ARCADIS Design & Consultancy for natural and built assets

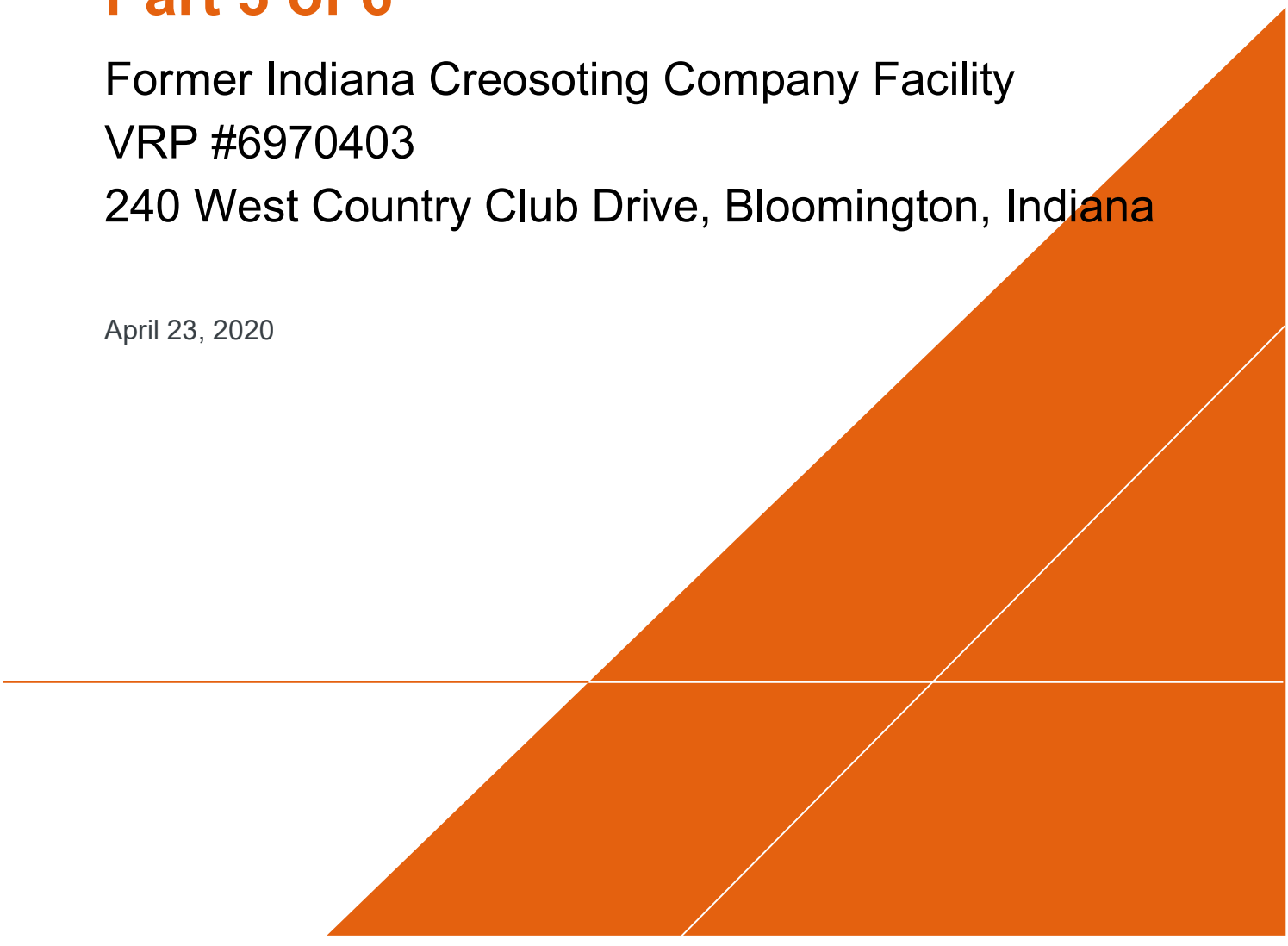
CSX Transportation, Inc.

REVISED REMEDIATION WORK PLAN

Part 3 of 6

Former Indiana Creosoting Company Facility
VRP #6970403
240 West Country Club Drive, Bloomington, Indiana

April 23, 2020



APPENDIX B

Screening-Level Ecological Risk Assessment Report for Clear Creek

(June 2011)

Imagine the result

CSX TRANSPORTATION

Screening-Level Ecological Risk Assessment for Clear Creek

Former Indiana Creosoting Company Facility

Bloomington, Indiana
IDEM VRP No. 6970403
CSXT Project No. 9415829
November 2011

ARCADIS



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Screening-Level Ecological Risk Assessment for Clear Creek

Bloomington, Indiana
IDEM VRP No. 6970403
CSXT Project No. 9415829

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November 2011

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List of Abbreviations

ARCADIS	ARCADIS US, Inc.
AVS	acid volatile sulifde
BC	black carbon
BEA	baseline ecological assessment
BERA	baseline ecological risk assessment
bgs	below ground surface
BSAF	biota sediment accumulation factor
BTEX	benzene, toluene, ethylbenzene, and xylenes
COC	consituents of concern
COPEC	consituents of potential ecological concern
CSM	conceptual site model
CSXT	CSX Transportation
DNAPL	dense non-aqueous phase liquid
ECOSAR	ecological structure activity relationships
ESBs	equilibrium partitioning sediment benchmarks
ESBTUs	equilibrium partitioning sediment benchmarks toxic units
ESLs	ecological screening levels
ESVs	ecological screening values
EqP	equilibruim partitioning
FCVs	final chronic values
f_{oc}	fraction organic carbon
f_{solid}	fraction of sediment that is solid
ft	foot/feet
HPAH	high molecular weight polycyclic aromatic hydrocarbons
HQ	hazard quotient
IDEM	Indiana Department of Environmental Management

IDNR	Indiana Department of Natural Resources
INHDC	Indiana Natural Heritage Data Center
IWQU	interstitial water guideline units
K_{oc}	organic carbon-water partition coefficient
K_{ow}	octanol-water partition coefficient
L&N Railroad	Louisville and Nashville Railroad
LPAH	low molecular weight polycyclic aromatic hydrocarbons
LPH	liquid phase hydrocarbons
mg/kg	milligrams per kilogram
NAPL	non-aqueous phase liquid
PAHs	polycyclic aromatic hydrocarbons
PCB	polychlorinated piphenyl
QHEI	Qualitative Habitat Evaluation Index
ROI	receptors of interest
RWP	Remediation Work Plan
SAR	structure activity relationships
SEM	simultaneously extracted metals
Site	former Indiana Creosting Company
SLERA	screening-level ecological risk assessment
SVOCs	semi-volatile organic compounds
TOC	total organic carbon
TRVs	toxicity reference values
TU	toxic unit
USDA	U.S. Department of Agriculture
U.S. EPA	U.S. Environmental Protection Agency
UST	underground storage tank
USFWS	U.S. Fish and Wildlife Service

ARCADIS

VOCs	volatile organic compounds
VRP	Voluntary Remediation Program

1. Introduction

ARCADIS US, Inc. (ARCADIS) has developed this definitive screening-level ecological risk assessment (SLERA) on behalf of CSX Transportation (CSXT) for the portions of Clear Creek (the Study Area) associated with the former Indiana Creosoting Company (ICC) facility (hereafter referred to as the "Site") located at 240 Country Club Drive in Bloomington, Monroe County, Indiana (Figure 1). The purpose of this SLERA is to assist with closure activities under the Indiana Department of Environmental Management's (IDEM) Voluntary Remediation Program (VRP) at the Site. This report documents data collected for the SLERA from 1991 through 2011.

1.1 Background Information

As an initial step in this process, a baseline ecological assessment (BEA), as defined by IDEM (1996), was conducted by ARCADIS in 1999 (ARCADIS 2003) for the western portion of what is presently the Site. The BEA identified Clear Creek as an ecologically susceptible area, requiring evaluation of potential risks.

Four SLERA investigation events have been conducted for the portions of Clear Creek associated with the Site in April 1991, August and October 2003 and finally in September 2010. Sediment, surface water, and porewater samples were collected and analyzed for the constituents of concern (COCs) at the Site which included dense non-aqueous phase liquid (DNAPL; creosote), selected semi volatile organic compounds (SVOCs: phenols, phthalates, and priority pollutant and alkylated polycyclic aromatic hydrocarbons (PAHs)), and selected volatile organic compounds (VOCs: benzene, toluene, ethylbenzene, and xylene [BTEX]), and metals (total, dissolved, and as simultaneously extracted metals (SEM) and acid volatile sulfide (AVS).

A preliminary SLERA was conducted in 2004 based on the 1991 and 2003 data. The preliminary SLERA concluded that the only COCs that may cause potential risk to ecological receptors in Clear Creek are PAHs. Based in part on the results of the preliminary SLERA and intermittent presence of DNAPL globules on the creek bottom in the area directly adjacent east of the former operations area, a mitigation measure in the form of a creek liner was installed in Summer-Fall 2007 along an approximate 170 foot section of Clear Creek within the northern tract of the Site. The preliminary SLERA results are included herein as part of this definitive SLERA.

In September 2010, ARCADIS collected sediment and surface water samples to assess the current conditions of Clear Creek and to confirm the effectiveness of the mitigation measures taken in 2007. Subsequently, a definitive SLERA was conducted to refine the results of the preliminary SLERA and in particular to assess risk to aquatic organisms from organics in Clear Creek. The definitive SLERA provides a baseline evaluation of the nature and geographical extent of the possible ecological risks remaining, based on current knowledge of environmental conditions, COCs, and ecological receptors in the Study Area using the data obtained in 2010.

1.2 Purpose and Objectives

A SLERA is designed to identify constituents of potential ecological concern (COPECs) and areas that merit further investigation. In this evaluation, constituents in sediment and surface water from the Study Area within Clear Creek are evaluated based on comparisons to ecological screening values (ESVs) and other relevant scientific information.

The specific objectives of this SLERA are to:

- identify potentially exposed receptors of interest (ROIs) at the Study Area and potentially complete exposure pathways by which ROIs may be exposed to constituents in environmental media;
- identify constituents in environmental media (sediment and surface water) at the Study Area that do not pose an ecological risk;
- identify COPECs that might pose a potential risk of adverse effects to ecological receptors at the Study Area; and
- evaluate the appropriate remedy or remedies for the Study Area based on existing information, if there is a potential for risk of adverse effects to ecological receptors.

1.3 Conceptual Approach

This SLERA follows relevant U.S. Environmental Protection Agency (U.S. EPA) guidance, including:

- Framework for ecological risk assessment (U.S. EPA 1992);
- Ecological Risk Assessment Guidance for Superfund: *Process for Designing and Conducting Ecological Risk Assessments* (U.S. EPA 1997);

- Guidelines for ecological risk assessment (U.S. EPA1998); and
- Ecological Risk Assessment and Risk Management Principles for Superfund Sites (U.S. EPA 1999).

The conceptual approach to the SLERA involves: 1) defining the system to be studied, 2) identifying the study's goals and objectives, 3) providing the details of the analysis, and 4) describing conclusions of the analysis. This approach is consistent with the conceptual framework for ecological risk assessment developed by the U.S. EPA (U.S. EPA 1992), which includes three major components: problem formulation, analysis (exposure characterization and effects characterization), and risk characterization. The SLERA is organized according to these three components, as follows.

- Problem formulation is a process to define the specific issues addressed in the SLERA. Problem formulation describes: 1) ecological resources at the Study Area; 2) representative ROIs, constituent characterization methods, and complete exposure pathways; 3) a conceptual site model (CSM) that establishes the exposure pathways and defines the relationships among endpoints; and 4) assessment and measurement endpoints specifying the goals of the SLERA.
- Analysis includes: 1) exposure characterization, which quantifies the measured concentrations of constituents in environmental media; and 2) effects characterization, which identifies the ESVs to be used in the assessment.
- Risk characterization is the integration of the exposure and effects information to identify COPECs. Uncertainties in the SLERA process are also discussed.

Collectively, these components of the SLERA are intended to provide a scientifically sound basis for further investigation to support a baseline ecological risk assessment (BERA), if necessary. This risk assessment process will evaluate the nature and spatial extent of possible ecological effects based on current environmental conditions at the Site.

2. Problem Formulation

Problem formulation is a process for generating and evaluating preliminary hypotheses about why ecological effects have occurred, or may occur, from human activities. In problem formulation, the purpose for the SLERA is articulated, the problem is defined, and a plan for analyzing and characterizing risk is determined. The following discussion describes the Site and ecological setting and identifies ROIs, constituent characterization methods, exposure pathways, a CSM, and assessment and measurement endpoints.

2.1 Site Description and Ecological Setting

A brief summary of the Site operations, physical setting, and remediation activities is presented below, followed by a description of the characteristics of the Site. ARCADIS (2009, 2003) and Geraghty & Miller (1996) present a more detailed discussion of Site history, geology, and hydrogeology. The Study Area for this SLERA is then defined, based on habitat characteristics and historical activities at the Site.

2.1.1 Operations History

A wood treating facility, owned by the American Creosoting Company, began operating at the Site in 1906. In 1961, the Indiana Creosoting Company, a subsidiary of the Monon Railroad, purchased the property. The Monon Railroad then merged with the Louisville and Nashville (L&N) Railroad in 1971, and wood treating operations were terminated later that year. The wood treating facilities and support infrastructure were subsequently razed and backfilled in 1976. L&N Railroad was the predecessor company to CSXT, who is the current owner of the property.

2.1.2 Physical Description

The Site currently covers approximately 33 acres along Clear Creek on the southern portion of Bloomington. The Site is presently bounded to the north by industrial/commercial and residential properties. Residential and light industrial properties are located to the west across the former rail line. Commercial property has been constructed east of the Site. The Site is bisected by Clear Creek which runs north-south through the center of the Site (Figure 2). The Site is also bisected by Country Club Drive which runs east-west through the center of the Site. The Site topography varies from 5 to 15 feet above the elevation of Clear Creek.

All structures were razed by 1976. The Site is currently unoccupied and overgrown with trees, shrubs, tall grasses and other vegetation. The only standing structure currently at the Site is a conex storage container with an adjacent drum storage area concrete pad on the northern parcel used by the environmental consultant. The Site is relatively flat, sloping near Clear Creek, and is covered by vegetation (brush and grasses), with a wooded corridor adjacent to Clear Creek.

The depth of first encountered groundwater at the Site ranges from approximately 3 to 5 feet below ground surface (bgs). The hydrogeology at the Site can be divided into two separate zones; the shallow unconsolidated material water bearing unit (surface to 2 feet into the top of the first bedrock unit) and the bedrock water bearing units (beneath the upper 2 feet of the first bedrock unit). The unconsolidated material potentiometric surface appears to be controlled by the flow of Clear Creek. Groundwater flow direction of the unconsolidated material has been shown to be in a southerly direction, similar to Clear Creek. Groundwater flows to the southeast and towards Clear Creek (ARCADIS 2009).

As previously mentioned, Clear Creek generally runs in a north-south direction bisecting the 39 acre Site (Figure 2). The banks on either side of the Study Area at Clear Creek slope to the water and are covered with herbaceous vegetation up to the water's edge. Photos of Clear Creek are provided in Appendix A. Surface drainage would be expected to enter Clear Creek. In fact, Clear Creek is the main drainage for a significant portion of the City of Bloomington and is prone to flash flooding. Further groundwater discharge into the creek is expected.

2.1.3 Investigation and Remediation Activities

The nature and extent of impacts at the Site continue to be investigated through ongoing investigation and remediation activities. All previous known environmental investigations/remediation efforts conducted at the Site are summarized in the Remediation Work Plan (ARCADIS 2009). Based on Site operational history, investigations have focused on DNAPL, SVOCs, VOCs, PAH components associated with creosote, and metals (arsenic and lead) which have been detected in soil and groundwater samples throughout the Site and in sediment and surface water samples from Clear Creek.

Onsite investigation activities include soil sampling and groundwater monitoring. Onsite remediation activities include: product disposal, removal of underground storage tanks (USTs) and associated dispenser pump piping systems, soil excavation and removal,

and manual DNAPL recovery and disposal. Onsite investigation and remediation is ongoing and therefore risk to human and ecological receptor from exposure to conditions onsite will be addressed in the final (remediation work plan) RWP.

Investigation activities related to the Study Area at Clear Creek include sediment, surface water and porewater sampling. Details of those sampling events and remediation efforts are provided below:

- In April 1991, Geraghty & Miller collected five sediment samples (SS-1, SS-2, SS-3, SS-4, and SS-5) from Clear Creek, downgradient of the Site. Samples were analyzed for SVOCs, VOCs, and selected total metals (arsenic, chromium, and copper).

- In August 2003, ARCADIS collected ten surface water samples (CS-1, CS-2, CS-3, CS-4, CS-5, CS-6, CS-7, CS-8, CS-9, and CS-10) from Clear Creek downgradient of the Site. Samples were analyzed for selected SVOCs (phenols, phthalates, and priority pollutant PAHs) and selected VOCs (benzene, toluene, ethylbenzene, and xylene [BTEX]). During this sampling event, disturbance of the creek bed associated with the sampling effort resulted in sheen generation at several locations. The surface water samples from these locations contained sheen material.

- In October 2003, ARCADIS collected eight surface sediment (SED-1, SED-2, SED-3, SED-4, SED-5, SED-6, SED-7, and SED-8) and eight surface water (SW-1, SW-2, SW-3, SW-4, SW-5, SW-6, SW-7, and SW-8) samples from Clear Creek, both upgradient and downgradient of the 2003 Site boundary (Figure 3). Sediment samples were collected from 0-6 inches bgs, because generally aquatic organisms do not contact subsurface sediment. Sediment samples were analyzed for SVOCs (including alkylated PAHs), BTEX, total metals, AVS / SEM (downgradient samples only), grain size, and total organic carbon (TOC). Sediment porewater was extracted from the downgradient sediment samples only and analyzed for dissolved metals and hardness. Surface water samples were analyzed for SVOCs (alkylated PAHs), BTEX, total metals, dissolved metals (downgradient samples only), and hardness. Water quality parameters were measured at each sampling location. Photographs of each sampling location are provided in Appendix A. Sampling log sheets and laboratory reports for the October 2003 sediment and surface water samples are included in Appendix B.

- The October 2003 sampling event was intended to provide representative data for the water column, whereas the August 2003 sampling event intentionally included sampling of sheen generated due to sampling-related disturbance of the creek bed.

- In an effort to mitigate potential DNAPL migration into Clear Creek, a creek liner and interceptor trench remediation system was designed and installed along an approximate 170 foot section of Clear Creek within the northern tract of the Site in the Summer/Fall of 2007. Details of permitting, general construction, and on-going operation and maintenance activities associated with the installation of the creek liner are provided in the Remediation Work Plan (ARCADIS 2009). In summary, the limestone creek bottom was excavated to a depth of approximately 2.0 ft below the original creek bed surface, along the reach of creek the liner to be installed. The excavation was then covered with the following layers: a gravel sub-base, a lower geotextile protective layer, a geomembrane liner (Seaman XR-5), an upper geotextile protective layer, stone bedding, a final geotextile mesh, and finally, the Armor Flex (concrete revetment system). A more detailed explanation of the liner installation project and complete as-built drawings detailing the exact specification and placement of materials associated with the creek liner will be provided to IDEM as a separate report.

- In September 2010, ARCADIS collected 15 sediment and surface water samples from Clear Creek (Figure 3). Twelve samples (SED/SW-09 through SED/SW-19 and SED/SW-23) were collected from within the Study Area while three samples (SED/SW-20 through SED/SW- 22) were obtained from upstream locations. Sediment samples from the top 6 inches were obtained using a hand core sediment sampler. Samples were analyzed for select SVOCs (phenols, phthalates, and priority pollutant and alkylated PAHs), and selected VOCs (BTEX). Sediment samples were also analyzed for grain size, TOC, and soot content. Surface water samples were also analyzed for hardness. Sampling logs and Laboratory reports are included as Appendix B.

2.1.4 Ecological Setting

The ecological setting for the Site has been defined through a BEA (ARCADIS 2003), wetland delineation studies (ARCADIS 2006), and several Site reconnaissance visits.

Baseline Ecological Assessment

A BEA for the western portion of the Site (Western Site) was completed by ARCADIS in 1995 and presented to IDEM in the Phase II Investigation Report in 2003 (ARCADIS 2003). The BEA was conducted in accordance with the available guidance at the time which was provided in Table C-1 of Appendix C of the 1996 IDEM VRP Guidance Manual. Consistent with guidance, the BEA included a desktop review of all relevant ecological and other studies conducted at the Site as well as a Site visit to determine the Site land use, surrounding land uses, Site ecology, presence of threatened or endangered species, and the presence or absence of ecologically susceptible areas.

During the BEA, information was obtained from existing maps and studies. In addition, the Indiana Department of Natural Resources (IDNR) Natural Heritage Data Center and the United States Fish and Wildlife Service (USFWS) were contacted to obtain information regarding threatened or endangered species that may potentially inhabit or frequent the Western Site or the surrounding ¼ mile area.

In addition to the desktop information review in 1995, two ARCADIS representatives completed a Site visit in May 1999. The Site visit was conducted to collect information on vegetation cover/land use, plant species composition of each cover type (e.g., herbaceous, shrub canopy), and wildlife presence or use of these areas. The Western Site, adjacent areas, and parts of Clear Creek were evaluated on foot. Much of the remaining ¼ mile was evaluated through a windshield survey.

The complete BEA and associated correspondence was submitted to the agency (ARCADIS 2003). The BEA identified Clear Creek as an ecologically susceptible area, requiring evaluation of potential risks.

Wetland Delineation Studies

In May of 2005 a wetlands delineation survey was completed on 17 acres of the Site (Western Site) by Davey Resource Group from Kent, Ohio. The survey identified four jurisdictional wetlands, totaling 1.586 acres, at the Site. The report was completed and submitted to ARCADIS on June 30, 2005. In August of 2006 an additional wetlands delineation survey was completed on the newly purchased 16 acres east of Clear Creek by Davey Resource Group. The two delineation survey reports were combined into a final Wetlands Delineation Report (Davey Resources 2006), and supplied in the *Further Site Investigation Report* (ARCADIS 2006) previously submitted to IDEM. The final wetland delineation report indicates that wetlands in the form of inundation or

saturated soils have formed on disturbed soils in areas that have been rutted and poorly graded. Ten wetlands totaling 5.253 acres are found within the Site area. The wetlands near the former operations areas were formed as a result of historical excavation activities associated with site remediation. .

Site Reconnaissance

As previously mentioned, Site reconnaissance was first conducted for the western half of the Site in 1999 in conjunction with the BEA. Additional observations of aquatic habitat characteristics were noted by ARCADIS representatives during sampling efforts in October 2003. More recently, two ARCADIS employees completed a Site visit in conjunction with sampling activities in Clear Creek. The Site, adjacent areas, and parts of Clear Creek were evaluated on foot. Much of the remaining ¼ mile surrounding the Site was evaluated through a windshield survey.

A description of Site ecology, as gleaned from the investigations described above, is supplied below.

2.1.4.1 Site Ecology

The following sections describe the general ecological characteristics of the Site, including soil and vegetation types, wetland locations, and aquatic and wildlife resources.

Soils

The *U.S. Department of Agriculture Soil Survey of Monroe County* (USDA 1981) was reviewed to determine the soil type(s) located at the Site. Soils at the Site are classified as loamy Udorthents. These soils are characterized as being nearly level to moderately sloping, deep, and somewhat poorly drained in disturbed areas.

Vegetation

As described above, the Site is vacant of all buildings except some small concrete slabs and other building debris. The majority of the Site is covered with grasses, weeds, and other herbaceous vegetation. However, several small, forested areas are present onsite. A five- to twenty-foot wide strip of trees extends along the entire eastern boundary of the Site along the western bank of Clear Creek. Dominant tree species include box elder (*Acer negundo*), sycamore (*Platanus occidentalis*), black

locust (*Robinia pseudo-acacia*), honeysuckle (*Lonicera sp.*), silver maple (*Acer saccharinum*), rose (*Rosa spp*.), and red bud (*Cercis canadensis*). Another forested area exists toward the northern edge of the Site. Dominant species in this area include willow (*Salix sp*.), honeysuckle (*Lonicera sp.*), maple leaf viburnum (*Viburnum acerifolium*), hackberry (*Celtis occidentalis)*, silver maple (*Acer saccharinum*), and sycamore (*Platanus occidentalis)*.

Within a ¼ mile of the Site, vegetated areas exist to the south and east. Forested areas are present to the south of the Site. The eastern bank of Clear Creek is also vegetated with herbaceous plants and trees; however, this area is spatially limited due to the presence of other commercial and industrial facilities.

Wetlands

Ten wetlands totaling 5.253 acres are found within the Site. The wetlands will be addressed at a later date, under the Army Corp of Engineers Nation Wide Permit #38 (approved in May 2010), since onsite investigation and remediation is in progress.

Aquatic Resources

The aquatic resources onsite are limited to the areas described above. Clear Creek bisects the Site (Figure 2). The banks on either side of the creek slope to the water and are covered with herbaceous vegetation up to the water's edge. Deciduous trees are also found along the banks of Clear Creek as described above. At the time of the initial Site visit in 1999, the water was approximately one to three feet deep and two feet below the bottom of the bank, likely the result of low water flow. Water levels were similar during the October 2003 and September 2010 investigation events. The average width of Clear Creek along the Site is 25 feet. Bedrock forms the underlying substrate of Clear Creek. Throughout a majority of the length of the creek adjacent to the Site, the bedrock is exposed, with very few depositional areas. Isolated sand bars are located at various points in Clear Creek. Small pieces of building debris and cement blocks were found at several locations throughout the creek. Evidence of beaver in the study area was observed in 1999, October 2003, and September 2010. Beyond the southern beaver dam, the water level in Clear Creek decreased significantly and was only several inches high in some areas. Photographs of Clear Creek are provided in Appendix A.

The overall physical quality of Clear Creek at several locations adjacent to the Site was assessed in October 2003 using the Qualitative Habitat Evaluation Index (QHEI),

developed by the Ohio Environmental Protection Agency (Rankin 1989), and consistent with the U.S. EPA's *Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers* (Barbour, Gerritsen 1999). Aquatic habitat was evaluated on numerous physical variables, such as substrate, in-stream cover, riparian zone, bank erosion, and pool and riffle quality. Scores developed from the QHEI indicate that the segment of Clear Creek adjacent to the Site is in fair to good condition. The bedrock/gravel substrate and the narrow riparian zone on either bank of the creek limit the value of the aquatic habitat and contributed to the lower QHEI scores.

As a relatively small stream, Clear Creek supports populations of smaller fish. In October 2003 and September 2010, small fish were observed throughout the length of the creek adjacent to the Site. IDEM monitors fish in the creek because of an unrelated polychlorinated biphenyl (PCB) source upstream of the Site. A group 5 fish consumption advisory is currently in place for PCB contamination in Clear Creek for all fish species. A fish consumption advisory for PCBs is also in place for Lower Salt Creek, potentially associated with contamination from Clear Creek in Monroe County and Pleasant Run Creek in Lawrence County.

Wildlife

Wildlife species observed during the various Site visits include cowbirds, blue jays, yellow warblers, and tadpoles. Frogs can be heard from the larger wetland area; however, no individuals have been seen. Raccoon tracks have been seen along the Creek banks. Wildlife habitat onsite is limited to the open grassy area, the few trees in the northern portion of the Site, and the area of trees bordering Clear Creek. However, due to the industrialized nature of the Site and the close proximity of residential and commercial areas to the north, west, and east, other wildlife that may use the Site are likely limited to backyard species such as American robin, European starling, house sparrow, raccoon, Norway rat, and house mouse. Site conditions and observations were essentially the same in 2010.

Within a ¼ mile of the Site, similar backyard species are likely to be found in the commercial, industrial, and residential areas. More suitable wildlife habitat may be located immediately bordering Clear Creek. Deer and/or deer tracks have been observed along Clear Creek near the southern portion of the CSXT property. A Rails-to-Trails public walk path is located adjacent on the western border of the CSXT property. This recreational area may also provide some wildlife habitat; however, frequent use by recreators will limit the value of this area to wildlife species. Conditions and observations in the vicinity of the Site were substantially the same in 2010.

2.1.4.2 Threatened and Endangered Species

As part of the identification of potentially exposed receptors, it is necessary to identify protected species that may be exposed to Site constituents. In 1999, as part of the BEA, both the Indiana Natural Heritage Data Center (INHDC) and the United States Fish and Wildlife Service (USFWS) in Bloomington, Indiana were contacted to obtain information on state listed plants and aquatic and terrestrial wildlife onsite or within ¼ mile of the Site. At that time, no Indiana listed threatened or endangered species or significant habitats were identified; however USFWS responded that the Site is within the range of both the Indiana bat and the bald eagle. Correspondence with the IDNR is attached in Appendix C.

A recent check of the USFWS online database (USFWS, 2010) for Monroe County, Indiana indicates that the Indiana bat (*Myotis sodalis*) is still listed as endangered while the bald eagle (*Haliaeetus leucocephalus*) and the Arctic peregrine Falcon (*Falco peregrinus tundrius*) are in recovery.

Indiana Bat

Information provided by USFWS (Appendix C) indicates that the Indiana bat has a known hibernaculum several miles west of Bloomington. In addition, USFWS reported that Indiana bats may use Clear Creek for foraging habitat in summer, since these bats primarily forage over wooded stream corridors. However, no surveys have been conducted in the area to confirm the presence of a summer colony.

First listed in 1967, the Indiana bat continues to be at risk from disturbance by cavers, researchers, vandals, and natural catastrophes (for example, freezing temperatures, flooding) during winter. Estimates indicate that only nine hibernacula house 85 percent of the population in winter (USFWS 1999). Although protection of the summer population is important, clearly protection for wintering bats is critical to the continued success of the species.

In summer, most females migrate from winter hibernacula to areas north to establish nursery colonies. These colonies are usually housed behind the loose bark of trees, including bitternut hickory, shagbark hickory, and green ash, near the northern part of the range (Humphrey, Richter et al. 1977; Kurta, King et al. 1993). Often the characteristics of the tree (exfoliating bark with space for bats to roost) are more important than the tree species (USFWS 1999). The Indiana bat appears to have a strong site attachment and records indicate that individuals will return to sites

continually over several years (Humphrey, Richter et al. 1977; USFWS 1999). Studies show that the Indiana bat may fly up to 1.5 miles to reach foraging habitat (USFWS 1999). To date, no summer roosts have been identified onsite or within ¼ mile of the Site.

2.1.4.3 Identification of Potentially Impacted Ecologically Susceptible Areas

Consistent with IDEM (2001) guidance, ecologically susceptible areas include surface waters (streams, lakes, or ponds), wetlands, riparian areas (stream banks), and forest areas. Clear Creek and forested and wetland areas along Clear Creek are located within a ¼ mile of the Site. In addition, a Rails-to-Trails path is located adjacent along the western border of the CSXT property. All of these areas are considered ecologically susceptible; however, the habitat value of these areas for wildlife is limited given the proximity of numerous industrial, commercial, and residential development.

Onsite investigation and remediation is ongoing and therefore this SLERA is focused on the Study Area defined by the portions of Clear Creek associated with the Site. The Study Area could be impacted by onsite conditions through potential migration of constituents from soil through storm water and from groundwater through discharge to Clear Creek. Sediment and surface water sampling in the Study Area indicates that migration of PAHs from either soil or groundwater has resulted in detectable concentrations of Site-related constituents in critical habitat. These constituents are also associated with motor vehicle traffic and are expected to be present in runoff from Country Club Road. The road is an on-going source of PAHs to both the Site and Clear Creek.

2.1.5 Study Definition

Based on the ecological setting as described above, the Study Area for this SLERA is defined based on:

- The presence of ecologically susceptible areas; and
- The potential for Site-related constituent contamination from Site activities.

This SLERA focuses on the Study Area defined by the portions of Clear Creek associated with the Site since onsite investigation and remediation is ongoing. Therefore, the Study Area for this SLERA includes Clear Creek between the northern and southern boundaries of the Site. This portion of Clear Creek is potentially affected

by Site-related constituents. A section of Clear Creek approximately 600 feet upgradient of the Site is also evaluated in this SLERA as a reference area. Samples collected from this upgradient area provide information about background constituent concentrations in Clear Creek that are unrelated to the Site. The Study Area used in this definitive SLERA is slightly larger than that used in the preliminary SLERA. Specifically, the Study Area was expanded to the south to the vicinity of monitoring well (MW) 37 due to the observance of a non-toxic fluorescing dye emerging at the creek bank/creek bottom contact, during a tracer study conducted at the Site.

2.2 Receptors of Interest

It is not feasible to complete risk calculations for all species potentially exposed. Such an effort would also be duplicative because of the similarity of exposure patterns among closely related species and those within like feeding guilds. For these reasons, receptors of interest (ROIs) are selected for quantitative risk assessment purposes. The selected receptors are representative of entire classes of organisms (that is, functional groups). Selection criteria for ROIs include sensitivity, exposure potential, likely presence in the Study Area, ecological relevance, trophic level, feeding habits, and the availability of life history information.

The aquatic ROIs evaluated in the SLERA are identified as entire biological communities (for example, benthic invertebrates). Aquatic-feeding wildlife are also included as ROIs in this SLERA to evaluate compounds that may potentially bioaccumulate in prey. The rationale for selecting each ROI is discussed below.

- Benthic macroinvertebrates – The benthic macroinvertebrate community lives in constant and direct contact with surface sediment that may be impacted by Site COCs. Invertebrates have vital functions within the ecosystem, including serving as a prey base for higher trophic level organisms and cycling of nutrients.

- Fish – The fish community lives in constant and direct contact with surface water that may be impacted by Site COCs. Exposures are also possible via sediment and the food chain, particularly for bioaccumulative constituents. The fish community often dominates perennial aquatic ecosystems, in terms of biomass, and fish serve as a prey base for piscivorous wildlife.

- Raccoon (*Procyon lotor*) – Raccoons represent the feeding guild of omnivorous mammals in aquatic systems. The raccoon has been reported to

be the most abundant and widespread medium-sized omnivore in North America (U.S. EPA 1993a) and has been observed onsite. Raccoons also tend to be more closely associated with aquatic systems than other mammalian omnivores, although they feed opportunistically from both aquatic and terrestrial sources. Exposures to raccoons are enhanced by relatively small territory sizes, as well as their potential to ingest sediment that may be attached to invertebrate prey.

- Belted kingfisher (*Ceryle alcyon*) – The belted kingfisher is selected to represent piscivorous birds in aquatic systems. Kingfishers may be found in shallow, open water alongside rivers, streams, lakes, and ponds (Hamas 1974, as cited in U.S. EPA 1993a). Exposure potential for kingfishers is enhanced by the high proportion of fish in their diet, limited territory sizes, and a comparatively high food ingestion rate relative to their body weight. Although kingfishers have not been observed in the Study Area, their assessment in this SLERA is conservative and protective of other bird species that may consume prey from the Clear Creek Study Area.

2.3 Constituents of Concern

The COCs that have been associated with the Site include: DNAPL (creosote), select SVOCs (phenols, phthalates, and priority pollutant and alkylated PAHs), BTEX, and metals (lead and arsenic specifically).

As described in Section 2.1.3, sediment, surface water, and porewater samples have been gathered from Clear Creek during four separate investigation events.

2.4 Exposure Pathways and Conceptual Site Model

Pathways by which ecological receptors may be exposed to Site COCs include absorption from water by gills, dermal uptake from water, dermal uptake from sediment, surface water ingestion, sediment ingestion, and ingestion of food (i.e., plant and animal tissue). For aquatic organisms, all exposure pathways are integrated by comparing sediment and surface water concentrations (as appropriate) to toxicological benchmarks for the respective exposure medium. For wildlife, doses obtained through ingestion of sediment, surface water, and food (estimated) are directly calculated and summed for comparison to toxicity benchmarks.

A CSM is a written description and visual representation of predicted relationships between ecological entities and the stressors to which they may be exposed. Figure 4 presents a graphical interpretation of the CSM for the Clear Creek area. As shown, the primary receiving media are sediment and surface water due to groundwater discharge from the Site. The sediment and water function as secondary sources of exposure to ecological receptors. Following uptake by aquatic organisms (i.e., benthic invertebrates and fish), biota tissue may function as a tertiary source of exposure to upper trophic level receptors (aquatic-feeding wildlife).

2.5 Assessment and Measurement Endpoints

Assessment endpoints are explicit expressions of the environmental value that is to be protected, operationally defined by an ecological entity (for example, fish, birds, mammals) and its attributes (for example, community structure, survival, growth, reproduction). Assessment endpoints are selected based on ecological relevance, susceptibility (which is a combination of toxicological sensitivity and potential for exposure), and relevance to management goals.

The following assessment endpoints are selected for Clear Creek:

- Benthic macroinvertebrate community structure and function;
- Survival and reproduction of fish communities;
- Survival and reproduction of aquatic-feeding mammal populations; and
- Survival and reproduction of piscivorous bird populations.

“Community structure and function” refers to the types and diversity of species present and their ecological roles (for example, serving as prey for wildlife). Community structure and function generally does not depend on the presence or absence of any single species. “Population” refers to a group of interbreeding individuals of a single species, occurring within a geographic area.

A measurement endpoint is defined as a measurable ecological characteristic that is related to the valued characteristic chosen as the assessment endpoint, and is a measure of biological effects. More than one measurement endpoint may be selected for a given assessment endpoint. For this definitive SLERA, measurement endpoints are simply defined as the comparison of measured constituent concentrations in

sediment or surface water to conservative ecological screening and background values and other relevant toxicological information.

3. Methods Used in the Screening Level Ecological Risk Assessment

The methods used in the SLERA are discussed in the sections below from data compilation to initial and refined screening and risk characterization.

3.1 Data Evaluation

Sediment and surface water data from the Clear Creek were compiled to support the screening-level exposure characterization. The data were reviewed for quality and then data tables for each media were prepared. Data were separated into two datasets: Upgradient Area data and Study Area (adjacent to Site) data. The Study Area datasets were then summarized. For each constituent detected at least once, the following summary statistics were identified: frequency of detection, minimum and maximum detected concentrations, minimum and maximum detection limit, and arithmetic mean. The data evaluation was conducted under the following assumptions and considerations.

- Quality assurance and quality control procedures were routinely used to evaluate analytical data quality. Analytical data from the laboratory were validated to evaluate the sample preservation and shipping methods, holding times, laboratory blanks, laboratory control samples, and matrix spikes.
- Sediment results were confirmed to be reported on a dry weight basis.
- Where there are duplicate results, the average detected concentration or the minimum detection limit for non-detected constituents was used. If a constituent was detected in a parent sample and not detected in the duplicate, the detected concentration was used.
- Non-detect values were very conservatively assumed to equal one-half the practical quantitation limit (reporting limit). The reporting limit is typically a factor of 4 to 5 higher than the method detection limit. Concentrations that lie between the reporting and detection limits are reported as estimated values, whereas non-detected concentrations are generally below the detection limit. Applying a proxy concentration to non-detect results that is higher than the method detection limit ensures that the true concentration is less than the proxy concentration.

- To facilitate risk estimation for wildlife, PAHs were separated into low (LPAH) and high (HPAH) molecular weight groups. The LPAHs (2- and 3-ring PAHs) included acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, phenanthrene, and 11 alkylated homologues of these PAHs. HPAHs (4-, 5-, and 6-ring PAHs) included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)pyrene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, perylene, pyrene, and five alkylated homologues of these PAHs. Total LPAH and HPAH concentrations were then calculated by summing the concentrations of LPAH and HPAH constituents for each sample, including both detected concentrations and one-half the reporting limit for non-detected constituents.

3.2 Screening-Level Exposure Characterization

The following sections provide a discussion of the screening level exposure characterization methods for benthic invertebrates, fish, and wildlife.

3.2.1 Benthic Invertebrates

Sediment and porewater data were used to characterize exposures to benthic invertebrates in this SLERA. Based on the relatively low mobility of benthic invertebrates, each sediment sample was treated as an exposure unit in this SLERA. The significance of risks associated with individual samples, if any, were evaluated on the magnitude and spatial extent of risks across the Study Area.

The exposure characterization for benthic invertebrates is described below for the classes of COCs at the Site.

3.2.1.1 Organics

The effects of organics on benthic invertebrates were assessed by evaluating sediment concentrations. However since the bioavailability of organics is affected by the amount of organic carbon in sediment and its type, TOC was also used in the evaluation. TOC in sediment was not analyzed in samples collected in 1991; however TOC was measured in sediment samples obtained in 2003 and 2010. Further, soot (black carbon [BC]) was also analyzed in the 2010 sediment samples.

PAHs

In evaluating exposure of benthic invertebrates to PAHs, the potential additive toxicological effects of PAHs were considered. PAHs are a large class of organic compounds that include unsubstituted compounds as well as those with alkyl, oxygen, or nitrogen substituents. For example, naphthalene is an unsubstituted (or "parent") PAH, and 2-methylnaphthalene is an alkylated PAH. Naphthalene compounds with a single methyl group, regardless of its position, are collectively referred to as C1-naphthalenes, while C2-naphthalenes have two methyl groups or one ethyl group, and C3-naphthalenes have three carbons attached to the parent ring structure (for example, three methyl groups).

Alkylated PAHs were not analyzed in sediment samples collected in 1991, therefore the full additive effects could not be properly characterized. However, sediment data from 2003 and 2010 was analyzed for both unsubstituted and alkylated PAHs, which enabled the evaluation of additive effects.

3.2.1.2 Metals

Sediment and porewater data were used to characterize exposures of benthic invertebrates to metals in this SLERA. The toxicity of metals in sediment is dependent on the bioavailable metal fraction. The bioavailable metal fraction in sediment is best described by the Equilibrium Partitioning (EqP) theory which relies on the premise that metals partition in sediment between sulfide, porewater, benthic organisms, and organic carbon (U.S. EPA 2005). In validating the EqP theory, it has been shown that the biological responses of benthic organisms to metals in sediments are different across sediments when the sediment concentrations are expressed on a dry weight basis, but similar when expressed on a SEM-AVS or interstitial water basis (U.S. EPA 2005).

Therefore, in this definitive SLERA, exposure of benthic invertebrates to metals in sediment was evaluated using porewater analysis, SEM-AVS analysis, and TOC analysis in addition to whole sediment metal concentrations. All these analysis were conducted on samples acquired in 2003.

3.2.2 Fish

Surface water concentrations were used to characterize exposures to aquatic organisms (fish) in this definitive SLERA. Because the Study Area is larger than the

home ranges of many fish, all measured concentrations of constituents in surface water were evaluated as exposure units. The spatial distribution of concentrations was examined to determine the significance of estimated risks, if any. Surface water data for organics and metals (total and dissolved) were obtained in 1991, 2003 and 2010.

The following sections provide a discussion of exposure assessment methods for fish for the classes of Site COCs.

3.2.2.1 Organics

The effect of organics on aquatic organisms (fish) was assessed by evaluating surface water concentrations.

PAHs

To evaluate the additive effects of PAHs to fish, both unsubstituted and alkylated PAHs were used in the assessment. Both unsubstituted and alkylated PAHs were analyzed in surface water samples collected in October 2003 and September 2010; however, only unsubstituted PAHs and 2-methylnapthalene (an alkylated PAH) were analyzed in samples from August 2003.

3.2.2.2 Metals

The evaluation of the effect of metals on fish relies on comparing surface water data to ecological criteria. The criteria for certain metals (barium, cadmium, lead, nickel, and zinc) are dependent on hardness. Therefore, site-specific hardness-dependent metals criteria were calculated using the average hardness measured.

3.2.3 Wildlife

The U.S. EPA (2000) has compiled a list of constituents that it considers to be potentially important bioaccumulative compounds. Constituents identified in the initial screening that have the potential to bioaccumulate according to the U.S. EPA are evaluated for aquatic-feeding wildlife in this definitive SLERA.

Exposure for wildlife receptors is determined by calculating the average daily intake of each potential bioaccumulative constituent, which integrates exposure via ingestion of sediment, surface water, and prey. Incidental sediment and surface water ingestion are estimated from measured constituent concentrations of each media within the

Study Area. Total metal concentrations are used for sediment and surface water exposures for wildlife in this definitive SLERA. Exposure concentrations in prey are estimated from site-specific sediment concentrations using biota-sediment accumulation factors (BSAFs). Wildlife exposure concentrations for sediment, surface water, and biota are then determined as the arithmetic mean of each constituent concentration in the Study Area. Mean values (and upper bound estimates of the mean) are appropriate for use in wildlife exposure assessment because exposure to wildlife does not really occur at any one fixed point; rather it occurs at a variety of points throughout the receptors' territories, with equal likelihood that any given point within the exposure unit will be the contact location on any given day.

3.3 Screening-Level Effects Characterization

This section describes the methods used to assess ecological effects. This assessment is implemented using a tiered approach. Initially, simple, highly conservative screening is used to eliminate many constituents from further evaluation. Constituents in sediment, porewater, and surface water that are not eliminated through the initial tier of the screening assessment are then evaluated further to determine whether they might pose a risk to ecological receptors. In some cases constituents are carried forward even if they pass the first tier of screening to evaluate cumulative effects. Effects characterization methods for the two tiers of the assessment are described below.

In the initial screening (Section 3.3.1), the maximum detected concentrations are compared with screening values. Use of the maximum concentration for exposure is intentionally conservative and will likely overestimate exposures to individual wildlife receptors and communities of benthic invertebrates and fish. In the second tier of screening, specialized techniques are used to refine the evaluation of the potential for adverse effects to benthic invertebrates, fish, and aquatic-feeding wildlife (Section 3.3.2). The methodologies used in both the initial and refined screening evaluations are discussed below.

3.3.1 Initial Screening

The initial screening-level effects assessment relied on conservative criteria and ecological screening values (ESVs) developed by IDEM and U.S. EPA, as well as site-specific background concentrations of naturally occurring metals. In the initial screening, maximum concentrations were compared to conservative ESVs and background levels. Constituents with maximum concentrations exceeding ESVs were identified as COPEC and carried forward in the assessment.

Data from the upgradient sampling locations are used to determine site-specific background concentrations of both organic compounds and metals; however, organic compounds are generally anthropogenic and are not screened out based solely on comparisons to background. The following sections discuss the initial screening per media.

3.3.1.1 Sediment

In the initial screening, maximum sediment concentrations were compared to sediment ESVs and to site-specific background concentrations if they were metals. Sediment ESVs are intended to be protective of aquatic life (including benthic organisms) and aquatic-feeding wildlife. IDEM has not adopted toxicity-based criteria or guidelines for constituents in sediment. Therefore, ESVs were identified from the U.S. EPA Region 5 Ecological Screening Levels (U.S. EPA 2003a). Where ESVs were not available from Region 5, attempts were made to obtain them from other sources such as U.S. EPA Region 3 Sediment Screening Benchmarks (U.S. EPA 2006); and U.S. EPA Region 4 Ecological Screening Values (U.S. EPA 2001). Finally, when ESVs could not be located for organics, equilibrium partitioning (EqP) sediment benchmarks (ESBs) were either directly obtained from the *Compendium of Tier 2 Values for Nonionic Organic Compounds* (U.S. EPA 2008) or calculated using methods in that guidance.

The standard approach to calculate ESBs for nonionic organic compounds (U.S. EPA 2008) uses the mass fraction of organic carbon in sediment (f_{oc}) and the constituent-specific partition coefficient between water and organic carbon (K_{oc}) to calculate sediment quality benchmarks using the water quality benchmark (WQB). The standard approach assumes that the bioavailable fraction of non-polar organic constituents is equivalent to the fraction of the sediment concentration that is freely dissolved in interstitial water, and that the freely dissolved fraction is determined primarily by the extent of partitioning to organic carbon. The standard ESB is calculated using this equation:

$$Standard\ ESB = WQB \times K_{oc} \times f_{oc}$$

This equation applies only to sediments having ≥ 0.2% total organic carbon by dry weight and nonionic organic chemicals with log K_{OW} ≥ 2 (U.S. EPA 2008).

The standard ESB equation (provided above) is ineffective for assessing less-hydrophobic organic compounds in sediment (like acetone), because it fails to account for the contribution of dissolved constituent to the total constituent concentration in sediment. For constituents having low K_{oc} values, this results in sediment quality

benchmarks that are more conservative than benchmarks calculated by assuming 100% bioavailability.

For less hydrophobic compounds (that is, compounds having log octanol-water partition coefficient (K_{ow}) values below 3.5), Fuchsman (2003) developed a modified ESB equation:

$$MESB = WQB \times \left[\left(f_{OC} \times K_{OC} \right) + \left(\frac{1 - f_{solids}}{f_{solids}} \right) \right]$$

Where:

MESB = Modified equilibrium partitioning sediment benchmark (mg/kg);

WQB = Water quality benchmark (mg/L);

f_{oc} = Fraction of sediment present as organic carbon (unitless);

K_{oc} = Organic-carbon/water partition coefficient (L/kg); and

f_{solids} = Fraction of sediment present as solids (unitless).

ESBs were calculated for organic compounds lacking screening values, using the equation above. Sample specific TOC values were used, where possible, otherwise the minimum TOC content reported onsite was used. K_{oc} values were obtained from U.S. EPA's EpiWin software (U.S. EPA 2010a). Where WQBs were not available, they were estimated using the U.S. EPA Ecological Structure Activity Relationships (ECOSAR) software (U.S. EPA 2009b). The EOCSAR program predicts the acute (short-term) toxicity and chronic (long-term or delayed) toxicity of a constituent to aquatic organisms such as fish, aquatic invertebrates, and aquatic plants by using Structure Activity Relationships (SARs).

3.3.1.2 Surface Water

For this definitive SLERA, the maximum detected concentrations of each constituent in surface water from the Study Area were compared to surface water ESVs for the protection of chronic aquatic life. Surface water ESVs were identified from those calculated by IDEM for selected substances using the Great Lakes Basin

methodologies (IDEM 2003). Where criteria were not available from IDEM, U.S. EPA Region 5 ESLs were used (U.S. EPA 2003a). Surface water ESVs are intended to represent minimum concentrations that might be of ecological concern with respect to aquatic life or aquatic-feeding wildlife.

For metals only, the maximum detected site-specific background concentrations were used as a secondary screening tool. Metals that exceed both the surface water ESVs and the site-specific background values were considered in the refined screening evaluation. Since the criteria for certain metals (barium, cadmium, lead, nickel, and zinc) are dependent on hardness, the average hardness for surface water samples within the Study Area was used to calculate hardness-dependent metals criteria.

3.3.1.3 Sediment Porewater

Concentrations of dissolved metals in porewater were compared in this definitive SLERA to the surface water ESVs, consistent with the EqP theory (U.S. EPA 2005). This approach provides more information about the bioavailability and potential toxicity of metals in sediment than the evaluation of total metal concentrations. However, it is subject to two significant sources of uncertainty (U.S. EPA 2005): (1) porewater extraction procedures such as centrifugation can result in an overestimation of the metal concentrations occurring in the porewater of undisturbed sediment; and (2) characteristics of porewater, such as elevated concentrations of dissolved organic carbon, can reduce the bioavailability of metals in porewater compared with water-only exposures. However, site-specific porewater OC was not measured or incorporated into the exposure calculations. These sources of uncertainty will tend to result in an overestimation of risks.

3.3.2 Refined Screening Evaluation

This section presents the methods used in the refinement of the initial screening evaluation. The refined screening evaluation focuses only on the COPECs and media that progress beyond the initial screening. The refined screening evaluation also considers specialized data (e.g., soot carbon and SEM & AVS data) and applies specialized toxicological techniques (e.g., evaluating mixtures and bioavailability) to further evaluate the potential for constituents to adversely affect aquatic organisms and aquatic-feeding wildlife in the Study Area. Effects characterization methods are described below for benthic invertebrates, fish, and wildlife.

3.3.2.1 Benthic Invertebrates

The refined evaluation for benthic invertebrates relies on cause-effect, concentration-response relationships for PAHs, other organic compounds, and metals in sediment and porewater, based on U.S. EPA guidance.

Sediment toxicity of a substance is related to the bioavailable fraction of that substance in the porewater of sediments. Substances that are sequestered by sediment ligands are neither bioavailable nor toxic to benthic organisms. It has been shown that both inorganics and organic compounds behave in that fashion. Organic compounds typically adhere to other organics in sediment such as humic acid. Inorganics can be sequestered by both organic matter in sediment and by sulfides present in the anoxic region of sediment.

Further, the toxicity of some constituents when present in mixtures can differ from when they are present alone. Toxicity of constituents in mixtures can be synergistic (1 + 1 > 2) or antagonistic (1 + 1 <2). U. S. EPA has issued guidance for evaluating metal mixtures and PAHs in sediment (U. S. EPA 2003b and 2005). These guidelines are applied in this definitive SLERA whenever a metal or a PAH constituent does not pass the initial screening evaluation.

Therefore, in the refined evaluation, both bioavailability and toxicity of mixtures were addressed. The following sections discuss how those issues were addressed per constituent class.

3.3.2.1.1 PAHs

PAHs occur as mixtures rather than individual constituents in the environment and because the toxicity of mixtures of narcotic constituents such as PAHs has been shown to be approximately additive, the assessment of PAHs should always consider the cumulative effects the various PAHs have when present in a mixture. The U.S. EPA (2003b) developed guidance for evaluating the toxicity of PAH mixtures in sediments which also considers their bioavailability: *Procedures for Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures.* The guidance presents final chronic values (FCVs) which are defensible, numerical, and constituent-specific concentration limits of PAHs applicable across a range of sediment types that can be used to assess the extent of ecological risks of contaminated sediments, determine pollution control, and identify, prioritize, and implement appropriate cleanup levels (U.S. EPA, 2003b).

To evaluate the combined toxic contributions of PAHs in a mixture, the sum of the quotients of the measured PAH concentrations (normalized to organic carbon) to the FCVs for each individual PAH is calculated. The quotient is called an Equilibrium Partitioning Sediment Benchmark Toxic Unit ($ESBTU_{FCV}$ or TU) and the summation as represented by $\Sigma ESBTU_{FCV}$ (total TU) is analogous to a hazard index (HI).

$$TU = \frac{[PAH_1]}{FCV_1} + \frac{[PAH_2]}{FCV_2} + \mathrm{K} + \frac{[PAH_n]}{FCV_n}$$

If the HI (total TUs) is equal to or less than one in a given sediment sample, the concentration of the PAH mixture in sediment is acceptable for the protection of benthic organisms. If the HQ exceeds one, the concentration of the PAH mixture in the sediment may not be acceptable for the protection of benthic organisms.

Where PAHs were COPECs in this SLERA, the ESBTU approach was used. Sample specific TOC was used. U.S. EPA's sediment quality guidelines are designed to be applied to a minimum of 34 PAHs, including alkylated PAHs. Default uncertainty factors (UFs) are typically used for the assessment of smaller subsets of the total PAH concentrations in the absence of site-specific data for alkylated PAHs (U.S. EPA 2003b), default uncertainty factors (UFs) are typically used for the assessment of smaller subsets of the total PAH concentration. However, no adjustment factor is needed for sediment in this definitive SLERA because both alkylated and parent PAHs were analyzed.

3.3.2.1.2 Metals

Like PAHs, the assessment of metals in sediment should consider both their bioavailablity and their cumulative effects when present in a mixture. The U.S. EPA (2005) developed guidance for evaluating the bioavailability and toxicity of mixtures of selected metals in sediments: *Procedures for Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Metal Mixtures (Cadmium, Copper, Lead, Nickel, Silver, and Zinc) (U.S. EPA 2005)*. The effects of metals on benthic invertebrates were assessed by applying the U.S. EPA's metal mixture guidelines to the results of the whole sediment SEM-AVS analysis as parallel lines of evidence. Additionally, exposure to porewater was evaluated cumulatively for all detected metals.

Porewater

Exposure to metals in porewater was evaluated cumulatively to account for potential additive effects. Adverse effects are not expected if the sum of the dissolved interstitial water concentrations for each of the metals divided by its respective water quality criteria (WQC) is less than 1.0. This is accomplished through the following equation:

$$\sum IWBU = \frac{[Metal_1]}{WQC_1} + \frac{[Metal_2]}{WQC_2} + K + \frac{[Metal_n]}{WQC_n}$$

where:

IWBU = interstitial water benchmark unit;
[Metal] = dissolved metal concentration in porewater; and
WQC = surface water quality criterion.

The WQC used in this evaluation were final chronic values (FCV) or secondary chronic values (SCV) where FCV were not available. For metals whose toxicity is hardness dependent, sample specific water hardness was used to calculate the WQC. This approach is comparable to the methods used by USEPA in the Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (USEPA 2005) for assessing toxicity due to six divalent metals that are associated with binding to sulfides (i.e., cadmium, copper, lead, nickel, silver, and zinc).

Sediment

Exposure to the bioavailable fraction of divalent metals (i.e., cadmium, copper, lead, nickel and zinc) in sediment can also be evaluated using SEM-AVS data. This can be further refined by also accounting for the role of TOC as a secondary factor controlling the bioavailability of these metals, in sediments where SEM concentrations exceed the concentrations of AVS. This is accomplished through calculating the organic-carbon normalized concentration of "excess" metals ([SSEM-AVS]/f_{oc}). According to U.S. EPA 2005, Toxicity is not likely if [SSEM-AVS]/f_{oc} is less than 130 µmol per gram organic carbon (µmol/g_{OC}); but is expected with 90 percent confidence if (SSEM-AVS)/f_{oc} exceeds 3,000 µmol/g_{OC}. The likelihood of toxicity associated with intermediate values is uncertain. For the purposes of this SLERA, the effects benchmark for (SSEM-AVS)/f_{oc} is conservatively identified as 130 µmol/g_{OC}.

Although chromium does not form insoluble sulfide complexes, the likelihood of sediment toxicity due to chromium can also be predicted based on AVS data

(Boothman, Berry et al. 1999). The toxicity and bioavailability of chromium depend on whether it is present as trivalent or hexavalent chromium. Because AVS limits reduction and oxidation (redox) speciation of chromium (and vice versa), it can be concluded that if AVS is present, then hexavalent chromium is not present. Trivalent chromium is highly insoluble and relatively non-toxic, such that chromium toxicity is not expected in sediments that contain AVS (Boothman, Berry et al. 1999). All of the sediment samples analyzed from the Site contained detectable concentrations of AVS; therefore, chromium-related toxicity to benthic invertebrates is not expected.

In this SLERA, SEM-AVS data are considered for cadmium, copper, lead, nickel, and zinc. The interpretation of AVS and SEM analyses is not subject to the potential (conservative) biases described in Section 3.3.1.3, associated with porewater extraction and porewater composition. However, loss of AVS during sampling is a potential source of conservative bias. The results of AVS and SEM analyses are interpreted according to U.S. EPA (2005) guidelines for assessing the risk of sediment toxicity due to mixtures of cadmium, copper, lead, nickel, and zinc. These effects benchmarks for (SSEM-AVS)/f_{oc} are applied in the SLERA on a sample-by-sample basis.

3.3.2.2 Fish

As part of the derivation of sediment quality guidelines for PAHs, the U.S. EPA (2003b) developed aqueous FCVs for PAHs. These FCVs were applied to PAH mixtures in surface water using the same TU methodology described in Section 3.3.2.1.1 for PAHs in sediment. Surface water samples collected in August 2003 were not analyzed for alkylated PAHs; however, the conservative bias associated with the use of one-half the reporting limit as a proxy for non-detected concentrations more than offsets the TU contribution of alkylated PAHs. On this basis, TU values were calculated for surface water samples in this SLERA without employing an adjustment factor. This approach accounts for potential additive toxicity of multiple PAHs, based on direct exposure to PAHs in surface water. However, exposures via surface water may be less important than ingestion of prey containing PAHs, because PAHs are hydrophobic. A U.S. EPA-sponsored evaluation indicates that the equilibrium partitioning guidelines developed for the protection of benthic invertebrates are protective of fish as well (Linton, Giere et al. 2000).

3.3.2.3 Wildlife

Effects to wildlife from constituents in sediment and surface water, that did not pass the initial screening and are considered bioaccumulative, are evaluated through the identification and use of avian and mammalian toxicity reference values (TRVs).

4. Results of the Screening Level Ecological Risk Assessment

As described in Section 3, the screening-level risk evaluation is accomplished through a tiered process where simple, highly conservative comparisons with screening values (Section 3.3.1) are followed by a more refined evaluation (Section 3.3.2) where necessary. COPECs (if any) that merit further evaluation to fully characterize ecological risks are identified and discussed.

This section presents the results of the preliminary SLERA based on samples from 1991 and 2003 and then the results of the definitive SLERA based on samples obtained in 2010.

4.1 Preliminary SLERA

The preliminary SLERA was conducted using data obtained in 1991 and 2003.

4.1.1 Data

Sediment, surface water, and porewater samples obtained in 1991 and 2003 were used in the preliminary SLERA. Sampling log sheets and laboratory reports associated with those sampling efforts are included in Appendix B.

The sediment, surface water, and porewater data are presented in Tables 4.1-1 through 4.1-3. Data summaries are presented in 4.1-4 through 4.1-6 for sediment, surface water, and porewater, respectively. Grain size analysis is presented in Table 4.1-7.

4.1.2 Initial Screening

The initial tier of the screening evaluation for sediment, surface water, and sediment porewater is presented in Tables 4.1-8 through 4.1-10, respectively, and discussed by media below:

Sediment

Constituents in sediment that are not eliminated from consideration based on comparison of maximum detected concentration to ESVs are:

- PAHs;

§ Four metals (arsenic, cadmium, chromium, nickel); and

§ Three other organic compounds (bis(2-ethylhexyl)phthalate, 4-methylphenol, 2-butanone).

Surface water

Maximum detected concentrations of PAHs and metals in surface water were compared to surface water ESVs in the initial screening. In the October 2003 surface water samples, metals were analyzed as dissolved metals as well as total metals. Dissolved metal analyses have been shown to more accurately predict aquatic toxicity than total metals analyses, because they better reflect the metal concentrations that are bioavailable to aquatic organisms. For this reason, dissolved metal analyses provide the most appropriate means of assessing risks to aquatic organisms (Bergman and Dorward-King 1997; 1993b; 1995; Prothro 1993). However, both total and dissolved metals concentrations were conservatively used in the initial screening.

Constituents in surface water that are not eliminated from consideration based on comparison of maximum detected concentration to ESVs:

· PAHs.

Porewater

Maximum detected concentrations of metals in porewater were compared to surface water ESVs in the initial screening. Dissolved metals in sediment porewater did not exceed screening criteria. However, sediment porewater data are used as part of the refined screening evaluation for benthic invertebrates based on the identification of certain metals as COPECs from whole-sediment data and also to account for cumulative effects.

4.1.3 Refined Screening Evaluation

In the refined screening evaluation, constituents identified as COPECs in the initial screening are further evaluated based on site-specific information, specialized analyses, and other relevant toxicological information. Those constituents with the potential to cause adverse effects to ecological receptors (benthic invertebrates, fish, and wildlife) in the Study Area are then discussed below. Only constituents identified

by the U.S. EPA (2000) as bioaccumulative (PAHs, arsenic, cadmium, and nickel) are evaluated for their potential effects to aquatic-feeding wildlife.

4.1.3.1 Benthic Invertebrates

Potential adverse effects to benthic invertebrates from PAHs, metals, and other organic constituents in sediment and sediment porewater are evaluated in this section of the SLERA.

4.1.3.1.1 PAHs

PAHs were identified as sediment COPECs in the initial screen. As discussed in Section 3.3.2.1.1, the U.S. EPA EqP TU approach (U.S. EPA 2003b) for evaluating the bioavailability and toxicity of 34 PAHs present in mixtures in sediments was used in the refined screen to assess the effects of the PAHs on benthic communities. However, 35 PAHs were included because C1-naphthalenes were reported as 1-methylnaphthalene and 2-methylnaphthalene. On the other hand, several PAHs that did not pass the initial screening were not part of the 34 addressed by U.S. EPA guidance – namely: 1,1-Biphenyl, dibenzothiophene (unsubstituted and alkylated), carbazole, and dibenzofuran. All but dibenzofuran did not have identified ESVs. Therefore those PAHs were evaluated separately by comparison to calculated ESBs.

Dibenzofuran was detected in 7 out of 10 samples with a maximum of 3,100 µg/kg at SS-1 in 1991 which exceeded the ESV of 449 µg/kg. The second highest detected concentration of dibenzofuran was 330 µg/kg in sample SS-3 taken in 1991, while the maximum concentration detected in the 2003 samples was 79 µg/kg. The risk from dibenzofuran was refined using the EqP approach. The TOC in the sample with the maximum concentration was 0.55%, therefore the maximum concentration normalized to carbon content is 0.02 $\mu g/g_{oc}$, which is considerably lower than the Tier 2 ESB value of 37 $\mu g/g_{oc}$ (U.S. EPA 2008). Therefore, it was concluded that concentrations of dibenzofuran in Clear Creek are not expected to cause adverse effects to ecological receptors.

PAHs via U.S. EPA's Equilibrium Partitioning Toxic Unit Approach

The refined evaluation of PAHs in sediment, through the EqP TU approach, indicates that benthic organisms within the Study Area may be affected by PAHs (Table 4.1-11). Elevated PAH concentrations, within the Study Area, were observed at sampling locations near Country Club Road (SED-3, SS-1, and SS-3) and slightly upgradient of

Country Club Road (SED-4 and SS-4). Sheening from the bedrock substrate was observed at SED-3 and SS-1 sampling locations during both sampling events in 2003. Interestingly, PAH concentrations were also elevated in the upgradient reference area. In fact, the highest concentrations of PAHs determined from both the study and reference areas, and the highest TU calculated for the 2003 samples, were located at the sampling location the most upgradient of the Site (SED-8).

As discussed in Section 3, the toxicity of PAHs to benthic organisms is dependent on the amount of organic carbon in sediment. The levels of TOC in sediment samples from the Study Area (ranging from 0.55 to 1.36 percent) and the upstream reference area (ranging from 0.61 to 1.0 percent) are relatively low. The gravel/bedrock substrate of Clear Creek (see Table 4.1-7) contributes to the reduced organic carbon content in sediment samples. Material high in organic matter typically is associated with depositional areas, characterized by finer grained sediment than observed in the 1991 and 2003 samples. These are also the areas where PAHs and other hydrophobic constituents are likely to accumulate. The 2010 sampling event refined this uncertainty by focusing on finer depositional materials to the extent practical.

Further, the preliminary SLERA does not account for the enhanced affinity of PAHs for soot particles, which is recognized as a factor that can mitigate bioavailability and toxicity to benthic invertebrates (U.S. EPA 2003b). The presence of roads and industrial facilities upstream near Clear Creek suggest that soot has likely been deposited, together with PAHs, into the creek from combustion processes. As a result, the bioavailability of PAHs in Clear Creek using the 2003 sediment samples may be overestimated. Furthermore, TU values calculated for PAHs in 2003 sediment samples from within the Study Area only slightly exceed the effects threshold of 1.0 (i.e., 2), suggesting that any adverse effects would be limited to the most sensitive aquatic species.

Other PAHs

The following PAHs were also identified as COPECs in the preliminary SLERA: 1,1-Biphenyl, dibenzothiophene (unsubstituted and alkylated), carbazole, and dibenzofuran. All but dibenzofuran did not have identified ESVs. Therefore MESBs were calculated for those compounds using K_{oc} values obtained from U.S. EPA's EpiWin software (U.S. EPA 2010a) and the lowest chronic freshwater criteria estimated by ECOSAR (U.S. EPA 2009b). The TOC values in the sample with the maximum detected concentration of each PAH were used. Each of these COPECs is discussed separately below.

- 1,1-biphenyl: 1,1-biphenyl was detected in 3 out of 5 samples in the preliminary SLERA. The maximum detected concentration of 13 µg/kg of biphenyl was detected in SED-2 which had TOC measured at 0.55 % so that the maximum concentration normalized to carbon content is 5.64 µg/g_{oc}. Since the EqP Tier 2 ESB for 1,1-biphenyl is 37 µg/g_{oc}, which is much higher than the maximum concentration normalized to carbon content, it was concluded that concentrations of 1,1-biphenyl in Clear Creek are not expected to cause adverse effects on ecological receptors.

- Carbazole: carbazole was detected in 1 out of 5 samples in the preliminary SLERA with a maximum detected concentration of 200 µg/kg detected in SS-3 in 1991. An ESB was calculated using the Koc estimated by EpiWin (9160 L/kg), the minimum predicted chronic fresh water criteria identified by EOCSAR (1.015 mg/L for daphnids), and the minimum TOC measured (0.55%) for the Site. The calculated ESB of 51,000 µg/kg is much higher than the maximum detected concentration, therefore, it was concluded that detected concentrations of carbazole in Clear Creek are not expected to cause adverse effects to ecological receptors.

- Dibenzothiophenes: substituted dibenzothiophenes were detected in all 5 samples taken in 2003 with a maximum detected concentration of 130 µg/kg of C2-dibenzothiophene detected in SED-01, which had a TOC measured at 1.36%. An ESB was calculated using the Koc estimated by EpiWin (9160 L/kg), the minimum predicted chronic fresh water criteria identified by EOCSAR (0.140 mg/L for fish), and the minimum TOC measured in the 2003 samples (0.55%). The calculated ESB of 7,100 µg/kg is much higher than the maximum detected concentration, therefore, it was concluded that detected concentrations of dibenzothiophene in Clear Creek are not expected to cause adverse effects to ecological receptors.

4.1.3.1.2 Metals

While metals in surface water passed the initial screening, the following, metals were identified as sediment COPEC: arsenic, cadmium, chromium, and nickel. Therefore, the evaluation of metals in Clear Creek was refined using porewater data by the IWBU approach as presented in Table 4.1-12 and the sediment AVS-SEM data (Table 4.1-13). The analyses of metals in sediment porewater and AVS-SEM in sediment support the following observations:

- *Arsenic* – Arsenic is unlikely to cause adverse effects to benthic invertebrates. The maximum detected arsenic concentration in sediment porewater (2.8 µg/L) is well below the IDEM water quality criterion (148 µg/L). Furthermore, the cumulative effect of all metals detected in sediment porewater indicates that toxicity is unlikely, as the sum of IWBUs for all metals are below one.

- *Cadmium and nickel* – The AVS-SEM evaluation is inconclusive because the value of SSEM-AVS]/f_{oc}, for three of the five samples in the Study Area are associated with an indeterminate probability of toxicity, while that of two of the five samples indicated toxicity is unlikely (Table 4.1-13). However, the low concentrations of both cadmium and nickel in sediment porewater indicate that these metals pose no risk to benthic invertebrates. The concentrations of cadmium (0.2 µg/L) and nickel (5.1 µg/L) in sediment porewater are well below IDEM water quality criteria (6.5 and 149 µg/L, respectively). As described above, the cumulative evaluation of metals in porewater also indicates risk to benthic invertebrates is unlikely.

- *Chromium* – The maximum detected concentration of chromium in sediment porewater (1.7 µg/L) is well below the screening criteria determined by IDEM for trivalent chromium (238 µg/L). Cumulative toxicity due to metals is also unlikely, as described above.

In summary, the preliminary SLERA found that the toxicity to benthic invertebrates due to metals is very unlikely.

4.1.3.1.3 Other Organic Constituents

The organic constituents: bis(2-ethylhexyl)phthalate, 4-methylphenol, and 2-butanone are discussed below for their potential to cause adverse effects to benthic invertebrates.

- *Bis(2-ethylhexyl)phthalate* - Bis(2-ethylhexyl)phthalate, found in plastics, is ubiquitous in the environment and is a common laboratory contaminant. Bis(2-ethylhexyl)phthalate was detected in 2003 sediment samples at a maximum concentration of 1,300 µg/kg. In aqueous exposures, bis(2-ethylhexyl)phthalate is not toxic to aquatic organisms at concentrations up to the solubility limit (Call, Markee et al. 2001; Rhodes, Adams et al. 1995). Sediment spiked with 3,000,000 µg/kg bis(2-ethylhexyl)phthalate had no effect on either survival or growth of midges and amphipods (Call , Cox et al. 2001).

Based on these studies, bis(2-ethylhexyl)phthalate is very unlikely to adversely affect benthic organisms at the concentrations detected in Clear Creek.

§ *4-Methylphenol* - 4-Methylphenol is formed naturally as part of the biological degradation of woody organic matter and is also used industrially. 4-Methylphenol was detected in 2003 sediment samples at a maximum concentration of 830 µg/kg. The basis of the ESL of 20.2 µg/kg is unclear. A conservative, alternative screening value is thus calculated here for comparison, using the EqP approach as described in Section 3. A water quality benchmark of 530 µg/L is identified by using the U.S. EPA's (1993c) draft final chronic value for 2,4-dimethylphenol as a conservative surrogate, as it is well established that 2,4-dimethylphenol is more toxic than 4-methylphenol (e.g., Feng, Shuokui et al. 1996; Karabunarliev, Mekenyan et al. 1996; Schultz, Holcombe et al. 1986). The use of a well-understood surrogate compound is appropriate because relatively few studies have directly investigated the aquatic toxicity of 4-methylphenol. A K_{oc} of 106 is calculated for 4-methylphenol from the constituent specific log K_{ow} of 2.06. Together with a site-specific average organic carbon content of 0.86 percent and an average solids content of 77.9 percent, these values result in a sediment quality benchmark for 4-methylphenol of 630 µg/kg.

Because this value is below the maximum 4-methylphenol concentration reported in Clear Creek sediment samples used in the preliminary SLERA, 4-methylphenol might pose a risk to benthic invertebrates. However, this conclusion is highly uncertain, for several reasons. First, 4-methylphenol was detected only in 1991 and not in 2003, although the 2003 detection limits were well below the detected concentrations reported from 1991. Second, sample-specific organic carbon and solids data are not available for the 1991 sediment samples. Typically, organic compounds tend to be sequestered preferentially in sediments containing higher organic carbon levels; thus, the sample containing the maximum 4-methylphenol concentration may have contained a higher organic carbon concentration than assumed for this SLERA. Third, the use of 2,4-dimethylphenol as a surrogate to estimate 4-methylphenol toxicity is very conservative and overestimates risks. Fourth, 4-methylyphenol is non-ionic polar compound and EqP typically overestimate pore water concentrations for polar non-ionic compounds. Taken together, these considerations suggest that 4-methylphenol is relatively unlikely to adversely affect benthic invertebrates in the Study Area.

- *2-Butanone* - 2-Butanone, also called methyl ethyl ketone, is a common laboratory contaminant and may not actually occur in Clear Creek. 2-Butanone was detected in one 1991 sediment sample at a concentration of 880 µg/kg. The basis of the Region 5 ESL of 42.4 µg/kg is derived using EqP equation and corresponding water ESL. An alternative screening value was calculated here, using the EqP approach (U.S. EPA 2003), as described in Section 3, using the IDEM's water quality criterion of 14,000 µg/L, a K_{oc} of 1.8, and a site-specific average organic carbon content of 0.86 percent and an average solids content of 77.9 percent. The sediment quality benchmark for 2-butanone is calculated as 4,200 µg/kg. This value is well above the concentration reported in Clear Creek sediment (880 µg/kg), indicating that 2-butanone does not pose a risk to benthic invertebrates.

4.1.3.2 Fish

The evaluation of PAHs in surface water, using the modified TU approach, is provided in Table 4.1-14. The results of this evaluation differ markedly between the August 2003 and October 2003 sampling events. The August 2003 results indicate a high likelihood of toxicity between locations CS-5 and CS-9, whereas the October 2003 results indicate that toxicity is unlikely. This discrepancy reflects a difference in sampling methods between the two sampling events. The October 2003 sampling event was intended to provide representative data for the water column, whereas the August 2003 sampling event intentionally included sampling of surface sheen generated due to sampling-related disturbance of the creek bed. Exposure to sheen is minimal for aquatic organisms due to its presence at the water surface. Further, the October 2003 samples were analyzed for 35 PAHs while the August 2003 data was only analyzed for the non-alkylated PAHs, therefore the October data is associated with less uncertainty.

The results of the risk evaluation for benthic invertebrates exposed to PAHs in sediment are also of interest for fish, because fish may be exposed to PAHs through consumption of prey and direct exposure to sediment. The finding that benthic invertebrates may be at risk due to PAHs qualitatively implies that fish may also be at risk. However, the extent to which fish are exposed to sediment in Clear Creek is limited, because most of the creek bed consists of exposed bedrock with limited areas of coarse sediment. Thus, depositional sediments do not constitute an important reservoir of PAHs in this system. In summary, fish may encounter potentially toxic concentrations of PAHs on a spatially limited basis in the form of sheen or PAH-containing sediment, but direct toxicity due to PAHs in the water column is unlikely.

4.1.3.3 Wildlife

The following COCs did not pass the initial screening and were identified as potentially bioaccumulative: PAHs, arsenic, cadmium, chromium, and nickel.

Hexavalent chromium is identified by the U.S. EPA as a bioaccumulative compound; however, hexavalent chromium is not naturally occurring and is not expected to be present at the Site. Based on U.S. EPA research (Boothman, Berry et al. 1999), the presence of AVS in sediment indicates that chromium is present in the trivalent form. Since AVS was present in all sediment samples collected from the Study Area in October 2003, chromium within the Study Area is present in the trivalent form and therefore is not of concern with regard to bioaccumulation.

Therefore, the effects of PAHs, arsenic, cadmium, and nickel on aquatic-feeding wildlife were assessed in this SLERA. Ecological risks to wildlife are estimated through the calculation of hazard quotients (HQs). An HQ is the ratio of the measure of exposure to a literature-based TRV. An HQ less than or equal to 1 indicates that adverse effects due to a COC are unlikely. As shown in Appendix D, all HQs calculated for wildlife receptors in this SLERA are below 1, indicating that wildlife are not at risk due to COC exposures in the Study Area.

4.1.4 Results Summary and Outcome

The findings of the preliminary SLERA based on data acquired in 1991 and 2003 are summarized as follows:

- PAHs in sediment and sheen material are the only constituents that may pose a potential risk to aquatic organisms in Clear Creek based on slight exceedances of the target levels.

- Aquatic-feeding wildlife are not at risk from exposure to PAHs or other COCs in the Clear Creek Study Area. Risks unlikely even if surface sheen present, because contact with surface sheens is sporadic at most.

- Benthic invertebrates, and possibly fish, inhabiting the portion of Clear Creek upgradient of Country Club Road are at increased risk from PAHs. The source of PAHs in this area is unknown, but it is clear from these findings that multiple upgradient sources of PAHs are affecting the Study Area.

Based on the results of the preliminary SLERA, which was initially conducted in 2003, a creek liner and interceptor trench remediation system was designed and installed along an approximate 170 ft section of Clear Creek within the northern tract of the Site, immediately adjacent to the former operations area, in the Summer-Fall 2007. In September 2010, ARCADIS collected sediment and surface water samples to confirm the effectiveness of the mitigation measures taken. A definitive SLERA was conducted to evaluate the potential risk of adverse effects to ecological receptors from current conditions in Clear Creek. The definitive SLERA is presented below.

4.2 Definitive SLERA

The definitive SLERA is based on sediment and surface water data obtained in 2010. The definitive SLERA was conducted to evaluate the mitigation efforts conducted at a portion of Clear Creek near the former operations area and to evaluate the potential risk of adverse effects to ecological receptors from current (as of fall of 2010) conditions in Clear Creek.

4.2.1 Data

Sediment and surface water data obtained in 2010 were used in the definitive SLERA. Sampling log sheets, laboratory reports, and data validation reports associated with the 2010 sampling effort are included in Appendix B.

One of the contracted laboratories (Alpha Analytical) reported two sets of results for sample SED-14 and none for SED-12. To correct for the typographical mistake in transcribing the sample name, the results for SED-12 were identified based on the sample date and time rather than the sample name with the aid of the field log. Specifically, the sample with lab ID L1013935-13 was identified as being SED-12 since the sampling date and time (09/09/10 at 16:15) matched those of SED-12 per field notes.

Following data quality procedures for the project, a Tier II data validation was conducted by the ARCADIS internal data validation team. It was necessary to qualify a few compounds as unusable “R” as explained below.

- Sample location “SED-18” (8270C analysis), 2,4-dimethylphenol, due to both Matrix Spike/Matrix Spike Duplicate (MS/MSD) percent recovery <10%.

- Sample location “SED-14 (F76426-13)” (8270C analysis), all acid compounds due to surrogate percent recovery <10%.

Tables 4.2-1 and 4.2-2 present the analytical data obtained in 2010 for sediment and surface water, respectively, while Tables 4.2-3 and 4.2-4 present the 2010 Study Area data summaries for sediment and surface water, respectively.

4.2.2 Initial Screening

The initial tier of the screening evaluations for sediment and surface water are presented in Tables 4.2-5 and 4.2-6, respectively. Maximum detected constituent concentrations were compared with ecological screening values. The results of the screening are annotated below:

- BTEX, phthalates, and phenols were not detected in any of the sediment samples from Clear Creek; therefore, they were eliminated from further evaluation for sediment. Further, 4-methylphenol which was detected once in sediment samples from 1991 but not in 2003 was again not detected in any sediment samples in 2010.

- All phthalates analyzed with the exception of bis(2-ethylhexyl) phthalate were not detected in surface water and were thus eliminated from further evaluation in the SLERA.

- The only constituents considered COPECs at this point were PAHs in sediment and surface water and bis(2-ethylhexyl) phthalate in surface water.

4.2.3 Refined Screening Evaluation

In the refined screening evaluation, COPECs identified in the initial screening are further evaluated based on site-specific information, specialized analyses, and other relevant toxicological information. Those constituents with the potential to cause adverse effects to ecological receptors (benthic invertebrates, fish, and wildlife) in the Study Area are discussed below.

4.2.3.1 Benthic Invertebrates

PAHs were identified as sediment COPECs in the initial screen. As discussed in Section 3.3.2.1.1, the U.S. EPA EqP TU approach (U.S. EPA 2003b) for evaluating the

bioavailability and toxicity of 34 PAHs present in mixtures in sediments was used in the refined screen to assess the effects of the PAHs on the Clear Creek benthic community. Consistent with the preliminary SLERA, 35 PAHs were included because C1-naphthalenes were reported as 1-methylnaphthalene and 2-methylnaphthalene. Further, carbazole, which is a PAH that is not part of the 34 addressed by U.S. EPA guidance, did not pass the initial screening. Therefore, carbazole was also considered in the refined SLERA.

The evaluation of PAHs in sediment via the EqP TU approach indicates that benthic organisms within the Study Area are unlikely to be adversely affected by PAHs (Table 4.2-7). That is, the Sum TUs for each sediment sample was less than 1.0. Based on these results, the risks to benthic invertebrates associated with PAHs at Clear Creek appear to be negligible (i.e., *de minimis*) and do not warrant further evaluation.

Carbazole was detected in all samples collected in 2010 at concentrations ranging from 7.4 to 621 µg/kg. The maximum concentration was detected in sample SED-17 at 621 µg/kg (an average of 1210 and 33 µg/kg reported in duplicate samples at that location). The TOC content in SED-17 was 6.5%. An ESB was calculated using the Koc estimated by EpiWin (9160 L/kg), the minimum predicted chronic fresh water criteria identified by EOCSAR (1.015 mg/L for daphnids), and the minimum TOC measured at the Site (0.55%). The ESB of 51 mg/kg calculated using the lowest TOC content measured onsite (despite the fact that the TOC was an order of magnitude higher in sample with maximum concentration) is much higher than the maximum detected concentration. Therefore, it was concluded that detected concentrations of carbazole in Clear Creek are not expected to cause adverse effects on ecological receptors.

4.2.3.2 Fish

The evaluation of PAHs in surface water indicates that fish (and other aquatic biota) within the Study Area are unlikely to be affected by PAHs (Table 4.2-8). As with PAHs in sediment, the Sum TU for each surface water sample was less than 1.0. Based on these results, the risks to fish from PAHs in seep water discharging to Clear Creek appear to be negligible (i.e., *de minimis*) and do not warrant further evaluation.

4.2.4 Results Summary

The findings of the definitive SLERA are that significant adverse effects are unlikely at the aquatic habitat in Clear Creek that is associated with the Site.

5. Uncertainty Evaluation

Uncertainty can be introduced into a SLERA at every step in the evaluation process as information of varying quality is gathered from diverse sources in order to be integrated into a complex framework. The SLERA process is designed to be conservative, such that high confidence can be placed in findings of a lack of risk. Thus, where uncertainty exists, conservative assumptions are employed.

The uncertainties associated with key parameters and issues in this assessment are summarized below.

- Maximum concentrations – The use of maximum constituent concentrations is simplistic and highly conservative. Wildlife are actually exposed to a range of concentrations over time as they move throughout their foraging range.
- Screening values – The screening values selected for use in the initial screening tier of this SLERA are highly conservative.
- Aqueous FCVs for PAHs – These FCVs were derived using observed SARs based on the constituent's K_{ow} and general narcosis, rather than standard toxicity test data. Fish may be susceptible to effects other than general narcosis (Logan 2007), which could lead to the underestimation of potential risks. However, the FCVs used in this assessment were derived specifically for the PAHs in question and are based on a toxicity data set dominated by tests with water column biota, primarily fathead minnows. Also, use of the TU method quantitatively accounts for cumulative effects of all measured PAHs, which cannot otherwise be accomplished with the available toxicity data obtained from the literature.
- Photo-activation of PAHs – The toxicity of PAHs can be enhanced when organisms are simultaneously exposed to ultra violet (UV) light. In environments where significant sunlight penetrates to the sediment and benthic organisms are exposed to UV light, the EPA (2003a) screening values may be underprotective. Unfortunately, the likelihood and magnitude of potential phototoxicity cannot be accurately quantified at this time, due to the lack of *in situ* toxicity studies (Barron 2007). The water column in Clear Creek is shallow, but light penetration will be diminished by the typically turbid water in Clear Creek, which is depicted in the Site photos (Appendix A). However, organisms that are translucent to UV light and inhabit the water column or sediment surface are most at risk. Benthic organisms generally have low UV exposure because of morphological characteristics (e.g. sklerotized surfaces) and life history (Barron 2007).

- Soot carbon – Soot carbon, also called black carbon, has a much higher sorption capacity than biologically derived organic carbon (Ghosh 2007). PAHs may partition less to interstitial water in sediments with elevated soot carbon concentrations than predicted by the EqP model, thus making the sediment benchmarks overprotective (EPA 2003a). Although black carbon was measured in sediment collected at the Site, the potential reduction in estimated site-specific toxicity was not quantified, because it was deemed unnecessary since the sum of TUs using TOC alone was less than 1.0 for all samples.
- NAPL – As with soot carbon, NAPLs like coal tar may alter the sorption capacity of sediment, though the significance of these liquids relative to benthic toxicity is not yet fully understood (EPA 2003b). The sheen observed on the surface water in 2003 was a light NAPL, which is chemically very different from coal tar and unlikely to affect the bioavailability of PAHs in the same manner as such sediment-associated dense NAPLs. The sheen observed in 2010 was similar in quality to that observed previously, but was present in lesser quantity.
- Potential Cumulative effects of PCBs – The presence of additional nonionic narcotic constituents (e.g, PCBs) in the receiving environment, though unrelated to the Site, may make the EPA benchmarks for PAH mixtures underprotective, because the cumulative effect of multiple constituents with the same mode of action other than the measured PAHs is not accounted for by the sum of toxic units method (EPA 2003b). Fish consumption advisories are in place for Clear Creek in Monroe County due to elevated levels of PCBs in fish. This suggests that risks to fish and aquatic biota in the river may be greater than predicted in this assessment. This uncertainty is considered acceptable for this assessment, because the sum of toxic units is well below 1.0 for all 2010 water samples.
- Non-detected concentrations – As described in Section 3, a very conservative proxy value of one-half the reporting limit is used for non-detected constituent concentrations. This approach can significantly overestimate exposures.
- Bioaccumulation – In order to assess risks to aquatic-feeding wildlife, the bioaccumulation of PAHs in aquatic organisms was estimated from sediment data. Estimated concentrations in biota tissue are inherently more uncertain than measured concentrations. However, this source of uncertainty is of minor importance because none of the COPECs evaluated in this SLERA has the potential to biomagnify through the food web.

Due to the intentionally conservative nature of this SLERA, there would be greater uncertainty associated with findings of potential risk than with findings of a lack of risk.

However, the results for this assessment suggest that risks to all of the ecological receptors potentially exposed to PAHs in seep water discharging to Clear Creek are negligible (i.e., *de minimis*). Therefore, further evaluation to reduce these uncertainties is not warranted.

6. Summary and Conclusions

ARCADIS has developed this definitive SLERA on behalf of CSXT to assist with closure activities under the IDEM VRP at the former Indiana Creosoting Company facility. Due to ongoing investigation and remediation activities, this SLERA focused on the portion of Clear Creek that is associated with the Site as the Study Area.

The SLERA focused on the COCs at the Site which included DNAPL (creosote), selected SVOCs (phenols, phthalates, and priority pollutant and alkylated PAHs), and selected VOCs (benzene, toluene, ethylbenzene, and xylene [BTEX]), and metals (total, dissolved, and as SEM-AVS).

The SLERA was conducted in two phases. A preliminary SLERA was conducted in 2004 based on sediment, surface water and porewater data collected in 1991 and 2003. The preliminary SLERA concluded that the only COCs that may cause potential risk to ecological receptors in Clear Creek are PAHs in sediment. Based in part on the results of the preliminary SLERA, and intermittent presence of DNAPL globules on the creek bottom, a creek liner was installed along an approximate 170 foot section of Clear Creek within the northern tract of the Site, immediately adjacent to the former operations area, in the Summer-Fall of 2007.

Sediment and surface water samples were obtained from Clear Creek in 2010 to evaluate the effectiveness of the mitigation efforts. The data was used to conduct a definitive SLERA for the Study Area at Clear Creek. The results of the definitive SLERA indicate that ecologically significant adverse effects are unlikely at the Clear Creek Study Area due to Site related COCs. Therefore, further investigation of potential ecological risks and remediation to reduce potential ecological risks are not warranted for Clear Creek.

7. References

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Tables

Table 4.1-1
Analytical Results for Sediment Samples - 1991 and 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

		Study Area										Upgradient		
Compound	Sample ID	SS1	SS2	SS3	SS4	SS5	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8
	Date	4/1991	4/1991	4/1991	4/1991	4/1991	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)														
Unsubstituted PAHs														
Acenaphthene		4000	<330	400	< 330	360	68	110	74	53 [75]	77	28	50	100
Acenaphthylene		< 660	< 330	< 330	< 330	< 660	57	19	11	21 [25]	21	9.3	12	29
Anthracene		1100	< 330	570	< 330	< 660	220	64	250	130 [150]	230	86	120	380
Benz(a)anthracene		2600	810	2100	850	1400	950	240	500	620 [750]	790	410	450	1800
Benzo(a)pyrene		2300	970	2000	890	1400	880	290	490	720 [870]	850	480	500	2200
Benzo(b)fluoranthene		3600	1600	2700	1200	2200	690	300	500	720 [850]	820	510	540	2300
Benzo(e)pyrene		NA	NA	NA	NA	NA	560	220	320	490 [570]	550	340	360	1600
Benzo(g,h,i)perylene		920	610	1300	610	880	890	190	280	410 [480]	470	300	270	1200
Benzo(k)fluoranthene		660	310	730	330	850	740	250	380	570 [690]	710	420	430	2200
Chrysene		2300	950	2000	950	1800	1000	310	570	770 [900]	960	550	550	2500
Dibenz(a,h)anthracene		< 660	< 330	< 330	< 330	< 660	200	43	70	89 [110]	120	69	64	270
Fluoranthene		8300	1100	3800	1300	3000	2600	640	1700	1400 [1700]	1700	1100	1000	5900
Fluorene		3800	< 330	460	< 330	< 660	82	110	110	45 [68]	81	37	52	150
Indeno(1,2,3-cd)pyrene		1100	580	1200	600	870	610	320	510	720 [840]	870	540	470	2000
Naphthalene		8400	< 330	270	< 330	< 660	39	58	29	11 [17]	10	10	21	20
Perylene		NA	NA	NA	NA	NA	430	69	120	160 [200]	200	110	120	510
Phenanthrene		11000	490	3500	740	2000	880	470	1200	650 [880]	920	650	650	2600
Pyrene		3700	1000	3900	1600	3200	1600	500	1200	1200 [1500]	1500	960	860	4400

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Clear Creek, Bloomington, Indiana

		Study Area										Upgradient		
Compound	Sample ID	SS1	SS2	SS3	SS4	SS5	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8
	Date	4/1991	4/1991	4/1991	4/1991	4/1991	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003
Alkylated PAHs														
1-Methylnaphthalene		NA	NA	NA	NA	NA	18	42	6.9	9.1 [11]	30	8.8	7.3	14
2-Methylnaphthalene		2400	< 330	< 330	< 330	< 660	16	47	6	8.3 [9.7]	20	13	9.3	15
C1-Chrysenes		NA	NA	NA	NA	NA	900	140	200	320 [380]	380	190	210	850
C1-Fluoranthenes/pyrenes		NA	NA	NA	NA	NA	1200	190	340	480 [590]	620	300	350	1300
C1-Fluorenes		NA	NA	NA	NA	NA	59	20	25	21 [28]	67	13	16	41
C1-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	470	100	210	210 [260]	390	140	150	600
C2-Chrysenes		NA	NA	NA	NA	NA	400	72	74	120 [160]	120	84	96	280
C2-Fluorenes		NA	NA	NA	NA	NA	64	10	15	20 [26]	41	10	14	40
C2-Naphthalenes		NA	NA	NA	NA	NA	37	46	10	19 [23]	85	17	13	26
C2-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	350	51	73	120 [140]	160	63	72	270
C3-Chrysenes		NA	NA	NA	NA	NA	240	51	33	63 [120]	61	48	60	130
C3-Fluorenes		NA	NA	NA	NA	NA	51	14	16	29 [26]	28	16	22	51
C3-Naphthalenes		NA	NA	NA	NA	NA	57	24	15	25 [30]	71	18	17	34
C3-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	210	33	36	69 [81]	71	41	47	140
C4-Chrysenes		NA	NA	NA	NA	NA	320	56	< 4.9	21 [47]	21	22	26	49
C4-Naphthalenes		NA	NA	NA	NA	NA	37	9.7	8.3	16 [20]	28	9.8	10	22
C4-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	130	22	24	39 [54]	33	28	29	78
Other PAHs														
1,1-Biphenyl		NA	NA	NA	NA	NA	7.4	13	< 4.9	< 5 [< 4.8]	8.3	< 4.7	< 4.6	7.1
C1-Dibenzothiophenes		NA	NA	NA	NA	NA	22	< 4.9	5.6	11 [14]	14	6.2	8	15
C2-Dibenzothiophenes		NA	NA	NA	NA	NA	130	15	16	29 [34]	40	15	20	52
C3-Dibenzothiophenes		NA	NA	NA	NA	NA	58	21	20	32 [37]	32	20	28	55
Carbazole		< 660	< 330	200	< 330	< 660	NA	NA	NA	NA [NA]	NA	NA	NA	NA
Dibenzofuran		3100	< 330	330	< 330	< 660	43	79	39	17 [30]	18	18	29	64
Dibenzothiophene		NA	NA	NA	NA	NA	47	29	66	33 [46]	54	30	32	120

Table 4.1-1
Analytical Results for Sediment Samples - 1991 and 2003
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Clear Creek, Bloomington, Indiana

		Study Area										Upgradient		
Compound	Sample ID	SS1	SS2	SS3	SS4	SS5	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8
	Date	4/1991	4/1991	4/1991	4/1991	4/1991	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003
Total Metals (mg/kg)														
Antimony		NA	NA	NA	NA	NA	0.44	0.46	0.64	0.42 [0.55]	0.83	0.41	0.42	0.31
Arsenic		3.6	5.6	3.8	3.9	3.8	9.7	13.3	15.6	6.9 [8.1]	13.4	14.1	8.9	5.2
Barium		NA	NA	NA	NA	NA	38.6	43.8	78.1	44.8 [45.4]	38.5	132	68.6	33
Beryllium		NA	NA	NA	NA	NA	0.7	0.45	0.56	0.47 [0.48]	0.49	0.63	0.35	0.27
Cadmium		NA	NA	NA	NA	NA	0.84	0.88	0.8	0.99 [1.26]	0.71	0.81	0.72	0.9
Chromium		13	9.2	16	14	11	44.1	39.4	44.6	30.6 [28.1]	34.9	26.5	28	22.6
Copper		15	24	16	12	21	6.3	5.6	7.1	7.3 [9]	10.8	NA	NA	NA
Lead		NA	NA	NA	NA	NA	27.3	25.9	33.8	38.4 [32.2]	33.5	199	26	55
Mercury		NA	NA	NA	NA	NA	0.12	0.08	0.04	0.23 [0.24]	0.14	0.05	0.45	0.32
Nickel		NA	NA	NA	NA	NA	27.3	17.3	21.3	16 [16.8]	17.1	22.1	13.4	10
Thallium		NA	NA	NA	NA	NA	0.05	0.05	0.05	0.06 [0.05]	0.05	0.05	0.05	0.05
Zinc		NA	NA	NA	NA	NA	99.8	79.4	86.8	112 [98]	81.3	79.4	68.8	74.6
SEM Metals (mg/kg)														
Cadmium		NA	NA	NA	NA	NA	0.6	0.6	0.5	0.7 [0.9]	0.8	NA	NA	NA
Lead		NA	NA	NA	NA	NA	28.7	158	39	36.4 [38.8]	36.1	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	< 0.04	< 0.03	< 0.03	< 0.03 [< 0.04]	0.08	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	5.4	5.2	5.4	5 [5.4]	5.2	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	54.9	50.8	326	59.3 [63.1]	73.3	NA	NA	NA
Acid Volatile Sulfide (AVS) (mg/kg)														
Sulfide		NA	NA	NA	NA	NA	1	1.4	3.9	13.3 [18.5]	6.8	NA	NA	NA

Table 4.1-1
Analytical Results for Sediment Samples - 1991 and 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

		Study Area										Upgradient		
Compound	Sample ID	SS1	SS2	SS3	SS4	SS5	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8
	Date	4/1991	4/1991	4/1991	4/1991	4/1991	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003
Phthalates (µg/kg)														
Bis(2-ethylhexyl)phthalate		610	< 330	450	770	1300	< 1100	< 1100	< 950	< 1200 [< 1000]	< 940	< 960	< 990	< 1100
Butyl benzyl phthalate		< 660	< 330	170	< 330	< 660	< 55	< 51	78	< 57 [< 50]	< 47	< 48	< 50	340
Phenols (µg/kg)														
4-Methylphenol		830	< 330	< 330	240	650	< 55	< 51	< 48	< 57 [< 50]	< 47	< 48	< 50	< 51
Volatile Organic Compounds (mg/kg)														
2-Butanone		< 0.63	< 0.63	< 0.63	< 0.63	0.88	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromethane		< 0.31	0.57	0.38	< 0.31	< 0.31	NA	NA	NA	NA	NA	NA	NA	NA
Toluene		< 0.31	0.82	0.76	0.44	0.44	< 0.14	< 0.13	< 0.13	< 0.14 [< 0.14]	< 0.13	NA	NA	NA
Carbon Content (%)														
Total organic carbon (TOC)		NA	NA	NA	NA	NA	1.36	0.55	0.56	0.55 [0.77]	1.19	0.66	0.61	1

NA - Not analyzed
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
SEM - simultaneously extracted metals

Table 4.1-2
Analytical Results for Surface Water Samples - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Sample ID	Study Area														Upgradient		
		CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8	CS9	CS10	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8
	Date	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																			
Unsubstituted PAHs																			
Acenaphthene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	91.8	< 1.0	< 1.0	< 1.1	< 1.0	< 1.0 [< 1.0]	0.028	0.034	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	12.2	< 1.0	< 1.0	< 1.1	< 1.0	< 1.0 [< 1.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Anthracene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	28.7	0.31	< 1.0	< 1.1	< 1.0	< 1.0 [< 1.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Benz(a)anthracene		< 0.21	< 0.2	< 0.21 [0.12]	< 0.21	30.0	0.85	0.3	0.21	0.46	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.03	< 0.02	0.07
Benzo(a)pyrene		< 0.21	0.12	< 0.21 [0.20]	< 0.21	17.9	1.1	0.52	0.28	0.65	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.03	< 0.02	0.068
Benzo(b)fluoranthene		< 0.21	0.21	0.18 [0.36]	0.18	24.3	2.3	1.2	0.46	1	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.027	< 0.02	0.083
Benzo(e)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.029	< 0.02	0.073
Benzo(g,h,i)perylene		< 0.21	0.11	< 0.21 [0.19]	< 0.21	6.7	1.1	0.62	0.22	0.49	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.022	< 0.02	0.056
Benzo(k)fluoranthene		< 0.21	< 0.2	< 0.21 [0.10]	< 0.21	9.1	0.63	0.31	0.13	0.29	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.038	< 0.02	0.1
Chrysene		< 0.21	0.14	0.13 [0.21]	0.12	22.4	1.5	0.81	0.28	0.63	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.048	< 0.02	0.11
Dibenz(a,h)anthracene		< 0.21	< 0.2	< 0.21 [< 0.20]	< 0.21	2.0	0.2	< 0.2	< 0.22	0.1	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Fluoranthene		< 1.0	0.26	0.26 [0.37]	< 1.1	141.0	3.8	1.8	0.73	1.2	< 1.0 [< 1.0]	0.024	0.024	< 0.02	< 0.02 [< 0.02]	< 0.02	0.076	< 0.02	0.2
Fluorene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	95.5	0.38	< 1.0	< 1.1	< 1.0	< 1.0 [< 1.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Indeno(1,2,3-cd)pyrene		< 0.21	0.12	< 0.21 [0.21]	< 0.21	8.3	1.2	0.64	0.24	0.53	< 0.2 [< 0.20]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.025	< 0.02	0.072
Naphthalene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	320.0	< 1.0	< 1.0	0.29	< 1.0	< 1.0 [< 1.0]	0.054	0.071	0.074	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	261.0	2.2	0.91	0.45	0.51	< 1.0 [< 1.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.033	< 0.02	0.064
Pyrene		< 1.0	< 1.0	< 1.0 [0.27]	< 1.1	78.4	2.3	1.1	0.45	0.85	< 1.0 [< 1.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.077	< 0.02	0.16
Alkylated PAHs																			
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
2-Methylnaphthalene		< 1.0	< 1.0	< 1.0 [< 1.0]	< 1.1	100	< 1.0	< 1.0	< 1.1	< 1.0	< 1.0 [< 1.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C1-Chrysenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C1-Fluoranthenes/pyrenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	0.039	< 0.02	0.058
C1-Fluorenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C1-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C2-Chrysenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C2-Fluorenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C2-Naphthalenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C2-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C3-Chrysenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C3-Fluorenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C3-Naphthalenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C3-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C4-Chrysenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C4-Naphthalenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C4-Phenanthrenes/anthracenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Other PAHs																			
1,1-Biphenyl		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C1-Dibenzothiophenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C2-Dibenzothiophenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
C3-Dibenzothiophenes		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Carbazole		< 5.2	< 5.0	< 5.2 [< 5.0]	< 5.3	16.8	< 5.2	< 5.1	< 5.6	< 5.1	< 5.0 [< 5.0]	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran		< 5.2	< 5.0	< 5.2 [< 5.0]	< 5.3	83	< 5.2	< 5.1	< 5.6	< 5.1	< 5.0 [< 5.0]	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Dibenzothiophene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02

Table 4.1-2
Analytical Results for Surface Water Samples - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

		Study Area															Upgradient		
Compound	Sample ID	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8	CS9	CS10	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8
	Date	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	8/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003	10/2003
Total Metals (µg/L)																			
Antimony		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.29	0.27	0.31	0.29 [0.3]	0.28	0.28	0.28	0.31
Arsenic		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	1.4	1.5	1.4 [1.5]	1.4	1.5	1.5	1.6
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	88.9	87.1	89.2	85.9 [85.4]	86.3	90	86.2	87.8
Beryllium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	< 0.02
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.12	0.11	0.13	0.13 [0.15]	0.14	0.16	0.13	0.19
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.6	0.6	0.7	0.5 [0.7]	0.6	0.8	0.6	0.9
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.28	0.18	0.4	0.36 [0.29]	0.22	1.04	0.16	2.3
Mercury		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0. < 0.2	< 0.2	< 0.2
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	1.8	1.8	1.8 [2.4]	2	2.1	1.7	2.1
Thallium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	0.02	< 0.02	< 0.02 [< 0.02]	< 0.02	< 0.02	< 0.02	0.02
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.3	5.6	6.4	5.4 [5.7]	5.8	10.8	4.8	12.4
Dissolved Metals (µg/L)																			
Antimony		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.31	0.28	0.29	0.3 [0.33]	0.28	NA	NA	NA
Arsenic		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	1.3	1.5	1.4 [1.4]	1.4	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	86.3	85.6	86.7	87.1 [88.4]	86.7	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.14	0.14	0.13	0.12 [0.12]	0.13	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.6	0.5	0.5	0.6 [0.5]	0.6	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.11	0.12	0.12	0.12 [0.1]	0.11	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.8	1.7	1.9	2 [1.8]	1.7	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.02	< 0.02	< 0.02	0.02 [0.02]	< 0.02	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.2	3.9	4.8	6.5 [6.1]	6.7	NA	NA	NA
Other (percent)																			
Hardness		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	308	308	294	287 [300]	290	303	294	300

NA - Not analyzed
SEM - simultaneously extracted metals
µg/L- micrograms per liter

Table 4.1-3
Analytical Results for Sediment Porewater Samples - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Sample ID Date	SED-1 10/2003	SED-2 10/2003	SED-3 10/2003	SED-4[c] 10/2003	SED-5 10/2003
Metals (µg/L)						
Antimony		0.22	0.11	0.17	0.285	0.32
Arsenic		1.6	1.9	2.7	2.25	1.6
Barium		123	107	134	229.5	87.1
Cadmium		0.18	0.09	0.14	0.105	0.2
Chromium		0.5	0.6	0.4	1.15	0.7
Lead		0.16	0.08	0.56	0.15	0.71
Nickel		2.7	3.1	4.9	4.45	2.4
Thallium		0.02	0.01	0.01	0.01	0.02
Zinc		22.8	4	4.1	4.75	13.4
Other (percent)						
Hardness		344	316	344	415	312

mg/L- milligrams per liter
µg/L- micrograms per liter

[c] Values are an average of the primary and duplicate concentrations at this location.

Table 4.1-4
Data Summary for Study Area Sediment Samples - 1991 and 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Range of Detected Concentrations		Arithmetic Mean[a]	Frequency of Detection	Frequency of Detection (percent)
	Minimum	Maximum			
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)					
Unsubstituted PAHs					
Acenaphthene	64	4,000	591	8 / 10	80
Acenaphthylene	11	57	129	5 / 10	50
Anthracene	64	1,100	323	7 / 10	70
Benz(a)anthracene	240	2,600	1,093	10 / 10	100
Benzo(a)pyrene	290	2,300	1,087	10 / 10	100
Benzo(b)fluoranthene	300	3,600	1,440	10 / 10	100
Benzo(e)pyrene	220	560	436	5 / 5	100
Benzo(g,h,i)perylene	190	1,300	660	10 / 10	100
Benzo(k)fluoranthene	250	850	559	10 / 10	100
Chrysene	310	2,300	1,168	10 / 10	100
Dibenz(a,h)anthracene	43	200	169	5 / 10	50
Fluoranthene	640	8,300	2,569	10 / 10	100
Fluorene	57	3,800	536	7 / 10	70
Indeno(1,2,3-cd)pyrene	320	1,200	744	10 / 10	100
Naphthalene	10	8,400	948	7 / 10	70
Perylene	69	430	200	5 / 5	100
Phenanthrene	470	11,000	2,197	10 / 10	100
Pyrene	500	3,900	1,955	10 / 10	100
Alkylated PAHs					
1-Methylnaphthalene	6.9	42	21	5 / 5	100
2-Methylnaphthalene	6	2,400	332	6 / 10	60
C1-Chrysenes	140	900	394	5 / 5	100
C1-Fluoranthenes/pyrenes	190	1,200	577	5 / 5	100
C1-Fluorenes	20	67	39	5 / 5	100
C1-Phenanthrenes/anthracenes	100	470	281	5 / 5	100
C2-Chrysenes	72	400	161	5 / 5	100
C2-Fluorenes	10	64	31	5 / 5	100
C2-Naphthalenes	10	85	40	5 / 5	100
C2-Phenanthrenes/anthracenes	51	350	153	5 / 5	100
C3-Chrysenes	33	240	95	5 / 5	100
C3-Fluorenes	14	51	27	5 / 5	100
C3-Naphthalenes	15	71	39	5 / 5	100
C3-Phenanthrenes/anthracenes	33	210	85	5 / 5	100
C4-Chrysenes	21	320	87	4 / 5	80
C4-Naphthalenes	8.3	37	20	5 / 5	100
C4-Phenanthrenes/anthracenes	22	130	51	5 / 5	100

Table 4.1-4
Data Summary for Study Area Sediment Samples - 1991 and 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Range of Detected Concentrations		Arithmetic Mean[a]	Frequency of Detection	Frequency of Detection (percent)
	Minimum	Maximum			
Other PAHs					
1,1-Biphenyl	7.4	13	6.7	3 / 5	60
C1-Dibenzothiophenes	5.6	22	11	4 / 5	80
C2-Dibenzothiophenes	15	130	47	5 / 5	100
C3-Dibenzothiophenes	20	58	33	5 / 5	100
Carbazole	200	200	238	1 / 5	20
Dibenzofuran	18	3,100	429	7 / 10	70
Dibenzothiophene	29	66	47	5 / 5	100
Total LPAHs[b] (mg/kg)			2.1		
Total HPAHs[b] (mg/kg)			9.2		
Total Metals (mg/kg)					
Antimony	0.44	0.83	0.57	5 / 5	100
Arsenic	3.6	16	8.5	10 / 10	100
Barium	39	78	49	5 / 5	100
Beryllium	0.45	0.7	0.54	5 / 5	100
Cadmium	0.71	1.1	0.87	5 / 5	100
Chromium	9.2	45	27	10 / 10	100
Copper	5.6	24	12	10 / 10	100
Lead	26	35	31	5 / 5	100
Mercury	0.04	0.24	0.12	5 / 5	100
Nickel	16	27	20	5 / 5	100
Thallium	0.05	0.055	0.051	5 / 5	100
Zinc	79	105	90	5 / 5	100
SEM Metals (mg/kg)					
Cadmium	0.5	0.8	0.66	5 / 5	100
Lead	29	158	60	5 / 5	100
Mercury	0.08	0.08	0.08	5 / 5	100
Nickel	5.2	5.4	5.3	5 / 5	100
Zinc	51	326	113	5 / 5	100
Acid Volatile Sulfide (AVS) (mg/kg)					
Sulfide	1	16	5.8	5 / 5	100

Table 4.1-4
Data Summary for Study Area Sediment Samples - 1991 and 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Range of Detected Concentrations		Arithmetic Mean[a]	Frequency of Detection	Frequency of Detection (percent)
	Minimum	Maximum			
Phthalates (µg/kg)					
Bis(2-ethylhexyl)phthalate	450	1,300	589	4 / 10	40
Butyl benzyl phthalate	78	170	134	2 / 10	20
Phenols (µg/kg)					
4-Methylphenol	240	830	218	3 / 10	30
Volatile Organic Compounds (mg/kg)					
2-Butanone	0.88	0.88	0.43	1 / 5	20
Dichloromethane	0.38	0.57	0.28	2 / 5	40
Toluene	0.44	0.82	0.30	4 / 10	40
Carbon Content					
Total organic carbon	0.55	1.4	0.86	5 / 5	100

a. Average of detected concentrations and one-half the reporting limit for non-detects.
b. Total LPAHs and HPAHs calculated using October 2003 data only.

HPAHs - high molecular weight PAHs
LPAHs - low molecular weight PAHs
mg/kg- milligrams per kilogram
SEM - simultaneously extracted metals
µg/kg- micrograms per kilogram

Table 4.1-5
Data Summary for Study Area Surface Water Samples - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Range of Detected Concentrations Minimum	Maximum	Arithmetic Mean[a]	Frequency of Detection	Frequency of Detection (percent)
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)					
Unsubstituted PAHs					
Acenaphthene	0.028	92	6.4	3 / 15	20
Acenaphthylene	12	12	1.1	1 / 15	7
Anthracene	0.31	29	2.2	2 / 15	13
Benz(a)anthracene	0.12	30	2.2	6 / 15	40
Benzo(a)pyrene	0.12	18	1.4	7 / 15	47
Benzo(b)fluoranthene	0.18	24	2.0	8 / 15	53
Benzo(g,h,i)perylene	0.11	6.7	0.65	7 / 15	47
Benzo(k)fluoranthene	0.10	9.1	0.73	6 / 15	40
Chrysene	0.12	22	1.8	8 / 15	53
Dibenz(a,h)anthracene	0.1	2	0.2	3 / 15	20
Fluoranthene	0.024	141	10	9 / 15	60
Fluorene	0.38	96	6.7	2 / 15	13
Indeno(1,2,3-cd)pyrene	0.12	8.3	0.77	7 / 15	47
Naphthalene	0.054	320	22	5 / 15	33
Phenanthrene	0.45	261	18	5 / 15	33
Pyrene	0.27	78	5.7	6 / 15	40
Alkylated PAHs					
2-Methylnaphthalene	100	100	7.0	1 / 15	7
Carbazole	17	17	4.0	1 / 10	10
Dibenzofuran	83	83	7.1	1 / 15	7
Total LPAHs[b]			0.22		
Total HPAHs[b]			0.18		
Total Metals (µg/L)					
Antimony	0.28	0.32	0.30	5 / 5	100
Arsenic	1.3	1.5	1.4	5 / 5	100
Barium	86	89	87	5 / 5	100
Cadmium	0.11	0.14	0.13	5 / 5	100
Chromium	0.5	0.7	0.6	5 / 5	100
Lead	0.18	0.4	0.28	5 / 5	100
Nickel	1.7	1.9	1.8	5 / 5	100
Thallium	0.02	0.02	0.012	1 / 5	20
Zinc	4.3	6.4	5.5	5 / 5	100

Table 4.1-5
Data Summary for Study Area Surface Water Samples - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Range of Detected Concentrations		Arithmetic Mean[a]	Frequency of Detection	Frequency of Detection (percent)
	Minimum	Maximum			
Dissolved Metals (µg/L)					
Antimony	0.27	0.31	0.29	5 / 5	100
Arsenic	1.4	1.5	1.4	5 / 5	100
Barium	86	88	87	5 / 5	100
Cadmium	0.12	0.14	0.13	5 / 5	100
Chromium	0.5	0.6	0.6	5 / 5	100
Lead	0.11	0.12	0.11	5 / 5	100
Nickel	1.8	2.1	2.0	5 / 5	100
Thallium	0.02	0.02	0.012	1 / 5	20
Zinc	3.9	7.2	5.8	5 / 5	100
Other (mg/L)					
Hardness (as $CaCO_3$)	290	308	299	5 / 5	100

a. Average of detected concentrations and one-half the reporting limit for non-detects.
b. Total LPAHs and HPAHs calculated using October 2003 data only.

HPAHs - high molecular weight PAHs
LPAHs - low molecular weight PAHs
mg/L- milligrams per liter
PAHs - polycyclic aromatic hydrocarbons
µg/L- micrograms per liter

Table 4.1-6
Data Summary for Study Area Sediment Porewater Samples - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Range of Detected Concentrations		Arithmetic Mean[a]	Frequency of Detection	Frequency of Detection (percent)
	Minimum	Maximum			
Dissolved Metals (µg/L)					
Antimony	0.09	0.48	0.2	5 / 5	100
Arsenic	1.60	2.8	2.01	5 / 5	100
Barium	87	299	136	5 / 5	100
Cadmium	0.09	0.2	0.1	5 / 5	100
Chromium	0.4	1.7	0.7	5 / 5	100
Lead	0.04	0.71	0.3	5 / 5	100
Nickel	2.4	5.1	3.5	5 / 5	100
Thallium	0.02	0.02	0.02	2 / 5	40
Zinc	4	23	10	5 / 5	100
Other (mg/L)					
Hardness (as $CaCO_3$)	312	459	345	5 / 5	100

a. Average of detected concentrations and one-half the reporting limit for non-detects.

mg/L- milligrams per liter
µg/L- micrograms per liter

Table 4.1-7
Grain Size Data for Sediment - 2003
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

	Study Area					Upgradient		
Grain Size (%)	SED-1	SED-2	SED-3	SED-4[a]	SED-5	SED-6	SED-7	SED-8
Gravel	5.75	40.0	39.1	14.7	29.2	20.2	23.8	1.09
Sand (total)	91.4	58.6	62.2	83.4	69.5	81.4	76.9	90.9
Very coarse	19.0	23.1	25.3	16.1	17.6	18.9	22.0	0.77
Coarse	41.7	26.8	26.9	27.6	24.8	41.8	42.3	8.98
Medium	26.2	8.24	9.08	30.6	20.2	20.0	12.2	50.9
Fine	4.02	0.34	0.84	8.3	6.04	0.62	0.36	26.2
Very fine	0.45	0.09	0.10	0.86	0.89	0.04	0.08	4.00
Silt	0.88	0.46	0.24	1.0	2.60	0.22	0.20	4.49
Clay	0.23	0.12	0.07	0.18	0.46	0.05	0.08	1.63

a. Values are an average between the primary and duplicate sample values at this sampling location.

% - percent

Table 4.1-8
Comparison of Sediment Maximum Concentrations (1991 and 2003 Data) and Screening Values
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Maximum Concentration	Screening Value[a]	Background Value[b]	Exceeds Screening Value?[c]
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)				
Unsubstituted PAHs				
Acenaphthene	4,000	6.71	100	yes
Acenaphthylene	57	5.87	29	yes
Anthracene	1,100	57.2	380	yes
Benz(a)anthracene	2,600	108	1,800	yes
Benzo(a)pyrene	2,300	150	2,200	yes
Benzo(b)fluoranthene	3,600	10,400	2,300	no
Benzo(e)pyrene	560	NA	1,600	---
Benzo(g,h,i)perylene	1,300	170	1,200	yes
Benzo(k)fluoranthene	850	240	2,200	yes
Chrysene	2,300	166	2,500	yes
Dibenz(a,h)anthracene	200	33	270	yes
Fluoranthene	8,300	423	5,900	yes
Fluorene	3,800	77.4	150	yes
Indeno(1,2,3-cd)pyrene	1,200	200	2,000	yes
Naphthalene	8,400	176	21	yes
Perylene	430	NA	510	---
Phenanthrene	11,000	204	2,600	yes
Pyrene	3,900	195	4,400	yes
Alkylated PAHs				
1-Methylnaphthalene	42	20.2	14	---
2-Methylnaphthalene	2,400	20.2	15	yes
C1-Chrysenes	900	NA	850	---
C1-Fluoranthenes/pyrenes	1,200	NA	1,300	---
C1-Fluorenes	67	NA	41	---
C1-Phenanthrenes/anthracenes	470	NA	600	---
C2-Chrysenes	400	NA	280	---
C2-Fluorenes	64	NA	40	---
C2-Naphthalenes	85	NA	26	---
C2-Phenanthrenes/anthracenes	350	NA	270	---
C3-Chrysenes	240	NA	130	---
C3-Fluorenes	51	NA	51	---
C3-Naphthalenes	71	NA	34	---
C3-Phenanthrenes/anthracenes	210	NA	140	---
C4-Chrysenes	320	NA	49	---
C4-Naphthalenes	37	NA	22	---
C4-Phenanthrenes/anthracenes	130	NA	78	---

Table 4.1-8
Comparison of Sediment Maximum Concentrations (1991 and 2003 Data) and Screening Values
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Maximum Concentration	Screening Value[a]	Background Value[b]	Exceeds Screening Value?[c]
Other PAHs				
1,1-Biphenyl	13	NA	7	---
C1-Dibenzothiophenes	22	NA	15	---
C2-Dibenzothiophenes	130	NA	52	---
C3-Dibenzothiophenes	58	NA	55	---
Carbazole	200	NA	NA	---
Dibenzofuran	3,100	449	64	yes
Dibenzothiophene	66	NA	120	---
Total Metals (mg/kg)				
Antimony	0.83	NA	0.42	---
Arsenic	16	9.79	14	yes
Barium	78	NA	132	---
Beryllium	0.7	NA	0.63	---
Cadmium	1.1	0.99	0.90	yes
Chromium	45	43.4[d]	28	yes
Copper	24	31.6	ND	no
Lead	35	35.8	199	no
Mercury	0.24	0.174	0.45	no
Nickel	27	22.7	22	yes
Thallium	0.055	NA	0.05	---
Zinc	105	121	79	no
Phthalates (µg/kg)				
Bis(2-ethylhexyl)phthalate	1,300	182	ND	yes
Butyl benzyl phthalate	170	1,970	340	no
Phenols (µg/kg)				
4-Methylphenol	830	20.2	ND	yes
Volatile Organic Compounds (mg/kg)				
2-Butanone	0.88	0.0424	ND	yes
Dichloromethane	0.57	NA	ND	---
Toluene	0.82	1.22	ND	no

a. U.S. EPA Region 5 Resource Conservation and Recovery Act (RCRA) Ecological Screening Levels
2-Methylnaphthalene was used as surrogate for 1-Methylnaphthalene for identifying the R5 ESVs.
b. Values are maximum detected concentrations from upgradient sediment samples.
c. Screening for metals only based on exceedance of both the screening and background values.
d. Screening value is for trivalent chromium; hexavalent chromium value is not available.

mg/kg - milligrams per kilogram
NA - not available
ND - not detected
µg/kg - micrograms per kilogram

Table 4.1-9
Comparison of Surface Water Maximum Concentrations (2003 Data) and Screening Values
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Maximum Concentration	Screening Value	Screening Value Source[a]	Background Value[b]	Exceeds Screening Value?[c]
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)					
Unsubstituted PAHs					
Acenaphthene	92	27	IDEM	ND	yes
Acenaphthylene	12	4,840	U.S. EPA	ND	no
Anthracene	29	0.68	IDEM	ND	yes
Benz(a)anthracene	30	0.025	IDEM	0.07	yes
Benzo(a)pyrene	18	0.014	U.S. EPA	0.068	yes
Benzo(b)fluoranthene	24	9.07	U.S. EPA	0.083	yes
Benzo(g,h,i)perylene	6.7	7.64	U.S. EPA	0.056	no
Benzo(k)fluoranthene	9.1	NA	---	0.1	---
Chrysene	22	NA	---	0.11	---
Dibenz(a,h)anthracene	2	NA	---	ND	---
Fluoranthene	141	3.6	IDEM	0.2	yes
Fluorene	96	2.4	IDEM	ND	yes
Indeno(1,2,3-cd)pyrene	8.3	4.31	U.S. EPA	0.072	yes
Naphthalene	320	26	IDEM	ND	yes
Phenanthrene	261	0.93	IDEM	0.064	yes
Pyrene	78	0.3	U.S. EPA	0.16	yes
Alkylated PAHs					
2-Methylnaphthalene	100	330	U.S. EPA	ND	no
Other PAHs					
Carbazole	17	NA	---	ND	---
Dibenzofuran	83	4	U.S. EPA	ND	yes
Total Metals (µg/L)					
Antimony	0.32	80	IDEM	0.31	no
Arsenic	1.5	147.9	IDEM	1.6	no
Barium	89	1,402	IDEM[d]	90	no
Cadmium	0.14	5.82	IDEM[d]	0.19	no
Chromium	0.7	10.98	IDEM	0.9	no[e]
Lead	0.4	25.89	IDEM[d]	2.3	no
Nickel	1.9	132	IDEM[d]	2.1	no
Thallium	0.02	6	IDEM	0.02	no
Zinc	6.4	303	IDEM[d]	12	no
Dissolved Metals (µg/L)					
Antimony	0.31	80	IDEM	NM	no
Arsenic	1.5	147.9	IDEM	NM	no
Barium	88	1,402	IDEM[d]	NM	no
Cadmium	0.14	5.82	IDEM[d]	NM	no
Chromium	0.6	10.98	IDEM	NM	no[e]
Lead	0.12	25.89	IDEM[d]	NM	no
Nickel	2.1	132	IDEM[d]	NM	no
Thallium	0.02	6	IDEM	NM	no
Zinc	7.2	303	IDEM[d]	NM	no

a. IDEM Water Quality Criteria were used preferentially. U.S. EPA Region 5 Resource Conservation and Recovery Act (RCRA) Ecological Screening Levels were used in the absence of IDEM criteria.
b. Values are maximum detected concentrations from upgradient surface water samples.
c. Screening for metals only based on exceedance of both the screening and background values.
d. Hardness-dependent metals criteria are calculated using the average study area hardness of 299 mg/L as $CaCO_3$.
e. Detected chromium concentrations do not exceed criteria for hexavalent chromium (shown above) or trivalent chromium (211 µg/L).

IDEM- Indiana Department of Environmental Management
NA - not available
ND - not detected
NM - not measured
µg/L - micrograms per liter

Table 4.1-10
Comparison of Maximum Sediment Porewater Concentrations (2003 Data) and Screening Values
Concentrations and Screening Values
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Maximum Concentration	Screening Value [a]	Exceeds Screening Value ?
Dissolved Metals (µg/L)			
Antimony	0.48	80	no
Arsenic	2.8	148	no
Barium	299	1,633 [b]	no
Cadmium	0.2	6.5 [b]	no
Chromium	1.7	238	no[c]
Lead	0.71	31 [b]	no
Nickel	5.1	149 [b]	no
Thallium	0.02	6	no
Zinc	22.8	342 [b]	no

a. IDEM Water Quality Criteria
b. Criteria calculated based on an average porewater hardness of 345 mg/L as $CaCO_3$.
c. Detected chromium concentrations do not exceed criteria for trivalent chromium (shown above) or hexavalent chromium (10.98 µg/L).

IDEM- Indiana Department of Environmental Management
mg/L - milligrams per liter
µg/L- micrograms per liter

Table 4.1-11
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment - 1991 and 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/goc)	SED-1 1.4 % Organic Carbon PAH Concentration (mg/dry kg)	SED-1 1.4 % Organic Carbon PAH Concentration (µg/goc)	SED-1 1.4 % Organic Carbon Toxic Units	SED-2 0.55 % Organic Carbon PAH Concentration (mg/dry kg)	SED-2 0.55 % Organic Carbon PAH Concentration (µg/goc)	SED-2 0.55 % Organic Carbon Toxic Units	SED-3 0.56 % Organic Carbon PAH Concentration (mg/dry kg)	SED-3 0.56 % Organic Carbon PAH Concentration (µg/goc)	SED-3 0.56 % Organic Carbon Toxic Units
Unsubstituted PAHs										
Acenaphthene	491	0.068	5.0	0.010	0.11	20	0.041	0.074	13	0.027
Acenaphthylene	452	0.057	4.2	0.009	0.019	3.5	0.008	0.011	2.0	0.004
Anthracene	594	0.22	16	0.027	0.064	12	0.020	0.250	45	0.075
Benz(a)anthracene	841	0.95	70	0.083	0.24	44	0.052	0.500	89	0.106
Benzo(a)pyrene	965	0.88	65	0.067	0.29	53	0.055	0.490	88	0.091
Benzo(b)fluoranthene	979	0.69	51	0.052	0.3	55	0.056	0.500	89	0.091
Benzo(e)pyrene	967	0.56	41	0.043	0.22	40	0.041	0.320	57	0.059
Benzo(g,h,i)perylene	1,095	0.89	65	0.060	0.19	35	0.032	0.280	50	0.046
Benzo(k)fluoranthene	981	0.74	54	0.055	0.25	45	0.046	0.380	68	0.069
Chrysene	844	1	74	0.087	0.31	56	0.067	0.570	102	0.121
Dibenz(a,h)anthracene	1,123	0.2	15	0.013	0.043	7.8	0.007	0.070	13	0.011
Fluoranthene	707	2.6	191	0.270	0.64	116	0.165	1.700	304	0.429
Fluorene	538	0.082	6.03	0.011	0.11	20	0.037	0.110	20	0.037
Indeno(1,2,3-cd)pyrene	1,115	0.61	45	0.040	0.32	58	0.052	0.510	91	0.082
Naphthalene	385	0.039	2.9	0.007	0.058	11	0.027	0.029	5.2	0.013
Perylene	967	0.43	32	0.033	0.069	13	0.013	0.120	21	0.022
Phenanthrene	596	0.88	65	0.109	0.47	85	0.143	1.200	214	0.360
Pyrene	697	1.6	118	0.169	0.5	91	0.130	1.200	214	0.307
Alkylated PAHs										
1-Methylnaphthalene	446	0.018	1.3	0.003	0.042	7.6	0.017	0.007	1.2	0.003
2-Methylnaphthalene	447	0.016	1.2	0.003	0.047	8.5	0.019	0.006	1.07	0.002
C1-Chrysenes	929	0.9	66	0.071	0.14	25	0.027	0.200	36	0.038
C1-Fluoranthenes/Pyrenes	783	1.2 E	88	0.113	0.19	35	0.044	0.340	61	0.078
C1-Fluorenes	611	0.059	4.3	0.007	0.02	3.6	0.006	0.025	4.5	0.007
C1-Phenanthrenes/Anthracenes	670	0.47	35	0.052	0.1	18	0.027	0.210	38	0.056
C2-Chrysenes	1,008	0.4	29	0.029	0.072	13	0.013	0.074	13	0.013
C2-Fluorenes	686	0.064	4.7	0.007	0.01	1.8	0.003	0.015	2.7	0.004
C2-Naphthalenes	510	0.037	2.7	0.005	0.046	8.4	0.016	0.010	1.8	0.004
C2-Phenanthrenes/Anthracenes	746	0.35	26	0.034	0.051	9.3	0.012	0.073	13	0.017
C3-Chrysenes	1,112	0.24	18	0.016	0.051	9.3	0.008	0.033	5.9	0.005
C3-Fluorenes	769	0.051	3.8	0.005	0.014	2.5	0.003	0.016	2.9	0.004
C3-Naphthalenes	581	0.057	4.2	0.007	0.024	4.4	0.008	0.015	2.7	0.005
C3-Phenanthrenes/Anthracenes	829	0.21	15	0.019	0.033	6.0	0.007	0.036	6.4	0.008
C4-Chrysenes	1,214	0.32	24	0.019	0.056	10	0.008	0.005 U	0.44	0.0004
C4-Naphthalenes	657	0.037	2.7	0.004	0.0097	1.8	0.003	0.008	1.5	0.002
C4-Phenanthrenes/Anthracenes	913	0.13	9.6	0.010	0.022	4	0.004	0.024	4.3	0.005
Total PAHs		17.06			5.13			9.41		
Total Toxic Units[b]				2			1			2

Table 4.1-11
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment - 1991 and 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/goc)	SED-4* 0.66 % Organic Carbon PAH Concentration (mg/dry kg)	SED-4* 0.66 % Organic Carbon PAH Concentration (µg/goc)	SED-4* 0.66 % Organic Carbon Toxic Units	SED-5 1.19 % Organic Carbon PAH Concentration (mg/dry kg)	SED-5 1.19 % Organic Carbon PAH Concentration (µg/goc)	SED-5 1.19 % Organic Carbon Toxic Units	SED-6 0.66 % Organic Carbon PAH Concentration (mg/dry kg)	SED-6 0.66 % Organic Carbon PAH Concentration (µg/goc)	SED-6 0.66 % Organic Carbon Toxic Units
Unsubstituted PAHs										
Acenaphthene	491	0.064	9.7	0.020	0.077	6.5	0.013	0.028	4.2	0.009
Acenaphthylene	452	0.023	3.5	0.008	0.021	1.8	0.004	0.0093	1.4	0.003
Anthracene	594	0.14	21	0.036	0.23	19	0.033	0.086	13	0.022
Benz(a)anthracene	841	0.685	104	0.123	0.79	66	0.079	0.41	62	0.074
Benzo(a)pyrene	965	0.795	120	0.125	0.85	71	0.074	0.48	73	0.075
Benzo(b)fluoranthene	979	0.785	119	0.121	0.82	69	0.070	0.51	77	0.079
Benzo(e)pyrene	967	0.53	80	0.083	0.55	46	0.048	0.34	52	0.053
Benzo(g,h,i)perylene	1,095	0.445	67	0.062	0.47	39	0.036	0.3	45	0.042
Benzo(k)fluoranthene	981	0.63	95	0.097	0.71	60	0.061	0.42	64	0.065
Chrysene	844	0.835	127	0.150	0.96	81	0.096	0.55	83	0.099
Dibenz(a,h)anthracene	1,123	0.1	15.2	0.013	0.12	10	0.009	0.069	10	0.009
Fluoranthene	707	1.550	235	0.332	1.7	143	0.202	1.1	167	0.236
Fluorene	538	0.057	8.6	0.016	0.081	6.8	0.013	0.037	5.6	0.010
Indeno(1,2,3-cd)pyrene	1,115	0.78	118	0.106	0.87	73	0.066	0.54	82	0.073
Naphthalene	385	0.014	2.1	0.006	0.01	0.84	0.002	0.01	1.5	0.004
Perylene	967	0.18	27	0.028	0.2	17	0.017	0.11	17	0.017
Phenanthrene	596	0.765	116	0.194	0.92	77	0.130	0.65	98	0.165
Pyrene	697	1.35	205	0.293	1.5	126	0.181	0.96	145	0.209
Alkylated PAHs										
1-Methylnaphthalene	446	0.01	1.52	0.003	0.03	2.5	0.006	0.0088	1.3	0.003
2-Methylnaphthalene	447	0.009	1.36	0.003	0.02	1.7	0.004	0.013	2.0	0.004
C1-Chrysenes	929	0.35	53	0.057	0.38	32	0.034	0.19	29	0.031
C1-Fluoranthenes/Pyrenes	783	0.535	81	0.104	0.62	52	0.067	0.3	45	0.058
C1-Fluorenes	611	0.245	37	0.061	0.067	5.6	0.009	0.013	2.0	0.003
C1-Phenanthrenes/Anthracenes	670	0.235	36	0.053	0.39	33	0.049	0.14	21	0.032
C2-Chrysenes	1,008	0.14	21	0.021	0.12	10	0.010	0.084	13	0.013
C2-Fluorenes	686	0.023	3.5	0.005	0.041	3.4	0.005	0.01	1.5	0.002
C2-Naphthalenes	510	0.021	3.2	0.006	0.085	7.1	0.014	0.017	2.6	0.005
C2-Phenanthrenes/Anthracenes	746	0.13	20	0.026	0.16	13	0.018	0.063	9.5	0.013
C3-Chrysenes	1,112	0.092	13.9	0.013	0.061	5.1	0.005	0.048	7.3	0.007
C3-Fluorenes	769	0.028	4.2	0.006	0.028	2.4	0.003	0.016	2.4	0.003
C3-Naphthalenes	581	0.028	4.2	0.007	0.071	6.0	0.010	0.018	2.7	0.005
C3-Phenanthrenes/Anthracenes	829	0.075	11.4	0.014	0.071	6.0	0.007	0.041	6.2	0.007
C4-Chrysenes	1,214	0.034	5.2	0.004	0.021	1.8	0.001	0.022	3.3	0.003
C4-Naphthalenes	657	0.018	2.7	0.004	0.028	2.4	0.004	0.0098	1.5	0.002
C4-Phenanthrenes/Anthracenes	913	0.047	7.1	0.008	0.033	2.8	0.003	0.028	4.2	0.005
Total PAHs		11.75			13.11			7.63		
Total Toxic Units[b]				2			1			1

Table 4.1-11
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment - 1991 and 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/goc)	SED-7 0.61 % Organic Carbon PAH Concentration (mg/dry kg)	SED-7 0.61 % Organic Carbon PAH Concentration (µg/goc)	SED-7 0.61 % Organic Carbon Toxic Units	SED-8 1.00 % Organic Carbon PAH Concentration (mg/dry kg)	SED-8 1.00 % Organic Carbon PAH Concentration (µg/goc)	SED-8 1.00 % Organic Carbon Toxic Units
Unsubstituted PAHs							
Acenaphthene	491	0.05	8.2	0.017	0.1	10	0.020
Acenaphthylene	452	0.012	2.0	0.004	0.029	2.9	0.006
Anthracene	594	0.12	20	0.033	0.38	38	0.064
Benz(a)anthracene	841	0.45	74	0.088	1.8	180	0.214
Benzo(a)pyrene	965	0.5	82	0.085	2.2	220	0.228
Benzo(b)fluoranthene	979	0.54	89	0.090	2.3	230	0.235
Benzo(e)pyrene	967	0.36	59	0.061	1.6	160	0.165
Benzo(g,h,i)perylene	1,095	0.27	44	0.040	1.2	120	0.110
Benzo(k)fluoranthene	981	0.43	70	0.072	2.2	220	0.224
Chrysene	844	0.55	90	0.107	2.5	250	0.296
Dibenz(a,h)anthracene	1,123	0.064	10	0.009	0.27	27	0.024
Fluoranthene	707	1	164	0.232	5.9	590	0.835
Fluorene	538	0.052	8.5	0.016	0.15	15	0.028
Indeno(1,2,3-cd)pyrene	1,115	0.47	77	0.069	2	200	0.179
Naphthalene	385	0.021	3.4	0.009	0.02	2.0	0.005
Perylene	967	0.12	20	0.020	0.51	51	0.053
Phenanthrene	596	0.65	107	0.179	2.6	260	0.436
Pyrene	697	0.86	141	0.202	4.4	440	0.631
Alkylated PAHs							
1-Methylnaphthalene	446	0.0073	1.2	0.003	0.014	1.4	0.003
2-Methylnaphthalene	447	0.0093	1.5	0.003	0.015	1.5	0.003
C1-Chrysenes	929	0.21	34	0.037	0.85	85	0.091
C1-Fluoranthenes/Pyrenes	783	0.35	57	0.073	1.3 E	130	0.166
C1-Fluorenes	611	0.016	2.6	0.004	0.041	4.1	0.007
C1-Phenanthrenes/Anthracenes	670	0.15	25	0.037	0.6	60	0.090
C2-Chrysenes	1,008	0.096	16	0.016	0.28	28	0.028
C2-Fluorenes	686	0.014	2.3	0.003	0.04	4.0	0.006
C2-Naphthalenes	510	0.013	2.1	0.004	0.026	2.6	0.005
C2-Phenanthrenes/Anthracenes	746	0.072	12	0.016	0.27	27	0.036
C3-Chrysenes	1,112	0.06	9.8	0.009	0.13	13	0.012
C3-Fluorenes	769	0.022	3.6	0.005	0.051	5.1	0.007
C3-Naphthalenes	581	0.017	2.8	0.005	0.034	3.4	0.006
C3-Phenanthrenes/Anthracenes	829	0.047	7.7	0.009	0.140	14	0.017
C4-Chrysenes	1,214	0.026	4.3	0.004	0.049	4.9	0.004
C4-Naphthalenes	657	0.01	1.6	0.002	0.022	2.2	0.003
C4-Phenanthrenes/Anthracenes	913	0.029	4.8	0.005	0.078	7.8	0.009
Total PAHs		7.67			34.10		
Total Toxic Units[b]				2			4

Notes:
2003 sediment data only.
Reference area includes: SED-6, SED-7, and SED-8.
Study area includes locations SED-1 through SED-5.

a. U.S. EPA 2003
b. A toxic unit value exceeding 1.0 indicates the potential for toxicity to benthic organisms.
* Average results for sample and duplicate used.

E - estimated value
mg/kg - milligrams per kilogram
PAHs - polycyclic aromatic hydrocarbons
U - not detected
µg/goc - micrograms per gram organic carbon

Table 4.1-12
Evaluation of Dissolved Metal Mixtures in Sediment Porewater - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

	Interstitial Water Benchmark Units (IWBUs)										
Location	Hardness	Antimony	Arsenic	Barium	Cadmium	Chromium	Lead	Nickel	Thallium	Zinc	Sum IWBU (all metals) [a]
SED-1	344	0.0028	0.011	0.076	0.028	0.046	0.0052	0.018	0.0033	0.067	0.26
SED-2	316	0.0014	0.013	0.072	0.015	0.055	0.0029	0.022	0.0017	0.013	0.20
SED-3	344	0.0021	0.018	0.082	0.022	0.036	0.018	0.033	0.0017	0.012	0.23
SED-4[c]	415	0.0036	0.015	0.12	0.014	0.10	0.0038	0.026	0.0017	0.012	0.30
SED-5	312	0.0040	0.011	0.059	0.033	0.064	0.026	0.018	0.0033	0.043	0.26

a. Toxicity is unlikely if sum IWGU is less than 1.0.
Values are an average of the primary and duplicate concentrations at this location.

Table 4.1-13
Evaluation of Acid Volatile Sulfide (AVS) and Simultaneously Extracted Metals (SEM) in Sediment - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Location	SEM Cadmium (moles/kg)	SEM Copper (moles/kg)	SEM Lead (moles/kg)	SEM Nickel (moles/kg)	SEM Zinc (moles/kg)	Sum SEM (moles/kg)	AVS (moles/kg)	Total Organic Carbon (%)	Organic Normalized Excess SEM[a] (µmol/goc)
SED-1	5.3E-06	9.9E-05	1.4E-04	9.2E-05	8.4E-04	1.2E-03	2.9E-05	1.36	84
SED-2	5.3E-06	8.8E-05	7.6E-04	8.9E-05	7.8E-04	1.7E-03	4.1E-05	0.55	306
SED-3	4.4E-06	1.1E-04	1.9E-04	9.2E-05	5.0E-03	5.4E-03	1.1E-04	0.56	941
SED-4	7.1E-06	1.3E-04	1.8E-04	8.9E-05	9.4E-04	1.3E-03	4.7E-04	0.66	133
SED-5	7.1E-06	1.7E-04	1.7E-04	8.9E-05	1.1E-03	1.6E-03	2.0E-04	1.19	114

a. Toxicity to benthic invertebrates is very unlikely at concentrations below 130 µg/goc and very likely at concentrations above 3,000 µg/goc. The likelihood of toxicity at intermediate concentrations in indeterminate.

AVS - acid volatile sulfide
moles/kg - moles per kilogram
SEM - simultaneously extracted metal
µmol/goc - micromoles per gram organic carbon
% - percent

Table 4.1-14
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/L)	CS-1 PAH Concentration (µg/L)	CS-1 Toxic Units	CS-2 PAH Concentration (µg/L)	CS-2 Toxic Units	CS-3 * PAH Concentration (µg/L)	CS-3 * Toxic Units	CS-4 PAH Concentration (µg/L)	CS-4 Toxic Units
Unsubstituted PAHs									
Acenaphthene	56	1 U	8.93E-03	1 U	8.93E-03	1 U	8.93E-03	1.1 U	9.82E-03
Acenaphthylene	307	1 U	1.63E-03	1 U	1.63E-03	1 U	1.63E-03	1.1 U	1.79E-03
Anthracene	20.7	1 U	2.42E-02	1 U	2.42E-02	1 U	2.42E-02	1.1 U	2.66E-02
Benz(a)anthracene	2.2	0.21 U	4.77E-02	0.2 U	4.55E-02	0.21 U	4.77E-02	0.21 U	4.77E-02
Benzo(a)pyrene	0.96	0.21 U	1.09E-01	0.12 J	1.25E-01	0.21 U	1.09E-01	0.21 U	1.09E-01
Benzo(b)fluoranthene	0.68	0.21 U	1.54E-01	0.21	3.09E-01	0.18 J	2.65E-01	0.18 J	2.65E-01
Benzo(e)pyrene	0.9	NM	--	NM	--	NM	--	NM	--
Benzo(g,h,i)perylene	0.44	0.21 U	2.39E-01	0.11 J	2.50E-01	0.21 U	2.39E-01	0.21 U	2.39E-01
Benzo(k)fluoranthene	0.64	0.21 U	1.64E-01	0.2 U	1.56E-01	0.21 U	1.64E-01	0.21 U	1.64E-01
Chrysene	2	0.21 U	5.25E-02	0.14 J	7.00E-02	0.13 J	6.50E-02	0.12 J	6.00E-02
Dibenz(a,h)anthracene	0.28	0.21 U	3.75E-01	0.2 U	3.57E-01	0.21 U	3.75E-01	0.21 U	3.75E-01
Fluoranthene	7.1	1 U	7.04E-02	0.26 J	3.66E-02	0.26 J	3.66E-02	1.1 U	7.75E-02
Fluorene	39.3	1 U	1.27E-02	1 U	1.27E-02	1 U	1.27E-02	1.1 U	1.40E-02
Indeno(1,2,3-cd)pyrene	0.28	0.21 U	3.75E-01	0.12 J	4.29E-01	0.21 U	3.75E-01	0.21 U	3.75E-01
Naphthalene	193	1 U	2.59E-03	1 U	2.59E-03	1 U	2.59E-03	1.1 U	2.85E-03
Perylene	0.9	NM	--	NM	--	NM	--	NM	--
Phenanthrene	19.1	1 U	2.62E-02	1 U	2.62E-02	1 U	2.62E-02	1.1 U	2.88E-02
Pyrene	10.1	1 U	4.95E-02	1 U	4.95E-02	1 U	4.95E-02	1.1 U	5.45E-02
Alkylated PAHs									
1-Methylnaphthalene	75	NM	--	NM	--	NM	--	NM	--
2-Methylnaphthalene	72	1 U	6.94E-03	1 U	6.94E-03	1 U	6.94E-03	1.1 U	7.64E-03
C1-Chrysenes	0.86	NM	--	NM	--	NM	--	NM	--
C1-Dibenzo(a,h)anthracene	0.12	NM	--	NM	--	NM	--	NM	--
C1-Fluoranthenes/Pyrenes	3.2	NM	--	NM	--	NM	--	NM	--
C1-Fluorenes	14	NM	--	NM	--	NM	--	NM	--
C1-Naphthalenes	81.7	NM	--	NM	--	NM	--	NM	--
C1-Phenanthrenes/Anthracenes	7.4	NM	--	NM	--	NM	--	NM	--
C2-Chrysenes	0.48	NM	--	NM	--	NM	--	NM	--
C2-Dibenzo(a,h)anthracene	0.06	NM	--	NM	--	NM	--	NM	--
C2-Fluoranthenes/Pyrenes	1.4	NM	--	NM	--	NM	--	NM	--
C2-Fluorenes	5.3	NM	--	NM	--	NM	--	NM	--
C2-Naphthalenes	30.2	NM	--	NM	--	NM	--	NM	--
C2-Phenanthrenes/Anthracenes	3.2	NM	--	NM	--	NM	--	NM	--
C3-Chrysenes	0.17	NM	--	NM	--	NM	--	NM	--
C3-Dibenzo(a,h)anthracene	0.02	NM	--	NM	--	NM	--	NM	--
C3-Fluoranthenes/Pyrenes	0.63	NM	--	NM	--	NM	--	NM	--
C3-Fluorenes	1.9	NM	--	NM	--	NM	--	NM	--
C3-Naphthalenes	11.1	NM	--	NM	--	NM	--	NM	--
C3-Phenanthrenes/Anthracenes	1.3	NM	--	NM	--	NM	--	NM	--
C4-Chrysenes	0.07	NM	--	NM	--	NM	--	NM	--
C4-Naphthalenes	4	NM	--	NM	--	NM	--	NM	--
C4-Phenanthrenes/Anthracenes	0.56	NM	--	NM	--	NM	--	NM	--
Total Toxic Units[b]			(c)		2		(c)		(c)

Table 4.1-14
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/L)	CS-5		CS-6		CS-7		CS-8	
		PAH Concentration (µg/L)	Toxic Units	PAH Concentration (µg/L)	Toxic Units	PAH Concentration (µg/L)	Toxic Units	PAH Concentration (µg/L)	Toxic Units
Unsubstituted PAHs									
Acenaphthene	56	91.8	1.64E+00	1 U	8.93E-03	1 U	8.93E-03	1.1 U	9.82E-03
Acenaphthylene	307	12.2	3.97E-02	1 U	1.63E-03	1 U	1.63E-03	1.1 U	1.79E-03
Anthracene	20.7	28.7	1.39E+00	0.31 J	1.50E-02	1 U	2.42E-02	1.1 U	2.66E-02
Benz(a)anthracene	2.2	30	1.36E+01	0.85	3.86E-01	0.3	1.36E-01	0.21 J	9.55E-02
Benzo(a)pyrene	0.96	17.9	1.86E+01	1.1	1.15E+00	0.52	5.42E-01	0.28	2.92E-01
Benzo(b)fluoranthene	0.68	24.3	3.57E+01	2.3	3.38E+00	1.2	1.76E+00	0.46	6.76E-01
Benzo(e)pyrene	0.9	NM	--	NM	--	NM	--	NM	--
Benzo(g,h,i)perylene	0.44	6.7	1.52E+01	1.1	2.50E+00	0.62	1.41E+00	0.22	5.00E-01
Benzo(k)fluoranthene	0.64	9.1	1.42E+01	0.63	9.84E-01	0.31	4.84E-01	0.13 J	2.03E-01
Chrysene	2	22.4	1.12E+01	1.5	7.50E-01	0.81	4.05E-01	0.28	1.40E-01
Dibenz(a,h)anthracene	0.28	2	7.14E+00	0.2 J	7.14E-01	0.2 U	3.57E-01	0.22 U	3.93E-01
Fluoranthene	7.1	141	1.99E+01	3.8	5.35E-01	1.8	2.54E-01	0.73 J	1.03E-01
Fluorene	39.3	95.5	2.43E+00	0.38 J	9.67E-03	1 U	1.27E-02	1.1 U	1.40E-02
Indeno(1,2,3-cd)pyrene	0.28	8.3	2.96E+01	1.2	4.29E+00	0.64	2.29E+00	0.24	8.57E-01
Naphthalene	193	320	1.66E+00	1 U	2.59E-03	1 U	2.59E-03	0.29 J	1.50E-03
Perylene	0.9	NM	--	NM	--	NM	--	NM	--
Phenanthrene	19.1	261	1.37E+01	2.2	1.15E-01	0.91 J	4.76E-02	0.45 J	2.36E-02
Pyrene	10.1	78.4	7.76E+00	2.3	2.28E-01	1.1	1.09E-01	0.45 J	4.46E-02
Alkylated PAHs									
1-Methylnaphthalene	75	NM	--	NM	--	NM	--	NM	--
2-Methylnaphthalene	72	100	1.39E+00	1 U	6.94E-03	1 U	6.94E-03	1.1 U	7.64E-03
C1-Chrysenes	0.86	NM	--	NM	--	NM	--	NM	--
C1-Dibenzo(a,h)anthracene	0.12	NM	--	NM	--	NM	--	NM	--
C1-Fluoranthenes/Pyrenes	3.2	NM	--	NM	--	NM	--	NM	--
C1-Fluorenes	14	NM	--	NM	--	NM	--	NM	--
C1-Naphthalenes	81.7	NM	--	NM	--	NM	--	NM	--
C1-Phenanthrenes/Anthracenes	7.4	NM	--	NM	--	NM	--	NM	--
C2-Chrysenes	0.48	NM	--	NM	--	NM	--	NM	--
C2-Dibenzo(a,h)anthracene	0.06	NM	--	NM	--	NM	--	NM	--
C2-Fluoranthenes/Pyrenes	1.4	NM	--	NM	--	NM	--	NM	--
C2-Fluorenes	5.3	NM	--	NM	--	NM	--	NM	--
C2-Naphthalenes	30.2	NM	--	NM	--	NM	--	NM	--
C2-Phenanthrenes/Anthracenes	3.2	NM	--	NM	--	NM	--	NM	--
C3-Chrysenes	0.17	NM	--	NM	--	NM	--	NM	--
C3-Dibenzo(a,h)anthracene	0.02	NM	--	NM	--	NM	--	NM	--
C3-Fluoranthenes/Pyrenes	0.63	NM	--	NM	--	NM	--	NM	--
C3-Fluorenes	1.9	NM	--	NM	--	NM	--	NM	--
C3-Naphthalenes	11.1	NM	--	NM	--	NM	--	NM	--
C3-Phenanthrenes/Anthracenes	1.3	NM	--	NM	--	NM	--	NM	--
C4-Chrysenes	0.07	NM	--	NM	--	NM	--	NM	--
C4-Naphthalenes	4	NM	--	NM	--	NM	--	NM	--
C4-Phenanthrenes/Anthracenes	0.56	NM	--	NM	--	NM	--	NM	--
Total Toxic Units[b]			195		15		8		3

Table 4.1-14
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/L)	CS-9		CS-10 *		SW-1		SW-2	
		PAH Concentration (µg/L)	Toxic Units	PAH Concentration (µg/L)	Toxic Units	PAH Concentration (µg/L)	Toxic Units	PAH Concentration (µg/L)	Toxic Units
Unsubstituted PAHs									
Acenaphthene	56	0.5	8.93E-03	1 U	8.93E-03	0.028	5.00E-04	0.034	6.07E-04
Acenaphthylene	307	0.5	1.63E-03	1 U	1.63E-03	0.02 U	3.26E-05	0.02 U	3.26E-05
Anthracene	20.7	0.5	2.42E-02	1 U	2.42E-02	0.02 U	4.83E-04	0.02 U	4.83E-04
Benz(a)anthracene	2.2	0.46	2.09E-01	0.2 U	4.55E-02	0.02 U	4.55E-03	0.02 U	4.55E-03
Benzo(a)pyrene	0.96	0.65	6.77E-01	0.2 U	1.04E-01	0.02 U	1.04E-02	0.02 U	1.04E-02
Benzo(b)fluoranthene	0.68	1	1.47E+00	0.2 U	1.47E-01	0.02 U	1.47E-02	0.02 U	1.47E-02
Benzo(e)pyrene	0.9	NM	--	NM	--	0.02 U	1.11E-02	0.02 U	1.11E-02
Benzo(g,h,i)perylene	0.44	0.49	1.11E+00	0.2 U	2.27E-01	0.02 U	2.27E-02	0.02 U	2.27E-02
Benzo(k)fluoranthene	0.64	0.29	4.53E-01	0.2 U	1.56E-01	0.02 U	1.56E-02	0.02 U	1.56E-02
Chrysene	2	0.63	3.15E-01	0.2 U	5.00E-02	0.02 U	5.00E-03	0.02 U	5.00E-03
Dibenz(a,h)anthracene	0.28	0.1	3.57E-01	0.2 U	3.57E-01	0.02 U	3.57E-02	0.02 U	3.57E-02
Fluoranthene	7.1	1.2	1.69E-01	1 U	7.04E-02	0.024	3.38E-03	0.024	3.38E-03
Fluorene	39.3	0.5	1.27E-02	1 U	1.27E-02	0.02 U	2.54E-04	0.02 U	2.54E-04
Indeno(1,2,3-cd)pyrene	0.28	0.53	1.89E+00	0.2 U	3.57E-01	0.02 U	3.57E-02	0.02 U	3.57E-02
Naphthalene	193	0.5	2.59E-03	1 U	2.59E-03	0.054	2.80E-04	0.071	3.68E-04
Perylene	0.9	NM	--	NM	--	0.02 U	1.11E-02	0.02 U	1.11E-02
Phenanthrene	19.1	0.51	2.67E-02	1 U	2.62E-02	0.02 U	5.24E-04	0.02 U	5.24E-04
Pyrene	10.1	0.85	8.42E-02	1 U	4.95E-02	0.02 U	9.90E-04	0.02 U	9.90E-04
Alkylated PAHs									
1-Methylnaphthalene	75	NM	--	NM	--	0.02 U	1.33E-04	0.02 U	1.33E-04
2-Methylnaphthalene	72	0.5	6.94E-03	1 U	6.94E-03	0.02 U	1.39E-04	0.02 U	1.39E-04
C1-Chrysenes	0.86	NM	--	NM	--	0.02 U	1.16E-02	0.02 U	1.16E-02
C1-Dibenzo(a,h)anthracene	0.12	NM	--	NM	--	NM	--	NM	--
C1-Fluoranthenes/Pyrenes	3.2	NM	--	NM	--	0.02 U	3.13E-03	0.02 U	3.13E-03
C1-Fluorenes	14	NM	--	NM	--	0.02 U	7.14E-04	0.02 U	7.14E-04
C1-Naphthalenes	81.7	NM	--	NM	--	NM	--	NM	--
C1-Phenanthrenes/Anthracenes	7.4	NM	--	NM	--	0.02 U	1.35E-03	0.02 U	1.35E-03
C2-Chrysenes	0.48	NM	--	NM	--	0.02 U	2.08E-02	0.02 U	2.08E-02
C2-Dibenzo(a,h)anthracene	0.06	NM	--	NM	--	NM	--	NM	--
C2-Fluoranthenes/Pyrenes	1.4	NM	--	NM	--	NM	--	NM	--
C2-Fluorenes	5.3	NM	--	NM	--	0.02 U	1.89E-03	0.02 U	1.89E-03
C2-Naphthalenes	30.2	NM	--	NM	--	0.02 U	3.31E-04	0.02 U	3.31E-04
C2-Phenanthrenes/Anthracenes	3.2	NM	--	NM	--	0.02 U	3.13E-03	0.02 U	3.13E-03
C3-Chrysenes	0.17	NM	--	NM	--	0.02 U	5.88E-02	0.02 U	5.88E-02
C3-Dibenzo(a,h)anthracene	0.02	NM	--	NM	--	NM	--	NM	--
C3-Fluoranthenes/Pyrenes	0.63	NM	--	NM	--	NM	--	NM	--
C3-Fluorenes	1.9	NM	--	NM	--	0.02 U	5.26E-03	0.02 U	5.26E-03
C3-Naphthalenes	11.1	NM	--	NM	--	0.02 U	9.01E-04	0.02 U	9.01E-04
C3-Phenanthrenes/Anthracenes	1.3	NM	--	NM	--	0.02 U	7.69E-03	0.02 U	7.69E-03
C4-Chrysenes	0.07	NM	--	NM	--	0.02 U	1.43E-01	0.02 U	1.43E-01
C4-Naphthalenes	4	NM	--	NM	--	0.02 U	2.50E-03	0.02 U	2.50E-03
C4-Phenanthrenes/Anthracenes	0.56	NM	--	NM	--	0.02 U	1.79E-02	0.02 U	1.79E-02
Total Toxic Units[b]			7		(c)		0.5		0.5

Table 4.1-14
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/L)	SW-3 PAH Concentration (µg/L)	SW-3 Toxic Units	SW-4 * PAH Concentration (µg/L)	SW-4 * Toxic Units	SW-5 PAH Concentration (µg/L)	SW-5 Toxic Units	SW-6 PAH Concentration (µg/L)	SW-6 Toxic Units
Unsubstituted PAHs									
Acenaphthene	56	0.02 U	1.79E-04	0.02 U	1.79E-04	0.02 U	1.79E-04	0.02 U	1.79E-04
Acenaphthylene	307	0.02 U	3.26E-05	0.02 U	3.26E-05	0.02 U	3.26E-05	0.02 U	3.26E-05
Anthracene	20.7	0.02 U	4.83E-04	0.02 U	4.83E-04	0.02 U	4.83E-04	0.02 U	4.83E-04
Benz(a)anthracene	2.2	0.02 U	4.55E-03	0.02 U	4.55E-03	0.02 U	4.55E-03	0.03	1.36E-02
Benzo(a)pyrene	0.96	0.02 U	1.04E-02	0.02 U	1.04E-02	0.02 U	1.04E-02	0.03	3.13E-02
Benzo(b)fluoranthene	0.68	0.02 U	1.47E-02	0.02 U	1.47E-02	0.02 U	1.47E-02	0.027	3.97E-02
Benzo(e)pyrene	0.9	0.02 U	1.11E-02	0.02 U	1.11E-02	0.02 U	1.11E-02	0.029	3.22E-02
Benzo(g,h,i)perylene	0.44	0.02 U	2.27E-02	0.02 U	2.27E-02	0.02 U	2.27E-02	0.022	5.00E-02
Benzo(k)fluoranthene	0.64	0.02 U	1.56E-02	0.02 U	1.56E-02	0.02 U	1.56E-02	0.038	5.94E-02
Chrysene	2	0.02 U	5.00E-03	0.02 U	5.00E-03	0.02 U	5.00E-03	0.048	2.40E-02
Dibenz(a,h)anthracene	0.28	0.02 U	3.57E-02	0.02 U	3.57E-02	0.02 U	3.57E-02	0.02 U	3.57E-02
Fluoranthene	7.1	0.02 U	1.41E-03	0.02 U	1.41E-03	0.02 U	1.41E-03	0.076	1.07E-02
Fluorene	39.3	0.02 U	2.54E-04	0.02 U	2.54E-04	0.02 U	2.54E-04	0.02 U	2.54E-04
Indeno(1,2,3-cd)pyrene	0.28	0.02 U	3.57E-02	0.02 U	3.57E-02	0.02 U	3.57E-02	0.025	8.93E-02
Naphthalene	193	0.074	3.83E-04	0.02 U	5.18E-05	0.02 U	5.18E-05	0.02 U	5.18E-05
Perylene	0.9	0.02 U	1.11E-02	0.02 U	1.11E-02	0.02 U	1.11E-02	0.02 U	1.11E-02
Phenanthrene	19.1	0.02 U	5.24E-04	0.02 U	5.24E-04	0.02 U	5.24E-04	0.033	1.73E-03
Pyrene	10.1	0.02 U	9.90E-04	0.02 U	9.90E-04	0.02 U	9.90E-04	0.077	7.62E-03
Alkylated PAHs									
1-Methylnaphthalene	75	0.02 U	1.33E-04	0.02 U	1.33E-04	0.02 U	1.33E-04	0.02 U	1.33E-04
2-Methylnaphthalene	72	0.02 U	1.39E-04	0.02 U	1.39E-04	0.02 U	1.39E-04	0.02 U	1.39E-04
C1-Chrysenes	0.86	0.02 U	1.16E-02	0.02 U	1.16E-02	0.02 U	1.16E-02	0.02 U	1.16E-02
C1-Dibenzo(a,h)anthracene	0.12	NM	--	NM	--	NM	--	NM	--
C1-Fluoranthenes/Pyrenes	3.2	0.02 U	3.13E-03	0.02 U	3.13E-03	0.02 U	3.13E-03	0.039	1.22E-02
C1-Fluorenes	14	0.02 U	7.14E-04	0.02 U	7.14E-04	0.02 U	7.14E-04	0.02 U	7.14E-04
C1-Naphthalenes	81.7	NM	--	NM	--	NM	--	NM	--
C1-Phenanthrenes/Anthracenes	7.4	0.02 U	1.35E-03	0.02 U	1.35E-03	0.02 U	1.35E-03	0.02 U	1.35E-03
C2-Chrysenes	0.48	0.02 U	2.08E-02	0.02 U	2.08E-02	0.02 U	2.08E-02	0.02 U	2.08E-02
C2-Dibenzo(a,h)anthracene	0.06	NM	--	NM	--	NM	--	NM	--
C2-Fluoranthenes/Pyrenes	1.4	NM	--	NM	--	NM	--	NM	--
C2-Fluorenes	5.3	0.02 U	1.89E-03	0.02 U	1.89E-03	0.02 U	1.89E-03	0.02 U	1.89E-03
C2-Naphthalenes	30.2	0.02 U	3.31E-04	0.02 U	3.31E-04	0.02 U	3.31E-04	0.02 U	3.31E-04
C2-Phenanthrenes/Anthracenes	3.2	0.02 U	3.13E-03	0.02 U	3.13E-03	0.02 U	3.13E-03	0.02 U	3.13E-03
C3-Chrysenes	0.17	0.02 U	5.88E-02	0.02 U	5.88E-02	0.02 U	5.88E-02	0.02 U	5.88E-02
C3-Dibenzo(a,h)anthracene	0.02	NM	--	NM	--	NM	--	NM	--
C3-Fluoranthenes/Pyrenes	0.63	NM	--	NM	--	NM	--	NM	--
C3-Fluorenes	1.9	0.02 U	5.26E-03	0.02 U	5.26E-03	0.02 U	5.26E-03	0.02 U	5.26E-03
C3-Naphthalenes	11.1	0.02 U	9.01E-04	0.02 U	9.01E-04	0.02 U	9.01E-04	0.02 U	9.01E-04
C3-Phenanthrenes/Anthracenes	1.3	0.02 U	7.69E-03	0.02 U	7.69E-03	0.02 U	7.69E-03	0.02 U	7.69E-03
C4-Chrysenes	0.07	0.02 U	1.43E-01	0.02 U	1.43E-01	0.02 U	1.43E-01	0.02 U	1.43E-01
C4-Naphthalenes	4	0.02 U	2.50E-03	0.02 U	2.50E-03	0.02 U	2.50E-03	0.02 U	2.50E-03
C4-Phenanthrenes/Anthracenes	0.56	0.02 U	1.79E-02	0.02 U	1.79E-02	0.02 U	1.79E-02	0.02 U	1.79E-02
Total Toxic Units[b]			0.5		0.4		0.4		0.7

Table 4.1-14
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water - 2003 Data
Preliminary Screening Level Ecological Risk Assessment
Clear Creek, Bloomington, Indiana

Compound	Final Chronic Value[a] (µg/L)	SW-7 PAH Concentration (µg/L)	SW-7 Toxic Units	SW-8 PAH Concentration (µg/L)	SW-8 Toxic Units
Unsubstituted PAHs					
Acenaphthene	56	0.02 U	1.79E-04	0.02 U	1.79E-04
Acenaphthylene	307	0.02 U	3.26E-05	0.02 U	3.26E-05
Anthracene	20.7	0.02 U	4.83E-04	0.02 U	4.83E-04
Benz(a)anthracene	2.2	0.02 U	4.55E-03	0.07	3.18E-02
Benzo(a)pyrene	0.96	0.02 U	1.04E-02	0.068	7.08E-02
Benzo(b)fluoranthene	0.68	0.02 U	1.47E-02	0.083	1.22E-01
Benzo(e)pyrene	0.9	0.02 U	1.11E-02	0.073	8.11E-02
Benzo(g,h,i)perylene	0.44	0.02 U	2.27E-02	0.056	1.27E-01
Benzo(k)fluoranthene	0.64	0.02 U	1.56E-02	0.1	1.56E-01
Chrysene	2	0.02 U	5.00E-03	0.11	5.50E-02
Dibenz(a,h)anthracene	0.28	0.02 U	3.57E-02	0.02 U	3.57E-02
Fluoranthene	7.1	0.02 U	1.41E-03	0.2	2.82E-02
Fluorene	39.3	0.02 U	2.54E-04	0.02 U	2.54E-04
Indeno(1,2,3-cd)pyrene	0.28	0.02 U	3.57E-02	0.072	2.57E-01
Naphthalene	193	0.02 U	5.18E-05	0.02 U	5.18E-05
Perylene	0.9	0.02 U	1.11E-02	0.02 U	1.11E-02
Phenanthrene	19.1	0.02 U	5.24E-04	0.064	3.35E-03
Pyrene	10.1	0.02 U	9.90E-04	0.16	1.58E-02
Alkylated PAHs					
1-Methylnaphthalene	75	0.02 U	1.33E-04	0.02 U	1.33E-04
2-Methylnaphthalene	72	0.02 U	1.39E-04	0.00002 U	1.39E-07
C1-Chrysenes	0.86	0.02 U	1.16E-02	0.02 U	1.16E-02
C1-Dibenzo(a,h)anthracene	0.12	NM	--	NM	--
C1-Fluoranthenes/Pyrenes	3.2	0.02 U	3.13E-03	0.058	1.81E-02
C1-Fluorenes	14	0.02 U	7.14E-04	0.02 U	7.14E-04
C1-Naphthalenes	81.7	NM	--	NM	--
C1-Phenanthrenes/Anthracenes	7.4	0.02 U	1.35E-03	0.02 U	1.35E-03
C2-Chrysenes	0.48	0.02 U	2.08E-02	0.02 U	2.08E-02
C2-Dibenzo(a,h)anthracene	0.06	NM	--	NM	--
C2-Fluoranthenes/Pyrenes	1.4	NM	--	NM	--
C2-Fluorenes	5.3	0.02 U	1.89E-03	0.02 U	1.89E-03
C2-Naphthalenes	30.2	0.02 U	3.31E-04	0.02 U	3.31E-04
C2-Phenanthrenes/Anthracenes	3.2	0.02 U	3.13E-03	0.02 U	3.13E-03
C3-Chrysenes	0.17	0.02 U	5.88E-02	0.02 U	5.88E-02
C3-Dibenzo(a,h)anthracene	0.02	NM	--	NM	--
C3-Fluoranthenes/Pyrenes	0.63	NM	--	NM	--
C3-Fluorenes	1.9	0.02 U	5.26E-03	0.02 U	5.26E-03
C3-Naphthalenes	11.1	0.02 U	9.01E-04	0.02 U	9.01E-04
C3-Phenanthrenes/Anthracenes	1.3	0.02 U	7.69E-03	0.02 U	7.69E-03
C4-Chrysenes	0.07	0.02 U	1.43E-01	0.02 U	1.43E-01
C4-Naphthalenes	4	0.02 U	2.50E-03	0.02 U	2.50E-03
C4-Phenanthrenes/Anthracenes	0.56	0.02 U	1.79E-02	0.02 U	1.79E-02
Total Toxic Units[b]			0.4		1

Notes:
Upgradient area includes locations SW-6, SW-7, and SW-8.
Study area includes locations CS-1 through CS-10 and SW-1 through SW-5.

a. USEPA 2003
b. A toxic unit value exceeding 1.0 indicates the potential for toxicity to fish.
c. Detection limits not adequate to evaluate risks.
* Average results for sample and duplicate used.

J - estimated value
NM - not measured
U - not detected
µg/L - micrograms per liter

Table 4.2-1
Analytical Results for Sediment Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

		Study Area												Upgradient		
Parameter	Sample ID	SED-09	SED-10	SED-11	SED-12	SED-13	SED-14	SED-15	SED-16	SED-17 *	SED-18	SED-19	SED-23	SED-20	SED-21	SED-22
	Sample Date	8-Sep-10	8-Sep-10	8-Sep-10	9-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)										4780						
Unsubstituted PAHs																
Acenaphthene		12.2	73.5	17.6	13.1	20.4	874	22.6	6.16	869 [15.8]	35 J	143	2.54	120	55.8	126
Acenaphthylene		52.7	44.8	13.8	41.6	10.6	43.4	18.8	13.8	67.5 [54.1]	91.8 J	85.6	10.6	58.6	71.5	106
Anthracene		116	66.1	27.7	30.8	42.4	108	44.5	24.7	720 [168]	173 J	359	13.8	288	161	740
Benz(a)anthracene		380	286	153	171	273	602	182	95.1	3050 [616]	1290	749	64	1040	587	1250
Benzo(a)pyrene		240	348	124	198	343	681	233	109	2690 [496]	585	612	52.8	864	431	1130
Benzo(b)fluoranthene		282	372	210	183	349	789	230	114	3180 [516]	1320	748	97	1070	557	1080
Benzo(e)Pyrene		214	274	174	186	263	566	192	89.4	1930 [346]	923	529	73.1	674	381	770
Benzo(g,h,i)perylene		154	250	156	186	262	563	171	86.6	1830 [322]	746	492	67.8	631	347	742
Benzo(k)fluoranthene		283	301	173	193	300	620	184	97.7	2510 [440]	1220	651	77	786	405	923
Chrysene		430	370	245	230	349	841	238	124	3410 [599]	1620	881	99.3	1150	638	1250
Dibenz(a,h)anthracene		56.5	63	36.3	44	64.4	139	36.7	19	590 [89.3]	183 J	136	15.4	182	93.3	194
Fluoranthene		1050	583	403	191	504	1770	462	221	[8410 D] [1150]	2960 J	2010	150	2480	1340	2940
Fluorene		19.7	39.2	17.8	9.63	17.1	377	21.8	7.62	674 [34.6]	41.9 J	186	4.5	130	67.6	160
Indeno(1,2,3-cd)Pyrene		160	247	145	163	271	568	146	80.7	2170 [362]	740 J	538	69.1	698	360	771
Naphthalene		9.39	198	23.4	8.55	11.8	2640	88.7	10.9	137 [40.1]	26.4 J	17	2.86	39.8	15.8	446
Perylene		64.8	94.3	39	46.5	99.2	189	56.3	27.9	690 [134]	216 J	165	16.2	232	119	295
Phenanthrene		247	234	235	82.4	221	1230	276	108	[8520 D] [387]	1180 J	1890	57.8	1810	876	2560
Pyrene		777	519	412	216	436	1380	424	182	5820 [960]	2410 J	1580	131	1980	1180	2370
Alkylated PAHs																
1-Methylnaphthalene		5.48	18.5	17.4	4.18	7.19	562	14.2	6.44	69.6 [13]	15.1	18.4	<1.89	24.4	7.61	106
2-Methylnaphthalene		5.8	18.5	27.5	2.65	7.94	287	24.4	7.79	95.1 [20.8]	22 J	30.3	<1.89	25.6	8.76	186
C1-Naphthalenes		7.5	24.8	29.9	4.54	9.96	559	25.2	9.99	105 [22.1]	24.4 J	31.6	3.01	32.4	10.8	187
C1-Chrysenes		168	139	133	119	105	208	113	40.8	786 [247]	441	242	34	310	198	398
C1-Fluoranthenes/Pyrenes		353	235	302	161	175	393	207	74.1	1510 [538]	761 J	470	54.6	617	407	785
C1-Fluorenes		24.5	15.5	13	7.31	7.31	30	10.6	5.6	93 [39.7]	21 J	30.4	5.04	34.7	22.5	61.4
C1-Phenanthrenes/Anthracenes		233	103	213	62.4	65.2	237	82.8	41.6	1290 [292]	364 J	360	29.1	383	200	582
C2-Chrysenes		106	86.5	103	63.2	52.8	104	137	35.2	321 [115]	178	111	26.2	148	111	244
C2-Fluorenes		28.2	22.5	44.5	12	13.3	24.5	25.1	11	113 [64.2]	38.7 J	45.3	10.3	45.2	26.8	89.4
C2-Naphthalenes		13	31.8	45.1	9.8	19.4	230	23.6	17.1	113 [40.9]	35.9 J	53.8	7.97	46.9	20.9	179
C2-Phenanthrenes/Anthracenes		167	77.5	251	44.2	48.7	111	77.3	42	417 [201]	220 J	160	25.7	170	103	256
C3-Chrysenes		128	103	83.6	54.2	76.2	116	198	65.7	278 [124]	143	111	38.3	145	114	286
C3-Fluorenes		55.5	58.9	112	22.7	43.9	171	64.2	28.3	990 [78.6]	160 J	223	22.7	219	109	206
C3-Naphthalenes		19.8	34.9	67.8	11.9	20.6	57.5	23.5	21.9	91.2 [58.4]	36.4 J	52.7	9.98	47.2	22.5	140
C3-Phenanthrenes/Anthracenes		59.2	48.4	154	26.1	29.5	58.4	59.6	29	163 [92.2]	97.6 J	71.6	17.9	82.7	51.1	123
C4-Chrysenes		93.8	73.7	58.7	39.1	50.2	74.8	142	58.7	160 [75]	98.1	80.9	34.3	100	76.4	180
C4-Naphthalenes		21.4	31.8	77	8.77	18.2	28.2	28.4	18.1	58.2 [55.6]	33.2 J	42.5	9.89	35.1	17.1	91.4
C4-Phenanthrenes/Anthracenes		31.4	30.5	82.4	13.6	22.4	35	54.1	18.8	55.5 [34.5]	41.3 J	34.7	11.6	39.1	27.3	82.3

Table 4.2-1
Analytical Results for Sediment Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

		Study Area												Upgradient		
Parameter	Sample ID	SED-09	SED-10	SED-11	SED-12	SED-13	SED-14	SED-15	SED-16	SED-17 *	SED-18	SED-19	SED-23	SED-20	SED-21	SED-22
	Sample Date	8-Sep-10	8-Sep-10	8-Sep-10	9-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10
Other PAHs																
Carbazole		19.1	33.4	29.3	7.4	37.2	337	42.2	15.3	1210 [33]	146 J	315	11.7	279	110	152
Dibenzofuran		7.56	26.5	17.1	5.35	9.12	398	32.3	<3.98	626 [23.4]	32.1	108	2.06	78.1	26.7	247
Volatile Organic Carbons (VOCs) (mg/kg)																
Benzene		<0.0065	<0.0068	<0.0058	<0.0061	<0.0069	<0.4	<0.0057	<0.0064	<0.0064 [<0.0067]	<0.0072	<0.0068	<0.0068	<0.0062	<0.0056	<0.0060
Toluene		<0.0065	<0.0068	<0.0058	<0.0061	<0.0069	<0.4	<0.0057	<0.0064	<0.0064 [<0.0067]	<0.0072	<0.0068	<0.0068	<0.0062	<0.0056	<0.0060
Ethylbenzene		<0.0065	<0.0068	<0.0058	<0.0061	<0.0069	<0.4	<0.0057	<0.0064	<0.0064 [<0.0067]	<0.0072	<0.0068	<0.0068	<0.0062	<0.0056	<0.0060
Xylene		<0.02	<0.02	<0.017	<0.018	<0.021	<1.2	<0.017	<0.019	<0.019 [<0.02]	<0.022	<0.02	<0.02	<0.019	<0.017	<0.018
Phenol and Phthalates (µg/kg)																
Phenol		<202 J	<223 J	<212 J	<224	<233 J	R	<230 J	<227	<228 [<230]	<248 J	<241	<234	<213	<234	<236
2-Methylphenol		<202	<223	<212	<224	<233	R	<230 J	<227	<228 [<230]	<248 J	<241	<234	<213	<234	<236
4-Methylphenol		<202	<223	<212	<224	<233	R	<230 J	<227	<228 [<230]	<248 J	<241	<234	<213	<234	<236
2,4-Dimethylphenol		<202	<223	<212	<224	<233	R	<230 J	<227	<228 [<230]	R	<241	<234	<213	<234	<236
2,4-Dichlorophenol		<202	<223	<212	<224	<233	R	<230 J	<227	<228 [<230]	<248 J	<241	<234	<213	<234	<236
2,4,6-Trichlorophenol		<202	<223	<212	<224	<233	R	<230 J	<227	<228 [<230]	<248 J	<241	<234	<213	<234	<236
Pentachlorophenol		<808	<892	<847	<895	<934	R	<230 J	<908	<912 [<919]	<248 J	<963	<935	<852	<936	<943
Butylbenzylphthalate		<202	<223	<212	<224	<233	<223	<230 J	<227	<228 [<230]	<248	<241	<234	<213	<234	<236
Bis(2-Ethylhexyl)phthalate		<202	<223	<212	<224	<233	<223	<230 J	<227	<228 [<230]	<248	<241	<234	<213	<234	<236
Physical Parameters																
% Gravel		0	0	0	0	0	0	0	0	0 [0]	0	0	0	0	0	0
% Sand		90.4	74.6	80.1	72	82.2	75.7	73.7	73.7	71.6 [73.5]	70.5	73.2	76.3	73.4	72.4	70.4
% Fines		9.6	25.4	19.9	28	17.8	24.3	26.3	26.3	28.4 [26.5]	29.5	26.8	23.7	26.6	27.6	29.6
% Soot		4.11 [3.67	3.46 [2.78	3.66 [3.38	3.02 [3.03	4.55 [3.17	3.79 [2.9]	4.64 [3.12	3.36 [3.19	98 [3.01]	[4.2 [2.7	35 J [1.42	2.62 [3.07	4.01 [4.92]	2.53 [2.2]	3.08 [3.67	3.01 [2.93
% Total Solids		84.8 [80.4	78.5 [79.9	84 [80.7]	34.5 [79.13	1.3 [79.13	1.2 [80.33	2.7 [80.1	83 [79.3]	1.2 [76.7]	[80 [79.4	75.6 [68.17	8.1 [74.83	0.1 [77.9]	82.6 [76.67	9.6 [76.4	79 [76.6]
Total Organic Carbon (mg/kg)		83400	66100	45900	43400	92400	65500	38400	84500	55700 [74000]	49700	55800	42500	58200	53900	65200

* Sample has a duplicate.
[ ] Results in brackets are from field duplicates, lab duplicates, or repeated analyses.
mg/kg - milligrams per kilogram.
ug/kg - micrograms per kilograms.

Table 4.2-2
Analytical Results for Surface Water Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Sample ID	Study Area											Upgradient		
		SW-09	SW-10	SW-11	SW-12	SW-13	SW-14	SW-15	SW-16	SW-17 *	SW-18 *	SW-19	SW-23	SW-20	SW-21	SW-22
	Sample Date	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10
	Units															
Polycyclic Aromatic Hydrocarbons (PAHs) (ng/L)																
Unsubstituted PAHs																
Acenaphthene		49.3	60.3	57.8	59	63	68	59.9	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Acenaphthylene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	11.8 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Anthracene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	10.6 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Benz(a)anthracene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	10.6	<10.5	33.6 [16.3]	14.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Benzo(a)pyrene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	23.5 [<9.34]	11.1 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Benzo(b)fluoranthene		11.8	<10.9	<9.43	13.7	11.6	<9.62	16.5	<10.5	80.8 [31]	21.3 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Benzo(e)Pyrene		<9.39	<10.9	<9.43	11.3	<9.48	<9.62	13	<10.5	56.1 [28.2]	14.7 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Benzo(g,h,i)perylene		<9.39	<10.9	<9.43	11.5	10.1	<9.62	11.7	<10.5	54.8 [26.5]	14.2 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Benzo(k)fluoranthene		10.8	<10.9	<9.43	10.7	<9.48	<9.62	12.5	<10.5	51.4 [28.4]	16.9 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Chrysene		15.9	<10.9	9.7	14.8	13.8	<9.62	18.1	10.6	69.7 [32.6]	22 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Dibenz(a,h)anthracene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	10.3 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Fluoranthene		29	26.6	24.2	31.8	29.2	26.9	35.2	16.4	97.9 [41.3]	34.2 [30.8]	9.43	11.8	9.77	10.5	10.1
Fluorene		21.1	32.2	25	26.3	27.6	31.3	27.1	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Indeno(1,2,3-cd)Pyrene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	11.8	<10.5	50 [24]	13.4 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Naphthalene		60.5	73.3	81.7	74.8	73	43.6	24.2	14.6	16.5 [13.6]	32.3 [29.4]	21.7	84.3	28.6	38.1	21
Perylene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Phenanthrene		16.8	18.3	17.7	20.2	20.4	23.1	26.6	11.8	43.3 [18.1]	18.5 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Pyrene		22.6	18.6	16.1	22.8	20	17.7	26.9	13.9	88.7 [41.1]	30.6 [28.3]	<9.43	<10.8	<9.62	<10	<9.8
Alkylated PAHs																
1-Methylnaphthalene		9.42	<10.9	13	13.5	16	14.5	14.7	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
2-Methylnaphthalene		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C1-Naphthalenes		<9.39	<10.9	12.2	12.3	13.9	13.3	15.8	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	12.5	<9.62	<10	<9.8
C1-Chrysenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	23.7 [12.8]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C1-Fluoranthenes/Pyrenes		9.83	<10.9	<9.43	10.3	<9.48	<9.62	16	11.4	43.2 [23.9]	15.5 [23.7]	<9.43	<10.8	<9.62	<10	<9.8
C1-Fluorenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C1-Phenanthrenes/Anthracenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	9.83	<10.5	17 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C2-Chrysenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	14.6 [9.38]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C2-Fluorenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C2-Naphthalenes		10.1	<10.9	10.5	9.89	10.3	11.3	17.5	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C2-Phenanthrenes/Anthracenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	9.53	<10.5	14.6 [9.5]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C3-Chrysenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C3-Fluorenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C3-Naphthalenes		<9.39	13.7	11.7	11.8	10.9	12.1	11.7	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C3-Phenanthrenes/Anthracenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	10.4 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C4-Chrysenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
C4-Naphthalenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	10.5	<10.8	<9.62	<10	<9.8
C4-Phenanthrenes/Anthracenes		<9.39	<10.9	<9.43	<9.39	<9.48	<9.62	<9.34	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8

Table 4.2-2
Analytical Results for Surface Water Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Sample ID	Study Area											Upgradient		
		SW-09	SW-10	SW-11	SW-12	SW-13	SW-14	SW-15	SW-16	SW-17 *	SW-18 *	SW-19	SW-23	SW-20	SW-21	SW-22
	Sample Date	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	8-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10	9-Sep-10
	Units															
Other PAHs																
Carbazole		12.2	15.5	18.3	19.2	21	21.1	22.3	<10.5	10.1 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Dibenzofuran		19	25.2	24.5	24.1	25.8	29.1	25	<10.5	<9.52 [<9.34]	<10.8 [<21.3]	<9.43	<10.8	<9.62	<10	<9.8
Volatile Organic Carbons (VOCs) (mg/L)																
Benzene		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015 [<0.015]	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Phenol and Phthalates (µg/L)																
Phenol		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	<0.543	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
2-Methylphenol		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	<0.543	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
4-Methylphenol		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	<0.543	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
2,4-Dimethylphenol		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	<0.543	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
2,4-Dichlorophenol		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	<0.543	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
2,4,6-Trichlorophenol		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	<0.543	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
Pentachlorophenol		<2.08	<2	<2.08	<2.04	<2.1	<2.04	<2.17	<2.04	<1.98 [<2.02]	<2.08	<2.04	<2.47	<2	<2.06	<2.02
Butylbenzylphthalate		<0.521	<0.5	<0.521	<0.51	<0.526	<0.51	0.57	<0.51	<0.495 [<0.505]	<0.521	<0.51	<0.617	<0.5	<0.515	<0.505
Bis(2-Ethylhexyl)phthalate		1.46	<0.5	<0.521	<0.51	<0.526	0.566	0.751	<0.51	1.15 [<0.505]	<0.521	3.33	<0.617	<0.5	<0.515	1.28
Water Quality (mg/L)																
Hardness		206	202	202	201	192	196	186	201	213 [218]	236	199	204	192	194	196

* Sample has a duplicate.
[ ] Results in brackets are from field duplicates, lab duplicates, or repeated analyses.
mg/l - milligrams per liter.
ug/l - micrograms per liter.
ng/l - nanograms per liter.

Table 4.2-3
Data Summary for Study Area Sediment Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Frequency of Detection		Minimum Detect	Maximum Detect	Max Detect Location	Minimum Non-Detect	Maximum Non-Detect	Arithmetic Average
	# detects/ #samples	(%)						
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)								
Unsubstituted PAHs								
Acenaphthene	12/12	100	2.54	874	SED-14			139
Acenaphthylene	12/12	100	10.6	91.8	SED-18			40.7
Anthracene	12/12	100	13.8	444	SED-17 *			121
Benz(a)anthracene	12/12	100	64	1833	SED-17 *			507
Benzo(a)pyrene	12/12	100	52.8	1593	SED-17 *			427
Benzo(b)fluoranthene	12/12	100	97	1848	SED-17 *			545
Benzo(e)Pyrene	12/12	100	73.1	1138	SED-17 *			385
Benzo(g,h,i)perylene	12/12	100	67.8	1076	SED-17 *			351
Benzo(k)fluoranthene	12/12	100	77	1475	SED-17 *			465
Chrysene	12/12	100	99.3	2004.5	SED-17 *			619
Dibenz(a,h)anthracene	12/12	100	15.4	339.65	SED-17 *			94.4
Fluoranthene	12/12	100	150	4780	SED-17 *			1530
Fluorene	12/12	100	4.5	377	SED-14			91.4
Indeno(1,2,3-cd)Pyrene	12/12	100	69.1	1266	SED-17 *			366
Naphthalene	12/12	100	2.86	2640	SED-14			260
Perylene	12/12	100	16.2	412	SED-17 *			119
Phenanthrene	12/12	100	57.8	4453	SED-17 *			1160
Pyrene	12/12	100	131	3390	SED-17 *			988
Alkylated PAHs								
1-Methylnaphthalene	11/12	91.7	4.18	562	SED-14	1.89	1.89	59.3
2-Methylnaphthalene	11/12	91.7	2.65	287	SED-14	1.89	1.89	41.1
C1-Naphthalenes	12/12	100	3.01	559	SED-14			66.1
C1-Chrysenes	12/12	100	34	516.5	SED-17 *			188
C1-Fluoranthenes/Pyrenes	12/12	100	54.6	1024	SED-17 *			351
C1-Fluorenes	12/12	100	5.04	66.35	SED-17 *			19.7
C1-Phenanthrenes/Anthracenes	12/12	100	29.1	791	SED-17 *			215
C2-Chrysenes	12/12	100	26.2	218	SED-17 *			102
C2-Fluorenes	12/12	100	10.3	88.6	SED-17 *			30.3
C2-Naphthalenes	12/12	100	7.97	230	SED-14			47
C2-Phenanthrenes/Anthracenes	12/12	100	25.7	309	SED-17 *			128
C3-Chrysenes	12/12	100	38.3	201	SED-17 *			110
C3-Fluorenes	12/12	100	22.7	534.3	SED-17 *			125
C3-Naphthalenes	12/12	100	9.98	74.8	SED-17 *			36
C3-Phenanthrenes/Anthracenes	12/12	100	17.9	154	SED-11			64.9
C4-Chrysenes	12/12	100	34.3	142	SED-15			76.8
C4-Naphthalenes	12/12	100	8.77	77	SED-11			31.2
C4-Phenanthrenes/Anthracenes	12/12	100	11.6	82.4	SED-11			35.1

Table 4.2-3
Data Summary for Study Area Sediment Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Frequency of Detection # detects/ #samples	Frequency of Detection (%)	Minimum Detect	Maximum Detect	Max Detect Location	Minimum Non-Detect	Maximum Non-Detect	Arithmetic Average
Other PAHs								
Carbazole	12/12	100	7.4	621.5	SED-17 *			135
Dibenzofuran	11/12	91.7	2.06	398	SED-14	3.98	3.98	80.6
Volatile Organic Carbons (VOCs) (mg/kg)								
Benzene	0/12	0				0.0057	0.4	0.0393
Toluene	0/12	0				0.0057	0.4	0.0393
Ethylbenzene	0/12	0				0.0057	0.4	0.0393
Xylene	0/12	0				0.017	1.2	0.118
Phenol and Phthalates (µg/kg)								
Phenol	0/11	0				202	248	227
2-Methylphenol	0/11	0				202	248	227
4-Methylphenol	0/11	0				202	248	227
2,4-Dimethylphenol	0/10	0				202	248	227
2,4-Dichlorophenol	0/11	0				202	248	227
2,4,6-Trichlorophenol	0/11	0				202	248	227
Pentachlorophenol	0/11	0				808	993	908
Butylbenzylphthalate	0/12	0				202	248	227
Bis(2-Ethylhexyl)phthalate	0/12	0				202	248	227
Physical Parameters								
% Soot	12/12	100	1.39	4.465	SED-23			3.3
% Total Solids	12/12	100	71.85	82.6	SED-09			79.6
Total Organic Carbon (mg/kg)	12/12	100	38400	92400	SED-13			61000

* Sample has a duplicate. Result of parent and duplicate were set at: the average value or the detected value in case one was non-detect.
For the arithmetic mean, one-half the detection limit was used for non-detects.

mg/kg - milligrams per kilogram. ug/kg - micrograms per kilogram.

Table 4.2-4
Data Summary for Study Area Surface Water Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Units	Frequency of Detection		Minimum Detect	Maximum Detect	Max Detect Location	Minimum Non-Detect	Maximum Non-Detect	Arithmetic Average
		# detects/ #samples	(%)						
Polycyclic Aromatic Hydrocarbons (PAHs) (ng/L)									
Unsubstituted PAHs									
Acenaphthene		7/12	58.3	49.3	68	SW-14	9.43	16.05	37.1
Acenaphthylene		1/12	8.33	11.8	11.8	SW-17 *	9.34	16.05	5.75
Anthracene		1/12	8.33	10.6	10.6	SW-17 *	9.34	16.05	5.65
Benz(a)anthracene		3/12	25	10.6	24.95	SW-17 *	9.39	10.9	7.9
Benzo(a)pyrene		2/12	16.7	11.1	23.5	SW-17 *	9.34	10.9	6.98
Benzo(b)fluoranthene		6/12	50	11.6	55.9	SW-17 *	9.43	10.9	13.4
Benzo(e)Pyrene		4/12	33.3	11.3	42.15	SW-17 *	9.39	10.9	10.1
Benzo(g,h,i)perylene		5/12	41.7	10.1	40.65	SW-17 *	9.39	10.9	10.3
Benzo(k)fluoranthene		5/12	41.7	10.7	39.9	SW-17 *	9.43	10.9	10.5
Chrysene		8/12	66.7	9.7	51.15	SW-17 *	9.43	10.9	14.7
Dibenz(a,h)anthracene		1/12	8.33	10.3	10.3	SW-17 *	9.34	16.05	5.62
Fluoranthene		12/12	100	9.43	69.6	SW-17 *			28.6
Fluorene		7/12	58.3	21.1	32.2	SW-10	9.43	16.05	18.2
Indeno(1,2,3-cd)Pyrene		3/12	25	11.8	37	SW-17 *	9.39	10.9	8.89
Naphthalene		12/12	100	14.6	84.3	SW-23			49.8
Perylene		0/12	0				9.34	16.05	5.16
Phenanthrene		10/12	83.3	11.8	30.7	SW-17 *	9.43	10.8	17.9
Pyrene		10/12	83.3	13.9	64.9	SW-17 *	9.43	10.8	21.9
Alkylated PAHs									
1-Methylnaphthalene		6/12	50	9.42	16	SW-13	9.43	16.05	9.56
2-Methylnaphthalene		0/12	0				9.34	16.05	5.16
C1-Naphthalenes		6/12	50	12.2	15.8	SW-15	9.39	16.05	9.4
C1-Chrysenes		1/12	8.33	18.25	18.25	SW-17 *	9.34	16.05	6.28
C1-Fluoranthenes/Pyrenes		6/12	50	9.83	33.55	SW-17 *	9.43	10.9	10.9
C1-Fluorenes		0/12	0				9.34	16.05	5.16
C1-Phenanthrenes/Anthracenes		2/12	16.7	9.83	17	SW-17 *	9.39	16.05	6.61
C2-Chrysenes		1/12	8.33	11.99	11.99	SW-17 *	9.34	16.05	5.76
C2-Fluorenes		0/12	0				9.34	16.05	5.16
C2-Naphthalenes		6/12	50	9.89	17.5	SW-15	9.43	16.05	8.6
C2-Phenanthrenes/Anthracenes		2/12	16.7	9.53	12.05	SW-17 *	9.39	16.05	6.17
C3-Chrysenes		0/12	0				9.34	16.05	5.16
C3-Fluorenes		0/12	0				9.34	16.05	5.16
C3-Naphthalenes		6/12	50	10.9	13.7	SW-10	9.39	16.05	8.73
C3-Phenanthrenes/Anthracenes		1/12	8.33	10.4	10.4	SW-17 *	9.34	16.05	5.63
C4-Chrysenes		0/12	0				9.34	16.05	5.16
C4-Naphthalenes		1/12	8.33	10.5	10.5	SW-19	9.34	16.05	5.64
C4-Phenanthrenes/Anthracenes		0/12	0				9.34	16.05	5.16

Table 4.2-4
Data Summary for Study Area Surface Water Samples - 2010
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Units	Frequency of Detection # detects/ #samples	Frequency of Detection (%)	Minimum Detect	Maximum Detect	Max Detect Location	Minimum Non-Detect	Maximum Non-Detect	Arithmetic Average
Other PAHs									
Carbazole		8/12	66.7	10.1	22.3	SW-15	9.43	16.05	13.6
Dibenzofuran		7/12	58.3	19	29.1	SW-14	9.43	16.05	16.7
Volatile Organic Carbons (VOCs) (mg/L)									
Benzene		0/12	0				0.005	0.005	0.0025
Toluene		0/12	0				0.005	0.005	0.0025
Ethylbenzene		0/12	0				0.005	0.005	0.0025
Xylene		0/12	0				0.015	0.015	0.0075
Phenol and Phthalates (µg/L)									
Phenol		0/12	0				0.5	0.617	0.262
2-Methylphenol		0/12	0				0.5	0.617	0.262
4-Methylphenol		0/12	0				0.5	0.617	0.262
2,4-Dimethylphenol		0/12	0				0.5	0.617	0.262
2,4-Dichlorophenol		0/12	0				0.5	0.617	0.262
2,4,6-Trichlorophenol		0/12	0				0.5	0.617	0.262
Pentachlorophenol		0/12	0				2	2.47	1.05
Butylbenzylphthalate		1/12	8.33	0.57	0.57	SW-15	0.5	0.617	0.287
Bis(2-Ethylhexyl)phthalate		5/12	41.7	0.566	3.33	SW-19	0.5	0.617	0.759
Water Quality (mg/L)									
Hardness		12/12	100	186	236	SW-18 *			203

* Sample has a duplicate. Result of parent and duplicate were set at: the average value or the detected value in case one was non-detect.

The results for duplicates were set as: the average value or the detected value in case one was non-detect.

For the arithmetic mean, one-half the detection limit was used for non-detects.

mg/l - milligrams per liter. ng/l - nanograms per liter. ug/l - micrograms per liter.

Table 4.2-5
Comparison of Sediment Maximum Concentrations (2010 Data) and Screening Values
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Compound	Maximum Concentration (µg/kg)	Screening Value[a] (µg/kg)	Background Value[b] (µg/kg)	Exceeds Screening Value?
Polycyclic Aromatic Hydrocarbons (PAHs)				
Unsubstituted PAHs				
Acenaphthene	874	6.71	126	yes
Acenaphthylene	91.8	5.87	106	yes
Anthracene	444	57.2	740	yes
Benz(a)anthracene	1833	108	1250	yes
Benzo(a)pyrene	1593	150	1130	yes
Benzo(b)fluoranthene	1848	10400	1080	no
Benzo(e)Pyrene	1138	NA	770	--
Benzo(g,h,i)perylene	1076	170	742	yes
Benzo(k)fluoranthene	1475	240	923	yes
Chrysene	2004.5	166	1250	yes
Dibenz(a,h)anthracene	339.65	33	194	yes
Fluoranthene	4780	423	2940	yes
Fluorene	377	77.4	160	yes
Indeno(1,2,3-cd)Pyrene	1266	200	771	yes
Naphthalene	2640	176	446	yes
Perylene	412	NA	295	--
Phenanthrene	4453	204	2560	yes
Pyrene	3390	195	2370	yes
Alkylated PAHs				
1-Methylnaphthalene	562	20.2	106	yes
2-Methylnaphthalene	287	20.2	186	yes
C1-Naphthalenes	559	NA	187	--
C1-Chrysenes	516.5	NA	398	--
C1-Fluoranthenes/Pyrenes	1024	NA	785	--
C1-Fluorenes	66.35	NA	61.4	--
C1-Phenanthrenes/Anthracenes	791	NA	582	--
C2-Chrysenes	218	NA	244	--
C2-Fluorenes	88.6	NA	89.4	--
C2-Naphthalenes	230	NA	179	--
C2-Phenanthrenes/Anthracenes	309	NA	256	--
C3-Chrysenes	201	NA	286	--
C3-Fluorenes	534.3	NA	219	--
C3-Naphthalenes	74.8	NA	140	--
C3-Phenanthrenes/Anthracenes	154	NA	123	--
C4-Chrysenes	142	NA	180	--
C4-Naphthalenes	77	NA	91.4	--
C4-Phenanthrenes/Anthracenes	82.4	NA	82.3	--
Other PAHs				
Carbazole	621.5	NA	279	--
Dibenzofuran	398	449	247	no

a. U.S. EPA Region 5 Resource Conservation and Recovery Act (RCRA) Ecological Screening Levels (USEPA, 2003). 2-Methylnaphthalene was used as surrogate for 1-Methylnaphthalene for identifying the R5 ESVs.

b. Values are maximum detected concentrations from upgradient sediment samples.

NA - not available

ND - not detected

µg/kg - micrograms per kilogram

Table 4.2-6
Comparison of Surface Water Maximum Concentrations (2010 Data) and Screening Values
Definitive Screening Level Ecological Risk Assessment
Clear Creek, Former Indiana Creosote Co, Bloomington, Indiana

Compound	Maximum Concentration (µg/L)	Screening Value[a] (µg/L)	Screening Value Source	Background Value[b] (µg/L)	Exceeds Screening Value?
Polycyclic Aromatic Hydrocarbons (PAHs)					
Unsubstituted PAHs					
Acenaphthene	0.068	27	IDEM	--	no
Acenaphthylene	0.0118	4840	USEPA_R5	--	no
Anthracene	0.0106	0.68	IDEM	--	no
Benz(a)anthracene	0.02495	0.025	IDEM	--	no
Benzo(a)pyrene	0.0235	0.014	USEPA_R5	--	yes
Benzo(b)fluoranthene	0.0559	9.07	USEPA_R5	--	no
Benzo(e)Pyrene	0.04215	NA		--	--
Benzo(g,h,i)perylene	0.04065	7.64	USEPA_R5	--	no
Benzo(k)fluoranthene	0.0399	NA		--	--
Chrysene	0.05115	NA		--	--
Dibenz(a,h)anthracene	0.0103	NA		--	--
Fluoranthene	0.0696	3.6	IDEM	0.0105	no
Fluorene	0.0322	2.4	IDEM	--	no
Indeno(1,2,3-cd)Pyrene	0.037	4.31	USEPA_R5	--	no
Naphthalene	0.0843	26	IDEM	0.0381	no
Perylene	ND	NA		--	no
Phenanthrene	0.0307	0.93	IDEM	--	no
Pyrene	0.0649	0.3	USEPA_R5	--	no
Alkylated PAHs					
1-Methylnaphthalene	0.016	330	USEPA_R5	--	no
2-Methylnaphthalene	ND	330	USEPA_R5	--	no
C1-Naphthalenes	0.0158	NA		--	--
C1-Chrysenes	0.01825	NA		--	--
C1-Fluoranthenes/Pyrenes	0.03355	NA		--	--
C1-Fluorenes	ND	NA		--	no
C1-Phenanthrenes/Anthracenes	0.017	NA		--	--
C2-Chrysenes	0.01199	NA		--	--
C2-Fluorenes	ND	NA		--	no
C2-Naphthalenes	0.0175	NA		--	--
C2-Phenanthrenes/Anthracenes	0.01205	NA		--	--
C3-Chrysenes	ND	NA		--	no
C3-Fluorenes	ND	NA		--	no
C3-Naphthalenes	0.0137	NA		--	--
C3-Phenanthrenes/Anthracenes	0.0104	NA		--	--
C4-Chrysenes	ND	NA		--	no
C4-Naphthalenes	0.0105	NA		--	--
C4-Phenanthrenes/Anthracenes	ND	NA		--	no
Other PAHs					
Carbazole	0.0223	NA		--	--
Dibenzofuran	0.0291	4	USEPA_R5	--	no
Phthalates					
Butylbenzylphthalate	0.57	23	USEPA_R5	--	no
bis(2-ethylhexyl)phthalate	3.33	0.3	USEPA_R5	1.28	yes

a. Screening values obtained from IDEM water quality criteria for the protection of chronic aquatic life (IDEM 2003) then from U.S. EPA Region 5 Resource Conservation and Recovery Act (RCRA) Ecological Screening Levels (2003).
2-Methylnaphthalene was used as surrogate for 1-Methylnaphthalene for identifying the R5 ESVs.

b. Values are maximum detected concentrations from upgradient surface water samples.

NA - not available ND - not detected µg/L - micrograms per liter

Table 4.2-7
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/goc)	SED-09 8.34% Organic Carbon PAH Concentration (µg/dry kg)	SED-09 PAH Concentration (µg/goc)	SED-09 Toxic Units	SED-10 6.61% Organic Carbon PAH Concentration (µg/dry kg)	SED-10 PAH Concentration (µg/goc)	SED-10 Toxic Units	SED-11 4.59% Organic Carbon PAH Concentration (µg/dry kg)	SED-11 PAH Concentration (µg/goc)	SED-11 Toxic Units	SED-12 4.34% Organic Carbon PAH Concentration (µg/dry kg)	SED-12 PAH Concentration (µg/goc)	SED-12 Toxic Units
Unsubstituted PAHs													
Acenaphthene	491	12.2	0.1	0.0002	73.5	1.11	0.002	17.6	0.4	0.0008	13.1	0.3	0.0006
Acenaphthylene	452	52.7	0.6	0.001	44.8	0.7	0.002	13.8	0.3	0.0007	41.6	1	0.002
Anthracene	594	116	1.39	0.002	66.1	1	0.002	27.7	0.6	0.001	30.8	0.7	0.001
Benz(a)anthracene	841	380	4.56	0.005	286	4.33	0.005	153	3.33	0.004	171	3.94	0.005
Benzo(a)pyrene	965	240	2.88	0.003	348	5.26	0.005	124	2.7	0.003	198	4.56	0.005
Benzo(b)fluoranthene	979	282	3.38	0.003	372	5.63	0.006	210	4.58	0.005	183	4.22	0.004
Benzo(e)pyrene	967	214	2.57	0.003	274	4.15	0.004	174	3.79	0.004	186	4.29	0.004
Benzo(g,h,i)perylene	1095	154	1.85	0.002	250	3.78	0.003	156	3.4	0.003	186	4.29	0.004
Benzo(k)fluoranthene	981	283	3.39	0.003	301	4.55	0.005	173	3.77	0.004	193	4.45	0.005
Chrysene	844	430	5.16	0.006	370	5.6	0.007	245	5.34	0.006	230	5.3	0.006
Dibenz(a,h)anthracene	1123	56.5	0.7	0.0006	63	1	0.0009	36.3	0.8	0.0007	44	1.01	0.0009
Fluoranthene	707	1050	12.6	0.02	583	8.82	0.01	403	8.78	0.01	191	4.4	0.006
Fluorene	538	19.7	0.2	0.0004	39.2	0.6	0.001	17.8	0.4	0.0007	9.63	0.2	0.0004
Indeno(1,2,3-cd)pyrene	1115	160	1.92	0.002	247	3.74	0.003	145	3.16	0.003	163	3.76	0.003
Naphthalene	385	9.39	0.1	0.0003	198	3	0.008	23.4	0.5	0.001	8.55	0.2	0.0005
Perylene	967	64.8	0.8	0.0008	94.3	1.43	0.001	39	0.8	0.0008	46.5	1.07	0.001
Phenanthrene	596	247	2.96	0.005	234	3.54	0.006	235	5.12	0.009	82.4	1.9	0.003
Pyrene	697	777	9.32	0.01	519	7.85	0.01	412	8.98	0.01	216	4.98	0.007
Alkylated PAHs													
1-Methylnaphthalene	446	5.48	0.07	0.0002	18.5	0.3	0.0007	17.4	0.4	0.0009	4.18	0.1	0.0002
2-Methylnaphthalene	447	5.8	0.07	0.0002	18.5	0.3	0.0007	27.5	0.6	0.001	2.65	0.06	0.0001
C1-Chrysenes	929	168	2.01	0.002	139	2.1	0.002	133	2.9	0.003	119	2.74	0.003
C1-Fluoranthenes/Pyrenes	770	353	4.23	0.005	235	3.56	0.005	302	6.58	0.009	161	3.71	0.005
C1-Fluorenes	611	24.5	0.3	0.0005	15.5	0.2	0.0003	13	0.3	0.0005	7.31	0.2	0.0003
C1-Phenanthrenes/Anthracenes	670	233	2.79	0.004	103	1.56	0.002	213	4.64	0.007	62.4	1.44	0.002
C2-Chrysenes	1008	106	1.27	0.001	86.5	1.31	0.001	103	2.24	0.002	63.2	1.46	0.001
C2-Fluorenes	686	28.2	0.3	0.0004	22.5	0.3	0.0004	44.5	1	0.001	12	0.3	0.0004
C2-Naphthalenes	510	13	0.2	0.0004	31.8	0.5	0.001	45.1	1	0.002	9.8	0.2	0.0004
C2-Phenanthrenes/Anthracenes	746	167	2	0.003	77.5	1.17	0.002	251	5.47	0.007	44.2	1.02	0.001
C3-Chrysenes	1112	128	1.53	0.001	103	1.56	0.001	83.6	1.82	0.002	54.2	1.25	0.001
C3-Fluorenes	769	55.5	0.7	0.0009	58.9	0.9	0.001	112	2.44	0.003	22.7	0.5	0.0007
C3-Naphthalenes	581	19.8	0.2	0.0003	34.9	0.5	0.0009	67.8	1.48	0.003	11.9	0.3	0.0005
C3-Phenanthrenes/Anthracenes	829	59.2	0.7	0.0008	48.4	0.7	0.0008	154	3.36	0.004	26.1	0.6	0.0007
C4-Chrysenes	1214	93.8	1.12	0.0009	73.7	1.11	0.0009	58.7	1.28	0.001	39.1	0.9	0.0007
C4-Naphthalenes	657	21.4	0.3	0.0005	31.8	0.5	0.0008	77	1.68	0.003	8.77	0.2	0.0003
C4-Phenanthrenes/Anthracenes	913	31.4	0.4	0.0004	30.5	0.5	0.0005	82.4	1.8	0.002	13.6	0.3	0.0003
Total PAHs		6,061			5,492			4,391			2,856		
Total Toxic Units [b]				0.09			0.1			0.1			0.08

PAHs- polycyclic Aromatic Hydrocarbons

µg/kg- micrograms per kilogram

µg/goc- micrograms per gram organic carbon

Upgradient are included locations: SED -20, SED-21, SED-22.

[a] From USEPA 2003.

[b] A toxic unit value exceeding 1.0 indicates the potential for toxicity to benthic organisms.

* Average results for sample and duplicate used

Table 4.2-7
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

	Final Chronic Value[a]	SED-13 9.24% Organic Carbon			SED-14 6.55% Organic Carbon			SED-15 3.84% Organic Carbon			SED-16 8.45% Organic Carbon		
		PAH Concentration		Toxic	PAH Concentration		Toxic	PAH Concentration		Toxic	PAH Concentration		Toxic
Parameter	(µg/goc)	(µg/dry kg)	(µg/goc)	Units	(µg/dry kg)	(µg/goc)	Units	(µg/dry kg)	(µg/goc)	Units	(µg/dry kg)	(µg/goc)	Units
Unsubstituted PAHs													
Acenaphthene	491	20.4	0.2	0.0004	874	13.3	0.03	22.6	0.6	0.001	6.16	0.07	0.0001
Acenaphthylene	452	10.6	0.1	0.0002	43.4	0.7	0.002	18.8	0.5	0.001	13.8	0.2	0.0004
Anthracene	594	42.4	0.5	0.0008	108	1.65	0.003	44.5	1.16	0.002	24.7	0.3	0.0005
Benz(a)anthracene	841	273	2.95	0.004	602	9.19	0.01	182	4.74	0.006	95.1	1.13	0.001
Benzo(a)pyrene	965	343	3.71	0.004	681	10.4	0.01	233	6.07	0.006	109	1.29	0.001
Benzo(b)fluoranthene	979	349	3.78	0.004	789	12	0.01	230	5.99	0.006	114	1.35	0.001
Benzo(e)pyrene	967	263	2.85	0.003	566	8.64	0.009	192	5	0.005	89.4	1.06	0.001
Benzo(g,h,i)perylene	1095	262	2.84	0.003	563	8.6	0.008	171	4.45	0.004	86.6	1.02	0.0009
Benzo(k)fluoranthene	981	300	3.25	0.003	620	9.47	0.01	184	4.79	0.005	97.7	1.16	0.001
Chrysene	844	349	3.78	0.004	841	12.8	0.02	238	6.2	0.007	124	1.47	0.002
Dibenz(a,h)anthracene	1123	64.4	0.7	0.0006	139	2.12	0.002	36.7	1	0.0009	19	0.2	0.0002
Fluoranthene	707	504	5.45	0.008	1770	27	0.04	462	12	0.02	221	2.62	0.004
Fluorene	538	17.1	0.2	0.0004	377	5.76	0.01	21.8	0.6	0.001	7.62	0.09	0.0002
Indeno(1,2,3-cd)pyrene	1115	271	2.93	0.003	568	8.67	0.008	146	3.8	0.003	80.7	1	0.0009
Naphthalene	385	11.8	0.1	0.0003	2640	40.3	0.1	88.7	2.31	0.006	10.9	0.1	0.0003
Perylene	967	99.2	1.07	0.001	189	2.89	0.003	56.3	1.47	0.002	27.9	0.3	0.0003
Phenanthrene	596	221	2.39	0.004	1230	18.8	0.03	276	7.19	0.01	108	1.28	0.002
Pyrene	697	436	4.72	0.007	1380	21.1	0.03	424	11	0.02	182	2.15	0.003
Alkylated PAHs													
1-Methylnaphthalene	446	7.19	0.08	0.0002	562	8.58	0.02	14.2	0.4	0.0009	6.44	0.08	0.0002
2-Methylnaphthalene	447	7.94	0.09	0.0002	287	4.38	0.01	24.4	0.6	0.001	7.79	0.09	0.0002
C1-Chrysenes	929	105	1.14	0.001	208	3.18	0.003	113	2.94	0.003	40.8	0.5	0.0005
C1-Fluoranthenes/Pyrenes	770	175	1.89	0.002	393	6	0.008	207	5.39	0.007	74.1	0.9	0.001
C1-Fluorenes	611	7.31	0.08	0.0001	30	0.5	0.0008	10.6	0.3	0.0005	5.6	0.07	0.0001
C1-Phenanthrenes/Anthracenes	670	65.2	0.7	0.001	237	3.62	0.005	82.8	2.16	0.003	41.6	0.5	0.0007
C2-Chrysenes	1008	52.8	0.6	0.0006	104	1.59	0.002	137	3.57	0.004	35.2	0.4	0.0004
C2-Fluorenes	686	13.3	0.1	0.0001	24.5	0.4	0.0006	25.1	0.7	0.001	11	0.1	0.0001
C2-Naphthalenes	510	19.4	0.2	0.0004	230	3.51	0.007	23.6	0.6	0.001	17.1	0.2	0.0004
C2-Phenanthrenes/Anthracenes	746	48.7	0.5	0.0007	111	1.69	0.002	77.3	2.01	0.003	42	0.5	0.0007
C3-Chrysenes	1112	76.2	0.8	0.0007	116	1.77	0.002	198	5.16	0.005	65.7	0.8	0.0007
C3-Fluorenes	769	43.9	0.5	0.0007	171	2.61	0.003	64.2	1.67	0.002	28.3	0.3	0.0004
C3-Naphthalenes	581	20.6	0.2	0.0003	57.5	0.9	0.002	23.5	0.6	0.001	21.9	0.3	0.0005
C3-Phenanthrenes/Anthracenes	829	29.5	0.3	0.0004	58.4	0.9	0.001	59.6	1.55	0.002	29	0.3	0.0004
C4-Chrysenes	1214	50.2	0.5	0.0004	74.8	1.14	0.0009	142	3.7	0.003	58.7	0.7	0.0006
C4-Naphthalenes	657	18.2	0.2	0.0003	28.2	0.4	0.0006	28.4	0.7	0.001	18.1	0.2	0.0003
C4-Phenanthrenes/Anthracenes	913	22.4	0.2	0.0002	35	0.5	0.0005	54.1	1.41	0.002	18.8	0.2	0.0002
Total PAHs		4,600			16,708			4,312			1,940		
Total Toxic Units [b]				0.06			0.4			0.1			0.03

PAHs- polycyclic Aromatic Hydrocarbons
µg/kg- micrograms per kilogram
µg/goc- micrograms per gram organic carbor
Upgradient are included locations: SED -20,
[a] From USEPA 2003.
[b] A toxic unit value exceeding 1.0 indicates
* Average results for sample and duplicate u

Table 4.2-7
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/goc)	SED-17 * 6.49% Organic Carbon PAH Concentration (µg/dry kg)	SED-17 * 6.49% Organic Carbon PAH Concentration (µg/goc)	SED-17 * Toxic Units	SED-18 4.97% Organic Carbon PAH Concentration (µg/dry kg)	SED-18 4.97% Organic Carbon PAH Concentration (µg/goc)	SED-18 Toxic Units	SED-19 5.58% Organic Carbon PAH Concentration (µg/dry kg)	SED-19 5.58% Organic Carbon PAH Concentration (µg/goc)	SED-19 Toxic Units	SED-23 4.25% Organic Carbon PAH Concentration (µg/dry kg)	SED-23 4.25% Organic Carbon PAH Concentration (µg/goc)	SED-23 Toxic Units
Unsubstituted PAHs													
Acenaphthene	491	442	6.81	0.01	35	0.7	0.001	143	2.56	0.005	2.54	0.06	0.0001
Acenaphthylene	452	60.8	0.9	0.002	91.8	1.85	0.004	85.6	1.53	0.003	10.6	0.2	0.0004
Anthracene	594	444	6.84	0.01	173	3.48	0.006	359	6.43	0.01	13.8	0.3	0.0005
Benz(a)anthracene	841	1830	28.2	0.03	1290	26	0.03	749	13.4	0.02	64	1.51	0.002
Benzo(a)pyrene	965	1590	24.5	0.03	585	11.8	0.01	612	11	0.01	52.8	1.24	0.001
Benzo(b)fluoranthene	979	1850	28.5	0.03	1320	26.6	0.03	748	13.4	0.01	97	2.28	0.002
Benzo(e)pyrene	967	1140	17.6	0.02	923	18.6	0.02	529	9.48	0.01	73.1	1.72	0.002
Benzo(g,h,i)perylene	1095	1080	16.6	0.02	746	15	0.01	492	8.82	0.008	67.8	1.6	0.001
Benzo(k)fluoranthene	981	1480	22.8	0.02	1220	24.5	0.02	651	11.7	0.01	77	1.81	0.002
Chrysene	844	2000	30.8	0.04	1620	32.6	0.04	881	15.8	0.02	99.3	2.34	0.003
Dibenz(a,h)anthracene	1123	340	5.24	0.005	183	3.68	0.003	136	2.44	0.002	15.4	0.4	0.0004
Fluoranthene	707	4780	73.7	0.1	2960	59.6	0.08	2010	36	0.05	150	3.53	0.005
Fluorene	538	354	5.45	0.01	41.9	0.8	0.001	186	3.33	0.006	4.5	0.1	0.0002
Indeno(1,2,3-cd)pyrene	1115	1270	19.6	0.02	740	14.9	0.01	538	9.64	0.009	69.1	1.63	0.001
Naphthalene	385	88.6	1.37	0.004	26.4	0.5	0.001	17	0.3	0.0008	2.86	0.07	0.0002
Perylene	967	412	6.35	0.007	216	4.35	0.004	165	2.96	0.003	16.2	0.4	0.0004
Phenanthrene	596	4453.5	68.6	0.1	1180	23.7	0.04	1890	33.9	0.06	57.8	1.36	0.002
Pyrene	697	3390	52.2	0.07	2410	48.5	0.07	1580	28.3	0.04	131	3.08	0.004
Alkylated PAHs													
1-Methylnaphthalene	446	41.3	0.6	0.001	15.1	0.3	0.0007	18.4	0.3	0.0007	<1.89	0.02	0.00004
2-Methylnaphthalene	447	58	0.9	0.002	22	0.4	0.0009	30.3	0.5	0.001	<1.89	0.02	0.00004
C1-Chrysenes	929	517	7.97	0.009	441	8.87	0.01	242	4.34	0.005	34	0.8	0.0009
C1-Fluoranthenes/Pyrenes	770	1020	15.7	0.02	761	15.3	0.02	470	8.42	0.01	54.6	1.28	0.002
C1-Fluorenes	611	66.4	1.02	0.002	21	0.4	0.0007	30.4	0.5	0.0008	5.04	0.1	0.0002
C1-Phenanthrenes/Anthracenes	670	791	12.2	0.02	364	7.32	0.01	360	6.45	0.01	29.1	0.7	0.001
C2-Chrysenes	1008	218	3.36	0.003	178	3.58	0.004	111	1.99	0.002	26.2	0.6	0.0006
C2-Fluorenes	686	88.6	1.37	0.002	38.7	0.8	0.001	45.3	0.8	0.001	10.3	0.2	0.0003
C2-Naphthalenes	510	77	1.19	0.002	35.9	0.7	0.001	53.8	1	0.002	7.97	0.2	0.0004
C2-Phenanthrenes/Anthracenes	746	309	4.76	0.006	220	4.43	0.006	160	2.87	0.004	25.7	0.6	0.0008
C3-Chrysenes	1112	201	3.1	0.003	143	2.88	0.003	111	1.99	0.002	38.3	0.9	0.0008
C3-Fluorenes	769	534	8.23	0.01	160	3.22	0.004	223	4	0.005	22.7	0.5	0.0007
C3-Naphthalenes	581	74.8	1.15	0.002	36.4	0.7	0.001	52.7	0.9	0.002	9.98	0.2	0.0003
C3-Phenanthrenes/Anthracenes	829	128	1.97	0.002	97.6	1.96	0.002	71.6	1.28	0.002	17.9	0.4	0.0005
C4-Chrysenes	1214	118	1.82	0.001	98.1	1.97	0.002	80.9	1.45	0.001	34.3	0.8	0.0007
C4-Naphthalenes	657	56.9	0.9	0.001	33.2	0.7	0.001	42.5	0.8	0.001	9.89	0.2	0.0003
C4-Phenanthrenes/Anthracenes	913	45	0.7	0.0008	41.3	0.8	0.0009	34.7	0.6	0.0007	11.6	0.3	0.0003
Total PAHs		31,349			18,467			13,909			1,342		
Total Toxic Units [b]				0.6			0.4			0.3			0.04

PAHs- polycyclic Aromatic Hydrocarbons
µg/kg- micrograms per kilogram
µg/goc- micrograms per gram organic carbor
Upgradient are included locations: SED -20,
[a] From USEPA 2003.
[b] A toxic unit value exceeding 1.0 indicates
* Average results for sample and duplicate u

Table 4.2-7
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/goc)	SED-20 5.82% Organic Carbon PAH Concentration (µg/dry kg)	SED-20 PAH Concentration (µg/goc)	SED-20 Toxic Units	SED-21 5.39% Organic Carbon PAH Concentration (µg/dry kg)	SED-21 PAH Concentration (µg/goc)	SED-21 Toxic Units	SED-22 6.52% Organic Carbon PAH Concentration (µg/dry kg)	SED-22 PAH Concentration (µg/goc)	SED-22 Toxic Units
Unsubstituted PAHs										
Acenaphthene	491	120	2.06	0.004	55.8	1.04	0.002	126	1.93	0.004
Acenaphthylene	452	58.6	1.01	0.002	71.5	1.33	0.003	106	1.63	0.004
Anthracene	594	288	4.95	0.008	161	2.99	0.005	740	11.3	0.02
Benz(a)anthracene	841	1040	17.9	0.02	587	10.9	0.01	1250	19.2	0.02
Benzo(a)pyrene	965	864	14.8	0.02	431	8	0.008	1130	17.3	0.02
Benzo(b)fluoranthene	979	1070	18.4	0.02	557	10.3	0.01	1080	16.6	0.02
Benzo(e)pyrene	967	674	11.6	0.01	381	7.07	0.007	770	11.8	0.01
Benzo(g,h,i)perylene	1095	631	10.8	0.01	347	6.44	0.006	742	11.4	0.01
Benzo(k)fluoranthene	981	786	13.5	0.01	405	7.51	0.008	923	14.2	0.01
Chrysene	844	1150	19.8	0.02	638	11.8	0.01	1250	19.2	0.02
Dibenz(a,h)anthracene	1123	182	3.13	0.003	93.3	1.73	0.002	194	2.98	0.003
Fluoranthene	707	2480	42.6	0.06	1340	24.9	0.04	2940	45.1	0.06
Fluorene	538	130	2.23	0.004	67.6	1.25	0.002	160	2.45	0.005
Indeno(1,2,3-cd)pyrene	1115	698	12	0.01	360	6.68	0.006	771	11.8	0.01
Naphthalene	385	39.8	0.7	0.002	15.8	0.3	0.0008	446	6.84	0.02
Perylene	967	232	3.99	0.004	119	2.21	0.002	295	4.52	0.005
Phenanthrene	596	1810	31.1	0.05	876	16.3	0.03	2560	39.3	0.07
Pyrene	697	1980	34	0.05	1180	21.9	0.03	2370	36.3	0.05
Alkylated PAHs										
1-Methylnaphthalene	446	24.4	0.4	0.0009	7.61	0.1	0.0002	106	1.63	0.004
2-Methylnaphthalene	447	25.6	0.4	0.0009	8.76	0.2	0.0004	186	2.85	0.006
C1-Chrysenes	929	310	5.33	0.006	198	3.67	0.004	398	6.1	0.007
C1-Fluoranthenes/Pyrenes	770	617	10.6	0.01	407	7.55	0.01	785	12	0.02
C1-Fluorenes	611	34.7	0.6	0.001	22.5	0.4	0.0007	61.4	0.9	0.001
C1-Phenanthrenes/Anthracenes	670	383	6.58	0.01	200	3.71	0.006	582	8.93	0.01
C2-Chrysenes	1008	148	2.54	0.003	111	2.06	0.002	244	3.74	0.004
C2-Fluorenes	686	45.2	0.8	0.001	26.8	0.5	0.0007	89.4	1.37	0.002
C2-Naphthalenes	510	46.9	0.8	0.002	20.9	0.4	0.0008	179	2.75	0.005
C2-Phenanthrenes/Anthracenes	746	170	2.92	0.004	103	1.91	0.003	256	3.93	0.005
C3-Chrysenes	1112	145	2.49	0.002	114	2.12	0.002	286	4.39	0.004
C3-Fluorenes	769	219	3.76	0.005	109	2.02	0.003	206	3.16	0.004
C3-Naphthalenes	581	47.2	0.8	0.001	22.5	0.4	0.0007	140	2.15	0.004
C3-Phenanthrenes/Anthracenes	829	82.7	1.42	0.002	51.1	0.9	0.001	123	1.89	0.002
C4-Chrysenes	1214	100	1.72	0.001	76.4	1.42	0.001	180	2.76	0.002
C4-Naphthalenes	657	35.1	0.6	0.0009	17.1	0.3	0.0005	91.4	1.4	0.002
C4-Phenanthrenes/Anthracenes	913	39.1	0.7	0.0008	27.3	0.5	0.0005	82.3	1.26	0.001
Total PAHs		16,706			9,209			21,849		
Total Toxic Units [b]				0.4			0.2			0.4

PAHs- polycyclic Aromatic Hydrocarbons
µg/kg- micrograms per kilogram
µg/goc- micrograms per gram organic carbor
Upgradient are included locations: SED -20,
[a] From USEPA 2003.
[b] A toxic unit value exceeding 1.0 indicates
* Average results for sample and duplicate u

Table 4.2-8
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/L)	SW-09 PAH Concentration (ng/L)	SW-09 PAH Concentration value	SW-09 Toxic Units	SW-10 PAH Concentration (ng/L)	SW-10 PAH Concentration value	SW-10 Toxic Units	SW-11 PAH Concentration (ng/L)	SW-11 PAH Concentration value	SW-11 Toxic Units	SW-12 PAH Concentration (ng/L)	SW-12 PAH Concentration value	SW-12 Toxic Units
Unsubstituted PAHs													
Acenaphthene	55.85	49.3	49.3	0.0009	60.3	60.3	0.001	57.8	57.8	0.001	59	59	0.001
Acenaphthylene	306.9	<9.39	4.695	0.00002	<10.9	5.45	0.00002	<9.43	4.715	0.00002	<9.39	4.695	0.00002
Anthracene	20.73	<9.39	4.695	0.0002	<10.9	5.45	0.0003	<9.43	4.715	0.0002	<9.39	4.695	0.0002
Benz(a)anthracene	2.227	<9.39	4.695	0.002	<10.9	5.45	0.002	<9.43	4.715	0.002	<9.39	4.695	0.002
Benzo(a)pyrene	0.9573	<9.39	4.695	0.005	<10.9	5.45	0.006	<9.43	4.715	0.005	<9.39	4.695	0.005
Benzo(b)fluoranthene	0.6774	11.8	11.8	0.02	<10.9	5.45	0.008	<9.43	4.715	0.007	13.7	13.7	0.02
Benzo(e)pyrene	0.9008	<9.39	4.695	0.005	<10.9	5.45	0.006	<9.43	4.715	0.005	11.3	11.3	0.01
Benzo(g,h,i)perylene	0.4391	<9.39	4.695	0.01	<10.9	5.45	0.01	<9.43	4.715	0.01	11.5	11.5	0.03
Benzo(k)fluoranthene	0.6415	10.8	10.8	0.02	<10.9	5.45	0.008	<9.43	4.715	0.007	10.7	10.7	0.02
Chrysene	2.042	15.9	15.9	0.008	<10.9	5.45	0.003	9.7	9.7	0.005	14.8	14.8	0.007
Dibenz(a,h)anthracene	0.2825	<9.39	4.695	0.02	<10.9	5.45	0.02	<9.43	4.715	0.02	<9.39	4.695	0.02
Fluoranthene	7.109	29	29	0.004	26.6	26.6	0.004	24.2	24.2	0.003	31.8	31.8	0.004
Fluorene	39.3	21.1	21.1	0.0005	32.2	32.2	0.0008	25	25	0.0006	26.3	26.3	0.0007
Indeno(1,2,3-cd)pyrene	0.275	<9.39	4.695	0.02	<10.9	5.45	0.02	<9.43	4.715	0.02	<9.39	4.695	0.02
Naphthalene	193.5	60.5	60.5	0.0003	73.3	73.3	0.0004	81.7	81.7	0.0004	74.8	74.8	0.0004
Perylene	0.9008	<9.39	4.695	0.005	<10.9	5.45	0.006	<9.43	4.715	0.005	<9.39	4.695	0.005
Phenanthrene	19.13	16.8	16.8	0.0009	18.3	18.3	0.001	17.7	17.7	0.0009	20.2	20.2	0.001
Pyrene	10.11	22.6	22.6	0.002	18.6	18.6	0.002	16.1	16.1	0.002	22.8	22.8	0.002
Alkylated PAHs													
1-Methylnaphthalene	75.37	9.42	9.42	0.0001	<10.9	5.45	0.00007	13	13	0.0002	13.5	13.5	0.0002
2-Methylnaphthalene	72.16	<9.39	4.695	0.00007	<10.9	5.45	0.00008	<9.43	4.715	0.00007	<9.39	4.695	0.00007
C1-Chrysenes	0.8557	<9.39	4.695	0.005	<10.9	5.45	0.006	<9.43	4.715	0.006	<9.39	4.695	0.005
C1-Fluoranthenes/Pyrenes	4.887	9.83	9.83	0.002	<10.9	5.45	0.001	<9.43	4.715	0.001	10.3	10.3	0.002
C1-Fluorenes	13.99	<9.39	4.695	0.0003	<10.9	5.45	0.0004	<9.43	4.715	0.0003	<9.39	4.695	0.0003
C1-Phenanthrenes/Anthracenes	7.436	<9.39	4.695	0.0006	<10.9	5.45	0.0007	<9.43	4.715	0.0006	<9.39	4.695	0.0006
C2-Chrysenes	0.4827	<9.39	4.695	0.01	<10.9	5.45	0.01	<9.43	4.715	0.01	<9.39	4.695	0.01
C2-Fluorenes	5.305	<9.39	4.695	0.0009	<10.9	5.45	0.001	<9.43	4.715	0.0009	<9.39	4.695	0.0009
C2-Naphthalenes	30.24	10.1	10.1	0.0003	<10.9	5.45	0.0002	10.5	10.5	0.0003	9.89	9.89	0.0003
C2-Phenanthrenes/Anthracenes	3.199	<9.39	4.695	0.001	<10.9	5.45	0.002	<9.43	4.715	0.001	<9.39	4.695	0.001
C3-Chrysenes	0.1675	<9.39	4.695	0.03	<10.9	5.45	0.03	<9.43	4.715	0.03	<9.39	4.695	0.03
C3-Fluorenes	1.916	<9.39	4.695	0.002	<10.9	5.45	0.003	<9.43	4.715	0.002	<9.39	4.695	0.002
C3-Naphthalenes	11.1	<9.39	4.695	0.0004	13.7	13.7	0.001	11.7	11.7	0.001	11.8	11.8	0.001
C3-Phenanthrenes/Anthracenes	1.256	<9.39	4.695	0.004	<10.9	5.45	0.004	<9.43	4.715	0.004	<9.39	4.695	0.004
C4-Chrysenes	0.07062	<9.39	4.695	0.07	<10.9	5.45	0.08	<9.43	4.715	0.07	<9.39	4.695	0.07
C4-Naphthalenes	4.048	<9.39	4.695	0.001	<10.9	5.45	0.001	<9.43	4.715	0.001	<9.39	4.695	0.001
C4-Phenanthrenes/Anthracenes	0.5594	<9.39	4.695	0.008	<10.9	5.45	0.01	<9.43	4.715	0.008	<9.39	4.695	0.008
Total Toxic Units [b]				0.3			0.2			0.2			0.3

PAHs - polycyclic aromatic hydrocarbons.
µg/L - micrograms per liter.
ng/L - nangrams per liter.
Upgradient area includes locations: SW-20, SW-21, SW-22.
[a]- From USEPA 2003.
[b]-A toxic unit value exceeding 1.0 indicates the potential for toxicity to benthic organisms.
* Average results for sample and duplicate used.

Table 4.2-8
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/L)	SW-13 PAH Concentration (ng/L)	SW-13 PAH Concentration value	SW-13 Toxic Units	SW-14 PAH Concentration (ng/L)	SW-14 PAH Concentration value	SW-14 Toxic Units	SW-15 PAH Concentration (ng/L)	SW-15 PAH Concentration value	SW-15 Toxic Units	SW-16 PAH Concentration (ng/L)	SW-16 PAH Concentration value	SW-16 Toxic Units
Unsubstituted PAHs													
Acenaphthene	55.85	63	63	0.001	68	68	0.001	59.9	59.9	0.001	<10.5	5.25	0.00009
Acenaphthylene	306.9	<9.48	4.74	0.00002	<9.62	4.81	0.00002	<9.34	4.67	0.00002	<10.5	5.25	0.00002
Anthracene	20.73	<9.48	4.74	0.0002	<9.62	4.81	0.0002	<9.34	4.67	0.0002	<10.5	5.25	0.0003
Benz(a)anthracene	2.227	<9.48	4.74	0.002	<9.62	4.81	0.002	10.6	10.6	0.005	<10.5	5.25	0.002
Benzo(a)pyrene	0.9573	<9.48	4.74	0.005	<9.62	4.81	0.005	<9.34	4.67	0.005	<10.5	5.25	0.005
Benzo(b)fluoranthene	0.6774	11.6	11.6	0.02	<9.62	4.81	0.007	16.5	16.5	0.02	<10.5	5.25	0.008
Benzo(e)pyrene	0.9008	<9.48	4.74	0.005	<9.62	4.81	0.005	13	13	0.01	<10.5	5.25	0.006
Benzo(g,h,i)perylene	0.4391	10.1	10.1	0.02	<9.62	4.81	0.01	11.7	11.7	0.03	<10.5	5.25	0.01
Benzo(k)fluoranthene	0.6415	<9.48	4.74	0.007	<9.62	4.81	0.007	12.5	12.5	0.02	<10.5	5.25	0.008
Chrysene	2.042	13.8	13.8	0.007	<9.62	4.81	0.002	18.1	18.1	0.009	10.6	10.6	0.005
Dibenz(a,h)anthracene	0.2825	<9.48	4.74	0.02	<9.62	4.81	0.02	<9.34	4.67	0.02	<10.5	5.25	0.02
Fluoranthene	7.109	29.2	29.2	0.004	26.9	26.9	0.004	35.2	35.2	0.005	16.4	16.4	0.002
Fluorene	39.3	27.6	27.6	0.0007	31.3	31.3	0.0008	27.1	27.1	0.0007	<10.5	5.25	0.0001
Indeno(1,2,3-cd)pyrene	0.275	<9.48	4.74	0.02	<9.62	4.81	0.02	11.8	11.8	0.04	<10.5	5.25	0.02
Naphthalene	193.5	73	73	0.0004	43.6	43.6	0.0002	24.2	24.2	0.0001	14.6	14.6	0.00008
Perylene	0.9008	<9.48	4.74	0.005	<9.62	4.81	0.005	<9.34	4.67	0.005	<10.5	5.25	0.006
Phenanthrene	19.13	20.4	20.4	0.001	23.1	23.1	0.001	26.6	26.6	0.001	11.8	11.8	0.0006
Pyrene	10.11	20	20	0.002	17.7	17.7	0.002	26.9	26.9	0.003	13.9	13.9	0.001
Alkylated PAHs													
1-Methylnaphthalene	75.37	16	16	0.0002	14.5	14.5	0.0002	14.7	14.7	0.0002	<10.5	5.25	0.00007
2-Methylnaphthalene	72.16	<9.48	4.74	0.00007	<9.62	4.81	0.00007	<9.34	4.67	0.00006	<10.5	5.25	0.00007
C1-Chrysenes	0.8557	<9.48	4.74	0.006	<9.62	4.81	0.006	<9.34	4.67	0.005	<10.5	5.25	0.006
C1-Fluoranthenes/Pyrenes	4.887	<9.48	4.74	0.001	<9.62	4.81	0.001	16	16	0.003	11.4	11.4	0.002
C1-Fluorenes	13.99	<9.48	4.74	0.0003	<9.62	4.81	0.0003	<9.34	4.67	0.0003	<10.5	5.25	0.0004
C1-Phenanthrenes/Anthracenes	7.436	<9.48	4.74	0.0006	<9.62	4.81	0.0006	9.83	9.83	0.001	<10.5	5.25	0.0007
C2-Chrysenes	0.4827	<9.48	4.74	0.01	<9.62	4.81	0.01	<9.34	4.67	0.01	<10.5	5.25	0.01
C2-Fluorenes	5.305	<9.48	4.74	0.0009	<9.62	4.81	0.0009	<9.34	4.67	0.0009	<10.5	5.25	0.001
C2-Naphthalenes	30.24	10.3	10.3	0.0003	11.3	11.3	0.0004	17.5	17.5	0.0006	<10.5	5.25	0.0002
C2-Phenanthrenes/Anthracenes	3.199	<9.48	4.74	0.001	<9.62	4.81	0.002	9.53	9.53	0.003	<10.5	5.25	0.002
C3-Chrysenes	0.1675	<9.48	4.74	0.03	<9.62	4.81	0.03	<9.34	4.67	0.03	<10.5	5.25	0.03
C3-Fluorenes	1.916	<9.48	4.74	0.002	<9.62	4.81	0.003	<9.34	4.67	0.002	<10.5	5.25	0.003
C3-Naphthalenes	11.1	10.9	10.9	0.001	12.1	12.1	0.001	11.7	11.7	0.001	<10.5	5.25	0.0005
C3-Phenanthrenes/Anthracenes	1.256	<9.48	4.74	0.004	<9.62	4.81	0.004	<9.34	4.67	0.004	<10.5	5.25	0.004
C4-Chrysenes	0.07062	<9.48	4.74	0.07	<9.62	4.81	0.07	<9.34	4.67	0.07	<10.5	5.25	0.07
C4-Naphthalenes	4.048	<9.48	4.74	0.001	<9.62	4.81	0.001	<9.34	4.67	0.001	<10.5	5.25	0.001
C4-Phenanthrenes/Anthracenes	0.5594	<9.48	4.74	0.008	<9.62	4.81	0.009	<9.34	4.67	0.008	<10.5	5.25	0.009
Total Toxic Units [b]				0.3			0.2			0.3			0.2

PAHs - polycyclic aromatic hydrocarbons.
µg/L - micrograms per liter.
ng/L - nangrams per liter.
Upgradient area includes locations: SW-20, S
[a]- From USEPA 2003.
[b]-A toxic unit value exceeding 1.0 indicates
* Average results for sample and duplicate u

Table 4.2-8
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/L)	SW-17 * PAH Concentration (ng/L)	SW-17 * value	SW-17 * Toxic Units	SW-18 * PAH Concentration (ng/L)	SW-18 * value	SW-18 * Toxic Units	SW-19 PAH Concentration (ng/L)	SW-19 value	SW-19 Toxic Units	SW-23 PAH Concentration (ng/L)	SW-23 value	SW-23 Toxic Units
Unsubstituted PAHs													
Acenaphthene	55.85	< 9.43	4.715	0.00008	< 16.1	8.05	0.0001	<9.43	4.715	0.00008	<10.8	5.4	0.0001
Acenaphthylene	306.9	11.8	11.8	0.00004	< 16.1	8.05	0.00003	<9.43	4.715	0.00002	<10.8	5.4	0.00002
Anthracene	20.73	10.6	10.6	0.0005	< 16.1	8.05	0.0004	<9.43	4.715	0.0002	<10.8	5.4	0.0003
Benz(a)anthracene	2.227	25	25	0.01	14.8	14.8	0.007	<9.43	4.715	0.002	<10.8	5.4	0.002
Benzo(a)pyrene	0.9573	23.5	23.5	0.02	11.1	11.1	0.01	<9.43	4.715	0.005	<10.8	5.4	0.006
Benzo(b)fluoranthene	0.6774	55.9	55.9	0.08	21.3	21.3	0.03	<9.43	4.715	0.007	<10.8	5.4	0.008
Benzo(e)pyrene	0.9008	42.2	42.2	0.05	14.7	14.7	0.02	<9.43	4.715	0.005	<10.8	5.4	0.006
Benzo(g,h,i)perylene	0.4391	40.7	40.7	0.09	14.2	14.2	0.03	<9.43	4.715	0.01	<10.8	5.4	0.01
Benzo(k)fluoranthene	0.6415	39.9	39.9	0.06	16.9	16.9	0.03	<9.43	4.715	0.007	<10.8	5.4	0.008
Chrysene	2.042	51.2	51.2	0.03	22	22	0.01	<9.43	4.715	0.002	<10.8	5.4	0.003
Dibenz(a,h)anthracene	0.2825	10.3	10.3	0.04	< 16.1	8.05	0.03	<9.43	4.715	0.02	<10.8	5.4	0.02
Fluoranthene	7.109	69.6	69.6	0.01	32.5	32.5	0.005	9.43	9.43	0.001	11.8	11.8	0.002
Fluorene	39.3	< 9.43	4.715	0.0001	< 16.1	8.05	0.0002	<9.43	4.715	0.0001	<10.8	5.4	0.0001
Indeno(1,2,3-cd)pyrene	0.275	37	37	0.1	13.4	13.4	0.05	<9.43	4.715	0.02	<10.8	5.4	0.02
Naphthalene	193.5	15.1	15.1	0.00008	30.9	30.9	0.0002	21.7	21.7	0.0001	84.3	84.3	0.0004
Perylene	0.9008	< 9.43	4.715	0.005	< 16.1	8.05	0.009	<9.43	4.715	0.005	<10.8	5.4	0.006
Phenanthrene	19.13	30.7	30.7	0.002	18.5	18.5	0.001	<9.43	4.715	0.0002	<10.8	5.4	0.0003
Pyrene	10.11	64.9	64.9	0.006	29.5	29.5	0.003	<9.43	4.715	0.0005	<10.8	5.4	0.0005
Alkylated PAHs													
1-Methylnaphthalene	75.37	< 9.43	4.715	0.00006	< 16.1	8.05	0.0001	<9.43	4.715	0.00006	<10.8	5.4	0.00007
2-Methylnaphthalene	72.16	< 9.43	4.715	0.00007	< 16.1	8.05	0.0001	<9.43	4.715	0.00007	<10.8	5.4	0.00007
C1-Chrysenes	0.8557	18.3	18.3	0.02	< 16.1	8.05	0.009	<9.43	4.715	0.006	<10.8	5.4	0.006
C1-Fluoranthenes/Pyrenes	4.887	33.6	33.6	0.007	19.6	19.6	0.004	<9.43	4.715	0.001	<10.8	5.4	0.001
C1-Fluorenes	13.99	< 9.43	4.715	0.0003	< 16.1	8.05	0.0006	<9.43	4.715	0.0003	<10.8	5.4	0.0004
C1-Phenanthrenes/Anthracenes	7.436	17	17	0.002	< 16.1	8.05	0.001	<9.43	4.715	0.0006	<10.8	5.4	0.0007
C2-Chrysenes	0.4827	12	12	0.02	< 16.1	8.05	0.02	<9.43	4.715	0.01	<10.8	5.4	0.01
C2-Fluorenes	5.305	< 9.43	4.715	0.0009	< 16.1	8.05	0.002	<9.43	4.715	0.0009	<10.8	5.4	0.001
C2-Naphthalenes	30.24	< 9.43	4.715	0.0002	< 16.1	8.05	0.0003	<9.43	4.715	0.0002	<10.8	5.4	0.0002
C2-Phenanthrenes/Anthracenes	3.199	12.1	12.1	0.004	< 16.1	8.05	0.003	<9.43	4.715	0.001	<10.8	5.4	0.002
C3-Chrysenes	0.1675	< 9.43	4.715	0.03	< 16.1	8.05	0.05	<9.43	4.715	0.03	<10.8	5.4	0.03
C3-Fluorenes	1.916	< 9.43	4.715	0.002	< 16.1	8.05	0.004	<9.43	4.715	0.002	<10.8	5.4	0.003
C3-Naphthalenes	11.1	< 9.43	4.715	0.0004	< 16.1	8.05	0.0007	<9.43	4.715	0.0004	<10.8	5.4	0.0005
C3-Phenanthrenes/Anthracenes	1.256	10.4	10.4	0.008	< 16.1	8.05	0.006	<9.43	4.715	0.004	<10.8	5.4	0.004
C4-Chrysenes	0.07062	< 9.43	4.715	0.07	< 16.1	8.05	0.1	<9.43	4.715	0.07	<10.8	5.4	0.08
C4-Naphthalenes	4.048	< 9.43	4.715	0.001	< 16.1	8.05	0.002	10.5	10.5	0.003	<10.8	5.4	0.001
C4-Phenanthrenes/Anthracenes	0.5594	< 9.43	4.715	0.008	< 16.1	8.05	0.01	<9.43	4.715	0.008	<10.8	5.4	0.01
Total Toxic Units [b]				0.7			0.4			0.2			0.2

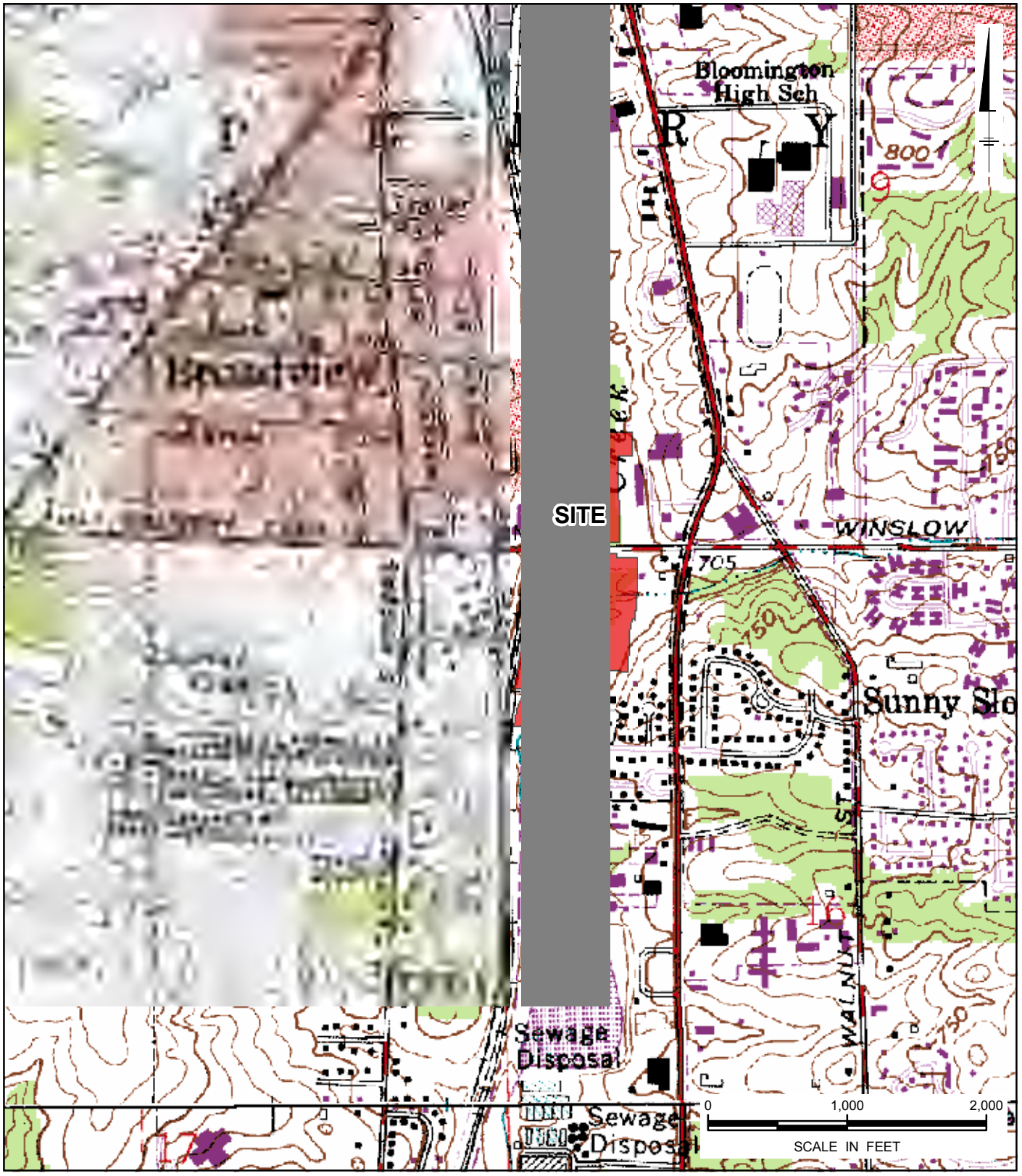
PAHs - polycyclic aromatic hydrocarbons.
µg/L - micrograms per liter.
ng/L - nangrams per liter.
Upgradient area includes locations: SW-20, S
[a]- From USEPA 2003.
[b]-A toxic unit value exceeding 1.0 indicates
* Average results for sample and duplicate u

Table 4.2-8
Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water (2010 Data)
Clear Creek
Former Indiana Creosote Co, Bloomington, Indiana

Parameter	Final Chronic Value[a] (µg/L)	SW-20 PAH Concentration (ng/L)	SW-20 PAH Concentration value	SW-20 Toxic Units	SW-21 PAH Concentration (ng/L)	SW-21 PAH Concentration value	SW-21 Toxic Units	SW-22 PAH Concentration (ng/L)	SW-22 PAH Concentration value	SW-22 Toxic Units
Unsubstituted PAHs										
Acenaphthene	55.85	<9.62	4.81	0.00009	<10	5	0.00009	<9.8	4.9	0.00009
Acenaphthylene	306.9	<9.62	4.81	0.00002	<10	5	0.00002	<9.8	4.9	0.00002
Anthracene	20.73	<9.62	4.81	0.0002	<10	5	0.0002	<9.8	4.9	0.0002
Benz(a)anthracene	2.227	<9.62	4.81	0.002	<10	5	0.002	<9.8	4.9	0.002
Benzo(a)pyrene	0.9573	<9.62	4.81	0.005	<10	5	0.005	<9.8	4.9	0.005
Benzo(b)fluoranthene	0.6774	<9.62	4.81	0.007	<10	5	0.007	<9.8	4.9	0.007
Benzo(e)pyrene	0.9008	<9.62	4.81	0.005	<10	5	0.006	<9.8	4.9	0.005
Benzo(g,h,i)perylene	0.4391	<9.62	4.81	0.01	<10	5	0.01	<9.8	4.9	0.01
Benzo(k)fluoranthene	0.6415	<9.62	4.81	0.007	<10	5	0.008	<9.8	4.9	0.008
Chrysene	2.042	<9.62	4.81	0.002	<10	5	0.002	<9.8	4.9	0.002
Dibenz(a,h)anthracene	0.2825	<9.62	4.81	0.02	<10	5	0.02	<9.8	4.9	0.02
Fluoranthene	7.109	9.77	9.77	0.001	10.5	10.5	0.001	10.1	10.1	0.001
Fluorene	39.3	<9.62	4.81	0.0001	<10	5	0.0001	<9.8	4.9	0.0001
Indeno(1,2,3-cd)pyrene	0.275	<9.62	4.81	0.02	<10	5	0.02	<9.8	4.9	0.02
Naphthalene	193.5	28.6	28.6	0.0001	38.1	38.1	0.0002	21	21	0.0001
Perylene	0.9008	<9.62	4.81	0.005	<10	5	0.006	<9.8	4.9	0.005
Phenanthrene	19.13	<9.62	4.81	0.0003	<10	5	0.0003	<9.8	4.9	0.0003
Pyrene	10.11	<9.62	4.81	0.0005	<10	5	0.0005	<9.8	4.9	0.0005
Alkylated PAHs										
1-Methylnaphthalene	75.37	<9.62	4.81	0.00006	<10	5	0.00007	<9.8	4.9	0.00007
2-Methylnaphthalene	72.16	<9.62	4.81	0.00007	<10	5	0.00007	<9.8	4.9	0.00007
C1-Chrysenes	0.8557	<9.62	4.81	0.006	<10	5	0.006	<9.8	4.9	0.006
C1-Fluoranthenes/Pyrenes	4.887	<9.62	4.81	0.001	<10	5	0.001	<9.8	4.9	0.001
C1-Fluorenes	13.99	<9.62	4.81	0.0003	<10	5	0.0004	<9.8	4.9	0.0004
C1-Phenanthrenes/Anthracenes	7.436	<9.62	4.81	0.0006	<10	5	0.0007	<9.8	4.9	0.0007
C2-Chrysenes	0.4827	<9.62	4.81	0.01	<10	5	0.01	<9.8	4.9	0.01
C2-Fluorenes	5.305	<9.62	4.81	0.0009	<10	5	0.0009	<9.8	4.9	0.0009
C2-Naphthalenes	30.24	<9.62	4.81	0.0002	<10	5	0.0002	<9.8	4.9	0.0002
C2-Phenanthrenes/Anthracenes	3.199	<9.62	4.81	0.002	<10	5	0.002	<9.8	4.9	0.002
C3-Chrysenes	0.1675	<9.62	4.81	0.03	<10	5	0.03	<9.8	4.9	0.03
C3-Fluorenes	1.916	<9.62	4.81	0.003	<10	5	0.003	<9.8	4.9	0.003
C3-Naphthalenes	11.1	<9.62	4.81	0.0004	<10	5	0.0005	<9.8	4.9	0.0004
C3-Phenanthrenes/Anthracenes	1.256	<9.62	4.81	0.004	<10	5	0.004	<9.8	4.9	0.004
C4-Chrysenes	0.07062	<9.62	4.81	0.07	<10	5	0.07	<9.8	4.9	0.07
C4-Naphthalenes	4.048	<9.62	4.81	0.001	<10	5	0.001	<9.8	4.9	0.001
C4-Phenanthrenes/Anthracenes	0.5594	<9.62	4.81	0.009	<10	5	0.009	<9.8	4.9	0.009
Total Toxic Units [b]				0.2			0.2			0.2

PAHs - polycyclic aromatic hydrocarbons.
µg/L - micrograms per liter.
ng/L - nangrams per liter.
Upgradient area includes locations: SW-20, S
[a]- From USEPA 2003.
[b]-A toxic unit value exceeding 1.0 indicates
* Average results for sample and duplicate u

Figures



INDIANA



PROJECTION:
NAD83 State Plane Indiana West Feet

REFERENCE:
U.S.G.S. 7.5 Minute
Series Topographic Quadrangles:
Bloomington, Indiana 1992,
Clear Creek, Indiana 1992.

CSX TRANSPORTATION, INC.
BLOOMINGTON, INDIANA

SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT REPORT

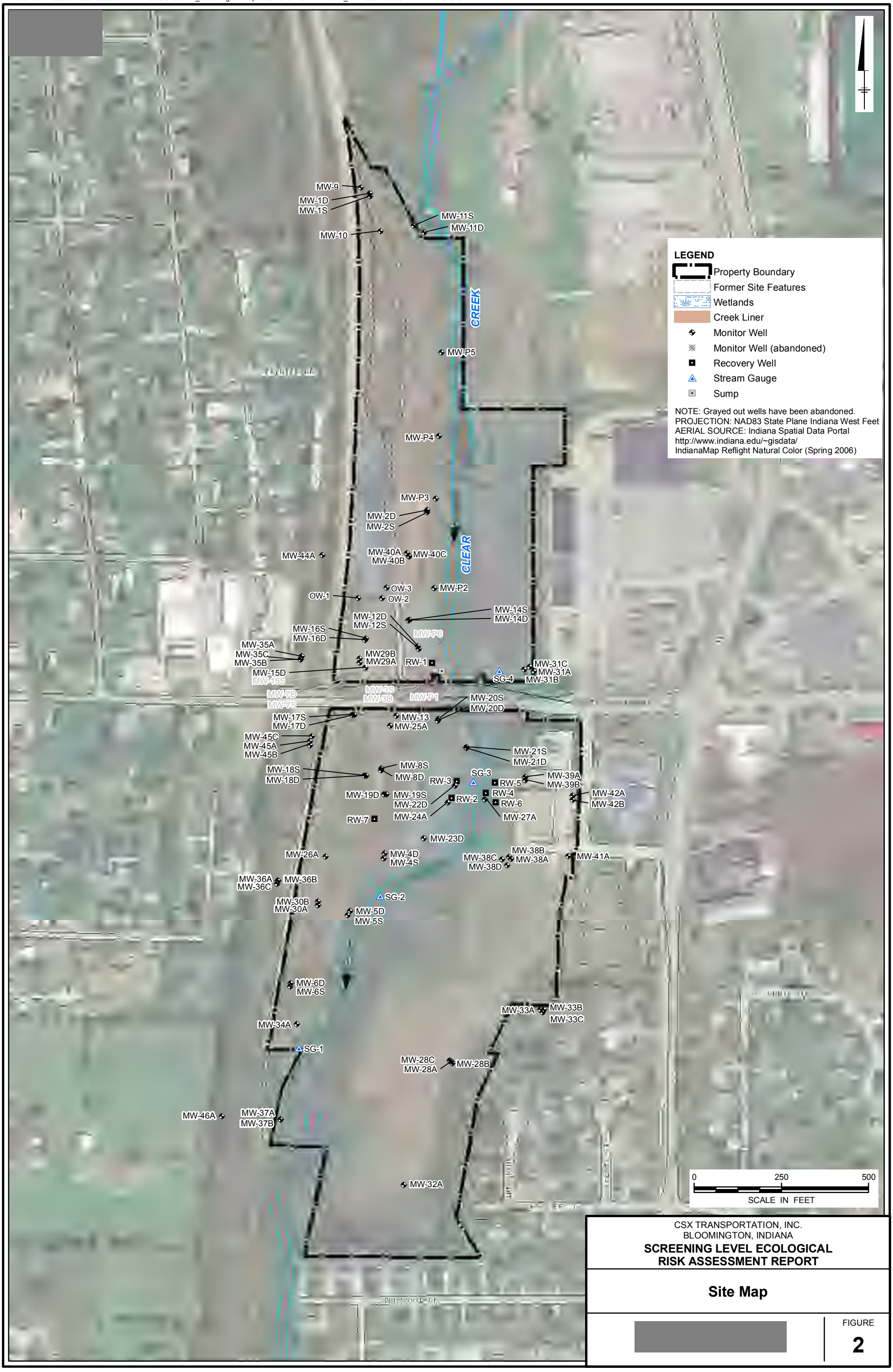
Project Location Map

ARCADIS

FIGURE
1

CITY: (KNOXVILLE) DIV/GROUP: (ENV) DB: (B.ALTOM) LD: (B.ALTOM) QC:(J.HUGHES) PIC:(J.REID) PM: (S.SHARP) TM: (D.JONES/T.SCHLEMAT)
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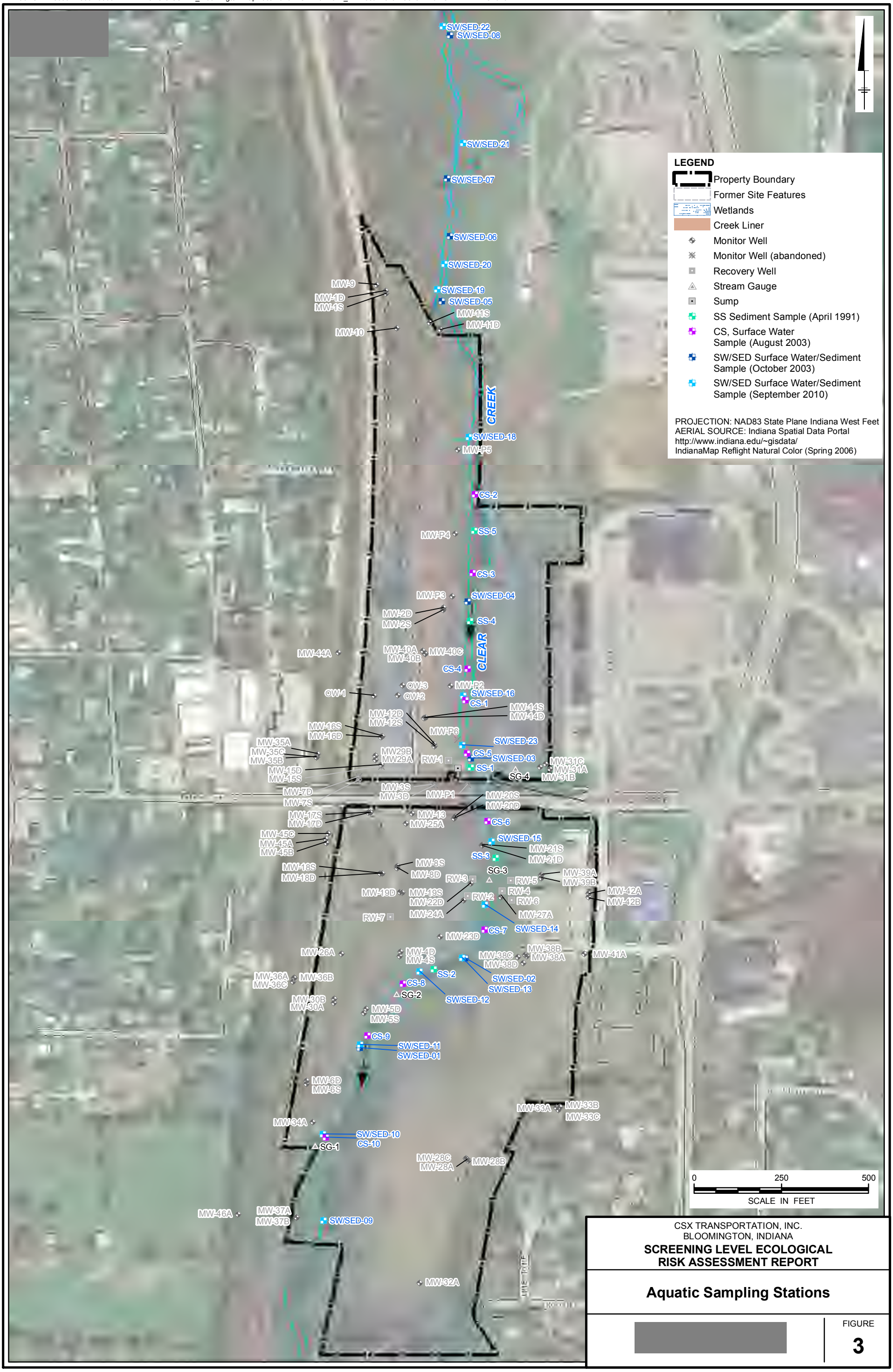
CSX TRANSPORTATION, INC.
BLOOMINGTON, INDIANA

SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT REPORT

Site Map

FIGURE
2

CITY: (KNOXVILLE) DIV/GROUP: (ENV) DB: (B.ALTOM) LD: (B.ALTOM) QC:(J.HUGHES) PIC:(J.REID) PM: (S.SHARP) TM: (D.JONES/T.SCHLEMAT)
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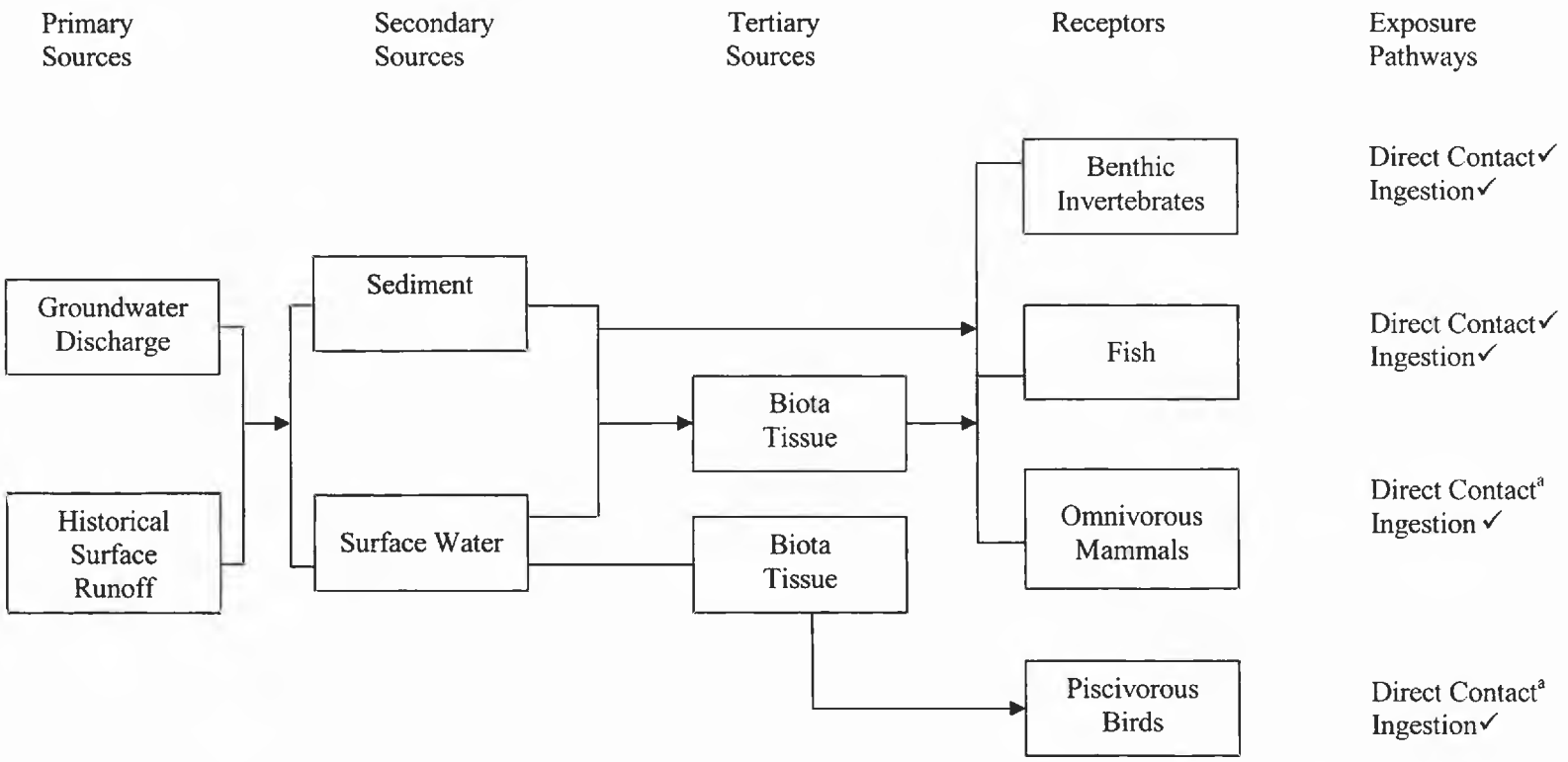
CSX TRANSPORTATION, INC.
BLOOMINGTON, INDIANA

SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT REPORT

Aquatic Sampling Stations

FIGURE
3

CITY: (KNOXVILLE) DIV/GROUP: (ENV/GIS) LD: (B.ALTOM) PIC: (S.GLENN) PM: (S.SHARP) TM: (B.GRIGGS)
PROJECT: IN0000072.0074 PATH: G:\GIS\CSX\IN_Bloomington\MapDocs\2015\ECO RISK\F4 IN072_ECO model.cdr



*Dermal contact of insectivorous birds with sediment and surface water is minimal, and toxicological information is unavailable to assess this exposure pathway.

CSX TRANSPORTATION, INC.
BLOOMINGTON, INDIANA
SCREENING-LEVEL ECOLOGICAL RISK ASSESSMENT REPORT

Ecological Conceptual Site Model Clear Creek

ARCADIS

FIGURE
4

Appendix A.

Photographs of Clear Creek

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 1

Date: October 22, 2003

Direction: South/Downstream

Description: Sampling location, SED-1



Photo No.: 2

Date: October 22, 2003

Direction: North/Upstream

Description: Sampling location, SED-1

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 3

Date: October 22, 2003

Direction: South/Downstream

Description: Sampling location, SED-2



Photo No.: 4

Date: October 22, 2003

Direction: South/Downstream

Description: Sampling location, SED-3

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 5

Date: October 22, 2003

Direction: North/Upstream

Description: Sampling location, SED-3



Photo No.: 6

Date: October 23, 2003

Direction: South/Downstream

Description: Sampling location, SED-4

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 7

Date: October 23, 2003

Direction: North/Upstream

Description: Sampling location, SED-4



Photo No.: 8

Date: October 23, 2003

Direction: South/Downstream

Description: Sampling location, SED-5

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 9

Date: October 23, 2003

Direction: North/Upstream

Description: Sampling location, SED-5



Photo No.: 10

Date: October 23, 2003

Direction: South/Downstream

Description: Sampling location, SED-6

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 11

Date: October 23, 2003

Direction: North/Upstream

Description: Sampling location, SED-6

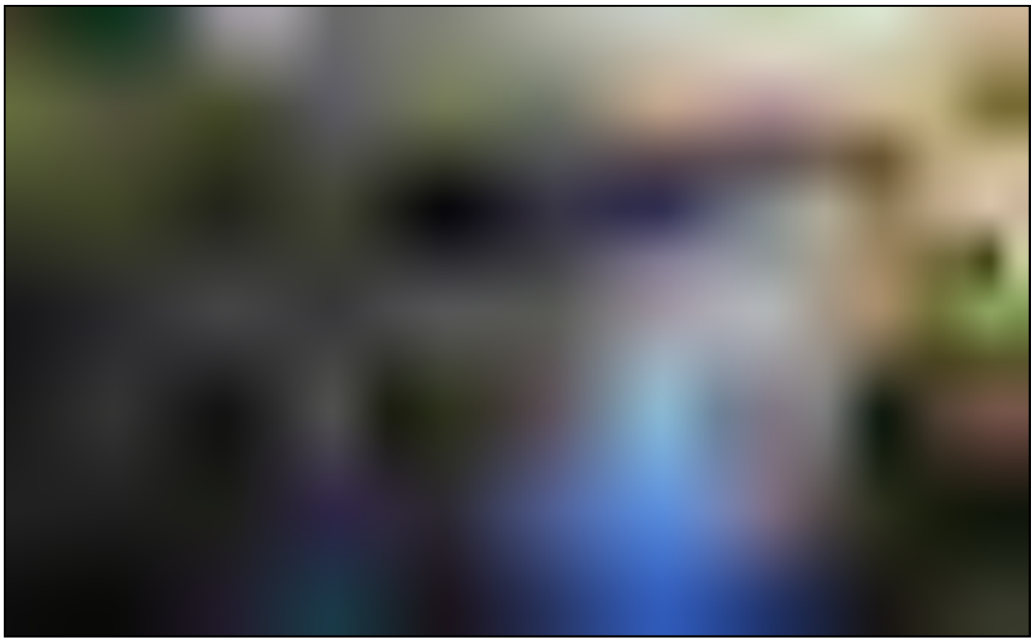


Photo No.: 12

Date: October 23, 2003

Direction: South/Downstream

Description: Sampling location, SED-7

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 13

Date: October 23, 2003

Direction: North/Upstream

Description: Sampling location, SED-7, left branch



Photo No.: 14

Date: October 23, 2003

Direction: North/Upstream

Description: Sampling location, SED-7, right branch

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 15

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-09



Photo No.: 16

Date: November 4, 2011

Direction: South

Description: Sampling location SW/SED-10

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 17

Date: November 4, 2011

Direction: South

Description: Sample location, SW/SED-11



Photo No.: 18

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-12

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 19

Date: November 4, 2011

Direction: North

Description: Sample location, SW/SED-13



Photo No.: 20

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-14

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 21

Date: November 4, 2011

Direction: North

Description: Sample location, SW/SED-15



Photo No.: 22

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-16

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 23

Date: November 4, 2011

Direction: North

Description: Sample location, SW/SED-17



Photo No.: 24

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-18

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 25

Date: November 4, 2011

Direction: North

Description: Sample location, SW/SED-19



Photo No.: 26

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-20

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 27

Date: November 4, 2011

Direction: North

Description: Sample location, SW/SED-21



Photo No.: 28

Date: November 4, 2011

Direction: North

Description: Sampling location SW/SED-22

Report Name: SLERA for Clear Creek
Project Site: Former ICC
Location: Bloomington, Indiana



Photo No.: 29

Date: November 4, 2011

Direction: North

Description: Sample location, SW/SED-23

Appendix B.

Laboratory Reports, Data Validation Reports, and Sampling Log Sheets

Southeast

09/28/10

Technical Report for

CSX Transportation

AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

IN000072.0052.00001

Accutest Job Number: F76426

Sampling Date: 09/08/10

Report to:

ARCADIS Geraghty & Miller
251 East Ohio Street Suite 800
Indianapolis, IN 46204
bgriggs@arcadis-us.com

ATTN: Bryant Griggs

Total number of pages in report: **537**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Test results relate only to samples analyzed.

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Sample Summary

CSX Transportation

Job No: F76426

AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN
Project No: IN000072.0052.00001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F76426-1	09/08/10	11:15	RD	09/09/10	AQ	Surface Water	SW-09
F76426-2	09/08/10	11:15	RD	09/09/10	SO	Soil	SED-09
F76426-3	09/08/10	13:05	RD	09/09/10	AQ	Surface Water	SW-10
F76426-4	09/08/10	13:05	RD	09/09/10	SO	Soil	SED-10
F76426-5	09/08/10	00:00	RD	09/09/10	SO	Trip Blank Soil	TRIP BLANK
F76426-6	09/08/10	13:40	RD	09/09/10	AQ	Surface Water	SW-11
F76426-7	09/08/10	13:40	RD	09/09/10	SO	Soil	SED-11
F76426-8	09/08/10	14:15	RD	09/09/10	AQ	Surface Water	SW-12
F76426-9	09/08/10	14:15	RD	09/09/10	SO	Soil	SED-12
F76426-10	09/08/10	14:45	RD	09/09/10	AQ	Surface Water	SW-13
F76426-11	09/08/10	14:15	RD	09/09/10	SO	Soil	SED-13
F76426-12	09/08/10	15:15	RD	09/09/10	AQ	Surface Water	SW-14
F76426-13	09/08/10	15:15	RD	09/09/10	SO	Soil	SED-14

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

CSX Transportation

Job No: F76426

AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN
Project No: IN000072.0052.00001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
F76426-14	09/08/10	15:45	RD	09/09/10	AQ	Surface Water	SW-15
F76426-15	09/08/10	15:45	RD	09/09/10	SO	Soil	SED-15

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: CSX Transportation **Job** F76426

Site: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, **Report Date:** 9/25/2010 10:23:09 AM

14 Samples and 1 Trip Blank were collected on 09/08/2010 and were received at Accutest SE on 09/09/2010 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of F76426. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VJ3338

All samples were analyzed within the recommended method holding time.

Samples F76356-1MS, F76356-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** VG2525

All samples were analyzed within the recommended method holding time.

Samples F76376-6MS, F76376-6MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

F76426-9, F76426-11, F76426-15: Sample was received in a bulk container and preserved within 48 hours of sampling.

Matrix: SO **Batch ID:** VG2526

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76408-2MS, F76408-2MSD were used as the QC samples indicated.

F76426-13: Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range). Sample was received in a bulk container and preserved within 48 hours of sampling.

Matrix: SO **Batch ID:** VK2009

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76266-37MS, F76266-37MSD were used as the QC samples indicated.

F76426-2, F76426-4, F76426-7: Sample was received in a bulk container and preserved within 48 hours of sampling.

Wet Chemistry by Method ASTM D422

Matrix: SO **Batch ID:** GN41406

Sample T58537-7BDUP was used as the QC sample for % Fines, % Gravel, % Sand.

Matrix: SO **Batch ID:** GN41439

Sample T58707-1BDUP was used as the QC sample for % Fines, % Gravel, % Sand.

Wet Chemistry by Method SM19 2540B M

Matrix: SO **Batch ID:** GN41317

Sample F76284-1DUP was used as the QC sample for Solids, Percent.

Saturday, September 25, 2010

Wet Chemistry by Method SW846 9060A MOD

Matrix: SO **Batch ID:** GP15611

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76426-9DUP, F76426-9MS were used as the QC samples for Total Organic Carbon.

Matrix Spike Recovery for Total Organic Carbon is outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: September 25, 2010

Ellen Pampel, Inorganic QA (signature on file)

Saturday, September 25, 2010

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-09		
Lab Sample ID:	F76426-1	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059349.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	101%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: SED-09
Lab Sample ID: F76426-2 **Date Sampled:** 09/08/10
Matrix: SO - Soil **Date Received:** 09/09/10
Method: SW846 8260B SW846 5030A **Percent Solids:** 80.4
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046611.D	1	09/10/10	SH	09/09/10 16:07	n/a	VK2009
Run #2							

	Initial Weight
Run #1	4.76 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0065	mg/kg	
108-88-3	Toluene	ND	0.0065	mg/kg	
100-41-4	Ethylbenzene	ND	0.0065	mg/kg	
1330-20-7	Xylene (total)	ND	0.020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-121%
2037-26-5	Toluene-D8	88%		71-130%
460-00-4	4-Bromofluorobenzene	102%		59-148%
17060-07-0	1,2-Dichloroethane-D4	102%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SED-09
Lab Sample ID: F76426-2
Matrix: SO - Soil
Date Sampled: 09/08/10
Date Received: 09/09/10
Percent Solids: 80.4
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/17/10	LE	ASTM D422
% Sand	90.4		%	1	09/17/10	LE	ASTM D422
% Fines	9.6		%	1	09/17/10	LE	ASTM D422
Solids, Percent	80.4		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	83400	1200	mg/kg	1	09/14/10 14:49	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-10		
Lab Sample ID:	F76426-3	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059350.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	108%		86-112%
460-00-4	4-Bromofluorobenzene	98%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-10		
Lab Sample ID:	F76426-4	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	79.9
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046612.D	1	09/10/10	SH	09/09/10 16:07	n/a	VK2009
Run #2							

	Initial Weight
Run #1	4.63 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0068	mg/kg	
108-88-3	Toluene	ND	0.0068	mg/kg	
100-41-4	Ethylbenzene	ND	0.0068	mg/kg	
1330-20-7	Xylene (total)	ND	0.020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-121%
2037-26-5	Toluene-D8	90%		71-130%
460-00-4	4-Bromofluorobenzene	101%		59-148%
17060-07-0	1,2-Dichloroethane-D4	97%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-10		
Lab Sample ID:	F76426-4	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
		Percent Solids:	79.9
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/17/10	LE	ASTM D422
% Sand	74.6		%	1	09/17/10	LE	ASTM D422
% Fines	25.4		%	1	09/17/10	LE	ASTM D422
Solids, Percent	79.9		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	66100	1300	mg/kg	1	09/14/10 15:30	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F76426-5	**Date Sampled:**	09/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K046609.D	1	09/10/10	SH	09/09/10 16:07	n/a	VK2009
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/kg	
108-88-3	Toluene	ND	0.0050	mg/kg	
100-41-4	Ethylbenzene	ND	0.0050	mg/kg	
1330-20-7	Xylene (total)	ND	0.015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-121%
2037-26-5	Toluene-D8	88%		71-130%
460-00-4	4-Bromofluorobenzene	101%		59-148%
17060-07-0	1,2-Dichloroethane-D4	100%		77-123%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-11		
Lab Sample ID:	F76426-6	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059351.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-11		
Lab Sample ID:	F76426-7	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	80.7
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046613.D	1	09/10/10	SH	09/09/10 16:07	n/a	VK2009
Run #2							

	Initial Weight
Run #1	5.33 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0058	mg/kg	
108-88-3	Toluene	ND	0.0058	mg/kg	
100-41-4	Ethylbenzene	ND	0.0058	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-121%
2037-26-5	Toluene-D8	85%		71-130%
460-00-4	4-Bromofluorobenzene	104%		59-148%
17060-07-0	1,2-Dichloroethane-D4	112%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-11		
Lab Sample ID:	F76426-7	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
		Percent Solids:	80.7
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/17/10	LE	ASTM D422
% Sand	80.1		%	1	09/17/10	LE	ASTM D422
% Fines	19.9		%	1	09/17/10	LE	ASTM D422
Solids, Percent	80.7		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	45900	1200	mg/kg	1	09/14/10 16:06	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-12		
Lab Sample ID:	F76426-8	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059352.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	101%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-12		
Lab Sample ID:	F76426-9	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	79.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0066873.D	1	09/16/10	MM	09/09/10 16:07	n/a	VG2525
Run #2							

	Initial Weight
Run #1	5.16 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0061	mg/kg	
108-88-3	Toluene	ND	0.0061	mg/kg	
100-41-4	Ethylbenzene	ND	0.0061	mg/kg	
1330-20-7	Xylene (total)	ND	0.018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		80-121%
2037-26-5	Toluene-D8	98%		71-130%
460-00-4	4-Bromofluorobenzene	103%		59-148%
17060-07-0	1,2-Dichloroethane-D4	95%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-12		
Lab Sample ID:	F76426-9	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
		Percent Solids:	79.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/17/10	LE	ASTM D422
% Sand	72.0		%	1	09/17/10	LE	ASTM D422
% Fines	28.0		%	1	09/17/10	LE	ASTM D422
Solids, Percent	79.1		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	43400	1300	mg/kg	1	09/14/10 14:10	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-13		
Lab Sample ID:	F76426-10	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059353.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	100%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	100%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-13		
Lab Sample ID:	F76426-11	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	79.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0066874.D	1	09/16/10	MM	09/09/10 16:07	n/a	VG2525
Run #2							

	Initial Weight
Run #1	4.61 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0069	mg/kg	
108-88-3	Toluene	ND	0.0069	mg/kg	
100-41-4	Ethylbenzene	ND	0.0069	mg/kg	
1330-20-7	Xylene (total)	ND	0.021	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-121%
2037-26-5	Toluene-D8	99%		71-130%
460-00-4	4-Bromofluorobenzene	104%		59-148%
17060-07-0	1,2-Dichloroethane-D4	96%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-13		
Lab Sample ID:	F76426-11	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
		Percent Solids:	79.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/17/10	LE	ASTM D422
% Sand	82.2		%	1	09/17/10	LE	ASTM D422
% Fines	17.8		%	1	09/17/10	LE	ASTM D422
Solids, Percent	79.1		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	92400	1300	mg/kg	1	09/14/10 17:26	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-14		
Lab Sample ID:	F76426-12	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059354.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	109%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-14		
Lab Sample ID:	F76426-13	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	80.3
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0066905.D	1	09/17/10	MM	09/09/10 16:35	n/a	VG2526
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.58 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.40	mg/kg	
108-88-3	Toluene	ND	0.40	mg/kg	
100-41-4	Ethylbenzene	ND	0.40	mg/kg	
1330-20-7	Xylene (total)	ND	1.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-121%
2037-26-5	Toluene-D8	90%		71-130%
460-00-4	4-Bromofluorobenzene	92%		59-148%
17060-07-0	1,2-Dichloroethane-D4	103%		77-123%

(a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range). Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-14		
Lab Sample ID:	F76426-13	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
		Percent Solids:	80.3
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/23/10	LE	ASTM D422
% Sand	75.7		%	1	09/23/10	LE	ASTM D422
% Fines	24.3		%	1	09/23/10	LE	ASTM D422
Solids, Percent	80.3		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	65500	1200	mg/kg	1	09/15/10 12:42	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-15		
Lab Sample ID:	F76426-14	**Date Sampled:**	09/08/10
Matrix:	AQ - Surface Water	**Date Received:**	09/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J059355.D	1	09/15/10	KW	n/a	n/a	VJ3338
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		87-116%
17060-07-0	1,2-Dichloroethane-D4	100%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-15		
Lab Sample ID:	F76426-15	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	80.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0066876.D	1	09/16/10	MM	09/09/10 16:35	n/a	VG2525
Run #2							

	Initial Weight
Run #1	5.44 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0057	mg/kg	
108-88-3	Toluene	ND	0.0057	mg/kg	
100-41-4	Ethylbenzene	ND	0.0057	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-121%
2037-26-5	Toluene-D8	96%		71-130%
460-00-4	4-Bromofluorobenzene	104%		59-148%
17060-07-0	1,2-Dichloroethane-D4	105%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-15		
Lab Sample ID:	F76426-15	**Date Sampled:**	09/08/10
Matrix:	SO - Soil	**Date Received:**	09/09/10
		Percent Solids:	80.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/23/10	LE	ASTM D422
% Sand	73.7		%	1	09/23/10	LE	ASTM D422
% Fines	26.3		%	1	09/23/10	LE	ASTM D422
Solids, Percent	80.1		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	38400	1200	mg/kg	1	09/15/10 13:27	CN	SW846 9060A MOD

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

F76426

CSX TRANSPORTATION — CHAIN OF CUSTODY

COC # 1 of 1 Cooler 1 of 1

LABORATORY INFORMATION
Accutest
4405 Vineland Rd., Suite C-15
Orlando, FL 32811
Phone: 407-425-6700
Fax: 407-425-0707

SHIPMENT INFORMATION
Shipment Method: FED-EX
Shipment Tracking No:

CSXT PROJECT INFORMATION
CSXT Project Number: 941582.29
CSXT Project Name: IN CREOSOTE
CSXT Contact: PAUL J. KWIATKOWSKI
Proj. State (State of Origin): IN
Proj. City: BLOOMINGTON
LWON: ENV 53216

CONSULTANT INFORMATION
Company: ARCADIS
Address: 351 E. OHIO ST., STE. 588
City, State, Zip: INDIANAPOLIS, IN 46204
Project #: IN000072.0052.00001
PM: BRIAN GRIGGS
Email: BRIAN.GRIGGS@ARCADIS-US.COM
Phone: 317-231-6508 Fax: 317-231-6584

Turnaround Time:
- [ ] 1 Day Rush
- [ ] 2 Day Rush
- [ ] 3 Day Rush
- [X] Standard 6-13 Days — Specify # Days 7
- [ ] Standard 14 Days
- [ ] Other

Deliverables:
- [ ] CSXT Standard (Level II)
- [ ] Level III
- [X] Level IV
- [X] Other Deliv: MACCO ONLY — NO HARD COPY
- [X] EDD Required, Format: EXCEL

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: SO = Soil; LIQ = Liquid; GW = Groundwater; SL = Sludge; WW = Waste Water; OI = Oil; SW = Surface Water; SOL = Other Solid

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Note ➡ Pres. Code: 1	0	0	COMMENTS	LAB USE
									BTEX	TOC	GRAIN SIZE ANALYSES		
1	SW/SED-09 (2)	5	9-8-10	1115	RW	N	G	SO/SW	X	X	X		
(3)	SW/SED-10 (4)	5	9-8-10	1305	RW	N	G	SO/SW	X	X	X		
5	TRIP BLANK-1 (090810)	3	—	—	—	—	—	LIQ	X				
6	SW/SED-11 (7)	5	9-8-10	1340	RW	N	G	SO/SW	X	X	X		
8	SW/SED-12 (9)	5	9-8-10	1415	RW	N	G	SO/SW	X	X	X		
10	SW/SED-13 (11)	5	9-8-10	1445	RW	N	G	SO/SW	X	X	X		
12	SW/SED-14 (13)	5	9-8-10	1515	RW	N	G	SO/SW	X	X	X		
14	SW/SED-15 15	5	9-8-10	1545	RW	N	G	SO/SW	X	X	X		

	Date Time:	Received By:	Date Time:
Relinquished By: [signature] ARCADIS	9-8-10 / 1800	Received By: FX	
Relinquished By: FX	9/9/10 9:00	Received By: [signature]	09/09/10 9:00
Relinquished By:		Received By:	
Received By Laboratory:		Lab Remarks:	

Comments & Special Analytical Requirements:
- SEE TAB 1
- ECO RISC SAMPLES

2.8c

LAB USE: Custody Intact ☐ Yes ☐ No; Custody Seal #; LAB Log Number

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

F76426: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F76426 CLIENT: ARCADIS PROJECT: IN CREOSOTE

DATE/TIME RECEIVED: 09/09/10 9:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8730 0408 5274

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [✓] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [✓] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [✓] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ?

NUMBER OF 5035 FIELD KITS ? 1 TB

NUMBER OR LAB FILTERED METALS ?

TEMPERATURE INFORMATION

- [ ] IR THERM ID #3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 2.2
- [ ] CORRECTED TEMPS: 2.8

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE Cliff Hall 09/09/10 REVIEWER SIGNATURE/DATE JC 09-9-10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1 4

F76426: Chain of Custody
Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2009-MB	K046593.D	1	09/10/10	SH	n/a	n/a	VK2009

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-2, F76426-4, F76426-5, F76426-7

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	80-121%
2037-26-5	Toluene-D8	90%	71-130%
460-00-4	4-Bromofluorobenzene	106%	59-148%
17060-07-0	1,2-Dichloroethane-D4	88%	77-123%

Method Blank Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3338-MB	J059348.D	1	09/15/10	KW	n/a	n/a	VJ3338

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-1, F76426-3, F76426-6, F76426-8, F76426-10, F76426-12, F76426-14

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	102%	76-127%
2037-26-5	Toluene-D8	98%	86-112%
460-00-4	4-Bromofluorobenzene	104%	84-120%

Method Blank Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2525-MB	G0066856.D	1	09/16/10	MM	n/a	n/a	VG2525

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-9, F76426-11, F76426-15

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	80-121%
2037-26-5	Toluene-D8	95%	71-130%
460-00-4	4-Bromofluorobenzene	100%	59-148%
17060-07-0	1,2-Dichloroethane-D4	105%	77-123%

Method Blank Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2526-MB	G0066901.D	1	09/17/10	MM	n/a	n/a	VG2526

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-13

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-121%
2037-26-5	Toluene-D8	98%	71-130%
460-00-4	4-Bromofluorobenzene	98%	59-148%
17060-07-0	1,2-Dichloroethane-D4	95%	77-123%

Blank Spike Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2009-BS	K046595.D	1	09/10/10	SH	n/a	n/a	VK2009

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-2, F76426-4, F76426-5, F76426-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	54.9	110	78-130
100-41-4	Ethylbenzene	50	45.4	91	82-124
108-88-3	Toluene	50	45.4	91	80-123
1330-20-7	Xylene (total)	150	141	94	83-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	80-121%
2037-26-5	Toluene-D8	93%	71-130%
460-00-4	4-Bromofluorobenzene	92%	59-148%
17060-07-0	1,2-Dichloroethane-D4	116%	77-123%

Blank Spike Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3338-BS	J059347.D	1	09/15/10	KW	n/a	n/a	VJ3338

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-1, F76426-3, F76426-6, F76426-8, F76426-10, F76426-12, F76426-14

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	22.5	90	83-124
100-41-4	Ethylbenzene	25	22.5	90	87-118
108-88-3	Toluene	25	24.1	96	86-116
1330-20-7	Xylene (total)	75	68.7	92	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	76-127%
2037-26-5	Toluene-D8	103%	86-112%
460-00-4	4-Bromofluorobenzene	102%	84-120%

Blank Spike Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2525-BS	G0066855.D	1	09/16/10	MM	n/a	n/a	VG2525

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-9, F76426-11, F76426-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	46.9	94	78-130
100-41-4	Ethylbenzene	50	49.9	100	82-124
108-88-3	Toluene	50	48.6	97	80-123
1330-20-7	Xylene (total)	150	155	103	83-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	80-121%
2037-26-5	Toluene-D8	99%	71-130%
460-00-4	4-Bromofluorobenzene	104%	59-148%
17060-07-0	1,2-Dichloroethane-D4	97%	77-123%

Blank Spike Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2526-BS	G0066900.D	1	09/17/10	MM	n/a	n/a	VG2526

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-13

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	51.3	103	78-130
100-41-4	Ethylbenzene	50	51.7	103	82-124
108-88-3	Toluene	50	50.0	100	80-123
1330-20-7	Xylene (total)	150	157	105	83-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-121%
2037-26-5	Toluene-D8	96%	71-130%
460-00-4	4-Bromofluorobenzene	94%	59-148%
17060-07-0	1,2-Dichloroethane-D4	94%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76266-37MS	K046614.D	1	09/10/10	SH	n/a	n/a	VK2009
F76266-37MSD	K046615.D	1	09/10/10	SH	n/a	n/a	VK2009
F76266-37	K046608.D	1	09/10/10	SH	n/a	n/a	VK2009

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-2, F76426-4, F76426-5, F76426-7

CAS No.	Compound	F76266-37 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		64.3	81.3	126	77.4	120	5	78-130/25
100-41-4	Ethylbenzene	ND		64.3	66.9	104	67.3	104	1	82-124/25
108-88-3	Toluene	ND		64.3	72.2	112	72.4	112	0	80-123/26
1330-20-7	Xylene (total)	ND		193	206	107	202	104	2	83-127/24

CAS No.	Surrogate Recoveries	MS	MSD	F76266-37	Limits
1868-53-7	Dibromofluoromethane	105%	103%	107%	80-121%
2037-26-5	Toluene-D8	101%	105%	82%	71-130%
460-00-4	4-Bromofluorobenzene	105%	107%	97%	59-148%
17060-07-0	1,2-Dichloroethane-D4	106%	94%	119%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76356-1MS	J059360.D	5	09/15/10	KW	n/a	n/a	VJ3338
F76356-1MSD	J059361.D	5	09/15/10	KW	n/a	n/a	VJ3338
F76356-1	J059359.D	5	09/15/10	KW	n/a	n/a	VJ3338

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-1, F76426-3, F76426-6, F76426-8, F76426-10, F76426-12, F76426-14

CAS No.	Compound	F76356-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	5.0 U		125	119	95	122	98	2	83-124/11
100-41-4	Ethylbenzene	5.0 U		125	110	88	109	87	1	87-118/10
108-88-3	Toluene	5.0 U		125	111	89	117	94	5	86-116/10
1330-20-7	Xylene (total)	15 U		375	339	90	333	89	2	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F76356-1	Limits
1868-53-7	Dibromofluoromethane	97%	98%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	111%	106%	100%	76-127%
2037-26-5	Toluene-D8	97%	99%	99%	86-112%
460-00-4	4-Bromofluorobenzene	98%	101%	103%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76376-6MS	G0066865.D	1	09/16/10	MM	n/a	n/a	VG2525
F76376-6MSD	G0066866.D	1	09/16/10	MM	n/a	n/a	VG2525
F76376-6 [a]	G0066864.D	1	09/16/10	MM	n/a	n/a	VG2525

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-9, F76426-11, F76426-15

CAS No.	Compound	F76376-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	4.2	U	58.1	59.9	103	59.0	104	2	78-130/25
100-41-4	Ethylbenzene	4.2	U	58.1	62.5	108	62.9	111	1	82-124/25
108-88-3	Toluene	4.2	U	58.1	61.3	106	61.8	109	1	80-123/26
1330-20-7	Xylene (total)	13	U	174	189	109	192	112	2	83-127/24

CAS No.	Surrogate Recoveries	MS	MSD	F76376-6	Limits
1868-53-7	Dibromofluoromethane	97%	98%	98%	80-121%
2037-26-5	Toluene-D8	100%	101%	159%* [b]	71-130%
460-00-4	4-Bromofluorobenzene	101%	104%	57%* [b]	59-148%
17060-07-0	1,2-Dichloroethane-D4	88%	86%	111%	77-123%

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to matrix interference.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76408-2MS	G0066908.D	1	09/17/10	MM	n/a	n/a	VG2526
F76408-2MSD	G0066909.D	1	09/17/10	MM	n/a	n/a	VG2526
F76408-2	G0066910.D	1	09/17/10	MM	n/a	n/a	VG2526

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76426-13

CAS No.	Compound	F76408-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	6.2	U	73	83.0	114	76.9	107	8	78-130/25
100-41-4	Ethylbenzene	6.2	U	73	85.6	117	75.2	105	13	82-124/25
108-88-3	Toluene	6.2	U	73	81.7	112	73.9	103	10	80-123/26
1330-20-7	Xylene (total)	19	U	219	256	117	229	106	11	83-127/24

CAS No.	Surrogate Recoveries	MS	MSD	F76408-2	Limits
1868-53-7	Dibromofluoromethane	94%	102%	103%	80-121%
2037-26-5	Toluene-D8	95%	97%	93%	71-130%
460-00-4	4-Bromofluorobenzene	95%	106%	102%	59-148%
17060-07-0	1,2-Dichloroethane-D4	85%	92%	107%	77-123%

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VG2523-BFB
Lab File ID: G0066791.D
Instrument ID: GCMSG
Injection Date: 09/14/10
Injection Time: 11:42

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	60495	21.9		Pass
75	30.0 - 60.0% of mass 95	150357	54.4		Pass
95	Base peak, 100% relative abundance	276272	100.0		Pass
96	5.0 - 9.0% of mass 95	18902	6.84		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	264820	95.9		Pass
175	5.0 - 9.0% of mass 174	21416	7.75	(8.09) [a]	Pass
176	95.0 - 101.0% of mass 174	261612	94.7	(98.8) [a]	Pass
177	5.0 - 9.0% of mass 176	16874	6.11	(6.45) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VG2523-IC2523	G0066792.D	09/14/10	11:59	00:17	Initial cal 1
VG2523-IC2523	G0066793.D	09/14/10	12:26	00:44	Initial cal 2
VG2523-IC2523	G0066794.D	09/14/10	12:53	01:11	Initial cal 3
VG2523-ICC2523	G0066795.D	09/14/10	13:19	01:37	Initial cal 4
VG2523-IC2523	G0066796.D	09/14/10	13:46	02:04	Initial cal 5
VG2523-IC2523	G0066797.D	09/14/10	14:13	02:31	Initial cal 6
VG2523-ICV2523	G0066798.D	09/14/10	14:39	02:57	Initial cal verification 3
VG2523-BS	G0066799.D	09/14/10	15:06	03:24	Blank Spike
VG2523-MB	G0066800.D	09/14/10	15:33	03:51	Method Blank
F76263-11	G0066801.D	09/14/10	16:00	04:18	(used for QC only; not part of job F76426)
F76263-11MS	G0066802.D	09/14/10	16:26	04:44	Matrix Spike
F76263-11MSD	G0066803.D	09/14/10	16:53	05:11	Matrix Spike Duplicate
ZZZZZZ	G0066804.D	09/14/10	17:20	05:38	(unrelated sample)
ZZZZZZ	G0066805.D	09/14/10	17:46	06:04	(unrelated sample)
ZZZZZZ	G0066806.D	09/14/10	18:13	06:31	(unrelated sample)
ZZZZZZ	G0066807.D	09/14/10	18:39	06:57	(unrelated sample)
ZZZZZZ	G0066808.D	09/14/10	19:06	07:24	(unrelated sample)
ZZZZZZ	G0066809.D	09/14/10	19:32	07:50	(unrelated sample)
ZZZZZZ	G0066810.D	09/14/10	19:59	08:17	(unrelated sample)
ZZZZZZ	G0066811.D	09/14/10	20:25	08:43	(unrelated sample)
ZZZZZZ	G0066812.D	09/14/10	20:51	09:09	(unrelated sample)
ZZZZZZ	G0066813.D	09/14/10	21:18	09:36	(unrelated sample)
ZZZZZZ	G0066814.D	09/14/10	21:44	10:02	(unrelated sample)
ZZZZZZ	G0066815.D	09/14/10	22:10	10:28	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample:	VG2523-BFB	**Injection Date:**	09/14/10
Lab File ID:	G0066791.D	**Injection Time:**	11:42
Instrument ID:	GCMSG		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	G0066816.D	09/14/10	22:36	10:54	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VG2525-BFB
Lab File ID: G0066853.D
Instrument ID: GCMSG
Injection Date: 09/16/10
Injection Time: 10:05

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	53611	22.1		Pass
75	30.0 - 60.0% of mass 95	126328	52.1		Pass
95	Base peak, 100% relative abundance	242316	100.0		Pass
96	5.0 - 9.0% of mass 95	16526	6.82		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	228072	94.1		Pass
175	5.0 - 9.0% of mass 174	16245	6.70	(7.12) [a]	Pass
176	95.0 - 101.0% of mass 174	218304	90.1	(95.7) [a]	Pass
177	5.0 - 9.0% of mass 176	14785	6.10	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VG2525-CC2523	G0066854.D	09/16/10	10:22	00:17	Continuing cal 4
VG2525-BS	G0066855.D	09/16/10	11:02	00:57	Blank Spike
VG2525-MB	G0066856.D	09/16/10	11:29	01:24	Method Blank
ZZZZZZ	G0066857.D	09/16/10	11:55	01:50	(unrelated sample)
ZZZZZZ	G0066858.D	09/16/10	12:22	02:17	(unrelated sample)
ZZZZZZ	G0066859.D	09/16/10	12:49	02:44	(unrelated sample)
ZZZZZZ	G0066860.D	09/16/10	13:16	03:11	(unrelated sample)
ZZZZZZ	G0066861.D	09/16/10	13:42	03:37	(unrelated sample)
ZZZZZZ	G0066862.D	09/16/10	14:09	04:04	(unrelated sample)
ZZZZZZ	G0066863.D	09/16/10	14:36	04:31	(unrelated sample)
F76376-6	G0066864.D	09/16/10	15:03	04:58	(used for QC only; not part of job F76426)
F76376-6MS	G0066865.D	09/16/10	15:30	05:25	Matrix Spike
F76376-6MSD	G0066866.D	09/16/10	15:57	05:52	Matrix Spike Duplicate
ZZZZZZ	G0066868.D	09/16/10	16:50	06:45	(unrelated sample)
ZZZZZZ	G0066869.D	09/16/10	17:17	07:12	(unrelated sample)
ZZZZZZ	G0066871.D	09/16/10	18:10	08:05	(unrelated sample)
ZZZZZZ	G0066872.D	09/16/10	18:37	08:32	(unrelated sample)
F76426-9	G0066873.D	09/16/10	19:04	08:59	SED-12
F76426-11	G0066874.D	09/16/10	19:30	09:25	SED-13
F76426-15	G0066876.D	09/16/10	20:23	10:18	SED-15
ZZZZZZ	G0066877.D	09/16/10	20:50	10:45	(unrelated sample)
ZZZZZZ	G0066878.D	09/16/10	21:16	11:11	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VG2526-BFB
Lab File ID: G0066898.D
Instrument ID: GCMSG
Injection Date: 09/17/10
Injection Time: 10:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	65387	23.5		Pass
75	30.0 - 60.0% of mass 95	156231	56.1		Pass
95	Base peak, 100% relative abundance	278481	100.0		Pass
96	5.0 - 9.0% of mass 95	20038	7.20		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	262098	94.1		Pass
175	5.0 - 9.0% of mass 174	21105	7.58	(8.05) [a]	Pass
176	95.0 - 101.0% of mass 174	257851	92.6	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	18037	6.48	(7.00) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VG2526-CC2523	G0066899.D	09/17/10	10:28	00:18	Continuing cal 4
VG2526-BS	G0066900.D	09/17/10	11:06	00:56	Blank Spike
VG2526-MB	G0066901.D	09/17/10	11:33	01:23	Method Blank
ZZZZZZ	G0066902.D	09/17/10	11:59	01:49	(unrelated sample)
ZZZZZZ	G0066903.D	09/17/10	12:26	02:16	(unrelated sample)
F76426-13	G0066905.D	09/17/10	13:19	03:09	SED-14
ZZZZZZ	G0066906.D	09/17/10	13:46	03:36	(unrelated sample)
ZZZZZZ	G0066907.D	09/17/10	14:12	04:02	(unrelated sample)
F76408-2MS	G0066908.D	09/17/10	14:39	04:29	Matrix Spike
F76408-2MSD	G0066909.D	09/17/10	15:06	04:56	Matrix Spike Duplicate
F76408-2	G0066910.D	09/17/10	15:33	05:23	(used for QC only; not part of job F76426)
ZZZZZZ	G0066911.D	09/17/10	15:59	05:49	(unrelated sample)
ZZZZZZ	G0066913.D	09/17/10	16:52	06:42	(unrelated sample)
ZZZZZZ	G0066914.D	09/17/10	17:19	07:09	(unrelated sample)
ZZZZZZ	G0066915.D	09/17/10	17:45	07:35	(unrelated sample)
ZZZZZZ	G0066916.D	09/17/10	18:12	08:02	(unrelated sample)
ZZZZZZ	G0066917.D	09/17/10	18:38	08:28	(unrelated sample)
ZZZZZZ	G0066918.D	09/17/10	19:05	08:55	(unrelated sample)
ZZZZZZ	G0066919.D	09/17/10	19:31	09:21	(unrelated sample)
ZZZZZZ	G0066920.D	09/17/10	19:57	09:47	(unrelated sample)
ZZZZZZ	G0066921.D	09/17/10	20:24	10:14	(unrelated sample)
ZZZZZZ	G0066922.D	09/17/10	20:50	10:40	(unrelated sample)
ZZZZZZ	G0066923.D	09/17/10	21:17	11:07	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VJ3328-BFB
Lab File ID: J059051.D
Instrument ID: GCMSJ
Injection Date: 09/01/10
Injection Time: 09:47

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	46605	21.8		Pass
75	30.0 - 60.0% of mass 95	91125	42.6		Pass
95	Base peak, 100% relative abundance	213973	100.0		Pass
96	5.0 - 9.0% of mass 95	14048	6.57		Pass
173	Less than 2.0% of mass 174	592	0.28	(0.38) [a]	Pass
174	50.0 - 100.0% of mass 95	157397	73.6		Pass
175	5.0 - 9.0% of mass 174	11721	5.48	(7.45) [a]	Pass
176	95.0 - 101.0% of mass 174	153280	71.6	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	10096	4.72	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3328-IC3328	J059052.D	09/01/10	10:08	00:21	Initial cal 1
VJ3328-IC3328	J059053.D	09/01/10	10:31	00:44	Initial cal 2
VJ3328-IC3328	J059054.D	09/01/10	10:54	01:07	Initial cal 3
VJ3328-ICC3328	J059055.D	09/01/10	11:17	01:30	Initial cal 4
VJ3328-IC3328	J059056.D	09/01/10	11:40	01:53	Initial cal 5
VJ3328-IC3328	J059057.D	09/01/10	12:03	02:16	Initial cal 6
VJ3328-ICV3328	J059058.D	09/01/10	12:26	02:39	Initial cal verification 4

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VJ3338-BFB
Lab File ID: J059345.D
Instrument ID: GCMSJ
Injection Date: 09/15/10
Injection Time: 09:28

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	45534	26.7		Pass
75	30.0 - 60.0% of mass 95	76752	45.0		Pass
95	Base peak, 100% relative abundance	170389	100.0		Pass
96	5.0 - 9.0% of mass 95	11131	6.53		Pass
173	Less than 2.0% of mass 174	529	0.31	(0.39) [a]	Pass
174	50.0 - 100.0% of mass 95	135778	79.7		Pass
175	5.0 - 9.0% of mass 174	9852	5.78	(7.26) [a]	Pass
176	95.0 - 101.0% of mass 174	136405	80.1	(100.5) [a]	Pass
177	5.0 - 9.0% of mass 176	9051	5.31	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3338-CC3328	J059346.D	09/15/10	09:47	00:19	Continuing cal 4
VJ3338-BS	J059347.D	09/15/10	10:10	00:42	Blank Spike
VJ3338-MB	J059348.D	09/15/10	10:33	01:05	Method Blank
F76426-1	J059349.D	09/15/10	10:56	01:28	SW-09
F76426-3	J059350.D	09/15/10	11:19	01:51	SW-10
F76426-6	J059351.D	09/15/10	11:43	02:15	SW-11
F76426-8	J059352.D	09/15/10	12:06	02:38	SW-12
F76426-10	J059353.D	09/15/10	12:29	03:01	SW-13
F76426-12	J059354.D	09/15/10	12:52	03:24	SW-14
F76426-14	J059355.D	09/15/10	13:15	03:47	SW-15
ZZZZZZ	J059356.D	09/15/10	13:38	04:10	(unrelated sample)
ZZZZZZ	J059357.D	09/15/10	14:01	04:33	(unrelated sample)
ZZZZZZ	J059358.D	09/15/10	14:24	04:56	(unrelated sample)
F76356-1	J059359.D	09/15/10	14:47	05:19	(used for QC only; not part of job F76426)
F76356-1MS	J059360.D	09/15/10	15:10	05:42	Matrix Spike
F76356-1MSD	J059361.D	09/15/10	15:33	06:05	Matrix Spike Duplicate
ZZZZZZ	J059363.D	09/15/10	16:19	06:51	(unrelated sample)
ZZZZZZ	J059364.D	09/15/10	16:42	07:14	(unrelated sample)
ZZZZZZ	J059365.D	09/15/10	17:06	07:38	(unrelated sample)
ZZZZZZ	J059366.D	09/15/10	17:29	08:01	(unrelated sample)
ZZZZZZ	J059367.D	09/15/10	17:51	08:23	(unrelated sample)
ZZZZZZ	J059368.D	09/15/10	18:14	08:46	(unrelated sample)
ZZZZZZ	J059369.D	09/15/10	18:37	09:09	(unrelated sample)
ZZZZZZ	J059370.D	09/15/10	19:00	09:32	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample:	VJ3338-BFB	**Injection Date:**	09/15/10
Lab File ID:	J059345.D	**Injection Time:**	09:28
Instrument ID:	GCMSJ		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	J059372.D	09/15/10	19:46	10:18	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VK2006-BFB
Lab File ID: K046498.D
Instrument ID: GCMSK
Injection Date: 09/03/10
Injection Time: 16:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20660	25.4		Pass
75	30.0 - 60.0% of mass 95	43471	53.5		Pass
95	Base peak, 100% relative abundance	81273	100.0		Pass
96	5.0 - 9.0% of mass 95	5945	7.31		Pass
173	Less than 2.0% of mass 174	428	0.53	(0.74) [a]	Pass
174	50.0 - 100.0% of mass 95	57536	70.8		Pass
175	5.0 - 9.0% of mass 174	4479	5.51	(7.78) [a]	Pass
176	95.0 - 101.0% of mass 174	55640	68.5	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4137	5.09	(7.44) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VK2006-IC2006	K046499.D	09/03/10	16:56	00:35	Initial cal 1
VK2006-IC2006	K046500.D	09/03/10	17:21	01:00	Initial cal 2
VK2006-IC2006	K046501.D	09/03/10	17:46	01:25	Initial cal 3
VK2006-ICC2006	K046502.D	09/03/10	18:12	01:51	Initial cal 4
VK2006-IC2006	K046503.D	09/03/10	18:37	02:16	Initial cal 5
VK2006-IC2006	K046504.D	09/03/10	19:03	02:42	Initial cal 6
VK2006-ICV2006	K046505.D	09/03/10	19:28	03:07	Initial cal verification 3
VK2006-BS	K046506.D	09/03/10	19:53	03:32	Blank Spike
VK2006-MB	K046508.D	09/03/10	20:44	04:23	Method Blank
ZZZZZZ	K046509.D	09/03/10	21:10	04:49	(unrelated sample)
ZZZZZZ	K046511.D	09/03/10	22:00	05:39	(unrelated sample)
F76091-4	K046512.D	09/03/10	22:26	06:05	(used for QC only; not part of job F76426)
ZZZZZZ	K046513.D	09/03/10	22:51	06:30	(unrelated sample)
ZZZZZZ	K046515.D	09/03/10	23:41	07:20	(unrelated sample)
ZZZZZZ	K046517.D	09/04/10	00:31	08:10	(unrelated sample)
ZZZZZZ	K046518.D	09/04/10	00:57	08:36	(unrelated sample)
F76091-4MS	K046519.D	09/04/10	01:22	09:01	Matrix Spike
F76091-4MSD	K046520.D	09/04/10	01:47	09:26	Matrix Spike Duplicate

Instrument Performance Check (BFB)

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VK2009-BFB
Lab File ID: K046588.D
Instrument ID: GCMSK
Injection Date: 09/10/10
Injection Time: 11:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	23730	25.0		Pass
75	30.0 - 60.0% of mass 95	51981	54.7		Pass
95	Base peak, 100% relative abundance	95087	100.0		Pass
96	5.0 - 9.0% of mass 95	7339	7.72		Pass
173	Less than 2.0% of mass 174	587	0.62	(0.88) [a]	Pass
174	50.0 - 100.0% of mass 95	67000	70.5		Pass
175	5.0 - 9.0% of mass 174	5401	5.68	(8.06) [a]	Pass
176	95.0 - 101.0% of mass 174	66806	70.3	(99.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4475	4.71	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VK2009-CC2006	K046590.D	09/10/10	12:39	01:29	Continuing cal 4
VK2009-MB	K046593.D	09/10/10	13:51	02:41	Method Blank
ZZZZZZ	K046594.D	09/10/10	14:16	03:06	(unrelated sample)
VK2009-BS	K046595.D	09/10/10	14:42	03:32	Blank Spike
ZZZZZZ	K046596.D	09/10/10	15:08	03:58	(unrelated sample)
ZZZZZZ	K046597.D	09/10/10	15:34	04:24	(unrelated sample)
ZZZZZZ	K046598.D	09/10/10	15:59	04:49	(unrelated sample)
ZZZZZZ	K046599.D	09/10/10	16:25	05:15	(unrelated sample)
ZZZZZZ	K046600.D	09/10/10	16:50	05:40	(unrelated sample)
ZZZZZZ	K046601.D	09/10/10	17:16	06:06	(unrelated sample)
ZZZZZZ	K046602.D	09/10/10	17:42	06:32	(unrelated sample)
ZZZZZZ	K046603.D	09/10/10	18:08	06:58	(unrelated sample)
ZZZZZZ	K046604.D	09/10/10	18:33	07:23	(unrelated sample)
ZZZZZZ	K046605.D	09/10/10	18:59	07:49	(unrelated sample)
ZZZZZZ	K046606.D	09/10/10	19:25	08:15	(unrelated sample)
ZZZZZZ	K046607.D	09/10/10	19:50	08:40	(unrelated sample)
F76266-37	K046608.D	09/10/10	20:16	09:06	(used for QC only; not part of job F76426)
F76426-5	K046609.D	09/10/10	20:41	09:31	TRIP BLANK
ZZZZZZ	K046610.D	09/10/10	21:07	09:57	(unrelated sample)
F76426-2	K046611.D	09/10/10	21:32	10:22	SED-09
F76426-4	K046612.D	09/10/10	21:58	10:48	SED-10
F76426-7	K046613.D	09/10/10	22:23	11:13	SED-11
F76266-37MS	K046614.D	09/10/10	22:49	11:39	Matrix Spike
F76266-37MSD	K046615.D	09/10/10	23:14	12:04	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VG2525-CC2523 **Injection Date:** 09/16/10
Lab File ID: G0066854.D **Injection Time:** 10:22
Instrument ID: GCMSG **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1033951	11.07	982964	14.64	612634	16.92	118427	7.99
Upper Limit [a]	2067902	11.57	1965928	15.14	1225268	17.42	236854	8.49
Lower Limit [b]	516976	10.57	491482	14.14	306317	16.42	59214	7.49

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VG2525-BS	1040636	11.07	1006397	14.64	583694	16.92	162633	7.98
VG2525-MB	920973	11.07	891184	14.64	447801	16.93	140921	7.99
ZZZZZZ	1098738	11.07	1127113	14.64	673233	16.92	143220	8.01
ZZZZZZ	1036792	11.06	1036075	14.64	637377	16.93	145649	8.00
ZZZZZZ	1075898	11.07	1095285	14.64	663423	16.92	195377	8.02
ZZZZZZ	1142179	11.07	1013735	14.65	680581	16.92	168850	8.02
ZZZZZZ	628544	11.08	384999*	14.64	69891*	16.92	164609	7.98
ZZZZZZ	1038690	11.07	1037980	14.65	576455	16.92	207951	7.99
ZZZZZZ	949201	11.08	912165	14.65	473627	16.92	152242	8.01
F76376-6	867374	11.08	481674*	14.65	320098	16.93	125716	7.99
F76376-6MS	1043737	11.08	1014026	14.64	598073	16.92	136298	7.98
F76376-6MSD	1032185	11.08	1001058	14.65	578540	16.92	123235	8.00
ZZZZZZ	1004698	11.08	865901	14.65	514282	16.92	189657	8.00
ZZZZZZ	1127759	11.08	773858	14.65	513652	16.92	191851	8.00
ZZZZZZ	1441311	11.08	1513238	14.65	808448	16.92	226437	7.99
ZZZZZZ	1152682	11.08	966632	14.65	362212	16.93	176506	7.99
F76426-9 [c]	1451904	11.08	1365177	14.65	694406	16.92	215473	8.00
F76426-11 [c]	1246568	11.08	1172749	14.65	615041	16.93	181822	8.00
F76426-15 [c]	1222570	11.07	1216302	14.65	614316	16.92	176254	8.00
ZZZZZZ	1207132	11.07	1209525	14.65	642561	16.92	243058*	8.00
ZZZZZZ	1224340	11.08	1207927	14.64	645010	16.92	186700	8.00

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was received in a bulk container and preserved within 48 hours of sampling.

Volatile Internal Standard Area Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VG2526-CC2523 **Injection Date:** 09/17/10
Lab File ID: G0066899.D **Injection Time:** 10:28
Instrument ID: GCMSG **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1112653	11.07	1104601	14.64	617353	16.93	129271	7.99
Upper Limit [a]	2225306	11.57	2209202	15.14	1234706	17.43	258542	8.49
Lower Limit [b]	556327	10.57	552301	14.14	308677	16.43	64636	7.49

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VG2526-BS	1174929	11.07	1212033	14.64	709956	16.92	131439	7.98
VG2526-MB	1144526	11.07	1100677	14.65	538534	16.92	153704	8.01
ZZZZZZ	1259966	11.07	1326547	14.64	816240	16.92	196558	8.01
ZZZZZZ	1222037	11.07	1166273	14.64	738449	16.92	184723	8.01
F76426-13 [c]	1333744	11.07	1401785	14.65	874792	16.92	206072	8.02
ZZZZZZ	1115326	11.08	1099497	14.65	594964	16.92	126555	8.00
ZZZZZZ	1199610	11.08	1156821	14.65	535637	16.93	168098	8.01
F76408-2MS	816753	11.08	826618	14.65	478594	16.93	83587	7.99
F76408-2MSD	1207782	11.08	1225315	14.65	664849	16.92	85586	7.99
F76408-2	1102839	11.08	1059978	14.65	521536	16.93	147748	8.00
ZZZZZZ	1074559	11.08	1049611	14.65	457943	16.93	144956	8.01
ZZZZZZ	1130264	11.08	1111954	14.65	551185	16.93	161485	8.00
ZZZZZZ	1031772	11.08	711392	14.64	159051*	16.93	147090	8.00
ZZZZZZ	1040978	11.08	919797	14.64	330301	16.93	121752	8.01
ZZZZZZ	1013080	11.08	996444	14.65	457636	16.92	126042	8.02
ZZZZZZ	1056342	11.08	1016176	14.64	441730	16.93	111440	8.00
ZZZZZZ	1027462	11.08	1008691	14.64	495950	16.93	118535	8.00
ZZZZZZ	979823	11.08	894376	14.65	397613	16.93	124241	8.01
ZZZZZZ	914734	11.08	924903	14.65	426587	16.92	17198*	8.10
ZZZZZZ	976189	11.08	950518	14.64	433021	16.93	86528	7.99
ZZZZZZ	913589	11.08	815352	14.65	300507*	16.92	104073	8.01
ZZZZZZ	950352	11.08	870679	14.65	353494	16.93	106040	8.02

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range). Sample was received in a bulk container and preserved within 48 hours of sampling.

Volatile Internal Standard Area Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std:	VJ3338-CC3328	**Injection Date:**	09/15/10
Lab File ID:	J059346.D	**Injection Time:**	09:47
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1300698	7.44	950693	10.52	501031	12.89	139602	5.10
Upper Limit [a]	2601396	7.94	1901386	11.02	1002062	13.39	279204	5.60
Lower Limit [b]	650349	6.94	475347	10.02	250516	12.39	69801	4.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3338-BS	1287616	7.44	941471	10.52	491946	12.88	135715	5.09
VJ3338-MB	1282602	7.44	941770	10.52	465194	12.88	132598	5.09
F76426-1	1232640	7.44	897156	10.52	449152	12.88	113680	5.09
F76426-3	1166051	7.45	838107	10.52	428844	12.88	109353	5.09
F76426-6	1212338	7.44	899048	10.52	445696	12.88	113473	5.10
F76426-8	1131728	7.44	774739	10.52	416545	12.88	116538	5.09
F76426-10	1117884	7.44	825667	10.52	403525	12.88	114025	5.09
F76426-12	1070901	7.44	797720	10.52	386006	12.88	111466	5.09
F76426-14	1110720	7.44	813256	10.52	399799	12.88	115447	5.09
ZZZZZZ	1019270	7.44	797394	10.52	389884	12.88	114343	5.09
ZZZZZZ	1073689	7.44	787386	10.52	388133	12.88	109365	5.10
ZZZZZZ	978409	7.44	760319	10.52	383664	12.88	102683	5.09
F76356-1	1112067	7.44	805794	10.52	392577	12.88	114056	5.09
F76356-1MS	990543	7.44	763059	10.52	411795	12.88	111178	5.10
F76356-1MSD	1065704	7.44	790425	10.52	423001	12.88	115419	5.10
ZZZZZZ	1021499	7.44	747840	10.52	367962	12.88	107336	5.09
ZZZZZZ	1008019	7.44	737009	10.52	363926	12.88	107431	5.09
ZZZZZZ	961689	7.44	733715	10.52	363778	12.88	99590	5.09
ZZZZZZ	918507	7.44	715195	10.52	321942	12.88	100360	5.09
ZZZZZZ	969194	7.44	717478	10.52	368676	12.88	100146	5.09
ZZZZZZ	962798	7.44	723243	10.52	382398	12.88	103916	5.09
ZZZZZZ	1004431	7.44	756033	10.52	395910	12.88	105119	5.09
ZZZZZZ	1188910	7.44	910095	10.52	528589	12.88	121380	5.09
ZZZZZZ	1253694	7.44	938055	10.52	475729	12.88	144249	5.09

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VK2009-CC2006 **Injection Date:** 09/10/10
Lab File ID: K046590.D **Injection Time:** 12:39
Instrument ID: GCMSK **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1071098	11.46	673002	14.97	316385	17.42	119730	8.29
Upper Limit [a]	2142196	11.96	1346004	15.47	632770	17.92	239460	8.79
Lower Limit [b]	535549	10.96	336501	14.47	158193	16.92	59865	7.79

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VK2009-MB	994011	11.46	657930	14.97	224230	17.43	114860	8.43
ZZZZZZ	976108	11.46	648304	14.97	233096	17.43	142707	8.45
VK2009-BS	1139138	11.46	747777	14.96	336203	17.42	141631	8.30
ZZZZZZ	1000292	11.46	608366	14.97	193175	17.43	132032	8.45
ZZZZZZ	1068097	11.46	713797	14.97	255512	17.43	143134	8.48
ZZZZZZ	1001445	11.46	652553	14.97	217886	17.43	133537	8.43
ZZZZZZ	1111294	11.46	733692	14.97	265287	17.43	171321	8.40
ZZZZZZ	1043647	11.46	670099	14.97	211859	17.43	150319	8.43
ZZZZZZ	1059015	11.46	696516	14.97	222791	17.43	178970	8.44
ZZZZZZ	1145386	11.46	769974	14.97	274994	17.42	123453	8.41
ZZZZZZ	945016	11.46	571913	14.97	165892	17.43	135500	8.45
ZZZZZZ	1041351	11.46	691427	14.97	262438	17.43	175899	8.40
ZZZZZZ	1107333	11.46	760829	14.97	285299	17.43	106608	8.41
ZZZZZZ	1140344	11.46	776273	14.97	297535	17.42	210561	8.40
ZZZZZZ	1089574	11.46	778869	14.97	293091	17.42	248191*	8.40
F76266-37	1006497	11.46	700385	14.97	276414	17.42	255117*	8.50
F76426-5	1018930	11.46	675853	14.97	253234	17.43	127809	8.45
ZZZZZZ	997579	11.46	657203	14.97	238607	17.43	116241	8.44
F76426-2 [c]	1034553	11.46	675166	14.97	250437	17.43	133169	8.46
F76426-4 [c]	1021012	11.46	666865	14.97	244712	17.42	127638	8.46
F76426-7 [c]	1042357	11.46	705039	14.97	269956	17.42	166256	8.48
F76266-37MS	902993	11.46	546105	14.96	212551	17.42	93322	8.34
F76266-37MSD	1001038	11.46	575730	14.96	212757	17.42	81814	8.37

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was received in a bulk container and preserved within 48 hours of sampling.

Volatile Surrogate Recovery Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F76426-1	J059349.D	103.0	98.0	101.0	101.0
F76426-3	J059350.D	100.0	98.0	108.0	98.0
F76426-6	J059351.D	101.0	98.0	99.0	102.0
F76426-8	J059352.D	100.0	101.0	106.0	101.0
F76426-10	J059353.D	98.0	100.0	99.0	100.0
F76426-12	J059354.D	96.0	101.0	99.0	109.0
F76426-14	J059355.D	92.0	100.0	100.0	103.0
F76356-1MS	J059360.D	97.0	111.0	97.0	98.0
F76356-1MSD	J059361.D	98.0	106.0	99.0	101.0
VJ3338-BS	J059347.D	102.0	101.0	103.0	102.0
VJ3338-MB	J059348.D	102.0	102.0	98.0	104.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Volatile Surrogate Recovery Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F76426-2	K046611.D	101.0	88.0	102.0	102.0
F76426-4	K046612.D	104.0	90.0	101.0	97.0
F76426-5	K046609.D	101.0	88.0	101.0	100.0
F76426-7	K046613.D	104.0	85.0	104.0	112.0
F76426-9	G0066873.D	92.0	98.0	103.0	95.0
F76426-11	G0066874.D	95.0	99.0	104.0	96.0
F76426-13	G0066905.D	96.0	90.0	92.0	103.0
F76426-15	G0066876.D	96.0	96.0	104.0	105.0
F76266-37MS	K046614.D	105.0	101.0	105.0	106.0
F76266-37MSD	K046615.D	103.0	105.0	107.0	94.0
F76376-6MS	G0066865.D	97.0	100.0	101.0	88.0
F76376-6MSD	G0066866.D	98.0	101.0	104.0	86.0
F76408-2MS	G0066908.D	94.0	95.0	95.0	85.0
F76408-2MSD	G0066909.D	102.0	97.0	106.0	92.0
VG2525-BS	G0066855.D	96.0	99.0	104.0	97.0
VG2525-MB	G0066856.D	101.0	95.0	100.0	105.0
VG2526-BS	G0066900.D	101.0	96.0	94.0	94.0
VG2526-MB	G0066901.D	102.0	98.0	98.0	95.0
VK2009-BS	K046595.D	106.0	93.0	92.0	116.0
VK2009-MB	K046593.D	93.0	90.0	106.0	88.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-121%
S2 = Toluene-D8	71-130%
S3 = 4-Bromofluorobenzene	59-148%
S4 = 1,2-Dichloroethane-D4	77-123%

Initial Calibration Summary

Job Number: F76426 **Sample:** VG2523-ICC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066795.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA1

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration

Calibration Files
1 =G0066792.D 2 =G0066793.D 3 =G0066794.D 4 =G0066795.D
5 =G0066796.D 6 =G0066797.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet	0.774	0.769	0.776	0.771	0.768	0.736	0.766	1.91
3)	P	Chloromethane	0.885	0.777	0.851	0.852	0.864	0.841	0.845	4.35
4)	C	Vinyl Chloride	0.785	0.696	0.721	0.683	0.693	0.656	0.706	6.28
5)		Bromomethane	0.402	0.285	0.254	0.206	0.189	0.175	0.252	33.52
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9902								
		Response Ratio = 0.00000 + 0.18639 *A								
6)		Chloroethane	0.338	0.217	0.222	0.179	0.158	0.142	0.209	33.79
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9979								
		Response Ratio = 0.00000 + 0.22529 *A + -0.02131 *A^2								
7)		Trichlorofluorometh	0.741	0.776	0.715	0.648	0.645	0.584	0.685	10.45
8)		Ethyl Ether	0.387	0.333	0.340	0.325	0.317	0.291	0.332	9.52
9)		1,2-Dichlorotrifluo	0.706	0.688	0.729	0.695	0.729	0.695	0.707	2.51
10)	C	1,1-Dichloroethene	1.141	1.059	1.129	1.074	1.078	1.028	1.085	3.94
11)		Freon 113	0.683	0.621	0.687	0.640	0.627	0.586	0.641	6.07
12)		Carbon Disulfide	1.802	1.727	1.770	1.730	1.769	1.666	1.744	2.70
13)		Iodomethane	1.324	1.343	1.376	1.354	1.392	1.324	1.352	2.03
14)		Allyl chloride	0.749	0.831	0.919	0.890	0.964	0.922	0.879	8.80
15)		Methylene Chloride	4.114	1.564	1.330	1.095	1.043	1.025	1.695	70.97
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9991								
		Response Ratio = 0.00000 + 1.05351 *A								
16)		Acetone	0.357	0.344	0.334	0.307	0.290	0.275	0.318	10.11
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9961								
		Response Ratio = 0.00000 + 0.28617 *A								
17)		Methyl acetate	0.390	0.421	0.395	0.353	0.353	0.352	0.377	7.69
18)		trans-1,2-Dichloroe	0.988	0.992	1.084	1.042	1.062	0.996	1.027	4.01
19)		Hexane	0.614	0.490	0.540	0.522	0.512	0.486	0.527	8.91
20)		Methyl Tert Butyl E	1.685	1.801	1.802	1.718	1.717	1.639	1.727	3.74
21)		Acetonitrile	0.049	0.054	0.046	0.046	0.044	0.044	0.047	7.71
22)		Di-isopropyl ether	2.197	2.193	2.256	2.221	2.331	2.257	2.242	2.29
23)		Chloroprene	1.020	0.992	1.056	1.009	1.016	0.991	1.014	2.34
24)	P	1,1-Dichloroethane	1.331	1.233	1.307	1.279	1.300	1.225	1.279	3.31
25)		Acrylonitrile	0.180	0.163	0.171	0.163	0.177	0.168	0.170	4.23
26)		ETBE	1.942	2.152	2.237	2.125	2.175	2.087	2.120	4.75
27)		Vinyl acetate	0.541	0.485	0.557	0.642	0.654	0.563	0.574	11.13
28)		cis-1,2-Dichloroeth	0.663	0.679	0.697	0.680	0.701	0.702	0.687	2.24
29)		2,2-Dichloropropane	0.743	0.662	0.655	0.633	0.635	0.584	0.652	8.00
30)		Bromochloromethane	0.468	0.426	0.443	0.429	0.418	0.413	0.433	4.62
31)		Cyclohexane	1.117	1.111	1.116	1.047	1.058	0.994	1.074	4.61
32)	C	Chloroform	1.531	1.427	1.485	1.389	1.392	1.299	1.420	5.72
33)		Ethyl acetate	0.578	0.568	0.561	0.535	0.532	0.491	0.544	5.87
34)		Tetrahydrofuran	0.213	0.191	0.135	0.126	0.151	0.117	0.156	24.68

Initial Calibration Summary

Job Number: F76426 **Sample:** VG2523-ICC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066795.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35)	S	Dibromofluoromethan	0.380	0.372	0.376	0.371	0.346	0.354	0.366	3.68
36)		Carbon Tetrachlorid	1.254	1.226	1.310	1.236	1.239	1.161	1.238	3.88
37)		1,1,1-Trichloroetha	1.049	1.054	1.116	1.058	1.044	0.981	1.050	4.12
38)		2-Butanone	0.370	0.354	0.360	0.327	0.315	0.302	0.338	8.05
39)		1,1-Dichloropropene	1.001	0.930	1.009	0.950	0.940	0.881	0.952	5.00
40)		Propionitrile	0.056	0.065	0.067	0.062	0.059	0.055	0.061	7.91
41)		Methacrylonitrile	0.427	0.419	0.408	0.370	0.351	0.320	0.382	11.11
42)		Benzene	2.462	2.407	2.486	2.343	2.346	2.167	2.368	4.84
43)		TAME	1.776	1.758	1.784	1.663	1.612	1.455	1.675	7.63
44)	S	1,2-Dichloroethane-	0.393	0.405	0.377	0.327	0.327	0.312	0.357	11.15
45)		1,2-Dichloroethane	1.098	1.151	1.118	1.068	1.057	0.961	1.075	6.09
46)		Trichloroethene	0.726	0.728	0.788	0.741	0.726	0.679	0.731	4.79
47)		Methylcyclohexane	1.086	0.982	0.995	0.968	0.960	0.903	0.982	6.09
48)		Dibromomethane	0.563	0.476	0.530	0.514	0.503	0.492	0.513	5.97
49)	C	1,2-Dichloropropane	0.607	0.658	0.709	0.679	0.695	0.654	0.667	5.42
50)		Bromodichloromethan	1.101	1.014	1.073	1.035	1.068	0.999	1.048	3.70
51)		Methyl methacrylate	0.486	0.588	0.564	0.552	0.540	0.519	0.542	6.60
52)		2-Chloroethyl vinyl	0.192	0.260	0.277	0.269	0.276	0.262	0.256	12.60
53)		cis-1,3-Dichloropro	0.942	1.047	1.148	1.104	1.133	1.084	1.076	6.98
54)	I	Chlorobenzene-d5	----------ISTD----------							
55)	S	Toluene-d8	1.057	1.158	1.178	1.180	1.231	1.352	1.193	8.11
56)	C	Toluene	2.363	2.582	2.712	2.640	2.773	2.836	2.651	6.33
57)		2-Nitropropane	0.172	0.184	0.184	0.193	0.193	0.206	0.189	6.21
58)		4-Methyl-2-pentanon	0.488	0.587	0.555	0.557	0.556	0.583	0.554	6.37
59)		trans-1,3-Dichlorop	0.758	0.902	0.966	0.926	0.940	0.969	0.910	8.66
60)		Tetrachloroethene	0.870	0.871	0.875	0.870	0.923	0.942	0.892	3.61
61)		Ethyl methacrylate	0.535	0.638	0.680	0.706	0.739	0.743	0.674	11.60
62)		1,1,2-Trichloroetha	0.532	0.489	0.487	0.471	0.481	0.504	0.494	4.36
63)		Dibromochloromethan	0.745	0.796	0.836	0.872	0.899	0.929	0.846	8.02
64)		1,3-Dichloropropane	0.855	0.923	0.913	0.914	0.968	0.993	0.928	5.19
65)		1,2-Dibromoethane	0.582	0.648	0.629	0.656	0.698	0.712	0.654	7.20
66)		2-hexanone	0.407	0.459	0.473	0.461	0.474	0.496	0.462	6.48
67)		1-Chlorohexane	0.795	0.882	0.920	0.925	0.954	0.990	0.911	7.38
68)	C	Ethylbenzene	2.566	2.869	2.909	2.832	2.903	2.897	2.829	4.67
69)	P	Chlorobenzene	1.610	1.665	1.717	1.648	1.645	1.650	1.656	2.12
70)		1,1,1,2-Tetrachloro	0.653	0.708	0.713	0.697	0.723	0.743	0.706	4.26
71)		m,p-Xylene	2.111	2.326	2.322	2.131	2.046	1.889	2.138	7.84
72)		o-Xylene	2.166	2.442	2.512	2.416	2.536	2.566	2.440	5.96
73)		Styrene	1.337	1.721	1.770	1.783	1.802	1.822	1.706	10.77
74)	P	Bromoform	0.471	0.573	0.590	0.630	0.659	0.689	0.602	12.82
75)		Isopropylbenzene	2.143	2.423	2.470	2.417	2.491	2.457	2.400	5.38
76)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
77)	S	4-Bromofluorobenzen	0.915	0.941	0.889	0.955	1.011	1.039	0.958	5.95
78)		cis-1,4-Dichloro-2-	0.294	0.389	0.393	0.387	0.366	0.363	0.365	10.15
79)		n-Propylbenzene	5.594	5.375	5.409	5.314	5.395	4.853	5.323	4.68
80)		Bromobenzene	1.517	1.405	1.372	1.398	1.412	1.313	1.403	4.75
81)	P	1,1,2,2-Tetrachloro	1.452	1.138	1.064	1.017	0.977	0.915	1.094	17.50
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9968								
		Response Ratio = 0.00000 + 0.95303 *A								
82)		1,3,5-Trimethylbenz	4.150	3.996	3.939	3.690	3.642	3.335	3.792	7.76
83)		2-Chlorotoluene	3.822	3.882	3.757	3.545	3.485	3.125	3.603	7.81
84)		trans-1,4-Dichloro-	0.176	0.129	0.138	0.150	0.145	0.135	0.146	11.34
85)		1,2,3-Trichloroprop	0.426	0.324	0.286	0.278	0.260	0.228	0.300	23.09
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9988								
		Response Ratio = 0.00000 + 0.32791 *A + -0.02455 *A^2								
86)		Cyclohexanone	0.046	0.045	0.029	0.027	0.027	0.026	0.033	28.82

Initial Calibration Summary

Job Number: F76426 **Sample:** VG2523-ICC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066795.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

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              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9971
                Response Ratio = 0.00000 + 0.02672 *A

 87)     4-Chlorotoluene     3.270 3.259 3.316 3.174 3.127 2.858 3.167   5.25
 88)     tert-Butylbenzene   2.636 2.477 2.508 2.374 2.314 2.141 2.408   7.14
 89)     1,2,4-Trimethylbenz 3.846 3.952 3.738 3.497 3.276 2.932 3.540  10.90
 90)     Pentachloroethane   0.873 0.890 0.821 0.768 0.744 0.662 0.793  10.82
 91)     sec-Butylbenzene    4.804 4.739 4.619 4.394 4.258 3.729 4.424   9.01
 92)     4-Isopropyltoluene  3.672 3.830 3.754 3.521 3.454 3.119 3.559   7.22
 93)     1,3-Dichlorobenzene 2.236 2.240 2.219 2.223 2.227 2.098 2.207   2.45
 94)     1,4-Dichlorobenzene 2.300 2.247 2.194 2.164 2.185 2.033 2.187   4.12
 95)     n-Butylbenzene      1.879 2.035 2.009 2.016 1.991 1.838 1.961   4.18
 96)     Benzyl Chloride     0.325 0.345 0.343 0.343 0.356 0.336 0.341   3.05
 97)     1,2-Dichlorobenzene 2.122 2.134 2.118 2.116 2.132 2.011 2.106   2.23
 98)     1,2-Dibromo-3-Chlor 0.238 0.213 0.204 0.183 0.205 0.193 0.206   9.12
 99)     Hexachlorobutadiene 1.036 1.088 1.132 1.131 1.203 1.155 1.124   5.09
100)     1,2,4-Trichlorobenz 1.014 1.184 1.309 1.369 1.494 1.429 1.300  13.53
101)     Naphthalene         1.601 2.027 2.204 2.249 2.383 2.295 2.126  13.31
102)     1,2,3-Trichlorobenz 0.811 1.052 1.122 1.159 1.238 1.170 1.092  13.79

103) I   Tert Butyl Alcohol-d1 ----------------ISTD--------------------
104)     Ethanol             0.307 0.185 0.133 0.147 0.142 0.161 0.179  36.38
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9961
               Response Ratio = 0.00000 + 0.12618 *A + 0.00201 *A^2

105)     Acrolein            1.616 1.451 1.471 1.541 1.516 1.550 1.524   3.91
106)     Tert Butyl Alcohol  1.994 1.929 1.876 1.895 1.906 1.856 1.909   2.53
107)     Isobutyl alcohol    0.346 0.394 0.460 0.456 0.463 0.454 0.429  11.23
108)     Tert Amyl Alcohol   1.155 1.324 1.486 1.481 1.482 1.419 1.391   9.45
109)     1,4-Dioxane         0.135 0.200 0.183 0.187 0.191 0.182 0.180  12.70
 ---------------------------------------------------------------------------
 (#) = Out of Range

           APP9-G.M          Tue Sep 14 15:58:13 2010
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Initial Calibration Verification

Job Number: F76426 **Sample:** VG2523-ICV2523
Account: CSXT CSX Transportation **Lab FileID:** G0066798.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : G:\HPCHEM\1\DATA\091410\G0066798.D Vial: 7
Acq On : 14 Sep 2010 2:39 pm Operator: MikeM
Sample : icv2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	108	0.00	11.08
2		Dichlorodifluoromethane	0.766	0.714	6.8	100	0.00	4.22
3	P	Chloromethane	0.845	0.846	-0.1	107	-0.01	4.59
4	C	Vinyl Chloride	0.706	0.664	5.9	99	0.00	4.80
			Amount	Calc.	%Drift			
5		Bromomethane	50.000	63.835	-27.7#	101	0.00	5.44
6		Chloroethane	50.000	45.880	8.2	92	0.02	5.71
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.685	0.678	1.0	102	-0.01	5.94
8		Ethyl Ether	0.332	0.326	1.8	103	0.00	6.40
9		1,2-Dichlorotrifluoroetha	0.707	0.792	-12.0	117	-0.01	6.74
10	C	1,1-Dichloroethene	1.085	1.021	5.9	98	0.00	6.81
11		Freon 113	0.641	0.633	1.2	99	0.00	6.84
12		Carbon Disulfide	1.744	1.759	-0.9	107	0.00	6.92
13		Iodomethane	1.352	1.429	-5.7	112	0.00	7.08
14		Allyl chloride	0.879	0.959	-9.1	113	0.00	7.50
			Amount	Calc.	%Drift			
15		Methylene Chloride	50.000	54.835	-9.7	94	0.00	7.70
16		Acetone	250.000	197.309	21.1#	73	0.00	7.72
			AvgRF	CCRF	%Dev			
17		Methyl acetate	0.377	0.408	-8.2	111	0.00	7.87
18		trans-1,2-Dichloroethene	1.027	1.033	-0.6	103	0.00	7.90
19		Hexane	0.527	0.557	-5.7	111	0.00	7.98
20		Methyl Tert Butyl Ether	1.727	1.811	-4.9	109	0.00	8.01
21		Acetonitrile	0.047	0.048	-2.1	113	0.00	8.42
22		Di-isopropyl ether	2.242	2.391	-6.6	114	0.00	8.51
23		Chloroprene	1.014	1.072	-5.7	110	0.00	8.73
24	P	1,1-Dichloroethane	1.279	1.263	1.3	104	0.00	8.77
25		Acrylonitrile	0.170	0.189	-11.2	120	0.00	8.83
26		ETBE	2.120	2.168	-2.3	105	0.00	9.00
27		Vinyl acetate	0.574	0.769	-34.0#	149	0.00	9.03
28		cis-1,2-Dichloroethene	0.687	0.700	-1.9	108	0.00	9.49
29		2,2-Dichloropropane	0.652	0.624	4.3	103	0.00	9.65
30		Bromochloromethane	0.433	0.426	1.6	104	0.00	9.77
31		Cyclohexane	1.074	1.081	-0.7	105	0.00	9.80
32	C	Chloroform	1.420	1.405	1.1	102	0.00	9.82
33		Ethyl acetate	0.544	0.540	0.7	104	0.00	9.91
34		Tetrahydrofuran	0.156	0.141	9.6	113	0.00	10.05

Initial Calibration Verification

Job Number: F76426 **Sample:** VG2523-ICV2523
Account: CSXT CSX Transportation **Lab FileID:** G0066798.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35	S	Dibromofluoromethane	0.366	0.354	3.3	102	0.00	10.05
36		Carbon Tetrachloride	1.238	1.194	3.6	98	0.00	10.05
37		1,1,1-Trichloroethane	1.050	1.046	0.4	101	0.00	10.13
38		2-Butanone	0.338	0.293	13.3	88	0.00	10.19
39		1,1-Dichloropropene	0.952	0.959	-0.7	103	0.00	10.27
40		Propionitrile	0.061	0.071	-16.4	114	0.00	10.59
41		Methacrylonitrile	0.382	0.435	-13.9	115	0.00	10.61
42		Benzene	2.368	2.340	1.2	102	0.00	10.59
43		TAME	1.675	1.791	-6.9	108	0.00	10.64
44	S	1,2-Dichloroethane-d4	0.357	0.350	2.0	100	0.00	10.74
45		1,2-Dichloroethane	1.075	1.102	-2.5	106	0.00	10.83
46		Trichloroethene	0.731	0.746	-2.1	102	0.00	11.28
47		Methylcyclohexane	0.982	1.019	-3.8	111	0.00	11.29
48		Dibromomethane	0.513	0.513	0.0	105	0.00	11.80
49	C	1,2-Dichloropropane	0.667	0.695	-4.2	106	0.00	11.91
50		Bromodichloromethane	1.048	1.031	1.6	104	0.00	11.94
51		Methyl methacrylate	0.542	0.638	-17.7	122	0.00	12.04
52		2-Chloroethyl vinyl ether	0.256	0.277	-8.2	108	0.00	12.54
53		cis-1,3-Dichloropropene	1.076	1.120	-4.1	105	0.00	12.66
54	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.65
55	S	Toluene-d8	1.193	1.164	2.4	102	0.00	12.88
56	C	Toluene	2.651	2.690	-1.5	103	0.00	12.94
57		2-Nitropropane	0.189	0.183	3.2	103	0.00	13.21
58		4-Methyl-2-pentanone	0.554	0.599	-8.1	112	0.00	13.31
59		trans-1,3-Dichloropropene	0.910	1.027	-12.9	110	0.00	13.38
60		Tetrachloroethene	0.892	0.977	-9.5	116	0.00	13.40
61		Ethyl methacrylate	0.674	0.739	-9.6	112	0.00	13.47
62		1,1,2-Trichloroethane	0.494	0.500	-1.2	106	0.00	13.58
63		Dibromochloromethane	0.846	0.864	-2.1	107	0.00	13.81
64		1,3-Dichloropropane	0.928	0.950	-2.4	108	0.00	13.91
65		1,2-Dibromoethane	0.654	0.660	-0.9	109	0.00	14.11
66		2-hexanone	0.462	0.456	1.3	100	0.00	14.23
67		1-Chlorohexane	0.911	0.873	4.2	98	0.00	14.56
68	C	Ethylbenzene	2.829	2.891	-2.2	103	0.00	14.64
69	P	Chlorobenzene	1.656	1.761	-6.3	106	0.00	14.66
70		1,1,1,2-Tetrachloroethane	0.706	0.754	-6.8	109	0.00	14.71
71		m,p-Xylene	2.138	2.305	-7.8	103	0.00	14.78
72		o-Xylene	2.440	2.469	-1.2	102	0.00	15.27
73		Styrene	1.706	1.799	-5.5	105	0.00	15.32
74	P	Bromoform	0.602	0.631	-4.8	111	0.00	15.39
75		Isopropylbenzene	2.400	2.837	-18.2	119	0.00	15.56
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	16.92
77	S	4-Bromofluorobenzene	0.958	0.962	-0.4	111	0.00	15.89
78		cis-1,4-Dichloro-2-butene	0.365	0.421	-15.3	110	0.00	15.91
79		n-Propylbenzene	5.323	5.397	-1.4	103	0.00	15.97
80		Bromobenzene	1.403	1.426	-1.6	107	0.00	16.01
		----------	Amount	Calc.	%Drift		----------	
81	P	1,1,2,2-Tetrachloroethane	50.000	58.472	-16.9	108	0.00	16.02
		----------	AvgRF	CCRF	%Dev		----------	
82		1,3,5-Trimethylbenzene	3.792	3.972	-4.7	104	0.00	16.12
83		2-Chlorotoluene	3.603	3.804	-5.6	104	0.00	16.16
84		trans-1,4-Dichloro-2-Bute	0.146	0.143	2.1	107	0.00	16.20
		----------	Amount	Calc.	%Drift		----------	
85		1,2,3-Trichloropropane	50.000	44.393	11.2	98	0.00	16.19
86		Cyclohexanone	250.000	292.199	-16.9	110	0.00	16.28

Initial Calibration Verification

Job Number: F76426 **Sample:** VG2523-ICV2523
Account: CSXT CSX Transportation **Lab FileID:** G0066798.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.167	3.364	-6.2	104	0.00	16.31
88		tert-Butylbenzene	2.408	2.507	-4.1	103	0.00	16.44
89		1,2,4-Trimethylbenzene	3.540	3.732	-5.4	103	0.00	16.50
90		Pentachloroethane	0.793	0.860	-8.4	108	0.00	16.51
91		sec-Butylbenzene	4.424	4.683	-5.9	104	0.00	16.61
92		4-Isopropyltoluene	3.559	3.787	-6.4	104	0.00	16.70
93		1,3-Dichlorobenzene	2.207	2.337	-5.9	108	0.00	16.86
94		1,4-Dichlorobenzene	2.187	2.253	-3.0	106	0.00	16.94
95		n-Butylbenzene	1.961	2.033	-3.7	104	0.00	17.10
96		Benzyl Chloride	0.341	0.339	0.6	102	0.00	17.15
97		1,2-Dichlorobenzene	2.106	2.160	-2.6	105	0.00	17.35
98		1,2-Dibromo-3-Chloropropa	0.206	0.194	5.8	98	0.00	18.07
99		Hexachlorobutadiene	1.124	1.206	-7.3	110	0.00	18.64
100		1,2,4-Trichlorobenzene	1.300	1.384	-6.5	109	0.00	18.72
101		Naphthalene	2.126	2.205	-3.7	103	0.00	19.07
102		1,2,3-Trichlorobenzene	1.092	1.164	-6.6	107	0.00	19.27
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	108	0.00	7.98

			Amount	Calc.	%Drift			
104		Ethanol	1000.000	1243.480	-24.3#	138	0.00	6.63

			AvgRF	CCRF	%Dev			
105		Acrolein	1.524	1.457	4.4	107	0.00	7.29
106		Tert Butyl Alcohol	1.909	1.776	7.0	103	-0.01	8.08
107		Isobutyl alcohol	0.429	0.481	-12.1	113	0.00	10.69
108		Tert Amyl Alcohol	1.391	1.439	-3.5	105	0.00	10.83
109		1,4-Dioxane	0.180	0.184	-2.2	109	-0.01	12.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G0066794.D APP9-G.M Tue Sep 14 15:10:51 2010

Continuing Calibration Summary

Job Number: F76426 **Sample:** VG2525-CC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066854.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : G:\HPCHEM\1\DATA\091610\G0066854.D Vial: 1
Acq On : 16 Sep 2010 10:22 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	108	0.00	11.07
2		Dichlorodifluoromethane	0.766	0.566	26.1#	79	0.00	4.21
3	P	Chloromethane	0.845	0.709	16.1	90	0.00	4.60
4	C	Vinyl Chloride	0.706	0.601	14.9	95	0.01	4.81
			Amount	Calc.	%Drift			
5		Bromomethane	100.000	95.742	4.3	93	0.00	5.43
6		Chloroethane	100.000	106.628	-6.6	116	0.00	5.69
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.685	0.645	5.8	107	0.00	5.95
8		Ethyl Ether	0.332	0.307	7.5	102	0.00	6.40
9		1,2-Dichlorotrifluoroetha	0.707	0.645	8.8	100	-0.02	6.74
10	C	1,1-Dichloroethene	1.085	0.989	8.8	99	0.00	6.80
11		Freon 113	0.641	0.574	10.5	96	0.00	6.84
12		Carbon Disulfide	1.744	1.626	6.8	101	0.00	6.91
13		Iodomethane	1.352	1.258	7.0	100	0.00	7.08
14		Allyl chloride	0.879	0.890	-1.3	108	0.00	7.49
			Amount	Calc.	%Drift			
15		Methylene Chloride	100.000	100.354	-0.4	104	0.00	7.70
16		Acetone	500.000	458.630	8.3	92	0.00	7.71
			AvgRF	CCRF	%Dev			
17		Methyl acetate	0.377	0.284	24.7#	87	0.00	7.87
18		trans-1,2-Dichloroethene	1.027	1.007	1.9	104	0.00	7.90
19		Hexane	0.527	0.475	9.9	98	0.00	7.98
20		Methyl Tert Butyl Ether	1.727	1.549	10.3	97	0.00	8.01
21		Acetonitrile	0.047	0.040	14.9	93	0.00	8.41
22		Di-isopropyl ether	2.242	2.126	5.2	103	0.00	8.50
23		Chloroprene	1.014	0.947	6.6	101	0.00	8.73
24	P	1,1-Dichloroethane	1.279	1.204	5.9	101	0.00	8.77
25		Acrylonitrile	0.170	0.144	15.3	95	0.00	8.82
26		ETBE	2.120	2.005	5.4	101	0.00	9.00
27		Vinyl acetate	0.574	0.607	-5.7	102	0.00	9.03
28		cis-1,2-Dichloroethene	0.687	0.665	3.2	105	0.00	9.49
29		2,2-Dichloropropane	0.652	0.608	6.7	103	0.00	9.64
30		Bromochloromethane	0.433	0.392	9.5	98	0.00	9.76
31		Cyclohexane	1.074	0.941	12.4	97	0.00	9.79
32	C	Chloroform	1.420	1.304	8.2	101	0.00	9.81
33		Ethyl acetate	0.544	0.458	15.8	92	0.00	9.90
34		Tetrahydrofuran	0.156	0.118	24.4#	101	0.01	10.06

Continuing Calibration Summary

Job Number: F76426 **Sample:** VG2525-CC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066854.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35	S	Dibromofluoromethane	0.366	0.359	1.9	104	0.00	10.06
36		Carbon Tetrachloride	1.238	1.134	8.4	99	0.00	10.05
37		1,1,1-Trichloroethane	1.050	0.985	6.2	100	0.00	10.13
38		2-Butanone	0.338	0.280	17.2	92	0.00	10.18
39		1,1-Dichloropropene	0.952	0.877	7.9	99	0.00	10.27
40		Propionitrile	0.061	0.052	14.8	90	0.00	10.59
41		Methacrylonitrile	0.382	0.319	16.5	93	0.00	10.62
42		Benzene	2.368	2.181	7.9	100	0.00	10.59
43		TAME	1.675	1.528	8.8	99	0.00	10.64
44	S	1,2-Dichloroethane-d4	0.357	0.324	9.2	106	0.00	10.75
45		1,2-Dichloroethane	1.075	0.969	9.9	98	0.00	10.83
46		Trichloroethene	0.731	0.681	6.8	99	0.00	11.28
47		Methylcyclohexane	0.982	0.897	8.7	100	0.00	11.29
48		Dibromomethane	0.513	0.457	10.9	96	0.00	11.80
49	C	1,2-Dichloropropane	0.667	0.620	7.0	98	0.00	11.90
50		Bromodichloromethane	1.048	0.986	5.9	102	0.00	11.95
51		Methyl methacrylate	0.542	0.463	14.6	90	0.00	12.04
52		2-Chloroethyl vinyl ether	0.256	0.264	-3.1	106	0.00	12.53
53		cis-1,3-Dichloropropene	1.076	1.064	1.1	104	0.00	12.67
54	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.64
55	S	Toluene-d8	1.193	1.254	-5.1	110	0.00	12.88
56	C	Toluene	2.651	2.656	-0.2	104	0.00	12.94
57		2-Nitropropane	0.189	0.168	11.1	90	0.00	13.21
58		4-Methyl-2-pentanone	0.554	0.492	11.2	91	0.00	13.31
59		trans-1,3-Dichloropropene	0.910	0.882	3.1	98	0.00	13.38
60		Tetrachloroethene	0.892	0.819	8.2	97	0.00	13.41
61		Ethyl methacrylate	0.674	0.636	5.6	93	0.00	13.47
62		1,1,2-Trichloroethane	0.494	0.431	12.8	95	0.00	13.57
63		Dibromochloromethane	0.846	0.760	10.2	90	0.00	13.80
64		1,3-Dichloropropane	0.928	0.858	7.5	97	0.00	13.90
65		1,2-Dibromoethane	0.654	0.603	7.8	95	0.00	14.11
66		2-hexanone	0.462	0.415	10.2	93	0.00	14.22
67		1-Chlorohexane	0.911	0.908	0.3	102	0.00	14.55
68	C	Ethylbenzene	2.829	2.789	1.4	102	0.00	14.63
69	P	Chlorobenzene	1.656	1.592	3.9	100	0.00	14.66
70		1,1,1,2-Tetrachloroethane	0.706	0.659	6.7	98	0.00	14.71
71		m,p-Xylene	2.138	2.064	3.5	100	0.00	14.78
72		o-Xylene	2.440	2.403	1.5	103	0.00	15.26
73		Styrene	1.706	1.728	-1.3	100	0.00	15.31
74	P	Bromoform	0.602	0.558	7.3	92	0.00	15.40
75		Isopropylbenzene	2.400	2.433	-1.4	104	0.00	15.56
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	16.92
77	S	4-Bromofluorobenzene	0.958	1.003	-4.7	108	0.00	15.88
78		cis-1,4-Dichloro-2-butene	0.365	0.347	4.9	92	0.00	15.90
79		n-Propylbenzene	5.323	5.168	2.9	100	0.00	15.96
80		Bromobenzene	1.403	1.310	6.6	97	0.00	16.01
		----------	Amount	Calc.	%Drift	----------		
81	P	1,1,2,2-Tetrachloroethane	100.000	93.907	6.1	91	0.00	16.03
		----------	AvgRF	CCRF	%Dev	----------		
82		1,3,5-Trimethylbenzene	3.792	3.624	4.4	101	0.00	16.12
83		2-Chlorotoluene	3.603	3.478	3.5	101	0.00	16.16
84		trans-1,4-Dichloro-2-Bute	0.146	0.131	10.3	90	0.00	16.20
		----------	Amount	Calc.	%Drift	----------		
85		1,2,3-Trichloropropane	100.000	87.891	12.1	93	0.00	16.19
86		Cyclohexanone	500.000	383.711	23.3#	79	0.00	16.26

Continuing Calibration Summary

Job Number: F76426 **Sample:** VG2525-CC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066854.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.167	3.166	0.0	103	0.00	16.30
88		tert-Butylbenzene	2.408	2.326	3.4	101	0.00	16.43
89		1,2,4-Trimethylbenzene	3.540	3.404	3.8	100	0.00	16.49
90		Pentachloroethane	0.793	0.759	4.3	102	0.00	16.50
91		sec-Butylbenzene	4.424	4.256	3.8	100	0.00	16.60
92		4-Isopropyltoluene	3.559	3.430	3.6	100	0.00	16.70
93		1,3-Dichlorobenzene	2.207	2.207	0.0	102	0.00	16.86
94		1,4-Dichlorobenzene	2.187	2.131	2.6	102	0.00	16.93
95		n-Butylbenzene	1.961	1.993	-1.6	102	0.00	17.09
96		Benzyl Chloride	0.341	0.315	7.6	95	0.00	17.14
97		1,2-Dichlorobenzene	2.106	2.080	1.2	101	0.00	17.34
98		1,2-Dibromo-3-Chloropropa	0.206	0.168	18.4	94	0.00	18.07
99		Hexachlorobutadiene	1.124	1.049	6.7	96	0.00	18.63
100		1,2,4-Trichlorobenzene	1.300	1.293	0.5	97	0.00	18.72
101		Naphthalene	2.126	1.868	12.1	86	0.00	19.05
102		1,2,3-Trichlorobenzene	1.092	0.988	9.5	88	0.00	19.26
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	79	0.01	7.99

			Amount	Calc.	%Drift			
104		Ethanol	2000.000	2835.903	-41.8#	114	0.00	6.62

			AvgRF	CCRF	%Dev			
105		Acrolein	1.524	1.846	-21.1#	95	0.00	7.30
106		Tert Butyl Alcohol	1.909	2.160	-13.1	90	0.00	8.09
107		Isobutyl alcohol	0.429	0.543	-26.6#	94	0.00	10.69
108		Tert Amyl Alcohol	1.391	1.602	-15.2	86	0.00	10.83
109		1,4-Dioxane	0.180	0.212	-17.8	90	0.00	12.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G0066795.D APP9-G.M Thu Sep 16 10:46:48 2010

Continuing Calibration Summary

Job Number: F76426 **Sample:** VG2526-CC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066899.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : G:\HPCHEM\1\DATA\091710\G0066899.D Vial: 1
Acq On : 17 Sep 2010 10:28 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	116	0.00	11.07
2		Dichlorodifluoromethane	0.766	0.539	29.6#	81	0.01	4.22
3	P	Chloromethane	0.845	0.837	0.9	114	0.00	4.60
4	C	Vinyl Chloride	0.706	0.761	-7.8	129	0.00	4.80
			Amount	Calc.	%Drift			
5		Bromomethane	100.000	118.740	-18.7	124	0.00	5.44
6		Chloroethane	100.000	145.193	-45.2#	154	0.00	5.69
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.685	0.842	-22.9#	150	0.00	5.95
8		Ethyl Ether	0.332	0.335	-0.9	120	0.00	6.40
9		1,2-Dichlorotrifluoroetha	0.707	0.797	-12.7	133	0.00	6.75
10	C	1,1-Dichloroethene	1.085	1.198	-10.4	129	0.00	6.80
11		Freon 113	0.641	0.696	-8.6	126	0.01	6.85
12		Carbon Disulfide	1.744	1.885	-8.1	126	0.00	6.91
13		Iodomethane	1.352	1.483	-9.7	127	0.00	7.08
14		Allyl chloride	0.879	0.973	-10.7	127	0.01	7.50
			Amount	Calc.	%Drift			
15		Methylene Chloride	100.000	107.245	-7.2	119	0.00	7.70
16		Acetone	500.000	494.066	1.2	107	0.00	7.71
			AvgRF	CCRF	%Dev			
17		Methyl acetate	0.377	0.303	19.6	99	0.00	7.87
18		trans-1,2-Dichloroethene	1.027	1.174	-14.3	130	0.00	7.90
19		Hexane	0.527	0.562	-6.6	125	0.01	7.99
20		Methyl Tert Butyl Ether	1.727	1.658	4.0	112	0.00	8.01
21		Acetonitrile	0.047	0.042	10.6	106	0.00	8.40
22		Di-isopropyl ether	2.242	2.273	-1.4	118	0.00	8.50
23		Chloroprene	1.014	1.081	-6.6	124	0.00	8.73
24	P	1,1-Dichloroethane	1.279	1.377	-7.7	125	0.00	8.77
25		Acrylonitrile	0.170	0.147	13.5	104	0.00	8.83
26		ETBE	2.120	2.175	-2.6	118	0.00	9.00
27		Vinyl acetate	0.574	0.652	-13.6	118	0.00	9.03
28		cis-1,2-Dichloroethene	0.687	0.751	-9.3	128	0.00	9.50
29		2,2-Dichloropropane	0.652	0.759	-16.4	139	0.00	9.64
30		Bromochloromethane	0.433	0.431	0.5	116	0.00	9.76
31		Cyclohexane	1.074	1.137	-5.9	126	0.00	9.79
32	C	Chloroform	1.420	1.536	-8.2	128	0.00	9.82
33		Ethyl acetate	0.544	0.479	11.9	104	0.00	9.90
34		Tetrahydrofuran	0.156	0.114	26.9#	105	0.01	10.06

Continuing Calibration Summary

Job Number: F76426 **Sample:** VG2526-CC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066899.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35	S	Dibromofluoromethane	0.366	0.369	-0.8	115	0.00	10.06
36		Carbon Tetrachloride	1.238	1.373	-10.9	129	0.00	10.05
37		1,1,1-Trichloroethane	1.050	1.186	-13.0	130	0.00	10.13
38		2-Butanone	0.338	0.282	16.6	100	0.00	10.19
39		1,1-Dichloropropene	0.952	1.073	-12.7	131	0.00	10.27
40		Propionitrile	0.061	0.054	11.5	101	0.00	10.59
41		Methacrylonitrile	0.382	0.337	11.8	105	0.00	10.62
42		Benzene	2.368	2.594	-9.5	128	0.00	10.59
43		TAME	1.675	1.660	0.9	116	0.00	10.65
44	S	1,2-Dichloroethane-d4	0.357	0.327	8.4	116	0.00	10.75
45		1,2-Dichloroethane	1.075	1.075	0.0	117	0.00	10.83
46		Trichloroethene	0.731	0.825	-12.9	129	0.00	11.28
47		Methylcyclohexane	0.982	1.072	-9.2	128	0.00	11.29
48		Dibromomethane	0.513	0.481	6.2	108	0.00	11.80
49	C	1,2-Dichloropropane	0.667	0.714	-7.0	122	0.00	11.91
50		Bromodichloromethane	1.048	1.105	-5.4	124	0.00	11.95
51		Methyl methacrylate	0.542	0.474	12.5	99	0.00	12.04
52		2-Chloroethyl vinyl ether	0.256	0.279	-9.0	120	0.00	12.53
53		cis-1,3-Dichloropropene	1.076	1.166	-8.4	122	0.00	12.67
54	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	14.64
55	S	Toluene-d8	1.193	1.205	-1.0	119	0.00	12.89
56	C	Toluene	2.651	2.969	-12.0	131	0.00	12.94
57		2-Nitropropane	0.189	0.176	6.9	106	0.00	13.21
58		4-Methyl-2-pentanone	0.554	0.483	12.8	101	0.00	13.31
59		trans-1,3-Dichloropropene	0.910	0.930	-2.2	117	0.00	13.39
60		Tetrachloroethene	0.892	0.970	-8.7	130	0.00	13.41
61		Ethyl methacrylate	0.674	0.657	2.5	108	0.00	13.48
62		1,1,2-Trichloroethane	0.494	0.463	6.3	114	0.00	13.57
63		Dibromochloromethane	0.846	0.850	-0.5	113	0.00	13.80
64		1,3-Dichloropropane	0.928	0.920	0.9	117	0.00	13.90
65		1,2-Dibromoethane	0.654	0.626	4.3	111	0.00	14.12
66		2-hexanone	0.462	0.405	12.3	102	0.00	14.23
67		1-Chlorohexane	0.911	1.030	-13.1	129	0.00	14.56
68	C	Ethylbenzene	2.829	3.152	-11.4	129	0.00	14.64
69	P	Chlorobenzene	1.656	1.809	-9.2	128	0.00	14.66
70		1,1,1,2-Tetrachloroethane	0.706	0.752	-6.5	125	0.00	14.71
71		m,p-Xylene	2.138	2.331	-9.0	127	0.00	14.78
72		o-Xylene	2.440	2.705	-10.9	130	0.00	15.26
73		Styrene	1.706	1.883	-10.4	123	0.00	15.31
74	P	Bromoform	0.602	0.573	4.8	106	0.00	15.40
75		Isopropylbenzene	2.400	2.693	-12.2	130	0.00	15.56
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	16.93
77	S	4-Bromofluorobenzene	0.958	1.028	-7.3	112	0.00	15.88
78		cis-1,4-Dichloro-2-butene	0.365	0.347	4.9	93	0.00	15.91
79		n-Propylbenzene	5.323	6.519	-22.5#	128	0.00	15.96
80		Bromobenzene	1.403	1.587	-13.1	118	0.00	16.01

			Amount	Calc.	%Drift			
81	P	1,1,2,2-Tetrachloroethane	100.000	105.176	-5.2	102	0.00	16.03

			AvgRF	CCRF	%Dev			
82		1,3,5-Trimethylbenzene	3.792	4.538	-19.7	128	0.00	16.12
83		2-Chlorotoluene	3.603	4.279	-18.8	125	0.00	16.16
84		trans-1,4-Dichloro-2-Bute	0.146	0.145	0.7	100	0.00	16.20

			Amount	Calc.	%Drift			
85		1,2,3-Trichloropropane	100.000	96.395	3.6	101	0.00	16.19
86		Cyclohexanone	500.000	435.905	12.8	91	0.00	16.27

Continuing Calibration Summary

Job Number: F76426 **Sample:** VG2526-CC2523
Account: CSXT CSX Transportation **Lab FileID:** G0066899.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.167	3.786	-19.5	124	0.00	16.30
88		tert-Butylbenzene	2.408	2.857	-18.6	125	0.00	16.44
89		1,2,4-Trimethylbenzene	3.540	4.213	-19.0	125	0.00	16.49
90		Pentachloroethane	0.793	0.904	-14.0	122	0.00	16.51
91		sec-Butylbenzene	4.424	5.190	-17.3	123	0.00	16.60
92		4-Isopropyltoluene	3.559	4.322	-21.4#	128	0.00	16.71
93		1,3-Dichlorobenzene	2.207	2.530	-14.6	118	0.00	16.87
94		1,4-Dichlorobenzene	2.187	2.434	-11.3	117	0.00	16.94
95		n-Butylbenzene	1.961	2.353	-20.0	121	0.00	17.09
96		Benzyl Chloride	0.341	0.332	2.6	101	0.00	17.14
97		1,2-Dichlorobenzene	2.106	2.272	-7.9	112	0.00	17.34
98		1,2-Dibromo-3-Chloropropa	0.206	0.175	15.0	99	0.00	18.08
99		Hexachlorobutadiene	1.124	1.295	-15.2	119	0.00	18.64
100		1,2,4-Trichlorobenzene	1.300	1.385	-6.5	105	0.00	18.72
101		Naphthalene	2.126	1.905	10.4	88	0.00	19.06
102		1,2,3-Trichlorobenzene	1.092	1.035	5.2	93	0.00	19.26
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	86	0.01	7.99

			Amount	Calc.	%Drift			
104		Ethanol	2000.000	2598.877	-29.9#	113	0.00	6.62

			AvgRF	CCRF	%Dev			
105		Acrolein	1.524	1.848	-21.3#	104	0.01	7.31
106		Tert Butyl Alcohol	1.909	2.065	-8.2	94	0.00	8.09
107		Isobutyl alcohol	0.429	0.556	-29.6#	105	0.00	10.69
108		Tert Amyl Alcohol	1.391	1.569	-12.8	92	0.00	10.83
109		1,4-Dioxane	0.180	0.219	-21.7#	101	0.00	12.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G0066795.D APP9-G.M Fri Sep 17 10:51:13 2010

Initial Calibration Summary

Job Number: F76426 **Sample:** VJ3328-ICC3328
Account: CSXT CSX Transportation **Lab FileID:** J059055.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

Calibration Files
1 =J059052.D 2 =J059053.D 3 =J059054.D 4 =J059055.D
5 =J059056.D 6 =J059057.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet	0.319	0.402	0.450	0.429	0.445	0.444	0.415	12.05
3)	P	Chloromethane	1.001	0.824	0.858	0.823	0.825	0.817	0.858	8.34
4)	C	Vinyl Chloride	0.472	0.570	0.616	0.598	0.605	0.600	0.577	9.28
5)		Bromomethane	0.345	0.285	0.270	0.247	0.224	0.200	0.262	19.56
		---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000								
		Response Ratio = 0.00000 + 0.28066 *A + -0.04048 *A^2								
6)		Chloroethane	0.259	0.269	0.289	0.263	0.251	0.230	0.260	7.57
7)		Trichlorofluorometh	0.356	0.452	0.495	0.471	0.481	0.466	0.454	11.02
8)		Ethyl Ether	0.323	0.334	0.367	0.359	0.366	0.361	0.352	5.33
9)		1,2-Dichlorotrifluo	0.339	0.370	0.394	0.388	0.397	0.387	0.379	5.74
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
		Response Ratio = 0.00000 + 0.39904 *A + -0.00545 *A^2								
10)	C	1,1-Dichloroethene	0.518	0.579	0.635	0.620	0.631	0.602	0.597	7.34
11)		Freon 113	0.228	0.279	0.297	0.287	0.291	0.280	0.277	9.02
12)		Carbon Disulfide	1.022	1.063	1.131	1.096	1.113	1.045	1.078	3.89
13)		Iodomethane	0.439	0.474	0.522	0.508	0.524	0.519	0.498	6.87
14)		Methylene Chloride	1.033	0.783	0.811	0.788	0.810	0.784	0.835	11.69
15)		Acetone	0.044	0.032	0.033	0.031	0.033	0.033	0.034	13.37
16)		Methyl acetate	0.049	0.047	0.053	0.050	0.053	0.051	0.050	5.15
17)		trans-1,2-Dichloroe	0.675	0.746	0.818	0.783	0.809	0.774	0.768	6.79
18)		Hexane	0.463	0.504	0.519	0.496	0.507	0.486	0.496	3.99
19)		Methyl Tert Butyl E	1.028	0.989	1.102	1.042	1.085	1.070	1.053	3.92
20)		Di-isopropyl ether	1.814	1.895	2.067	1.985	2.011	1.917	1.948	4.65
21)	P	1,1-Dichloroethane	0.842	0.895	0.976	0.951	0.978	0.952	0.932	5.71
22)		Acrylonitrile	0.165	0.155	0.157	0.154	0.158	0.157	0.158	2.59
23)		ETBE	1.488	1.579	1.768	1.685	1.715	1.638	1.645	6.12
24)		Vinyl acetate	0.606	0.629	0.645	0.604	0.572	0.536	0.599	6.59
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
		Response Ratio = 0.00000 + 0.65480 *A + -0.01189 *A^2								
25)		cis-1,2-Dichloroeth	0.427	0.441	0.480	0.466	0.481	0.472	0.461	4.80
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
		Response Ratio = 0.00000 + 0.47744 *A + -0.00186 *A^2								
26)		2,2-Dichloropropane	0.568	0.580	0.610	0.593	0.609	0.594	0.592	2.78
27)		Bromochloromethane	0.193	0.201	0.221	0.216	0.223	0.223	0.213	6.03
28)		Cyclohexane	0.851	0.969	1.040	1.003	1.024	0.972	0.976	6.91
29)	C	Chloroform	0.749	0.771	0.802	0.776	0.795	0.764	0.776	2.50
30)		Tetrahydrofuran	0.177	0.114	0.121	0.115	0.123	0.120	0.128	18.67
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9994								
		Response Ratio = 0.00000 + 0.12043 *A								
31)	S	Dibromofluoromethan	0.244	0.242	0.239	0.238	0.239	0.236	0.240	1.20

Initial Calibration Summary

Job Number: F76426 **Sample:** VJ3328-ICC3328
Account: CSXT CSX Transportation **Lab FileID:** J059055.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

32)		Carbon Tetrachlorid	0.322	0.396	0.451	0.450	0.475	0.472	0.428	13.76
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997								
		Response Ratio = 0.00000 + 0.44969 *A + 0.01223 *A^2								
33)		1,1,1-Trichloroetha	0.512	0.542	0.599	0.585	0.607	0.594	0.573	6.53
34)		2-Butanone	0.173	0.156	0.178	0.173	0.177	0.173	0.172	4.84
35)		1,1-Dichloropropene	0.535	0.598	0.642	0.625	0.642	0.625	0.611	6.62
36)		Benzene	1.760	1.819	1.943	1.835	1.820	1.688	1.811	4.69
37)		TAME	1.044	1.059	1.176	1.124	1.152	1.097	1.109	4.69
38)	S	1,2-Dichloroethane-	0.284	0.284	0.293	0.305	0.319	0.285	0.295	4.86
39)		1,2-Dichloroethane	0.575	0.582	0.633	0.608	0.623	0.614	0.606	3.75
40)		Trichloroethene	0.425	0.425	0.460	0.443	0.457	0.443	0.442	3.41
41)		Methylcyclohexane	0.604	0.754	0.799	0.759	0.768	0.707	0.732	9.45
42)		Dibromomethane	0.219	0.214	0.243	0.239	0.246	0.240	0.234	5.80
43)	C	1,2-Dichloropropane	0.501	0.547	0.589	0.567	0.578	0.561	0.557	5.57
44)		Bromodichloromethan	0.457	0.486	0.548	0.542	0.567	0.558	0.526	8.41
45)		2-Chloroethyl vinyl	0.254	0.267	0.303	0.280	0.270	0.243	0.270	7.76
46)		cis-1,3-Dichloropro	0.706	0.690	0.763	0.731	0.751	0.723	0.728	3.75
47)	I	Chlorobenzene-d5	----------ISTD----------							
48)	S	Toluene-d8	1.370	1.413	1.401	1.417	1.433	1.479	1.419	2.55
49)	C	Toluene	2.540	2.680	2.807	2.635	2.516	2.255	2.572	7.28
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997								
		Response Ratio = 0.00000 + 2.96433 *A + -0.34921 *A^2								
50)		2-Nitropropane	0.077	0.074	0.101	0.113	0.132	0.136	0.106	25.11
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9989								
		Response Ratio = 0.00000 + 0.10251 *A + 0.00351 *A^2								
51)		4-Methyl-2-pentanon	0.514	0.513	0.583	0.540	0.514	0.459	0.520	7.80
52)		trans-1,3-Dichlorop	0.753	0.794	0.900	0.880	0.902	0.889	0.853	7.45
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
		Response Ratio = 0.00000 + 0.89558 *A + -0.00205 *A^2								
53)		Tetrachloroethene	0.534	0.605	0.634	0.606	0.610	0.596	0.598	5.63
54)		1,1,2-Trichloroetha	0.422	0.436	0.480	0.464	0.476	0.473	0.458	5.23
55)		Dibromochloromethan	0.365	0.423	0.495	0.511	0.534	0.547	0.479	14.76
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9994								
		Response Ratio = 0.00000 + 0.53843 *A								
56)		1,3-Dichloropropane	0.861	0.907	0.982	0.950	0.968	0.942	0.935	4.77
57)		1,2-Dibromoethane	0.456	0.455	0.525	0.510	0.523	0.525	0.499	6.82
58)		2-hexanone	0.336	0.339	0.391	0.371	0.364	0.335	0.356	6.45
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996								
		Response Ratio = 0.00000 + 0.40614 *A + -0.00693 *A^2								
59)		1-Chlorohexane	0.860	0.938	1.020	0.978	0.987	0.940	0.954	5.81
60)	C	Ethylbenzene	2.762	2.918	2.959	2.676	2.410	2.069	2.632	12.87
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
		Response Ratio = 0.00000 + 3.13593 *A + -0.53146 *A^2								
61)	P	Chlorobenzene	1.511	1.562	1.667	1.563	1.464	1.346	1.519	7.13
62)		1,1,1,2-Tetrachloro	0.437	0.507	0.555	0.552	0.565	0.558	0.529	9.41
63)		m,p-Xylene	2.103	2.238	2.230	1.880	1.559	1.288	1.883	20.63
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9992								
		Response Ratio = 0.00000 + 2.29393 *A + -0.25357 *A^2								
64)		o-Xylene	2.071	2.350	2.412	2.248	2.139	1.874	2.182	9.04
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994								
		Response Ratio = 0.00000 + 2.58037 *A + -0.34748 *A^2								

Initial Calibration Summary

Job Number: F76426 **Sample:** VJ3328-ICC3328
Account: CSXT CSX Transportation **Lab FileID:** J059055.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

```
65)     Styrene             1.643 1.705 1.908 1.820 1.734 1.576 1.731   6.93
66) P   Bromoform           0.206 0.223 0.266 0.282 0.311 0.327 0.269  17.73
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.25710 *A + 0.03569 *A^2

67)     Isopropylbenzene    2.151 2.446 2.454 2.278 2.105 1.876 2.218   9.98
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2.58246 *A + -0.35130 *A^2


68) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
69) S   4-Bromofluorobenzen 1.038 1.045 1.062 1.049 1.069 1.111 1.062   2.48
70)     n-Propylbenzene     5.756 6.306 6.310 5.545 4.780 4.039 5.456  16.43
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 6.60692 *A + -1.28819 *A^2

71)     Bromobenzene        1.176 1.276 1.322 1.237 1.213 1.139 1.227   5.41
72) P   1,1,2,2-Tetrachloro 1.048 1.028 1.204 1.119 1.154 1.145 1.116   5.99
73)     1,3,5-Trimethylbenz 3.708 4.182 4.334 3.853 3.502 3.018 3.766  12.66
74)     2-Chlorotoluene     4.107 4.354 4.404 3.944 3.635 3.194 3.940  11.71
75)     trans-1,4-Dichloro- 0.315 0.300 0.331 0.322 0.336 0.360 0.328   6.23
76)     1,2,3-Trichloroprop 0.251 0.264 0.291 0.278 0.276 0.271 0.272   4.95
77)     Cyclohexanone       0.077 0.040 0.036 0.035 0.037 0.037 0.044  37.67
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.03692 *A

78)     4-Chlorotoluene     3.626 4.006 4.193 3.827 3.569 3.210 3.739   9.31
79)     tert-Butylbenzene   2.299 2.498 2.585 2.439 2.403 2.233 2.410   5.35
80)     1,2,4-Trimethylbenz 3.922 4.251 4.487 4.043 3.714 3.271 3.948  10.77
81)     sec-Butylbenzene    4.912 5.617 5.711 5.063 4.481 3.877 4.944  14.04
82)     4-Isopropyltoluene  3.799 4.242 4.376 3.989 3.655 3.201 3.877  10.99
83)     1,3-Dichlorobenzene 2.175 2.303 2.477 2.378 2.265 2.101 2.283   5.95
84)     1,4-Dichlorobenzene 2.248 2.414 2.485 2.319 2.243 2.077 2.298   6.25
85)     n-Butylbenzene      2.396 2.620 2.903 2.723 2.560 2.328 2.588   8.17
86)     Benzyl Chloride     0.347 0.347 0.431 0.415 0.409 0.390 0.390   9.16
87)     1,2-Dichlorobenzene 2.005 2.245 2.317 2.159 2.111 1.959 2.133   6.43
88)     1,2-Dibromo-3-Chlor 0.154 0.141 0.164 0.166 0.180 0.180 0.164   9.29
89)     Hexachlorobutadiene 0.708 0.738 0.784 0.754 0.751 0.744 0.747   3.31
90)     1,2,4-Trichlorobenz 1.338 1.440 1.587 1.498 1.442 1.375 1.447   6.12
91)     Naphthalene         2.343 2.398 2.918 2.720 2.637 2.415 2.572   8.74
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 3.00509 *A + -0.29038 *A^2

92)     1,2,3-Trichlorobenz 1.176 1.194 1.370 1.273 1.270 1.213 1.249   5.70

93) I   Tert Butyl Alcohol-d1 ----------------ISTD--------------------
94)     acrolein            3.933 2.654 2.512 2.452 2.516 2.490 2.760  20.98
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2.49496 *A

95)     Tert Butyl Alcohol  1.800 1.622 1.754 1.713 1.770 1.727 1.731   3.57
96)     tert Amyl alcohol   1.298 1.371 1.479 1.470 1.531 1.508 1.443   6.22
97)     1,4-Dioxane         0.158 0.145 0.164 0.165 0.171 0.169 0.162   5.74
-------------------------------------------------------------------------------
(#) = Out of Range

          8260-J.M          Thu Sep 02 08:43:32 2010
```

Initial Calibration Verification

Job Number: F76426 **Sample:** VJ3328-ICV3328
Account: CSXT CSX Transportation **Lab FileID:** J059058.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	96	0.00	7.44
2		Dichlorodifluoromethane	0.415	0.470	-13.3	105	0.00	2.79
3	P	Chloromethane	0.858	0.917	-6.9	107	0.00	2.93
4	C	Vinyl Chloride	0.577	0.601	-4.2	96	-0.01	3.05
		----------	Amount	Calc.	%Drift	----------		
5		Bromomethane	40.000	38.563	3.6	93	-0.01	3.42
		----------	AvgRF	CCRF	%Dev	----------		
6		Chloroethane	0.260	0.259	0.4	95	0.00	3.57
7		Trichlorofluoromethane	0.454	0.531	-17.0	108	0.01	3.77
8		Ethyl Ether	0.352	0.379	-7.7	101	-0.01	3.99
		----------	Amount	Calc.	%Drift	----------		
9		1,2-Dichlorotrifluoroetha	40.000	46.480	-16.2	113	-0.01	4.22
		----------	AvgRF	CCRF	%Dev	----------		
10	C	1,1-Dichloroethene	0.597	0.623	-4.4	96	-0.01	4.25
11		Freon 113	0.277	0.302	-9.0	101	-0.02	4.32
12		Carbon Disulfide	1.078	1.098	-1.9	96	0.00	4.33
13		Iodomethane	0.498	0.537	-7.8	101	0.00	4.43
14		Methylene Chloride	0.835	0.836	-0.1	102	-0.01	4.84
15		Acetone	0.034	0.032	5.9	99	0.00	4.87
16		Methyl acetate	0.050	0.056	-12.0	107	-0.01	4.97
17		trans-1,2-Dichloroethene	0.768	0.820	-6.8	100	-0.01	5.01
18		Hexane	0.496	0.563	-13.5	109	-0.01	5.08
19		Methyl Tert Butyl Ether	1.053	1.122	-6.6	103	0.00	5.13
20		Di-isopropyl ether	1.948	2.164	-11.1	105	0.00	5.48
21	P	1,1-Dichloroethane	0.932	1.018	-9.2	103	0.00	5.63
22		Acrylonitrile	0.158	0.158	0.0	99	0.00	5.65
23		ETBE	1.645	1.747	-6.2	99	0.00	5.87
		----------	Amount	Calc.	%Drift	----------		
24		Vinyl acetate	200.000	260.123	-30.1#	122	0.00	5.84
25		cis-1,2-Dichloroethene	40.000	43.487	-8.7	107	0.00	6.18
		----------	AvgRF	CCRF	%Dev	----------		
26		2,2-Dichloropropane	0.592	0.642	-8.4	104	0.00	6.32
27		Bromochloromethane	0.213	0.220	-3.3	98	0.00	6.38
28		Cyclohexane	0.976	1.046	-7.2	100	0.00	6.45
29	C	Chloroform	0.776	0.841	-8.4	104	0.00	6.44

Initial Calibration Verification

Job Number: F76426 **Sample:** VJ3328-ICV3328
Account: CSXT CSX Transportation **Lab FileID:** J059058.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			Amount	Calc.	%Drift			
30		Tetrahydrofuran	40.000	42.046	-5.1	105	0.00	6.62
			AvgRF	CCRF	%Dev			
31	S	Dibromofluoromethane	0.240	0.238	0.8	96	-0.01	6.62
			Amount	Calc.	%Drift			
32		Carbon Tetrachloride	40.000	42.997	-7.5	105	0.00	6.64
			AvgRF	CCRF	%Dev			
33		1,1,1-Trichloroethane	0.573	0.631	-10.1	103	0.00	6.70
34		2-Butanone	0.172	0.188	-9.3	104	0.00	6.72
35		1,1-Dichloropropene	0.611	0.680	-11.3	104	0.00	6.80
36		Benzene	1.811	1.963	-8.4	103	0.00	7.05
37		TAME	1.109	1.194	-7.7	102	0.00	7.14
38	S	1,2-Dichloroethane-d4	0.295	0.312	-5.8	98	0.00	7.17
39		1,2-Dichloroethane	0.606	0.663	-9.4	104	-0.01	7.23
40		Trichloroethene	0.442	0.481	-8.8	104	0.00	7.62
41		Methylcyclohexane	0.732	0.832	-13.7	105	0.00	7.65
42		Dibromomethane	0.234	0.259	-10.7	104	0.00	8.03
43	C	1,2-Dichloropropane	0.557	0.616	-10.6	104	0.00	8.12
44		Bromodichloromethane	0.526	0.590	-12.2	105	0.00	8.17
45		2-Chloroethyl vinyl ether	0.270	0.291	-7.8	100	0.00	8.70
46		cis-1,3-Dichloropropene	0.728	0.807	-10.9	106	0.00	8.79
47	I	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00	10.53
48	S	Toluene-d8	1.419	1.428	-0.6	95	0.00	8.99
			Amount	Calc.	%Drift			
49	C	Toluene	40.000	42.588	-6.5	102	0.00	9.03
50		2-Nitropropane	200.000	208.305	-4.2	102	0.00	9.23
			AvgRF	CCRF	%Dev			
51		4-Methyl-2-pentanone	0.520	0.614	-18.1	107	0.00	9.36
			Amount	Calc.	%Drift			
52		trans-1,3-Dichloropropene	40.000	46.406	-16.0	111	0.00	9.41
			AvgRF	CCRF	%Dev			
53		Tetrachloroethene	0.598	0.656	-9.7	102	0.00	9.44
54		1,1,2-Trichloroethane	0.458	0.503	-9.8	103	0.00	9.58
			Amount	Calc.	%Drift			
55		Dibromochloromethane	40.000	42.313	-5.8	105	0.00	9.77
			AvgRF	CCRF	%Dev			
56		1,3-Dichloropropane	0.935	1.028	-9.9	102	0.00	9.86
57		1,2-Dibromoethane	0.499	0.558	-11.8	103	0.00	10.03
			Amount	Calc.	%Drift			
58		2-hexanone	200.000	232.252	-16.1	111	0.00	10.18
			AvgRF	CCRF	%Dev			
59		1-Chlorohexane	0.954	1.007	-5.6	97	0.00	10.49
			Amount	Calc.	%Drift			
60	C	Ethylbenzene	40.000	42.550	-6.4	101	0.00	10.55
61	P	Chlorobenzene	40.000	44.499	-11.2	102	0.00	10.54
			AvgRF	CCRF	%Dev			

Initial Calibration Verification

Job Number: F76426 **Sample:** VJ3328-ICV3328
Account: CSXT CSX Transportation **Lab FileID:** J059058.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

62		1,1,1,2-Tetrachloroethane	0.529	0.602	-13.8	103	0.00	10.59
		----------	Amount	Calc.	%Drift			
63		m,p-Xylene	80.000	86.698	-8.4	101	0.00	10.69
64		o-Xylene	40.000	42.872	-7.2	103	0.00	11.13
		----------	AvgRF	CCRF	%Dev			
65		Styrene	1.731	1.928	-11.4	100	0.00	11.17
		----------	Amount	Calc.	%Drift			
66	P	Bromoform	40.000	44.049	-10.1	106	0.00	11.22
67		Isopropylbenzene	40.000	48.744	-21.9#	113	0.00	11.44
		----------	AvgRF	CCRF	%Dev			
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	93	0.00	12.89
69	S	4-Bromofluorobenzene	1.062	1.056	0.6	94	0.00	11.74
		----------	Amount	Calc.	%Drift			
70		n-Propylbenzene	40.000	43.764	-9.4	101	0.00	11.86
		----------	AvgRF	CCRF	%Dev			
71		Bromobenzene	1.227	1.333	-8.6	101	0.00	11.86
72	P	1,1,2,2-Tetrachloroethane	1.116	1.269	-13.7	106	0.00	11.90
73		1,3,5-Trimethylbenzene	3.766	4.178	-10.9	101	0.00	12.05
74		2-Chlorotoluene	3.940	4.322	-9.7	102	0.00	12.03
75		trans-1,4-Dichloro-2-Bute	0.328	0.346	-5.5	100	0.00	12.08
76		1,2,3-Trichloropropane	0.272	0.279	-2.6	94	0.00	12.06
		----------	Amount	Calc.	%Drift			
77		Cyclohexanone	200.000	207.171	-3.6	103	0.00	12.11
		----------	AvgRF	CCRF	%Dev			
78		4-Chlorotoluene	3.739	4.189	-12.0	102	0.00	12.20
79		tert-Butylbenzene	2.410	2.699	-12.0	103	0.00	12.38
80		1,2,4-Trimethylbenzene	3.948	4.376	-10.8	101	0.00	12.45
81		sec-Butylbenzene	4.944	5.475	-10.7	101	0.00	12.57
82		4-Isopropyltoluene	3.877	4.365	-12.6	102	0.00	12.70
83		1,3-Dichlorobenzene	2.283	2.515	-10.2	99	0.00	12.81
84		1,4-Dichlorobenzene	2.298	2.501	-8.8	101	0.00	12.90
85		n-Butylbenzene	2.588	2.911	-12.5	100	0.00	13.14
86		Benzyl Chloride	0.390	0.428	-9.7	96	0.00	13.14
87		1,2-Dichlorobenzene	2.133	2.359	-10.6	102	0.00	13.34
88		1,2-Dibromo-3-Chloropropa	0.164	0.187	-14.0	105	0.00	14.09
89		Hexachlorobutadiene	0.747	0.857	-14.7	106	0.00	14.67
90		1,2,4-Trichlorobenzene	1.447	1.631	-12.7	102	0.00	14.70
		----------	Amount	Calc.	%Drift			
91		Naphthalene	40.000	43.903	-9.8	104	0.00	14.98
		----------	AvgRF	CCRF	%Dev			
92		1,2,3-Trichlorobenzene	1.249	1.417	-13.5	104	0.00	15.14
93	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	98	0.00	5.09
		----------	Amount	Calc.	%Drift			
94		acrolein	200.000	209.868	-4.9	105	-0.01	4.58
		----------	AvgRF	CCRF	%Dev			
95		Tert Butyl Alcohol	1.731	1.768	-2.1	101	0.00	5.17

Initial Calibration Verification

Job Number: F76426 **Sample:** VJ3328-ICV3328
Account: CSXT CSX Transportation **Lab FileID:** J059058.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

96	tert Amyl alcohol	1.443	1.577	-9.3	105	0.00	7.28
97	1,4-Dioxane	0.162	0.183	-13.0	109	0.00	8.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J059055.D 8260-J.M Thu Sep 02 08:43:20 2010

Continuing Calibration Summary

Job Number: F76426 **Sample:** VJ3338-CC3328
Account: CSXT CSX Transportation **Lab FileID:** J059346.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	91	0.00	7.44
2		Dichlorodifluoromethane	0.472	0.404	14.4	71	0.00	2.78
3	P	Chloromethane	1.054	1.019	3.3	89	0.00	2.93
4	C	Vinyl Chloride	0.716	0.714	0.3	85	-0.02	3.05
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	40.051	-0.1	88	0.00	3.44
		----------	AvgRF	CCRF	%Dev		----------	
6		Chloroethane	0.341	0.357	-4.7	92	0.00	3.57
7		Trichlorofluoromethane	0.607	0.631	-4.0	89	0.00	3.77
8		Ethyl Ether	0.455	0.484	-6.4	99	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.496	0.490	1.2	91	0.00	4.24
10	C	1,1-Dichloroethene	0.785	0.808	-2.9	94	0.00	4.27
11		Freon 113	0.370	0.364	1.6	89	0.00	4.33
12		Carbon Disulfide	1.325	1.303	1.7	90	0.00	4.34
13		Iodomethane	0.688	0.675	1.9	88	0.00	4.44
14		Methylene Chloride	0.948	0.879	7.3	90	0.00	4.86
15		Acetone	0.040	0.036	10.0	88	0.00	4.87
16		Methyl acetate	0.060	0.052	13.3	82	0.00	4.98
17		trans-1,2-Dichloroethene	0.880	0.766	13.0	80	0.00	5.03
18		Hexane	0.557	0.503	9.7	86	0.00	5.09
19		Methyl Tert Butyl Ether	1.169	0.987	15.6	78	0.00	5.14
20		Di-isopropyl ether	2.124	1.979	6.8	85	0.00	5.49
21	P	1,1-Dichloroethane	1.052	0.931	11.5	81	0.00	5.64
22		Acrylonitrile	0.180	0.178	1.1	91	0.00	5.66
23		ETBE	1.880	1.641	12.7	79	0.00	5.87
		----------	Amount	Calc.	%Drift		----------	
24		Vinyl acetate	200.000	200.465	-0.2	89	0.00	5.84
		----------	AvgRF	CCRF	%Dev		----------	
25		cis-1,2-Dichloroethene	0.508	0.430	15.4	78	0.00	6.19
26		2,2-Dichloropropane	0.640	0.547	14.5	79	0.00	6.33
27		Bromochloromethane	0.264	0.218	17.4	75	0.00	6.39
28		Cyclohexane	1.086	0.975	10.2	82	0.00	6.46
29	C	Chloroform	0.840	0.691	17.7	76	0.00	6.44
		----------	Amount	Calc.	%Drift		----------	
30		Tetrahydrofuran	40.000	38.149	4.6	90	0.00	6.62
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: F76426 **Sample:** VJ3338-CC3328
Account: CSXT CSX Transportation **Lab FileID:** J059346.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

31	S	Dibromofluoromethane	0.256	0.252	1.6	89	0.00	6.63
			Amount	Calc.	%Drift			
32		Carbon Tetrachloride	40.000	35.427	11.4	79	0.00	6.64
			AvgRF	CCRF	%Dev			
33		1,1,1-Trichloroethane	0.646	0.539	16.6	75	0.00	6.71
34		2-Butanone	0.205	0.200	2.4	91	0.00	6.72
35		1,1-Dichloropropene	0.656	0.571	13.0	79	0.00	6.80
36		Benzene	1.916	1.650	13.9	78	0.00	7.05
37		TAME	1.230	1.032	16.1	77	0.00	7.14
38	S	1,2-Dichloroethane-d4	0.311	0.334	-7.4	99	0.00	7.17
39		1,2-Dichloroethane	0.732	0.644	12.0	80	0.00	7.23
40		Trichloroethene	0.499	0.414	17.0	77	0.00	7.62
41		Methylcyclohexane	0.784	0.661	15.7	76	0.00	7.65
42		Dibromomethane	0.280	0.240	14.3	79	0.00	8.03
43	C	1,2-Dichloropropane	0.625	0.547	12.5	80	0.00	8.12
44		Bromodichloromethane	0.582	0.534	8.2	82	0.00	8.17
45		2-Chloroethyl vinyl ether	0.337	0.312	7.4	82	0.00	8.69
46		cis-1,3-Dichloropropene	0.814	0.691	15.1	78	0.00	8.79
47	I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00	10.52
48	S	Toluene-d8	1.319	1.309	0.8	91	0.00	8.98
49	C	Toluene	2.674	2.292	14.3	78	0.00	9.04
50		2-Nitropropane	0.137	0.157	-14.6	100	0.00	9.22
51		4-Methyl-2-pentanone	0.578	0.570	1.4	89	0.00	9.36
52		trans-1,3-Dichloropropene	0.917	0.781	14.8	78	0.00	9.41
53		Tetrachloroethene	0.695	0.564	18.8	75	0.00	9.44
54		1,1,2-Trichloroethane	0.476	0.405	14.9	77	0.00	9.58
55		Dibromochloromethane	0.592	0.501	15.4	76	0.00	9.77
56		1,3-Dichloropropane	0.973	0.840	13.7	79	0.00	9.86
57		1,2-Dibromoethane	0.547	0.457	16.5	75	0.00	10.03
58		2-hexanone	0.393	0.390	0.8	89	0.00	10.18
59		1-Chlorohexane	1.011	0.852	15.7	76	0.00	10.49
			Amount	Calc.	%Drift			
60	C	Ethylbenzene	40.000	32.762	18.1	77	0.00	10.55
61	P	Chlorobenzene	40.000	32.633	18.4	75	0.00	10.54
			AvgRF	CCRF	%Dev			
62		1,1,1,2-Tetrachloroethane	0.611	0.510	16.5	75	0.00	10.59
			Amount	Calc.	%Drift			
63		m,p-Xylene	80.000	68.942	13.8	80	0.00	10.69
64		o-Xylene	40.000	32.298	19.3	76	0.00	11.12
			AvgRF	CCRF	%Dev			
65		Styrene	1.804	1.537	14.8	73	0.00	11.17
66	P	Bromoform	0.372	0.325	12.6	78	0.00	11.22
			Amount	Calc.	%Drift			
67		Isopropylbenzene	40.000	31.744	20.6#	75	0.00	11.44
			AvgRF	CCRF	%Dev			
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	87	0.00	12.89
69	S	4-Bromofluorobenzene	0.954	0.959	-0.5	89	0.00	11.73
			Amount	Calc.	%Drift			
70		n-Propylbenzene	40.000	35.701	10.7	79	0.00	11.85

Continuing Calibration Summary

Job Number: F76426 **Sample:** VJ3338-CC3328
Account: CSXT CSX Transportation **Lab FileID:** J059346.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			AvgRF	CCRF	%Dev			
71		Bromobenzene	1.441	1.216	15.6	74	0.00	11.86
72	P	1,1,2,2-Tetrachloroethane	1.170	1.035	11.5	78	0.00	11.90
73		1,3,5-Trimethylbenzene	3.962	3.527	11.0	76	0.00	12.04
74		2-Chlorotoluene	4.094	3.637	11.2	77	0.00	12.03
75		trans-1,4-Dichloro-2-Bute	0.442	0.421	4.8	82	0.00	12.08
76		1,2,3-Trichloropropane	0.311	0.262	15.8	75	0.00	12.06

			Amount	Calc.	%Drift			
77		Cyclohexanone	200.000	198.360	0.8	86	0.00	12.11

			AvgRF	CCRF	%Dev			
78		4-Chlorotoluene	3.809	3.343	12.2	74	0.00	12.20
79		tert-Butylbenzene	2.485	2.108	15.2	74	0.00	12.38
80		1,2,4-Trimethylbenzene	4.090	3.610	11.7	75	0.00	12.45

			Amount	Calc.	%Drift			
81		sec-Butylbenzene	40.000	34.328	14.2	76	0.00	12.56

			AvgRF	CCRF	%Dev			
82		4-Isopropyltoluene	4.227	3.723	11.9	75	0.00	12.70
83		1,3-Dichlorobenzene	2.625	2.213	15.7	74	0.00	12.81
84		1,4-Dichlorobenzene	2.676	2.265	15.4	74	0.00	12.90
85		n-Butylbenzene	2.745	2.468	10.1	77	0.00	13.14
86		Benzyl Chloride	0.472	0.440	6.8	77	0.00	13.14
87		1,2-Dichlorobenzene	2.486	2.093	15.8	73	0.00	13.34
88		1,2-Dibromo-3-Chloropropa	0.185	0.152	17.8	74	0.00	14.09
89		Hexachlorobutadiene	0.927	0.769	17.0	75	0.00	14.67
90		1,2,4-Trichlorobenzene	1.787	1.559	12.8	77	0.00	14.71
91		Naphthalene	3.137	2.696	14.1	73	0.00	14.98
92		1,2,3-Trichlorobenzene	1.562	1.323	15.3	75	0.00	15.14
93	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	101	0.00	5.10
94		acrolein	3.186	2.739	14.0	88	0.00	4.58
95		Tert Butyl Alcohol	1.969	1.614	18.0	84	0.00	5.17
96		tert Amyl alcohol	1.583	1.242	21.5#	78	0.00	7.28
97		1,4-Dioxane	0.183	0.145	20.8#	83	0.00	8.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J059098.D 8260-J.M Wed Sep 15 14:01:36 2010

Initial Calibration Summary

Job Number: F76426 **Sample:** VK2006-ICC2006
Account: CSXT CSX Transportation **Lab FileID:** K046502.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA2

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

Calibration Files
1 =K046499.D 2 =K046500.D 3 =K046501.D 4 =K046502.D
5 =K046503.D 6 =K046504.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.227	0.188	0.171	0.141	0.146	0.138	0.169	20.54
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9971								
	Response Ratio = 0.00000 + 0.14234 *A								
3) P	Chloromethane	0.627	0.457	0.415	0.350	0.360	0.349	0.427	25.15
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.35544 *A								
4) C	Vinyl Chloride	0.437	0.359	0.335	0.274	0.282	0.276	0.327	19.62
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9977								
	Response Ratio = 0.00000 + 0.27989 *A								
5)	Bromomethane	0.229	0.162	0.134	0.091	0.075	0.067	0.126	49.26
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9835								
	Response Ratio = 0.00000 + 0.12915 *A + -0.01627 *A^2								
6)	Chloroethane	0.190	0.176	0.155	0.131	0.124	0.116	0.149	20.10
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9934								
	Response Ratio = 0.00000 + 0.12189 *A								
7)	Trichlorofluorometh	0.405	0.350	0.296	0.254	0.254	0.243	0.300	21.58
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9981								
	Response Ratio = 0.00000 + 0.25019 *A								
8)	1,2-Dichloro-1,1,2-	0.583	0.414	0.380	0.306	0.328	0.307	0.386	27.29
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9957								
	Response Ratio = 0.00000 + 0.31629 *A								
9)	Ethyl Ether	0.263	0.195	0.233	0.239	0.241	0.238	0.235	9.38
10)	Freon 113	0.392	0.309	0.279	0.226	0.223	0.215	0.274	25.07
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9969								
	Response Ratio = 0.00000 + 0.22170 *A								
11) C	1,1-Dichloroethene	0.623	0.540	0.494	0.416	0.424	0.412	0.485	17.48
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9983								
	Response Ratio = 0.00000 + 0.41988 *A								
12)	Acetone	0.132	0.073	0.089	0.085	0.092	0.092	0.094	21.26
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9978								
	Response Ratio = 0.00000 + 0.09078 *A								
13)	Iodomethane	0.534	0.421	0.430	0.366	0.378	0.368	0.416	15.34
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.37298 *A								

Initial Calibration Summary

Job Number: F76426 **Sample:** VK2006-ICC2006
Account: CSXT CSX Transportation **Lab FileID:** K046502.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

14)		Carbon Disulfide	1.117	0.917	0.894	0.761	0.786	0.771	0.874	15.56
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9985								
		Response Ratio = 0.00000 + 0.77913 *A								
15)		Methyl acetate	0.247	0.157	0.186	0.213	0.233	0.240	0.213	16.50
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9959								
		Response Ratio = 0.00000 + 0.23230 *A								
16)		Methylene Chloride	1.688	0.676	0.688	0.517	0.511	0.502	0.764	60.32
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9957								
		Response Ratio = 0.00000 + 0.51431 *A								
17)		Acrylonitrile	0.102	0.066	0.076	0.088	0.097	0.095	0.087	15.83
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9965								
		Response Ratio = 0.00000 + 0.09386 *A								
18)		Methyl Tert Butyl E	0.986	0.690	0.762	0.777	0.795	0.790	0.800	12.33
19)		trans-1,2-Dichloroe	0.561	0.486	0.472	0.431	0.443	0.423	0.469	10.86
20)		Hexane	0.912	0.712	0.702	0.616	0.628	0.607	0.696	16.52
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9988								
		Response Ratio = 0.00000 + 0.61800 *A								
21)		Vinyl acetate	0.247	0.160	0.186	0.213	0.233	0.240	0.213	15.95
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9959								
		Response Ratio = 0.00000 + 0.23231 *A								
22)	P	1,1-Dichloroethane	0.782	0.678	0.641	0.560	0.560	0.547	0.628	14.62
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9988								
		Response Ratio = 0.00000 + 0.55638 *A								
23)		Di-isopropyl ether	1.683	1.319	1.344	1.309	1.300	1.304	1.377	10.96
24)		Ethyl tert-butyl Et	1.122	0.955	1.009	1.005	1.006	1.001	1.016	5.46
25)		2-Butanone	0.149	0.110	0.128	0.143	0.156	0.161	0.141	13.57
26)		cis-1,2-Dichloroeth	0.282	0.293	0.307	0.266	0.272	0.269	0.282	5.62
27)		2,2-Dichloropropane	0.408	0.475	0.400	0.340	0.332	0.309	0.377	16.37
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9943								
		Response Ratio = 0.00000 + 0.32376 *A								
28)		Bromochloromethane	0.139	0.135	0.144	0.138	0.141	0.137	0.139	2.21
29)	C	Chloroform	0.655	0.572	0.560	0.485	0.477	0.461	0.535	13.96
30)		Tetrahydrofuran	0.075	0.054	0.035	0.050	0.052	0.053	0.053	23.67
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9920								
		Response Ratio = 0.00000 + 0.05179 *A								
31)	S	Dibromofluoromethan	0.239	0.238	0.249	0.248	0.249	0.249	0.245	2.10
32)		1,1,1-Trichloroetha	0.455	0.492	0.437	0.371	0.374	0.367	0.416	12.64
33)		Cyclohexane	0.855	0.779	0.683	0.566	0.561	0.528	0.662	20.15
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9959								
		Response Ratio = 0.00000 + 0.54912 *A								
34)		1,1-Dichloropropene	0.470	0.448	0.428	0.377	0.376	0.364	0.411	10.80
35)		Carbon Tetrachlorid	0.456	0.467	0.351	0.301	0.306	0.360	0.373	19.39
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9810								
		Response Ratio = 0.00000 + 0.33621 *A								
36)	S	1,2-Dichloroethane-	0.286	0.279	0.298	0.330	0.280	0.302	0.296	6.52
37)		1,2-Dichloroethane	0.443	0.390	0.412	0.407	0.405	0.409	0.411	4.23
38)		Benzene	1.603	1.403	1.282	1.124	1.105	1.068	1.264	16.52
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
		Response Ratio = 0.00000 + 1.09514 *A								

Initial Calibration Summary

Job Number: F76426 **Sample:** VK2006-ICC2006
Account: CSXT CSX Transportation **Lab FileID:** K046502.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

39)		Tert-Amyl Methyl Et	0.778	0.721	0.743	0.763	0.794	0.781	0.763	3.57
40)		Trichloroethene	0.398	0.332	0.305	0.267	0.257	0.251	0.302	18.69
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9983								
		Response Ratio = 0.00000 + 0.25719 *A								
41)		Methylcyclohexane	0.619	0.591	0.526	0.444	0.427	0.406	0.502	17.87
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9959								
		Response Ratio = 0.00000 + 0.42258 *A								
42)	C	1,2-Dichloropropane	0.417	0.396	0.376	0.353	0.343	0.335	0.370	8.68
43)		Dibromomethane	0.149	0.153	0.160	0.164	0.170	0.172	0.161	5.76
44)		Bromodichloromethan	0.377	0.371	0.395	0.369	0.373	0.372	0.376	2.56
45)		2-Nitropropane	0.068	0.055	0.064	0.079	0.087	0.092	0.074	19.08
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9941								
		Response Ratio = 0.00000 + 0.08739 *A								
46)		2-Chloroethyl vinyl	0.077	0.068	0.084	0.094	0.103	0.108	0.089	17.17
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9963								
		Response Ratio = 0.00000 + 0.10351 *A								
47)		cis-1,3-Dichloropro	0.470	0.444	0.474	0.468	0.470	0.475	0.467	2.51
48)		4-Methyl-2-pentanon	0.373	0.258	0.293	0.313	0.328	0.327	0.315	12.22
49)	I	Chlorobenzene-d5	----------ISTD----------							
50)	S	Toluene-d8	1.525	1.725	1.682	1.681	1.816	1.852	1.714	6.78
51)	C	Toluene	2.355	2.361	2.084	1.804	1.943	1.911	2.077	11.35
52)		trans-1,3-Dichlorop	0.496	0.546	0.614	0.598	0.690	0.690	0.606	12.81
53)		1,1,2-Trichloroetha	0.365	0.364	0.360	0.342	0.375	0.387	0.366	4.11
54)		1,3-Dichloropropane	0.737	0.728	0.693	0.714	0.783	0.787	0.740	5.06
55)		2-hexanone	0.395	0.283	0.300	0.339	0.401	0.415	0.355	15.81
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9914								
		Response Ratio = 0.00000 + 0.39606 *A								
56)		Tetrachloroethene	0.522	0.579	0.471	0.378	0.412	0.397	0.460	17.16
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9952								
		Response Ratio = 0.00000 + 0.40235 *A								
57)		Dibromochloromethan	0.333	0.417	0.427	0.417	0.480	0.484	0.427	12.83
58)		1,2-Dibromoethane	0.346	0.340	0.356	0.379	0.425	0.430	0.380	10.43
59)		1-Chlorohexane	0.605	0.723	0.640	0.568	0.620	0.609	0.628	8.39
60)	P	Chlorobenzene	1.282	1.283	1.175	1.040	1.096	1.052	1.155	9.51
61)		1,1,1,2-Tetrachloro	0.395	0.436	0.426	0.385	0.419	0.415	0.413	4.66
62)	C	Ethylbenzene	2.190	2.417	2.120	1.804	1.942	1.870	2.057	11.16
63)		m,p-Xylene	1.803	1.851	1.662	1.421	1.499	1.419	1.609	11.89
64)		o-Xylene	1.761	1.900	1.792	1.600	1.717	1.692	1.744	5.79
65)		Styrene	1.140	1.316	1.259	1.180	1.275	1.260	1.238	5.27
66)	P	Bromoform	0.196	0.210	0.251	0.264	0.298	0.303	0.254	17.28
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9965								
		Response Ratio = 0.00000 + 0.29379 *A								
67)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
68)		Isopropylbenzene	4.395	4.786	4.084	3.393	3.381	3.160	3.867	16.88
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9951								
		Response Ratio = 0.00000 + 3.29656 *A								
69)		Cyclohexanone	0.064	0.032	0.029	0.032	0.039	0.037	0.039	32.58
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9901								
		Response Ratio = 0.00000 + 0.03668 *A								

Initial Calibration Summary

Job Number: F76426 **Sample:** VK2006-ICC2006
Account: CSXT CSX Transportation **Lab FileID:** K046502.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN


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70) S   4-Bromofluorobenzen 0.887 0.949 0.919 0.918 0.953 0.944 0.928   2.72
71) P   1,1,2,2-Tetrachloro 1.178 1.024 0.979 0.986 1.014 0.938 1.020   8.15
72)     trans-1,4-Dichloro- 0.341 0.233 0.268 0.286 0.324 0.329 0.297  14.10
73)     1,2,3-Trichloroprop 0.297 0.263 0.249 0.244 0.259 0.237 0.258   8.19
74)     Bromobenzene        1.086 1.180 0.978 0.905 0.897 0.827 0.979  13.50
75)     n-Propylbenzene     6.132 6.221 5.373 4.484 4.469 4.194 5.146  17.34
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9957
              Response Ratio = 0.00000 + 4.36524 *A

76)     2-Chlorotoluene     4.393 4.400 3.725 3.240 3.199 2.950 3.651  17.24
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9950
              Response Ratio = 0.00000 + 3.09663 *A

77)     1,3,5-Trimethylbenz 4.207 4.406 3.736 3.113 3.143 2.878 3.580  17.67
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9939
              Response Ratio = 0.00000 + 3.02503 *A

78)     4-Chlorotoluene     3.565 3.724 3.159 2.761 2.783 2.662 3.109  14.50
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9980
              Response Ratio = 0.00000 + 2.73340 *A

79)     tert-Butylbenzene   2.689 2.710 2.355 1.933 1.926 1.789 2.234  18.25
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9945
              Response Ratio = 0.00000 + 1.87307 *A

80)     1,2,4-Trimethylbenz 3.916 4.121 3.599 3.081 3.052 2.858 3.438  15.02
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9959
              Response Ratio = 0.00000 + 2.97708 *A

81)     sec-Butylbenzene    5.208 5.406 4.669 3.836 3.786 3.520 4.404  18.18
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9941
              Response Ratio = 0.00000 + 3.68976 *A

82)     4-Isopropyltoluene  3.561 3.899 3.314 2.815 2.822 2.611 3.170  15.86
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9950
              Response Ratio = 0.00000 + 2.73136 *A

83)     1,3-Dichlorobenzene 1.847 1.951 1.705 1.520 1.568 1.483 1.679  11.28
84)     1,4-Dichlorobenzene 1.953 1.796 1.694 1.474 1.474 1.432 1.637  12.91
85)     Benzyl chloride     0.275 0.212 0.261 0.282 0.317 0.312 0.276  13.91
86)     n-Butylbenzene      2.009 2.019 1.905 1.624 1.661 1.573 1.798  11.24
87)     1,2-Dichlorobenzene 1.817 1.720 1.613 1.466 1.478 1.392 1.581  10.43
88)     1,2-Dibromo-3-Chlor 0.107 0.125 0.129 0.139 0.156 0.175 0.138  17.49
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9883
              Response Ratio = 0.00000 + 0.16267 *A

89)     1,2,4-Trichlorobenz 0.658 0.603 0.687 0.651 0.669 0.691 0.660   4.83
90)     Hexachlorobutadiene 0.813 0.702 0.629 0.504 0.473 0.453 0.596  24.13
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9936
              Response Ratio = 0.00000 + 0.47324 *A

91)     Naphthalene         1.609 1.030 1.224 1.390 1.520 1.615 1.398  16.70
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9942
              Response Ratio = 0.00000 + 1.54085 *A

92)     1,2,3-Trichlorobenz 0.551 0.458 0.527 0.556 0.577 0.596 0.544   8.85

93) I   Tert Butyl Alcohol-d1 ----------------ISTD--------------------
94)     Acrolein            4.281 4.547 3.437 2.576 2.446 2.004 3.215  32.40
```

Job Number: F76426 **Sample:** VK2006-ICC2006
Account: CSXT CSX Transportation **Lab FileID:** K046502.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

```
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9920
                Response Ratio = 0.00000 + 3.60074 *A + -0.40019 *A^2

 95)     Tert Butyl Alcohol  1.634 0.726 1.239 1.282 1.418 1.270 1.261  23.80
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9916
                Response Ratio = 0.00000 + 1.31191 *A

 96)     Tert Amyl Alcohol   0.926 1.151 0.944 1.066 1.167 1.082 1.056   9.60
 97)     1,4-Dioxane         0.121 0.098 0.151 0.142 0.144 0.125 0.130  14.97
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9952
                Response Ratio = 0.00000 + 0.16221 *A + -0.00215 *A^2

--------------------------------------------------------------------------------
(#) = Out of Range

           8260-K.M          Tue Sep 07 12:48:18 2010
```

Initial Calibration Verification

Job Number: F76426 **Sample:** VK2006-ICV2006
Account: CSXT CSX Transportation **Lab FileID:** K046505.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	100	0.00	11.46
			Amount	Calc.	%Drift			
2		Dichlorodifluoromethane	50.000	49.149	1.7	82	0.00	4.23
3	P	Chloromethane	50.000	51.131	-2.3	88	0.00	4.61
4	C	Vinyl Chloride	50.000	48.228	3.5	81	0.00	4.80
5		Bromomethane	50.000	47.101	5.8	80	0.01	5.47
6		Chloroethane	50.000	52.953	-5.9	84	0.01	5.74
7		Trichlorofluoromethane	50.000	54.285	-8.6	92	0.03	6.03
8		1,2-Dichloro-1,1,2-triflu	50.000	62.493	-25.0#	104	0.01	6.86
			AvgRF	CCRF	%Dev			
9		Ethyl Ether	0.235	0.225	4.3	96	0.00	6.52
			Amount	Calc.	%Drift			
10		Freon 113	50.000	56.372	-12.7	90	0.00	7.01
11	C	1,1-Dichloroethene	50.000	52.741	-5.5	90	0.00	6.92
12		Acetone	250.000	346.064	-38.4#	142	0.00	7.94
13		Iodomethane	50.000	54.323	-8.6	94	0.00	7.20
14		Carbon Disulfide	50.000	50.574	-1.1	88	0.01	7.03
15		Methyl acetate	250.000	214.150	14.3	107	0.00	8.12
16		Methylene Chloride	50.000	57.120	-14.2	86	0.00	7.89
17		Acrylonitrile	250.000	217.634	12.9	108	0.00	9.15
			AvgRF	CCRF	%Dev			
18		Methyl Tert Butyl Ether	0.800	0.802	-0.3	105	0.00	8.30
19		trans-1,2-Dichloroethene	0.469	0.468	0.2	99	0.00	8.16
			Amount	Calc.	%Drift			
20		Hexane	50.000	57.671	-15.3	102	0.01	8.29
21		Vinyl acetate	250.000	214.134	14.3	107	0.00	8.12
22	P	1,1-Dichloroethane	50.000	54.695	-9.4	95	0.00	9.10
			AvgRF	CCRF	%Dev			
23		Di-isopropyl ether	1.377	1.374	0.2	102	0.00	8.85
24		Ethyl tert-butyl Ether	1.016	1.048	-3.1	104	0.00	9.38
25		2-Butanone	0.141	0.179	-27.0#	140	0.00	10.57
26		cis-1,2-Dichloroethene	0.282	0.304	-7.8	99	0.00	9.86
			Amount	Calc.	%Drift			
27		2,2-Dichloropropane	50.000	55.862	-11.7	91	0.00	10.02

Initial Calibration Verification

Job Number: F76426 **Sample:** VK2006-ICV2006
Account: CSXT CSX Transportation **Lab FileID:** K046505.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			AvgRF / Amount	CCRF / Calc.	%Dev / %Drift			
28		Bromochloromethane	0.139	0.141	-1.4	98	0.00	10.13
29	C	Chloroform	0.535	0.555	-3.7	99	0.00	10.20
30		Tetrahydrofuran	50.000	47.521	5.0	140	0.00	10.57
31	S	Dibromofluoromethane	0.245	0.247	-0.8	99	0.00	10.44
32		1,1,1-Trichloroethane	0.416	0.424	-1.9	97	0.00	10.52
33		Cyclohexane	50.000	57.364	-14.7	92	0.01	10.19
34		1,1-Dichloropropene	0.411	0.415	-1.0	97	0.00	10.67
35		Carbon Tetrachloride	50.000	60.145	-20.3#	115	0.01	10.45
36	S	1,2-Dichloroethane-d4	0.296	0.325	-9.8	109	0.00	11.13
37		1,2-Dichloroethane	0.411	0.435	-5.8	106	0.01	11.22
38		Benzene	50.000	56.393	-12.8	96	0.00	10.98
39		Tert-Amyl Methyl Ether	0.763	0.784	-2.8	106	0.00	11.06
40		Trichloroethene	50.000	56.804	-13.6	96	0.00	11.68
41		Methylcyclohexane	50.000	61.284	-22.6#	99	0.00	11.70
42	C	1,2-Dichloropropane	0.370	0.380	-2.7	101	0.00	12.29
43		Dibromomethane	0.161	0.173	-7.5	108	0.00	12.18
44		Bromodichloromethane	0.376	0.408	-8.5	103	0.00	12.34
45		2-Nitropropane	250.000	223.336	10.7	122	0.00	13.55
46		2-Chloroethyl vinyl ether	250.000	232.407	7.0	114	0.00	12.92
47		cis-1,3-Dichloropropene	0.467	0.515	-10.3	109	0.00	13.05
48		4-Methyl-2-pentanone	0.315	0.357	-13.3	122	0.00	13.67
49	I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.97
50	S	Toluene-d8	1.714	1.667	2.7	100	0.00	13.26
51	C	Toluene	2.077	2.026	2.5	98	0.01	13.33
52		trans-1,3-Dichloropropene	0.606	0.662	-9.2	109	0.00	13.75
53		1,1,2-Trichloroethane	0.366	0.362	1.1	101	0.00	13.94
54		1,3-Dichloropropane	0.740	0.731	1.2	106	0.00	14.24
55		2-hexanone	250.000	267.016	-6.8	142	0.00	14.57
56		Tetrachloroethene	50.000	55.034	-10.1	95	0.00	13.78
57		Dibromochloromethane	0.427	0.459	-7.5	108	0.00	14.16

Initial Calibration Verification

Job Number: F76426 **Sample:** VK2006-ICV2006
Account: CSXT CSX Transportation **Lab FileID:** K046505.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

58		1,2-Dibromoethane	0.380	0.385	-1.3	109	0.00	14.45
59		1-Chlorohexane	0.628	0.606	3.5	95	0.00	14.89
60	P	Chlorobenzene	1.155	1.180	-2.2	101	0.00	14.99
61		1,1,1,2-Tetrachloroethane	0.413	0.436	-5.6	103	0.00	15.04
62	C	Ethylbenzene	2.057	2.055	0.1	98	0.00	14.97
63		m,p-Xylene	1.609	1.584	1.6	96	0.00	15.11
64		o-Xylene	1.744	1.749	-0.3	98	0.00	15.58
65		Styrene	1.238	1.288	-4.0	103	0.00	15.63
			Amount	Calc.	%Drift			
66	P	Bromoform	50.000	45.192	9.6	107	0.00	15.72
			AvgRF	CCRF	%Dev			
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	17.42
			Amount	Calc.	%Drift			
68		Isopropylbenzene	50.000	67.850	-35.7#	110	0.00	15.90
69		Cyclohexanone	250.000	245.500	1.8	124	0.01	16.68
			AvgRF	CCRF	%Dev			
70	S	4-Bromofluorobenzene	0.928	0.923	0.5	101	0.00	16.24
71	P	1,1,2,2-Tetrachloroethane	1.020	1.102	-8.0	113	0.00	16.40
72		trans-1,4-Dichloro-2-Bute	0.297	0.302	-1.7	114	0.00	16.58
73		1,2,3-Trichloropropane	0.258	0.253	1.9	102	0.00	16.58
74		Bromobenzene	0.979	1.029	-5.1	106	0.00	16.38
			Amount	Calc.	%Drift			
75		n-Propylbenzene	50.000	59.410	-18.8	97	0.00	16.33
76		2-Chlorotoluene	50.000	61.003	-22.0#	102	0.00	16.55
77		1,3,5-Trimethylbenzene	50.000	60.377	-20.8#	98	0.00	16.51
78		4-Chlorotoluene	50.000	57.490	-15.0	100	0.00	16.71
79		tert-Butylbenzene	50.000	60.456	-20.9#	97	0.00	16.87
80		1,2,4-Trimethylbenzene	50.000	58.941	-17.9	98	0.00	16.93
81		sec-Butylbenzene	50.000	60.324	-20.6#	96	0.00	17.06
82		4-Isopropyltoluene	50.000	59.475	-19.0	99	0.00	17.18
			AvgRF	CCRF	%Dev			
83		1,3-Dichlorobenzene	1.679	1.741	-3.7	103	0.00	17.35
84		1,4-Dichlorobenzene	1.637	1.731	-5.7	103	0.00	17.44
85		Benzyl chloride	0.276	0.267	3.3	103	0.01	17.68
86		n-Butylbenzene	1.798	1.794	0.2	95	0.00	17.63
87		1,2-Dichlorobenzene	1.581	1.651	-4.4	103	0.00	17.91
			Amount	Calc.	%Drift			
88		1,2-Dibromo-3-Chloropropa	50.000	44.922	10.2	114	0.00	18.74
			AvgRF	CCRF	%Dev			
89		1,2,4-Trichlorobenzene	0.660	0.694	-5.2	102	0.00	19.47
			Amount	Calc.	%Drift			
90		Hexachlorobutadiene	50.000	63.365	-26.7#	96	0.00	19.39
91		Naphthalene	50.000	47.548	4.9	121	0.00	19.84
			AvgRF	CCRF	%Dev			
92		1,2,3-Trichlorobenzene	0.544	0.586	-7.7	112	0.00	20.06
93	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	97	0.02	8.29
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: F76426 **Sample:** VK2006-ICV2006
Account: CSXT CSX Transportation **Lab FileID:** K046505.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

94	Acrolein	250.000	287.719	-15.1	102	0.01	8.28	
95	Tert Butyl Alcohol	500.000	575.493	-15.1	119	0.01	8.40	
		AvgRF	CCRF	%Dev				
96	Tert Amyl Alcohol	1.056	1.177	-11.5	121	0.01	11.26	
		Amount	Calc.	%Drift				
97	1,4-Dioxane	1000.000	859.462	14.1	86	0.00	12.55	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
K046501.D 8260-K.M Tue Sep 07 12:48:37 2010

Continuing Calibration Summary

Job Number: F76426 **Sample:** VK2009-CC2006
Account: CSXT CSX Transportation **Lab FileID:** K046590.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : K:\HPCHEM\1\DATA\091010\K046590.D Vial: 2
Acq On : 10 Sep 2010 12:39 pm Operator: StevenH
Sample : cc2006-4 Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	99	0.00	11.46
			Amount	Calc.	%Drift			
2		Dichlorodifluoromethane	100.000	135.477	-35.5#	135	0.01	4.24
3	P	Chloromethane	100.000	95.727	4.3	96	0.00	4.60
4	C	Vinyl Chloride	100.000	89.855	10.1	91	0.00	4.79
5		Bromomethane	100.000	71.464	28.5#	82	0.01	5.47
6		Chloroethane	100.000	75.735	24.3#	69	0.01	5.74
7		Trichlorofluoromethane	100.000	73.570	26.4#	71	0.00	5.99
8		1,2-Dichloro-1,1,2-triflu	100.000	113.155	-13.2	115	0.00	6.85
			AvgRF	CCRF	%Dev			
9		Ethyl Ether	0.235	0.233	0.9	96	0.00	6.52
			Amount	Calc.	%Drift			
10		Freon 113	100.000	113.710	-13.7	110	0.00	7.01
11	C	1,1-Dichloroethene	100.000	110.177	-10.2	109	0.00	6.91
12		Acetone	500.000	455.585	8.9	96	0.00	7.95
13		Iodomethane	100.000	105.450	-5.5	106	0.00	7.20
14		Carbon Disulfide	100.000	111.443	-11.4	112	0.00	7.02
15		Methyl acetate	500.000	448.314	10.3	96	0.00	8.12
16		Methylene Chloride	100.000	122.926	-22.9#	120	0.00	7.88
17		Acrylonitrile	500.000	512.262	-2.5	108	0.00	9.15
			AvgRF	CCRF	%Dev			
18		Methyl Tert Butyl Ether	0.800	0.789	1.4	100	0.00	8.30
19		trans-1,2-Dichloroethene	0.469	0.471	-0.4	108	0.00	8.16
			Amount	Calc.	%Drift			
20		Hexane	100.000	114.637	-14.6	113	0.00	8.28
21		Vinyl acetate	500.000	448.280	10.3	96	0.00	8.12
22	P	1,1-Dichloroethane	100.000	108.918	-8.9	107	0.00	9.10
			AvgRF	CCRF	%Dev			
23		Di-isopropyl ether	1.377	1.322	4.0	99	0.00	8.85
24		Ethyl tert-butyl Ether	1.016	1.032	-1.6	101	0.00	9.38
25		2-Butanone	0.141	0.152	-7.8	104	0.00	10.57
26		cis-1,2-Dichloroethene	0.282	0.283	-0.4	105	0.00	9.87
			Amount	Calc.	%Drift			
27		2,2-Dichloropropane	100.000	121.454	-21.5#	114	0.00	10.01

Continuing Calibration Summary

Job Number: F76426 **Sample:** VK2009-CC2006
Account: CSXT CSX Transportation **Lab FileID:** K046590.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			AvgRF / Amount	CCRF / Calc.	%Dev / %Drift			
28		Bromochloromethane	0.139	0.139	0.0	99	0.00	10.13
29	C	Chloroform	0.535	0.512	4.3	104	0.00	10.20
30		Tetrahydrofuran	100.000	93.245	6.8	95	0.00	10.57
31	S	Dibromofluoromethane	0.245	0.245	0.0	97	0.00	10.45
32		1,1,1-Trichloroethane	0.416	0.412	1.0	109	0.00	10.52
33		Cyclohexane	100.000	115.874	-15.9	111	0.00	10.18
34		1,1-Dichloropropene	0.411	0.436	-6.1	114	0.00	10.66
35		Carbon Tetrachloride	100.000	102.827	-2.8	113	0.01	10.45
36	S	1,2-Dichloroethane-d4	0.296	0.351	-18.6	105	0.00	11.13
37		1,2-Dichloroethane	0.411	0.409	0.5	99	0.00	11.22
38		Benzene	100.000	109.294	-9.3	105	0.00	10.98
39		Tert-Amyl Methyl Ether	0.763	0.776	-1.7	100	0.00	11.06
40		Trichloroethene	100.000	112.006	-12.0	106	0.00	11.68
41		Methylcyclohexane	100.000	119.066	-19.1	112	0.00	11.70
42	C	1,2-Dichloropropane	0.370	0.362	2.2	101	0.00	12.29
43		Dibromomethane	0.161	0.166	-3.1	100	0.00	12.18
44		Bromodichloromethane	0.376	0.383	-1.9	102	0.00	12.34
45		2-Nitropropane	500.000	488.163	2.4	106	0.00	13.55
46		2-Chloroethyl vinyl ether	500.000	202.110	59.6#	44	0.00	12.92
47		cis-1,3-Dichloropropene	0.467	0.486	-4.1	102	0.00	13.05
48		4-Methyl-2-pentanone	0.315	0.328	-4.1	103	0.00	13.68
49	I	Chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.97
50	S	Toluene-d8	1.714	1.657	3.3	100	0.00	13.27
51	C	Toluene	2.077	1.903	8.4	107	0.00	13.32
52		trans-1,3-Dichloropropene	0.606	0.594	2.0	101	0.00	13.75
53		1,1,2-Trichloroethane	0.366	0.341	6.8	101	0.00	13.94
54		1,3-Dichloropropane	0.740	0.701	5.3	100	0.00	14.25
55		2-hexanone	500.000	439.786	12.0	104	0.00	14.57
56		Tetrachloroethene	100.000	105.677	-5.7	114	0.00	13.78
57		Dibromochloromethane	0.427	0.413	3.3	101	0.00	14.16

Continuing Calibration Summary

Job Number: F76426 **Sample:** VK2009-CC2006
Account: CSXT CSX Transportation **Lab FileID:** K046590.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

58		1,2-Dibromoethane	0.380	0.372	2.1	100	0.00	14.46
59		1-Chlorohexane	0.628	0.659	-4.9	118	0.00	14.90
60	P	Chlorobenzene	1.155	1.076	6.8	105	0.00	14.99
61		1,1,1,2-Tetrachloroethane	0.413	0.388	6.1	102	0.00	15.04
62	C	Ethylbenzene	2.057	1.965	4.5	111	0.00	14.97
63		m,p-Xylene	1.609	1.539	4.4	110	0.00	15.12
64		o-Xylene	1.744	1.699	2.6	108	0.00	15.59
65		Styrene	1.238	1.243	-0.4	107	0.00	15.63
			Amount	Calc.	%Drift			
66	P	Bromoform	100.000	86.598	13.4	98	0.01	15.73
			AvgRF	CCRF	%Dev			
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	17.42
			Amount	Calc.	%Drift			
68		Isopropylbenzene	100.000	108.390	-8.4	111	0.00	15.90
69		Cyclohexanone	500.000	471.267	5.7	113	0.00	16.67
			AvgRF	CCRF	%Dev			
70	S	4-Bromofluorobenzene	0.928	0.901	2.9	104	0.00	16.24
71	P	1,1,2,2-Tetrachloroethane	1.020	0.967	5.2	104	0.00	16.40
72		trans-1,4-Dichloro-2-Bute	0.297	0.290	2.4	107	0.00	16.58
73		1,2,3-Trichloropropane	0.258	0.235	8.9	102	0.00	16.58
74		Bromobenzene	0.979	0.896	8.5	105	0.00	16.39
			Amount	Calc.	%Drift			
75		n-Propylbenzene	100.000	111.788	-11.8	115	0.00	16.33
76		2-Chlorotoluene	100.000	108.168	-8.2	109	0.00	16.55
77		1,3,5-Trimethylbenzene	100.000	110.178	-10.2	113	0.00	16.51
78		4-Chlorotoluene	100.000	105.778	-5.8	111	0.00	16.71
79		tert-Butylbenzene	100.000	107.821	-7.8	111	0.00	16.87
80		1,2,4-Trimethylbenzene	100.000	108.361	-8.4	111	0.01	16.94
81		sec-Butylbenzene	100.000	112.445	-12.4	114	0.00	17.06
82		4-Isopropyltoluene	100.000	111.845	-11.8	115	0.01	17.19
			AvgRF	CCRF	%Dev			
83		1,3-Dichlorobenzene	1.679	1.580	5.9	110	0.00	17.35
84		1,4-Dichlorobenzene	1.637	1.574	3.8	113	0.00	17.44
85		Benzyl chloride	0.276	0.285	-3.3	107	0.00	17.68
86		n-Butylbenzene	1.798	1.838	-2.2	120	0.00	17.64
87		1,2-Dichlorobenzene	1.581	1.498	5.2	108	0.00	17.91
			Amount	Calc.	%Drift			
88		1,2-Dibromo-3-Chloropropa	100.000	100.620	-0.6	125	0.00	18.74
			AvgRF	CCRF	%Dev			
89		1,2,4-Trichlorobenzene	0.660	0.797	-20.8#	130	0.00	19.47
			Amount	Calc.	%Drift			
90		Hexachlorobutadiene	100.000	119.282	-19.3	119	0.00	19.39
91		Naphthalene	100.000	106.376	-6.4	125	0.00	19.84
			AvgRF	CCRF	%Dev			
92		1,2,3-Trichlorobenzene	0.544	0.685	-25.9#	130	0.00	20.06
93	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	107	0.02	8.29
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: F76426 **Sample:** VK2009-CC2006
Account: CSXT CSX Transportation **Lab FileID:** K046590.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

94	Acrolein	500.000	516.889	-3.4	120	0.00	8.28	
95	Tert Butyl Alcohol	1000.000	1033.398	-3.3	114	0.00	8.39	
		AvgRF	CCRF	%Dev				
96	Tert Amyl Alcohol	1.056	1.170	-10.8	118	0.00	11.26	
		Amount	Calc.	%Drift				
97	1,4-Dioxane	2000.000	2054.881	-2.7	112	0.00	12.56	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
K046502.D 8260-K.M Mon Sep 13 12:51:22 2010

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059349.D Vial: 4
Acq On : 15 Sep 2010 10:56 am Operator: KarenW
Sample : F76426-1 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:54:56 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

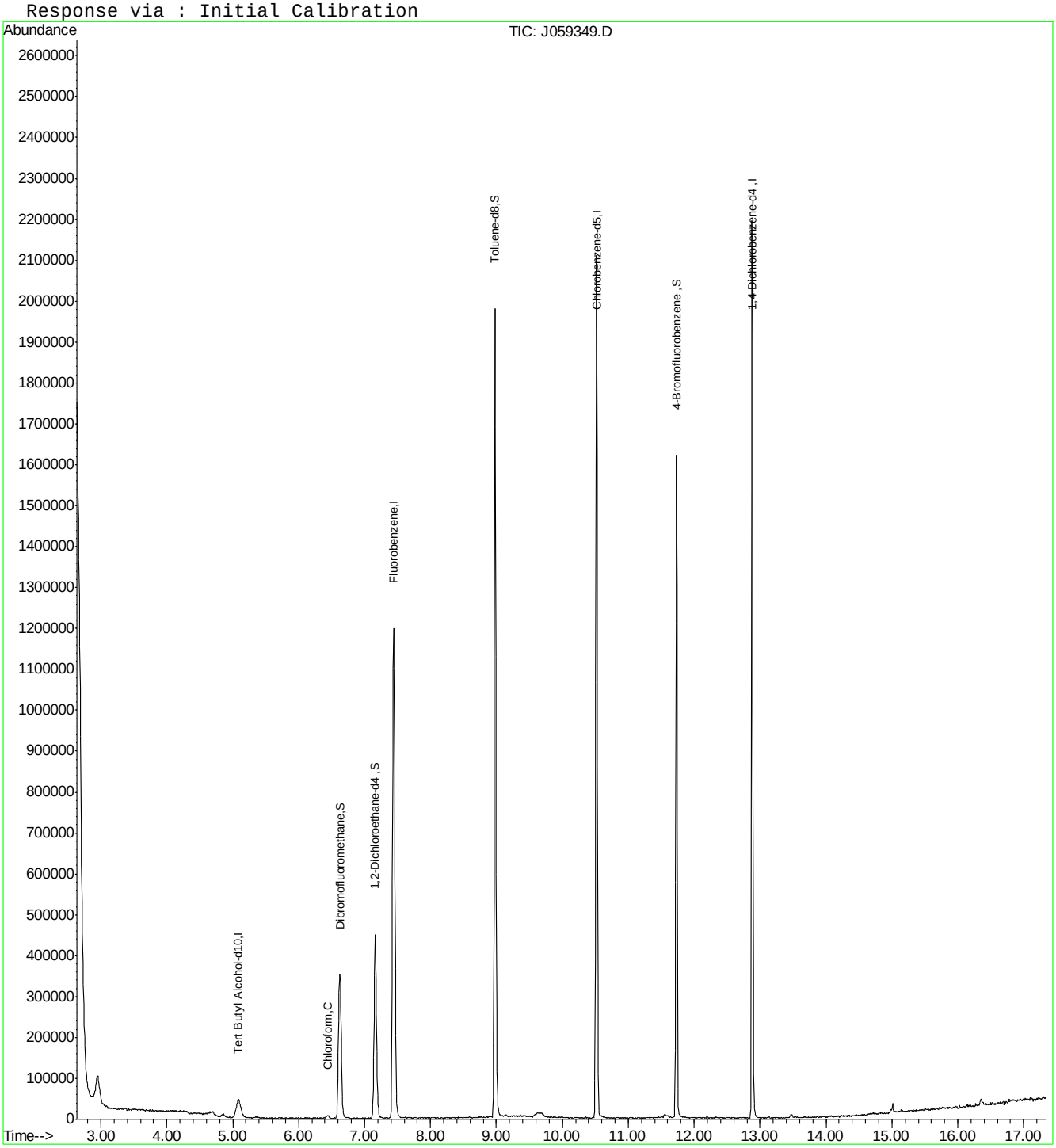
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1232640	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	897156	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	449152	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	113680	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	323556	51.31	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 102.62%			
38) 1,2-Dichloroethane-d4	7.16	65	375888	49.09	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 98.18%			
48) Toluene-d8	8.98	98	1190760	50.32	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.64%			
69) 4-Bromofluorobenzene	11.73	95	434344	50.69	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 101.38%			
Target Compounds						Qvalue
29) Chloroform	6.44	83	6074	0.29	ug/L	68

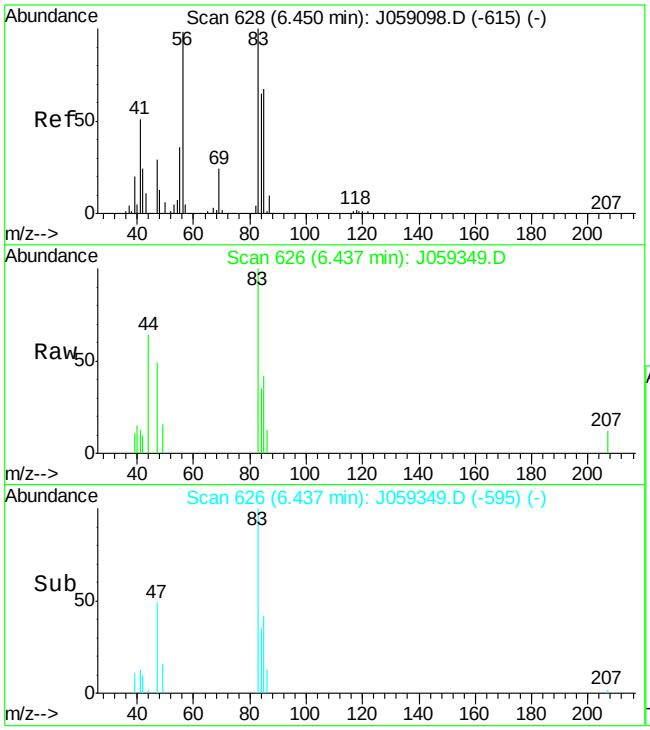
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059349.D Vial: 4
Acq On : 15 Sep 2010 10:56 am Operator: KarenW
Sample : F76426-1 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:56 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

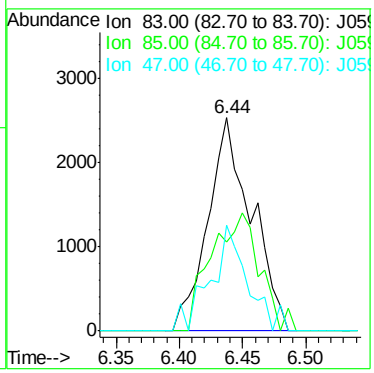




#29
Chloroform
Concen: 0.29 ug/L
RT: 6.44 min Scan# 626
Delta R.T. -0.01 min
Lab File: J059349.D
Acq: 15 Sep 2010 10:56 am

Tgt Ion: 83 Resp: 6074

Ion	Ratio	Lower	Upper
83	100		
85	41.9	37.0	97.0
47	49.4	1.6	61.6



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/14/10 10:17

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046611.D Vial: 22
Acq On : 10 Sep 2010 9:32 pm Operator: StevenH
Sample : f76426-2 Inst : MSVOA2
Misc : ms15375,vk2009,4.76,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:27 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

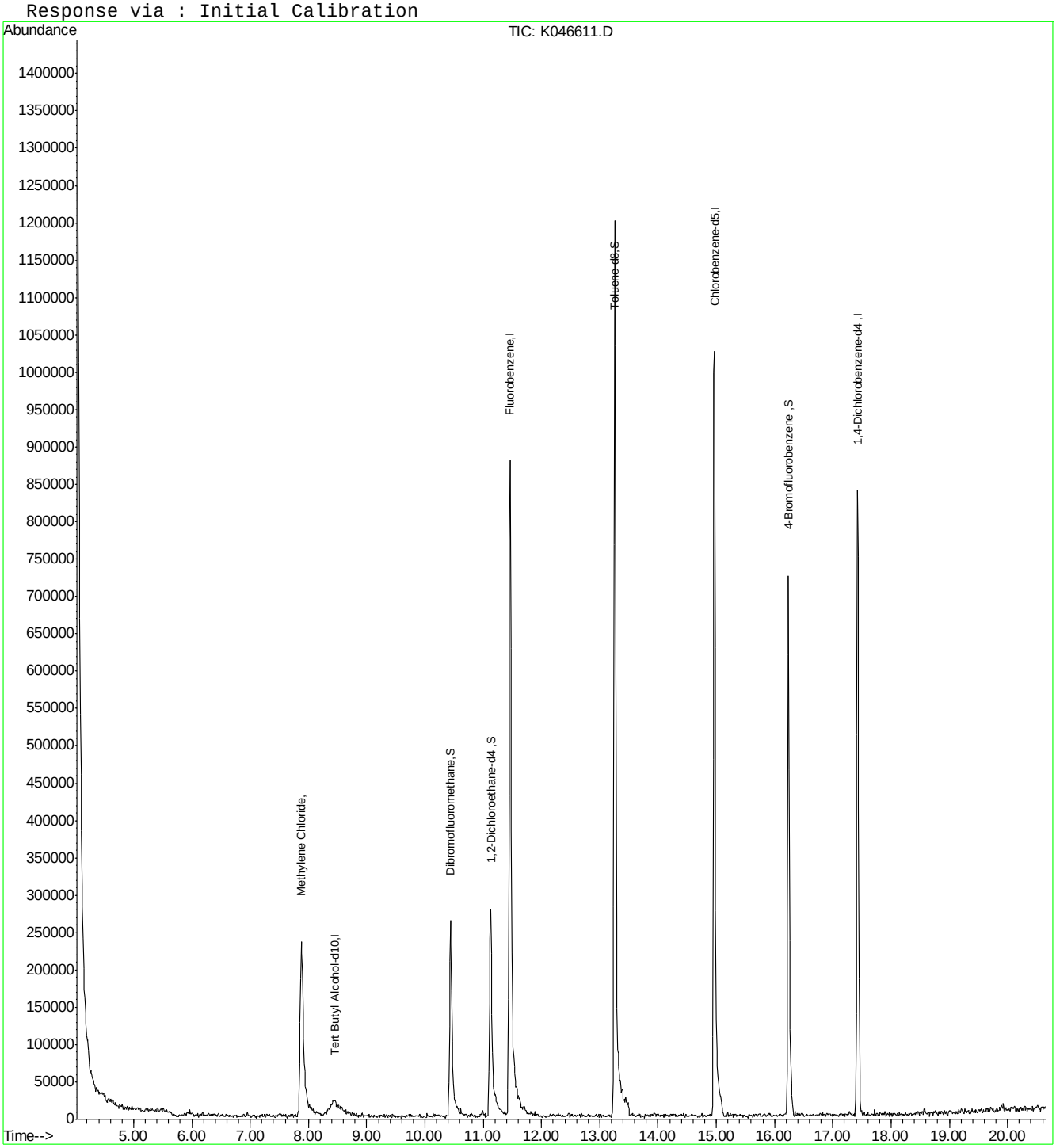
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1034553	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	675166	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	250437	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.46	65	133169m	250.00	ug/Kg	0.19
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	257341	50.69	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 101.38%			
36) 1,2-Dichloroethane-d4	11.13	65	311521	50.90	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 101.80%			
50) Toluene-d8	13.26	98	1016823	43.94	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 87.88%			
70) 4-Bromofluorobenzene	16.24	174	236658	50.91	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 101.82%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	333729	31.36	ug/Kg	97

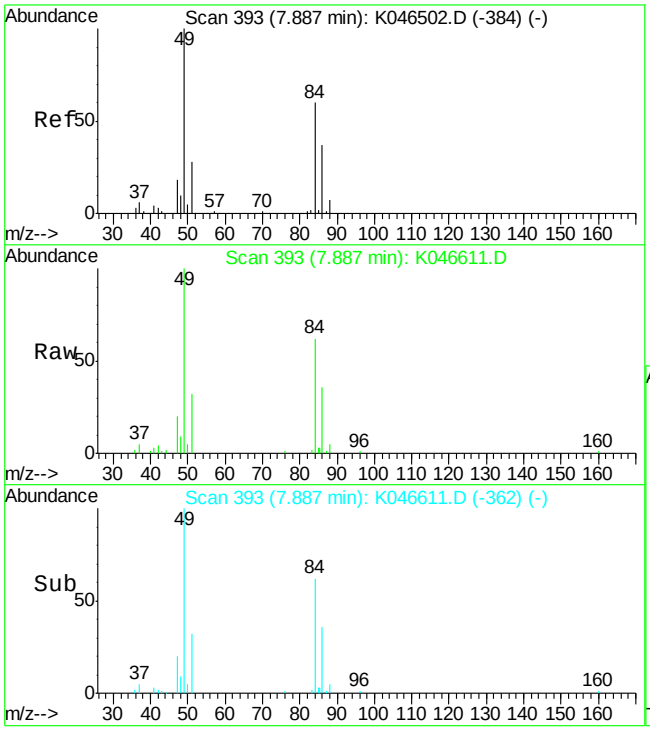
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046611.D 8260-K.M Mon Sep 13 10:51:30 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046611.D Vial: 22
Acq On : 10 Sep 2010 9:32 pm Operator: StevenH
Sample : f76426-2 Inst : MSVOA2
Misc : ms15375,vk2009,4.76,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:44 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

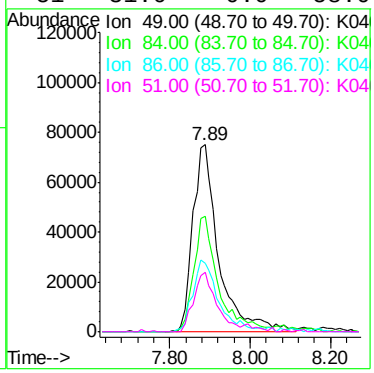




#16
Methylene Chloride
Concen: 31.36 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.00 min
Lab File: K046611.D
Acq: 10 Sep 2010 9:32 pm

Tgt Ion: 49 Resp: 333729

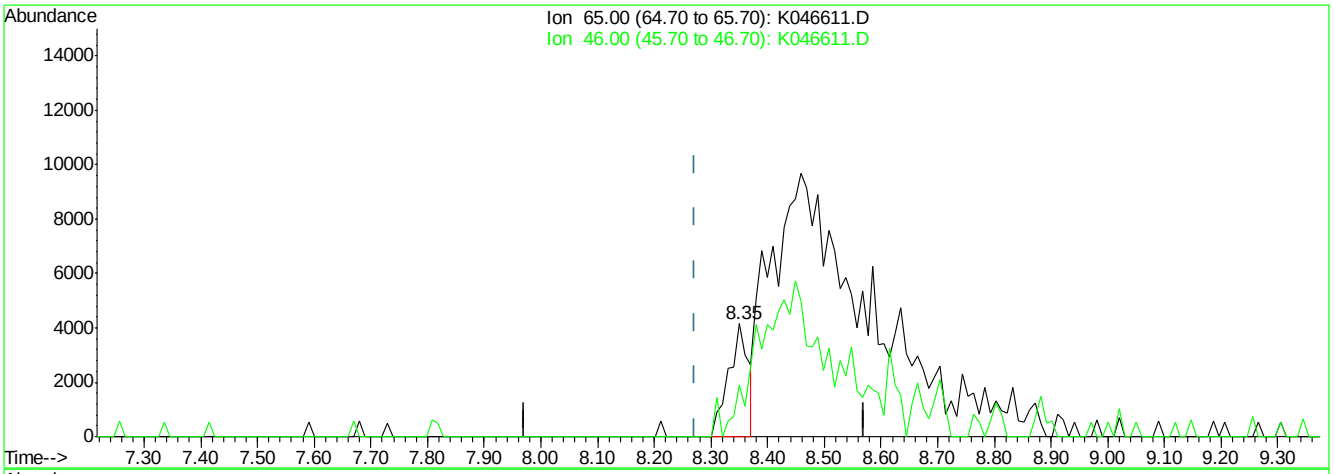
Ion	Ratio	Lower	Upper
49	100		
84	61.7	30.4	90.4
86	36.3	7.1	67.1
51	31.6	0.0	58.0

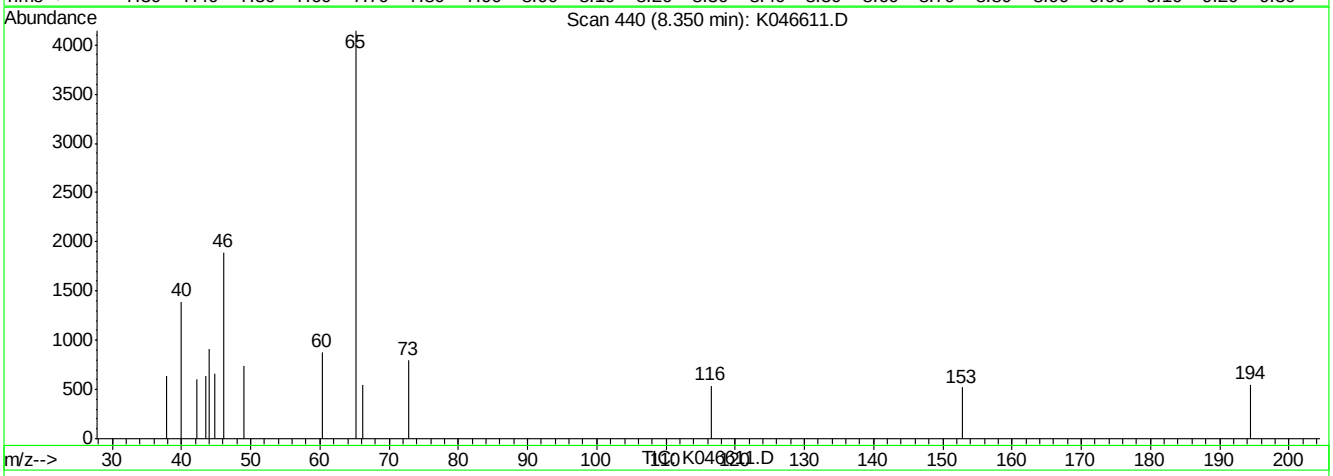


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046611.D Vial: 22
Acq On : 10 Sep 2010 9:32 pm Operator: StevenH
Sample : f76426-2 Inst : MSVOA2
Misc : ms15375,vk2009,4.76,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.35min (+0.079) 250.00ug/Kg

response 10027

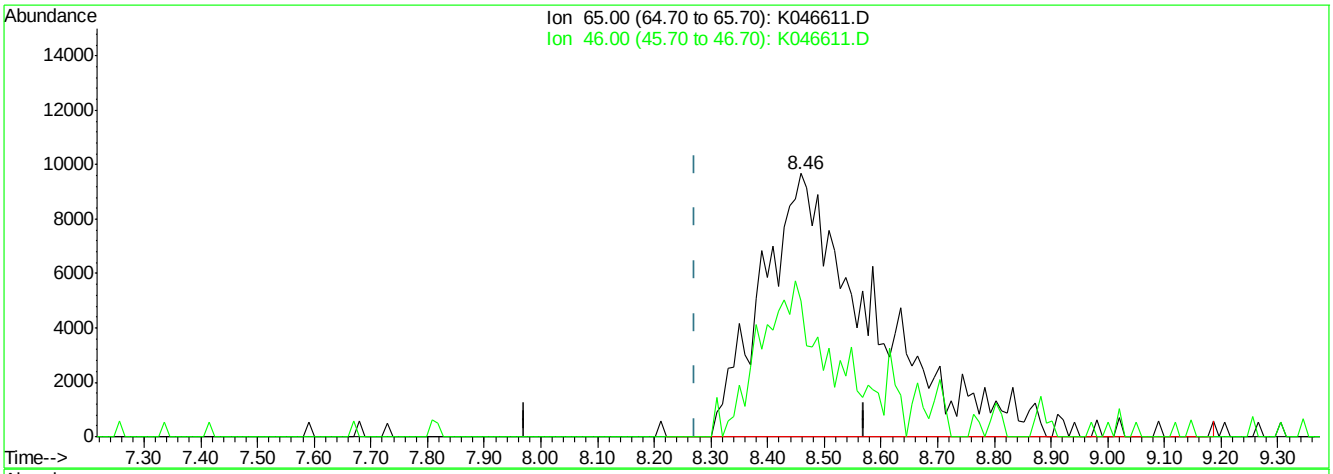
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	45.68
0.00	0.00	0.00
0.00	0.00	0.00

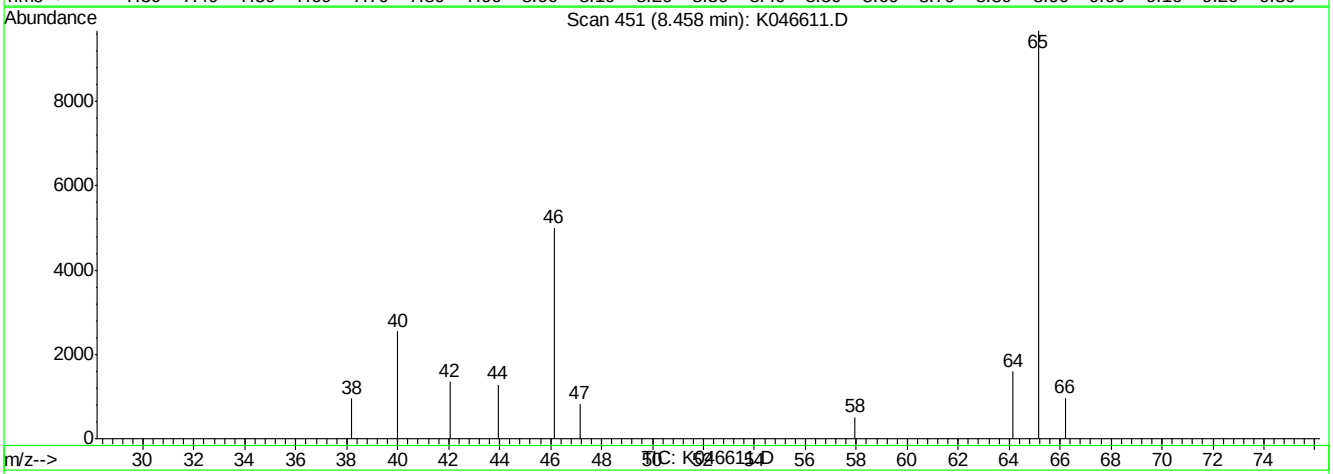
K046611.D 8260-K.M Mon Sep 13 10:44:14 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046611.D Vial: 22
Acq On : 10 Sep 2010 9:32 pm Operator: StevenH
Sample : f76426-2 Inst : MSVOA2
Misc : ms15375,vk2009,4.76,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.46min (+0.187) 250.00ug/Kg m

response 133169

Ion	Exp%	Act%
65.00	100	100
46.00	34.00	51.64
0.00	0.00	0.00
0.00	0.00	0.00

K046611.D 8260-K.M Mon Sep 13 10:44:17 2010

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059350.D Vial: 5
Acq On : 15 Sep 2010 11:19 am Operator: KarenW
Sample : F76426-3 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:54:57 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

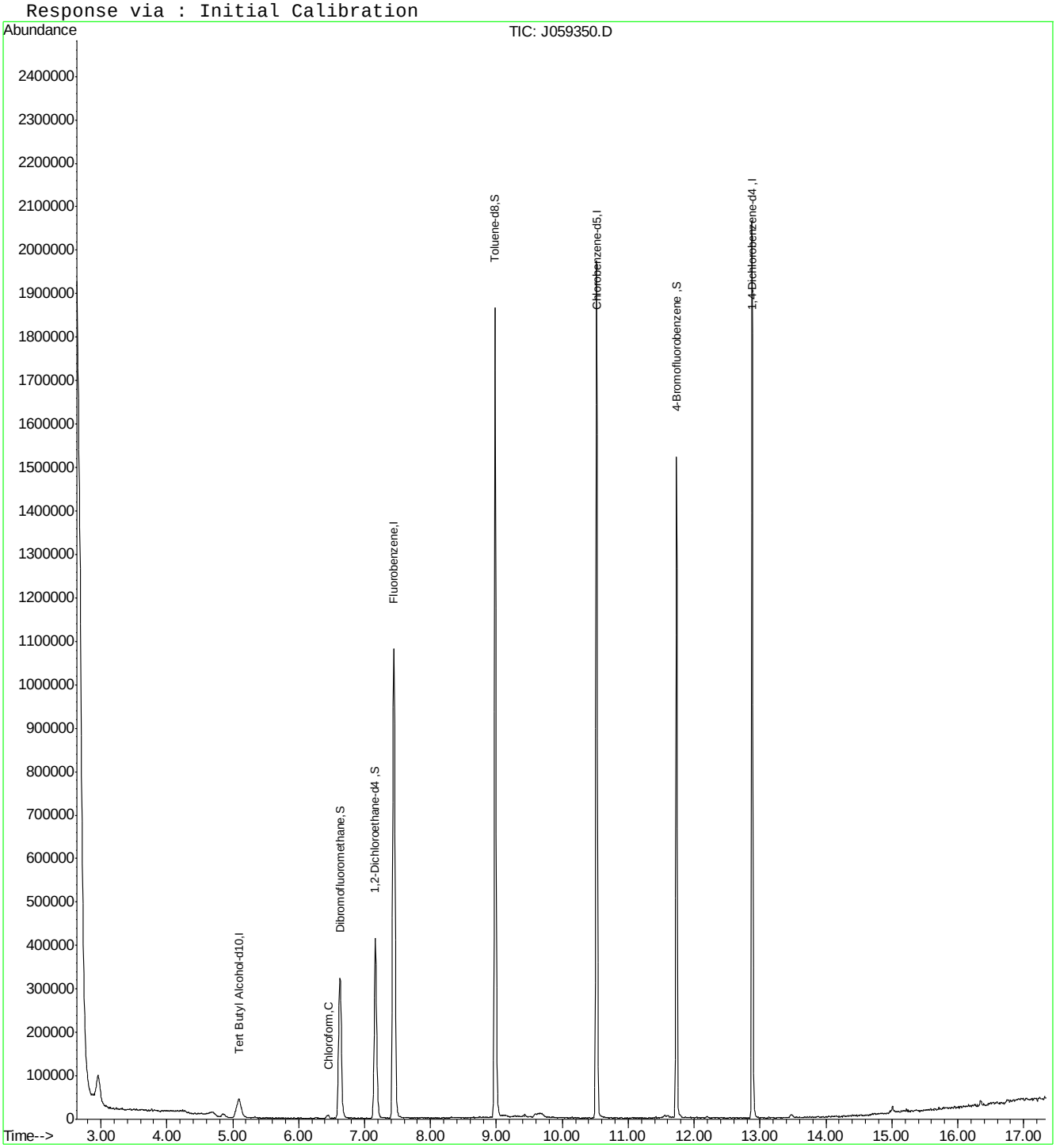
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.45	96	1166051	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	838107	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	428844	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	109353	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	297710	49.91	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 99.82%			
38) 1,2-Dichloroethane-d4	7.16	65	356394	49.20	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 98.40%			
48) Toluene-d8	8.98	98	1193988	54.01	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 108.02%			
69) 4-Bromofluorobenzene	11.73	95	400537	48.96	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 97.92%			
Target Compounds						Qvalue
29) Chloroform	6.45	83	5642	0.29	ug/L	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059350.D 8260-J.M Wed Sep 15 14:01:16 2010 Page 1

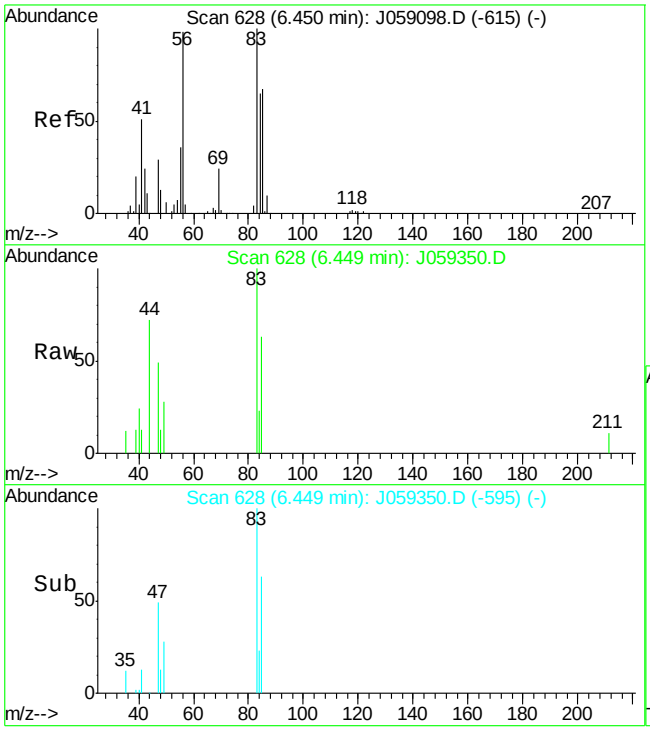
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059350.D Vial: 5
Acq On : 15 Sep 2010 11:19 am Operator: KarenW
Sample : F76426-3 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:56 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration



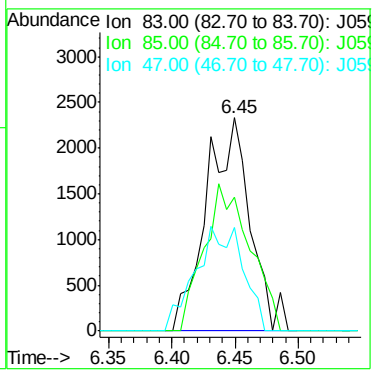
J059350.D 8260-J.M Wed Sep 15 14:01:16 2010 Page 2



#29
Chloroform
Concen: 0.29 ug/L
RT: 6.45 min Scan# 628
Delta R.T. -0.00 min
Lab File: J059350.D
Acq: 15 Sep 2010 11:19 am

Tgt Ion: 83 Resp: 5642

Ion	Ratio	Lower	Upper
83	100		
85	62.8	37.0	97.0
47	48.7	1.6	61.6



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/14/10 10:17

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046612.D Vial: 23
Acq On : 10 Sep 2010 9:58 pm Operator: StevenH
Sample : f76426-4 Inst : MSVOA2
Misc : ms15375,vk2009,4.63,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:28 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

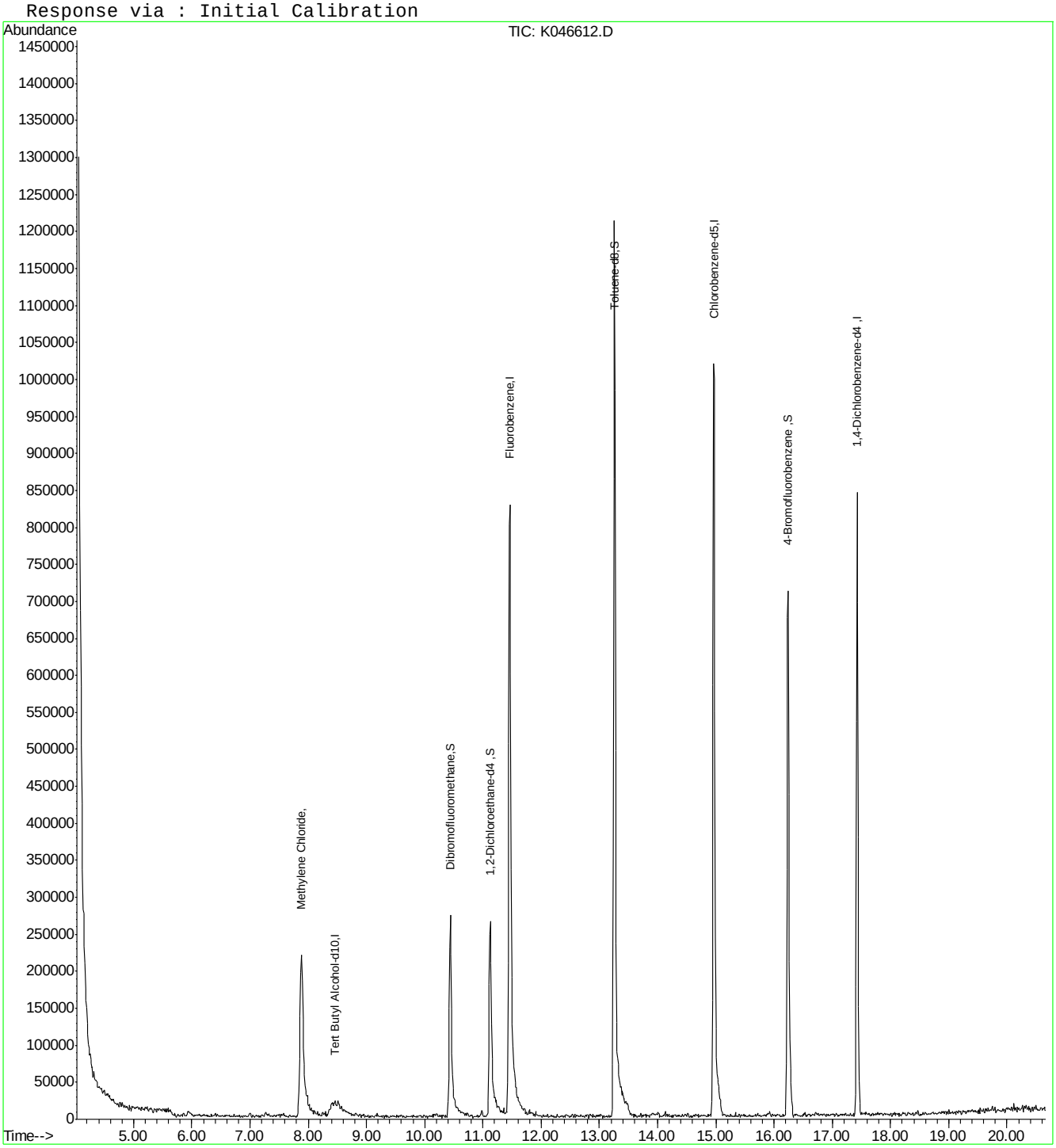
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1021012	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	666865	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	244712	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.46	65	127638m	250.00	ug/Kg	0.19
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	259973	51.88	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 103.76%			
36) 1,2-Dichloroethane-d4	11.13	65	292608	48.44	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 96.88%			
50) Toluene-d8	13.26	98	1026150	44.90	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 89.80%			
70) 4-Bromofluorobenzene	16.24	174	229360	50.49	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.98%			
Target Compounds						Qvalue
16) Methylene Chloride	7.88	49	330393	31.46	ug/Kg	95

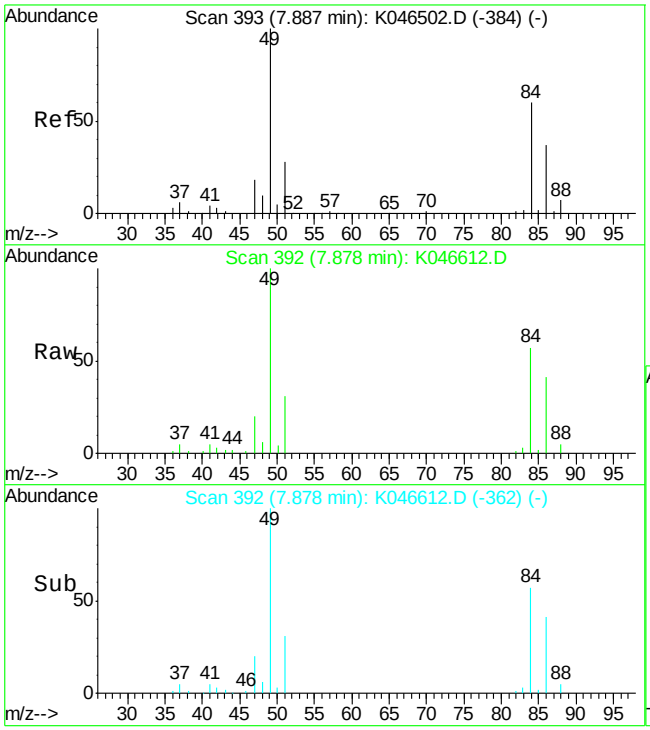
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046612.D 8260-K.M Mon Sep 13 10:51:36 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046612.D Vial: 23
Acq On : 10 Sep 2010 9:58 pm Operator: StevenH
Sample : f76426-4 Inst : MSVOA2
Misc : ms15375,vk2009,4.63,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:45 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

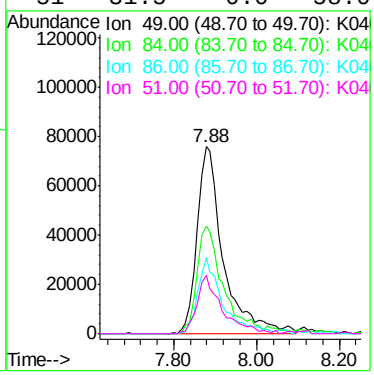




#16
Methylene Chloride
Concen: 31.46 ug/Kg
RT: 7.88 min Scan# 392
Delta R.T. -0.01 min
Lab File: K046612.D
Acq: 10 Sep 2010 9:58 pm

Tgt Ion: 49 Resp: 330393

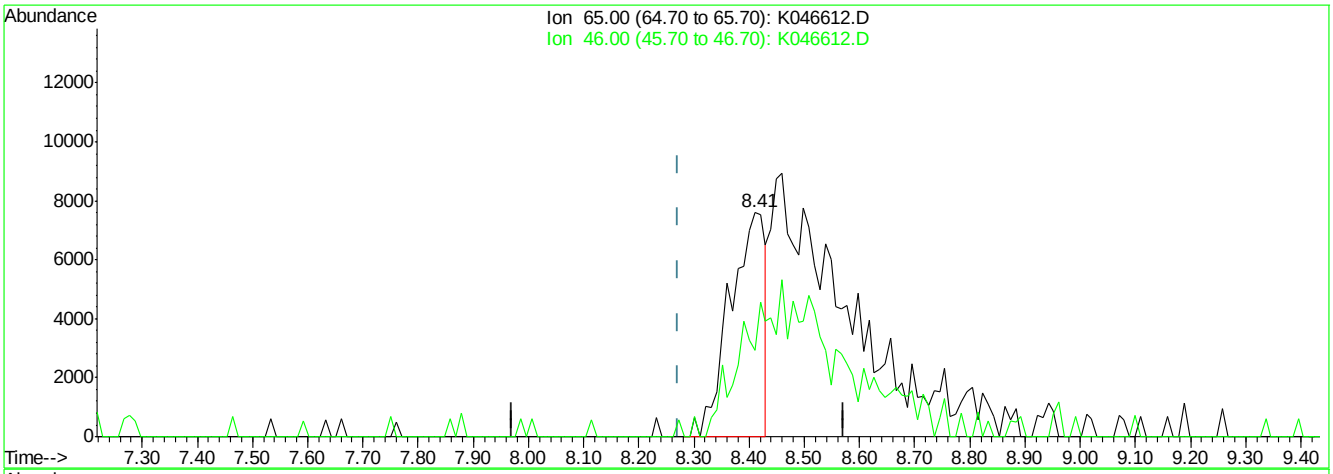
Ion	Ratio	Lower	Upper
49	100		
84	57.4	30.4	90.4
86	40.9	7.1	67.1
51	31.5	0.0	58.0

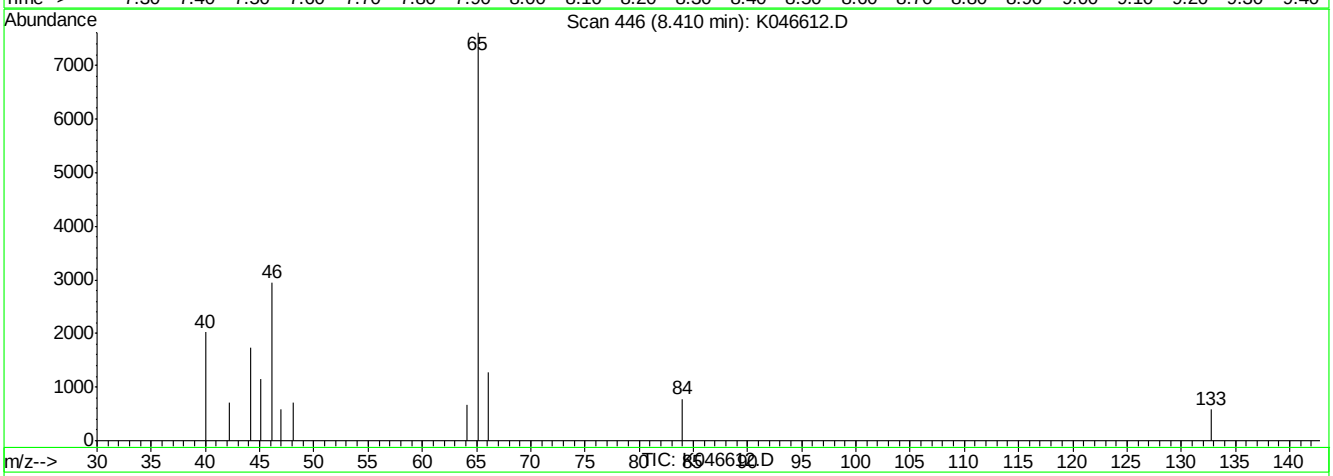


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046612.D Vial: 23
Acq On : 10 Sep 2010 9:58 pm Operator: StevenH
Sample : f76426-4 Inst : MSVOA2
Misc : ms15375,vk2009,4.63,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.41min (+0.139) 250.00ug/Kg

response 33936

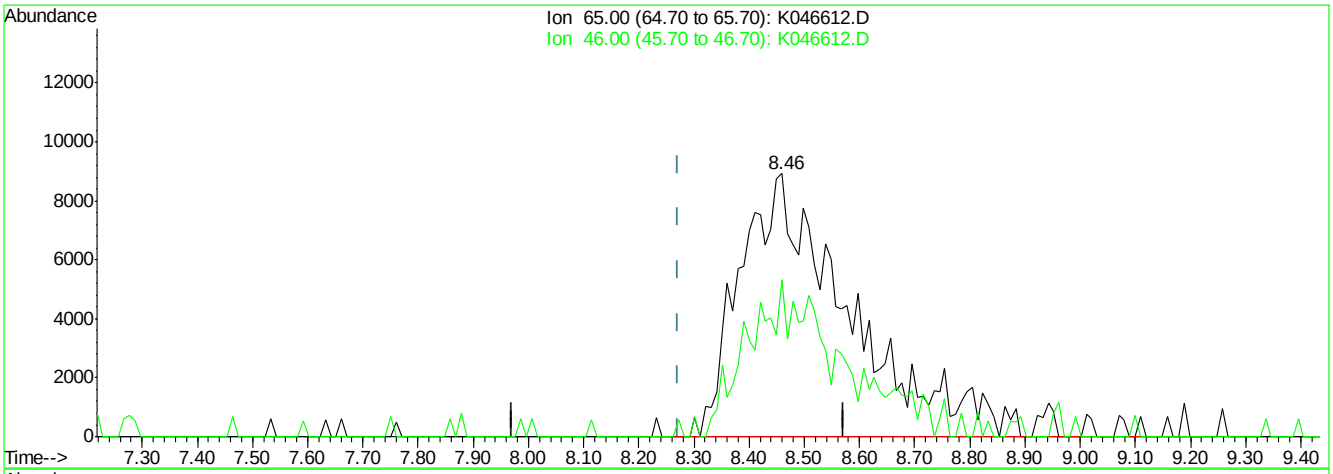
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	38.73
0.00	0.00	0.00
0.00	0.00	0.00

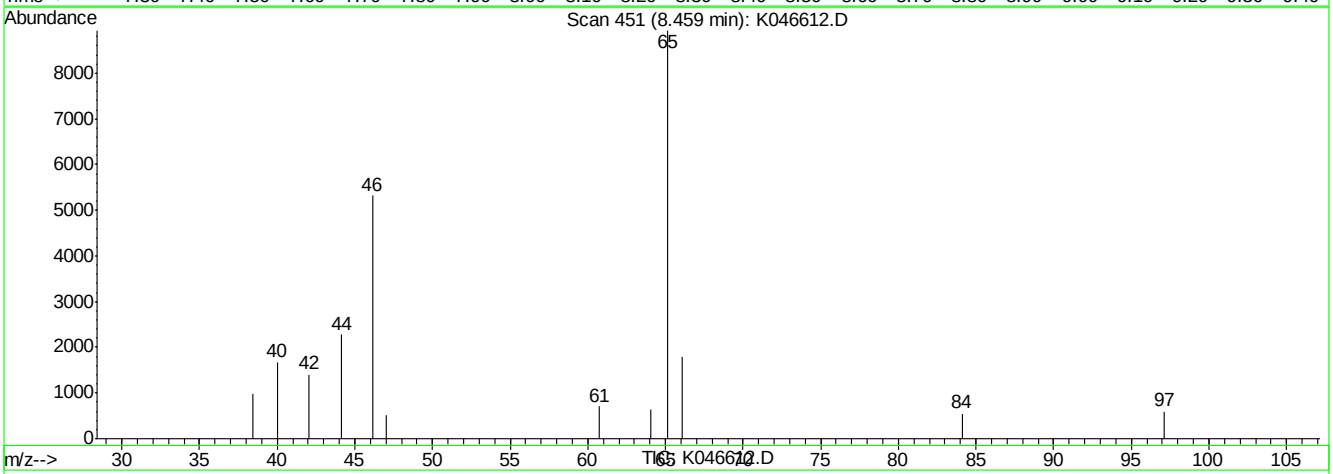
K046612.D 8260-K.M Mon Sep 13 10:44:51 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046612.D Vial: 23
Acq On : 10 Sep 2010 9:58 pm Operator: StevenH
Sample : f76426-4 Inst : MSVOA2
Misc : ms15375,vk2009,4.63,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.46min (+0.188) 250.00ug/Kg m

response 127638

Ion	Exp%	Act%
65.00	100	100
46.00	34.00	59.61#
0.00	0.00	0.00
0.00	0.00	0.00

K046612.D 8260-K.M Mon Sep 13 10:44:54 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/14/10 10:17

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046609.D Vial: 20
Acq On : 10 Sep 2010 8:41 pm Operator: StevenH
Sample : f76426-5,tb Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:25 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

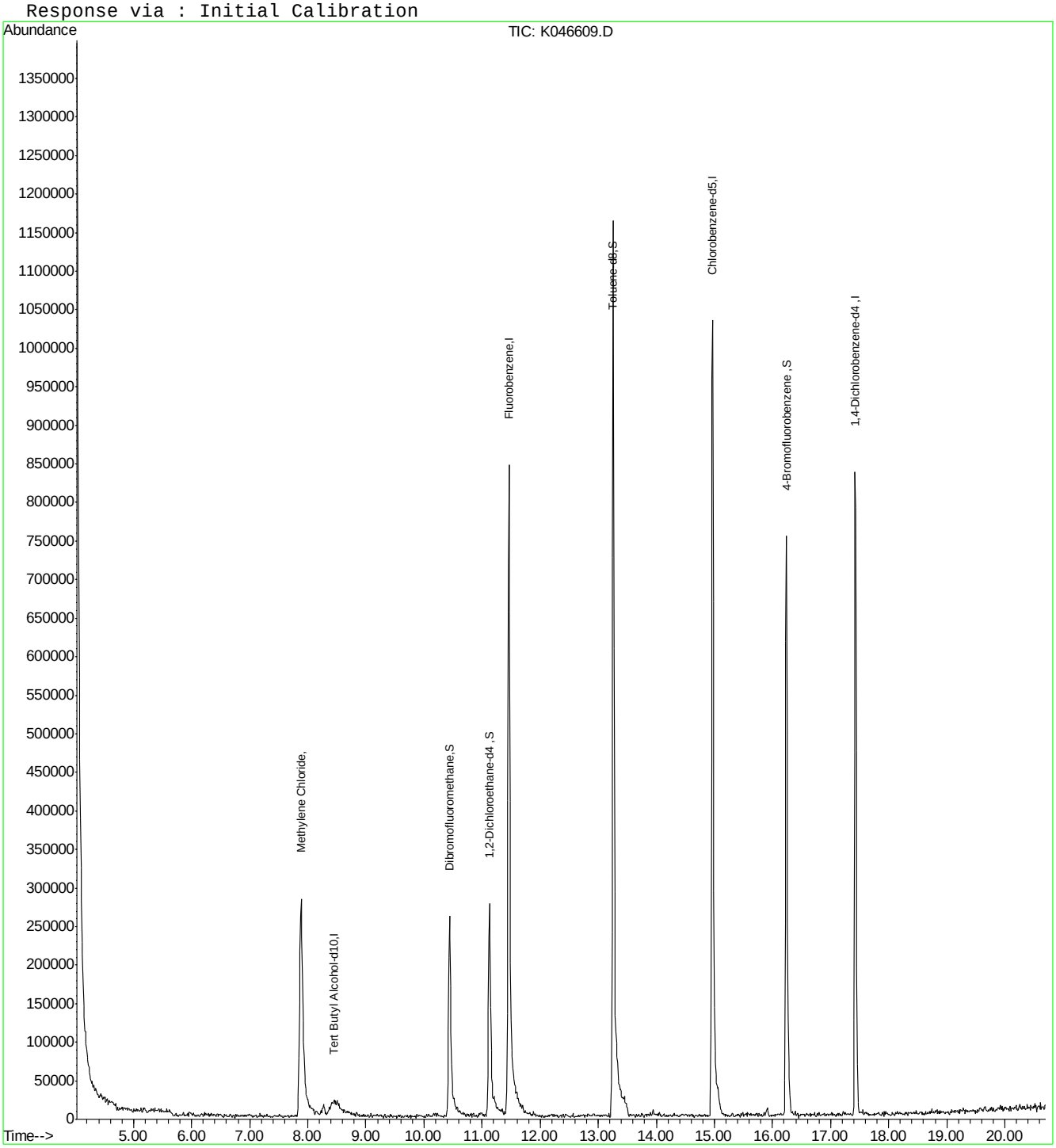
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1018930	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	675853	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	253234	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.45	65	127809m	250.00	ug/Kg	0.18
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	253685	50.73	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 101.46%			
36) 1,2-Dichloroethane-d4	11.13	65	300914	49.92	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 99.84%			
50) Toluene-d8	13.26	98	1014642	43.80	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 87.60%			
70) 4-Bromofluorobenzene	16.24	174	237978	50.63	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 101.26%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	416997	39.79	ug/Kg	99

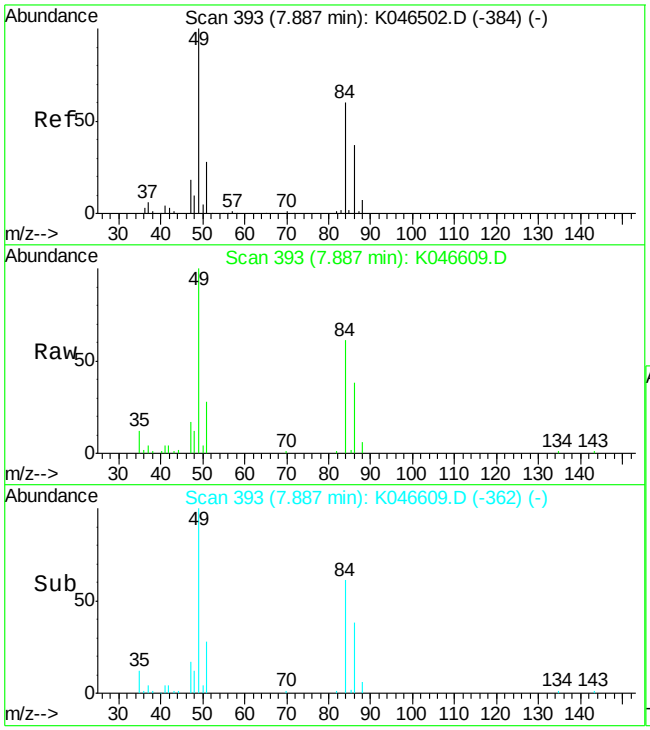
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046609.D 8260-K.M Mon Sep 13 10:51:18 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046609.D Vial: 20
Acq On : 10 Sep 2010 8:41 pm Operator: StevenH
Sample : f76426-5,tb Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:43 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

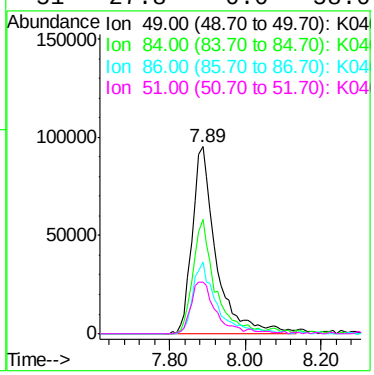




#16
Methylene Chloride
Concen: 39.79 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.00 min
Lab File: K046609.D
Acq: 10 Sep 2010 8:41 pm

Tgt Ion: 49 Resp: 416997

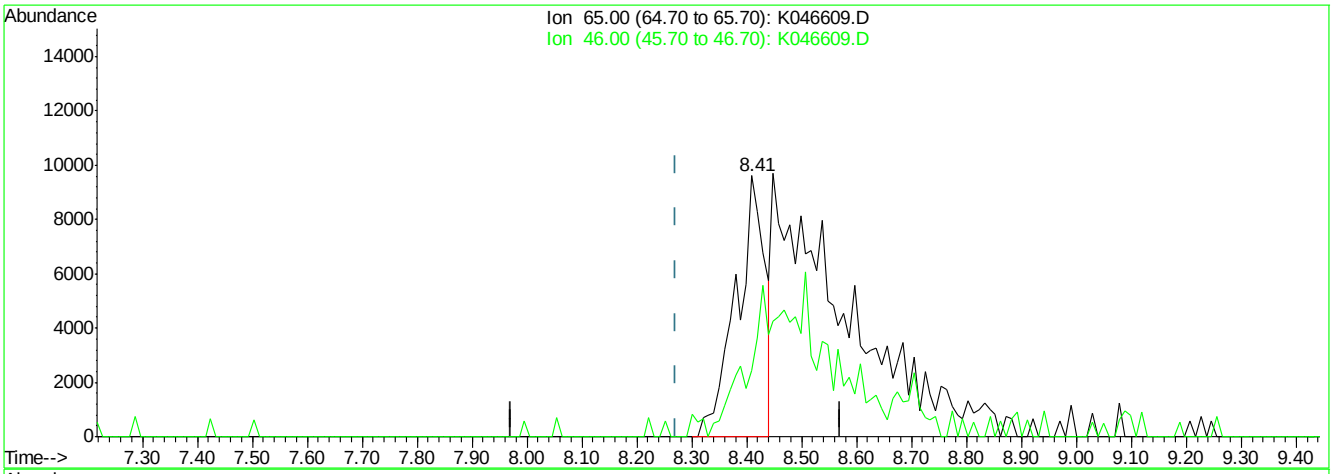
Ion	Ratio	Lower	Upper
49	100		
84	60.9	30.4	90.4
86	38.3	7.1	67.1
51	27.8	0.0	58.0



Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046609.D Vial: 20
Acq On : 10 Sep 2010 8:41 pm Operator: StevenH
Sample : f76426-5,tb Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:43 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration



(93) Tert Butyl Alcohol-d10 (I)

8.41min (+0.138) 250.00ug/Kg

response 34289

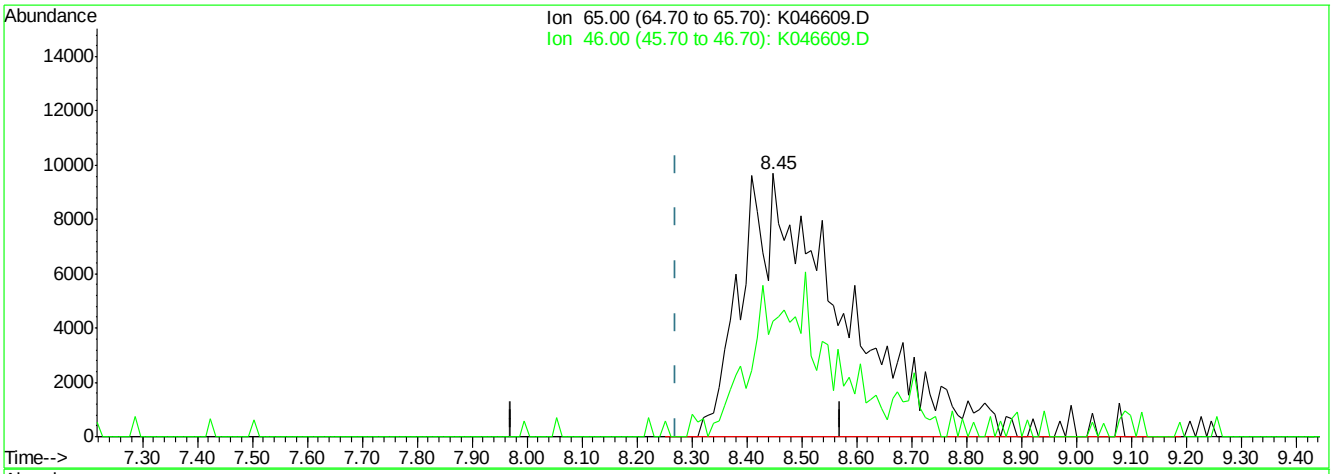
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	16.84
0.00	0.00	0.00
0.00	0.00	0.00

K046609.D 8260-K.M Mon Sep 13 10:42:38 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046609.D Vial: 20
Acq On : 10 Sep 2010 8:41 pm Operator: StevenH
Sample : f76426-5,tb Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:43 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration



(93) Tert Butyl Alcohol-d10 (I)

8.45min (+0.177) 250.00ug/Kg m

response 127809

Ion	Exp%	Act%
65.00	100	100
46.00	34.00	43.67
0.00	0.00	0.00
0.00	0.00	0.00

K046609.D 8260-K.M Mon Sep 13 10:42:43 2010

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059351.D Vial: 6
Acq On : 15 Sep 2010 11:43 am Operator: KarenW
Sample : F76426-6 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:54:58 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

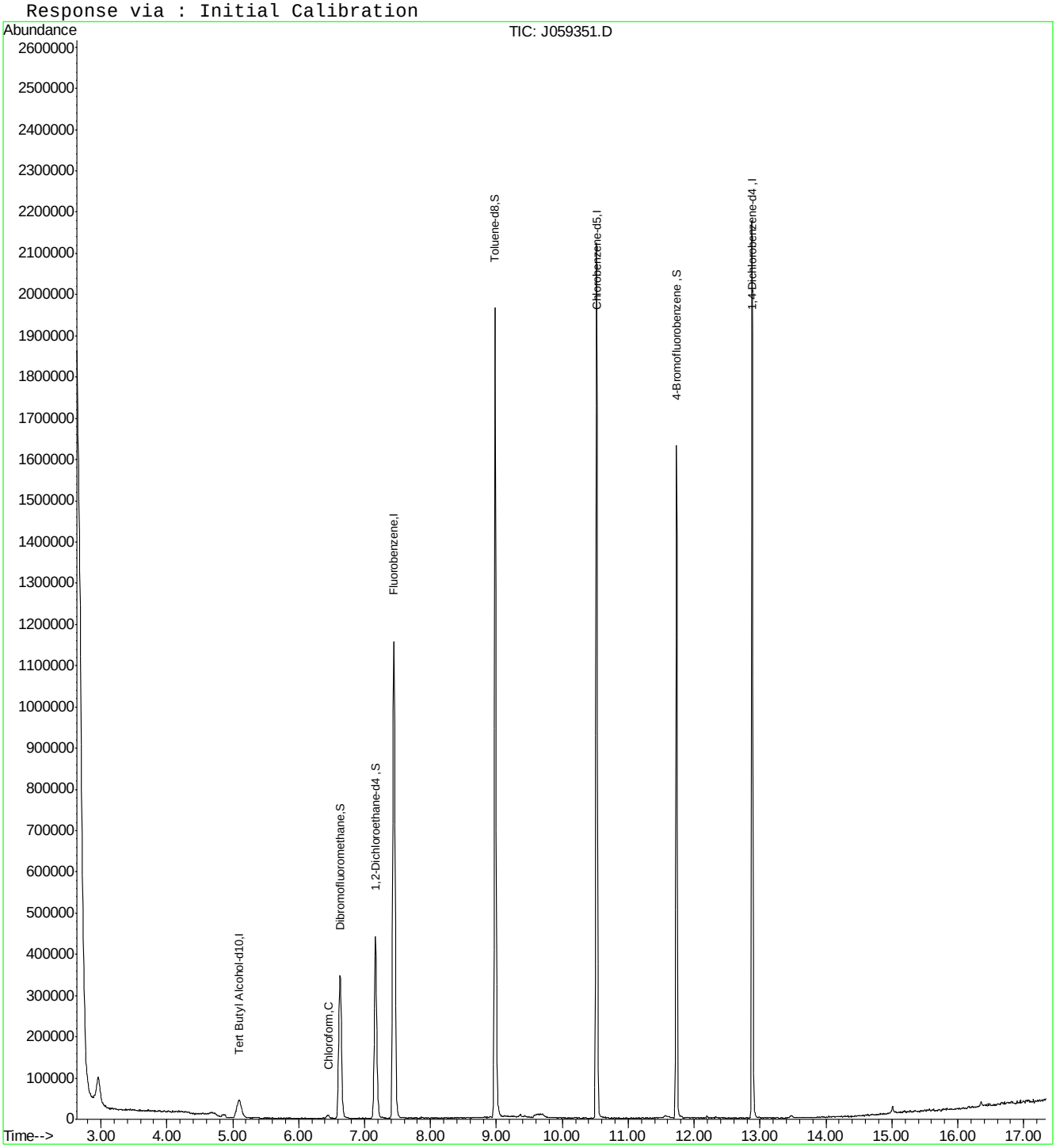
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1212338	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	899048	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	445696	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.10	65	113473	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	312761	50.43	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 100.86%			
38) 1,2-Dichloroethane-d4	7.17	65	369092	49.01	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 98.02%			
48) Toluene-d8	8.98	98	1174610	49.53	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 99.06%			
69) 4-Bromofluorobenzene	11.73	95	434985	51.16	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 102.32%			
Target Compounds						Qvalue
29) Chloroform	6.45	83	6784	0.33	ug/L	83

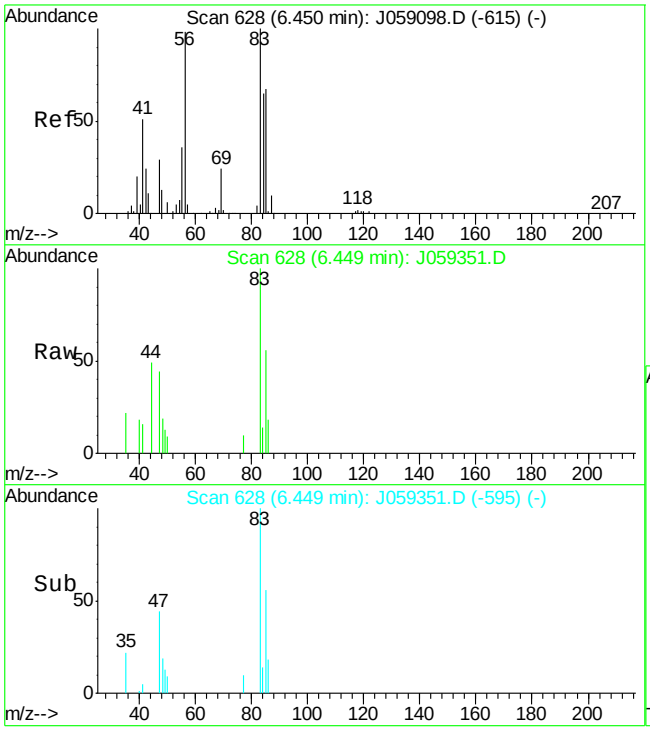
(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059351.D 8260-J.M Wed Sep 15 14:01:17 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059351.D Vial: 6
Acq On : 15 Sep 2010 11:43 am Operator: KarenW
Sample : F76426-6 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:57 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

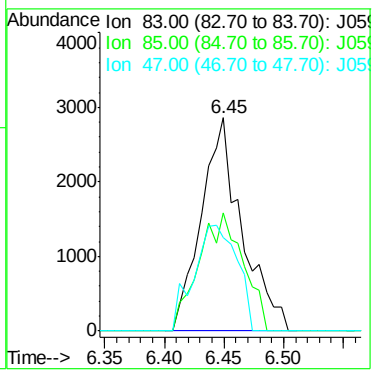




#29
Chloroform
Concen: 0.33 ug/L
RT: 6.45 min Scan# 628
Delta R.T. -0.00 min
Lab File: J059351.D
Acq: 15 Sep 2010 11:43 am

Tgt Ion: 83 Resp: 6784

Ion	Ratio	Lower	Upper
83	100		
85	55.6	37.0	97.0
47	44.0	1.6	61.6



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/14/10 10:17

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046613.D Vial: 24
Acq On : 10 Sep 2010 10:23 pm Operator: StevenH
Sample : f76426-7 Inst : MSVOA2
Misc : ms15375,vk2009,5.33,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:29 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

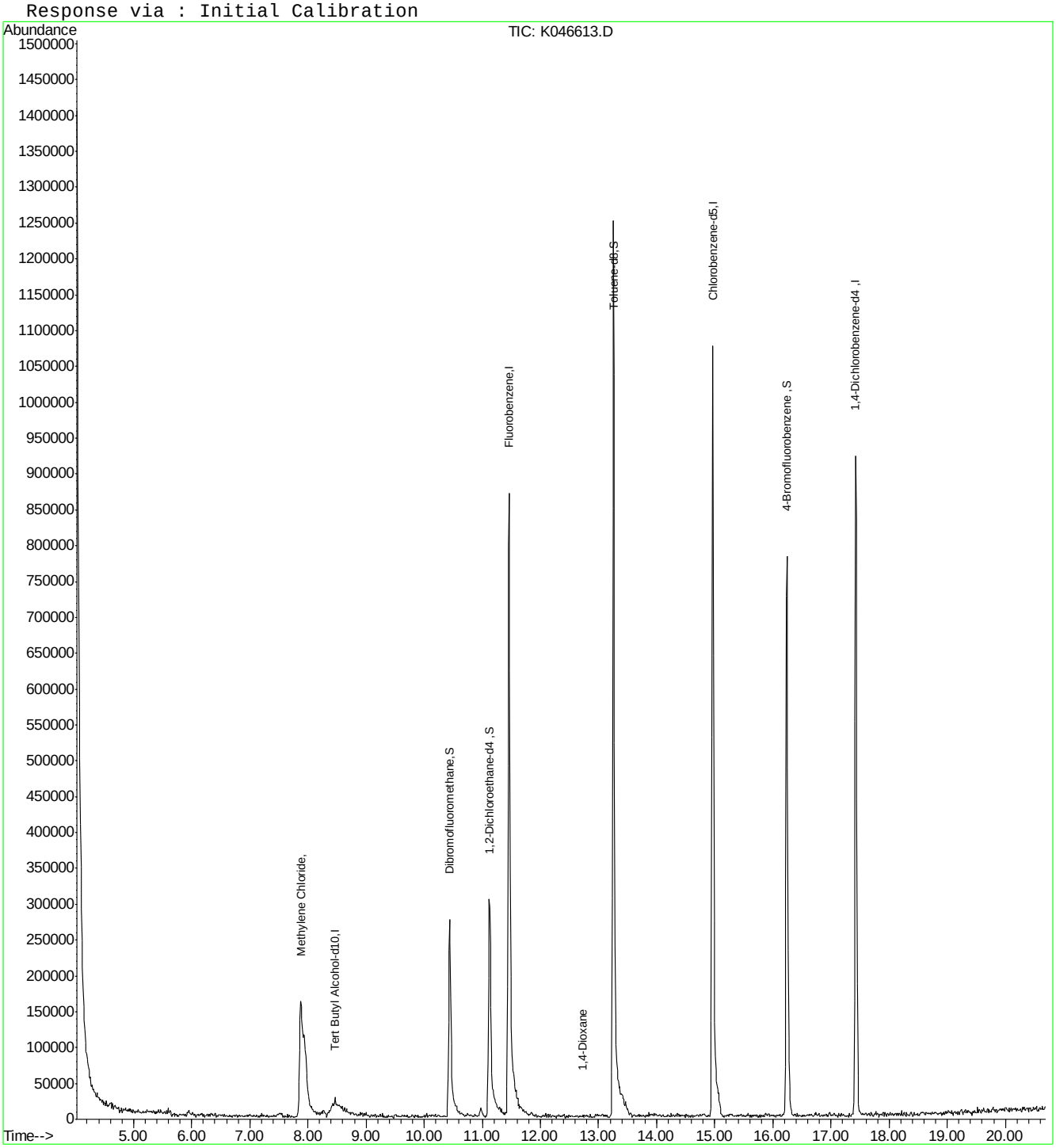
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1042357	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	705039	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	269956	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.48	65	166256m	250.00	ug/Kg	0.21
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	266119	52.02	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 104.04%			
36) 1,2-Dichloroethane-d4	11.12	65	346458	56.18	ug/Kg	-0.01
Spiked Amount 50.000	Range 77 - 123		Recovery = 112.36%			
50) Toluene-d8	13.26	98	1029934	42.62	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 85.24%			
70) 4-Bromofluorobenzene	16.24	174	260230	51.93	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.86%			
Target Compounds						Qvalue
16) Methylene Chloride	7.88	49	356998	33.30	ug/Kg	94
97) 1,4-Dioxane	12.71	88	297	2.75	ug/Kg#	23

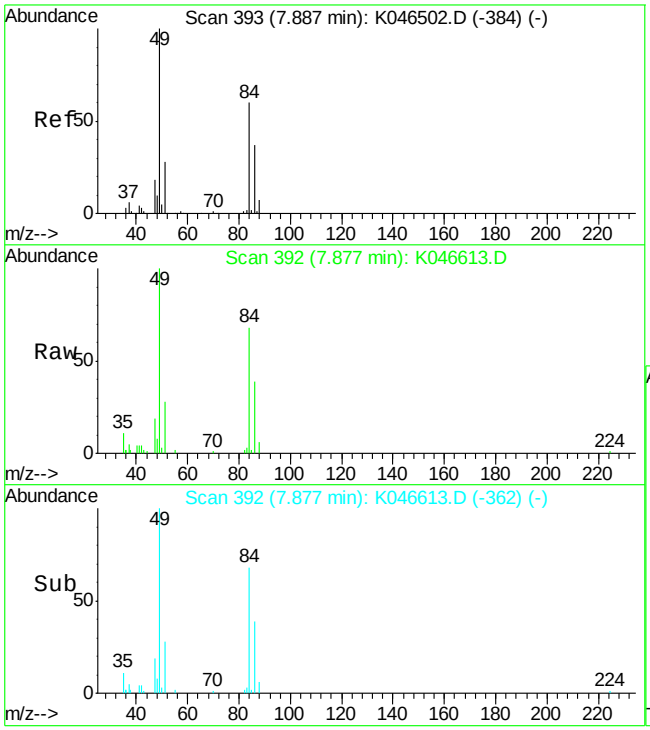
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046613.D Vial: 24
Acq On : 10 Sep 2010 10:23 pm Operator: StevenH
Sample : f76426-7 Inst : MSVOA2
Misc : ms15375,vk2009,5.33,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:45 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

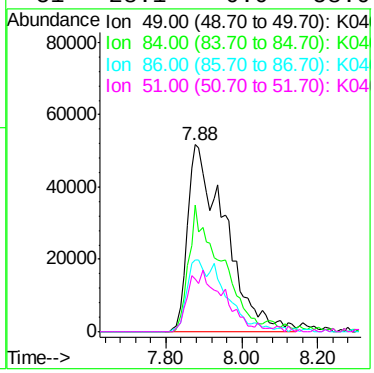


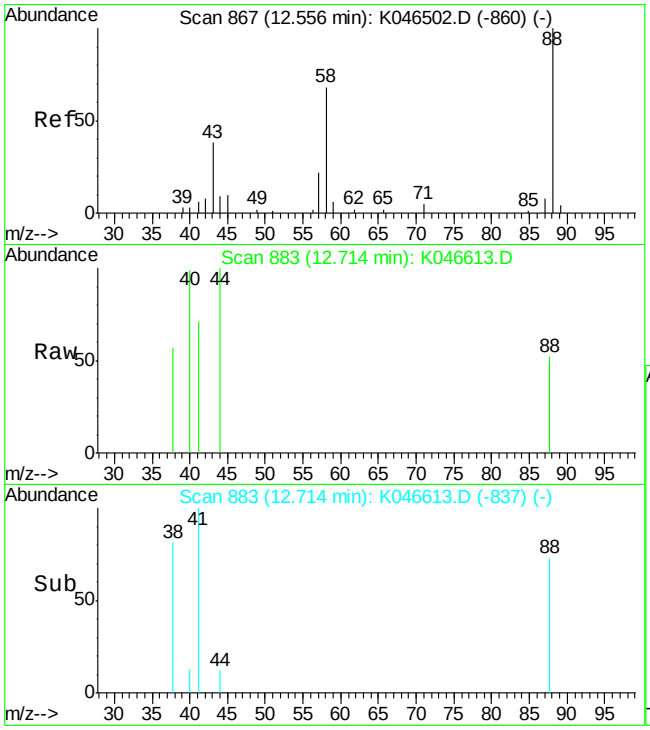


#16
Methylene Chloride
Concen: 33.30 ug/Kg
RT: 7.88 min Scan# 392
Delta R.T. -0.01 min
Lab File: K046613.D
Acq: 10 Sep 2010 10:23 pm

Tgt Ion: 49 Resp: 356998

Ion	Ratio	Lower	Upper
49	100		
84	68.0	30.4	90.4
86	38.6	7.1	67.1
51	28.1	0.0	58.0

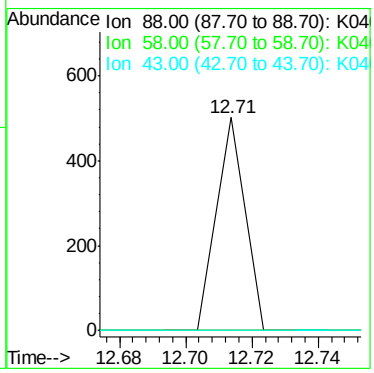




#97
1,4-Dioxane
Concen: 2.75 ug/Kg
RT: 12.71 min Scan# 883
Delta R.T. 0.16 min
Lab File: K046613.D
Acq: 10 Sep 2010 10:23 pm

Tgt Ion: 88 Resp: 297

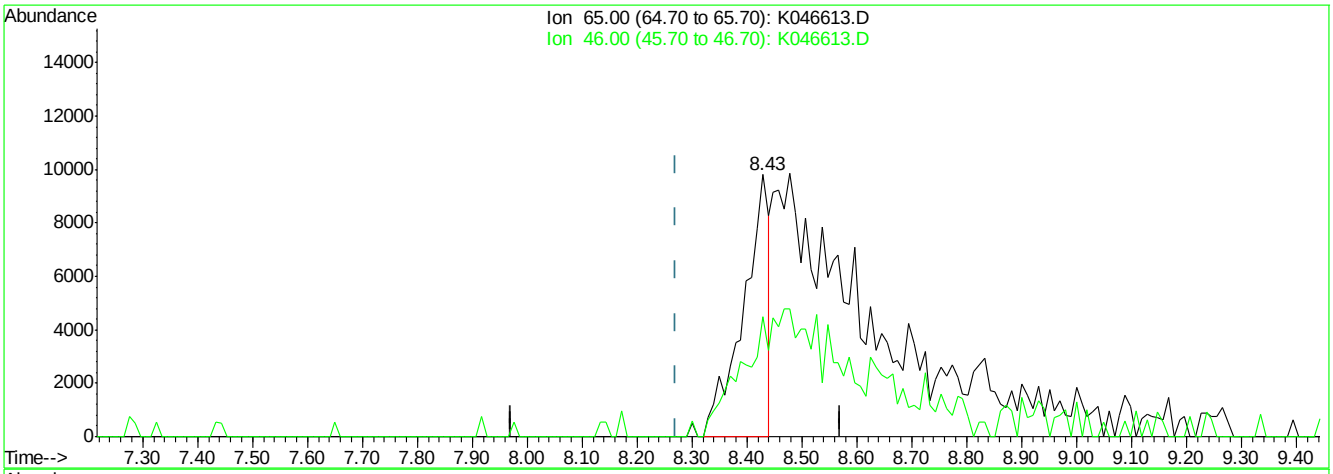
Ion	Ratio	Lower	Upper
88	100		
58	0.0	48.4	88.4#
43	0.0	18.4	58.4#

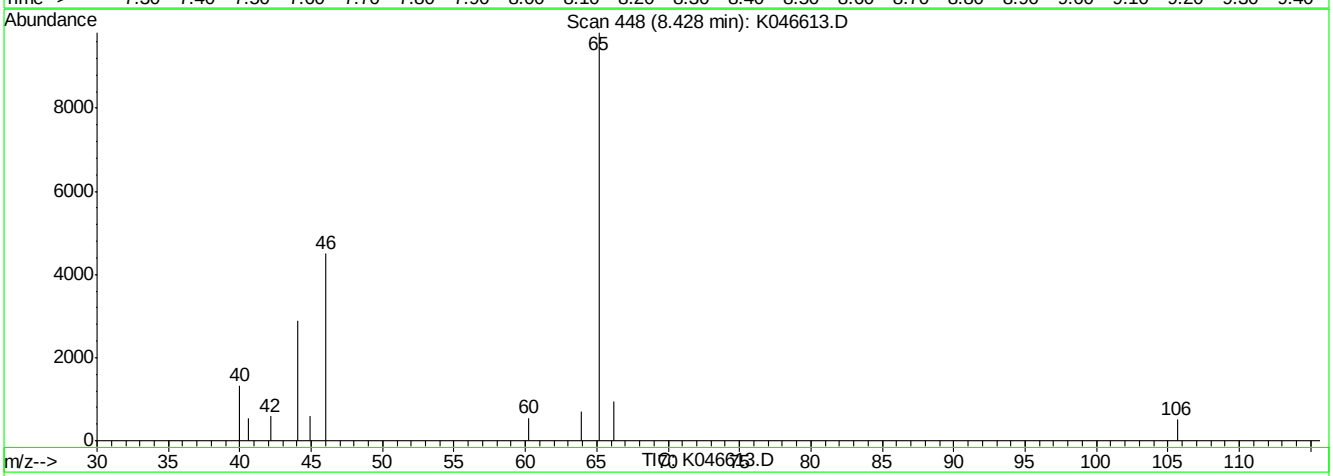


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046613.D Vial: 24
Acq On : 10 Sep 2010 10:23 pm Operator: StevenH
Sample : f76426-7 Inst : MSVOA2
Misc : ms15375,vk2009,5.33,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.43min (+0.157) 250.00ug/Kg

response 31434

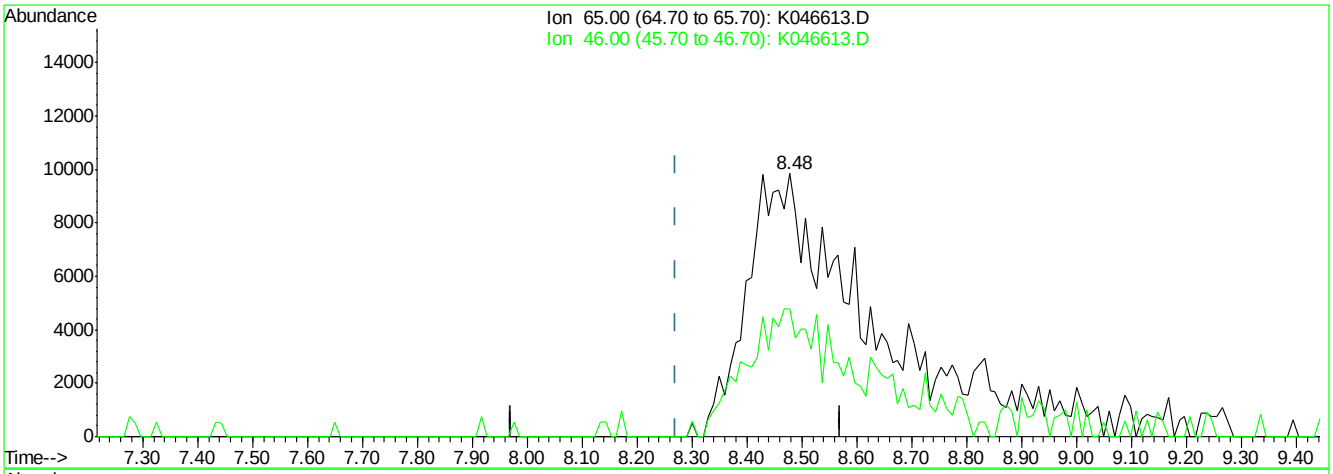
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	45.76
0.00	0.00	0.00
0.00	0.00	0.00

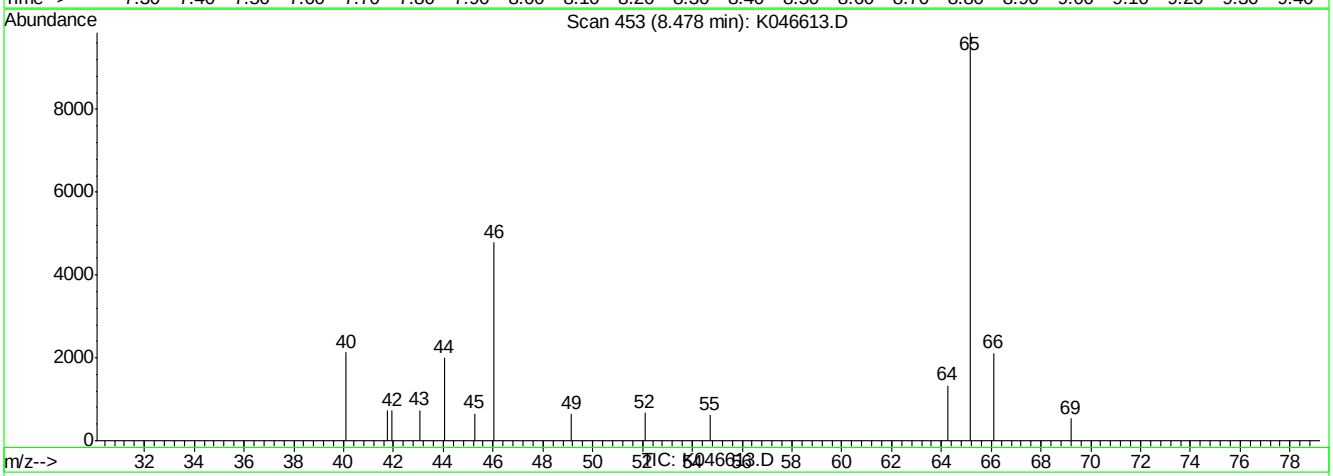
K046613.D 8260-K.M Mon Sep 13 10:45:20 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046613.D Vial: 24
Acq On : 10 Sep 2010 10:23 pm Operator: StevenH
Sample : f76426-7 Inst : MSVOA2
Misc : ms15375,vk2009,5.33,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.48min (+0.207) 250.00ug/Kg m

response 166256

Ion	Exp%	Act%
65.00	100	100
46.00	34.00	48.54
0.00	0.00	0.00
0.00	0.00	0.00

K046613.D 8260-K.M Mon Sep 13 10:45:24 2010

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059352.D Vial: 7
Acq On : 15 Sep 2010 12:06 pm Operator: KarenW
Sample : F76426-8 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:54:59 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

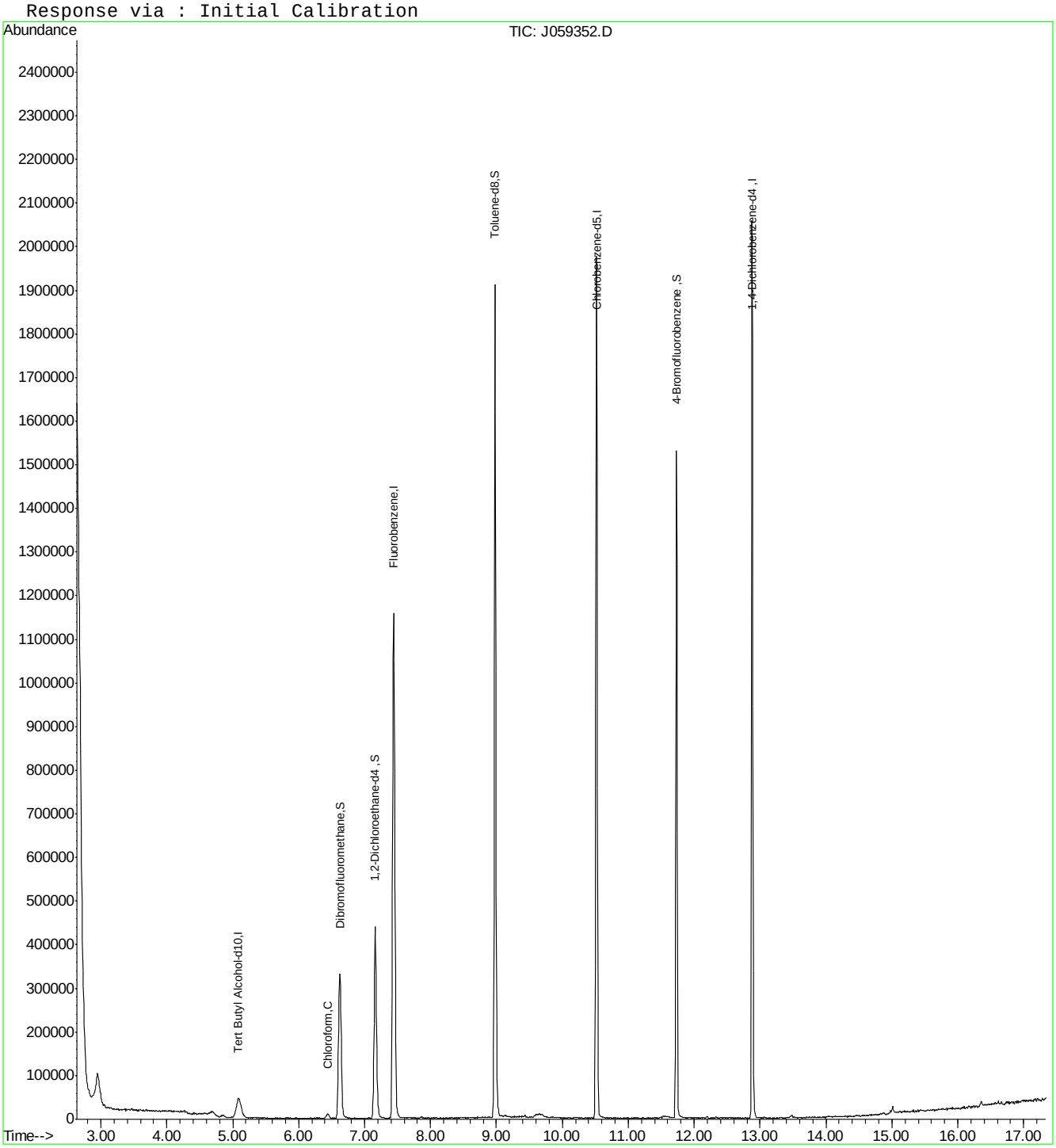
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1131728	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	774739	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	416545	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	116538	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	289472	50.00	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 100.00%			
38) 1,2-Dichloroethane-d4	7.16	65	353279	50.25	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 100.50%			
48) Toluene-d8	8.98	98	1083117	53.00	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 106.00%			
69) 4-Bromofluorobenzene	11.73	95	400746	50.43	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 100.86%			
Target Compounds						Qvalue
29) Chloroform	6.45	83	7907	0.42	ug/L	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

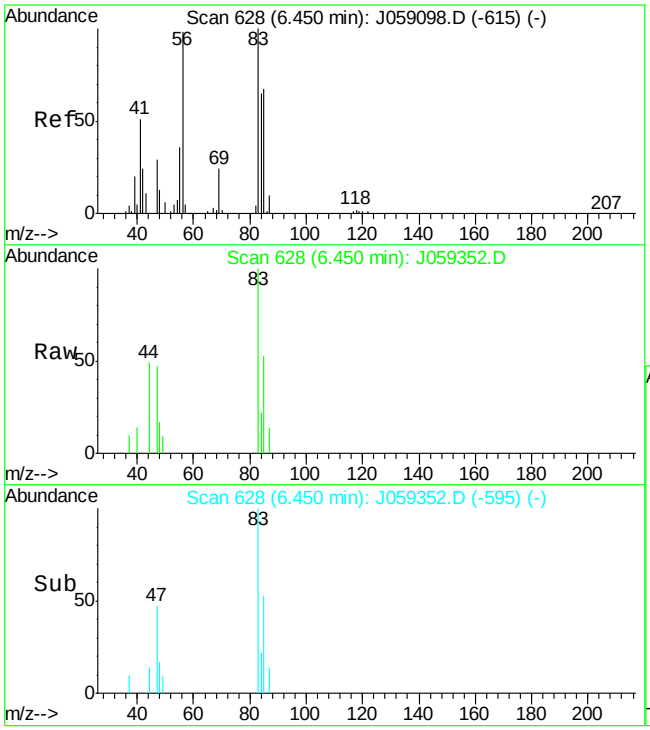
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059352.D Vial: 7
Acq On : 15 Sep 2010 12:06 pm Operator: KarenW
Sample : F76426-8 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:57 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration



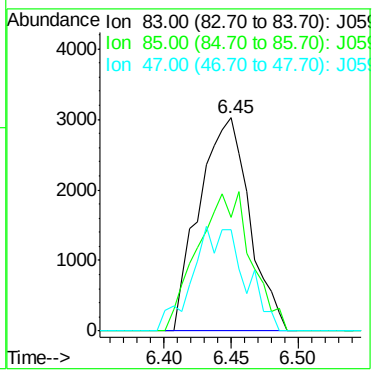
J059352.D 8260-J.M Wed Sep 15 14:01:18 2010 Page 2



#29
Chloroform
Concen: 0.42 ug/L
RT: 6.45 min Scan# 628
Delta R.T. 0.00 min
Lab File: J059352.D
Acq: 15 Sep 2010 12:06 pm

Tgt Ion: 83 Resp: 7907

Ion	Ratio	Lower	Upper
83	100		
85	53.1	37.0	97.0
47	47.5	1.6	61.6



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066873.D Vial: 20
Acq On : 16 Sep 2010 7:04 pm Operator: MikeM
Sample : f76426-9 Inst : MSVOA1
Misc : ms15411,vg2525,5.16,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 07:46:05 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

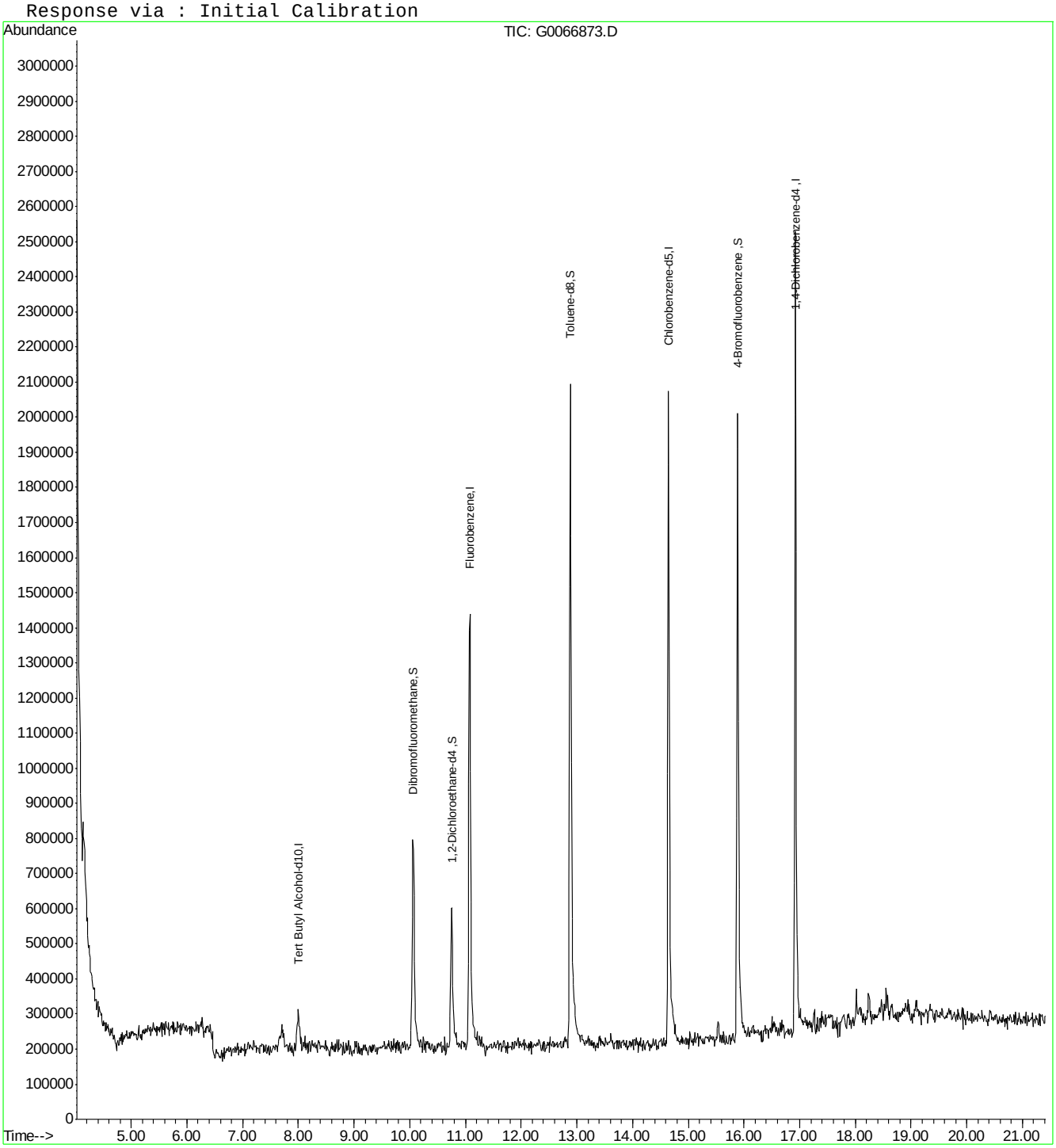
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	1451904	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1365177	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	694406	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	215473	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	489749	46.04	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 92.08%			
44) 1,2-Dichloroethane-d4	10.75	65	492011	47.47	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 94.94%			
55) Toluene-d8	12.88	98	1599600	49.12	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 98.24%			
77) 4-Bromofluorobenzene	15.89	174	688411	51.73	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.46%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
G0066873.D APP9-G.M Fri Sep 17 08:00:18 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066873.D Vial: 20
Acq On : 16 Sep 2010 7:04 pm Operator: MikeM
Sample : f76426-9 Inst : MSVOA1
Misc : ms15411,vg2525,5.16,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 7:55 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/16/10 09:21

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059353.D Vial: 8
Acq On : 15 Sep 2010 12:29 pm Operator: KarenW
Sample : F76426-10 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:55:00 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

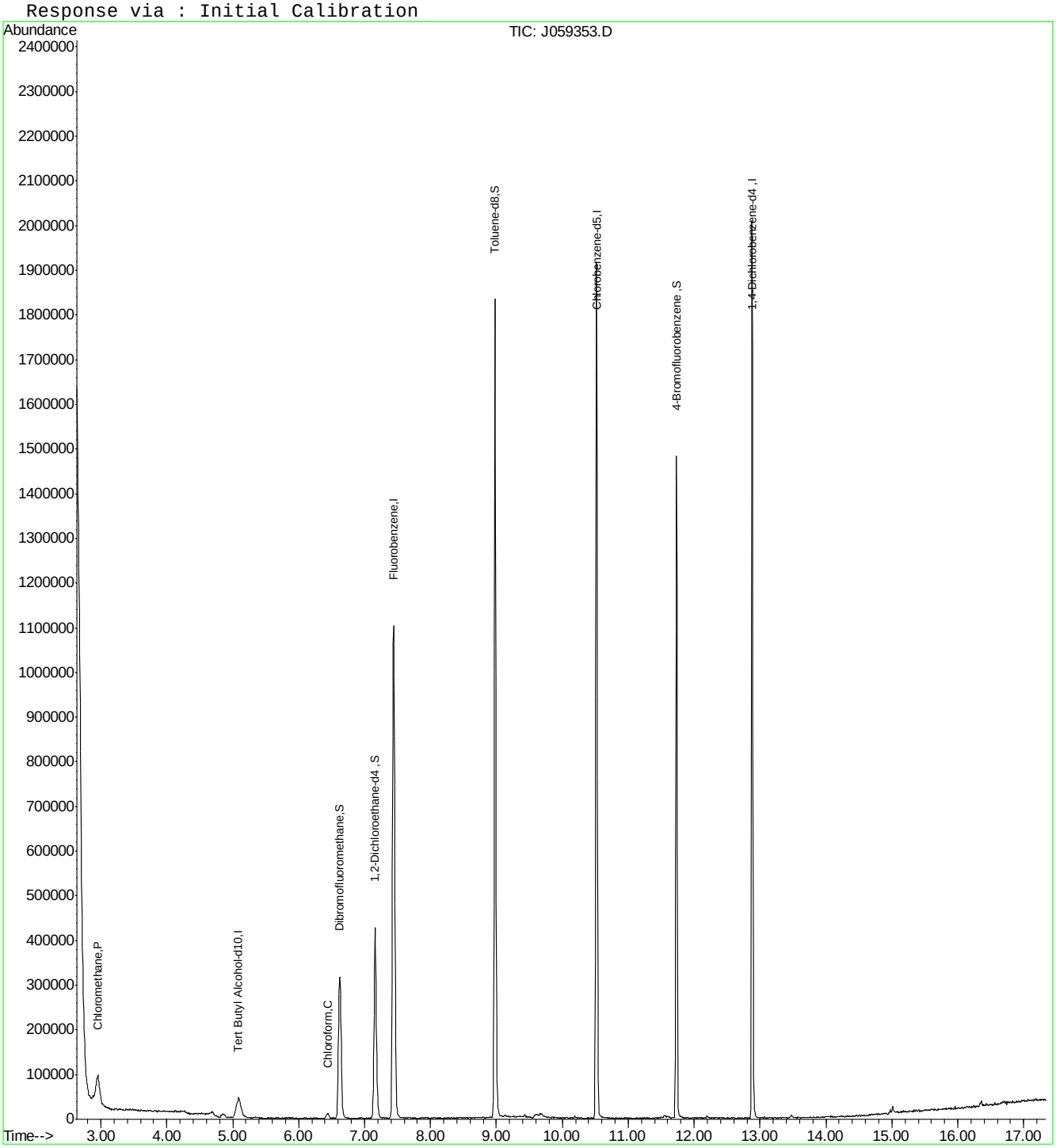
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1117884	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	825667	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	403525	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	114025	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.62	113	281030	49.14	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 98.28%			
38) 1,2-Dichloroethane-d4	7.16	65	346023	49.83	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 99.66%			
48) Toluene-d8	8.98	98	1073094	49.27	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 98.54%			
69) 4-Bromofluorobenzene	11.73	95	384326	49.93	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 99.86%			
Target Compounds						Qvalue
3) Chloromethane	2.95	50	11913m	0.51	ug/L	
29) Chloroform	6.44	83	8768	0.47	ug/L	84

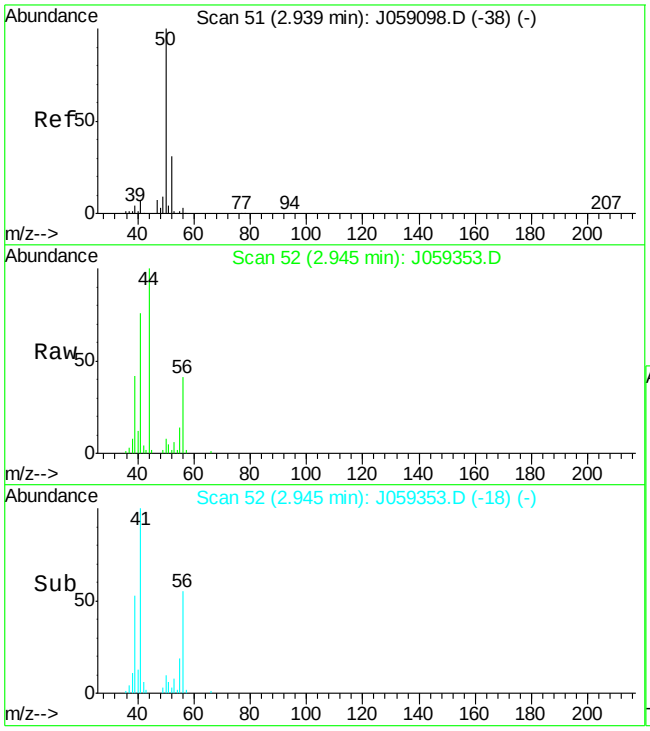
(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059353.D 8260-J.M Wed Sep 15 14:01:19 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059353.D Vial: 8
Acq On : 15 Sep 2010 12:29 pm Operator: KarenW
Sample : F76426-10 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:58 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

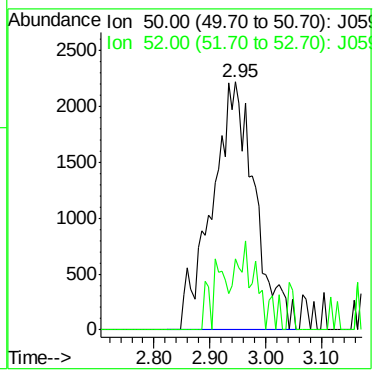


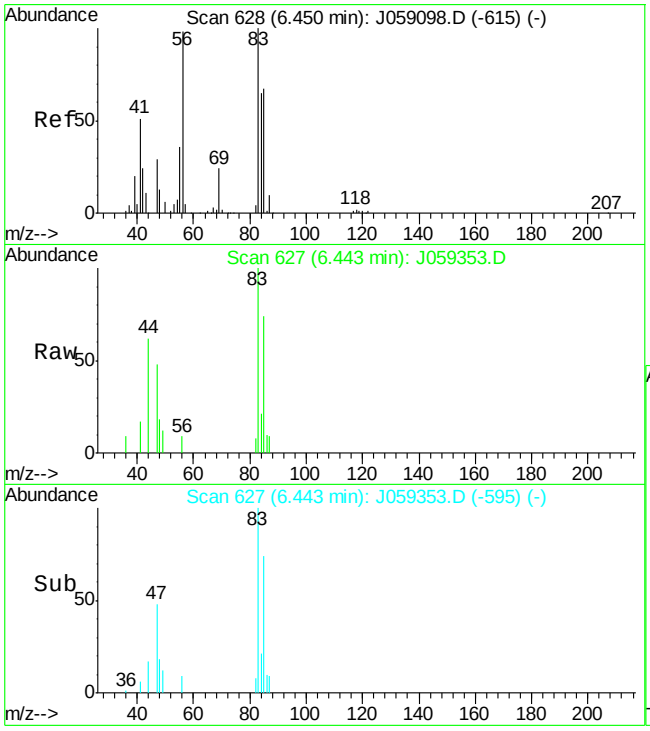


#3
Chloromethane
Concen: 0.51 ug/L m
RT: 2.95 min Scan# 52
Delta R.T. 0.01 min
Lab File: J059353.D
Acq: 15 Sep 2010 12:29 pm

Tgt Ion: 50 Resp: 11913

Ion	Ratio	Lower	Upper
50	100		
52	28.7	0.6	60.6

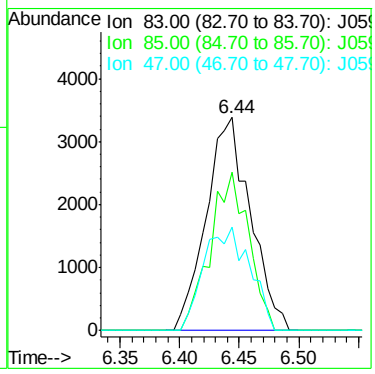




#29
Chloroform
Concen: 0.47 ug/L
RT: 6.44 min Scan# 627
Delta R.T. -0.01 min
Lab File: J059353.D
Acq: 15 Sep 2010 12:29 pm

Tgt Ion: 83 Resp: 8768

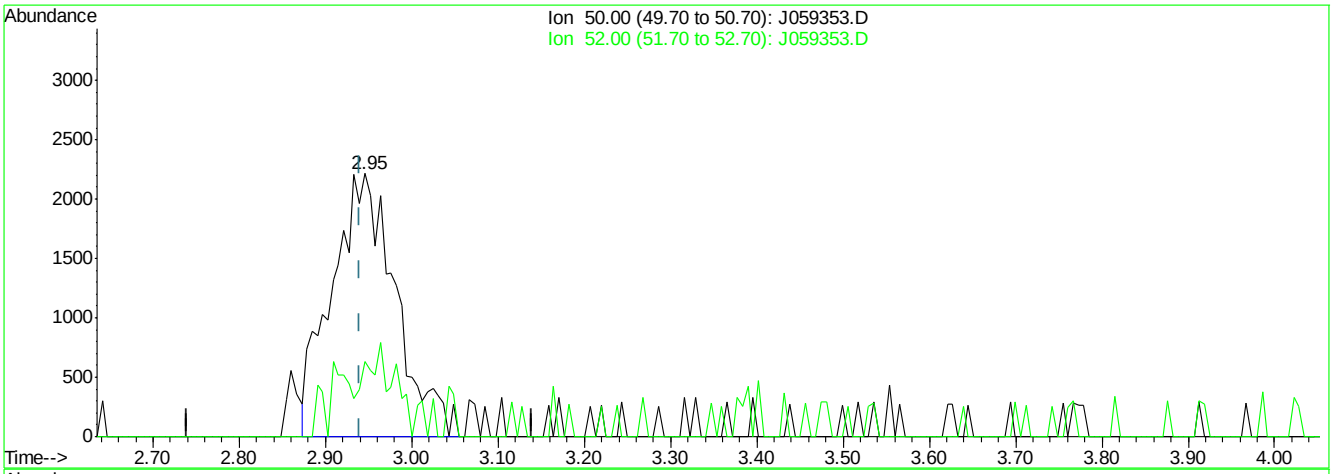
Ion	Ratio	Lower	Upper
83	100		
85	74.3	37.0	97.0
47	48.5	1.6	61.6

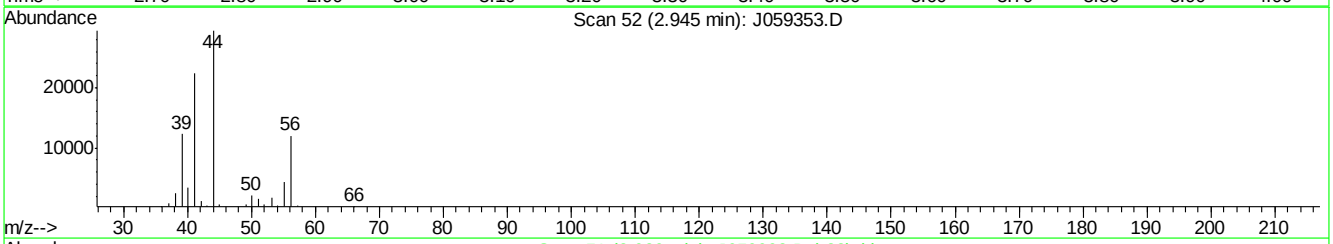


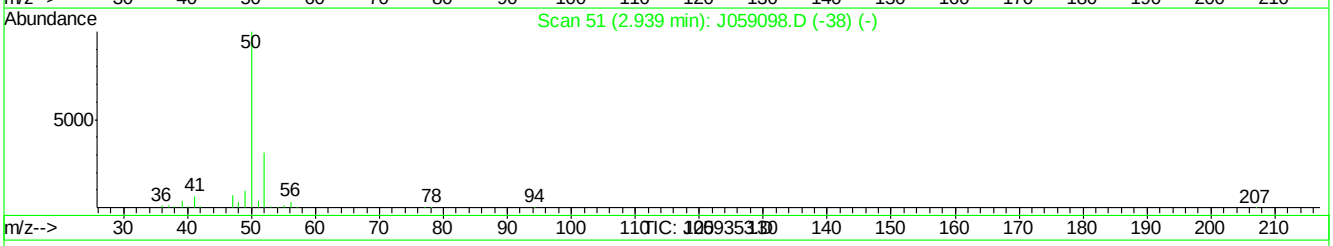
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059353.D Vial: 8
Acq On : 15 Sep 2010 12:29 pm Operator: KarenW
Sample : F76426-10 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:55 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration







(3) Chloromethane (P)

2.95min (+0.006) 0.48ug/L

response 11364

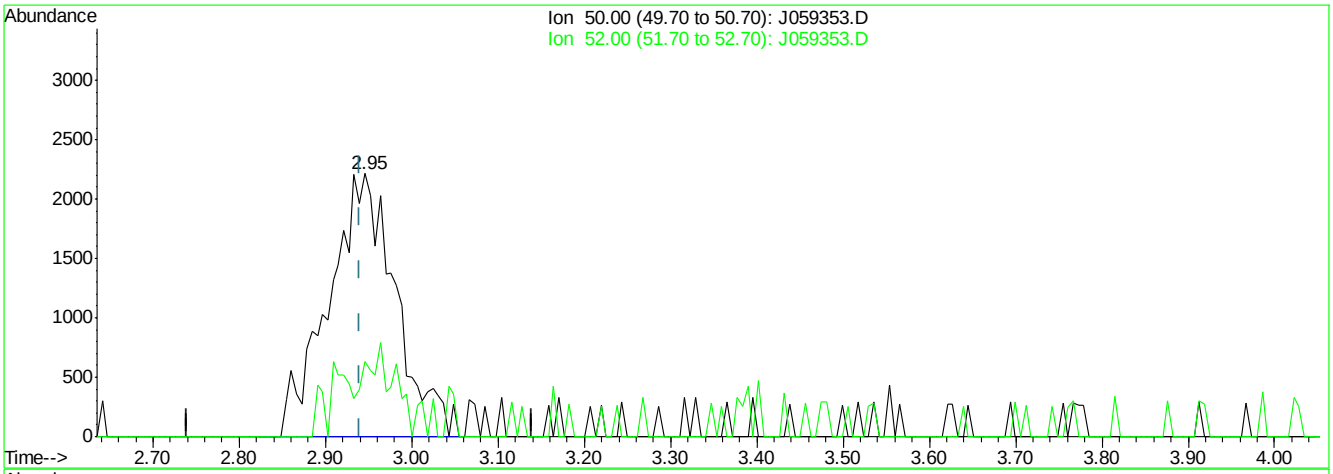
Ion	Exp%	Act%
50.00	100	100
52.00	30.60	28.66
0.00	0.00	0.00
0.00	0.00	0.00

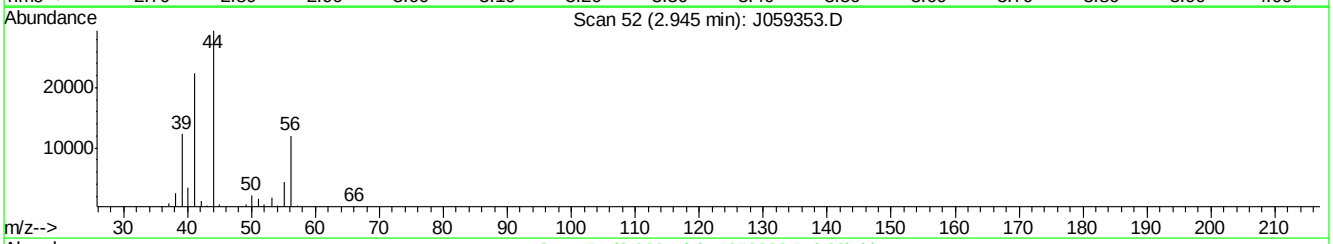
J059353.D 8260-J.M Wed Sep 15 13:58:20 2010

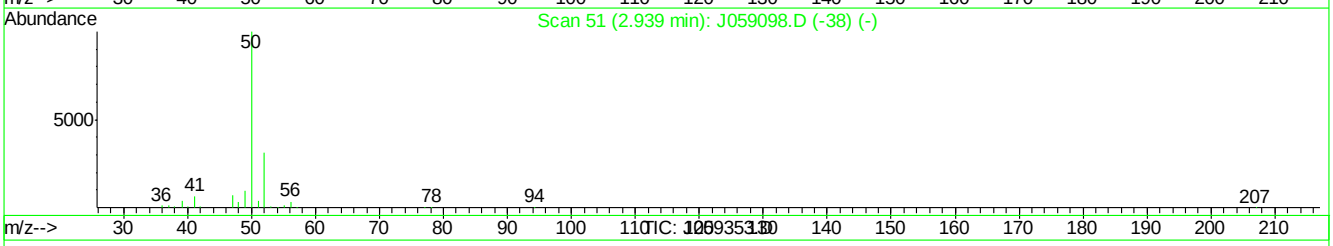
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059353.D Vial: 8
Acq On : 15 Sep 2010 12:29 pm Operator: KarenW
Sample : F76426-10 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:58 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration







(3) Chloromethane (P)

2.95min (+0.006) 0.51ug/L m

response 11913

Ion	Exp%	Act%
50.00	100	100
52.00	30.60	28.66
0.00	0.00	0.00
0.00	0.00	0.00

J059353.D 8260-J.M Wed Sep 15 13:58:24 2010

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066874.D Vial: 21
Acq On : 16 Sep 2010 7:30 pm Operator: MikeM
Sample : f76426-11 Inst : MSVOA1
Misc : ms15411,vg2525,4.61,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 07:46:07 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

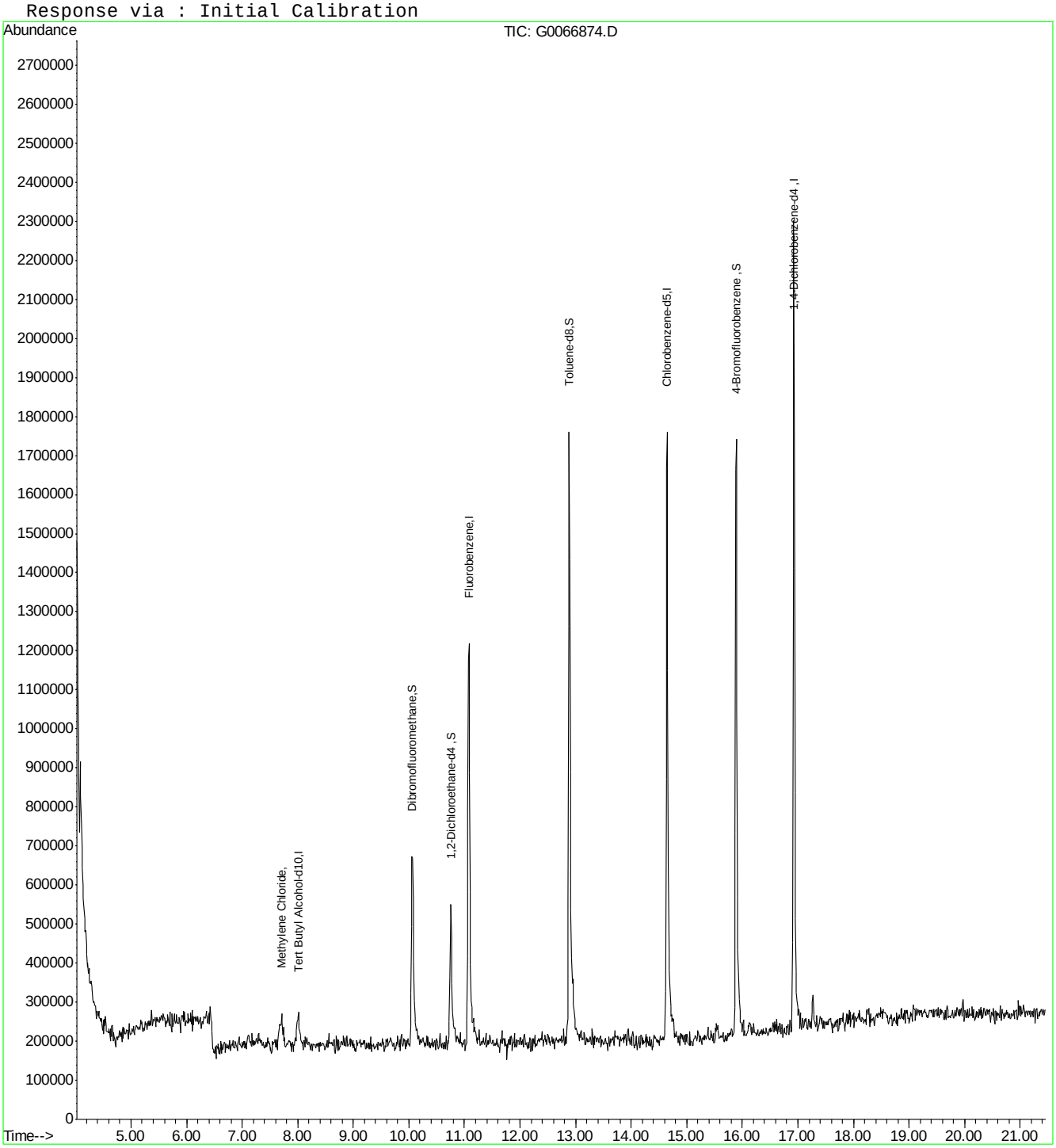
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	1246568	50.00	ug/Kg	0.01
54) Chlorobenzene-d5	14.65	117	1172749	50.00	ug/Kg	0.01
76) 1,4-Dichlorobenzene-d4	16.93	152	615041	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	181822	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	434300	47.55	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 95.10%			
44) 1,2-Dichloroethane-d4	10.76	65	428754	48.19	ug/Kg	0.01
Spiked Amount 50.000	Range 77 - 123		Recovery = 96.38%			
55) Toluene-d8	12.88	98	1391437	49.74	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 99.48%			
77) 4-Bromofluorobenzene	15.89	174	611864	51.91	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.82%			
Target Compounds						Qvalue
15) Methylene Chloride	7.71	49	142283	5.42	ug/Kg	92

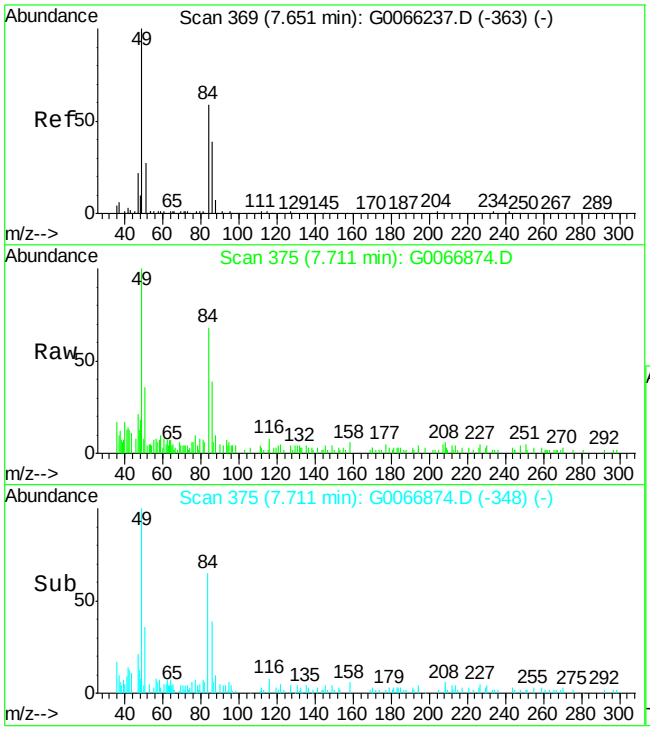
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066874.D Vial: 21
Acq On : 16 Sep 2010 7:30 pm Operator: MikeM
Sample : f76426-11 Inst : MSVOA1
Misc : ms15411,vg2525,4.61,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 7:55 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration

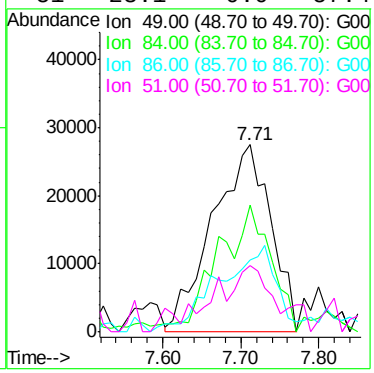




#15
Methylene Chloride
Concen: 5.42 ug/Kg
RT: 7.71 min Scan# 375
Delta R.T. 0.01 min
Lab File: G0066874.D
Acq: 16 Sep 2010 7:30 pm

Tgt Ion: 49 Resp: 142283

Ion	Ratio	Lower	Upper
49	100		
84	67.9	28.6	88.6
86	38.7	9.5	69.5
51	23.1	0.0	57.4



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059354.D Vial: 9
Acq On : 15 Sep 2010 12:52 pm Operator: KarenW
Sample : F76426-12 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:55:01 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

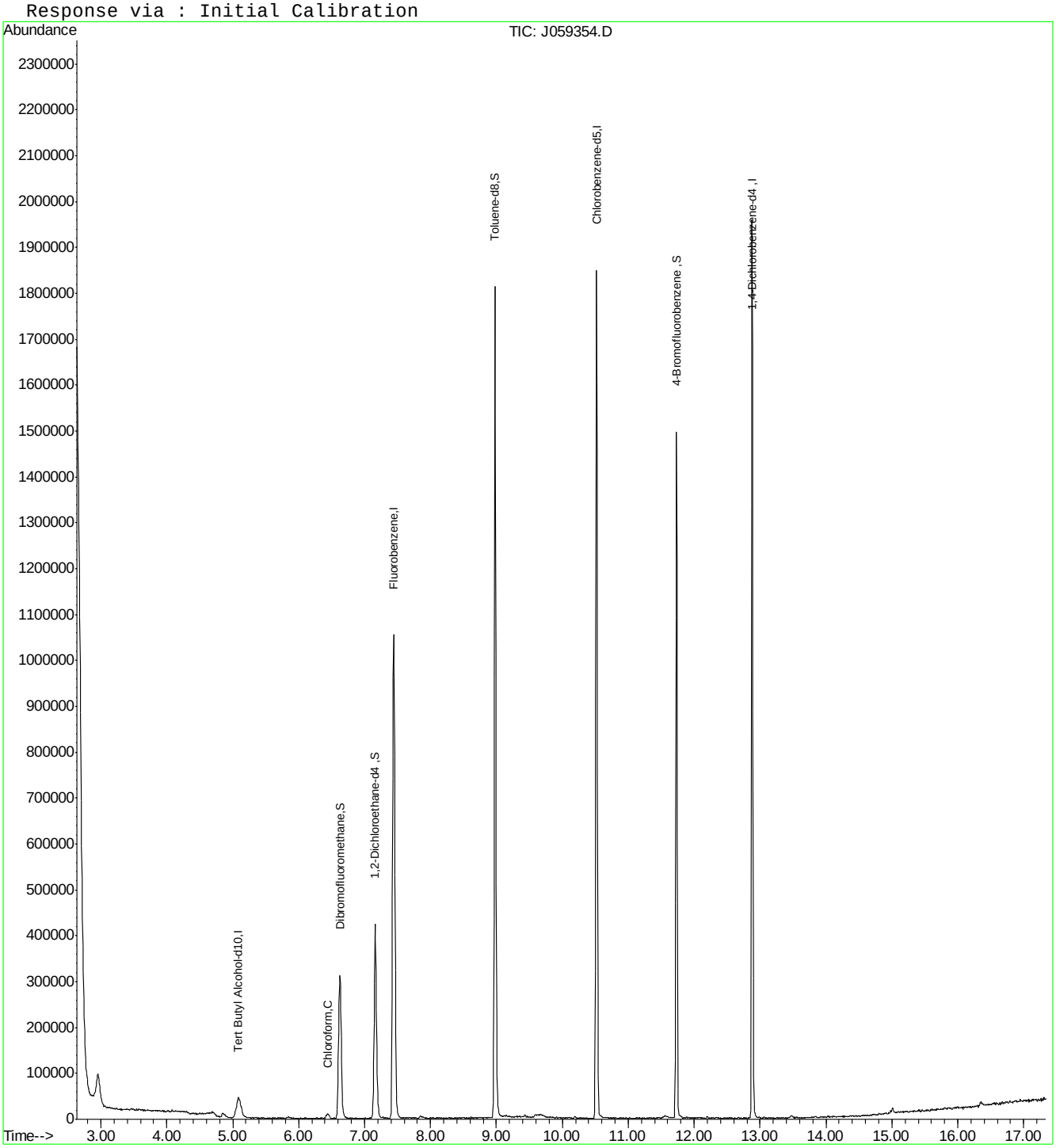
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1070901	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	797720	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	386006	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	111466	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	264075	48.20	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 96.40%			
38) 1,2-Dichloroethane-d4	7.16	65	334755	50.32	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 100.64%			
48) Toluene-d8	8.98	98	1046291	49.73	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 99.46%			
69) 4-Bromofluorobenzene	11.73	95	401998	54.59	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 109.18%			
Target Compounds						Qvalue
29) Chloroform	6.44	83	9068	0.50	ug/L	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

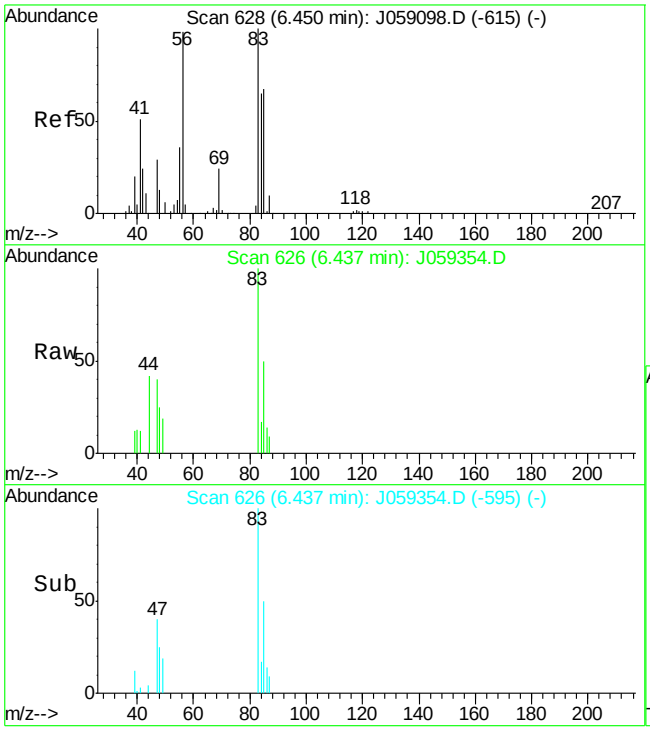
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059354.D Vial: 9
Acq On : 15 Sep 2010 12:52 pm Operator: KarenW
Sample : F76426-12 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:59 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration



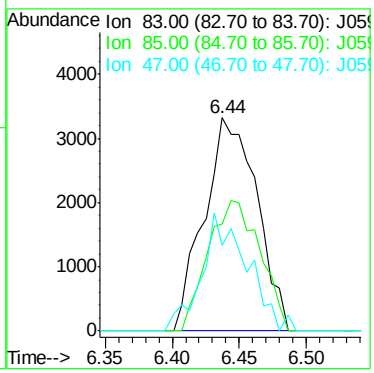
J059354.D 8260-J.M Wed Sep 15 14:01:20 2010 Page 2



#29
Chloroform
Concen: 0.50 ug/L
RT: 6.44 min Scan# 626
Delta R.T. -0.01 min
Lab File: J059354.D
Acq: 15 Sep 2010 12:52 pm

Tgt Ion: 83 Resp: 9068

Ion	Ratio	Lower	Upper
83	100		
85	50.0	37.0	97.0
47	40.1	1.6	61.6



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066905.D Vial: 7
Acq On : 17 Sep 2010 1:19 pm Operator: MikeM
Sample : f76426-13,rr Inst : MSVOA1
Misc : ms15433,vg2526,4.58,,100,5,1, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 14:23:39 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

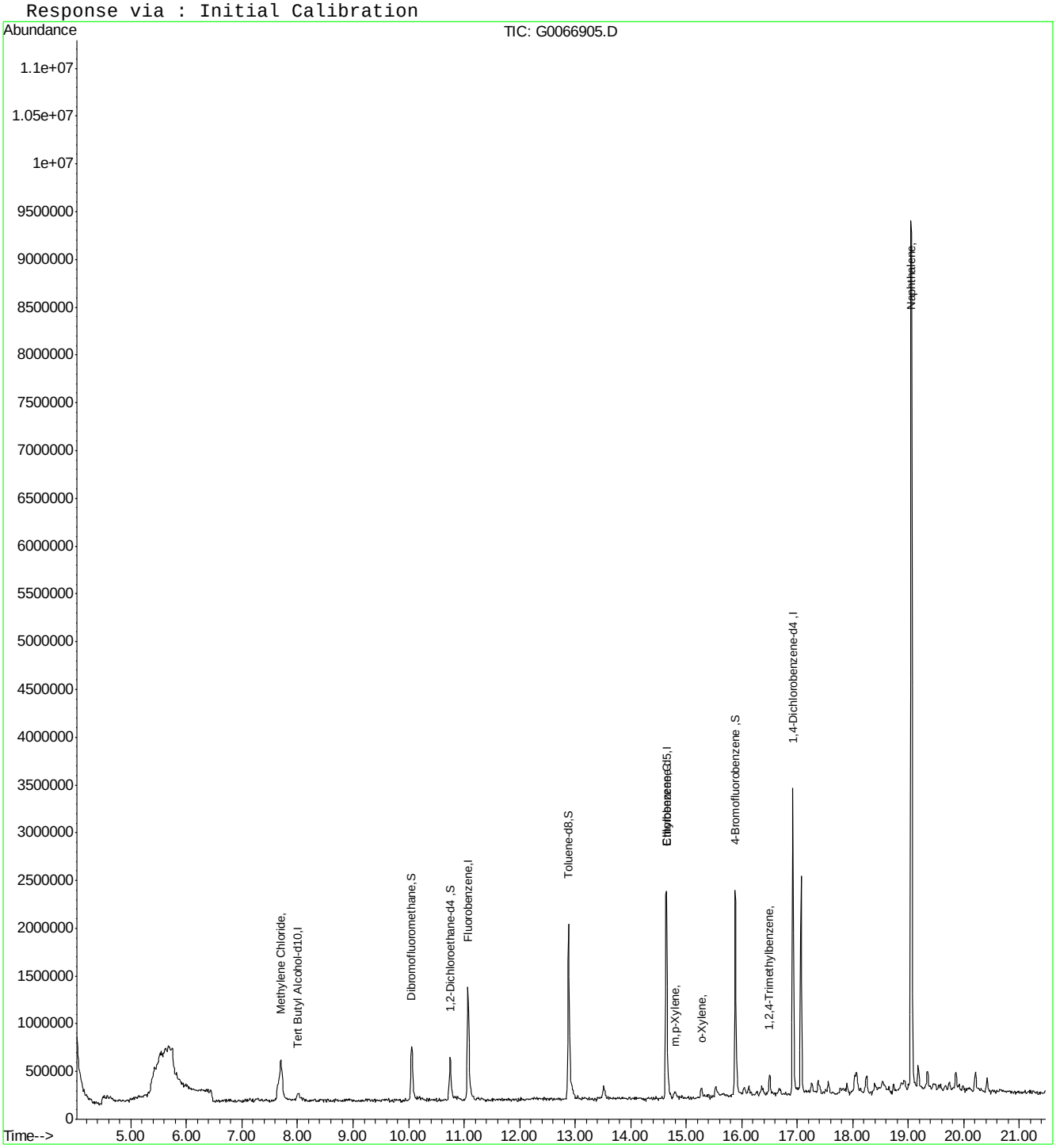
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1333744	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1401785	50.00	ug/Kg	0.01
76) 1,4-Dichlorobenzene-d4	16.92	152	874792	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.02	65	206072	250.00	ug/Kg	0.04
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	469687	48.06	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 96.12%			
44) 1,2-Dichloroethane-d4	10.75	65	488486	51.31	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 102.62%			
55) Toluene-d8	12.88	98	1497031	44.77	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 89.54%			
77) 4-Bromofluorobenzene	15.89	174	773061	46.11	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 92.22%			
Target Compounds						Qvalue
15) Methylene Chloride	7.70	49	688347	24.49	ug/Kg	87
68) Ethylbenzene	14.65	91	128116	1.62	ug/Kg	95
71) m,p-Xylene	14.80	91	60140	1.00	ug/Kg	79
72) o-Xylene	15.27	91	92194	1.35	ug/Kg	93
89) 1,2,4-Trimethylbenzene	16.50	105	143735	2.32	ug/Kg	90
101) Naphthalene	19.06	128	7907259	212.54	ug/Kg	98

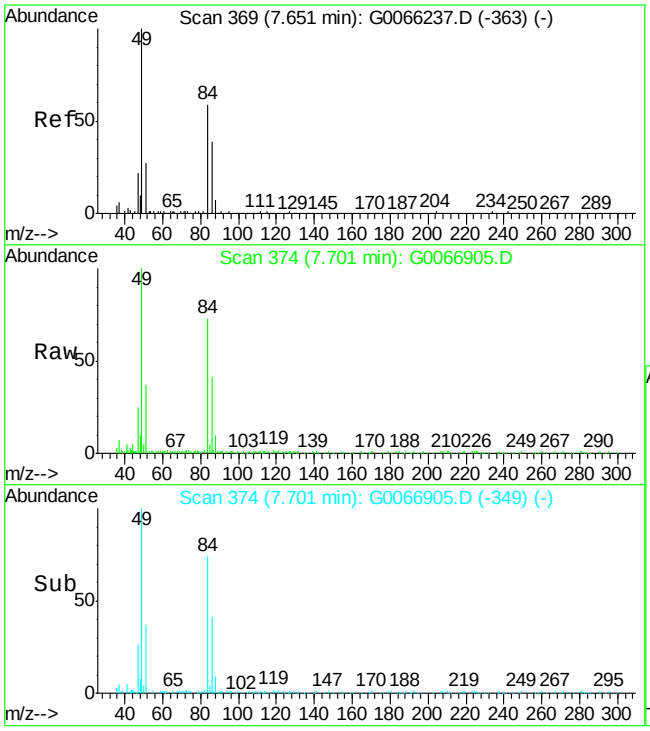
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066905.D Vial: 7
Acq On : 17 Sep 2010 1:19 pm Operator: MikeM
Sample : f76426-13,rr Inst : MSVOA1
Misc : ms15433,vg2526,4.58,,100,5,1, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 14:26 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration

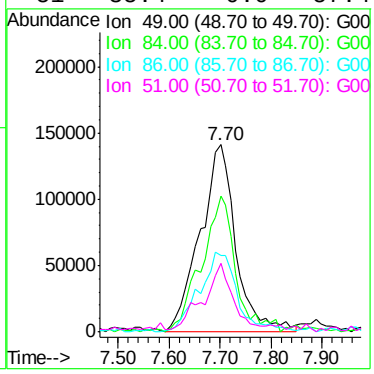


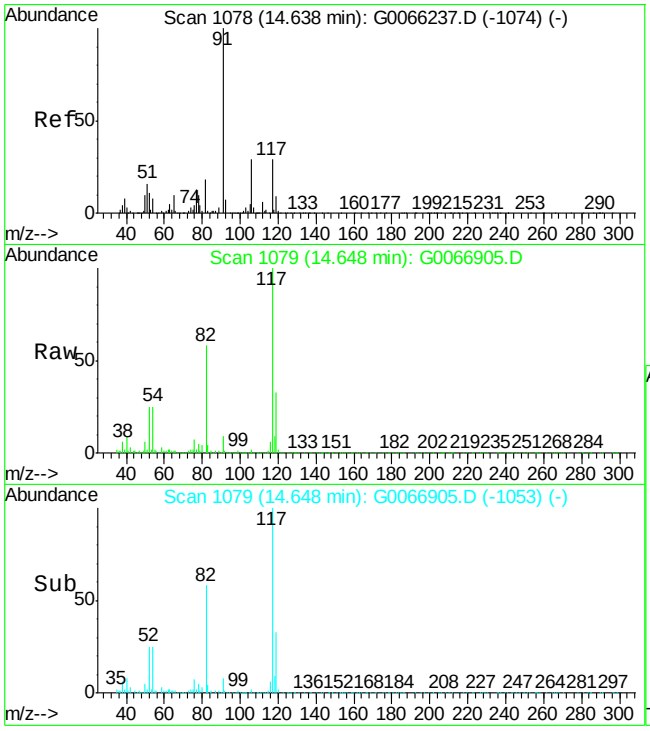


#15
Methylene Chloride
Concen: 24.49 ug/Kg
RT: 7.70 min Scan# 374
Delta R.T. 0.00 min
Lab File: G0066905.D
Acq: 17 Sep 2010 1:19 pm

Tgt Ion: 49 Resp: 688347

Ion	Ratio	Lower	Upper
49	100		
84	72.8	28.6	88.6
86	40.3	9.5	69.5
51	35.4	0.0	57.4

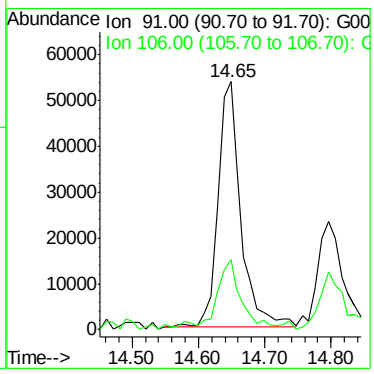


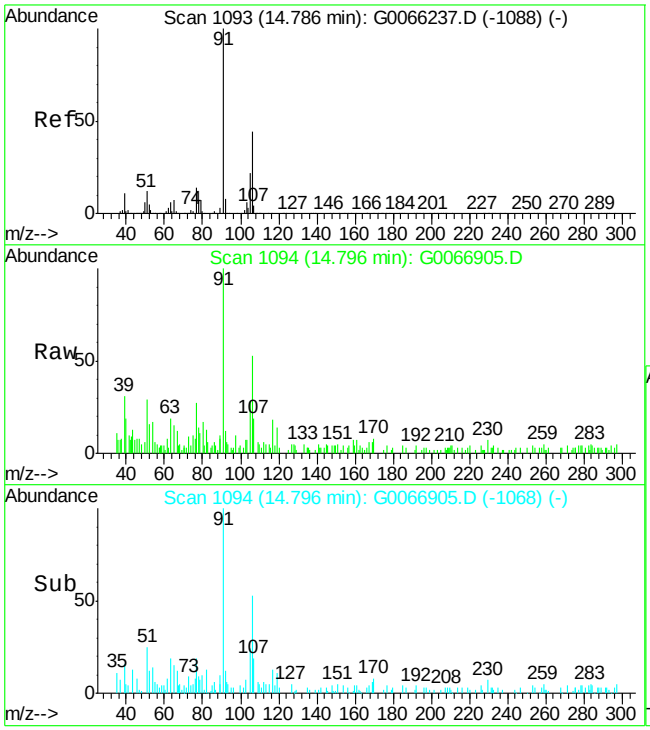


#68
Ethylbenzene
Concen: 1.62 ug/Kg
RT: 14.65 min Scan# 1079
Delta R.T. 0.01 min
Lab File: G0066905.D
Acq: 17 Sep 2010 1:19 pm

Tgt Ion: 91 Resp: 128116

Ion	Ratio	Lower	Upper
91	100		
106	28.4	1.0	61.0

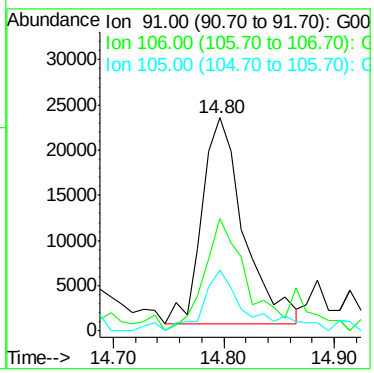


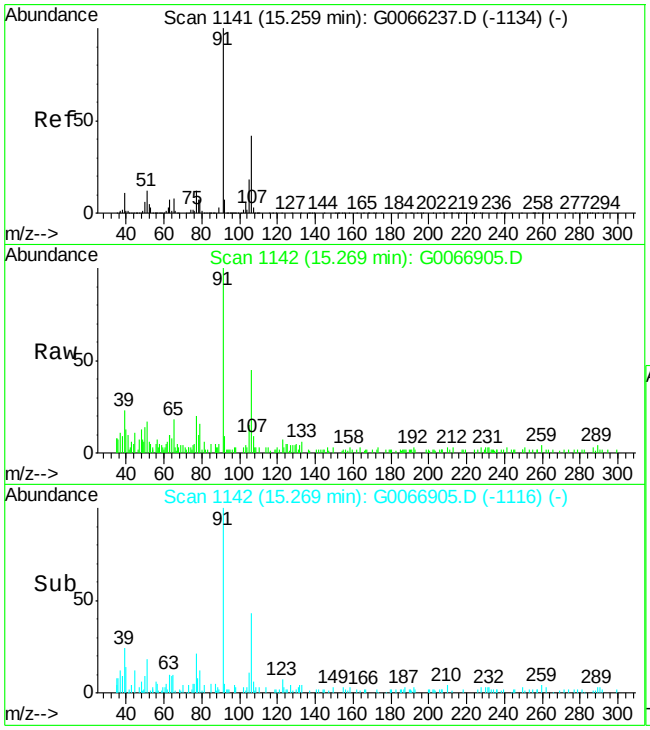


#71
m,p-Xylene
Concen: 1.00 ug/Kg
RT: 14.80 min Scan# 1094
Delta R.T. 0.01 min
Lab File: G0066905.D
Acq: 17 Sep 2010 1:19 pm

Tgt Ion: 91 Resp: 60140

Ion	Ratio	Lower	Upper
91	100		
106	54.6	11.8	71.8
105	29.3	0.0	49.7

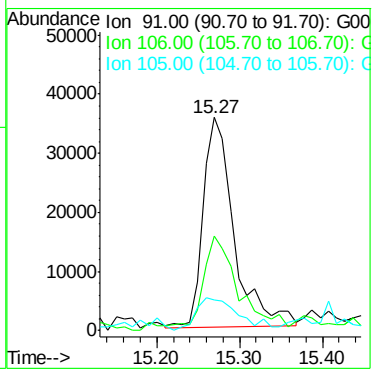


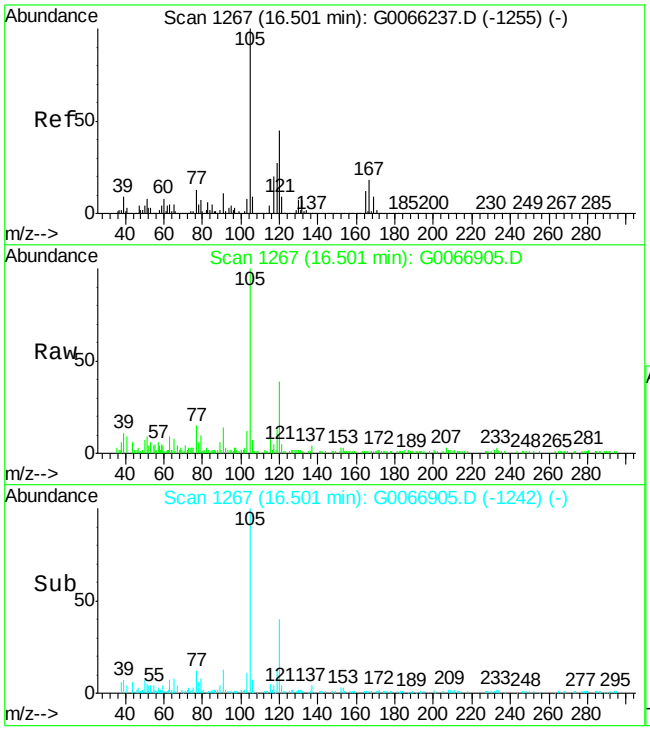


#72
o-Xylene
Concen: 1.35 ug/Kg
RT: 15.27 min Scan# 1142
Delta R.T. 0.01 min
Lab File: G0066905.D
Acq: 17 Sep 2010 1:19 pm

Tgt Ion: 91 Resp: 92194

Ion	Ratio	Lower	Upper
91	100		
106	43.3	10.5	70.5
105	12.4	0.0	47.3

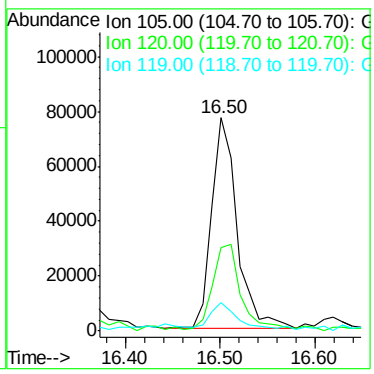


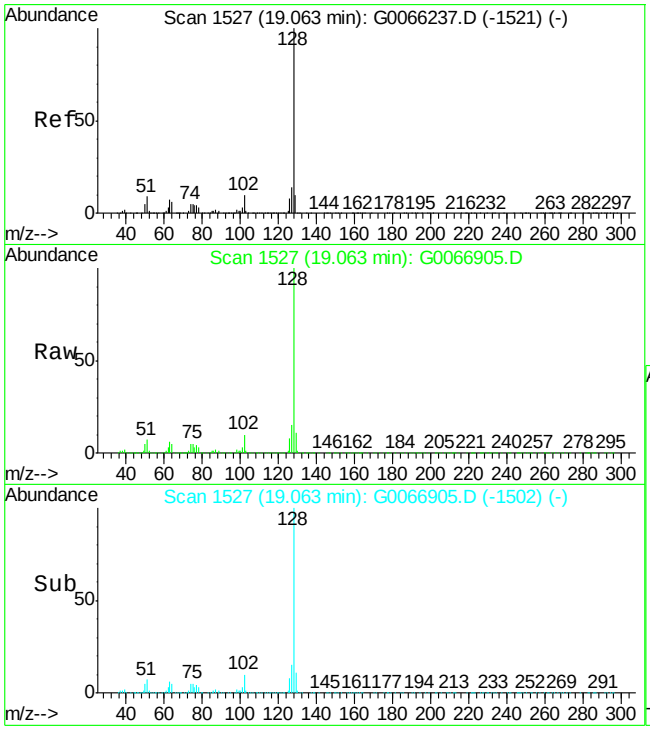


#89
1,2,4-Trimethylbenzene
Concen: 2.32 ug/Kg
RT: 16.50 min Scan# 1267
Delta R.T. 0.00 min
Lab File: G0066905.D
Acq: 17 Sep 2010 1:19 pm

Tgt Ion:105 Resp: 143735

Ion	Ratio	Lower	Upper
105	100		
120	38.9	12.4	72.4
119	12.3	0.0	51.7

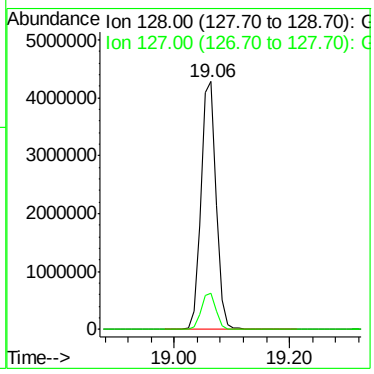




#101
Naphthalene
Concen: 212.54 ug/Kg
RT: 19.06 min Scan# 1527
Delta R.T. 0.00 min
Lab File: G0066905.D
Acq: 17 Sep 2010 1:19 pm

Tgt Ion:128 Resp: 7907259

Ion	Ratio	Lower	Upper
128	100		
127	14.5	0.0	43.9



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059355.D Vial: 10
Acq On : 15 Sep 2010 1:15 pm Operator: KarenW
Sample : F76426-14 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:55:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

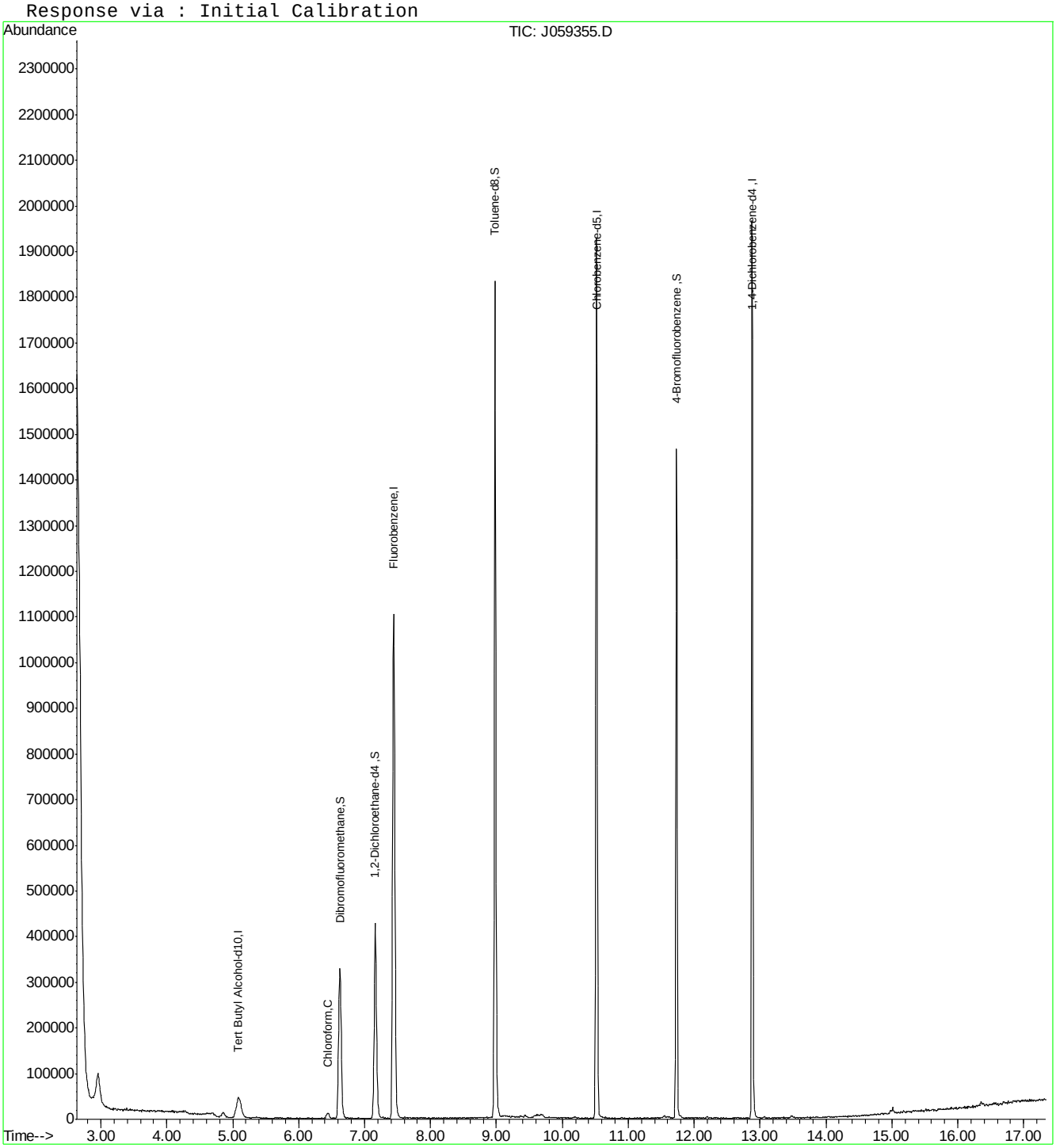
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1110720	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	813256	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	399799	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	115447	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	261994	46.11	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 92.22%			
38) 1,2-Dichloroethane-d4	7.16	65	346550	50.23	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 100.46%			
48) Toluene-d8	8.98	98	1071586	49.96	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 99.92%			
69) 4-Bromofluorobenzene	11.73	95	393656	51.61	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 103.22%			
Target Compounds						Qvalue
29) Chloroform	6.44	83	11655	0.62	ug/L	72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

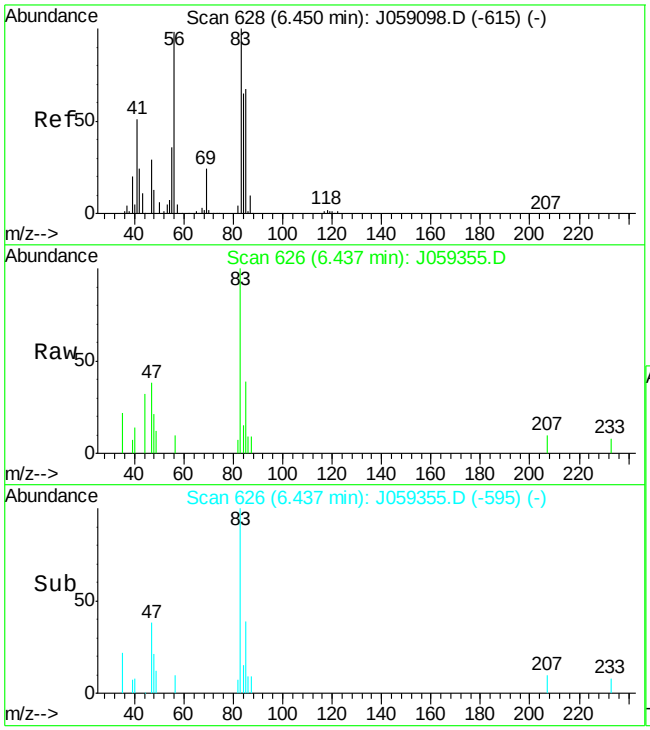
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059355.D Vial: 10
Acq On : 15 Sep 2010 1:15 pm Operator: KarenW
Sample : F76426-14 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:59 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration



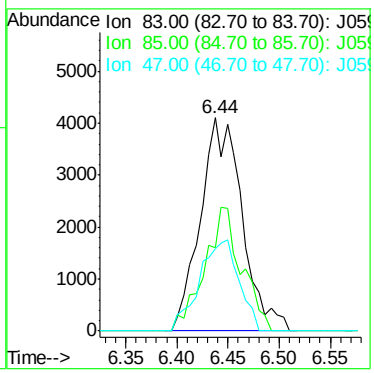
ACCUTEST
F76426



#29
Chloroform
Concen: 0.62 ug/L
RT: 6.44 min Scan# 626
Delta R.T. -0.01 min
Lab File: J059355.D
Acq: 15 Sep 2010 1:15 pm

Tgt Ion: 83 Resp: 11655

Ion	Ratio	Lower	Upper
83	100		
85	38.9	37.0	97.0
47	38.3	1.6	61.6



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066876.D Vial: 23
Acq On : 16 Sep 2010 8:23 pm Operator: MikeM
Sample : f76426-15 Inst : MSVOA1
Misc : ms15411,vg2525,5.44,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 07:46:11 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

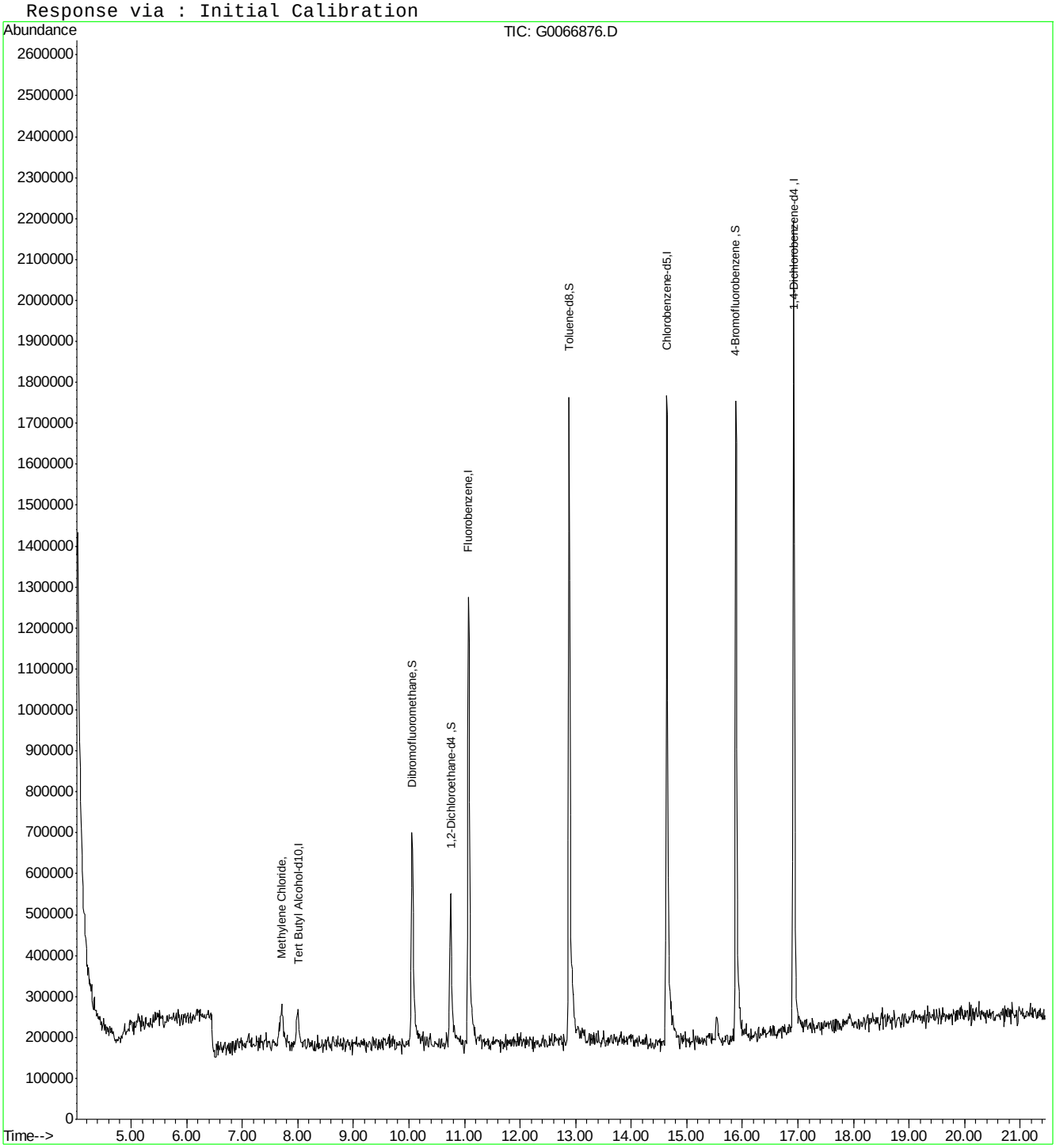
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1222570	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1216302	50.00	ug/Kg	0.01
76) 1,4-Dichlorobenzene-d4	16.92	152	614316	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	176254	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	427844	47.76	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 95.52%			
44) 1,2-Dichloroethane-d4	10.76	65	460177	52.73	ug/Kg	0.01
Spiked Amount 50.000	Range 77 - 123		Recovery = 105.46%			
55) Toluene-d8	12.88	98	1395104	48.08	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 96.16%			
77) 4-Bromofluorobenzene	15.89	174	611246	51.92	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.84%			
Target Compounds						Qvalue
15) Methylene Chloride	7.70	49	138280	5.37	ug/Kg	88

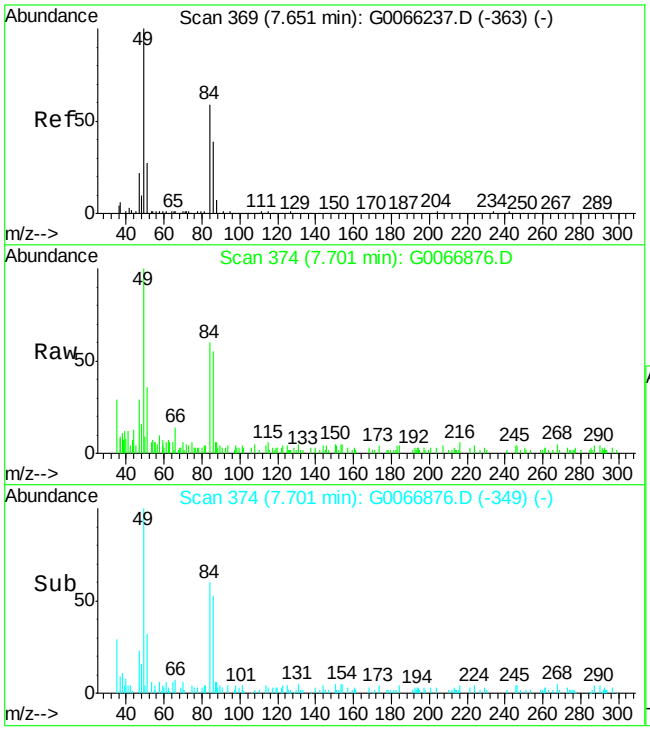
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066876.D Vial: 23
Acq On : 16 Sep 2010 8:23 pm Operator: MikeM
Sample : f76426-15 Inst : MSVOA1
Misc : ms15411,vg2525,5.44,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 7:57 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration

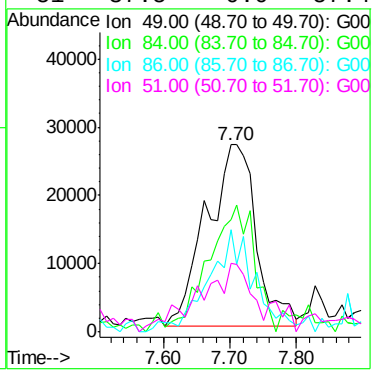




#15
Methylene Chloride
Concen: 5.37 ug/Kg
RT: 7.70 min Scan# 374
Delta R.T. 0.00 min
Lab File: G0066876.D
Acq: 16 Sep 2010 8:23 pm

Tgt Ion: 49 Resp: 138280

Ion	Ratio	Lower	Upper
49	100		
84	59.3	28.6	88.6
86	52.9	9.5	69.5
51	37.5	0.0	57.4



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/14/10 10:15

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046593.D Vial: 4
Acq On : 10 Sep 2010 1:51 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 14:27:21 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

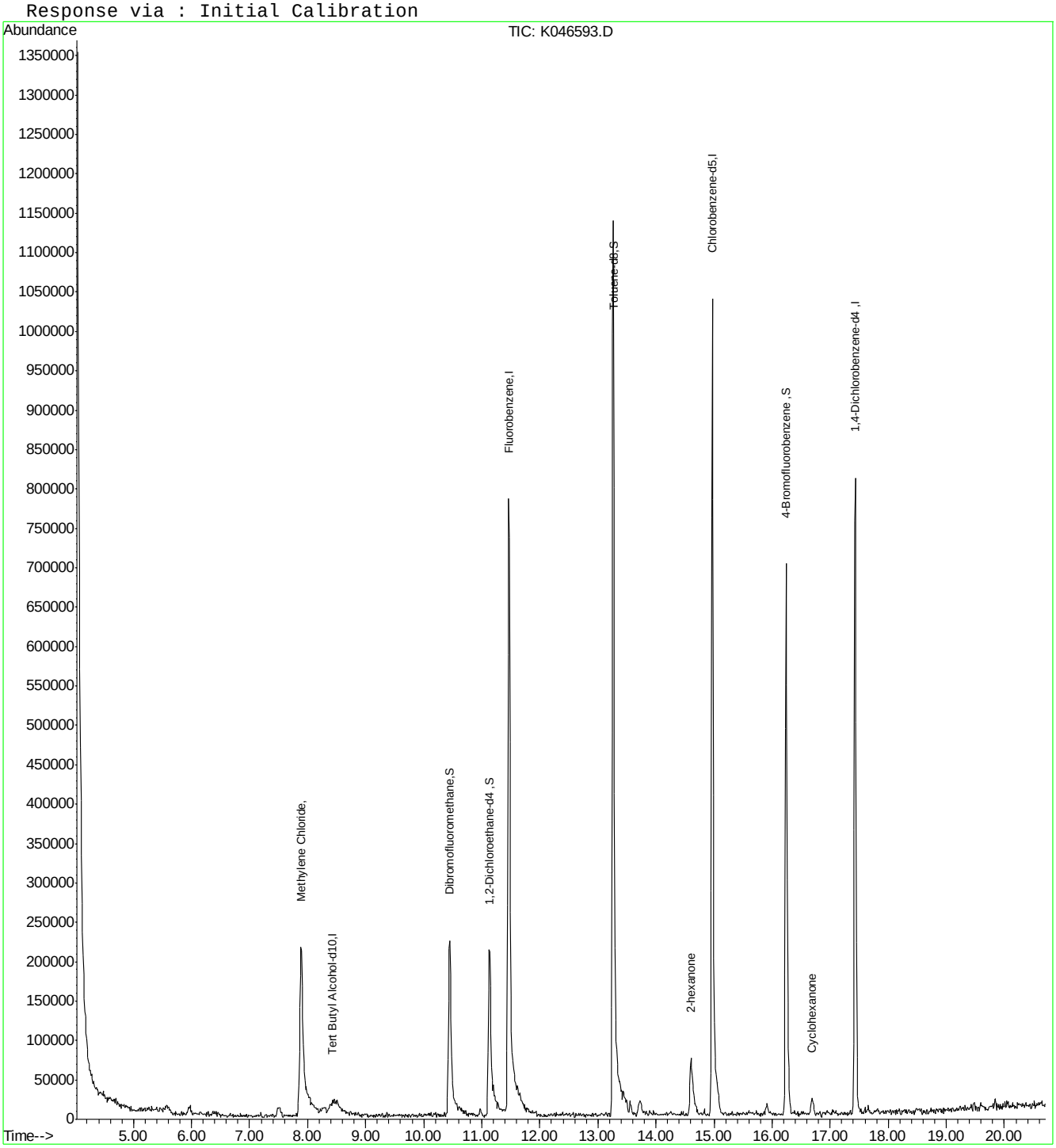
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	994011	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	657930	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	224230	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.43	65	114860m	250.00	ug/Kg	0.16
System Monitoring Compounds						
31) Dibromofluoromethane	10.45	113	226250	46.38	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 92.76%			
36) 1,2-Dichloroethane-d4	11.13	65	257555	43.80	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 87.60%			
50) Toluene-d8	13.27	98	1013964	44.97	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 89.94%			
70) 4-Bromofluorobenzene	16.24	174	221036	53.10	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 106.20%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	347293	33.97	ug/Kg	95
55) 2-hexanone	14.61	43	119868	23.00	ug/Kg	97
69) Cyclohexanone	16.69	55	14184	86.23	ug/Kg#	65

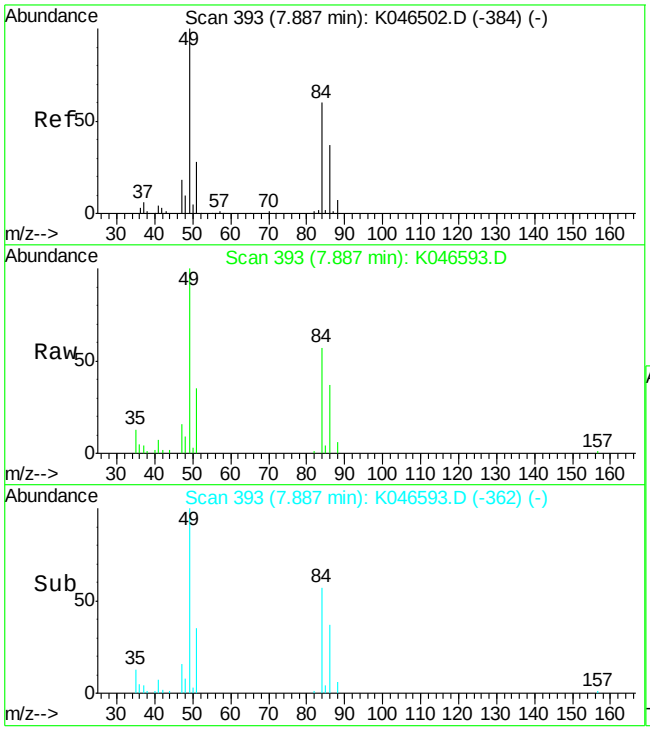
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046593.D 8260-K.M Mon Sep 13 10:54:42 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046593.D Vial: 4
Acq On : 10 Sep 2010 1:51 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:55 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

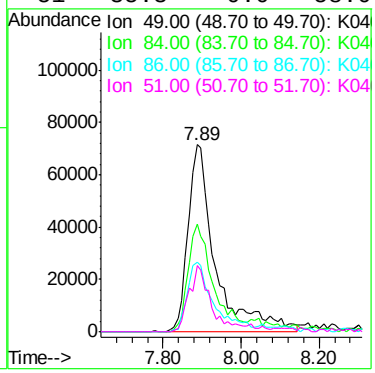


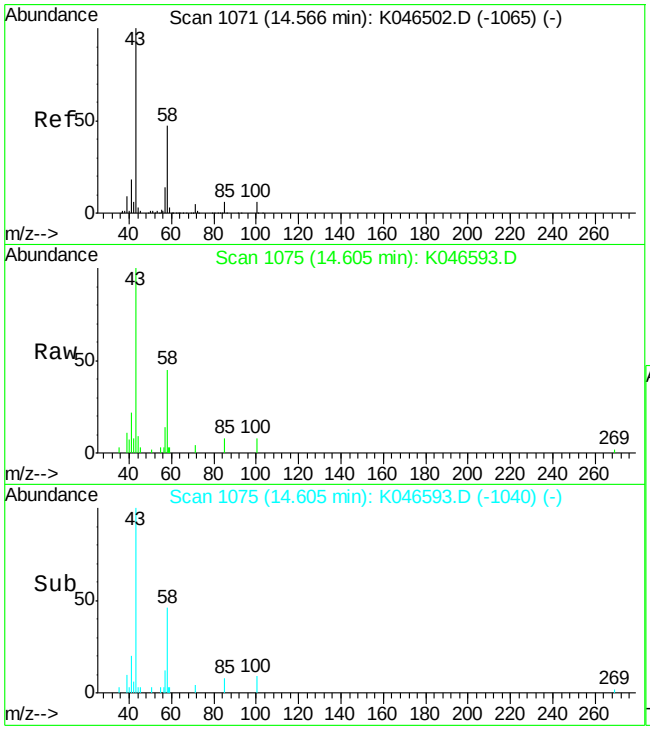


#16
Methylene Chloride
Concen: 33.97 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.00 min
Lab File: K046593.D
Acq: 10 Sep 2010 1:51 pm

Tgt Ion: 49 Resp: 347293

Ion	Ratio	Lower	Upper
49	100		
84	57.4	30.4	90.4
86	37.0	7.1	67.1
51	35.3	0.0	58.0

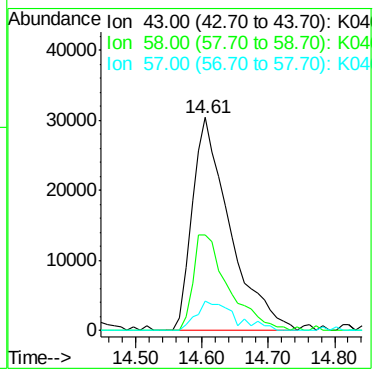


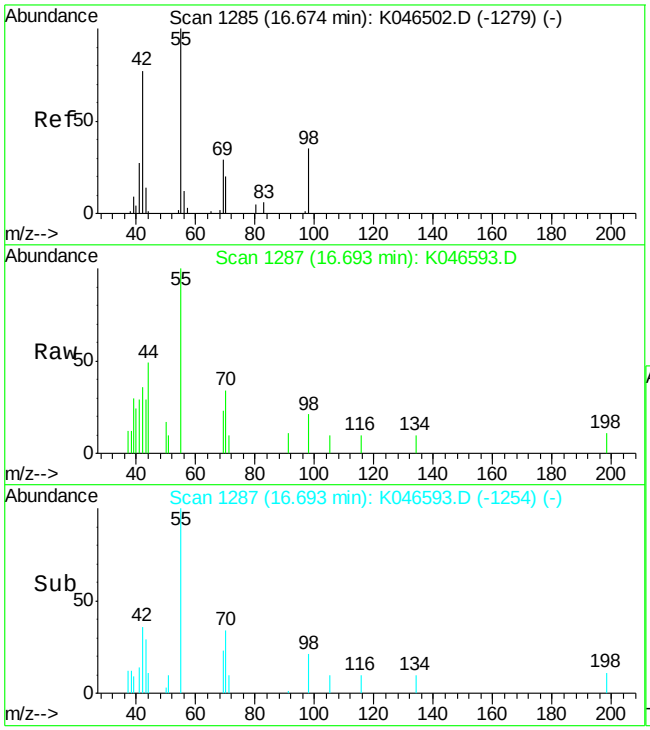


#55
2-hexanone
Concen: 23.00 ug/Kg
RT: 14.61 min Scan# 1075
Delta R.T. 0.04 min
Lab File: K046593.D
Acq: 10 Sep 2010 1:51 pm

Tgt Ion: 43 Resp: 119868

Ion	Ratio	Lower	Upper
43	100		
58	44.6	16.8	76.8
57	13.7	0.0	44.5

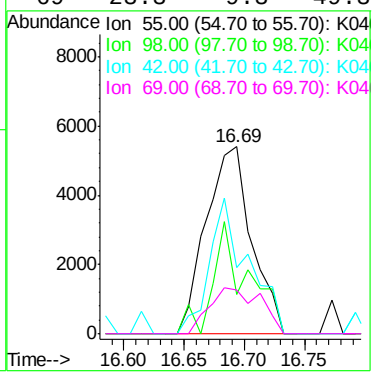




#69
Cyclohexanone
Concen: 86.23 ug/Kg
RT: 16.69 min Scan# 1287
Delta R.T. 0.02 min
Lab File: K046593.D
Acq: 10 Sep 2010 1:51 pm

Tgt Ion: 55 Resp: 14184

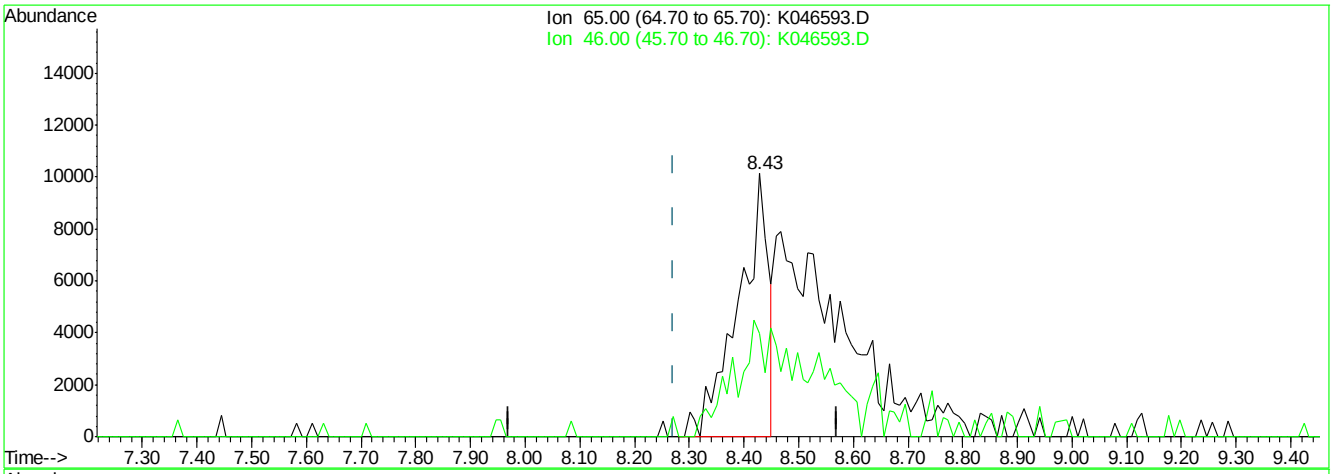
Ion	Ratio	Lower	Upper
55	100		
98	20.8	15.4	55.4
42	35.5	57.0	97.0#
69	23.3	9.3	49.3

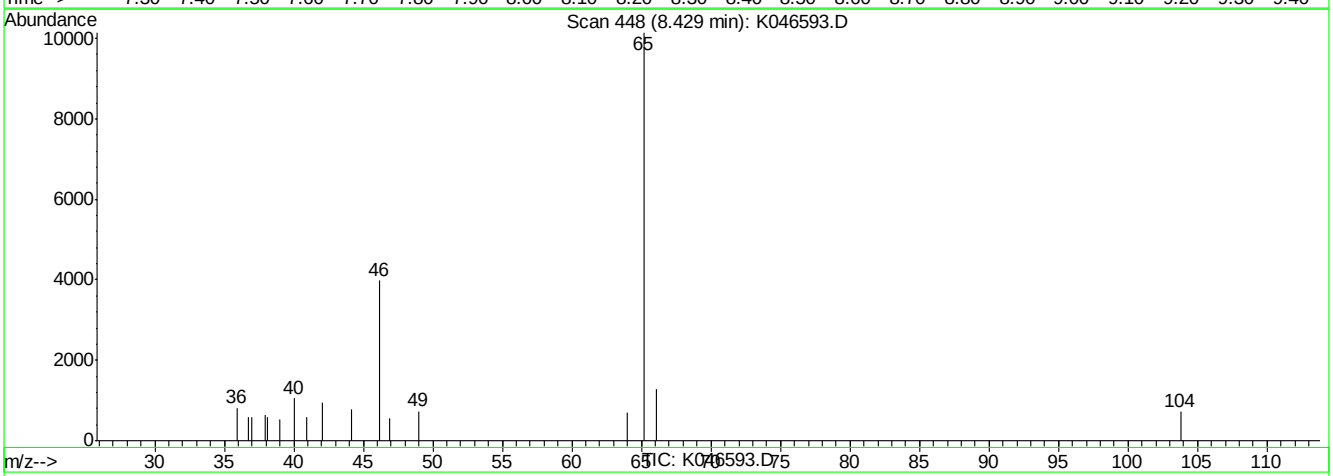


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046593.D Vial: 4
Acq On : 10 Sep 2010 1:51 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 17:27 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.43min (+0.158) 250.00ug/Kg

response 38444

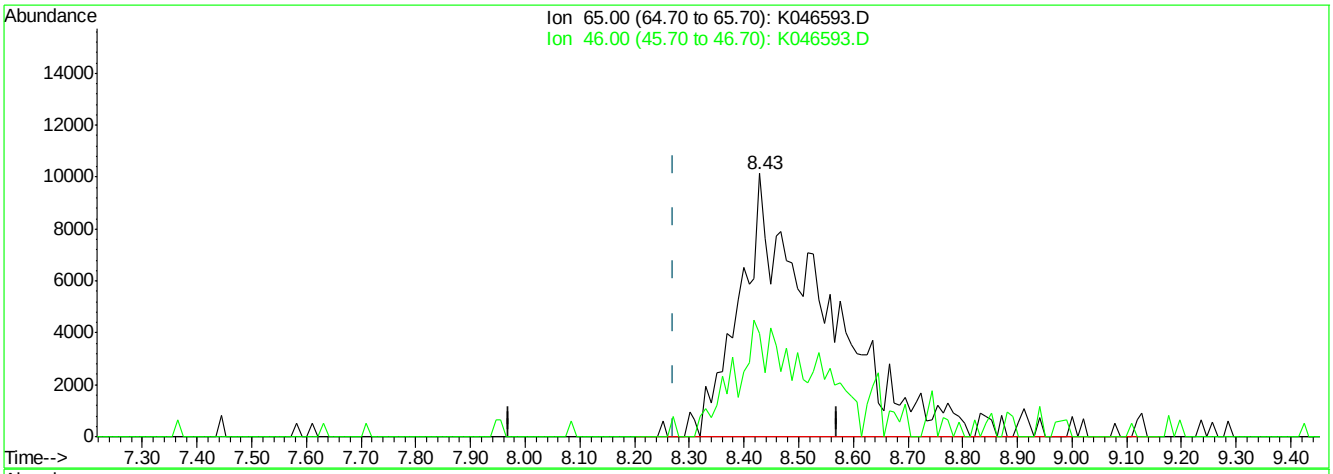
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	39.21
0.00	0.00	0.00
0.00	0.00	0.00

K046593.D 8260-K.M Mon Sep 13 10:53:32 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046593.D Vial: 4
Acq On : 10 Sep 2010 1:51 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:54 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration



(93) Tert Butyl Alcohol-d10 (I)

8.43min (+0.158) 250.00ug/Kg m

response 114860

Ion	Exp%	Act%
65.00	100	100
46.00	34.00	39.21
0.00	0.00	0.00
0.00	0.00	0.00

K046593.D 8260-K.M Mon Sep 13 10:53:36 2010

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059348.D Vial: 3
Acq On : 15 Sep 2010 10:33 am Operator: KarenW
Sample : MB Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:54:55 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

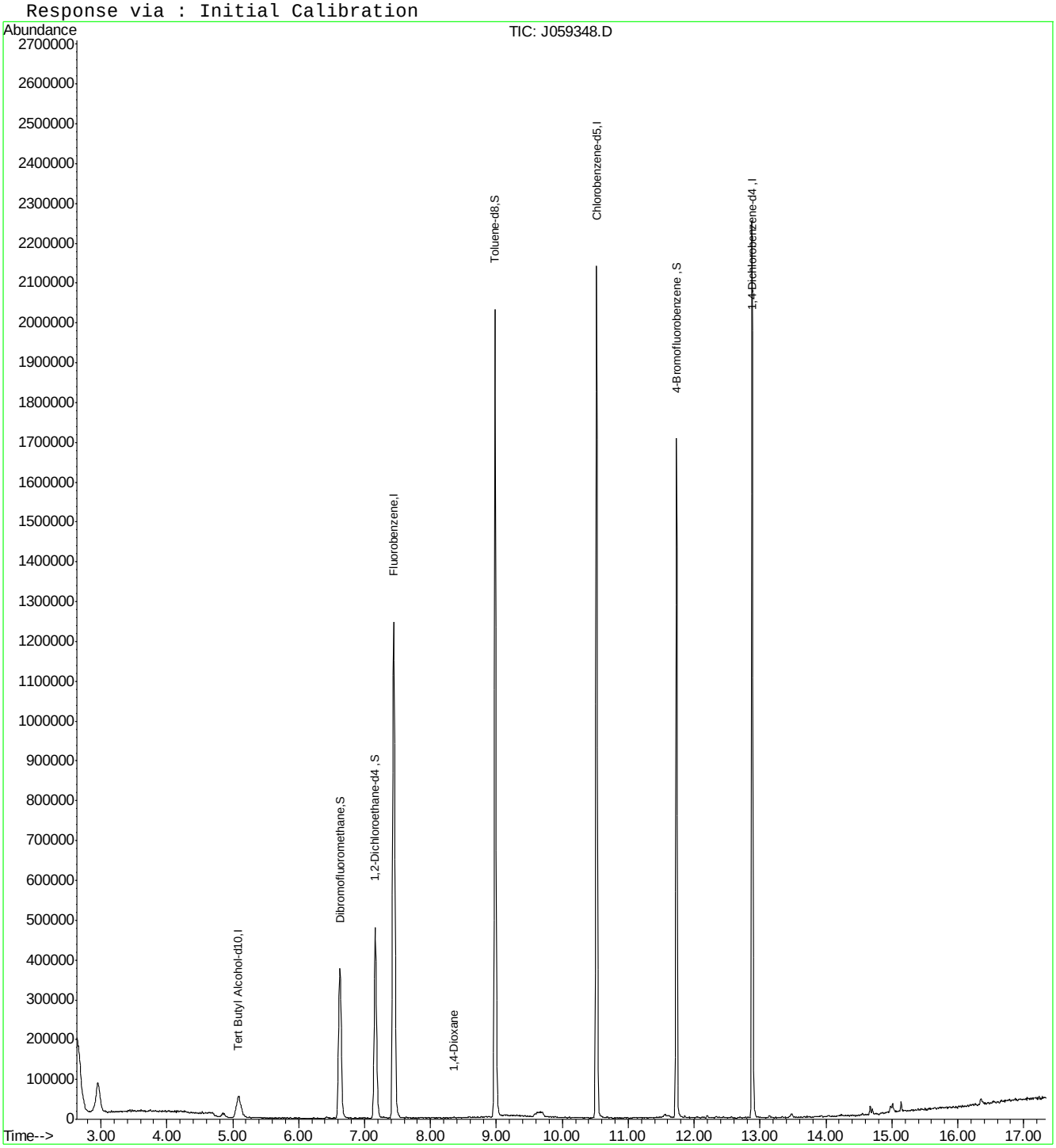
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1282602	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	941770	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	465194	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	132598	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	334540	50.99	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 101.98%			
38) 1,2-Dichloroethane-d4	7.16	65	407621	51.16	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 102.32%			
48) Toluene-d8	8.98	98	1222089	49.20	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 98.40%			
69) 4-Bromofluorobenzene	11.73	95	462231	52.09	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 104.18%			
Target Compounds						Qvalue
97) 1,4-Dioxane	8.35	88	377	3.89	ug/L #	75

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059348.D 8260-J.M Wed Sep 15 14:01:14 2010 Page 1

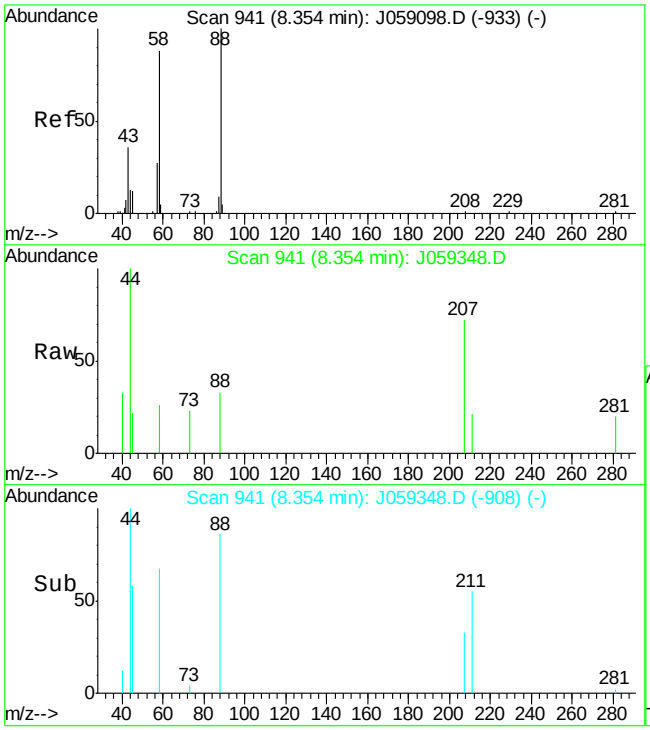
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059348.D Vial: 3
Acq On : 15 Sep 2010 10:33 am Operator: KarenW
Sample : MB Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 13:55 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration



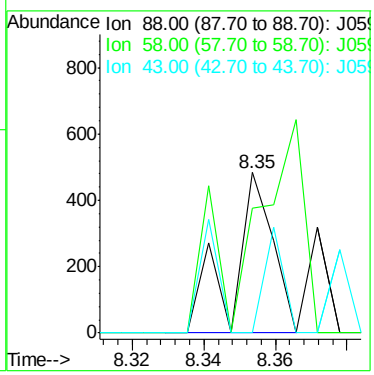
ACCUTEST
F76426



#97
1,4-Dioxane
Concen: 3.89 ug/L
RT: 8.35 min Scan# 941
Delta R.T. -0.00 min
Lab File: J059348.D
Acq: 15 Sep 2010 10:33 am

Tgt Ion: 88 Resp: 377

Ion	Ratio	Lower	Upper
88	100		
58	77.5	57.5	117.5
43	0.0	5.9	65.9#



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066856.D Vial: 3
Acq On : 16 Sep 2010 11:29 am Operator: MikeM
Sample : mb Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 12:07:51 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

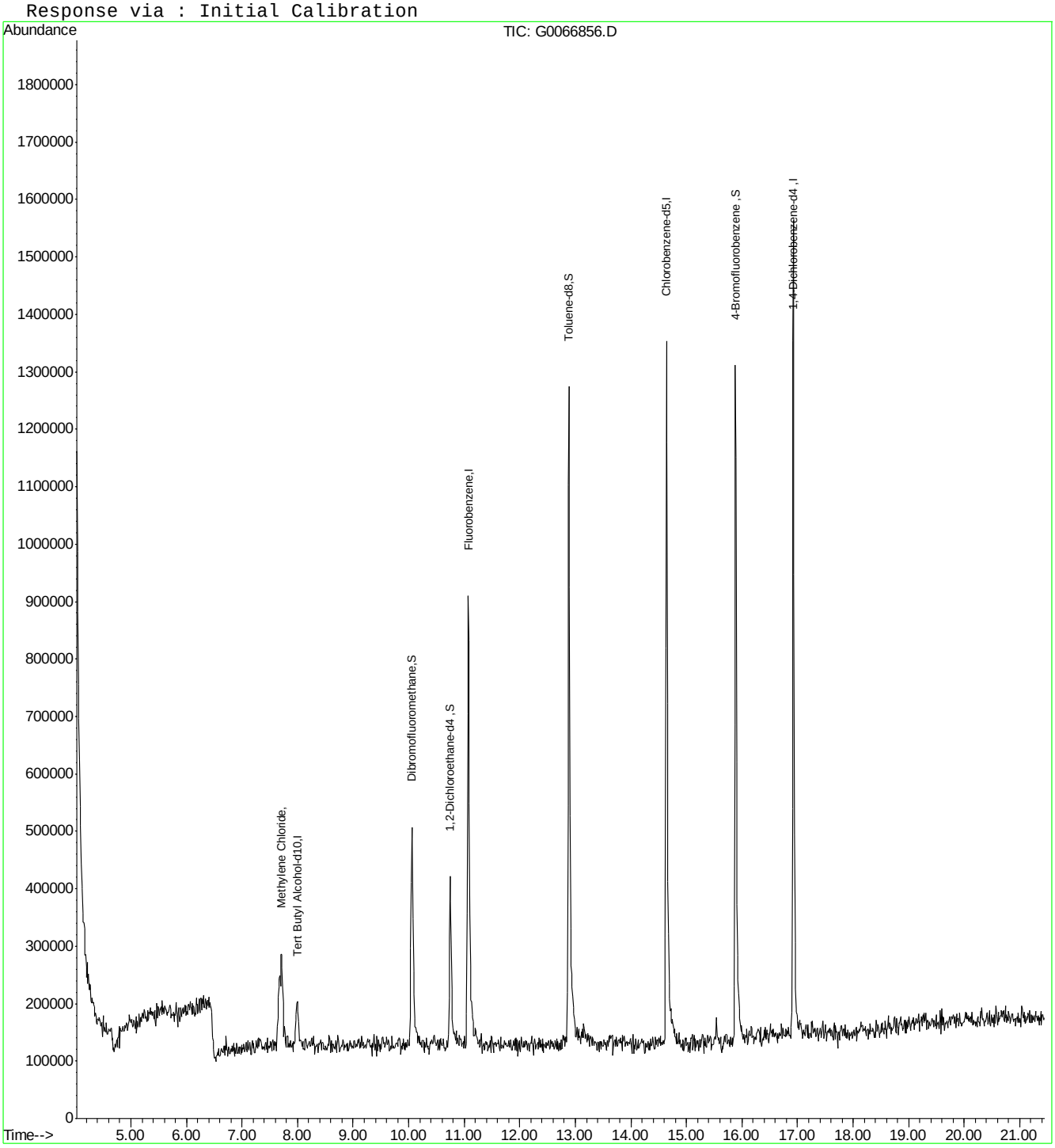
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	920973	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	891184	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.93	152	447801	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.99	65	140921	250.00	ug/Kg	0.01
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	340657	50.48	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.96%			
44) 1,2-Dichloroethane-d4	10.75	65	345498	52.56	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 105.12%			
55) Toluene-d8	12.88	98	1011467	47.58	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 95.16%			
77) 4-Bromofluorobenzene	15.88	174	428641	49.95	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.90%			
Target Compounds						Qvalue
15) Methylene Chloride	7.71	49	258805	13.34	ug/Kg	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed
G0066856.D APP9-G.M Thu Sep 16 12:08:40 2010 Page 1

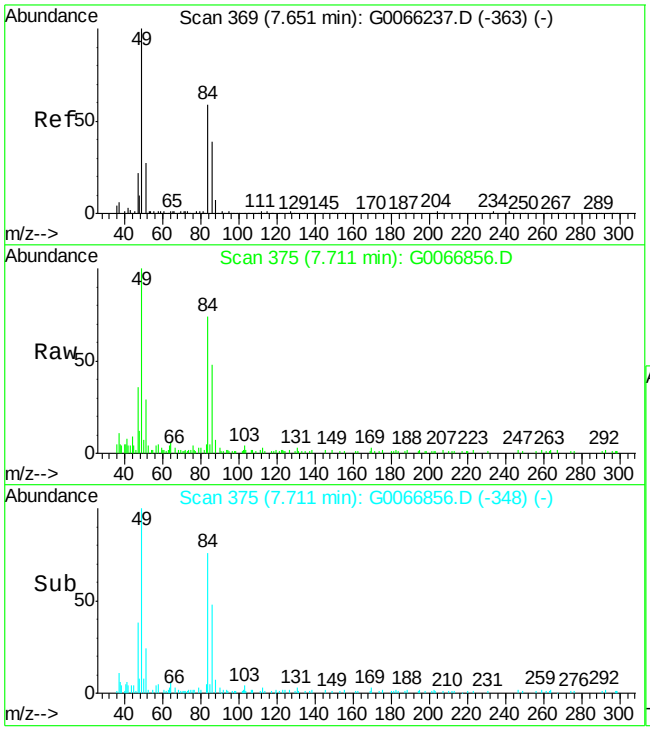
Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066856.D Vial: 3
Acq On : 16 Sep 2010 11:29 am Operator: MikeM
Sample : mb Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 12:07 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



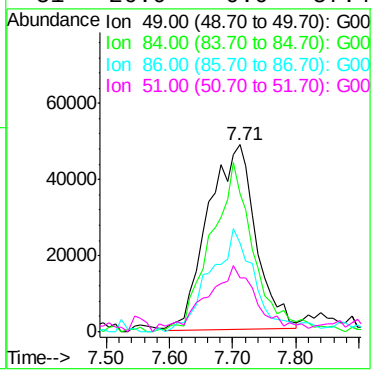
ACCUTEST
F76426



#15
Methylene Chloride
Concen: 13.34 ug/Kg
RT: 7.71 min Scan# 375
Delta R.T. 0.01 min
Lab File: G0066856.D
Acq: 16 Sep 2010 11:29 am

Tgt Ion: 49 Resp: 258805

Ion	Ratio	Lower	Upper
49	100		
84	73.3	28.6	88.6
86	48.3	9.5	69.5
51	26.0	0.0	57.4



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066901.D Vial: 3
Acq On : 17 Sep 2010 11:33 am Operator: MikeM
Sample : mb Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 11:56:44 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

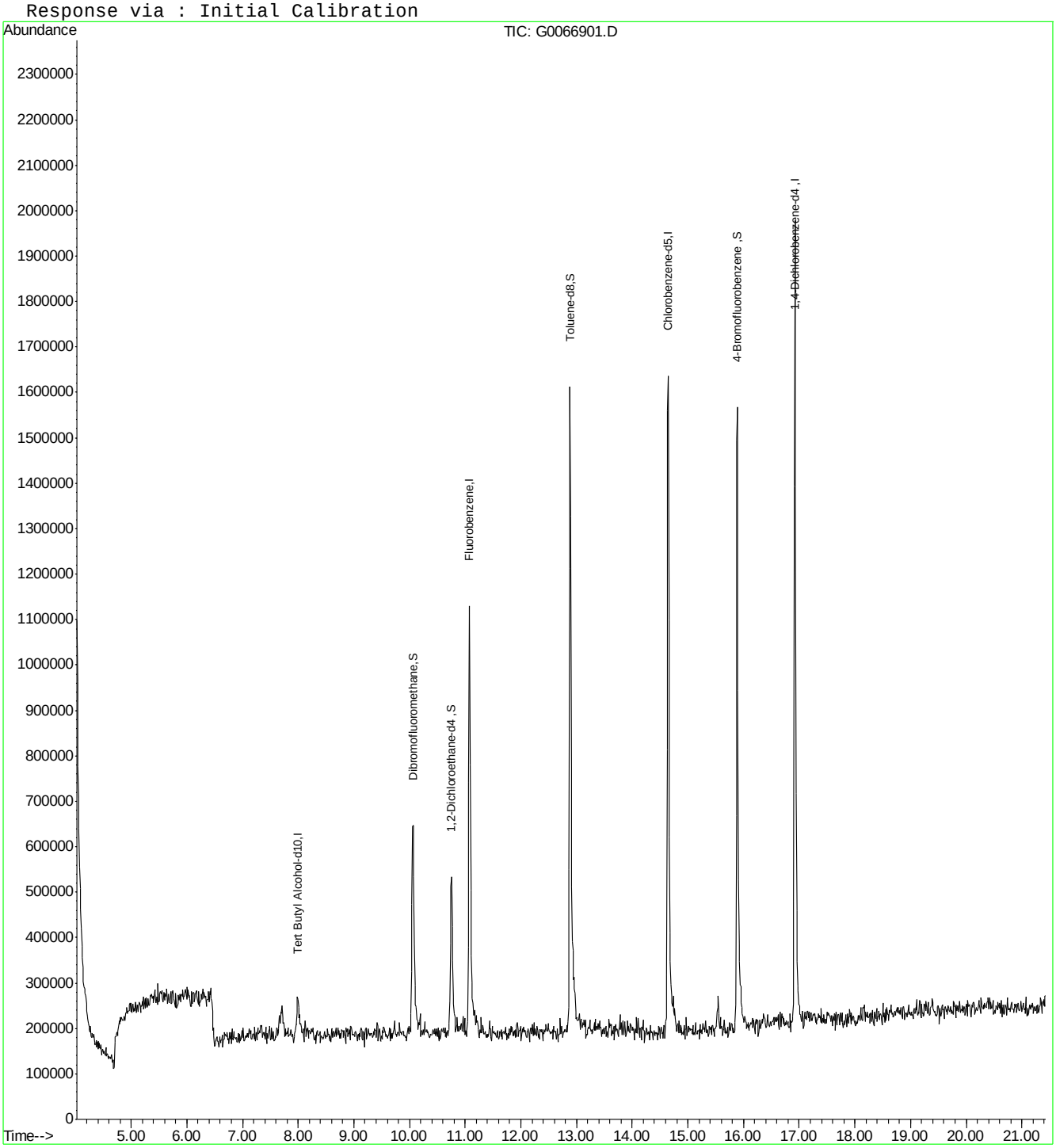
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1144526	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1100677	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	538534	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.01	65	153704	250.00	ug/Kg	0.03
System Monitoring Compounds						
35) Dibromofluoromethane	10.07	113	428706	51.12	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 102.24%			
44) 1,2-Dichloroethane-d4	10.76	65	387795	47.47	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 94.94%			
55) Toluene-d8	12.88	98	1282659	48.85	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.70%			
77) 4-Bromofluorobenzene	15.89	174	505733	49.00	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 98.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
G0066901.D APP9-G.M Fri Sep 17 11:57:31 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066901.D Vial: 3
Acq On : 17 Sep 2010 11:33 am Operator: MikeM
Sample : mb Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 11:56 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



ACCUTEST
F76426

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046595.D Vial: 6
Acq On : 10 Sep 2010 2:42 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:39:00 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Sep 13 09:38:56 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1139138	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	747777	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	336203	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.30	65	141631	250.00	ug/Kg	0.03
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	295532	52.86	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 105.72%			
36) 1,2-Dichloroethane-d4	11.13	65	391918	58.16	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 116.32%			
50) Toluene-d8	13.26	98	1196135	46.67	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 93.34%			
70) 4-Bromofluorobenzene	16.24	174	286291	45.87	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 91.74%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	322240	99.37	ug/Kg	89
3) Chloromethane	4.60	50	577629	71.33	ug/Kg	99
4) Vinyl Chloride	4.79	62	394100	61.80	ug/Kg	99
5) Bromomethane	5.47	94	153626	61.84	ug/Kg	91
6) Chloroethane	5.73	64	152395	54.88	ug/Kg	96
7) Trichlorofluoromethane	5.99	101	341557	59.92	ug/Kg	98
8) 1,2-Dichloro-1,1,2-trifluo	6.89	67	448961	62.30	ug/Kg	92
9) Ethyl Ether	6.51	59	226631	42.34	ug/Kg	96
10) Freon 113	7.01	101	276007	54.65	ug/Kg	91
11) 1,1-Dichloroethene	6.91	61	517606	54.11	ug/Kg	94
12) Acetone	7.95	43	620528	300.03	ug/Kg	92
13) Iodomethane	7.18	142	438816	51.64	ug/Kg	97
14) Carbon Disulfide	7.01	76	890044	50.14	ug/Kg	100
15) Methyl acetate	8.12	43	1335669	252.38	ug/Kg	98
16) Methylene Chloride	7.88	49	1032023	88.08	ug/Kg	95
17) Acrylonitrile	9.14	53	518620	242.54	ug/Kg	95
18) Methyl Tert Butyl Ether	8.30	73	857330	47.04	ug/Kg	96
19) trans-1,2-Dichloroethene	8.16	61	505058	47.23	ug/Kg	98
20) Hexane	8.27	57	771722	54.81	ug/Kg	94
21) Vinyl acetate	8.12	43	1360419	257.03	ug/Kg	99
22) 1,1-Dichloroethane	9.10	63	683944	53.96	ug/Kg	97
23) Di-isopropyl ether	8.85	45	1492136	47.58	ug/Kg	98
24) Ethyl tert-butyl Ether	9.39	59	1100878	47.55	ug/Kg	94
25) 2-Butanone	10.57	43	971743	302.28	ug/Kg	97
26) cis-1,2-Dichloroethene	9.86	96	330190	51.47	ug/Kg	95
27) 2,2-Dichloropropane	10.01	77	395041	53.56	ug/Kg	95
28) Bromochloromethane	10.13	128	157388	49.65	ug/Kg	96
29) Chloroform	10.20	83	617935	50.69	ug/Kg	94
30) Tetrahydrofuran	10.57	42	75930	64.36	ug/Kg	97
32) 1,1,1-Trichloroethane	10.51	97	463207	48.87	ug/Kg	92
33) Cyclohexane	10.18	56	744431	59.50	ug/Kg	97
34) 1,1-Dichloropropene	10.67	75	487490	52.12	ug/Kg	94
35) Carbon Tetrachloride	10.44	117	371183	48.46	ug/Kg	98
37) 1,2-Dichloroethane	11.21	62	481989	51.49	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
K046595.D 8260-K.M Mon Sep 13 10:48:50 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046595.D Vial: 6
Acq On : 10 Sep 2010 2:42 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:39:00 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Sep 13 09:38:56 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) Benzene	10.97	78	1370107	54.91	ug/Kg	95
39) Tert-Amyl Methyl Ether	11.06	73	844239	48.54	ug/Kg	96
40) Trichloroethene	11.68	95	342527	58.46	ug/Kg	98
41) Methylcyclohexane	11.70	83	601419	62.47	ug/Kg	97
42) 1,2-Dichloropropane	12.28	63	423817	50.28	ug/Kg	97
43) Dibromomethane	12.18	93	195323	53.17	ug/Kg	95
44) Bromodichloromethane	12.34	83	436842	50.97	ug/Kg	95
45) 2-Nitropropane	13.55	41	467847	235.00	ug/Kg	97
46) 2-Chloroethyl vinyl ether	12.92	63	272412	148.12	ug/Kg	88
47) cis-1,3-Dichloropropene	13.04	75	551257	51.83	ug/Kg	93
48) 4-Methyl-2-pentanone	13.67	43	2078678	289.52	ug/Kg	98
51) Toluene	13.32	91	1409794	45.39	ug/Kg	100
52) trans-1,3-Dichloropropene	13.75	75	465236	51.37	ug/Kg	95
53) 1,1,2-Trichloroethane	13.94	83	264461	48.38	ug/Kg	97
54) 1,3-Dichloropropane	14.24	76	515505	46.55	ug/Kg	95
55) 2-hexanone	14.57	43	1440909	243.26	ug/Kg	98
56) Tetrachloroethene	13.78	166	313949	52.17	ug/Kg	98
57) Dibromochloromethane	14.16	129	306217	48.01	ug/Kg	94
58) 1,2-Dibromoethane	14.45	107	273004	48.09	ug/Kg	93
59) 1-Chlorohexane	14.89	91	429939	45.80	ug/Kg	98
60) Chlorobenzene	14.99	112	809999	46.91	ug/Kg	97
61) 1,1,1,2-Tetrachloroethane	15.04	131	283495	45.93	ug/Kg	91
62) Ethylbenzene	14.97	91	1396939	45.41	ug/Kg	99
63) m,p-Xylene	15.11	91	2272208	94.42	ug/Kg	98
64) o-Xylene	15.58	91	1210381	46.41	ug/Kg	94
65) Styrene	15.63	104	873459	47.17	ug/Kg	98
66) Bromoform	15.72	173	184221	41.93	ug/Kg	96
68) Isopropylbenzene	15.90	105	1346724	60.76	ug/Kg	95
69) Cyclohexanone	16.67	55	44375	179.92	ug/Kg	95
71) 1,1,2,2-Tetrachloroethane	16.40	83	358534	52.28	ug/Kg	99
72) trans-1,4-Dichloro-2-Buten	16.58	53	90348	45.27	ug/Kg#	91
73) 1,2,3-Trichloropropane	16.58	110	74820	43.07	ug/Kg	90
74) Bromobenzene	16.38	156	297785	45.25	ug/Kg	99
75) n-Propylbenzene	16.33	91	1647279	56.12	ug/Kg	98
76) 2-Chlorotoluene	16.55	91	1127393	54.14	ug/Kg	96
77) 1,3,5-Trimethylbenzene	16.51	105	1127693	55.44	ug/Kg	100
78) 4-Chlorotoluene	16.71	91	980839	53.37	ug/Kg	98
79) tert-Butylbenzene	16.87	91	694843	55.17	ug/Kg	96
80) 1,2,4-Trimethylbenzene	16.93	105	1097190	54.81	ug/Kg	97
81) sec-Butylbenzene	17.06	105	1377060	55.50	ug/Kg	98
82) 4-Isopropyltoluene	17.18	119	1041102	56.69	ug/Kg	99
83) 1,3-Dichlorobenzene	17.35	146	538032	47.66	ug/Kg	97
84) 1,4-Dichlorobenzene	17.44	146	520100	47.24	ug/Kg	97
85) Benzyl chloride	17.68	126	74081	39.86	ug/Kg#	86
86) n-Butylbenzene	17.63	92	575947	47.63	ug/Kg	99
87) 1,2-Dichlorobenzene	17.91	146	506228	47.62	ug/Kg	97
88) 1,2-Dibromo-3-Chloropropan	18.74	75	53952	49.33	ug/Kg	82
89) 1,2,4-Trichlorobenzene	19.47	180	239826	54.05	ug/Kg	95
90) Hexachlorobutadiene	19.39	225	185224	58.21	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
K046595.D 8260-K.M Mon Sep 13 10:48:50 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046595.D Vial: 6
Acq On : 10 Sep 2010 2:42 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:39:00 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Sep 13 09:38:56 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

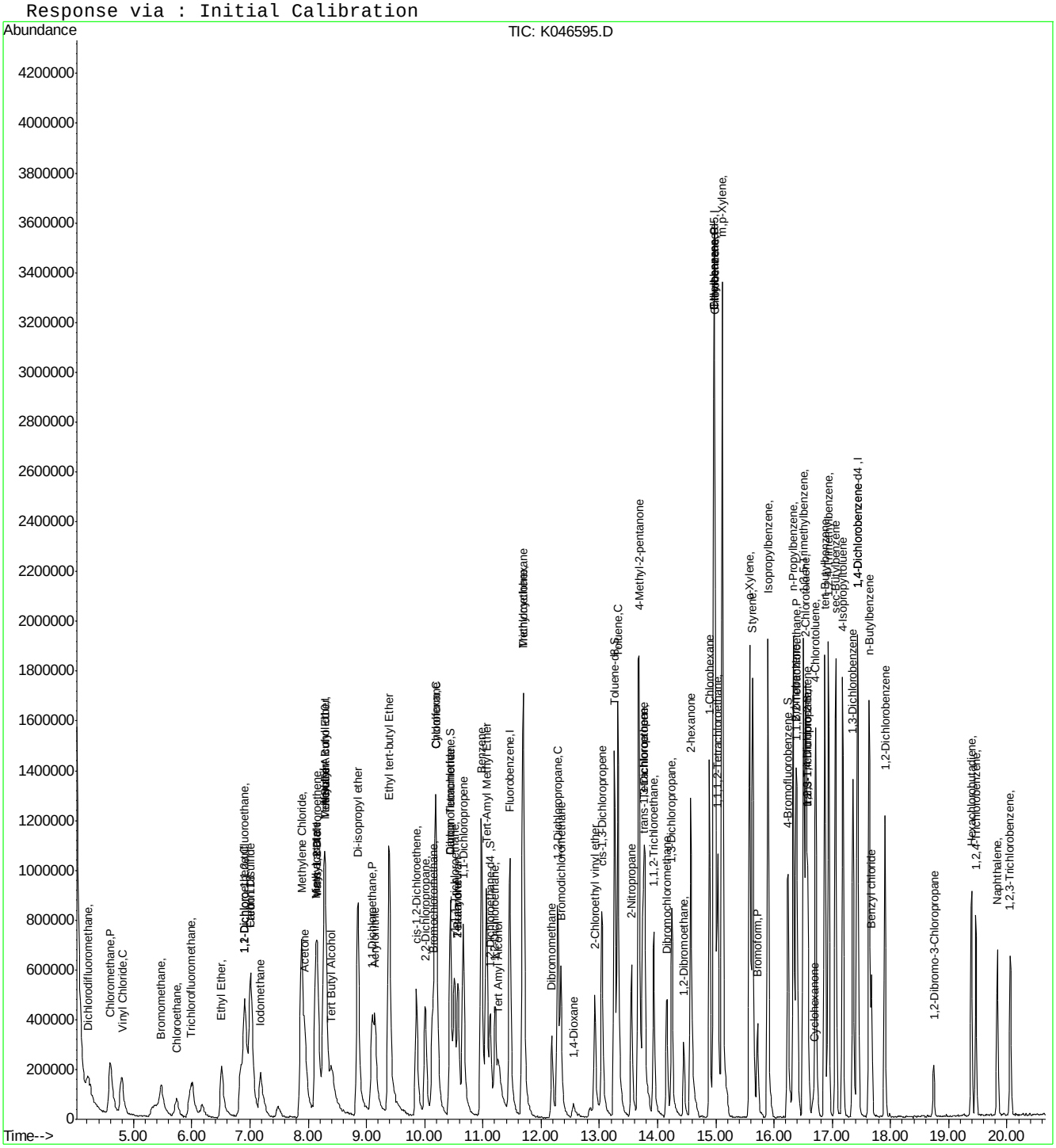
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	19.84	128	501471	48.40	ug/Kg	100
92) 1,2,3-Trichlorobenzene	20.06	180	194298	53.09	ug/Kg	95
94) Acrolein	8.27	56	322859	171.32	ug/Kg	91
95) Tert Butyl Alcohol	8.41	59	325030	437.32	ug/Kg	93
96) Tert Amyl Alcohol	11.27	59	313460	524.02	ug/Kg	83
97) 1,4-Dioxane	12.56	88	60997	688.98	ug/Kg#	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046595.D 8260-K.M Mon Sep 13 10:48:50 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046595.D Vial: 6
Acq On : 10 Sep 2010 2:42 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15375,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 12:39 2010 Quant Results File: 8260-K.RES

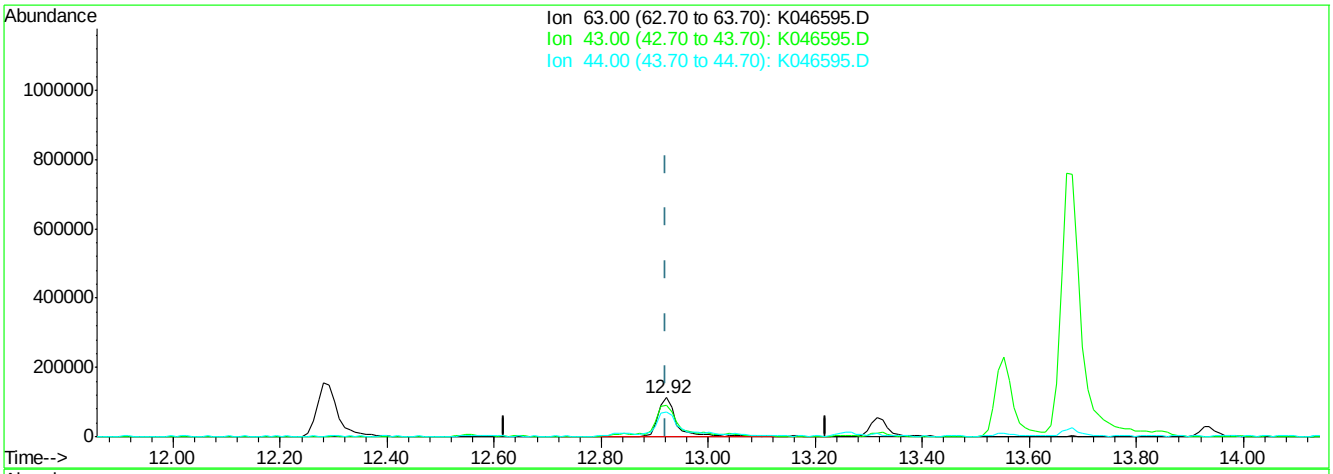
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

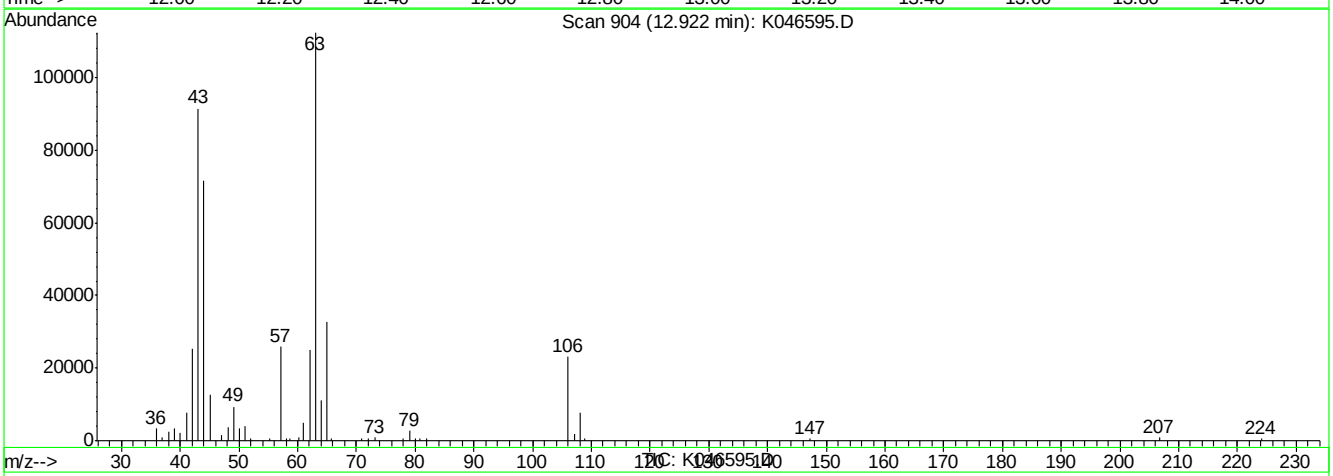


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046595.D Vial: 6
Acq On : 10 Sep 2010 2:42 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15375,vk2009,6.46,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 12:23 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(46) 2-Chloroethyl vinyl ether

12.92min (+0.002) 116.91ug/Kg m

response 275706

Ion	Exp%	Act%
63.00	100	100
43.00	89.50	81.33
44.00	73.60	63.74
0.00	0.00	0.00

K046595.D 8260-K.M Mon Sep 13 09:22:36 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 15:13

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059347.D Vial: 2
Acq On : 15 Sep 2010 10:10 am Operator: KarenW
Sample : BS Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28:27 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.44	96	1287616	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.52	117	941471	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	491946	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.09	65	135715	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	336048	51.02	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 102.04%				
38) 1,2-Dichloroethane-d4	7.16	65	402339	50.30	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 100.60%				
48) Toluene-d8	8.98	98	1277471	51.44	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 102.88%				
69) 4-Bromofluorobenzene	11.73	95	476698	50.80	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 101.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.78	85	394092	32.40	ug/L		93
3) Chloromethane	2.92	50	890550	32.80	ug/L		98
4) Vinyl Chloride	3.05	62	567411	30.76	ug/L		98
5) Bromomethane	3.42	94	257982	29.31	ug/L		89
6) Chloroethane	3.57	64	261802	29.85	ug/L		94
7) Trichlorofluoromethane	3.76	101	494350	31.64	ug/L		99
8) Ethyl Ether	4.00	59	320770	27.35	ug/L		97
9) 1,2-Dichlorotrifluoroethan	4.23	67	424891	33.24	ug/L		96
10) 1,1-Dichloroethene	4.26	61	571588	28.28	ug/L		96
11) Freon 113	4.33	101	276476	29.01	ug/L		97
12) Carbon Disulfide	4.33	76	926727	27.15	ug/L		93
13) Iodomethane	4.43	142	486721	27.46	ug/L		98
14) Methylene Chloride	4.85	49	598952	24.53	ug/L		94
15) Acetone	4.86	58	114229	109.96	ug/L		93
16) Methyl acetate	4.98	74	164821	107.56	ug/L		95
17) trans-1,2-Dichloroethene	5.01	61	542167	23.92	ug/L		96
18) Hexane	5.09	56	389222	27.13	ug/L		94
19) Methyl Tert Butyl Ether	5.13	73	672088	22.33	ug/L		92
20) Di-isopropyl ether	5.48	45	1459739	26.69	ug/L		97
21) 1,1-Dichloroethane	5.63	63	630025	23.25	ug/L		99
22) Acrylonitrile	5.66	53	516005	111.27	ug/L		100
23) ETBE	5.87	59	1122685	23.19	ug/L		100
24) Vinyl acetate	5.84	43	2654966	148.01	ug/L		98
25) cis-1,2-Dichloroethene	6.18	96	309577	23.68	ug/L		97
26) 2,2-Dichloropropane	6.32	77	386073	23.44	ug/L		98
27) Bromochloromethane	6.39	128	146152	21.50	ug/L	#	85
28) Cyclohexane	6.45	56	735659	26.32	ug/L		96
29) Chloroform	6.44	83	493115	22.80	ug/L		94
30) Tetrahydrofuran	6.61	42	89321	25.20	ug/L		97
32) Carbon Tetrachloride	6.64	117	365597m	28.06	ug/L		
33) 1,1,1-Trichloroethane	6.70	97	378727	22.77	ug/L		87
34) 2-Butanone	6.72	43	649065	122.90	ug/L		96
35) 1,1-Dichloropropene	6.80	75	411414	24.36	ug/L		93
36) Benzene	7.05	78	1110984	22.52	ug/L		96

(#) = qualifier out of range (m) = manual integration
J059347.D 8260-J.M Wed Sep 15 14:01:02 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059347.D Vial: 2
Acq On : 15 Sep 2010 10:10 am Operator: KarenW
Sample : BS Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28:27 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	748426	23.62	ug/L		98
39)	1,2-Dichloroethane	7.23	62	440854	23.37	ug/L		95
40)	Trichloroethene	7.62	95	298731	23.25	ug/L		99
41)	Methylcyclohexane	7.65	83	538610	26.67	ug/L		97
42)	Dibromomethane	8.03	93	160703	22.31	ug/L		95
43)	1,2-Dichloropropane	8.12	63	382332	23.76	ug/L		96
44)	Bromodichloromethane	8.17	83	338742	22.59	ug/L		95
45)	2-Chloroethyl vinyl ether	8.69	63	1025625	118.03	ug/L		97
46)	cis-1,3-Dichloropropene	8.79	75	481937	22.99	ug/L		91
49)	Toluene	9.04	91	1212999	24.09	ug/L		94
50)	2-Nitropropane	9.22	41	363493	141.07	ug/L		98
51)	4-Methyl-2-pentanone	9.36	43	1506234	138.35	ug/L		92
52)	trans-1,3-Dichloropropene	9.41	75	404650	23.43	ug/L		97
53)	Tetrachloroethene	9.43	166	298377	22.79	ug/L		97
54)	1,1,2-Trichloroethane	9.58	83	195152	21.78	ug/L		93
55)	Dibromochloromethane	9.77	129	243966	21.90	ug/L		99
56)	1,3-Dichloropropane	9.86	76	407212	22.23	ug/L		96
57)	1,2-Dibromoethane	10.02	107	222411	21.59	ug/L		99
58)	2-hexanone	10.17	43	1034298	139.69	ug/L		91
59)	1-Chlorohexane	10.49	91	460122	24.18	ug/L		96
60)	Ethylbenzene	10.55	91	1301088	22.54	ug/L		93
61)	Chlorobenzene	10.54	112	756534	21.62	ug/L		93
62)	1,1,1,2-Tetrachloroethane	10.59	131	254681	22.15	ug/L		97
63)	m,p-Xylene	10.69	91	1924598	46.90	ug/L		90
64)	o-Xylene	11.12	91	1022019	21.82	ug/L		94
65)	Styrene	11.17	104	780285	22.97	ug/L		95
66)	Bromoform	11.22	173	152261	21.75	ug/L		96
67)	Isopropylbenzene	11.43	105	1187135	24.83	ug/L		95
70)	n-Propylbenzene	11.85	91	1503797	24.79	ug/L		92
71)	Bromobenzene	11.85	156	321572	22.69	ug/L		98
72)	1,1,2,2-Tetrachloroethane	11.90	83	272476	23.67	ug/L		98
73)	1,3,5-Trimethylbenzene	12.04	105	1015525	26.05	ug/L		93
74)	2-Chlorotoluene	12.03	91	965388	23.97	ug/L		99
75)	trans-1,4-Dichloro-2-Buten	12.08	53	106678	24.54	ug/L		94
76)	1,2,3-Trichloropropane	12.06	110	64662	21.11	ug/L		92
77)	Cyclohexanone	12.11	55	41188	119.66	ug/L		91
78)	4-Chlorotoluene	12.20	91	936610	24.99	ug/L		97
79)	tert-Butylbenzene	12.38	91	599366	24.52	ug/L		97
80)	1,2,4-Trimethylbenzene	12.45	105	1003834	24.95	ug/L		95
81)	sec-Butylbenzene	12.56	105	1343492	24.67	ug/L		95
82)	4-Isopropyltoluene	12.70	119	1067392	25.67	ug/L		93
83)	1,3-Dichlorobenzene	12.81	146	602835	23.34	ug/L		98
84)	1,4-Dichlorobenzene	12.90	146	602493	22.89	ug/L		92
85)	n-Butylbenzene	13.14	92	685998	25.40	ug/L		89
86)	Benzyl Chloride	13.14	126	108548	23.39	ug/L	#	71
87)	1,2-Dichlorobenzene	13.34	146	562102	22.98	ug/L		98
88)	1,2-Dibromo-3-Chloropropan	14.09	75	39957	21.91	ug/L		91
89)	Hexachlorobutadiene	14.67	225	230364	25.27	ug/L		93
90)	1,2,4-Trichlorobenzene	14.70	180	419251	23.84	ug/L		95

(#) = qualifier out of range (m) = manual integration
J059347.D 8260-J.M Wed Sep 15 14:01:02 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059347.D Vial: 2
Acq On : 15 Sep 2010 10:10 am Operator: KarenW
Sample : BS Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28:27 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

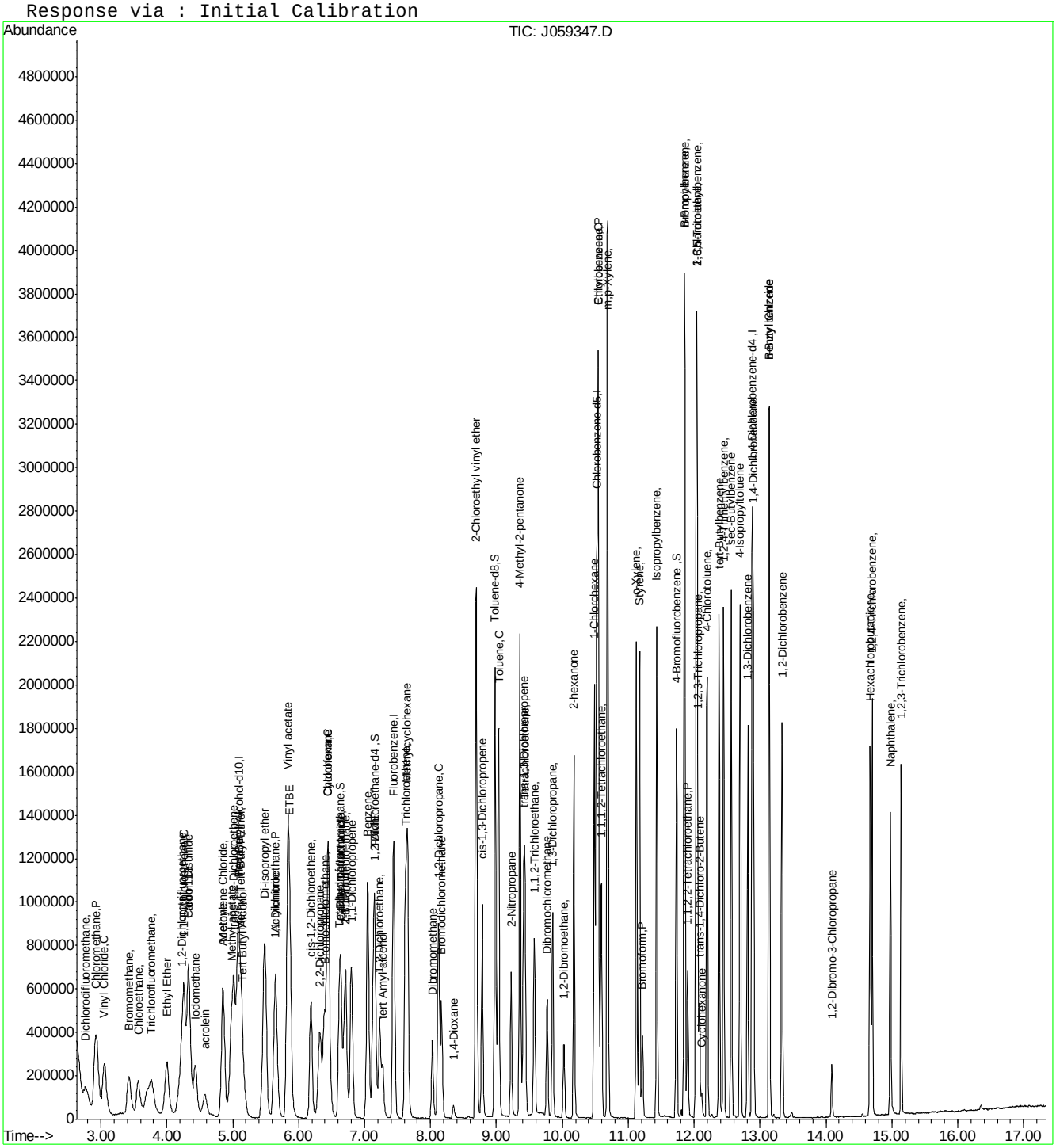
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91)	Naphthalene	14.98	128	702335	22.76	ug/L		97
92)	1,2,3-Trichlorobenzene	15.14	180	362827	23.60	ug/L		91
94)	acrolein	4.58	56	190993	110.45	ug/L		96
95)	Tert Butyl Alcohol	5.15	59	225699	211.16	ug/L	#	66
96)	tert Amyl alcohol	7.28	59	188151	218.98	ug/L		96
97)	1,4-Dioxane	8.35	88	40613	409.34	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059347.D 8260-J.M Wed Sep 15 14:01:02 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059347.D Vial: 2
Acq On : 15 Sep 2010 10:10 am Operator: KarenW
Sample : BS Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:29 2010 Quant Results File: 8260-J.RES

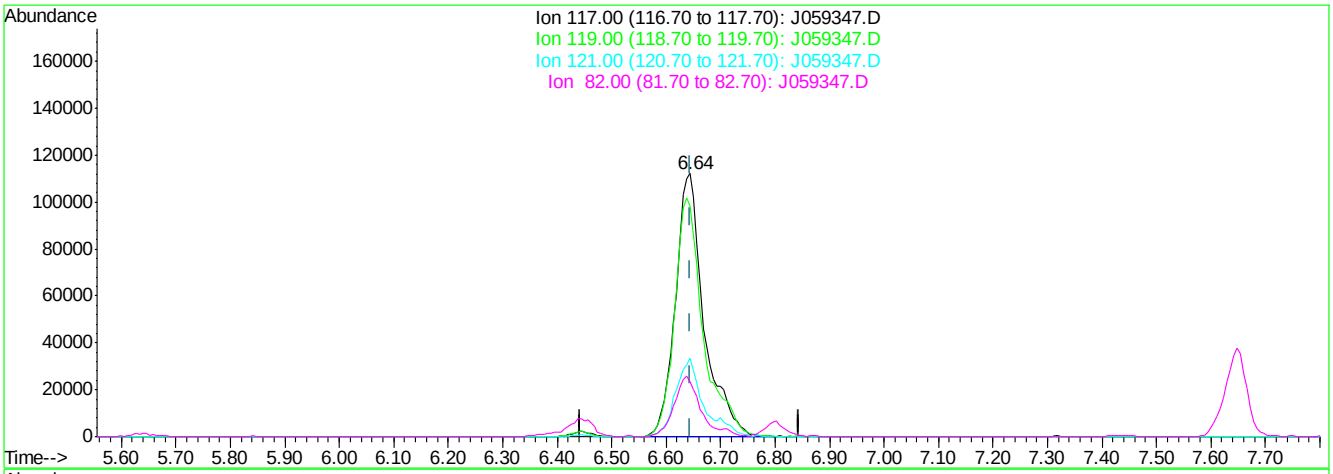
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

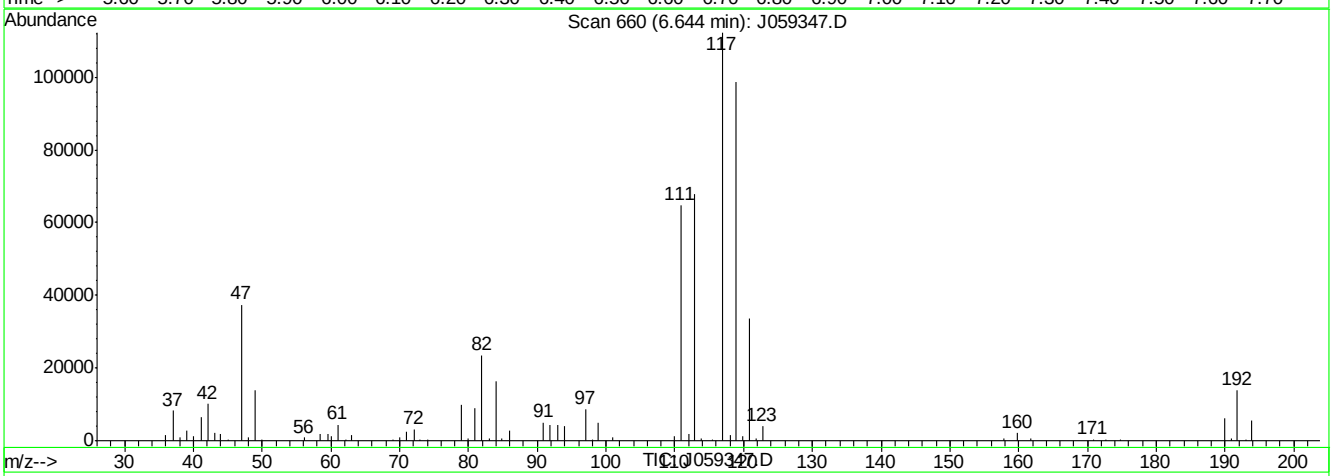


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059347.D Vial: 2
Acq On : 15 Sep 2010 10:10 am Operator: KarenW
Sample : BS Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.000) 31.20ug/L

response 408721

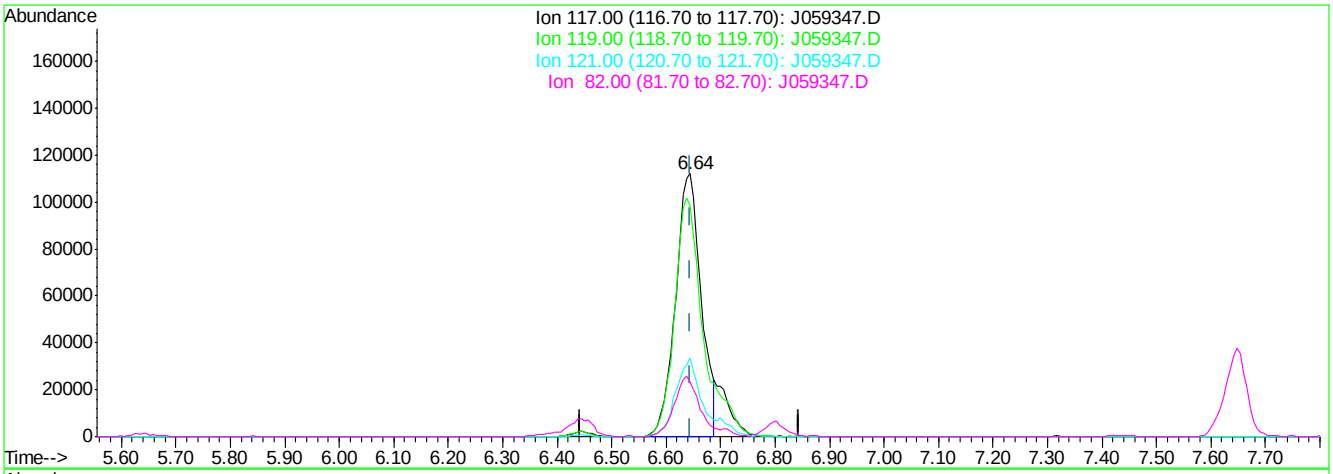
Ion	Exp%	Act%
117.00	100	100
119.00	95.40	87.89
121.00	29.70	29.86
82.00	22.30	20.88

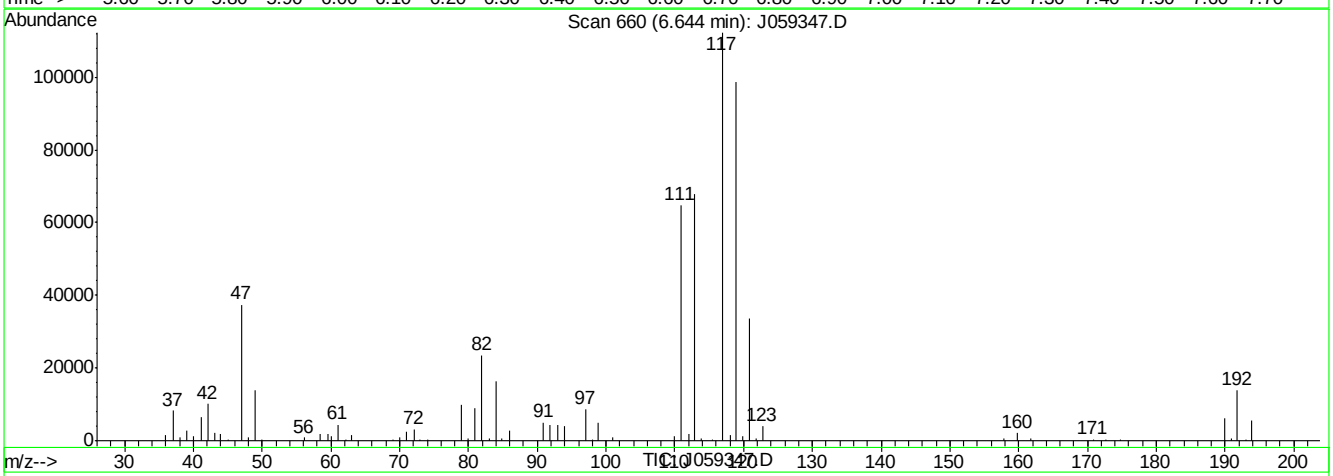
J059347.D 8260-J.M Wed Sep 15 10:29:00 2010

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059347.D Vial: 2
Acq On : 15 Sep 2010 10:10 am Operator: KarenW
Sample : BS Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:29 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.000) 28.06ug/L m

response 365597

Ion	Exp%	Act%
117.00	100	100
119.00	95.40	87.89
121.00	29.70	29.86
82.00	22.30	20.88

J059347.D 8260-J.M Wed Sep 15 10:29:08 2010

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066855.D Vial: 2
Acq On : 16 Sep 2010 11:02 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:27:57 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1040636	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	1006397	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	583694	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.98	65	162633	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	364570	47.81	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 95.62%			
44) 1,2-Dichloroethane-d4	10.75	65	359718	48.43	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 96.86%			
55) Toluene-d8	12.88	98	1188649	49.51	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 99.02%			
77) 4-Bromofluorobenzene	15.88	174	579107	51.77	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.54%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	1214543	76.21	ug/Kg	97
3) Chloromethane	4.59	50	1121916	63.80	ug/Kg	99
4) Vinyl Chloride	4.78	62	803056	54.67	ug/Kg	97
5) Bromomethane	5.43	94	271446	69.97	ug/Kg	85
6) Chloroethane	5.69	64	255294	61.63	ug/Kg	88
7) Trichlorofluoromethane	5.94	101	883378	61.99	ug/Kg	95
8) Ethyl Ether	6.39	59	303002	43.84	ug/Kg	99
9) 1,2-Dichlorotrifluoroethan	6.75	67	814410	55.36	ug/Kg	95
10) 1,1-Dichloroethene	6.79	61	1065637	47.19	ug/Kg	96
11) Freon 113	6.84	101	663574	49.76	ug/Kg	95
12) Carbon Disulfide	6.91	76	1758788	48.45	ug/Kg	93
13) Iodomethane	7.07	142	1356234	48.19	ug/Kg	99
14) Allyl chloride	7.49	41	1028851	56.23	ug/Kg	90
15) Methylene Chloride	7.70	49	1130363	51.55	ug/Kg	86
16) Acetone	7.72	43	1057662	177.58	ug/Kg	98
17) Methyl acetate	7.87	43	1733104	220.64	ug/Kg	99
18) trans-1,2-Dichloroethene	7.90	61	1019390	47.68	ug/Kg	96
19) Hexane	7.98	56	574122	52.30	ug/Kg#	85
20) Methyl Tert Butyl Ether	8.01	73	1641689	45.67	ug/Kg	87
21) Acetonitrile	8.41	41	507997	517.21	ug/Kg	98
22) Di-isopropyl ether	8.50	45	2150480	46.08	ug/Kg	95
23) Chloroprene	8.73	53	1111238	52.66	ug/Kg	96
24) 1,1-Dichloroethane	8.77	63	1237294	46.47	ug/Kg	99
25) Acrylonitrile	8.82	53	862257	243.14	ug/Kg	97
26) ETBE	8.99	59	2069211	46.91	ug/Kg	94
27) Vinyl acetate	9.03	43	4289180	359.26	ug/Kg	99
28) cis-1,2-Dichloroethene	9.49	96	680891	47.61	ug/Kg	94
29) 2,2-Dichloropropane	9.64	77	658734	48.54	ug/Kg	98
30) Bromochloromethane	9.76	128	376018	41.75	ug/Kg	87
31) Cyclohexane	9.79	56	1121967	50.20	ug/Kg	91
32) Chloroform	9.81	83	1376263	46.55	ug/Kg	98
33) Ethyl acetate	9.90	43	3327760	293.85	ug/Kg	97
34) Tetrahydrofuran	10.06	42	172334	53.20	ug/Kg	94
36) Carbon Tetrachloride	10.05	117	1225322	47.57	ug/Kg	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066855.D Vial: 2
Acq On : 16 Sep 2010 11:02 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:27:57 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1068151	48.87	ug/Kg	96
38)	2-Butanone	10.19	43	1388189	197.30	ug/Kg	99
39)	1,1-Dichloropropene	10.27	75	979360	49.43	ug/Kg	93
40)	Propionitrile	10.59	54	649067	514.82	ug/Kg	95
41)	Methacrylonitrile	10.62	41	3942724	495.32	ug/Kg	96
42)	Benzene	10.59	78	2312278	46.91	ug/Kg	100
43)	TAME	10.65	73	1675898	48.08	ug/Kg	90
45)	1,2-Dichloroethane	10.82	62	995835	44.49	ug/Kg	94
46)	Trichloroethene	11.28	95	744292	48.90	ug/Kg	94
47)	Methylcyclohexane	11.29	83	1063197	52.00	ug/Kg	91
48)	Dibromomethane	11.80	93	458955	42.97	ug/Kg	89
49)	1,2-Dichloropropane	11.91	63	662407	47.72	ug/Kg	95
50)	Bromodichloromethane	11.95	83	937751	42.99	ug/Kg	100
51)	Methyl methacrylate	12.05	41	573117	50.85	ug/Kg	95
52)	2-Chloroethyl vinyl ether	12.53	63	1405240	263.78	ug/Kg	98
53)	cis-1,3-Dichloropropene	12.67	75	1068155	47.68	ug/Kg	94
56)	Toluene	12.94	91	2591735	48.57	ug/Kg	98
57)	2-Nitropropane	13.21	41	906176	238.80	ug/Kg	99
58)	4-Methyl-2-pentanone	13.31	43	2803939	251.34	ug/Kg	95
59)	trans-1,3-Dichloropropene	13.39	75	911138	49.74	ug/Kg	93
60)	Tetrachloroethene	13.41	166	869289	48.43	ug/Kg	93
61)	Ethyl methacrylate	13.48	69	711344	52.47	ug/Kg	93
62)	1,1,2-Trichloroethane	13.57	83	449167	45.19	ug/Kg	87
63)	Dibromochloromethane	13.81	129	780639	45.83	ug/Kg	95
64)	1,3-Dichloropropane	13.90	76	867774	46.48	ug/Kg	94
65)	1,2-Dibromoethane	14.12	107	592512	44.99	ug/Kg	95
66)	2-hexanone	14.22	43	2139385	230.25	ug/Kg	99
67)	1-Chlorohexane	14.56	91	921549	50.26	ug/Kg	97
68)	Ethylbenzene	14.64	91	2841093	49.89	ug/Kg	96
69)	Chlorobenzene	14.66	112	1641925	49.27	ug/Kg	97
70)	1,1,1,2-Tetrachloroethane	14.71	131	679606	47.81	ug/Kg	96
71)	m,p-Xylene	14.79	91	4519071	105.04	ug/Kg	96
72)	o-Xylene	15.26	91	2431238	49.51	ug/Kg	95
73)	Styrene	15.31	104	1693202	49.31	ug/Kg	96
74)	Bromoform	15.40	173	562687	46.42	ug/Kg	94
75)	Isopropylbenzene	15.56	105	2780323	57.56	ug/Kg	99
78)	cis-1,4-Dichloro-2-butene	15.91	53	231345	54.24	ug/Kg#	72
79)	n-Propylbenzene	15.96	91	3290518	52.95	ug/Kg	96
80)	Bromobenzene	16.01	156	812151	49.59	ug/Kg	98
81)	1,1,2,2-Tetrachloroethane	16.03	83	659085	59.24	ug/Kg	99
82)	1,3,5-Trimethylbenzene	16.12	105	2390968	54.01	ug/Kg	99
83)	2-Chlorotoluene	16.16	91	2290599	54.46	ug/Kg	94
84)	trans-1,4-Dichloro-2-Buten	16.20	53	174811	102.79	ug/Kg#	62
85)	1,2,3-Trichloropropane	16.20	110	172211	48.51	ug/Kg#	80
86)	Cyclohexanone	16.27	55	88766	284.53	ug/Kg	86
87)	4-Chlorotoluene	16.30	91	1996767	54.00	ug/Kg	99
88)	tert-Butylbenzene	16.44	91	1494068	53.14	ug/Kg	97
89)	1,2,4-Trimethylbenzene	16.49	105	2200614	53.25	ug/Kg	95
90)	Pentachloroethane	16.51	167	532789	57.55	ug/Kg	81

(#) = qualifier out of range (m) = manual integration
G0066855.D APP9-G.M Thu Sep 16 11:28:38 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066855.D Vial: 2
Acq On : 16 Sep 2010 11:02 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:27:57 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

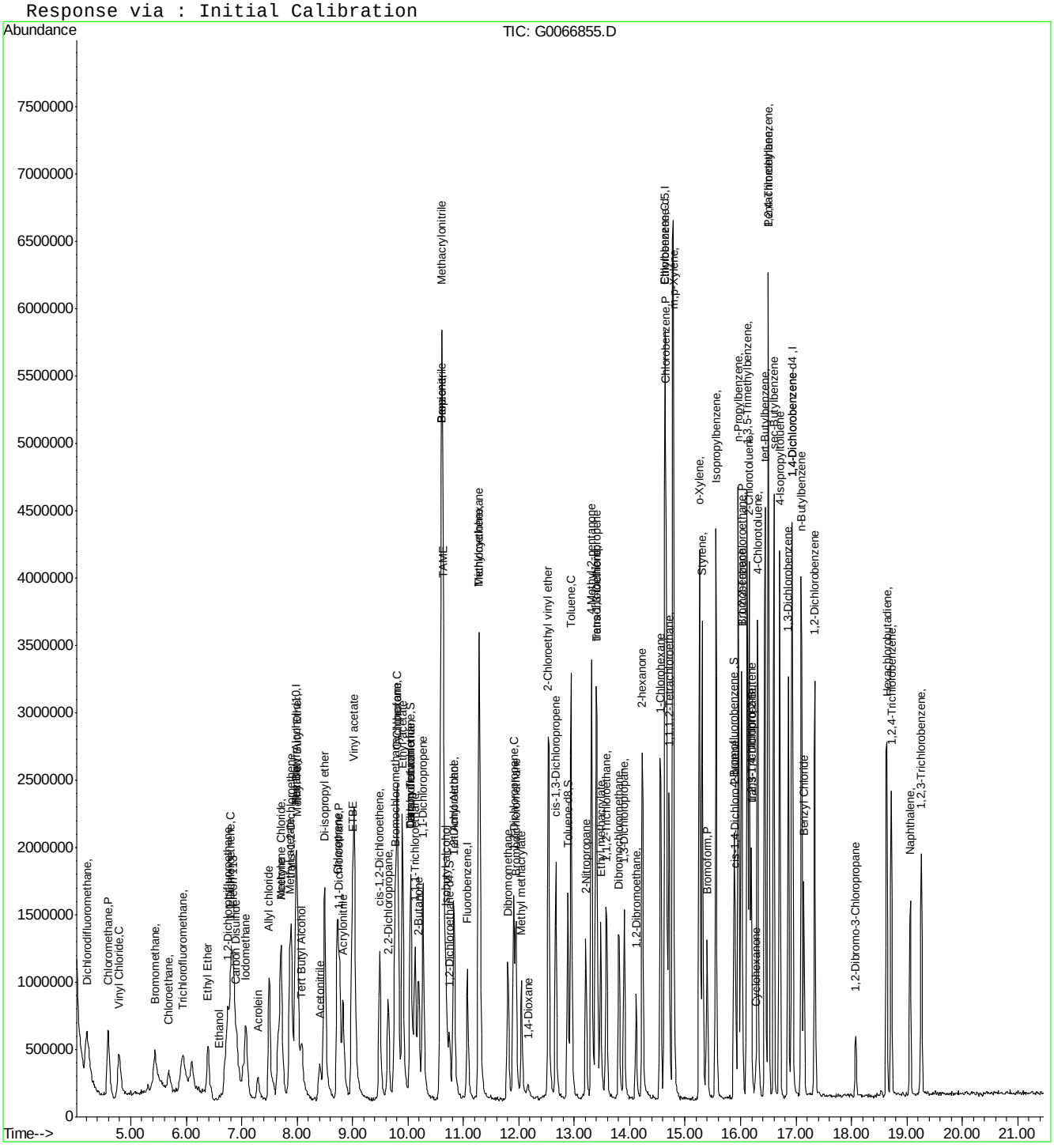
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	2864790	55.47	ug/Kg	96
92)	4-Isopropyltoluene	16.71	119	2252093	54.21	ug/Kg	64
93)	1,3-Dichlorobenzene	16.87	146	1309203	50.81	ug/Kg	98
94)	1,4-Dichlorobenzene	16.93	146	1319319	51.67	ug/Kg	94
95)	n-Butylbenzene	17.09	92	1230384	53.74	ug/Kg	94
96)	Benzyl Chloride	17.14	126	206266	51.75	ug/Kg	95
97)	1,2-Dichlorobenzene	17.34	146	1255504	51.08	ug/Kg	93
98)	1,2-Dibromo-3-Chloropropan	18.08	75	109282	45.43	ug/Kg#	81
99)	Hexachlorobutadiene	18.64	225	649637	49.50	ug/Kg	93
100)	1,2,4-Trichlorobenzene	18.72	180	774969	51.07	ug/Kg	97
101)	Naphthalene	19.06	128	1235320	49.76	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.26	180	637543	50.01	ug/Kg	96
104)	Ethanol	6.60	45	82001	942.40	ug/Kg	89
105)	Acrolein	7.30	56	244785	246.87	ug/Kg	92
106)	Tert Butyl Alcohol	8.09	59	579443	466.53	ug/Kg	97
107)	Isobutyl alcohol	10.69	42	282927	1014.53	ug/Kg	93
108)	Tert Amyl Alcohol	10.82	59	491492	543.06	ug/Kg	93
109)	1,4-Dioxane	12.17	88	106319	910.29	ug/Kg	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066855.D Vial: 2
Acq On : 16 Sep 2010 11:02 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:27 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066900.D Vial: 2
Acq On : 17 Sep 2010 11:06 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 11:30:26 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1174929	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	1212033	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	709956	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.98	65	131439	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	433274	50.33	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.66%			
44) 1,2-Dichloroethane-d4	10.75	65	394974	47.10	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 94.20%			
55) Toluene-d8	12.88	98	1389871	48.07	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 96.14%			
77) 4-Bromofluorobenzene	15.89	174	642131	47.19	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 94.38%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.20	85	1252103	69.59	ug/Kg	93
3) Chloromethane	4.58	50	1252937	63.10	ug/Kg	96
4) Vinyl Chloride	4.78	62	893651	53.89	ug/Kg	91
5) Bromomethane	5.42	94	334154	76.29	ug/Kg	94
6) Chloroethane	5.68	64	314835	68.29	ug/Kg	87
7) Trichlorofluoromethane	5.94	101	1032676	64.18	ug/Kg	90
8) Ethyl Ether	6.39	59	358073	45.89	ug/Kg	91
9) 1,2-Dichlorotrifluoroethan	6.74	67	959420	57.76	ug/Kg	97
10) 1,1-Dichloroethene	6.79	61	1184614	46.47	ug/Kg	96
11) Freon 113	6.84	101	806314	53.56	ug/Kg	96
12) Carbon Disulfide	6.90	76	2031729	49.58	ug/Kg	98
13) Iodomethane	7.06	142	1757783	55.32	ug/Kg	96
14) Allyl chloride	7.49	41	1213227	58.73	ug/Kg	92
15) Methylene Chloride	7.69	49	1997413	80.68	ug/Kg	84
16) Acetone	7.71	43	1063023	158.08	ug/Kg	98
17) Methyl acetate	7.86	43	1682925	189.76	ug/Kg	98
18) trans-1,2-Dichloroethene	7.90	61	1248051	51.71	ug/Kg	97
19) Hexane	7.98	56	669235	54.00	ug/Kg#	86
20) Methyl Tert Butyl Ether	8.00	73	1892487	46.63	ug/Kg	78
21) Acetonitrile	8.40	41	480419	433.22	ug/Kg	88
22) Di-isopropyl ether	8.49	45	2687274	51.00	ug/Kg	89
23) Chloroprene	8.73	53	1289648	54.13	ug/Kg	95
24) 1,1-Dichloroethane	8.77	63	1546598	51.45	ug/Kg	97
25) Acrylonitrile	8.82	53	819081	204.56	ug/Kg	97
26) ETBE	8.99	59	2393285	48.05	ug/Kg	94
27) Vinyl acetate	9.02	43	4640450	344.26	ug/Kg	98
28) cis-1,2-Dichloroethene	9.48	96	877289	54.33	ug/Kg	93
29) 2,2-Dichloropropane	9.64	77	834690	54.47	ug/Kg	91
30) Bromochloromethane	9.76	128	469655	46.19	ug/Kg	88
31) Cyclohexane	9.79	56	1238818	49.09	ug/Kg	90
32) Chloroform	9.81	83	1732837	51.92	ug/Kg	95
33) Ethyl acetate	9.90	43	2522253	197.26	ug/Kg	95
34) Tetrahydrofuran	10.05	42	143334	39.19	ug/Kg	94
36) Carbon Tetrachloride	10.05	117	1444316	49.67	ug/Kg	95

(#) = qualifier out of range (m) = manual integration
G0066900.D APP9-G.M Fri Sep 17 11:31:14 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066900.D Vial: 2
Acq On : 17 Sep 2010 11:06 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 11:30:26 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1307035	52.96	ug/Kg	93
38)	2-Butanone	10.18	43	1271379	160.05	ug/Kg	98
39)	1,1-Dichloropropene	10.27	75	1148422	51.33	ug/Kg	97
40)	Propionitrile	10.59	54	642422	451.31	ug/Kg#	68
41)	Methacrylonitrile	10.62	41	4014413	446.68	ug/Kg	95
42)	Benzene	10.59	78	2857475	51.34	ug/Kg	96
43)	TAME	10.65	73	1936133	49.20	ug/Kg	93
45)	1,2-Dichloroethane	10.83	62	1230799	48.70	ug/Kg	95
46)	Trichloroethene	11.28	95	891678	51.89	ug/Kg	88
47)	Methylcyclohexane	11.29	83	1204992	52.20	ug/Kg	91
48)	Dibromomethane	11.80	93	531577	44.08	ug/Kg#	52
49)	1,2-Dichloropropane	11.91	63	768369	49.03	ug/Kg	89
50)	Bromodichloromethane	11.95	83	1180607	47.93	ug/Kg	99
51)	Methyl methacrylate	12.05	41	537073	42.20	ug/Kg	87
52)	2-Chloroethyl vinyl ether	12.54	63	1486564	247.15	ug/Kg	94
53)	cis-1,3-Dichloropropene	12.67	75	1324548	52.37	ug/Kg	92
56)	Toluene	12.94	91	3212829	49.99	ug/Kg	98
57)	2-Nitropropane	13.21	41	845938	185.11	ug/Kg	95
58)	4-Methyl-2-pentanone	13.31	43	2685772	199.90	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.39	75	1127201	51.10	ug/Kg	95
60)	Tetrachloroethene	13.41	166	1069206	49.46	ug/Kg	97
61)	Ethyl methacrylate	13.48	69	731306	44.79	ug/Kg	95
62)	1,1,2-Trichloroethane	13.57	83	513811	42.92	ug/Kg	90
63)	Dibromochloromethane	13.80	129	933159	45.49	ug/Kg	94
64)	1,3-Dichloropropane	13.90	76	1014581	45.12	ug/Kg	97
65)	1,2-Dibromoethane	14.12	107	705028	44.45	ug/Kg	95
66)	2-hexanone	14.22	43	1981417	177.07	ug/Kg	98
67)	1-Chlorohexane	14.55	91	1086014	49.18	ug/Kg	97
68)	Ethylbenzene	14.64	91	3547668	51.73	ug/Kg	97
69)	Chlorobenzene	14.66	112	2077880	51.77	ug/Kg	95
70)	1,1,1,2-Tetrachloroethane	14.71	131	895467	52.31	ug/Kg	97
71)	m,p-Xylene	14.79	91	5545848	107.03	ug/Kg	96
72)	o-Xylene	15.26	91	2983432	50.45	ug/Kg	97
73)	Styrene	15.31	104	2103939	50.88	ug/Kg	97
74)	Bromoform	15.40	173	630274	43.18	ug/Kg	97
75)	Isopropylbenzene	15.56	105	3375635	58.02	ug/Kg	95
78)	cis-1,4-Dichloro-2-butene	15.91	53	259720	50.06	ug/Kg	88
79)	n-Propylbenzene	15.96	91	4065240	53.78	ug/Kg	98
80)	Bromobenzene	16.02	156	978200	49.10	ug/Kg	97
81)	1,1,2,2-Tetrachloroethane	16.03	83	667207	49.31	ug/Kg	97
82)	1,3,5-Trimethylbenzene	16.12	105	2938899	54.58	ug/Kg	99
83)	2-Chlorotoluene	16.16	91	2813234	54.99	ug/Kg	97
84)	trans-1,4-Dichloro-2-Buten	16.20	53	163992	79.28	ug/Kg#	72
85)	1,2,3-Trichloropropane	16.20	110	169327	38.60	ug/Kg	86
86)	Cyclohexanone	16.27	55	89020	234.60	ug/Kg	90
87)	4-Chlorotoluene	16.30	91	2503903	55.67	ug/Kg	95
88)	tert-Butylbenzene	16.44	91	1858432	54.34	ug/Kg	94
89)	1,2,4-Trimethylbenzene	16.50	105	2835624	56.41	ug/Kg	94
90)	Pentachloroethane	16.51	167	671074	59.60	ug/Kg	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066900.D Vial: 2
Acq On : 17 Sep 2010 11:06 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 11:30:26 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

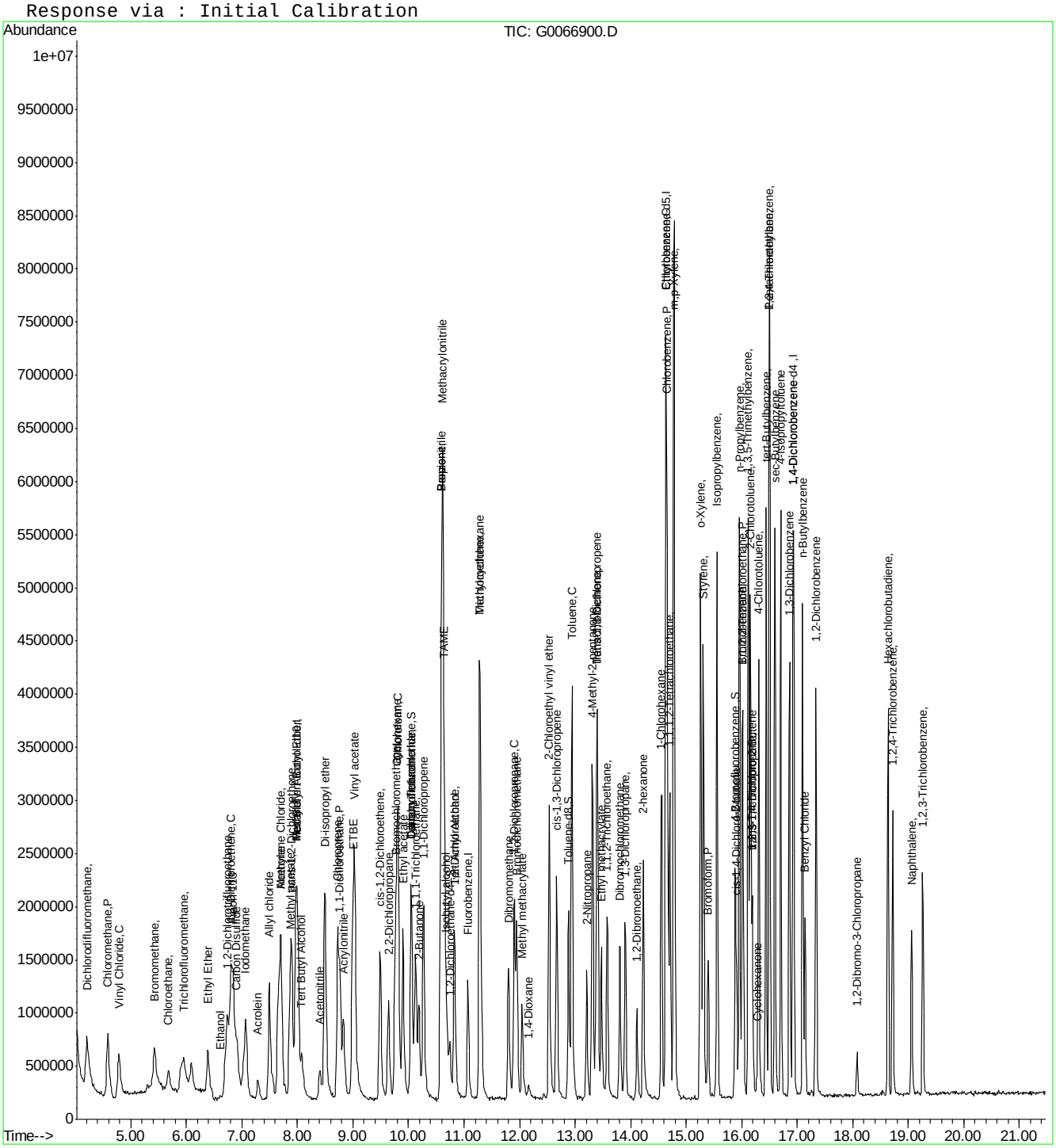
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	3413156	54.34	ug/Kg	98
92)	4-Isopropyltoluene	16.71	119	2816406	55.74	ug/Kg	65
93)	1,3-Dichlorobenzene	16.87	146	1670354	53.30	ug/Kg	98
94)	1,4-Dichlorobenzene	16.93	146	1645015	52.97	ug/Kg	92
95)	n-Butylbenzene	17.10	92	1484632	53.31	ug/Kg	94
96)	Benzyl Chloride	17.14	126	226286	46.68	ug/Kg	95
97)	1,2-Dichlorobenzene	17.34	146	1502804	50.27	ug/Kg	96
98)	1,2-Dibromo-3-Chloropropan	18.08	75	114296	39.07	ug/Kg	85
99)	Hexachlorobutadiene	18.64	225	851758	53.36	ug/Kg	95
100)	1,2,4-Trichlorobenzene	18.72	180	930488	50.41	ug/Kg	97
101)	Naphthalene	19.06	128	1237070	40.97	ug/Kg	99
102)	1,2,3-Trichlorobenzene	19.26	180	751777	48.48	ug/Kg	96
104)	Ethanol	6.62	45	97874	1357.86	ug/Kg	70
105)	Acrolein	7.29	56	249948	311.90	ug/Kg	90
106)	Tert Butyl Alcohol	8.08	59	525882	523.89	ug/Kg	92
107)	Isobutyl alcohol	10.69	42	256415	1137.67	ug/Kg#	86
108)	Tert Amyl Alcohol	10.83	59	435060	594.79	ug/Kg	95
109)	1,4-Dioxane	12.17	88	114415	1212.09	ug/Kg	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066900.D Vial: 2
Acq On : 17 Sep 2010 11:06 am Operator: MikeM
Sample : bs Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 11:30 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/15/10 13:16

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:30 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	902993	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	546105	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	212551	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.34	65	93322m	250.00	ug/Kg	0.07
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	231883	52.33	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 104.66%			
36) 1,2-Dichloroethane-d4	11.13	65	283389	53.05	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 106.10%			
50) Toluene-d8	13.26	98	945961	50.54	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 101.08%			
70) 4-Bromofluorobenzene	16.24	174	207641	52.63	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 105.26%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	258177	100.43	ug/Kg	100
3) Chloromethane	4.60	50	437495	68.15	ug/Kg	94
4) Vinyl Chloride	4.79	62	258526	51.14	ug/Kg	94
5) Bromomethane	5.47	94	108344	53.72	ug/Kg	93
6) Chloroethane	5.75	64	140327	63.75	ug/Kg	94
7) Trichlorofluoromethane	5.99	101	281056	62.20	ug/Kg	99
8) 1,2-Dichloro-1,1,2-trifluo	6.89	67	396873m	69.48	ug/Kg	
9) Ethyl Ether	6.51	59	196696	46.36	ug/Kg	99
10) Freon 113	7.01	101	241213	60.25	ug/Kg	92
11) 1,1-Dichloroethene	6.92	61	436958	57.62	ug/Kg	93
12) Acetone	7.96	43	269558	164.42	ug/Kg	96
13) Iodomethane	7.18	142	262510	38.97	ug/Kg	92
14) Carbon Disulfide	7.01	76	643057	45.70	ug/Kg	96
15) Methyl acetate	8.13	43	291088	69.39	ug/Kg	98
16) Methylene Chloride	7.88	49	891089	95.94	ug/Kg	97
17) Acrylonitrile	9.16	53	185423	109.39	ug/Kg	94
18) Methyl Tert Butyl Ether	8.30	73	702815	48.65	ug/Kg	82
19) trans-1,2-Dichloroethene	8.15	61	468478	55.26	ug/Kg	99
20) Hexane	8.28	57	503753	45.14	ug/Kg	92
21) Vinyl acetate	8.13	43	291088	69.38	ug/Kg	99
22) 1,1-Dichloroethane	9.10	63	602698	59.98	ug/Kg	97
23) Di-isopropyl ether	8.85	45	1300489	52.31	ug/Kg	98
24) Ethyl tert-butyl Ether	9.38	59	921265	50.19	ug/Kg	99
25) 2-Butanone	10.58	43	491769	192.98	ug/Kg	98
26) cis-1,2-Dichloroethene	9.86	96	307646	60.50	ug/Kg	90
27) 2,2-Dichloropropane	10.01	77	232296	39.73	ug/Kg	98
28) Bromochloromethane	10.12	128	143541	57.12	ug/Kg	85
29) Chloroform	10.19	83	554306	57.37	ug/Kg	95
30) Tetrahydrofuran	10.58	42	36604	39.14	ug/Kg#	80
32) 1,1,1-Trichloroethane	10.51	97	399230	53.14	ug/Kg	89
33) Cyclohexane	10.17	56	568879	57.36	ug/Kg	95
34) 1,1-Dichloropropene	10.67	75	407384	54.95	ug/Kg	90
35) Carbon Tetrachloride	10.44	117	367665	60.55	ug/Kg	97
37) 1,2-Dichloroethane	11.21	62	403713	54.40	ug/Kg	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:30 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1250002	63.20	ug/Kg	98
39)	Tert-Amyl Methyl Ether	11.06	73	679426	49.28	ug/Kg	93
40)	Trichloroethene	11.67	95	290550	62.55	ug/Kg	99
41)	Methylcyclohexane	11.69	83	443637	58.13	ug/Kg	98
42)	1,2-Dichloropropane	12.28	63	381107	57.04	ug/Kg	96
43)	Dibromomethane	12.18	93	174034	59.77	ug/Kg	93
44)	Bromodichloromethane	12.34	83	379785	55.90	ug/Kg	95
45)	2-Nitropropane	13.55	41	300764	190.58	ug/Kg	91
46)	2-Chloroethyl vinyl ether	12.92	63	243796	130.42	ug/Kg	89
47)	cis-1,3-Dichloropropene	13.04	75	299828	35.56	ug/Kg	95
48)	4-Methyl-2-pentanone	13.68	43	1386830	243.67	ug/Kg	96
51)	Toluene	13.32	91	1273196	56.14	ug/Kg	99
52)	trans-1,3-Dichloropropene	13.75	75	253268	38.29	ug/Kg	91
53)	1,1,2-Trichloroethane	13.93	83	219166	54.90	ug/Kg	96
54)	1,3-Dichloropropane	14.24	76	416080	51.45	ug/Kg	98
55)	2-hexanone	14.58	43	693934	160.42	ug/Kg	93
56)	Tetrachloroethene	13.78	166	273513	62.24	ug/Kg	84
57)	Dibromochloromethane	14.15	129	252089	54.11	ug/Kg	98
58)	1,2-Dibromoethane	14.45	107	185791	44.81	ug/Kg	98
59)	1-Chlorohexane	14.89	91	284691	41.53	ug/Kg	95
60)	Chlorobenzene	14.99	112	667025	52.89	ug/Kg	88
61)	1,1,1,2-Tetrachloroethane	15.03	131	249408	55.33	ug/Kg	93
62)	Ethylbenzene	14.97	91	1168584	52.01	ug/Kg	94
63)	m,p-Xylene	15.11	91	1889157	107.49	ug/Kg	97
64)	o-Xylene	15.58	91	1008653	52.96	ug/Kg	99
65)	Styrene	15.63	104	593303	43.87	ug/Kg	96
66)	Bromoform	15.72	173	128184	39.95	ug/Kg	92
68)	Isopropylbenzene	15.90	105	1056411	75.38	ug/Kg	94
69)	Cyclohexanone	16.68	55	19852	127.32	ug/Kg#	87
71)	1,1,2,2-Tetrachloroethane	16.39	83	252153	58.16	ug/Kg	93
72)	trans-1,4-Dichloro-2-Buten	16.58	53	19046	15.10	ug/Kg#	1
73)	1,2,3-Trichloropropane	16.58	110	56793	51.71	ug/Kg	90
74)	Bromobenzene	16.38	156	231525	55.64	ug/Kg	95
75)	n-Propylbenzene	16.33	91	1168521	62.97	ug/Kg	98
76)	2-Chlorotoluene	16.55	91	845984	64.27	ug/Kg	95
77)	1,3,5-Trimethylbenzene	16.51	105	810139	63.00	ug/Kg	96
78)	4-Chlorotoluene	16.71	91	656419	56.49	ug/Kg	97
79)	tert-Butylbenzene	16.87	91	494535	62.11	ug/Kg	96
80)	1,2,4-Trimethylbenzene	16.93	105	769630	60.81	ug/Kg	94
81)	sec-Butylbenzene	17.06	105	936052	59.68	ug/Kg	97
82)	4-Isopropyltoluene	17.18	119	635846	54.76	ug/Kg	99
83)	1,3-Dichlorobenzene	17.35	146	338961	47.50	ug/Kg	92
84)	1,4-Dichlorobenzene	17.44	146	316434	45.47	ug/Kg	96
85)	Benzyl chloride	17.68	126	8759	7.45	ug/Kg#	43
86)	n-Butylbenzene	17.63	92	295884	38.70	ug/Kg	92
87)	1,2-Dichlorobenzene	17.91	146	306433	45.59	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.73	75	26857	38.84	ug/Kg#	75
89)	1,2,4-Trichlorobenzene	19.46	180	61651	21.98	ug/Kg	91
90)	Hexachlorobutadiene	19.39	225	77561	38.55	ug/Kg	90

(#) = qualifier out of range (m) = manual integration
K046614.D 8260-K.M Mon Sep 13 10:48:58 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:30 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

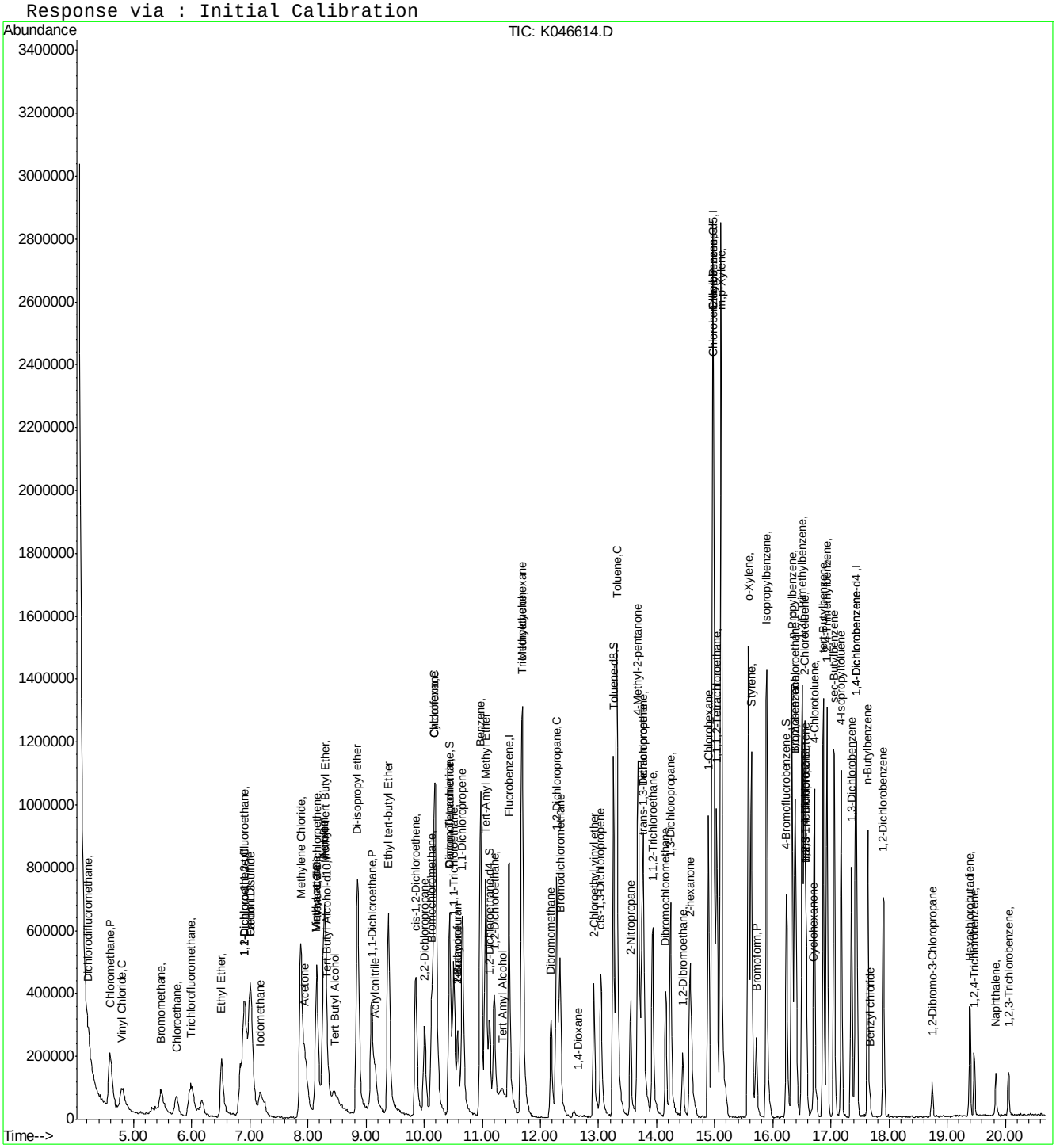
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	94728	14.46	ug/Kg	98
92)	1,2,3-Trichlorobenzene	20.06	180	47817	20.67	ug/Kg	97
94)	Acrolein	8.27	56	244915	199.99	ug/Kg	92
95)	Tert Butyl Alcohol	8.47	59	191822	391.70	ug/Kg	82
96)	Tert Amyl Alcohol	11.34	59	141447	358.87	ug/Kg	85
97)	1,4-Dioxane	12.65	88	10125	168.73	ug/Kg#	28

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046614.D 8260-K.M Mon Sep 13 10:48:58 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:46 2010 Quant Results File: 8260-K.RES

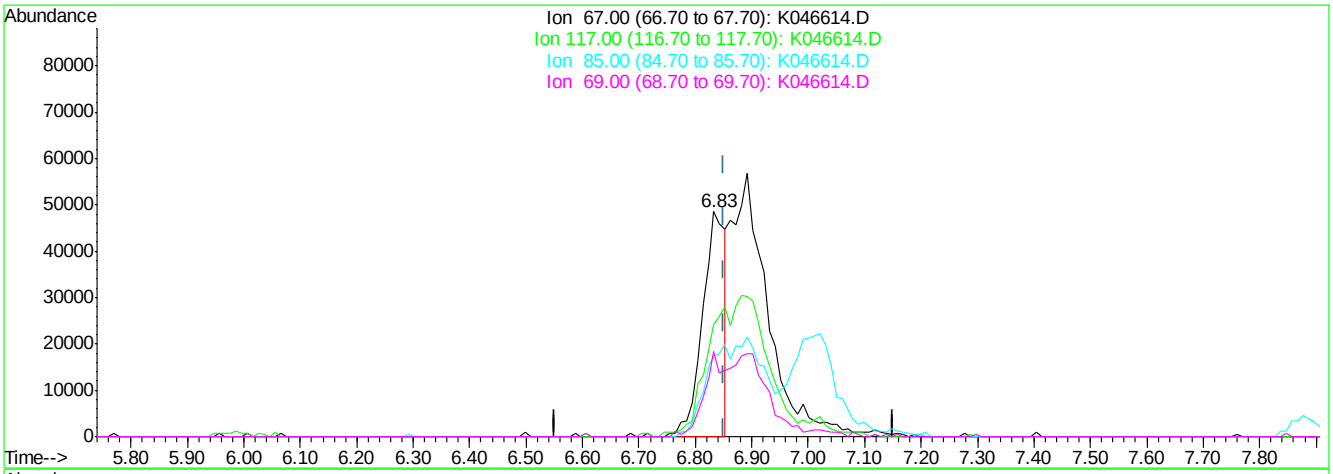
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

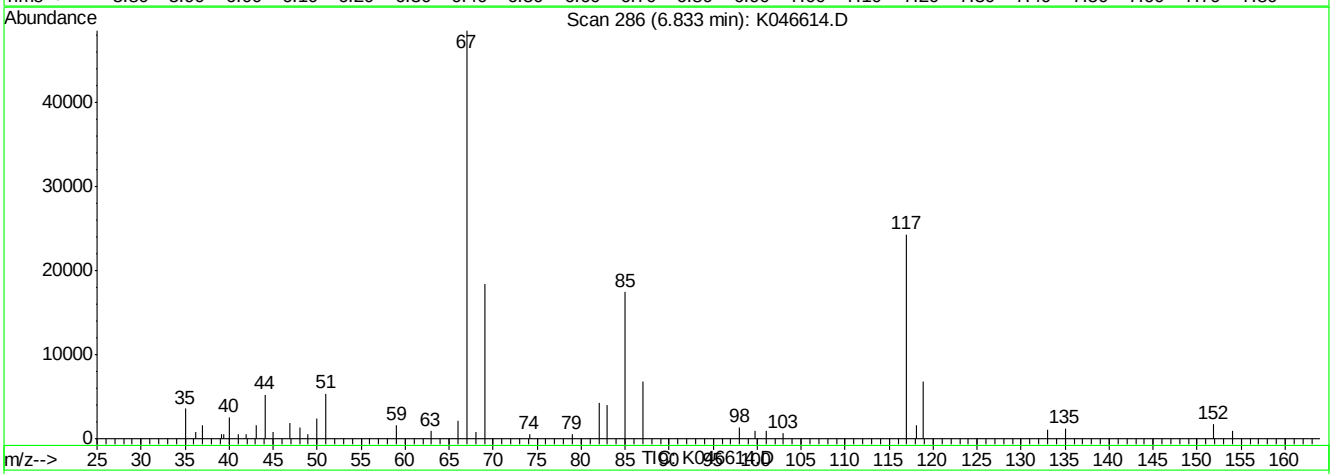


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 12:27 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.83min (-0.019) 24.55ug/Kg

response 140235

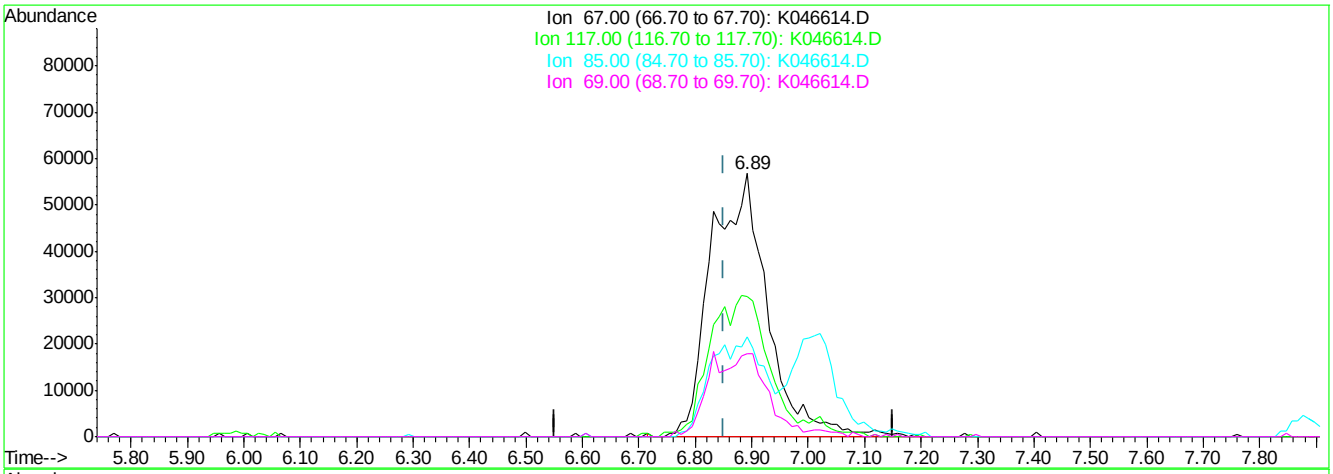
Ion	Exp%	Act%
67.00	100	100
117.00	55.90	48.15
85.00	40.10	35.98
69.00	38.50	37.89

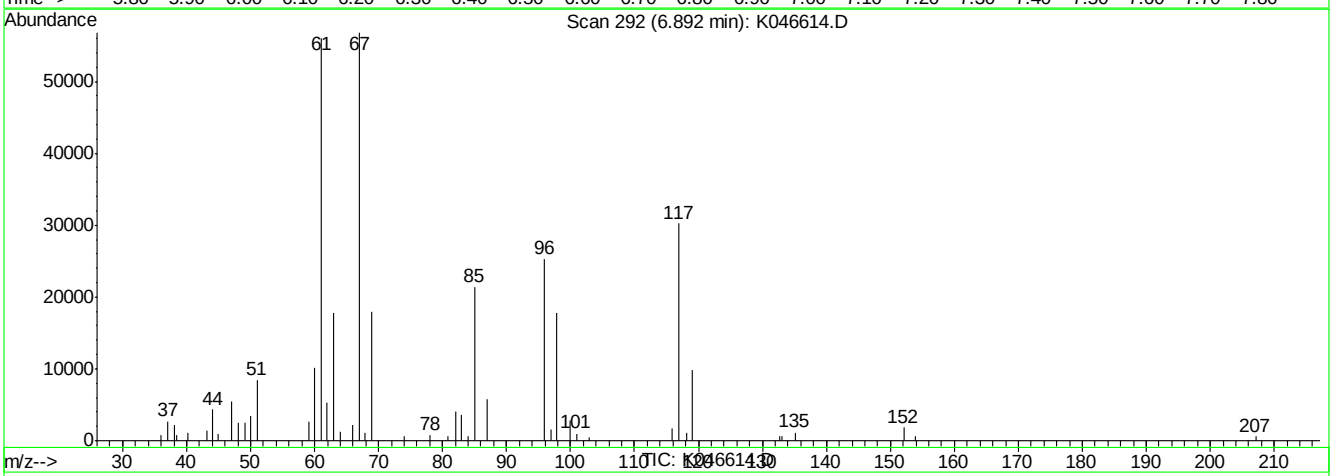
K046614.D 8260-K.M Mon Sep 13 10:45:45 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.89min (+0.040) 69.48ug/Kg m

response 396873

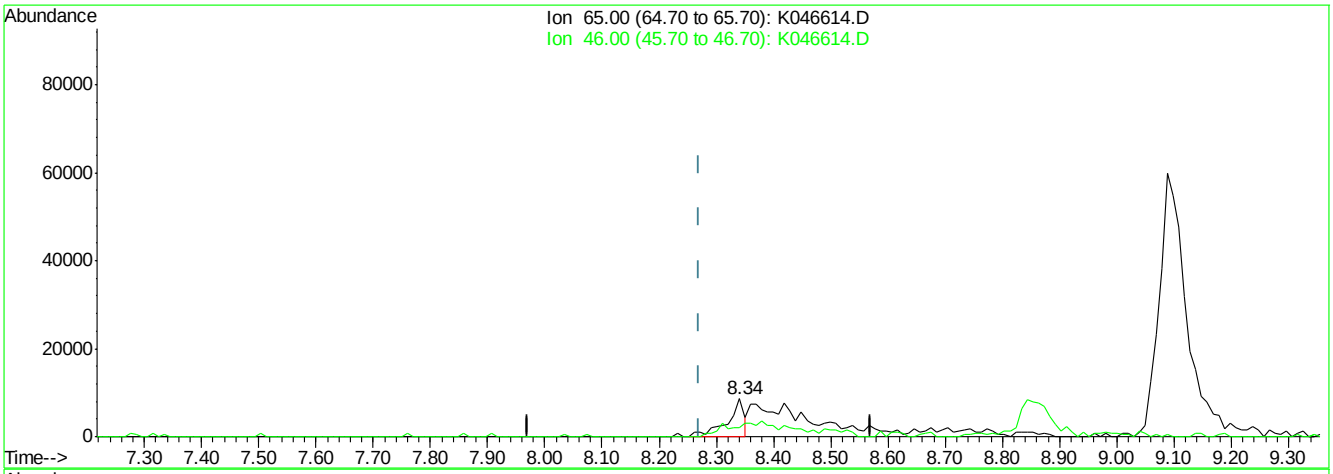
Ion	Exp%	Act%
67.00	100	100
117.00	55.90	53.21
85.00	40.10	37.76
69.00	38.50	31.66

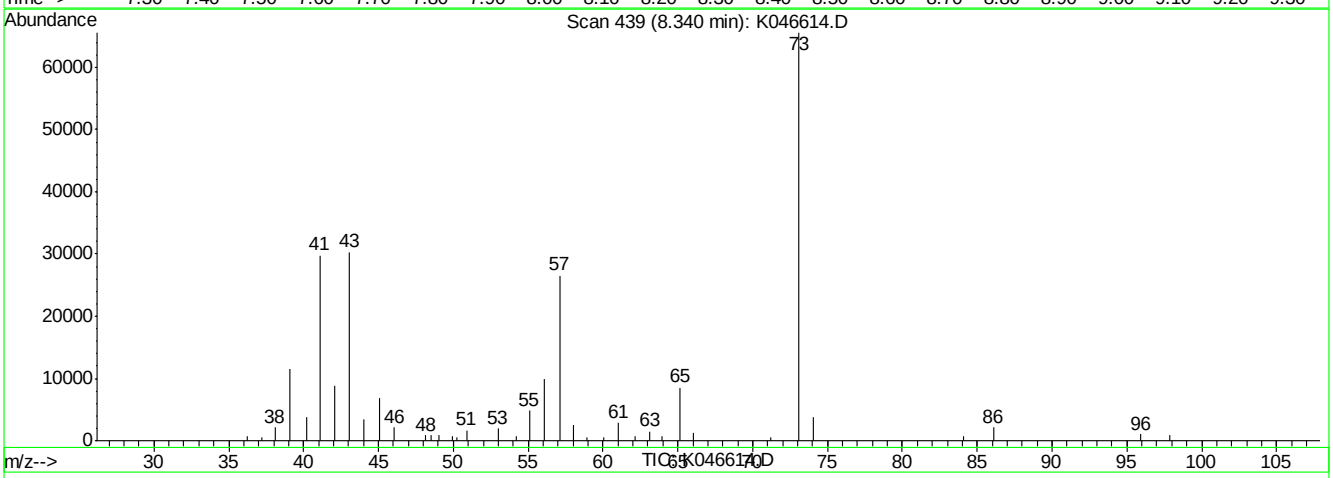
K046614.D 8260-K.M Mon Sep 13 10:45:49 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.34min (+0.069) 250.00ug/Kg

response 17910

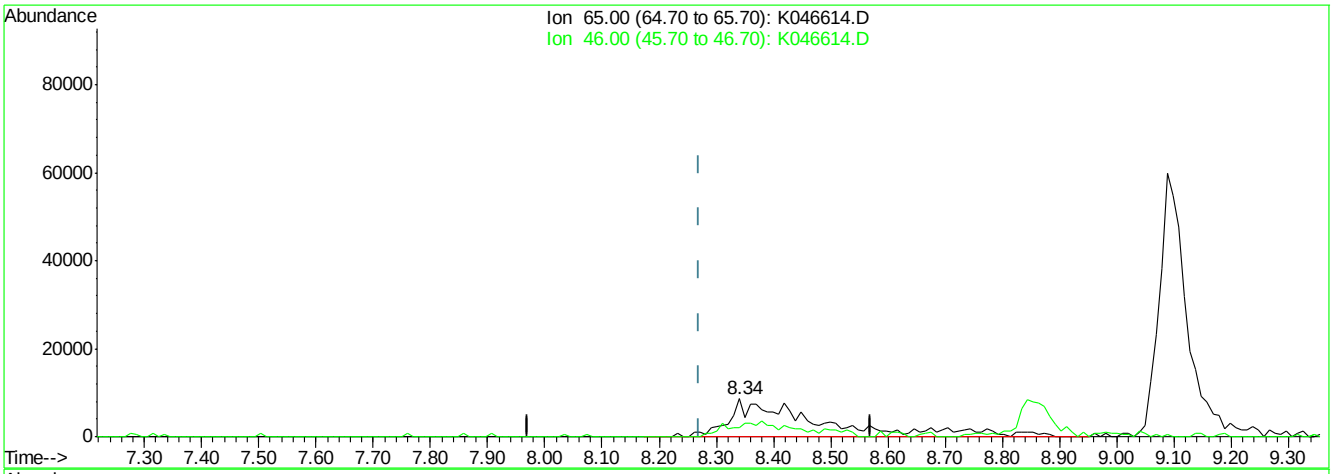
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	24.94
0.00	0.00	0.00
0.00	0.00	0.00

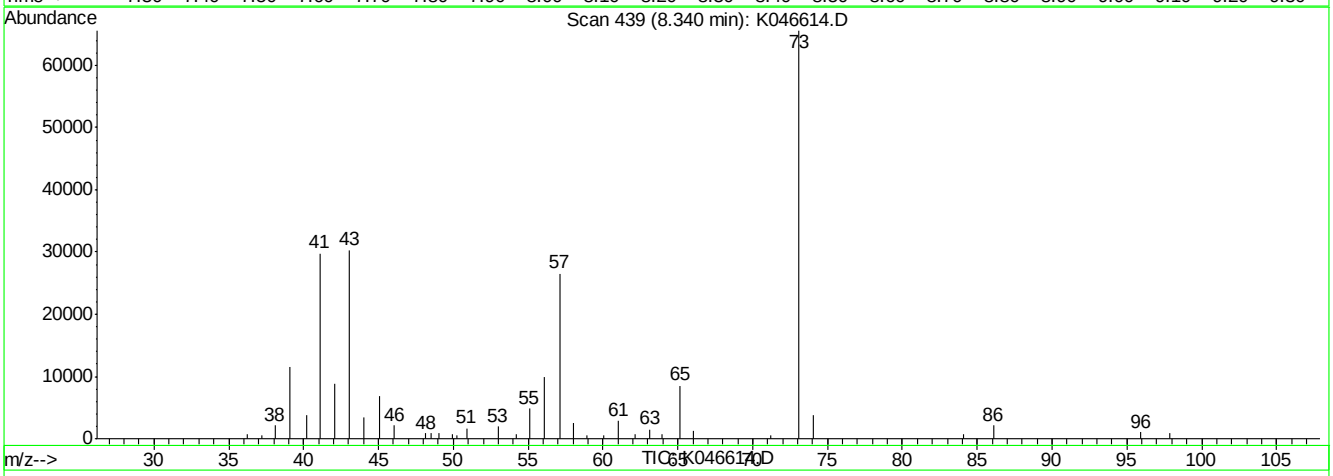
K046614.D 8260-K.M Mon Sep 13 10:45:57 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15375,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.34min (+0.069) 250.00ug/Kg m

response 93322

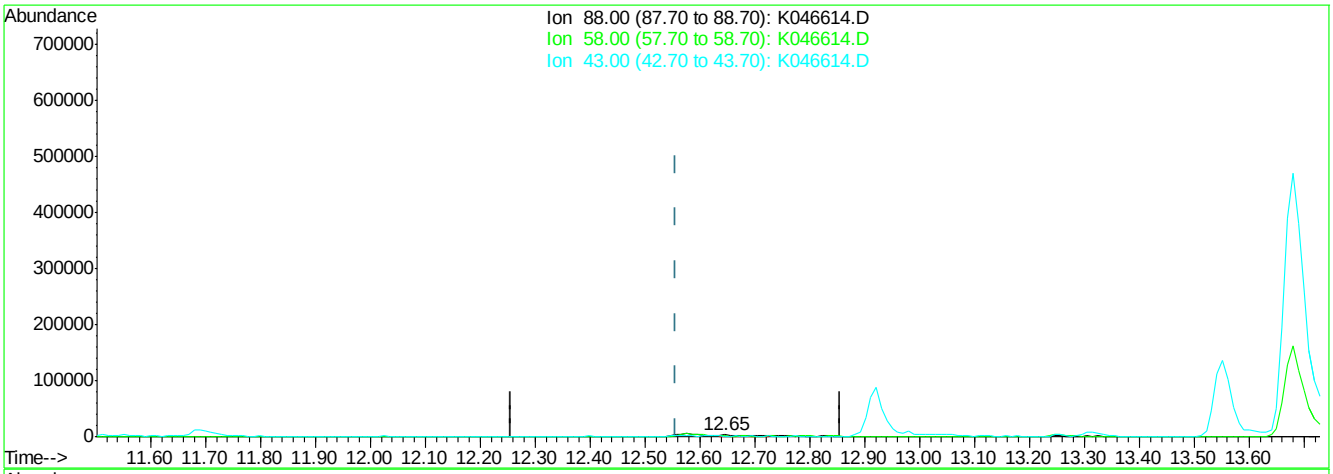
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	24.94
0.00	0.00	0.00
0.00	0.00	0.00

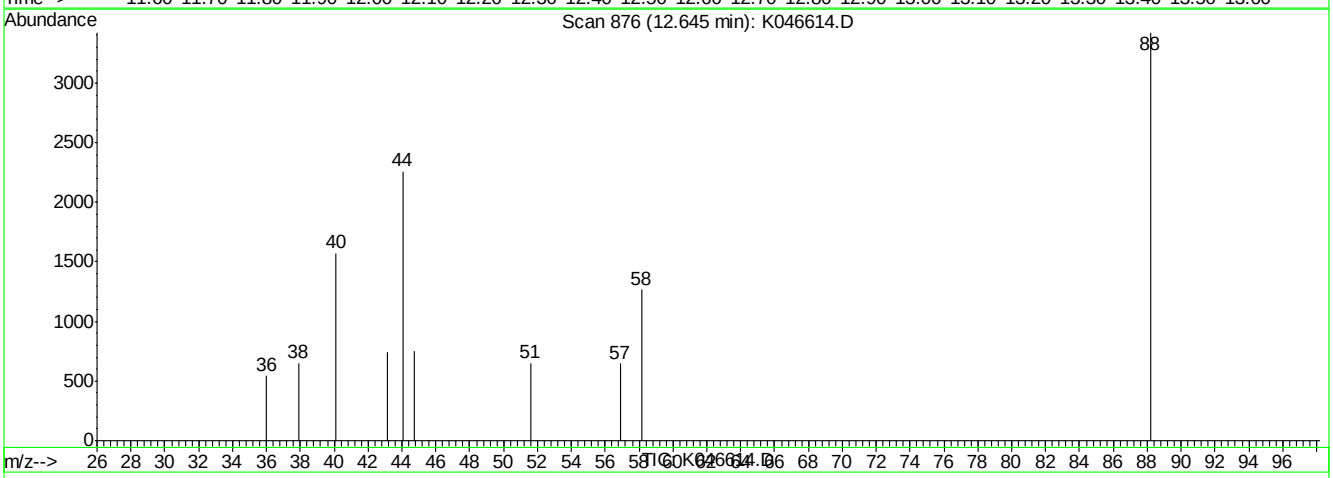
K046614.D 8260-K.M Mon Sep 13 10:46:00 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15386,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Wed Sep 15 13:00:11 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.65min (+0.089) 168.73ug/Kg

response 10125

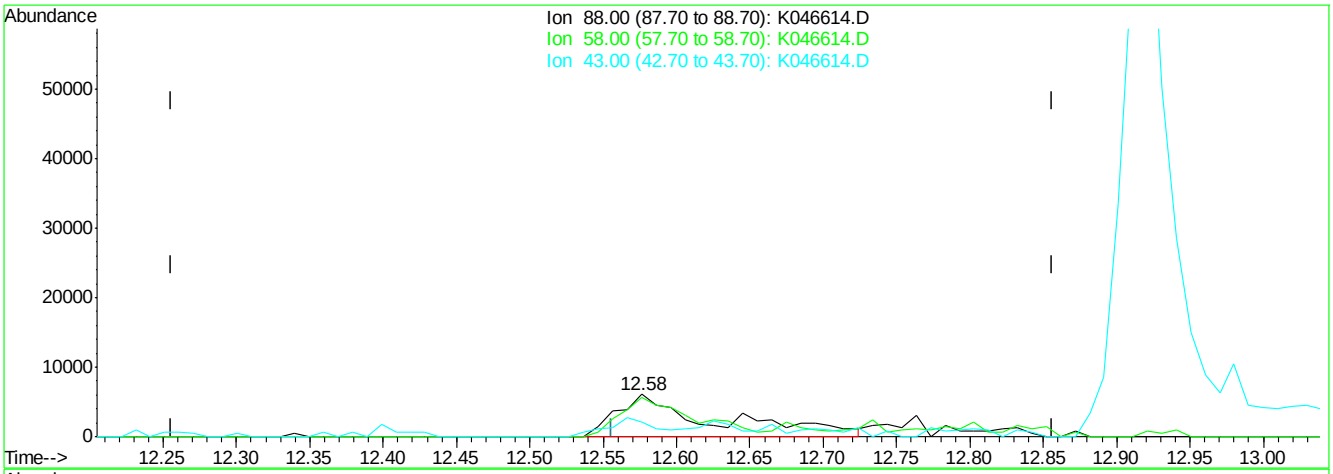
Ion	Exp%	Act%
88.00	100	100
58.00	68.40	5.89#
43.00	38.40	0.00#
0.00	0.00	0.00

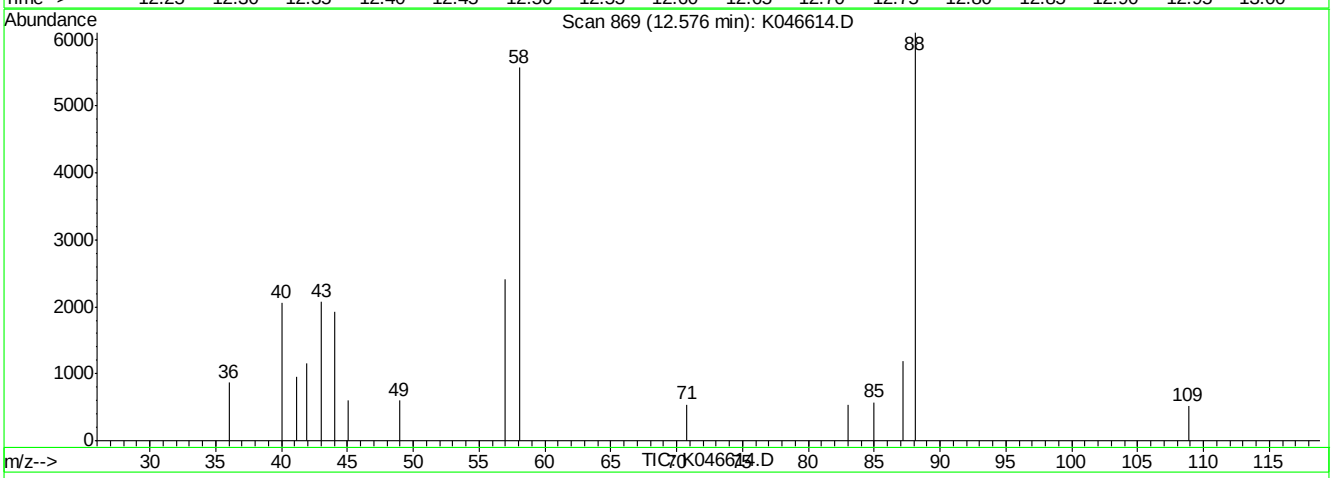
K046614.D 8260-K.M Wed Sep 15 13:10:47 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046614.D Vial: 25
Acq On : 10 Sep 2010 10:49 pm Operator: StevenH
Sample : f76266-37ms Inst : MSVOA2
Misc : ms15386,vk2009,4.55,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 15 16:11 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Wed Sep 15 13:00:11 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.58min (+0.020) 479.89ug/Kg m

response 28317

Ion	Exp%	Act%
88.00	100	100
58.00	68.40	91.45#
43.00	38.40	33.99
0.00	0.00	0.00

K046614.D 8260-K.M Wed Sep 15 13:11:11 2010

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/15/10 13:16

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:31 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1001038	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	575730	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	212757	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.37	65	81814m	250.00	ug/Kg	0.10
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	253784	51.66	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 103.32%			
36) 1,2-Dichloroethane-d4	11.12	65	277134	46.80	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 93.60%			
50) Toluene-d8	13.26	98	1033549	52.38	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 104.76%			
70) 4-Bromofluorobenzene	16.23	174	212156	53.72	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 107.44%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	302196	106.04	ug/Kg	89
3) Chloromethane	4.60	50	480644	67.54	ug/Kg	93
4) Vinyl Chloride	4.80	62	304325	54.31	ug/Kg	92
5) Bromomethane	5.48	94	115739	51.42	ug/Kg	91
6) Chloroethane	5.74	64	144529	59.23	ug/Kg	97
7) Trichlorofluoromethane	6.00	101	323833	64.65	ug/Kg	96
8) 1,2-Dichloro-1,1,2-trifluo	6.83	67	453100	71.55	ug/Kg	89
9) Ethyl Ether	6.51	59	194705	41.40	ug/Kg	99
10) Freon 113	7.00	101	270441	60.93	ug/Kg	95
11) 1,1-Dichloroethene	6.90	61	479942	57.09	ug/Kg	98
12) Acetone	7.97	43	258486	142.22	ug/Kg	94
13) Iodomethane	7.18	142	281298	37.67	ug/Kg	93
14) Carbon Disulfide	7.00	76	770443	49.39	ug/Kg	98
15) Methyl acetate	8.13	43	246773	53.06	ug/Kg	96
16) Methylene Chloride	7.88	49	905359	87.93	ug/Kg	98
17) Acrylonitrile	9.15	53	205734	109.49	ug/Kg	85
18) Methyl Tert Butyl Ether	8.30	73	698809	43.63	ug/Kg	89
19) trans-1,2-Dichloroethene	8.15	61	515848	54.89	ug/Kg	96
20) Hexane	8.27	57	558511	45.14	ug/Kg	87
21) Vinyl acetate	8.13	43	246773	53.06	ug/Kg	97
22) 1,1-Dichloroethane	9.10	63	659510	59.21	ug/Kg	100
23) Di-isopropyl ether	8.85	45	1361066	49.39	ug/Kg	98
24) Ethyl tert-butyl Ether	9.38	59	935026	45.95	ug/Kg	99
25) 2-Butanone	10.58	43	447402	158.37	ug/Kg	98
26) cis-1,2-Dichloroethene	9.86	96	313194	55.55	ug/Kg	97
27) 2,2-Dichloropropane	10.02	77	276077	42.59	ug/Kg	100
28) Bromochloromethane	10.12	128	148832	53.43	ug/Kg	96
29) Chloroform	10.19	83	597918	55.82	ug/Kg	91
30) Tetrahydrofuran	10.58	42	44115	42.55	ug/Kg#	82
32) 1,1,1-Trichloroethane	10.51	97	447768	53.76	ug/Kg	98
33) Cyclohexane	10.17	56	647354	58.88	ug/Kg	97
34) 1,1-Dichloropropene	10.66	75	432560	52.63	ug/Kg	97
35) Carbon Tetrachloride	10.44	117	332342	49.37	ug/Kg	94
37) 1,2-Dichloroethane	11.21	62	406804	49.45	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
K046615.D 8260-K.M Mon Sep 13 10:49:04 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:31 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1310043	59.75	ug/Kg	100
39)	Tert-Amyl Methyl Ether	11.07	73	692958	45.34	ug/Kg	91
40)	Trichloroethene	11.67	95	312109	60.61	ug/Kg	95
41)	Methylcyclohexane	11.69	83	467303	55.23	ug/Kg	94
42)	1,2-Dichloropropane	12.28	63	396743	53.56	ug/Kg	98
43)	Dibromomethane	12.18	93	167664	51.94	ug/Kg	95
44)	Bromodichloromethane	12.34	83	385949	51.24	ug/Kg	95
45)	2-Nitropropane	13.55	41	242094	138.38	ug/Kg	93
46)	2-Chloroethyl vinyl ether	12.92	63	150841	72.79	ug/Kg	94
47)	cis-1,3-Dichloropropene	13.04	75	296930	31.77	ug/Kg	93
48)	4-Methyl-2-pentanone	13.68	43	1232019	195.27	ug/Kg	98
51)	Toluene	13.32	91	1336264	55.88	ug/Kg	94
52)	trans-1,3-Dichloropropene	13.74	75	235226	33.73	ug/Kg	93
53)	1,1,2-Trichloroethane	13.93	83	201089	47.78	ug/Kg	99
54)	1,3-Dichloropropane	14.24	76	403619	47.34	ug/Kg	98
55)	2-hexanone	14.58	43	587925	128.92	ug/Kg	97
56)	Tetrachloroethene	13.78	166	285032	61.52	ug/Kg	95
57)	Dibromochloromethane	14.16	129	236708	48.20	ug/Kg	96
58)	1,2-Dibromoethane	14.45	107	167735	38.37	ug/Kg	92
59)	1-Chlorohexane	14.89	91	310353	42.94	ug/Kg	95
60)	Chlorobenzene	14.99	112	688570	51.79	ug/Kg	88
61)	1,1,1,2-Tetrachloroethane	15.03	131	244251	51.40	ug/Kg	86
62)	Ethylbenzene	14.97	91	1230497	51.95	ug/Kg	98
63)	m,p-Xylene	15.11	91	1937895	104.59	ug/Kg	98
64)	o-Xylene	15.58	91	1025993	51.10	ug/Kg	97
65)	Styrene	15.63	104	591610	41.49	ug/Kg	97
66)	Bromoform	15.72	173	115027	34.00	ug/Kg	92
68)	Isopropylbenzene	15.90	105	1112325	79.30	ug/Kg	96
69)	Cyclohexanone	16.68	55	17302	110.86	ug/Kg	87
71)	1,1,2,2-Tetrachloroethane	16.39	83	230015	53.00	ug/Kg	98
72)	trans-1,4-Dichloro-2-Buten	16.58	53	18583	14.71	ug/Kg#	1
73)	1,2,3-Trichloropropane	16.58	110	50988	46.38	ug/Kg	88
74)	Bromobenzene	16.38	156	219572	52.72	ug/Kg	91
75)	n-Propylbenzene	16.33	91	1214013	65.36	ug/Kg	99
76)	2-Chlorotoluene	16.55	91	822181	62.40	ug/Kg	95
77)	1,3,5-Trimethylbenzene	16.51	105	829848	64.47	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	648797	55.78	ug/Kg	98
79)	tert-Butylbenzene	16.87	91	514480	64.55	ug/Kg	95
80)	1,2,4-Trimethylbenzene	16.93	105	772380	60.97	ug/Kg	98
81)	sec-Butylbenzene	17.06	105	976638	62.20	ug/Kg	97
82)	4-Isopropyltoluene	17.18	119	648035	55.76	ug/Kg	98
83)	1,3-Dichlorobenzene	17.35	146	327127	45.79	ug/Kg	91
84)	1,4-Dichlorobenzene	17.44	146	305533	43.86	ug/Kg	93
85)	Benzyl chloride	17.68	126	5984	5.09	ug/Kg#	80
86)	n-Butylbenzene	17.63	92	294030	38.42	ug/Kg	97
87)	1,2-Dichlorobenzene	17.91	146	288538	42.89	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.74	75	21159	30.57	ug/Kg	84
89)	1,2,4-Trichlorobenzene	19.47	180	58900	20.98	ug/Kg	92
90)	Hexachlorobutadiene	19.39	225	83297	41.36	ug/Kg	94

(#) = qualifier out of range (m) = manual integration
K046615.D 8260-K.M Mon Sep 13 10:49:04 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 09:26:31 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

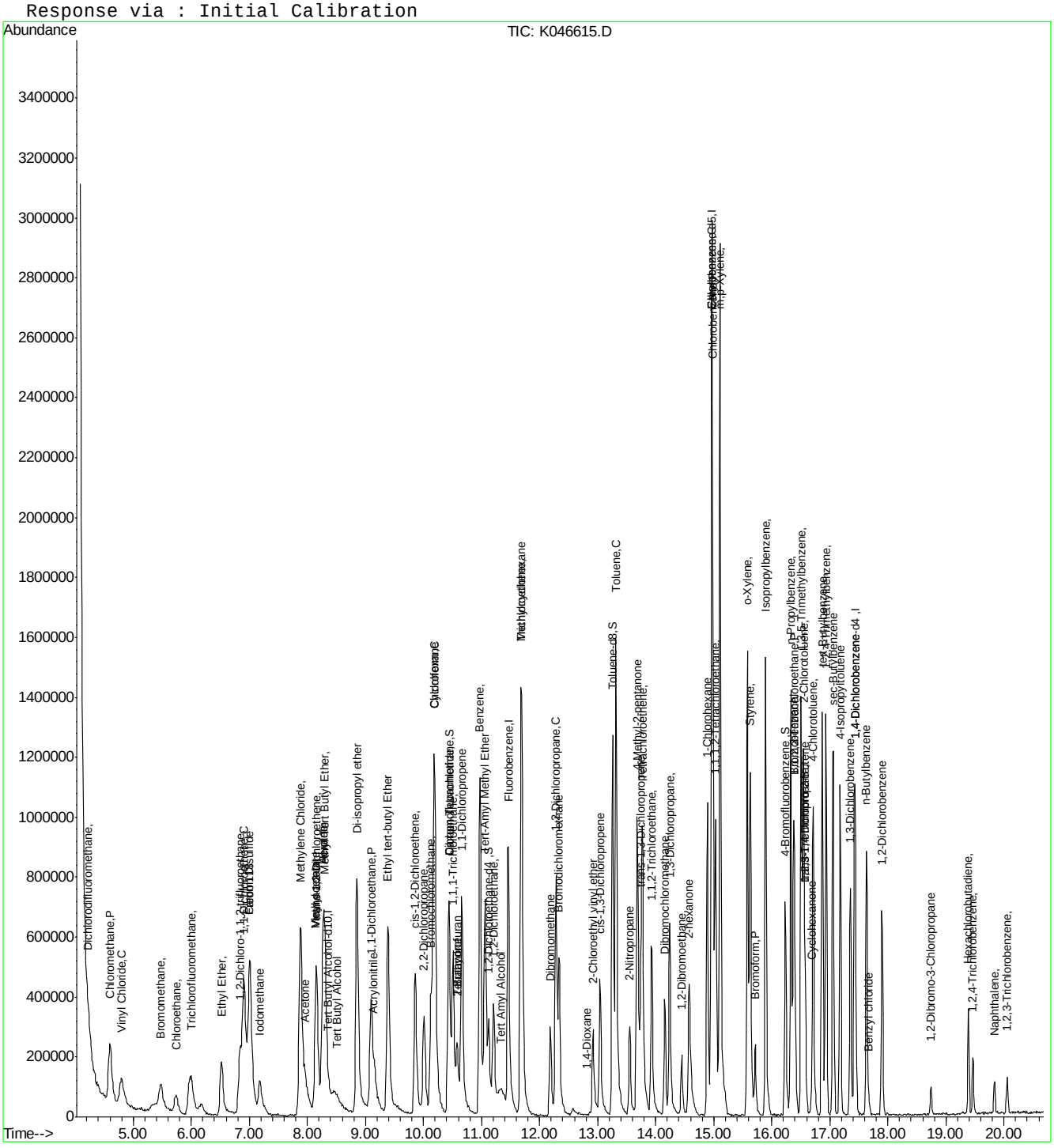
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	19.84	128	89616	13.67	ug/Kg	92
92) 1,2,3-Trichlorobenzene	20.05	180	40066	17.30	ug/Kg	95
94) Acrolein	8.27	56	279904m	269.93	ug/Kg	
95) Tert Butyl Alcohol	8.51	59	202938	472.69	ug/Kg	97
96) Tert Amyl Alcohol	11.35	59	180840m	523.35	ug/Kg	
97) 1,4-Dioxane	12.81	88	3307	62.50	ug/Kg	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046615.D 8260-K.M Mon Sep 13 10:49:04 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: 8260-K.RES

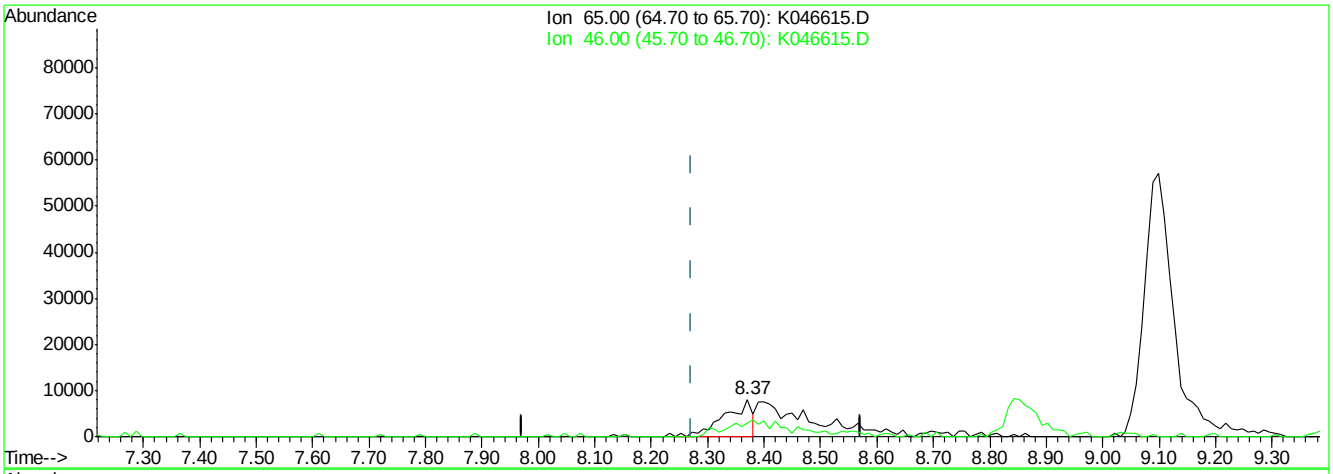
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

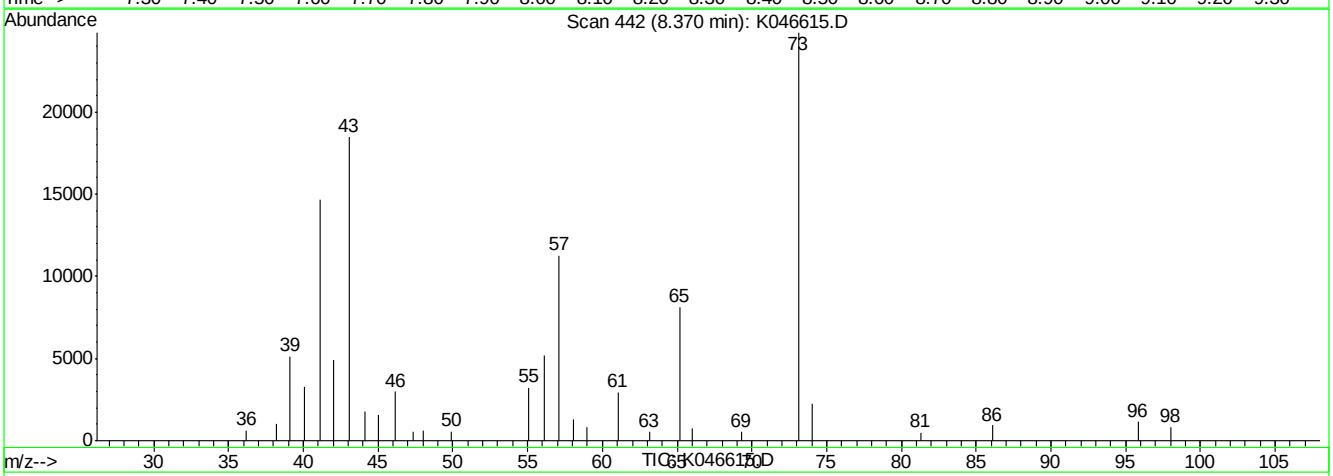


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 12:27 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.37min (+0.099) 250.00ug/Kg

response 27239

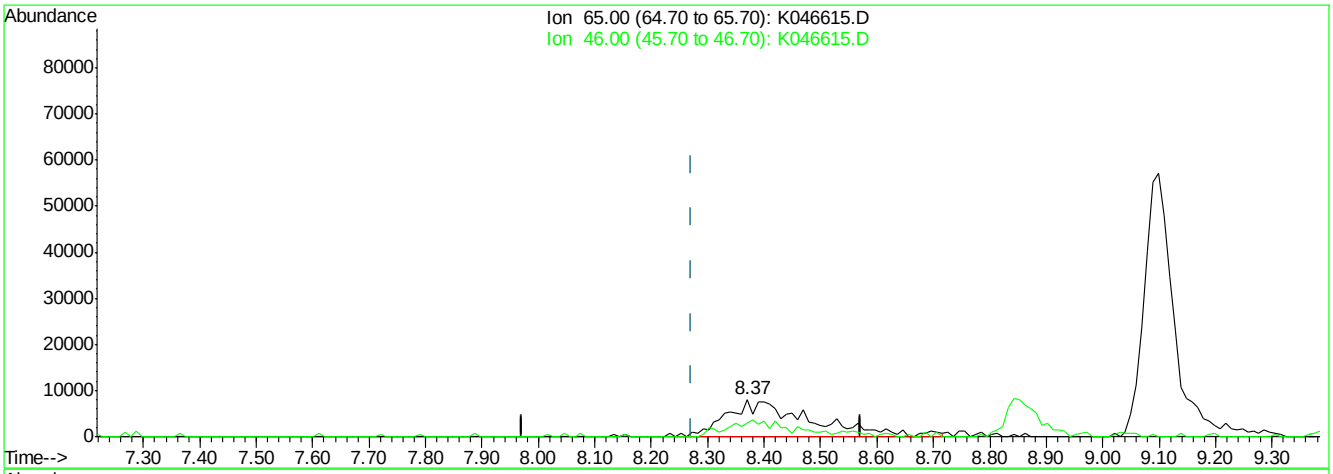
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	36.68
0.00	0.00	0.00
0.00	0.00	0.00

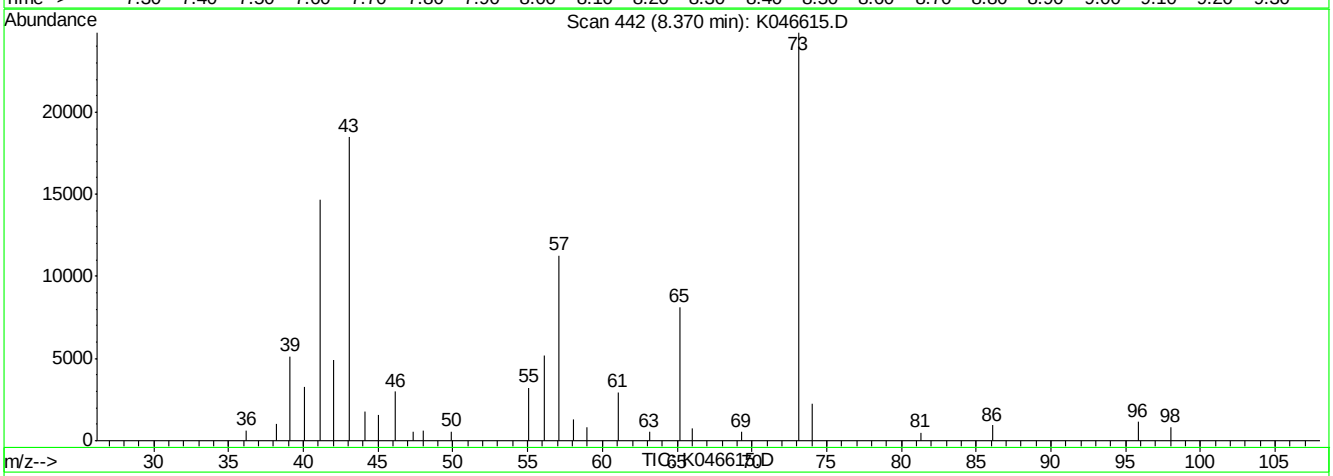
K046615.D 8260-K.M Mon Sep 13 10:46:34 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.37min (+0.099) 250.00ug/Kg m

response 81814

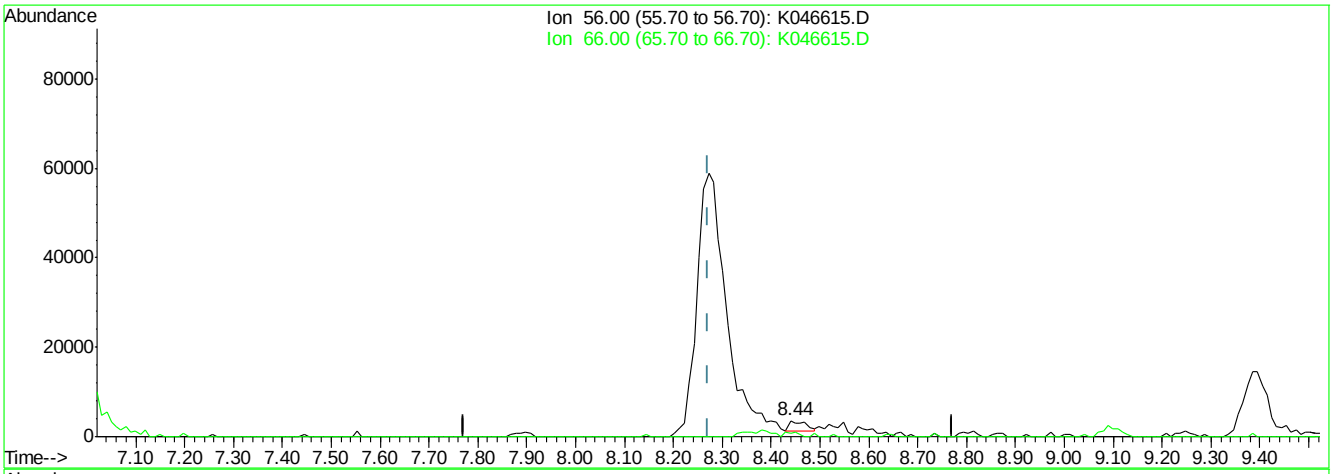
Ion	Exp%	Act%
65.00	100	100
46.00	34.00	36.68
0.00	0.00	0.00
0.00	0.00	0.00

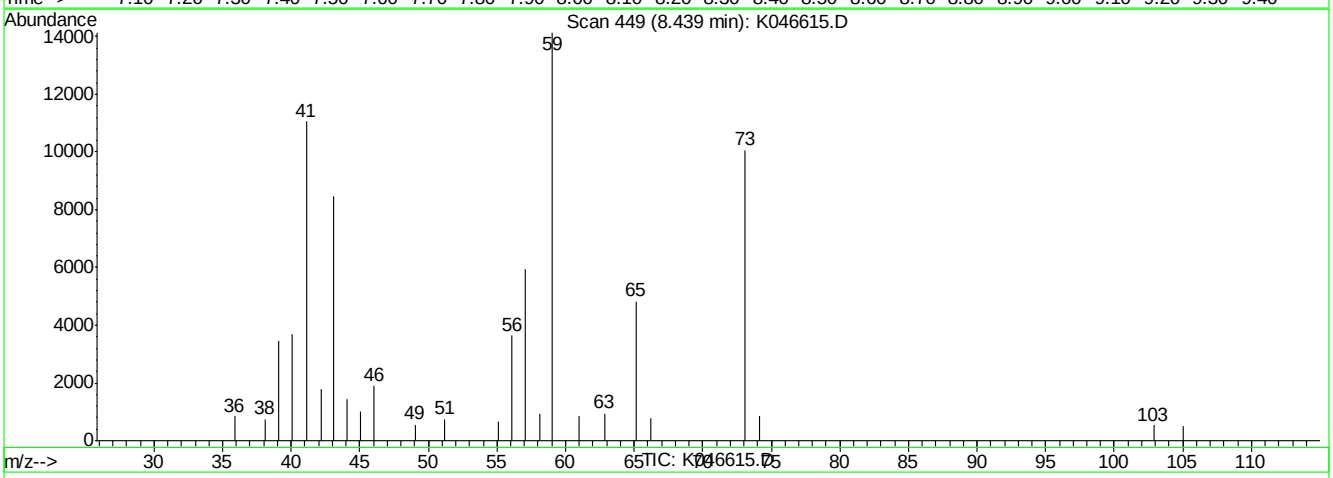
K046615.D 8260-K.M Mon Sep 13 10:46:38 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.44min (+0.168) 4.75ug/Kg

response 5580

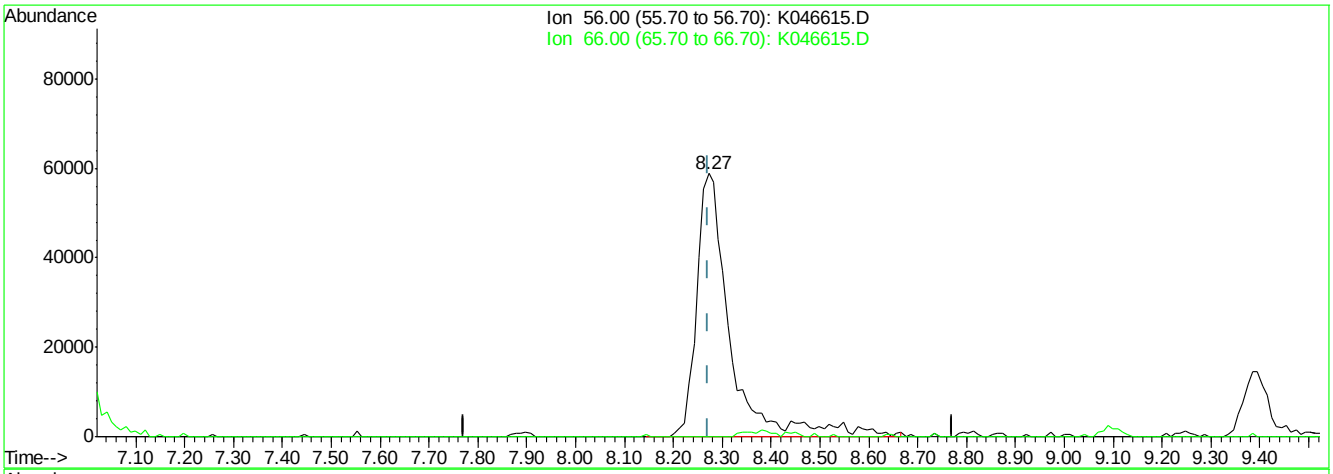
Ion	Exp%	Act%
56.00	100	100
66.00	3.00	37.04#
0.00	0.00	0.00
0.00	0.00	0.00

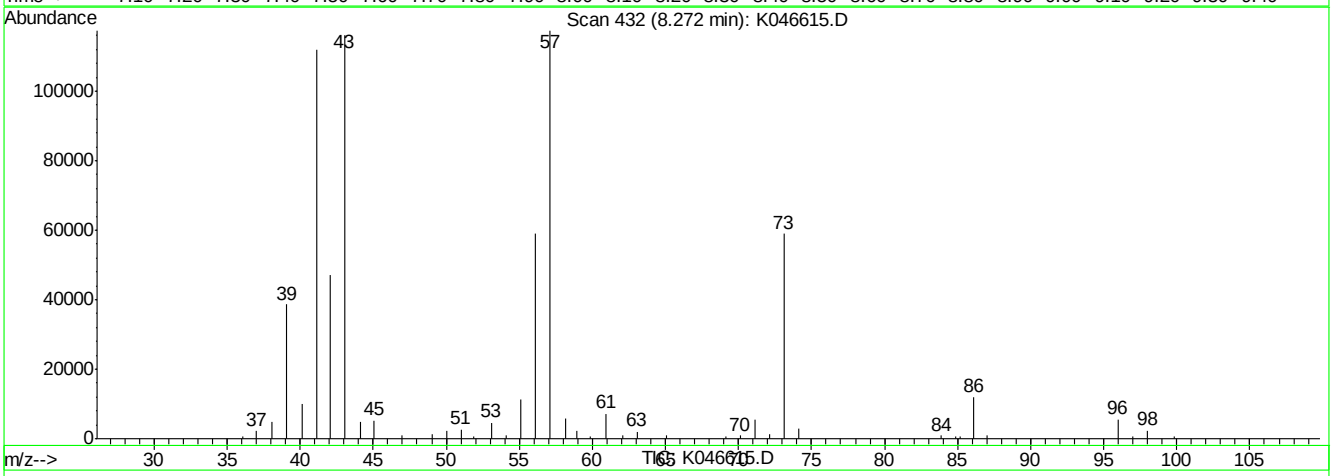
K046615.D 8260-K.M Mon Sep 13 10:46:42 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.27min (+0.001) 269.93ug/Kg m

response 279904

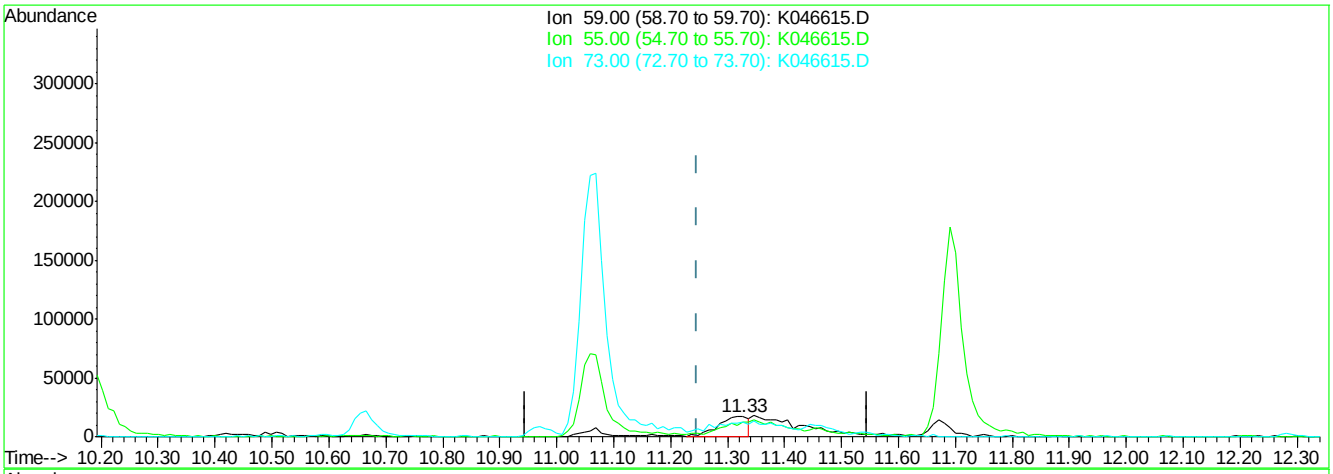
Ion	Exp%	Act%
56.00	100	100
66.00	3.00	0.74
0.00	0.00	0.00
0.00	0.00	0.00

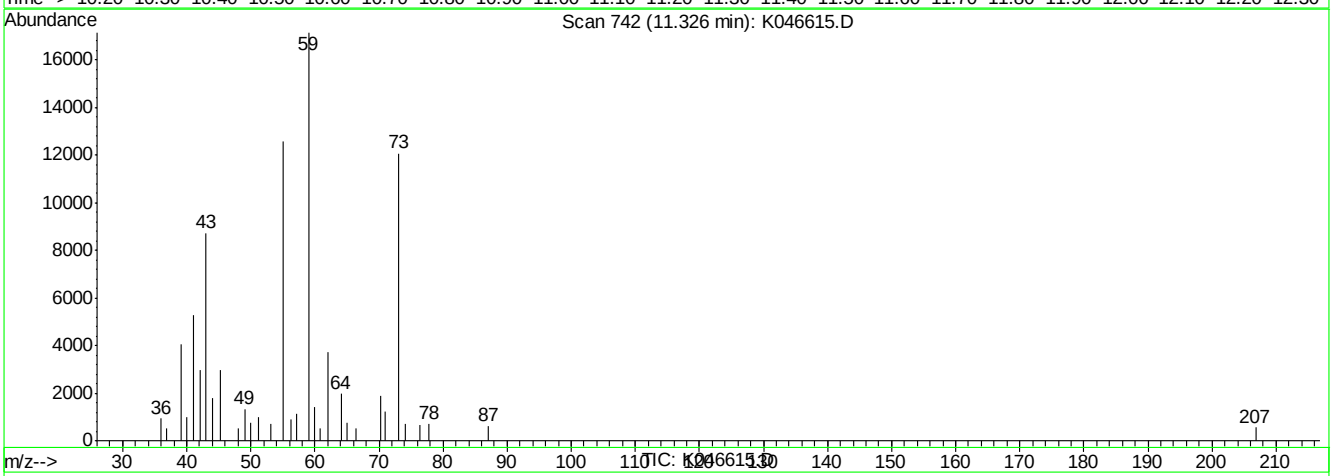
K046615.D 8260-K.M Mon Sep 13 10:46:46 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.33min (+0.080) 185.11ug/Kg

response 63963

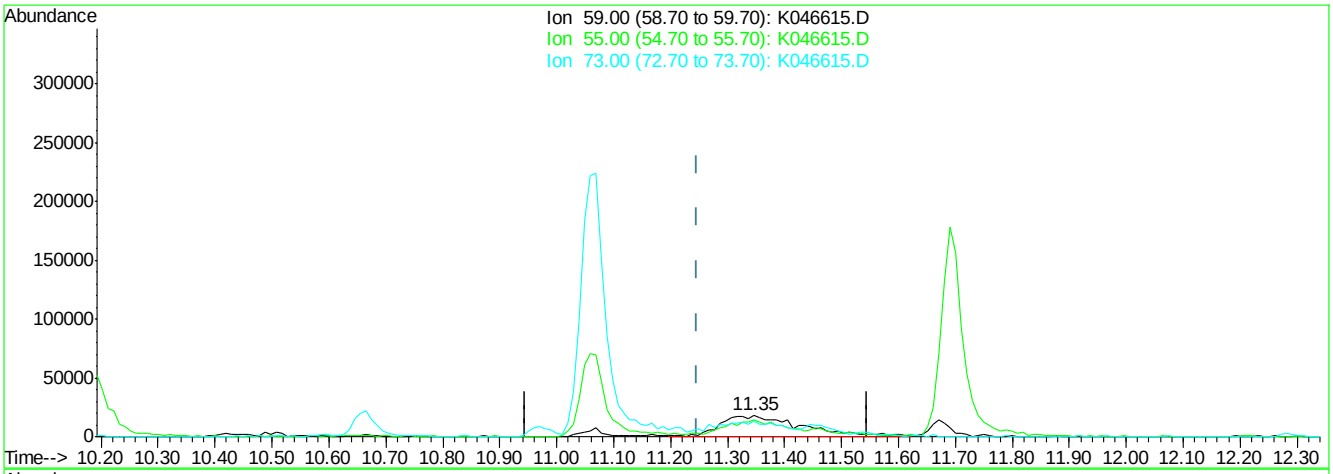
Ion	Exp%	Act%
59.00	100	100
55.00	48.40	60.46
73.00	59.20	46.27
0.00	0.00	0.00

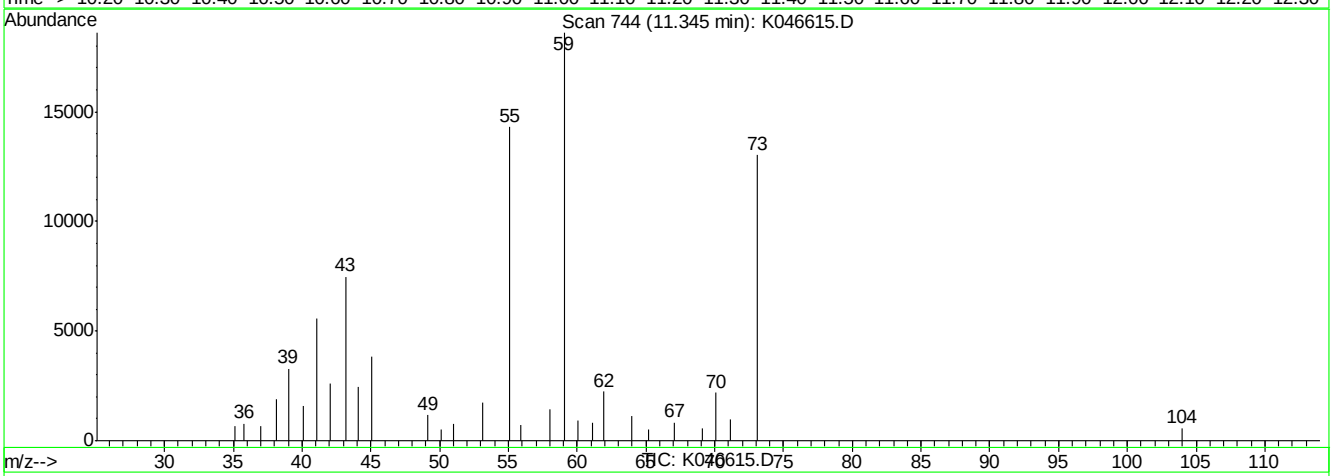
K046615.D 8260-K.M Mon Sep 13 10:46:51 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15375,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.35min (+0.099) 523.35ug/Kg m

response 180840

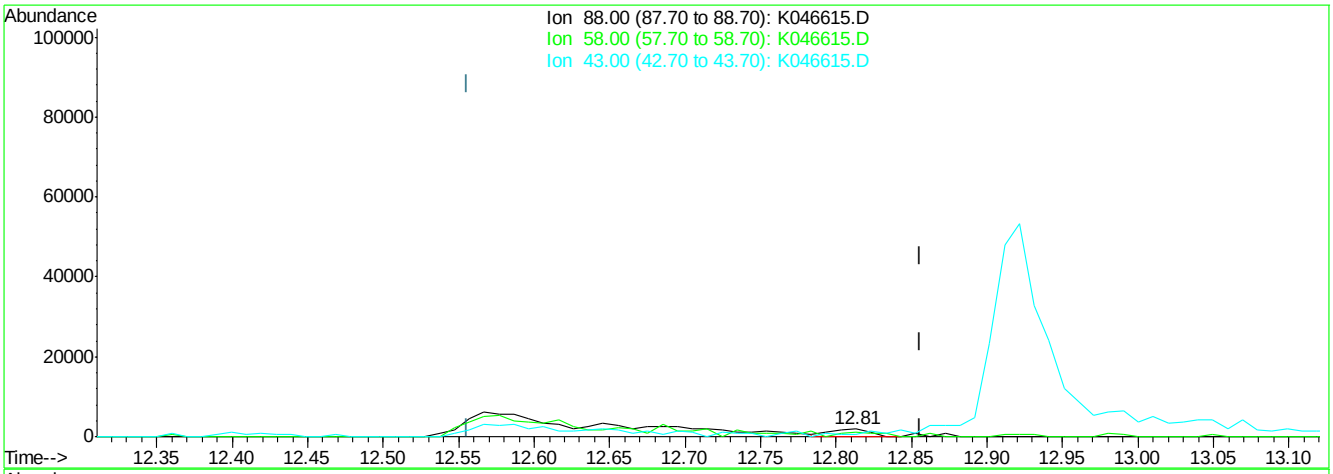
Ion	Exp%	Act%
59.00	100	100
55.00	48.40	76.91#
73.00	59.20	70.05
0.00	0.00	0.00

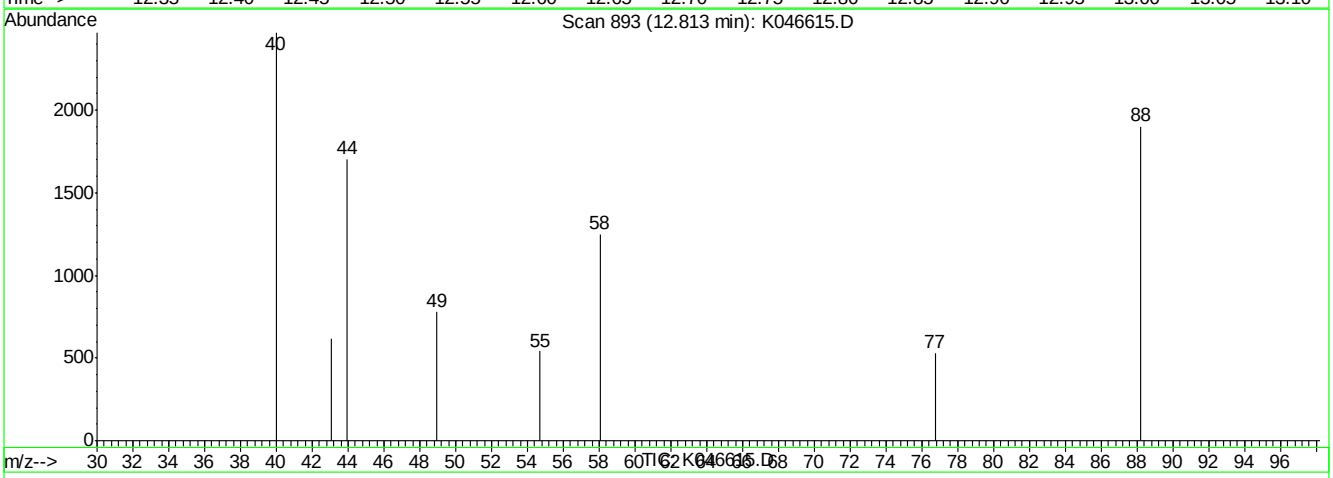
K046615.D 8260-K.M Mon Sep 13 10:46:55 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15386,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 13 13:47 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Wed Sep 15 13:00:11 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.81min (+0.257) 62.50ug/Kg

response 3307

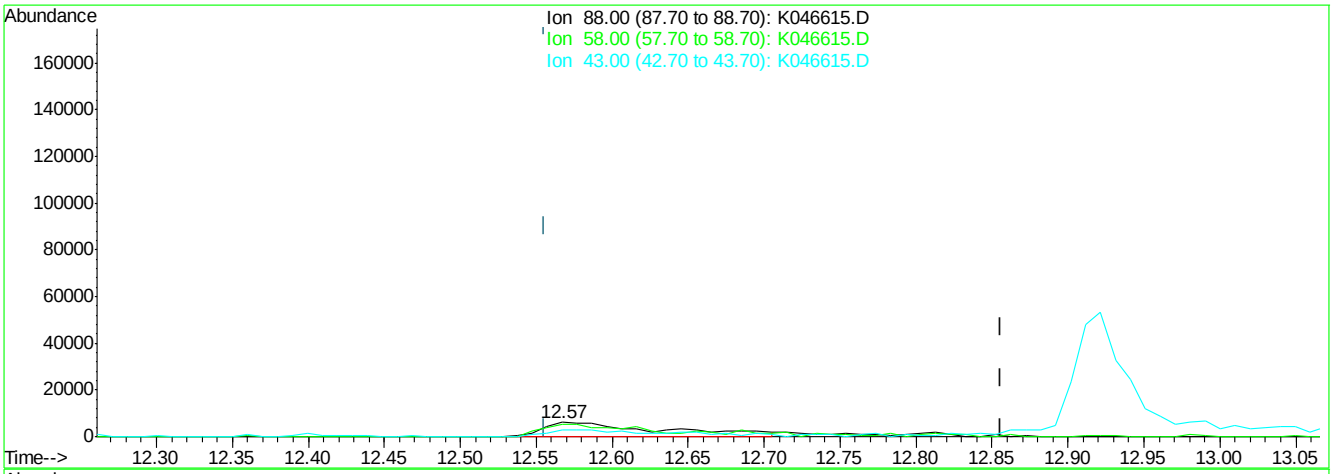
Ion	Exp%	Act%
88.00	100	100
58.00	68.40	65.84
43.00	38.40	32.58
0.00	0.00	0.00

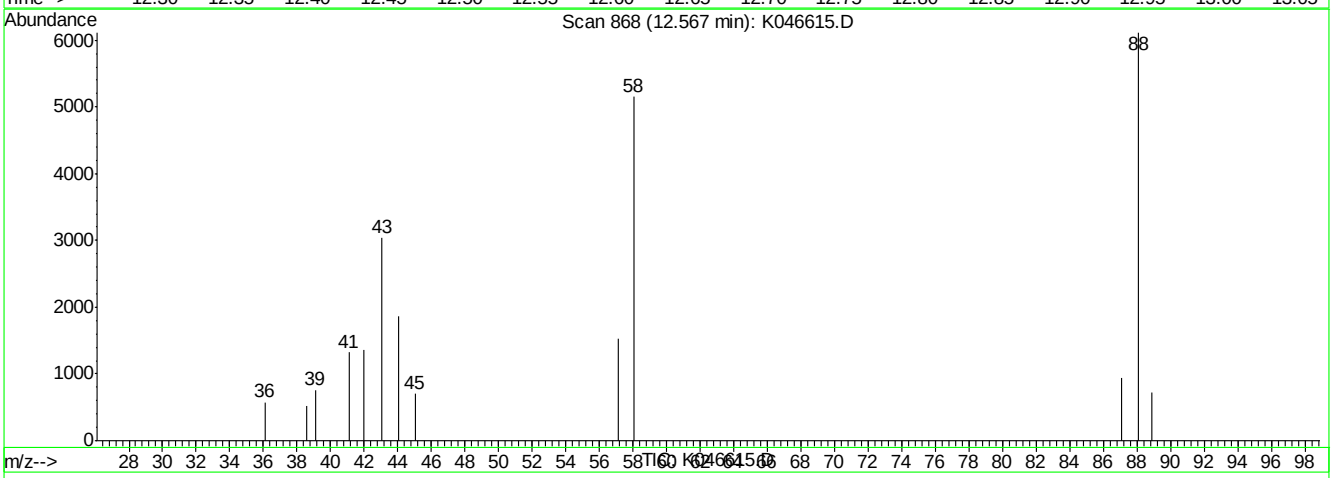
K046615.D 8260-K.M Wed Sep 15 13:05:23 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091010\K046615.D Vial: 26
Acq On : 10 Sep 2010 11:14 pm Operator: StevenH
Sample : f76266-37msd Inst : MSVOA2
Misc : ms15386,vk2009,4.52,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 15 16:06 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Wed Sep 15 13:00:11 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.57min (+0.011) 667.88ug/Kg m

response 34196

Ion	Exp%	Act%
88.00	100	100
58.00	68.40	84.24
43.00	38.40	49.67
0.00	0.00	0.00

K046615.D 8260-K.M Wed Sep 15 13:06:12 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/17/10 12:57

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059360.D Vial: 15
Acq On : 15 Sep 2010 3:10 pm Operator: KarenW
Sample : F76356-1ms, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 08:22:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.44	96	990543	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.52	117	763059	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	411795	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.10	65	111178	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.62	113	245049	48.36	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 96.72%				
38) 1,2-Dichloroethane-d4	7.16	65	341035	55.43	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 110.86%				
48) Toluene-d8	8.98	98	972643	48.33	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 96.66%				
69) 4-Bromofluorobenzene	11.73	95	385331	49.05	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 98.10%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.77	85	310442	33.17	ug/L		99
3) Chloromethane	2.92	50	728661	34.89	ug/L		98
4) Vinyl Chloride	3.05	62	466975	32.90	ug/L		97
5) Bromomethane	3.43	94	213895	31.84	ug/L		98
6) Chloroethane	3.57	64	225819	33.47	ug/L		98
7) Trichlorofluoromethane	3.77	101	405338	33.72	ug/L		94
8) Ethyl Ether	4.00	59	257213	28.51	ug/L		98
9) 1,2-Dichlorotrifluoroethan	4.23	67	348928	35.49	ug/L		94
10) 1,1-Dichloroethene	4.27	61	458139	29.47	ug/L		97
11) Freon 113	4.33	101	227242	30.99	ug/L		95
12) Carbon Disulfide	4.33	76	695605	26.49	ug/L		94
13) Iodomethane	4.43	142	378459	27.76	ug/L		99
14) Methylene Chloride	4.84	49	493389	26.26	ug/L		86
15) Acetone	4.86	58	90124	112.77	ug/L	#	78
16) Methyl acetate	4.98	74	138813	117.75	ug/L	#	86
17) trans-1,2-Dichloroethene	5.01	61	428855	24.59	ug/L		92
18) Hexane	5.09	56	313955	28.44	ug/L		96
19) Methyl Tert Butyl Ether	5.13	73	495241	21.39	ug/L		81
20) Di-isopropyl ether	5.49	45	1163443	27.65	ug/L		94
21) 1,1-Dichloroethane	5.64	63	596730	28.63	ug/L		99
22) Acrylonitrile	5.66	53	373557	104.71	ug/L		97
23) ETBE	5.87	59	890483	23.91	ug/L		96
24) Vinyl acetate	5.84	43	2261493	164.92	ug/L		99
25) cis-1,2-Dichloroethene	6.18	96	725951	72.18	ug/L		92
26) 2,2-Dichloropropane	6.32	77	280454	22.14	ug/L		96
27) Bromochloromethane	6.39	128	103321	19.76	ug/L	#	68
28) Cyclohexane	6.45	56	587466	27.32	ug/L		93
29) Chloroform	6.44	83	371531	22.33	ug/L		95
30) Tetrahydrofuran	6.61	42	71060	26.06	ug/L		93
32) Carbon Tetrachloride	6.64	117	244957m	24.60	ug/L		
33) 1,1,1-Trichloroethane	6.70	97	280616	21.93	ug/L		84
34) 2-Butanone	6.72	43	551586	135.77	ug/L		90
35) 1,1-Dichloropropene	6.80	75	313855	24.15	ug/L		89
36) Benzene	7.05	78	905877	23.87	ug/L		94

(#) = qualifier out of range (m) = manual integration
J059360.D 8260-J.M Thu Sep 16 08:43:01 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059360.D Vial: 15
Acq On : 15 Sep 2010 3:10 pm Operator: KarenW
Sample : F76356-1ms, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 08:22:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	540802	22.19	ug/L		91
39)	1,2-Dichloroethane	7.23	62	340015	23.43	ug/L		93
40)	Trichloroethene	7.62	95	237057	23.98	ug/L		95
41)	Methylcyclohexane	7.65	83	402035	25.88	ug/L		87
42)	Dibromomethane	8.03	93	125478	22.64	ug/L		90
43)	1,2-Dichloropropane	8.12	63	314562	25.41	ug/L		97
44)	Bromodichloromethane	8.17	83	240301	20.83	ug/L		96
45)	2-Chloroethyl vinyl ether	8.69	63	58617	8.77	ug/L		93
46)	cis-1,3-Dichloropropene	8.79	75	368887	22.87	ug/L		94
49)	Toluene	9.03	91	907716	22.25	ug/L		96
50)	2-Nitropropane	9.22	41	301564	144.40	ug/L		94
51)	4-Methyl-2-pentanone	9.36	43	1253517	142.06	ug/L		94
52)	trans-1,3-Dichloropropene	9.41	75	323173	23.09	ug/L		93
53)	Tetrachloroethene	9.43	166	233250	21.98	ug/L		99
54)	1,1,2-Trichloroethane	9.58	83	162322	22.35	ug/L		96
55)	Dibromochloromethane	9.77	129	145161	16.08	ug/L		98
56)	1,3-Dichloropropane	9.85	76	329644	22.21	ug/L		89
57)	1,2-Dibromoethane	10.02	107	164299	19.68	ug/L		93
58)	2-hexanone	10.17	43	863717	143.93	ug/L		92
59)	1-Chlorohexane	10.48	91	354875	23.00	ug/L		81
60)	Ethylbenzene	10.54	91	1030718	21.98	ug/L		91
61)	Chlorobenzene	10.54	112	607356	21.40	ug/L		92
62)	1,1,1,2-Tetrachloroethane	10.59	131	188235	20.20	ug/L		98
63)	m,p-Xylene	10.68	91	1554279	46.70	ug/L		85
64)	o-Xylene	11.12	91	801498	21.07	ug/L		93
65)	Styrene	11.17	104	580850	21.10	ug/L		95
66)	Bromoform	11.21	173	73636	12.98	ug/L		97
67)	Isopropylbenzene	11.43	105	953761	24.59	ug/L		91
70)	n-Propylbenzene	11.85	91	1223883	24.03	ug/L		94
71)	Bromobenzene	11.85	156	254091	21.41	ug/L		97
72)	1,1,2,2-Tetrachloroethane	11.90	83	220604	22.90	ug/L		100
73)	1,3,5-Trimethylbenzene	12.04	105	779603	23.89	ug/L		92
74)	2-Chlorotoluene	12.03	91	817745	24.25	ug/L		94
75)	trans-1,4-Dichloro-2-Buten	12.08	53	75836	20.84	ug/L		97
76)	1,2,3-Trichloropropane	12.06	110	49143	19.17	ug/L		90
77)	Cyclohexanone	12.11	55	34400	119.40	ug/L		95
78)	4-Chlorotoluene	12.20	91	739562	23.58	ug/L		98
79)	tert-Butylbenzene	12.38	91	476906	23.31	ug/L		95
80)	1,2,4-Trimethylbenzene	12.45	105	805299	23.91	ug/L		93
81)	sec-Butylbenzene	12.56	105	1083351	23.68	ug/L		95
82)	4-Isopropyltoluene	12.70	119	839461	24.11	ug/L		94
83)	1,3-Dichlorobenzene	12.81	146	471822	21.82	ug/L		97
84)	1,4-Dichlorobenzene	12.90	146	487593	22.13	ug/L		95
85)	n-Butylbenzene	13.14	92	550285	24.34	ug/L		89
86)	Benzyl Chloride	13.14	126	85035	21.89	ug/L	#	60
87)	1,2-Dichlorobenzene	13.34	146	450421	22.00	ug/L		96
88)	1,2-Dibromo-3-Chloropropan	14.09	75	30848	20.21	ug/L		89
89)	Hexachlorobutadiene	14.67	225	164282	21.53	ug/L		94
90)	1,2,4-Trichlorobenzene	14.70	180	306459	20.82	ug/L		92

(#) = qualifier out of range (m) = manual integration
J059360.D 8260-J.M Thu Sep 16 08:43:01 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059360.D Vial: 15
Acq On : 15 Sep 2010 3:10 pm Operator: KarenW
Sample : F76356-1ms, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 08:22:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

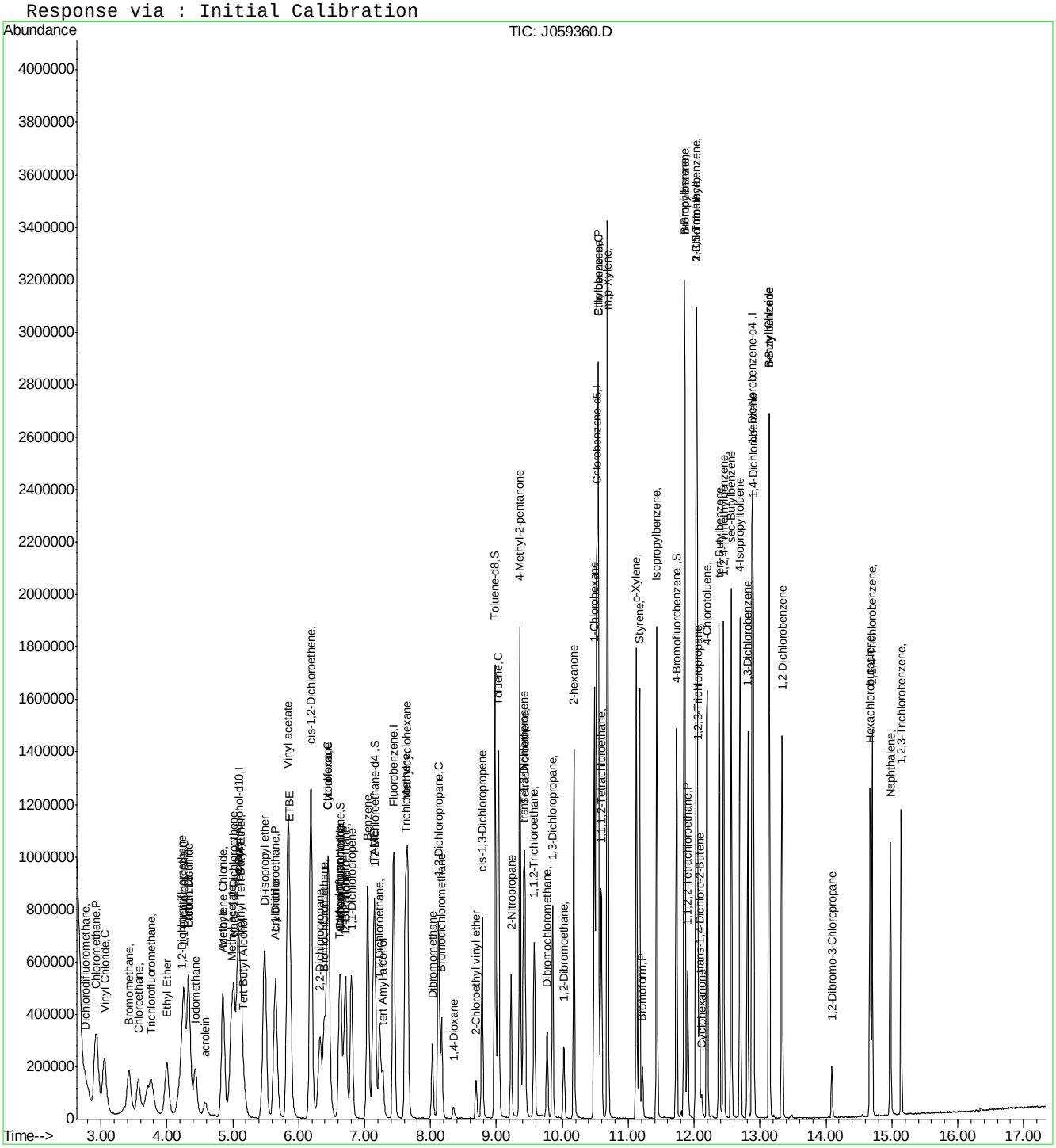
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	14.98	128	520410	20.15	ug/L	98
92)	1,2,3-Trichlorobenzene	15.14	180	257233	19.99	ug/L	93
94)	acrolein	4.59	56	98446	69.49	ug/L	96
95)	Tert Butyl Alcohol	5.17	59	171013	195.31	ug/L	94
96)	tert Amyl alcohol	7.28	59	143174	203.41	ug/L	96
97)	1,4-Dioxane	8.35	88	28954	356.23	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059360.D Vial: 15
Acq On : 15 Sep 2010 3:10 pm Operator: KarenW
Sample : F76356-1ms, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 8:26 2010 Quant Results File: 8260-J.RES

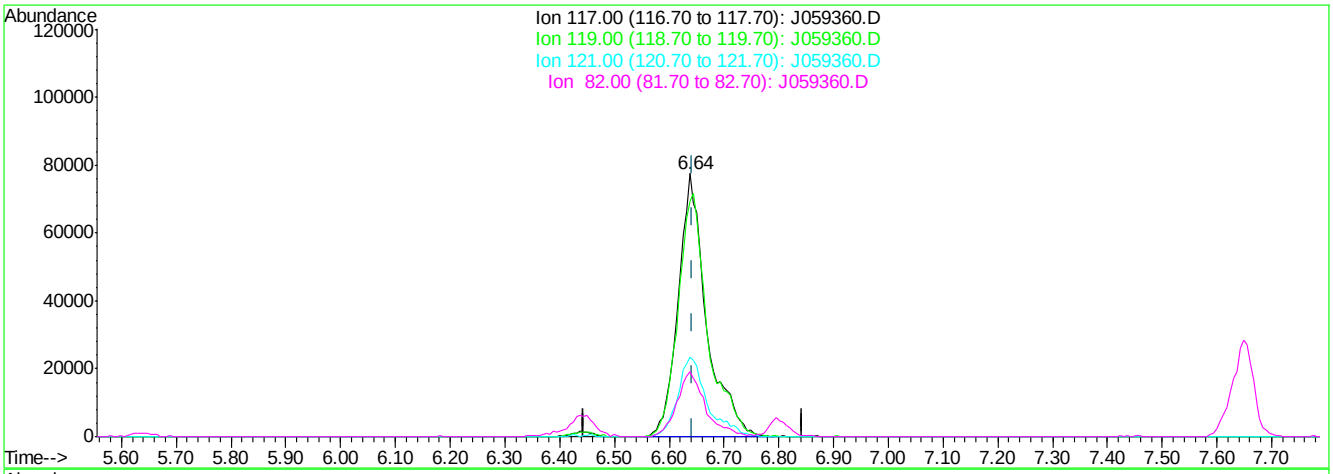
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

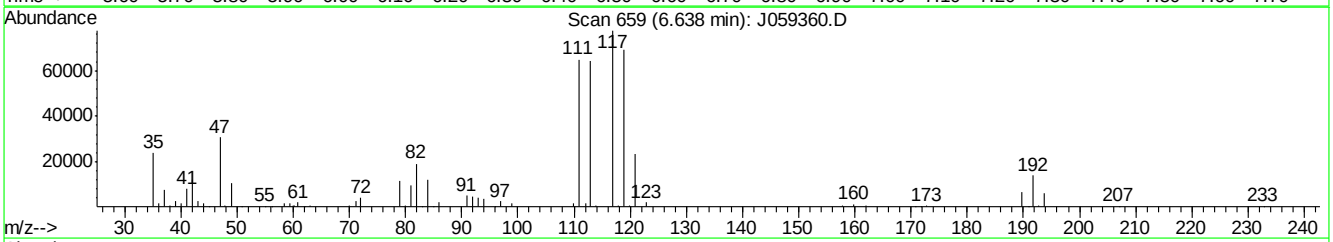


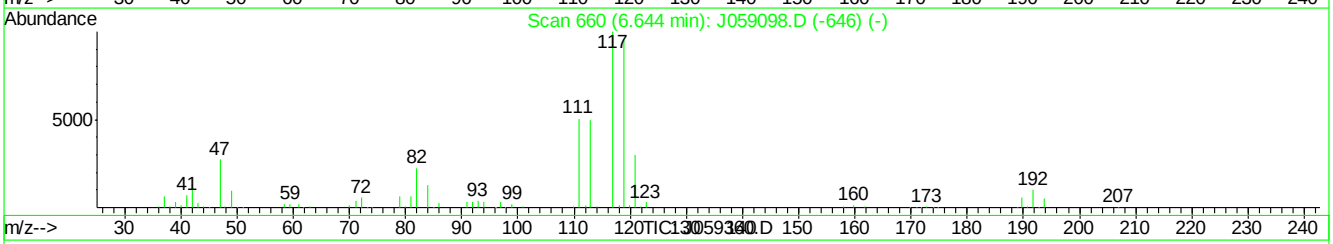
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059360.D Vial: 15
Acq On : 15 Sep 2010 3:10 pm Operator: KarenW
Sample : F76356-1ms, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 8:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (-0.006) 27.63ug/L

response 276681

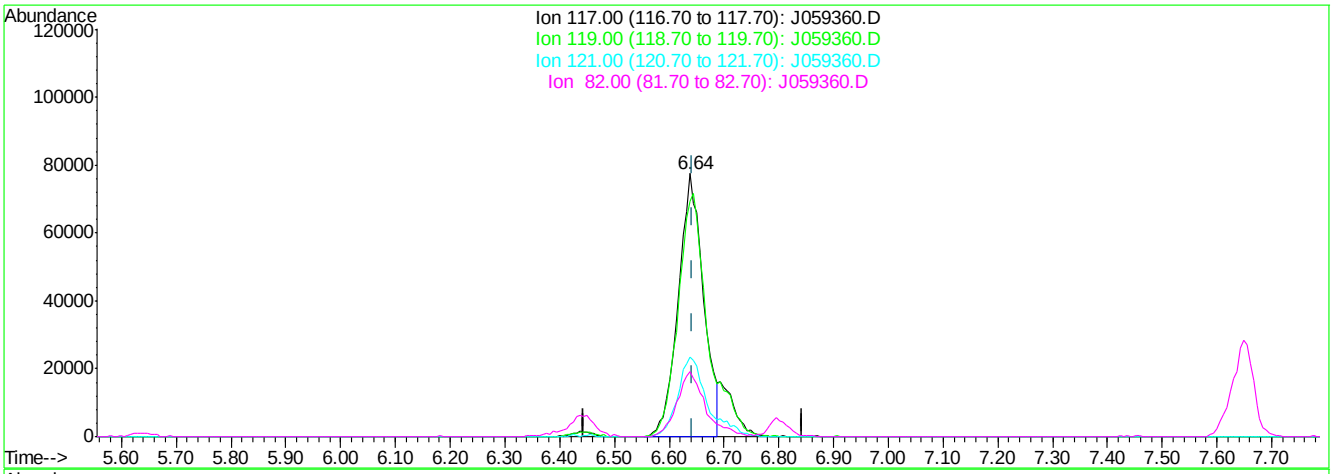
Ion	Exp%	Act%
117.00	100	100
119.00	95.40	89.42
121.00	29.70	30.30
82.00	22.30	24.55

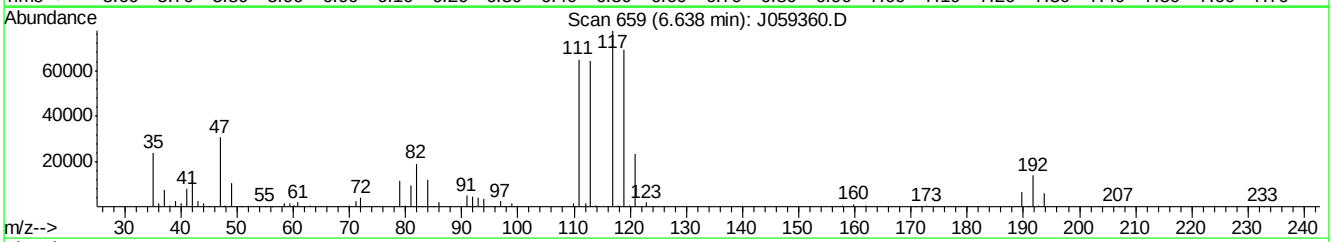
J059360.D 8260-J.M Thu Sep 16 08:26:37 2010

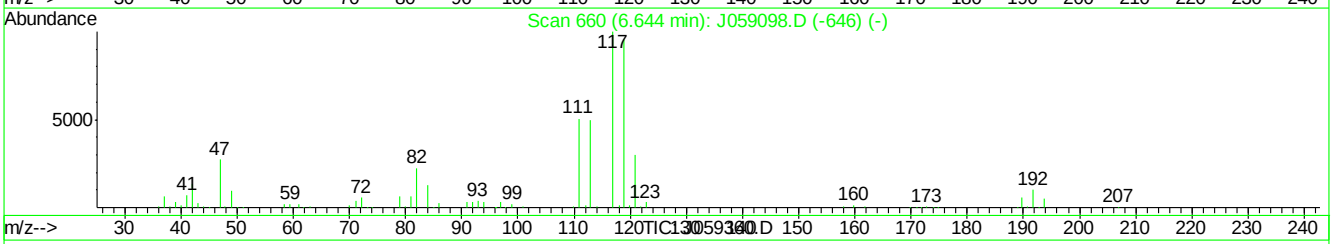
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059360.D Vial: 15
Acq On : 15 Sep 2010 3:10 pm Operator: KarenW
Sample : F76356-1ms, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 8:26 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (-0.006) 24.60ug/L m

response 244957

Ion	Exp%	Act%
117.00	100	100
119.00	95.40	89.42
121.00	29.70	30.30
82.00	22.30	24.55

J059360.D 8260-J.M Thu Sep 16 08:26:46 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/17/10 12:57

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059361.D Vial: 15
Acq On : 15 Sep 2010 3:33 pm Operator: KarenW
Sample : F76356-1msd, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 08:22:03 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.44	96	1065704	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.52	117	790425	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.88	152	423001	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.10	65	115419	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	267696	49.10	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 98.20%			
38) 1,2-Dichloroethane-d4	7.16	65	351040	53.03	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 106.06%			
48) Toluene-d8	8.98	98	1026951	49.26	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 98.52%			
69) 4-Bromofluorobenzene	11.73	95	408117	50.58	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 101.16%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.77	85	330026	32.78	ug/L	93
3) Chloromethane	2.93	50	804347	35.80	ug/L	96
4) Vinyl Chloride	3.06	62	509312	33.36	ug/L	99
5) Bromomethane	3.43	94	231450	32.04	ug/L	91
6) Chloroethane	3.58	64	236762	32.62	ug/L	98
7) Trichlorofluoromethane	3.77	101	430910	33.32	ug/L	93
8) Ethyl Ether	4.00	59	281706	29.02	ug/L	97
9) 1,2-Dichlorotrifluoroethan	4.22	67	364652	34.47	ug/L	94
10) 1,1-Dichloroethene	4.27	61	497834	29.76	ug/L	97
11) Freon 113	4.33	101	228806	29.01	ug/L	95
12) Carbon Disulfide	4.33	76	649545	23.00	ug/L	97
13) Iodomethane	4.44	142	396944	27.06	ug/L	97
14) Methylene Chloride	4.85	49	513375	25.40	ug/L	88
15) Acetone	4.87	58	99272	115.46	ug/L	90
16) Methyl acetate	4.98	74	148431	117.03	ug/L	98
17) trans-1,2-Dichloroethene	5.03	61	441914	23.55	ug/L	92
18) Hexane	5.09	56	329050	27.71	ug/L	95
19) Methyl Tert Butyl Ether	5.13	73	547915	22.00	ug/L	81
20) Di-isopropyl ether	5.49	45	1237087	27.32	ug/L	95
21) 1,1-Dichloroethane	5.64	63	634037	28.27	ug/L	97
22) Acrylonitrile	5.66	53	426430	111.10	ug/L	96
23) ETBE	5.87	59	961015	23.98	ug/L	98
24) Vinyl acetate	5.84	43	2381433	161.19	ug/L	99
25) cis-1,2-Dichloroethene	6.19	96	769653	71.13	ug/L	92
26) 2,2-Dichloropropane	6.32	77	305287	22.40	ug/L	99
27) Bromochloromethane	6.39	128	111290	19.78	ug/L #	68
28) Cyclohexane	6.45	56	600090	25.94	ug/L	93
29) Chloroform	6.44	83	399763	22.33	ug/L	94
30) Tetrahydrofuran	6.62	42	77534	26.43	ug/L	91
32) Carbon Tetrachloride	6.64	117	245945m	23.02	ug/L	
33) 1,1,1-Trichloroethane	6.70	97	311237	22.61	ug/L	92
34) 2-Butanone	6.72	43	593290	135.73	ug/L	94
35) 1,1-Dichloropropene	6.80	75	334309	23.91	ug/L	93
36) Benzene	7.05	78	996329	24.40	ug/L	96

(#) = qualifier out of range (m) = manual integration
J059361.D 8260-J.M Thu Sep 16 08:43:02 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059361.D Vial: 15
Acq On : 15 Sep 2010 3:33 pm Operator: KarenW
Sample : F76356-1msd, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 08:22:03 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	591143	22.54	ug/L		92
39)	1,2-Dichloroethane	7.23	62	362564	23.22	ug/L		94
40)	Trichloroethene	7.62	95	250983	23.60	ug/L		92
41)	Methylcyclohexane	7.65	83	419209	25.08	ug/L		94
42)	Dibromomethane	8.03	93	133262	22.35	ug/L		92
43)	1,2-Dichloropropane	8.12	63	329755	24.76	ug/L		97
44)	Bromodichloromethane	8.17	83	236303	19.04	ug/L		95
45)	2-Chloroethyl vinyl ether	8.69	63	22889	3.18	ug/L		92
46)	cis-1,3-Dichloropropene	8.79	75	356111	20.53	ug/L		94
49)	Toluene	9.04	91	991488	23.46	ug/L		98
50)	2-Nitropropane	9.22	41	315932	146.04	ug/L		96
51)	4-Methyl-2-pentanone	9.36	43	1355774	148.33	ug/L		94
52)	trans-1,3-Dichloropropene	9.41	75	309741	21.36	ug/L		95
53)	Tetrachloroethene	9.44	166	244715	22.27	ug/L		95
54)	1,1,2-Trichloroethane	9.58	83	168768	22.43	ug/L		97
55)	Dibromochloromethane	9.77	129	150293	16.07	ug/L		92
56)	1,3-Dichloropropane	9.86	76	342348	22.26	ug/L		95
57)	1,2-Dibromoethane	10.02	107	174114	20.14	ug/L		99
58)	2-hexanone	10.17	43	929404	149.51	ug/L		91
59)	1-Chlorohexane	10.49	91	360441	22.56	ug/L		90
60)	Ethylbenzene	10.55	91	1056640	21.74	ug/L		92
61)	Chlorobenzene	10.54	112	619788	21.07	ug/L		94
62)	1,1,1,2-Tetrachloroethane	10.59	131	189321	19.61	ug/L		94
63)	m,p-Xylene	10.69	91	1579193	45.69	ug/L		90
64)	o-Xylene	11.12	91	826962	20.98	ug/L		92
65)	Styrene	11.17	104	593302	20.80	ug/L		95
66)	Bromoform	11.22	173	83374	14.19	ug/L		97
67)	Isopropylbenzene	11.43	105	992703	24.72	ug/L		94
70)	n-Propylbenzene	11.85	91	1264138	24.17	ug/L		90
71)	Bromobenzene	11.85	156	259461	21.29	ug/L		99
72)	1,1,2,2-Tetrachloroethane	11.90	83	227306	22.97	ug/L		97
73)	1,3,5-Trimethylbenzene	12.04	105	792051	23.63	ug/L		93
74)	2-Chlorotoluene	12.03	91	833243	24.06	ug/L		94
75)	trans-1,4-Dichloro-2-Buten	12.08	53	70160	18.77	ug/L		94
76)	1,2,3-Trichloropropane	12.06	110	50744	19.27	ug/L		91
77)	Cyclohexanone	12.11	55	38598	130.01	ug/L		94
78)	4-Chlorotoluene	12.20	91	737780	22.90	ug/L		97
79)	tert-Butylbenzene	12.38	91	493137	23.46	ug/L		95
80)	1,2,4-Trimethylbenzene	12.45	105	796343	23.02	ug/L		99
81)	sec-Butylbenzene	12.56	105	1110537	23.63	ug/L		93
82)	4-Isopropyltoluene	12.70	119	876943	24.52	ug/L		94
83)	1,3-Dichlorobenzene	12.81	146	484973	21.84	ug/L		100
84)	1,4-Dichlorobenzene	12.90	146	499344	22.06	ug/L		96
85)	n-Butylbenzene	13.14	92	567674	24.44	ug/L		89
86)	Benzyl Chloride	13.14	126	79527	19.93	ug/L	#	29
87)	1,2-Dichlorobenzene	13.34	146	460426	21.89	ug/L		98
88)	1,2-Dibromo-3-Chloropropan	14.09	75	29970	19.11	ug/L		87
89)	Hexachlorobutadiene	14.67	225	182866	23.33	ug/L		93
90)	1,2,4-Trichlorobenzene	14.70	180	331417	21.92	ug/L		93

(#) = qualifier out of range (m) = manual integration
J059361.D 8260-J.M Thu Sep 16 08:43:02 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059361.D Vial: 15
Acq On : 15 Sep 2010 3:33 pm Operator: KarenW
Sample : F76356-1msd, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 08:22:03 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

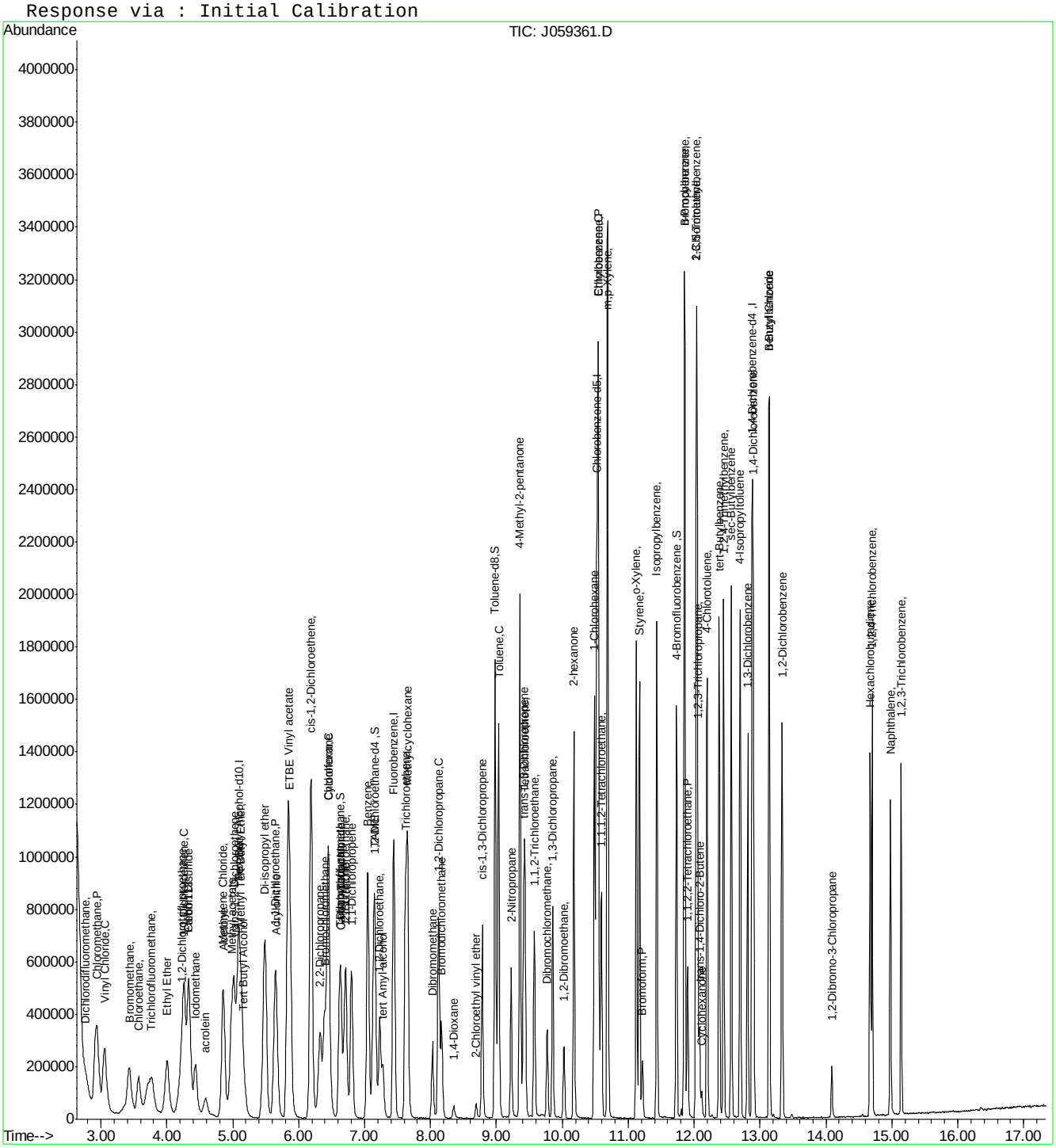
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	14.98	128	607460	22.89	ug/L	99
92)	1,2,3-Trichlorobenzene	15.14	180	306714	23.20	ug/L	85
94)	acrolein	4.58	56	121650	82.72	ug/L	90
95)	Tert Butyl Alcohol	5.17	59	195439	215.00	ug/L	90
96)	tert Amyl alcohol	7.28	59	163175	223.31	ug/L	94
97)	1,4-Dioxane	8.35	88	35383	419.34	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059361.D 8260-J.M Thu Sep 16 08:43:02 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059361.D Vial: 15
Acq On : 15 Sep 2010 3:33 pm Operator: KarenW
Sample : F76356-1msd, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 8:26 2010 Quant Results File: 8260-J.RES

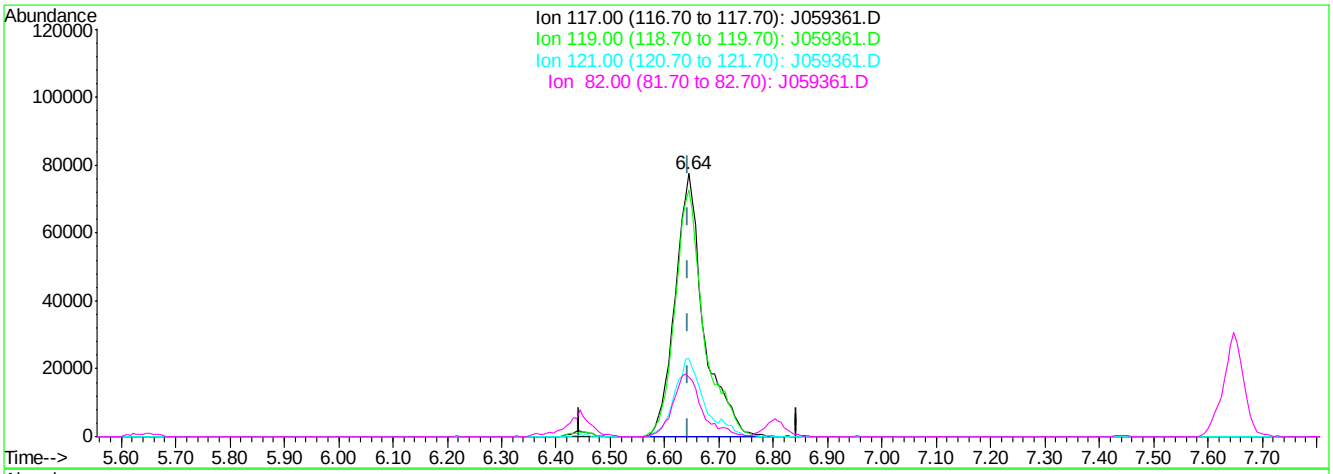
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

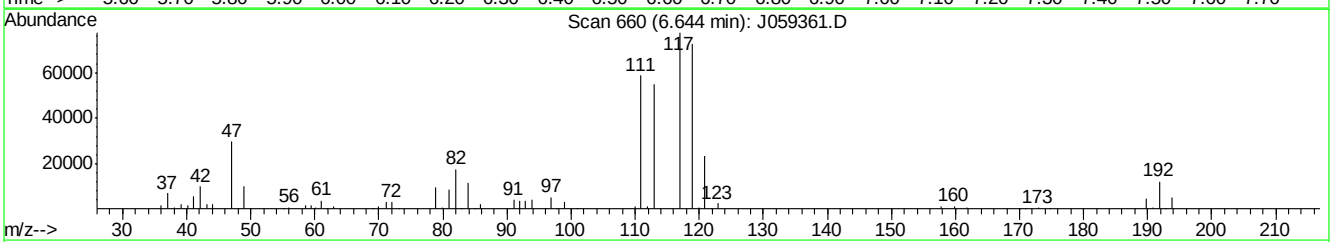


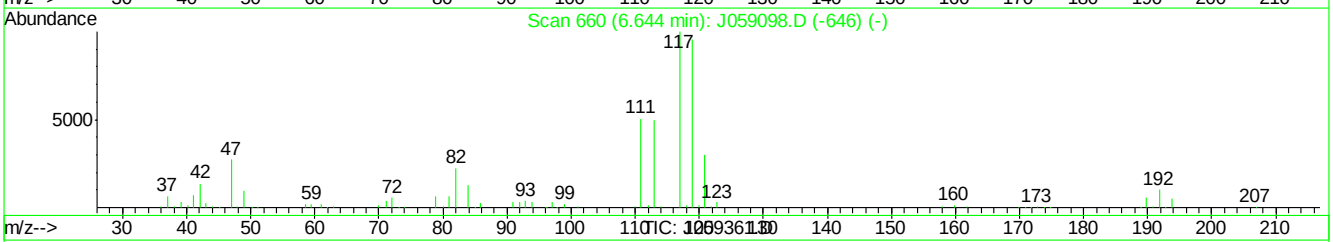
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059361.D Vial: 15
Acq On : 15 Sep 2010 3:33 pm Operator: KarenW
Sample : F76356-1msd, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 8:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.000) 26.24ug/L

response 281932

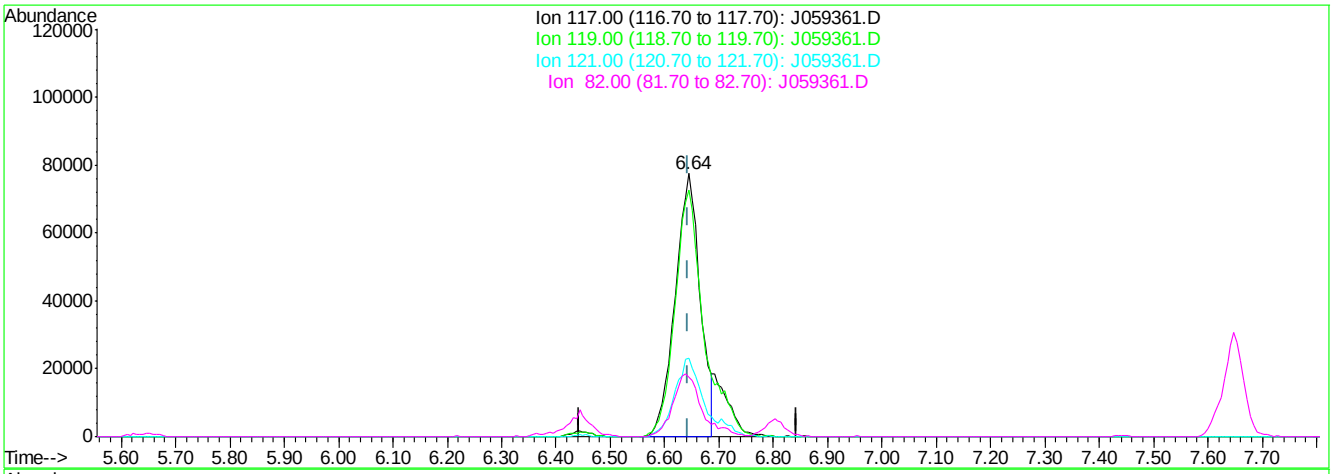
Ion	Exp%	Act%
117.00	100	100
119.00	95.40	93.69
121.00	29.70	29.97
82.00	22.30	22.58

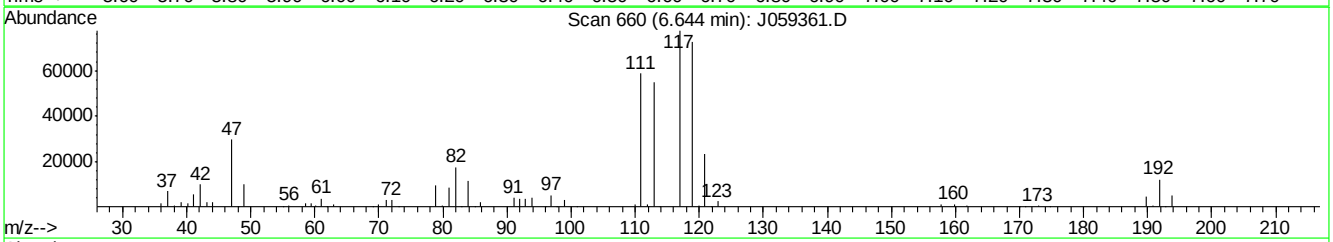
J059361.D 8260-J.M Thu Sep 16 08:26:57 2010

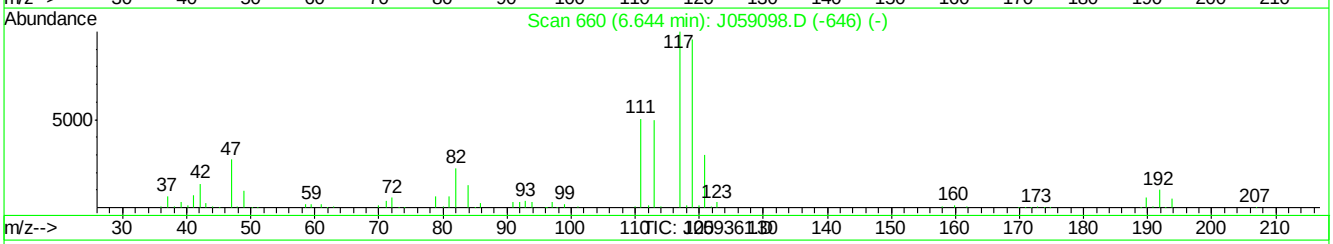
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059361.D Vial: 15
Acq On : 15 Sep 2010 3:33 pm Operator: KarenW
Sample : F76356-1msd, 5x Inst : MSVOA6
Misc : ms15407,vj3338,,,,,5 Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 16 8:26 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.000) 23.02ug/L m

response 245945

Ion	Exp%	Act%
117.00	100	100
119.00	95.40	93.69
121.00	29.70	29.97
82.00	22.30	22.58

J059361.D 8260-J.M Thu Sep 16 08:27:01 2010

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066865.D Vial: 12
Acq On : 16 Sep 2010 3:30 pm Operator: MikeM
Sample : f76376-6ms Inst : MSVOA1
Misc : ms15411,vg2525,4.50,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 15:54:48 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	1043737	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	1014026	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	598073	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.98	65	136298	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	369921	48.37	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 96.74%			
44) 1,2-Dichloroethane-d4	10.75	65	326143	43.78	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 87.56%			
55) Toluene-d8	12.89	98	1211123	50.07	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 100.14%			
77) 4-Bromofluorobenzene	15.89	174	580939	50.68	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 101.36%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	1199967	75.07	ug/Kg	100
3) Chloromethane	4.60	50	1222660	69.32	ug/Kg	90
4) Vinyl Chloride	4.80	62	827355	56.16	ug/Kg	92
5) Bromomethane	5.45	94	319651	82.15	ug/Kg	89
6) Chloroethane	5.70	64	266996	64.69	ug/Kg	87
7) Trichlorofluoromethane	5.95	101	895940	62.68	ug/Kg	100
8) Ethyl Ether	6.40	59	312894	45.14	ug/Kg	91
9) 1,2-Dichlorotrifluoroethan	6.75	67	907804	61.52	ug/Kg	95
10) 1,1-Dichloroethene	6.81	61	1137173	50.21	ug/Kg	94
11) Freon 113	6.85	101	673061	50.33	ug/Kg	95
12) Carbon Disulfide	6.91	76	1906720	52.37	ug/Kg	94
13) Iodomethane	7.09	142	1483097	52.54	ug/Kg	96
14) Allyl chloride	7.50	41	1125485	61.33	ug/Kg	95
15) Methylene Chloride	7.72	49	1739119	79.08	ug/Kg	89
16) Acetone	7.72	43	907511	151.92	ug/Kg	99
17) Methyl acetate	7.87	43	1494347	189.68	ug/Kg	97
18) trans-1,2-Dichloroethene	7.90	61	1117816	52.13	ug/Kg	92
19) Hexane	7.98	56	549193	49.88	ug/Kg#	81
20) Methyl Tert Butyl Ether	8.01	73	1683908	46.70	ug/Kg	92
21) Acetonitrile	8.42	41	387431	393.28	ug/Kg	90
22) Di-isopropyl ether	8.50	45	2521107	53.86	ug/Kg	96
23) Chloroprene	8.73	53	1188051	56.13	ug/Kg	96
24) 1,1-Dichloroethane	8.77	63	1334532	49.98	ug/Kg	100
25) Acrylonitrile	8.84	53	680027	191.18	ug/Kg	98
26) ETBE	9.01	59	2222665	50.23	ug/Kg	97
27) Vinyl acetate	9.04	43	3532327	294.99	ug/Kg	98
28) cis-1,2-Dichloroethene	9.50	96	722753	50.39	ug/Kg	90
29) 2,2-Dichloropropane	9.65	77	679512	49.92	ug/Kg	98
30) Bromochloromethane	9.77	128	383394	42.44	ug/Kg#	84
31) Cyclohexane	9.80	56	1165303	51.98	ug/Kg	96
32) Chloroform	9.82	83	1466742	49.47	ug/Kg	99
33) Ethyl acetate	9.90	43	3048501	268.39	ug/Kg	95
34) Tetrahydrofuran	10.05	42	122157	37.60	ug/Kg	93
36) Carbon Tetrachloride	10.05	117	1254163	48.55	ug/Kg	94

(#) = qualifier out of range (m) = manual integration
G0066865.D APP9-G.M Thu Sep 16 15:55:30 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066865.D Vial: 12
Acq On : 16 Sep 2010 3:30 pm Operator: MikeM
Sample : f76376-6ms Inst : MSVOA1
Misc : ms15411,vg2525,4.50,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 15:54:48 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1119425	51.06	ug/Kg	99
38)	2-Butanone	10.19	43	1170379	165.85	ug/Kg	99
39)	1,1-Dichloropropene	10.28	75	1058178	53.25	ug/Kg	95
40)	Propionitrile	10.59	54	552562	436.98	ug/Kg#	66
41)	Methacrylonitrile	10.61	41	3597076	450.56	ug/Kg	94
42)	Benzene	10.59	78	2550558	51.59	ug/Kg	93
43)	TAME	10.65	73	1730408	49.50	ug/Kg	96
45)	1,2-Dichloroethane	10.83	62	1001405	44.61	ug/Kg	97
46)	Trichloroethene	11.28	95	809617	53.03	ug/Kg	98
47)	Methylcyclohexane	11.29	83	1016582	49.58	ug/Kg	97
48)	Dibromomethane	11.81	93	447911	41.81	ug/Kg#	83
49)	1,2-Dichloropropane	11.90	63	706380	50.74	ug/Kg	92
50)	Bromodichloromethane	11.95	83	981336	44.85	ug/Kg	95
51)	Methyl methacrylate	12.05	41	497741	44.03	ug/Kg	97
52)	2-Chloroethyl vinyl ether	12.54	63	1431424	267.89	ug/Kg	97
53)	cis-1,3-Dichloropropene	12.67	75	1115593	49.65	ug/Kg	89
56)	Toluene	12.95	91	2840656	52.83	ug/Kg	99
57)	2-Nitropropane	13.22	41	749261	195.97	ug/Kg	100
58)	4-Methyl-2-pentanone	13.31	43	2555374	227.33	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.39	75	926778	50.21	ug/Kg	94
60)	Tetrachloroethene	13.41	166	1175159	64.98	ug/Kg	93
61)	Ethyl methacrylate	13.48	69	692631	50.71	ug/Kg	91
62)	1,1,2-Trichloroethane	13.58	83	470664	47.00	ug/Kg	95
63)	Dibromochloromethane	13.81	129	765582	44.61	ug/Kg	98
64)	1,3-Dichloropropane	13.90	76	880076	46.78	ug/Kg	96
65)	1,2-Dibromoethane	14.12	107	573132	43.19	ug/Kg	96
66)	2-hexanone	14.23	43	1899598	202.90	ug/Kg	98
67)	1-Chlorohexane	14.56	91	927038	50.18	ug/Kg	92
68)	Ethylbenzene	14.63	91	3090261	53.86	ug/Kg	96
69)	Chlorobenzene	14.66	112	1724177	51.35	ug/Kg	99
70)	1,1,1,2-Tetrachloroethane	14.71	131	719799	50.26	ug/Kg	94
71)	m,p-Xylene	14.78	91	4805313	110.85	ug/Kg	98
72)	o-Xylene	15.26	91	2562833	51.80	ug/Kg	99
73)	Styrene	15.31	104	1796695	51.93	ug/Kg	97
74)	Bromoform	15.40	173	513127	42.01	ug/Kg#	68
75)	Isopropylbenzene	15.56	105	2955493	60.72	ug/Kg	100
78)	cis-1,4-Dichloro-2-butene	15.92	53	258208	59.08	ug/Kg#	80
79)	n-Propylbenzene	15.96	91	3992114	62.70	ug/Kg	96
80)	Bromobenzene	16.01	156	814075	48.51	ug/Kg	95
81)	1,1,2,2-Tetrachloroethane	16.03	83	654310	57.40	ug/Kg	97
82)	1,3,5-Trimethylbenzene	16.12	105	2446659	53.94	ug/Kg	100
83)	2-Chlorotoluene	16.16	91	2274223	52.77	ug/Kg	94
84)	trans-1,4-Dichloro-2-Buten	16.20	53	141211	81.03	ug/Kg#	72
85)	1,2,3-Trichloropropane	16.19	110	145026	39.29	ug/Kg	93
86)	Cyclohexanone	16.27	55	142132	444.63	ug/Kg#	78
87)	4-Chlorotoluene	16.31	91	2057142	54.30	ug/Kg	97
88)	tert-Butylbenzene	16.44	91	1528193	53.05	ug/Kg	95
89)	1,2,4-Trimethylbenzene	16.50	105	2205084	52.07	ug/Kg	97
90)	Pentachloroethane	16.51	167	349336	36.83	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
G0066865.D APP9-G.M Thu Sep 16 15:55:31 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066865.D Vial: 12
Acq On : 16 Sep 2010 3:30 pm Operator: MikeM
Sample : f76376-6ms Inst : MSVOA1
Misc : ms15411,vg2525,4.50,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 15:54:48 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

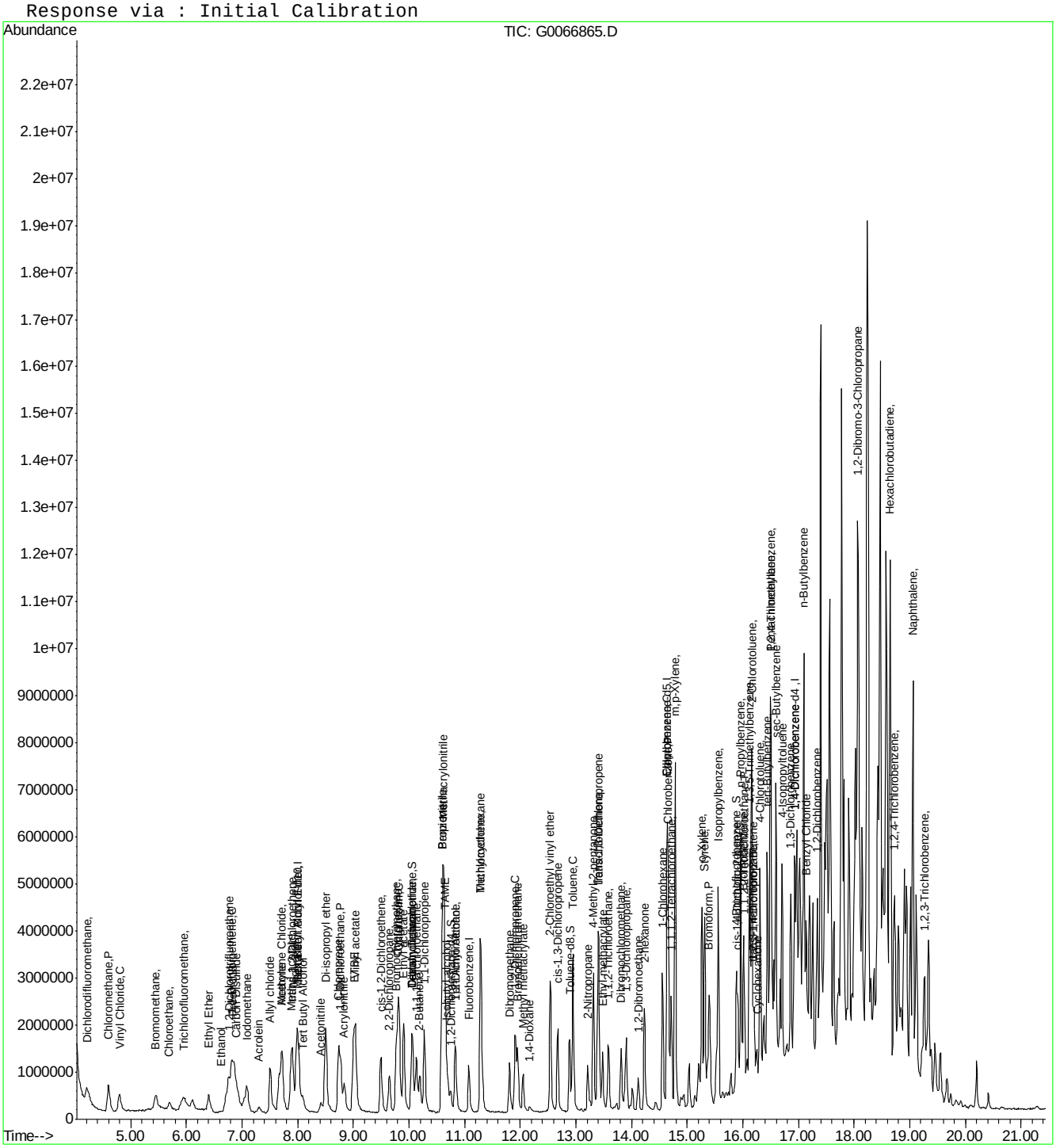
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	3057883	57.79	ug/Kg	94
92)	4-Isopropyltoluene	16.70	119	2211451	51.95	ug/Kg	66
93)	1,3-Dichlorobenzene	16.86	146	1355739	51.36	ug/Kg	98
94)	1,4-Dichlorobenzene	16.94	146	1286702	49.18	ug/Kg	95
95)	n-Butylbenzene	17.10	92	2017514	86.00	ug/Kg	95
96)	Benzyl Chloride	17.15	126	178490	43.71	ug/Kg#	72
97)	1,2-Dichlorobenzene	17.33	146	1175170	46.66	ug/Kg	93
98)	1,2-Dibromo-3-Chloropropan	18.07	75	184116	74.70	ug/Kg#	1
99)	Hexachlorobutadiene	18.64	225	384799	28.62	ug/Kg	93
100)	1,2,4-Trichlorobenzene	18.72	180	654392	42.08	ug/Kg	86
101)	Naphthalene	19.06	128	6154002	241.95	ug/Kg	98
102)	1,2,3-Trichlorobenzene	19.26	180	572151	43.80	ug/Kg	92
104)	Ethanol	6.62	45	68534	939.95	ug/Kg	67
105)	Acrolein	7.30	56	178803	215.17	ug/Kg	96
106)	Tert Butyl Alcohol	8.09	59	475192	456.51	ug/Kg	89
107)	Isobutyl alcohol	10.69	42	240525	1029.12	ug/Kg#	71
108)	Tert Amyl Alcohol	10.83	59	403251	531.65	ug/Kg	94
109)	1,4-Dioxane	12.17	88	93240	952.56	ug/Kg	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066865.D Vial: 12
Acq On : 16 Sep 2010 3:30 pm Operator: MikeM
Sample : f76376-6ms Inst : MSVOA1
Misc : ms15411,vg2525,4.50,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 15:54 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066866.D Vial: 13
Acq On : 16 Sep 2010 3:57 pm Operator: MikeM
Sample : f76376-6msd Inst : MSVOA1
Misc : ms15411,vg2525,4.59,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 16:24:16 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	1032185	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1001058	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	578540	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	123235	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.07	113	370036	48.93	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 97.86%			
44) 1,2-Dichloroethane-d4	10.76	65	317724	43.12	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 86.24%			
55) Toluene-d8	12.88	98	1210026	50.67	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 101.34%			
77) 4-Bromofluorobenzene	15.89	174	574869	51.85	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	1217862	77.05	ug/Kg	93
3) Chloromethane	4.60	50	1203994	69.02	ug/Kg	98
4) Vinyl Chloride	4.80	62	842130	57.80	ug/Kg	90
5) Bromomethane	5.45	94	339428	88.21	ug/Kg	93
6) Chloroethane	5.70	64	260677	63.73	ug/Kg	82
7) Trichlorofluoromethane	5.95	101	894621	63.29	ug/Kg	95
8) Ethyl Ether	6.40	59	321078	46.84	ug/Kg	95
9) 1,2-Dichlorotrifluoroethan	6.75	67	922809	63.24	ug/Kg	90
10) 1,1-Dichloroethene	6.81	61	1142499	51.01	ug/Kg	93
11) Freon 113	6.85	101	683658	51.69	ug/Kg	93
12) Carbon Disulfide	6.91	76	1957959	54.38	ug/Kg	93
13) Iodomethane	7.09	142	1466121	52.52	ug/Kg	96
14) Allyl chloride	7.50	41	1107311	61.01	ug/Kg	85
15) Methylene Chloride	7.71	49	1561956	71.82	ug/Kg	84
16) Acetone	7.72	43	876464	148.36	ug/Kg	95
17) Methyl acetate	7.87	43	1479900	189.95	ug/Kg	99
18) trans-1,2-Dichloroethene	7.91	61	1124945	53.05	ug/Kg	97
19) Hexane	7.99	56	584244	53.66	ug/Kg#	80
20) Methyl Tert Butyl Ether	8.02	73	1679361	47.10	ug/Kg	86
21) Acetonitrile	8.42	41	376209	386.17	ug/Kg	96
22) Di-isopropyl ether	8.50	45	2513718	54.30	ug/Kg	94
23) Chloroprene	8.74	53	1192402	56.96	ug/Kg	98
24) 1,1-Dichloroethane	8.77	63	1369429	51.86	ug/Kg	98
25) Acrylonitrile	8.83	53	701186	199.34	ug/Kg	95
26) ETBE	9.00	59	2236407	51.11	ug/Kg	97
27) Vinyl acetate	9.04	43	3582324	302.51	ug/Kg	100
28) cis-1,2-Dichloroethene	9.49	96	751596	52.99	ug/Kg	97
29) 2,2-Dichloropropane	9.64	77	668448	49.66	ug/Kg	96
30) Bromochloromethane	9.77	128	374116	41.88	ug/Kg	91
31) Cyclohexane	9.80	56	1197905	54.03	ug/Kg	95
32) Chloroform	9.82	83	1506450	51.37	ug/Kg	98
33) Ethyl acetate	9.91	43	2967096	264.14	ug/Kg	100
34) Tetrahydrofuran	10.06	42	141967	44.18	ug/Kg	93
36) Carbon Tetrachloride	10.06	117	1279765	50.09	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
G0066866.D APP9-G.M Thu Sep 16 16:25:00 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066866.D Vial: 13
Acq On : 16 Sep 2010 3:57 pm Operator: MikeM
Sample : f76376-6msd Inst : MSVOA1
Misc : ms15411,vg2525,4.59,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 16:24:16 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1128007	52.03	ug/Kg	95
38)	2-Butanone	10.19	43	1172134	167.96	ug/Kg	99
39)	1,1-Dichloropropene	10.27	75	1088870	55.40	ug/Kg	97
40)	Propionitrile	10.60	54	522362	417.72	ug/Kg#	68
41)	Methacrylonitrile	10.62	41	3584308	453.98	ug/Kg	93
42)	Benzene	10.59	78	2534705	51.84	ug/Kg	94
43)	TAME	10.65	73	1726547	49.94	ug/Kg	92
45)	1,2-Dichloroethane	10.83	62	1022830	46.07	ug/Kg	95
46)	Trichloroethene	11.29	95	823957	54.58	ug/Kg	96
47)	Methylcyclohexane	11.29	83	1112166	54.84	ug/Kg	95
48)	Dibromomethane	11.81	93	453038	42.77	ug/Kg#	80
49)	1,2-Dichloropropane	11.91	63	710653	51.61	ug/Kg	94
50)	Bromodichloromethane	11.95	83	1031500	47.67	ug/Kg	98
51)	Methyl methacrylate	12.05	41	468911	41.94	ug/Kg	96
52)	2-Chloroethyl vinyl ether	12.54	63	1390525	263.15	ug/Kg	96
53)	cis-1,3-Dichloropropene	12.67	75	1140386	51.32	ug/Kg	96
56)	Toluene	12.94	91	2879988	54.26	ug/Kg	99
57)	2-Nitropropane	13.21	41	793399	210.20	ug/Kg	98
58)	4-Methyl-2-pentanone	13.32	43	2552884	230.05	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.39	75	938173	51.49	ug/Kg	98
60)	Tetrachloroethene	13.41	166	1206158	67.56	ug/Kg	94
61)	Ethyl methacrylate	13.48	69	658617	48.84	ug/Kg	98
62)	1,1,2-Trichloroethane	13.58	83	491968	49.76	ug/Kg	97
63)	Dibromochloromethane	13.81	129	749142	44.22	ug/Kg	98
64)	1,3-Dichloropropane	13.91	76	859744	46.30	ug/Kg	96
65)	1,2-Dibromoethane	14.12	107	553703	42.27	ug/Kg	95
66)	2-hexanone	14.23	43	1863437	201.62	ug/Kg	98
67)	1-Chlorohexane	14.56	91	928828	50.92	ug/Kg	84
68)	Ethylbenzene	14.64	91	3132211	55.29	ug/Kg	98
69)	Chlorobenzene	14.67	112	1753174	52.89	ug/Kg	93
70)	1,1,1,2-Tetrachloroethane	14.72	131	722876	51.13	ug/Kg	94
71)	m,p-Xylene	14.79	91	4948193	115.62	ug/Kg	98
72)	o-Xylene	15.26	91	2605141	53.33	ug/Kg	99
73)	Styrene	15.32	104	1785210	52.27	ug/Kg	95
74)	Bromoform	15.40	173	494882	41.05	ug/Kg	97
75)	Isopropylbenzene	15.56	105	2958075	61.56	ug/Kg	97
78)	cis-1,4-Dichloro-2-butene	15.91	53	339791	80.37	ug/Kg#	83
79)	n-Propylbenzene	15.96	91	4178228	67.83	ug/Kg	100
80)	Bromobenzene	16.02	156	827494	50.97	ug/Kg	91
81)	1,1,2,2-Tetrachloroethane	16.03	83	692167	62.77	ug/Kg	92
82)	1,3,5-Trimethylbenzene	16.12	105	2420799	55.18	ug/Kg	99
83)	2-Chlorotoluene	16.16	91	2265453	54.34	ug/Kg	96
84)	trans-1,4-Dichloro-2-Buten	16.19	53	194025	115.10	ug/Kg#	81
85)	1,2,3-Trichloropropane	16.19	110	142520	39.95	ug/Kg	95
86)	Cyclohexanone	16.24	55	128221	414.66	ug/Kg#	58
87)	4-Chlorotoluene	16.31	91	2028978	55.36	ug/Kg	96
88)	tert-Butylbenzene	16.44	91	1532619	55.00	ug/Kg	95
89)	1,2,4-Trimethylbenzene	16.50	105	2243325	54.76	ug/Kg	96
90)	Pentachloroethane	16.51	167	339150	36.96	ug/Kg	93

(#) = qualifier out of range (m) = manual integration
G0066866.D APP9-G.M Thu Sep 16 16:25:00 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066866.D Vial: 13
Acq On : 16 Sep 2010 3:57 pm Operator: MikeM
Sample : f76376-6msd Inst : MSVOA1
Misc : ms15411,vg2525,4.59,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 16:24:16 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

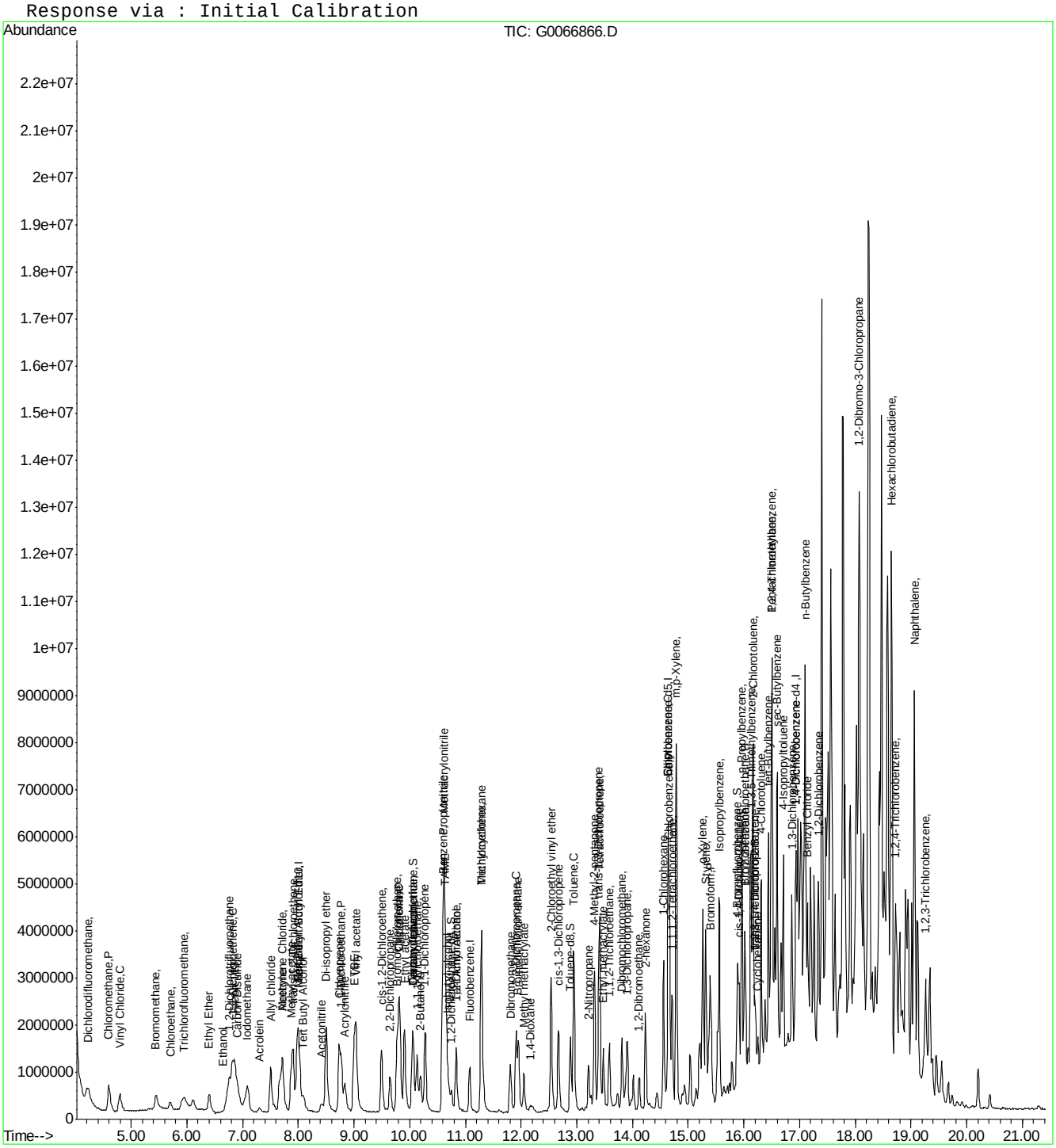
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	3112339	60.80	ug/Kg	94
92)	4-Isopropyltoluene	16.71	119	2199781	53.42	ug/Kg	65
93)	1,3-Dichlorobenzene	16.86	146	1312769	51.41	ug/Kg	99
94)	1,4-Dichlorobenzene	16.93	146	1291761	51.04	ug/Kg	94
95)	n-Butylbenzene	17.10	92	2094299	92.29	ug/Kg	98
96)	Benzyl Chloride	17.14	126	181819	46.02	ug/Kg#	83
97)	1,2-Dichlorobenzene	17.34	146	1156055	47.45	ug/Kg	97
98)	1,2-Dibromo-3-Chloropropan	18.07	75	187490	78.64	ug/Kg#	1
99)	Hexachlorobutadiene	18.64	225	419323	32.24	ug/Kg	90
100)	1,2,4-Trichlorobenzene	18.72	180	653291	43.43	ug/Kg	93
101)	Naphthalene	19.06	128	6438355	261.67	ug/Kg	98
102)	1,2,3-Trichlorobenzene	19.26	180	575511	45.55	ug/Kg	95
104)	Ethanol	6.64	45	69108	1041.90	ug/Kg	82
105)	Acrolein	7.31	56	164789	219.32	ug/Kg	82
106)	Tert Butyl Alcohol	8.09	59	481820	511.95	ug/Kg	97
107)	Isobutyl alcohol	10.69	42	273268	1293.16	ug/Kg#	71
108)	Tert Amyl Alcohol	10.83	59	397872	580.16	ug/Kg	97
109)	1,4-Dioxane	12.16	88	81906	925.46	ug/Kg#	62

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066866.D Vial: 13
Acq On : 16 Sep 2010 3:57 pm Operator: MikeM
Sample : f76376-6msd Inst : MSVOA1
Misc : ms15411,vg2525,4.59,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 16:23 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066908.D Vial: 10
Acq On : 17 Sep 2010 2:39 pm Operator: MikeM
Sample : f76408-2ms Inst : MSVOA1
Misc : ms15433,vg2526,4.54,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:04:10 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	816753	50.00	ug/Kg	0.01
54) Chlorobenzene-d5	14.65	117	826618	50.00	ug/Kg	0.01
76) 1,4-Dichlorobenzene-d4	16.93	152	478594	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.99	65	83587	250.00	ug/Kg	0.01
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	281688	47.07	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 94.14%			
44) 1,2-Dichloroethane-d4	10.75	65	248367	42.60	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 85.20%			
55) Toluene-d8	12.88	98	938816	47.61	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 95.22%			
77) 4-Bromofluorobenzene	15.89	174	434437	47.36	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 94.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	1120484	89.58	ug/Kg	97
3) Chloromethane	4.61	50	1026212	74.35	ug/Kg	91
4) Vinyl Chloride	4.80	62	771008	66.88	ug/Kg	93
5) Bromomethane	5.44	94	287935	94.57	ug/Kg	92
6) Chloroethane	5.70	64	262755	85.10	ug/Kg	78
7) Trichlorofluoromethane	5.95	101	870002	77.78	ug/Kg	86
8) Ethyl Ether	6.40	59	258474	47.65	ug/Kg	92
9) 1,2-Dichlorotrifluoroethan	6.76	67	844564	73.14	ug/Kg	97
10) 1,1-Dichloroethene	6.81	61	1029682	58.10	ug/Kg	92
11) Freon 113	6.85	101	619461	59.19	ug/Kg	90
12) Carbon Disulfide	6.92	76	1696125	59.54	ug/Kg	95
13) Iodomethane	7.08	142	1319582	59.74	ug/Kg	97
14) Allyl chloride	7.50	41	880345	61.30	ug/Kg	92
15) Methylene Chloride	7.70	49	2456314	142.73	ug/Kg	86
16) Acetone	7.72	43	581019	124.29	ug/Kg	92
17) Methyl acetate	7.87	43	1220678	198.00	ug/Kg	98
18) trans-1,2-Dichloroethene	7.91	61	974223	58.06	ug/Kg	98
19) Hexane	7.99	56	471201	54.69	ug/Kg#	79
20) Methyl Tert Butyl Ether	8.02	73	1333657	47.27	ug/Kg	87
21) Acetonitrile	8.41	41	293395	380.60	ug/Kg	84
22) Di-isopropyl ether	8.50	45	1982406	54.12	ug/Kg	93
23) Chloroprene	8.74	53	1043984	63.03	ug/Kg	98
24) 1,1-Dichloroethane	8.78	63	1144453	54.77	ug/Kg	95
25) Acrylonitrile	8.83	53	531048	190.79	ug/Kg	100
26) ETBE	9.00	59	1749241	50.52	ug/Kg	97
27) Vinyl acetate	9.03	43	2198908	234.67	ug/Kg	98
28) cis-1,2-Dichloroethene	9.49	96	653329	58.21	ug/Kg	96
29) 2,2-Dichloropropane	9.64	77	619663	58.17	ug/Kg	93
30) Bromochloromethane	9.77	128	335522	47.46	ug/Kg#	76
31) Cyclohexane	9.80	56	1020352	58.16	ug/Kg	91
32) Chloroform	9.82	83	1295029	55.81	ug/Kg	98
33) Ethyl acetate	9.91	43	1561200	175.64	ug/Kg	100
34) Tetrahydrofuran	10.07	42	88791	34.92	ug/Kg	93
36) Carbon Tetrachloride	10.06	117	1189349	58.83	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
G0066908.D APP9-G.M Fri Sep 17 15:04:44 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066908.D Vial: 10
Acq On : 17 Sep 2010 2:39 pm Operator: MikeM
Sample : f76408-2ms Inst : MSVOA1
Misc : ms15433,vg2526,4.54,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:04:10 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.14	97	1043707	60.83	ug/Kg	92
38)	2-Butanone	10.19	43	771783	139.76	ug/Kg	95
39)	1,1-Dichloropropene	10.28	75	919348	59.12	ug/Kg	95
40)	Propionitrile	10.46	54	5274	5.33	ug/Kg	82
41)	Methacrylonitrile	10.62	41	2677376	428.56	ug/Kg	95
42)	Benzene	10.59	78	2197895	56.81	ug/Kg	88
43)	TAME	10.65	73	1411163	51.59	ug/Kg	95
45)	1,2-Dichloroethane	10.84	62	852637	48.54	ug/Kg	95
46)	Trichloroethene	11.29	95	713998	59.77	ug/Kg	94
47)	Methylcyclohexane	11.29	83	938564	58.49	ug/Kg	95
48)	Dibromomethane	11.80	93	369059	44.03	ug/Kg	94
49)	1,2-Dichloropropane	11.91	63	595444	54.65	ug/Kg	89
50)	Bromodichloromethane	11.95	83	861699	50.33	ug/Kg	98
51)	Methyl methacrylate	12.05	41	378748	42.81	ug/Kg	86
52)	2-Chloroethyl vinyl ether	12.54	63	1040915	248.95	ug/Kg	98
53)	cis-1,3-Dichloropropene	12.67	75	901424	51.27	ug/Kg	96
56)	Toluene	12.94	91	2451780	55.94	ug/Kg	97
57)	2-Nitropropane	13.21	41	533289	171.10	ug/Kg	97
58)	4-Methyl-2-pentanone	13.32	43	1781900	194.46	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.39	75	750089	49.85	ug/Kg	94
60)	Tetrachloroethene	13.41	166	860495	58.37	ug/Kg	95
61)	Ethyl methacrylate	13.48	69	485807	43.63	ug/Kg	94
62)	1,1,2-Trichloroethane	13.58	83	365387	44.76	ug/Kg	89
63)	Dibromochloromethane	13.81	129	632289	45.20	ug/Kg	98
64)	1,3-Dichloropropane	13.91	76	694222	45.27	ug/Kg	95
65)	1,2-Dibromoethane	14.12	107	468750	43.33	ug/Kg	93
66)	2-hexanone	14.23	43	1224610	160.46	ug/Kg	95
67)	1-Chlorohexane	14.56	91	794531	52.75	ug/Kg	98
68)	Ethylbenzene	14.64	91	2740709	58.59	ug/Kg	98
69)	Chlorobenzene	14.67	112	1525559	55.73	ug/Kg	94
70)	1,1,1,2-Tetrachloroethane	14.71	131	613007	52.50	ug/Kg	99
71)	m,p-Xylene	14.79	91	4230860	119.72	ug/Kg	94
72)	o-Xylene	15.26	91	2240277	55.54	ug/Kg	99
73)	Styrene	15.32	104	1519625	53.88	ug/Kg	96
74)	Bromoform	15.40	173	403745	40.55	ug/Kg	98
75)	Isopropylbenzene	15.57	105	2600982	65.55	ug/Kg	96
78)	cis-1,4-Dichloro-2-butene	15.91	53	178084	50.92	ug/Kg	91
79)	n-Propylbenzene	15.96	91	3063810	60.13	ug/Kg	98
80)	Bromobenzene	16.02	156	725433	54.02	ug/Kg	100
81)	1,1,2,2-Tetrachloroethane	16.03	83	457267	50.13	ug/Kg	99
82)	1,3,5-Trimethylbenzene	16.13	105	2163364	59.60	ug/Kg	100
83)	2-Chlorotoluene	16.16	91	2119263	61.45	ug/Kg	95
84)	trans-1,4-Dichloro-2-Buten	16.20	53	123104	88.28	ug/Kg	98
85)	1,2,3-Trichloropropane	16.20	110	109862	37.06	ug/Kg	89
86)	Cyclohexanone	16.28	55	46445	181.57	ug/Kg	93
87)	4-Chlorotoluene	16.31	91	1816061	59.90	ug/Kg	99
88)	tert-Butylbenzene	16.44	91	1401555	60.80	ug/Kg	97
89)	1,2,4-Trimethylbenzene	16.50	105	2050368	60.51	ug/Kg	98
90)	Pentachloroethane	16.51	167	464869	61.25	ug/Kg	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066908.D Vial: 10
Acq On : 17 Sep 2010 2:39 pm Operator: MikeM
Sample : f76408-2ms Inst : MSVOA1
Misc : ms15433,vg2526,4.54,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:04:10 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

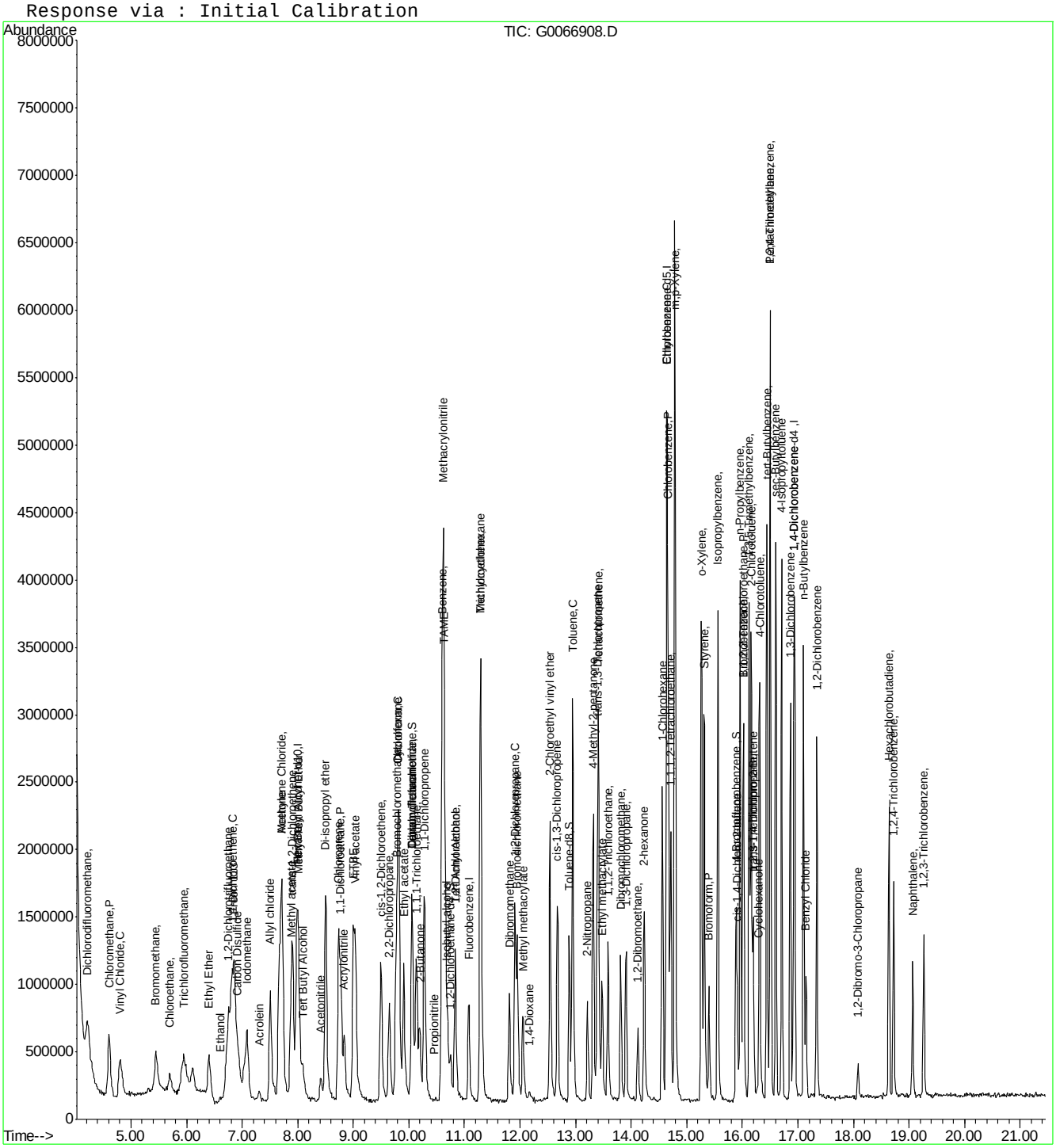
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	2581952	60.97	ug/Kg	99
92)	4-Isopropyltoluene	16.71	119	2064896	60.62	ug/Kg	68
93)	1,3-Dichlorobenzene	16.87	146	1141971	54.06	ug/Kg	98
94)	1,4-Dichlorobenzene	16.94	146	1140574	54.48	ug/Kg	94
95)	n-Butylbenzene	17.10	92	987404	52.60	ug/Kg	86
96)	Benzyl Chloride	17.15	126	125618	38.44	ug/Kg#	70
97)	1,2-Dichlorobenzene	17.34	146	1058060	52.50	ug/Kg	95
98)	1,2-Dibromo-3-Chloropropan	18.08	75	73272	37.15	ug/Kg#	82
99)	Hexachlorobutadiene	18.64	225	494662	45.97	ug/Kg	92
100)	1,2,4-Trichlorobenzene	18.72	180	556056	44.69	ug/Kg	98
101)	Naphthalene	19.06	128	817866	40.18	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.26	180	434870	41.60	ug/Kg	95
104)	Ethanol	6.61	45	52617	1161.27	ug/Kg	83
105)	Acrolein	7.31	56	105389	206.80	ug/Kg	93
106)	Tert Butyl Alcohol	8.09	59	368073	576.59	ug/Kg	90
107)	Isobutyl alcohol	10.70	42	170376	1188.69	ug/Kg#	84
108)	Tert Amyl Alcohol	10.84	59	260144	559.26	ug/Kg	93
109)	1,4-Dioxane	12.18	88	66870	1113.96	ug/Kg	75

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066908.D Vial: 10
Acq On : 17 Sep 2010 2:39 pm Operator: MikeM
Sample : f76408-2ms Inst : MSVOA1
Misc : ms15433,vg2526,4.54,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:03 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066909.D Vial: 11
Acq On : 17 Sep 2010 3:06 pm Operator: MikeM
Sample : f76408-2msd Inst : MSVOA1
Misc : ms15433,vg2526,4.61,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:54:41 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	1207782	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1225315	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	664849	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.99	65	85586	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.07	113	452008	51.08	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 102.16%			
44) 1,2-Dichloroethane-d4	10.76	65	397414	46.10	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 92.20%			
55) Toluene-d8	12.88	98	1412075	48.31	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 96.62%			
77) 4-Bromofluorobenzene	15.89	174	672697	52.79	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 105.58%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	1104491	59.71	ug/Kg	92
3) Chloromethane	4.60	50	1348946	66.09	ug/Kg	94
4) Vinyl Chloride	4.79	62	1045293	61.32	ug/Kg	96
5) Bromomethane	5.44	94	404136	89.76	ug/Kg	79
6) Chloroethane	5.70	64	341142	72.68	ug/Kg	86
7) Trichlorofluoromethane	5.95	101	1184446	71.61	ug/Kg	95
8) Ethyl Ether	6.40	59	332941	41.51	ug/Kg	95
9) 1,2-Dichlorotrifluoroethan	6.74	67	1083162	63.44	ug/Kg	91
10) 1,1-Dichloroethene	6.80	61	1338405	51.07	ug/Kg	97
11) Freon 113	6.85	101	849246	54.87	ug/Kg	98
12) Carbon Disulfide	6.91	76	2292007	54.41	ug/Kg	93
13) Iodomethane	7.09	142	1794004	54.92	ug/Kg	96
14) Allyl chloride	7.51	41	1159393	54.59	ug/Kg	93
15) Methylene Chloride	7.71	49	3660093	143.83	ug/Kg	89
16) Acetone	7.72	43	736579	106.56	ug/Kg	87
17) Methyl acetate	7.88	43	1706085	187.14	ug/Kg	94
18) trans-1,2-Dichloroethene	7.91	61	1281470	51.65	ug/Kg	98
19) Hexane	7.99	56	623572	48.95	ug/Kg#	81
20) Methyl Tert Butyl Ether	8.02	73	1802939	43.21	ug/Kg	88
21) Acetonitrile	8.41	41	395833	347.24	ug/Kg	92
22) Di-isopropyl ether	8.51	45	2612488	48.23	ug/Kg	88
23) Chloroprene	8.73	53	1377449	56.24	ug/Kg	90
24) 1,1-Dichloroethane	8.77	63	1575690	50.99	ug/Kg	98
25) Acrylonitrile	8.84	53	714513	173.59	ug/Kg	95
26) ETBE	9.00	59	2373645	46.36	ug/Kg	95
27) Vinyl acetate	9.04	43	2631342	189.90	ug/Kg	98
28) cis-1,2-Dichloroethene	9.50	96	883711	53.24	ug/Kg	95
29) 2,2-Dichloropropane	9.65	77	829565	52.67	ug/Kg	93
30) Bromochloromethane	9.77	128	448254	42.88	ug/Kg	89
31) Cyclohexane	9.80	56	1380359	53.21	ug/Kg	91
32) Chloroform	9.82	83	1727815	50.36	ug/Kg	97
33) Ethyl acetate	9.91	43	2077774	158.08	ug/Kg	95
34) Tetrahydrofuran	10.06	42	114405	30.43	ug/Kg	90
36) Carbon Tetrachloride	10.06	117	1591929	53.25	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
G0066909.D APP9-G.M Fri Sep 17 15:56:05 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066909.D Vial: 11
Acq On : 17 Sep 2010 3:06 pm Operator: MikeM
Sample : f76408-2msd Inst : MSVOA1
Misc : ms15433,vg2526,4.61,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:54:41 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1407559	55.48	ug/Kg	96
38)	2-Butanone	10.20	43	1056409	129.37	ug/Kg	99
39)	1,1-Dichloropropene	10.28	75	1259983	54.79	ug/Kg	93
40)	Propionitrile	10.60	54	555630	379.72	ug/Kg#	65
41)	Methacrylonitrile	10.62	41	3590393	388.64	ug/Kg	91
42)	Benzene	10.60	78	3058923	53.47	ug/Kg	92
43)	TAME	10.65	73	1942449	48.02	ug/Kg	95
45)	1,2-Dichloroethane	10.83	62	1195555	46.02	ug/Kg	93
46)	Trichloroethene	11.29	95	939183	53.16	ug/Kg	86
47)	Methylcyclohexane	11.30	83	1251649	52.75	ug/Kg	92
48)	Dibromomethane	11.81	93	503145	40.59	ug/Kg	88
49)	1,2-Dichloropropane	11.91	63	808333	50.17	ug/Kg	92
50)	Bromodichloromethane	11.96	83	1164843	46.01	ug/Kg	96
51)	Methyl methacrylate	12.06	41	550055	42.05	ug/Kg	96
52)	2-Chloroethyl vinyl ether	12.54	63	1373096	222.07	ug/Kg	96
53)	cis-1,3-Dichloropropene	12.68	75	1241001	47.73	ug/Kg	92
56)	Toluene	12.94	91	3335634	51.34	ug/Kg	96
57)	2-Nitropropane	13.22	41	736655	159.45	ug/Kg	99
58)	4-Methyl-2-pentanone	13.32	43	2470617	181.89	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.39	75	1045051	46.86	ug/Kg	91
60)	Tetrachloroethene	13.42	166	1143311	52.32	ug/Kg	91
61)	Ethyl methacrylate	13.47	69	615220	37.27	ug/Kg	93
62)	1,1,2-Trichloroethane	13.58	83	496876	41.06	ug/Kg	96
63)	Dibromochloromethane	13.81	129	848634	40.92	ug/Kg	96
64)	1,3-Dichloropropane	13.91	76	933683	41.08	ug/Kg	93
65)	1,2-Dibromoethane	14.13	107	630313	39.31	ug/Kg	94
66)	2-hexanone	14.23	43	1649392	145.80	ug/Kg	98
67)	1-Chlorohexane	14.56	91	1026802	45.99	ug/Kg	98
68)	Ethylbenzene	14.64	91	3626811	52.31	ug/Kg	99
69)	Chlorobenzene	14.67	112	2026288	49.94	ug/Kg	92
70)	1,1,1,2-Tetrachloroethane	14.72	131	879726	50.83	ug/Kg	96
71)	m,p-Xylene	14.79	91	5703900	108.89	ug/Kg	98
72)	o-Xylene	15.27	91	3011127	50.36	ug/Kg	96
73)	Styrene	15.32	104	2111691	50.51	ug/Kg	97
74)	Bromoform	15.40	173	554528	37.58	ug/Kg	95
75)	Isopropylbenzene	15.56	105	3558858	60.51	ug/Kg	97
78)	cis-1,4-Dichloro-2-butene	15.91	53	226126	46.54	ug/Kg	91
79)	n-Propylbenzene	15.97	91	4055012	57.29	ug/Kg	92
80)	Bromobenzene	16.02	156	969607	51.97	ug/Kg	95
81)	1,1,2,2-Tetrachloroethane	16.03	83	595457	46.99	ug/Kg	99
82)	1,3,5-Trimethylbenzene	16.13	105	2956313	58.63	ug/Kg	99
83)	2-Chlorotoluene	16.17	91	2743617	57.27	ug/Kg	88
84)	trans-1,4-Dichloro-2-Buten	16.19	53	164069	84.69	ug/Kg#	91
85)	1,2,3-Trichloropropane	16.19	110	158767	38.65	ug/Kg	84
86)	Cyclohexanone	16.27	55	64857	182.51	ug/Kg	94
87)	4-Chlorotoluene	16.31	91	2385597	56.64	ug/Kg	98
88)	tert-Butylbenzene	16.44	91	1936515	60.47	ug/Kg	96
89)	1,2,4-Trimethylbenzene	16.50	105	2790514	59.28	ug/Kg	97
90)	Pentachloroethane	16.51	167	627471	59.51	ug/Kg	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066909.D Vial: 11
Acq On : 17 Sep 2010 3:06 pm Operator: MikeM
Sample : f76408-2msd Inst : MSVOA1
Misc : ms15433,vg2526,4.61,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:54:41 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

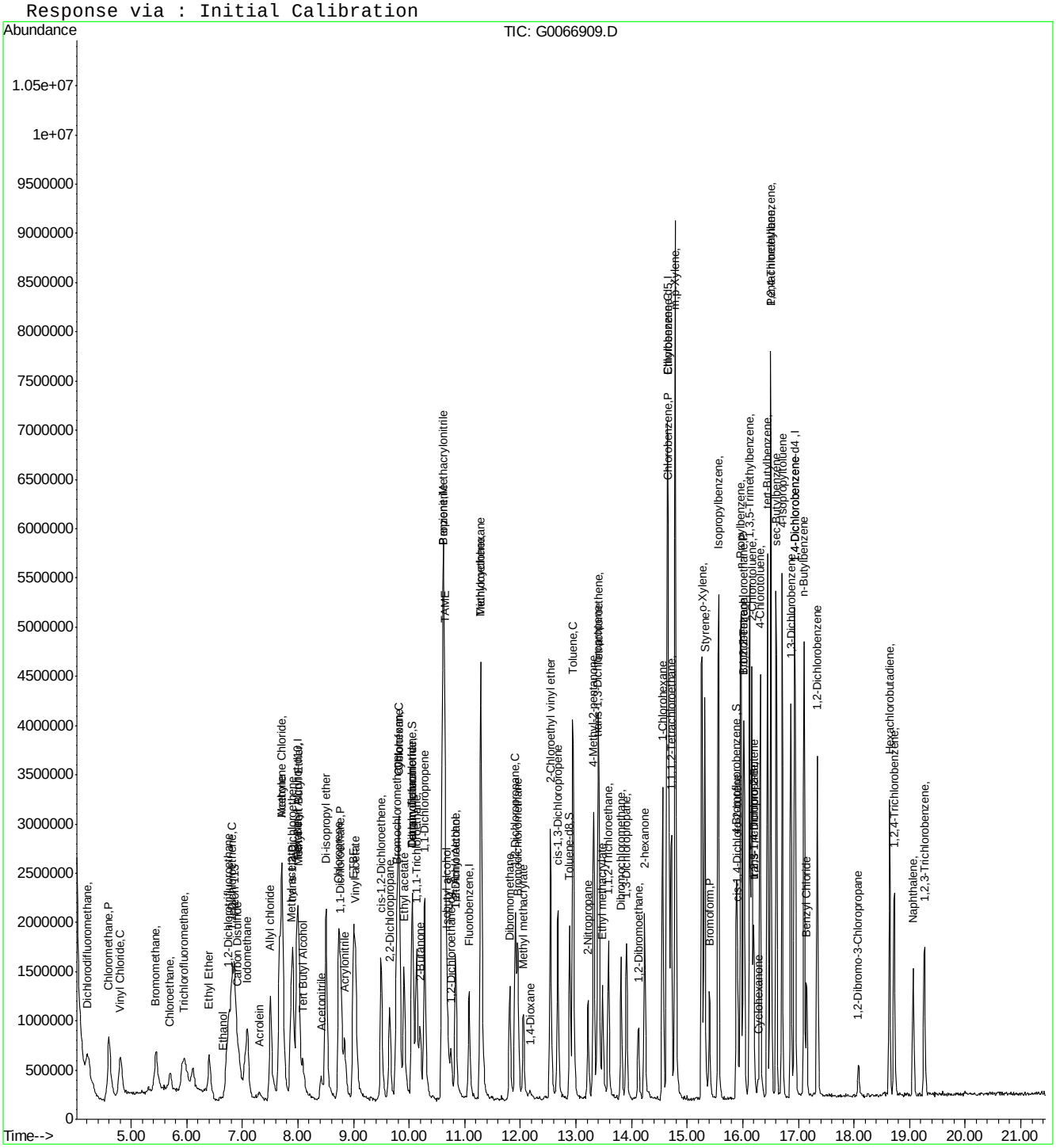
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	3355524	57.04	ug/Kg	99
92)	4-Isopropyltoluene	16.71	119	2686274	56.77	ug/Kg	65
93)	1,3-Dichlorobenzene	16.86	146	1553199	52.93	ug/Kg	98
94)	1,4-Dichlorobenzene	16.94	146	1557493	53.55	ug/Kg	99
95)	n-Butylbenzene	17.10	92	1363512	52.28	ug/Kg	92
96)	Benzyl Chloride	17.15	126	166489	36.67	ug/Kg#	84
97)	1,2-Dichlorobenzene	17.34	146	1398400	49.95	ug/Kg	97
98)	1,2-Dibromo-3-Chloropropan	18.08	75	96679	35.29	ug/Kg	94
99)	Hexachlorobutadiene	18.64	225	670681	44.87	ug/Kg	95
100)	1,2,4-Trichlorobenzene	18.73	180	781867	45.23	ug/Kg	97
101)	Naphthalene	19.06	128	1084813	38.37	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.27	180	561775	38.69	ug/Kg	96
104)	Ethanol	6.65	45	50164	1086.12	ug/Kg	79
105)	Acrolein	7.31	56	105220	201.64	ug/Kg	86
106)	Tert Butyl Alcohol	8.09	59	477146	730.00	ug/Kg	99
107)	Isobutyl alcohol	10.69	42	212570	1448.43	ug/Kg#	57
108)	Tert Amyl Alcohol	10.83	59	357202	749.98	ug/Kg	90
109)	1,4-Dioxane	12.16	88	86888	1413.63	ug/Kg	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

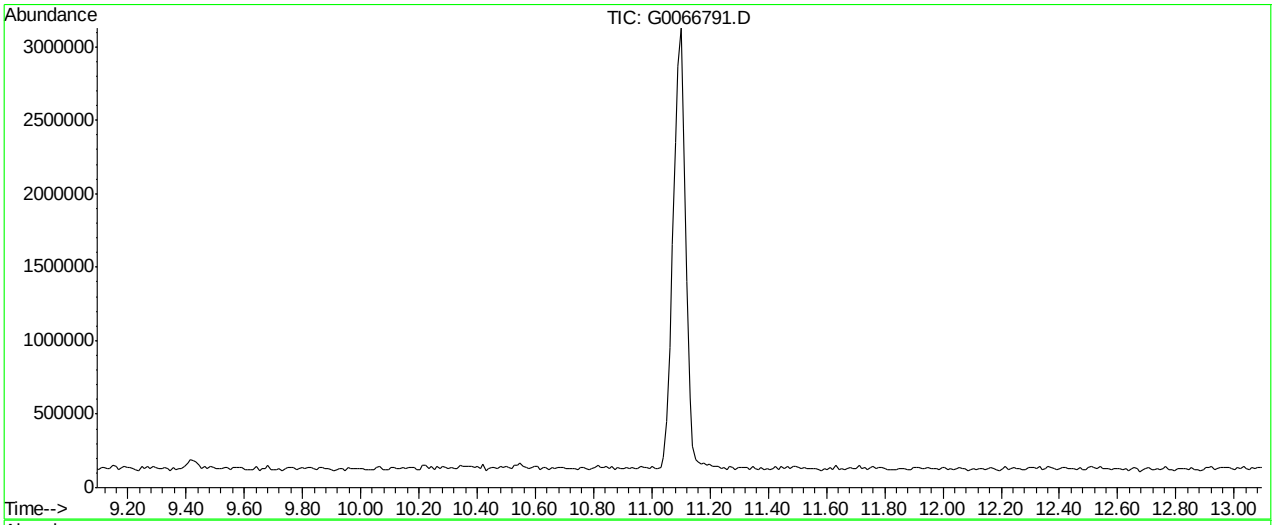
Data File : G:\HPCHEM\1\DATA\091710\G0066909.D Vial: 11
Acq On : 17 Sep 2010 3:06 pm Operator: MikeM
Sample : f76408-2msd Inst : MSVOA1
Misc : ms15433,vg2526,4.61,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 15:54 2010 Quant Results File: APP9-G.RES

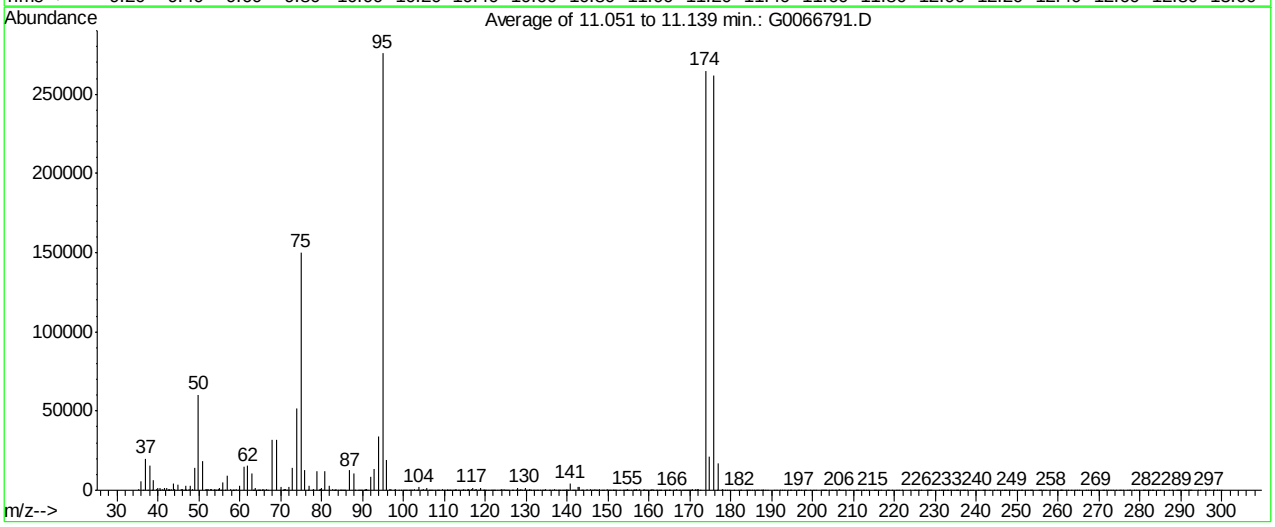
Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Methods: SW-846 8260B

Data File : G:\HPCHEM\1\DATA\091410\G0066791.D Vial: 100
Acq On : 14 Sep 2010 11:42 am Operator: MikeM
Sample : bfb Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B





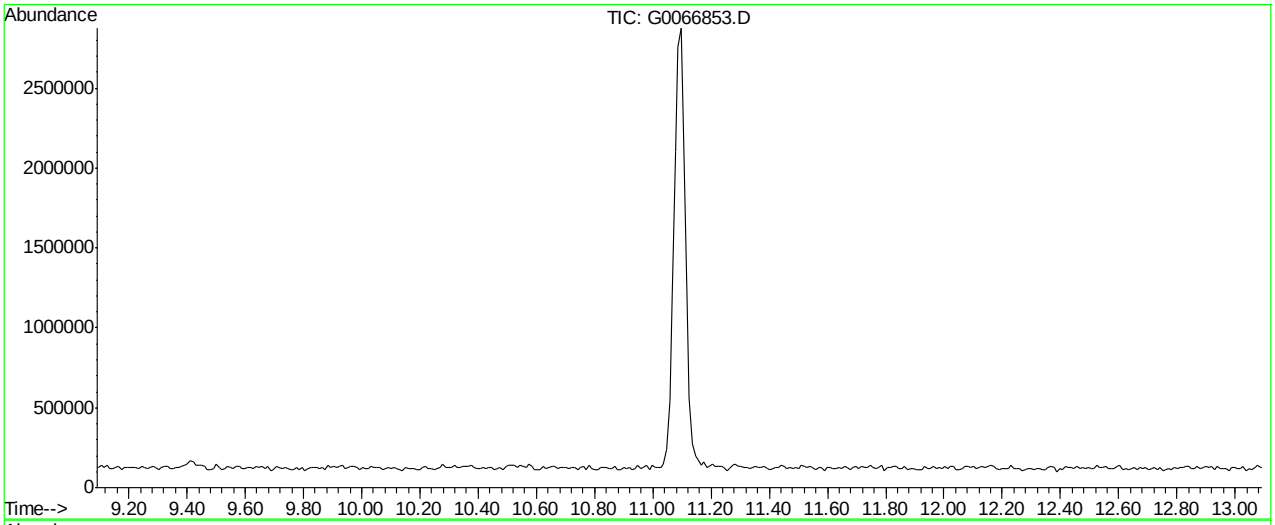
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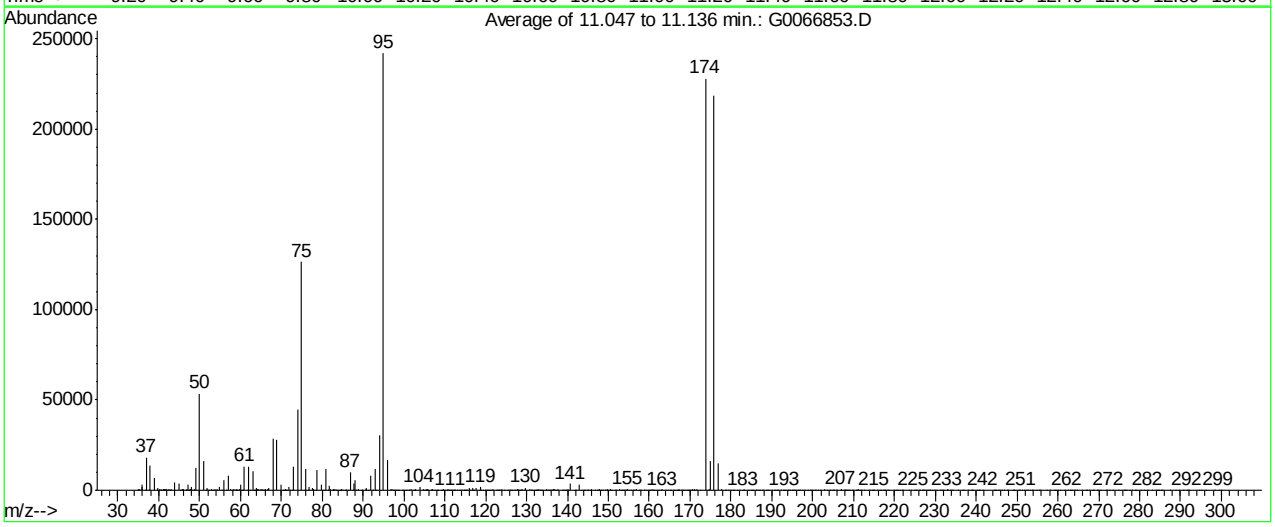
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.9	60495	PASS
75	95	30	60	54.4	150357	PASS
95	95	100	100	100.0	276272	PASS
96	95	5	9	6.8	18902	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	95.9	264820	PASS
175	174	5	9	8.1	21416	PASS
176	174	95	101	98.8	261612	PASS
177	176	5	9	6.5	16874	PASS

G0066791.D APP9-G.M Tue Sep 14 11:56:38 2010

Methods: SW-846 8260B

Data File : G:\HPCHEM\1\DATA\091610\G0066853.D Vial: 100
Acq On : 16 Sep 2010 10:05 am Operator: MikeM
Sample : bfb Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B





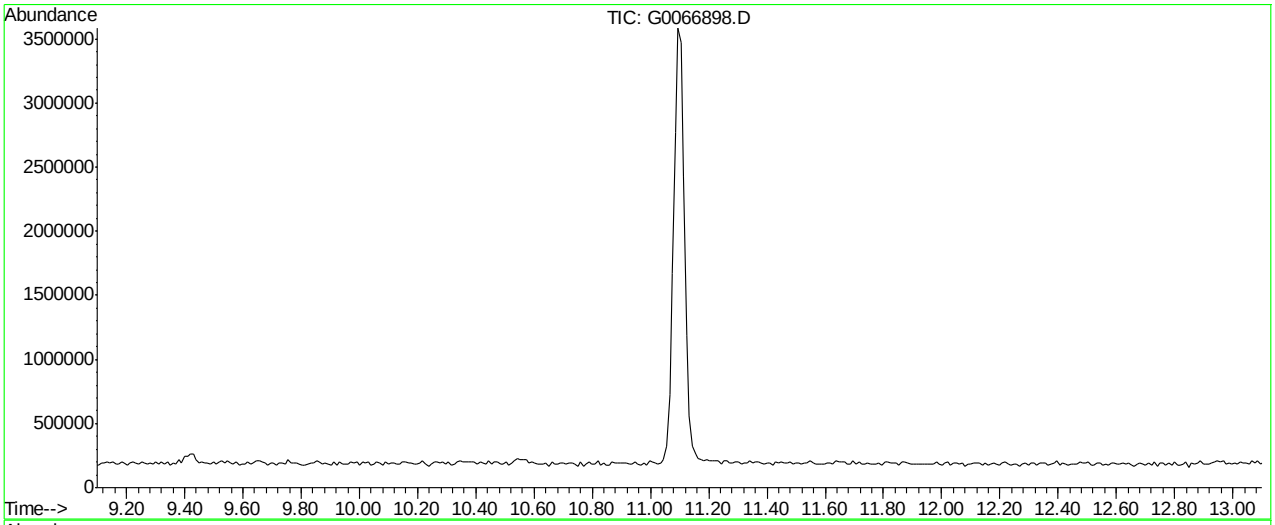
Spectrum Information: Average of 11.047 to 11.136 min.

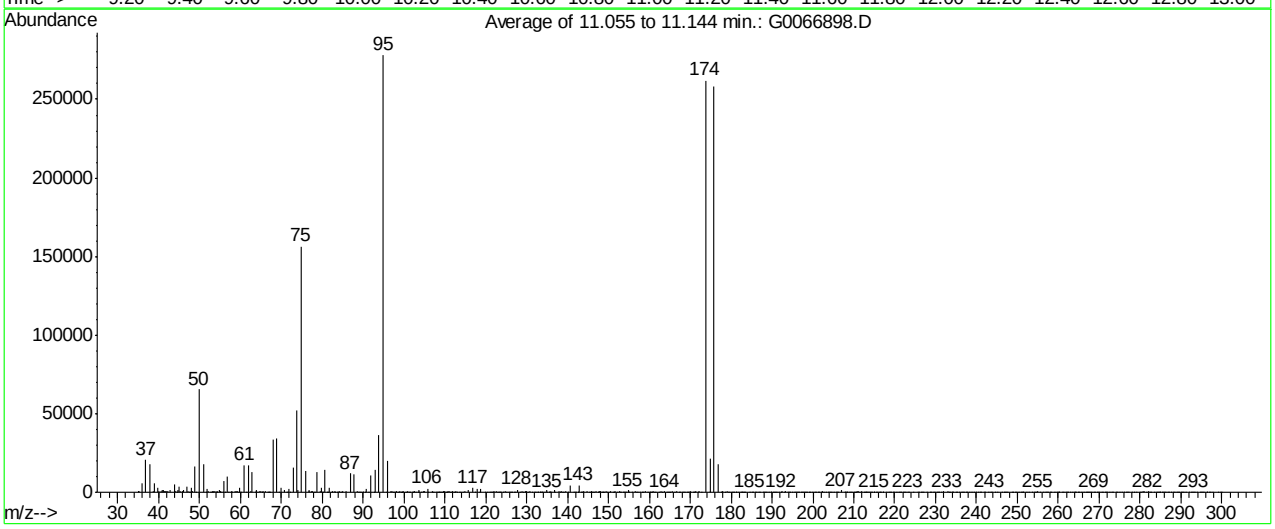
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	53611	PASS
75	95	30	60	52.1	126328	PASS
95	95	100	100	100.0	242316	PASS
96	95	5	9	6.8	16526	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.1	228072	PASS
175	174	5	9	7.1	16245	PASS
176	174	95	101	95.7	218304	PASS
177	176	5	9	6.8	14785	PASS

G0066853.D APP9-G.M Thu Sep 16 10:20:25 2010

Methods: SW-846 8260B

Data File : G:\HPCHEM\1\DATA\091710\G0066898.D Vial: 100
Acq On : 17 Sep 2010 10:10 am Operator: MikeM
Sample : bfb Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B





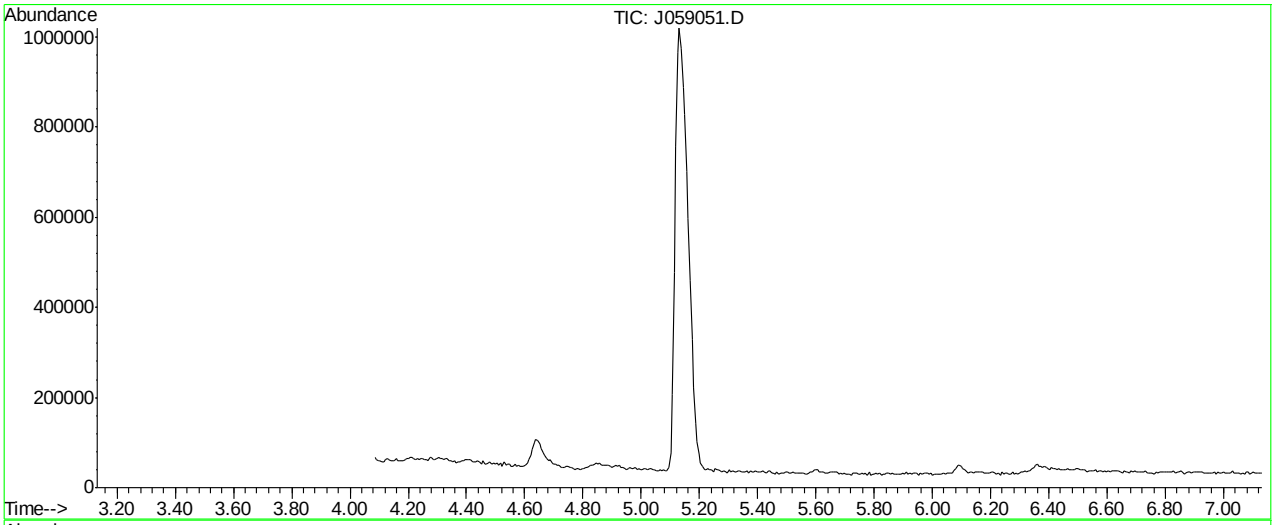
Spectrum Information: Average of 11.055 to 11.144 min.

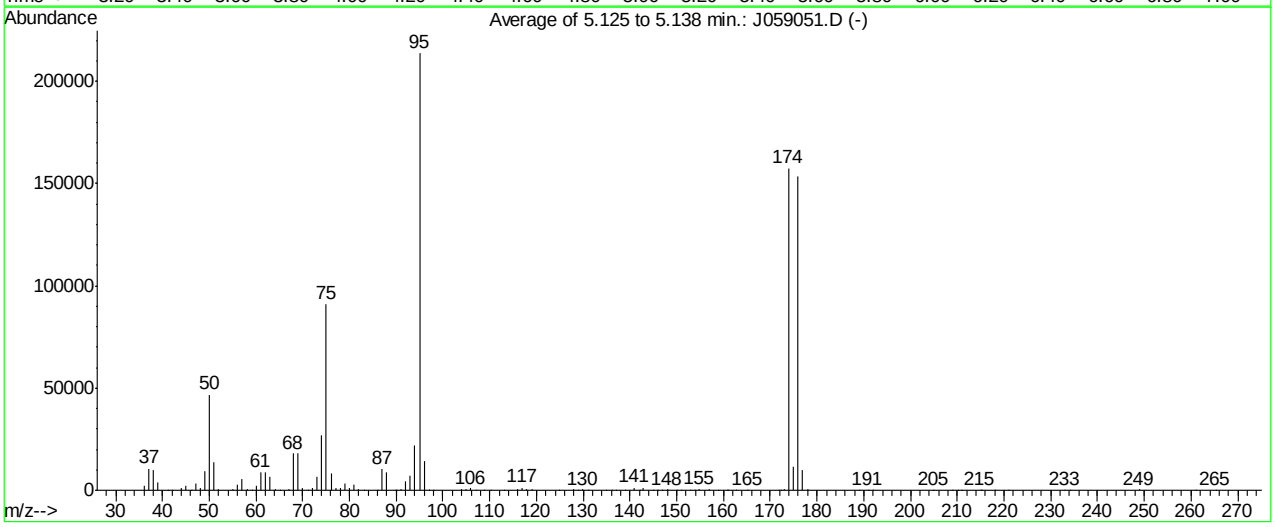
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.5	65387	PASS
75	95	30	60	56.1	156231	PASS
95	95	100	100	100.0	278481	PASS
96	95	5	9	7.2	20038	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.1	262098	PASS
175	174	5	9	8.1	21105	PASS
176	174	95	101	98.4	257851	PASS
177	176	5	9	7.0	18037	PASS

G0066898.D APP9-G.M Fri Sep 17 10:25:11 2010

Methods: SW-846 8260B

```
Data File : C:\MSDchem\1\data\090110\J059051.D          Vial: 100
Acq On    :  1 Sep 2010   9:47 am                   Operator: KarenW
Sample    : BFB tune                                Inst    : MSVOA6
Misc      : ms15305,vj3328,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P
Method    : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title     :
```





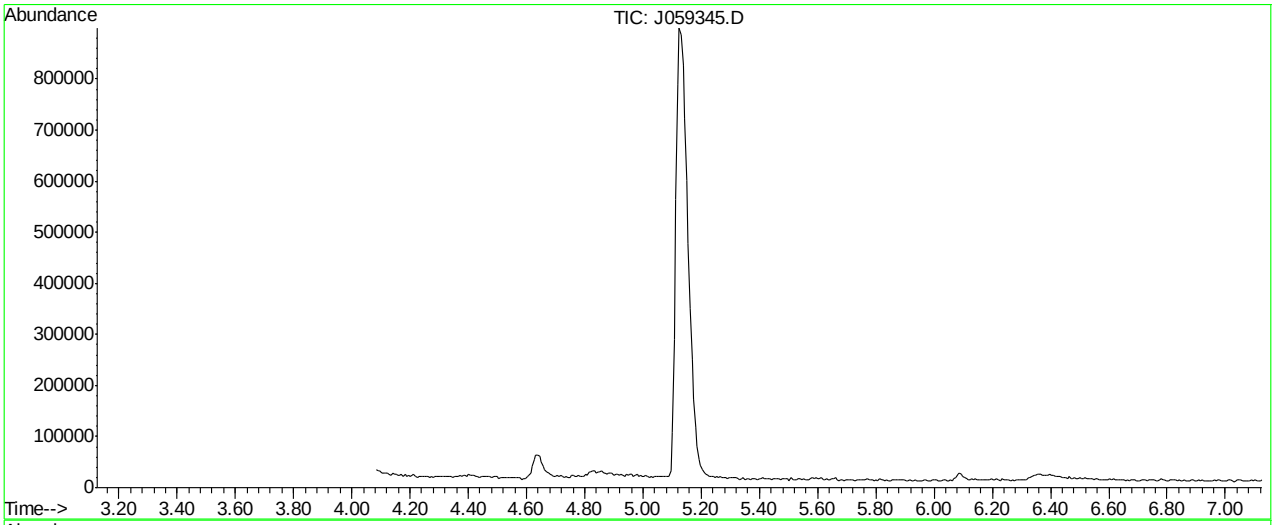
AutoFind: Scans 172, 173, 174; Background Corrected with Scan 164

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.8	46605	PASS
75	95	30	60	42.6	91125	PASS
95	95	100	100	100.0	213973	PASS
96	95	5	9	6.6	14048	PASS
173	174	0.00	2	0.4	592	PASS
174	95	50	100	73.6	157397	PASS
175	174	5	9	7.4	11721	PASS
176	174	95	101	97.4	153280	PASS
177	176	5	9	6.6	10096	PASS

J059051.D BFB.M Wed Sep 01 09:54:53 2010

Methods: SW-846 8260B

Data File : C:\MSDchem\1\data\091510\J059345.D Vial: 100
Acq On : 15 Sep 2010 9:28 am Operator: KarenW
Sample : BFB tune Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :



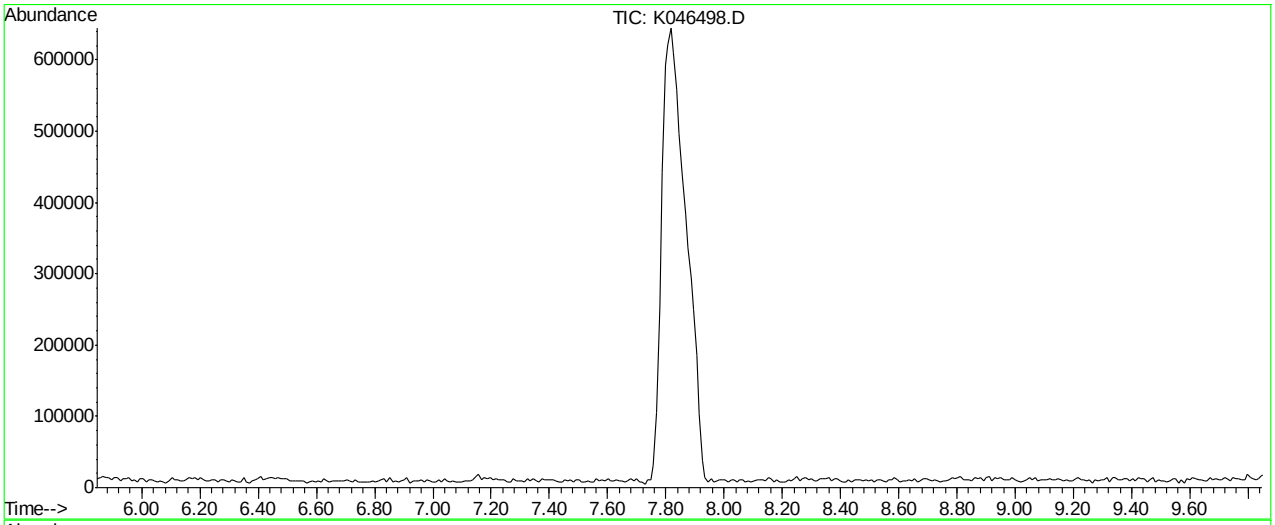
AutoFind: Scans 171, 172, 173; Background Corrected with Scan 163

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.7	45534	PASS
75	95	30	60	45.0	76752	PASS
95	95	100	100	100.0	170389	PASS
96	95	5	9	6.5	11131	PASS
173	174	0.00	2	0.4	529	PASS
174	95	50	100	79.7	135778	PASS
175	174	5	9	7.3	9852	PASS
176	174	95	101	100.5	136405	PASS
177	176	5	9	6.6	9051	PASS

J059345.D BFB.M Wed Sep 15 09:35:59 2010

Methods: SW-846 8260B

Data File : K:\HPCHEM\1\DATA\090310\K046498.D Vial: 100
Acq On : 3 Sep 2010 4:21 pm Operator: StevenH
Sample : bfb Inst : MSVOA2
Misc : ms15268,vk2006,5.00,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B



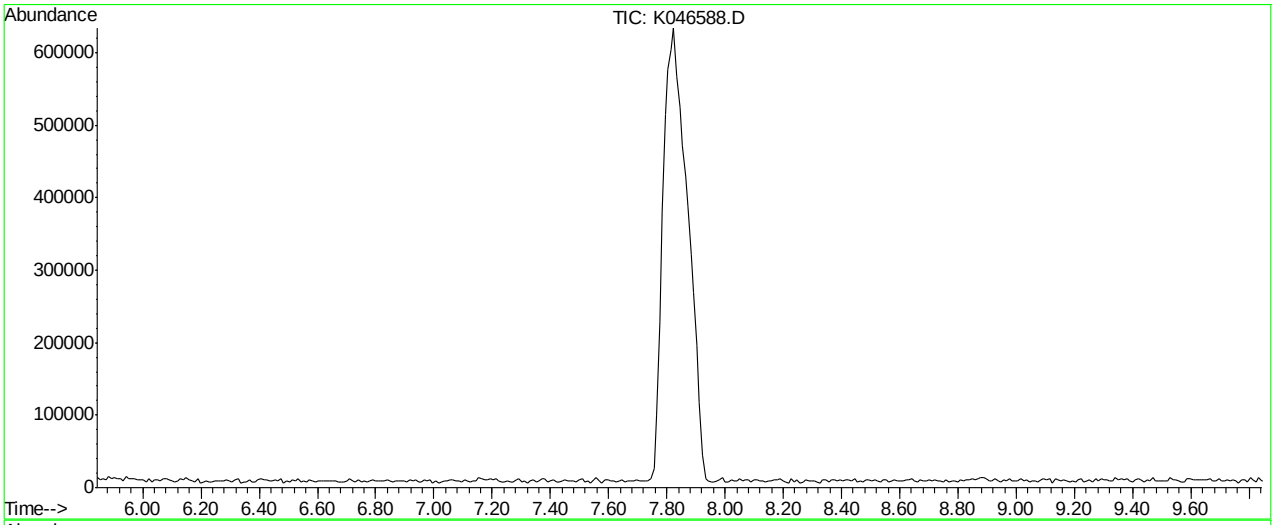
Spectrum Information: Average of 7.778 to 7.916 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.4	20660	PASS
75	95	30	60	53.5	43471	PASS
95	95	100	100	100.0	81273	PASS
96	95	5	9	7.3	5945	PASS
173	174	0.00	2	0.7	428	PASS
174	95	50	100	70.8	57536	PASS
175	174	5	9	7.8	4479	PASS
176	174	95	101	96.7	55640	PASS
177	176	5	9	7.4	4137	PASS

K046498.D 8260-K.M Fri Sep 03 16:39:41 2010

Methods: SW-846 8260B

Data File : K:\HPCHEM\1\DATA\091010\K046588.D Vial: 100
Acq On : 10 Sep 2010 11:10 am Operator: StevenH
Sample : bfb Inst : MSVOA2
Misc : ms15268,vk2009,5.00,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B



Spectrum Information: Average of 7.794 to 7.893 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.0	23730	PASS
75	95	30	60	54.7	51981	PASS
95	95	100	100	100.0	95087	PASS
96	95	5	9	7.7	7339	PASS
173	174	0.00	2	0.9	587	PASS
174	95	50	100	70.5	67000	PASS
175	174	5	9	8.1	5401	PASS
176	174	95	101	99.7	66806	PASS
177	176	5	9	6.7	4475	PASS

K046588.D 8260-K.M Tue Sep 14 09:50:21 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 13:58

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:29 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1016889	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	1082096	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	542795	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.99	65	201089	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	386355	51.85	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 103.70%			
44) 1,2-Dichloroethane-d4	10.75	65	399592	55.05	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 110.10%			
55) Toluene-d8	12.88	98	1144241	44.33	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 88.66%			
77) 4-Bromofluorobenzene	15.89	174	496716	47.75	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 95.50%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	78740	5.06	ug/Kg	93
3) Chloromethane	4.61	50	90012	5.25	ug/Kg	97
4) Vinyl Chloride	4.79	62	79842	5.56	ug/Kg	90
5) Bromomethane	5.45	94	40850m	8.05	ug/Kg	
6) Chloroethane	5.68	64	34412m	8.73	ug/Kg	
7) Trichlorofluoromethane	5.94	101	75346	5.29	ug/Kg	84
8) Ethyl Ether	6.39	59	39320	5.82	ug/Kg#	79
9) 1,2-Dichlorotrifluoroethan	6.75	67	71793	4.99	ug/Kg	85
10) 1,1-Dichloroethene	6.81	61	116047	5.26	ug/Kg	93
11) Freon 113	6.87	101	69494	5.33	ug/Kg#	75
12) Carbon Disulfide	6.90	76	183215	5.17	ug/Kg	89
13) Iodomethane	7.09	142	134681	4.90	ug/Kg	82
14) Allyl chloride	7.50	41	76202	4.26	ug/Kg	94
15) Methylene Chloride	7.71	49	418350	12.13	ug/Kg	83
16) Acetone	7.73	43	181281	28.05	ug/Kg	81
17) Methyl acetate	7.88	43	198304	25.96	ug/Kg	92
18) trans-1,2-Dichloroethene	7.91	61	100418	4.81	ug/Kg	94
19) Hexane	8.00	56	62447	5.82	ug/Kg#	87
20) Methyl Tert Butyl Ether	8.03	73	171385	4.88	ug/Kg	81
21) Acetonitrile	8.43	41	49693	51.78	ug/Kg#	64
22) Di-isopropyl ether	8.51	45	223410	4.90	ug/Kg	91
23) Chloroprene	8.74	53	103739	5.03	ug/Kg	90
24) 1,1-Dichloroethane	8.77	63	135301	5.20	ug/Kg	90
25) Acrylonitrile	8.84	53	91674	26.45	ug/Kg	80
26) ETBE	9.00	59	197444	4.58	ug/Kg	88
27) Vinyl acetate	9.04	43	275162	23.59	ug/Kg	99
28) cis-1,2-Dichloroethene	9.49	96	67434	4.83	ug/Kg	91
29) 2,2-Dichloropropane	9.65	77	75509	5.69	ug/Kg	97
30) Bromochloromethane	9.77	128	47548	5.40	ug/Kg#	66
31) Cyclohexane	9.80	56	113592	5.20	ug/Kg	88
32) Chloroform	9.83	83	155684	5.39	ug/Kg	92
33) Ethyl acetate	9.91	43	293934	26.56	ug/Kg	94
34) Tetrahydrofuran	10.07	42	21673	6.85	ug/Kg#	65
36) Carbon Tetrachloride	10.06	117	127487	5.07	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
G0066792.D APP9-G.M Tue Sep 14 14:45:28 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:29 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.14	97	106685	4.99	ug/Kg	93
38)	2-Butanone	10.20	43	187994	27.34	ug/Kg	92
39)	1,1-Dichloropropene	10.27	75	101821	5.26	ug/Kg	94
40)	Propionitrile	10.60	54	57196	46.43	ug/Kg	88
41)	Methacrylonitrile	10.63	41	434384	55.85	ug/Kg	90
42)	Benzene	10.59	78	250341	5.20	ug/Kg	91
43)	TAME	10.65	73	180565	5.30	ug/Kg	87
45)	1,2-Dichloroethane	10.83	62	111634	5.10	ug/Kg	85
46)	Trichloroethene	11.29	95	73829	4.96	ug/Kg	86
47)	Methylcyclohexane	11.30	83	110394	5.53	ug/Kg#	80
48)	Dibromomethane	11.81	93	57271	5.49	ug/Kg#	58
49)	1,2-Dichloropropane	11.91	63	61697	4.55	ug/Kg	89
50)	Bromodichloromethane	11.96	83	111913	5.25	ug/Kg#	80
51)	Methyl methacrylate	12.06	41	49419	4.49	ug/Kg	86
52)	2-Chloroethyl vinyl ether	12.54	63	97508	18.73	ug/Kg	92
53)	cis-1,3-Dichloropropene	12.68	75	95772	4.37	ug/Kg	94
56)	Toluene	12.94	91	255715	4.46	ug/Kg	93
57)	2-Nitropropane	13.21	41	92925	22.78	ug/Kg	86
58)	4-Methyl-2-pentanone	13.32	43	264247	22.03	ug/Kg	96
59)	trans-1,3-Dichloropropene	13.40	75	81991	4.16	ug/Kg#	67
60)	Tetrachloroethene	13.41	166	94093	4.88	ug/Kg	92
61)	Ethyl methacrylate	13.49	69	57937	3.97	ug/Kg	86
62)	1,1,2-Trichloroethane	13.58	83	57527	5.38	ug/Kg	90
63)	Dibromochloromethane	13.81	129	80655	4.40	ug/Kg	93
64)	1,3-Dichloropropane	13.91	76	92550	4.61	ug/Kg	94
65)	1,2-Dibromoethane	14.12	107	63018	4.45	ug/Kg	91
66)	2-hexanone	14.23	43	220087	22.03	ug/Kg	90
67)	1-Chlorohexane	14.56	91	86024	4.36	ug/Kg	90
68)	Ethylbenzene	14.64	91	277669	4.53	ug/Kg	95
69)	Chlorobenzene	14.67	112	174188	4.86	ug/Kg	79
70)	1,1,1,2-Tetrachloroethane	14.72	131	70709	4.63	ug/Kg	93
71)	m,p-Xylene	14.79	91	456784	9.87	ug/Kg	95
72)	o-Xylene	15.26	91	234422	4.44	ug/Kg	97
73)	Styrene	15.32	104	144695	3.92	ug/Kg	92
74)	Bromoform	15.40	173	50977	3.91	ug/Kg	87
75)	Isopropylbenzene	15.56	105	231872	4.46	ug/Kg	98
78)	cis-1,4-Dichloro-2-butene	15.93	53	15979	4.03	ug/Kg#	52
79)	n-Propylbenzene	15.96	91	303658	5.25	ug/Kg	98
80)	Bromobenzene	16.02	156	82360	5.41	ug/Kg	99
81)	1,1,2,2-Tetrachloroethane	16.03	83	78831	6.64	ug/Kg	89
82)	1,3,5-Trimethylbenzene	16.12	105	225254	5.47	ug/Kg	96
83)	2-Chlorotoluene	16.16	91	207480	5.30	ug/Kg	91
84)	trans-1,4-Dichloro-2-Buten	16.20	53	19107	12.08	ug/Kg#	65
85)	1,2,3-Trichloropropane	16.19	110	23139	7.10	ug/Kg#	69
86)	Cyclohexanone	16.27	55	12601	34.66	ug/Kg#	55
87)	4-Chlorotoluene	16.31	91	177520	5.16	ug/Kg	99
88)	tert-Butylbenzene	16.44	91	143103	5.47	ug/Kg	98
89)	1,2,4-Trimethylbenzene	16.50	105	208768	5.43	ug/Kg	95
90)	Pentachloroethane	16.51	167	47402	5.51	ug/Kg	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:29 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

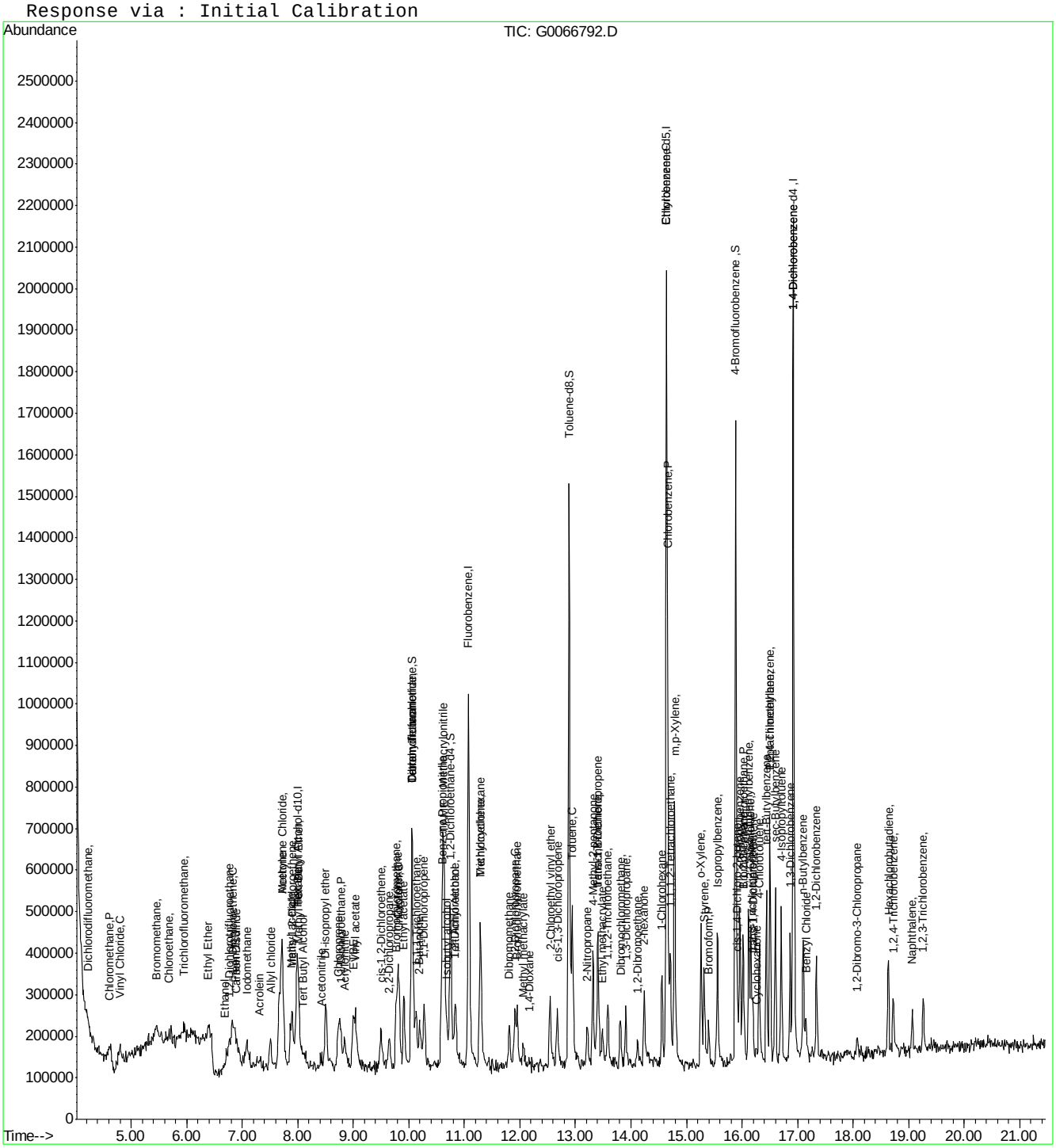
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	260755	5.43	ug/Kg	98
92)	4-Isopropyltoluene	16.71	119	199319	5.16	ug/Kg	67
93)	1,3-Dichlorobenzene	16.87	146	121382	5.07	ug/Kg	95
94)	1,4-Dichlorobenzene	16.93	146	124856	5.26	ug/Kg	85
95)	n-Butylbenzene	17.10	92	101975	4.79	ug/Kg	89
96)	Benzyl Chloride	17.15	126	17649	4.76	ug/Kg#	73
97)	1,2-Dichlorobenzene	17.34	146	115204	5.04	ug/Kg	93
98)	1,2-Dibromo-3-Chloropropan	18.08	75	12923	5.78	ug/Kg	77
99)	Hexachlorobutadiene	18.64	225	56211	4.61	ug/Kg	91
100)	1,2,4-Trichlorobenzene	18.73	180	55042	3.90	ug/Kg	97
101)	Naphthalene	19.06	128	86916	3.77	ug/Kg	89
102)	1,2,3-Trichlorobenzene	19.27	180	44007	3.71	ug/Kg	86
104)	Ethanol	6.69	45	24712m	172.81	ug/Kg	
105)	Acrolein	7.31	56	32500	26.51	ug/Kg	68
106)	Tert Butyl Alcohol	8.10	59	80186	52.21	ug/Kg	93
107)	Isobutyl alcohol	10.70	42	27835	80.72	ug/Kg#	45
108)	Tert Amyl Alcohol	10.84	59	46440	41.50	ug/Kg	93
109)	1,4-Dioxane	12.17	88	10846	75.10	ug/Kg#	43

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:40 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:45:00 2010
Response via : Initial Calibration

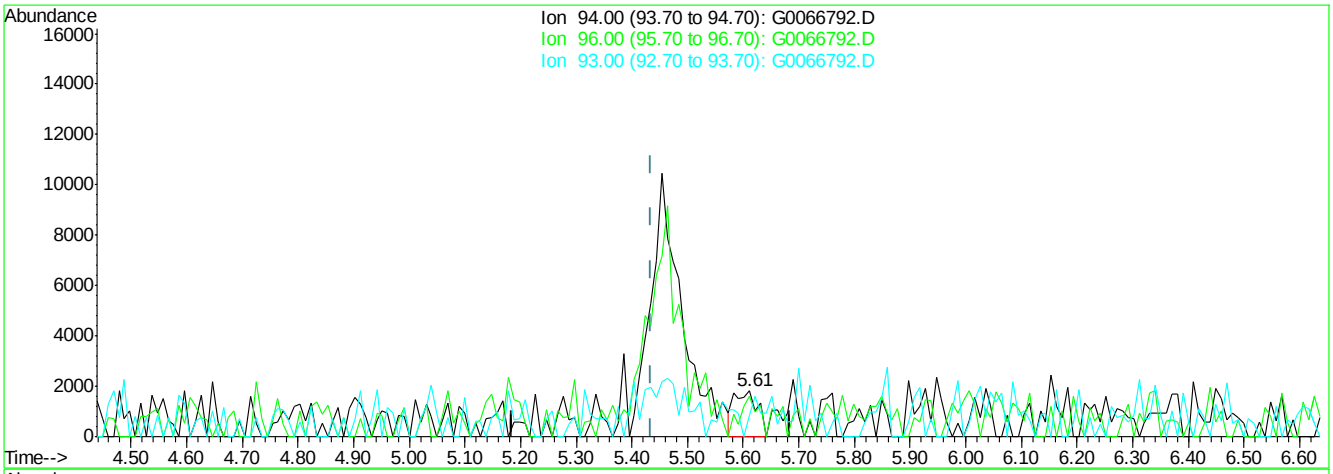


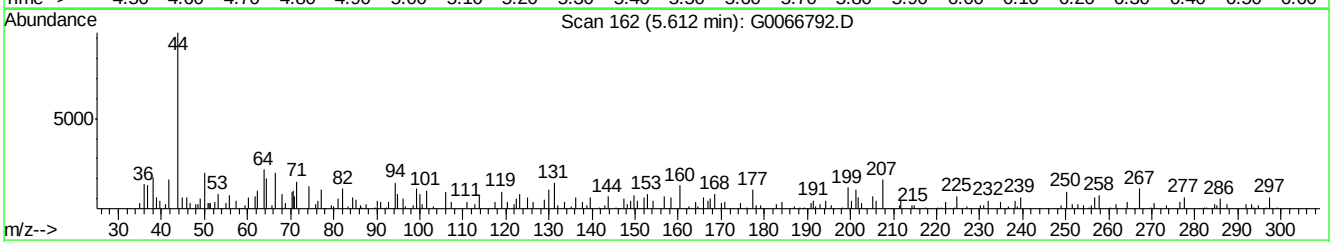
ACCUTEST
F76426

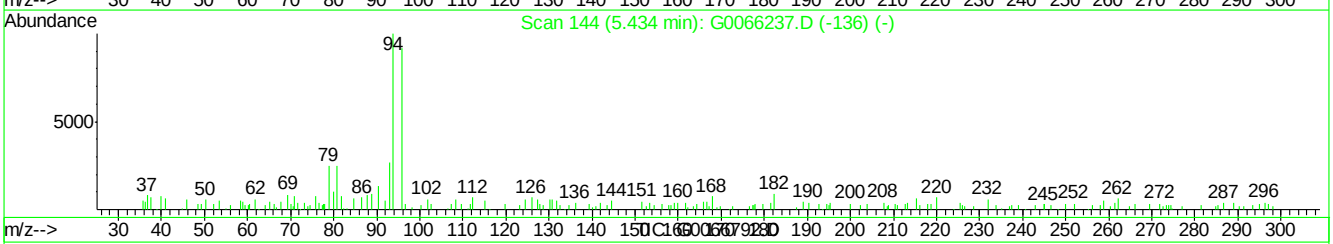
Quantitation Report (Qedit)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Multiple Level Calibration







(5) Bromomethane ( )

5.61min (+0.177) 1.04ug/Kg

response 5272

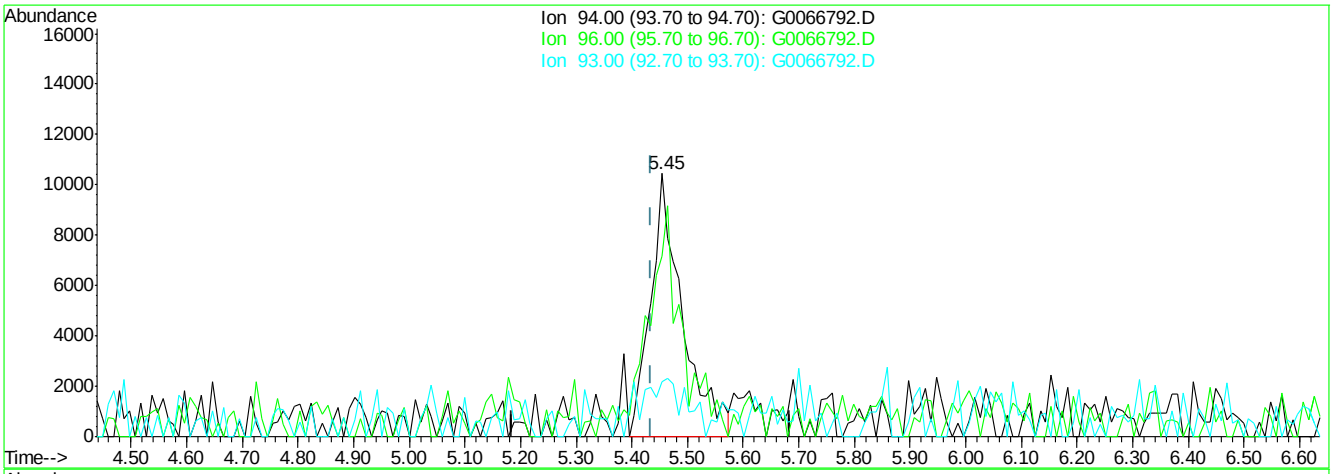
Ion	Exp%	Act%
94.00	100	100
96.00	108.00	88.89
93.00	25.90	0.00
0.00	0.00	0.00

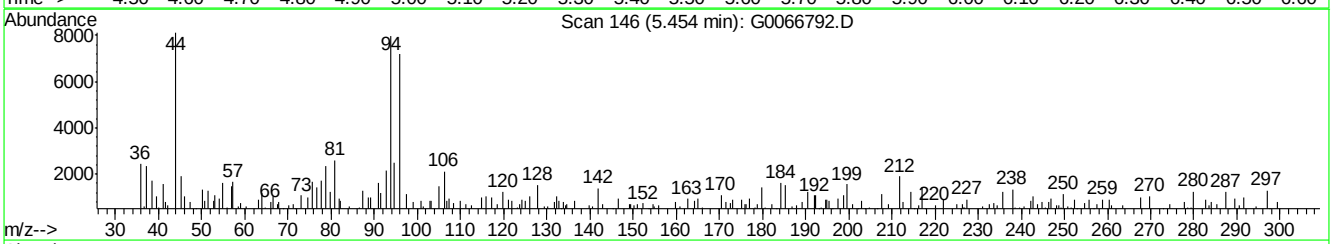
G0066792.D APP9-G.M Tue Sep 14 14:39:45 2010

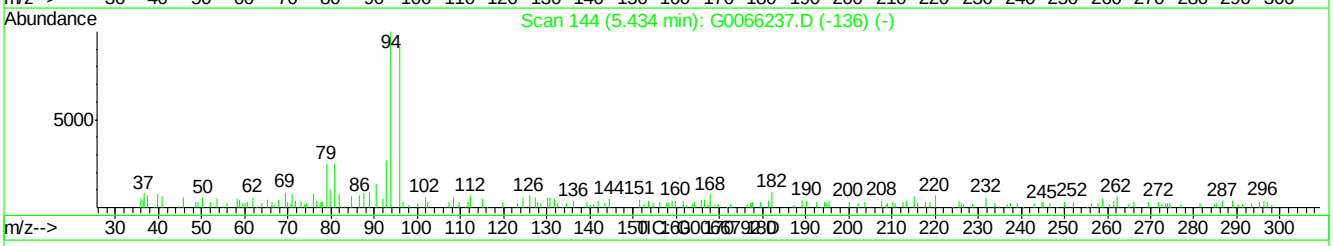
Quantitation Report (Qedit)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Multiple Level Calibration







(5) Bromomethane ( )

5.45min (+0.020) 8.05ug/Kg m

response 40850

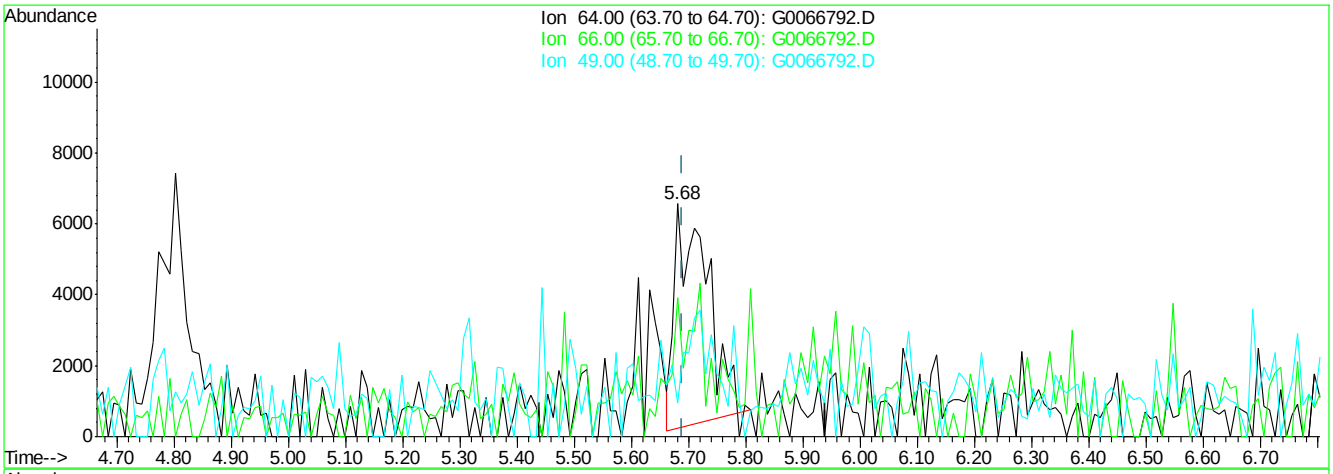
Ion	Exp%	Act%
94.00	100	100
96.00	108.00	89.88
93.00	25.90	27.11
0.00	0.00	0.00

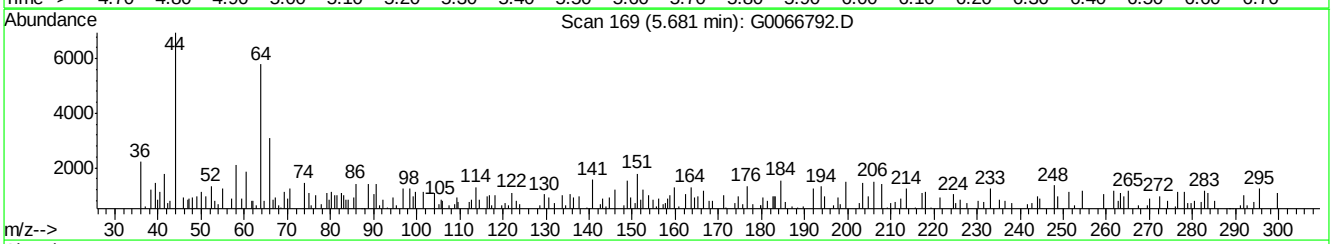
G0066792.D APP9-G.M Tue Sep 14 14:39:54 2010

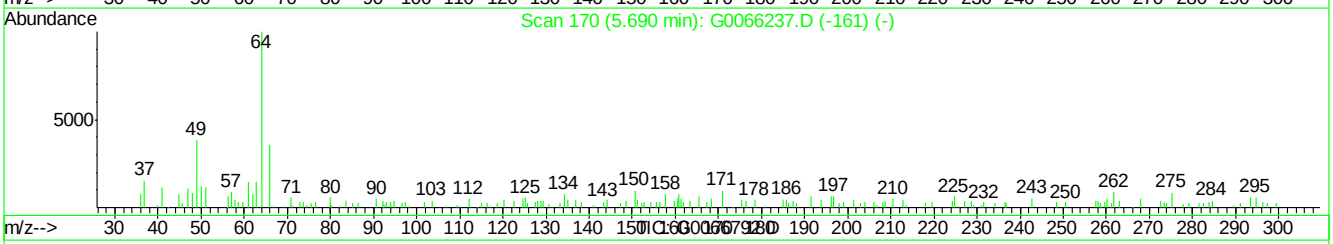
Quantitation Report (Qedit)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Multiple Level Calibration







(6) Chloroethane ( )

5.68min (-0.010) 6.31ug/Kg

response 24867

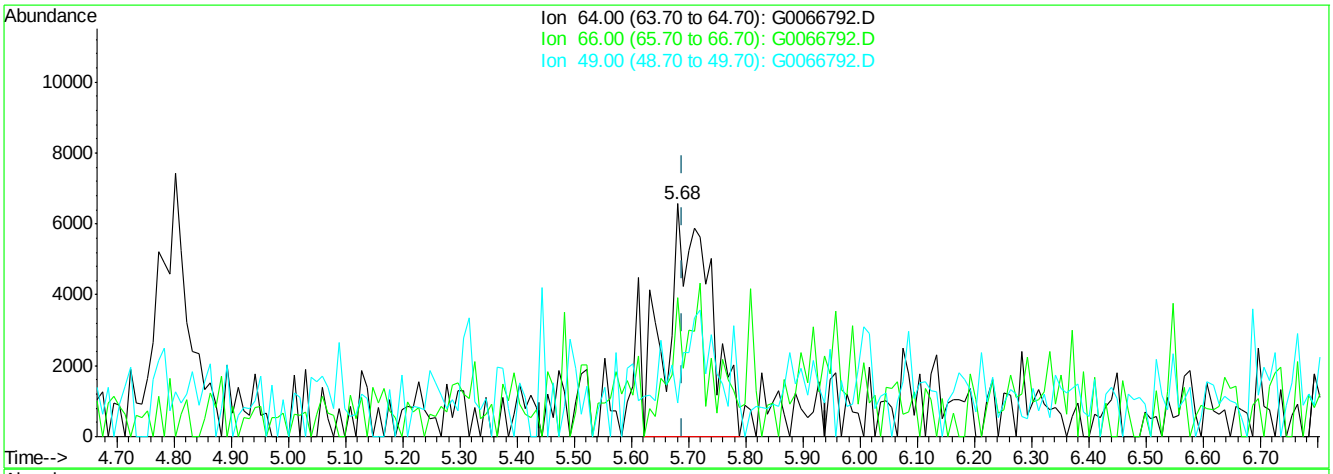
Ion	Exp%	Act%
64.00	100	100
66.00	27.20	42.37
49.00	22.00	4.26
0.00	0.00	0.00

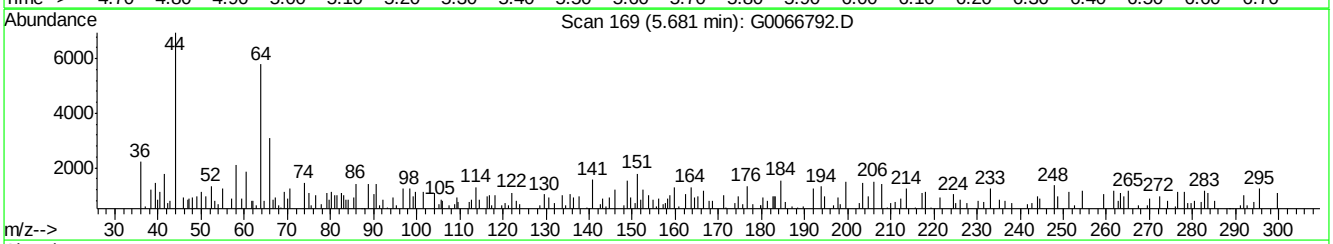
G0066792.D APP9-G.M Tue Sep 14 14:39:59 2010

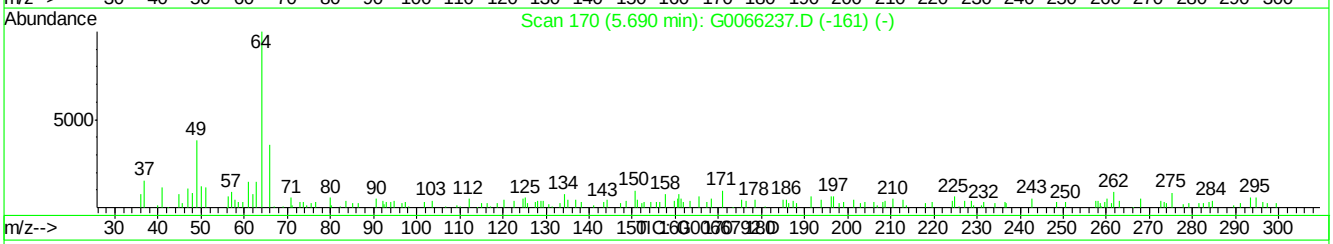
Quantitation Report (Qedit)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Multiple Level Calibration







(6) Chloroethane ( )

5.68min (-0.010) 8.73ug/Kg m

response 34412

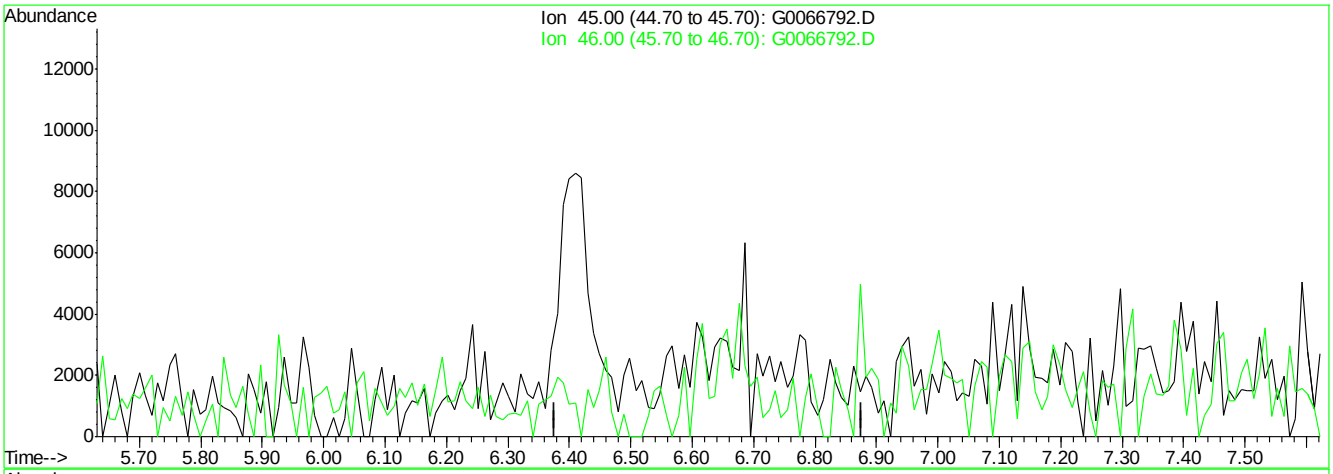
Ion	Exp%	Act%
64.00	100	100
66.00	27.20	53.58
49.00	22.00	16.65
0.00	0.00	0.00

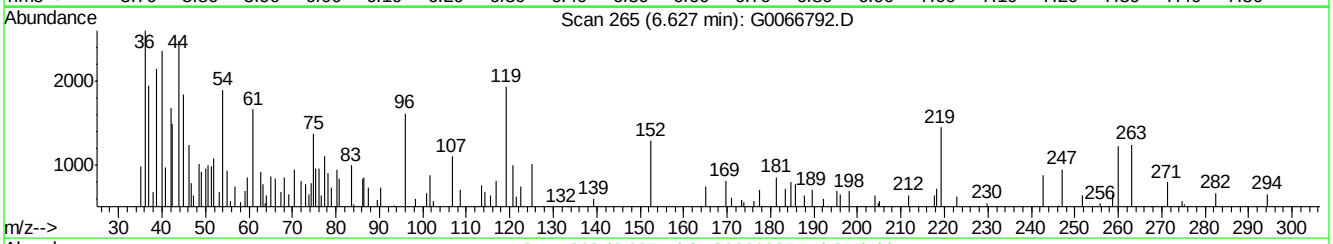
G0066792.D APP9-G.M Tue Sep 14 14:40:06 2010

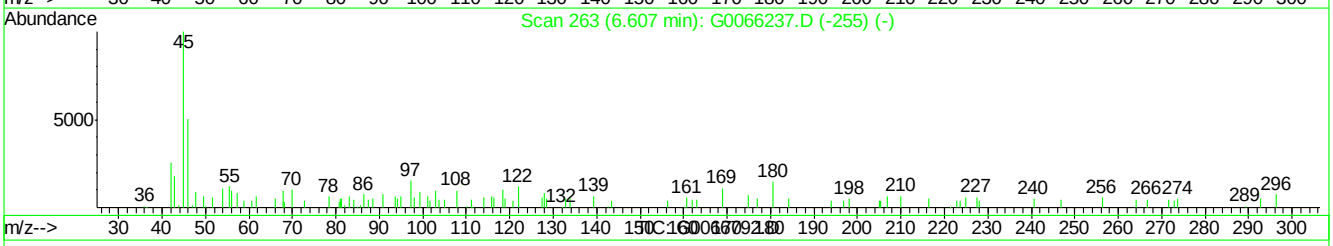
Quantitation Report (Qedit)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Multiple Level Calibration







(104) Ethanol

6.63min (-6.627) 0.00ug/Kg

response 0

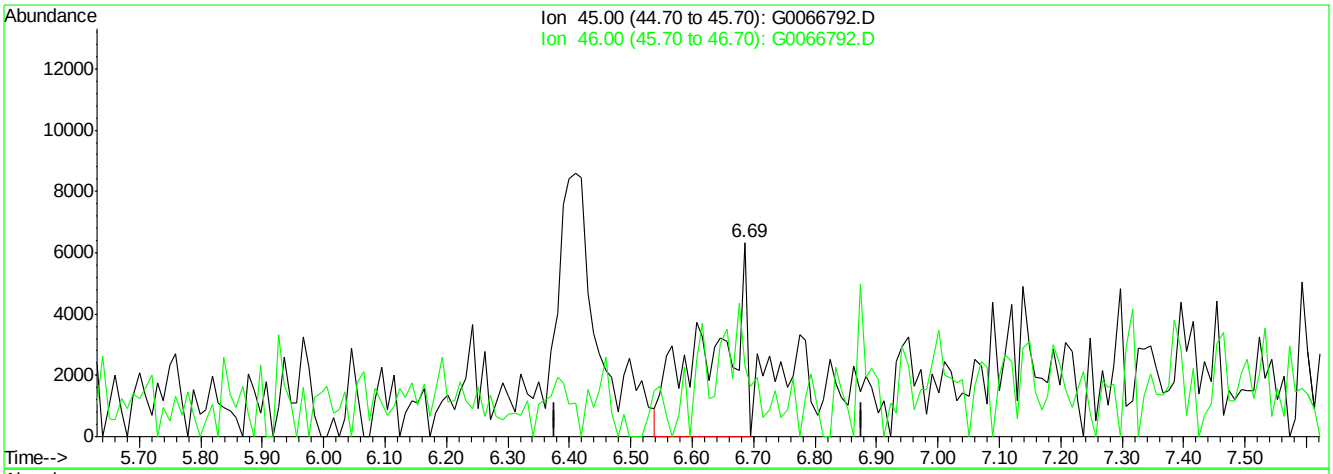
Ion	Exp%	Act%
45.00	100	0.00
46.00	29.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

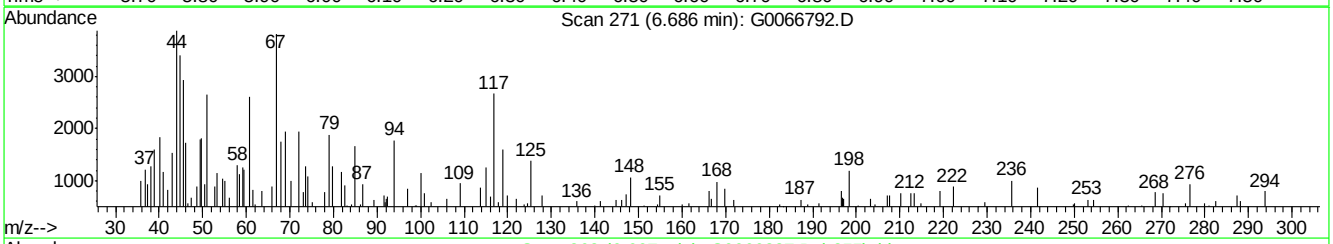
G0066792.D APP9-G.M Tue Sep 14 14:40:26 2010

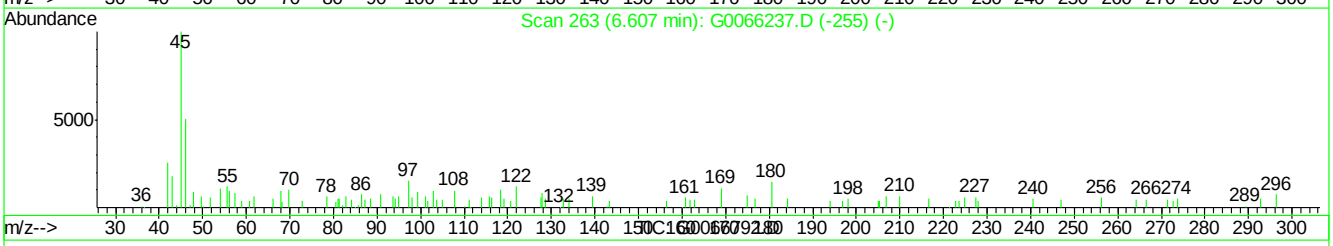
Quantitation Report (Qedit)

Data File : G:\HPCHEM\1\DATA\091410\G0066792.D Vial: 1
Acq On : 14 Sep 2010 11:59 am Operator: MikeM
Sample : ic2523-1 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:40 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:25 2010
Response via : Multiple Level Calibration







(104) Ethanol

6.69min (+0.059) 172.81ug/Kg m

response 24712

Ion	Exp%	Act%
45.00	100	100
46.00	29.70	50.45#
0.00	0.00	0.00
0.00	0.00	0.00

G0066792.D APP9-G.M Tue Sep 14 14:40:40 2010

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066793.D Vial: 2
Acq On : 14 Sep 2010 12:26 pm Operator: MikeM
Sample : ic2523-2 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:13 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:11 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	981774	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	992943	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	595971	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	166273	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	364860	48.91	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 97.82%			
44) 1,2-Dichloroethane-d4	10.75	65	398105	51.60	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 103.20%			
55) Toluene-d8	12.88	98	1149718	54.75	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 109.50%			
77) 4-Bromofluorobenzene	15.88	174	560754	51.41	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 102.82%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	302031	19.86	ug/Kg	96
3) Chloromethane	4.61	50	305004	17.81	ug/Kg	99
4) Vinyl Chloride	4.79	62	273437	17.74	ug/Kg	89
5) Bromomethane	5.45	94	112041	14.70	ug/Kg	81
6) Chloroethane	5.69	64	85218	17.75	ug/Kg	91
7) Trichlorofluoromethane	5.95	101	304808	18.55	ug/Kg	94
8) Ethyl Ether	6.40	59	130697	17.21	ug/Kg	96
9) 1,2-Dichlorotrifluoroethan	6.76	67	270091	19.48	ug/Kg	92
10) 1,1-Dichloroethene	6.80	61	415973	18.56	ug/Kg	96
11) Freon 113	6.85	101	243852	18.17	ug/Kg	95
12) Carbon Disulfide	6.92	76	678367	19.18	ug/Kg	96
13) Iodomethane	7.09	142	527589	20.29	ug/Kg	95
14) Allyl chloride	7.50	41	326281	22.17	ug/Kg	89
15) Methylene Chloride	7.71	49	614274	7.60	ug/Kg	86
16) Acetone	7.72	43	675516	96.49	ug/Kg	98
17) Methyl acetate	7.88	43	826784	111.14	ug/Kg	96
18) trans-1,2-Dichloroethene	7.90	61	389485	20.09	ug/Kg	97
19) Hexane	7.99	56	192568	15.97	ug/Kg#	86
20) Methyl Tert Butyl Ether	8.01	73	707424	21.38	ug/Kg	80
21) Acetonitrile	8.42	41	210884	219.78	ug/Kg	94
22) Di-isopropyl ether	8.50	45	861043	19.96	ug/Kg	93
23) Chloroprene	8.74	53	389638	19.45	ug/Kg	96
24) 1,1-Dichloroethane	8.78	63	484205	18.53	ug/Kg	99
25) Acrylonitrile	8.83	53	319647	90.29	ug/Kg	89
26) ETBE	9.00	59	845058	22.17	ug/Kg	87
27) Vinyl acetate	9.04	43	952900	89.67	ug/Kg	97
28) cis-1,2-Dichloroethene	9.49	96	266750	20.49	ug/Kg	95
29) 2,2-Dichloropropane	9.64	77	260161	17.84	ug/Kg	93
30) Bromochloromethane	9.76	128	167148	18.21	ug/Kg	91
31) Cyclohexane	9.80	56	436315	19.89	ug/Kg	94
32) Chloroform	9.82	83	560496	18.64	ug/Kg	99
33) Ethyl acetate	9.91	43	1115779	98.29	ug/Kg	98
34) Tetrahydrofuran	10.06	42	75115	17.95	ug/Kg	88
36) Carbon Tetrachloride	10.05	117	481464	19.56	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
G0066793.D APP9-G.M Tue Sep 14 14:45:36 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066793.D Vial: 2
Acq On : 14 Sep 2010 12:26 pm Operator: MikeM
Sample : ic2523-2 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:13 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:11 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.14	97	413808	20.09	ug/Kg	97
38)	2-Butanone	10.19	43	695501	95.80	ug/Kg	99
39)	1,1-Dichloropropene	10.27	75	365175	18.57	ug/Kg	97
40)	Propionitrile	10.60	54	253889	229.88	ug/Kg#	64
41)	Methacrylonitrile	10.62	41	1646622	196.31	ug/Kg	95
42)	Benzene	10.59	78	945228	19.55	ug/Kg	98
43)	TAME	10.65	73	690482	19.80	ug/Kg	95
45)	1,2-Dichloroethane	10.82	62	452108	20.97	ug/Kg	93
46)	Trichloroethene	11.28	95	286019	20.06	ug/Kg	94
47)	Methylcyclohexane	11.29	83	385697	18.09	ug/Kg	93
48)	Dibromomethane	11.80	93	186990	16.91	ug/Kg	87
49)	1,2-Dichloropropane	11.91	63	258481	21.70	ug/Kg	92
50)	Bromodichloromethane	11.95	83	398135	18.42	ug/Kg	98
51)	Methyl methacrylate	12.06	41	231075	24.22	ug/Kg	92
52)	2-Chloroethyl vinyl ether	12.54	63	510352	135.53	ug/Kg	93
53)	cis-1,3-Dichloropropene	12.67	75	411021	22.23	ug/Kg	95
56)	Toluene	12.94	91	1025554	21.85	ug/Kg	95
57)	2-Nitropropane	13.21	41	364632	106.91	ug/Kg	95
58)	4-Methyl-2-pentanone	13.32	43	1165049	120.12	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.39	75	358099	23.80	ug/Kg	93
60)	Tetrachloroethene	13.41	166	345888	20.03	ug/Kg	96
61)	Ethyl methacrylate	13.48	69	253418	23.83	ug/Kg	88
62)	1,1,2-Trichloroethane	13.58	83	194370	18.41	ug/Kg	83
63)	Dibromochloromethane	13.81	129	316218	21.36	ug/Kg	93
64)	1,3-Dichloropropane	13.90	76	366437	21.57	ug/Kg	97
65)	1,2-Dibromoethane	14.12	107	257404	22.26	ug/Kg	92
66)	2-hexanone	14.23	43	911132	112.79	ug/Kg	98
67)	1-Chlorohexane	14.56	91	350481	22.20	ug/Kg	95
68)	Ethylbenzene	14.64	91	1139503	22.36	ug/Kg	94
69)	Chlorobenzene	14.67	112	661106	20.68	ug/Kg	86
70)	1,1,1,2-Tetrachloroethane	14.71	131	281164	21.67	ug/Kg	94
71)	m,p-Xylene	14.79	91	1847882	44.09	ug/Kg	95
72)	o-Xylene	15.26	91	969875	22.54	ug/Kg	98
73)	Styrene	15.31	104	683603	25.74	ug/Kg	95
74)	Bromoform	15.40	173	227757	24.34	ug/Kg	95
75)	Isopropylbenzene	15.55	105	962310	22.61	ug/Kg	98
78)	cis-1,4-Dichloro-2-butene	15.91	53	92707	26.42	ug/Kg	91
79)	n-Propylbenzene	15.96	91	1281271	19.21	ug/Kg	97
80)	Bromobenzene	16.02	156	335001	18.52	ug/Kg	95
81)	1,1,2,2-Tetrachloroethane	16.03	83	271299	15.67	ug/Kg	98
82)	1,3,5-Trimethylbenzene	16.12	105	952517	19.26	ug/Kg	100
83)	2-Chlorotoluene	16.16	91	925508	20.31	ug/Kg	92
84)	trans-1,4-Dichloro-2-Buten	16.20	53	61615	29.37	ug/Kg#	88
85)	1,2,3-Trichloropropane	16.19	110	77183	15.19	ug/Kg	88
86)	Cyclohexanone	16.27	55	54024	97.62	ug/Kg#	67
87)	4-Chlorotoluene	16.30	91	776942	19.93	ug/Kg	96
88)	tert-Butylbenzene	16.44	91	590477	18.79	ug/Kg	98
89)	1,2,4-Trimethylbenzene	16.50	105	942177	20.55	ug/Kg	93
90)	Pentachloroethane	16.50	167	212111	20.38	ug/Kg#	83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066793.D Vial: 2
Acq On : 14 Sep 2010 12:26 pm Operator: MikeM
Sample : ic2523-2 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:13 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:11 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

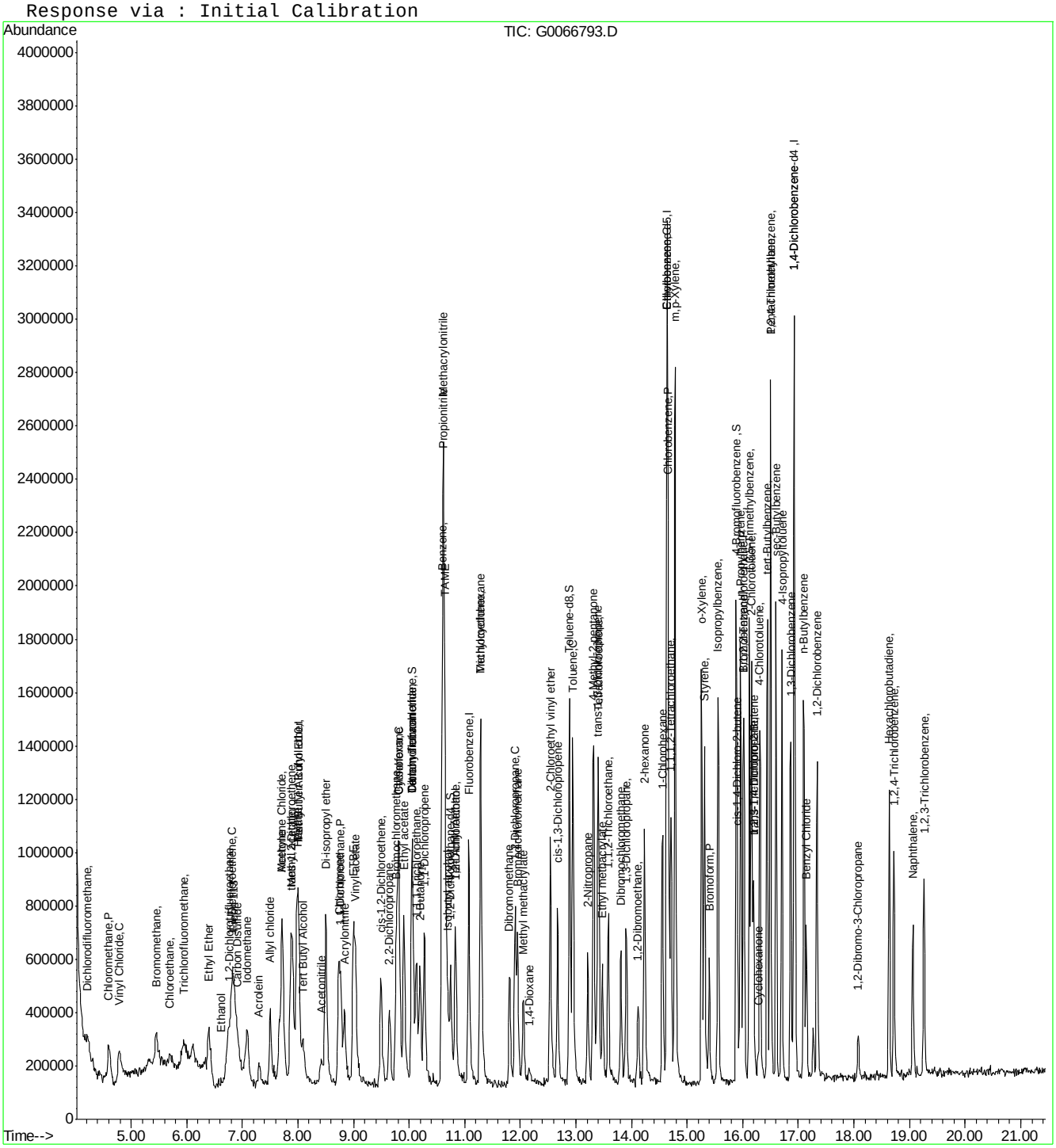
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	1129752	19.73	ug/Kg	100
92)	4-Isopropyltoluene	16.71	119	913146	20.86	ug/Kg	63
93)	1,3-Dichlorobenzene	16.87	146	533966	20.03	ug/Kg	97
94)	1,4-Dichlorobenzene	16.93	146	535588	19.53	ug/Kg	91
95)	n-Butylbenzene	17.09	92	485053	21.66	ug/Kg	89
96)	Benzyl Chloride	17.14	126	82326	21.24	ug/Kg#	92
97)	1,2-Dichlorobenzene	17.34	146	508735	20.11	ug/Kg	92
98)	1,2-Dibromo-3-Chloropropan	18.08	75	50700	17.87	ug/Kg	85
99)	Hexachlorobutadiene	18.64	225	259479	21.02	ug/Kg	91
100)	1,2,4-Trichlorobenzene	18.72	180	282231	23.35	ug/Kg	94
101)	Naphthalene	19.06	128	483315	25.32	ug/Kg	95
102)	1,2,3-Trichlorobenzene	19.26	180	250896	25.96	ug/Kg	98
104)	Ethanol	6.63	45	49243	248.33	ug/Kg	76
105)	Acrolein	7.30	56	96494	89.77	ug/Kg	92
106)	Tert Butyl Alcohol	8.10	59	256551	193.47	ug/Kg	90
107)	Isobutyl alcohol	10.70	42	104713	454.96	ug/Kg#	89
108)	Tert Amyl Alcohol	10.82	59	176175	229.40	ug/Kg	91
109)	1,4-Dioxane	12.17	88	53131	592.44	ug/Kg	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066793.D Vial: 2
Acq On : 14 Sep 2010 12:26 pm Operator: MikeM
Sample : ic2523-2 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:38 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:45:00 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066794.D Vial: 3
Acq On : 14 Sep 2010 12:53 pm Operator: MikeM
Sample : ic2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:15 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:14 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	941748	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	968878	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	604093	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.98	65	160487	250.00	ug/Kg	-0.01
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	354194	50.04	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.08%			
44) 1,2-Dichloroethane-d4	10.75	65	355342	47.26	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 94.52%			
55) Toluene-d8	12.88	98	1141778	53.20	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 106.40%			
77) 4-Bromofluorobenzene	15.88	174	537040	47.90	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 95.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	730327	50.25	ug/Kg	93
3) Chloromethane	4.60	50	801830	51.64	ug/Kg	90
4) Vinyl Chloride	4.79	62	678947	48.66	ug/Kg	100
5) Bromomethane	5.43	94	239106	37.71	ug/Kg	81
6) Chloroethane	5.70	64	209442	48.19	ug/Kg	93
7) Trichlorofluoromethane	5.95	101	673124	44.31	ug/Kg	97
8) Ethyl Ether	6.40	59	320353	47.28	ug/Kg	96
9) 1,2-Dichlorotrifluoroethan	6.74	67	686110	52.27	ug/Kg	89
10) 1,1-Dichloroethene	6.80	61	1063035	51.30	ug/Kg	96
11) Freon 113	6.85	101	646952	52.67	ug/Kg	97
12) Carbon Disulfide	6.91	76	1666470	50.14	ug/Kg	97
13) Iodomethane	7.08	142	1295704	51.57	ug/Kg	96
14) Allyl chloride	7.50	41	865163	58.14	ug/Kg	86
15) Methylene Chloride	7.71	49	1252717	23.43	ug/Kg	81
16) Acetone	7.72	43	1573154	238.44	ug/Kg	95
17) Methyl acetate	7.87	43	1860918	247.03	ug/Kg	98
18) trans-1,2-Dichloroethene	7.90	61	1020790	54.76	ug/Kg	98
19) Hexane	7.99	56	508677	48.91	ug/Kg#	62
20) Methyl Tert Butyl Ether	8.02	73	1697450	51.69	ug/Kg	83
21) Acetonitrile	8.42	41	433382	448.67	ug/Kg	96
22) Di-isopropyl ether	8.50	45	2124835	51.40	ug/Kg	90
23) Chloroprene	8.73	53	994397	52.47	ug/Kg	96
24) 1,1-Dichloroethane	8.77	63	1231217	51.00	ug/Kg	99
25) Acrylonitrile	8.83	53	803702	248.74	ug/Kg	95
26) ETBE	9.00	59	2106336	54.64	ug/Kg	96
27) Vinyl acetate	9.03	43	2622111	271.25	ug/Kg	100
28) cis-1,2-Dichloroethene	9.49	96	656505	51.93	ug/Kg	96
29) 2,2-Dichloropropane	9.64	77	617169	46.64	ug/Kg	98
30) Bromochloromethane	9.76	128	417603	49.64	ug/Kg	90
31) Cyclohexane	9.79	56	1050790	50.08	ug/Kg	91
32) Chloroform	9.82	83	1398401	50.20	ug/Kg	98
33) Ethyl acetate	9.90	43	2641645	244.69	ug/Kg	99
34) Tetrahydrofuran	10.06	42	127254	33.41	ug/Kg	95
36) Carbon Tetrachloride	10.05	117	1233677	52.83	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
G0066794.D APP9-G.M Tue Sep 14 14:45:44 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066794.D Vial: 3
Acq On : 14 Sep 2010 12:53 pm Operator: MikeM
Sample : ic2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:15 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:14 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1051397	53.09	ug/Kg	97
38)	2-Butanone	10.19	43	1696162	248.79	ug/Kg	95
39)	1,1-Dichloropropene	10.27	75	950513	52.26	ug/Kg	98
40)	Propionitrile	10.60	54	631092	554.30	ug/Kg#	71
41)	Methacrylonitrile	10.62	41	3838118	481.47	ug/Kg	94
42)	Benzene	10.59	78	2341109	51.06	ug/Kg	96
43)	TAME	10.65	73	1680400	50.49	ug/Kg	95
45)	1,2-Dichloroethane	10.83	62	1052516	49.69	ug/Kg	94
46)	Trichloroethene	11.28	95	741930	54.17	ug/Kg	94
47)	Methylcyclohexane	11.29	83	937031	48.12	ug/Kg	91
48)	Dibromomethane	11.80	93	499326	51.01	ug/Kg	91
49)	1,2-Dichloropropane	11.91	63	667430	56.03	ug/Kg	90
50)	Bromodichloromethane	11.95	83	1010713	50.76	ug/Kg	96
51)	Methyl methacrylate	12.05	41	530680	52.45	ug/Kg	94
52)	2-Chloroethyl vinyl ether	12.54	63	1305724	306.96	ug/Kg	92
53)	cis-1,3-Dichloropropene	12.67	75	1081096	57.73	ug/Kg	94
56)	Toluene	12.94	91	2627427	54.84	ug/Kg	97
57)	2-Nitropropane	13.21	41	889100	258.23	ug/Kg	99
58)	4-Methyl-2-pentanone	13.31	43	2687091	257.98	ug/Kg	99
59)	trans-1,3-Dichloropropene	13.39	75	936284	58.24	ug/Kg	93
60)	Tetrachloroethene	13.41	166	848116	50.30	ug/Kg	96
61)	Ethyl methacrylate	13.48	69	658864	57.95	ug/Kg	94
62)	1,1,2-Trichloroethane	13.58	83	471574	47.67	ug/Kg	94
63)	Dibromochloromethane	13.81	129	810246	54.25	ug/Kg	98
64)	1,3-Dichloropropane	13.90	76	884266	51.33	ug/Kg	95
65)	1,2-Dibromoethane	14.12	107	609871	51.16	ug/Kg	99
66)	2-hexanone	14.22	43	2293436	273.47	ug/Kg	99
67)	1-Chlorohexane	14.56	91	891494	54.85	ug/Kg	99
68)	Ethylbenzene	14.64	91	2818748	53.53	ug/Kg	98
69)	Chlorobenzene	14.66	112	1663663	52.44	ug/Kg	94
70)	1,1,1,2-Tetrachloroethane	14.71	131	691182	52.40	ug/Kg	97
71)	m,p-Xylene	14.79	91	4499139	104.66	ug/Kg	96
72)	o-Xylene	15.26	91	2433961	54.51	ug/Kg	99
73)	Styrene	15.31	104	1714593	57.86	ug/Kg	96
74)	Bromoform	15.40	173	571363	56.46	ug/Kg	96
75)	Isopropylbenzene	15.55	105	2393043	54.10	ug/Kg	96
78)	cis-1,4-Dichloro-2-butene	15.91	53	237675	57.58	ug/Kg	92
79)	n-Propylbenzene	15.96	91	3267692	49.31	ug/Kg	96
80)	Bromobenzene	16.02	156	829008	46.96	ug/Kg	98
81)	1,1,2,2-Tetrachloroethane	16.03	83	642582	41.06	ug/Kg	98
82)	1,3,5-Trimethylbenzene	16.12	105	2379271	48.35	ug/Kg	100
83)	2-Chlorotoluene	16.16	91	2269668	48.76	ug/Kg	96
84)	trans-1,4-Dichloro-2-Buten	16.20	53	167136	90.64	ug/Kg#	87
85)	1,2,3-Trichloropropane	16.20	110	172595	38.09	ug/Kg	93
86)	Cyclohexanone	16.26	55	88368	159.43	ug/Kg#	80
87)	4-Chlorotoluene	16.30	91	2003173	50.78	ug/Kg	96
88)	tert-Butylbenzene	16.44	91	1514805	49.04	ug/Kg	97
89)	1,2,4-Trimethylbenzene	16.49	105	2258163	47.93	ug/Kg	97
90)	Pentachloroethane	16.51	167	496067	46.58	ug/Kg	87

(#) = qualifier out of range (m) = manual integration
G0066794.D APP9-G.M Tue Sep 14 14:45:44 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066794.D Vial: 3
Acq On : 14 Sep 2010 12:53 pm Operator: MikeM
Sample : ic2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:15 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:14 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

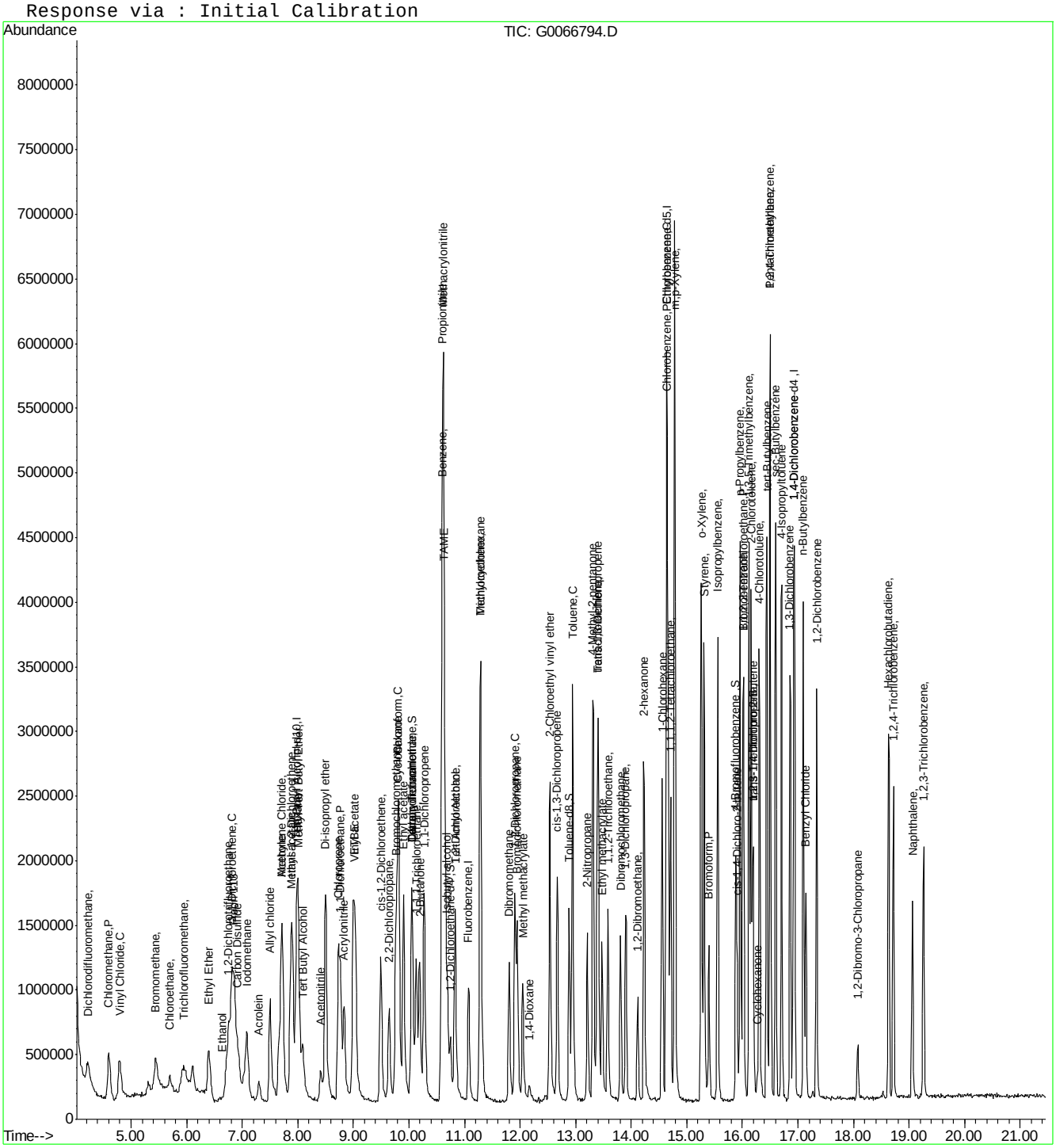
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	2790416	48.40	ug/Kg	98
92)	4-Isopropyltoluene	16.71	119	2267829	50.04	ug/Kg	64
93)	1,3-Dichlorobenzene	16.87	146	1340234	49.56	ug/Kg	98
94)	1,4-Dichlorobenzene	16.93	146	1325434	48.25	ug/Kg	97
95)	n-Butylbenzene	17.09	92	1213591	51.33	ug/Kg	98
96)	Benzyl Chloride	17.14	126	207139	51.14	ug/Kg	94
97)	1,2-Dichlorobenzene	17.34	146	1279248	49.75	ug/Kg	93
98)	1,2-Dibromo-3-Chloropropan	18.08	75	123389	45.31	ug/Kg	86
99)	Hexachlorobutadiene	18.64	225	683993	53.31	ug/Kg	92
100)	1,2,4-Trichlorobenzene	18.72	180	790678	59.55	ug/Kg	98
101)	Naphthalene	19.06	128	1331136	60.73	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.26	180	677828	60.22	ug/Kg	98
104)	Ethanol	6.65	45	85592	551.81	ug/Kg	96
105)	Acrolein	7.31	56	236048	239.78	ug/Kg	99
106)	Tert Butyl Alcohol	8.09	59	602092	478.22	ug/Kg	97
107)	Isobutyl alcohol	10.69	42	295258	1243.66	ug/Kg	97
108)	Tert Amyl Alcohol	10.83	59	476847	599.25	ug/Kg	96
109)	1,4-Dioxane	12.16	88	117565	1094.82	ug/Kg	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
G0066794.D APP9-G.M Tue Sep 14 14:45:44 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066794.D Vial: 3
Acq On : 14 Sep 2010 12:53 pm Operator: MikeM
Sample : ic2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:38 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:45:00 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066795.D Vial: 4
Acq On : 14 Sep 2010 1:19 pm Operator: MikeM
Sample : icc2523-4 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:18 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:17 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	961258	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	950093	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	593900	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.98	65	149638	250.00	ug/Kg	-0.01
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	356547	49.34	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.68%			
44) 1,2-Dichloroethane-d4	10.75	65	314620	41.76	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 83.52%			
55) Toluene-d8	12.88	98	1120767	52.14	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 104.28%			
77) 4-Bromofluorobenzene	15.89	174	566990	52.17	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 104.34%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	1482386	99.75	ug/Kg	96
3) Chloromethane	4.61	50	1637694	102.21	ug/Kg	94
4) Vinyl Chloride	4.80	62	1312736	93.01	ug/Kg	97
5) Bromomethane	5.43	94	395722	66.60	ug/Kg	90
6) Chloroethane	5.69	64	343337	78.33	ug/Kg	90
7) Trichlorofluoromethane	5.96	101	1246489	83.55	ug/Kg	88
8) Ethyl Ether	6.40	59	623866	91.87	ug/Kg	97
9) 1,2-Dichlorotrifluoroethan	6.75	67	1336229	98.25	ug/Kg	89
10) 1,1-Dichloroethene	6.80	61	2065654	96.82	ug/Kg	98
11) Freon 113	6.84	101	1230716	96.44	ug/Kg	98
12) Carbon Disulfide	6.92	76	3326844	97.98	ug/Kg	100
13) Iodomethane	7.08	142	2602555	100.43	ug/Kg	98
14) Allyl chloride	7.49	41	1710478	106.81	ug/Kg	94
15) Methylene Chloride	7.70	49	2105375	46.88	ug/Kg	91
16) Acetone	7.72	43	2952745	445.33	ug/Kg	97
17) Methyl acetate	7.87	43	3392575	442.96	ug/Kg	98
18) trans-1,2-Dichloroethene	7.90	61	2002897	102.03	ug/Kg	98
19) Hexane	7.98	56	1003885	95.25	ug/Kg#	82
20) Methyl Tert Butyl Ether	8.01	73	3302393	97.43	ug/Kg	87
21) Acetonitrile	8.41	41	890851	935.57	ug/Kg	92
22) Di-isopropyl ether	8.50	45	4269739	100.25	ug/Kg	93
23) Chloroprene	8.73	53	1939066	98.62	ug/Kg	97
24) 1,1-Dichloroethane	8.77	63	2458931	99.13	ug/Kg	98
25) Acrylonitrile	8.83	53	1569356	476.65	ug/Kg	92
26) ETBE	9.00	59	4085427	100.71	ug/Kg	95
27) Vinyl acetate	9.03	43	6167092	607.80	ug/Kg	98
28) cis-1,2-Dichloroethene	9.49	96	1308246	100.10	ug/Kg	98
29) 2,2-Dichloropropane	9.64	77	1217205	92.19	ug/Kg	96
30) Bromochloromethane	9.76	128	824318	96.23	ug/Kg	90
31) Cyclohexane	9.80	56	2013578	93.97	ug/Kg	92
32) Chloroform	9.82	83	2670721	93.80	ug/Kg	96
33) Ethyl acetate	9.90	43	5141830	469.94	ug/Kg	100
34) Tetrahydrofuran	10.05	42	241960	69.98	ug/Kg	92
36) Carbon Tetrachloride	10.05	117	2375761	97.83	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
G0066795.D APP9-G.M Tue Sep 14 14:45:53 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066795.D Vial: 4
Acq On : 14 Sep 2010 1:19 pm Operator: MikeM
Sample : icc2523-4 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:18 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:17 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	2033377	98.56	ug/Kg	93
38)	2-Butanone	10.19	43	3145376	452.72	ug/Kg	96
39)	1,1-Dichloropropene	10.27	75	1827051	96.96	ug/Kg	98
40)	Propionitrile	10.59	54	1189995	988.21	ug/Kg	86
41)	Methacrylonitrile	10.62	41	7109510	884.68	ug/Kg	94
42)	Benzene	10.59	78	4505285	95.59	ug/Kg	94
43)	TAME	10.65	73	3196497	93.79	ug/Kg	98
45)	1,2-Dichloroethane	10.83	62	2052617	95.14	ug/Kg	96
46)	Trichloroethene	11.28	95	1425408	99.20	ug/Kg	95
47)	Methylcyclohexane	11.29	83	1861875	94.86	ug/Kg	91
48)	Dibromomethane	11.80	93	987641	98.19	ug/Kg	90
49)	1,2-Dichloropropane	11.91	63	1304466	103.14	ug/Kg	93
50)	Bromodichloromethane	11.95	83	1989227	97.38	ug/Kg	99
51)	Methyl methacrylate	12.05	41	1061332	101.11	ug/Kg	99
52)	2-Chloroethyl vinyl ether	12.54	63	2585102	553.36	ug/Kg	96
53)	cis-1,3-Dichloropropene	12.67	75	2122754	105.61	ug/Kg	96
56)	Toluene	12.94	91	5017369	103.45	ug/Kg	99
57)	2-Nitropropane	13.21	41	1834739	537.52	ug/Kg	99
58)	4-Methyl-2-pentanone	13.32	43	5289330	512.40	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.39	75	1759807	105.82	ug/Kg	97
60)	Tetrachloroethene	13.41	166	1652437	99.74	ug/Kg	97
61)	Ethyl methacrylate	13.48	69	1340890	114.22	ug/Kg	95
62)	1,1,2-Trichloroethane	13.58	83	894053	93.62	ug/Kg	91
63)	Dibromochloromethane	13.81	129	1656588	109.99	ug/Kg	99
64)	1,3-Dichloropropane	13.91	76	1735833	101.86	ug/Kg	93
65)	1,2-Dibromoethane	14.12	107	1245864	105.76	ug/Kg	94
66)	2-hexanone	14.22	43	4379217	516.34	ug/Kg	100
67)	1-Chlorohexane	14.56	91	1757347	106.81	ug/Kg	99
68)	Ethylbenzene	14.64	91	5381546	101.82	ug/Kg	99
69)	Chlorobenzene	14.67	112	3131334	99.05	ug/Kg	88
70)	1,1,1,2-Tetrachloroethane	14.71	131	1324391	100.78	ug/Kg	98
71)	m,p-Xylene	14.79	91	8099745	189.20	ug/Kg	98
72)	o-Xylene	15.26	91	4590687	101.79	ug/Kg	96
73)	Styrene	15.31	104	3388848	110.82	ug/Kg	98
74)	Bromoform	15.40	173	1197934	115.73	ug/Kg	99
75)	Isopropylbenzene	15.55	105	4592546	103.06	ug/Kg	97
78)	cis-1,4-Dichloro-2-butene	15.91	53	460108	107.93	ug/Kg#	84
79)	n-Propylbenzene	15.96	91	6311496	97.33	ug/Kg	97
80)	Bromobenzene	16.02	156	1660063	97.62	ug/Kg	97
81)	1,1,2,2-Tetrachloroethane	16.03	83	1207518	83.46	ug/Kg	99
82)	1,3,5-Trimethylbenzene	16.12	105	4382924	91.61	ug/Kg	96
83)	2-Chlorotoluene	16.16	91	4211131	92.79	ug/Kg	93
84)	trans-1,4-Dichloro-2-Buten	16.20	53	355687	202.53	ug/Kg#	79
85)	1,2,3-Trichloropropane	16.20	110	330584	80.61	ug/Kg	90
86)	Cyclohexanone	16.27	55	158849	331.54	ug/Kg	94
87)	4-Chlorotoluene	16.31	91	3770303	96.72	ug/Kg	96
88)	tert-Butylbenzene	16.44	91	2820251	93.47	ug/Kg	98
89)	1,2,4-Trimethylbenzene	16.50	105	4153653	90.94	ug/Kg	97
90)	Pentachloroethane	16.51	167	911839	89.12	ug/Kg	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066795.D Vial: 4
Acq On : 14 Sep 2010 1:19 pm Operator: MikeM
Sample : icc2523-4 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:18 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:17 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

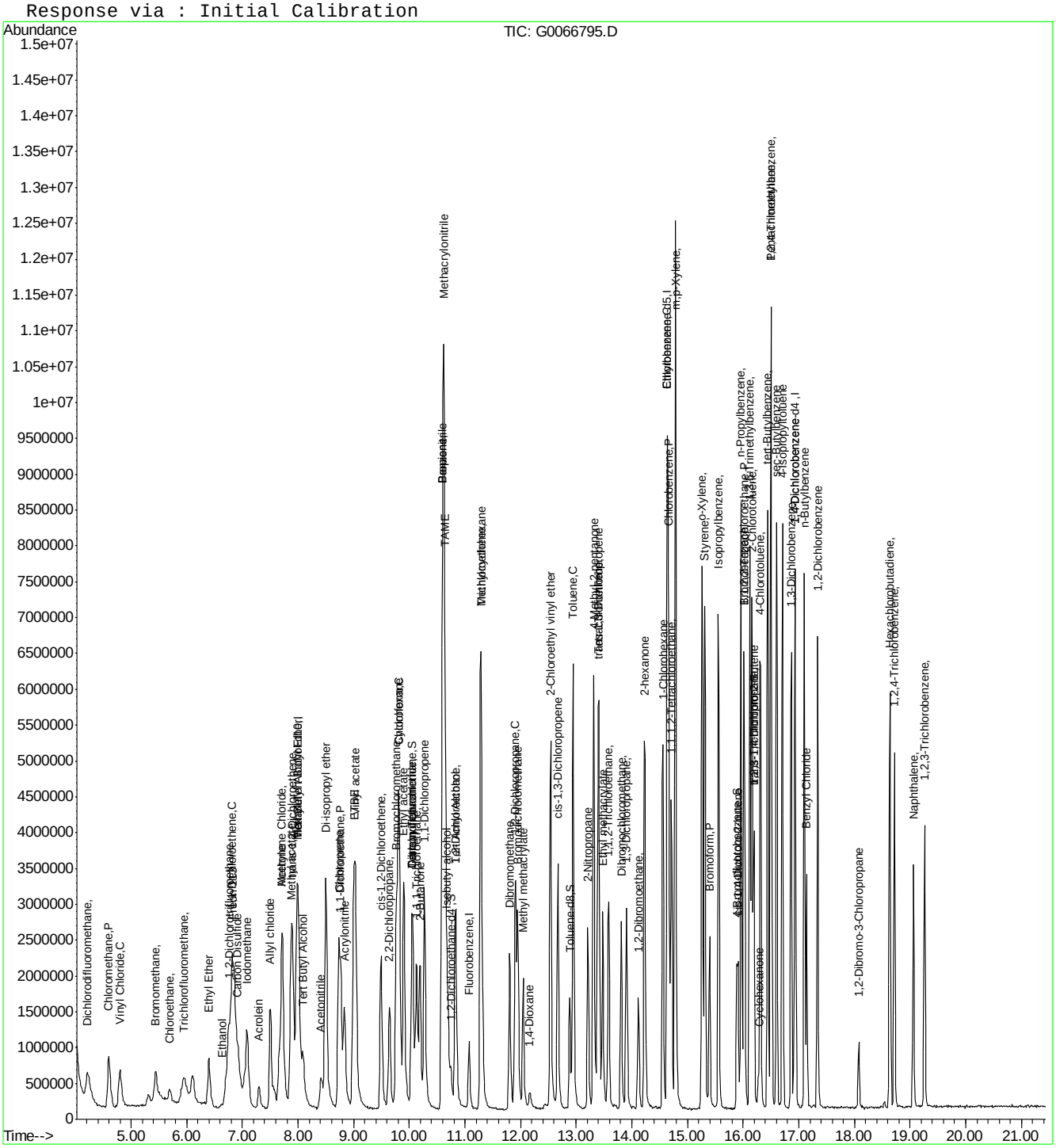
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	5219562	93.09	ug/Kg	98
92)	4-Isopropyltoluene	16.71	119	4182240	93.84	ug/Kg	65
93)	1,3-Dichlorobenzene	16.87	146	2640000	99.60	ug/Kg	95
94)	1,4-Dichlorobenzene	16.93	146	2570343	96.30	ug/Kg	93
95)	n-Butylbenzene	17.10	92	2394434	102.11	ug/Kg	92
96)	Benzyl Chloride	17.14	126	407499	101.56	ug/Kg	96
97)	1,2-Dichlorobenzene	17.34	146	2513489	99.59	ug/Kg	96
98)	1,2-Dibromo-3-Chloropropan	18.08	75	217781	83.97	ug/Kg#	75
99)	Hexachlorobutadiene	18.64	225	1343108	104.17	ug/Kg	92
100)	1,2,4-Trichlorobenzene	18.72	180	1626486	117.14	ug/Kg	99
101)	Naphthalene	19.06	128	2671315	115.68	ug/Kg	99
102)	1,2,3-Trichlorobenzene	19.26	180	1376916	116.49	ug/Kg	94
104)	Ethanol	6.63	45	175536	1426.90	ug/Kg	89
105)	Acrolein	7.30	56	461325	509.54	ug/Kg	99
106)	Tert Butyl Alcohol	8.09	59	1134344	980.53	ug/Kg	93
107)	Isobutyl alcohol	10.69	42	545353	2278.57	ug/Kg	93
108)	Tert Amyl Alcohol	10.82	59	886559	1120.75	ug/Kg	95
109)	1,4-Dioxane	12.17	88	223785	2166.60	ug/Kg	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed
G0066795.D APP9-G.M Tue Sep 14 14:45:54 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066795.D Vial: 4
Acq On : 14 Sep 2010 1:19 pm Operator: MikeM
Sample : icc2523-4 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:38 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:45:00 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066796.D Vial: 5
Acq On : 14 Sep 2010 1:46 pm Operator: MikeM
Sample : ic2523-5 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:21 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:19 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	943502	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	900436	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	574940	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	143747	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	326459	46.18	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 92.36%			
44) 1,2-Dichloroethane-d4	10.76	65	308255	43.47	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 86.94%			
55) Toluene-d8	12.88	98	1108593	53.84	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 107.68%			
77) 4-Bromofluorobenzene	15.89	174	581307	54.66	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 109.32%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.20	85	2173352	149.09	ug/Kg	93
3) Chloromethane	4.60	50	2444942	154.61	ug/Kg	95
4) Vinyl Chloride	4.80	62	1962766	144.20	ug/Kg	95
5) Bromomethane	5.43	94	534434	99.98	ug/Kg	82
6) Chloroethane	5.69	64	448202	110.15	ug/Kg	83
7) Trichlorofluoromethane	5.95	101	1824302	129.93	ug/Kg	94
8) Ethyl Ether	6.40	59	896519	137.30	ug/Kg	94
9) 1,2-Dichlorotrifluoroethan	6.75	67	2062104	155.15	ug/Kg	92
10) 1,1-Dichloroethene	6.81	61	3050153	146.82	ug/Kg	96
11) Freon 113	6.85	101	1773930	142.90	ug/Kg	96
12) Carbon Disulfide	6.92	76	5006940	150.99	ug/Kg	99
13) Iodomethane	7.08	142	3939608	154.72	ug/Kg	99
14) Allyl chloride	7.50	41	2729526	170.75	ug/Kg	99
15) Methylene Chloride	7.70	49	2952074	77.22	ug/Kg	87
16) Acetone	7.72	43	4102829	648.14	ug/Kg	96
17) Methyl acetate	7.87	43	4998961	684.51	ug/Kg	98
18) trans-1,2-Dichloroethene	7.90	61	3006702	155.26	ug/Kg	98
19) Hexane	7.98	56	1448399	141.70	ug/Kg#	81
20) Methyl Tert Butyl Ether	8.02	73	4859798	147.02	ug/Kg	84
21) Acetonitrile	8.41	41	1246084	1355.09	ug/Kg	91
22) Di-isopropyl ether	8.50	45	6596917	157.71	ug/Kg	91
23) Chloroprene	8.73	53	2874602	149.47	ug/Kg	97
24) 1,1-Dichloroethane	8.77	63	3680806	151.51	ug/Kg	97
25) Acrylonitrile	8.83	53	2508654	785.44	ug/Kg	96
26) ETBE	9.00	59	6157255	154.37	ug/Kg	93
27) Vinyl acetate	9.03	43	9259030	882.15	ug/Kg	98
28) cis-1,2-Dichloroethene	9.49	96	1983588	154.59	ug/Kg	98
29) 2,2-Dichloropropane	9.64	77	1797910	141.49	ug/Kg	97
30) Bromochloromethane	9.76	128	1183413	142.09	ug/Kg	91
31) Cyclohexane	9.79	56	2994974	144.57	ug/Kg	94
32) Chloroform	9.82	83	3938841	143.16	ug/Kg	100
33) Ethyl acetate	9.90	43	7523575	711.25	ug/Kg	98
34) Tetrahydrofuran	10.06	42	428027	136.36	ug/Kg	97
36) Carbon Tetrachloride	10.05	117	3507385	147.94	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
G0066796.D APP9-G.M Tue Sep 14 14:46:01 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066796.D Vial: 5
Acq On : 14 Sep 2010 1:46 pm Operator: MikeM
Sample : ic2523-5 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:21 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:19 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	2955614	146.49	ug/Kg	96
38)	2-Butanone	10.19	43	4457579	669.49	ug/Kg	99
39)	1,1-Dichloropropene	10.27	75	2660682	144.96	ug/Kg	99
40)	Propionitrile	10.60	54	1665500	1413.28	ug/Kg#	74
41)	Methacrylonitrile	10.62	41	9923940	1295.49	ug/Kg	95
42)	Benzene	10.59	78	6639725	145.13	ug/Kg	91
43)	TAME	10.65	73	4563667	138.58	ug/Kg	94
45)	1,2-Dichloroethane	10.83	62	2990969	142.98	ug/Kg	93
46)	Trichloroethene	11.28	95	2054160	145.94	ug/Kg	88
47)	Methylcyclohexane	11.29	83	2717517	142.90	ug/Kg	95
48)	Dibromomethane	11.80	93	1424692	144.96	ug/Kg	87
49)	1,2-Dichloropropane	11.91	63	1967671	157.27	ug/Kg	94
50)	Bromodichloromethane	11.95	83	3021965	151.72	ug/Kg	97
51)	Methyl methacrylate	12.05	41	1529718	148.07	ug/Kg	97
52)	2-Chloroethyl vinyl ether	12.54	63	3910408	830.64	ug/Kg	95
53)	cis-1,3-Dichloropropene	12.67	75	3207753	160.35	ug/Kg	97
56)	Toluene	12.94	91	7491666	161.59	ug/Kg	100
57)	2-Nitropropane	13.21	41	2605045	790.46	ug/Kg	93
58)	4-Methyl-2-pentanone	13.32	43	7508946	762.81	ug/Kg	99
59)	trans-1,3-Dichloropropene	13.39	75	2538726	158.76	ug/Kg	95
60)	Tetrachloroethene	13.41	166	2494091	158.94	ug/Kg	95
61)	Ethyl methacrylate	13.48	69	1995544	173.20	ug/Kg	94
62)	1,1,2-Trichloroethane	13.58	83	1298306	145.77	ug/Kg	89
63)	Dibromochloromethane	13.81	129	2428370	165.98	ug/Kg	98
64)	1,3-Dichloropropane	13.91	76	2615836	161.21	ug/Kg	92
65)	1,2-Dibromoethane	14.12	107	1884848	166.42	ug/Kg	95
66)	2-hexanone	14.22	43	6404199	790.29	ug/Kg	98
67)	1-Chlorohexane	14.56	91	2577710	162.55	ug/Kg	95
68)	Ethylbenzene	14.64	91	7840859	155.83	ug/Kg	99
69)	Chlorobenzene	14.67	112	4442742	148.63	ug/Kg	91
70)	1,1,1,2-Tetrachloroethane	14.71	131	1953023	156.51	ug/Kg	98
71)	m,p-Xylene	14.79	91	11054442	276.19	ug/Kg	94
72)	o-Xylene	15.26	91	6849494	159.53	ug/Kg	97
73)	Styrene	15.31	104	4867548	163.53	ug/Kg	98
74)	Bromoform	15.40	173	1780975	174.67	ug/Kg	97
75)	Isopropylbenzene	15.55	105	6728102	158.10	ug/Kg	98
78)	cis-1,4-Dichloro-2-butene	15.91	53	630790	149.87	ug/Kg	88
79)	n-Propylbenzene	15.96	91	9306129	149.24	ug/Kg	98
80)	Bromobenzene	16.02	156	2435925	148.86	ug/Kg	98
81)	1,1,2,2-Tetrachloroethane	16.03	83	1685012	125.50	ug/Kg	99
82)	1,3,5-Trimethylbenzene	16.12	105	6281722	138.53	ug/Kg	98
83)	2-Chlorotoluene	16.16	91	6011664	139.35	ug/Kg	95
84)	trans-1,4-Dichloro-2-Buten	16.20	53	501418	293.99	ug/Kg#	74
85)	1,2,3-Trichloropropane	16.20	110	448073	118.61	ug/Kg	96
86)	Cyclohexanone	16.27	55	232895	548.30	ug/Kg	95
87)	4-Chlorotoluene	16.31	91	5393437	144.10	ug/Kg	96
88)	tert-Butylbenzene	16.44	91	3991735	138.92	ug/Kg	98
89)	1,2,4-Trimethylbenzene	16.50	105	5650443	130.75	ug/Kg	98
90)	Pentachloroethane	16.51	167	1282848	133.13	ug/Kg	88

(#) = qualifier out of range (m) = manual integration
G0066796.D APP9-G.M Tue Sep 14 14:46:01 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066796.D Vial: 5
Acq On : 14 Sep 2010 1:46 pm Operator: MikeM
Sample : ic2523-5 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:21 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:19 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

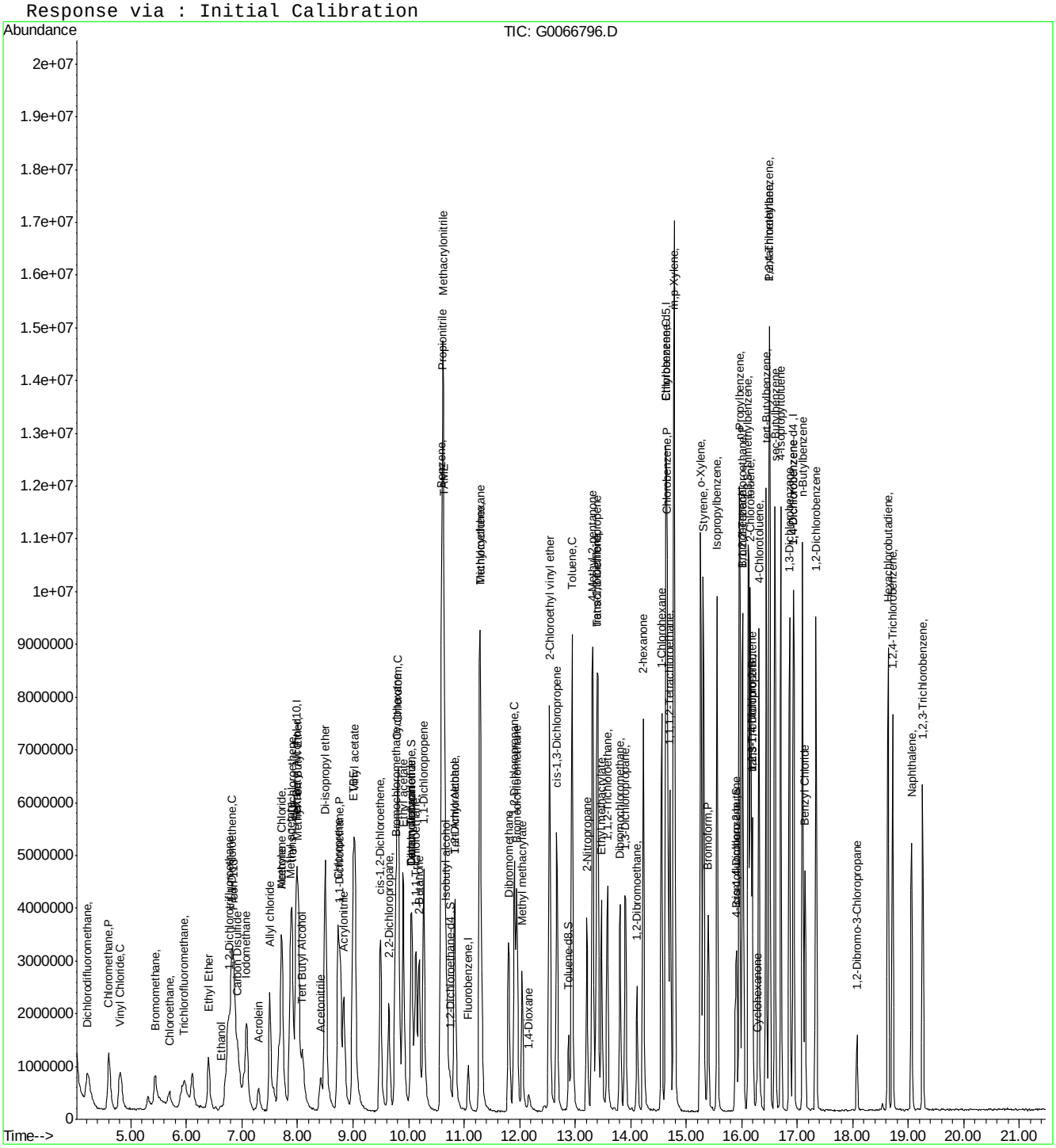
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	7344203	137.67	ug/Kg	100
92)	4-Isopropyltoluene	16.71	119	5958127	140.25	ug/Kg	64
93)	1,3-Dichlorobenzene	16.87	146	3840852	149.83	ug/Kg	96
94)	1,4-Dichlorobenzene	16.94	146	3769558	147.25	ug/Kg	96
95)	n-Butylbenzene	17.10	92	3434924	150.52	ug/Kg	94
96)	Benzyl Chloride	17.14	126	614680	157.63	ug/Kg#	92
97)	1,2-Dichlorobenzene	17.34	146	3677755	150.69	ug/Kg	96
98)	1,2-Dibromo-3-Chloropropan	18.08	75	353899	146.84	ug/Kg	77
99)	Hexachlorobutadiene	18.64	225	2075046	164.54	ug/Kg	94
100)	1,2,4-Trichlorobenzene	18.72	180	2577720	183.89	ug/Kg	98
101)	Naphthalene	19.06	128	4109548	176.90	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.26	180	2134904	179.19	ug/Kg	97
104)	Ethanol	6.62	45	245568	2238.34	ug/Kg	89
105)	Acrolein	7.30	56	653789	748.14	ug/Kg	93
106)	Tert Butyl Alcohol	8.10	59	1643904	1486.47	ug/Kg	97
107)	Isobutyl alcohol	10.69	42	799157	3358.88	ug/Kg	95
108)	Tert Amyl Alcohol	10.83	59	1278186	1632.76	ug/Kg	97
109)	1,4-Dioxane	12.17	88	328765	3245.83	ug/Kg	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066796.D Vial: 5
Acq On : 14 Sep 2010 1:46 pm Operator: MikeM
Sample : ic2523-5 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:45:00 2010
Response via : Initial Calibration



ACCUTEST
F76426

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066797.D Vial: 6
Acq On : 14 Sep 2010 2:13 pm Operator: MikeM
Sample : ic2523-6 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:23 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	981641	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	855533	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.93	152	581714	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	146582	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	347015	47.91	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 95.82%			
44) 1,2-Dichloroethane-d4	10.75	65	305907	42.58	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 85.16%			
55) Toluene-d8	12.88	98	1156743	58.23	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 116.46%			
77) 4-Bromofluorobenzene	15.89	174	604253	55.13	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 110.26%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	2891560	190.89	ug/Kg	95
3) Chloromethane	4.60	50	3301571	199.44	ug/Kg	93
4) Vinyl Chloride	4.80	62	2574410	183.21	ug/Kg	95
5) Bromomethane	5.44	94	686469	132.26	ug/Kg	84
6) Chloroethane	5.69	64	555833	138.66	ug/Kg	82
7) Trichlorofluoromethane	5.95	101	2291185	161.15	ug/Kg	100
8) Ethyl Ether	6.40	59	1144189	171.32	ug/Kg	90
9) 1,2-Dichlorotrifluoroethan	6.75	67	2729900	196.07	ug/Kg	92
10) 1,1-Dichloroethene	6.80	61	4036744	187.56	ug/Kg	97
11) Freon 113	6.84	101	2300683	179.83	ug/Kg	96
12) Carbon Disulfide	6.92	76	6542286	189.38	ug/Kg	98
13) Iodomethane	7.08	142	5199836	195.05	ug/Kg	98
14) Allyl chloride	7.50	41	3620672	211.83	ug/Kg	98
15) Methylene Chloride	7.70	49	4023657	112.04	ug/Kg	88
16) Acetone	7.72	43	5402892	843.26	ug/Kg	94
17) Methyl acetate	7.87	43	6910613	925.68	ug/Kg	99
18) trans-1,2-Dichloroethene	7.90	61	3910645	192.74	ug/Kg	97
19) Hexane	7.98	56	1907967	181.41	ug/Kg#	82
20) Methyl Tert Butyl Ether	8.01	73	6436798	187.91	ug/Kg	89
21) Acetonitrile	8.42	41	1735696	1849.94	ug/Kg	97
22) Di-isopropyl ether	8.50	45	8863390	201.59	ug/Kg	91
23) Chloroprene	8.73	53	3893064	194.69	ug/Kg	99
24) 1,1-Dichloroethane	8.77	63	4810046	189.91	ug/Kg	100
25) Acrylonitrile	8.83	53	3299744	983.69	ug/Kg	96
26) ETBE	9.00	59	8194403	196.31	ug/Kg	96
27) Vinyl acetate	9.03	43	11046392	977.11	ug/Kg	99
28) cis-1,2-Dichloroethene	9.50	96	2755794	205.17	ug/Kg	95
29) 2,2-Dichloropropane	9.64	77	2292457	175.39	ug/Kg	93
30) Bromochloromethane	9.76	128	1621505	189.13	ug/Kg	89
31) Cyclohexane	9.80	56	3904645	182.48	ug/Kg	91
32) Chloroform	9.82	83	5099559	179.78	ug/Kg	97
33) Ethyl acetate	9.90	43	9638084	884.89	ug/Kg	99
34) Tetrahydrofuran	10.06	42	460432	143.60	ug/Kg	97
36) Carbon Tetrachloride	10.05	117	4557701	185.29	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
G0066797.D APP9-G.M Tue Sep 14 14:46:09 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066797.D Vial: 6
Acq On : 14 Sep 2010 2:13 pm Operator: MikeM
Sample : ic2523-6 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:23 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.14	97	3850105	184.27	ug/Kg	95
38)	2-Butanone	10.19	43	5929035	874.67	ug/Kg	98
39)	1,1-Dichloropropene	10.27	75	3460764	182.45	ug/Kg	98
40)	Propionitrile	10.60	54	2152086	1775.75	ug/Kg#	83
41)	Methacrylonitrile	10.62	41	12576812	1622.24	ug/Kg	95
42)	Benzene	10.59	78	8507799	179.90	ug/Kg	93
43)	TAME	10.65	73	5711852	169.28	ug/Kg	95
45)	1,2-Dichloroethane	10.84	62	3775222	175.10	ug/Kg	96
46)	Trichloroethene	11.28	95	2665105	182.98	ug/Kg	95
47)	Methylcyclohexane	11.29	83	3544160	180.84	ug/Kg	93
48)	Dibromomethane	11.80	93	1932835	190.30	ug/Kg	87
49)	1,2-Dichloropropane	11.91	63	2569783	195.52	ug/Kg	94
50)	Bromodichloromethane	11.95	83	3922576	188.85	ug/Kg	95
51)	Methyl methacrylate	12.05	41	2037946	190.09	ug/Kg	96
52)	2-Chloroethyl vinyl ether	12.54	63	5135553	1026.43	ug/Kg	99
53)	cis-1,3-Dichloropropene	12.67	75	4257730	201.78	ug/Kg	95
56)	Toluene	12.94	91	9706519	217.00	ug/Kg	98
57)	2-Nitropropane	13.21	41	3529655	1115.20	ug/Kg	97
58)	4-Methyl-2-pentanone	13.32	43	9978193	1063.22	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.39	75	3315216	215.68	ug/Kg	95
60)	Tetrachloroethene	13.41	166	3222334	213.58	ug/Kg	95
61)	Ethyl methacrylate	13.48	69	2543571	225.38	ug/Kg	94
62)	1,1,2-Trichloroethane	13.58	83	1724984	205.00	ug/Kg	94
63)	Dibromochloromethane	13.81	129	3177986	223.85	ug/Kg	99
64)	1,3-Dichloropropane	13.91	76	3397853	217.15	ug/Kg	94
65)	1,2-Dibromoethane	14.12	107	2438142	221.72	ug/Kg	96
66)	2-hexanone	14.23	43	8481824	1089.90	ug/Kg	98
67)	1-Chlorohexane	14.56	91	3386235	221.04	ug/Kg	97
68)	Ethylbenzene	14.64	91	9912843	205.74	ug/Kg	97
69)	Chlorobenzene	14.67	112	5647210	199.21	ug/Kg	89
70)	1,1,1,2-Tetrachloroethane	14.71	131	2541350	212.50	ug/Kg	97
71)	m,p-Xylene	14.79	91	12928354	345.45	ug/Kg	89
72)	o-Xylene	15.26	91	8782423	212.59	ug/Kg	97
73)	Styrene	15.31	104	6234390	216.54	ug/Kg	99
74)	Bromoform	15.40	173	2358750	235.73	ug/Kg	98
75)	Isopropylbenzene	15.56	105	8406556	205.68	ug/Kg	99
78)	cis-1,4-Dichloro-2-butene	15.91	53	843574	198.13	ug/Kg#	87
79)	n-Propylbenzene	15.96	91	11291535	179.15	ug/Kg	90
80)	Bromobenzene	16.02	156	3056030	184.86	ug/Kg	97
81)	1,1,2,2-Tetrachloroethane	16.03	83	2128171	161.95	ug/Kg	100
82)	1,3,5-Trimethylbenzene	16.13	105	7760181	171.77	ug/Kg	96
83)	2-Chlorotoluene	16.16	91	7271478	168.99	ug/Kg	93
84)	trans-1,4-Dichloro-2-Buten	16.20	53	630412	366.79	ug/Kg#	79
85)	1,2,3-Trichloropropane	16.20	110	529841	144.68	ug/Kg	94
86)	Cyclohexanone	16.27	55	304866	749.71	ug/Kg	88
87)	4-Chlorotoluene	16.31	91	6650471	177.01	ug/Kg	95
88)	tert-Butylbenzene	16.44	91	4982436	173.95	ug/Kg	97
89)	1,2,4-Trimethylbenzene	16.50	105	6822834	160.15	ug/Kg	98
90)	Pentachloroethane	16.51	167	1540814	161.68	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
G0066797.D APP9-G.M Tue Sep 14 14:46:09 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066797.D Vial: 6
Acq On : 14 Sep 2010 2:13 pm Operator: MikeM
Sample : ic2523-6 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39:23 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:39:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

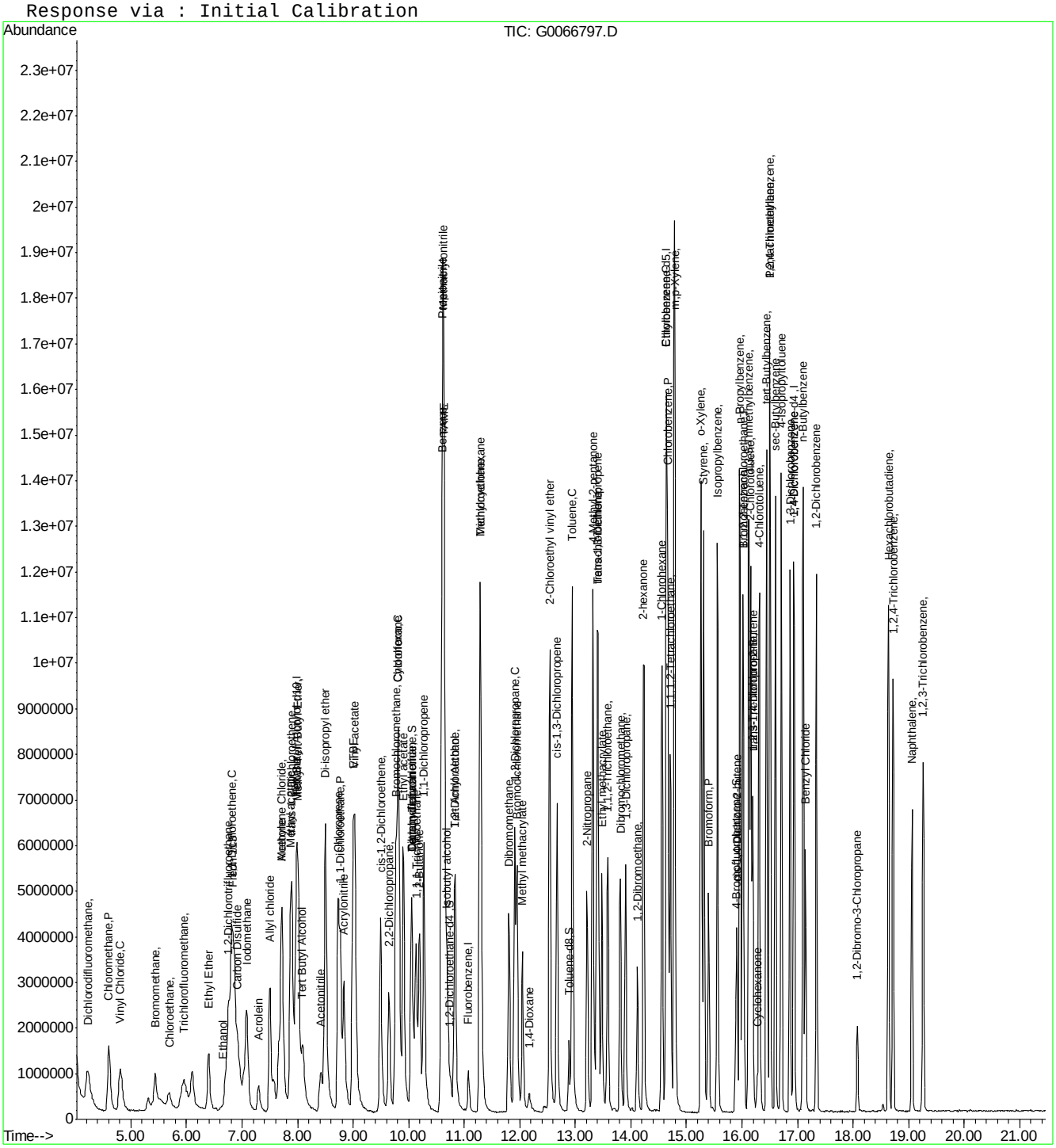
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	8676076	163.43	ug/Kg	96
92)	4-Isopropyltoluene	16.71	119	7257968	171.08	ug/Kg	65
93)	1,3-Dichlorobenzene	16.87	146	4881294	188.24	ug/Kg	97
94)	1,4-Dichlorobenzene	16.94	146	4731015	183.33	ug/Kg	98
95)	n-Butylbenzene	17.10	92	4276712	185.10	ug/Kg	91
96)	Benzyl Chloride	17.14	126	781045	195.97	ug/Kg#	87
97)	1,2-Dichlorobenzene	17.34	146	4678704	189.29	ug/Kg	97
98)	1,2-Dibromo-3-Chloropropan	18.08	75	448569	184.73	ug/Kg	78
99)	Hexachlorobutadiene	18.64	225	2687483	206.61	ug/Kg	93
100)	1,2,4-Trichlorobenzene	18.72	180	3325963	224.37	ug/Kg	96
101)	Naphthalene	19.06	128	5339679	219.31	ug/Kg	99
102)	1,2,3-Trichlorobenzene	19.26	180	2722175	217.36	ug/Kg	98
104)	Ethanol	6.65	45	377820	3557.86	ug/Kg	100
105)	Acrolein	7.30	56	908811	1020.36	ug/Kg	100
106)	Tert Butyl Alcohol	8.10	59	2176558	1933.54	ug/Kg	94
107)	Isobutyl alcohol	10.70	42	1064044	4283.23	ug/Kg	96
108)	Tert Amyl Alcohol	10.84	59	1664513	2048.86	ug/Kg	97
109)	1,4-Dioxane	12.18	88	426894	4066.48	ug/Kg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066797.D Vial: 6
Acq On : 14 Sep 2010 2:13 pm Operator: MikeM
Sample : ic2523-6 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 14:39 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 14:45:00 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066798.D Vial: 7
Acq On : 14 Sep 2010 2:39 pm Operator: MikeM
Sample : icv2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 15:09:21 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.08	96	1017089	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.65	117	1002297	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	621747	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.98	65	173965	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.05	113	359640	48.26	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 96.52%			
44) 1,2-Dichloroethane-d4	10.74	65	356422	49.09	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 98.18%			
55) Toluene-d8	12.88	98	1166425	48.78	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.56%			
77) 4-Bromofluorobenzene	15.89	174	597871	50.17	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.34%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	726703	46.66	ug/Kg	98
3) Chloromethane	4.59	50	860149	50.04	ug/Kg	87
4) Vinyl Chloride	4.80	62	675019	47.02	ug/Kg	88
5) Bromomethane	5.44	94	242033	63.83	ug/Kg	91
6) Chloroethane	5.71	64	192008	45.88	ug/Kg	85
7) Trichlorofluoromethane	5.94	101	689781	49.52	ug/Kg	84
8) Ethyl Ether	6.40	59	331421	49.07	ug/Kg	94
9) 1,2-Dichlorotrifluoroethan	6.74	67	805368	56.01	ug/Kg	92
10) 1,1-Dichloroethene	6.81	61	1038521	47.06	ug/Kg	92
11) Freon 113	6.84	101	643379	49.37	ug/Kg	97
12) Carbon Disulfide	6.92	76	1789205	50.43	ug/Kg	89
13) Iodomethane	7.08	142	1452999	52.82	ug/Kg	100
14) Allyl chloride	7.50	41	974981	54.52	ug/Kg#	79
15) Methylene Chloride	7.70	49	1175115	54.83	ug/Kg	92
16) Acetone	7.72	43	1148565	197.31	ug/Kg	92
17) Methyl acetate	7.87	43	2073448	270.08	ug/Kg	97
18) trans-1,2-Dichloroethene	7.90	61	1050724	50.29	ug/Kg	99
19) Hexane	7.98	56	566144	52.77	ug/Kg#	71
20) Methyl Tert Butyl Ether	8.01	73	1842100	52.43	ug/Kg	88
21) Acetonitrile	8.42	41	488255	508.62	ug/Kg	95
22) Di-isopropyl ether	8.51	45	2431614	53.31	ug/Kg	94
23) Chloroprene	8.73	53	1090145	52.85	ug/Kg	97
24) 1,1-Dichloroethane	8.77	63	1284499	49.36	ug/Kg	98
25) Acrylonitrile	8.83	53	962397	277.66	ug/Kg	96
26) ETBE	9.00	59	2204822	51.14	ug/Kg	96
27) Vinyl acetate	9.03	43	3908649	334.97	ug/Kg	99
28) cis-1,2-Dichloroethene	9.49	96	712274	50.96	ug/Kg	96
29) 2,2-Dichloropropane	9.65	77	634337	47.82	ug/Kg	94
30) Bromochloromethane	9.77	128	433066	49.20	ug/Kg#	84
31) Cyclohexane	9.80	56	1099891	50.35	ug/Kg	95
32) Chloroform	9.82	83	1429493	49.47	ug/Kg	99
33) Ethyl acetate	9.91	43	2744441	247.95	ug/Kg	97
34) Tetrahydrofuran	10.05	42	143379	45.29	ug/Kg	96
36) Carbon Tetrachloride	10.05	117	1214806	48.26	ug/Kg	95

(#) = qualifier out of range (m) = manual integration
G0066798.D APP9-G.M Tue Sep 14 15:11:21 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066798.D Vial: 7
Acq On : 14 Sep 2010 2:39 pm Operator: MikeM
Sample : icv2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 15:09:21 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	1064107	49.81	ug/Kg	95
38)	2-Butanone	10.19	43	1490016	216.68	ug/Kg	99
39)	1,1-Dichloropropene	10.27	75	975393	50.37	ug/Kg	98
40)	Propionitrile	10.59	54	722007	585.94	ug/Kg	89
41)	Methacrylonitrile	10.61	41	4423059	568.53	ug/Kg	93
42)	Benzene	10.59	78	2379727	49.39	ug/Kg	96
43)	TAME	10.64	73	1822088	53.49	ug/Kg	92
45)	1,2-Dichloroethane	10.83	62	1120789	51.23	ug/Kg	92
46)	Trichloroethene	11.28	95	758242	50.97	ug/Kg	95
47)	Methylcyclohexane	11.29	83	1036114	51.85	ug/Kg	87
48)	Dibromomethane	11.80	93	522226	50.03	ug/Kg	92
49)	1,2-Dichloropropane	11.91	63	707047	52.11	ug/Kg	92
50)	Bromodichloromethane	11.94	83	1048300	49.17	ug/Kg	96
51)	Methyl methacrylate	12.04	41	648800	58.89	ug/Kg	96
52)	2-Chloroethyl vinyl ether	12.54	63	1408765	270.56	ug/Kg	95
53)	cis-1,3-Dichloropropene	12.66	75	1139149	52.03	ug/Kg	97
56)	Toluene	12.94	91	2696610	50.74	ug/Kg	97
57)	2-Nitropropane	13.21	41	916354	242.47	ug/Kg	99
58)	4-Methyl-2-pentanone	13.31	43	3001747	270.17	ug/Kg	95
59)	trans-1,3-Dichloropropene	13.38	75	1029637	56.44	ug/Kg	95
60)	Tetrachloroethene	13.40	166	979681	54.81	ug/Kg	97
61)	Ethyl methacrylate	13.47	69	740480	54.84	ug/Kg	90
62)	1,1,2-Trichloroethane	13.58	83	501558	50.67	ug/Kg	82
63)	Dibromochloromethane	13.81	129	865659	51.03	ug/Kg	97
64)	1,3-Dichloropropane	13.91	76	952473	51.23	ug/Kg	94
65)	1,2-Dibromoethane	14.11	107	661729	50.45	ug/Kg	97
66)	2-hexanone	14.23	43	2284723	246.89	ug/Kg	99
67)	1-Chlorohexane	14.56	91	875256	47.93	ug/Kg	95
68)	Ethylbenzene	14.64	91	2897424	51.09	ug/Kg	97
69)	Chlorobenzene	14.66	112	1764678	53.17	ug/Kg	90
70)	1,1,1,2-Tetrachloroethane	14.71	131	755680	53.38	ug/Kg	93
71)	m,p-Xylene	14.78	91	4621175	107.85	ug/Kg	95
72)	o-Xylene	15.27	91	2474756	50.60	ug/Kg	95
73)	Styrene	15.32	104	1803305	52.74	ug/Kg	96
74)	Bromoform	15.39	173	632758	52.42	ug/Kg	97
75)	Isopropylbenzene	15.56	105	2843982	59.12	ug/Kg	98
78)	cis-1,4-Dichloro-2-butene	15.91	53	261987	57.66	ug/Kg	92
79)	n-Propylbenzene	15.97	91	3355799	50.70	ug/Kg	94
80)	Bromobenzene	16.01	156	886897	50.84	ug/Kg	94
81)	1,1,2,2-Tetrachloroethane	16.02	83	692938	58.47	ug/Kg	95
82)	1,3,5-Trimethylbenzene	16.12	105	2469302	52.37	ug/Kg	99
83)	2-Chlorotoluene	16.16	91	2365427	52.80	ug/Kg	94
84)	trans-1,4-Dichloro-2-Buten	16.20	53	178416	98.49	ug/Kg#	69
85)	1,2,3-Trichloropropane	16.19	110	168984	44.39	ug/Kg	91
86)	Cyclohexanone	16.28	55	97102	292.20	ug/Kg	98
87)	4-Chlorotoluene	16.31	91	2091585	53.10	ug/Kg	99
88)	tert-Butylbenzene	16.44	91	1558731	52.05	ug/Kg	99
89)	1,2,4-Trimethylbenzene	16.50	105	2320161	52.70	ug/Kg	99
90)	Pentachloroethane	16.51	167	534849	54.24	ug/Kg	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066798.D Vial: 7
Acq On : 14 Sep 2010 2:39 pm Operator: MikeM
Sample : icv2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 15:09:21 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

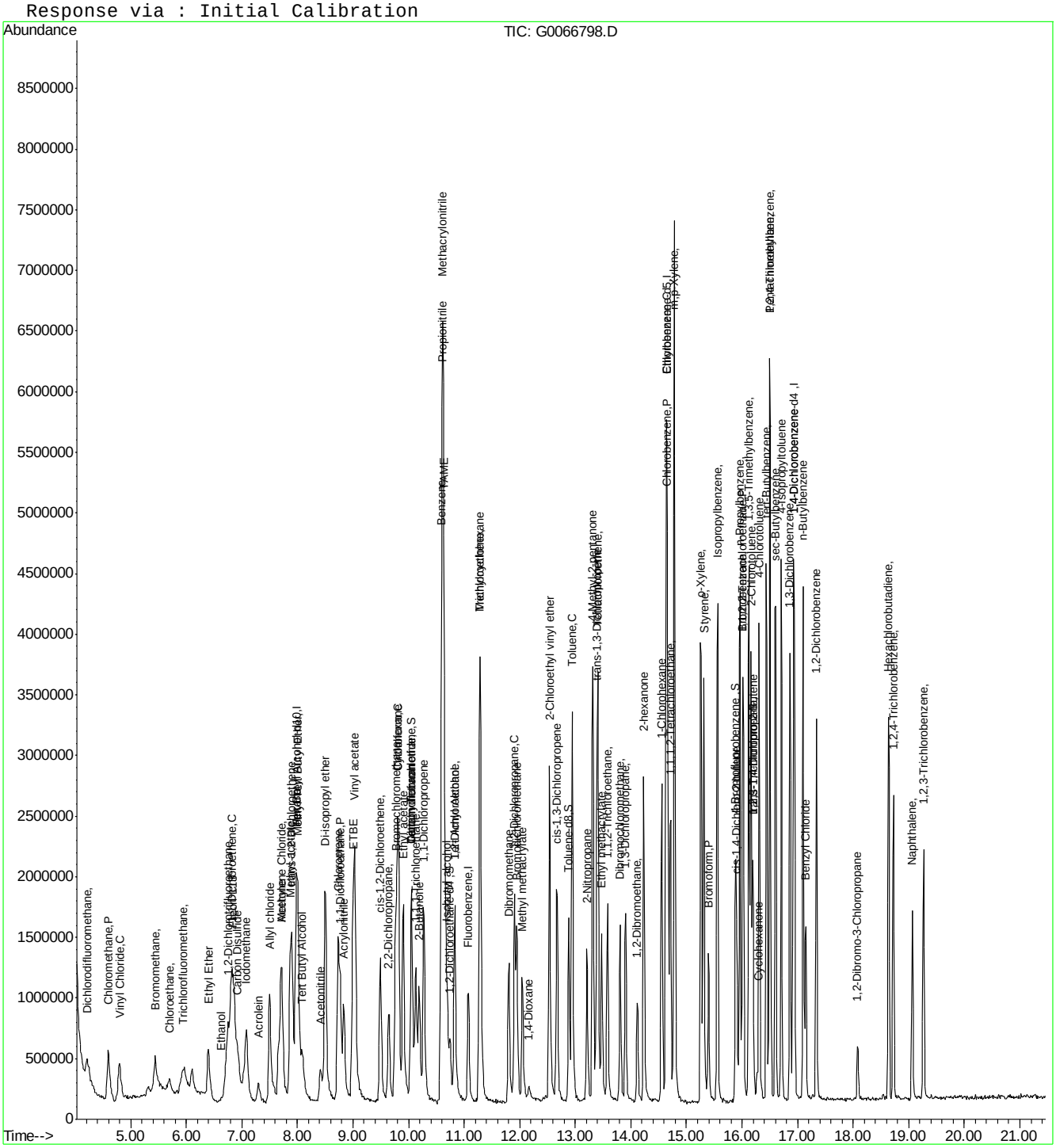
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.61	105	2911857	52.93	ug/Kg	96
92)	4-Isopropyltoluene	16.70	119	2354332	53.20	ug/Kg	66
93)	1,3-Dichlorobenzene	16.86	146	1453163	52.95	ug/Kg	96
94)	1,4-Dichlorobenzene	16.94	146	1400551	51.49	ug/Kg	96
95)	n-Butylbenzene	17.10	92	1263861	51.82	ug/Kg	94
96)	Benzyl Chloride	17.15	126	210929	49.68	ug/Kg#	93
97)	1,2-Dichlorobenzene	17.35	146	1342879	51.29	ug/Kg	94
98)	1,2-Dibromo-3-Chloropropan	18.07	75	120566	47.05	ug/Kg	91
99)	Hexachlorobutadiene	18.64	225	749875	53.64	ug/Kg	96
100)	1,2,4-Trichlorobenzene	18.72	180	860427	53.23	ug/Kg	96
101)	Naphthalene	19.07	128	1371052	51.85	ug/Kg	98
102)	1,2,3-Trichlorobenzene	19.27	180	723961	53.31	ug/Kg	98
104)	Ethanol	6.63	45	117833	1243.48	ug/Kg	72
105)	Acrolein	7.29	56	253445	238.95	ug/Kg	91
106)	Tert Butyl Alcohol	8.08	59	617797	465.01	ug/Kg	97
107)	Isobutyl alcohol	10.69	42	334457	1121.18	ug/Kg	94
108)	Tert Amyl Alcohol	10.83	59	500625	517.12	ug/Kg	93
109)	1,4-Dioxane	12.16	88	127871	1023.50	ug/Kg	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed
G0066798.D APP9-G.M Tue Sep 14 15:11:22 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091410\G0066798.D Vial: 7
Acq On : 14 Sep 2010 2:39 pm Operator: MikeM
Sample : icv2523-3 Inst : MSVOA1
Misc : ms15387,vg2523,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 14 15:09 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066854.D Vial: 1
Acq On : 16 Sep 2010 10:22 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:46:11 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1033951	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	982964	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.92	152	612634	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.99	65	118427	250.00	ug/Kg	0.01
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	371335	49.02	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.04%			
44) 1,2-Dichloroethane-d4	10.75	65	334753	45.36	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 90.72%			
55) Toluene-d8	12.88	98	1232982	52.58	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 105.16%			
77) 4-Bromofluorobenzene	15.88	174	614699	52.35	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 104.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	1170166	73.90	ug/Kg	96
3) Chloromethane	4.60	50	1466556	83.93	ug/Kg	95
4) Vinyl Chloride	4.81	62	1243732	85.23	ug/Kg	96
5) Bromomethane	5.43	94	369030	95.74	ug/Kg	89
6) Chloroethane	5.69	64	396562	106.63	ug/Kg	83
7) Trichlorofluoromethane	5.95	101	1332844	94.13	ug/Kg	95
8) Ethyl Ether	6.40	59	633848	92.31	ug/Kg	96
9) 1,2-Dichlorotrifluoroethan	6.74	67	1333636	91.24	ug/Kg	91
10) 1,1-Dichloroethene	6.80	61	2045973	91.20	ug/Kg	98
11) Freon 113	6.84	101	1186029	89.52	ug/Kg	98
12) Carbon Disulfide	6.91	76	3361538	93.21	ug/Kg	100
13) Iodomethane	7.08	142	2601339	93.03	ug/Kg	97
14) Allyl chloride	7.49	41	1840625	101.24	ug/Kg	91
15) Methylene Chloride	7.70	49	2186267	100.35	ug/Kg	88
16) Acetone	7.71	43	2714013	458.63	ug/Kg	94
17) Methyl acetate	7.87	43	2934984	376.07	ug/Kg	99
18) trans-1,2-Dichloroethene	7.90	61	2082805	98.05	ug/Kg	97
19) Hexane	7.98	56	982049	90.05	ug/Kg#	80
20) Methyl Tert Butyl Ether	8.01	73	3203714	89.70	ug/Kg	88
21) Acetonitrile	8.41	41	827473	847.92	ug/Kg	98
22) Di-isopropyl ether	8.50	45	4395478	94.79	ug/Kg	90
23) Chloroprene	8.73	53	1958523	93.40	ug/Kg	98
24) 1,1-Dichloroethane	8.77	63	2489562	94.11	ug/Kg	96
25) Acrylonitrile	8.82	53	1488159	422.34	ug/Kg	97
26) ETBE	9.00	59	4146003	94.59	ug/Kg	95
27) Vinyl acetate	9.03	43	6274115	528.92	ug/Kg	99
28) cis-1,2-Dichloroethene	9.49	96	1375427	96.80	ug/Kg	92
29) 2,2-Dichloropropane	9.64	77	1257159	93.23	ug/Kg	95
30) Bromochloromethane	9.76	128	811106	90.64	ug/Kg	86
31) Cyclohexane	9.79	56	1945606	87.61	ug/Kg	91
32) Chloroform	9.81	83	2697104	91.82	ug/Kg	99
33) Ethyl acetate	9.90	43	4731980	420.54	ug/Kg	99
34) Tetrahydrofuran	10.06	42	244753	76.04	ug/Kg	94
36) Carbon Tetrachloride	10.05	117	2344536	91.61	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
G0066854.D APP9-G.M Thu Sep 16 10:47:14 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066854.D Vial: 1
Acq On : 16 Sep 2010 10:22 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:46:11 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	2036428	93.76	ug/Kg	98
38)	2-Butanone	10.18	43	2894011	413.98	ug/Kg	100
39)	1,1-Dichloropropene	10.27	75	1812917	92.09	ug/Kg	94
40)	Propionitrile	10.59	54	1076070	859.03	ug/Kg	85
41)	Methacrylonitrile	10.62	41	6587431	832.93	ug/Kg	97
42)	Benzene	10.59	78	4509439	92.07	ug/Kg	96
43)	TAME	10.64	73	3160242	91.26	ug/Kg	98
45)	1,2-Dichloroethane	10.83	62	2004556	90.14	ug/Kg	95
46)	Trichloroethene	11.28	95	1408866	93.16	ug/Kg	93
47)	Methylcyclohexane	11.29	83	1855199	91.33	ug/Kg	90
48)	Dibromomethane	11.80	93	945995	89.15	ug/Kg	86
49)	1,2-Dichloropropane	11.90	63	1282982	93.02	ug/Kg	93
50)	Bromodichloromethane	11.95	83	2038628	94.06	ug/Kg	99
51)	Methyl methacrylate	12.04	41	956501	85.41	ug/Kg	96
52)	2-Chloroethyl vinyl ether	12.53	63	2733660	516.45	ug/Kg	98
53)	cis-1,3-Dichloropropene	12.67	75	2201211	98.89	ug/Kg	93
56)	Toluene	12.94	91	5221387	100.18	ug/Kg	98
57)	2-Nitropropane	13.21	41	1648516	444.79	ug/Kg	99
58)	4-Methyl-2-pentanone	13.31	43	4832154	443.46	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.38	75	1733395	96.89	ug/Kg	98
60)	Tetrachloroethene	13.41	166	1609391	91.81	ug/Kg	96
61)	Ethyl methacrylate	13.47	69	1250694	94.46	ug/Kg	94
62)	1,1,2-Trichloroethane	13.57	83	848297	87.38	ug/Kg	93
63)	Dibromochloromethane	13.80	129	1494695	89.85	ug/Kg	99
64)	1,3-Dichloropropane	13.90	76	1686405	92.48	ug/Kg	95
65)	1,2-Dibromoethane	14.11	107	1184654	92.10	ug/Kg	93
66)	2-hexanone	14.22	43	4077412	449.28	ug/Kg	99
67)	1-Chlorohexane	14.55	91	1786011	99.72	ug/Kg	94
68)	Ethylbenzene	14.63	91	5482042	98.56	ug/Kg	94
69)	Chlorobenzene	14.66	112	3130328	96.17	ug/Kg	91
70)	1,1,1,2-Tetrachloroethane	14.71	131	1296000	93.35	ug/Kg	96
71)	m,p-Xylene	14.78	91	8114012	193.09	ug/Kg	98
72)	o-Xylene	15.26	91	4723514	98.48	ug/Kg	97
73)	Styrene	15.31	104	3397630	101.31	ug/Kg	98
74)	Bromoform	15.40	173	1097919	92.74	ug/Kg	98
75)	Isopropylbenzene	15.56	105	4783238	101.38	ug/Kg	100
78)	cis-1,4-Dichloro-2-butene	15.90	53	425209	94.98	ug/Kg#	87
79)	n-Propylbenzene	15.96	91	6332183	97.08	ug/Kg	94
80)	Bromobenzene	16.01	156	1604869	93.36	ug/Kg	96
81)	1,1,2,2-Tetrachloroethane	16.03	83	1096567	93.91	ug/Kg	97
82)	1,3,5-Trimethylbenzene	16.12	105	4440003	95.57	ug/Kg	98
83)	2-Chlorotoluene	16.16	91	4261699	96.54	ug/Kg	90
84)	trans-1,4-Dichloro-2-Buten	16.20	53	321830	180.29	ug/Kg#	73
85)	1,2,3-Trichloropropane	16.19	110	306654	87.89	ug/Kg	90
86)	Cyclohexanone	16.26	55	125644	383.71	ug/Kg	93
87)	4-Chlorotoluene	16.30	91	3878774	99.94	ug/Kg	99
88)	tert-Butylbenzene	16.43	91	2849942	96.57	ug/Kg	95
89)	1,2,4-Trimethylbenzene	16.49	105	4170351	96.14	ug/Kg	96
90)	Pentachloroethane	16.50	167	929778	95.69	ug/Kg	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066854.D Vial: 1
Acq On : 16 Sep 2010 10:22 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:46:11 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

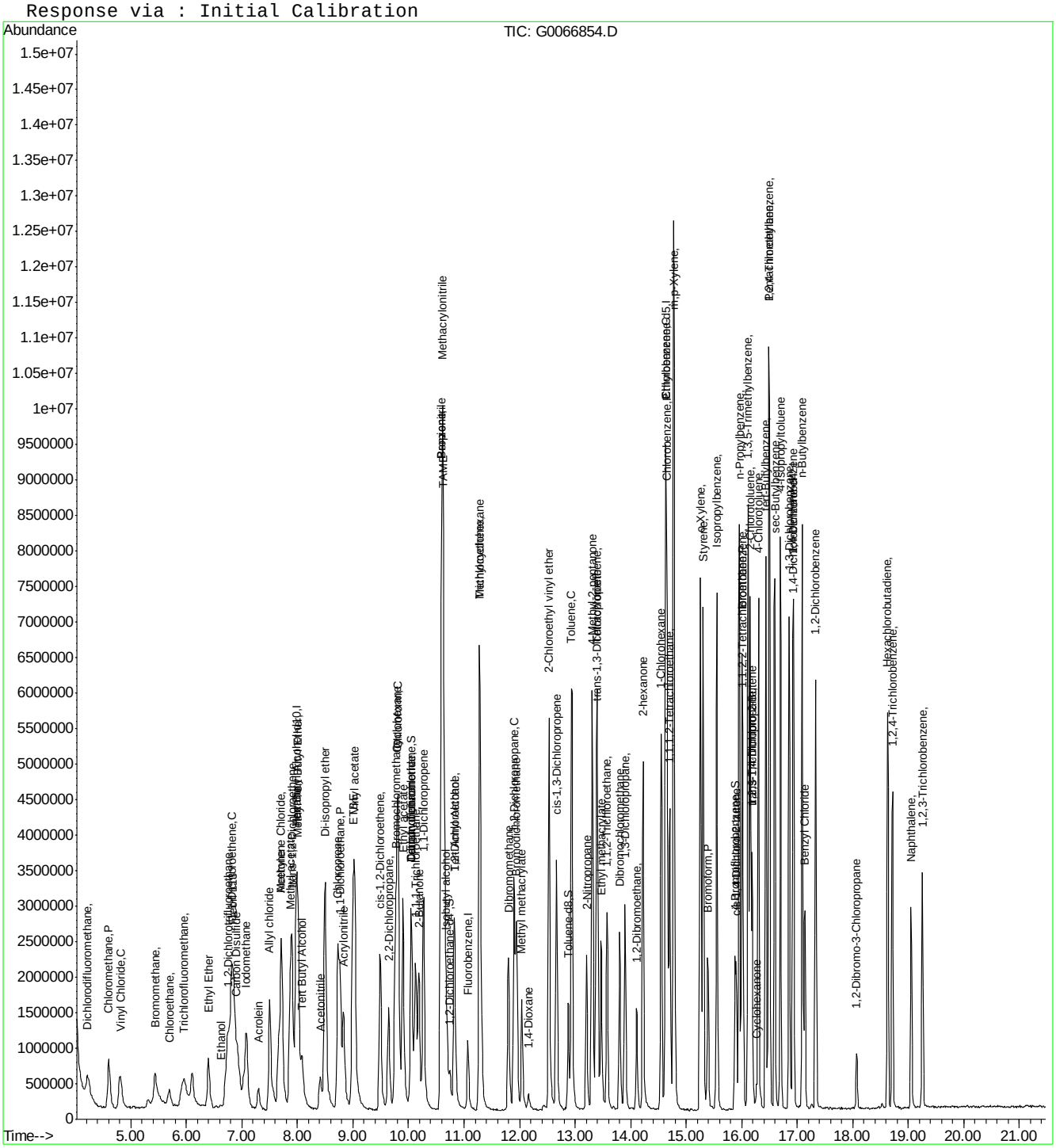
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	5214991	96.21	ug/Kg	97
92)	4-Isopropyltoluene	16.70	119	4202691	96.39	ug/Kg	64
93)	1,3-Dichlorobenzene	16.86	146	2703862	99.99	ug/Kg	98
94)	1,4-Dichlorobenzene	16.93	146	2611200	97.43	ug/Kg	97
95)	n-Butylbenzene	17.09	92	2441436	101.60	ug/Kg	95
96)	Benzyl Chloride	17.14	126	386003	92.27	ug/Kg#	90
97)	1,2-Dichlorobenzene	17.34	146	2548883	98.80	ug/Kg	93
98)	1,2-Dibromo-3-Chloropropan	18.07	75	205771	81.50	ug/Kg	94
99)	Hexachlorobutadiene	18.63	225	1285636	93.34	ug/Kg	98
100)	1,2,4-Trichlorobenzene	18.72	180	1584154	99.45	ug/Kg	97
101)	Naphthalene	19.05	128	2288384	87.83	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.26	180	1210072	90.44	ug/Kg	97
104)	Ethanol	6.62	45	200138	2835.90	ug/Kg	99
105)	Acrolein	7.30	56	437197	605.50	ug/Kg	98
106)	Tert Butyl Alcohol	8.09	59	1023001	1131.10	ug/Kg	96
107)	Isobutyl alcohol	10.69	42	514151	2531.85	ug/Kg	89
108)	Tert Amyl Alcohol	10.83	59	758697	1151.22	ug/Kg	94
109)	1,4-Dioxane	12.17	88	200407	2356.35	ug/Kg	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091610\G0066854.D Vial: 1
Acq On : 16 Sep 2010 10:22 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15380,vg2525,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:45 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066899.D Vial: 1
Acq On : 17 Sep 2010 10:28 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 10:50:24 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.07	96	1112653	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.64	117	1104601	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	16.93	152	617353	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	7.99	65	129271	250.00	ug/Kg	0.01
System Monitoring Compounds						
35) Dibromofluoromethane	10.06	113	410262	50.32	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.64%			
44) 1,2-Dichloroethane-d4	10.75	65	363397	45.76	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 91.52%			
55) Toluene-d8	12.89	98	1330498	50.49	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 100.98%			
77) 4-Bromofluorobenzene	15.88	174	634576	53.63	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 107.26%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	1198485	70.34	ug/Kg	95
3) Chloromethane	4.60	50	1862967	99.08	ug/Kg	90
4) Vinyl Chloride	4.80	62	1692438	107.77	ug/Kg	93
5) Bromomethane	5.44	94	492510	118.74	ug/Kg	87
6) Chloroethane	5.69	64	527997	145.19	ug/Kg	90
7) Trichlorofluoromethane	5.95	101	1873593	122.96	ug/Kg	99
8) Ethyl Ether	6.40	59	745705	100.92	ug/Kg	97
9) 1,2-Dichlorotrifluoroethan	6.75	67	1773792	112.77	ug/Kg	93
10) 1,1-Dichloroethene	6.80	61	2664805	110.38	ug/Kg	97
11) Freon 113	6.85	101	1548548	108.61	ug/Kg	96
12) Carbon Disulfide	6.91	76	4195333	108.10	ug/Kg	97
13) Iodomethane	7.08	142	3301152	109.70	ug/Kg	99
14) Allyl chloride	7.50	41	2166079	110.72	ug/Kg	90
15) Methylene Chloride	7.70	49	2514232	107.25	ug/Kg	85
16) Acetone	7.71	43	3146256	494.07	ug/Kg	93
17) Methyl acetate	7.87	43	3369579	401.21	ug/Kg	96
18) trans-1,2-Dichloroethene	7.90	61	2611606	114.25	ug/Kg	95
19) Hexane	7.99	56	1250915	106.59	ug/Kg#	74
20) Methyl Tert Butyl Ether	8.01	73	3690273	96.01	ug/Kg	88
21) Acetonitrile	8.40	41	941527	896.55	ug/Kg	93
22) Di-isopropyl ether	8.50	45	5057082	101.34	ug/Kg	90
23) Chloroprene	8.73	53	2406293	106.64	ug/Kg	97
24) 1,1-Dichloroethane	8.77	63	3064535	107.65	ug/Kg	97
25) Acrylonitrile	8.83	53	1633787	430.87	ug/Kg	97
26) ETBE	9.00	59	4840622	102.63	ug/Kg	95
27) Vinyl acetate	9.03	43	7250039	567.96	ug/Kg	100
28) cis-1,2-Dichloroethene	9.50	96	1671041	109.29	ug/Kg	93
29) 2,2-Dichloropropane	9.64	77	1688000	116.33	ug/Kg	96
30) Bromochloromethane	9.76	128	959567	99.64	ug/Kg	90
31) Cyclohexane	9.79	56	2530819	105.90	ug/Kg	93
32) Chloroform	9.82	83	3418701	108.16	ug/Kg	99
33) Ethyl acetate	9.90	43	5324621	439.74	ug/Kg	99
34) Tetrahydrofuran	10.06	42	253655	73.24	ug/Kg	93
36) Carbon Tetrachloride	10.05	117	3055416	110.95	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
G0066899.D APP9-G.M Fri Sep 17 10:51:51 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066899.D Vial: 1
Acq On : 17 Sep 2010 10:28 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 10:50:24 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.13	97	2640109	112.96	ug/Kg	98
38)	2-Butanone	10.19	43	3140863	417.51	ug/Kg	98
39)	1,1-Dichloropropene	10.27	75	2387213	112.68	ug/Kg	95
40)	Propionitrile	10.59	54	1197389	888.27	ug/Kg#	73
41)	Methacrylonitrile	10.62	41	7488350	879.87	ug/Kg	95
42)	Benzene	10.59	78	5771381	109.50	ug/Kg	95
43)	TAME	10.65	73	3694511	99.14	ug/Kg	96
45)	1,2-Dichloroethane	10.83	62	2392470	99.97	ug/Kg	96
46)	Trichloroethene	11.28	95	1835608	112.79	ug/Kg	94
47)	Methylcyclohexane	11.29	83	2386212	109.16	ug/Kg	91
48)	Dibromomethane	11.80	93	1069359	93.65	ug/Kg#	78
49)	1,2-Dichloropropane	11.91	63	1588006	106.99	ug/Kg	88
50)	Bromodichloromethane	11.95	83	2459594	105.45	ug/Kg	99
51)	Methyl methacrylate	12.04	41	1053723	87.43	ug/Kg	95
52)	2-Chloroethyl vinyl ether	12.53	63	3106554	545.39	ug/Kg	89
53)	cis-1,3-Dichloropropene	12.67	75	2593892	108.29	ug/Kg	95
56)	Toluene	12.94	91	6559464	111.99	ug/Kg	98
57)	2-Nitropropane	13.21	41	1941155	466.07	ug/Kg	99
58)	4-Methyl-2-pentanone	13.31	43	5334414	435.65	ug/Kg	95
59)	trans-1,3-Dichloropropene	13.39	75	2054189	102.17	ug/Kg	91
60)	Tetrachloroethene	13.41	166	2143587	108.81	ug/Kg	95
61)	Ethyl methacrylate	13.48	69	1451561	97.55	ug/Kg	92
62)	1,1,2-Trichloroethane	13.57	83	1023379	93.81	ug/Kg	93
63)	Dibromochloromethane	13.80	129	1878071	100.46	ug/Kg	99
64)	1,3-Dichloropropane	13.90	76	2033285	99.23	ug/Kg	92
65)	1,2-Dibromoethane	14.12	107	1383525	95.71	ug/Kg	96
66)	2-hexanone	14.23	43	4474257	438.72	ug/Kg	98
67)	1-Chlorohexane	14.56	91	2274912	113.03	ug/Kg	96
68)	Ethylbenzene	14.64	91	6962362	111.39	ug/Kg	98
69)	Chlorobenzene	14.66	112	3995506	109.23	ug/Kg	94
70)	1,1,1,2-Tetrachloroethane	14.71	131	1661119	106.47	ug/Kg	96
71)	m,p-Xylene	14.78	91	10301023	218.14	ug/Kg	97
72)	o-Xylene	15.26	91	5975723	110.87	ug/Kg	97
73)	Styrene	15.31	104	4160430	110.40	ug/Kg	97
74)	Bromoform	15.40	173	1266729	95.21	ug/Kg	98
75)	Isopropylbenzene	15.56	105	5948384	112.19	ug/Kg	95
78)	cis-1,4-Dichloro-2-butene	15.91	53	427970	94.86	ug/Kg#	83
79)	n-Propylbenzene	15.96	91	8048843	122.46	ug/Kg	94
80)	Bromobenzene	16.01	156	1959463	113.11	ug/Kg	100
81)	1,1,2,2-Tetrachloroethane	16.03	83	1237616	105.18	ug/Kg	96
82)	1,3,5-Trimethylbenzene	16.12	105	5603581	119.69	ug/Kg	99
83)	2-Chlorotoluene	16.16	91	5283211	118.76	ug/Kg	95
84)	trans-1,4-Dichloro-2-Buten	16.20	53	357287	198.63	ug/Kg#	76
85)	1,2,3-Trichloropropane	16.19	110	333944	96.39	ug/Kg	96
86)	Cyclohexanone	16.27	55	143834	435.91	ug/Kg	94
87)	4-Chlorotoluene	16.30	91	4674649	119.53	ug/Kg	97
88)	tert-Butylbenzene	16.44	91	3526962	118.60	ug/Kg	97
89)	1,2,4-Trimethylbenzene	16.49	105	5201363	118.99	ug/Kg	96
90)	Pentachloroethane	16.51	167	1116328	114.02	ug/Kg	89

(#) = qualifier out of range (m) = manual integration
G0066899.D APP9-G.M Fri Sep 17 10:51:52 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066899.D Vial: 1
Acq On : 17 Sep 2010 10:28 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 10:50:24 2010 Quant Results File: APP9-G.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

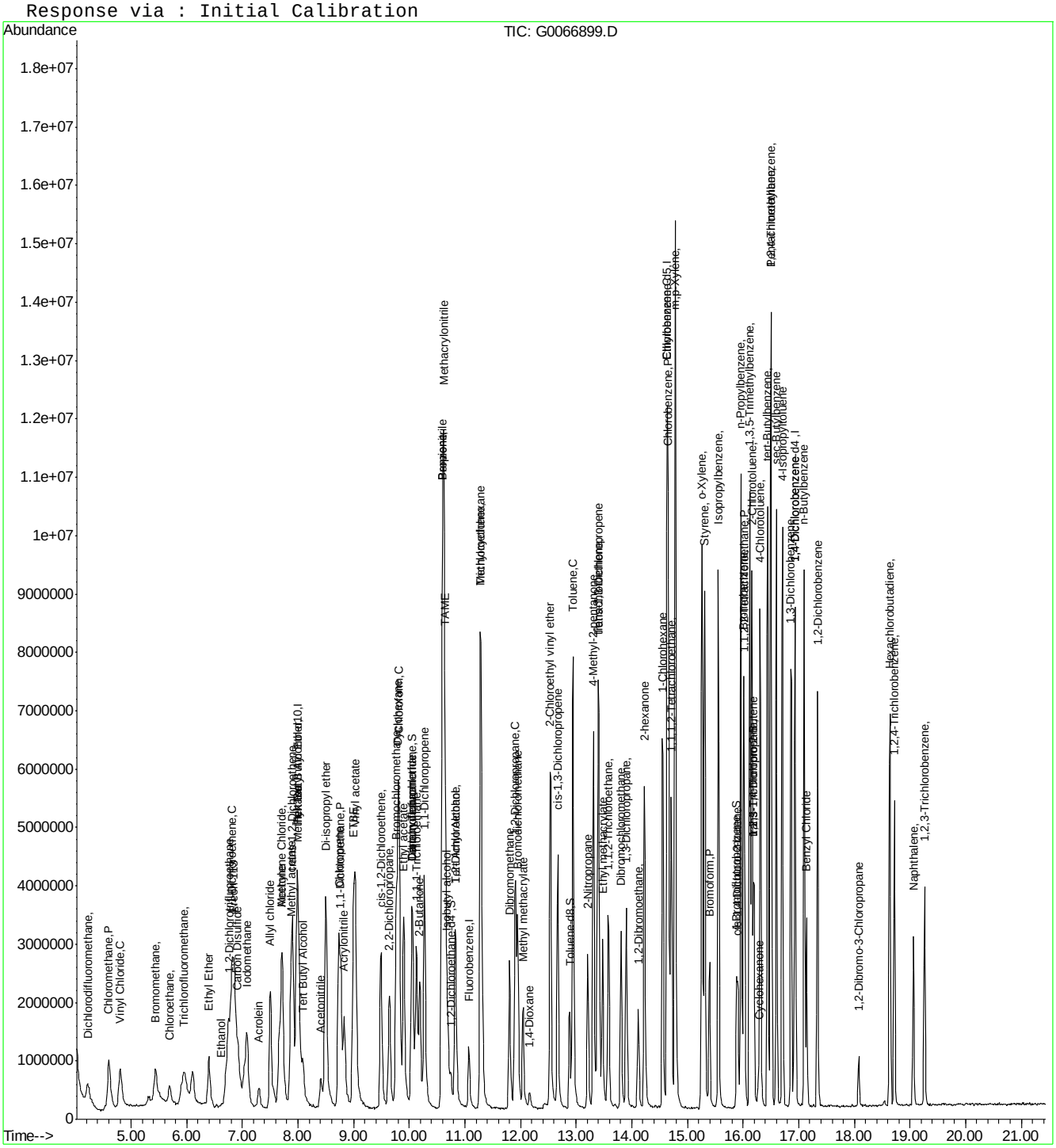
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.60	105	6407903	117.31	ug/Kg	96
92)	4-Isopropyltoluene	16.71	119	5336478	121.46	ug/Kg	63
93)	1,3-Dichlorobenzene	16.87	146	3123594	114.63	ug/Kg	99
94)	1,4-Dichlorobenzene	16.94	146	3005772	111.30	ug/Kg	96
95)	n-Butylbenzene	17.09	92	2905033	119.96	ug/Kg	97
96)	Benzyl Chloride	17.14	126	410081	97.28	ug/Kg#	89
97)	1,2-Dichlorobenzene	17.34	146	2804968	107.90	ug/Kg	95
98)	1,2-Dibromo-3-Chloropropan	18.08	75	216468	85.08	ug/Kg#	79
99)	Hexachlorobutadiene	18.64	225	1598920	115.19	ug/Kg	93
100)	1,2,4-Trichlorobenzene	18.72	180	1710256	106.55	ug/Kg	98
101)	Naphthalene	19.06	128	2351752	89.57	ug/Kg	100
102)	1,2,3-Trichlorobenzene	19.26	180	1277743	94.77	ug/Kg	96
104)	Ethanol	6.62	45	197644	2598.88	ug/Kg	91
105)	Acrolein	7.31	56	477775	606.19	ug/Kg	93
106)	Tert Butyl Alcohol	8.09	59	1067537	1081.33	ug/Kg	97
107)	Isobutyl alcohol	10.69	42	574565	2592.00	ug/Kg#	85
108)	Tert Amyl Alcohol	10.83	59	811464	1128.00	ug/Kg	93
109)	1,4-Dioxane	12.17	88	226743	2442.36	ug/Kg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : G:\HPCHEM\1\DATA\091710\G0066899.D Vial: 1
Acq On : 17 Sep 2010 10:28 am Operator: MikeM
Sample : cc2523-4 Inst : MSVOA1
Misc : ms15421,vg2526,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 17 10:50 2010 Quant Results File: APP9-G.RES

Method : C:\MSDCHEM\1\METHODS\APP9-G.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 14 15:09:06 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 10:37:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.44	96	1862137	50.00	ug/L		-0.01
47) Chlorobenzene-d5	10.52	117	1266911	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	663623	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.08	65	172407	250.00	ug/L		-0.02
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	454430	44.79	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 89.58%				
38) 1,2-Dichloroethane-d4	7.16	65	528799	45.90	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 91.80%				
48) Toluene-d8	8.99	98	1736034	56.05	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 112.10%#				
69) 4-Bromofluorobenzene	11.73	95	688842	66.55	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 133.10%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.77	85	11892	1.36	ug/L		98
3) Chloromethane	2.91	50	37280	1.20	ug/L		81
4) Vinyl Chloride	3.04	62	17580	0.67	ug/L		85
5) Bromomethane	3.44	94	12863	0.76	ug/L		88
6) Chloroethane	3.57	64	9645	0.58	ug/L		85
7) Trichlorofluoromethane	3.74	101	13253	0.39	ug/L		97
8) Ethyl Ether	3.99	59	12025	0.63	ug/L		80
9) 1,2-Dichlorotrifluoroethan	4.20	67	12630	0.51	ug/L	#	78
10) 1,1-Dichloroethene	4.25	61	19300	0.53	ug/L		97
11) Freon 113	4.31	101	8495	0.44	ug/L	#	81
12) Carbon Disulfide	4.32	76	38074	0.60	ug/L		73
13) Iodomethane	4.43	142	16357	0.46	ug/L		94
14) Methylene Chloride	4.84	49	38458	1.12	ug/L		95
15) Acetone	4.86	58	8114	6.56	ug/L	#	57
16) Methyl acetate	4.98	74	9056	5.08	ug/L	#	59
17) trans-1,2-Dichloroethene	5.01	61	25141	0.93	ug/L		96
18) Hexane	5.08	56	17229	1.00	ug/L	#	59
19) Methyl Tert Butyl Ether	5.13	73	38292	1.11	ug/L		77
20) Di-isopropyl ether	5.48	45	67572	0.95	ug/L		92
21) 1,1-Dichloroethane	5.63	63	31370	1.00	ug/L		92
22) Acrylonitrile	5.66	53	30794	5.27	ug/L		92
23) ETBE	5.86	59	55416	1.02	ug/L		87
24) Vinyl acetate	5.84	43	112895	4.45	ug/L		96
25) cis-1,2-Dichloroethene	6.18	96	15913	1.17	ug/L		89
26) 2,2-Dichloropropane	6.31	77	21148	1.19	ug/L		88
27) Bromochloromethane	6.38	128	7185	0.93	ug/L	#	74
28) Cyclohexane	6.45	56	31689	0.96	ug/L		95
29) Chloroform	6.44	83	27908	1.05	ug/L		97
30) Tetrahydrofuran	6.62	42	6577	1.34	ug/L		90
32) Carbon Tetrachloride	6.64	117	12008m	0.80	ug/L		
33) 1,1,1-Trichloroethane	6.69	97	19079	1.01	ug/L		93
34) 2-Butanone	6.73	43	32301	4.61	ug/L		88
35) 1,1-Dichloropropene	6.80	75	19934	1.04	ug/L		89
36) Benzene	7.05	78	65547	1.15	ug/L		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 10:37:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	38864	1.09	ug/L		91
39)	1,2-Dichloroethane	7.23	62	21414	1.08	ug/L		89
40)	Trichloroethene	7.62	95	15828	1.07	ug/L		85
41)	Methylcyclohexane	7.65	83	22513	0.94	ug/L		96
42)	Dibromomethane	8.03	93	8164	0.99	ug/L		79
43)	1,2-Dichloropropane	8.13	63	18661	1.01	ug/L		87
44)	Bromodichloromethane	8.16	83	17017	0.95	ug/L		91
45)	2-Chloroethyl vinyl ether	8.69	63	47389	4.61	ug/L		89
46)	cis-1,3-Dichloropropene	8.79	75	26301	1.16	ug/L		84
49)	Toluene	9.03	91	64362	1.23	ug/L		96
50)	2-Nitropropane	9.23	41	9709	3.38	ug/L		91
51)	4-Methyl-2-pentanone	9.36	43	65086	5.21	ug/L		93
52)	trans-1,3-Dichloropropene	9.41	75	19072	1.23	ug/L		91
53)	Tetrachloroethene	9.44	166	13530	0.96	ug/L		92
54)	1,1,2-Trichloroethane	9.58	83	10682	1.22	ug/L		88
55)	Dibromochloromethane	9.77	129	9261	0.98	ug/L		95
56)	1,3-Dichloropropane	9.86	76	21806	1.34	ug/L		85
57)	1,2-Dibromoethane	10.03	107	11546	1.20	ug/L		72
58)	2-hexanone	10.18	43	42628	5.24	ug/L		94
59)	1-Chlorohexane	10.49	91	21783	1.17	ug/L		89
60)	Ethylbenzene	10.55	91	69988	1.09	ug/L		89
61)	Chlorobenzene	10.54	112	38291	1.04	ug/L		91
62)	1,1,1,2-Tetrachloroethane	10.59	131	11062	0.94	ug/L		72
63)	m,p-Xylene	10.69	91	106569	2.05	ug/L		97
64)	o-Xylene	11.13	91	52488	1.15	ug/L		98
65)	Styrene	11.17	104	41624	1.20	ug/L		93
66)	Bromoform	11.22	173	5224	0.79	ug/L		90
67)	Isopropylbenzene	11.44	105	54501	1.20	ug/L		97
70)	n-Propylbenzene	11.86	91	76400	1.08	ug/L		88
71)	Bromobenzene	11.86	156	15606	1.10	ug/L		92
72)	1,1,2,2-Tetrachloroethane	11.91	83	13915	1.32	ug/L		97
73)	1,3,5-Trimethylbenzene	12.05	105	49214	1.05	ug/L		93
74)	2-Chlorotoluene	12.03	91	54504	1.16	ug/L		88
75)	trans-1,4-Dichloro-2-Buten	12.08	53	4184	1.08	ug/L	#	62
76)	1,2,3-Trichloropropane	12.06	110	3334	1.05	ug/L	#	60
77)	Cyclohexanone	12.11	55	5118	17.15	ug/L	#	71
78)	4-Chlorotoluene	12.20	91	48131	1.32	ug/L		79
79)	tert-Butylbenzene	12.38	91	30513	1.33	ug/L		99
80)	1,2,4-Trimethylbenzene	12.45	105	52056	1.20	ug/L		99
81)	sec-Butylbenzene	12.57	105	65200	1.15	ug/L		98
82)	4-Isopropyltoluene	12.70	119	50420	1.20	ug/L		82
83)	1,3-Dichlorobenzene	12.81	146	28872	1.22	ug/L		93
84)	1,4-Dichlorobenzene	12.90	146	29838	1.13	ug/L		90
85)	n-Butylbenzene	13.14	92	31800	1.09	ug/L		98
86)	Benzyl Chloride	13.14	126	4610	1.06	ug/L	#	87
87)	1,2-Dichlorobenzene	13.34	146	26608	1.15	ug/L		96
88)	1,2-Dibromo-3-Chloropropan	14.09	75	2046	1.86	ug/L	#	81
89)	Hexachlorobutadiene	14.67	225	9396	1.23	ug/L		96
90)	1,2,4-Trichlorobenzene	14.70	180	17765	0.98	ug/L	#	63

(#) = qualifier out of range (m) = manual integration
J059052.D 8260-J.M Thu Sep 02 08:40:44 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 10:37:02 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

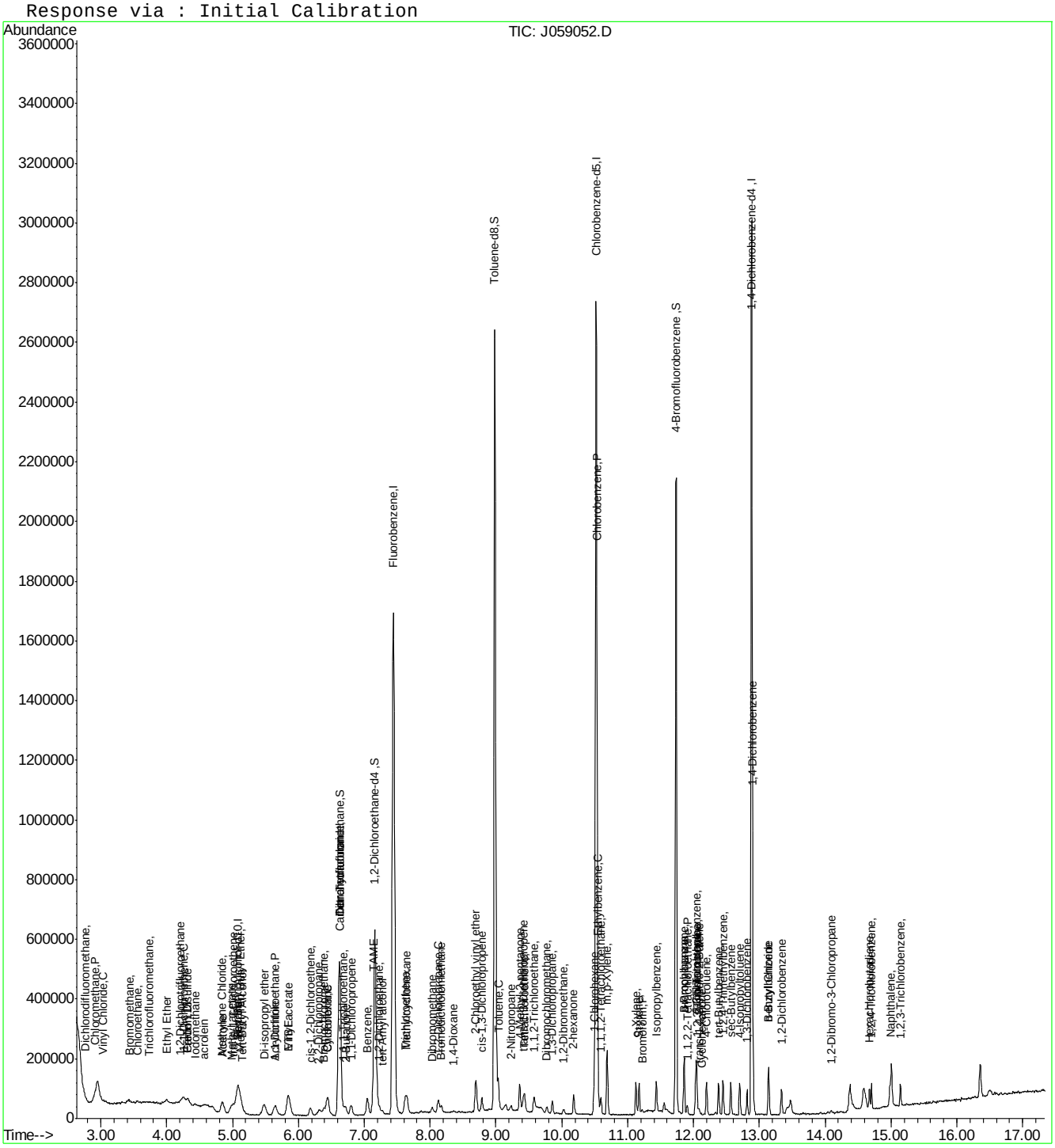
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91)	Naphthalene	14.98	128	31103	1.15	ug/L		96
92)	1,2,3-Trichlorobenzene	15.14	180	15611	1.03	ug/L		85
94)	acrolein	4.56	56	13562m	5.22	ug/L		
95)	Tert Butyl Alcohol	5.16	59	12412	11.72	ug/L	#	55
96)	tert Amyl alcohol	7.28	59	8949	10.69	ug/L		87
97)	1,4-Dioxane	8.35	88	2185	24.15	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:39 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

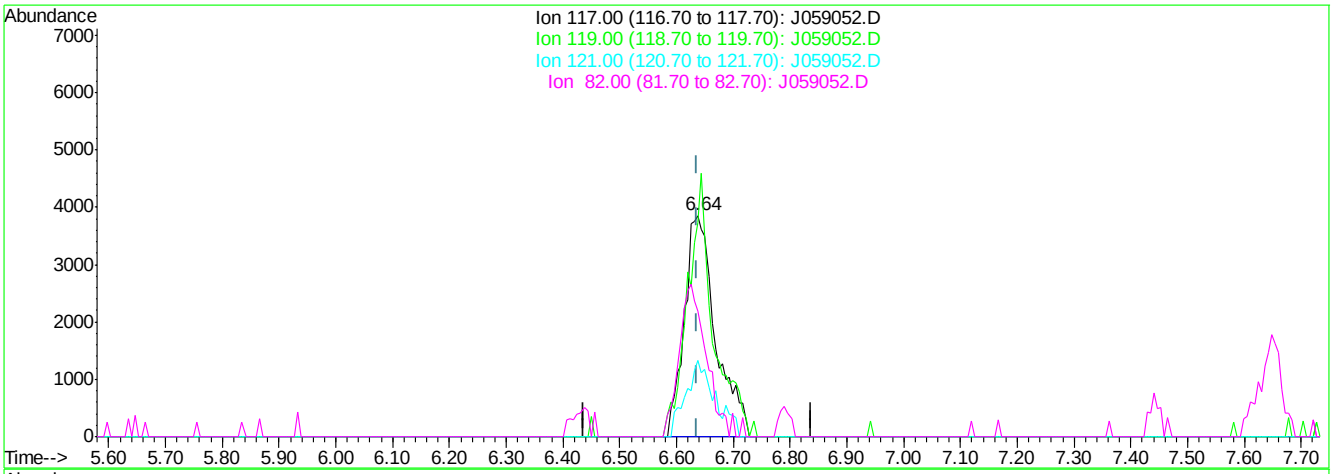


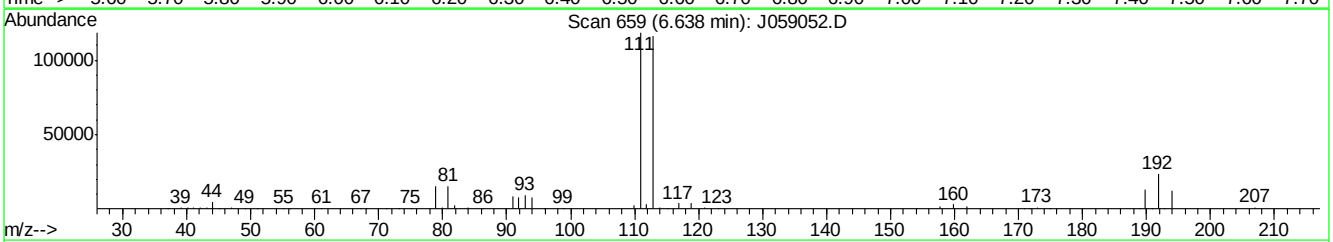
ACCUTEST
F76426

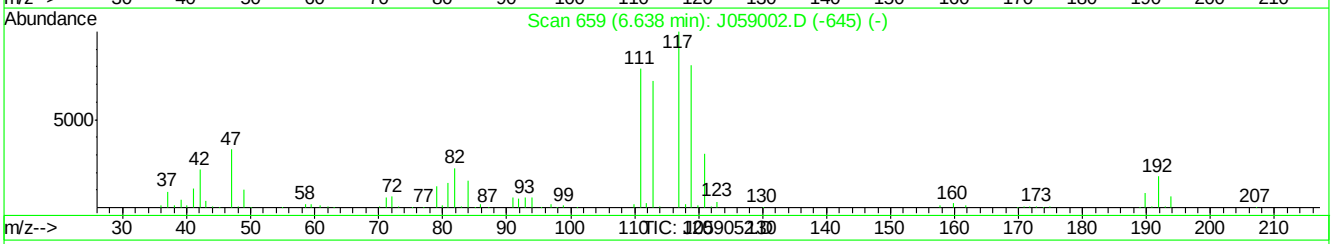
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:37 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.001) 0.99ug/L

response 14787

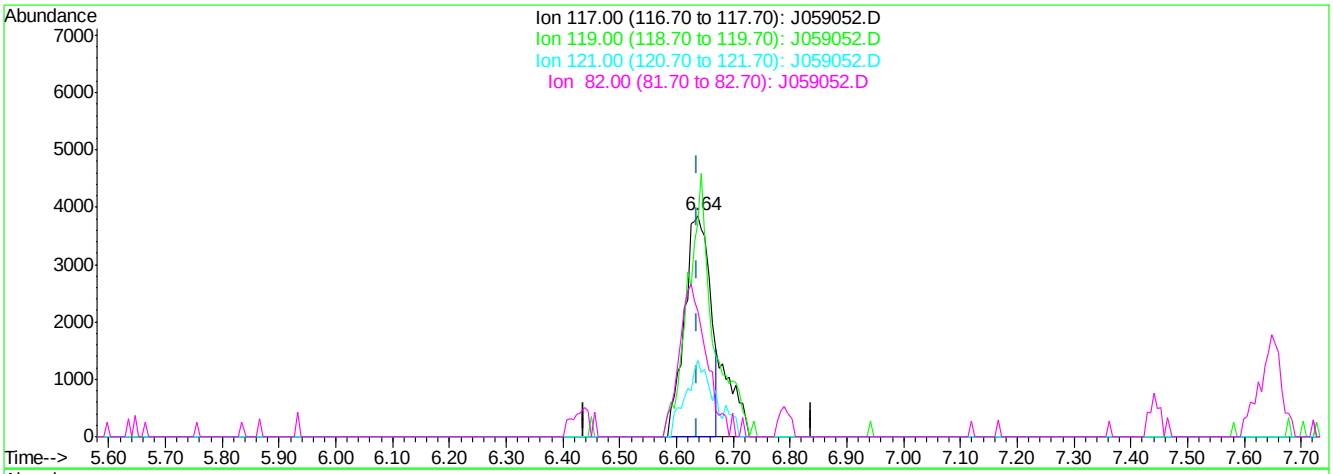
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	96.91
121.00	30.30	34.38
82.00	22.50	56.62#

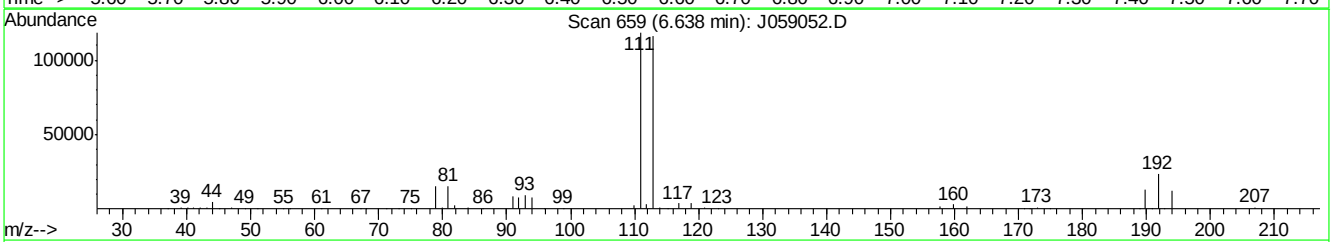
J059052.D 8260-J.M Wed Sep 01 10:37:48 2010

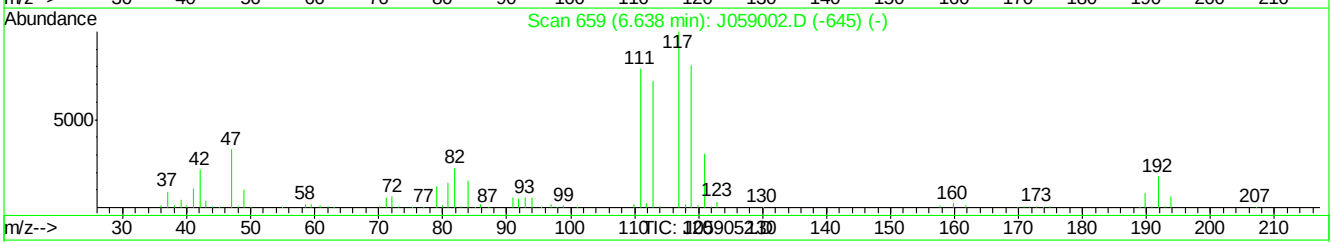
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:37 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.001) 0.80ug/L m

response 12008

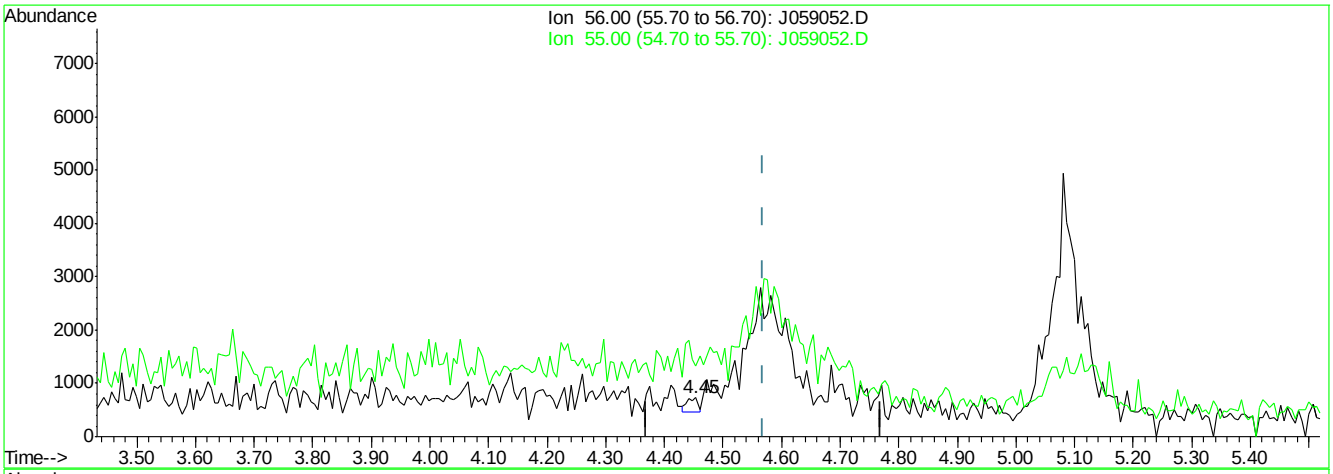
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	96.91
121.00	30.30	34.38
82.00	22.50	56.62#

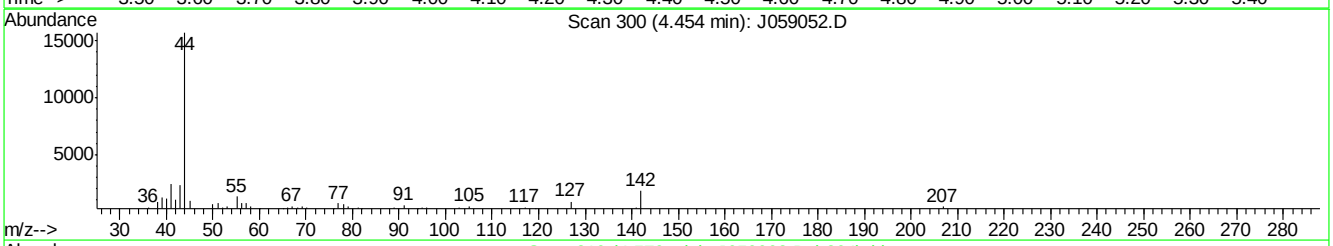
J059052.D 8260-J.M Wed Sep 01 10:37:54 2010

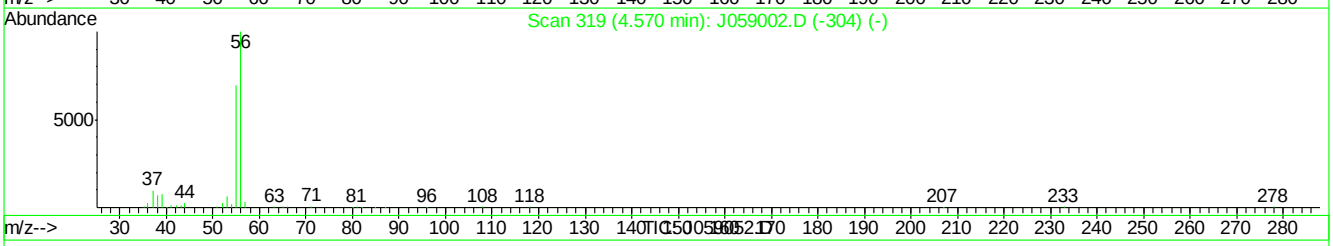
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:37 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(94) acrolein

4.45min (-0.116) 0.13ug/L

response 334

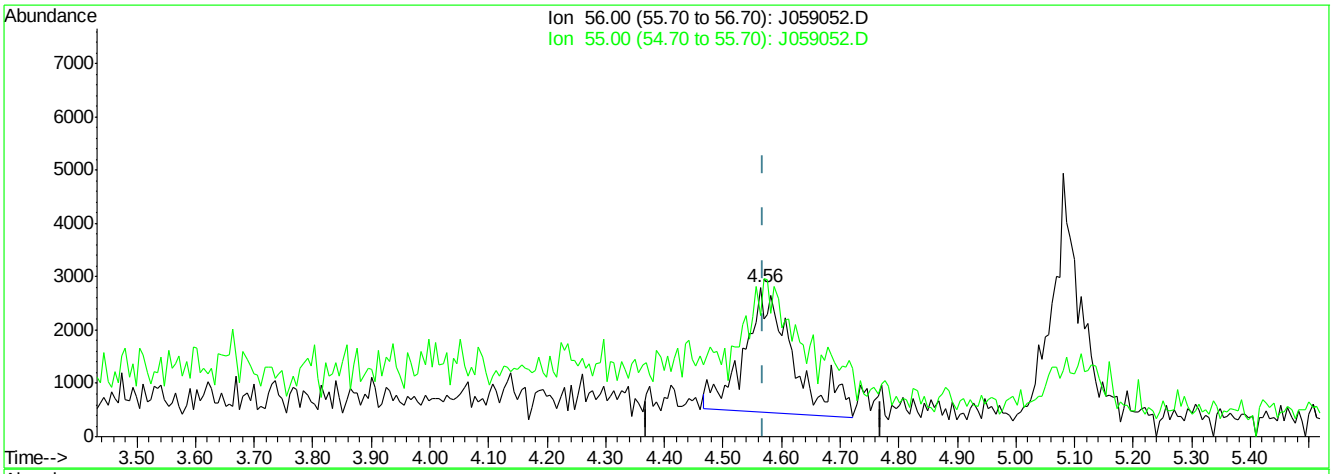
Ion	Exp%	Act%
56.00	100	100
55.00	69.20	86.52
0.00	0.00	0.00
0.00	0.00	0.00

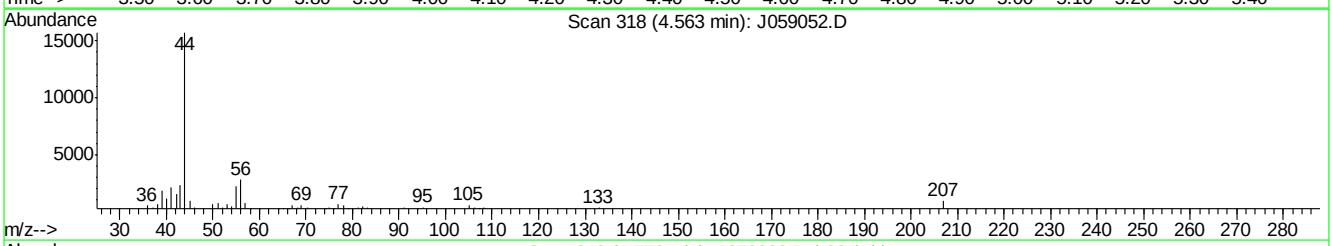
J059052.D 8260-J.M Wed Sep 01 10:39:27 2010

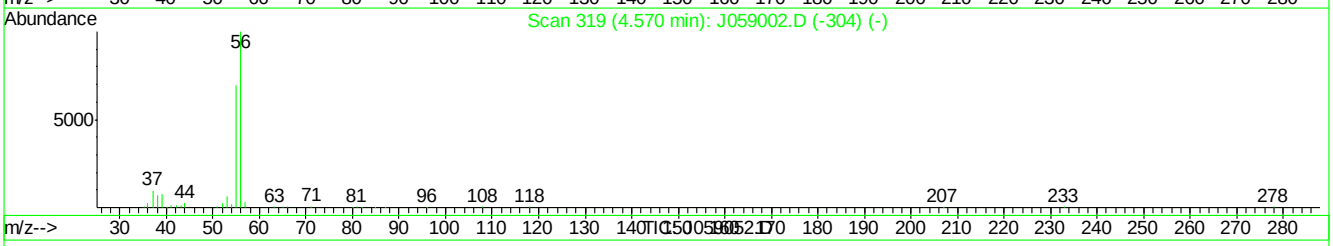
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059052.D Vial: 1
Acq On : 1 Sep 2010 10:08 am Operator: KarenW
Sample : IC3328-1 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(94) acrolein

4.56min (-0.006) 5.22ug/L m

response 13562

Ion	Exp%	Act%
56.00	100	100
55.00	69.20	81.04
0.00	0.00	0.00
0.00	0.00	0.00

J059052.D 8260-J.M Wed Sep 01 10:39:42 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059053.D Vial: 2
Acq On : 1 Sep 2010 10:31 am Operator: KarenW
Sample : IC3328-2 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 10:48:37 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.45	96	1827622	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.52	117	1215697	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	646374	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.08	65	165821	250.00	ug/L		-0.02
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	441421	44.33	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 88.66%				
38) 1,2-Dichloroethane-d4	7.17	65	519457	45.94	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 91.88%				
48) Toluene-d8	8.99	98	1717579	57.79	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 115.58%#				
69) 4-Bromofluorobenzene	11.73	95	675391	66.99	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 133.98%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.79	85	73468	8.53	ug/L		96
3) Chloromethane	2.92	50	150538	4.93	ug/L		96
4) Vinyl Chloride	3.04	62	104182	4.02	ug/L		95
5) Bromomethane	3.42	94	52068	3.17	ug/L		90
6) Chloroethane	3.58	64	49246	3.06	ug/L		94
7) Trichlorofluoromethane	3.73	101	82672	2.47	ug/L		90
8) Ethyl Ether	4.00	59	60964	3.24	ug/L		92
9) 1,2-Dichlorotrifluoroethan	4.22	67	67595	2.80	ug/L		97
10) 1,1-Dichloroethene	4.26	61	105838	2.97	ug/L		97
11) Freon 113	4.33	101	51067	2.67	ug/L		84
12) Carbon Disulfide	4.33	76	194341	3.10	ug/L		93
13) Iodomethane	4.44	142	86618	2.46	ug/L		98
14) Methylene Chloride	4.85	49	143194	4.26	ug/L		90
15) Acetone	4.86	58	28967	23.86	ug/L	#	79
16) Methyl acetate	4.98	74	42519	24.32	ug/L	#	71
17) trans-1,2-Dichloroethene	5.01	61	136335	5.15	ug/L		94
18) Hexane	5.09	56	92079	5.42	ug/L	#	85
19) Methyl Tert Butyl Ether	5.12	73	180774	5.36	ug/L		93
20) Di-isopropyl ether	5.48	45	346281	4.94	ug/L		91
21) 1,1-Dichloroethane	5.64	63	163543	5.30	ug/L		93
22) Acrylonitrile	5.66	53	141202	24.63	ug/L		98
23) ETBE	5.86	59	288492	5.41	ug/L		96
24) Vinyl acetate	5.84	43	574930	23.11	ug/L		99
25) cis-1,2-Dichloroethene	6.18	96	80645	5.97	ug/L		94
26) 2,2-Dichloropropane	6.33	77	105928	6.07	ug/L		95
27) Bromochloromethane	6.38	128	36681	4.81	ug/L	#	83
28) Cyclohexane	6.45	56	177147	5.44	ug/L		95
29) Chloroform	6.44	83	140886	5.38	ug/L		95
30) Tetrahydrofuran	6.62	42	20785	4.32	ug/L		93
32) Carbon Tetrachloride	6.64	117	72319m	4.88	ug/L		
33) 1,1,1-Trichloroethane	6.70	97	99084	5.37	ug/L		85
34) 2-Butanone	6.72	43	142119	20.68	ug/L		88
35) 1,1-Dichloropropene	6.80	75	109313	5.80	ug/L		88
36) Benzene	7.05	78	332418	5.92	ug/L		93

(#) = qualifier out of range (m) = manual integration
J059053.D 8260-J.M Thu Sep 02 08:40:45 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059053.D Vial: 2
Acq On : 1 Sep 2010 10:31 am Operator: KarenW
Sample : IC3328-2 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 10:48:37 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	193514	5.55	ug/L		88
39)	1,2-Dichloroethane	7.23	62	106399	5.46	ug/L		91
40)	Trichloroethene	7.62	95	77611	5.37	ug/L		86
41)	Methylcyclohexane	7.65	83	137827	5.85	ug/L		93
42)	Dibromomethane	8.04	93	39087	4.83	ug/L		96
43)	1,2-Dichloropropane	8.13	63	99978	5.52	ug/L		93
44)	Bromodichloromethane	8.17	83	88913	5.07	ug/L		90
45)	2-Chloroethyl vinyl ether	8.69	63	243834	24.16	ug/L		92
46)	cis-1,3-Dichloropropene	8.79	75	126150	5.61	ug/L		90
49)	Toluene	9.03	91	325864	6.48	ug/L		97
50)	2-Nitropropane	9.23	41	45254	16.42	ug/L		95
51)	4-Methyl-2-pentanone	9.36	43	312066	26.01	ug/L		96
52)	trans-1,3-Dichloropropene	9.42	75	96574	6.42	ug/L		93
53)	Tetrachloroethene	9.44	166	73508	5.45	ug/L		92
54)	1,1,2-Trichloroethane	9.58	83	52966	6.32	ug/L		90
55)	Dibromochloromethane	9.77	129	51369	5.59	ug/L		98
56)	1,3-Dichloropropane	9.86	76	110217	6.97	ug/L		84
57)	1,2-Dibromoethane	10.03	107	55374	6.02	ug/L		67
58)	2-hexanone	10.18	43	205794	26.37	ug/L		92
59)	1-Chlorohexane	10.49	91	114056	6.40	ug/L		92
60)	Ethylbenzene	10.55	91	354730	5.78	ug/L		95
61)	Chlorobenzene	10.54	112	189940	5.38	ug/L		93
62)	1,1,1,2-Tetrachloroethane	10.59	131	61650	5.46	ug/L		93
63)	m,p-Xylene	10.69	91	544150	11.06	ug/L		96
64)	o-Xylene	11.13	91	285690	6.54	ug/L		98
65)	Styrene	11.17	104	207311	6.19	ug/L		95
66)	Bromoform	11.22	173	27141	4.20	ug/L		87
67)	Isopropylbenzene	11.44	105	297300	6.79	ug/L		99
70)	n-Propylbenzene	11.86	91	407611	6.00	ug/L		92
71)	Bromobenzene	11.86	156	82468	5.92	ug/L		89
72)	1,1,2,2-Tetrachloroethane	11.90	83	66420	6.47	ug/L		91
73)	1,3,5-Trimethylbenzene	12.05	105	270302	5.96	ug/L		95
74)	2-Chlorotoluene	12.03	91	281418	6.20	ug/L		91
75)	trans-1,4-Dichloro-2-Buten	12.08	53	19402	5.16	ug/L		86
76)	1,2,3-Trichloropropane	12.06	110	17078	5.50	ug/L		94
77)	Cyclohexanone	12.11	55	12773	43.95	ug/L		95
78)	4-Chlorotoluene	12.20	91	258928	7.30	ug/L		72
79)	tert-Butylbenzene	12.38	91	161488	7.15	ug/L		94
80)	1,2,4-Trimethylbenzene	12.45	105	274775	6.55	ug/L		92
81)	sec-Butylbenzene	12.56	105	363081	6.65	ug/L		93
82)	4-Isopropyltoluene	12.70	119	274212	6.72	ug/L		84
83)	1,3-Dichlorobenzene	12.81	146	148841	6.40	ug/L		96
84)	1,4-Dichlorobenzene	12.90	146	156040	6.03	ug/L		89
85)	n-Butylbenzene	13.14	92	169380	5.94	ug/L		98
86)	Benzyl Chloride	13.14	126	22398	5.24	ug/L	#	34
87)	1,2-Dichlorobenzene	13.34	146	145100	6.39	ug/L		93
88)	1,2-Dibromo-3-Chloropropan	14.09	75	9090	8.27	ug/L		87
89)	Hexachlorobutadiene	14.67	225	47702	6.26	ug/L		87
90)	1,2,4-Trichlorobenzene	14.70	180	93047	5.28	ug/L		71

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059053.D Vial: 2
Acq On : 1 Sep 2010 10:31 am Operator: KarenW
Sample : IC3328-2 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 10:48:37 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

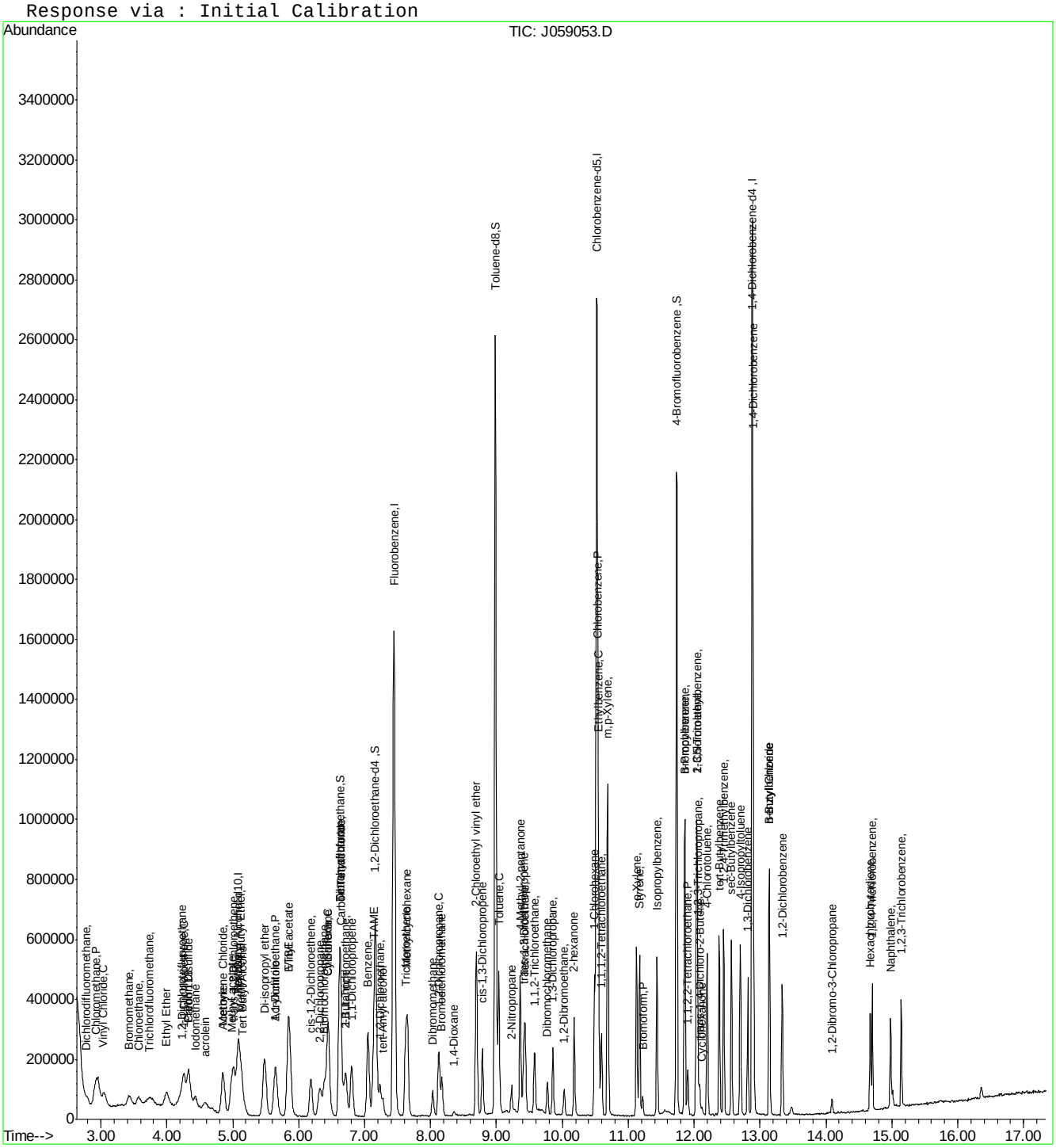
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	14.98	128	155028	5.87	ug/L	99
92) 1,2,3-Trichlorobenzene	15.14	180	77158	5.21	ug/L	85
94) acrolein	4.58	56	44007	17.62	ug/L	83
95) Tert Butyl Alcohol	5.15	59	53787	52.80	ug/L	95
96) tert Amyl alcohol	7.28	59	45466	56.46	ug/L	98
97) 1,4-Dioxane	8.36	88	9635	110.71	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059053.D 8260-J.M Thu Sep 02 08:40:45 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059053.D Vial: 2
Acq On : 1 Sep 2010 10:31 am Operator: KarenW
Sample : IC3328-2 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:49 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

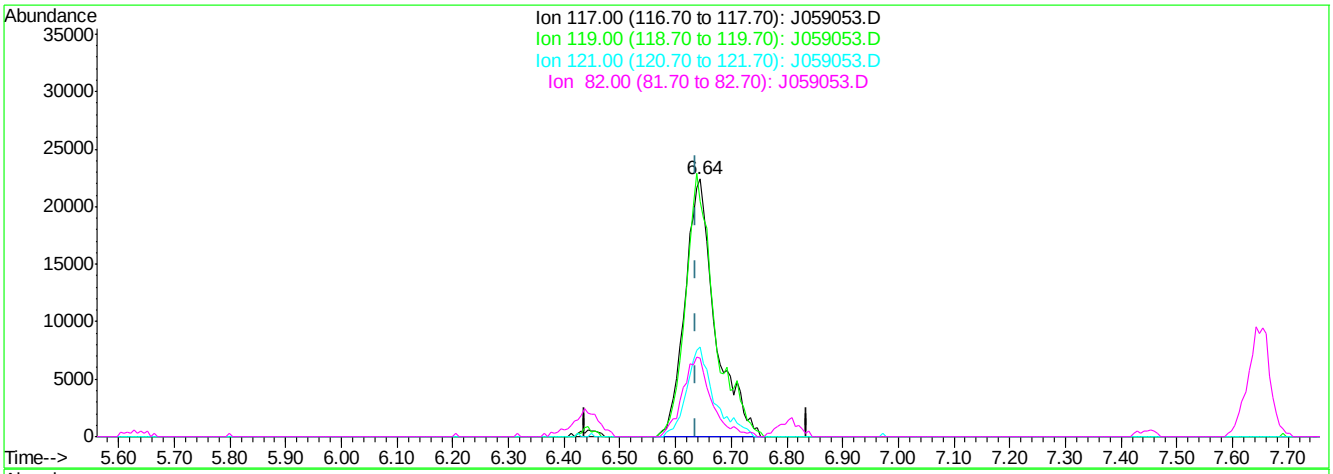


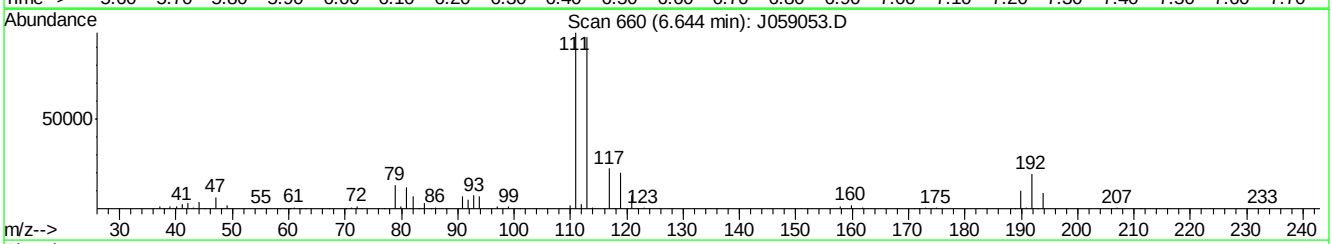
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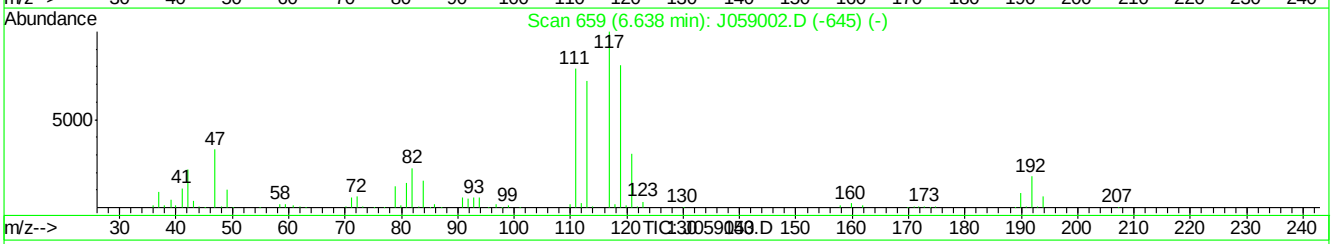
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059053.D Vial: 2
Acq On : 1 Sep 2010 10:31 am Operator: KarenW
Sample : IC3328-2 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:48 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.007) 5.74ug/L

response 85233

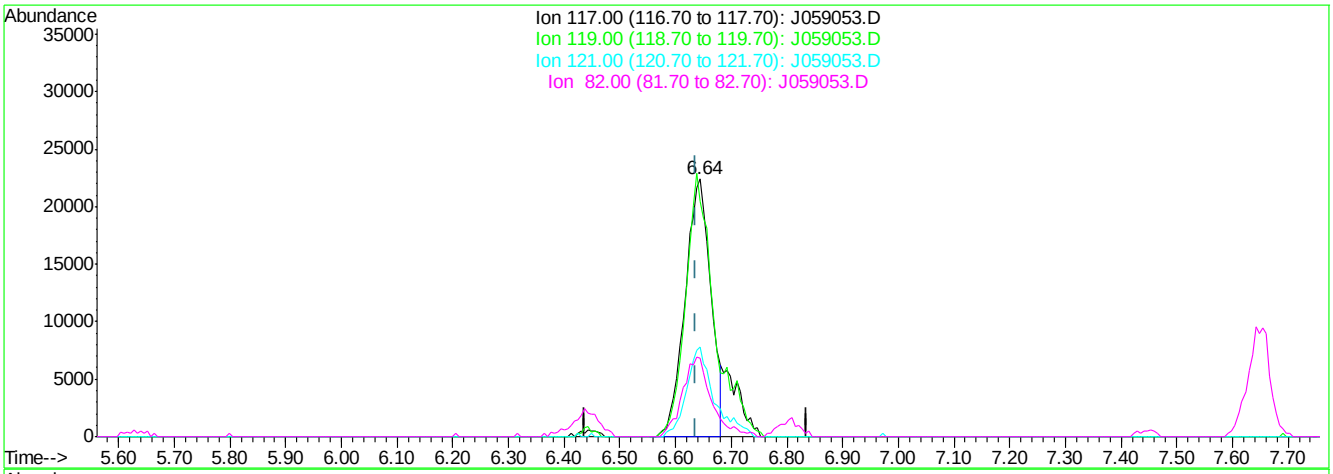
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	91.40
121.00	30.30	35.03
82.00	22.50	30.62

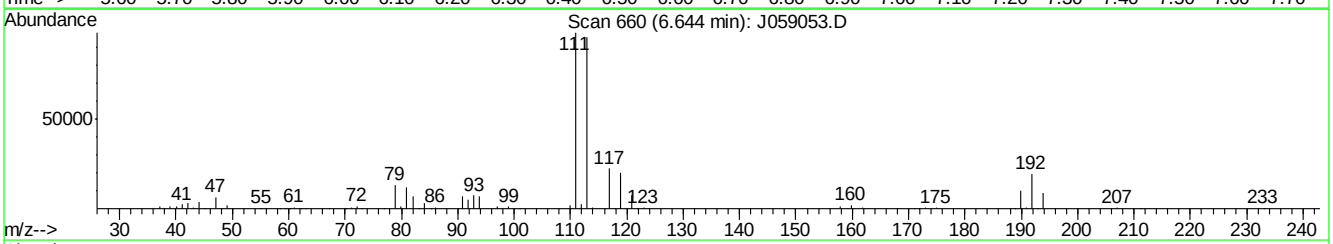
J059053.D 8260-J.M Wed Sep 01 10:49:09 2010

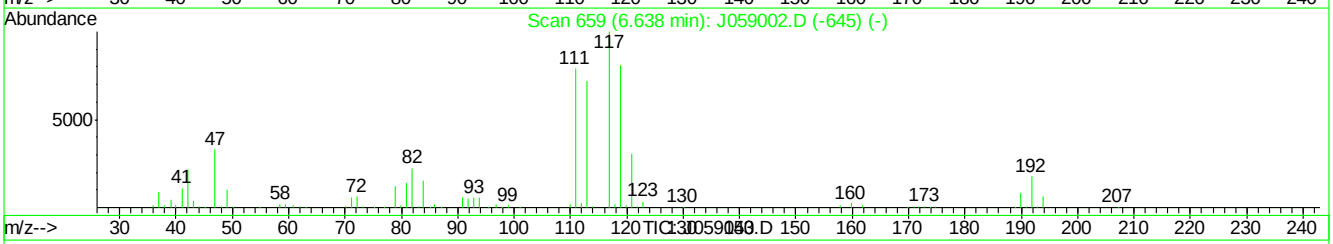
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059053.D Vial: 2
Acq On : 1 Sep 2010 10:31 am Operator: KarenW
Sample : IC3328-2 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 10:49 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.007) 4.88ug/L m

response 72319

Ion	Exp%	Act%
117.00	100	100
119.00	81.10	91.40
121.00	30.30	35.03
82.00	22.50	30.62

J059053.D 8260-J.M Wed Sep 01 10:49:24 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059054.D Vial: 3
Acq On : 1 Sep 2010 10:54 am Operator: KarenW
Sample : IC3328-3 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 11:15:06 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.45	96	1803745	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.53	117	1210605	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	637380	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.09	65	170509	250.00	ug/L		-0.01
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	431476	43.91	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 87.82%				
38) 1,2-Dichloroethane-d4	7.17	65	528729	47.38	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 94.76%				
48) Toluene-d8	8.99	98	1696236	57.31	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 114.62%#				
69) 4-Bromofluorobenzene	11.73	95	676767	68.08	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 136.16%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.80	85	324806	37.30	ug/L		97
3) Chloromethane	2.93	50	619143	20.77	ug/L		100
4) Vinyl Chloride	3.07	62	444393	17.37	ug/L		92
5) Bromomethane	3.43	94	194987	12.42	ug/L		85
6) Chloroethane	3.57	64	208449	13.64	ug/L		95
7) Trichlorofluoromethane	3.75	101	357331	10.82	ug/L		100
8) Ethyl Ether	4.00	59	265103	14.28	ug/L		94
9) 1,2-Dichlorotrifluoroethan	4.23	67	284594	11.94	ug/L		97
10) 1,1-Dichloroethene	4.26	61	457837	13.01	ug/L		98
11) Freon 113	4.33	101	214345	11.37	ug/L		96
12) Carbon Disulfide	4.33	76	816258	13.19	ug/L		98
13) Iodomethane	4.43	142	376584	10.84	ug/L		96
14) Methylene Chloride	4.85	49	585469	17.65	ug/L		87
15) Acetone	4.86	58	120781	100.81	ug/L		100
16) Methyl acetate	4.98	74	191303	110.88	ug/L	#	72
17) trans-1,2-Dichloroethene	5.02	61	590143	22.57	ug/L		96
18) Hexane	5.09	56	374777	22.37	ug/L	#	86
19) Methyl Tert Butyl Ether	5.13	73	794889	23.86	ug/L		95
20) Di-isopropyl ether	5.49	45	1491113	21.54	ug/L		91
21) 1,1-Dichloroethane	5.63	63	704007	23.10	ug/L		95
22) Acrylonitrile	5.66	53	567980	100.39	ug/L		97
23) ETBE	5.87	59	1275400	24.25	ug/L		96
24) Vinyl acetate	5.84	43	2325111	94.85	ug/L		97
25) cis-1,2-Dichloroethene	6.19	96	346273	25.16	ug/L		96
26) 2,2-Dichloropropane	6.33	77	440203	25.54	ug/L		94
27) Bromochloromethane	6.39	128	159410	21.20	ug/L		92
28) Cyclohexane	6.45	56	750026	23.34	ug/L		94
29) Chloroform	6.44	83	578304	22.40	ug/L		95
30) Tetrahydrofuran	6.62	42	87271	18.36	ug/L		93
32) Carbon Tetrachloride	6.64	117	325142m	21.29	ug/L		
33) 1,1,1-Trichloroethane	6.70	97	432295	23.72	ug/L		95
34) 2-Butanone	6.72	43	643589	94.87	ug/L		89
35) 1,1-Dichloropropene	6.80	75	463072	24.90	ug/L		90
36) Benzene	7.06	78	1402118	25.29	ug/L		94

(#) = qualifier out of range (m) = manual integration
J059054.D 8260-J.M Thu Sep 02 08:40:46 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059054.D Vial: 3
Acq On : 1 Sep 2010 10:54 am Operator: KarenW
Sample : IC3328-3 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 11:15:06 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	848434	24.66	ug/L		90
39)	1,2-Dichloroethane	7.23	62	456382	23.74	ug/L		93
40)	Trichloroethene	7.62	95	331704	23.25	ug/L		88
41)	Methylcyclohexane	7.65	83	576380	24.80	ug/L		94
42)	Dibromomethane	8.04	93	175524	21.96	ug/L		92
43)	1,2-Dichloropropane	8.13	63	425255	23.79	ug/L		92
44)	Bromodichloromethane	8.18	83	395312	22.85	ug/L		87
45)	2-Chloroethyl vinyl ether	8.69	63	1092860	109.70	ug/L		93
46)	cis-1,3-Dichloropropene	8.79	75	550586	24.07	ug/L		92
49)	Toluene	9.03	91	1359072	27.14	ug/L		97
50)	2-Nitropropane	9.23	41	244064	88.94	ug/L		96
51)	4-Methyl-2-pentanone	9.36	43	1410872	118.10	ug/L		94
52)	trans-1,3-Dichloropropene	9.42	75	435867	27.46	ug/L		92
53)	Tetrachloroethene	9.44	166	306949	22.87	ug/L		99
54)	1,1,2-Trichloroethane	9.58	83	232294	27.83	ug/L		92
55)	Dibromochloromethane	9.78	129	239859	24.43	ug/L		99
56)	1,3-Dichloropropane	9.86	76	475560	29.17	ug/L		84
57)	1,2-Dibromoethane	10.03	107	254068	27.73	ug/L		75
58)	2-hexanone	10.18	43	947123	121.85	ug/L		93
59)	1-Chlorohexane	10.49	91	493806	27.81	ug/L		93
60)	Ethylbenzene	10.55	91	1432869	23.92	ug/L		98
61)	Chlorobenzene	10.54	112	807399	22.97	ug/L		92
62)	1,1,1,2-Tetrachloroethane	10.59	131	268850	23.92	ug/L		97
63)	m,p-Xylene	10.69	91	2159699	46.88	ug/L		98
64)	o-Xylene	11.13	91	1168135	26.76	ug/L		97
65)	Styrene	11.17	104	924043	27.03	ug/L		97
66)	Bromoform	11.22	173	128758	18.98	ug/L		89
67)	Isopropylbenzene	11.44	105	1188521	27.07	ug/L		98
70)	n-Propylbenzene	11.86	91	1608735	25.36	ug/L		94
71)	Bromobenzene	11.86	156	337063	23.69	ug/L		83
72)	1,1,2,2-Tetrachloroethane	11.90	83	306920	30.30	ug/L		96
73)	1,3,5-Trimethylbenzene	12.05	105	1104920	25.32	ug/L		97
74)	2-Chlorotoluene	12.03	91	1122827	25.64	ug/L		95
75)	trans-1,4-Dichloro-2-Buten	12.08	53	84453	22.79	ug/L		91
76)	1,2,3-Trichloropropane	12.06	110	74166	24.22	ug/L		88
77)	Cyclohexanone	12.11	55	46438	162.03	ug/L		89
78)	4-Chlorotoluene	12.20	91	1068961	30.44	ug/L		77
79)	tert-Butylbenzene	12.38	91	659146	28.66	ug/L		99
80)	1,2,4-Trimethylbenzene	12.45	105	1143855	28.04	ug/L		94
81)	sec-Butylbenzene	12.56	105	1456080	28.02	ug/L		95
82)	4-Isopropyltoluene	12.70	119	1115705	27.92	ug/L		88
83)	1,3-Dichlorobenzene	12.81	146	631475	26.69	ug/L		93
84)	1,4-Dichlorobenzene	12.90	146	633647	24.48	ug/L		97
85)	n-Butylbenzene	13.14	92	740074	26.32	ug/L		98
86)	Benzyl Chloride	13.14	126	109785	24.61	ug/L	#	58
87)	1,2-Dichlorobenzene	13.34	146	590740	25.86	ug/L		98
88)	1,2-Dibromo-3-Chloropropan	14.09	75	41910	34.92	ug/L	#	83
89)	Hexachlorobutadiene	14.67	225	199881	24.31	ug/L		89
90)	1,2,4-Trichlorobenzene	14.70	180	404484	23.29	ug/L	#	67

(#) = qualifier out of range (m) = manual integration
J059054.D 8260-J.M Thu Sep 02 08:40:46 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059054.D Vial: 3
Acq On : 1 Sep 2010 10:54 am Operator: KarenW
Sample : IC3328-3 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 11:15:06 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

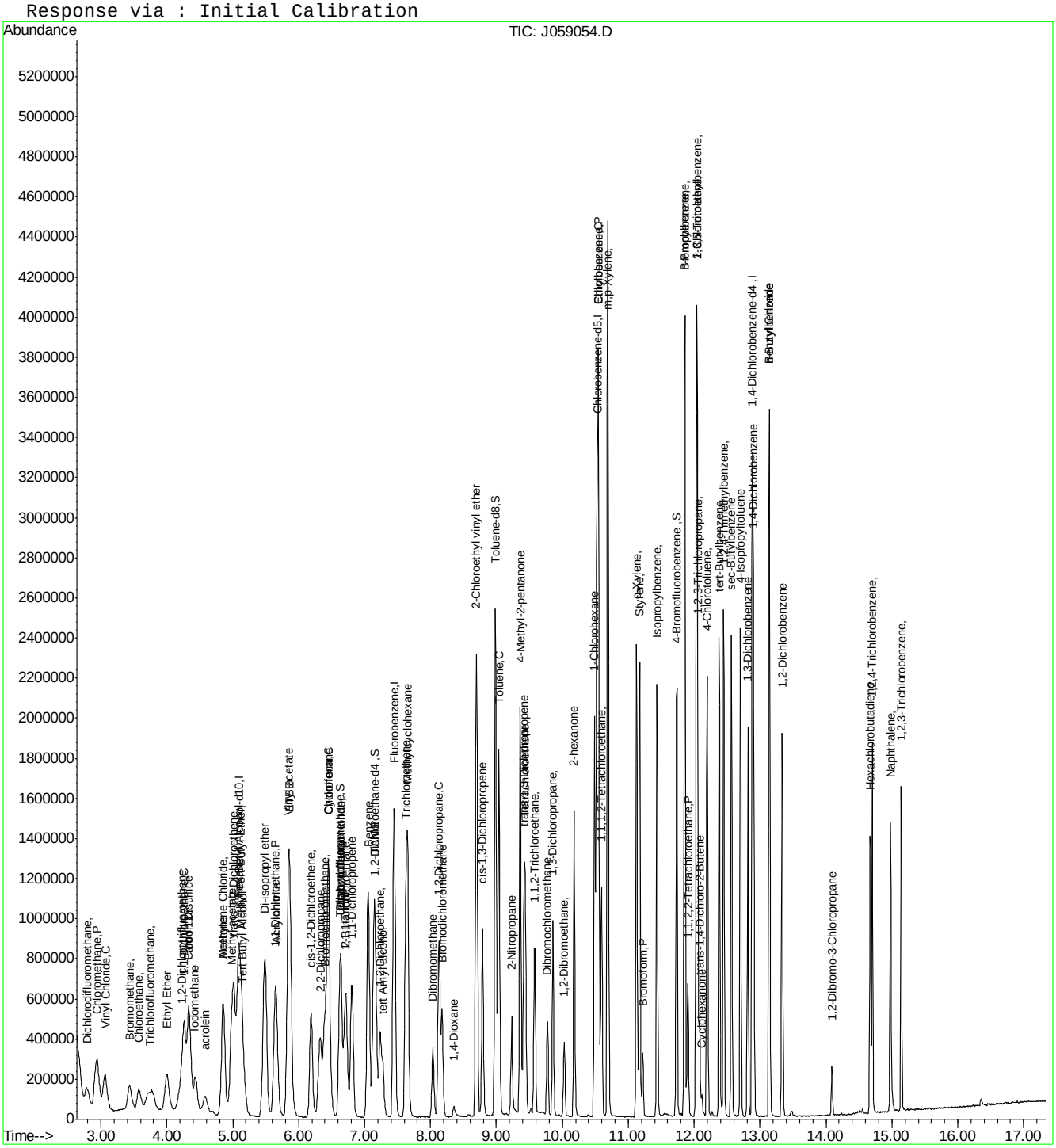
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91)	Naphthalene	14.98	128	743908	28.28	ug/L		98
92)	1,2,3-Trichlorobenzene	15.14	180	349376	23.91	ug/L		87
94)	acrolein	4.58	56	171314	66.72	ug/L		98
95)	Tert Butyl Alcohol	5.16	59	239242	228.40	ug/L	#	83
96)	tert Amyl alcohol	7.28	59	201688	243.57	ug/L		94
97)	1,4-Dioxane	8.35	88	44627	498.70	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059054.D 8260-J.M Thu Sep 02 08:40:46 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059054.D Vial: 3
Acq On : 1 Sep 2010 10:54 am Operator: KarenW
Sample : IC3328-3 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 11:15 2010 Quant Results File: 8260-J.RES

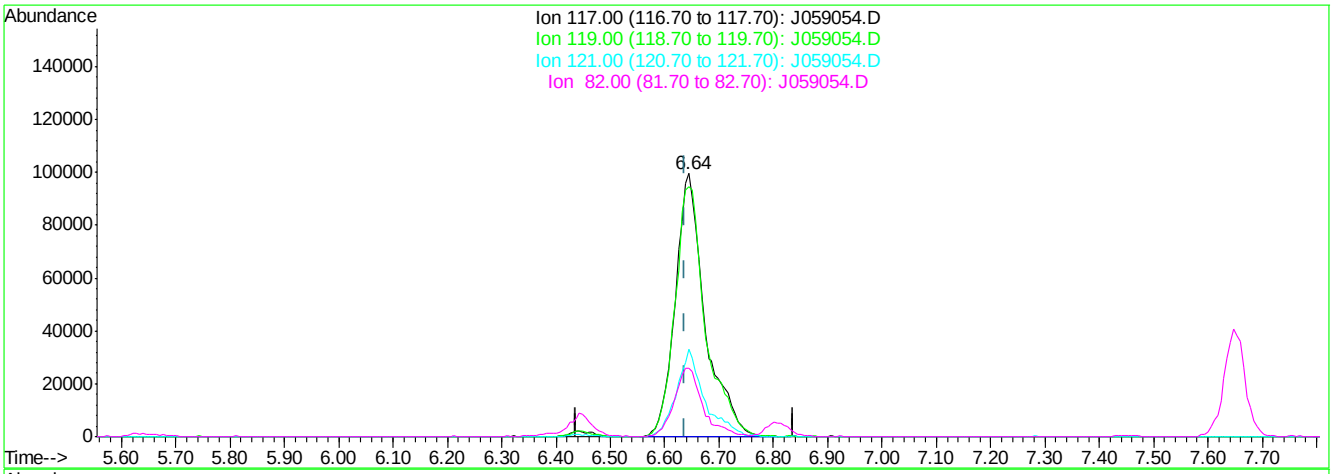
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

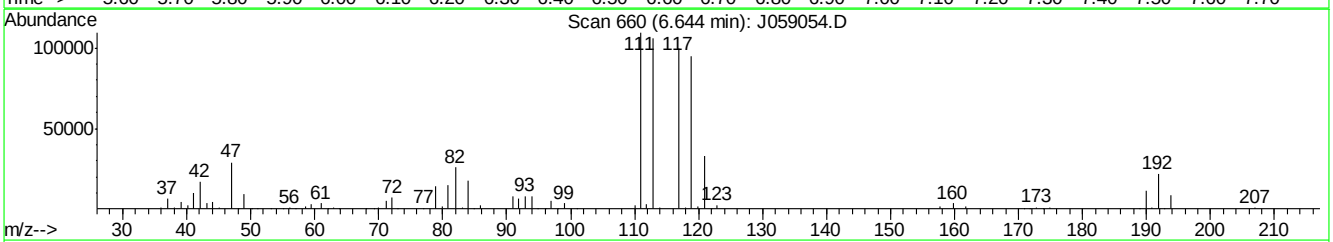


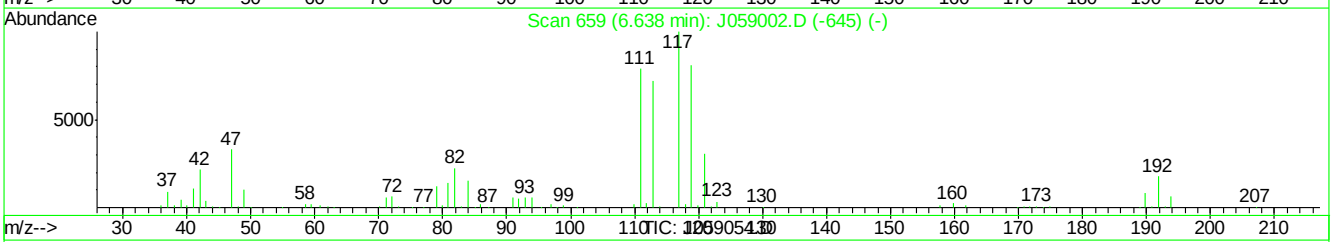
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059054.D Vial: 3
Acq On : 1 Sep 2010 10:54 am Operator: KarenW
Sample : IC3328-3 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 11:15 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.007) 24.41ug/L

response 375778

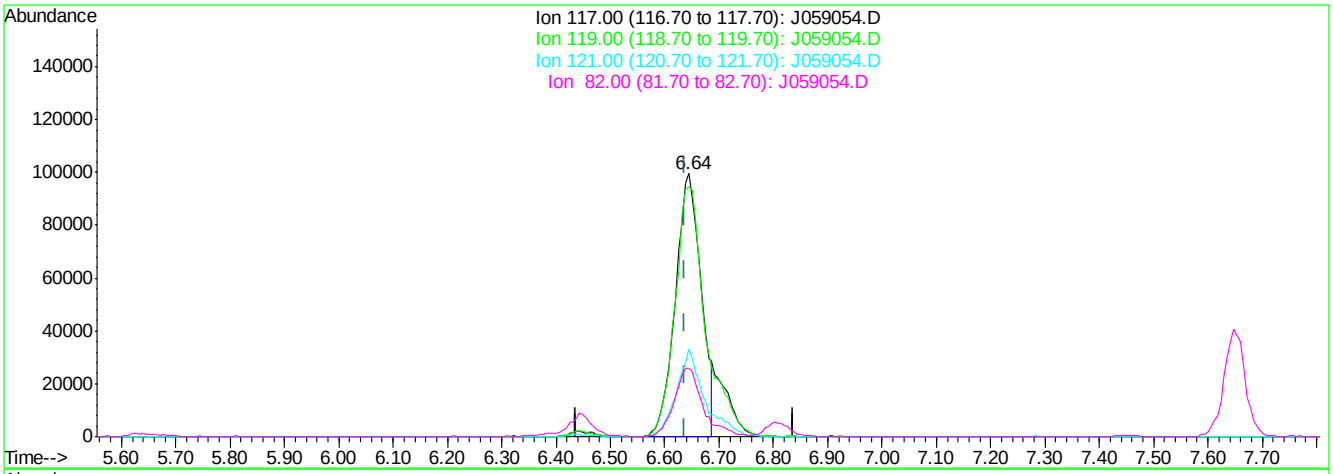
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	95.16
121.00	30.30	33.20
82.00	22.50	25.82

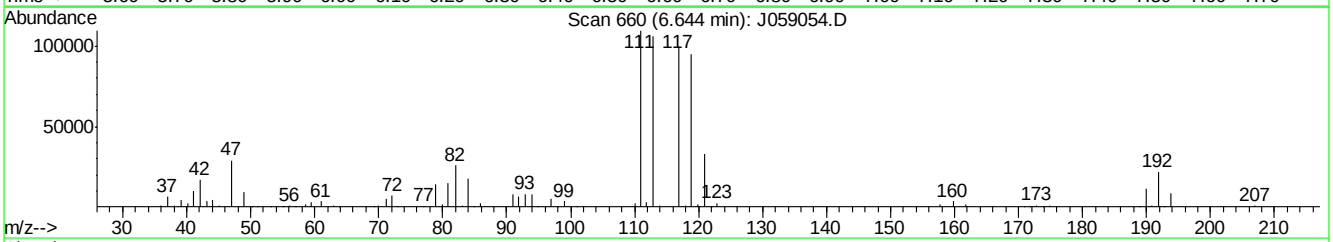
J059054.D 8260-J.M Wed Sep 01 11:15:34 2010

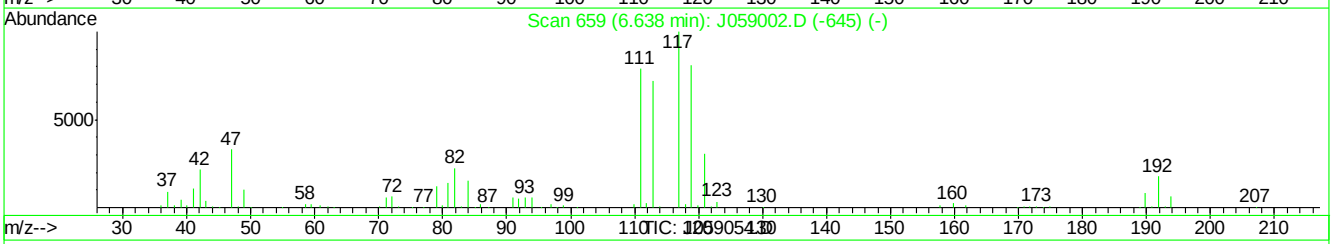
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059054.D Vial: 3
Acq On : 1 Sep 2010 10:54 am Operator: KarenW
Sample : IC3328-3 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 11:15 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration







(32) Carbon Tetrachloride ( )

6.64min (+0.007) 21.29ug/L m

response 325142

Ion	Exp%	Act%
117.00	100	100
119.00	81.10	95.16
121.00	30.30	33.20
82.00	22.50	25.82

J059054.D 8260-J.M Wed Sep 01 11:15:41 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059055.D Vial: 4
Acq On : 1 Sep 2010 11:17 am Operator: KarenW
Sample : ICC3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:27:44 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.45	96	1816217	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.53	117	1208350	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	646633	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.09	65	170050	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	432273	43.69	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 87.38%				
38) 1,2-Dichloroethane-d4	7.17	65	554635	49.36	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 98.72%				
48) Toluene-d8	8.99	98	1712335	57.96	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 115.92%#				
69) 4-Bromofluorobenzene	11.74	95	678187	67.24	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 134.48%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.79	85	623480	69.31	ug/L		94
3) Chloromethane	2.93	50	1195721	40.38	ug/L		99
4) Vinyl Chloride	3.07	62	869157	33.75	ug/L		91
5) Bromomethane	3.43	94	358583	23.61	ug/L		85
6) Chloroethane	3.57	64	381806	26.02	ug/L		92
7) Trichlorofluoromethane	3.75	101	684767	20.60	ug/L		99
8) Ethyl Ether	4.00	59	521287	27.89	ug/L		95
9) 1,2-Dichlorotrifluoroethan	4.23	67	563876	23.50	ug/L		97
10) 1,1-Dichloroethene	4.27	61	900378	25.41	ug/L		98
11) Freon 113	4.34	101	417568	22.00	ug/L		94
12) Carbon Disulfide	4.33	76	1592298	25.56	ug/L		98
13) Iodomethane	4.44	142	738448	21.11	ug/L		97
14) Methylene Chloride	4.86	49	1144727	34.28	ug/L		90
15) Acetone	4.87	58	227973	188.98	ug/L		99
16) Methyl acetate	4.98	74	362604	208.73	ug/L	#	61
17) trans-1,2-Dichloroethene	5.02	61	1138106	43.23	ug/L		97
18) Hexane	5.09	56	721171	42.75	ug/L	#	85
19) Methyl Tert Butyl Ether	5.14	73	1513928	45.14	ug/L		88
20) Di-isopropyl ether	5.49	45	2884718	41.38	ug/L		90
21) 1,1-Dichloroethane	5.64	63	1382263	45.05	ug/L		91
22) Acrylonitrile	5.66	53	1118631	196.35	ug/L		94
23) ETBE	5.87	59	2448350	46.24	ug/L		96
24) Vinyl acetate	5.85	43	4388335	178.16	ug/L		98
25) cis-1,2-Dichloroethene	6.19	96	676517	47.09	ug/L		94
26) 2,2-Dichloropropane	6.32	77	861599	49.65	ug/L		96
27) Bromochloromethane	6.39	128	313177	41.36	ug/L		94
28) Cyclohexane	6.45	56	1457276	45.04	ug/L		94
29) Chloroform	6.45	83	1126998	43.34	ug/L		94
30) Tetrahydrofuran	6.63	42	167609	35.03	ug/L		92
32) Carbon Tetrachloride	6.64	117	654345m	40.53	ug/L		
33) 1,1,1-Trichloroethane	6.71	97	849397	46.29	ug/L		94
34) 2-Butanone	6.73	43	1256942	184.01	ug/L		88
35) 1,1-Dichloropropene	6.81	75	907822	48.48	ug/L		92
36) Benzene	7.06	78	2666872	47.77	ug/L		95

(#) = qualifier out of range (m) = manual integration
J059055.D 8260-J.M Thu Sep 02 08:40:47 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059055.D Vial: 4
Acq On : 1 Sep 2010 11:17 am Operator: KarenW
Sample : ICC3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:27:44 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	1632925	47.13	ug/L		89
39)	1,2-Dichloroethane	7.24	62	883742	45.65	ug/L		94
40)	Trichloroethene	7.62	95	642954	44.75	ug/L		87
41)	Methylcyclohexane	7.65	83	1103264	47.13	ug/L		94
42)	Dibromomethane	8.04	93	347579	43.18	ug/L		91
43)	1,2-Dichloropropane	8.13	63	823294	45.74	ug/L		93
44)	Bromodichloromethane	8.18	83	786950	45.18	ug/L		89
45)	2-Chloroethyl vinyl ether	8.70	63	2035431	202.92	ug/L		93
46)	cis-1,3-Dichloropropene	8.79	75	1062378	44.67	ug/L		93
49)	Toluene	9.04	91	2547586	50.93	ug/L		98
50)	2-Nitropropane	9.23	41	547923	200.05	ug/L		94
51)	4-Methyl-2-pentanone	9.36	43	2611346	218.99	ug/L		90
52)	trans-1,3-Dichloropropene	9.42	75	850791	50.60	ug/L		93
53)	Tetrachloroethene	9.44	166	586284	43.77	ug/L		94
54)	1,1,2-Trichloroethane	9.58	83	448651	53.84	ug/L		91
55)	Dibromochloromethane	9.77	129	494145	46.69	ug/L		98
56)	1,3-Dichloropropane	9.86	76	918155	54.33	ug/L		86
57)	1,2-Dibromoethane	10.03	107	493208	53.94	ug/L		74
58)	2-hexanone	10.18	43	1791536	230.92	ug/L		89
59)	1-Chlorohexane	10.49	91	945026	53.32	ug/L		93
60)	Ethylbenzene	10.55	91	2586394	44.27	ug/L		98
61)	Chlorobenzene	10.54	112	1510631	43.06	ug/L		91
62)	1,1,1,2-Tetrachloroethane	10.59	131	533986	47.60	ug/L		98
63)	m,p-Xylene	10.69	91	3634375	84.69	ug/L		89
64)	o-Xylene	11.13	91	2172911	49.66	ug/L		98
65)	Styrene	11.17	104	1759463	50.23	ug/L		95
66)	Bromoform	11.22	173	272655	37.78	ug/L		87
67)	Isopropylbenzene	11.44	105	2201680	49.82	ug/L		95
70)	n-Propylbenzene	11.86	91	2868660	47.64	ug/L		96
71)	Bromobenzene	11.86	156	639974	42.75	ug/L		85
72)	1,1,2,2-Tetrachloroethane	11.91	83	578791	56.32	ug/L		98
73)	1,3,5-Trimethylbenzene	12.05	105	1993100	46.29	ug/L		93
74)	2-Chlorotoluene	12.03	91	2040445	47.06	ug/L		96
75)	trans-1,4-Dichloro-2-Buten	12.08	53	166681	44.34	ug/L		89
76)	1,2,3-Trichloropropane	12.06	110	143719	46.27	ug/L		93
77)	Cyclohexanone	12.11	55	90051	309.71	ug/L		88
78)	4-Chlorotoluene	12.20	91	1979673	55.34	ug/L		80
79)	tert-Butylbenzene	12.38	91	1261509	52.24	ug/L		99
80)	1,2,4-Trimethylbenzene	12.45	105	2091225	51.33	ug/L		88
81)	sec-Butylbenzene	12.57	105	2619059	51.74	ug/L		99
82)	4-Isopropyltoluene	12.70	119	2063548	51.29	ug/L		88
83)	1,3-Dichlorobenzene	12.81	146	1230376	49.56	ug/L		92
84)	1,4-Dichlorobenzene	12.90	146	1199754	45.00	ug/L		96
85)	n-Butylbenzene	13.14	92	1408371	49.37	ug/L		85
86)	Benzyl Chloride	13.14	126	214767	44.91	ug/L	#	70
87)	1,2-Dichlorobenzene	13.34	146	1116884	47.19	ug/L		94
88)	1,2-Dibromo-3-Chloropropan	14.09	75	85777	63.80	ug/L	#	84
89)	Hexachlorobutadiene	14.67	225	390278	42.95	ug/L		89
90)	1,2,4-Trichlorobenzene	14.70	180	774957	43.98	ug/L	#	64

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059055.D Vial: 4
Acq On : 1 Sep 2010 11:17 am Operator: KarenW
Sample : ICC3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:27:44 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

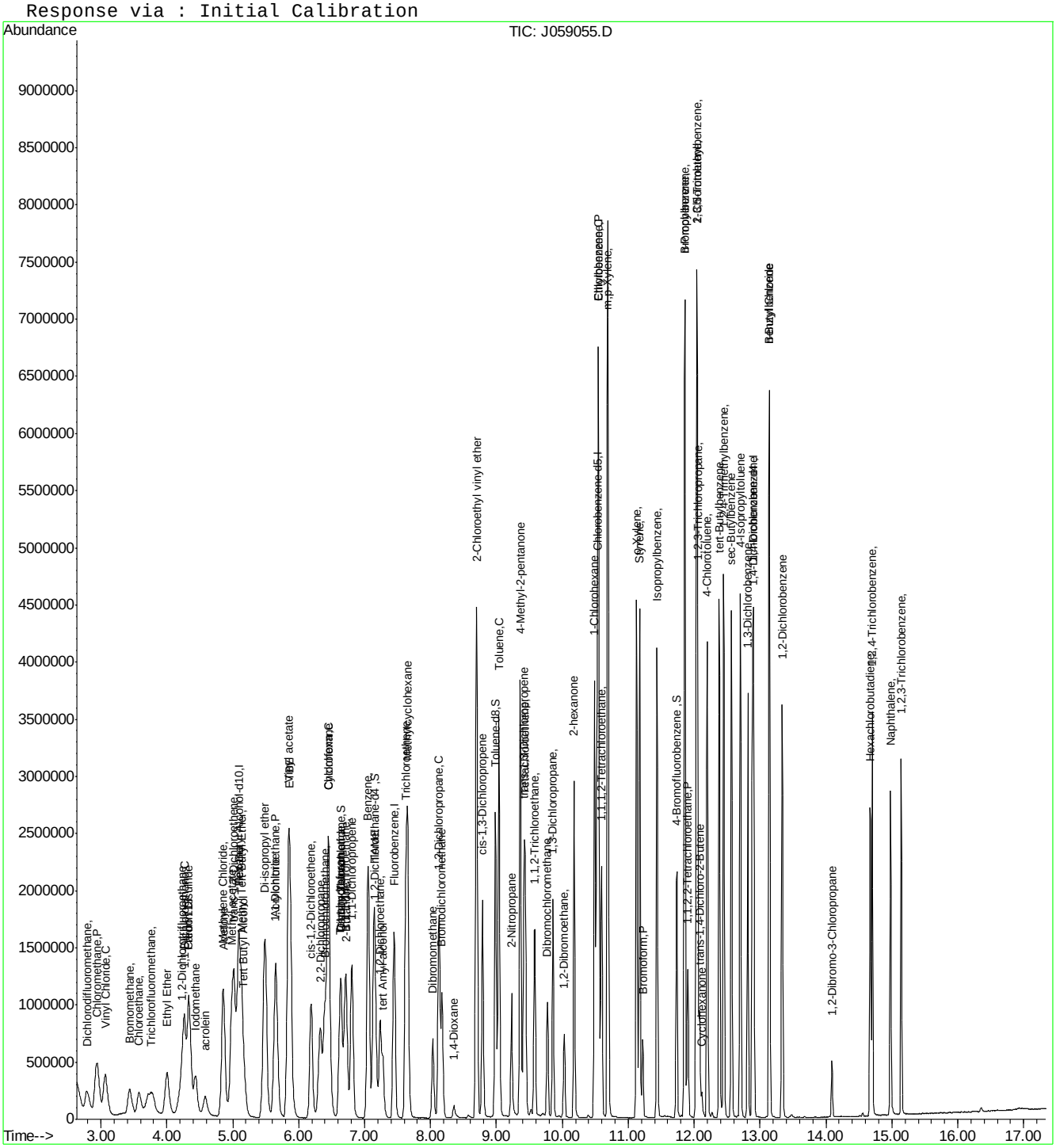
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91)	Naphthalene	14.98	128	1407083	52.14	ug/L		95
92)	1,2,3-Trichlorobenzene	15.14	180	658471	44.42	ug/L		87
94)	acrolein	4.59	56	333632	130.28	ug/L		99
95)	Tert Butyl Alcohol	5.17	59	466005	446.09	ug/L	#	75
96)	tert Amyl alcohol	7.28	59	400051	484.44	ug/L		99
97)	1,4-Dioxane	8.35	88	89706	1005.15	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059055.D 8260-J.M Thu Sep 02 08:40:47 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059055.D Vial: 4
Acq On : 1 Sep 2010 11:17 am Operator: KarenW
Sample : ICC3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:28 2010 Quant Results File: 8260-J.RES

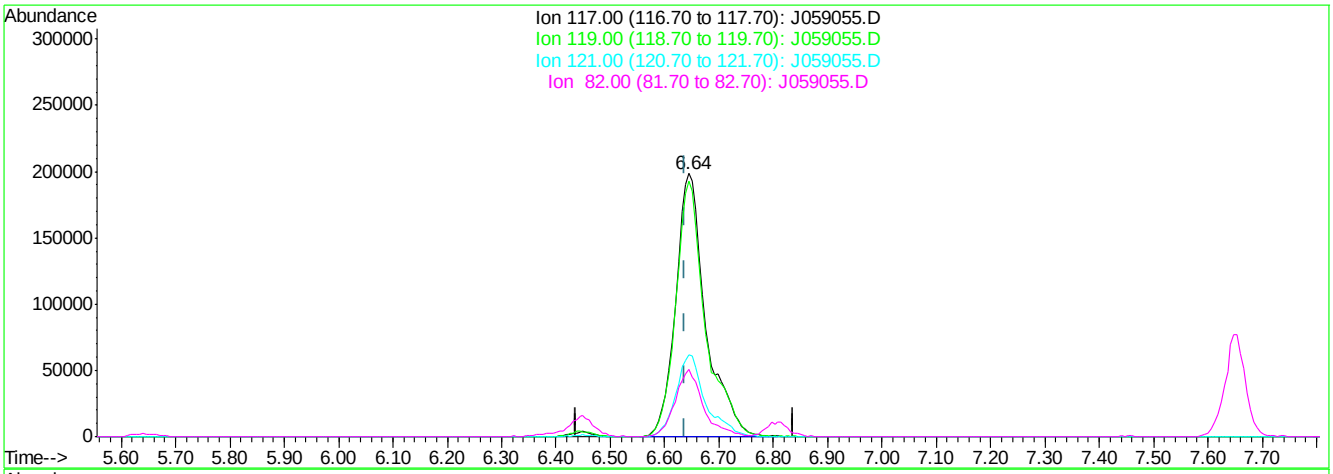
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

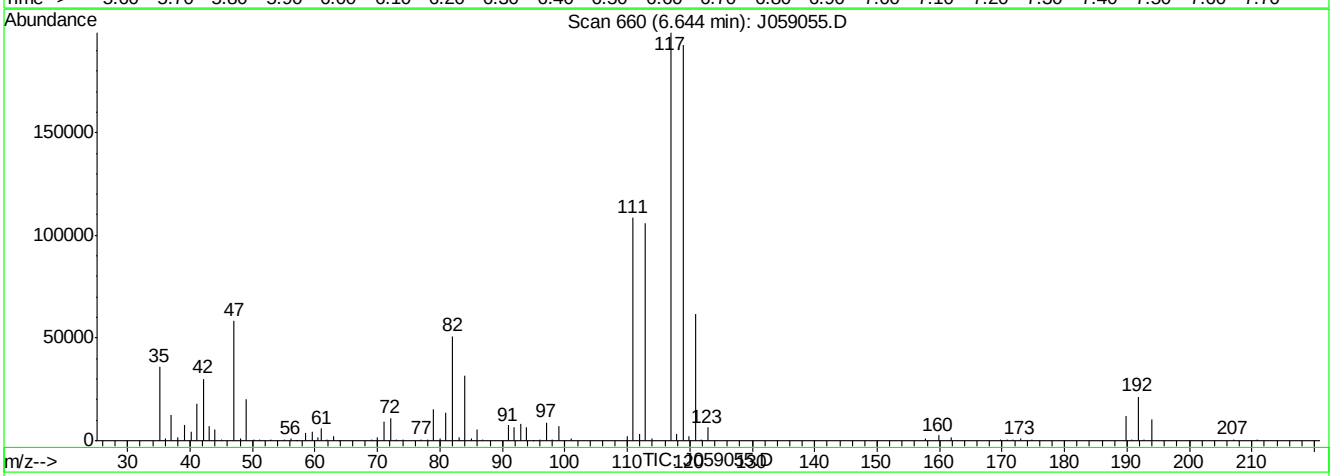


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059055.D Vial: 4
Acq On : 1 Sep 2010 11:17 am Operator: KarenW
Sample : ICC3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:27 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.007) 46.27ug/L

response 757607

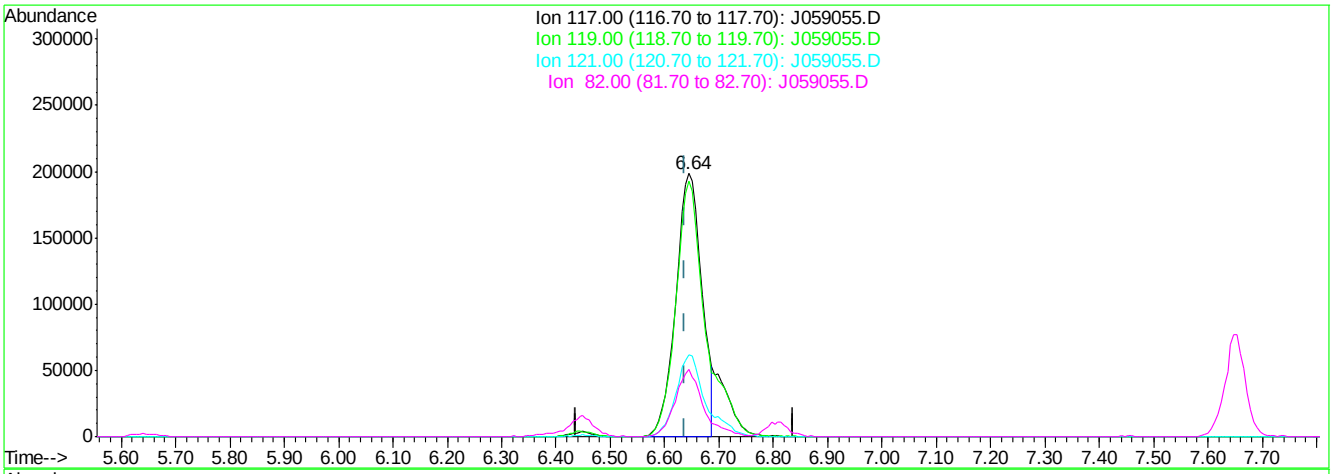
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	97.10
121.00	30.30	31.08
82.00	22.50	25.56

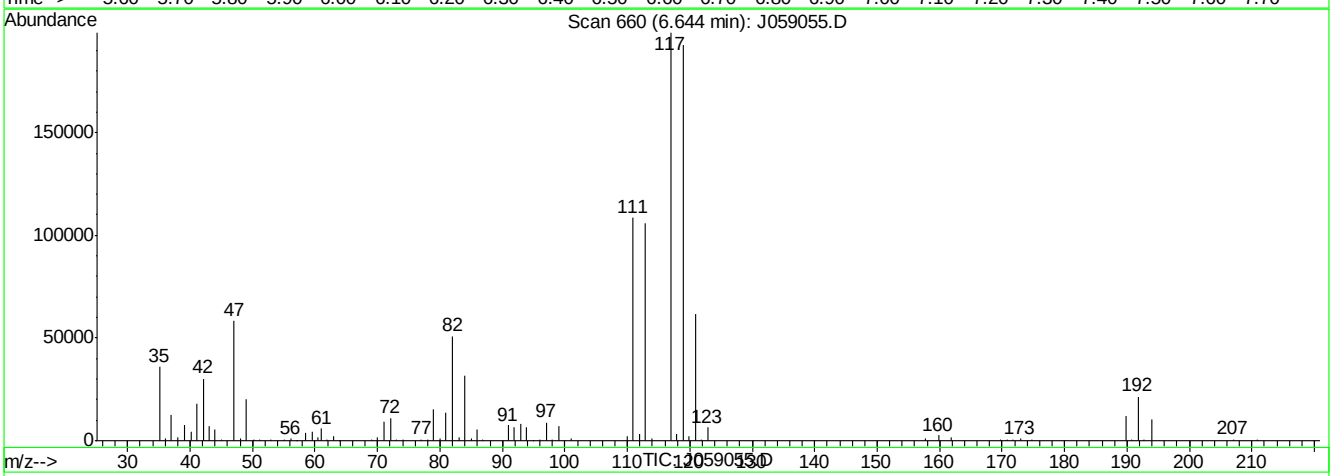
J059055.D 8260-J.M Wed Sep 01 12:27:59 2010

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059055.D Vial: 4
Acq On : 1 Sep 2010 11:17 am Operator: KarenW
Sample : ICC3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.007) 40.53ug/L m

response 654345

Ion	Exp%	Act%
117.00	100	100
119.00	81.10	97.10
121.00	30.30	31.08
82.00	22.50	25.56

J059055.D 8260-J.M Wed Sep 01 12:28:04 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059056.D Vial: 5
Acq On : 1 Sep 2010 11:40 am Operator: KarenW
Sample : IC3328-5 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:28:21 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.45	96	1734152	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.53	117	1136657	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	604554	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.09	65	163529	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	414415	43.86	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 87.72%				
38) 1,2-Dichloroethane-d4	7.17	65	553092	51.55	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 103.10%				
48) Toluene-d8	8.99	98	1628783	58.61	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 117.22%#				
69) 4-Bromofluorobenzene	11.74	95	645966	68.51	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 137.02%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.79	85	1079212	120.72	ug/L		95
3) Chloromethane	2.94	50	2003690	72.49	ug/L		97
4) Vinyl Chloride	3.07	62	1469620	59.76	ug/L		92
5) Bromomethane	3.43	94	542660	39.74	ug/L		81
6) Chloroethane	3.58	64	608428	47.39	ug/L		90
7) Trichlorofluoromethane	3.77	101	1166814	36.76	ug/L		100
8) Ethyl Ether	4.00	59	888715	49.81	ug/L		94
9) 1,2-Dichlorotrifluoroethan	4.24	67	963232	42.05	ug/L		96
10) 1,1-Dichloroethene	4.27	61	1530781	45.24	ug/L		96
11) Freon 113	4.34	101	707433	39.04	ug/L		92
12) Carbon Disulfide	4.33	76	2702437	45.44	ug/L		96
13) Iodomethane	4.44	142	1273092	38.11	ug/L		99
14) Methylene Chloride	4.85	49	1966715	61.68	ug/L		88
15) Acetone	4.86	58	405419	351.97	ug/L		93
16) Methyl acetate	4.98	74	645799	389.33	ug/L	#	51
17) trans-1,2-Dichloroethene	5.02	61	1964348	78.14	ug/L		95
18) Hexane	5.09	56	1230705	76.40	ug/L	#	87
19) Methyl Tert Butyl Ether	5.13	73	2634628	82.27	ug/L		93
20) Di-isopropyl ether	5.49	45	4882947	73.37	ug/L		88
21) 1,1-Dichloroethane	5.64	63	2373408	81.01	ug/L		93
22) Acrylonitrile	5.66	53	1915432	352.12	ug/L		97
23) ETBE	5.87	59	4163446	82.35	ug/L		95
24) Vinyl acetate	5.84	43	6939381	295.93	ug/L		100
25) cis-1,2-Dichloroethene	6.19	96	1168990	80.83	ug/L		94
26) 2,2-Dichloropropane	6.33	77	1478081	89.20	ug/L		98
27) Bromochloromethane	6.39	128	540617	74.78	ug/L		96
28) Cyclohexane	6.45	56	2485543	80.46	ug/L		93
29) Chloroform	6.44	83	1929624	77.73	ug/L		95
30) Tetrahydrofuran	6.62	42	297670	65.15	ug/L		95
32) Carbon Tetrachloride	6.64	117	1152258m	69.72	ug/L		
33) 1,1,1-Trichloroethane	6.71	97	1472557	84.05	ug/L		94
34) 2-Butanone	6.72	43	2153174	330.13	ug/L		88
35) 1,1-Dichloropropene	6.81	75	1558023	87.15	ug/L		90
36) Benzene	7.06	78	4418442	82.89	ug/L		100

(#) = qualifier out of range (m) = manual integration
J059056.D 8260-J.M Thu Sep 02 08:40:48 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059056.D Vial: 5
Acq On : 1 Sep 2010 11:40 am Operator: KarenW
Sample : IC3328-5 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:28:21 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	2797598	84.56	ug/L		91
39)	1,2-Dichloroethane	7.23	62	1511671	81.79	ug/L		94
40)	Trichloroethene	7.62	95	1109742	80.89	ug/L		89
41)	Methylcyclohexane	7.65	83	1864760	83.44	ug/L		95
42)	Dibromomethane	8.04	93	597514	77.75	ug/L		93
43)	1,2-Dichloropropane	8.13	63	1402267	81.59	ug/L		92
44)	Bromodichloromethane	8.18	83	1377146	82.80	ug/L		90
45)	2-Chloroethyl vinyl ether	8.70	63	3281402	342.61	ug/L		98
46)	cis-1,3-Dichloropropene	8.79	75	1824459	76.60	ug/L		93
49)	Toluene	9.04	91	4003836	85.03	ug/L		89
50)	2-Nitropropane	9.23	41	1046732	406.26	ug/L		92
51)	4-Methyl-2-pentanone	9.36	43	4089236	364.56	ug/L		81
52)	trans-1,3-Dichloropropene	9.42	75	1435855	83.82	ug/L		95
53)	Tetrachloroethene	9.44	166	971335	77.09	ug/L		96
54)	1,1,2-Trichloroethane	9.58	83	757131	96.59	ug/L		89
55)	Dibromochloromethane	9.78	129	850537	77.49	ug/L		98
56)	1,3-Dichloropropane	9.86	76	1541064	91.85	ug/L		86
57)	1,2-Dibromoethane	10.03	107	832570	96.80	ug/L		77
58)	2-hexanone	10.18	43	2896252	396.87	ug/L		85
59)	1-Chlorohexane	10.49	91	1571076	94.23	ug/L		94
60)	Ethylbenzene	10.56	91	3835133	72.08	ug/L		90
61)	Chlorobenzene	10.54	112	2330450	70.62	ug/L		89
62)	1,1,1,2-Tetrachloroethane	10.59	131	899404	85.23	ug/L		96
63)	m,p-Xylene	10.69	91	4962976	136.22	ug/L		78
64)	o-Xylene	11.13	91	3404410	82.22	ug/L		92
65)	Styrene	11.18	104	2759701	80.98	ug/L		90
66)	Bromoform	11.22	173	495281	66.65	ug/L		84
67)	Isopropylbenzene	11.44	105	3350406	79.73	ug/L		90
70)	n-Propylbenzene	11.86	91	4045256	79.78	ug/L		93
71)	Bromobenzene	11.86	156	1026564	69.81	ug/L		85
72)	1,1,2,2-Tetrachloroethane	11.91	83	976304	101.62	ug/L		95
73)	1,3,5-Trimethylbenzene	12.05	105	2963769	76.78	ug/L		89
74)	2-Chlorotoluene	12.03	91	3076174	78.77	ug/L		96
75)	trans-1,4-Dichloro-2-Buten	12.08	53	284638	80.99	ug/L	#	86
76)	1,2,3-Trichloropropane	12.06	110	233915	80.55	ug/L		87
77)	Cyclohexanone	12.12	55	156175	574.52	ug/L		93
78)	4-Chlorotoluene	12.20	91	3020823	89.82	ug/L		85
79)	tert-Butylbenzene	12.38	91	2033896	85.93	ug/L		97
80)	1,2,4-Trimethylbenzene	12.45	105	3143753	84.47	ug/L		83
81)	sec-Butylbenzene	12.57	105	3792799	85.14	ug/L		89
82)	4-Isopropyltoluene	12.70	119	3093159	83.06	ug/L		96
83)	1,3-Dichlorobenzene	12.81	146	1917434	79.21	ug/L		95
84)	1,4-Dichlorobenzene	12.90	146	1898508	74.56	ug/L		96
85)	n-Butylbenzene	13.14	92	2166742	81.24	ug/L	#	72
86)	Benzyl Chloride	13.14	126	346464	72.25	ug/L	#	40
87)	1,2-Dichlorobenzene	13.34	146	1786949	78.35	ug/L		93
88)	1,2-Dibromo-3-Chloropropan	14.09	75	152406	106.42	ug/L	#	82
89)	Hexachlorobutadiene	14.67	225	635342	67.48	ug/L		91
90)	1,2,4-Trichlorobenzene	14.70	180	1220403	74.09	ug/L	#	63

(#) = qualifier out of range (m) = manual integration
J059056.D 8260-J.M Thu Sep 02 08:40:48 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059056.D Vial: 5
Acq On : 1 Sep 2010 11:40 am Operator: KarenW
Sample : IC3328-5 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:28:21 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

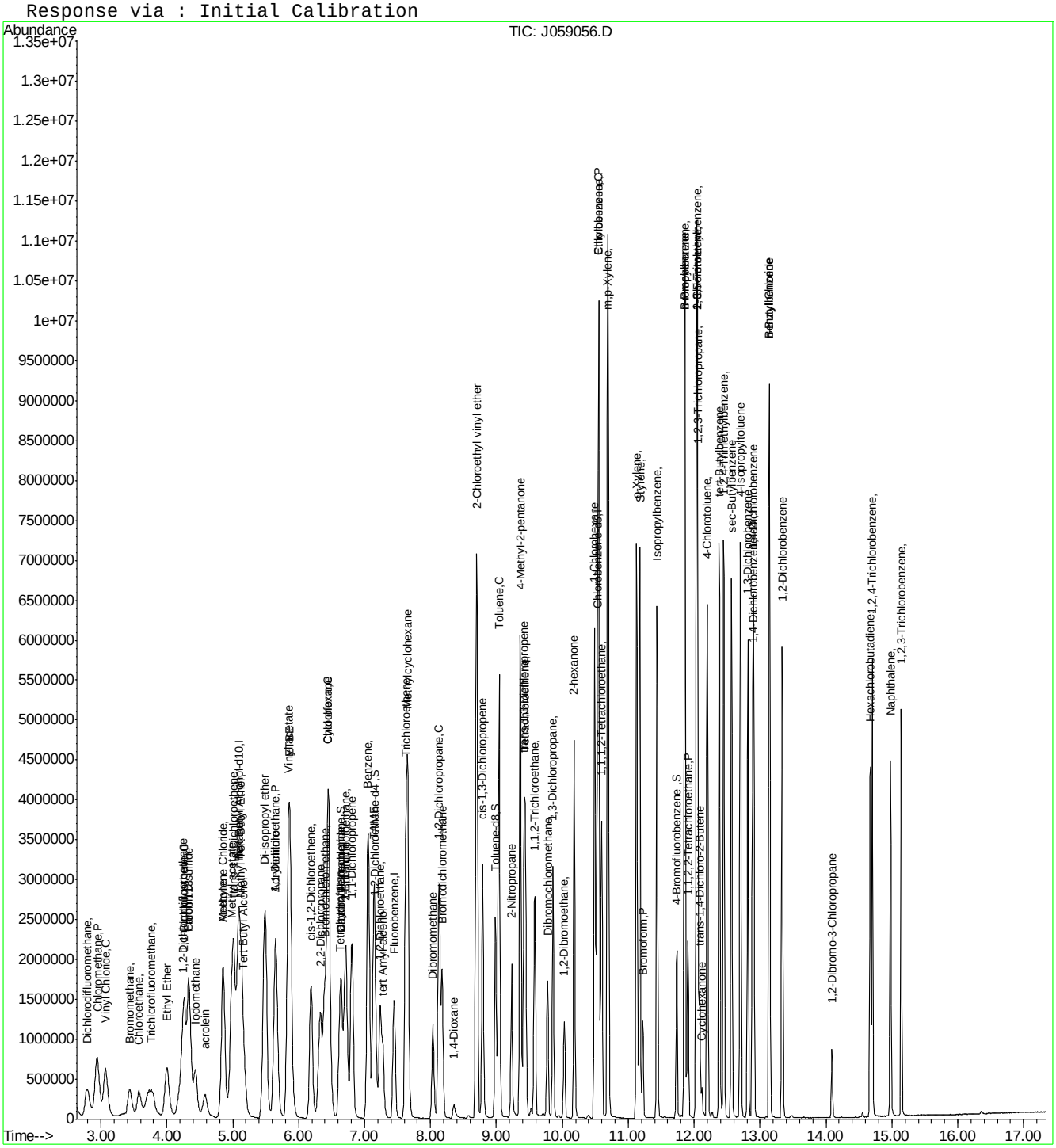
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91)	Naphthalene	14.98	128	2231470	87.02	ug/L		91
92)	1,2,3-Trichlorobenzene	15.14	180	1075050	77.58	ug/L		85
94)	acrolein	4.58	56	576080	233.93	ug/L		98
95)	Tert Butyl Alcohol	5.17	59	810444	806.75	ug/L	#	81
96)	tert Amyl alcohol	7.28	59	700942	882.64	ug/L		95
97)	1,4-Dioxane	8.35	88	156411	1822.46	ug/L		90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059056.D Vial: 5
Acq On : 1 Sep 2010 11:40 am Operator: KarenW
Sample : IC3328-5 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:28 2010 Quant Results File: 8260-J.RES

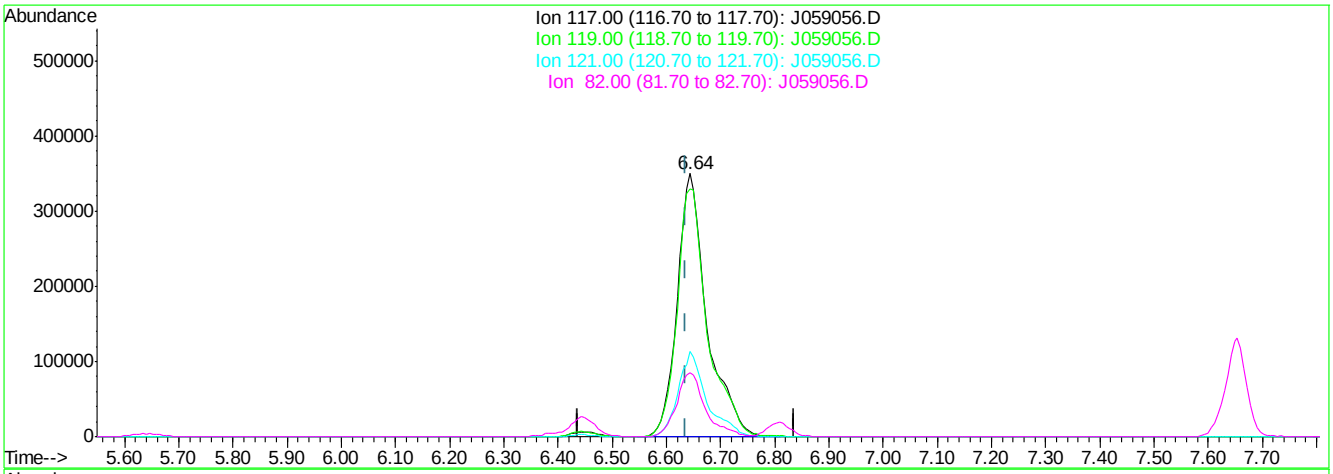
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

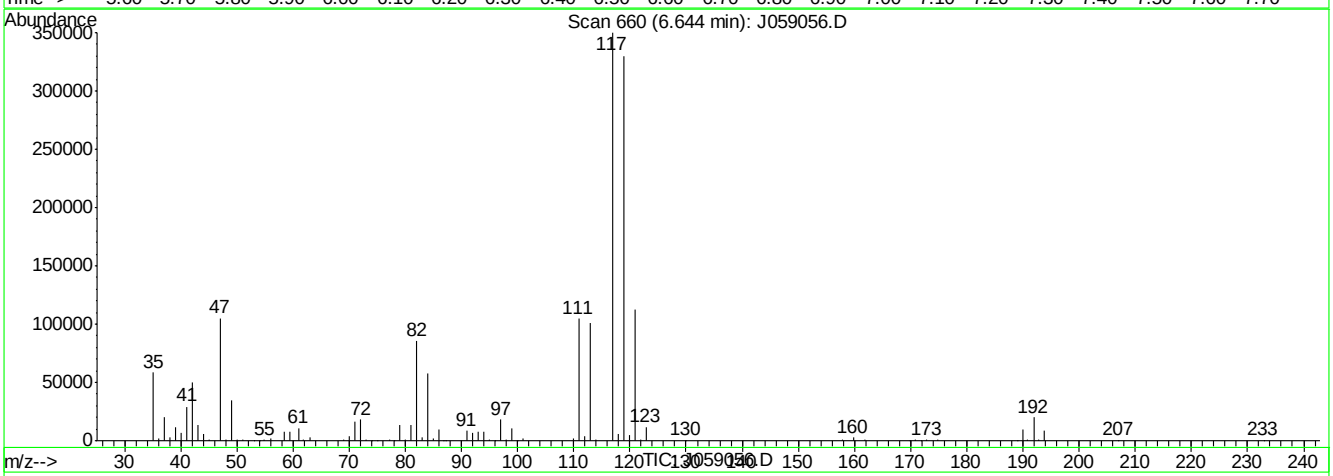


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059056.D Vial: 5
Acq On : 1 Sep 2010 11:40 am Operator: KarenW
Sample : IC3328-5 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.007) 78.89ug/L

response 1331295

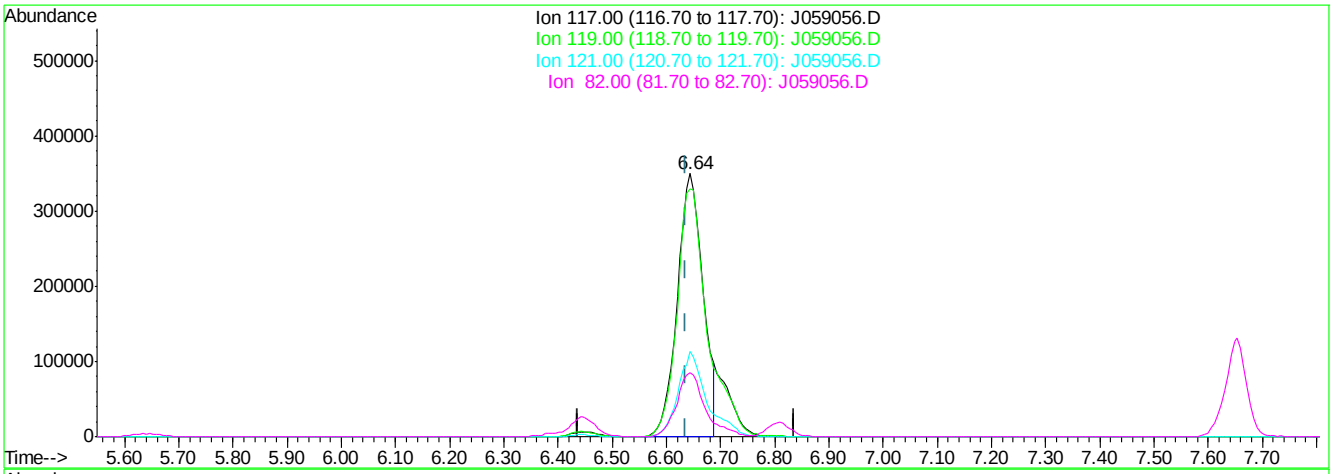
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	94.28
121.00	30.30	32.27
82.00	22.50	24.40

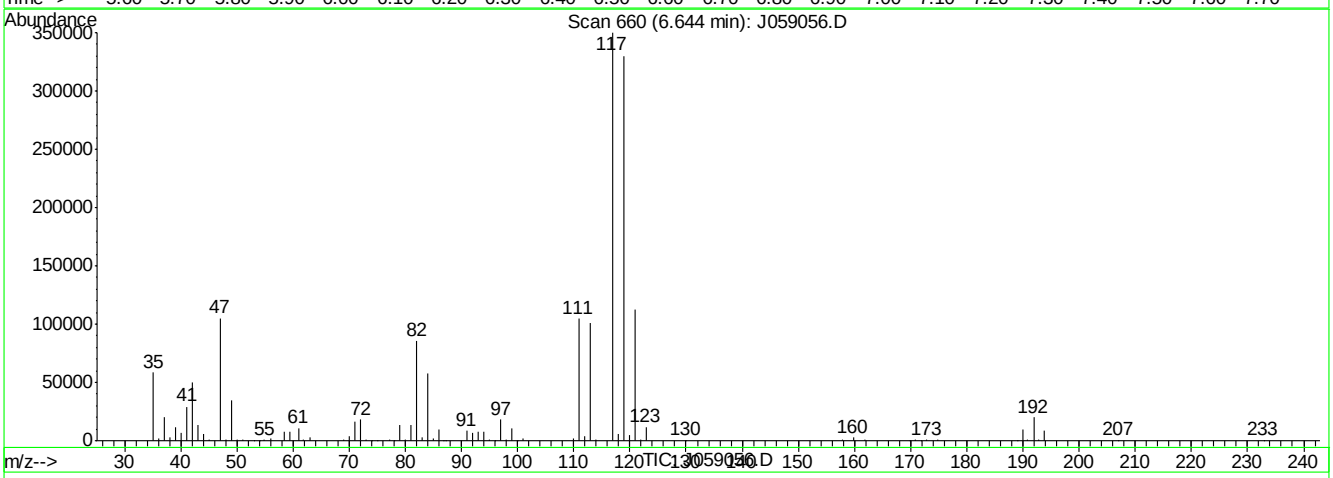
J059056.D 8260-J.M Wed Sep 01 12:28:30 2010

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059056.D Vial: 5
Acq On : 1 Sep 2010 11:40 am Operator: KarenW
Sample : IC3328-5 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.007) 69.72ug/L m

response 1152258

Ion	Exp%	Act%
117.00	100	100
119.00	81.10	94.28
121.00	30.30	32.27
82.00	22.50	24.40

J059056.D 8260-J.M Wed Sep 01 12:28:35 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059057.D Vial: 6
Acq On : 1 Sep 2010 12:03 pm Operator: KarenW
Sample : IC3328-6 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:28:53 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.45	96	1728617	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.53	117	1109210	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	594661	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	5.09	65	164028	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.63	113	407450	43.27	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 86.54%#			
38) 1,2-Dichloroethane-d4	7.17	65	492188	46.02	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 92.04%			
48) Toluene-d8	8.99	98	1640906	60.51	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 121.02%#			
69) 4-Bromofluorobenzene	11.74	95	660551	71.22	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 142.44%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.78	85	1536176	166.56	ug/L	96
3) Chloromethane	2.95	50	2824593	104.96	ug/L	100
4) Vinyl Chloride	3.07	62	2072724	84.56	ug/L	93
5) Bromomethane	3.43	94	691121	53.64	ug/L	86
6) Chloroethane	3.57	64	794213	68.07	ug/L	92
7) Trichlorofluoromethane	3.76	101	1610746	50.91	ug/L	99
8) Ethyl Ether	4.00	59	1249283	70.24	ug/L	94
9) 1,2-Dichlorotrifluoroethan	4.22	67	1337117	58.56	ug/L	98
10) 1,1-Dichloroethene	4.27	61	2081923	61.73	ug/L	98
11) Freon 113	4.34	101	967233	53.55	ug/L	93
12) Carbon Disulfide	4.33	76	3612203	60.93	ug/L	99
13) Iodomethane	4.44	142	1794286	53.89	ug/L	99
14) Methylene Chloride	4.85	49	2712181	85.34	ug/L	84
15) Acetone	4.87	58	564193	491.38	ug/L	93
16) Methyl acetate	4.98	74	885248	535.40	ug/L #	53
17) trans-1,2-Dichloroethene	5.02	61	2676823	106.82	ug/L	91
18) Hexane	5.09	56	1678565	104.54	ug/L #	87
19) Methyl Tert Butyl Ether	5.14	73	3697576	115.84	ug/L	82
20) Di-isopropyl ether	5.49	45	6628927	99.92	ug/L	84
21) 1,1-Dichloroethane	5.64	63	3290049	112.66	ug/L	88
22) Acrylonitrile	5.66	53	2710449	499.87	ug/L	96
23) ETBE	5.87	59	5662921	112.36	ug/L	96
24) Vinyl acetate	5.84	43	9263963	397.33	ug/L	94
25) cis-1,2-Dichloroethene	6.19	96	1632057	108.61	ug/L	94
26) 2,2-Dichloropropane	6.33	77	2052045	124.24	ug/L	100
27) Bromochloromethane	6.39	128	772083	107.13	ug/L	93
28) Cyclohexane	6.45	56	3360022	109.12	ug/L	92
29) Chloroform	6.44	83	2642463	106.78	ug/L	94
30) Tetrahydrofuran	6.62	42	415425	91.22	ug/L	95
32) Carbon Tetrachloride	6.64	117	1632153m	93.86	ug/L	
33) 1,1,1-Trichloroethane	6.71	97	2052576	117.53	ug/L	95
34) 2-Butanone	6.72	43	2993290	460.40	ug/L	88
35) 1,1-Dichloropropene	6.81	75	2162108	121.32	ug/L	91
36) Benzene	7.05	78	5835461	109.83	ug/L	96

(#) = qualifier out of range (m) = manual integration
J059057.D 8260-J.M Thu Sep 02 08:40:49 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059057.D Vial: 6
Acq On : 1 Sep 2010 12:03 pm Operator: KarenW
Sample : IC3328-6 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:28:53 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	3792772	115.01	ug/L		94
39)	1,2-Dichloroethane	7.23	62	2121787	115.16	ug/L		93
40)	Trichloroethene	7.62	95	1532133	112.04	ug/L		85
41)	Methylcyclohexane	7.65	83	2443016	109.66	ug/L		96
42)	Dibromomethane	8.04	93	829424	108.27	ug/L		93
43)	1,2-Dichloropropane	8.13	63	1939109	113.18	ug/L		93
44)	Bromodichloromethane	8.18	83	1930815	116.46	ug/L		88
45)	2-Chloroethyl vinyl ether	8.70	63	4194185	439.32	ug/L		93
46)	cis-1,3-Dichloropropene	8.79	75	2501277	101.64	ug/L		93
49)	Toluene	9.04	91	5003294	108.82	ug/L		82
50)	2-Nitropropane	9.23	41	1512343	601.50	ug/L		89
51)	4-Methyl-2-pentanone	9.36	43	5085756	464.62	ug/L		69
52)	trans-1,3-Dichloropropene	9.42	75	1972275	111.01	ug/L		96
53)	Tetrachloroethene	9.44	166	1322414	107.56	ug/L		96
54)	1,1,2-Trichloroethane	9.58	83	1049193	137.17	ug/L		91
55)	Dibromochloromethane	9.78	129	1212922	104.65	ug/L		99
56)	1,3-Dichloropropane	9.86	76	2089989	122.42	ug/L		88
57)	1,2-Dibromoethane	10.03	107	1163841	138.66	ug/L		70
58)	2-hexanone	10.18	43	3717522	522.01	ug/L		78
59)	1-Chlorohexane	10.49	91	2084299	128.11	ug/L		95
60)	Ethylbenzene	10.56	91	4589406	90.34	ug/L		76
61)	Chlorobenzene	10.54	112	2986576	92.75	ug/L		92
62)	1,1,1,2-Tetrachloroethane	10.60	131	1237697	120.18	ug/L		97
63)	m,p-Xylene	10.70	91	5712456	174.81	ug/L		65
64)	o-Xylene	11.13	91	4156343	102.48	ug/L		82
65)	Styrene	11.18	104	3495712	102.72	ug/L		81
66)	Bromoform	11.22	173	726125	92.86	ug/L		84
67)	Isopropylbenzene	11.44	105	4162237	100.73	ug/L		78
70)	n-Propylbenzene	11.86	91	4803688	105.74	ug/L		86
71)	Bromobenzene	11.86	156	1355004	90.36	ug/L		78
72)	1,1,2,2-Tetrachloroethane	11.91	83	1361222	144.04	ug/L		95
73)	1,3,5-Trimethylbenzene	12.05	105	3588942	97.32	ug/L		81
74)	2-Chlorotoluene	12.03	91	3798896	101.68	ug/L		91
75)	trans-1,4-Dichloro-2-Buten	12.08	53	428306	123.90	ug/L		87
76)	1,2,3-Trichloropropane	12.06	110	321873	112.69	ug/L		87
77)	Cyclohexanone	12.11	55	221660	828.98	ug/L		88
78)	4-Chlorotoluene	12.20	91	3817998	114.95	ug/L		89
79)	tert-Butylbenzene	12.38	91	2655759	110.38	ug/L		94
80)	1,2,4-Trimethylbenzene	12.45	105	3890812	108.08	ug/L		79
81)	sec-Butylbenzene	12.57	105	4610955	110.43	ug/L		80
82)	4-Isopropyltoluene	12.70	119	3806955	104.66	ug/L		96
83)	1,3-Dichlorobenzene	12.81	146	2498510	101.74	ug/L		96
84)	1,4-Dichlorobenzene	12.90	146	2470591	97.08	ug/L		93
85)	n-Butylbenzene	13.14	92	2768524	105.53	ug/L	#	62
86)	Benzyl Chloride	13.14	126	463534	93.39	ug/L	#	22
87)	1,2-Dichlorobenzene	13.34	146	2330404	101.61	ug/L		90
88)	1,2-Dibromo-3-Chloropropan	14.09	75	214145	139.01	ug/L	#	82
89)	Hexachlorobutadiene	14.67	225	885251	88.28	ug/L		89
90)	1,2,4-Trichlorobenzene	14.71	180	1634855	100.90	ug/L		67

(#) = qualifier out of range (m) = manual integration
J059057.D 8260-J.M Thu Sep 02 08:40:49 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059057.D Vial: 6
Acq On : 1 Sep 2010 12:03 pm Operator: KarenW
Sample : IC3328-6 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:28:53 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

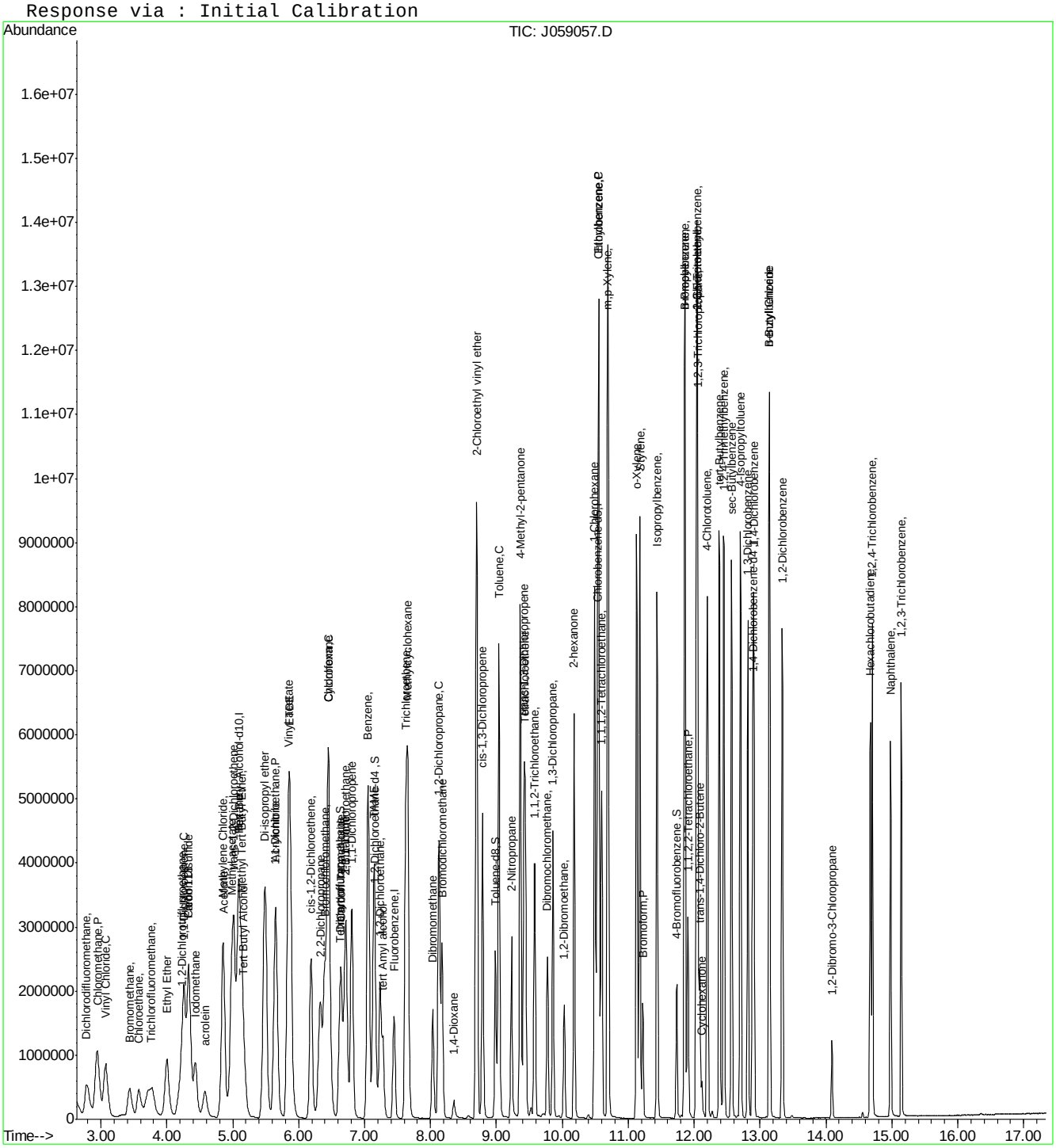
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91)	Naphthalene	14.98	128	2871652	112.53	ug/L		86
92)	1,2,3-Trichlorobenzene	15.14	180	1443232	105.88	ug/L		84
94)	acrolein	4.58	56	816891	330.70	ug/L		97
95)	Tert Butyl Alcohol	5.17	59	1132812	1124.21	ug/L	#	62
96)	tert Amyl alcohol	7.28	59	989424	1242.12	ug/L		98
97)	1,4-Dioxane	8.35	88	222045	2579.34	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059057.D Vial: 6
Acq On : 1 Sep 2010 12:03 pm Operator: KarenW
Sample : IC3328-6 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:29 2010 Quant Results File: 8260-J.RES

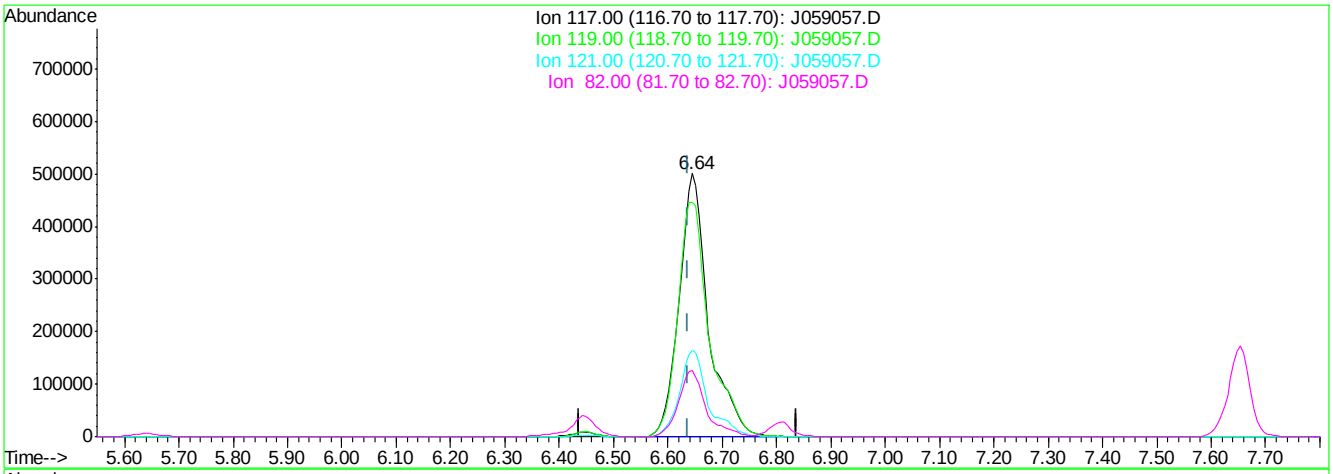
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

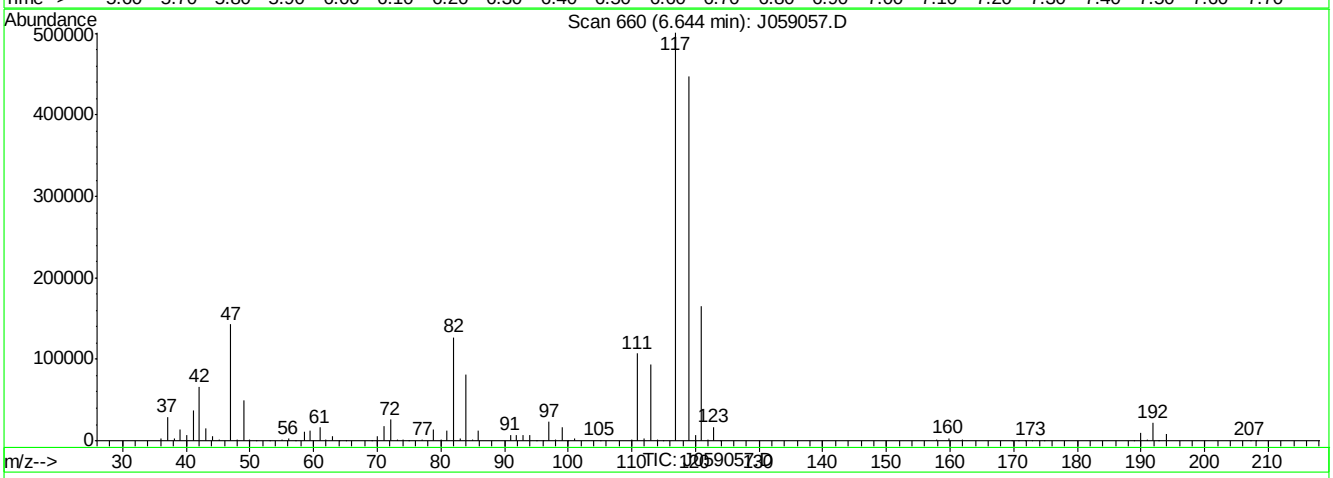


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059057.D Vial: 6
Acq On : 1 Sep 2010 12:03 pm Operator: KarenW
Sample : IC3328-6 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.007) 105.32ug/L

response 1877334

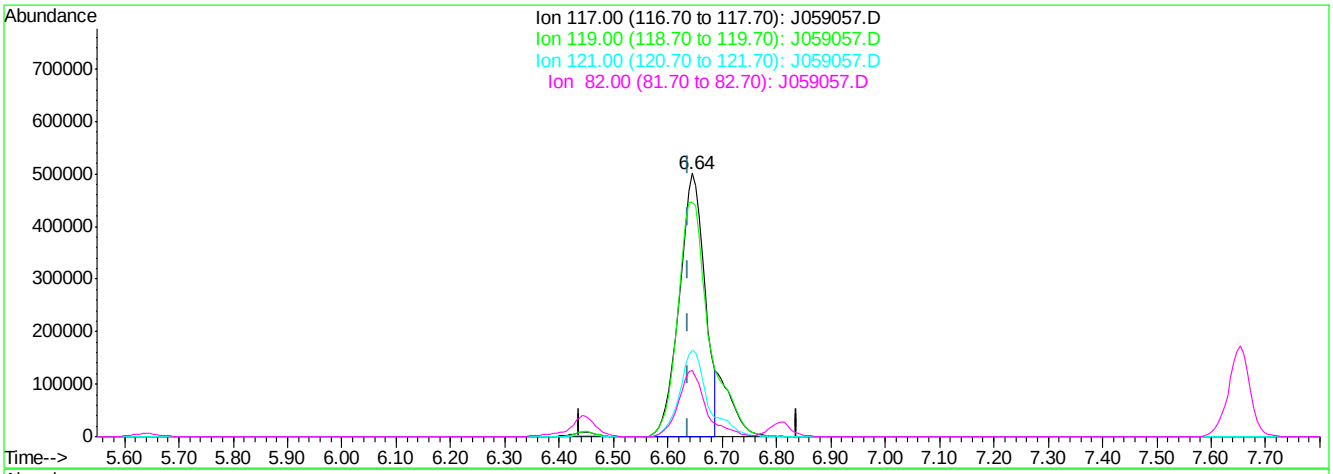
Ion	Exp%	Act%
117.00	100	100
119.00	81.10	89.18
121.00	30.30	32.89
82.00	22.50	25.24

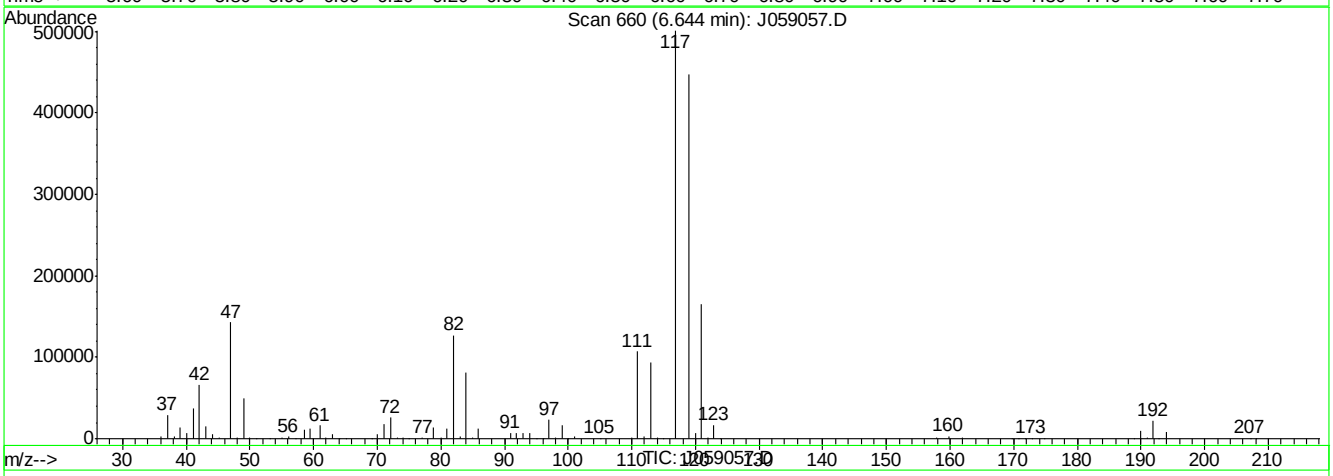
J059057.D 8260-J.M Wed Sep 01 12:29:08 2010

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059057.D Vial: 6
Acq On : 1 Sep 2010 12:03 pm Operator: KarenW
Sample : IC3328-6 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:29 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Aug 30 15:18:08 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.007) 93.86ug/L m

response 1632153

Ion	Exp%	Act%
117.00	100	100
119.00	81.10	89.18
121.00	30.30	32.89
82.00	22.50	25.30

J059057.D 8260-J.M Wed Sep 01 12:29:15 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/02/10 14:49

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:48:43 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 12:48:37 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.44	96	1742161	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.53	117	1141857	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	604425	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.09	65	166835	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.62	113	415064	49.72	ug/L		-0.01
Spiked Amount 50.000	Range 87 - 116		Recovery = 99.44%				
38) 1,2-Dichloroethane-d4	7.17	65	542903	52.81	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 105.62%				
48) Toluene-d8	8.99	98	1630761	50.32	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.64%				
69) 4-Bromofluorobenzene	11.74	95	638437	49.72	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 99.44%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.79	85	654842	45.30	ug/L		100
3) Chloromethane	2.93	50	1278499	42.76	ug/L		98
4) Vinyl Chloride	3.05	62	837857	41.69	ug/L		100
5) Bromomethane	3.42	94	335162	38.56	ug/L		97
6) Chloroethane	3.57	64	361581	39.90	ug/L		97
7) Trichlorofluoromethane	3.77	101	739440	46.79	ug/L		99
8) Ethyl Ether	3.99	59	528665	43.14	ug/L		98
9) 1,2-Dichlorotrifluoroethan	4.22	67	638048	46.48	ug/L		98
10) 1,1-Dichloroethene	4.25	61	868251	41.71	ug/L		98
11) Freon 113	4.32	101	421326	43.62	ug/L		98
12) Carbon Disulfide	4.33	76	1530612	40.73	ug/L		99
13) Iodomethane	4.43	142	748953	43.18	ug/L		98
14) Methylene Chloride	4.84	49	1164549	40.03	ug/L		98
15) Acetone	4.87	58	225223	188.11	ug/L		86
16) Methyl acetate	4.97	74	387636	220.65	ug/L	#	88
17) trans-1,2-Dichloroethene	5.01	61	1142164	42.70	ug/L		99
18) Hexane	5.08	56	785084	45.45	ug/L		96
19) Methyl Tert Butyl Ether	5.13	73	1564302	42.65	ug/L		99
20) Di-isopropyl ether	5.48	45	3015779	44.42	ug/L		99
21) 1,1-Dichloroethane	5.63	63	1419155	43.69	ug/L		100
22) Acrylonitrile	5.65	53	1102490	200.71	ug/L		95
23) ETBE	5.87	59	2434969	42.47	ug/L		99
24) Vinyl acetate	5.84	43	5374286	260.12	ug/L		100
25) cis-1,2-Dichloroethene	6.18	96	720980	43.49	ug/L		96
26) 2,2-Dichloropropane	6.32	77	894486	43.35	ug/L		99
27) Bromochloromethane	6.38	128	306496	41.36	ug/L		98
28) Cyclohexane	6.45	56	1457842	42.85	ug/L		97
29) Chloroform	6.44	83	1172812	43.37	ug/L		97
30) Tetrahydrofuran	6.62	42	176429	42.05	ug/L		98
32) Carbon Tetrachloride	6.64	117	689470m	43.00	ug/L		
33) 1,1,1-Trichloroethane	6.70	97	879032	44.02	ug/L		98
34) 2-Butanone	6.72	43	1312073	219.16	ug/L		99
35) 1,1-Dichloropropene	6.80	75	947579	44.50	ug/L		98
36) Benzene	7.05	78	2735681	43.36	ug/L		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:48:43 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 12:48:37 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	1663999	43.08	ug/L		98
39)	1,2-Dichloroethane	7.23	62	923481	43.76	ug/L		99
40)	Trichloroethene	7.62	95	669700	43.48	ug/L		97
41)	Methylcyclohexane	7.65	83	1159696	45.47	ug/L		99
42)	Dibromomethane	8.03	93	360679	44.31	ug/L		97
43)	1,2-Dichloropropane	8.12	63	857846	44.19	ug/L		98
44)	Bromodichloromethane	8.17	83	822671	44.85	ug/L		98
45)	2-Chloroethyl vinyl ether	8.70	63	2026145	215.72	ug/L		99
46)	cis-1,3-Dichloropropene	8.79	75	1125354	44.39	ug/L		98
49)	Toluene	9.03	91	2593791	42.59	ug/L		98
50)	2-Nitropropane	9.23	41	557200	208.30	ug/L		99
51)	4-Methyl-2-pentanone	9.36	43	2805884	236.08	ug/L		99
52)	trans-1,3-Dichloropropene	9.41	75	947113	46.41	ug/L		99
53)	Tetrachloroethene	9.44	166	599040	43.90	ug/L		94
54)	1,1,2-Trichloroethane	9.58	83	459931	43.94	ug/L		99
55)	Dibromochloromethane	9.77	129	520285	42.31	ug/L		97
56)	1,3-Dichloropropane	9.86	76	939237	43.99	ug/L		99
57)	1,2-Dibromoethane	10.03	107	509694	44.73	ug/L		97
58)	2-hexanone	10.18	43	1983378	232.25	ug/L		99
59)	1-Chlorohexane	10.49	91	919752	42.23	ug/L		99
60)	Ethylbenzene	10.55	91	2607757	42.55	ug/L		100
61)	Chlorobenzene	10.54	112	1543711	44.50	ug/L		97
62)	1,1,1,2-Tetrachloroethane	10.59	131	549737	45.50	ug/L		98
63)	m,p-Xylene	10.69	91	3671289	86.70	ug/L		99
64)	o-Xylene	11.13	91	2234678	42.87	ug/L		98
65)	Styrene	11.17	104	1761038	44.55	ug/L		98
66)	Bromoform	11.22	173	290256	44.05	ug/L		98
67)	Isopropylbenzene	11.44	105	2493470	48.74	ug/L		100
70)	n-Propylbenzene	11.86	91	2898803	43.76	ug/L		98
71)	Bromobenzene	11.86	156	644345	43.43	ug/L		91
72)	1,1,2,2-Tetrachloroethane	11.90	83	613747	45.49	ug/L		96
73)	1,3,5-Trimethylbenzene	12.05	105	2020285	44.38	ug/L		98
74)	2-Chlorotoluene	12.03	91	2089901	43.88	ug/L		97
75)	trans-1,4-Dichloro-2-Buten	12.08	53	167435	42.29	ug/L		98
76)	1,2,3-Trichloropropane	12.06	110	134693	40.99	ug/L		98
77)	Cyclohexanone	12.11	55	92464	207.17	ug/L		94
78)	4-Chlorotoluene	12.20	91	2025404	44.82	ug/L		97
79)	tert-Butylbenzene	12.38	91	1305204	44.81	ug/L		99
80)	1,2,4-Trimethylbenzene	12.45	105	2115906	44.33	ug/L		99
81)	sec-Butylbenzene	12.57	105	2647584	44.30	ug/L		99
82)	4-Isopropyltoluene	12.70	119	2110676	45.04	ug/L		97
83)	1,3-Dichlorobenzene	12.81	146	1216222	44.06	ug/L		93
84)	1,4-Dichlorobenzene	12.90	146	1209546	43.54	ug/L		99
85)	n-Butylbenzene	13.14	92	1407606	44.99	ug/L		99
86)	Benzyl Chloride	13.14	126	207045	43.94	ug/L	#	88
87)	1,2-Dichlorobenzene	13.34	146	1140519	44.24	ug/L		98
88)	1,2-Dibromo-3-Chloropropan	14.09	75	90309	45.50	ug/L		97
89)	Hexachlorobutadiene	14.67	225	414366	45.91	ug/L		99
90)	1,2,4-Trichlorobenzene	14.70	180	788716	45.10	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 01 12:48:43 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 12:48:37 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

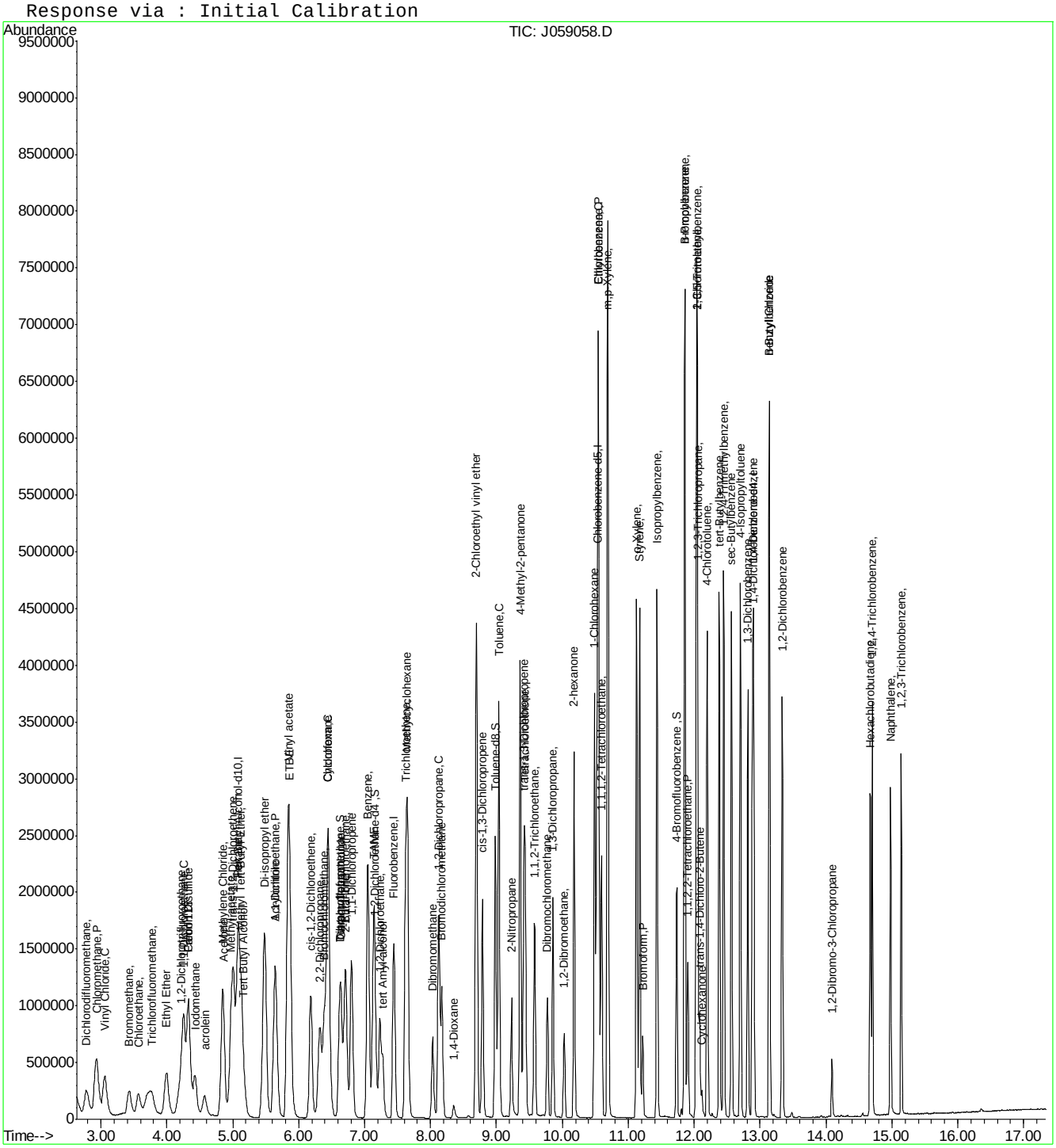
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	14.98	128	1459554	43.90	ug/L	100
92) 1,2,3-Trichlorobenzene	15.14	180	685335	45.37	ug/L	97
94) acrolein	4.58	56	349428	209.87	ug/L	95
95) Tert Butyl Alcohol	5.17	59	471839	408.51	ug/L	88
96) tert Amyl alcohol	7.28	59	420891	437.16	ug/L	97
97) 1,4-Dioxane	8.35	88	97928	905.71	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059058.D 8260-J.M Thu Sep 02 08:40:50 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 13:52 2010 Quant Results File: 8260-J.RES

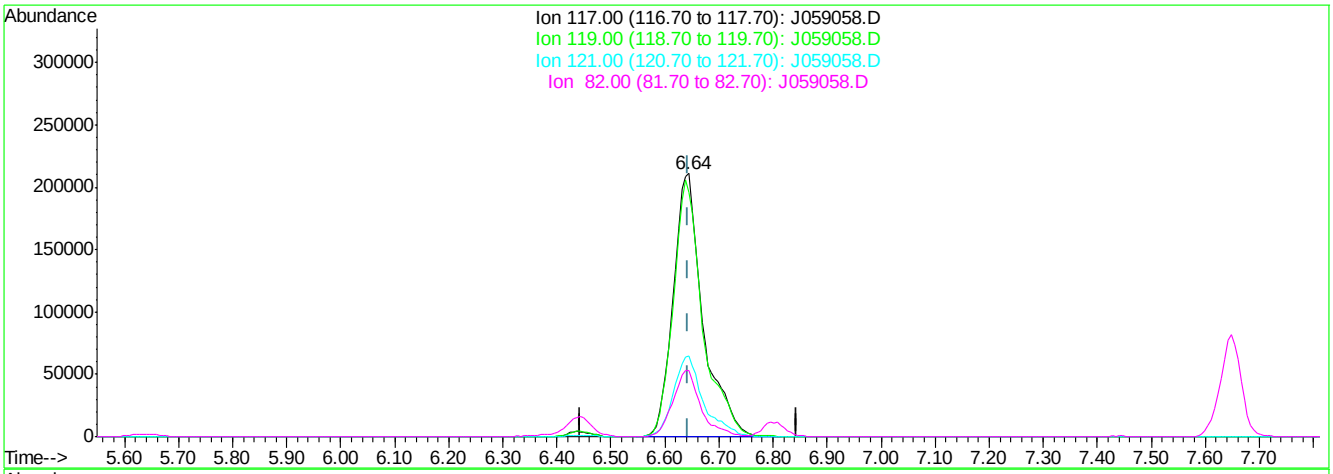
Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Initial Calibration

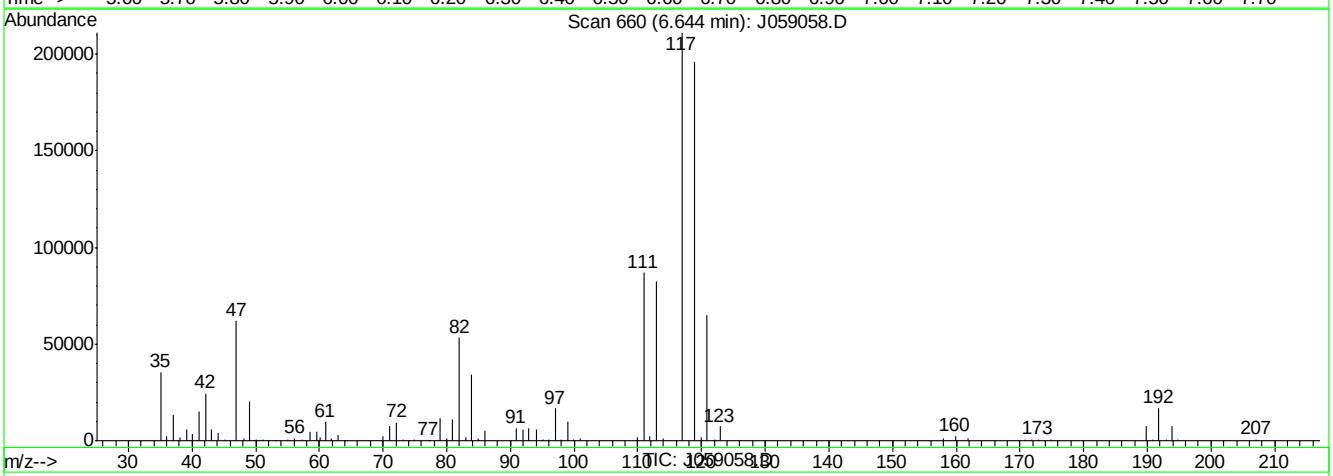


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 12:48 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.000) 49.81ug/L

response 801629

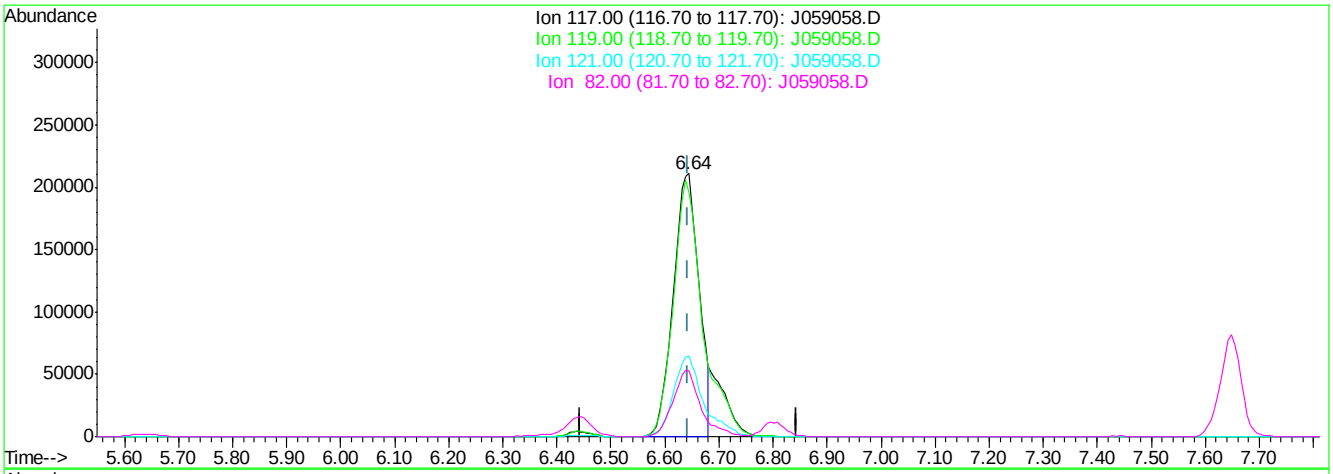
Ion	Exp%	Act%
117.00	100	100
119.00	97.10	92.97
121.00	31.10	30.86
82.00	25.60	25.14

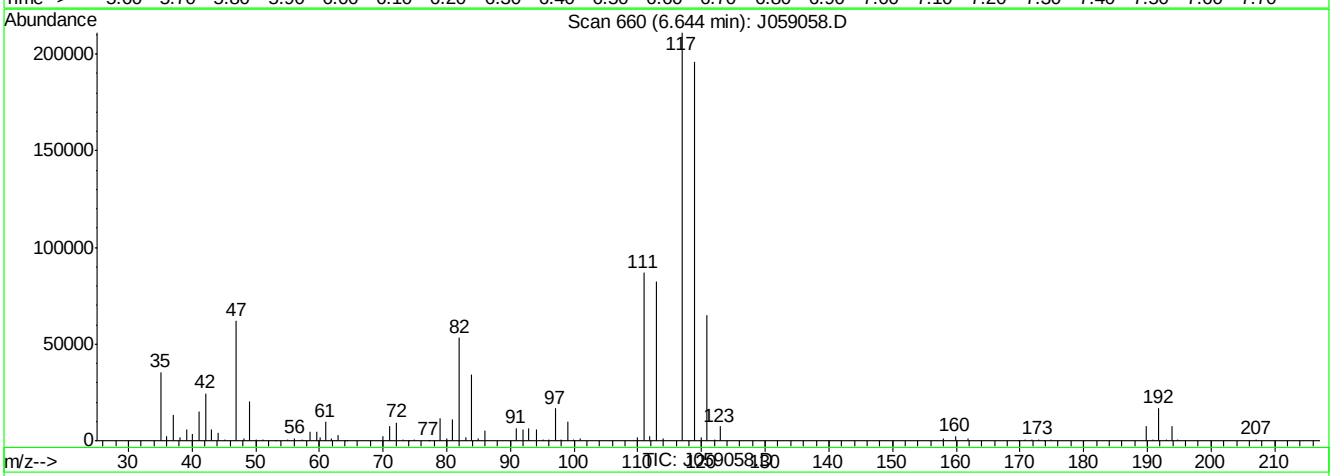
J059058.D 8260-J.M Wed Sep 01 13:52:29 2010

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\090110\J059058.D Vial: 7
Acq On : 1 Sep 2010 12:26 pm Operator: KarenW
Sample : ICV3328-4 Inst : MSVOA6
Misc : ms15305,vj3328,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 1 13:52 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Wed Sep 01 13:49:53 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.000) 43.00ug/L m

response 689470

Ion	Exp%	Act%
117.00	100	100
119.00	97.10	92.97
121.00	31.10	30.86
82.00	25.60	25.27

J059058.D 8260-J.M Wed Sep 01 13:52:34 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 15:13

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28:26 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.44	96	1300698	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.52	117	950693	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.89	152	501031	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	5.10	65	139602	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.63	113	327474	49.21	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 98.42%				
38) 1,2-Dichloroethane-d4	7.17	65	435028	53.84	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 107.68%				
48) Toluene-d8	8.98	98	1244638	49.63	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 99.26%				
69) 4-Bromofluorobenzene	11.73	95	480455	50.27	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 100.54%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.78	85	420511	34.22	ug/L		98
3) Chloromethane	2.93	50	1060711	38.68	ug/L		98
4) Vinyl Chloride	3.05	62	742702	39.85	ug/L		100
5) Bromomethane	3.44	94	344223	40.05	ug/L		100
6) Chloroethane	3.57	64	371841	41.97	ug/L		97
7) Trichlorofluoromethane	3.77	101	656986	41.63	ug/L		91
8) Ethyl Ether	4.00	59	504061	42.55	ug/L		100
9) 1,2-Dichlorotrifluoroethan	4.24	67	509822	39.49	ug/L		94
10) 1,1-Dichloroethene	4.27	61	840791	41.19	ug/L		97
11) Freon 113	4.33	101	379067	39.37	ug/L		98
12) Carbon Disulfide	4.34	76	1356024	39.33	ug/L		96
13) Iodomethane	4.44	142	702598	39.24	ug/L		98
14) Methylene Chloride	4.86	49	914147	37.06	ug/L		91
15) Acetone	4.87	58	188948	180.05	ug/L		87
16) Methyl acetate	4.98	74	271018	175.08	ug/L	#	91
17) trans-1,2-Dichloroethene	5.03	61	796978	34.80	ug/L		95
18) Hexane	5.09	56	523853	36.14	ug/L		96
19) Methyl Tert Butyl Ether	5.14	73	1027030	33.78	ug/L		93
20) Di-isopropyl ether	5.49	45	2059676	37.27	ug/L		98
21) 1,1-Dichloroethane	5.64	63	969067	35.40	ug/L		97
22) Acrylonitrile	5.66	53	926549	197.78	ug/L		98
23) ETBE	5.87	59	1707422	34.91	ug/L		97
24) Vinyl acetate	5.84	43	3561715	200.46	ug/L		99
25) cis-1,2-Dichloroethene	6.19	96	447034	33.85	ug/L		95
26) 2,2-Dichloropropane	6.33	77	569681	34.24	ug/L		97
27) Bromochloromethane	6.39	128	226595	33.00	ug/L	#	79
28) Cyclohexane	6.46	56	1014597	35.93	ug/L		97
29) Chloroform	6.44	83	719163	32.92	ug/L		95
30) Tetrahydrofuran	6.62	42	136607	38.15	ug/L		96
32) Carbon Tetrachloride	6.64	117	472500m	35.43	ug/L		
33) 1,1,1-Trichloroethane	6.71	97	560387	33.36	ug/L		90
34) 2-Butanone	6.72	43	1038677	194.70	ug/L		95
35) 1,1-Dichloropropene	6.80	75	593679	34.79	ug/L		95
36) Benzene	7.05	78	1717031	34.45	ug/L		96

(#) = qualifier out of range (m) = manual integration
J059346.D 8260-J.M Wed Sep 15 14:01:01 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28:26 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
37)	TAME	7.14	73	1073779	33.55	ug/L		97
39)	1,2-Dichloroethane	7.23	62	669956	35.16	ug/L		96
40)	Trichloroethene	7.62	95	430921	33.19	ug/L		96
41)	Methylcyclohexane	7.65	83	688275	33.74	ug/L		95
42)	Dibromomethane	8.03	93	249542	34.29	ug/L		97
43)	1,2-Dichloropropane	8.12	63	569566	35.04	ug/L		96
44)	Bromodichloromethane	8.17	83	556075	36.71	ug/L		94
45)	2-Chloroethyl vinyl ether	8.69	63	1624637	185.09	ug/L		95
46)	cis-1,3-Dichloropropene	8.79	75	718543	33.93	ug/L		92
49)	Toluene	9.04	91	1743410	34.29	ug/L		98
50)	2-Nitropropane	9.22	41	596808	229.37	ug/L		99
51)	4-Methyl-2-pentanone	9.36	43	2167956	197.20	ug/L		95
52)	trans-1,3-Dichloropropene	9.41	75	594065	34.06	ug/L		95
53)	Tetrachloroethene	9.44	166	429084	32.46	ug/L		97
54)	1,1,2-Trichloroethane	9.58	83	307791	34.01	ug/L		96
55)	Dibromochloromethane	9.77	129	380853	33.86	ug/L		97
56)	1,3-Dichloropropane	9.86	76	638925	34.55	ug/L		94
57)	1,2-Dibromoethane	10.03	107	347594	33.42	ug/L		94
58)	2-hexanone	10.18	43	1481701	198.18	ug/L		93
59)	1-Chlorohexane	10.49	91	647863	33.71	ug/L		89
60)	Ethylbenzene	10.55	91	1836854	32.76	ug/L		95
61)	Chlorobenzene	10.54	112	1123430	32.63	ug/L		97
62)	1,1,1,2-Tetrachloroethane	10.59	131	388092	33.43	ug/L		99
63)	m,p-Xylene	10.69	91	2698487	68.94	ug/L		93
64)	o-Xylene	11.12	91	1483111	32.30	ug/L		95
65)	Styrene	11.17	104	1168746	34.07	ug/L		96
66)	Bromoform	11.22	173	247075	34.96	ug/L		98
67)	Isopropylbenzene	11.44	105	1498887	31.74	ug/L		98
70)	n-Propylbenzene	11.85	91	2104649	35.70	ug/L		92
71)	Bromobenzene	11.86	156	487219	33.75	ug/L		99
72)	1,1,2,2-Tetrachloroethane	11.90	83	414780	35.38	ug/L		99
73)	1,3,5-Trimethylbenzene	12.04	105	1413767	35.61	ug/L		95
74)	2-Chlorotoluene	12.03	91	1457828	35.54	ug/L		96
75)	trans-1,4-Dichloro-2-Buten	12.08	53	168825	38.14	ug/L		98
76)	1,2,3-Trichloropropane	12.06	110	105033	33.68	ug/L		90
77)	Cyclohexanone	12.11	55	71164	198.36	ug/L		95
78)	4-Chlorotoluene	12.20	91	1339845	35.10	ug/L		98
79)	tert-Butylbenzene	12.38	91	844964	33.94	ug/L		96
80)	1,2,4-Trimethylbenzene	12.45	105	1446944	35.31	ug/L		98
81)	sec-Butylbenzene	12.56	105	1837418	34.33	ug/L		96
82)	4-Isopropyltoluene	12.70	119	1492461	35.24	ug/L		97
83)	1,3-Dichlorobenzene	12.81	146	886839	33.71	ug/L		97
84)	1,4-Dichlorobenzene	12.90	146	907823	33.86	ug/L		96
85)	n-Butylbenzene	13.14	92	989263	35.96	ug/L		92
86)	Benzyl Chloride	13.14	126	176516	37.35	ug/L	#	90
87)	1,2-Dichlorobenzene	13.34	146	838943	33.67	ug/L		99
88)	1,2-Dibromo-3-Chloropropan	14.09	75	61118	32.90	ug/L		94
89)	Hexachlorobutadiene	14.67	225	308237	33.20	ug/L		92
90)	1,2,4-Trichlorobenzene	14.71	180	624924	34.90	ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28:26 2010 Quant Results File: 8260-J.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration
DataAcq Meth : 8260VMS

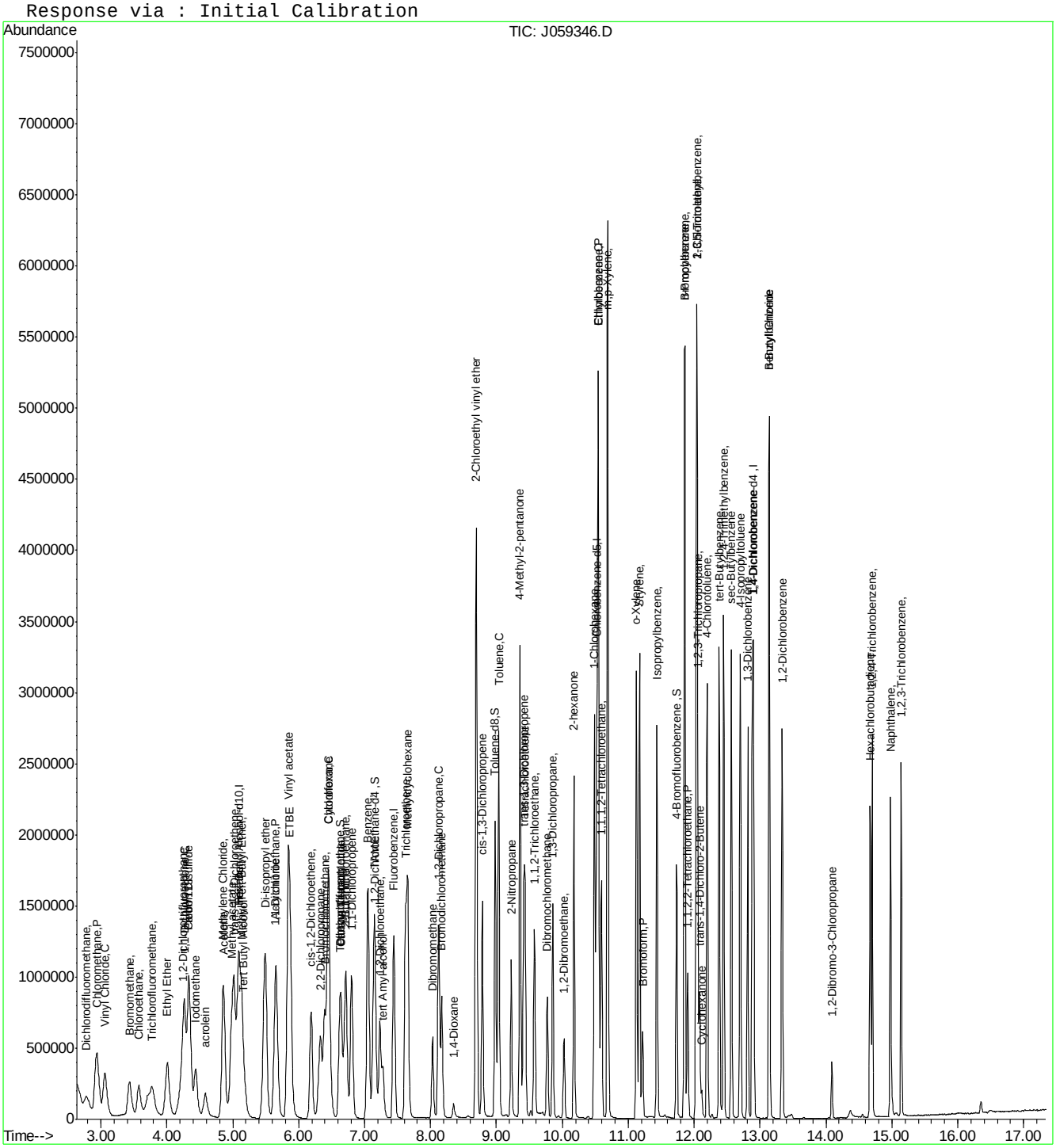
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	14.98	128	1080560	34.38	ug/L	99
92)	1,2,3-Trichlorobenzene	15.14	180	530418	33.88	ug/L	92
94)	acrolein	4.58	56	305853	171.94	ug/L	96
95)	Tert Butyl Alcohol	5.17	59	360453	327.84	ug/L	84
96)	tert Amyl alcohol	7.28	59	277522	314.00	ug/L	96
97)	1,4-Dioxane	8.35	88	64861	635.53	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed
J059346.D 8260-J.M Wed Sep 15 14:01:01 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28 2010 Quant Results File: 8260-J.RES

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Initial Calibration

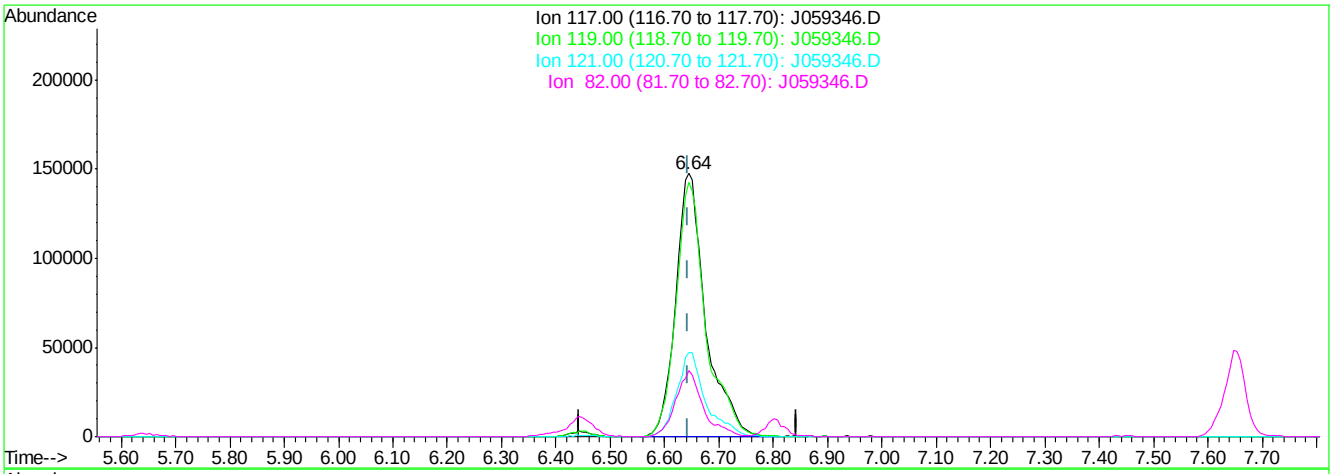


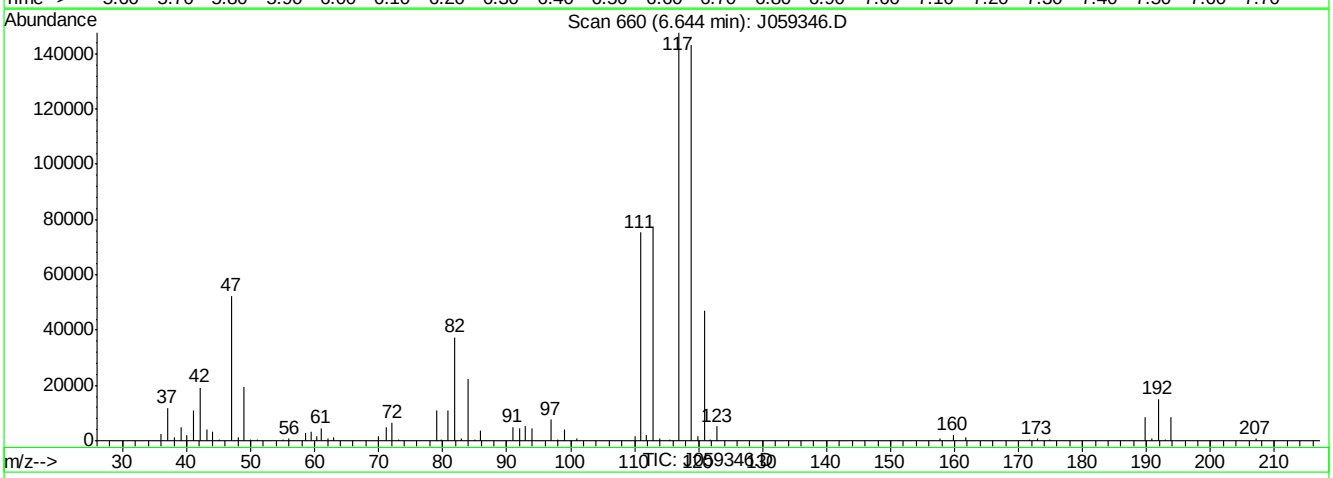
ACCUTEST
F76426

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.000) 41.67ug/L

response 562099

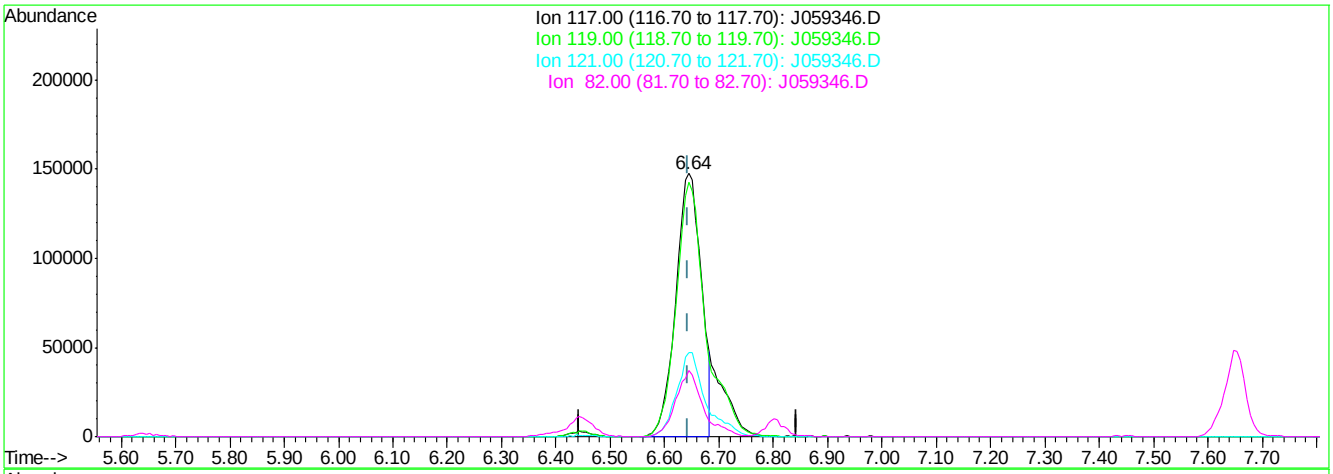
Ion	Exp%	Act%
117.00	100	100
119.00	95.40	96.88
121.00	29.70	31.75
82.00	22.30	25.29

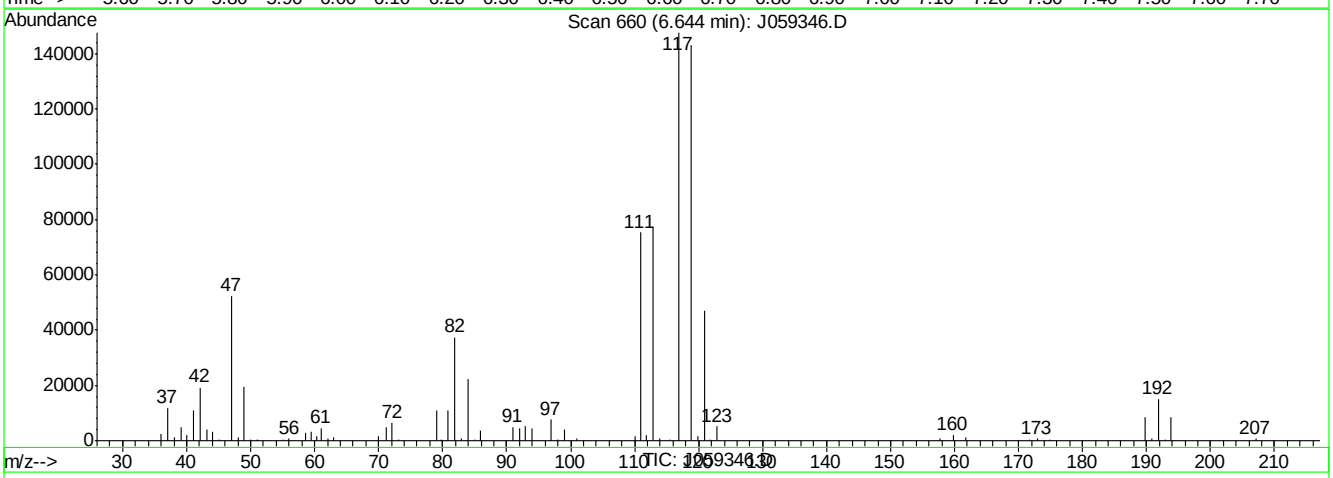
J059346.D 8260-J.M Wed Sep 15 10:28:46 2010

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\091510\J059346.D Vial: 1
Acq On : 15 Sep 2010 9:47 am Operator: KarenW
Sample : CC3328-4 Inst : MSVOA6
Misc : ms15399,vj3338,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p
Quant Time: Sep 15 10:28 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Sep 02 14:40:07 2010
Response via : Multiple Level Calibration





(32) Carbon Tetrachloride ( )

6.64min (+0.000) 35.43ug/L m

response 472500

Ion	Exp%	Act%
117.00	100	100
119.00	95.40	96.88
121.00	29.70	31.75
82.00	22.30	25.29

J059346.D 8260-J.M Wed Sep 15 10:28:50 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/07/10 16:06

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 03 17:27:25 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Fri Sep 03 11:12:35 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.47	96	978707	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.98	117	622954	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	239862	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.42	65	130235m	250.00	ug/Kg	0.15
System Monitoring Compounds						
31) Dibromofluoromethane	10.45	113	234129	47.35	ug/Kg	0.01
Spiked Amount 50.000	Range 80 - 121		Recovery = 94.70%			
36) 1,2-Dichloroethane-d4	11.13	65	280031	48.18	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 96.36%			
50) Toluene-d8	13.27	98	950024	44.53	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 89.06%			
70) 4-Bromofluorobenzene	16.25	174	212693	48.10	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 96.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	22223m	6.42	ug/Kg	
3) Chloromethane	4.61	50	61367	8.18	ug/Kg	97
4) Vinyl Chloride	4.80	62	42735	7.14	ug/Kg	83
5) Bromomethane	5.47	94	22458	9.06	ug/Kg#	54
6) Chloroethane	5.76	64	18565	6.90	ug/Kg	91
7) Trichlorofluoromethane	6.01	101	39629	7.18	ug/Kg	76
8) 1,2-Dichloro-1,1,2-trifluo	6.87	67	57050m	8.49	ug/Kg	
9) Ethyl Ether	6.53	59	25724	5.29	ug/Kg#	84
10) Freon 113	7.02	101	38400	8.24	ug/Kg	94
11) 1,1-Dichloroethene	6.92	61	60995	6.82	ug/Kg	88
12) Acetone	7.98	43	64486	40.08	ug/Kg	84
13) Iodomethane	7.20	142	52254	6.75	ug/Kg	84
14) Carbon Disulfide	7.04	76	109330	6.29	ug/Kg	100
15) Methyl acetate	8.15	43	120802	27.73	ug/Kg	92
16) Methylene Chloride	7.90	49	165221	16.30	ug/Kg	94
17) Acrylonitrile	9.17	53	49860m	30.43	ug/Kg	
18) Methyl Tert Butyl Ether	8.33	73	96482	6.08	ug/Kg#	58
19) trans-1,2-Dichloroethene	8.17	61	54907	5.78	ug/Kg	92
20) Hexane	8.30	57	89282	7.18	ug/Kg	92
21) Vinyl acetate	8.15	43	120718	27.49	ug/Kg	96
22) 1,1-Dichloroethane	9.11	63	76519	6.61	ug/Kg	97
23) Di-isopropyl ether	8.87	45	164706	5.84	ug/Kg	93
24) Ethyl tert-butyl Ether	9.40	59	109793	5.22	ug/Kg	92
25) 2-Butanone	10.60	43	72899	24.90	ug/Kg	94
26) cis-1,2-Dichloroethene	9.86	96	27614	4.78	ug/Kg#	61
27) 2,2-Dichloropropane	10.02	77	39941	4.99	ug/Kg	89
28) Bromochloromethane	10.14	128	13606	4.68	ug/Kg#	72
29) Chloroform	10.22	83	64129	6.58	ug/Kg	94
30) Tetrahydrofuran	10.63	42	7298	7.73	ug/Kg#	35
32) 1,1,1-Trichloroethane	10.52	97	44547	5.62	ug/Kg	75
33) Cyclohexane	10.20	56	83666	7.18	ug/Kg	95
34) 1,1-Dichloropropene	10.67	75	46000	5.82	ug/Kg	86
35) Carbon Tetrachloride	10.43	117	44633	6.73	ug/Kg	91
37) 1,2-Dichloroethane	11.22	62	43309	5.09	ug/Kg	86

(#) = qualifier out of range (m) = manual integration
K046499.D 8260-K.M Tue Sep 07 09:38:43 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 03 17:27:25 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Fri Sep 03 11:12:35 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.99	78	156870	6.97	ug/Kg	90
39)	Tert-Amyl Methyl Ether	11.07	73	76188	4.85	ug/Kg	96
40)	Trichloroethene	11.69	95	38909	7.22	ug/Kg	78
41)	Methylcyclohexane	11.71	83	60541	6.69	ug/Kg	74
42)	1,2-Dichloropropane	12.29	63	40803	5.48	ug/Kg	95
43)	Dibromomethane	12.19	93	14566	4.51	ug/Kg	79
44)	Bromodichloromethane	12.35	83	36877	4.84	ug/Kg	87
45)	2-Nitropropane	13.56	41	33465	21.43	ug/Kg	76
46)	2-Chloroethyl vinyl ether	12.93	63	37564	21.45	ug/Kg	97
47)	cis-1,3-Dichloropropene	13.05	75	45986	4.84	ug/Kg	92
48)	4-Methyl-2-pentanone	13.71	43	182498	28.25	ug/Kg	98
51)	Toluene	13.33	91	146725	5.49	ug/Kg	98
52)	trans-1,3-Dichloropropene	13.76	75	30879	3.93	ug/Kg	96
53)	1,1,2-Trichloroethane	13.95	83	22741	5.00	ug/Kg	88
54)	1,3-Dichloropropane	14.26	76	45903	4.91	ug/Kg	89
55)	2-hexanone	14.60	43	122890	26.78	ug/Kg	86
56)	Tetrachloroethene	13.78	166	32523	5.67	ug/Kg	86
57)	Dibromochloromethane	14.17	129	20772	3.74	ug/Kg	84
58)	1,2-Dibromoethane	14.45	107	21569	4.47	ug/Kg	86
59)	1-Chlorohexane	14.91	91	37672	4.64	ug/Kg	87
60)	Chlorobenzene	15.00	112	79885	5.44	ug/Kg	97
61)	1,1,1,2-Tetrachloroethane	15.04	131	24615	4.54	ug/Kg#	50
62)	Ethylbenzene	14.98	91	136418	5.14	ug/Kg	96
63)	m,p-Xylene	15.12	91	224676	10.94	ug/Kg	96
64)	o-Xylene	15.59	91	109688	4.86	ug/Kg	94
65)	Styrene	15.65	104	71012	4.44	ug/Kg	95
66)	Bromoform	15.71	173	12239	3.63	ug/Kg	69
68)	Isopropylbenzene	15.90	105	105421	6.06	ug/Kg	98
69)	Cyclohexanone	16.69	55	7631	49.62	ug/Kg#	70
71)	1,1,2,2-Tetrachloroethane	16.40	83	28257	5.59	ug/Kg	94
72)	trans-1,4-Dichloro-2-Buten	16.60	53	8188	5.85	ug/Kg#	24
73)	1,2,3-Trichloropropane	16.59	110	7126	5.61	ug/Kg#	76
74)	Bromobenzene	16.38	156	26058	5.37	ug/Kg	97
75)	n-Propylbenzene	16.33	91	147092	5.77	ug/Kg	97
76)	2-Chlorotoluene	16.55	91	105369	6.61	ug/Kg	91
77)	1,3,5-Trimethylbenzene	16.51	105	100918	5.70	ug/Kg	92
78)	4-Chlorotoluene	16.72	91	85502	5.57	ug/Kg	96
79)	tert-Butylbenzene	16.88	91	64488	6.61	ug/Kg	97
80)	1,2,4-Trimethylbenzene	16.95	105	93934	5.57	ug/Kg	96
81)	sec-Butylbenzene	17.06	105	124913	6.47	ug/Kg	94
82)	4-Isopropyltoluene	17.19	119	85414	5.45	ug/Kg	97
83)	1,3-Dichlorobenzene	17.37	146	44304	5.31	ug/Kg	87
84)	1,4-Dichlorobenzene	17.45	146	46842	5.89	ug/Kg	86
85)	Benzyl chloride	17.67	126	6587	4.58	ug/Kg#	66
86)	n-Butylbenzene	17.65	92	48180	5.36	ug/Kg	95
87)	1,2-Dichlorobenzene	17.91	146	43589	5.69	ug/Kg	92
88)	1,2-Dibromo-3-Chloropropan	18.74	75	2558	3.68	ug/Kg#	68
89)	1,2,4-Trichlorobenzene	19.48	180	15788	4.88	ug/Kg	93
90)	Hexachlorobutadiene	19.40	225	19508	8.37	ug/Kg	86

(#) = qualifier out of range (m) = manual integration
K046499.D 8260-K.M Tue Sep 07 09:38:43 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 03 17:27:25 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Fri Sep 03 11:12:35 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

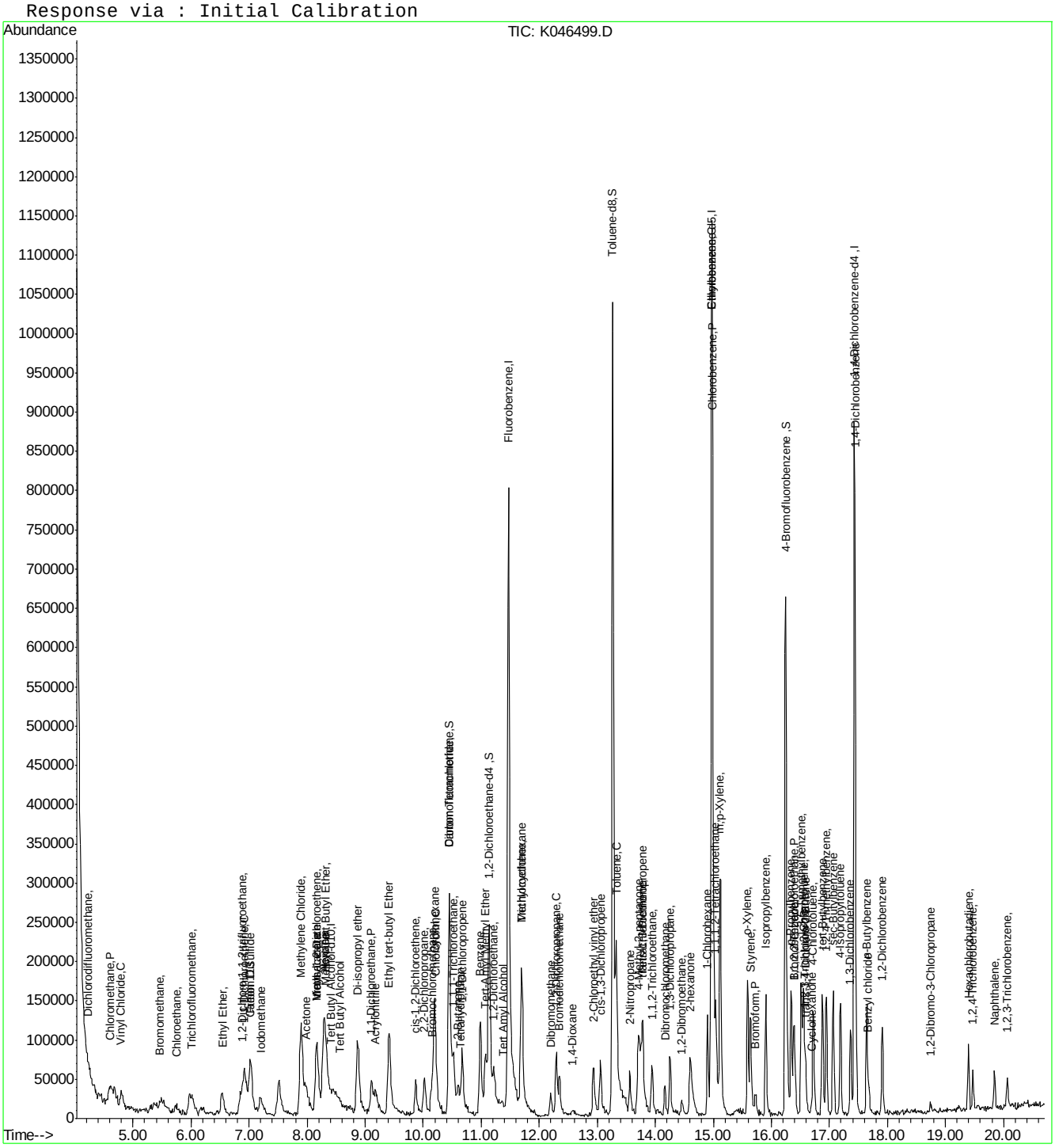
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	38591	5.51	ug/Kg	94
92)	1,2,3-Trichlorobenzene	20.07	180	13228	4.97	ug/Kg#	75
94)	Acrolein	8.30	56	55749m	35.99	ug/Kg	
95)	Tert Butyl Alcohol	8.57	59	42560m	57.32	ug/Kg	
96)	Tert Amyl Alcohol	11.38	59	24112m	39.16	ug/Kg	
97)	1,4-Dioxane	12.56	88	6322m	81.86	ug/Kg	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046499.D 8260-K.M Tue Sep 07 09:38:43 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

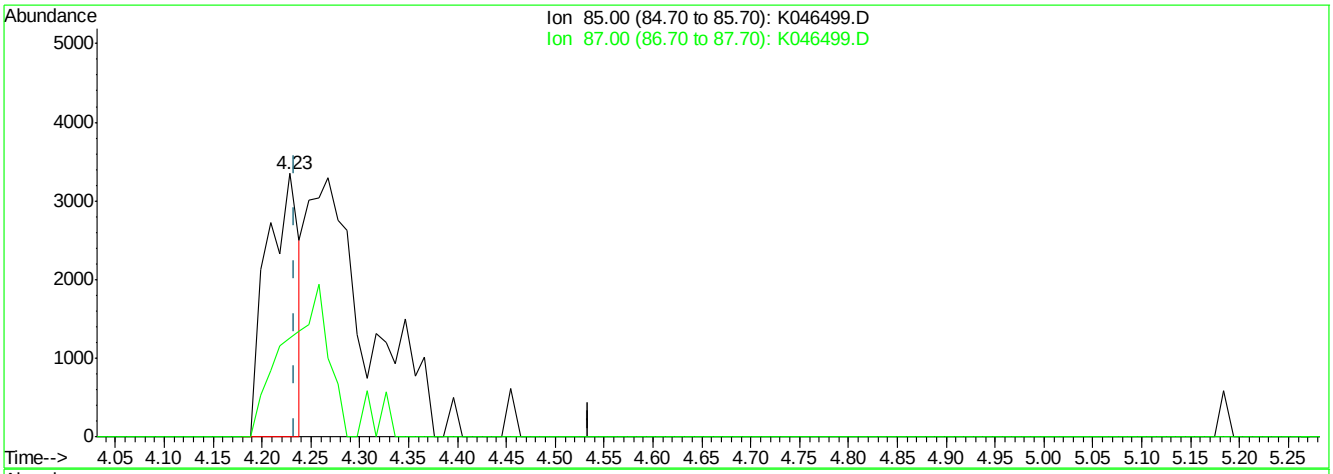


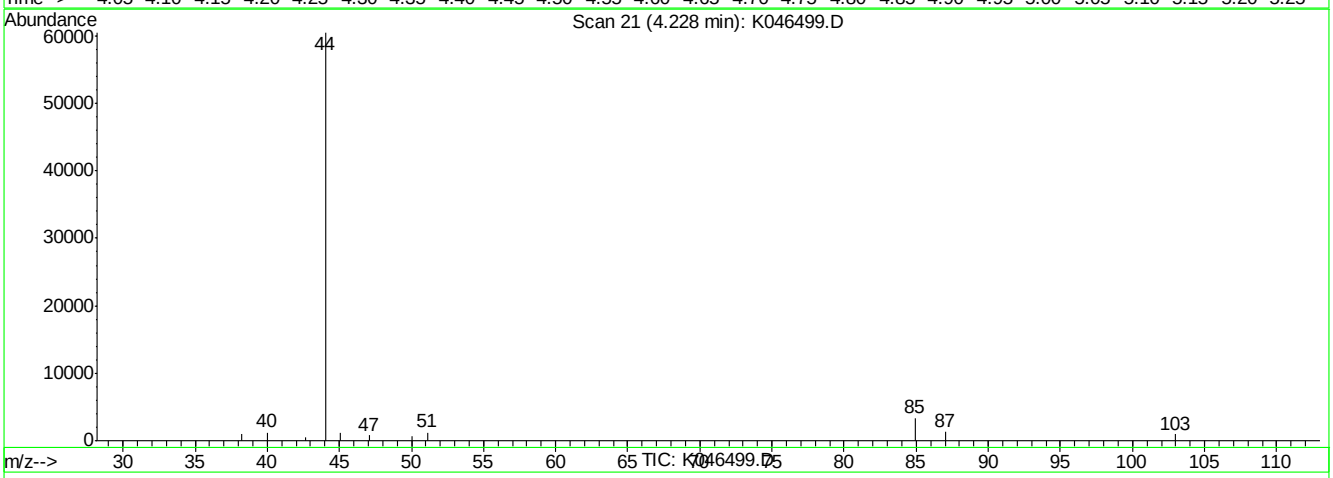
ACCUTEST
F76426

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 3 20:27 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(2) Dichlorodifluoromethane ( )

4.23min (-0.006) 2.22ug/Kg

response 7691

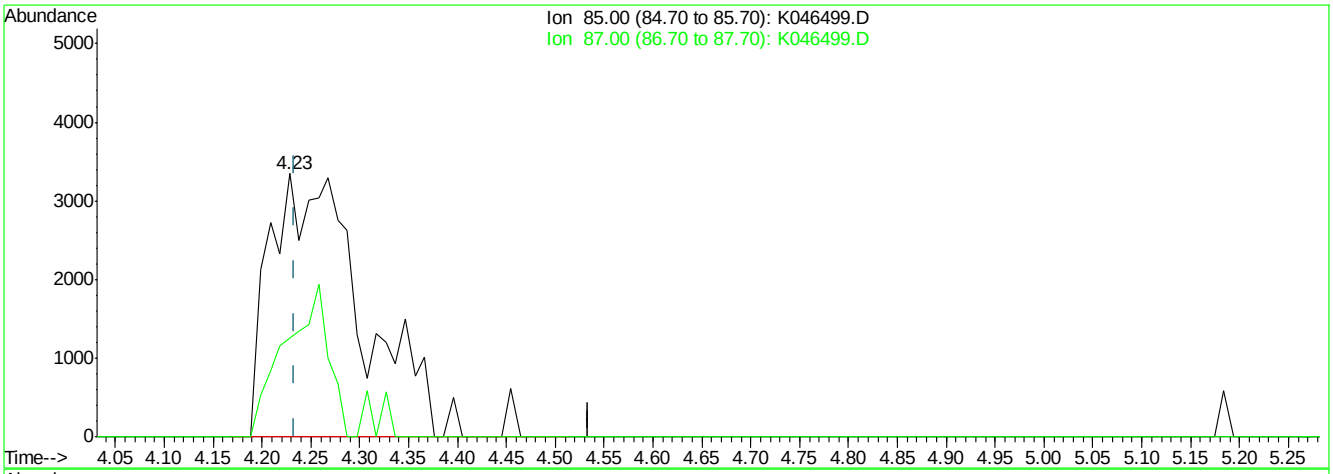
Ion	Exp%	Act%
85.00	100	100
87.00	32.10	37.41
0.00	0.00	0.00
0.00	0.00	0.00

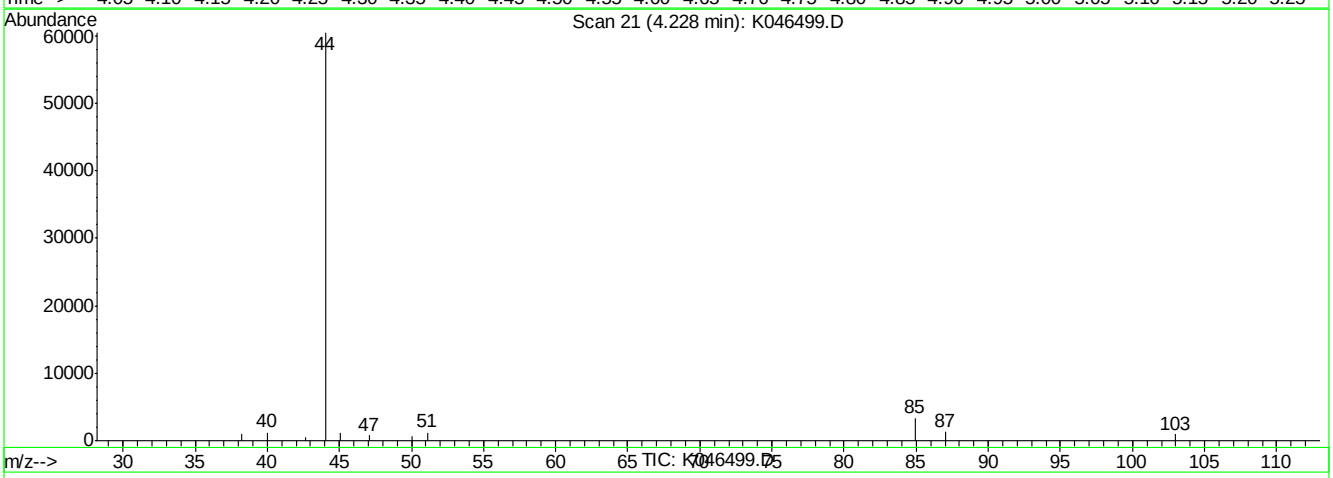
K046499.D 8260-K.M Tue Sep 07 09:22:15 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(2) Dichlorodifluoromethane ( )

4.23min (-0.006) 6.42ug/Kg m

response 22223

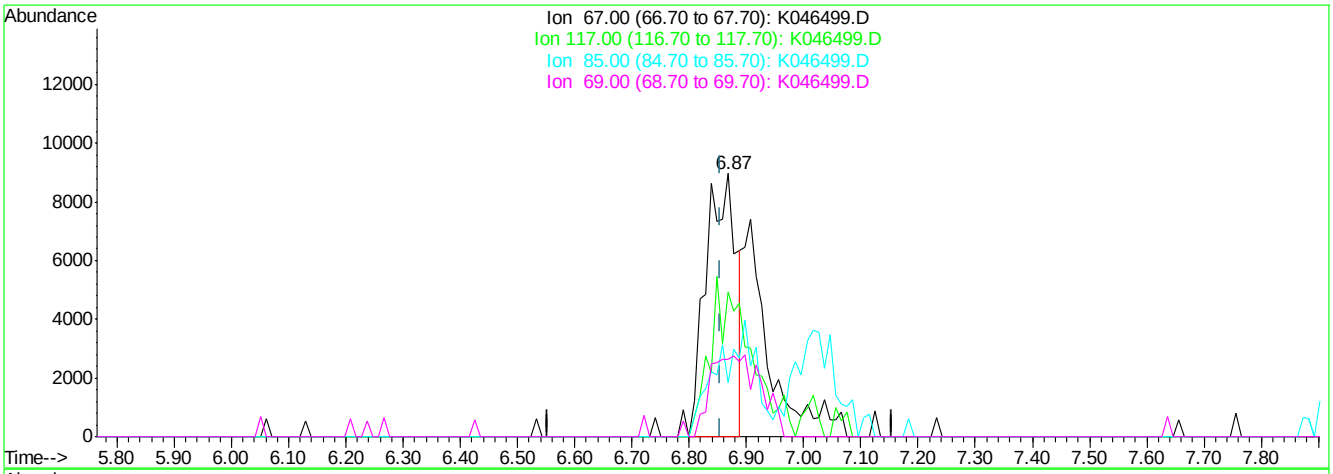
Ion	Exp%	Act%
85.00	100	100
87.00	32.10	37.41
0.00	0.00	0.00
0.00	0.00	0.00

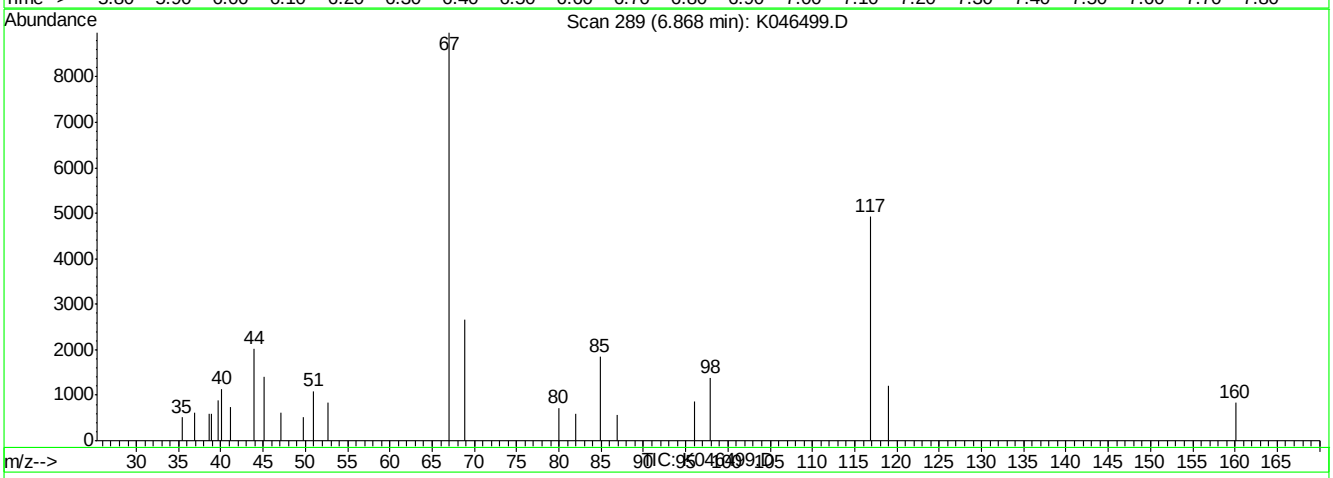
K046499.D 8260-K.M Tue Sep 07 09:22:19 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.87min (+0.014) 4.98ug/Kg

response 33457

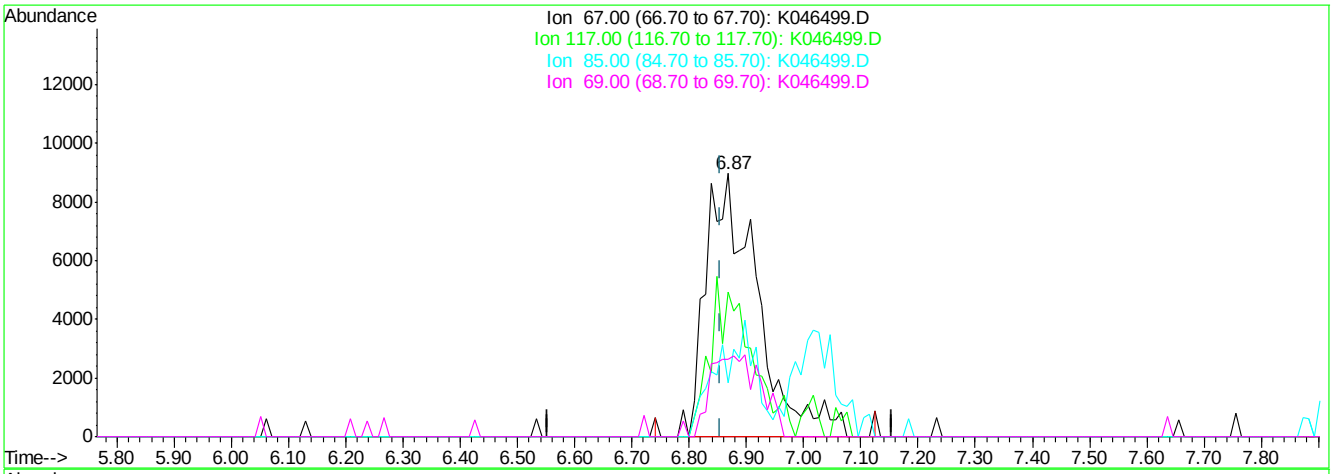
Ion	Exp%	Act%
67.00	100	100
117.00	57.80	54.89
85.00	37.00	20.49
69.00	33.80	29.59

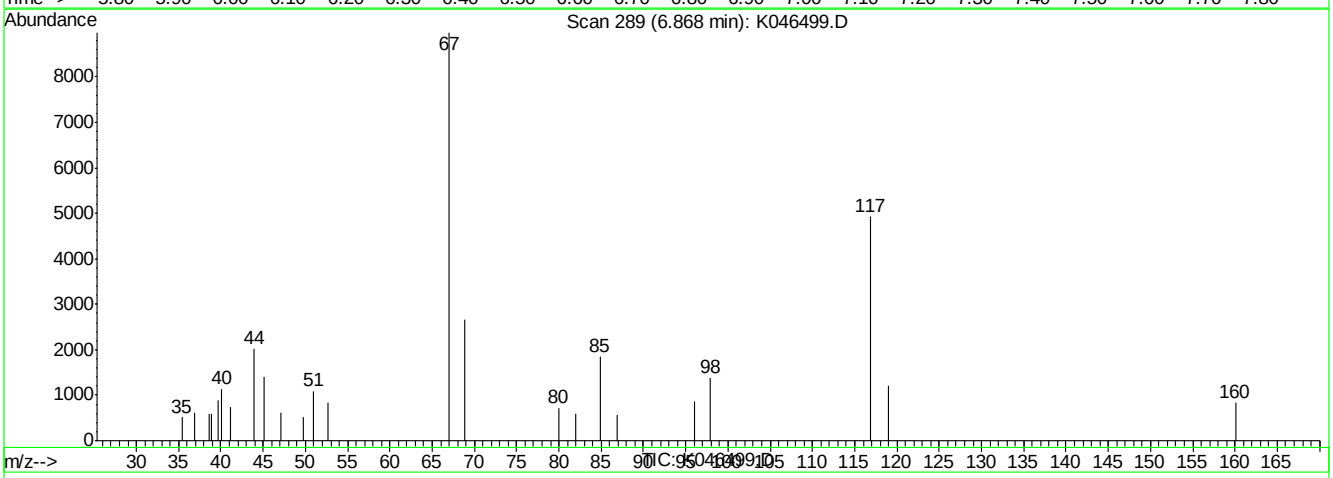
K046499.D 8260-K.M Tue Sep 07 09:22:36 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.87min (+0.014) 8.49ug/Kg m

response 57050

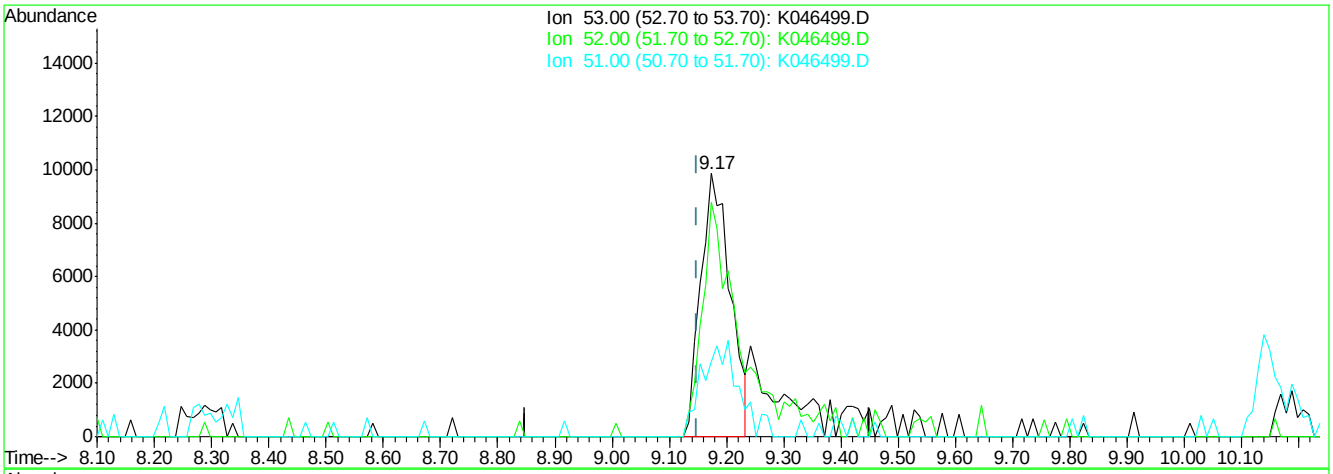
Ion	Exp%	Act%
67.00	100	100
117.00	57.80	54.89
85.00	37.00	20.49
69.00	33.80	29.59

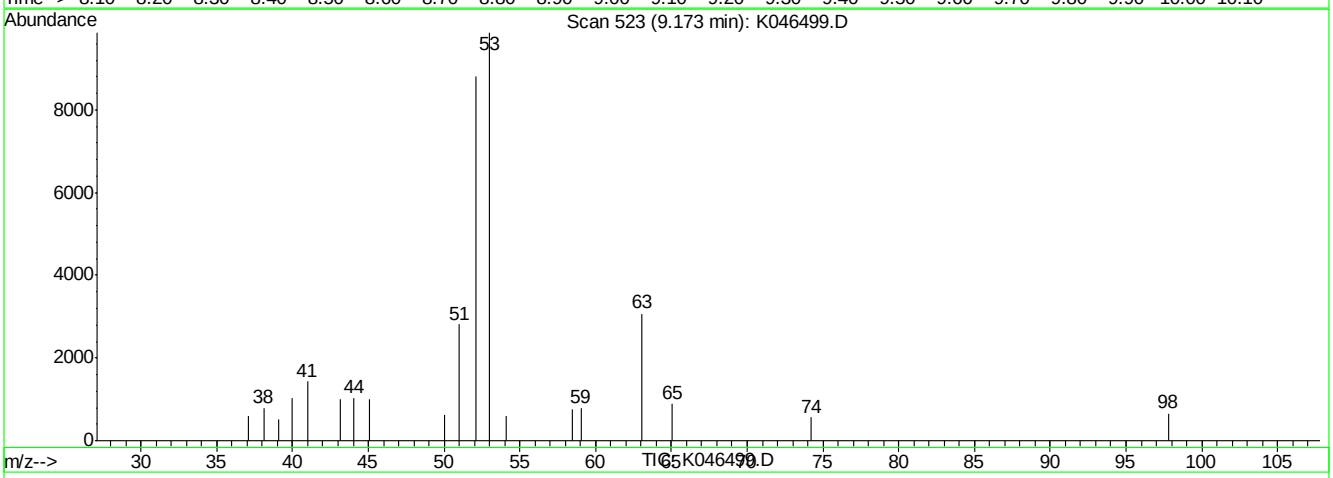
K046499.D 8260-K.M Tue Sep 07 09:22:40 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(17) Acrylonitrile

9.17min (+0.024) 21.69ug/Kg

response 35531

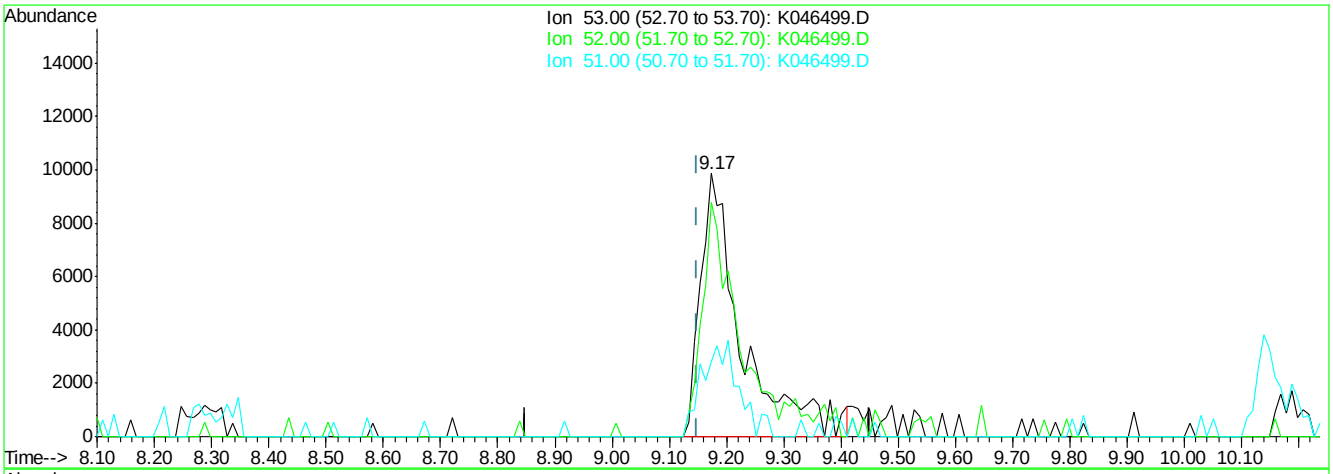
Ion	Exp%	Act%
53.00	100	100
52.00	89.50	89.17
51.00	37.90	28.54
0.00	0.00	0.00

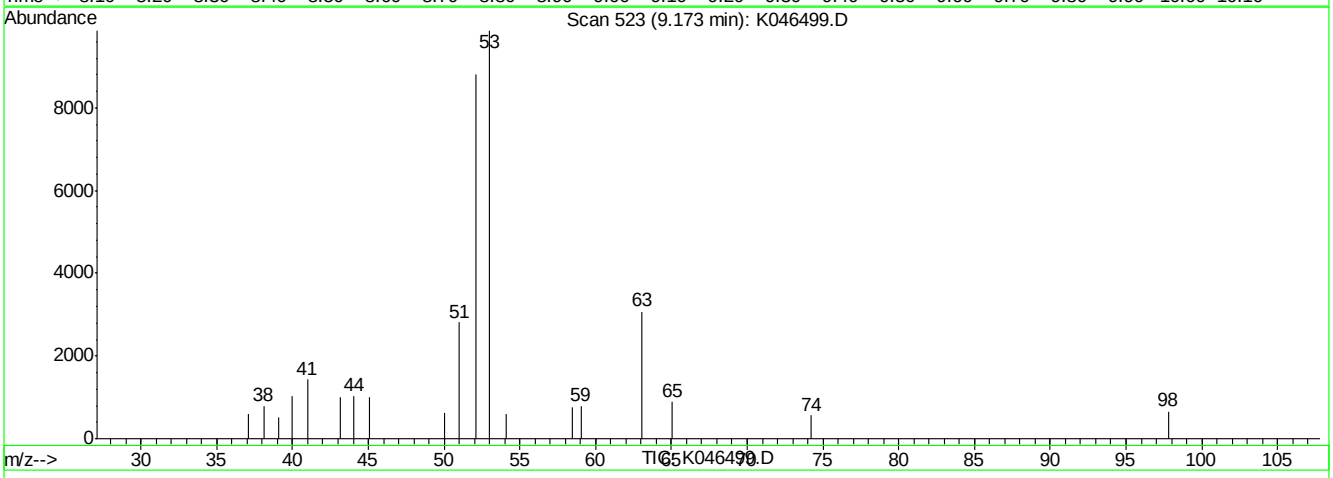
K046499.D 8260-K.M Tue Sep 07 09:22:54 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:23 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(17) Acrylonitrile

9.17min (+0.024) 30.43ug/Kg m

response 49860

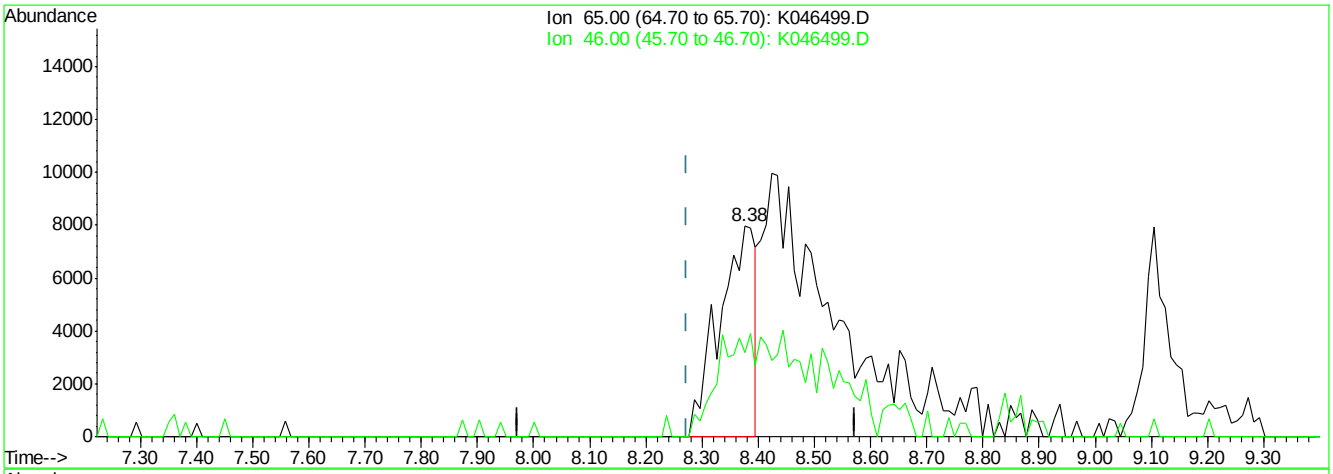
Ion	Exp%	Act%
53.00	100	100
52.00	89.50	89.17
51.00	37.90	28.54
0.00	0.00	0.00

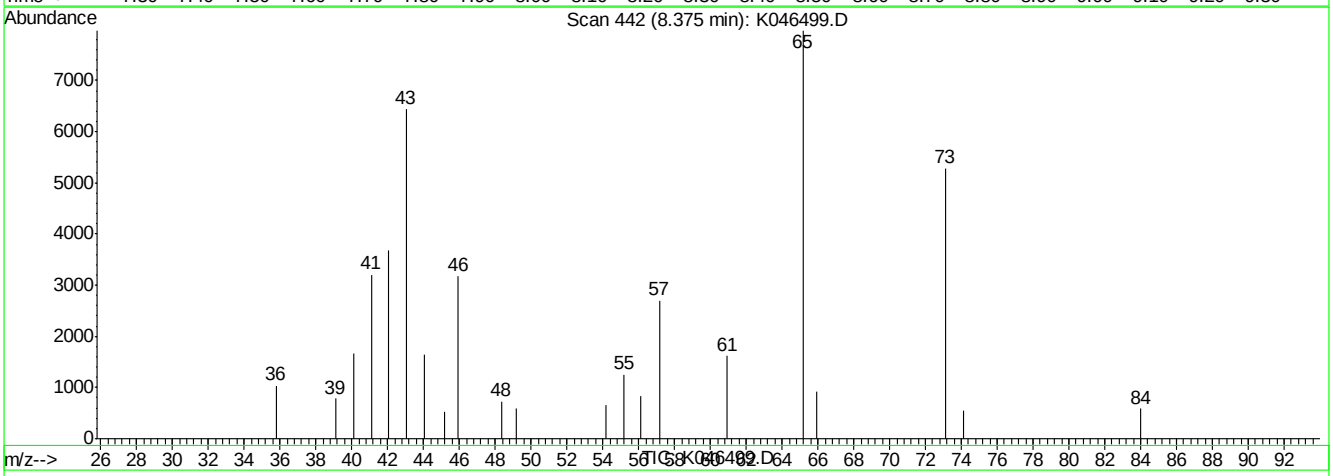
K046499.D 8260-K.M Tue Sep 07 09:22:58 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:23 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.38min (+0.102) 250.00ug/Kg

response 35590

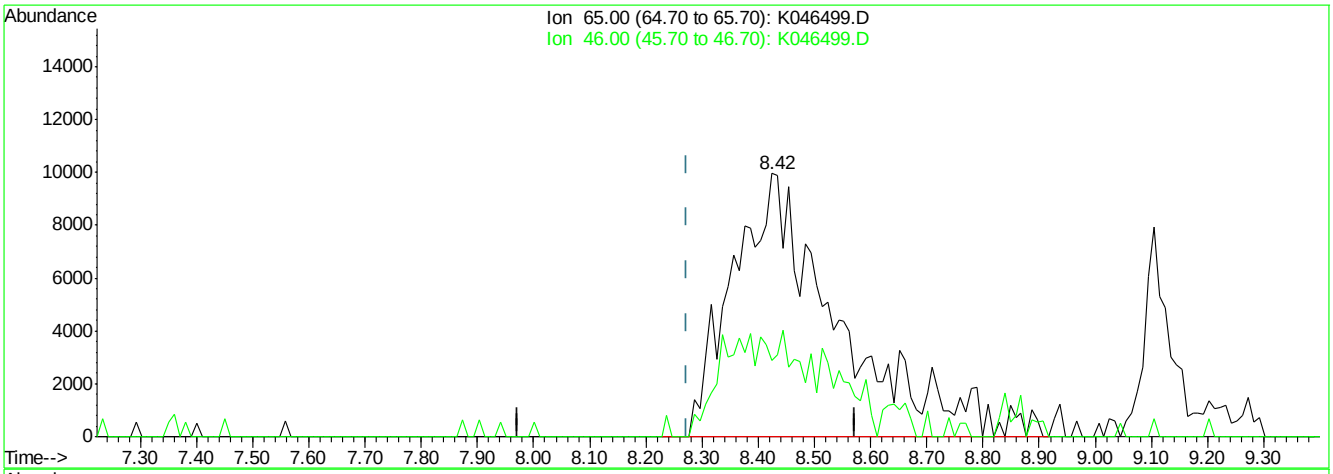
Ion	Exp%	Act%
65.00	100	100
46.00	27.90	39.93
0.00	0.00	0.00
0.00	0.00	0.00

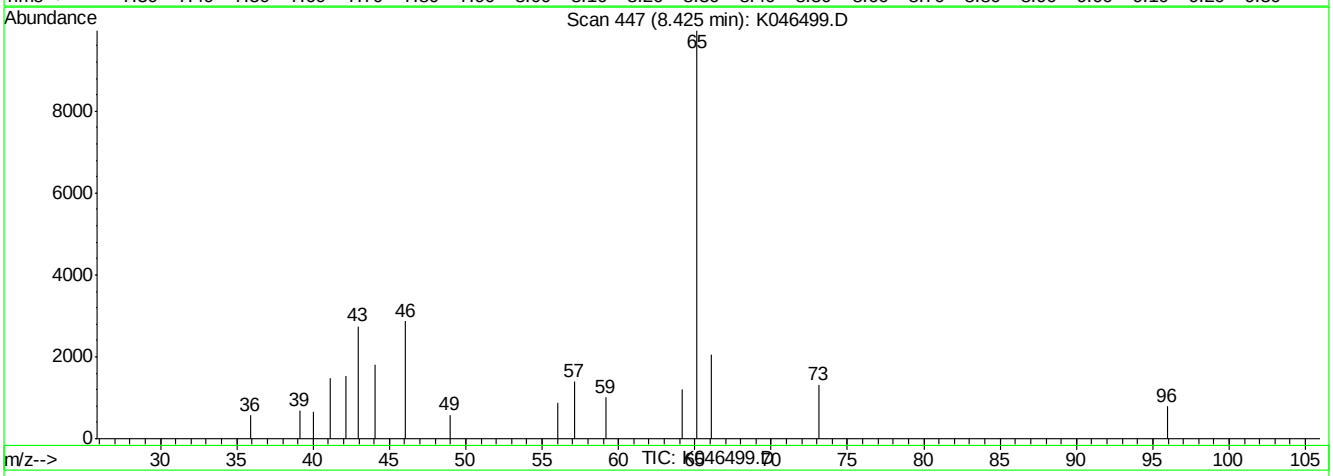
K046499.D 8260-K.M Tue Sep 07 09:23:33 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:23 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.42min (+0.152) 250.00ug/Kg m

response 130235

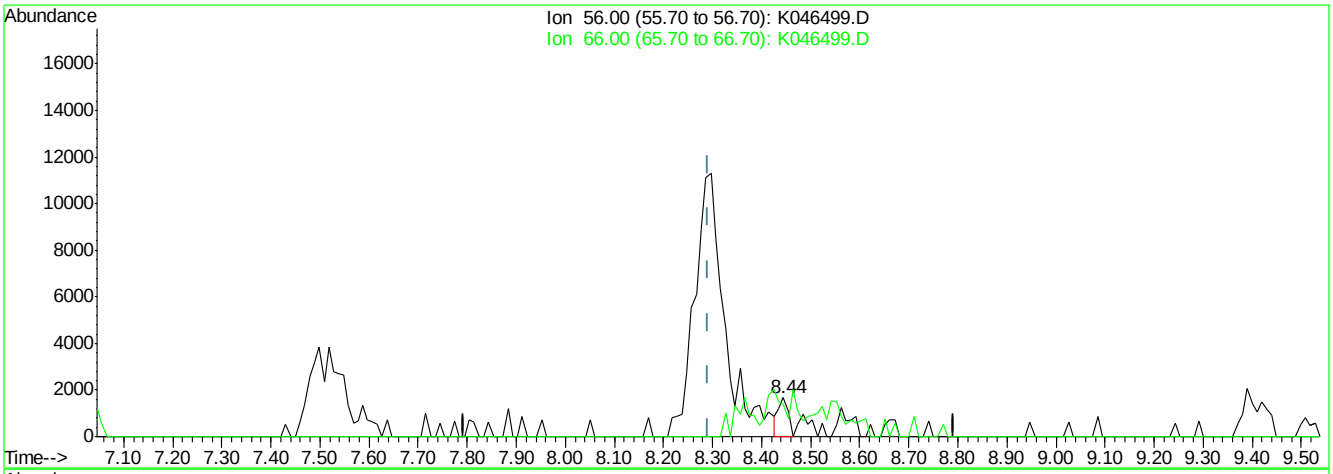
Ion	Exp%	Act%
65.00	100	100
46.00	27.90	28.82
0.00	0.00	0.00
0.00	0.00	0.00

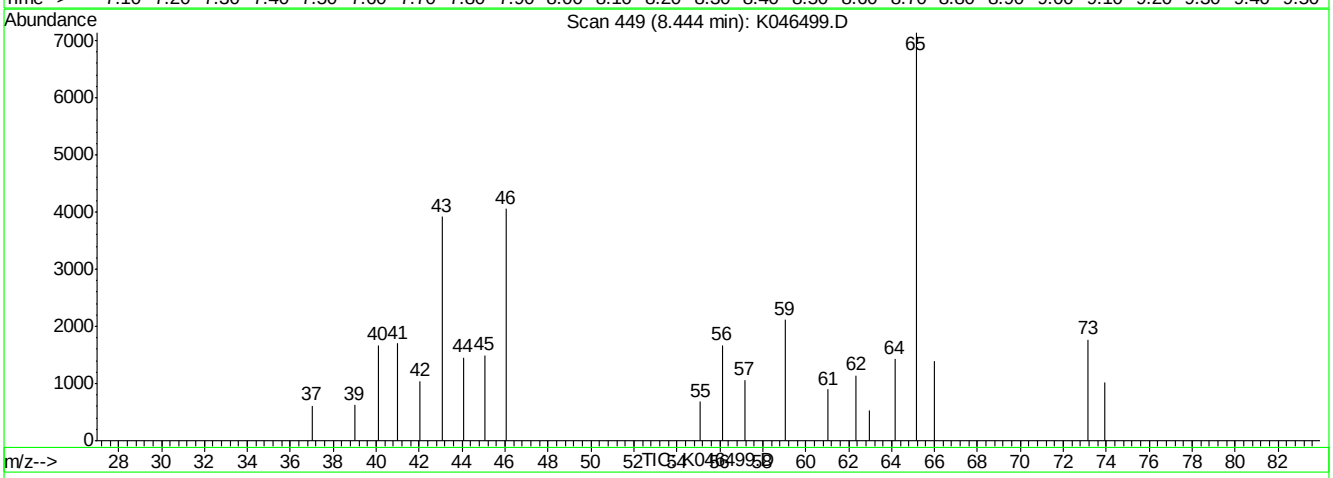
K046499.D 8260-K.M Tue Sep 07 09:23:37 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:23 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.44min (+0.152) 1.51ug/Kg

response 2344

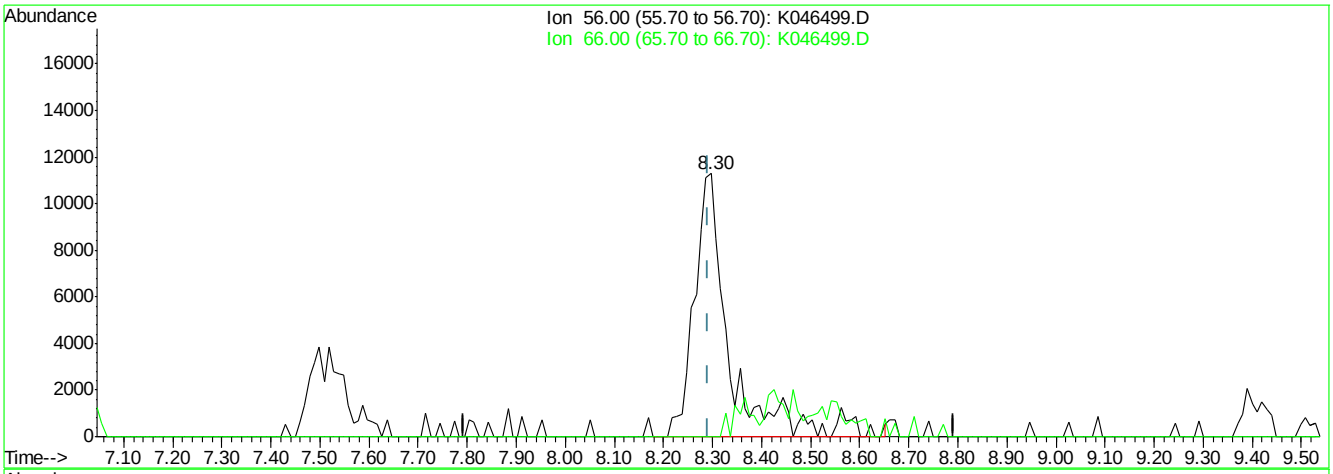
Ion	Exp%	Act%
56.00	100	100
66.00	2.90	174.19#
0.00	0.00	0.00
0.00	0.00	0.00

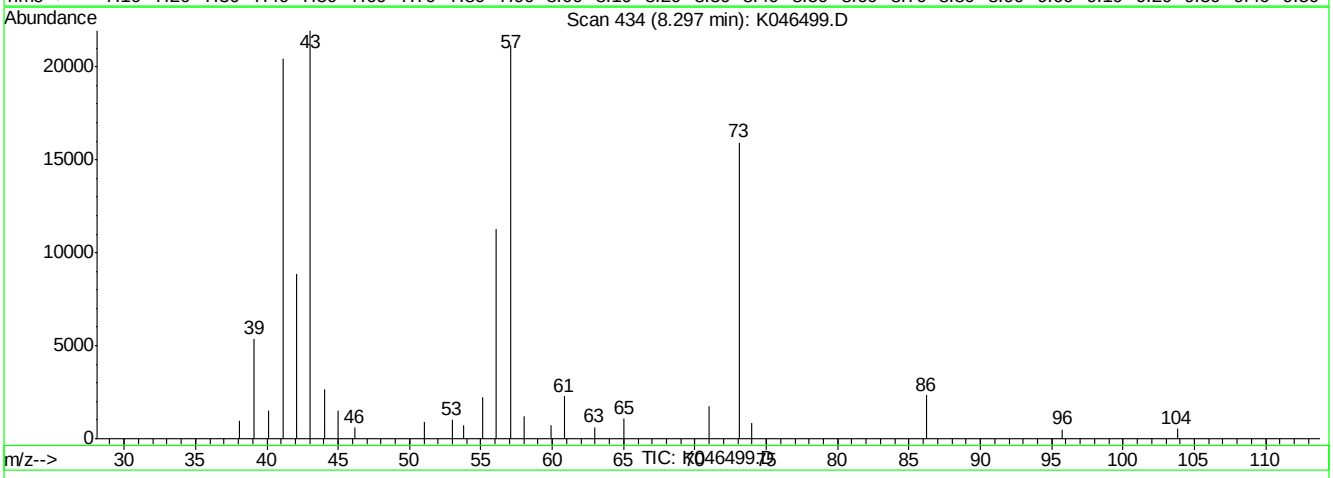
K046499.D 8260-K.M Tue Sep 07 09:23:41 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.30min (+0.004) 35.99ug/Kg m

response 55749

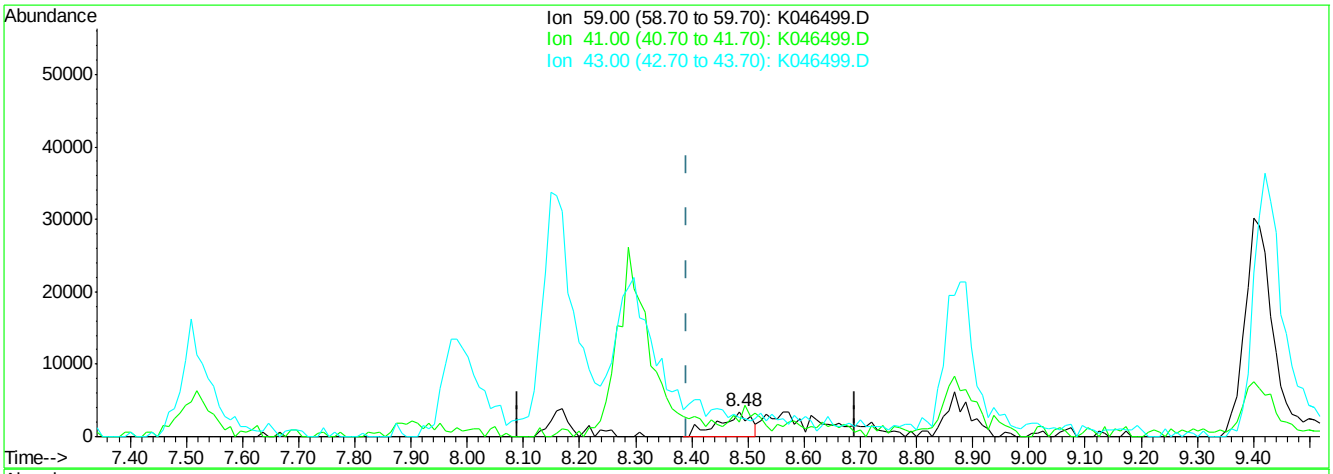
Ion	Exp%	Act%
56.00	100	100
66.00	2.90	7.32
0.00	0.00	0.00
0.00	0.00	0.00

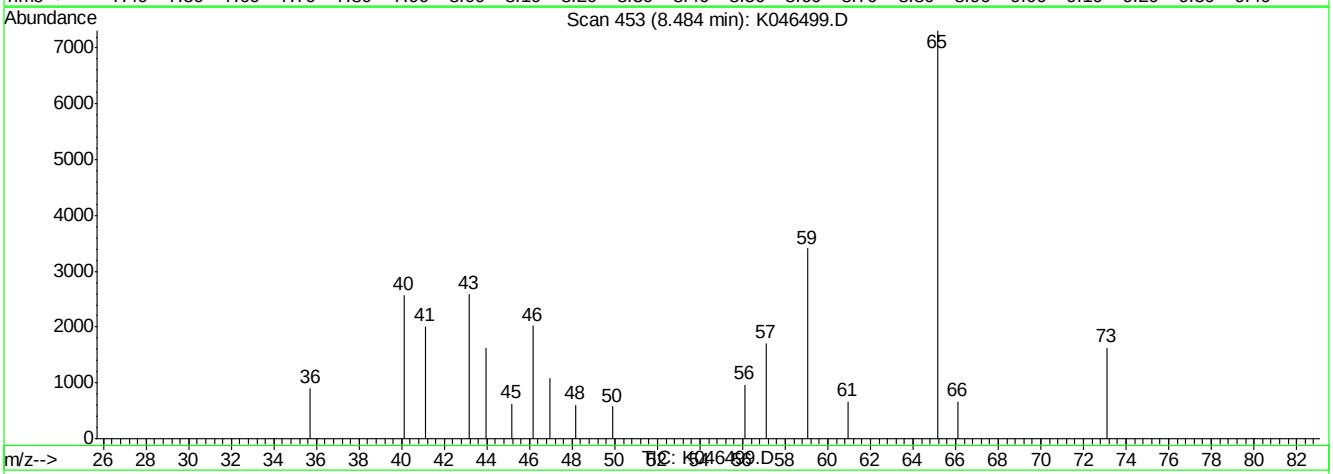
K046499.D 8260-K.M Tue Sep 07 09:23:44 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(95) Tert Butyl Alcohol

8.48min (+0.093) 18.46ug/Kg

response 13709

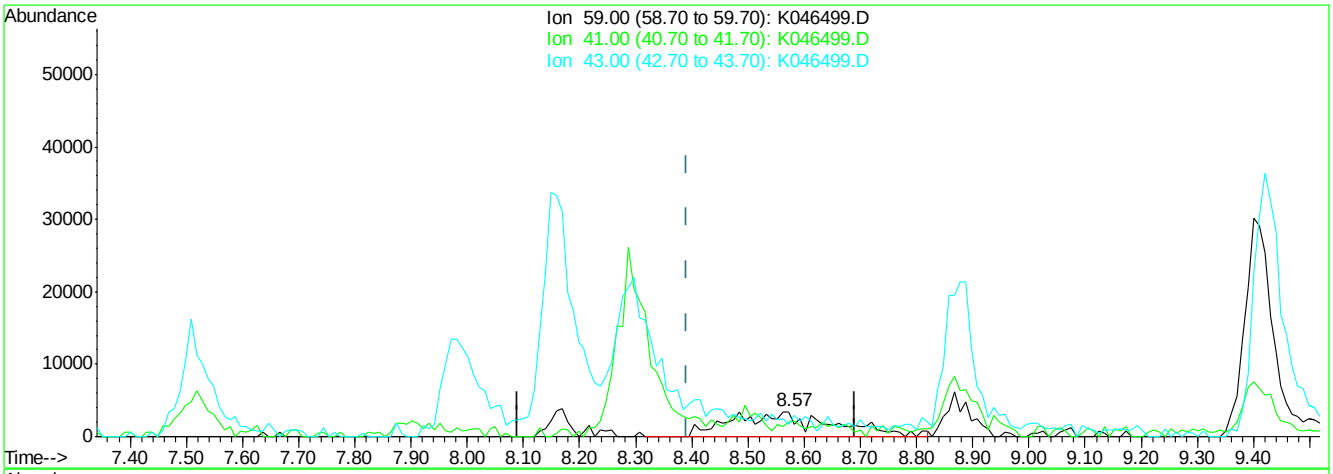
Ion	Exp%	Act%
59.00	100	100
41.00	40.50	0.00#
43.00	40.20	3.02#
0.00	0.00	0.00

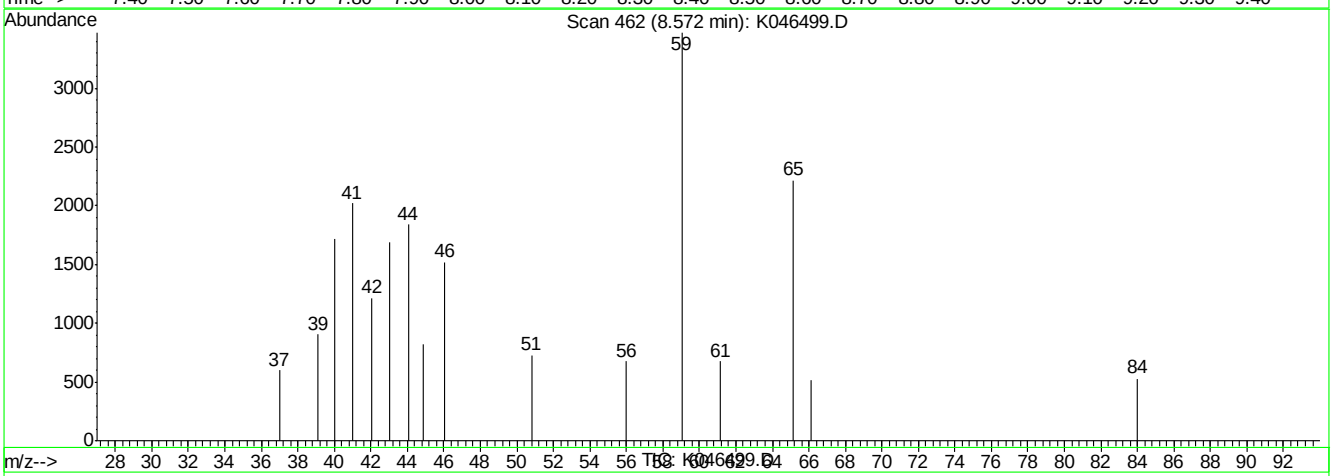
K046499.D 8260-K.M Tue Sep 07 09:23:49 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(95) Tert Butyl Alcohol

8.57min (+0.181) 57.32ug/Kg m

response 42560

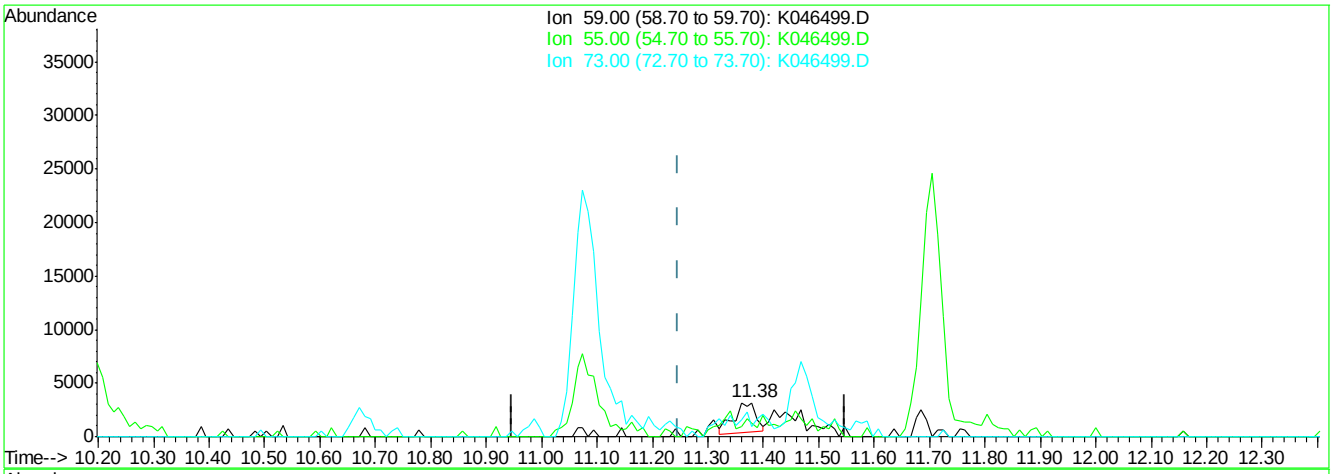
Ion	Exp%	Act%
59.00	100	100
41.00	40.50	58.18
43.00	40.20	48.53
0.00	0.00	0.00

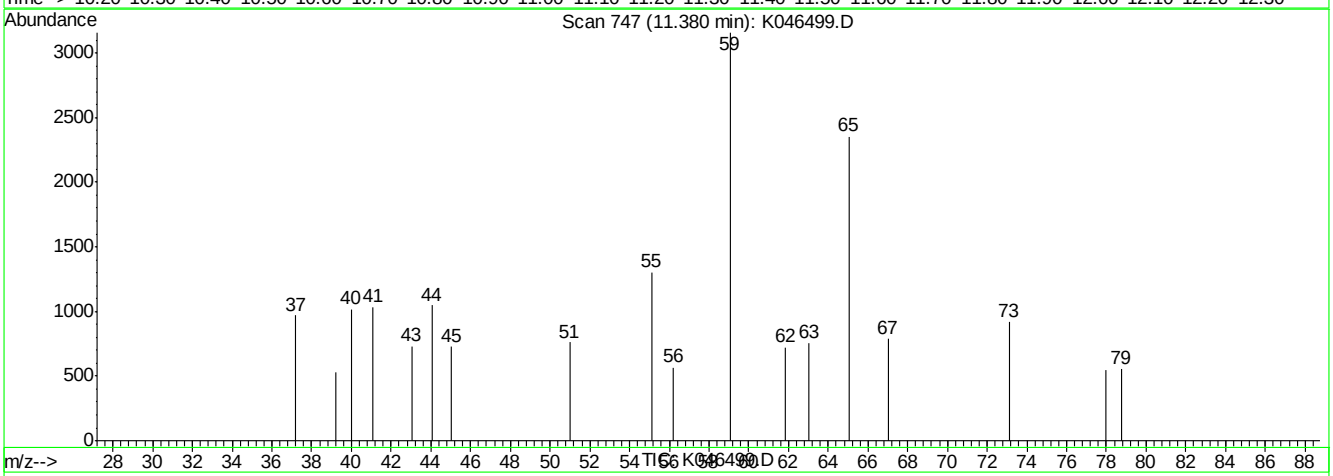
K046499.D 8260-K.M Tue Sep 07 09:23:55 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.38min (+0.133) 12.55ug/Kg

response 7728

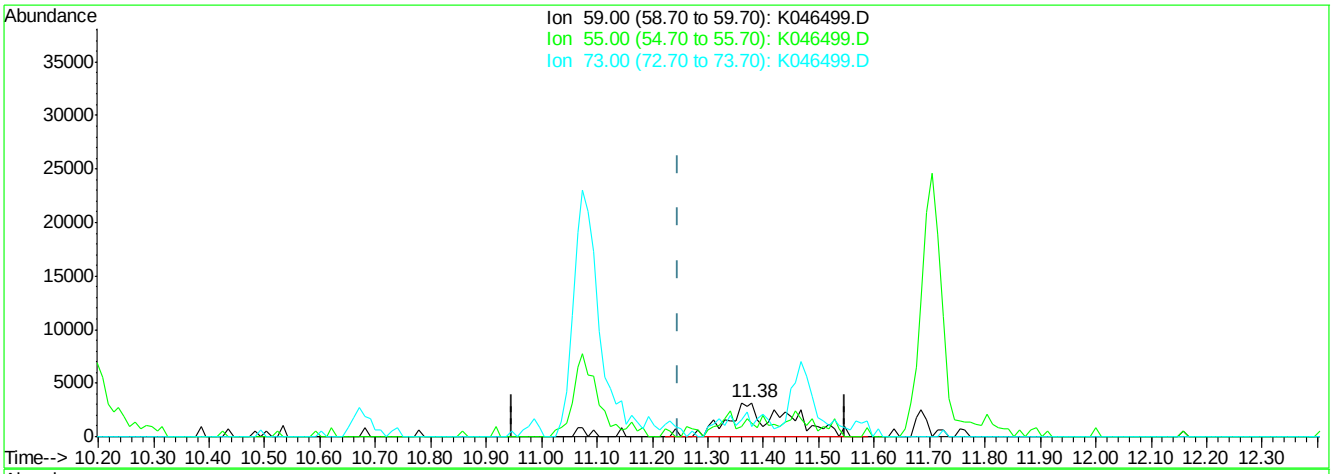
Ion	Exp%	Act%
59.00	100	100
55.00	46.50	11.56#
73.00	49.60	0.00#
0.00	0.00	0.00

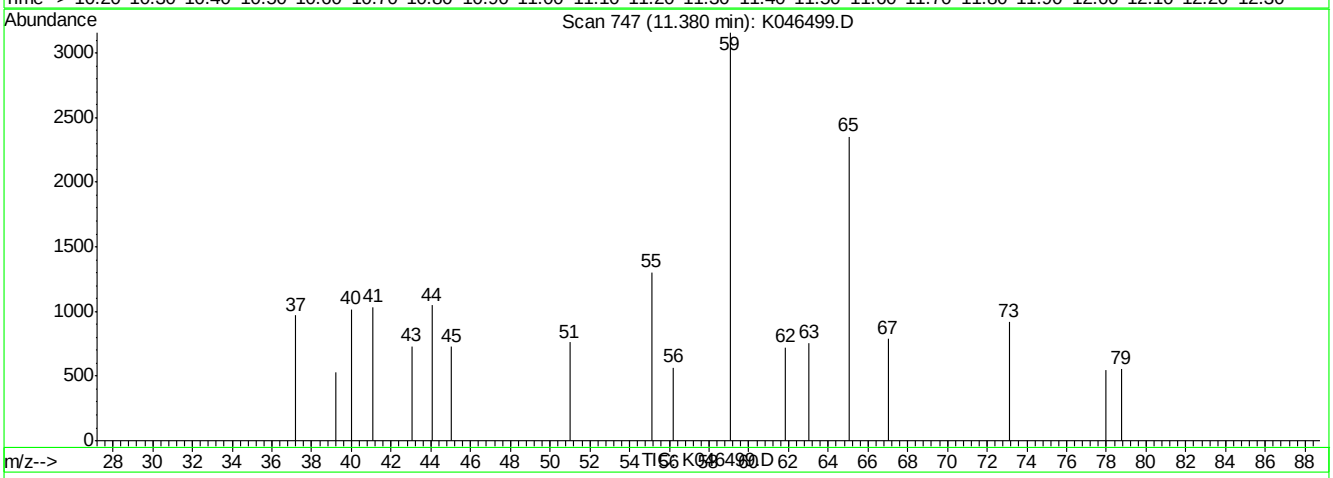
K046499.D 8260-K.M Tue Sep 07 09:24:00 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.38min (+0.133) 39.16ug/Kg m

response 24112

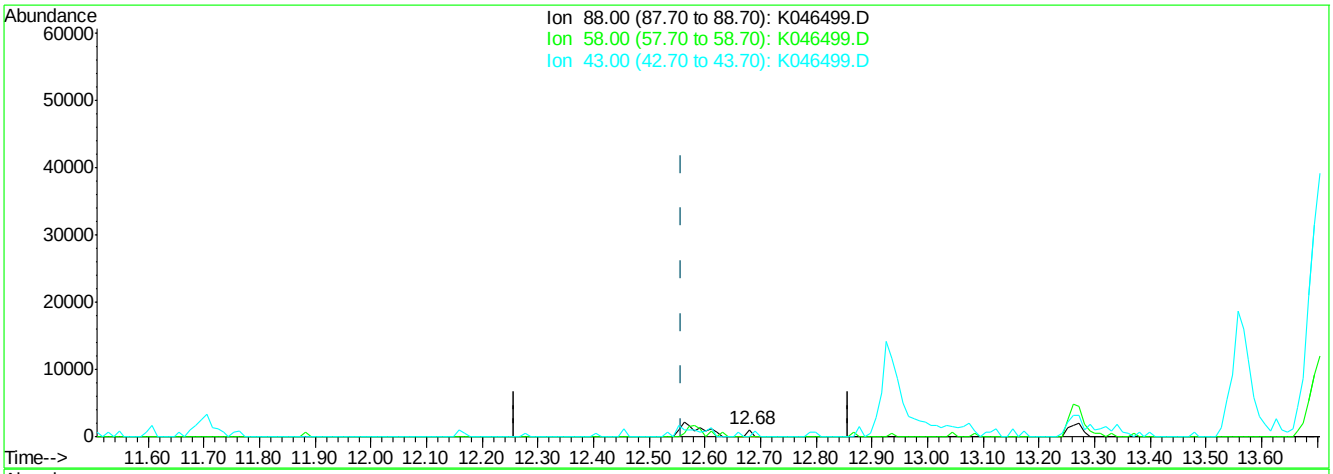
Ion	Exp%	Act%
59.00	100	100
55.00	46.50	41.21
73.00	49.60	29.08#
0.00	0.00	0.00

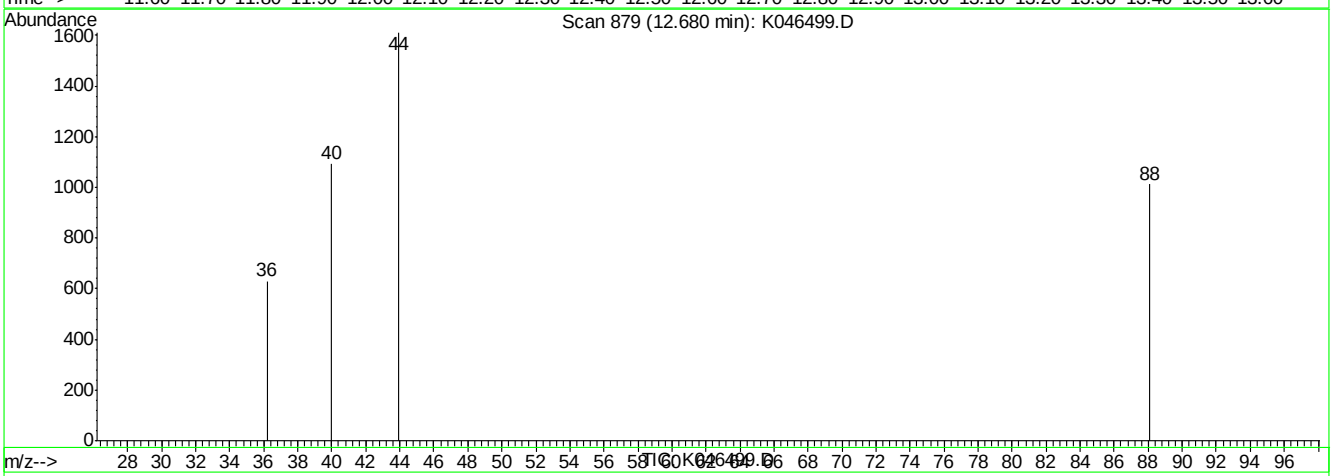
K046499.D 8260-K.M Tue Sep 07 09:24:04 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.68min (+0.122) 7.74ug/Kg

response 598

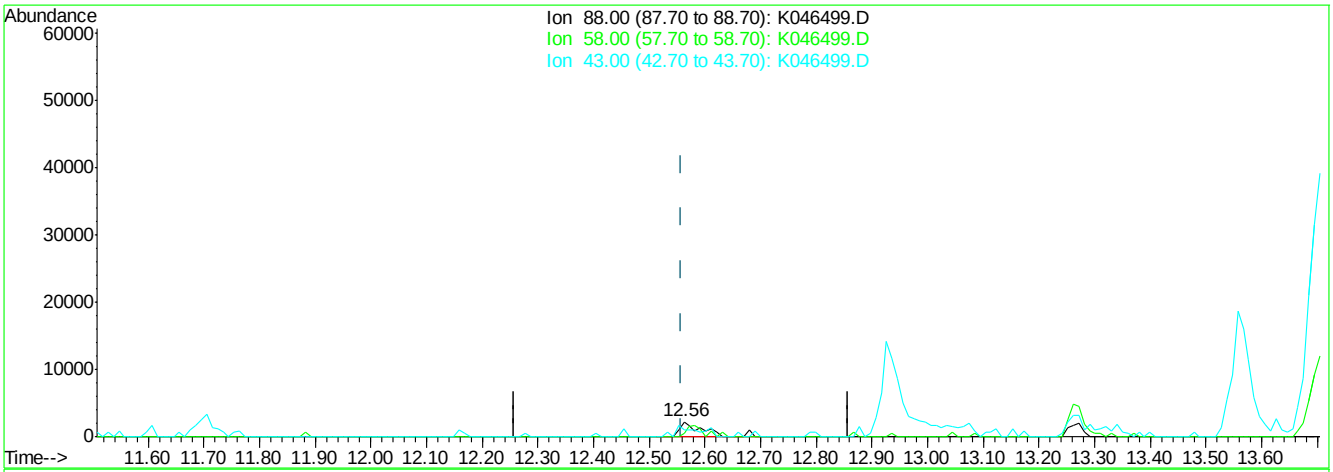
Ion	Exp%	Act%
88.00	100	100
58.00	79.50	0.00#
43.00	35.20	0.00#
0.00	0.00	0.00

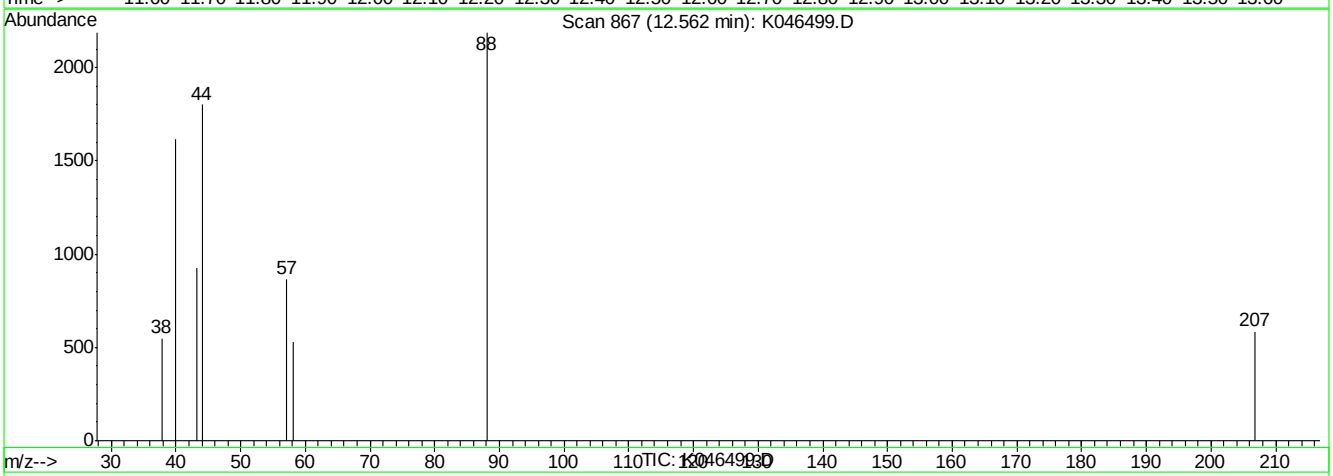
K046499.D 8260-K.M Tue Sep 07 09:24:08 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046499.D Vial: 1
Acq On : 3 Sep 2010 4:56 pm Operator: StevenH
Sample : ic2006-1 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:24 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.56min (+0.004) 81.86ug/Kg m

response 6322

Ion	Exp%	Act%
88.00	100	100
58.00	79.50	24.10#
43.00	35.20	42.43
0.00	0.00	0.00

K046499.D 8260-K.M Tue Sep 07 09:24:12 2010

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/07/10 16:06

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:23 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Fri Sep 03 11:12:35 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1033707	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	582494	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	232423	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.35	65	84118m	250.00	ug/Kg	0.08
System Monitoring Compounds						
31) Dibromofluoromethane	10.45	113	246335	47.16	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 94.32%			
36) 1,2-Dichloroethane-d4	11.13	65	287990	46.92	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 93.84%			
50) Toluene-d8	13.27	98	1004629	50.36	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 100.72%			
70) 4-Bromofluorobenzene	16.24	174	220486	51.45	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 102.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	77803	21.29	ug/Kg	95
3) Chloromethane	4.61	50	189067	23.86	ug/Kg	93
4) Vinyl Chloride	4.79	62	148422	23.47	ug/Kg	91
5) Bromomethane	5.49	94	66946	26.55	ug/Kg	99
6) Chloroethane	5.73	64	72816	25.64	ug/Kg	93
7) Trichlorofluoromethane	6.00	101	144756	24.85	ug/Kg	97
8) 1,2-Dichloro-1,1,2-trifluo	6.85	67	171087	24.10	ug/Kg	94
9) Ethyl Ether	6.54	59	80692	15.70	ug/Kg	95
10) Freon 113	7.01	101	127899	26.00	ug/Kg	90
11) 1,1-Dichloroethene	6.92	61	223400	23.63	ug/Kg	95
12) Acetone	7.96	43	151514	89.17	ug/Kg	96
13) Iodomethane	7.21	142	173922	21.26	ug/Kg	98
14) Carbon Disulfide	7.02	76	378975	20.65	ug/Kg	97
15) Methyl acetate	8.14	43	324547	70.53	ug/Kg	97
16) Methylene Chloride	7.89	49	279443	26.09	ug/Kg	94
17) Acrylonitrile	9.16	53	136215	78.71	ug/Kg	92
18) Methyl Tert Butyl Ether	8.31	73	285440	17.04	ug/Kg	94
19) trans-1,2-Dichloroethene	8.17	61	200959	20.02	ug/Kg	93
20) Hexane	8.28	57	294460	22.41	ug/Kg	86
21) Vinyl acetate	8.14	43	331418	71.45	ug/Kg	100
22) 1,1-Dichloroethane	9.10	63	280488	22.94	ug/Kg	98
23) Di-isopropyl ether	8.86	45	545475	18.33	ug/Kg	99
24) Ethyl tert-butyl Ether	9.39	59	395015	17.79	ug/Kg	97
25) 2-Butanone	10.59	43	226434	73.23	ug/Kg	94
26) cis-1,2-Dichloroethene	9.87	96	121115	19.85	ug/Kg	96
27) 2,2-Dichloropropane	10.01	77	196286	23.21	ug/Kg	96
28) Bromochloromethane	10.14	128	55968	18.22	ug/Kg#	77
29) Chloroform	10.20	83	236702	22.99	ug/Kg	98
30) Tetrahydrofuran	10.58	42	22134	22.20	ug/Kg#	52
32) 1,1,1-Trichloroethane	10.52	97	203301	24.31	ug/Kg	99
33) Cyclohexane	10.18	56	322230	26.18	ug/Kg	95
34) 1,1-Dichloropropene	10.67	75	185432	22.23	ug/Kg	96
35) Carbon Tetrachloride	10.45	117	193231	27.59	ug/Kg	93
37) 1,2-Dichloroethane	11.21	62	161068	17.91	ug/Kg	95

(#) = qualifier out of range (m) = manual integration
K046500.D 8260-K.M Tue Sep 07 09:38:49 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:23 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Fri Sep 03 11:12:35 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	Benzene	10.98	78	579913	24.39 ug/Kg	97
39)	Tert-Amyl Methyl Ether	11.07	73	297976	17.97 ug/Kg	93
40)	Trichloroethene	11.68	95	137208	24.11 ug/Kg	96
41)	Methylcyclohexane	11.70	83	244540	25.57 ug/Kg	92
42)	1,2-Dichloropropane	12.29	63	163847	20.82 ug/Kg	92
43)	Dibromomethane	12.19	93	63156	18.51 ug/Kg	92
44)	Bromodichloromethane	12.34	83	153477	19.06 ug/Kg	96
45)	2-Nitropropane	13.56	41	113365	68.72 ug/Kg	97
46)	2-Chloroethyl vinyl ether	12.92	63	141371	76.43 ug/Kg	95
47)	cis-1,3-Dichloropropene	13.05	75	183400	18.27 ug/Kg	98
48)	4-Methyl-2-pentanone	13.69	43	533517	78.19 ug/Kg	98
51)	Toluene	13.32	91	550162	22.03 ug/Kg	96
52)	trans-1,3-Dichloropropene	13.75	75	127141	17.30 ug/Kg	96
53)	1,1,2-Trichloroethane	13.94	83	84869	19.96 ug/Kg	90
54)	1,3-Dichloropropane	14.24	76	169698	19.40 ug/Kg	96
55)	2-hexanone	14.60	43	329240	76.74 ug/Kg	94
56)	Tetrachloroethene	13.78	166	134854	25.13 ug/Kg	89
57)	Dibromochloromethane	14.16	129	97258	18.72 ug/Kg	94
58)	1,2-Dibromoethane	14.46	107	79277	17.56 ug/Kg	94
59)	1-Chlorohexane	14.89	91	168566	22.22 ug/Kg	98
60)	Chlorobenzene	14.99	112	298823	21.75 ug/Kg	98
61)	1,1,1,2-Tetrachloroethane	15.04	131	101624	20.04 ug/Kg	87
62)	Ethylbenzene	14.97	91	563181	22.68 ug/Kg	100
63)	m,p-Xylene	15.12	91	862717	44.92 ug/Kg	99
64)	o-Xylene	15.58	91	442615	20.99 ug/Kg	97
65)	Styrene	15.63	104	306577	20.49 ug/Kg	95
66)	Bromoform	15.72	173	48989	15.54 ug/Kg	89
68)	Isopropylbenzene	15.90	105	444952	26.41 ug/Kg	95
69)	Cyclohexanone	16.68	55	14792	99.26 ug/Kg	89
71)	1,1,2,2-Tetrachloroethane	16.40	83	95191	19.44 ug/Kg	86
72)	trans-1,4-Dichloro-2-Buten	16.59	53	21674	15.99 ug/Kg#	75
73)	1,2,3-Trichloropropane	16.58	110	24442	19.84 ug/Kg	88
74)	Bromobenzene	16.39	156	109716	23.34 ug/Kg	98
75)	n-Propylbenzene	16.33	91	578366	23.40 ug/Kg	99
76)	2-Chlorotoluene	16.55	91	409066	26.47 ug/Kg	99
77)	1,3,5-Trimethylbenzene	16.51	105	409613	23.88 ug/Kg	98
78)	4-Chlorotoluene	16.71	91	346191	23.26 ug/Kg	97
79)	tert-Butylbenzene	16.87	91	251949	26.64 ug/Kg	94
80)	1,2,4-Trimethylbenzene	16.94	105	383125	23.43 ug/Kg	99
81)	sec-Butylbenzene	17.06	105	502592	26.86 ug/Kg	96
82)	4-Isopropyltoluene	17.19	119	362490	23.85 ug/Kg	97
83)	1,3-Dichlorobenzene	17.35	146	181382	22.42 ug/Kg	94
84)	1,4-Dichlorobenzene	17.44	146	166964	21.65 ug/Kg	95
85)	Benzyl chloride	17.68	126	19673	14.11 ug/Kg	94
86)	n-Butylbenzene	17.64	92	187669	21.55 ug/Kg	86
87)	1,2-Dichlorobenzene	17.91	146	159918	21.55 ug/Kg	97
88)	1,2-Dibromo-3-Chloropropan	18.74	75	11621	17.23 ug/Kg	84
89)	1,2,4-Trichlorobenzene	19.47	180	56104	17.88 ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	65232	28.89 ug/Kg	94

(#) = qualifier out of range (m) = manual integration
K046500.D 8260-K.M Tue Sep 07 09:38:49 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:23 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Fri Sep 03 11:12:35 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

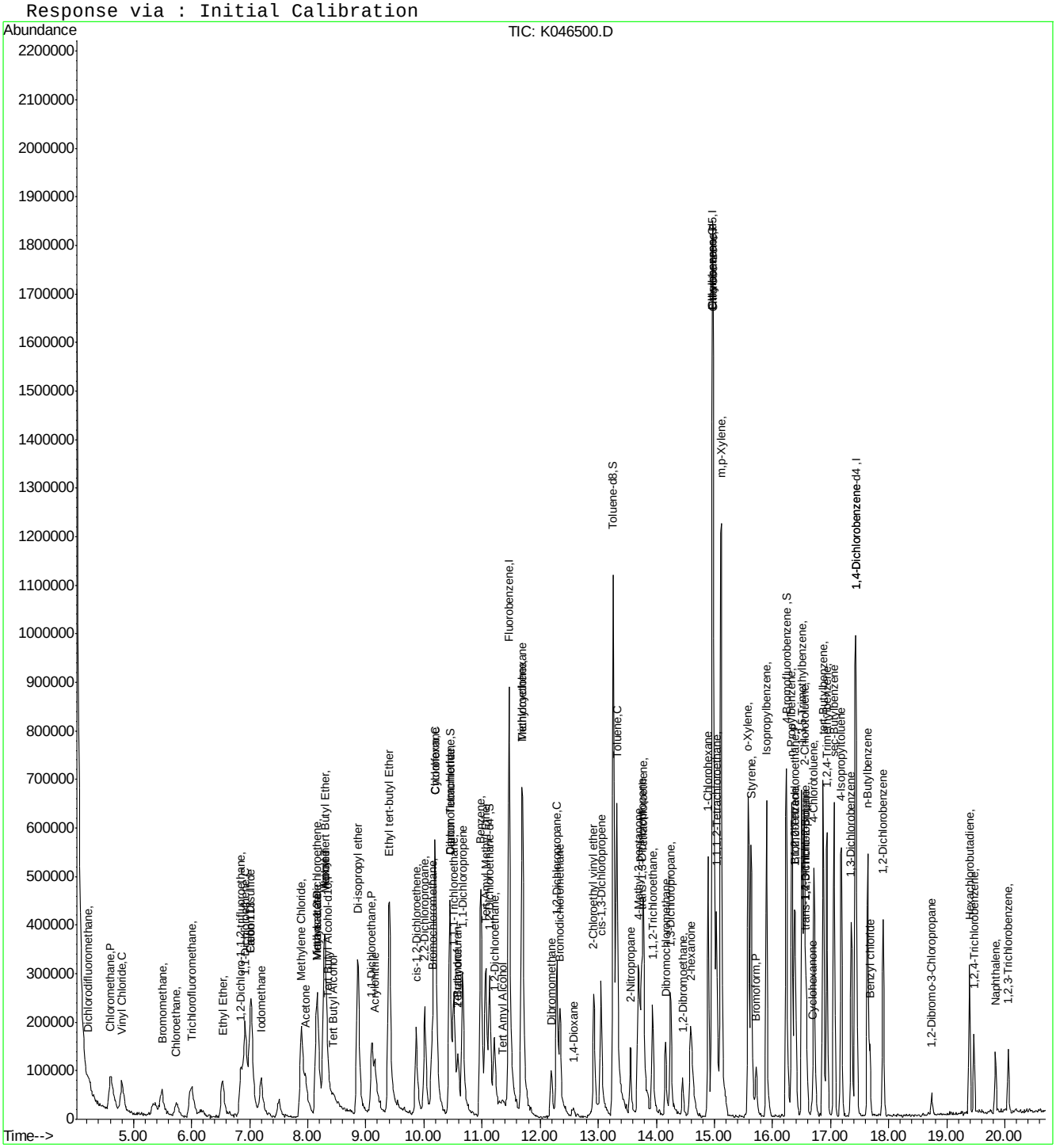
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	95729	14.11	ug/Kg	96
92)	1,2,3-Trichlorobenzene	20.06	180	42616	16.53	ug/Kg	90
94)	Acrolein	8.29	56	153010m	152.95	ug/Kg	
95)	Tert Butyl Alcohol	8.44	59	48881	101.92	ug/Kg#	48
96)	Tert Amyl Alcohol	11.35	59	77425m	194.66	ug/Kg	
97)	1,4-Dioxane	12.58	88	13185	264.31	ug/Kg	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046500.D 8260-K.M Tue Sep 07 09:38:49 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:25 2010 Quant Results File: 8260-K.RES

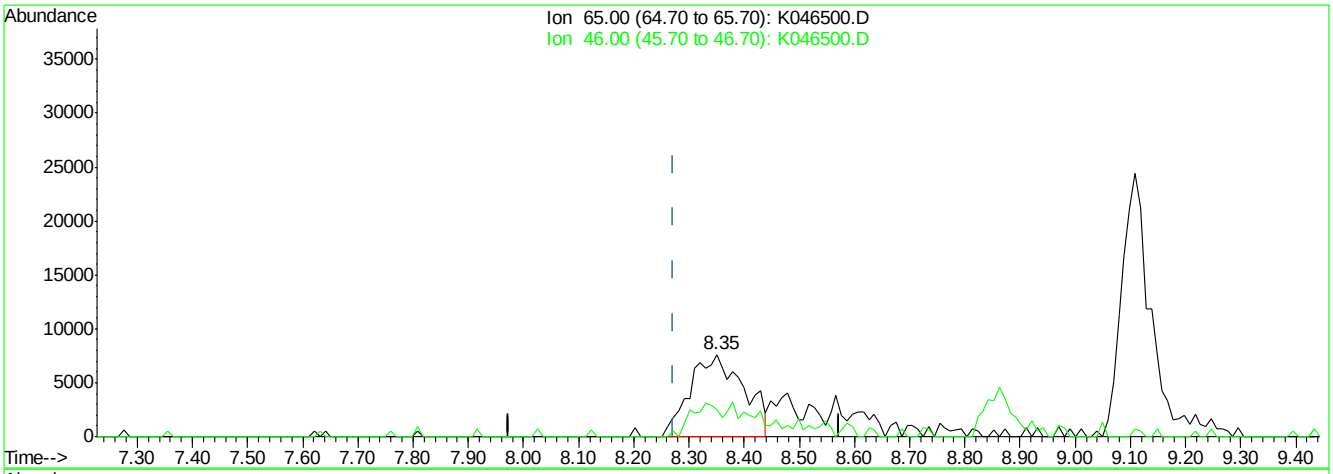
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

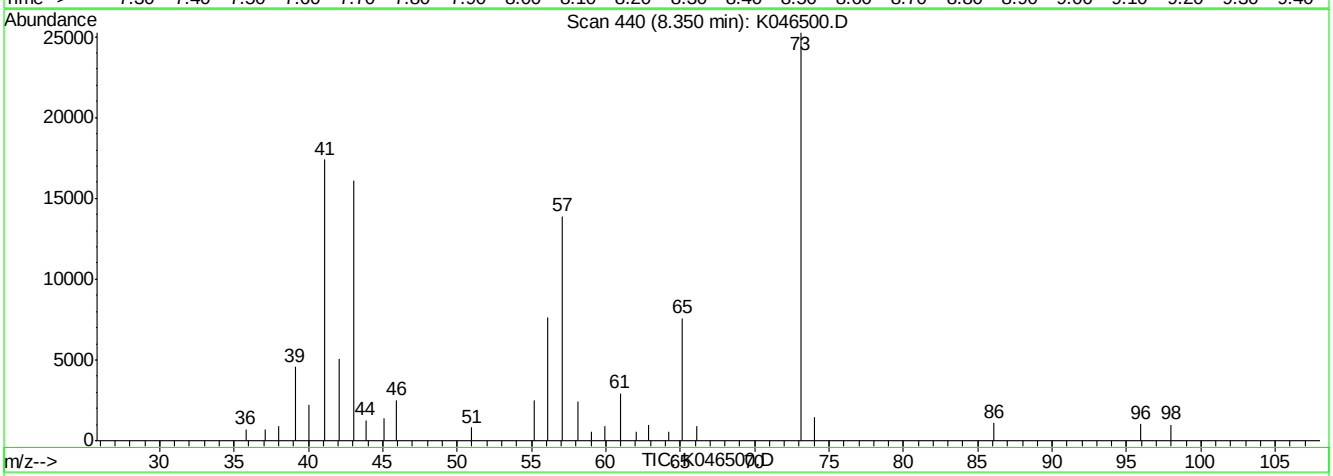


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:21 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.35min (+0.077) 250.00ug/Kg

response 51338

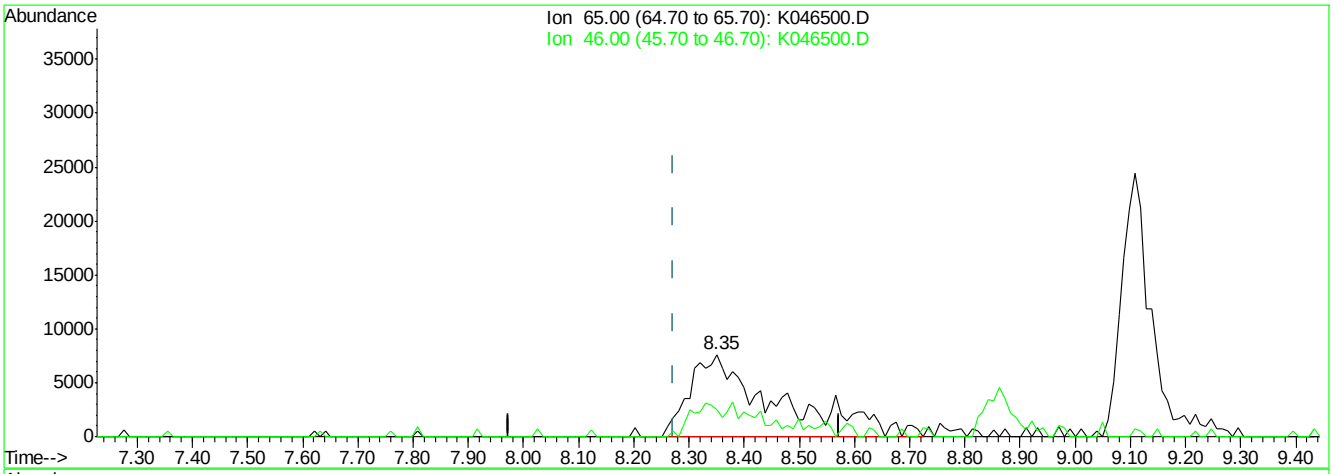
Ion	Exp%	Act%
65.00	100	100
46.00	27.90	32.91
0.00	0.00	0.00
0.00	0.00	0.00

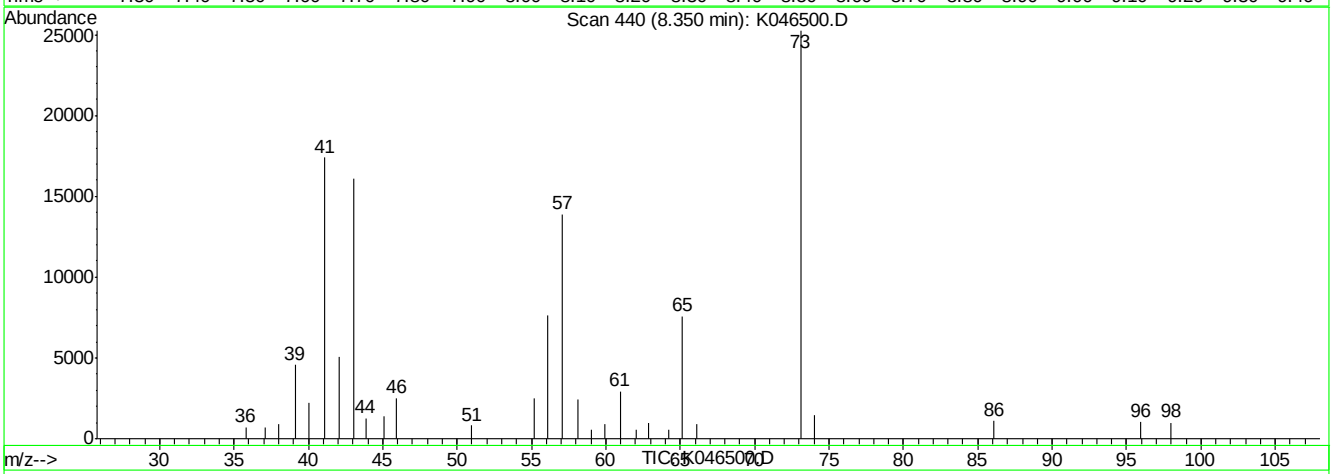
K046500.D 8260-K.M Tue Sep 07 09:25:01 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:25 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.35min (+0.077) 250.00ug/Kg m

response 84118

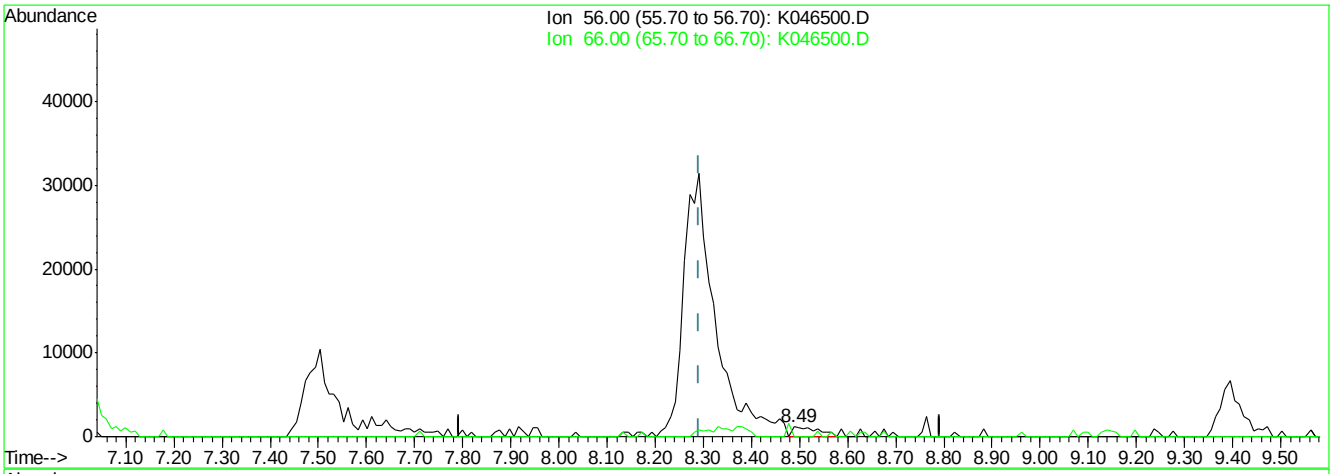
Ion	Exp%	Act%
65.00	100	100
46.00	27.90	32.91
0.00	0.00	0.00
0.00	0.00	0.00

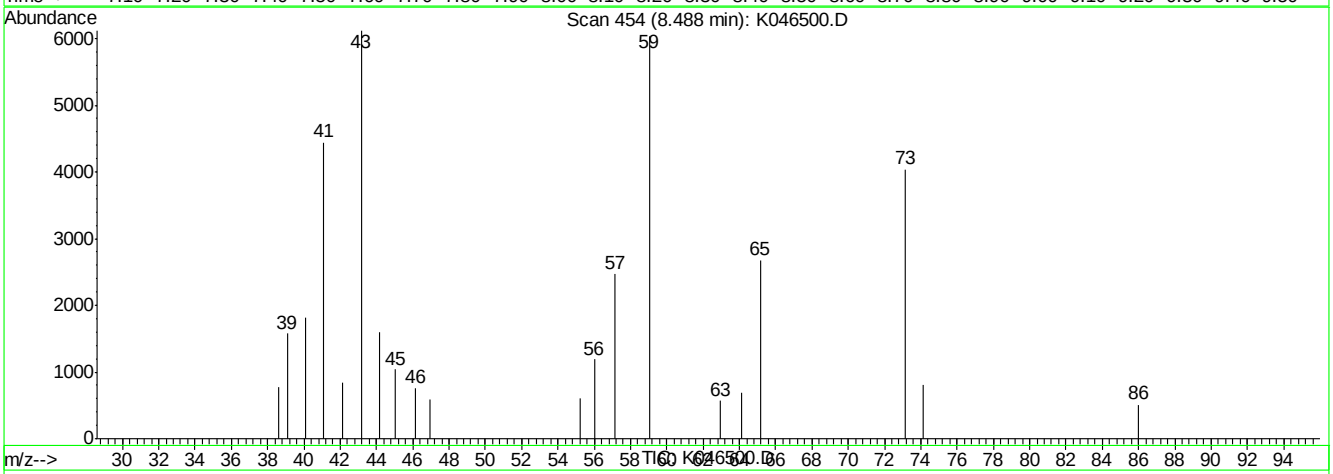
K046500.D 8260-K.M Tue Sep 07 09:25:07 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:25 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.49min (+0.195) 4.54ug/Kg

response 4539

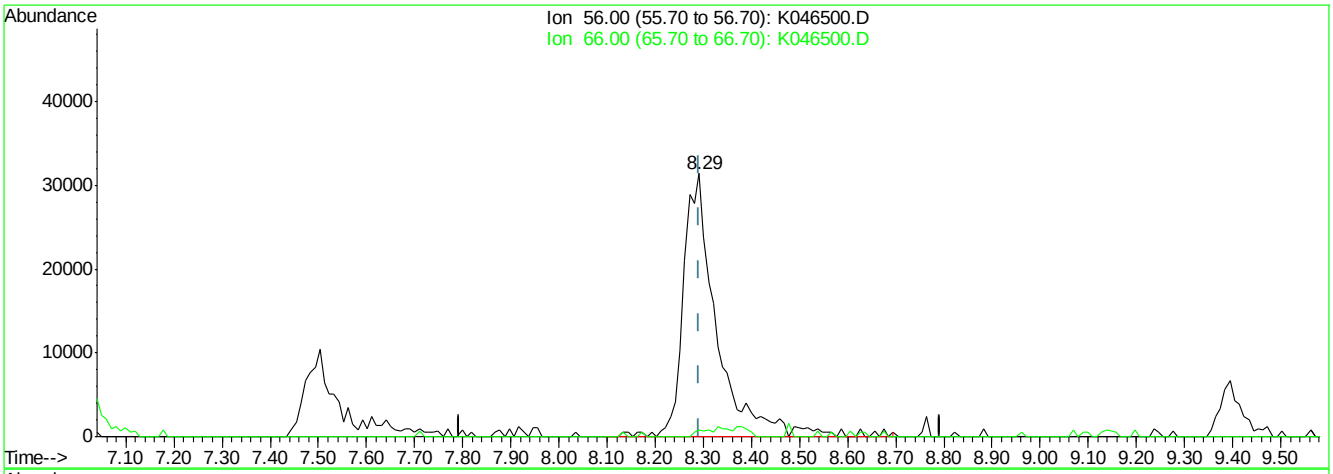
Ion	Exp%	Act%
56.00	100	100
66.00	2.90	21.39
0.00	0.00	0.00
0.00	0.00	0.00

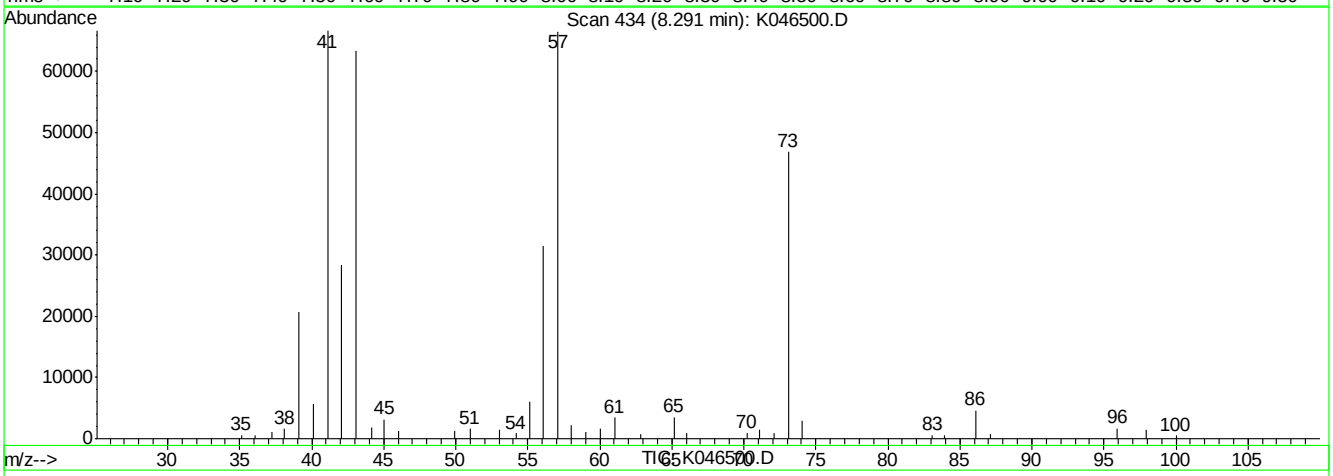
K046500.D 8260-K.M Tue Sep 07 09:25:24 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:25 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.29min (-0.002) 152.95ug/Kg m

response 153010

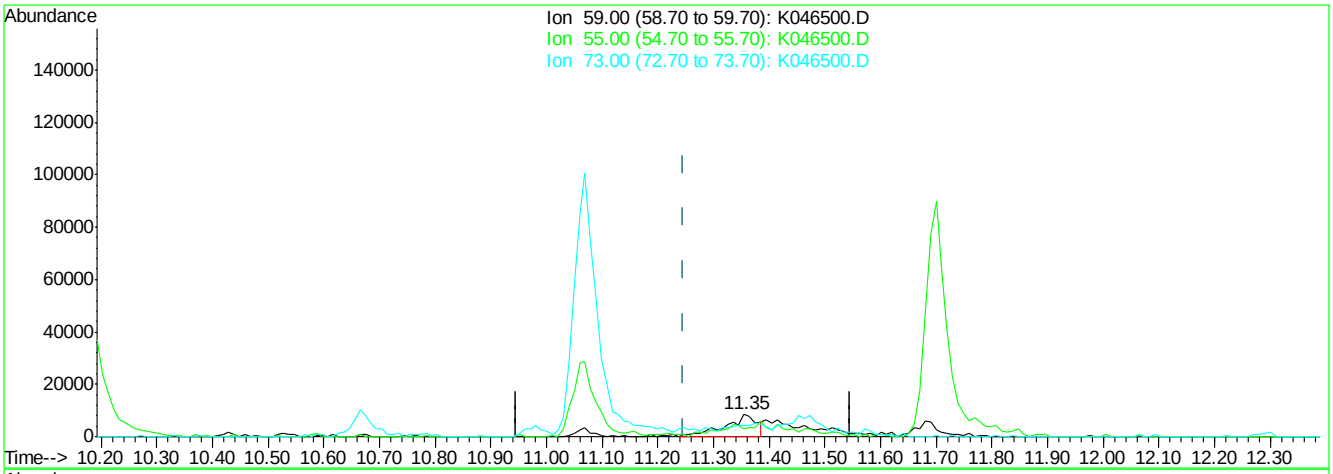
Ion	Exp%	Act%
56.00	100	100
66.00	2.90	0.63
0.00	0.00	0.00
0.00	0.00	0.00

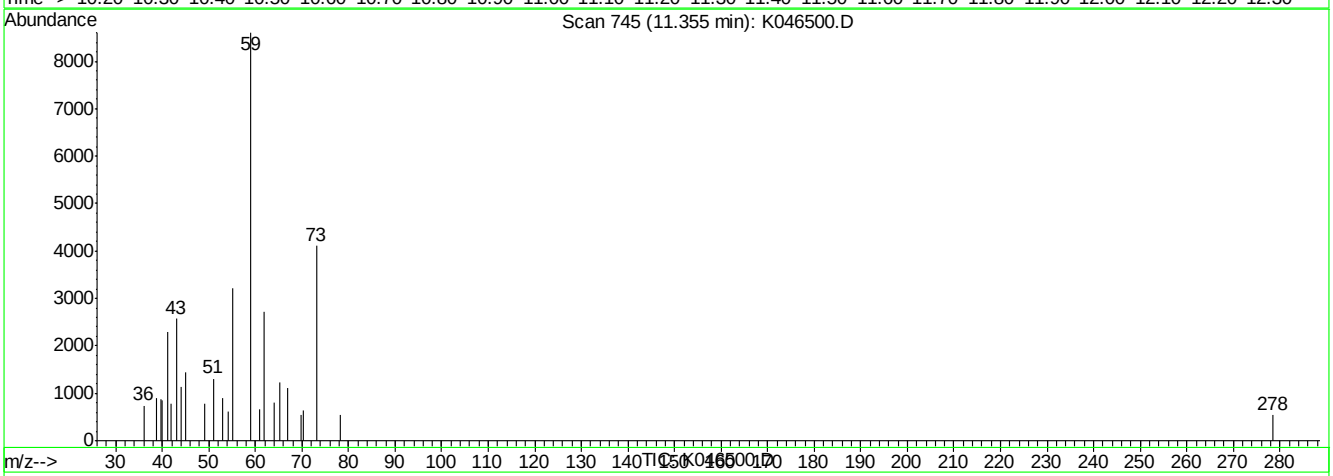
K046500.D 8260-K.M Tue Sep 07 09:25:28 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:25 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.35min (+0.108) 85.19ug/Kg

response 33882

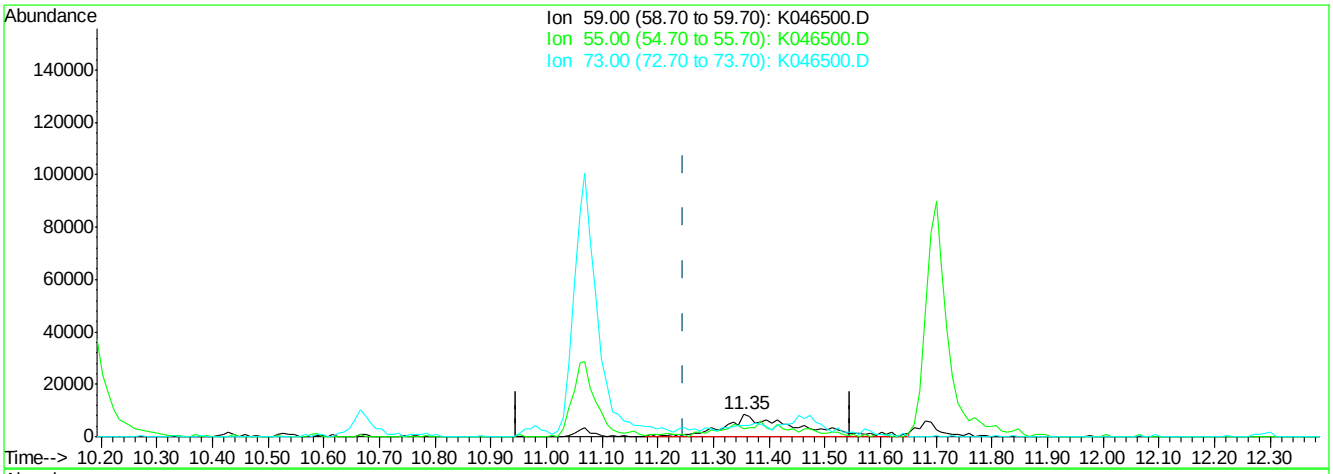
Ion	Exp%	Act%
59.00	100	100
55.00	46.50	28.78
73.00	49.60	14.55#
0.00	0.00	0.00

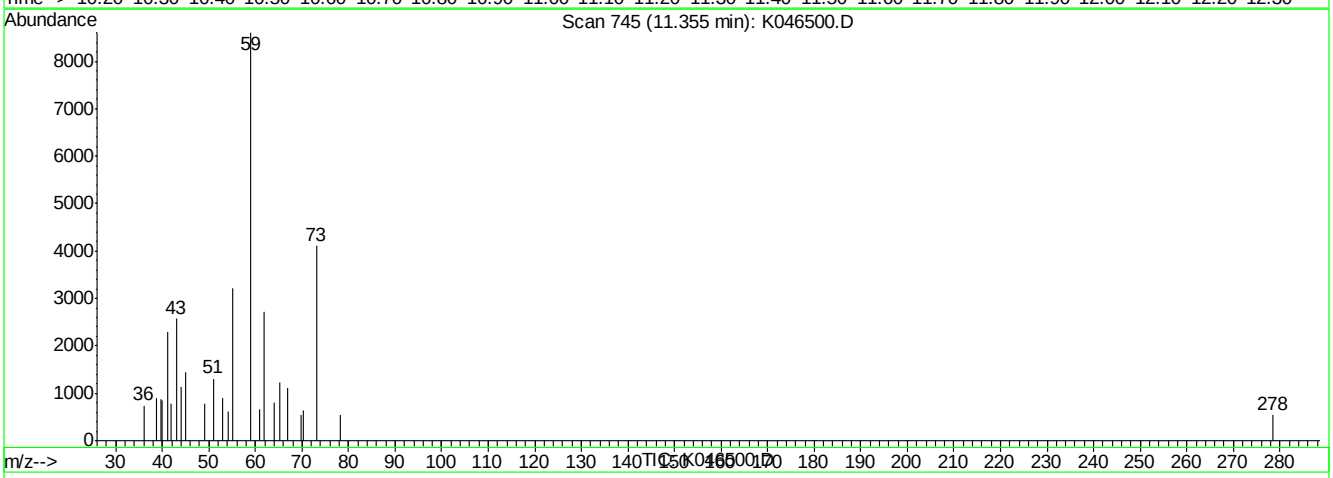
K046500.D 8260-K.M Tue Sep 07 09:25:33 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046500.D Vial: 2
Acq On : 3 Sep 2010 5:21 pm Operator: StevenH
Sample : ic2006-2 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:25 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.35min (+0.108) 194.66ug/Kg m

response 77425

Ion	Exp%	Act%
59.00	100	100
55.00	46.50	37.30
73.00	49.60	47.69
0.00	0.00	0.00

K046500.D 8260-K.M Tue Sep 07 09:25:37 2010

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046501.D Vial: 3
Acq On : 3 Sep 2010 5:46 pm Operator: StevenH
Sample : ic2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:38 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1071417	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	648050	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	282949	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.31	65	98076	250.00	ug/Kg	0.04
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	266327	49.20	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.40%			
36) 1,2-Dichloroethane-d4	11.13	65	319568	50.23	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 100.46%			
50) Toluene-d8	13.26	98	1090152	49.12	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 98.24%			
70) 4-Bromofluorobenzene	16.24	174	259968	49.83	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	183172	48.37	ug/Kg	87
3) Chloromethane	4.61	50	445091	46.19	ug/Kg	94
4) Vinyl Chloride	4.79	62	358610	47.23	ug/Kg	91
5) Bromomethane	5.48	94	143730	53.10	ug/Kg	98
6) Chloroethane	5.74	64	165641	49.41	ug/Kg	91
7) Trichlorofluoromethane	6.02	101	316650	47.60	ug/Kg	95
8) 1,2-Dichloro-1,1,2-trifluo	6.85	67	407628	49.55	ug/Kg	97
9) Ethyl Ether	6.52	59	250004	46.92	ug/Kg	94
10) Freon 113	7.02	101	298617	49.24	ug/Kg	97
11) 1,1-Dichloroethene	6.92	61	529126	48.43	ug/Kg	93
12) Acetone	7.95	43	474160	307.99	ug/Kg	94
13) Iodomethane	7.19	142	460409	49.43	ug/Kg	98
14) Carbon Disulfide	7.02	76	958314	50.37	ug/Kg	98
15) Methyl acetate	8.12	43	996884	209.03	ug/Kg	96
16) Methylene Chloride	7.89	49	736762	47.21	ug/Kg	96
17) Acrylonitrile	9.15	53	406174	226.44	ug/Kg	92
18) Methyl Tert Butyl Ether	8.30	73	816193	47.02	ug/Kg	93
19) trans-1,2-Dichloroethene	8.17	61	506184	48.66	ug/Kg	96
20) Hexane	8.29	57	751837	48.40	ug/Kg	94
21) Vinyl acetate	8.12	43	996884	207.36	ug/Kg	96
22) 1,1-Dichloroethane	9.11	63	686847	48.92	ug/Kg	97
23) Di-isopropyl ether	8.85	45	1439887	46.67	ug/Kg	96
24) Ethyl tert-butyl Ether	9.39	59	1080553	46.95	ug/Kg	99
25) 2-Butanone	10.58	43	687434	214.48	ug/Kg	97
26) cis-1,2-Dichloroethene	9.87	96	328863	51.99	ug/Kg	95
27) 2,2-Dichloropropane	10.01	77	428259	48.86	ug/Kg	96
28) Bromochloromethane	10.13	128	154325	48.47	ug/Kg	96
29) Chloroform	10.20	83	600150	49.74	ug/Kg	97
30) Tetrahydrofuran	10.58	42	37828	32.12	ug/Kg#	79
32) 1,1,1-Trichloroethane	10.52	97	467850	48.30	ug/Kg	97
33) Cyclohexane	10.18	56	731251	48.85	ug/Kg	93
34) 1,1-Dichloropropene	10.66	75	458936	47.91	ug/Kg	95
35) Carbon Tetrachloride	10.44	117	376073	43.60	ug/Kg	97
37) 1,2-Dichloroethane	11.22	62	441464	47.37	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
K046501.D 8260-K.M Tue Sep 07 09:38:57 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046501.D Vial: 3
Acq On : 3 Sep 2010 5:46 pm Operator: StevenH
Sample : ic2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:38 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.98	78	1373207	48.51	ug/Kg	99
39)	Tert-Amyl Methyl Ether	11.06	73	795862	46.31	ug/Kg	98
40)	Trichloroethene	11.68	95	326530	49.56	ug/Kg	91
41)	Methylcyclohexane	11.70	83	563284	49.43	ug/Kg	96
42)	1,2-Dichloropropane	12.29	63	402350	49.33	ug/Kg	95
43)	Dibromomethane	12.19	93	171365	48.46	ug/Kg	98
44)	Bromodichloromethane	12.34	83	423353	50.72	ug/Kg	99
45)	2-Nitropropane	13.55	41	342419	200.26	ug/Kg	96
46)	2-Chloroethyl vinyl ether	12.92	63	451367	235.44	ug/Kg	94
47)	cis-1,3-Dichloropropene	13.05	75	507557	48.79	ug/Kg	99
48)	4-Methyl-2-pentanone	13.68	43	1567367	221.63	ug/Kg	99
51)	Toluene	13.32	91	1350528	48.61	ug/Kg	100
52)	trans-1,3-Dichloropropene	13.75	75	398079	48.68	ug/Kg	96
53)	1,1,2-Trichloroethane	13.94	83	233427	49.36	ug/Kg	81
54)	1,3-Dichloropropane	14.24	76	449234	46.16	ug/Kg	96
55)	2-hexanone	14.57	43	970859	203.39	ug/Kg	99
56)	Tetrachloroethene	13.78	166	305297	51.15	ug/Kg	94
57)	Dibromochloromethane	14.16	129	276953	47.91	ug/Kg	100
58)	1,2-Dibromoethane	14.45	107	230943	45.99	ug/Kg	97
59)	1-Chlorohexane	14.89	91	415060	49.19	ug/Kg	97
60)	Chlorobenzene	14.99	112	761559	49.83	ug/Kg	99
61)	1,1,1,2-Tetrachloroethane	15.04	131	276139	48.93	ug/Kg	94
62)	Ethylbenzene	14.97	91	1373849	49.73	ug/Kg	100
63)	m,p-Xylene	15.12	91	2154190	100.82	ug/Kg	100
64)	o-Xylene	15.58	91	1161561	49.50	ug/Kg	99
65)	Styrene	15.63	104	815845	49.02	ug/Kg	93
66)	Bromoform	15.72	173	162672	46.37	ug/Kg	94
68)	Isopropylbenzene	15.90	105	1155450	50.38	ug/Kg	99
69)	Cyclohexanone	16.67	55	41424	209.75	ug/Kg	96
71)	1,1,2,2-Tetrachloroethane	16.40	83	277131	46.48	ug/Kg	98
72)	trans-1,4-Dichloro-2-Buten	16.58	53	75697	45.87	ug/Kg	94
73)	1,2,3-Trichloropropane	16.58	110	70539	47.04	ug/Kg	93
74)	Bromobenzene	16.38	156	276689	48.35	ug/Kg	98
75)	n-Propylbenzene	16.33	91	1520147	50.51	ug/Kg	99
76)	2-Chlorotoluene	16.55	91	1053934	49.88	ug/Kg	98
77)	1,3,5-Trimethylbenzene	16.51	105	1056959	50.61	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	893848	49.34	ug/Kg	97
79)	tert-Butylbenzene	16.87	91	666378	49.98	ug/Kg	97
80)	1,2,4-Trimethylbenzene	16.93	105	1018200	51.14	ug/Kg	97
81)	sec-Butylbenzene	17.06	105	1320951	51.18	ug/Kg	99
82)	4-Isopropyltoluene	17.19	119	937737	50.68	ug/Kg	100
83)	1,3-Dichlorobenzene	17.35	146	482464	48.98	ug/Kg	97
84)	1,4-Dichlorobenzene	17.44	146	479374	51.06	ug/Kg	96
85)	Benzyl chloride	17.68	126	73926	43.56	ug/Kg#	73
86)	n-Butylbenzene	17.64	92	539124	50.86	ug/Kg	98
87)	1,2-Dichlorobenzene	17.91	146	456504	50.53	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.74	75	36378	44.32	ug/Kg	95
89)	1,2,4-Trichlorobenzene	19.47	180	194316	50.88	ug/Kg	95
90)	Hexachlorobutadiene	19.39	225	177896	55.89	ug/Kg	89

(#) = qualifier out of range (m) = manual integration
K046501.D 8260-K.M Tue Sep 07 09:38:57 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046501.D Vial: 3
Acq On : 3 Sep 2010 5:46 pm Operator: StevenH
Sample : ic2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:38 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

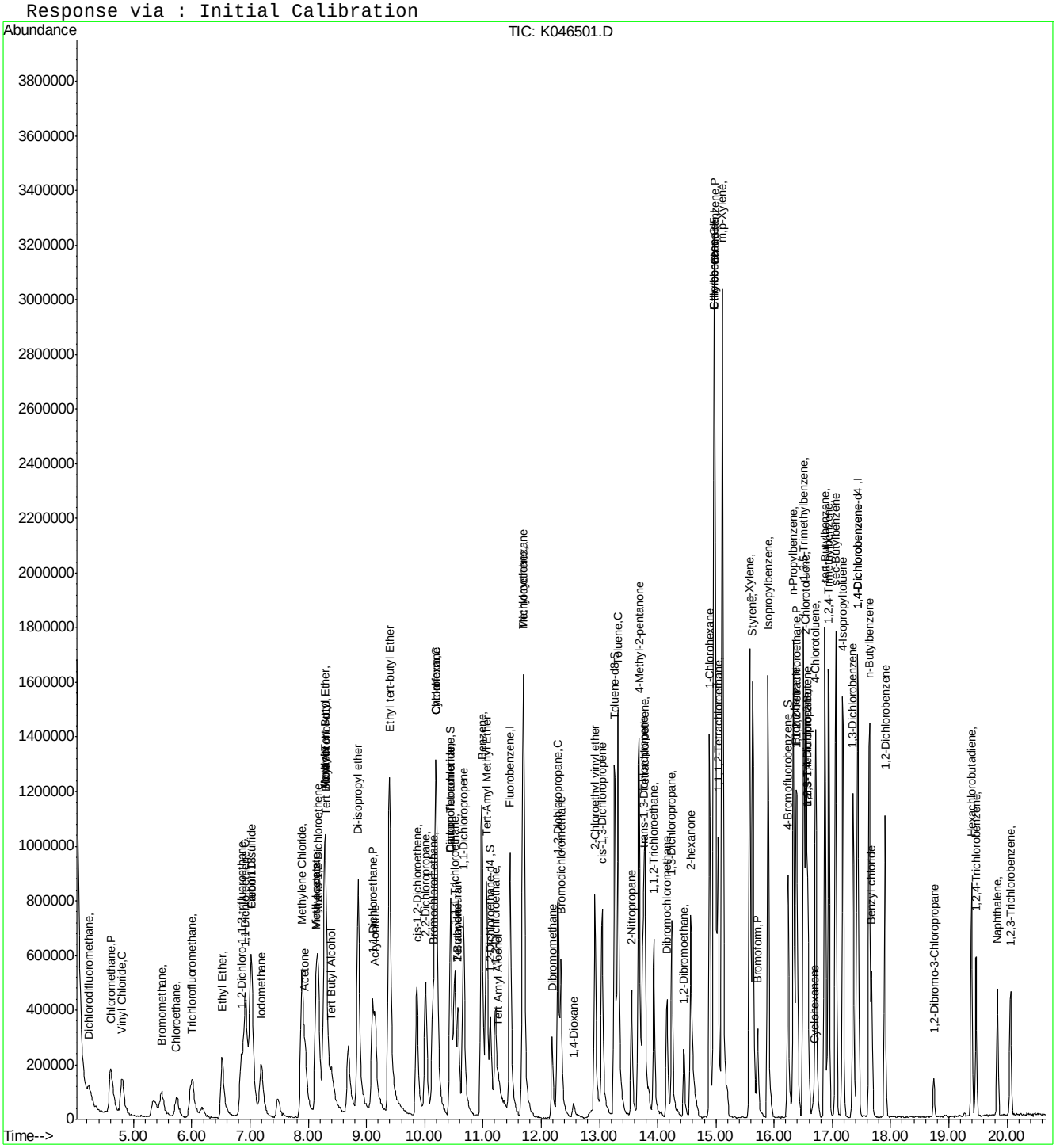
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	346190	41.92	ug/Kg	97
92)	1,2,3-Trichlorobenzene	20.06	180	149114	47.51	ug/Kg	97
94)	Acrolein	8.28	56	337114	415.14	ug/Kg	99
95)	Tert Butyl Alcohol	8.40	59	242979	505.25	ug/Kg	92
96)	Tert Amyl Alcohol	11.27	59	185223	503.18	ug/Kg	91
97)	1,4-Dioxane	12.55	88	59182	1208.57	ug/Kg	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046501.D 8260-K.M Tue Sep 07 09:38:57 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046501.D Vial: 3
Acq On : 3 Sep 2010 5:46 pm Operator: StevenH
Sample : ic2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:21 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046502.D Vial: 4
Acq On : 3 Sep 2010 6:12 pm Operator: StevenH
Sample : icc2006-4 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:42 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1087273	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	662412	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	299008	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.27	65	111470	250.00	ug/Kg	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	269518	49.06	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.12%			
36) 1,2-Dichloroethane-d4	11.13	65	358834	55.58	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 111.16%			
50) Toluene-d8	13.26	98	1113692	49.09	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 98.18%			
70) 4-Bromofluorobenzene	16.24	174	274457	49.79	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.58%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	306731	79.81	ug/Kg	94
3) Chloromethane	4.61	50	760574	77.78	ug/Kg	98
4) Vinyl Chloride	4.80	62	594834	77.20	ug/Kg	94
5) Bromomethane	5.46	94	198105	72.12	ug/Kg	91
6) Chloroethane	5.73	64	285916	84.04	ug/Kg	97
7) Trichlorofluoromethane	6.00	101	552845	81.89	ug/Kg	96
8) 1,2-Dichloro-1,1,2-trifluo	6.85	67	664496	79.60	ug/Kg	95
9) Ethyl Ether	6.52	59	520600	96.29	ug/Kg	98
10) Freon 113	7.01	101	491437	79.85	ug/Kg	97
11) 1,1-Dichloroethene	6.92	61	905270	81.65	ug/Kg	98
12) Acetone	7.94	43	919643	588.63	ug/Kg	99
13) Iodomethane	7.20	142	796607	84.28	ug/Kg	98
14) Carbon Disulfide	7.02	76	1654117	85.67	ug/Kg	99
15) Methyl acetate	8.12	43	2317216	478.80	ug/Kg	99
16) Methylene Chloride	7.89	49	1124536	71.01	ug/Kg	98
17) Acrylonitrile	9.15	53	953064	523.59	ug/Kg	98
18) Methyl Tert Butyl Ether	8.30	73	1688909	95.88	ug/Kg	91
19) trans-1,2-Dichloroethene	8.16	61	936275	88.69	ug/Kg	97
20) Hexane	8.28	57	1339631	84.99	ug/Kg	92
21) Vinyl acetate	8.12	43	2317216	474.98	ug/Kg	99
22) 1,1-Dichloroethane	9.10	63	1218147	85.50	ug/Kg	99
23) Di-isopropyl ether	8.85	45	2847168	90.94	ug/Kg	99
24) Ethyl tert-butyl Ether	9.38	59	2185283	93.57	ug/Kg	97
25) 2-Butanone	10.57	43	1556627	478.59	ug/Kg	99
26) cis-1,2-Dichloroethene	9.86	96	579050	90.21	ug/Kg	99
27) 2,2-Dichloropropane	10.01	77	740287	83.23	ug/Kg	98
28) Bromochloromethane	10.13	128	300663	93.05	ug/Kg	96
29) Chloroform	10.20	83	1054177	86.09	ug/Kg	94
30) Tetrahydrofuran	10.57	42	109050	91.26	ug/Kg	90
32) 1,1,1-Trichloroethane	10.52	97	806724	82.08	ug/Kg	93
33) Cyclohexane	10.18	56	1230053	80.97	ug/Kg	98
34) 1,1-Dichloropropene	10.66	75	818906	84.25	ug/Kg	95
35) Carbon Tetrachloride	10.44	117	653716	74.69	ug/Kg	96
37) 1,2-Dichloroethane	11.21	62	885754	93.66	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
K046502.D 8260-K.M Tue Sep 07 09:39:02 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046502.D Vial: 4
Acq On : 3 Sep 2010 6:12 pm Operator: StevenH
Sample : icc2006-4 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:42 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.98	78	2443981	85.07	ug/Kg	99
39)	Tert-Amyl Methyl Ether	11.06	73	1660090	95.20	ug/Kg	96
40)	Trichloroethene	11.68	95	581139	86.91	ug/Kg	97
41)	Methylcyclohexane	11.70	83	965637	83.50	ug/Kg	99
42)	1,2-Dichloropropane	12.29	63	767338	92.70	ug/Kg	96
43)	Dibromomethane	12.18	93	355757	99.15	ug/Kg	97
44)	Bromodichloromethane	12.34	83	802085	94.69	ug/Kg	99
45)	2-Nitropropane	13.55	41	859871	495.55	ug/Kg	97
46)	2-Chloroethyl vinyl ether	12.92	63	1027244	528.00	ug/Kg	96
47)	cis-1,3-Dichloropropene	13.05	75	1018713	96.50	ug/Kg	97
48)	4-Methyl-2-pentanone	13.67	43	3398612	473.57	ug/Kg	99
51)	Toluene	13.31	91	2390517	84.17	ug/Kg	96
52)	trans-1,3-Dichloropropene	13.75	75	791731	94.72	ug/Kg	92
53)	1,1,2-Trichloroethane	13.94	83	452956	93.70	ug/Kg	97
54)	1,3-Dichloropropane	14.24	76	946470	95.15	ug/Kg	94
55)	2-hexanone	14.57	43	2248062	460.75	ug/Kg	99
56)	Tetrachloroethene	13.78	166	500464	82.02	ug/Kg	96
57)	Dibromochloromethane	14.16	129	552704	93.54	ug/Kg	95
58)	1,2-Dibromoethane	14.45	107	502763	97.94	ug/Kg	95
59)	1-Chlorohexane	14.89	91	751947	87.18	ug/Kg	97
60)	Chlorobenzene	14.99	112	1377330	88.17	ug/Kg	98
61)	1,1,1,2-Tetrachloroethane	15.04	131	510038	88.42	ug/Kg	98
62)	Ethylbenzene	14.97	91	2389688	84.62	ug/Kg	98
63)	m,p-Xylene	15.11	91	3765156	172.39	ug/Kg	98
64)	o-Xylene	15.58	91	2120194	88.40	ug/Kg	99
65)	Styrene	15.63	104	1563656	91.91	ug/Kg	95
66)	Bromoform	15.72	173	349405	97.44	ug/Kg	96
68)	Isopropylbenzene	15.90	105	2029325	83.72	ug/Kg	98
69)	Cyclohexanone	16.67	55	96764	463.65	ug/Kg	96
71)	1,1,2,2-Tetrachloroethane	16.40	83	589680	93.59	ug/Kg	98
72)	trans-1,4-Dichloro-2-Buten	16.58	53	171134	98.12	ug/Kg#	92
73)	1,2,3-Trichloropropane	16.58	110	146184	92.26	ug/Kg	92
74)	Bromobenzene	16.38	156	540912	89.45	ug/Kg	96
75)	n-Propylbenzene	16.33	91	2681509	84.31	ug/Kg	99
76)	2-Chlorotoluene	16.55	91	1937682	86.77	ug/Kg	97
77)	1,3,5-Trimethylbenzene	16.51	105	1861565	84.34	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	1651010	86.24	ug/Kg	98
79)	tert-Butylbenzene	16.87	91	1155985	82.05	ug/Kg	98
80)	1,2,4-Trimethylbenzene	16.93	105	1842544	87.57	ug/Kg	100
81)	sec-Butylbenzene	17.06	105	2293951	84.10	ug/Kg	97
82)	4-Isopropyltoluene	17.18	119	1683691	86.10	ug/Kg	96
83)	1,3-Dichlorobenzene	17.35	146	908740	87.31	ug/Kg	97
84)	1,4-Dichlorobenzene	17.44	146	881517	88.84	ug/Kg	97
85)	Benzyl chloride	17.67	126	168530	93.97	ug/Kg#	64
86)	n-Butylbenzene	17.63	92	971007	86.69	ug/Kg	95
87)	1,2-Dichlorobenzene	17.91	146	876584	91.81	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.74	75	83113	95.81	ug/Kg	76
89)	1,2,4-Trichlorobenzene	19.47	180	389013	96.38	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	301362	89.60	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
K046502.D 8260-K.M Tue Sep 07 09:39:03 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046502.D Vial: 4
Acq On : 3 Sep 2010 6:12 pm Operator: StevenH
Sample : icc2006-4 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:42 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

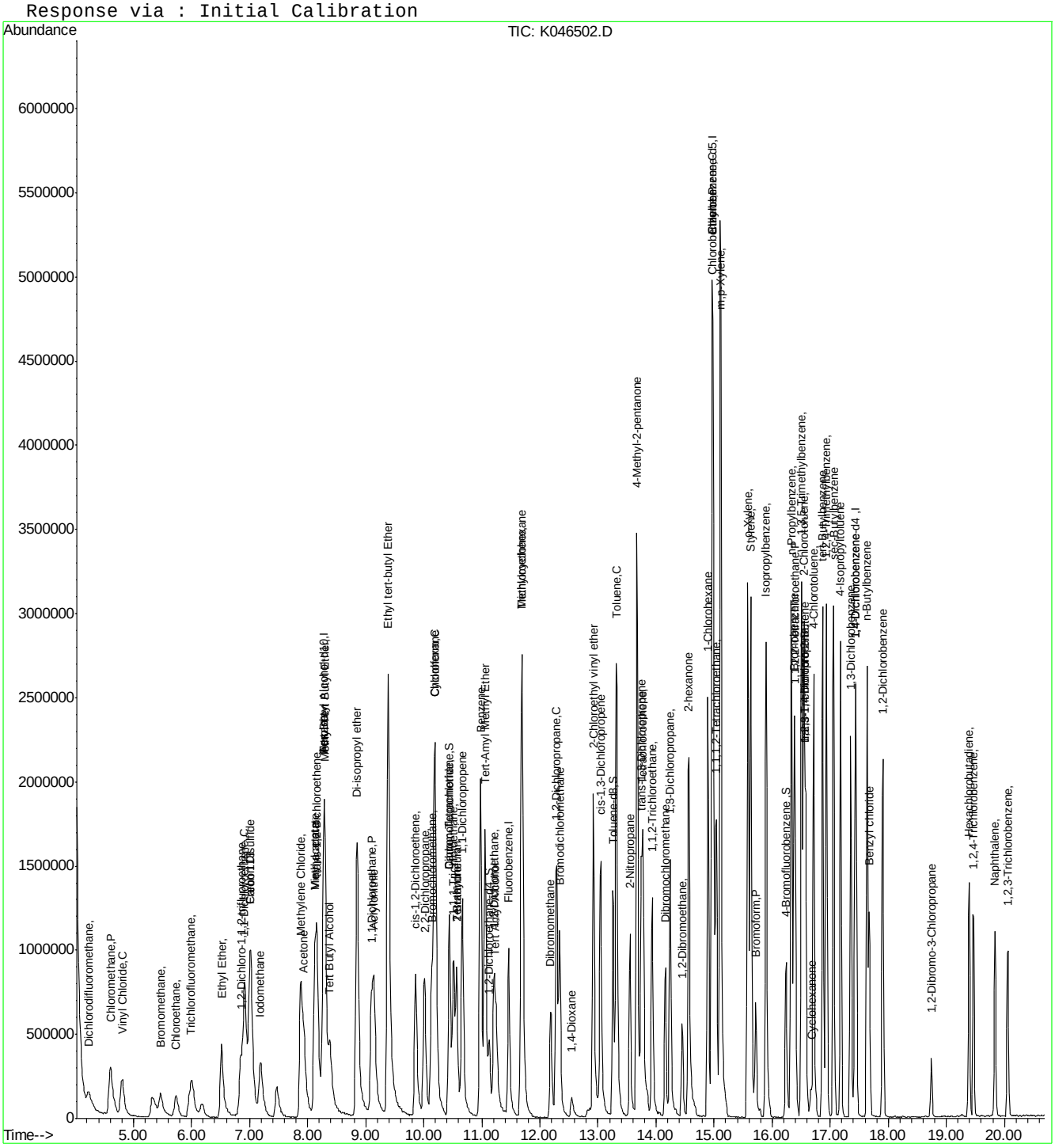
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	831490	95.28	ug/Kg	99
92)	1,2,3-Trichlorobenzene	20.06	180	332311	100.20	ug/Kg	95
94)	Acrolein	8.27	56	574402	622.36	ug/Kg	100
95)	Tert Butyl Alcohol	8.39	59	571471	1045.52	ug/Kg	94
96)	Tert Amyl Alcohol	11.25	59	475157	1135.71	ug/Kg	91
97)	1,4-Dioxane	12.56	88	126636	2275.34	ug/Kg	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046502.D 8260-K.M Tue Sep 07 09:39:03 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046502.D Vial: 4
Acq On : 3 Sep 2010 6:12 pm Operator: StevenH
Sample : icc2006-4 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/07/10 16:06

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046503.D Vial: 5
Acq On : 3 Sep 2010 6:37 pm Operator: StevenH
Sample : ic2006-5 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:48 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1084251	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	599005	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	293851	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.26	65	117539	250.00	ug/Kg	-0.01
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	269813	49.25	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.50%			
36) 1,2-Dichloroethane-d4	11.13	65	303429	47.13	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 94.26%			
50) Toluene-d8	13.26	98	1088027	53.04	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 106.08%			
70) 4-Bromofluorobenzene	16.24	174	279988	51.68	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.36%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	474574	123.83	ug/Kg	93
3) Chloromethane	4.61	50	1172318	120.22	ug/Kg	99
4) Vinyl Chloride	4.80	62	918639	119.56	ug/Kg	92
5) Bromomethane	5.46	94	244661	89.32	ug/Kg	95
6) Chloroethane	5.73	64	403553	118.95	ug/Kg	99
7) Trichlorofluoromethane	6.01	101	824984	122.55	ug/Kg	91
8) 1,2-Dichloro-1,1,2-trifluo	6.88	67	1068191m	128.32	ug/Kg	
9) Ethyl Ether	6.52	59	782852	145.20	ug/Kg	91
10) Freon 113	7.02	101	725427	118.19	ug/Kg	94
11) 1,1-Dichloroethene	6.92	61	1379234	124.75	ug/Kg	95
12) Acetone	7.94	43	1493292	958.47	ug/Kg	100
13) Iodomethane	7.19	142	1228871	130.38	ug/Kg	99
14) Carbon Disulfide	7.01	76	2555569	132.73	ug/Kg	99
15) Methyl acetate	8.12	43	3793798	786.08	ug/Kg	99
16) Methylene Chloride	7.89	49	1663626	105.34	ug/Kg	94
17) Acrylonitrile	9.14	53	1570291	865.08	ug/Kg	92
18) Methyl Tert Butyl Ether	8.30	73	2586811	147.26	ug/Kg	88
19) trans-1,2-Dichloroethene	8.16	61	1440738	136.86	ug/Kg	97
20) Hexane	8.28	57	2042616	129.95	ug/Kg	95
21) Vinyl acetate	8.12	43	3793798	779.81	ug/Kg	99
22) 1,1-Dichloroethane	9.10	63	1822846	128.29	ug/Kg	97
23) Di-isopropyl ether	8.85	45	4228829	135.45	ug/Kg	97
24) Ethyl tert-butyl Ether	9.38	59	3273551	140.56	ug/Kg	99
25) 2-Butanone	10.57	43	2532459	780.78	ug/Kg	100
26) cis-1,2-Dichloroethene	9.86	96	885598	138.35	ug/Kg	96
27) 2,2-Dichloropropane	10.01	77	1079567	121.72	ug/Kg	97
28) Bromochloromethane	10.13	128	459004	142.46	ug/Kg	97
29) Chloroform	10.20	83	1550053	126.94	ug/Kg	98
30) Tetrahydrofuran	10.57	42	167693	140.73	ug/Kg	89
32) 1,1,1-Trichloroethane	10.52	97	1216604	124.12	ug/Kg	98
33) Cyclohexane	10.18	56	1824588	120.45	ug/Kg	98
34) 1,1-Dichloropropene	10.66	75	1222094	126.08	ug/Kg	96
35) Carbon Tetrachloride	10.44	117	994159	113.90	ug/Kg	97
37) 1,2-Dichloroethane	11.21	62	1317282	139.67	ug/Kg	99

(#) = qualifier out of range (m) = manual integration
K046503.D 8260-K.M Tue Sep 07 09:39:10 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046503.D Vial: 5
Acq On : 3 Sep 2010 6:37 pm Operator: StevenH
Sample : ic2006-5 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:48 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.98	78	3593176	125.42	ug/Kg	100
39)	Tert-Amyl Methyl Ether	11.06	73	2582383	148.50	ug/Kg	98
40)	Trichloroethene	11.68	95	834352	125.13	ug/Kg	96
41)	Methylcyclohexane	11.70	83	1389199	120.46	ug/Kg	98
42)	1,2-Dichloropropane	12.29	63	1114952	135.07	ug/Kg	95
43)	Dibromomethane	12.18	93	554556	154.98	ug/Kg	95
44)	Bromodichloromethane	12.34	83	1214005	143.72	ug/Kg	98
45)	2-Nitropropane	13.55	41	1410820	815.33	ug/Kg	97
46)	2-Chloroethyl vinyl ether	12.92	63	1673414	862.53	ug/Kg	99
47)	cis-1,3-Dichloropropene	13.05	75	1528301	145.18	ug/Kg	99
48)	4-Methyl-2-pentanone	13.67	43	5334638	745.42	ug/Kg	99
51)	Toluene	13.32	91	3492273	135.98	ug/Kg	97
52)	trans-1,3-Dichloropropene	13.75	75	1240074	164.07	ug/Kg	99
53)	1,1,2-Trichloroethane	13.94	83	673834	154.14	ug/Kg	99
54)	1,3-Dichloropropane	14.24	76	1406370	156.35	ug/Kg	98
55)	2-hexanone	14.56	43	3601527	816.28	ug/Kg	96
56)	Tetrachloroethene	13.78	166	740706	134.25	ug/Kg	96
57)	Dibromochloromethane	14.16	129	862382	161.41	ug/Kg	97
58)	1,2-Dibromoethane	14.45	107	763452	164.47	ug/Kg	98
59)	1-Chlorohexane	14.89	91	1114949	142.95	ug/Kg	97
60)	Chlorobenzene	14.99	112	1969897	139.46	ug/Kg	98
61)	1,1,1,2-Tetrachloroethane	15.04	131	753116	144.38	ug/Kg	97
62)	Ethylbenzene	14.97	91	3489900	136.67	ug/Kg	97
63)	m,p-Xylene	15.12	91	5385853	272.70	ug/Kg	98
64)	o-Xylene	15.58	91	3086189	142.30	ug/Kg	98
65)	Styrene	15.63	104	2290309	148.87	ug/Kg	96
66)	Bromoform	15.72	173	534660	164.88	ug/Kg	96
68)	Isopropylbenzene	15.90	105	2980416	125.12	ug/Kg	100
69)	Cyclohexanone	16.66	55	172045	838.83	ug/Kg	96
71)	1,1,2,2-Tetrachloroethane	16.40	83	893644	144.32	ug/Kg	97
72)	trans-1,4-Dichloro-2-Buten	16.58	53	285354	166.48	ug/Kg#	85
73)	1,2,3-Trichloropropane	16.58	110	228499	146.74	ug/Kg	90
74)	Bromobenzene	16.38	156	790317	132.98	ug/Kg	98
75)	n-Propylbenzene	16.33	91	3939801	126.05	ug/Kg	99
76)	2-Chlorotoluene	16.55	91	2819788	128.49	ug/Kg	98
77)	1,3,5-Trimethylbenzene	16.51	105	2770595	127.73	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	2453154	130.39	ug/Kg	98
79)	tert-Butylbenzene	16.87	91	1697688	122.61	ug/Kg	97
80)	1,2,4-Trimethylbenzene	16.93	105	2690506	130.12	ug/Kg	96
81)	sec-Butylbenzene	17.06	105	3337648	124.52	ug/Kg	99
82)	4-Isopropyltoluene	17.18	119	2487811	129.46	ug/Kg	94
83)	1,3-Dichlorobenzene	17.35	146	1381954	135.10	ug/Kg	96
84)	1,4-Dichlorobenzene	17.44	146	1299485	133.27	ug/Kg	97
85)	Benzyl chloride	17.68	126	279574	158.61	ug/Kg#	93
86)	n-Butylbenzene	17.63	92	1464619	133.05	ug/Kg	97
87)	1,2-Dichlorobenzene	17.90	146	1302701	138.84	ug/Kg	98
88)	1,2-Dibromo-3-Chloropropan	18.74	75	137432	161.21	ug/Kg	78
89)	1,2,4-Trichlorobenzene	19.47	180	590063	148.76	ug/Kg	94
90)	Hexachlorobutadiene	19.39	225	417320	126.26	ug/Kg	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046503.D Vial: 5
Acq On : 3 Sep 2010 6:37 pm Operator: StevenH
Sample : ic2006-5 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:48 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

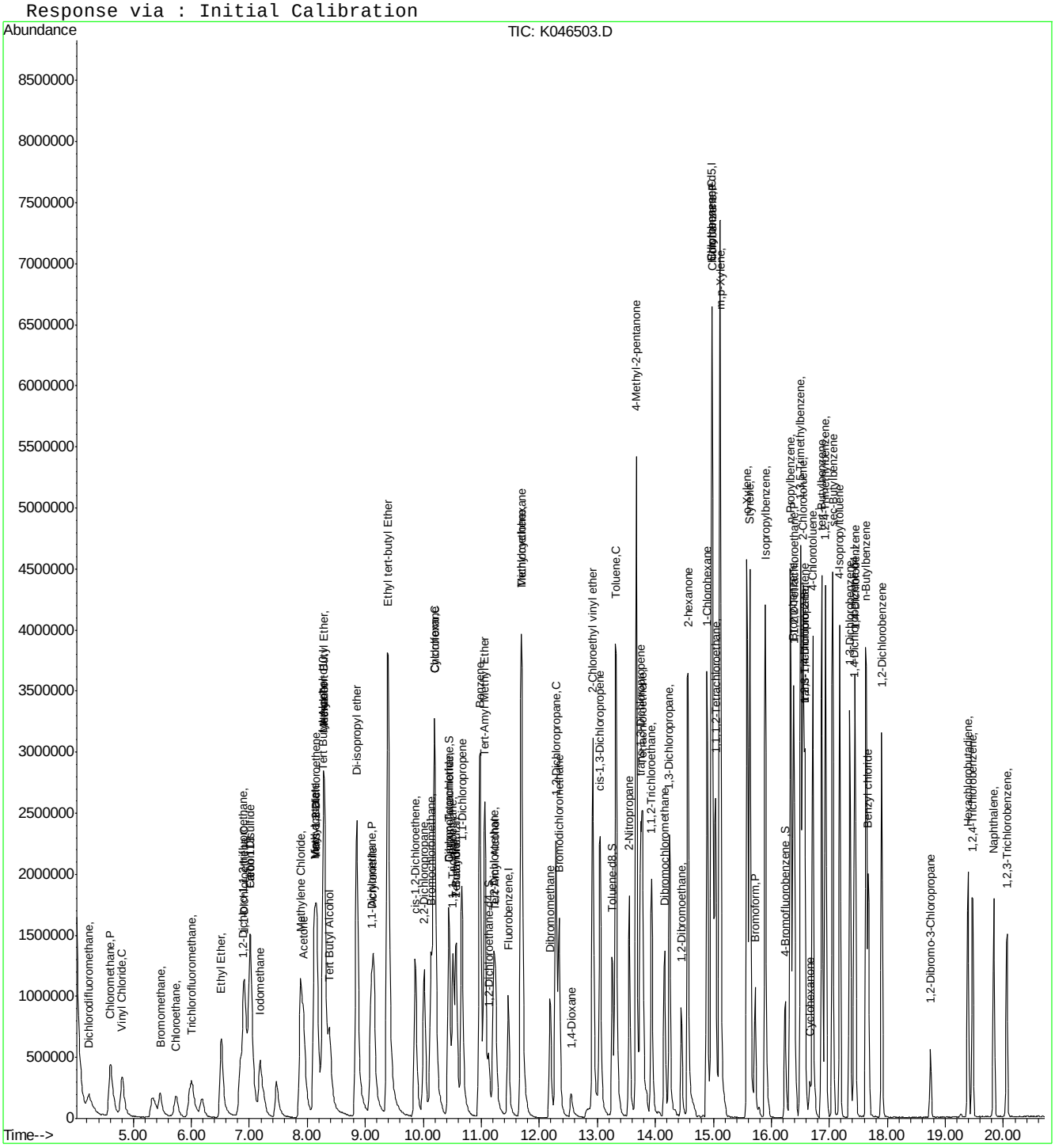
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	1339604	156.19	ug/Kg	99
92)	1,2,3-Trichlorobenzene	20.06	180	508408	155.98	ug/Kg	95
94)	Acrolein	8.28	56	862616	886.38	ug/Kg	98
95)	Tert Butyl Alcohol	8.39	59	1000119	1735.27	ug/Kg	86
96)	Tert Amyl Alcohol	11.25	59	822733	1864.95	ug/Kg	92
97)	1,4-Dioxane	12.55	88	203057	3460.05	ug/Kg	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046503.D Vial: 5
Acq On : 3 Sep 2010 6:37 pm Operator: StevenH
Sample : ic2006-5 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:27 2010 Quant Results File: 8260-K.RES

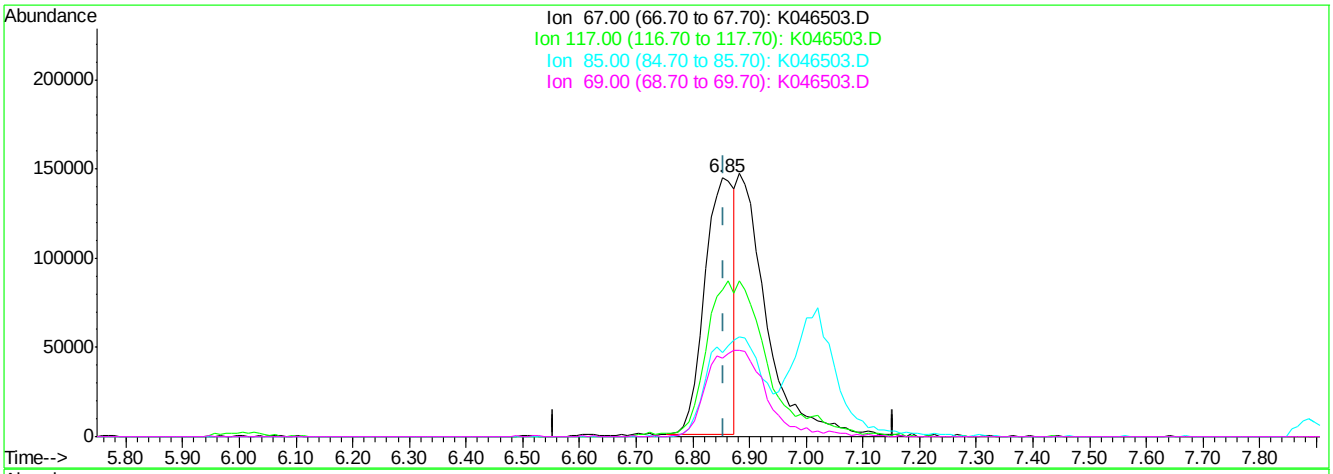
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

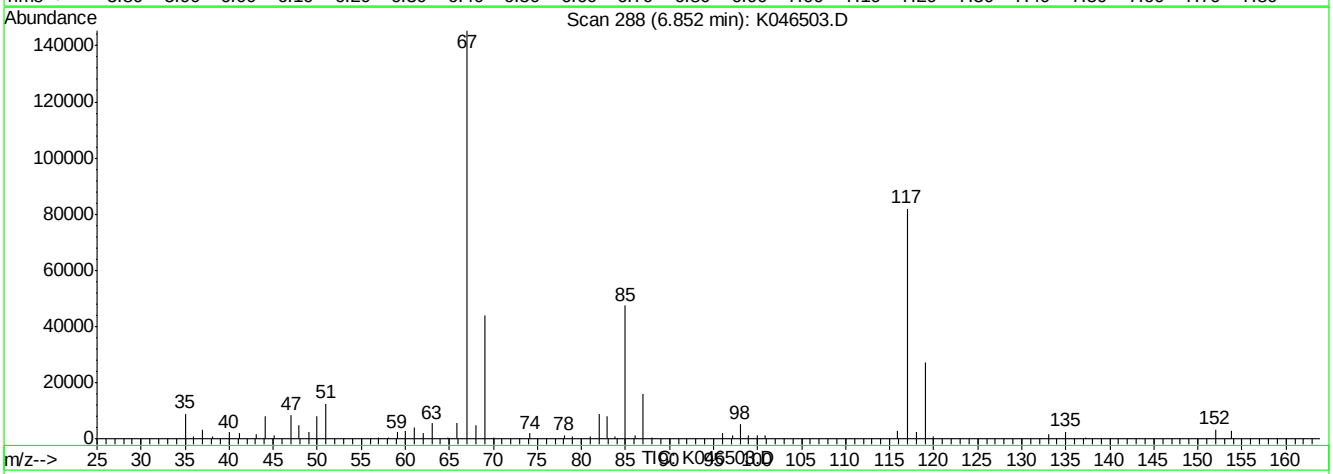


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046503.D Vial: 5
Acq On : 3 Sep 2010 6:37 pm Operator: StevenH
Sample : ic2006-5 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.85min (-0.002) 62.08ug/Kg

response 516811

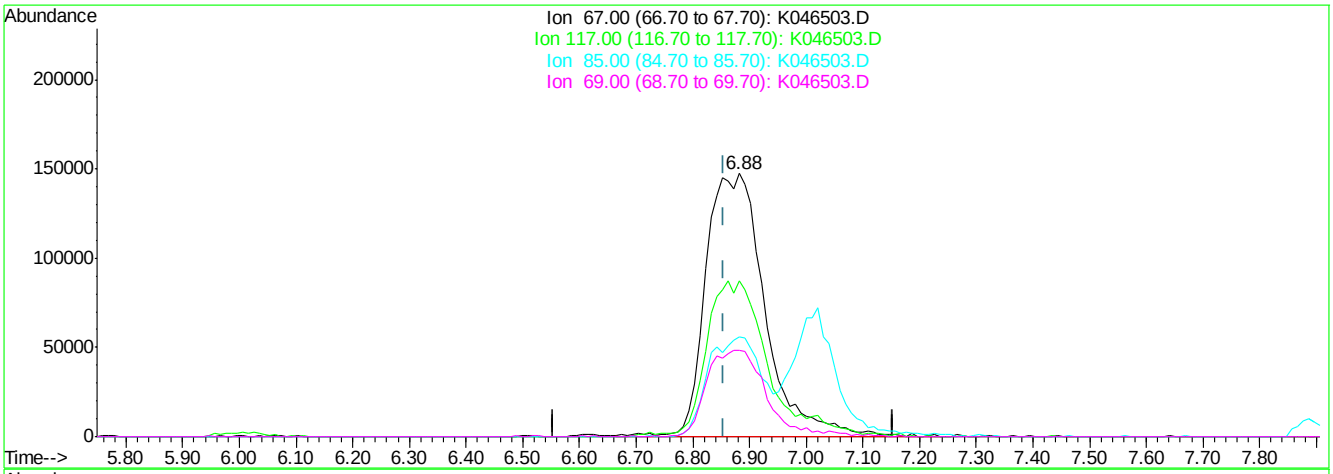
Ion	Exp%	Act%
67.00	100	100
117.00	57.80	55.59
85.00	37.00	32.91
69.00	33.80	30.43

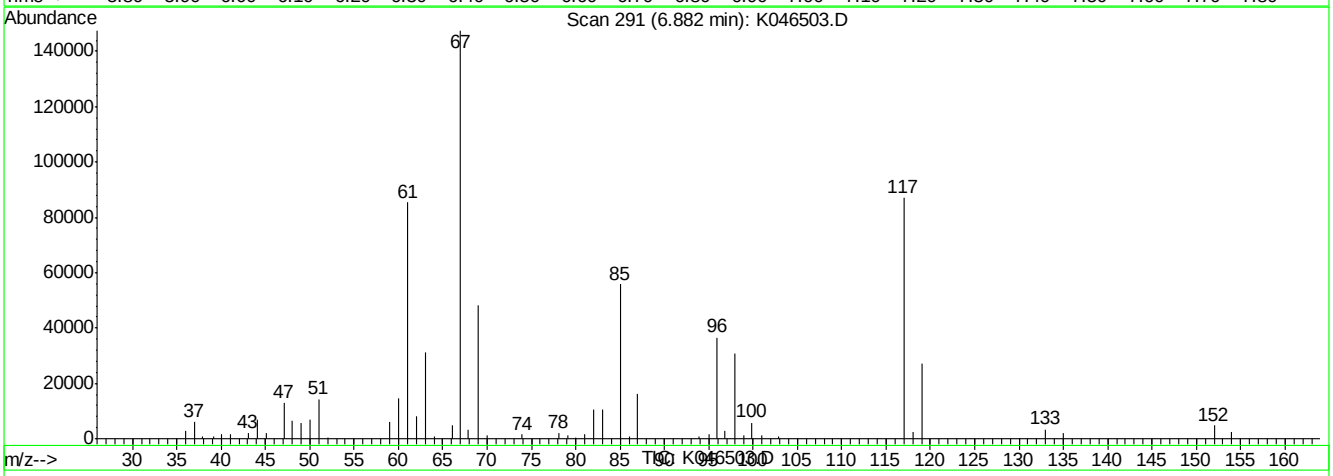
K046503.D 8260-K.M Tue Sep 07 09:27:10 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046503.D Vial: 5
Acq On : 3 Sep 2010 6:37 pm Operator: StevenH
Sample : ic2006-5 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:27 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.88min (+0.027) 128.32ug/Kg m

response 1068191

Ion	Exp%	Act%
67.00	100	100
117.00	57.80	59.04
85.00	37.00	37.85
69.00	33.80	32.75

K046503.D 8260-K.M Tue Sep 07 09:27:14 2010

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046504.D Vial: 6
Acq On : 3 Sep 2010 7:03 pm Operator: StevenH
Sample : ic2006-6 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:53 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1088492	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	593203	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	307377	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.26	65	137447	250.00	ug/Kg	-0.01
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	271495	49.36	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.72%			
36) 1,2-Dichloroethane-d4	11.13	65	328613	50.84	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 101.68%			
50) Toluene-d8	13.26	98	1098782	54.08	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 108.16%			
70) 4-Bromofluorobenzene	16.24	174	290122	51.20	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 102.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	602429	156.58	ug/Kg	95
3) Chloromethane	4.61	50	1520121	155.28	ug/Kg	100
4) Vinyl Chloride	4.81	62	1200576	155.65	ug/Kg	97
5) Bromomethane	5.46	94	289842	105.40	ug/Kg	100
6) Chloroethane	5.73	64	503489	147.83	ug/Kg	98
7) Trichlorofluoromethane	6.01	101	1059386	156.75	ug/Kg	86
8) 1,2-Dichloro-1,1,2-trifluo	6.90	67	1336698	159.95	ug/Kg	94
9) Ethyl Ether	6.51	59	1036959	191.58	ug/Kg	97
10) Freon 113	7.01	101	937554	152.16	ug/Kg	95
11) 1,1-Dichloroethene	6.91	61	1796007	161.81	ug/Kg	95
12) Acetone	7.94	43	2003656	1281.04	ug/Kg	96
13) Iodomethane	7.19	142	1601455	169.25	ug/Kg	97
14) Carbon Disulfide	7.02	76	3358138	173.74	ug/Kg	100
15) Methyl acetate	8.11	43	5228591	1079.15	ug/Kg	99
16) Methylene Chloride	7.88	49	2185798	137.86	ug/Kg	96
17) Acrylonitrile	9.14	53	2074531	1138.42	ug/Kg	97
18) Methyl Tert Butyl Ether	8.29	73	3439414	195.03	ug/Kg	99
19) trans-1,2-Dichloroethene	8.16	61	1843503	174.44	ug/Kg	98
20) Hexane	8.28	57	2640768	167.35	ug/Kg	96
21) Vinyl acetate	8.11	43	5228591	1070.54	ug/Kg	99
22) 1,1-Dichloroethane	9.10	63	2379543	166.82	ug/Kg	100
23) Di-isopropyl ether	8.85	45	5676469	181.11	ug/Kg	99
24) Ethyl tert-butyl Ether	9.38	59	4356740	186.34	ug/Kg	98
25) 2-Butanone	10.57	43	3502987	1075.80	ug/Kg	98
26) cis-1,2-Dichloroethene	9.86	96	1171152	182.24	ug/Kg	94
27) 2,2-Dichloropropane	10.01	77	1344062	150.95	ug/Kg	99
28) Bromochloromethane	10.13	128	596634	184.45	ug/Kg	97
29) Chloroform	10.20	83	2007402	163.75	ug/Kg	100
30) Tetrahydrofuran	10.57	42	232178	194.08	ug/Kg#	72
32) 1,1,1-Trichloroethane	10.52	97	1599976	162.60	ug/Kg	97
33) Cyclohexane	10.18	56	2296790	151.03	ug/Kg	97
34) 1,1-Dichloropropene	10.66	75	1584648	162.85	ug/Kg	93
35) Carbon Tetrachloride	10.44	117	1567440	178.88	ug/Kg	98
37) 1,2-Dichloroethane	11.21	62	1780614	188.06	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
K046504.D 8260-K.M Tue Sep 07 09:39:15 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046504.D Vial: 6
Acq On : 3 Sep 2010 7:03 pm Operator: StevenH
Sample : ic2006-6 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:53 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.98	78	4648039	161.61	ug/Kg	100
39)	Tert-Amyl Methyl Ether	11.06	73	3400670	194.79	ug/Kg	96
40)	Trichloroethene	11.68	95	1093975	163.43	ug/Kg	99
41)	Methylcyclohexane	11.70	83	1769565	152.84	ug/Kg	97
42)	1,2-Dichloropropane	12.29	63	1460310	176.23	ug/Kg	94
43)	Dibromomethane	12.18	93	748110	208.26	ug/Kg	93
44)	Bromodichloromethane	12.34	83	1619613	190.99	ug/Kg	99
45)	2-Nitropropane	13.55	41	1994640	1148.24	ug/Kg	97
46)	2-Chloroethyl vinyl ether	12.92	63	2344338	1203.64	ug/Kg	96
47)	cis-1,3-Dichloropropene	13.05	75	2069993	195.87	ug/Kg	97
48)	4-Methyl-2-pentanone	13.67	43	7112185	989.92	ug/Kg	99
51)	Toluene	13.32	91	4535215	178.32	ug/Kg	99
52)	trans-1,3-Dichloropropene	13.75	75	1637625	218.78	ug/Kg	96
53)	1,1,2-Trichloroethane	13.94	83	917698	211.98	ug/Kg	96
54)	1,3-Dichloropropane	14.24	76	1867533	209.64	ug/Kg	99
55)	2-hexanone	14.57	43	4920149	1126.05	ug/Kg	96
56)	Tetrachloroethene	13.78	166	941611	172.33	ug/Kg	97
57)	Dibromochloromethane	14.16	129	1147987	216.96	ug/Kg	99
58)	1,2-Dibromoethane	14.45	107	1021491	222.21	ug/Kg	97
59)	1-Chlorohexane	14.89	91	1445622	187.15	ug/Kg	95
60)	Chlorobenzene	14.99	112	2495652	178.40	ug/Kg	100
61)	1,1,1,2-Tetrachloroethane	15.04	131	984253	190.54	ug/Kg	99
62)	Ethylbenzene	14.97	91	4436877	175.45	ug/Kg	98
63)	m,p-Xylene	15.12	91	6732079	344.19	ug/Kg	98
64)	o-Xylene	15.58	91	4014248	186.90	ug/Kg	99
65)	Styrene	15.63	104	2989436	196.22	ug/Kg	94
66)	Bromoform	15.72	173	718416	223.71	ug/Kg	98
68)	Isopropylbenzene	15.90	105	3885437	155.93	ug/Kg	98
69)	Cyclohexanone	16.66	55	227029	1058.20	ug/Kg	89
71)	1,1,2,2-Tetrachloroethane	16.40	83	1153491	178.09	ug/Kg	97
72)	trans-1,4-Dichloro-2-Buten	16.58	53	404357	225.53	ug/Kg#	76
73)	1,2,3-Trichloropropane	16.58	110	291731	179.10	ug/Kg	94
74)	Bromobenzene	16.38	156	1017137	163.62	ug/Kg	98
75)	n-Propylbenzene	16.33	91	5157143	157.74	ug/Kg	100
76)	2-Chlorotoluene	16.55	91	3627339	158.02	ug/Kg	97
77)	1,3,5-Trimethylbenzene	16.51	105	3538322	155.95	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	3272656	166.29	ug/Kg	98
79)	tert-Butylbenzene	16.87	91	2200098	151.91	ug/Kg	100
80)	1,2,4-Trimethylbenzene	16.93	105	3514010	162.47	ug/Kg	96
81)	sec-Butylbenzene	17.06	105	4327553	154.34	ug/Kg	99
82)	4-Isopropyltoluene	17.19	119	3209848	159.68	ug/Kg	96
83)	1,3-Dichlorobenzene	17.35	146	1822765	170.36	ug/Kg	96
84)	1,4-Dichlorobenzene	17.44	146	1760826	172.63	ug/Kg	97
85)	Benzyl chloride	17.68	126	383757	208.14	ug/Kg#	91
86)	n-Butylbenzene	17.64	92	1934082	167.96	ug/Kg	99
87)	1,2-Dichlorobenzene	17.90	146	1711041	174.33	ug/Kg	99
88)	1,2-Dibromo-3-Chloropropan	18.74	75	215093	241.20	ug/Kg	90
89)	1,2,4-Trichlorobenzene	19.47	180	849959	204.86	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	557299	161.19	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
K046504.D 8260-K.M Tue Sep 07 09:39:16 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046504.D Vial: 6
Acq On : 3 Sep 2010 7:03 pm Operator: StevenH
Sample : ic2006-6 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:21:53 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:21:32 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

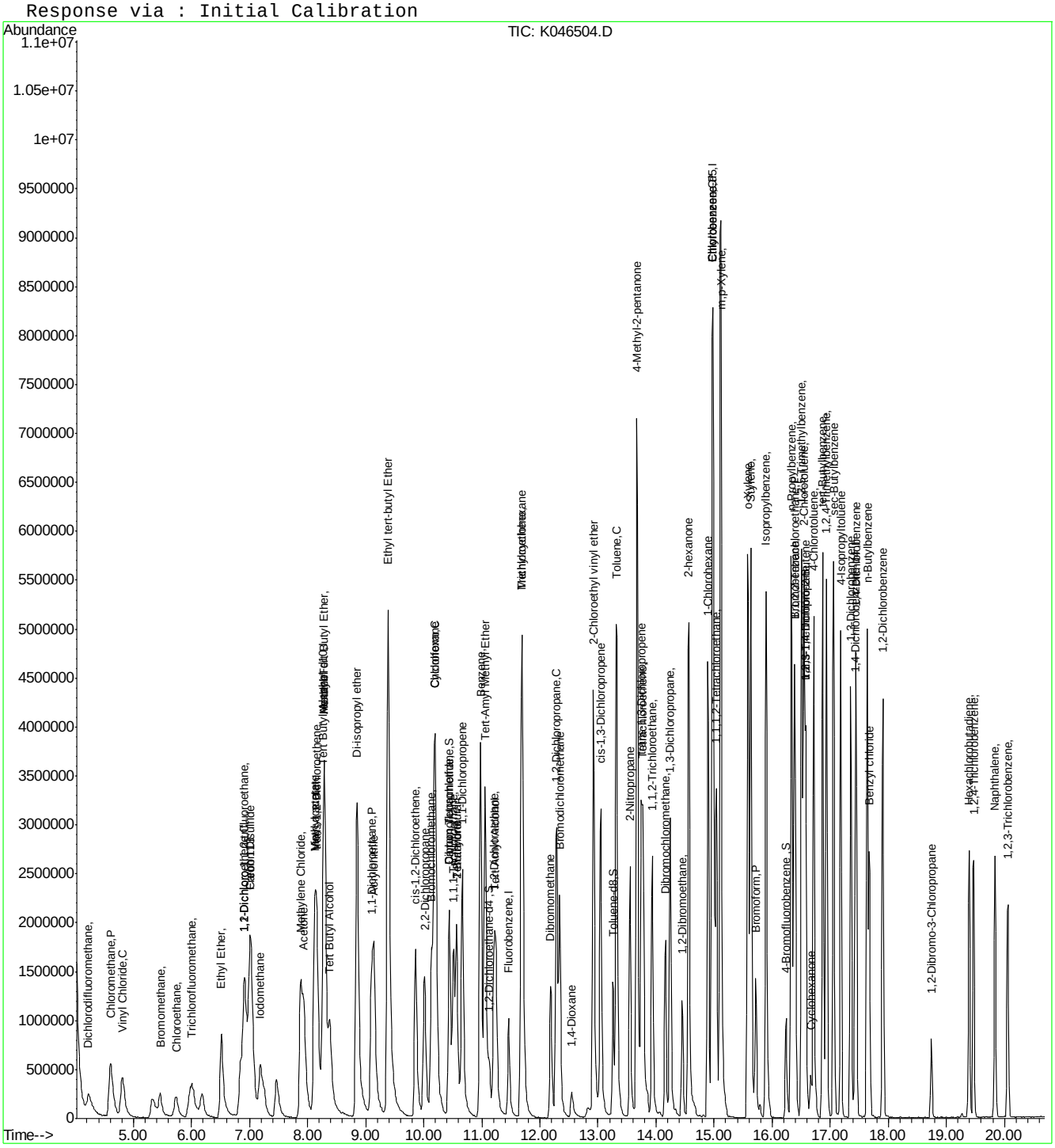
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	1986056	221.38	ug/Kg	99
92)	1,2,3-Trichlorobenzene	20.06	180	733027	215.00	ug/Kg	93
94)	Acrolein	8.28	56	1101610	968.00	ug/Kg	96
95)	Tert Butyl Alcohol	8.38	59	1396394	2071.90	ug/Kg	89
96)	Tert Amyl Alcohol	11.25	59	1190237	2307.21	ug/Kg	94
97)	1,4-Dioxane	12.55	88	274886	4005.57	ug/Kg	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046504.D 8260-K.M Tue Sep 07 09:39:16 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046504.D Vial: 6
Acq On : 3 Sep 2010 7:03 pm Operator: StevenH
Sample : ic2006-6 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:22 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/07/10 16:06

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:36:06 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:35:56 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1072154	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	653489	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	284941	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.29	65	95370	250.00	ug/Kg	0.02
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	264497	50.27	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.54%			
36) 1,2-Dichloroethane-d4	11.13	65	348623	54.96	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 109.92%			
50) Toluene-d8	13.26	98	1089250	48.63	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.26%			
70) 4-Bromofluorobenzene	16.24	174	262997	49.72	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.44%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	150015	49.15	ug/Kg	76
3) Chloromethane	4.61	50	389709	51.13	ug/Kg	98
4) Vinyl Chloride	4.80	62	289451	48.23	ug/Kg	91
5) Bromomethane	5.47	94	114967	47.10	ug/Kg	88
6) Chloroethane	5.74	64	138404	52.95	ug/Kg	96
7) Trichlorofluoromethane	6.03	101	291230	54.28	ug/Kg	100
8) 1,2-Dichloro-1,1,2-trifluo	6.86	67	423844m	62.49	ug/Kg	
9) Ethyl Ether	6.52	59	241012	47.84	ug/Kg	97
10) Freon 113	7.01	101	267985	56.37	ug/Kg	92
11) 1,1-Dichloroethene	6.92	61	474856	52.74	ug/Kg	98
12) Acetone	7.94	43	673654	346.06	ug/Kg	98
13) Iodomethane	7.20	142	434466	54.32	ug/Kg	99
14) Carbon Disulfide	7.03	76	844932	50.57	ug/Kg	99
15) Methyl acetate	8.12	43	1066713	214.15	ug/Kg	98
16) Methylene Chloride	7.89	49	629943	57.12	ug/Kg	99
17) Acrylonitrile	9.15	53	438008	217.63	ug/Kg	93
18) Methyl Tert Butyl Ether	8.30	73	859602	50.11	ug/Kg	95
19) trans-1,2-Dichloroethene	8.16	61	502186	49.89	ug/Kg	97
20) Hexane	8.29	57	764244	57.67	ug/Kg	94
21) Vinyl acetate	8.12	43	1066713	214.13	ug/Kg	95
22) 1,1-Dichloroethane	9.10	63	652541	54.69	ug/Kg	99
23) Di-isopropyl ether	8.85	45	1473375	49.92	ug/Kg	96
24) Ethyl tert-butyl Ether	9.38	59	1123913	51.57	ug/Kg	97
25) 2-Butanone	10.57	43	961614	317.82	ug/Kg	97
26) cis-1,2-Dichloroethene	9.86	96	326199	54.02	ug/Kg	97
27) 2,2-Dichloropropane	10.02	77	387811	55.86	ug/Kg	97
28) Bromochloromethane	10.13	128	151440	50.76	ug/Kg	95
29) Chloroform	10.20	83	595324	51.89	ug/Kg	91
30) Tetrahydrofuran	10.57	42	52771	47.52	ug/Kg	93
32) 1,1,1-Trichloroethane	10.52	97	454756	50.98	ug/Kg	94
33) Cyclohexane	10.19	56	675457	57.36	ug/Kg	98
34) 1,1-Dichloropropene	10.67	75	444694	50.52	ug/Kg	94
35) Carbon Tetrachloride	10.45	117	433614	60.15	ug/Kg	94
37) 1,2-Dichloroethane	11.22	62	466301	52.92	ug/Kg	94

(#) = qualifier out of range (m) = manual integration
K046505.D 8260-K.M Tue Sep 07 09:39:23 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:36:06 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:35:56 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.98	78	1324278	56.39	ug/Kg	98
39)	Tert-Amyl Methyl Ether	11.06	73	840492	51.35	ug/Kg	98
40)	Trichloroethene	11.68	95	313273	56.80	ug/Kg	86
41)	Methylcyclohexane	11.70	83	555325	61.28	ug/Kg	95
42)	1,2-Dichloropropane	12.29	63	407480	51.37	ug/Kg	96
43)	Dibromomethane	12.18	93	185766	53.73	ug/Kg	94
44)	Bromodichloromethane	12.34	83	437223	54.20	ug/Kg	94
45)	2-Nitropropane	13.55	41	418489	223.34	ug/Kg	99
46)	2-Chloroethyl vinyl ether	12.92	63	515847	232.41	ug/Kg	98
47)	cis-1,3-Dichloropropene	13.05	75	552515	55.20	ug/Kg	98
48)	4-Methyl-2-pentanone	13.67	43	1911430	282.85	ug/Kg	98
51)	Toluene	13.33	91	1323735	48.77	ug/Kg	99
52)	trans-1,3-Dichloropropene	13.75	75	432861	54.69	ug/Kg	94
53)	1,1,2-Trichloroethane	13.94	83	236617	49.53	ug/Kg	97
54)	1,3-Dichloropropane	14.24	76	477404	49.33	ug/Kg	96
55)	2-hexanone	14.57	43	1382190	267.02	ug/Kg	96
56)	Tetrachloroethene	13.78	166	289405	55.03	ug/Kg	93
57)	Dibromochloromethane	14.16	129	300052	53.83	ug/Kg	95
58)	1,2-Dibromoethane	14.45	107	251572	50.71	ug/Kg	98
59)	1-Chlorohexane	14.89	91	395822	48.25	ug/Kg	95
60)	Chlorobenzene	14.99	112	771402	51.12	ug/Kg	98
61)	1,1,1,2-Tetrachloroethane	15.04	131	285098	52.85	ug/Kg	96
62)	Ethylbenzene	14.97	91	1342986	49.95	ug/Kg	99
63)	m,p-Xylene	15.11	91	2070478	98.45	ug/Kg	97
64)	o-Xylene	15.58	91	1143153	50.16	ug/Kg	98
65)	Styrene	15.63	104	841542	52.00	ug/Kg	96
66)	Bromoform	15.72	173	173526	45.19	ug/Kg	95
68)	Isopropylbenzene	15.90	105	1274669	67.85	ug/Kg	98
69)	Cyclohexanone	16.68	55	51317	245.50	ug/Kg	96
71)	1,1,2,2-Tetrachloroethane	16.40	83	314056	54.03	ug/Kg	99
72)	trans-1,4-Dichloro-2-Buten	16.58	53	85993	50.84	ug/Kg	93
73)	1,2,3-Trichloropropane	16.58	110	71993	48.90	ug/Kg	88
74)	Bromobenzene	16.38	156	293134	52.55	ug/Kg	100
75)	n-Propylbenzene	16.33	91	1477932	59.41	ug/Kg	99
76)	2-Chlorotoluene	16.55	91	1076519	61.00	ug/Kg	100
77)	1,3,5-Trimethylbenzene	16.51	105	1040838	60.38	ug/Kg	96
78)	4-Chlorotoluene	16.71	91	895537	57.49	ug/Kg	97
79)	tert-Butylbenzene	16.87	91	645328	60.46	ug/Kg	98
80)	1,2,4-Trimethylbenzene	16.93	105	999986	58.94	ug/Kg	99
81)	sec-Butylbenzene	17.06	105	1268455	60.32	ug/Kg	99
82)	4-Isopropyltoluene	17.18	119	925754	59.47	ug/Kg	98
83)	1,3-Dichlorobenzene	17.35	146	496108	51.85	ug/Kg	97
84)	1,4-Dichlorobenzene	17.44	146	493199	52.86	ug/Kg	92
85)	Benzyl chloride	17.68	126	76145	48.34	ug/Kg	93
86)	n-Butylbenzene	17.63	92	511312	49.89	ug/Kg	96
87)	1,2-Dichlorobenzene	17.91	146	470397	52.21	ug/Kg	99
88)	1,2-Dibromo-3-Chloropropan	18.74	75	41644	44.92	ug/Kg	88
89)	1,2,4-Trichlorobenzene	19.47	180	197824	52.60	ug/Kg	95
90)	Hexachlorobutadiene	19.39	225	170890	63.36	ug/Kg	94

(#) = qualifier out of range (m) = manual integration
K046505.D 8260-K.M Tue Sep 07 09:39:23 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 07 09:36:06 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:35:56 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

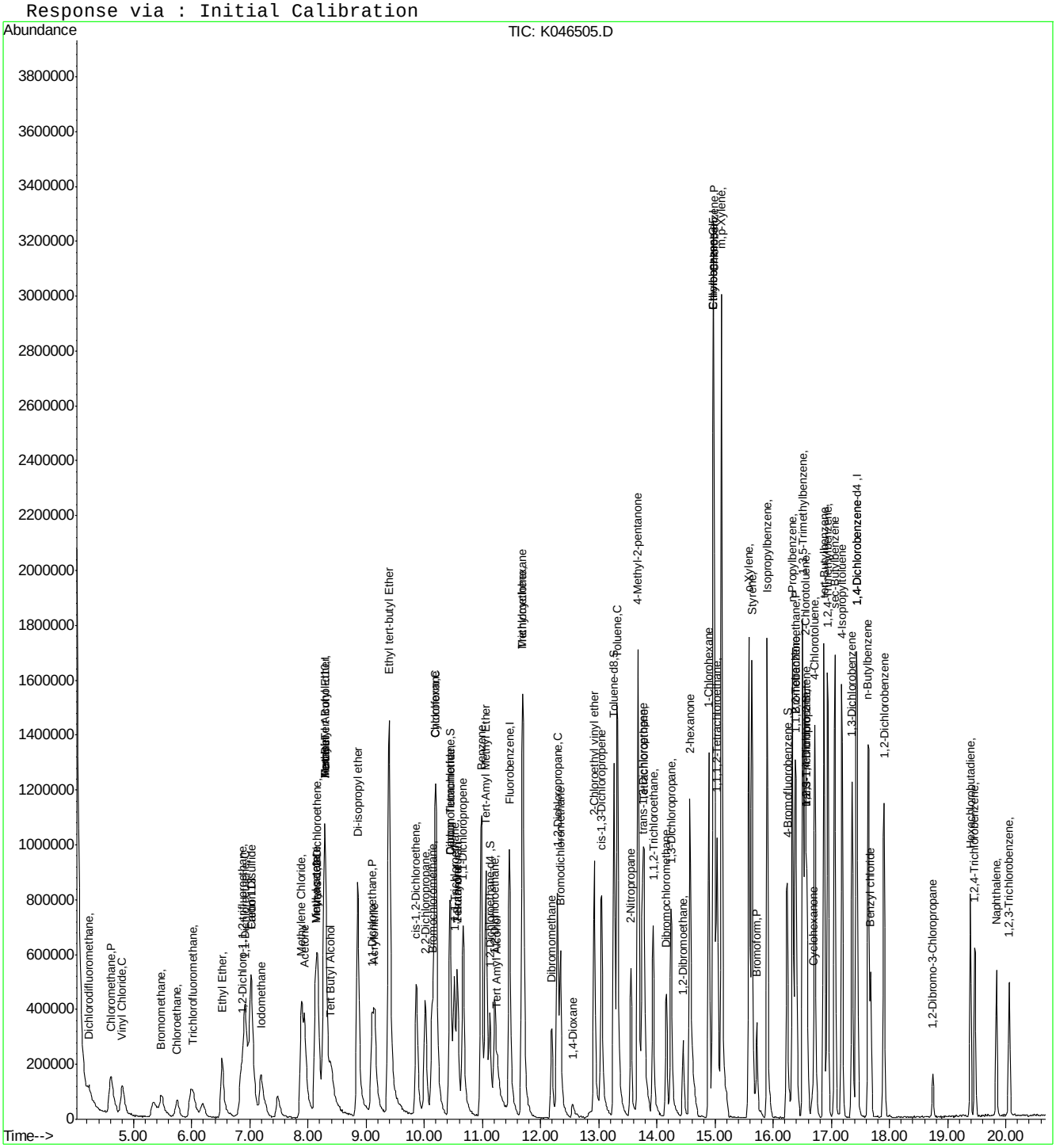
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	417520	47.55	ug/Kg	98
92)	1,2,3-Trichlorobenzene	20.06	180	167052	53.86	ug/Kg	94
94)	Acrolein	8.28	56	344663	287.72	ug/Kg	96
95)	Tert Butyl Alcohol	8.40	59	288015	575.49	ug/Kg	97
96)	Tert Amyl Alcohol	11.26	59	224590	557.58	ug/Kg	95
97)	1,4-Dioxane	12.55	88	50755	859.46	ug/Kg	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046505.D 8260-K.M Tue Sep 07 09:39:23 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:37 2010 Quant Results File: 8260-K.RES

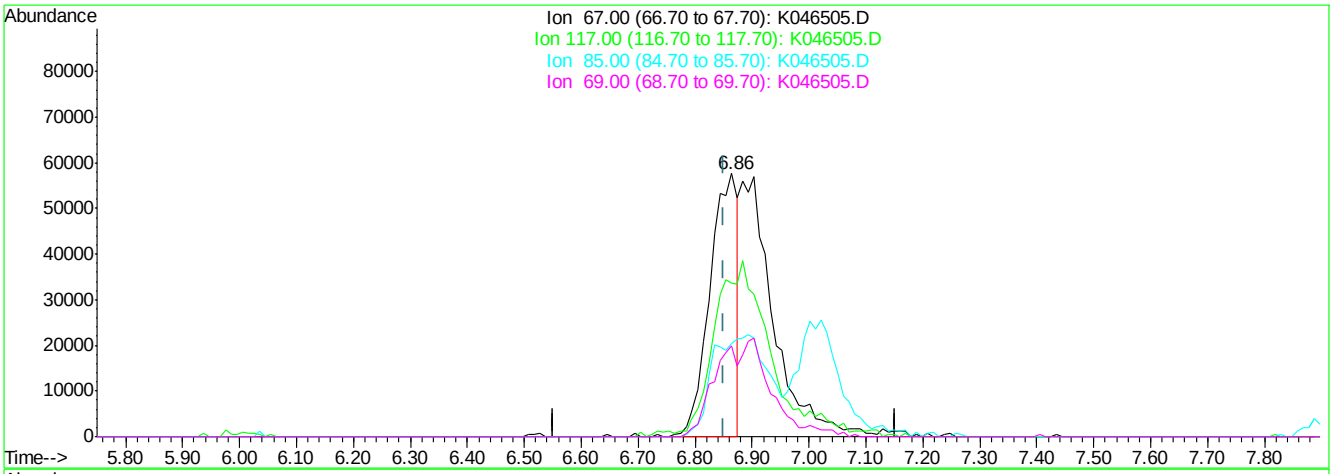
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration

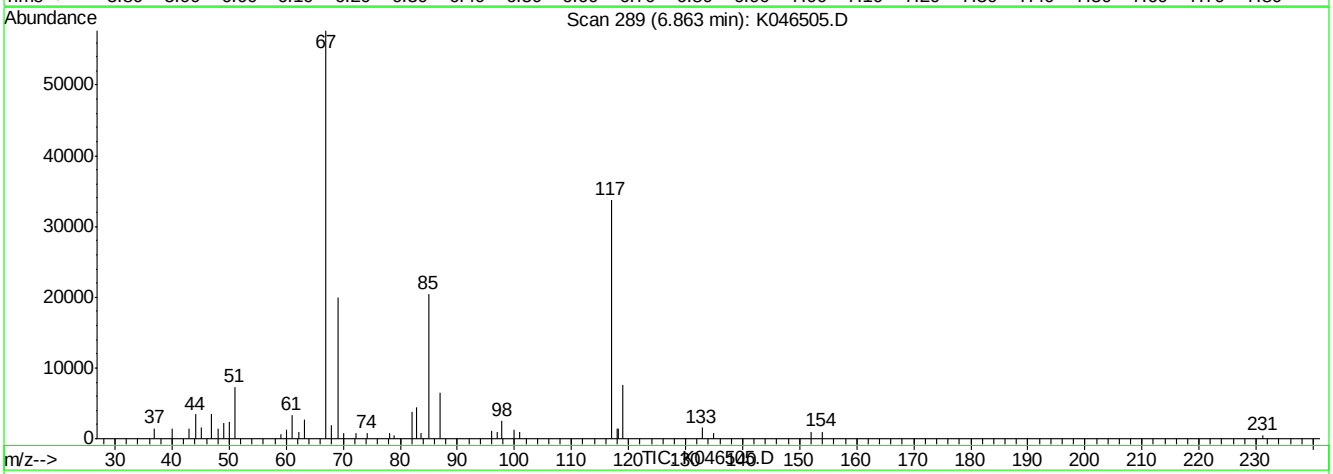


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:36 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:35:56 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.86min (+0.011) 28.76ug/Kg

response 195024

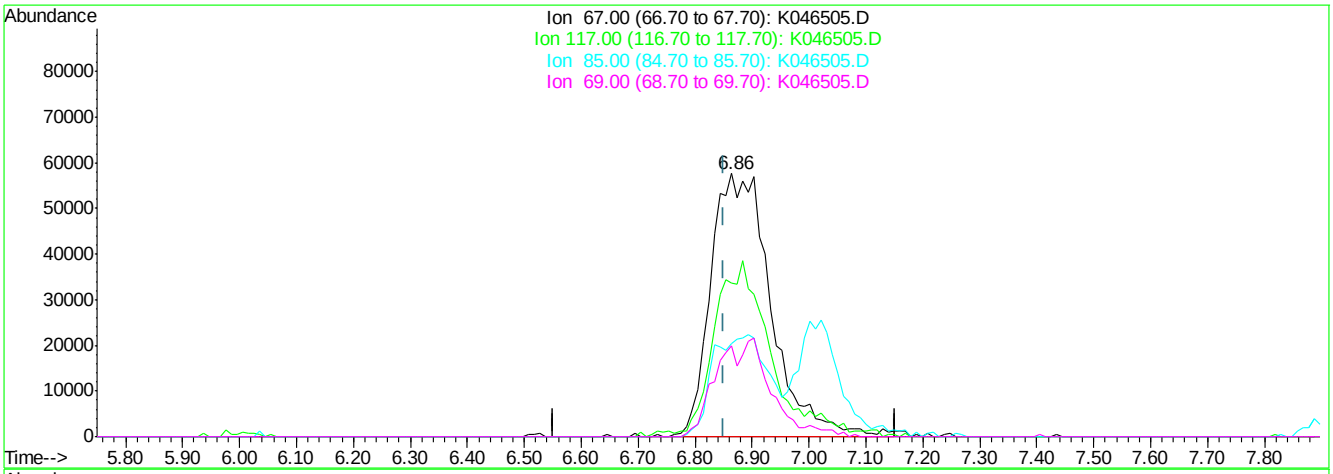
Ion	Exp%	Act%
67.00	100	100
117.00	57.80	56.48
85.00	37.00	35.50
69.00	33.80	34.60

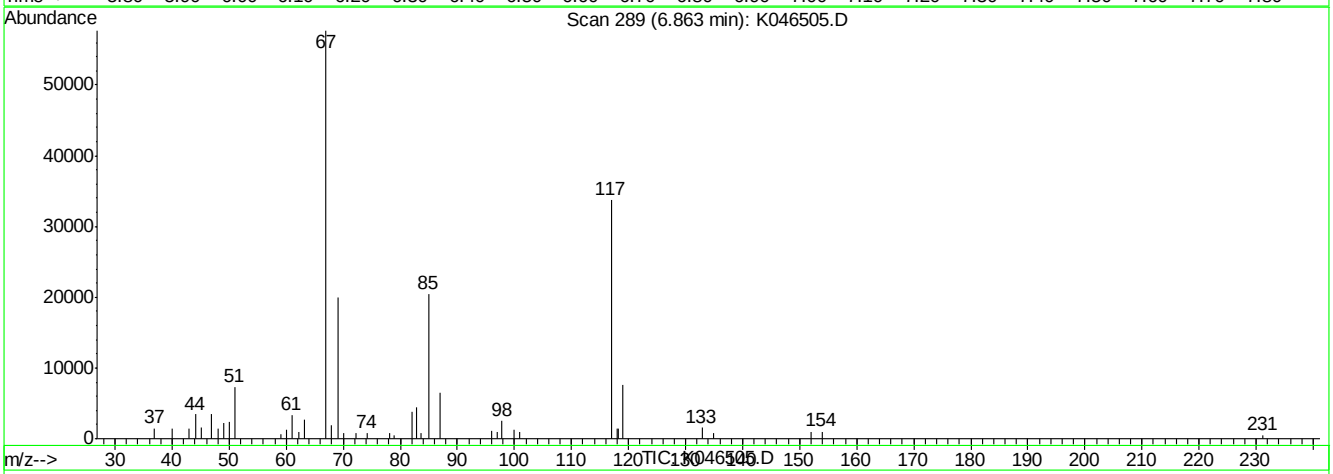
K046505.D 8260-K.M Tue Sep 07 09:36:40 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\090310\K046505.D Vial: 7
Acq On : 3 Sep 2010 7:28 pm Operator: StevenH
Sample : icv2006-3 Inst : MSVOA2
Misc : ms15298,vk2006,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 7 12:37 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:35:56 2010
Response via : Multiple Level Calibration





(8) 1,2-Dichloro-1,1,2-trifluoroethane ( )

6.86min (+0.011) 62.49ug/Kg m

response 423844

Ion	Exp%	Act%
67.00	100	100
117.00	57.80	58.51
85.00	37.00	35.50
69.00	33.80	34.60

K046505.D 8260-K.M Tue Sep 07 09:36:44 2010

Quantitation Report (Not Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046590.D Vial: 2
Acq On : 10 Sep 2010 12:39 pm Operator: StevenH
Sample : cc2006-4 Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:08:06 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1071098	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	673002	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	316385	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.29	65	119730	250.00	ug/Kg	0.02
System Monitoring Compounds						
31) Dibromofluoromethane	10.45	113	262231	49.89	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 99.78%			
36) 1,2-Dichloroethane-d4	11.13	65	376020	59.34	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 118.68%			
50) Toluene-d8	13.27	98	1114963	48.34	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 96.68%			
70) 4-Bromofluorobenzene	16.24	174	285053	48.54	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 97.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.24	85	413102	135.48	ug/Kg	91
3) Chloromethane	4.60	50	728894	95.73	ug/Kg	95
4) Vinyl Chloride	4.79	62	538756	89.86	ug/Kg	100
5) Bromomethane	5.47	94	162129	71.46	ug/Kg	97
6) Chloroethane	5.74	64	197752	75.73	ug/Kg	94
7) Trichlorofluoromethane	5.99	101	394301	73.57	ug/Kg	96
8) 1,2-Dichloro-1,1,2-trifluo	6.85	67	766686	113.15	ug/Kg	96
9) Ethyl Ether	6.52	59	499514	99.25	ug/Kg	97
10) Freon 113	7.01	101	540029	113.71	ug/Kg	96
11) 1,1-Dichloroethene	6.91	61	991011	110.18	ug/Kg	97
12) Acetone	7.95	43	885975	455.59	ug/Kg	99
13) Iodomethane	7.20	142	842547	105.45	ug/Kg	95
14) Carbon Disulfide	7.02	76	1860041	111.44	ug/Kg	96
15) Methyl acetate	8.12	43	2230916	448.31	ug/Kg	97
16) Methylene Chloride	7.88	49	1354340	122.93	ug/Kg	95
17) Acrylonitrile	9.15	53	1029957	512.26	ug/Kg	93
18) Methyl Tert Butyl Ether	8.30	73	1690166	98.63	ug/Kg	92
19) trans-1,2-Dichloroethene	8.16	61	1009123	100.36	ug/Kg	98
20) Hexane	8.28	57	1517652	114.64	ug/Kg	93
21) Vinyl acetate	8.12	43	2230916	448.28	ug/Kg	99
22) 1,1-Dichloroethane	9.10	63	1298182	108.92	ug/Kg	99
23) Di-isopropyl ether	8.85	45	2831299	96.02	ug/Kg	97
24) Ethyl tert-butyl Ether	9.38	59	2211679	101.59	ug/Kg	95
25) 2-Butanone	10.57	43	1625986	537.93	ug/Kg	100
26) cis-1,2-Dichloroethene	9.87	96	605497	100.38	ug/Kg	91
27) 2,2-Dichloropropane	10.01	77	842340	121.45	ug/Kg	99
28) Bromochloromethane	10.13	128	298349	100.10	ug/Kg	94
29) Chloroform	10.20	83	1097860	95.79	ug/Kg	93
30) Tetrahydrofuran	10.57	42	103444	93.25	ug/Kg#	79
32) 1,1,1-Trichloroethane	10.52	97	883167	99.10	ug/Kg	99
33) Cyclohexane	10.18	56	1363057	115.87	ug/Kg	99
34) 1,1-Dichloropropene	10.66	75	933280	106.13	ug/Kg	94
35) Carbon Tetrachloride	10.45	117	740597	102.83	ug/Kg	98
37) 1,2-Dichloroethane	11.22	62	876105	99.53	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
K046590.D 8260-K.M Mon Sep 13 10:48:37 2010 Page 1

Quantitation Report (Not Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046590.D Vial: 2
Acq On : 10 Sep 2010 12:39 pm Operator: StevenH
Sample : cc2006-4 Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:08:06 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	Benzene	10.98	78	2564037	109.29 ug/Kg	97
39)	Tert-Amyl Methyl Ether	11.06	73	1662225	101.65 ug/Kg	98
40)	Trichloroethene	11.68	95	617107	112.01 ug/Kg	96
41)	Methylcyclohexane	11.70	83	1077859	119.07 ug/Kg	98
42)	1,2-Dichloropropane	12.29	63	775112	97.80 ug/Kg	94
43)	Dibromomethane	12.18	93	354904	102.75 ug/Kg	92
44)	Bromodichloromethane	12.34	83	821280	101.91 ug/Kg	98
45)	2-Nitropropane	13.55	41	913825	488.16 ug/Kg	98
46)	2-Chloroethyl vinyl ether	12.92	63	448158	202.11 ug/Kg	97
47)	cis-1,3-Dichloropropene	13.05	75	1041252	104.12 ug/Kg	99
48)	4-Methyl-2-pentanone	13.68	43	3516191	520.84 ug/Kg	98
51)	Toluene	13.32	91	2560916	91.62 ug/Kg	97
52)	trans-1,3-Dichloropropene	13.75	75	799325	98.06 ug/Kg	96
53)	1,1,2-Trichloroethane	13.94	83	459295	93.35 ug/Kg	97
54)	1,3-Dichloropropane	14.25	76	943342	94.66 ug/Kg	98
55)	2-hexanone	14.57	43	2344501	439.79 ug/Kg	96
56)	Tetrachloroethene	13.78	166	572312	105.68 ug/Kg	99
57)	Dibromochloromethane	14.16	129	556268	96.89 ug/Kg	97
58)	1,2-Dibromoethane	14.46	107	500684	97.99 ug/Kg	98
59)	1-Chlorohexane	14.90	91	887462	105.05 ug/Kg	92
60)	Chlorobenzene	14.99	112	1448598	93.21 ug/Kg	97
61)	1,1,1,2-Tetrachloroethane	15.04	131	522621	94.08 ug/Kg	93
62)	Ethylbenzene	14.97	91	2644891	95.52 ug/Kg	98
63)	m,p-Xylene	15.12	91	4143081	191.29 ug/Kg	98
64)	o-Xylene	15.59	91	2286471	97.42 ug/Kg	98
65)	Styrene	15.63	104	1673184	100.39 ug/Kg	99
66)	Bromoform	15.73	173	342445	86.60 ug/Kg	95
68)	Isopropylbenzene	15.90	105	2260982	108.39 ug/Kg	100
69)	Cyclohexanone	16.67	55	109380	471.27 ug/Kg	96
71)	1,1,2,2-Tetrachloroethane	16.40	83	611781	94.80 ug/Kg	95
72)	trans-1,4-Dichloro-2-Buten	16.58	53	183296	97.60 ug/Kg#	87
73)	1,2,3-Trichloropropane	16.58	110	148882	91.07 ug/Kg	86
74)	Bromobenzene	16.39	156	566694	91.50 ug/Kg	100
75)	n-Propylbenzene	16.33	91	3087805	111.79 ug/Kg	97
76)	2-Chlorotoluene	16.55	91	2119497	108.17 ug/Kg	99
77)	1,3,5-Trimethylbenzene	16.51	105	2108973	110.18 ug/Kg	99
78)	4-Chlorotoluene	16.71	91	1829547	105.78 ug/Kg	96
79)	tert-Butylbenzene	16.87	91	1277915	107.82 ug/Kg	95
80)	1,2,4-Trimethylbenzene	16.94	105	2041320	108.36 ug/Kg	100
81)	sec-Butylbenzene	17.06	105	2625342	112.45 ug/Kg	97
82)	4-Isopropyltoluene	17.19	119	1933040	111.85 ug/Kg	99
83)	1,3-Dichlorobenzene	17.35	146	999669	94.10 ug/Kg	98
84)	1,4-Dichlorobenzene	17.44	146	995865	96.13 ug/Kg	98
85)	Benzyl chloride	17.68	126	180609	103.26 ug/Kg#	84
86)	n-Butylbenzene	17.64	92	1162773	102.18 ug/Kg	97
87)	1,2-Dichlorobenzene	17.91	146	948008	94.76 ug/Kg	94
88)	1,2-Dibromo-3-Chloropropan	18.74	75	103570	100.62 ug/Kg	87
89)	1,2,4-Trichlorobenzene	19.47	180	504114	120.72 ug/Kg	98
90)	Hexachlorobutadiene	19.39	225	357193	119.28 ug/Kg	92

(#) = qualifier out of range (m) = manual integration
K046590.D 8260-K.M Mon Sep 13 10:48:37 2010 Page 2

Quantitation Report (Not Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046590.D Vial: 2
Acq On : 10 Sep 2010 12:39 pm Operator: StevenH
Sample : cc2006-4 Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:08:06 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

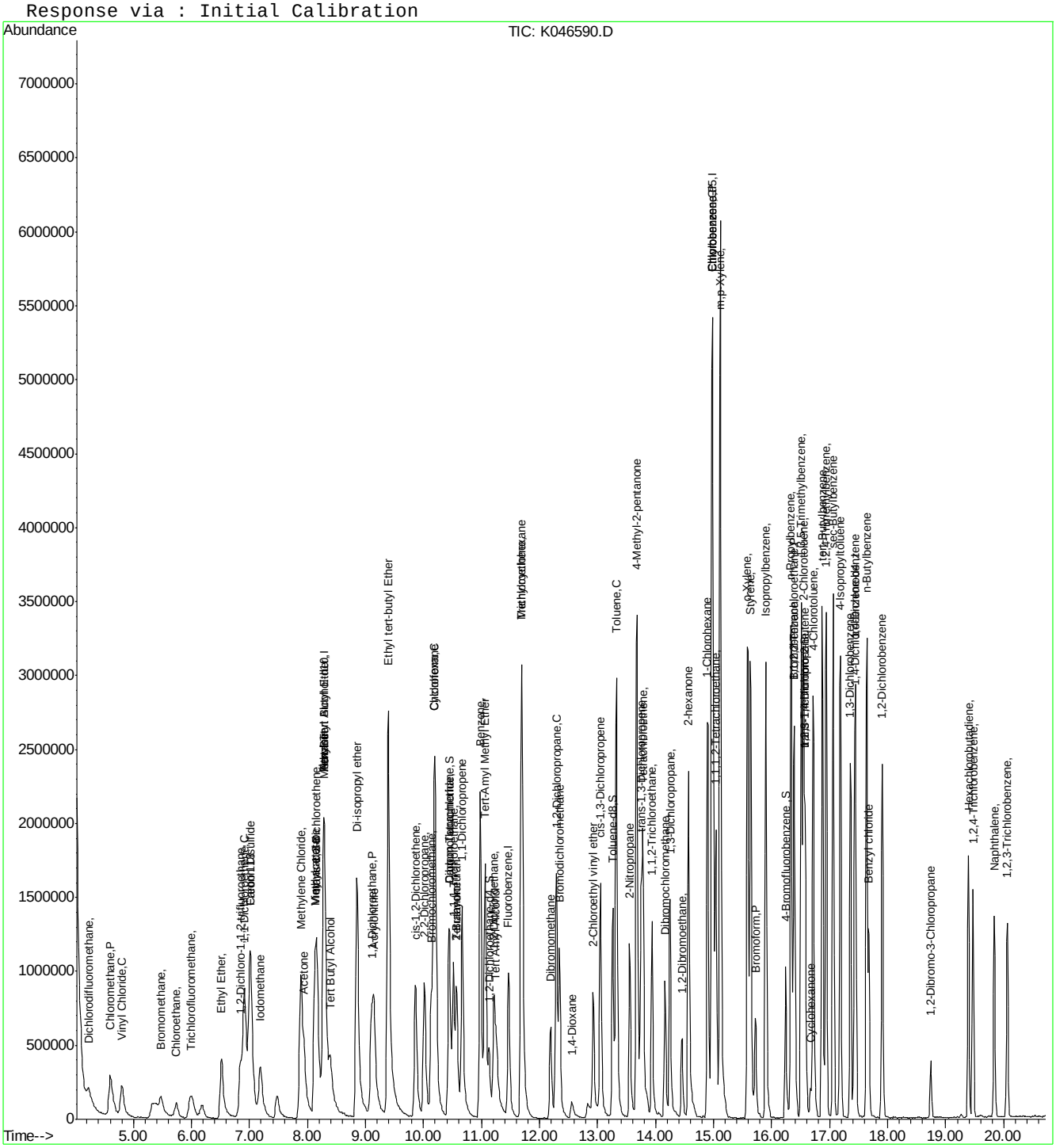
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	1037170	106.38	ug/Kg	100
92)	1,2,3-Trichlorobenzene	20.06	180	433594	125.90	ug/Kg	94
94)	Acrolein	8.28	56	686534	516.89	ug/Kg	98
95)	Tert Butyl Alcohol	8.39	59	649282	1033.40	ug/Kg	94
96)	Tert Amyl Alcohol	11.26	59	560479	1108.37	ug/Kg	94
97)	1,4-Dioxane	12.56	88	142205	2054.88	ug/Kg	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : K:\HPCHEM\1\DATA\091010\K046590.D Vial: 2
Acq On : 10 Sep 2010 12:39 pm Operator: StevenH
Sample : cc2006-4 Inst : MSVOA2
Misc : ms15298,vk2009,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:08 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Tue Sep 07 09:37:23 2010
Response via : Initial Calibration



ACCUTEST LABORATORIES SE

DATE:	9/14/10
COLUMN TYPE:	RTXVMS
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA1-G
PURGE PRESSURE:	20
ANALYST:	WM

MS VOA1-G ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8084.6.m
CALIB. DATE:	9/14/10
EM VOLTAGE:	1671
BFB RESPONSE:	818492
RUN ID:	VG 2523

STANDARDS

BFB:	V110931
ICAL/CCV:	V11122 V110338 V111336 V11102 V111496
ISTD/SURR:	V11092
ICV/QC:	V11133 V11105 V11135 V110346 V111419
	44 mg/mL
METHANOL LOT #:	B45536

9/14
9/23 9/30
10/10 10/11
9/30 9/20
10/17 9/16

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
G 0066788	BFB	—	—	—	—	—	—	—	—	BFB 2uL
G 89	CC25178-4	N	S	5.00	1M	1	8260	—	—	10mL 1.0mL 5mL CCV out
G 90	4	N	L	L	L	1	L	—	—	L
G 91	BFB	—	—	—	—	—	—	—	—	BFB 2uL
G 92	RC2523-1	N	S	5.00	N	1	8260	N	N	12.5mL → 5mL 45mL → 20mL
G 93	2					2				500mL →
G 94	3					3				12.5 mL →
G 95	RC25178-4					4				2.50mL →
G 96	RC25227-5					5				3.25 mL →
G 97	6					6				5.00 mL →
G 98	RCV25227-3					7				12.5uL/20mL 5mL Purge
G 99	BL					8				L
G 100	MB				100	9				CH2Cl2 ✓ MB ✓ A0096013
G 01	F76263-11,5m	14941		5.72	N	10		5030B	—	1mOH - P&T ✓
G 02	11MS	6		4.66	N	11			—	12.5uL Level 5mL ✓
G 03	11MSD	6		4.68	N	12		L	—	L
G 04	F76334-2,5m	15111		5.30	N	13		5030B w/ 5mL	—	1mOH - P&T ✓
G 05	4,5m	15117		4.57	N	14		5030B w/ 20mL	1*	1mOH - P&T DEP 2.5 T RR
G 06	5,5m	15120		5.00	N	15		5030B w/ 5mL	1*	1mOH - P&T DEP RR C.C.
G 07	6,5m	15124		4.61	N	16		5030B w/ 20mL	—	1mOH - P&T DEP ✓
G 08	F76263-10,5m	14973		5.03	N	17		5030B	—	1mOH - P&T DEP
G 09	F76303-9,5m	15078		5.43	N	18		pt	—	1pt - 25 DEP 1 STD
G 10	11,5m	15081		5.95	N	19		pt	—	1pt - ST DEP
G 11	14,5m	15087		6.81	N	20		pt	—	1pt DEP
G 12	21,5m	15102		5.63	N	21		pt	—	1pt DEP IS
G 13	F76265-17,5m	15138		4.95	N	22		5030B w/ 5mL	—	1pt - 25/25
G 14	F76238-1,5m	14924		1.73	50 1.0x	23		5030B w/ 20mL	—	1mOH - P&T DEP

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

Method 8260 includes analytes by SOP MS005

MSVOA1_G_log.xls 11/06

Analyst's Signature: WM

57 of 100

ACCUTEST LABORATORIES SE

DATE:	9/14/10
COLUMN TYPE:	
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA1-G
PURGE PRESSURE:	
ANALYST:	MLM

MS VOA1-G ANALYSIS LOG

METHODS:*	
METHOD FILE:	
CALIB. DATE:	
EM VOLTAGE:	
BFB RESPONSE:	
RUN ID:	VG 2523

cont. p.57

STANDARDS

BFB:	
ICAL/CCV:	
ISTD/SURR:	
ICV/QC:	
METHANOL LOT #:	

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
G 0066815	F76378-2,5F	1L4727	S	1.09	50/100x	24	8260	5035 [illegible]	–	1meoH-Dil. off
G 16	F76774-1,5F	1L5402		4.80	10	25		5030 [illegible]	–	1pt-? 1meoH - Dil. [illegible]
G 17	2,5F	1L5414		4.67	N	26		5030 [illegible]	–	1pt. I.D. 1meoH. Dil. [illegible]
G 18	F76307-2F	K5509		6.09	10	27		pt	50X	AR
G 19	B	–		5.00	N	22			–	
G 20	B	–	S			27			–	
G										
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MLM 9/15/10

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA1_G_log.xls 11/06

Analyst's Signature: MLM

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K48826	F76263-4	M	29.64	35.93	6.29	9-1-10	16:09	CL	PT	Frozen in
27	5	W	31.20	37.36	6.16					(9-1-10 9:00
28	5	W	30.99	36.98	5.99					at 9:53
29	5	M	29.62	35.41	5.79					
30	6	W	31.09	37.65	6.56					
31	6	W	31.15	37.38	6.23					
32	6	M	29.64	35.76	6.12					
33	7	W	31.08	37.04	5.96					
34	7	W	31.30	36.76	5.46					
35	7	M	29.39	35.10	5.71					
36	8	W	30.98	36.13	5.15					
37	8	W	31.12	36.06	4.94					
38	8	M	29.81	35.64	5.83					
39	9	W	31.07	38.07	7.00					
40	9	W	30.87	37.48	6.61					
41	9	M	29.73	35.27	5.54					
42	10	W			4.67				5030A	OOH 9-2-10
43	10	W			5.03					
44	10	M			5.29		16:23	CL		
45	11	W	31.01	35.83	4.82		16:42	CL	PT	frozen in
46	11	W	30.97	36.69	5.72					9-1-10 9:53
47	11	M	29.87	35.15	5.28					
48	12	W	31.29	36.93	5.64		16:47	CL		

Container Type: PT for pre-tared vials (field kits). EN for Encore or simular type. 5030A for samples collected in jars or bulk containers. SL for core sleeve

Comment: N/O for no odor. S/O for slight odor. OOH for Out of Hold. Encore Comment: C for sampler incorrectly capped. P for plunger not locked. F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
R5608	F76394-1	w AC1886			4.77	9-8-10	16:18	CL	5030A	Qnt bot
9	1	w			4.57					
10	1	m AC702			5.36					
11	2	w			5.30					
12	2	w			4.84					
13	2	m			4.76					
14	3	w			4.73					
15	3	w			5.24					
16	3	m			4.78					
17	4	w			4.53					
18	4	w			4.85					
19	4	m			5.42					
20	5	w			5.00					
21	5	w			5.78					
22	5	m			5.15					
23	6	w			5.09					
24	6	w			4.61					
25	6	m			5.21					
26	7	w			4.54					
27	7	w			4.85					
28	7	m			4.50					
29	8	w			4.90					
30	8	w			4.73		16:48	CL		

Comments: ... for slight odor; Qnt ... Encore C ... sampler incorrectly capped; F ... not locked; F for sampler not completely ...

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5470	F76303-5	M	30.08	36.46	6.38	9-7-10	11:10	CL	PT	frozen in
71	6	W	31.04	37.23	6.19					9-7-10 1700
72	6	W	30.91	36.92	6.01					
73	6	M	29.79	35.23	5.44					
74	8	W	30.98	37.13	6.15					
75	8	W	31.15	37.65	6.50					
76	8	M	29.62	35.79	6.17					
77	9	W	30.88	36.22	5.34					
78	9	W	31.06	36.49	5.43					
79	9	M	29.76	34.91	5.15					
80	11	W	31.13	37.03	5.90					
81	11	W	31.11	37.06	5.95					
82	11	M	29.49	34.46	4.97					
83	12	W	31.08	37.01	5.93					
84	12	W	31.21	36.94	5.73					
85	12	M	30.10	37.09	6.99					
86	14	W	30.96	37.41	6.45					
87	14	W	31.07	37.88	6.81					
88	14	M	29.89	34.90	5.01					
89	15	W	31.22	36.77	5.55					
90	15	W	30.97	36.42	5.45					
91	15	M	29.64	34.97	5.33					
92	16 CL 9-7	W	31.12	36.72	5.60		11:33	CL		

Container Type: PT for pre-15... [illegible] for Encore or similar ... [illegible]

... [illegible] for no bead; WO for slight bead; ... [illegible] bead in field

Ensure container is not sampled improperly capped (i.e. for plunger not locked). Ref sampled not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5493	F76303-4618	w	3121	36.76	5.55	9-7-10	11:35	CL	PT	frozen 17
94	" 9-7 4618	m	2990	3521	531					9-2-10 17:00
95	17	w	3116	3744	628					
96	17	w	3134	3774	640					
97	17	m	30.15	3553	538					
98	20	w	30.94	3718	624					
99	20	w	3106	3737	631					
K5500	20	m	2995	3659	664					
1	21	w	30.99	37.02	6.03					
2	21	w	3104	3667	563					
3	21	m	2975	3474	499		11:50	CL		
4	23	w	3110	3749	639		12:43	CL		
5	23	w	30.97	37.09	612					
6	23	m	2970	35.98	628					
7	25	w	3114	3770	656					
8	25	w	3116	3781	665					
9	25	m	2994	36.02	608					
10	26	w	3115	3722	607					
11	26	w	3108	36.81	573					
12	26	m	2956	3535	579					
13	27	w	3116	3726	610					
14	27	w	30.98	3711	613					
15	27	m	30.07	3555	548		1300	CL		

* PT for pre-weighed 40 mL vial, T for pre-weighed 120 mL vial, J for pre-weighed 250 mL jar

Comments: S for slight odor, D for dark color

Comments: I for sample incorrectly collected, P for sample not collected, F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
F5631	F76394-8	M AC1702			4.86	9-8-10	16.49	CL	5035A	CC/T SOIL
32	F76244-1	W AC1686			4.78	9/9/10	8:21	ZH	40NA	SOIL
33	1	W			5.21	"	"	"	"	"
34	" 1	M AC1702			4.79	"	"	"	"	"
35	F76254-1	W A			4.83	9/9/10	9:50	ZH	5035A	SOIL
36	" 1	W			5.22		"	"	"	"
37	" 1	M			4.97		"	"	"	"
38	F76265-14	W			4.95		10:27	CL	5035A	CC/T SOIL
39	14	W			4.66					
40	14	M			4.84					
41	F76394-9	W			4.95					
42	9	W			4.70					
43	9	M		tare 4.70	~~4.84~~					
44	10	W			4.89					
45	10	W			5.00					
46	10	M			4.77					
47	11	W			5.03					
48	11	W			4.80					
49	11	M			4.73					
50	12	W			5.07					
51	12	W			4.92					
52	12	M			5.10					
53	13	W			4.52		10:58	CL		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5815	F76476-11	M AC1664			5.50	9-9-10	16:35	CL	5030A	IH 60 1
16	13	W AC1686			4.64					
17	13	W			4.90					
18	13	M			4.58					
19	15	W			5.44					
20	15	W			5.41					
21	15	M			4.79		16:42	CL		
K58 22	F76278-1	W AC1686			1.09	9/10/10	11:25	AD	5030A	OOH
23	-1	W AC1686			1.02					
24	-1	M AC1664			1.33					
25	F76278-2	W AC1686			1.09					
26	-2	W AC1686			1.00					
27	-2	M AC1664			1.09		11:32		5030A	OOH
28	F76430-1	W	31.11	36.39	5.28	9/10/10	11:50	AD	PT	IH
29	-1	W	31.09	36.11	5.02					
30	-1	~~W~~ M	29.91	33.50	3.59					
31	-2	W	31.10	35.80	4.70					
32	-2	W	31.01	36.35	5.34					
33	-2	M	29.93	34.81	4.88					
34	-3	W	31.19	36.05	4.86					
35	-3	W	31.14	35.55	4.41	9/10/10	12:00	AD	PT	IH

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
KS4 47	F76338-28	W	—	—	5	9/4/10	14:17	JW	PT	NaHSO4 TB
48	-28	W	—	—	5	↓	↓	↓	↓	↓
49	-28	M	—	—	5	9/4/10	14:50	JW	PT	NaHSO4 TB
50	F76334-1	W AC1686	—	—	4.90	9-7-10	10:34	CL	5030A	OOH 6ot 1
51	1	W	—	—	4.86					
52	1	M AC1702	—	—	4.80					
53	2	W	—	—	4.68					
54	2	W	—	—	4.63					
55	2	M	—	—	4.70		10:45	CL	5030A	
56	F76290-1	W	31.14	35.59	4.45		10.55	CL	PT	frozen in
57	1	W	31.10	35.72	4.62					9-2-10 17:00
58	1	M	29.72	33.90	4.18					
59	F76303-1	W	—	—	5.00				TB	
60	1	W	—	—	5.00					
61	1	M	—	—	5.00					
62	2	W	31.12	36.76	5.64				PT	
63	2	W	31.03	36.33	5.30					
64	2	M	29.77	35.46	5.69					
65	3	W	30.90	36.82	5.92					
66	3	W	31.10	37.15	6.05					
67	3	M	30.17	35.70	5.53					
68	5	W	30.97	37.29	6.32					
69	5	W	31.03	37.52	6.49		~~11:17~~ 11.09	CL CC 9-7		

Comment: N/O for no odor; S/O for slight odor; OOH for out of hold

Ensure comment: C for sampler incorrectly capped; P for plunger not locked; F for sample not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
KS4 47	F76338-28	W	—	—	5	9/4/10	14:17	JW	PT	NaHSO4 TB
48	-28	W	—	—	5	↓	↓	↓	↓	↓ ↓
49	-28	M	—	—	5	9/4/10	14:50	JW	PT	NaHSO4 TB
50	F76334-1	W ACI686	—	—	4.80	9-7-10	10:34	CL	5030A	OOH bot 1
51	1	W	—	—	4.86					
52	1	M ACI702	—	—	4.80					
53	2	W	—	—	4.68					
54	2	W	—	—	4.63					
55	2	M	—	—	4.70		10:45	CL	5030A	
56	F76290-1	W	31.14	35.59	4.45		10.55	CL	PT	Frozen in
57	1	W	31.10	35.72	4.62					9-2-10 17:00
58	1	M	29.72	33.90	4.18					
59	F76303-1	W	—	—	5.00				TB	
60	1	W	—	—	5.00					
61	1	M	—	—	5.00					
62	2	W	31.12	36.76	5.64				PT	
63	2	W	31.03	36.33	5.30					
64	2	M	29.77	35.46	5.69					
65	3	W	30.90	36.82	5.92					
66	3	W	31.10	37.15	6.05					
67	3	M	30.17	35.70	5.53					
68	5	W	30.97	37.29	6.32					
69	5	W	31.03	37.52	6.49		~~11:13~~ 11.04	CL (CL 9-7)		

Comment: H=5 for no odor; O/O for slight odor; O/S for Out of Hold

Enscore Comment: C for sampler incorrectly capped; P for plunger not locked; P for sampler not completely filled

Instrument Run Log VG2525 page 1 of 12

ACCUTEST LABORATORIES SE

DATE:	9/16/10
COLUMN TYPE:	RTXVMS
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA1-G
PURGE PRESSURE:	20
ANALYST:	MM

MS VOA1-G ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	A009-6.M
CALIB. DATE:	9/14/10
EM VOLTAGE:	1621
BFB RESPONSE:	7706202
RUN ID:	VG 2525

STANDARDS

BFB:	V11093 (9/27)
ICAL/CCV:	V11148 V11134 V11136 V11102 V11140
ISTD/SURR:	V11092 (9/25)
ICV/QC:	V11149 V11135 V11105 V11034 V11146
METHANOL LOT #:	H45E36

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
G 0066852	B	-	-S	5.00	N	1	8260	N	N	10uL/10mL 5mL
G 53	BFB	-	-	-	-	-	-	-	-	BV62uL BFB
G 54	CC2522-4	N	S	5.00	N	1	8260	N	N	10uL/10mL 5mL Pentane
G 55	BS	↓		↓	↓	2		↓	↓	12.5uL/10mL 5mL
G 56	MB	↓		↓	100	3		↓	↓	CH_2Cl_2 NO A50646019
G 57	F76342-6,1/5	IK5227		5.68	100	4		pt	-	IPA
G 58	7,1/5	IK5231		5.98	100	5		pt	-	IPA
G 59	8,1/5	IK5234		5.87	100	6		pt	-	IPA
G 60	9,1/5	IK5242		6.17	100	7		pt	-	pentane pentane
G 61	13,1/5	IK5256		6.52	N	8		pt	1X	MA 1,2,3,5,7,4,5,5,7,2,3,8,5,2
G 62	~~5,1/5~~	~~IK5236~~		~~5.82~~	~~100~~	9		pt	-	F76400-1 IK5770 6.55 N
G 63	F76376-1	IK5304		5.00	N	10		pt	-	
G 64	6	IK5332		6.19	N	11		pt	1X	2,5,5,7,4,5,5,2,7,1,2 MA
G 65	6MS	16		4.50	N	12		5030A	-	12.5uL/10mL 5mL
G 66	6MSD	16		4.59	N	13		1	-	1
G 67	2	IK5308		4.77	N	14		pt	1X	3,7,5 MA
G 68	3	IK5312		6.29	N	15		pt	50X	
G 69	4	IK5316		6.11	N	16		pt	50X	
G 70	5	IK5320		5.83	N	17		pt	50X/1X	3,5,4,5,1,4,7,5,1 MA
G 71	7	IK5336		5.84	N	18		pt	50X	
G 72	F76703-2	IK5311		5.13	N	19		pt	-	
G 73	F76426-9	IK5810		5.16	N	20		5030A	-	
G 74	11	IK5813		4.61	N	21		5030A	-	
G 75	13	IK5818		4.58	20	22		5030A	5X	FFJL
G 76	15	IK5819		5.44	N	23		5030A	-	
G 77	F76416-2	IK5291		5.17	N	24		pt 5mL	-	4,7,5,1,1
G 78	9	IK5894		5.00	N	25		pt 5mL	-	
~~24 Vials 16~~						26				

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA1_G_log.xls 11/06

Analyst's Signature: MM

61 of

404 of 537
F76426
ACCUTEST
9
6.7.2

[redacted]

ACCUTEST LABORATORIES SE

DATE:	9/16/10
COLUMN TYPE:	
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA1-G
PURGE PRESSURE:	
ANALYST:	MM

MS VOA1-G ANALYSIS LOG

METHODS:*	
METHOD FILE:	
CALIB. DATE:	
EM VOLTAGE:	
BFB RESPONSE:	
RUN ID: VG	2525

cont. 1.1

STANDARDS

BFB:	
ICAL/CCV:	
ISTD/SURR:	
ICV/QC:	
METHANOL LOT #:	

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
G0066 79	BFB 400-1,0	1	5	5.00	20	26	8260	Screen	2	
G 80	B 2	—	1	1	—	27	1	✓	—	
G 81	3	N	5	5.00	20	28	8260			
G 82	4	↓	↓	↓	↓	29	↓			
G 83	5					30				
G 84	6					31				
G 85	7					32				
G 86	8					33				
G 87	9					34				
G 88	10					35				
G 89	11					36				
G 90	12					37				
G 91	13					38				
G 92	14					39				
G 93	15	↓				40		↓		
G 94	BFB	2			N	41		N		
G 95	16	↓	↓	↓	↓	42	↓			
G										
G										
G										
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G										

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA1-G Log 11/06

Analyst's Signature: MM

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K52 17	F76305-18	M	29.68	35.66	5.98	9/3/10	15.22	ZO	PT	IN
18	-19	W	31.18	36.61	5.43					
19	-19	W	31.16	37.47	6.31					
20	-19	M	29.66	34.84	5.18					
21	-20	W			S					TB IN
22	-20	W			S					TB IN
23	-20	M			S	9/3/10	15:30	ZO	PT	TB IN
24	F76342-6	W	31.24	37.20	5.96	9/3/10	15:43	ZO	PT	IN
25	-6	W	31.14	37.49	6.35					
26	-6	M	29.76	35.73	5.97					
27	-6	M	29.65	35.33	5.68					
28	-7	W	30.90	37.24	6.34					
29	-7	W	31.03	37.21	6.18					
30	-7	M	29.90	36.39	6.49					
31	-7	M	29.42	35.40	5.98					
32	-8	W	31.24	37.40	6.16					
33	-8	W	30.94	36.13	5.19					
34	-8	M	29.71	35.58	5.87					
35	-8	M	29.49	34.81	5.32					
36	-8	W	31.00	36.88	5.88					
37	-8	W	31.18	37.62	6.44					
38	-8	M	29.75	35.47	5.72					
39	-8	M	29.43	36.01	6.58	9/3/10	16:00	ZO	PT	IN

Container Type: PT for pre-labeled vials (EPA kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments	
KG240	F76312-9	W	31.27	37.52	6.25	9/3/10	16:01	[illegible]	PT	IN	
41	-9	W	31.17	37.61	6.44						
42	-9	M	29.63	35.80	6.17						
43	-9	M	29.59	32.46	2.87						
44	-10	W	31.13	37.25	6.12						
45	-10	W	31.10	37.02	5.92						
46	-10	M	29.65	35.98	6.33						
47	-10	M	29.55	35.34	5.79						
48	-11	W	31.09	37.44	6.35						
49	-11	W	31.04	37.41	6.37						
50	-11	M	29.49	35.49	6.00						
51	-11	M	29.35	35.48	6.13						
52	-12	W	31.02	36.48	5.46						
53	-12	W	30.89	36.58	5.69						
54	-12	M	29.67	35.28	5.61						
55	-12	M	30.15	35.98	5.83						
56	-13	W	30.88	37.40	6.52						
57	-13	W	30.92	37.74	6.82						
58	-13	M	29.84	36.00	6.16						
59	-13	M	30.10	37.42	7.32						
60	-14	W	—	—						IN	TB
61	-14	W	—	—		9/3/10	16:20	[illegible]	PT	IN	TB
62	F76337-1	W	31.06	37.72	6.66	9/4/10	11:00	[illegible]	PT	IN	

Container Type: PT for pre-tared vials (5-10 kits); SN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
R5769	F76395-2	S/B	31.61	37.51	5.90	9-9-10	15:06	CL	PT	17
70	2	M	29.96	34.85	4.89					
71	3	S/B	31.55	36.76	5.21					
72	3	S/B	31.34	36.99	5.65					
73	3	M	29.55	34.69	5.14					
74	4	S/B	31.68	36.80	5.12					
75	4	S/B	31.61	38.01	6.40					
76	4	M	29.60	34.74	5.14					
77	5	S/B	31.56	37.12	5.56					
78	5	S/B	31.59	37.12	5.53					
79	5	M	29.67	35.53	5.86					
80	6	S/B	31.59	37.11	5.52					
81	6	S/B	31.26	36.68	5.42					
82	6	M	29.40	34.86	5.46					
83	7	M	29.51	34.87	5.36					
84	8	S/B			5.00				TB	
85	8	S/B			5.00					
86	8	M			5.00					
87	F76394-30	W			5.00					
88	30	W			5.00					
89	30	M			5.00					
90	F76400-1	W	30.70	37.25	6.55				PT	frozen 17
91	1	W	30.89	37.62	6.73		15:32	CL	L	9-8-10 17:00

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments	
K5286	F76337-9	W	30.92	38.24	7.32	9/4/10	11:44	[illegible]	PT	IN	
87	-9	W	31.17	37.43	6.26						
88	-9	M	29.83	36.26	6.43						
89	-10	W	31.29	37.47	6.18						
90	-10	W	31.13	35.83	4.70						
91	-10	M	29.72	37.54	7.82						
92	-11	W	31.18	36.93	5.75						
93	-11	W	31.17	37.87	6.70						
94	-11	M	29.75	35.33	5.58						
95	-12	W	31.17	36.32	5.15						
96	-12	W	31.17	37.13	5.96						
97	-12	M	29.70	35.45	5.75						
98	-13	W	31.09	38.56	7.47						
99	-13	W	31.19	37.72	6.53						
K5300	-13	M	29.54	36.27	6.73						
01	-14	W	—	—	5					IN	TB
02	-14	W	—	—	5					IN	TB
03	-14	M	—	—	5		12:00	[illegible]	PT	IN	TB
04	F76376-1	W	—	—	5		12:15	[illegible]	PT	IN	TB
05	-1	W	—	—	5						TB
06	-1	M	—	—	5						TB
07	-2	W	31.02	36.26	5.24						
08	-2	W	30.97	35.74	4.77	9/4/10	12:19	[illegible]	PT	IN	

Container Type: PT for pre-tared vials (Field kits) EN for Encore or similar type 5030A for samples collected in jars or bulk containers: SL for core sleeve

Comments: N/O for no odor: S/O for slight odor: OOH for Out of Hold Encore Comment: C for sampler incorrectly capped: P for plunger not locked: F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
KS309	F76376-2	M	29.59	34.63	5.04	9/4/10	12:20	JW	PT	IN
10	-2	M	29.76	34.92	5.16					
11	-3	W	31.16	37.04	5.88					
12	-3	W	31.04	37.33	6.29					
13	-3	M	29.76	34.49	4.73					
14	-3	M	29.48	35.37	5.89					
15	-4	W	31.08	37.37	6.29					
16	-4	W	30.92	37.03	6.11					
17	-4	M	29.43	35.34	5.91					
18	-4	M	29.46	35.16	5.70					
19	-5	W	30.90	36.71	5.81					
20	-5	W	31.15	36.98	5.83					
21	-5	M	29.70	35.19	5.49					
22	-5	M	29.76	35.58	5.82					
23	-6	W	30.96	37.07	6.11					
24	-6	W	31.02	37.10	6.08					
25	-6	M	29.69	35.90	6.21					
26	-6	M	29.75	35.19	5.44					
27	-6	W	31.12	37.14	6.02					
28	-6	W	31.23	36.97	5.74					
29	-6	M	29.76	35.34	5.58					
30	-6	M	30.10	35.84	5.74					
31	-6	W	31.16	36.84	5.68	9/4/10	12:12	JW	PT	IN

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
KS332	F76376-6	W	31.10	37.29	6.19	9/4/10	12:48	AO.	PT	IN
33	-6	M	29.70	35.11	5.41					
34	-6	M	29.80	35.87	6.07					
35	-7	W	31.01	36.87	5.86					
36	-7	W	31.12	36.96	5.84					
37	-7	M	29.46	34.76	5.10					
38	-7	M	29.51	35.11	5.60		12:50	AO.	PT	IN
39	F76338-1	W	31.47	37.28	5.81		13:02	AO.	PT	HgHSO4 frozen
40	-1	W	31.72	37.40	5.68					
41	-1	M	29.39	35.25	5.86					
42	-1	M	29.67	35.71	6.04					
43	-2	W	31.39	37.38	5.99					
44	-2	W	31.57	37.82	6.25					
45	-2	M	29.84	35.94	6.10					
46	-2	M	29.48	35.74	6.26					
47	-3	W	31.49	37.20	5.71					
48	-3	W	31.56	36.36	4.80					
49	-3	M	29.64	34.44	4.80					
50	-3	M	29.81	35.66	5.85					
51	-4	W	31.48	36.24	4.76					
52	-4	W	31.46	36.46	5.00					
53	-4	M	29.42	34.29	4.87					
54	-4	M	29.41	34.23	4.82	9/4/10	13:16	AO	PT	NaHSO4

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5493	F76303-16 18	w	31.21	36.76	5.55	9-7-10	11:35	CC	PT	frozen in
94	" 9-7 16 18	m	29.90	35.21	5.31					9-2-10 17:00
95	17	w	31.16	37.44	6.28					
96	17	w	31.34	37.74	6.40					
97	17	m	30.15	35.53	5.38					
98	20	w	30.94	37.19	6.24					
99	20	w	31.06	37.37	6.31					
K5500	20	m	29.95	36.64	6.69					
1	21	w	30.99	37.02	6.03					
2	21	w	31.04	36.67	5.63					
3	21	m	29.75	34.74	4.99		11:50	CC		
4	23	w	31.10	37.49	6.39		12:43	CC		
5	23	w	30.97	37.09	6.12					
6	23	m	29.70	35.98	6.28					
7	25	w	31.14	37.70	6.56					
8	25	w	31.16	37.81	6.65					
9	25	m	29.94	36.02	6.08					
10	26	w	31.15	37.22	6.07					
11	26	w	31.08	36.81	5.73					
12	26	m	29.56	35.35	5.79					
13	27	w	31.16	37.26	6.10					
14	27	w	30.98	37.11	6.13					
15	27	m	30.07	35.55	5.48		3:00	CC		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5792	F76400-1	M	29.66	35.21	5.55	9-9-10	15:33	CL	PT	Frozen 17
93	F76395-2	M	29.50	34.88	5.38		16:07	CL		9-9-10 17:00
94	3	M	29.69	35.46	5.77					
95	4	M	29.73	34.58	4.85					
96	5	M	29.94	35.76	5.82					
97	6	M	29.56	35.40	5.84					
98	F76426-2	L AC1686			4.76				5030A	In Set 1
99	2	W			4.89					
K5800	2	M AC1664			4.95					
1	4	L			4.63					
2	4	W			4.52					
3	4	M			5.03					
4	5	W			5.00				FB	
5	5	L			5.00					
6	5	M			5.00					
7	7	W			5.33				5030A	
8	7	W			5.50					
9	7	M			5.17					
10	9	W			5.16					
11	9	W			5.13					
12	9	M			5.33					
13	11	W			4.61					
14	11	W			4.94		16:33	CL		

Comments: Type S Soil: OK; Soil Sleeve: OK; Soil Plug: OK for Slight Soil; Soil Not Visible; Broken Sleeve; Other

Indicate: Comments: OK for sampler inserted correctly & capped; P for plunger not locked; F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5815	F76426-11	M AC1664			5.50	9-9-10	16:35	CL	5030A	IH 40ml
16	13	W AC1686			4.64					
17	13	W			4.90					
18	13	M			4.58					
19	15	W			5.44					
20	15	W			5.41					
21	15	M			4.79		16:42	CL		
K58 22	F76278-1	W AC1686			1.09	9/10/10	11:25	AD	5030A	OOH
23	-1	W AC1686			1.02					
24	-1	M AC1664			1.33					
25	F76278-2	W AC1686			1.09					
26	-2	W AC1686			1.00					
27	-2	M AC1664			1.09		11:32		5030A	OOH
28	F76430-1	W	31.11	36.39	5.28	9/10/10	11:50	AD	PT	IH
29	-1	W	31.09	36.11	5.02					
30	-1	M	29.91	33.50	3.59					
31	-2	W	31.10	35.80	4.70					
32	-2	W	31.01	36.35	5.34					
33	-2	M	29.93	34.81	4.88					
34	-3	W	31.19	36.05	4.86					
35	-3	W	31.19	35.55	4.41	9/10/10	12:00	AD	PT	IH

5035 Soil Prep Log xls NF rev 05/06

Accutest Laboratories SE 71 of 100

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5882	F76416-5	W	31.14	37.07	5.93	9/10/10	15:10	AO.	PT	OOH (Terminal)
83	-5	M	29.77	35.90	6.13					
84	-6	W	31.12	37.80	6.68					
85	-6	W	31.12	37.76	6.64					
86	-6	M	29.61	35.34	5.73					
87	-7	W	31.01	34.65	3.64					
88	-7	W	30.96	35.58	4.62					
89	-7	M	29.62	35.43	5.81					
90	-8	W	31.03	35.26	4.23					
91	-8	W	31.22	36.39	5.17					
92	-8	M	29.57	35.33	5.76					OOH TB
93	-9	W			5					TB
94	-9	W			5				PT	OOH TB
95	-9	M			5				5030A	IH bot#1
96	F76459-1	W AC11686			5.19					
97	-1	W			4.94					
98	-1	M AC11684			4.68					
99	-2	W			5.12					
K5900	-2	W			5.60					
01	-2	M			4.84					
02	-3	W			5.09					
03	-3	W			4.56					
04	-3	M			4.86	9/10/10	15:46	AO	5030A	IH bot#1

ACCUTEST LABORATORIES SE

DATE:	9/17/10
COLUMN TYPE:	RTXVMI
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA1-G
PURGE PRESSURE:	20
ANALYST:	MM

MS VOA1-G ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	APP9.G.m
CALIB. DATE:	9/14/10 1671
EM VOLTAGE:	
BFB RESPONSE:	9557831
RUN ID:	VG 2526

STANDARDS

BFB:	V11093F (9/27)
ICAL/CCV:	V11148 V11134 V11136 V11103 V11142
ISTD/SURR:	V11092 (9125)
ICV/QC:	V11149 V11135 V11105 V11084b V11119
METHANOL LOT #:	H45E36

9/21 9/21 10/10 10/10 10/10 9/30 9/30 9/30 10/13 10/13

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
G 0066896	BFB	—	—	—	—	—	—	—	—	RVG 2uL BFB ✓
G 97	B	—	S	5.00	N	1	8260	—	—	✓
G 98	BFB	—	—	—	—	—	—	—	—	RVG 2uL BFB ✓
G 99	CC2523-4	N	S	5.00	N	1	8260	N	N	10uL/10mL 5mL Pass M
G 900	BS	↓	↓	↓	↓	2	↓	↓	↓	12.5uL/2mL 5mL ✓
G 01	MB	↓	↓	↓	100	3	↓	↓	↓	ND AS094019
G 02	F76416-1 ~~1x~~ 2x 10	K5871	↓	5.89	100	4	↓	pt DCM	—	✓
G 03	2x 10	K5874	↓	6.95	100	5	↓	pt DCM	—	1mL MeOH - DI ~~1x~~ 2x
G 04	F76479-1	K5838	↓	5.21	10	6	↓	5030A	50A	✓ RR
G	9/17/10 05	~~7~~	~~K5931~~	~~5.100~~	~~10~~	7	↓	~~5030A~~		~~500~~ F76426-13 K5918 9.58 N 100 ✓
G 06		~~7~~	~~K5954~~	~~5.02~~	~~100~~	8	↓	5030A DCM	—	F76403-1 K5704 5.43 N ✓
G 07	F76408-1	K5937	↓	5.25	N	9	↓	pt	—	✓
G 08	2	K5939	↓	5.31	N	10	↓	pt	—	✓
G 09	2MS 4.20	5	↓	4.54	N	11	↓	5030A	—	12.5 uL/2mL 5mL ✓
G 10	2MSD	5	↓	4.61	N	12	↓	↓	—	↓
G 11	3	K5962	↓	5.01	N	13	↓	pt	—	✓
G 12	4	K5965	↓	8.83	N	14	↓	pt	IN	1-42L NOT USED RR
G 13	5	K6055	↓	4.82	N	15	↓	pt	—	✓
G 14	6	K6058	↓	5.26	N	16	↓	pt	IN	455T3EJL RR
G 15	7	K6061	↓	4.94	N	17	↓	pt	—	✓
G 16	8	K6064	↓	4.91	N	18	↓	pt	—	✓
G 17	9	K6067	↓	5.26	N	19	↓	pt	—	✓
G 18	10	K6070	↓	5.67	N	20	↓	pt	—	✓
G 19	11	K6073	↓	5.36	N	21	↓	pt	—	✓
G 20	12	K6076	↓	5.25	N	22	↓	pt	—	455T ✓
G 21	13	K6079 4.1ms	↓	5.11	N	23	↓	pt	—	K6079
G 22	14	K6082	↓	5.41	N	24	↓	pt	IN	3EJL RR

ACCUTEST LABORATORIES SE

DATE:	9/17/10
COLUMN TYPE:	
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA1-G
PURGE PRESSURE:	
ANALYST:	

MS VOA1-G ANALYSIS LOG

METHODS:*	
METHOD FILE:	
CALIB. DATE:	
EM VOLTAGE:	
BFB RESPONSE:	
RUN ID:	VG 2526

CONT. P.3

STANDARDS

BFB:	
ICAL/CCV:	
ISTD/SURR:	
ICV/QC:	
METHANOL LOT #:	

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Alig.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
G0066923	FJ6408-15	KL085	S	4.98	N	25	8260	pt screen #140	—	stock vial 3rd use 9/10/10
G (mis 9/10/10 24)	FJ6494-1 Screen	—	↓	5.0	A 100	26		soil		restarted 9/18/10 SH
G 25	↓ 2	—	↓	↓	↓	27	↓	↓	—	restarted again
G 26	5		S			28				
G 27	6					29				
G 28	7					30				
G 29	8					31				
G 30	FJ6525-1					32				
G 31	↓				↓	33				
G 32	FJ6550-1				10	34				
G 33	2				10	35				
G 34	3				10	36				
G 35	D	—		Rush	—	37		N	—	
G 36	↓	—	↓	↓	—	38	↓	↓	—	
G										
G										
G										
G										
G										
G										
G										
G										
G										
G										
G										
G										
G										

pm 9/20/10

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5700	F76394-25	M AC16624			4.99	9-9-10	1321	CL	5030A	001 kit
1	29	L AC16626			5.27					
2	29	L			4.73					
3	29	M			4.69					
4	F76403-1	L			5.43					M kit
5	1	L			4.79					
6	1	M			4.82		1322			
7	F76419-1	L	3113	3894	7.81		1400	CL	MT	M
8	1	L	3103	3779	6.76					
9	1	M	2964	3664	7.00					
10	2	L	3102	3708	6.06					
11	2	L	3101	3650	5.49					
12	2	M	2967	3486	5.19					
13	3	L	3100	3698	5.98					
14	3	L	3106	3717	6.11					
15	3	M	2965	3629	6.64					
16	4	L	3104	3652	5.48					
17	4	L	3103	3696	5.88					
18	4	M	3016	3572	5.56					
19	5	L	3106	3677	5.71					
20	5	L	3081	3563	4.82					
21	5	M	2996	3471	4.75					
22	5	L			4.51				5030A	kit 7

no soil in MT

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5815	F76426-11	m AC1664			5.50	9-9-10	16:35	CL	5030A	in bag 1
16	13	w AC1686			4.64					
17	13	w			4.90					
18	13	m			4.58					
19	15	w			5.44					
20	15	w			5.41					
21	15	m			4.79		16:42	CL		
K58 22	F76278-1	w AC1686			1.09	9/10/10	11:25	AD	5030A	OOH
23	-1	w AC1686			1.02					
24	-1	m AC1664			1.33					
25	F76278-2	w AC1686			1.09					
26	-2	w AC1686			1.00					
27	-2	m AC1664			1.09		11:32		5030A	OOH
28	F76430-1	w	31.11	36.39	5.28	9/10/10	11:50	AD	PT	1H
29	-1	w	31.09	36.11	5.02					
30	-1	~~w~~ m	29.91	33.50	3.59					
31	-2	w	31.10	35.80	4.70					
32	-2	w	31.01	36.35	5.34					
33	-2	m	29.93	34.81	4.88					
34	-3	w	31.19	36.05	4.86					
35	-3	w	31.14	35.55	4.41	9/10/10	12:00	AD	PT	1H

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5859	F76454-3	M			5	9/10/10	13:16	[illegible]	PT	IH TB
60	F76456-1	M	29.52	36.87	7.35				PT	IH
61	-2	M	29.58	37.15	7.57					
62	-3	M	29.53	34.47	4.94					
63	-4	M	29.75	36.83	7.08		13:20	[illegible]	PT	IH
64	F76420-1	M	29.66	35.22	5.56					
65	-2	M	29.78	36.~~72~~26.~~62~~94						
66	-3	M	29.69	36.02	6.33					
67	-4	M	29.57	34.46	4.89					
68	-5	M	29.61	33.50	3.89		13:16		PT	IH
69	F76416-1	W	31.14	36.54	5.40		13:55		PT	COH
70	-1	W	31.30	38.41	7.11					(RECEIVED)
71	-1	M	29.52	35.41	5.89					
72	-2	W	31.44	38.25	6.81					
73	-2	W	31.16	~~37~~37.83	6.67					
74	-2	M	29.74	36.69	6.95					
75	-3	W	31.16	38.60	7.44					
76	-3	W	31.06	38.31	7.25					
77	-3	M	29.65	36.71	7.06					
78	-4	W	31.14	38.77	7.63					
79	-4	W	31.04	38.66	7.62					
80	-4	M	29.60	36.96	7.36	9/10/10	14:10	[illegible]	PT	COH
81	-5	W	31.00	37.32	6.32	9/10/10	15:09	[illegible]	PT	COH

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K59 28	F76479-1	M A0460			5.21	9/11/10	11:46	AO	5030A	1H bot H1
29	-2	M A0486			5.59					
30	-2	M			5.27					
31	-2	M			5.00					
32	-3	W			5.89					
33	-3	W			4.53					
34	-3	M			5.02					
35	F76483-14	W			4.74					
36	-14	W			4.84					
37	-14	M			4.00		12:05	AO	5030A	1H bot H1
38	F76478-1	W	30.84	35.77	4.93		12:25		PT	1H
39	-1	W	30.79	36.13	5.34					
40	-1	M	29.99	35.26	5.27					
41	-2	~~W~~ M	29.74	33.47	3.73					
42	-2	W	30.55	34.58	4.03					
43	-2	~~M~~ W	31.00	34.90	3.90					
44	-3	W	30.95	35.41	4.46					
45	-3	W	31.13	35.39	4.26					
46	-3	M	29.50	33.91	4.41					
47	-4	W	30.93	35.48	4.55					
48	-4	W	30.93	35.17	4.24					
49	-4	M	29.53	33.90	4.37					
K59 50	-5	W	31.13	36.29	5.16	9/11/10	12:45	AO	PT	1H

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K59 51	F76478-5	M	29.58	34.81	5.23	9/11/10	12:46	[illegible]	PT	IH
K59 52	F76478-5	W	30.93	36.21	5.28					
53	-6	M	29.55	34.08	4.53					
54	-6	W	30.99	35.49	4.50					
55	-6	W	30.97	35.50	4.53		13:00	[illegible]	PT	IH
56	F76408-1	W	~~30~~ 31.01	36.19	5.18		13:15		PT	IH frozen
57	-1	W	31.15	~~36~~.40	5.25					
58	-1	M	29.54	34.25	4.71					
59	-2	W	31.02	36.33	5.31					
60	-2	W	31.21	37.63	6.92					
61	-2	M	29.67	34.83	5.16					
62	-3	W	31.40	36.41	5.01					
63	-3	W	30.88	36.07	5.19					
64	-3	M	29.62	34.77	5.15					
65	-4	W	31.18	40.01	~~9.03~~ 8.83					
66	-4	W	31.15	37.16	6.01					
67	-4	M	29.63	35.60	5.97	9/11/10	13:51	[illegible]	PT	IH frozen
68	F76413-2	W	3105	3841	7.36	9-13-10	10:30	CC	PT	frozen in 9-9-10 8:56
69	2	W	3100	3801	701					↓
70	2	M	29.65	36.50	6.85					M
71	F76414-1	M	32.51	38.50	5.99					↓
72	1	M	32.67	3903	6.36					
K59 73	F76452-1	W	3079	38.96	8.17		10:39	CC		frozen in 9-10-10

RUN SH 9/17

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K6043	F76486-11	w	30.64	37.28	6.64	9-13-10	13:05	CL	MT	frozen 12 9-14-10 11:15
44	11	m	29.18	35.75	6.57					
45	F76493-1	w	31.06	38.58	7.52					
46	1	w	31.11	38.30	7.19					
47	1	m	29.55	36.41	6.86					
48	4	w	31.00	37.68	6.68					
49	4	w	30.91	37.08	6.17					
50	4	m	29.69	35.13	5.44					
51	F76479-4	w			5.00				TB	
52	4	w			5.00					
53	4	m			5.00					
54	F76408-5	w	31.04	36.17	5.13				MT	frozen 12 9-9-10 8:56
55	5	w	31.36	36.19	4.83					
56	5	m	29.47	33.48	4.01					
57	6	w	30.97	36.49	5.52					
58	6	w	31.13	36.89	5.76					
59	6	m	29.66	35.80	6.14					
60	7	w	31.11	36.23	5.12					
61	7	w	31.41	36.35	4.94					
62	7	m	29.69	33.86	4.17					
63	8	w	31.08	35.93	4.85					
64	8	w	30.95	35.86	4.91					
65	8	m	29.39	33.97	4.58		13:45	CL		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K6066	F76408-9	w	31.14	36.45	5.31	9-13-10	13:49	CL	PT	frozen in
67	9	w	31.07	36.33	5.26					9-14-10 8:56
68	9	m	29.68	34.80	5.12					
69	10	w	30.90	36.19	5.29					
70	10	w	31.23	36.90	5.67					
71	10	m	29.05	34.15	4.50					
72	11	w	31.05	36.41	5.36					
73	11	w	31.02	36.38	5.36					
74	11	m	29.56	34.74	5.18					
75	12	w	31.18	36.51	5.33					
76	12	w	30.92	36.17	5.25					
77	12	m	29.73	34.78	5.05					
78	13	w	31.22	36.25	5.03					
79	13	w	31.04	36.15	5.11					
80	13	m	29.52	34.72	5.20					
81	14	w	31.18	36.90	5.72					
82	14	w	31.08	36.49	5.41					
83	14	m	29.61	34.82	5.21					
84	15	w	31.02	36.37	5.35					
85	15	w	31.10	36.08	4.98					
86	15	m	29.57	34.64	5.07					
87	F76511-6	w			5.00				TB	m
8882	6	w			5.00		14:11	CL	"	"

ACCUTEST LABORATORIES SE

DATE:	09/01/10
COLUMN TYPE:	Rtx-Vms
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA6-J
PURGE PRESSURE:	9.9 psi
ANALYST:	KW

MS VOA6-J ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260-J
CALIB. DATE:	09/01/10
EM VOLTAGE:	1378
BFB RESPONSE:	5020260
RUN ID:	VJ 3328 + 3329

STANDARDS

BFB:	V11093
ICAL/CCV:	V11112 V11091 V11102
ISTD/SURR:	V11101
ICV/QC:	V11110 V11097 V11094
Purge Volume	5 ml

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
V059051	BFB									Auto 2ml
J 52	IC 3328-1		W	1	8260	OP #32, OP #34	NA	NA		10ml of level 2 → 5ml
J 53	-2			2		OP #32				5ml → 10ml
J 54	-3			3		OP #32				10 ul → 5ml
J 55	-4			4		OP #32				20ul → 5ml
J 56	-5			5		OP #32				30ul → 5ml
J 57	-6			6		OP #32				50ul → 5ml
J 10ml 96.1% 58	ICV 3328-7			7						Pass 25ul → 5ml
J 59	BFB									Auto 2ml
J 60	CC 3328-4		W	1	8260	OP #32	NA	NA		Pass 20ul → 50ml
J 61	BS			2		OP #32				Pass 12.5ul → 10ml val
J 62	10ml 96.6% MB			3						#8712
J 63	F76865-2, 10x			4			6	N	50X	AFA, HS Foamed
J 64	-2, 50x			5			6			✓ AFA, HS
J 65	F76114-1	2		6			1			✓
J 66	-2			7			1			✓
J 67	-3			8			1			✓
J 68	-4			9			1			✓
J 69	-5	1		10			1			✓
J 70	-6			11			1			✓
J 71	-2MS	3		12		OP #32	1			✓ 12.5ul → 10ml val
J 72	-2MSD			12		OP #32				✓ ↓
J 73	F76232-1, 2x	2		13			1		2X	✓
J 74	-2, 20x			14			1			✓
J 75	-3, 5x			15			1			✓
J 76	-4	1		16			1			✓
J 77	F76012-1			17			1		5X	✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

msvoa6_j_log.xls NF 06/10

ACCUTEST LABORATORIES SE

DATE:	09/01/10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA6-J
PURGE PRESSURE:	9.9psi
ANALYST:	KW

MS VOA6-J ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	326055
CALIB. DATE:	09/01/10
EM VOLTAGE:	1318
BFB RESPONSE:	30.80260
RUN ID:	VJ 3328 + 3329

STANDARDS

BFB:	V110938
ICAL/CCV:	V1102 V1101 V1102
ISTD/SURR:	V1101
ICV/QC:	V1100 V1099 V1054
Purge Volume	5ml

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
J0590 28	F76012-2	1	W	18	8260		1	N		✓
J 29	-3.50x	↓	↓	19	↓		1	↓		✓
J 80	-4			20			1			✓
J 81	-5			21			1			✓
J 82	-6.2x	↓		22		SP#4	1		1X	
J 83	-4ms	2		23		SPH52	1			✓ 12.5ml→40ml um
J 84	-4msd	↓		23		SPH52	↓			✓ ↓
J 85	F76087-1	1		24			1			✓
J 86	-2	2		25			1			✓
J 87	-3	↓		26			1			✓
J 88	F76012-3	1	↓	27	↓			↓		
J 89	Blank									

KW 09/02/10

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003
Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature: KW

msvoa6_j_log.xls NF 06/10

ACCUTEST LABORATORIES SE

DATE:	09/15/10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA6-J
PURGE PRESSURE:	9.6psi
ANALYST:	KW

MS VOA6-J ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260-J
CALIB. DATE:	09/02/10
EM VOLTAGE:	1400
BFB RESPONSE:	2598233 10^3 09/15/10
RUN ID:	VJ 3338 ~~3339~~

STANDARDS

BFB:	V110935
ICAL/CCV:	V11146 V11152 V11102
ISTD/SURR:	V11101
ICV/QC:	V11140 V11109 V11145
Purge Volume	5ml

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
J059343	BFB									Full 1X ✓
J 44	BFB									Full 1X ✓
J 45	BFB									Auto 2nd
J 46	CC3330-V		W	1	8260	OP#32	NA	NA		pass 20ml → 5ml
J 47	BS			2		OP#32	↓	↓		pass 10ml → 5ml vial
J 48	MB			3						ND
J 49	FX6426-1	2		4			/	N		✓
J 50	RunLog -13			5			/			✓
J 51	-6			6			/			✓
J 52	-8			7			/			✓
J 53	-10			8		SP#3	/			✓
J 54	-12			9			/			✓
J 55	-14			10			/			✓
J 56	FX6535-2	↓		11		PII #3	/	↓		✓
J 57	FX6333-16, 20x	1		12			/	N	100x	✓
J 58	-17, 5x	↓		13			/		100x	✓
J 59	FX6356-1 5x RunLog	2		14			/		2x	✓
J 60	-1MS 5x ~~2, 50x~~			15		OP #32	/			✓ 5ml → 40ml vial
J 61	-1MSD, 5x			15		OP #32	↓			✓ 40ml vial
J 60	-2, 50x			16			/		50x	✓ C.O
J 63	-3, 100x			17			/		20x	✓ MS
J 64	-4	↓		18		PII #3	/		2x	✓
J 65	-5	1		19			/			✓
J 66	FX6333-16, 100x	2		20			/			✓
J 67	-17, 100x RunLog	↓		21			/		20x	✓
J 68	FX6402-1a, 100x	x2		22		OP#28	/		10x	
J 69	-2a, 100x	↓	↓	23	↓	OP#28	/	↓	20x	✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003
Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029. **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

msvoa6_j_log.xls NF 06/10

10 of 100

ACCUTEST LABORATORIES SE

DATE:	09/15/10
COLUMN TYPE:	Rtx-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA6-J
PURGE PRESSURE:	9.6 psi
ANALYST:	KW

MS VOA6-J ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260-J
CALIB. DATE:	09/02/10
EM VOLTAGE:	1400
BFB RESPONSE:	2598233
RUN ID:	VJ3338

STANDARDS

BFB:	VJ1093b
ICAL/CCV:	VJ1146 VJ1196 VJ1202
ISTD/SURR:	VJ1101
ICV/QC:	VJ1144 VJ1197 VJ1199
Purge Volume	5ml

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
J059370	F76402-4a	2	W	24	8260	mpt63 KW 09/10/10	1N	N	10x	✓
J 71	-16a	↓	↓	25	↓		N1	N	1x	
J 72	-17a, 10x			26			1	N	20x	✓
J 73	Blank						1			

KW 09/10/10

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

msvoa6_j_log.xls NF 06/10

ACCUTEST LABORATORIES SE

DATE:	9/3/10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA3-K
PURGE PRESSURE:	23
ANALYST:	SA

MS VOA3-K ANALYSIS LOG

METHODS:*	624
METHOD FILE:	624.PF
CALIB. DATE:	9/3/10
EM VOLTAGE:	2049
BFB RESPONSE:	37335.83
RUN ID:	VK 2336

STANDARDS

BFB:	V110930
ICAL/CCV:	V110944, V110935, V109908
ISTD/SURR:	V110927
ICV/QC:	V110946, V109950, V109939
METHANOL LOT #:	114E36

DATA FILE	SAMPLE ID, DIL	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
K 046495	BFB	VA	-	-	NA	-	BFB	NA		✓ AVG
K 96	LL2035-4		S	5		1	624			LL+DLET
K 97	LL2035-4		L	5		2	624			DLET
K 98	BFB		-	-		-	BFB			
K 99	LL2036-1		S	5		1	624			0.125 5ml + 4ml + 10ml
K 500	1 2					2				0.50
K 01	3					3				1.25
K 02	4					4				2.5
K 03	5					5				3.75
K 04	6					6				5.00
K 05	ICV-3					7				12.5ml + 20ml
K 06	BS					8				2
K 07	MD				100	9				
K 08	MA				100	10				
K 09	FTC127-1	E4375		3.40	-	11		PT		LL#25: A95 0960/9 RR
K 10	B	-		5	-	12				
K 11	6091-2	K4547		5.99	10X/10	13				NT +10ul
K 12	4	K4552		5.75	10	14				
K 13	5	K4555		5.59	10X/10	15				10X+10ml
K 14	159-2	K4410		5.39	10	16		A-0314	10X/10ml	Stgrem 1
K 15	3	K4412		4.70	2	17		A-3014		4.7 g I53 ✓
K 16	5	K4419		5.02	10	18		A-0314	→	10X+10ml Stgrem 1
K 17	6	K4420		5.23	-	19		A-0314		
K 18 ~~BFB+4MS 7~~		K4423		4.55	-	20		A-3014		159-7
K 19	4MSD	K4552		5.75	10	21		PT		0.5ml + 10ml
K 20	4MSA	↓		↓	↓	22		↓		↓
K 21	6	-		5		1				
~~K 22~~	~~7~~	-		↓		2				-

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-Aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA3_K_log.xls NF 11/06

Analyst's Signature: SA

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type	Comments
K4390	F76132-1	M	29.75	35.52	5.77	8/27/10	15:36	JD	PT	1H
K4391	F76127-2	W			5					TB
92	F76127-2	W			5					TB
93	-2	M			5					TB
94	-1	W	30.02	35.58	5.56					1H
95	-1	W	31.00	34.40	3.4					1H
96	-1	M	29.75	33.87	4.12	8/27/10	16:15	JD	PT	1H
97	F75869-6	W			2.45			SH	5030A	OOH Bot 1
98	6	M			1.22			1	2	1 F.V. 10mL
K4399	F76160-1	W AC1686		1.16	~~2.27~~	8/27/10	16:25	JD	5030A	OOH Bot 1
K4400	-1	W AC1686		1.06	1.27					
01	-1	M AC1702			1.09					
02	-2	W AC1686			1.10					
03	-2	W AC1686			0.85					
04	-2	M AC1702			0.85	8/27/10	16:42	JD	5030A	OOH Bot 1
05	F76159-1	W			5.33	8/28/10	5:52	SH	5030A	OOH
06	1	W			5.43					
07	1	M			5.42					
08	2	W			5.24					
09	2	W			4.41					
10	2	M			5.39					
11	3	W			4.88					
12	3	W			4.71					

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor, S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type*	Comments
K4528	F76092-1	M	29.79	36.05	6.26	8/30/10	15:50	AH	PT	#120711 (LEAKED)
29	1	M	29.87	51.45	NO MEOH					
30	1	M	29.89	35.05	5.16					
31	1	M	29.77	34.92	5.15					
32	1	M			5.00					TB
33	1	M			5.00					
34	1	M			5.00					
35	F76091									
36	F76085-1	W	31.00	37.53	6.53	8/31/10	8:40	SH	PT	1
37	1	W	31.04	37.50	6.46					From 9/26/10
38	1	M	29.07	36.93	7.76					JW 9:30AM
39	4	W			5					TB
40	4	W			5.6					1
41	4	M			5					1
42	F76084-1	W	31.18	37.32	6.14					From JW
43	1	W	31.04	37.24	6.20					9/26/10
44	1	M	29.67	36.02	6.15					12:05
45	2	W	31.21	36.88	5.67					
46	2	W	31.25	37.03	5.78					
47	2	M	29.67	35.65	5.99					
48	3	W	31.00	36.93	5.93					
49	3	W	31.00	36.71	5.71					
50	3	M	29.63	35.62	5.99					

Container Type: PT for pre-tared vials (field kits) EN for Encore or similar type 5030A for samples collected in jars or bulk containers SL for core sleeve

Comment: N/O for no odor S/O for slight odor OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped P for plunger not locked F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type*	Comments
K455U	F7C091-4	W	31.02	36.81	5.74	8/31/10	8:50	BH	PT	EN
51	4	W	31.35	37.23	6.18					P. Stern 8/26/10
52	4	M	21.69	35.44	5.75					12:35
53	5	W	31.04	36.69	5.65					
54	5	W	30.58	36.19	5.31					
55	5	M	29.98	35.56	5.58					
56	6	W	5—	—	5—					
57	6	W	5—	—	5—					
58	6	M	—	—	5—					
59	F7C106-3	W		—	5—					TB
60	3	W		—	5—					
61	3	M		—	5—					
62	F7C129-1	W	31.05	38.62	7.57					Patch JW
63	1	W	30.83	38.53	7.70					8/27/10
64	1	M	30.05	36.92	6.87					10:13
65	5	W		—	5—					TB
66	5	W		—	5—					
67	5	M		—	5—					
68	F7C130-1	W	31.10	37.83	6.73					Patch 8/27/10
69	1	W	31.00	38.18	7.18					10:13 JW
70	1	M	29.43	36.04	6.61					
71	4	W		—	5—					
72	4	W		—	5—		9:11			

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type	Comments
K4390	F76132-1	M	29.75	35.52	5.77	8/27/10	15:36	JO.	PT	1H
K4391	F76127-2	W			5					TB
92	F76127-2	W			5					TB
93	-2	M			5					TB
94	-1	W	30.02	35.58	5.56					1M
95	-1	W	31.00	34.40	3.4					1H
96	-1	M	29.75	33.87	4.12	8/27/10	16:15	JO.	PT.	1H
97	F75469-6	W			2.45			SH	5030A	2H BOT 1
98	6	M			1.22			1	2	1 F.U. 10mL
K4399	F76160-1	W AC1686		1.16	~~2.27~~ 1.16	8/27/10	16:25	JO.	5030A	OOH Bot 1
K4400	-1	W AC1686		1.06	1.27					
01	-1	M AC1702			1.09					
02	-2	W AC1686			1.10					
03	-2	W AC1686			0.85					
04	-2	M AC1702			0.85	8/27/10	16:42	JO.	5030A	OOH Bot 1
05	F76155-1	W			5.33	8/28/10	~~8:52~~ 9:52	SH	5030A	OOH
06	1	W			5.43					
07	1	M			5.42					
08	2	W			5.24					
09	2	W			4.41					
10	2	M			5.39					
11	3	W			4.88					
12	3	W			4.71					

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type*	Comments
K44 13	F76159-3	M			4.82	8/28/10	10:02	J.P.	5030A	0017
14	-4	W			5.66					
15	-4	W			5.28					
16	-4	M			4.58					
17	-5	W			4.70					
18	-5	W			4.91					
19	-5	M			5.02					
20	-6	W			5.25					
21	-6	W			5.05					
22	-6	M			4.55					
23	-7	W			4.59					
24	-7	W			4.67					
25	-7	M			5.27					
26	-8	W			4.86					
27	-8	W			4.52					
28	-8	M			5.19	8/28/10	10:49	J.P.	5030A	OOH
29	F76059-1	W	31.27	38.48	7.21	8/28/10	11:00	J.P.	PT	N9HSO4 IR
30	-1	W	31.42	38.71	7.29					
31	-1	M	29.69	35.71	6.02					
32	-2	W	31.37	38.05	6.68					
33	-2	W	31.33	38.11	6.78					
34	-2	M	29.70	36.33	6.63					
35	-3	W	31.29	37.55	6.26		11:20			

Container Type: PT for pre tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

ACCUTEST LABORATORIES SE

DATE:	9/13/11
COLUMN TYPE:	RTX-VMS
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA3-K
PURGE PRESSURE:	20
ANALYST:	SH

MS VOA3-K ANALYSIS LOG

METHODS:*	8260K
METHOD FILE:	8260K
CALIB. DATE:	9/13/10
EM VOLTAGE:	2099
BFB RESPONSE:	370/862
RUN ID:	VK 2099

STANDARDS

BFB:	V113930
ICAL/CCV:	V11122, V11938, V11102
ISTD/SURR:	V11027
ICV/QC:	V11123, V11990, V11934B
METHANOL LOT #:	114SE36

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
K 0912588	BFB	NA	-	NA	NA	-	BFB	NA		- ADD 20
K 89	LC-2505-4		S			1	8260			LCS + SURR + 10 uL MM1
K 90	LC20554					2				
K 91	BS					3				TRIP 12.5-20 ml
K 92	MB				100	4				A40603 19
K 93	F76241-15	K4783		6.46	-	5		PT		
K 94	BS	-		5-	-	6		-		
K 95	241-16	K4786		6.79	-	7		PT		
K 96	18	K4789		7.98	-	9		PT		
K 97	19	K4792		8.02	-	9		PT		
K 98	21	K4808		6.98	-	10		PT		
K 99	22	K4795		5.35	-	11		PT		
K 100	23	K4798		3.96	-	12		PT		
K 01	25	K4801		6.81	-	13		PT		
K 02	26	K4804		7.52	-	14		PT		
K 03	28	K4812		8.66	-	15		PT		
K 04	226-33	K5006		6.79	-	16		PT		
K 05	34	K5009		6.02	-	17		PT		ISTD
K 06	36	K5012		6.46	-	18		PT	IH	ISTD
K 07	37	K5015		5.41	-	19		PT	IH	ISTD
K 08	426-5	K5801		5-	-	20		PT		TB
K 09	11	K4691		5-	-	21		PT		TB
K 10	2	K5798		4.76	-	22		A-IN		
K 11	3	K5801		4.63	-	23		A-IN		
K 12	7	K5807		5.33	-	24		A-IN		
K 13	241-37	-		4.55	-	25		WAITAL		12.5-20 ml
K 14	266-39	-		4.52	-	26		L		

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA3_K_log.xls NF 11/06

Analyst's Signature: SH

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
KW665	F76233-6	W	31.13	38.55	7.42	8/31/10	1643	MM	PT	EN
66	6	W	31.10	37.20	6.10					
67	6	M	29.50	35.87	6.37					
68	F76233-7	W	31.20	37.01	5.81					
69	7	W	31.17	37.04	5.87					
70	7	M	29.79	35.19	5.40					
71	F76233-8	W	31.12	37.97	6.85					
72	8	W	30.90	38.60	7.70					
73	8	M	29.71	36.08	6.37					
74	F76233-9	W	30.80	38.69	7.89					
75	9	W	31.17	38.63	7.46					
76	9	M	29.73	35.98	6.25					
77	F76233-10	W	31.14	37.20	6.06					
78	10	W	31.20	38.13	6.93					
79	10	M	29.74	35.12	5.38					
80	F76233-11	W			5.00					TB
81	11	W								
82	11	M								
83	F76136-2	W			5.00	9/1/10	17:02	MM	SOIL	BOT #4 OOH
84	2	W			4.75		0915			
85	F76136-3	W			4.73					Bot #4
86	3	W			4.90					
87	F76136-5	W			4.80		0930			Bot #4

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K47180	F76241-13	w	3112	3768	656	9-1-10	14:07	CL	PT	frozen in 5-3-10 11:26
81	13	w	3101	3703	602					
82	13	m	2952	3498	546					
83	15	w	3042	3738	646					
84	15	w	3115	3949	834					
85	15	m	2948	3654	706					
86	16	w	3107	3786	679					
87	16	w	3127	3749	622					
88	16	m	2993	3511	518					
89	18	w	3096	3894	798					
90	18	w	3101	3917	816					
91	18	m	2983	3718	735					
92	19	w	3103	3905	802					
93	19	w	3112	3856	744					
94	19	m	2947	3618	671					
95	22	w	3100	3635	535					
96	22	w	3110	3582	472					
97	22	m	2985	3327	342					
98	23	w	3105	3501	396					
99	23	w	3057	3625	568					
K48000	23	m	2983	3539	556					
1	25	w	3112	3793	681					
2	25	w	3105	4016	905	↓	14:43	CL	↓	↓

Container Type: PT for pre-tared vials (field kits); EN for Encore® or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; COH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K4780	F76241-13	w	3112	3768	656	9-1-10	1407	CL	PT	frozen in
81	13	w	3109	3703	602					8-31-10 11:26
82	13	m	2952	3498	546					
83	15	w	3042	3738	646					
84	15	w	3115	3949	834					
85	15	m	2948	3654	706					
86	16	w	3107	3786	679					
87	16	w	3127	3749	622					
88	16	m	2993	3511	518					
89	18	w	3096	3894	798					
90	18	w	3101	3917	816					
91	18	m	2983	3718	735					
92	19	w	3103	3905	802					
93	19	w	3112	3856	744					
94	19	m	2947	3618	671					
95	22	w	3100	3635	535					
96	22	w	3110	3582	472					
97	22	m	2985	3327	342					
98	23	w	3105	3501	396					
99	23	w	3087	3655	568					
K4800	23	m	2983	3539	556					
1	25	w	3112	3793	681					
2	25	w	3105	4016	905	↓	1443	CL	↓	↓

Container Type: PT for pre-tared vials (field kits) EN for Encore or similar type 5030A for samples collected in jars or bulk containers: SL for core sleeve

Comment: N/O for no odor S/O for slight odor. COH for Out of Hold

Encore Comment: C for sampler incorrectly capped: P for plunger not locked: F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
R4803	F76241-25	M	29.72	37.34	7.62	9-1-10	14:45	CL	PT	frozen in
4	26	W	31.04	38.56	7.52					9-3-10 11:26
5	26	W	31.29	37.64	6.35					
6	26	M	29.47	35.75	6.28					
7	21	W	30.99	38.19	7.20					
8	21	W	31.06	38.04	6.98					
9	21	M	29.41	36.33	6.92					
10	+ 76059-5	W			4.32					
11	F76241-28	W								1 rotted
12	28	W	31.11	39.77	8.66					
13	28	M	29.93	37.33	7.40					
14	28	W AL1686			5.50		15:00	CL	5035A	CL 9-1
15	F76263-1	W	31.13	37.49	6.36		15:44	CL	PT	~~frozen~~
16	1	W	31.11	36.83	5.72					9-1-10 9:00 OOH
17	1	M	29.60	34.63	5.03					
18	2	W	31.16	38.27	7.11					
19	2	W	31.19	38.30	7.11					
20	2	M	29.97	37.08	7.11					
21	3	W	31.08	36.97	5.89					
22	3	W	31.24	36.97	5.73					frozen in
23	3	M	29.76	35.92	6.16					9-1-10 9:00
24	4	W	31.01	37.19	6.18					
25	4	W	31.06	37.48	6.42		16:01	CL		

Container Type: PT for pre-tared vials (field kits). EN for Encore or similar type. 5030A for samples collected in jars or bulk containers. SL for core sleeve

Comment: N/O for no odor. S/O for slight odor. OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped. P for plunger not locked. F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K4987	F76266-22	M	29.51	34.86	5.35	9-7-10	1434	CL	PT	Frozen in 9-10 17:00
88	24	W	3105	3784	6.79					
89	24	W	3106	3702	5.96					
90	24	M	2983	3609	6.26					
91	25	W	3096	3668	5.72					
92	25	W	3106	3758	6.52					
93	25	M	3009	3543	5.34					
94	27	W	3112	3797	6.85					
95	27	W	3117	3815	6.98					
96	27	M	2939	3538	5.99					
97	28	W	3096	3659	5.63					
98	28	W	3094	3731	6.37					
99	28	M	3012	3602	5.90					
K5000	30	W	3129	3820	6.91					
1	30	W	3111	3778	6.67					
2	30	M	2979	3609	6.30					
3	31	W	3096	3752	6.56					
4	31	W	3114	3769	6.55					
5	31	M	3005	3623	6.18					
6	33	W	3086	3765	6.79					
7	33	W	3102	3687	5.85					
8	33	M	3019	3731	7.12					
9	34	W	30.97	36.99	6.02		1500	CL		

Container Type: PT for pre-tared vials (field kits) EN for Encore or similar type. 5030A for samples collected in jars or bulk containers. SL for core sleeve

Comment: N/O for no odor S/O for slight odor. OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5010	F76 266-34	w	31.06	37.07	6.01	9-2-10	14:51	CL	PT	frozen in
11	34	m	29.52	35.88	6.36					9-10 17:00
12	36	w	31.24	37.70	6.46					
13	36	w	31.13	37.64	6.51					
14	36	m	29.56	35.80	6.24					
15	37	w	31.04	36.45	5.41					
16	37	w	31.30	36.96	5.66					
17	37	m	29.57	35.53	5.96					
18	37	w	31.01	37.07	6.06					MS
19	37	w	30.96	37.13	6.17					MSD
20	39	w	31.11	37.64	6.53					
21	39	w	31.09	37.36	6.27					
22	39	m	30.00	35.87	5.87					
23	40	w	31.06	37.73	6.67					
24	40	w	31.12	37.90	6.78					
25	40	m	29.48	35.58	6.10					
26	42	w	31.00	37.64	6.64					
27	42	w	30.93	37.33	6.40					
28	42	m	29.73	36.34	6.61					
29	43	w	30.85	37.24	6.39					
30	43	w	31.05	37.21	6.16					
31	43	m	30.09	36.41	6.32					
32	45	w	31.00	37.57	6.57		15:08	CL		

Container Type: PT for pre-tared vials (field kits). EN for Encore or similar type: 5030A for samples collected in jars or bulk containers. SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5792	F76400-1	m	29.66	35.21	5.55	9-9-10	15:33	CL	MT	Frozen 17
93	F76395-2	m	29.50	34.88	5.38		16:07	CL		9-8-10 17:00
94	3	m	29.69	35.46	5.77					
95	4	m	29.73	34.58	4.85					
96	5	m	29.94	35.76	5.82					
97	6	m	29.56	35.40	5.84					
98	F76426-2	w AH686			4.76				5030/7	m bot 1
99	2	w			4.89					
K5800	2	m AH664			4.95					
1	4	w			4.63					
2	4	w			4.52					
3	4	m			5.03					
4	5	w			5.00				TM	
5	5	w			5.00					
6	5	m			5.00					
7	7	w			5.33				5030F	
8	7	w			5.50					
9	7	m			5.17					
10	9	w			5.16					
11	9	w			5.13					
12	9	m			5.33					
13	11	w			4.61					
14	11	w			4.94		16:33	CL		

Comments: Tare Wt column: use for slight dust; use for dust in vial

Enclore Comments: S for sampler inadvertently capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Total Organic Carbon	GP15611/GN41365	1000	0.00	mg/kg	20000	21000	105.0	88-114%

Associated Samples:
Batch GP15611: F76426-11, F76426-13, F76426-15, F76426-2, F76426-4, F76426-7, F76426-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
% Fines	GN41406	T58537-7B	%	69.2	75.2(a)	8.3	0-30%
% Fines	GN41439	T58707-1B	%	32.0	30.6	4.5	0-30%
% Gravel	GN41406	T58537-7B	%	0.0	0.0(a)	0.0	0-30%
% Gravel	GN41439	T58707-1B	%	0.0	0.0	0.0	0-30%
% Sand	GN41406	T58537-7B	%	30.8	24.8(a)	21.6	0-30%
% Sand	GN41439	T58707-1B	%	68.0	69.4	2.0	0-30%
% Silt, Clay, Colloids	GN41406	T58537-7B	%	69.2	75.2(a)	8.3	0-30%
% Silt, Clay, Colloids	GN41439	T58707-1B	%	32.0	30.6	4.5	0-30%
Solids, Percent	GN41317	F76284-1	%	89.4	87	2.7	0-10%
Total Organic Carbon	GP15611/GN41365	F76426-9	mg/kg	43400	33000	27.2	0-36%

Associated Samples:
Batch GN41317: F76426-11, F76426-13, F76426-15, F76426-2, F76426-4, F76426-7, F76426-9
Batch GN41406: F76426-11, F76426-2, F76426-4, F76426-7, F76426-9
Batch GN41439: F76426-13, F76426-15
Batch GP15611: F76426-11, F76426-13, F76426-15, F76426-2, F76426-4, F76426-7, F76426-9
(*) Outside of QC limits
(a) Limited volume sample.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Total Organic Carbon	GP15611/GN41365	F76426-9	mg/kg	43400	25300	84500	162.6N(a)	88-114%

Associated Samples:
Batch GP15611: F76426-11, F76426-13, F76426-15, F76426-2, F76426-4, F76426-7, F76426-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091410S1.TXT Date Analyzed: 09/14/10 Methods: SW846 9060A MOD
Analyst: CN Run ID: GN41365
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:27	GN41365-CCV1	1		
10:40	GN41365-CCB1	1		
10:58	GN41365-ICV1	1		
11:10	GN41365-ICB1	1		
11:23	GP15611-MB1	1		
12:24	GP15611-B1	1		
12:53	GP15611-S1	1		
13:31	GP15611-D1	1		
14:10	F76426-9	1		
14:49	F76426-2	1		
15:30	F76426-4	1		
16:06	F76426-7	1		
16:56	GN41365-CCV2	1		
17:07	GN41365-CCB2	1		
17:26	F76426-11	1		
18:00	GN41365-CCV3	1		
18:11	GN41365-CCB3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091410S1.TXT Date Analyzed: 09/14/10 Methods: SW846 9060A MOD
Run ID: GN41365 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN41365-CCV1	Total Organic Carbon	20500	1000	500	20000	102.5	90-110
GN41365-CCB1	Total Organic Carbon	500 U	1000	500			
GN41365-ICV1	Total Organic Carbon	20700	1000	500	20000	103.5	90-110
GN41365-ICB1	Total Organic Carbon	500 U	1000	500			
GN41365-CCV2	Total Organic Carbon	21600	1000	500	20000	108.0	90-110
GN41365-CCB2	Total Organic Carbon	500 U	1000	500			
GN41365-CCV3	Total Organic Carbon	21800	1000	500	20000	109.0	90-110
GN41365-CCB3	Total Organic Carbon	500 U	1000	500			

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091510S1.TXT Date Analyzed: 09/15/10 Methods: SW846 9060A MOD
Analyst: CN Run ID: GN41375
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:47	GN41375-CCV1	1		
10:00	GN41375-CCB1	1		
10:31	GN41375-ICV1	1		
10:43	GN41375-ICB1	1		
12:42	F76426-13	1		
13:27	F76426-15	1		
14:13	ZZZZZZ	1		
14:42	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:50	GN41375-CCV2	1		
16:01	GN41375-CCB2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: F76426
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091510S1.TXT Date Analyzed: 09/15/10 Methods: SW846 9060A MOD
Run ID: GN41375 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN41375-CCV1	Total Organic Carbon	19600	1000	500	20000	98.0	90-110
GN41375-CCB1	Total Organic Carbon	500 U	1000	500			
GN41375-ICV1	Total Organic Carbon	21800	1000	500	20000	109.0	90-110
GN41375-ICB1	Total Organic Carbon	500 U	1000	500			
GN41375-CCV2	Total Organic Carbon	21600	1000	500	20000	108.0	90-110
GN41375-CCB2	Total Organic Carbon	500 U	1000	500			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: F76426-2 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-09

Wet Weight (Total)	7.46	g
Tare Weight	1.03	g
Dry Weight (Total)	6.2	g
Solids, Percent	80.4	%

Sample: F76426-4 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-10

Wet Weight (Total)	9.75	g
Tare Weight	1.04	g
Dry Weight (Total)	8	g
Solids, Percent	79.9	%

Sample: F76426-7 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-11

Wet Weight (Total)	7.56	g
Tare Weight	1.04	g
Dry Weight (Total)	6.3	g
Solids, Percent	80.7	%

Sample: F76426-9 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-12

Wet Weight (Total)	6.14	g
Tare Weight	1.02	g
Dry Weight (Total)	5.07	g
Solids, Percent	79.1	%

Sample: F76426-11 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-13

Wet Weight (Total)	7.03	g
Tare Weight	1.06	g
Dry Weight (Total)	5.78	g
Solids, Percent	79.1	%

Sample: F76426-13 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-14

Wet Weight (Total)	6.08	g
Tare Weight	1	g
Dry Weight (Total)	5.08	g
Solids, Percent	80.3	%

Percent Solids Raw Data Summary

Job Number: F76426
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: F76426-15 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-15

Wet Weight (Total)	6.24	g
Tare Weight	1.02	g
Dry Weight (Total)	5.2	g
Solids, Percent	80.1	%

General Chemistry

Raw Data

TOC ANALYSIS LOG, Solid

DATE:	09-13-10
ANALYST:	WN
INSTRUMENT:	TOC1
INST. FILE NAME:	toccalso 09-13-10 cu

METHODS:	SW846 9060A
METHOD FILE:	SSM-COPY 2
CALIB. DATE:	09-13-10
GN BATCH:	calibration

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC 1206
CCV:	TOC 1211
QC:	TOC 1207

Sample ID		Bottle #	Rep 1 mg	Rep 2 mg	Rep 3 mg	Rep 4 mg	HCL added (y / n)	GP BATCH	COMMENTS
Cal curve - Standard	1	—	100	100	—	—	y		Blank
	2	—	100	100	—	—			TOC 1208
	3	—	100	100	—	—			TOC 1209
	4	—	100	100	—	—			TOC 1210
	5	—	100	100	—	—			TOC 1211
	6	—	100	100 E	100	—			TOC 1212
	7	—	100	100	—	—			TOC 1213

WN 09-13-10

Oven ID: TOC OVEN

Thermometer ID: 212

Therm Corr Factor: 0

Oven Temperature:

Observed Temp: 75°C

Corrected Temp: 75°C

Analyst Signature: WN 09-13-10

Acid Lot# #32032

Glass Wool Lot# GC 646

Balance ID AdvPro4

TOC ANALYSIS LOG, Solid

DATE:	09-14-10
ANALYST:	WM
INSTRUMENT:	TOC1
INST. FILE NAME:	toc 091410 sl txt

METHODS:	SW846 9060A
METHOD FILE:	SSM - COPY 2
CALIB. DATE:	09-13 10
GN BATCH:	41365

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC 1206
CCV:	TOC 1211
QC:	TOC 1206

Sample ID	Bottle #	Rep 1 mg	Rep 2 mg	Rep 3 mg	Rep 4 mg	HCL added (y / n)	GP BATCH	COMMENTS
low	—	100	100	—	—	y		TOC 1208
high	—	100	100	—	—			TOC 1213
CCV	—	100	100	—	—			
CCB	—	100	100	100 E	—			
ICV	—	100	100	—	—			
ICB	—	100	100	—	—			
MB1	—	100	100	100	100		15611	
B1	—	100	100	100	100			
S1 (F76426-9)	1	100	100	100	100			
D1 (F76426-9)	1	100	100	100	100			
F76426-9	1	100	100	100	100			
-2	1	100	100	100	100			
-4	1	100	100	100	100			
-7	1	100	100 E/100	100	100			
CCV	—	100	100	—	—			
CCB	—	100	100	—	—			
F76426-11	1	100	100	100	100			
CCV	—	100	100	—	—			
CCB	—	100	100	—	—	↓	↓	

Oven ID: TOC Oven

Thermometer ID: 212

Therm Corr Factor: 0

Oven Temperature:

Observed Temp: 75°C

Corrected Temp: 75°C

Acid Lot# H32032

Glass Wool Lot# GC 646

Analyst Signature: WM 09-15-10

Balance ID Adv Pro 4

C:\TOC3[illegible]\Data\[illegible] 09-14-10 so.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	low	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:1270mg			Completed		9/14/2010 8:31
2	Unknown	SSM-TC	high	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:50050mg			Completed		9/14/2010 9:17
3	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20541mg			Completed		9/14/2010 10:3
4	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 10:5
5	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20707mg			Completed		9/14/2010 11:0
6	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 11:1
7	Unknown	SSM-TC	GP15611-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 11:4
8	Unknown	SSM-TC	GP15611-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21007mg			Completed		9/14/2010 12:4
9	Unknown	SSM-TC	GP15611-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:66829mg			Completed		9/14/2010 1:23
10	Unknown	SSM-TC	GP15611-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:26105mg			Completed		9/14/2010 2:02
11	Unknown	SSM-TC	F76426-9	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:34308mg			Completed		9/14/2010 2:36
12	Unknown	SSM-TC	F76426-2	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:67031mg			Completed		9/14/2010 3:21
13	Unknown	SSM-TC	F76426-4	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52784mg			Completed		9/14/2010 3:57
14	Unknown	SSM-TC	F76426-7	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:37059mg			Completed		9/14/2010 4:46
15	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21635mg			Completed		9/14/2010 5:01
16	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 5:13
17	Unknown	SSM-TC	F76426-11	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:73063mg			Completed		9/14/2010 5:53
18	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21773mg			Completed		9/14/2010 6:06
19	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 6:17

9/15/2010 8:40:59 AM

1/1

C:\TOC3201\Data\toc 09-14-10 so ud.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20541mg			Completed		9/14/2010 10:3
2	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 10:5
3	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20707mg			Completed		9/14/2010 11:0
4	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 11:1
5	Unknown	SSM-TC	GP15611-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 11:4
6	Unknown	SSM-TC	GP15611-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21007mg			Completed		9/14/2010 12:4
7	Unknown	SSM-TC	GP15611-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:66829mg			Completed		9/14/2010 1:23
8	Unknown	SSM-TC	GP15611-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:26105mg			Completed		9/14/2010 2:02
9	Unknown	SSM-TC	F76426-9	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:34308mg			Completed		9/14/2010 2:36
10	Unknown	SSM-TC	F76426-2	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:67031mg			Completed		9/14/2010 3:21
11	Unknown	SSM-TC	F76426-4	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52784mg			Completed		9/14/2010 3:57
12	Unknown	SSM-TC	F76426-7	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:37059mg			Completed		9/14/2010 4:46
13	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21635mg			Completed		9/14/2010 5:01
14	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 5:13
15	Unknown	SSM-TC	F76426-11	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:73063mg			Completed		9/14/2010 5:53
16	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21773mg			Completed		9/14/2010 6:06
17	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/14/2010 6:17

Instr.Information

System	SSM-COPY 2
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Sample

Sample Name:	low
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

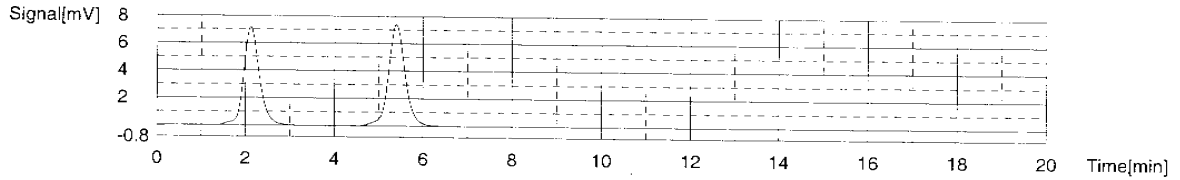
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1270mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	16.91	16.91	1215685ug	1216mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 8:24:22 AM
2	18.83	18.83	1324227ug	1324mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 8:31:40 AM

Mean Area	17.87
Mean CNV	17.87
Mean Conc.	1270mg



Sample

Sample Name:	high
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

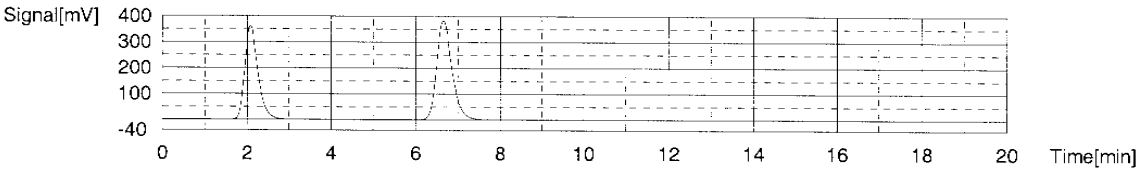
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:50050mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	792.3	792.3	45050132ug	45050mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 9:11:53 AM
2	969.2	969.2	55050665ug	55051mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 9:17:46 AM

Mean Area 880.8
Mean CNV 880.8
Mean Conc. 50050mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

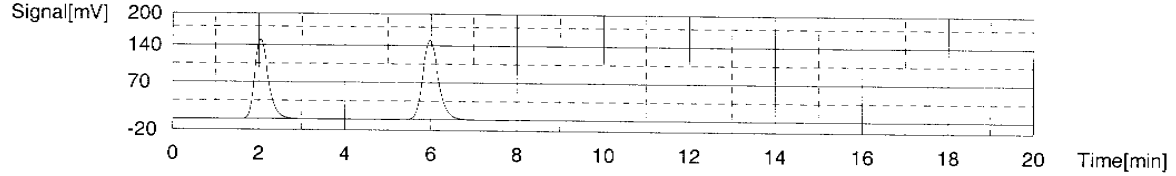
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:20541mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	332.6	332.6	19062313ug	19062mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 10:27:27 AM
2	384.9	384.9	22018943ug	22019mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 10:34:23 AM

Mean Area 358.8
Mean CNV 358.8
Mean Conc. 20541mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

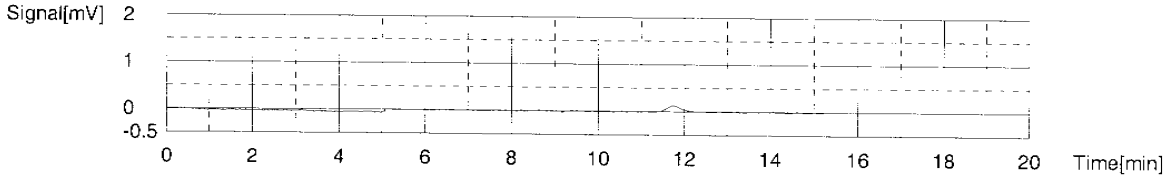
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 10:40:23 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 10:46:30 AM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 10:52:54 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: ICV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

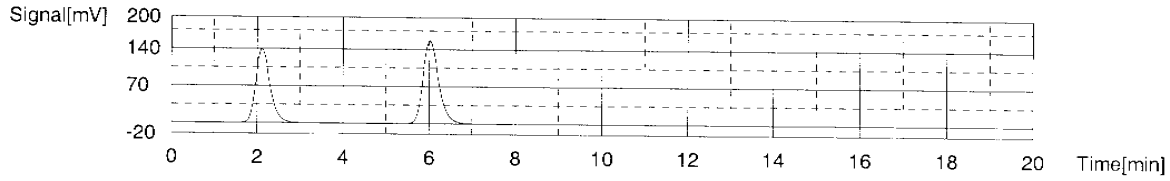
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:20707mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	324.3	324.3	18593096ug	18593mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 10:58:46 AM
2	399.1	399.1	22821699ug	22822mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:04:25 AM

Mean Area 361.7
Mean CNV 361.7
Mean Conc. 20707mg



Sample

Sample Name: ICB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

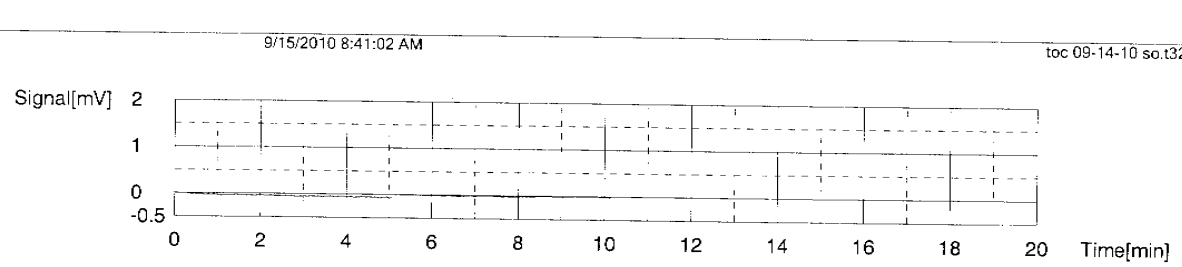
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:10:21 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:17:26 AM

9/15/2010 8:41:02 AM toc 09-14-10 so.t32

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15611-MB1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

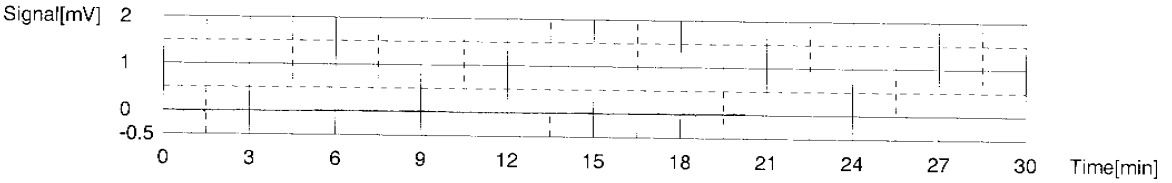
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:23:22 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:29:34 AM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:35:23 AM
4	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 11:41:18 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15611-B1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

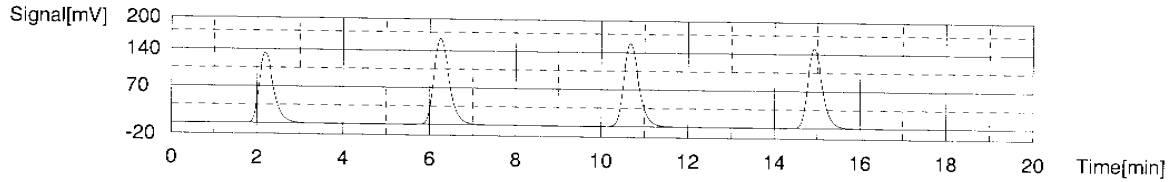
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21007mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	311.4	311.4	17863832ug	17864mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 12:24:02 PM
2	405.5	405.5	23183505ug	23184mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 12:30:47 PM
3	387.8	387.8	22182886ug	22183mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 12:36:53 PM
4	363.3	363.3	20797849ug	20798mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 12:42:39 PM

Mean Area 367.0
Mean CNV 367.0
Mean Conc. 21007mg



Sample

Sample Name: GP15611-S1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

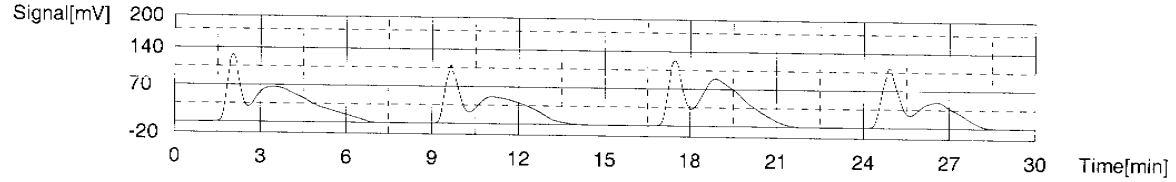
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:66829mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1341	1341	76069311ug	76069mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 12:53:07 PM
2	1017	1017	57752901ug	57753mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 1:05:05 PM
3	1409	1409	79913495ug	79913mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 1:14:37 PM
4	943.2	943.2	53580830ug	53581mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 1:23:47 PM

Mean Area 1178
Mean CNV 1178
Mean Conc. 66829mg



Sample

Sample Name: GP15611-D1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

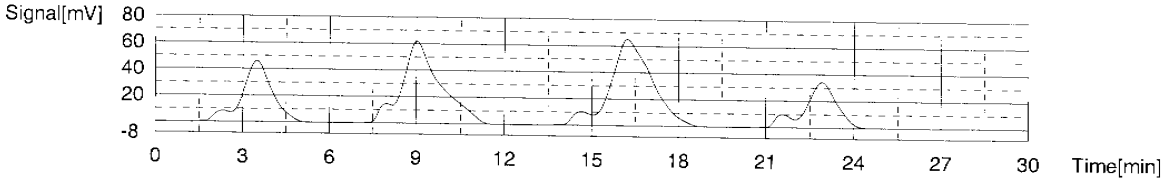
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:26105mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	333.2	333.2	19096232ug	19096mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 1:31:04 PM
2	566.0	566.0	32256911ug	32257mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 1:38:33 PM
3	662.4	662.4	37706608ug	37707mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 1:53:03 PM
4	267.1	267.1	15359458ug	15359mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 2:02:13 PM

Mean Area 457.2
Mean CNV 457.2
Mean Conc. 26105mg



Sample

Sample Name: F76426-9
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

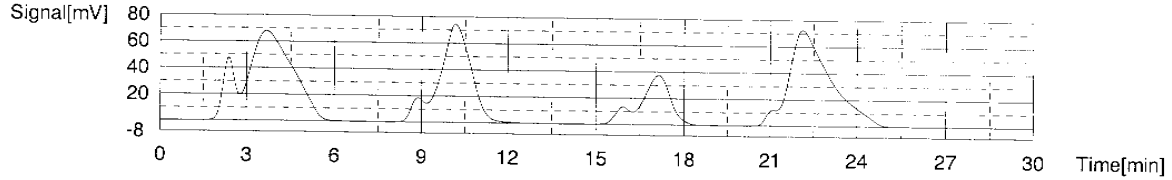
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:34308mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	812.7	812.7	46203387ug	46203mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 2:10:15 PM
2	587.5	587.5	33472352ug	33472mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 2:19:15 PM
3	276.1	276.1	15868247ug	15868mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 2:26:34 PM
4	732.8	732.8	41686470ug	41686mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 2:36:55 PM

Mean Area 602.3
Mean CNV 602.3
Mean Conc. 34308mg



Sample

Sample Name: F76426-2
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

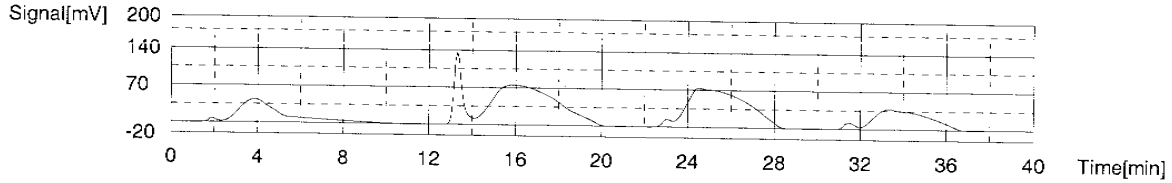
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:67031mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	647.5	647.5	36864280ug	36864mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 2:49:46 PM
2	1941	1941	109988587ug	109989mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:01:16 PM
3	1427	1427	80931074ug	80931mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:10:53 PM
4	709.0	709.0	40341006ug	40341mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:21:22 PM

Mean Area 1181
Mean CNV 1181
Mean Conc. 67031mg



Sample

Sample Name: F76426-4
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

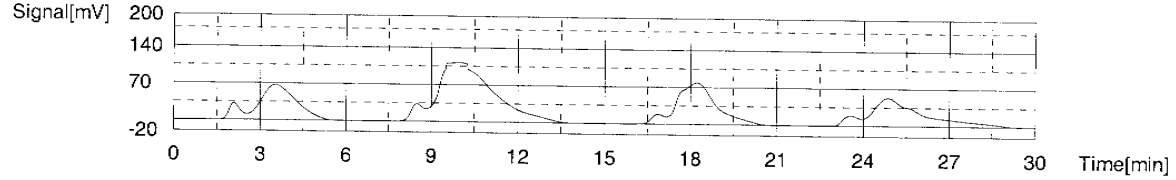
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:52784mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	658.1	658.1	37463520ug	37464mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:30:26 PM
2	1560	1560	88449847ug	88450mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:39:52 PM
3	784.1	784.1	44586568ug	44587mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:47:57 PM
4	714.2	714.2	40634973ug	40635mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 3:57:48 PM

Mean Area	929.1
Mean CNV	929.1
Mean Conc.	52784mg



Sample

Sample Name:	F76426-7
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

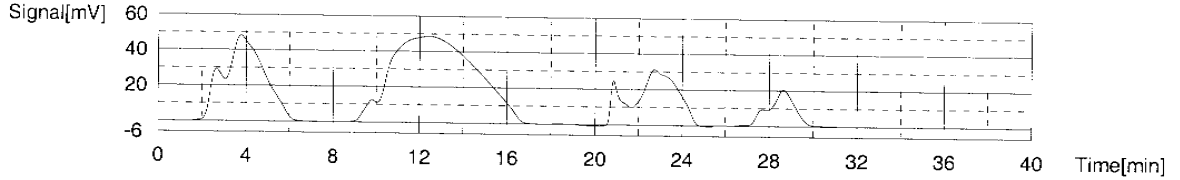
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:37059mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	630.5	630.5	35903234ug	35903mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 4:06:48 PM
2	1346	1346	76351971ug	76352mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 4:17:39 PM
3	1.048	1.048	318972ug	319.0mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 4:21:40 PM
4	458.1	458.1	26157095ug	26157mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 4:32:16 PM
5	169.2	169.2	9824963ug	9825mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 4:46:50 PM

Mean Area	650.9
Mean CNV	650.9
Mean Conc.	37059mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

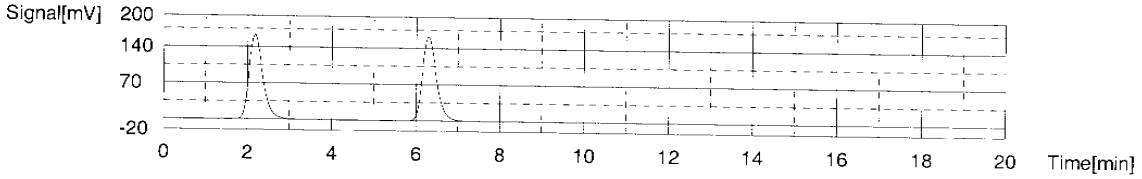
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21635mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	377.6	377.6	21606258ug	21606mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 4:56:06 PM
2	378.6	378.6	21662791ug	21663mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:01:19 PM

Mean Area 378.1
Mean CNV 378.1
Mean Conc. 21635mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

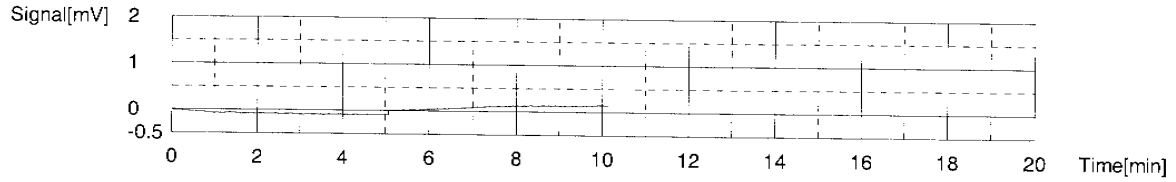
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:07:57 PM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:13:56 PM

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



Sample

Sample Name:	F76426-11
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

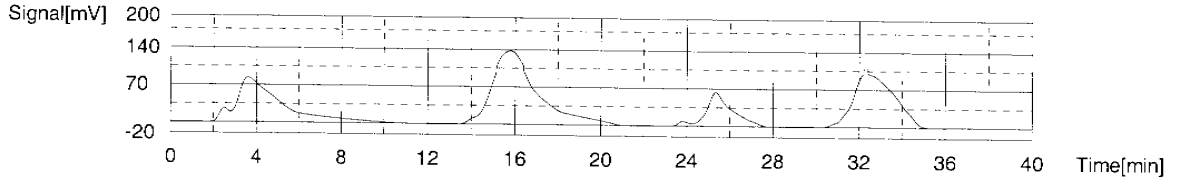
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:73063mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1247	1247	70755291ug	70755mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:26:36 PM
2	2005	2005	113606644ug	113607mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:37:19 PM
3	547.3	547.3	31199761ug	31200mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:45:29 PM
4	1352	1352	76691164ug	76691mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 5:53:53 PM

Mean Area	1288
Mean CNV	1288
Mean Conc.	73063mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

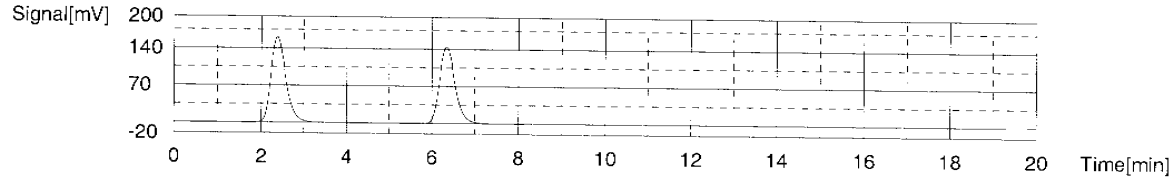
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21773mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	396.1	396.1	22652103ug	22652mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 6:00:51 PM
2	365.0	365.0	20893954ug	20894mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 6:06:05 PM

Mean Area 380.6
Mean CNV 380.6
Mean Conc. 21773mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

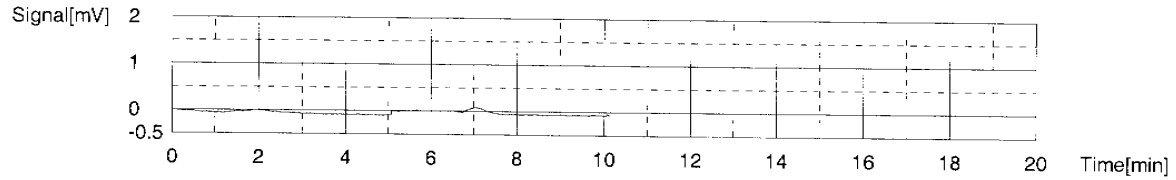
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 6:11:49 PM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/14/2010 6:17:09 PM

9/15/2010 8:41:02 AM toc 09-14-10 so.t32

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



14/14

TOC-V Cal Curve Information
toccalso 09-13-10.2010_09_13_10_35_12.cal

Date of Creation	10:10:40 AM 9/13/2010
User	
System	SSM-COPY 2

Cal. Curve

Sample Name:	Untitled
Sample ID:	Untitled
Cal. Curve:	toccalso 09-13-10.2010_09_13_10_35_12.cal
Status	Completed
Comment:	

Type	Anal.	Density
Standard	SSM-TC	1.000mg/uL

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:41:23 AM
2	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:47:27 AM

Mean Area	0.000
Mean CNV	0.000
SD Area	0.000
CV Area	0.00%

AbsC: 1000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	18.00	18.00000000ug		100.0mg	100uL	*******		9/13/2010 10:52:39 AM
2	18.05	18.05000000ug		100.0mg	100uL	*******		9/13/2010 10:57:27 AM

Mean Area	18.02
Mean CNV	18.02
SD Area	0.03536
CV Area	0.20%

AbsC: 5000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	84.70	84.70000000ug		100.0mg	100uL	*******		9/13/2010 11:02:35 AM
2	89.80	89.80000000ug		100.0mg	100uL	*******		9/13/2010 11:07:25 AM

Mean Area	87.25
Mean CNV	87.25
SD Area	3.606
CV Area	4.13%

AbsC: 10000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	156.9	156.9000000ug		100.0mg	100uL	*******		9/13/2010 11:12:31 AM
2	170.6	170.6000000ug		100.0mg	100uL	*******		9/13/2010 11:24:34 AM

Mean Area	163.8
Mean CNV	163.8
SD Area	9.687
CV Area	5.92%

AbsC: 20000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	328.9	328.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:32:30 AM
2	372.2	372.2	000000ug	100.0mg	100uL	*******		9/13/2010 11:38:50 AM

Mean Area	350.6
Mean CNV	350.6
SD Area	30.62
CV Area	8.73%

AbsC: 25000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	444.0	444.0	000000ug	100.0mg	100uL	*******		9/13/2010 11:44:48 AM
2	1.004	1.004	000000ug	100.0mg	100uL	*******	E	9/13/2010 12:28:52 PM
3	405.4	405.4	000000ug	100.0mg	100uL	*******		9/13/2010 12:34:58 PM

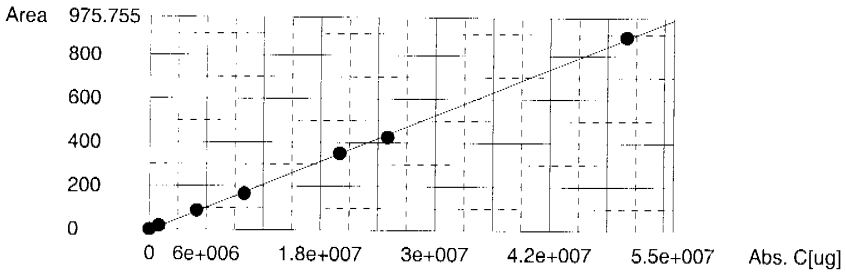
Mean Area	424.7
Mean CNV	424.7
SD Area	27.29
CV Area	6.43%

AbsC: 50000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	877.0	877.0	000000ug	100.0mg	100uL	*******		9/13/2010 12:41:26 PM
2	897.1	897.1	000000ug	100.0mg	100uL	*******		9/13/2010 12:47:09 PM

Mean Area	887.0
Mean CNV	887.0
SD Area	14.21
CV Area	1.60%

Slope:	0.00002
Intercept	-4.594
r^2	0.999407
Zero Shift	No



TOC ANALYSIS LOG, Solid

DATE:	09-15-10
ANALYST:	LLN
INSTRUMENT:	TOC1
INST. FILE NAME:	toc091510s1.txt

METHODS:	SW846 9060A
METHOD FILE:	SSM - Copy 2
CALIB. DATE:	09-13-10
GN BATCH:	41375

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC 1206
CCV:	TOC 1211
QC:	TOC 1206

Sample ID	Bottle #	Rep 1 mg	Rep 2 mg	Rep 3 mg	Rep 4 mg	HCL added (y / n)	GP BATCH	COMMENTS
low	—	100	100 E	100	—	y		TOC 1208
high	—	100	100	—	—			TOC 1213
CCV	—	100	100	—	—			
CCB	—	100	100	—	—			
ICV	—	100	100	—	—			
ICB	—	100	100	—	—			
MB1	—	100	100	100	100	~~ys~~	15611	*LLN 09-15-10
B1	—	100	100	100	100			
F76426-13	1	100	100	100	100			
F76426-15	1	100	100	100 E/100	100			
F76536-1	1	100	100	100	100			
-2	1	100	100	100	100			
-3	1	100	100	100	100			
CCV	—	100 E	100	100	—			
CCB	—	100	100					
				LLN 09-15-10				

Oven ID: TOC oven

Thermometer ID: 212

Therm Corr Factor: 0

Oven Temperature:

Observed Temp: 75°C

Corrected Temp: 75°C

Acid Lot# H132032

Glass Wool Lot# GC 646

Balance ID Adv104

Analyst Signature: LLN 09-15-10

C:\TOC3201\Data\toc 09-15-10 so.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	low	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:1292mg			Completed		9/15/2010 9:27
2	Unknown	SSM-TC	high	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:51967mg			Completed		9/15/2010 9:41
3	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:19554mg			Completed		9/15/2010 9:54
4	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 10:0
5	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21827mg			Completed		9/15/2010 10:3
6	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 10:5
7	Unknown	SSM-TC	GP15611-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 11:1
8	Unknown	SSM-TC	GP15611-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21936mg			Completed		9/15/2010 11:4
9	Unknown	SSM-TC	F76426-13	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52575mg			Completed		9/15/2010 1:17
10	Unknown	SSM-TC	F76426-15	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:30772mg			Completed		9/15/2010 2:03
11	Unknown	SSM-TC	F76536-1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:57349mg			Completed		9/15/2010 2:34
12	Unknown	SSM-TC	F76536-2	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:60353mg			Completed		9/15/2010 3:04
13	Unknown	SSM-TC	F76536-3	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:17136mg			Completed		9/15/2010 3:37
14	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21567mg			Completed		9/15/2010 3:55
15	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 4:07

9/15/2010 4:09:22 PM

1/1

C:\TOC3201\Data\toc 09-15-10 so ud.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:19554mg			Completed		9/15/2010 9:54
2	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 10:0
3	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21827mg			Completed		9/15/2010 10:3
4	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 10:5
5	Unknown	SSM-TC	F76426-13	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52575mg			Completed		9/15/2010 1:17
6	Unknown	SSM-TC	F76426-15	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:30772mg			Completed		9/15/2010 2:03
7	Unknown	SSM-TC	F76536-1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:57349mg			Completed		9/15/2010 2:34
8	Unknown	SSM-TC	F76536-2	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:60353mg			Completed		9/15/2010 3:04
9	Unknown	SSM-TC	F76536-3	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:17136mg			Completed		9/15/2010 3:37
10	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21567mg			Completed		9/15/2010 3:55
11	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/15/2010 4:07

Instr.Information

System	SSM-COPY 2
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Sample

Sample Name:	low
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

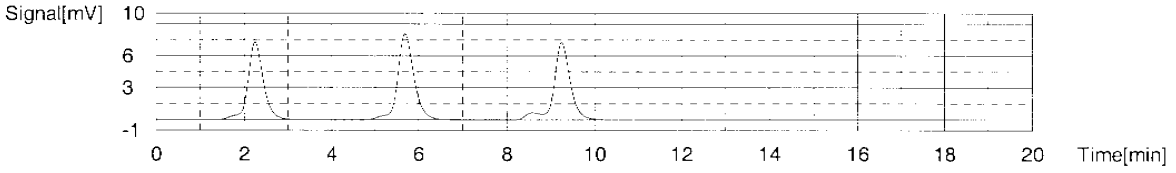
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1292mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	17.52	17.52	1250170ug	1250mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:16:44 AM
2	20.63	20.63	1425985ug	1426mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:21:25 AM
3	19.01	19.01	1334403ug	1334mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:27:31 AM

Mean Area	18.27
Mean CNV	18.27
Mean Conc.	1292mg



Sample

Sample Name:	high
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

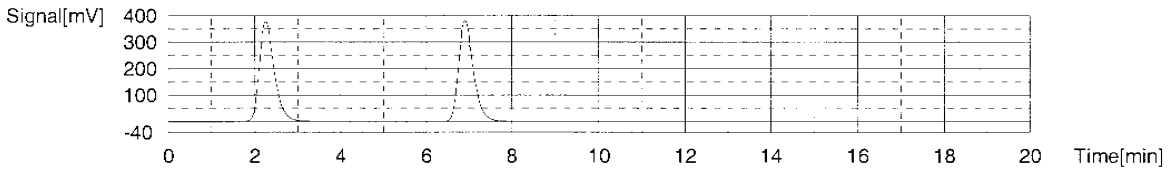
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:51967mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	907.0	907.0	51534367ug	51534mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:34:24 AM
2	922.3	922.3	52399309ug	52399mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:41:09 AM

Mean Area 914.7
Mean CNV 914.6
Mean Conc. 51967mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

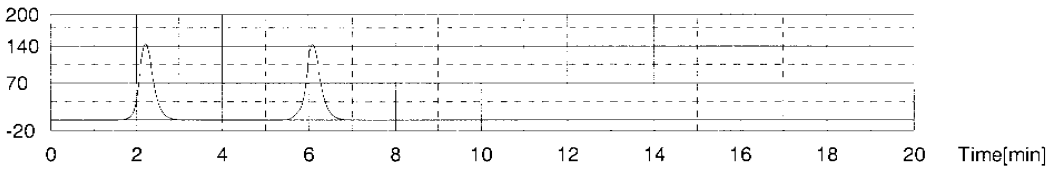
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:19554mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	339.8	339.8	19469344ug	19469mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:47:15 AM
2	342.8	342.8	19638940ug	19639mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 9:54:06 AM

Mean Area	341.3
Mean CNV	341.3
Mean Conc.	19554mg



Sample

Sample Name:	CCB
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

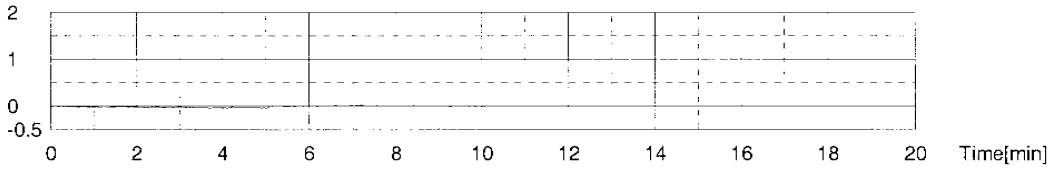
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:00:20 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:06:21 AM

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



Sample

Sample Name: ICV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

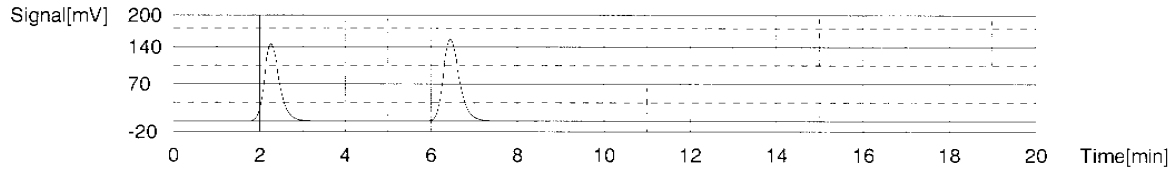
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21827mg

1 Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	355.9	355.9	20379511ug	20380mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:31:07 AM
2	407.1	407.1	23273956ug	23274mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:36:54 AM

Mean Area 381.5
Mean CNV 381.5
Mean Conc. 21827mg



Sample

Sample Name: ICB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

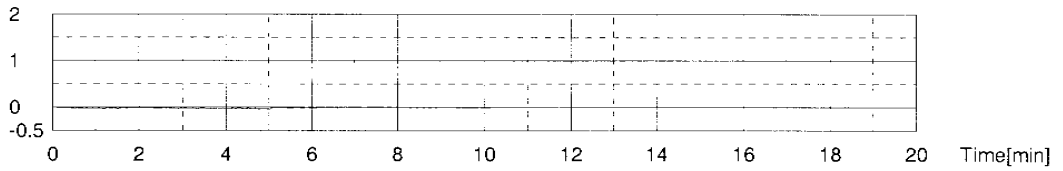
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:43:13 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:50:08 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15611-MB1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

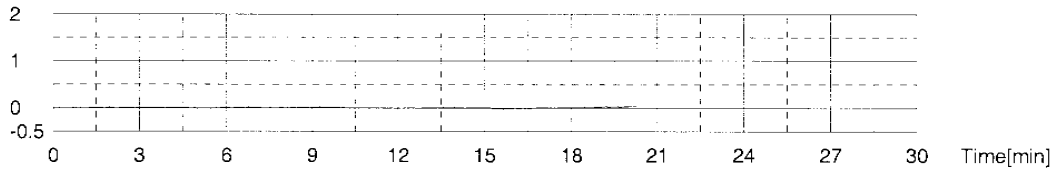
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 10:58:33 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:05:09 AM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:11:07 AM
4	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:17:13 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15611-B1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

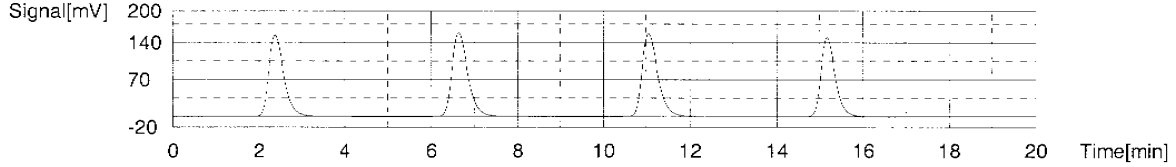
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21936mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	380.2	380.2	21753242ug	21753mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:24:07 AM
2	407.4	407.4	23290916ug	23291mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:30:06 AM
3	398.9	398.9	22810393ug	22810mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:35:57 AM
4	347.2	347.2	19887682ug	19888mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 11:41:21 AM

Mean Area 383.4
Mean CNV 383.4
Mean Conc. 21936mg



Sample

Sample Name: F76426-13
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

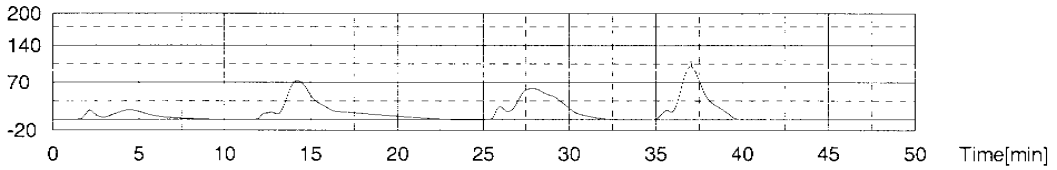
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:52575mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	354.6	354.6	20306019ug	20306mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 12:42:37 PM
2	1181	1181	67024170ug	67024mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 12:57:36 PM
3	1096	1096	62218939ug	62219mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 1:08:44 PM
4	1070	1070	60749104ug	60749mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 1:17:38 PM

Mean Area 925.4
Mean CNV 925.4
Mean Conc. 52575mg



Sample

Sample Name: F76426-15
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

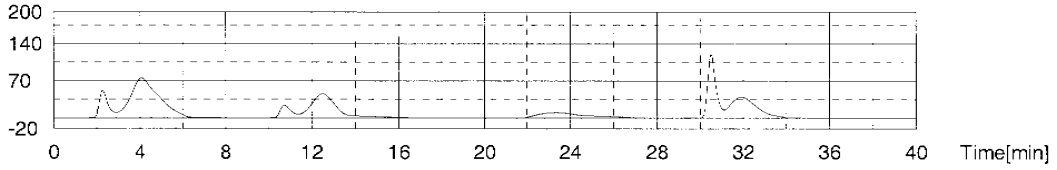
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:30772mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	849.7	849.7	48295076ug	48295mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 1:27:36 PM
2	473.7	473.7	27038996ug	27039mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 1:38:18 PM
3	1.492	1.492	344073ug	344.1mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 1:42:11 PM
4	170.2	170.2	9881495ug	9881mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 1:55:04 PM
5	665.3	665.3	37870552ug	37871mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:03:47 PM

Mean Area 539.7
Mean CNV 539.7
Mean Conc. 30772mg



Sample

Sample Name:	F76536-1
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

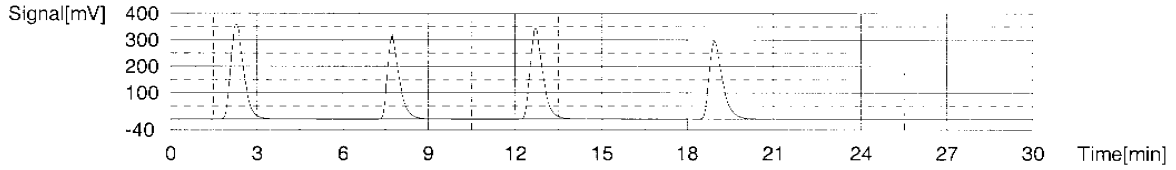
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:57349mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1116	1116	63349582ug	63350mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:13:40 PM
2	911.7	911.7	51800068ug	51800mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:20:20 PM
3	1057	1057	60014186ug	60014mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:27:43 PM
4	954.7	954.7	54230950ug	54231mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:34:37 PM

Mean Area	1010
Mean CNV	1010
Mean Conc.	57349mg



Sample

Sample Name:	F76536-2
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:60353mg

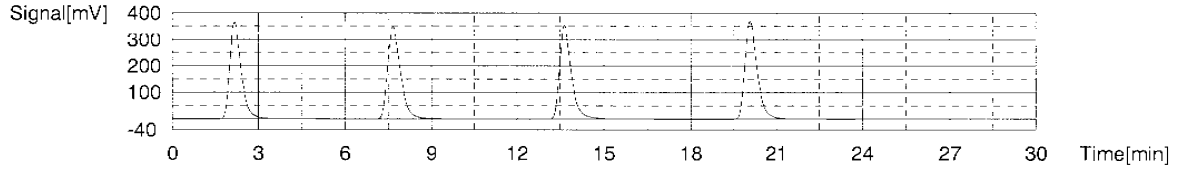
1. Det

Raw Data GN41375: Total Organic Carbon page 11 of 16
QC Reports:
GN41375
484 of 537
F76426
8.2 8

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1029	1029	58431287ug	58431mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:42:14 PM
2	1093	1093	62049343ug	62049mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:50:04 PM
3	1006	1006	57131048ug	57131mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 2:57:31 PM
4	1124	1124	63801839ug	63802mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:04:47 PM

Mean Area 1063
Mean CNV 1063
Mean Conc. 60353mg



Sample

Sample Name: F76536-3
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

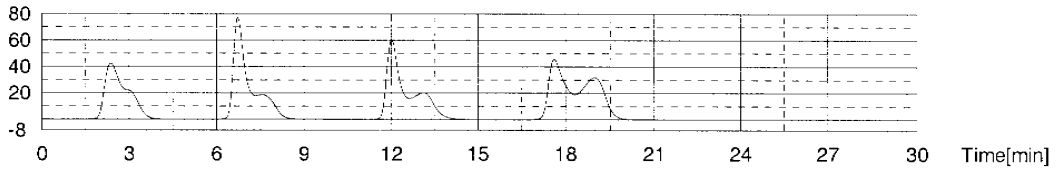
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:17136mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	227.1	227.1	13098173ug	13098mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:15:12 PM
2	301.0	301.0	17275897ug	17276mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:22:40 PM
3	298.4	298.4	17128914ug	17129mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:29:42 PM
4	367.6	367.6	21040937ug	21041mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:37:20 PM

Mean Area 298.5
Mean CNV 298.5
Mean Conc. 17136mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

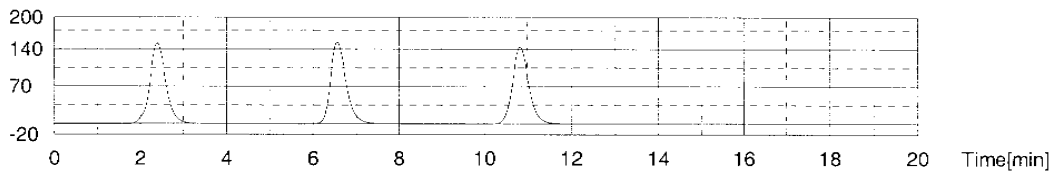
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21567mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	390.5	390.5	22335523ug	22336mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:45:11 PM
2	381.3	381.3	21815427ug	21815mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:50:32 PM
3	372.5	372.5	21317945ug	21318mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 3:55:52 PM

Mean Area 376.9
Mean CNV 376.9
Mean Conc. 21567mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

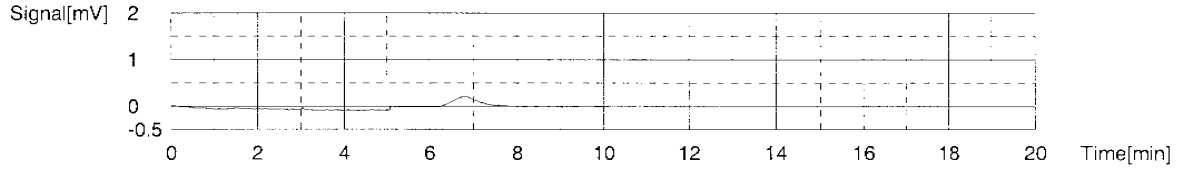
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 4:01:50 PM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/15/2010 4:07:55 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



TOC-V Cal Curve Information
toccalso 09-13-10.2010_09_13_10_35_12.cal

Date of Creation 10:10:40 AM 9/13/2010
User
System SSM-COPY 2

Cal. Curve

Sample Name: Untitled
Sample ID: Untitled
Cal. Curve: toccalso 09-13-10.2010_09_13_10_35_12.cal
Status Completed
Comment:

Type	Anal.	Density
Standard	SSM-TC	1.000mg/uL

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:41:23 AM
2	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:47:27 AM

Mean Area 0.000
Mean CNV 0.000
SD Area 0.000
CV Area 0.00%

AbsC: 1000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	18.00	18.00	000000ug	100.0mg	100uL	*******		9/13/2010 10:52:39 AM
2	18.05	18.05	000000ug	100.0mg	100uL	*******		9/13/2010 10:57:27 AM

Mean Area 18.02
Mean CNV 18.02
SD Area 0.03536
CV Area 0.20%

AbsC: 5000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	84.70	84.70	000000ug	100.0mg	100uL	*******		9/13/2010 11:02:35 AM
2	89.80	89.80	000000ug	100.0mg	100uL	*******		9/13/2010 11:07:25 AM

Mean Area 87.25
Mean CNV 87.25
SD Area 3.606
CV Area 4.13%

AbsC: 10000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	156.9	156.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:12:31 AM
2	170.6	170.6	000000ug	100.0mg	100uL	*******		9/13/2010 11:24:34 AM

Mean Area 163.8
Mean CNV 163.8
SD Area 9.687
CV Area 5.92%

AbsC: 20000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	328.9	328.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:32:30 AM
2	372.2	372.2	000000ug	100.0mg	100uL	*******		9/13/2010 11:38:50 AM

Mean Area 350.6
Mean CNV 350.6
SD Area 30.62
CV Area 8.73%

AbsC: 25000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	444.0	444.0	000000ug	100.0mg	100uL	*******		9/13/2010 11:44:48 AM
2	1.004	1.004	000000ug	100.0mg	100uL	*******	E	9/13/2010 12:28:52 PM
3	405.4	405.4	000000ug	100.0mg	100uL	*******		9/13/2010 12:34:58 PM

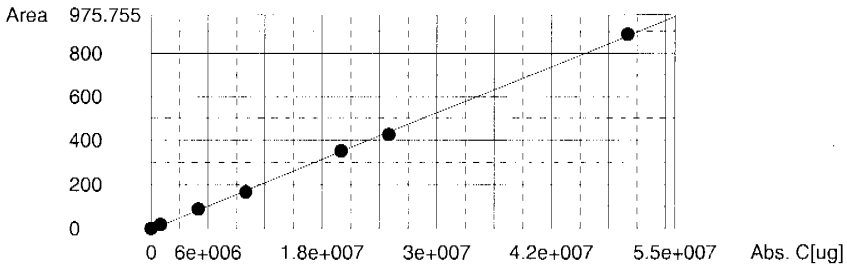
Mean Area 424.7
Mean CNV 424.7
SD Area 27.29
CV Area 6.43%

AbsC: 50000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	877.0	877.0	000000ug	100.0mg	100uL	*******		9/13/2010 12:41:26 PM
2	897.1	897.1	000000ug	100.0mg	100uL	*******		9/13/2010 12:47:09 PM

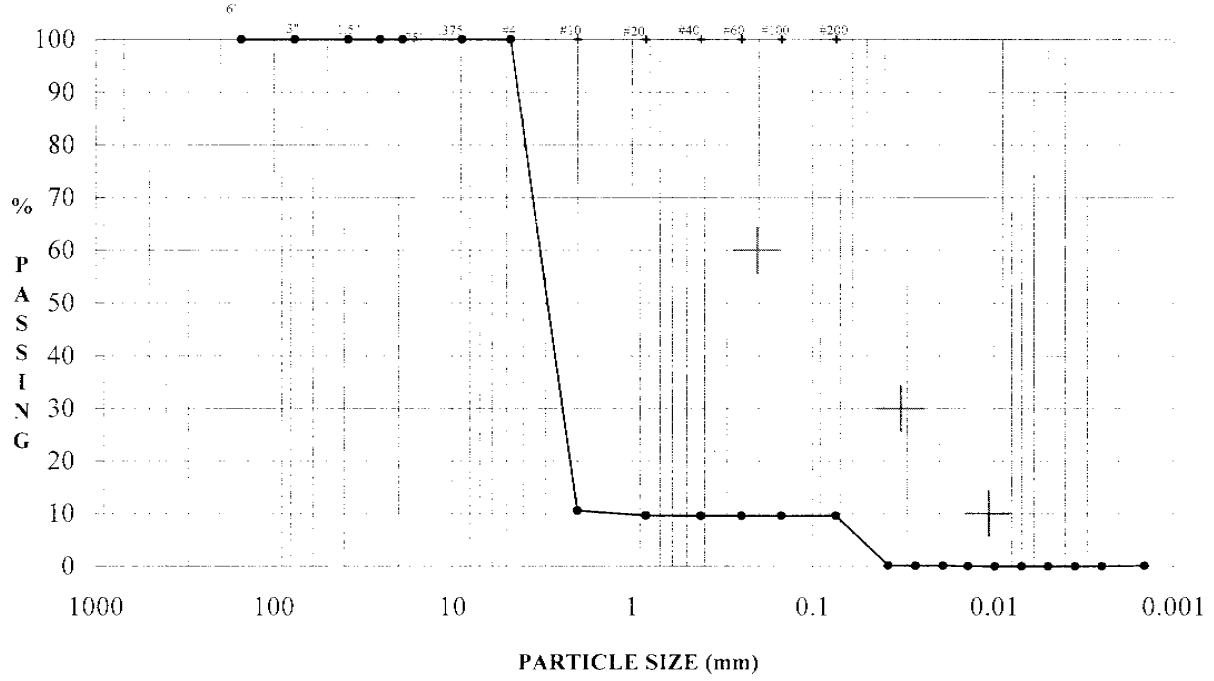
Mean Area 887.0
Mean CNV 887.0
SD Area 14.21
CV Area 1.60%

Slope: 0.00002
Intercept -4.594
r^2 0.999407
Zero Shift No



PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	10.6%
#20	9.6%
#40	9.6%
#60	9.6%
#100	9.6%
#200	9.6%

Hydrometer Data	
Particle Diameter	% Finer
0.038	0.2%
0.027	0.1%
0.019	0.1%
0.014	0.1%
0.010	0.0%
0.007	0.0%
0.005	0.0%
0.004	0.0%
0.002	0.0%

DESCRIPTION

Sample.Bottle#:	F76426-2.1	Depth:	-
		USCS:	-
Wet Color:	brown w/rocks		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	19.5
G_S:	2.65
% Gravel	0.0
% Sand	90.4
% Fines	9.6

C_C	0.5
C_U	19.1
LL	-
PL	-
PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN 41406

F76426-2.1

Tare weight: 0.99

Wet weight: 16.16

DRY weight: 5.59

90.7 % solid

9.3 % moist

8.3

tare #			Total Wt (g)	16263	
wt soil&tare,moist (g)			Wt Split #10 (g)	17.21	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

SIEVE	wt ret (g)	% ret	% pass	SIEVE	
		#VALUE!	#VALUE!	3.000	coarse gravel
coarse gravel		#VALUE!	#VALUE!	1.500	
		#VALUE!	#VALUE!	1.000	
fine gravel		#VALUE!	#VALUE!	0.750	fine gravel
		#VALUE!	#VALUE!	0.375	
coarse sand		#VALUE!	#VALUE!	#4	coarse sand
medium sand		#VALUE!	#VALUE!	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #					
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT REFL. CORR.	PERCENT PASSING		
#10	0.00	#VALUE!	#VALUE!	#10	medium sand
#20	15.27	#VALUE!	#VALUE!	#18	
#40	16.33	#VALUE!	#VALUE!	#40	fine sand
#60	16.35	#VALUE!	#VALUE!	#60	
#100	16.35	#VALUE!	#VALUE!	#120	
#200	16.36	#VALUE!	#VALUE!	#200	fines

DATE	TIME	TIME,Cum (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
5/14/10	#VALUE!	2.0	10	22	7	#N/A	#VALUE!
	#VALUE!	4.0	9			#N/A	#VALUE!
	#VALUE!	8.0	8			#N/A	#VALUE!
	#VALUE!	15.0	7			#N/A	#VALUE!
	#VALUE!	30.0	7			#N/A	#VALUE!
	#VALUE!	60.0	7			#N/A	#VALUE!
	#VALUE!	120.0	7			#N/A	#VALUE!
	#VALUE!	240.0	7			#N/A	#VALUE!
	#VALUE!	480.0	6	21	7	#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0				#N/A	#VALUE!

%C GRVL:	#VALUE!				
%F GRVL:	#VALUE!				
%C SAND:	#VALUE!				
%M SAND:	#VALUE!				
%F SAND:	#VALUE!				
%FINES:	#VALUE!				
%TOTAL:	#VALUE!				

Wet Color: brown

Description: poorly sorted

USCS:

DATE #VALUE!

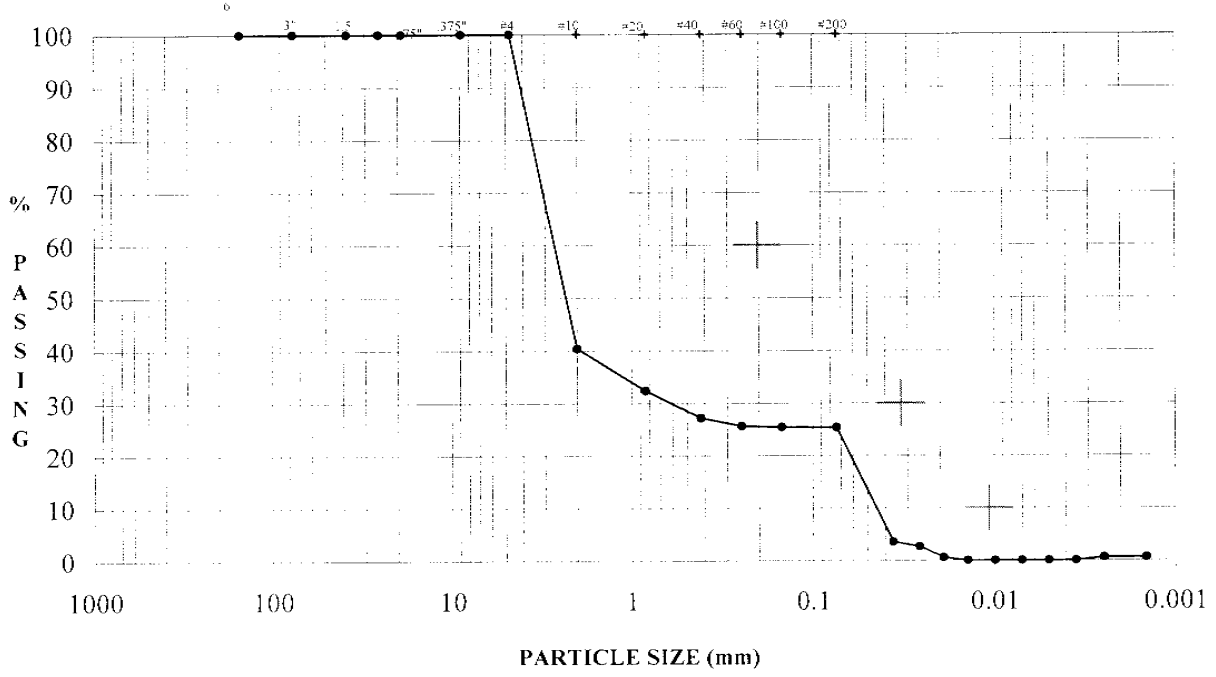
TECH

REVIEW

804

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	40.4%
#20	32.4%
#40	27.2%
#60	25.6%
#100	25.4%
#200	25.4%

Hydrometer Data	
Particle Diameter	% Finer
0.036	3.5%
0.026	2.7%
0.019	0.6%
0.014	0.0%
0.010	0.0%
0.007	0.0%
0.005	0.0%
0.004	0.0%
0.002	0.6%

DESCRIPTION

Sample.Bottle#:	F76426-4.1	Depth:	-
		USCS:	-
Wet Color:	brown w/rocks		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	20.2	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	74.6	PL	-
% Fines	25.4	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN 41406

FT-4210-41

Tare weight: 1.00

Wet weight: 7.28

Dry weight: 6.18

84.9 % solid

15.1 % moist

F1.0

tare #		Total Wt (g)	139.84
wt soil&tare,moist (g)		Wt Split #10 (g)	54.10
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

SIEVE	wt ret (g)	% ret	% pass	SIEVE	
				3.000	coarse gravel
coarse gravel		#VALUE!	#VALUE!	1.500	
		#VALUE!	#VALUE!	1.000	
fine gravel		#VALUE!	#VALUE!	0.750	fine gravel
		#VALUE!	#VALUE!	0.375	
coarse sand		#VALUE!	#VALUE!	#4	coarse sand
medium sand		#VALUE!	#VALUE!	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
mL Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL	-
wt tare (g)		wt tare (g)	0.00	PI	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING		
#10	0.00	#VALUE!	#VALUE!	#10	medium sand
#20	27.25	#VALUE!	#VALUE!	#19	
#40	44.87	#VALUE!	#VALUE!	#40	fine sand
#60	50.17	#VALUE!	#VALUE!	#60	
#100	50.76	#VALUE!	#VALUE!	#120	
#200	50.96	#VALUE!	#VALUE!	#200	fines

DATE	TIME	TIME,CUM (min)	HYDROMETER READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/17/10		2.0	19	22	7	#N/A	#VALUE!
	#VALUE!	4.0	17			#N/A	#VALUE!
	#VALUE!	8.0	15			#N/A	#VALUE!
	#VALUE!	15.0	13			#N/A	#VALUE!
	#VALUE!	30.0	12			#N/A	#VALUE!
	#VALUE!	60.0	12			#N/A	#VALUE!
	#VALUE!	120.0	12			#N/A	#VALUE!
	#VALUE!	240.0	11			#N/A	#VALUE!
	#VALUE!	480.0	11	21	7	#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0				#N/A	#VALUE!

%C GRVL:	#VALUE!		
%F GRVL:	#VALUE!		
%C SAND:	#VALUE!	Wet Color:	
%M SAND:	#VALUE!	Description:	
%F SAND:	#VALUE!		
%FINES:	#VALUE!	USCS:	
%TOTAL:	#VALUE!		

DATE #VALUE!

TECH

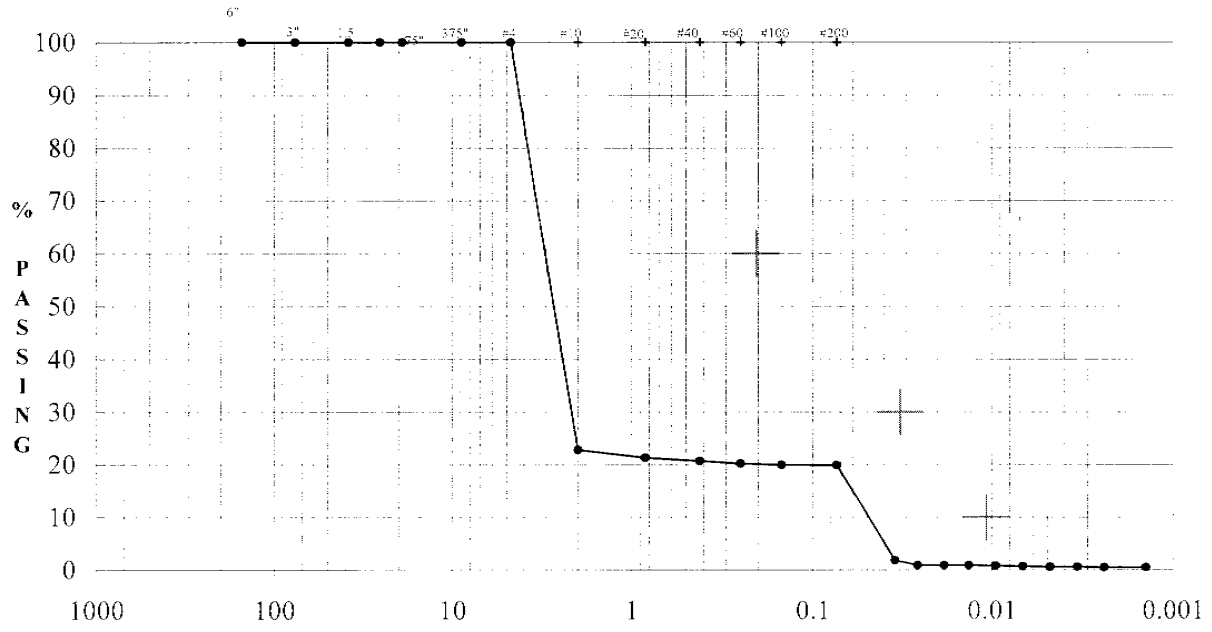
REVIEW

8.3

8

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	22.8%
#20	21.3%
#40	20.7%
#60	20.2%
#100	20.0%
#200	19.9%

Hydrometer Data	
Particle Diameter	% Finer
0.035	1.8%
0.026	0.9%
0.018	0.9%
0.013	0.9%
0.010	0.8%
0.007	0.7%
0.005	0.6%
0.003	0.6%
0.002	0.5%

DESCRIPTION

Sample.Bottle#:	F76426-7.1	Depth:	-
		USCS:	-
Wet Color:	yellow w/rocks		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	19.3	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	80.1	PL	-
% Fines	19.9	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN41406

F76426-7.2

Tare weight 1.00

wet weight 5.44

Dry weight 4.74

87.1 % solid

12.9 % moist

tare #			Total Wt (g)	222.14	
wt soil&tare,moist (g)			Wt Split#10 (g)	50.69	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	14.81	#VALUE!	#VALUE!	#18
#40	30.95	#VALUE!	#VALUE!	#40 fine sand
#60	26.01	#VALUE!	#VALUE!	#60
#100	29.31	#VALUE!	#VALUE!	#120
#200	29.03	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/17/10		2.0	25	22	7	#N/A	#VALUE!
	#VALUE!	4.0	16			#N/A	#VALUE!
	#VALUE!	8.0	16			#N/A	#VALUE!
	#VALUE!	15.0	16			#N/A	#VALUE!
	#VALUE!	30.0	15			#N/A	#VALUE!
	#VALUE!	60.0	14			#N/A	#VALUE!
	#VALUE!	120.0	13			#N/A	#VALUE!
	#VALUE!	240.0	13			#N/A	#VALUE!
	#VALUE!	480.0	12			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	12	21	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: yellow rocks

USCS:

DATE #VALUE!

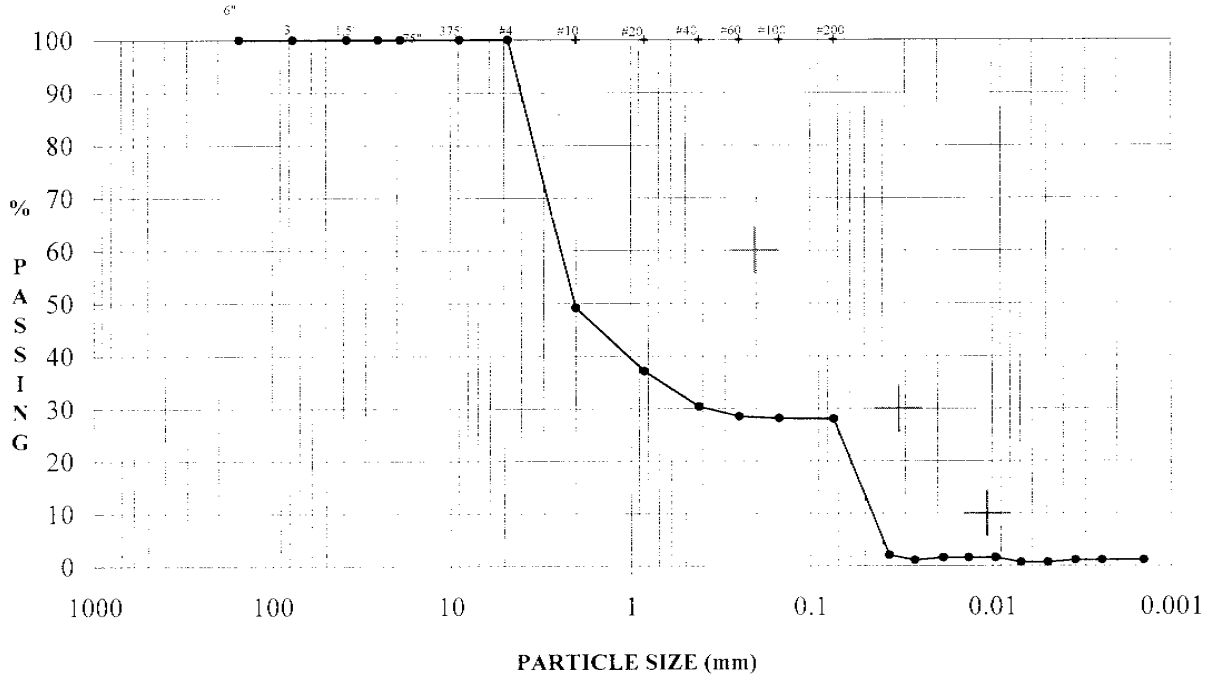
TECH

REVIEW

80.7

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	49.1%
#20	37.1%
#40	30.3%
#60	28.5%
#100	28.1%
#200	28.0%

Hydrometer Data	
Particle Diameter	% Finer
0.037	2.0%
0.027	1.1%
0.019	1.6%
0.014	1.6%
0.010	1.6%
0.007	0.7%
0.005	0.7%
0.003	1.1%
0.002	1.1%

DESCRIPTION

Sample.Bottle#:	F76426-9.1	Depth:	-
		USCS:	-
Wet Color:	brown w/rocks		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	21.0	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	72.0	PL	-
% Fines	28.0	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN41406

F76426-9.1

Tare weight: 1.02

wet weight 7.24

DRY weight 6.19

85.5% solid

14.5% moist

9.1

tare #			Total Wt (g)	209.90	
wt soil&tare,moist (g)			Wt Split #10 (g)	102.92	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	53.19	#VALUE!	#VALUE!	#18
#40	82.88	#VALUE!	#VALUE!	#40 fine sand
#60	91.09	#VALUE!	#VALUE!	#60
#100	92.58	#VALUE!	#VALUE!	#120
#200	93.03	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
8/17/16		2.0	16	22	7	#N/A	#VALUE!
	#VALUE!	4.0	12			#N/A	#VALUE!
	#VALUE!	8.0	14			#N/A	#VALUE!
	#VALUE!	15.0	14			#N/A	#VALUE!
	#VALUE!	30.0	14			#N/A	#VALUE!
	#VALUE!	60.0	10			#N/A	#VALUE!
	#VALUE!	120.0	10			#N/A	#VALUE!
	#VALUE!	240.0	12			#N/A	#VALUE!
	#VALUE!	480.0	12			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	12	21	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: brown rocks

USCS:

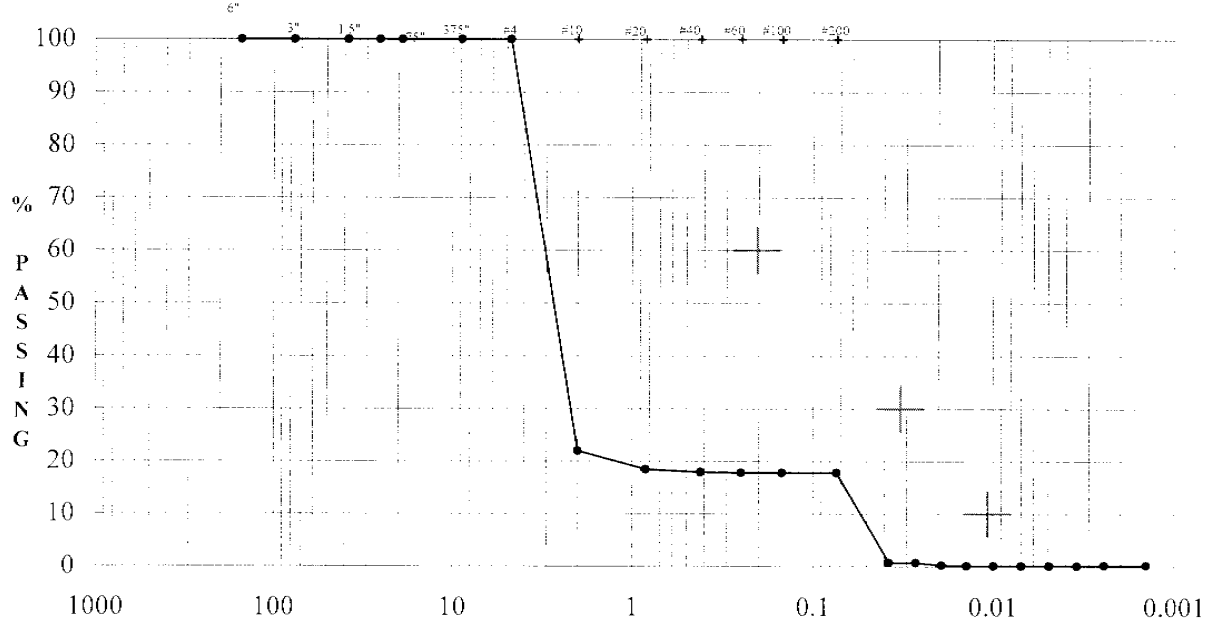
DATE #VALUE!

TECH

REVIEW

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	22.0%
#20	18.5%
#40	17.9%
#60	17.8%
#100	17.8%
#200	17.8%

Hydrometer Data	
Particle Diameter	% Finer
0.038	0.7%
0.027	0.7%
0.019	0.3%
0.014	0.1%
0.010	0.1%
0.007	0.1%
0.005	0.1%
0.003	0.1%
0.002	0.3%

DESCRIPTION			
Sample.Bottle#:	F76426-11.1	Depth:	-
		USCS:	-
Wet Color:	brown w/rocks		
Description:			
Comments:	GN41406		

SAMPLE DATA			
W_C (%):	21.0	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	82.2	PL	-
% Fines	17.8	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN41406

F76426-11.1

Tare weight 1.01

wet weight 8.03

dry weight 7.03

87.5 % solid

12.5 % moist

Tare #		Total Wt (g)		143.96	
wt soil&tare,moist (g)		Wt Split #10 (g)		31.61	
wt soil&tare,dry (g)		% passing #10		#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

SIEVE	wt ret (g)	% ret	% pass	SIEVE	
coarse gravel	3.000	#VALUE!	#VALUE!	3.000	coarse gravel
	1.500	#VALUE!	#VALUE!	1.500	
	1.000	#VALUE!	#VALUE!	1.000	
fine gravel	0.750	#VALUE!	#VALUE!	0.750	fine gravel
	0.375	#VALUE!	#VALUE!	0.375	
coarse sand	#4	#VALUE!	#VALUE!	#4	coarse sand
medium sand	#10	#VALUE!	#VALUE!	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

Tare #					
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	
wt tare (g)		wt tare (g)	0.00	PI:	
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING				
#10	0.00	#VALUE!	#VALUE!			#10 medium sand	
#20	24.61	#VALUE!	#VALUE!			#18	
#40	27.94	#VALUE!	#VALUE!			#40 fine sand	
#60	28.34	#VALUE!	#VALUE!			#60	
#100	28.62	#VALUE!	#VALUE!			#120	
#200	28.84	#VALUE!	#VALUE!			#200 fines	

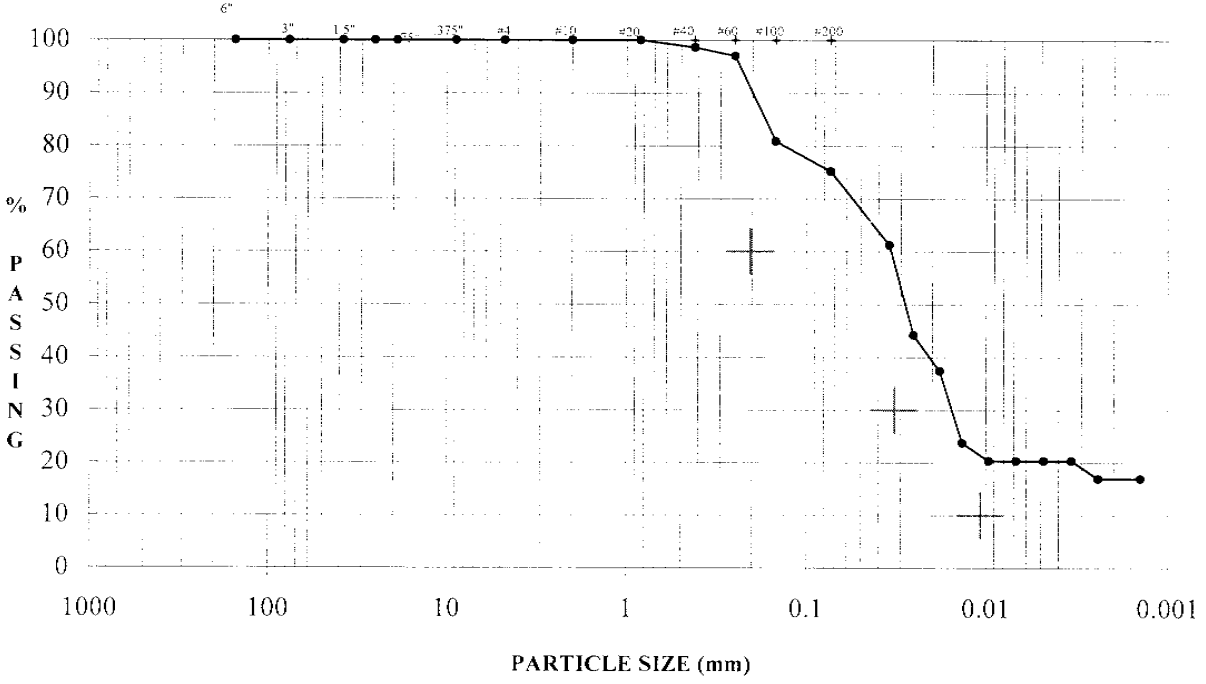
DATE	TIME	TIME,Cum (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
4/9/15	#VALUE!	2.0	12	22	7	#N/A	#VALUE!
	#VALUE!	4.0	12			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	8			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8	21	7	#N/A	#VALUE!
	#VALUE!	240.0	8			#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	8			#N/A	#VALUE!

%C GRVL:	#VALUE!				
%F GRVL:	#VALUE!	Wet Color:	brown		
%C SAND:	#VALUE!	Description:	fines		
%M SAND:	#VALUE!				
%F SAND:	#VALUE!	USCS:	-	DATE	#VALUE!
%FINES:	#VALUE!			TECH	
%TOTAL:	#VALUE!			REVIEW	

8.3

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	98.6%
#60	97.0%
#100	80.9%
#200	75.2%

Hydrometer Data	
Particle Diameter	% Finer
0.035	61.2%
0.025	44.2%
0.018	37.4%
0.014	23.8%
0.010	20.4%
0.007	20.4%
0.005	20.4%
0.003	20.4%
0.002	17.0%

DESCRIPTION

Sample.Bottle#:	T58537-7bD1	Depth:	-
		USCS:	-
Wet Color:	brown		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	29.9	SPD	C_C	N/A
G_S:	2.65		C_U	N/A
% Gravel	0.0	0.0	LL	-
% Sand	24.8	21.6	PL	-
% Fines	75.2	82.1	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

tare #		Total Wt (g)	30.17
wt soil&tare,moist (g)		Wt Split #10 (g)	3.37
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

SIEVE	wt ret (g)	% ret	% pass	SIEVE	
	3.000	#VALUE!	#VALUE!	3.000	coarse gravel
coarse gravel	1.500	#VALUE!	#VALUE!	1.500	
	1.000	#VALUE!	#VALUE!	1.000	
fine gravel	0.750	#VALUE!	#VALUE!	0.750	fine gravel
	0.375	#VALUE!	#VALUE!	0.375	
coarse sand	#4	#VALUE!	#VALUE!	#4	coarse sand
medium sand	#10	#VALUE!	#VALUE!	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve		Initial Moist Weight	
Specific Gravity	(ASSUMED) 2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)		125	

MOISTURE CONTENT (Hygroscopic - #10)

tare #							
wt soil&tare,moist (g)					#VALUE!	LL	-
wt soil&tare,dry (g)				wt soil&tare,wash (g)	#VALUE!	PL	-
wt tare (g)				wt tare (g)	0.00	PI	-
wt moisture (g)	#VALUE!			wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!			wt dry soil (g)	#VALUE!		
% moisture	#VALUE!			% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING		
#10	0.00	#VALUE!	#VALUE!	#10 medium sand	
#20	0.41	#VALUE!	#VALUE!	#18	
#40	0.55	#VALUE!	#VALUE!	#40 fine sand	
#60	3.43	#VALUE!	#VALUE!	#60	
#100	3.24	#VALUE!	#VALUE!	#120	
#200		#VALUE!	#VALUE!	#200 fines	

DATE	TIME	ELAPSED TIME (min)	HYDROM READING R	TEMP T	HYD EDG H	PARTICLE DIAMETER	% FINER
4/12/16	#VALUE!	2.0	25	22	7	#N/A	#VALUE!
	#VALUE!	4.0	22			#N/A	#VALUE!
	#VALUE!	8.0	19			#N/A	#VALUE!
	#VALUE!	15.0	17			#N/A	#VALUE!
	#VALUE!	30.0	13			#N/A	#VALUE!
	#VALUE!	60.0	13			#N/A	#VALUE!
	#VALUE!	120.0	13			#N/A	#VALUE!
	#VALUE!	240.0	12			#N/A	#VALUE!
	#VALUE!	480.0	12	21	7	#N/A	#VALUE!
	#VALUE!	1440.0			7	#N/A	#VALUE!

%C GRVL:	#VALUE!	Wet Color:	brown
%F GRVL:	#VALUE!	Description:	
%C SAND:	#VALUE!		
%M SAND:	#VALUE!	USCS:	-
%F SAND:	#VALUE!		
%FINES:	#VALUE!	DATE	#VALUE!
%TOTAL:	#VALUE!	TECH	
		REVIEW	

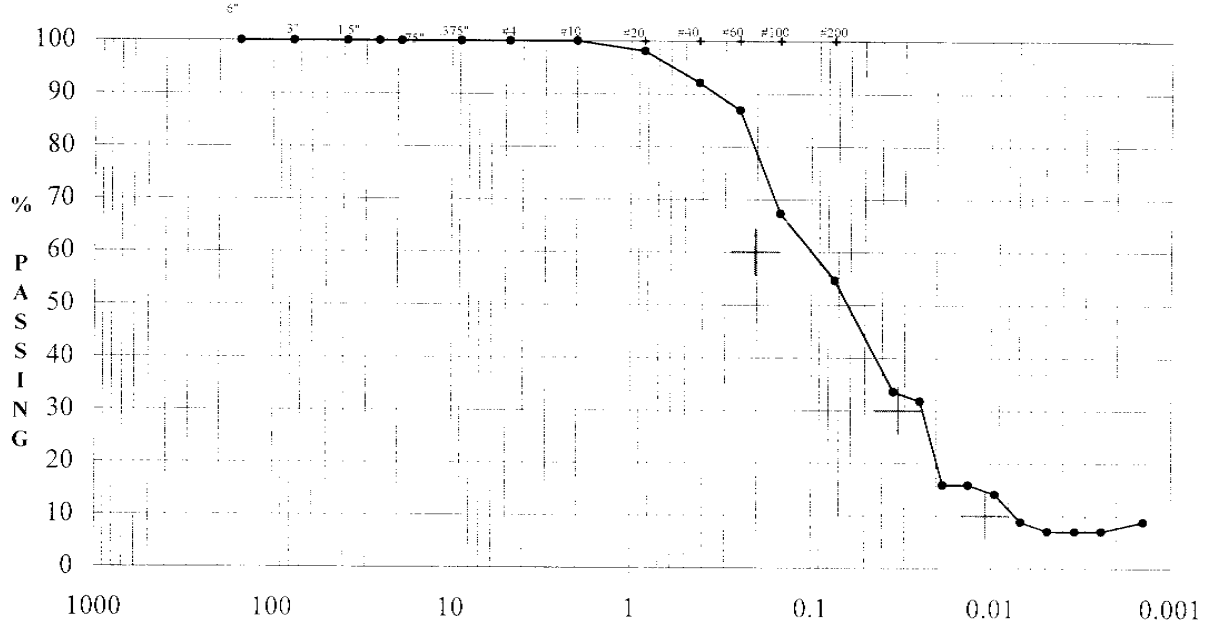
TS85337-78 Dupl.

72.6% - sld

27.4% moist

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	98.1%
#40	92.1%
#60	86.9%
#100	67.3%
#200	54.7%

Hydrometer Data	
Particle Diameter	% Finer
0.035	33.6%
0.025	31.8%
0.018	15.9%
0.013	15.9%
0.010	14.1%
0.007	8.8%
0.005	7.1%
0.003	7.1%
0.002	7.1%

DESCRIPTION

Sample.Bottle#:	T58303-1b	Depth:	-
		USCS:	-
Wet Color:	black		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	47.8	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	45.3	PL	-
% Fines	54.7	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

MOISTURE CONTENT (Unoven Moisture)

Tare #	
wt soil&tare,moist (g)	
wt soil&tare,dry (g)	
wt tare (g)	
wt moisture (g)	#VALUE!
wt dry soil (g)	#VALUE!
% moisture	#VALUE!

% PASSING #10 SIEVE

Total Wt (g)	54.55
Wt Split #10 (g)	54.55
% passing #10	#VALUE!

SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000	#VALUE!	#VALUE!	3.000 coarse gravel
	1.500	#VALUE!	#VALUE!	1.500
fine gravel	1.000	#VALUE!	#VALUE!	1.000
	0.750	#VALUE!	#VALUE!	0.750 fine gravel
coarse sand	0.375	#VALUE!	#VALUE!	0.375
	#4	#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10	#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve		#VALUE!	Initial Moist Weight
Specific Gravity	(ASTM D)	2.65	
ml Dispersing Agent Used (40 ml $Na(PO_3)_6$ per 1000 ml H_2O)		125	#VALUE!

MOISTURE CONTENT (Hygroscopic - #10)

tare #			
wt soil&tare,moist (g)	wt soil&tare,dry (g)	#VALUE!	LL: -
wt soil&tare,dry (g)	wt soil&tare,wash (g)	#VALUE!	PL: -
wt tare (g)	wt fines lost (g)	0.00	PI: -
wt moisture (g)	wt fines lost (g)	#VALUE!	
wt dry soil (g)	wt dry soil (g)	#VALUE!	
% moisture	% fines lost	#VALUE!	

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#16	1.07	#VALUE!	#VALUE!	#16
#40	4.47	#VALUE!	#VALUE!	#40 fine sand
#60	7.40	#VALUE!	#VALUE!	#60
#100	18.49	#VALUE!	#VALUE!	#120
#200	25.07	#VALUE!	#VALUE!	#200 fines

DATE	TIME	ELAPSED TIME (min)	READING R	TEMP T	HYD EQV H	PARTICLE DIAMETER	% FINER
5/19/2016	#VALUE!	2.0	26	22	7	#N/A	#VALUE!
	#VALUE!	4.0	25			#N/A	#VALUE!
	#VALUE!	8.0	16			#N/A	#VALUE!
	#VALUE!	15.0	10			#N/A	#VALUE!
	#VALUE!	30.0	5			#N/A	#VALUE!
	#VALUE!	60.0	12			#N/A	#VALUE!
	#VALUE!	120.0	11			#N/A	#VALUE!
	#VALUE!	240.0	11			#N/A	#VALUE!
#VALUE!	#VALUE!	480.0	11	21	7	#N/A	#VALUE!
	#VALUE!	1440.0	12			#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

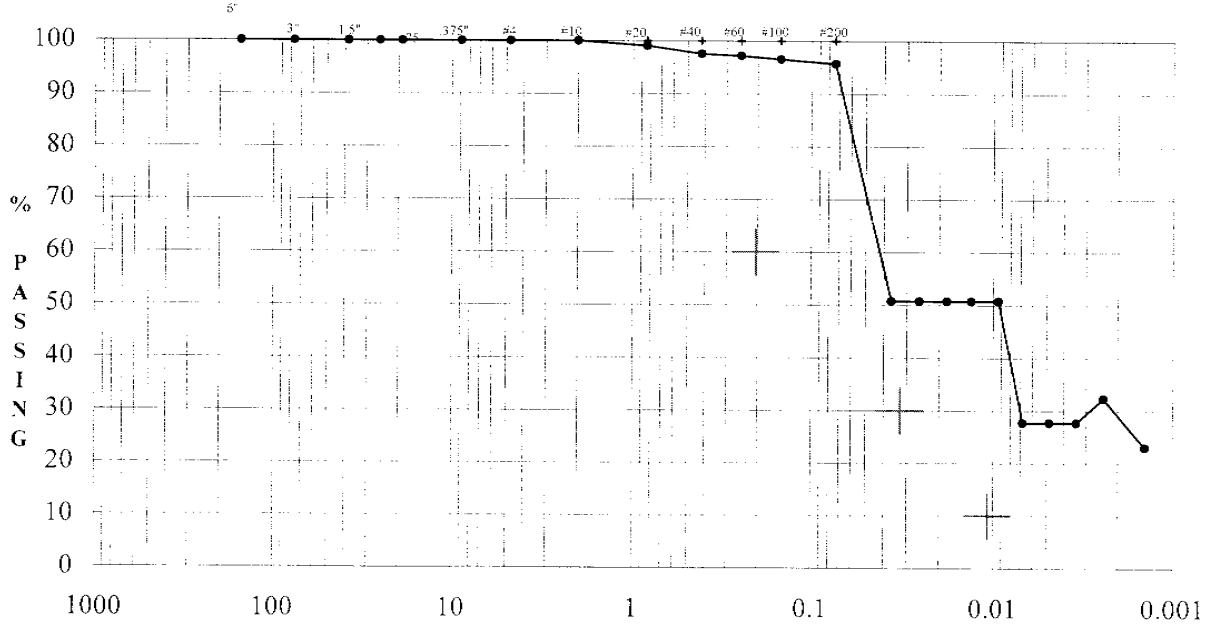
Wet Color: black
Description:
USCS:

DATE #VALUE!
TECH
REVIEW

GN 41406
T58303B-1
Tare: 1.01
Wet: 8.47
Dry 5.31
62.7 % Solids
37.3 % moist
52.1

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	99.0%
#40	97.6%
#60	97.2%
#100	96.5%
#200	95.7%

Hydrometer Data	
Particle Diameter	% Finer
0.036	50.7%
0.026	50.7%
0.018	50.7%
0.013	50.7%
0.009	50.7%
0.007	27.7%
0.005	27.7%
0.003	27.7%
0.002	32.3%

DESCRIPTION

Sample.Bottle#:	T58467-6b	Depth:	-
		USCS:	-
Wet Color:	black		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	68.5	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	4.3	PL	-
% Fines	95.7	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN 41406

T584678-6

Tare: 1.00

Wet: 7.08

Dry: 3.12

44.1% solid

55.9% moist

1) 07/17/26

313

MOISTURE CONTENT (Delivered Moisture)

tare #	
wt soil&tare,moist (g)	
wt soil&tare,dry (g)	
wt tare (g)	
wt moisture (g)	#VALUE!
wt dry soil (g)	#VALUE!
% moisture	#VALUE!

% PASSING #10 SIEVE

Total Wt (g)	21.25
Wt Split #10 (g)	21.25
% passing #10	#VALUE!

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		LL:	
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	PL:	
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PI:	
wt tare (g)		wt tare (g)	0.00		
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.21	#VALUE!	#VALUE!	#18
#40	0.53	#VALUE!	#VALUE!	#40 fine sand
#60	0.61	#VALUE!	#VALUE!	#60
#100	0.75	#VALUE!	#VALUE!	#120
#200	0.93	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
07/17/26		2.0	18	22	7	#N/A	#VALUE!
	#VALUE!	4.0	18	1)		#N/A	#VALUE!
	#VALUE!	8.0	18			#N/A	#VALUE!
	#VALUE!	15.0	18			#N/A	#VALUE!
	#VALUE!	30.0	18			#N/A	#VALUE!
	#VALUE!	60.0	13			#N/A	#VALUE!
	#VALUE!	120.0	13			#N/A	#VALUE!
	#VALUE!	240.0	13			#N/A	#VALUE!
	#VALUE!	480.0	12			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0		21	4	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: black sludge

USCS:

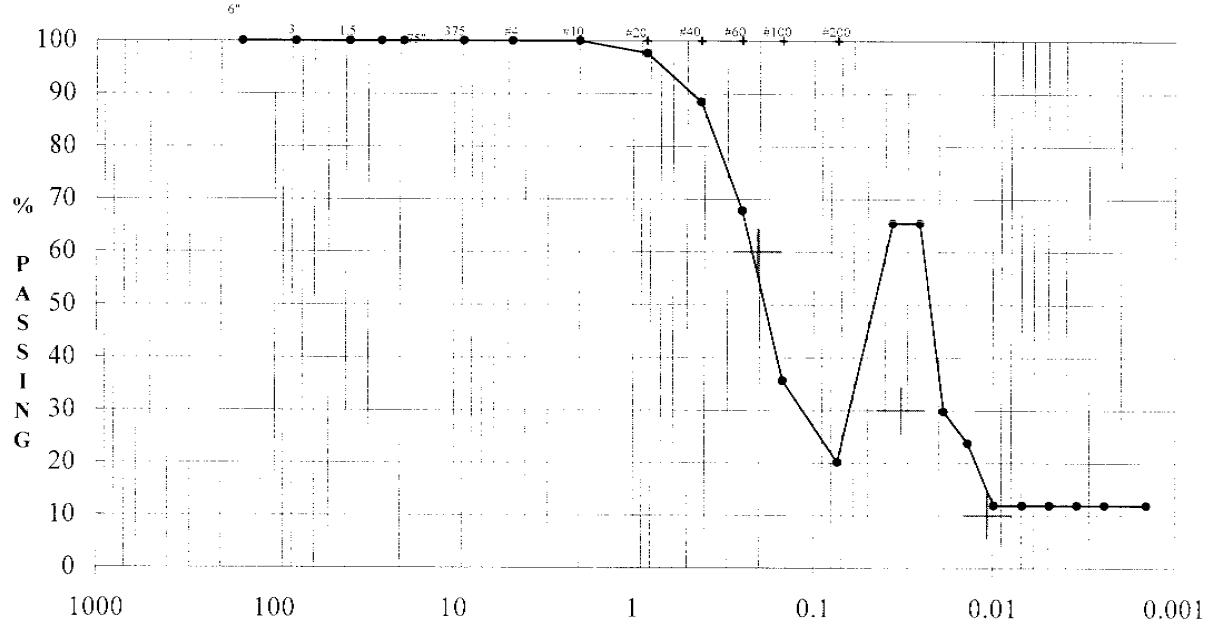
DATE #VALUE!

TECH

REVIEW

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data

Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	97.7%
#40	88.5%
#60	67.9%
#100	35.6%
#200	20.1%

Hydrometer Data

Particle Diameter	% Finer
0.036	65.5%
0.026	65.5%
0.019	29.8%
0.014	23.8%
0.010	11.9%
0.007	11.9%
0.005	11.9%
0.003	11.9%
0.002	11.9%

DESCRIPTION

Sample.Bottle#:	T58498-1b	Depth:	-
		USCS:	-
Wet Color:	black		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	59.6	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	79.9	PL	-
% Fines	20.1	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

T58968-1 GN 41406

tare 0.98
wt 3.42
dry 1.62

47.7 % solid
52.6 % moist

(after wet process)

40.3

tare #		Total Wt (g)	18.24
wt soil&tare,moist (g)		Wt Split #10 (g)	18.24
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

SIEVE	wt ret (g)	% ret	% pass	SIEVE	
3.000		#VALUE!	#VALUE!	3.000	coarse gravel
1.500		#VALUE!	#VALUE!	1.500	
1.000		#VALUE!	#VALUE!	1.000	
0.750		#VALUE!	#VALUE!	0.750	fine gravel
0.375		#VALUE!	#VALUE!	0.375	
#4		#VALUE!	#VALUE!	#4	coarse sand
#10		#VALUE!	#VALUE!	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve		Initial Moist Weight	
Specific Gravity	(ASSUMED) 2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO3)n per 1000 ml H2O)		125	

MOISTURE CONTENT (Hygroscopic - #10)

tare #			tare #		
wt soil&tare,moist (g)			wt soil&tare,dry (g)	#VALUE!	LL
wt soil&tare,dry (g)			wt soil&tare,wash (g)	#VALUE!	2L
wt tare (g)			wt tare (g)	0.00	PL
wt moisture (g)	#VALUE!		wt fines lost (g)	#VALUE!	
wt dry soil (g)	#VALUE!		wt dry soil (g)	#VALUE!	
% moisture	#VALUE!		% fines lost	#VALUE!	

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

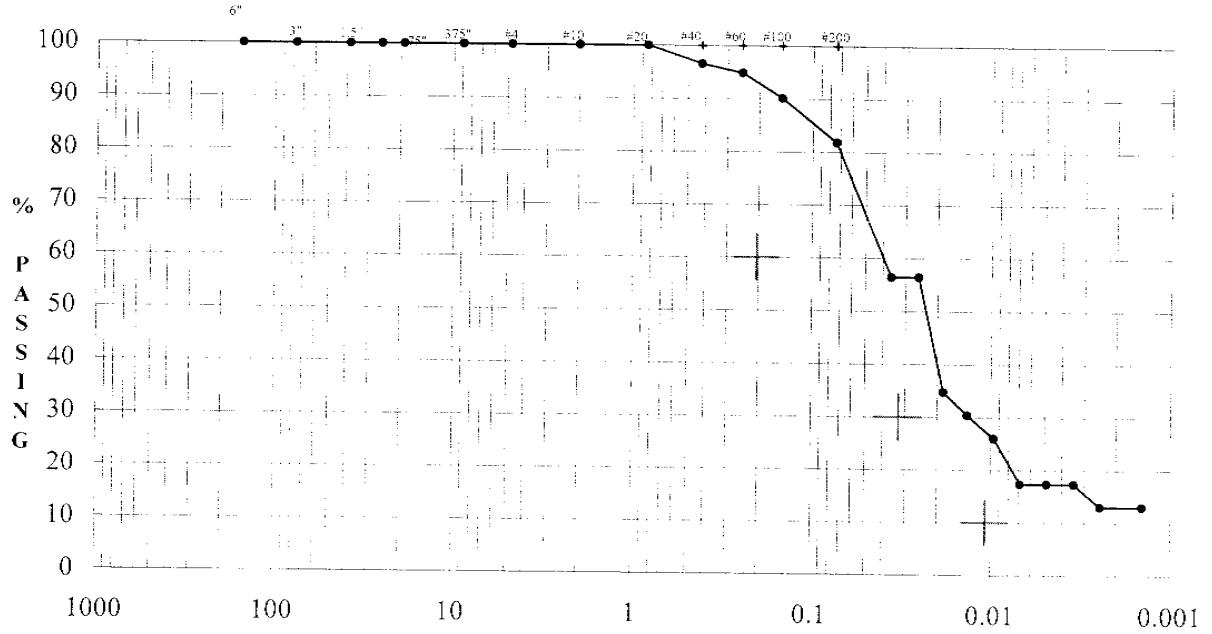
SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING		
#10	0.00	#VALUE!	#VALUE!	#10	medium sand
#20	0.351	#VALUE!	#VALUE!	#18	
#40	1.44	#VALUE!	#VALUE!	#40	fine sand
#60	5.40	#VALUE!	#VALUE!	#60	
#100	10.92	#VALUE!	#VALUE!	#120	
#200	13.92	#VALUE!	#VALUE!	#200	fines

DATE	TIME	TIME, Cum (min)	READING	TEMP T	HYD REG H	PARTICLE DIAMETER	% FINER
4/17/16	#VALUE!	2.0	18	22	7	#N/A	#VALUE!
	#VALUE!	4.0	8			#N/A	#VALUE!
	#VALUE!	8.0	12			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	7			#N/A	#VALUE!
	#VALUE!	240.0	6			#N/A	#VALUE!
	#VALUE!	480.0	4	21	7	#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0				#N/A	#VALUE!

%C GRVL:	#VALUE!	Wet Color:	black
%F GRVL:	#VALUE!	Description:	sticky
%C SAND:	#VALUE!		
%M SAND:	#VALUE!	USCS:	
%F SAND:	#VALUE!		
%FINES:	#VALUE!	DATH	#VALUE!
%TOTAL	#VALUE!	TECH	
		REVIEW	

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	96.6%
#60	94.9%
#100	90.2%
#200	81.8%

Hydrometer Data	
Particle Diameter	% Finer
0.036	56.4%
0.025	56.4%
0.018	34.7%
0.014	30.4%
0.010	26.0%
0.007	17.4%
0.005	17.4%
0.003	17.4%
0.002	13.0%

DESCRIPTION

Sample.Bottle#:	T58535-1b	Depth:	-
		USCS:	-
Wet Color:	black		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	45.3
G_S:	2.65
% Gravel	0.0
% Sand	18.2
% Fines	81.8

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date: 09/17/10
Technician: LE
Reviewer: SJL

ACCUTEST LAB SE

GN41406

T58535B-1

Tare: 1.01

Wet: 5.03

Dry: 3.33 g

66.2 % sand

33.8 % mud

54.9

tare #			Total Wt (g)	2257	
wt soil&tare,moist (g)			Wt Split #10 (g)	22.57	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	4	#VALUE!	#VALUE!	#18
#40	6.79	#VALUE!	#VALUE!	#40 fine sand
#60	1.13	#VALUE!	#VALUE!	#60
#100	2.27	#VALUE!	#VALUE!	#120
#200	4.20	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD EDG H	PARTICLE DIAMETER	% FINER
9/17/10		2.0	20	22	7	#N/A	#VALUE!
	#VALUE!	4.0	19			#N/A	#VALUE!
	#VALUE!	8.0	15			#N/A	#VALUE!
	#VALUE!	15.0	14			#N/A	#VALUE!
	#VALUE!	30.0	13			#N/A	#VALUE!
	#VALUE!	60.0	11			#N/A	#VALUE!
	#VALUE!	120.0	11			#N/A	#VALUE!
	#VALUE!	240.0	11			#N/A	#VALUE!
	#VALUE!	480.0	10			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	10	21	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

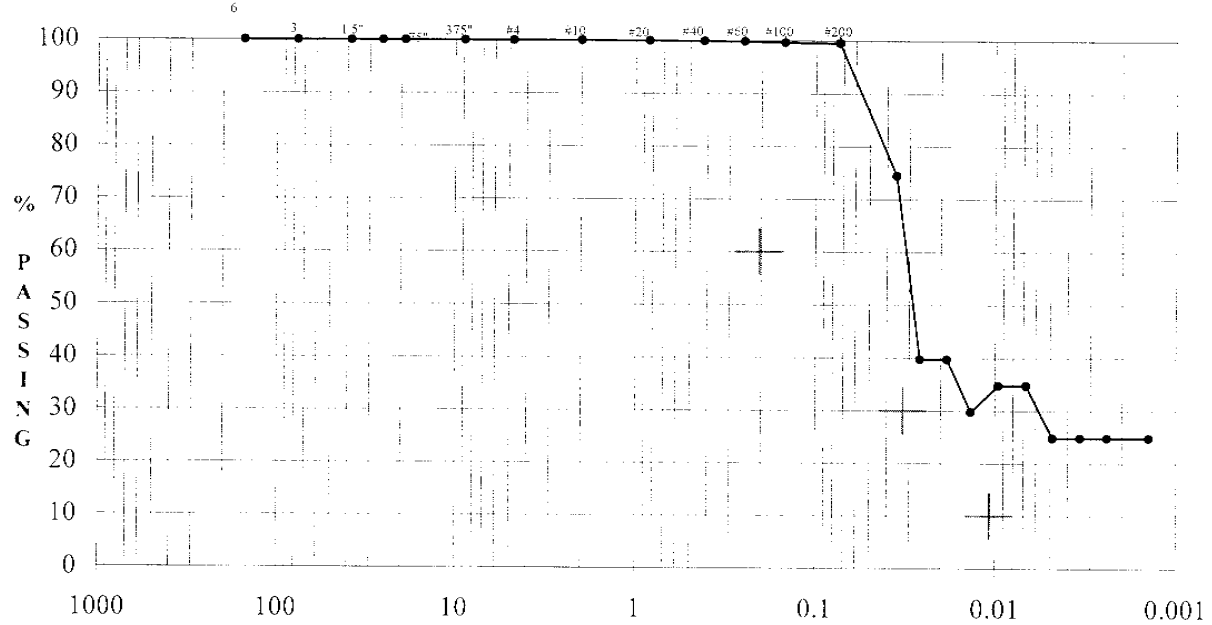
Wet Color: brown
Description:

USCS:

DATE #VALUE!
TECH
REVIEW

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	99.9%
#60	99.9%
#100	99.6%
#200	99.5%

Hydrometer Data	
Particle Diameter	% Finer
0.035	74.5%
0.026	39.7%
0.018	39.7%
0.014	29.8%
0.010	34.8%
0.007	34.8%
0.005	24.8%
0.003	24.8%
0.002	24.8%

DESCRIPTION

Sample.Bottle#:	T58537-6b	Depth:	-
		USCS:	-
Wet Color:	grey		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	46.7	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	0.5	PL	-
% Fines	99.5	PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

tare #		Total Wt (g)	19.91
wt soil&tare,moist (g)		Wt Split#10 (g)	19.91
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&ture,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	
wt soil&ture,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	
wt tare (g)		wt tare (g)	0.00	PI:	
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.01	#VALUE!	#VALUE!	#18
#40	0.02	#VALUE!	#VALUE!	#40 fine sand
#60	0.03	#VALUE!	#VALUE!	#60
#100	0.03	#VALUE!	#VALUE!	#120
#200	0.0	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
4/18/10		2.0	22	22	7	#N/A	#VALUE!
	#VALUE!	4.0	15			#N/A	#VALUE!
	#VALUE!	8.0	15			#N/A	#VALUE!
	#VALUE!	15.0	13			#N/A	#VALUE!
	#VALUE!	30.0	14			#N/A	#VALUE!
	#VALUE!	60.0	14			#N/A	#VALUE!
	#VALUE!	120.0	12			#N/A	#VALUE!
	#VALUE!	240.0	12			#N/A	#VALUE!
	#VALUE!	480.0	12			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	12	21	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: grey
Description: Sludge 1, Kz
USCS:

DATE #VALUE!
TECH
REVIEW

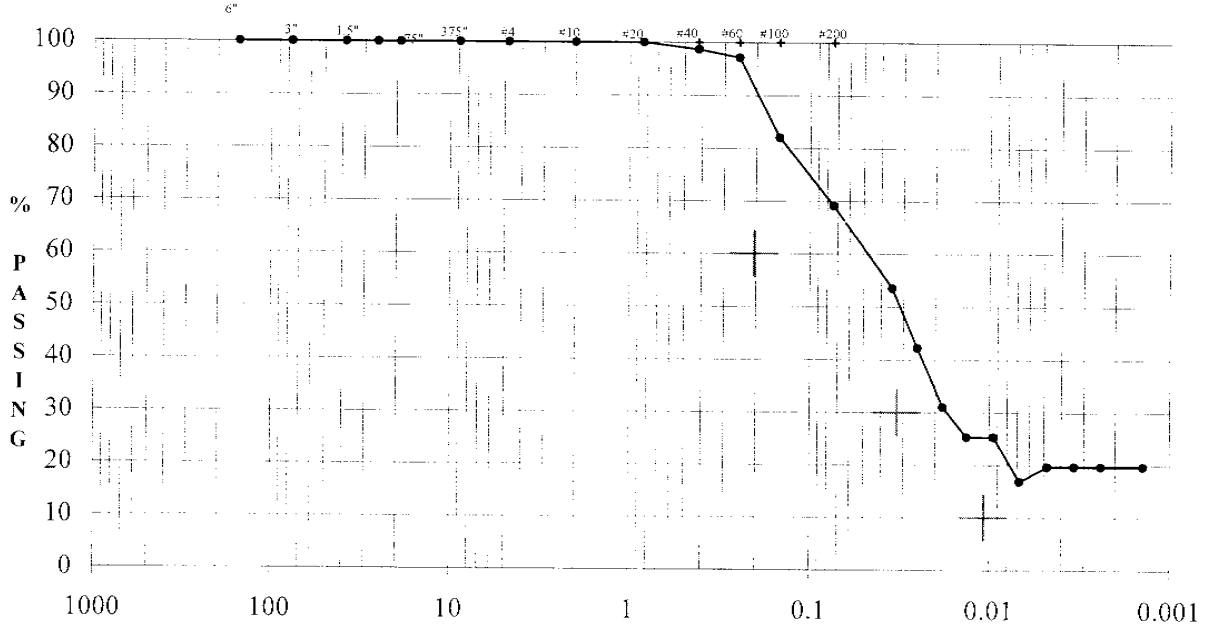
GN41406
T5853 7B-6
Tare: 1.01
Wet: 6.30
Dry: 3.92
6.23 (62.2% solid)
37.77 37.8% moist

53.4

limited amt provided

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	98.7%
#60	97.2%
#100	82.0%
#200	69.2%

Hydrometer Data	
Particle Diameter	% Finer
0.035	53.5%
0.025	42.2%
0.018	31.0%
0.013	25.3%
0.009	25.3%
0.007	16.9%
0.005	19.7%
0.003	19.7%
0.002	19.7%

DESCRIPTION

Sample.Bottle#:	T58537-7b	Depth:	-
		USCS:	-
Wet Color:	brown		
Description:			
Comments:	GN41406		

SAMPLE DATA

W_C (%):	29.9
G_S:	2.65
% Gravel	0.0
% Sand	30.8
% Fines	69.2

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/17/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

GN41406

T58537-7 QC

1.01 lbs
5.22 wet
3.74 dry

72.6 % solid
27.4 % moist

Tare #
Wt soil&tare,moist (g)
Wt soil&tare,dry (g)
Wt tare (g)
Wt moisture (g)
Wt dry soil (g)
% moisture

#VALUE!
#VALUE!
#VALUE!

Total Wt (g) 3.63
Wt Split #10 (g) 3.63
% passing #10 #VALUE!

SIEVE		wt ret (g)	% ret	% pass	SIEVE	
coarse gravel	3.000		#VALUE!	#VALUE!	3.000	coarse gravel
	1.500		#VALUE!	#VALUE!	1.500	
fine gravel	1.000		#VALUE!	#VALUE!	1.000	
	0.750		#VALUE!	#VALUE!	0.750	fine gravel
	0.375		#VALUE!	#VALUE!	0.375	
coarse sand	#4		#VALUE!	#VALUE!	#4	coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve #VALUE! Initial Moist Weight
Specific Gravity (ASSUMED) 2.65 #VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O) 125

MOISTURE CONTENT (Hygroscopic - #10)

Tare #			
Wt soil&tare,moist (g)		Wt soil&tare,dry (g)	#VALUE!
Wt soil&tare,dry (g)		Wt soil&tare,wash (g)	#VALUE!
Wt tare (g)		Wt tare (g)	0.00
Wt moisture (g)	#VALUE!	Wt fines lost (g)	#VALUE!
Wt dry soil (g)	#VALUE!	Wt dry soil (g)	#VALUE!
% moisture	#VALUE!	% fines lost	#VALUE!

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	RET. CORR.	CUMUL WT PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	4	#VALUE!	#VALUE!	#18
#40	0.47	#VALUE!	#VALUE!	#40 fine sand
#60	1.01	#VALUE!	#VALUE!	#60
#100	3.40	#VALUE!	#VALUE!	#120
#200	10.35	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME (min)	READING R	TEMP T	HYD HDG R	PARTICLE DIAMETER	% FINER
9/17/16	#VALUE!	2.0	26	22	7	#N/A	#VALUE!
	#VALUE!	4.0	22			#N/A	#VALUE!
	#VALUE!	8.0	18			#N/A	#VALUE!
	#VALUE!	15.0	16			#N/A	#VALUE!
	#VALUE!	30.0	14			#N/A	#VALUE!
	#VALUE!	60.0	13			#N/A	#VALUE!
	#VALUE!	120.0	12			#N/A	#VALUE!
	#VALUE!	240.0	11			#N/A	#VALUE!
	#VALUE!	480.0	11	21	7	#N/A	#VALUE!
	#VALUE!	1440.0				#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: brown
Description:
USCS:

DATE #VALUE!
TECH
REVIEW

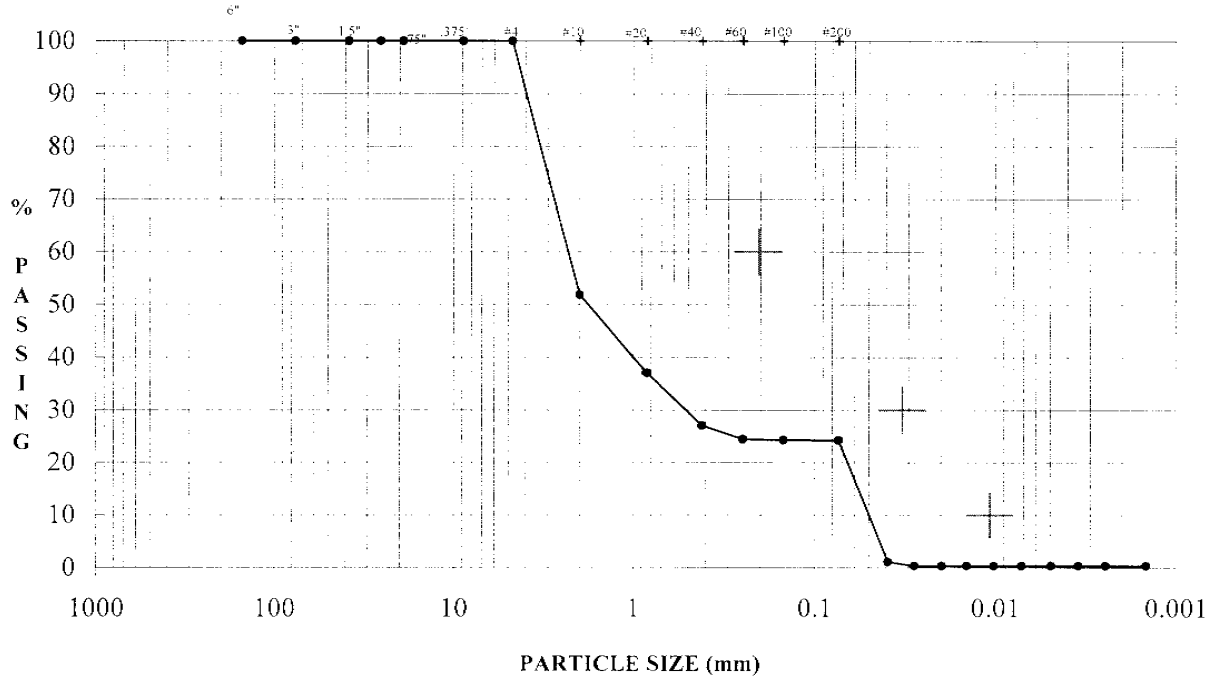
1 Dry Wt (g)

COC

8.3 8

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	51.8%
#20	37.0%
#40	27.1%
#60	24.5%
#100	24.3%
#200	24.3%

Hydrometer Data	
Particle Diameter	% Finer
0.039	1.1%
0.028	0.4%
0.020	0.4%
0.014	0.4%
0.010	0.4%
0.007	0.4%
0.005	0.4%
0.003	0.4%
0.002	0.4%

DESCRIPTION			
Sample.Bottle#:	F76426-13.1	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41439		

SAMPLE DATA			
W_C (%):	19.5	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	75.7	PL	-
% Fines	24.3	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

F76426

Tare #		Total Wt (g)	164.88
wt soil&tare,moist (g)		Wt Split #10 (g)	85.46
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	40.18	#VALUE!	#VALUE!	#18
#40	67.2	#VALUE!	#VALUE!	#40 fine sand
#60	74.29	#VALUE!	#VALUE!	#60
#100	74.80	#VALUE!	#VALUE!	#120
#200	74.91	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	10	20	7	#N/A	#VALUE!
	#VALUE!	4.0	8			#N/A	#VALUE!
	#VALUE!	8.0	7			#N/A	#VALUE!
	#VALUE!	15.0				#N/A	#VALUE!
	#VALUE!	30.0				#N/A	#VALUE!
	#VALUE!	60.0				#N/A	#VALUE!
	#VALUE!	120.0	6	22	7	#N/A	#VALUE!
	#VALUE!	240.0				#N/A	#VALUE!
	#VALUE!	480.0				#N/A	#VALUE!
9/24/10 #VALUE!	#VALUE!	1440.0	5	22	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: brown rock

USCS:

DATE #VALUE!
TECH
REVIEW

GN41439

F764426-13.1

Tare weight 1.01

wet weight ~~8.03~~ 7.64

DRY weight 4.49g

*CCD9-15-10

65.3 % solid

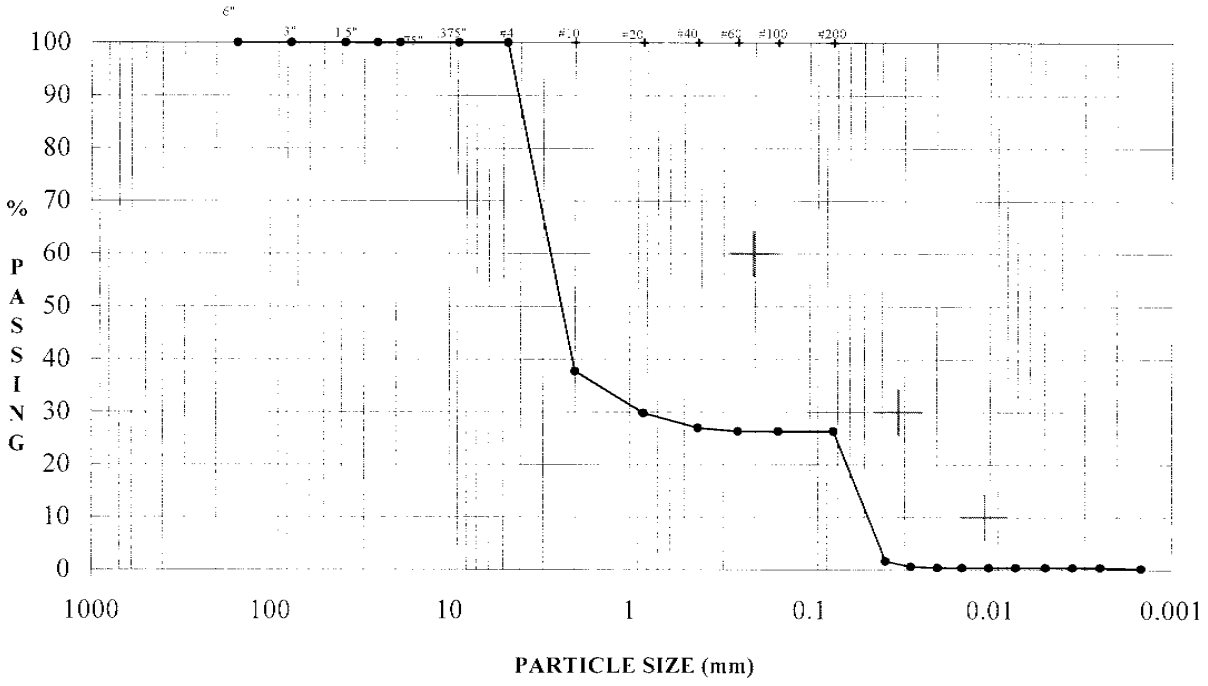
34.7 % moist

803

1) 9/22/10

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	37.7%
#20	29.8%
#40	26.9%
#60	26.3%
#100	26.3%
#200	26.3%

Hydrometer Data	
Particle Diameter	% Finer
0.038	1.7%
0.028	0.6%
0.020	0.4%
0.014	0.4%
0.010	0.4%
0.007	0.4%
0.005	0.4%
0.003	0.4%
0.002	0.4%

DESCRIPTION

Sample.Bottle#:	F76426-15.1	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41439		

SAMPLE DATA

W_C (%):	19.8	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	73.7	PL	-
% Fines	26.3	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

F76426

tare #		Total Wt (g)	160.80
wt soil&tare, moist (g)		Wt Split #10 (g)	60.59
wt soil&tare, dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve		#VALUE!	Initial Moist Weight	
Specific Gravity	(ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)		125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare, moist (g)		wt soil&tare, dry (g)	#VALUE!	LL	
wt soil&tare, dry (g)		wt soil&tare, wash (g)	#VALUE!	PL	
wt tare (g)		wt tare (g)	0.00	PI	
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	38.41	#VALUE!	#VALUE!	#18
#40	52.01	#VALUE!	#VALUE!	#40 fine sand
#50	54.40	#VALUE!	#VALUE!	#60
#100	54.98	#VALUE!	#VALUE!	#120
#200	55.22	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	15	20	7	#N/A	#VALUE!
	#VALUE!	4.0	10			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	9	22	7	#N/A	#VALUE!
	#VALUE!	240.0	9			#N/A	#VALUE!
	#VALUE!	480.0	9			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	8	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!	Wet Color:	brown
%F GRVL:	#VALUE!	Description:	rock
%C SAND:	#VALUE!		
%M SAND:	#VALUE!	USCS:	
%F SAND:	#VALUE!		
%FINES:	#VALUE!	DATE	#VALUE!
%TOTAL:	#VALUE!	TECH	
		REVIEW	

9/21/10

GN41439

F76426-15.1

Tare weight 1.01

wet weight 5.73

DRY weight ~~6.47~~ 5.47g

1) 9/22/10

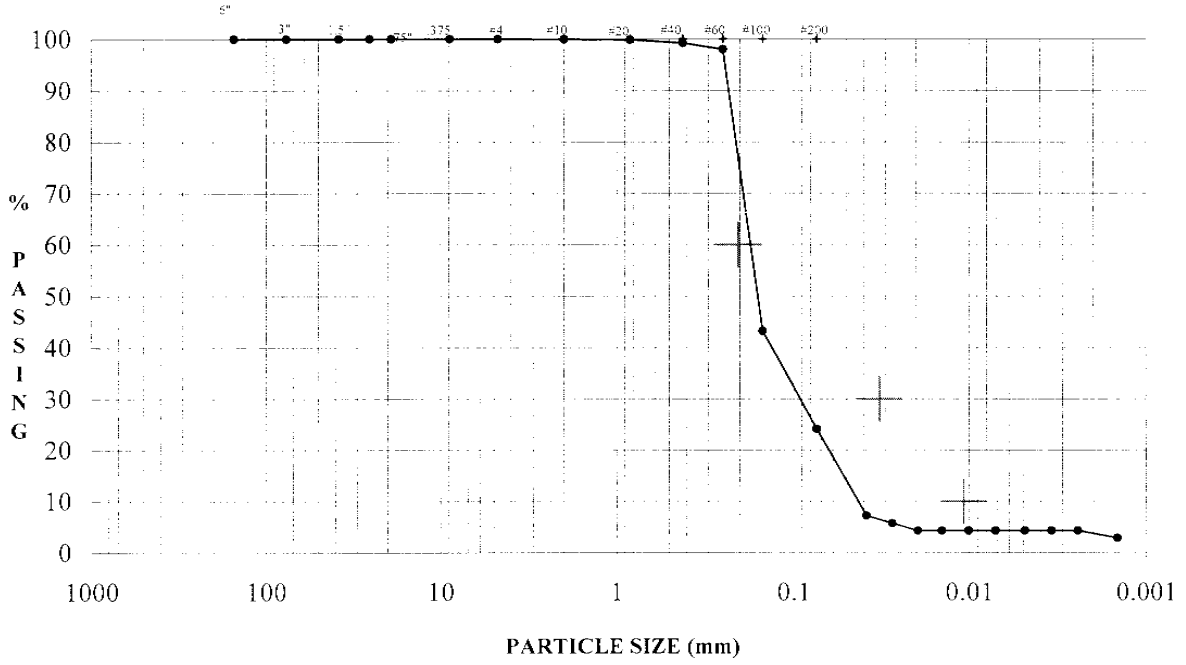
95.5 % solid

4.50 % moist

80.1

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	99.8%
#40	99.2%
#60	98.0%
#100	43.2%
#200	24.2%

Hydrometer Data	
Particle Diameter	% Finer
0.039	7.2%
0.027	5.7%
0.020	4.3%
0.014	4.3%
0.010	4.3%
0.007	4.3%
0.005	4.3%
0.003	4.3%
0.002	4.3%

DESCRIPTION				SAMPLE DATA			
Sample.Bottle#:	T58462-1b	Depth:	-	W_C (%):	19.5	C_C	N/A
		USCS:	-	G_S:	2.65	C_U	N/A
Wet Color:	brown			% Gravel	0.0	LL	-
Description:				% Sand	75.8	PL	-
				% Fines	24.2	PI	-
Comments:	GN41439						

Date:	09/23/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

tare #		Total Wt (g)	69.03
wt soil&tare,moist (g)		Wt Split #10 (g)	69.01
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.693	#VALUE!	#VALUE!	#18
#40	0.53	#VALUE!	#VALUE!	#40 fine sand
#60	1.33	#VALUE!	#VALUE!	#60
#100	34.51	#VALUE!	#VALUE!	#120
#200	52.78	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME CUM (min)	READING R	TEMP T	HYD EDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	12	20	7	#N/A	#VALUE!
	#VALUE!	4.0	11			#N/A	#VALUE!
	#VALUE!	8.0	10			#N/A	#VALUE!
	#VALUE!	15.0	10			#N/A	#VALUE!
	#VALUE!	30.0	10			#N/A	#VALUE!
	#VALUE!	60.0	10			#N/A	#VALUE!
	#VALUE!	120.0	10	22	7	#N/A	#VALUE!
	#VALUE!	240.0	10			#N/A	#VALUE!
	#VALUE!	480.0	9			#N/A	#VALUE!
9/23/10 #VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL	#VALUE!
%F GRVL	#VALUE!
%C SAND	#VALUE!
%M SAND	#VALUE!
%F SAND	#VALUE!
%FINES	#VALUE!
%TOTAL	#VALUE!

Wet Color, Description: brown

USCS:

DATE	#VALUE!
TECH	
REVIEW	

GN 41439

T58462-13

#3

1.02g tare

582g wet

4.93 g dry

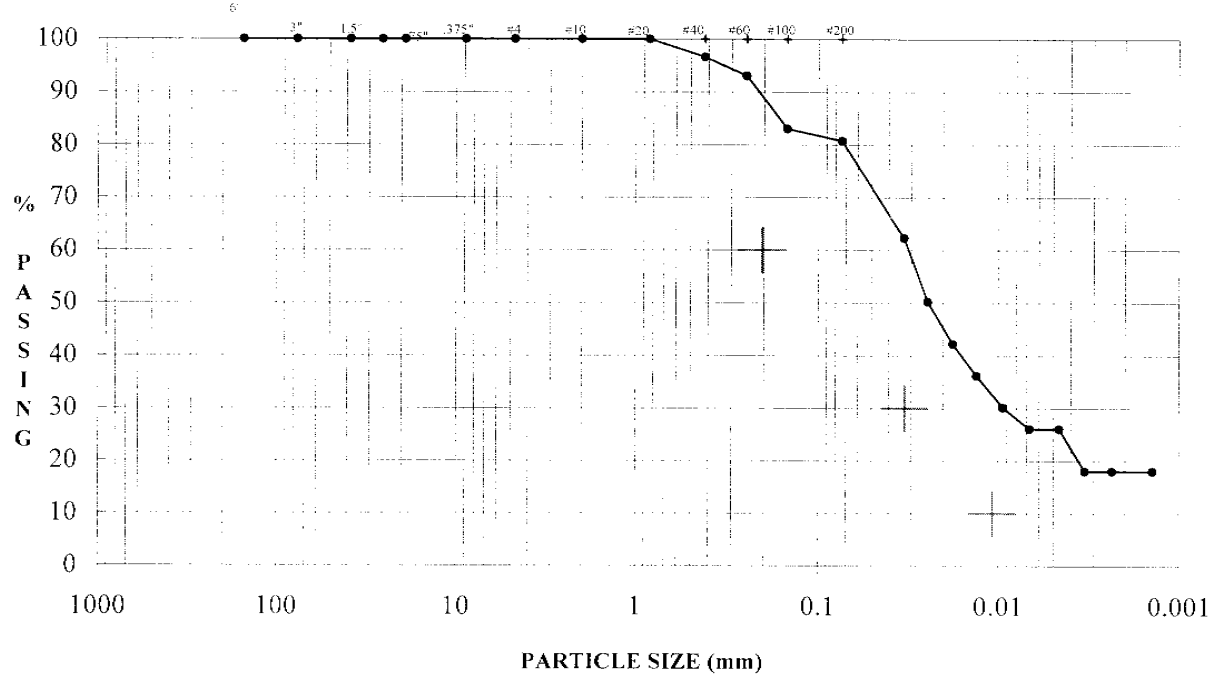
84.7 % solid

15.3 % moist

80.5

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	96.6%
#60	93.0%
#100	83.0%
#200	80.7%

Hydrometer Data	
Particle Diameter	% Finer
0.033	62.3%
0.024	50.2%
0.018	42.2%
0.013	36.2%
0.009	30.1%
0.007	26.1%
0.005	26.1%
0.003	18.1%
0.002	18.1%

DESCRIPTION			
Sample.Bottle#:	T58462-2b	Depth:	-
		USCS:	-
Wet Color:	grey		
Description:			
Comments:	GN41439		

SAMPLE DATA			
W_C (%):	50.0	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	19.3	PL	-
% Fines	80.7	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

tare #		Total Wt (g)	46.92
wt soil&tare,moist (g)		Wt Split#10 (g)	46.92
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	4	#VALUE!	#VALUE!	#18
#40	31.68 1.63 = 4.12%	#VALUE!	#VALUE!	#40 fine sand
#60	3.46	#VALUE!	#VALUE!	#60
#100	8.46	#VALUE!	#VALUE!	#120
#200	9.59	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	35	20	37	#N/A	#VALUE!
	#VALUE!	4.0	32			#N/A	#VALUE!
	#VALUE!	8.0	28			#N/A	#VALUE!
	#VALUE!	15.0	25			#N/A	#VALUE!
	#VALUE!	30.0	22			#N/A	#VALUE!
	#VALUE!	60.0	20			#N/A	#VALUE!
	#VALUE!	120.0	20	22	7	#N/A	#VALUE!
	#VALUE!	240.0	16			#N/A	#VALUE!
	#VALUE!	480.0	16			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	16	20	7	#N/A	#VALUE!

9/23/10

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: gray
Description: sludge

USCS: -

DATE #VALUE!
TECH
REVIEW

GN 41439

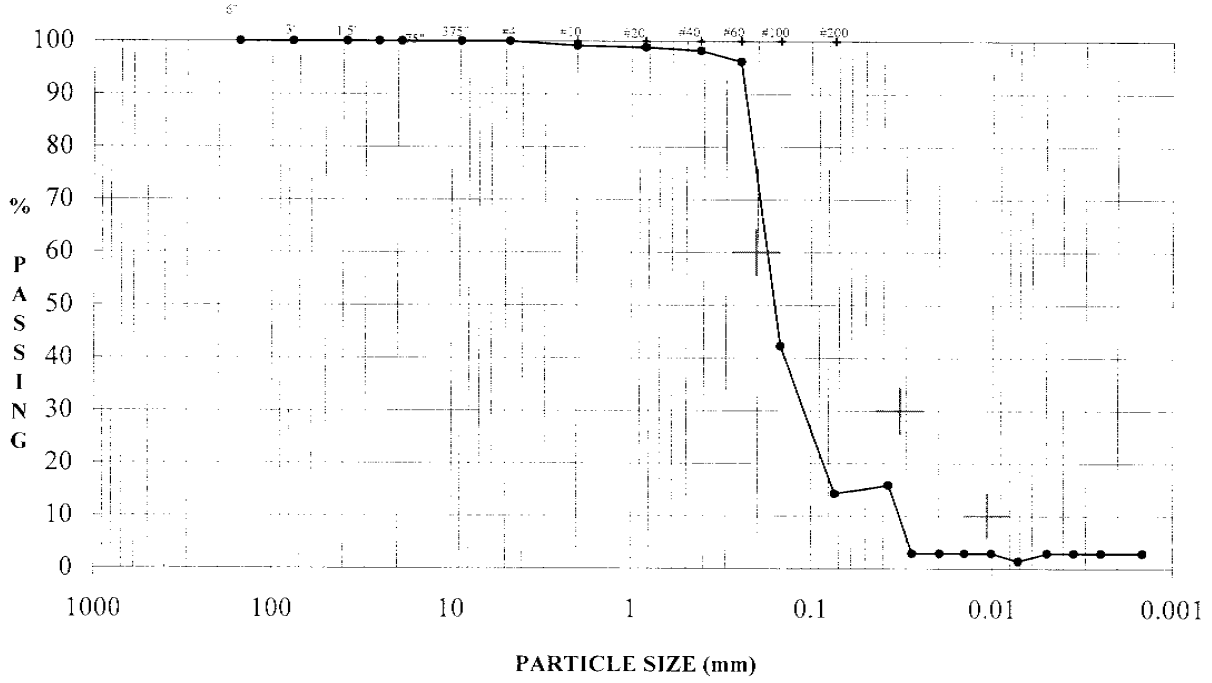
T5862-25
#4
tare 0.99 g
wet 6.11 g
dry 3.99 g

65.3 % solid
34.7 % moist

50

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.2%
#20	98.8%
#40	98.2%
#60	96.1%
#100	42.3%
#200	14.2%

Hydrometer Data	
Particle Diameter	% Finer
0.037	15.9%
0.028	2.9%
0.020	2.9%
0.014	2.9%
0.010	2.9%
0.007	1.4%
0.005	2.9%
0.003	2.9%
0.002	2.9%

DESCRIPTION			
Sample.Bottle#:	T58463-1b	Depth:	-
		USCS:	-
Wet Color:	grey		
Description:			
Comments:	GN41439		

SAMPLE DATA			
W_C (%):	17.4	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	85.8	PL	-
% Fines	14.2	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

tare #		Total Wt (g)	69.85
wt soil&tare, moist (g)		Wt Split #10 (g)	69.27
wt soil&tare, dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		LL	-
wt soil&tare, moist (g)		wt soil&tare, dry (g)	#VALUE!	PL	-
wt soil&tare, dry (g)		wt soil&tare, wash (g)	#VALUE!	PI	-
wt tare (g)		wt tare (g)	0.00		
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.2425	#VALUE!	#VALUE!	#18
#40	0.673	#VALUE!	#VALUE!	#40 fine sand
#60	2.12	#VALUE!	#VALUE!	#60
#100	39.4	#VALUE!	#VALUE!	#120
#200	58.32	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME, Cum (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	18	20	7	#N/A	#VALUE!
	#VALUE!	4.0	14			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	5			#N/A	#VALUE!
	#VALUE!	30.0	3			#N/A	#VALUE!
	#VALUE!	60.0	2			#N/A	#VALUE!
	#VALUE!	120.0	9	22	7	#N/A	#VALUE!
	#VALUE!	240.0	1			#N/A	#VALUE!
	#VALUE!	480.0	9			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	9	22	7	#N/A	#VALUE!

9/23/10

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: grey

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41439

T58463-1B #2

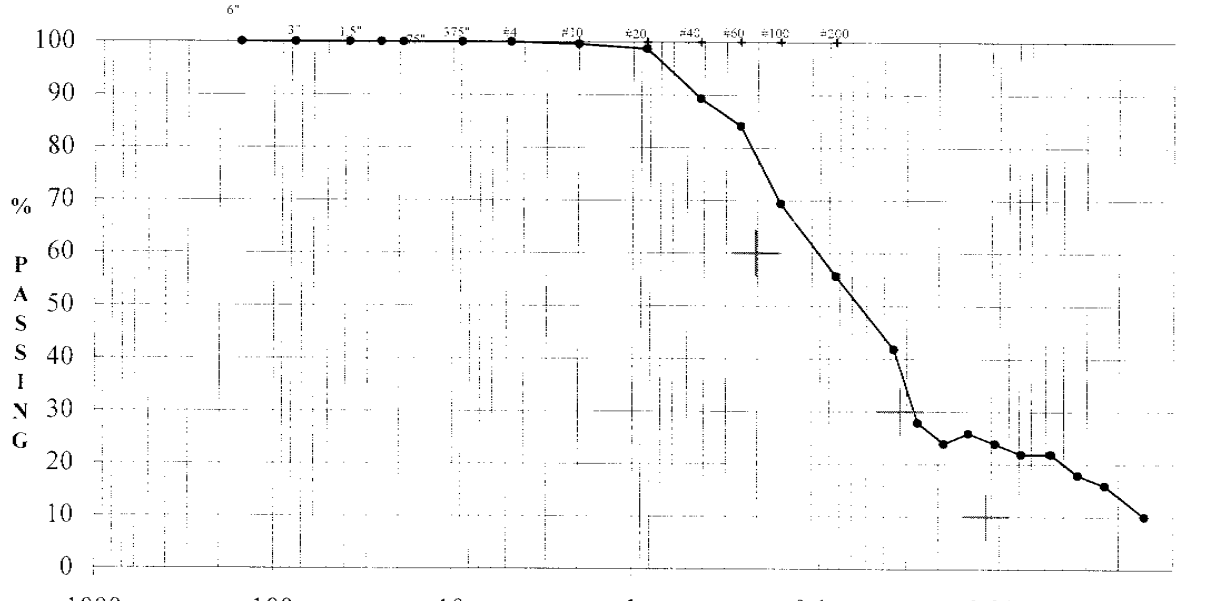
tare 1.00
wet 9.51 g
dry 7.86 g

82.64% solid (82.6%)
17.36% moist (17.4%)

82.4

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.6%
#20	98.7%
#40	89.3%
#60	84.1%
#100	69.4%
#200	55.6%

Hydrometer Data	
Particle Diameter	% Finer
0.035	41.8%
0.026	27.9%
0.019	23.9%
0.014	25.9%
0.010	23.9%
0.007	21.9%
0.005	21.9%
0.003	17.9%
0.002	15.9%

DESCRIPTION

Sample.Bottle#:	T58467-5b	Depth:	-
		USCS:	-
Wet Color:	grey		
Description:			
Comments:	GN41439		

SAMPLE DATA

W_C (%):	50.8	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	44.4	PL	-
% Fines	55.6	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	SJL

ACCUTEST LAB SE

tare #		Total Wt (g)	710	
wt soil&tare,moist (g)		Wt Split #10 (g)	46.04	
wt soil&tare,dry (g)		% passing #10	#VALUE!	
wt tare (g)				
wt moisture (g)	#VALUE!			
wt dry soil (g)	#VALUE!			
% moisture	#VALUE!			

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.407	#VALUE!	#VALUE!	#18
#40	5.15	#VALUE!	#VALUE!	#40 fine sand
#60	7.48	#VALUE!	#VALUE!	#60
#100	15.17	#VALUE!	#VALUE!	#120
#200	22.09	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG R	PARTICLE DIAMETER	% FINER
09/22/16		2.0	28	°C	7	#N/A	#VALUE!
	#VALUE!	4.0	21			#N/A	#VALUE!
	#VALUE!	8.0	19			#N/A	#VALUE!
	#VALUE!	15.0	20			#N/A	#VALUE!
	#VALUE!	30.0	19			#N/A	#VALUE!
	#VALUE!	60.0	17			#N/A	#VALUE!
	#VALUE!	120.0	18	22	7	#N/A	#VALUE!
	#VALUE!	240.0	16			#N/A	#VALUE!
	#VALUE!	480.0	15			#N/A	#VALUE!
09/23/16 #VALUE!	#VALUE!	1440.0	12	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: grey moist/sludge

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41439

T5867-5B
#5

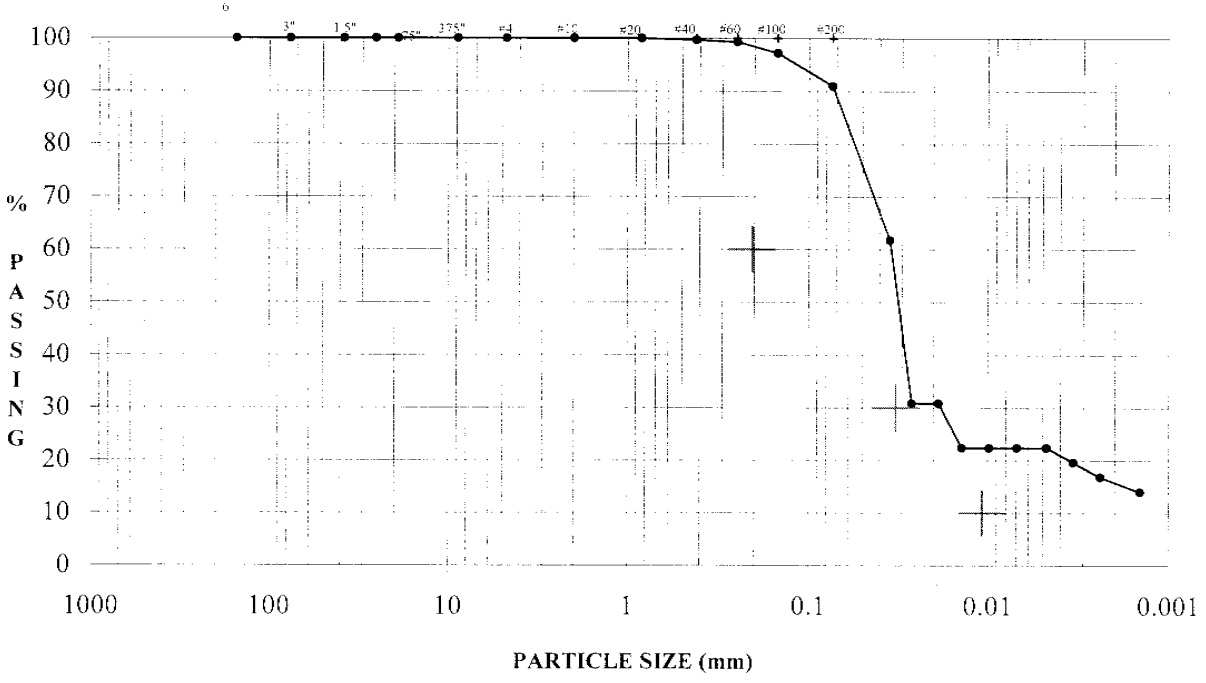
0.94 g tare
4.33 g wet
2.93 g dry

67.7 % solid
32.3 % moist

491

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	99.7%
#60	99.3%
#100	97.2%
#200	90.9%

Hydrometer Data	
Particle Diameter	% Finer
0.035	61.7%
0.026	30.8%
0.019	30.8%
0.014	22.4%
0.010	22.4%
0.007	22.4%
0.005	22.4%
0.003	19.6%
0.002	16.8%

DESCRIPTION

Sample.Bottle#:	T58611-1B	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	0		
Comments:	GN41439		

SAMPLE DATA

W_C (%):	41.5	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	9.1	PL	-
% Fines	90.9	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

tare #		Total Wt (g)	34.08
wt soil&tare,moist (g)		Wt Split #10 (g)	34.08
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	4	#VALUE!	#VALUE!	#18
#40	0.105	#VALUE!	#VALUE!	#40 fine sand
#60	0.237	#VALUE!	#VALUE!	#60
#100	0.997	#VALUE!	#VALUE!	#120
#200	3.23	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
7/22/10		2.0	29	23	7	#N/A	#VALUE!
	#VALUE!	4.0	18			#N/A	#VALUE!
	#VALUE!	8.0	14			#N/A	#VALUE!
	#VALUE!	15.0	15			#N/A	#VALUE!
	#VALUE!	30.0	15			#N/A	#VALUE!
	#VALUE!	60.0	15			#N/A	#VALUE!
	#VALUE!	120.0	13	22	7	#N/A	#VALUE!
	#VALUE!	240.0	14			#N/A	#VALUE!
	#VALUE!	480.0	13			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	12	22	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: brown

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41439

T53611-1B
#6

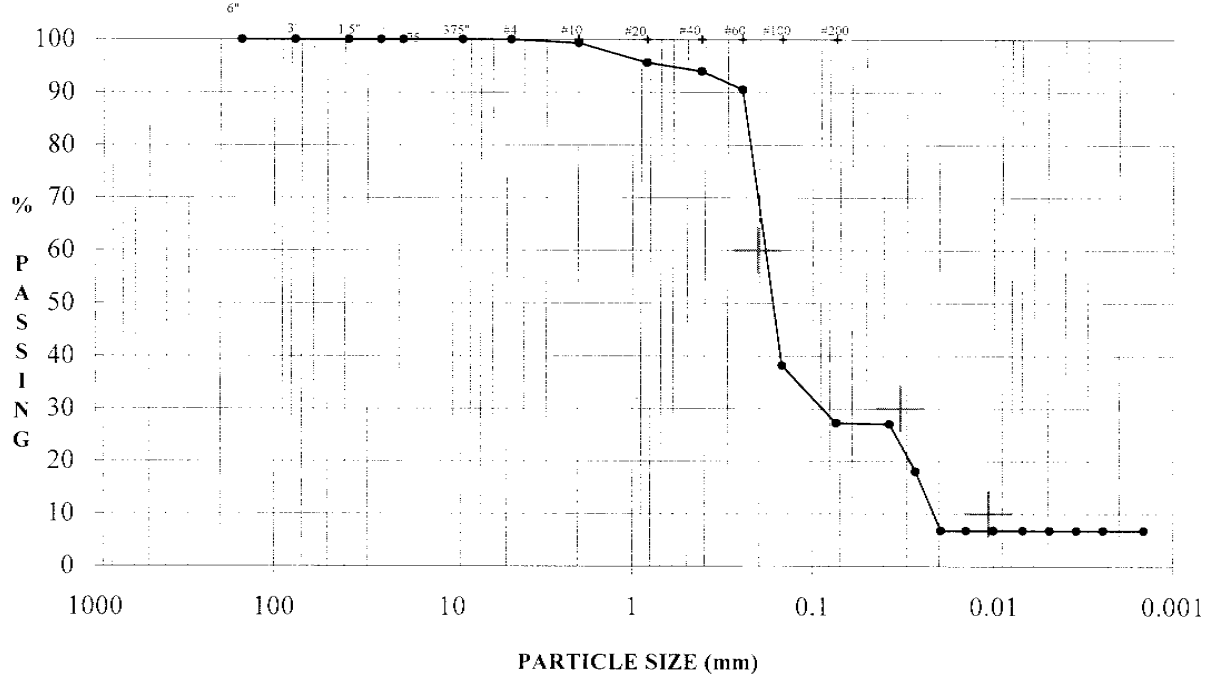
0.99 g tare
4.68 g wet
3.38 g dry

72.2 % solid
27.8 % moist

505

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.3%
#20	95.6%
#40	93.9%
#60	90.5%
#100	38.2%
#200	27.3%

Hydrometer Data	
Particle Diameter	% Finer
0.037	27.1%
0.027	18.1%
0.020	6.8%
0.014	6.8%
0.010	6.8%
0.007	6.8%
0.005	6.8%
0.003	6.8%
0.002	6.8%

DESCRIPTION

Sample.Bottle#:	T58614-1B.7	Depth:	-
		USCS:	-
Wet Color:	GREY		
Description:	sludge w/shells		
Comments:	GN41439		

SAMPLE DATA

W_C (%):	22.7	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	72.7	PL	-
% Fines	27.3	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

tare #		Total Wt (g)	1) 45.30
wt soil&tare,moist (g)		Wt Split #10 (g)	44.98
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:
wt tare (g)		wt tare (g)	0.00	PI:
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!	
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!	
% moisture	#VALUE!	% fines lost	#VALUE!	

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	1.64	#VALUE!	#VALUE!	#18
#40	2.37	#VALUE!	#VALUE!	#40 fine sand
#50	3.39	#VALUE!	#VALUE!	#60
#100	27.07	#VALUE!	#VALUE!	#120
#200	36.91	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	19	20	7	#N/A	#VALUE!
	#VALUE!	4.0	15			#N/A	#VALUE!
	#VALUE!	8.0	10			#N/A	#VALUE!
	#VALUE!	15.0	10			#N/A	#VALUE!
	#VALUE!	30.0	1) 9/10			#N/A	#VALUE!
	#VALUE!	60.0	10			#N/A	#VALUE!
	#VALUE!	120.0	10	22	7	#N/A	#VALUE!
	#VALUE!	240.0	10			#N/A	#VALUE!
	#VALUE!	480.0	10			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	10	20	7	#N/A	#VALUE!

9/23/10

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: grey sludge w/ shell fragments

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41439

TS8614-1 1) B

~~TS8614-1~~

#7

1.01g tare

6.06g wet

4.73 g dry

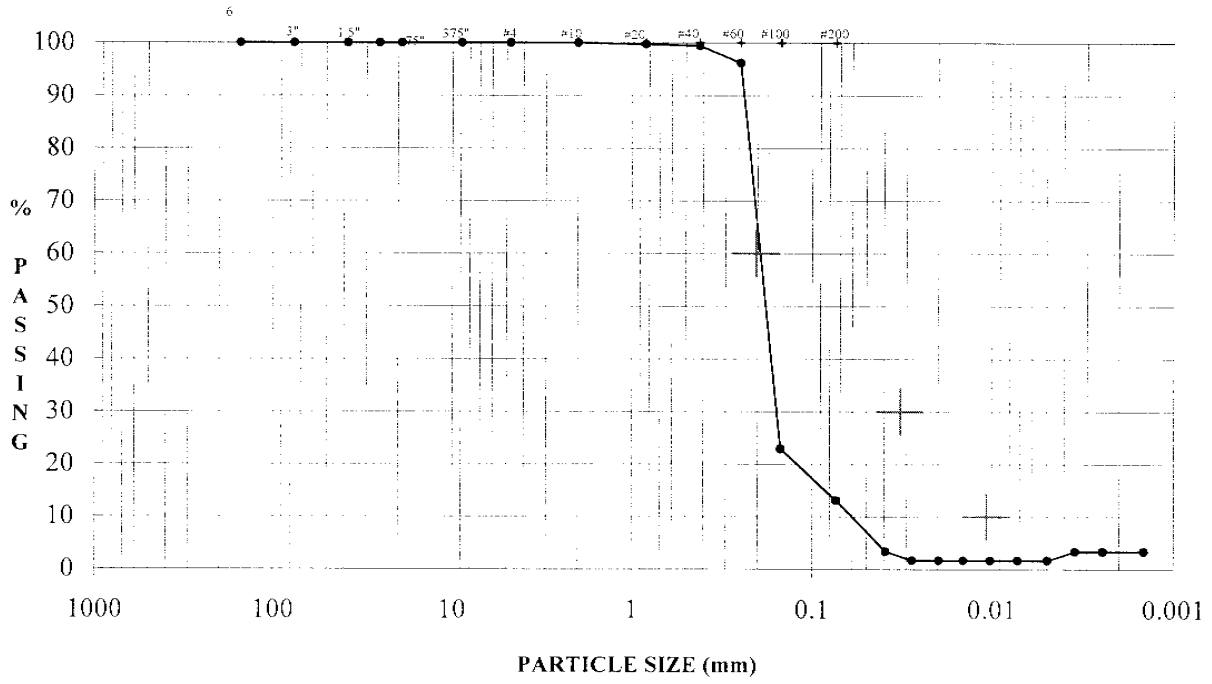
78.1 % solid

21.9 % moist

1) LE 9/22/10

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	99.7%
#40	99.4%
#60	96.2%
#100	22.9%
#200	13.1%

Hydrometer Data	
Particle Diameter	% Finer
0.039	3.4%
0.028	1.7%
0.020	1.7%
0.014	1.7%
0.010	1.7%
0.007	1.7%
0.005	1.7%
0.003	3.4%
0.002	3.4%

DESCRIPTION

Sample.Bottle#:	T58614-3B.8	Depth:	-
		USCS:	-
Wet Color:	brown		
Description:	0		
Comments:	GN41439		

SAMPLE DATA

W_C (%):	22.4	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	86.9	PL	-
% Fines	13.1	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

tare #		Total Wt (g)	58.34
wt soil&tare,moist (g)		Wt Split #10 (g)	58.34
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.152	#VALUE!	#VALUE!	#18
#40	0.341	#VALUE!	#VALUE!	#40 fine sand
#60	2.261	#VALUE!	#VALUE!	#60
#100	45.60	#VALUE!	#VALUE!	#120
#200	51.91	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/16		2.0	22	20	7	#N/A	#VALUE!
	#VALUE!	4.0	9			#N/A	#VALUE!
	#VALUE!	8.0	8			#N/A	#VALUE!
	#VALUE!	15.0	8			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8	22	7	#N/A	#VALUE!
	#VALUE!	240.0	9			#N/A	#VALUE!
	#VALUE!	480.0	9			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

9/23/16

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: brown

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41439

T58614-3 B

#8

101g tare

4.56g wet

32.9 dry

83.8 % solid

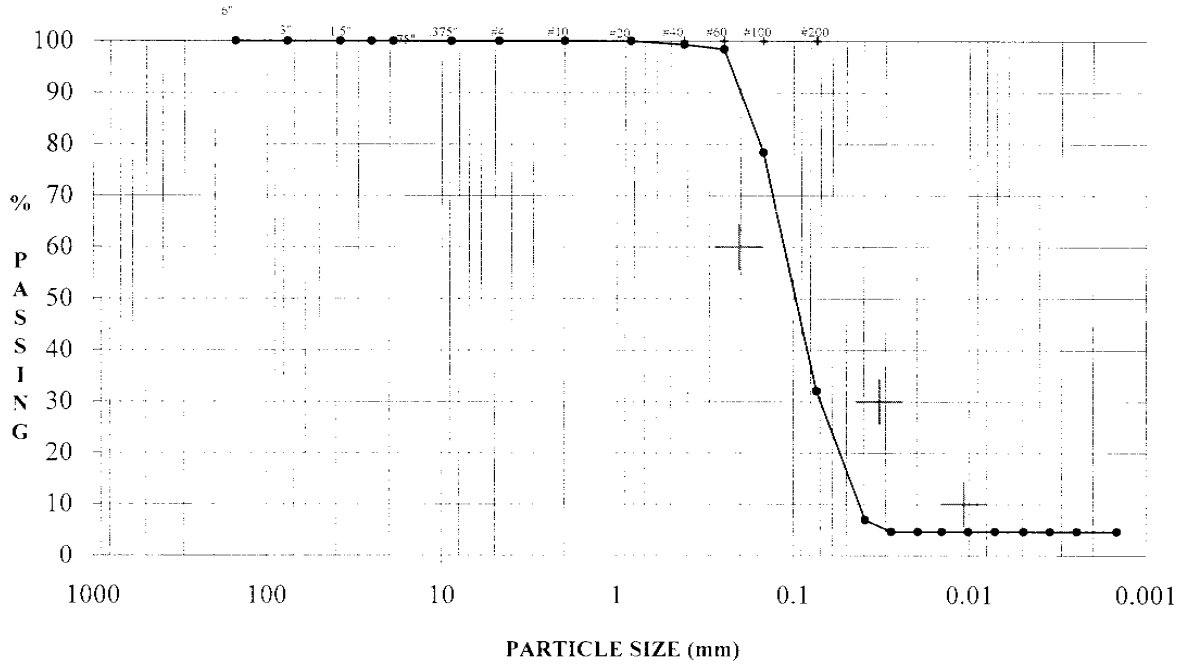
16.2 % moist

9/22/16

774

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	99.3%
#60	98.4%
#100	78.4%
#200	32.0%

Hydrometer Data	
Particle Diameter	% Finer
0.039	7.0%
0.028	4.6%
0.020	4.6%
0.014	4.6%
0.010	4.6%
0.007	4.6%
0.005	4.6%
0.003	4.6%
0.002	4.6%

DESCRIPTION

Sample.Bottle#:	T58707-1B	Depth:	-
		USCS:	-
Wet Color:	brown		
Description:	0		
Comments:	GN41439		

SAMPLE DATA

W_C (%):	27.7	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	68.0	PL	-
% Fines	32.0	PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

tare #		Total Wt (g)	40.75
wt soil&tare,moist (g)		Wt Split #10 (g)	40.75
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	9	#VALUE!	#VALUE!	#18
#40	2.25	#VALUE!	#VALUE!	#40 fine sand
#60	0.80	#VALUE!	#VALUE!	#60
#100	9.32	#VALUE!	#VALUE!	#120
#200	29.31	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME ELAPSED (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/10		2.0	10	20	7	#N/A	#VALUE!
	#VALUE!	4.0	9			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	9	22	7	#N/A	#VALUE!
	#VALUE!	240.0	9			#N/A	#VALUE!
	#VALUE!	480.0	9			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

9/23/10

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: Brown
Description:

USCS:

DATE #VALUE!
TECS
REVIEW

GN 41439

T58707-1 QC B

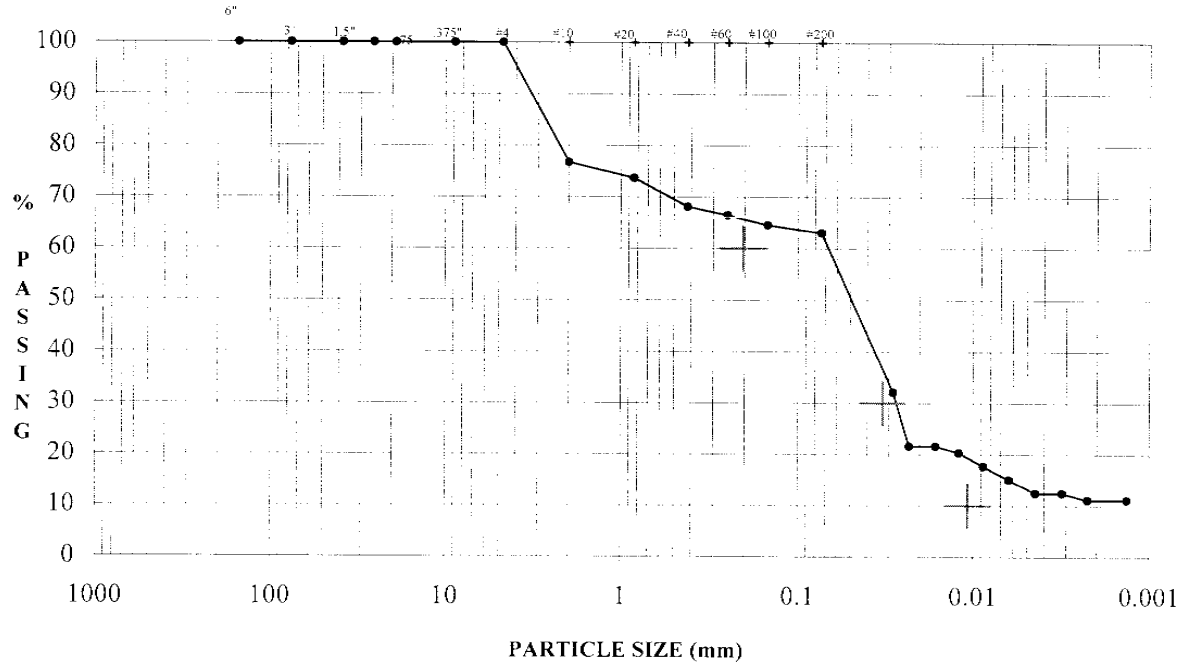
tare 1.05g
wet 5.51g
dry 4.59 g

83.3 % solid
16.7 % moist

-72.3

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	76.7%
#20	73.7%
#40	68.1%
#60	66.5%
#100	64.6%
#200	63.0%

Hydrometer Data	
Particle Diameter	% Finer
0.028	32.1%
0.023	21.6%
0.016	21.6%
0.012	20.3%
0.009	17.7%
0.006	15.1%
0.004	12.5%
0.003	12.5%
0.002	11.1%

DESCRIPTION			
Sample.Bottle#:	T58737-16	Depth:	-
		USCS:	-
Wet Color:	red, black,grey		
Description:	various soil types w/rocks		
Comments:	GN41439		

SAMPLE DATA	
W_C (%):	32.5
G_S:	2.65
% Gravel	0.0
% Sand	37.0
% Fines	63.0

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

Tare #		Total Wt (g)	110.23
wt soil&tare,moist (g)		Wt Split #10 (g)	84.53
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

Tare #		Tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	4.62	#VALUE!	#VALUE!	#18
#40	13.10	#VALUE!	#VALUE!	#40 fine sand
#60	15.61	#VALUE!	#VALUE!	#60
#100	18.45	#VALUE!	#VALUE!	#120
#200	20.37	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/16		2.0	56	20	7	#N/A	#VALUE!
	#VALUE!	4.0	40			#N/A	#VALUE!
	#VALUE!	8.0	40			#N/A	#VALUE!
	#VALUE!	15.0	34			#N/A	#VALUE!
	#VALUE!	30.0	34			#N/A	#VALUE!
	#VALUE!	60.0	30			#N/A	#VALUE!
	#VALUE!	120.0	26	22	7	#N/A	#VALUE!
	#VALUE!	240.0	26			#N/A	#VALUE!
	#VALUE!	480.0	24			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	24	20	7	#N/A	#VALUE!

9/23/16

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: Red, black, grey
Description: Mottled various soil types w/ rocks
USCS:

DATE: #VALUE!
TECH:
REVIEW:

GN41439

T58737-16

F58737-16

GMG-21-10 #1

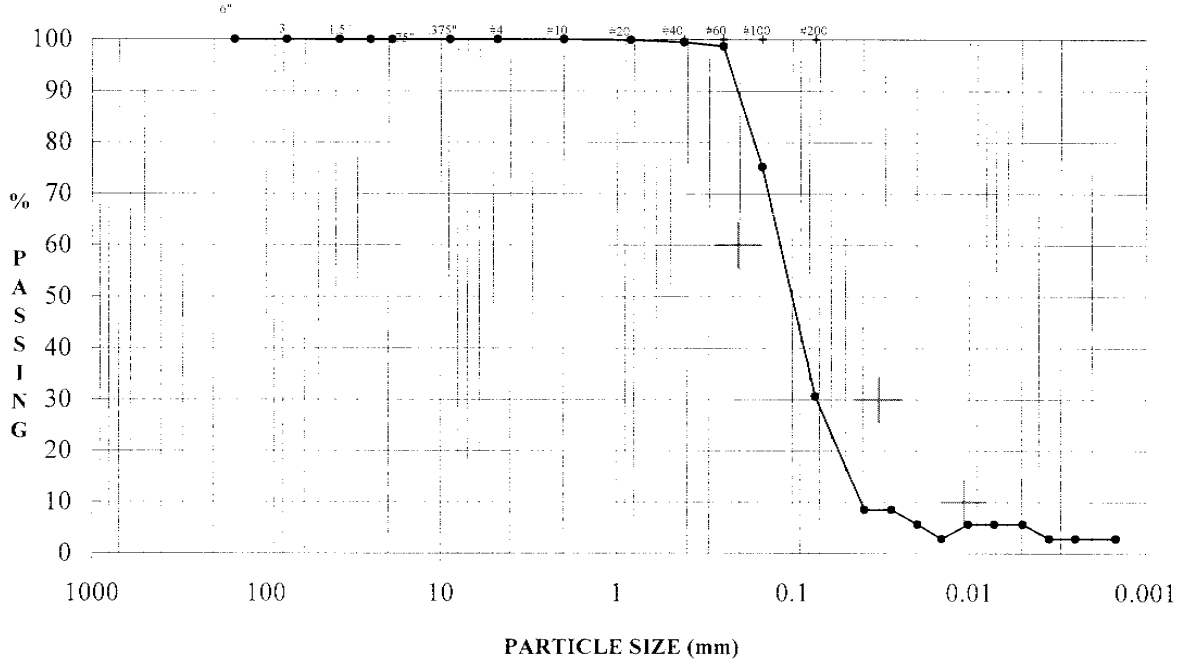
tare 1.04 g
wet 7.77 g
dry 6.10 g

78.5 % solid
21.5 % moist

07.4

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	99.9%
#40	99.5%
#60	98.7%
#100	75.2%
#200	30.6%

Hydrometer Data	
Particle Diameter	% Finer
0.039	8.5%
0.028	8.5%
0.020	5.7%
0.014	2.8%
0.010	5.7%
0.007	5.7%
0.005	5.7%
0.003	2.8%
0.002	2.8%

DESCRIPTION

Sample.Bottle#:	T58707-1B dup	Depth:	-
		USCS:	-
Wet Color:	brown		
Description:	0		
Comments:	GN41439		

SAMPLE DATA

W_C (%):	27.7
G_S:	2.65
% Gravel	0.0
% Sand	69.4
% Fines	30.6

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/23/10
Technician:	LE
Reviewer:	ltm

ACCUTEST LAB SE

tare #		Total Wt (g)	33.21
wt soil&tare,moist (g)		Wt Split #10 (g)	33.21
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.041	#VALUE!	#VALUE!	#18
#40	0.178	#VALUE!	#VALUE!	#40 fine sand
#60	0.463	#VALUE!	#VALUE!	#60
#100	8.72	#VALUE!	#VALUE!	#120
#200	24.38	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/22/16		2.0	10	20	7	#N/A	#VALUE!
	#VALUE!	4.0	10			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	8			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	9	22	7	#N/A	#VALUE!
	#VALUE!	240.0	8			#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
9/23/16 #VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: brown

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41439

T58774

83.3 % solid
16.7 % moist

T2.3

Southeast

09/28/10

Technical Report for

CSX Transportation

AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

IN000072.0052.00001

Accutest Job Number: F76459

Sampling Date: 09/09/10

Report to:

ARCADIS Geraghty & Miller
251 East Ohio Street Suite 800
Indianapolis, IN 46204
bgriggs@arcadis-us.com

ATTN: Bryant Griggs

Total number of pages in report: **574**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

CSX Transportation

Job No: F76459

AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN
Project No: IN000072.0052.00001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F76459-1	09/09/10	09:15	ER	09/10/10	SO	Soil	SED-16
F76459-2	09/09/10	10:00	ER	09/10/10	SO	Soil	SED-17
F76459-3	09/09/10	11:05	ER	09/10/10	SO	Soil	SED-18
F76459-3D	09/09/10	11:05	ER	09/10/10	SO	Soil Dup/MSD	SED-18
F76459-3S	09/09/10	11:05	ER	09/10/10	SO	Soil Matrix Spike	SED-18
F76459-4	09/09/10	00:00	ER	09/10/10	SO	Soil	FD-1-100909
F76459-5	09/09/10	13:40	ER	09/10/10	SO	Soil	SED-19
F76459-6	09/09/10	14:15	ER	09/10/10	SO	Soil	SED-20
F76459-7	09/09/10	14:45	ER	09/10/10	SO	Soil	SED-21
F76459-8	09/09/10	15:15	ER	09/10/10	SO	Soil	SED-22
F76459-9	09/09/10	15:30	ER	09/10/10	SO	Soil	SED-23
F76459-10	09/09/10	09:15	ER	09/10/10	AQ	Surface Water	SW-16
F76459-11	09/09/10	10:00	ER	09/10/10	AQ	Surface Water	SW-17

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

CSX Transportation

Job No: F76459

AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN
Project No: IN000072.0052.00001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F76459-12	09/09/10	11:05	ER	09/10/10	AQ	Surface Water	SW-18
F76459-12D	09/09/10	11:05	ER	09/10/10	AQ	Water Dup/MSD	SW-18
F76459-12S	09/09/10	11:05	ER	09/10/10	AQ	Water Matrix Spike	SW-18
F76459-13	09/09/10	00:00	ER	09/10/10	AQ	Surface Water	FD-1-100909
F76459-14	09/09/10	13:40	ER	09/10/10	AQ	Surface Water	SW-19
F76459-15	09/09/10	14:15	ER	09/10/10	AQ	Surface Water	SW-20
F76459-16	09/09/10	14:45	ER	09/10/10	AQ	Surface Water	SW-21
F76459-17	09/09/10	15:15	ER	09/10/10	AQ	Surface Water	SW-22
F76459-18	09/09/10	15:30	ER	09/10/10	AQ	Surface Water	SW-23
F76459-19	09/09/10	00:00	ER	09/10/10	AQ	Trip Blank Soil	TRIP BLANK

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: CSX Transportation **Job** F76459

Site: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, **Report Date:** 9/28/2010 8:18:30 AM

18 Samples and 1 Trip Blank were collected on 09/09/2010 and were received at Accutest SE on 09/10/2010 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of F76459. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VB2907

All samples were analyzed within the recommended method holding time.

Samples F76427-6MS, F76427-6MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Duplicate Recoverys for Ethylbenzene, Toluene are outside control limits. Probable cause due to matrix interference.

RPD for MSD for Benzene is outside control limits for sample F76427-6MSD. Probable cause due to sample

Sample F76459-2MS has surrogates outside control limits. Probable cause due to matrix interference.

F76459-19: Sample vial(s) contained significant headspace; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VC2933

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76459-12MS, F76459-12MSD were used as the QC samples indicated.

Matrix Spike Recovery for Ethylbenzene is outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for Ethylbenzene, Xylene (total) are outside control limits. Probable cause due to matrix interference.

Sample F76459-2MS has surrogates outside control limits. Probable cause due to matrix interference.

Matrix: SO **Batch ID:** VH2414

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76459-3MS, F76459-3MSD were used as the QC samples indicated.

Sample F76459-2MS has surrogates outside control limits. Probable cause due to matrix interference.

F76459-3: Sample was received in a bulk container and preserved within 48 hours of sampling.

Matrix: SO **Batch ID:** VK2013

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76459-2MS, F76459-2MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recoverys for Ethylbenzene, Xylene (total) are outside control limits. Probable cause due to matrix interference.

Sample F76459-2MS has surrogates outside control limits. Probable cause due to matrix interference.

F76459-1, F76459-2, F76459-4, F76459-5, F76459-6, F76459-7, F76459-8, F76459-9: Sample was received in a bulk container and preserved within 48 hours of sampling.

Wet Chemistry by Method ASTM D422

Matrix: SO **Batch ID:** GN41495

Sample F76459-3DUP was used as the QC sample for % Fines, % Gravel, % Sand.

Wet Chemistry by Method SM19 2540B M

Matrix: SO **Batch ID:** GN41323

Sample F76459-1DUP was used as the QC sample for Solids, Percent.

Wet Chemistry by Method SW846 9060A MOD

Matrix: SO **Batch ID:** GP15623

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76459-3DUP, F76459-3MS were used as the QC samples for Total Organic Carbon.

Matrix Spike Recovery for Total Organic Carbon is outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Matrix: SO **Batch ID:** GP15631

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76459-6DUP, F76459-6MS were used as the QC samples for Total Organic Carbon.

Matrix Spike Recovery for Total Organic Carbon is outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

RPD for Duplicate for Total Organic Carbon is outside control limits for sample GP15631-D1. High RPD due to possible sample nonhomogeneity.

Matrix: SO **Batch ID:** GP15646

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F76459-8DUP, F76459-8MS were used as the QC samples for Total Organic Carbon.

Matrix Spike Recovery for Total Organic Carbon is outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: September 28, 2010

Ellen Pampel, Inorganic QA (signature on file)

Tuesday, September 28, 2010

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-16		
Lab Sample ID:	F76459-1	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	79.3
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046757.D	1	09/16/10	SH	09/10/10 15:10	n/a	VK2013
Run #2							

	Initial Weight
Run #1	4.94 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0064	mg/kg	
108-88-3	Toluene	ND	0.0064	mg/kg	
100-41-4	Ethylbenzene	ND	0.0064	mg/kg	
1330-20-7	Xylene (total)	ND	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		80-121%
2037-26-5	Toluene-D8	93%		71-130%
460-00-4	4-Bromofluorobenzene	120%		59-148%
17060-07-0	1,2-Dichloroethane-D4	87%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-16		
Lab Sample ID:	F76459-1	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	79.3
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	73.7		%	1	09/25/10	LE	ASTM D422
% Fines	26.3		%	1	09/25/10	LE	ASTM D422
Solids, Percent	79.3		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	84500	1300	mg/kg	1	09/16/10 14:25	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-17
Lab Sample ID:	F76459-2
Matrix:	SO - Soil
Method:	SW846 8260B SW846 5030A
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN
Date Sampled:	09/09/10
Date Received:	09/10/10
Percent Solids:	76.7

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046758.D	1	09/16/10	SH	09/10/10 15:10	n/a	VK2013
Run #2							

	Initial Weight
Run #1	5.12 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0064	mg/kg	
108-88-3	Toluene	ND	0.0064	mg/kg	
100-41-4	Ethylbenzene	ND	0.0064	mg/kg	
1330-20-7	Xylene (total)	ND	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-121%
2037-26-5	Toluene-D8	93%		71-130%
460-00-4	4-Bromofluorobenzene	119%		59-148%
17060-07-0	1,2-Dichloroethane-D4	81%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SED-17
Lab Sample ID: F76459-2
Matrix: SO - Soil
Date Sampled: 09/09/10
Date Received: 09/10/10
Percent Solids: 76.7
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	71.6		%	1	09/25/10	LE	ASTM D422
% Fines	28.4		%	1	09/25/10	LE	ASTM D422
Solids, Percent	76.7		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	55700	1300	mg/kg	1	09/16/10 15:02	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-18		
Lab Sample ID:	F76459-3	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	68.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H064490.D	1	09/16/10	MM	09/10/10 15:10	n/a	VH2414
Run #2							

	Initial Weight
Run #1	5.09 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0072	mg/kg	
108-88-3	Toluene	ND	0.0072	mg/kg	
100-41-4	Ethylbenzene	ND	0.0072	mg/kg	
1330-20-7	Xylene (total)	ND	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-121%
2037-26-5	Toluene-D8	84%		71-130%
460-00-4	4-Bromofluorobenzene	100%		59-148%
17060-07-0	1,2-Dichloroethane-D4	97%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-18		
Lab Sample ID:	F76459-3	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	68.1
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	70.5		%	1	09/25/10	LE	ASTM D422
% Fines	29.5		%	1	09/25/10	LE	ASTM D422
Solids, Percent	68.1		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	49700	1500	mg/kg	1	09/16/10 13:49	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	FD-1-100909		
Lab Sample ID:	F76459-4	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	79.4
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046759.D	1	09/16/10	SH	09/10/10 15:47	n/a	VK2013
Run #2							

	Initial Weight
Run #1	4.70 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0067	mg/kg	
108-88-3	Toluene	ND	0.0067	mg/kg	
100-41-4	Ethylbenzene	ND	0.0067	mg/kg	
1330-20-7	Xylene (total)	ND	0.020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-121%
2037-26-5	Toluene-D8	94%		71-130%
460-00-4	4-Bromofluorobenzene	123%		59-148%
17060-07-0	1,2-Dichloroethane-D4	85%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FD-1-100909
Lab Sample ID: F76459-4 **Date Sampled:** 09/09/10
Matrix: SO - Soil **Date Received:** 09/10/10
Percent Solids: 79.4
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	73.5		%	1	09/25/10	LE	ASTM D422
% Fines	26.5		%	1	09/25/10	LE	ASTM D422
Solids, Percent	79.4		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	74000	1300	mg/kg	1	09/17/10 14:45	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-19
Lab Sample ID:	F76459-5
Matrix:	SO - Soil
Method:	SW846 8260B SW846 5030A
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN
Date Sampled:	09/09/10
Date Received:	09/10/10
Percent Solids:	74.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046760.D	1	09/16/10	SH	09/10/10 15:47	n/a	VK2013
Run #2							

	Initial Weight
Run #1	4.94 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0068	mg/kg	
108-88-3	Toluene	ND	0.0068	mg/kg	
100-41-4	Ethylbenzene	ND	0.0068	mg/kg	
1330-20-7	Xylene (total)	ND	0.020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		80-121%
2037-26-5	Toluene-D8	91%		71-130%
460-00-4	4-Bromofluorobenzene	111%		59-148%
17060-07-0	1,2-Dichloroethane-D4	94%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-19		
Lab Sample ID:	F76459-5	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	74.8
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	73.2		%	1	09/25/10	LE	ASTM D422
% Fines	26.8		%	1	09/25/10	LE	ASTM D422
Solids, Percent	74.8		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	55800	1300	mg/kg	1	09/17/10 15:41	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-20		
Lab Sample ID:	F76459-6	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	76.6
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046761.D	1	09/16/10	SH	09/10/10 15:47	n/a	VK2013
Run #2							

	Initial Weight
Run #1	5.24 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0062	mg/kg	
108-88-3	Toluene	ND	0.0062	mg/kg	
100-41-4	Ethylbenzene	ND	0.0062	mg/kg	
1330-20-7	Xylene (total)	ND	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-121%
2037-26-5	Toluene-D8	88%		71-130%
460-00-4	4-Bromofluorobenzene	111%		59-148%
17060-07-0	1,2-Dichloroethane-D4	100%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-20		
Lab Sample ID:	F76459-6	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	76.6
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	73.4		%	1	09/25/10	LE	ASTM D422
% Fines	26.6		%	1	09/25/10	LE	ASTM D422
Solids, Percent	76.6		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	58200	1300	mg/kg	1	09/17/10 14:04	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-21		
Lab Sample ID:	F76459-7	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	76.4
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046762.D	1	09/16/10	SH	09/10/10 15:47	n/a	VK2013
Run #2							

	Initial Weight
Run #1	5.81 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0056	mg/kg	
108-88-3	Toluene	ND	0.0056	mg/kg	
100-41-4	Ethylbenzene	ND	0.0056	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		80-121%
2037-26-5	Toluene-D8	92%		71-130%
460-00-4	4-Bromofluorobenzene	109%		59-148%
17060-07-0	1,2-Dichloroethane-D4	86%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-21		
Lab Sample ID:	F76459-7	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	76.4
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	72.4		%	1	09/25/10	LE	ASTM D422
% Fines	27.6		%	1	09/25/10	LE	ASTM D422
Solids, Percent	76.4		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	53900	1300	mg/kg	1	09/17/10 16:27	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-22		
Lab Sample ID:	F76459-8	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	76.6
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046763.D	1	09/16/10	SH	09/10/10 15:47	n/a	VK2013
Run #2							

	Initial Weight
Run #1	5.41 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0060	mg/kg	
108-88-3	Toluene	ND	0.0060	mg/kg	
100-41-4	Ethylbenzene	ND	0.0060	mg/kg	
1330-20-7	Xylene (total)	ND	0.018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-121%
2037-26-5	Toluene-D8	94%		71-130%
460-00-4	4-Bromofluorobenzene	115%		59-148%
17060-07-0	1,2-Dichloroethane-D4	83%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-22		
Lab Sample ID:	F76459-8	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	76.6
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	70.4		%	1	09/25/10	LE	ASTM D422
% Fines	29.6		%	1	09/25/10	LE	ASTM D422
Solids, Percent	76.6		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	65200	1300	mg/kg	1	09/20/10 14:22	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-23		
Lab Sample ID:	F76459-9	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
Method:	SW846 8260B SW846 5030A	**Percent Solids:**	77.9
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K046764.D	1	09/16/10	SH	09/10/10 15:47	n/a	VK2013
Run #2							

	Initial Weight
Run #1	4.72 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0068	mg/kg	
108-88-3	Toluene	ND	0.0068	mg/kg	
100-41-4	Ethylbenzene	ND	0.0068	mg/kg	
1330-20-7	Xylene (total)	ND	0.020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-121%
2037-26-5	Toluene-D8	93%		71-130%
460-00-4	4-Bromofluorobenzene	109%		59-148%
17060-07-0	1,2-Dichloroethane-D4	85%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SED-23		
Lab Sample ID:	F76459-9	**Date Sampled:**	09/09/10
Matrix:	SO - Soil	**Date Received:**	09/10/10
		Percent Solids:	77.9
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Grain Size							
% Gravel	0.0		%	1	09/25/10	LE	ASTM D422
% Sand	76.3		%	1	09/25/10	LE	ASTM D422
% Fines	23.7		%	1	09/25/10	LE	ASTM D422
Solids, Percent	77.9		%	1	09/10/10	TC	SM19 2540B M
Total Organic Carbon	42500	1300	mg/kg	1	09/20/10 15:37	CN	SW846 9060A MOD

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-16		
Lab Sample ID:	F76459-10	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073575.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		87-116%
17060-07-0	1,2-Dichloroethane-D4	79%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	100%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-17		
Lab Sample ID:	F76459-11	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073576.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		87-116%
17060-07-0	1,2-Dichloroethane-D4	83%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	101%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-18		
Lab Sample ID:	F76459-12	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073577.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	87%		76-127%
2037-26-5	Toluene-D8	102%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	FD-1-100909		
Lab Sample ID:	F76459-13	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073578.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	89%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-19		
Lab Sample ID:	F76459-14	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073579.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	90%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-20		
Lab Sample ID:	F76459-15	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073580.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	92%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-21		
Lab Sample ID:	F76459-16	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073581.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-22		
Lab Sample ID:	F76459-17	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073582.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	103%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-23		
Lab Sample ID:	F76459-18	**Date Sampled:**	09/09/10
Matrix:	AQ - Surface Water	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C073583.D	1	09/15/10	AJ	n/a	n/a	VC2933
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F76459-19	**Date Sampled:**	09/09/10
Matrix:	AQ - Trip Blank Soil	**Date Received:**	09/10/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	B070407.D	1	09/16/10	AJ	n/a	n/a	VB2907
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.015	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	104%		76-127%
2037-26-5	Toluene-D8	96%		86-112%
460-00-4	4-Bromofluorobenzene	100%		84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

F76459

COC # 1 of 2

CSX TRANSPORTATION CHAIN OF CUSTODY

LABORATORY INFORMATION
Accutest
4405 Vineland Rd., Suite C-15
Orlando, FL 32811
Phone: 407-425-6700
Fax: 407-425-0707

SHIPMENT INFORMATION
Shipment Method: FedEx
Shipment Tracking No:

CSXT PROJECT INFORMATION
CSXT Project Number: 7415824
CSXT Project Name: IN Creosote
CSXT Contact: Paul J. Kwiatkowski
Proj. State (State of Origin): IN
Proj. City: Bloomington
LWON: ENV 53216

CONSULTANT INFORMATION
Company: ARCADIS
Address: 251 E. Ohio St., Ste. 800
City, State, Zip: Indianapolis, IN 46204
Project #: IN000720052.0000.00001
PM: Bryant Gibbs
Email: Bryant.Gibbs@arcadis-us.com
Phone: 317-231-6500 Fax: 317-274-6574

Turnaround Time:
- [ ] 1 Day Rush
- [ ] 2 Day Rush
- [ ] 3 Day Rush
- [ ] Standard 6-13 Days
- [ ] Specify # Days
- [ ] Standard 14 Days
- [ ] Other

Deliverables:
- [ ] CSXT Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliv:
- [ ] EDD Required, Format:

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

Sample Identification		Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Note ➡ Pres. Code 1	0	2	METHODS FOR ANALYSIS: BTEX	TOC	Dissolved STLC	COMMENTS	LAB USE
SED-16	1	2	9-9-10	0915	RW	N	G	SW	X	X	X					10
SED-17	2	2	9-9-10	1000	RW	N	G	SW	X	X	X					11
SED-18	3	6	9-9-10	1105	RW	N	G	SW	X	X	X				MS/MSD	12
FD-1-100910	4	2	9-9-10	—	RW	N	G	SW	X	X	X				FIELD DUP	13
SED-19	5	2	9-9-10	1340	RW	N	G	SW	X	X	X					14
SED-20	6	2	9-9-10	1415	RW	N	G	SW	X	X	X					15
SED-21	7	2	9-9-10	1445	RW	N	G	SW	X	X	X					16
SED-22	8	2	9-9-10	1515	RW	N	G	SW	X	X	X					17
SED-23	9	2	9-9-10	1530	RW	N	G	SW	X	X	X					18

	Date Time:	Received By:	Date Time:	Comments & Special Analytical Requirements:
Relinquished By: Arcadis	9-10-10 1800	Received By: FX		-SEE TABLE 1
Relinquished By: FX	Date Time:	Received By: Accutest	Date Time: 9-10-10 1930	-ECO ROSS SAMPLES
Relinquished By:	Date Time:	Received By:	Date Time:	
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal # / LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

4.1 4

F76459: Chain of Custody
Page 1 of 3

F76459

CSX TRANSPORTATION — CHAIN OF CUSTODY

COC # 2 of 2

LABORATORY INFORMATION
Accutest
4405 Vineland Rd., Suite C-15
Orlando, FL 32811
Phone: 407-425-6700
Fax: 407-425-0707

SHIPMENT INFORMATION
Shipment Method: FED-EX
Shipment Tracking No:

CSXT PROJECT INFORMATION
CSXT Project Number: 941582S
CSXT Project Name: INCREOSOTE
CSXT Contact: PAUL J. KULAWIK II
Proj. State (State of Origin): IN
Proj. City: BLOOMINGTON
LWON: ENV 5321L

CONSULTANT INFORMATION
Company: ARCADIS
Address: 251 E. OHIO ST., STE. 600
City, State, Zip: INDIANAPOLIS, IN 46204
Project #: IN000072.0052.00001
PM: BRYANT GRIBBS
Email: BRYANT.GRIBBS@ARCADIS-US.COM
Phone: 317-231-6500
Fax: 317-231-6514

Turnaround Time:
- [ ] 1 Day Rush
- [ ] 2 Day Rush
- [ ] 3 Day Rush
- [X] Standard 6-13 Days — Specify # Days: 7
- [ ] Standard 14 Days
- [ ] Other

Deliverables:
- [ ] CSXT Standard (Level II)
- [ ] Level III
- [X] Level IV
- [X] Other Deliv: DATA CD ONLY, NO HARD COPY
- [X] EDD Required, Format: EXCEL

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other
Note ➡ Pres. Code: 1

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	METHODS FOR ANALYSIS (BTEX)	COMMENTS	LAB USE
SW-16 (10)	3	9-9-10	0915	RW	N	G	SW	X	PLEASE SEE ICP	
SW-17 (11)	3		1000					X		
SW-18 (12)	9		1105					X	MS/MSD	
FD-1-100909 (13)	3		—					X	FIELD DUP	
SW-19 (14)	3		1340					X		
SW-20 (15)	3		1415					X		
SW-21 (16)	3		1445					X		
SW-22 (17)	3		1515					X		
SW-23 (18)	3	↓	1530	↓	↓	↓	↓	X		
TRIP BLANK (090910) (19)	3	—	—	—	—	—	LIQ	X	TRIP BLANK	

Relinquished By:	Date Time: 9/10/10 1800	Received By:	Date Time:	Comments & Special Analytical Requirements: SEE TABLE 1 - ECO RISC SAMPLES
Relinquished By:	Date Time:	Received By:	Date Time: 9/10/10 1830	
Relinquished By:	Date Time:	Received By:	Date Time:	
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal #	LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

L6

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F76459: Chain of Custody
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ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F76459 CLIENT: Arcadis PROJECT: In Creosote

DATE/TIME RECEIVED: 091010 0900 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8728 5791 4475

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [X] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [X] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [X] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 0

NUMBER OR LAB FILTERED METALS ? 0

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +.6
- [ ] OBSERVED TEMPS: 2.0
- [ ] CORRECTED TEMPS: 2.6

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [X] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [X] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: Samp 1-9 is soils, Samp 10-18 is wtls (water)
Samp #3 1yr received broken RECEIVED ONLY 8 VIALS FOR SAMPLE #12

TECHNICIAN SIGNATURE/DATE FT 091010 REVIEWER SIGNATURE/DATE 09-10-10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

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F76459: Chain of Custody
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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC2933-MB	C073559.D	1	09/15/10	AJ	n/a	n/a	VC2933

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-10, F76459-11, F76459-12, F76459-13, F76459-14, F76459-15, F76459-16, F76459-17, F76459-18

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	107%	84-120%

Method Blank Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB2907-MB	B070405.D	1	09/16/10	AJ	n/a	n/a	VB2907

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-19

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	87-116%
17060-07-0	1,2-Dichloroethane-D4	108%	76-127%
2037-26-5	Toluene-D8	94%	86-112%
460-00-4	4-Bromofluorobenzene	99%	84-120%

Method Blank Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2414-MB	H064489.D	1	09/16/10	MM	n/a	n/a	VH2414

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-3

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	80-121%
2037-26-5	Toluene-D8	85%	71-130%
460-00-4	4-Bromofluorobenzene	94%	59-148%
17060-07-0	1,2-Dichloroethane-D4	106%	77-123%

Method Blank Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2013-MB	K046753.D	1	09/16/10	SH	n/a	n/a	VK2013

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-1, F76459-2, F76459-4, F76459-5, F76459-6, F76459-7, F76459-8, F76459-9

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	80-121%
2037-26-5	Toluene-D8	95%	71-130%
460-00-4	4-Bromofluorobenzene	106%	59-148%
17060-07-0	1,2-Dichloroethane-D4	91%	77-123%

Blank Spike Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC2933-BS	C073558.D	1	09/15/10	AJ	n/a	n/a	VC2933

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-10, F76459-11, F76459-12, F76459-13, F76459-14, F76459-15, F76459-16, F76459-17, F76459-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	20.9	84	83-124
100-41-4	Ethylbenzene	25	21.9	88	87-118
108-88-3	Toluene	25	21.7	87	86-116
1330-20-7	Xylene (total)	75	67.1	89	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	87-116%
17060-07-0	1,2-Dichloroethane-D4	106%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	102%	84-120%

Blank Spike Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB2907-BS	B070404.D	1	09/16/10	AJ	n/a	n/a	VB2907

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	26.2	105	83-124
100-41-4	Ethylbenzene	25	24.2	97	87-118
108-88-3	Toluene	25	23.9	96	86-116
1330-20-7	Xylene (total)	75	73.1	97	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	87-116%
17060-07-0	1,2-Dichloroethane-D4	107%	76-127%
2037-26-5	Toluene-D8	95%	86-112%
460-00-4	4-Bromofluorobenzene	99%	84-120%

Blank Spike Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2414-BS	H064488.D	1	09/16/10	MM	n/a	n/a	VH2414

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	53.0	106	78-130
100-41-4	Ethylbenzene	50	49.9	100	82-124
108-88-3	Toluene	50	46.1	92	80-123
1330-20-7	Xylene (total)	150	150	100	83-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-121%
2037-26-5	Toluene-D8	91%	71-130%
460-00-4	4-Bromofluorobenzene	101%	59-148%
17060-07-0	1,2-Dichloroethane-D4	116%	77-123%

Blank Spike Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2013-BS	K046752.D	1	09/16/10	SH	n/a	n/a	VK2013

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-1, F76459-2, F76459-4, F76459-5, F76459-6, F76459-7, F76459-8, F76459-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	58.4	117	78-130
100-41-4	Ethylbenzene	50	53.3	107	82-124
108-88-3	Toluene	50	50.2	100	80-123
1330-20-7	Xylene (total)	150	158	105	83-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-121%
2037-26-5	Toluene-D8	98%	71-130%
460-00-4	4-Bromofluorobenzene	96%	59-148%
17060-07-0	1,2-Dichloroethane-D4	102%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76459-12MS	C073573.D	1	09/15/10	AJ	n/a	n/a	VC2933
F76459-12MSD	C073574.D	1	09/15/10	AJ	n/a	n/a	VC2933
F76459-12	C073577.D	1	09/15/10	AJ	n/a	n/a	VC2933

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-10, F76459-11, F76459-12, F76459-13, F76459-14, F76459-15, F76459-16, F76459-17, F76459-18

CAS No.	Compound	F76459-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	22.2	89	21.7	87	2	83-124/11
100-41-4	Ethylbenzene	ND		25	21.3	85*	21.3	85*	0	87-118/10
108-88-3	Toluene	ND		25	23.2	93	22.8	91	2	86-116/10
1330-20-7	Xylene (total)	ND		75	64.6	86	63.4	85*	2	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F76459-12	Limits
1868-53-7	Dibromofluoromethane	93%	92%	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	78%	78%	87%	76-127%
2037-26-5	Toluene-D8	101%	102%	102%	86-112%
460-00-4	4-Bromofluorobenzene	99%	100%	103%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76459-3MS	H064491.D	1	09/16/10	MM	n/a	n/a	VH2414
F76459-3MSD	H064492.D	1	09/16/10	MM	n/a	n/a	VH2414
F76459-3 [a]	H064490.D	1	09/16/10	MM	n/a	n/a	VH2414

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-3

CAS No.	Compound	F76459-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		76.3	70.3	92	68.2	92	3	78-130/25
100-41-4	Ethylbenzene	ND		76.3	68.0	89	62.3	84	9	82-124/25
108-88-3	Toluene	ND		76.3	66.3	87	61.3	83	8	80-123/26
1330-20-7	Xylene (total)	ND		229	207	90	186	84	11	83-127/24

CAS No.	Surrogate Recoveries	MS	MSD	F76459-3	Limits
1868-53-7	Dibromofluoromethane	98%	100%	102%	80-121%
2037-26-5	Toluene-D8	97%	97%	84%	71-130%
460-00-4	4-Bromofluorobenzene	102%	100%	100%	59-148%
17060-07-0	1,2-Dichloroethane-D4	92%	93%	97%	77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76427-6MS	B070416.D	1	09/16/10	AJ	n/a	n/a	VB2907
F76427-6MSD	B070417.D	1	09/16/10	AJ	n/a	n/a	VB2907
F76427-6	B070415.D	1	09/16/10	AJ	n/a	n/a	VB2907

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-19

CAS No.	Compound	F76427-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.0 U		25	26.9	108	23.9	96	12*	83-124/11
100-41-4	Ethylbenzene	1.0 U		25	23.8	95	21.6	86*	10	87-118/10
108-88-3	Toluene	0.34	J	25	23.4	92	21.7	85*	8	86-116/10
1330-20-7	Xylene (total)	3.0 U		75	72.5	97	65.8	88	10	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F76427-6	Limits
1868-53-7	Dibromofluoromethane	104%	104%	106%	87-116%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	106%	76-127%
2037-26-5	Toluene-D8	91%	93%	92%	86-112%
460-00-4	4-Bromofluorobenzene	94%	95%	97%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F76459-2MS	K046771.D	1	09/16/10	SH	n/a	n/a	VK2013
F76459-2MSD	K046772.D	1	09/17/10	SH	n/a	n/a	VK2013
F76459-2 [a]	K046758.D	1	09/16/10	SH	n/a	n/a	VK2013

The QC reported here applies to the following samples: **Method:** SW846 8260B

F76459-1, F76459-2, F76459-4, F76459-5, F76459-6, F76459-7, F76459-8, F76459-9

CAS No.	Compound	F76459-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		70.7	77.1	109	72.8	101	6	78-130/25
100-41-4	Ethylbenzene	ND		70.7	64.8	92	58.1	80*	11	82-124/25
108-88-3	Toluene	ND		70.7	68.7	97	62.2	86	10	80-123/26
1330-20-7	Xylene (total)	ND		212	195	92	177	82*	10	83-127/24

CAS No.	Surrogate Recoveries	MS	MSD	F76459-2	Limits
1868-53-7	Dibromofluoromethane	94%	99%	94%	80-121%
2037-26-5	Toluene-D8	100%	97%	93%	71-130%
460-00-4	4-Bromofluorobenzene	105%	103%	119%	59-148%
17060-07-0	1,2-Dichloroethane-D4	74%*	97%	81%	77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VB2903-BFB
Lab File ID: B070284.D
Instrument ID: GCMSB
Injection Date: 09/10/10
Injection Time: 10:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	31938	22.1		Pass
75	30.0 - 60.0% of mass 95	74853	51.9		Pass
95	Base peak, 100% relative abundance	144256	100.0		Pass
96	5.0 - 9.0% of mass 95	9267	6.42		Pass
173	Less than 2.0% of mass 174	860	0.60	(0.69) [a]	Pass
174	50.0 - 100.0% of mass 95	123762	85.8		Pass
175	5.0 - 9.0% of mass 174	8812	6.11	(7.12) [a]	Pass
176	95.0 - 101.0% of mass 174	121240	84.0	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	8706	6.04	(7.18) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VB2903-IC2903	B070285.D	09/10/10	11:05	00:25	Initial cal 1
VB2903-IC2903	B070286.D	09/10/10	11:32	00:52	Initial cal 2
VB2903-IC2903	B070287.D	09/10/10	11:58	01:18	Initial cal 3
VB2903-IC2903	B070289.D	09/10/10	12:51	02:11	Initial cal 5
VB2903-IC2903	B070290.D	09/10/10	13:18	02:38	Initial cal 6
VB2903-ICV2903	B070291.D	09/10/10	13:44	03:04	Initial cal verification 4
VB2903-ICC2903	B070292.D	09/10/10	14:11	03:31	Initial cal 4
VB2903-MB	B070294.D	09/10/10	15:07	04:27	Method Blank
VB2903-BS	B070295.D	09/10/10	15:33	04:53	Blank Spike
F76331-1	B070296.D	09/10/10	16:00	05:20	(used for QC only; not part of job F76459)
ZZZZZZ	B070297.D	09/10/10	16:26	05:46	(unrelated sample)
ZZZZZZ	B070298.D	09/10/10	16:53	06:13	(unrelated sample)
ZZZZZZ	B070299.D	09/10/10	17:20	06:40	(unrelated sample)
ZZZZZZ	B070300.D	09/10/10	17:46	07:06	(unrelated sample)
ZZZZZZ	B070301.D	09/10/10	18:13	07:33	(unrelated sample)
F76331-1MS	B070302.D	09/10/10	18:39	07:59	Matrix Spike
F76331-1MSD	B070303.D	09/10/10	19:06	08:26	Matrix Spike Duplicate
ZZZZZZ	B070304.D	09/10/10	19:32	08:52	(unrelated sample)
ZZZZZZ	B070305.D	09/10/10	19:59	09:19	(unrelated sample)
ZZZZZZ	B070306.D	09/10/10	20:25	09:45	(unrelated sample)
ZZZZZZ	B070307.D	09/10/10	20:51	10:11	(unrelated sample)
ZZZZZZ	B070308.D	09/10/10	21:17	10:37	(unrelated sample)
ZZZZZZ	B070309.D	09/10/10	21:44	11:04	(unrelated sample)
ZZZZZZ	B070310.D	09/10/10	22:10	11:30	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample:	VB2903-BFB	**Injection Date:**	09/10/10
Lab File ID:	B070284.D	**Injection Time:**	10:40
Instrument ID:	GCMSB		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	B070311.D	09/10/10	22:37	11:57	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VB2907-BFB
Lab File ID: B070402.D
Instrument ID: GCMSB
Injection Date: 09/16/10
Injection Time: 08:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	45365	21.5		Pass
75	30.0 - 60.0% of mass 95	99392	47.2		Pass
95	Base peak, 100% relative abundance	210645	100.0		Pass
96	5.0 - 9.0% of mass 95	12483	5.93		Pass
173	Less than 2.0% of mass 174	427	0.20	(0.24) [a]	Pass
174	50.0 - 100.0% of mass 95	175637	83.4		Pass
175	5.0 - 9.0% of mass 174	12575	5.97	(7.16) [a]	Pass
176	95.0 - 101.0% of mass 174	173354	82.3	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	12005	5.70	(6.93) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VB2907-CC2903	B070403.D	09/16/10	09:16	00:27	Continuing cal 4
VB2907-BS	B070404.D	09/16/10	09:45	00:56	Blank Spike
VB2907-MB	B070405.D	09/16/10	10:12	01:23	Method Blank
ZZZZZZ	B070406.D	09/16/10	10:38	01:49	(unrelated sample)
F76459-19	B070407.D	09/16/10	11:04	02:15	TRIP BLANK
ZZZZZZ	B070408.D	09/16/10	11:32	02:43	(unrelated sample)
ZZZZZZ	B070409.D	09/16/10	12:15	03:26	(unrelated sample)
ZZZZZZ	B070410.D	09/16/10	12:41	03:52	(unrelated sample)
ZZZZZZ	B070411.D	09/16/10	13:07	04:18	(unrelated sample)
ZZZZZZ	B070412.D	09/16/10	13:34	04:45	(unrelated sample)
ZZZZZZ	B070413.D	09/16/10	14:00	05:11	(unrelated sample)
ZZZZZZ	B070414.D	09/16/10	14:27	05:38	(unrelated sample)
F76427-6	B070415.D	09/16/10	14:53	06:04	(used for QC only; not part of job F76459)
F76427-6MS	B070416.D	09/16/10	15:20	06:31	Matrix Spike
F76427-6MSD	B070417.D	09/16/10	15:46	06:57	Matrix Spike Duplicate
ZZZZZZ	B070419.D	09/16/10	16:41	07:52	(unrelated sample)
ZZZZZZ	B070420.D	09/16/10	17:07	08:18	(unrelated sample)
ZZZZZZ	B070421.D	09/16/10	17:34	08:45	(unrelated sample)
ZZZZZZ	B070422.D	09/16/10	18:00	09:11	(unrelated sample)
ZZZZZZ	B070423.D	09/16/10	18:26	09:37	(unrelated sample)
ZZZZZZ	B070424.D	09/16/10	18:53	10:04	(unrelated sample)
ZZZZZZ	B070425.D	09/16/10	19:19	10:30	(unrelated sample)
ZZZZZZ	B070426.D	09/16/10	19:45	10:56	(unrelated sample)
ZZZZZZ	B070427.D	09/16/10	20:12	11:23	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VC2932-BFB
Lab File ID: C073525.D
Instrument ID: GCMSC
Injection Date: 09/14/10
Injection Time: 10:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	25053	19.1		Pass
75	30.0 - 60.0% of mass 95	71394	54.5		Pass
95	Base peak, 100% relative abundance	130909	100.0		Pass
96	5.0 - 9.0% of mass 95	8964	6.85		Pass
173	Less than 2.0% of mass 174	232	0.18	(0.18) [a]	Pass
174	50.0 - 100.0% of mass 95	125538	95.9		Pass
175	5.0 - 9.0% of mass 174	8565	6.54	(6.82) [a]	Pass
176	95.0 - 101.0% of mass 174	122813	93.8	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	7811	5.97	(6.36) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC2932-IC2932	C073526.D	09/14/10	10:42	00:25	Initial cal 1
VC2932-IC2932	C073527.D	09/14/10	11:07	00:50	Initial cal 2
VC2932-IC2932	C073528.D	09/14/10	11:31	01:14	Initial cal 3
VC2932-ICC2932	C073529.D	09/14/10	11:56	01:39	Initial cal 4
VC2932-IC2932	C073530.D	09/14/10	12:21	02:04	Initial cal 5
VC2932-IC2932	C073531.D	09/14/10	12:46	02:29	Initial cal 6
VC2932-ICV2932	C073532.D	09/14/10	13:11	02:54	Initial cal verification 4
VC2932-BS	C073533.D	09/14/10	13:37	03:20	Blank Spike
VC2932-MB	C073535.D	09/14/10	14:27	04:10	Method Blank
ZZZZZZ	C073536.D	09/14/10	14:53	04:36	(unrelated sample)
ZZZZZZ	C073537.D	09/14/10	15:19	05:02	(unrelated sample)
F76359-12	C073538.D	09/14/10	15:44	05:27	(used for QC only; not part of job F76459)
ZZZZZZ	C073539.D	09/14/10	16:08	05:51	(unrelated sample)
ZZZZZZ	C073540.D	09/14/10	16:33	06:16	(unrelated sample)
ZZZZZZ	C073541.D	09/14/10	16:57	06:40	(unrelated sample)
ZZZZZZ	C073542.D	09/14/10	17:22	07:05	(unrelated sample)
F76359-12MS	C073543.D	09/14/10	17:46	07:29	Matrix Spike
F76359-12MSD	C073544.D	09/14/10	18:11	07:54	Matrix Spike Duplicate
ZZZZZZ	C073546.D	09/14/10	19:08	08:51	(unrelated sample)
ZZZZZZ	C073547.D	09/14/10	19:33	09:16	(unrelated sample)
ZZZZZZ	C073548.D	09/14/10	19:58	09:41	(unrelated sample)
ZZZZZZ	C073549.D	09/14/10	20:23	10:06	(unrelated sample)
ZZZZZZ	C073550.D	09/14/10	20:47	10:30	(unrelated sample)
ZZZZZZ	C073551.D	09/14/10	21:12	10:55	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample:	VC2932-BFB	**Injection Date:**	09/14/10
Lab File ID:	C073525.D	**Injection Time:**	10:17
Instrument ID:	GCMSC		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	C073552.D	09/14/10	21:36	11:19	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VC2933-BFB
Lab File ID: C073556.D
Instrument ID: GCMSC
Injection Date: 09/15/10
Injection Time: 08:44

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	24840	21.7		Pass
75	30.0 - 60.0% of mass 95	68098	59.4		Pass
95	Base peak, 100% relative abundance	114725	100.0		Pass
96	5.0 - 9.0% of mass 95	7801	6.80		Pass
173	Less than 2.0% of mass 174	705	0.61	(0.69) [a]	Pass
174	50.0 - 100.0% of mass 95	102760	89.6		Pass
175	5.0 - 9.0% of mass 174	7182	6.26	(6.99) [a]	Pass
176	95.0 - 101.0% of mass 174	99000	86.3	(96.3) [a]	Pass
177	5.0 - 9.0% of mass 176	6811	5.94	(6.88) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC2933-CC2932	C073557.D	09/15/10	09:07	00:23	Continuing cal 4
VC2933-BS	C073558.D	09/15/10	09:33	00:49	Blank Spike
VC2933-MB	C073559.D	09/15/10	10:06	01:22	Method Blank
ZZZZZZ	C073560.D	09/15/10	10:30	01:46	(unrelated sample)
ZZZZZZ	C073561.D	09/15/10	10:59	02:15	(unrelated sample)
ZZZZZZ	C073563.D	09/15/10	11:50	03:06	(unrelated sample)
ZZZZZZ	C073564.D	09/15/10	12:15	03:31	(unrelated sample)
ZZZZZZ	C073565.D	09/15/10	12:39	03:55	(unrelated sample)
ZZZZZZ	C073567.D	09/15/10	13:29	04:45	(unrelated sample)
ZZZZZZ	C073568.D	09/15/10	13:54	05:10	(unrelated sample)
ZZZZZZ	C073569.D	09/15/10	14:18	05:34	(unrelated sample)
F76459-12MS	C073573.D	09/15/10	16:02	07:18	Matrix Spike
F76459-12MSD	C073574.D	09/15/10	16:27	07:43	Matrix Spike Duplicate
F76459-10	C073575.D	09/15/10	16:51	08:07	SW-16
F76459-11	C073576.D	09/15/10	17:16	08:32	SW-17
F76459-12	C073577.D	09/15/10	17:41	08:57	SW-18
F76459-13	C073578.D	09/15/10	18:05	09:21	FD-1-100909
F76459-14	C073579.D	09/15/10	18:30	09:46	SW-19
F76459-15	C073580.D	09/15/10	18:55	10:11	SW-20
F76459-16	C073581.D	09/15/10	19:20	10:36	SW-21
F76459-17	C073582.D	09/15/10	19:45	11:01	SW-22
F76459-18	C073583.D	09/15/10	20:10	11:26	SW-23
ZZZZZZ	C073584.D	09/15/10	20:34	11:50	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VH2413-BFB
Lab File ID: H064456.D
Instrument ID: GCMSH
Injection Date: 09/15/10
Injection Time: 11:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12740	23.1		Pass
75	30.0 - 60.0% of mass 95	27413	49.7		Pass
95	Base peak, 100% relative abundance	55118	100.0		Pass
96	5.0 - 9.0% of mass 95	3503	6.36		Pass
173	Less than 2.0% of mass 174	31	0.06	(0.09) [a]	Pass
174	50.0 - 100.0% of mass 95	34812	63.2		Pass
175	5.0 - 9.0% of mass 174	2341	4.25	(6.72) [a]	Pass
176	95.0 - 101.0% of mass 174	33994	61.7	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2043	3.71	(6.01) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VH2413-IC2413	H064457.D	09/15/10	12:10	00:18	Initial cal 1
VH2413-IC2413	H064458.D	09/15/10	12:36	00:44	Initial cal 2
VH2413-IC2413	H064459.D	09/15/10	13:03	01:11	Initial cal 3
VH2413-ICC2413	H064460.D	09/15/10	13:30	01:38	Initial cal 4
VH2413-IC2413	H064461.D	09/15/10	13:57	02:05	Initial cal 5
VH2413-IC2413	H064462.D	09/15/10	14:24	02:32	Initial cal 6
VH2413-ICV2413	H064463.D	09/15/10	14:50	02:58	Initial cal verification 3
VH2413-BS	H064464.D	09/15/10	15:17	03:25	Blank Spike
VH2413-MB	H064465.D	09/15/10	15:44	03:52	Method Blank
F76303-27	H064466.D	09/15/10	16:11	04:19	(used for QC only; not part of job F76459)
F76303-27MS	H064467.D	09/15/10	16:38	04:46	Matrix Spike
F76303-27MSD	H064468.D	09/15/10	17:05	05:13	Matrix Spike Duplicate
ZZZZZZ	H064469.D	09/15/10	17:32	05:40	(unrelated sample)
ZZZZZZ	H064470.D	09/15/10	17:58	06:06	(unrelated sample)
ZZZZZZ	H064471.D	09/15/10	18:25	06:33	(unrelated sample)
ZZZZZZ	H064472.D	09/15/10	18:52	07:00	(unrelated sample)
ZZZZZZ	H064473.D	09/15/10	19:18	07:26	(unrelated sample)
ZZZZZZ	H064474.D	09/15/10	19:45	07:53	(unrelated sample)
ZZZZZZ	H064475.D	09/15/10	20:12	08:20	(unrelated sample)
ZZZZZZ	H064476.D	09/15/10	20:38	08:46	(unrelated sample)
ZZZZZZ	H064477.D	09/15/10	21:05	09:13	(unrelated sample)
ZZZZZZ	H064478.D	09/15/10	21:32	09:40	(unrelated sample)
ZZZZZZ	H064479.D	09/15/10	21:58	10:06	(unrelated sample)
ZZZZZZ	H064480.D	09/15/10	22:25	10:33	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample:	VH2413-BFB	**Injection Date:**	09/15/10
Lab File ID:	H064456.D	**Injection Time:**	11:52
Instrument ID:	GCMSH		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	H064482.D	09/15/10	23:18	11:26	(unrelated sample)
ZZZZZZ	H064483.D	09/15/10	23:44	11:52	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VH2414-BFB
Lab File ID: H064486.D
Instrument ID: GCMSH
Injection Date: 09/16/10
Injection Time: 09:46

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	13511	23.9		Pass
75	30.0 - 60.0% of mass 95	27709	49.1		Pass
95	Base peak, 100% relative abundance	56480	100.0		Pass
96	5.0 - 9.0% of mass 95	3597	6.37		Pass
173	Less than 2.0% of mass 174	35	0.06	(0.10) [a]	Pass
174	50.0 - 100.0% of mass 95	35147	62.2		Pass
175	5.0 - 9.0% of mass 174	2590	4.59	(7.37) [a]	Pass
176	95.0 - 101.0% of mass 174	34226	60.6	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	2022	3.58	(5.91) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VH2414-CC2413	H064487.D	09/16/10	10:04	00:18	Continuing cal 4
VH2414-BS	H064488.D	09/16/10	10:55	01:09	Blank Spike
VH2414-MB	H064489.D	09/16/10	11:21	01:35	Method Blank
F76459-3	H064490.D	09/16/10	11:48	02:02	SED-18
F76459-3MS	H064491.D	09/16/10	12:15	02:29	Matrix Spike
F76459-3MSD	H064492.D	09/16/10	12:42	02:56	Matrix Spike Duplicate
ZZZZZZ	H064493.D	09/16/10	13:09	03:23	(unrelated sample)
ZZZZZZ	H064494.D	09/16/10	13:36	03:50	(unrelated sample)
ZZZZZZ	H064495.D	09/16/10	14:03	04:17	(unrelated sample)
ZZZZZZ	H064497.D	09/16/10	14:57	05:11	(unrelated sample)
ZZZZZZ	H064498.D	09/16/10	15:24	05:38	(unrelated sample)
ZZZZZZ	H064499.D	09/16/10	15:51	06:05	(unrelated sample)
ZZZZZZ	H064500.D	09/16/10	16:18	06:32	(unrelated sample)
ZZZZZZ	H064501.D	09/16/10	16:45	06:59	(unrelated sample)
ZZZZZZ	H064502.D	09/16/10	17:12	07:26	(unrelated sample)
ZZZZZZ	H064507.D	09/16/10	19:26	09:40	(unrelated sample)
ZZZZZZ	H064508.D	09/16/10	19:53	10:07	(unrelated sample)
ZZZZZZ	H064509.D	09/16/10	20:20	10:34	(unrelated sample)
ZZZZZZ	H064510.D	09/16/10	20:46	11:00	(unrelated sample)
ZZZZZZ	H064511.D	09/16/10	21:13	11:27	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: VK2013-BFB
Lab File ID: K046744.D
Instrument ID: GCMSK
Injection Date: 09/16/10
Injection Time: 12:28

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	16015	26.3		Pass
75	30.0 - 60.0% of mass 95	34016	55.9		Pass
95	Base peak, 100% relative abundance	60849	100.0		Pass
96	5.0 - 9.0% of mass 95	4534	7.45		Pass
173	Less than 2.0% of mass 174	271	0.45	(0.65) [a]	Pass
174	50.0 - 100.0% of mass 95	41549	68.3		Pass
175	5.0 - 9.0% of mass 174	3177	5.22	(7.65) [a]	Pass
176	95.0 - 101.0% of mass 174	40132	66.0	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	2855	4.69	(7.11) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VK2013-IC2013	K046745.D	09/16/10	12:53	00:25	Initial cal 1
VK2013-IC2013	K046746.D	09/16/10	13:18	00:50	Initial cal 2
VK2013-IC2013	K046747.D	09/16/10	13:44	01:16	Initial cal 3
VK2013-ICC2013	K046748.D	09/16/10	14:09	01:41	Initial cal 4
VK2013-IC2013	K046749.D	09/16/10	14:35	02:07	Initial cal 5
VK2013-IC2013	K046750.D	09/16/10	15:00	02:32	Initial cal 6
VK2013-ICV2013	K046751.D	09/16/10	15:26	02:58	Initial cal verification 3
VK2013-BS	K046752.D	09/16/10	15:52	03:24	Blank Spike
VK2013-MB	K046753.D	09/16/10	16:17	03:49	Method Blank
ZZZZZZ	K046754.D	09/16/10	16:43	04:15	(unrelated sample)
ZZZZZZ	K046755.D	09/16/10	17:08	04:40	(unrelated sample)
ZZZZZZ	K046756.D	09/16/10	17:34	05:06	(unrelated sample)
F76459-1	K046757.D	09/16/10	17:59	05:31	SED-16
F76459-2	K046758.D	09/16/10	18:24	05:56	SED-17
F76459-4	K046759.D	09/16/10	18:50	06:22	FD-1-100909
F76459-5	K046760.D	09/16/10	19:15	06:47	SED-19
F76459-6	K046761.D	09/16/10	19:41	07:13	SED-20
F76459-7	K046762.D	09/16/10	20:06	07:38	SED-21
F76459-8	K046763.D	09/16/10	20:31	08:03	SED-22
F76459-9	K046764.D	09/16/10	20:57	08:29	SED-23
ZZZZZZ	K046766.D	09/16/10	21:47	09:19	(unrelated sample)
ZZZZZZ	K046768.D	09/16/10	22:38	10:10	(unrelated sample)
ZZZZZZ	K046769.D	09/16/10	23:03	10:35	(unrelated sample)
ZZZZZZ	K046770.D	09/16/10	23:29	11:01	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample:	VK2013-BFB	**Injection Date:**	09/16/10
Lab File ID:	K046744.D	**Injection Time:**	12:28
Instrument ID:	GCMSK		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F76459-2MS	K046771.D	09/16/10	23:54	11:26	Matrix Spike
F76459-2MSD	K046772.D	09/17/10	00:19	11:51	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VB2907-CC2903 **Injection Date:** 09/16/10
Lab File ID: B070403.D **Injection Time:** 09:16
Instrument ID: GCMSB **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	435535	9.93	1745081	13.15	1452880	15.69	268745	7.19
Upper Limit [a]	871070	10.43	3490162	13.65	2905760	16.19	537490	7.69
Lower Limit [b]	217768	9.43	872541	12.65	726440	15.19	134373	6.69

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VB2907-BS	421436	9.93	1692918	13.15	1435664	15.69	268789	7.19
VB2907-MB	385861	9.93	1522593	13.15	1205478	15.69	262266	7.19
ZZZZZZ	357743	9.93	1439260	13.15	1140630	15.69	238724	7.21
F76459-19 [c]	332981	9.93	1310392	13.15	1032521	15.69	219463	7.20
ZZZZZZ	296953	9.93	1208785	13.15	948327	15.69	187920	7.19
ZZZZZZ	223643	9.93	914617	13.15	771214	15.69	122806*	7.18
ZZZZZZ	301565	9.93	1226870	13.15	967207	15.69	193945	7.20
ZZZZZZ	313122	9.93	1280282	13.15	1026796	15.69	196372	7.20
ZZZZZZ	296961	9.93	1204747	13.15	950938	15.69	194272	7.19
ZZZZZZ	321255	9.93	1295729	13.15	1034595	15.69	193819	7.20
ZZZZZZ	346303	9.94	1385442	13.15	1083122	15.69	224816	7.21
F76427-6	333083	9.93	1398786	13.15	1099681	15.69	214606	7.20
F76427-6MS	349415	9.93	1450970	13.15	1289453	15.69	219810	7.21
F76427-6MSD	372808	9.93	1540891	13.15	1333329	15.69	235135	7.19
ZZZZZZ	534300	9.94	2173565	13.15	1856096	15.69	352681	7.21
ZZZZZZ	574177	9.93	2318001	13.15	1992814	15.69	376031	7.20
ZZZZZZ	598945	9.93	2355300	13.15	2017171	15.69	384808	7.20
ZZZZZZ	579774	9.93	2265456	13.15	1925145	15.69	366129	7.20
ZZZZZZ	562662	9.93	2205803	13.15	1802218	15.69	361616	7.20
ZZZZZZ	474013	9.94	1878391	13.15	1502062	15.69	305195	7.20
ZZZZZZ	450976	9.93	1853685	13.15	1539046	15.69	303295	7.20
ZZZZZZ	422022	9.93	1710825	13.15	1365030	15.69	322440	7.20
ZZZZZZ	388658	9.93	1592429	13.15	1254870	15.69	230890	7.20

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample vial(s) contained significant headspace; reported results are considered minimum values.

Volatile Internal Standard Area Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VC2933-CC2932 **Injection Date:** 09/15/10
Lab File ID: C073557.D **Injection Time:** 09:07
Instrument ID: GCMSC **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	769525	7.26	794612	10.35	583577	12.73	107648	4.92
Upper Limit [a]	1539050	7.76	1589224	10.85	1167154	13.23	215296	5.42
Lower Limit [b]	384763	6.76	397306	9.85	291789	12.23	53824	4.42

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VC2933-BS	864583	7.26	849727	10.35	601652	12.73	119863	4.92
VC2933-MB	781890	7.25	754313	10.35	483804	12.73	104828	4.92
ZZZZZZ	771060	7.26	756197	10.35	488338	12.73	114599	4.93
ZZZZZZ	765862	7.25	768692	10.35	557937	12.73	111142	4.91
ZZZZZZ	1535387	7.25	1436015	10.35	918565	12.73	199782	4.92
ZZZZZZ	1508520	7.25	1456363	10.35	908116	12.73	197392	4.92
ZZZZZZ	1439275	7.25	1386845	10.35	845599	12.73	182470	4.91
ZZZZZZ	1524610	7.25	1451458	10.35	898722	12.73	193325	4.93
ZZZZZZ	1463932	7.26	1398881	10.35	872681	12.73	184112	4.93
ZZZZZZ	1476102	7.25	1407728	10.35	898063	12.73	195282	4.91
F76459-12MS	1621733*	7.25	1529662	10.35	984304	12.73	200974	4.93
F76459-12MSD	1574500*	7.25	1488179	10.35	947844	12.73	200929	4.92
F76459-10	1492282	7.25	1409079	10.35	883801	12.73	187123	4.93
F76459-11	1359840	7.25	1292737	10.35	822280	12.73	174698	4.91
F76459-12	1256729	7.26	1205668	10.35	759430	12.73	160401	4.91
F76459-13	1066998	7.26	1017296	10.35	648541	12.73	140739	4.93
F76459-14	1128729	7.25	1085414	10.35	690284	12.73	147041	4.93
F76459-15	941452	7.25	918791	10.35	583030	12.73	126809	4.92
F76459-16	1017901	7.25	997895	10.35	632609	12.73	138145	4.91
F76459-17	992310	7.25	943107	10.35	613740	12.73	136801	4.93
F76459-18	860231	7.25	840030	10.35	531271	12.73	115036	4.92
ZZZZZZ	956442	7.25	952223	10.35	636202	12.73	135814	4.91

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VH2414-CC2413 **Injection Date:** 09/16/10
Lab File ID: H064487.D **Injection Time:** 10:04
Instrument ID: GCMSH **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	402436	11.21	262074	14.73	154217	17.20	43085	8.01
Upper Limit [a]	804872	11.71	524148	15.23	308434	17.70	86170	8.51
Lower Limit [b]	201218	10.71	131037	14.23	77109	16.70	21543	7.51

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VH2414-BS	414678	11.20	306180	14.73	166764	17.20	48895	8.00
VH2414-MB	433886	11.21	336462	14.74	180412	17.21	39244	8.04
F76459-3 [c]	553382	11.21	426030	14.74	215745	17.21	39460	8.03
F76459-3MS	551390	11.21	366449	14.73	213868	17.21	32793	8.00
F76459-3MSD	554028	11.22	382839	14.74	217220	17.21	28611	8.02
ZZZZZZ	546979	11.22	420848	14.74	221758	17.21	27520	8.04
ZZZZZZ	607927	11.22	485505	14.74	266225	17.21	51691	8.04
ZZZZZZ	620563	11.23	508285	14.74	268616	17.21	55425	8.05
ZZZZZZ	611697	11.22	485762	14.75	271557	17.21	48751	8.05
ZZZZZZ	605595	11.23	493615	14.75	266203	17.21	36535	8.05
ZZZZZZ	200729*	11.24	157070	14.76	59371*	17.22	16186*	8.05
ZZZZZZ	613753	11.23	472250	14.74	276392	17.21	49677	8.04
ZZZZZZ	512431	11.22	373257	14.74	200978	17.21	48948	8.03
ZZZZZZ	477893	11.23	360499	14.74	206503	17.22	54792	8.02
ZZZZZZ	537252	11.22	426932	14.74	232672	17.21	52532	8.04
ZZZZZZ	513854	11.22	409098	14.74	229756	17.20	39445	8.02
ZZZZZZ	516668	11.22	405659	14.74	234694	17.21	41114	8.04
ZZZZZZ	520484	11.21	418908	14.74	237154	17.20	51459	8.04
ZZZZZZ	449895	11.22	363736	14.74	206934	17.21	31423	8.05

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was received in a bulk container and preserved within 48 hours of sampling.

Volatile Internal Standard Area Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Check Std: VK2013-ICC2013 **Injection Date:** 09/16/10
Lab File ID: K046748.D **Injection Time:** 14:09
Instrument ID: GCMSK **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1021535	11.45	638352	14.96	300754	17.42	103393	8.27
Upper Limit [a]	2043070	11.95	1276704	15.46	601508	17.92	206786	8.77
Lower Limit [b]	510768	10.95	319176	14.46	150377	16.92	51697	7.77

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VK2013-BS	1035532	11.46	666384	14.96	295095	17.42	91021	8.30
VK2013-MB	954052	11.46	618365	14.97	218151	17.42	118529	8.52
ZZZZZZ	912379	11.46	594952	14.97	188602	17.43	121985	8.42
ZZZZZZ	960693	11.46	654976	14.97	227286	17.43	172463	8.47
ZZZZZZ	912459	11.46	512471	14.97	101381*	17.43	115996	8.45
F76459-1 [c]	897976	11.46	594596	14.97	190589	17.43	95402	8.53
F76459-2 [c]	883346	11.46	571981	14.97	183760	17.43	87484	8.51
F76459-4 [c]	907096	11.46	587115	14.97	188150	17.43	94239	8.56
F76459-5 [c]	912423	11.47	616494	14.99	210014	17.44	125410	8.47
F76459-6 [c]	875907	11.46	594375	14.97	221729	17.42	153807	8.47
F76459-7 [c]	918110	11.46	598736	14.97	220882	17.43	118288	8.45
F76459-8 [c]	854809	11.46	540797	14.97	180930	17.43	93013	8.53
F76459-9 [c]	834753	11.46	539133	14.97	181666	17.43	78804	8.49
ZZZZZZ	920441	11.45	588270	14.96	199072	17.42	98828	8.38
ZZZZZZ	845115	11.47	536663	14.98	154139	17.44	72248	8.56
ZZZZZZ	842783	11.46	529563	14.97	180411	17.43	93097	8.51
ZZZZZZ	926646	11.45	624151	14.96	258951	17.41	90591	8.29
F76459-2MS	916462	11.45	546143	14.96	239060	17.42	41242*	8.33
F76459-2MSD	937556	11.45	581357	14.96	264572	17.42	64927	8.30

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was received in a bulk container and preserved within 48 hours of sampling.

Volatile Surrogate Recovery Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F76459-10	C073575.D	94.0	79.0	101.0	100.0
F76459-11	C073576.D	95.0	83.0	101.0	101.0
F76459-12	C073577.D	98.0	87.0	102.0	103.0
F76459-13	C073578.D	99.0	89.0	101.0	103.0
F76459-14	C073579.D	100.0	90.0	101.0	103.0
F76459-15	C073580.D	101.0	92.0	99.0	103.0
F76459-16	C073581.D	101.0	95.0	100.0	104.0
F76459-17	C073582.D	103.0	96.0	103.0	104.0
F76459-18	C073583.D	103.0	97.0	101.0	105.0
F76459-19	B070407.D	102.0	104.0	96.0	100.0
F76427-6MS	B070416.D	104.0	102.0	91.0	94.0
F76427-6MSD	B070417.D	104.0	102.0	93.0	95.0
F76459-12MS	C073573.D	93.0	78.0	101.0	99.0
F76459-12MSD	C073574.D	92.0	78.0	102.0	100.0
VB2907-BS	B070404.D	107.0	107.0	95.0	99.0
VB2907-MB	B070405.D	106.0	108.0	94.0	99.0
VC2933-BS	C073558.D	104.0	106.0	100.0	102.0
VC2933-MB	C073559.D	104.0	104.0	100.0	107.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Volatile Surrogate Recovery Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F76459-1	K046757.D	92.0	93.0	120.0	87.0
F76459-2	K046758.D	94.0	93.0	119.0	81.0
F76459-3	H064490.D	102.0	84.0	100.0	97.0
F76459-4	K046759.D	99.0	94.0	123.0	85.0
F76459-5	K046760.D	91.0	91.0	111.0	94.0
F76459-6	K046761.D	100.0	88.0	111.0	100.0
F76459-7	K046762.D	92.0	92.0	109.0	86.0
F76459-8	K046763.D	96.0	94.0	115.0	83.0
F76459-9	K046764.D	102.0	93.0	109.0	85.0
F76459-2MS	K046771.D	94.0	100.0	105.0	74.0*
F76459-2MSD	K046772.D	99.0	97.0	103.0	97.0
F76459-3MS	H064491.D	98.0	97.0	102.0	92.0
F76459-3MSD	H064492.D	100.0	97.0	100.0	93.0
VH2414-BS	H064488.D	105.0	91.0	101.0	116.0
VH2414-MB	H064489.D	99.0	85.0	94.0	106.0
VK2013-BS	K046752.D	102.0	98.0	96.0	102.0
VK2013-MB	K046753.D	96.0	95.0	106.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-121%
S2 = Toluene-D8	71-130%
S3 = 4-Bromofluorobenzene	59-148%
S4 = 1,2-Dichloroethane-D4	77-123%

Initial Calibration Verification

Job Number: F76459 **Sample:** VB2903-ICV2903
Account: CSXT CSX Transportation **Lab FileID:** B070291.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\091010\B070291.D Vial: 7
Acq On : 10 Sep 2010 1:44 pm Operator: AnaJ
Sample : ICV2903-4 Inst : MSVOA4
Misc : MS15368,VB2903,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\8260b.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Fri Sep 10 14:37:01 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	107	0.00	9.93
2		Dichlorodifluoromethane	1.286	1.199	6.8	91	0.00	4.42
3	P	Chloromethane	1.509	1.398	7.4	106	0.00	4.75
4	C	Vinyl Chloride	1.135	0.983	13.4	96	0.00	4.97
5		Bromomethane	0.707	0.653	7.6	101	0.00	5.55
6		Chloroethane	0.581	0.499	14.1	96	0.00	5.66
7		Trichlorofluoromethane	1.447	1.602	-10.7	108	0.00	6.09
8		Ethyl Ether	0.658	0.659	-0.2	102	0.00	6.37
9		1,2-Dichlorotrifluoroetha	0.903	0.923	-2.2	117	0.00	6.37
10		Freon 113	0.901	0.885	1.8	98	0.00	6.74
11	C	1,1-Dichloroethene	1.610	1.566	2.7	96	0.00	6.78
		----------	Amount	Calc.	%Drift	----------		
12		Acetone	200.000	169.622	15.2	84	0.00	6.72
		----------	AvgRF	CCRF	%Dev	----------		
13		Iodomethane	1.579	1.631	-3.3	101	0.00	7.00
14		Carbon Disulfide	3.317	2.967	10.6	93	0.00	7.15
15		Methyl acetate	0.866	0.805	7.0	98	0.00	7.10
		----------	Amount	Calc.	%Drift	----------		
16		Methylene Chloride	40.000	38.941	2.6	98	0.00	7.30
		----------	AvgRF	CCRF	%Dev	----------		
17		Methyl Tert Butyl Ether	2.864	2.934	-2.4	101	0.00	7.58
18		trans-1,2-Dichloroethene	1.730	1.611	6.9	95	0.00	7.63
19		Acrylonitrile	0.421	0.403	4.3	97	0.00	7.52
20		Hexane	1.513	1.471	2.8	96	0.00	7.90
21		Di-isopropyl ether	4.412	4.297	2.6	103	0.00	8.08
22		Vinyl acetate	1.667	1.869	-12.1	114	0.00	8.05
23	P	1,1-Dichloroethane	2.216	2.064	6.9	97	0.00	8.09
24		ETBE	3.494	3.514	-0.6	98	0.00	8.48
25		2-Butanone	0.512	0.480	6.3	97	0.00	8.65
26		2,2-Dichloropropane	1.536	1.425	7.2	88	0.00	8.75
27		cis-1,2-Dichloroethene	1.155	1.126	2.5	100	0.00	8.72
28		Bromochloromethane	0.596	0.560	6.0	99	0.00	8.98
29		Tetrahydrofuran	0.321	0.328	-2.2	103	0.00	9.03
30	C	Chloroform	2.024	1.965	2.9	100	0.00	9.02
31	S	Dibromofluoromethane	0.461	0.476	-3.3	107	0.00	9.19
32		1,1,1-Trichloroethane	1.602	1.604	-0.1	98	0.00	9.30
33		Cyclohexane	1.949	1.887	3.2	97	0.00	9.40
34		Carbon Tetrachloride	1.398	1.406	-0.6	98	0.00	9.49

Initial Calibration Verification

Job Number: F76459 **Sample:** VB2903-ICV2903
Account: CSXT CSX Transportation **Lab FileID:** B070291.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35		1,1-Dichloropropene	1.517	1.465	3.4	96	0.00	9.45
36	S	1,2-Dichloroethane-d4	0.439	0.445	-1.4	106	0.00	9.58
37		TAME	2.871	2.916	-1.6	100	0.00	9.71
38		Benzene	4.413	4.031	8.7	96	0.00	9.69
39		1,2-Dichloroethane	1.677	1.608	4.1	98	0.00	9.66
40		Trichloroethene	1.099	1.071	2.5	97	0.00	10.32
41		Methylcyclohexane	1.573	1.605	-2.0	100	0.00	10.58
42	C	1,2-Dichloropropane	1.251	1.182	5.5	99	0.00	10.56
43		Dibromomethane	0.713	0.684	4.1	97	0.00	10.70
44		Bromodichloromethane	1.487	1.459	1.9	97	0.00	10.81
			Amount	Calc.	%Drift			
45		2-Chloroethyl vinyl ether	200.000	180.287	9.9	94	0.00	11.03
			AvgRF	CCRF	%Dev			
46		2-Nitropropane	0.289	0.282	2.4	98	0.00	11.00
47		cis-1,3-Dichloropropene	1.806	1.785	1.2	98	0.00	11.26
48		4-Methyl-2-pentanone	1.047	1.056	-0.9	106	0.00	11.35
49	I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.15
50	S	Toluene-d8	0.622	0.622	0.0	106	0.00	11.59
51	C	Toluene	1.269	1.208	4.8	96	0.00	11.66
52		trans-1,3-Dichloropropene	0.439	0.465	-5.9	103	0.00	11.81
53		1,1,2-Trichloroethane	0.241	0.225	6.6	95	0.00	12.03
54		Tetrachloroethene	0.317	0.311	1.9	98	0.00	12.27
55		2-hexanone	0.197	0.209	-6.1	106	0.00	12.21
56		1,3-Dichloropropane	0.504	0.461	8.5	97	0.00	12.23
57		Dibromochloromethane	0.297	0.300	-1.0	96	0.00	12.51
58		1,2-Dibromoethane	0.283	0.280	1.1	97	0.00	12.68
			Amount	Calc.	%Drift			
59		1-Chlorohexane	40.000	36.499	8.8	92	0.00	13.05
			AvgRF	CCRF	%Dev			
60	P	Chlorobenzene	0.855	0.812	5.0	98	0.00	13.19
61	C	Ethylbenzene	1.397	1.351	3.3	96	0.00	13.25
62		1,1,1,2-Tetrachloroethane	0.287	0.281	2.1	95	0.00	13.24
63		m,p-Xylene	1.065	1.037	2.6	97	0.00	13.36
64		o-Xylene	1.102	1.094	0.7	97	0.00	13.81
			Amount	Calc.	%Drift			
65		Styrene	40.000	38.649	3.4	98	0.00	13.82
66	P	Bromoform	40.000	39.514	1.2	97	0.00	14.08
			AvgRF	CCRF	%Dev			
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.69
68		Isopropylbenzene	1.423	1.632	-14.7	109	0.00	14.20
69		Cyclohexanone	0.010	0.009	10.0	86	0.00	14.34
70	S	4-Bromofluorobenzene	0.853	0.863	-1.2	106	0.00	14.40
71	P	1,1,2,2-Tetrachloroethane	0.465	0.419	9.9	97	0.00	14.47
			Amount	Calc.	%Drift			
72		trans-1,4-Dichloro-2-Bute	40.000	36.564	8.6	86	0.00	14.53
			AvgRF	CCRF	%Dev			
73		n-Propylbenzene	2.051	1.991	2.9	98	0.00	14.64
74		Bromobenzene	0.467	0.448	4.1	99	0.00	14.62
75		1,2,3-Trichloropropane	0.134	0.113	15.7	92	0.00	14.56
76		1,3,5-Trimethylbenzene	1.355	1.358	-0.2	98	0.00	14.81

Initial Calibration Verification

Job Number: F76459 **Sample:** VB2903-ICV2903
Account: CSXT CSX Transportation **Lab FileID:** B070291.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

77	2-Chlorotoluene	1.406	1.350	4.0	98	0.00	14.80
78	4-Chlorotoluene	1.312	1.296	1.2	99	0.00	14.91
	----------	Amount	Calc.	%Drift	----------		
79	tert-Butylbenzene	40.000	38.745	3.1	97	0.00	15.19
	----------	AvgRF	CCRF	%Dev	----------		
80	1,2,4-Trimethylbenzene	1.472	1.458	1.0	97	0.00	15.24
81	sec-Butylbenzene	1.820	1.782	2.1	96	0.00	15.44
82	4-Isopropyltoluene	1.420	1.431	-0.8	96	0.00	15.57
83	1,3-Dichlorobenzene	0.883	0.838	5.1	99	0.00	15.63
84	1,4-Dichlorobenzene	0.906	0.847	6.5	99	0.00	15.72
	----------	Amount	Calc.	%Drift	----------		
85	Benzyl Chloride	40.000	36.157	9.6	84	0.00	15.83
	----------	AvgRF	CCRF	%Dev	----------		
86	n-Butylbenzene	1.522	1.457	4.3	96	0.00	16.02
87	1,2-Dichlorobenzene	0.857	0.810	5.5	97	0.00	16.15
88	1,2-Dibromo-3-Chloropropa	0.073	0.075	-2.7	103	0.00	16.97
89	1,2,4-Trichlorobenzene	0.659	0.651	1.2	96	0.00	17.95
90	Hexachlorobutadiene	0.296	0.307	-3.7	99	0.00	18.10
91	Naphthalene	1.209	1.235	-2.2	100	0.00	18.28
92	1,2,3-Trichlorobenzene	0.586	0.587	-0.2	99	0.00	18.58
93 I	Tert Butyl alcohol-d10	1.000	1.000	0.0	101	0.00	7.20
94	Acrolein	0.956	1.015	-6.2	115	0.00	6.55
95	Tert-Butyl Alcohol	0.757	0.698	7.8	89	0.00	7.30
96	Tert amyl alcohol	0.580	0.563	2.9	95	0.00	9.49
97	1,4-Dioxane	0.077	0.066	14.3	81	0.00	10.64

(#) = Out of Range SPCC's out = 0 CCC's out = 0
B070292.D 8260b.m Fri Sep 10 15:01:14 2010

Initial Calibration Summary

Job Number: F76459 **Sample:** VB2903-ICC2903
Account: CSXT CSX Transportation **Lab FileID:** B070292.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA4

Method : C:\msdchem\1\METHODS\8260b.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Calibration Files
1 =B070285.D 2 =B070286.D 3 =B070287.D 4 =B070292.D
5 =B070289.D 6 =B070290.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet	0.969	1.318	1.442	1.408	1.265	1.312	1.286	13.11
3)	P	Chloromethane	1.588	1.648	1.703	1.411	1.332	1.372	1.509	10.39
4)	C	Vinyl Chloride	1.155	1.212	1.262	1.097	1.033	1.050	1.135	8.04
5)		Bromomethane	0.781	0.693	0.753	0.689	0.646	0.678	0.707	7.14
6)		Chloroethane	0.605	0.593	0.653	0.555	0.529	0.551	0.581	7.74
7)		Trichlorofluorometh	1.176	1.458	1.538	1.578	1.384	1.546	1.447	10.37
8)		Ethyl Ether	0.539	0.695	0.745	0.686	0.621	0.662	0.658	10.79
9)		1,2-Dichlorotrifluo	1.052	0.943	0.967	0.844	0.791	0.823	0.903	11.11
10)		Freon 113	0.712	0.977	0.985	0.960	0.855	0.919	0.901	11.59
11)	C	1,1-Dichloroethene	1.275	1.654	1.774	1.745	1.536	1.675	1.610	11.43
12)		Acetone	0.452	0.366	0.350	0.347	0.274	0.283	0.345	18.68
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9925								
		Response Ratio = 0.00000 + 0.34474 *A + -0.00676 *A^2								
13)		Iodomethane	1.397	1.558	1.698	1.724	1.472	1.623	1.579	8.12
14)		Carbon Disulfide	3.169	3.501	3.627	3.401	3.024	3.181	3.317	6.92
15)		Methyl acetate	0.929	0.895	0.927	0.872	0.768	0.805	0.866	7.63
16)		Methylene Chloride	4.980	2.397	2.191	1.942	1.744	1.827	2.513	49.03
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9973								
		Response Ratio = 0.00000 + 1.82339 *A								
17)		Methyl Tert Butyl E	2.566	2.818	3.081	3.112	2.683	2.923	2.864	7.58
18)		trans-1,2-Dichloroe	1.528	1.827	1.918	1.812	1.593	1.699	1.730	8.65
19)		Acrylonitrile	0.417	0.416	0.454	0.442	0.385	0.414	0.421	5.77
20)		Hexane	1.393	1.506	1.670	1.634	1.402	1.472	1.513	7.69
21)		Di-isopropyl ether	4.228	4.739	4.828	4.440	4.065	4.168	4.412	7.13
22)		Vinyl acetate	1.584	1.723	1.787	1.751	1.553	1.602	1.667	5.92
23)	P	1,1-Dichloroethane	1.991	2.413	2.477	2.275	2.025	2.116	2.216	9.18
24)		ETBE	2.926	3.392	3.793	3.836	3.360	3.654	3.494	9.77
25)		2-Butanone	0.512	0.523	0.566	0.529	0.459	0.482	0.512	7.33
26)		2,2-Dichloropropane	1.378	1.507	1.668	1.723	1.402	1.539	1.536	9.04
27)		cis-1,2-Dichloroeth	1.043	1.229	1.266	1.202	1.083	1.106	1.155	7.74
28)		Bromochloromethane	0.596	0.605	0.647	0.604	0.546	0.578	0.596	5.59
29)		Tetrahydrofuran	0.317	0.320	0.329	0.339	0.300	0.322	0.321	4.09
30)	C	Chloroform	2.024	2.029	2.178	2.087	1.847	1.977	2.024	5.46
31)	S	Dibromofluoromethan	0.453	0.451	0.464	0.473	0.459	0.466	0.461	1.80
32)		1,1,1-Trichloroetha	1.350	1.609	1.721	1.745	1.518	1.668	1.602	9.25
33)		Cyclohexane	1.523	2.007	2.189	2.085	1.899	1.991	1.949	11.82
34)		Carbon Tetrachlorid	1.148	1.393	1.487	1.529	1.328	1.501	1.398	10.28
35)		1,1-Dichloropropene	1.299	1.601	1.638	1.622	1.413	1.527	1.517	8.89
36)	S	1,2-Dichloroethane-	0.447	0.445	0.439	0.447	0.422	0.435	0.439	2.19
37)		TAME	2.458	2.870	3.163	3.101	2.742	2.894	2.871	8.89
38)		Benzene	4.194	4.813	4.960	4.495	3.974	4.039	4.413	9.33
39)		1,2-Dichloroethane	1.557	1.763	1.782	1.755	1.530	1.675	1.677	6.57
40)		Trichloroethene	0.943	1.115	1.199	1.177	1.049	1.109	1.099	8.48

Initial Calibration Summary

Job Number: F76459 **Sample:** VB2903-ICC2903
Account: CSXT CSX Transportation **Lab FileID:** B070292.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

41)		Methylcyclohexane	1.229	1.626	1.773	1.717	1.528	1.565	1.573	12.20
42)	C	1,2-Dichloropropane	1.123	1.303	1.389	1.278	1.205	1.208	1.251	7.40
43)		Dibromomethane	0.653	0.737	0.752	0.754	0.666	0.714	0.713	6.12
44)		Bromodichloromethan	1.247	1.505	1.577	1.599	1.439	1.554	1.487	8.79
45)		2-Chloroethyl vinyl	0.358	0.623	0.764	0.735	0.653	0.641	0.629	22.88
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9987								
		Response Ratio = 0.00000 + 0.75982 *A + -0.01239 *A^2								
46)		2-Nitropropane	0.249	0.280	0.308	0.308	0.285	0.302	0.289	7.88
47)		cis-1,3-Dichloropro	1.436	1.787	1.993	1.949	1.800	1.873	1.806	11.00
48)		4-Methyl-2-pentanon	0.981	1.155	1.156	1.062	0.954	0.972	1.047	8.80
49)	I	Chlorobenzene-d5	----------ISTD----------							
50)	S	Toluene-d8	0.618	0.628	0.611	0.626	0.625	0.624	0.622	1.03
51)	C	Toluene	1.188	1.359	1.346	1.335	1.172	1.213	1.269	6.82
52)		trans-1,3-Dichlorop	0.386	0.422	0.447	0.484	0.433	0.463	0.439	7.70
53)		1,1,2-Trichloroetha	0.229	0.256	0.248	0.253	0.222	0.237	0.241	5.69
54)		Tetrachloroethene	0.302	0.319	0.330	0.339	0.295	0.319	0.317	5.18
55)		2-hexanone	0.173	0.210	0.218	0.209	0.181	0.188	0.197	9.32
56)		1,3-Dichloropropane	0.537	0.538	0.531	0.507	0.447	0.466	0.504	7.77
57)		Dibromochloromethan	0.246	0.273	0.305	0.332	0.298	0.330	0.297	11.14
58)		1,2-Dibromoethane	0.257	0.284	0.289	0.307	0.270	0.294	0.283	6.30
59)		1-Chlorohexane	0.281	0.402	0.462	0.473	0.419	0.438	0.413	16.84
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9975								
		Response Ratio = 0.00000 + 0.45392 *A + -0.01063 *A^2								
60)	P	Chlorobenzene	0.862	0.919	0.881	0.885	0.773	0.808	0.855	6.32
61)	C	Ethylbenzene	1.196	1.492	1.549	1.498	1.304	1.343	1.397	9.83
62)		1,1,1,2-Tetrachloro	0.254	0.286	0.303	0.317	0.272	0.293	0.287	7.77
63)		m,p-Xylene	0.929	1.152	1.171	1.140	0.986	1.012	1.065	9.56
64)		o-Xylene	0.862	1.168	1.238	1.202	1.051	1.093	1.102	12.38
65)		Styrene	0.579	0.864	0.952	0.935	0.819	0.840	0.832	16.12
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9975								
		Response Ratio = 0.00000 + 0.92584 *A + -0.04789 *A^2								
66)	P	Bromoform	0.120	0.167	0.203	0.227	0.209	0.237	0.194	22.32
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9967								
		Response Ratio = 0.00000 + 0.19147 *A + 0.02123 *A^2								
67)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
68)		Isopropylbenzene	1.100	1.436	1.551	1.580	1.405	1.462	1.423	12.06
69)		Cyclohexanone	0.009	0.009	0.009	0.012	0.009	0.011	0.010	12.34
70)	S	4-Bromofluorobenzen	0.859	0.842	0.827	0.863	0.869	0.858	0.853	1.82
71)	P	1,1,2,2-Tetrachloro	0.539	0.486	0.462	0.455	0.412	0.436	0.465	9.42
72)		trans-1,4-Dichloro-	0.031	0.053	0.083	0.114	0.107	0.120	0.085	42.60
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9967								
		Response Ratio = 0.00000 + 0.09074 *A + 0.01442 *A^2								
73)		n-Propylbenzene	1.783	2.263	2.243	2.156	1.913	1.950	2.051	9.59
74)		Bromobenzene	0.451	0.509	0.477	0.479	0.430	0.456	0.467	5.88
75)		1,2,3-Trichloroprop	0.172	0.127	0.125	0.130	0.120	0.130	0.134	14.25
76)		1,3,5-Trimethylbenz	1.081	1.458	1.488	1.468	1.298	1.334	1.355	11.43
77)		2-Chlorotoluene	1.312	1.540	1.483	1.464	1.303	1.333	1.406	7.25
78)		4-Chlorotoluene	1.177	1.381	1.391	1.388	1.236	1.300	1.312	6.89
79)		tert-Butylbenzene	0.604	0.983	0.913	0.929	0.840	0.892	0.860	15.58
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9977								
		Response Ratio = 0.00000 + 0.87916 *A + 0.00129 *A^2								
80)		1,2,4-Trimethylbenz	1.244	1.583	1.594	1.583	1.371	1.458	1.472	9.69

Initial Calibration Summary

Job Number: F76459 **Sample:** VB2903-ICC2903
Account: CSXT CSX Transportation **Lab FileID:** B070292.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

```
81)     sec-Butylbenzene    1.505 1.937 1.999 1.953 1.732 1.792 1.820  10.16
82)     4-Isopropyltoluene  1.071 1.496 1.561 1.570 1.367 1.452 1.420  13.15
83)     1,3-Dichlorobenzene 0.907 0.954 0.905 0.899 0.800 0.834 0.883   6.34
84)     1,4-Dichlorobenzene 0.954 0.998 0.933 0.905 0.808 0.839 0.906   7.88
85)     Benzyl Chloride     0.183 0.396 0.629 0.856 0.750 0.819 0.605  43.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9946
              Response Ratio = 0.00000 + 0.72016 *A + 0.04598 *A^2

86)     n-Butylbenzene      1.342 1.598 1.673 1.612 1.439 1.468 1.522   8.26
87)     1,2-Dichlorobenzene 0.850 0.914 0.890 0.885 0.784 0.817 0.857   5.74
88)     1,2-Dibromo-3-Chlor 0.060 0.073 0.075 0.077 0.074 0.081 0.073   9.78
89)     1,2,4-Trichlorobenz 0.657 0.632 0.656 0.714 0.622 0.671 0.659   4.94
90)     Hexachlorobutadiene 0.260 0.276 0.294 0.329 0.293 0.322 0.296   8.94
91)     Naphthalene         1.228 1.110 1.200 1.303 1.159 1.254 1.209   5.69
92)     1,2,3-Trichlorobenz 0.621 0.558 0.563 0.627 0.548 0.595 0.586   5.79

93) I   Tert Butyl alcohol-d1 ----------------ISTD--------------------
94)     Acrolein            0.953 0.872 1.020 0.896 1.027 0.970 0.956   6.60
95)     Tert-Butyl Alcohol  0.655 0.815 0.763 0.799 0.728 0.784 0.757   7.73
96)     Tert amyl alcohol   0.528 0.575 0.595 0.600 0.573 0.610 0.580   5.05
97)     1,4-Dioxane         0.071 0.081 0.078 0.083 0.073 0.075 0.077   6.20
-------------------------------------------------------------------------------
(#) = Out of Range

          8260b.m           Fri Sep 10 15:00:29 2010
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Continuing Calibration Summary

Job Number: F76459 **Sample:** VB2907-CC2903
Account: CSXT CSX Transportation **Lab FileID:** B070403.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\091610\B070403.D Vial: 1
Acq On : 16 Sep 2010 9:16 am Operator: AnaJ
Sample : CC2903-4 Inst : MSVOA4
Misc : MS15410,VB2907,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\8260b.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Fri Sep 10 14:37:01 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	90	0.00	9.93
2		Dichlorodifluoromethane	1.286	1.260	2.0	80	0.00	4.43
3	P	Chloromethane	1.509	1.541	-2.1	98	0.00	4.75
4	C	Vinyl Chloride	1.135	1.233	-8.6	101	0.00	4.97
5		Bromomethane	0.707	0.850	-20.2#	111	0.00	5.55
6		Chloroethane	0.581	0.692	-19.1	112	0.00	5.66
7		Trichlorofluoromethane	1.447	2.046	-41.4#	116	0.00	6.09
8		Ethyl Ether	0.658	0.856	-30.1#	112	0.00	6.36
9		1,2-Dichlorotrifluoroetha	0.903	1.112	-23.1#	118	0.00	6.36
10		Freon 113	0.901	1.036	-15.0	97	0.00	6.74
11	C	1,1-Dichloroethene	1.610	1.894	-17.6	97	0.00	6.77
		----------	Amount	Calc.	%Drift		----------	
12		Acetone	200.000	179.501	10.2	74	0.00	6.72
		----------	AvgRF	CCRF	%Dev		----------	
13		Iodomethane	1.579	1.843	-16.7	96	0.00	6.99
14		Carbon Disulfide	3.317	3.713	-11.9	98	0.00	7.15
15		Methyl acetate	0.866	0.897	-3.6	92	0.00	7.10
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	46.054	-15.1	97	0.00	7.30
		----------	AvgRF	CCRF	%Dev		----------	
17		Methyl Tert Butyl Ether	2.864	3.204	-11.9	92	0.00	7.59
18		trans-1,2-Dichloroethene	1.730	2.012	-16.3	99	0.00	7.63
19		Acrylonitrile	0.421	0.448	-6.4	91	0.00	7.52
20		Hexane	1.513	1.812	-19.8	99	0.00	7.90
21		Di-isopropyl ether	4.412	4.822	-9.3	97	0.00	8.08
22		Vinyl acetate	1.667	1.803	-8.2	92	0.00	8.04
23	P	1,1-Dichloroethane	2.216	2.472	-11.6	97	0.00	8.09
24		ETBE	3.494	3.953	-13.1	92	0.00	8.48
25		2-Butanone	0.512	0.500	2.3	85	0.00	8.65
26		2,2-Dichloropropane	1.536	1.791	-16.6	93	0.00	8.75
27		cis-1,2-Dichloroethene	1.155	1.287	-11.4	96	0.00	8.72
28		Bromochloromethane	0.596	0.651	-9.2	97	0.00	8.98
29		Tetrahydrofuran	0.321	0.326	-1.6	86	0.00	9.04
30	C	Chloroform	2.024	2.307	-14.0	99	0.00	9.02
31	S	Dibromofluoromethane	0.461	0.498	-8.0	94	0.00	9.19
32		1,1,1-Trichloroethane	1.602	1.871	-16.8	96	0.00	9.29
33		Cyclohexane	1.949	2.269	-16.4	97	0.00	9.40
34		Carbon Tetrachloride	1.398	1.704	-21.9#	100	0.00	9.49

Continuing Calibration Summary

Job Number: F76459 **Sample:** VB2907-CC2903
Account: CSXT CSX Transportation **Lab FileID:** B070403.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35		1,1-Dichloropropene	1.517	1.717	-13.2	95	0.00	9.45
36	S	1,2-Dichloroethane-d4	0.439	0.463	-5.5	93	0.00	9.58
37		TAME	2.871	3.155	-9.9	91	0.00	9.71
38		Benzene	4.413	4.825	-9.3	96	0.00	9.68
39		1,2-Dichloroethane	1.677	1.866	-11.3	95	0.00	9.66
40		Trichloroethene	1.099	1.234	-12.3	94	0.00	10.32
41		Methylcyclohexane	1.573	1.851	-17.7	97	0.00	10.58
42	C	1,2-Dichloropropane	1.251	1.412	-12.9	99	0.00	10.56
43		Dibromomethane	0.713	0.778	-9.1	92	0.00	10.69
44		Bromodichloromethane	1.487	1.676	-12.7	94	0.00	10.81
			Amount	Calc.	%Drift			
45		2-Chloroethyl vinyl ether	200.000	199.682	0.2	86	0.00	11.03
			AvgRF	CCRF	%Dev			
46		2-Nitropropane	0.289	0.318	-10.0	93	0.00	11.00
47		cis-1,3-Dichloropropene	1.806	2.059	-14.0	95	0.00	11.26
48		4-Methyl-2-pentanone	1.047	1.057	-1.0	89	0.00	11.35
49	I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00	13.15
50	S	Toluene-d8	0.622	0.592	4.8	96	0.00	11.58
51	C	Toluene	1.269	1.246	1.8	94	0.00	11.66
52		trans-1,3-Dichloropropene	0.439	0.441	-0.5	92	0.00	11.81
53		1,1,2-Trichloroethane	0.241	0.229	5.0	92	0.00	12.03
54		Tetrachloroethene	0.317	0.311	1.9	93	0.00	12.27
55		2-hexanone	0.197	0.176	10.7	85	0.00	12.21
56		1,3-Dichloropropane	0.504	0.463	8.1	93	0.00	12.23
57		Dibromochloromethane	0.297	0.302	-1.7	92	0.00	12.51
58		1,2-Dibromoethane	0.283	0.267	5.7	88	0.00	12.68
			Amount	Calc.	%Drift			
59		1-Chlorohexane	40.000	38.331	4.2	91	0.00	13.05
			AvgRF	CCRF	%Dev			
60	P	Chlorobenzene	0.855	0.815	4.7	93	0.00	13.19
61	C	Ethylbenzene	1.397	1.400	-0.2	95	0.00	13.25
62		1,1,1,2-Tetrachloroethane	0.287	0.289	-0.7	93	0.00	13.24
63		m,p-Xylene	1.065	1.058	0.7	94	0.00	13.36
64		o-Xylene	1.102	1.124	-2.0	95	0.00	13.82
			Amount	Calc.	%Drift			
65		Styrene	40.000	39.032	2.4	94	0.00	13.82
66	P	Bromoform	40.000	38.021	4.9	88	0.00	14.08
			AvgRF	CCRF	%Dev			
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	15.69
68		Isopropylbenzene	1.423	1.421	0.1	91	0.00	14.19
69		Cyclohexanone	0.010	0.010	0.0	84	0.00	14.34
70	S	4-Bromofluorobenzene	0.853	0.852	0.1	100	0.00	14.40
71	P	1,1,2,2-Tetrachloroethane	0.465	0.397	14.6	89	0.00	14.47
			Amount	Calc.	%Drift			
72		trans-1,4-Dichloro-2-Bute	40.000	39.724	0.7	91	0.00	14.52
			AvgRF	CCRF	%Dev			
73		n-Propylbenzene	2.051	2.016	1.7	95	0.00	14.64
74		Bromobenzene	0.467	0.439	6.0	93	0.00	14.62
75		1,2,3-Trichloropropane	0.134	0.111	17.2	87	0.00	14.56
76		1,3,5-Trimethylbenzene	1.355	1.361	-0.4	94	0.00	14.81

Continuing Calibration Summary

Job Number: F76459 **Sample:** VB2907-CC2903
Account: CSXT CSX Transportation **Lab FileID:** B070403.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

77	2-Chlorotoluene	1.406	1.357	3.5	94	0.00	14.80
78	4-Chlorotoluene	1.312	1.270	3.2	93	0.00	14.91
	----------	Amount	Calc.	%Drift	----------		
79	tert-Butylbenzene	40.000	38.794	3.0	93	0.00	15.20
	----------	AvgRF	CCRF	%Dev	----------		
80	1,2,4-Trimethylbenzene	1.472	1.431	2.8	92	0.00	15.24
81	sec-Butylbenzene	1.820	1.779	2.3	93	0.00	15.44
82	4-Isopropyltoluene	1.420	1.397	1.6	90	0.00	15.57
83	1,3-Dichlorobenzene	0.883	0.814	7.8	92	0.00	15.63
84	1,4-Dichlorobenzene	0.906	0.817	9.8	92	0.00	15.72
	----------	Amount	Calc.	%Drift	----------		
85	Benzyl Chloride	40.000	37.057	7.4	83	0.00	15.83
	----------	AvgRF	CCRF	%Dev	----------		
86	n-Butylbenzene	1.522	1.476	3.0	93	0.00	16.02
87	1,2-Dichlorobenzene	0.857	0.775	9.6	89	0.00	16.15
88	1,2-Dibromo-3-Chloropropa	0.073	0.065	11.0	86	0.00	16.97
89	1,2,4-Trichlorobenzene	0.659	0.604	8.3	86	0.00	17.94
90	Hexachlorobutadiene	0.296	0.285	3.7	88	0.00	18.11
91	Naphthalene	1.209	1.032	14.6	81	0.00	18.29
92	1,2,3-Trichlorobenzene	0.586	0.522	10.9	85	0.00	18.58
93 I	Tert Butyl alcohol-d10	1.000	1.000	0.0	95	0.00	7.19
94	Acrolein	0.956	0.786	17.8	84	0.00	6.55
95	Tert-Butyl Alcohol	0.757	0.730	3.6	87	0.00	7.29
96	Tert amyl alcohol	0.580	0.540	6.9	86	0.00	9.49
97	1,4-Dioxane	0.077	0.081	-5.2	93	0.00	10.64

(#) = Out of Range SPCC's out = 0 CCC's out = 0
B070292.D 8260b.m Thu Sep 16 10:05:11 2010

Initial Calibration Summary

Job Number: F76459 **Sample:** VC2932-ICC2932
Account: CSXT CSX Transportation **Lab FileID:** C073529.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA5

Method : C:\msdchem\2\METHODS\8260c.m (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Calibration Files
1 =C073526.D 2 =C073527.D 3 =C073528.D 4 =C073529.D
5 =C073530.D 6 =C073531.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet	0.366	0.538	0.534	0.421	0.378	0.326	0.427	20.94
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9978								
		Response Ratio = 0.00000 + 0.51176 *A + -0.09348 *A^2								
3)	P	Chloromethane	0.428	0.446	0.385	0.349	0.319	0.283	0.368	17.19
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
		Response Ratio = 0.00000 + 0.40156 *A + -0.05951 *A^2								
4)	C	Vinyl Chloride	0.328	0.373	0.373	0.355	0.330	0.302	0.344	8.33
5)		Bromomethane	0.302	0.315	0.293	0.287	0.262	0.235	0.282	10.31
6)		Chloroethane	0.176	0.209	0.189	0.187	0.171	0.147	0.180	11.49
7)		Trichlorofluorometh	0.653	0.836	0.833	0.776	0.710	0.625	0.739	12.23
8)		Ethyl Ether	0.254	0.269	0.243	0.246	0.228	0.215	0.242	7.88
9)		1,2-Dichlorotrifluo	0.315	0.370	0.342	0.334	0.314	0.294	0.328	8.08
10)	C	1,1-Dichloroethene	0.446	0.568	0.524	0.507	0.468	0.438	0.492	10.21
11)		Freon 113	0.319	0.421	0.385	0.348	0.341	0.323	0.356	11.05
12)		Carbon Disulfide	0.850	0.973	0.905	0.893	0.863	0.837	0.887	5.58
13)		Iodomethane	0.593	0.699	0.654	0.654	0.632	0.616	0.641	5.72
14)		Methylene Chloride	0.509	0.430	0.362	0.346	0.319	0.306	0.379	20.43
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
		Response Ratio = 0.00000 + 0.36842 *A + -0.03198 *A^2								
15)		Acetone	0.020	0.025	0.022	0.021	0.020	0.020	0.021	9.81
16)		Methyl acetate	0.044	0.049	0.046	0.046	0.043	0.043	0.045	4.69
17)		trans-1,2-Dichloroe	0.428	0.513	0.464	0.437	0.409	0.401	0.442	9.33
18)		Hexane	0.210	0.254	0.231	0.216	0.204	0.202	0.219	9.14
19)		Methyl Tert Butyl E	1.034	1.159	1.092	1.069	0.996	0.973	1.054	6.45
20)		Di-isopropyl ether	0.785	0.849	0.812	0.781	0.739	0.740	0.784	5.39
21)	P	1,1-Dichloroethane	0.498	0.612	0.556	0.535	0.511	0.504	0.536	8.06
22)		Acrylonitrile	0.080	0.085	0.080	0.080	0.077	0.078	0.080	3.50
23)		ETBE	0.918	1.115	1.048	1.021	0.969	0.937	1.001	7.42
24)		Vinyl acetate	0.299	0.335	0.332	0.328	0.305	0.290	0.315	6.01
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
		Response Ratio = 0.00000 + 0.34424 *A + -0.00538 *A^2								
25)		cis-1,2-Dichloroeth	0.279	0.340	0.328	0.327	0.317	0.322	0.319	6.55
26)		2,2-Dichloropropane	0.566	0.722	0.663	0.626	0.577	0.543	0.616	10.99
27)		Bromochloromethane	0.200	0.222	0.208	0.210	0.206	0.206	0.209	3.59
28)		Cyclohexane	0.355	0.446	0.418	0.403	0.400	0.402	0.404	7.29
29)	C	Chloroform	0.694	0.812	0.752	0.729	0.687	0.666	0.723	7.38
30)		Tetrahydrofuran	0.087	0.077	0.072	0.068	0.064	0.064	0.072	12.24
31)	S	Dibromofluoromethan	0.319	0.320	0.313	0.307	0.295	0.294	0.308	3.75
32)		Carbon Tetrachlorid	0.657	0.894	0.851	0.806	0.757	0.719	0.781	11.18
33)		1,1,1-Trichloroetha	0.638	0.835	0.795	0.758	0.708	0.679	0.735	10.12
34)		2-Butanone	0.112	0.130	0.120	0.123	0.114	0.110	0.118	6.43

Initial Calibration Summary

Job Number: F76459 **Sample:** VC2932-ICC2932
Account: CSXT CSX Transportation **Lab FileID:** C073529.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35)		1,1-Dichloropropene	0.432	0.548	0.514	0.497	0.474	0.472	0.490	8.10
36)		Benzene	1.159	1.325	1.232	1.220	1.204	1.210	1.225	4.49
37)		TAME	0.916	0.984	1.003	1.009	0.966	0.941	0.970	3.74
38)	S	1,2-Dichloroethane-	0.438	0.459	0.460	0.449	0.427	0.410	0.441	4.46
39)		1,2-Dichloroethane	0.658	0.761	0.711	0.672	0.615	0.562	0.663	10.54
40)		Trichloroethene	0.390	0.432	0.406	0.398	0.384	0.373	0.397	5.11
41)		Methylcyclohexane	0.396	0.511	0.477	0.473	0.470	0.477	0.467	8.15
42)		Dibromomethane	0.226	0.269	0.251	0.254	0.238	0.227	0.244	6.91
43)	C	1,2-Dichloropropane	0.256	0.307	0.293	0.286	0.278	0.269	0.282	6.49
44)		Bromodichloromethan	0.529	0.638	0.621	0.614	0.571	0.539	0.585	7.76
45)		2-Chloroethyl vinyl	0.169	0.212	0.211	0.216	0.206	0.190	0.201	9.02
46)		cis-1,3-Dichloropro	0.512	0.621	0.621	0.617	0.598	0.564	0.589	7.42
47)	I	Chlorobenzene-d5	----------ISTD----------							
48)	S	Toluene-d8	1.143	1.130	1.120	1.106	1.130	1.127	1.126	1.09
49)	C	Toluene	1.358	1.574	1.496	1.510	1.499	1.496	1.489	4.75
50)		2-Nitropropane	0.102	0.125	0.129	0.132	0.120	0.109	0.120	9.88
51)		4-Methyl-2-pentanon	0.232	0.275	0.260	0.269	0.253	0.239	0.255	6.66
52)		trans-1,3-Dichlorop	0.555	0.638	0.616	0.612	0.588	0.566	0.596	5.31
53)		Tetrachloroethene	0.425	0.532	0.494	0.485	0.491	0.483	0.485	7.10
54)		1,1,2-Trichloroetha	0.242	0.274	0.262	0.263	0.256	0.253	0.258	4.13
55)		Dibromochloromethan	0.454	0.517	0.519	0.511	0.495	0.489	0.498	4.95
56)		1,3-Dichloropropane	0.517	0.588	0.559	0.563	0.549	0.528	0.550	4.65
57)		1,2-Dibromoethane	0.346	0.392	0.377	0.381	0.377	0.370	0.374	4.12
58)		2-hexanone	0.156	0.189	0.188	0.194	0.184	0.175	0.181	7.57
59)		1-Chlorohexane	0.430	0.516	0.491	0.488	0.496	0.497	0.486	5.99
60)	C	Ethylbenzene	1.745	2.010	1.882	1.902	1.856	1.829	1.871	4.66
61)	P	Chlorobenzene	1.017	1.163	1.106	1.112	1.102	1.089	1.098	4.31
62)		1,1,1,2-Tetrachloro	0.448	0.507	0.484	0.484	0.471	0.457	0.475	4.43
63)		m,p-Xylene	1.237	1.603	1.532	1.548	1.511	1.489	1.487	8.63
64)		o-Xylene	1.293	1.592	1.556	1.571	1.541	1.502	1.509	7.29
65)		Styrene	0.904	1.149	1.167	1.209	1.210	1.191	1.138	10.31
66)	P	Bromoform	0.305	0.371	0.380	0.398	0.386	0.380	0.370	8.92
67)		Isopropylbenzene	1.320	1.688	1.710	1.713	1.679	1.659	1.628	9.36
68)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
69)	S	4-Bromofluorobenzen	0.853	0.829	0.800	0.784	0.791	0.798	0.809	3.29
70)		n-Propylbenzene	2.782	3.271	3.080	3.069	3.064	3.018	3.047	5.15
71)		Bromobenzene	0.821	0.893	0.843	0.850	0.859	0.850	0.853	2.77
72)	P	1,1,2,2-Tetrachloro	0.561	0.593	0.563	0.575	0.568	0.567	0.571	2.08
73)		1,3,5-Trimethylbenz	2.089	2.587	2.443	2.435	2.458	2.412	2.404	6.92
74)		2-Chlorotoluene	2.055	2.426	2.298	2.249	2.235	2.201	2.244	5.40
75)		trans-1,4-Dichloro-	0.167	0.158	0.189	0.207	0.205	0.200	0.188	11.02
76)		1,2,3-Trichloroprop	0.243	0.250	0.241	0.243	0.231	0.224	0.239	4.01
77)		Cyclohexanone	0.006	0.014	0.014	0.015	0.015	0.015	0.013	25.28
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
		Response Ratio = 0.00000 + 0.01389 *A + 0.00011 *A^2								
78)		4-Chlorotoluene	1.928	2.248	2.089	2.079	2.081	2.043	2.078	4.94
79)		tert-Butylbenzene	1.248	1.610	1.484	1.474	1.441	1.400	1.443	8.22
80)		1,2,4-Trimethylbenz	2.071	2.594	2.512	2.519	2.496	2.485	2.446	7.67
81)		sec-Butylbenzene	2.450	3.040	2.891	2.875	2.870	2.868	2.832	7.01
82)		4-Isopropyltoluene	2.127	2.654	2.590	2.610	2.611	2.579	2.529	7.85
83)		1,3-Dichlorobenzene	1.428	1.606	1.545	1.555	1.577	1.547	1.543	3.94
84)		1,4-Dichlorobenzene	1.569	1.675	1.616	1.637	1.635	1.605	1.623	2.20
85)		n-Butylbenzene	1.041	1.320	1.305	1.317	1.285	1.274	1.257	8.52
86)		Benzyl Chloride	0.296	0.315	0.337	0.347	0.337	0.326	0.326	5.69
87)		1,2-Dichlorobenzene	1.419	1.575	1.525	1.538	1.521	1.498	1.513	3.47
88)		1,2-Dibromo-3-Chlor	0.173	0.163	0.161	0.161	0.156	0.147	0.160	5.24
89)		Hexachlorobutadiene	0.556	0.574	0.517	0.507	0.509	0.498	0.527	5.84

Initial Calibration Summary

Job Number: F76459 **Sample:** VC2932-ICC2932
Account: CSXT CSX Transportation **Lab FileID:** C073529.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

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90)     1,2,4-Trichlorobenz 1.105 1.204 1.183 1.210 1.218 1.184 1.184   3.48
91)     Naphthalene         2.461 2.369 2.471 2.628 2.631 2.549 2.518   4.11
92)     1,2,3-Trichlorobenz 1.096 1.080 1.084 1.127 1.116 1.092 1.099   1.70

93) I   Tert Butyl Alcohol-d1 ----------------ISTD--------------------
94)     acrolein            1.420 0.627 0.520 0.493 0.484 0.635 0.697  51.73
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9920
              Response Ratio = 0.00000 + 0.34861 *A + 0.13572 *A^2

95)     Tert Butyl Alcohol  1.175 1.205 1.129 1.156 1.152 1.119 1.156   2.70
96)     tert Amyl alcohol   0.750 0.862 0.849 0.891 0.893 0.901 0.858   6.58
97)     1,4-Dioxane         0.067 0.110 0.110 0.119 0.122 0.124 0.109  19.53
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.11376 *A + 0.00134 *A^2

--------------------------------------------------------------------------------
(#) = Out of Range

          8260c.m           Tue Sep 14 14:25:25 2010
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Initial Calibration Verification

Job Number: F76459 **Sample:** VC2932-ICV2932
Account: CSXT CSX Transportation **Lab FileID:** C073532.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\091410\C073532.D Vial: 7
Acq On : 14 Sep 2010 1:11 pm Operator: AnaJ
Sample : ICV2932-4 Inst : MSVOA5
Misc : MS15393,VC2932,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p

Method : C:\msdchem\2\METHODS\8260c.m (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Tue Sep 14 14:22:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	150	0.00	7.26
			Amount	Calc.	%Drift			
2		Dichlorodifluoromethane	40.000	53.057	-32.6#	195	0.00	2.62
3	P	Chloromethane	40.000	43.333	-8.3	163	0.02	2.79
			AvgRF	CCRF	%Dev			
4	C	Vinyl Chloride	0.344	0.354	-2.9	149	0.00	2.92
5		Bromomethane	0.282	0.270	4.3	141	0.02	3.27
6		Chloroethane	0.180	0.171	5.0	137	0.02	3.41
7		Trichlorofluoromethane	0.739	0.720	2.6	139	0.01	3.61
8		Ethyl Ether	0.242	0.224	7.4	137	0.01	3.82
9		1,2-Dichlorotrifluoroetha	0.328	0.338	-3.0	152	0.00	4.05
10	C	1,1-Dichloroethene	0.492	0.399	18.9	118	0.01	4.07
11		Freon 113	0.356	0.311	12.6	134	0.00	4.15
12		Carbon Disulfide	0.887	0.763	14.0	128	0.00	4.12
13		Iodomethane	0.641	0.605	5.6	139	0.00	4.23
			Amount	Calc.	%Drift			
14		Methylene Chloride	40.000	35.079	12.3	132	0.00	4.66
			AvgRF	CCRF	%Dev			
15		Acetone	0.021	0.020	4.8	140	0.00	4.70
16		Methyl acetate	0.045	0.046	-2.2	149	0.00	4.80
17		trans-1,2-Dichloroethene	0.442	0.383	13.3	131	0.00	4.82
18		Hexane	0.219	0.214	2.3	149	0.00	4.87
19		Methyl Tert Butyl Ether	1.054	0.977	7.3	137	0.00	4.93
20		Di-isopropyl ether	0.784	0.779	0.6	150	0.00	5.29
21	P	1,1-Dichloroethane	0.536	0.487	9.1	137	0.00	5.44
22		Acrylonitrile	0.080	0.081	-1.3	152	0.00	5.50
23		ETBE	1.001	0.922	7.9	135	0.00	5.66
24		Vinyl acetate	0.315	0.402	-27.6#	184	0.00	5.65
25		cis-1,2-Dichloroethene	0.319	0.329	-3.1	151	0.00	5.99
26		2,2-Dichloropropane	0.616	0.503	18.3	121	0.00	6.12
27		Bromochloromethane	0.209	0.199	4.8	142	0.00	6.20
28		Cyclohexane	0.404	0.387	4.2	144	0.00	6.22
29	C	Chloroform	0.723	0.652	9.8	134	0.00	6.26
30		Tetrahydrofuran	0.072	0.066	8.3	146	0.00	6.43
31	S	Dibromofluoromethane	0.308	0.286	7.1	140	0.00	6.44
32		Carbon Tetrachloride	0.781	0.673	13.8	125	0.00	6.43
33		1,1,1-Trichloroethane	0.735	0.629	14.4	125	0.00	6.50
34		2-Butanone	0.118	0.115	2.5	140	0.00	6.55

Initial Calibration Verification

Job Number: F76459 **Sample:** VC2932-ICV2932
Account: CSXT CSX Transportation **Lab FileID:** C073532.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35		1,1-Dichloropropene	0.490	0.455	7.1	137	0.00	6.61
36		Benzene	1.225	1.174	4.2	144	0.00	6.86
37		TAME	0.970	0.934	3.7	139	0.00	6.94
38	S	1,2-Dichloroethane-d4	0.441	0.378	14.3	127	0.00	6.99
39		1,2-Dichloroethane	0.663	0.548	17.3	122	0.00	7.05
40		Trichloroethene	0.397	0.360	9.3	136	0.00	7.43
41		Methylcyclohexane	0.467	0.474	-1.5	150	0.00	7.43
42		Dibromomethane	0.244	0.223	8.6	132	0.00	7.85
43	C	1,2-Dichloropropane	0.282	0.266	5.7	140	0.00	7.95
44		Bromodichloromethane	0.585	0.514	12.1	126	0.00	8.00
45		2-Chloroethyl vinyl ether	0.201	0.187	7.0	130	0.00	8.53
46		cis-1,3-Dichloropropene	0.589	0.554	5.9	135	0.00	8.61
47	I	Chlorobenzene-d5	1.000	1.000	0.0	135	0.00	10.35
48	S	Toluene-d8	1.126	1.156	-2.7	141	0.00	8.80
49	C	Toluene	1.489	1.501	-0.8	134	0.00	8.86
50		2-Nitropropane	0.120	0.110	8.3	112	0.00	9.08
51		4-Methyl-2-pentanone	0.255	0.274	-7.5	137	0.00	9.20
52		trans-1,3-Dichloropropene	0.596	0.607	-1.8	134	0.00	9.25
53		Tetrachloroethene	0.485	0.489	-0.8	136	0.00	9.25
54		1,1,2-Trichloroethane	0.258	0.260	-0.8	134	0.00	9.42
55		Dibromochloromethane	0.498	0.486	2.4	128	0.00	9.61
56		1,3-Dichloropropane	0.550	0.532	3.3	128	0.00	9.70
57		1,2-Dibromoethane	0.374	0.369	1.3	131	0.00	9.86
58		2-hexanone	0.181	0.202	-11.6	141	0.00	10.02
59		1-Chlorohexane	0.486	0.481	1.0	133	0.00	10.32
60	C	Ethylbenzene	1.871	1.778	5.0	126	0.00	10.38
61	P	Chlorobenzene	1.098	1.091	0.6	133	0.00	10.37
62		1,1,1,2-Tetrachloroethane	0.475	0.455	4.2	127	0.00	10.43
63		m,p-Xylene	1.487	1.449	2.6	126	0.00	10.52
64		o-Xylene	1.509	1.473	2.4	127	0.00	10.96
65		Styrene	1.138	1.166	-2.5	130	0.00	11.01
66	P	Bromoform	0.370	0.366	1.1	124	0.00	11.06
67		Isopropylbenzene	1.628	1.851	-13.7	146	0.00	11.27
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	126	0.00	12.73
69	S	4-Bromofluorobenzene	0.809	0.797	1.5	128	0.00	11.57
70		n-Propylbenzene	3.047	3.032	0.5	125	0.00	11.69
71		Bromobenzene	0.853	0.851	0.2	126	0.00	11.69
72	P	1,1,2,2-Tetrachloroethane	0.571	0.596	-4.4	131	0.00	11.76
73		1,3,5-Trimethylbenzene	2.404	2.399	0.2	124	0.00	11.88
74		2-Chlorotoluene	2.244	2.219	1.1	125	0.00	11.87
75		trans-1,4-Dichloro-2-Bute	0.188	0.198	-5.3	121	0.00	11.94
76		1,2,3-Trichloropropane	0.239	0.210	12.1	109	0.00	11.92
			Amount	Calc.	%Drift			
77		Cyclohexanone	200.000	217.011	-8.5	135	0.00	11.98
			AvgRF	CCRF	%Dev			
78		4-Chlorotoluene	2.078	2.050	1.3	125	0.00	12.04
79		tert-Butylbenzene	1.443	1.395	3.3	119	0.00	12.21
80		1,2,4-Trimethylbenzene	2.446	2.451	-0.2	123	0.00	12.29
81		sec-Butylbenzene	2.832	2.834	-0.1	125	0.00	12.40
82		4-Isopropyltoluene	2.529	2.537	-0.3	123	0.00	12.54
83		1,3-Dichlorobenzene	1.543	1.540	0.2	125	0.00	12.65
84		1,4-Dichlorobenzene	1.623	1.609	0.9	124	0.00	12.74
85		n-Butylbenzene	1.257	1.225	2.5	117	0.00	12.98
86		Benzyl Chloride	0.326	0.314	3.7	114	0.00	12.99
87		1,2-Dichlorobenzene	1.513	1.507	0.4	124	0.00	13.19
88		1,2-Dibromo-3-Chloropropa	0.160	0.149	6.9	117	0.00	13.97

Initial Calibration Verification

Job Number: F76459 **Sample:** VC2932-ICV2932
Account: CSXT CSX Transportation **Lab FileID:** C073532.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

89		Hexachlorobutadiene	0.527	0.500	5.1	125	0.00	14.53
90		1,2,4-Trichlorobenzene	1.184	1.182	0.2	123	0.00	14.58
91		Naphthalene	2.518	2.616	-3.9	126	0.00	14.86
92		1,2,3-Trichlorobenzene	1.099	1.100	-0.1	123	0.00	15.02
93	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	138	0.00	4.93
		----------	Amount	Calc.	%Drift	----------		
94		acrolein	200.000	283.607	-41.8#	199	0.00	4.42
		----------	AvgRF	CCRF	%Dev	----------		
95		Tert Butyl Alcohol	1.156	1.138	1.6	136	0.00	5.00
96		tert Amyl alcohol	0.858	0.888	-3.5	137	0.00	7.11
		----------	Amount	Calc.	%Drift	----------		
97		1,4-Dioxane	800.000	857.829	-7.2	147	0.00	8.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
C073529.D 8260c.m Tue Sep 14 14:26:10 2010

Continuing Calibration Summary

Job Number: F76459 **Sample:** VC2933-CC2932
Account: CSXT CSX Transportation **Lab FileID:** C073557.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\091510\C073557.D Vial: 1
Acq On : 15 Sep 2010 9:07 am Operator: AnaJ
Sample : CC2932-4 Inst : MSVOA5
Misc : MS15403,VC2933,,,,, Multiplr: 1.00
MS Integration Params: Tiny.p

Method : C:\msdchem\2\METHODS\8260c.m (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Tue Sep 14 14:22:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	85	0.00	7.26
			Amount	Calc.	%Drift			
2		Dichlorodifluoromethane	40.000	37.210	7.0	83	0.00	2.62
3	P	Chloromethane	40.000	35.474	11.3	78	0.00	2.77
			AvgRF	CCRF	%Dev			
4	C	Vinyl Chloride	0.344	0.315	8.4	76	0.00	2.92
5		Bromomethane	0.282	0.265	6.0	79	0.00	3.26
6		Chloroethane	0.180	0.174	3.3	79	0.00	3.39
7		Trichlorofluoromethane	0.739	0.787	-6.5	87	0.00	3.59
8		Ethyl Ether	0.242	0.241	0.4	84	0.02	3.83
9		1,2-Dichlorotrifluoroetha	0.328	0.344	-4.9	88	0.00	4.04
10	C	1,1-Dichloroethene	0.492	0.536	-8.9	90	0.00	4.06
11		Freon 113	0.356	0.370	-3.9	91	0.01	4.15
12		Carbon Disulfide	0.887	0.889	-0.2	85	0.00	4.12
13		Iodomethane	0.641	0.640	0.2	84	0.00	4.23
			Amount	Calc.	%Drift			
14		Methylene Chloride	40.000	43.213	-8.0	91	0.00	4.65
			AvgRF	CCRF	%Dev			
15		Acetone	0.021	0.019	9.5	78	0.00	4.70
16		Methyl acetate	0.045	0.042	6.7	77	0.00	4.81
17		trans-1,2-Dichloroethene	0.442	0.450	-1.8	88	0.00	4.82
18		Hexane	0.219	0.225	-2.7	89	0.00	4.87
19		Methyl Tert Butyl Ether	1.054	1.045	0.9	83	0.00	4.92
20		Di-isopropyl ether	0.784	0.775	1.1	85	0.00	5.28
21	P	1,1-Dichloroethane	0.536	0.539	-0.6	86	0.00	5.45
22		Acrylonitrile	0.080	0.075	6.3	80	0.00	5.50
23		ETBE	1.001	1.022	-2.1	85	0.00	5.65
24		Vinyl acetate	0.315	0.329	-4.4	85	0.01	5.66
25		cis-1,2-Dichloroethene	0.319	0.306	4.1	80	0.00	5.99
26		2,2-Dichloropropane	0.616	0.664	-7.8	90	0.00	6.12
27		Bromochloromethane	0.209	0.196	6.2	80	0.00	6.20
28		Cyclohexane	0.404	0.399	1.2	84	0.00	6.22
29	C	Chloroform	0.723	0.732	-1.2	86	0.00	6.25
30		Tetrahydrofuran	0.072	0.066	8.3	84	0.00	6.42
31	S	Dibromofluoromethane	0.308	0.321	-4.2	89	0.00	6.44
32		Carbon Tetrachloride	0.781	0.834	-6.8	88	0.00	6.42
33		1,1,1-Trichloroethane	0.735	0.780	-6.1	88	0.00	6.49
34		2-Butanone	0.118	0.114	3.4	79	0.00	6.55

Continuing Calibration Summary

Job Number: F76459 **Sample:** VC2933-CC2932
Account: CSXT CSX Transportation **Lab FileID:** C073557.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

35		1,1-Dichloropropene	0.490	0.496	-1.2	85	0.00	6.60
36		Benzene	1.225	1.164	5.0	81	0.00	6.86
37		TAME	0.970	0.966	0.4	82	0.00	6.94
38	S	1,2-Dichloroethane-d4	0.441	0.493	-11.8	94	0.00	6.98
39		1,2-Dichloroethane	0.663	0.715	-7.8	91	0.00	7.06
40		Trichloroethene	0.397	0.396	0.3	85	0.00	7.42
41		Methylcyclohexane	0.467	0.458	1.9	83	0.00	7.43
42		Dibromomethane	0.244	0.247	-1.2	83	0.00	7.85
43	C	1,2-Dichloropropane	0.282	0.273	3.2	81	0.00	7.95
44		Bromodichloromethane	0.585	0.610	-4.3	85	0.00	7.99
45		2-Chloroethyl vinyl ether	0.201	0.194	3.5	77	0.00	8.53
46		cis-1,3-Dichloropropene	0.589	0.597	-1.4	83	0.00	8.62
47	I	Chlorobenzene-d5	1.000	1.000	0.0	85	0.00	10.35
48	S	Toluene-d8	1.126	1.091	3.1	84	0.00	8.80
49	C	Toluene	1.489	1.416	4.9	80	0.00	8.86
50		2-Nitropropane	0.120	0.130	-8.3	84	0.00	9.08
51		4-Methyl-2-pentanone	0.255	0.253	0.8	80	0.00	9.20
52		trans-1,3-Dichloropropene	0.596	0.597	-0.2	83	0.00	9.25
53		Tetrachloroethene	0.485	0.457	5.8	80	0.00	9.25
54		1,1,2-Trichloroethane	0.258	0.240	7.0	78	0.00	9.42
55		Dibromochloromethane	0.498	0.489	1.8	82	0.00	9.61
56		1,3-Dichloropropane	0.550	0.522	5.1	79	0.00	9.70
57		1,2-Dibromoethane	0.374	0.351	6.1	79	0.00	9.86
58		2-hexanone	0.181	0.177	2.2	78	0.00	10.02
59		1-Chlorohexane	0.486	0.477	1.9	83	0.00	10.32
60	C	Ethylbenzene	1.871	1.818	2.8	81	0.00	10.38
61	P	Chlorobenzene	1.098	1.055	3.9	81	0.00	10.37
62		1,1,1,2-Tetrachloroethane	0.475	0.472	0.6	83	0.00	10.43
63		m,p-Xylene	1.487	1.514	-1.8	83	0.00	10.52
64		o-Xylene	1.509	1.523	-0.9	83	0.00	10.96
65		Styrene	1.138	1.153	-1.3	81	0.00	11.01
66	P	Bromoform	0.370	0.376	-1.6	81	0.00	11.06
67		Isopropylbenzene	1.628	1.676	-2.9	83	0.00	11.27
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	88	0.00	12.73
69	S	4-Bromofluorobenzene	0.809	0.811	-0.2	91	0.00	11.57
70		n-Propylbenzene	3.047	2.962	2.8	85	0.00	11.69
71		Bromobenzene	0.853	0.790	7.4	82	0.00	11.70
72	P	1,1,2,2-Tetrachloroethane	0.571	0.513	10.2	78	0.00	11.76
73		1,3,5-Trimethylbenzene	2.404	2.342	2.6	85	0.00	11.88
74		2-Chlorotoluene	2.244	2.181	2.8	85	0.00	11.87
75		trans-1,4-Dichloro-2-Bute	0.188	0.205	-9.0	87	0.00	11.94
76		1,2,3-Trichloropropane	0.239	0.215	10.0	78	0.00	11.91
		----------	Amount	Calc.	%Drift	----------		
77		Cyclohexanone	200.000	177.223	11.4	76	0.00	11.98
		----------	AvgRF	CCRF	%Dev	----------		
78		4-Chlorotoluene	2.078	2.014	3.1	85	0.00	12.04
79		tert-Butylbenzene	1.443	1.455	-0.8	87	0.00	12.22
80		1,2,4-Trimethylbenzene	2.446	2.407	1.6	84	0.00	12.29
81		sec-Butylbenzene	2.832	2.762	2.5	84	0.00	12.40
82		4-Isopropyltoluene	2.529	2.489	1.6	84	0.00	12.54
83		1,3-Dichlorobenzene	1.543	1.451	6.0	82	0.00	12.65
84		1,4-Dichlorobenzene	1.623	1.531	5.7	82	0.00	12.74
85		n-Butylbenzene	1.257	1.261	-0.3	84	0.00	12.98
86		Benzyl Chloride	0.326	0.321	1.5	81	0.00	12.99
87		1,2-Dichlorobenzene	1.513	1.437	5.0	82	0.00	13.19
88		1,2-Dibromo-3-Chloropropa	0.160	0.150	6.3	82	0.00	13.97

Continuing Calibration Summary

Job Number: F76459 **Sample:** VC2933-CC2932
Account: CSXT CSX Transportation **Lab FileID:** C073557.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

89		Hexachlorobutadiene	0.527	0.490	7.0	85	0.00	14.53
90		1,2,4-Trichlorobenzene	1.184	1.120	5.4	81	0.00	14.58
91		Naphthalene	2.518	2.245	10.8	75	0.00	14.86
92		1,2,3-Trichlorobenzene	1.099	1.018	7.4	79	0.00	15.02
93	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	83	0.00	4.92
		----------	Amount	Calc.	%Drift	----------		
94		acrolein	200.000	251.721	-25.9#	102	0.00	4.41
		----------	AvgRF	CCRF	%Dev	----------		
95		Tert Butyl Alcohol	1.156	1.107	4.2	79	0.00	4.99
96		tert Amyl alcohol	0.858	0.796	7.2	74	0.00	7.11
		----------	Amount	Calc.	%Drift	----------		
97		1,4-Dioxane	800.000	692.715	13.4	71	0.01	8.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
C073529.D 8260c.m Wed Sep 15 09:52:39 2010

Initial Calibration Summary

Job Number: F76459 **Sample:** VH2413-ICC2413
Account: CSXT CSX Transportation **Lab FileID:** H064460.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA3

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration

Calibration Files
1 =H064457.D 2 =H064458.D 3 =H064459.D 4 =H064460.D
5 =H064461.D 6 =H064462.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------	----------	ISTD	----------	----------	----------		
2)		Dichlorodifluoromet	0.212	0.259	0.255	0.277	0.306	0.281	0.265	12.01
3)	P	Chloromethane	0.478	0.497	0.463	0.462	0.521	0.497	0.486	4.75
4)	C	Vinyl Chloride	0.292	0.346	0.356	0.356	0.398	0.398	0.358	10.94
5)		Bromomethane	0.166	0.162	0.144	0.130	0.123	0.113	0.140	15.27
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9933								
		Response Ratio = 0.00000 + 0.11963 *A								
6)		Chloroethane	0.174	0.198	0.181	0.168	0.161	0.132	0.169	13.09
7)		Trichlorofluorometh	0.370	0.395	0.401	0.393	0.423	0.397	0.396	4.30
8)		Ethyl Ether	0.278	0.305	0.281	0.287	0.298	0.285	0.289	3.57
9)		1,2-Dichlorotrifluo	0.398	0.445	0.448	0.456	0.497	0.482	0.454	7.53
10)	C	1,1-Dichloroethene	0.630	0.675	0.671	0.674	0.731	0.715	0.683	5.28
11)		Freon 113	0.289	0.311	0.325	0.318	0.330	0.330	0.317	5.00
12)		Carbon Disulfide	1.139	1.166	1.180	1.191	1.314	1.275	1.211	5.63
13)		Iodomethane	0.435	0.497	0.500	0.509	0.541	0.522	0.501	7.21
14)		Allyl chloride	0.794	0.900	0.921	0.972	1.030	1.038	0.943	9.71
15)		Methylene Chloride	3.326	1.611	1.118	0.848	0.889	0.836	1.438	67.49
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9958								
		Response Ratio = 0.00000 + 0.86771 *A								
16)		Acetone	0.228	0.241	0.223	0.218	0.248	0.247	0.234	5.51
17)		Methyl acetate	0.224	0.290	0.262	0.255	0.278	0.280	0.265	9.07
18)		trans-1,2-Dichloroe	0.619	0.716	0.685	0.704	0.753	0.730	0.701	6.63
19)		Hexane	0.427	0.386	0.389	0.393	0.429	0.423	0.408	5.04
20)		Methyl Tert Butyl E	0.719	0.757	0.735	0.685	0.764	0.762	0.737	4.20
21)		Acetonitrile	0.023	0.045	0.039	0.039	0.048	0.047	0.040	22.60
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9911								
		Response Ratio = 0.00000 + 0.04587 *A								
22)		Di-isopropyl ether	1.710	1.812	1.767	1.793	1.881	1.816	1.797	3.17
23)		Chloroprene	0.653	0.696	0.707	0.743	0.793	0.825	0.736	8.70
24)	P	1,1-Dichloroethane	0.834	0.836	0.821	0.820	0.882	0.838	0.839	2.70
25)		Acrylonitrile	0.115	0.128	0.125	0.120	0.140	0.126	0.126	6.67
26)		ETBE	0.987	1.079	1.076	0.976	1.063	1.050	1.039	4.38
27)		Vinyl acetate	0.370	0.414	0.448	0.446	0.512	0.496	0.448	11.69
28)		cis-1,2-Dichloroeth	0.342	0.371	0.367	0.380	0.400	0.380	0.373	5.08
29)		2,2-Dichloropropane	0.598	0.656	0.634	0.637	0.686	0.673	0.647	4.84
30)		Bromochloromethane	0.157	0.180	0.171	0.175	0.175	0.165	0.171	4.77
31)		Cyclohexane	0.843	0.833	0.797	0.812	0.858	0.837	0.830	2.65
32)	C	Chloroform	0.764	0.784	0.770	0.757	0.801	0.756	0.772	2.26
33)		Ethyl acetate	0.448	0.464	0.420	0.405	0.472	0.451	0.443	5.82
34)		Tetrahydrofuran	0.134	0.111	0.095	0.092	0.110	0.102	0.107	14.32
35)	S	Dibromofluoromethan	0.246	0.249	0.256	0.232	0.232	0.223	0.240	5.19
36)		Carbon Tetrachlorid	0.533	0.559	0.586	0.587	0.631	0.603	0.583	5.87
37)		1,1,1-Trichloroetha	0.605	0.626	0.627	0.616	0.661	0.624	0.626	2.99

Initial Calibration Summary

Job Number: F76459 **Sample:** VH2413-ICC2413
Account: CSXT CSX Transportation **Lab FileID:** H064460.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

38)		2-Butanone	0.251	0.280	0.258	0.249	0.289	0.278	0.267	6.39
39)		1,1-Dichloropropene	0.574	0.603	0.583	0.608	0.646	0.623	0.606	4.34
40)		Propionitrile	0.041	0.045	0.042	0.039	0.043	0.041	0.042	4.99
41)		Methacrylonitrile	0.299	0.310	0.279	0.252	0.269	0.252	0.277	8.66
42)		Benzene	1.585	1.573	1.493	1.396	1.402	1.290	1.457	7.87
43)		TAME	0.640	0.715	0.700	0.622	0.709	0.710	0.682	5.96
44)	S	1,2-Dichloroethane-	0.380	0.389	0.386	0.343	0.360	0.349	0.368	5.43
45)		1,2-Dichloroethane	0.688	0.703	0.663	0.649	0.693	0.663	0.677	3.13
46)		Trichloroethene	0.412	0.393	0.393	0.378	0.396	0.371	0.390	3.65
47)		Methylcyclohexane	0.626	0.604	0.591	0.595	0.623	0.603	0.607	2.39
48)		Dibromomethane	0.181	0.209	0.208	0.207	0.219	0.209	0.205	6.25
49)	C	1,2-Dichloropropane	0.394	0.438	0.436	0.439	0.465	0.438	0.435	5.21
50)		Bromodichloromethan	0.477	0.568	0.573	0.591	0.606	0.593	0.568	8.26
51)		Methyl methacrylate	0.422	0.479	0.441	0.445	0.478	0.475	0.457	5.23
52)		2-Chloroethyl vinyl	0.051	0.069	0.071	0.072	0.079	0.083	0.071	15.91
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9961								
		Response Ratio = 0.00000 + 0.08022 *A								
53)		cis-1,3-Dichloropro	0.566	0.675	0.693	0.700	0.732	0.701	0.678	8.54
54)	I	Chlorobenzene-d5	----------ISTD----------							
55)	S	Toluene-d8	1.290	1.361	1.486	1.659	1.740	1.886	1.570	14.67
56)	C	Toluene	2.012	2.173	2.271	2.523	2.739	2.819	2.423	13.32
57)		2-Nitropropane	0.158	0.192	0.205	0.226	0.268	0.290	0.223	21.96
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995								
		Response Ratio = 0.00000 + 0.17480 *A + 0.00582 *A^2								
58)		4-Methyl-2-pentanon	0.594	0.633	0.603	0.648	0.762	0.802	0.674	12.89
59)		trans-1,3-Dichlorop	0.627	0.821	0.843	0.918	0.987	1.018	0.869	16.28
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9978								
		Response Ratio = 0.00000 + 0.98826 *A								
60)		Tetrachloroethene	0.543	0.594	0.610	0.658	0.692	0.701	0.633	9.71
61)		Ethyl methacrylate	0.411	0.561	0.661	0.762	0.882	0.941	0.703	28.40
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9920								
		Response Ratio = 0.00000 + 0.88838 *A								
62)		1,1,2-Trichloroetha	0.314	0.367	0.372	0.416	0.465	0.490	0.404	16.35
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9943								
		Response Ratio = 0.00000 + 0.46836 *A								
63)		Dibromochloromethan	0.343	0.448	0.490	0.566	0.610	0.642	0.517	21.65
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9963								
		Response Ratio = 0.00000 + 0.61621 *A								
64)		1,3-Dichloropropane	0.742	0.767	0.854	0.937	1.014	1.086	0.900	15.23
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9951								
		Response Ratio = 0.00000 + 1.03522 *A								
65)		1,2-Dibromoethane	0.302	0.369	0.423	0.454	0.515	0.543	0.434	20.74
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996								
		Response Ratio = 0.00000 + 0.38077 *A + 0.04134 *A^2								
66)		2-hexanone	0.439	0.498	0.514	0.578	0.666	0.694	0.565	17.73
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991								
		Response Ratio = 0.00000 + 0.48219 *A + 0.01091 *A^2								
67)		1-Chlorohexane	0.712	0.767	0.867	0.951	1.027	1.050	0.896	15.45
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9979								
		Response Ratio = 0.00000 + 1.02267 *A								

Initial Calibration Summary

Job Number: F76459 **Sample:** VH2413-ICC2413
Account: CSXT CSX Transportation **Lab FileID:** H064460.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

68)	C	Ethylbenzene	2.151	2.413	2.481	2.616	2.753	2.773	2.531	9.28
69)	P	Chlorobenzene	1.169	1.260	1.333	1.388	1.424	1.417	1.332	7.53
70)		1,1,1,2-Tetrachloro	0.420	0.476	0.519	0.570	0.597	0.622	0.534	14.43
71)		m,p-Xylene	1.907	2.112	2.072	2.129	2.148	2.138	2.084	4.35
72)		o-Xylene	1.934	2.155	2.263	2.397	2.518	2.598	2.311	10.63
73)		Styrene	1.185	1.363	1.530	1.675	1.764	1.831	1.558	15.94
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9982								
		Response Ratio = 0.00000 + 1.77747 *A								
74)	P	Bromoform	0.201	0.308	0.333	0.376	0.424	0.446	0.348	25.57
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995								
		Response Ratio = 0.00000 + 0.31038 *A + 0.03466 *A^2								
75)		Isopropylbenzene	1.836	2.078	2.141	2.344	2.479	2.531	2.235	11.87
76)	I	1,4-Dichlorobenzene-d ----------ISTD----------								
77)	S	4-Bromofluorobenzen	0.844	0.849	0.897	0.904	0.875	0.944	0.885	4.26
78)		cis-1,4-Dichloro-2-	0.379	0.427	0.407	0.431	0.491	0.509	0.441	11.32
79)		n-Propylbenzene	5.437	5.335	5.349	5.616	5.598	5.557	5.482	2.28
80)		Bromobenzene	0.977	1.044	1.019	1.052	1.014	0.982	1.015	3.04
81)	P	1,1,2,2-Tetrachloro	0.898	1.017	0.944	0.958	1.008	1.027	0.975	5.18
82)		1,3,5-Trimethylbenz	3.521	3.819	3.703	3.765	3.703	3.619	3.688	2.88
83)		2-Chlorotoluene	4.081	3.917	3.894	3.974	3.904	3.848	3.936	2.08
84)		trans-1,4-Dichloro-	0.175	0.198	0.203	0.206	0.231	0.239	0.209	11.09
85)		1,2,3-Trichloroprop	0.280	0.257	0.230	0.248	0.263	0.269	0.258	6.70
86)		Cyclohexanone	0.021	0.028	0.027	0.030	0.033	0.038	0.030	19.76
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994								
		Response Ratio = 0.00000 + 0.02187 *A + 0.00081 *A^2								
87)		4-Chlorotoluene	3.345	3.620	3.609	3.719	3.669	3.643	3.601	3.65
88)		tert-Butylbenzene	2.355	2.477	2.500	2.563	2.539	2.546	2.496	3.05
89)		1,2,4-Trimethylbenz	3.787	3.717	3.482	3.431	3.326	3.187	3.488	6.56
90)		Pentachloroethane	0.570	0.618	0.602	0.569	0.517	0.496	0.562	8.47
91)		sec-Butylbenzene	4.603	4.623	4.566	4.632	4.630	4.612	4.611	0.53
92)		4-Isopropyltoluene	3.514	3.598	3.561	3.594	3.536	3.516	3.553	1.05
93)		1,3-Dichlorobenzene	1.790	1.943	1.917	2.004	1.957	1.901	1.919	3.77
94)		1,4-Dichlorobenzene	2.041	1.989	1.985	1.998	1.927	1.903	1.974	2.54
95)		n-Butylbenzene	2.082	2.351	2.357	2.445	2.448	2.430	2.352	5.91
96)		Benzyl Chloride	0.202	0.327	0.345	0.342	0.369	0.387	0.329	19.94
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9973								
		Response Ratio = 0.00000 + 0.37386 *A								
97)		1,2-Dichlorobenzene	1.713	1.867	1.845	1.912	1.814	1.791	1.824	3.76
98)		1,2-Dibromo-3-Chlor	0.086	0.180	0.179	0.209	0.237	0.261	0.192	31.69
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9900								
		Response Ratio = 0.00000 + 0.24369 *A								
99)		Hexachlorobutadiene	1.118	1.050	1.028	1.058	0.992	0.962	1.035	5.26
100)		1,2,4-Trichlorobenz	1.480	1.422	1.428	1.464	1.403	1.326	1.421	3.83
101)		Naphthalene	2.577	2.534	2.388	2.503	2.629	2.685	2.553	4.06
102)		1,2,3-Trichlorobenz	1.319	1.286	1.261	1.285	1.249	1.204	1.267	3.10
103)	I	Tert Butyl Alcohol-d1 ----------ISTD----------								
104)		Ethanol	0.307	0.357	0.295	0.305	0.315	0.245	0.304	11.93
105)		Acrolein	1.203	1.462	1.602	1.656	1.714	1.537	1.529	11.94
106)		Tert Butyl Alcohol	2.240	2.431	2.613	2.490	2.522	2.211	2.418	6.64
107)		Isobutyl alcohol	0.341	0.296	0.292	0.283	0.285	0.234	0.288	11.86
108)		Tert Amyl Alcohol	1.118	1.265	1.412	1.322	1.351	1.296	1.294	7.70
109)		1,4-Dioxane	0.092	0.140	0.143	0.145	0.164		0.137	19.64

Initial Calibration Summary

Job Number: F76459 **Sample:** VH2413-ICC2413
Account: CSXT CSX Transportation **Lab FileID:** H064460.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

```
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9945
              Response Ratio = 0.00000 + 0.15701 *A

--------------------------------------------------------------------------------
(#) = Out of Range

          APP9-H.M          Wed Sep 15 15:21:13 2010
```

Initial Calibration Verification

Job Number: F76459 **Sample:** VH2413-ICV2413
Account: CSXT CSX Transportation **Lab FileID:** H064463.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : H:\HPCHEM\1\DATA\091510\H064463.D Vial: 7
Acq On : 15 Sep 2010 2:50 pm Operator: MikeM
Sample : icv2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	103	0.00	11.23
2		Dichlorodifluoromethane	0.265	0.258	2.6	104	0.03	3.98
3	P	Chloromethane	0.486	0.467	3.9	104	0.00	4.29
4	C	Vinyl Chloride	0.358	0.342	4.5	99	0.02	4.50
			Amount	Calc.	%Drift			
5		Bromomethane	50.000	58.523	-17.0	100	0.00	5.13
			AvgRF	CCRF	%Dev			
6		Chloroethane	0.169	0.181	-7.1	103	0.04	5.40
7		Trichlorofluoromethane	0.396	0.389	1.8	100	0.04	5.65
8		Ethyl Ether	0.289	0.288	0.3	106	0.00	6.19
9		1,2-Dichlorotrifluoroetha	0.454	0.517	-13.9	119	0.00	6.54
10	C	1,1-Dichloroethene	0.683	0.630	7.8	97	0.00	6.60
11		Freon 113	0.317	0.308	2.8	98	0.00	6.70
12		Carbon Disulfide	1.211	1.179	2.6	103	0.02	6.70
13		Iodomethane	0.501	0.507	-1.2	105	0.02	6.88
14		Allyl chloride	0.943	1.005	-6.6	113	0.00	7.41
			Amount	Calc.	%Drift			
15		Methylene Chloride	50.000	50.036	-0.1	80	0.02	7.59
			AvgRF	CCRF	%Dev			
16		Acetone	0.234	0.157	32.9#	73	0.00	7.64
17		Methyl acetate	0.265	0.277	-4.5	109	0.02	7.84
18		trans-1,2-Dichloroethene	0.701	0.682	2.7	103	0.02	7.87
19		Hexane	0.408	0.441	-8.1	117	0.00	7.97
20		Methyl Tert Butyl Ether	0.737	0.769	-4.3	108	0.00	8.02
			Amount	Calc.	%Drift			
21		Acetonitrile	500.000	483.345	3.3	116	0.00	8.41
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	1.797	1.862	-3.6	109	0.00	8.59
23		Chloroprene	0.736	0.802	-9.0	117	0.02	8.79
24	P	1,1-Dichloroethane	0.839	0.813	3.1	102	0.00	8.82
25		Acrylonitrile	0.126	0.130	-3.2	108	0.00	8.86
26		ETBE	1.039	1.119	-7.7	107	0.00	9.13
27		Vinyl acetate	0.448	0.584	-30.4#	134	0.02	9.14
28		cis-1,2-Dichloroethene	0.373	0.377	-1.1	106	0.00	9.60
29		2,2-Dichloropropane	0.647	0.607	6.2	99	0.00	9.76
30		Bromochloromethane	0.171	0.161	5.8	97	0.02	9.89

Initial Calibration Verification

Job Number: F76459 **Sample:** VH2413-ICV2413
Account: CSXT CSX Transportation **Lab FileID:** H064463.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

31		Cyclohexane	0.830	0.830	0.0	108	0.00	9.92
32	C	Chloroform	0.772	0.777	-0.6	104	0.00	9.95
33		Ethyl acetate	0.443	0.402	9.3	99	0.02	10.06
34		Tetrahydrofuran	0.107	0.107	0.0	116	0.00	10.19
35	S	Dibromofluoromethane	0.240	0.245	-2.1	99	0.00	10.19
36		Carbon Tetrachloride	0.583	0.559	4.1	98	0.00	10.19
37		1,1,1-Trichloroethane	0.626	0.584	6.7	96	0.00	10.26
38		2-Butanone	0.267	0.217	18.7	87	0.00	10.33
39		1,1-Dichloropropene	0.606	0.595	1.8	105	0.00	10.41
40		Propionitrile	0.042	0.045	-7.1	111	0.00	10.70
41		Methacrylonitrile	0.277	0.305	-10.1	113	0.00	10.73
42		Benzene	1.457	1.448	0.6	100	0.00	10.72
43		TAME	0.682	0.759	-11.3	112	0.00	10.82
44	S	1,2-Dichloroethane-d4	0.368	0.390	-6.0	104	0.00	10.88
45		1,2-Dichloroethane	0.677	0.662	2.2	103	0.00	10.97
46		Trichloroethene	0.390	0.388	0.5	102	0.00	11.44
47		Methylcyclohexane	0.607	0.638	-5.1	111	0.00	11.45
48		Dibromomethane	0.205	0.206	-0.5	103	0.00	11.95
49	C	1,2-Dichloropropane	0.435	0.435	0.0	103	0.00	12.05
50		Bromodichloromethane	0.568	0.572	-0.7	103	0.00	12.11
51		Methyl methacrylate	0.457	0.509	-11.4	119	0.00	12.22
			Amount	Calc.	%Drift			
52		2-Chloroethyl vinyl ether	250.000	264.313	-5.7	122	0.00	12.69
			AvgRF	CCRF	%Dev			
53		cis-1,3-Dichloropropene	0.678	0.716	-5.6	107	0.00	12.81
54	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	14.74
55	S	Toluene-d8	1.570	1.490	5.1	105	0.00	13.03
56	C	Toluene	2.423	2.286	5.7	105	0.00	13.09
			Amount	Calc.	%Drift			
57		2-Nitropropane	250.000	245.026	2.0	102	0.00	13.32
			AvgRF	CCRF	%Dev			
58		4-Methyl-2-pentanone	0.674	0.637	5.5	110	0.00	13.45
			Amount	Calc.	%Drift			
59		trans-1,3-Dichloropropene	50.000	47.557	4.9	116	0.00	13.52
			AvgRF	CCRF	%Dev			
60		Tetrachloroethene	0.633	0.644	-1.7	110	0.00	13.55
			Amount	Calc.	%Drift			
61		Ethyl methacrylate	50.000	41.795	16.4	117	0.00	13.63
62		1,1,2-Trichloroethane	50.000	40.596	18.8	107	0.00	13.71
63		Dibromochloromethane	50.000	41.023	18.0	108	0.00	13.93
64		1,3-Dichloropropane	50.000	40.142	19.7	102	0.00	14.01
65		1,2-Dibromoethane	50.000	48.559	2.9	101	0.00	14.22
66		2-hexanone	250.000	244.914	2.0	107	0.00	14.34
67		1-Chlorohexane	50.000	40.847	18.3	101	0.00	14.66
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	2.531	2.448	3.3	103	0.00	14.74
69	P	Chlorobenzene	1.332	1.310	1.7	103	0.00	14.76
70		1,1,1,2-Tetrachloroethane	0.534	0.503	5.8	101	0.00	14.81
71		m,p-Xylene	2.084	2.060	1.2	104	0.00	14.89
72		o-Xylene	2.311	2.224	3.8	103	0.00	15.36

Initial Calibration Verification

Job Number: F76459 **Sample:** VH2413-ICV2413
Account: CSXT CSX Transportation **Lab FileID:** H064463.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			Amount	Calc.	%Drift			
73		Styrene	50.000	42.857	14.3	104	0.00	15.41
74	P	Bromoform	50.000	46.283	7.4	99	0.00	15.50
			AvgRF	CCRF	%Dev			
75		Isopropylbenzene	2.235	2.425	-8.5	118	0.00	15.67
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	17.21
77	S	4-Bromofluorobenzene	0.885	0.843	4.7	96	0.00	16.02
78		cis-1,4-Dichloro-2-butene	0.441	0.469	-6.3	118	0.00	16.04
79		n-Propylbenzene	5.482	5.486	-0.1	105	0.00	16.11
80		Bromobenzene	1.015	1.004	1.1	101	0.00	16.16
81	P	1,1,2,2-Tetrachloroethane	0.975	0.993	-1.8	108	0.00	16.18
82		1,3,5-Trimethylbenzene	3.688	3.699	-0.3	102	0.00	16.28
83		2-Chlorotoluene	3.936	3.987	-1.3	105	0.00	16.32
84		trans-1,4-Dichloro-2-Bute	0.209	0.197	5.7	99	0.00	16.36
85		1,2,3-Trichloropropane	0.258	0.227	12.0	101	0.00	16.35
			Amount	Calc.	%Drift			
86		Cyclohexanone	250.000	337.593	-35.0#	138	0.00	16.44
			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.601	3.650	-1.4	103	0.00	16.49
88		tert-Butylbenzene	2.496	2.522	-1.0	103	0.00	16.65
89		1,2,4-Trimethylbenzene	3.488	3.612	-3.6	106	0.00	16.72
90		Pentachloroethane	0.562	0.636	-13.2	108	0.00	16.73
91		sec-Butylbenzene	4.611	4.660	-1.1	104	0.00	16.84
92		4-Isopropyltoluene	3.553	3.714	-4.5	107	0.00	16.96
93		1,3-Dichlorobenzene	1.919	1.953	-1.8	104	0.00	17.14
94		1,4-Dichlorobenzene	1.974	1.984	-0.5	102	0.00	17.23
95		n-Butylbenzene	2.352	2.350	0.1	102	0.00	17.42
			Amount	Calc.	%Drift			
96		Benzyl Chloride	50.000	42.823	14.4	95	0.00	17.46
			AvgRF	CCRF	%Dev			
97		1,2-Dichlorobenzene	1.824	1.830	-0.3	101	0.00	17.69
			Amount	Calc.	%Drift			
98		1,2-Dibromo-3-Chloropropa	50.000	42.177	15.6	118	0.02	18.55
			AvgRF	CCRF	%Dev			
99		Hexachlorobutadiene	1.035	1.102	-6.5	110	0.00	19.19
100		1,2,4-Trichlorobenzene	1.421	1.439	-1.3	103	0.00	19.27
101		Naphthalene	2.553	2.621	-2.7	112	0.00	19.64
102		1,2,3-Trichlorobenzene	1.267	1.324	-4.5	107	0.00	19.86
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	121	0.03	8.03
104		Ethanol	0.304	0.223	26.6#	91	0.02	6.49
105		Acrolein	1.529	1.594	-4.3	120	0.03	7.18
106		Tert Butyl Alcohol	2.418	2.159	10.7	100	0.02	8.14
107		Isobutyl alcohol	0.288	0.280	2.8	116	0.00	10.19
108		Tert Amyl Alcohol	1.294	1.140	11.9	98	0.00	11.03
			Amount	Calc.	%Drift			
109		1,4-Dioxane	1000.000	881.181	11.9	117	0.00	12.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Initial Calibration Verification

Job Number: F76459 **Sample:** VH2413-ICV2413
Account: CSXT CSX Transportation **Lab FileID:** H064463.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

H064459.D APP9-H.M Wed Sep 15 15:20:24 2010

Continuing Calibration Summary

Job Number: F76459 **Sample:** VH2414-CC2413
Account: CSXT CSX Transportation **Lab FileID:** H064487.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : H:\HPCHEM\1\DATA\091610\H064487.D Vial: 1
Acq On : 16 Sep 2010 10:04 am Operator: MikeM
Sample : cc2413-4 Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	70	0.00	11.21
2		Dichlorodifluoromethane	0.265	0.304	-14.7	77	0.00	3.95
3	P	Chloromethane	0.486	0.541	-11.3	82	0.00	4.29
4	C	Vinyl Chloride	0.358	0.406	-13.4	80	0.00	4.48
			Amount	Calc.	%Drift			
5		Bromomethane	100.000	114.338	-14.3	74	-0.01	5.11
			AvgRF	CCRF	%Dev			
6		Chloroethane	0.169	0.193	-14.2	81	-0.01	5.35
7		Trichlorofluoromethane	0.396	0.444	-12.1	79	0.00	5.62
8		Ethyl Ether	0.289	0.292	-1.0	71	-0.02	6.16
9		1,2-Dichlorotrifluoroetha	0.454	0.498	-9.7	77	-0.01	6.52
10	C	1,1-Dichloroethene	0.683	0.738	-8.1	77	-0.02	6.57
11		Freon 113	0.317	0.352	-11.0	78	-0.03	6.67
12		Carbon Disulfide	1.211	1.302	-7.5	77	0.00	6.68
13		Iodomethane	0.501	0.512	-2.2	71	-0.01	6.85
14		Allyl chloride	0.943	1.067	-13.1	77	-0.01	7.39
			Amount	Calc.	%Drift			
15		Methylene Chloride	100.000	95.867	4.1	69	-0.01	7.56
			AvgRF	CCRF	%Dev			
16		Acetone	0.234	0.250	-6.8	80	-0.01	7.62
17		Methyl acetate	0.265	0.259	2.3	71	-0.01	7.81
18		trans-1,2-Dichloroethene	0.701	0.741	-5.7	74	-0.01	7.84
19		Hexane	0.408	0.446	-9.3	80	-0.01	7.95
20		Methyl Tert Butyl Ether	0.737	0.674	8.5	69	-0.02	7.99
			Amount	Calc.	%Drift			
21		Acetonitrile	1000.000	1033.728	-3.4	86	-0.02	8.38
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	1.797	1.761	2.0	69	-0.02	8.56
23		Chloroprene	0.736	0.852	-15.8	81	-0.01	8.76
24	P	1,1-Dichloroethane	0.839	0.853	-1.7	73	-0.01	8.80
25		Acrylonitrile	0.126	0.130	-3.2	76	-0.01	8.85
26		ETBE	1.039	0.971	6.5	70	-0.02	9.10
27		Vinyl acetate	0.448	0.510	-13.8	80	0.00	9.12
28		cis-1,2-Dichloroethene	0.373	0.381	-2.1	70	-0.01	9.58
29		2,2-Dichloropropane	0.647	0.685	-5.9	75	-0.01	9.74
30		Bromochloromethane	0.171	0.168	1.8	67	0.00	9.87

Continuing Calibration Summary

Job Number: F76459 **Sample:** VH2414-CC2413
Account: CSXT CSX Transportation **Lab FileID:** H064487.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

31		Cyclohexane	0.830	0.888	-7.0	77	-0.01	9.91
32	C	Chloroform	0.772	0.794	-2.8	74	-0.01	9.94
33		Ethyl acetate	0.443	0.555	-25.3#	96	-0.01	10.03
34		Tetrahydrofuran	0.107	0.109	-1.9	84	-0.02	10.17
35	S	Dibromofluoromethane	0.240	0.236	1.7	71	-0.02	10.17
36		Carbon Tetrachloride	0.583	0.600	-2.9	72	-0.01	10.17
37		1,1,1-Trichloroethane	0.626	0.647	-3.4	74	0.00	10.25
38		2-Butanone	0.267	0.288	-7.9	82	-0.01	10.31
39		1,1-Dichloropropene	0.606	0.644	-6.3	74	-0.01	10.40
40		Propionitrile	0.042	0.048	-14.3	86	-0.01	10.69
41		Methacrylonitrile	0.277	0.299	-7.9	83	-0.01	10.72
42		Benzene	1.457	1.466	-0.6	74	0.00	10.71
43		TAME	0.682	0.611	10.4	69	-0.01	10.80
44	S	1,2-Dichloroethane-d4	0.368	0.383	-4.1	79	0.00	10.87
45		1,2-Dichloroethane	0.677	0.647	4.4	70	-0.01	10.95
46		Trichloroethene	0.390	0.397	-1.8	74	-0.01	11.42
47		Methylcyclohexane	0.607	0.639	-5.3	76	-0.01	11.44
48		Dibromomethane	0.205	0.210	-2.4	71	-0.01	11.93
49	C	1,2-Dichloropropane	0.435	0.436	-0.2	70	-0.01	12.03
50		Bromodichloromethane	0.568	0.574	-1.1	68	-0.01	12.09
51		Methyl methacrylate	0.457	0.495	-8.3	78	0.00	12.21
		----------	Amount	Calc.	%Drift		----------	
52		2-Chloroethyl vinyl ether	500.000	399.975	20.0#	62	0.00	12.68
		----------	AvgRF	CCRF	%Dev		----------	
53		cis-1,3-Dichloropropene	0.678	0.689	-1.6	69	-0.01	12.80
54	I	Chlorobenzene-d5	1.000	1.000	0.0	75	0.00	14.73
55	S	Toluene-d8	1.570	1.561	0.6	71	-0.01	13.02
56	C	Toluene	2.423	2.475	-2.1	73	-0.01	13.07
		----------	Amount	Calc.	%Drift		----------	
57		2-Nitropropane	500.000	498.135	0.4	77	0.00	13.31
		----------	AvgRF	CCRF	%Dev		----------	
58		4-Methyl-2-pentanone	0.674	0.683	-1.3	79	0.00	13.44
		----------	Amount	Calc.	%Drift		----------	
59		trans-1,3-Dichloropropene	100.000	87.301	12.7	70	0.00	13.51
		----------	AvgRF	CCRF	%Dev		----------	
60		Tetrachloroethene	0.633	0.607	4.1	69	-0.01	13.53
		----------	Amount	Calc.	%Drift		----------	
61		Ethyl methacrylate	100.000	91.527	8.5	80	0.00	13.62
62		1,1,2-Trichloroethane	100.000	82.316	17.7	70	0.00	13.70
63		Dibromochloromethane	100.000	82.424	17.6	67	0.00	13.92
64		1,3-Dichloropropane	100.000	86.503	13.5	72	0.00	14.01
65		1,2-Dibromoethane	100.000	95.042	5.0	72	0.00	14.22
66		2-hexanone	500.000	520.543	-4.1	80	-0.01	14.32
67		1-Chlorohexane	100.000	95.354	4.6	77	0.00	14.66
		----------	AvgRF	CCRF	%Dev		----------	
68	C	Ethylbenzene	2.531	2.635	-4.1	75	-0.01	14.73
69	P	Chlorobenzene	1.332	1.352	-1.5	73	-0.01	14.75
70		1,1,1,2-Tetrachloroethane	0.534	0.519	2.8	68	-0.01	14.80
71		m,p-Xylene	2.084	2.128	-2.1	75	0.00	14.88
72		o-Xylene	2.311	2.377	-2.9	74	0.00	15.35

Continuing Calibration Summary

Job Number: F76459 **Sample:** VH2414-CC2413
Account: CSXT CSX Transportation **Lab FileID:** H064487.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

			Amount	Calc.	%Drift			
73		Styrene	100.000	90.684	9.3	72	-0.01	15.40
74	P	Bromoform	100.000	91.810	8.2	68	0.00	15.49
			AvgRF	CCRF	%Dev			
75		Isopropylbenzene	2.235	2.281	-2.1	73	0.00	15.66
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	74	0.00	17.20
77	S	4-Bromofluorobenzene	0.885	0.851	3.8	70	-0.01	16.01
78		cis-1,4-Dichloro-2-butene	0.441	0.486	-10.2	84	-0.01	16.03
79		n-Propylbenzene	5.482	5.669	-3.4	75	-0.01	16.10
80		Bromobenzene	1.015	0.961	5.3	68	-0.01	16.15
81	P	1,1,2,2-Tetrachloroethane	0.975	0.973	0.2	75	-0.01	16.17
82		1,3,5-Trimethylbenzene	3.688	3.704	-0.4	73	-0.01	16.27
83		2-Chlorotoluene	3.936	3.909	0.7	73	-0.01	16.31
84		trans-1,4-Dichloro-2-Bute	0.209	0.196	6.2	70	0.00	16.35
85		1,2,3-Trichloropropane	0.258	0.237	8.1	71	-0.01	16.34
			Amount	Calc.	%Drift			
86		Cyclohexanone	500.000	496.252	0.7	74	0.00	16.43
			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.601	3.616	-0.4	72	-0.01	16.48
88		tert-Butylbenzene	2.496	2.527	-1.2	73	-0.01	16.64
89		1,2,4-Trimethylbenzene	3.488	3.383	3.0	73	0.00	16.71
90		Pentachloroethane	0.562	0.568	-1.1	74	-0.01	16.72
91		sec-Butylbenzene	4.611	4.696	-1.8	75	-0.01	16.82
92		4-Isopropyltoluene	3.553	3.578	-0.7	74	0.00	16.95
93		1,3-Dichlorobenzene	1.919	1.906	0.7	70	-0.01	17.13
94		1,4-Dichlorobenzene	1.974	1.882	4.7	70	-0.01	17.22
95		n-Butylbenzene	2.352	2.490	-5.9	75	-0.01	17.41
			Amount	Calc.	%Drift			
96		Benzyl Chloride	100.000	91.149	8.9	74	0.00	17.45
			AvgRF	CCRF	%Dev			
97		1,2-Dichlorobenzene	1.824	1.735	4.9	67	0.00	17.68
			Amount	Calc.	%Drift			
98		1,2-Dibromo-3-Chloropropa	100.000	86.526	13.5	75	0.00	18.53
			AvgRF	CCRF	%Dev			
99		Hexachlorobutadiene	1.035	0.979	5.4	68	-0.01	19.18
100		1,2,4-Trichlorobenzene	1.421	1.328	6.5	67	-0.01	19.26
101		Naphthalene	2.553	2.400	6.0	71	0.00	19.63
102		1,2,3-Trichlorobenzene	1.267	1.168	7.8	67	0.00	19.85
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	88	0.00	8.01
104		Ethanol	0.304	0.287	5.6	83	0.00	6.48
105		Acrolein	1.529	1.386	9.4	74	0.00	7.15
106		Tert Butyl Alcohol	2.418	2.187	9.6	78	-0.02	8.10
107		Isobutyl alcohol	0.288	0.266	7.6	83	-0.02	10.17
108		Tert Amyl Alcohol	1.294	1.141	11.8	76	-0.01	11.01
			Amount	Calc.	%Drift			
109		1,4-Dioxane	2000.000	1689.700	15.5	81	0.00	12.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Continuing Calibration Summary

Job Number: F76459 **Sample:** VH2414-CC2413
Account: CSXT CSX Transportation **Lab FileID:** H064487.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

H064460.D APP9-H.M Thu Sep 16 10:30:48 2010

Initial Calibration Summary

Job Number: F76459 **Sample:** VK2013-ICC2013
Account: CSXT CSX Transportation **Lab FileID:** K046748.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Response Factor Report MSVOA2

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

Calibration Files
1 =K046745.D 2 =K046746.D 3 =K046747.D 4 =K046748.D
5 =K046749.D 6 =K046750.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.349	0.248	0.245	0.210	0.200	0.187	0.240	24.61
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9946								
	Response Ratio = 0.00000 + 0.19589 *A								
3) P	Chloromethane	0.677	0.510	0.484	0.411	0.400	0.376	0.476	23.32
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9962								
	Response Ratio = 0.00000 + 0.39211 *A								
4) C	Vinyl Chloride	0.477	0.376	0.385	0.330	0.310	0.289	0.361	18.74
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9931								
	Response Ratio = 0.00000 + 0.30454 *A								
5)	Bromomethane	0.176	0.158	0.153	0.112	0.095	0.081	0.129	29.68
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9944								
	Response Ratio = 0.00000 + 0.15446 *A + -0.01879 *A^2								
6)	Chloroethane	0.226	0.170	0.166	0.138	0.125	0.107	0.155	27.15
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9993								
	Response Ratio = 0.00000 + 0.17586 *A + -0.01719 *A^2								
7)	Trichlorofluorometh	0.433	0.339	0.347	0.279	0.267	0.232	0.316	22.79
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976								
	Response Ratio = 0.00000 + 0.35343 *A + -0.03019 *A^2								
8)	1,2-Dichloro-1,1,2-	0.149	0.414	0.391	0.344	0.324	0.293	0.319	29.49
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991								
	Response Ratio = 0.00000 + 0.40841 *A + -0.02878 *A^2								
9)	Ethyl Ether	0.298	0.219	0.233	0.232	0.223	0.227	0.239	12.43
10)	Freon 113	0.366	0.311	0.284	0.247	0.219	0.211	0.273	21.69
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9981								
	Response Ratio = 0.00000 + 0.28623 *A + -0.01956 *A^2								
11) C	1,1-Dichloroethene	0.691	0.533	0.543	0.459	0.441	0.408	0.513	19.90
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9935								
	Response Ratio = 0.00000 + 0.42995 *A								
12)	Acetone	0.267	0.172	0.153	0.166	0.168	0.197	0.187	22.33
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9971								
	Response Ratio = 0.00000 + 0.12929 *A + 0.00320 *A^2								
13)	Iodomethane	0.467	0.454	0.434	0.394	0.378	0.354	0.413	10.92
14)	Carbon Disulfide	0.978	0.972	0.942	0.822	0.806	0.725	0.874	11.95
15)	Methyl acetate	0.273	0.206	0.189	0.201	0.211	0.247	0.221	14.45
16)	Methylene Chloride	4.328	1.421	0.863	0.655	0.594	0.556	1.403	104.68

Initial Calibration Summary

Job Number: F76459 **Sample:** VK2013-ICC2013
Account: CSXT CSX Transportation **Lab FileID:** K046748.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

```
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.59638 *A

17)     Acrylonitrile       0.101 0.071 0.079 0.086 0.087 0.106 0.088  15.07
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9965
              Response Ratio = 0.00000 + 0.06106 *A + 0.00214 *A^2

18)     Methyl Tert Butyl E 0.949 0.779 0.777 0.785 0.782 0.815 0.814   8.30
19)     trans-1,2-Dichloroe 0.507 0.522 0.516 0.470 0.454 0.422 0.482   8.28
20)     Hexane              0.816 0.684 0.674 0.658 0.625 0.607 0.677  10.94
21)     Vinyl acetate       0.275 0.213 0.189 0.201 0.211 0.247 0.223  14.39
22) P   1,1-Dichloroethane  0.739 0.709 0.683 0.594 0.585 0.564 0.646  11.38
23)     Di-isopropyl ether  1.515 1.407 1.390 1.343 1.307 1.291 1.375   5.96
24)     Ethyl tert-butyl Et 1.231 1.034 1.070 1.043 1.012 1.031 1.070   7.58
25)     2-Butanone          0.288 0.208 0.188 0.204 0.209 0.243 0.223  16.19
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9978
              Response Ratio = 0.00000 + 0.15931 *A + 0.00401 *A^2

26)     cis-1,2-Dichloroeth 0.300 0.304 0.309 0.286 0.275 0.270 0.291   5.60
27)     2,2-Dichloropropane 0.370 0.448 0.440 0.400 0.366 0.293 0.386  14.73
28)     Bromochloromethane  0.136 0.147 0.139 0.136 0.136 0.139 0.139   3.08
29) C   Chloroform          0.652 0.607 0.565 0.514 0.496 0.479 0.552  12.32
30)     Tetrahydrofuran     0.069 0.078 0.066 0.070 0.069 0.084 0.073   9.58
31) S   Dibromofluoromethan 0.253 0.252 0.247 0.243 0.247 0.243 0.248   1.66
32)     1,1,1-Trichloroetha 0.470 0.496 0.477 0.412 0.395 0.362 0.435  12.24
33)     Cyclohexane         0.798 0.769 0.726 0.606 0.574 0.530 0.667  16.72
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9915
              Response Ratio = 0.00000 + 0.56099 *A

34)     1,1-Dichloropropene 0.436 0.485 0.472 0.407 0.392 0.371 0.427  10.58
35)     Carbon Tetrachlorid 0.448 0.409 0.380 0.326 0.320 0.293 0.363  16.46
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9937
              Response Ratio = 0.00000 + 0.30875 *A

36) S   1,2-Dichloroethane- 0.326 0.301 0.318 0.280 0.301 0.306 0.305   5.28
37)     1,2-Dichloroethane  0.515 0.434 0.421 0.414 0.414 0.430 0.438   8.82
38)     Benzene             1.596 1.449 1.370 1.185 1.134 1.081 1.302  15.48
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9963
              Response Ratio = 0.00000 + 1.12237 *A

39)     Tert-Amyl Methyl Et 0.987 0.783 0.778 0.790 0.778 0.808 0.821  10.05
40)     Trichloroethene     0.317 0.324 0.322 0.279 0.271 0.254 0.295  10.27
41)     Methylcyclohexane   0.630 0.591 0.577 0.465 0.447 0.404 0.519  17.70
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.57250 *A + -0.04247 *A^2

42) C   1,2-Dichloropropane 0.404 0.415 0.398 0.359 0.354 0.346 0.379   7.81
43)     Dibromomethane      0.169 0.169 0.169 0.164 0.167 0.182 0.170   3.63
44)     Bromodichloromethan 0.384 0.399 0.390 0.388 0.379 0.376 0.386   2.20
45)     2-Nitropropane      0.116 0.069 0.070 0.078 0.082 0.100 0.086  21.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9972
              Response Ratio = 0.00000 + 0.05250 *A + 0.00230 *A^2

46)     2-Chloroethyl vinyl 0.063 0.043 0.033 0.047 0.052 0.074 0.052  28.18
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9927
              Response Ratio = 0.00000 + 0.01477 *A + 0.00286 *A^2

47)     cis-1,3-Dichloropro 0.466 0.521 0.509 0.490 0.474 0.489 0.491   4.22
48)     4-Methyl-2-pentanon 0.495 0.333 0.303 0.316 0.315 0.360 0.354  20.40
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9976
```

```
              Response Ratio = 0.00000 + 0.26401 *A + 0.00450 *A^2


 49) I   Chlorobenzene-d5      ----------------ISTD--------------------
 50) S   Toluene-d8          1.466 1.595 1.638 1.676 1.753 1.762 1.648   6.70
 51) C   Toluene             2.257 2.175 2.123 1.915 1.881 1.803 2.026   9.05
 52)     trans-1,3-Dichlorop 0.511 0.577 0.560 0.605 0.634 0.677 0.594   9.78
 53)     1,1,2-Trichloroetha 0.390 0.359 0.348 0.341 0.342 0.369 0.358   5.33
 54)     1,3-Dichloropropane 0.708 0.714 0.702 0.703 0.703 0.769 0.716   3.64
 55)     2-hexanone          0.664 0.389 0.357 0.421 0.432 0.507 0.462  24.09
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9979
               Response Ratio = 0.00000 + 0.30757 *A + 0.00966 *A^2

 56)     Tetrachloroethene   0.413 0.498 0.472 0.405 0.395 0.369 0.425  11.59
 57)     Dibromochloromethan 0.364 0.399 0.418 0.414 0.433 0.462 0.415   7.91
 58)     1,2-Dibromoethane   0.315 0.361 0.355 0.372 0.389 0.420 0.369   9.56
 59)     1-Chlorohexane      0.619 0.682 0.666 0.606 0.604 0.575 0.625   6.47
 60) P   Chlorobenzene       1.191 1.257 1.196 1.068 1.054 1.004 1.128   8.84
 61)     1,1,1,2-Tetrachloro 0.377 0.430 0.419 0.399 0.405 0.394 0.404   4.64
 62) C   Ethylbenzene        2.105 2.222 2.144 1.939 1.896 1.757 2.011   8.72
 63)     m,p-Xylene          1.676 1.762 1.721 1.528 1.463 1.371 1.587   9.85
 64)     o-Xylene            1.835 1.816 1.823 1.702 1.687 1.606 1.745   5.35
 65)     Styrene             1.279 1.276 1.281 1.240 1.224 1.218 1.253   2.30
 66) P   Bromoform           0.163 0.231 0.227 0.253 0.262 0.295 0.238  18.65
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9918
               Response Ratio = 0.00000 + 0.27699 *A


 67) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 68)     Isopropylbenzene    4.343 4.279 3.936 3.403 3.236 2.934 3.688  15.78
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 4.07512 *A + -0.28589 *A^2

 69)     Cyclohexanone       0.100 0.031 0.025 0.031 0.032 0.039 0.043  65.59
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9954
               Response Ratio = 0.00000 + 0.02051 *A + 0.00091 *A^2

 70) S   4-Bromofluorobenzen 0.898 0.871 0.879 0.907 0.879 0.876 0.885   1.61
 71) P   1,1,2,2-Tetrachloro 1.334 1.051 0.899 0.940 0.895 0.951 1.012  16.59
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9978
               Response Ratio = 0.00000 + 0.93175 *A

 72)     trans-1,4-Dichloro- 0.272 0.257 0.239 0.275 0.298 0.324 0.277  10.79
 73)     1,2,3-Trichloroprop 0.329 0.260 0.225 0.221 0.213 0.228 0.246  17.87
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9971
               Response Ratio = 0.00000 + 0.22281 *A

 74)     Bromobenzene        1.112 1.040 0.966 0.885 0.828 0.794 0.938  13.26
 75)     n-Propylbenzene     6.077 5.665 5.212 4.603 4.358 3.947 4.977  16.38
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9910
               Response Ratio = 0.00000 + 4.20860 *A

 76)     2-Chlorotoluene     4.346 4.069 3.739 3.240 3.060 2.790 3.541  17.19
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9912
               Response Ratio = 0.00000 + 2.96914 *A

 77)     1,3,5-Trimethylbenz 4.119 3.981 3.615 3.249 2.992 2.693 3.442  16.33
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3.87664 *A + -0.29632 *A^2
```

Initial Calibration Summary

Job Number: F76459 **Sample:** VK2013-ICC2013
Account: CSXT CSX Transportation **Lab FileID:** K046748.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN


```
78)     4-Chlorotoluene     3.484 3.312 3.071 2.789 2.704 2.522 2.980  12.51
79)     tert-Butylbenzene   2.348 2.366 2.273 1.982 1.855 1.669 2.083  13.91
80)     1,2,4-Trimethylbenz 3.837 3.869 3.522 3.172 2.994 2.758 3.359  13.61
81)     sec-Butylbenzene    5.019 4.997 4.506 3.957 3.665 3.292 4.239  16.88
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 4.77388 *A + -0.37159 *A^2

82)     4-Isopropyltoluene  3.512 3.543 3.367 2.852 2.718 2.495 3.081  14.58
83)     1,3-Dichlorobenzene 1.927 1.768 1.662 1.528 1.494 1.387 1.627  12.18
84)     1,4-Dichlorobenzene 1.868 1.761 1.614 1.523 1.417 1.364 1.591  12.33
85)     Benzyl chloride     0.268 0.232 0.246 0.271 0.279 0.309 0.267  10.05
86)     n-Butylbenzene      1.938 1.907 1.861 1.675 1.606 1.530 1.753   9.77
87)     1,2-Dichlorobenzene 1.745 1.627 1.563 1.462 1.405 1.339 1.524   9.88
88)     1,2-Dibromo-3-Chlor 0.118 0.121 0.123 0.141 0.156 0.176 0.139  16.74
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.10468 *A + 0.01778 *A^2

89)     1,2,4-Trichlorobenz 0.578 0.555 0.624 0.650 0.660 0.697 0.627   8.45
90)     Hexachlorobutadiene 0.443 0.622 0.592 0.504 0.465 0.429 0.509  15.76
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 0.60082 *A + -0.04359 *A^2

91)     Naphthalene         1.566 1.006 1.152 1.339 1.475 1.746 1.381  19.71
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.89227 *A + 0.20956 *A^2

92)     1,2,3-Trichlorobenz 0.476 0.463 0.496 0.536 0.568 0.604 0.524  10.51

93) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
94)     Acrolein            2.922 2.826 2.765 2.521 2.317       2.670   9.24
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9947
              Response Ratio = 0.00000 + 2.41238 *A

95)     Tert Butyl Alcohol  1.344 1.198 1.125 1.308 1.217 1.205 1.233   6.48
96)     Tert Amyl Alcohol   1.199 0.937 0.980 1.194 1.020 1.006 1.056  10.62
97)     1,4-Dioxane         0.090 0.114 0.101 0.127 0.122 0.120 0.112  12.52
-------------------------------------------------------------------------------
(#) = Out of Range

          8260-K.M          Fri Sep 17 11:29:01 2010
```

Initial Calibration Verification

Job Number: F76459 **Sample:** VK2013-ICV2013
Account: CSXT CSX Transportation **Lab FileID:** K046751.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Evaluate Continuing Calibration Report

Data File : K:\HPCHEM\1\DATA\091610\K046751.D Vial: 7
Acq On : 16 Sep 2010 3:26 pm Operator: StevenH
Sample : icv2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	107	0.00	11.45
			Amount	Calc.	%Drift			
2		Dichlorodifluoromethane	50.000	89.143	-78.3#	153	-0.01	4.21
3	P	Chloromethane	50.000	72.115	-44.2#	125	0.00	4.60
4	C	Vinyl Chloride	50.000	60.540	-21.1#	102	0.00	4.79
5		Bromomethane	50.000	55.393	-10.8	103	-0.01	5.46
6		Chloroethane	50.000	48.343	3.3	99	-0.01	5.72
7		Trichlorofluoromethane	50.000	48.799	2.4	97	0.00	5.99
8		1,2-Dichloro-1,1,2-triflu	50.000	49.779	0.4	104	0.00	6.84
			AvgRF	CCRF	%Dev			
9		Ethyl Ether	0.239	0.228	4.6	105	0.00	6.51
			Amount	Calc.	%Drift			
10		Freon 113	50.000	44.912	10.2	91	0.00	7.00
11	C	1,1-Dichloroethene	50.000	49.629	0.7	84	0.00	6.91
12		Acetone	250.000	195.152	21.9#	77	0.02	7.95
			AvgRF	CCRF	%Dev			
13		Iodomethane	0.413	0.412	0.2	101	0.00	7.18
14		Carbon Disulfide	0.874	0.805	7.9	91	0.00	7.01
15		Methyl acetate	0.221	0.214	3.2	121	0.00	8.11
			Amount	Calc.	%Drift			
16		Methylene Chloride	50.000	100.056	-100.1#	148	0.00	7.87
17		Acrylonitrile	250.000	294.217	-17.7	118	0.00	9.14
			AvgRF	CCRF	%Dev			
18		Methyl Tert Butyl Ether	0.814	0.795	2.3	109	0.00	8.29
19		trans-1,2-Dichloroethene	0.482	0.432	10.4	90	0.00	8.15
20		Hexane	0.677	0.667	1.5	106	0.00	8.27
21		Vinyl acetate	0.223	0.214	4.0	121	0.00	8.11
22	P	1,1-Dichloroethane	0.646	0.610	5.6	95	0.00	9.09
23		Di-isopropyl ether	1.375	1.392	-1.2	107	0.00	8.84
24		Ethyl tert-butyl Ether	1.070	1.005	6.1	100	0.00	9.37
			Amount	Calc.	%Drift			
25		2-Butanone	250.000	223.150	10.7	90	0.00	10.57
			AvgRF	CCRF	%Dev			
26		cis-1,2-Dichloroethene	0.291	0.295	-1.4	102	0.00	9.85

Initial Calibration Verification

Job Number: F76459 **Sample:** VK2013-ICV2013
Account: CSXT CSX Transportation **Lab FileID:** K046751.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

27		2,2-Dichloropropane	0.386	0.357	7.5	87	0.00	10.00
28		Bromochloromethane	0.139	0.140	-0.7	107	0.00	10.12
29	C	Chloroform	0.552	0.532	3.6	101	0.00	10.19
30		Tetrahydrofuran	0.073	0.067	8.2	108	0.00	10.57
31	S	Dibromofluoromethane	0.248	0.251	-1.2	109	0.00	10.44
32		1,1,1-Trichloroethane	0.435	0.399	8.3	89	0.00	10.51
		----------	Amount	Calc.	%Drift	----------		
33		Cyclohexane	50.000	53.938	-7.9	89	0.00	10.17
		----------	AvgRF	CCRF	%Dev	----------		
34		1,1-Dichloropropene	0.427	0.393	8.0	89	0.00	10.65
		----------	Amount	Calc.	%Drift	----------		
35		Carbon Tetrachloride	50.000	49.721	0.6	86	0.00	10.43
		----------	AvgRF	CCRF	%Dev	----------		
36	S	1,2-Dichloroethane-d4	0.305	0.315	-3.3	106	0.00	11.12
37		1,2-Dichloroethane	0.438	0.412	5.9	105	0.00	11.21
		----------	Amount	Calc.	%Drift	----------		
38		Benzene	50.000	53.468	-6.9	94	0.00	10.97
		----------	AvgRF	CCRF	%Dev	----------		
39		Tert-Amyl Methyl Ether	0.821	0.782	4.8	107	0.00	11.06
40		Trichloroethene	0.295	0.280	5.1	93	0.00	11.67
		----------	Amount	Calc.	%Drift	----------		
41		Methylcyclohexane	50.000	46.321	7.4	92	0.00	11.69
		----------	AvgRF	CCRF	%Dev	----------		
42	C	1,2-Dichloropropane	0.379	0.371	2.1	100	0.00	12.28
43		Dibromomethane	0.170	0.165	2.9	104	0.00	12.18
44		Bromodichloromethane	0.386	0.361	6.5	99	0.00	12.33
		----------	Amount	Calc.	%Drift	----------		
45		2-Nitropropane	250.000	297.030	-18.8	121	0.00	13.54
46		2-Chloroethyl vinyl ether	250.000	347.877	-39.2#	157	0.00	12.92
		----------	AvgRF	CCRF	%Dev	----------		
47		cis-1,3-Dichloropropene	0.491	0.494	-0.6	104	0.00	13.04
		----------	Amount	Calc.	%Drift	----------		
48		4-Methyl-2-pentanone	250.000	290.316	-16.1	119	0.00	13.67
		----------	AvgRF	CCRF	%Dev	----------		
49	I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00	14.96
50	S	Toluene-d8	1.648	1.644	0.2	108	0.00	13.26
51	C	Toluene	2.026	1.831	9.6	92	0.00	13.31
52		trans-1,3-Dichloropropene	0.594	0.609	-2.5	117	0.00	13.74
53		1,1,2-Trichloroethane	0.358	0.340	5.0	105	0.00	13.93
54		1,3-Dichloropropane	0.716	0.694	3.1	106	0.00	14.24
		----------	Amount	Calc.	%Drift	----------		
55		2-hexanone	250.000	265.321	-6.1	114	0.00	14.57
		----------	AvgRF	CCRF	%Dev	----------		
56		Tetrachloroethene	0.425	0.383	9.9	87	0.00	13.77
57		Dibromochloromethane	0.415	0.409	1.4	105	0.00	14.15

Initial Calibration Verification

Job Number: F76459 **Sample:** VK2013-ICV2013
Account: CSXT CSX Transportation **Lab FileID:** K046751.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

58		1,2-Dibromoethane	0.369	0.354	4.1	107	0.00	14.45
59		1-Chlorohexane	0.625	0.555	11.2	89	0.00	14.89
60	P	Chlorobenzene	1.128	1.124	0.4	101	0.00	14.98
61		1,1,1,2-Tetrachloroethane	0.404	0.402	0.5	103	0.00	15.03
62	C	Ethylbenzene	2.011	1.840	8.5	92	0.00	14.97
63		m,p-Xylene	1.587	1.483	6.6	92	0.00	15.11
64		o-Xylene	1.745	1.641	6.0	97	0.00	15.58
65		Styrene	1.253	1.168	6.8	98	0.00	15.63
			Amount	Calc.	%Drift			
66	P	Bromoform	50.000	41.424	17.2	109	0.00	15.72
			AvgRF	CCRF	%Dev			
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	17.42
			Amount	Calc.	%Drift			
68		Isopropylbenzene	50.000	51.565	-3.1	105	0.00	15.90
69		Cyclohexanone	250.000	358.098	-43.2#	164	0.02	16.67
			AvgRF	CCRF	%Dev			
70	S	4-Bromofluorobenzene	0.885	0.880	0.6	107	0.00	16.24
			Amount	Calc.	%Drift			
71	P	1,1,2,2-Tetrachloroethane	50.000	50.644	-1.3	112	0.00	16.39
			AvgRF	CCRF	%Dev			
72		trans-1,4-Dichloro-2-Bute	0.277	0.253	8.7	112	0.00	16.58
			Amount	Calc.	%Drift			
73		1,2,3-Trichloropropane	50.000	48.195	3.6	102	0.00	16.58
			AvgRF	CCRF	%Dev			
74		Bromobenzene	0.938	0.895	4.6	99	0.00	16.38
			Amount	Calc.	%Drift			
75		n-Propylbenzene	50.000	54.232	-8.5	93	0.00	16.33
76		2-Chlorotoluene	50.000	56.007	-12.0	95	0.00	16.55
77		1,3,5-Trimethylbenzene	50.000	43.489	13.0	93	0.00	16.51
			AvgRF	CCRF	%Dev			
78		4-Chlorotoluene	2.980	2.852	4.3	99	0.00	16.71
79		tert-Butylbenzene	2.083	1.963	5.8	92	0.00	16.87
80		1,2,4-Trimethylbenzene	3.359	3.156	6.0	95	0.00	16.93
			Amount	Calc.	%Drift			
81		sec-Butylbenzene	50.000	42.863	14.3	90	0.00	17.05
			AvgRF	CCRF	%Dev			
82		4-Isopropyltoluene	3.081	2.825	8.3	89	0.00	17.18
83		1,3-Dichlorobenzene	1.627	1.548	4.9	99	0.00	17.35
84		1,4-Dichlorobenzene	1.591	1.475	7.3	97	0.00	17.44
85		Benzyl chloride	0.267	0.223	16.5	97	0.00	17.68
86		n-Butylbenzene	1.753	1.575	10.2	90	0.00	17.63
87		1,2-Dichlorobenzene	1.524	1.518	0.4	103	0.00	17.91
			Amount	Calc.	%Drift			
88		1,2-Dibromo-3-Chloropropa	50.000	51.602	-3.2	110	0.00	18.74
			AvgRF	CCRF	%Dev			

Initial Calibration Verification

Job Number: F76459 **Sample:** VK2013-ICV2013
Account: CSXT CSX Transportation **Lab FileID:** K046751.D
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

89	1,2,4-Trichlorobenzene	0.627	0.599	4.5	102	0.00	19.46
	---------- Amount	Calc.	%Drift	----------			
90	Hexachlorobutadiene	50.000	43.308	13.4	88	0.00	19.39
91	Naphthalene	50.000	57.009	-14.0	119	0.00	19.84
	---------- AvgRF	CCRF	%Dev	----------			
92	1,2,3-Trichlorobenzene	0.524	0.500	4.6	107	0.00	20.05
93 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	111	0.02	8.29
	---------- Amount	Calc.	%Drift	----------			
94	Acrolein	250.000	268.237	-7.3	104	0.00	8.27
	---------- AvgRF	CCRF	%Dev	----------			
95	Tert Butyl Alcohol	1.233	1.086	11.9	108	0.02	8.40
96	Tert Amyl Alcohol	1.056	1.008	4.5	115	0.00	11.27
97	1,4-Dioxane	0.112	0.117	-4.5	129	0.00	12.56

(#) = Out of Range SPCC's out = 0 CCC's out = 1
K046747.D 8260-K.M Fri Sep 17 11:28:37 2010

GC/MS Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller 09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046757.D Vial: 13
Acq On : 16 Sep 2010 5:59 pm Operator: StevenH
Sample : f76459-1 Inst : MSVOA2
Misc : ms15414,vk2013,4.94,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:25 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

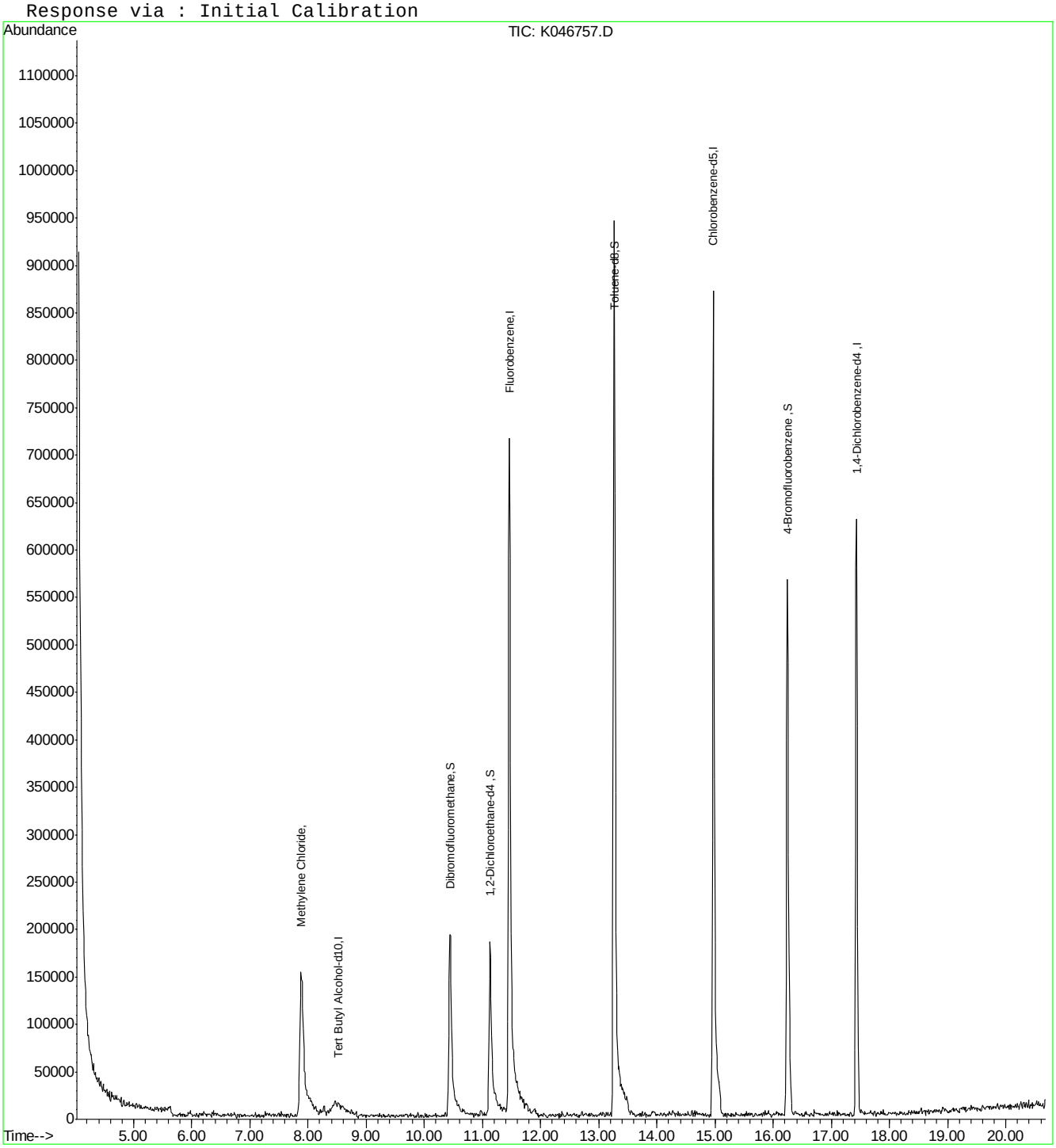
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	897976	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	594596	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	190589	50.00	ug/Kg	0.02
93) Tert Butyl Alcohol-d10	8.53	65	95402m	250.00	ug/Kg	0.26
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	203471	45.77	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 91.54%			
36) 1,2-Dichloroethane-d4	11.14	65	239829	43.74	ug/Kg	0.02
Spiked Amount 50.000	Range 77 - 123		Recovery = 87.48%			
50) Toluene-d8	13.27	98	909451	46.39	ug/Kg	0.02
Spiked Amount 50.000	Range 71 - 130		Recovery = 92.78%			
70) 4-Bromofluorobenzene	16.25	174	202720	60.08	ug/Kg	0.02
Spiked Amount 50.000	Range 59 - 148		Recovery = 120.16%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	250737	23.41	ug/Kg	93

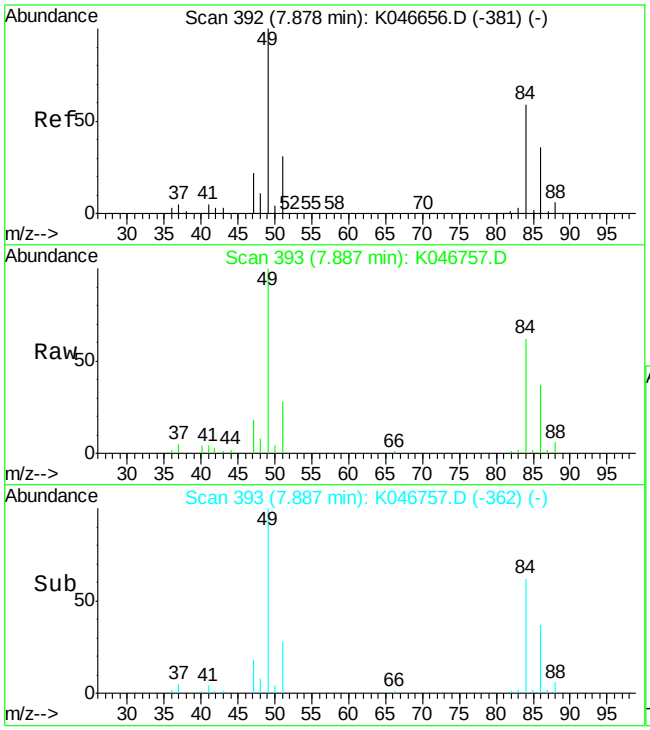
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046757.D 8260-K.M Fri Sep 17 08:51:41 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046757.D Vial: 13
Acq On : 16 Sep 2010 5:59 pm Operator: StevenH
Sample : f76459-1 Inst : MSVOA2
Misc : ms15414,vk2013,4.94,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:38 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

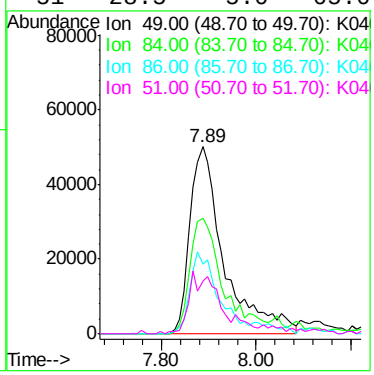




#16
Methylene Chloride
Concen: 23.41 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.01 min
Lab File: K046757.D
Acq: 16 Sep 2010 5:59 pm

Tgt Ion: 49 Resp: 250737

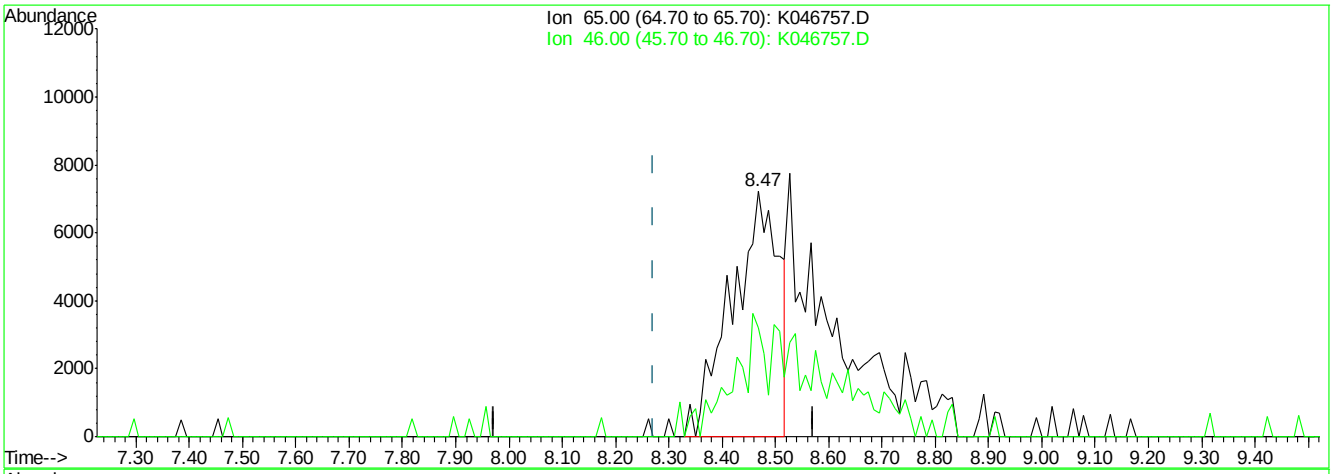
Ion	Ratio	Lower	Upper
49	100		
84	61.8	36.3	96.3
86	37.2	11.1	71.1
51	28.5	5.0	65.0

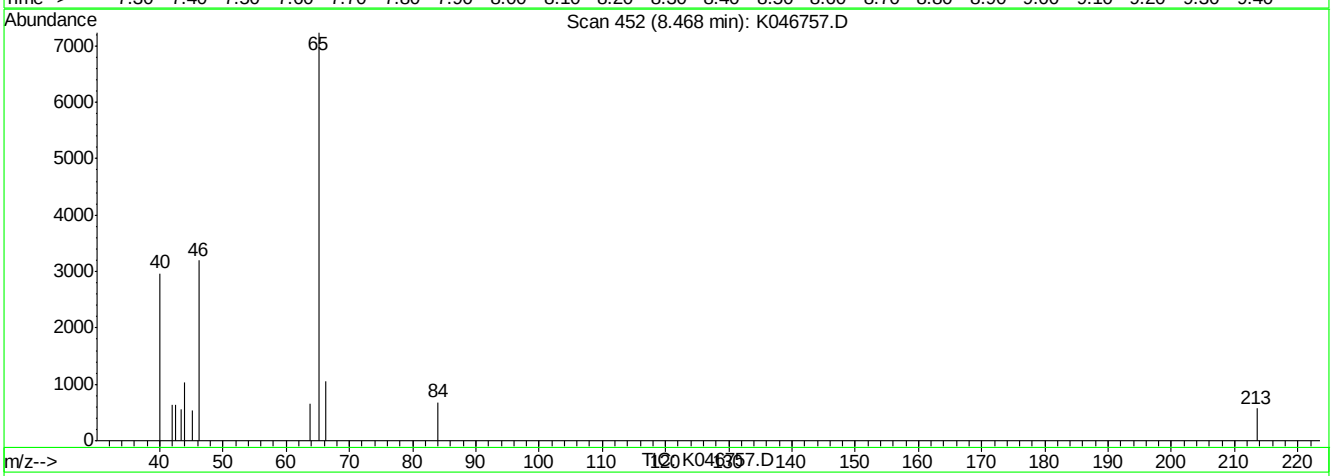


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046757.D Vial: 13
Acq On : 16 Sep 2010 5:59 pm Operator: StevenH
Sample : f76459-1 Inst : MSVOA2
Misc : ms15414,vk2013,4.94,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:38 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.47min (+0.196) 250.00ug/Kg

response 44304

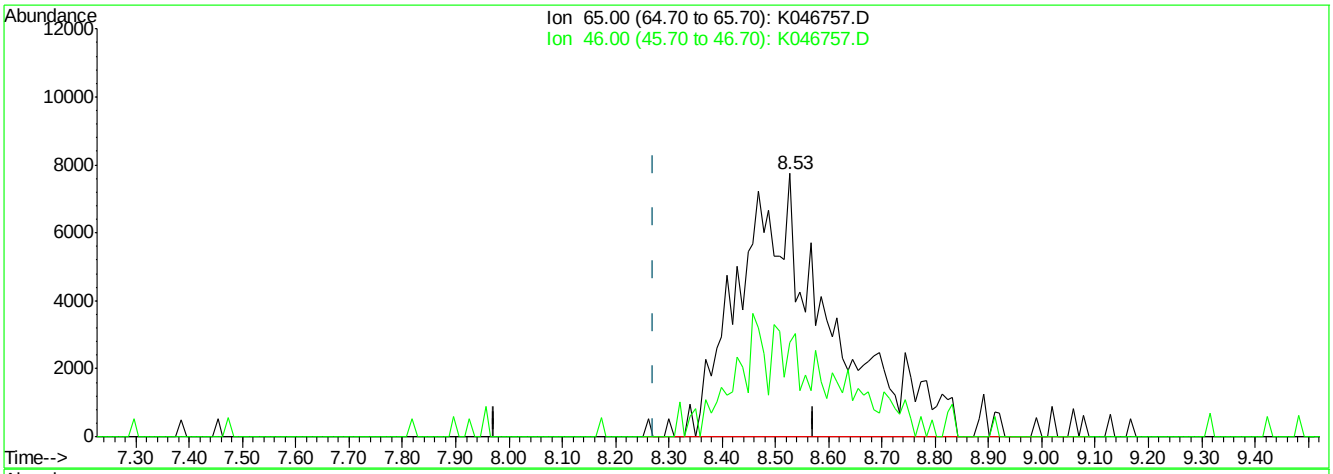
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	44.22
0.00	0.00	0.00
0.00	0.00	0.00

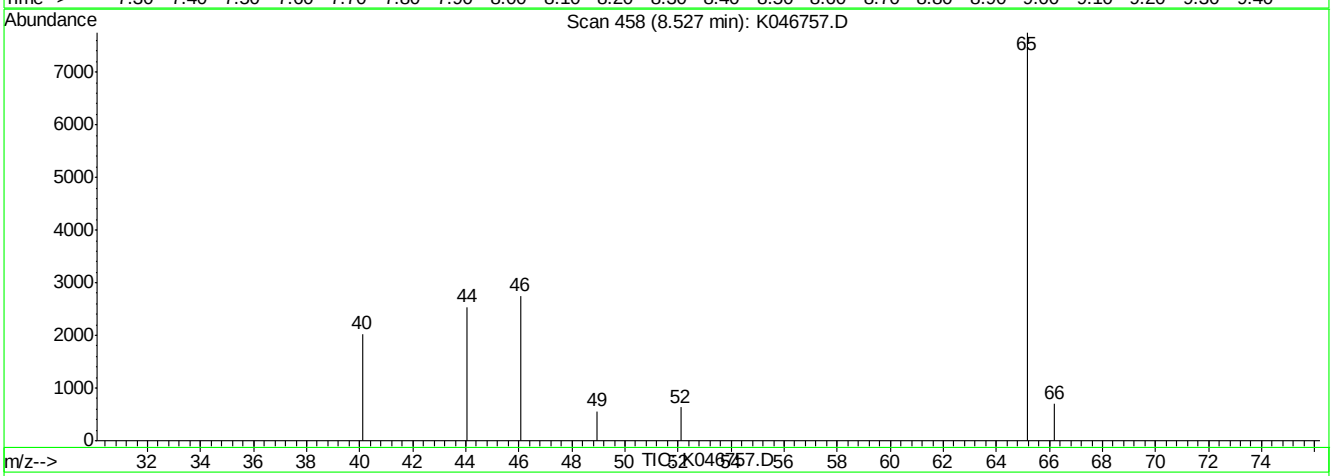
K046757.D 8260-K.M Fri Sep 17 08:37:47 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046757.D Vial: 13
Acq On : 16 Sep 2010 5:59 pm Operator: StevenH
Sample : f76459-1 Inst : MSVOA2
Misc : ms15414,vk2013,4.94,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:38 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.53min (+0.255) 250.00ug/Kg m

response 95402

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	35.58
0.00	0.00	0.00
0.00	0.00	0.00

K046757.D 8260-K.M Fri Sep 17 08:37:50 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046758.D Vial: 14
Acq On : 16 Sep 2010 6:24 pm Operator: StevenH
Sample : f76459-2 Inst : MSVOA2
Misc : ms15414,vk2013,5.12,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:26 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

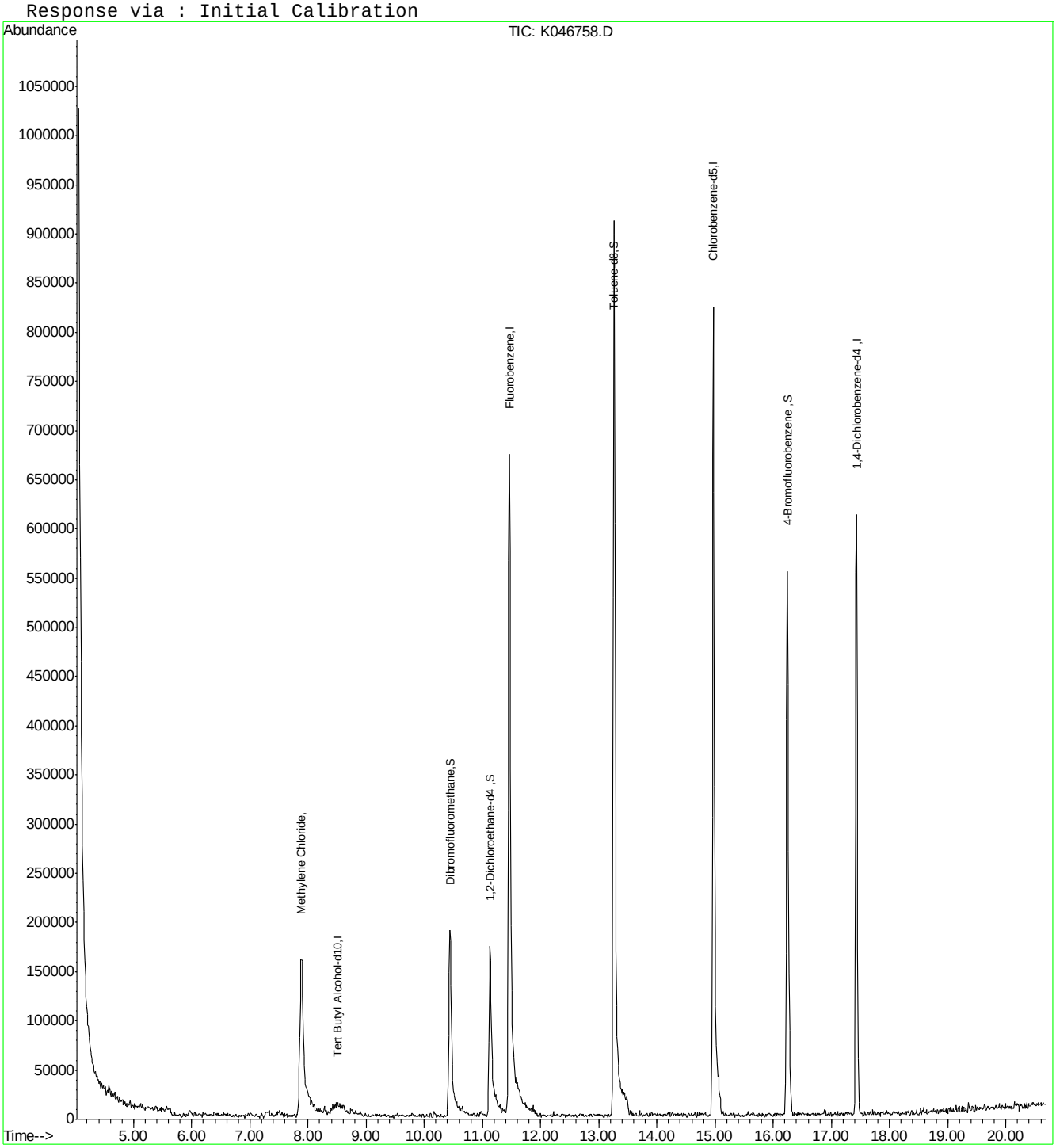
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	883346	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	571981	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	183760	50.00	ug/Kg	0.02
93) Tert Butyl Alcohol-d10	8.51	65	87484m	250.00	ug/Kg	0.24
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	206069	47.12	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 94.24%			
36) 1,2-Dichloroethane-d4	11.13	65	219202	40.64	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 81.28%			
50) Toluene-d8	13.27	98	877907	46.55	ug/Kg	0.02
Spiked Amount 50.000	Range 71 - 130		Recovery = 93.10%			
70) 4-Bromofluorobenzene	16.24	174	193241	59.40	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 118.80%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	275697	26.17	ug/Kg	94

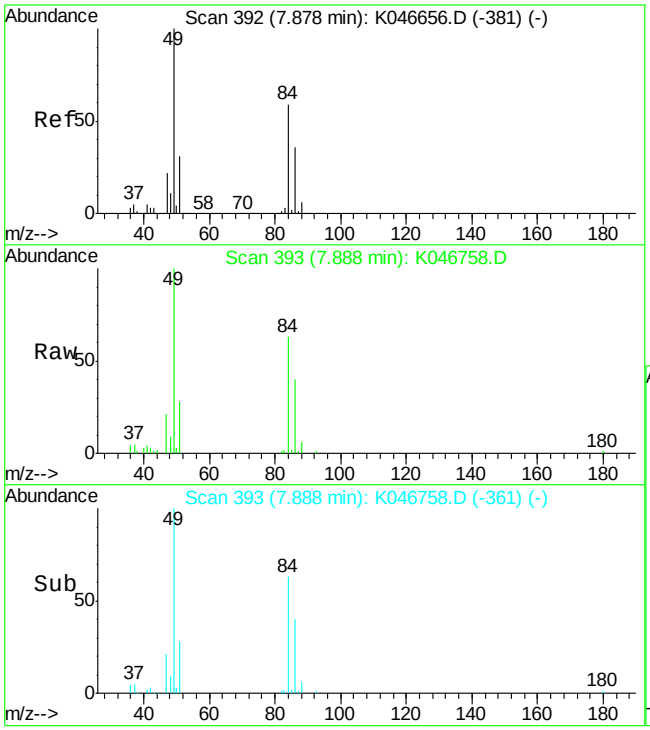
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046758.D 8260-K.M Fri Sep 17 08:51:47 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046758.D Vial: 14
Acq On : 16 Sep 2010 6:24 pm Operator: StevenH
Sample : f76459-2 Inst : MSVOA2
Misc : ms15414,vk2013,5.12,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:38 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

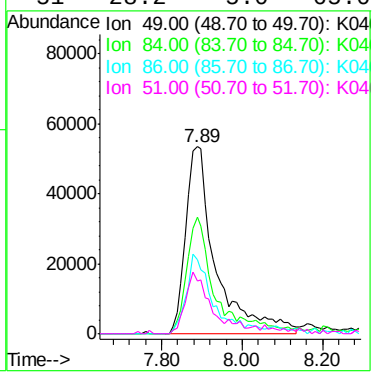




#16
Methylene Chloride
Concen: 26.17 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.01 min
Lab File: K046758.D
Acq: 16 Sep 2010 6:24 pm

Tgt Ion: 49 Resp: 275697

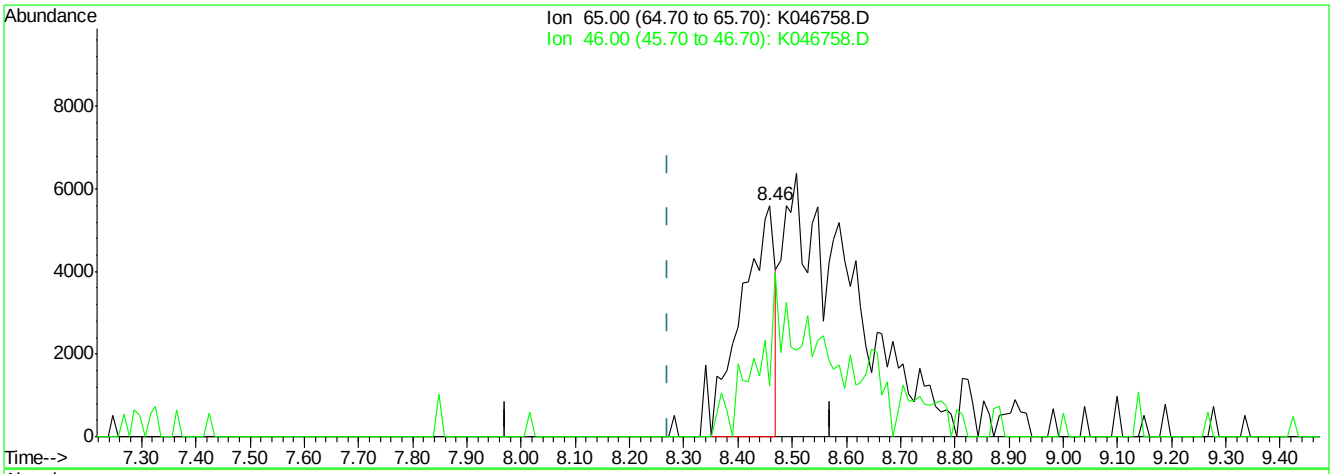
Ion	Ratio	Lower	Upper
49	100		
84	62.6	36.3	96.3
86	39.6	11.1	71.1
51	28.2	5.0	65.0

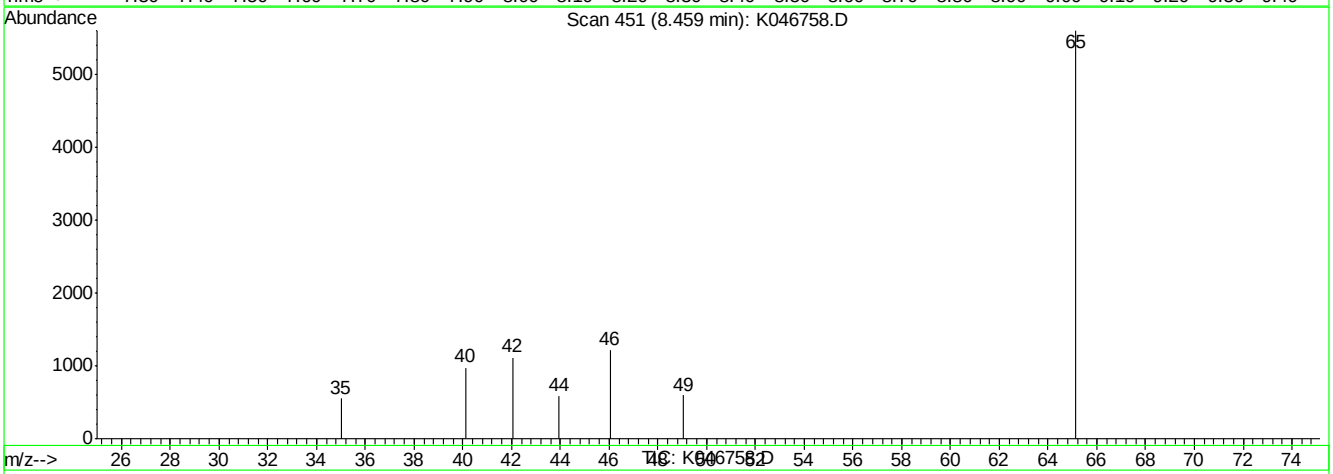


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046758.D Vial: 14
Acq On : 16 Sep 2010 6:24 pm Operator: StevenH
Sample : f76459-2 Inst : MSVOA2
Misc : ms15414,vk2013,5.12,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:38 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.46min (+0.187) 250.00ug/Kg

response 23686

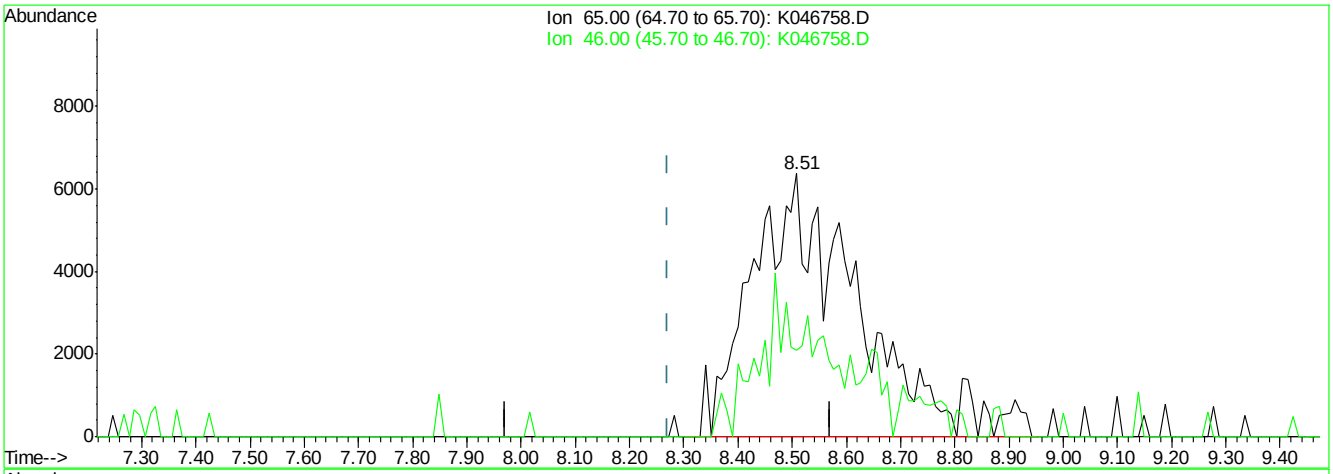
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	21.81
0.00	0.00	0.00
0.00	0.00	0.00

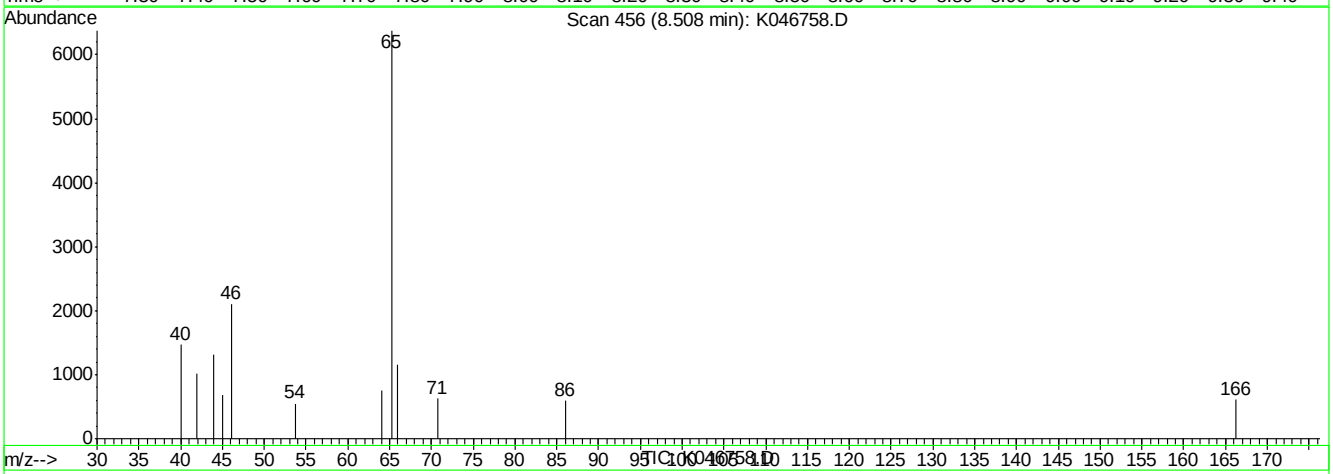
K046758.D 8260-K.M Fri Sep 17 08:38:10 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046758.D Vial: 14
Acq On : 16 Sep 2010 6:24 pm Operator: StevenH
Sample : f76459-2 Inst : MSVOA2
Misc : ms15414,vk2013,5.12,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:38 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.51min (+0.236) 250.00ug/Kg m

response 87484

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	32.97
0.00	0.00	0.00
0.00	0.00	0.00

K046758.D 8260-K.M Fri Sep 17 08:38:14 2010

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064490.D Vial: 4
Acq On : 16 Sep 2010 11:48 am Operator: MikeM
Sample : f76459-3 Inst : MSVOA3
Misc : ms15421,vh2414,5.09,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 12:13:08 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.21	96	553382	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.74	117	426030	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	215745	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.03	65	39460	250.00	ug/Kg	0.03
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	135515	51.10	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 102.20%			
44) 1,2-Dichloroethane-d4	10.87	65	197980	48.63	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 97.26%			
55) Toluene-d8	13.03	98	560472	41.89	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 83.78%			
77) 4-Bromofluorobenzene	16.01	174	191223	50.05	ug/Kg	-0.01
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.10%			

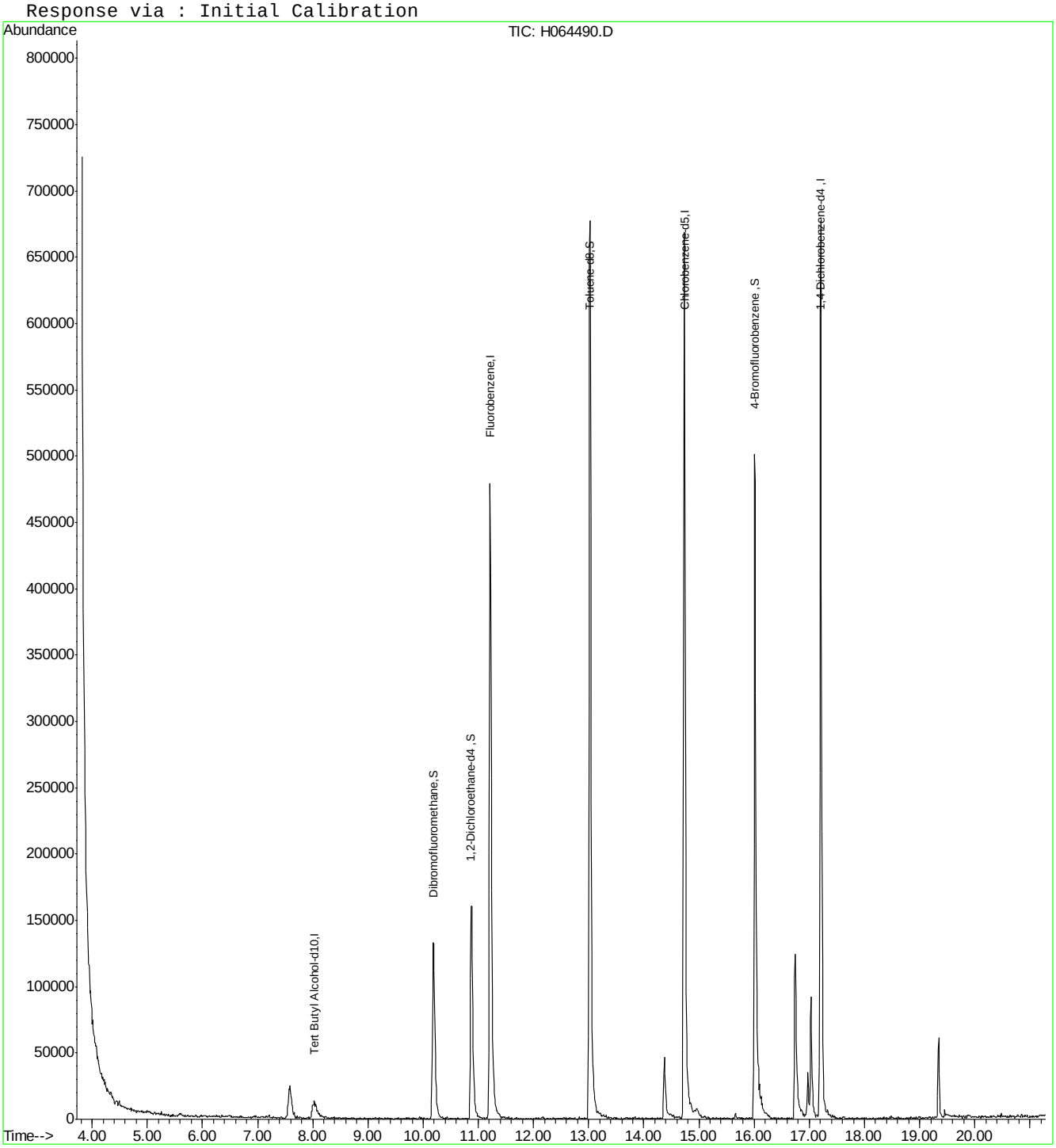
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064490.D Vial: 4
Acq On : 16 Sep 2010 11:48 am Operator: MikeM
Sample : f76459-3 Inst : MSVOA3
Misc : ms15421,vh2414,5.09,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 12:10 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046759.D Vial: 15
Acq On : 16 Sep 2010 6:50 pm Operator: StevenH
Sample : f76459-4 Inst : MSVOA2
Misc : ms15414,vk2013,4.70,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:27 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

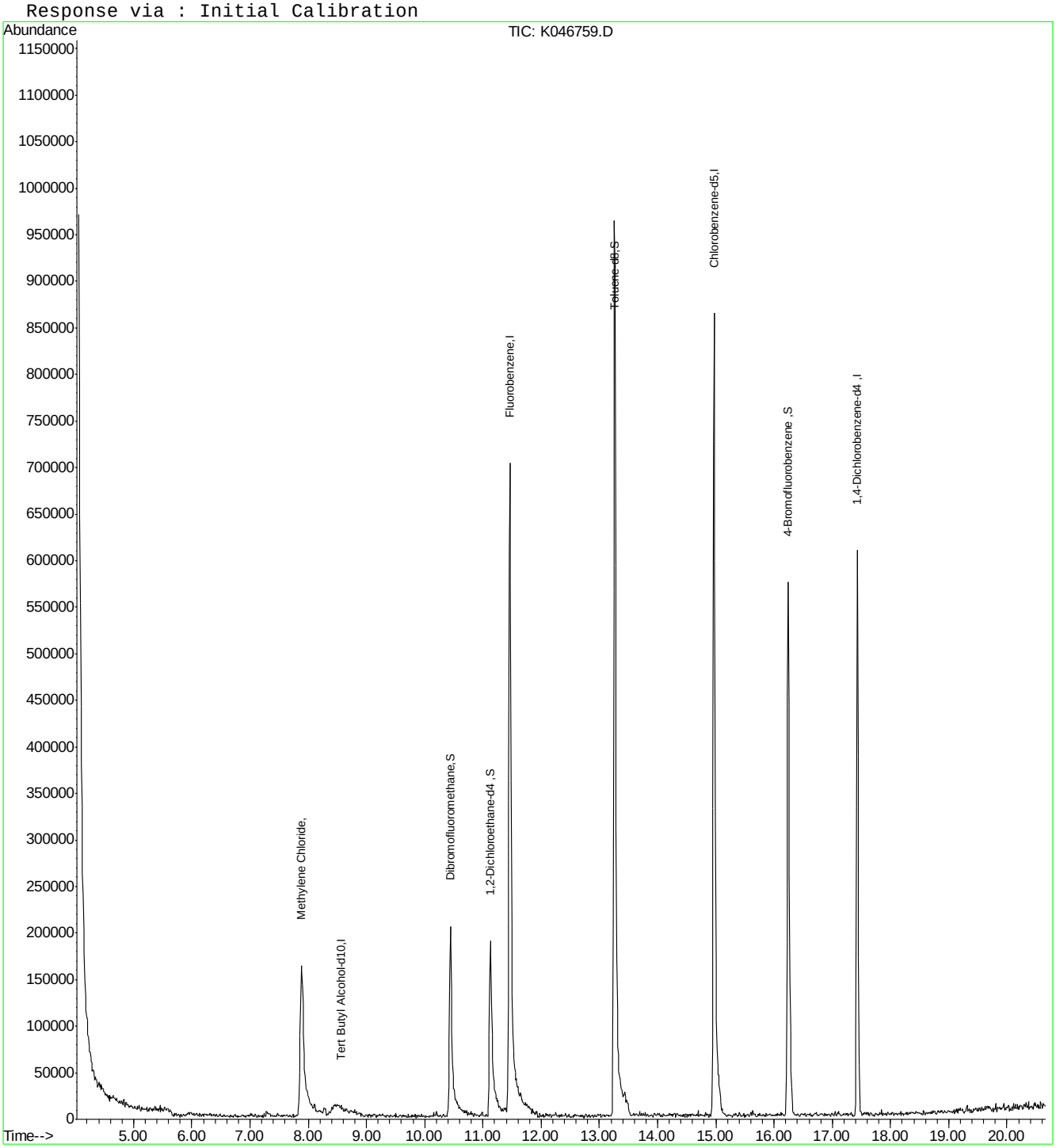
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	907096	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	587115	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	188150	50.00	ug/Kg	0.02
93) Tert Butyl Alcohol-d10	8.56	65	94239m	250.00	ug/Kg	0.29
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	222061	49.45	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.90%			
36) 1,2-Dichloroethane-d4	11.13	65	235914	42.59	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 85.18%			
50) Toluene-d8	13.26	98	907902	46.90	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 93.80%			
70) 4-Bromofluorobenzene	16.24	174	204780	61.48	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 122.96%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	261085	24.13	ug/Kg	91

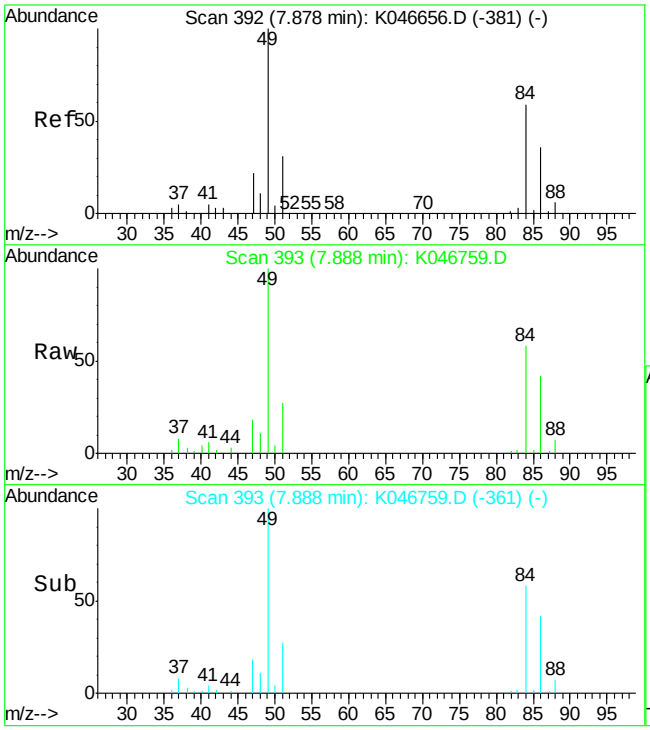
(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046759.D 8260-K.M Fri Sep 17 08:51:52 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046759.D Vial: 15
Acq On : 16 Sep 2010 6:50 pm Operator: StevenH
Sample : f76459-4 Inst : MSVOA2
Misc : ms15414,vk2013,4.70,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:39 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

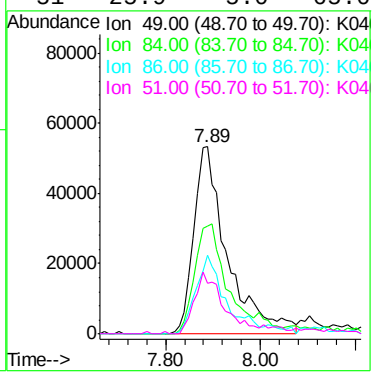




#16
Methylene Chloride
Concen: 24.13 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.01 min
Lab File: K046759.D
Acq: 16 Sep 2010 6:50 pm

Tgt Ion: 49 Resp: 261085

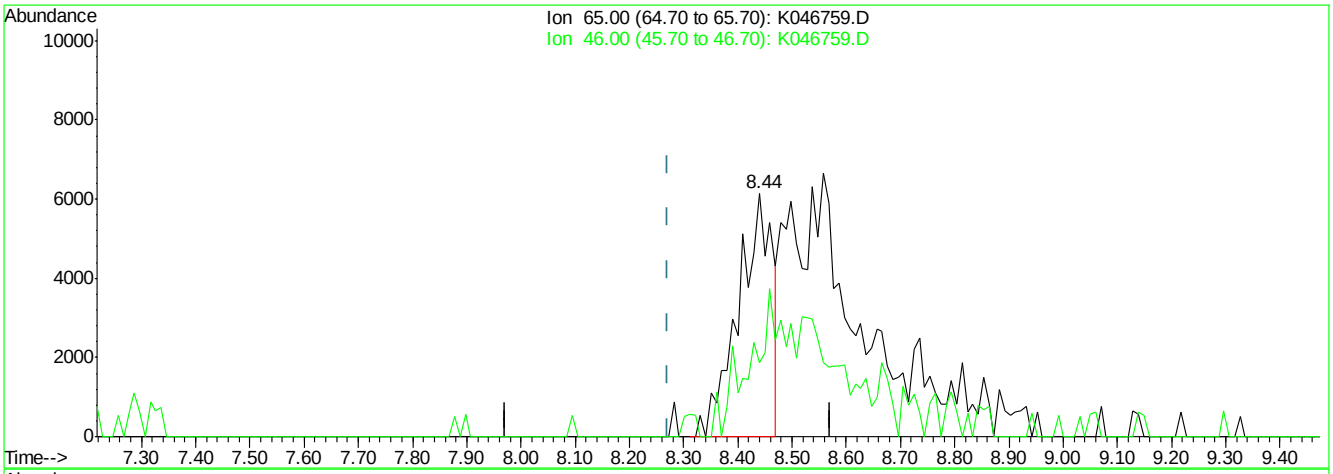
Ion	Ratio	Lower	Upper
49	100		
84	57.6	36.3	96.3
86	41.8	11.1	71.1
51	25.9	5.0	65.0

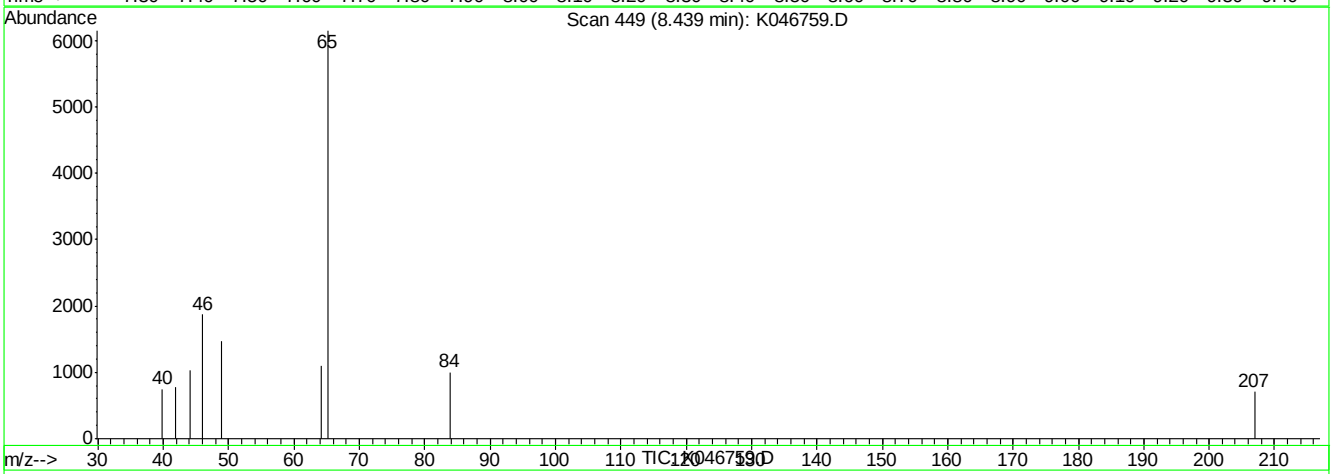


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046759.D Vial: 15
Acq On : 16 Sep 2010 6:50 pm Operator: StevenH
Sample : f76459-4 Inst : MSVOA2
Misc : ms15414,vk2013,4.70,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.44min (+0.168) 250.00ug/Kg

response 26792

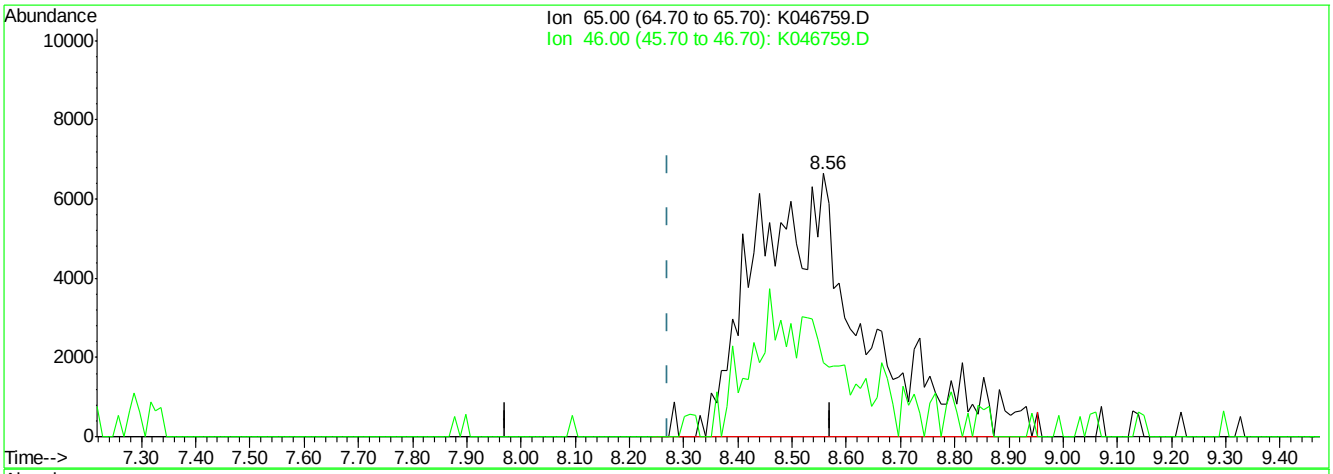
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	21.27
0.00	0.00	0.00
0.00	0.00	0.00

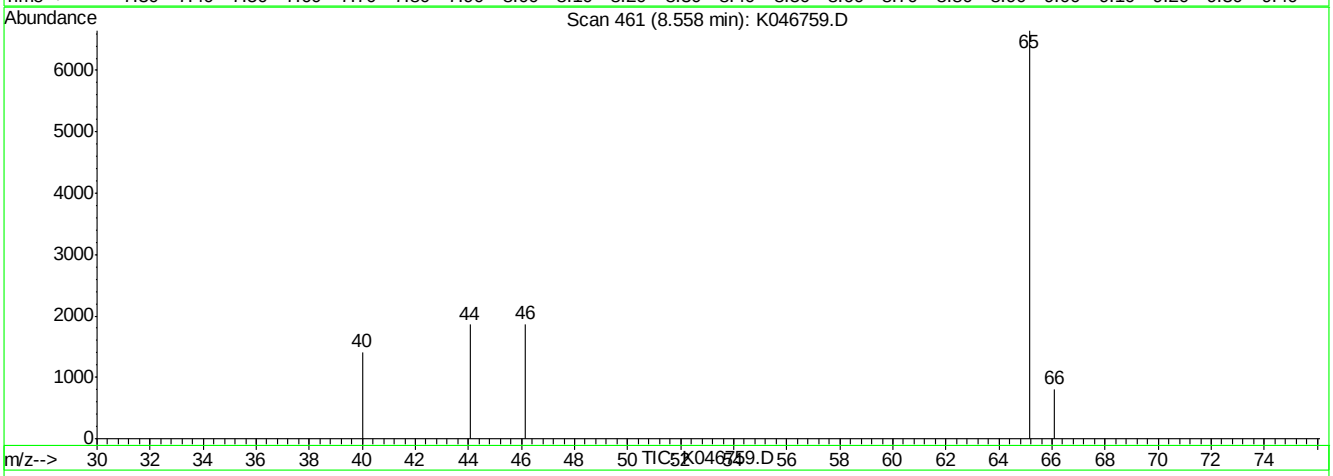
K046759.D 8260-K.M Fri Sep 17 08:38:35 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046759.D Vial: 15
Acq On : 16 Sep 2010 6:50 pm Operator: StevenH
Sample : f76459-4 Inst : MSVOA2
Misc : ms15414,vk2013,4.70,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.56min (+0.286) 250.00ug/Kg m

response 94239

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	28.15
0.00	0.00	0.00
0.00	0.00	0.00

K046759.D 8260-K.M Fri Sep 17 08:38:39 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046760.D Vial: 16
Acq On : 16 Sep 2010 7:15 pm Operator: StevenH
Sample : f76459-5 Inst : MSVOA2
Misc : ms15414,vk2013,4.95,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:28 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

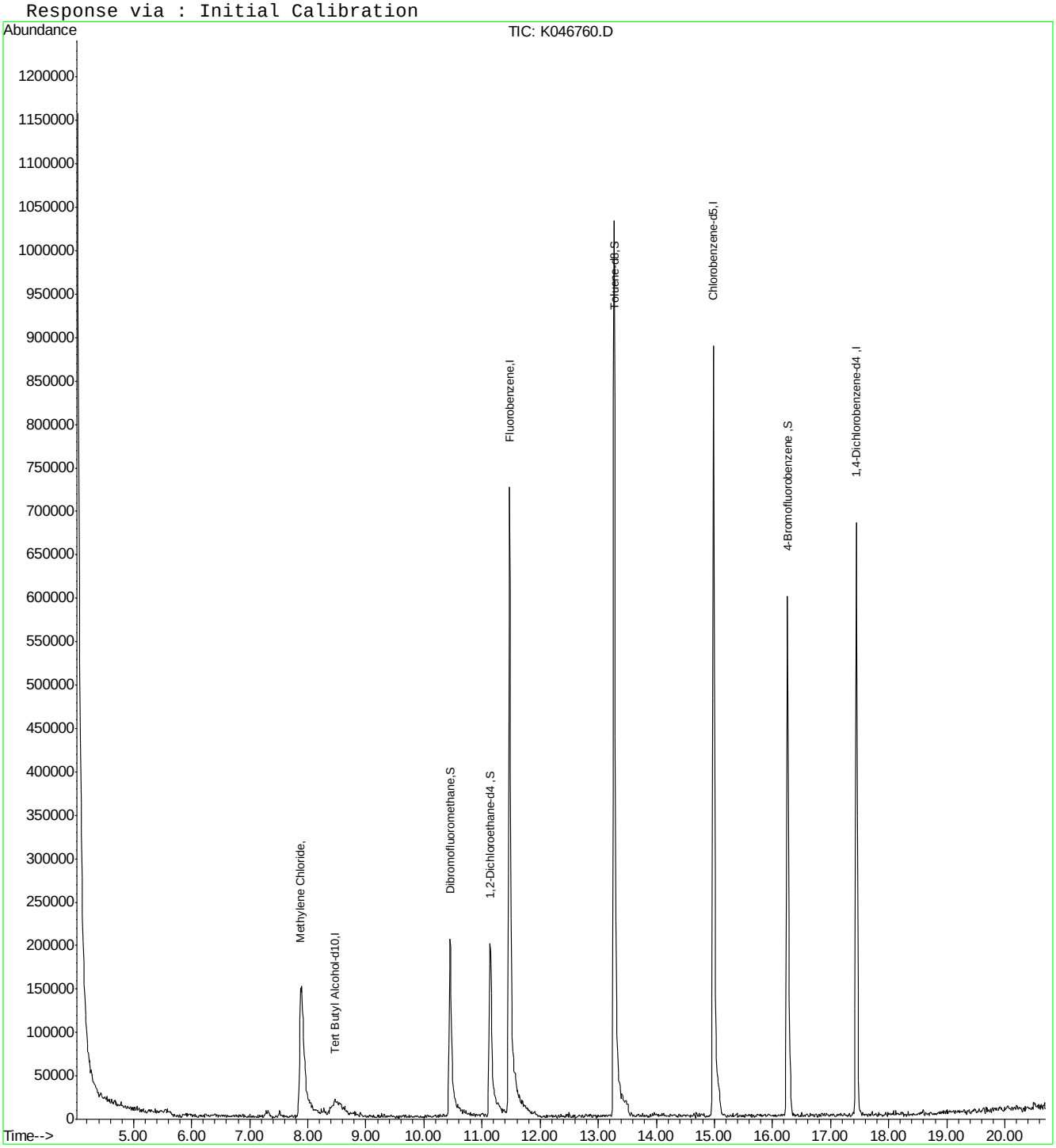
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.47	96	912423	50.00	ug/Kg	0.02
49) Chlorobenzene-d5	14.99	117	616494	50.00	ug/Kg	0.03
67) 1,4-Dichlorobenzene-d4	17.44	152	210014	50.00	ug/Kg	0.03
93) Tert Butyl Alcohol-d10	8.47	65	125410m	250.00	ug/Kg	0.20
System Monitoring Compounds						
31) Dibromofluoromethane	10.45	113	204639	45.30	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 90.60%			
36) 1,2-Dichloroethane-d4	11.14	65	260652	46.78	ug/Kg	0.02
Spiked Amount 50.000	Range 77 - 123		Recovery = 93.56%			
50) Toluene-d8	13.27	98	923597	45.44	ug/Kg	0.03
Spiked Amount 50.000	Range 71 - 130		Recovery = 90.88%			
70) 4-Bromofluorobenzene	16.26	174	207062	55.69	ug/Kg	0.03
Spiked Amount 50.000	Range 59 - 148		Recovery = 111.38%			
Target Compounds						Qvalue
16) Methylene Chloride	7.88	49	290791	26.72	ug/Kg	89

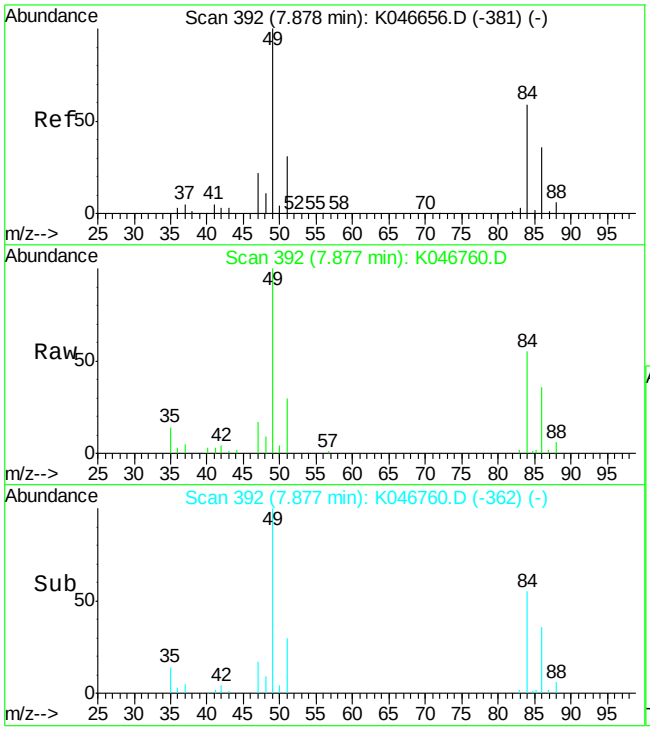
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046760.D Vial: 16
Acq On : 16 Sep 2010 7:15 pm Operator: StevenH
Sample : f76459-5 Inst : MSVOA2
Misc : ms15414,vk2013,4.95,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:39 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

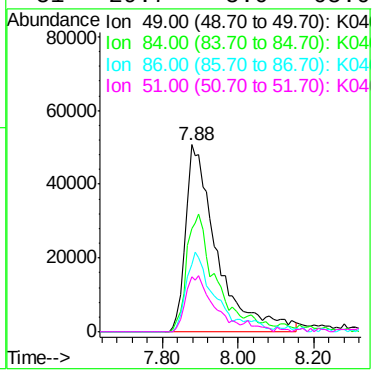




#16
Methylene Chloride
Concen: 26.72 ug/Kg
RT: 7.88 min Scan# 392
Delta R.T. -0.00 min
Lab File: K046760.D
Acq: 16 Sep 2010 7:15 pm

Tgt Ion: 49 Resp: 290791

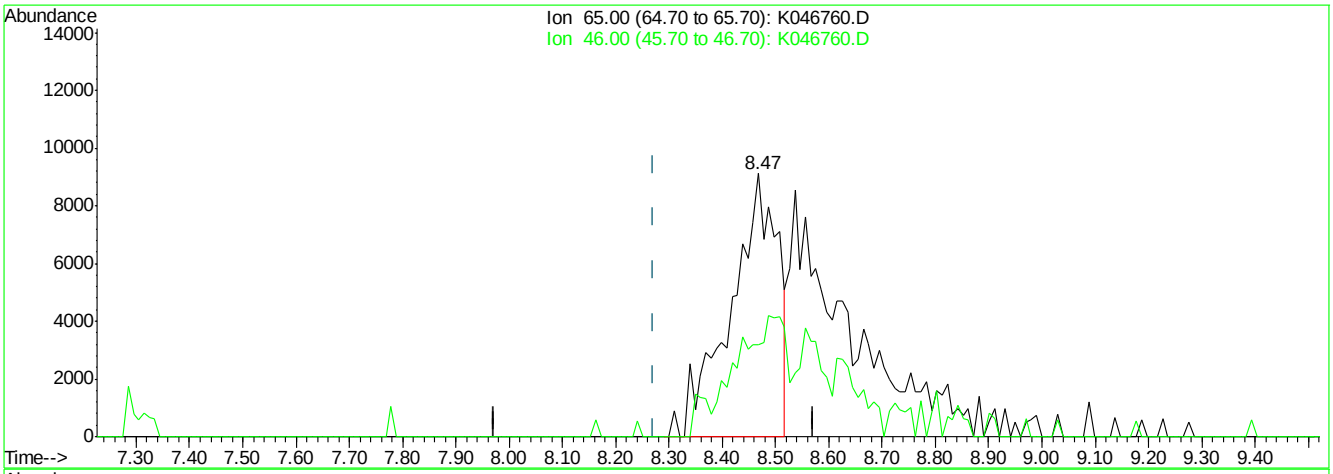
Ion	Ratio	Lower	Upper
49	100		
84	55.1	36.3	96.3
86	36.1	11.1	71.1
51	29.7	5.0	65.0

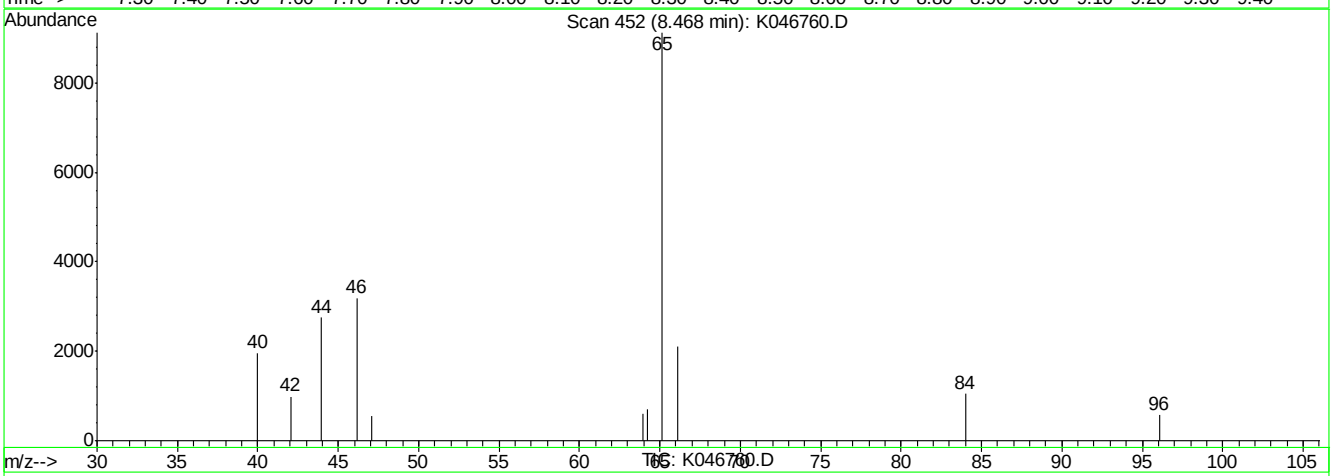


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046760.D Vial: 16
Acq On : 16 Sep 2010 7:15 pm Operator: StevenH
Sample : f76459-5 Inst : MSVOA2
Misc : ms15414,vk2013,4.95,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.47min (+0.196) 250.00ug/Kg

response 55916

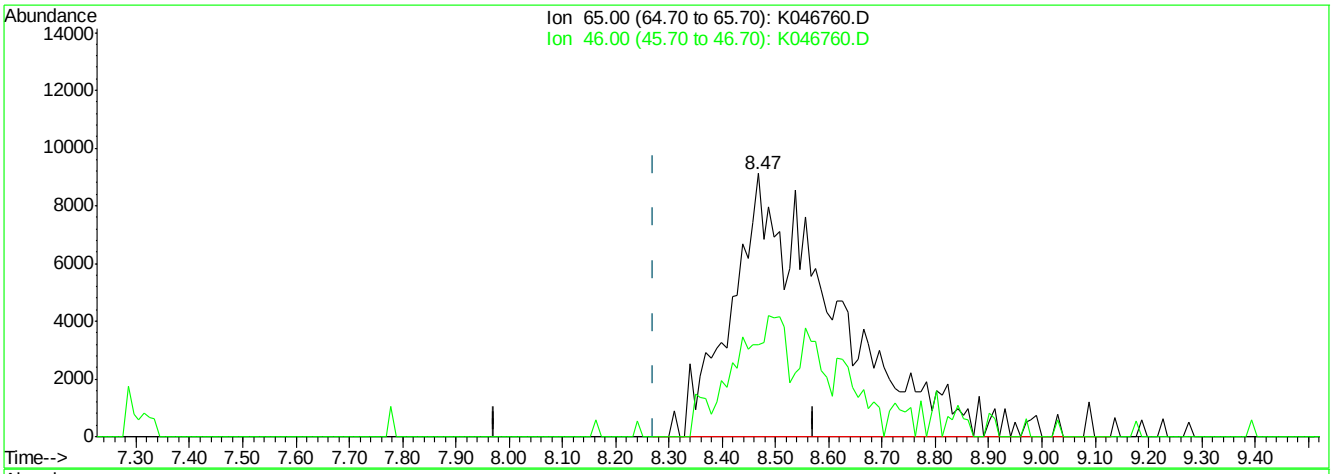
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	35.01
0.00	0.00	0.00
0.00	0.00	0.00

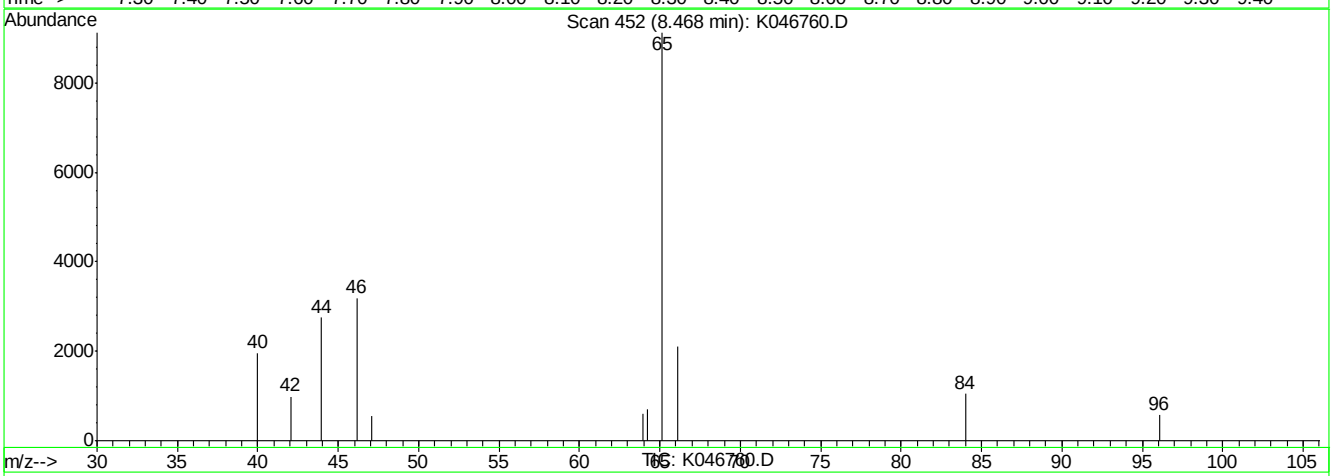
K046760.D 8260-K.M Fri Sep 17 08:38:59 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046760.D Vial: 16
Acq On : 16 Sep 2010 7:15 pm Operator: StevenH
Sample : f76459-5 Inst : MSVOA2
Misc : ms15414,vk2013,4.95,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:39 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.47min (+0.196) 250.00ug/Kg m

response 125410

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	35.01
0.00	0.00	0.00
0.00	0.00	0.00

K046760.D 8260-K.M Fri Sep 17 08:39:02 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046761.D Vial: 17
Acq On : 16 Sep 2010 7:41 pm Operator: StevenH
Sample : f76459-6 Inst : MSVOA2
Misc : ms15414,vk2013,5.24,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:29 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

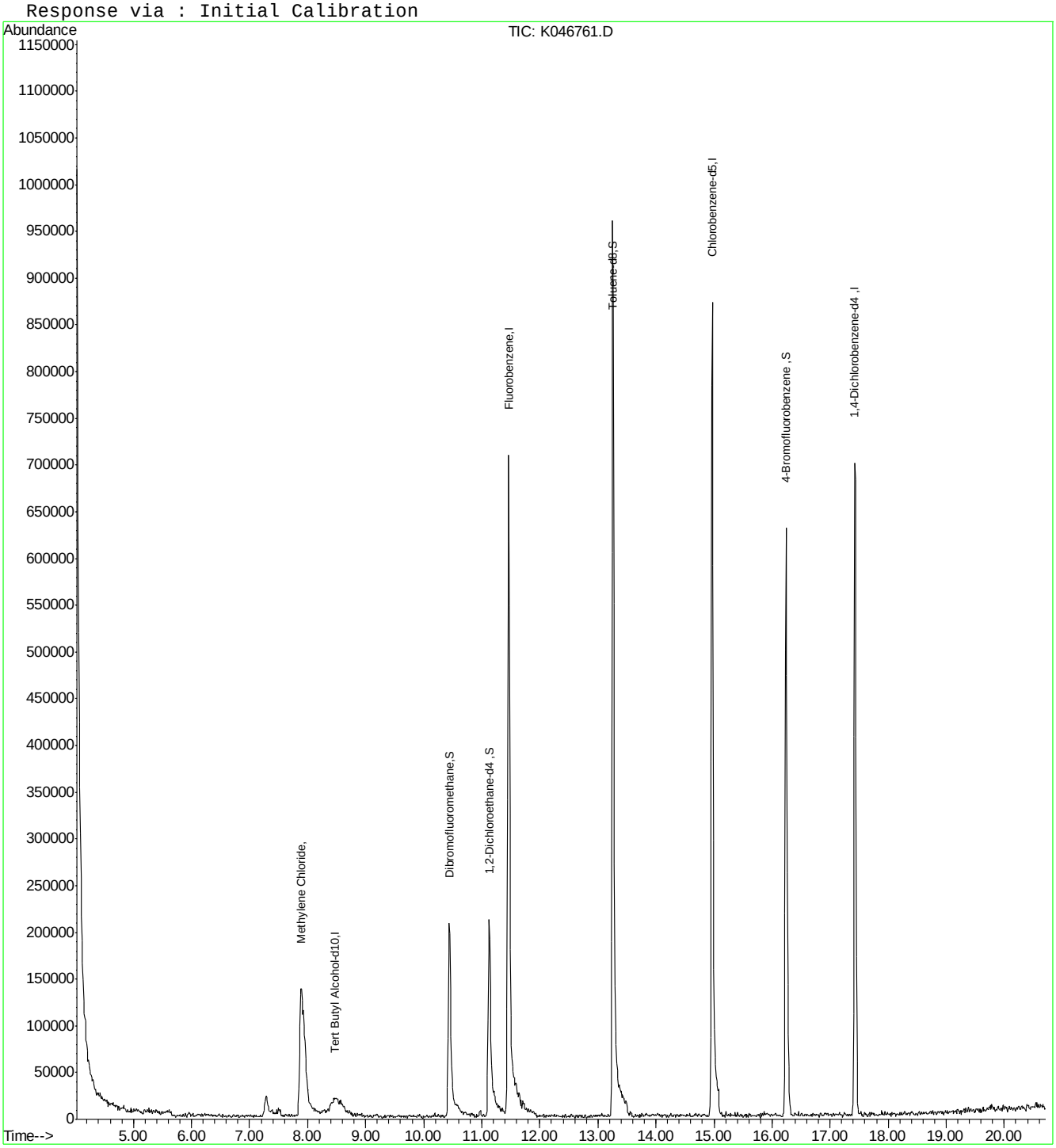
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	875907	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	594375	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	221729	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.47	65	153807m	250.00	ug/Kg	0.20
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	217402	50.13	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.26%			
36) 1,2-Dichloroethane-d4	11.13	65	268745	50.25	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 100.50%			
50) Toluene-d8	13.26	98	863615	44.07	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 88.14%			
70) 4-Bromofluorobenzene	16.24	174	217517	55.41	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 110.82%			
Target Compounds						Qvalue
16) Methylene Chloride	7.90	49	310699	29.74	ug/Kg	90

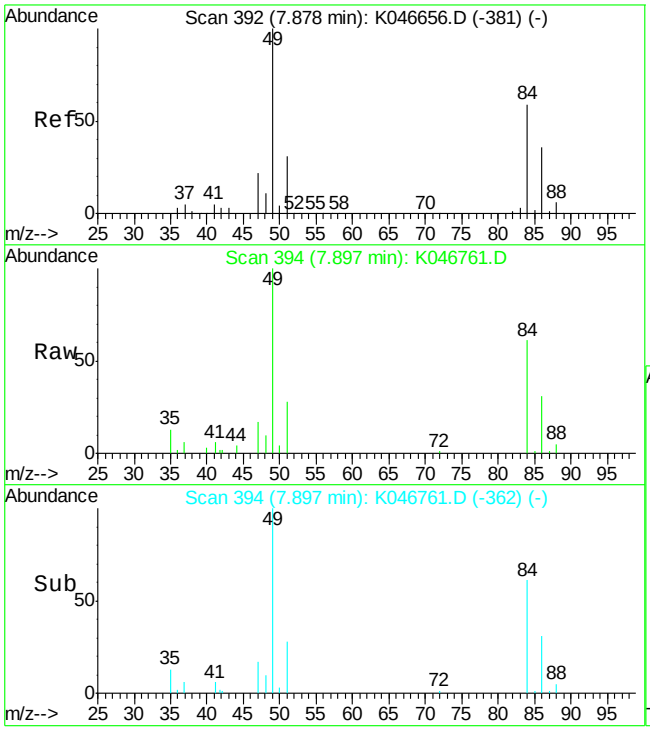
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046761.D Vial: 17
Acq On : 16 Sep 2010 7:41 pm Operator: StevenH
Sample : f76459-6 Inst : MSVOA2
Misc : ms15414,vk2013,5.24,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:40 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

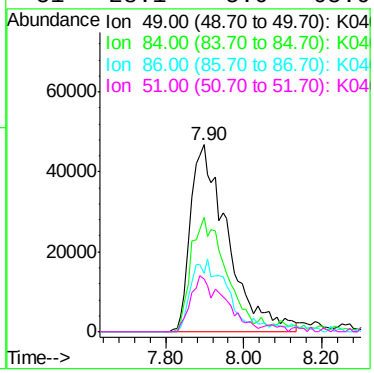




#16
Methylene Chloride
Concen: 29.74 ug/Kg
RT: 7.90 min Scan# 394
Delta R.T. 0.02 min
Lab File: K046761.D
Acq: 16 Sep 2010 7:41 pm

Tgt Ion: 49 Resp: 310699

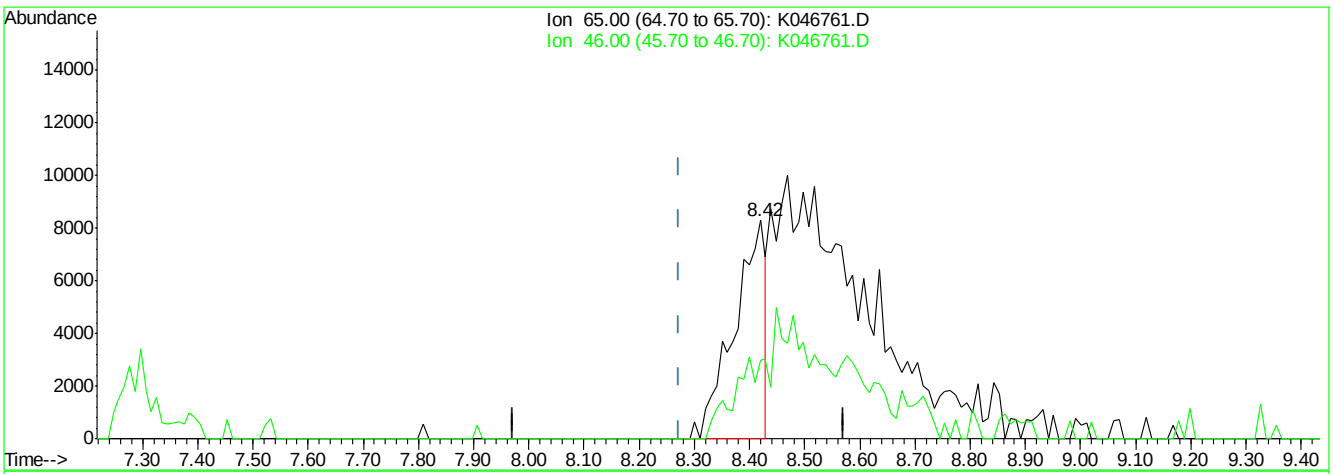
Ion	Ratio	Lower	Upper
49	100		
84	61.1	36.3	96.3
86	31.4	11.1	71.1
51	28.1	5.0	65.0

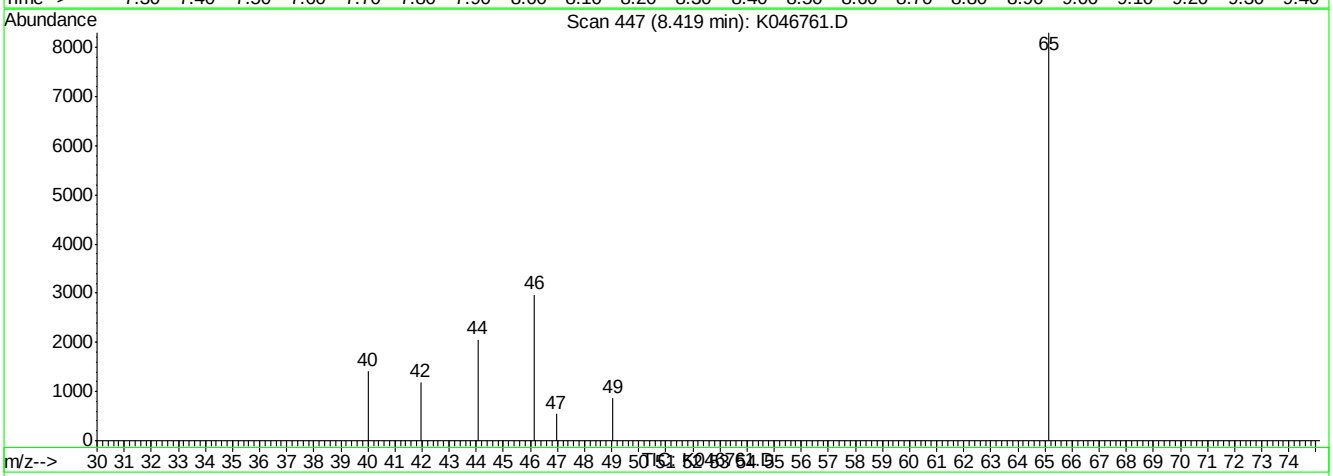


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046761.D Vial: 17
Acq On : 16 Sep 2010 7:41 pm Operator: StevenH
Sample : f76459-6 Inst : MSVOA2
Misc : ms15414,vk2013,5.24,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:40 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.42min (+0.147) 250.00ug/Kg

response 33153

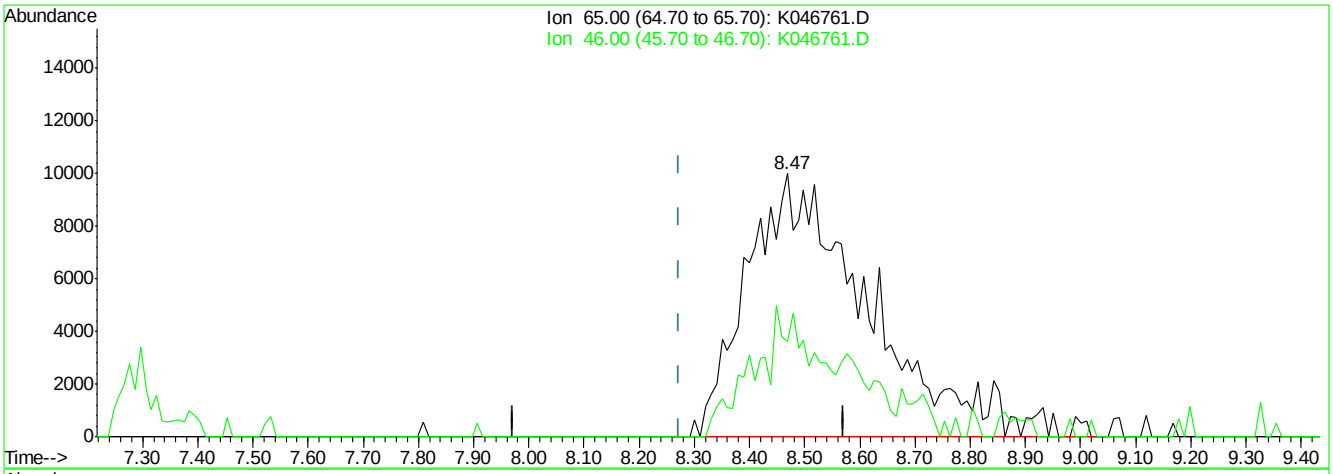
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	35.81
0.00	0.00	0.00
0.00	0.00	0.00

K046761.D 8260-K.M Fri Sep 17 08:39:26 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046761.D Vial: 17
Acq On : 16 Sep 2010 7:41 pm Operator: StevenH
Sample : f76459-6 Inst : MSVOA2
Misc : ms15414,vk2013,5.24,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:40 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration



(93) Tert Butyl Alcohol-d10 (I)

8.47min (+0.197) 250.00ug/Kg m

response 153807

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	36.19
0.00	0.00	0.00
0.00	0.00	0.00

K046761.D 8260-K.M Fri Sep 17 08:39:29 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046762.D Vial: 18
Acq On : 16 Sep 2010 8:06 pm Operator: StevenH
Sample : f76459-7 Inst : MSVOA2
Misc : ms15414,vk2013,5.81,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:30 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

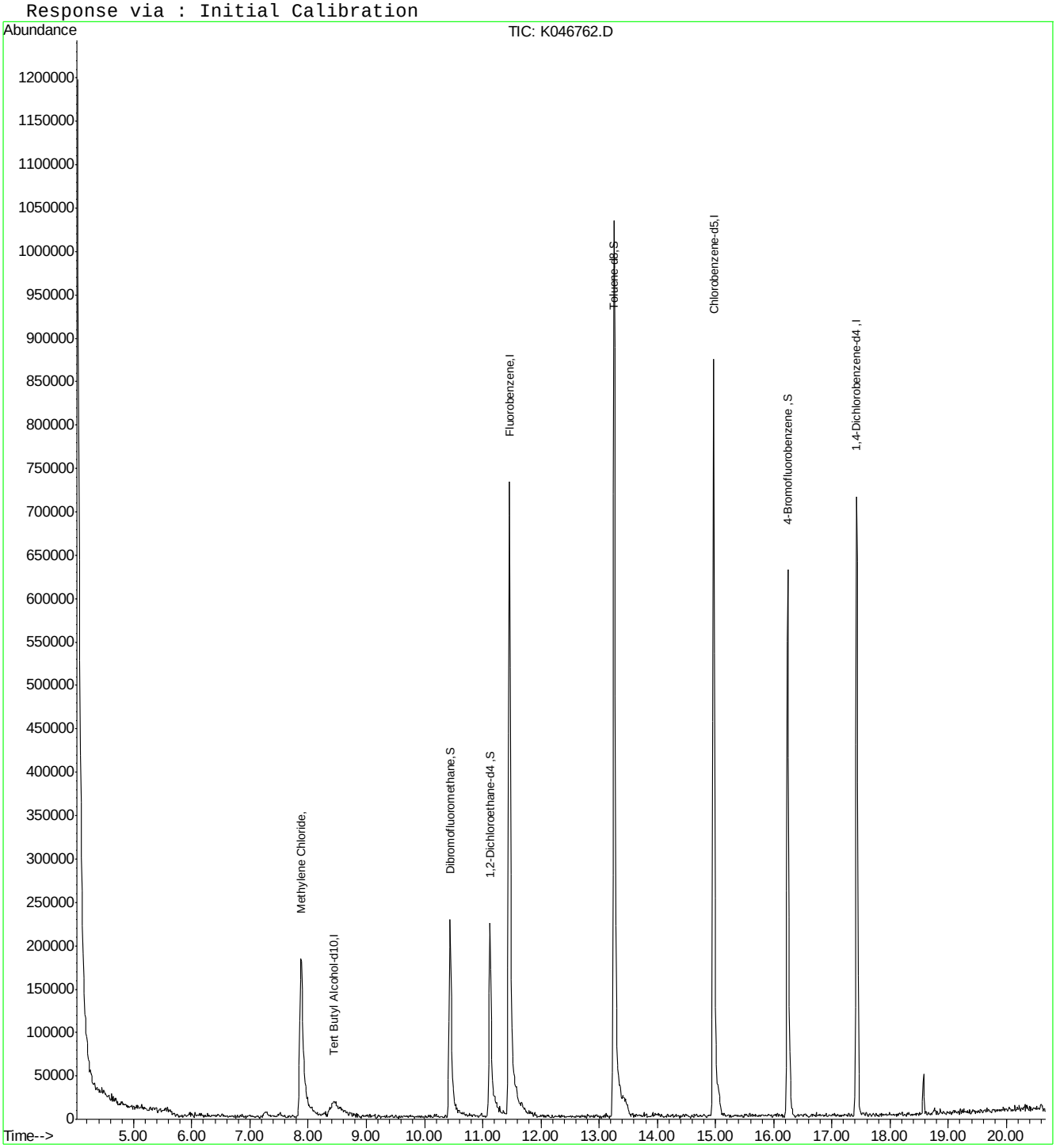
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	918110	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	598736	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	220882	50.00	ug/Kg	0.02
93) Tert Butyl Alcohol-d10	8.45	65	118288m	250.00	ug/Kg	0.18
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	209905	46.18	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 92.36%			
36) 1,2-Dichloroethane-d4	11.13	65	240009	42.81	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 85.62%			
50) Toluene-d8	13.26	98	904365	45.81	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 91.62%			
70) 4-Bromofluorobenzene	16.24	174	213731	54.66	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 109.32%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	288703	26.36	ug/Kg	91

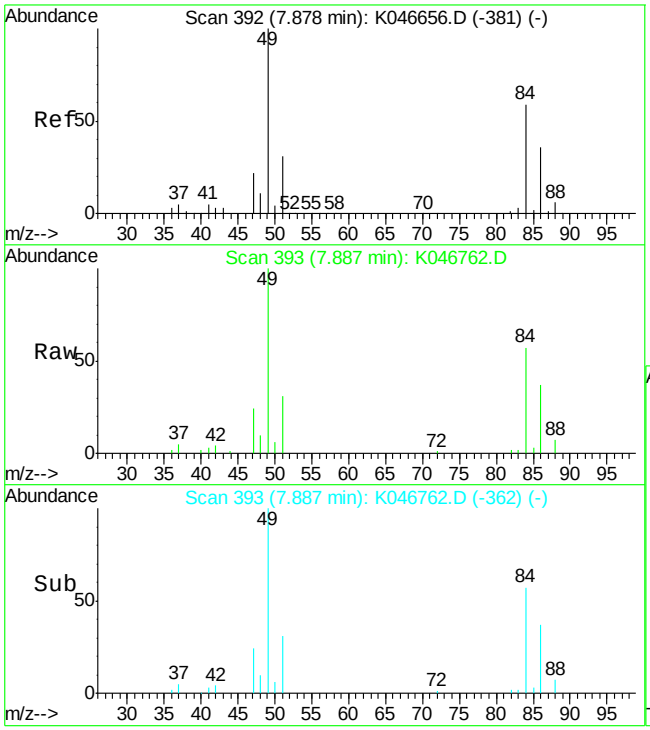
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046762.D Vial: 18
Acq On : 16 Sep 2010 8:06 pm Operator: StevenH
Sample : f76459-7 Inst : MSVOA2
Misc : ms15414,vk2013,5.81,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

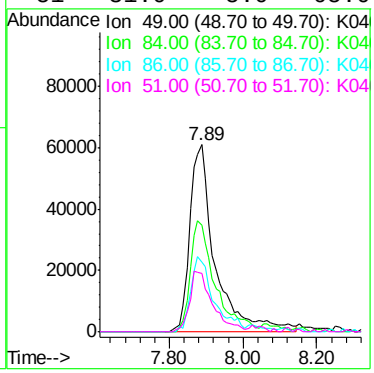




#16
Methylene Chloride
Concen: 26.36 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.01 min
Lab File: K046762.D
Acq: 16 Sep 2010 8:06 pm

Tgt Ion: 49 Resp: 288703

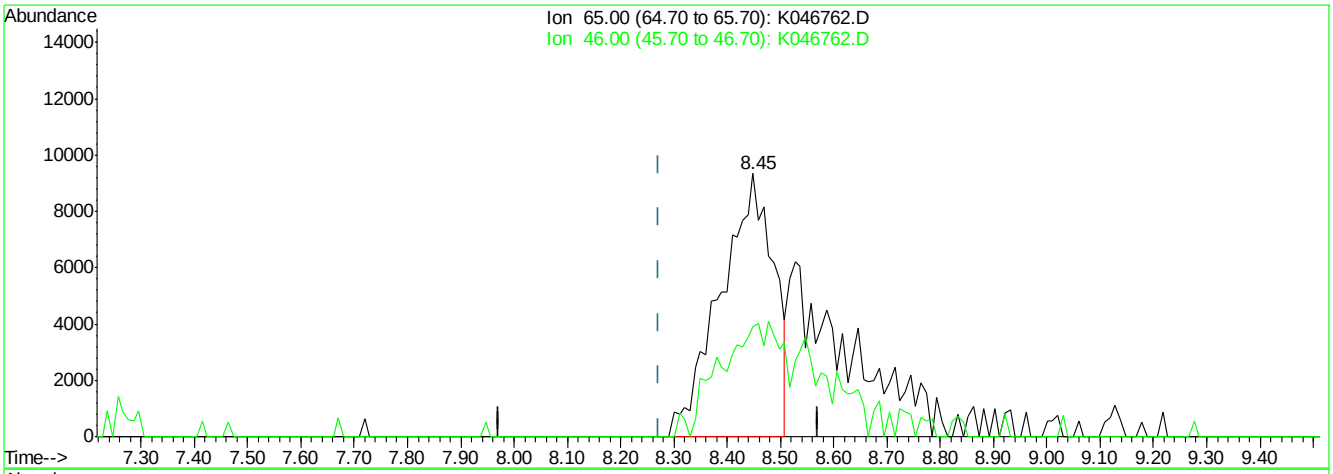
Ion	Ratio	Lower	Upper
49	100		
84	56.9	36.3	96.3
86	37.1	11.1	71.1
51	31.0	5.0	65.0

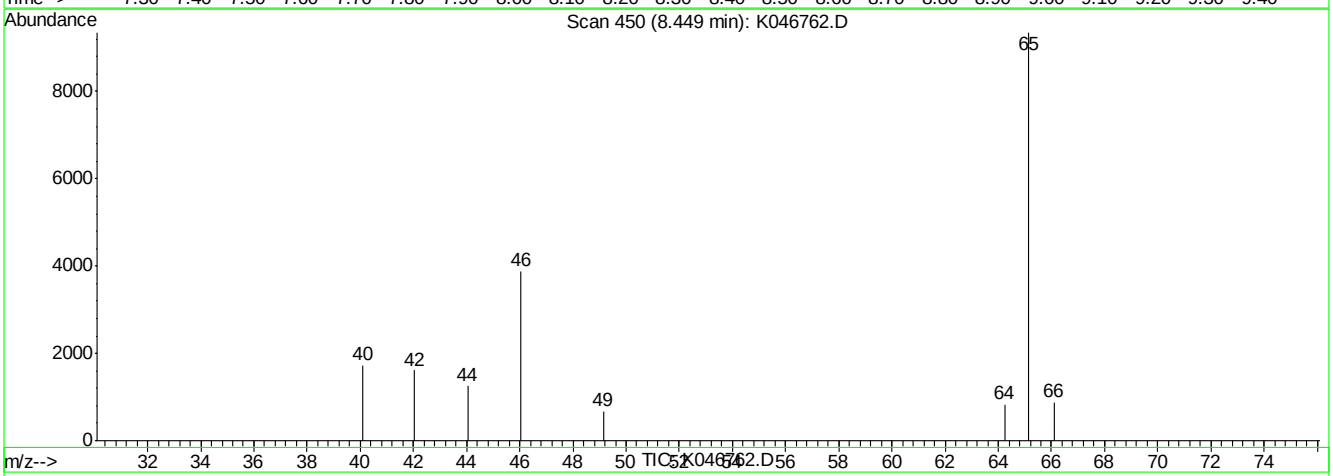


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046762.D Vial: 18
Acq On : 16 Sep 2010 8:06 pm Operator: StevenH
Sample : f76459-7 Inst : MSVOA2
Misc : ms15414,vk2013,5.81,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:40 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.45min (+0.177) 250.00ug/Kg

response 64550

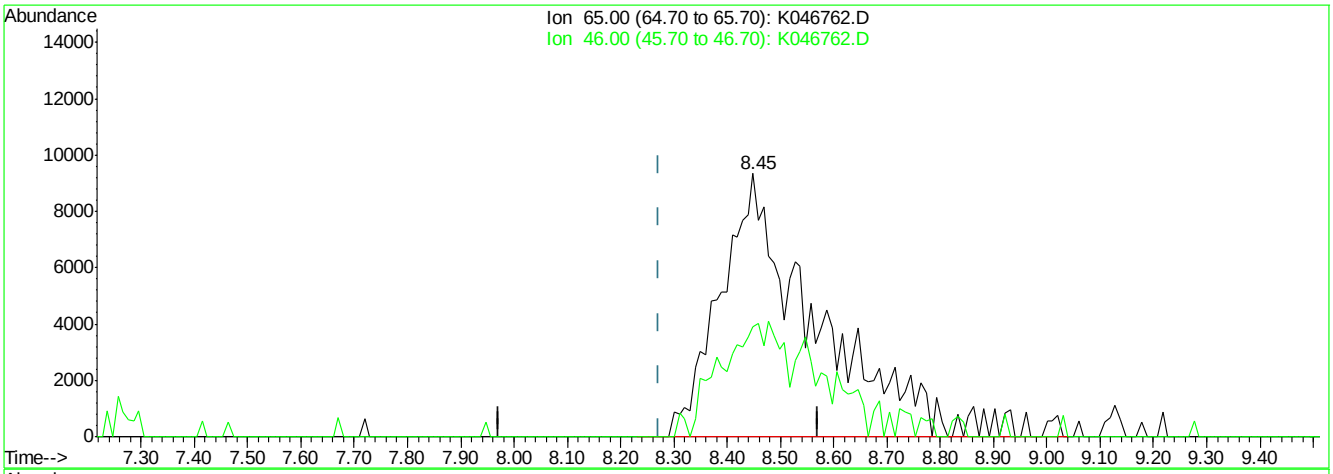
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	41.60
0.00	0.00	0.00
0.00	0.00	0.00

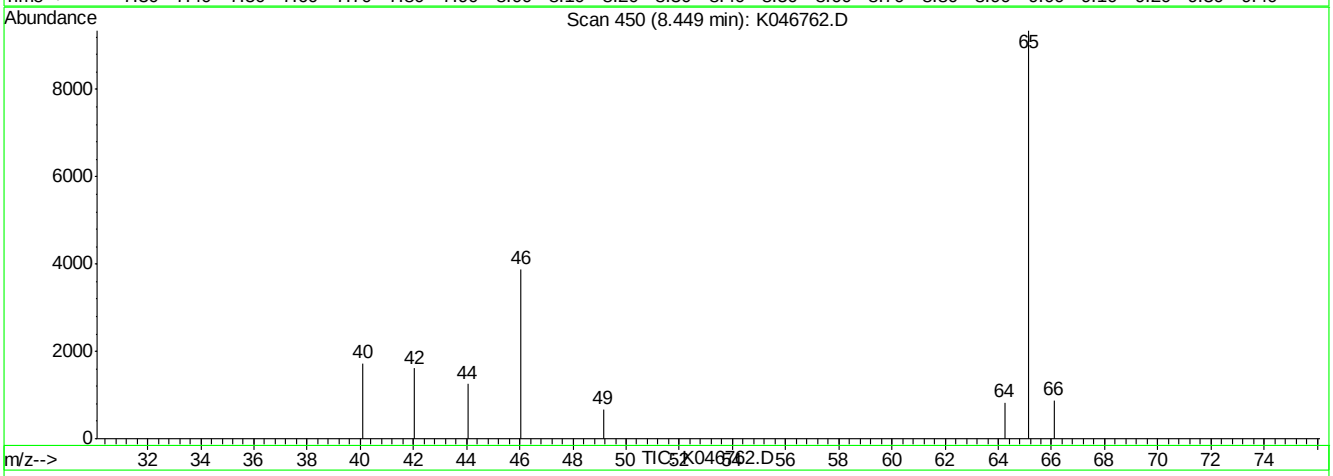
K046762.D 8260-K.M Fri Sep 17 08:40:25 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046762.D Vial: 18
Acq On : 16 Sep 2010 8:06 pm Operator: StevenH
Sample : f76459-7 Inst : MSVOA2
Misc : ms15414,vk2013,5.81,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.45min (+0.177) 250.00ug/Kg m

response 118288

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	41.60
0.00	0.00	0.00
0.00	0.00	0.00

K046762.D 8260-K.M Fri Sep 17 08:40:28 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller 09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046763.D Vial: 19
Acq On : 16 Sep 2010 8:31 pm Operator: StevenH
Sample : f76459-8 Inst : MSVOA2
Misc : ms15414,vk2013,5.41,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:31 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

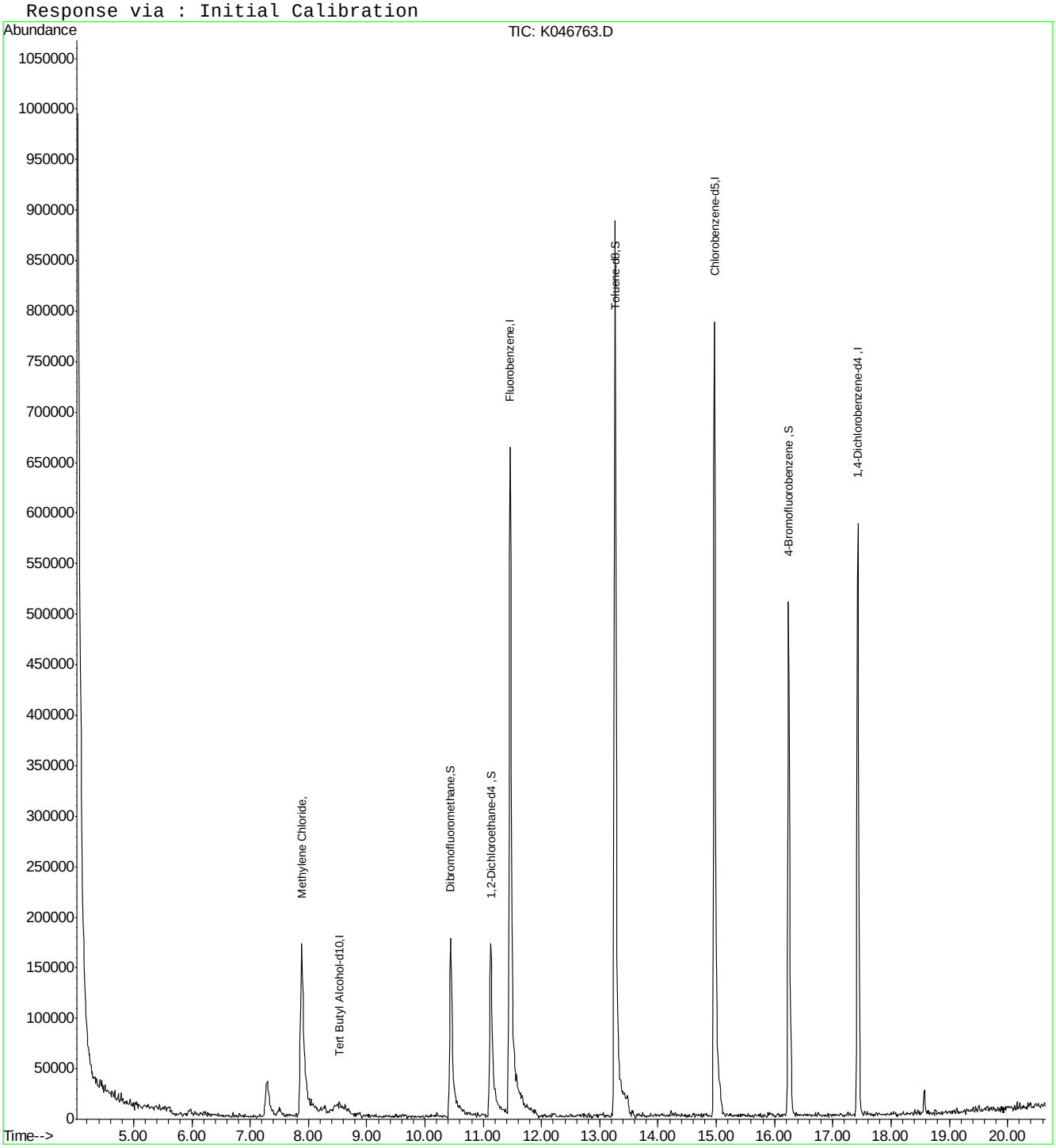
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	854809	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	540797	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	180930	50.00	ug/Kg	0.02
93) Tert Butyl Alcohol-d10	8.53	65	93013m	250.00	ug/Kg	0.26
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	203901	48.18	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 96.36%			
36) 1,2-Dichloroethane-d4	11.13	65	217429	41.66	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 83.32%			
50) Toluene-d8	13.27	98	839061	47.06	ug/Kg	0.02
Spiked Amount 50.000	Range 71 - 130		Recovery = 94.12%			
70) 4-Bromofluorobenzene	16.24	174	183475	57.28	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 114.56%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	261242	25.62	ug/Kg	89

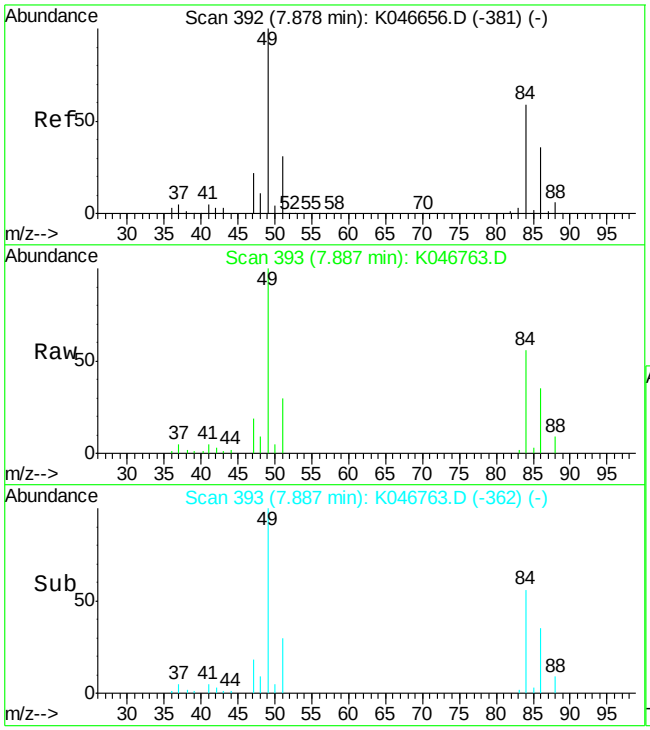
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046763.D Vial: 19
Acq On : 16 Sep 2010 8:31 pm Operator: StevenH
Sample : f76459-8 Inst : MSVOA2
Misc : ms15414,vk2013,5.41,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

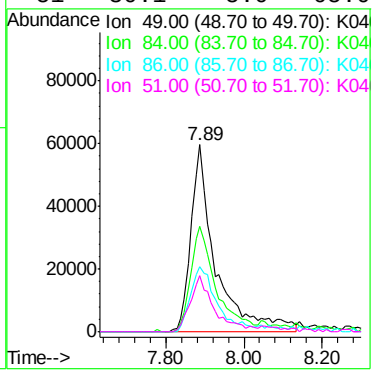




#16
Methylene Chloride
Concen: 25.62 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.01 min
Lab File: K046763.D
Acq: 16 Sep 2010 8:31 pm

Tgt Ion: 49 Resp: 261242

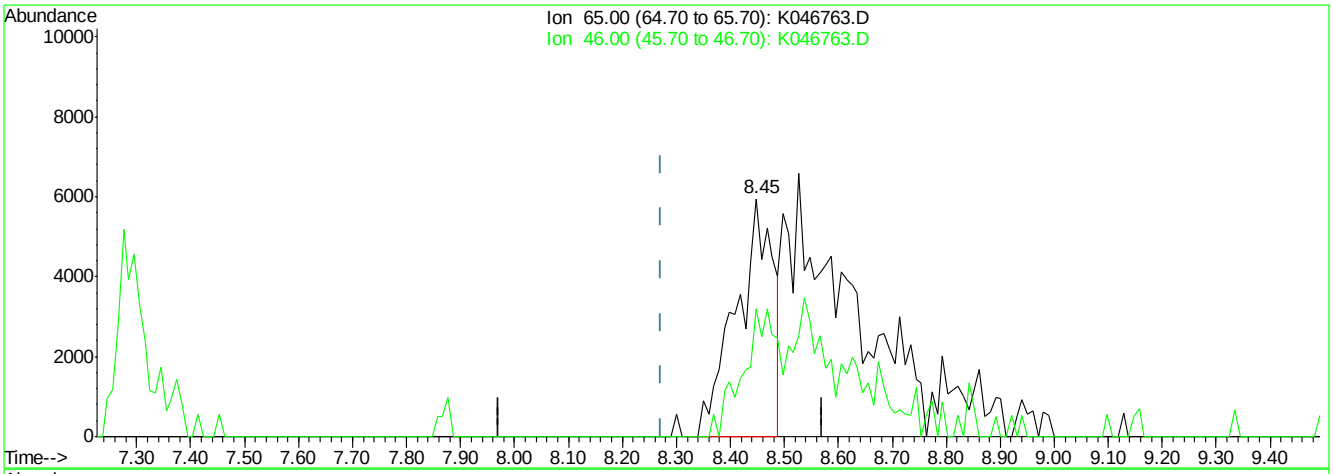
Ion	Ratio	Lower	Upper
49	100		
84	56.2	36.3	96.3
86	35.0	11.1	71.1
51	30.1	5.0	65.0

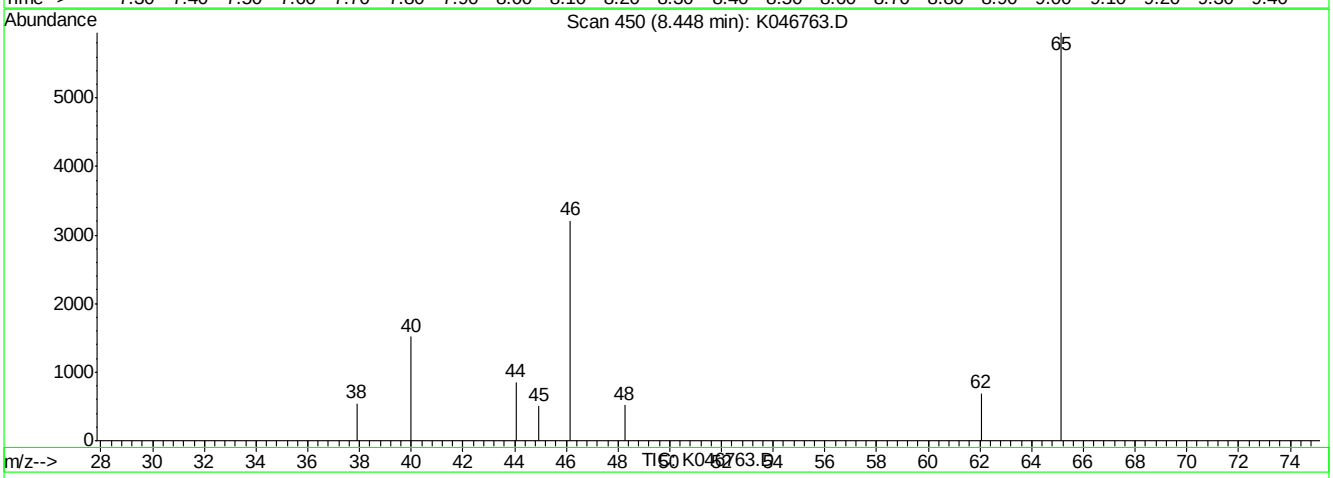


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046763.D Vial: 19
Acq On : 16 Sep 2010 8:31 pm Operator: StevenH
Sample : f76459-8 Inst : MSVOA2
Misc : ms15414,vk2013,5.41,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:40 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.45min (+0.176) 250.00ug/Kg

response 28368

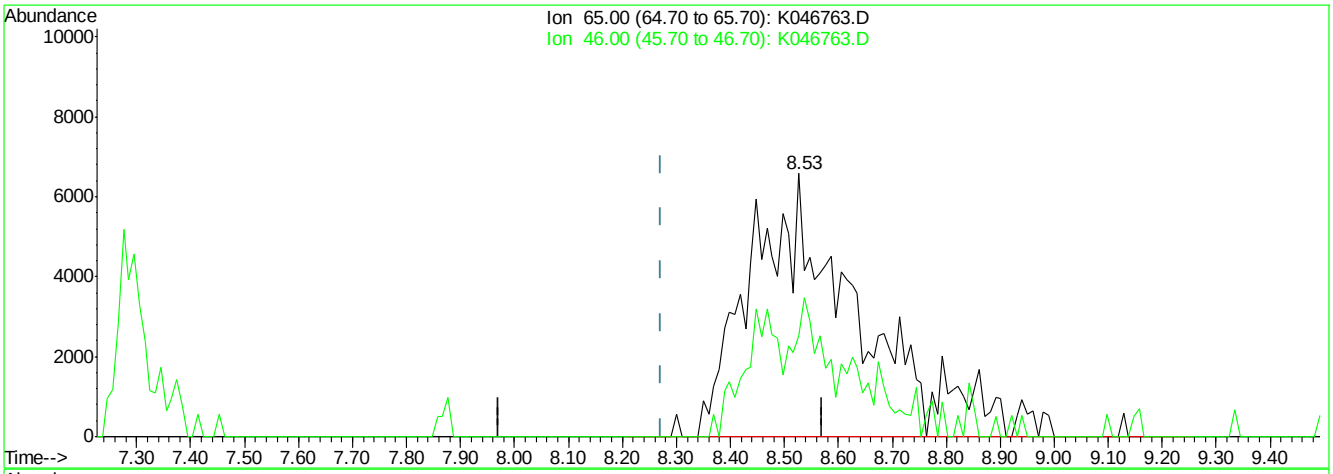
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	53.90
0.00	0.00	0.00
0.00	0.00	0.00

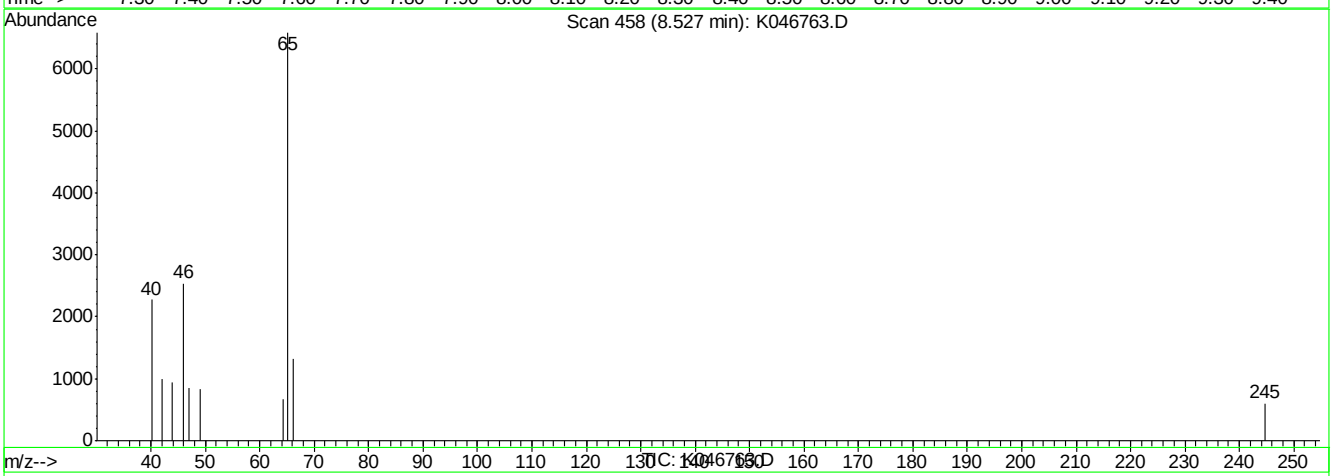
K046763.D 8260-K.M Fri Sep 17 08:40:36 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046763.D Vial: 19
Acq On : 16 Sep 2010 8:31 pm Operator: StevenH
Sample : f76459-8 Inst : MSVOA2
Misc : ms15414,vk2013,5.41,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.53min (+0.255) 250.00ug/Kg m

response 93013

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	38.47
0.00	0.00	0.00
0.00	0.00	0.00

K046763.D 8260-K.M Fri Sep 17 08:40:40 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:39

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046764.D Vial: 20
Acq On : 16 Sep 2010 8:57 pm Operator: StevenH
Sample : f76459-9 Inst : MSVOA2
Misc : ms15414,vk2013,4.72,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:32 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

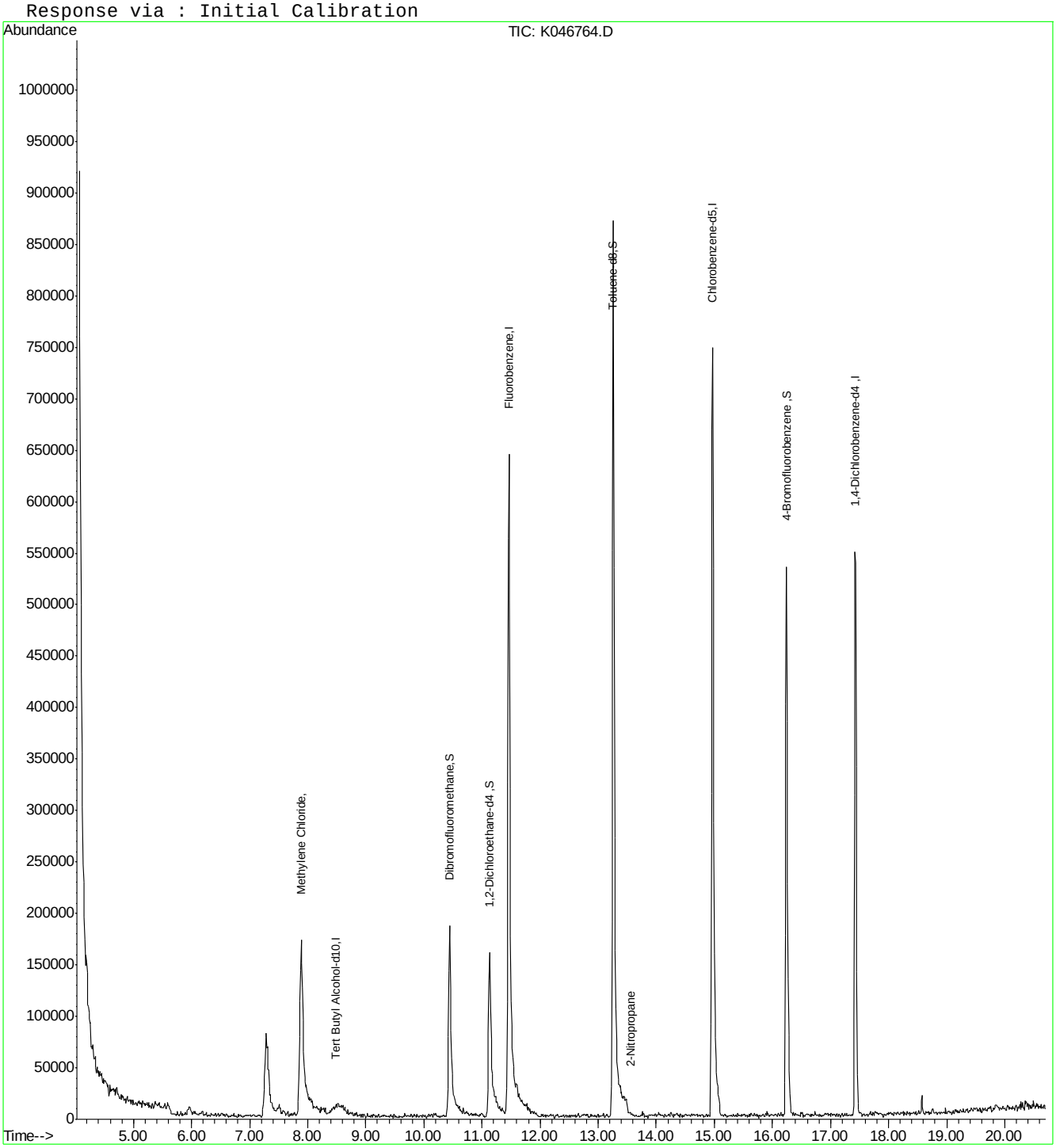
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	834753	50.00	ug/Kg	0.01
49) Chlorobenzene-d5	14.97	117	539133	50.00	ug/Kg	0.01
67) 1,4-Dichlorobenzene-d4	17.43	152	181666	50.00	ug/Kg	0.02
93) Tert Butyl Alcohol-d10	8.49	65	78804m	250.00	ug/Kg	0.22
System Monitoring Compounds						
31) Dibromofluoromethane	10.45	113	211035	51.06	ug/Kg	0.01
Spiked Amount 50.000	Range 80 - 121		Recovery = 102.12%			
36) 1,2-Dichloroethane-d4	11.14	65	216762	42.53	ug/Kg	0.02
Spiked Amount 50.000	Range 77 - 123		Recovery = 85.06%			
50) Toluene-d8	13.26	98	825208	46.43	ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 92.86%			
70) 4-Bromofluorobenzene	16.24	174	175416	54.54	ug/Kg	0.01
Spiked Amount 50.000	Range 59 - 148		Recovery = 109.08%			
Target Compounds						Qvalue
16) Methylene Chloride	7.89	49	279787	28.10	ug/Kg	90
45) 2-Nitropropane	13.54	41	1155	1.32	ug/Kg#	52

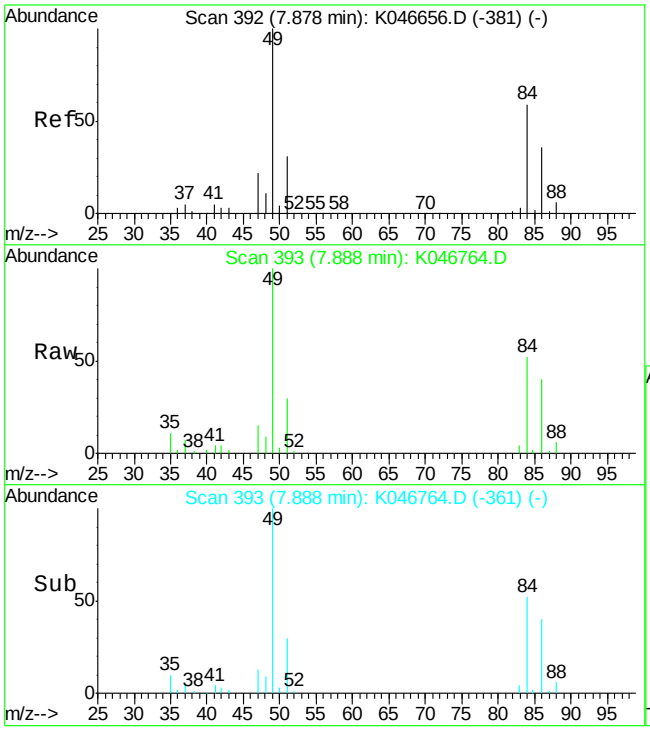
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046764.D Vial: 20
Acq On : 16 Sep 2010 8:57 pm Operator: StevenH
Sample : f76459-9 Inst : MSVOA2
Misc : ms15414,vk2013,4.72,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

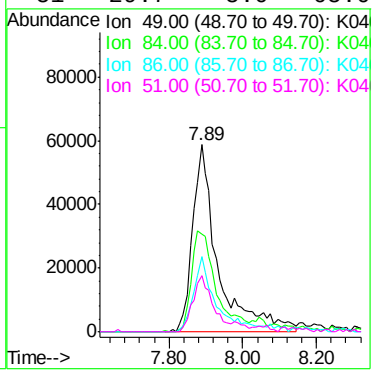


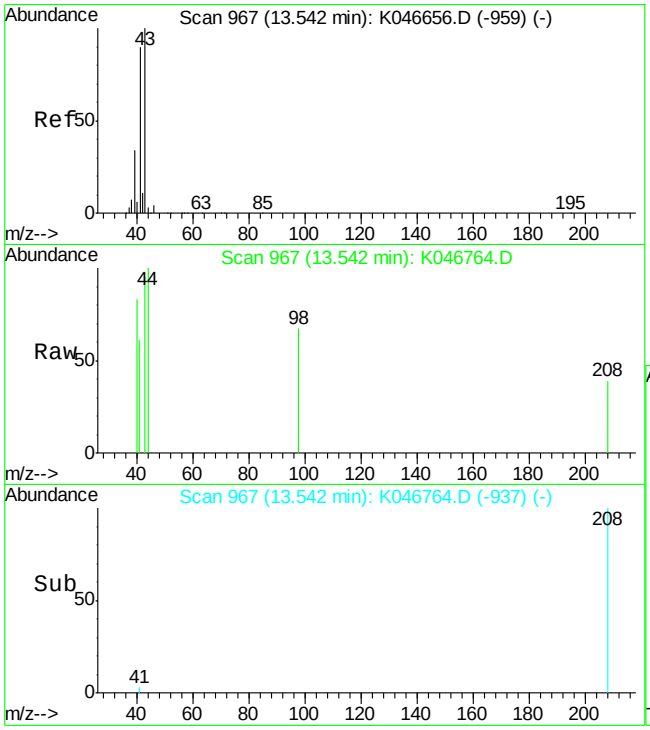


#16
Methylene Chloride
Concen: 28.10 ug/Kg
RT: 7.89 min Scan# 393
Delta R.T. 0.01 min
Lab File: K046764.D
Acq: 16 Sep 2010 8:57 pm

Tgt Ion: 49 Resp: 279787

Ion	Ratio	Lower	Upper
49	100		
84	53.2	36.3	96.3
86	40.3	11.1	71.1
51	29.7	5.0	65.0

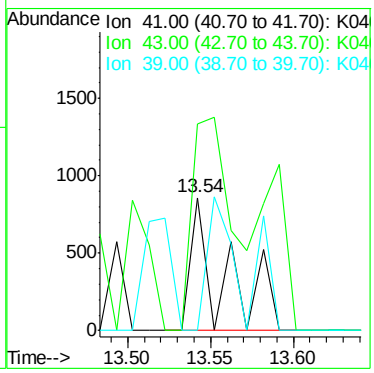




#45
2-Nitropropane
Concen: 1.32 ug/Kg
RT: 13.54 min Scan# 967
Delta R.T. 0.00 min
Lab File: K046764.D
Acq: 16 Sep 2010 8:57 pm

Tgt Ion: 41 Resp: 1155

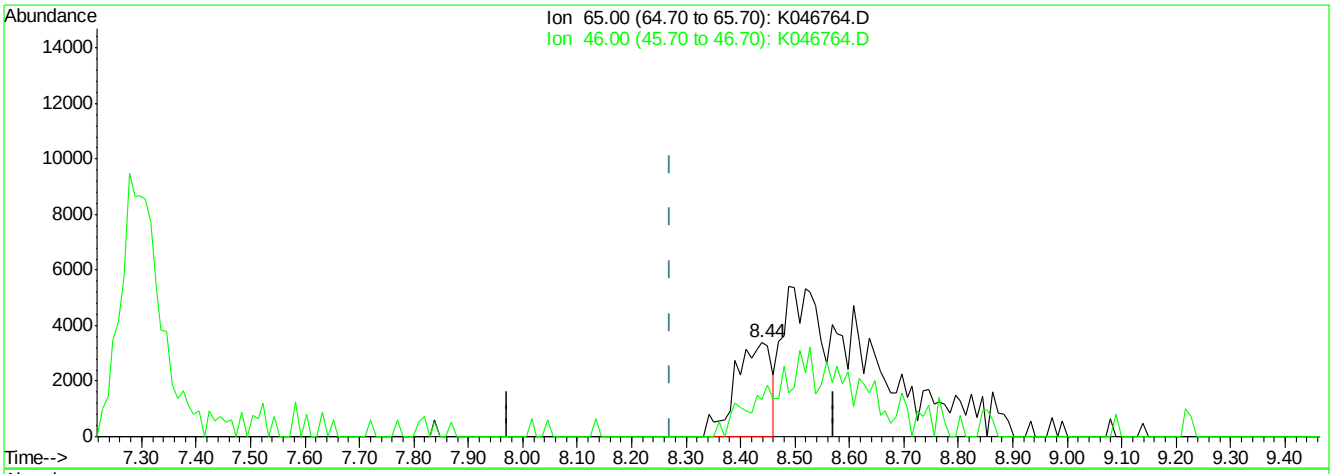
Ion	Ratio	Lower	Upper
41	100		
43	155.8	80.1	140.1#
39	0.0	5.8	65.8#

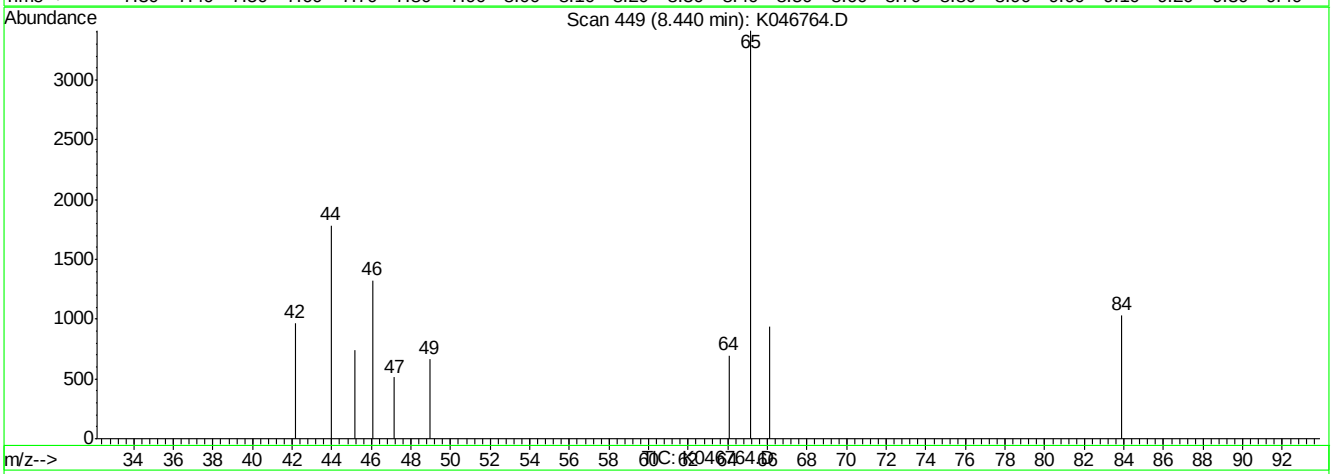


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046764.D Vial: 20
Acq On : 16 Sep 2010 8:57 pm Operator: StevenH
Sample : f76459-9 Inst : MSVOA2
Misc : ms15414,vk2013,4.72,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.44min (+0.168) 250.00ug/Kg

response 15611

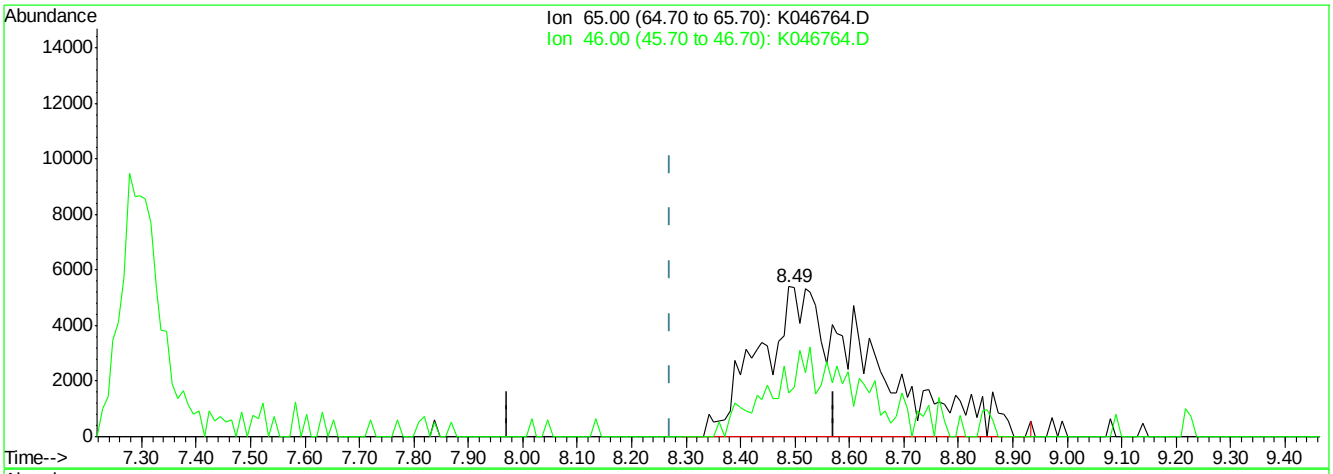
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	38.83
0.00	0.00	0.00
0.00	0.00	0.00

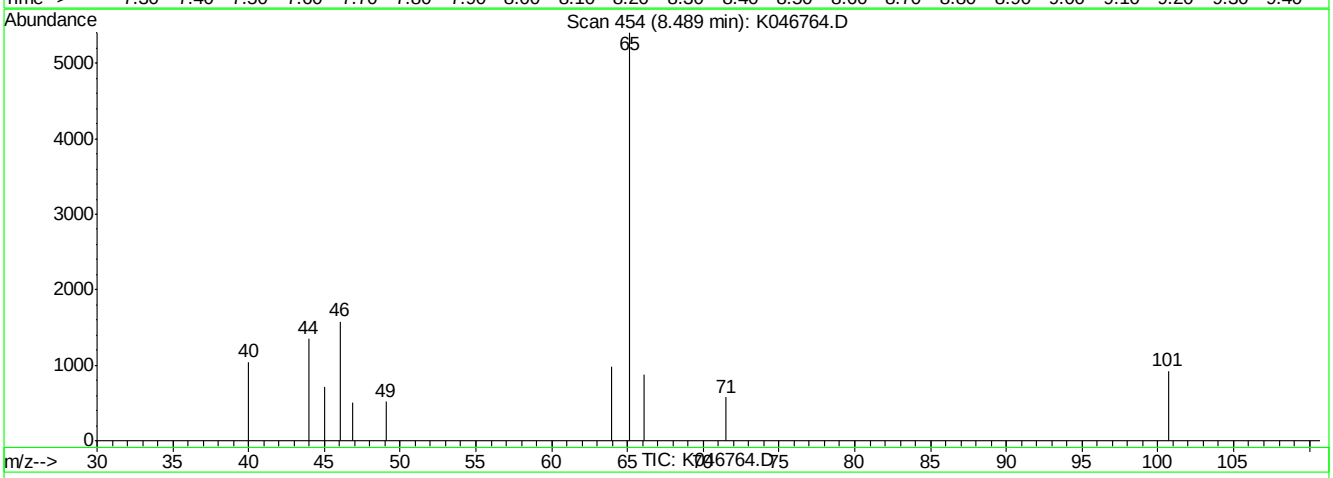
K046764.D 8260-K.M Fri Sep 17 08:41:16 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046764.D Vial: 20
Acq On : 16 Sep 2010 8:57 pm Operator: StevenH
Sample : f76459-9 Inst : MSVOA2
Misc : ms15414,vk2013,4.72,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:41 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.49min (+0.217) 250.00ug/Kg m

response 78804

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	29.16
0.00	0.00	0.00
0.00	0.00	0.00

K046764.D 8260-K.M Fri Sep 17 08:41:20 2010

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073575.D
Acq On : 15 Sep 2010 4:51 pm
Operator : AnaJ
Sample : F76459-10
Misc : MS15409,VC2933,,,,,
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 16 07:36:21 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

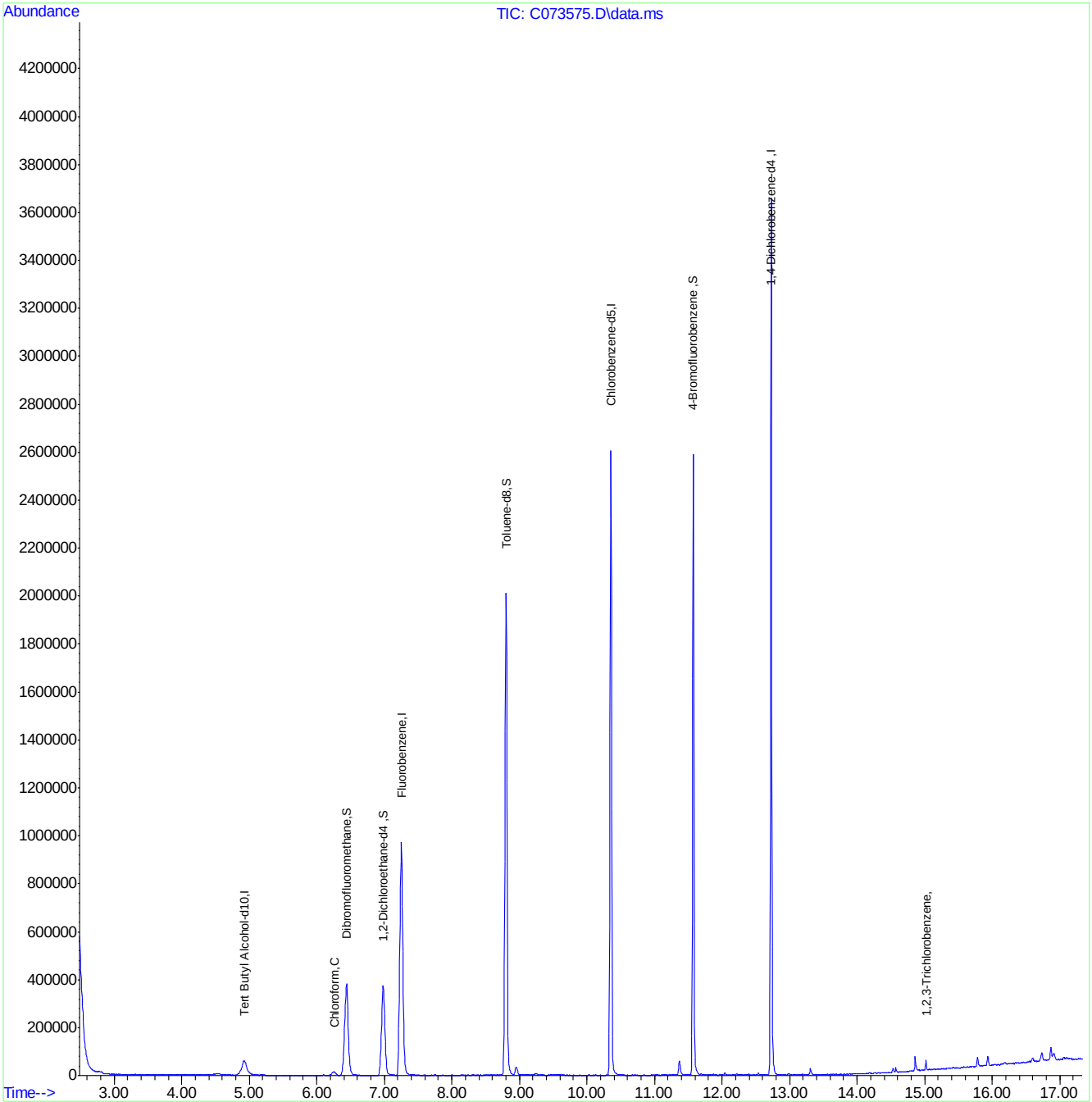
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.251	96	1492282	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	1409079	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	883801	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.927	65	187123	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.442	113	432002	47.00	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 94.00%			
38) 1,2-Dichloroethane-d4	6.983	65	521076	39.63	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 79.26%			
48) Toluene-d8	8.802	98	1606433	50.62	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 101.24%			
69) 4-Bromofluorobenzene	11.570	95	713585	49.90	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 99.80%			
Target Compounds						Qvalue
29) Chloroform	6.265	83	19452	0.90	ug/L	91
92) 1,2,3-Trichlorobenzene	15.019	180	10013	0.52	ug/L	91

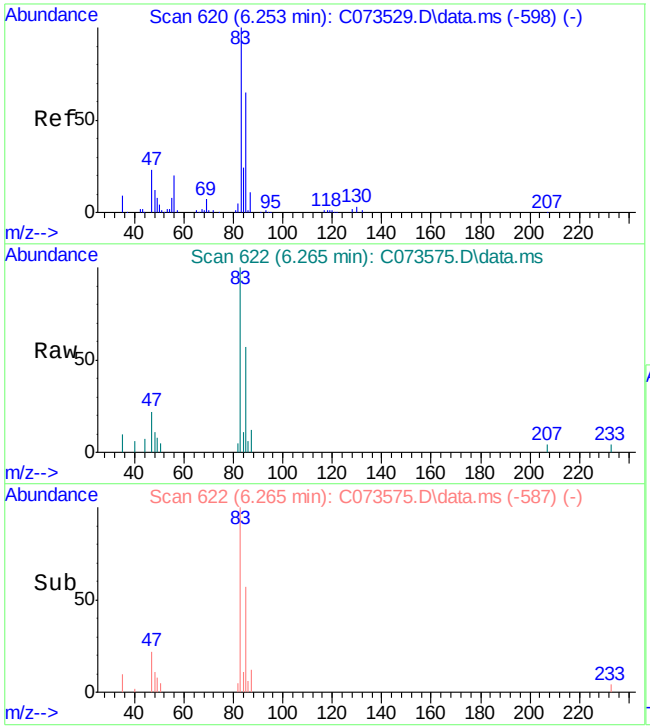
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073575.D
Acq On : 15 Sep 2010 4:51 pm
Operator : AnaJ
Sample : F76459-10
Misc : MS15409,VC2933,,,,,
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 16 07:36:21 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

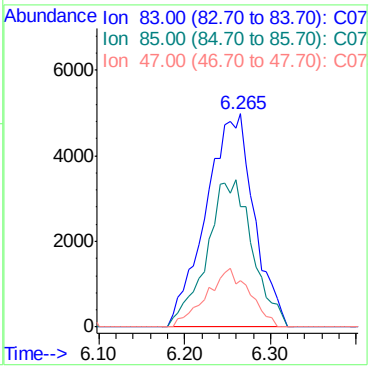


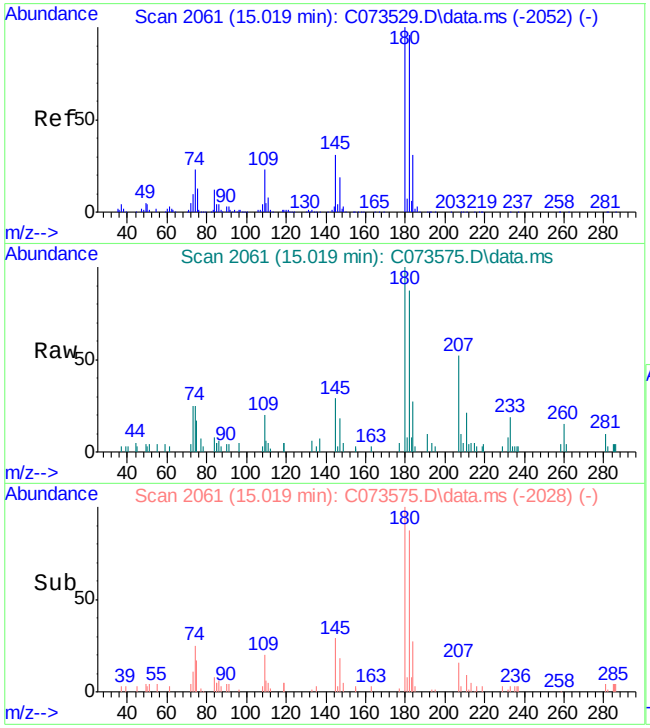


#29
Chloroform
Concen: 0.90 ug/L
RT: 6.265 min Scan# 622
Delta R.T. 0.012 min
Lab File: C073575.D
Acq: 15 Sep 2010 4:51 pm

Tgt Ion: 83 Resp: 19452

Ion	Ratio	Lower	Upper
83	100		
85	56.6	35.3	95.3
47	21.6	0.0	53.0

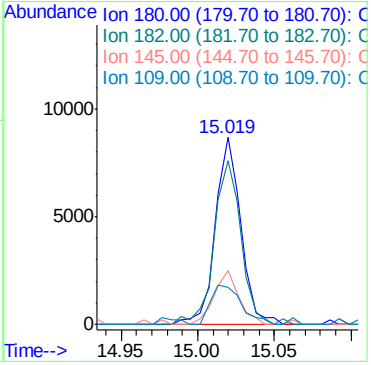




#92
1,2,3-Trichlorobenzene
Concen: 0.52 ug/L
RT: 15.019 min Scan# 2061
Delta R.T. 0.000 min
Lab File: C073575.D
Acq: 15 Sep 2010 4:51 pm

Tgt Ion:180 Resp: 10013

Ion	Ratio	Lower	Upper
180	100		
182	87.4	65.9	125.9
145	26.3	0.7	60.7
109	16.1	0.0	52.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073576.D
Acq On : 15 Sep 2010 5:16 pm
Operator : AnaJ
Sample : F76459-11
Misc : MS15409,VC2933,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 16 07:36:37 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

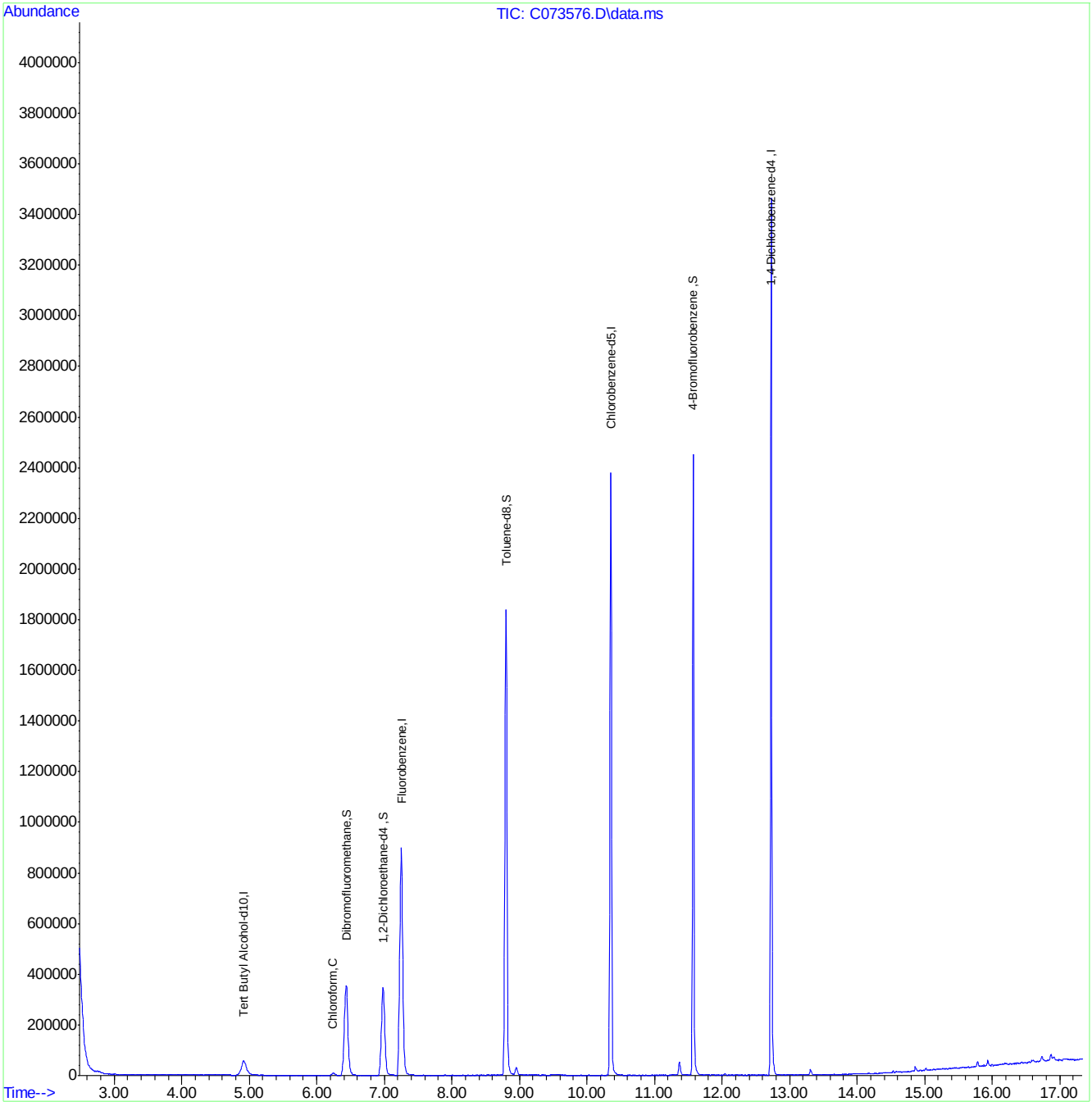
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.251	96	1359840	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	1292737	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	822280	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.908	65	174698	250.00	ug/L	-0.01
System Monitoring Compounds						
31) Dibromofluoromethane	6.435	113	399147	47.65	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 95.30%			
38) 1,2-Dichloroethane-d4	6.977	65	494579	41.28	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 82.56%			
48) Toluene-d8	8.802	98	1471642	50.55	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 101.10%			
69) 4-Bromofluorobenzene	11.570	95	672543	50.54	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 101.08%			
Target Compounds						Qvalue
29) Chloroform	6.241	83	11339	0.58	ug/L	98

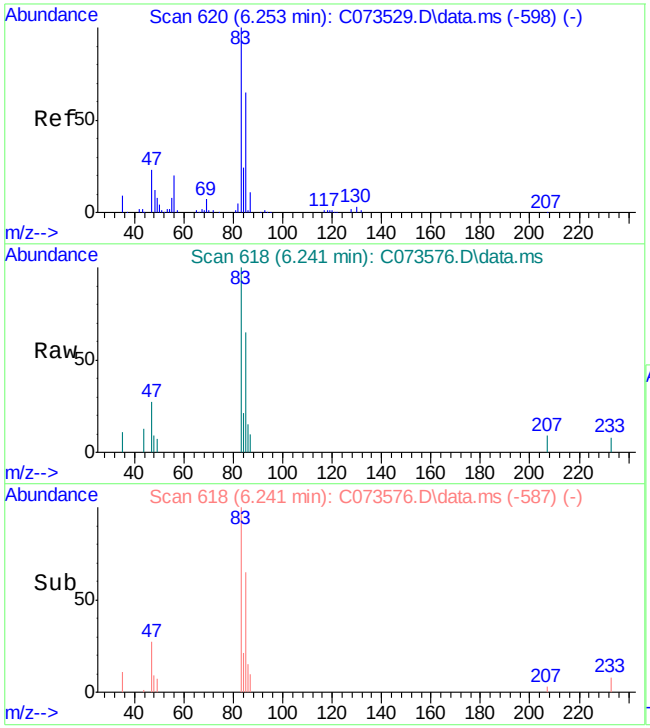
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073576.D
Acq On : 15 Sep 2010 5:16 pm
Operator : AnaJ
Sample : F76459-11
Misc : MS15409,VC2933,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 16 07:36:37 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

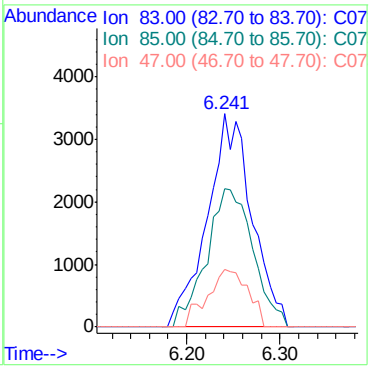




#29
Chloroform
Concen: 0.58 ug/L
RT: 6.241 min Scan# 618
Delta R.T. -0.012 min
Lab File: C073576.D
Acq: 15 Sep 2010 5:16 pm

Tgt Ion: 83 Resp: 11339

Ion	Ratio	Lower	Upper
83	100		
85	64.9	35.3	95.3
47	26.9	0.0	53.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073577.D
Acq On : 15 Sep 2010 5:41 pm
Operator : AnaJ
Sample : F76459-12
Misc : MS15409,VC2933,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 16 07:36:53 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

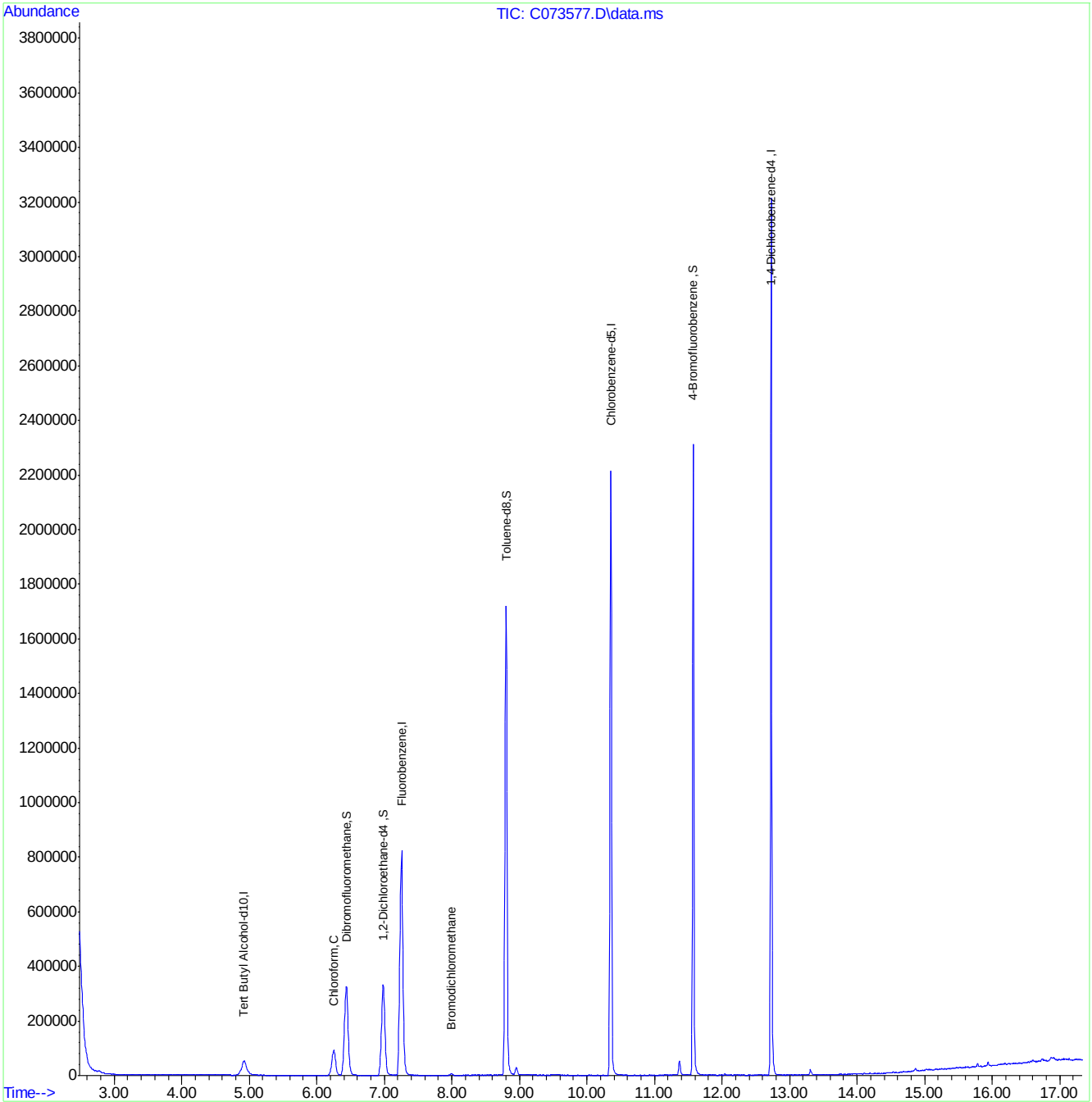
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.257	96	1256729	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	1205668	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	759430	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.915	65	160401	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.435	113	379424	49.02	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 98.04%			
38) 1,2-Dichloroethane-d4	6.983	65	480137	43.36	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 86.72%			
48) Toluene-d8	8.802	98	1383982	50.97	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 101.94%			
69) 4-Bromofluorobenzene	11.570	95	630268	51.29	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 102.58%			
Target Compounds						Qvalue
29) Chloroform	6.253	83	140578	7.73	ug/L	97
44) Bromodichloromethane	7.999	83	5600	0.38	ug/L	92

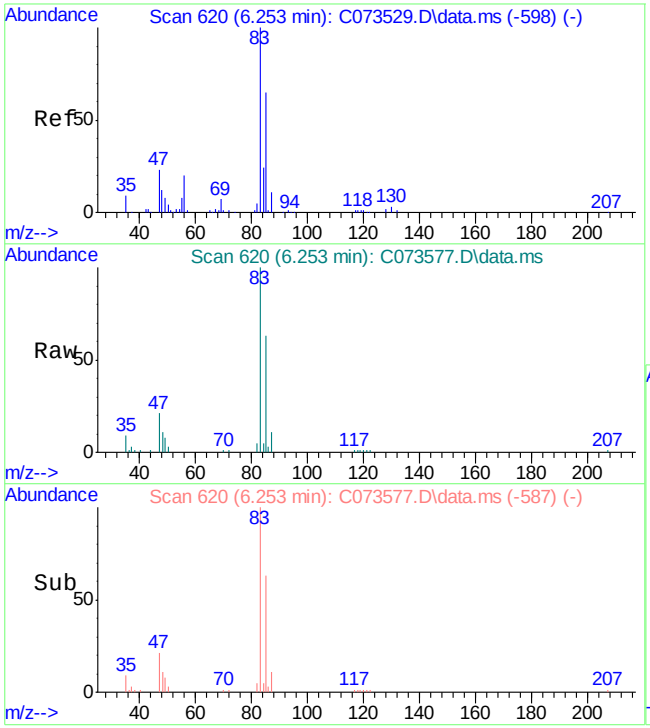
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073577.D
Acq On : 15 Sep 2010 5:41 pm
Operator : AnaJ
Sample : F76459-12
Misc : MS15409,VC2933,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 16 07:36:53 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

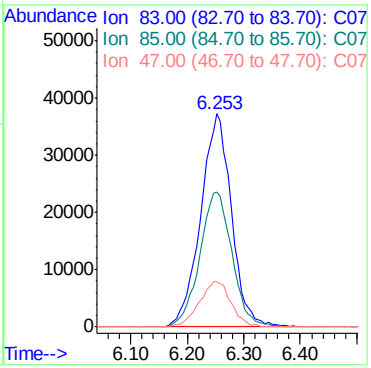


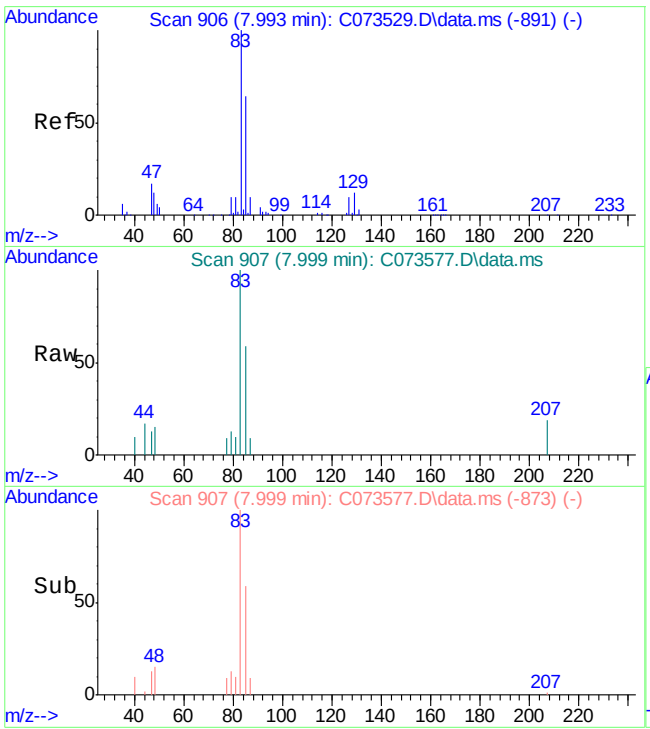


#29
Chloroform
Concen: 7.73 ug/L
RT: 6.253 min Scan# 620
Delta R.T. -0.000 min
Lab File: C073577.D
Acq: 15 Sep 2010 5:41 pm

Tgt Ion: 83 Resp: 140578

Ion	Ratio	Lower	Upper
83	100		
85	63.3	35.3	95.3
47	21.2	0.0	53.0

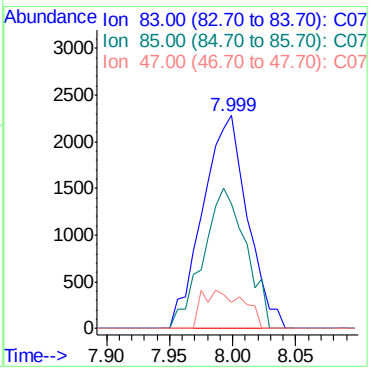




#44
Bromodichloromethane
Concen: 0.38 ug/L
RT: 7.999 min Scan# 907
Delta R.T. 0.006 min
Lab File: C073577.D
Acq: 15 Sep 2010 5:41 pm

Tgt Ion: 83 Resp: 5600

Ion	Ratio	Lower	Upper
83	100		
85	58.6	45.1	83.9
47	12.5	12.0	22.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073578.D
Acq On : 15 Sep 2010 6:05 pm
Operator : AnaJ
Sample : F76459-13
Misc : MS15409,VC2933,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 16 07:37:08 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

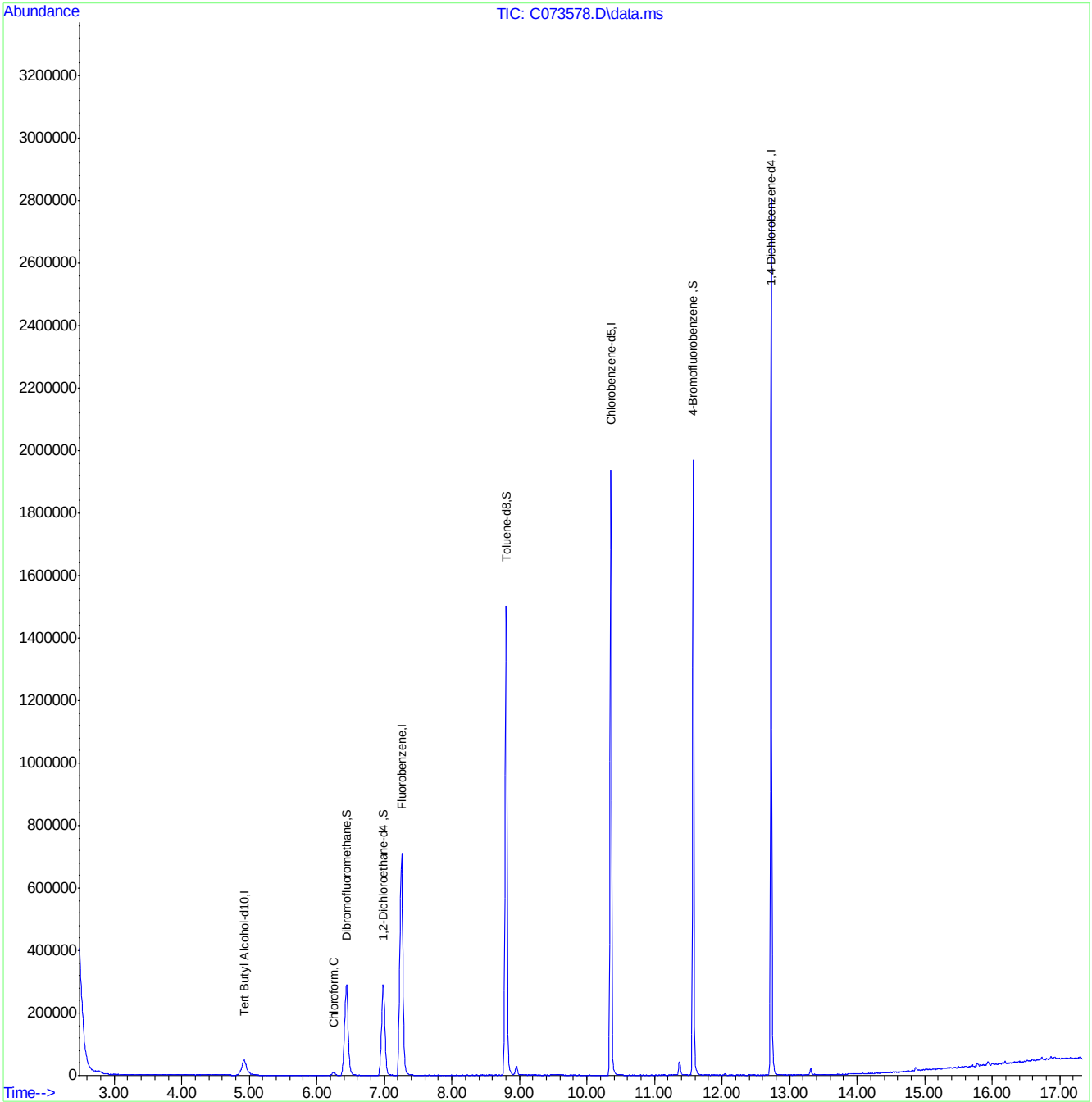
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.257	96	1066998	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	1017296	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	648541	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.927	65	140739	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.441	113	325151	49.47	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 98.94%			
38) 1,2-Dichloroethane-d4	6.983	65	418614	44.53	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 89.06%			
48) Toluene-d8	8.802	98	1155935	50.46	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.92%			
69) 4-Bromofluorobenzene	11.570	95	541427	51.59	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 103.18%			
Target Compounds						Qvalue
29) Chloroform	6.247	83	12672	0.82	ug/L	92

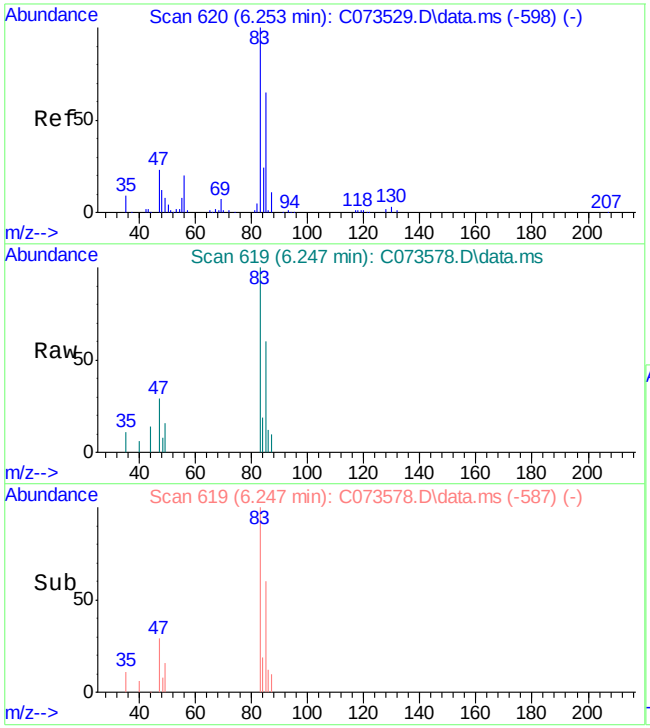
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073578.D
Acq On : 15 Sep 2010 6:05 pm
Operator : AnaJ
Sample : F76459-13
Misc : MS15409,VC2933,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 16 07:37:08 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

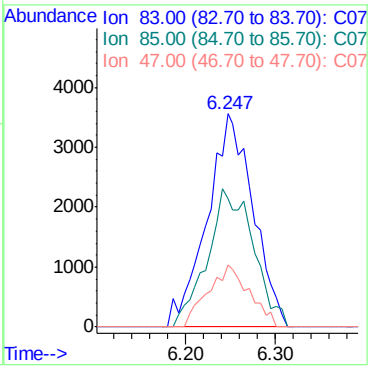




#29
Chloroform
Concen: 0.82 ug/L
RT: 6.247 min Scan# 619
Delta R.T. -0.006 min
Lab File: C073578.D
Acq: 15 Sep 2010 6:05 pm

Tgt Ion: 83 Resp: 12672

Ion	Ratio	Lower	Upper
83	100		
85	60.3	35.3	95.3
47	29.1	0.0	53.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073579.D
Acq On : 15 Sep 2010 6:30 pm
Operator : AnaJ
Sample : F76459-14
Misc : MS15409,VC2933,,,,,
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 16 07:37:24 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

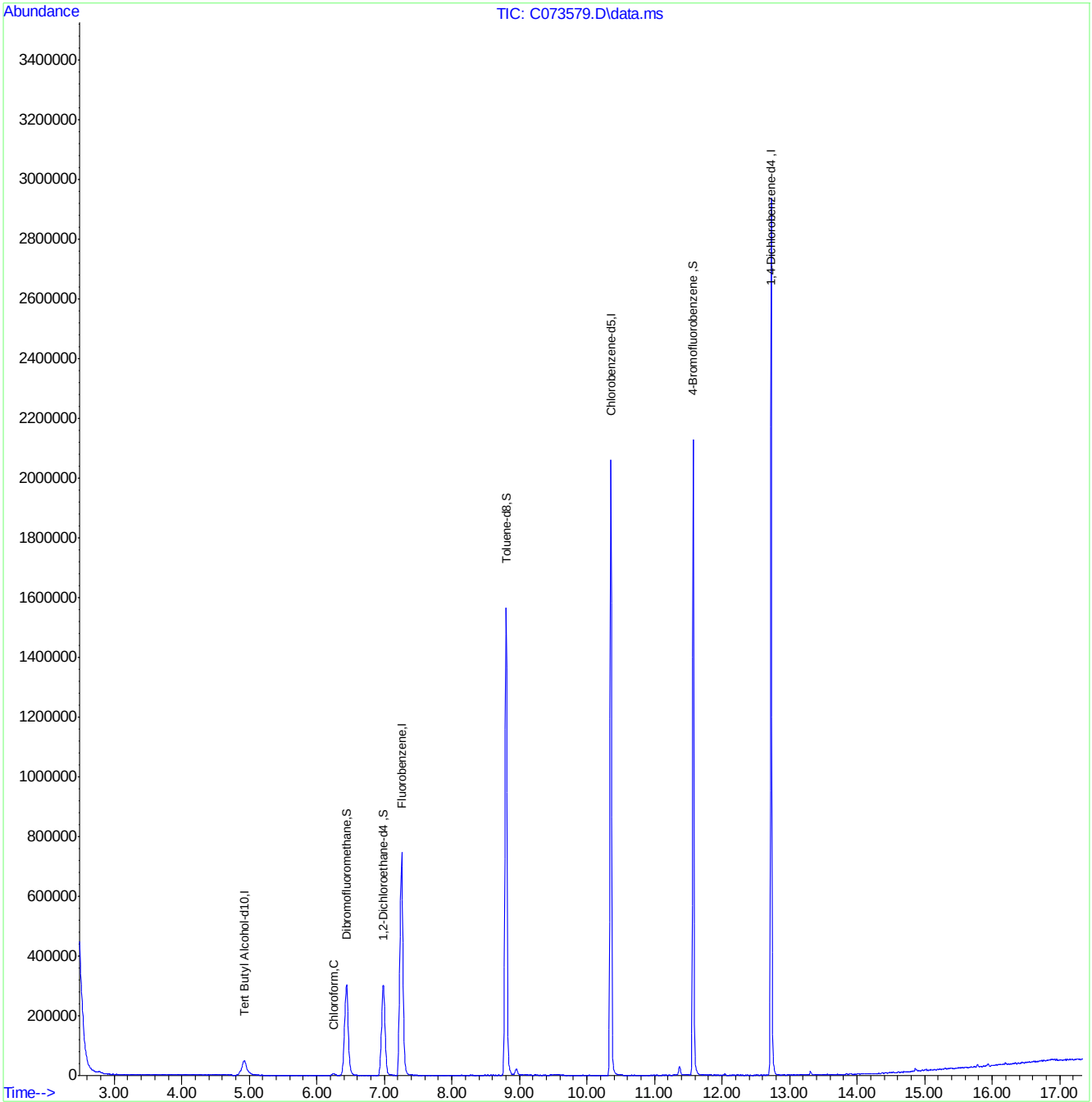
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.250	96	1128729	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	1085414	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	690284	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.926	65	147041	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.441	113	346303	49.81	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 99.62%			
38) 1,2-Dichloroethane-d4	6.989	65	446467	44.90	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 89.80%			
48) Toluene-d8	8.802	98	1229830	50.31	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.62%			
69) 4-Bromofluorobenzene	11.570	95	577696	51.72	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 103.44%			
Target Compounds						Qvalue
29) Chloroform	6.247	83	7407	0.45	ug/L	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

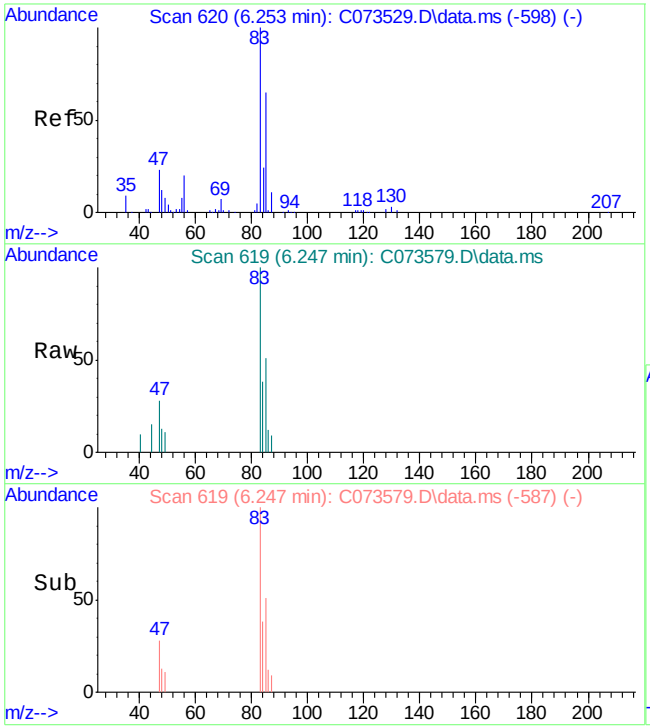
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073579.D
Acq On : 15 Sep 2010 6:30 pm
Operator : AnaJ
Sample : F76459-14
Misc : MS15409,VC2933,,,,,
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 16 07:37:24 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration



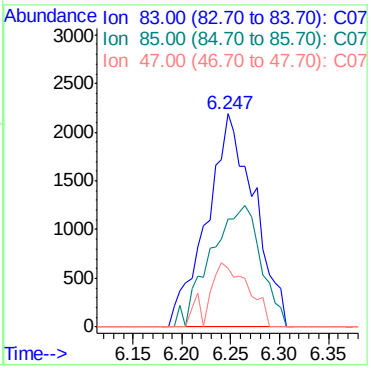
8260c.m Thu Sep 16 08:12:43 2010 Page: 2



#29
Chloroform
Concen: 0.45 ug/L
RT: 6.247 min Scan# 619
Delta R.T. -0.006 min
Lab File: C073579.D
Acq: 15 Sep 2010 6:30 pm

Tgt Ion: 83 Resp: 7407

Ion	Ratio	Lower	Upper
83	100		
85	50.7	35.3	95.3
47	27.6	0.0	53.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073580.D
Acq On : 15 Sep 2010 6:55 pm
Operator : AnaJ
Sample : F76459-15
Misc : MS15409,VC2933,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 16 07:37:40 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

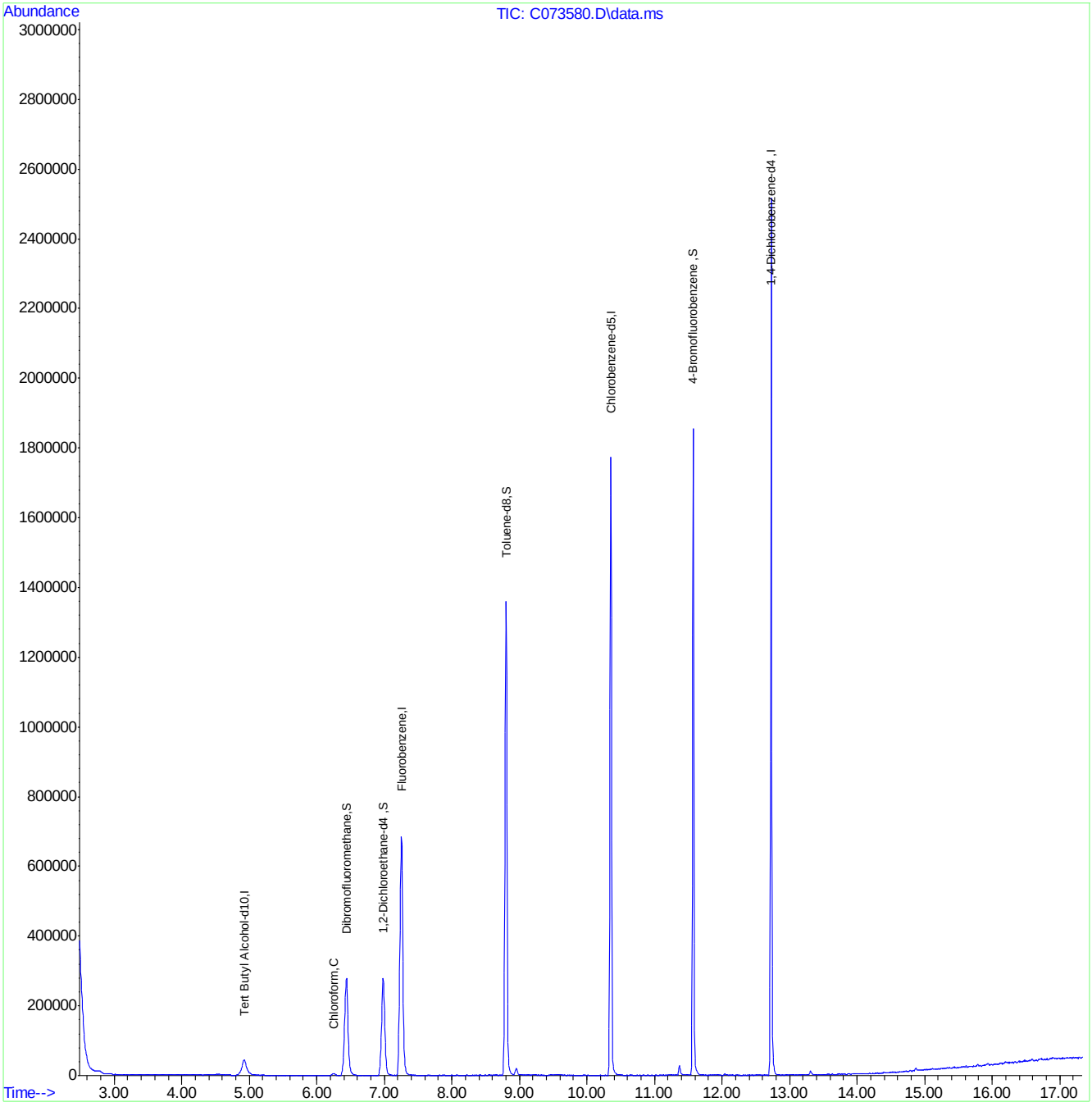
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.251	96	941452	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	918791	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	583030	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.921	65	126809	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.436	113	291835	50.33	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 100.66%			
38) 1,2-Dichloroethane-d4	6.983	65	382141	46.07	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 92.14%			
48) Toluene-d8	8.802	98	1029319	49.75	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 99.50%			
69) 4-Bromofluorobenzene	11.570	95	486879	51.61	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 103.22%			
Target Compounds						Qvalue
29) Chloroform	6.253	83	6813	0.50	ug/L	84

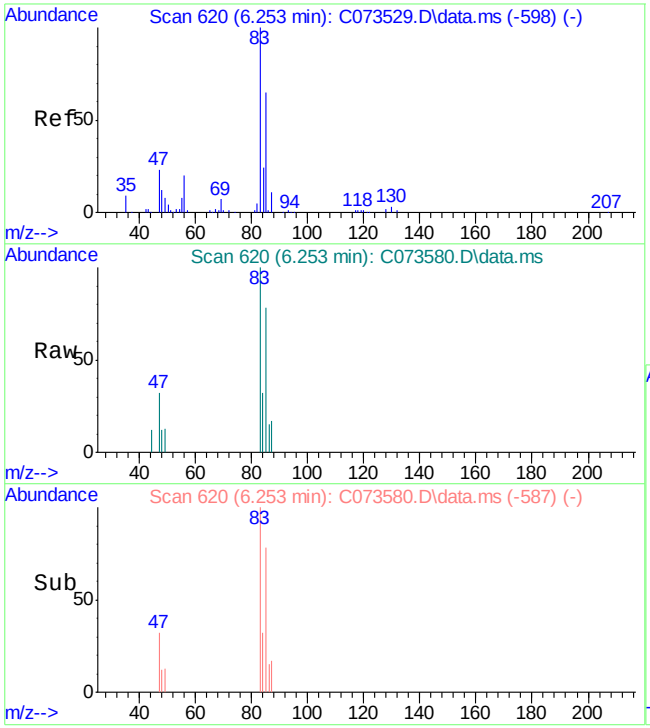
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073580.D
Acq On : 15 Sep 2010 6:55 pm
Operator : AnaJ
Sample : F76459-15
Misc : MS15409,VC2933,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 16 07:37:40 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

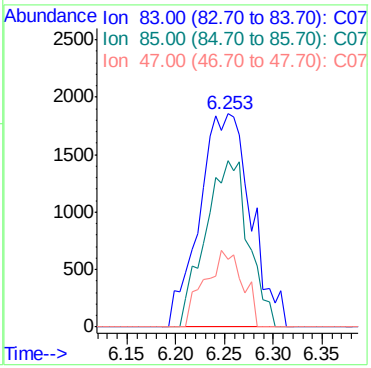




#29
Chloroform
Concen: 0.50 ug/L
RT: 6.253 min Scan# 620
Delta R.T. 0.000 min
Lab File: C073580.D
Acq: 15 Sep 2010 6:55 pm

Tgt Ion: 83 Resp: 6813

Ion	Ratio	Lower	Upper
83	100		
85	77.9	35.3	95.3
47	31.5	0.0	53.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073581.D
Acq On : 15 Sep 2010 7:20 pm
Operator : AnaJ
Sample : F76459-16
Misc : MS15409,VC2933,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 16 07:37:59 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

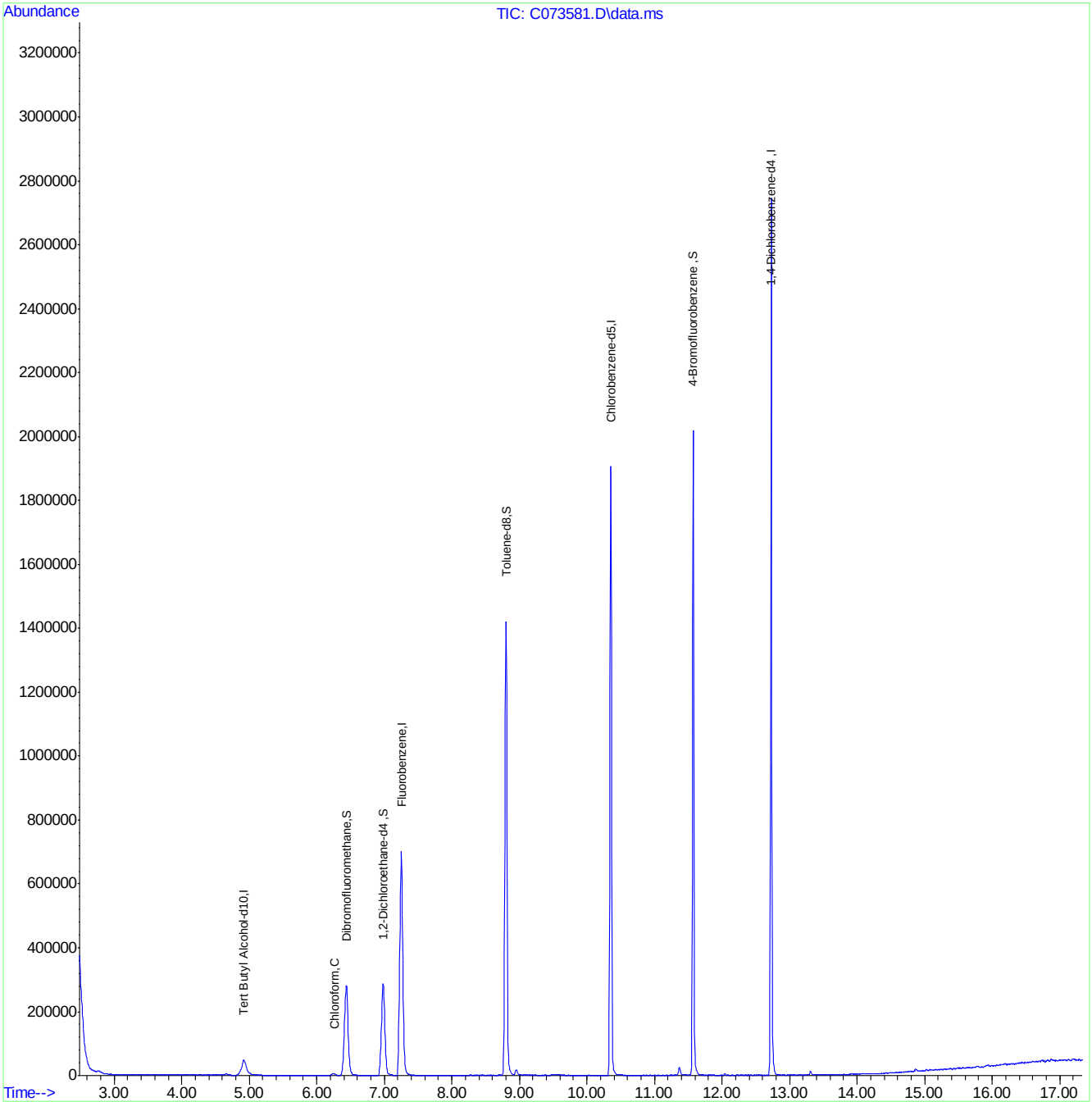
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.251	96	1017901	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	997895	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	632609	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.915	65	138145	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.436	113	317200	50.59	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 101.18%			
38) 1,2-Dichloroethane-d4	6.983	65	423903	47.27	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 94.54%			
48) Toluene-d8	8.802	98	1127781	50.18	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.36%			
69) 4-Bromofluorobenzene	11.570	95	533272	52.09	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 104.18%			
Target Compounds						Qvalue
29) Chloroform	6.259	83	8233	0.56	ug/L	95

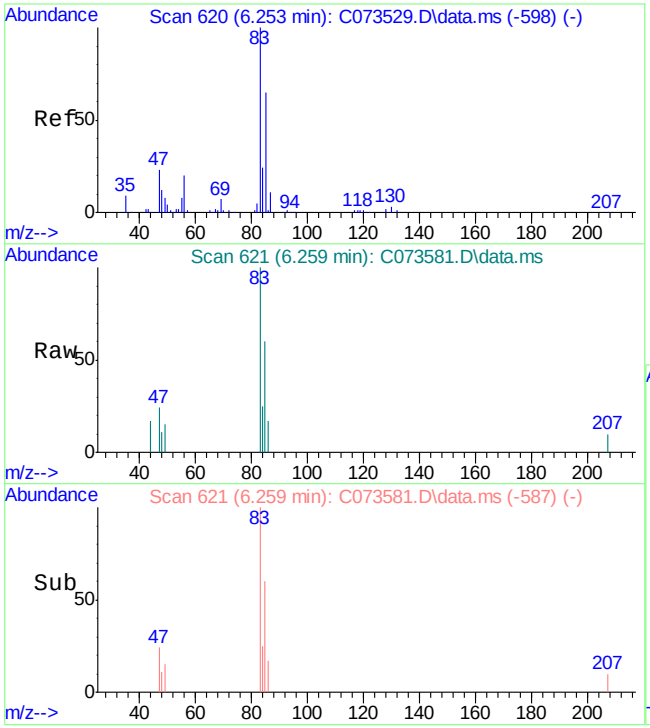
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073581.D
Acq On : 15 Sep 2010 7:20 pm
Operator : AnaJ
Sample : F76459-16
Misc : MS15409,VC2933,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 16 07:37:59 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

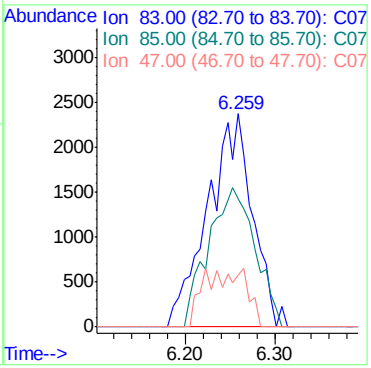




#29
Chloroform
Concen: 0.56 ug/L
RT: 6.259 min Scan# 621
Delta R.T. 0.006 min
Lab File: C073581.D
Acq: 15 Sep 2010 7:20 pm

Tgt Ion: 83 Resp: 8233

Ion	Ratio	Lower	Upper
83	100		
85	60.3	35.3	95.3
47	24.4	0.0	53.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073582.D
Acq On : 15 Sep 2010 7:45 pm
Operator : AnaJ
Sample : F76459-17
Misc : MS15409,VC2933,,,,,
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 16 07:38:22 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

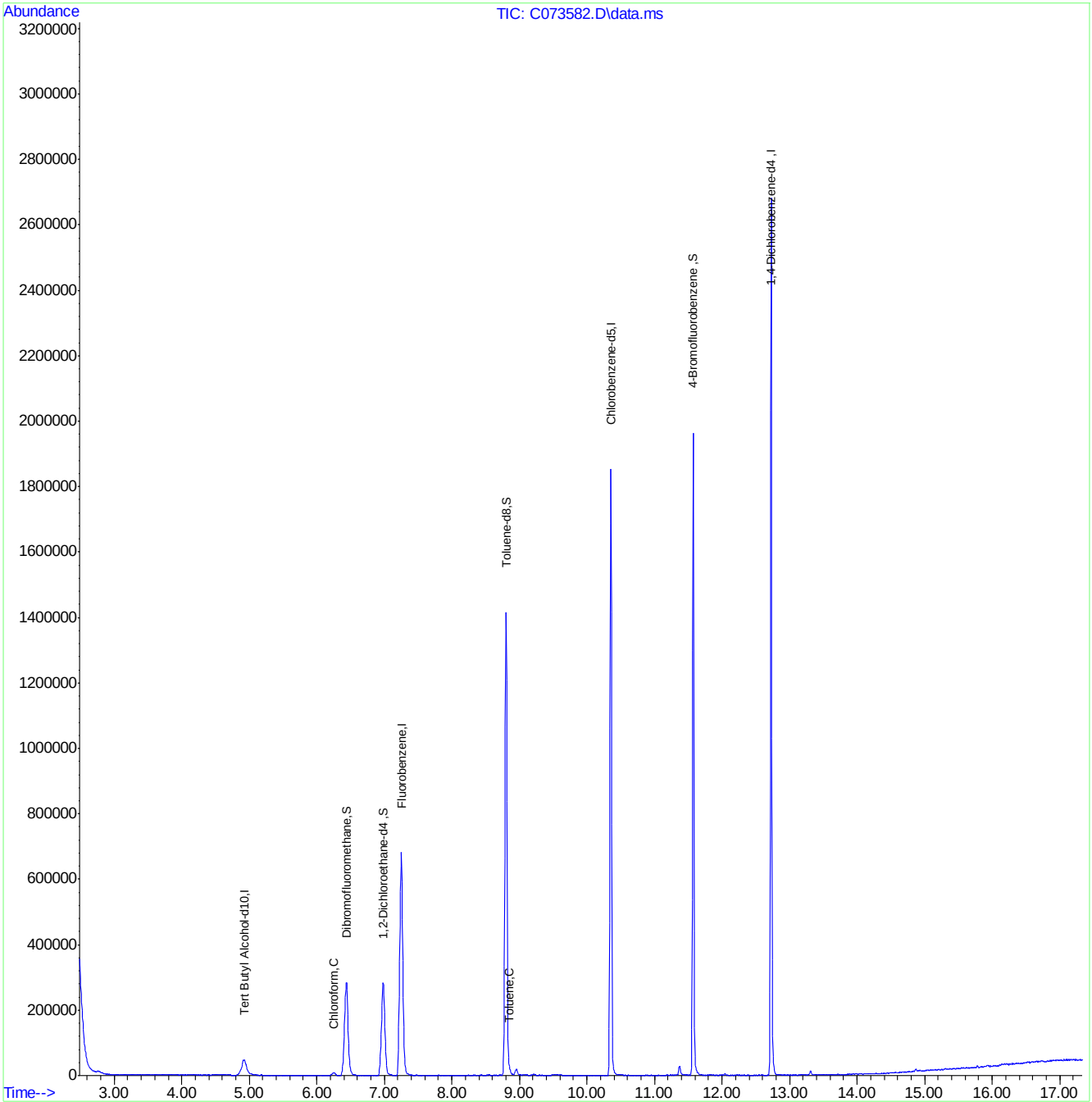
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.250	96	992310	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	943107	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	613740	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.926	65	136801	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.435	113	314593	51.47	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 102.94%			
38) 1,2-Dichloroethane-d4	6.983	65	419048	47.93	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 95.86%			
48) Toluene-d8	8.802	98	1096842	51.64	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 103.28%			
69) 4-Bromofluorobenzene	11.570	95	517978	52.15	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 104.30%			
Target Compounds						Qvalue
29) Chloroform	6.247	83	10708	0.75	ug/L	90
49) Toluene	8.856	91	5810	0.21	ug/L	97

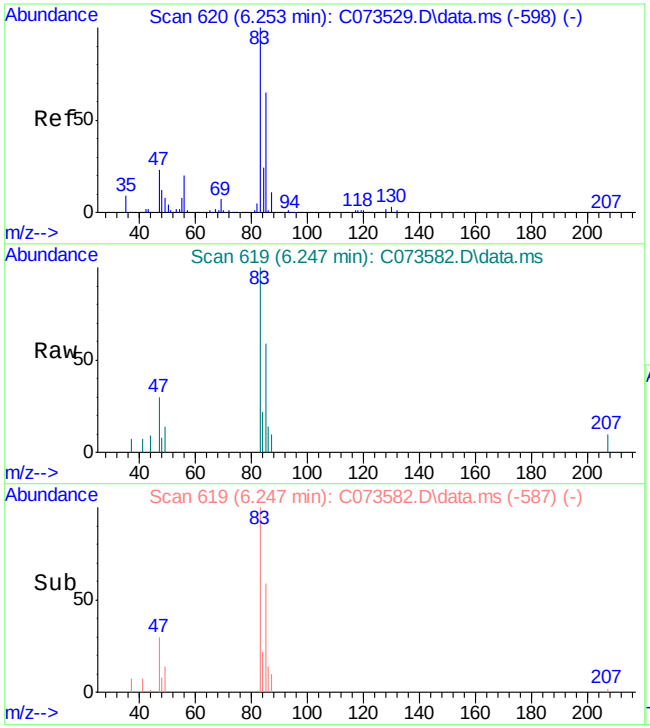
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073582.D
Acq On : 15 Sep 2010 7:45 pm
Operator : AnaJ
Sample : F76459-17
Misc : MS15409,VC2933,,,,,
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 16 07:38:22 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

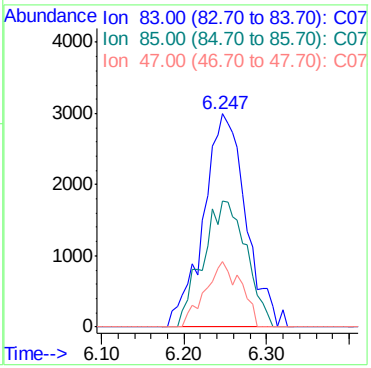


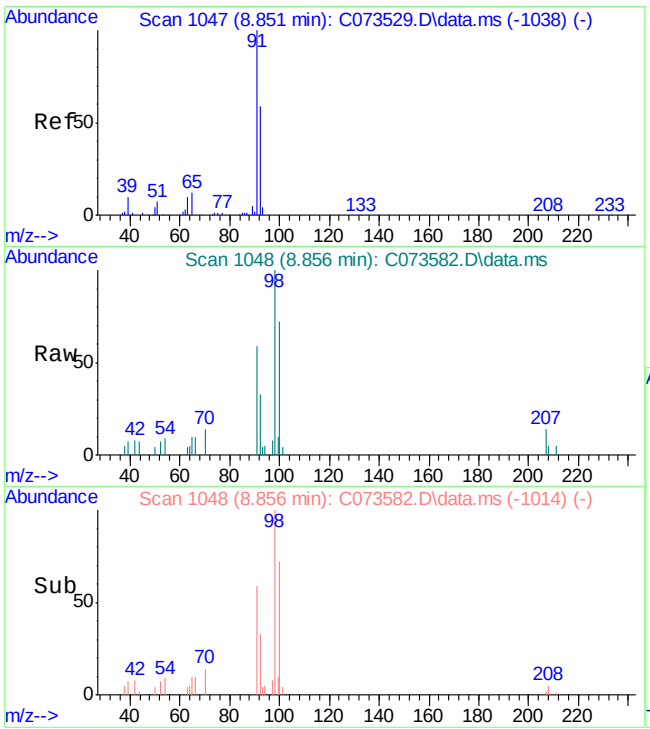


#29
Chloroform
Concen: 0.75 ug/L
RT: 6.247 min Scan# 619
Delta R.T. -0.006 min
Lab File: C073582.D
Acq: 15 Sep 2010 7:45 pm

Tgt Ion: 83 Resp: 10708

Ion	Ratio	Lower	Upper
83	100		
85	59.1	35.3	95.3
47	30.5	0.0	53.0

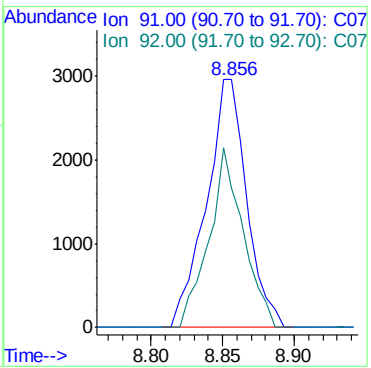




#49
Toluene
Concen: 0.21 ug/L
RT: 8.856 min Scan# 1048
Delta R.T. 0.006 min
Lab File: C073582.D
Acq: 15 Sep 2010 7:45 pm

Tgt Ion: 91 Resp: 5810

Ion	Ratio	Lower	Upper
91	100		
92	56.5	28.6	88.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073583.D
Acq On : 15 Sep 2010 8:10 pm
Operator : AnaJ
Sample : F76459-18
Misc : MS15409,VC2933,,,,,
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 16 07:38:39 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

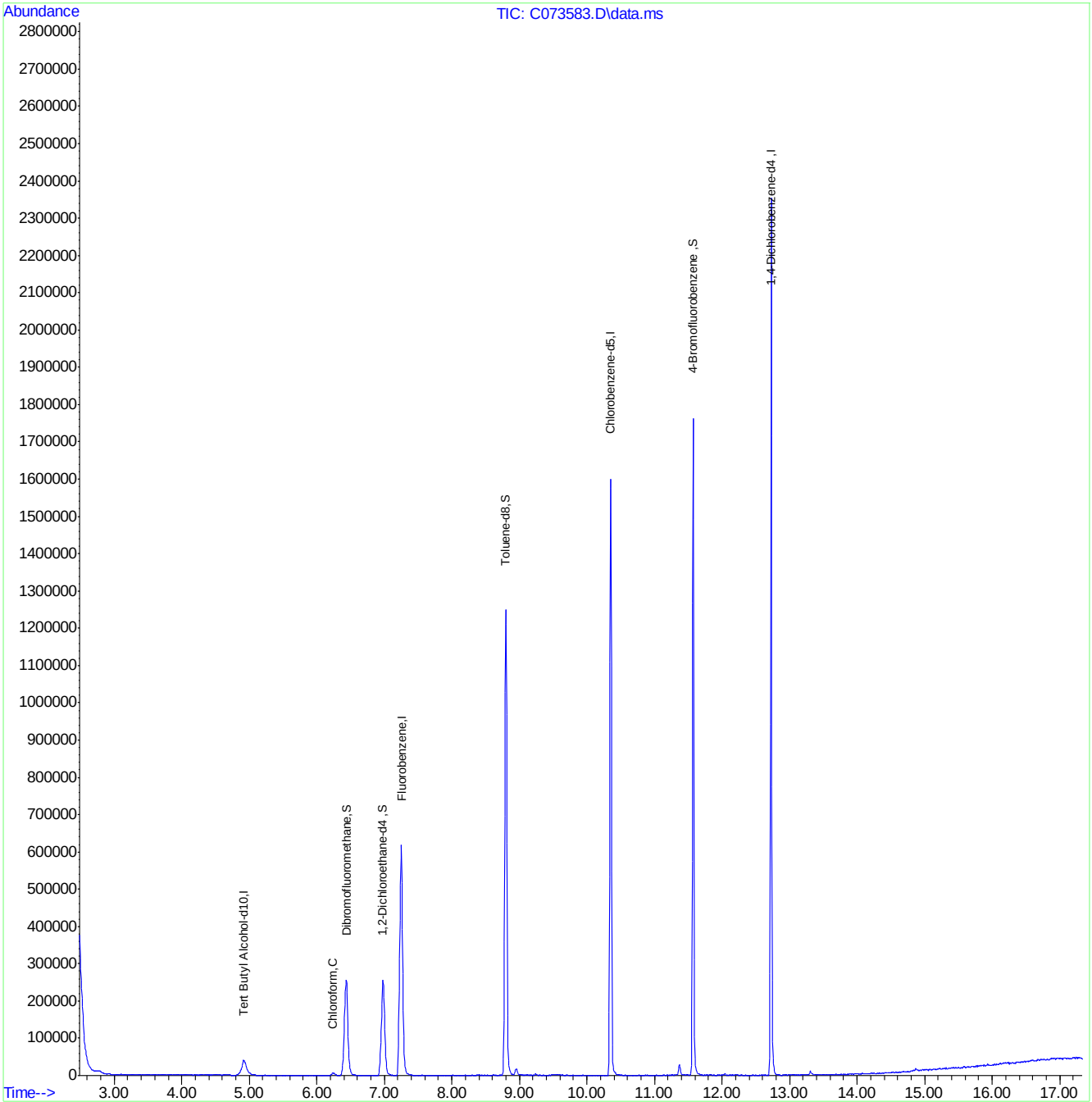
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.251	96	860231	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	840030	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	531271	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.921	65	115036	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.436	113	272070	51.35	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 102.70%			
38) 1,2-Dichloroethane-d4	6.983	65	369204	48.71	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 97.42%			
48) Toluene-d8	8.796	98	950936	50.27	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.54%			
69) 4-Bromofluorobenzene	11.570	95	451783	52.55	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 105.10%			
Target Compounds						Qvalue
29) Chloroform	6.241	83	9518	0.76	ug/L	90

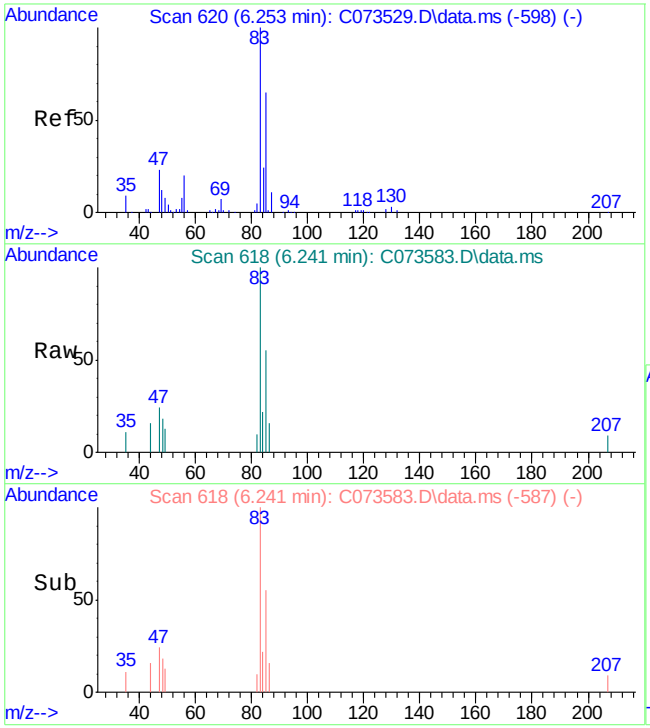
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073583.D
Acq On : 15 Sep 2010 8:10 pm
Operator : AnaJ
Sample : F76459-18
Misc : MS15409,VC2933,,,,,
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 16 07:38:39 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

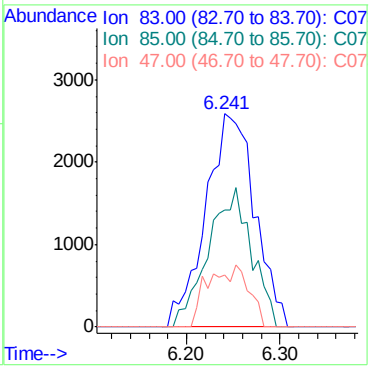




#29
Chloroform
Concen: 0.76 ug/L
RT: 6.241 min Scan# 618
Delta R.T. -0.012 min
Lab File: C073583.D
Acq: 15 Sep 2010 8:10 pm

Tgt Ion: 83 Resp: 9518

Ion	Ratio	Lower	Upper
83	100		
85	54.8	35.3	95.3
47	24.1	0.0	53.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070407.D
Acq On : 16 Sep 2010 11:04 am
Operator : AnaJ
Sample : F76459-19,hs
Misc : MS15409,VB2907,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 16 11:26:48 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

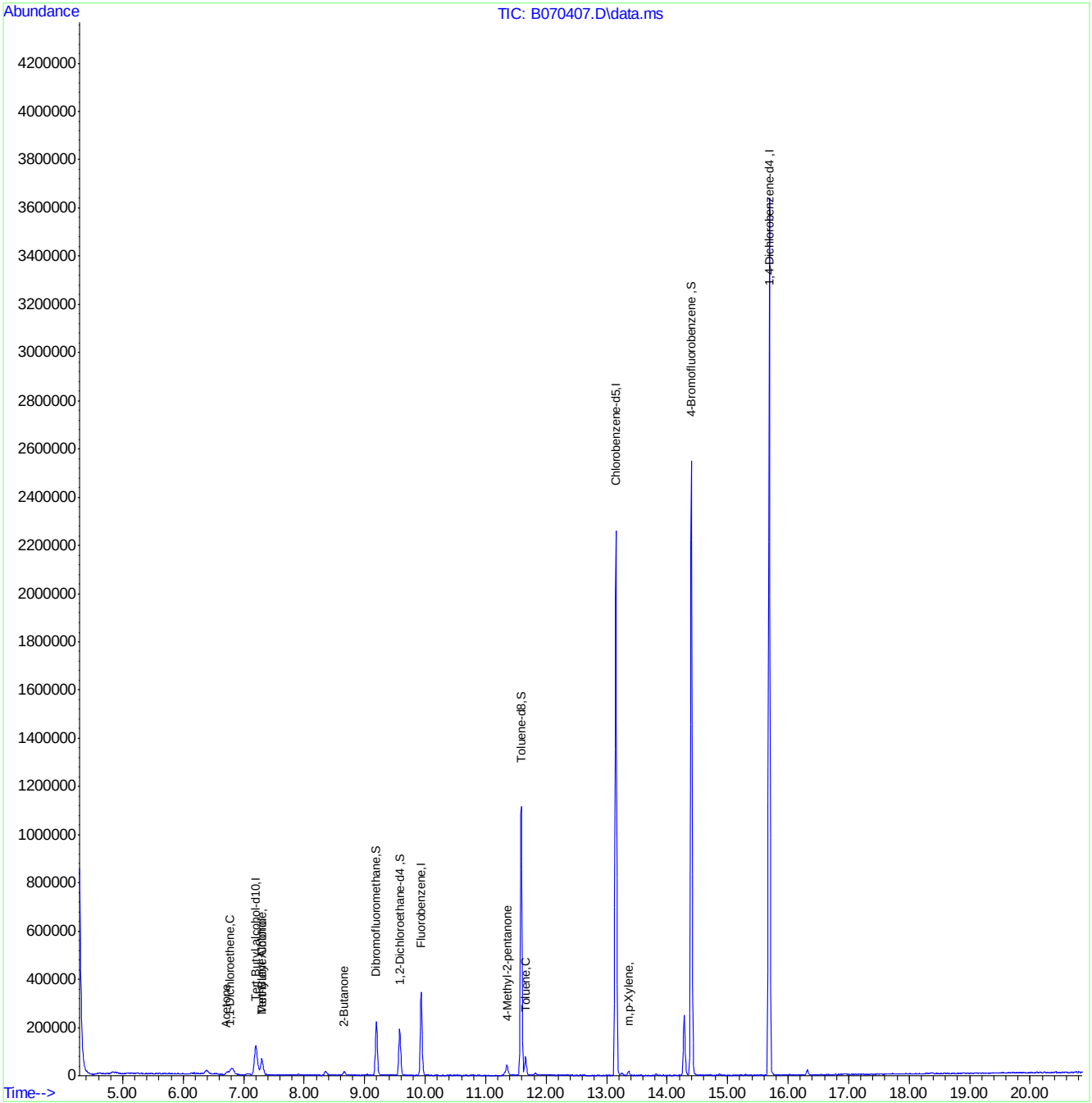
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	332981	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1310392	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1032521	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.195	65	219463	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	155855	50.78	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 101.56%			
36) 1,2-Dichloroethane-d4	9.580	65	152124	52.00	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 104.00%			
50) Toluene-d8	11.587	98	779067	47.79	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 95.58%			
70) 4-Bromofluorobenzene	14.398	95	880074	49.97	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 99.94%			
Target Compounds						Qvalue
11) 1,1-Dichloroethene	6.763	61	11420	1.07	ug/L	90
12) Acetone	6.714	43	23313	10.20	ug/L	88
16) Methylene Chloride	7.298	49	60700	5.00	ug/L	96
25) 2-Butanone	8.655	43	23905	7.01	ug/L	92
48) 4-Methyl-2-pentanone	11.350	43	39979	5.74	ug/L	95
51) Toluene	11.660	91	56963	1.71	ug/L	96
63) m,p-Xylene	13.364	91	13570	0.49	ug/L	90
95) Tert-Butyl Alcohol	7.292	59	4243	6.38	ug/L #	77

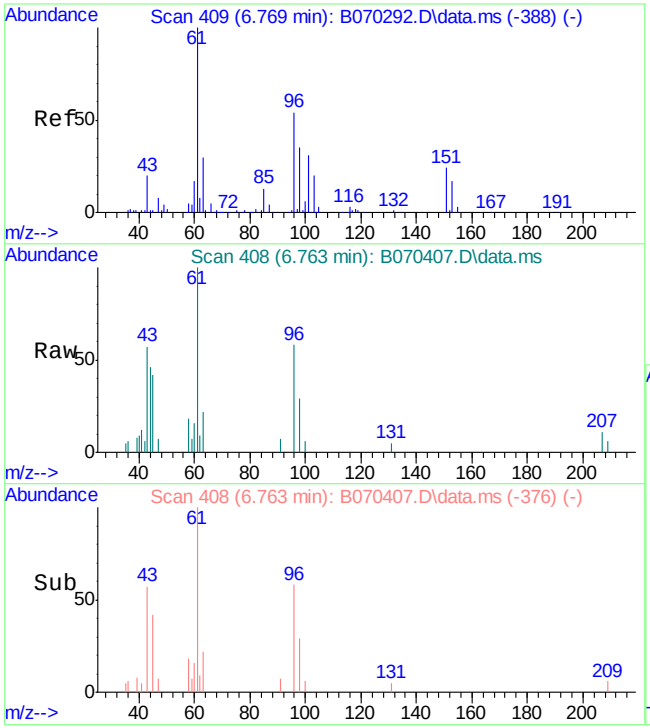
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070407.D
Acq On : 16 Sep 2010 11:04 am
Operator : AnaJ
Sample : F76459-19,hs
Misc : MS15409,VB2907,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 16 11:26:48 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

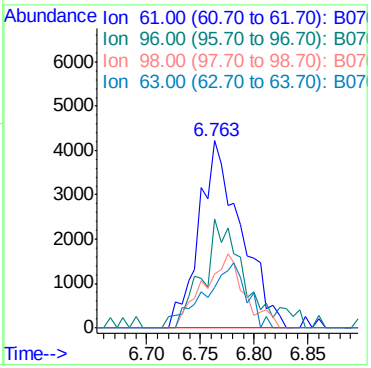


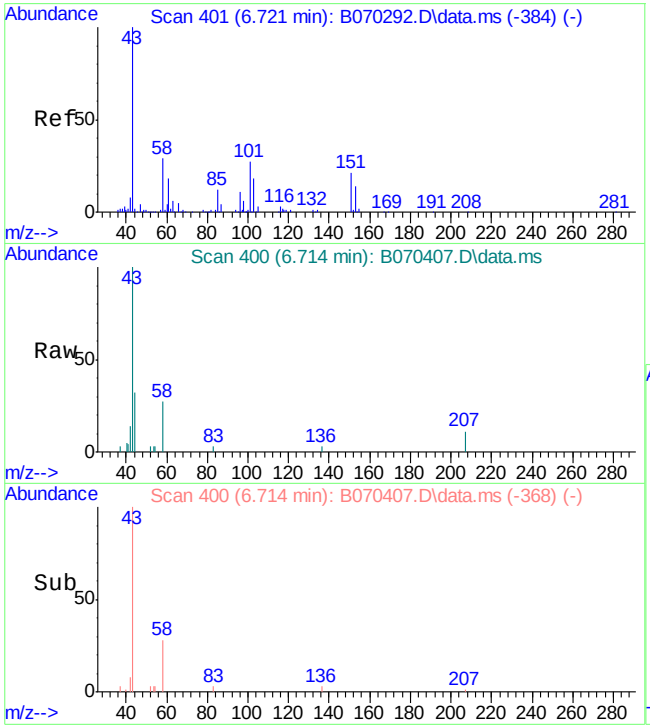


#11
1,1-Dichloroethene
Concen: 1.07 ug/L
RT: 6.763 min Scan# 408
Delta R.T. -0.006 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 61 Resp: 11420

Ion	Ratio	Lower	Upper
61	100		
96	58.4	24.6	84.6
98	28.7	5.3	65.3
63	21.5	0.2	60.2

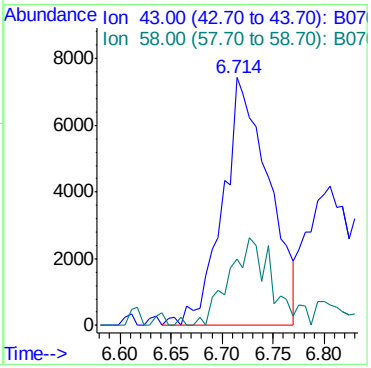


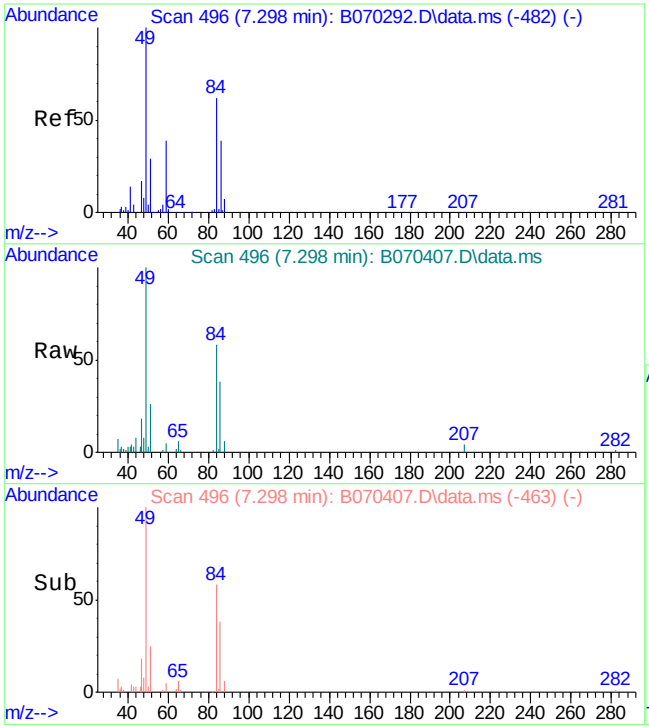


#12
Acetone
Concen: 10.20 ug/L
RT: 6.714 min Scan# 400
Delta R.T. -0.006 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 43 Resp: 23313

Ion	Ratio	Lower	Upper
43	100		
58	22.7	0.0	59.1

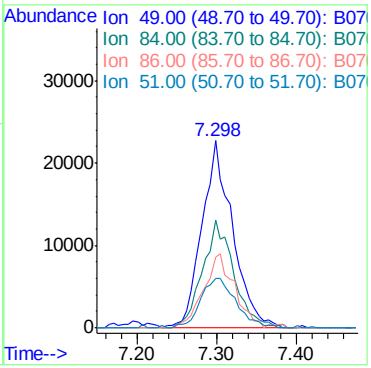


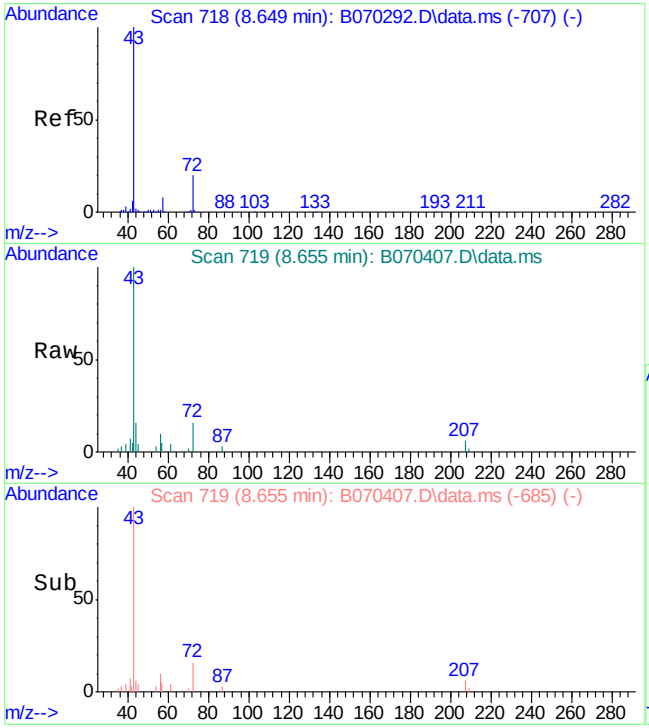


#16
Methylene Chloride
Concen: 5.00 ug/L
RT: 7.298 min Scan# 496
Delta R.T. 0.000 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 49 Resp: 60700

Ion	Ratio	Lower	Upper
49	100		
84	57.8	31.7	91.7
86	37.9	9.0	69.0
51	26.2	0.0	59.3

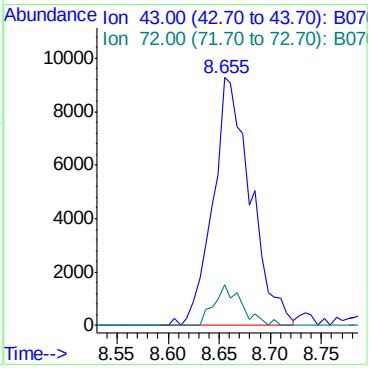


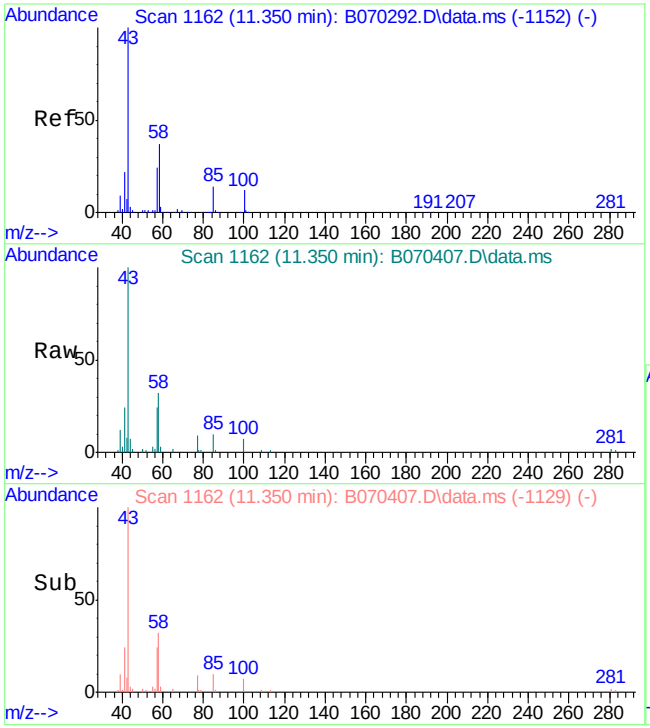


#25
2-Butanone
Concen: 7.01 ug/L
RT: 8.655 min Scan# 719
Delta R.T. 0.006 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 43 Resp: 23905

Ion	Ratio	Lower	Upper
43	100		
72	16.4	0.0	50.2

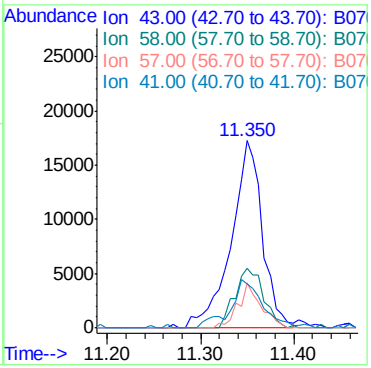


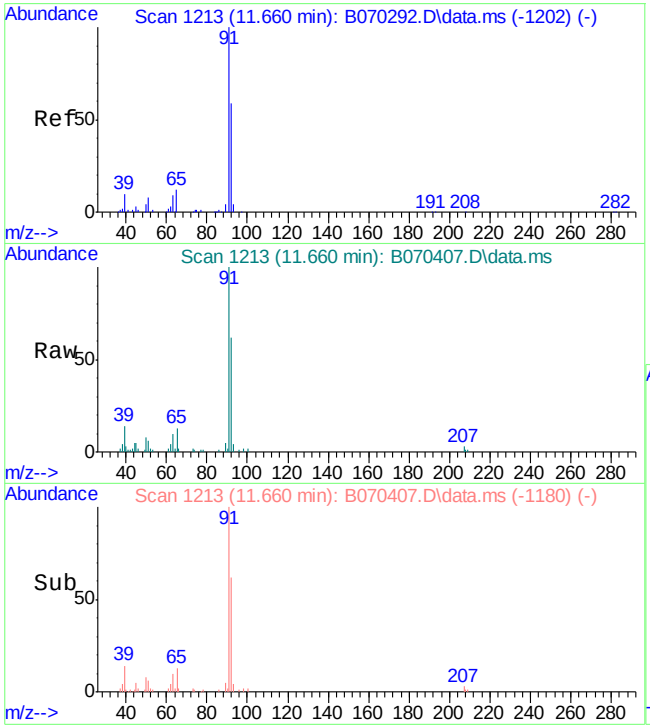


#48
4-Methyl-2-pentanone
Concen: 5.74 ug/L
RT: 11.350 min Scan# 1162
Delta R.T. 0.000 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 43 Resp: 39979

Ion	Ratio	Lower	Upper
43	100		
58	32.0	7.0	67.0
57	24.1	0.0	54.0
41	23.7	0.0	52.2

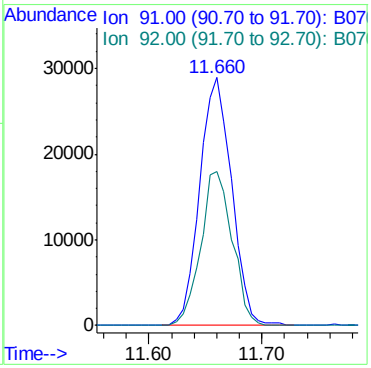


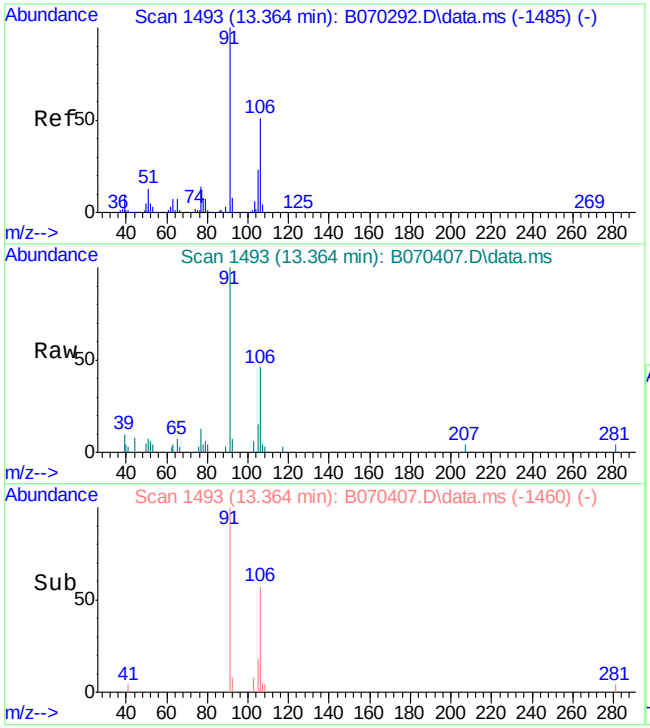


#51
Toluene
Concen: 1.71 ug/L
RT: 11.660 min Scan# 1213
Delta R.T. 0.000 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 91 Resp: 56963

Ion	Ratio	Lower	Upper
91	100		
92	62.2	29.2	89.2

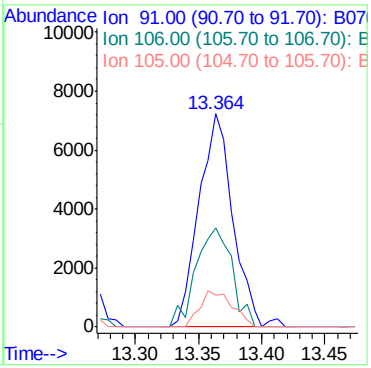


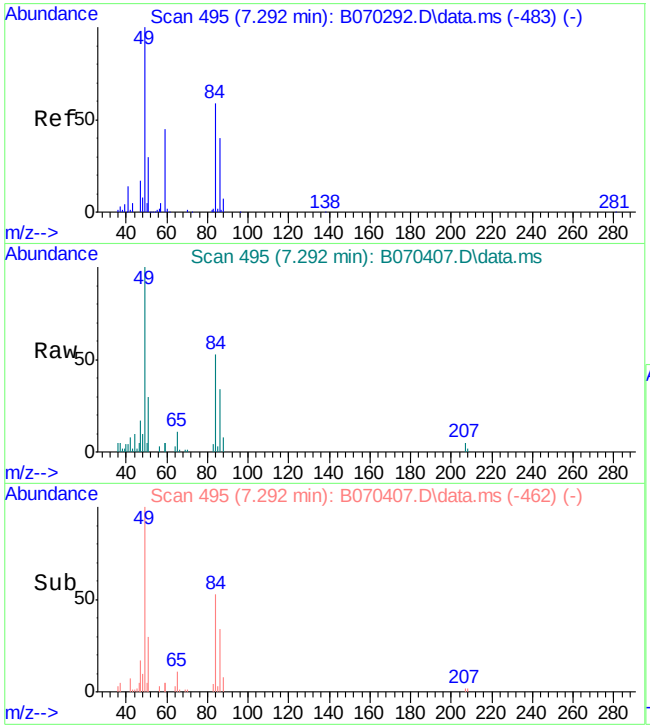


#63
m,p-Xylene
Concen: 0.49 ug/L
RT: 13.364 min Scan# 1493
Delta R.T. 0.000 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 91 Resp: 13570

Ion	Ratio	Lower	Upper
91	100		
106	46.4	21.4	81.4
105	15.0	0.0	52.6

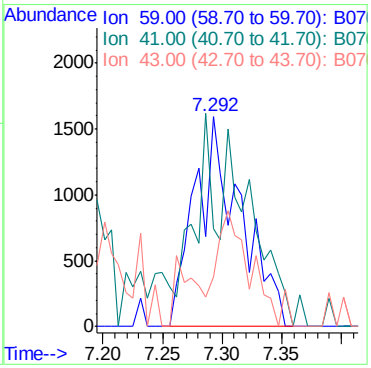




#95
Tert-Butyl Alcohol
Concen: 6.38 ug/L
RT: 7.292 min Scan# 495
Delta R.T. -0.000 min
Lab File: B070407.D
Acq: 16 Sep 2010 11:04 am

Tgt Ion: 59 Resp: 4243

Ion	Ratio	Lower	Upper
59	100		
41	46.6	25.6	38.4#
43	23.6	12.9	19.3#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073559.D
Acq On : 15 Sep 2010 10:06 am
Operator : AnaJ
Sample : MB
Misc : MS15403,VC2933,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 15 10:25:39 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	7.251	96	781890	50.00	ug/L	0.00
47) Chlorobenzene-d5	10.353	117	754313	50.00	ug/L	0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	483804	50.00	ug/L	0.00
93) Tert Butyl Alcohol-d10	4.921	65	104828	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	6.435	113	250518	52.02	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 104.04%			
38) 1,2-Dichloroethane-d4	6.983	65	359572	52.20	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 104.40%			
48) Toluene-d8	8.802	98	851240	50.11	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.22%			
69) 4-Bromofluorobenzene	11.570	95	417626	53.34	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 106.68%			

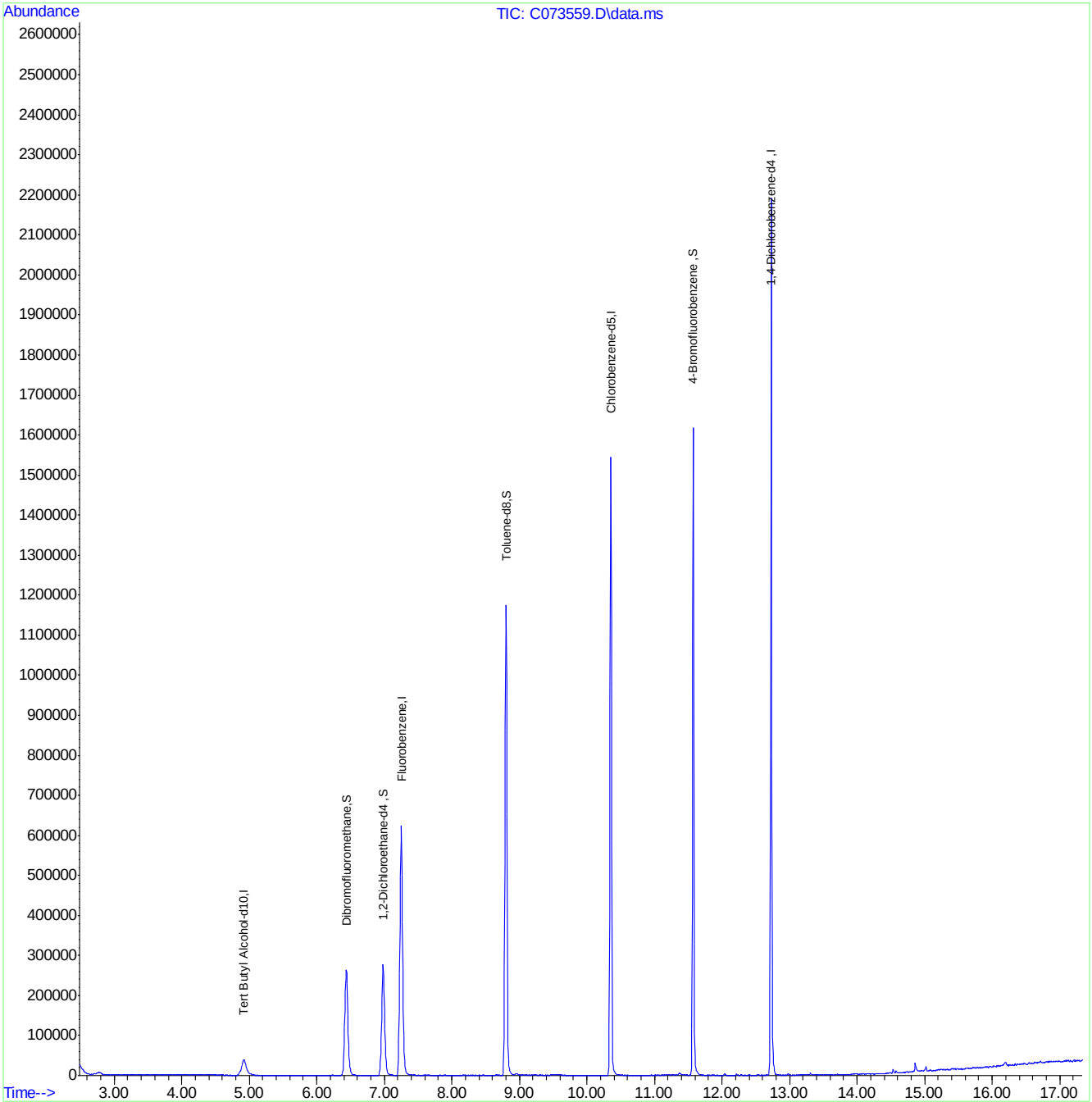
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073559.D
Acq On : 15 Sep 2010 10:06 am
Operator : AnaJ
Sample : MB
Misc : MS15403,VC2933,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 15 10:25:39 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070405.D
Acq On : 16 Sep 2010 10:12 am
Operator : AnaJ
Sample : MB
Misc : MS15410,VB2907,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 10:33:44 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.932	96	385861	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1522593	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1205478	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.195	65	262266	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	188245	52.92	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 105.84%			
36) 1,2-Dichloroethane-d4	9.574	65	183267	54.06	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 108.12%			
50) Toluene-d8	11.587	98	893203	47.16	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 94.32%			
70) 4-Bromofluorobenzene	14.398	95	1015484	49.38	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 98.76%			

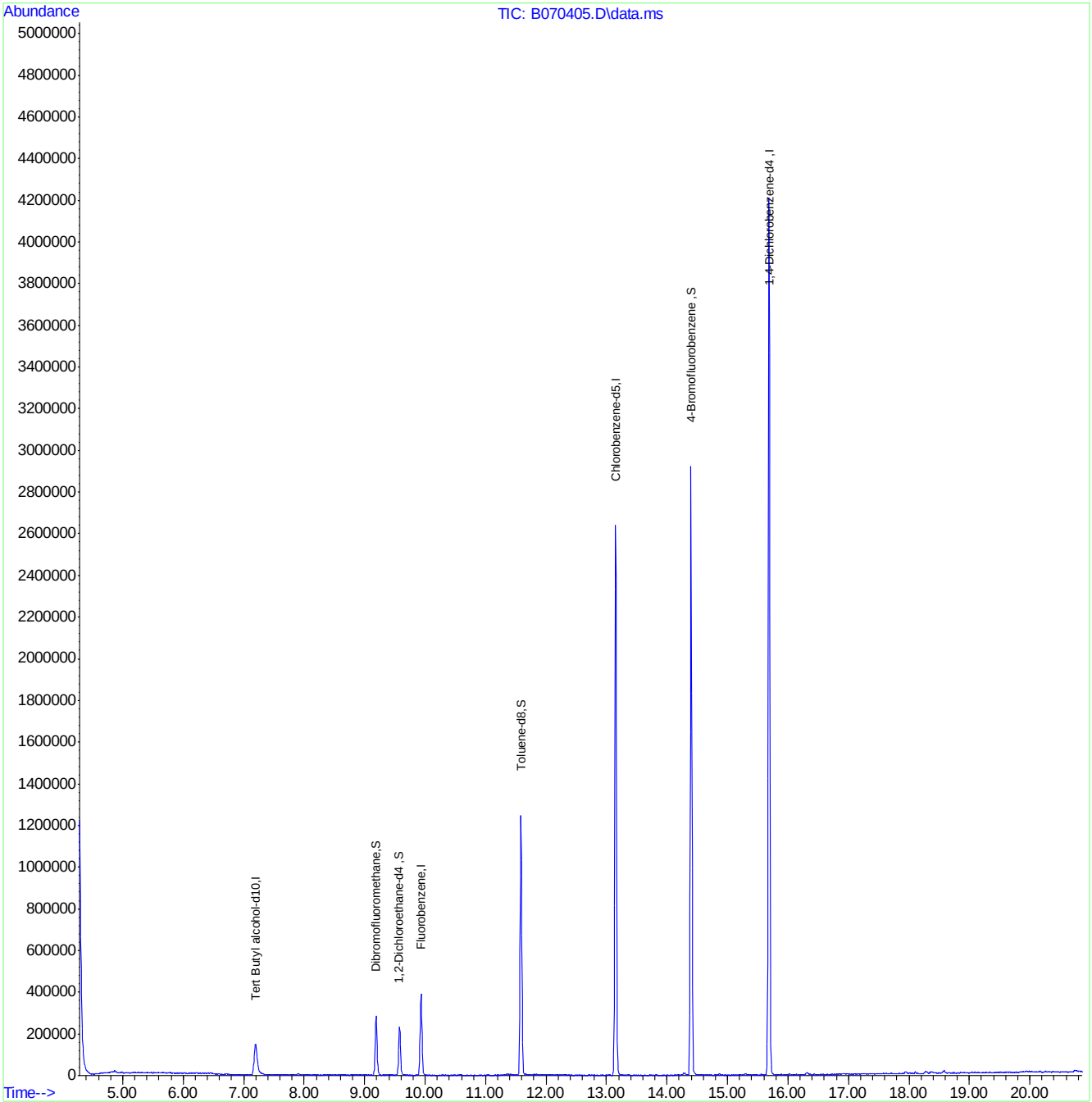
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070405.D
Acq On : 16 Sep 2010 10:12 am
Operator : AnaJ
Sample : MB
Misc : MS15410,VB2907,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 10:33:44 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064489.D Vial: 3
Acq On : 16 Sep 2010 11:21 am Operator: MikeM
Sample : mb Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 12:07:22 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

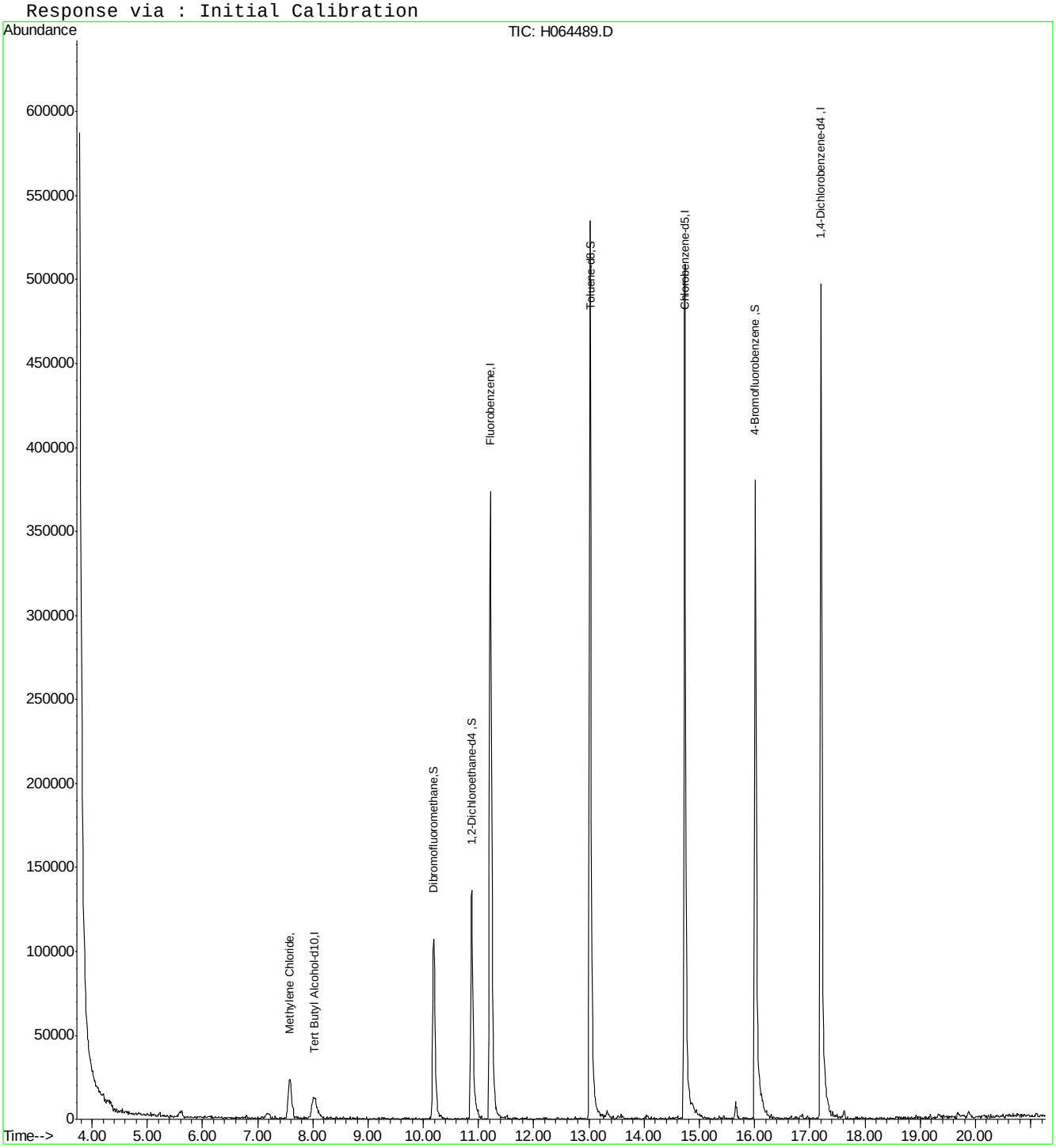
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.21	96	433886	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.74	117	336462	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	180412	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.04	65	39244	250.00	ug/Kg	0.04
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	103173	49.62	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 99.24%			
44) 1,2-Dichloroethane-d4	10.87	65	169614	53.13	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 106.26%			
55) Toluene-d8	13.03	98	450595	42.64	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 85.28%			
77) 4-Bromofluorobenzene	16.01	174	149809	46.89	ug/Kg	-0.01
Spiked Amount 50.000	Range 59 - 148		Recovery = 93.78%			
Target Compounds						Qvalue
15) Methylene Chloride	7.58	49	39170	5.20	ug/Kg	88

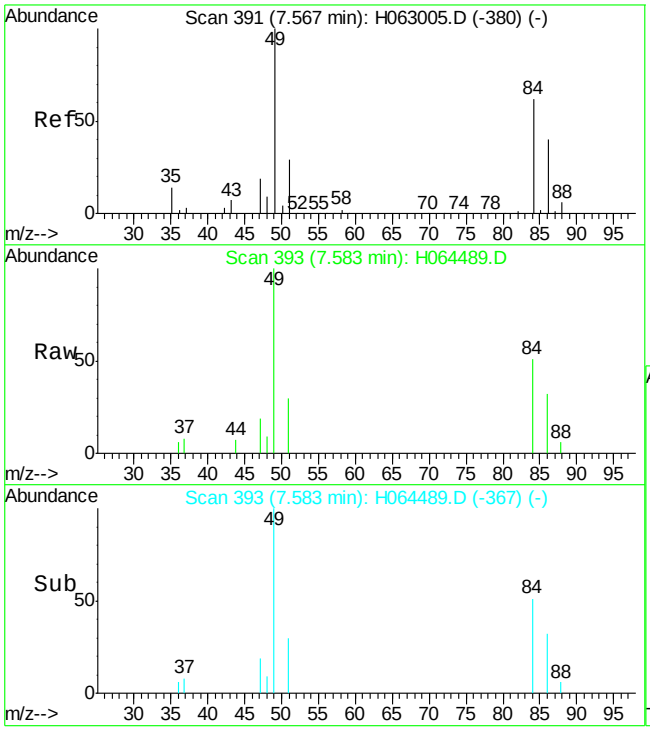
(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064489.D APP9-H.M Thu Sep 16 12:07:43 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064489.D Vial: 3
Acq On : 16 Sep 2010 11:21 am Operator: MikeM
Sample : mb Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 12:04 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration

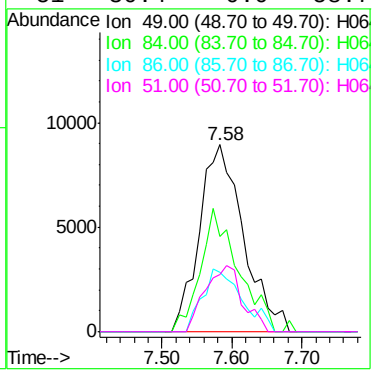




#15
Methylene Chloride
Concen: 5.20 ug/Kg
RT: 7.58 min Scan# 393
Delta R.T. 0.01 min
Lab File: H064489.D
Acq: 16 Sep 2010 11:21 am

Tgt Ion: 49 Resp: 39170

Ion	Ratio	Lower	Upper
49	100		
84	50.7	32.3	92.3
86	31.9	10.2	70.2
51	30.4	0.0	58.7



Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:38

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046753.D Vial: 9
Acq On : 16 Sep 2010 4:17 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 16:49:54 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

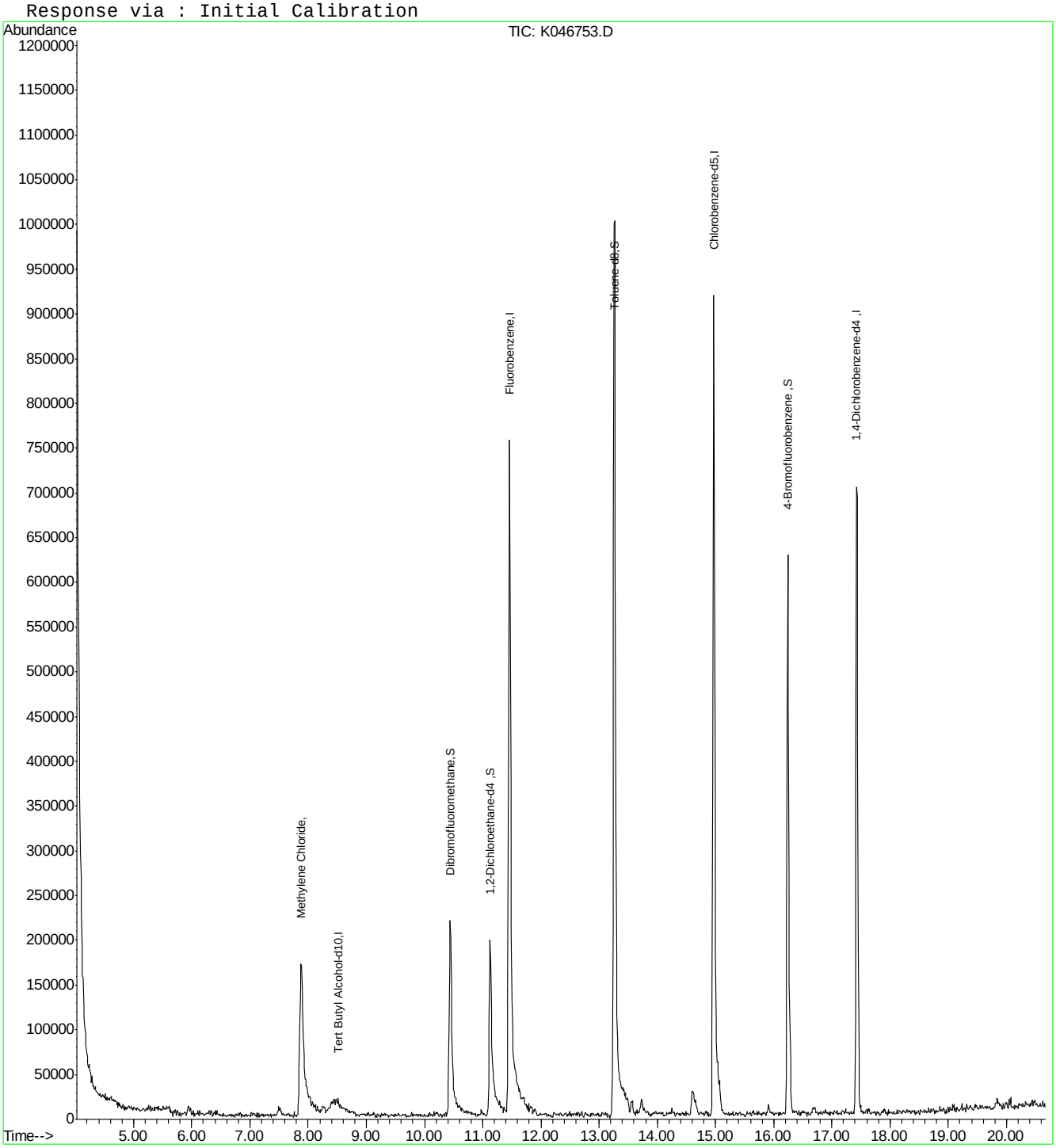
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	954052	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	618365	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	218151	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.52	65	118529m	250.00	ug/Kg	0.25
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	227540	48.17	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 96.34%			
36) 1,2-Dichloroethane-d4	11.13	65	264977	45.48	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 90.96%			
50) Toluene-d8	13.27	98	971444	47.65	ug/Kg	0.02
Spiked Amount 50.000	Range 71 - 130		Recovery = 95.30%			
70) 4-Bromofluorobenzene	16.24	174	204334	52.91	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 105.82%			
Target Compounds						Qvalue
16) Methylene Chloride	7.88	49	294458	25.88	ug/Kg	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046753.D 8260-K.M Fri Sep 17 08:49:29 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046753.D Vial: 9
Acq On : 16 Sep 2010 4:17 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:36 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

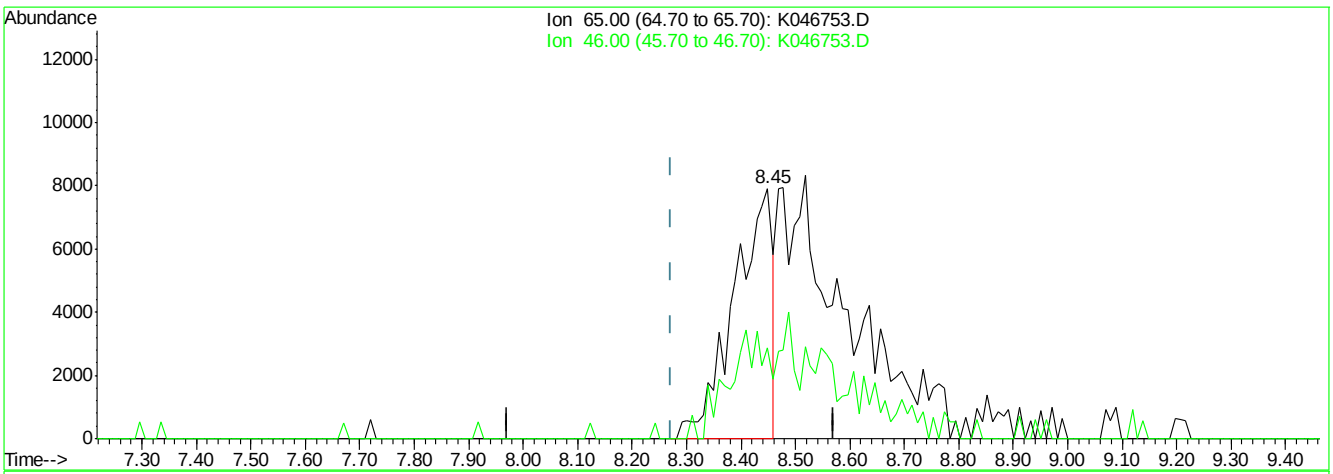


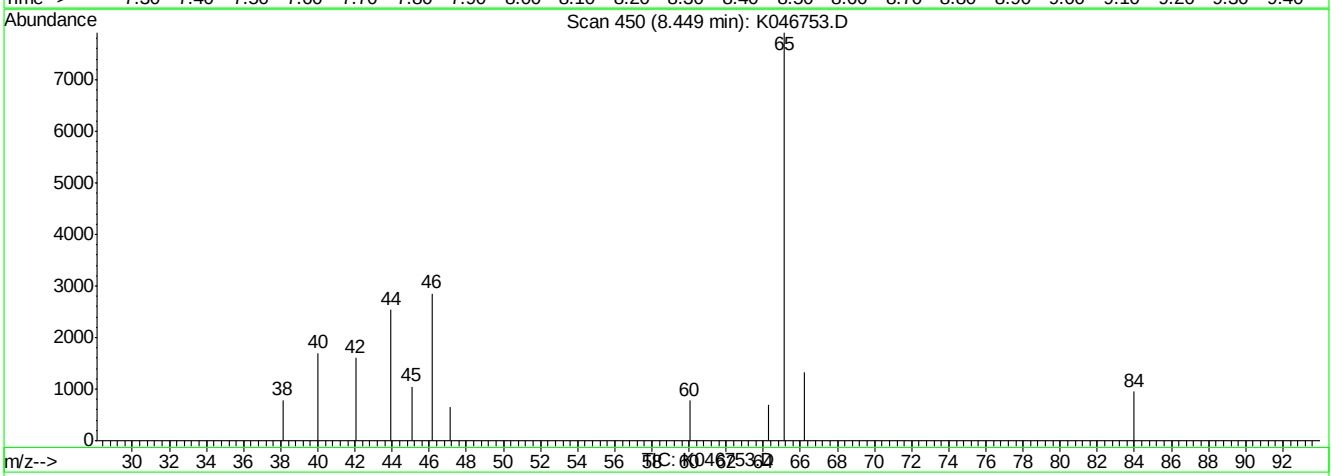
ACCUTEST
F76459

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046753.D Vial: 9
Acq On : 16 Sep 2010 4:17 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:30 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.45min (+0.177) 250.00ug/Kg

response 38816

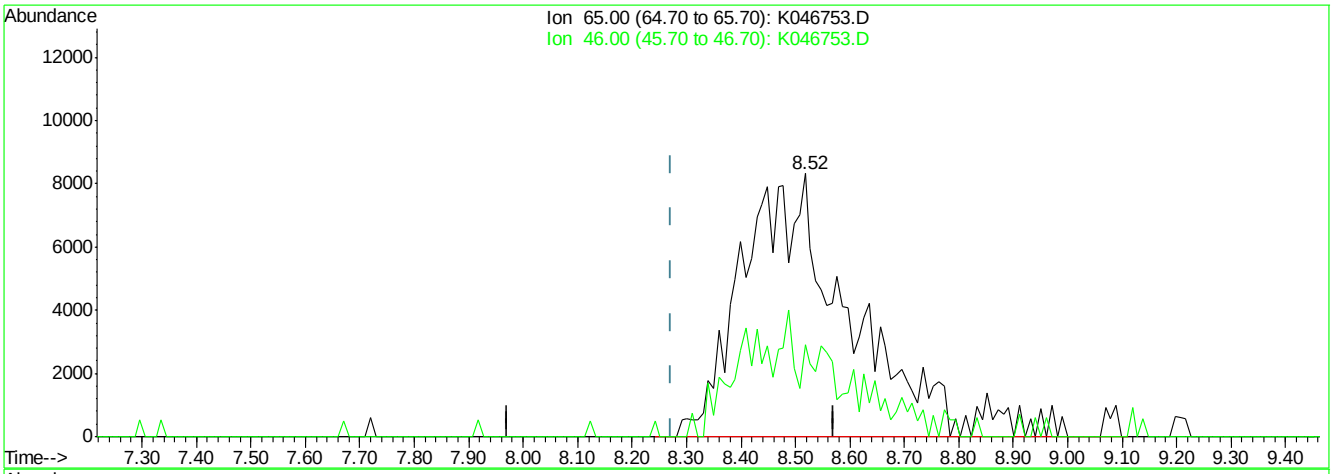
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	36.12
0.00	0.00	0.00
0.00	0.00	0.00

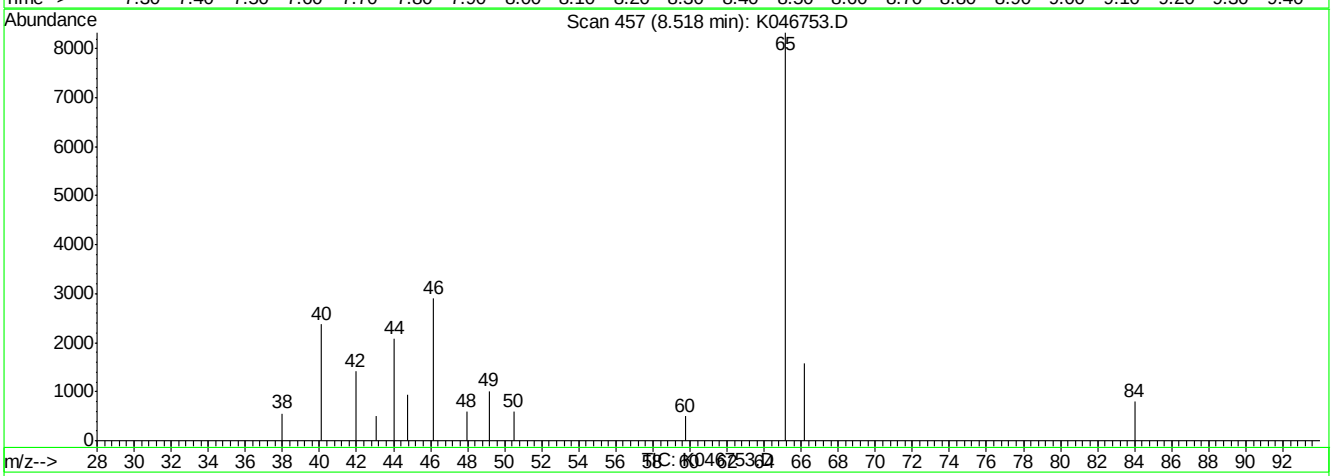
K046753.D 8260-K.M Fri Sep 17 08:35:29 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046753.D Vial: 9
Acq On : 16 Sep 2010 4:17 pm Operator: StevenH
Sample : mb Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:36 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.52min (+0.246) 250.00ug/Kg m

response 118529

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	34.81
0.00	0.00	0.00
0.00	0.00	0.00

K046753.D 8260-K.M Fri Sep 17 08:35:33 2010

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073558.D
Acq On : 15 Sep 2010 9:33 am
Operator : AnaJ
Sample : BS
Misc : MS15403,VC2933,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 15 09:51:28 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	864583	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	849727	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	601652	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.921	65	119863	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.448	113	277976	52.20	ug/L		0.01
Spiked Amount 50.000	Range 87 - 116		Recovery = 104.40%				
38) 1,2-Dichloroethane-d4	6.989	65	402933	52.90	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 105.80%				
48) Toluene-d8	8.802	98	958573	50.09	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.18%				
69) 4-Bromofluorobenzene	11.570	95	496679	51.01	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 102.02%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.627	85	316869	42.37	ug/L		95
3) Chloromethane	2.785	50	209376	33.48	ug/L		98
4) Vinyl Chloride	2.913	62	183675	30.92	ug/L		97
5) Bromomethane	3.260	94	136999	28.06	ug/L		93
6) Chloroethane	3.400	64	88835	28.56	ug/L		99
7) Trichlorofluoromethane	3.595	101	410594	32.14	ug/L		97
8) Ethyl Ether	3.820	59	96002	22.89	ug/L		99
9) 1,2-Dichlorotrifluoroe...	4.051	67	171190	30.16	ug/L		94
10) 1,1-Dichloroethene	4.069	61	208063	24.46	ug/L		97
11) Freon 113	4.148	101	157548	25.59	ug/L		93
12) Carbon Disulfide	4.124	76	361741	23.59	ug/L		100
13) Iodomethane	4.233	142	269137	24.27	ug/L		99
14) Methylene Chloride	4.659	49	134895	22.02	ug/L		99
15) Acetone	4.708	58	35370	96.14	ug/L	#	66
16) Methyl acetate	4.799	74	82114	105.36	ug/L		99
17) trans-1,2-Dichloroethene	4.823	61	172936	22.63	ug/L		98
18) Hexane	4.860	56	95025	25.04	ug/L	#	84
19) Methyl Tert Butyl Ether	4.921	73	399849	21.94	ug/L		91
20) Di-isopropyl ether	5.280	45	311157	22.94	ug/L		98
21) 1,1-Dichloroethane	5.444	63	206098	22.24	ug/L		98
22) Acrylonitrile	5.505	53	147476	106.58	ug/L		99
23) ETBE	5.651	59	376145	21.72	ug/L		99
24) Vinyl acetate	5.657	43	829504	152.33	ug/L		99
25) cis-1,2-Dichloroethene	5.998	96	123696	22.42	ug/L		97
26) 2,2-Dichloropropane	6.113	77	255368	23.97	ug/L		99
27) Bromochloromethane	6.204	128	74123	20.55	ug/L		97
28) Cyclohexane	6.223	56	166010	23.77	ug/L		95
29) Chloroform	6.253	83	283063	22.63	ug/L		99
30) Tetrahydrofuran	6.429	42	25547	20.56	ug/L		98
32) Carbon Tetrachloride	6.423	117	328644	24.34	ug/L		99
33) 1,1,1-Trichloroethane	6.496	97	302705	23.81	ug/L		97
34) 2-Butanone	6.557	43	216384	105.95	ug/L		99
35) 1,1-Dichloropropene	6.600	75	198632	23.46	ug/L		97
36) Benzene	6.855	78	443270	20.93	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073558.D
Acq On : 15 Sep 2010 9:33 am
Operator : AnaJ
Sample : BS
Misc : MS15403,VC2933,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 15 09:51:28 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) TAME	6.940	73	364674	21.74	ug/L	96
39) 1,2-Dichloroethane	7.056	62	257172	22.43	ug/L	97
40) Trichloroethene	7.427	95	155310	22.60	ug/L	92
41) Methylcyclohexane	7.433	83	195251	24.15	ug/L	97
42) Dibromomethane	7.853	93	93007	22.01	ug/L	92
43) 1,2-Dichloropropane	7.950	63	102875	21.13	ug/L	98
44) Bromodichloromethane	7.999	83	223119	22.04	ug/L	99
45) 2-Chloroethyl vinyl ether	8.528	63	336842	97.03	ug/L	95
46) cis-1,3-Dichloropropene	8.613	75	220949	21.70	ug/L	97
49) Toluene	8.857	91	548404	21.67	ug/L	98
50) 2-Nitropropane	9.082	41	226412	111.43	ug/L	96
51) 4-Methyl-2-pentanone	9.204	43	500670	115.64	ug/L	99
52) trans-1,3-Dichloropropene	9.252	75	235795	23.28	ug/L	92
53) Tetrachloroethene	9.246	166	187220	22.71	ug/L	97
54) 1,1,2-Trichloroethane	9.416	83	90113	20.54	ug/L	96
55) Dibromochloromethane	9.605	129	181290	21.44	ug/L	99
56) 1,3-Dichloropropane	9.696	76	188232	20.12	ug/L	93
57) 1,2-Dibromoethane	9.861	107	130912	20.59	ug/L	99
58) 2-hexanone	10.025	43	367189	119.32	ug/L	95
59) 1-Chlorohexane	10.317	91	185008	22.38	ug/L	94
60) Ethylbenzene	10.378	91	694709	21.85	ug/L	98
61) Chlorobenzene	10.372	112	399563	21.41	ug/L	98
62) 1,1,1,2-Tetrachloroethane	10.426	131	174590	21.62	ug/L	99
63) m,p-Xylene	10.518	91	1128538	44.67	ug/L	98
64) o-Xylene	10.956	91	574764	22.41	ug/L	99
65) Styrene	11.010	104	421145	21.77	ug/L	99
66) Bromoform	11.059	173	134573	21.40	ug/L	99
67) Isopropylbenzene	11.266	105	728507	26.33	ug/L	99
70) n-Propylbenzene	11.686	91	817678	22.30	ug/L	100
71) Bromobenzene	11.692	156	212909	20.75	ug/L	94
72) 1,1,2,2-Tetrachloroethane	11.759	83	138548	20.16	ug/L	100
73) 1,3,5-Trimethylbenzene	11.880	105	640364	22.14	ug/L	99
74) 2-Chlorotoluene	11.868	91	598571	22.17	ug/L	98
75) trans-1,4-Dichloro-2-B...	11.941	53	46942	20.77	ug/L	95
76) 1,2,3-Trichloropropane	11.911	110	52707	18.37	ug/L	91
77) Cyclohexanone	11.972	55	18475	108.75	ug/L	93
78) 4-Chlorotoluene	12.039	91	550415	22.01	ug/L	99
79) tert-Butylbenzene	12.215	91	406750	23.43	ug/L	99
80) 1,2,4-Trimethylbenzene	12.288	105	653599	22.21	ug/L	97
81) sec-Butylbenzene	12.397	105	771290	22.63	ug/L	98
82) 4-Isopropyltoluene	12.537	119	690598	22.70	ug/L	99
83) 1,3-Dichlorobenzene	12.653	146	397666	21.42	ug/L	99
84) 1,4-Dichlorobenzene	12.744	146	414234	21.22	ug/L	99
85) n-Butylbenzene	12.981	92	345114	22.82	ug/L	98
86) Benzyl Chloride	12.994	126	83768	21.33	ug/L	96
87) 1,2-Dichlorobenzene	13.188	146	382319	21.00	ug/L	97
88) 1,2-Dibromo-3-Chloropr...	13.967	75	39984	20.76	ug/L	95
89) Hexachlorobutadiene	14.533	225	150992	23.82	ug/L	97
90) 1,2,4-Trichlorobenzene	14.575	180	309129	21.70	ug/L	99
91) Naphthalene	14.861	128	623448	20.58	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073558.D
Acq On : 15 Sep 2010 9:33 am
Operator : AnaJ
Sample : BS
Misc : MS15403,VC2933,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 15 09:51:28 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

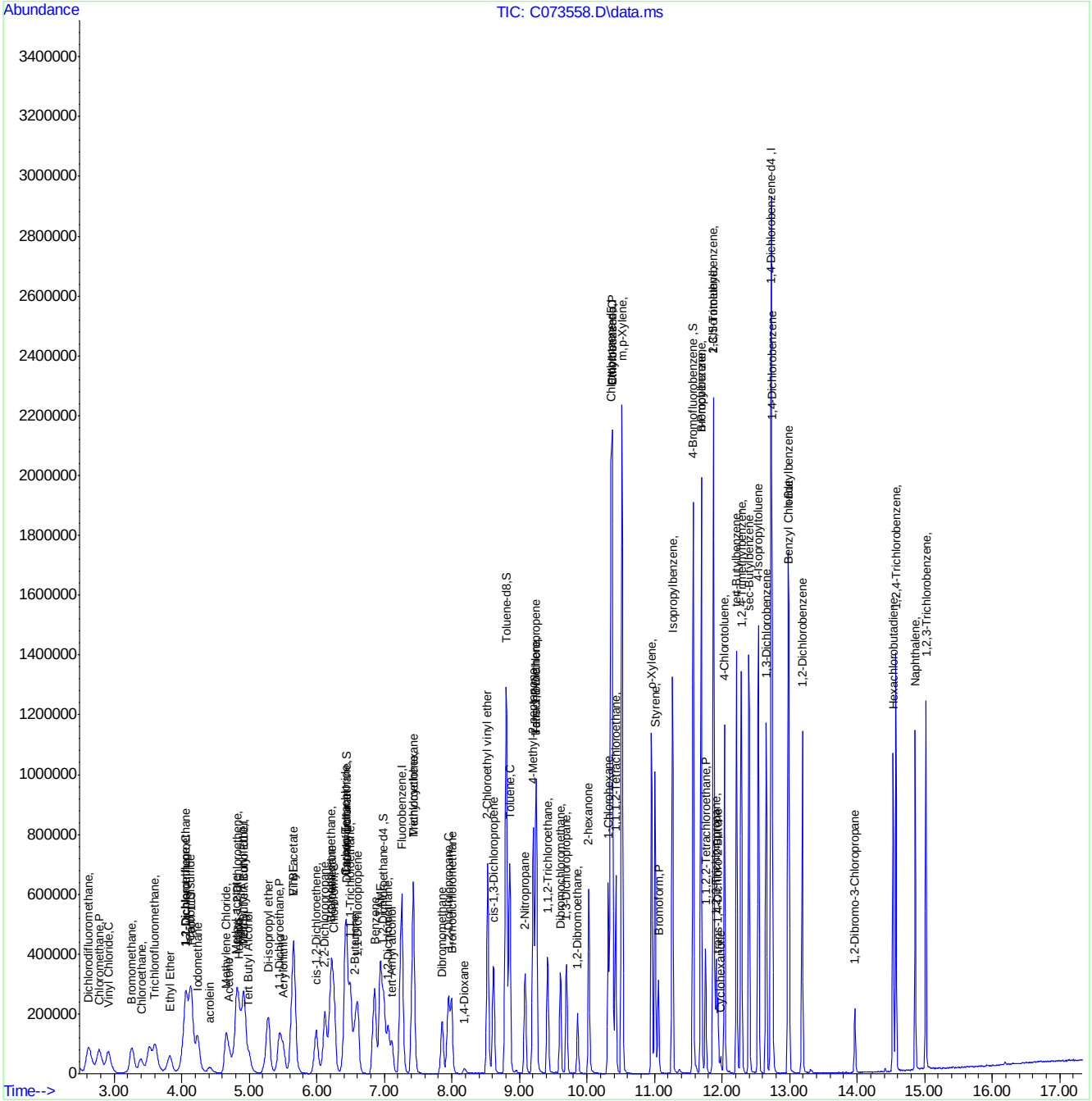
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	279833	21.15	ug/L	100
94) acrolein	4.416	56	41113	189.85	ug/L	96
95) Tert Butyl Alcohol	4.994	59	115323	208.07	ug/L	95
96) tert Amyl alcohol	7.111	59	83258	202.48	ug/L	97
97) 1,4-Dioxane	8.188	88	21241	382.54	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073558.D
Acq On : 15 Sep 2010 9:33 am
Operator : AnaJ
Sample : BS
Misc : MS15403,VC2933,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 15 09:51:28 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070404.D
Acq On : 16 Sep 2010 9:45 am
Operator : AnaJ
Sample : BS
Misc : MS15410,VB2907,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 10:06:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	421436	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1692918	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1435664	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.195	65	268789	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	208557	53.68	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 107.36%			
36) 1,2-Dichloroethane-d4	9.580	65	197845	53.44	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 106.88%			
50) Toluene-d8	11.587	98	1005029	47.73	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 95.46%			
70) 4-Bromofluorobenzene	14.398	95	1208058	49.33	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 98.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.421	85	442910	40.87	ug/L	99
3) Chloromethane	4.749	50	440434	34.63	ug/L	99
4) Vinyl Chloride	4.974	62	319117	33.36	ug/L	100
5) Bromomethane	5.540	94	195030	32.74	ug/L	92
6) Chloroethane	5.662	64	151872	31.01	ug/L	99
7) Trichlorofluoromethane	6.094	101	492236	40.37	ug/L	97
8) Ethyl Ether	6.368	59	167560	30.21	ug/L	96
9) 1,2-Dichlorotrifluoroe...	6.368	67	265631	34.89	ug/L	97
10) Freon 113	6.745	101	225956	29.74	ug/L	98
11) 1,1-Dichloroethene	6.775	61	379849	27.99	ug/L	98
12) Acetone	6.726	43	298610	107.28	ug/L	99
13) Iodomethane	6.994	142	377798	28.39	ug/L	94
14) Carbon Disulfide	7.152	76	748301	26.76	ug/L	96
15) Methyl acetate	7.104	43	895858	122.73	ug/L	96
16) Methylene Chloride	7.304	49	413495	26.90	ug/L	98
17) Methyl Tert Butyl Ether	7.590	73	650821	26.96	ug/L	99
18) trans-1,2-Dichloroethene	7.627	61	389372	26.71	ug/L	98
19) Acrylonitrile	7.523	53	410144	115.45	ug/L	98
20) Hexane	7.901	57	387526	30.40	ug/L	99
21) Di-isopropyl ether	8.077	45	1015212	27.30	ug/L	91
22) Vinyl acetate	8.047	43	1993411	141.87	ug/L	99
23) 1,1-Dichloroethane	8.095	63	499357	26.73	ug/L	96
24) ETBE	8.479	59	783028	26.59	ug/L	99
25) 2-Butanone	8.649	43	534045	123.73	ug/L	97
26) 2,2-Dichloropropane	8.746	77	368607	28.47	ug/L	95
27) cis-1,2-Dichloroethene	8.716	96	270698	27.81	ug/L	97
28) Bromochloromethane	8.983	128	122743	24.42	ug/L	98
29) Tetrahydrofuran	9.032	42	65457	24.18	ug/L	93
30) Chloroform	9.014	83	460211	26.98	ug/L	96
32) 1,1,1-Trichloroethane	9.300	97	378526	28.04	ug/L	99
33) Cyclohexane	9.397	56	468313	28.51	ug/L	98
34) Carbon Tetrachloride	9.495	117	337803	28.68	ug/L	97
35) 1,1-Dichloropropene	9.452	75	357755	27.99	ug/L	97
37) TAME	9.707	73	638363	26.38	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070404.D
Acq On : 16 Sep 2010 9:45 am
Operator : AnaJ
Sample : BS
Misc : MS15410,VB2907,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 10:06:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.683	78	972788	26.15	ug/L	99
39) 1,2-Dichloroethane	9.659	62	368823	26.10	ug/L	96
40) Trichloroethene	10.322	95	249667	26.96	ug/L	96
41) Methylcyclohexane	10.577	83	412691	31.13	ug/L	98
42) 1,2-Dichloropropane	10.559	63	275854	26.17	ug/L	96
43) Dibromomethane	10.693	93	150856	25.12	ug/L	96
44) Bromodichloromethane	10.809	83	332596	26.54	ug/L	93
45) 2-Chloroethyl vinyl ether	11.028	63	679502	110.05	ug/L	98
46) 2-Nitropropane	10.997	41	305197	125.40	ug/L	95
47) cis-1,3-Dichloropropene	11.265	75	409506	26.90	ug/L	99
48) 4-Methyl-2-pentanone	11.350	43	1173766	133.06	ug/L	99
51) Toluene	11.660	91	1026092	23.88	ug/L	99
52) trans-1,3-Dichloropropene	11.806	75	363013	24.42	ug/L	96
53) 1,1,2-Trichloroethane	12.031	83	182048	22.30	ug/L	96
54) Tetrachloroethene	12.275	166	268169	24.96	ug/L	95
55) 2-hexanone	12.214	43	818355	123.00	ug/L	99
56) 1,3-Dichloropropane	12.226	76	375646	22.00	ug/L	99
57) Dibromochloromethane	12.506	129	227993	22.65	ug/L	98
58) 1,2-Dibromoethane	12.682	107	213320	22.23	ug/L	100
59) 1-Chlorohexane	13.047	91	363109	23.89	ug/L	100
60) Chlorobenzene	13.187	112	672998	23.25	ug/L	98
61) Ethylbenzene	13.248	91	1146015	24.22	ug/L	98
62) 1,1,1,2-Tetrachloroethane	13.236	131	223931	23.01	ug/L	97
63) m,p-Xylene	13.364	91	1747181	48.46	ug/L	99
64) o-Xylene	13.814	91	920475	24.67	ug/L	97
65) Styrene	13.820	104	698484	22.82	ug/L	96
66) Bromoform	14.082	173	148649	21.87	ug/L	97
68) Isopropylbenzene	14.191	105	1150193	28.16	ug/L	98
69) Cyclohexanone	14.343	55	27379	98.12	ug/L	88
71) 1,1,2,2-Tetrachloroethane	14.471	83	277015	20.75	ug/L	98
72) trans-1,4-Dichloro-2-B...	14.520	53	52431	18.98	ug/L	94
73) n-Propylbenzene	14.641	91	1399537	23.76	ug/L	100
74) Bromobenzene	14.623	156	297298	22.17	ug/L	96
75) 1,2,3-Trichloropropane	14.568	110	69572	18.09	ug/L	95
76) 1,3,5-Trimethylbenzene	14.805	105	931600	23.95	ug/L	99
77) 2-Chlorotoluene	14.799	91	939974	23.29	ug/L	99
78) 4-Chlorotoluene	14.903	91	867613	23.03	ug/L	99
79) tert-Butylbenzene	15.201	91	587991	23.28	ug/L	96
80) 1,2,4-Trimethylbenzene	15.243	105	982972	23.25	ug/L	99
81) sec-Butylbenzene	15.438	105	1259085	24.10	ug/L	99
82) 4-Isopropyltoluene	15.566	119	998564	24.50	ug/L	99
83) 1,3-Dichlorobenzene	15.627	146	564944	22.28	ug/L	99
84) 1,4-Dichlorobenzene	15.718	146	554731	21.32	ug/L	98
85) Benzyl Chloride	15.828	91	395956	18.70	ug/L	98
86) n-Butylbenzene	16.016	91	1026994	23.50	ug/L	98
87) 1,2-Dichlorobenzene	16.144	146	538537	21.90	ug/L	98
88) 1,2-Dibromo-3-Chloropr...	16.971	75	44116	20.92	ug/L	95
89) 1,2,4-Trichlorobenzene	17.945	180	418546	22.13	ug/L	98
90) Hexachlorobutadiene	18.109	225	208209	24.53	ug/L	100
91) Naphthalene	18.279	128	727667	20.96	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070404.D
Acq On : 16 Sep 2010 9:45 am
Operator : AnaJ
Sample : BS
Misc : MS15410,VB2907,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 10:06:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

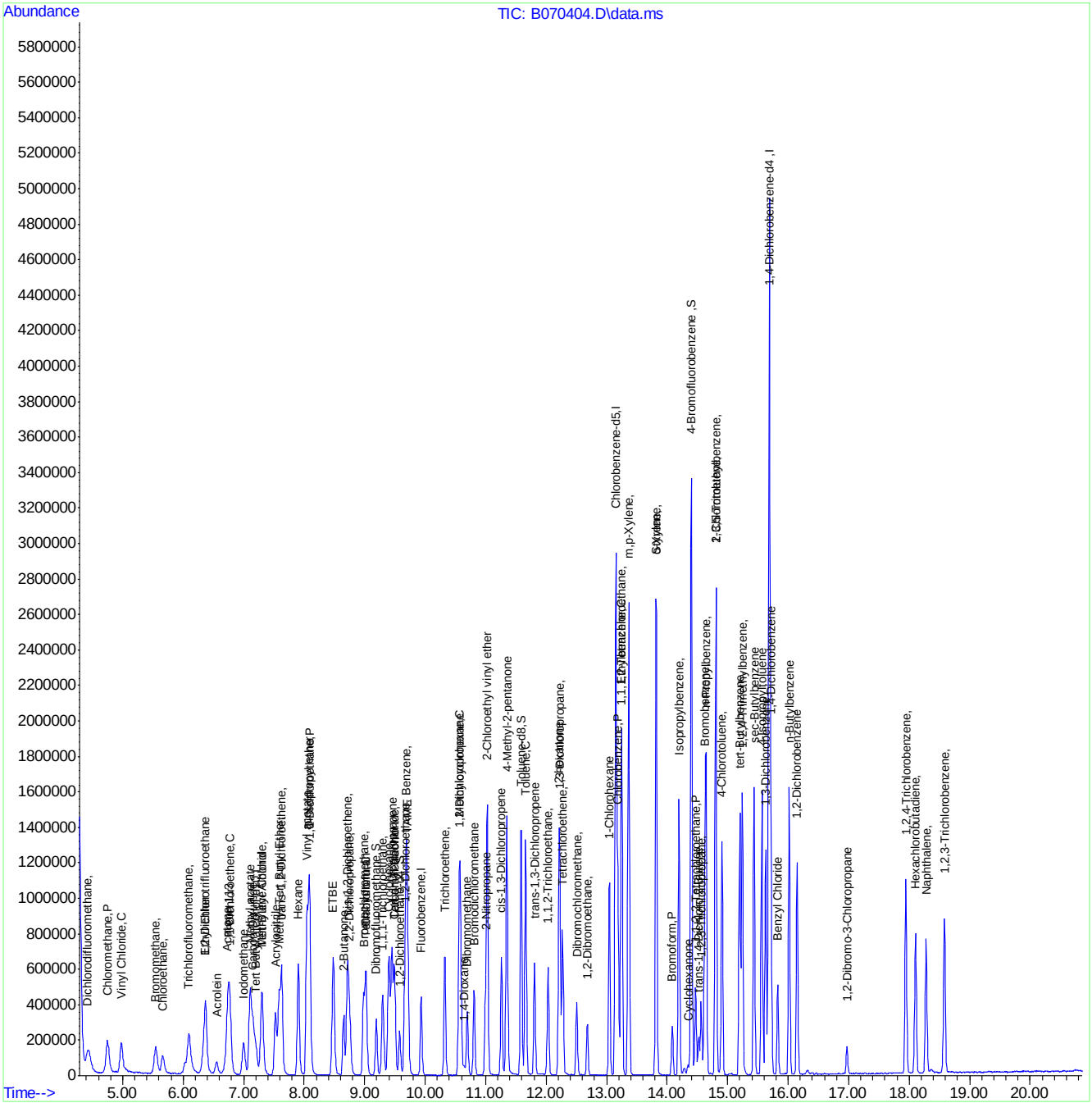
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.583	180	362641	21.57	ug/L	96
94) Acrolein	6.550	56	98778	96.08	ug/L	88
95) Tert-Butyl Alcohol	7.298	59	173241	212.77	ug/L	95
96) Tert amyl alcohol	9.488	59	127909	205.10	ug/L	90
97) 1,4-Dioxane	10.644	88	35250	426.10	ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070404.D
Acq On : 16 Sep 2010 9:45 am
Operator : AnaJ
Sample : BS
Misc : MS15410,VB2907,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 10:06:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064488.D Vial: 2
Acq On : 16 Sep 2010 10:55 am Operator: MikeM
Sample : bs Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:19:50 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.20	96	414678	50.00	ug/Kg	-0.01
54) Chlorobenzene-d5	14.73	117	306180	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.20	152	166764	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	48895	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.18	113	104661	52.66	ug/Kg	-0.01
Spiked Amount 50.000	Range 80 - 121		Recovery = 105.32%			
44) 1,2-Dichloroethane-d4	10.87	65	176394	57.82	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 115.64%			
55) Toluene-d8	13.02	98	438933	45.65	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 91.30%			
77) 4-Bromofluorobenzene	16.01	174	148817	50.39	ug/Kg	-0.01
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.94	85	254660	115.87	ug/Kg	98
3) Chloromethane	4.28	50	330620	81.99	ug/Kg	96
4) Vinyl Chloride	4.46	62	204232	68.83	ug/Kg	97
5) Bromomethane	5.12	94	73298	73.88	ug/Kg	96
6) Chloroethane	5.36	64	92408	65.89	ug/Kg	93
7) Trichlorofluoromethane	5.61	101	226276	68.81	ug/Kg	95
8) Ethyl Ether	6.16	59	126240	52.71	ug/Kg	89
9) 1,2-Dichlorotrifluoroethan	6.50	67	239373	63.52	ug/Kg	82
10) 1,1-Dichloroethene	6.57	61	291983	51.57	ug/Kg	91
11) Freon 113	6.68	101	152323	57.92	ug/Kg	95
12) Carbon Disulfide	6.67	76	539439	53.72	ug/Kg	95
13) Iodomethane	6.84	142	219524	52.86	ug/Kg	98
14) Allyl chloride	7.39	41	474873	60.74	ug/Kg	97
15) Methylene Chloride	7.56	49	393783	54.72	ug/Kg	93
16) Acetone	7.62	43	403170	207.52	ug/Kg	97
17) Methyl acetate	7.81	43	652326	297.03	ug/Kg	98
18) trans-1,2-Dichloroethene	7.84	61	302755	52.06	ug/Kg	96
19) Hexane	7.95	56	197109	58.27	ug/Kg	92
20) Methyl Tert Butyl Ether	8.00	73	305476	49.97	ug/Kg	84
21) Acetonitrile	8.39	41	235796	619.86	ug/Kg	99
22) Di-isopropyl ether	8.56	45	766634	51.45	ug/Kg	98
23) Chloroprene	8.76	53	390774	64.01	ug/Kg	92
24) 1,1-Dichloroethane	8.80	63	354270	50.94	ug/Kg	94
25) Acrylonitrile	8.85	53	337832	324.34	ug/Kg	99
26) ETBE	9.10	59	417482	48.47	ug/Kg	94
27) Vinyl acetate	9.12	43	1602106	431.55	ug/Kg	99
28) cis-1,2-Dichloroethene	9.58	96	169211	54.66	ug/Kg#	82
29) 2,2-Dichloropropane	9.75	77	281961	52.51	ug/Kg	94
30) Bromochloromethane	9.87	128	70062	49.50	ug/Kg	92
31) Cyclohexane	9.91	56	368463	53.52	ug/Kg	94
32) Chloroform	9.94	83	334399	52.22	ug/Kg	95
33) Ethyl acetate	10.04	43	1026163	279.24	ug/Kg	100
34) Tetrahydrofuran	10.17	42	51993	58.48	ug/Kg	87
36) Carbon Tetrachloride	10.17	117	252496	52.20	ug/Kg	95

(#) = qualifier out of range (m) = manual integration
H064488.D APP9-H.M Thu Sep 16 11:20:48 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064488.D Vial: 2
Acq On : 16 Sep 2010 10:55 am Operator: MikeM
Sample : bs Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:19:50 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.25	97	274473	52.85	ug/Kg	94
38)	2-Butanone	10.31	43	560583	252.79	ug/Kg	94
39)	1,1-Dichloropropene	10.40	75	274982	54.69	ug/Kg	94
40)	Propionitrile	10.69	54	239532	686.64	ug/Kg	96
41)	Methacrylonitrile	10.72	41	1525274	664.26	ug/Kg	97
42)	Benzene	10.71	78	640812	53.05	ug/Kg	89
43)	TAME	10.80	73	290648	51.35	ug/Kg	89
45)	1,2-Dichloroethane	10.95	62	278671	49.67	ug/Kg	95
46)	Trichloroethene	11.42	95	175792	54.32	ug/Kg	90
47)	Methylcyclohexane	11.43	83	291950	57.98	ug/Kg	97
48)	Dibromomethane	11.94	93	91574	53.78	ug/Kg	87
49)	1,2-Dichloropropane	12.03	63	181975	50.43	ug/Kg	93
50)	Bromodichloromethane	12.09	83	241837	51.34	ug/Kg	93
51)	Methyl methacrylate	12.22	41	238366	62.93	ug/Kg	93
52)	2-Chloroethyl vinyl ether	12.68	63	171452	257.69	ug/Kg	94
53)	cis-1,3-Dichloropropene	12.80	75	299711	53.32	ug/Kg	85
56)	Toluene	13.07	91	684262	46.12	ug/Kg	99
57)	2-Nitropropane	13.31	41	324975	258.96	ug/Kg	96
58)	4-Methyl-2-pentanone	13.44	43	1097657	266.04	ug/Kg	99
59)	trans-1,3-Dichloropropene	13.51	75	275684	45.55	ug/Kg	90
60)	Tetrachloroethene	13.54	166	187170	48.29	ug/Kg	98
61)	Ethyl methacrylate	13.62	69	253058	46.52	ug/Kg	95
62)	1,1,2-Trichloroethane	13.69	83	114852	40.05	ug/Kg	91
63)	Dibromochloromethane	13.92	129	149376	39.59	ug/Kg	97
64)	1,3-Dichloropropane	14.01	76	252202	39.78	ug/Kg	91
65)	1,2-Dibromoethane	14.22	107	127359	49.34	ug/Kg	92
66)	2-hexanone	14.33	43	907295	273.43	ug/Kg	97
67)	1-Chlorohexane	14.66	91	268275	42.84	ug/Kg	95
68)	Ethylbenzene	14.73	91	772863	49.86	ug/Kg	97
69)	Chlorobenzene	14.75	112	404363	49.59	ug/Kg	83
70)	1,1,1,2-Tetrachloroethane	14.80	131	150702	46.08	ug/Kg	94
71)	m,p-Xylene	14.88	91	1310720	102.69	ug/Kg	94
72)	o-Xylene	15.35	91	672222	47.50	ug/Kg	95
73)	Styrene	15.40	104	465625	42.78	ug/Kg	88
74)	Bromoform	15.49	173	97122	46.31	ug/Kg	96
75)	Isopropylbenzene	15.66	105	759707	55.51	ug/Kg	97
78)	cis-1,4-Dichloro-2-butene	16.04	53	91173	62.03	ug/Kg	92
79)	n-Propylbenzene	16.11	91	993298	54.33	ug/Kg	92
80)	Bromobenzene	16.16	156	174964	51.70	ug/Kg	89
81)	1,1,2,2-Tetrachloroethane	16.16	83	177865	54.67	ug/Kg	99
82)	1,3,5-Trimethylbenzene	16.28	105	654424	53.20	ug/Kg	98
83)	2-Chlorotoluene	16.31	91	691416	52.66	ug/Kg	93
84)	trans-1,4-Dichloro-2-Buten	16.35	53	69109	99.25	ug/Kg#	71
85)	1,2,3-Trichloropropane	16.34	110	44048	51.17	ug/Kg	95
86)	Cyclohexanone	16.43	55	31586	344.62	ug/Kg	97
87)	4-Chlorotoluene	16.49	91	631689	52.60	ug/Kg	93
88)	tert-Butylbenzene	16.64	91	450919	54.16	ug/Kg	94
89)	1,2,4-Trimethylbenzene	16.71	105	624249	53.66	ug/Kg	92
90)	Pentachloroethane	16.72	167	122007	65.09	ug/Kg	90

(#) = qualifier out of range (m) = manual integration
H064488.D APP9-H.M Thu Sep 16 11:20:49 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064488.D Vial: 2
Acq On : 16 Sep 2010 10:55 am Operator: MikeM
Sample : bs Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:19:50 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

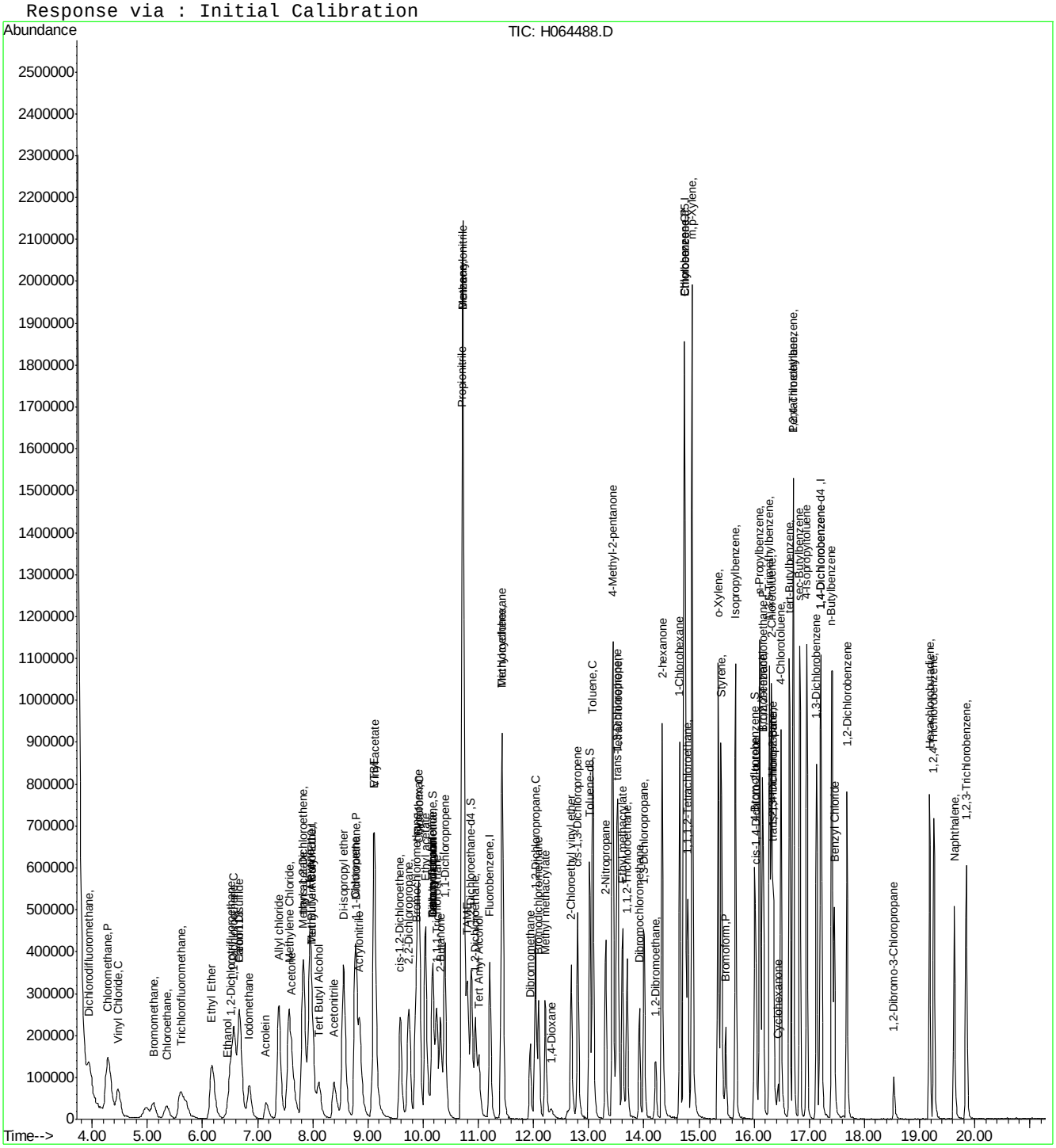
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.82	105	837027	54.42	ug/Kg	100
92)	4-Isopropyltoluene	16.95	119	648474	54.72	ug/Kg	100
93)	1,3-Dichlorobenzene	17.13	146	332757	52.00	ug/Kg	90
94)	1,4-Dichlorobenzene	17.22	146	346021	52.56	ug/Kg	96
95)	n-Butylbenzene	17.41	92	432519	55.13	ug/Kg	94
96)	Benzyl Chloride	17.45	126	62050	49.76	ug/Kg	95
97)	1,2-Dichlorobenzene	17.68	146	313830	51.60	ug/Kg	94
98)	1,2-Dibromo-3-Chloropropan	18.54	75	37509	46.15	ug/Kg	90
99)	Hexachlorobutadiene	19.18	225	190244	55.12	ug/Kg	96
100)	1,2,4-Trichlorobenzene	19.26	180	260346	54.95	ug/Kg	92
101)	Naphthalene	19.63	128	448607	52.69	ug/Kg	98
102)	1,2,3-Trichlorobenzene	19.85	180	221758	52.47	ug/Kg	98
104)	Ethanol	6.44	45	15121	254.36	ug/Kg	99
105)	Acrolein	7.15	56	77043	257.64	ug/Kg	96
106)	Tert Butyl Alcohol	8.11	59	213288	451.03	ug/Kg	93
107)	Isobutyl alcohol	10.17	42	53072	940.83	ug/Kg	86
108)	Tert Amyl Alcohol	11.01	59	120140	474.83	ug/Kg	94
109)	1,4-Dioxane	12.33	88	26092	849.69	ug/Kg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064488.D APP9-H.M Thu Sep 16 11:20:49 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064488.D Vial: 2
Acq On : 16 Sep 2010 10:55 am Operator: MikeM
Sample : bs Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 11:16 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046752.D Vial: 8
Acq On : 16 Sep 2010 3:52 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 16:49:43 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	1035532	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	666384	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	295095	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.30	65	91021	250.00	ug/Kg	0.02
System Monitoring Compounds						
31) Dibromofluoromethane	10.43	113	260762	50.86	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 101.72%			
36) 1,2-Dichloroethane-d4	11.11	65	322294	50.97	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 101.94%			
50) Toluene-d8	13.25	98	1074292	48.90	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.80%			
70) 4-Bromofluorobenzene	16.24	174	249870	47.83	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 95.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	440803	108.65	ug/Kg	98
3) Chloromethane	4.59	50	641455	78.99	ug/Kg	100
4) Vinyl Chloride	4.79	62	451564	71.60	ug/Kg	96
5) Bromomethane	5.45	94	165736	60.81	ug/Kg	81
6) Chloroethane	5.72	64	175967	54.02	ug/Kg	97
7) Trichlorofluoromethane	5.98	101	403010	61.53	ug/Kg	92
8) 1,2-Dichloro-1,1,2-trifluo	6.84	67	472017	61.06	ug/Kg	89
9) Ethyl Ether	6.51	59	234318	47.41	ug/Kg	86
10) Freon 113	7.00	101	324050	59.50	ug/Kg	90
11) 1,1-Dichloroethene	6.91	61	514431	57.77	ug/Kg	98
12) Acetone	7.93	43	557907	190.39	ug/Kg	96
13) Iodomethane	7.17	142	467805	54.64	ug/Kg	98
14) Carbon Disulfide	7.01	76	1004986	55.51	ug/Kg	97
15) Methyl acetate	8.12	43	917548	200.42	ug/Kg	96
16) Methylene Chloride	7.87	49	842138	68.18	ug/Kg	90
17) Acrylonitrile	9.14	53	396096	264.30	ug/Kg	94
18) Methyl Tert Butyl Ether	8.29	73	779345	46.21	ug/Kg	72
19) trans-1,2-Dichloroethene	8.15	61	530002	53.11	ug/Kg	97
20) Hexane	8.27	57	827997	59.03	ug/Kg	95
21) Vinyl acetate	8.12	43	917548	198.89	ug/Kg	96
22) 1,1-Dichloroethane	9.09	63	677891	50.70	ug/Kg	97
23) Di-isopropyl ether	8.84	45	1465184	51.43	ug/Kg	98
24) Ethyl tert-butyl Ether	9.38	59	1014790	45.79	ug/Kg	96
25) 2-Butanone	10.56	43	775544	212.37	ug/Kg	99
26) cis-1,2-Dichloroethene	9.85	96	323928	53.84	ug/Kg	96
27) 2,2-Dichloropropane	10.00	77	487736	60.99	ug/Kg	99
28) Bromochloromethane	10.13	128	143962	50.09	ug/Kg#	79
29) Chloroform	10.20	83	601979	52.65	ug/Kg	96
30) Tetrahydrofuran	10.57	42	58702	38.94	ug/Kg	84
32) 1,1,1-Trichloroethane	10.51	97	486443	53.96	ug/Kg	89
33) Cyclohexane	10.18	56	788901	67.90	ug/Kg	96
34) 1,1-Dichloropropene	10.66	75	514360	58.16	ug/Kg	94
35) Carbon Tetrachloride	10.43	117	392581	61.40	ug/Kg	93
37) 1,2-Dichloroethane	11.20	62	420890	46.43	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
K046752.D 8260-K.M Fri Sep 17 08:49:22 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046752.D Vial: 8
Acq On : 16 Sep 2010 3:52 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 16:49:43 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1356815	58.37	ug/Kg	98
39)	Tert-Amyl Methyl Ether	11.05	73	782030	46.01	ug/Kg	96
40)	Trichloroethene	11.67	95	343228	56.27	ug/Kg	95
41)	Methylcyclohexane	11.69	83	639358	59.11	ug/Kg	92
42)	1,2-Dichloropropane	12.29	63	398074	50.68	ug/Kg	92
43)	Dibromomethane	12.18	93	159756	45.40	ug/Kg	94
44)	Bromodichloromethane	12.33	83	404949	50.64	ug/Kg	98
45)	2-Nitropropane	13.55	41	348305	260.70	ug/Kg	96
46)	2-Chloroethyl vinyl ether	12.92	63	153352	253.17	ug/Kg	86
47)	cis-1,3-Dichloropropene	13.04	75	513233	50.43	ug/Kg	96
48)	4-Methyl-2-pentanone	13.67	43	1557445	261.51	ug/Kg	99
51)	Toluene	13.31	91	1354049	50.16	ug/Kg	95
52)	trans-1,3-Dichloropropene	13.74	75	410546	51.86	ug/Kg	95
53)	1,1,2-Trichloroethane	13.93	83	208570	43.69	ug/Kg	93
54)	1,3-Dichloropropane	14.24	76	425796	44.60	ug/Kg	92
55)	2-hexanone	14.56	43	1105325	234.96	ug/Kg	95
56)	Tetrachloroethene	13.77	166	309929	54.69	ug/Kg	97
57)	Dibromochloromethane	14.16	129	264537	47.83	ug/Kg	96
58)	1,2-Dibromoethane	14.44	107	227888	46.37	ug/Kg	90
59)	1-Chlorohexane	14.89	91	436858	52.41	ug/Kg	95
60)	Chlorobenzene	14.98	112	766678	50.98	ug/Kg	95
61)	1,1,1,2-Tetrachloroethane	15.03	131	273180	50.76	ug/Kg	95
62)	Ethylbenzene	14.96	91	1428841	53.32	ug/Kg	99
63)	m,p-Xylene	15.10	91	2247926	106.28	ug/Kg	98
64)	o-Xylene	15.58	91	1211537	52.10	ug/Kg	99
65)	Styrene	15.62	104	820121	49.11	ug/Kg	99
66)	Bromoform	15.71	173	142748	38.67	ug/Kg	99
68)	Isopropylbenzene	15.89	105	1369627	62.41	ug/Kg	100
69)	Cyclohexanone	16.68	55	40801	271.78	ug/Kg	95
71)	1,1,2,2-Tetrachloroethane	16.39	83	272017	49.47	ug/Kg	97
72)	trans-1,4-Dichloro-2-Buten	16.58	53	69400	42.37	ug/Kg#	59
73)	1,2,3-Trichloropropane	16.57	110	60011	45.64	ug/Kg	96
74)	Bromobenzene	16.37	156	277607	50.17	ug/Kg	97
75)	n-Propylbenzene	16.32	91	1595339	64.23	ug/Kg	98
76)	2-Chlorotoluene	16.54	91	1127282	64.33	ug/Kg	98
77)	1,3,5-Trimethylbenzene	16.50	105	1100771	52.29	ug/Kg	96
78)	4-Chlorotoluene	16.71	91	938811	53.37	ug/Kg	100
79)	tert-Butylbenzene	16.87	91	673434	54.79	ug/Kg	93
80)	1,2,4-Trimethylbenzene	16.93	105	1053880	53.16	ug/Kg	98
81)	sec-Butylbenzene	17.05	105	1362036	52.66	ug/Kg	100
82)	4-Isopropyltoluene	17.18	119	1010868	55.59	ug/Kg	99
83)	1,3-Dichlorobenzene	17.35	146	491873	51.21	ug/Kg	97
84)	1,4-Dichlorobenzene	17.44	146	482210	51.35	ug/Kg	95
85)	Benzyl chloride	17.67	126	70536	44.68	ug/Kg#	73
86)	n-Butylbenzene	17.63	92	554376	53.59	ug/Kg	98
87)	1,2-Dichlorobenzene	17.90	146	453314	50.41	ug/Kg	95
88)	1,2-Dibromo-3-Chloropropan	18.74	75	33340	46.59	ug/Kg	89
89)	1,2,4-Trichlorobenzene	19.47	180	185209	50.03	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	182565	56.04	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
K046752.D 8260-K.M Fri Sep 17 08:49:23 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046752.D Vial: 8
Acq On : 16 Sep 2010 3:52 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 16:49:43 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

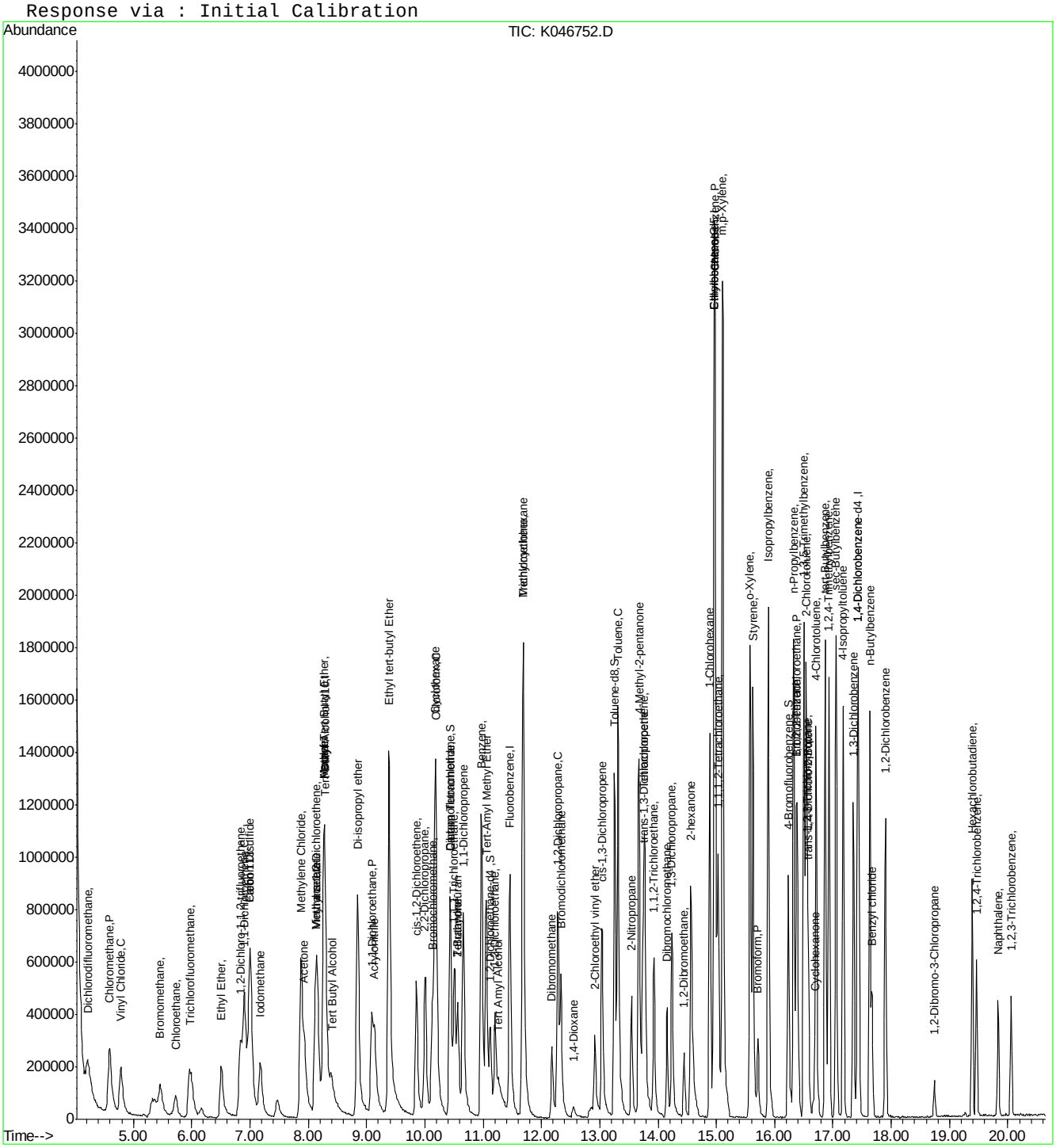
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	19.83	128	326436	50.17	ug/Kg	100
92) 1,2,3-Trichlorobenzene	20.06	180	142438	46.08	ug/Kg	95
94) Acrolein	8.27	56	376421	428.58	ug/Kg	97
95) Tert Butyl Alcohol	8.40	59	224817	500.94	ug/Kg	93
96) Tert Amyl Alcohol	11.27	59	166961	434.18	ug/Kg	74
97) 1,4-Dioxane	12.55	88	42114	1029.41	ug/Kg	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046752.D 8260-K.M Fri Sep 17 08:49:23 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046752.D Vial: 8
Acq On : 16 Sep 2010 3:52 pm Operator: StevenH
Sample : bs Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 19:50 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration



ACCUTEST
F76459

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073573.D
Acq On : 15 Sep 2010 4:02 pm
Operator : AnaJ
Sample : F76459-12ms
Misc : MS15409,VC2933,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 15 16:23:27 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.251	96	1621733	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	1529662	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	984304	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.927	65	200974	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.442	113	465232	46.57	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 93.14%				
38) 1,2-Dichloroethane-d4	6.983	65	557582	39.02	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 78.04%				
48) Toluene-d8	8.802	98	1731862	50.27	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.54%				
69) 4-Bromofluorobenzene	11.570	95	786249	49.36	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 98.72%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.621	85	398856	26.62	ug/L		95
3) Chloromethane	2.773	50	299605	24.83	ug/L		97
4) Vinyl Chloride	2.907	62	271189	24.34	ug/L		100
5) Bromomethane	3.254	94	198554	21.68	ug/L		99
6) Chloroethane	3.388	64	130707	22.40	ug/L		98
7) Trichlorofluoromethane	3.528	101	527959	22.03	ug/L		94
8) Ethyl Ether	3.820	59	151684	19.29	ug/L		95
9) 1,2-Dichlorotrifluoroe...	4.045	67	254917	23.95	ug/L		95
10) 1,1-Dichloroethene	4.063	61	298416	18.71	ug/L		89
11) Freon 113	4.136	101	245144	21.23	ug/L		93
12) Carbon Disulfide	4.124	76	594006	20.65	ug/L		90
13) Iodomethane	4.233	142	448599	21.57	ug/L		90
14) Methylene Chloride	4.659	49	215392	18.63	ug/L		86
15) Acetone	4.696	58	66705	96.66	ug/L	#	81
16) Methyl acetate	4.799	74	160646	109.89	ug/L		94
17) trans-1,2-Dichloroethene	4.817	61	289199	20.18	ug/L		90
18) Hexane	4.860	56	168942	23.73	ug/L	#	90
19) Methyl Tert Butyl Ether	4.921	73	681724	19.94	ug/L		96
20) Di-isopropyl ether	5.274	45	547824	21.54	ug/L		94
21) 1,1-Dichloroethane	5.444	63	360680	20.75	ug/L		100
22) Acrylonitrile	5.499	53	283328	109.16	ug/L		96
23) ETBE	5.657	59	646902	19.92	ug/L		98
24) Vinyl acetate	5.645	43	1358742	133.02	ug/L		96
25) cis-1,2-Dichloroethene	5.991	96	247084	23.88	ug/L		95
26) 2,2-Dichloropropane	6.119	77	408469	20.44	ug/L		96
27) Bromochloromethane	6.198	128	145663	21.53	ug/L		94
28) Cyclohexane	6.223	56	307032	23.43	ug/L		91
29) Chloroform	6.253	83	639131	27.24	ug/L		96
30) Tetrahydrofuran	6.429	42	43786	18.79	ug/L		90
32) Carbon Tetrachloride	6.423	117	496895	19.62	ug/L		99
33) 1,1,1-Trichloroethane	6.490	97	465296	19.51	ug/L		97
34) 2-Butanone	6.551	43	373975	97.62	ug/L		95
35) 1,1-Dichloropropene	6.594	75	342508	21.57	ug/L		91
36) Benzene	6.849	78	883078	22.23	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073573.D
Acq On : 15 Sep 2010 4:02 pm
Operator : AnaJ
Sample : F76459-12ms
Misc : MS15409,VC2933,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 15 16:23:27 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.941	73	627084	19.93	ug/L		94
39) 1,2-Dichloroethane	7.050	62	361716	16.82	ug/L		97
40) Trichloroethene	7.421	95	273016	21.18	ug/L		94
41) Methylcyclohexane	7.433	83	386583	25.49	ug/L		96
42) Dibromomethane	7.853	93	154383	19.48	ug/L		93
43) 1,2-Dichloropropane	7.944	63	192433	21.07	ug/L		87
44) Bromodichloromethane	7.993	83	364315	19.19	ug/L		99
45) 2-Chloroethyl vinyl ether	8.528	63	10589	1.63	ug/L		94
46) cis-1,3-Dichloropropene	8.613	75	384588	20.14	ug/L		91
49) Toluene	8.851	91	1054689	23.15	ug/L		98
50) 2-Nitropropane	9.082	41	309797	84.69	ug/L		97
51) 4-Methyl-2-pentanone	9.204	43	849319	108.97	ug/L		97
52) trans-1,3-Dichloropropene	9.252	75	392336	21.52	ug/L		97
53) Tetrachloroethene	9.246	166	351838	23.71	ug/L		97
54) 1,1,2-Trichloroethane	9.417	83	168145	21.29	ug/L		96
55) Dibromochloromethane	9.605	129	308898	20.29	ug/L		99
56) 1,3-Dichloropropane	9.696	76	345970	20.54	ug/L		93
57) 1,2-Dibromoethane	9.861	107	242916	21.23	ug/L		99
58) 2-hexanone	10.025	43	617895	111.54	ug/L		97
59) 1-Chlorohexane	10.317	91	348461	23.42	ug/L		92
60) Ethylbenzene	10.378	91	1221594	21.35	ug/L		97
61) Chlorobenzene	10.372	112	744094	22.15	ug/L		94
62) 1,1,1,2-Tetrachloroethane	10.426	131	296887	20.42	ug/L		94
63) m,p-Xylene	10.518	91	1966495	43.24	ug/L		98
64) o-Xylene	10.956	91	985924	21.35	ug/L		97
65) Styrene	11.010	104	781915	22.46	ug/L		97
66) Bromoform	11.059	173	229227	20.25	ug/L		98
67) Isopropylbenzene	11.266	105	1266426	25.43	ug/L		100
70) n-Propylbenzene	11.686	91	1393018	23.22	ug/L		99
71) Bromobenzene	11.692	156	374624	22.32	ug/L		99
72) 1,1,2,2-Tetrachloroethane	11.759	83	248406	22.10	ug/L		99
73) 1,3,5-Trimethylbenzene	11.880	105	1067734	22.56	ug/L		98
74) 2-Chlorotoluene	11.868	91	975583	22.08	ug/L		97
75) trans-1,4-Dichloro-2-B...	11.941	53	56650	15.32	ug/L		84
76) 1,2,3-Trichloropropane	11.917	110	87077	18.55	ug/L		95
77) Cyclohexanone	11.978	55	29876	107.51	ug/L		97
78) 4-Chlorotoluene	12.039	91	910725	22.26	ug/L		98
79) tert-Butylbenzene	12.215	91	619158	21.80	ug/L		97
80) 1,2,4-Trimethylbenzene	12.288	105	1083155	22.49	ug/L		100
81) sec-Butylbenzene	12.397	105	1299774	23.31	ug/L		99
82) 4-Isopropyltoluene	12.537	119	1158626	23.28	ug/L		99
83) 1,3-Dichlorobenzene	12.653	146	679591	22.37	ug/L		99
84) 1,4-Dichlorobenzene	12.744	146	698908	21.88	ug/L		99
85) n-Butylbenzene	12.982	92	570206	23.04	ug/L		92
86) Benzyl Chloride	12.994	126	147825	23.00	ug/L	#	91
87) 1,2-Dichlorobenzene	13.188	146	650295	21.84	ug/L		99
88) 1,2-Dibromo-3-Chloropr...	13.967	75	57884	18.37	ug/L		96
89) Hexachlorobutadiene	14.533	225	227916	21.98	ug/L		97
90) 1,2,4-Trichlorobenzene	14.575	180	496497	21.31	ug/L		99
91) Naphthalene	14.861	128	1046822	21.12	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073573.D
Acq On : 15 Sep 2010 4:02 pm
Operator : AnaJ
Sample : F76459-12ms
Misc : MS15409,VC2933,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 15 16:23:27 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

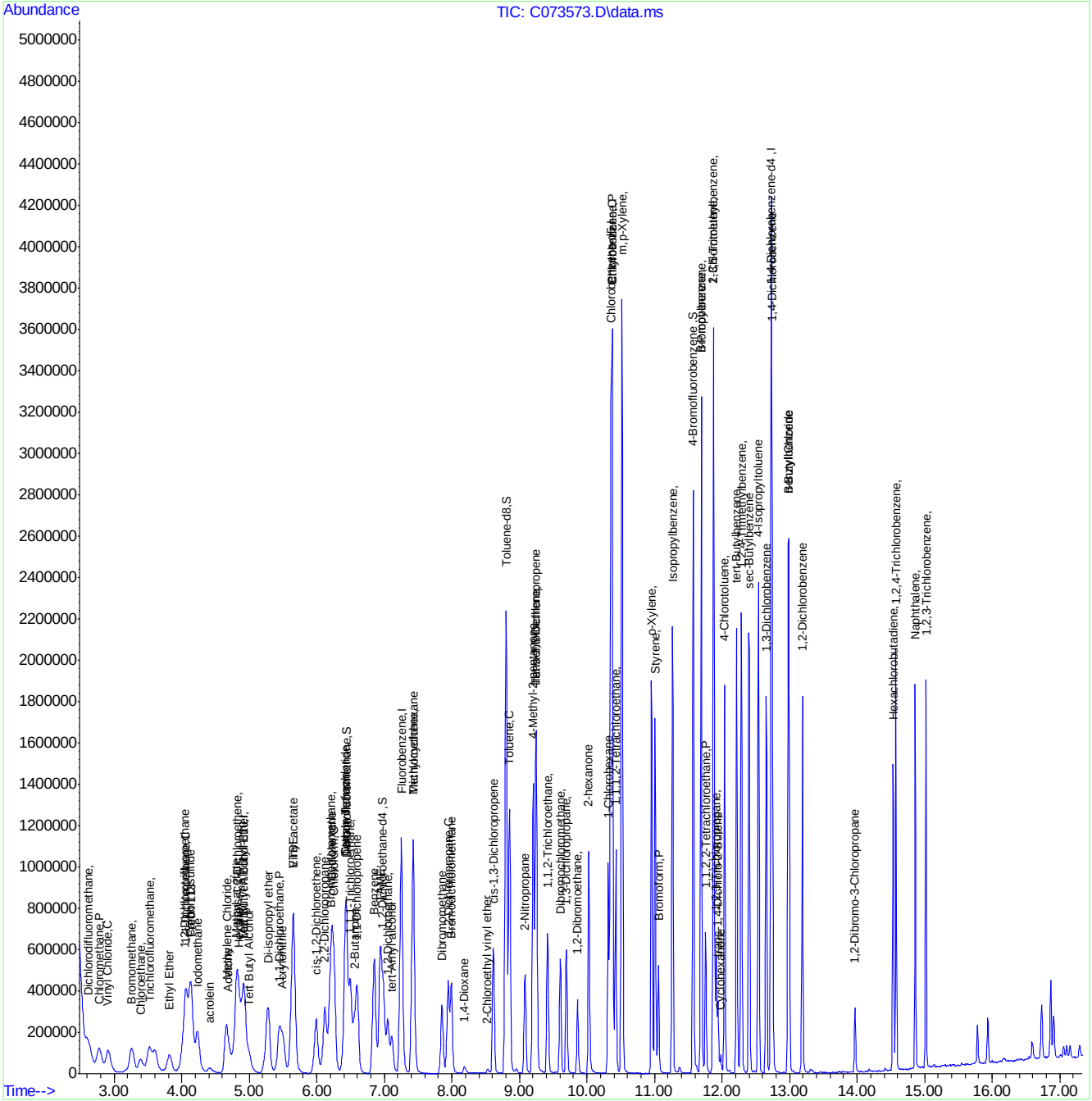
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	446428	20.63	ug/L	99
94) acrolein	4.416	56	54455	156.28	ug/L	98
95) Tert Butyl Alcohol	5.000	59	188267	202.58	ug/L	92
96) tert Amyl alcohol	7.111	59	147109	213.37	ug/L	95
97) 1,4-Dioxane	8.188	88	42413	454.05	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073573.D
Acq On : 15 Sep 2010 4:02 pm
Operator : AnaJ
Sample : F76459-12ms
Misc : MS15409,VC2933,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 15 16:23:27 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073574.D
Acq On : 15 Sep 2010 4:27 pm
Operator : AnaJ
Sample : F76459-12msd
Misc : MS15409,VC2933,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 16 07:35:50 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.251	96	1574500	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	1488179	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	947844	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.921	65	200929	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.436	113	446260	46.02	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 92.04%				
38) 1,2-Dichloroethane-d4	6.983	65	543501	39.18	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 78.36%				
48) Toluene-d8	8.802	98	1703544	50.83	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 101.66%				
69) 4-Bromofluorobenzene	11.570	95	769584	50.17	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 100.34%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.615	85	386576	26.57	ug/L		96
3) Chloromethane	2.773	50	278618	23.70	ug/L		98
4) Vinyl Chloride	2.907	62	256114	23.68	ug/L		99
5) Bromomethane	3.260	94	188609	21.21	ug/L		96
6) Chloroethane	3.388	64	120877	21.34	ug/L		92
7) Trichlorofluoromethane	3.509	101	515098	22.14	ug/L		93
8) Ethyl Ether	3.813	59	141205	18.49	ug/L		94
9) 1,2-Dichlorotrifluoroe...	4.039	67	244008	23.61	ug/L		97
10) 1,1-Dichloroethene	4.063	61	285979	18.46	ug/L		91
11) Freon 113	4.130	101	234327	20.90	ug/L		91
12) Carbon Disulfide	4.112	76	565044	20.23	ug/L		90
13) Iodomethane	4.227	142	428888	21.24	ug/L		90
14) Methylene Chloride	4.653	49	207035	18.44	ug/L		86
15) Acetone	4.702	58	65430	97.66	ug/L	#	84
16) Methyl acetate	4.793	74	152788	107.65	ug/L		97
17) trans-1,2-Dichloroethene	4.817	61	276596	19.88	ug/L		91
18) Hexane	4.866	56	162594	23.52	ug/L	#	85
19) Methyl Tert Butyl Ether	4.921	73	664831	20.03	ug/L		95
20) Di-isopropyl ether	5.274	45	528448	21.40	ug/L		94
21) 1,1-Dichloroethane	5.438	63	344359	20.40	ug/L		97
22) Acrylonitrile	5.493	53	277730	110.22	ug/L		96
23) ETBE	5.651	59	624118	19.79	ug/L		99
24) Vinyl acetate	5.645	43	1291300	130.21	ug/L		96
25) cis-1,2-Dichloroethene	5.991	96	230834	22.97	ug/L		93
26) 2,2-Dichloropropane	6.113	77	389583	20.08	ug/L		94
27) Bromochloromethane	6.198	128	136786	20.82	ug/L		94
28) Cyclohexane	6.217	56	294327	23.14	ug/L		94
29) Chloroform	6.247	83	608376	26.71	ug/L		98
30) Tetrahydrofuran	6.417	42	43203	19.09	ug/L		93
32) Carbon Tetrachloride	6.423	117	479510	19.50	ug/L		98
33) 1,1,1-Trichloroethane	6.490	97	449249	19.40	ug/L		96
34) 2-Butanone	6.545	43	361669	97.24	ug/L		92
35) 1,1-Dichloropropene	6.594	75	325798	21.13	ug/L		93
36) Benzene	6.849	78	835565	21.66	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073574.D
Acq On : 15 Sep 2010 4:27 pm
Operator : AnaJ
Sample : F76459-12msd
Misc : MS15409,VC2933,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 16 07:35:50 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) TAME	6.940	73	608419	19.92 ug/L	94
39) 1,2-Dichloroethane	7.050	62	352800	16.90 ug/L	97
40) Trichloroethene	7.421	95	257346	20.57 ug/L	93
41) Methylcyclohexane	7.433	83	364463	24.76 ug/L	96
42) Dibromomethane	7.847	93	150781	19.60 ug/L	97
43) 1,2-Dichloropropane	7.944	63	184145	20.77 ug/L	90
44) Bromodichloromethane	7.993	83	347203	18.84 ug/L	97
46) cis-1,3-Dichloropropene	8.613	75	375401	20.25 ug/L	88
49) Toluene	8.851	91	1008756	22.76 ug/L	100
50) 2-Nitropropane	9.082	41	306136	86.03 ug/L	96
51) 4-Methyl-2-pentanone	9.204	43	818674	107.97 ug/L	97
52) trans-1,3-Dichloropropene	9.252	75	376381	21.22 ug/L	96
53) Tetrachloroethene	9.240	166	333313	23.08 ug/L	98
54) 1,1,2-Trichloroethane	9.416	83	161771	21.05 ug/L	95
55) Dibromochloromethane	9.605	129	300833	20.32 ug/L	99
56) 1,3-Dichloropropane	9.696	76	332277	20.28 ug/L	94
57) 1,2-Dibromoethane	9.861	107	234359	21.05 ug/L	99
58) 2-hexanone	10.025	43	598349	111.02 ug/L	97
59) 1-Chlorohexane	10.317	91	333706	23.05 ug/L	92
60) Ethylbenzene	10.378	91	1186005	21.30 ug/L	99
61) Chlorobenzene	10.372	112	712235	21.79 ug/L	96
62) 1,1,1,2-Tetrachloroethane	10.426	131	291910	20.64 ug/L	97
63) m,p-Xylene	10.518	91	1872925	42.33 ug/L	97
64) o-Xylene	10.956	91	947809	21.10 ug/L	97
65) Styrene	11.010	104	746772	22.05 ug/L	96
66) Bromoform	11.059	173	217229	19.72 ug/L	97
67) Isopropylbenzene	11.266	105	1223812	25.26 ug/L	99
70) n-Propylbenzene	11.686	91	1318757	22.83 ug/L	100
71) Bromobenzene	11.692	156	358540	22.19 ug/L	96
72) 1,1,2,2-Tetrachloroethane	11.759	83	242406	22.39 ug/L	98
73) 1,3,5-Trimethylbenzene	11.880	105	1030197	22.61 ug/L	100
74) 2-Chlorotoluene	11.868	91	938247	22.06 ug/L	97
75) trans-1,4-Dichloro-2-B...	11.941	53	57850	16.25 ug/L	89
76) 1,2,3-Trichloropropane	11.911	110	82561	18.26 ug/L	96
77) Cyclohexanone	11.978	55	29861	111.53 ug/L	98
78) 4-Chlorotoluene	12.039	91	861093	21.86 ug/L	97
79) tert-Butylbenzene	12.215	91	585178	21.39 ug/L	95
80) 1,2,4-Trimethylbenzene	12.288	105	1031928	22.25 ug/L	100
81) sec-Butylbenzene	12.397	105	1242773	23.15 ug/L	100
82) 4-Isopropyltoluene	12.537	119	1106156	23.08 ug/L	100
83) 1,3-Dichlorobenzene	12.653	146	649096	22.19 ug/L	98
84) 1,4-Dichlorobenzene	12.744	146	677748	22.03 ug/L	98
85) n-Butylbenzene	12.981	92	537015	22.54 ug/L	95
86) Benzyl Chloride	12.994	126	137827	22.27 ug/L	96
87) 1,2-Dichlorobenzene	13.188	146	623270	21.74 ug/L	98
88) 1,2-Dibromo-3-Chloropr...	13.967	75	56073	18.48 ug/L	96
89) Hexachlorobutadiene	14.533	225	220821	22.11 ug/L	97
90) 1,2,4-Trichlorobenzene	14.575	180	478804	21.34 ug/L	99
91) Naphthalene	14.861	128	1030814	21.60 ug/L	99
92) 1,2,3-Trichlorobenzene	15.019	180	436346	20.94 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073574.D
Acq On : 15 Sep 2010 4:27 pm
Operator : AnaJ
Sample : F76459-12msd
Misc : MS15409,VC2933,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 16 07:35:50 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

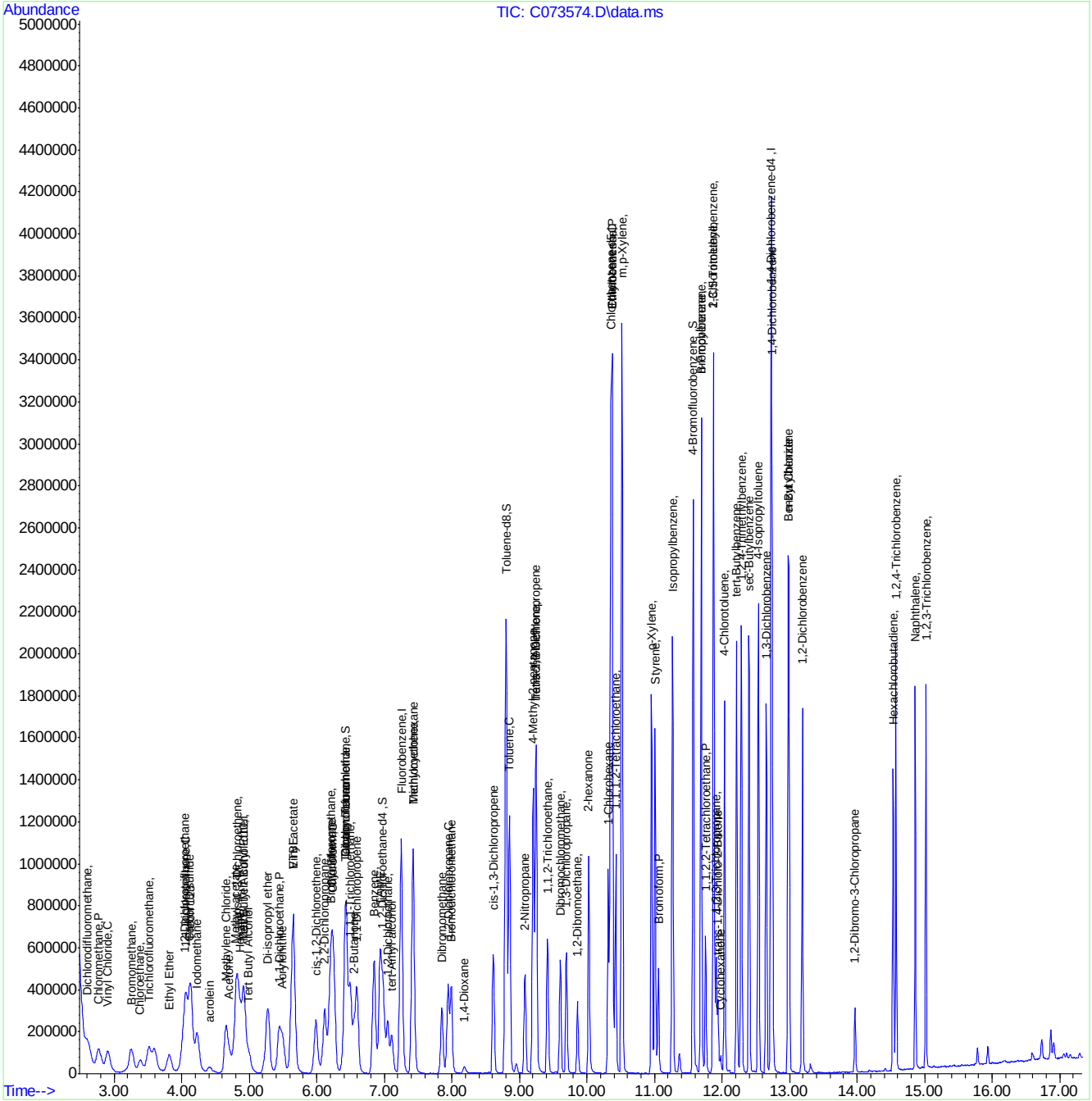
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
94) acrolein	4.410	56	59360	167.94 ug/L	99
95) Tert Butyl Alcohol	4.988	59	184293	198.35 ug/L	98
96) tert Amyl alcohol	7.111	59	144921	210.24 ug/L	96
97) 1,4-Dioxane	8.181	88	42089	450.76 ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073574.D
Acq On : 15 Sep 2010 4:27 pm
Operator : AnaJ
Sample : F76459-12msd
Misc : MS15409,VC2933,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 16 07:35:50 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064491.D Vial: 5
Acq On : 16 Sep 2010 12:15 pm Operator: MikeM
Sample : f76459-3ms Inst : MSVOA3
Misc : ms15421,vh2414,4.81,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:07:24 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.21	96	551390	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.73	117	366449	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	213868	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	32793	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.18	113	128911	48.78	ug/Kg	-0.01
Spiked Amount 50.000	Range 80 - 121		Recovery = 97.56%			
44) 1,2-Dichloroethane-d4	10.88	65	185689	45.77	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 91.54%			
55) Toluene-d8	13.02	98	558624	48.54	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.08%			
77) 4-Bromofluorobenzene	16.02	174	192902	50.93	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 101.86%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.94	85	260634	89.18	ug/Kg	99
3) Chloromethane	4.28	50	342933	63.96	ug/Kg	93
4) Vinyl Chloride	4.48	62	232923	59.03	ug/Kg	93
5) Bromomethane	5.12	94	93579	70.93	ug/Kg	96
6) Chloroethane	5.36	64	110605	59.31	ug/Kg	90
7) Trichlorofluoromethane	5.63	101	257708	58.94	ug/Kg	93
8) Ethyl Ether	6.16	59	125667	39.46	ug/Kg	91
9) 1,2-Dichlorotrifluoroethan	6.54	67	284018	56.68	ug/Kg	88
10) 1,1-Dichloroethene	6.59	61	337716	44.86	ug/Kg	88
11) Freon 113	6.67	101	176231	50.40	ug/Kg	93
12) Carbon Disulfide	6.68	76	594267	44.51	ug/Kg	93
13) Iodomethane	6.85	142	266660	48.29	ug/Kg	99
14) Allyl chloride	7.40	41	533372	51.31	ug/Kg	94
15) Methylene Chloride	7.57	49	507928	53.08	ug/Kg	91
16) Acetone	7.64	43	259173	100.32	ug/Kg	96
17) Methyl acetate	7.82	43	585033	200.34	ug/Kg	99
18) trans-1,2-Dichloroethene	7.86	61	347496	44.94	ug/Kg	87
19) Hexane	7.96	56	181172	40.28	ug/Kg	95
20) Methyl Tert Butyl Ether	8.01	73	292991	36.05	ug/Kg	79
21) Acetonitrile	8.40	41	154131	304.72	ug/Kg	96
22) Di-isopropyl ether	8.57	45	860949	43.45	ug/Kg	98
23) Chloroprene	8.77	53	448151	55.21	ug/Kg	93
24) 1,1-Dichloroethane	8.81	63	404722	43.77	ug/Kg	100
25) Acrylonitrile	8.87	53	236696	170.90	ug/Kg	97
26) ETBE	9.11	59	444388	38.80	ug/Kg	93
27) Vinyl acetate	9.14	43	441937	89.53	ug/Kg	95
28) cis-1,2-Dichloroethene	9.59	96	188224	45.73	ug/Kg	86
29) 2,2-Dichloropropane	9.75	77	325618	45.60	ug/Kg	98
30) Bromochloromethane	9.87	128	73929	39.29	ug/Kg	99
31) Cyclohexane	9.90	56	397550	43.43	ug/Kg	95
32) Chloroform	9.94	83	385864	45.32	ug/Kg	98
33) Ethyl acetate	10.06	43	503965	103.14	ug/Kg	100
34) Tetrahydrofuran	10.19	42	34824	29.46	ug/Kg	98
36) Carbon Tetrachloride	10.18	117	297270	46.22	ug/Kg	99

(#) = qualifier out of range (m) = manual integration
H064491.D APP9-H.M Thu Sep 16 13:08:37 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064491.D Vial: 5
Acq On : 16 Sep 2010 12:15 pm Operator: MikeM
Sample : f76459-3ms Inst : MSVOA3
Misc : ms15421,vh2414,4.81,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:07:24 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.25	97	320401	46.39	ug/Kg	94
38)	2-Butanone	10.32	43	360193	122.15	ug/Kg	92
39)	1,1-Dichloropropene	10.40	75	306128	45.79	ug/Kg	86
40)	Propionitrile	10.70	54	155018	334.19	ug/Kg#	42
41)	Methacrylonitrile	10.73	41	1140706	373.61	ug/Kg	93
42)	Benzene	10.71	78	740035	46.07	ug/Kg	88
43)	TAME	10.81	73	281495	37.40	ug/Kg	87
45)	1,2-Dichloroethane	10.96	62	283030	37.94	ug/Kg	94
46)	Trichloroethene	11.43	95	195605	45.46	ug/Kg	89
47)	Methylcyclohexane	11.44	83	265434	39.64	ug/Kg	90
48)	Dibromomethane	11.94	93	82847	36.59	ug/Kg	96
49)	1,2-Dichloropropane	12.04	63	198087	41.29	ug/Kg	93
50)	Bromodichloromethane	12.10	83	250639	40.01	ug/Kg	96
51)	Methyl methacrylate	12.22	41	220790	43.84	ug/Kg	90
52)	2-Chloroethyl vinyl ether	12.69	63	144516	163.35	ug/Kg	95
53)	cis-1,3-Dichloropropene	12.81	75	307488	41.14	ug/Kg	89
56)	Toluene	13.08	91	771769	43.46	ug/Kg	100
57)	2-Nitropropane	13.32	41	232220	163.47	ug/Kg	94
58)	4-Methyl-2-pentanone	13.44	43	770579	156.05	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.52	75	252173	34.82	ug/Kg	88
60)	Tetrachloroethene	13.54	166	231614	49.93	ug/Kg	96
61)	Ethyl methacrylate	13.63	69	146461	22.49	ug/Kg	97
62)	1,1,2-Trichloroethane	13.69	83	102308	29.80	ug/Kg	93
63)	Dibromochloromethane	13.92	129	144006	31.89	ug/Kg	97
64)	1,3-Dichloropropane	14.01	76	231702	30.54	ug/Kg	91
65)	1,2-Dibromoethane	14.22	107	106671	35.49	ug/Kg	100
66)	2-hexanone	14.33	43	590463	156.06	ug/Kg	95
67)	1-Chlorohexane	14.66	91	262838	35.07	ug/Kg	93
68)	Ethylbenzene	14.74	91	826382	44.54	ug/Kg	98
69)	Chlorobenzene	14.76	112	438580	44.94	ug/Kg	96
70)	1,1,1,2-Tetrachloroethane	14.80	131	170214	43.49	ug/Kg	98
71)	m,p-Xylene	14.87	91	1408195	92.18	ug/Kg	94
72)	o-Xylene	15.35	91	736947	43.51	ug/Kg	97
73)	Styrene	15.41	104	463663	35.59	ug/Kg	88
74)	Bromoform	15.49	173	88957	36.18	ug/Kg	92
75)	Isopropylbenzene	15.67	105	789946	48.23	ug/Kg	97
78)	cis-1,4-Dichloro-2-butene	16.04	53	62884	33.36	ug/Kg	96
79)	n-Propylbenzene	16.11	91	959675	40.93	ug/Kg	97
80)	Bromobenzene	16.15	156	185430	42.72	ug/Kg	94
81)	1,1,2,2-Tetrachloroethane	16.17	83	134486	32.23	ug/Kg	96
82)	1,3,5-Trimethylbenzene	16.28	105	664299	42.11	ug/Kg	97
83)	2-Chlorotoluene	16.32	91	706033	41.93	ug/Kg	99
84)	trans-1,4-Dichloro-2-Buten	16.36	53	52003	58.24	ug/Kg#	68
85)	1,2,3-Trichloropropane	16.35	110	31864	28.86	ug/Kg	92
86)	Cyclohexanone	16.45	55	16290	156.03	ug/Kg#	67
87)	4-Chlorotoluene	16.49	91	626721	40.69	ug/Kg	100
88)	tert-Butylbenzene	16.65	91	429947	40.26	ug/Kg	99
89)	1,2,4-Trimethylbenzene	16.71	105	630593	42.26	ug/Kg	91
90)	Pentachloroethane	16.72	167	125149	52.06	ug/Kg	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064491.D Vial: 5
Acq On : 16 Sep 2010 12:15 pm Operator: MikeM
Sample : f76459-3ms Inst : MSVOA3
Misc : ms15421,vh2414,4.81,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:07:24 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

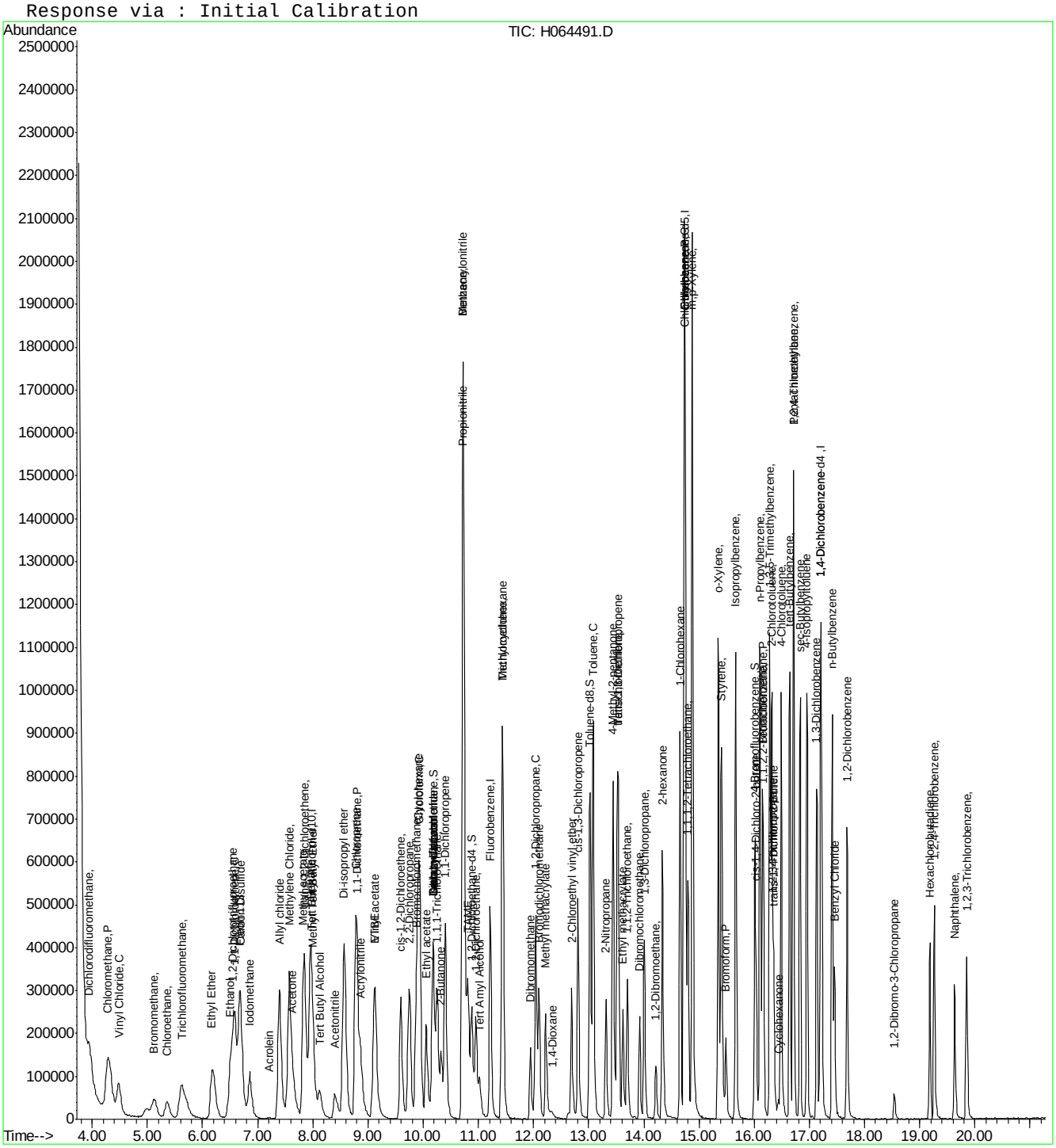
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.83	105	738085	37.42	ug/Kg	97
92)	4-Isopropyltoluene	16.95	119	591910	38.95	ug/Kg	98
93)	1,3-Dichlorobenzene	17.14	146	336054	40.95	ug/Kg	97
94)	1,4-Dichlorobenzene	17.22	146	342320	40.55	ug/Kg	93
95)	n-Butylbenzene	17.41	92	349325	34.72	ug/Kg	99
96)	Benzyl Chloride	17.46	126	42639	26.66	ug/Kg#	89
97)	1,2-Dichlorobenzene	17.68	146	299928	38.45	ug/Kg	95
98)	1,2-Dibromo-3-Chloropropan	18.54	75	25374	24.34	ug/Kg	96
99)	Hexachlorobutadiene	19.19	225	107457	24.28	ug/Kg	89
100)	1,2,4-Trichlorobenzene	19.26	180	195855	32.23	ug/Kg	94
101)	Naphthalene	19.63	128	294194	26.94	ug/Kg	93
102)	1,2,3-Trichlorobenzene	19.84	180	154297	28.46	ug/Kg	85
104)	Ethanol	6.49	45	48813	1224.28	ug/Kg	79
105)	Acrolein	7.21	56	5273	26.29	ug/Kg#	16
106)	Tert Butyl Alcohol	8.13	59	149615	471.73	ug/Kg	88
107)	Isobutyl alcohol	10.19	42	34824	920.47	ug/Kg	91
108)	Tert Amyl Alcohol	11.02	59	70557	415.79	ug/Kg	95
109)	1,4-Dioxane	12.35	88	15235	739.74	ug/Kg	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064491.D APP9-H.M Thu Sep 16 13:08:37 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064491.D Vial: 5
Acq On : 16 Sep 2010 12:15 pm Operator: MikeM
Sample : f76459-3ms Inst : MSVOA3
Misc : ms15421,vh2414,4.81,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:04 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 15:39

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064492.D Vial: 6
Acq On : 16 Sep 2010 12:42 pm Operator: MikeM
Sample : f76459-3msd Inst : MSVOA3
Misc : ms15421,vh2414,4.97,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:07:25 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.22	96	554028	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.74	117	382839	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	217220	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.02	65	28611	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	132976	50.08	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 100.16%			
44) 1,2-Dichloroethane-d4	10.87	65	190503	46.74	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 93.48%			
55) Toluene-d8	13.03	98	583986	48.57	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.14%			
77) 4-Bromofluorobenzene	16.02	174	192219	49.97	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.94%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.95	85	266216	90.66	ug/Kg	99
3) Chloromethane	4.28	50	364379	67.63	ug/Kg	97
4) Vinyl Chloride	4.49	62	230858	58.23	ug/Kg	100
5) Bromomethane	5.13	94	93208	70.32	ug/Kg	89
6) Chloroethane	5.36	64	113870	60.77	ug/Kg	97
7) Trichlorofluoromethane	5.62	101	267044	60.78	ug/Kg	90
8) Ethyl Ether	6.18	59	129110	40.35	ug/Kg	94
9) 1,2-Dichlorotrifluoroethan	6.52	67	278758	55.37	ug/Kg	84
10) 1,1-Dichloroethene	6.59	61	341480	45.15	ug/Kg	92
11) Freon 113	6.69	101	173708	49.44	ug/Kg	86
12) Carbon Disulfide	6.68	76	595048	44.36	ug/Kg	91
13) Iodomethane	6.86	142	254522	45.87	ug/Kg	97
14) Allyl chloride	7.40	41	558619	53.48	ug/Kg	89
15) Methylene Chloride	7.57	49	524845	54.59	ug/Kg	98
16) Acetone	7.64	43	255262	98.34	ug/Kg	94
17) Methyl acetate	7.83	43	615273	209.69	ug/Kg	97
18) trans-1,2-Dichloroethene	7.85	61	347204	44.69	ug/Kg	93
19) Hexane	7.96	56	164675	36.43	ug/Kg	92
20) Methyl Tert Butyl Ether	8.01	73	312329	38.24	ug/Kg	71
21) Acetonitrile	8.39	41	146514	288.28	ug/Kg	97
22) Di-isopropyl ether	8.57	45	887388	44.58	ug/Kg	95
23) Chloroprene	8.77	53	442763	54.28	ug/Kg	94
24) 1,1-Dichloroethane	8.81	63	412982	44.45	ug/Kg	100
25) Acrylonitrile	8.85	53	238048	171.06	ug/Kg	80
26) ETBE	9.12	59	478014	41.54	ug/Kg	97
27) Vinyl acetate	9.15	43	303663	61.22	ug/Kg	92
28) cis-1,2-Dichloroethene	9.59	96	188252	45.52	ug/Kg	85
29) 2,2-Dichloropropane	9.75	77	324822	45.28	ug/Kg	91
30) Bromochloromethane	9.88	128	75456	39.91	ug/Kg	99
31) Cyclohexane	9.92	56	377694	41.06	ug/Kg	93
32) Chloroform	9.94	83	387752	45.32	ug/Kg	94
33) Ethyl acetate	10.06	43	479307	97.62	ug/Kg	95
34) Tetrahydrofuran	10.19	42	41566	34.99	ug/Kg	92
36) Carbon Tetrachloride	10.18	117	298716	46.22	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
H064492.D APP9-H.M Thu Sep 16 13:08:44 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064492.D Vial: 6
Acq On : 16 Sep 2010 12:42 pm Operator: MikeM
Sample : f76459-3msd Inst : MSVOA3
Misc : ms15421,vh2414,4.97,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:07:25 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.25	97	316749	45.65	ug/Kg	96
38)	2-Butanone	10.33	43	356145	120.20	ug/Kg	95
39)	1,1-Dichloropropene	10.40	75	308959	45.99	ug/Kg	92
40)	Propionitrile	10.70	54	160153	343.62	ug/Kg#	70
41)	Methacrylonitrile	10.73	41	1163452	379.24	ug/Kg	94
42)	Benzene	10.72	78	745165	46.17	ug/Kg	86
43)	TAME	10.81	73	302804	40.04	ug/Kg	88
45)	1,2-Dichloroethane	10.97	62	278378	37.13	ug/Kg	96
46)	Trichloroethene	11.43	95	205401	47.50	ug/Kg	97
47)	Methylcyclohexane	11.45	83	243743	36.23	ug/Kg	92
48)	Dibromomethane	11.95	93	88894	39.07	ug/Kg	92
49)	1,2-Dichloropropane	12.04	63	205424	42.61	ug/Kg	94
50)	Bromodichloromethane	12.10	83	253300	40.25	ug/Kg	99
51)	Methyl methacrylate	12.22	41	228702	45.19	ug/Kg	93
52)	2-Chloroethyl vinyl ether	12.69	63	131848	148.32	ug/Kg	89
53)	cis-1,3-Dichloropropene	12.81	75	303148	40.37	ug/Kg	81
56)	Toluene	13.08	91	770168	41.52	ug/Kg	99
57)	2-Nitropropane	13.32	41	234463	158.46	ug/Kg	99
58)	4-Methyl-2-pentanone	13.45	43	775940	150.41	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.52	75	256539	33.90	ug/Kg	88
60)	Tetrachloroethene	13.54	166	223950	46.21	ug/Kg	96
61)	Ethyl methacrylate	13.63	69	129426	19.03	ug/Kg	87
62)	1,1,2-Trichloroethane	13.70	83	105655	29.46	ug/Kg	93
63)	Dibromochloromethane	13.93	129	147311	31.22	ug/Kg	96
64)	1,3-Dichloropropane	14.01	76	232289	29.31	ug/Kg	90
65)	1,2-Dibromoethane	14.22	107	112644	35.85	ug/Kg	91
66)	2-hexanone	14.33	43	594149	150.65	ug/Kg	94
67)	1-Chlorohexane	14.66	91	239613	30.60	ug/Kg	88
68)	Ethylbenzene	14.74	91	816808	42.14	ug/Kg	98
69)	Chlorobenzene	14.76	112	427954	41.97	ug/Kg	89
70)	1,1,1,2-Tetrachloroethane	14.81	131	169308	41.40	ug/Kg	96
71)	m,p-Xylene	14.89	91	1368717	85.76	ug/Kg	94
72)	o-Xylene	15.35	91	710175	40.14	ug/Kg	96
73)	Styrene	15.41	104	470967	34.61	ug/Kg	87
74)	Bromoform	15.50	173	94123	36.61	ug/Kg	89
75)	Isopropylbenzene	15.66	105	762849	44.58	ug/Kg	99
78)	cis-1,4-Dichloro-2-butene	16.04	53	64328	33.60	ug/Kg	94
79)	n-Propylbenzene	16.11	91	915071	38.42	ug/Kg	94
80)	Bromobenzene	16.15	156	178698	40.54	ug/Kg	96
81)	1,1,2,2-Tetrachloroethane	16.17	83	139587	32.94	ug/Kg	100
82)	1,3,5-Trimethylbenzene	16.28	105	631332	39.40	ug/Kg	93
83)	2-Chlorotoluene	16.32	91	671152	39.25	ug/Kg	99
84)	trans-1,4-Dichloro-2-Buten	16.36	53	49064	54.10	ug/Kg#	71
85)	1,2,3-Trichloropropane	16.35	110	34227	30.52	ug/Kg	94
86)	Cyclohexanone	16.44	55	18001	168.37	ug/Kg	94
87)	4-Chlorotoluene	16.49	91	610089	39.00	ug/Kg	97
88)	tert-Butylbenzene	16.65	91	396877	36.59	ug/Kg	98
89)	1,2,4-Trimethylbenzene	16.72	105	592294	39.08	ug/Kg	98
90)	Pentachloroethane	16.72	167	120320	49.28	ug/Kg	94

(#) = qualifier out of range (m) = manual integration
H064492.D APP9-H.M Thu Sep 16 13:08:44 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064492.D Vial: 6
Acq On : 16 Sep 2010 12:42 pm Operator: MikeM
Sample : f76459-3msd Inst : MSVOA3
Misc : ms15421,vh2414,4.97,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:07:25 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

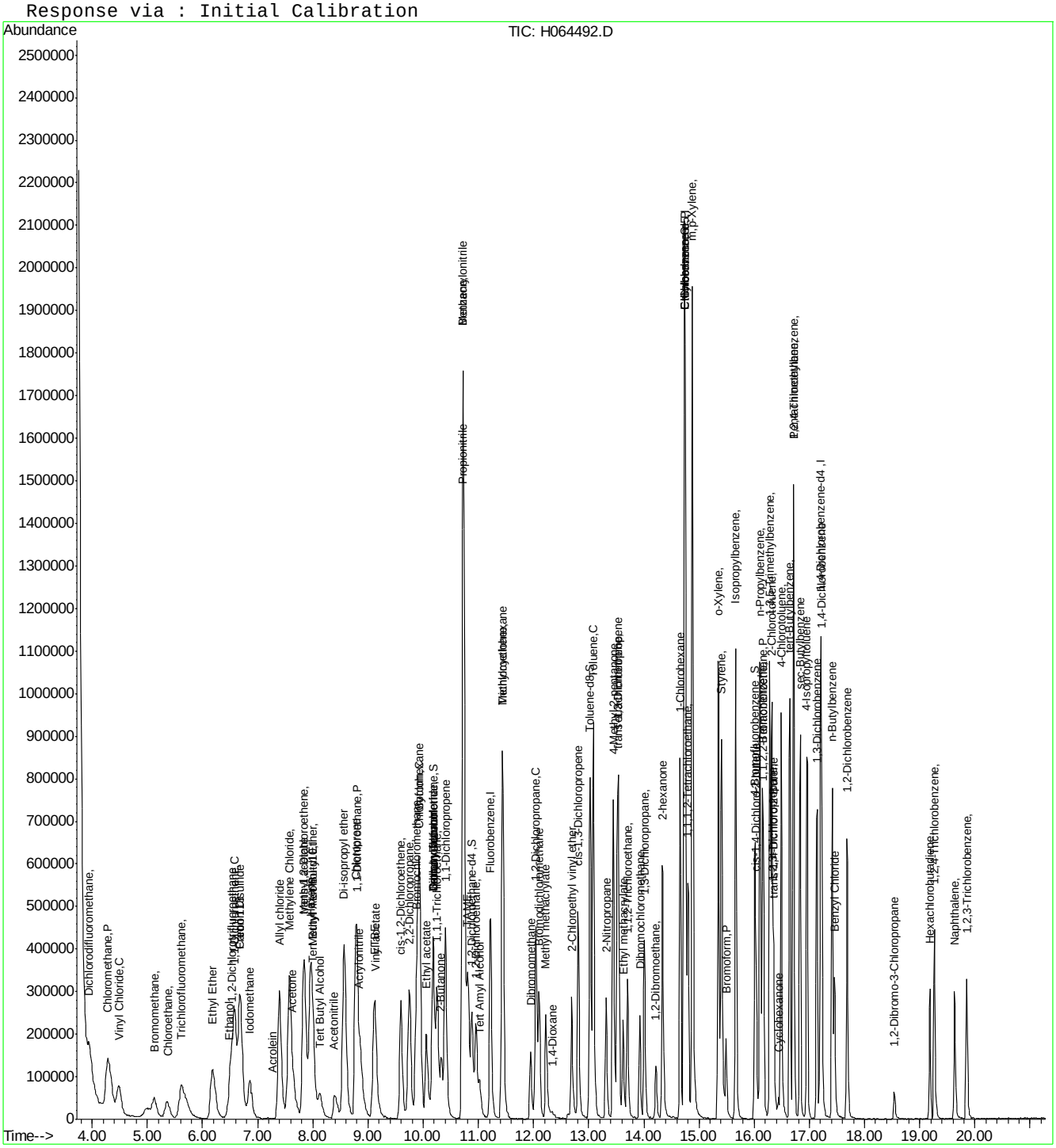
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.83	105	679554	33.92	ug/Kg	99
92)	4-Isopropyltoluene	16.96	119	526662	34.12	ug/Kg	98
93)	1,3-Dichlorobenzene	17.14	146	312102	37.44	ug/Kg	94
94)	1,4-Dichlorobenzene	17.23	146	323079	37.68	ug/Kg	97
95)	n-Butylbenzene	17.41	92	290596	28.44	ug/Kg	99
96)	Benzyl Chloride	17.46	126	41371	25.47	ug/Kg	96
97)	1,2-Dichlorobenzene	17.68	146	288893	36.46	ug/Kg	93
98)	1,2-Dibromo-3-Chloropropan	18.54	75	23149	21.87	ug/Kg	98
99)	Hexachlorobutadiene	19.19	225	78578	17.48	ug/Kg	88
100)	1,2,4-Trichlorobenzene	19.26	180	167018	27.06	ug/Kg	87
101)	Naphthalene	19.63	128	287871	25.96	ug/Kg	92
102)	1,2,3-Trichlorobenzene	19.85	180	137822	25.03	ug/Kg	82
104)	Ethanol	6.47	45	34223	983.81	ug/Kg	89
105)	Acrolein	7.28	56	2202m	12.58	ug/Kg	
106)	Tert Butyl Alcohol	8.13	59	144490	522.17	ug/Kg	90
107)	Isobutyl alcohol	10.19	42	41566	1259.26	ug/Kg	88
108)	Tert Amyl Alcohol	11.03	59	70807	478.25	ug/Kg	94
109)	1,4-Dioxane	12.35	88	15733	875.59	ug/Kg	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064492.D APP9-H.M Thu Sep 16 13:08:44 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064492.D Vial: 6
Acq On : 16 Sep 2010 12:42 pm Operator: MikeM
Sample : f76459-3msd Inst : MSVOA3
Misc : ms15421,vh2414,4.97,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:05 2010 Quant Results File: APP9-H.RES

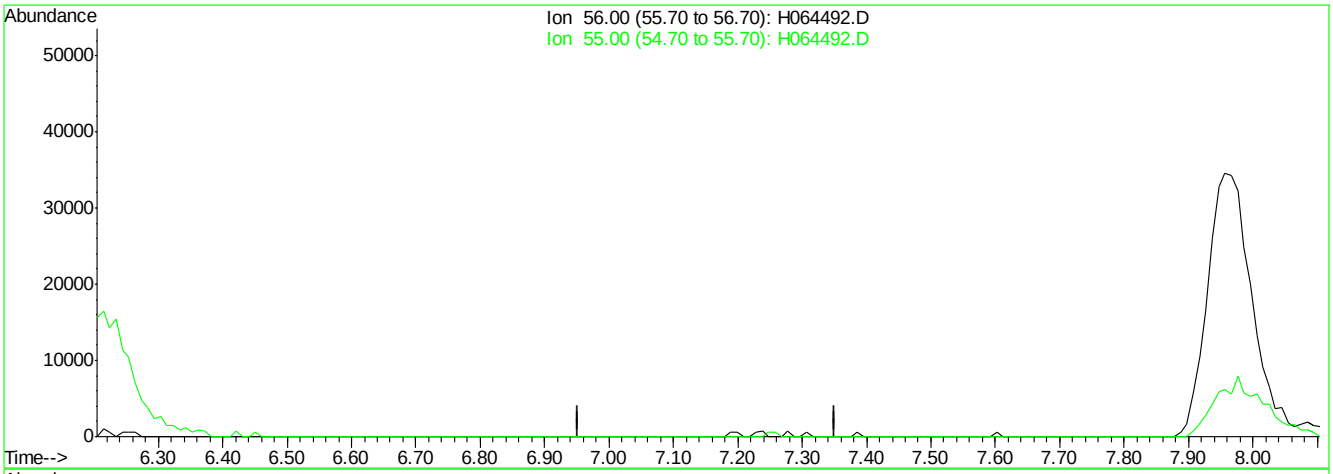
Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration

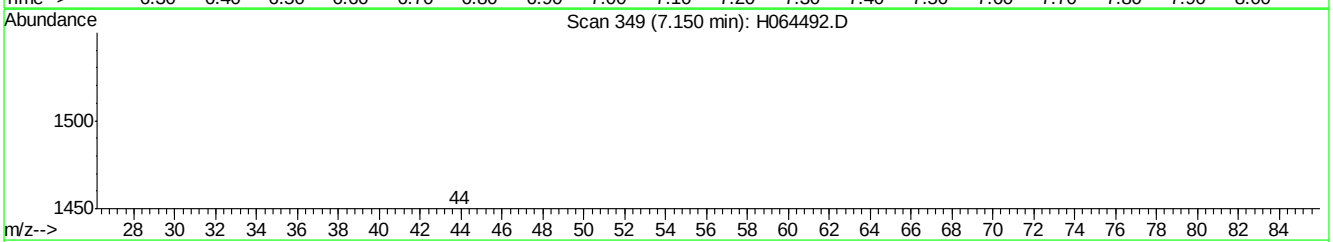


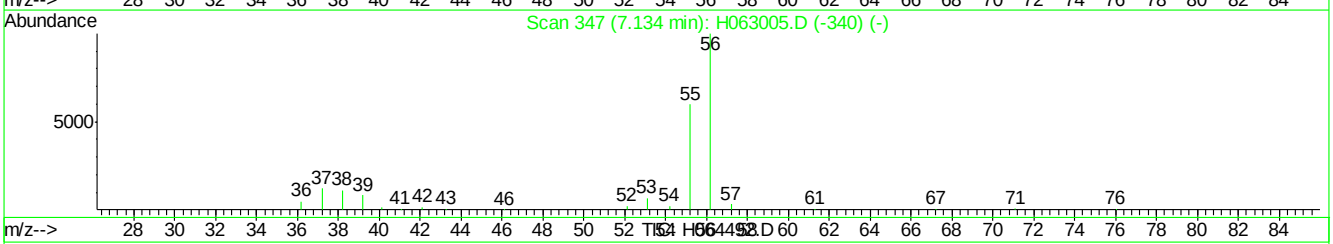
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091610\H064492.D Vial: 6
Acq On : 16 Sep 2010 12:42 pm Operator: MikeM
Sample : f76459-3msd Inst : MSVOA3
Misc : ms15421,vh2414,4.97,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:04 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Multiple Level Calibration







(105) Acrolein

7.15min (-7.152) 0.00ug/Kg

response 0

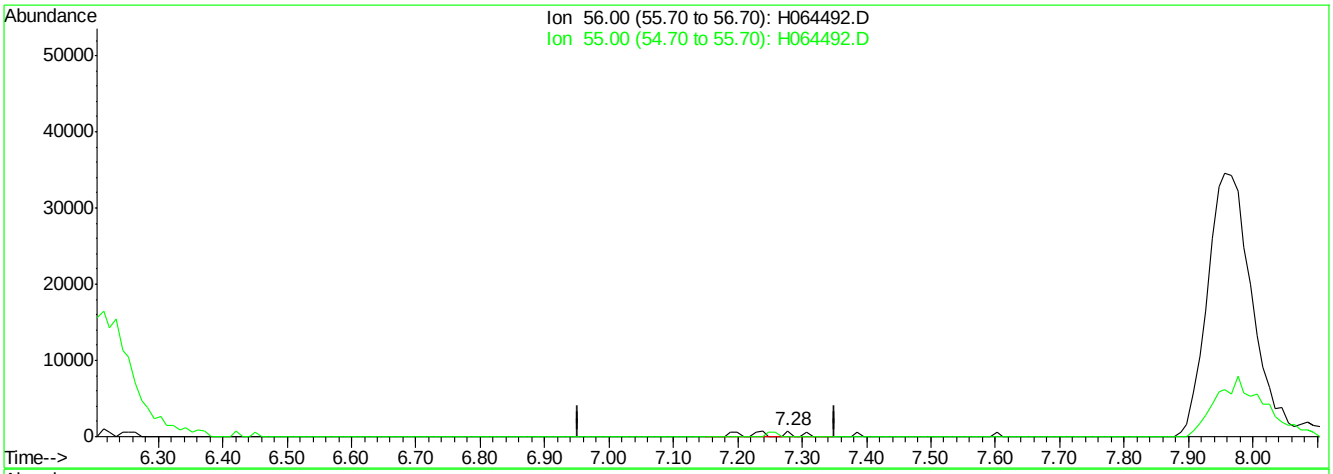
Ion	Exp%	Act%
56.00	100	0.00
55.00	68.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

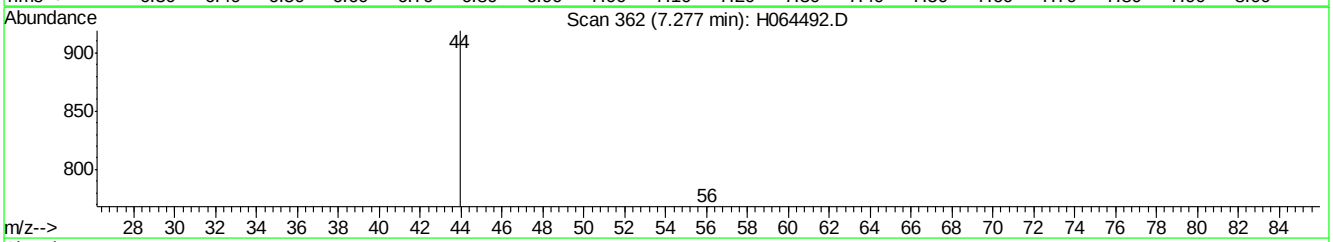
H064492.D APP9-H.M Thu Sep 16 13:08:20 2010

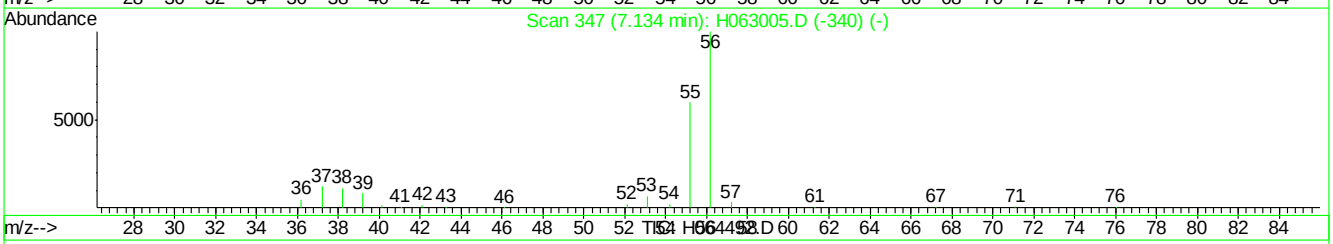
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091610\H064492.D Vial: 6
Acq On : 16 Sep 2010 12:42 pm Operator: MikeM
Sample : f76459-3msd Inst : MSVOA3
Misc : ms15421,vh2414,4.97,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 13:05 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Multiple Level Calibration







(105) Acrolein

7.28min (+0.125) 12.58ug/Kg m

response 2202

Ion	Exp%	Act%
56.00	100	100
55.00	68.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

H064492.D APP9-H.M Thu Sep 16 13:08:24 2010

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070416.D
Acq On : 16 Sep 2010 3:20 pm
Operator : AnaJ
Sample : F76427-6ms
Misc : MS15420,VB2907,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 16 15:43:03 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.932	96	349415	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1450970	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1289453	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.207	65	219810	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	166943	51.83	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 103.66%			
36) 1,2-Dichloroethane-d4	9.573	65	156516	50.99	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 101.98%			
50) Toluene-d8	11.587	98	822802	45.59	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 91.18%			
70) 4-Bromofluorobenzene	14.398	95	1038605	47.22	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 94.44%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.427	85	279797	31.14	ug/L	97
3) Chloromethane	4.749	50	348438	33.04	ug/L	97
4) Vinyl Chloride	4.968	62	244909	30.88	ug/L	99
5) Bromomethane	5.534	94	154612	31.31	ug/L	95
6) Chloroethane	5.662	64	127561	31.42	ug/L	94
7) Trichlorofluoromethane	6.100	101	358873	35.50	ug/L	86
8) Ethyl Ether	6.374	59	136089	29.59	ug/L	95
9) 1,2-Dichlorotrifluoroe...	6.367	67	224707	35.60	ug/L	96
10) Freon 113	6.745	101	180766	28.70	ug/L	91
11) 1,1-Dichloroethene	6.769	61	296763	26.38	ug/L	98
12) Acetone	6.720	43	252025	109.29	ug/L	91
13) Iodomethane	7.000	142	289097	26.21	ug/L	95
14) Carbon Disulfide	7.152	76	595530	25.69	ug/L	98
15) Methyl acetate	7.110	43	740085	122.29	ug/L	99
16) Methylene Chloride	7.298	49	341188	26.78	ug/L	95
17) Methyl Tert Butyl Ether	7.590	73	500671	25.02	ug/L	96
18) trans-1,2-Dichloroethene	7.627	61	316606	26.19	ug/L	97
19) Acrylonitrile	7.523	53	347820	118.09	ug/L	95
20) Hexane	7.907	57	322307	30.49	ug/L	95
21) Di-isopropyl ether	8.083	45	848822	27.53	ug/L	99
22) Vinyl acetate	8.047	43	1644549	141.17	ug/L	100
23) 1,1-Dichloroethane	8.095	63	413129	26.68	ug/L	98
24) ETBE	8.485	59	618643	25.34	ug/L	98
25) 2-Butanone	8.655	43	454374	126.97	ug/L	98
26) 2,2-Dichloropropane	8.746	77	284872	26.54	ug/L	99
27) cis-1,2-Dichloroethene	8.716	96	217834	26.99	ug/L	97
28) Bromochloromethane	8.983	128	101912	24.46	ug/L	97
29) Tetrahydrofuran	9.032	42	58382	26.01	ug/L	97
30) Chloroform	9.020	83	371274	26.25	ug/L	96
32) 1,1,1-Trichloroethane	9.300	97	286960	25.64	ug/L	91
33) Cyclohexane	9.403	56	403259	29.61	ug/L	98
34) Carbon Tetrachloride	9.488	117	260225	26.64	ug/L	99
35) 1,1-Dichloropropene	9.452	75	296377	27.96	ug/L	97
37) TAME	9.707	73	532142	26.52	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070416.D
Acq On : 16 Sep 2010 3:20 pm
Operator : AnaJ
Sample : F76427-6ms
Misc : MS15420,VB2907,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 16 15:43:03 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) Benzene	9.683	78	830931	26.95	ug/L		100
39) 1,2-Dichloroethane	9.659	62	292079	24.92	ug/L		98
40) Trichloroethene	10.322	95	205231	26.73	ug/L		97
41) Methylcyclohexane	10.583	83	349804	31.82	ug/L		95
42) 1,2-Dichloropropane	10.565	63	236274	27.03	ug/L		87
43) Dibromomethane	10.699	93	127709	25.65	ug/L		96
44) Bromodichloromethane	10.808	83	259357	24.96	ug/L		96
46) 2-Nitropropane	10.997	41	226225	112.11	ug/L		89
47) cis-1,3-Dichloropropene	11.265	75	333272	26.40	ug/L		98
48) 4-Methyl-2-pentanone	11.350	43	1043439	142.67	ug/L		99
51) Toluene	11.660	91	860240	23.36	ug/L		98
52) trans-1,3-Dichloropropene	11.806	75	301028	23.63	ug/L		94
53) 1,1,2-Trichloroethane	12.031	83	159008	22.73	ug/L		95
54) Tetrachloroethene	12.275	166	213901	23.23	ug/L		95
55) 2-hexanone	12.214	43	740689	129.89	ug/L		100
56) 1,3-Dichloropropane	12.226	76	315041	21.53	ug/L		95
57) Dibromochloromethane	12.506	129	191775	22.23	ug/L		95
58) 1,2-Dibromoethane	12.682	107	180293	21.92	ug/L		90
59) 1-Chlorohexane	13.047	91	303065	23.26	ug/L		97
60) Chlorobenzene	13.187	112	567149	22.86	ug/L		99
61) Ethylbenzene	13.248	91	966022	23.82	ug/L		100
62) 1,1,1,2-Tetrachloroethane	13.242	131	187111	22.43	ug/L		96
63) m,p-Xylene	13.364	91	1486737	48.11	ug/L		100
64) o-Xylene	13.814	91	780031	24.39	ug/L		97
65) Styrene	13.820	104	600753	22.90	ug/L		96
66) Bromoform	14.081	173	122798	21.11	ug/L		97
68) Isopropylbenzene	14.191	105	963787	26.27	ug/L		98
69) Cyclohexanone	14.343	55	23919	95.44	ug/L		96
71) 1,1,2,2-Tetrachloroethane	14.471	83	253993	21.18	ug/L		98
72) trans-1,4-Dichloro-2-B...	14.519	53	45989	18.56	ug/L	#	84
73) n-Propylbenzene	14.641	91	1236381	23.37	ug/L		98
74) Bromobenzene	14.623	156	259120	21.51	ug/L		95
75) 1,2,3-Trichloropropane	14.568	110	62534	18.10	ug/L		93
76) 1,3,5-Trimethylbenzene	14.805	105	800507	22.91	ug/L		99
77) 2-Chlorotoluene	14.799	91	812598	22.42	ug/L		100
78) 4-Chlorotoluene	14.909	91	747032	22.08	ug/L		95
79) tert-Butylbenzene	15.195	91	578281	25.49	ug/L		97
80) 1,2,4-Trimethylbenzene	15.243	105	858399	22.61	ug/L		99
81) sec-Butylbenzene	15.438	105	1111822	23.69	ug/L		99
82) 4-Isopropyltoluene	15.566	119	868799	23.73	ug/L		98
83) 1,3-Dichlorobenzene	15.627	146	499888	21.95	ug/L		98
84) 1,4-Dichlorobenzene	15.718	146	500452	21.42	ug/L		98
85) Benzyl Chloride	15.827	91	338847	17.84	ug/L		99
86) n-Butylbenzene	16.016	91	919016	23.41	ug/L		98
87) 1,2-Dichlorobenzene	16.144	146	476785	21.58	ug/L		98
88) 1,2-Dibromo-3-Chloropr...	16.971	75	38483	20.32	ug/L		92
89) 1,2,4-Trichlorobenzene	17.945	180	349126	20.55	ug/L		99
90) Hexachlorobutadiene	18.109	225	163617	21.46	ug/L		97
91) Naphthalene	18.279	128	612602	19.65	ug/L		98
92) 1,2,3-Trichlorobenzene	18.583	180	290064	19.21	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070416.D
Acq On : 16 Sep 2010 3:20 pm
Operator : AnaJ
Sample : F76427-6ms
Misc : MS15420,VB2907,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 16 15:43:03 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

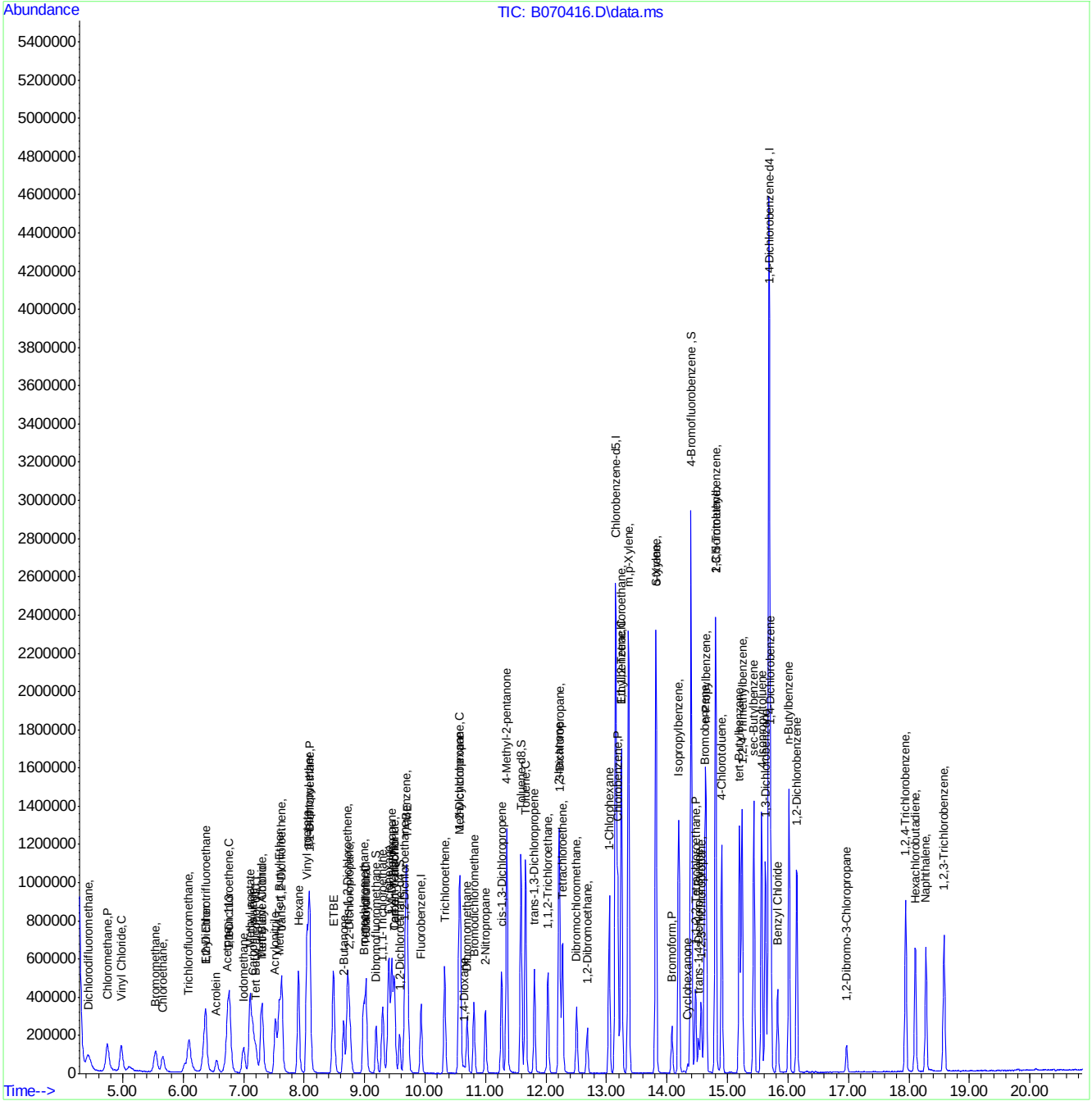
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
94) Acrolein	6.556	56	95065	113.07 ug/L	87
95) Tert-Butyl Alcohol	7.292	59	138648	208.23 ug/L	97
96) Tert amyl alcohol	9.488	59	110529	216.73 ug/L	91
97) 1,4-Dioxane	10.644	88	28389	419.63 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070416.D
Acq On : 16 Sep 2010 3:20 pm
Operator : AnaJ
Sample : F76427-6ms
Misc : MS15420,VB2907,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 16 15:43:03 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070417.D
Acq On : 16 Sep 2010 3:46 pm
Operator : AnaJ
Sample : F76427-6msd
Misc : MS15420,VB2907,,,,,
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 16 16:07:58 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	372808	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1540891	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1333329	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.195	65	235135	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	178802	52.03	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 104.06%			
36) 1,2-Dichloroethane-d4	9.580	65	167838	51.25	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 102.50%			
50) Toluene-d8	11.587	98	892355	46.56	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 93.12%			
70) 4-Bromofluorobenzene	14.398	95	1078499	47.42	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 94.84%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.427	85	327254	34.14	ug/L	97
3) Chloromethane	4.737	50	374193	33.26	ug/L	99
4) Vinyl Chloride	4.968	62	264530	31.26	ug/L	96
5) Bromomethane	5.540	94	156609	29.72	ug/L	96
6) Chloroethane	5.668	64	122763	28.34	ug/L	94
7) Trichlorofluoromethane	6.088	101	360427	33.41	ug/L	98
8) Ethyl Ether	6.368	59	132944	27.10	ug/L	91
9) 1,2-Dichlorotrifluoroe...	6.368	67	220097	32.68	ug/L	92
10) Freon 113	6.739	101	179550	26.72	ug/L	92
11) 1,1-Dichloroethene	6.769	61	293373	24.44	ug/L	95
12) Acetone	6.726	43	263642	107.06	ug/L	94
13) Iodomethane	7.000	142	279937	23.78	ug/L	95
14) Carbon Disulfide	7.146	76	569518	23.03	ug/L	95
15) Methyl acetate	7.104	43	738252	114.33	ug/L	100
16) Methylene Chloride	7.298	49	332806	24.48	ug/L	96
17) Methyl Tert Butyl Ether	7.590	73	507063	23.75	ug/L	97
18) trans-1,2-Dichloroethene	7.627	61	298543	23.15	ug/L	98
19) Acrylonitrile	7.530	53	354289	112.74	ug/L	99
20) Hexane	7.907	57	321520	28.51	ug/L	99
21) Di-isopropyl ether	8.083	45	832718	25.32	ug/L	99
22) Vinyl acetate	8.047	43	1637734	131.76	ug/L	100
23) 1,1-Dichloroethane	8.095	63	394003	23.84	ug/L	100
24) ETBE	8.479	59	602551	23.13	ug/L	97
25) 2-Butanone	8.649	43	458621	120.12	ug/L	99
26) 2,2-Dichloropropane	8.746	77	271349	23.69	ug/L	100
27) cis-1,2-Dichloroethene	8.716	96	214413	24.90	ug/L	98
28) Bromochloromethane	8.983	128	99526	22.39	ug/L	94
29) Tetrahydrofuran	9.038	42	58597	24.47	ug/L	92
30) Chloroform	9.020	83	353406	23.42	ug/L	99
32) 1,1,1-Trichloroethane	9.300	97	281774	23.59	ug/L	98
33) Cyclohexane	9.403	56	388994	26.77	ug/L	96
34) Carbon Tetrachloride	9.495	117	251367	24.12	ug/L	97
35) 1,1-Dichloropropene	9.452	75	283557	25.08	ug/L	93
37) TAME	9.707	73	519841	24.28	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070417.D
Acq On : 16 Sep 2010 3:46 pm
Operator : AnaJ
Sample : F76427-6msd
Misc : MS15420,VB2907,,,,,
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 16 16:07:58 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.689	78	784969	23.86	ug/L	99
39) 1,2-Dichloroethane	9.659	62	280027	22.40	ug/L	97
40) Trichloroethene	10.328	95	194468	23.74	ug/L	98
41) Methylcyclohexane	10.583	83	343376	29.28	ug/L	98
42) 1,2-Dichloropropane	10.559	63	229205	24.58	ug/L	96
43) Dibromomethane	10.699	93	127362	23.97	ug/L	97
44) Bromodichloromethane	10.809	83	265967	23.99	ug/L	97
46) 2-Nitropropane	10.997	41	230608	107.11	ug/L	88
47) cis-1,3-Dichloropropene	11.265	75	331676	24.63	ug/L	96
48) 4-Methyl-2-pentanone	11.350	43	1059031	135.71	ug/L	98
51) Toluene	11.660	91	849098	21.71	ug/L	99
52) trans-1,3-Dichloropropene	11.806	75	295577	21.84	ug/L	97
53) 1,1,2-Trichloroethane	12.031	83	153026	20.60	ug/L	92
54) Tetrachloroethene	12.275	166	208903	21.37	ug/L	97
55) 2-hexanone	12.214	43	744370	122.91	ug/L	99
56) 1,3-Dichloropropane	12.226	76	315665	20.31	ug/L	93
57) Dibromochloromethane	12.506	129	183536	20.04	ug/L	94
58) 1,2-Dibromoethane	12.682	107	182350	20.88	ug/L	98
59) 1-Chlorohexane	13.047	91	284766	20.55	ug/L	95
60) Chlorobenzene	13.187	112	542238	20.58	ug/L	99
61) Ethylbenzene	13.248	91	928056	21.55	ug/L	100
62) 1,1,1,2-Tetrachloroethane	13.242	131	173803	19.62	ug/L	94
63) m,p-Xylene	13.364	91	1423982	43.39	ug/L	98
64) o-Xylene	13.820	91	760261	22.38	ug/L	98
65) Styrene	13.820	104	580060	20.78	ug/L	96
66) Bromoform	14.088	173	120855	19.63	ug/L	96
68) Isopropylbenzene	14.197	105	925801	24.41	ug/L	100
69) Cyclohexanone	14.343	55	23408	90.32	ug/L	88
71) 1,1,2,2-Tetrachloroethane	14.471	83	246580	19.89	ug/L	98
72) trans-1,4-Dichloro-2-B...	14.520	53	49593	19.31	ug/L	83
73) n-Propylbenzene	14.641	91	1181589	21.60	ug/L	97
74) Bromobenzene	14.623	156	241344	19.37	ug/L	98
75) 1,2,3-Trichloropropane	14.568	110	55973	15.67	ug/L	92
76) 1,3,5-Trimethylbenzene	14.805	105	762504	21.11	ug/L	97
77) 2-Chlorotoluene	14.799	91	780809	20.83	ug/L	99
78) 4-Chlorotoluene	14.903	91	718526	20.54	ug/L	99
79) tert-Butylbenzene	15.195	91	477720	20.36	ug/L	95
80) 1,2,4-Trimethylbenzene	15.243	105	824791	21.01	ug/L	100
81) sec-Butylbenzene	15.438	105	1059360	21.83	ug/L	98
82) 4-Isopropyltoluene	15.566	119	817753	21.60	ug/L	99
83) 1,3-Dichlorobenzene	15.627	146	464970	19.75	ug/L	96
84) 1,4-Dichlorobenzene	15.718	146	476216	19.71	ug/L	98
85) Benzyl Chloride	15.828	91	333748	17.01	ug/L	96
86) n-Butylbenzene	16.016	91	880646	21.70	ug/L	97
87) 1,2-Dichlorobenzene	16.150	146	455681	19.95	ug/L	98
88) 1,2-Dibromo-3-Chloropr...	16.971	75	36814	18.80	ug/L	87
89) 1,2,4-Trichlorobenzene	17.951	180	333822	19.00	ug/L	97
90) Hexachlorobutadiene	18.109	225	156884	19.90	ug/L	98
91) Naphthalene	18.285	128	621905	19.29	ug/L	98
92) 1,2,3-Trichlorobenzene	18.583	180	293733	18.81	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070417.D
Acq On : 16 Sep 2010 3:46 pm
Operator : AnaJ
Sample : F76427-6msd
Misc : MS15420,VB2907,,,,,
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 16 16:07:58 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

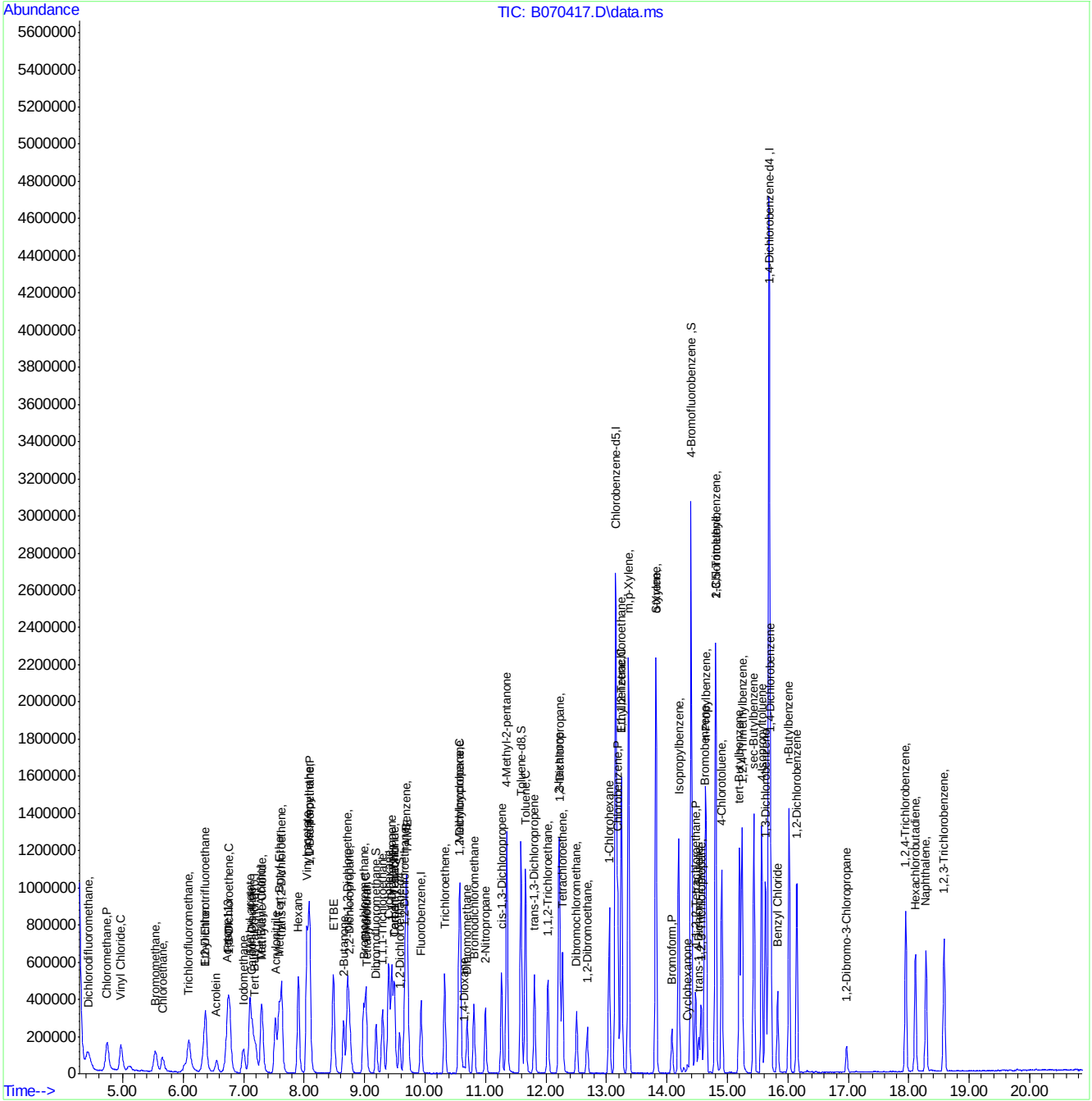
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
94) Acrolein	6.544	56	94821	105.43 ug/L	87
95) Tert-Butyl Alcohol	7.286	59	143257	201.13 ug/L	99
96) Tert amyl alcohol	9.488	59	109800	201.27 ug/L	93
97) 1,4-Dioxane	10.644	88	27818	384.39 ug/L #	79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070417.D
Acq On : 16 Sep 2010 3:46 pm
Operator : AnaJ
Sample : F76427-6msd
Misc : MS15420,VB2907,,,,,
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 16 16:07:58 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046771.D Vial: 27
Acq On : 16 Sep 2010 11:54 pm Operator: StevenH
Sample : f76459-2ms Inst : MSVOA2
Misc : ms15414,vk2013,4.61,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:39 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	916462	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	546143	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	239060	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.33	65	41242	250.00	ug/Kg	0.06
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	212792	46.90	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 93.80%			
36) 1,2-Dichloroethane-d4	11.12	65	206132	36.83	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 73.66%#			
50) Toluene-d8	13.26	98	900763	50.03	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 100.06%			
70) 4-Bromofluorobenzene	16.23	174	221540	52.35	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 104.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	393208	109.51	ug/Kg	99
3) Chloromethane	4.60	50	660553	91.91	ug/Kg	99
4) Vinyl Chloride	4.79	62	436255	78.15	ug/Kg	95
5) Bromomethane	5.47	94	166328	71.02	ug/Kg	99
6) Chloroethane	5.73	64	175754	62.05	ug/Kg	94
7) Trichlorofluoromethane	6.00	101	349950	60.22	ug/Kg	91
8) 1,2-Dichloro-1,1,2-trifluo	6.84	67	433871	63.67	ug/Kg	95
9) Ethyl Ether	6.51	59	221285	50.59	ug/Kg	94
10) Freon 113	7.00	101	276455	57.16	ug/Kg	90
11) 1,1-Dichloroethene	6.91	61	488659	62.01	ug/Kg	96
12) Acetone	7.95	43	356542	140.65	ug/Kg	95
13) Iodomethane	7.19	142	348594	46.01	ug/Kg	99
14) Carbon Disulfide	7.01	76	685176	42.76	ug/Kg	99
15) Methyl acetate	8.12	43	583058	143.91	ug/Kg	99
16) Methylene Chloride	7.89	49	847892	77.57	ug/Kg	94
17) Acrylonitrile	9.15	53	176447	143.28	ug/Kg	94
18) Methyl Tert Butyl Ether	8.30	73	591688	39.64	ug/Kg	84
19) trans-1,2-Dichloroethene	8.15	61	463364	52.46	ug/Kg	96
20) Hexane	8.28	57	537022	43.26	ug/Kg	98
21) Vinyl acetate	8.12	43	583058	142.81	ug/Kg	97
22) 1,1-Dichloroethane	9.10	63	561827	47.48	ug/Kg	97
23) Di-isopropyl ether	8.85	45	1186103	47.05	ug/Kg	98
24) Ethyl tert-butyl Ether	9.38	59	810106	41.30	ug/Kg	96
25) 2-Butanone	10.57	43	413838	132.85	ug/Kg	99
26) cis-1,2-Dichloroethene	9.86	96	276424	51.91	ug/Kg	98
27) 2,2-Dichloropropane	10.00	77	289910	40.97	ug/Kg	98
28) Bromochloromethane	10.13	128	117423	46.16	ug/Kg#	76
29) Chloroform	10.20	83	494390	48.86	ug/Kg	97
30) Tetrahydrofuran	10.57	42	33575	25.16	ug/Kg	88
32) 1,1,1-Trichloroethane	10.51	97	370934	46.49	ug/Kg	90
33) Cyclohexane	10.17	56	540112	52.53	ug/Kg	97
34) 1,1-Dichloropropene	10.66	75	357047	45.62	ug/Kg	98
35) Carbon Tetrachloride	10.44	117	269452	47.61	ug/Kg	92
37) 1,2-Dichloroethane	11.21	62	330149	41.15	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
K046771.D 8260-K.M Fri Sep 17 08:49:33 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046771.D Vial: 27
Acq On : 16 Sep 2010 11:54 pm Operator: StevenH
Sample : f76459-2ms Inst : MSVOA2
Misc : ms15414,vk2013,4.61,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:39 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1121746	54.53	ug/Kg	96
39)	Tert-Amyl Methyl Ether	11.06	73	567312	37.71	ug/Kg	97
40)	Trichloroethene	11.67	95	261268	48.40	ug/Kg	96
41)	Methylcyclohexane	11.69	83	409442	41.58	ug/Kg	93
42)	1,2-Dichloropropane	12.28	63	326484	46.96	ug/Kg	94
43)	Dibromomethane	12.18	93	127091	40.81	ug/Kg	94
44)	Bromodichloromethane	12.33	83	284874	40.25	ug/Kg	96
45)	2-Nitropropane	13.54	41	182270	165.41	ug/Kg	93
46)	2-Chloroethyl vinyl ether	12.91	63	170449	294.29	ug/Kg	95
47)	cis-1,3-Dichloropropene	13.04	75	336752	37.39	ug/Kg	97
48)	4-Methyl-2-pentanone	13.68	43	941195	183.07	ug/Kg	99
51)	Toluene	13.31	91	1075389	48.60	ug/Kg	98
52)	trans-1,3-Dichloropropene	13.74	75	273121	42.10	ug/Kg	94
53)	1,1,2-Trichloroethane	13.93	83	158455	40.50	ug/Kg	92
54)	1,3-Dichloropropane	14.24	76	332409	42.48	ug/Kg	95
55)	2-hexanone	14.58	43	545796	148.59	ug/Kg	99
56)	Tetrachloroethene	13.77	166	236049	50.82	ug/Kg	95
57)	Dibromochloromethane	14.15	129	178299	39.34	ug/Kg	92
58)	1,2-Dibromoethane	14.45	107	159674	39.65	ug/Kg	84
59)	1-Chlorohexane	14.89	91	277181	40.58	ug/Kg	93
60)	Chlorobenzene	14.98	112	595531	48.32	ug/Kg	93
61)	1,1,1,2-Tetrachloroethane	15.03	131	211159	47.87	ug/Kg	96
62)	Ethylbenzene	14.96	91	1006916	45.85	ug/Kg	99
63)	m,p-Xylene	15.11	91	1613417	93.08	ug/Kg	96
64)	o-Xylene	15.58	91	856067	44.92	ug/Kg	96
65)	Styrene	15.63	104	582347	42.55	ug/Kg	96
66)	Bromoform	15.72	173	88168	29.14	ug/Kg	94
68)	Isopropylbenzene	15.90	105	927358	51.29	ug/Kg	99
69)	Cyclohexanone	16.67	55	14862	135.37	ug/Kg	88
71)	1,1,2,2-Tetrachloroethane	16.40	83	183960	41.29	ug/Kg	90
72)	trans-1,4-Dichloro-2-Buten	16.58	53	34503	26.01	ug/Kg	93
73)	1,2,3-Trichloropropane	16.57	110	40410	37.93	ug/Kg	94
74)	Bromobenzene	16.38	156	198984	44.39	ug/Kg	90
75)	n-Propylbenzene	16.33	91	1027148	51.05	ug/Kg	100
76)	2-Chlorotoluene	16.54	91	755139	53.19	ug/Kg	97
77)	1,3,5-Trimethylbenzene	16.51	105	730301	42.11	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	616873	43.29	ug/Kg	96
79)	tert-Butylbenzene	16.87	91	458394	46.04	ug/Kg	93
80)	1,2,4-Trimethylbenzene	16.93	105	704239	43.85	ug/Kg	98
81)	sec-Butylbenzene	17.06	105	854513	39.92	ug/Kg	99
82)	4-Isopropyltoluene	17.18	119	588650	39.96	ug/Kg	100
83)	1,3-Dichlorobenzene	17.35	146	331494	42.60	ug/Kg	95
84)	1,4-Dichlorobenzene	17.44	146	318002	41.80	ug/Kg	95
85)	Benzyl chloride	17.67	126	20706	16.19	ug/Kg#	34
86)	n-Butylbenzene	17.63	92	278552	33.24	ug/Kg	96
87)	1,2-Dichlorobenzene	17.90	146	296148	40.65	ug/Kg	93
88)	1,2-Dibromo-3-Chloropropan	18.74	75	17902	32.24	ug/Kg#	86
89)	1,2,4-Trichlorobenzene	19.46	180	79883	26.64	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	79056	28.72	ug/Kg	93

(#) = qualifier out of range (m) = manual integration
K046771.D 8260-K.M Fri Sep 17 08:49:34 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046771.D Vial: 27
Acq On : 16 Sep 2010 11:54 pm Operator: StevenH
Sample : f76459-2ms Inst : MSVOA2
Misc : ms15414,vk2013,4.61,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:39 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

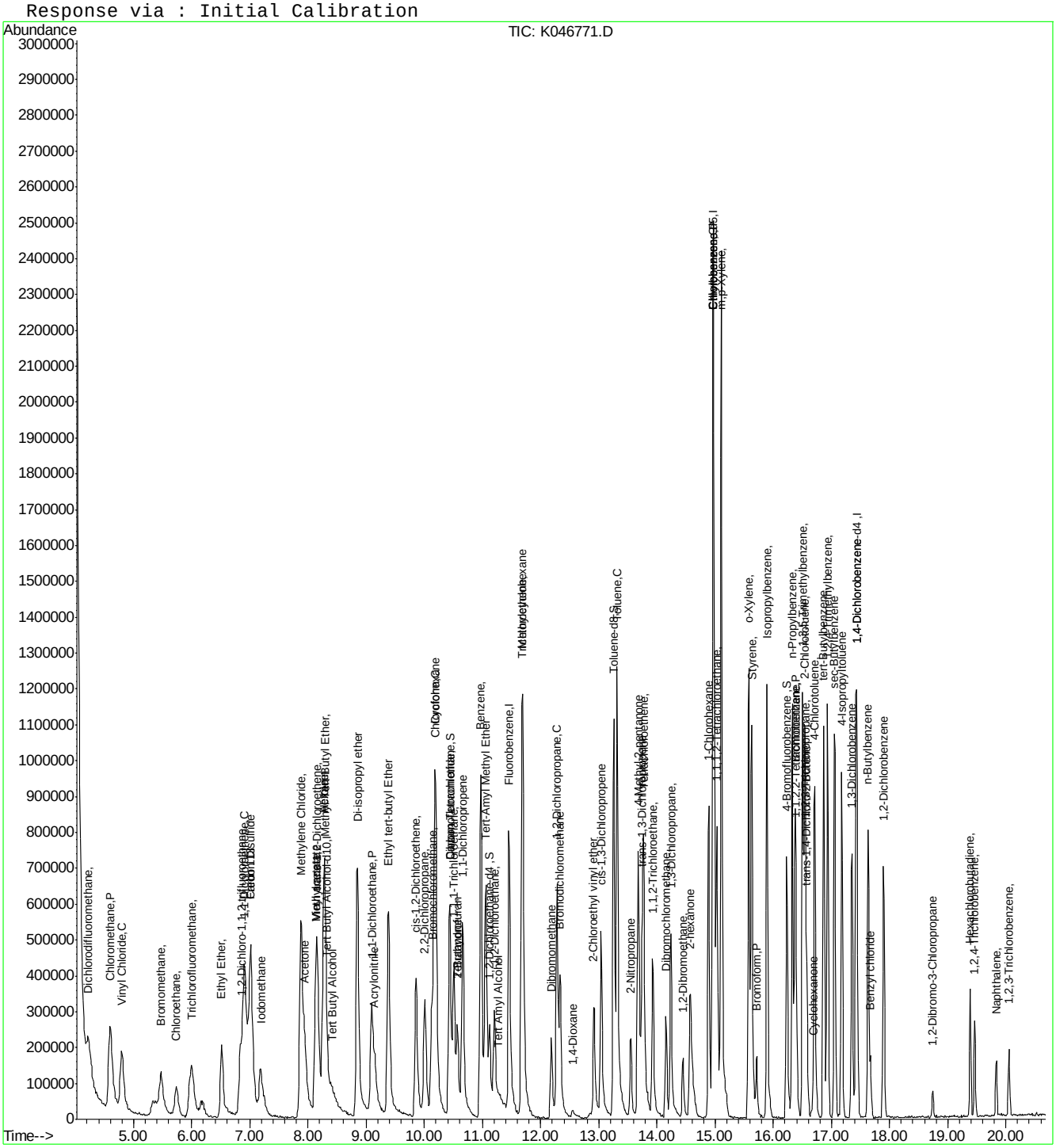
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	19.84	128	131802	27.38	ug/Kg	94
92) 1,2,3-Trichlorobenzene	20.05	180	57369	22.91	ug/Kg	89
94) Acrolein	8.28	56	222771	559.78	ug/Kg	96
95) Tert Butyl Alcohol	8.43	59	119293	586.64	ug/Kg#	83
96) Tert Amyl Alcohol	11.28	59	25867	148.46	ug/Kg#	57
97) 1,4-Dioxane	12.57	88	27118	1462.92	ug/Kg#	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046771.D Vial: 27
Acq On : 16 Sep 2010 11:54 pm Operator: StevenH
Sample : f76459-2ms Inst : MSVOA2
Misc : ms15414,vk2013,4.61,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:29 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046772.D Vial: 28
Acq On : 17 Sep 2010 12:19 am Operator: StevenH
Sample : f76459-2msd Inst : MSVOA2
Misc : ms15414,vk2013,4.51,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:40 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	937556	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	581357	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	264572	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.30	65	64927	250.00	ug/Kg	0.03
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	228825	49.30	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.60%			
36) 1,2-Dichloroethane-d4	11.13	65	277023	48.39	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 96.78%			
50) Toluene-d8	13.26	98	932653	48.66	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 97.32%			
70) 4-Bromofluorobenzene	16.24	174	240973	51.45	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 102.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.24	85	339831	92.52	ug/Kg	96
3) Chloromethane	4.60	50	607899	82.68	ug/Kg	94
4) Vinyl Chloride	4.79	62	404796	70.89	ug/Kg	98
5) Bromomethane	5.46	94	152972	62.24	ug/Kg	85
6) Chloroethane	5.75	64	162702	55.32	ug/Kg	92
7) Trichlorofluoromethane	6.02	101	303745	50.13	ug/Kg	92
8) 1,2-Dichloro-1,1,2-trifluo	6.89	67	427177	61.03	ug/Kg	94
9) Ethyl Ether	6.51	59	254311	56.83	ug/Kg	98
10) Freon 113	7.02	101	239407	47.72	ug/Kg	95
11) 1,1-Dichloroethene	6.95	61	459541	57.00	ug/Kg	97
12) Acetone	7.94	43	434890	165.77	ug/Kg	92
13) Iodomethane	7.24	142	338938	43.73	ug/Kg	97
14) Carbon Disulfide	7.04	76	632141	38.56	ug/Kg	100
15) Methyl acetate	8.12	43	661362	159.56	ug/Kg	99
16) Methylene Chloride	7.88	49	912422	81.59	ug/Kg	91
17) Acrylonitrile	9.15	53	252279	193.98	ug/Kg	84
18) Methyl Tert Butyl Ether	8.29	73	654582	42.87	ug/Kg	94
19) trans-1,2-Dichloroethene	8.15	61	369642	40.91	ug/Kg	94
20) Hexane	8.28	57	528993	41.66	ug/Kg	93
21) Vinyl acetate	8.12	43	661362	158.34	ug/Kg	97
22) 1,1-Dichloroethane	9.09	63	531625	43.92	ug/Kg	96
23) Di-isopropyl ether	8.84	45	1172551	45.46	ug/Kg	97
24) Ethyl tert-butyl Ether	9.38	59	894082	44.56	ug/Kg	98
25) 2-Butanone	10.57	43	558557	172.09	ug/Kg	95
26) cis-1,2-Dichloroethene	9.86	96	260992	47.91	ug/Kg	97
27) 2,2-Dichloropropane	10.01	77	228687	31.59	ug/Kg	98
28) Bromochloromethane	10.12	128	127634	49.05	ug/Kg	87
29) Chloroform	10.19	83	477999	46.17	ug/Kg	95
30) Tetrahydrofuran	10.58	42	43042	31.53	ug/Kg#	78
32) 1,1,1-Trichloroethane	10.51	97	326512	40.00	ug/Kg	96
33) Cyclohexane	10.18	56	489351	46.52	ug/Kg	95
34) 1,1-Dichloropropene	10.67	75	331591	41.41	ug/Kg	96
35) Carbon Tetrachloride	10.44	117	245289	42.37	ug/Kg	99
37) 1,2-Dichloroethane	11.21	62	354451	43.19	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
K046772.D 8260-K.M Fri Sep 17 08:49:39 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046772.D Vial: 28
Acq On : 17 Sep 2010 12:19 am Operator: StevenH
Sample : f76459-2msd Inst : MSVOA2
Misc : ms15414,vk2013,4.51,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:40 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1060192	50.38	ug/Kg	96
39)	Tert-Amyl Methyl Ether	11.06	73	665553	43.25	ug/Kg	95
40)	Trichloroethene	11.67	95	245847	44.52	ug/Kg	95
41)	Methylcyclohexane	11.69	83	374220	36.88	ug/Kg	95
42)	1,2-Dichloropropane	12.28	63	325750	45.80	ug/Kg	98
43)	Dibromomethane	12.18	93	143887	45.16	ug/Kg	91
44)	Bromodichloromethane	12.33	83	304070	42.00	ug/Kg	96
45)	2-Nitropropane	13.55	41	262336	222.89	ug/Kg	95
46)	2-Chloroethyl vinyl ether	12.92	63	259455	379.42	ug/Kg	88
47)	cis-1,3-Dichloropropene	13.04	75	359645	39.03	ug/Kg	97
48)	4-Methyl-2-pentanone	13.67	43	1252150	234.22	ug/Kg	99
51)	Toluene	13.32	91	1013447	43.03	ug/Kg	91
52)	trans-1,3-Dichloropropene	13.74	75	299337	43.35	ug/Kg	91
53)	1,1,2-Trichloroethane	13.93	83	182409	43.79	ug/Kg	92
54)	1,3-Dichloropropane	14.24	76	367031	44.06	ug/Kg	93
55)	2-hexanone	14.57	43	767526	191.57	ug/Kg	100
56)	Tetrachloroethene	13.77	166	215421	43.57	ug/Kg	95
57)	Dibromochloromethane	14.15	129	202243	41.92	ug/Kg	97
58)	1,2-Dibromoethane	14.45	107	181514	42.34	ug/Kg	99
59)	1-Chlorohexane	14.89	91	256480	35.27	ug/Kg	91
60)	Chlorobenzene	14.98	112	564843	43.05	ug/Kg	88
61)	1,1,1,2-Tetrachloroethane	15.03	131	211828	45.12	ug/Kg	94
62)	Ethylbenzene	14.96	91	939133	40.17	ug/Kg	98
63)	m,p-Xylene	15.11	91	1502312	81.42	ug/Kg	98
64)	o-Xylene	15.58	91	831388	40.98	ug/Kg	96
65)	Styrene	15.63	104	584198	40.10	ug/Kg	97
66)	Bromoform	15.72	173	108401	33.66	ug/Kg	97
68)	Isopropylbenzene	15.90	105	881741	43.55	ug/Kg	98
69)	Cyclohexanone	16.68	55	25727	201.26	ug/Kg	87
71)	1,1,2,2-Tetrachloroethane	16.39	83	212658	43.13	ug/Kg	92
72)	trans-1,4-Dichloro-2-Buten	16.58	53	43528	29.64	ug/Kg#	88
73)	1,2,3-Trichloropropane	16.57	110	48498	41.14	ug/Kg	93
74)	Bromobenzene	16.38	156	210162	42.36	ug/Kg	95
75)	n-Propylbenzene	16.33	91	978292	43.93	ug/Kg	97
76)	2-Chlorotoluene	16.55	91	729508	46.43	ug/Kg	97
77)	1,3,5-Trimethylbenzene	16.51	105	708532	36.59	ug/Kg	100
78)	4-Chlorotoluene	16.71	91	617218	39.14	ug/Kg	97
79)	tert-Butylbenzene	16.86	91	418498	37.98	ug/Kg	96
80)	1,2,4-Trimethylbenzene	16.93	105	675085	37.98	ug/Kg	95
81)	sec-Butylbenzene	17.06	105	799493	33.38	ug/Kg	100
82)	4-Isopropyltoluene	17.18	119	575617	35.31	ug/Kg	99
83)	1,3-Dichlorobenzene	17.35	146	333759	38.76	ug/Kg	97
84)	1,4-Dichlorobenzene	17.44	146	334744	39.76	ug/Kg	95
85)	Benzyl chloride	17.68	126	31094	21.97	ug/Kg#	60
86)	n-Butylbenzene	17.63	92	275731	29.73	ug/Kg	92
87)	1,2-Dichlorobenzene	17.90	146	317148	39.34	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.73	75	21261	34.37	ug/Kg	92
89)	1,2,4-Trichlorobenzene	19.46	180	93016	28.02	ug/Kg	89
90)	Hexachlorobutadiene	19.39	225	74081	24.15	ug/Kg	95

(#) = qualifier out of range (m) = manual integration
K046772.D 8260-K.M Fri Sep 17 08:49:40 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046772.D Vial: 28
Acq On : 17 Sep 2010 12:19 am Operator: StevenH
Sample : f76459-2msd Inst : MSVOA2
Misc : ms15414,vk2013,4.51,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:28:40 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

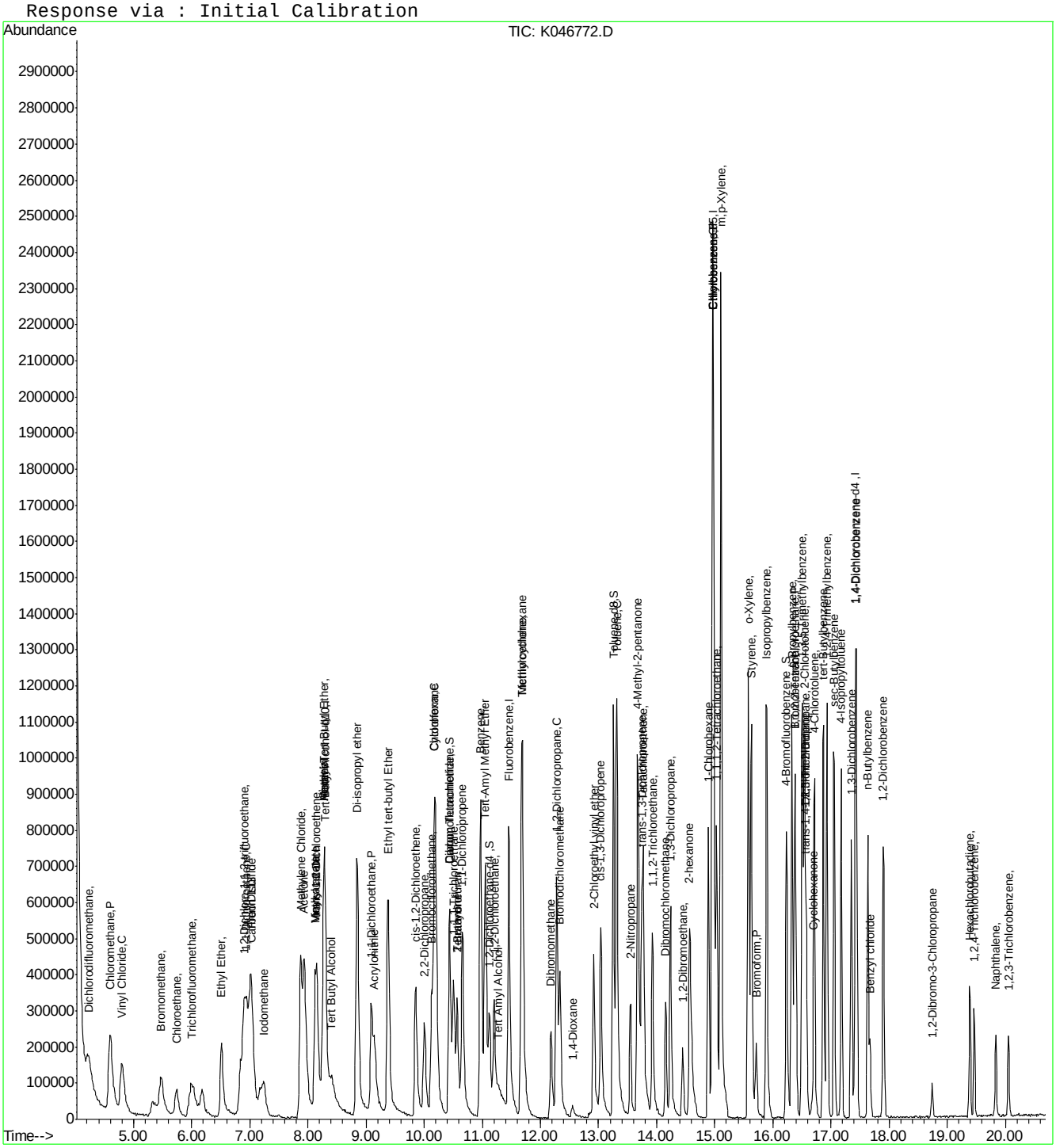
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	163476	30.31	ug/Kg	90
92)	1,2,3-Trichlorobenzene	20.05	180	69949	25.24	ug/Kg	92
94)	Acrolein	8.27	56	215460	343.90	ug/Kg#	93
95)	Tert Butyl Alcohol	8.41	59	138434	432.43	ug/Kg	87
96)	Tert Amyl Alcohol	11.29	59	57108	208.19	ug/Kg#	67
97)	1,4-Dioxane	12.56	88	37679	1291.15	ug/Kg	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046772.D Vial: 28
Acq On : 17 Sep 2010 12:19 am Operator: StevenH
Sample : f76459-2msd Inst : MSVOA2
Misc : ms15414,vk2013,4.51,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 17 11:29 2010 Quant Results File: 8260-K.RES

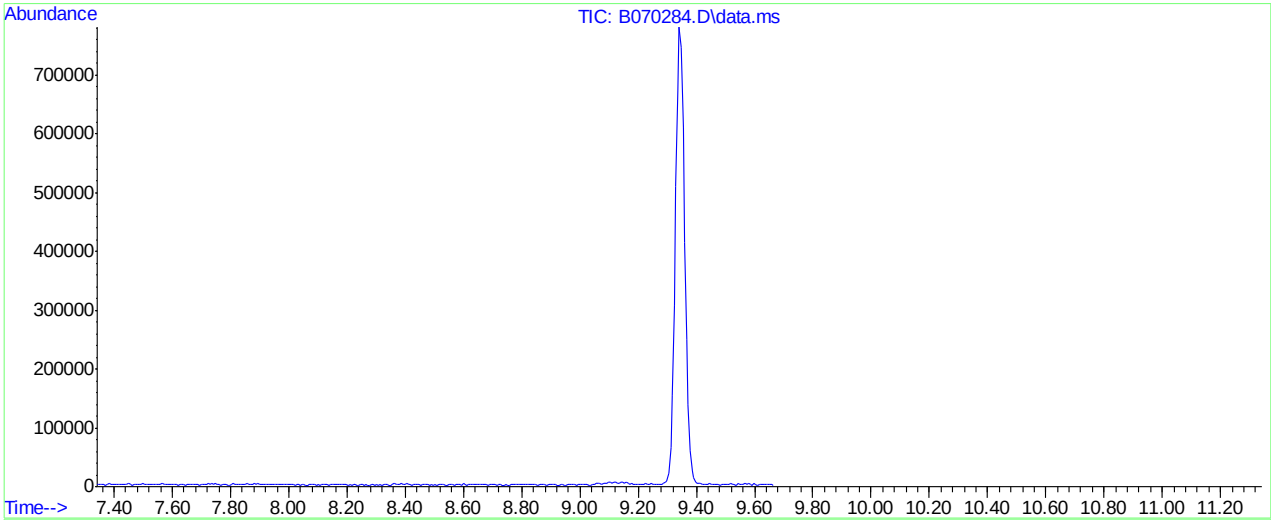
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration



Methods: SW-846 8260B

Data File : C:\msdchem\1\DATA\091010\B070284.D Vial: 100
Acq On : 10 Sep 2010 10:40 am Operator: AnaJ
Sample : BFB Inst : MSVOA4
Misc : MS15368,VB2903,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :



AutoFind: Scans 535, 536, 537; Background Corrected with Scan 525

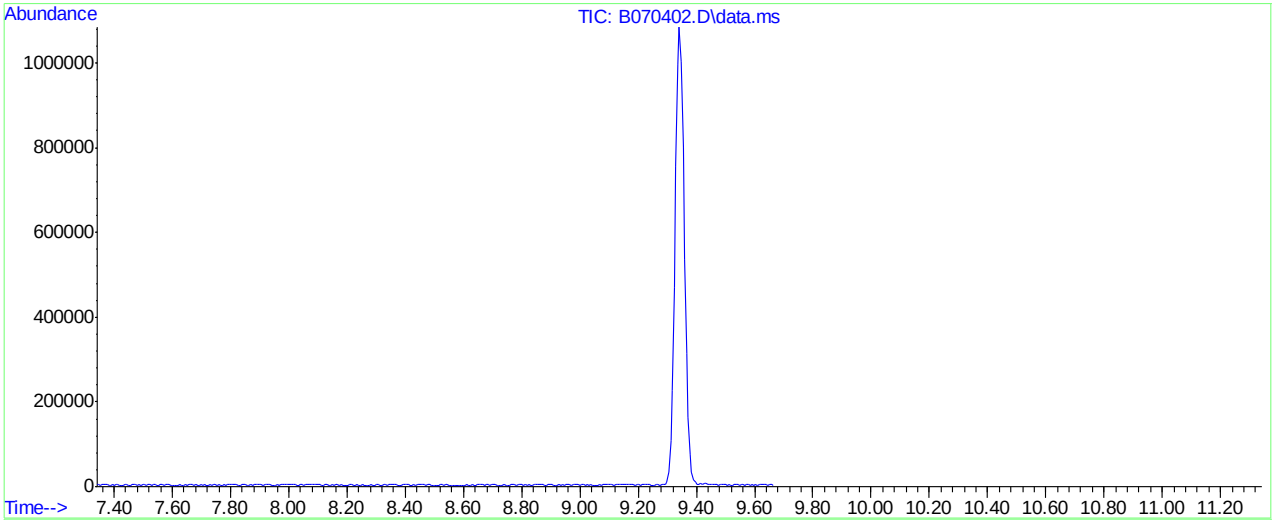
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	31938	PASS
75	95	30	60	51.9	74853	PASS
95	95	100	100	100.0	144256	PASS
96	95	5	9	6.4	9267	PASS
173	174	0.00	2	0.7	860	PASS
174	95	50	100	85.8	123762	PASS
175	174	5	9	7.1	8812	PASS
176	174	95	101	98.0	121240	PASS
177	176	5	9	7.2	8706	PASS

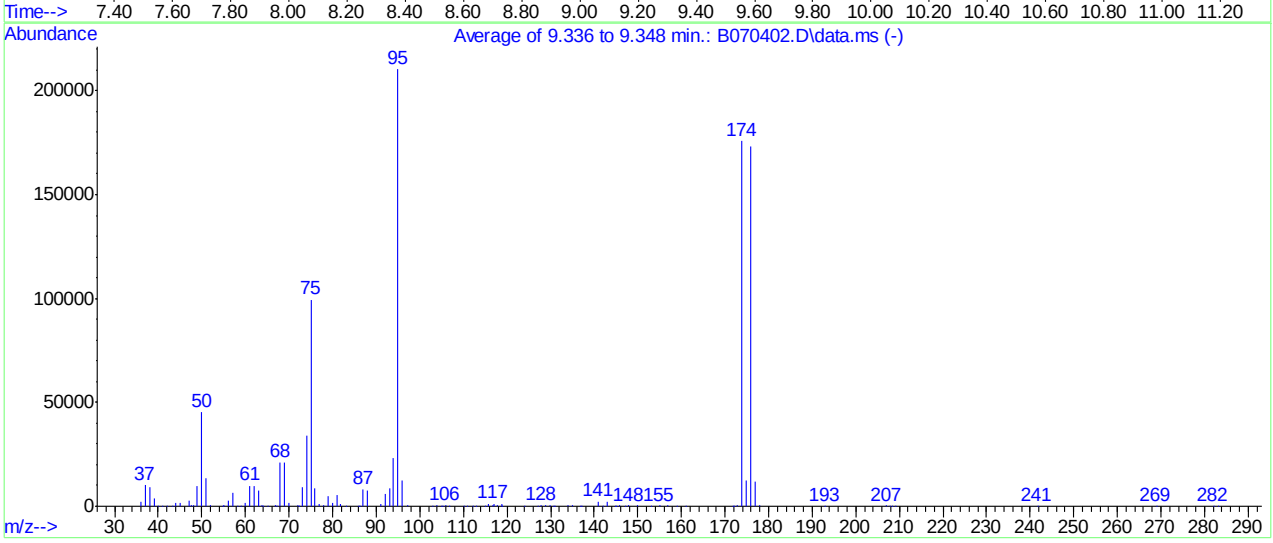
B070284.D BFB.M Fri Sep 10 10:50:31 2010

Methods: SW-846 8260B

Data File : C:\msdchem\1\DATA\091610\B070402.D Vial: 100
Acq On : 16 Sep 2010 8:49 am Operator: AnaJ
Sample : BFB Inst : MSVOA4
Misc : MS15410,VB2907,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :





AutoFind: Scans 535, 536, 537; Background Corrected with Scan 525

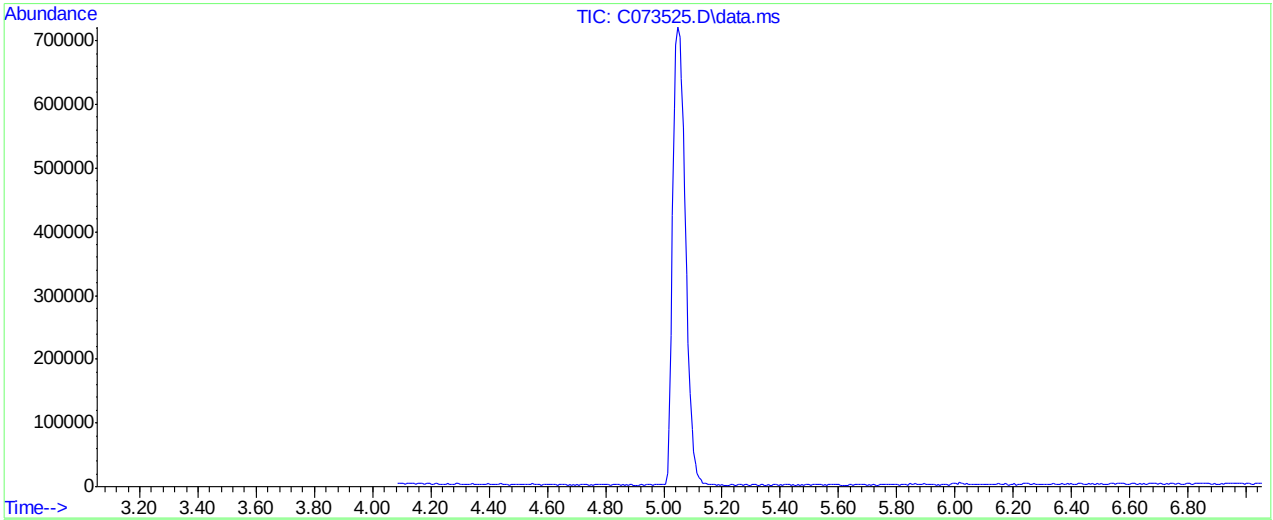
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.5	45365	PASS
75	95	30	60	47.2	99392	PASS
95	95	100	100	100.0	210645	PASS
96	95	5	9	5.9	12483	PASS
173	174	0.00	2	0.2	427	PASS
174	95	50	100	83.4	175637	PASS
175	174	5	9	7.2	12575	PASS
176	174	95	101	98.7	173354	PASS
177	176	5	9	6.9	12005	PASS

B070402.D BFB.M Thu Sep 16 08:58:54 2010

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\091410\C073525.D Vial: 100
Acq On : 14 Sep 2010 10:17 am Operator: AnaJ
Sample : BFB Inst : MSVOA5
Misc : MS15393,VC2932,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title :



AutoFind: Scans 159, 160, 161; Background Corrected with Scan 149

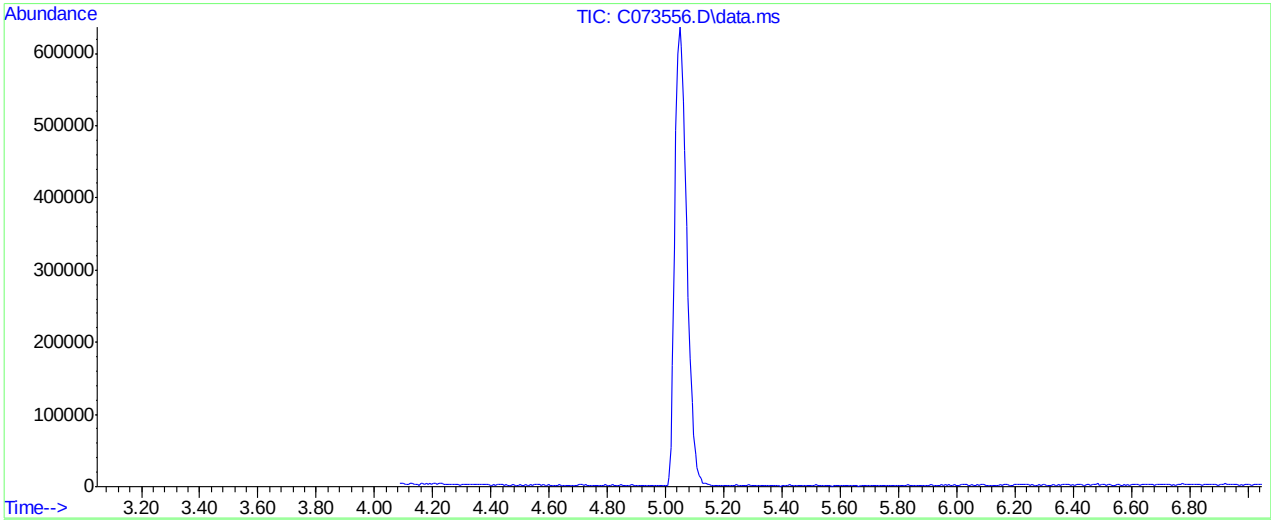
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.1	25053	PASS
75	95	30	60	54.5	71394	PASS
95	95	100	100	100.0	130909	PASS
96	95	5	9	6.8	8964	PASS
173	174	0.00	2	0.2	232	PASS
174	95	50	100	95.9	125538	PASS
175	174	5	9	6.8	8565	PASS
176	174	95	101	97.8	122813	PASS
177	176	5	9	6.4	7811	PASS

C073525.D BFB.M Tue Sep 14 10:24:53 2010

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\091510\C073556.D Vial: 100
Acq On : 15 Sep 2010 8:44 am Operator: AnaJ
Sample : BFB Inst : MSVOA5
Misc : MS15403,VC2933,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title :



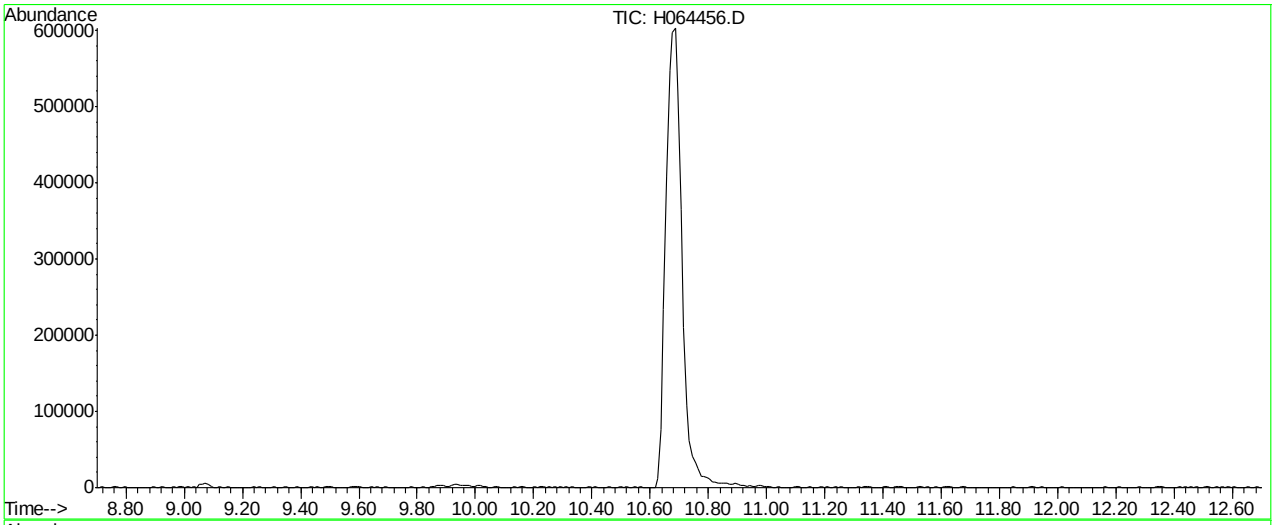
AutoFind: Scans 158, 159, 160; Background Corrected with Scan 149

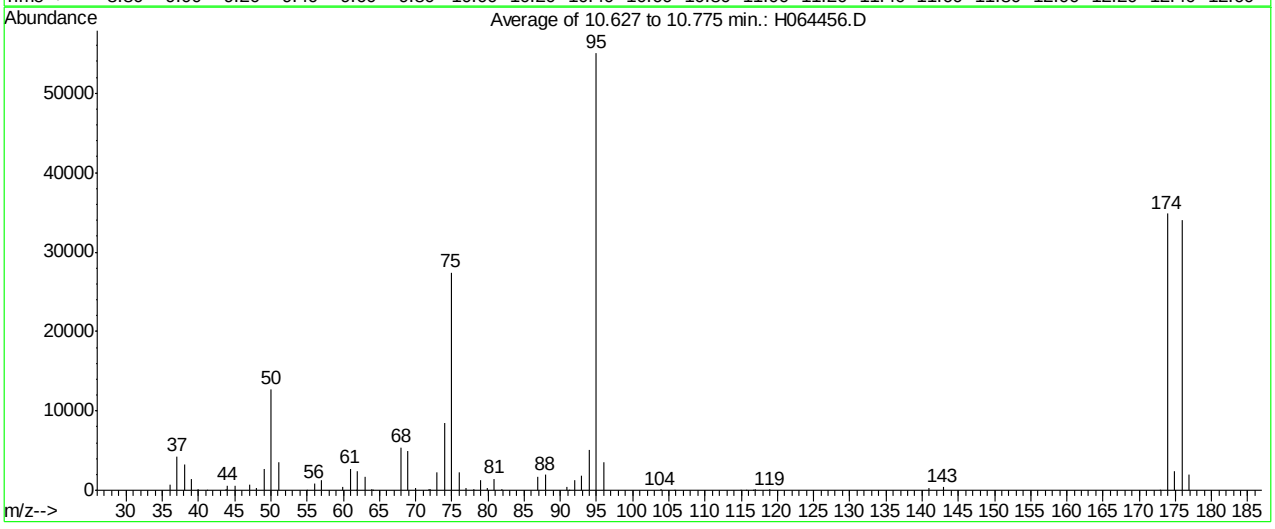
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	24840	PASS
75	95	30	60	59.4	68098	PASS
95	95	100	100	100.0	114725	PASS
96	95	5	9	6.8	7801	PASS
173	174	0.00	2	0.7	705	PASS
174	95	50	100	89.6	102760	PASS
175	174	5	9	7.0	7182	PASS
176	174	95	101	96.3	99000	PASS
177	176	5	9	6.9	6811	PASS

C073556.D BFB.M Wed Sep 15 08:51:53 2010

Methods: SW-846 8260B

Data File : H:\HPCHEM\1\DATA\091510\H064456.D Vial: 100
Acq On : 15 Sep 2010 11:52 am Operator: MikeM
Sample : bfb Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B





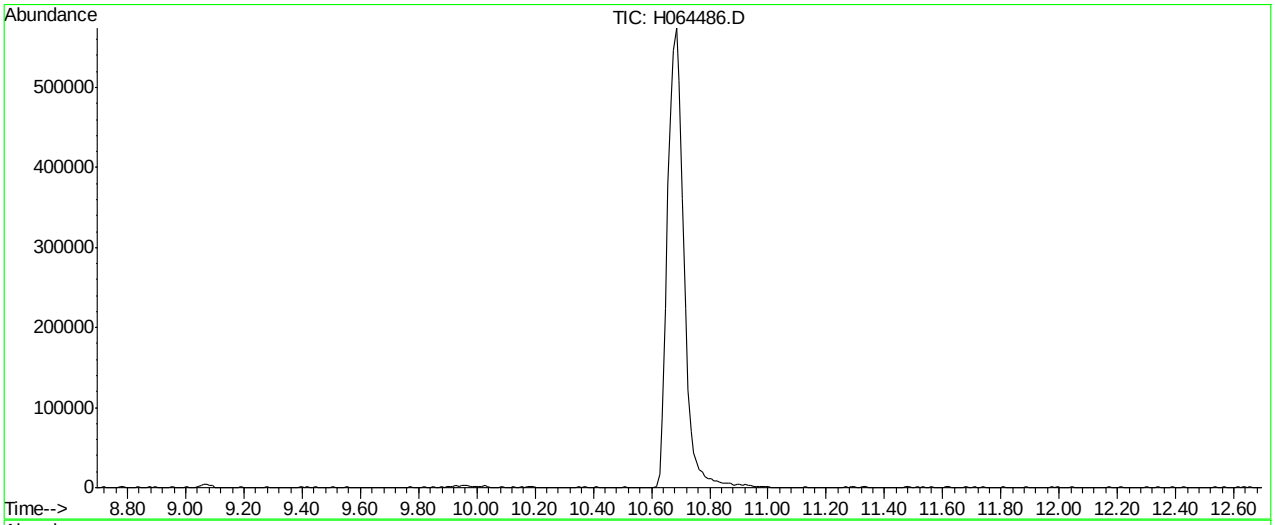
Spectrum Information: Average of 10.627 to 10.775 min.

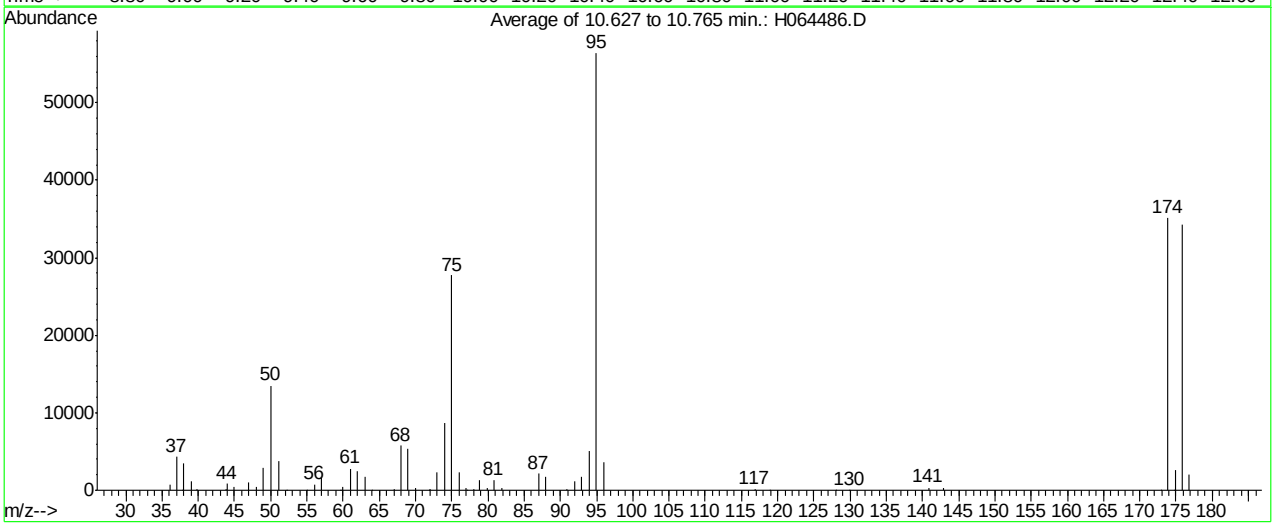
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.1	12740	PASS
75	95	30	60	49.7	27413	PASS
95	95	100	100	100.0	55118	PASS
96	95	5	9	6.4	3503	PASS
173	174	0.00	2	0.1	31	PASS
174	95	50	100	63.2	34812	PASS
175	174	5	9	6.7	2341	PASS
176	174	95	101	97.7	33994	PASS
177	176	5	9	6.0	2043	PASS

H064456.D APP9-H.M Wed Sep 15 12:17:53 2010

Methods: SW-846 8260B

```
Data File : H:\HPCHEM\1\DATA\091610\H064486.D            Vial: 100
Acq On    : 16 Sep 2010   9:46 am                    Operator: MikeM
Sample    : bfb                                      Inst    : MSVOA3
Misc      : ms15392,vh2414,5.00,,,,,                 Multiplr: 1.00
MS Integration Params: small.p
Method    : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title     : SW-846 Method 5035A/8260B
```





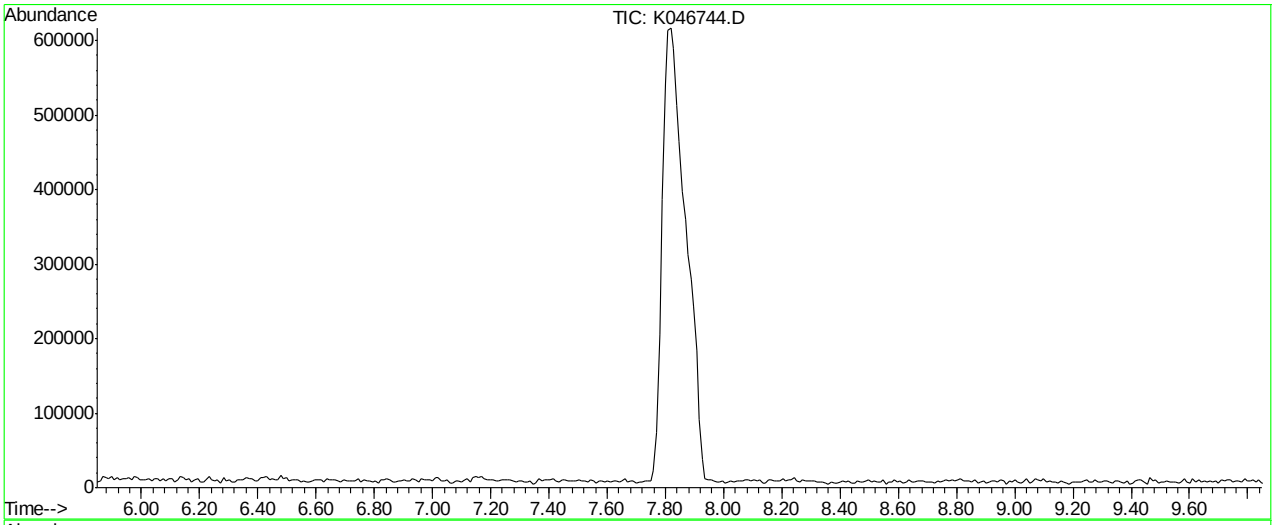
Spectrum Information: Average of 10.627 to 10.765 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.9	13511	PASS
75	95	30	60	49.1	27709	PASS
95	95	100	100	100.0	56480	PASS
96	95	5	9	6.4	3597	PASS
173	174	0.00	2	0.1	35	PASS
174	95	50	100	62.2	35147	PASS
175	174	5	9	7.4	2590	PASS
176	174	95	101	97.4	34226	PASS
177	176	5	9	5.9	2022	PASS

H064486.D APP9-H.M Thu Sep 16 10:07:18 2010

Methods: SW-846 8260B

Data File : K:\HPCHEM\1\DATA\091610\K046744.D Vial: 1
Acq On : 16 Sep 2010 12:28 pm Operator: StevenH
Sample : bfb Inst : MSVOA2
Misc : ms15268,vk2013,5.00,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B



Spectrum Information: Average of 7.760 to 7.937 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.3	16015	PASS
75	95	30	60	55.9	34016	PASS
95	95	100	100	100.0	60849	PASS
96	95	5	9	7.5	4534	PASS
173	174	0.00	2	0.7	271	PASS
174	95	50	100	68.3	41549	PASS
175	174	5	9	7.6	3177	PASS
176	174	95	101	96.6	40132	PASS
177	176	5	9	7.1	2855	PASS

K046744.D 8260-K.M Fri Sep 17 08:33:37 2010

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070291.D
Acq On : 10 Sep 2010 1:44 pm
Operator : AnaJ
Sample : ICV2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 10 14:37:13 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	518706	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1836072	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1511533	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.201	65	285713	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	246987	51.65	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 103.30%			
36) 1,2-Dichloroethane-d4	9.580	65	230844	50.66	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 101.32%			
50) Toluene-d8	11.587	98	1142500	50.02	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 100.04%			
70) 4-Bromofluorobenzene	14.398	95	1303754	50.56	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 101.12%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.421	85	497629	37.31	ug/L	96
3) Chloromethane	4.749	50	580000	37.05	ug/L	100
4) Vinyl Chloride	4.975	62	407813	34.64	ug/L	97
5) Bromomethane	5.552	94	271045	36.97	ug/L	92
6) Chloroethane	5.656	64	207179	34.37	ug/L	99
7) Trichlorofluoromethane	6.094	101	664814	44.30	ug/L	97
8) Ethyl Ether	6.368	59	273412	40.05	ug/L	97
9) 1,2-Dichlorotrifluoroe...	6.368	67	383162	40.89	ug/L	97
10) Freon 113	6.745	101	367199	39.27	ug/L	98
11) 1,1-Dichloroethene	6.775	61	649927	38.92	ug/L	99
12) Acetone	6.721	43	566300	169.62	ug/L	97
13) Iodomethane	7.000	142	676675	41.32	ug/L	95
14) Carbon Disulfide	7.152	76	1231160	35.78	ug/L	95
15) Methyl acetate	7.104	43	1670773	185.97	ug/L	99
16) Methylene Chloride	7.305	49	736610	38.94	ug/L	99
17) Methyl Tert Butyl Ether	7.584	73	1217427	40.98	ug/L	99
18) trans-1,2-Dichloroethene	7.627	61	668556	37.26	ug/L	99
19) Acrylonitrile	7.524	53	835752	191.14	ug/L	99
20) Hexane	7.901	57	610569	38.91	ug/L	98
21) Di-isopropyl ether	8.077	45	1783141	38.96	ug/L	85
22) Vinyl acetate	8.047	43	3877890	224.24	ug/L	99
23) 1,1-Dichloroethane	8.089	63	856624	37.26	ug/L	99
24) ETBE	8.485	59	1458040	40.23	ug/L	98
25) 2-Butanone	8.649	43	996258	187.54	ug/L	99
26) 2,2-Dichloropropane	8.746	77	591304	37.10	ug/L	99
27) cis-1,2-Dichloroethene	8.716	96	467066	38.99	ug/L	98
28) Bromochloromethane	8.984	128	232258	37.55	ug/L	92
29) Tetrahydrofuran	9.032	42	136159	40.86	ug/L	95
30) Chloroform	9.020	83	815471	38.84	ug/L	98
32) 1,1,1-Trichloroethane	9.300	97	665555	40.05	ug/L	98
33) Cyclohexane	9.397	56	782885	38.72	ug/L	96
34) Carbon Tetrachloride	9.495	117	583525	40.25	ug/L	99
35) 1,1-Dichloropropene	9.452	75	608058	38.65	ug/L	98
37) TAME	9.714	73	1209919	40.62	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070291.D
Acq On : 10 Sep 2010 1:44 pm
Operator : AnaJ
Sample : ICV2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 10 14:37:13 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.689	78	1672771	36.54	ug/L	98
39) 1,2-Dichloroethane	9.659	62	667233	38.36	ug/L	98
40) Trichloroethene	10.322	95	444348	38.99	ug/L	96
41) Methylcyclohexane	10.584	83	665995	40.81	ug/L	98
42) 1,2-Dichloropropane	10.559	63	490362	37.80	ug/L	97
43) Dibromomethane	10.699	93	283977	38.41	ug/L	94
44) Bromodichloromethane	10.809	83	605292	39.24	ug/L	97
45) 2-Chloroethyl vinyl ether	11.028	63	1337545	180.29	ug/L	97
46) 2-Nitropropane	10.997	41	584421	195.09	ug/L	95
47) cis-1,3-Dichloropropene	11.265	75	740522	39.52	ug/L	99
48) 4-Methyl-2-pentanone	11.350	43	2190653	201.76	ug/L	100
51) Toluene	11.660	91	1773694	38.07	ug/L	100
52) trans-1,3-Dichloropropene	11.806	75	683677	42.40	ug/L	97
53) 1,1,2-Trichloroethane	12.031	83	330973	37.39	ug/L	98
54) Tetrachloroethene	12.269	166	457192	39.24	ug/L	97
55) 2-hexanone	12.214	43	1532206	212.33	ug/L	98
56) 1,3-Dichloropropane	12.226	76	677052	36.56	ug/L	97
57) Dibromochloromethane	12.506	129	440072	40.32	ug/L	97
58) 1,2-Dibromoethane	12.682	107	411705	39.56	ug/L	99
59) 1-Chlorohexane	13.047	91	597988	36.50	ug/L	96
60) Chlorobenzene	13.187	112	1191985	37.98	ug/L	98
61) Ethylbenzene	13.254	91	1984439	38.68	ug/L	100
62) 1,1,1,2-Tetrachloroethane	13.236	131	413158	39.15	ug/L	99
63) m,p-Xylene	13.364	91	3045569	77.89	ug/L	98
64) o-Xylene	13.814	91	1607353	39.71	ug/L	98
65) Styrene	13.820	104	1261463	38.65	ug/L	98
66) Bromoform	14.082	173	302173	39.51	ug/L	99
68) Isopropylbenzene	14.197	105	1973288	45.89	ug/L	97
69) Cyclohexanone	14.343	55	57256	194.88	ug/L	95
71) 1,1,2,2-Tetrachloroethane	14.471	83	507174	36.08	ug/L	98
72) trans-1,4-Dichloro-2-B...	14.526	53	111954	36.56	ug/L	95
73) n-Propylbenzene	14.641	91	2407647	38.82	ug/L	98
74) Bromobenzene	14.623	156	542291	38.40	ug/L	98
75) 1,2,3-Trichloropropane	14.562	110	136662	33.75	ug/L	97
76) 1,3,5-Trimethylbenzene	14.806	105	1642464	40.11	ug/L	100
77) 2-Chlorotoluene	14.800	91	1632601	38.42	ug/L	99
78) 4-Chlorotoluene	14.909	91	1567323	39.52	ug/L	96
79) tert-Butylbenzene	15.195	91	1030913	38.74	ug/L	98
80) 1,2,4-Trimethylbenzene	15.244	105	1762511	39.60	ug/L	99
81) sec-Butylbenzene	15.438	105	2154672	39.17	ug/L	98
82) 4-Isopropyltoluene	15.566	119	1730930	40.33	ug/L	100
83) 1,3-Dichlorobenzene	15.627	146	1013418	37.97	ug/L	99
84) 1,4-Dichlorobenzene	15.718	146	1024559	37.40	ug/L	98
85) Benzyl Chloride	15.828	91	823506	36.16	ug/L	99
86) n-Butylbenzene	16.016	91	1761609	38.29	ug/L	99
87) 1,2-Dichlorobenzene	16.150	146	979103	37.81	ug/L	99
88) 1,2-Dibromo-3-Chloropr...	16.971	75	90785	40.89	ug/L	95
89) 1,2,4-Trichlorobenzene	17.951	180	787413	39.54	ug/L	97
90) Hexachlorobutadiene	18.103	225	371298	41.54	ug/L	95
91) Naphthalene	18.279	128	1493539	40.86	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070291.D
Acq On : 10 Sep 2010 1:44 pm
Operator : AnaJ
Sample : ICV2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 10 14:37:13 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

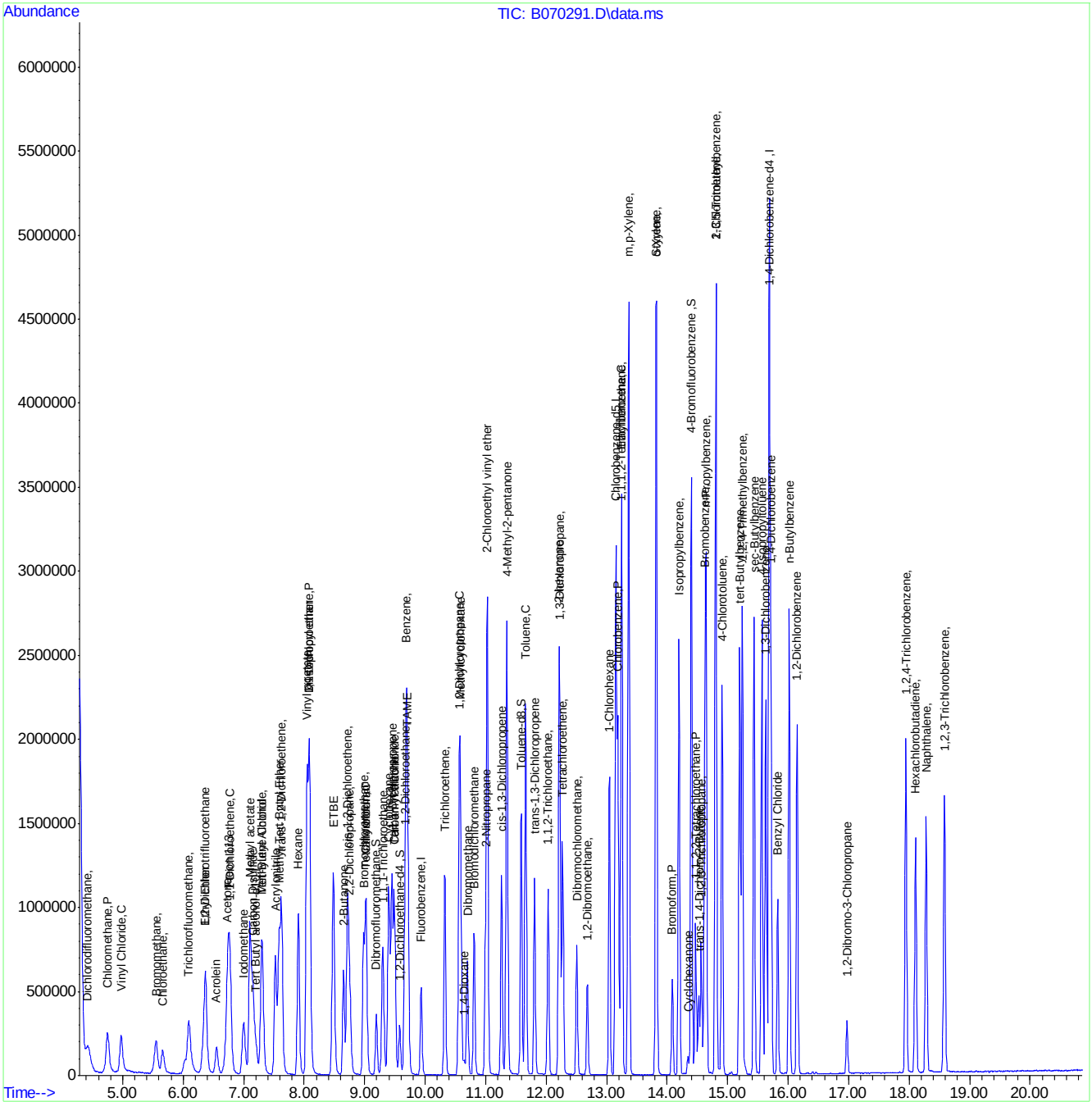
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.584	180	709588	40.09	ug/L	99
94) Acrolein	6.550	56	231885	212.19	ug/L	97
95) Tert-Butyl Alcohol	7.298	59	318948	368.53	ug/L	94
96) Tert amyl alcohol	9.489	59	257402	388.30	ug/L	94
97) 1,4-Dioxane	10.644	88	60622	689.39	ug/L	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070291.D
Acq On : 10 Sep 2010 1:44 pm
Operator : AnaJ
Sample : ICV2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 10 14:37:13 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/13/10 10:23

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 12:32:10 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	9.932	96	397657	50.00	ug/L		0.00
49) Chlorobenzene-d5	13.151	117	1436136	50.00	ug/L		0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1093351	50.00	ug/L		0.00
93) Tert Butyl alcohol-d10	7.201	65	213776	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	9.190	113	180152	49.20	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 98.40%				
36) 1,2-Dichloroethane-d4	9.580	65	177754	49.76	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 99.52%				
50) Toluene-d8	11.581	98	887425	48.02	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 96.04%				
70) 4-Bromofluorobenzene	14.398	95	938872	48.10	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 96.20%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	4.427	85	7704	1.21	ug/L		99
3) Chloromethane	4.731	50	12630	1.46	ug/L		69
4) Vinyl Chloride	4.956	62	9184m	1.29	ug/L		
5) Bromomethane	5.564	94	6215	1.49	ug/L		92
6) Chloroethane	5.680	64	4811m	1.17	ug/L		
7) Trichlorofluoromethane	6.094	101	9356m	0.93	ug/L		
8) Ethyl Ether	6.374	59	4290	0.85	ug/L	#	81
9) 1,2-Dichlorotrifluoroe...	6.349	67	8365m	1.33	ug/L		
10) Freon 113	6.763	101	5661	0.87	ug/L		78
11) 1,1-Dichloroethene	6.775	61	10139	0.82	ug/L		86
12) Acetone	6.732	43	17979	7.62	ug/L		95
13) Iodomethane	7.000	142	11111	0.96	ug/L		76
14) Carbon Disulfide	7.146	76	25204	1.03	ug/L		62
15) Methyl acetate	7.104	43	36928	5.42	ug/L		91
16) Methylene Chloride	7.292	49	39608	2.88	ug/L		94
17) Methyl Tert Butyl Ether	7.584	73	20408	0.93	ug/L		91
18) trans-1,2-Dichloroethene	7.633	61	12156	0.93	ug/L		91
19) Acrylonitrile	7.523	53	16602	4.83	ug/L		97
20) Hexane	7.907	57	11078	0.96	ug/L		91
21) Di-isopropyl ether	8.077	45	33626	0.97	ug/L		94
22) Vinyl acetate	8.040	43	63003	4.75	ug/L		82
23) 1,1-Dichloroethane	8.089	63	15835	0.94	ug/L		92
24) ETBE	8.491	59	23271	0.85	ug/L		95
25) 2-Butanone	8.649	43	20379	5.07	ug/L		87
26) 2,2-Dichloropropane	8.746	77	10957	0.97	ug/L		88
27) cis-1,2-Dichloroethene	8.722	96	8296	0.97	ug/L	#	64
28) Bromochloromethane	8.977	128	4744	1.09	ug/L	#	61
29) Tetrahydrofuran	9.038	42	2520	0.95	ug/L		75
30) Chloroform	9.008	83	16098	1.06	ug/L		75
32) 1,1,1-Trichloroethane	9.294	97	10734	0.87	ug/L		86
33) Cyclohexane	9.409	56	12110	0.79	ug/L		88
34) Carbon Tetrachloride	9.501	117	9127	0.84	ug/L		80
35) 1,1-Dichloropropene	9.452	75	10333	0.91	ug/L		81
37) TAME	9.707	73	19552	0.90	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 12:32:10 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) Benzene	9.683	78	33356	1.02	ug/L		97
39) 1,2-Dichloroethane	9.659	62	12380	0.95	ug/L		93
40) Trichloroethene	10.328	95	7497	0.90	ug/L		88
41) Methylcyclohexane	10.583	83	9772	0.84	ug/L		82
42) 1,2-Dichloropropane	10.553	63	8929	0.93	ug/L		96
43) Dibromomethane	10.699	93	5195	0.97	ug/L		83
44) Bromodichloromethane	10.808	83	9916	0.87	ug/L		78
45) 2-Chloroethyl vinyl ether	11.034	63	14244	2.83	ug/L	#	76
46) 2-Nitropropane	10.997	41	9904	4.45	ug/L		85
47) cis-1,3-Dichloropropene	11.265	75	11418	0.84	ug/L		90
48) 4-Methyl-2-pentanone	11.350	43	39017	4.83	ug/L		96
51) Toluene	11.654	91	34111	0.93	ug/L		99
52) trans-1,3-Dichloropropene	11.806	75	11097	0.89	ug/L		96
53) 1,1,2-Trichloroethane	12.037	83	6590	0.95	ug/L		85
54) Tetrachloroethene	12.269	166	8678	0.98	ug/L		98
55) 2-hexanone	12.214	43	24809	4.22	ug/L		95
56) 1,3-Dichloropropane	12.226	76	15426	1.11	ug/L		90
57) Dibromochloromethane	12.500	129	7077	0.81	ug/L		86
58) 1,2-Dibromoethane	12.682	107	7373	0.92	ug/L		100
59) 1-Chlorohexane	13.041	91	8080	0.68	ug/L		78
60) Chlorobenzene	13.187	112	24754	1.02	ug/L		76
61) Ethylbenzene	13.248	91	34351	0.85	ug/L		92
62) 1,1,1,2-Tetrachloroethane	13.242	131	7283	0.86	ug/L		92
63) m,p-Xylene	13.370	91	53355	1.73	ug/L		95
64) o-Xylene	13.820	91	24751	0.76	ug/L		90
65) Styrene	13.820	104	16643	0.71	ug/L		93
66) Bromoform	14.081	173	3459	0.69	ug/L		78
68) Isopropylbenzene	14.191	105	24062	0.71	ug/L		85
69) Cyclohexanone	14.337	55	970	3.77	ug/L	#	57
71) 1,1,2,2-Tetrachloroethane	14.471	83	11776	1.18	ug/L		98
72) trans-1,4-Dichloro-2-B...	14.519	53	684	0.29	ug/L	#	21
73) n-Propylbenzene	14.641	91	38997	0.82	ug/L		96
74) Bromobenzene	14.623	156	9869	0.95	ug/L		84
75) 1,2,3-Trichloropropane	14.568	110	3764	1.27	ug/L		76
76) 1,3,5-Trimethylbenzene	14.799	105	23641	0.75	ug/L		90
77) 2-Chlorotoluene	14.805	91	28696	0.88	ug/L		94
78) 4-Chlorotoluene	14.903	91	25738	0.85	ug/L		96
79) tert-Butylbenzene	15.201	91	13200	0.65	ug/L		93
80) 1,2,4-Trimethylbenzene	15.243	105	27205	0.81	ug/L		94
81) sec-Butylbenzene	15.438	105	32908	0.79	ug/L		89
82) 4-Isopropyltoluene	15.566	119	23414	0.73	ug/L		99
83) 1,3-Dichlorobenzene	15.627	146	19823	1.03	ug/L		94
84) 1,4-Dichlorobenzene	15.718	146	20855	1.07	ug/L		84
85) Benzyl Chloride	15.827	91	3997	0.27	ug/L		96
86) n-Butylbenzene	16.022	91	29346	0.85	ug/L		83
87) 1,2-Dichlorobenzene	16.150	146	18594	1.00	ug/L		85
88) 1,2-Dibromo-3-Chloropr...	16.965	75	1311	0.77	ug/L	#	60
89) 1,2,4-Trichlorobenzene	17.945	180	14368	1.01	ug/L		82
90) Hexachlorobutadiene	18.103	225	5677	0.86	ug/L		89
91) Naphthalene	18.285	128	26858	1.02	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 12:32:10 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

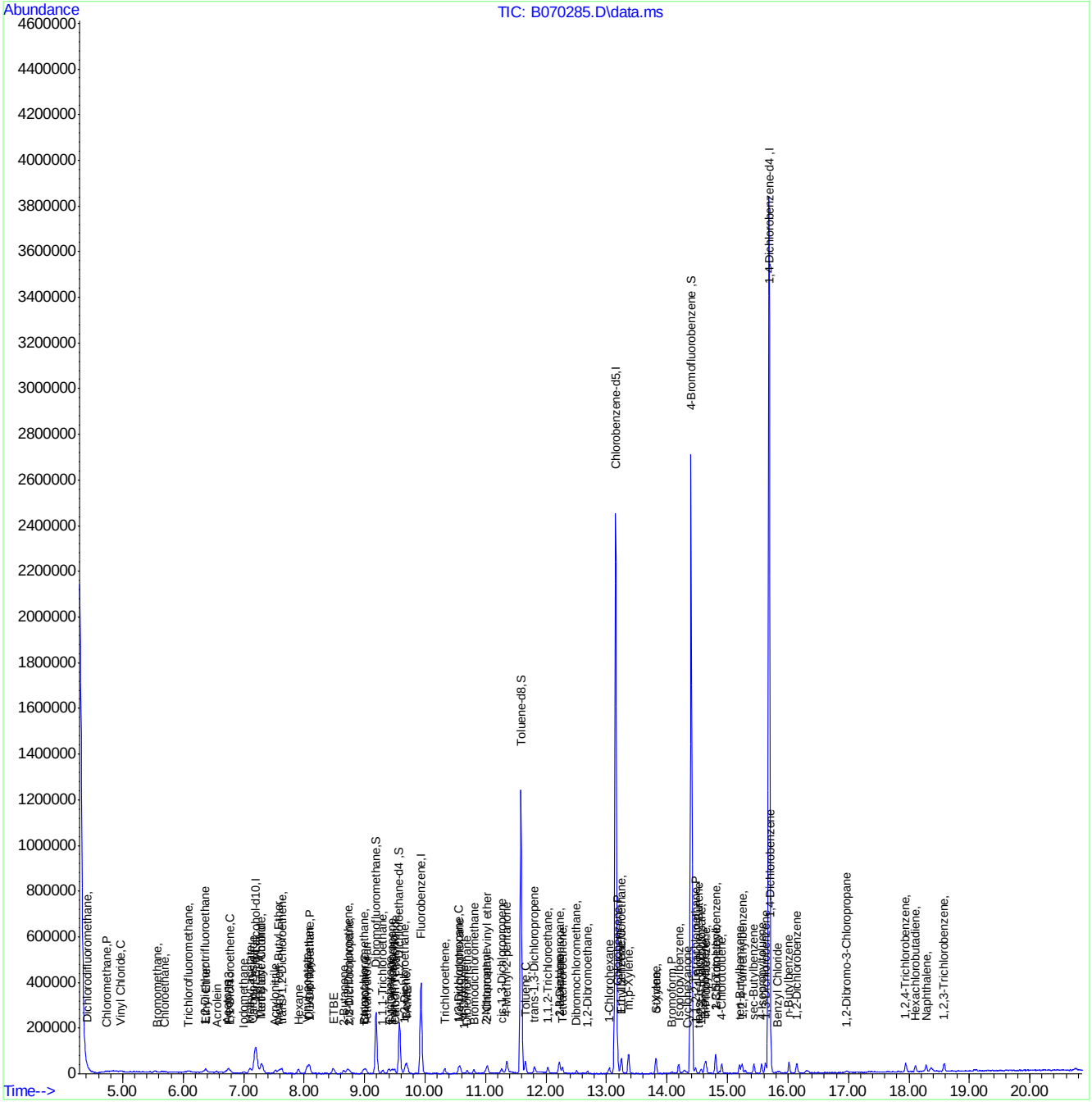
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,3-Trichlorobenzene	18.583	180	13590	1.08	ug/L		91
94) Acrolein	6.562	56	4074	4.51	ug/L		88
95) Tert-Butyl Alcohol	7.292	59	5601	8.01	ug/L	#	79
96) Tert amyl alcohol	9.482	59	4515	9.05	ug/L		81
97) 1,4-Dioxane	10.650	88	1211	17.96	ug/L	#	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

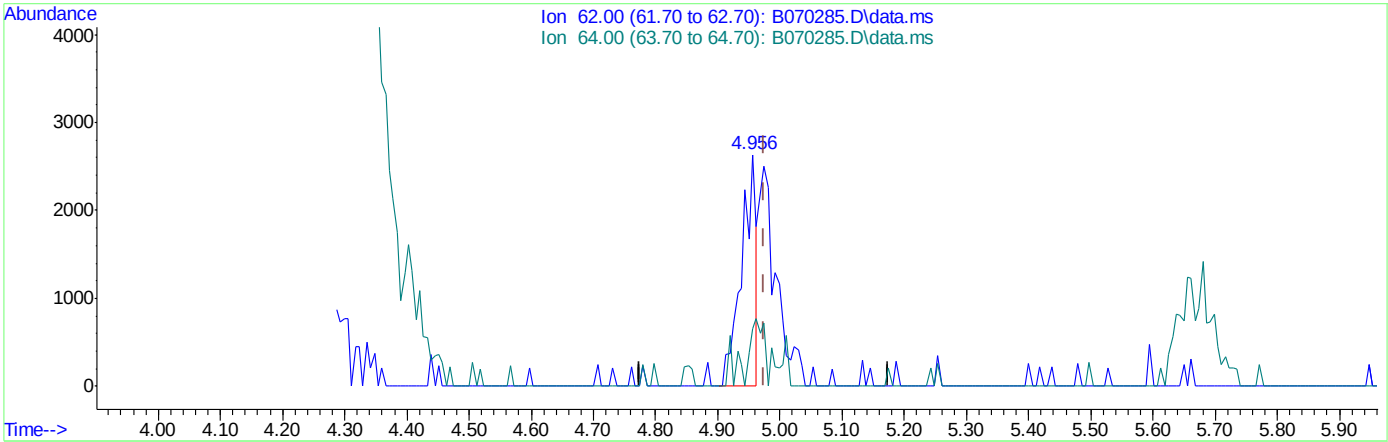
Quant Time: Sep 10 12:32:10 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

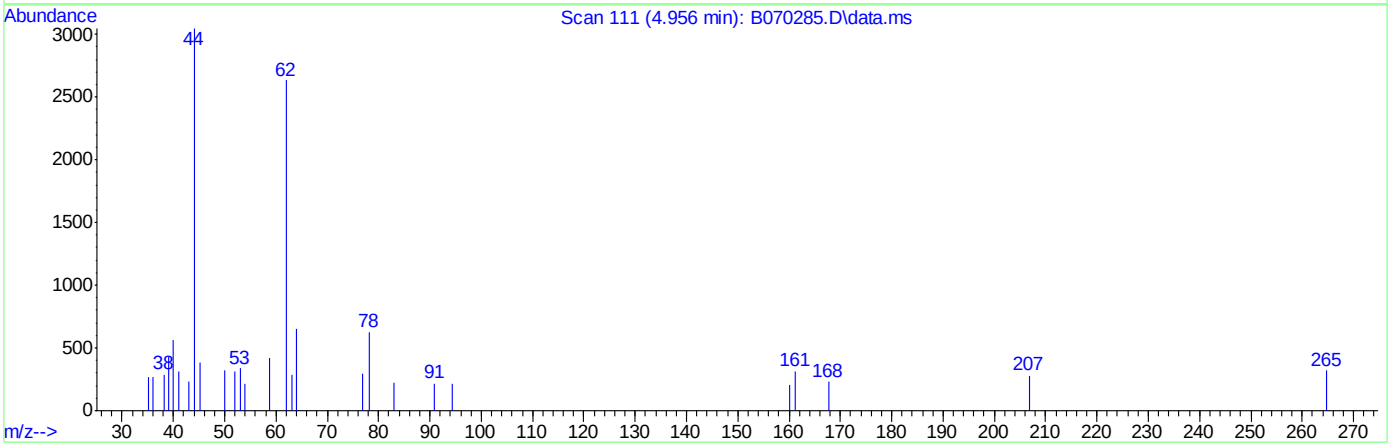


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(4) Vinyl Chloride (C)

4.956min (-0.018) 0.61ug/L

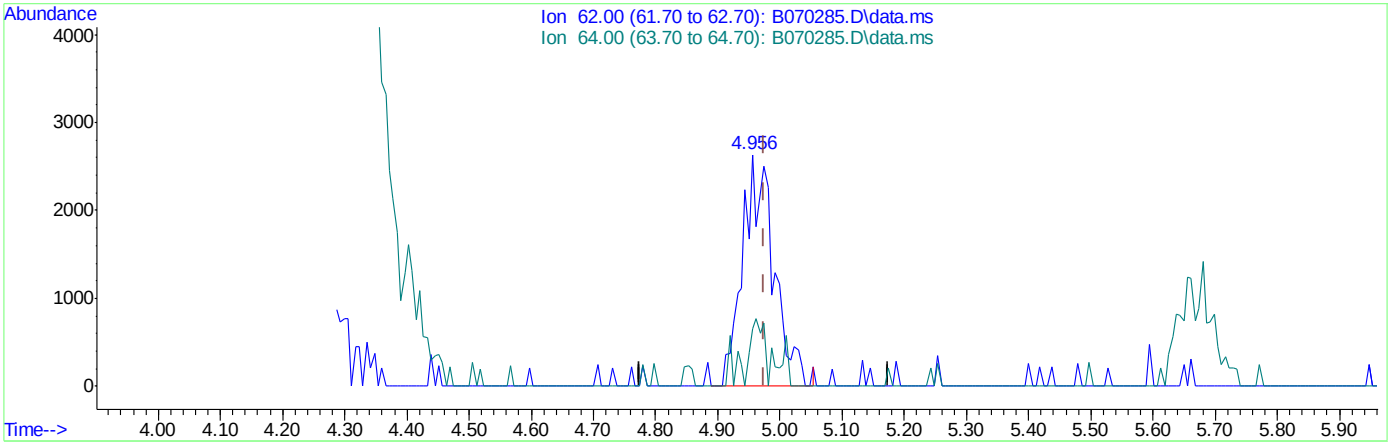
response 4373

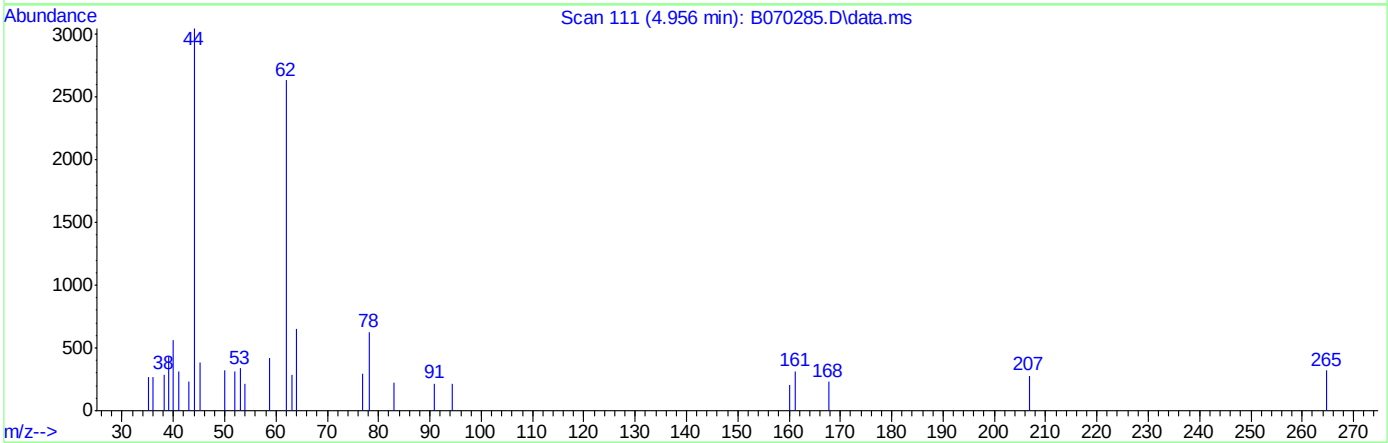
Ion	Exp%	Act%
62.00	100	100
64.00	30.60	24.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(4) Vinyl Chloride (C)

4.956min (-0.018) 1.29ug/L m

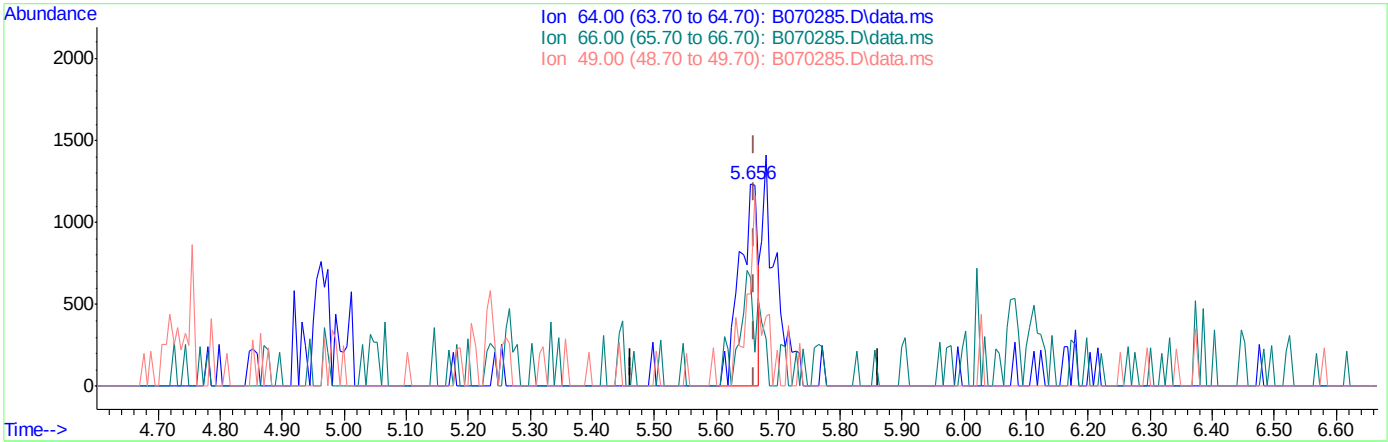
response 9184

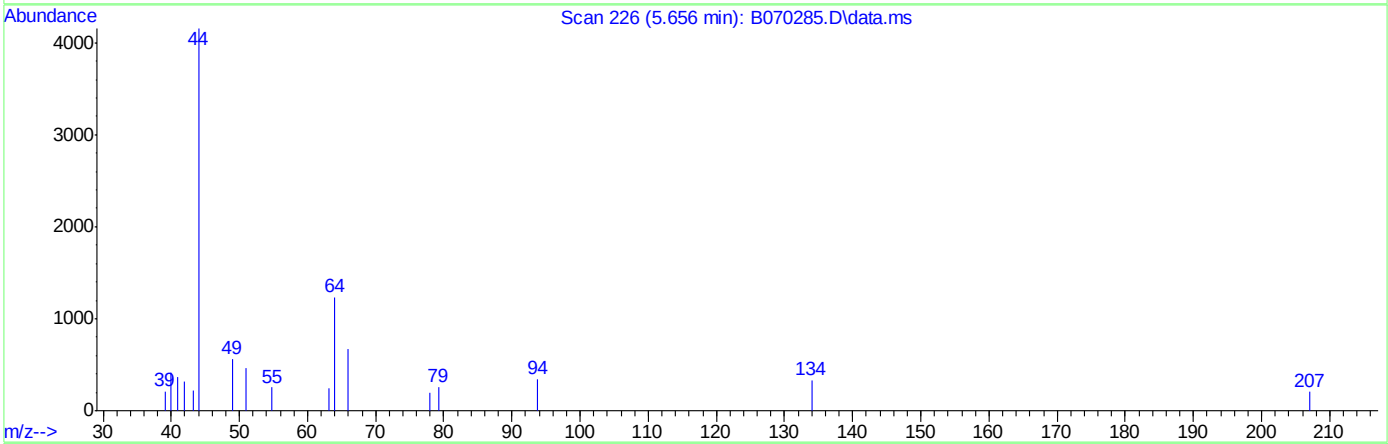
Ion	Exp%	Act%
62.00	100	100
64.00	30.60	24.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(6) Chloroethane ( )

5.656min (-0.006) 0.60ug/L

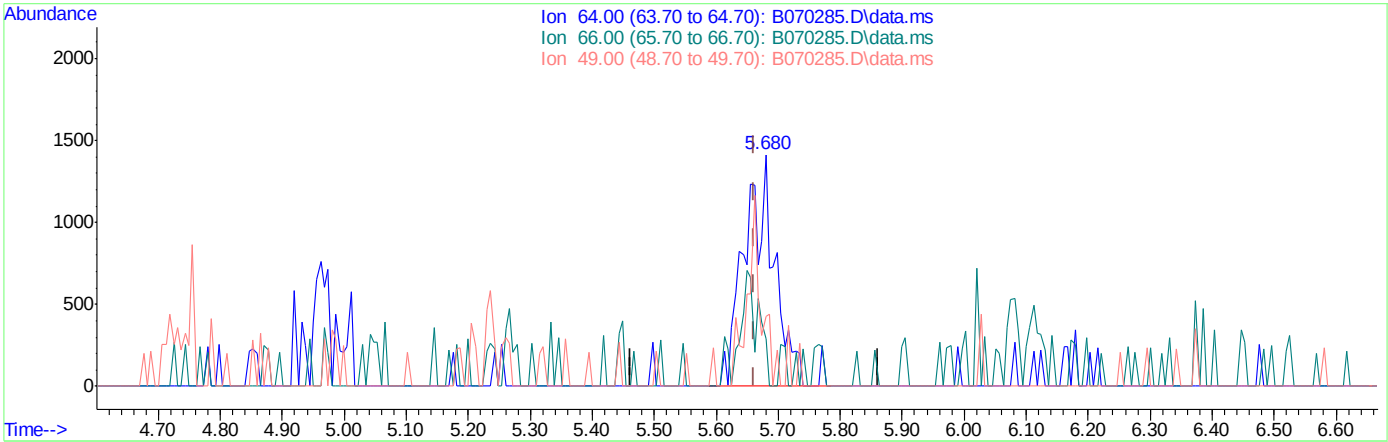
response 2450

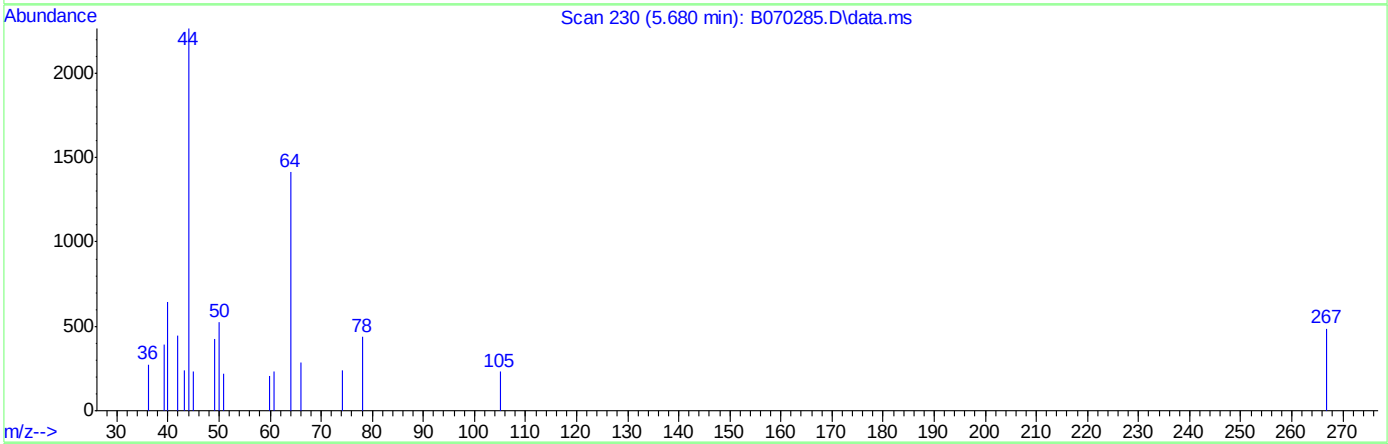
Ion	Exp%	Act%
64.00	100	100
66.00	31.70	54.17
49.00	33.90	45.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(6) Chloroethane ( )

5.680min (+0.018) 1.17ug/L m

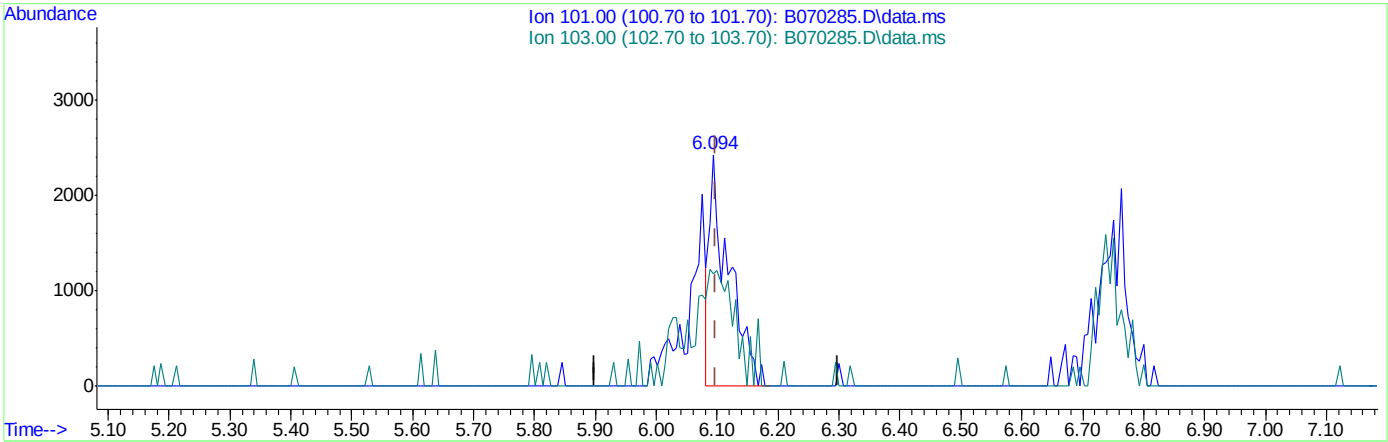
response 4811

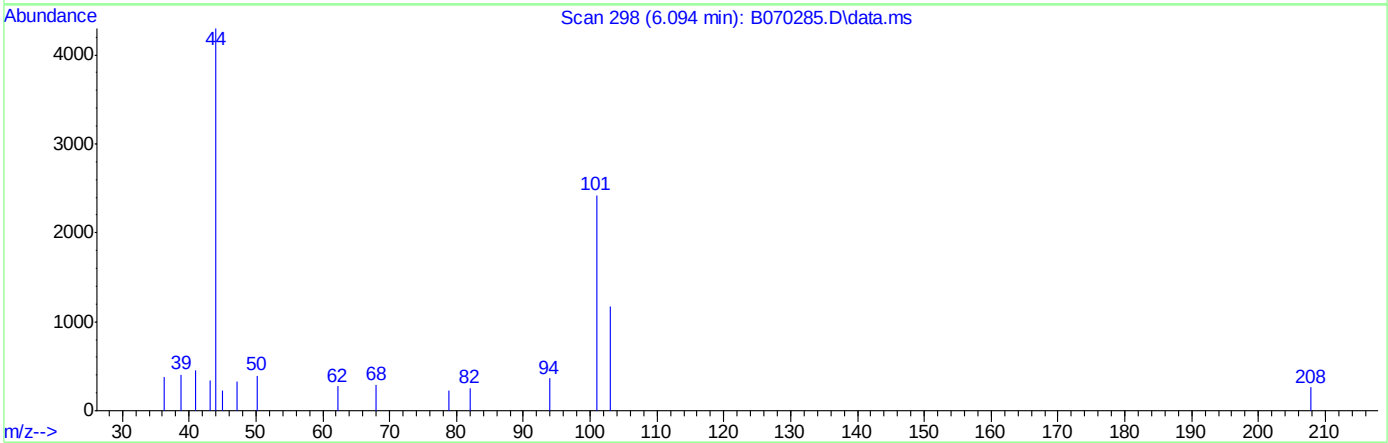
Ion	Exp%	Act%
64.00	100	100
66.00	31.70	20.44
49.00	33.90	30.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(7) Trichlorofluoromethane ( )

6.094min (-0.005) 0.53ug/L

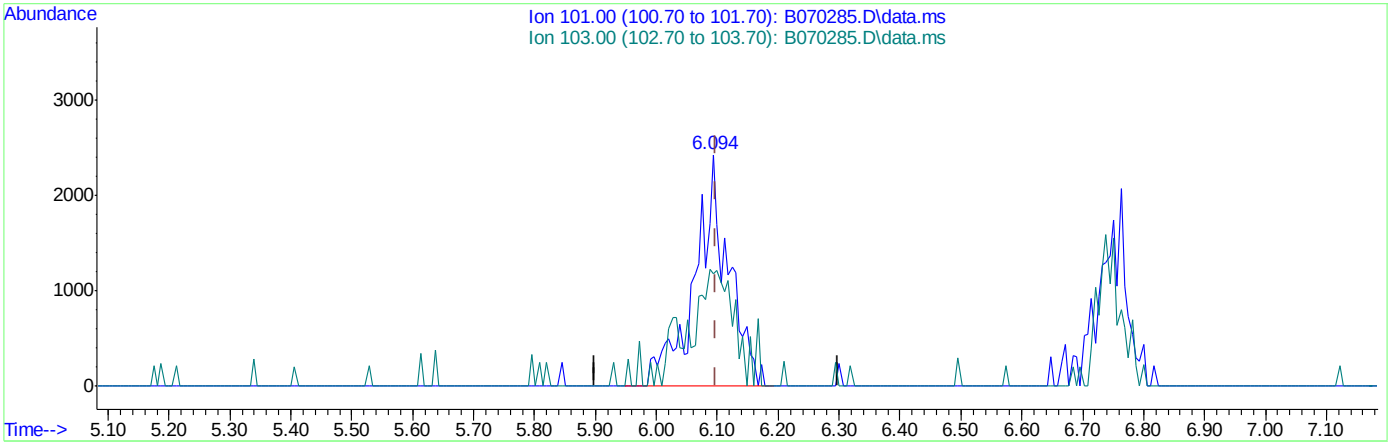
response 5338

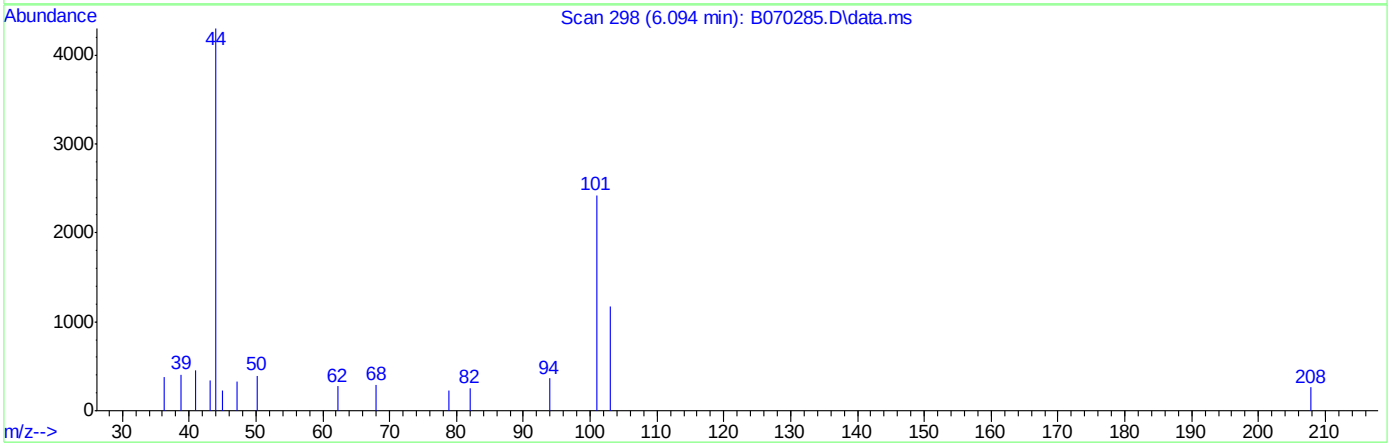
Ion	Exp%	Act%
101.00	100	100
103.00	58.80	48.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(7) Trichlorofluoromethane ( )

6.094min (-0.005) 0.93ug/L m

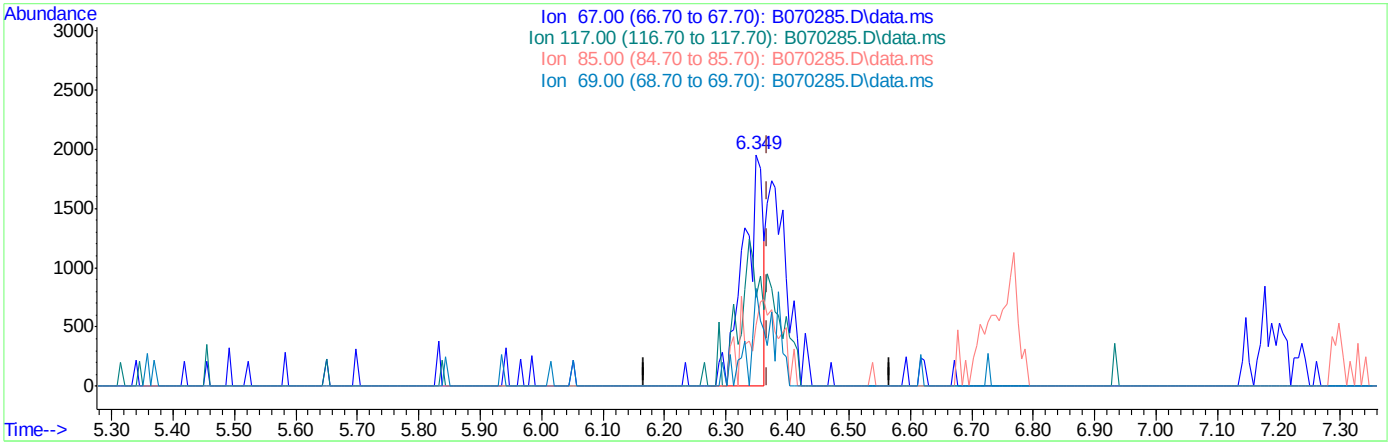
response 9356

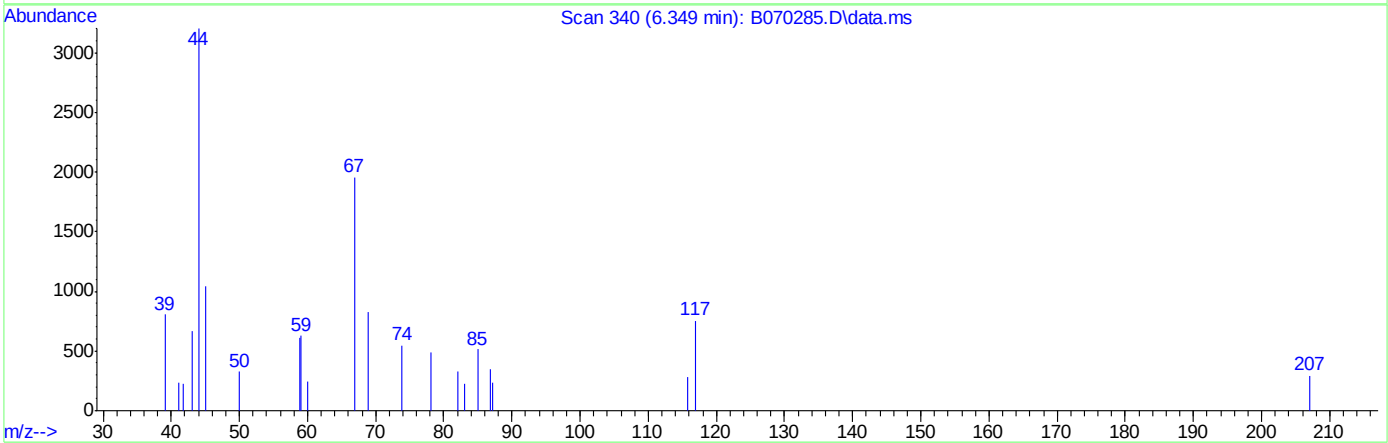
Ion	Exp%	Act%
101.00	100	100
103.00	58.80	48.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(9) 1,2-Dichlorotrifluoroethane

6.349min (-0.018) 0.69ug/L

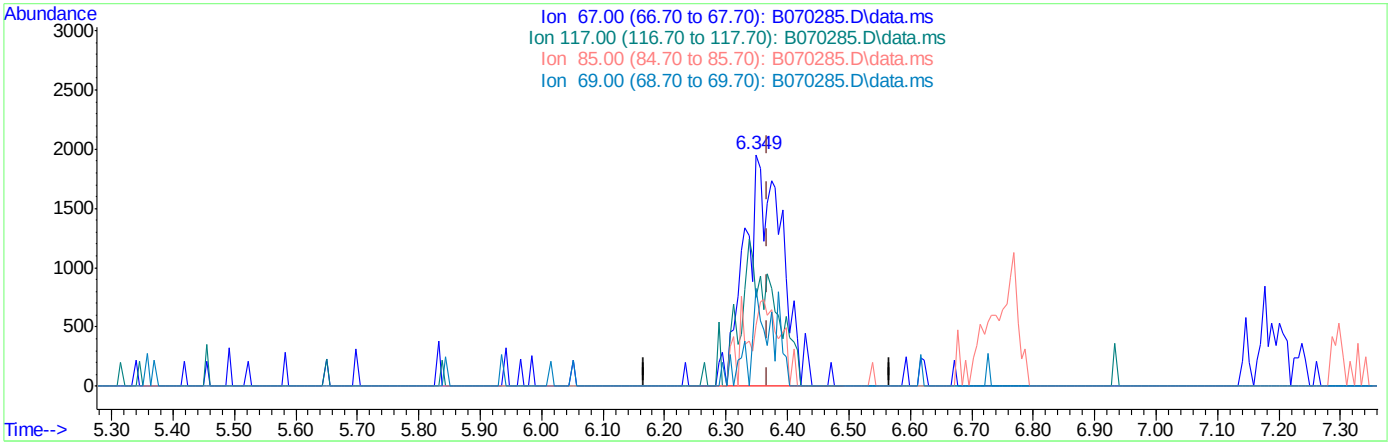
response 4325

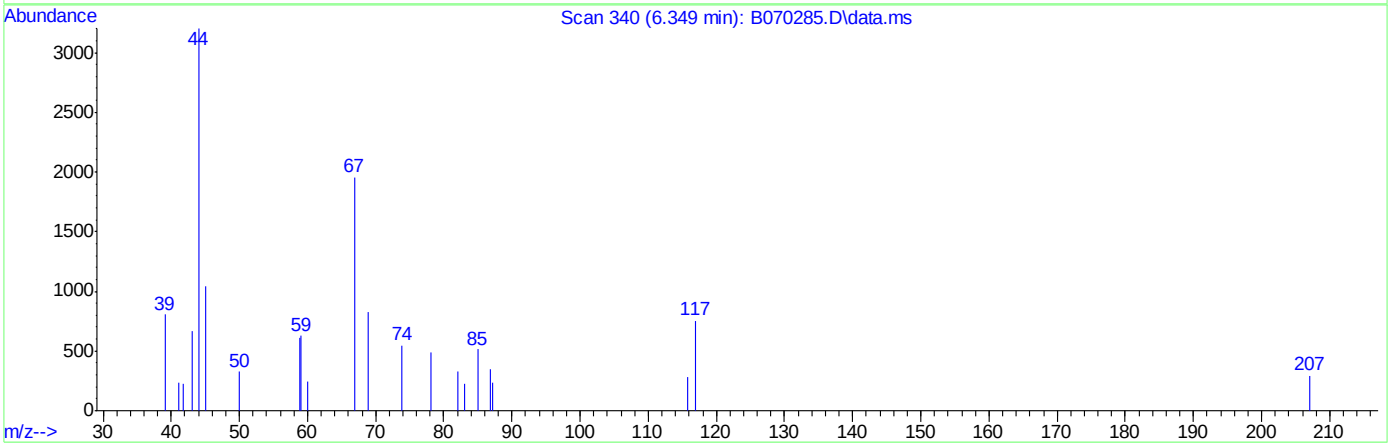
Ion	Exp%	Act%
67.00	100	100
117.00	62.60	38.47#
85.00	40.10	26.24
69.00	31.60	42.20

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070285.D
Acq On : 10 Sep 2010 11:05 am
Operator : AnaJ
Sample : IC2903-1
Misc : MS15368,VB2903,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 10 11:38:28 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070285.D\data.ms

(9) 1,2-Dichlorotrifluoroethane

6.349min (-0.018) 1.33ug/L m

response 8365

Ion	Exp%	Act%
67.00	100	100
117.00	62.60	38.47#
85.00	40.10	26.24
69.00	31.60	42.20

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/13/10 10:23

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070286.D
Acq On : 10 Sep 2010 11:32 am
Operator : AnaJ
Sample : IC2903-2
Misc : MS15368,VB2903,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 10 12:34:09 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	399955	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1446582	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1168108	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.195	65	217606	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	180314	48.96	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 97.92%			
36) 1,2-Dichloroethane-d4	9.580	65	178090	49.57	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 99.14%			
50) Toluene-d8	11.587	98	908264	48.79	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 97.58%			
70) 4-Bromofluorobenzene	14.398	95	983410	47.16	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 94.32%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.451	85	52710	8.22	ug/L	99
3) Chloromethane	4.749	50	65926	7.60	ug/L	94
4) Vinyl Chloride	4.968	62	48491	6.76	ug/L	87
5) Bromomethane	5.546	94	27735	6.60	ug/L	92
6) Chloroethane	5.662	64	23715	5.73	ug/L	92
7) Trichlorofluoromethane	6.094	101	58309m	5.78	ug/L	
8) Ethyl Ether	6.362	59	27788	5.45	ug/L	94
9) 1,2-Dichlorotrifluoroe...	6.380	67	37709	5.95	ug/L	85
10) Freon 113	6.751	101	39070	5.94	ug/L	92
11) 1,1-Dichloroethene	6.763	61	66140	5.33	ug/L	93
12) Acetone	6.714	43	73170	30.81	ug/L	91
13) Iodomethane	7.000	142	62331	5.34	ug/L	95
14) Carbon Disulfide	7.146	76	140015	5.68	ug/L	100
15) Methyl acetate	7.104	43	178975	26.14	ug/L	98
16) Methylene Chloride	7.305	49	95851	6.91	ug/L	97
17) Methyl Tert Butyl Ether	7.590	73	112724	5.08	ug/L	97
18) trans-1,2-Dichloroethene	7.627	61	73066	5.54	ug/L	94
19) Acrylonitrile	7.524	53	83163	24.06	ug/L	97
20) Hexane	7.907	57	60218	5.21	ug/L	96
21) Di-isopropyl ether	8.083	45	189557	5.45	ug/L	98
22) Vinyl acetate	8.047	43	344583	25.81	ug/L	99
23) 1,1-Dichloroethane	8.095	63	96503	5.68	ug/L	87
24) ETBE	8.485	59	135681	4.95	ug/L	97
25) 2-Butanone	8.655	43	104560	25.87	ug/L	99
26) 2,2-Dichloropropane	8.752	77	60273	5.32	ug/L	98
27) cis-1,2-Dichloroethene	8.722	96	49142	5.69	ug/L	90
28) Bromochloromethane	8.984	128	24206	5.52	ug/L	93
29) Tetrahydrofuran	9.038	42	12812	4.82	ug/L	89
30) Chloroform	9.020	83	81142	5.30	ug/L	92
32) 1,1,1-Trichloroethane	9.300	97	64361	5.16	ug/L	89
33) Cyclohexane	9.397	56	80255	5.20	ug/L	95
34) Carbon Tetrachloride	9.495	117	55712	5.09	ug/L	93
35) 1,1-Dichloropropene	9.452	75	64017	5.64	ug/L	97
37) TAME	9.714	73	114779	5.24	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070286.D
Acq On : 10 Sep 2010 11:32 am
Operator : AnaJ
Sample : IC2903-2
Misc : MS15368,VB2903,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 10 12:34:09 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) Benzene	9.689	78	192518	5.83	ug/L		99
39) 1,2-Dichloroethane	9.659	62	70505	5.37	ug/L		96
40) Trichloroethene	10.322	95	44594	5.35	ug/L		95
41) Methylcyclohexane	10.584	83	65017	5.57	ug/L		95
42) 1,2-Dichloropropane	10.559	63	52097	5.42	ug/L		98
43) Dibromomethane	10.693	93	29470	5.45	ug/L		94
44) Bromodichloromethane	10.809	83	60186	5.24	ug/L		97
45) 2-Chloroethyl vinyl ether	11.028	63	124525	24.62	ug/L		93
46) 2-Nitropropane	10.997	41	56073	25.08	ug/L		86
47) cis-1,3-Dichloropropene	11.265	75	71474	5.23	ug/L		96
48) 4-Methyl-2-pentanone	11.350	43	231015	28.43	ug/L		99
51) Toluene	11.660	91	196595	5.32	ug/L		97
52) trans-1,3-Dichloropropene	11.813	75	61052	4.88	ug/L		96
53) 1,1,2-Trichloroethane	12.032	83	37093	5.32	ug/L		96
54) Tetrachloroethene	12.275	166	46094	5.15	ug/L		96
55) 2-hexanone	12.214	43	152082	25.69	ug/L		98
56) 1,3-Dichloropropane	12.226	76	77891	5.57	ug/L		97
57) Dibromochloromethane	12.506	129	39436	4.50	ug/L		94
58) 1,2-Dibromoethane	12.682	107	41030	5.06	ug/L		99
59) 1-Chlorohexane	13.047	91	58189	4.83	ug/L		94
60) Chlorobenzene	13.187	112	132990	5.46	ug/L		93
61) Ethylbenzene	13.254	91	215854	5.31	ug/L		97
62) 1,1,1,2-Tetrachloroethane	13.242	131	41398	4.86	ug/L		97
63) m,p-Xylene	13.364	91	333181	10.71	ug/L		98
64) o-Xylene	13.820	91	168894	5.12	ug/L		96
65) Styrene	13.820	104	125039	5.31	ug/L		95
66) Bromoform	14.082	173	24170	4.73	ug/L		90
68) Isopropylbenzene	14.197	105	167703	4.64	ug/L		100
69) Cyclohexanone	14.337	55	5030	18.30	ug/L	#	88
71) 1,1,2,2-Tetrachloroethane	14.471	83	56825	5.34	ug/L		96
72) trans-1,4-Dichloro-2-B...	14.514	53	6133	2.40	ug/L	#	52
73) n-Propylbenzene	14.647	91	264313	5.19	ug/L		100
74) Bromobenzene	14.623	156	59503	5.35	ug/L		97
75) 1,2,3-Trichloropropane	14.568	110	14786	4.68	ug/L		86
76) 1,3,5-Trimethylbenzene	14.806	105	170345	5.06	ug/L		87
77) 2-Chlorotoluene	14.800	91	179848	5.18	ug/L		97
78) 4-Chlorotoluene	14.903	91	161277	5.01	ug/L		100
79) tert-Butylbenzene	15.201	91	114823	5.33	ug/L		93
80) 1,2,4-Trimethylbenzene	15.244	105	184929	5.14	ug/L		98
81) sec-Butylbenzene	15.438	105	226209	5.08	ug/L		100
82) 4-Isopropyltoluene	15.566	119	174790	5.07	ug/L		97
83) 1,3-Dichlorobenzene	15.627	146	111443	5.41	ug/L		98
84) 1,4-Dichlorobenzene	15.712	146	116593	5.59	ug/L		95
85) Benzyl Chloride	15.828	91	46219	2.89	ug/L		97
86) n-Butylbenzene	16.016	91	186627	5.06	ug/L		96
87) 1,2-Dichlorobenzene	16.144	146	106770	5.37	ug/L		96
88) 1,2-Dibromo-3-Chloropr...	16.977	75	8580	4.71	ug/L		90
89) 1,2,4-Trichlorobenzene	17.945	180	73870	4.84	ug/L		98
90) Hexachlorobutadiene	18.109	225	32251	4.55	ug/L		98
91) Naphthalene	18.285	128	129638	4.59	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070286.D
Acq On : 10 Sep 2010 11:32 am
Operator : AnaJ
Sample : IC2903-2
Misc : MS15368,VB2903,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 10 12:34:09 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

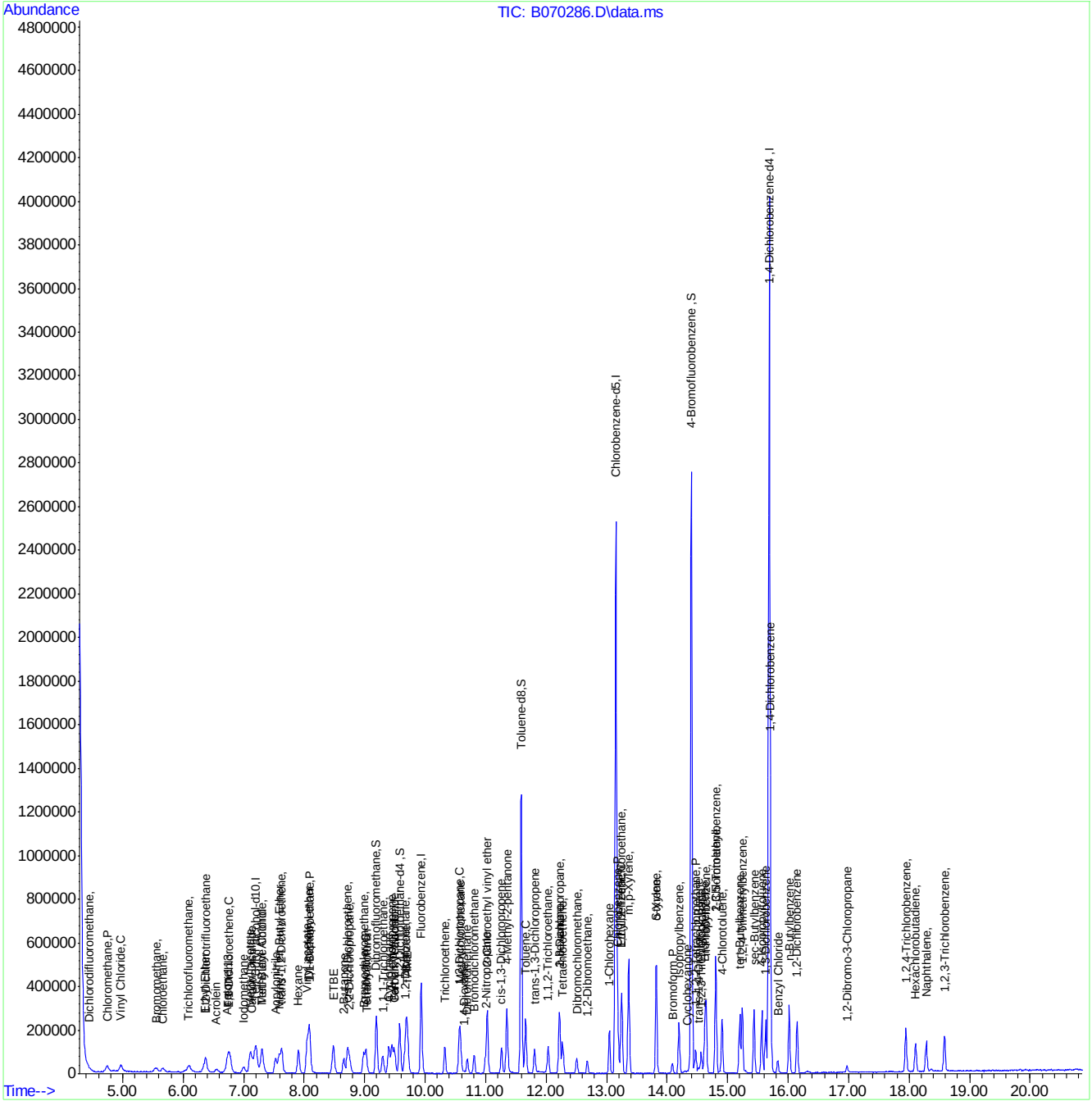
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,3-Trichlorobenzene	18.584	180	65146	4.87	ug/L		98
94) Acrolein	6.538	56	18975	20.62	ug/L		91
95) Tert-Butyl Alcohol	7.305	59	35473	49.81	ug/L	#	93
96) Tert amyl alcohol	9.489	59	25006	49.23	ug/L		99
97) 1,4-Dioxane	10.651	88	7044	102.61	ug/L		87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070286.D
Acq On : 10 Sep 2010 11:32 am
Operator : AnaJ
Sample : IC2903-2
Misc : MS15368,VB2903,,,,,
ALS Vial : 2 Sample Multiplier: 1

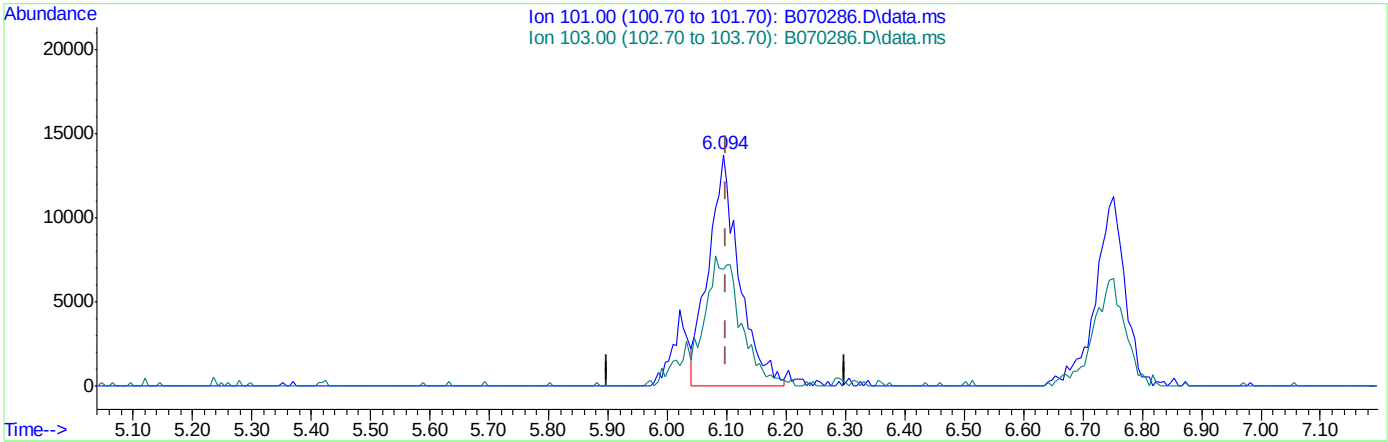
Quant Time: Sep 10 12:34:09 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

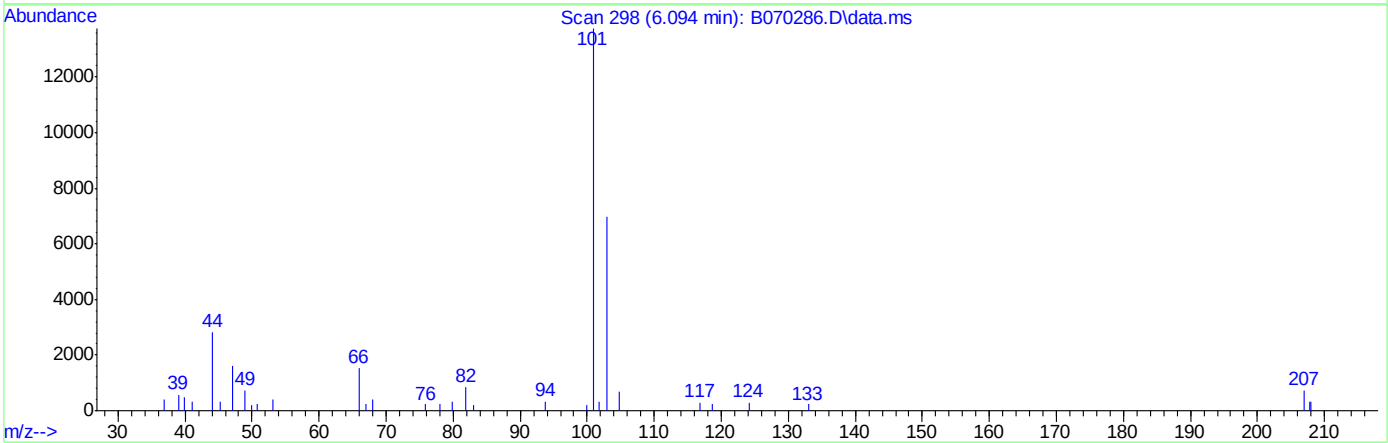


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070286.D
Acq On : 10 Sep 2010 11:32 am
Operator : AnaJ
Sample : IC2903-2
Misc : MS15368,VB2903,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 10 12:21:39 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070286.D\data.ms

(7) Trichlorofluoromethane ( )

6.094min (-0.005) 4.88ug/L

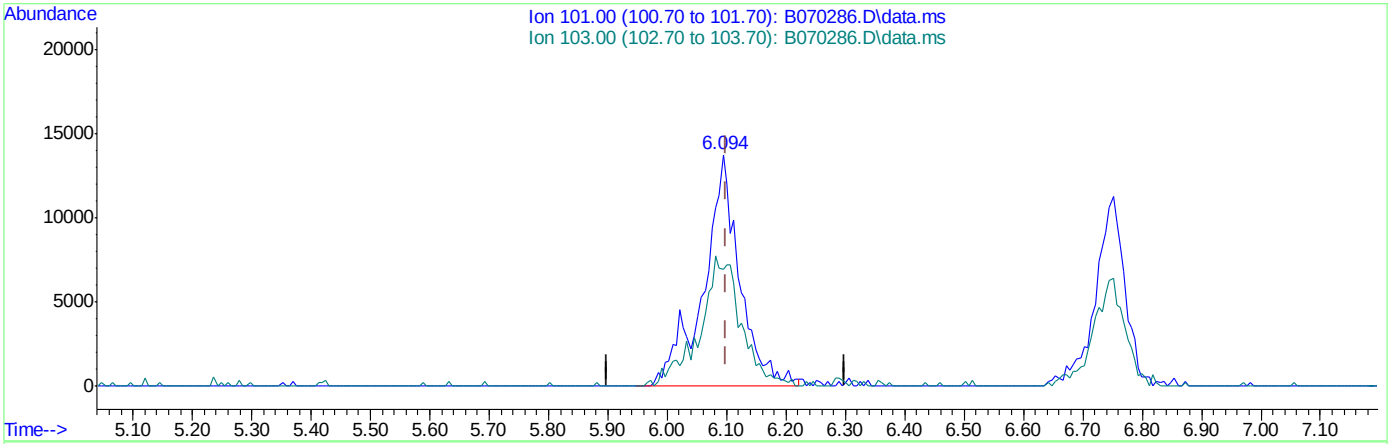
response 49304

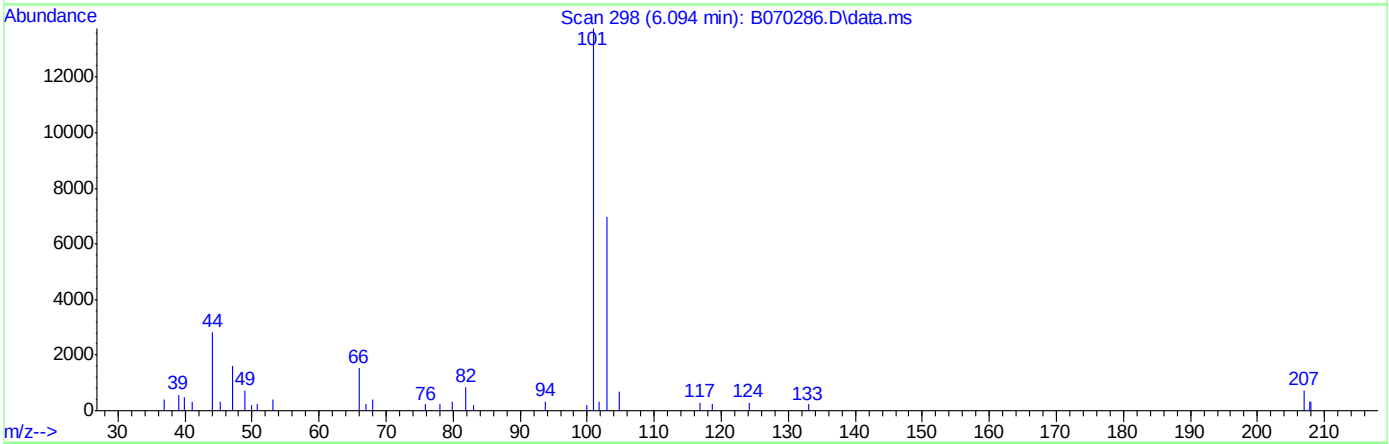
Ion	Exp%	Act%
101.00	100	100
103.00	58.80	49.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070286.D
Acq On : 10 Sep 2010 11:32 am
Operator : AnaJ
Sample : IC2903-2
Misc : MS15368,VB2903,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 10 12:21:39 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070286.D\data.ms

(7) Trichlorofluoromethane ( )

6.094min (-0.005) 5.78ug/L m

response 58309

Ion	Exp%	Act%
101.00	100	100
103.00	58.80	50.69
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/13/10 10:23

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070287.D
Acq On : 10 Sep 2010 11:58 am
Operator : AnaJ
Sample : IC2903-3
Misc : MS15368,VB2903,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 10 12:36:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	9.939	96	377621	50.00	ug/L		0.00
49) Chlorobenzene-d5	13.151	117	1408098	50.00	ug/L		0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1194028	50.00	ug/L		0.00
93) Tert Butyl alcohol-d10	7.201	65	214661	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	9.190	113	175243	50.40	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 100.80%				
36) 1,2-Dichloroethane-d4	9.580	65	165590	48.82	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 97.64%				
50) Toluene-d8	11.587	98	860231	47.47	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 94.94%				
70) 4-Bromofluorobenzene	14.398	95	987682	46.34	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 92.68%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	4.421	85	217860	35.98	ug/L		94
3) Chloromethane	4.749	50	257207	31.40	ug/L		98
4) Vinyl Chloride	4.968	62	190662	28.14	ug/L		88
5) Bromomethane	5.552	94	113727	28.41	ug/L		90
6) Chloroethane	5.662	64	98582	25.24	ug/L		98
7) Trichlorofluoromethane	6.088	101	232287	24.37	ug/L		98
8) Ethyl Ether	6.367	59	112553	23.37	ug/L		98
9) 1,2-Dichlorotrifluoroe...	6.367	67	146079m	24.40	ug/L		
10) Freon 113	6.751	101	148834	23.97	ug/L		96
11) 1,1-Dichloroethene	6.775	61	268025	22.88	ug/L		94
12) Acetone	6.726	43	264638	118.04	ug/L		88
13) Iodomethane	7.000	142	256425	23.29	ug/L		99
14) Carbon Disulfide	7.146	76	547845	23.55	ug/L		99
15) Methyl acetate	7.104	43	700068	108.28	ug/L		99
16) Methylene Chloride	7.304	49	330996	24.96	ug/L		96
17) Methyl Tert Butyl Ether	7.590	73	465441	22.23	ug/L		94
18) trans-1,2-Dichloroethene	7.627	61	289718	23.27	ug/L		95
19) Acrylonitrile	7.523	53	343147	105.15	ug/L		91
20) Hexane	7.907	57	252193	23.12	ug/L		98
21) Di-isopropyl ether	8.083	45	729304	22.20	ug/L		100
22) Vinyl acetate	8.047	43	1349956	107.11	ug/L		100
23) 1,1-Dichloroethane	8.095	63	374094	23.34	ug/L		97
24) ETBE	8.479	59	572981	22.15	ug/L		98
25) 2-Butanone	8.655	43	427799	112.12	ug/L		99
26) 2,2-Dichloropropane	8.746	77	251992	23.57	ug/L		98
27) cis-1,2-Dichloroethene	8.716	96	191170	23.43	ug/L		90
28) Bromochloromethane	8.983	128	97770	23.61	ug/L	#	87
29) Tetrahydrofuran	9.038	42	49748	19.81	ug/L		91
30) Chloroform	9.020	83	328953	22.77	ug/L		98
32) 1,1,1-Trichloroethane	9.300	97	259926	22.06	ug/L		97
33) Cyclohexane	9.397	56	330656	22.71	ug/L		100
34) Carbon Tetrachloride	9.494	117	224558	21.75	ug/L		95
35) 1,1-Dichloropropene	9.452	75	247402	23.07	ug/L		96
37) TAME	9.713	73	477741	23.11	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070287.D
Acq On : 10 Sep 2010 11:58 am
Operator : AnaJ
Sample : IC2903-3
Misc : MS15368,VB2903,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 10 12:36:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.689	78	749208	24.04	ug/L	96
39) 1,2-Dichloroethane	9.659	62	269199	21.74	ug/L	99
40) Trichloroethene	10.328	95	181091	23.00	ug/L	99
41) Methylcyclohexane	10.583	83	267853	24.30	ug/L	96
42) 1,2-Dichloropropane	10.559	63	209785	23.13	ug/L	95
43) Dibromomethane	10.699	93	113516	22.24	ug/L	90
44) Bromodichloromethane	10.809	83	238193	21.98	ug/L	97
45) 2-Chloroethyl vinyl ether	11.028	63	577372	121.96	ug/L	92
46) 2-Nitropropane	10.997	41	232716	110.22	ug/L	89
47) cis-1,3-Dichloropropene	11.265	75	300986	23.34	ug/L	97
48) 4-Methyl-2-pentanone	11.350	43	872809	113.77	ug/L	99
51) Toluene	11.660	91	757884	21.07	ug/L	100
52) trans-1,3-Dichloropropene	11.806	75	251786	20.69	ug/L	96
53) 1,1,2-Trichloroethane	12.031	83	139782	20.60	ug/L	97
54) Tetrachloroethene	12.275	166	185611	21.29	ug/L	98
55) 2-hexanone	12.214	43	612940	106.36	ug/L	97
56) 1,3-Dichloropropane	12.226	76	298964	21.96	ug/L	97
57) Dibromochloromethane	12.506	129	171906	20.15	ug/L	98
58) 1,2-Dibromoethane	12.682	107	162870	20.65	ug/L	96
59) 1-Chlorohexane	13.047	91	260449	22.21	ug/L	94
60) Chlorobenzene	13.187	112	495950	20.90	ug/L	98
61) Ethylbenzene	13.248	91	872496	22.03	ug/L	95
62) 1,1,1,2-Tetrachloroethane	13.242	131	170643	20.57	ug/L	95
63) m,p-Xylene	13.364	91	1318784	43.55	ug/L	99
64) o-Xylene	13.814	91	697254	21.71	ug/L	98
65) Styrene	13.814	104	535951	23.36	ug/L	96
66) Bromoform	14.081	173	114209	21.40	ug/L	94
68) Isopropylbenzene	14.197	105	740991	20.04	ug/L	98
69) Cyclohexanone	14.337	55	21832	77.70	ug/L	92
71) 1,1,2,2-Tetrachloroethane	14.471	83	220479	20.28	ug/L	99
72) trans-1,4-Dichloro-2-B...	14.519	53	39597	14.60	ug/L	96
73) n-Propylbenzene	14.641	91	1071141	20.58	ug/L	100
74) Bromobenzene	14.623	156	227644	20.01	ug/L	96
75) 1,2,3-Trichloropropane	14.562	110	59473	18.42	ug/L	97
76) 1,3,5-Trimethylbenzene	14.805	105	710804	20.66	ug/L	100
77) 2-Chlorotoluene	14.799	91	708090	19.94	ug/L	99
78) 4-Chlorotoluene	14.909	91	664261	20.20	ug/L	97
79) tert-Butylbenzene	15.195	91	436047	19.80	ug/L	96
80) 1,2,4-Trimethylbenzene	15.243	105	761232	20.69	ug/L	97
81) sec-Butylbenzene	15.438	105	954754	20.99	ug/L	99
82) 4-Isopropyltoluene	15.566	119	745718	21.18	ug/L	99
83) 1,3-Dichlorobenzene	15.627	146	432137	20.52	ug/L	98
84) 1,4-Dichlorobenzene	15.718	146	445380	20.89	ug/L	97
85) Benzyl Chloride	15.827	91	300602	17.73	ug/L	95
86) n-Butylbenzene	16.016	91	799146	21.20	ug/L	99
87) 1,2-Dichlorobenzene	16.150	146	424947	20.92	ug/L	97
88) 1,2-Dibromo-3-Chloropr...	16.971	75	35822	19.25	ug/L	92
89) 1,2,4-Trichlorobenzene	17.945	180	313093	20.06	ug/L	96
90) Hexachlorobutadiene	18.109	225	140624	19.42	ug/L	96
91) Naphthalene	18.285	128	573289	19.84	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070287.D
Acq On : 10 Sep 2010 11:58 am
Operator : AnaJ
Sample : IC2903-3
Misc : MS15368,VB2903,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 10 12:36:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

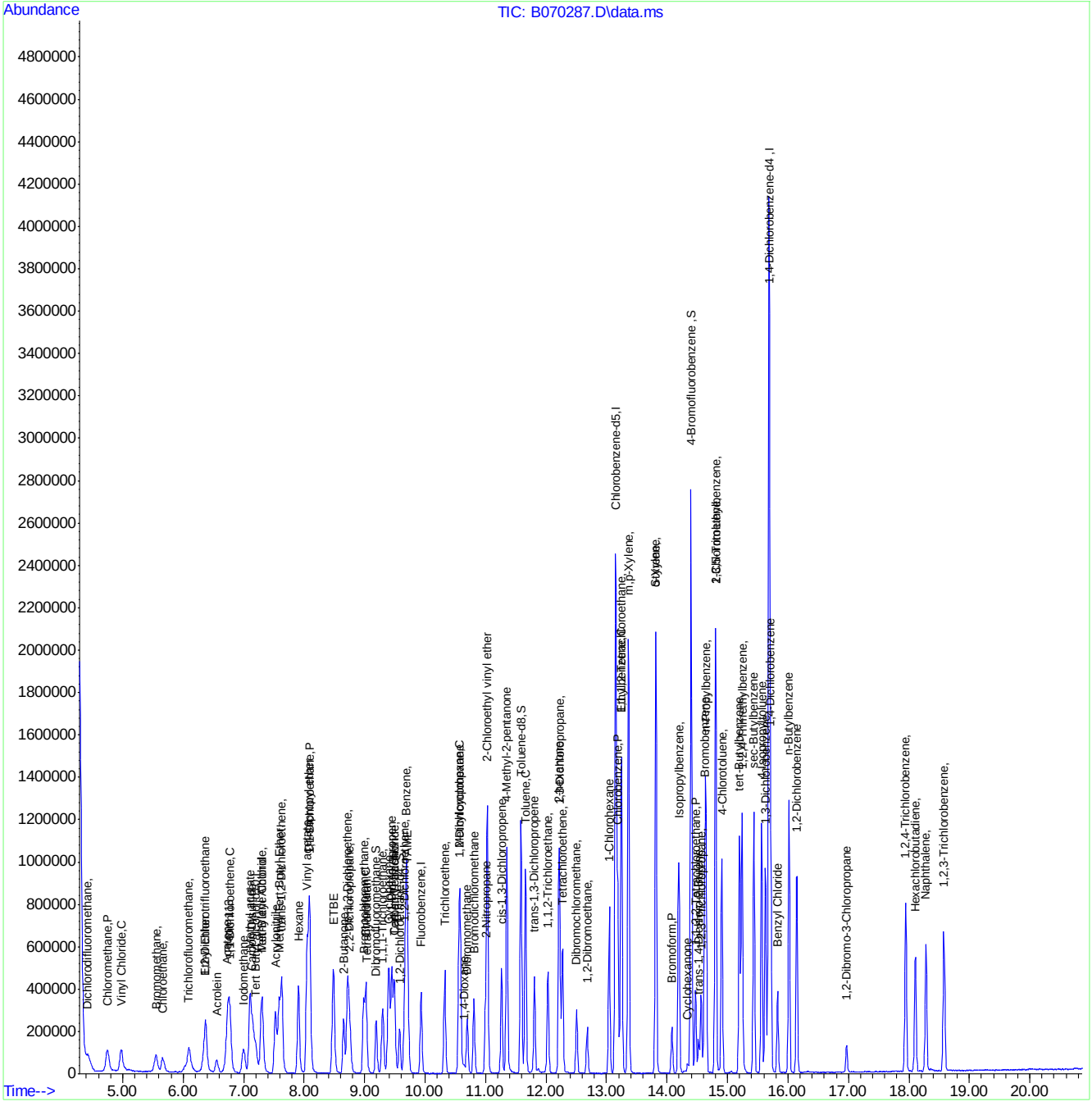
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.583	180	269001	19.66	ug/L	99
94) Acrolein	6.556	56	87548	96.47	ug/L	92
95) Tert-Butyl Alcohol	7.292	59	130961	186.40	ug/L	92
96) Tert amyl alcohol	9.488	59	102172	203.90	ug/L	92
97) 1,4-Dioxane	10.650	88	26934	397.74	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070287.D
Acq On : 10 Sep 2010 11:58 am
Operator : AnaJ
Sample : IC2903-3
Misc : MS15368,VB2903,,,,,
ALS Vial : 3 Sample Multiplier: 1

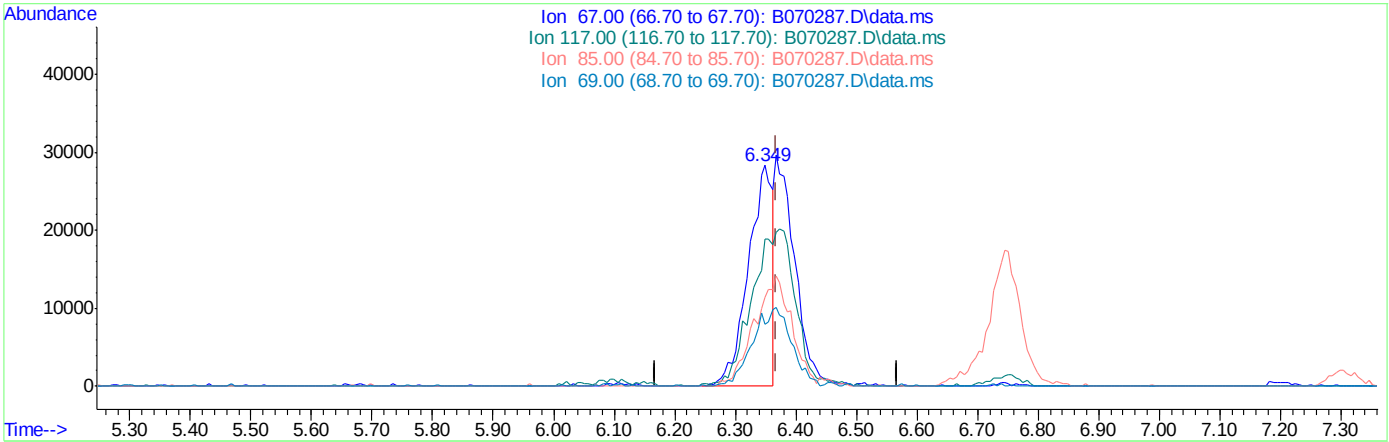
Quant Time: Sep 10 12:36:07 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

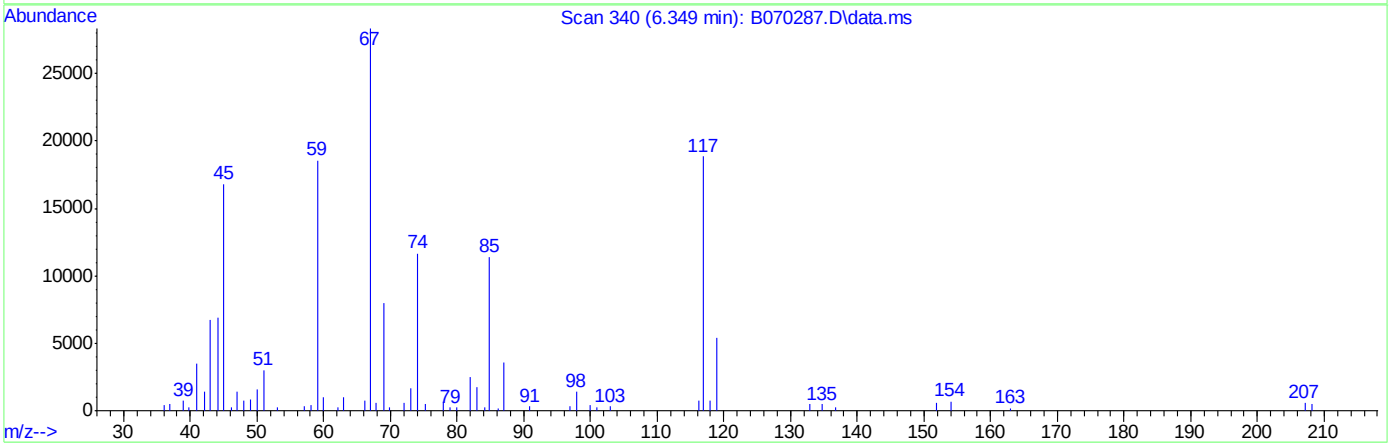


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070287.D
Acq On : 10 Sep 2010 11:58 am
Operator : AnaJ
Sample : IC2903-3
Misc : MS15368,VB2903,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 10 12:21:40 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070287.D\data.ms

(9) 1,2-Dichlorotrifluoroethane

6.349min (-0.018) 13.08ug/L

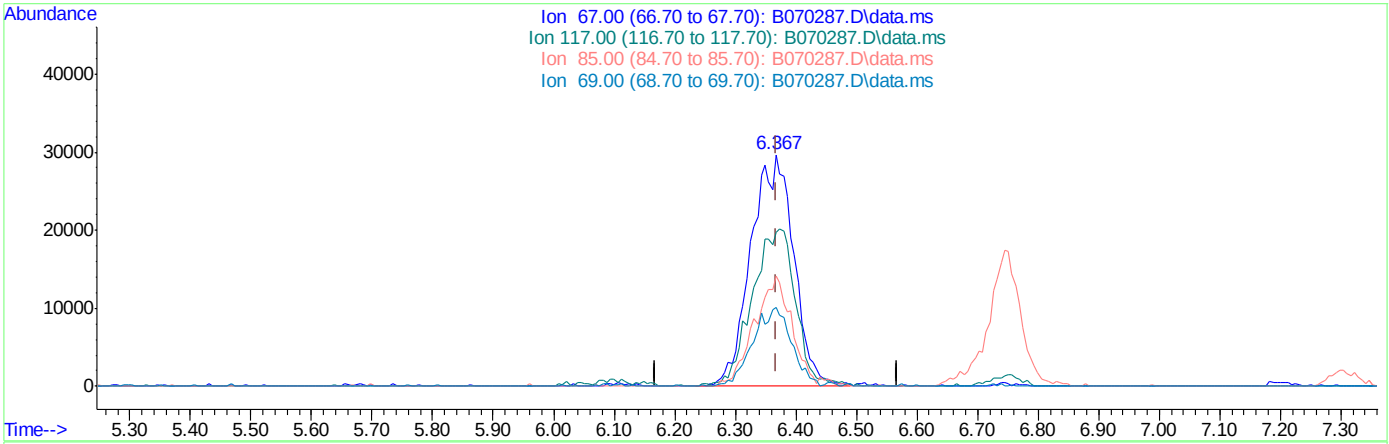
response 78296

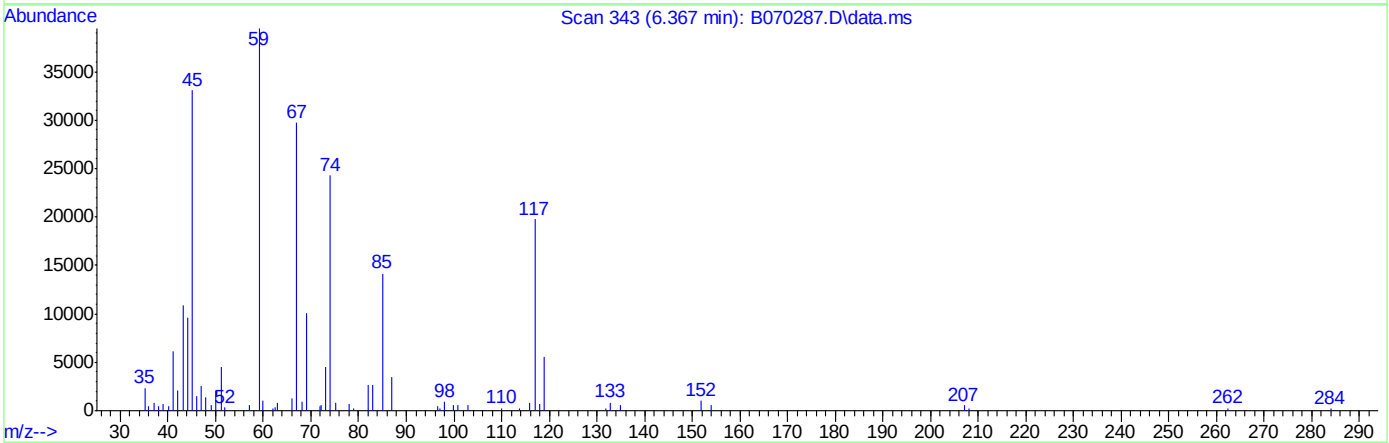
Ion	Exp%	Act%
67.00	100	100
117.00	62.60	65.30
85.00	40.10	40.19
69.00	31.60	27.20

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070287.D
Acq On : 10 Sep 2010 11:58 am
Operator : AnaJ
Sample : IC2903-3
Misc : MS15368,VB2903,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 10 12:21:40 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration





TIC: B070287.D\data.ms

(9) 1,2-Dichlorotrifluoroethane

6.367min (-0.000) 24.40ug/L m

response 146079

Ion	Exp%	Act%
67.00	100	100
117.00	62.60	66.49
85.00	40.10	47.70
69.00	31.60	33.90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070289.D
Acq On : 10 Sep 2010 12:51 pm
Operator : AnaJ
Sample : IC2903-5
Misc : MS15368,VB2903,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 10 13:32:44 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	9.933	96	475100	50.00	ug/L		0.00
49) Chlorobenzene-d5	13.151	117	1724806	50.00	ug/L		0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1422459	50.00	ug/L		0.00
93) Tert Butyl alcohol-d10	7.207	65	238904	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	9.190	113	217864	49.80	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 99.60%				
36) 1,2-Dichloroethane-d4	9.580	65	200671	47.02	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 94.04%				
50) Toluene-d8	11.587	98	1078086	48.57	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 97.14%				
70) 4-Bromofluorobenzene	14.398	95	1236094	48.68	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 97.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	4.421	85	841659	110.48	ug/L		98
3) Chloromethane	4.755	50	885889	85.95	ug/L		100
4) Vinyl Chloride	4.981	62	687334	80.62	ug/L		99
5) Bromomethane	5.552	94	429770	83.40	ug/L		95
6) Chloroethane	5.656	64	351636	71.55	ug/L		98
7) Trichlorofluoromethane	6.100	101	920271	76.74	ug/L		97
8) Ethyl Ether	6.368	59	412842	68.14	ug/L		96
9) 1,2-Dichlorotrifluoroe...	6.362	67	526029	69.83	ug/L		96
10) Freon 113	6.745	101	568753	72.82	ug/L		98
11) 1,1-Dichloroethene	6.775	61	1021673	69.33	ug/L		98
12) Acetone	6.727	43	910816	322.90	ug/L		98
13) Iodomethane	7.000	142	978795	70.64	ug/L		98
14) Carbon Disulfide	7.152	76	2011267	68.71	ug/L		99
15) Methyl acetate	7.104	43	2554572	314.05	ug/L		100
16) Methylene Chloride	7.304	49	1159864	67.49	ug/L		96
17) Methyl Tert Butyl Ether	7.590	73	1784725	67.74	ug/L		98
18) trans-1,2-Dichloroethene	7.627	61	1059431	67.63	ug/L		96
19) Acrylonitrile	7.523	53	1280769	311.94	ug/L		98
20) Hexane	7.907	57	932389	67.95	ug/L		96
21) Di-isopropyl ether	8.083	45	2703779	65.41	ug/L		99
22) Vinyl acetate	8.047	43	5166340	325.82	ug/L		100
23) 1,1-Dichloroethane	8.095	63	1347115	66.80	ug/L		98
24) ETBE	8.485	59	2235195	68.68	ug/L		99
25) 2-Butanone	8.649	43	1526631	318.00	ug/L		99
26) 2,2-Dichloropropane	8.746	77	932583	69.32	ug/L		98
27) cis-1,2-Dichloroethene	8.716	96	720437	70.19	ug/L		92
28) Bromochloromethane	8.984	128	363443	69.77	ug/L	#	89
29) Tetrahydrofuran	9.032	42	199481	63.14	ug/L		95
30) Chloroform	9.020	83	1228550	67.58	ug/L		99
32) 1,1,1-Trichloroethane	9.300	97	1009601	68.10	ug/L		97
33) Cyclohexane	9.403	56	1262879	68.94	ug/L		98
34) Carbon Tetrachloride	9.495	117	883573	68.01	ug/L		96
35) 1,1-Dichloropropene	9.446	75	939688	69.64	ug/L		99
37) TAME	9.714	73	1823721	70.11	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070289.D
Acq On : 10 Sep 2010 12:51 pm
Operator : AnaJ
Sample : IC2903-5
Misc : MS15368,VB2903,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 10 13:32:44 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.683	78	2643249	67.41	ug/L	99
39) 1,2-Dichloroethane	9.659	62	1017510	65.30	ug/L	98
40) Trichloroethene	10.322	95	697592	70.41	ug/L	97
41) Methylcyclohexane	10.584	83	1016653	73.30	ug/L	96
42) 1,2-Dichloropropane	10.559	63	801180	70.21	ug/L	95
43) Dibromomethane	10.693	93	442815	68.96	ug/L	95
44) Bromodichloromethane	10.809	83	957432	70.21	ug/L	99
45) 2-Chloroethyl vinyl ether	11.028	63	2172425	372.98	ug/L	96
46) 2-Nitropropane	10.997	41	946629	356.37	ug/L	93
47) cis-1,3-Dichloropropene	11.259	75	1197137	73.77	ug/L	99
48) 4-Methyl-2-pentanone	11.350	43	3172032	328.63	ug/L	97
51) Toluene	11.660	91	2830180	64.24	ug/L	100
52) trans-1,3-Dichloropropene	11.806	75	1044991	70.11	ug/L	98
53) 1,1,2-Trichloroethane	12.031	83	536338	64.53	ug/L	95
54) Tetrachloroethene	12.275	166	712880	66.56	ug/L	99
55) 2-hexanone	12.214	43	2187202	309.83	ug/L	98
56) 1,3-Dichloropropane	12.226	76	1080450	64.79	ug/L	97
57) Dibromochloromethane	12.506	129	719710	68.86	ug/L	99
58) 1,2-Dibromoethane	12.682	107	652325	67.52	ug/L	99
59) 1-Chlorohexane	13.047	91	1012293	70.47	ug/L	96
60) Chlorobenzene	13.187	112	1867464	64.25	ug/L	99
61) Ethylbenzene	13.254	91	3149746	64.93	ug/L	100
62) 1,1,1,2-Tetrachloroethane	13.236	131	657833	64.73	ug/L	99
63) m,p-Xylene	13.364	91	4764256	128.43	ug/L	100
64) o-Xylene	13.814	91	2537595	64.52	ug/L	99
65) Styrene	13.820	104	1978860	70.42	ug/L	99
66) Bromoform	14.082	173	504872	65.58	ug/L	96
68) Isopropylbenzene	14.197	105	2798683	63.54	ug/L	100
69) Cyclohexanone	14.343	55	92623	276.72	ug/L	96
71) 1,1,2,2-Tetrachloroethane	14.471	83	821284	63.41	ug/L	98
72) trans-1,4-Dichloro-2-B...	14.520	53	213489	58.35	ug/L	93
73) n-Propylbenzene	14.641	91	3810410	61.47	ug/L	99
74) Bromobenzene	14.623	156	856834	63.21	ug/L	97
75) 1,2,3-Trichloropropane	14.562	110	239323	62.21	ug/L	97
76) 1,3,5-Trimethylbenzene	14.806	105	2585659	63.09	ug/L	99
77) 2-Chlorotoluene	14.799	91	2593966	61.32	ug/L	98
78) 4-Chlorotoluene	14.903	91	2460604	62.81	ug/L	100
79) tert-Butylbenzene	15.195	91	1673802	63.79	ug/L	96
80) 1,2,4-Trimethylbenzene	15.244	105	2730224	62.28	ug/L	98
81) sec-Butylbenzene	15.438	105	3449622	63.66	ug/L	100
82) 4-Isopropyltoluene	15.566	119	2722688	64.92	ug/L	100
83) 1,3-Dichlorobenzene	15.627	146	1592280	63.48	ug/L	99
84) 1,4-Dichlorobenzene	15.718	146	1609320	63.35	ug/L	97
85) Benzyl Chloride	15.828	91	1492677	66.04	ug/L	98
86) n-Butylbenzene	16.016	91	2865579	63.82	ug/L	99
87) 1,2-Dichlorobenzene	16.150	146	1560828	64.50	ug/L	98
88) 1,2-Dibromo-3-Chloropr...	16.971	75	147421	66.51	ug/L	94
89) 1,2,4-Trichlorobenzene	17.945	180	1238780	66.61	ug/L	99
90) Hexachlorobutadiene	18.109	225	583279	67.62	ug/L	97
91) Naphthalene	18.279	128	2307849	67.05	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070289.D
Acq On : 10 Sep 2010 12:51 pm
Operator : AnaJ
Sample : IC2903-5
Misc : MS15368,VB2903,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 10 13:32:44 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

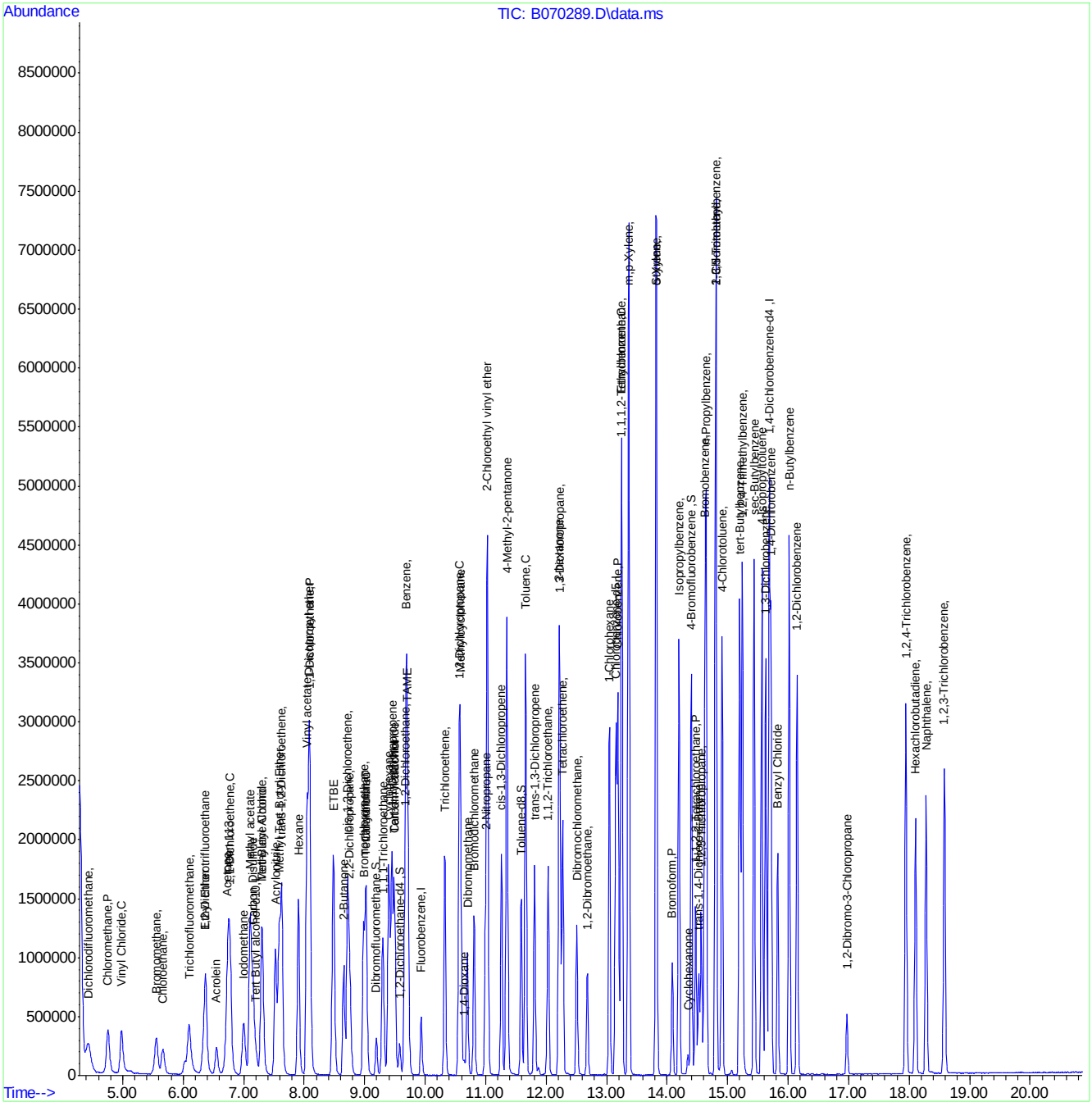
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.577	180	1092295	67.00	ug/L	99
94) Acrolein	6.556	56	343503	340.09	ug/L	97
95) Tert-Butyl Alcohol	7.292	59	486954	622.77	ug/L	95
96) Tert amyl alcohol	9.488	59	383316	687.33	ug/L	92
97) 1,4-Dioxane	10.644	88	97424	1292.69	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070289.D
Acq On : 10 Sep 2010 12:51 pm
Operator : AnaJ
Sample : IC2903-5
Misc : MS15368,VB2903,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 10 13:32:44 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070290.D
Acq On : 10 Sep 2010 1:18 pm
Operator : AnaJ
Sample : IC2903-6
Misc : MS15368,VB2903,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 10 13:40:11 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	476850	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1690957	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1395147	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.201	65	252507	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	222416	50.65	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 101.30%			
36) 1,2-Dichloroethane-d4	9.580	65	207450	48.43	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 96.86%			
50) Toluene-d8	11.587	98	1055145	48.49	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 96.98%			
70) 4-Bromofluorobenzene	14.398	95	1197378	48.08	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 96.16%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.433	85	1251477	163.67	ug/L	96
3) Chloromethane	4.761	50	1308515	126.49	ug/L	99
4) Vinyl Chloride	4.980	62	1001162	117.01	ug/L	99
5) Bromomethane	5.558	94	646338	122.97	ug/L	98
6) Chloroethane	5.662	64	525923	106.61	ug/L	93
7) Trichlorofluoromethane	6.100	101	1474661	122.52	ug/L	93
8) Ethyl Ether	6.368	59	631432	103.84	ug/L	97
9) 1,2-Dichlorotrifluoroe...	6.368	67	784525	103.77	ug/L	92
10) Freon 113	6.751	101	876684	111.83	ug/L	97
11) 1,1-Dichloroethene	6.775	61	1597401	108.00	ug/L	97
12) Acetone	6.720	43	1350700	477.08	ug/L	98
13) Iodomethane	7.000	142	1547614	111.29	ug/L	99
14) Carbon Disulfide	7.152	76	3034021	103.26	ug/L	99
15) Methyl acetate	7.104	43	3838735	470.18	ug/L	97
16) Methylene Chloride	7.304	49	1742443	98.90	ug/L	95
17) Methyl Tert Butyl Ether	7.590	73	2787335	105.41	ug/L	99
18) trans-1,2-Dichloroethene	7.627	61	1620363	103.06	ug/L	97
19) Acrylonitrile	7.523	53	1972021	478.54	ug/L	100
20) Hexane	7.907	57	1403908	101.93	ug/L	97
21) Di-isopropyl ether	8.083	45	3975155	95.82	ug/L	98
22) Vinyl acetate	8.047	43	7640913	480.11	ug/L	99
23) 1,1-Dichloroethane	8.095	63	2018185	99.71	ug/L	100
24) ETBE	8.485	59	3485142	106.69	ug/L	98
25) 2-Butanone	8.655	43	2300797	477.51	ug/L	98
26) 2,2-Dichloropropane	8.746	77	1467329	108.67	ug/L	98
27) cis-1,2-Dichloroethene	8.716	96	1055037	102.41	ug/L	96
28) Bromochloromethane	8.983	128	551339	105.45	ug/L	91
29) Tetrahydrofuran	9.038	42	306657	96.70	ug/L	96
30) Chloroform	9.020	83	1885610	103.35	ug/L	98
32) 1,1,1-Trichloroethane	9.300	97	1590903	106.92	ug/L	97
33) Cyclohexane	9.403	56	1898587	103.27	ug/L	97
34) Carbon Tetrachloride	9.495	117	1431375	109.77	ug/L	98
35) 1,1-Dichloropropene	9.452	75	1456645	107.56	ug/L	99
37) TAME	9.713	73	2760479	105.73	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070290.D
Acq On : 10 Sep 2010 1:18 pm
Operator : AnaJ
Sample : IC2903-6
Misc : MS15368,VB2903,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 10 13:40:11 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.689	78	3852264	97.89	ug/L	98
39) 1,2-Dichloroethane	9.659	62	1597298	102.13	ug/L	97
40) Trichloroethene	10.328	95	1057759	106.37	ug/L	98
41) Methylcyclohexane	10.583	83	1492361	107.20	ug/L	97
42) 1,2-Dichloropropane	10.559	63	1151636	100.55	ug/L	97
43) Dibromomethane	10.699	93	681352	105.71	ug/L	99
44) Bromodichloromethane	10.809	83	1482218	108.30	ug/L	97
45) 2-Chloroethyl vinyl ether	11.028	63	3056392	530.35	ug/L	95
46) 2-Nitropropane	10.997	41	1442394	541.01	ug/L	96
47) cis-1,3-Dichloropropene	11.265	75	1785922	109.65	ug/L	98
48) 4-Methyl-2-pentanone	11.350	43	4635271	478.46	ug/L	97
51) Toluene	11.660	91	4103811	95.01	ug/L	96
52) trans-1,3-Dichloropropene	11.806	75	1564354	107.06	ug/L	98
53) 1,1,2-Trichloroethane	12.031	83	801939	98.42	ug/L	95
54) Tetrachloroethene	12.275	166	1078335	102.47	ug/L	99
55) 2-hexanone	12.214	43	3176761	459.01	ug/L	96
56) 1,3-Dichloropropane	12.226	76	1574510	96.31	ug/L	98
57) Dibromochloromethane	12.506	129	1114690	108.79	ug/L	99
58) 1,2-Dibromoethane	12.682	107	994160	104.96	ug/L	100
59) 1-Chlorohexane	13.047	91	1479975	105.08	ug/L	93
60) Chlorobenzene	13.187	112	2733588	95.94	ug/L	99
61) Ethylbenzene	13.254	91	4543294	95.53	ug/L	99
62) 1,1,1,2-Tetrachloroethane	13.242	131	990114	99.37	ug/L	96
63) m,p-Xylene	13.364	91	6843849	188.18	ug/L	99
64) o-Xylene	13.820	91	3697107	95.88	ug/L	100
65) Styrene	13.820	104	2841412	103.14	ug/L	98
66) Bromoform	14.082	173	801170	96.12	ug/L	98
68) Isopropylbenzene	14.197	105	4079810	94.44	ug/L	98
69) Cyclohexanone	14.343	55	149807	456.33	ug/L	92
71) 1,1,2,2-Tetrachloroethane	14.471	83	1216347	95.74	ug/L	95
72) trans-1,4-Dichloro-2-B...	14.520	53	335505	86.88	ug/L	89
73) n-Propylbenzene	14.647	91	5441009	89.49	ug/L	96
74) Bromobenzene	14.623	156	1271661	95.65	ug/L	98
75) 1,2,3-Trichloropropane	14.562	110	362919	96.19	ug/L	98
76) 1,3,5-Trimethylbenzene	14.805	105	3722552	92.61	ug/L	99
77) 2-Chlorotoluene	14.799	91	3719427	89.65	ug/L	98
78) 4-Chlorotoluene	14.909	91	3627312	94.41	ug/L	99
79) tert-Butylbenzene	15.201	91	2489611	96.73	ug/L	95
80) 1,2,4-Trimethylbenzene	15.243	105	4068936	94.64	ug/L	100
81) sec-Butylbenzene	15.438	105	5001524	94.10	ug/L	98
82) 4-Isopropyltoluene	15.566	119	4051513	98.49	ug/L	98
83) 1,3-Dichlorobenzene	15.627	146	2327383	94.60	ug/L	99
84) 1,4-Dichlorobenzene	15.718	146	2342216	94.01	ug/L	97
85) Benzyl Chloride	15.828	91	2284485	96.56	ug/L	97
86) n-Butylbenzene	16.016	91	4094993	92.98	ug/L	96
87) 1,2-Dichlorobenzene	16.150	146	2279953	96.06	ug/L	98
88) 1,2-Dibromo-3-Chloropr...	16.971	75	226644	104.26	ug/L	95
89) 1,2,4-Trichlorobenzene	17.945	180	1872197	102.64	ug/L	99
90) Hexachlorobutadiene	18.109	225	897721	106.11	ug/L	98
91) Naphthalene	18.279	128	3500302	103.68	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070290.D
Acq On : 10 Sep 2010 1:18 pm
Operator : AnaJ
Sample : IC2903-6
Misc : MS15368,VB2903,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 10 13:40:11 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

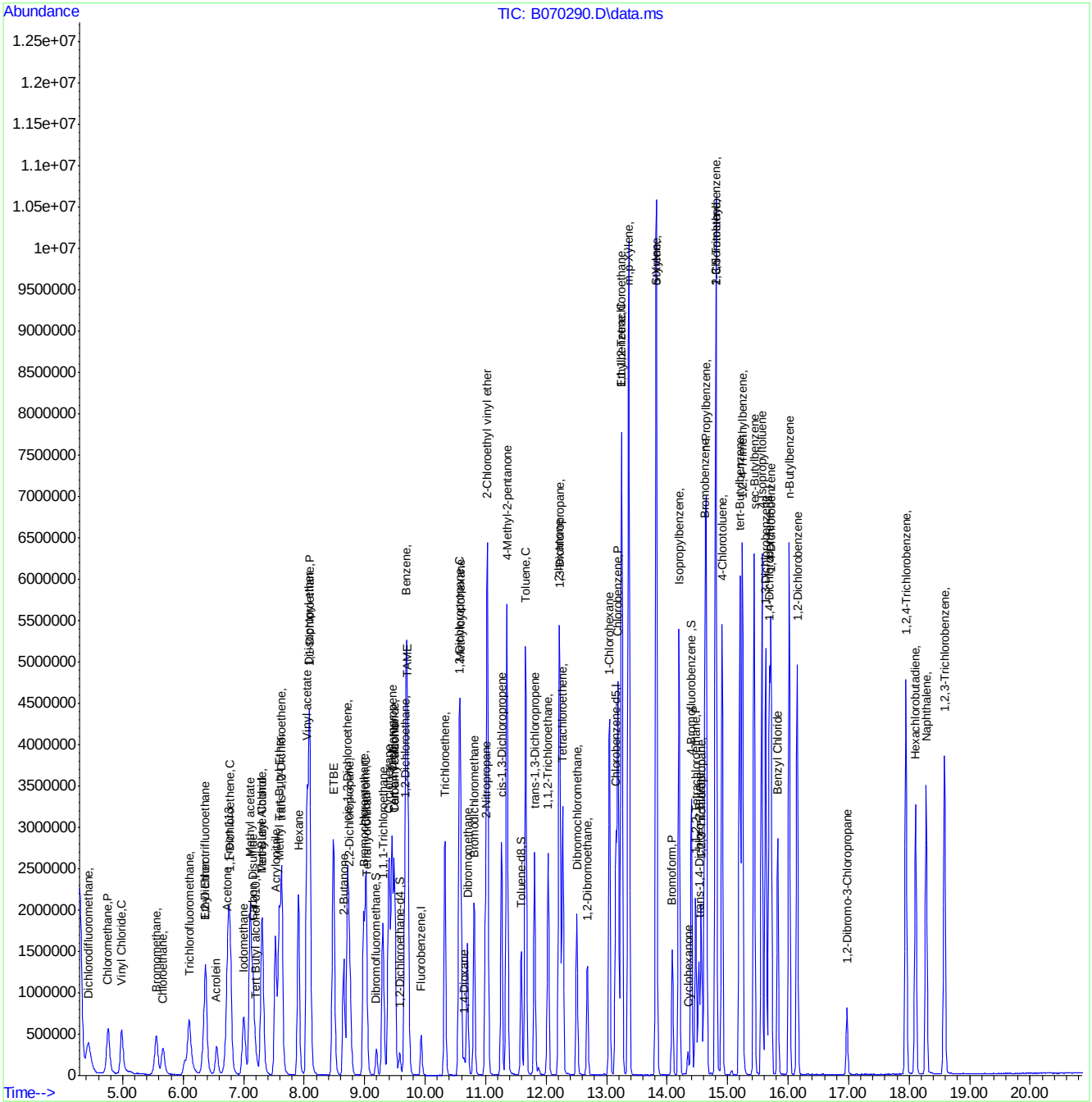
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.583	180	1660384	103.84	ug/L	98
94) Acrolein	6.556	56	489781	458.79	ug/L	99
95) Tert-Butyl Alcohol	7.304	59	792049	958.38	ug/L	97
96) Tert amyl alcohol	9.488	59	616161	1045.33	ug/L	95
97) 1,4-Dioxane	10.650	88	152490	1914.34	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070290.D
Acq On : 10 Sep 2010 1:18 pm
Operator : AnaJ
Sample : IC2903-6
Misc : MS15368,VB2903,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 10 13:40:11 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration



ACCUTEST
F76459

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070292.D
Acq On : 10 Sep 2010 2:11 pm
Operator : AnaJ
Sample : ICC2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 10 14:32:24 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.933	96	486353	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1723508	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1429327	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.201	65	281672	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	229817	51.32	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 102.64%			
36) 1,2-Dichloroethane-d4	9.580	65	217562	49.80	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 99.60%			
50) Toluene-d8	11.587	98	1078966	48.65	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 97.30%			
70) 4-Bromofluorobenzene	14.398	95	1233033	48.33	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 96.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.427	85	547693	70.23	ug/L	97
3) Chloromethane	4.749	50	548988	52.03	ug/L	98
4) Vinyl Chloride	4.975	62	426639	48.89	ug/L	97
5) Bromomethane	5.552	94	267978	51.48	ug/L	98
6) Chloroethane	5.656	64	216060	42.94	ug/L	98
7) Trichlorofluoromethane	6.094	101	613965	50.01	ug/L	96
8) Ethyl Ether	6.368	59	266982	43.05	ug/L	95
9) 1,2-Dichlorotrifluoroe...	6.362	67	328382	42.58	ug/L	94
10) Freon 113	6.751	101	373466	46.71	ug/L	96
11) 1,1-Dichloroethene	6.769	61	679089	45.02	ug/L	97
12) Acetone	6.721	43	674488	233.58	ug/L	98
13) Iodomethane	6.994	142	670821	47.30	ug/L	98
14) Carbon Disulfide	7.146	76	1323276	44.16	ug/L	96
15) Methyl acetate	7.104	43	1696903	203.78	ug/L	97
16) Methylene Chloride	7.298	49	755407	43.65	ug/L	96
17) Methyl Tert Butyl Ether	7.590	73	1210786	44.89	ug/L	98
18) trans-1,2-Dichloroethene	7.627	61	705156	43.97	ug/L	96
19) Acrylonitrile	7.524	53	860763	204.79	ug/L	97
20) Hexane	7.901	57	635597	45.25	ug/L	97
21) Di-isopropyl ether	8.083	45	1727579	40.83	ug/L	99
22) Vinyl acetate	8.047	43	3407104	209.90	ug/L	100
23) 1,1-Dichloroethane	8.089	63	885164	42.88	ug/L	98
24) ETBE	8.479	59	1492396	44.79	ug/L	98
25) 2-Butanone	8.649	43	1029414	209.47	ug/L	100
26) 2,2-Dichloropropane	8.746	77	670482	48.69	ug/L	99
27) cis-1,2-Dichloroethene	8.716	96	467695	44.51	ug/L	94
28) Bromochloromethane	8.984	128	235100	44.09	ug/L	90
29) Tetrahydrofuran	9.032	42	131981	40.81	ug/L	98
30) Chloroform	9.020	83	811907	43.63	ug/L	95
32) 1,1,1-Trichloroethane	9.294	97	678928	44.74	ug/L	97
33) Cyclohexane	9.397	56	811154	43.26	ug/L	97
34) Carbon Tetrachloride	9.495	117	594884	44.73	ug/L	96
35) 1,1-Dichloropropene	9.446	75	631032	45.69	ug/L	98
37) TAME	9.714	73	1206561	45.31	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070292.D
Acq On : 10 Sep 2010 2:11 pm
Operator : AnaJ
Sample : ICC2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 10 14:32:24 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.683	78	1749056	43.58	ug/L	99
39) 1,2-Dichloroethane	9.659	62	682775	42.80	ug/L	98
40) Trichloroethene	10.322	95	457957	45.15	ug/L	97
41) Methylcyclohexane	10.584	83	668145	47.06	ug/L	97
42) 1,2-Dichloropropane	10.559	63	497053	42.55	ug/L	96
43) Dibromomethane	10.699	93	293263	44.61	ug/L	95
44) Bromodichloromethane	10.809	83	622293	44.58	ug/L	98
45) 2-Chloroethyl vinyl ether	11.028	63	1428912	236.74	ug/L	91
46) 2-Nitropropane	10.997	41	598838	220.22	ug/L	95
47) cis-1,3-Dichloropropene	11.265	75	758516	45.66	ug/L	98
48) 4-Methyl-2-pentanone	11.350	43	2065347	209.02	ug/L	99
51) Toluene	11.660	91	1841091	41.82	ug/L	99
52) trans-1,3-Dichloropropene	11.806	75	666968	44.78	ug/L	98
53) 1,1,2-Trichloroethane	12.031	83	349011	42.02	ug/L	98
54) Tetrachloroethene	12.275	166	467731	43.77	ug/L	99
55) 2-hexanone	12.214	43	1443412	204.62	ug/L	99
56) 1,3-Dichloropropane	12.226	76	698784	41.94	ug/L	94
57) Dibromochloromethane	12.506	129	457100	43.77	ug/L	98
58) 1,2-Dibromoethane	12.676	107	423360	43.85	ug/L	93
59) 1-Chlorohexane	13.047	91	652135	45.43	ug/L	92
60) Chlorobenzene	13.187	112	1220419	42.02	ug/L	98
61) Ethylbenzene	13.248	91	2066133	42.62	ug/L	98
62) 1,1,1,2-Tetrachloroethane	13.236	131	436482	42.98	ug/L	96
63) m,p-Xylene	13.364	91	3142406	84.77	ug/L	98
64) o-Xylene	13.814	91	1656846	42.15	ug/L	99
65) Styrene	13.814	104	1288498	45.89	ug/L	99
66) Bromoform	14.082	173	312724	43.90	ug/L	97
68) Isopropylbenzene	14.197	105	1806745	40.82	ug/L	99
69) Cyclohexanone	14.343	55	66577	197.95	ug/L	91
71) 1,1,2,2-Tetrachloroethane	14.471	83	520413	39.98	ug/L	98
72) trans-1,4-Dichloro-2-B...	14.520	53	129833	37.41	ug/L	89
73) n-Propylbenzene	14.641	91	2465741	39.58	ug/L	99
74) Bromobenzene	14.623	156	548202	40.25	ug/L	96
75) 1,2,3-Trichloropropane	14.562	110	148792	38.49	ug/L	98
76) 1,3,5-Trimethylbenzene	14.806	105	1678231	40.75	ug/L	100
77) 2-Chlorotoluene	14.800	91	1673796	39.38	ug/L	100
78) 4-Chlorotoluene	14.909	91	1586971	40.32	ug/L	99
79) tert-Butylbenzene	15.201	91	1062039	40.28	ug/L	94
80) 1,2,4-Trimethylbenzene	15.244	105	1809890	41.09	ug/L	97
81) sec-Butylbenzene	15.438	105	2233116	41.01	ug/L	99
82) 4-Isopropyltoluene	15.566	119	1795527	42.60	ug/L	99
83) 1,3-Dichlorobenzene	15.627	146	1027559	40.77	ug/L	98
84) 1,4-Dichlorobenzene	15.718	146	1034396	40.52	ug/L	98
85) Benzyl Chloride	15.828	91	978355	45.15	ug/L	98
86) n-Butylbenzene	16.016	91	1843804	40.87	ug/L	99
87) 1,2-Dichlorobenzene	16.150	146	1011403	41.59	ug/L	97
88) 1,2-Dibromo-3-Chloropr...	16.971	75	88074	39.55	ug/L	92
89) 1,2,4-Trichlorobenzene	17.945	180	816752	43.71	ug/L	98
90) Hexachlorobutadiene	18.109	225	376349	43.42	ug/L	96
91) Naphthalene	18.279	128	1489639	43.07	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070292.D
Acq On : 10 Sep 2010 2:11 pm
Operator : AnaJ
Sample : ICC2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 10 14:32:24 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration

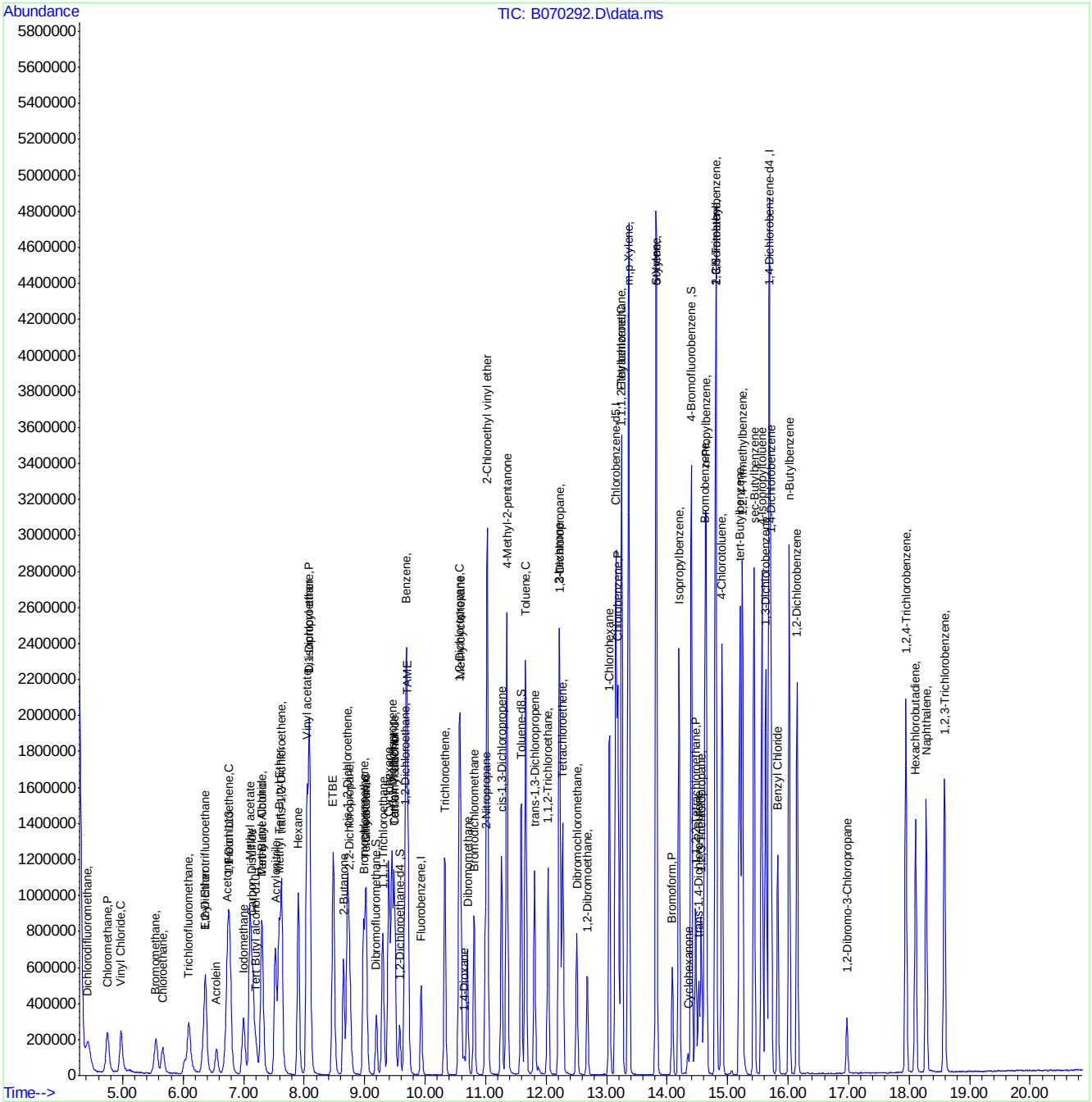
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.584	180	717025	43.77	ug/L	98
94) Acrolein	6.550	56	201911	169.55	ug/L	93
95) Tert-Butyl Alcohol	7.292	59	360050	390.55	ug/L	97
96) Tert amyl alcohol	9.489	59	270226	410.98	ug/L	98
97) 1,4-Dioxane	10.644	88	74990	843.94	ug/L	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091010\
Data File : B070292.D
Acq On : 10 Sep 2010 2:11 pm
Operator : AnaJ
Sample : ICC2903-4
Misc : MS15368,VB2903,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 10 14:32:24 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 03 13:27:09 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070403.D
Acq On : 16 Sep 2010 9:16 am
Operator : AnaJ
Sample : CC2903-4
Misc : MS15410,VB2907,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 09:38:06 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.932	96	435535	50.00	ug/L	0.00
49) Chlorobenzene-d5	13.151	117	1745081	50.00	ug/L	0.00
67) 1,4-Dichlorobenzene-d4	15.688	152	1452880	50.00	ug/L	0.00
93) Tert Butyl alcohol-d10	7.195	65	268745	250.00	ug/L	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	9.190	113	216934	54.03	ug/L	0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 108.06%			
36) 1,2-Dichloroethane-d4	9.580	65	201735	52.72	ug/L	0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 105.44%			
50) Toluene-d8	11.581	98	1032782	47.58	ug/L	0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 95.16%			
70) 4-Bromofluorobenzene	14.398	95	1238204	49.96	ug/L	0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 99.92%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.433	85	439146	39.21	ug/L	98
3) Chloromethane	4.749	50	536830	40.84	ug/L	100
4) Vinyl Chloride	4.974	62	429451	43.44	ug/L	98
5) Bromomethane	5.546	94	296118	48.10	ug/L	99
6) Chloroethane	5.662	64	241153	47.65	ug/L	97
7) Trichlorofluoromethane	6.094	101	713050	56.59	ug/L	96
8) Ethyl Ether	6.361	59	298095	52.00	ug/L	97
9) 1,2-Dichlorotrifluoroe...	6.361	67	387571	49.26	ug/L	95
10) Freon 113	6.745	101	360827	45.96	ug/L	97
11) 1,1-Dichloroethene	6.769	61	660053	47.07	ug/L	98
12) Acetone	6.720	43	501105	179.50	ug/L	94
13) Iodomethane	6.994	142	642077	46.69	ug/L	94
14) Carbon Disulfide	7.146	76	1293777	44.78	ug/L	96
15) Methyl acetate	7.104	43	1562583	207.15	ug/L	98
16) Methylene Chloride	7.298	49	731478	46.05	ug/L	99
17) Methyl Tert Butyl Ether	7.590	73	1116377	44.75	ug/L	97
18) trans-1,2-Dichloroethene	7.627	61	701069	46.53	ug/L	97
19) Acrylonitrile	7.523	53	781327	212.82	ug/L	95
20) Hexane	7.901	57	631397	47.92	ug/L	97
21) Di-isopropyl ether	8.083	45	1680032	43.72	ug/L	96
22) Vinyl acetate	8.040	43	3141238	216.33	ug/L	100
23) 1,1-Dichloroethane	8.089	63	861298	44.62	ug/L	96
24) ETBE	8.478	59	1377326	45.26	ug/L	99
25) 2-Butanone	8.649	43	871062	195.28	ug/L	97
26) 2,2-Dichloropropane	8.746	77	623925	46.63	ug/L	97
27) cis-1,2-Dichloroethene	8.716	96	448291	44.57	ug/L	96
28) Bromochloromethane	8.983	128	226963	43.70	ug/L	96
29) Tetrahydrofuran	9.038	42	113529	40.58	ug/L	95
30) Chloroform	9.020	83	803663	45.59	ug/L	95
32) 1,1,1-Trichloroethane	9.294	97	652076	46.74	ug/L	98
33) Cyclohexane	9.397	56	790617	46.58	ug/L	97
34) Carbon Tetrachloride	9.488	117	593772	48.77	ug/L	98
35) 1,1-Dichloropropene	9.452	75	598319	45.29	ug/L	98
37) TAME	9.707	73	1099441	43.96	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070403.D
Acq On : 16 Sep 2010 9:16 am
Operator : AnaJ
Sample : CC2903-4
Misc : MS15410,VB2907,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 09:38:06 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Benzene	9.683	78	1681144	43.74	ug/L	98
39) 1,2-Dichloroethane	9.659	62	650061	44.50	ug/L	98
40) Trichloroethene	10.322	95	429936	44.93	ug/L	98
41) Methylcyclohexane	10.583	83	644821	47.06	ug/L	95
42) 1,2-Dichloropropane	10.559	63	492067	45.17	ug/L	98
43) Dibromomethane	10.693	93	271177	43.69	ug/L	97
44) Bromodichloromethane	10.808	83	583830	45.08	ug/L	95
45) 2-Chloroethyl vinyl ether	11.028	63	1235536	199.68	ug/L	100
46) 2-Nitropropane	10.997	41	554263	220.36	ug/L	98
47) cis-1,3-Dichloropropene	11.259	75	717256	45.59	ug/L	98
48) 4-Methyl-2-pentanone	11.350	43	1842250	202.08	ug/L	99
51) Toluene	11.660	91	1738894	39.27	ug/L	100
52) trans-1,3-Dichloropropene	11.806	75	615416	40.16	ug/L	98
53) 1,1,2-Trichloroethane	12.031	83	319997	38.03	ug/L	96
54) Tetrachloroethene	12.275	166	434419	39.23	ug/L	97
55) 2-hexanone	12.208	43	1230333	179.39	ug/L	99
56) 1,3-Dichloropropane	12.226	76	647018	36.76	ug/L	99
57) Dibromochloromethane	12.506	129	422308	40.71	ug/L	99
58) 1,2-Dibromoethane	12.682	107	372269	37.63	ug/L	94
59) 1-Chlorohexane	13.047	91	596372	38.33	ug/L	98
60) Chlorobenzene	13.187	112	1138236	38.15	ug/L	98
61) Ethylbenzene	13.248	91	1954176	40.07	ug/L	99
62) 1,1,1,2-Tetrachloroethane	13.236	131	403752	40.25	ug/L	99
63) m,p-Xylene	13.364	91	2953196	79.46	ug/L	99
64) o-Xylene	13.820	91	1569446	40.80	ug/L	99
65) Styrene	13.820	104	1210326	39.03	ug/L	97
66) Bromoform	14.081	173	275505	38.02	ug/L	96
68) Isopropylbenzene	14.191	105	1651551	39.96	ug/L	100
69) Cyclohexanone	14.343	55	55782	197.53	ug/L	94
71) 1,1,2,2-Tetrachloroethane	14.471	83	461980	34.19	ug/L	98
72) trans-1,4-Dichloro-2-B...	14.519	53	117959	39.72	ug/L	97
73) n-Propylbenzene	14.641	91	2343721	39.32	ug/L	97
74) Bromobenzene	14.623	156	510077	37.58	ug/L	99
75) 1,2,3-Trichloropropane	14.562	110	129198	33.20	ug/L	92
76) 1,3,5-Trimethylbenzene	14.805	105	1581497	40.18	ug/L	99
77) 2-Chlorotoluene	14.799	91	1577623	38.63	ug/L	98
78) 4-Chlorotoluene	14.909	91	1475940	38.72	ug/L	97
79) tert-Butylbenzene	15.201	91	992185	38.79	ug/L	98
80) 1,2,4-Trimethylbenzene	15.243	105	1663095	38.88	ug/L	98
81) sec-Butylbenzene	15.438	105	2067738	39.11	ug/L	99
82) 4-Isopropyltoluene	15.566	119	1623550	39.36	ug/L	100
83) 1,3-Dichlorobenzene	15.627	146	946541	36.89	ug/L	99
84) 1,4-Dichlorobenzene	15.718	146	949022	36.05	ug/L	99
85) Benzyl Chloride	15.827	91	812162	37.06	ug/L	99
86) n-Butylbenzene	16.016	91	1715032	38.78	ug/L	99
87) 1,2-Dichlorobenzene	16.150	146	900680	36.19	ug/L	95
88) 1,2-Dibromo-3-Chloropr...	16.971	75	75828	35.53	ug/L	91
89) 1,2,4-Trichlorobenzene	17.945	180	702050	36.68	ug/L	97
90) Hexachlorobutadiene	18.109	225	331049	38.54	ug/L	98
91) Naphthalene	18.285	128	1199596	34.14	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070403.D
Acq On : 16 Sep 2010 9:16 am
Operator : AnaJ
Sample : CC2903-4
Misc : MS15410,VB2907,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 09:38:06 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration

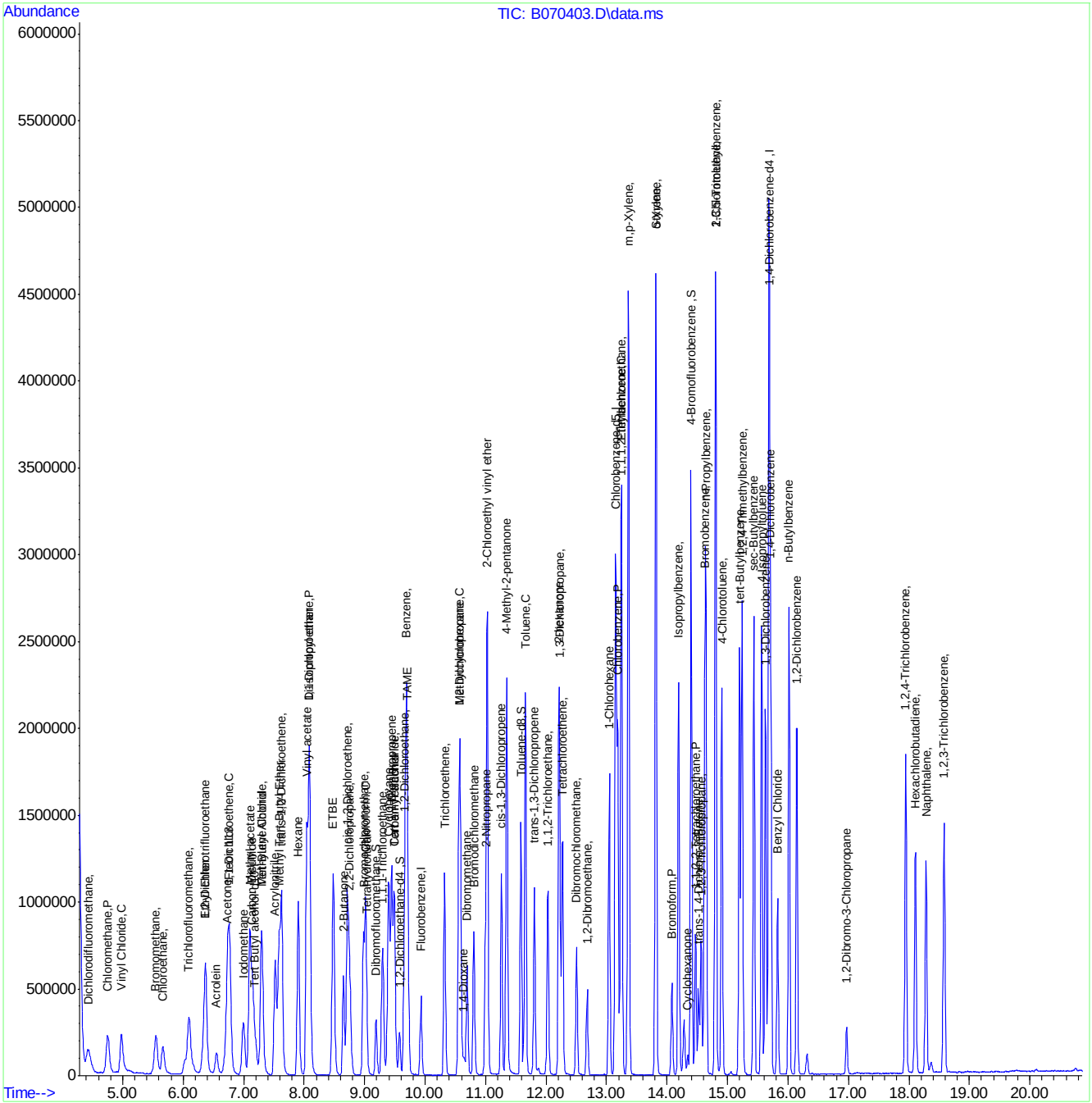
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	18.583	180	606850	35.67	ug/L	98
94) Acrolein	6.550	56	168979	164.39	ug/L	96
95) Tert-Butyl Alcohol	7.292	59	313852	385.53	ug/L	96
96) Tert amyl alcohol	9.488	59	232029	372.12	ug/L	95
97) 1,4-Dioxane	10.644	88	69473	839.93	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091610\
Data File : B070403.D
Acq On : 16 Sep 2010 9:16 am
Operator : AnaJ
Sample : CC2903-4
Misc : MS15410,VB2907,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 09:38:06 2010
Quant Method : C:\msdchem\1\METHODS\8260b.m
Quant Title : EPA 624 & SWA 5030B/8260B
QLast Update : Fri Sep 10 14:37:01 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 09:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:06:15 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	856378	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	815935	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	530857	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.927	65	109830	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.442	113	273095	54.01	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 108.02%				
38) 1,2-Dichloroethane-d4	6.983	65	375322	52.71	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 105.42%				
48) Toluene-d8	8.802	98	932836	49.95	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 99.90%				
69) 4-Bromofluorobenzene	11.570	95	452905	51.99	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 103.98%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.603	85	6271	0.71	ug/L		86
3) Chloromethane	2.755	50	7338	1.06	ug/L		84
4) Vinyl Chloride	2.871	62	5612	1.00	ug/L		93
5) Bromomethane	3.254	94	5170	1.12	ug/L		82
6) Chloroethane	3.400	64	3013	1.01	ug/L		95
7) Trichlorofluoromethane	3.528	101	11192m	0.82	ug/L		
8) Ethyl Ether	3.813	59	4350m	1.14	ug/L		
9) 1,2-Dichlorotrifluoroe...	4.026	67	5394	0.92	ug/L	#	81
10) 1,1-Dichloroethene	4.063	61	7636	1.01	ug/L		83
11) Freon 113	4.142	101	5459	1.03	ug/L		87
12) Carbon Disulfide	4.124	76	14559	1.03	ug/L		87
13) Iodomethane	4.239	142	10154	1.03	ug/L		99
14) Methylene Chloride	4.653	49	8726	1.40	ug/L		87
15) Acetone	4.708	58	1708m	4.39	ug/L		
16) Methyl acetate	4.799	74	3731	5.01	ug/L	#	65
17) trans-1,2-Dichloroethene	4.811	61	7327	1.04	ug/L		93
18) Hexane	4.860	56	3595	0.99	ug/L	#	73
19) Methyl Tert Butyl Ether	4.921	73	17705	1.06	ug/L		90
20) Di-isopropyl ether	5.286	45	13444	1.03	ug/L		95
21) 1,1-Dichloroethane	5.450	63	8529	0.99	ug/L		98
22) Acrylonitrile	5.493	53	6845	5.15	ug/L		94
23) ETBE	5.651	59	15722	0.97	ug/L		94
24) Vinyl acetate	5.663	43	25633	4.96	ug/L		92
25) cis-1,2-Dichloroethene	5.985	96	4787	0.93	ug/L		82
26) 2,2-Dichloropropane	6.113	77	9701	1.04	ug/L		95
27) Bromochloromethane	6.210	128	3418	1.04	ug/L	#	75
28) Cyclohexane	6.223	56	6085	0.94	ug/L		93
29) Chloroform	6.247	83	11885	1.04	ug/L		91
30) Tetrahydrofuran	6.435	42	1487m	1.13	ug/L		
32) Carbon Tetrachloride	6.429	117	11259	0.98	ug/L		84
33) 1,1,1-Trichloroethane	6.502	97	10919	0.98	ug/L		95
34) 2-Butanone	6.557	43	9585	4.90	ug/L		91
35) 1,1-Dichloropropene	6.594	75	7406	0.97	ug/L		87
36) Benzene	6.855	78	19845	1.00	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:06:15 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.940	73	15693	1.03	ug/L		96
39) 1,2-Dichloroethane	7.062	62	11273	1.10	ug/L		96
40) Trichloroethene	7.421	95	6683	1.09	ug/L		87
41) Methylcyclohexane	7.433	83	6784	0.91	ug/L		89
42) Dibromomethane	7.847	93	3876	1.01	ug/L		83
43) 1,2-Dichloropropane	7.944	63	4379	0.93	ug/L		97
44) Bromodichloromethane	7.987	83	9067	1.00	ug/L		94
45) 2-Chloroethyl vinyl ether	8.534	63	14459	4.36	ug/L		94
46) cis-1,3-Dichloropropene	8.626	75	8764	0.93	ug/L		93
49) Toluene	8.857	91	22165	0.93	ug/L		96
50) 2-Nitropropane	9.082	41	8326	4.58	ug/L	#	79
51) 4-Methyl-2-pentanone	9.204	43	18896	4.61	ug/L		95
52) trans-1,3-Dichloropropene	9.252	75	9065	1.00	ug/L		97
53) Tetrachloroethene	9.252	166	6940	0.95	ug/L		91
54) 1,1,2-Trichloroethane	9.416	83	3949	0.96	ug/L		93
55) Dibromochloromethane	9.605	129	7403	1.00	ug/L		97
56) 1,3-Dichloropropane	9.696	76	8431	0.97	ug/L		91
57) 1,2-Dibromoethane	9.861	107	5653	0.98	ug/L		96
58) 2-hexanone	10.031	43	12739	3.77	ug/L		100
59) 1-Chlorohexane	10.317	91	7025	0.95	ug/L		92
60) Ethylbenzene	10.378	91	28483	0.98	ug/L		97
61) Chlorobenzene	10.372	112	16595	0.97	ug/L		79
62) 1,1,1,2-Tetrachloroethane	10.426	131	7318	1.04	ug/L		92
63) m,p-Xylene	10.518	91	40369	1.76	ug/L		99
64) o-Xylene	10.956	91	21104	0.91	ug/L		98
65) Styrene	11.010	104	14745	0.84	ug/L		93
66) Bromoform	11.059	173	4980	0.92	ug/L		98
67) Isopropylbenzene	11.266	105	21533	0.76	ug/L		100
70) n-Propylbenzene	11.692	91	29534	0.94	ug/L		98
71) Bromobenzene	11.692	156	8714	1.01	ug/L		98
72) 1,1,2,2-Tetrachloroethane	11.759	83	5951	0.99	ug/L		99
73) 1,3,5-Trimethylbenzene	11.880	105	22177	0.91	ug/L		98
74) 2-Chlorotoluene	11.868	91	21823	0.95	ug/L		97
75) trans-1,4-Dichloro-2-B...	11.941	53	1776	0.99	ug/L	#	87
76) 1,2,3-Trichloropropane	11.911	110	2578	1.09	ug/L		86
77) Cyclohexanone	11.984	55	338	2.06	ug/L	#	77
78) 4-Chlorotoluene	12.038	91	20468	0.96	ug/L		97
79) tert-Butylbenzene	12.215	91	13254	0.92	ug/L		99
80) 1,2,4-Trimethylbenzene	12.288	105	21988	0.88	ug/L		98
81) sec-Butylbenzene	12.397	105	26015	0.90	ug/L		94
82) 4-Isopropyltoluene	12.537	119	22582	0.89	ug/L		99
83) 1,3-Dichlorobenzene	12.653	146	15164	0.97	ug/L		91
84) 1,4-Dichlorobenzene	12.744	146	16654m	1.02	ug/L		
85) n-Butylbenzene	12.981	92	11057	0.86	ug/L		98
86) Benzyl Chloride	12.994	126	3143	0.96	ug/L	#	84
87) 1,2-Dichlorobenzene	13.188	146	15065	0.99	ug/L		95
88) 1,2-Dibromo-3-Chloropr...	13.973	75	1832	1.17	ug/L		92
89) Hexachlorobutadiene	14.539	225	5902	1.21	ug/L		95
90) 1,2,4-Trichlorobenzene	14.575	180	11727	1.02	ug/L		94
91) Naphthalene	14.861	128	26126	1.05	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:06:15 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

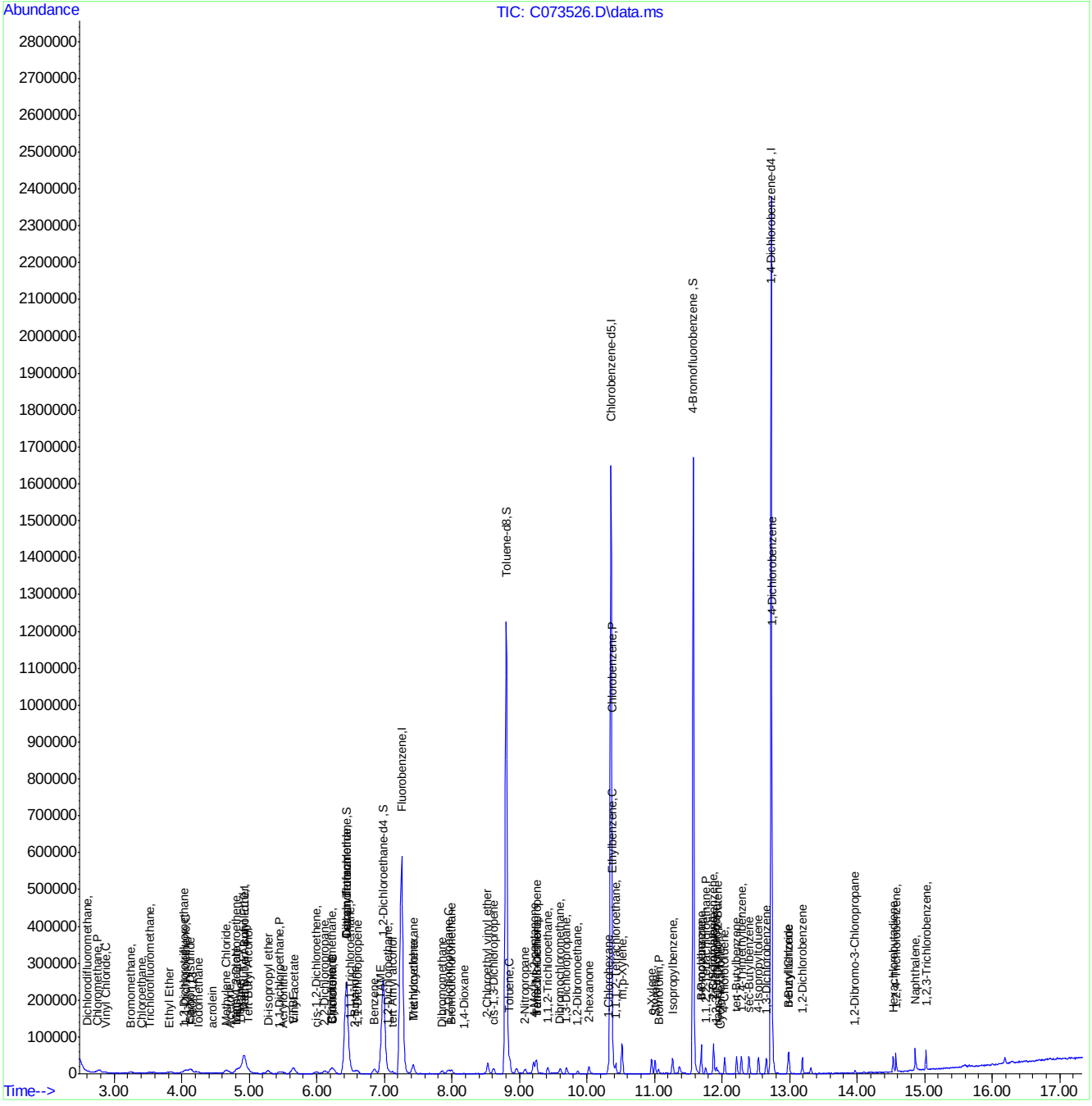
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	11638	1.08	ug/L		97
94) acrolein	4.458	56	3120m	14.65	ug/L		
95) Tert Butyl Alcohol	4.988	59	5160	10.42	ug/L	#	77
96) tert Amyl alcohol	7.123	59	3296	9.03	ug/L		93
97) 1,4-Dioxane	8.194	88	590m	12.13	ug/L		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

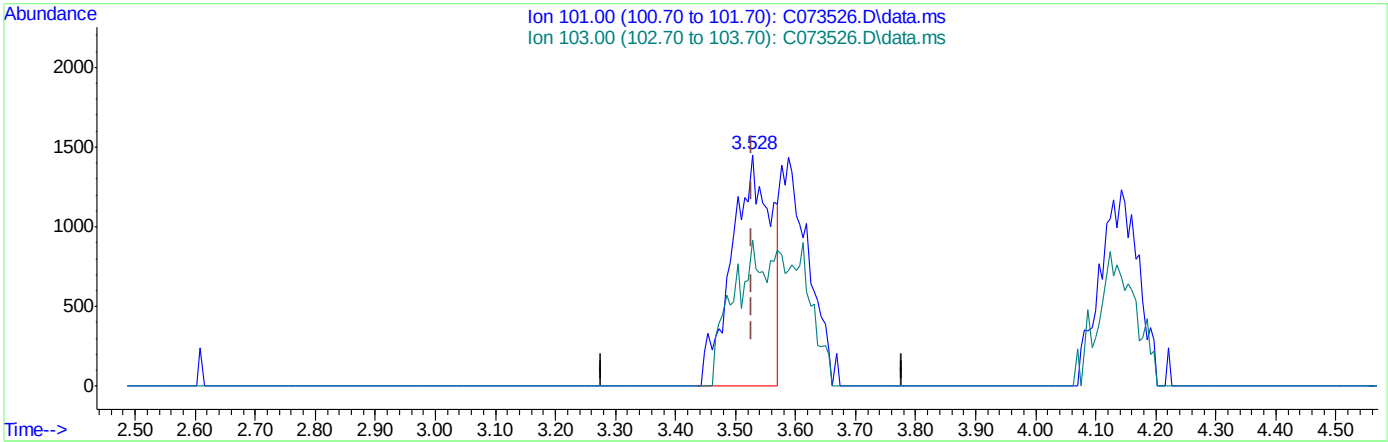
Quant Time: Sep 14 11:06:15 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

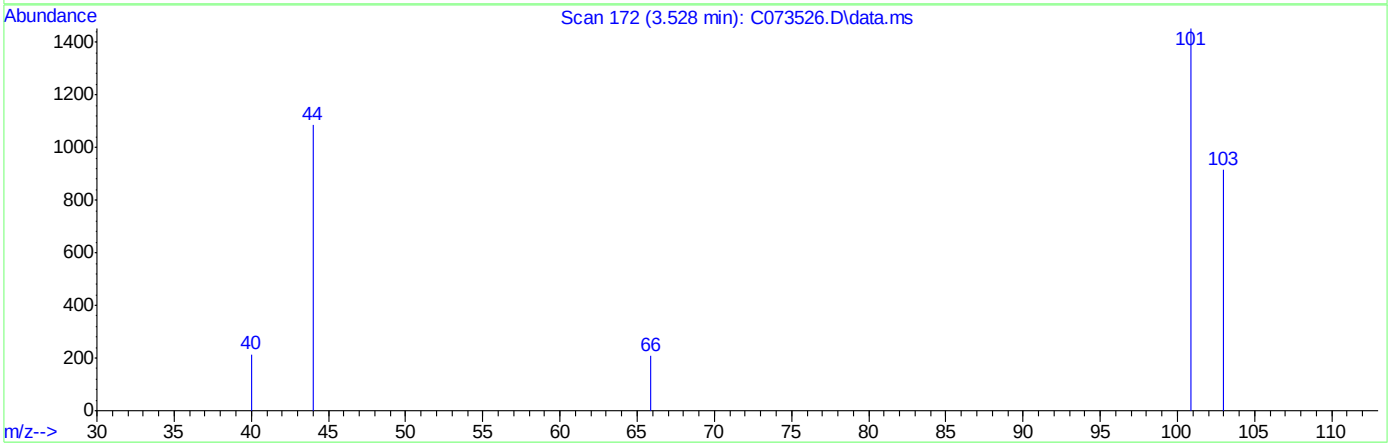


Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(7) Trichlorofluoromethane ( )

3.528min (+0.001) 0.49ug/L

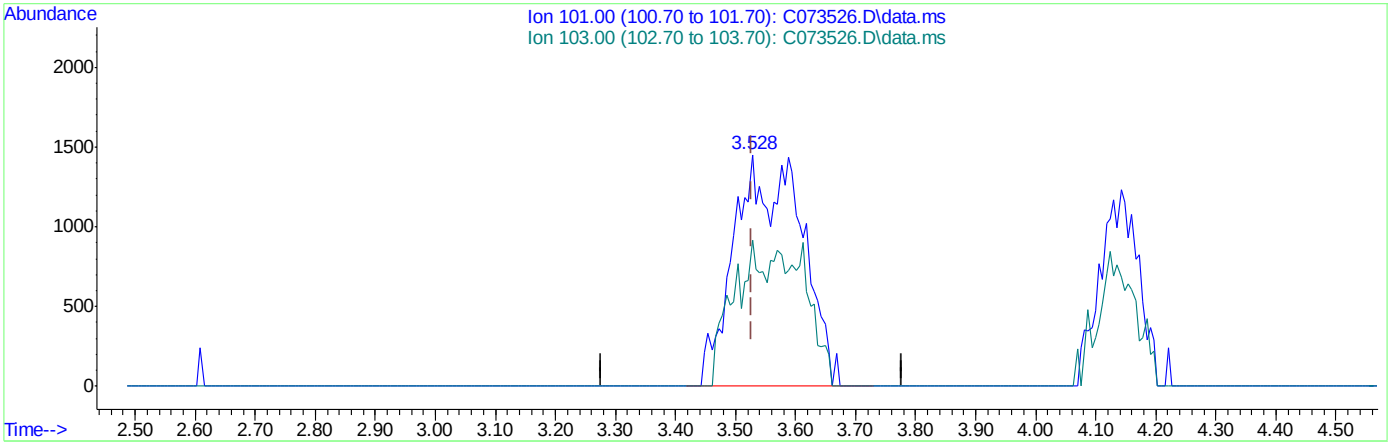
response 6624

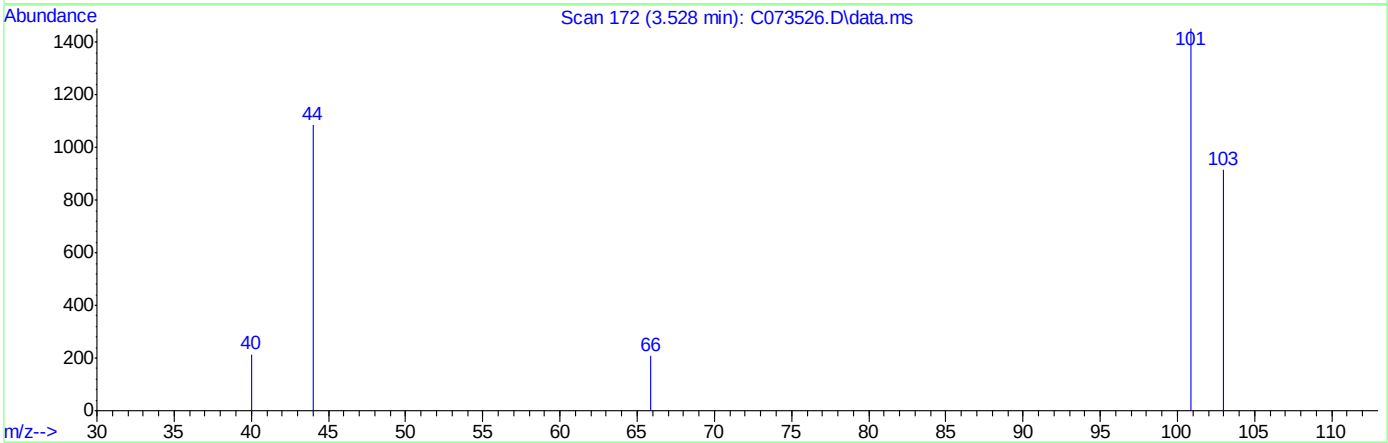
Ion	Exp%	Act%
101.00	100	100
103.00	63.60	62.95
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(7) Trichlorofluoromethane ( )

3.528min (+0.001) 0.82ug/L m

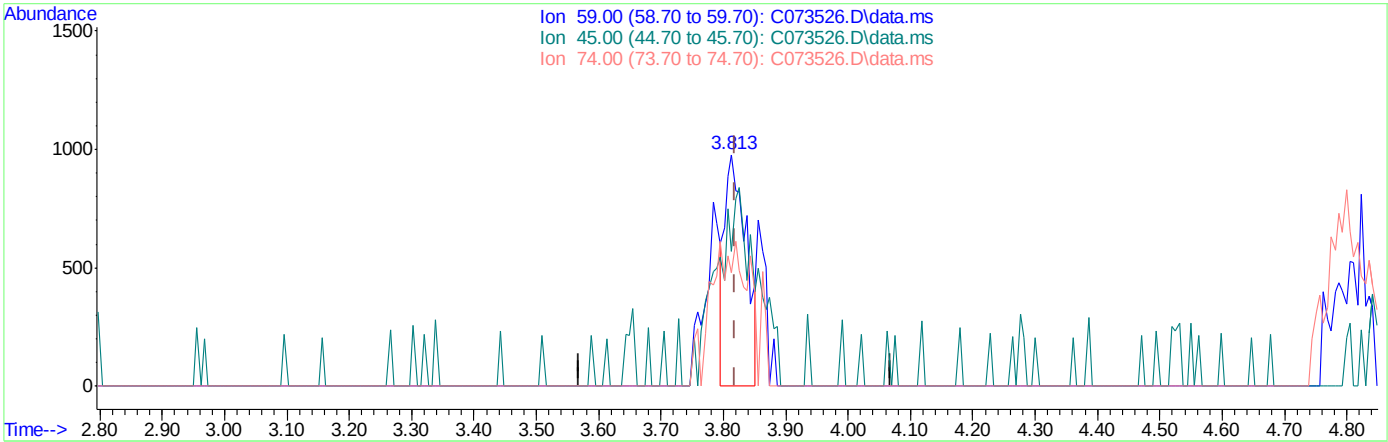
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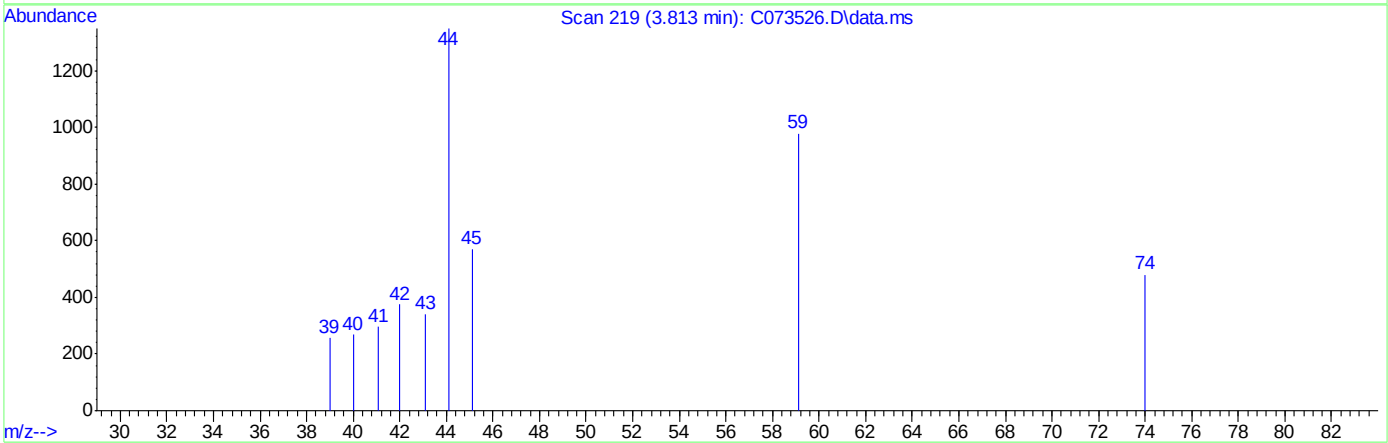
Ion	Exp%	Act%
101.00	100	100
103.00	63.60	62.95
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(8) Ethyl Ether

3.813min (-0.006) 0.60ug/L

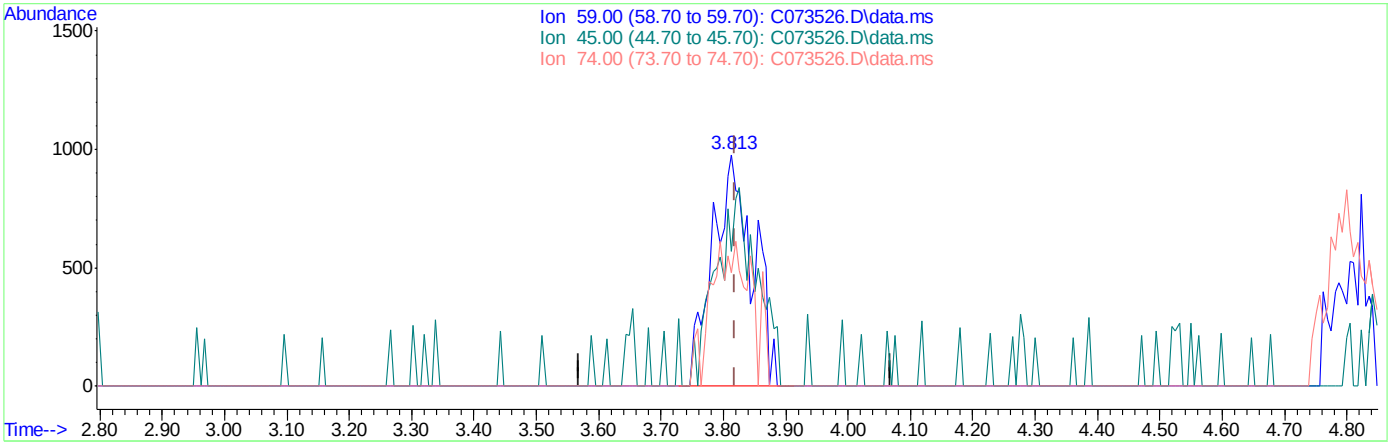
response 2294

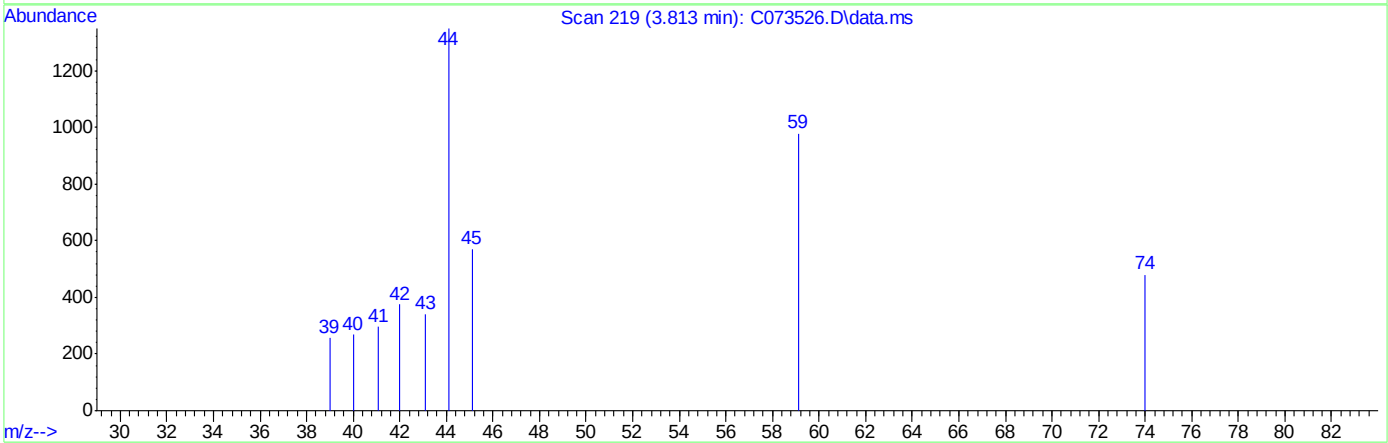
Ion	Exp%	Act%
59.00	100	100
45.00	66.50	31.51#
74.00	78.20	15.85#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(8) Ethyl Ether

3.813min (-0.006) 1.14ug/L m

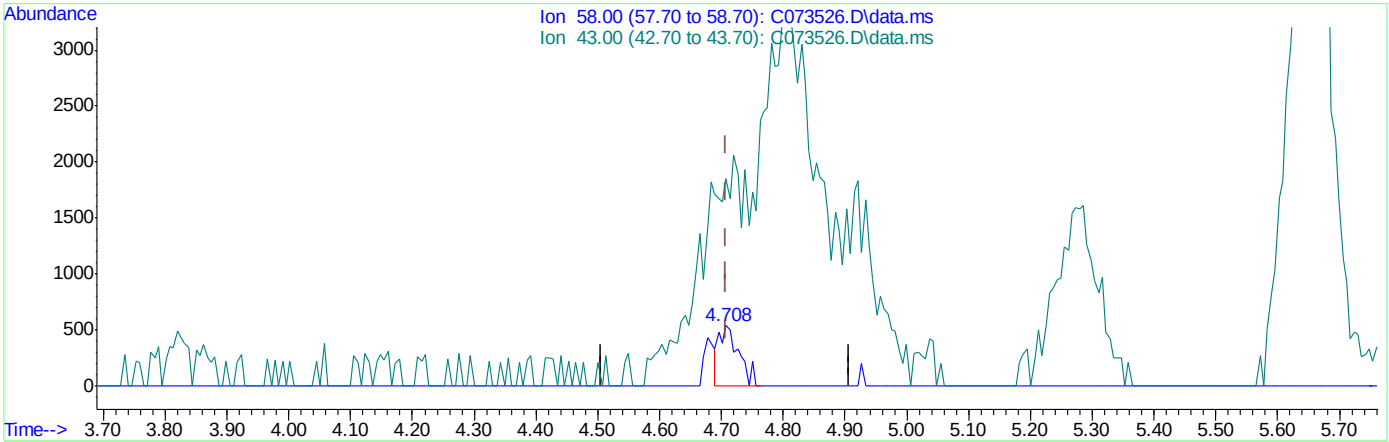
response 4350

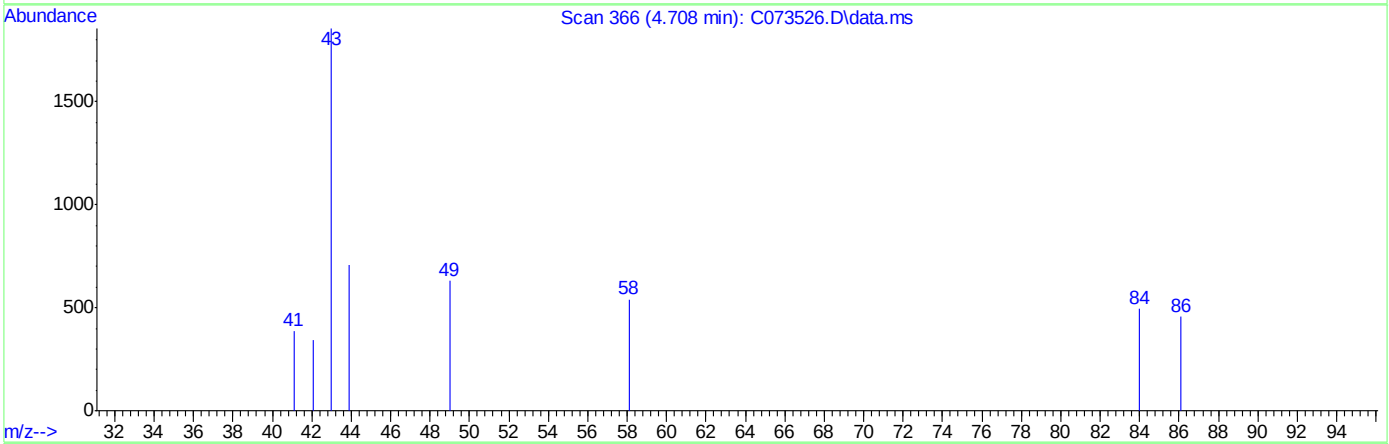
Ion	Exp%	Act%
59.00	100	100
45.00	66.50	58.38
74.00	78.20	49.08#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(15) Acetone

4.708min (+0.001) 3.06ug/L

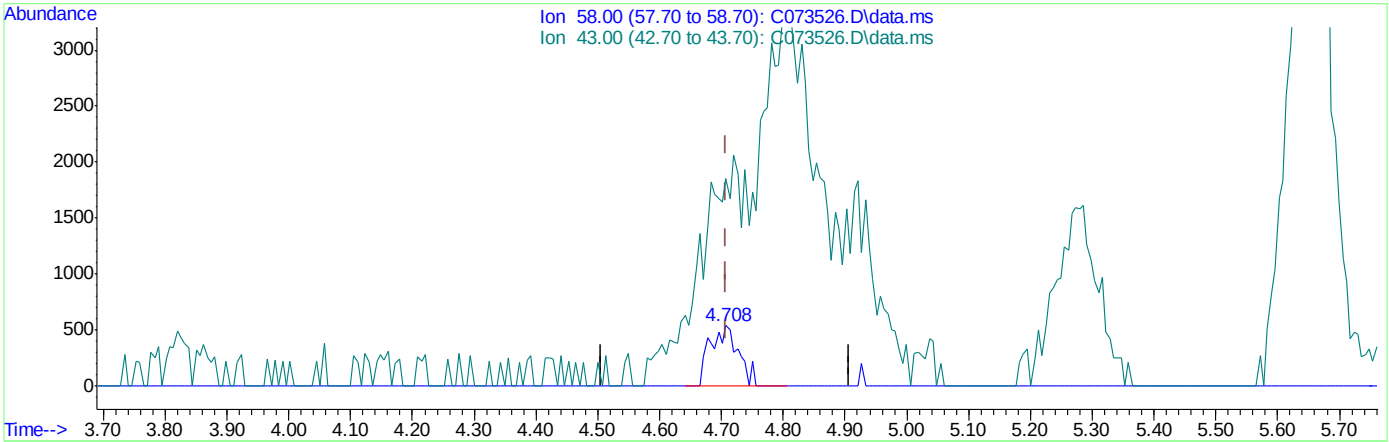
response 1190

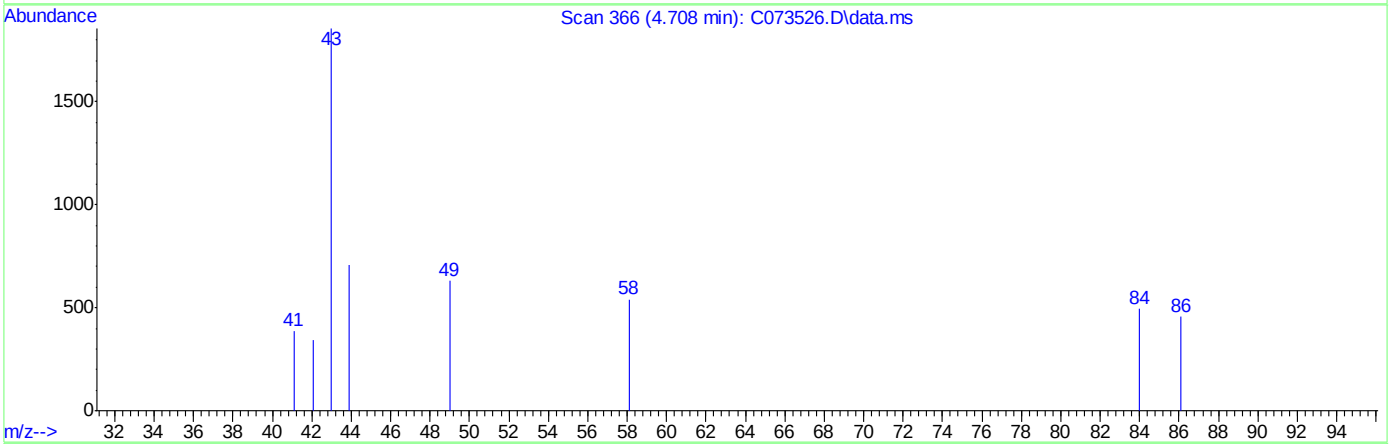
Ion	Exp%	Act%
58.00	100	100
43.00	469.80	26.43#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(15) Acetone

4.708min (+0.001) 4.39ug/L m

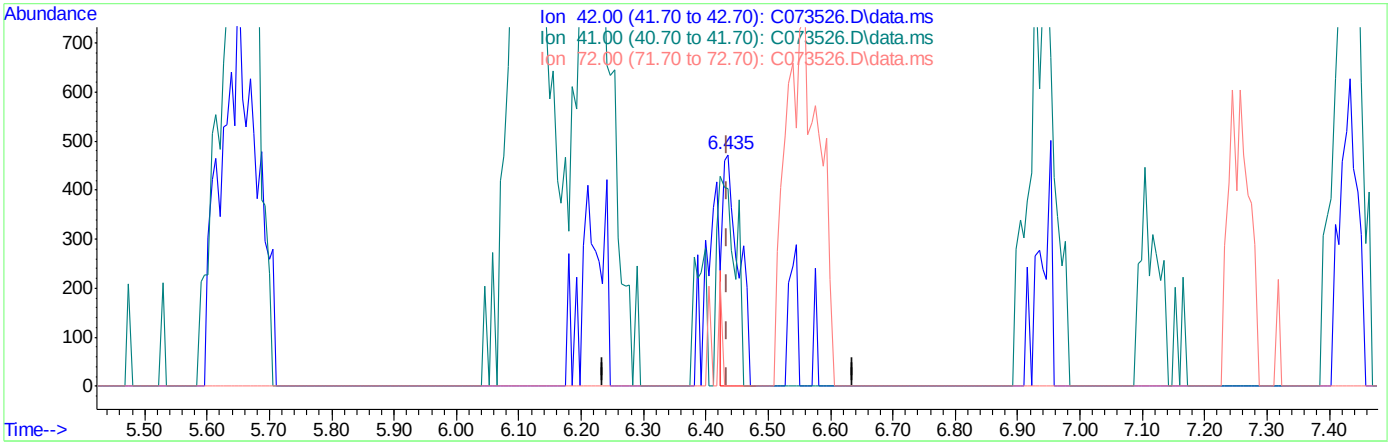
response 1708

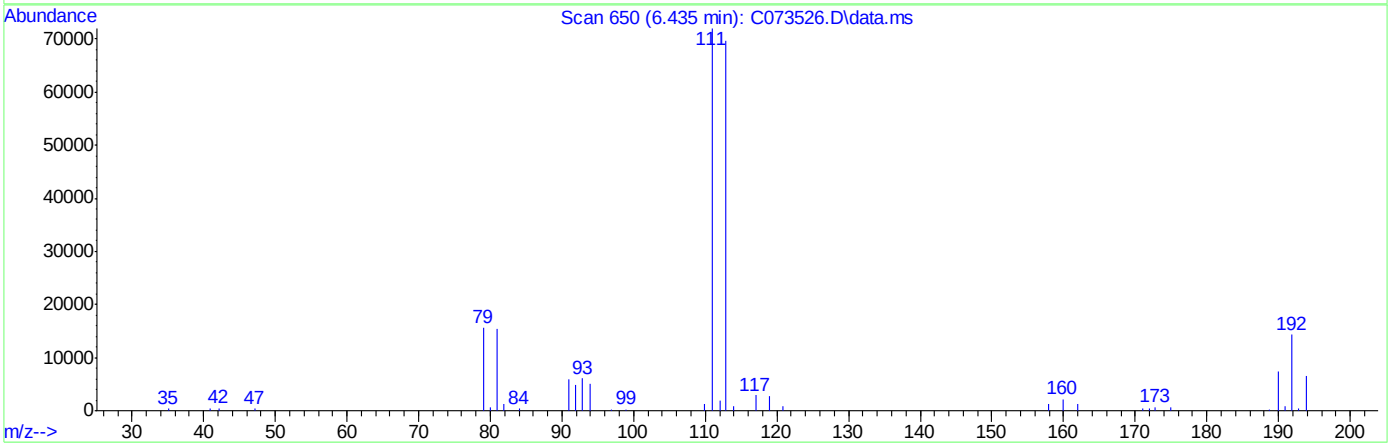
Ion	Exp%	Act%
58.00	100	100
43.00	469.80	343.07#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(30) Tetrahydrofuran

6.435min (+0.000) 0.63ug/L

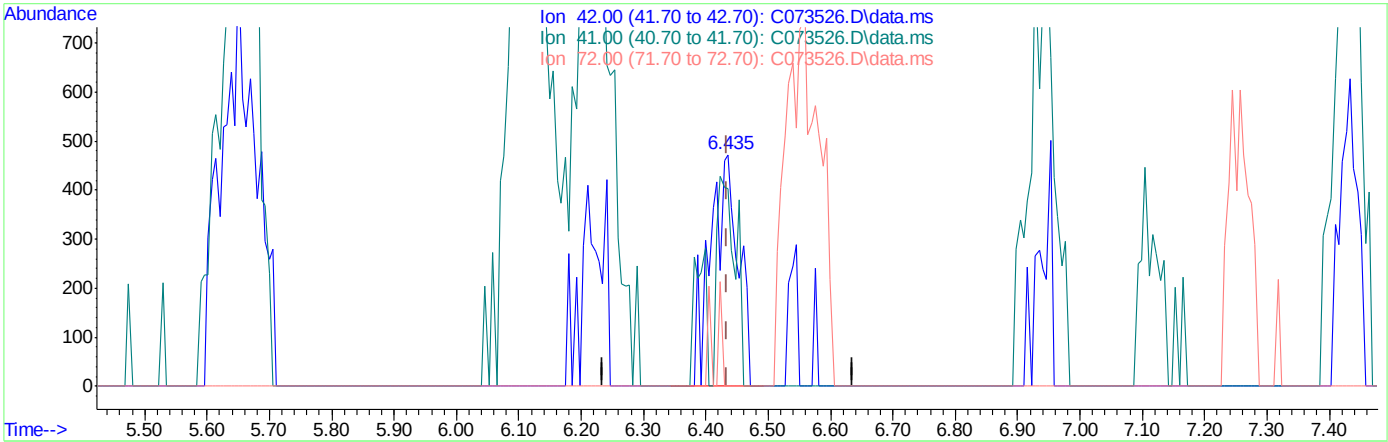
response 828

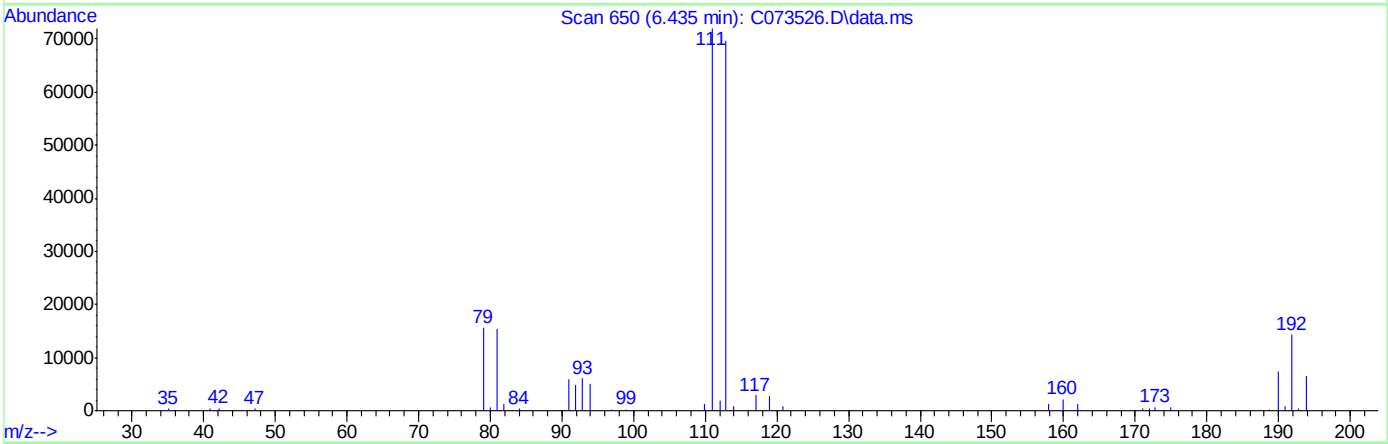
Ion	Exp%	Act%
42.00	100	100
41.00	59.90	85.38#
72.00	56.20	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(30) Tetrahydrofuran

6.435min (+0.000) 1.13ug/L m

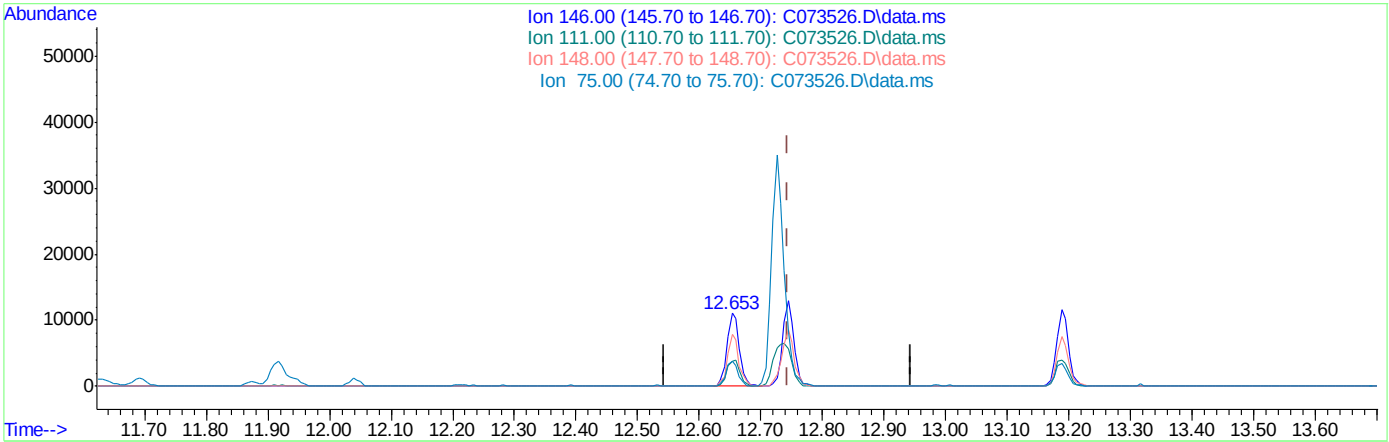
response 1487

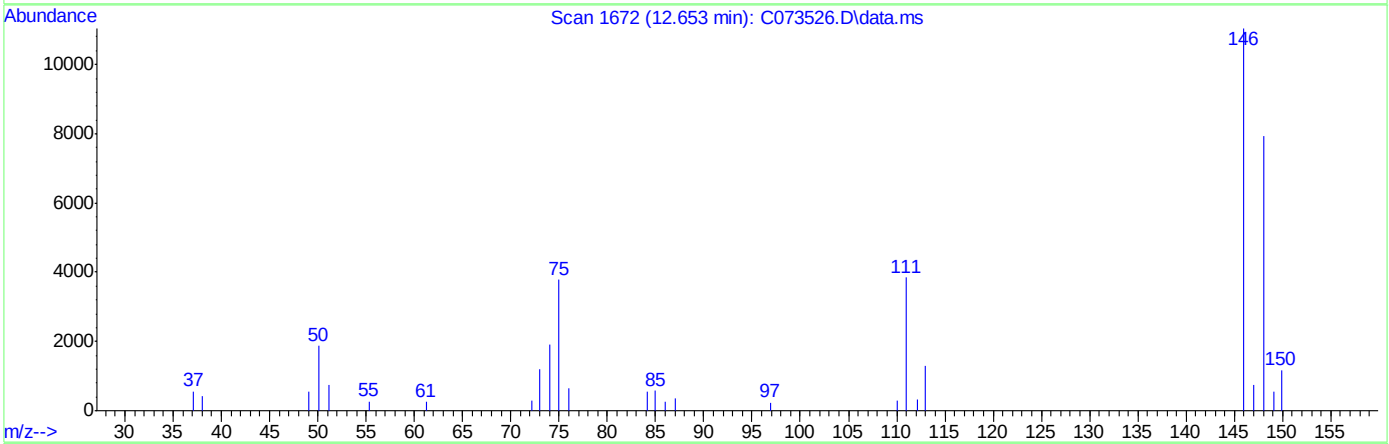
Ion	Exp%	Act%
42.00	100	100
41.00	59.90	85.38#
72.00	56.20	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(84) 1,4-Dichlorobenzene

12.653min (-0.091) 0.93ug/L

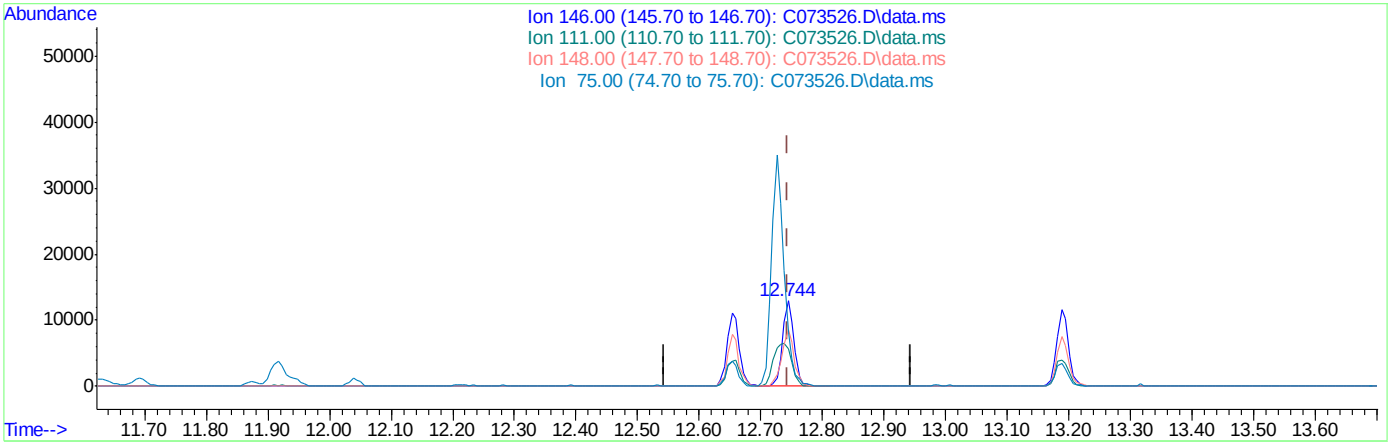
response 15164

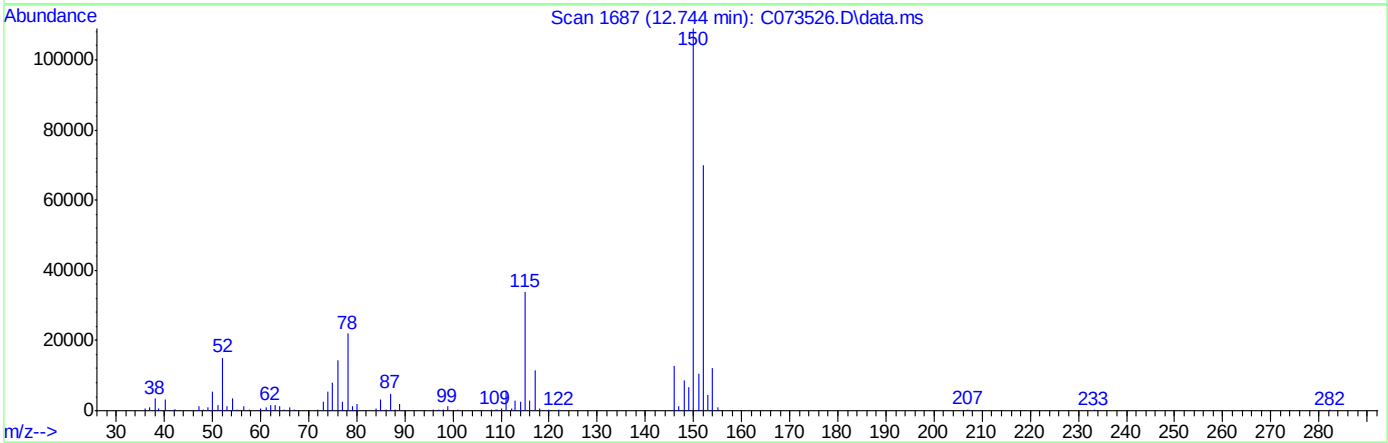
Ion	Exp%	Act%
146.00	100	100
111.00	36.40	34.89
148.00	62.50	71.97
75.00	29.00	34.24

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(84) 1,4-Dichlorobenzene

12.744min (-0.000) 1.02ug/L m

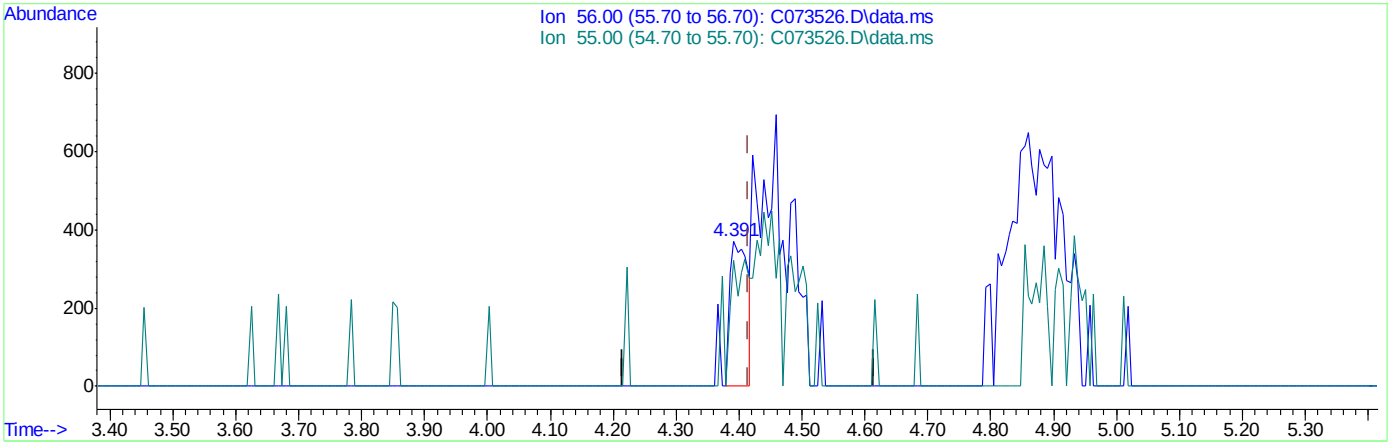
response 16654

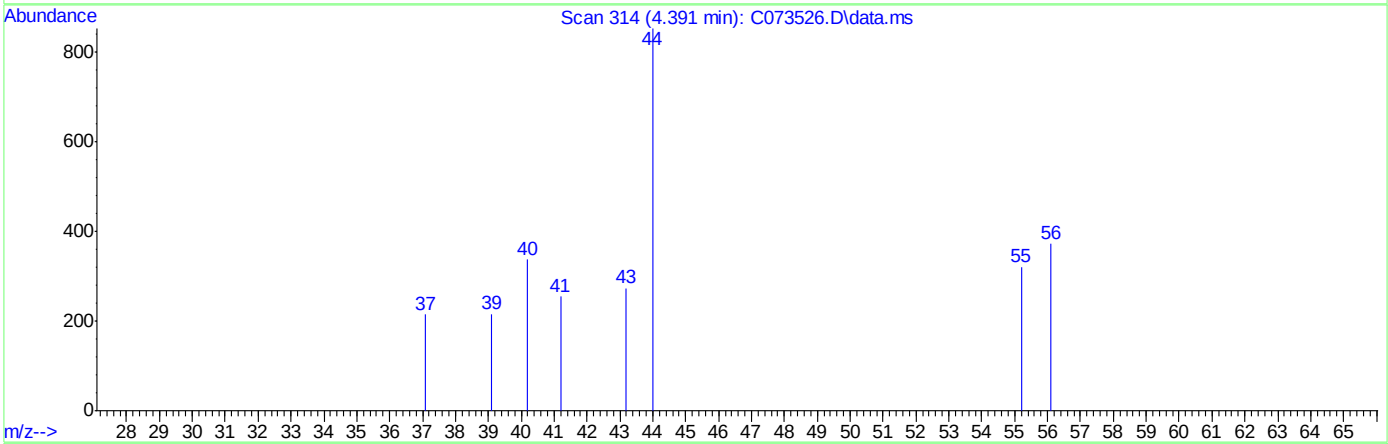
Ion	Exp%	Act%
146.00	100	100
111.00	36.40	43.45
148.00	62.50	66.74
75.00	29.00	63.06#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(94) acrolein

4.391min (-0.024) 3.37ug/L

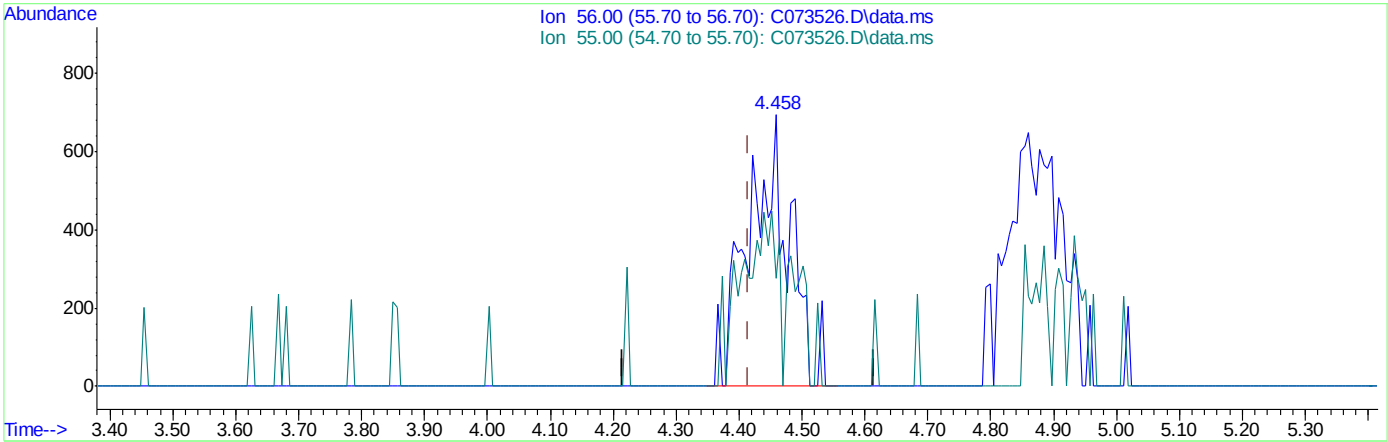
response 720

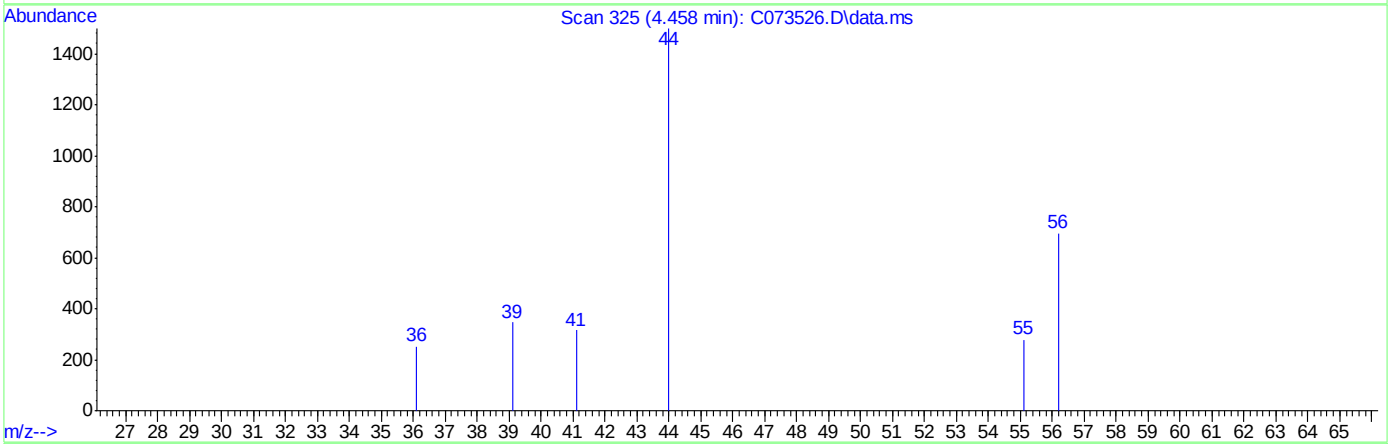
Ion	Exp%	Act%
56.00	100	100
55.00	70.00	86.29
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:02:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(94) acrolein

4.458min (+0.043) 14.65ug/L m

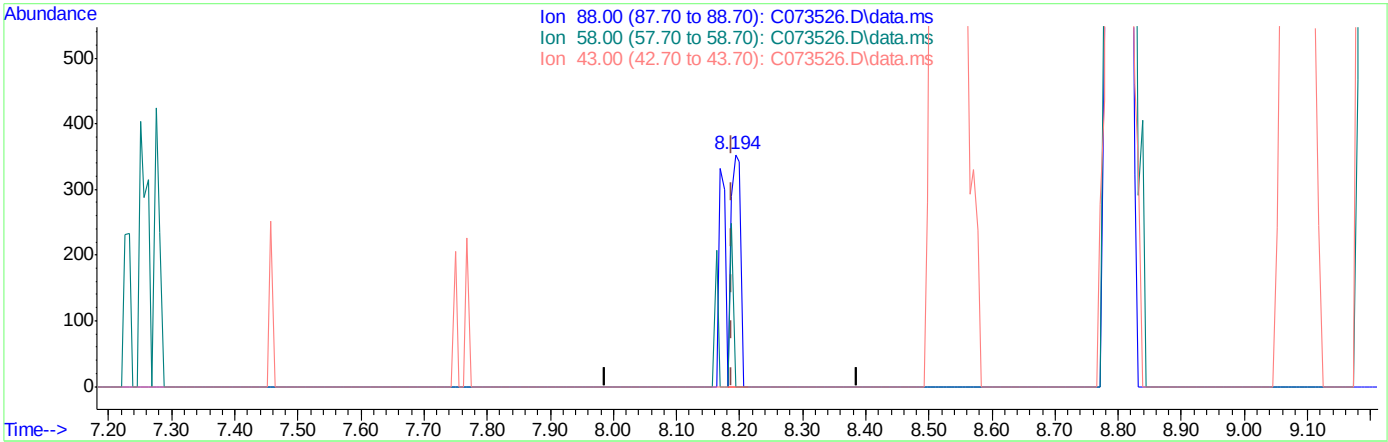
response 3120

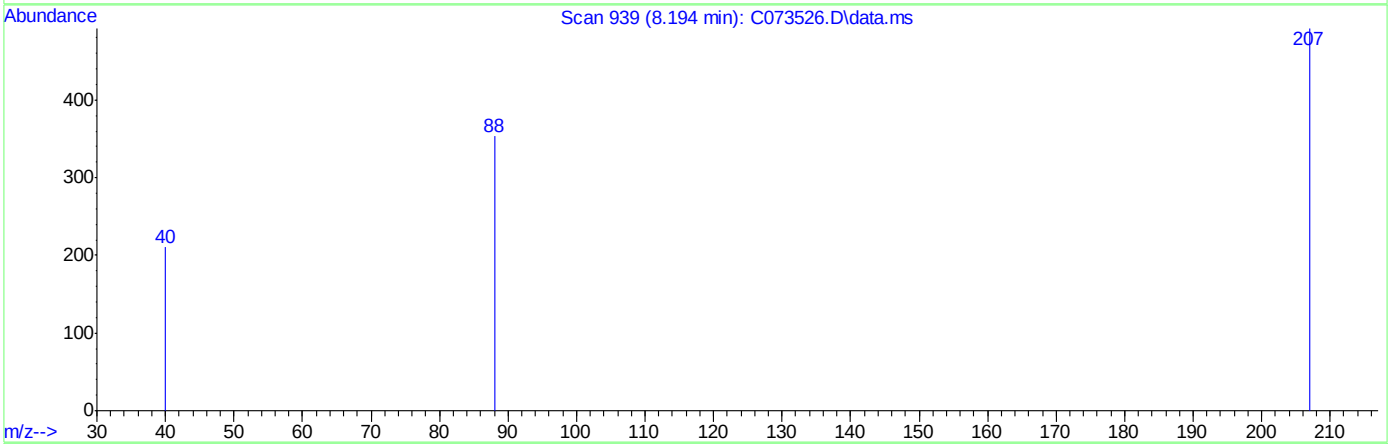
Ion	Exp%	Act%
56.00	100	100
55.00	70.00	39.86#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:05:47 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(97) 1,4-Dioxane

8.194min (+0.006) 7.38ug/L

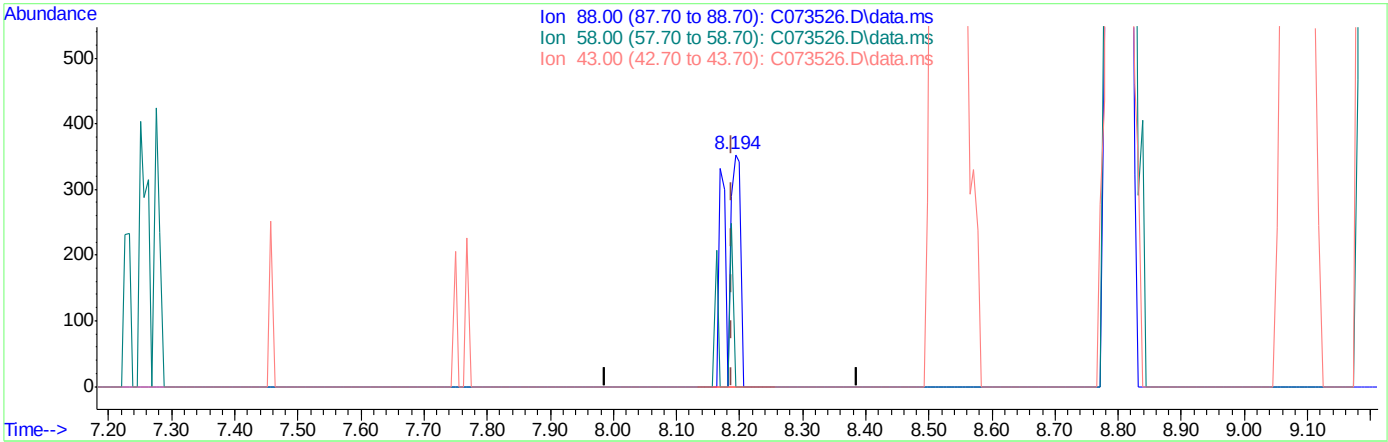
response 359

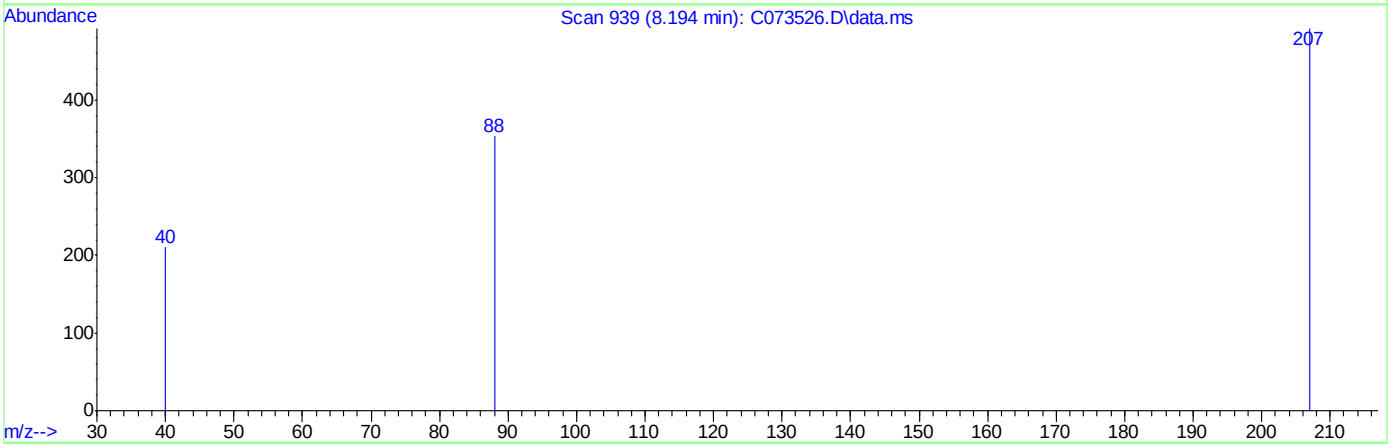
Ion	Exp%	Act%
88.00	100	100
58.00	57.10	0.00#
43.00	27.80	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073526.D
Acq On : 14 Sep 2010 10:42 am
Operator : AnaJ
Sample : IC2932-1
Misc : MS15393,VC2932,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 14 11:05:47 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073526.D\data.ms

(97) 1,4-Dioxane

8.194min (+0.006) 12.13ug/L m

response 590

Ion	Exp%	Act%
88.00	100	100
58.00	57.10	0.00#
43.00	27.80	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 09:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:28:03 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.256	96	808621	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	802277	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	543254	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.926	65	112676	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.441	113	258822	54.21	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 108.42%				
38) 1,2-Dichloroethane-d4	6.983	65	371167	55.20	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 110.40%				
48) Toluene-d8	8.802	98	906264	49.35	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 98.70%				
69) 4-Bromofluorobenzene	11.570	95	450600	50.54	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 101.08%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.621	85	43509	5.31	ug/L		96
3) Chloromethane	2.761	50	36038	5.58	ug/L		96
4) Vinyl Chloride	2.882	62	30167	5.69	ug/L		97
5) Bromomethane	3.259	94	25497	5.87	ug/L		95
6) Chloroethane	3.393	64	16862	6.01	ug/L		95
7) Trichlorofluoromethane	3.527	101	67594	5.32	ug/L		89
8) Ethyl Ether	3.825	59	21765	6.05	ug/L		89
9) 1,2-Dichlorotrifluoroe...	4.038	67	29941	5.48	ug/L		84
10) 1,1-Dichloroethene	4.063	61	45902	6.45	ug/L		95
11) Freon 113	4.148	101	34011	6.77	ug/L		91
12) Carbon Disulfide	4.129	76	78694	5.90	ug/L		91
13) Iodomethane	4.227	142	56509	6.06	ug/L		97
14) Methylene Chloride	4.659	49	34765	5.99	ug/L		93
15) Acetone	4.707	58	10193m	28.00	ug/L		
16) Methyl acetate	4.799	74	19636	27.91	ug/L	#	58
17) trans-1,2-Dichloroethene	4.823	61	41473	6.25	ug/L		95
18) Hexane	4.872	56	20547	6.02	ug/L	#	92
19) Methyl Tert Butyl Ether	4.920	73	93758	5.96	ug/L		98
20) Di-isopropyl ether	5.285	45	68632	5.59	ug/L		97
21) 1,1-Dichloroethane	5.443	63	49526	6.10	ug/L		97
22) Acrylonitrile	5.492	53	34385	27.38	ug/L		99
23) ETBE	5.650	59	90140	5.91	ug/L		97
24) Vinyl acetate	5.656	43	135292	27.72	ug/L		98
25) cis-1,2-Dichloroethene	5.991	96	27531	5.66	ug/L		93
26) 2,2-Dichloropropane	6.125	77	58392	6.66	ug/L		97
27) Bromochloromethane	6.198	128	17962	5.79	ug/L		91
28) Cyclohexane	6.228	56	36040	5.87	ug/L		95
29) Chloroform	6.259	83	65674	6.11	ug/L		99
30) Tetrahydrofuran	6.435	42	6198	5.02	ug/L		88
32) Carbon Tetrachloride	6.429	117	72310	6.64	ug/L		95
33) 1,1,1-Trichloroethane	6.496	97	67548	6.42	ug/L		99
34) 2-Butanone	6.557	43	52415	28.40	ug/L		97
35) 1,1-Dichloropropene	6.605	75	44316	6.15	ug/L		96
36) Benzene	6.855	78	107136	5.72	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:28:03 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.940	73	79603	5.52	ug/L		97
39) 1,2-Dichloroethane	7.050	62	61516	6.36	ug/L		98
40) Trichloroethene	7.421	95	34930	6.02	ug/L		95
41) Methylcyclohexane	7.433	83	41358	5.87	ug/L		98
42) Dibromomethane	7.853	93	21791	6.03	ug/L		98
43) 1,2-Dichloropropane	7.944	63	24860	5.60	ug/L		94
44) Bromodichloromethane	7.999	83	51604	6.04	ug/L		99
45) 2-Chloroethyl vinyl ether	8.528	63	85870	27.42	ug/L		96
46) cis-1,3-Dichloropropene	8.613	75	50255	5.67	ug/L		94
49) Toluene	8.850	91	126279	5.39	ug/L		100
50) 2-Nitropropane	9.081	41	50277	28.13	ug/L		93
51) 4-Methyl-2-pentanone	9.203	43	110475	27.39	ug/L		98
52) trans-1,3-Dichloropropene	9.252	75	51182	5.73	ug/L		98
53) Tetrachloroethene	9.240	166	42713	5.95	ug/L		97
54) 1,1,2-Trichloroethane	9.416	83	21959	5.44	ug/L		96
55) Dibromochloromethane	9.605	129	41485	5.72	ug/L		97
56) 1,3-Dichloropropane	9.696	76	47157	5.49	ug/L		95
57) 1,2-Dibromoethane	9.860	107	31472	5.55	ug/L		99
58) 2-hexanone	10.024	43	75717	22.98	ug/L		94
59) 1-Chlorohexane	10.316	91	41419	5.68	ug/L		96
60) Ethylbenzene	10.377	91	161221	5.67	ug/L		99
61) Chlorobenzene	10.371	112	93336	5.57	ug/L		93
62) 1,1,1,2-Tetrachloroethane	10.426	131	40684	5.89	ug/L		96
63) m,p-Xylene	10.517	91	257192	11.43	ug/L		97
64) o-Xylene	10.955	91	127726	5.62	ug/L		98
65) Styrene	11.010	104	92160	5.31	ug/L		97
66) Bromoform	11.053	173	29740	5.58	ug/L		98
67) Isopropylbenzene	11.265	105	135407	4.89	ug/L		99
70) n-Propylbenzene	11.685	91	177705	5.55	ug/L		96
71) Bromobenzene	11.691	156	48501	5.49	ug/L		94
72) 1,1,2,2-Tetrachloroethane	11.758	83	32215	5.25	ug/L		97
73) 1,3,5-Trimethylbenzene	11.880	105	140548	5.64	ug/L		98
74) 2-Chlorotoluene	11.868	91	131784	5.62	ug/L		97
75) trans-1,4-Dichloro-2-B...	11.941	53	8578	4.68	ug/L		91
76) 1,2,3-Trichloropropane	11.916	110	13569	5.60	ug/L		96
77) Cyclohexanone	11.977	55	3804	22.78	ug/L		97
78) 4-Chlorotoluene	12.038	91	122121	5.63	ug/L		99
79) tert-Butylbenzene	12.215	91	87461	5.93	ug/L		98
80) 1,2,4-Trimethylbenzene	12.288	105	140920	5.53	ug/L		98
81) sec-Butylbenzene	12.397	105	165144	5.60	ug/L		96
82) 4-Isopropyltoluene	12.537	119	144165	5.54	ug/L		99
83) 1,3-Dichlorobenzene	12.653	146	87262	5.43	ug/L		98
84) 1,4-Dichlorobenzene	12.744	146	90978	5.45	ug/L		95
85) n-Butylbenzene	12.981	92	71683	5.48	ug/L		93
86) Benzyl Chloride	12.993	126	17109	5.13	ug/L	#	87
87) 1,2-Dichlorobenzene	13.188	146	85558	5.51	ug/L		98
88) 1,2-Dibromo-3-Chloropr...	13.967	75	8857	5.52	ug/L		92
89) Hexachlorobutadiene	14.532	225	31182	6.27	ug/L		94
90) 1,2,4-Trichlorobenzene	14.575	180	65388	5.56	ug/L		97
91) Naphthalene	14.861	128	128682	5.04	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:28:03 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

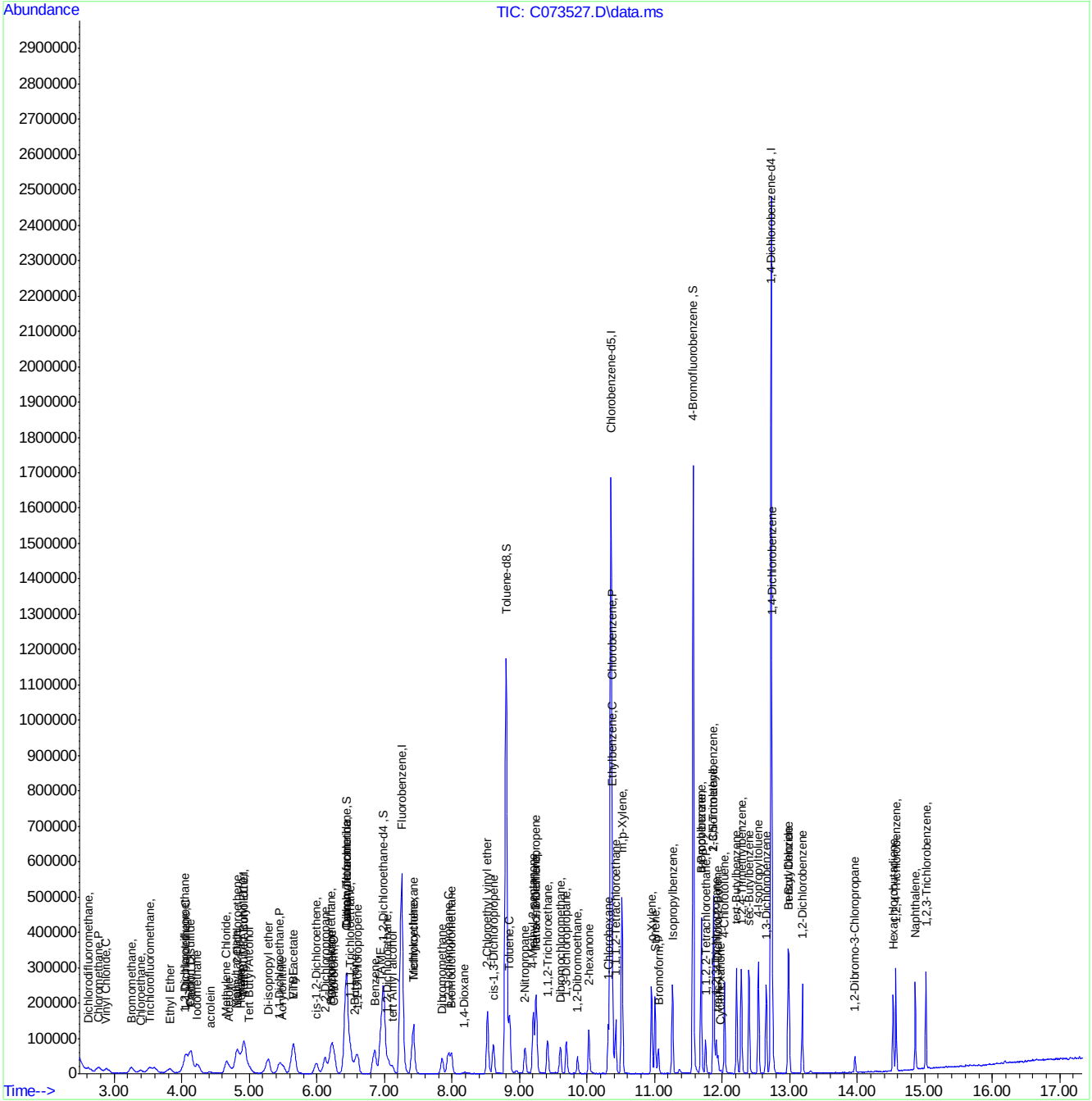
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	58695	5.33	ug/L	99
94) acrolein	4.428	56	7067m	32.47	ug/L	
95) Tert Butyl Alcohol	5.005	59	27160	53.46	ug/L	95
96) tert Amyl alcohol	7.110	59	19420	51.84	ug/L	89
97) 1,4-Dioxane	8.181	88	4954	99.26	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:28:03 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

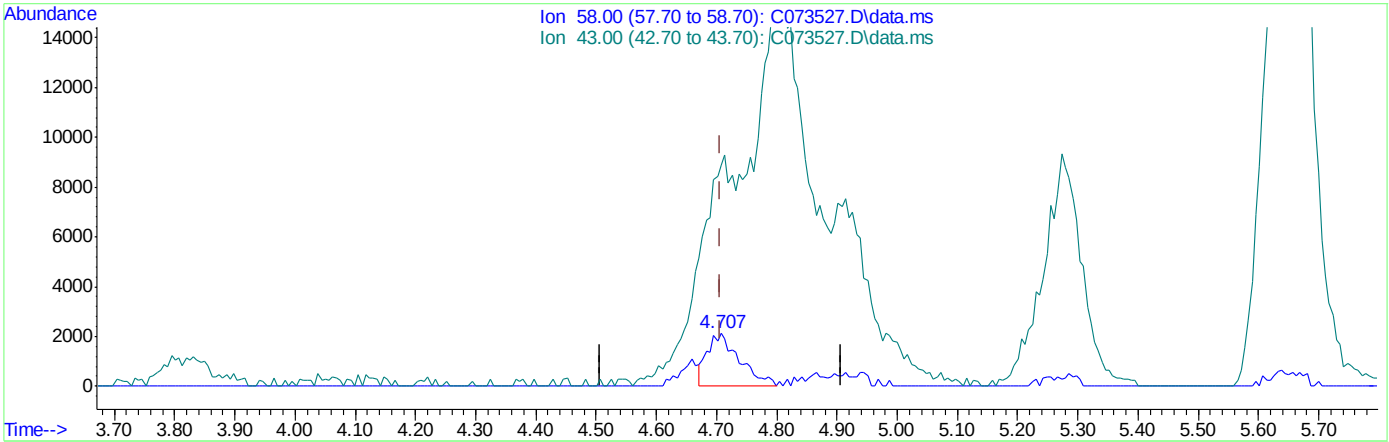


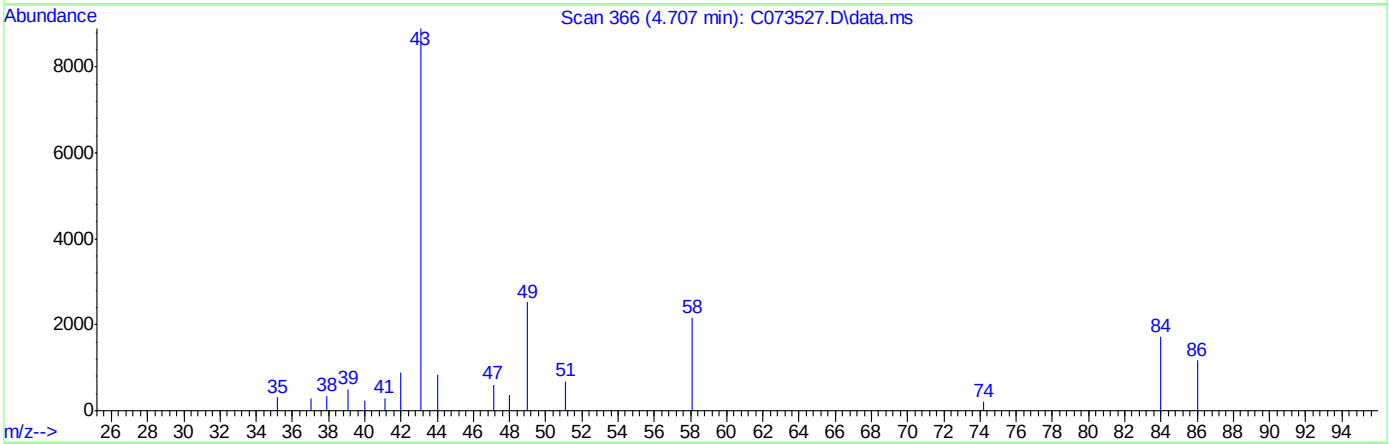
8260c.m Tue Sep 14 14:25:51 2010 Page: 4

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:25:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073527.D\data.ms

(15) Acetone

4.707min (+0.000) 21.52ug/L

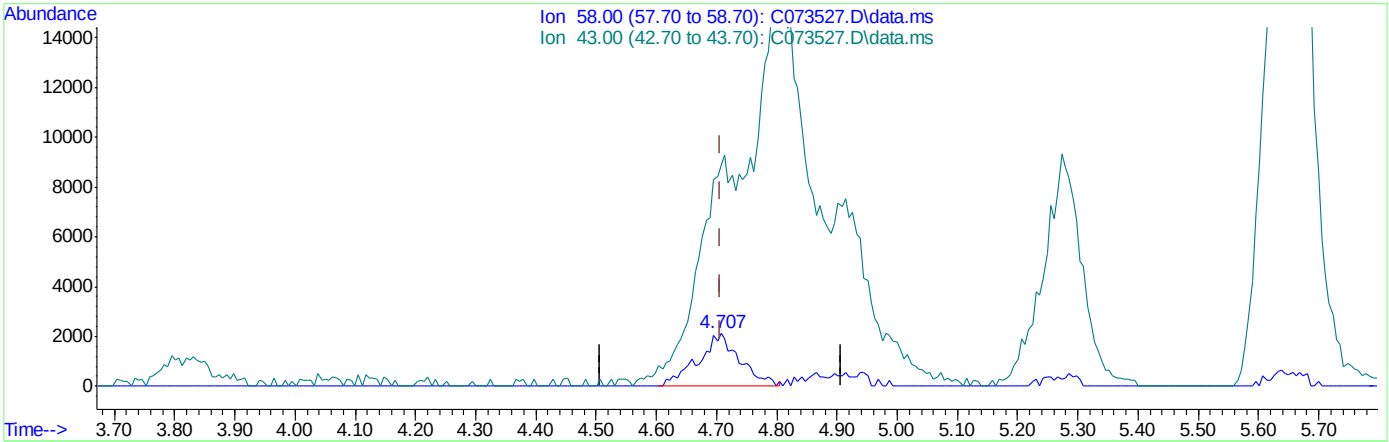
response 7853

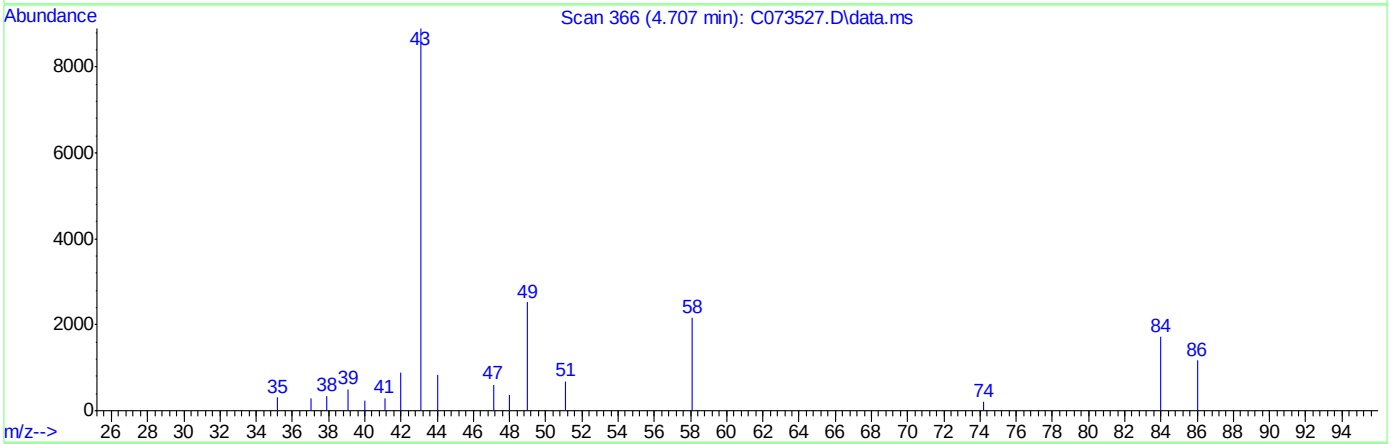
Ion	Exp%	Act%
58.00	100	100
43.00	469.80	174.19#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:25:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073527.D\data.ms

(15) Acetone

4.707min (+0.000) 28.00ug/L m

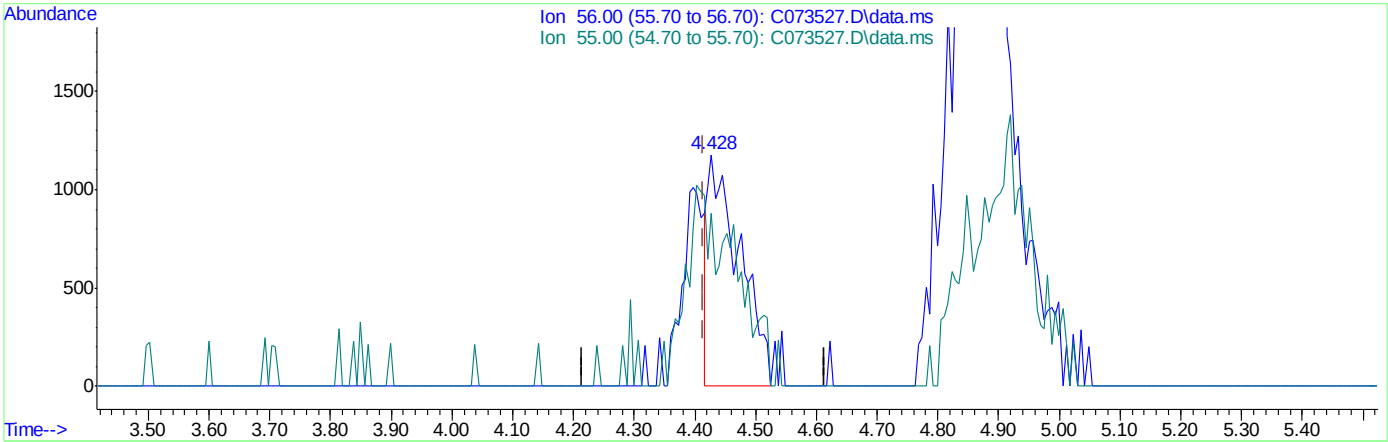
response 10193

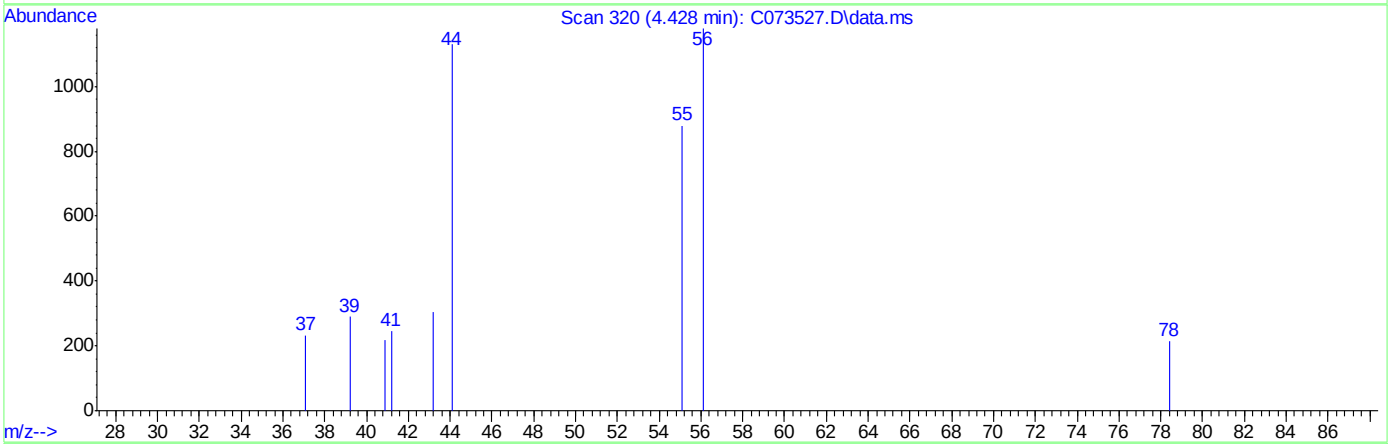
Ion	Exp%	Act%
58.00	100	100
43.00	469.80	413.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:25:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073527.D\data.ms

(94) acrolein

4.428min (+0.013) 19.61ug/L

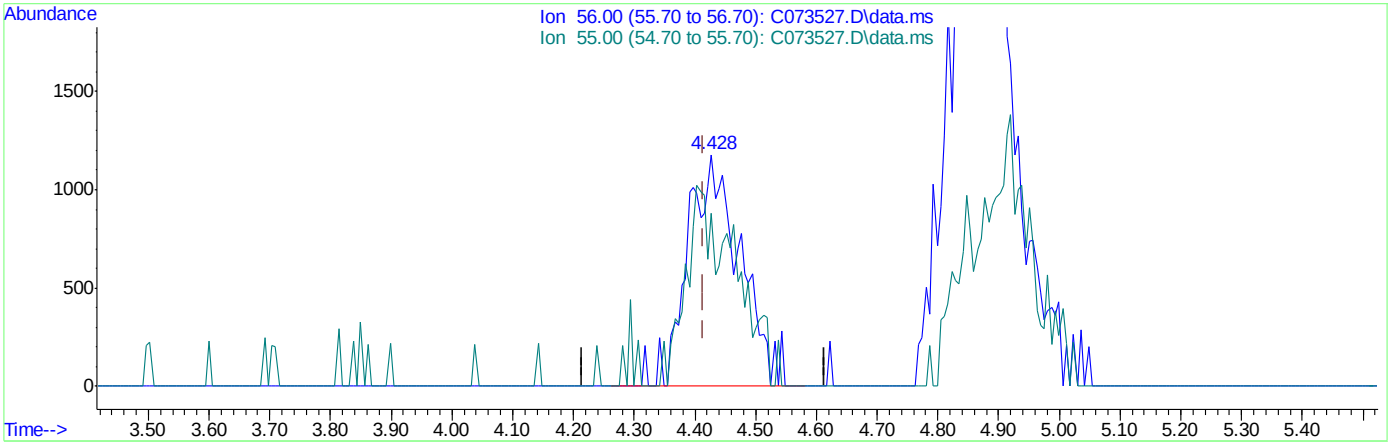
response 4279

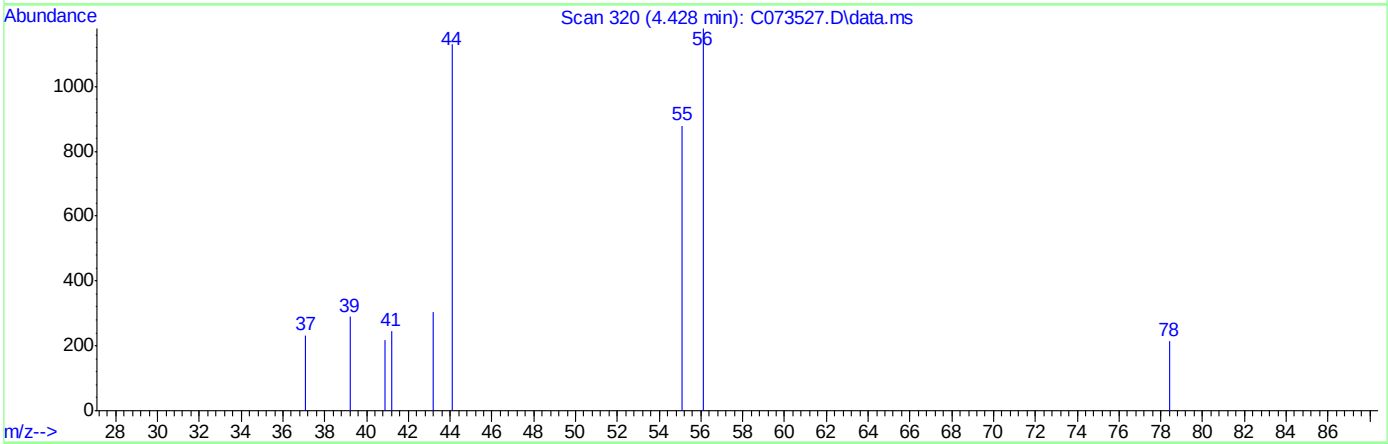
Ion	Exp%	Act%
56.00	100	100
55.00	70.00	74.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073527.D
Acq On : 14 Sep 2010 11:07 am
Operator : AnaJ
Sample : IC2932-2
Misc : MS15393,VC2932,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 11:25:44 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073527.D\data.ms

(94) acrolein

4.428min (+0.013) 32.47ug/L m

response 7067

Ion	Exp%	Act%
56.00	100	100
55.00	70.00	74.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073528.D
Acq On : 14 Sep 2010 11:31 am
Operator : AnaJ
Sample : IC2932-3
Misc : MS15393,VC2932,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 11:51:19 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	840846	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	859698	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	606626	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.920	65	116082	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.447	113	263188	53.01	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 106.02%				
38) 1,2-Dichloroethane-d4	6.989	65	387152	55.37	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 110.74%				
48) Toluene-d8	8.802	98	962802	48.93	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 97.86%				
69) 4-Bromofluorobenzene	11.570	95	485110	48.73	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 97.46%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.627	85	179535	22.27	ug/L		96
3) Chloromethane	2.779	50	129654	20.18	ug/L		99
4) Vinyl Chloride	2.907	62	125615	22.78	ug/L		96
5) Bromomethane	3.266	94	98590	21.82	ug/L		94
6) Chloroethane	3.400	64	63709	21.82	ug/L		94
7) Trichlorofluoromethane	3.521	101	280148	22.31	ug/L		100
8) Ethyl Ether	3.813	59	81763	21.86	ug/L		93
9) 1,2-Dichlorotrifluoroe...	4.044	67	114906	21.00	ug/L		97
10) 1,1-Dichloroethene	4.063	61	176277	23.84	ug/L		95
11) Freon 113	4.142	101	129382	24.77	ug/L		96
12) Carbon Disulfide	4.130	76	304531	21.94	ug/L		98
13) Iodomethane	4.233	142	220035	22.69	ug/L		93
14) Methylene Chloride	4.659	49	121873	20.96	ug/L		98
15) Acetone	4.701	58	36430	99.01	ug/L		96
16) Methyl acetate	4.805	74	77010	105.25	ug/L	#	76
17) trans-1,2-Dichloroethene	4.817	61	155895	22.60	ug/L		94
18) Hexane	4.872	56	77862	21.94	ug/L	#	88
19) Methyl Tert Butyl Ether	4.920	73	367330	22.45	ug/L		95
20) Di-isopropyl ether	5.273	45	273065	21.40	ug/L		99
21) 1,1-Dichloroethane	5.438	63	186911	22.12	ug/L		97
22) Acrylonitrile	5.498	53	134264	102.80	ug/L		94
23) ETBE	5.657	59	352555	22.25	ug/L		98
24) Vinyl acetate	5.651	43	557672	109.87	ug/L		98
25) cis-1,2-Dichloroethene	5.997	96	110205	21.80	ug/L		99
26) 2,2-Dichloropropane	6.119	77	223032	24.45	ug/L		99
27) Bromochloromethane	6.198	128	70103	21.75	ug/L		96
28) Cyclohexane	6.222	56	140609	22.01	ug/L		96
29) Chloroform	6.253	83	253066	22.65	ug/L		97
30) Tetrahydrofuran	6.429	42	24194	19.54	ug/L		92
32) Carbon Tetrachloride	6.429	117	286233	25.29	ug/L		99
33) 1,1,1-Trichloroethane	6.496	97	267499	24.45	ug/L		99
34) 2-Butanone	6.551	43	202454	105.49	ug/L		100
35) 1,1-Dichloropropene	6.600	75	172733	23.07	ug/L		97
36) Benzene	6.855	78	414408	21.26	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073528.D
Acq On : 14 Sep 2010 11:31 am
Operator : AnaJ
Sample : IC2932-3
Misc : MS15393,VC2932,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 11:51:19 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
37) TAME	6.940	73	337349	22.51 ug/L		99
39) 1,2-Dichloroethane	7.056	62	239035	23.77 ug/L		98
40) Trichloroethene	7.427	95	136502	22.63 ug/L		94
41) Methylcyclohexane	7.433	83	160339	21.90 ug/L		94
42) Dibromomethane	7.847	93	84544	22.51 ug/L		96
43) 1,2-Dichloropropane	7.950	63	98690	21.38 ug/L		92
44) Bromodichloromethane	7.999	83	208719	23.50 ug/L		97
45) 2-Chloroethyl vinyl ether	8.528	63	355623	109.20 ug/L		99
46) cis-1,3-Dichloropropene	8.613	75	208738	22.66 ug/L		99
49) Toluene	8.850	91	514410	20.49 ug/L		100
50) 2-Nitropropane	9.082	41	221772	115.77 ug/L		98
51) 4-Methyl-2-pentanone	9.203	43	446413	103.29 ug/L		97
52) trans-1,3-Dichloropropene	9.252	75	211713	22.12 ug/L		96
53) Tetrachloroethene	9.246	166	169778	22.07 ug/L		98
54) 1,1,2-Trichloroethane	9.416	83	89963	20.81 ug/L		96
55) Dibromochloromethane	9.605	129	178521	22.98 ug/L		99
56) 1,3-Dichloropropane	9.696	76	192074	20.87 ug/L		97
57) 1,2-Dibromoethane	9.860	107	129631	21.32 ug/L		98
58) 2-hexanone	10.025	43	323111	94.18 ug/L		98
59) 1-Chlorohexane	10.317	91	168773	21.60 ug/L		95
60) Ethylbenzene	10.377	91	647184	21.24 ug/L		100
61) Chlorobenzene	10.371	112	380336	21.18 ug/L		96
62) 1,1,1,2-Tetrachloroethane	10.426	131	166324	22.46 ug/L		96
63) m,p-Xylene	10.517	91	1053345	43.68 ug/L		99
64) o-Xylene	10.955	91	535082	21.99 ug/L		98
65) Styrene	11.010	104	401271	21.59 ug/L		98
66) Bromoform	11.059	173	130719	22.88 ug/L		98
67) Isopropylbenzene	11.266	105	588007	20.19 ug/L		98
70) n-Propylbenzene	11.685	91	747415	20.89 ug/L		97
71) Bromobenzene	11.692	156	204485	20.75 ug/L		98
72) 1,1,2,2-Tetrachloroethane	11.758	83	136578	19.93 ug/L		99
73) 1,3,5-Trimethylbenzene	11.880	105	592904	21.32 ug/L		100
74) 2-Chlorotoluene	11.868	91	557626	21.31 ug/L		98
75) trans-1,4-Dichloro-2-B...	11.941	53	45944	22.43 ug/L		89
76) 1,2,3-Trichloropropane	11.917	110	58435	21.61 ug/L		98
77) Cyclohexanone	11.971	55	16491	89.81 ug/L		91
78) 4-Chlorotoluene	12.038	91	506822	20.91 ug/L		97
79) tert-Butylbenzene	12.215	91	360082	21.86 ug/L		99
80) 1,2,4-Trimethylbenzene	12.288	105	609540	21.43 ug/L		99
81) sec-Butylbenzene	12.397	105	701417	21.31 ug/L		99
82) 4-Isopropyltoluene	12.537	119	628566	21.63 ug/L		100
83) 1,3-Dichlorobenzene	12.653	146	374908	20.90 ug/L		98
84) 1,4-Dichlorobenzene	12.744	146	392049	21.04 ug/L		98
85) n-Butylbenzene	12.981	92	316762	21.67 ug/L		95
86) Benzyl Chloride	12.993	126	81861	21.99 ug/L	#	78
87) 1,2-Dichlorobenzene	13.188	146	370117	21.34 ug/L		100
88) 1,2-Dibromo-3-Chloropr...	13.967	75	38988	21.78 ug/L		98
89) Hexachlorobutadiene	14.533	225	125390	22.57 ug/L		89
90) 1,2,4-Trichlorobenzene	14.575	180	286958	21.87 ug/L		99
91) Naphthalene	14.861	128	599619	21.03 ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073528.D
Acq On : 14 Sep 2010 11:31 am
Operator : AnaJ
Sample : IC2932-3
Misc : MS15393,VC2932,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 11:51:19 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

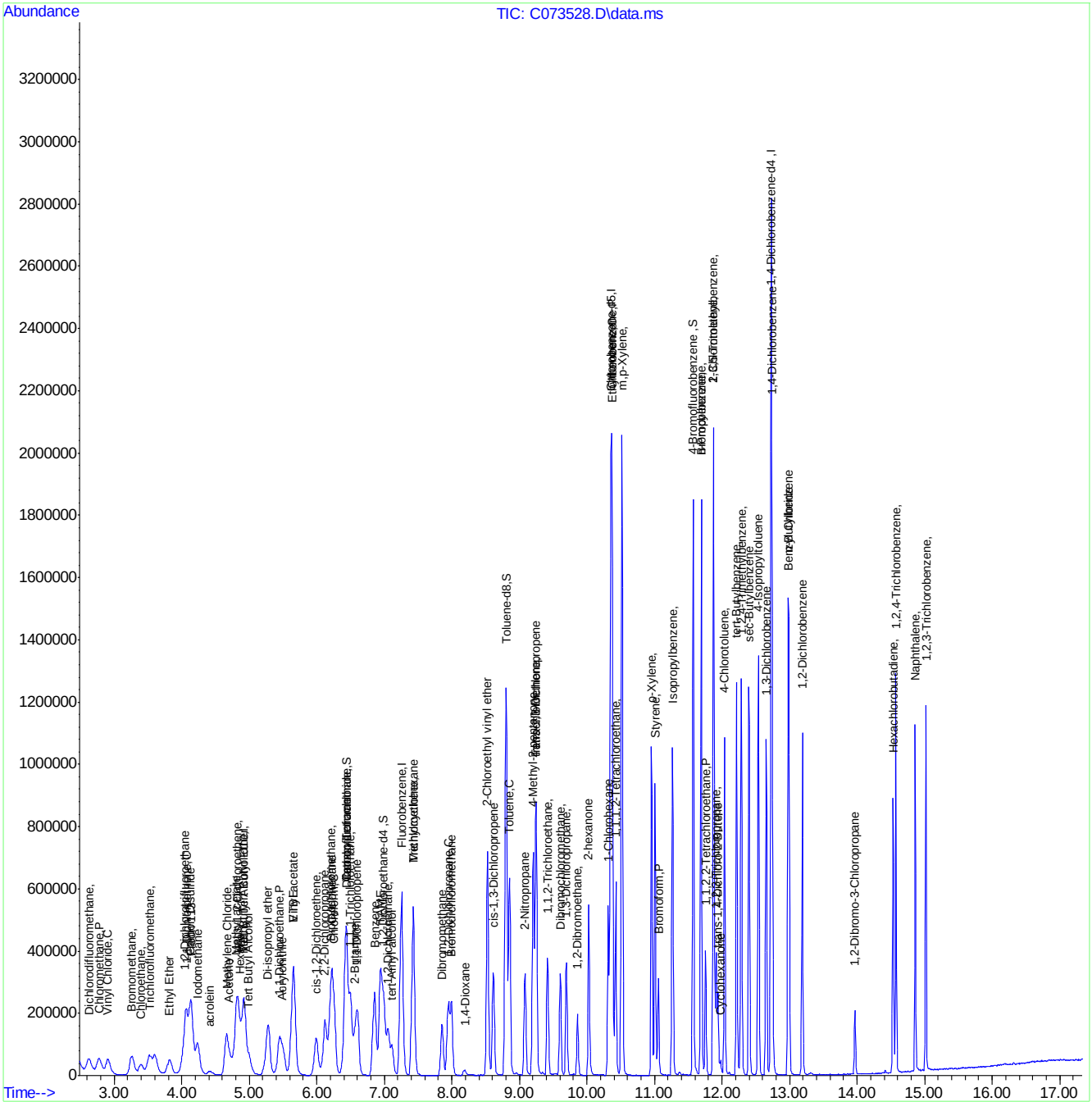
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	263025	21.41	ug/L	99
94) acrolein	4.416	56	24158	109.51	ug/L	83
95) Tert Butyl Alcohol	4.993	59	104830	200.29	ug/L	98
96) tert Amyl alcohol	7.111	59	78806	204.21	ug/L	95
97) 1,4-Dioxane	8.193	88	20416	397.04	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073528.D
Acq On : 14 Sep 2010 11:31 am
Operator : AnaJ
Sample : IC2932-3
Misc : MS15393,VC2932,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 11:51:19 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073529.D
Acq On : 14 Sep 2010 11:56 am
Operator : AnaJ
Sample : ICC2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 12:14:16 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.251	96	901876	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	932384	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	664020	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.921	65	130434	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.435	113	277086	52.03	ug/L		-0.01
Spiked Amount 50.000	Range 87 - 116		Recovery = 104.06%				
38) 1,2-Dichloroethane-d4	6.983	65	404638	53.96	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 107.92%				
48) Toluene-d8	8.796	98	1031545	48.34	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 96.68%				
69) 4-Bromofluorobenzene	11.570	95	520577	47.77	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 95.54%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.615	85	303623	36.95	ug/L		96
3) Chloromethane	2.773	50	252095	38.85	ug/L		99
4) Vinyl Chloride	2.919	62	256344	43.34	ug/L		98
5) Bromomethane	3.254	94	206970	42.71	ug/L		94
6) Chloroethane	3.388	64	134942	43.09	ug/L		98
7) Trichlorofluoromethane	3.594	101	559774	44.61	ug/L		98
8) Ethyl Ether	3.807	59	177271	44.18	ug/L		93
9) 1,2-Dichlorotrifluoroe...	4.045	67	241057	43.44	ug/L		96
10) 1,1-Dichloroethene	4.057	61	366129	46.16	ug/L		96
11) Freon 113	4.142	101	250932	44.80	ug/L		95
12) Carbon Disulfide	4.118	76	644047	43.26	ug/L		94
13) Iodomethane	4.233	142	471537	45.34	ug/L		97
14) Methylene Chloride	4.653	49	249646	42.29	ug/L		99
15) Acetone	4.696	58	76606	202.65	ug/L	#	87
16) Methyl acetate	4.799	74	165832	211.31	ug/L	#	84
17) trans-1,2-Dichloroethene	4.811	61	315513	42.64	ug/L		97
18) Hexane	4.872	56	155941	40.97	ug/L		98
19) Methyl Tert Butyl Ether	4.921	73	771368	43.96	ug/L		99
20) Di-isopropyl ether	5.280	45	563645	41.19	ug/L		99
21) 1,1-Dichloroethane	5.444	63	385819	42.58	ug/L		98
22) Acrylonitrile	5.493	53	289786	206.86	ug/L		97
23) ETBE	5.651	59	736844	43.35	ug/L		97
24) Vinyl acetate	5.645	43	1184588	217.59	ug/L		98
25) cis-1,2-Dichloroethene	5.997	96	236188	43.56	ug/L		97
26) 2,2-Dichloropropane	6.119	77	451669	46.16	ug/L		98
27) Bromochloromethane	6.198	128	151231	43.75	ug/L		97
28) Cyclohexane	6.216	56	290748	42.43	ug/L		97
29) Chloroform	6.253	83	526203	43.91	ug/L		99
30) Tetrahydrofuran	6.423	42	48761	38.57	ug/L		91
32) Carbon Tetrachloride	6.423	117	581855	47.93	ug/L		98
33) 1,1,1-Trichloroethane	6.490	97	546851	46.60	ug/L		99
34) 2-Butanone	6.545	43	443652	215.52	ug/L		99
35) 1,1-Dichloropropene	6.600	75	358722	44.67	ug/L		97
36) Benzene	6.849	78	880171	42.10	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073529.D
Acq On : 14 Sep 2010 11:56 am
Operator : AnaJ
Sample : ICC2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 12:14:16 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.934	73	728082	45.30	ug/L		98
39) 1,2-Dichloroethane	7.050	62	484642	44.92	ug/L		99
40) Trichloroethene	7.421	95	287333	44.42	ug/L		97
41) Methylcyclohexane	7.433	83	341523	43.49	ug/L		99
42) Dibromomethane	7.853	93	182978	45.42	ug/L		94
43) 1,2-Dichloropropane	7.944	63	206323	41.66	ug/L		95
44) Bromodichloromethane	7.993	83	442693	46.46	ug/L		99
45) 2-Chloroethyl vinyl ether	8.528	63	778009	222.73	ug/L		99
46) cis-1,3-Dichloropropene	8.613	75	445476	45.09	ug/L		98
49) Toluene	8.851	91	1126567	41.38	ug/L		100
50) 2-Nitropropane	9.082	41	493232	237.42	ug/L		97
51) 4-Methyl-2-pentanone	9.204	43	1004087	214.22	ug/L		98
52) trans-1,3-Dichloropropene	9.252	75	456735	44.01	ug/L		99
53) Tetrachloroethene	9.246	166	361776	43.36	ug/L		99
54) 1,1,2-Trichloroethane	9.416	83	195891	41.79	ug/L		98
55) Dibromochloromethane	9.605	129	381041	45.22	ug/L		98
56) 1,3-Dichloropropane	9.696	76	420141	42.09	ug/L		99
57) 1,2-Dibromoethane	9.861	107	284346	43.13	ug/L		99
58) 2-hexanone	10.025	43	723533	203.57	ug/L		98
59) 1-Chlorohexane	10.317	91	363867	42.93	ug/L		97
60) Ethylbenzene	10.378	91	1418816	42.93	ug/L		99
61) Chlorobenzene	10.372	112	829268	42.57	ug/L		98
62) 1,1,1,2-Tetrachloroethane	10.426	131	360742	44.91	ug/L		97
63) m,p-Xylene	10.518	91	2309708	88.32	ug/L		100
64) o-Xylene	10.956	91	1171658	44.39	ug/L		100
65) Styrene	11.010	104	901463	44.72	ug/L		99
66) Bromoform	11.059	173	296872	47.90	ug/L		98
67) Isopropylbenzene	11.266	105	1277510	41.59	ug/L		99
70) n-Propylbenzene	11.686	91	1630543	41.64	ug/L		99
71) Bromobenzene	11.692	156	451410	41.84	ug/L		97
72) 1,1,2,2-Tetrachloroethane	11.759	83	305515	40.73	ug/L		98
73) 1,3,5-Trimethylbenzene	11.880	105	1293490	42.49	ug/L		99
74) 2-Chlorotoluene	11.868	91	1194758	41.72	ug/L		99
75) trans-1,4-Dichloro-2-B...	11.941	53	110012	49.06	ug/L		92
76) 1,2,3-Trichloropropane	11.911	110	129251	43.67	ug/L		96
77) Cyclohexanone	11.978	55	38666	197.33	ug/L		93
78) 4-Chlorotoluene	12.038	91	1104199	41.62	ug/L		98
79) tert-Butylbenzene	12.215	91	783179	43.45	ug/L		99
80) 1,2,4-Trimethylbenzene	12.288	105	1337872	42.97	ug/L		100
81) sec-Butylbenzene	12.397	105	1527244	42.38	ug/L		100
82) 4-Isopropyltoluene	12.537	119	1386424	43.59	ug/L		100
83) 1,3-Dichlorobenzene	12.653	146	826123	42.08	ug/L		99
84) 1,4-Dichlorobenzene	12.744	146	869672	42.64	ug/L		98
85) n-Butylbenzene	12.981	92	699673	43.73	ug/L		92
86) Benzyl Chloride	12.994	126	184378	45.24	ug/L	#	75
87) 1,2-Dichlorobenzene	13.188	146	816855	43.03	ug/L		99
88) 1,2-Dibromo-3-Chloropr...	13.967	75	85640	43.70	ug/L		95
89) Hexachlorobutadiene	14.533	225	269292	44.28	ug/L		92
90) 1,2,4-Trichlorobenzene	14.575	180	642790	44.75	ug/L		100
91) Naphthalene	14.861	128	1395800	44.72	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073529.D
Acq On : 14 Sep 2010 11:56 am
Operator : AnaJ
Sample : ICC2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 12:14:16 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

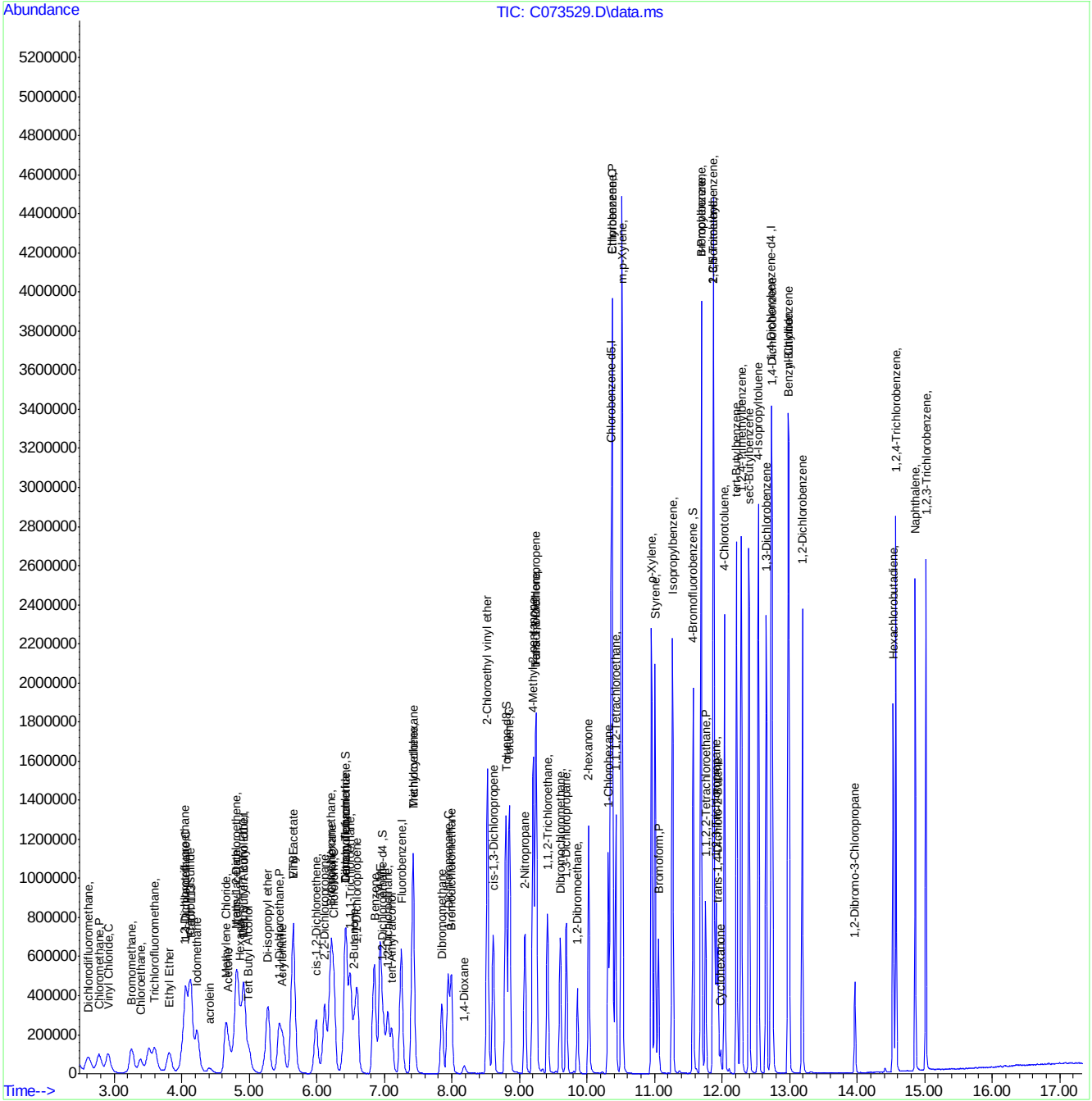
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	598865	44.53	ug/L	99
94) acrolein	4.416	56	51482	212.38	ug/L	100
95) Tert Butyl Alcohol	4.994	59	241323	410.33	ug/L	98
96) tert Amyl alcohol	7.105	59	185934	428.80	ug/L	98
97) 1,4-Dioxane	8.175	88	49619	858.79	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073529.D
Acq On : 14 Sep 2010 11:56 am
Operator : AnaJ
Sample : ICC2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 12:14:16 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 09:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073530.D
Acq On : 14 Sep 2010 12:21 pm
Operator : AnaJ
Sample : IC2932-5
Misc : MS15393,VC2932,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 13:08:48 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	1073241	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	1079031	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	752710	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.920	65	145939	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.441	113	316702	49.98	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 99.96%				
38) 1,2-Dichloroethane-d4	6.983	65	458084	51.33	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 102.66%				
48) Toluene-d8	8.802	98	1219003	49.36	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 98.72%				
69) 4-Bromofluorobenzene	11.570	95	595127	48.18	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 96.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.615	85	567975	64.33	ug/L		98
3) Chloromethane	2.791	50	478858	68.88	ug/L		97
4) Vinyl Chloride	2.919	62	495583	70.41	ug/L		95
5) Bromomethane	3.266	94	393587	68.25	ug/L		95
6) Chloroethane	3.387	64	257546	69.12	ug/L		96
7) Trichlorofluoromethane	3.509	101	1066450	81.13	ug/L		96
8) Ethyl Ether	3.813	59	343035	71.84	ug/L		94
9) 1,2-Dichlorotrifluoroe...	4.038	67	471823	78.50	ug/L		97
10) 1,1-Dichloroethene	4.057	61	703519	74.53	ug/L		99
11) Freon 113	4.142	101	512429	76.87	ug/L		96
12) Carbon Disulfide	4.117	76	1296752	73.19	ug/L		100
13) Iodomethane	4.227	142	949464	76.72	ug/L		98
14) Methylene Chloride	4.653	49	479289	74.65	ug/L		95
15) Acetone	4.695	58	148021	351.15	ug/L	#	83
16) Methyl acetate	4.805	74	324101	347.04	ug/L		93
17) trans-1,2-Dichloroethene	4.811	61	614359	69.77	ug/L		98
18) Hexane	4.860	56	305834	67.52	ug/L		90
19) Methyl Tert Butyl Ether	4.920	73	1496750	71.68	ug/L		99
20) Di-isopropyl ether	5.273	45	1110518	68.20	ug/L		99
21) 1,1-Dichloroethane	5.444	63	768336	71.25	ug/L		98
22) Acrylonitrile	5.492	53	576827	346.02	ug/L		98
23) ETBE	5.650	59	1455562	71.96	ug/L		98
24) Vinyl acetate	5.650	43	2293261	353.98	ug/L		100
25) cis-1,2-Dichloroethene	5.991	96	476566	73.86	ug/L		98
26) 2,2-Dichloropropane	6.119	77	866637	74.43	ug/L		97
27) Bromochloromethane	6.198	128	309404	75.21	ug/L		98
28) Cyclohexane	6.216	56	600269	73.60	ug/L		98
29) Chloroform	6.253	83	1032097	72.38	ug/L		99
30) Tetrahydrofuran	6.429	42	96776	70.19	ug/L		91
32) Carbon Tetrachloride	6.423	117	1136781	78.68	ug/L		99
33) 1,1,1-Trichloroethane	6.490	97	1063238	76.13	ug/L		97
34) 2-Butanone	6.551	43	857348	349.98	ug/L		97
35) 1,1-Dichloropropene	6.593	75	712853	74.59	ug/L		97
36) Benzene	6.855	78	1808720	72.71	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073530.D
Acq On : 14 Sep 2010 12:21 pm
Operator : AnaJ
Sample : IC2932-5
Misc : MS15393,VC2932,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 13:08:48 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.940	73	1451268	75.87	ug/L		98
39) 1,2-Dichloroethane	7.050	62	923451	71.93	ug/L		98
40) Trichloroethene	7.421	95	577384	75.00	ug/L		99
41) Methylcyclohexane	7.433	83	706374	75.58	ug/L		98
42) Dibromomethane	7.853	93	357694	74.62	ug/L		92
43) 1,2-Dichloropropane	7.944	63	417561	70.86	ug/L		98
44) Bromodichloromethane	7.993	83	858580	75.72	ug/L		99
45) 2-Chloroethyl vinyl ether	8.528	63	1550247	372.95	ug/L		99
46) cis-1,3-Dichloropropene	8.613	75	898368	76.42	ug/L		98
49) Toluene	8.850	91	2264928	71.89	ug/L		100
50) 2-Nitropropane	9.082	41	903122	375.64	ug/L		99
51) 4-Methyl-2-pentanone	9.203	43	1914493	352.94	ug/L		99
52) trans-1,3-Dichloropropene	9.252	75	888526	73.98	ug/L		99
53) Tetrachloroethene	9.246	166	742429	76.89	ug/L		99
54) 1,1,2-Trichloroethane	9.416	83	387208	71.37	ug/L		99
55) Dibromochloromethane	9.605	129	748204	76.72	ug/L		99
56) 1,3-Dichloropropane	9.696	76	829002	71.76	ug/L		98
57) 1,2-Dibromoethane	9.860	107	570208	74.73	ug/L		98
58) 2-hexanone	10.025	43	1392496	363.44	ug/L		98
59) 1-Chlorohexane	10.317	91	748778	76.34	ug/L		96
60) Ethylbenzene	10.377	91	2803178	73.29	ug/L		100
61) Chlorobenzene	10.371	112	1665403	73.87	ug/L		98
62) 1,1,1,2-Tetrachloroethane	10.426	131	710772	76.47	ug/L		98
63) m,p-Xylene	10.517	91	4566399	150.88	ug/L		99
64) o-Xylene	10.955	91	2328091	76.21	ug/L		100
65) Styrene	11.010	104	1827142	78.33	ug/L		98
66) Bromoform	11.059	173	583428	81.34	ug/L		98
67) Isopropylbenzene	11.266	105	2536628	74.62	ug/L		99
70) n-Propylbenzene	11.685	91	3228487	72.74	ug/L		99
71) Bromobenzene	11.691	156	905576	74.04	ug/L		99
72) 1,1,2,2-Tetrachloroethane	11.758	83	598149	70.35	ug/L		100
73) 1,3,5-Trimethylbenzene	11.880	105	2589748	75.05	ug/L		99
74) 2-Chlorotoluene	11.868	91	2355354	72.56	ug/L		99
75) trans-1,4-Dichloro-2-B...	11.941	53	216015	84.98	ug/L		97
76) 1,2,3-Trichloropropane	11.917	110	243193	72.49	ug/L		97
77) Cyclohexanone	11.977	55	76838	359.99	ug/L		98
78) 4-Chlorotoluene	12.038	91	2193278	72.93	ug/L		98
79) tert-Butylbenzene	12.215	91	1518765	74.32	ug/L		98
80) 1,2,4-Trimethylbenzene	12.288	105	2630055	74.52	ug/L		99
81) sec-Butylbenzene	12.403	105	3023922	74.03	ug/L		99
82) 4-Isopropyltoluene	12.537	119	2751229	76.32	ug/L		100
83) 1,3-Dichlorobenzene	12.653	146	1661695	74.67	ug/L		97
84) 1,4-Dichlorobenzene	12.744	146	1722562	74.51	ug/L		98
85) n-Butylbenzene	12.981	92	1353730	74.63	ug/L		96
86) Benzyl Chloride	12.993	126	355506	76.95	ug/L	#	86
87) 1,2-Dichlorobenzene	13.188	146	1603194	74.50	ug/L		99
88) 1,2-Dibromo-3-Chloropr...	13.967	75	164170	73.91	ug/L		95
89) Hexachlorobutadiene	14.532	225	536762	77.87	ug/L		93
90) 1,2,4-Trichlorobenzene	14.575	180	1283086	78.80	ug/L		100
91) Naphthalene	14.861	128	2772355	78.36	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073530.D
Acq On : 14 Sep 2010 12:21 pm
Operator : AnaJ
Sample : IC2932-5
Misc : MS15393,VC2932,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 13:08:48 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

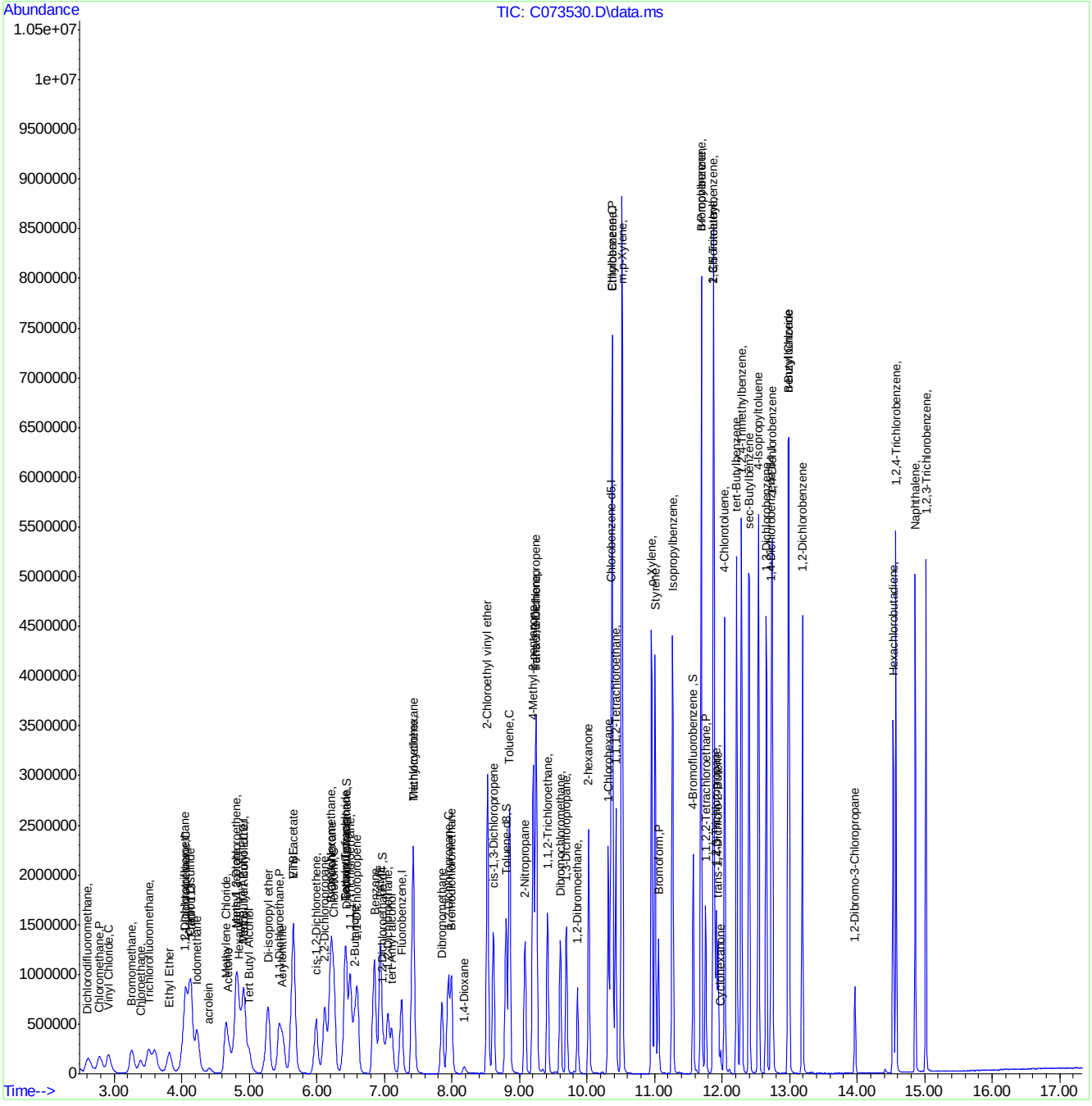
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	1176461	77.17	ug/L	99
94) acrolein	4.409	56	98979m	378.73	ug/L	
95) Tert Butyl Alcohol	5.000	59	470628	715.21	ug/L	94
96) tert Amyl alcohol	7.111	59	364826	751.97	ug/L	98
97) 1,4-Dioxane	8.181	88	99809	1543.94	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073530.D
Acq On : 14 Sep 2010 12:21 pm
Operator : AnaJ
Sample : IC2932-5
Misc : MS15393,VC2932,,,,,
ALS Vial : 5 Sample Multiplier: 1

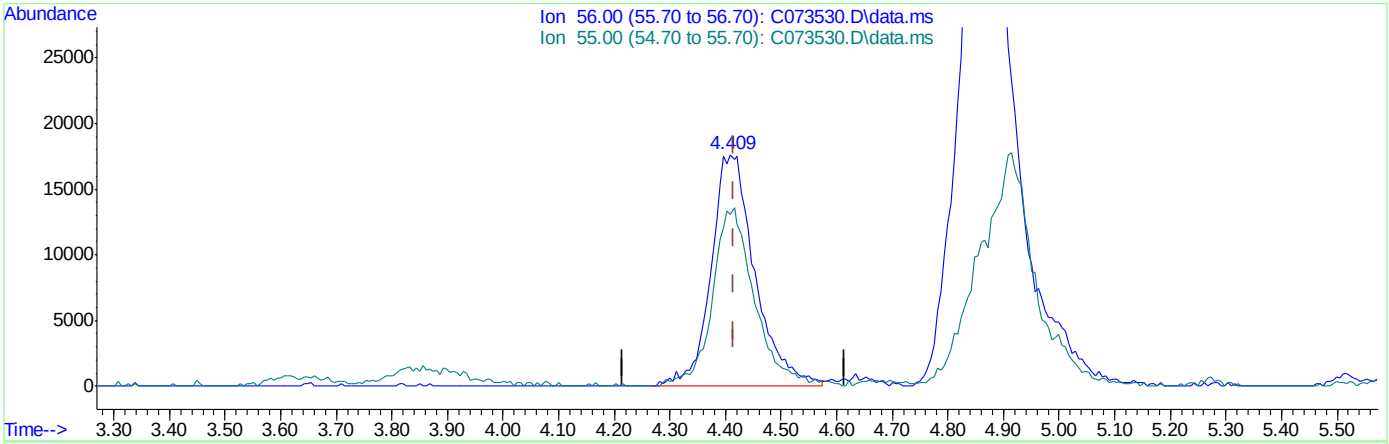
Quant Time: Sep 14 13:08:48 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

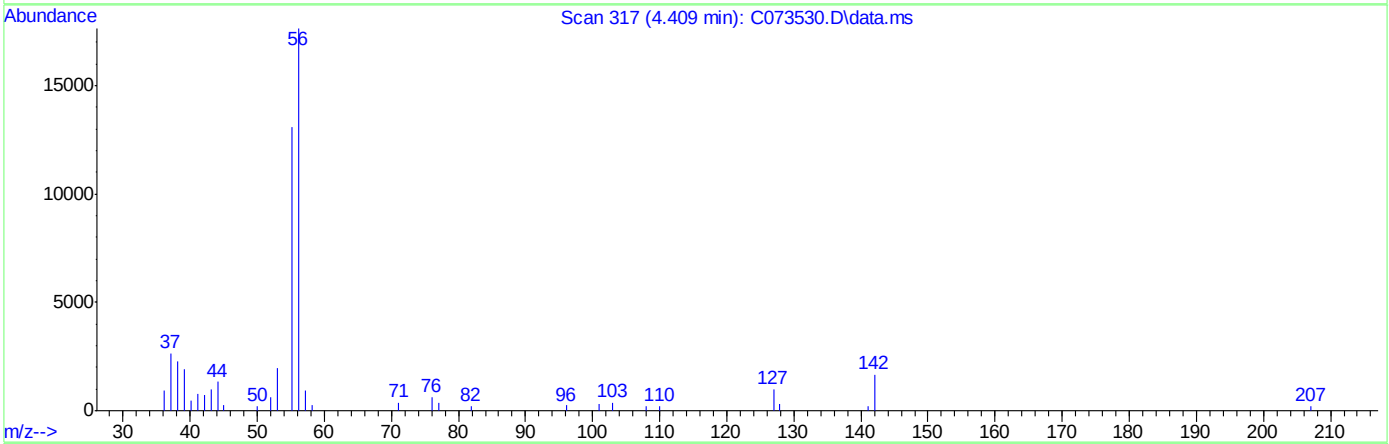


Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073530.D
Acq On : 14 Sep 2010 12:21 pm
Operator : AnaJ
Sample : IC2932-5
Misc : MS15393,VC2932,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 12:39:43 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073530.D\data.ms

(94) acrolein

4.409min (-0.006) 363.66ug/L

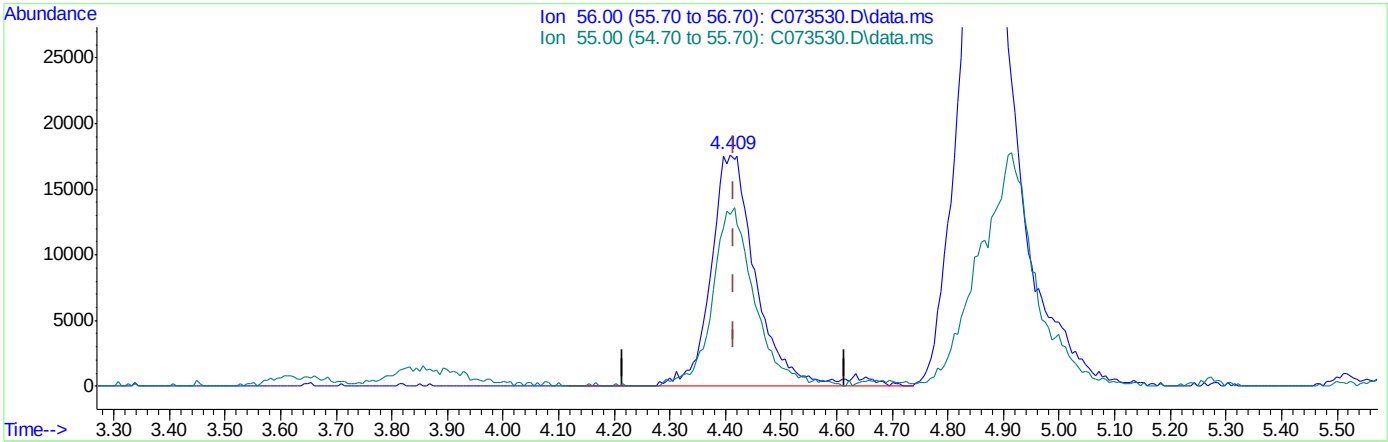
response 95365

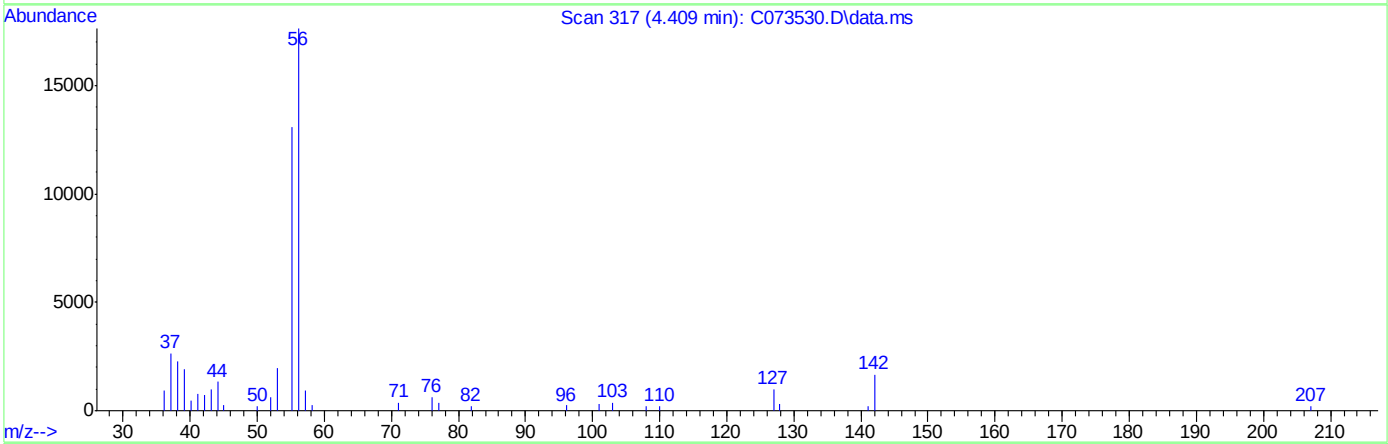
Ion	Exp%	Act%
56.00	100	100
55.00	70.00	74.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073530.D
Acq On : 14 Sep 2010 12:21 pm
Operator : AnaJ
Sample : IC2932-5
Misc : MS15393,VC2932,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 12:39:43 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073530.D\data.ms

(94) acrolein

4.409min (-0.006) 378.73ug/L m

response 98979

Ion	Exp%	Act%
56.00	100	100
55.00	70.00	74.06
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
09/15/10 09:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073531.D
Acq On : 14 Sep 2010 12:46 pm
Operator : AnaJ
Sample : IC2932-6
Misc : MS15393,VC2932,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 13:04:08 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	1270110	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	1247244	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	847465	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.927	65	169542	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.442	113	372820	49.71	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 99.42%				
38) 1,2-Dichloroethane-d4	6.989	65	520684	49.30	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 98.60%				
48) Toluene-d8	8.802	98	1405902	49.25	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 98.50%				
69) 4-Bromofluorobenzene	11.570	95	676019	48.61	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 97.22%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.615	85	828945	87.14	ug/L		99
3) Chloromethane	2.804	50	717868	97.61	ug/L		100
4) Vinyl Chloride	2.937	62	766577	92.03	ug/L		95
5) Bromomethane	3.272	94	597517	87.56	ug/L		96
6) Chloroethane	3.400	64	373245	84.64	ug/L		97
7) Trichlorofluoromethane	3.607	101	1587026m	118.53	ug/L		
8) Ethyl Ether	3.826	59	545501	96.54	ug/L		96
9) 1,2-Dichlorotrifluoroe...	4.045	67	747544	118.37	ug/L		94
10) 1,1-Dichloroethene	4.063	61	1112385	99.58	ug/L		98
11) Freon 113	4.148	101	821675	104.16	ug/L		99
12) Carbon Disulfide	4.124	76	2126004	101.40	ug/L		97
13) Iodomethane	4.233	142	1564059	106.79	ug/L		96
14) Methylene Chloride	4.659	49	776822	116.33	ug/L		90
15) Acetone	4.708	58	252777	559.45	ug/L	#	82
16) Methyl acetate	4.805	74	551184	498.71	ug/L		95
17) trans-1,2-Dichloroethene	4.817	61	1018395	97.72	ug/L		96
18) Hexane	4.866	56	512490	95.61	ug/L		93
19) Methyl Tert Butyl Ether	4.927	73	2471814	100.02	ug/L		97
20) Di-isopropyl ether	5.280	45	1879502	97.53	ug/L		96
21) 1,1-Dichloroethane	5.444	63	1279792	100.29	ug/L		99
22) Acrylonitrile	5.499	53	993245	503.46	ug/L		98
23) ETBE	5.657	59	2380006	99.43	ug/L		96
24) Vinyl acetate	5.657	43	3687442	480.96	ug/L		99
25) cis-1,2-Dichloroethene	5.997	96	818584	107.21	ug/L		96
26) 2,2-Dichloropropane	6.119	77	1378852	100.07	ug/L		96
27) Bromochloromethane	6.198	128	522995	107.42	ug/L		93
28) Cyclohexane	6.223	56	1022002	105.89	ug/L		97
29) Chloroform	6.253	83	1691408	100.23	ug/L		97
30) Tetrahydrofuran	6.423	42	161898	113.33	ug/L		93
32) Carbon Tetrachloride	6.423	117	1826542	106.83	ug/L		99
33) 1,1,1-Trichloroethane	6.496	97	1723637	104.29	ug/L		98
34) 2-Butanone	6.557	43	1392344	480.28	ug/L		95
35) 1,1-Dichloropropene	6.606	75	1198884	106.00	ug/L		95
36) Benzene	6.855	78	3074038	104.42	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073531.D
Acq On : 14 Sep 2010 12:46 pm
Operator : AnaJ
Sample : IC2932-6
Misc : MS15393,VC2932,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 13:04:08 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.940	73	2390153	105.59	ug/L		96
39) 1,2-Dichloroethane	7.056	62	1428087	94.00	ug/L		100
40) Trichloroethene	7.427	95	948770	104.14	ug/L		97
41) Methylcyclohexane	7.433	83	1212338	109.62	ug/L		96
42) Dibromomethane	7.853	93	577158	101.74	ug/L		94
43) 1,2-Dichloropropane	7.950	63	683591	98.02	ug/L		97
44) Bromodichloromethane	7.999	83	1369001	102.03	ug/L		99
45) 2-Chloroethyl vinyl ether	8.534	63	2411823	490.28	ug/L		96
46) cis-1,3-Dichloropropene	8.619	75	1432371	102.96	ug/L		95
49) Toluene	8.857	91	3732110	102.48	ug/L		99
50) 2-Nitropropane	9.088	41	1362085	490.12	ug/L		98
51) 4-Methyl-2-pentanone	9.204	43	2983799	475.88	ug/L		98
52) trans-1,3-Dichloropropene	9.252	75	1411887	101.70	ug/L		98
53) Tetrachloroethene	9.246	166	1204641	107.93	ug/L		99
54) 1,1,2-Trichloroethane	9.416	83	630178	100.49	ug/L		98
55) Dibromochloromethane	9.605	129	1220002	108.23	ug/L		99
56) 1,3-Dichloropropane	9.696	76	1317008	98.63	ug/L		97
57) 1,2-Dibromoethane	9.861	107	922765	104.62	ug/L		99
58) 2-hexanone	10.025	43	2186197	536.30	ug/L		98
59) 1-Chlorohexane	10.317	91	1239672	109.35	ug/L		95
60) Ethylbenzene	10.378	91	4562820	103.21	ug/L		100
61) Chlorobenzene	10.372	112	2716082	104.23	ug/L		97
62) 1,1,1,2-Tetrachloroethane	10.426	131	1141200	106.22	ug/L		99
63) m,p-Xylene	10.518	91	7426981	212.30	ug/L		99
64) o-Xylene	10.962	91	3746077	106.09	ug/L		97
65) Styrene	11.010	104	2971710	110.22	ug/L		98
66) Bromoform	11.059	173	947894	114.34	ug/L		98
67) Isopropylbenzene	11.266	105	4138908	110.92	ug/L		98
70) n-Propylbenzene	11.692	91	5115451	102.37	ug/L		97
71) Bromobenzene	11.698	156	1440182	104.59	ug/L		100
72) 1,1,2,2-Tetrachloroethane	11.759	83	961490	100.43	ug/L		98
73) 1,3,5-Trimethylbenzene	11.880	105	4087989	105.23	ug/L		100
74) 2-Chlorotoluene	11.874	91	3730067	102.06	ug/L		99
75) trans-1,4-Dichloro-2-B...	11.941	53	339575	118.66	ug/L		98
76) 1,2,3-Trichloropropane	11.917	110	378843	100.29	ug/L		98
77) Cyclohexanone	11.978	55	126708	554.13	ug/L		98
78) 4-Chlorotoluene	12.038	91	3463542	102.29	ug/L		98
79) tert-Butylbenzene	12.215	91	2372971	103.14	ug/L		98
80) 1,2,4-Trimethylbenzene	12.288	105	4211550	105.99	ug/L		99
81) sec-Butylbenzene	12.403	105	4861891	105.72	ug/L		100
82) 4-Isopropyltoluene	12.537	119	4371935	107.71	ug/L		99
83) 1,3-Dichlorobenzene	12.653	146	2621757	104.64	ug/L		99
84) 1,4-Dichlorobenzene	12.744	146	2719644	104.48	ug/L		99
85) n-Butylbenzene	12.981	92	2159038	105.72	ug/L		99
86) Benzyl Chloride	12.994	126	552378	106.19	ug/L	#	90
87) 1,2-Dichlorobenzene	13.188	146	2538283	104.77	ug/L		98
88) 1,2-Dibromo-3-Chloropr...	13.967	75	249418	99.73	ug/L		90
89) Hexachlorobutadiene	14.533	225	843412	108.68	ug/L		93
90) 1,2,4-Trichlorobenzene	14.575	180	2006346	109.44	ug/L		99
91) Naphthalene	14.861	128	4320065	108.46	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073531.D
Acq On : 14 Sep 2010 12:46 pm
Operator : AnaJ
Sample : IC2932-6
Misc : MS15393,VC2932,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 13:04:08 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

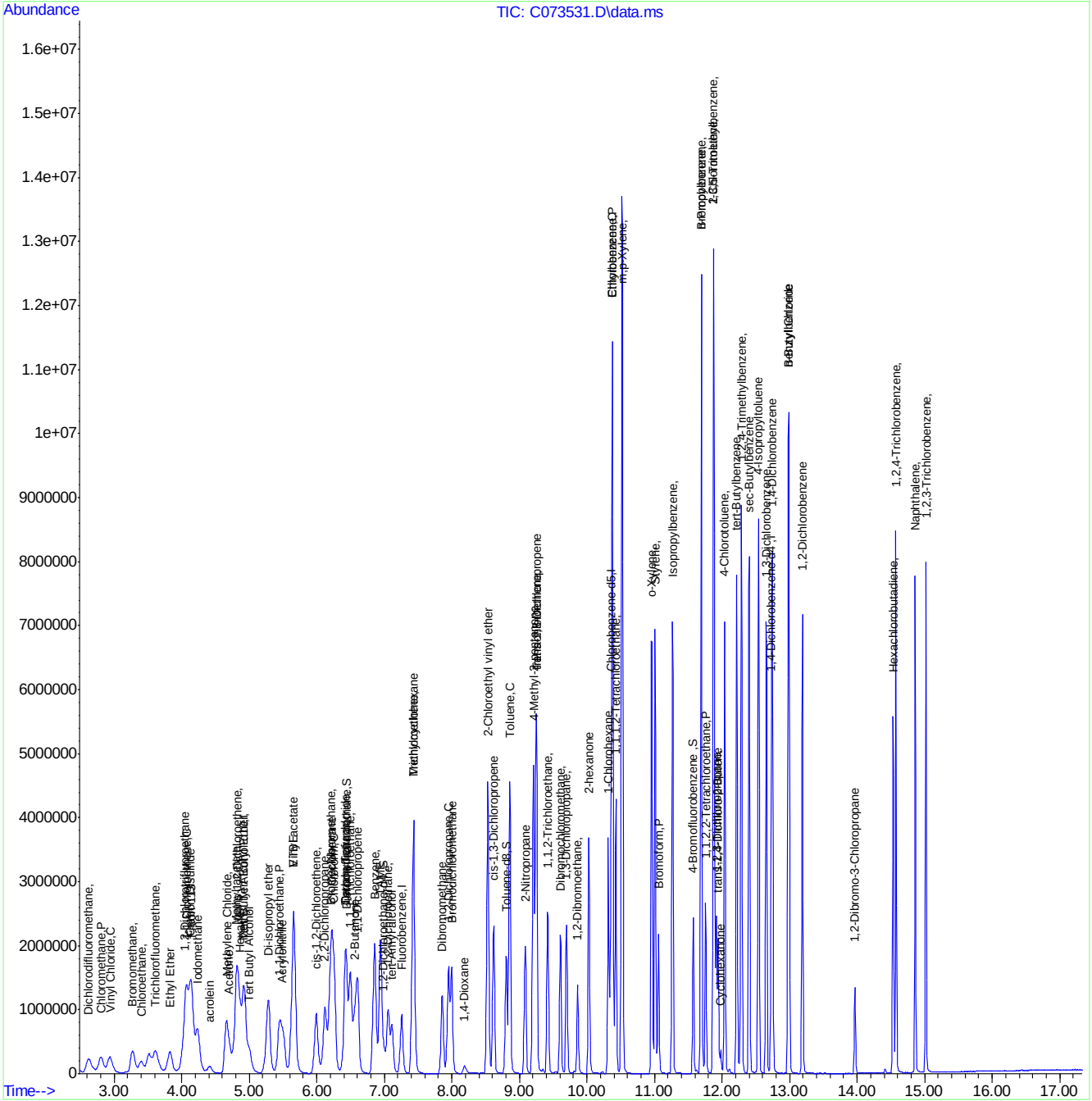
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	1850084	107.79	ug/L	98
94) acrolein	4.416	56	215439	780.95	ug/L	97
95) Tert Butyl Alcohol	5.000	59	759206	993.14	ug/L	95
96) tert Amyl alcohol	7.111	59	611363	1084.70	ug/L	97
97) 1,4-Dioxane	8.188	88	168427	2242.68	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073531.D
Acq On : 14 Sep 2010 12:46 pm
Operator : AnaJ
Sample : IC2932-6
Misc : MS15393,VC2932,,,,,
ALS Vial : 6 Sample Multiplier: 1

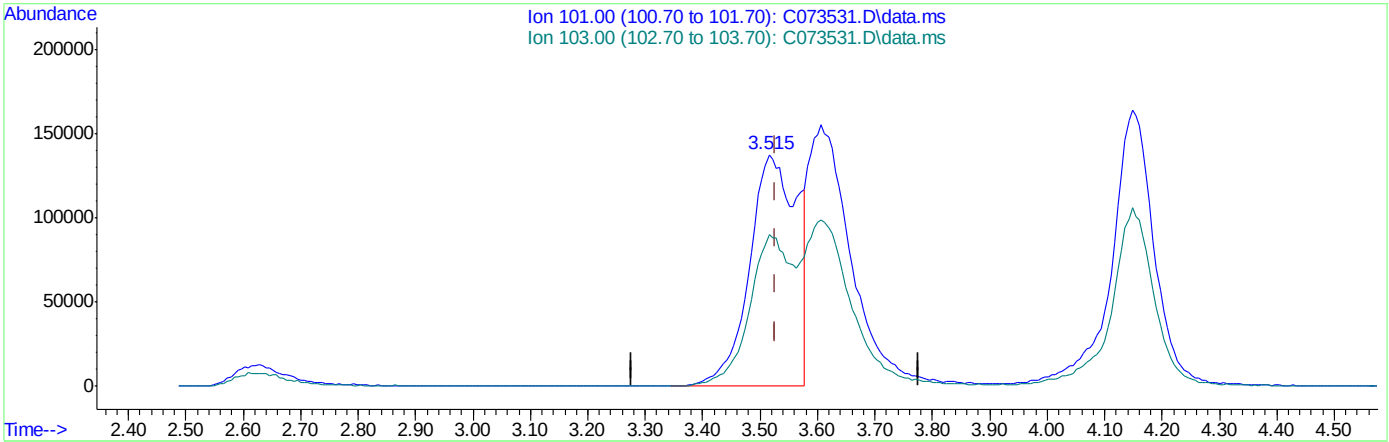
Quant Time: Sep 14 13:04:08 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration

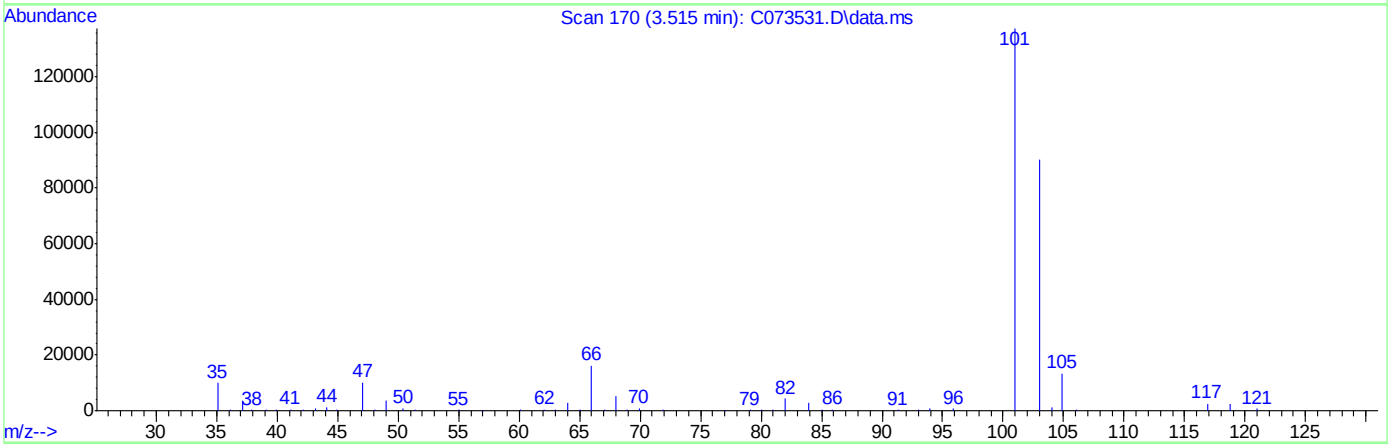


Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073531.D
Acq On : 14 Sep 2010 12:46 pm
Operator : AnaJ
Sample : IC2932-6
Misc : MS15393,VC2932,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 13:03:51 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073531.D\data.ms

(7) Trichlorofluoromethane ( )

3.515min (-0.012) 44.80ug/L

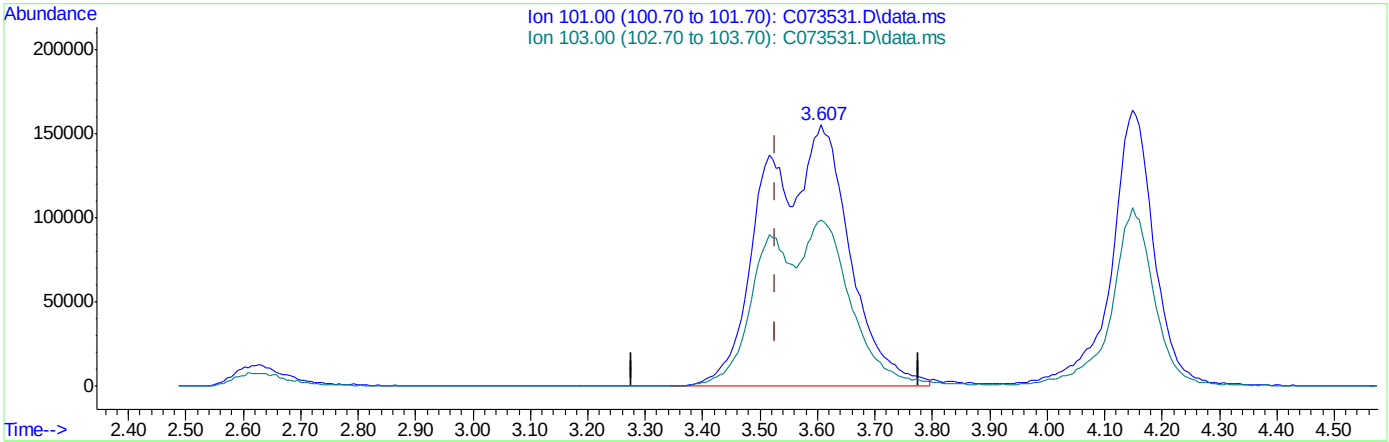
response 791181

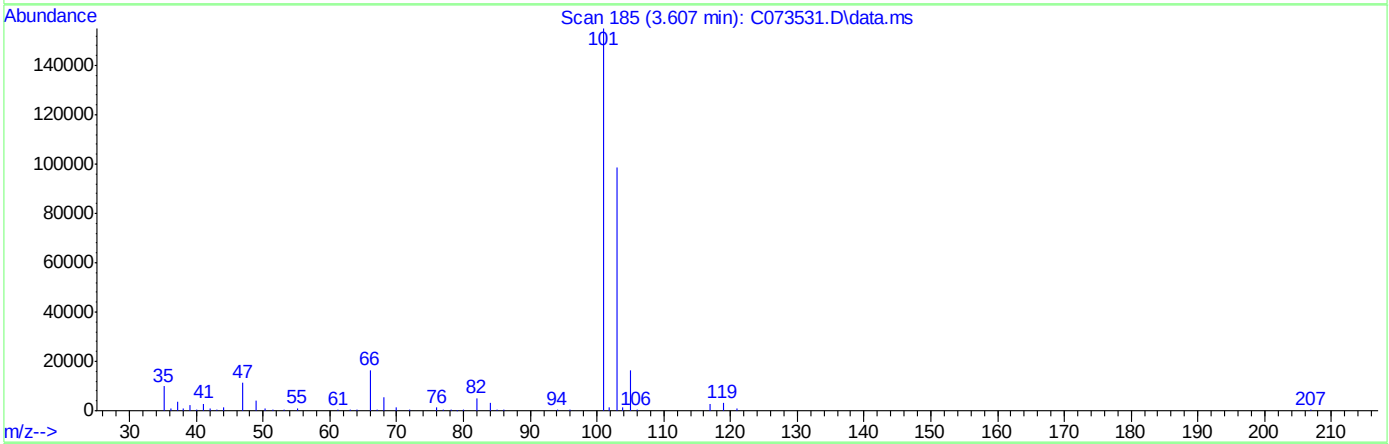
Ion	Exp%	Act%
101.00	100	100
103.00	63.60	65.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073531.D
Acq On : 14 Sep 2010 12:46 pm
Operator : AnaJ
Sample : IC2932-6
Misc : MS15393,VC2932,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 13:03:51 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Mon Sep 13 12:33:36 2010
Response via : Initial Calibration





TIC: C073531.D\data.ms

(7) Trichlorofluoromethane ( )

3.607min (+0.080) 118.53ug/L m

response 1587026

Ion	Exp%	Act%
101.00	100	100
103.00	63.60	63.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073532.D
Acq On : 14 Sep 2010 1:11 pm
Operator : AnaJ
Sample : ICV2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 14 14:22:33 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:30 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	1353686	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	1259603	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	838746	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.927	65	179680	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.442	113	386554	46.36	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 92.72%				
38) 1,2-Dichloroethane-d4	6.989	65	512097	42.94	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 85.88%				
48) Toluene-d8	8.802	98	1456213	51.34	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 102.68%				
69) 4-Bromofluorobenzene	11.570	95	668074	49.22	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 98.44%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.621	85	592617	53.06	ug/L		94
3) Chloromethane	2.791	50	410595	43.33	ug/L		97
4) Vinyl Chloride	2.919	62	382893	41.17	ug/L		100
5) Bromomethane	3.272	94	292723	38.29	ug/L		96
6) Chloroethane	3.406	64	184879	37.96	ug/L		95
7) Trichlorofluoromethane	3.607	101	779935	38.99	ug/L		99
8) Ethyl Ether	3.820	59	243019	37.02	ug/L		97
9) 1,2-Dichlorotrifluoroe...	4.051	67	366296	41.22	ug/L		98
10) 1,1-Dichloroethene	4.069	61	432475	32.48	ug/L		94
11) Freon 113	4.148	101	337334	34.99	ug/L		99
12) Carbon Disulfide	4.124	76	825891	34.40	ug/L		91
13) Iodomethane	4.233	142	655282	37.75	ug/L		92
14) Methylene Chloride	4.659	49	328593	35.08	ug/L		91
15) Acetone	4.702	58	107173	186.05	ug/L	#	83
16) Methyl acetate	4.799	74	247071	202.47	ug/L		98
17) trans-1,2-Dichloroethene	4.817	61	414551	34.65	ug/L		91
18) Hexane	4.872	56	231854	39.02	ug/L	#	92
19) Methyl Tert Butyl Ether	4.927	73	1058217	37.09	ug/L		96
20) Di-isopropyl ether	5.286	45	843623	39.73	ug/L		95
21) 1,1-Dichloroethane	5.444	63	527317	36.34	ug/L		99
22) Acrylonitrile	5.499	53	439645	202.93	ug/L		96
23) ETBE	5.657	59	998392	36.83	ug/L		98
24) Vinyl acetate	5.651	43	2177648	253.77	ug/L		96
25) cis-1,2-Dichloroethene	5.991	96	356224	41.24	ug/L		98
26) 2,2-Dichloropropane	6.119	77	544387	32.63	ug/L		94
27) Bromochloromethane	6.204	128	215208	38.11	ug/L		97
28) Cyclohexane	6.223	56	418799	38.29	ug/L		96
29) Chloroform	6.259	83	705790	36.04	ug/L		99
30) Tetrahydrofuran	6.429	42	71213	36.61	ug/L		97
32) Carbon Tetrachloride	6.429	117	728529	34.46	ug/L		98
33) 1,1,1-Trichloroethane	6.496	97	681049	34.21	ug/L		97
34) 2-Butanone	6.551	43	620318	193.99	ug/L		95
35) 1,1-Dichloropropene	6.606	75	492235	37.14	ug/L		92
36) Benzene	6.855	78	1271671	38.35	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073532.D
Acq On : 14 Sep 2010 1:11 pm
Operator : AnaJ
Sample : ICV2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 14 14:22:33 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:30 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.940	73	1011312	38.51	ug/L		95
39) 1,2-Dichloroethane	7.050	62	593196	33.05	ug/L		100
40) Trichloroethene	7.427	95	389700	36.23	ug/L		96
41) Methylcyclohexane	7.433	83	513036	40.53	ug/L		97
42) Dibromomethane	7.853	93	241030	36.44	ug/L		98
43) 1,2-Dichloropropane	7.950	63	288056	37.79	ug/L		91
44) Bromodichloromethane	7.999	83	556609	35.12	ug/L		98
45) 2-Chloroethyl vinyl ether	8.528	63	1012053	186.19	ug/L		97
46) cis-1,3-Dichloropropene	8.613	75	600002	37.64	ug/L		93
49) Toluene	8.857	91	1512895	40.33	ug/L		100
50) 2-Nitropropane	9.082	41	552925	183.57	ug/L		98
51) 4-Methyl-2-pentanone	9.203	43	1379271	214.91	ug/L		98
52) trans-1,3-Dichloropropene	9.252	75	611221	40.71	ug/L		97
53) Tetrachloroethene	9.246	166	492655	40.31	ug/L		99
54) 1,1,2-Trichloroethane	9.416	83	261630	40.23	ug/L		96
55) Dibromochloromethane	9.605	129	489399	39.05	ug/L		99
56) 1,3-Dichloropropane	9.696	76	536319	38.67	ug/L		95
57) 1,2-Dibromoethane	9.861	107	371600	39.44	ug/L		96
58) 2-hexanone	10.025	43	1016813	222.91	ug/L		99
59) 1-Chlorohexane	10.317	91	484962	39.58	ug/L		94
60) Ethylbenzene	10.378	91	1791513	38.02	ug/L		99
61) Chlorobenzene	10.372	112	1099038	39.72	ug/L		95
62) 1,1,1,2-Tetrachloroethane	10.426	131	458988	38.35	ug/L		97
63) m,p-Xylene	10.518	91	2919751	77.96	ug/L		99
64) o-Xylene	10.956	91	1484755	39.05	ug/L		98
65) Styrene	11.010	104	1174849	40.98	ug/L		97
66) Bromoform	11.059	173	369163	39.60	ug/L		99
67) Isopropylbenzene	11.266	105	1865203	45.48	ug/L		100
70) n-Propylbenzene	11.686	91	2034170	39.79	ug/L		100
71) Bromobenzene	11.692	156	570973	39.93	ug/L		98
72) 1,1,2,2-Tetrachloroethane	11.759	83	399699	41.72	ug/L		98
73) 1,3,5-Trimethylbenzene	11.880	105	1609983	39.92	ug/L		99
74) 2-Chlorotoluene	11.868	91	1488723	39.55	ug/L		98
75) trans-1,4-Dichloro-2-B...	11.941	53	133127	42.25	ug/L	#	85
76) 1,2,3-Trichloropropane	11.917	110	140915	35.22	ug/L		94
77) Cyclohexanone	11.978	55	52230	217.01	ug/L		93
78) 4-Chlorotoluene	12.038	91	1375454	39.46	ug/L		99
79) tert-Butylbenzene	12.215	91	935824	38.66	ug/L		97
80) 1,2,4-Trimethylbenzene	12.288	105	1644403	40.08	ug/L		100
81) sec-Butylbenzene	12.397	105	1901910	40.03	ug/L		99
82) 4-Isopropyltoluene	12.537	119	1702363	40.13	ug/L		100
83) 1,3-Dichlorobenzene	12.653	146	1033350	39.92	ug/L		99
84) 1,4-Dichlorobenzene	12.744	146	1079554	39.66	ug/L		99
85) n-Butylbenzene	12.981	92	822077	38.99	ug/L		95
86) Benzyl Chloride	12.994	126	210831	38.50	ug/L		95
87) 1,2-Dichlorobenzene	13.188	146	1011202	39.85	ug/L		99
88) 1,2-Dibromo-3-Chloropr...	13.967	75	99879	37.20	ug/L		97
89) Hexachlorobutadiene	14.533	225	335295	37.95	ug/L		97
90) 1,2,4-Trichlorobenzene	14.575	180	793101	39.94	ug/L		99
91) Naphthalene	14.861	128	1755496	41.56	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073532.D
Acq On : 14 Sep 2010 1:11 pm
Operator : AnaJ
Sample : ICV2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 14 14:22:33 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:30 2010
Response via : Initial Calibration

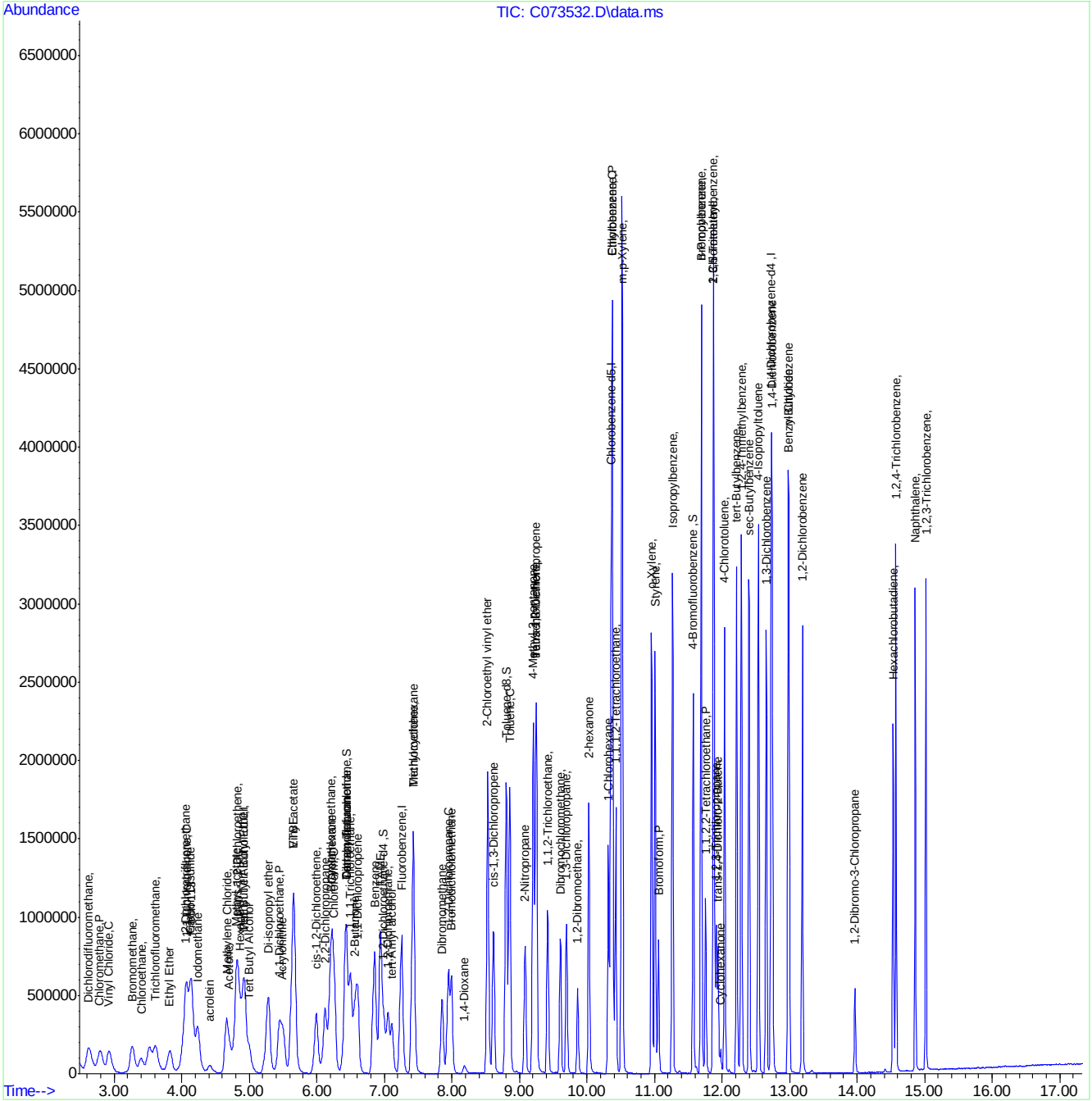
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.019	180	737841	40.01 ug/L	100
94) acrolein	4.416	56	102443	283.61 ug/L	98
95) Tert Butyl Alcohol	5.000	59	327023	393.60 ug/L	95
96) tert Amyl alcohol	7.111	59	255283	414.15 ug/L	95
97) 1,4-Dioxane	8.181	88	72973	857.83 ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091410\
Data File : C073532.D
Acq On : 14 Sep 2010 1:11 pm
Operator : AnaJ
Sample : ICV2932-4
Misc : MS15393,VC2932,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 14 14:22:33 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:30 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073557.D
Acq On : 15 Sep 2010 9:07 am
Operator : AnaJ
Sample : CC2932-4
Misc : MS15403,VC2933,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 15 09:25:29 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	7.257	96	769525	50.00	ug/L		0.00
47) Chlorobenzene-d5	10.353	117	794612	50.00	ug/L		0.00
68) 1,4-Dichlorobenzene-d4	12.726	152	583577	50.00	ug/L		0.00
93) Tert Butyl Alcohol-d10	4.921	65	107648	250.00	ug/L		0.00
System Monitoring Compounds							
31) Dibromofluoromethane	6.442	113	246636	52.03	ug/L		0.00
Spiked Amount 50.000	Range 87 - 116		Recovery = 104.06%				
38) 1,2-Dichloroethane-d4	6.983	65	379382	55.96	ug/L		0.00
Spiked Amount 50.000	Range 76 - 127		Recovery = 111.92%				
48) Toluene-d8	8.802	98	867154	48.46	ug/L		0.00
Spiked Amount 50.000	Range 86 - 112		Recovery = 96.92%				
69) 4-Bromofluorobenzene	11.570	95	473433	50.13	ug/L		0.00
Spiked Amount 50.000	Range 84 - 120		Recovery = 100.26%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.615	85	253234	37.21	ug/L		93
3) Chloromethane	2.773	50	196185	35.47	ug/L		97
4) Vinyl Chloride	2.919	62	194113	36.72	ug/L		97
5) Bromomethane	3.260	94	163307	37.58	ug/L		95
6) Chloroethane	3.394	64	107132	38.70	ug/L		95
7) Trichlorofluoromethane	3.595	101	484601	42.62	ug/L		98
8) Ethyl Ether	3.826	59	148139	39.69	ug/L		96
9) 1,2-Dichlorotrifluoroe...	4.039	67	211655	41.90	ug/L		93
10) 1,1-Dichloroethene	4.063	61	329714	43.56	ug/L		97
11) Freon 113	4.154	101	227982	41.60	ug/L		96
12) Carbon Disulfide	4.124	76	547093	40.08	ug/L		97
13) Iodomethane	4.233	142	393850	39.91	ug/L		98
14) Methylene Chloride	4.653	49	226646	43.21	ug/L		99
15) Acetone	4.702	58	59553	181.87	ug/L		93
16) Methyl acetate	4.805	74	128194	184.80	ug/L	#	57
17) trans-1,2-Dichloroethene	4.817	61	277082	40.74	ug/L		98
18) Hexane	4.866	56	138528	41.01	ug/L		96
19) Methyl Tert Butyl Ether	4.921	73	643446	39.67	ug/L		95
20) Di-isopropyl ether	5.280	45	476882	39.51	ug/L		97
21) 1,1-Dichloroethane	5.450	63	331988	40.24	ug/L		98
22) Acrylonitrile	5.499	53	231413	187.90	ug/L		99
23) ETBE	5.651	59	629250	40.83	ug/L		97
24) Vinyl acetate	5.657	43	1012504	208.90	ug/L		98
25) cis-1,2-Dichloroethene	5.992	96	188609	38.41	ug/L		90
26) 2,2-Dichloropropane	6.119	77	408579	43.08	ug/L		100
27) Bromochloromethane	6.198	128	120517	37.54	ug/L		92
28) Cyclohexane	6.223	56	245574	39.50	ug/L		96
29) Chloroform	6.253	83	450925	40.50	ug/L		98
30) Tetrahydrofuran	6.423	42	40880	36.97	ug/L		95
32) Carbon Tetrachloride	6.423	117	513332	42.72	ug/L		99
33) 1,1,1-Trichloroethane	6.490	97	480214	42.43	ug/L		99
34) 2-Butanone	6.551	43	350796	192.98	ug/L		99
35) 1,1-Dichloropropene	6.600	75	305124	40.49	ug/L		94
36) Benzene	6.855	78	716401	38.00	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073557.D
Acq On : 15 Sep 2010 9:07 am
Operator : AnaJ
Sample : CC2932-4
Misc : MS15403,VC2933,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 15 09:25:29 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) TAME	6.941	73	594425	39.82	ug/L		97
39) 1,2-Dichloroethane	7.056	62	440023	43.12	ug/L		99
40) Trichloroethene	7.421	95	243896	39.88	ug/L		93
41) Methylcyclohexane	7.433	83	282056	39.20	ug/L		95
42) Dibromomethane	7.853	93	151978	40.41	ug/L		91
43) 1,2-Dichloropropane	7.950	63	168148	38.80	ug/L		97
44) Bromodichloromethane	7.993	83	375407	41.67	ug/L		99
45) 2-Chloroethyl vinyl ether	8.528	63	597195	193.27	ug/L		97
46) cis-1,3-Dichloropropene	8.620	75	367592	40.56	ug/L		94
49) Toluene	8.857	91	900023	38.03	ug/L		99
50) 2-Nitropropane	9.082	41	413509	217.62	ug/L		95
51) 4-Methyl-2-pentanone	9.204	43	804126	198.61	ug/L		97
52) trans-1,3-Dichloropropene	9.252	75	379561	40.08	ug/L		94
53) Tetrachloroethene	9.246	166	290260	37.65	ug/L		97
54) 1,1,2-Trichloroethane	9.417	83	152532	37.18	ug/L		96
55) Dibromochloromethane	9.605	129	310600	39.28	ug/L		100
56) 1,3-Dichloropropane	9.696	76	331542	37.90	ug/L		93
57) 1,2-Dibromoethane	9.861	107	223391	37.58	ug/L		95
58) 2-hexanone	10.025	43	563164	195.70	ug/L		96
59) 1-Chlorohexane	10.317	91	303054	39.21	ug/L		92
60) Ethylbenzene	10.378	91	1155554	38.87	ug/L		100
61) Chlorobenzene	10.372	112	670650	38.43	ug/L		99
62) 1,1,1,2-Tetrachloroethane	10.426	131	300015	39.73	ug/L		99
63) m,p-Xylene	10.518	91	1924369	81.45	ug/L		98
64) o-Xylene	10.956	91	968332	40.37	ug/L		99
65) Styrene	11.010	104	733088	40.53	ug/L		97
66) Bromoform	11.059	173	239011	40.64	ug/L		97
67) Isopropylbenzene	11.266	105	1065520	41.18	ug/L		99
70) n-Propylbenzene	11.692	91	1383019	38.88	ug/L		99
71) Bromobenzene	11.698	156	368969	37.08	ug/L		98
72) 1,1,2,2-Tetrachloroethane	11.759	83	239689	35.96	ug/L		99
73) 1,3,5-Trimethylbenzene	11.880	105	1093158	38.96	ug/L		99
74) 2-Chlorotoluene	11.874	91	1018446	38.88	ug/L		99
75) trans-1,4-Dichloro-2-B...	11.941	53	95896	43.74	ug/L		88
76) 1,2,3-Trichloropropane	11.911	110	100346	36.05	ug/L		96
77) Cyclohexanone	11.978	55	29503	177.22	ug/L		93
78) 4-Chlorotoluene	12.039	91	940293	38.77	ug/L		97
79) tert-Butylbenzene	12.215	91	679104	40.32	ug/L		98
80) 1,2,4-Trimethylbenzene	12.288	105	1123552	39.36	ug/L		98
81) sec-Butylbenzene	12.398	105	1289602	39.01	ug/L		97
82) 4-Isopropyltoluene	12.537	119	1162014	39.37	ug/L		99
83) 1,3-Dichlorobenzene	12.653	146	677318	37.61	ug/L		98
84) 1,4-Dichlorobenzene	12.744	146	714735	37.74	ug/L		97
85) n-Butylbenzene	12.982	92	588484	40.11	ug/L		98
86) Benzyl Chloride	12.994	126	149991	39.37	ug/L	#	84
87) 1,2-Dichlorobenzene	13.188	146	670698	37.99	ug/L		98
88) 1,2-Dibromo-3-Chloropr...	13.967	75	70043	37.49	ug/L		89
89) Hexachlorobutadiene	14.533	225	228869	37.23	ug/L		96
90) 1,2,4-Trichlorobenzene	14.575	180	522921	37.85	ug/L		99
91) Naphthalene	14.861	128	1048063	35.66	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073557.D
Acq On : 15 Sep 2010 9:07 am
Operator : AnaJ
Sample : CC2932-4
Misc : MS15403,VC2933,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 15 09:25:29 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration

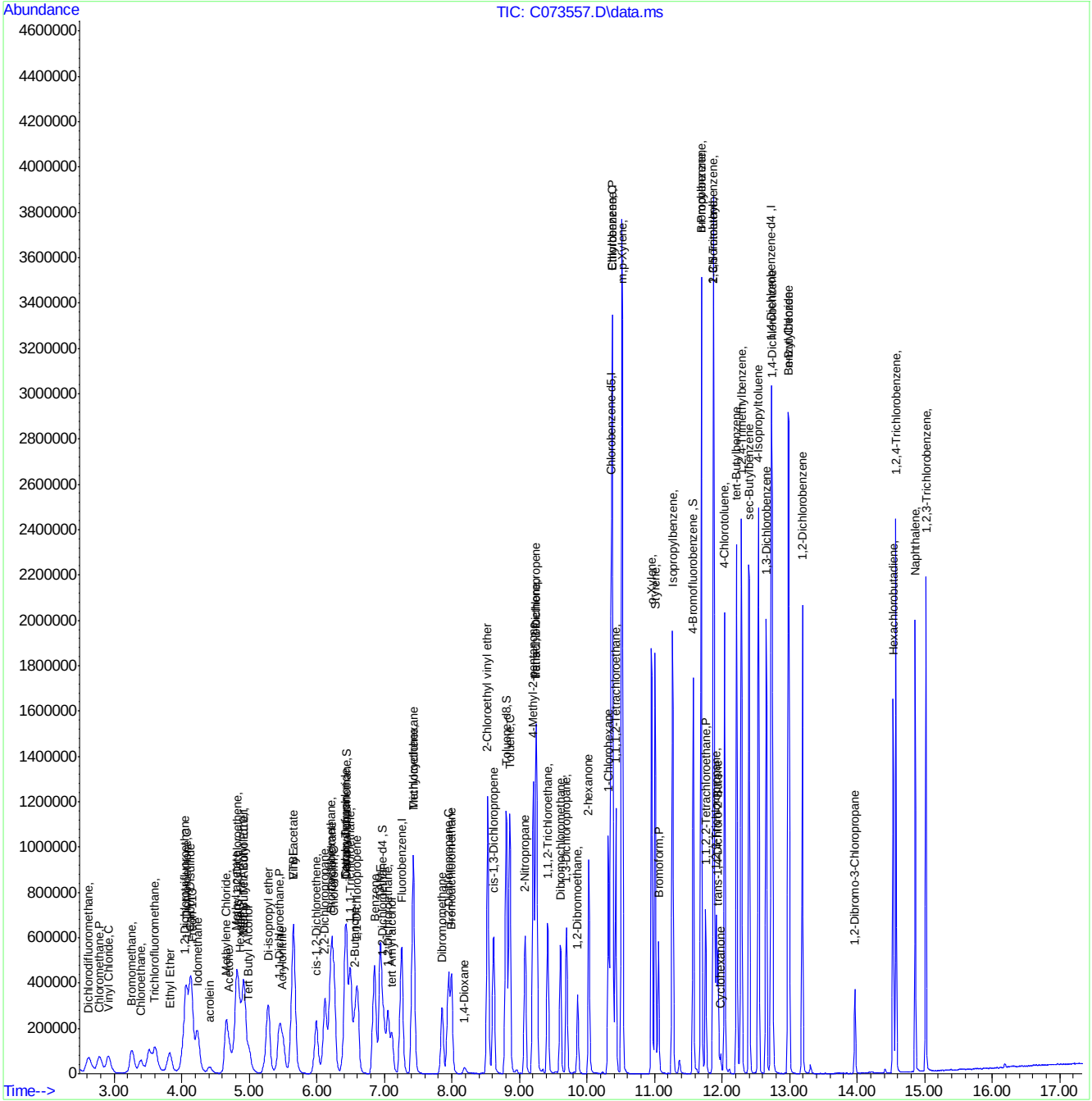
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,3-Trichlorobenzene	15.020	180	475369	37.05	ug/L	99
94) acrolein	4.410	56	52598	251.72	ug/L	93
95) Tert Butyl Alcohol	4.994	59	190587	382.88	ug/L	95
96) tert Amyl alcohol	7.111	59	137160	371.41	ug/L	98
97) 1,4-Dioxane	8.188	88	35040	692.71	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\091510\
Data File : C073557.D
Acq On : 15 Sep 2010 9:07 am
Operator : AnaJ
Sample : CC2932-4
Misc : MS15403,VC2933,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 15 09:25:29 2010
Quant Method : C:\msdchem\2\METHODS\8260c.m
Quant Title : SW-846 Method 5030B/8260B & EPA 624
QLast Update : Tue Sep 14 14:22:47 2010
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller 09/17/10 10:11

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:32 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.21	96	524651	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.73	117	415477	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.20	152	211127	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.03	65	51630	250.00	ug/Kg	0.03
System Monitoring Compounds						
35) Dibromofluoromethane	10.18	113	129006	51.31	ug/Kg	-0.01
Spiked Amount 50.000	Range 80 - 121		Recovery = 102.62%			
44) 1,2-Dichloroethane-d4	10.87	65	199455	51.67	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 103.34%			
55) Toluene-d8	13.02	98	536122	41.09	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 82.18%			
77) 4-Bromofluorobenzene	16.01	174	178155	47.65	ug/Kg	-0.01
Spiked Amount 50.000	Range 59 - 148		Recovery = 95.30%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.94	85	11104	3.99	ug/Kg	88
3) Chloromethane	4.26	50	25091	4.92	ug/Kg	85
4) Vinyl Chloride	4.47	62	15337m	4.35	ug/Kg	
5) Bromomethane	5.11	94	8700	5.93	ug/Kg	74
6) Chloroethane	5.37	64	9126	5.14	ug/Kg	67
7) Trichlorofluoromethane	5.62	101	19397	4.66	ug/Kg	96
8) Ethyl Ether	6.20	59	14598m	5.28	ug/Kg	
9) 1,2-Dichlorotrifluoroethan	6.51	67	20894	4.38	ug/Kg	88
10) 1,1-Dichloroethene	6.58	61	33048	4.61	ug/Kg	85
11) Freon 113	6.68	101	15150	4.55	ug/Kg	81
12) Carbon Disulfide	6.69	76	59750	4.70	ug/Kg	99
13) Iodomethane	6.86	142	22821	4.34	ug/Kg	90
14) Allyl chloride	7.40	41	41683	4.21	ug/Kg	92
15) Methylene Chloride	7.58	49	174498	11.58	ug/Kg	90
16) Acetone	7.66	43	59875	24.36	ug/Kg	96
17) Methyl acetate	7.85	43	58640	21.10	ug/Kg	99
18) trans-1,2-Dichloroethene	7.87	61	32458	4.41	ug/Kg	94
19) Hexane	7.97	56	22411	5.24	ug/Kg#	86
20) Methyl Tert Butyl Ether	8.01	73	37705	4.88	ug/Kg	82
21) Acetonitrile	8.43	41	12288	29.11	ug/Kg	89
22) Di-isopropyl ether	8.58	45	89718	4.76	ug/Kg	96
23) Chloroprene	8.80	53	34262	4.44	ug/Kg	92
24) 1,1-Dichloroethane	8.81	63	43743	4.97	ug/Kg	95
25) Acrylonitrile	8.90	53	30192	22.91	ug/Kg	92
26) ETBE	9.12	59	51761	4.75	ug/Kg	87
27) Vinyl acetate	9.16	43	96975	20.71	ug/Kg	89
28) cis-1,2-Dichloroethene	9.61	96	17961	4.59	ug/Kg	98
29) 2,2-Dichloropropane	9.76	77	31375	4.62	ug/Kg	96
30) Bromochloromethane	9.87	128	8256	4.61	ug/Kg#	74
31) Cyclohexane	9.92	56	44248	5.08	ug/Kg	93
32) Chloroform	9.95	83	40097	4.95	ug/Kg	87
33) Ethyl acetate	10.06	43	117451	25.26	ug/Kg	93
34) Tetrahydrofuran	10.18	42	7041	6.26	ug/Kg	80
36) Carbon Tetrachloride	10.17	117	27941	4.57	ug/Kg	92

(#) = qualifier out of range (m) = manual integration
H064457.D APP9-H.M Wed Sep 15 15:03:45 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:32 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.25	97	31721	4.83	ug/Kg	85
38)	2-Butanone	10.34	43	65758	23.44	ug/Kg	98
39)	1,1-Dichloropropene	10.41	75	30119	4.73	ug/Kg	84
40)	Propionitrile	10.71	54	21683	49.13	ug/Kg#	1
41)	Methacrylonitrile	10.73	41	156849	53.99	ug/Kg	94
42)	Benzene	10.72	78	83141	5.44	ug/Kg	92
43)	TAME	10.81	73	33587	4.69	ug/Kg#	68
45)	1,2-Dichloroethane	10.96	62	36091	5.08	ug/Kg	98
46)	Trichloroethene	11.44	95	21592	5.27	ug/Kg	84
47)	Methylcyclohexane	11.44	83	32853	5.16	ug/Kg	92
48)	Dibromomethane	11.94	93	9486	4.40	ug/Kg#	74
49)	1,2-Dichloropropane	12.04	63	20690	4.53	ug/Kg	89
50)	Bromodichloromethane	12.10	83	25002	4.19	ug/Kg#	88
51)	Methyl methacrylate	12.25	41	22159	4.62	ug/Kg#	89
52)	2-Chloroethyl vinyl ether	12.70	63	13329	17.90	ug/Kg	86
53)	cis-1,3-Dichloropropene	12.82	75	29691	4.17	ug/Kg	91
56)	Toluene	13.08	91	83598	4.15	ug/Kg	93
57)	2-Nitropropane	13.31	41	32832	17.72	ug/Kg	94
58)	4-Methyl-2-pentanone	13.45	43	123479	22.05	ug/Kg	95
59)	trans-1,3-Dichloropropene	13.53	75	26035	3.61	ug/Kg	96
60)	Tetrachloroethene	13.54	166	22551	4.29	ug/Kg	86
61)	Ethyl methacrylate	13.64	69	17087	2.92	ug/Kg	99
62)	1,1,2-Trichloroethane	13.70	83	13052	3.89	ug/Kg	87
63)	Dibromochloromethane	13.93	129	14231	3.32	ug/Kg	95
64)	1,3-Dichloropropane	14.01	76	30810	4.12	ug/Kg	95
65)	1,2-Dibromoethane	14.22	107	12562	3.48	ug/Kg	83
66)	2-hexanone	14.34	43	91148	19.42	ug/Kg	91
67)	1-Chlorohexane	14.66	91	29564	3.97	ug/Kg	96
68)	Ethylbenzene	14.74	91	89378	4.25	ug/Kg	92
69)	Chlorobenzene	14.75	112	48579	4.39	ug/Kg	72
70)	1,1,1,2-Tetrachloroethane	14.80	131	17437	3.93	ug/Kg	90
71)	m,p-Xylene	14.89	91	158497	9.15	ug/Kg	99
72)	o-Xylene	15.36	91	80355	4.18	ug/Kg	96
73)	Styrene	15.43	104	49247	3.80	ug/Kg	91
74)	Bromoform	15.51	173	8349	2.89	ug/Kg	81
75)	Isopropylbenzene	15.67	105	76269	4.11	ug/Kg	95
78)	cis-1,4-Dichloro-2-butene	16.06	53	8006	4.30	ug/Kg#	62
79)	n-Propylbenzene	16.11	91	114800	4.96	ug/Kg	99
80)	Bromobenzene	16.16	156	20633	4.82	ug/Kg	93
81)	1,1,2,2-Tetrachloroethane	16.17	83	18968	4.61	ug/Kg	92
82)	1,3,5-Trimethylbenzene	16.28	105	74334	4.77	ug/Kg	96
83)	2-Chlorotoluene	16.32	91	86170	5.18	ug/Kg	97
84)	trans-1,4-Dichloro-2-Buten	16.37	53	7408	8.40	ug/Kg#	34
85)	1,2,3-Trichloropropane	16.35	110	5916	5.43	ug/Kg#	72
86)	Cyclohexanone	16.45	55	2221	17.70	ug/Kg#	73
87)	4-Chlorotoluene	16.49	91	70617	4.64	ug/Kg	99
88)	tert-Butylbenzene	16.64	91	49722	4.72	ug/Kg	94
89)	1,2,4-Trimethylbenzene	16.72	105	79944	5.43	ug/Kg	94
90)	Pentachloroethane	16.72	167	12033	5.07	ug/Kg	85

(#) = qualifier out of range (m) = manual integration
H064457.D APP9-H.M Wed Sep 15 15:03:45 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:32 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

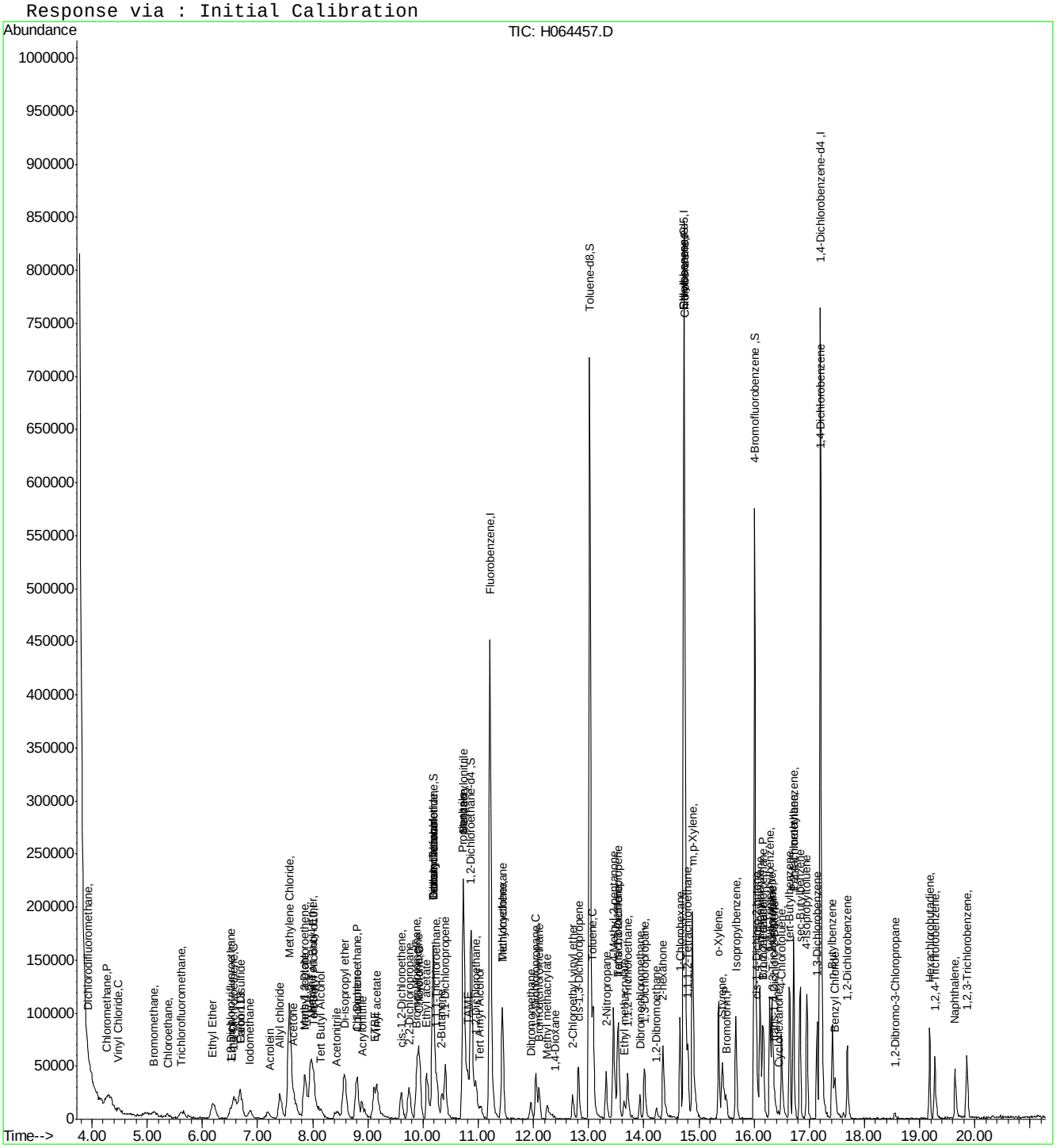
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.83	105	97174	4.99	ug/Kg	91
92)	4-Isopropyltoluene	16.95	119	74200	4.95	ug/Kg	93
93)	1,3-Dichlorobenzene	17.14	146	37798	4.67	ug/Kg	96
94)	1,4-Dichlorobenzene	17.22	146	43093	5.17	ug/Kg	83
95)	n-Butylbenzene	17.43	92	43963	4.43	ug/Kg	90
96)	Benzyl Chloride	17.47	126	4268	3.07	ug/Kg#	76
97)	1,2-Dichlorobenzene	17.69	146	36166	4.70	ug/Kg	86
98)	1,2-Dibromo-3-Chloropropan	18.55	75	1826m	2.03	ug/Kg	
99)	Hexachlorobutadiene	19.18	225	23608	5.40	ug/Kg	93
100)	1,2,4-Trichlorobenzene	19.28	180	31257	5.21	ug/Kg	98
101)	Naphthalene	19.64	128	54413	5.05	ug/Kg	89
102)	1,2,3-Trichlorobenzene	19.86	180	27839	5.20	ug/Kg	80
104)	Ethanol	6.52	45	6333m	101.07	ug/Kg	
105)	Acrolein	7.24	56	6210	19.67	ug/Kg#	16
106)	Tert Butyl Alcohol	8.15	59	23134	46.33	ug/Kg	81
107)	Isobutyl alcohol	10.18	42	7041	118.21	ug/Kg#	44
108)	Tert Amyl Alcohol	11.03	59	11545	43.21	ug/Kg	92
109)	1,4-Dioxane	12.40	88	1896m	63.34	ug/Kg	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: APP9-H.RES

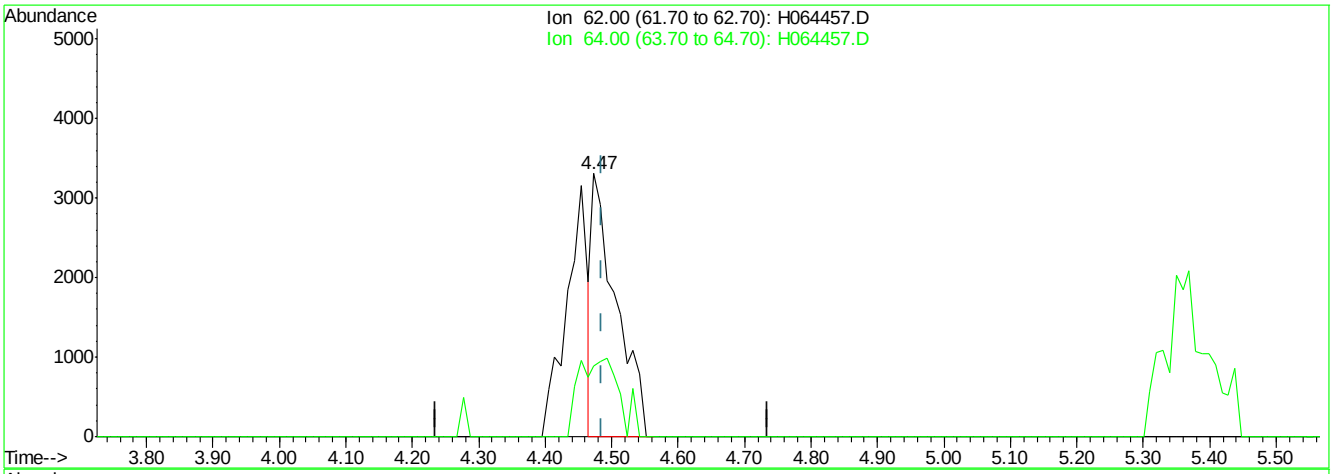
Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:03:17 2010
Response via : Initial Calibration

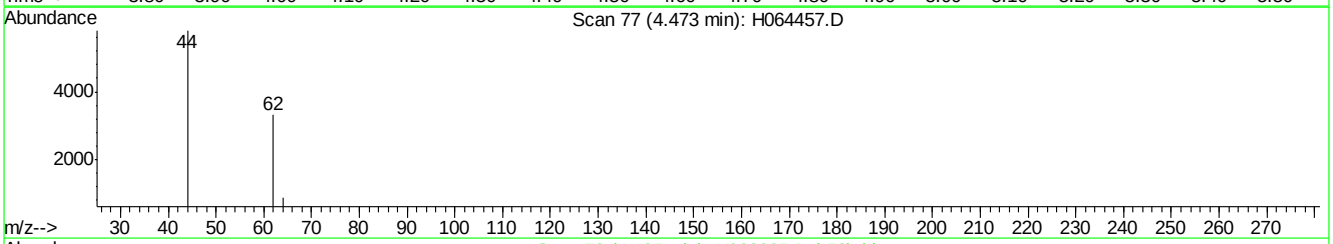


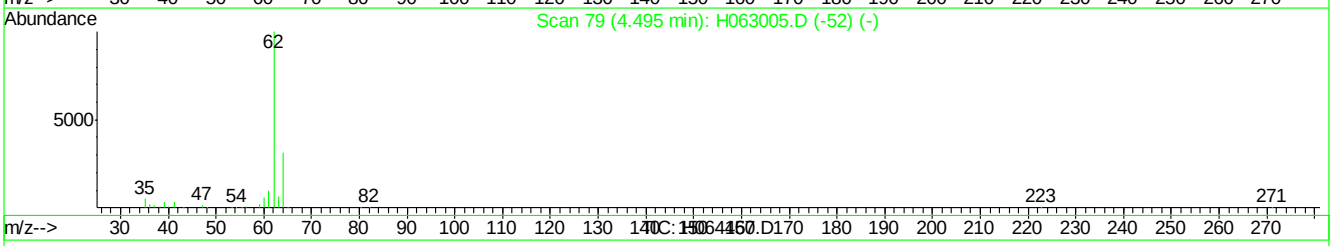
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(4) Vinyl Chloride (C)

4.47min (-0.012) 2.40ug/Kg

response 8464

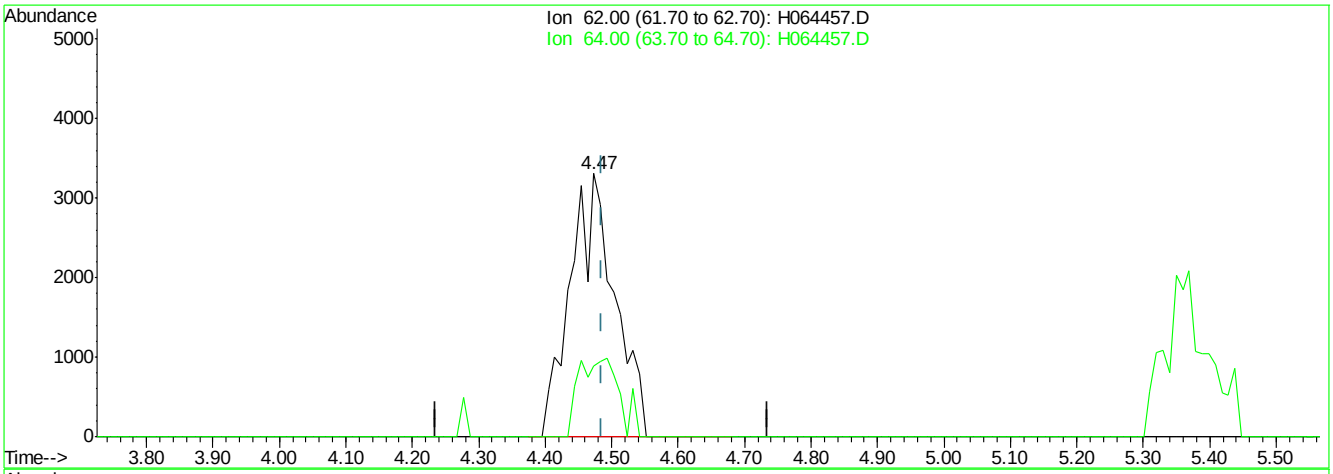
Ion	Exp%	Act%
62.00	100	100
64.00	31.10	26.78
0.00	0.00	0.00
0.00	0.00	0.00

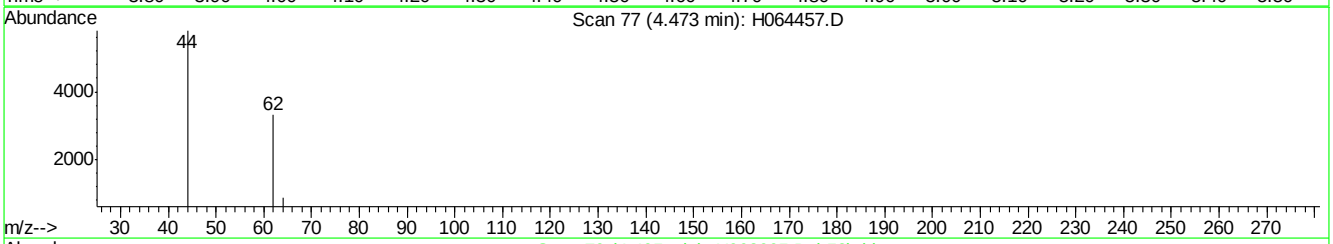
H064457.D APP9-H.M Wed Sep 15 14:53:44 2010

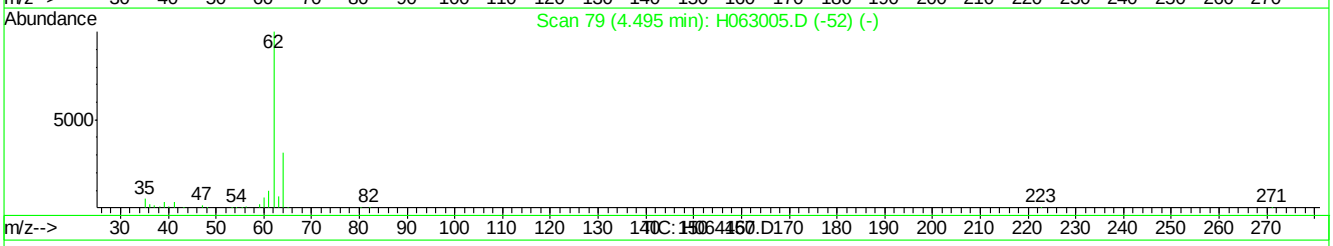
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(4) Vinyl Chloride (C)

4.47min (-0.012) 4.35ug/Kg m

response 15337

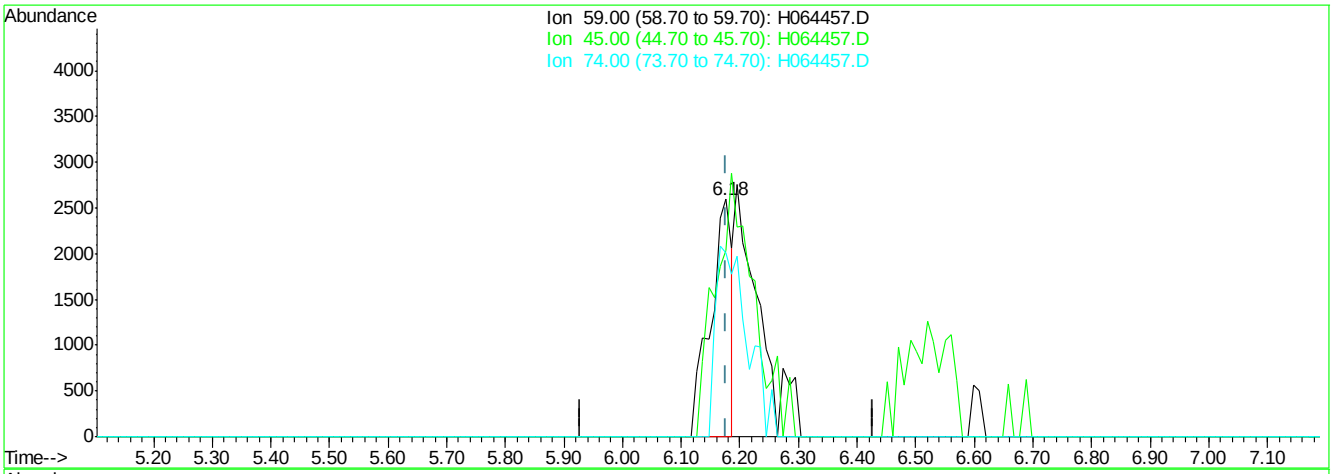
Ion	Exp%	Act%
62.00	100	100
64.00	31.10	26.78
0.00	0.00	0.00
0.00	0.00	0.00

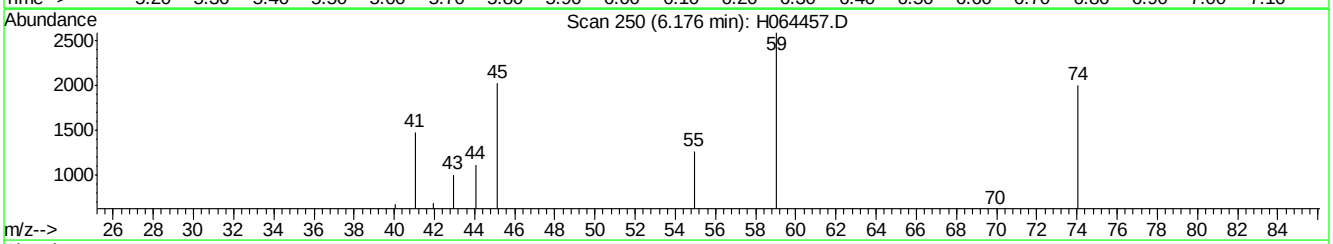
H064457.D APP9-H.M Wed Sep 15 14:53:46 2010

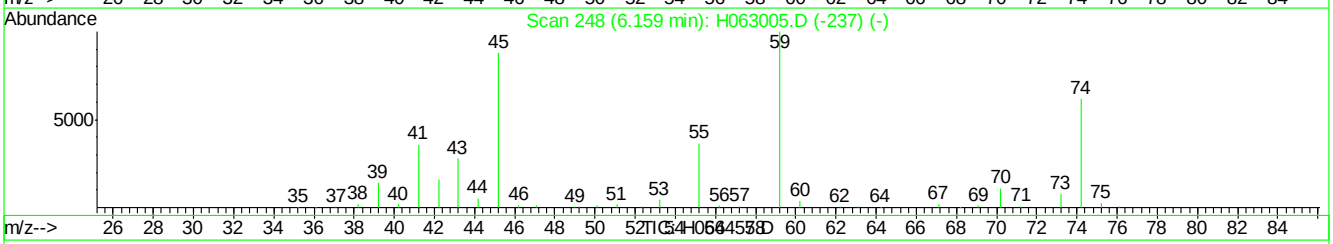
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(8) Ethyl Ether

6.18min (-0.002) 2.41ug/Kg

response 6661

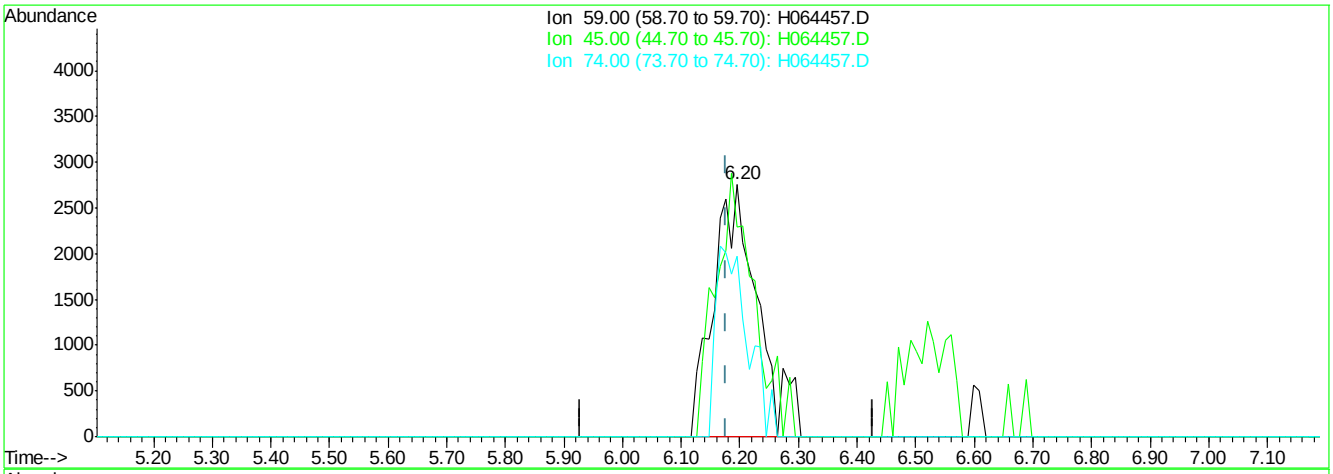
Ion	Exp%	Act%
59.00	100	100
45.00	88.20	78.33
74.00	61.60	77.32
0.00	0.00	0.00

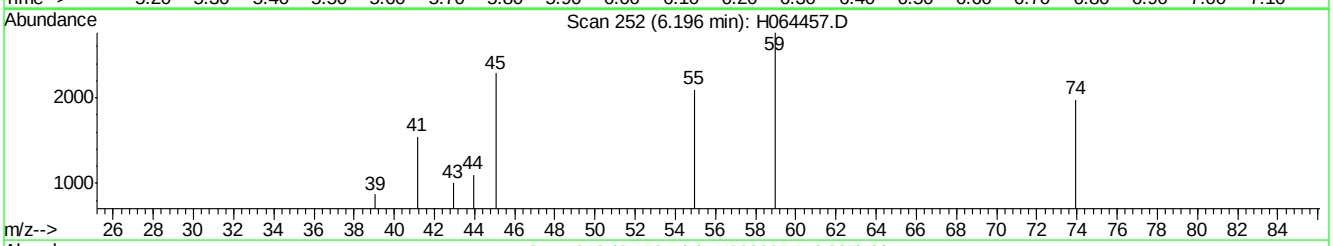
H064457.D APP9-H.M Wed Sep 15 14:53:53 2010

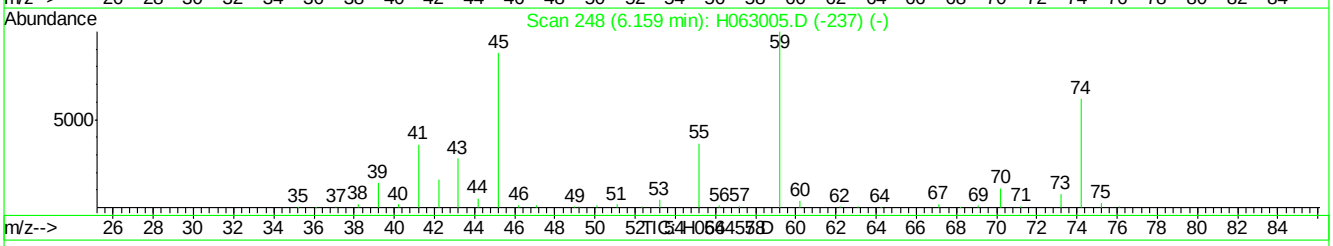
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(8) Ethyl Ether

6.20min (+0.018) 5.28ug/Kg m

response 14598

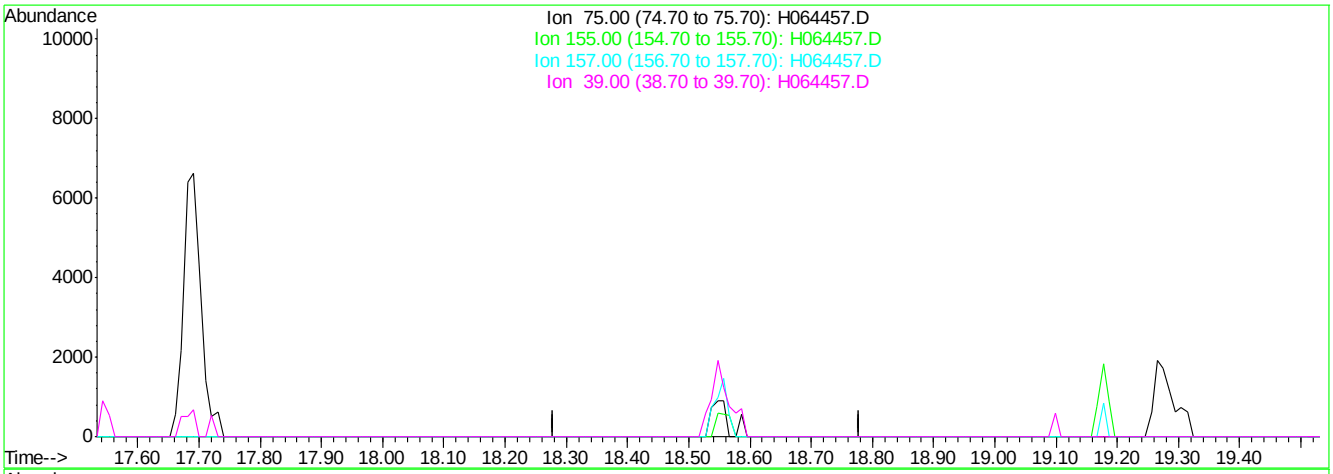
Ion	Exp%	Act%
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45.00	88.20	82.91
74.00	61.60	71.58
0.00	0.00	0.00

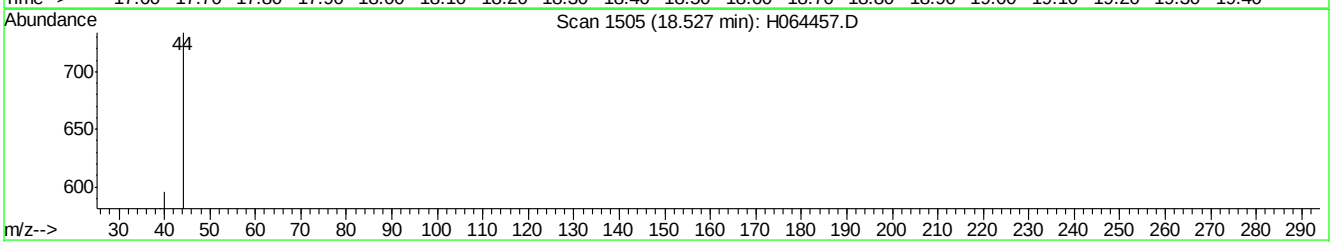
H064457.D APP9-H.M Wed Sep 15 14:53:56 2010

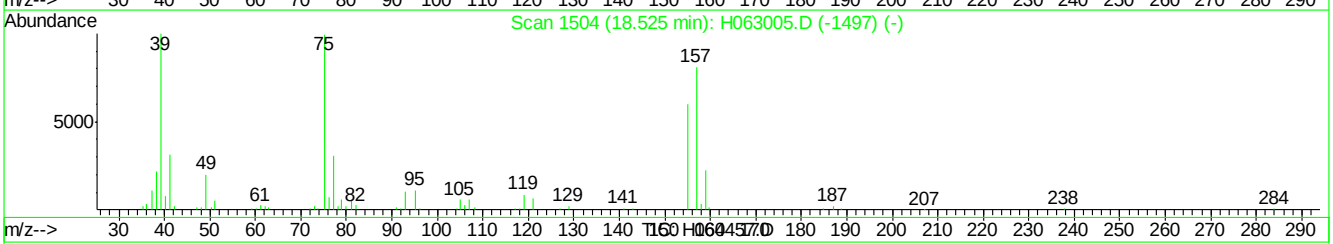
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(98) 1,2-Dibromo-3-Chloropropane

18.53min (-18.529) 0.00ug/Kg

response 0

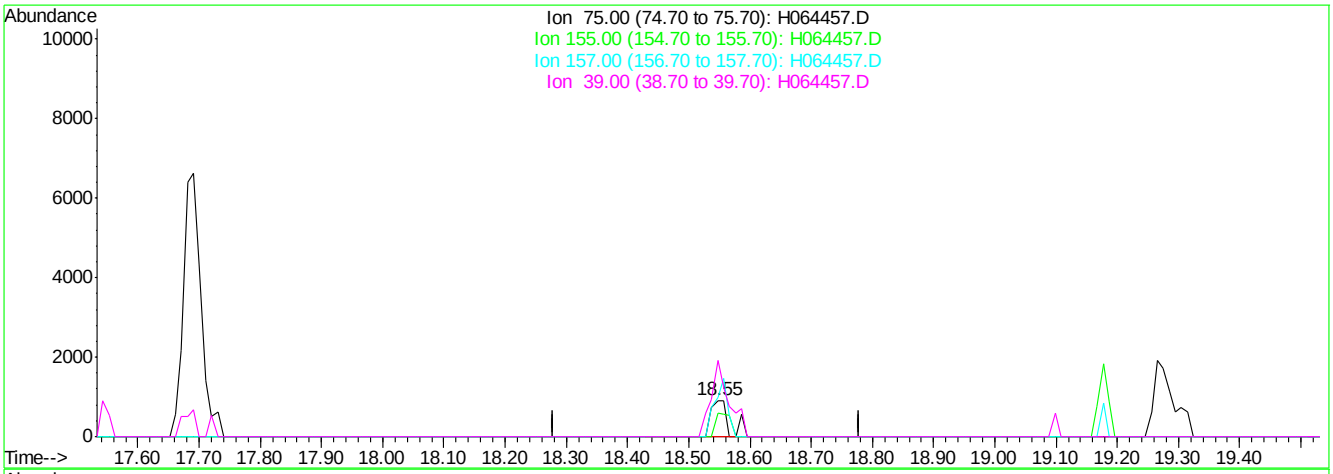
Ion	Exp%	Act%
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155.00	60.50	0.00#
157.00	81.60	0.00#
39.00	100.50	0.00#

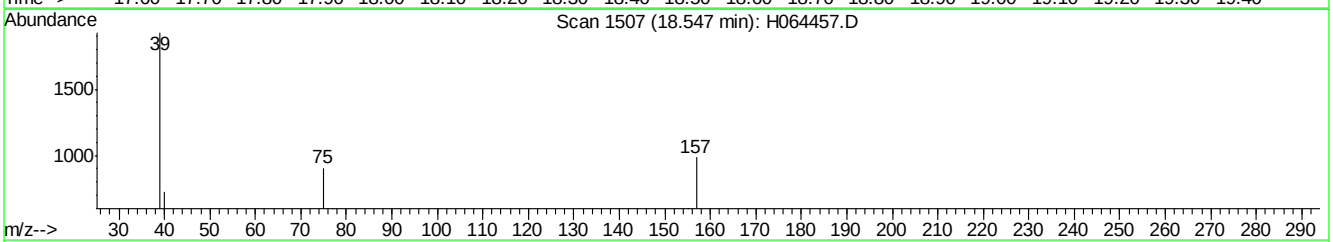
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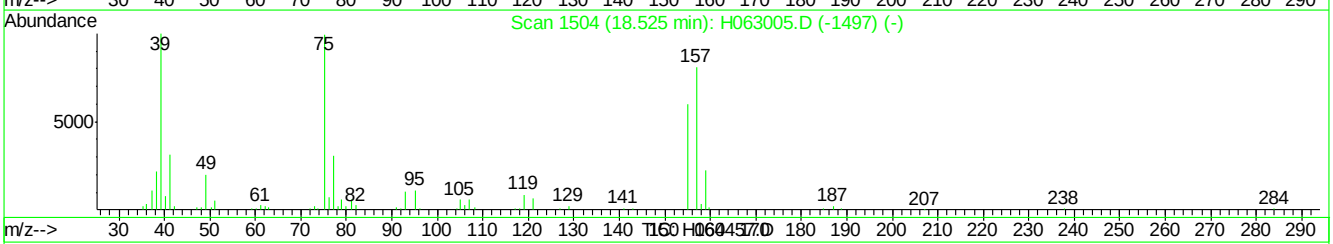
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(98) 1,2-Dibromo-3-Chloropropane

18.55min (+0.018) 2.03ug/Kg m

response 1826

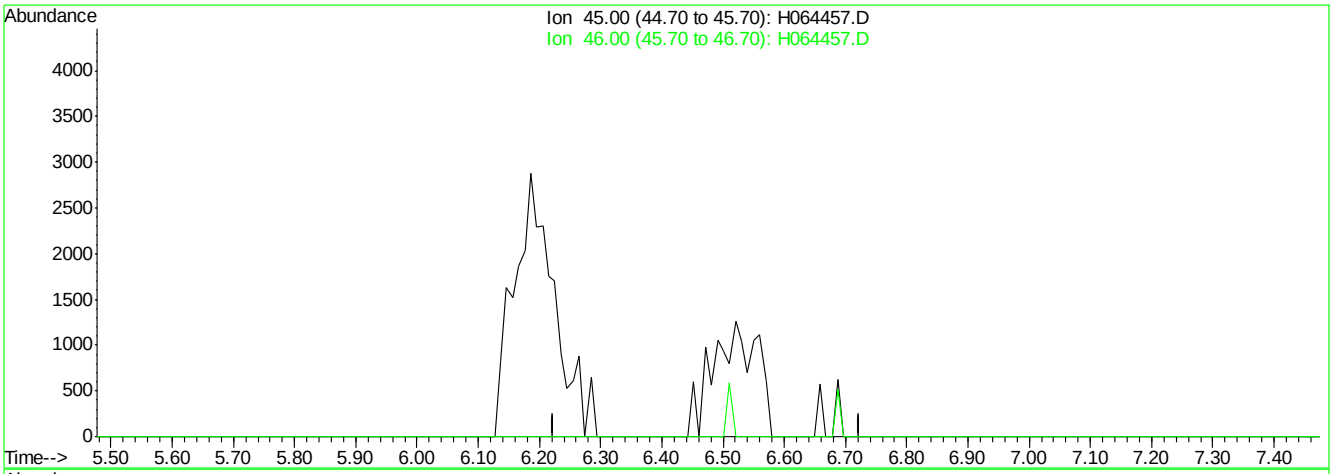
Ion	Exp%	Act%
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157.00	81.60	109.19
39.00	100.50	213.51#

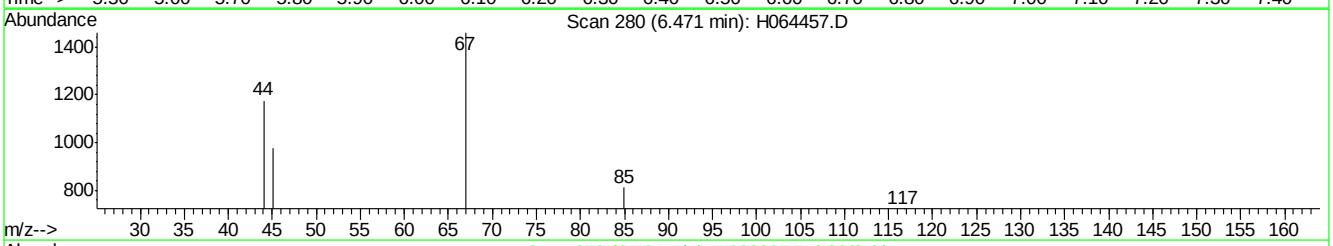
H064457.D APP9-H.M Wed Sep 15 14:54:17 2010

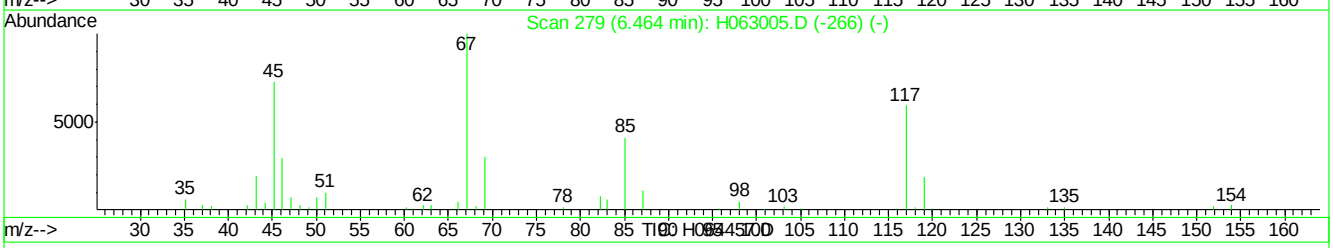
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(104) Ethanol

6.47min (-6.473) 0.00ug/Kg

response 0

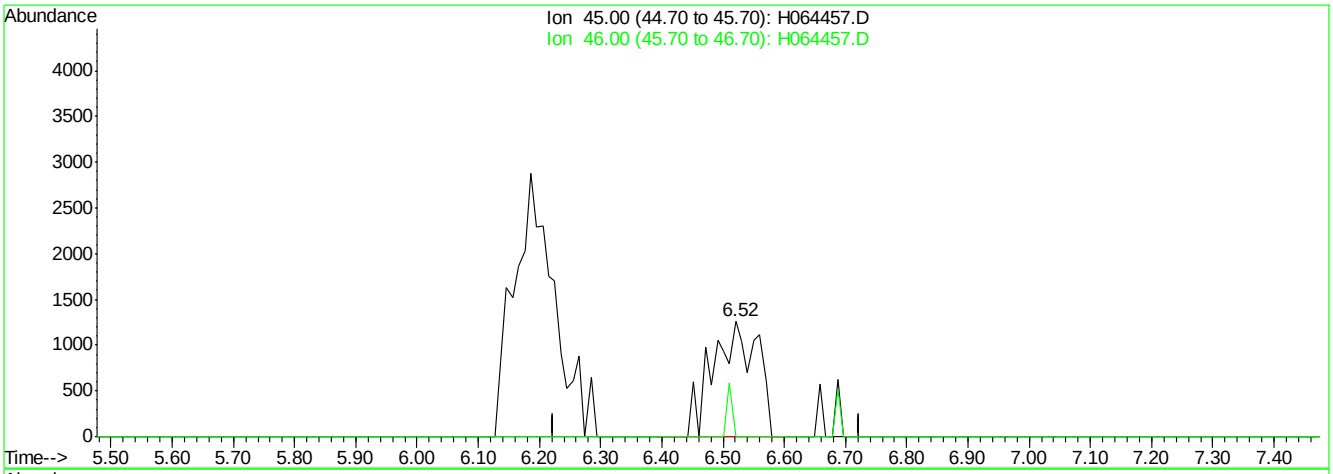
Ion	Exp%	Act%
45.00	100	0.00
46.00	41.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

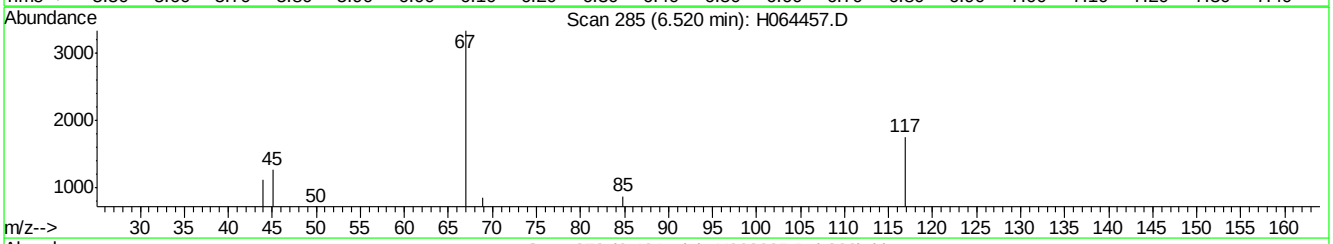
H064457.D APP9-H.M Wed Sep 15 14:54:21 2010

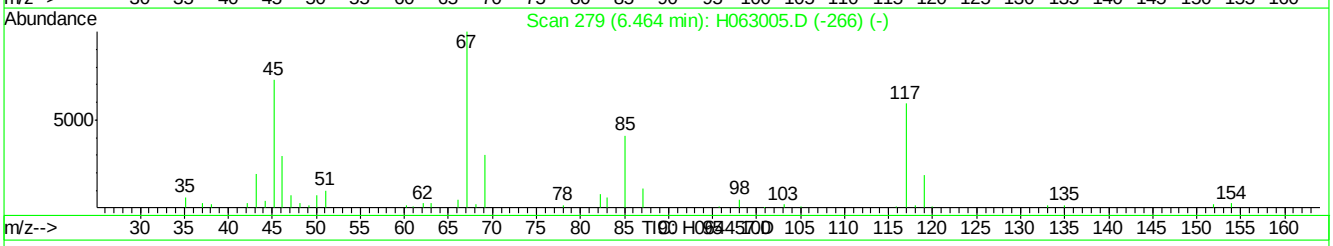
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(104) Ethanol

6.52min (+0.047) 101.07ug/Kg m

response 6333

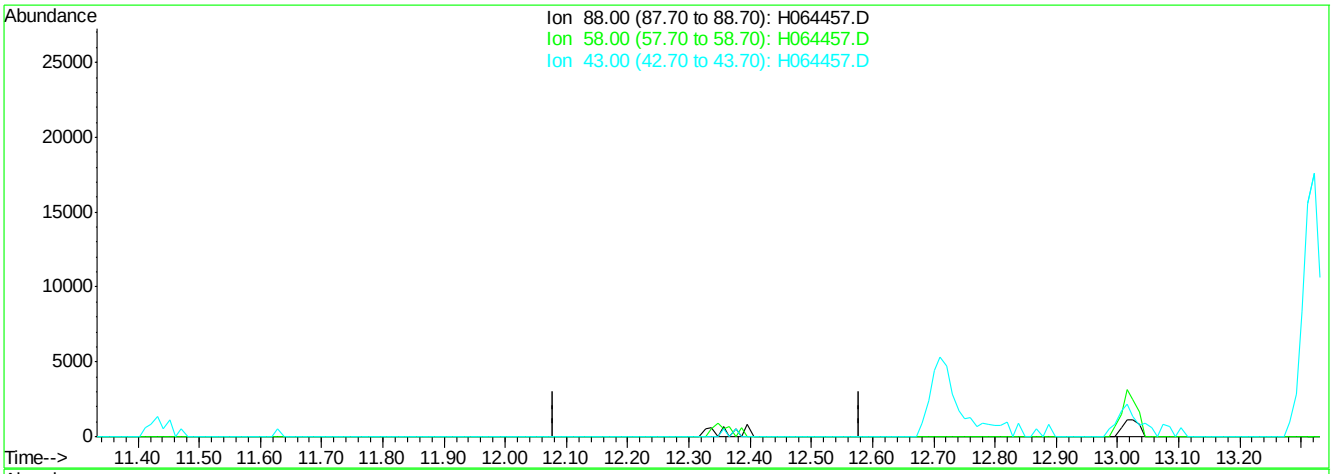
Ion	Exp%	Act%
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46.00	41.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

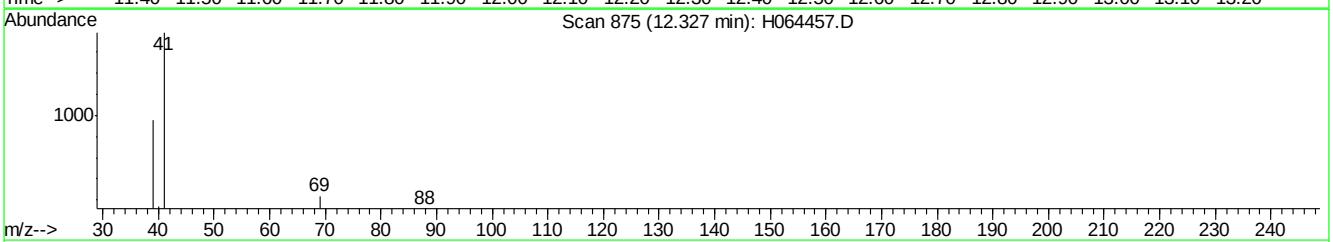
H064457.D APP9-H.M Wed Sep 15 14:54:27 2010

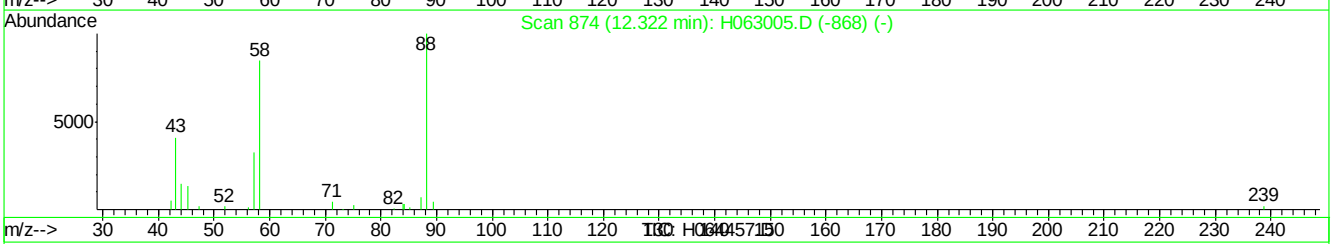
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(109) 1,4-Dioxane

12.33min (-12.329) 0.00ug/Kg

response 0

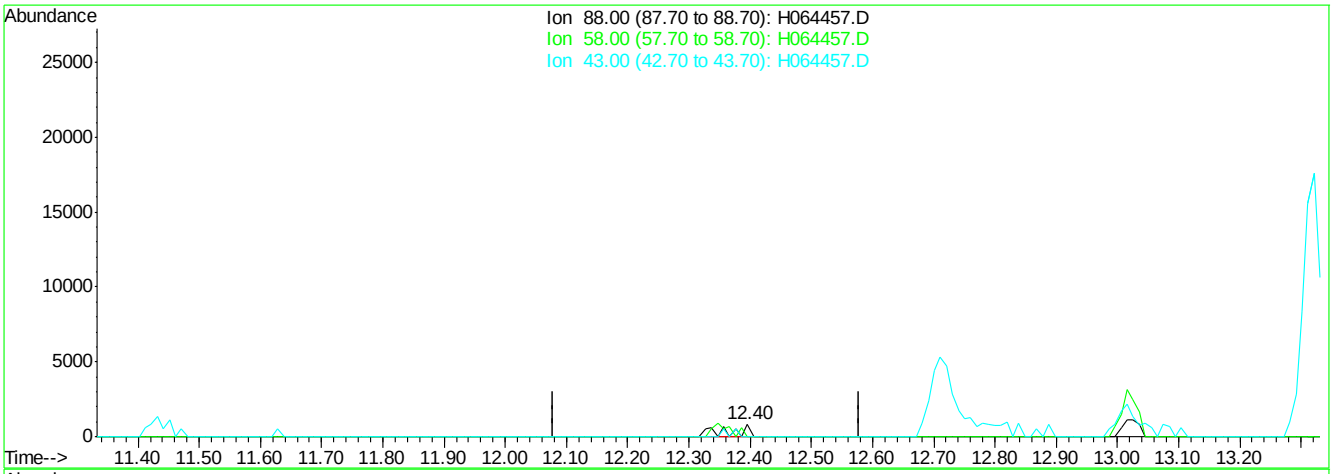
Ion	Exp%	Act%
88.00	100	0.00
58.00	84.50	0.00#
43.00	40.90	0.00#
0.00	0.00	0.00

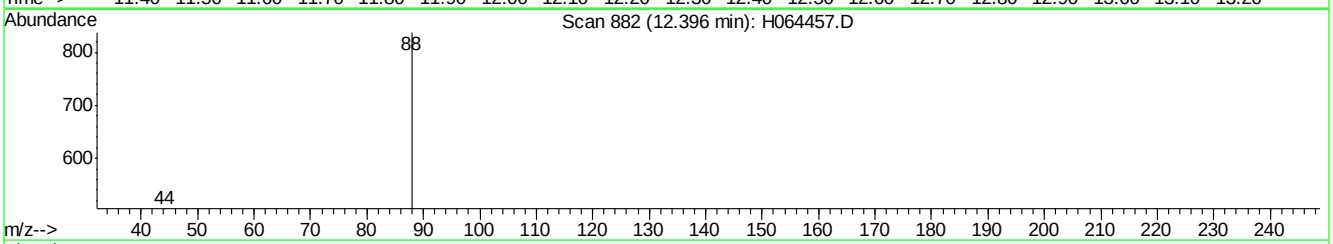
H064457.D APP9-H.M Wed Sep 15 14:54:31 2010

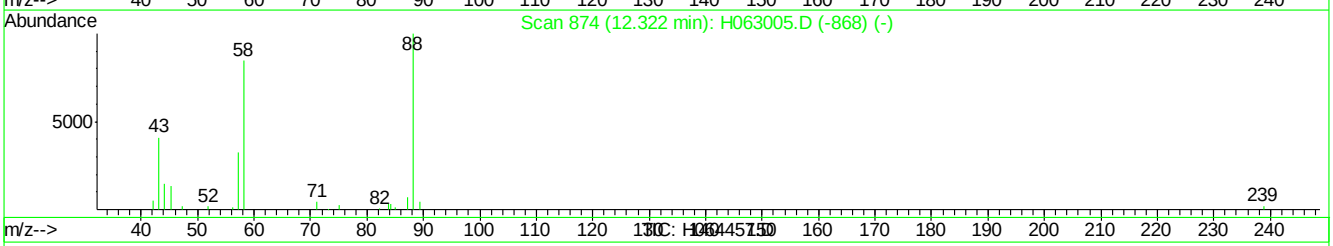
Quantitation Report (Qedit)

Data File : H:\HPCHEM\1\DATA\091510\H064457.D Vial: 1
Acq On : 15 Sep 2010 12:10 pm Operator: MikeM
Sample : ic2413-1 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:51 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:28 2010
Response via : Multiple Level Calibration







(109) 1,4-Dioxane

12.40min (+0.067) 63.34ug/Kg m

response 1896

Ion	Exp%	Act%
88.00	100	100
58.00	84.50	0.00#
43.00	40.90	0.00#
0.00	0.00	0.00

H064457.D APP9-H.M Wed Sep 15 14:54:34 2010

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064458.D Vial: 2
Acq On : 15 Sep 2010 12:36 pm Operator: MikeM
Sample : ic2413-2 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:11 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:10 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.22	96	549707	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.73	117	414199	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.20	152	223193	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.01	65	52627	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.18	113	136642	50.55	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 101.10%			
44) 1,2-Dichloroethane-d4	10.87	65	214086	51.22	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 102.44%			
55) Toluene-d8	13.02	98	563559	52.72	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 105.44%			
77) 4-Bromofluorobenzene	16.01	174	189388	50.28	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.56%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.96	85	57052	24.52	ug/Kg	95
3) Chloromethane	4.27	50	109350	20.80	ug/Kg	84
4) Vinyl Chloride	4.48	62	76001	42.85	ug/Kg	99
6) Chloroethane	5.38	64	43528	22.76	ug/Kg	88
7) Trichlorofluoromethane	5.62	101	86752	21.34	ug/Kg	91
8) Ethyl Ether	6.19	59	66962	47.97	ug/Kg	90
9) 1,2-Dichlorotrifluoroethan	6.53	67	97834	22.34	ug/Kg	94
10) 1,1-Dichloroethene	6.58	61	148315	21.42	ug/Kg	85
11) Freon 113	6.68	101	68285	21.51	ug/Kg	91
12) Carbon Disulfide	6.68	76	256325	20.47	ug/Kg	100
13) Iodomethane	6.87	142	109272	22.85	ug/Kg	91
14) Allyl chloride	7.40	41	197931	22.66	ug/Kg	97
16) Acetone	7.63	43	265098	105.64	ug/Kg	97
17) Methyl acetate	7.82	43	319086	129.84	ug/Kg	97
18) trans-1,2-Dichloroethene	7.85	61	157401	23.14	ug/Kg	90
19) Hexane	7.97	56	84873	18.07	ug/Kg	98
20) Methyl Tert Butyl Ether	8.01	73	166444	21.07	ug/Kg	87
21) Acetonitrile	8.42	41	99216	385.31	ug/Kg	96
22) Di-isopropyl ether	8.57	45	398398	21.19	ug/Kg	94
23) Chloroprene	8.78	53	153014	21.31	ug/Kg	92
24) 1,1-Dichloroethane	8.81	63	183843	20.06	ug/Kg	96
25) Acrylonitrile	8.86	53	141230	111.61	ug/Kg	95
26) ETBE	9.12	59	237307	21.88	ug/Kg	93
27) Vinyl acetate	9.14	43	455254	114.50	ug/Kg	97
28) cis-1,2-Dichloroethene	9.59	96	81652	21.69	ug/Kg	92
29) 2,2-Dichloropropane	9.75	77	144252	21.94	ug/Kg	94
30) Bromochloromethane	9.87	128	39527	22.85	ug/Kg	89
31) Cyclohexane	9.92	56	183232	19.76	ug/Kg	99
32) Chloroform	9.95	83	172438	20.52	ug/Kg	98
33) Ethyl acetate	10.05	43	509634	103.53	ug/Kg	97
34) Tetrahydrofuran	10.18	42	24355	16.51	ug/Kg	84
36) Carbon Tetrachloride	10.17	117	123024	21.01	ug/Kg	91
37) 1,1,1-Trichloroethane	10.25	97	137575	20.70	ug/Kg	96
38) 2-Butanone	10.32	43	308018	111.77	ug/Kg	93

(#) = qualifier out of range (m) = manual integration
H064458.D APP9-H.M Wed Sep 15 15:03:53 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064458.D Vial: 2
Acq On : 15 Sep 2010 12:36 pm Operator: MikeM
Sample : ic2413-2 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:11 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:10 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) 1,1-Dichloropropene	10.40	75	132556	21.00	ug/Kg	91
40) Propionitrile	10.70	54	99595	219.19	ug/Kg#	63
41) Methacrylonitrile	10.72	41	681298	207.28	ug/Kg	95
42) Benzene	10.71	78	345957	19.86	ug/Kg	90
43) TAME	10.81	73	157214	22.34	ug/Kg	87
45) 1,2-Dichloroethane	10.95	62	154603	20.44	ug/Kg	98
46) Trichloroethene	11.43	95	86323	19.08	ug/Kg	95
47) Methylcyclohexane	11.44	83	132765	19.28	ug/Kg	85
48) Dibromomethane	11.94	93	45906	23.09	ug/Kg	94
49) 1,2-Dichloropropane	12.04	63	96339	22.22	ug/Kg	96
50) Bromodichloromethane	12.10	83	124943	23.85	ug/Kg	95
51) Methyl methacrylate	12.22	41	105292	22.68	ug/Kg	94
52) 2-Chloroethyl vinyl ether	12.69	63	75418	135.01	ug/Kg	93
53) cis-1,3-Dichloropropene	12.81	75	148394	23.85	ug/Kg	74
56) Toluene	13.08	91	359999	21.60	ug/Kg	98
57) 2-Nitropropane	13.31	41	158751	121.25	ug/Kg	95
58) 4-Methyl-2-pentanone	13.44	43	524180	106.45	ug/Kg	96
59) trans-1,3-Dichloropropene	13.52	75	136029	26.20	ug/Kg	97
60) Tetrachloroethene	13.54	166	98496	21.91	ug/Kg	92
61) Ethyl methacrylate	13.62	69	92977	27.29	ug/Kg	94
62) 1,1,2-Trichloroethane	13.71	83	60872	23.39	ug/Kg	97
63) Dibromochloromethane	13.92	129	74295	26.18	ug/Kg	96
64) 1,3-Dichloropropane	14.01	76	127043	20.68	ug/Kg	83
65) 1,2-Dibromoethane	14.22	107	61085	24.39	ug/Kg	96
66) 2-hexanone	14.33	43	412496	113.49	ug/Kg	95
67) 1-Chlorohexane	14.66	91	127050	21.55	ug/Kg	95
68) Ethylbenzene	14.74	91	399854	22.44	ug/Kg	99
69) Chlorobenzene	14.75	112	208836	21.56	ug/Kg	78
70) 1,1,1,2-Tetrachloroethane	14.80	131	78822	22.67	ug/Kg	95
71) m,p-Xylene	14.88	91	699752	44.29	ug/Kg	94
72) o-Xylene	15.35	91	356991	22.28	ug/Kg	97
73) Styrene	15.41	104	225741	22.99	ug/Kg	94
74) Bromoform	15.49	173	50969	30.62	ug/Kg	97
75) Isopropylbenzene	15.66	105	344243	22.64	ug/Kg	98
78) cis-1,4-Dichloro-2-butene	16.04	53	38161	22.54	ug/Kg#	69
79) n-Propylbenzene	16.11	91	476318	19.62	ug/Kg	98
80) Bromobenzene	16.16	156	93228	21.37	ug/Kg	97
81) 1,1,2,2-Tetrachloroethane	16.17	83	90824	22.65	ug/Kg	97
82) 1,3,5-Trimethylbenzene	16.28	105	340961	21.69	ug/Kg	95
83) 2-Chlorotoluene	16.31	91	349716	19.20	ug/Kg	96
84) trans-1,4-Dichloro-2-Buten	16.36	53	35326	45.11	ug/Kg#	57
85) 1,2,3-Trichloropropane	16.35	110	22962	18.36	ug/Kg	95
86) Cyclohexanone	16.44	55	12536	133.48	ug/Kg#	83
87) 4-Chlorotoluene	16.49	91	323193	21.61	ug/Kg	96
88) tert-Butylbenzene	16.64	91	221104	21.21	ug/Kg	95
89) 1,2,4-Trimethylbenzene	16.71	105	331852	19.63	ug/Kg	88
90) Pentachloroethane	16.72	167	55216	21.70	ug/Kg	93
91) sec-Butylbenzene	16.82	105	412742	20.09	ug/Kg	99
92) 4-Isopropyltoluene	16.95	119	321245	20.48	ug/Kg	100

(#) = qualifier out of range (m) = manual integration
H064458.D APP9-H.M Wed Sep 15 15:03:53 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064458.D Vial: 2
Acq On : 15 Sep 2010 12:36 pm Operator: MikeM
Sample : ic2413-2 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:11 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:10 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

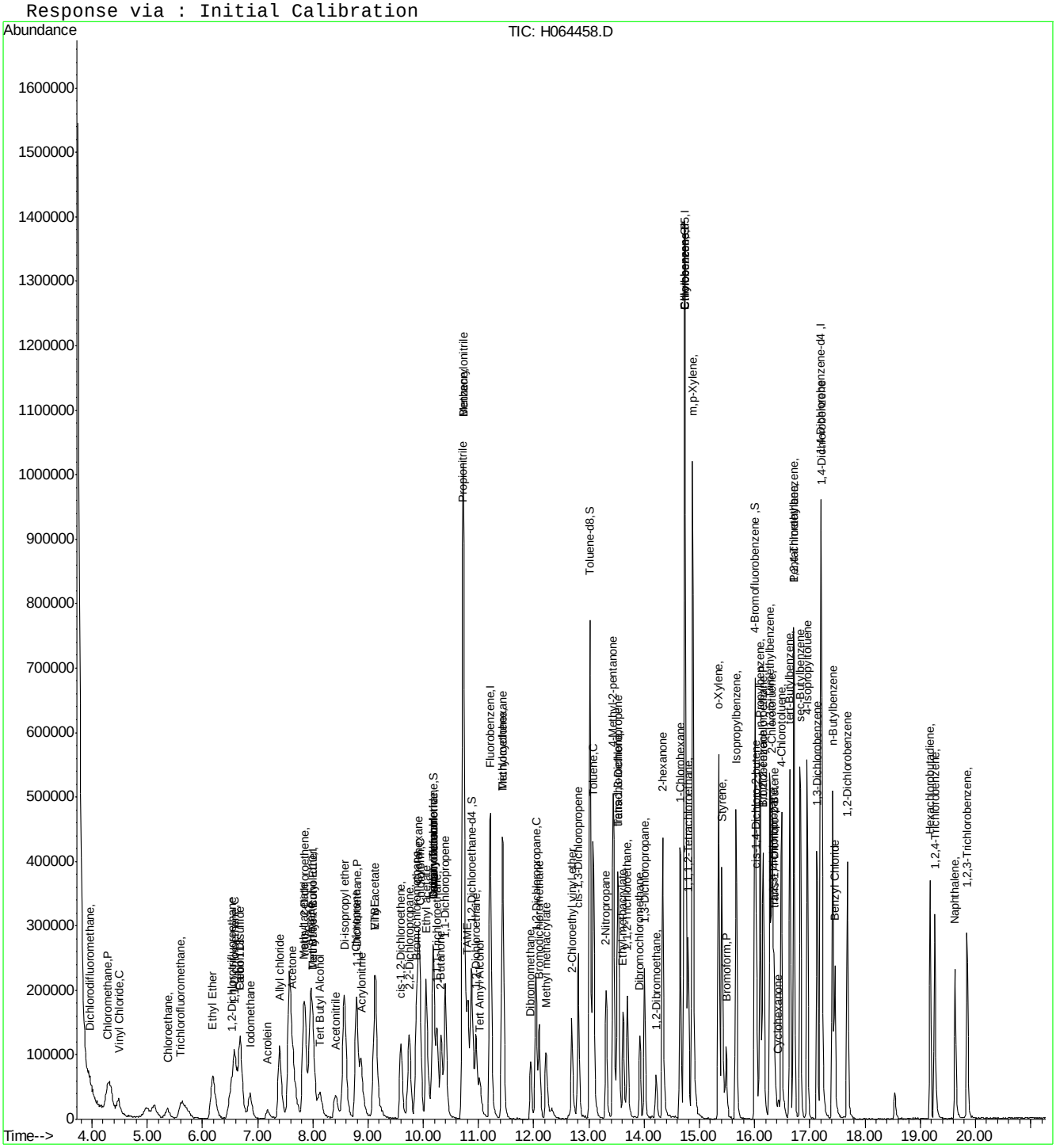
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
93)	1,3-Dichlorobenzene	17.14	146	173447	21.70	ug/Kg	95
94)	1,4-Dichlorobenzene	17.22	146	177542	19.49	ug/Kg	87
95)	n-Butylbenzene	17.42	92	209907	22.58	ug/Kg	96
96)	Benzyl Chloride	17.45	126	29230	32.39	ug/Kg#	84
97)	1,2-Dichlorobenzene	17.68	146	166657	21.79	ug/Kg	83
99)	Hexachlorobutadiene	19.19	225	93785	18.79	ug/Kg	89
100)	1,2,4-Trichlorobenzene	19.27	180	126939	19.21	ug/Kg	99
101)	Naphthalene	19.63	128	226210	19.66	ug/Kg	95
102)	1,2,3-Trichlorobenzene	19.85	180	114845	19.51	ug/Kg	98
105)	Acrolein	7.19	56	30778	121.56	ug/Kg	98
106)	Tert Butyl Alcohol	8.13	59	102345	217.01	ug/Kg	89
107)	Isobutyl alcohol	10.18	42	24904	347.00	ug/Kg	79
108)	Tert Amyl Alcohol	11.03	59	53242	226.22	ug/Kg	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064458.D Vial: 2
Acq On : 15 Sep 2010 12:36 pm Operator: MikeM
Sample : ic2413-2 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:03:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064459.D Vial: 3
Acq On : 15 Sep 2010 1:03 pm Operator: MikeM
Sample : ic2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:13 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:12 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.21	96	556839	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.73	117	379501	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.20	152	217111	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	45895	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	142557	51.78	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 103.56%			
44) 1,2-Dichloroethane-d4	10.87	65	214874	50.14	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 100.28%			
55) Toluene-d8	13.02	98	564035	56.06	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 112.12%			
77) 4-Bromofluorobenzene	16.02	174	194811	53.02	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 106.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.97	85	142026	54.14	ug/Kg	96
3) Chloromethane	4.29	50	257620	47.42	ug/Kg	86
4) Vinyl Chloride	4.49	62	198480	70.31	ug/Kg	92
5) Bromomethane	5.14	94	80303	46.42	ug/Kg	90
6) Chloroethane	5.38	64	100935	48.74	ug/Kg	87
7) Trichlorofluoromethane	5.63	101	223425	52.50	ug/Kg	92
8) Ethyl Ether	6.19	59	156221	65.02	ug/Kg	92
9) 1,2-Dichlorotrifluoroethan	6.52	67	249390	53.12	ug/Kg	84
10) 1,1-Dichloroethene	6.59	61	373488	51.42	ug/Kg	93
11) Freon 113	6.69	101	180812	54.18	ug/Kg	89
12) Carbon Disulfide	6.68	76	657053	51.20	ug/Kg	99
13) Iodomethane	6.86	142	278263	53.62	ug/Kg	94
14) Allyl chloride	7.40	41	512812	54.34	ug/Kg	96
15) Methylene Chloride	7.57	49	622373	Below Cal		96
16) Acetone	7.63	43	620249	237.31	ug/Kg	98
17) Methyl acetate	7.82	43	728408	254.61	ug/Kg	99
18) trans-1,2-Dichloroethene	7.86	61	381536	51.34	ug/Kg	92
19) Hexane	7.96	56	216679	47.85	ug/Kg#	84
20) Methyl Tert Butyl Ether	8.01	73	409541	49.84	ug/Kg	79
21) Acetonitrile	8.39	41	219594	575.34	ug/Kg	98
22) Di-isopropyl ether	8.57	45	983770	50.16	ug/Kg	95
23) Chloroprene	8.78	53	393878	52.44	ug/Kg	94
24) 1,1-Dichloroethane	8.81	63	457346	49.19	ug/Kg	95
25) Acrylonitrile	8.87	53	346673	255.62	ug/Kg	95
26) ETBE	9.12	59	598962	52.07	ug/Kg	92
27) Vinyl acetate	9.13	43	1247239	272.49	ug/Kg	99
28) cis-1,2-Dichloroethene	9.60	96	204104	51.36	ug/Kg	90
29) 2,2-Dichloropropane	9.75	77	353261	50.59	ug/Kg	97
30) Bromochloromethane	9.88	128	95438	50.84	ug/Kg	95
31) Cyclohexane	9.92	56	443711	47.52	ug/Kg	92
32) Chloroform	9.94	83	428670	49.71	ug/Kg	99
33) Ethyl acetate	10.05	43	1169266	230.43	ug/Kg	99
34) Tetrahydrofuran	10.18	42	52745	42.23	ug/Kg	93
36) Carbon Tetrachloride	10.17	117	326268	53.65	ug/Kg	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064459.D Vial: 3
Acq On : 15 Sep 2010 1:03 pm Operator: MikeM
Sample : ic2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:13 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:12 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.25	97	348947	50.94	ug/Kg	94
38)	2-Butanone	10.32	43	717765	242.82	ug/Kg	93
39)	1,1-Dichloropropene	10.41	75	324629	49.53	ug/Kg	90
40)	Propionitrile	10.70	54	233136	483.33	ug/Kg#	73
41)	Methacrylonitrile	10.73	41	1554773	458.63	ug/Kg	94
42)	Benzene	10.72	78	831248	47.27	ug/Kg	100
43)	TAME	10.81	73	389552	51.62	ug/Kg	87
45)	1,2-Dichloroethane	10.96	62	369355	47.68	ug/Kg	98
46)	Trichloroethene	11.43	95	218586	48.82	ug/Kg	96
47)	Methylcyclohexane	11.45	83	329349	48.09	ug/Kg	94
48)	Dibromomethane	11.94	93	115593	53.28	ug/Kg	98
49)	1,2-Dichloropropane	12.04	63	242894	52.40	ug/Kg	92
50)	Bromodichloromethane	12.10	83	318878	54.81	ug/Kg	90
51)	Methyl methacrylate	12.22	41	245614	48.94	ug/Kg	97
52)	2-Chloroethyl vinyl ether	12.69	63	199068	299.39	ug/Kg	93
53)	cis-1,3-Dichloropropene	12.81	75	385836	55.84	ug/Kg	84
56)	Toluene	13.08	91	861857	54.27	ug/Kg	97
57)	2-Nitropropane	13.31	41	388633	269.97	ug/Kg	95
58)	4-Methyl-2-pentanone	13.44	43	1145027	245.87	ug/Kg	97
59)	trans-1,3-Dichloropropene	13.52	75	319890	52.06	ug/Kg	91
60)	Tetrachloroethene	13.54	166	231407	53.62	ug/Kg	89
61)	Ethyl methacrylate	13.62	69	250851	59.83	ug/Kg	89
62)	1,1,2-Trichloroethane	13.70	83	141019	54.52	ug/Kg	94
63)	Dibromochloromethane	13.92	129	186071	55.44	ug/Kg	94
64)	1,3-Dichloropropane	14.01	76	324011	56.60	ug/Kg	91
65)	1,2-Dibromoethane	14.22	107	160367	57.92	ug/Kg	96
66)	2-hexanone	14.33	43	974526	259.67	ug/Kg	98
67)	1-Chlorohexane	14.66	91	328906	58.62	ug/Kg	93
68)	Ethylbenzene	14.74	91	941432	54.35	ug/Kg	97
69)	Chlorobenzene	14.76	112	505784	54.85	ug/Kg	93
70)	1,1,1,2-Tetrachloroethane	14.80	131	197150	58.02	ug/Kg	96
71)	m,p-Xylene	14.88	91	1572522	103.10	ug/Kg	95
72)	o-Xylene	15.35	91	858910	55.35	ug/Kg	97
73)	Styrene	15.41	104	580748	56.59	ug/Kg	90
74)	Bromoform	15.49	173	126274	55.21	ug/Kg	93
75)	Isopropylbenzene	15.66	105	812663	54.72	ug/Kg	100
78)	cis-1,4-Dichloro-2-butene	16.04	53	88288	47.89	ug/Kg	97
79)	n-Propylbenzene	16.11	91	1161250	49.65	ug/Kg	97
80)	Bromobenzene	16.15	156	221245	50.41	ug/Kg	98
81)	1,1,2,2-Tetrachloroethane	16.17	83	204847	49.25	ug/Kg	94
82)	1,3,5-Trimethylbenzene	16.28	105	803984	50.45	ug/Kg	99
83)	2-Chlorotoluene	16.32	91	845381	48.68	ug/Kg	98
84)	trans-1,4-Dichloro-2-Buten	16.35	53	88189	108.82	ug/Kg#	81
85)	1,2,3-Trichloropropane	16.34	110	50040	42.89	ug/Kg	88
86)	Cyclohexanone	16.44	55	29838	279.77	ug/Kg	93
87)	4-Chlorotoluene	16.49	91	783589	51.78	ug/Kg	99
88)	tert-Butylbenzene	16.65	91	542728	51.95	ug/Kg	98
89)	1,2,4-Trimethylbenzene	16.71	105	756016	46.41	ug/Kg	93
90)	Pentachloroethane	16.72	167	130758	50.68	ug/Kg	89

(#) = qualifier out of range (m) = manual integration
H064459.D APP9-H.M Wed Sep 15 15:04:01 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064459.D Vial: 3
Acq On : 15 Sep 2010 1:03 pm Operator: MikeM
Sample : ic2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:13 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:12 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

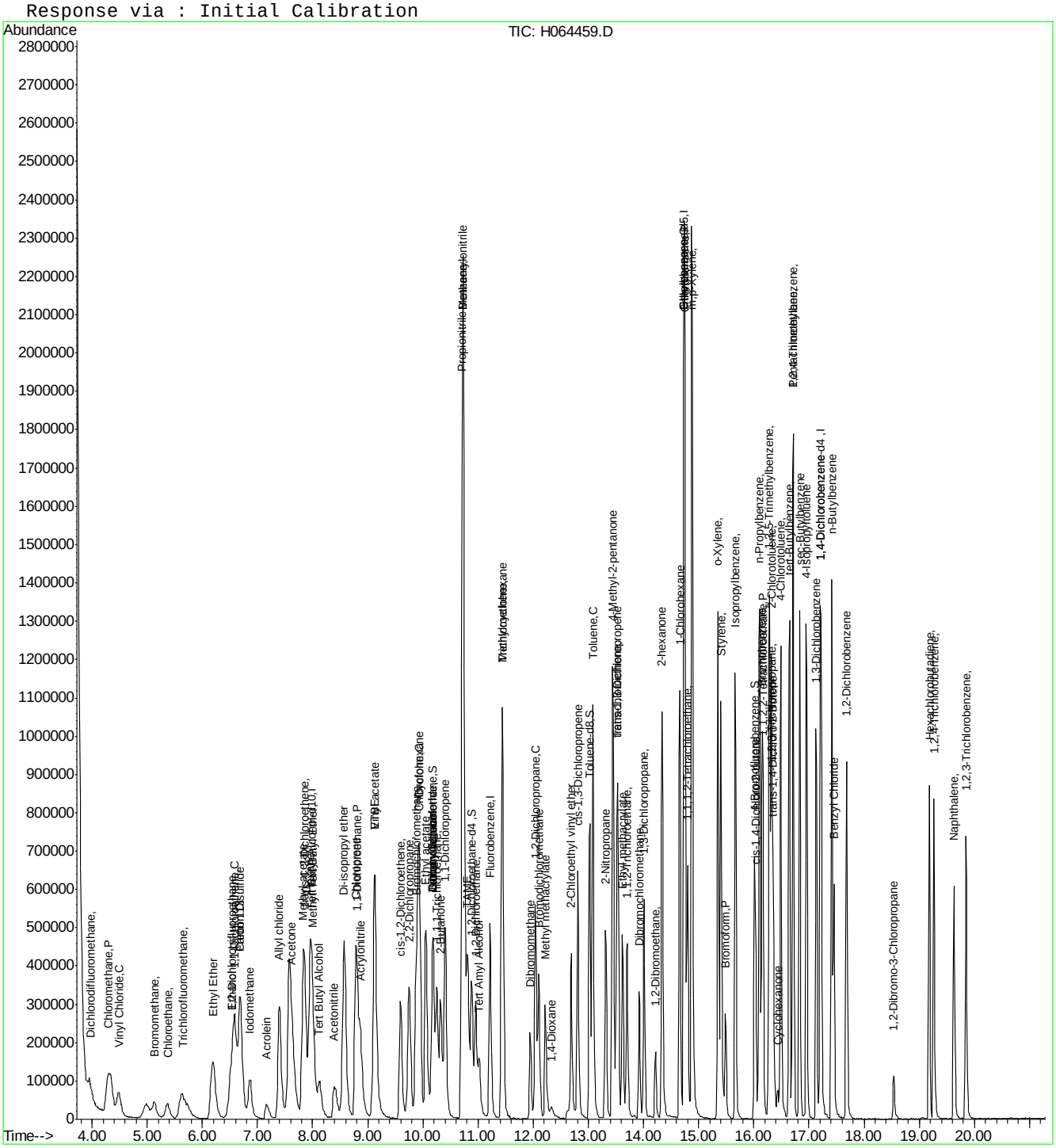
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.83	105	991433	49.50	ug/Kg	99
92)	4-Isopropyltoluene	16.95	119	773047	50.06	ug/Kg	99
93)	1,3-Dichlorobenzene	17.14	146	416233	51.36	ug/Kg	94
94)	1,4-Dichlorobenzene	17.22	146	430962	49.26	ug/Kg	94
95)	n-Butylbenzene	17.41	92	511748	53.17	ug/Kg	96
96)	Benzyl Chloride	17.45	126	75000	53.97	ug/Kg#	65
97)	1,2-Dichlorobenzene	17.69	146	400638	51.55	ug/Kg	91
98)	1,2-Dibromo-3-Chloropropan	18.54	75	38796	49.59	ug/Kg	94
99)	Hexachlorobutadiene	19.19	225	223176	47.40	ug/Kg	90
100)	1,2,4-Trichlorobenzene	19.26	180	310026	49.20	ug/Kg	97
101)	Naphthalene	19.63	128	518476	46.72	ug/Kg	97
102)	1,2,3-Trichlorobenzene	19.85	180	273819	48.41	ug/Kg	95
104)	Ethanol	6.52	45	54240	826.72	ug/Kg	89
105)	Acrolein	7.16	56	73538	276.87	ug/Kg	92
106)	Tert Butyl Alcohol	8.11	59	239881	559.46	ug/Kg	93
107)	Isobutyl alcohol	10.18	42	53684	918.58	ug/Kg	91
108)	Tert Amyl Alcohol	11.02	59	129574	592.46	ug/Kg	87
109)	1,4-Dioxane	12.33	88	26211	1017.72	ug/Kg	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064459.D APP9-H.M Wed Sep 15 15:04:01 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064459.D Vial: 3
Acq On : 15 Sep 2010 1:03 pm Operator: MikeM
Sample : ic2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:03:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064460.D Vial: 4
Acq On : 15 Sep 2010 1:30 pm Operator: MikeM
Sample : icc2413-4 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:15 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:14 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.22	96	572896	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.73	117	349665	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.20	152	208382	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.00	65	48745	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	133087	46.43	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 92.86%			
44) 1,2-Dichloroethane-d4	10.87	65	196265	44.47	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 88.94%			
55) Toluene-d8	13.03	98	580113	60.15	ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 120.30%			
77) 4-Bromofluorobenzene	16.02	174	188338	52.35	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 104.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.95	85	317272	114.40	ug/Kg	99
3) Chloromethane	4.29	50	528822	96.27	ug/Kg	100
4) Vinyl Chloride	4.49	62	408417	123.85	ug/Kg	95
5) Bromomethane	5.12	94	149400	Below Cal		88
6) Chloroethane	5.36	64	192564	91.15	ug/Kg	93
7) Trichlorofluoromethane	5.61	101	450481	101.20	ug/Kg	91
8) Ethyl Ether	6.18	59	328853	120.92	ug/Kg	97
9) 1,2-Dichlorotrifluoroethan	6.53	67	523006	106.07	ug/Kg	92
10) 1,1-Dichloroethene	6.59	61	772438	102.39	ug/Kg	90
11) Freon 113	6.70	101	363946	103.13	ug/Kg	93
12) Carbon Disulfide	6.68	76	1364480	102.53	ug/Kg	95
13) Iodomethane	6.86	142	583395	106.69	ug/Kg	93
14) Allyl chloride	7.40	41	1113612	111.48	ug/Kg	93
15) Methylene Chloride	7.58	49	971795	Below Cal		94
16) Acetone	7.63	43	1249875	472.81	ug/Kg	97
17) Methyl acetate	7.82	43	1459317	492.77	ug/Kg	100
18) trans-1,2-Dichloroethene	7.85	61	806970	104.61	ug/Kg	90
19) Hexane	7.96	56	450231	98.05	ug/Kg	90
20) Methyl Tert Butyl Ether	8.01	73	785012	92.96	ug/Kg	84
21) Acetonitrile	8.40	41	441936	1071.60	ug/Kg	91
22) Di-isopropyl ether	8.58	45	2054954	101.74	ug/Kg	96
23) Chloroprene	8.78	53	850769	108.33	ug/Kg	94
24) 1,1-Dichloroethane	8.82	63	939868	98.78	ug/Kg	99
25) Acrylonitrile	8.86	53	687711	489.21	ug/Kg	98
26) ETBE	9.12	59	1118769	93.24	ug/Kg	90
27) Vinyl acetate	9.12	43	2555425	503.90	ug/Kg	99
28) cis-1,2-Dichloroethene	9.59	96	434936	105.42	ug/Kg#	81
29) 2,2-Dichloropropane	9.75	77	730364	101.26	ug/Kg	98
30) Bromochloromethane	9.87	128	200774	103.38	ug/Kg	92
31) Cyclohexane	9.92	56	930825	98.53	ug/Kg	92
32) Chloroform	9.95	83	867266	97.95	ug/Kg	98
33) Ethyl acetate	10.05	43	2318282	455.96	ug/Kg	98
34) Tetrahydrofuran	10.19	42	105006	94.23	ug/Kg	95
36) Carbon Tetrachloride	10.18	117	672224	104.89	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
H064460.D APP9-H.M Wed Sep 15 15:04:09 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064460.D Vial: 4
Acq On : 15 Sep 2010 1:30 pm Operator: MikeM
Sample : icc2413-4 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:15 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:14 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) 1,1,1-Trichloroethane	10.25	97	706081	99.56	ug/Kg	94
38) 2-Butanone	10.32	43	1424282	472.86	ug/Kg	93
39) 1,1-Dichloropropene	10.41	75	697006	103.70	ug/Kg	89
40) Propionitrile	10.70	54	447851	912.59	ug/Kg#	69
41) Methacrylonitrile	10.73	41	2890915	852.37	ug/Kg	96
42) Benzene	10.71	78	1599943	90.07	ug/Kg	92
43) TAME	10.81	73	712196	90.75	ug/Kg	85
45) 1,2-Dichloroethane	10.96	62	743442	94.75	ug/Kg	97
46) Trichloroethene	11.43	95	433022	94.74	ug/Kg	98
47) Methylcyclohexane	11.45	83	681590	97.98	ug/Kg	93
48) Dibromomethane	11.94	93	236908	103.87	ug/Kg	98
49) 1,2-Dichloropropane	12.04	63	503260	103.86	ug/Kg	93
50) Bromodichloromethane	12.10	83	677251	109.63	ug/Kg	94
51) Methyl methacrylate	12.21	41	509700	99.42	ug/Kg	91
52) 2-Chloroethyl vinyl ether	12.68	63	414018	567.82	ug/Kg	89
53) cis-1,3-Dichloropropene	12.81	75	801614	108.54	ug/Kg	81
56) Toluene	13.09	91	1764748	117.26	ug/Kg	97
57) 2-Nitropropane	13.31	41	789985	557.54	ug/Kg	93
58) 4-Methyl-2-pentanone	13.44	43	2267344	531.33	ug/Kg	97
59) trans-1,3-Dichloropropene	13.51	75	641997	109.54	ug/Kg	91
60) Tetrachloroethene	13.54	166	459821	112.91	ug/Kg	92
61) Ethyl methacrylate	13.62	69	532792	118.08	ug/Kg	91
62) 1,1,2-Trichloroethane	13.70	83	290660	118.40	ug/Kg	93
63) Dibromochloromethane	13.92	129	395780	117.10	ug/Kg	95
64) 1,3-Dichloropropane	14.01	76	654924	118.94	ug/Kg	91
65) 1,2-Dibromoethane	14.22	107	317618	109.66	ug/Kg	97
66) 2-hexanone	14.34	43	2019799	565.42	ug/Kg	97
67) 1-Chlorohexane	14.66	91	665198	121.68	ug/Kg	87
68) Ethylbenzene	14.74	91	1829779	111.41	ug/Kg	99
69) Chlorobenzene	14.76	112	970360	110.64	ug/Kg	90
70) 1,1,1,2-Tetrachloroethane	14.81	131	398849	120.92	ug/Kg	96
71) m,p-Xylene	14.88	91	2977692	209.72	ug/Kg	94
72) o-Xylene	15.35	91	1676585	113.23	ug/Kg	95
73) Styrene	15.41	104	1171033	111.31	ug/Kg	93
74) Bromoform	15.49	173	262753	114.49	ug/Kg	97
75) Isopropylbenzene	15.67	105	1638884	116.11	ug/Kg	97
78) cis-1,4-Dichloro-2-butene	16.04	53	179529	105.26	ug/Kg	95
79) n-Propylbenzene	16.11	91	2340382	104.50	ug/Kg	98
80) Bromobenzene	16.16	156	438469	103.80	ug/Kg	99
81) 1,1,2,2-Tetrachloroethane	16.18	83	399223	100.51	ug/Kg	100
82) 1,3,5-Trimethylbenzene	16.29	105	1568994	102.27	ug/Kg	96
83) 2-Chlorotoluene	16.32	91	1656264	100.25	ug/Kg	99
84) trans-1,4-Dichloro-2-Buten	16.35	53	171751	214.50	ug/Kg#	71
85) 1,2,3-Trichloropropane	16.35	110	103531	97.05	ug/Kg	84
86) Cyclohexanone	16.43	55	62286	585.25	ug/Kg	89
87) 4-Chlorotoluene	16.49	91	1549804	105.45	ug/Kg	97
88) tert-Butylbenzene	16.65	91	1068021	105.14	ug/Kg	96
89) 1,2,4-Trimethylbenzene	16.71	105	1430109	93.71	ug/Kg	92
90) Pentachloroethane	16.73	167	237005	95.27	ug/Kg	86

(#) = qualifier out of range (m) = manual integration
H064460.D APP9-H.M Wed Sep 15 15:04:09 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064460.D Vial: 4
Acq On : 15 Sep 2010 1:30 pm Operator: MikeM
Sample : icc2413-4 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:15 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:14 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

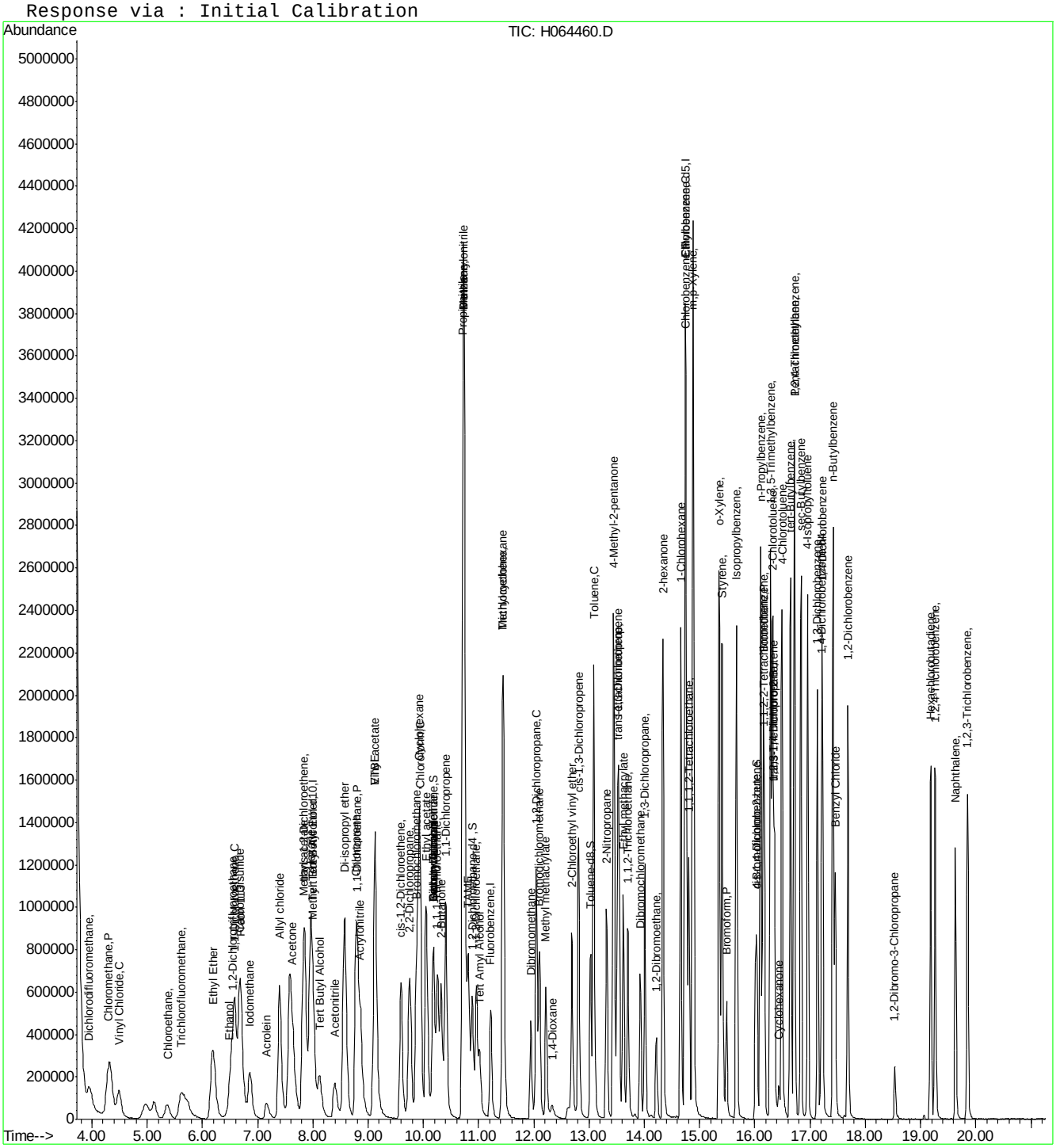
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.84	105	1930627	100.76	ug/Kg	100
92)	4-Isopropyltoluene	16.95	119	1497951	101.02	ug/Kg	98
93)	1,3-Dichlorobenzene	17.14	146	835341	106.42	ug/Kg	92
94)	1,4-Dichlorobenzene	17.23	146	832607	99.64	ug/Kg	94
95)	n-Butylbenzene	17.42	92	1018807	108.00	ug/Kg	92
96)	Benzyl Chloride	17.46	126	142591	100.11	ug/Kg#	81
97)	1,2-Dichlorobenzene	17.68	146	796737	105.72	ug/Kg	88
98)	1,2-Dibromo-3-Chloropropan	18.53	75	87042	116.40	ug/Kg	94
99)	Hexachlorobutadiene	19.19	225	440951	99.30	ug/Kg	93
100)	1,2,4-Trichlorobenzene	19.27	180	610308	101.45	ug/Kg	96
101)	Naphthalene	19.63	128	1043359	100.15	ug/Kg	96
102)	1,2,3-Trichlorobenzene	19.85	180	535610	99.72	ug/Kg	98
104)	Ethanol	6.47	45	118854	2005.17	ug/Kg	96
105)	Acrolein	7.15	56	161437	524.12	ug/Kg	100
106)	Tert Butyl Alcohol	8.13	59	485517	1025.48	ug/Kg	92
107)	Isobutyl alcohol	10.19	42	110363	1827.60	ug/Kg	90
108)	Tert Amyl Alcohol	11.02	59	257683	1044.93	ug/Kg	89
109)	1,4-Dioxane	12.33	88	56713	2042.11	ug/Kg	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064460.D Vial: 4
Acq On : 15 Sep 2010 1:30 pm Operator: MikeM
Sample : icc2413-4 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:03:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064461.D Vial: 5
Acq On : 15 Sep 2010 1:57 pm Operator: MikeM
Sample : ic2413-5 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:16 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:16 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.22	96	492898	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.74	117	289627	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	183074	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.01	65	48356	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	114256	47.17	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 94.34%			
44) 1,2-Dichloroethane-d4	10.88	65	177505	48.08	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 96.16%			
55) Toluene-d8	13.02	98	503898	60.03	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 120.06%			
77) 4-Bromofluorobenzene	16.02	174	160267	50.12	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.24%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.96	85	452678	183.12	ug/Kg	99
3) Chloromethane	4.30	50	770193	164.51	ug/Kg	90
4) Vinyl Chloride	4.49	62	588046	195.60	ug/Kg	94
5) Bromomethane	5.12	94	181499	170.54	ug/Kg	99
6) Chloroethane	5.37	64	238740	134.31	ug/Kg	95
7) Trichlorofluoromethane	5.61	101	625314	162.79	ug/Kg	90
8) Ethyl Ether	6.17	59	440510	178.91	ug/Kg	95
9) 1,2-Dichlorotrifluoroethan	6.54	67	734657	170.58	ug/Kg	92
10) 1,1-Dichloroethene	6.59	61	1081399	165.63	ug/Kg	93
11) Freon 113	6.68	101	488436	159.62	ug/Kg	96
12) Carbon Disulfide	6.69	76	1942730	168.60	ug/Kg	98
13) Iodomethane	6.86	142	800501	167.36	ug/Kg	97
14) Allyl chloride	7.40	41	1523068	172.27	ug/Kg	93
15) Methylene Chloride	7.57	49	1314240	Below Cal		93
16) Acetone	7.64	43	1836058	818.40	ug/Kg	99
17) Methyl acetate	7.82	43	2057028	810.26	ug/Kg	99
18) trans-1,2-Dichloroethene	7.86	61	1113619	165.88	ug/Kg	91
19) Hexane	7.97	56	634881	161.49	ug/Kg	89
20) Methyl Tert Butyl Ether	8.01	73	1130245	158.35	ug/Kg	78
21) Acetonitrile	8.40	41	706814	1957.01	ug/Kg	98
22) Di-isopropyl ether	8.58	45	2781907	159.39	ug/Kg	97
23) Chloroprene	8.78	53	1172701	170.02	ug/Kg	90
24) 1,1-Dichloroethane	8.81	63	1304466	159.84	ug/Kg	94
25) Acrylonitrile	8.85	53	1033205	858.90	ug/Kg	97
26) ETBE	9.12	59	1572327	154.93	ug/Kg	95
27) Vinyl acetate	9.13	43	3787052	862.76	ug/Kg	98
28) cis-1,2-Dichloroethene	9.60	96	591491	164.41	ug/Kg#	82
29) 2,2-Dichloropropane	9.76	77	1013749	162.85	ug/Kg	97
30) Bromochloromethane	9.87	128	258847	153.61	ug/Kg#	86
31) Cyclohexane	9.91	56	1268543	156.65	ug/Kg	93
32) Chloroform	9.94	83	1184356	156.27	ug/Kg	97
33) Ethyl acetate	10.05	43	3486753	815.02	ug/Kg	100
34) Tetrahydrofuran	10.19	42	162891	177.84	ug/Kg	94
36) Carbon Tetrachloride	10.18	117	933593	167.27	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
H064461.D APP9-H.M Wed Sep 15 15:04:17 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064461.D Vial: 5
Acq On : 15 Sep 2010 1:57 pm Operator: MikeM
Sample : ic2413-5 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:16 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:16 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.26	97	976878	160.27	ug/Kg	95
38)	2-Butanone	10.32	43	2134263	834.91	ug/Kg	94
39)	1,1-Dichloropropene	10.41	75	955267	163.67	ug/Kg	89
40)	Propionitrile	10.70	54	641380	1553.01	ug/Kg	90
41)	Methacrylonitrile	10.74	41	3979653	1416.08	ug/Kg	98
42)	Benzene	10.72	78	2073396	139.12	ug/Kg	100
43)	TAME	10.81	73	1047927	158.88	ug/Kg	89
45)	1,2-Dichloroethane	10.96	62	1025002	153.86	ug/Kg	99
46)	Trichloroethene	11.43	95	585089	150.77	ug/Kg	98
47)	Methylcyclohexane	11.45	83	921930	154.82	ug/Kg	90
48)	Dibromomethane	11.94	93	324047	163.55	ug/Kg	94
49)	1,2-Dichloropropane	12.04	63	687093	163.24	ug/Kg	94
50)	Bromodichloromethane	12.10	83	896257	164.67	ug/Kg	97
51)	Methyl methacrylate	12.22	41	706487	160.40	ug/Kg	94
52)	2-Chloroethyl vinyl ether	12.69	63	585650	902.95	ug/Kg	87
53)	cis-1,3-Dichloropropene	12.81	75	1082990	166.88	ug/Kg	81
56)	Toluene	13.08	91	2379550	182.99	ug/Kg	97
57)	2-Nitropropane	13.32	41	1163444	910.28	ug/Kg	98
58)	4-Methyl-2-pentanone	13.44	43	3309759	921.95	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.52	75	857235	164.45	ug/Kg	91
60)	Tetrachloroethene	13.54	166	601479	172.73	ug/Kg	98
61)	Ethyl methacrylate	13.62	69	766441	179.91	ug/Kg	92
62)	1,1,2-Trichloroethane	13.70	83	404400	190.13	ug/Kg	93
63)	Dibromochloromethane	13.93	129	529804	167.13	ug/Kg	98
64)	1,3-Dichloropropane	14.01	76	881275	184.49	ug/Kg	88
65)	1,2-Dibromoethane	14.22	107	447552	173.58	ug/Kg	97
66)	2-hexanone	14.33	43	2895032	888.49	ug/Kg	94
67)	1-Chlorohexane	14.66	91	892721	187.02	ug/Kg	84
68)	Ethylbenzene	14.74	91	2392290	170.98	ug/Kg	99
69)	Chlorobenzene	14.76	112	1236884	165.85	ug/Kg	85
70)	1,1,1,2-Tetrachloroethane	14.81	131	518751	180.44	ug/Kg	98
71)	m,p-Xylene	14.88	91	3732478	313.56	ug/Kg	96
72)	o-Xylene	15.36	91	2188062	172.69	ug/Kg	97
73)	Styrene	15.41	104	1532431	161.71	ug/Kg	91
74)	Bromoform	15.50	173	368009	174.08	ug/Kg	96
75)	Isopropylbenzene	15.67	105	2154277	177.13	ug/Kg	98
78)	cis-1,4-Dichloro-2-butene	16.04	53	269623	172.90	ug/Kg	93
79)	n-Propylbenzene	16.11	91	3074287	154.51	ug/Kg	96
80)	Bromobenzene	16.15	156	556648	148.59	ug/Kg	100
81)	1,1,2,2-Tetrachloroethane	16.17	83	553488	158.41	ug/Kg	98
82)	1,3,5-Trimethylbenzene	16.28	105	2033842	150.05	ug/Kg	94
83)	2-Chlorotoluene	16.32	91	2144193	147.63	ug/Kg	98
84)	trans-1,4-Dichloro-2-Buten	16.36	53	254182	354.90	ug/Kg#	58
85)	1,2,3-Trichloropropane	16.35	110	144623	155.46	ug/Kg	86
86)	Cyclohexanone	16.44	55	91683	940.47	ug/Kg	93
87)	4-Chlorotoluene	16.49	91	2014953	153.96	ug/Kg	97
88)	tert-Butylbenzene	16.65	91	1394360	154.26	ug/Kg	94
89)	1,2,4-Trimethylbenzene	16.72	105	1826527	138.40	ug/Kg	93
90)	Pentachloroethane	16.73	167	284107	131.55	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
H064461.D APP9-H.M Wed Sep 15 15:04:18 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064461.D Vial: 5
Acq On : 15 Sep 2010 1:57 pm Operator: MikeM
Sample : ic2413-5 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:16 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:16 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

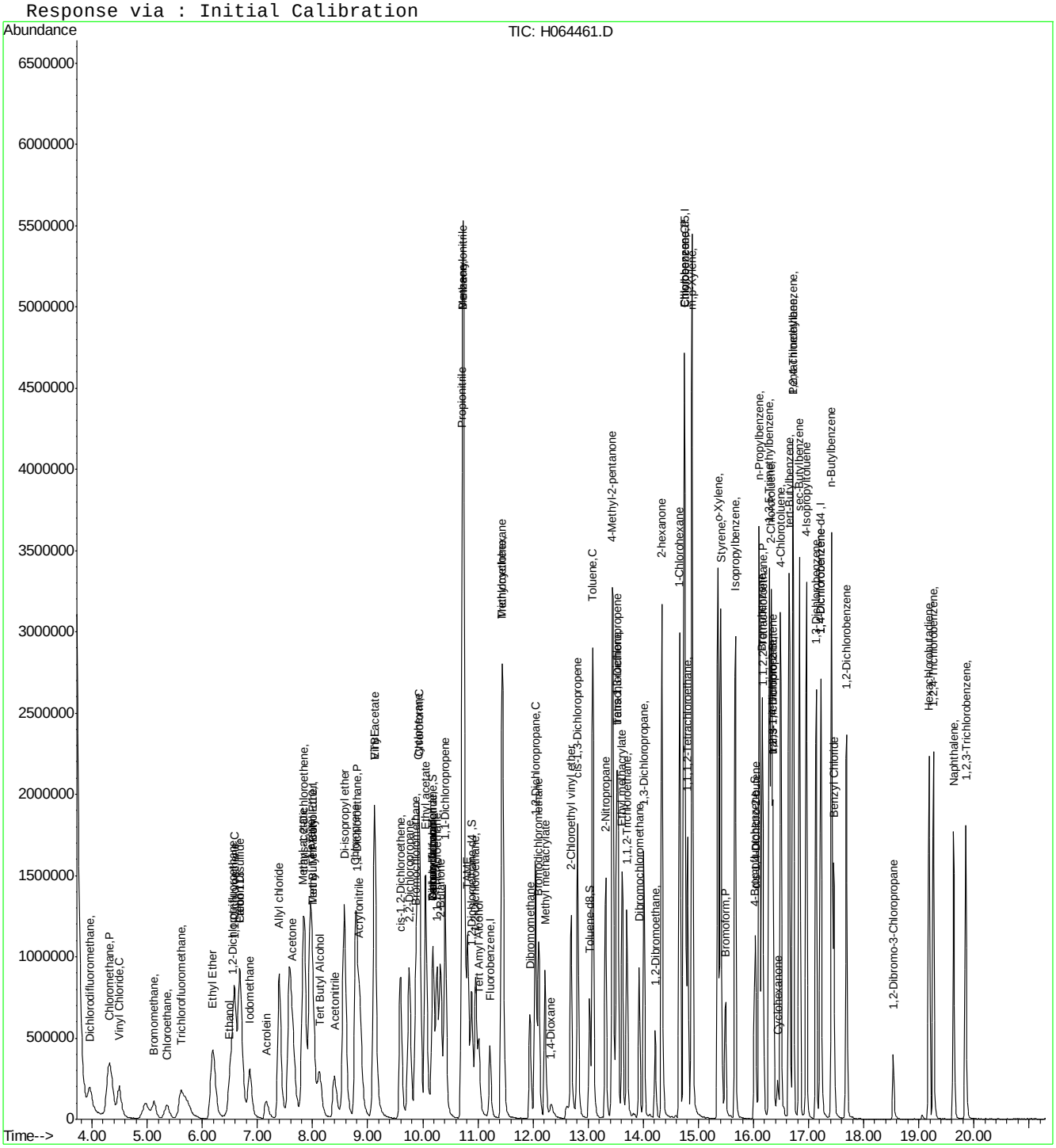
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.83	105	2542959	150.78	ug/Kg	97
92)	4-Isopropyltoluene	16.96	119	1942042	148.70	ug/Kg	98
93)	1,3-Dichlorobenzene	17.14	146	1074859	153.40	ug/Kg	86
94)	1,4-Dichlorobenzene	17.23	146	1058441	144.31	ug/Kg	95
95)	n-Butylbenzene	17.41	92	1344312	159.02	ug/Kg	97
96)	Benzyl Chloride	17.45	126	202828	161.95	ug/Kg#	92
97)	1,2-Dichlorobenzene	17.69	146	996380	148.36	ug/Kg	88
98)	1,2-Dibromo-3-Chloropropan	18.54	75	130345	188.12	ug/Kg	95
99)	Hexachlorobutadiene	19.19	225	545012	139.94	ug/Kg	96
100)	1,2,4-Trichlorobenzene	19.26	180	770513	145.26	ug/Kg	98
101)	Naphthalene	19.63	128	1444024	157.71	ug/Kg	97
102)	1,2,3-Trichlorobenzene	19.85	180	685722	145.42	ug/Kg	97
104)	Ethanol	6.47	45	182709	3101.04	ug/Kg	89
105)	Acrolein	7.17	56	248597	784.31	ug/Kg	99
106)	Tert Butyl Alcohol	8.13	59	731675	1547.97	ug/Kg	95
107)	Isobutyl alcohol	10.19	42	165098	2816.70	ug/Kg	92
108)	Tert Amyl Alcohol	11.02	59	391866	1584.04	ug/Kg	92
109)	1,4-Dioxane	12.33	88	95224	3400.88	ug/Kg	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064461.D APP9-H.M Wed Sep 15 15:04:18 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064461.D Vial: 5
Acq On : 15 Sep 2010 1:57 pm Operator: MikeM
Sample : ic2413-5 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:03:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064462.D Vial: 6
Acq On : 15 Sep 2010 2:24 pm Operator: MikeM
Sample : ic2413-6 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:18 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:17 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.22	96	494088	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.74	117	261923	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	169907	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.02	65	54690	250.00	ug/Kg	0.02
System Monitoring Compounds						
35) Dibromofluoromethane	10.20	113	110273	45.94	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 91.88%			
44) 1,2-Dichloroethane-d4	10.88	65	172442	46.96	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 93.92%			
55) Toluene-d8	13.03	98	493884	62.55	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 125.10%			
77) 4-Bromofluorobenzene	16.02	174	160393	54.02	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 108.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.96	85	555096	214.53	ug/Kg	98
3) Chloromethane	4.30	50	981661	205.20	ug/Kg	97
4) Vinyl Chloride	4.50	62	786999	246.18	ug/Kg	98
5) Bromomethane	5.13	94	223716	203.82	ug/Kg	94
6) Chloroethane	5.35	64	260674	149.43	ug/Kg	91
7) Trichlorofluoromethane	5.61	101	785397	200.55	ug/Kg	99
8) Ethyl Ether	6.18	59	562412	219.41	ug/Kg	95
9) 1,2-Dichlorotrifluoroethan	6.54	67	952557	214.75	ug/Kg	93
10) 1,1-Dichloroethene	6.59	61	1413278	211.53	ug/Kg	92
11) Freon 113	6.69	101	653181	210.24	ug/Kg	95
12) Carbon Disulfide	6.68	76	2519421	212.85	ug/Kg	94
13) Iodomethane	6.86	142	1032120	210.39	ug/Kg	97
14) Allyl chloride	7.40	41	2051939	224.85	ug/Kg	96
15) Methylene Chloride	7.58	49	1652526	240.40	ug/Kg	94
16) Acetone	7.64	43	2439757	1065.44	ug/Kg	96
17) Methyl acetate	7.82	43	2771764	1071.94	ug/Kg	96
18) trans-1,2-Dichloroethene	7.85	61	1442284	209.88	ug/Kg	89
19) Hexane	7.97	56	835633	208.84	ug/Kg#	80
20) Methyl Tert Butyl Ether	8.02	73	1505738	208.13	ug/Kg	92
21) Acetonitrile	8.40	41	929444	2419.78	ug/Kg	96
22) Di-isopropyl ether	8.58	45	3589789	202.64	ug/Kg	95
23) Chloroprene	8.78	53	1630225	229.65	ug/Kg	93
24) 1,1-Dichloroethane	8.81	63	1655634	199.76	ug/Kg	97
25) Acrylonitrile	8.86	53	1242000	1000.92	ug/Kg	98
26) ETBE	9.13	59	2075534	202.69	ug/Kg	95
27) Vinyl acetate	9.13	43	4899089	1016.36	ug/Kg	99
28) cis-1,2-Dichloroethene	9.60	96	750186	204.09	ug/Kg#	83
29) 2,2-Dichloropropane	9.76	77	1330776	209.67	ug/Kg	94
30) Bromochloromethane	9.88	128	326268	192.23	ug/Kg	92
31) Cyclohexane	9.92	56	1654440	202.02	ug/Kg	93
32) Chloroform	9.94	83	1494674	195.11	ug/Kg	97
33) Ethyl acetate	10.05	43	4457580	1021.72	ug/Kg	99
34) Tetrahydrofuran	10.19	42	200994	195.83	ug/Kg	99
36) Carbon Tetrachloride	10.19	117	1192349	208.32	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
H064462.D APP9-H.M Wed Sep 15 15:04:24 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064462.D Vial: 6
Acq On : 15 Sep 2010 2:24 pm Operator: MikeM
Sample : ic2413-6 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:18 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:17 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.26	97	1232708	199.03	ug/Kg	93
38)	2-Butanone	10.32	43	2751350	1049.94	ug/Kg	95
39)	1,1-Dichloropropene	10.41	75	1231749	206.77	ug/Kg	86
40)	Propionitrile	10.70	54	818679	1963.66	ug/Kg	97
41)	Methacrylonitrile	10.74	41	4975126	1786.02	ug/Kg	97
42)	Benzene	10.72	78	2549336	173.16	ug/Kg	99
43)	TAME	10.82	73	1402499	209.64	ug/Kg	91
45)	1,2-Dichloroethane	10.96	62	1310137	195.18	ug/Kg	99
46)	Trichloroethene	11.43	95	733218	188.30	ug/Kg	95
47)	Methylcyclohexane	11.45	83	1191843	198.39	ug/Kg	88
48)	Dibromomethane	11.94	93	412690	204.10	ug/Kg	96
49)	1,2-Dichloropropane	12.04	63	865433	201.55	ug/Kg	94
50)	Bromodichloromethane	12.10	83	1172842	210.84	ug/Kg	96
51)	Methyl methacrylate	12.22	41	939684	209.93	ug/Kg	95
52)	2-Chloroethyl vinyl ether	12.69	63	824744	1218.81	ug/Kg	96
53)	cis-1,3-Dichloropropene	12.82	75	1385273	208.25	ug/Kg	98
56)	Toluene	13.08	91	2953190	240.55	ug/Kg	99
57)	2-Nitropropane	13.32	41	1517188	1155.73	ug/Kg	97
58)	4-Methyl-2-pentanone	13.45	43	4200129	1236.99	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.52	75	1066269	213.14	ug/Kg	88
60)	Tetrachloroethene	13.55	166	734484	226.38	ug/Kg	98
61)	Ethyl methacrylate	13.62	69	986222	227.21	ug/Kg	90
62)	1,1,2-Trichloroethane	13.70	83	513737	253.52	ug/Kg	93
63)	Dibromochloromethane	13.93	129	672744	218.80	ug/Kg	98
64)	1,3-Dichloropropane	14.01	76	1137686	251.78	ug/Kg	85
65)	1,2-Dibromoethane	14.22	107	568881	221.82	ug/Kg	97
66)	2-hexanone	14.33	43	3634918	1104.07	ug/Kg	96
67)	1-Chlorohexane	14.67	91	1100450	242.93	ug/Kg	88
68)	Ethylbenzene	14.74	91	2905486	223.37	ug/Kg	98
69)	Chlorobenzene	14.76	112	1484202	215.51	ug/Kg	80
70)	1,1,1,2-Tetrachloroethane	14.81	131	651642	240.86	ug/Kg	98
71)	m,p-Xylene	14.89	91	4479900	412.43	ug/Kg	96
72)	o-Xylene	15.36	91	2721777	230.56	ug/Kg	95
73)	Styrene	15.41	104	1918255	213.26	ug/Kg	90
74)	Bromoform	15.50	173	467111	221.72	ug/Kg	96
75)	Isopropylbenzene	15.67	105	2651691	232.68	ug/Kg	100
78)	cis-1,4-Dichloro-2-butene	16.04	53	346116	218.01	ug/Kg	92
79)	n-Propylbenzene	16.11	91	3776402	203.28	ug/Kg	95
80)	Bromobenzene	16.15	156	667434	192.33	ug/Kg	97
81)	1,1,2,2-Tetrachloroethane	16.17	83	698269	212.94	ug/Kg	100
82)	1,3,5-Trimethylbenzene	16.28	105	2459310	195.49	ug/Kg	94
83)	2-Chlorotoluene	16.32	91	2615232	194.63	ug/Kg	97
84)	trans-1,4-Dichloro-2-Buten	16.36	53	324525	470.99	ug/Kg#	59
85)	1,2,3-Trichloropropane	16.35	110	182863	210.27	ug/Kg	81
86)	Cyclohexanone	16.44	55	130607	1373.79	ug/Kg	98
87)	4-Chlorotoluene	16.49	91	2475993	202.78	ug/Kg	94
88)	tert-Butylbenzene	16.65	91	1730036	205.06	ug/Kg	92
89)	1,2,4-Trimethylbenzene	16.72	105	2165868	179.61	ug/Kg	90
90)	Pentachloroethane	16.73	167	336793	172.27	ug/Kg	87

(#) = qualifier out of range (m) = manual integration
H064462.D APP9-H.M Wed Sep 15 15:04:25 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064462.D Vial: 6
Acq On : 15 Sep 2010 2:24 pm Operator: MikeM
Sample : ic2413-6 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:53:18 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 14:53:17 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

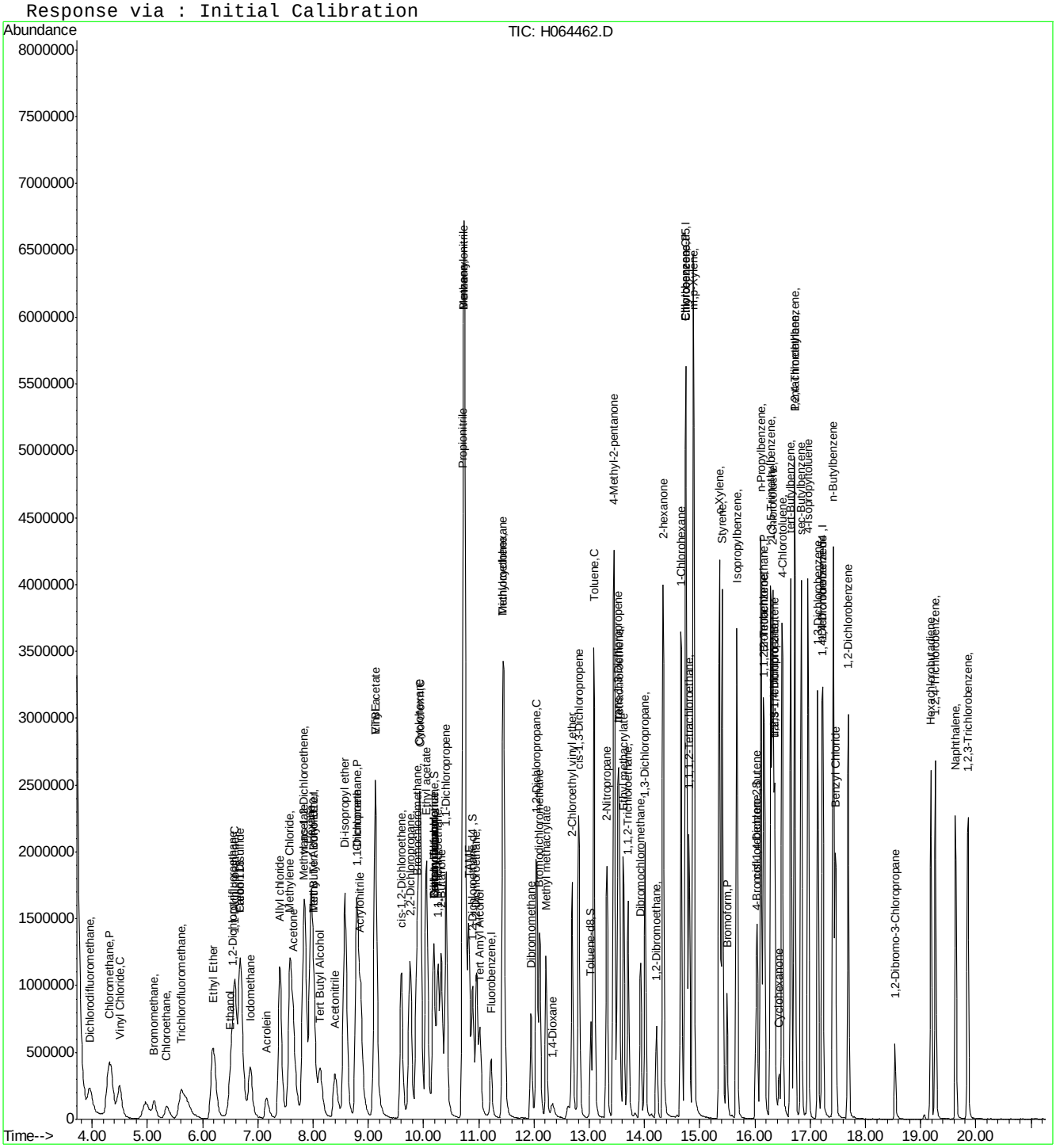
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.83	105	3134556	200.05	ug/Kg	100
92)	4-Isopropyltoluene	16.96	119	2389261	197.46	ug/Kg	97
93)	1,3-Dichlorobenzene	17.14	146	1291800	197.75	ug/Kg	91
94)	1,4-Dichlorobenzene	17.23	146	1293510	191.48	ug/Kg	90
95)	n-Butylbenzene	17.42	92	1651634	208.02	ug/Kg	95
96)	Benzyl Chloride	17.45	126	262815	215.22	ug/Kg#	88
97)	1,2-Dichlorobenzene	17.69	146	1217215	195.72	ug/Kg	91
98)	1,2-Dibromo-3-Chloropropan	18.54	75	177236	259.15	ug/Kg	95
99)	Hexachlorobutadiene	19.19	225	654083	183.42	ug/Kg	96
100)	1,2,4-Trichlorobenzene	19.26	180	901138	184.22	ug/Kg	97
101)	Naphthalene	19.63	128	1824509	212.52	ug/Kg	97
102)	1,2,3-Trichlorobenzene	19.86	180	818173	188.11	ug/Kg	98
104)	Ethanol	6.48	45	214034	3144.66	ug/Kg	84
105)	Acrolein	7.16	56	336208	911.39	ug/Kg	98
106)	Tert Butyl Alcohol	8.12	59	967268	1797.90	ug/Kg	89
107)	Isobutyl alcohol	10.19	42	204652	3125.34	ug/Kg	96
108)	Tert Amyl Alcohol	11.02	59	566813	2003.42	ug/Kg	94
109)	1,4-Dioxane	12.34	88	115608	3364.90	ug/Kg	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064462.D APP9-H.M Wed Sep 15 15:04:25 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064462.D Vial: 6
Acq On : 15 Sep 2010 2:24 pm Operator: MikeM
Sample : ic2413-6 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 14:50 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:03:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064463.D Vial: 7
Acq On : 15 Sep 2010 2:50 pm Operator: MikeM
Sample : icv2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 15:18:57 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.23	96	574578	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.74	117	396142	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.21	152	222139	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.03	65	55601	250.00	ug/Kg	0.03
System Monitoring Compounds						
35) Dibromofluoromethane	10.19	113	140600	51.06	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 102.12%			
44) 1,2-Dichloroethane-d4	10.88	65	223906	52.97	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 105.94%			
55) Toluene-d8	13.03	98	590157	47.44	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 94.88%			
77) 4-Bromofluorobenzene	16.02	174	187269	47.60	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 95.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.98	85	148067	48.62	ug/Kg	97
3) Chloromethane	4.29	50	268377	48.03	ug/Kg	95
4) Vinyl Chloride	4.50	62	196451	47.78	ug/Kg	98
5) Bromomethane	5.13	94	80453	58.52	ug/Kg	95
6) Chloroethane	5.40	64	103754	53.39	ug/Kg	96
7) Trichlorofluoromethane	5.65	101	223466	49.05	ug/Kg	93
8) Ethyl Ether	6.19	59	165704	49.93	ug/Kg	94
9) 1,2-Dichlorotrifluoroethan	6.54	67	296955	56.87	ug/Kg	89
10) 1,1-Dichloroethene	6.60	61	361895	46.13	ug/Kg	92
11) Freon 113	6.70	101	176727	48.50	ug/Kg	89
12) Carbon Disulfide	6.70	76	677260	48.68	ug/Kg	98
13) Iodomethane	6.88	142	291591	50.67	ug/Kg	100
14) Allyl chloride	7.41	41	577214	53.29	ug/Kg	95
15) Methylene Chloride	7.59	49	498922	50.04	ug/Kg	98
16) Acetone	7.64	43	451011	167.54	ug/Kg	99
17) Methyl acetate	7.84	43	796883	261.87	ug/Kg	98
18) trans-1,2-Dichloroethene	7.87	61	392045	48.66	ug/Kg	90
19) Hexane	7.97	56	253542	54.09	ug/Kg#	84
20) Methyl Tert Butyl Ether	8.02	73	441640	52.14	ug/Kg	78
21) Acetonitrile	8.41	41	254766	483.35	ug/Kg	81
22) Di-isopropyl ether	8.59	45	1069859	51.82	ug/Kg	94
23) Chloroprene	8.79	53	460583	54.45	ug/Kg	90
24) 1,1-Dichloroethane	8.82	63	466964	48.46	ug/Kg	99
25) Acrylonitrile	8.86	53	374266	259.33	ug/Kg	89
26) ETBE	9.13	59	642871	53.87	ug/Kg	93
27) Vinyl acetate	9.14	43	1676888	325.99	ug/Kg	100
28) cis-1,2-Dichloroethene	9.60	96	216629	50.51	ug/Kg#	80
29) 2,2-Dichloropropane	9.76	77	348610	46.85	ug/Kg	99
30) Bromochloromethane	9.89	128	92257	47.05	ug/Kg	93
31) Cyclohexane	9.92	56	477152	50.02	ug/Kg	93
32) Chloroform	9.95	83	446163	50.29	ug/Kg	96
33) Ethyl acetate	10.06	43	1155809	226.99	ug/Kg	99
34) Tetrahydrofuran	10.19	42	61411	49.85	ug/Kg	89
36) Carbon Tetrachloride	10.19	117	321063	47.90	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
H064463.D APP9-H.M Wed Sep 15 15:20:49 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064463.D Vial: 7
Acq On : 15 Sep 2010 2:50 pm Operator: MikeM
Sample : icv2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 15:18:57 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.26	97	335430	46.61	ug/Kg	99
38)	2-Butanone	10.33	43	623611	202.95	ug/Kg	98
39)	1,1-Dichloropropene	10.41	75	341868	49.07	ug/Kg	90
40)	Propionitrile	10.70	54	258731	535.27	ug/Kg	83
41)	Methacrylonitrile	10.73	41	1752514	550.83	ug/Kg	94
42)	Benzene	10.72	78	832091	49.71	ug/Kg	97
43)	TAME	10.82	73	436270	55.63	ug/Kg	89
45)	1,2-Dichloroethane	10.97	62	380552	48.95	ug/Kg	99
46)	Trichloroethene	11.44	95	223195	49.77	ug/Kg	97
47)	Methylcyclohexane	11.45	83	366809	52.57	ug/Kg	90
48)	Dibromomethane	11.95	93	118641	50.28	ug/Kg	96
49)	1,2-Dichloropropane	12.05	63	250008	50.00	ug/Kg	96
50)	Bromodichloromethane	12.11	83	328405	50.31	ug/Kg	98
51)	Methyl methacrylate	12.22	41	292419	55.71	ug/Kg	88
52)	2-Chloroethyl vinyl ether	12.69	63	243668	264.31	ug/Kg	88
53)	cis-1,3-Dichloropropene	12.81	75	411432	52.82	ug/Kg	88
56)	Toluene	13.09	91	905469	47.17	ug/Kg	99
57)	2-Nitropropane	13.32	41	394694	245.03	ug/Kg	95
58)	4-Methyl-2-pentanone	13.45	43	1262077	236.42	ug/Kg	98
59)	trans-1,3-Dichloropropene	13.52	75	372363	47.56	ug/Kg	94
60)	Tetrachloroethene	13.55	166	254944	50.84	ug/Kg	98
61)	Ethyl methacrylate	13.63	69	294173	41.79	ug/Kg	98
62)	1,1,2-Trichloroethane	13.71	83	150642	40.60	ug/Kg	92
63)	Dibromochloromethane	13.93	129	200279	41.02	ug/Kg	99
64)	1,3-Dichloropropane	14.01	76	329239	40.14	ug/Kg	92
65)	1,2-Dibromoethane	14.22	107	161939	48.56	ug/Kg	99
66)	2-hexanone	14.34	43	1039382	244.91	ug/Kg	93
67)	1-Chlorohexane	14.66	91	330962	40.85	ug/Kg	85
68)	Ethylbenzene	14.74	91	969749	48.35	ug/Kg	97
69)	Chlorobenzene	14.76	112	518869	49.18	ug/Kg	86
70)	1,1,1,2-Tetrachloroethane	14.81	131	199075	47.05	ug/Kg	97
71)	m,p-Xylene	14.89	91	1631771	98.81	ug/Kg	94
72)	o-Xylene	15.36	91	880859	48.11	ug/Kg	95
73)	Styrene	15.41	104	603534	42.86	ug/Kg	86
74)	Bromoform	15.50	173	125579	46.28	ug/Kg	96
75)	Isopropylbenzene	15.67	105	960557	54.25	ug/Kg	99
78)	cis-1,4-Dichloro-2-butene	16.04	53	104115	53.17	ug/Kg	90
79)	n-Propylbenzene	16.11	91	1218591	50.04	ug/Kg	94
80)	Bromobenzene	16.16	156	222989	49.46	ug/Kg	98
81)	1,1,2,2-Tetrachloroethane	16.18	83	220518	50.89	ug/Kg	96
82)	1,3,5-Trimethylbenzene	16.28	105	821713	50.15	ug/Kg	95
83)	2-Chlorotoluene	16.32	91	885747	50.65	ug/Kg	97
84)	trans-1,4-Dichloro-2-Buten	16.36	53	87426	94.26	ug/Kg#	60
85)	1,2,3-Trichloropropane	16.35	110	50514	44.05	ug/Kg	85
86)	Cyclohexanone	16.44	55	41045	337.59	ug/Kg	92
87)	4-Chlorotoluene	16.49	91	810716	50.68	ug/Kg	93
88)	tert-Butylbenzene	16.65	91	560154	50.51	ug/Kg	93
89)	1,2,4-Trimethylbenzene	16.72	105	802333	51.77	ug/Kg	91
90)	Pentachloroethane	16.73	167	141379	56.62	ug/Kg	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064463.D Vial: 7
Acq On : 15 Sep 2010 2:50 pm Operator: MikeM
Sample : icv2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 15:18:57 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

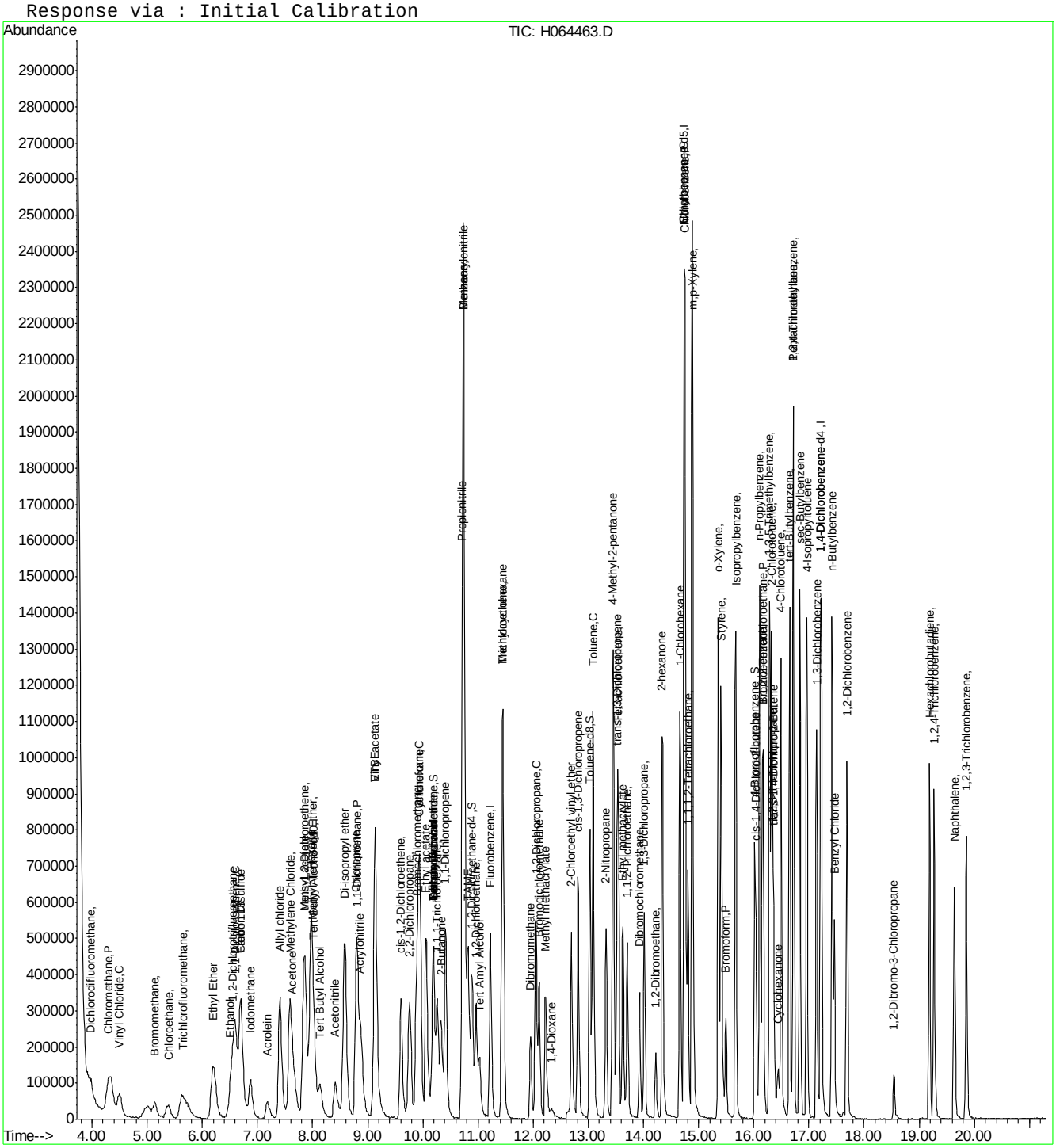
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.84	105	1035134	50.53	ug/Kg	92
92)	4-Isopropyltoluene	16.96	119	825102	52.27	ug/Kg	98
93)	1,3-Dichlorobenzene	17.14	146	433904	50.90	ug/Kg	87
94)	1,4-Dichlorobenzene	17.23	146	440703	50.26	ug/Kg	85
95)	n-Butylbenzene	17.42	92	521994	49.95	ug/Kg	95
96)	Benzyl Chloride	17.46	126	71129	42.82	ug/Kg	93
97)	1,2-Dichlorobenzene	17.69	146	406433	50.16	ug/Kg	95
98)	1,2-Dibromo-3-Chloropropan	18.55	75	45664	42.18	ug/Kg	97
99)	Hexachlorobutadiene	19.19	225	244775	53.24	ug/Kg	93
100)	1,2,4-Trichlorobenzene	19.27	180	319593	50.64	ug/Kg	98
101)	Naphthalene	19.64	128	582144	51.33	ug/Kg	95
102)	1,2,3-Trichlorobenzene	19.86	180	294214	52.26	ug/Kg	98
104)	Ethanol	6.49	45	49541	732.84	ug/Kg	91
105)	Acrolein	7.18	56	88601	260.56	ug/Kg	95
106)	Tert Butyl Alcohol	8.14	59	240070	446.44	ug/Kg#	67
107)	Isobutyl alcohol	10.19	42	62176	969.29	ug/Kg#	80
108)	Tert Amyl Alcohol	11.03	59	126812	440.75	ug/Kg	97
109)	1,4-Dioxane	12.34	88	30770	881.18	ug/Kg	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed
H064463.D APP9-H.M Wed Sep 15 15:20:50 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091510\H064463.D Vial: 7
Acq On : 15 Sep 2010 2:50 pm Operator: MikeM
Sample : icv2413-3 Inst : MSVOA3
Misc : ms15392,vh2413,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 15 15:16 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064487.D Vial: 1
Acq On : 16 Sep 2010 10:04 am Operator: MikeM
Sample : cc2413-4 Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:30:15 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.21	96	402436	50.00	ug/Kg	0.00
54) Chlorobenzene-d5	14.73	117	262074	50.00	ug/Kg	0.00
76) 1,4-Dichlorobenzene-d4	17.20	152	154217	50.00	ug/Kg	0.00
103) Tert Butyl Alcohol-d10	8.01	65	43085	250.00	ug/Kg	0.00
System Monitoring Compounds						
35) Dibromofluoromethane	10.17	113	94934	49.22	ug/Kg	-0.02
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.44%			
44) 1,2-Dichloroethane-d4	10.87	65	154316	52.12	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 104.24%			
55) Toluene-d8	13.02	98	409087	49.70	ug/Kg	-0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 99.40%			
77) 4-Bromofluorobenzene	16.01	174	131284	48.07	ug/Kg	-0.01
Spiked Amount 50.000	Range 59 - 148		Recovery = 96.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.95	85	244469	114.61	ug/Kg	95
3) Chloromethane	4.29	50	435831	111.37	ug/Kg	90
4) Vinyl Chloride	4.48	62	326505	113.38	ug/Kg	96
5) Bromomethane	5.11	94	110091	114.34	ug/Kg	94
6) Chloroethane	5.35	64	155026	113.90	ug/Kg	96
7) Trichlorofluoromethane	5.62	101	357160	111.92	ug/Kg	99
8) Ethyl Ether	6.16	59	234910	101.06	ug/Kg	94
9) 1,2-Dichlorotrifluoroethan	6.52	67	400650	109.55	ug/Kg	93
10) 1,1-Dichloroethene	6.57	61	594014	108.12	ug/Kg	89
11) Freon 113	6.67	101	283511	111.09	ug/Kg	91
12) Carbon Disulfide	6.68	76	1048258	107.58	ug/Kg	97
13) Iodomethane	6.85	142	411963	102.22	ug/Kg	93
14) Allyl chloride	7.39	41	859119	113.24	ug/Kg	95
15) Methylene Chloride	7.56	49	669526	95.87	ug/Kg	95
16) Acetone	7.62	43	1005144	533.10	ug/Kg	99
17) Methyl acetate	7.81	43	1041234	488.53	ug/Kg	99
18) trans-1,2-Dichloroethene	7.84	61	596070	105.62	ug/Kg	92
19) Hexane	7.95	56	359243	109.42	ug/Kg	95
20) Methyl Tert Butyl Ether	7.99	73	542354	91.42	ug/Kg#	51
21) Acetonitrile	8.38	41	381626	1033.73	ug/Kg	96
22) Di-isopropyl ether	8.56	45	1417450	98.02	ug/Kg	98
23) Chloroprene	8.76	53	685697	115.73	ug/Kg	90
24) 1,1-Dichloroethane	8.80	63	686338	101.69	ug/Kg	98
25) Acrylonitrile	8.85	53	523843	518.23	ug/Kg	99
26) ETBE	9.10	59	781876	93.54	ug/Kg	92
27) Vinyl acetate	9.12	43	2051220	569.33	ug/Kg	99
28) cis-1,2-Dichloroethene	9.58	96	306342	101.98	ug/Kg	86
29) 2,2-Dichloropropane	9.74	77	551236	105.78	ug/Kg	92
30) Bromochloromethane	9.87	128	135404	98.58	ug/Kg	93
31) Cyclohexane	9.91	56	715028	107.01	ug/Kg	91
32) Chloroform	9.94	83	638863	102.81	ug/Kg	93
33) Ethyl acetate	10.03	43	2232261	625.92	ug/Kg	99
34) Tetrahydrofuran	10.17	42	87823	101.79	ug/Kg	95
36) Carbon Tetrachloride	10.17	117	483099	102.91	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
H064487.D APP9-H.M Thu Sep 16 10:31:14 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064487.D Vial: 1
Acq On : 16 Sep 2010 10:04 am Operator: MikeM
Sample : cc2413-4 Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:30:15 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	1,1,1-Trichloroethane	10.25	97	520894	103.34	ug/Kg	95
38)	2-Butanone	10.31	43	1160871	539.40	ug/Kg	92
39)	1,1-Dichloropropene	10.40	75	518156	106.19	ug/Kg	90
40)	Propionitrile	10.69	54	383569	1132.97	ug/Kg	95
41)	Methacrylonitrile	10.72	41	2408338	1080.74	ug/Kg	97
42)	Benzene	10.71	78	1179639	100.62	ug/Kg	99
43)	TAME	10.80	73	491392	89.46	ug/Kg	88
45)	1,2-Dichloroethane	10.95	62	520925	95.66	ug/Kg	99
46)	Trichloroethene	11.42	95	319285	101.66	ug/Kg	98
47)	Methylcyclohexane	11.44	83	514688	105.32	ug/Kg	89
48)	Dibromomethane	11.93	93	168834	102.17	ug/Kg	95
49)	1,2-Dichloropropane	12.03	63	351176	100.28	ug/Kg	95
50)	Bromodichloromethane	12.09	83	462360	101.13	ug/Kg	96
51)	Methyl methacrylate	12.21	41	398088	108.29	ug/Kg	94
52)	2-Chloroethyl vinyl ether	12.68	63	258262	399.97	ug/Kg	91
53)	cis-1,3-Dichloropropene	12.80	75	554858	101.71	ug/Kg	85
56)	Toluene	13.07	91	1297060	102.14	ug/Kg	99
57)	2-Nitropropane	13.31	41	607753	498.13	ug/Kg	98
58)	4-Methyl-2-pentanone	13.44	43	1788682	506.48	ug/Kg	99
59)	trans-1,3-Dichloropropene	13.51	75	452211	87.30	ug/Kg	80
60)	Tetrachloroethene	13.53	166	318068	95.87	ug/Kg	93
61)	Ethyl methacrylate	13.62	69	426190	91.53	ug/Kg	94
62)	1,1,2-Trichloroethane	13.70	83	202079	82.32	ug/Kg	83
63)	Dibromochloromethane	13.92	129	266217	82.42	ug/Kg	96
64)	1,3-Dichloropropane	14.01	76	469372	86.50	ug/Kg	95
65)	1,2-Dibromoethane	14.22	107	228836	95.04	ug/Kg	87
66)	2-hexanone	14.32	43	1625614	520.54	ug/Kg	98
67)	1-Chlorohexane	14.66	91	511124	95.35	ug/Kg	97
68)	Ethylbenzene	14.73	91	1380948	104.08	ug/Kg	96
69)	Chlorobenzene	14.75	112	708894	101.56	ug/Kg	86
70)	1,1,1,2-Tetrachloroethane	14.80	131	272140	97.22	ug/Kg	98
71)	m,p-Xylene	14.88	91	2230727	204.19	ug/Kg	96
72)	o-Xylene	15.35	91	1246089	102.87	ug/Kg	94
73)	Styrene	15.40	104	844865	90.68	ug/Kg	90
74)	Bromoform	15.49	173	179985	91.81	ug/Kg	99
75)	Isopropylbenzene	15.66	105	1195599	102.07	ug/Kg	98
78)	cis-1,4-Dichloro-2-butene	16.03	53	150018	110.36	ug/Kg	94
79)	n-Propylbenzene	16.10	91	1748556	103.42	ug/Kg	96
80)	Bromobenzene	16.15	156	296259	94.66	ug/Kg	94
81)	1,1,2,2-Tetrachloroethane	16.17	83	300247	99.80	ug/Kg	95
82)	1,3,5-Trimethylbenzene	16.27	105	1142583	100.44	ug/Kg	97
83)	2-Chlorotoluene	16.31	91	1205712	99.31	ug/Kg	98
84)	trans-1,4-Dichloro-2-Buten	16.35	53	120944	187.83	ug/Kg#	65
85)	1,2,3-Trichloropropane	16.34	110	73015	91.71	ug/Kg	82
86)	Cyclohexanone	16.43	55	45842	496.25	ug/Kg#	81
87)	4-Chlorotoluene	16.48	91	1115362	100.43	ug/Kg	95
88)	tert-Butylbenzene	16.64	91	779485	101.23	ug/Kg	93
89)	1,2,4-Trimethylbenzene	16.71	105	1043323	96.97	ug/Kg	95
90)	Pentachloroethane	16.72	167	175188	101.06	ug/Kg	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064487.D Vial: 1
Acq On : 16 Sep 2010 10:04 am Operator: MikeM
Sample : cc2413-4 Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:30:15 2010 Quant Results File: APP9-H.RES

Quant Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

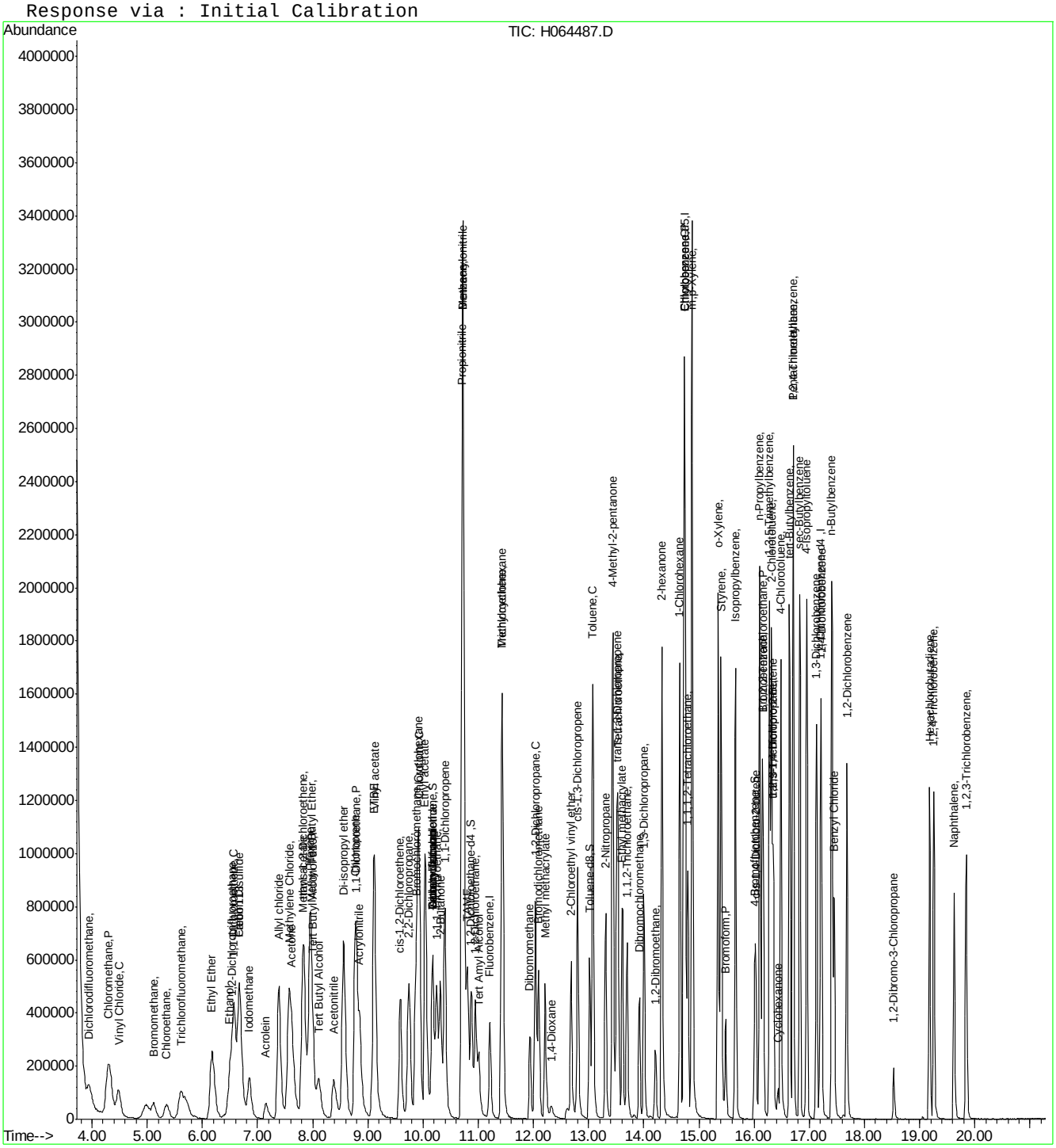
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	sec-Butylbenzene	16.82	105	1448363	101.84	ug/Kg	99
92)	4-Isopropyltoluene	16.95	119	1103488	100.69	ug/Kg	99
93)	1,3-Dichlorobenzene	17.13	146	587964	99.35	ug/Kg	94
94)	1,4-Dichlorobenzene	17.22	146	580608	95.37	ug/Kg	93
95)	n-Butylbenzene	17.41	92	768141	105.88	ug/Kg	97
96)	Benzyl Chloride	17.45	126	105105	91.15	ug/Kg#	90
97)	1,2-Dichlorobenzene	17.68	146	535256	95.16	ug/Kg	94
98)	1,2-Dibromo-3-Chloropropan	18.53	75	65036	86.53	ug/Kg	91
99)	Hexachlorobutadiene	19.18	225	301942	94.59	ug/Kg	97
100)	1,2,4-Trichlorobenzene	19.26	180	409587	93.48	ug/Kg	96
101)	Naphthalene	19.63	128	740115	94.00	ug/Kg	97
102)	1,2,3-Trichlorobenzene	19.85	180	360268	92.17	ug/Kg	96
104)	Ethanol	6.48	45	98868	1887.37	ug/Kg	99
105)	Acrolein	7.15	56	119461	453.37	ug/Kg	98
106)	Tert Butyl Alcohol	8.10	59	376954	904.62	ug/Kg	93
107)	Isobutyl alcohol	10.17	42	91645	1843.72	ug/Kg#	88
108)	Tert Amyl Alcohol	11.01	59	196705	882.28	ug/Kg	95
109)	1,4-Dioxane	12.34	88	45721	1689.70	ug/Kg	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : H:\HPCHEM\1\DATA\091610\H064487.D Vial: 1
Acq On : 16 Sep 2010 10:04 am Operator: MikeM
Sample : cc2413-4 Inst : MSVOA3
Misc : ms15392,vh2414,5.00,,,,, Multiplr: 1.00
MS Integration Params: small.p
Quant Time: Sep 16 10:27 2010 Quant Results File: APP9-H.RES

Method : C:\MSDCHEM\1\METHODS\APP9-H.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Sep 15 15:18:36 2010
Response via : Initial Calibration



ACCUTEST
F76459

Manual Integrations APPROVED
(compounds with "m" flag)
Steven Heller
09/17/10 14:38

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:41 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 08:33:39 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.46	96	940365	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.97	117	672495	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.43	152	255226	50.00	ug/Kg	0.01
93) Tert Butyl Alcohol-d10	8.40	65	153498m	250.00	ug/Kg	0.13
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	237503	51.69	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 103.38%			
36) 1,2-Dichloroethane-d4	11.12	65	306595	55.33	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 110.66%			
50) Toluene-d8	13.26	98	985674	43.92	ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 130		Recovery = 87.84%			
70) 4-Bromofluorobenzene	16.24	174	229282	51.32	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 102.64%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	32844m	7.87	ug/Kg	
3) Chloromethane	4.59	50	63658	7.26	ug/Kg	85
4) Vinyl Chloride	4.78	62	44826	6.73	ug/Kg	95
5) Bromomethane	5.47	94	16557	6.60	ug/Kg	86
6) Chloroethane	5.75	64	21271	7.19	ug/Kg	72
7) Trichlorofluoromethane	6.02	101	40726m	8.34	ug/Kg	
8) 1,2-Dichloro-1,1,2-trifluo	6.84	67	14047	1.97	ug/Kg	81
9) Ethyl Ether	6.52	59	28039	6.18	ug/Kg#	63
10) Freon 113	7.01	101	34398	6.87	ug/Kg	90
11) 1,1-Dichloroethene	6.90	61	64967m	7.02	ug/Kg	
12) Acetone	7.96	43	125677	36.41	ug/Kg	76
13) Iodomethane	7.23	142	43949m	6.40	ug/Kg	
14) Carbon Disulfide	7.04	76	91943	5.60	ug/Kg	100
15) Methyl acetate	8.15	43	128264	31.23	ug/Kg	97
16) Methylene Chloride	7.87	49	407021	10.71	ug/Kg	84
17) Acrylonitrile	9.17	53	47559	29.22	ug/Kg	82
18) Methyl Tert Butyl Ether	8.31	73	89279	5.83	ug/Kg#	69
19) trans-1,2-Dichloroethene	8.16	61	47712	5.42	ug/Kg	90
20) Hexane	8.28	57	76726	5.89	ug/Kg	91
21) Vinyl acetate	8.15	43	129324	31.05	ug/Kg	99
22) 1,1-Dichloroethane	9.09	63	69485	5.80	ug/Kg	90
23) Di-isopropyl ether	8.86	45	142464	5.47	ug/Kg	94
24) Ethyl tert-butyl Ether	9.39	59	115768	5.71	ug/Kg	99
25) 2-Butanone	10.59	43	135254	32.19	ug/Kg	99
26) cis-1,2-Dichloroethene	9.86	96	28228	5.06	ug/Kg#	70
27) 2,2-Dichloropropane	10.01	77	34749	4.85	ug/Kg	97
28) Bromochloromethane	10.13	128	12779	4.88	ug/Kg#	84
29) Chloroform	10.20	83	61270	5.93	ug/Kg	89
30) Tetrahydrofuran	10.59	42	6470	4.09	ug/Kg#	53
32) 1,1,1-Trichloroethane	10.52	97	44173	5.51	ug/Kg	81
33) Cyclohexane	10.18	56	75043	6.00	ug/Kg	93
34) 1,1-Dichloropropene	10.66	75	41026	5.15	ug/Kg	97
35) Carbon Tetrachloride	10.43	117	42107	6.23	ug/Kg	85
37) 1,2-Dichloroethane	11.20	62	48405	5.96	ug/Kg	92

(#) = qualifier out of range (m) = manual integration
K046745.D 8260-K.M Fri Sep 17 08:48:39 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:41 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 08:33:39 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.98	78	150061	6.23	ug/Kg	97
39)	Tert-Amyl Methyl Ether	11.06	73	92850	5.90	ug/Kg	88
40)	Trichloroethene	11.68	95	29803	5.21	ug/Kg	92
41)	Methylcyclohexane	11.69	83	59197	6.04	ug/Kg	84
42)	1,2-Dichloropropane	12.29	63	37985	5.36	ug/Kg	94
43)	Dibromomethane	12.18	93	15866	4.99	ug/Kg	80
44)	Bromodichloromethane	12.34	83	36088	4.82	ug/Kg	86
45)	2-Nitropropane	13.56	41	54751	34.10	ug/Kg	84
46)	2-Chloroethyl vinyl ether	12.93	63	29485	29.72	ug/Kg	90
47)	cis-1,3-Dichloropropene	13.04	75	43818	4.73	ug/Kg	92
48)	4-Methyl-2-pentanone	13.70	43	232844	35.37	ug/Kg	91
51)	Toluene	13.32	91	151782	5.59	ug/Kg	98
52)	trans-1,3-Dichloropropene	13.75	75	34393m	4.22	ug/Kg	
53)	1,1,2-Trichloroethane	13.93	83	26234	5.41	ug/Kg	92
54)	1,3-Dichloropropane	14.25	76	47585	4.83	ug/Kg	91
55)	2-hexanone	14.59	43	223369	35.85	ug/Kg	95
56)	Tetrachloroethene	13.77	166	27775	4.81	ug/Kg	92
57)	Dibromochloromethane	14.16	129	24458	4.25	ug/Kg	95
58)	1,2-Dibromoethane	14.45	107	21182	4.10	ug/Kg	100
59)	1-Chlorohexane	14.90	91	41642	4.89	ug/Kg	98
60)	Chlorobenzene	14.99	112	80081	5.23	ug/Kg	85
61)	1,1,1,2-Tetrachloroethane	15.03	131	25330	4.60	ug/Kg#	56
62)	Ethylbenzene	14.98	91	141547	5.18	ug/Kg	96
63)	m,p-Xylene	15.11	91	225428	10.45	ug/Kg	97
64)	o-Xylene	15.59	91	123387	5.22	ug/Kg	98
65)	Styrene	15.64	104	85984	5.08	ug/Kg	98
66)	Bromoform	15.72	173	10947	3.28	ug/Kg	95
68)	Isopropylbenzene	15.90	105	110844	5.87	ug/Kg	94
69)	Cyclohexanone	16.69	55	12742	63.54	ug/Kg#	74
71)	1,1,2,2-Tetrachloroethane	16.39	83	34059	6.57	ug/Kg	95
72)	trans-1,4-Dichloro-2-Buten	16.59	53	6932	4.70	ug/Kg#	39
73)	1,2,3-Trichloropropane	16.57	110	8409	6.88	ug/Kg	79
74)	Bromobenzene	16.38	156	28391	5.99	ug/Kg	86
75)	n-Propylbenzene	16.33	91	155111	6.14	ug/Kg	96
76)	2-Chlorotoluene	16.54	91	110928	6.17	ug/Kg	97
77)	1,3,5-Trimethylbenzene	16.51	105	105133	5.94	ug/Kg	96
78)	4-Chlorotoluene	16.72	91	88930	5.80	ug/Kg	87
79)	tert-Butylbenzene	16.88	91	59939	5.43	ug/Kg	82
80)	1,2,4-Trimethylbenzene	16.95	105	97935	5.73	ug/Kg	94
81)	sec-Butylbenzene	17.06	105	128090	6.05	ug/Kg	96
82)	4-Isopropyltoluene	17.18	119	89636	5.76	ug/Kg	97
83)	1,3-Dichlorobenzene	17.36	146	49182	5.87	ug/Kg	92
84)	1,4-Dichlorobenzene	17.45	146	47667	5.92	ug/Kg	93
85)	Benzyl chloride	17.67	126	6851	4.67	ug/Kg#	79
86)	n-Butylbenzene	17.63	92	49462	5.59	ug/Kg	95
87)	1,2-Dichlorobenzene	17.91	146	44536	5.64	ug/Kg	91
88)	1,2-Dibromo-3-Chloropropan	18.74	75	3009	3.97	ug/Kg#	56
89)	1,2,4-Trichlorobenzene	19.47	180	14751	4.68	ug/Kg	85
90)	Hexachlorobutadiene	19.40	225	11318	4.36	ug/Kg	93

(#) = qualifier out of range (m) = manual integration
K046745.D 8260-K.M Fri Sep 17 08:48:40 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:41 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 08:33:39 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

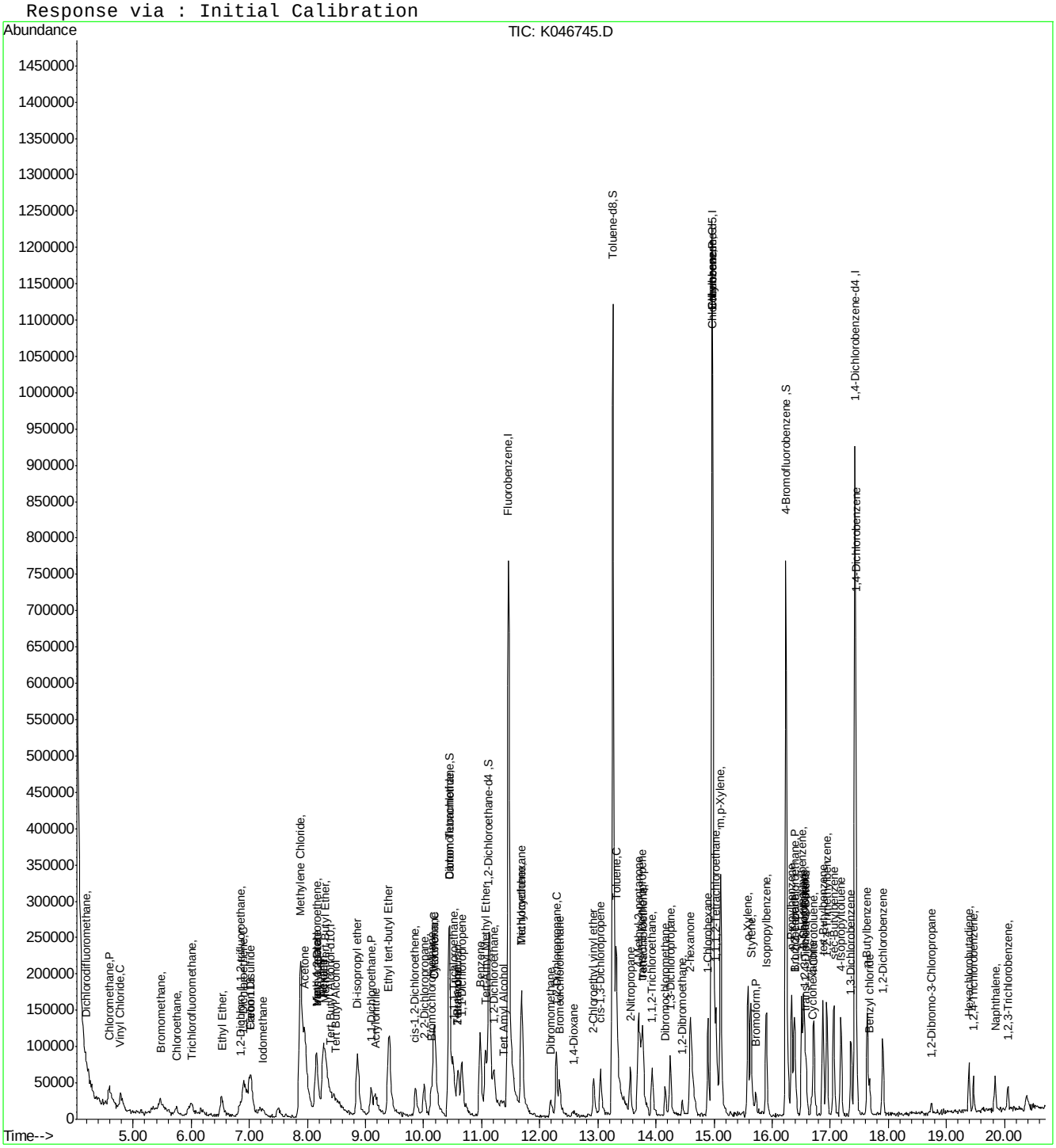
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	19.84	128	39965	5.79	ug/Kg	95
92) 1,2,3-Trichlorobenzene	20.06	180	12153	4.72	ug/Kg#	73
94) Acrolein	8.28	56	44857m	29.40	ug/Kg	
95) Tert Butyl Alcohol	8.49	59	41263m	54.31	ug/Kg	
96) Tert Amyl Alcohol	11.37	59	36801m	55.25	ug/Kg	
97) 1,4-Dioxane	12.59	88	5548m	90.96	ug/Kg	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046745.D 8260-K.M Fri Sep 17 08:48:40 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

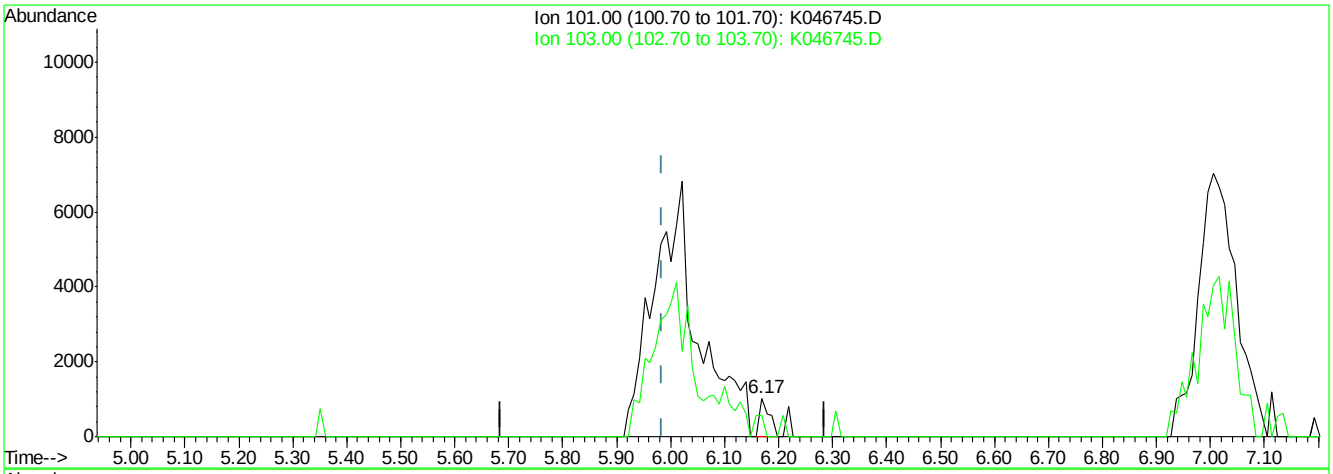


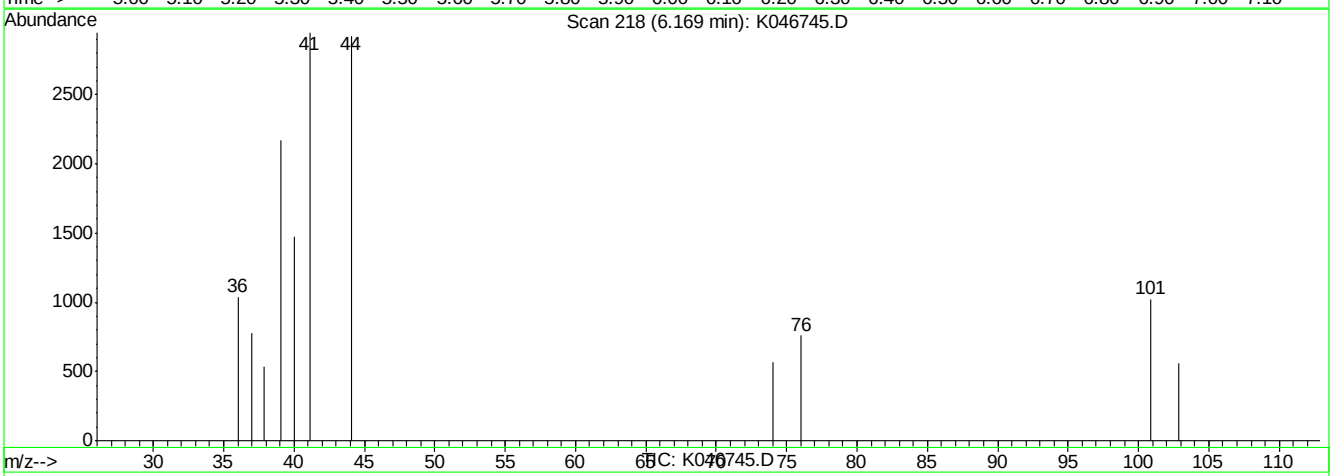
ACCUTEST
F76459

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(7) Trichlorofluoromethane ( )

6.17min (+0.183) 0.27ug/Kg

response 1298

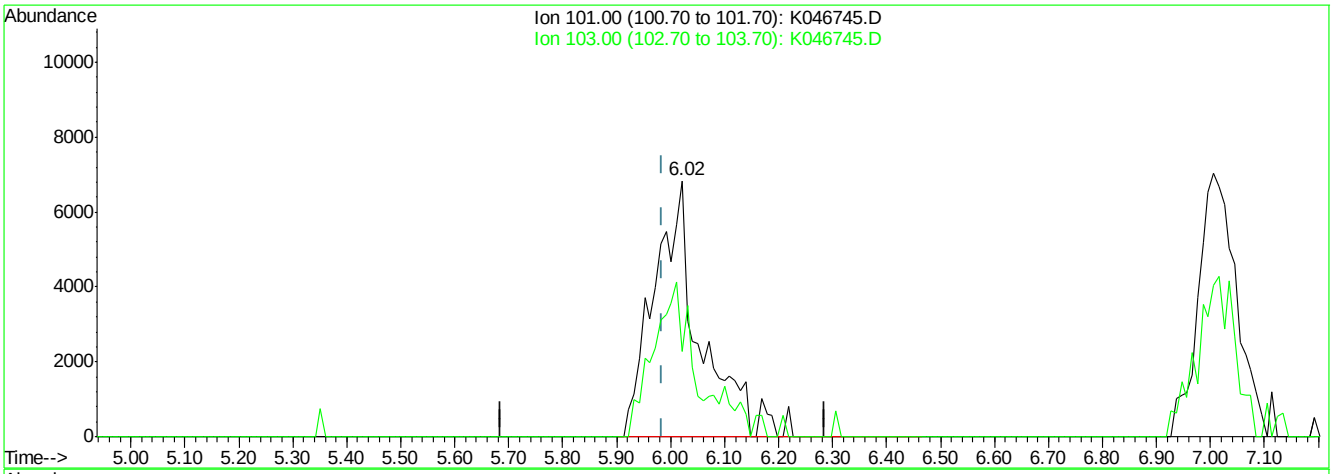
Ion	Exp%	Act%
101.00	100	100
103.00	71.50	54.25
0.00	0.00	0.00
0.00	0.00	0.00

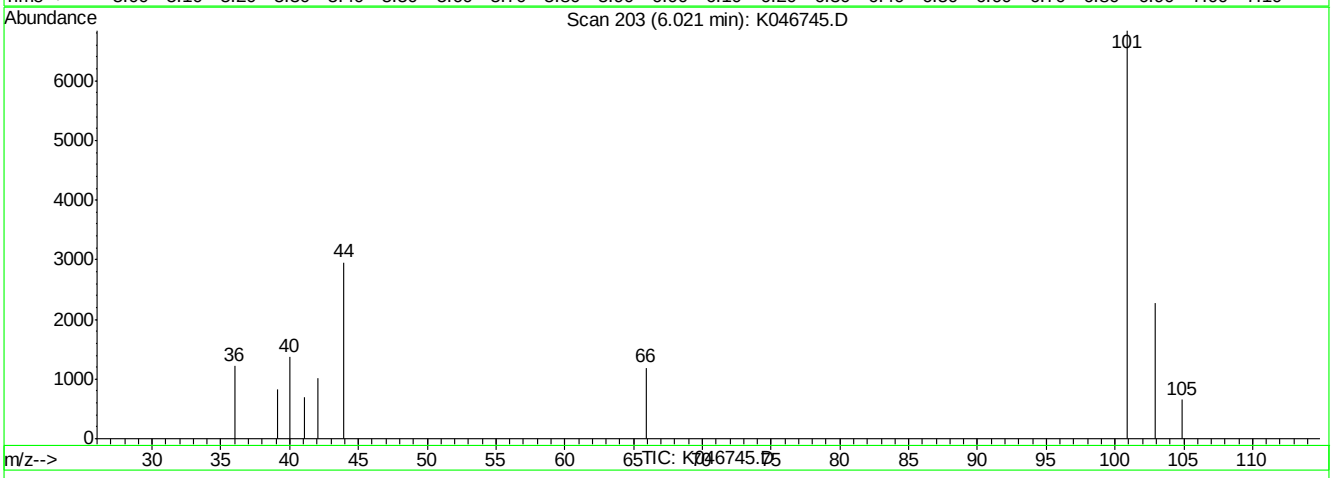
K046745.D 8260-K.M Thu Sep 16 14:42:07 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(7) Trichlorofluoromethane ( )

6.02min (+0.035) 8.34ug/Kg m

response 40726

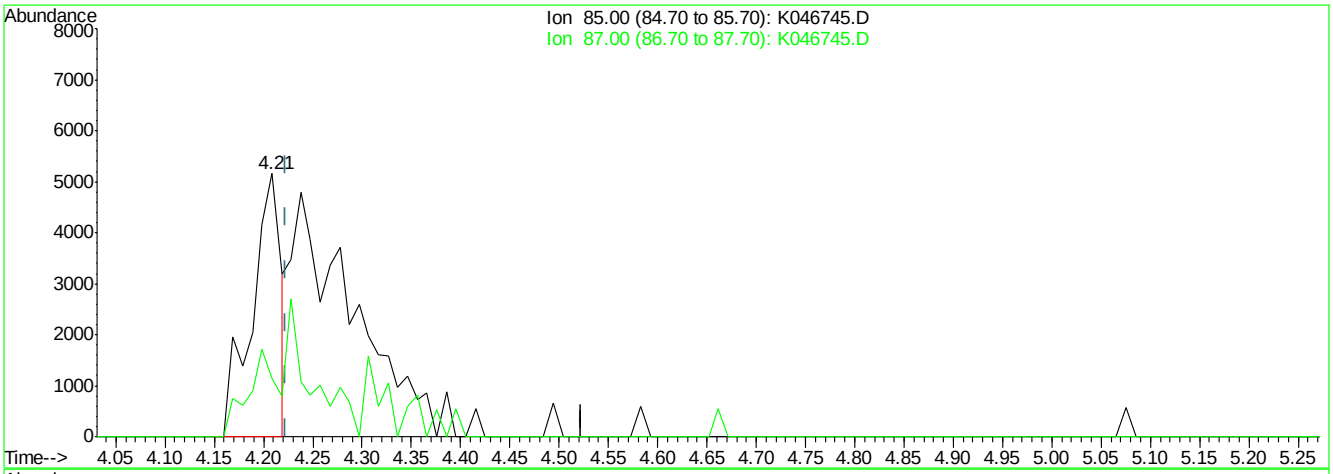
Ion	Exp%	Act%
101.00	100	100
103.00	71.50	33.36#
0.00	0.00	0.00
0.00	0.00	0.00

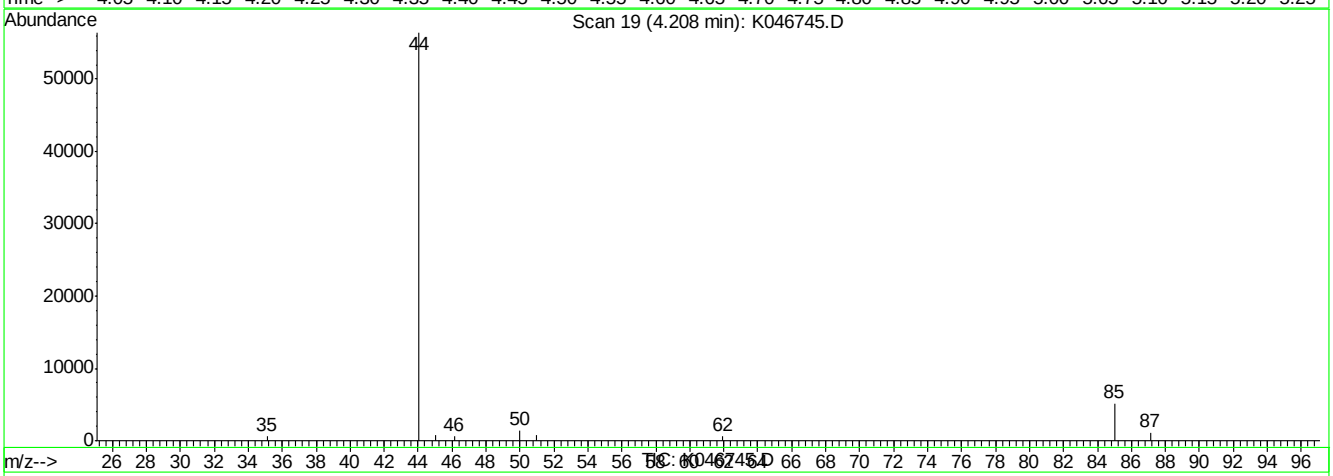
K046745.D 8260-K.M Thu Sep 16 14:42:11 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(2) Dichlorodifluoromethane ( )

4.21min (-0.015) 2.54ug/Kg

response 10581

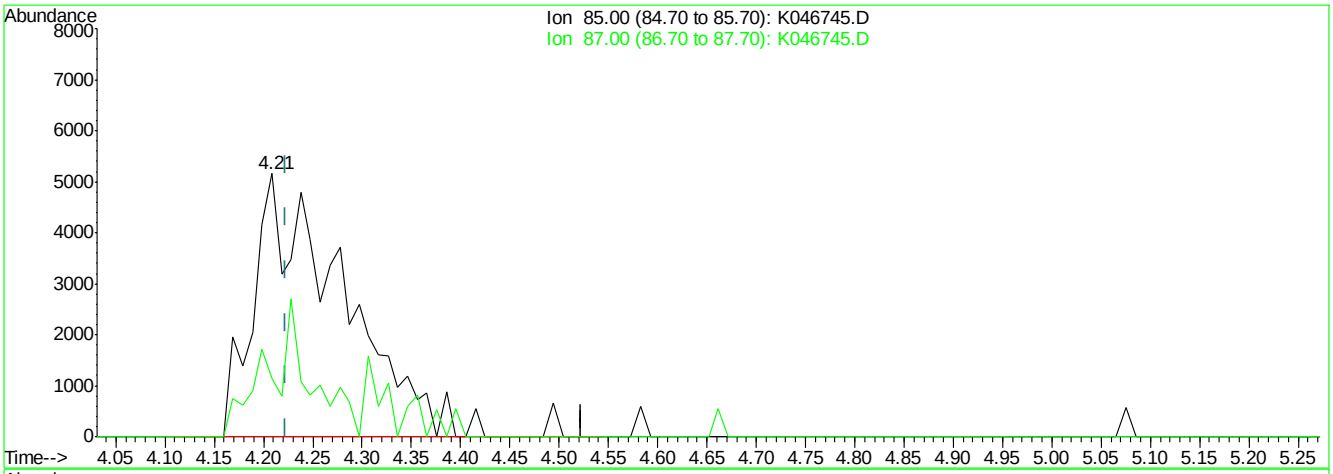
Ion	Exp%	Act%
85.00	100	100
87.00	32.60	22.17
0.00	0.00	0.00
0.00	0.00	0.00

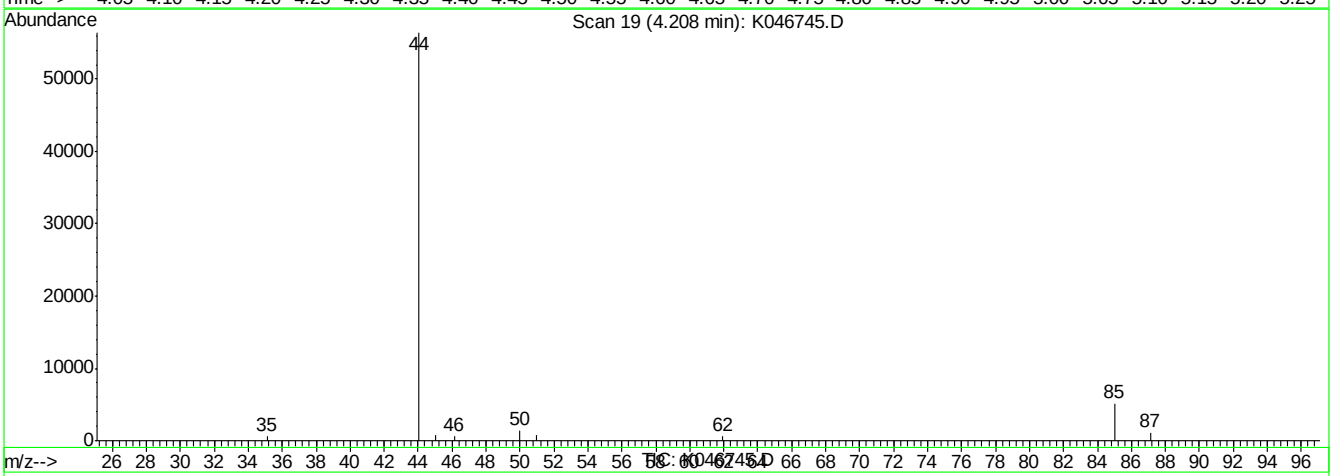
K046745.D 8260-K.M Thu Sep 16 14:42:17 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(2) Dichlorodifluoromethane ( )

4.21min (-0.015) 7.87ug/Kg m

response 32844

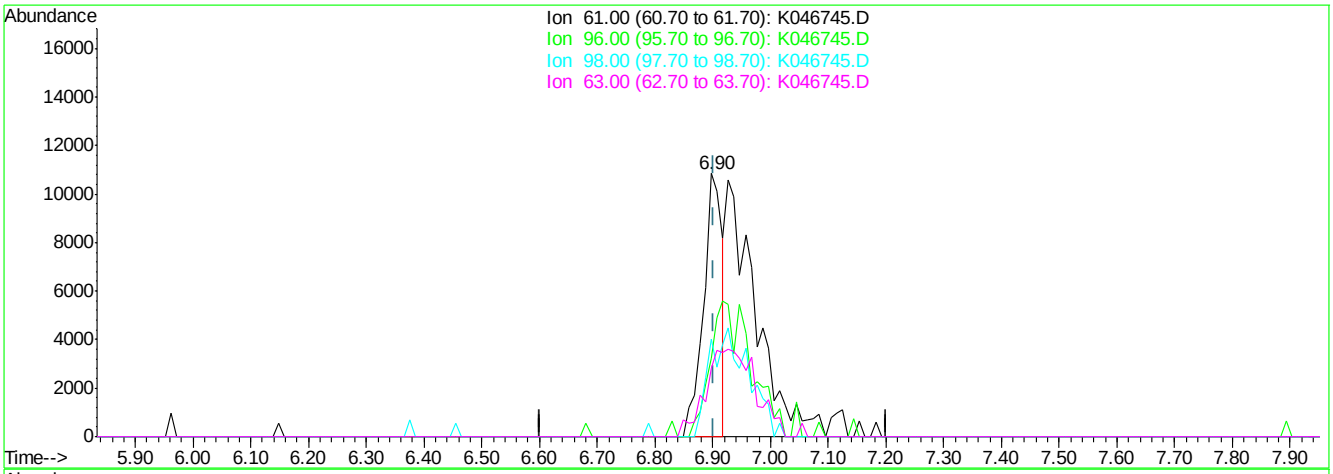
Ion	Exp%	Act%
85.00	100	100
87.00	32.60	22.17
0.00	0.00	0.00
0.00	0.00	0.00

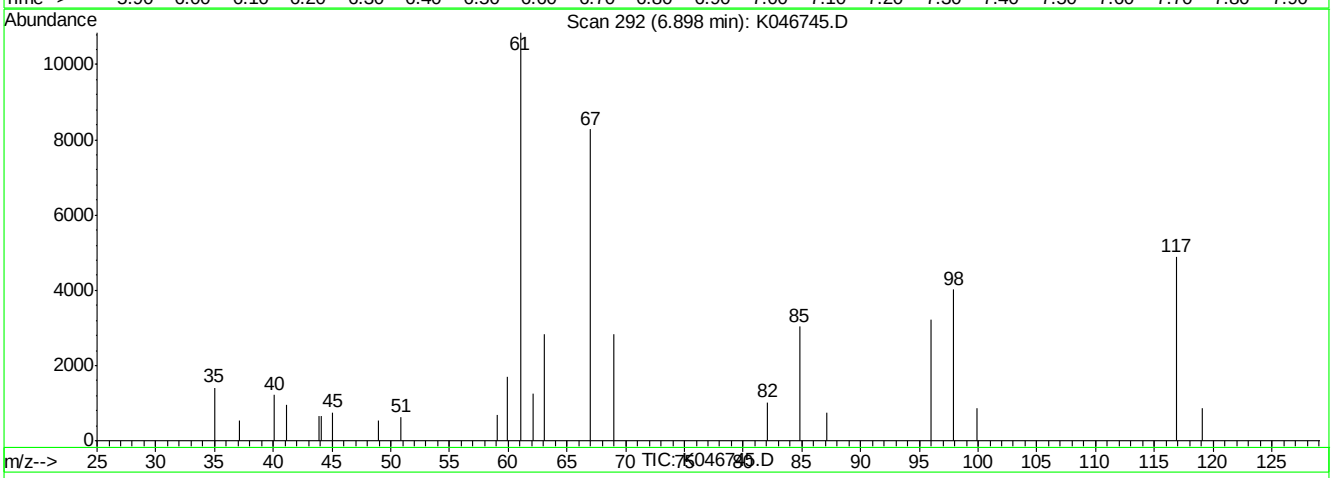
K046745.D 8260-K.M Thu Sep 16 14:42:20 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(11) 1,1-Dichloroethene (C)

6.90min (-0.004) 2.68ug/Kg

response 24826

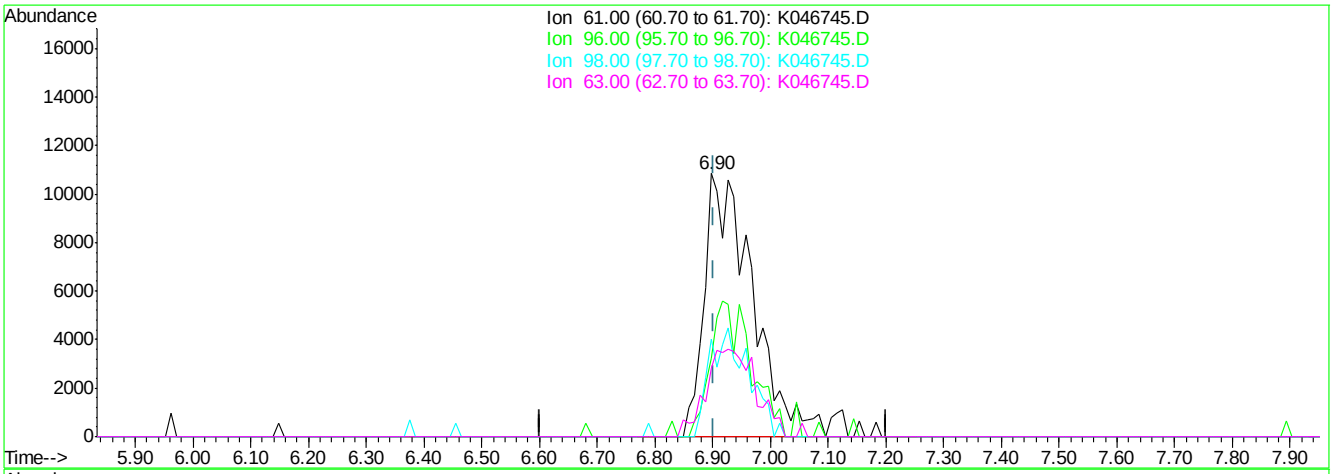
Ion	Exp%	Act%
61.00	100	100
96.00	45.50	29.72
98.00	27.90	36.98
63.00	31.40	26.20

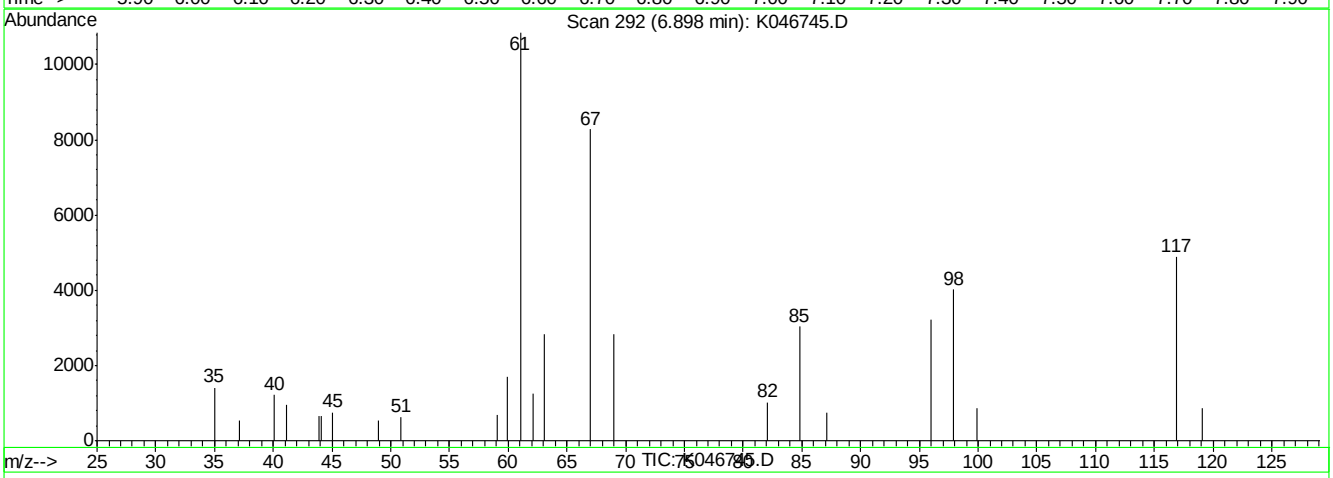
K046745.D 8260-K.M Thu Sep 16 14:42:31 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:43 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(11) 1,1-Dichloroethene (C)

6.90min (-0.004) 7.02ug/Kg m

response 64967

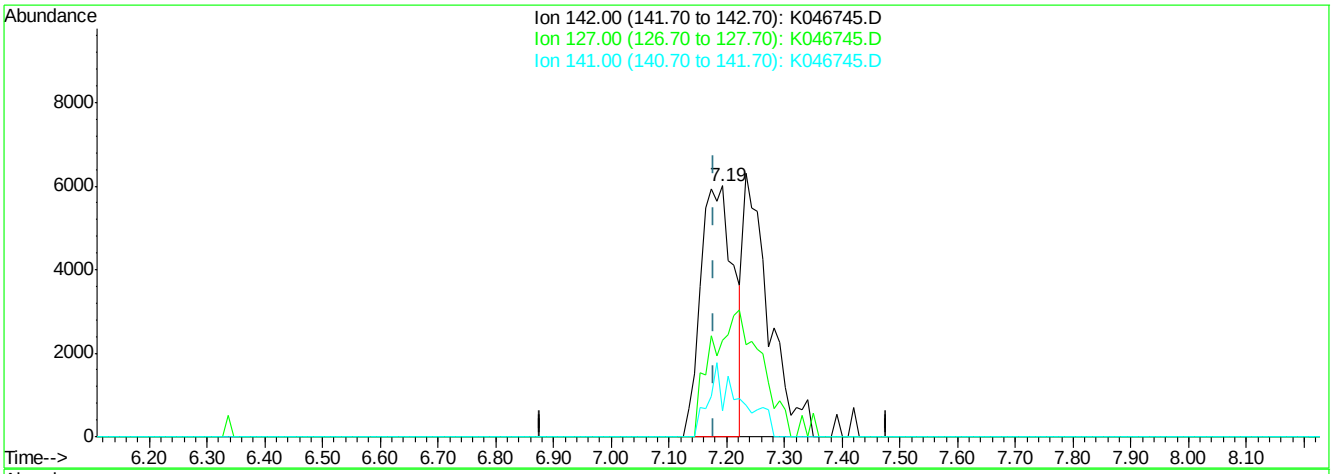
Ion	Exp%	Act%
61.00	100	100
96.00	45.50	29.72
98.00	27.90	36.98
63.00	31.40	26.20

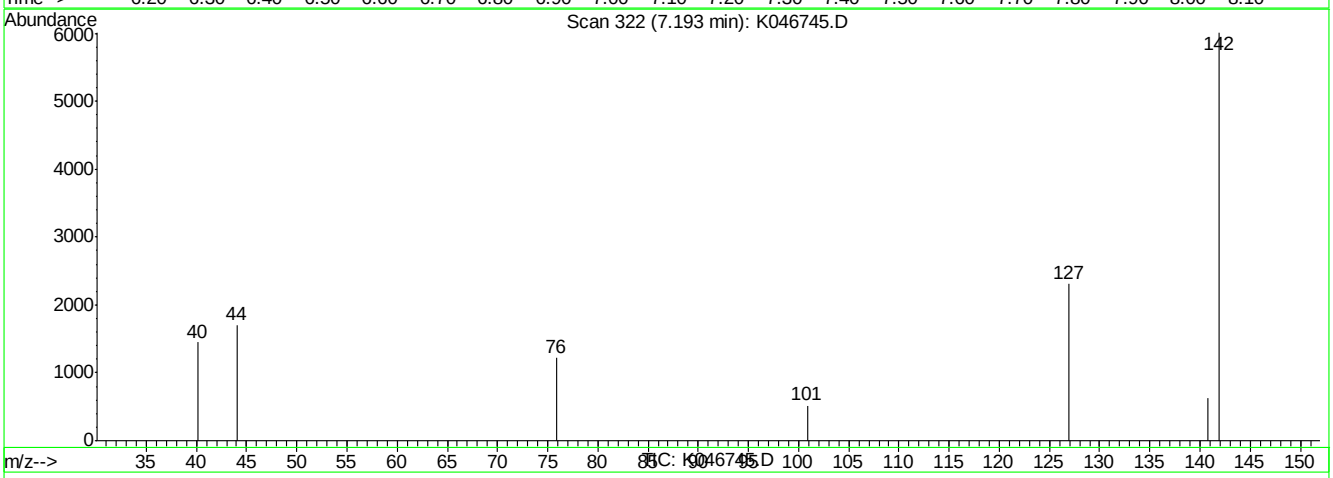
K046745.D 8260-K.M Thu Sep 16 14:42:35 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:43 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(13) Iodomethane

7.19min (+0.015) 3.51ug/Kg

response 24084

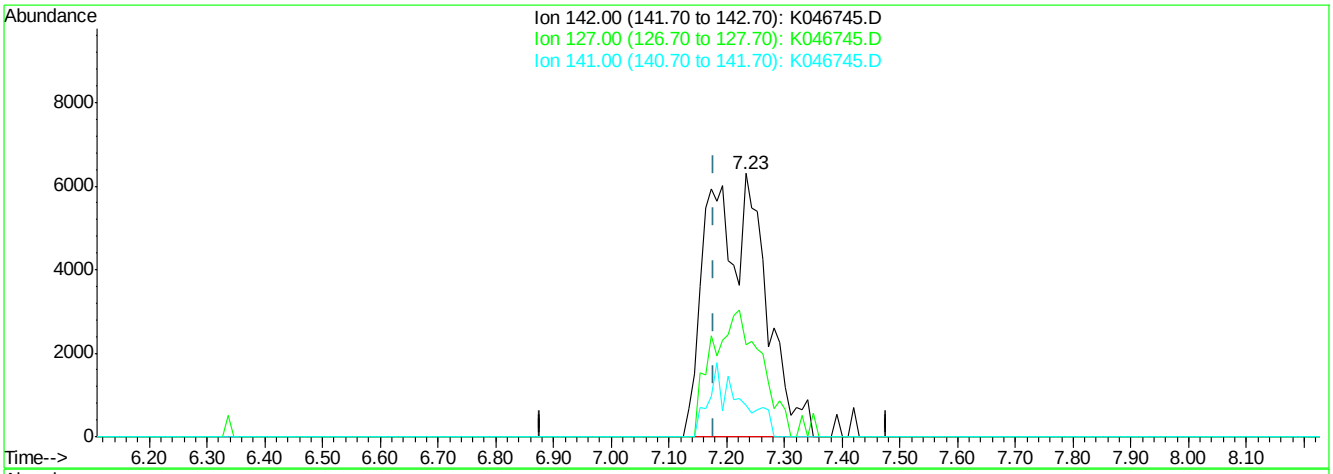
Ion	Exp%	Act%
142.00	100	100
127.00	46.20	38.39
141.00	15.20	10.40
0.00	0.00	0.00

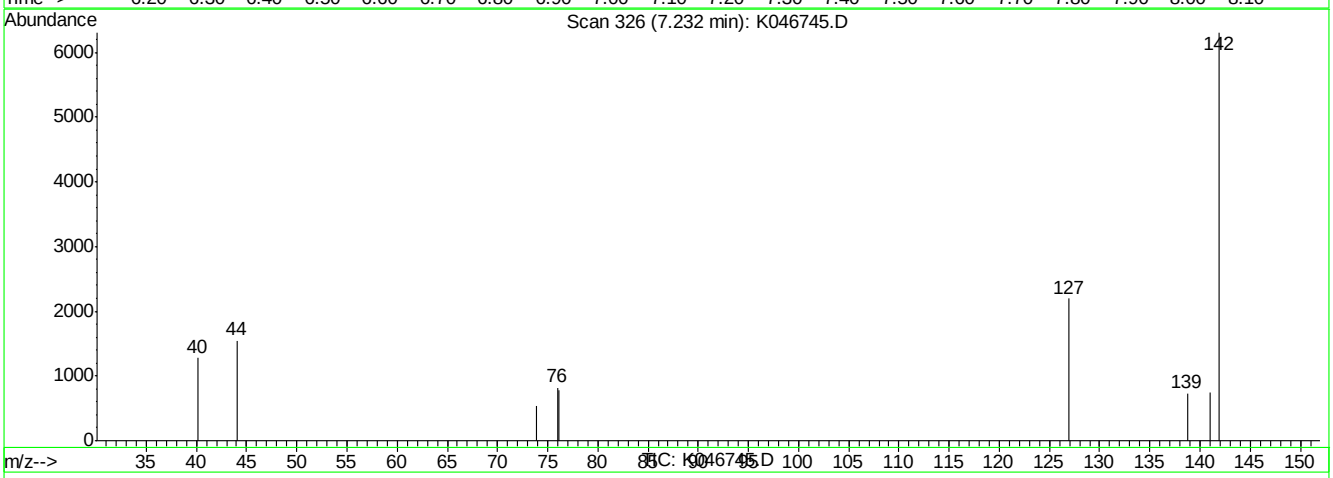
K046745.D 8260-K.M Thu Sep 16 14:42:40 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:43 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(13) Iodomethane

7.23min (+0.054) 6.40ug/Kg m

response 43949

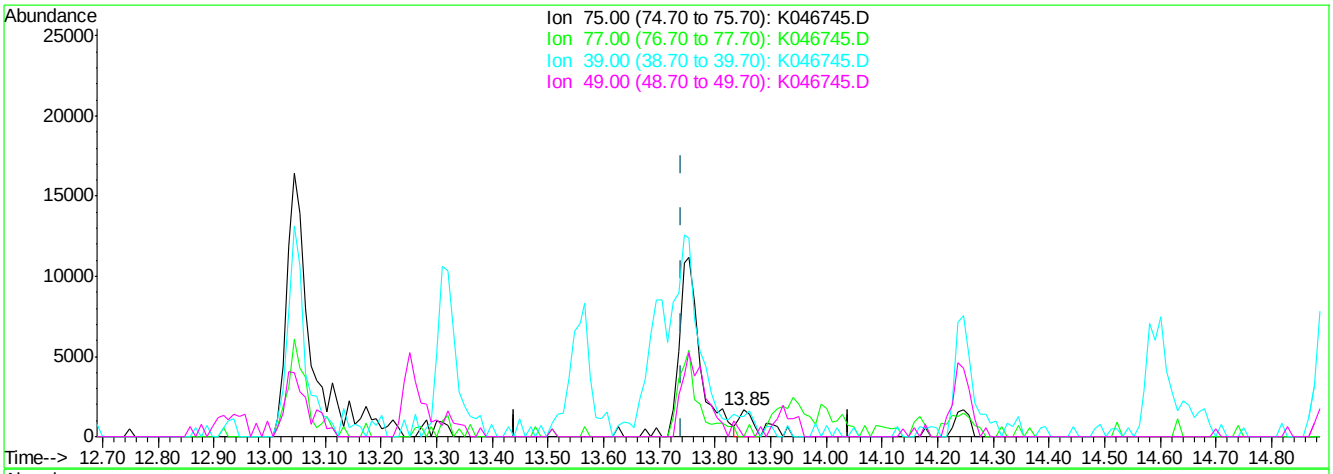
Ion	Exp%	Act%
142.00	100	100
127.00	46.20	34.79
141.00	15.20	11.75
0.00	0.00	0.00

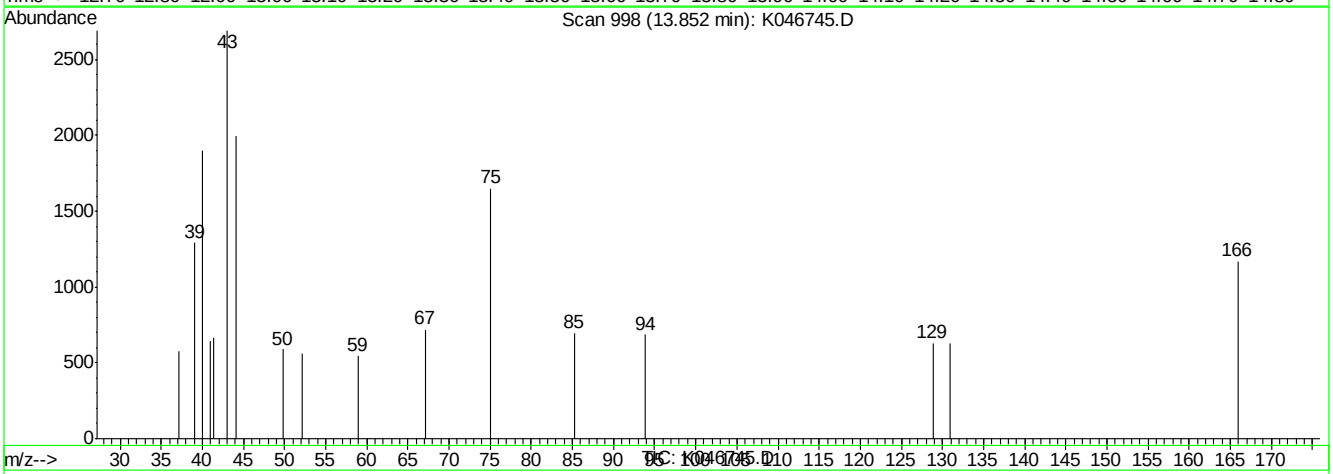
K046745.D 8260-K.M Thu Sep 16 14:42:44 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:43 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(52) trans-1,3-Dichloropropene

13.85min (+0.113) 0.34ug/Kg

response 2779

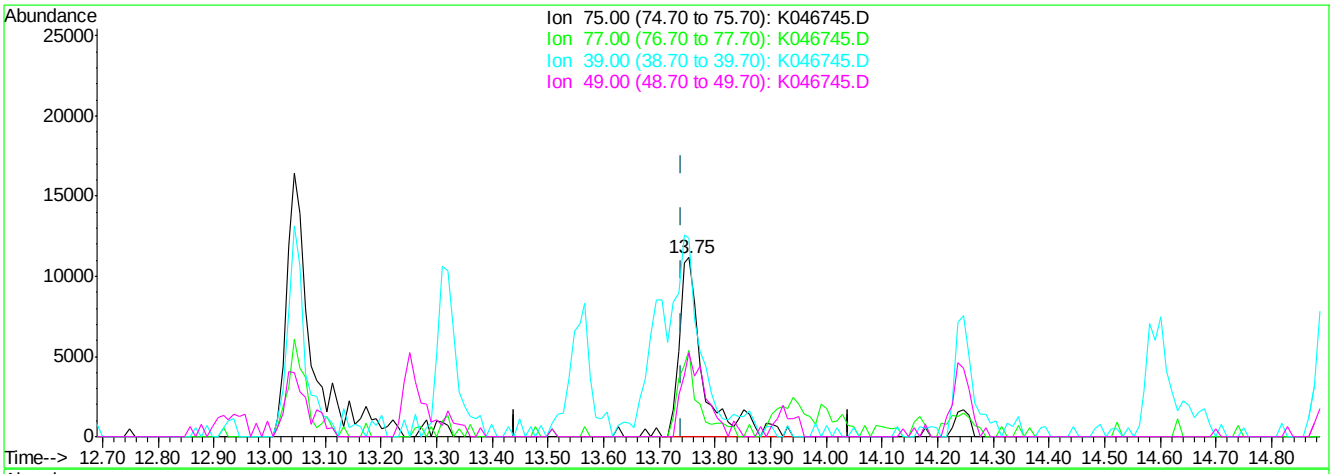
Ion	Exp%	Act%
75.00	100	100
77.00	29.90	0.00
39.00	62.90	78.36
49.00	27.40	0.00

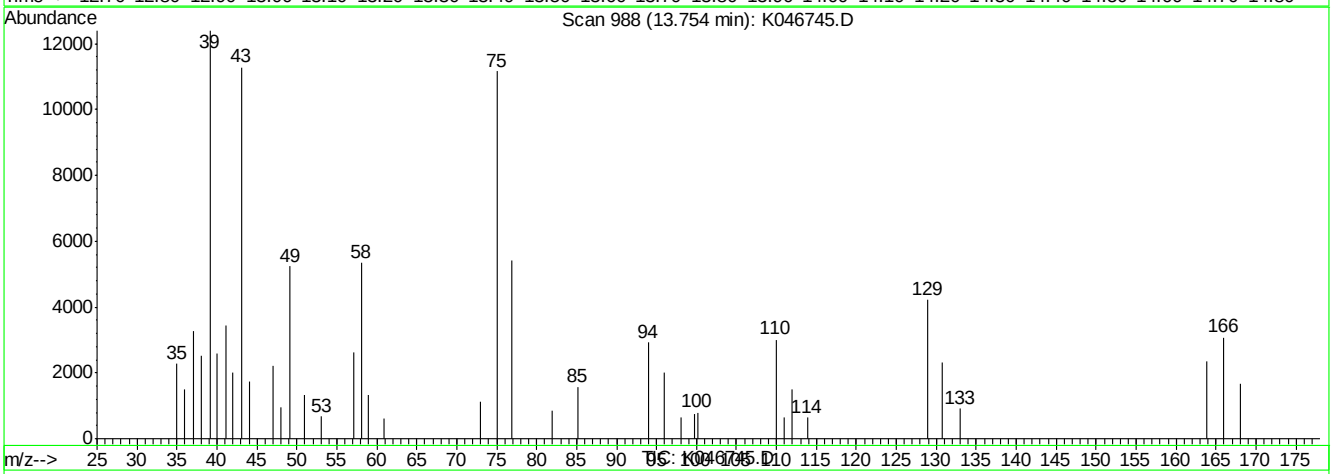
K046745.D 8260-K.M Thu Sep 16 14:43:22 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(52) trans-1,3-Dichloropropene

13.75min (+0.015) 4.22ug/Kg m

response 34393

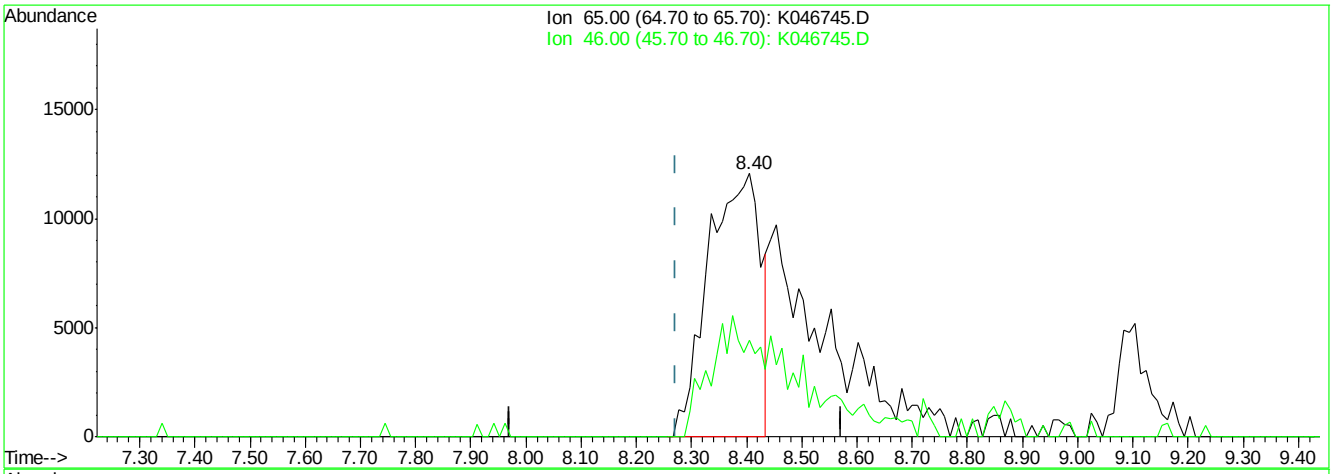
Ion	Exp%	Act%
75.00	100	100
77.00	29.90	48.41
39.00	62.90	111.04#
49.00	27.40	46.94

K046745.D 8260-K.M Thu Sep 16 14:43:26 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration



(93) Tert Butyl Alcohol-d10 (I)

8.40min (+0.133) 250.00ug/Kg

response 79107

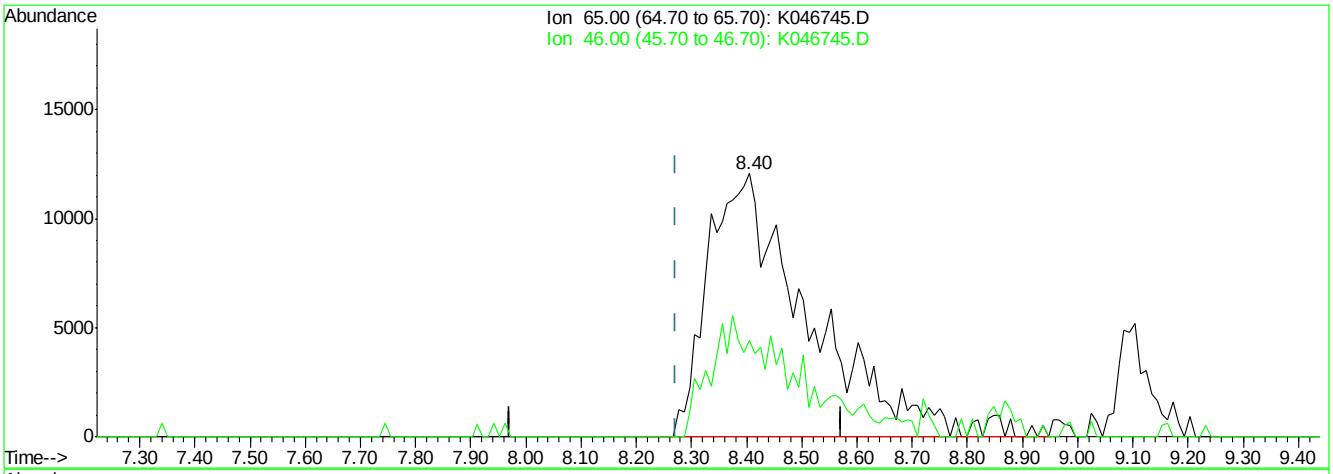
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	36.58
0.00	0.00	0.00
0.00	0.00	0.00

K046745.D 8260-K.M Thu Sep 16 14:43:43 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration



(93) Tert Butyl Alcohol-d10 (I)

8.40min (+0.133) 250.00ug/Kg m

response 153498

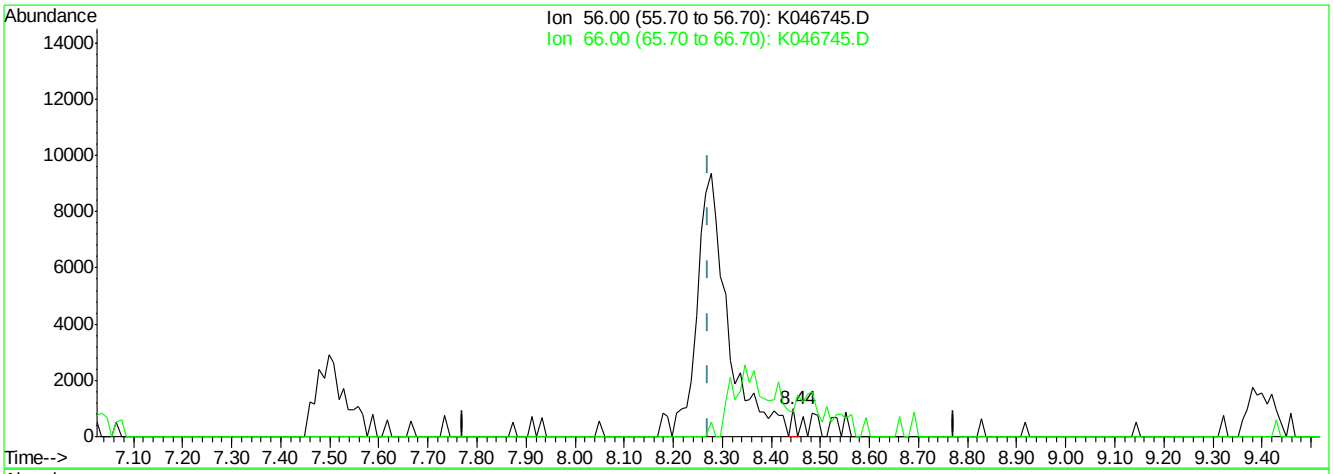
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	36.58
0.00	0.00	0.00
0.00	0.00	0.00

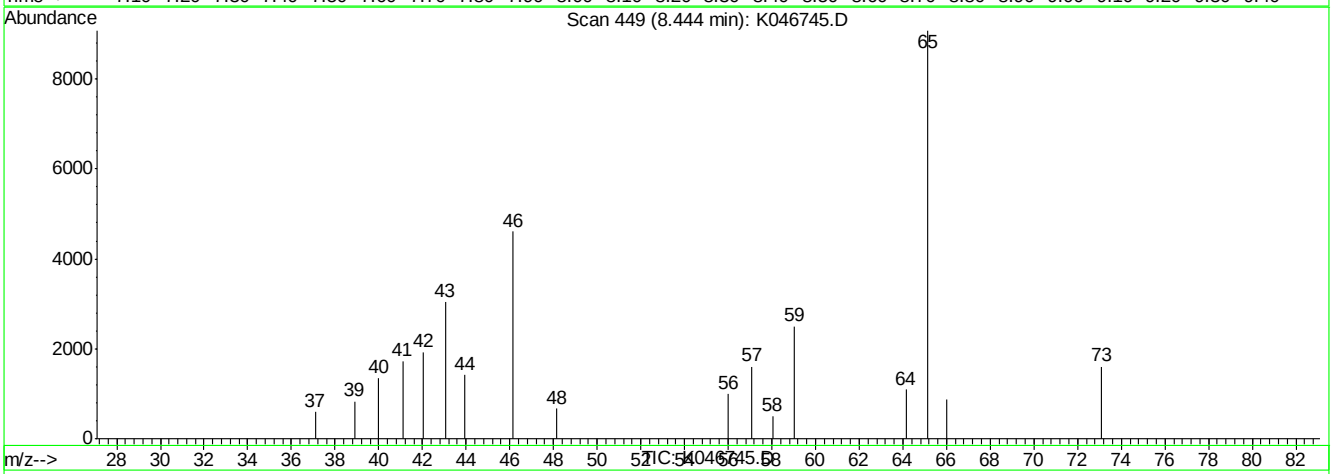
K046745.D 8260-K.M Thu Sep 16 14:43:46 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.44min (+0.172) 0.39ug/Kg

response 589

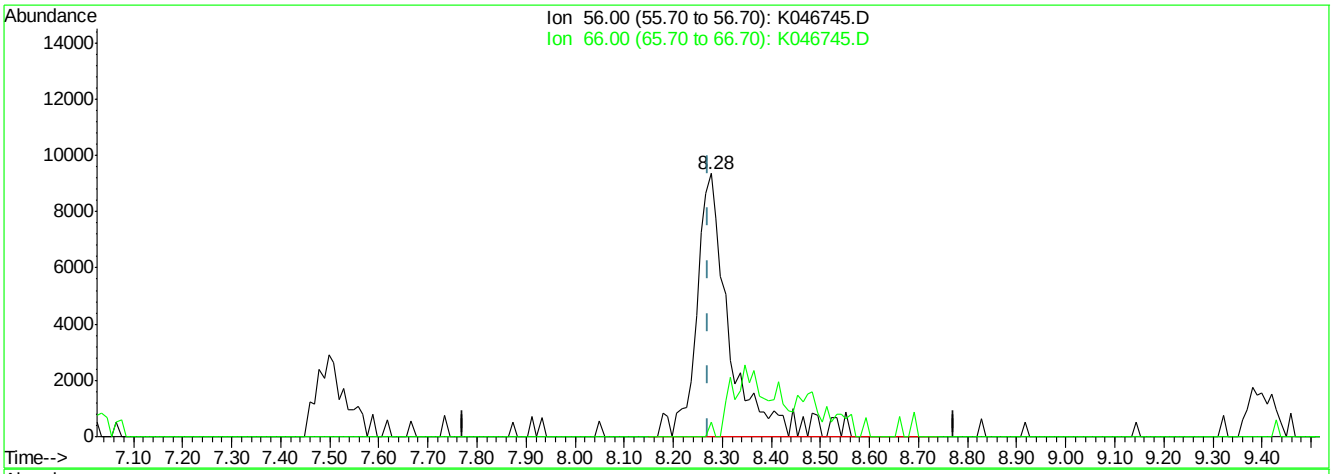
Ion	Exp%	Act%
56.00	100	100
66.00	2.40	0.00
0.00	0.00	0.00
0.00	0.00	0.00

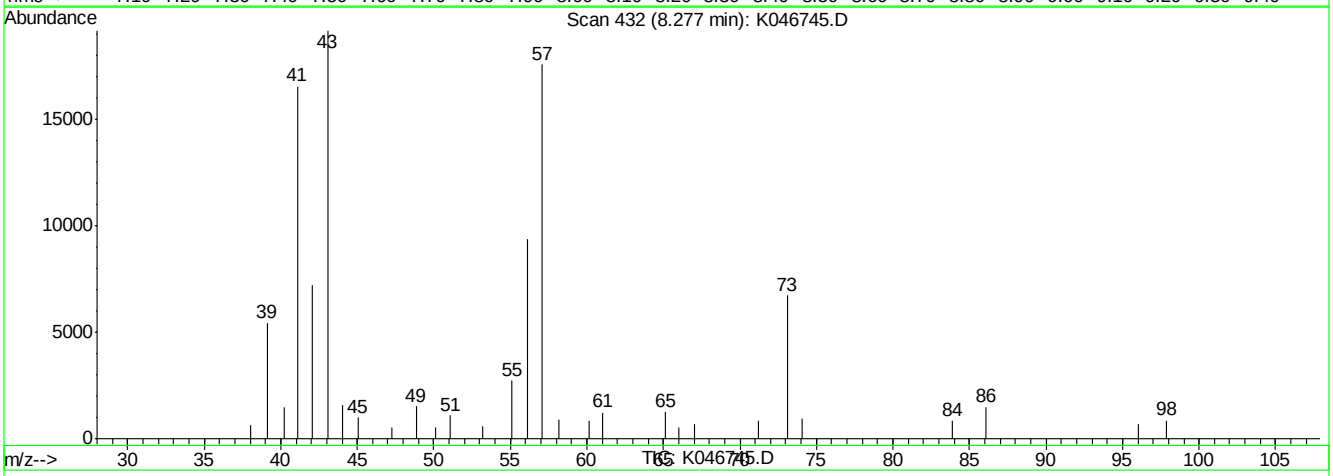
K046745.D 8260-K.M Thu Sep 16 14:43:51 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(94) Acrolein

8.28min (+0.005) 29.40ug/Kg m

response 44857

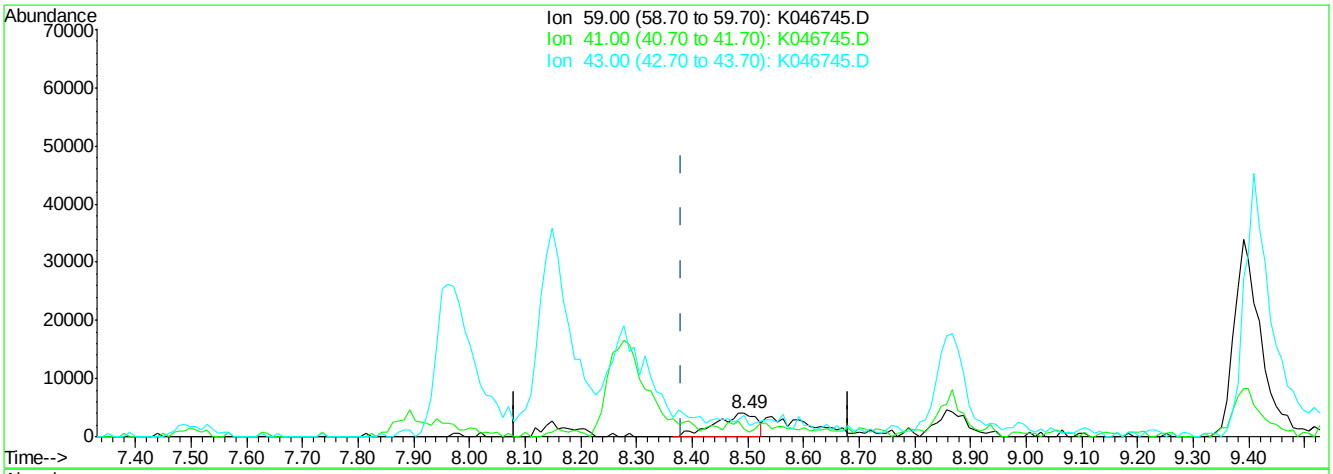
Ion	Exp%	Act%
56.00	100	100
66.00	2.40	0.00
0.00	0.00	0.00
0.00	0.00	0.00

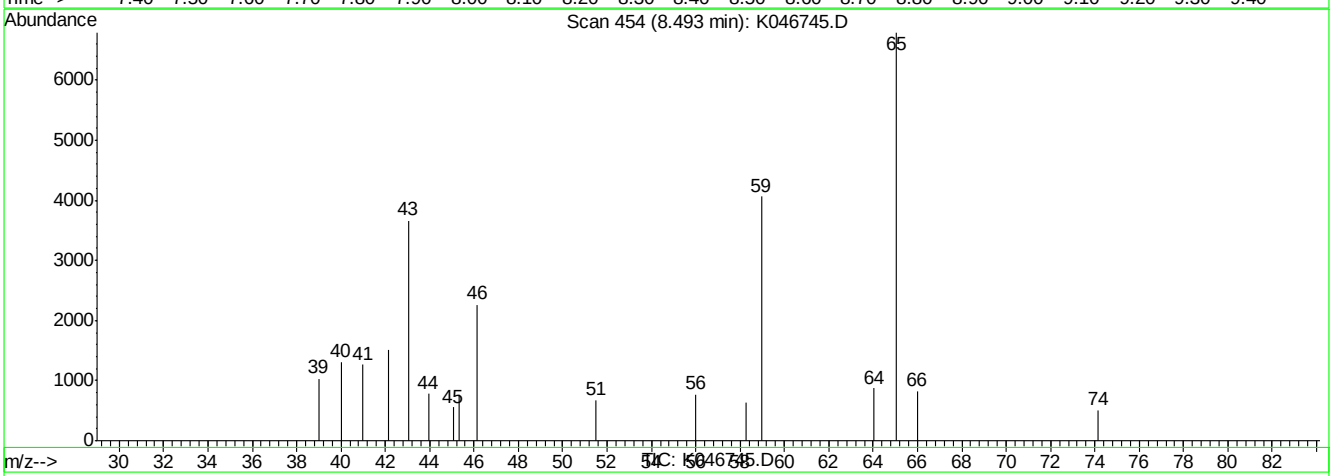
K046745.D 8260-K.M Thu Sep 16 14:43:54 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(95) Tert Butyl Alcohol

8.49min (+0.113) 27.87ug/Kg

response 21179

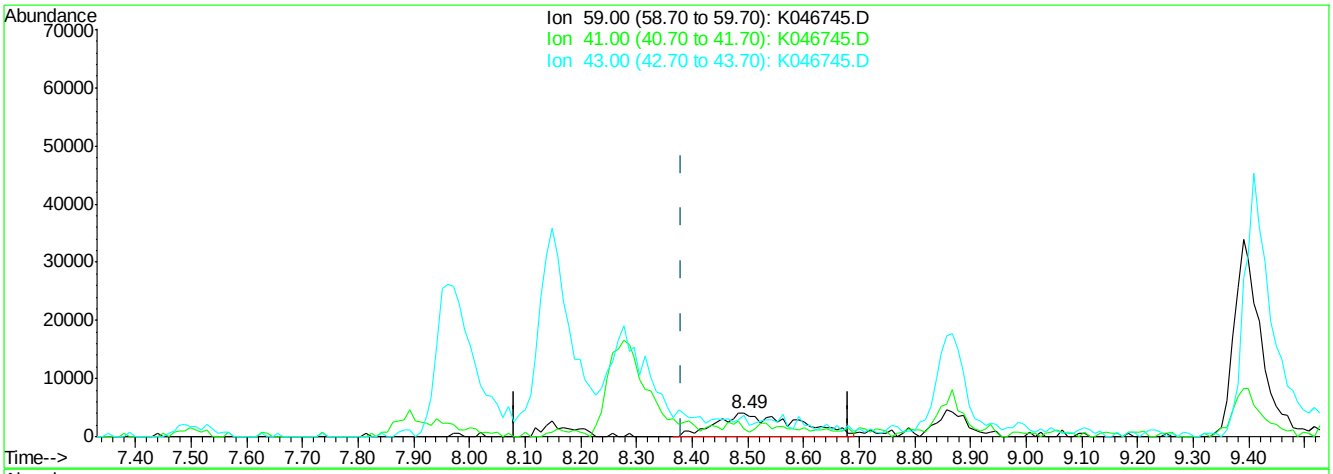
Ion	Exp%	Act%
59.00	100	100
41.00	48.90	0.00#
43.00	45.30	22.37#
0.00	0.00	0.00

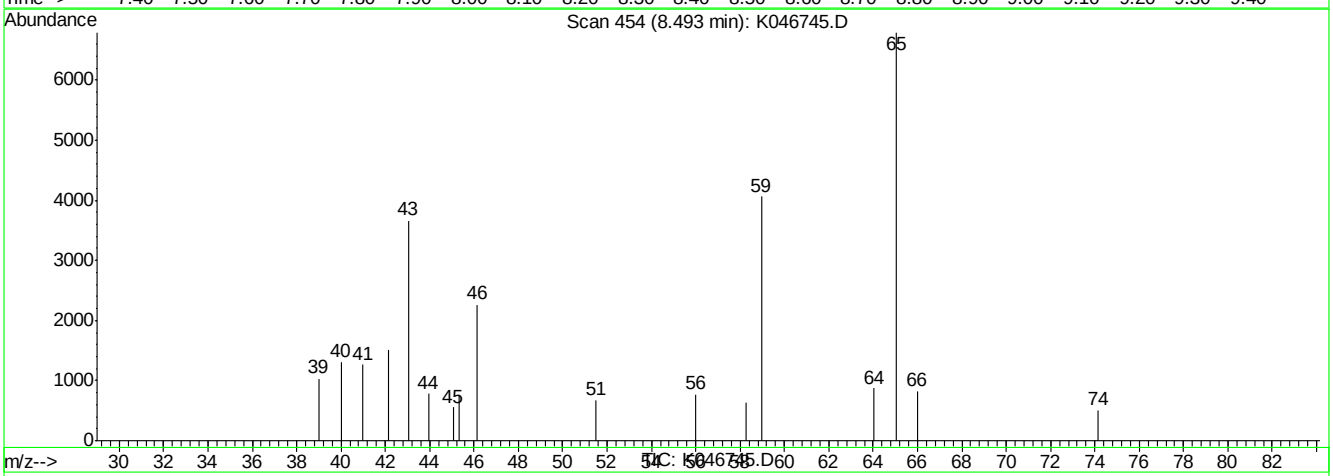
K046745.D 8260-K.M Thu Sep 16 14:43:59 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(95) Tert Butyl Alcohol

8.49min (+0.113) 54.31ug/Kg m

response 41263

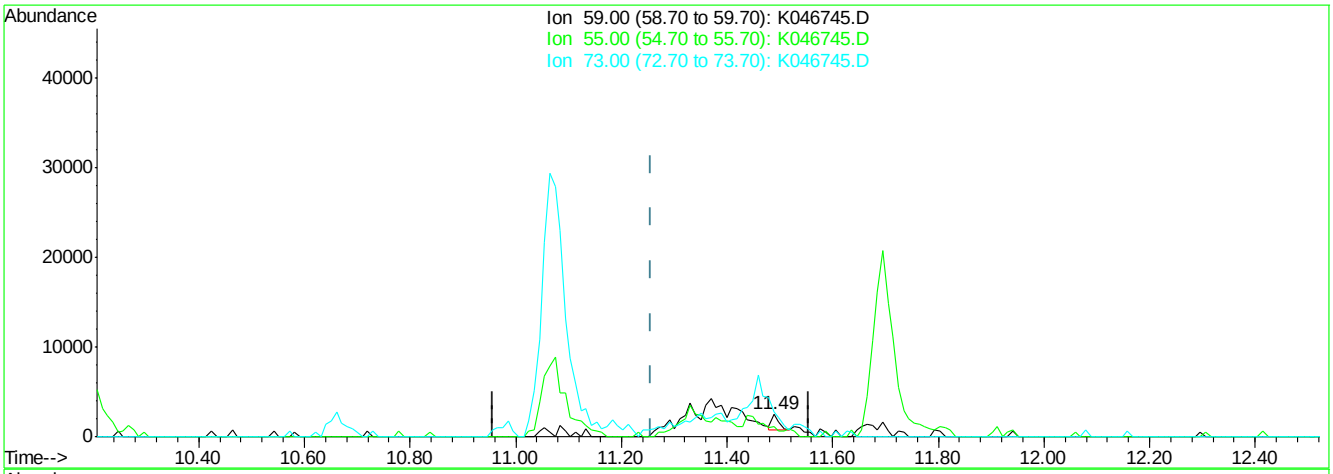
Ion	Exp%	Act%
59.00	100	100
41.00	48.90	31.15
43.00	45.30	90.18#
0.00	0.00	0.00

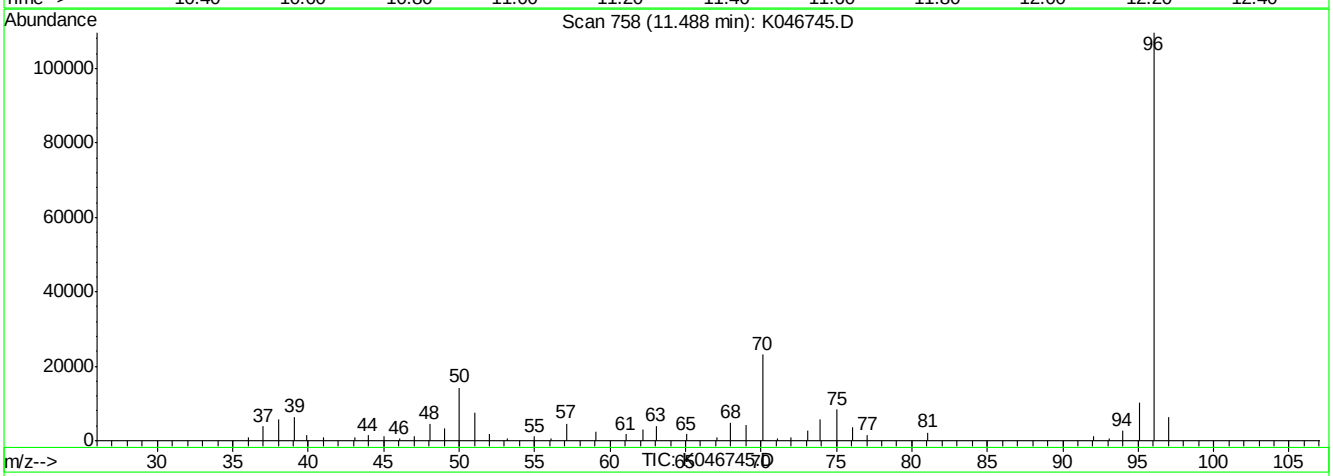
K046745.D 8260-K.M Thu Sep 16 14:44:03 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.49min (+0.231) 2.43ug/Kg

response 1616

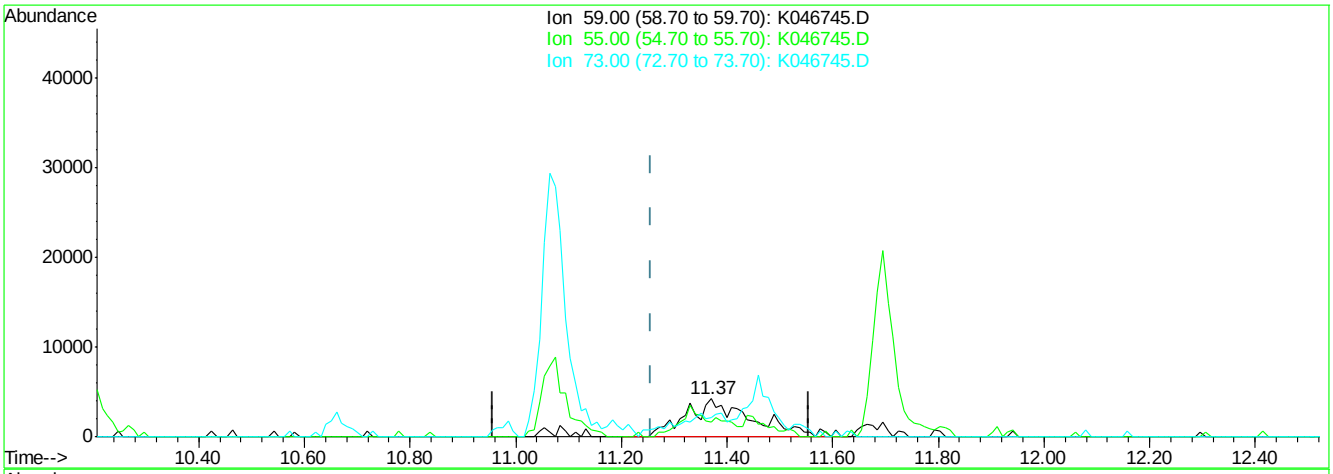
Ion	Exp%	Act%
59.00	100	100
55.00	53.40	12.98#
73.00	43.30	112.58#
0.00	0.00	0.00

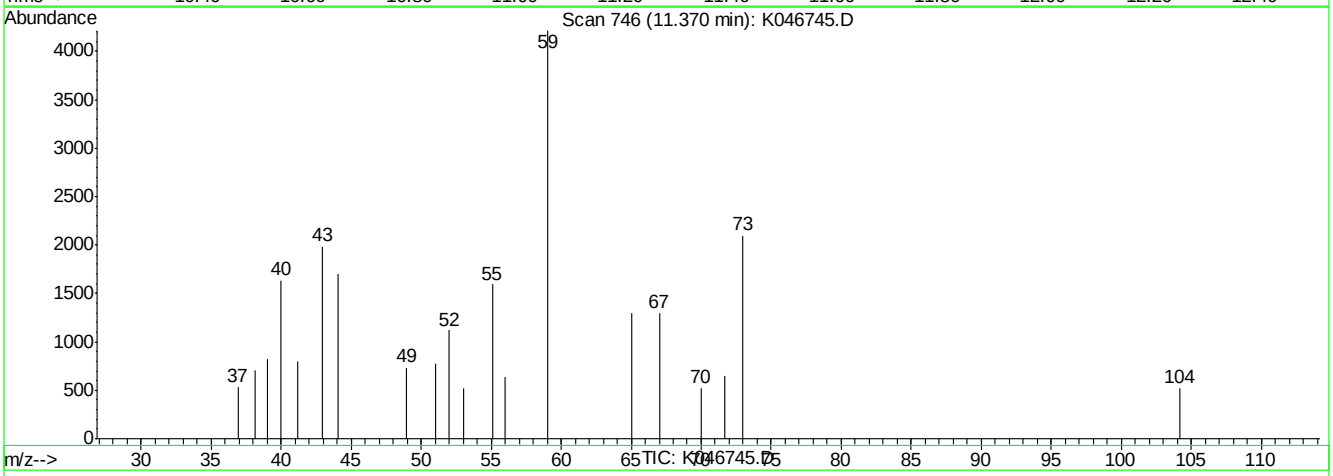
K046745.D 8260-K.M Thu Sep 16 14:44:08 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.37min (+0.113) 55.25ug/Kg m

response 36801

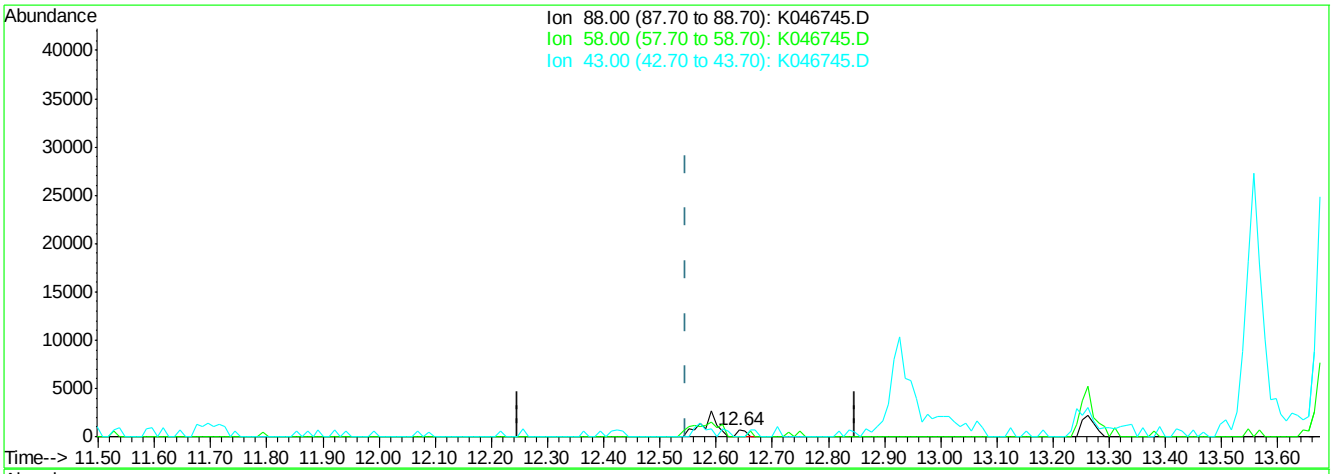
Ion	Exp%	Act%
59.00	100	100
55.00	53.40	37.87
73.00	43.30	49.83
0.00	0.00	0.00

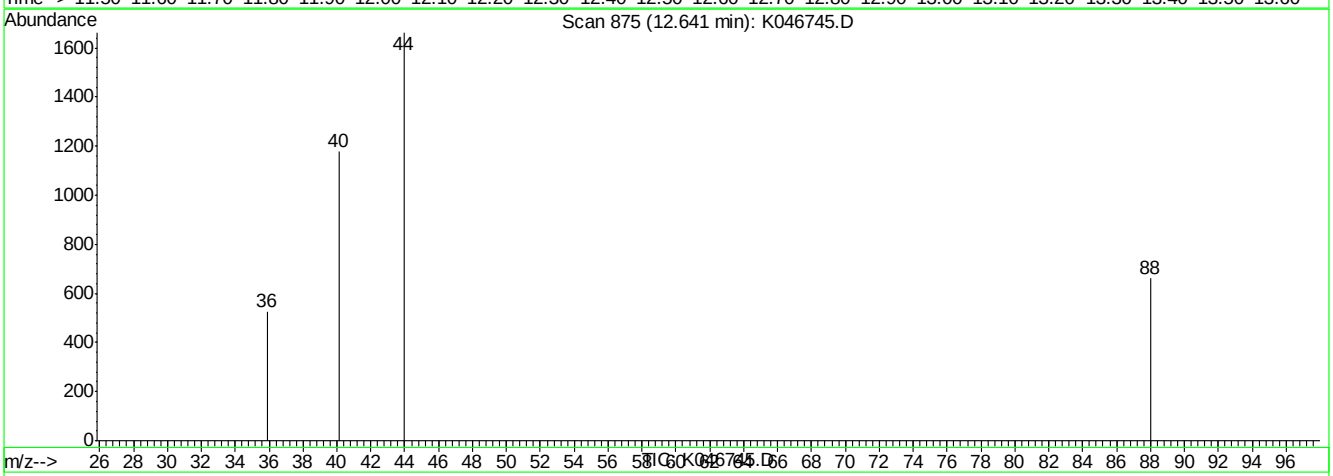
K046745.D 8260-K.M Thu Sep 16 14:44:13 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:44 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.64min (+0.094) 11.80ug/Kg

response 720

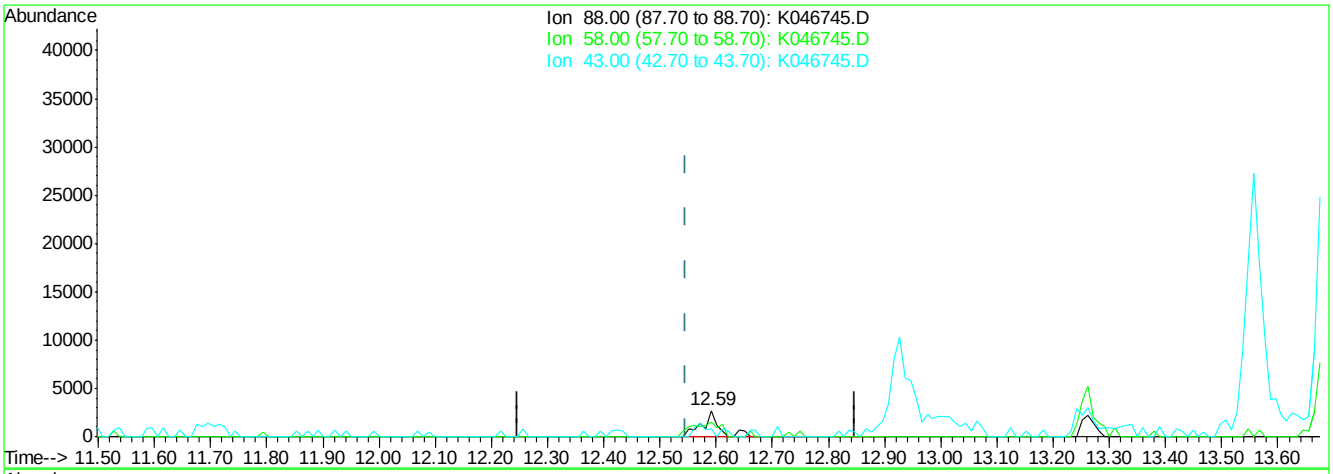
Ion	Exp%	Act%
88.00	100	100
58.00	88.40	0.00#
43.00	41.10	0.00#
0.00	0.00	0.00

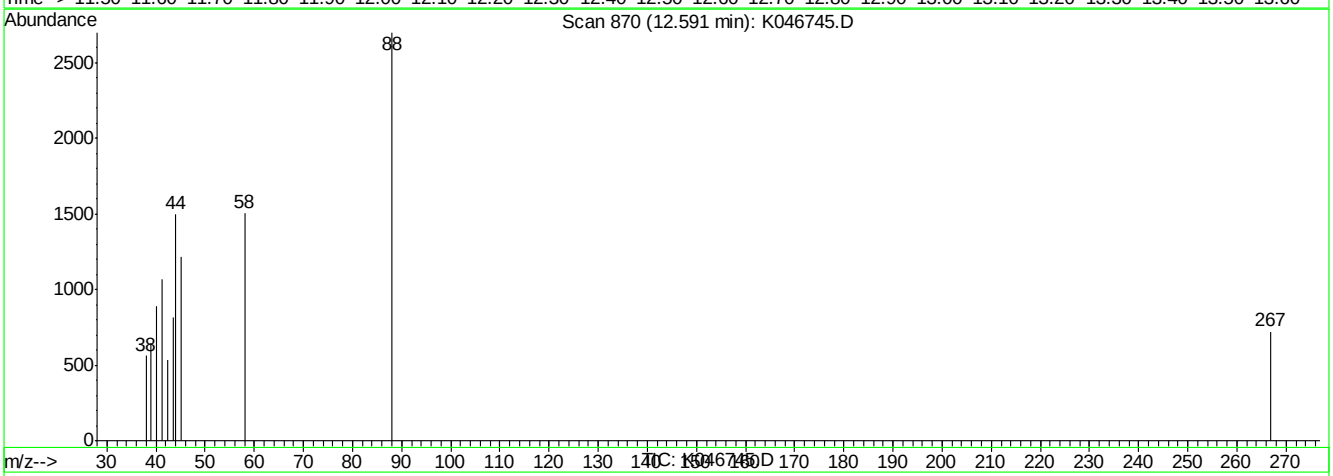
K046745.D 8260-K.M Thu Sep 16 14:44:18 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046745.D Vial: 1
Acq On : 16 Sep 2010 12:53 pm Operator: StevenH
Sample : ic2013-1 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.59min (+0.044) 90.96ug/Kg m

response 5548

Ion	Exp%	Act%
88.00	100	100
58.00	88.40	55.84#
43.00	41.10	30.11
0.00	0.00	0.00

K046745.D 8260-K.M Thu Sep 16 14:44:22 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller
09/17/10 14:38

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:43 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	1007229	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	654059	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	278844	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.36	65	120853m	250.00	ug/Kg	0.09
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	253945	51.60	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 103.20%			
36) 1,2-Dichloroethane-d4	11.12	65	303447	51.13	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 102.26%			
50) Toluene-d8	13.26	98	1043311	47.80	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 95.60%			
70) 4-Bromofluorobenzene	16.23	174	242913	49.76	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.23	85	99781	22.33	ug/Kg	91
3) Chloromethane	4.60	50	205448	21.88	ug/Kg	96
4) Vinyl Chloride	4.77	62	151481	21.22	ug/Kg	98
5) Bromomethane	5.46	94	63501	23.63	ug/Kg	77
6) Chloroethane	5.74	64	68478	21.62	ug/Kg	92
7) Trichlorofluoromethane	6.00	101	136402	26.07	ug/Kg	84
8) 1,2-Dichloro-1,1,2-trifluo	6.86	67	166962	21.82	ug/Kg	91
9) Ethyl Ether	6.51	59	88111	18.14	ug/Kg	89
10) Freon 113	7.01	101	125225m	23.35	ug/Kg	
11) 1,1-Dichloroethene	6.90	61	214892	21.67	ug/Kg	90
12) Acetone	7.95	43	346689	93.76	ug/Kg	86
13) Iodomethane	7.19	142	182858	24.88	ug/Kg	93
14) Carbon Disulfide	7.01	76	391711	22.28	ug/Kg	97
15) Methyl acetate	8.12	43	413990	94.11	ug/Kg	97
16) Methylene Chloride	7.87	49	572578	14.07	ug/Kg	90
17) Acrylonitrile	9.15	53	142107	81.50	ug/Kg	99
18) Methyl Tert Butyl Ether	8.30	73	313666	19.13	ug/Kg	90
19) trans-1,2-Dichloroethene	8.15	61	210156	22.30	ug/Kg	96
20) Hexane	8.26	57	275751	19.78	ug/Kg	94
21) Vinyl acetate	8.12	43	429992	96.37	ug/Kg	96
22) 1,1-Dichloroethane	9.10	63	285501	22.23	ug/Kg	97
23) Di-isopropyl ether	8.85	45	566902	20.33	ug/Kg	94
24) Ethyl tert-butyl Ether	9.38	59	416475	19.18	ug/Kg	94
25) 2-Butanone	10.57	43	419827	93.29	ug/Kg	88
26) cis-1,2-Dichloroethene	9.86	96	122503	20.50	ug/Kg	96
27) 2,2-Dichloropropane	10.00	77	180321	23.50	ug/Kg	95
28) Bromochloromethane	10.12	128	59205	21.13	ug/Kg	88
29) Chloroform	10.19	83	244681	22.12	ug/Kg	97
30) Tetrahydrofuran	10.57	42	31527	18.61	ug/Kg#	76
32) 1,1,1-Trichloroethane	10.51	97	200006	23.30	ug/Kg	97
33) Cyclohexane	10.17	56	309752	23.14	ug/Kg	92
34) 1,1-Dichloropropene	10.65	75	195285	22.90	ug/Kg	95
35) Carbon Tetrachloride	10.43	117	164964	22.80	ug/Kg	100
37) 1,2-Dichloroethane	11.21	62	174697	20.09	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
K046746.D 8260-K.M Fri Sep 17 08:48:46 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:43 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	583958	22.64	ug/Kg	99
39)	Tert-Amyl Methyl Ether	11.06	73	315384	18.72	ug/Kg	95
40)	Trichloroethene	11.67	95	130466	21.30	ug/Kg	97
41)	Methylcyclohexane	11.69	83	238255	22.71	ug/Kg	96
42)	1,2-Dichloropropane	12.28	63	167195	22.04	ug/Kg	89
43)	Dibromomethane	12.18	93	68115	19.99	ug/Kg	90
44)	Bromodichloromethane	12.33	83	160942	20.06	ug/Kg	96
45)	2-Nitropropane	13.55	41	139514	81.13	ug/Kg	94
46)	2-Chloroethyl vinyl ether	12.92	63	86913	81.78	ug/Kg	92
47)	cis-1,3-Dichloropropene	13.04	75	209860	21.14	ug/Kg	95
48)	4-Methyl-2-pentanone	13.68	43	670033	95.02	ug/Kg	99
51)	Toluene	13.31	91	568930	21.53	ug/Kg	90
52)	trans-1,3-Dichloropropene	13.74	75	150854	19.03	ug/Kg	92
53)	1,1,2-Trichloroethane	13.93	83	94034	19.94	ug/Kg	92
54)	1,3-Dichloropropane	14.24	76	186816	19.51	ug/Kg	95
55)	2-hexanone	14.58	43	508937	83.99	ug/Kg	96
56)	Tetrachloroethene	13.77	166	130263	23.21	ug/Kg	88
57)	Dibromochloromethane	14.15	129	104402	18.64	ug/Kg	98
58)	1,2-Dibromoethane	14.45	107	94501	18.82	ug/Kg	99
59)	1-Chlorohexane	14.89	91	178421	21.54	ug/Kg	91
60)	Chlorobenzene	14.98	112	328880	22.08	ug/Kg	91
61)	1,1,1,2-Tetrachloroethane	15.03	131	112376	20.96	ug/Kg	91
62)	Ethylbenzene	14.97	91	581380	21.86	ug/Kg	99
63)	m,p-Xylene	15.11	91	922222	43.97	ug/Kg	99
64)	o-Xylene	15.58	91	475037	20.66	ug/Kg	99
65)	Styrene	15.63	104	333705	20.28	ug/Kg	98
66)	Bromoform	15.72	173	60559	18.65	ug/Kg	97
68)	Isopropylbenzene	15.90	105	477289	23.12	ug/Kg	99
69)	Cyclohexanone	16.69	55	17290	78.92	ug/Kg	87
71)	1,1,2,2-Tetrachloroethane	16.39	83	117269	20.70	ug/Kg	97
72)	trans-1,4-Dichloro-2-Buten	16.57	53	28627	17.78	ug/Kg	94
73)	1,2,3-Trichloropropane	16.57	110	29054	21.76	ug/Kg	81
74)	Bromobenzene	16.38	156	116017	22.42	ug/Kg	96
75)	n-Propylbenzene	16.33	91	631849	22.89	ug/Kg	100
76)	2-Chlorotoluene	16.55	91	453796	23.10	ug/Kg	100
77)	1,3,5-Trimethylbenzene	16.51	105	444038	22.96	ug/Kg	97
78)	4-Chlorotoluene	16.71	91	369387	22.06	ug/Kg	97
79)	tert-Butylbenzene	16.87	91	263913	21.88	ug/Kg	96
80)	1,2,4-Trimethylbenzene	16.93	105	431546	23.13	ug/Kg	99
81)	sec-Butylbenzene	17.05	105	557347	24.09	ug/Kg	97
82)	4-Isopropyltoluene	17.18	119	395140	23.24	ug/Kg	95
83)	1,3-Dichlorobenzene	17.35	146	197182	21.55	ug/Kg	98
84)	1,4-Dichlorobenzene	17.44	146	196448	22.31	ug/Kg	98
85)	Benzyl chloride	17.67	126	25835	16.11	ug/Kg#	65
86)	n-Butylbenzene	17.63	92	212662	22.01	ug/Kg	95
87)	1,2-Dichlorobenzene	17.89	146	181486	21.05	ug/Kg	92
88)	1,2-Dibromo-3-Chloropropan	18.74	75	13506	16.31	ug/Kg#	85
89)	1,2,4-Trichlorobenzene	19.46	180	61905	17.98	ug/Kg	91
90)	Hexachlorobutadiene	19.39	225	69344	24.47	ug/Kg	91

(#) = qualifier out of range (m) = manual integration
K046746.D 8260-K.M Fri Sep 17 08:48:46 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:43 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

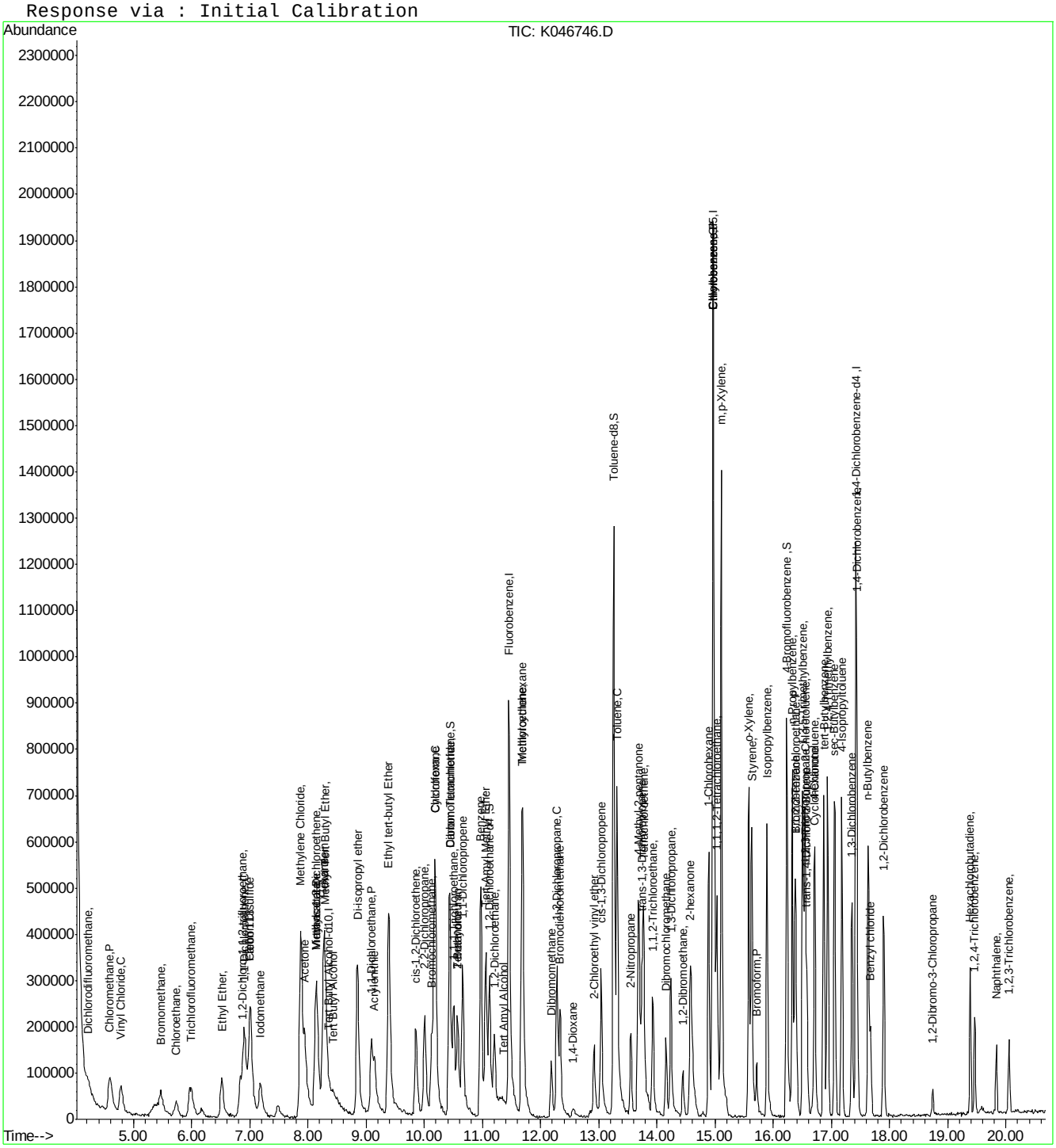
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	112248	14.88	ug/Kg	99
92)	1,2,3-Trichlorobenzene	20.05	180	51635	18.35	ug/Kg	91
94)	Acrolein	8.27	56	136591	113.71	ug/Kg#	93
95)	Tert Butyl Alcohol	8.44	59	115785m	193.54	ug/Kg	
96)	Tert Amyl Alcohol	11.36	59	90634m	172.83	ug/Kg	
97)	1,4-Dioxane	12.56	88	22048m	459.10	ug/Kg	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046746.D 8260-K.M Fri Sep 17 08:48:46 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:46 2010 Quant Results File: 8260-K.RES

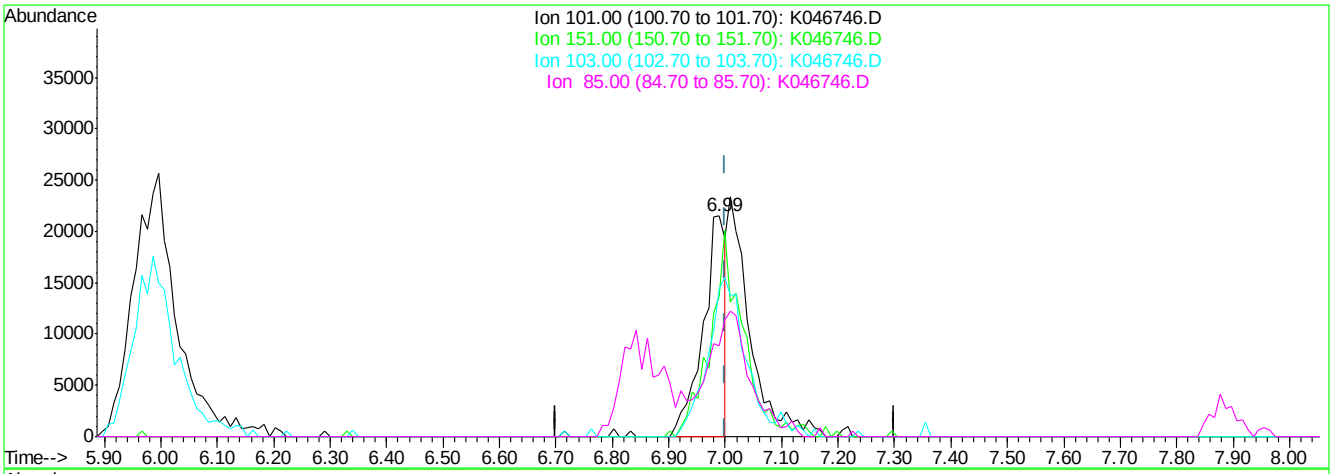
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

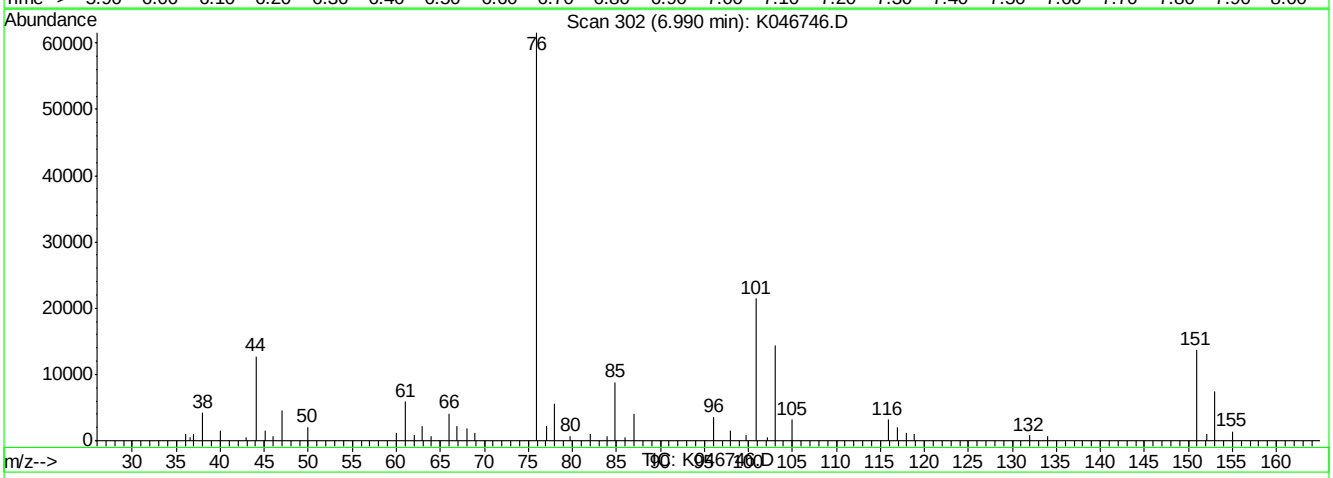


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(10) Freon 113

6.99min (-0.011) 11.49ug/Kg

response 61631

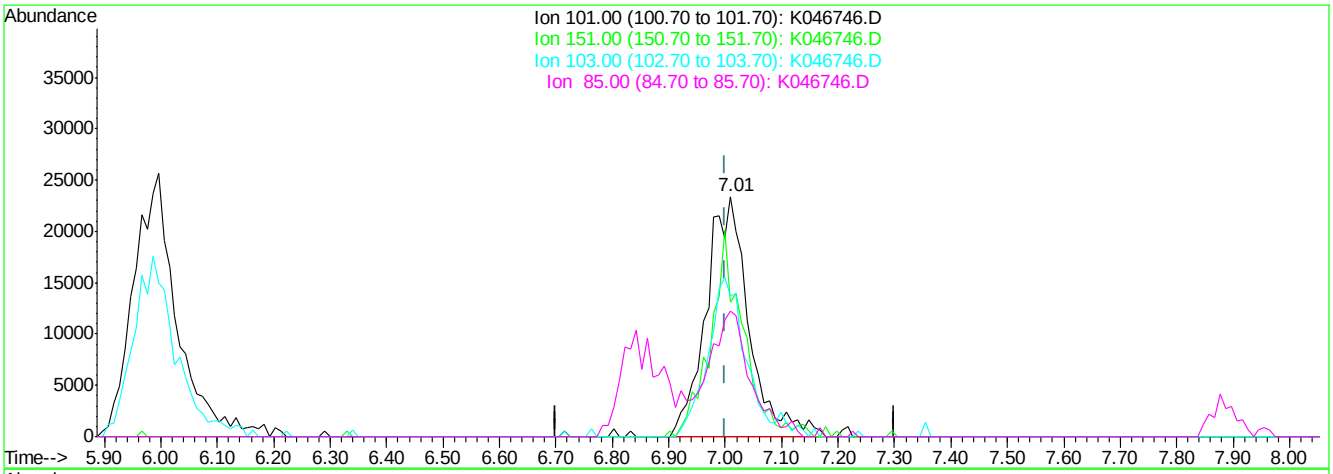
Ion	Exp%	Act%
101.00	100	100
151.00	62.70	63.47
103.00	66.00	67.19
85.00	44.30	9.33#

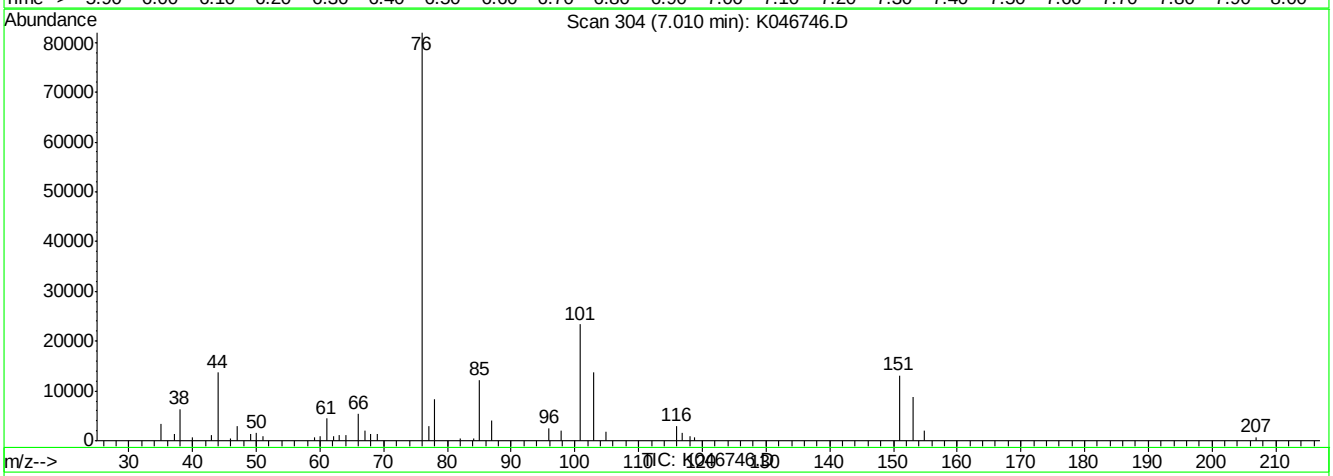
K046746.D 8260-K.M Thu Sep 16 14:44:46 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(10) Freon 113

7.01min (+0.009) 23.35ug/Kg m

response 125225

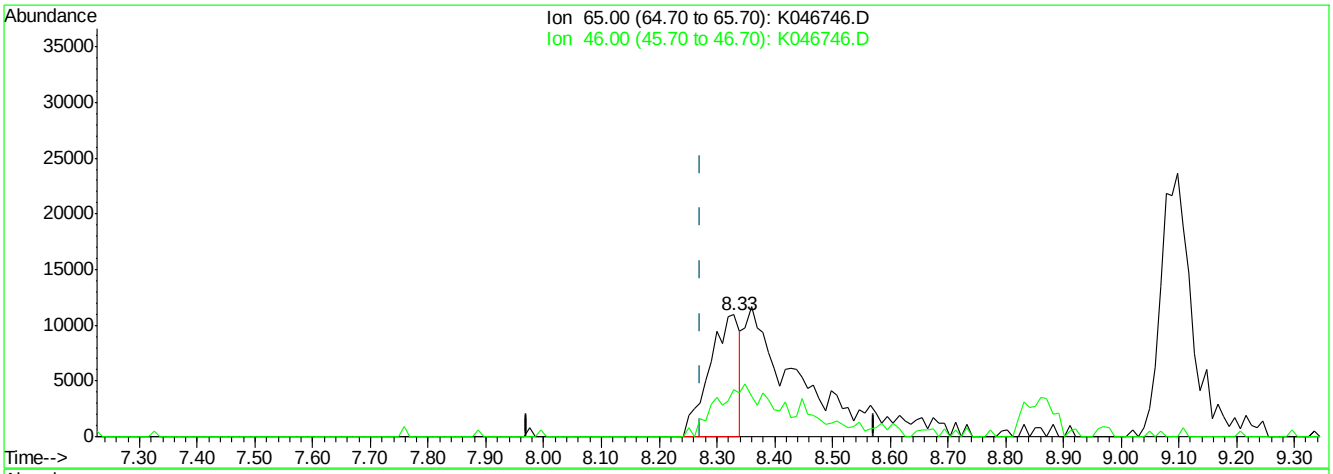
Ion	Exp%	Act%
101.00	100	100
151.00	62.70	56.12
103.00	66.00	58.66
85.00	44.30	52.41

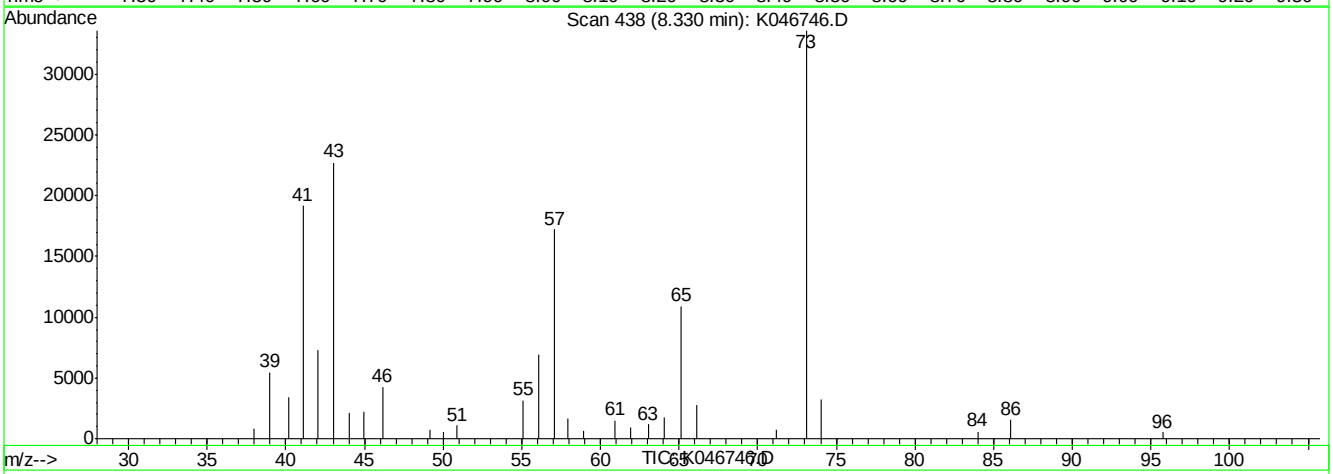
K046746.D 8260-K.M Thu Sep 16 14:44:51 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.33min (+0.058) 250.00ug/Kg

response 40289

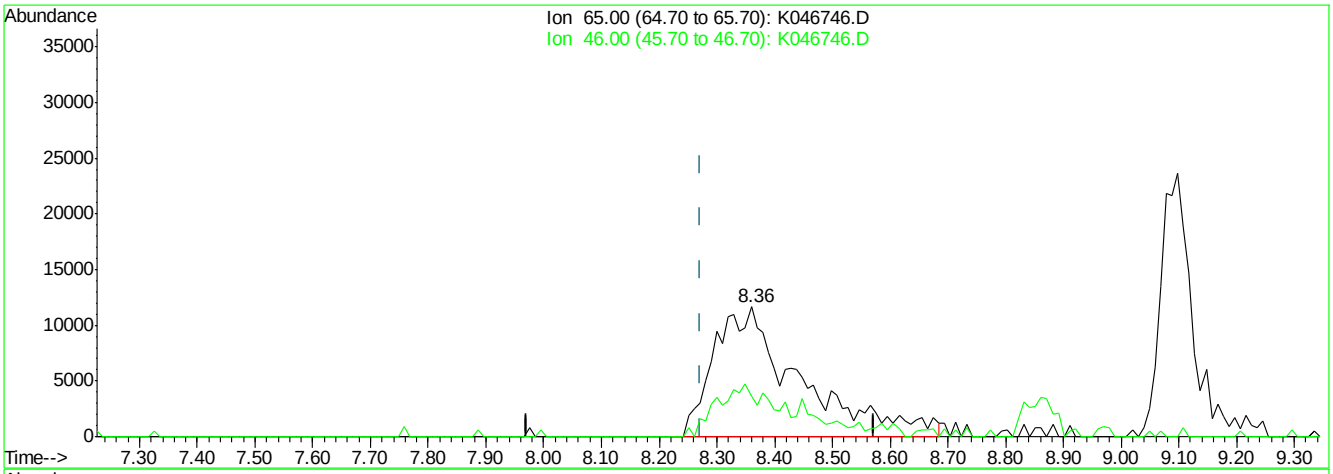
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	39.05
0.00	0.00	0.00
0.00	0.00	0.00

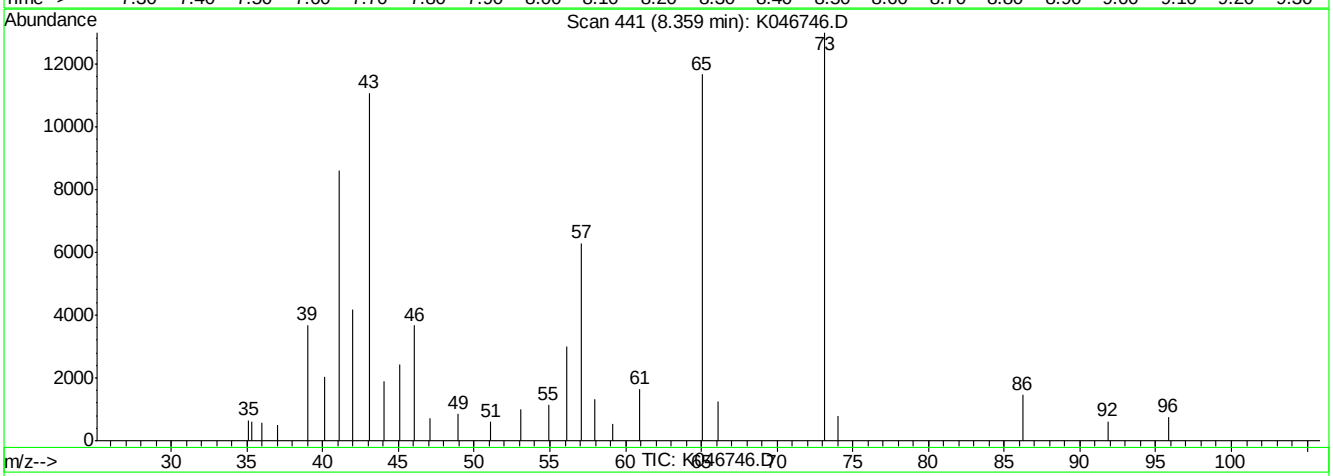
K046746.D 8260-K.M Thu Sep 16 14:45:03 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.36min (+0.087) 250.00ug/Kg m

response 120853

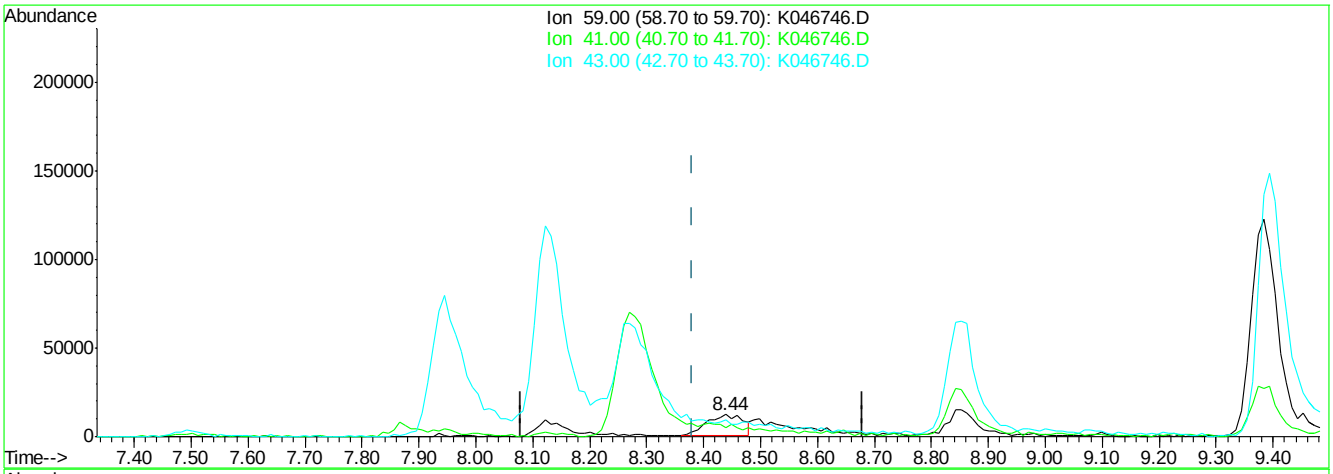
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	31.46
0.00	0.00	0.00
0.00	0.00	0.00

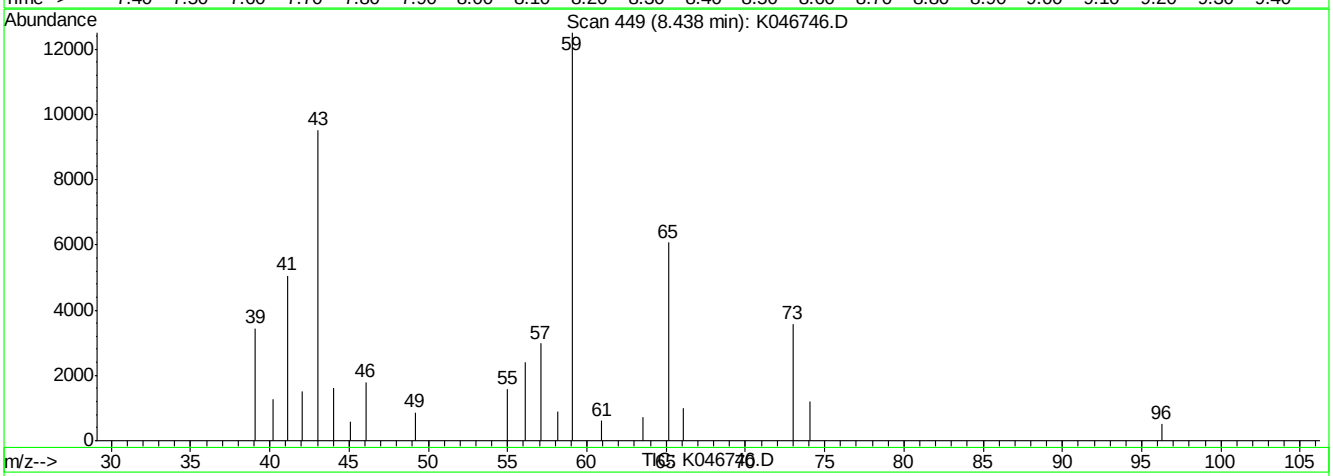
K046746.D 8260-K.M Thu Sep 16 14:45:08 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(95) Tert Butyl Alcohol

8.44min (+0.058) 88.77ug/Kg

response 53108

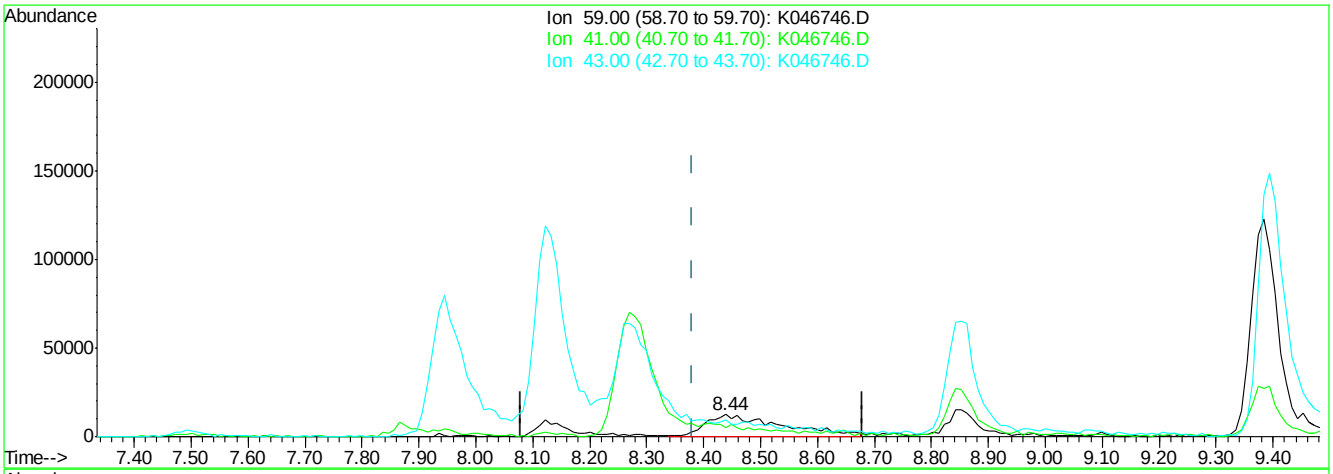
Ion	Exp%	Act%
59.00	100	100
41.00	48.90	1.19#
43.00	45.30	13.11#
0.00	0.00	0.00

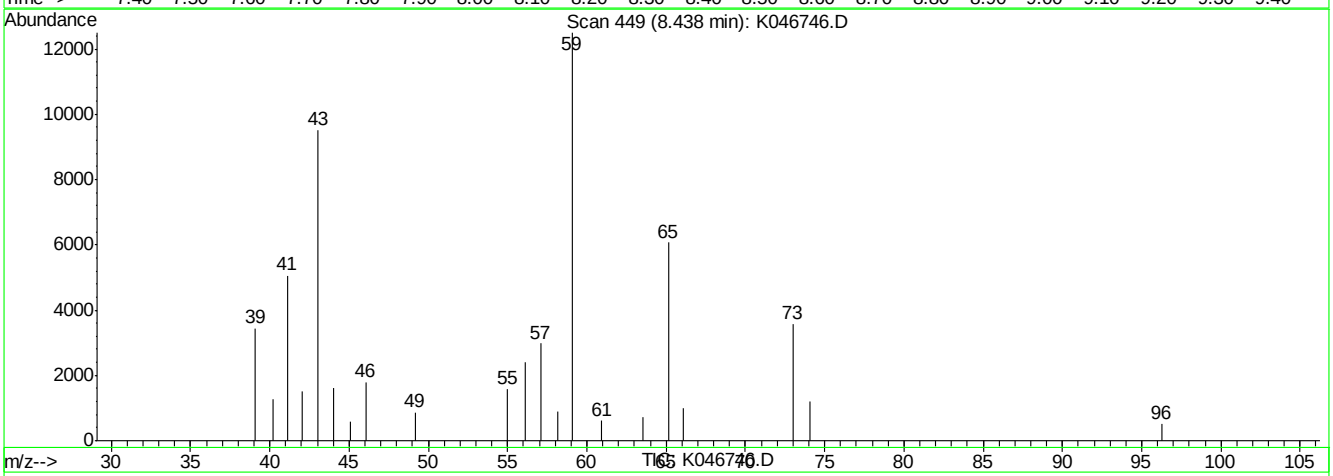
K046746.D 8260-K.M Thu Sep 16 14:45:13 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(95) Tert Butyl Alcohol

8.44min (+0.058) 193.54ug/Kg m

response 115785

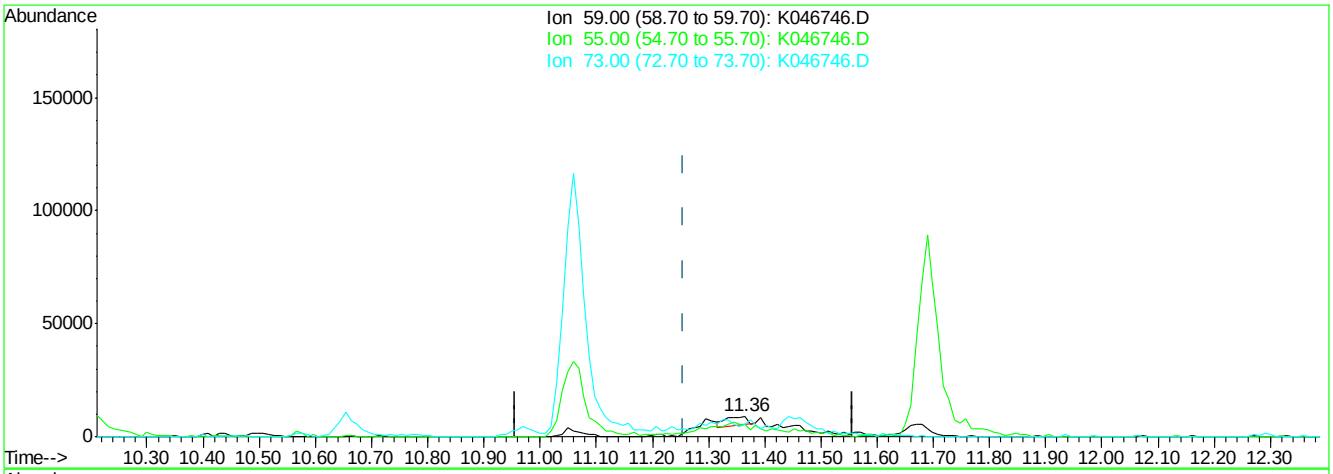
Ion	Exp%	Act%
59.00	100	100
41.00	48.90	40.52
43.00	45.30	76.10#
0.00	0.00	0.00

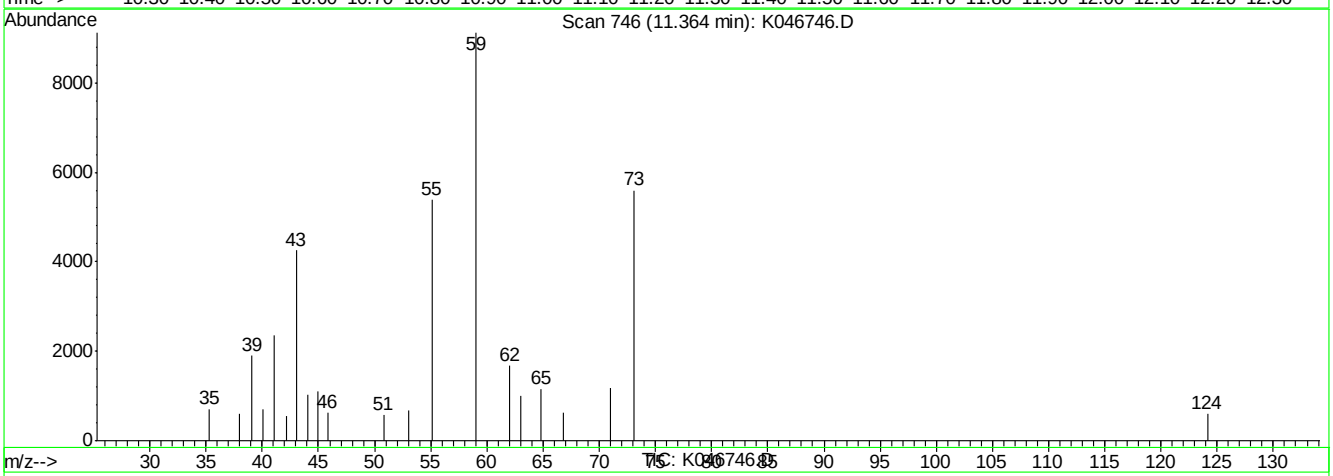
K046746.D 8260-K.M Thu Sep 16 14:45:17 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:45 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.36min (+0.107) 19.12ug/Kg

response 10026

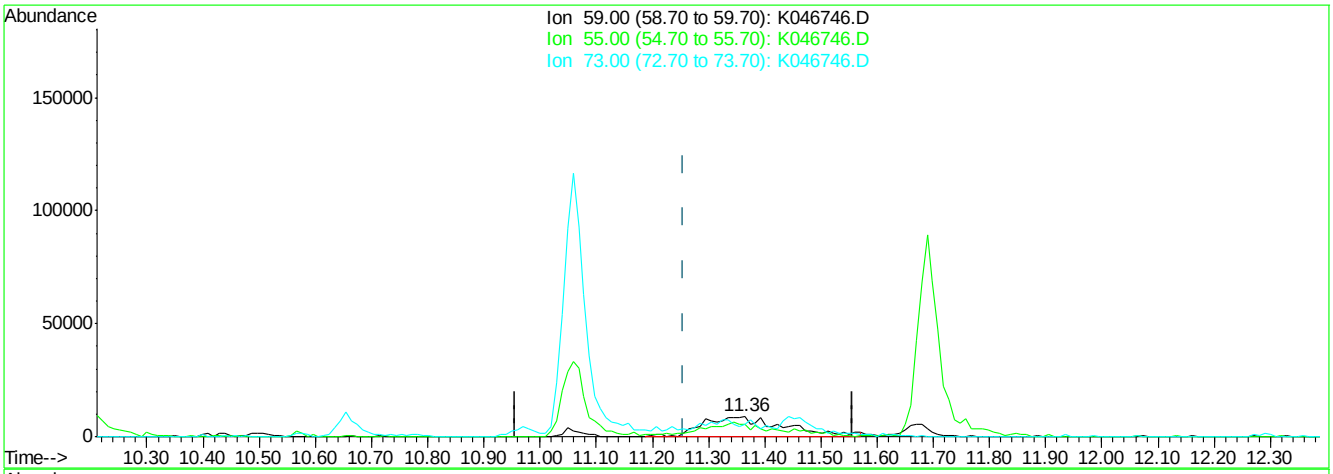
Ion	Exp%	Act%
59.00	100	100
55.00	53.40	27.22#
73.00	43.30	6.24#
0.00	0.00	0.00

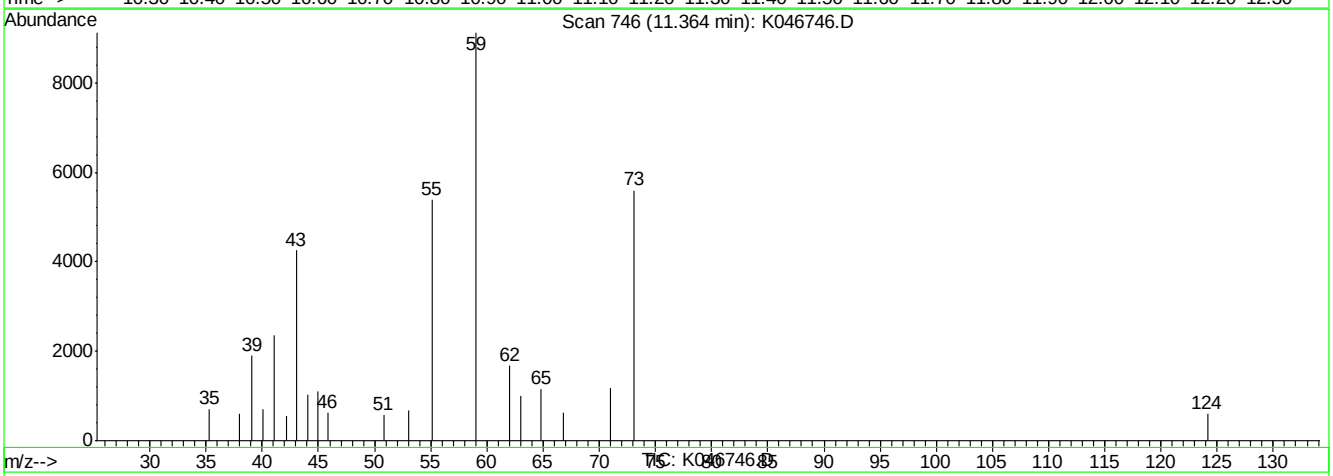
K046746.D 8260-K.M Thu Sep 16 14:45:22 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(96) Tert Amyl Alcohol

11.36min (+0.107) 172.83ug/Kg m

response 90634

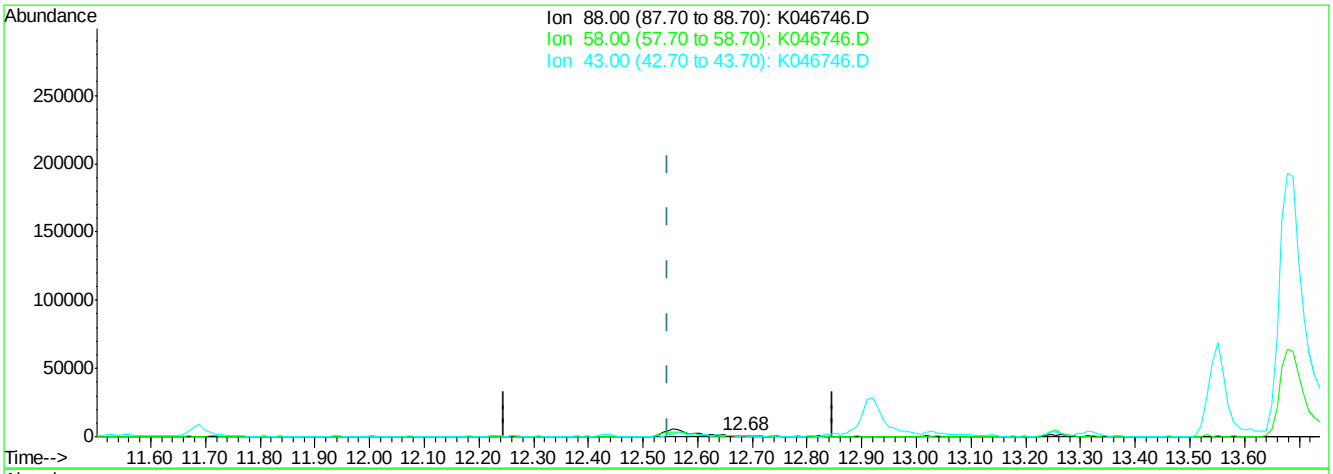
Ion	Exp%	Act%
59.00	100	100
55.00	53.40	58.98
73.00	43.30	61.29
0.00	0.00	0.00

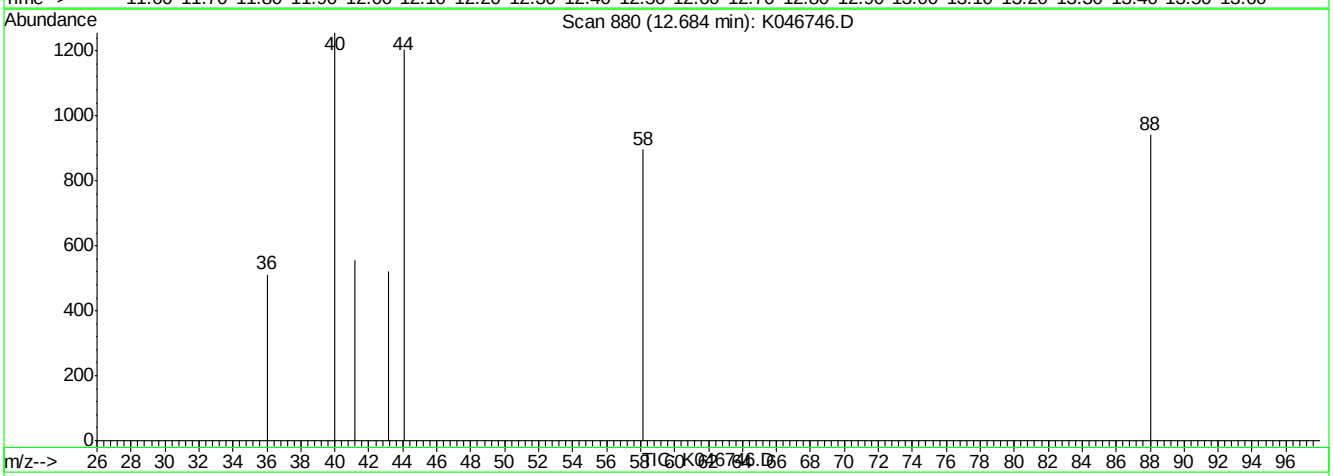
K046746.D 8260-K.M Thu Sep 16 14:45:27 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.68min (+0.137) 35.65ug/Kg

response 1712

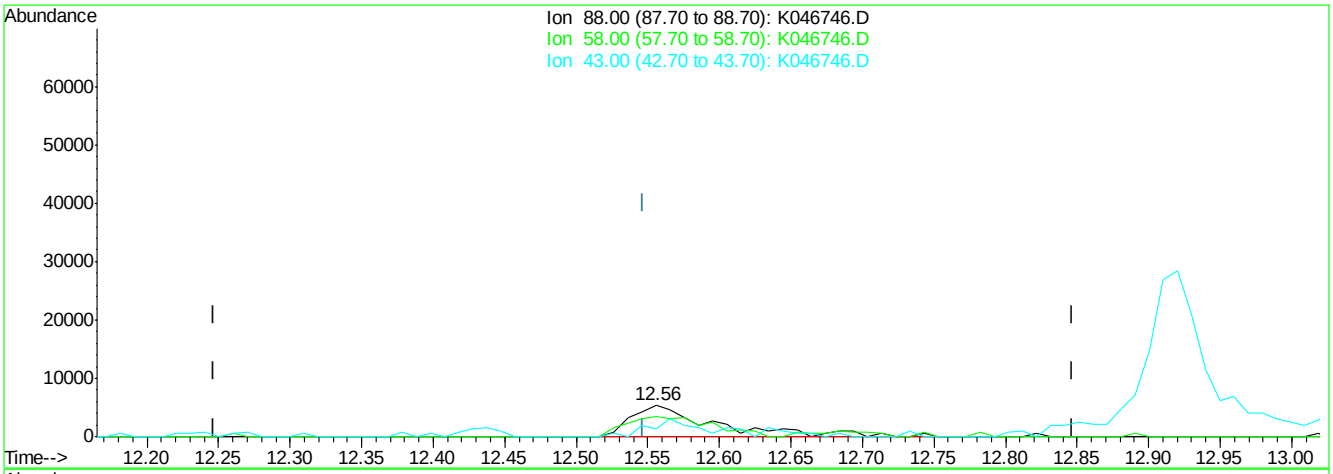
Ion	Exp%	Act%
88.00	100	100
58.00	88.40	95.22
43.00	41.10	0.74#
0.00	0.00	0.00

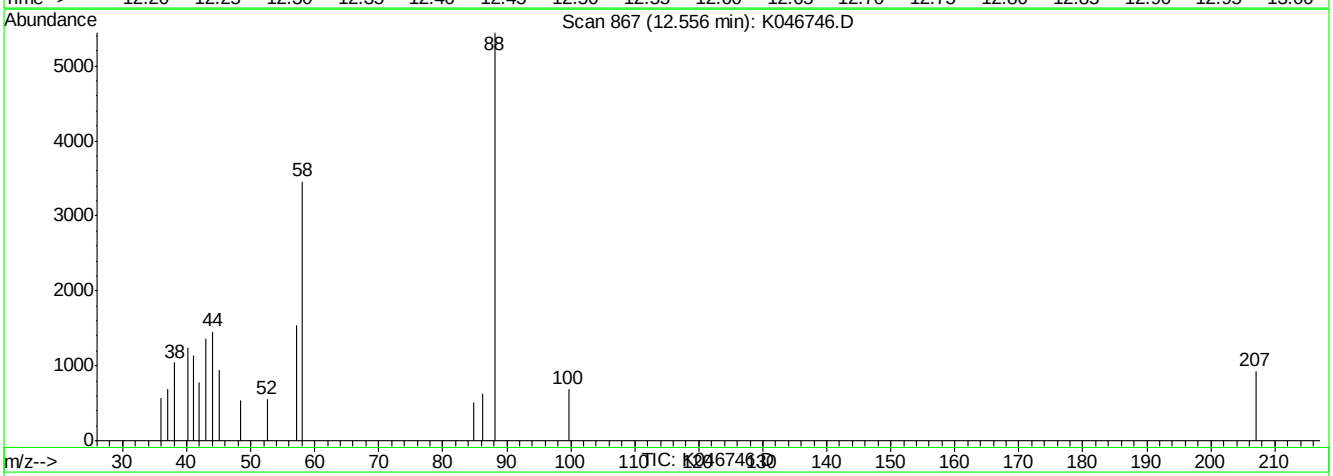
K046746.D 8260-K.M Thu Sep 16 14:45:32 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046746.D Vial: 2
Acq On : 16 Sep 2010 1:18 pm Operator: StevenH
Sample : ic2013-2 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(97) 1,4-Dioxane

12.56min (+0.009) 459.10ug/Kg m

response 22048

Ion	Exp%	Act%
88.00	100	100
58.00	88.40	63.57#
43.00	41.10	24.97
0.00	0.00	0.00

K046746.D 8260-K.M Thu Sep 16 14:45:37 2010

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller 09/17/10 14:38

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046747.D Vial: 3
Acq On : 16 Sep 2010 1:44 pm Operator: StevenH
Sample : ic2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:46 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	986560	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	628618	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	288544	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.29	65	107825m	250.00	ug/Kg	0.02
System Monitoring Compounds						
31) Dibromofluoromethane	10.43	113	243861	50.59	ug/Kg	-0.01
Spiked Amount 50.000	Range 80 - 121		Recovery = 101.18%			
36) 1,2-Dichloroethane-d4	11.12	65	314062	54.02	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 108.04%			
50) Toluene-d8	13.26	98	1029737	49.09	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 98.18%			
70) 4-Bromofluorobenzene	16.23	174	253559	50.20	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 100.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	241474	55.18	ug/Kg	94
3) Chloromethane	4.60	50	477399	51.91	ug/Kg	84
4) Vinyl Chloride	4.78	62	379999	54.34	ug/Kg	98
5) Bromomethane	5.46	94	151139	57.42	ug/Kg	95
6) Chloroethane	5.73	64	163533	52.71	ug/Kg	92
7) Trichlorofluoromethane	5.98	101	342158	66.77	ug/Kg	85
8) 1,2-Dichloro-1,1,2-trifluo	6.83	67	385333	51.42	ug/Kg	93
9) Ethyl Ether	6.51	59	230047	48.36	ug/Kg	85
10) Freon 113	7.00	101	280318	53.36	ug/Kg	94
11) 1,1-Dichloroethene	6.91	61	535863	55.16	ug/Kg	97
12) Acetone	7.94	43	754964	208.46	ug/Kg	97
13) Iodomethane	7.18	142	428017	59.45	ug/Kg	94
14) Carbon Disulfide	7.01	76	929667	53.98	ug/Kg	99
15) Methyl acetate	8.12	43	933718	216.72	ug/Kg	98
16) Methylene Chloride	7.87	49	851183	21.36	ug/Kg	89
17) Acrylonitrile	9.15	53	388179	227.30	ug/Kg	93
18) Methyl Tert Butyl Ether	8.29	73	766627	47.74	ug/Kg	97
19) trans-1,2-Dichloroethene	8.15	61	509551	55.20	ug/Kg	96
20) Hexane	8.27	57	664868	48.69	ug/Kg	93
21) Vinyl acetate	8.12	43	933718	213.65	ug/Kg	100
22) 1,1-Dichloroethane	9.09	63	673384	53.54	ug/Kg	98
23) Di-isopropyl ether	8.84	45	1371001	50.21	ug/Kg	98
24) Ethyl tert-butyl Ether	9.37	59	1055449	49.62	ug/Kg	99
25) 2-Butanone	10.57	43	929162	210.79	ug/Kg	99
26) cis-1,2-Dichloroethene	9.86	96	304701	52.05	ug/Kg	92
27) 2,2-Dichloropropane	10.00	77	434207	57.78	ug/Kg	98
28) Bromochloromethane	10.12	128	137308	50.03	ug/Kg	98
29) Chloroform	10.19	83	557528	51.46	ug/Kg	99
30) Tetrahydrofuran	10.57	42	65485	39.47	ug/Kg#	63
32) 1,1,1-Trichloroethane	10.51	97	470608	55.98	ug/Kg	91
33) Cyclohexane	10.17	56	716541	54.64	ug/Kg	95
34) 1,1-Dichloropropene	10.65	75	465195	55.70	ug/Kg	97
35) Carbon Tetrachloride	10.43	117	374995	52.92	ug/Kg	92
37) 1,2-Dichloroethane	11.21	62	415261	48.74	ug/Kg	93

(#) = qualifier out of range (m) = manual integration
K046747.D 8260-K.M Fri Sep 17 08:48:52 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046747.D Vial: 3
Acq On : 16 Sep 2010 1:44 pm Operator: StevenH
Sample : ic2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:46 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1351163	53.49	ug/Kg	94
39)	Tert-Amyl Methyl Ether	11.05	73	767568	46.52	ug/Kg	96
40)	Trichloroethene	11.67	95	317967	52.99	ug/Kg	86
41)	Methylcyclohexane	11.69	83	569209	55.40	ug/Kg	94
42)	1,2-Dichloropropane	12.28	63	392413	52.82	ug/Kg	96
43)	Dibromomethane	12.18	93	167157	50.08	ug/Kg	96
44)	Bromodichloromethane	12.33	83	384794	48.97	ug/Kg	93
45)	2-Nitropropane	13.54	41	343493	203.93	ug/Kg	99
46)	2-Chloroethyl vinyl ether	12.91	63	162254	155.87	ug/Kg	95
47)	cis-1,3-Dichloropropene	13.04	75	501988	51.62	ug/Kg	96
48)	4-Methyl-2-pentanone	13.67	43	1493777	216.28	ug/Kg	97
51)	Toluene	13.31	91	1334710	52.56	ug/Kg	92
52)	trans-1,3-Dichloropropene	13.74	75	351794	46.18	ug/Kg	88
53)	1,1,2-Trichloroethane	13.93	83	218865	48.28	ug/Kg	92
54)	1,3-Dichloropropane	14.24	76	441435	47.96	ug/Kg	96
55)	2-hexanone	14.57	43	1123378	192.90	ug/Kg	99
56)	Tetrachloroethene	13.77	166	296703	55.01	ug/Kg	95
57)	Dibromochloromethane	14.15	129	263009	48.85	ug/Kg	99
58)	1,2-Dibromoethane	14.45	107	223188	46.25	ug/Kg	97
59)	1-Chlorohexane	14.89	91	418452	52.56	ug/Kg	95
60)	Chlorobenzene	14.98	112	751880	52.53	ug/Kg	92
61)	1,1,1,2-Tetrachloroethane	15.03	131	263442	51.13	ug/Kg	94
62)	Ethylbenzene	14.96	91	1347625	52.73	ug/Kg	100
63)	m,p-Xylene	15.11	91	2163297	107.31	ug/Kg	98
64)	o-Xylene	15.58	91	1145741	51.84	ug/Kg	95
65)	Styrene	15.63	104	805333	50.92	ug/Kg	98
66)	Bromoform	15.72	173	142405	45.62	ug/Kg	96
68)	Isopropylbenzene	15.90	105	1135674	53.17	ug/Kg	98
69)	Cyclohexanone	16.66	55	36158	159.50	ug/Kg	89
71)	1,1,2,2-Tetrachloroethane	16.39	83	259435	44.27	ug/Kg	97
72)	trans-1,4-Dichloro-2-Buten	16.58	53	69084	41.47	ug/Kg#	78
73)	1,2,3-Trichloropropane	16.57	110	64782	46.89	ug/Kg	82
74)	Bromobenzene	16.38	156	278609	52.03	ug/Kg	83
75)	n-Propylbenzene	16.33	91	1503880	52.64	ug/Kg	97
76)	2-Chlorotoluene	16.55	91	1078971	53.08	ug/Kg	98
77)	1,3,5-Trimethylbenzene	16.51	105	1043094	52.13	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	886049	51.14	ug/Kg	97
79)	tert-Butylbenzene	16.87	91	655983	52.55	ug/Kg	94
80)	1,2,4-Trimethylbenzene	16.93	105	1016380	52.63	ug/Kg	97
81)	sec-Butylbenzene	17.05	105	1300088	54.31	ug/Kg	100
82)	4-Isopropyltoluene	17.18	119	971460	55.22	ug/Kg	96
83)	1,3-Dichlorobenzene	17.35	146	479508	50.64	ug/Kg	96
84)	1,4-Dichlorobenzene	17.44	146	465728	51.12	ug/Kg	94
85)	Benzyl chloride	17.67	126	70909	42.72	ug/Kg	94
86)	n-Butylbenzene	17.63	92	537053	53.71	ug/Kg	95
87)	1,2-Dichlorobenzene	17.90	146	451131	50.56	ug/Kg	95
88)	1,2-Dibromo-3-Chloropropan	18.74	75	35516	41.44	ug/Kg#	75
89)	1,2,4-Trichlorobenzene	19.46	180	180172	50.57	ug/Kg	98
90)	Hexachlorobutadiene	19.39	225	170809	58.25	ug/Kg	88

(#) = qualifier out of range (m) = manual integration
K046747.D 8260-K.M Fri Sep 17 08:48:53 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046747.D Vial: 3
Acq On : 16 Sep 2010 1:44 pm Operator: StevenH
Sample : ic2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:46 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

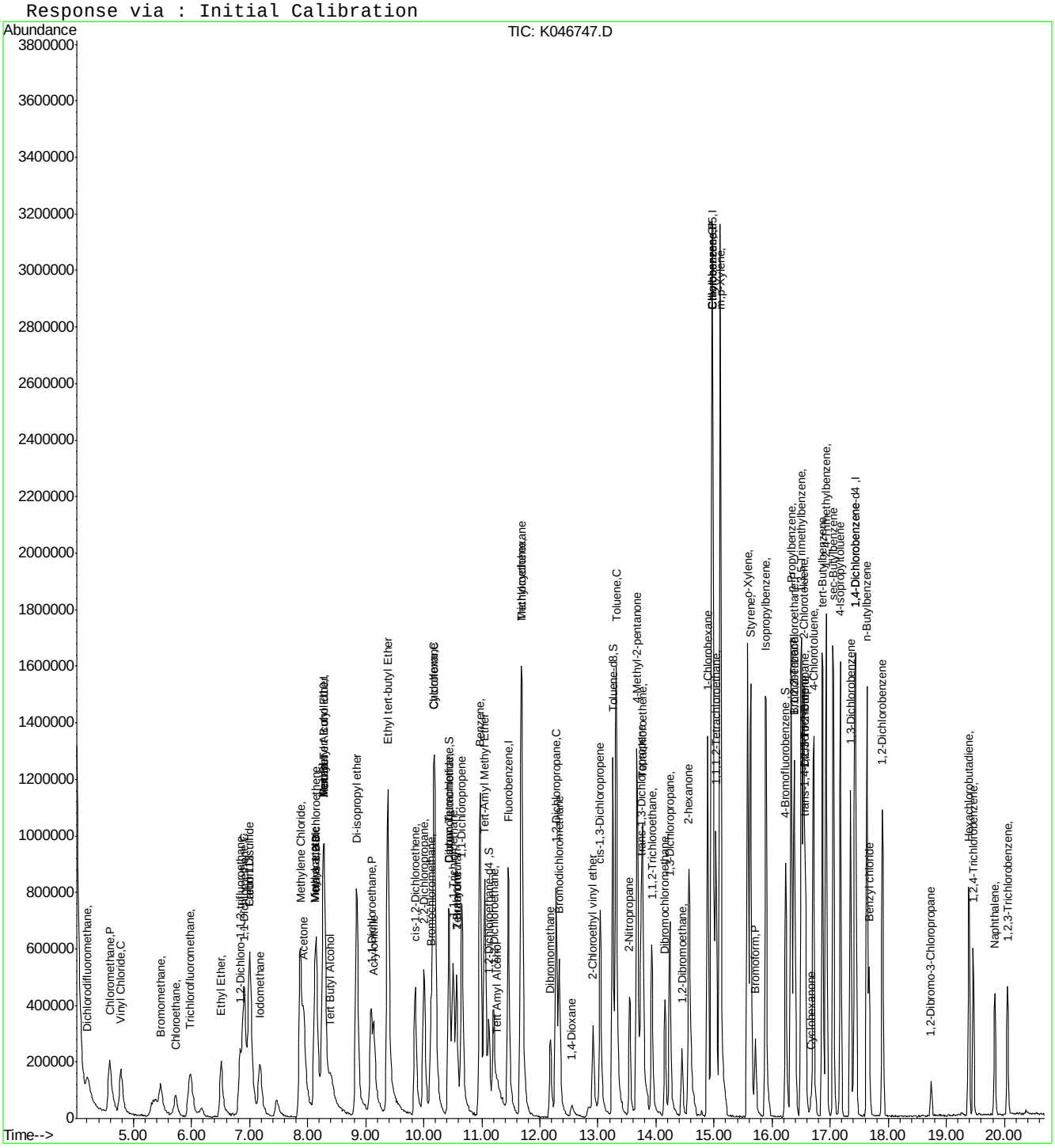
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	332541	42.59	ug/Kg	98
92)	1,2,3-Trichlorobenzene	20.05	180	143197	49.19	ug/Kg	90
94)	Acrolein	8.27	56	298156	278.20	ug/Kg	98
95)	Tert Butyl Alcohol	8.39	59	242576	454.48	ug/Kg	97
96)	Tert Amyl Alcohol	11.28	59	211418	451.86	ug/Kg	86
97)	1,4-Dioxane	12.55	88	43429	1013.57	ug/Kg	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046747.D Vial: 3
Acq On : 16 Sep 2010 1:44 pm Operator: StevenH
Sample : ic2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:46 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

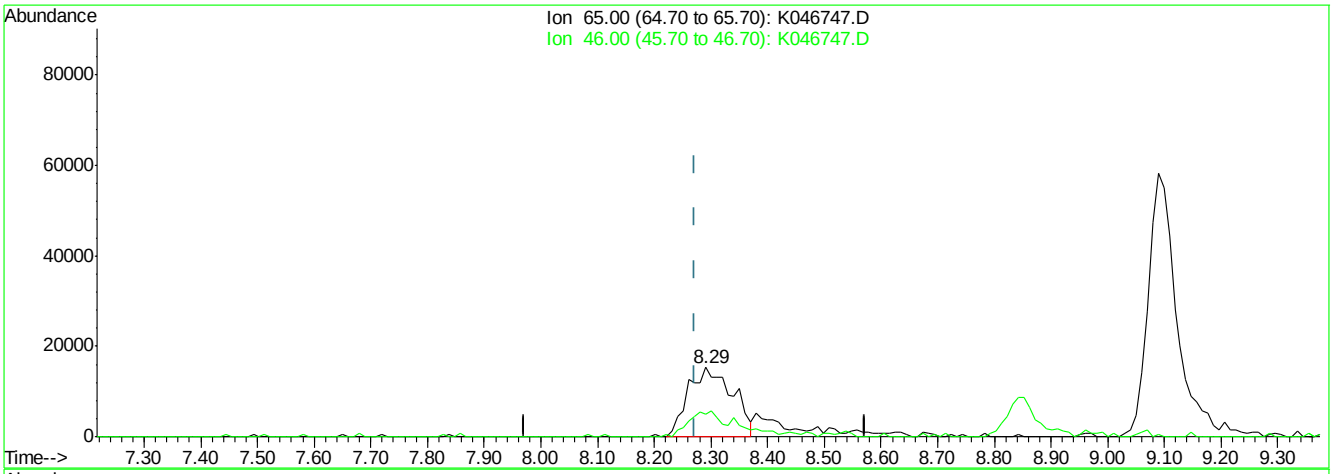


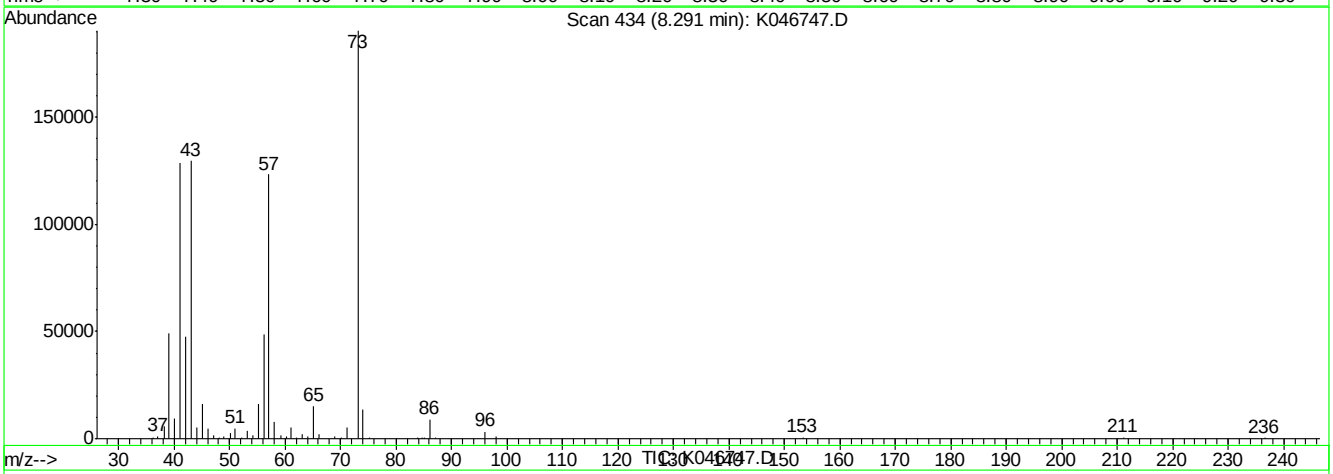
ACCUTEST
F76459

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046747.D Vial: 3
Acq On : 16 Sep 2010 1:44 pm Operator: StevenH
Sample : ic2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.29min (+0.019) 250.00ug/Kg

response 82577

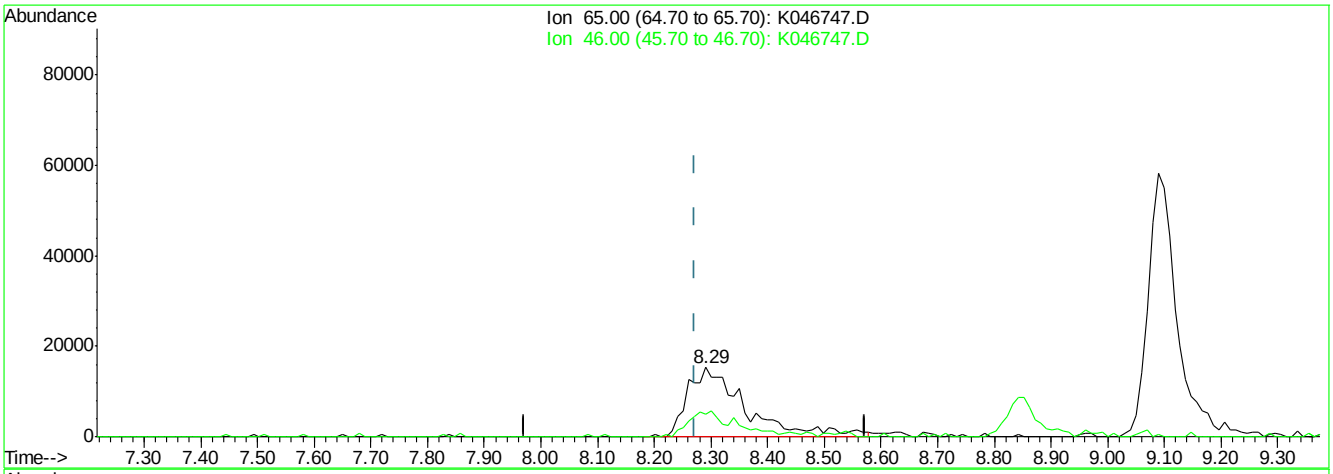
Ion	Exp%	Act%
65.00	100	100
46.00	39.80	29.03
0.00	0.00	0.00
0.00	0.00	0.00

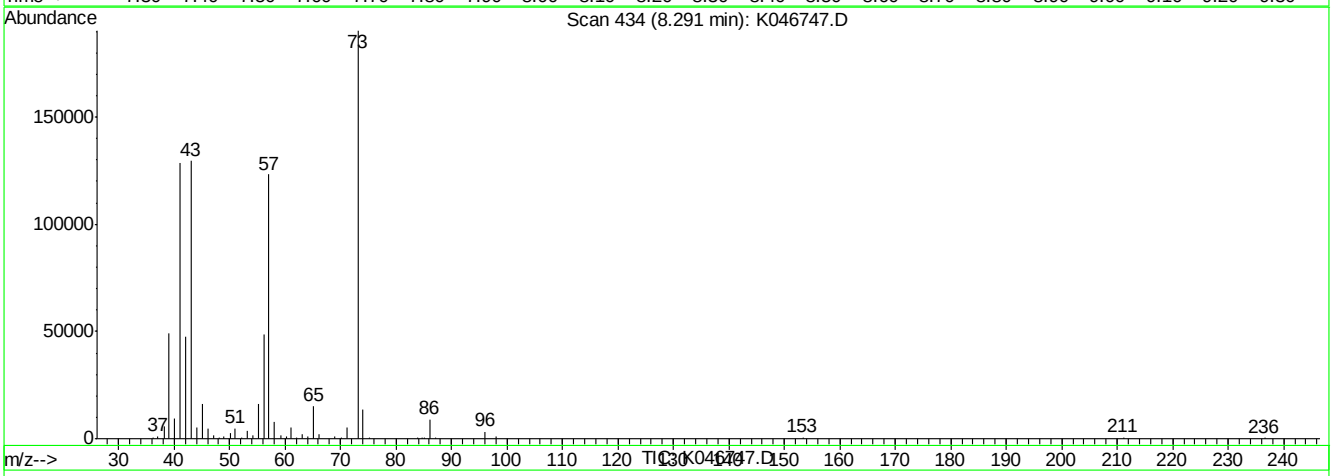
K046747.D 8260-K.M Thu Sep 16 14:46:07 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046747.D Vial: 3
Acq On : 16 Sep 2010 1:44 pm Operator: StevenH
Sample : ic2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:46 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Multiple Level Calibration





(93) Tert Butyl Alcohol-d10 (I)

8.29min (+0.019) 250.00ug/Kg m

response 107825

Ion	Exp%	Act%
65.00	100	100
46.00	39.80	32.45
0.00	0.00	0.00
0.00	0.00	0.00

K046747.D 8260-K.M Thu Sep 16 14:46:11 2010

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046748.D Vial: 4
Acq On : 16 Sep 2010 2:09 pm Operator: StevenH
Sample : icc2013-4 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:50 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	1021535	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	638352	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	300754	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.27	65	103393	250.00	ug/Kg	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	248216	49.73	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 99.46%			
36) 1,2-Dichloroethane-d4	11.12	65	285640	47.45	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 94.90%			
50) Toluene-d8	13.25	98	1070189	50.24	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 100.48%			
70) 4-Bromofluorobenzene	16.24	174	272898	51.83	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 103.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	429525	94.79	ug/Kg	97
3) Chloromethane	4.60	50	838726	88.07	ug/Kg	95
4) Vinyl Chloride	4.79	62	674451	93.14	ug/Kg	99
5) Bromomethane	5.45	94	229758	84.30	ug/Kg	95
6) Chloroethane	5.73	64	282296	87.87	ug/Kg	92
7) Trichlorofluoromethane	5.97	101	569609	107.35	ug/Kg	94
8) 1,2-Dichloro-1,1,2-trifluo	6.83	67	703046	90.60	ug/Kg	90
9) Ethyl Ether	6.51	59	473800	96.20	ug/Kg	99
10) Freon 113	6.99	101	504589	92.77	ug/Kg	96
11) 1,1-Dichloroethene	6.90	61	937896	93.23	ug/Kg	96
12) Acetone	7.93	43	1695566	452.14	ug/Kg	96
13) Iodomethane	7.18	142	804695	107.95	ug/Kg	93
14) Carbon Disulfide	7.00	76	1678403	94.12	ug/Kg	98
15) Methyl acetate	8.11	43	2049391	459.38	ug/Kg	99
16) Methylene Chloride	7.88	49	1338654	32.44	ug/Kg	96
17) Acrylonitrile	9.14	53	876886	495.89	ug/Kg	100
18) Methyl Tert Butyl Ether	8.28	73	1603103	96.40	ug/Kg	87
19) trans-1,2-Dichloroethene	8.15	61	960350	100.48	ug/Kg	99
20) Hexane	8.27	57	1344108	95.06	ug/Kg	95
21) Vinyl acetate	8.11	43	2049391	452.89	ug/Kg	98
22) 1,1-Dichloroethane	9.10	63	1213866	93.21	ug/Kg	99
23) Di-isopropyl ether	8.84	45	2744017	97.05	ug/Kg	98
24) Ethyl tert-butyl Ether	9.37	59	2130399	96.73	ug/Kg	96
25) 2-Butanone	10.56	43	2087404	457.35	ug/Kg	98
26) cis-1,2-Dichloroethene	9.85	96	583709	96.30	ug/Kg	95
27) 2,2-Dichloropropane	10.00	77	817087	105.01	ug/Kg	97
28) Bromochloromethane	10.12	128	276948	97.46	ug/Kg	96
29) Chloroform	10.19	83	1049844	93.58	ug/Kg	94
30) Tetrahydrofuran	10.56	42	143614	83.60	ug/Kg	94
32) 1,1,1-Trichloroethane	10.51	97	840752	96.58	ug/Kg	96
33) Cyclohexane	10.17	56	1238217	91.19	ug/Kg	98
34) 1,1-Dichloropropene	10.65	75	831424	96.15	ug/Kg	97
35) Carbon Tetrachloride	10.43	117	666243	90.80	ug/Kg	94
37) 1,2-Dichloroethane	11.21	62	845785	95.88	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
K046748.D 8260-K.M Fri Sep 17 08:48:59 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046748.D Vial: 4
Acq On : 16 Sep 2010 2:09 pm Operator: StevenH
Sample : icc2013-4 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:50 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	2420745	92.55	ug/Kg	99
39)	Tert-Amyl Methyl Ether	11.05	73	1614017	94.47	ug/Kg	97
40)	Trichloroethene	11.67	95	570992	91.90	ug/Kg	95
41)	Methylcyclohexane	11.69	83	949608	89.26	ug/Kg	95
42)	1,2-Dichloropropane	12.28	63	734260	95.44	ug/Kg	96
43)	Dibromomethane	12.17	93	334330	96.73	ug/Kg	97
44)	Bromodichloromethane	12.34	83	793482	97.53	ug/Kg	98
45)	2-Nitropropane	13.54	41	795033	455.86	ug/Kg	98
46)	2-Chloroethyl vinyl ether	12.92	63	475067	440.75	ug/Kg	90
47)	cis-1,3-Dichloropropene	13.04	75	1000569	99.37	ug/Kg	97
48)	4-Methyl-2-pentanone	13.67	43	3226742	451.19	ug/Kg	98
51)	Toluene	13.31	91	2444897	94.80	ug/Kg	99
52)	trans-1,3-Dichloropropene	13.74	75	772440	99.85	ug/Kg	95
53)	1,1,2-Trichloroethane	13.92	83	434930	94.48	ug/Kg	94
54)	1,3-Dichloropropane	14.24	76	897286	96.00	ug/Kg	96
55)	2-hexanone	14.56	43	2685980	454.18	ug/Kg	98
56)	Tetrachloroethene	13.78	166	517021	94.40	ug/Kg	95
57)	Dibromochloromethane	14.15	129	528916	96.74	ug/Kg	96
58)	1,2-Dibromoethane	14.45	107	474576	96.85	ug/Kg	98
59)	1-Chlorohexane	14.89	91	773281	95.65	ug/Kg	98
60)	Chlorobenzene	14.98	112	1363236	93.79	ug/Kg	88
61)	1,1,1,2-Tetrachloroethane	15.03	131	509776	97.44	ug/Kg	92
62)	Ethylbenzene	14.96	91	2476070	95.41	ug/Kg	97
63)	m,p-Xylene	15.11	91	3902452	190.63	ug/Kg	97
64)	o-Xylene	15.58	91	2173189	96.82	ug/Kg	99
65)	Styrene	15.63	104	1583738	98.61	ug/Kg	98
66)	Bromoform	15.72	173	322719	101.81	ug/Kg	97
68)	Isopropylbenzene	15.89	105	2046717	91.93	ug/Kg	98
69)	Cyclohexanone	16.66	55	92137	389.93	ug/Kg	94
71)	1,1,2,2-Tetrachloroethane	16.40	83	565607	92.59	ug/Kg	96
72)	trans-1,4-Dichloro-2-Buten	16.57	53	165695	95.42	ug/Kg#	62
73)	1,2,3-Trichloropropane	16.57	110	133152	92.46	ug/Kg	95
74)	Bromobenzene	16.38	156	532276	95.36	ug/Kg	97
75)	n-Propylbenzene	16.33	91	2768700	92.98	ug/Kg	96
76)	2-Chlorotoluene	16.55	91	1948658	91.97	ug/Kg	99
77)	1,3,5-Trimethylbenzene	16.51	105	1954045	93.68	ug/Kg	100
78)	4-Chlorotoluene	16.71	91	1677430	92.88	ug/Kg	98
79)	tert-Butylbenzene	16.87	91	1192442	91.65	ug/Kg	95
80)	1,2,4-Trimethylbenzene	16.93	105	1908255	94.81	ug/Kg	97
81)	sec-Butylbenzene	17.05	105	2380243	95.39	ug/Kg	99
82)	4-Isopropyltoluene	17.18	119	1715267	93.54	ug/Kg	99
83)	1,3-Dichlorobenzene	17.35	146	918935	93.12	ug/Kg	99
84)	1,4-Dichlorobenzene	17.44	146	916157	96.48	ug/Kg	98
85)	Benzyl chloride	17.67	126	162978	94.20	ug/Kg#	77
86)	n-Butylbenzene	17.63	92	1007643	96.68	ug/Kg	99
87)	1,2-Dichlorobenzene	17.90	146	879345	94.55	ug/Kg	99
88)	1,2-Dibromo-3-Chloropropan	18.73	75	85078	95.24	ug/Kg	79
89)	1,2,4-Trichlorobenzene	19.46	180	390901	105.27	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	303139	99.17	ug/Kg	89

(#) = qualifier out of range (m) = manual integration
K046748.D 8260-K.M Fri Sep 17 08:48:59 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046748.D Vial: 4
Acq On : 16 Sep 2010 2:09 pm Operator: StevenH
Sample : icc2013-4 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 14:41:50 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:41:22 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

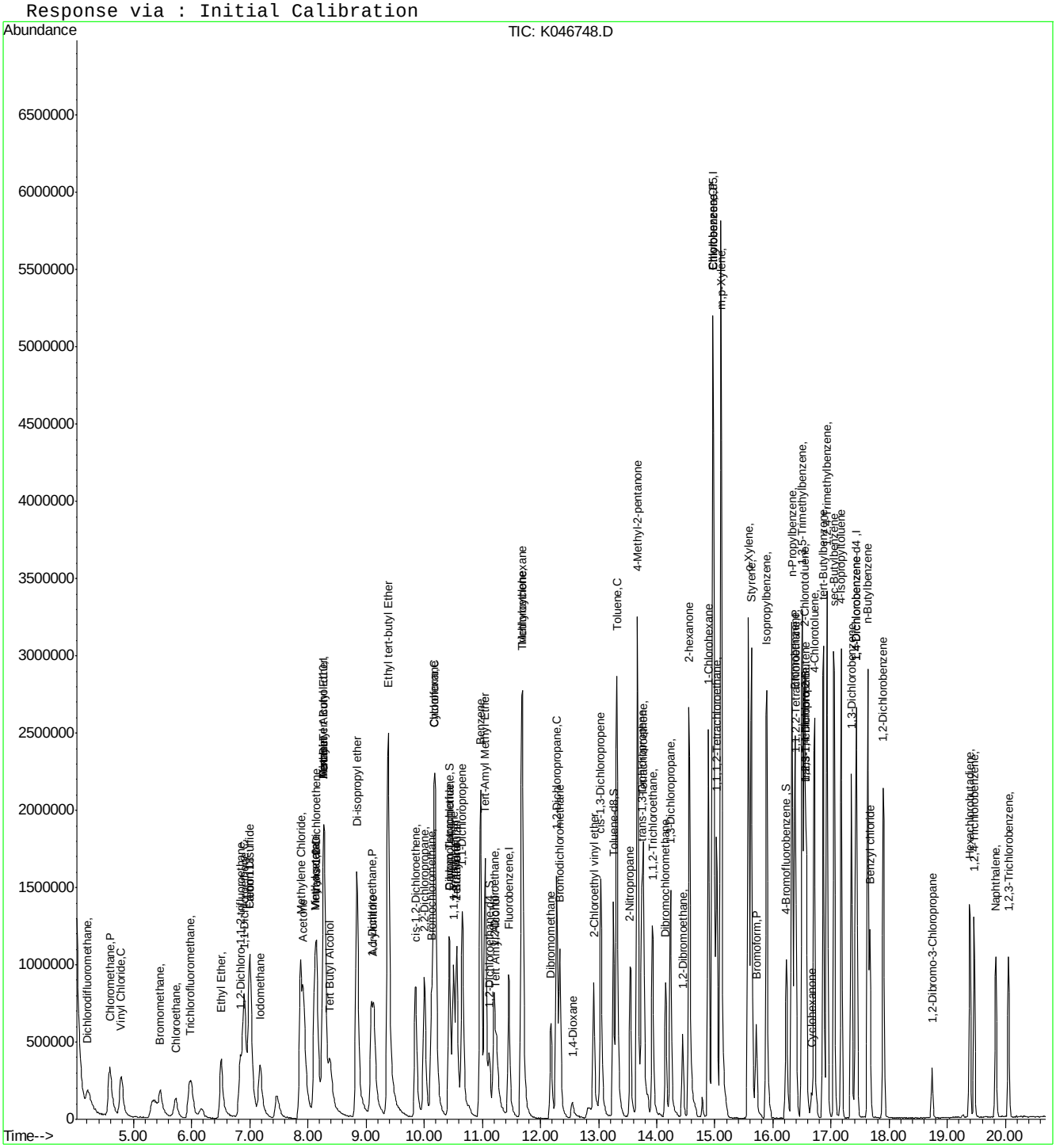
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Naphthalene	19.84	128	805139	98.93	ug/Kg	100
92) 1,2,3-Trichlorobenzene	20.05	180	322530	106.29	ug/Kg	91
94) Acrolein	8.27	56	521311	507.27	ug/Kg	100
95) Tert Butyl Alcohol	8.38	59	540882	1056.81	ug/Kg	96
96) Tert Amyl Alcohol	11.25	59	493759	1100.54	ug/Kg	91
97) 1,4-Dioxane	12.56	88	105074	2557.40	ug/Kg	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046748.D 8260-K.M Fri Sep 17 08:48:59 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046748.D Vial: 4
Acq On : 16 Sep 2010 2:09 pm Operator: StevenH
Sample : icc2013-4 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 17:42 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046749.D Vial: 5
Acq On : 16 Sep 2010 2:35 pm Operator: StevenH
Sample : ic2013-5 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:04:11 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:47:52 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	1056237	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	637304	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	316999	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.26	65	124998	250.00	ug/Kg	-0.01
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	260848	49.65	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 99.30%			
36) 1,2-Dichloroethane-d4	11.12	65	317436	49.06	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 98.12%			
50) Toluene-d8	13.26	98	1117201	54.99	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 109.98%			
70) 4-Bromofluorobenzene	16.23	174	278752	49.46	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 98.92%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	632268	113.81	ug/Kg	99
3) Chloromethane	4.60	50	1266622	115.23	ug/Kg	94
4) Vinyl Chloride	4.79	62	980918	118.46	ug/Kg	100
5) Bromomethane	5.45	94	302235	95.49	ug/Kg	89
6) Chloroethane	5.72	64	394792	106.78	ug/Kg	99
7) Trichlorofluoromethane	5.98	101	847498	114.85	ug/Kg	93
8) 1,2-Dichloro-1,1,2-trifluo	6.83	67	1027942	149.90	ug/Kg	94
9) Ethyl Ether	6.50	59	705124	135.97	ug/Kg	91
10) Freon 113	7.00	101	695303	109.01	ug/Kg	97
11) 1,1-Dichloroethene	6.90	61	1396597	118.77	ug/Kg	94
12) Acetone	7.93	43	2656946	663.34	ug/Kg	95
13) Iodomethane	7.18	142	1196703	129.56	ug/Kg	93
14) Carbon Disulfide	7.00	76	2554456	130.24	ug/Kg	99
15) Methyl acetate	8.11	43	3348663	730.32	ug/Kg	99
16) Methylene Chloride	7.87	49	1880765	49.00	ug/Kg	90
17) Acrylonitrile	9.14	53	1383014	778.87	ug/Kg	96
18) Methyl Tert Butyl Ether	8.28	73	2477229	142.59	ug/Kg	93
19) trans-1,2-Dichloroethene	8.15	61	1437837	135.08	ug/Kg	99
20) Hexane	8.27	57	1979443	132.34	ug/Kg	94
21) Vinyl acetate	8.11	43	3348663	721.84	ug/Kg	99
22) 1,1-Dichloroethane	9.09	63	1853394	128.82	ug/Kg	95
23) Di-isopropyl ether	8.84	45	4141589	138.68	ug/Kg	97
24) Ethyl tert-butyl Ether	9.37	59	3207487	138.75	ug/Kg	96
25) 2-Butanone	10.56	43	3308604	704.89	ug/Kg	99
26) cis-1,2-Dichloroethene	9.86	96	870110	137.44	ug/Kg	97
27) 2,2-Dichloropropane	10.01	77	1160181	132.57	ug/Kg	97
28) Bromochloromethane	10.12	128	432082	146.73	ug/Kg	96
29) Chloroform	10.19	83	1571907	127.31	ug/Kg	99
30) Tetrahydrofuran	10.56	42	217653	145.26	ug/Kg#	75
32) 1,1,1-Trichloroethane	10.51	97	1250575	127.67	ug/Kg	90
33) Cyclohexane	10.17	56	1818625	118.78	ug/Kg	96
34) 1,1-Dichloropropene	10.66	75	1242535	130.75	ug/Kg	99
35) Carbon Tetrachloride	10.43	117	1013082	122.70	ug/Kg	97
37) 1,2-Dichloroethane	11.20	62	1310338	139.14	ug/Kg	97

(#) = qualifier out of range (m) = manual integration
K046749.D 8260-K.M Fri Sep 17 08:49:05 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046749.D Vial: 5
Acq On : 16 Sep 2010 2:35 pm Operator: StevenH
Sample : ic2013-5 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:04:11 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:47:52 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	3592579	121.48	ug/Kg	97
39)	Tert-Amyl Methyl Ether	11.05	73	2464541	139.80	ug/Kg	98
40)	Trichloroethene	11.67	95	858078	130.76	ug/Kg	97
41)	Methylcyclohexane	11.69	83	1416721	118.56	ug/Kg	96
42)	1,2-Dichloropropane	12.28	63	1120460	134.61	ug/Kg	97
43)	Dibromomethane	12.17	93	528650	149.21	ug/Kg	98
44)	Bromodichloromethane	12.33	83	1202106	145.76	ug/Kg	96
45)	2-Nitropropane	13.54	41	1300721	739.25	ug/Kg	95
46)	2-Chloroethyl vinyl ether	12.91	63	822951	841.16	ug/Kg	95
47)	cis-1,3-Dichloropropene	13.04	75	1500401	143.09	ug/Kg	100
48)	4-Methyl-2-pentanone	13.67	43	4994065	653.73	ug/Kg	99
51)	Toluene	13.32	91	3595750	133.23	ug/Kg	95
52)	trans-1,3-Dichloropropene	13.74	75	1212624	168.93	ug/Kg	92
53)	1,1,2-Trichloroethane	13.93	83	653398	142.56	ug/Kg	95
54)	1,3-Dichloropropane	14.24	76	1343517	149.16	ug/Kg	99
55)	2-hexanone	14.56	43	4127151	707.16	ug/Kg	98
56)	Tetrachloroethene	13.77	166	754781	132.49	ug/Kg	97
57)	Dibromochloromethane	14.15	129	827700	162.81	ug/Kg	96
58)	1,2-Dibromoethane	14.45	107	743782	166.37	ug/Kg	97
59)	1-Chlorohexane	14.89	91	1155441	140.95	ug/Kg	97
60)	Chlorobenzene	14.98	112	2016057	134.28	ug/Kg	92
61)	1,1,1,2-Tetrachloroethane	15.03	131	773801	149.48	ug/Kg	90
62)	Ethylbenzene	14.96	91	3624864	135.26	ug/Kg	99
63)	m,p-Xylene	15.11	91	5595698	262.58	ug/Kg	98
64)	o-Xylene	15.58	91	3225643	141.08	ug/Kg	99
65)	Styrene	15.63	104	2340773	144.73	ug/Kg	96
66)	Bromoform	15.72	173	501120	180.02	ug/Kg	93
68)	Isopropylbenzene	15.89	105	3077825	121.66	ug/Kg	100
69)	Cyclohexanone	16.65	55	153399	518.80	ug/Kg	92
71)	1,1,2,2-Tetrachloroethane	16.39	83	851143	127.09	ug/Kg	93
72)	trans-1,4-Dichloro-2-Buten	16.58	53	283510	171.47	ug/Kg#	53
73)	1,2,3-Trichloropropane	16.57	110	202201	123.16	ug/Kg	84
74)	Bromobenzene	16.38	156	787901	124.18	ug/Kg	100
75)	n-Propylbenzene	16.33	91	4144698	121.30	ug/Kg	99
76)	2-Chlorotoluene	16.55	91	2910117	119.27	ug/Kg	98
77)	1,3,5-Trimethylbenzene	16.51	105	2845531	119.98	ug/Kg	100
78)	4-Chlorotoluene	16.71	91	2571827	128.21	ug/Kg	99
79)	tert-Butylbenzene	16.86	91	1764522	124.10	ug/Kg	94
80)	1,2,4-Trimethylbenzene	16.93	105	2846946	124.73	ug/Kg	99
81)	sec-Butylbenzene	17.05	105	3485409	119.00	ug/Kg	99
82)	4-Isopropyltoluene	17.18	119	2584487	122.85	ug/Kg	98
83)	1,3-Dichlorobenzene	17.35	146	1420636	130.19	ug/Kg	99
84)	1,4-Dichlorobenzene	17.44	146	1347654	125.66	ug/Kg	97
85)	Benzyl chloride	17.67	126	265688	164.87	ug/Kg#	79
86)	n-Butylbenzene	17.63	92	1527313	130.55	ug/Kg	100
87)	1,2-Dichlorobenzene	17.90	146	1335751	131.73	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.73	75	148451	186.01	ug/Kg	80
89)	1,2,4-Trichlorobenzene	19.46	180	627307	164.41	ug/Kg	96
90)	Hexachlorobutadiene	19.38	225	442470	129.18	ug/Kg	93

(#) = qualifier out of range (m) = manual integration
K046749.D 8260-K.M Fri Sep 17 08:49:05 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046749.D Vial: 5
Acq On : 16 Sep 2010 2:35 pm Operator: StevenH
Sample : ic2013-5 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:04:11 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 14:47:52 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

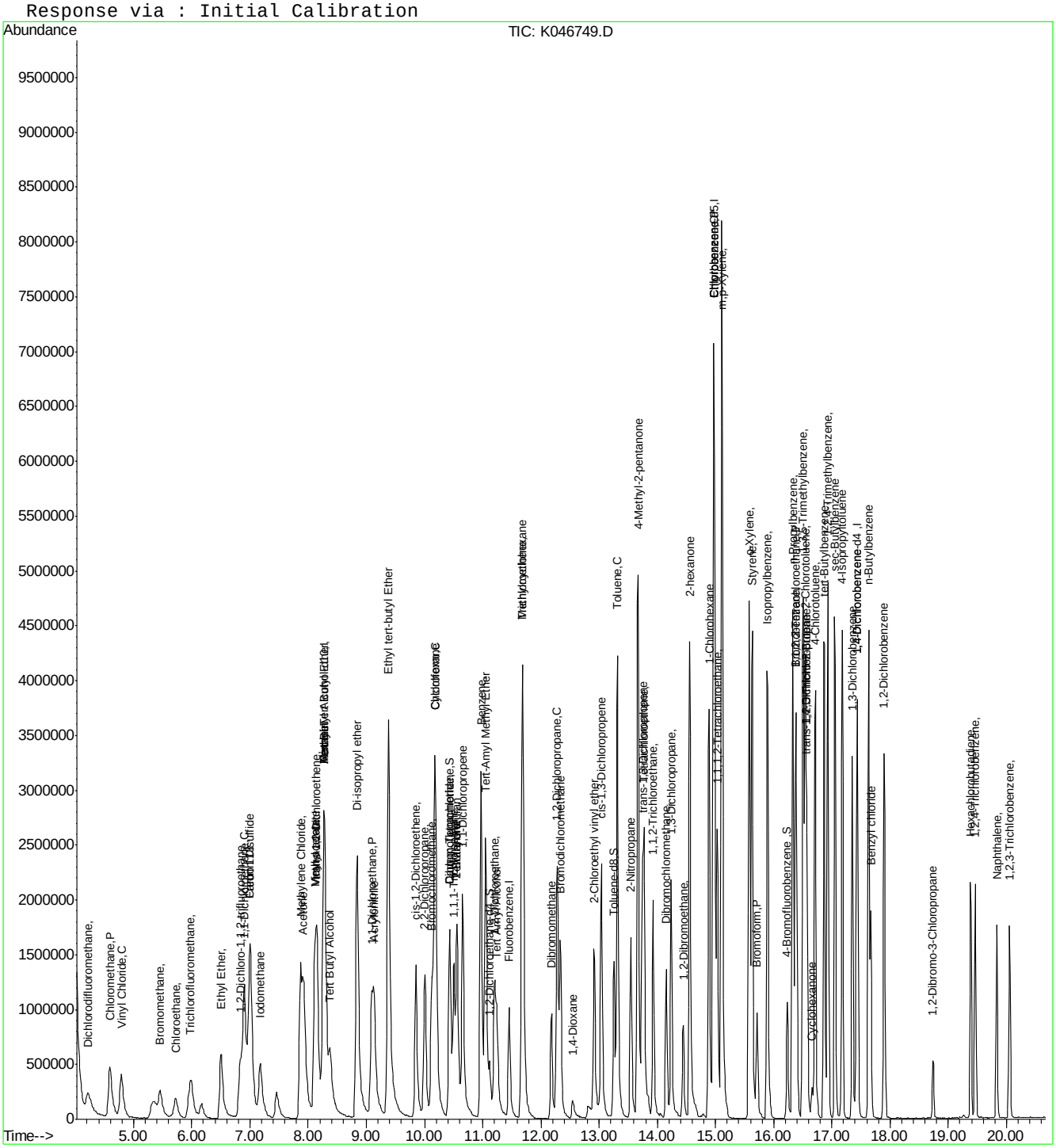
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	1402864	174.81	ug/Kg	99
92)	1,2,3-Trichlorobenzene	20.05	180	539765	172.73	ug/Kg	89
94)	Acrolein	8.26	56	868854	629.95	ug/Kg	99
95)	Tert Butyl Alcohol	8.38	59	912423	1467.43	ug/Kg	84
96)	Tert Amyl Alcohol	11.25	59	765349	1420.48	ug/Kg	88
97)	1,4-Dioxane	12.55	88	182759	3383.64	ug/Kg	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046749.D 8260-K.M Fri Sep 17 08:49:05 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046749.D Vial: 5
Acq On : 16 Sep 2010 2:35 pm Operator: StevenH
Sample : ic2013-5 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 18:04 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration



ACCUTEST
F76459

Manual Integrations APPROVED (compounds with "m" flag)
Steven Heller 09/17/10 14:38

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046750.D Vial: 6
Acq On : 16 Sep 2010 3:00 pm Operator: StevenH
Sample : ic2013-6 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:35:55 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:04:44 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	1063689	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	627013	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	332105	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.27	65	156603	250.00	ug/Kg	0.00
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	258974	49.01	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 98.02%			
36) 1,2-Dichloroethane-d4	11.12	65	325576	50.15	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 100.30%			
50) Toluene-d8	13.26	98	1104948	54.20	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 108.40%			
70) 4-Bromofluorobenzene	16.23	174	290956	49.39	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 98.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.22	85	793864	149.09	ug/Kg	99
3) Chloromethane	4.60	50	1600333	151.60	ug/Kg	98
4) Vinyl Chloride	4.78	62	1231550	154.17	ug/Kg	98
5) Bromomethane	5.45	94	343343	116.16	ug/Kg	90
6) Chloroethane	5.73	64	456498	130.10	ug/Kg	93
7) Trichlorofluoromethane	5.99	101	987595	139.43	ug/Kg	88
8) 1,2-Dichloro-1,1,2-trifluo	6.88	67	1246532	180.53	ug/Kg	95
9) Ethyl Ether	6.50	59	967645	188.82	ug/Kg	93
10) Freon 113	7.01	101	898346	147.94	ug/Kg	95
11) 1,1-Dichloroethene	6.90	61	1737311	153.09	ug/Kg	94
12) Acetone	7.93	43	4184263	1061.88	ug/Kg	95
13) Iodomethane	7.18	142	1504856m	166.32	ug/Kg	
14) Carbon Disulfide	7.01	76	3085519	160.44	ug/Kg	95
15) Methyl acetate	8.11	43	5248545	1142.65	ug/Kg	99
16) Methylene Chloride	7.87	49	2365762	70.73	ug/Kg	90
17) Acrylonitrile	9.14	53	2249551	1248.38	ug/Kg	97
18) Methyl Tert Butyl Ether	8.28	73	3467027	200.14	ug/Kg	98
19) trans-1,2-Dichloroethene	8.14	61	1794643	170.82	ug/Kg	98
20) Hexane	8.27	57	2580707	175.46	ug/Kg	95
21) Vinyl acetate	8.11	43	5248545	1131.96	ug/Kg	99
22) 1,1-Dichloroethane	9.09	63	2401354	170.56	ug/Kg	99
23) Di-isopropyl ether	8.84	45	5492339	185.42	ug/Kg	99
24) Ethyl tert-butyl Ether	9.37	59	4386570	191.29	ug/Kg	97
25) 2-Butanone	10.56	43	5172114	1107.51	ug/Kg	98
26) cis-1,2-Dichloroethene	9.85	96	1147462	183.04	ug/Kg	99
27) 2,2-Dichloropropane	10.00	77	1248050	144.98	ug/Kg	97
28) Bromochloromethane	10.12	128	590233	199.91	ug/Kg	97
29) Chloroform	10.19	83	2036236	168.88	ug/Kg	99
30) Tetrahydrofuran	10.56	42	358803	239.29	ug/Kg#	79
32) 1,1,1-Trichloroethane	10.51	97	1542004	161.12	ug/Kg	95
33) Cyclohexane	10.17	56	2254558	152.57	ug/Kg	97
34) 1,1-Dichloropropene	10.65	75	1576599	169.08	ug/Kg	98
35) Carbon Tetrachloride	10.43	117	1245306	155.42	ug/Kg	91
37) 1,2-Dichloroethane	11.21	62	1827507	195.52	ug/Kg	96

(#) = qualifier out of range (m) = manual integration
K046750.D 8260-K.M Fri Sep 17 08:49:11 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046750.D Vial: 6
Acq On : 16 Sep 2010 3:00 pm Operator: StevenH
Sample : ic2013-6 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:35:55 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:04:44 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	4600727	160.59	ug/Kg	98
39)	Tert-Amyl Methyl Ether	11.05	73	3438762	196.36	ug/Kg	99
40)	Trichloroethene	11.67	95	1080012	167.73	ug/Kg	98
41)	Methylcyclohexane	11.69	83	1718173	149.03	ug/Kg	98
42)	1,2-Dichloropropane	12.28	63	1471854	179.27	ug/Kg	97
43)	Dibromomethane	12.18	93	773184	216.93	ug/Kg	97
44)	Bromodichloromethane	12.33	83	1598156	193.52	ug/Kg	95
45)	2-Nitropropane	13.55	41	2133344	1207.44	ug/Kg	99
46)	2-Chloroethyl vinyl ether	12.92	63	1572072	1557.73	ug/Kg	92
47)	cis-1,3-Dichloropropene	13.04	75	2081827	198.99	ug/Kg	99
48)	4-Methyl-2-pentanone	13.67	43	7653355	1021.02	ug/Kg	97
51)	Toluene	13.31	91	4522013	174.19	ug/Kg	94
52)	trans-1,3-Dichloropropene	13.74	75	1697023	234.38	ug/Kg	91
53)	1,1,2-Trichloroethane	13.93	83	926071	207.42	ug/Kg	93
54)	1,3-Dichloropropane	14.24	76	1928208	217.83	ug/Kg	97
55)	2-hexanone	14.56	43	6362817	1120.92	ug/Kg	97
56)	Tetrachloroethene	13.78	166	924978	168.97	ug/Kg	98
57)	Dibromochloromethane	14.15	129	1157541	227.54	ug/Kg	98
58)	1,2-Dibromoethane	14.45	107	1054162	234.55	ug/Kg	99
59)	1-Chlorohexane	14.89	91	1443331	181.15	ug/Kg	99
60)	Chlorobenzene	14.99	112	2517437	174.07	ug/Kg	99
61)	1,1,1,2-Tetrachloroethane	15.04	131	987127	193.95	ug/Kg	92
62)	Ethylbenzene	14.97	91	4407377	170.51	ug/Kg	98
63)	m,p-Xylene	15.11	91	6876268	336.36	ug/Kg	99
64)	o-Xylene	15.58	91	4027579	181.20	ug/Kg	100
65)	Styrene	15.63	104	3055272	193.36	ug/Kg	96
66)	Bromoform	15.72	173	740135	259.85	ug/Kg	93
68)	Isopropylbenzene	15.90	105	3896964	152.81	ug/Kg	99
69)	Cyclohexanone	16.66	55	260882	897.51	ug/Kg	90
71)	1,1,2,2-Tetrachloroethane	16.40	83	1263160	185.71	ug/Kg	96
72)	trans-1,4-Dichloro-2-Buten	16.57	53	430036	241.35	ug/Kg#	49
73)	1,2,3-Trichloropropane	16.57	110	303348	182.91	ug/Kg	86
74)	Bromobenzene	16.38	156	1054284	164.26	ug/Kg	98
75)	n-Propylbenzene	16.33	91	5243786	152.32	ug/Kg	98
76)	2-Chlorotoluene	16.55	91	3706786	151.21	ug/Kg	99
77)	1,3,5-Trimethylbenzene	16.51	105	3577621	149.99	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	3350405	164.20	ug/Kg	99
79)	tert-Butylbenzene	16.87	91	2217792	154.21	ug/Kg	92
80)	1,2,4-Trimethylbenzene	16.93	105	3663782	158.55	ug/Kg	99
81)	sec-Butylbenzene	17.06	105	4373437	148.68	ug/Kg	97
82)	4-Isopropyltoluene	17.18	119	3314550	156.03	ug/Kg	97
83)	1,3-Dichlorobenzene	17.35	146	1842116	165.51	ug/Kg	97
84)	1,4-Dichlorobenzene	17.44	146	1812310	166.72	ug/Kg	96
85)	Benzyl chloride	17.67	126	410062	238.16	ug/Kg#	67
86)	n-Butylbenzene	17.63	92	2033035	170.29	ug/Kg	98
87)	1,2-Dichlorobenzene	17.90	146	1779209	171.67	ug/Kg	97
88)	1,2-Dibromo-3-Chloropropan	18.73	75	234391	267.50	ug/Kg	89
89)	1,2,4-Trichlorobenzene	19.46	180	925654	227.20	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	570015	163.38	ug/Kg	95

(#) = qualifier out of range (m) = manual integration
K046750.D 8260-K.M Fri Sep 17 08:49:11 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046750.D Vial: 6
Acq On : 16 Sep 2010 3:00 pm Operator: StevenH
Sample : ic2013-6 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:35:55 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:04:44 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

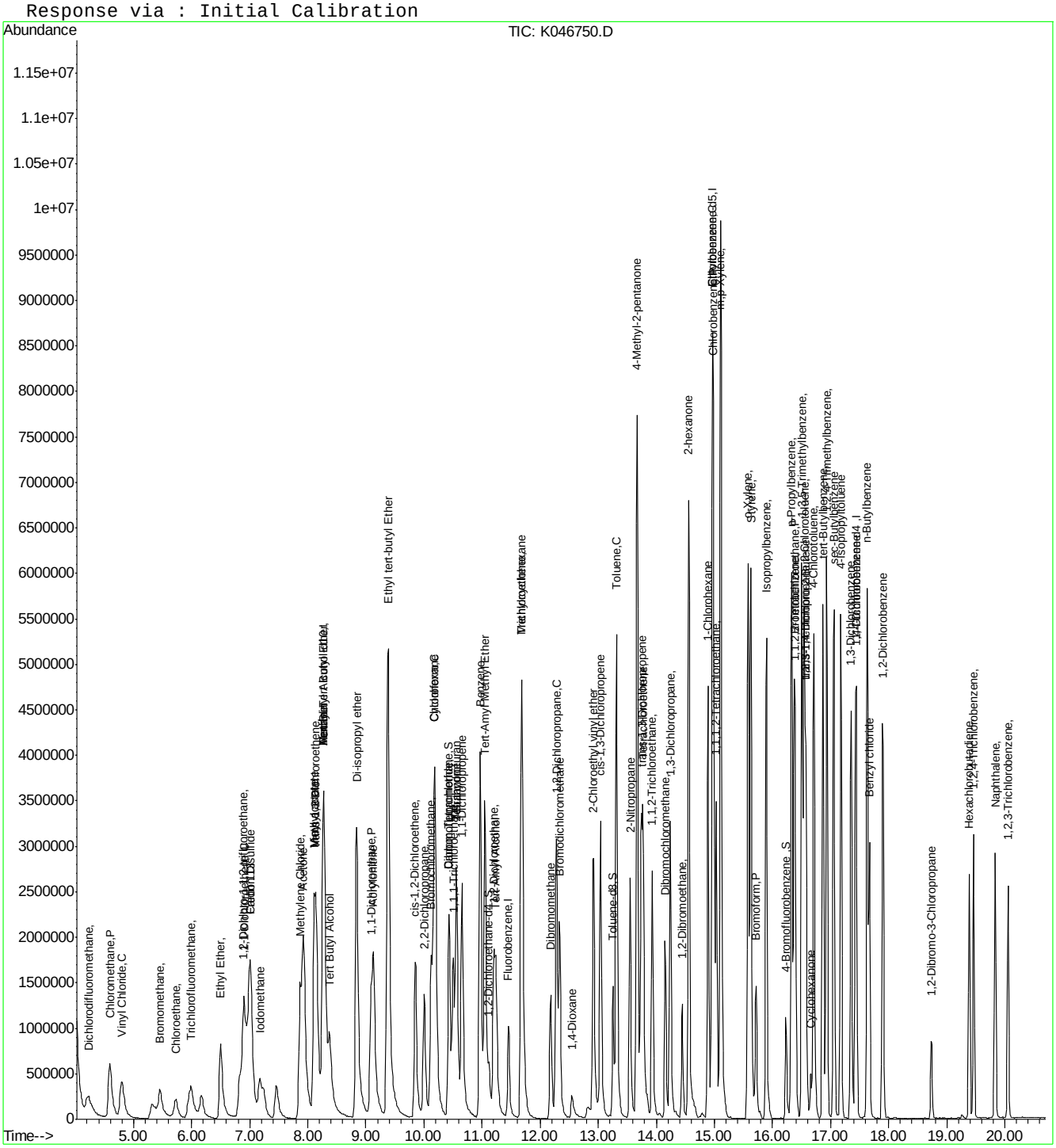
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	2318870	266.97	ug/Kg	99
92)	1,2,3-Trichlorobenzene	20.05	180	801719	237.68	ug/Kg	92
94)	Acrolein	8.26	56	1070637	640.08	ug/Kg	100
95)	Tert Butyl Alcohol	8.38	59	1509730	1946.49	ug/Kg	77
96)	Tert Amyl Alcohol	11.24	59	1260686	1887.62	ug/Kg	89
97)	1,4-Dioxane	12.55	88	301302	4341.52	ug/Kg	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046750.D Vial: 6
Acq On : 16 Sep 2010 3:00 pm Operator: StevenH
Sample : ic2013-6 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 18:36 2010 Quant Results File: 8260-K.RES

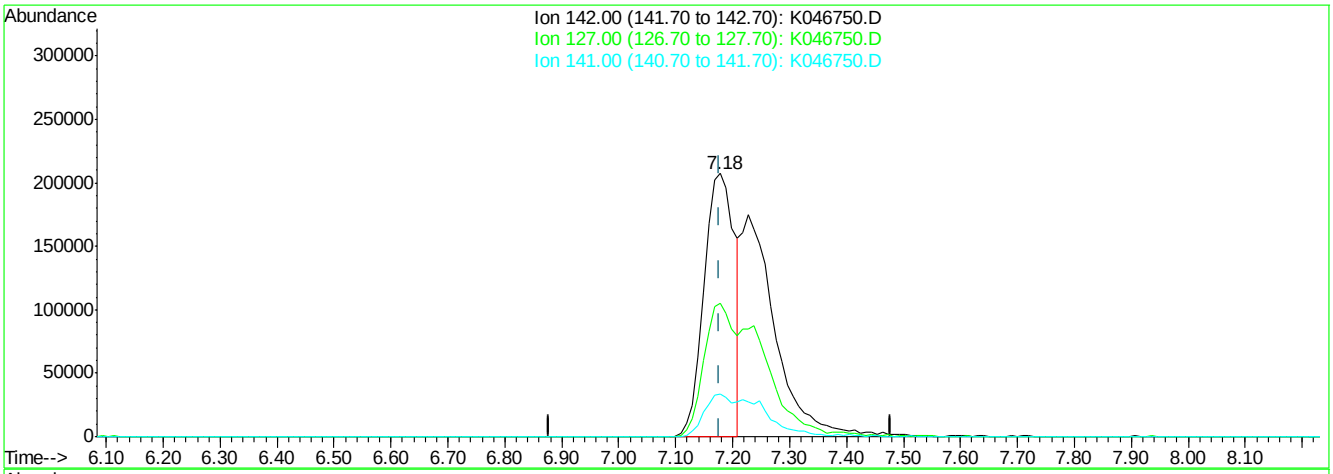
Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration

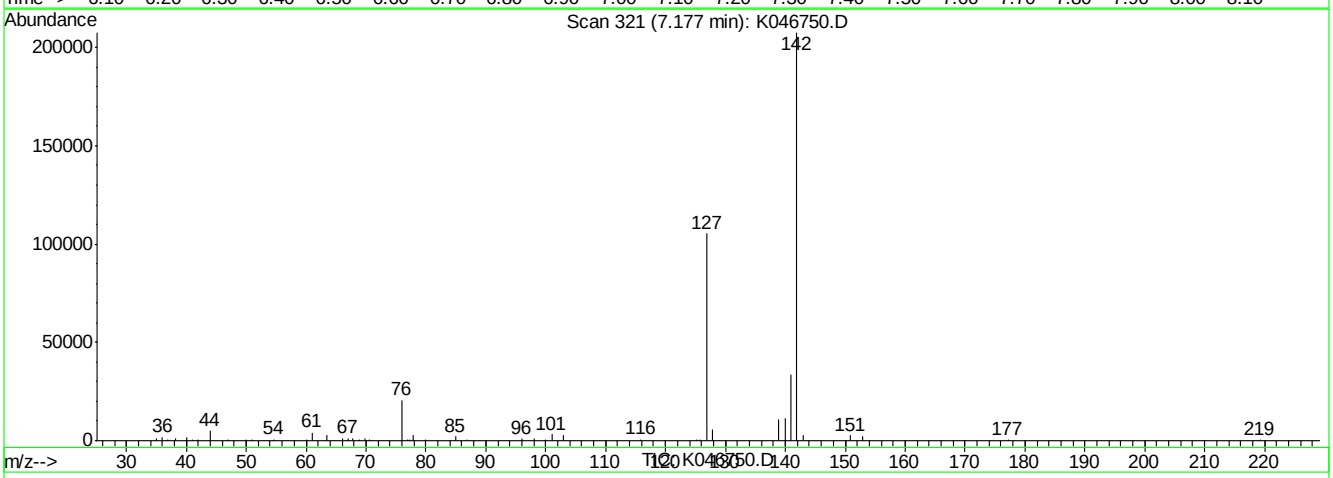


Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046750.D Vial: 6
Acq On : 16 Sep 2010 3:00 pm Operator: StevenH
Sample : ic2013-6 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 18:36 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:04:44 2010
Response via : Multiple Level Calibration





(13) Iodomethane

7.18min (-0.001) 85.50ug/Kg

response 773628

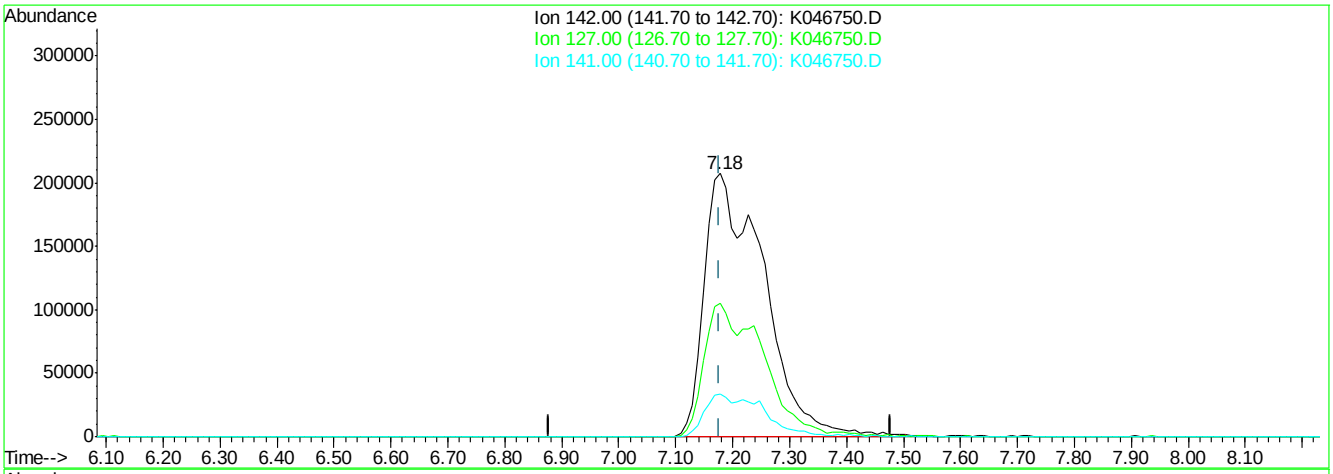
Ion	Exp%	Act%
142.00	100	100
127.00	46.20	50.71
141.00	15.20	16.31
0.00	0.00	0.00

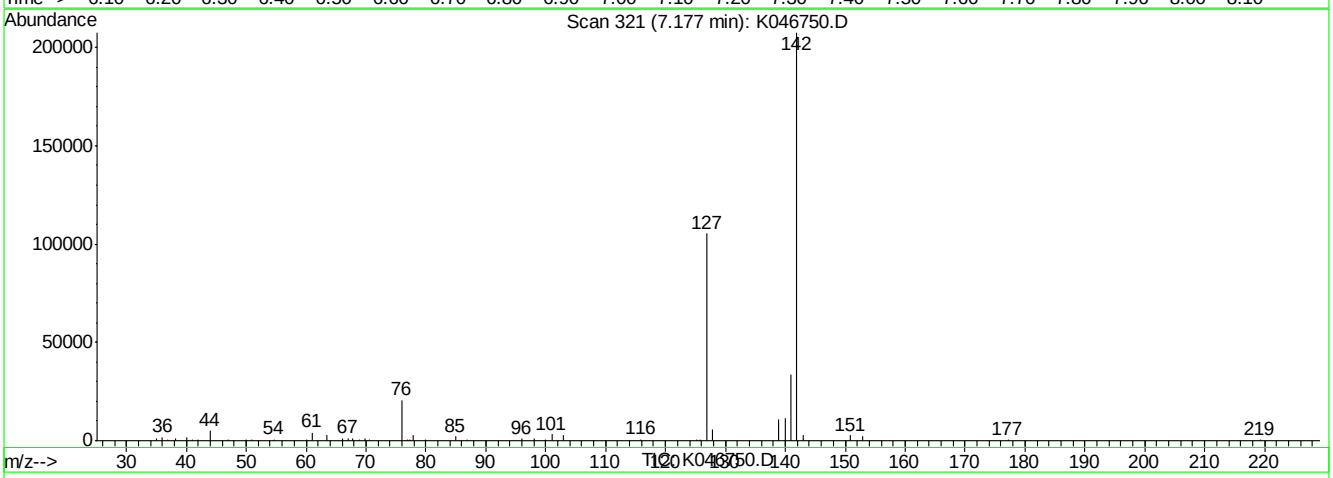
K046750.D 8260-K.M Thu Sep 16 15:36:15 2010

Quantitation Report (Qedit)

Data File : K:\HPCHEM\1\DATA\091610\K046750.D Vial: 6
Acq On : 16 Sep 2010 3:00 pm Operator: StevenH
Sample : ic2013-6 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 18:36 2010 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:04:44 2010
Response via : Multiple Level Calibration





(13) Iodomethane

7.18min (-0.001) 166.32ug/Kg m

response 1504856

Ion	Exp%	Act%
142.00	100	100
127.00	46.20	50.71
141.00	15.20	16.31
0.00	0.00	0.00

K046750.D 8260-K.M Thu Sep 16 15:36:20 2010

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046751.D Vial: 7
Acq On : 16 Sep 2010 3:26 pm Operator: StevenH
Sample : icv2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:58:18 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.45	96	1055037	50.00	ug/Kg	0.00
49) Chlorobenzene-d5	14.96	117	673903	50.00	ug/Kg	0.00
67) 1,4-Dichlorobenzene-d4	17.42	152	307085	50.00	ug/Kg	0.00
93) Tert Butyl Alcohol-d10	8.29	65	120173	250.00	ug/Kg	0.02
System Monitoring Compounds						
31) Dibromofluoromethane	10.44	113	264754	50.69	ug/Kg	0.00
Spiked Amount 50.000	Range 80 - 121		Recovery = 101.38%			
36) 1,2-Dichloroethane-d4	11.12	65	332527	51.62	ug/Kg	0.00
Spiked Amount 50.000	Range 77 - 123		Recovery = 103.24%			
50) Toluene-d8	13.26	98	1107731	49.86	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 130		Recovery = 99.72%			
70) 4-Bromofluorobenzene	16.24	174	270365	49.73	ug/Kg	0.00
Spiked Amount 50.000	Range 59 - 148		Recovery = 99.46%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.21	85	368465	89.14	ug/Kg	99
3) Chloromethane	4.60	50	596663	72.11	ug/Kg	99
4) Vinyl Chloride	4.79	62	389030	60.54	ug/Kg	98
5) Bromomethane	5.46	94	156204	55.39	ug/Kg	88
6) Chloroethane	5.72	64	162437	48.34	ug/Kg	89
7) Trichlorofluoromethane	5.99	101	333579	48.80	ug/Kg	92
8) 1,2-Dichloro-1,1,2-trifluo	6.84	67	398883	49.78	ug/Kg	94
9) Ethyl Ether	6.51	59	240411	47.74	ug/Kg	99
10) Freon 113	7.00	101	254604	44.91	ug/Kg	96
11) 1,1-Dichloroethene	6.91	61	450244	49.63	ug/Kg	92
12) Acetone	7.95	43	583878	195.15	ug/Kg	89
13) Iodomethane	7.18	142	434199	49.78	ug/Kg	90
14) Carbon Disulfide	7.01	76	849038	46.03	ug/Kg	98
15) Methyl acetate	8.11	43	1130590	242.39	ug/Kg	97
16) Methylene Chloride	7.87	49	1259095	100.06	ug/Kg	87
17) Acrylonitrile	9.14	53	457184	294.22	ug/Kg	95
18) Methyl Tert Butyl Ether	8.29	73	838896	48.82	ug/Kg	97
19) trans-1,2-Dichloroethene	8.15	61	456200	44.87	ug/Kg	96
20) Hexane	8.27	57	703671	49.24	ug/Kg	93
21) Vinyl acetate	8.11	43	1130590	240.54	ug/Kg	99
22) 1,1-Dichloroethane	9.09	63	643055	47.21	ug/Kg	98
23) Di-isopropyl ether	8.84	45	1468269	50.59	ug/Kg	98
24) Ethyl tert-butyl Ether	9.37	59	1059991	46.94	ug/Kg	98
25) 2-Butanone	10.57	43	834334	223.15	ug/Kg	96
26) cis-1,2-Dichloroethene	9.85	96	311198	50.77	ug/Kg	97
27) 2,2-Dichloropropane	10.00	77	376192	46.18	ug/Kg	97
28) Bromochloromethane	10.12	128	147545	50.39	ug/Kg	94
29) Chloroform	10.19	83	561117	48.17	ug/Kg	96
30) Tetrahydrofuran	10.57	42	70932	46.18	ug/Kg	90
32) 1,1,1-Trichloroethane	10.51	97	420816	45.82	ug/Kg	95
33) Cyclohexane	10.17	56	638488	53.94	ug/Kg	95
34) 1,1-Dichloropropene	10.65	75	415081	46.07	ug/Kg	95
35) Carbon Tetrachloride	10.43	117	323920	49.72	ug/Kg	89
37) 1,2-Dichloroethane	11.21	62	434564	47.05	ug/Kg	98

(#) = qualifier out of range (m) = manual integration
K046751.D 8260-K.M Fri Sep 17 08:49:16 2010 Page 1

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046751.D Vial: 7
Acq On : 16 Sep 2010 3:26 pm Operator: StevenH
Sample : icv2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:58:18 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Benzene	10.97	78	1266261	53.47	ug/Kg	96
39)	Tert-Amyl Methyl Ether	11.06	73	824849	47.63	ug/Kg	100
40)	Trichloroethene	11.67	95	295728	47.58	ug/Kg	92
41)	Methylcyclohexane	11.69	83	521103	46.32	ug/Kg	97
42)	1,2-Dichloropropane	12.28	63	391376	48.90	ug/Kg	96
43)	Dibromomethane	12.18	93	173877	48.50	ug/Kg	93
44)	Bromodichloromethane	12.33	83	380475	46.70	ug/Kg	98
45)	2-Nitropropane	13.54	41	414812	297.03	ug/Kg	97
46)	2-Chloroethyl vinyl ether	12.92	63	254447	347.88	ug/Kg	94
47)	cis-1,3-Dichloropropene	13.04	75	521176	50.27	ug/Kg	96
48)	4-Methyl-2-pentanone	13.67	43	1777428	290.32	ug/Kg	98
51)	Toluene	13.31	91	1234068	45.20	ug/Kg	95
52)	trans-1,3-Dichloropropene	13.74	75	410179	51.24	ug/Kg	94
53)	1,1,2-Trichloroethane	13.93	83	229442	47.52	ug/Kg	90
54)	1,3-Dichloropropane	14.24	76	467756	48.45	ug/Kg	96
55)	2-hexanone	14.57	43	1283198	265.32	ug/Kg	97
56)	Tetrachloroethene	13.77	166	258271	45.06	ug/Kg	94
57)	Dibromochloromethane	14.15	129	275880	49.33	ug/Kg	96
58)	1,2-Dibromoethane	14.45	107	238878	48.07	ug/Kg	97
59)	1-Chlorohexane	14.89	91	373729	44.34	ug/Kg	98
60)	Chlorobenzene	14.98	112	757659	49.82	ug/Kg	92
61)	1,1,1,2-Tetrachloroethane	15.03	131	270686	49.73	ug/Kg	95
62)	Ethylbenzene	14.97	91	1240219	45.77	ug/Kg	98
63)	m,p-Xylene	15.11	91	1999046	93.46	ug/Kg	97
64)	o-Xylene	15.58	91	1105999	47.03	ug/Kg	97
65)	Styrene	15.63	104	786887	46.59	ug/Kg	96
66)	Bromoform	15.72	173	154651	41.42	ug/Kg	96
68)	Isopropylbenzene	15.90	105	1197199	51.56	ug/Kg	99
69)	Cyclohexanone	16.67	55	59386	358.10	ug/Kg	85
71)	1,1,2,2-Tetrachloroethane	16.39	83	289810	50.64	ug/Kg	99
72)	trans-1,4-Dichloro-2-Buten	16.58	53	77553	45.50	ug/Kg#	54
73)	1,2,3-Trichloropropane	16.58	110	65951	48.19	ug/Kg	93
74)	Bromobenzene	16.38	156	274921	47.75	ug/Kg	99
75)	n-Propylbenzene	16.33	91	1401782	54.23	ug/Kg	100
76)	2-Chlorotoluene	16.55	91	1021318	56.01	ug/Kg	99
77)	1,3,5-Trimethylbenzene	16.51	105	966593	43.49	ug/Kg	99
78)	4-Chlorotoluene	16.71	91	875753	47.84	ug/Kg	100
79)	tert-Butylbenzene	16.87	91	602771	47.13	ug/Kg	93
80)	1,2,4-Trimethylbenzene	16.93	105	969222	46.98	ug/Kg	99
81)	sec-Butylbenzene	17.05	105	1172873	42.86	ug/Kg	97
82)	4-Isopropyltoluene	17.18	119	867450	45.84	ug/Kg	95
83)	1,3-Dichlorobenzene	17.35	146	475478	47.57	ug/Kg	98
84)	1,4-Dichlorobenzene	17.44	146	452992	46.35	ug/Kg	96
85)	Benzyl chloride	17.68	126	68529	41.72	ug/Kg#	86
86)	n-Butylbenzene	17.63	92	483633	44.92	ug/Kg	96
87)	1,2-Dichlorobenzene	17.91	146	466209	49.82	ug/Kg	96
88)	1,2-Dibromo-3-Chloropropan	18.74	75	38991	51.60	ug/Kg	94
89)	1,2,4-Trichlorobenzene	19.46	180	183991	47.76	ug/Kg	96
90)	Hexachlorobutadiene	19.39	225	149766	43.31	ug/Kg	94

(#) = qualifier out of range (m) = manual integration
K046751.D 8260-K.M Fri Sep 17 08:49:17 2010 Page 2

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046751.D Vial: 7
Acq On : 16 Sep 2010 3:26 pm Operator: StevenH
Sample : icv2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 15:58:18 2010 Quant Results File: 8260-K.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration
DataAcq Meth : 8260S

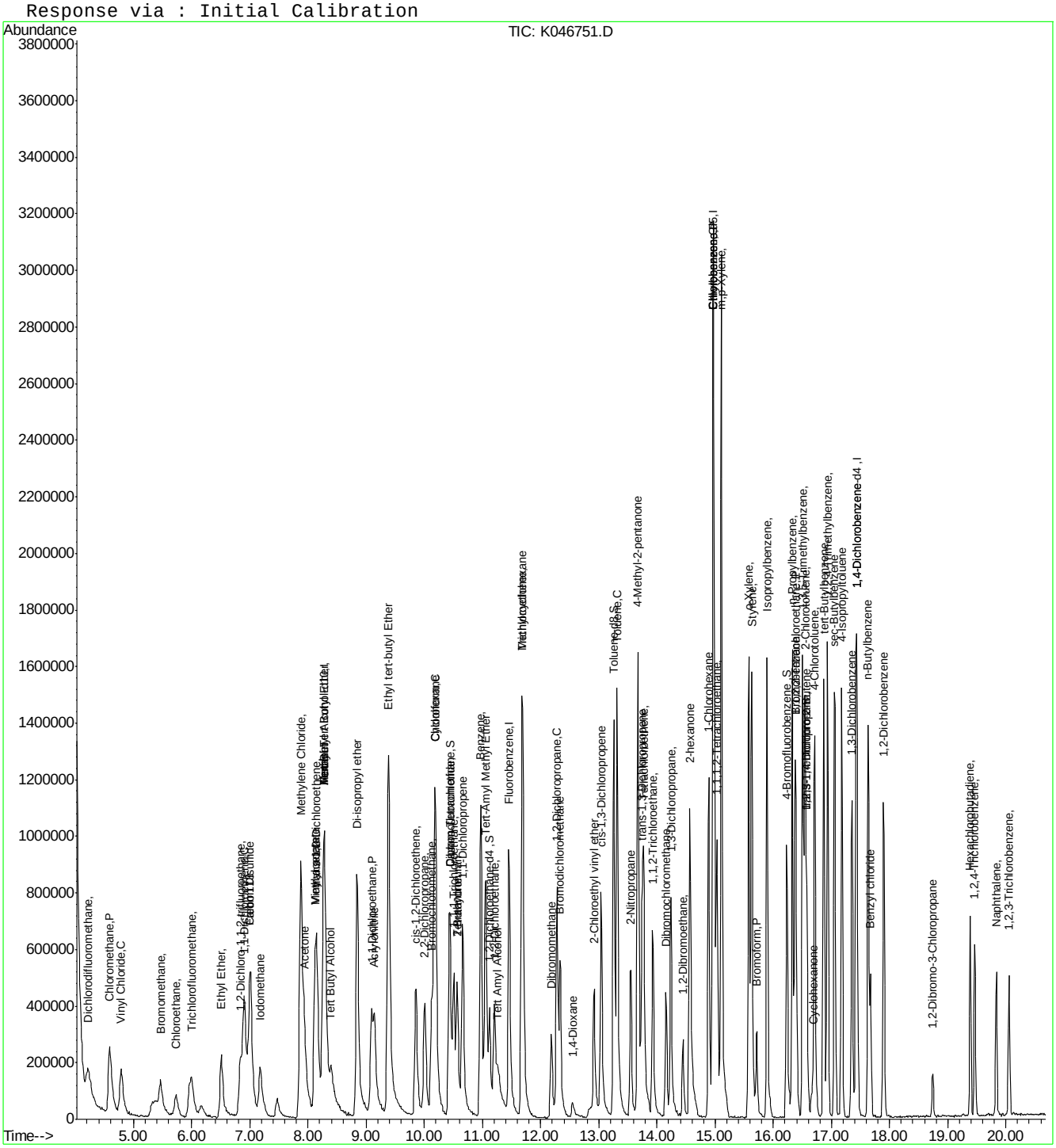
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91)	Naphthalene	19.84	128	396069	57.01	ug/Kg	97
92)	1,2,3-Trichlorobenzene	20.05	180	153625	47.76	ug/Kg	92
94)	Acrolein	8.27	56	311051	268.24	ug/Kg	99
95)	Tert Butyl Alcohol	8.40	59	260942	440.38	ug/Kg	92
96)	Tert Amyl Alcohol	11.27	59	242210	477.07	ug/Kg	88
97)	1,4-Dioxane	12.56	88	56038	1037.48	ug/Kg#	70

(#) = qualifier out of range (m) = manual integration (+) = signals summed
K046751.D 8260-K.M Fri Sep 17 08:49:17 2010 Page 3

Quantitation Report (QT Reviewed)

Data File : K:\HPCHEM\1\DATA\091610\K046751.D Vial: 7
Acq On : 16 Sep 2010 3:26 pm Operator: StevenH
Sample : icv2013-3 Inst : MSVOA2
Misc : ms15397,vk2013,5.00,,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 16 18:59 2010 Quant Results File: 8260-K.RES

Method : C:\MSDCHEM\2\METHODS\8260-K.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Sep 16 15:44:28 2010
Response via : Initial Calibration



K046751.D 8260-K.M Fri Sep 17 08:49:18 2010 Page 4

ACCUTEST LABORATORIES SE

DATE:	09-10-10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	11.0 psi
ANALYST:	AS

MS VOA4-B ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260B
CALIB. DATE:	09-10-10
EM VOLTAGE:	2185
BFB RESPONSE:	1739522
RUN ID:	VB 29103

STANDARDS

BFB:	V11C936
ICAL/CCV:	V11126, V11133, V11107A
ISTD/SURR:	V11021
ICV/QC:	V11129, V11125, V11038A
Purge Volume	5mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
B 0702791	BFB	vial	-	100	BFB		nr	nr		processed (AF) 2uL
B 0702830	CC29107-4	nr	W	1	8260		nr	nr		x failed 20uL→50mL
B 0702831	CC29107-4	nr	W	2	8260		nr	nr		x 20uL→50mL
B 0702832	Blank	nr	W	3	8260		nr	nr		x
B 0702833	BFB	nr	-	100	BFB		nr	nr		x (AF) 2uL
B 0702834	BFB	vial	-	100	BFB		nr	nr		processed (AF) 2uL
B 0702835	IC29103-1	nr	W	1	8260	#1 PII, #2 PII, #7 PII, #8 PII,	nr	nr		✓ 5uL→500mL
B 0702836	IC29103-2	nr	W	2	8260	#7 PII	nr	nr		✓ 5uL→100mL
B 0702837	IC29103-3	nr	W	3	8260	#7 PII,	nr	nr		✓ 10uL→50mL
B 0702838	IC29103-4	nr	W	4	8260		nr	nr		x 20uL→50mL
B 0702839	IC29103-5	nr	W	5	8260		nr	nr		✓ 35uL→50mL
B 0702840	IC29103-6	nr	W	6	8260		nr	nr		✓ 80uL→50mL
B 0702841	IC29103-4	nr	W	7	8260		nr	nr		processed 25uL→50mL
B 0702842	ICC29103-4	nr	W	8	8260		nr	nr		✓ 20uL→50mL
B 0702843	LCS	nr	W	9	8260		nr	nr		x 12.5uL→40mL
B 0702844	MS	nr	W	10	8260		nr	nr		ND
B 0702845	DUP	nr	W	11	8260		nr	nr		processed 12.5uL→40mL
B 0702846	F76331-1	nr	W	12	8260		1	N		ND
B 0702847	F76331-2	2	W	13	8260		2	N		✓
B 0702848	F76331-3	2	W	14	8260		1	N		✓
B 0702849	F76331-4	2	W	15	8260		1	N		✓
B 0703000	F76331-5, dil	2	W	16	8260		1	N		✓
B 0703001	F76331-6, dil	2	W	17	8260		1	N		✓ 12.5uL→40mL
B 0703002	F76331-1 ms	3	W	18	8260		1	N		✓ 12.5uL→40mL
B 0703003	F76331-1, msd	3	W	18	8260	#7 PII	1	N		✓
B 0703004	F76331-7 dil	2	W	19	8260		1	N		✓
B 0703005	F76331-8	2	W	20	8260		1	N		

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	09-10-10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	11.0 psi
ANALYST:	AS

MS VOA4-B ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260B
CALIB. DATE:	09-10-10
EM VOLTAGE:	2185
BFB RESPONSE:	1739522
RUN ID:	VB 29033

STANDARDS

BFB:	V11093C
ICAL/CCV:	V11126, V11133, V11107A
ISTD/SURR:	V11021
ICV/QC:	V11129, V11125, V11034A
Purge Volume	5.mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
B 070306	F76331-9	2	W	21	8260		1	N		✓
B 070307	F76331-10	2	W	22	8260		1	N		✓
B 070308	F76331-11	2	W	23	8260		1	N		✓
B 070309	F76331-12	2	W	24	8260		1	N		✓
B 070310	F76331-13	2	W	25	8260		1	N		✓
B 070311	F76331-14	2	W	26	8260		1	N		MD
B 070312	F76331-14dl	2	W	27	8260		1	N		✓
B 070313	F76331-2dl	2	W	28	8260		1	N		✓
B 070314	F76331-3dl	2	W	29	8260		1	N		✓
B 070315	MP2dl	mp	W	30	8260		pH	n/a		MD 8260
B										
B										
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09/13/10

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	09-16-10
COLUMN TYPE:	RTX VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	11.0psi
ANALYST:	AT

MS VOA4-B ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260B
CALIB. DATE:	09-10-10
EM VOLTAGE:	2188
BFB RESPONSE:	2408389
RUN ID:	VB 2907

STANDARDS

BFB:	V11095C
ICAL/CCV:	V11126, V11133, V11107A
ISTD/SURR:	V11102
ICV/QC:	V11129, V11144, V11134A
Purge Volume	5mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
B 070401	BFB	na	-	100	BFB		na	na		Acquired
B 070402	BFB	na	-	100	BFB		na	na		Processed (AF)
B 070403	CC2903-4	na	W	1	8260		na	na		Processed 20ml+50mL
B 070404	BS	na	W	2	8260		na	na		Processed 12.5ml+40mL
B 070405	MB	na	W	3	8260		na	na		ND
B 070406	F76423-7	3	W	4	8260		-	N		✓
B 070407	F76459-19.ms	1	W	5	8260		-	N		✓
B 070408	F76377-1	1	W	6	8260		-	N		ND
B 070409	F76377-2.ms	2	W	7	8260		-	N		✓
B 070410	F76377-3	2	W	8	8260		-	N		ND
B 070411	F76377-4	2	W	9	8260		-	N		ND
B 070412	F76342-1	1	W	10	8260		-	N		ND
B 070413	F76427-2	2	W	11	8260		-	N		✓
B 070414	F76427-3	1	W	12	8260		-	N		✓
B 070415	F76427-6	2	W	13	8260		-	N		✓
B 070416	F76427-6ms	3	W	14	8260		-	N		✓ 12.5ml+40mL
B 070417	F76427-6msd	3	W	15	8260		-	N		✓ 12.5ml+40mL
B 070418	F76482-6.10X	1	W	16	8260		-	N		X
B 070419	F76427-4	2	W	17	8260		-	N		✓
B 070420	F76427-5	2	W	18	8260		-	N		✓
B 070421	F76427-7	2	W	19	8260		-	N		ND
B 070422	F76444-1	2	W	20	8260		-	N		✓
B 070423	F76444-2	2	W	21	8260		-	N		✓
B 070424	F76444-3	2	W	22	8260		-	N		✓
B 070425	F76444-4	2	W	23	8260		-	N		✓
B 070426	F76463-2.ms	1	W	24	8260		-	N		ND
B 070427	F76465-1.ms	1	W	25	8260		-	N		ND
B 070428	F76463-1.sdx	2	W	26	8260		-	N		ND
							6	2	1x	ND

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PI** Poor Instrument Integration

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	09-14-10
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA5-C
PURGE PRESSURE:	11.0 psi
ANALYST:	AJT

MS VOA5-C ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260C
CALIB. DATE:	09-14-10
EM VOLTAGE:	1847
BFB RESPONSE:	32143443
RUN ID:	VC 2932

STANDARDS

BFB:	V11035
ICAL/CCV:	V11120, V11133, V11107A
ISTD/SURR:	V11021
ICV/QC:	V11129, V11144, V11145A
Purge Volume	5mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
c 073521	BFB	1	-	100	BFB		nla	nla		processed (AFT) 2ul
c 073522	CC29131-4	1	W	1	8260		nla	nla		x 20ml→50 mL
c 073523	CC29131-4	1	W	2	8260		nla	nla		x 20ml→50 mL
c 073524	Blank	1	W	3	8260		nla	nla		x
c 073525	BFB	1	-	100	BFB		nla	nla		processed (AFT) 2ul
c 073526	IC29132-1	1	W	1	8260	#7 PII, #3 PII, #15 PII, #PII, #PII MP, #PII	nla	nla		✓ 5ml→500ml
c 073527	IC29132-2	1	W	2	8260	#15 PII, #14 PII	nla	nla		✓ 5ml→100ml
c 073528	IC29132-3	1	W	3	8260		nla	nla		✓ 10ml→50ml
c 073529	IC29132-4	1	W	4	8260		nla	nla		✓ 20ml→50ml
c 073530	IC29132-5	1	W	5	8260	#14 PII	nla	nla		✓ 35ml→50ml
c 073531	IC29132-6	1	W	6	8260	#7 PII	nla	nla		✓ 50ml→50ml
c 073532	ICV29132-4	1	W	7	8260		nla	nla		processed 25ml→50ml
c 073533	BS	1	W	8	8260		nla	nla		processed 12.5ml→40ml
c 073534	MB	1	W	9	8260		nla	nla		x
c 073535	MB	1	W	10	8260		nla	nla		✓
c 073536	F76351-5, 100x	3	W	11	8260	#7 PII	1	N		✓ Elevated
c 073537	F76351-11	2	W	12	8260		1	N		✓
c 073538	F76351-12	2	W	13	8260		1	N		ND
c 073539	F76351-13	2	W	14	8260		1	N		✓
c 073540	F76351-14, 5X	2	W	15	8260		6	N		✓
c 073541	F76351-15, MS	2	W	16	8260		1	N		✓
c 073542	F76351-16, 500X	2	W	17	8260		1	N		✓
c 073543	F76351-12 MS	3	W	18	8260		1	N		✓ 12.5ml→40ml
c 073544	F76351-12 MSD	3	W	19	8260		1	N		✓ 12.5ml→40ml
c 073545	F76361-1, 2X	2	W	20	8260		1	N	1X	wrong solvent dilution
c 073545	F76361-2	2	W	21	8260	#4 PII	1	N		✓
c 073546	F76361-3	2	W	22	8260		1	N		✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not cue to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	08-14-10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA5-C
PURGE PRESSURE:	11.0psi
ANALYST:	AT

MS VOA5-C ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260C
CALIB. DATE:	08-14-10
EM VOLTAGE:	1841.7
BFB RESPONSE:	2214343
RUN ID:	VC 2132

STANDARDS

BFB:	V110836
ICAL/CCV:	V111261, V111335, V111079
ISTD/SURR:	V110821
ICV/QC:	V111271, V111411, V111457
Purge Volume	5mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE; PEAK #	PH	CI ?	RR	COMMENTS
c 073547	F76361-4	2	W	23	8260		1	N		✓
c 073548	F76361-5	2	W	24	8260		1	N		✓
c 073549	F76361-6	2	W	25	8260		1	N		✓
c 073550	F76361-7	2	W	26	8260		1	N		✓
c 073551	F76361-8	1	W	27	8260		1	N		ND
c 073552	F76361-8.5D	1	W	28	8260		1	N		ND
c 073553	DF76361-8.5D	1	W	29	8260		1	N		ND
c 073554	Blank	1	W	1	8260		NC	NC		✓
c 073555										
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AT 08/14/10

Analyst's Signature:

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

ACCUTEST LABORATORIES SE

DATE:	05-15-10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA5-C
PURGE PRESSURE:	11.0psi
ANALYST:	AF

MS VOA5-C ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	5040C
CALIB. DATE:	05-014-10
EM VOLTAGE:	1847
BFB RESPONSE:	1822484
RUN ID:	VC 29333

STANDARDS

BFB:	V11036C
ICAL/CCV:	V11126, V11133, V11107A
ISTD/SURR:	V11021
ICV/QC:	V11129, V11144, V11145A
Purge Volume	5mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
c073556	BFB	1	-	100	8260		n/a	n/a		passed (AF) 2 pl
c 073557	229152-4	1	W	1	8260		n/a	n/a		passed 20µl→50mL
c 073558	BS	1	W	2	8260		n/a	n/a		passed 12.5µl→40mL
c 073559	MB	1	W	3	8260		n/a	n/a		ND
c 073560	F76367-1	3	W	4	8260		1	N		✓
c 073561	F76482-6,5x	1	W	5	8260		1	N		✓
c 073562	F76482-7,10X	1	W	6	8260		1	N	1x	
c 073563	F76482-8,MS	1	W	7	8260		1	N		ND
c 073564	F76482-9,2x	1	W	8	8260		1	N		✓
c 073565	F76482-10	1	W	9	8260		1	N		✓
c 073566	F76482-11	1	W	10	8260		1	N	1x	1st IS out
c 073567	F76482-13,11	1	W	11	8260		1	N		ND
c 073568	F76482-12,75x	1	W	12	8260		1	N		✓
c 073569	F76482-7	2	W	13	8260		1	N		✓
c 073570	F76482-9	2	W	14	8260		1	N		X EI co-elute 1st IS out.
c 073571	F76482-12	2	W	15	8260		1	N	1x	X EI co-elute 1st IS out
c 073572	F76459-12	2	W	16	8260		1	N	1x	SS out.
c 073573	F76459-12,MS	3	W	17	8260		1	N		✓ 12.5µl→40mL
c 073574	F76459-12,MSD	3	W	18	8260		1	N		✓ 12.5µl→40mL
c 073575	F76459-10	2	W	19	8260		1	N		✓
c 073576	F76459-11	2	W	20	8260		1	N		✓
c 073577	F76459-12	2	W	21	8260		1	N		✓
c 073578	F76459-13	2	W	22	8260		1	N		✓
c 073579	F76459-14	2	W	23	8260		1	N		✓
c 073580	F76459-15	2	W	24	8260		1	N		✓
c 073581	F76459-16	2	W	25	8260		1	N		✓
c 073582	F76459-17	2	W	26	8260		1	N		✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	09-15-10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA5-C
PURGE PRESSURE:	11.0psi
ANALYST:	AT

MS VOA5-C ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260CC
CALIB. DATE:	09-14-10
EM VOLTAGE:	1847
BFB RESPONSE:	1822484
RUN ID:	VC 2933

STANDARDS

BFB:	V1109-3C
ICAL/CCV:	V11126, V11133, V11107A
ISTD/SURR:	V11021
ICV/QC:	V110126, V11144, V11145A
Purge Volume	5mL

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
C 073583	F76451-18	2	W	27	8260		1	N		✓
C 073584	F76452-12	3	W	28	8260		1	N		✓ E! combine
C 073585	Blank	na	W	29	8260		na	na		✓
C 073586	Blank	na	W	30	8260		na	na		ND
C 073587	Blank	na	W	1	8260		na	na		✓
C							n			
C										
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AT 09/16/10

Analyst's Signature: [signature]

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 and Method 624 includes analytes by SOP MS003
Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

msvoa5_c_log.xls NF 06/10

ACCUTEST LABORATORIES SE

DATE:	9/15/10
COLUMN TYPE:	RTX-VMS
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA2-H
PURGE PRESSURE:	22
ANALYST:	HMM

MS VOA2-H ANALYSIS LOG

METHODS:	8260
METHOD FILE:	8260-H.M
CALIB. DATE:	9/14/10
EM VOLTAGE:	1729
BFB RESPONSE:	2146.517
RUN ID:	VH 2413

STANDARDS

BFB:	VI10935
ICAL/CCV:	VI11428 VI11424 VI11336 VI11021 VI11405
ISTD/SURR:	VI10939
ICV/QC:	VI11429 VI11335 VI11021 VI10946 VI11415
METHANOL LOT #:	HX5636

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
H 0644 57	BFB	-	-	-	-	-	-	-	-	AVG 2nd BFB.
H 57	CC2413-4	N	S	5.00	N	1	8260	N	N	10uL/10mL SMC CC over
H 54	4					2				
H 55	BS					3				12.5uL/20mL SMC
H 56	~~AAB~~ BFB		N	6.00	100	4	BFB			AVG 2nd BFB
H 57	RC2413-1	N	S	5.00	N	5	8260	N	N	125uL 4 SMC 400uL 20mL
H 58	2					1				500uL →
H 59	RCC2413-7					7				1.25mL →
H 60	RC2413-4					8				2.5mL →
H 61	5					9				3.75mL →
H 62	6					10				5.00mL →
H 63	RCV2413-3					11				12.5uL/20mL SMC Point
H 64	BI					12				
H 65	MB				100	13				ND
H 66	226207-27	15518		6.10	N	14		pt	-	
H 67	22.2mL	5		6.18	N	15		5.0mL	-	12.5uL/20mL SMC
H 68	22.2mL	5		5.01	N	16		"	-	
H 69	2	R5463		5.38	N	17		pt	-	
H 70	3	15461		6.07	N	18		pt	-	
H 71	5	15469		6.44	N	19		pt	-	
H 72	6	R5472		6.21	N	20		pt	-	
H 73	8	15474		6.15	N	21		pt	-	
H 74	17	R5495		6.28	N	23		pt	-	
H 75	18	R5492		5.60	N	24		pt	-	
H 76	23	15486		6.24	N	24		pt	-	
H 77	23	15504		6.39	N	25		pt	-	
H 78	26	15510		6.07	N	26		pt	IX	4ZILAR
79						27				

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

ACCUTEST LABORATORIES SE

DATE:	9/15/12
COLUMN TYPE:	
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA2-H
PURGE PRESSURE:	
ANALYST:	MM

MS VOA2-H ANALYSIS LOG

METHODS:*	
METHOD FILE:	
CALIB. DATE:	
EM VOLTAGE:	
BFB RESPONSE:	
RUN ID:	VH 2413

Cont P.4T

STANDARDS

BFB:	
ICAL/CCV:	
ISTD/SURR:	
ICV/QC:	
METHANOL LOT #:	

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
H 064479	F76303-25	145529	S	4.08	100	27	8260	pt	–	✓
H 80	F76384-13	145605		4.69	10	28		pt [illegible]	–	✓
H 81	10	145661		5.01	100	29		pt	–	✓
H 82	5	145720		5.28	N	30		pt	–	145124 ✓
H 83	4	145718		4.85	N	31		pt	–	2505 ✓
H 84	B	1 —		5.00	N	32				✓
H 85	B	—				33				✓
H										
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MM 9/15/12

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
* For NELAC purposes, Method 8260 includes analytes by SCP MS005

MSVOA2_H_log.xls NF 11/06

Analyst's Signature: MM

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
KS4 47	F76338-28	W			5	9/9/10	14:17	JW	PT	NaHSO4 TB
48	-28	W			5	↓	↓	↓	↓	↓
49	-28	M			5	9/9/10	14:50	JW	PT	NaHSO4 TB
50	F76334-1	W AC1686			4.80	9-7-10	10.34	CL	5030A	OOH bot 1
51	1	W			4.86					
52	1	M AC1702			4.80					
53	2	W			4.68					
54	2	W			4.63					
55	2	M			4.70		10.45	CL	5030A	
56	F76290-1	W	31.14	35.59	4.45		10.55	CL	PT	frozen in
57	1	W	31.10	35.72	4.62					9-2-10 17:00
58	1	M	29.72	33.90	4.18					
59	F76303-1	W			5.00				TB	
60	1	W			5.00					
61	1	M			5.00				PJ	
62	2	W	31.12	36.76	5.64					
63	2	W	31.03	36.33	5.30					
64	2	M	29.77	35.46	5.69					
65	3	W	30.90	36.82	5.92					
66	3	W	31.10	37.15	6.05					
67	3	M	30.17	35.70	5.53					
68	5	W	30.97	37.29	6.32					
69	5	W	31.03	37.52	6.49		~~11.13~~ 11.04	CL (CL 9-7)		

Comment: TB for broken. SB for slight odor. OOH for out of hold

Enclose comment: O for sample incorrectly capped. P for plunger not locked. F for sample not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5470	F76303-5	M	30.08	36.46	6.38	9-7-10	11:10	CL	PT	frozen 17
71	6	L	31.04	37.23	6.19					9-7-10 1700
72	6	L	30.91	36.92	6.01					
73	6	M	29.79	35.23	5.44					
74	8	L	30.98	37.13	6.15					
75	8	L	31.15	37.65	6.50					
76	8	M	29.62	35.79	6.17					
77	9	L	30.88	36.22	5.34					
78	9	L	31.06	36.49	5.43					
79	9	M	29.76	34.91	5.15					
80	11	L	31.13	37.03	5.90					
81	11	L	31.11	37.06	5.95					
82	11	M	29.49	34.46	4.97					
83	12	L	31.08	37.01	5.93					
84	12	L	31.21	36.94	5.73					
85	12	M	30.10	37.09	6.99					
86	14	L	30.96	37.41	6.45					
87	14	L	31.07	37.88	6.81					
88	14	M	29.89	34.90	5.01					
89	15	L	31.22	36.77	5.55					
90	15	L	30.97	36.42	5.45					
91	15	M	29.64	34.97	5.33					
92	18 16 CL 9-7	L	31.12	36.72	5.60		11:33	CL		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5493	F76303-1618	w	3121	36.76	5.55	9-7-10	11:35	CL	PT	frozen 17
94	" 9-7 1618	m	2990	35.21	5.31					9-7-10 17:00
95	17	w	3116	37.44	6.28					
96	17	m	3134	37.74	6.40					
97	17		30.15	35.53	5.38					
98	20	w	30.94	37.18	6.24					
99	20	w	31.06	37.37	6.31					
K5500	20	m	2995	36.64	6.69					
1	21	w	30.99	37.02	6.03					
2	21	w	3104	3667	5.63					
3	21	m	2975	34.74	4.99		11:50	CL		
4	23	w	3110	3749	6.39		12:43	CL		
5	23	w	30.97	37.09	6.12					
6	23	m	2970	35.98	6.28					
7	25	w	3114	3770	6.56					
8	25	w	3116	3781	6.65					
9	25	m	2994	36.02	6.08					
10	26	w	3115	3722	6.07					
11	26	w	3108	36.81	5.73					
12	26	m	2956	35.35	5.79					
13	27	w	3116	3726	6.10					
14	27	w	30.98	3711	6.13					
15	27	m	30.07	35.55	5.48		1300	CL		

for slight odor

for sampler incorrectly

for sampler not locked; F for sampler not completely

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
R5608	F763941-1	w AC1686			477	9-8-10	16 18	CL	5030A	001+ hot 1
9	1	w			457					
10	1	m AC1702			536					
11	2	w			530					
12	2	w			484					
13	2	m			476					
14	3	w			473					
15	3	w			524					
16	3	m			478					
17	4	w			453					
18	4	w			485					
19	4	m			542					
20	5	w			500					
21	5	w			528					
22	5	m			515					
23	6	w			509					
24	6	w			461					
25	6	m			521					
26	7	w			454					
27	7	w			485					
28	7	m			450					
29	8	w			490					
30	8	w			473		16 48	CL		

Comments: T for slight odor; UC for sampler incorrectly capped; F for sampler not completely [illegible]

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5654	F76394-13	W AC1686			4.98	9-9-10	11:00	CL	5030A	COH not
55	13	M AC1664			4.69					
56	14	W			4.62					
57	14	W			4.97					
58	14	M			5.21					
59	15	W			5.20					
60	15	W			4.99					
61	15	M			5.01					
62	16	W			4.56					
63	16	W			5.07					
64	16	M			4.54					
65	17	W			5.15					
66	17	W			4.58					
67	17	M			4.55					
68	18	W			4.86					
69	18	W			4.62					
70	18	M			4.91					
71	19	W			4.74					
72	19	W			5.21					
73	19	M			4.57					
74	20	W			4.53					
75	20	W			4.61					
76	20	M			4.82		11:36	CL		

ACCUTEST LABORATORIES SE

DATE:	9/16/10
COLUMN TYPE:	RTX VMS
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA2-H
PURGE PRESSURE:	20
ANALYST:	MM

MS VOA2-II ANALYSIS LOG

METHODS:	8260
METHOD FILE:	APP9-H.M
CALIB. DATE	9/14/10
EM VOLTAGE:	1324
BFB RESPONSE:	2256984
RUN ID:	VH 2414

STANDARDS

BFB:	V110535F
ICAL/CCV:	V11148 V11134 V11131 V11102 V11140
ISTD/SURR:	V11139
ICV/QC:	V11149 V11135 V11105 V11034b V11141
METHANOL LOT #:	H45E31

DATA FILE	SAMPLE ID, DIL	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	AI S POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
H 064481	BFB	-	-	-	-	-	-	-	-	RIK 2mL DFB
H 87	CC2413-4	N	S	5.00	N	1	8260	N	N	10mL 10mL 5mL Pass
H 88	BI	↓	↓	↓	↓	2	↓	↓	↓	12.5mL/25mL 5mL
H 89	MB	↓	↓	↓	100	3	↓	↓	↓	CH2Cl2 ND Acrolein
H 90	F76459-3	IK5902	↓	5.09	N	4	↓	5030A	-	
H 91	3MS	4	↓	4.81	N	5	↓	5030A	-	12.5mL/25mL 5mL
H 92	3MSD	4	↓	4.97	N	6	↓	L	-	✓ 2
H 93	F76335-6	IK5158	↓	4.96	N	7	↓	EN	-	✓
H 94	7	IK5162	↓	4.92	N	8	↓	EN	-	✓
H 95	F76359-7	IK5561	↓	5.27	N	9	↓	pt	-	✓
H 96	8	IK5564	↓	4.25	N	10	↓	pt	IX	RR ✓
H 97	9	IK5567	↓	3.80	N	11	↓	pt	-	✓
H 98	10	IK5570	↓	5.43	N	12	↓	pt	-	✓
H 99	F76342-13,MS	IK5257	↓	5.44	N	13	↓	pt	-	6.82 1,342SL ✓
H 500	F76359-8,MS	IK5565	↓	4.81	N	14	↓	pt	-	✓
H 01	~~F76446-1~~	~~IK5871~~	↓	~~5.87~~	~~20~~	15	↓	pt	-	F76342-10,MS 6.53 100 IK5246
H 02	F76446-2	IK5874	↓	6.95	20	16	↓	pt	IX	RR RR 50X
H 03	3	IK5876	↓	2.25	N	17	↓	pt	-	✓
H 04	4	IK5879	↓	7.62	N	18	↓	pt	-	✓
H 05	5	IK5882	↓	5.70	N	19	↓	pt	-	✓
H 06	6	IK5885	↓	6.64	N	21	↓	pt	-	✓
H 07	7	IK5888	↓	4.62	N	21	↓	pt	-	✓
H 08	F76372-13,MS	IK5292	↓	5.75	N	22	↓	pt	-	✓
H 09	12	IK5295	↓	5.93	N	23	↓	pt	-	✓ 5.15
H 10	13	IK5299	↓	6.53	N	24	↓	pt	-	✓
H 11	14	IK5302	↓	5.00	N	25	↓	pt	-	✓
H 12	F76486-1,Screen	-	↓	5.00	20	26	↓	Screen		

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

A For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA2_H_log.xls NF 11/06

Analyst's Signature: MM

ACCUTEST LABORATORIES SF

DATE: 9/16/10
COLUMN TYPE:
DETECTOR: 5970 MSD
INSTRUMENT: MSVOA2-H
PURGE PRESSURE:
ANALYST: MM

MS VOA2-H ANALYSIS LOG

METHODS:*
METHOD FILE:
CALIB. DATE:
EM VOLTAGE:
BFB RESPONSE:
RUN ID: VH 2414

STANDARDS

BFB:
ICAL/CCV:
ISTD/SURR:
ICV/QC:
METHANOL LOT #:

DATA FILE	SAMPLE ID, DIL	Vial #	MATRIX	SAMPLE AMT	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
H 064513	F76486-2,5cm	N	S	5.00	20	27	8260	Screen		
H 14	3					28				
H 15	4					29				
H 16	5					30				
H 17	6					31				
H 18	7					32				
H 19	8					33				
H 20	9					34				
H 21	10					35				
H 22	11					36				
H 23	B				N	37		N		
H 24	B				1	38		1		
H										
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MM 9/16/10

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA2_H_log.xls NF 11/06

Analyst's Signature: MM

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5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5148	F76335-2	M AC1702			4.91	9/3/10	13:14	RD.	EN	IN
49	-3	W AC1686			5.19					
50	-3	W AC1686			4.66					
51	-3	M AC1702			5.44					
52	-4	W			4.86					
53	-4	W			4.12					
54	-4	M			4.58					
55	-5	W			4.40					
56	-5	W			4.82					
57	-5	M			4.99					
58	-6	W			4.92					
59	-6	W			5.17					
60	-6	M			5.28					
61	-7	W	AC1686		4.43					
62	-7	W			4.92					
63	-7	M	AC1702		4.96		13:52		EN	IN
64	F76305-1	W	31.00	37.64	6.64				PT	IN
65	-1	W	31.05	37.18	6.13					
66	-1	M	29.51	35.87	6.36					
67	-2	W	31.10	37.73	6.63					
68	-2	W	31.07	37.75	6.68					
69	-2	M	30.24	36.34	6.10					
70	-3	W	31.10	36.86	5.76					

Container Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5240	F76312-9	W	31.27	37.52	6.25	9/3/10	16:01	JMD	PT	IN
41	-9	W	31.17	37.61	6.44					
42	-9	M	29.63	35.80	6.17					
43	-9	M	29.59	32.46	2.87					
44	-10	W	31.13	37.25	6.12					
45	-10	W	31.10	37.02	5.92					
46	-10	M	29.65	35.98	6.33					
47	-10	M	29.55	35.34	5.79					
48	-11	W	31.09	37.44	6.35					
49	-11	W	31.04	37.41	6.37					
50	-11	M	29.49	35.49	6.00					
51	-11	M	29.35	35.48	6.13					
52	-12	W	31.02	36.48	5.46					
53	-12	W	30.89	36.58	5.69					
54	-12	M	29.67	35.28	5.61					
55	-12	M	30.15	35.98	5.83					
56	-13	W	30.88	37.40	6.52					
57	-13	W	30.92	37.74	6.82					
58	-13	M	29.84	36.00	6.16					
59	-13	M	30.10	37.42	7.32					
60	-14	W	—							
61	-14	W	—			9/3/10	16:20	JMD	PT	IN TB
62	F76337-1	W	31.06	37.72	6.66	9/4/10	11:00	JMD	PT	IN

Cont. Type Type: PT for pre-tared vials (field kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SL for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035 Soil Prep Log.xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5286	F76337-9	W	30.92	38.24	7.32	9/4/10	11:44	JM	PT	IW
87	-9	W	31.17	37.43	6.26					
88	-9	M	29.83	36.26	6.43					
89	-10	W	31.29	37.47	6.18					
90	-10	W	31.13	35.83	4.70					
91	-10	M	29.72	37.54	7.82					
92	-11	W	31.18	36.93	5.75					
93	-11	W	31.17	37.87	6.70					
94	-11	M	29.75	35.33	5.58					
95	-12	W	31.17	36.32	5.15					
96	-12	W	31.17	37.13	5.96					
97	-12	M	29.70	35.45	5.75					
98	-13	W	31.09	38.56	7.47					
99	-13	W	31.19	37.72	6.53					
K5300	-13	M	29.54	36.27	6.73					
01	-14	W	—	—	5					IN TB
02	-14	W	—	—	5					IN TB
03	-14	M	—	—	5		12:00	JM	PT	IN TB
04	F76376-1	W	—	—	5		12:15	JM	PT	IN TB
05	-1	W	—	—	5					TB
06	-1	M	—	—	5					TB
07	-2	W	31.02	36.26	5.24					
08	-2	W	30.97	35.74	4.77	9/4/10	12:19	JM	PT	IN

Container Type: PT for pre-tared vials (5035 kits); EN for Encore or similar type; 5030A for samples collected in jars or bulk containers; SI for core sleeve

Comment: N/O for no odor; S/O for slight odor; OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped; P for plunger not locked; F for sampler not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5539	F76303-39	m	29.43	35.19	5.76	9-7-10	13:35	CL	PT	frozen m
40	41	w	30.95	38.09	7.14					9-7-10 17:00
41	41	w	31.10	37.46	6.36					
42	41	m	29.98	36.52	6.54		13:45	CL		
43	F76354-1	w	30.99	33.96	2.97		14:03	CL		Frozen m
44	1	w	31.16	35.55	4.45					9-3-10 17:00
45	1	m								leaked
46	2	w	31.17	35.91	4.74					
47	2	w	31.09	36.01	4.92					
48	2	m	29.53	34.48	4.95					
49	3	w	31.12	35.77	4.65					
50	3	w	30.93	36.17	5.24					
51	3	m	29.71	33.61	3.90					
52	4	w	31.00	36.37	5.37					
53	4	w	31.19	36.32	5.13					
54	4	m	29.70	34.80	5.10					
55	5	w	31.01	35.79	4.78					Frozen m
56	5	w	30.99	36.16	5.17					9-4-10 10:55
57	5	m	29.71	33.94	4.23					
58	6	w	30.93	35.68	4.75					
59	6	w	30.92	35.76	4.84					
60	6	m	29.55	34.02	4.47					
61	7	w	31.26	36.53	5.27		14:17	CL		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5562	F76359-7	w	31.14	37.13	5.99	9-7-10	14:20	CC	VT	frozen in
63	7	m	29.63	35.57	5.94					9-4-10 10:55
64	8	w	31.16	35.41	4.25					
65	8	w	31.16	35.97	4.81					
66	8	m	29.63	33.67	4.04					
67	9	w	30.82	34.62	3.80					
68	9	w	31.21	34.94	3.73					
69	9	m	29.69	33.64	3.95					
70	10	w	31.03	36.46	5.43					
71	16	w	31.04	36.28	5.24					
72	16	m	29.56	34.79	5.23					
73	20	w	—	—	5.00				TB	
74	20	w	—	—	5.00					
75	20	m	—	—	5.00					
76	21	w	—	—	5.00					
77	21	w	—	—	5.00					
78	21	m	—	—	5.00					
79	F76360-1	w	31.15	35.53	4.38				VT	
80	1	w	31.00	35.54	4.54					
81	1	m	29.62	33.99	4.37					
82	2	w	30.89	35.50	4.61					
83	2	w	30.98	35.79	4.81					
84	2	m	29.66	34.17	4.51		14:38	CC		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5859	F76454-3	M	—	—	5	9/10/10	13:16	[illegible]	PT	IH TB
60	F76456-1	M	29.52	36.87	7.35				PT	IH
61	-2	M	29.58	37.15	7.57					
62	-3	M	29.53	34.47	4.94					
63	-4	M	29.75	36.83	7.08		13:20	[illegible]	PT	IH
64	F76420-1	M	29.66	35.22	5.56					
65	-2	M	29.78	36.72	6.94					
66	-3	M	29.69	36.02	6.33					
67	-4	M	29.57	34.46	4.89					
68	-5	M	29.61	33.50	3.89		13:46		PT	IH
69	F76416-1	W	31.14	36.54	5.40		13:55		PT	OOH
70	-1	W	31.30	38.41	7.11					(RECEIVED
71	-1	M	29.52	35.41	5.89					
72	-2	W	31.44	38.25	6.81					
73	-2	W	31.16	37.83	6.67					
74	-2	M	29.74	36.69	6.95					
75	-3	W	31.16	38.60	7.44					
76	-3	W	31.06	38.31	7.25					
77	-3	M	29.65	36.71	7.06					
78	-4	W	31.14	38.77	7.63					
79	-4	W	31.04	38.66	7.62					
80	-4	M	29.60	36.96	7.36	9/10/10	14:10	[illegible]	PT	OOH
81	-5	W	31.00	37.32	6.32	9/10/10	15:09	[illegible]	PT	OOH

not loc... for sa... not completely filled

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5882	F76416-5	W	31.14	37.07	5.93	9/10/10	15:10	AO.	PT	OOH (Received)
83	-5	M	29.77	35.90	6.13					
84	-6	W	31.12	37.80	6.68					
85	-6	W	31.12	37.76	6.64					
86	-6	M	29.61	35.34	5.73					
87	-7	W	31.01	34.65	3.64					
88	-7	W	30.96	35.58	4.62					
89	-7	M	29.62	35.43	5.81					
90	-8	W	31.03	35.26	4.23					
91	-8	W	31.22	36.39	5.17					
92	-8	M	29.57	35.33	5.76					
93	-9	W			5					OOH TB
94	-9	W			5					TB
95	-9	M			5				PT	OOH TB
96	F76459-1	W AC16836			5.19				5030A	1H bot#1
97	-1	W			4.94					
98	-1	M AC16864			4.68					
99	-2	W			5.12					
K5900	-2	W			5.60					
01	-2	M			4.84					
02	-3	W			5.09					
03	-3	W			4.56					
04	-3	M			4.86	9/10/10	15:46	AO	5030A	1H bot#1

5035 Soil Prep Log xls NF rev 05/06

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K59 05	F76459-4	W AC1686			5.30	9/10/10	15:17	AO	5030A	1H bot#1
06	-4	W			4.70					
07	-4	M AC1664			4.72					
08	-5	W			4.96					
09	-5	W			4.94					
10	-5	M			5.06					
11	-6	W			4.75					
12	-6	W			5.24					
13	-6	M			4.55					
14	-7	W			X5.32					
15	-7	W			5.81					
16	-7	M			4.62					
17	-8	W			5.41					
18	-8	W			4.75					
19	-8	M			4.~~7~~79					
20	-9	W			5.32					
21	-9	W			4.72					
22	F76459-9	M			5.36	9/10/10	16:20	AO	5030A	1H bot#1
23	F76499-1	W AC1686			4.56	9/11/10	11:30	AO	5030A	1H bot#1
24	-1	W			5.22					
25	-1	M AC1664			4.66					
26	F76479-1	W			4.61					
27	-1	W			5.23	9/11/10	11:45	AO	5030A	1H bot#1

ACCUTEST LABORATORIES SE

DATE:	9/16/13
COLUMN TYPE:	
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA3-K
PURGE PRESSURE:	
ANALYST:	

MS VOA3-K ANALYSIS LOG

METHODS:*	8260
METHOD FILE:	8260R
CALIB. DATE:	9/16/13
EM VOLTAGE:	2049
BFB RESPONSE:	3454277
RUN ID:	VK2013

STANDARDS

BFB:	V110930
ICAL/CCV:	V11148 V11134 V11102
ISTD/SURR:	V11027
ICV/QC:	V11149, V11135, V110940
METHANOL LOT #:	116EB36

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
K0167[illegible]	BFB	NA			NA	-	BFB	NA		AVG 2ml
K 42	LL 2012-4	-	S	5		1	8260			20ul - 10ml
K 43	LLC2012-4	-		↓		2	↓			10ul - 5ml
K 44	BFB	-		-		-	BFB			AVG 2ml
K 45	SC 2013-1	-		5		1	8260			0.125 - 5ml OR 40ul - 20ml
K 46	2	-				2				0.5
K 47	3	-				3				1.25
K 48	4	-				4				2.50
K 49	5	-				5				3.75
K 47	6	-				6				5.00
K 50		-				7				12.5 - 20ml
K 51	Lab-3	-				8				↓
K 52	BS	-				9				
K 53	MB	-				10				
K 54	359-2	K5547		4.92	-	11				
K 55	3	K5550		5.24	-	12			1X	30 ISTD
K 56	535-1	K6145		7.54	-	13				
K 57	459-1	K5597		4.94	-	14				
K 58	2	K5599		5.12	-	15				
K 59	4	K5906		4.70	-	16				
K 60	5	K5909		4.94	-	17				
K 61	6	K5912		5.24	-	18				
K 62	7	K5915		5.81	-	19				
K 63	8	K5917		5.41	-	20				
K 64	9	K5921		4.72	-	21			1X	
K 65	477-1	K5984		6.51	100	22				
K 66	2	K5995		7.16	-	23			1X	All ISTD
K 67	3	K5998		6.55	-					

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA3_K_log.xls NF 11/06

Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

DATE:	6/12/13
COLUMN TYPE:	
DETECTOR:	5970 MSD
INSTRUMENT:	MSVOA3-K
PURGE PRESSURE:	
ANALYST:	ejl

P.2

MS VOA3-K ANALYSIS LOG

METHODS:*	
METHOD FILE:	
CALIB. DATE:	
EM VOLTAGE:	
BFB RESPONSE:	
RUN ID:	VK 2013

STANDARDS

BFB:	
ICAL/CCV:	
ISTD/SURR:	
ICV/QC:	
METHANOL LOT #:	

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	ANALYTICAL METHOD	PREP METHOD	RR	COMMENTS
K 046768	677-4	KE951	S	6.76	—	24	8260	P4		
K 69	5	K5494		6.46	—	25		↓		
K 70	305-3	K0226		5.26	100	26		A-03H		VK 3AR SMALLS! 1 Chlor
K 71	459-2MS	JAN		4.61	—	27		↓		
K 72	459-2MSD	1		4.51	—	28		↓		
K 73	493-1	NH		5	20	29		NA		Screens
K 74	4					30				
K 75	494-1					31				
K 76	2					32				
K 77	3					33				
K 78	6					34				
K 79	7					35				
K 80	8					36				
K 81	522-1					37				
K 82	525-1					38				
K 83	4					39				
K 84	6					1				
K 85	↓					2				
K 86						3				
K 87										
K 88										
K 89										
K 90										
K										
K										
K										
K										

(Continued)

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

* For NELAC purposes, Method 8260 includes analytes by SOP MS005

MSVOA3_K log.xls NF 11/06

Analyst's Signature: SH

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5539	F76303-39	m	29.43	35.19	5.76	9-7-10	13:35	CL	pT	frozen in
40	41	w	30.95	38.09	7.14		↓	↓		9-2-10 17:00
41	41	w	31.10	37.46	6.36		13:45	CL		↓
42	41	m	29.98	36.52	6.54		14:03	CL		frozen in
43	F76354-1	w	30.99	33.96	2.97					9-3-10 17:00
44	1	w	31.16	35.55	4.45					leaked
45	1	m								
46	2	w	31.17	35.91	4.74					
47	2	w	31.09	36.01	4.92					
48	2	m	29.53	34.48	4.95					
49	3	w	31.12	35.77	4.65					
50	3	w	30.93	36.17	5.24					
51	3	m	29.71	33.61	3.90					
52	4	w	31.00	36.37	5.37					
53	4	w	31.19	36.32	5.13					
54	4	m	29.70	34.80	5.10					frozen in
55	5	w	31.01	35.79	4.78					9-4-10 10:55
56	5	w	30.99	36.16	5.17					
57	5	m	29.71	33.94	4.23					
58	6	w	30.93	35.68	4.75					
59	6	w	30.92	35.76	4.84					
60	6	m	29.55	34.02	4.47		14:17	CL		
61	7	w	31.26	36.53	5.27					

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K6135	F76522-2	M	29.65	32.55	2.90	9-14-10	10:27	CL	PT	17
36	3	w			5.00				TB	
37	3	w			5.00				"	
38	3	m			5.00				"	
39	F76525-1	w	3108	3938	8.30				PT	
40	1	w	3100	3797	6.97					
41	1	m	29.80	38.16	8.36					
42	4	w	3110	3772	6.62					
43	4	w	3121	37.55	6.34					
44	4	m	2954	36.80	7.26		10:33	CL		
45	F76535-1	w	30.89	38.83	7.94		14:11	CL		
46	1	w	3108	38.13	7.05		"	"		
47	1	m	30.15	36.12	5.97		14:13	CL		
48	F76325-1	w AC1686			5.05		16:32	CL	5030A	Cont bot6 Repeat
49	1	w			5.43		"	"		
50	1	m AC1664			4.85		16:36	CL		
51	F76551-1	w AC1686			5.10	9-15-10	11:33	CL	5030A	in bot4
52	1	w	3109	38.50	7.41				PT	1 w and 1 m
53	1	m	2970	36.93	7.23					recieved
54	4	w	3120	3910	7.90					
55	4	w	3102	38.82	7.80					
56	4	m	2966	35.99	6.33					
57	F76550-1	w	3108	36.21	5.13		11:41	CL		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5882	F76416 -5	W	31.14	37.07	5.93	9/10/10	15:10	AO.	PT	OOH (received)
83	-5	M	29.77	35.90	6.13					
84	-6	W	31.12	37.80	6.68					
85	-6	W	31.12	37.76	6.64					
86	-6	M	29.61	35.34	5.73					
87	-7	W	31.01	34.65	3.64					
88	-7	W	30.96	35.58	4.62					
89	-7	M	29.62	35.43	5.81					
90	-8	W	31.03	35.26	4.23					
91	-8	W	31.22	36.39	5.17					
92	-8	M	29.57	35.33	5.76					
93	-9	W	—	—	5					OOH TB
94	-9	W	—	—	5					TB
95	-9	M	—	—	5				PT	OOH TB
96	F76159-1	W ACI1686	—	—	5.19				5030A	IH bot#1
97	-1	W	—	—	4.94					
98	-1	M ACI1684	—	—	4.68					
99	-2	W	—	—	5.12					
K5900	-2	W	—	—	5.60					
01	-2	M	—	—	4.84					
02	-3	W	—	—	5.09					
03	-3	W	—	—	4.56					
04	-3	M	—	—	4.86	9/10/10	15:46	AO	5030A	IH bot#1

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K59 05	F76459-4	W AC1686			5.30	9/10/10	15:17	AO	S030A	1H bot#1
06	-4	W			4.70					
07	-4	M AC1664			4.72					
08	-5	W			4.96					
09	-5	W			4.94					
10	-5	M			5.06					
11	-6	W			4.75					
12	-6	W			5.24					
13	-6	M			4.55					
14	-7	W			~~5.32~~					
15	-7	W			5.81					
16	-7	M			4.62					
17	-8	W			5.41					
18	-8	W			4.75					
19	-8	M			~~4.79~~					
20	-9	W			5.32					
21	-9	W			4.72					
22	F76459-9	M			5.36	9/10/10	16:20	AO	S030A	1H bot#1
23	F76499-1	W #1686			4.56	9/11/10	11:30	AO	S030A	1H bot#1
24	-1	W			5.22					
25	-1	M AC1664			4.66					
26	F76479-1	W			4.61					
27	-1	W			5.23	9/11/10	11:45	AO	S030A	1H bot#1

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
K5974	F76452-1	w	30.93	39.74	8.81	9-13-10	10:41	CL	PT	frozen in
75	1	m	29.56	37.42	7.86					9-10-10
76	3	w	30.96	36.74	5.78					
77	3	w	30.99	38.43	7.44					
78	3	m	29.53	37.18	7.65					
79	5	w	31.05	38.75	7.70					
80	5	w	31.08	37.49	6.41					
81	5	m	29.58	35.54	5.96					
82	F76477-1	w	30.95	37.68	6.73					frozen in
83	1	w	31.27	38.14	6.87					9-11-10 7:00
84	1	m	29.61	36.12	6.51					
85	2	w	31.10	38.26	7.16					
86	2	w	31.19	38.26	7.07					
87	2	m	29.60	36.51	6.91					
88	3	w	31.01	37.59	6.58					
89	3	w	30.92	38.57	7.65					
90	3	m	29.55	36.91	7.36					
91	4	w	31.09	37.85	6.76					
92	4	w	31.01	37.74	6.73					
93	4	m	29.74	36.24	6.50					
94	5	w	30.97	37.43	6.46					
95	5	w	30.99	37.95	6.96					
96	5	m	29.60	36.11	6.51		10:58	CL		

5035A SOIL PREP LOG

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
9-16	F76570-3									
16273	~~F7675~~ 3	w	30.89	36.76	5.87	9-16-10	14:54	CL	40T	17
74	3	tcm	29.74	36.69	6.95	"	"	"	"	"
75	F76570-23	m AH1664	—	—	4.96		15:35	CL	5030A	" 4t5
76	F76305-3	m	—	—	5.20		16:32	"		40H 5t5
77	F76584-1	w/AH1686	—	—	4.63					4t1
78	1	m	—	—	5.20					
79	1	m	—	—	4.53		16:40	CL		

5035 Soil Prep Log.xls NF rev 05/06

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Total Organic Carbon	GP15623/GN41394	1000	0.00	mg/kg	20000	21800	109.0	88-114%
Total Organic Carbon	GP15631/GN41412	1000	0.00	mg/kg	20000	21900	109.5	88-114%
Total Organic Carbon	GP15646/GN41433	1000	0.00	mg/kg	20000	21700	108.5	88-114%

Associated Samples:
Batch GP15623: F76459-1, F76459-2, F76459-3
Batch GP15631: F76459-4, F76459-5, F76459-6, F76459-7
Batch GP15646: F76459-8, F76459-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
% Fines	GN41495	F76459-3	%	29.5	30.4	3.0	0-30%
% Gravel	GN41495	F76459-3	%	0.0	0.0	0.0	0-30%
% Sand	GN41495	F76459-3	%	70.5	69.6	1.3	0-30%
% Silt, Clay, Colloids	GN41495	F76459-3	%	29.5	30.4	3.0	0-30%
Solids, Percent	GN41323	F76459-1	%	79.3	79.4	0.1	0-10%
Total Organic Carbon	GP15623/GN41394	F76459-3	mg/kg	49700	48100	3.3	0-36%
Total Organic Carbon	GP15631/GN41412	F76459-6	mg/kg	58200	32800	55.8*(a)	0-36%
Total Organic Carbon	GP15646/GN41433	F76459-8	mg/kg	65200	73100	11.4	0-36%

Associated Samples:
Batch GN41323: F76459-1, F76459-2, F76459-3, F76459-4, F76459-5, F76459-6, F76459-7, F76459-8, F76459-9
Batch GN41495: F76459-1, F76459-2, F76459-3, F76459-4, F76459-5, F76459-6, F76459-7, F76459-8, F76459-9
Batch GP15623: F76459-1, F76459-2, F76459-3
Batch GP15631: F76459-4, F76459-5, F76459-6, F76459-7
Batch GP15646: F76459-8, F76459-9
(*) Outside of QC limits
(a) High RPD due to possible sample nonhomogeneity.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Total Organic Carbon	GP15623/GN41394	F76459-3	mg/kg	49700	29400	70100	69.5N(a)	88-114%
Total Organic Carbon	GP15631/GN41412	F76459-6	mg/kg	58200	26100	68200	38.3N(a)	88-114%
Total Organic Carbon	GP15646/GN41433	F76459-8	mg/kg	65200	26100	103000	144.8N(a)	88-114%

Associated Samples:
Batch GP15623: F76459-1, F76459-2, F76459-3
Batch GP15631: F76459-4, F76459-5, F76459-6, F76459-7
Batch GP15646: F76459-8, F76459-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091610S1.TXT Date Analyzed: 09/16/10 Methods: SW846 9060A MOD
Analyst: CN Run ID: GN41394
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:11	GN41394-CCV1	1		
09:22	GN41394-CCB1	1		
09:37	GN41394-ICV1	1		
09:51	GN41394-ICB1	1		
10:04	GP15623-MB1	1		
11:14	GP15623-B1	1		
12:37	GP15623-S1	1		
13:18	GP15623-D1	1		
13:49	F76459-3	1		
14:25	F76459-1	1		
15:02	F76459-2	1		
15:32	ZZZZZZ	1		
15:57	GN41394-CCV2	1		
16:09	GN41394-CCB2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091610S1.TXT Date Analyzed: 09/16/10 Methods: SW846 9060A MOD
Run ID: GN41394 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN41394-CCV1	Total Organic Carbon	21000	1000	500	20000	105.0	90-110
GN41394-CCB1	Total Organic Carbon	500 U	1000	500			
GN41394-ICV1	Total Organic Carbon	21900	1000	500	20000	109.5	90-110
GN41394-ICB1	Total Organic Carbon	500 U	1000	500			
GN41394-CCV2	Total Organic Carbon	21400	1000	500	20000	107.0	90-110
GN41394-CCB2	Total Organic Carbon	500 U	1000	500			

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091710S1.TXT Date Analyzed: 09/17/10 Methods: SW846 9060A MOD
Analyst: CN Run ID: GN41412
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:36	GN41412-CCV1	1		
09:47	GN41412-CCB1	1		
10:07	GN41412-ICV1	1		
10:29	GN41412-ICB1	1		
10:39	GP15631-MB1	1		
11:02	GP15631-B1	1		
12:53	GP15631-S1	1		
13:30	GP15631-D1	1		
14:04	F76459-6	1		
14:45	F76459-4	1		
15:41	F76459-5	1		
16:27	F76459-7	1		
17:45	GN41412-CCV2	1		
17:59	GN41412-CCB2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC091710S1.TXT Date Analyzed: 09/17/10 Methods: SW846 9060A MOD
Run ID: GN41412 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN41412-CCV1	Total Organic Carbon	20000	1000	500	20000	100.0	90-110
GN41412-CCB1	Total Organic Carbon	500 U	1000	500			
GN41412-ICV1	Total Organic Carbon	21900	1000	500	20000	109.5	90-110
GN41412-ICB1	Total Organic Carbon	500 U	1000	500			
GN41412-CCV2	Total Organic Carbon	18700	1000	500	20000	93.5	90-110
GN41412-CCB2	Total Organic Carbon	500 U	1000	500			

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC092010S1.TXT Date Analyzed: 09/20/10 Methods: SW846 9060A MOD
Analyst: CN Run ID: GN41433
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:16	GN41433-CCV1	1		
10:27	GN41433-CCB1	1		
10:41	GN41433-ICV1	1		
10:52	GN41433-ICB1	1		
11:19	GP15646-MB1	1		
12:16	GP15646-B1	1		
12:47	GP15646-S1	1		
13:43	GP15646-D1	1		
14:22	F76459-8	1		
15:37	F76459-9	1		
17:10	GN41433-CCV2	1		
17:21	GN41433-CCB2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: F76459
Account: CSXT - CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

File ID: TOC092010S1.TXT Date Analyzed: 09/20/10 Methods: SW846 9060A MOD
Run ID: GN41433 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN41433-CCV1	Total Organic Carbon	21600	1000	500	20000	108.0	90-110
GN41433-CCB1	Total Organic Carbon	500 U	1000	500			
GN41433-ICV1	Total Organic Carbon	21000	1000	500	20000	105.0	90-110
GN41433-ICB1	Total Organic Carbon	500 U	1000	500			
GN41433-CCV2	Total Organic Carbon	20500	1000	500	20000	102.5	90-110
GN41433-CCB2	Total Organic Carbon	500 U	1000	500			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: F76459-1 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-16

Wet Weight (Total)	8.4	g
Tare Weight	1.06	g
Dry Weight (Total)	6.88	g
Solids, Percent	79.3	%

Sample: F76459-2 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-17

Wet Weight (Total)	7.18	g
Tare Weight	1.04	g
Dry Weight (Total)	5.75	g
Solids, Percent	76.7	%

Sample: F76459-3 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-18

Wet Weight (Total)	7.25	g
Tare Weight	1.01	g
Dry Weight (Total)	5.26	g
Solids, Percent	68.1	%

Sample: F76459-4 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: FD-1-100909

Wet Weight (Total)	7.82	g
Tare Weight	1.02	g
Dry Weight (Total)	6.42	g
Solids, Percent	79.4	%

Sample: F76459-5 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-19

Wet Weight (Total)	8.74	g
Tare Weight	1.04	g
Dry Weight (Total)	6.8	g
Solids, Percent	74.8	%

Sample: F76459-6 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-20

Wet Weight (Total)	6.44	g
Tare Weight	.97	g
Dry Weight (Total)	5.16	g
Solids, Percent	76.6	%

Percent Solids Raw Data Summary

Job Number: F76459
Account: CSXT CSX Transportation
Project: AGMININD: 9415829/ENV53216, Former Indiana Creosote Co, Bloomington, IN

Sample: F76459-7 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-21

Wet Weight (Total)	9.33	g
Tare Weight	1.04	g
Dry Weight (Total)	7.37	g
Solids, Percent	76.4	%

Sample: F76459-8 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-22

Wet Weight (Total)	7.97	g
Tare Weight	1	g
Dry Weight (Total)	6.34	g
Solids, Percent	76.6	%

Sample: F76459-9 **Analyzed:** 10-SEP-10 by TC **Method:** SM19 2540B M
ClientID: SED-23

Wet Weight (Total)	8.69	g
Tare Weight	1.01	g
Dry Weight (Total)	6.99	g
Solids, Percent	77.9	%

General Chemistry

Raw Data

TOC ANALYSIS LOG, Solid

DATE:	09-16-10
ANALYST:	UN
INSTRUMENT:	TOC1
INST. FILE NAME:	toc091610s1.txt

METHODS:	SW846 9060A
METHOD FILE:	~~NPOC~~ SSM-COPY 2
CALIB. DATE:	09-13-10
GN BATCH:	41394

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC 1206
CCV:	TOC 1211
QC:	TOC 1206

Sample ID	Bottle #	Rep 1 mg	Rep 2 mg	Rep 3 mg	Rep 4 mg	HCL added (y / n)	GP BATCH	COMMENTS
low	—	100	100	—	—	y		TOC 1208
high	—	100	100	—	—			TOC 1213
CCV	—	100	100	—	—			
CCB	—	100	100	—	—			
ICV	—	100	100	—	—			
ICB	—	100	100	—	—			
MB1	—	100	100	100	100		15623	
B1	—	100E/100	100	100	100			
S1 (F76459-3)	2	100E/100	100	100/100E	100			
D1 (F76459-3)	2	100	100	100	100			
F76459-3	2	100	100	100	100			
↓ -1	2	100	100	100	100			
-2	2	100	100	100	100			
F76273-1	1	100	100	100	100			
CCV	—	100	100	—	—			
CCB	—	100	100	—	—	y		

Oven ID: TOC oven

Thermometer ID: 212

Therm Corr Factor: 0

Oven Temperature:

Observed Temp: 75°C

Corrected Temp: 75°C

Acid Lot# H32032

Glass Wool Lot# GC 646

Balance ID AdvPro4

Analyst Signature: UN 09-16-10

* UN 09-16-10

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	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	low	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:1251mg			Completed		9/16/2010 8:07
2	Unknown	SSM-TC	high	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:51158mg			Completed		9/16/2010 9:06
3	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21047mg			Completed		9/16/2010 9:16
4	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 9:30
5	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21909mg			Completed		9/16/2010 9:45
6	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 9:58
7	Unknown	SSM-TC	GP15623-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 10:2
8	Unknown	SSM-TC	GP15623-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21783mg			Completed		9/16/2010 11:3
9	Unknown	SSM-TC	GP15623-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:47713mg			Completed		9/16/2010 1:10
10	Unknown	SSM-TC	GP15623-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:32788mg			Completed		9/16/2010 1:40
11	Unknown	SSM-TC	F76459-3	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:33827mg			Completed		9/16/2010 2:16
12	Unknown	SSM-TC	F76459-1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:67024mg			Completed		9/16/2010 2:53
13	Unknown	SSM-TC	F76459-2	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:42705mg			Completed		9/16/2010 3:27
14	Unknown	SSM-TC	F76273-1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:569.6mg			Completed		9/16/2010 3:49
15	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21386mg			Completed		9/16/2010 4:03
16	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 4:15

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	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21047mg			Completed		9/16/2010 9:16
2	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 9:30
3	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21909mg			Completed		9/16/2010 9:45
4	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 9:58
5	Unknown	SSM-TC	GP15623-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 10:2
6	Unknown	SSM-TC	GP15623-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21783mg			Completed		9/16/2010 11:3
7	Unknown	SSM-TC	GP15623-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:47713mg			Completed		9/16/2010 1:10
8	Unknown	SSM-TC	GP15623-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:32788mg			Completed		9/16/2010 1:40
9	Unknown	SSM-TC	F76459-3	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:33827mg			Completed		9/16/2010 2:16
10	Unknown	SSM-TC	F76459-1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:67024mg			Completed		9/16/2010 2:53
11	Unknown	SSM-TC	F76459-2	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:42705mg			Completed		9/16/2010 3:27
12	Unknown	SSM-TC	F76273-1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:569.6mg			Completed		9/16/2010 3:49
13	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21386mg			Completed		9/16/2010 4:03
14	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/16/2010 4:15

Instr.Information

System	SSM-COPY 2
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Sample

Sample Name:	low
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

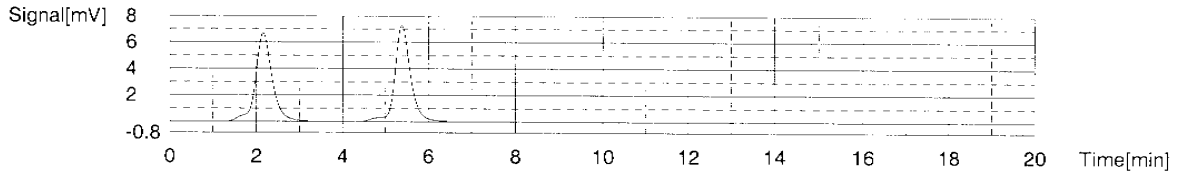
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1251mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	17.32	17.32	1238863ug	1239mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 8:03:19 AM
2	17.76	17.76	1263737ug	1264mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 8:07:32 AM

Mean Area	17.54
Mean CNV	17.54
Mean Conc.	1251mg



Sample

Sample Name:	high
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

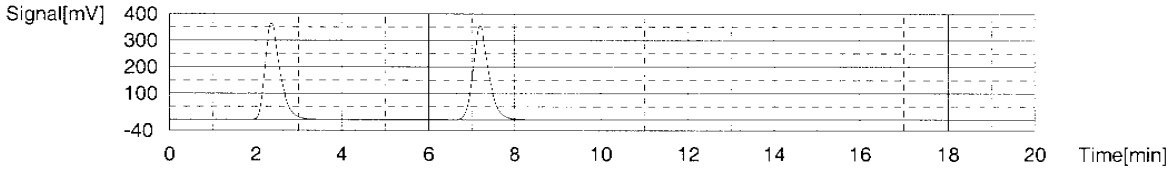
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:51158mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	891.4	891.4	50652466ug	50652mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:01:31 AM
2	909.3	909.3	51664391ug	51664mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:06:57 AM

Mean Area 900.4
Mean CNV 900.4
Mean Conc. 51158mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

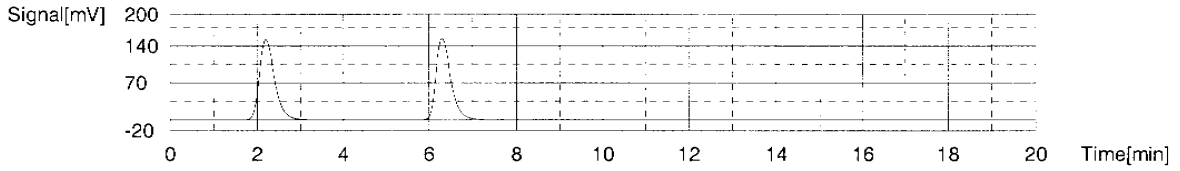
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21047mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	370.7	370.7	21216187ug	21216mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:11:43 AM
2	364.7	364.7	20876994ug	20877mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:16:46 AM

Mean Area 367.7
Mean CNV 367.7
Mean Conc. 21047mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

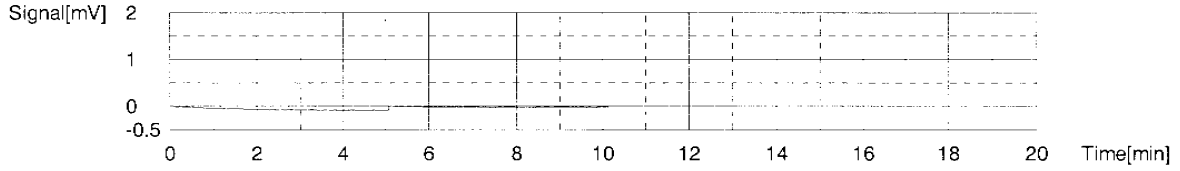
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:22:05 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:30:32 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: ICV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

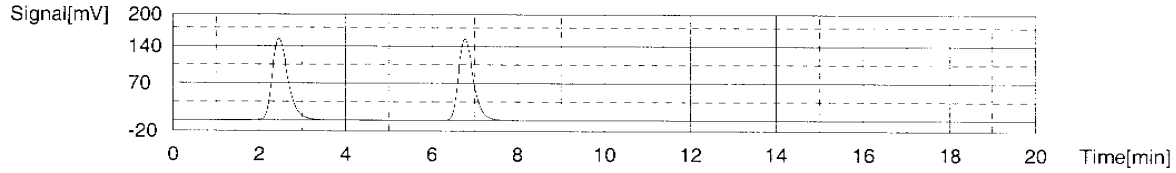
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21909mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	390.4	390.4	22329870ug	22330mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:37:11 AM
2	375.5	375.5	21487541ug	21488mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:45:17 AM

Mean Area 383.0
Mean CNV 382.9
Mean Conc. 21909mg



Sample

Sample Name: ICB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

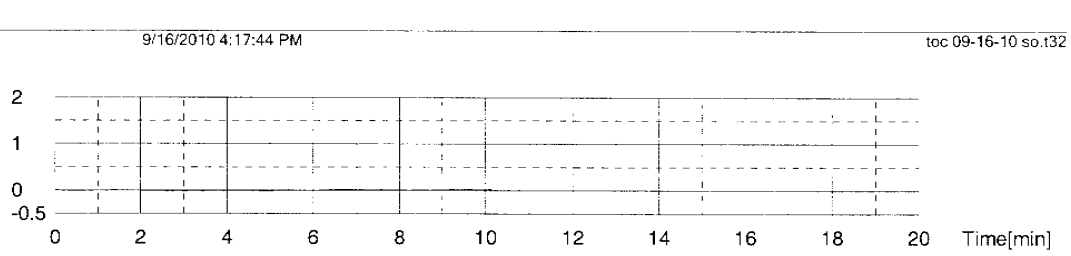
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:51:55 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 9:58:01 AM

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



Sample

Sample Name:	GP15623-MB1
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

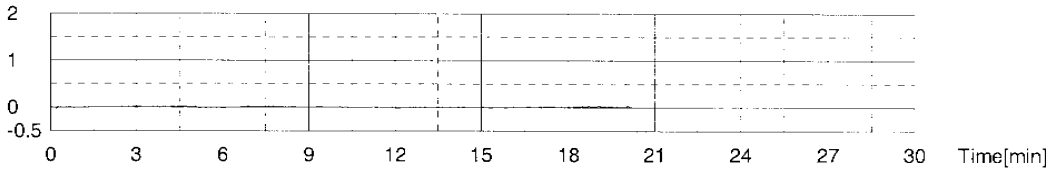
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 10:04:41 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 10:10:06 AM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 10:15:38 AM
4	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 10:21:33 AM

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



Sample

Sample Name: GP15623-B1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

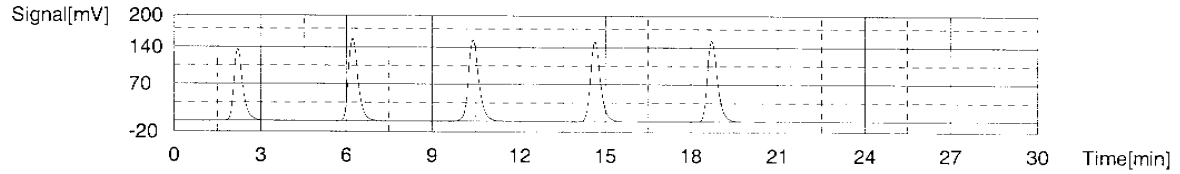
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21783mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	296.0	296.0	16993237ug	16993mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 11:07:52 AM
2	373.6	373.6	21380130ug	21380mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 11:14:07 AM
3	389.1	389.1	22256378ug	22256mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 11:20:15 AM
4	382.1	382.1	21860653ug	21861mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 11:25:33 AM
5	378.1	378.1	21634524ug	21635mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 11:31:54 AM

Mean Area 380.7
Mean CNV 380.7
Mean Conc. 21783mg



Sample

Sample Name: GP15623-S1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

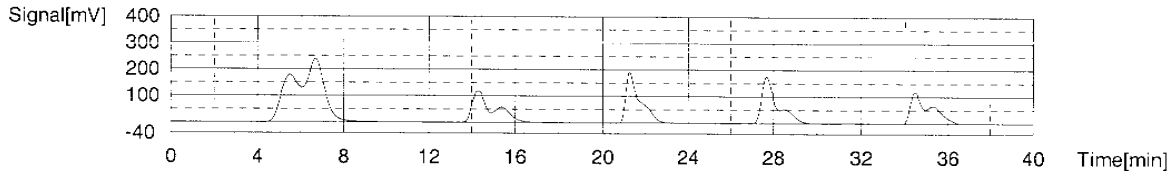
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:47713mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	2441	2441	138254651ug	138255mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 12:29:42 PM
2	820.1	820.1	46621725ug	46622mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 12:37:18 PM
3	884.1	884.1	50239781ug	50240mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 12:46:37 PM
4	892.4	892.4	50708998ug	50709mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 12:54:27 PM
5	2.212	2.212	384776ug	384.8mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 12:59:53 PM
6	761.0	761.0	43280676ug	43281mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:10:38 PM

Mean Area 839.4
Mean CNV 839.4
Mean Conc. 47713mg



Sample

Sample Name: GP15623-D1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

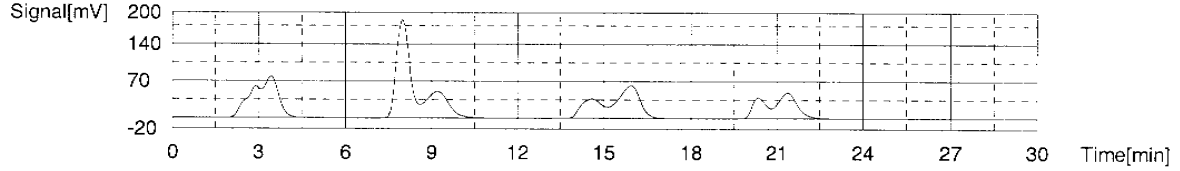
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:32788mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	505.7	505.7	28848024ug	28848mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:18:13 PM
2	892.2	892.2	50697691ug	50698mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:25:54 PM
3	527.2	527.2	30063465ug	30063mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:33:58 PM
4	376.5	376.5	21544073ug	21544mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:40:51 PM

Mean Area	575.4
Mean CNV	575.4
Mean Conc.	32788mg



Sample

Sample Name:	F76459-3
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

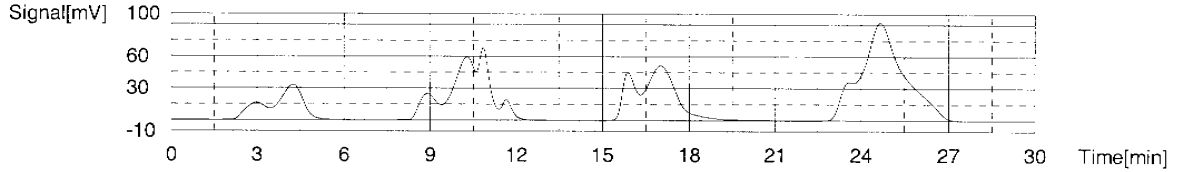
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:33827mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	267.3	267.3	15370765ug	15371mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:49:07 PM
2	640.4	640.4	36462902ug	36463mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 1:57:57 PM
3	502.9	502.9	28689734ug	28690mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 2:07:40 PM
4	964.5	964.5	54784964ug	54785mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 2:16:08 PM

Mean Area	593.8
Mean CNV	593.8
Mean Conc.	33827mg



Sample

Sample Name: F76459-1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

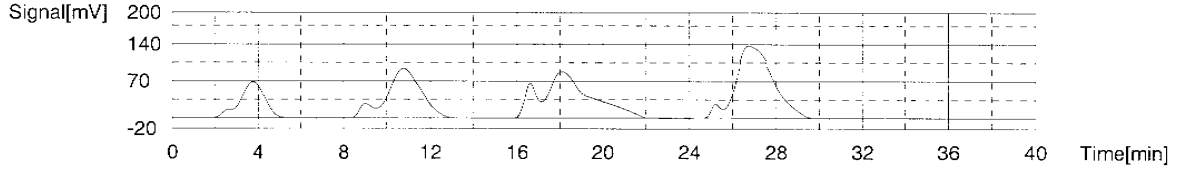
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:67024mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	558.0	558.0	31804654ug	31805mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 2:25:22 PM
2	1060	1060	60183783ug	60184mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 2:34:15 PM
3	1440	1440	81665991ug	81666mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 2:44:12 PM
4	1666	1666	94442252ug	94442mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 2:53:34 PM

Mean Area 1181
Mean CNV 1181
Mean Conc. 67024mg



Sample

Sample Name: F76459-2
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

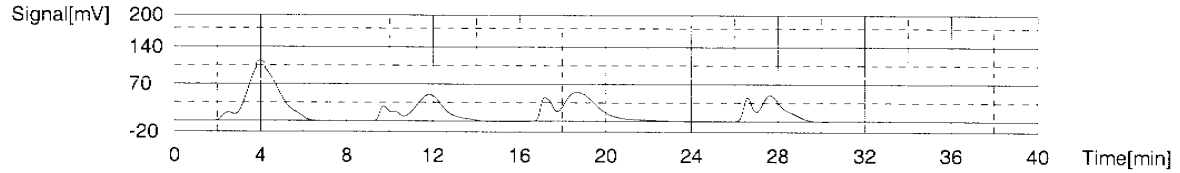
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:42705mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1138	1138	64593289ug	64593mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:02:27 PM
2	590.0	590.0	33613682ug	33614mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:10:44 PM
3	782.1	782.1	44473504ug	44474mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:20:40 PM
4	493.2	493.2	28141372ug	28141mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:27:32 PM

Mean Area 750.8
Mean CNV 750.8
Mean Conc. 42705mg



Sample

Sample Name: F76273-1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

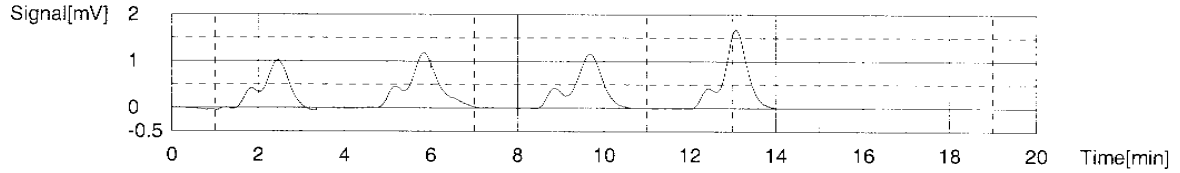
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:569.6mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	4.597	4.597	519605ug	519.6mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:32:47 PM
2	5.597	5.597	576137ug	576.1mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:39:02 PM
3	5.383	5.383	564039ug	564.0mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:44:33 PM
4	6.348	6.348	618593ug	618.6mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:49:34 PM

Mean Area 5.481
Mean CNV 5.481
Mean Conc. 569.6mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

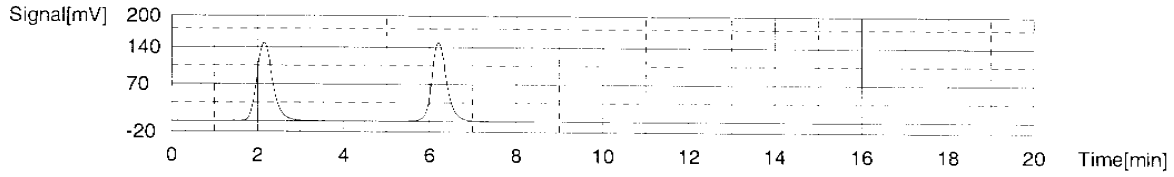
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21386mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	385.2	385.2	22035903ug	22036mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 3:57:54 PM
2	362.2	362.2	20735664ug	20736mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 4:03:08 PM

Mean Area 373.7
Mean CNV 373.7
Mean Conc. 21386mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

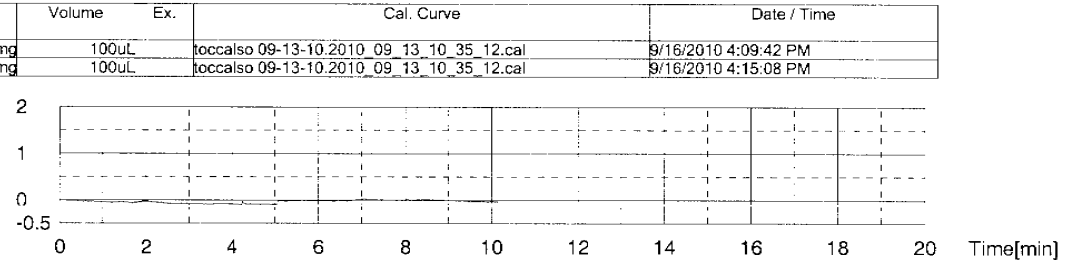
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 4:09:42 PM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/16/2010 4:15:08 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



TOC-V Cal Curve Information
toccalso 09-13-10.2010_09_13_10_35_12.cal

Date of Creation 10:10:40 AM 9/13/2010
User
System SSM-COPY 2

Cal. Curve

Sample Name: Untitled
Sample ID: Untitled
Cal. Curve: toccalso 09-13-10.2010_09_13_10_35_12.cal
Status Completed
Comment:

Type	Anal.	Density
Standard	SSM-TC	1.000mg/uL

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:41:23 AM
2	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:47:27 AM

Mean Area 0.000
Mean CNV 0.000
SD Area 0.000
CV Area 0.00%

AbsC: 1000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	18.00	18.00	000000ug	100.0mg	100uL	*******		9/13/2010 10:52:39 AM
2	18.05	18.05	000000ug	100.0mg	100uL	*******		9/13/2010 10:57:27 AM

Mean Area 18.02
Mean CNV 18.02
SD Area 0.03536
CV Area 0.20%

AbsC: 5000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	84.70	84.70	000000ug	100.0mg	100uL	*******		9/13/2010 11:02:35 AM
2	89.80	89.80	000000ug	100.0mg	100uL	*******		9/13/2010 11:07:25 AM

Mean Area 87.25
Mean CNV 87.25
SD Area 3.606
CV Area 4.13%

AbsC: 10000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	156.9	156.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:12:31 AM
2	170.6	170.6	000000ug	100.0mg	100uL	*******		9/13/2010 11:24:34 AM

Mean Area 163.8
Mean CNV 163.8
SD Area 9.687
CV Area 5.92%

AbsC: 20000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	328.9	328.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:32:30 AM
2	372.2	372.2	000000ug	100.0mg	100uL	*******		9/13/2010 11:38:50 AM

Mean Area 350.6
Mean CNV 350.6
SD Area 30.62
CV Area 8.73%

AbsC: 25000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	444.0	444.0	000000ug	100.0mg	100uL	*******		9/13/2010 11:44:48 AM
2	1.004	1.004	000000ug	100.0mg	100uL	*******	E	9/13/2010 12:28:52 PM
3	405.4	405.4	000000ug	100.0mg	100uL	*******		9/13/2010 12:34:58 PM

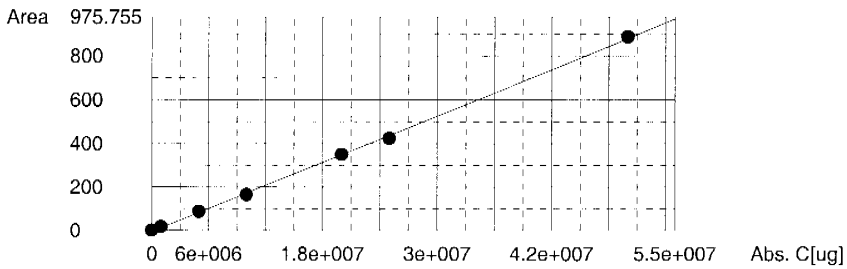
Mean Area 424.7
Mean CNV 424.7
SD Area 27.29
CV Area 6.43%

AbsC: 50000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	877.0	877.0	000000ug	100.0mg	100uL	*******		9/13/2010 12:41:26 PM
2	897.1	897.1	000000ug	100.0mg	100uL	*******		9/13/2010 12:47:09 PM

Mean Area 887.0
Mean CNV 887.0
SD Area 14.21
CV Area 1.60%

Slope: 0.00002
Intercept -4.594
r^2 0.999407
Zero Shift No



TOC ANALYSIS LOG, Solid

DATE:	09-17-10
ANALYST:	LN
INSTRUMENT:	TOC1
INST. FILE NAME:	toc091710s1.txt

METHODS:	SW846 9060A
METHOD FILE:	SSM - COPY 2
CALIB. DATE:	09-13-10
GN BATCH:	41412

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC 1206
CCV:	TOC 1211
QC:	TOC 1206

Sample ID	Bottle #	Rep 1 mg	Rep 2 mg	Rep 3 mg	Rep 4 mg	HCL added (y / n)	GP BATCH	COMMENTS
low	—	100	100	—	—	y		
high	—	100	100	—	—			
CCV	—	100	100	—	—			
CCB	—	100	100	—	—			
ICV	—	100	100	—	—			
ICB	—	100	100	—	—			E-Excluded - NDIR
MB1	—	100	100	100	100		15631	baseline fluc
B1	—	100	100	100	100E/100			
S1 (F76459-6)	2	100	100	100	100			
D1 (F76459-6)	2	100	100	100	100			
F76459-6	2	100	100	100E/100	100			
-4	2	100/100E	100E/100	100	100			
-5	2	100	100	100	100E/100			
-7	2	100	100	100E/100	100			
CCV	—	100	100	—	—			
CCB	—	100 E	100	100	—			
				LN 09-18-10				

Oven ID: TOC oven

Thermometer ID: 212

Therm. Corr Factor: 1

Oven Temperature:

Observed Temp: 75°C

Corrected Temp: 75°C

Acid Lot# H32032

Glass Wool Lot# GC 646

Balance ID AdvPro4

Analyst Signature: LN 09-18-10

33

C:\TOC3201\Data\toc 09-17 2

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20046mg			Completed		9/17/2010 9:41
2	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 9:52
3	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21886mg			Completed		9/17/2010 10:2
4	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 10:3
5	Unknown	SSM-TC	GP15631-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 10:5
6	Unknown	SSM-TC	GP15631-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21919mg			Completed		9/17/2010 11:2
7	Unknown	SSM-TC	GP15631-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52269mg			Completed		9/17/2010 1:21
8	Unknown	SSM-TC	GP15631-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:25127mg			Completed		9/17/2010 1:56
9	Unknown	SSM-TC	F76459-6	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:44578mg			Completed		9/17/2010 2:37
10	Unknown	SSM-TC	F76459-4	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:58779mg			Completed		9/17/2010 3:28
11	Unknown	SSM-TC	F76459-5	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:41739mg			Completed		9/17/2010 4:16
12	Unknown	SSM-TC	F76459-7	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:41208mg			Completed		9/17/2010 4:56
13	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:18692mg			Completed		9/17/2010 5:51
14	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 6:04

C:\TOC3201\Data\toc 09-17-10 no.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	low	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:1315mg			Completed		9/17/2010 9:19
2	Unknown	SSM-TC	high	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52476mg			Completed		9/17/2010 9:30
3	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20046mg			Completed		9/17/2010 9:41
4	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 9:52
5	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21886mg			Completed		9/17/2010 10:2
6	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 10:3
7	Unknown	SSM-TC	GP15631-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 10:5
8	Unknown	SSM-TC	GP15631-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21919mg			Completed		9/17/2010 11:2
9	Unknown	SSM-TC	GP15631-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52269mg			Completed		9/17/2010 1:21
10	Unknown	SSM-TC	GP15631-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:25127mg			Completed		9/17/2010 1:56
11	Unknown	SSM-TC	F76459-6	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:44578mg			Completed		9/17/2010 2:37
12	Unknown	SSM-TC	F76459-4	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:58779mg			Completed		9/17/2010 3:28
13	Unknown	SSM-TC	F76459-5	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:41739mg			Completed		9/17/2010 4:16
14	Unknown	SSM-TC	F76459-7	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:41208mg			Completed		9/17/2010 4:56
15	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:18692mg			Completed		9/17/2010 5:51
16	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/17/2010 6:04

Instr.Information

System	SSM-COPY 2
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Sample

Sample Name:	low
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

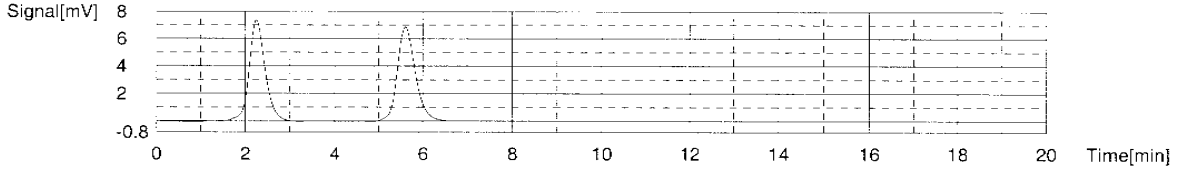
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1315mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	18.08	18.08	1281828ug	1282mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:11:51 AM
2	19.26	19.26	1348536ug	1349mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:19:31 AM

Mean Area	18.67
Mean CNV	18.67
Mean Conc.	1315mg



Sample

Sample Name:	high
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

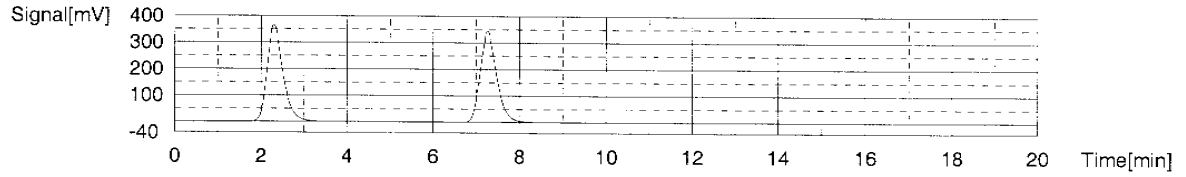
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:52476mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	935.6	935.6	53151186ug	53151mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:25:34 AM
2	911.7	911.7	51800068ug	51800mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:30:56 AM

Mean Area 923.7
Mean CNV 923.7
Mean Conc. 52476mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

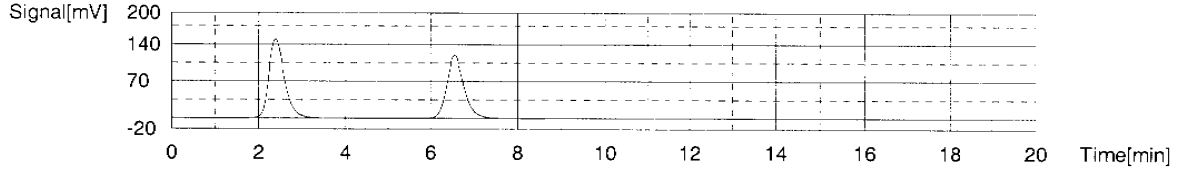
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:20046mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	371.3	371.3	21250106ug	21250mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:36:21 AM
2	328.7	328.7	18841837ug	18842mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:41:24 AM

Mean Area	350.0
Mean CNV	350.0
Mean Conc.	20046mg



Sample

Sample Name:	CCB
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

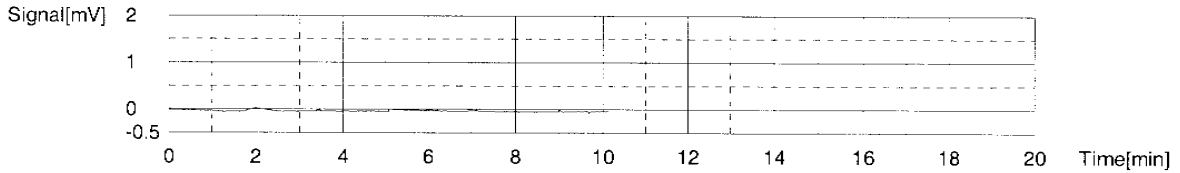
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:47:11 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 9:52:34 AM

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



Sample

Sample Name: ICV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

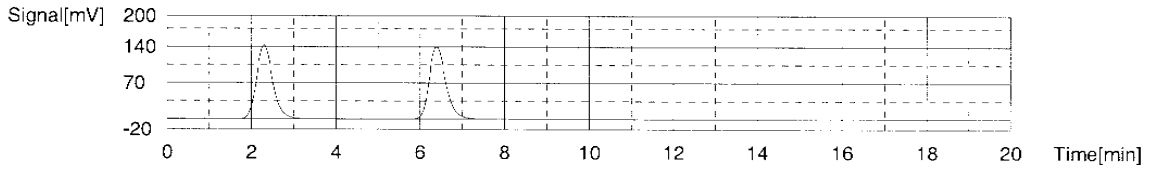
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21886mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	382.9	382.9	21905879ug	21906mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:07:56 AM
2	382.2	382.2	21866306ug	21866mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:23:45 AM

Mean Area 382.6
Mean CNV 382.6
Mean Conc. 21886mg



Sample

Sample Name: ICB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

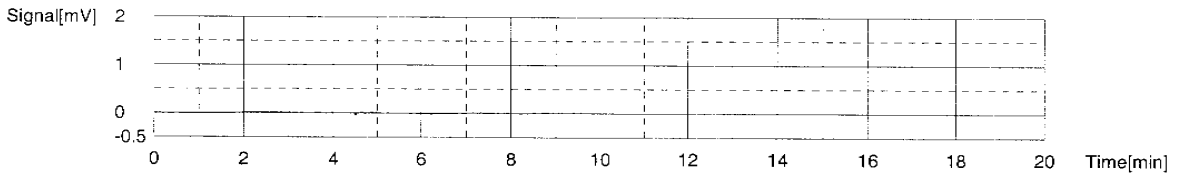
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:29:07 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:34:40 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15631-MB1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

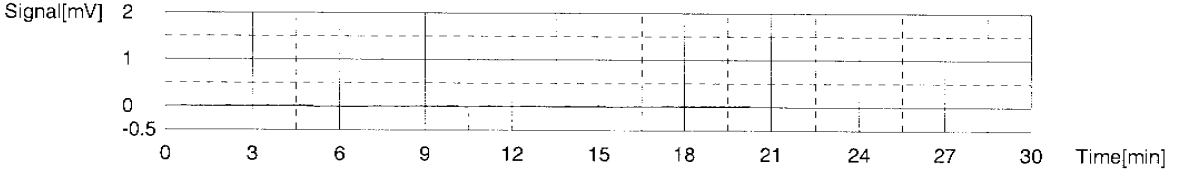
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:39:59 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:45:21 AM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:52:24 AM
4	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 10:57:56 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15631-B1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

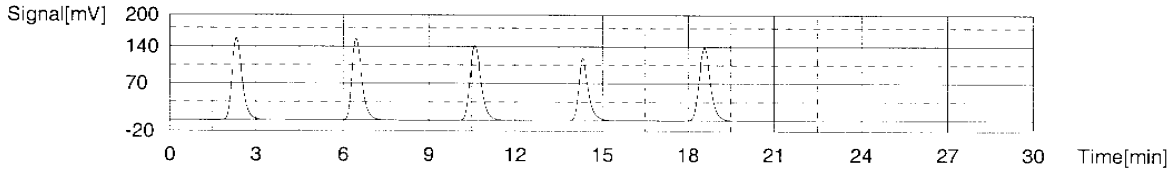
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21919mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	384.5	384.5	21996330ug	21996mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 11:02:58 AM
2	378.0	378.0	21628871ug	21629mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 11:08:37 AM
3	383.7	383.7	21951104ug	21951mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 11:13:41 AM
4	273.7	273.7	15732570ug	15733mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 11:19:40 AM
5	386.3	386.3	22098088ug	22098mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 11:25:37 AM

Mean Area 383.1
Mean CNV 383.1
Mean Conc. 21919mg



Sample

Sample Name: GP15631-S1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

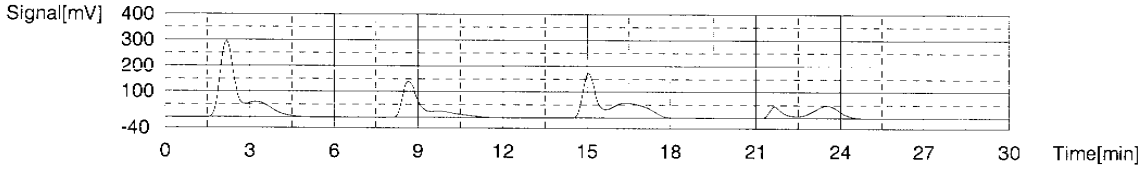
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:52269mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1423	1423	80704945ug	80705mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 12:53:48 PM
2	689.9	689.9	39261242ug	39261mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:02:42 PM
3	1090	1090	61879746ug	61880mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:12:34 PM
4	477.1	477.1	27231205ug	27231mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:21:45 PM

Mean Area 920.0
Mean CNV 920.0
Mean Conc. 52269mg



Sample

Sample Name: GP15631-D1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

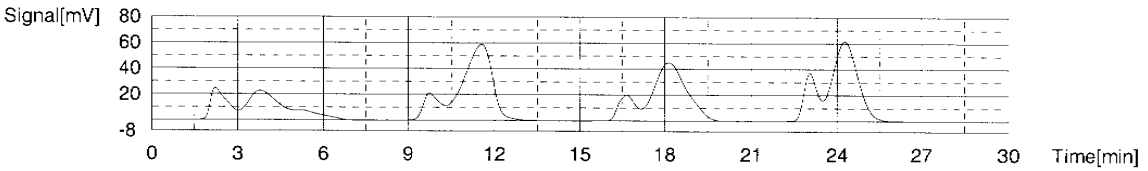
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:25127mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	323.5	323.5	18547870ug	18548mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:30:43 PM
2	493.0	493.0	28130066ug	28130mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:38:26 PM
3	437.0	437.0	24964267ug	24964mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:49:47 PM
4	506.0	506.0	28864984ug	28865mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 1:56:41 PM

Mean Area 439.9
Mean CNV 439.9
Mean Conc. 25127mg



Sample

Sample Name:	F76459-6
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

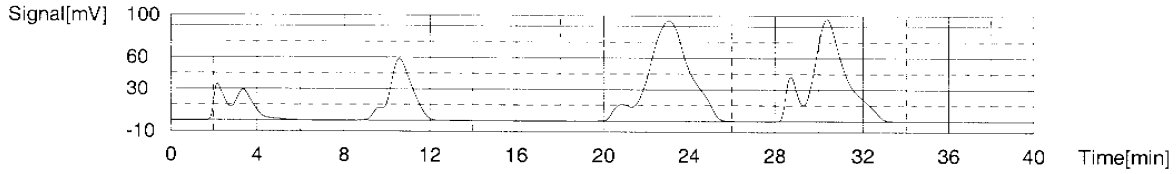
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:44578mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	302.8	302.8	17377655ug	17378mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:04:54 PM
2	444.0	444.0	25359992ug	25360mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:12:14 PM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:17:49 PM
4	1295	1295	73468833ug	73469mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:28:10 PM
5	1094	1094	62105875ug	62106mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:37:31 PM

Mean Area	784.0
Mean CNV	784.0
Mean Conc.	44578mg



Sample

Sample Name:	F76459-4
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

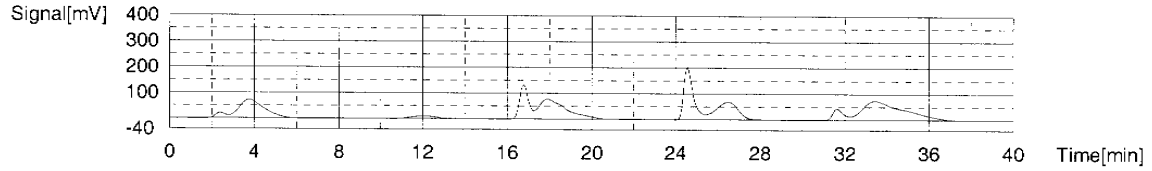
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:58779mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	665.6	665.6	37887511ug	37888mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:45:13 PM
2	0.7742	0.7742	303494ug	303.5mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 2:48:34 PM
3	86.47	86.47	5148060ug	5148mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 3:01:51 PM
4	1112	1112	63123453ug	63123mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 3:10:18 PM
5	1161	1161	65893528ug	65894mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 3:19:04 PM
6	1202	1202	68211345ug	68211mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 3:28:36 PM

Mean Area 1035
Mean CNV 1035
Mean Conc. 58779mg



Sample

Sample Name: F76459-5
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

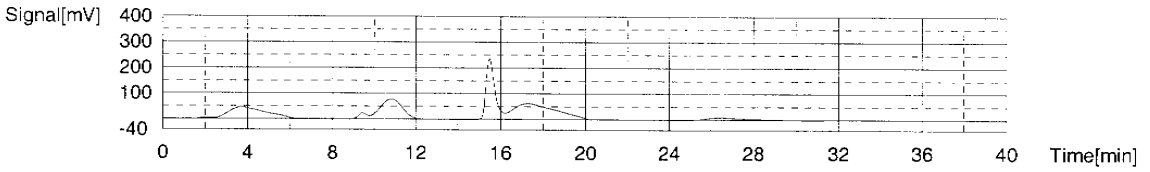
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:41739mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	577.9	577.9	32929644ug	32930mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 3:41:32 PM
2	652.7	652.7	37158247ug	37158mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 3:51:57 PM
3	1568	1568	88902104ug	88902mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:00:47 PM
4	1.437	1.437	340963ug	341.0mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:04:23 PM
5	136.3	136.3	7965056ug	7965mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:16:16 PM

Mean Area 733.7
Mean CNV 733.7
Mean Conc. 41739mg



Sample

Sample Name: F76459-7
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

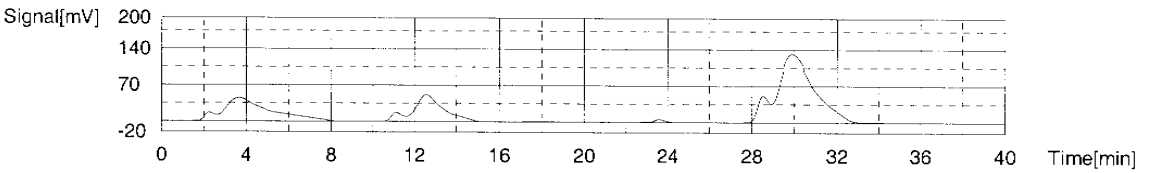
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:41208mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	706.5	706.5	40199675ug	40200mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:27:24 PM
2	532.0	532.0	30334819ug	30335mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:35:33 PM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:41:16 PM
4	20.87	20.87	1439552ug	1440mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:46:26 PM
5	1638	1638	92859353ug	92859mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 4:56:59 PM

Mean Area 724.3
Mean CNV 724.3
Mean Conc. 41208mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

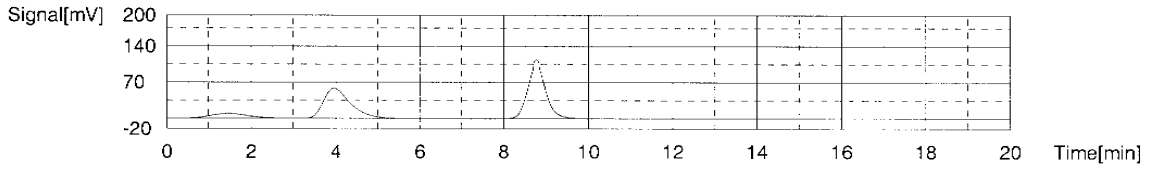
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:18692mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	327.7	327.7	18785305ug	18785mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 5:45:46 PM
2	324.4	324.4	18598749ug	18599mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 5:51:16 PM

Mean Area 326.1
Mean CNV 326.1
Mean Conc. 18692mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

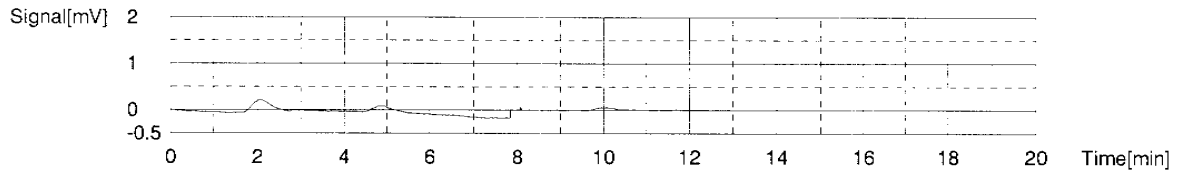
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.6153	0.6153	294511ug	294.5mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 5:54:19 PM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 5:59:36 PM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/17/2010 6:04:52 PM

9/18/2010 9:01:17 AM toc 09-17-10 so.t32

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



12/12

TOC-V Cal Curve Information
toccalso 09-13-10.2010_09_13_10_35_12.cal

Date of Creation 10:10:40 AM 9/13/2010
User
System SSM-COPY 2

Cal. Curve

Sample Name: Untitled
Sample ID: Untitled
Cal. Curve: toccalso 09-13-10.2010_09_13_10_35_12.cal
Status Completed
Comment:

Type	Anal	Density
Standard	SSM-TC	1.000mg/uL

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:41:23 AM
2	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:47:27 AM

Mean Area 0.000
Mean CNV 0.000
SD Area 0.000
CV Area 0.00%

AbsC: 1000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	18.00	18.00	000000ug	100.0mg	100uL	*******		9/13/2010 10:52:39 AM
2	18.05	18.05	000000ug	100.0mg	100uL	*******		9/13/2010 10:57:27 AM

Mean Area 18.02
Mean CNV 18.02
SD Area 0.03536
CV Area 0.20%

AbsC: 5000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	84.70	84.70	000000ug	100.0mg	100uL	*******		9/13/2010 11:02:35 AM
2	89.80	89.80	000000ug	100.0mg	100uL	*******		9/13/2010 11:07:25 AM

Mean Area 87.25
Mean CNV 87.25
SD Area 3.606
CV Area 4.13%

AbsC: 10000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	156.9	156.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:12:31 AM
2	170.6	170.6	000000ug	100.0mg	100uL	*******		9/13/2010 11:24:34 AM

Mean Area 163.8
Mean CNV 163.8
SD Area 9.687
CV Area 5.92%

AbsC: 20000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	328.9	328.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:32:30 AM
2	372.2	372.2	000000ug	100.0mg	100uL	*******		9/13/2010 11:38:50 AM

Mean Area	350.6
Mean CNV	350.6
SD Area	30.62
CV Area	8.73%

AbsC: 25000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	444.0	444.0	000000ug	100.0mg	100uL	*******		9/13/2010 11:44:48 AM
2	1.004	1.004	000000ug	100.0mg	100uL	*******	E	9/13/2010 12:28:52 PM
3	405.4	405.4	000000ug	100.0mg	100uL	*******		9/13/2010 12:34:58 PM

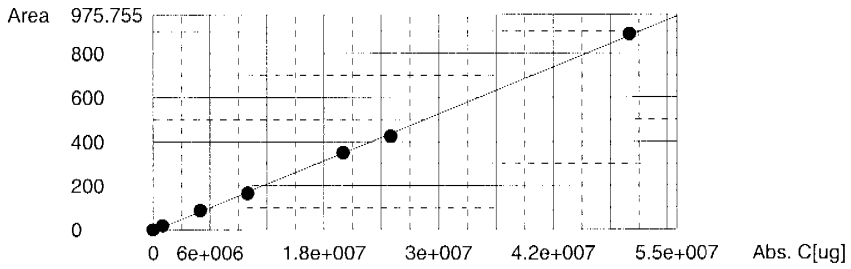
Mean Area	424.7
Mean CNV	424.7
SD Area	27.29
CV Area	6.43%

AbsC: 50000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	877.0	877.0	000000ug	100.0mg	100uL	*******		9/13/2010 12:41:26 PM
2	897.1	897.1	000000ug	100.0mg	100uL	*******		9/13/2010 12:47:09 PM

Mean Area	887.0
Mean CNV	887.0
SD Area	14.21
CV Area	1.60%

Slope:	0.00002
Intercept	-4.594
r^2	0.999407
Zero Shift	No



TOC ANALYSIS LOG, Solid

DATE:	09-20-10
ANALYST:	LLN
INSTRUMENT:	TOC1
INST. FILE NAME:	toc092010s1.txt

METHODS:	SW846 9060A
METHOD FILE:	SSM- COPY 2
CALIB. DATE:	09-13-10
GN BATCH:	41433

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC 1206
CCV:	TOC 1211
QC:	TOC 1206

Sample ID	Bottle #	Rep 1 mg	Rep 2 mg	Rep 3 mg	Rep 4 mg	HCL added (y / n)	GP BATCH	COMMENTS
low	—	100	100	—	—	y		TOC 1203
high	—	100	100	—	—			TOC 1213
CCV	—	100	100	—	—			
CCB	—	100	100	—	—			
ICV	—	100	100	—	—			
ICB	—	100	100	—	—			
MB1	—	100	100	100	100		15646	
B1	—	100	100	100	100			
S1(F76459-8)	2	100	100/100E	100	100			E- Excluded NDIR baseline fluctuation
D1(F76459-8)	2	100E/100E	100/100	100	100			
F76459-8	2	100/100E	100/100E	100/100E	100			
F76459-9	2	100E/100E	100/100	100	100			
CCV	—							
CCB	—							

Oven ID: Toc oven

Thermometer ID: 212

Therm Corr Factor: 0

Oven Temperature:

Observed Temp: 74°C

Corrected Temp: 74°C

Acid Lot# H32032

Glass Wool Lot# GC 646

Analyst Signature: LLN 09-20-10

Balance ID AdvPro4

C:\TOC3201\Data\toc 09-20-10 so ud.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21635mg			Completed		9/20/2010 10:2
2	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 10:3
3	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21018mg			Completed		9/20/2010 10:4
4	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 11:0
5	Unknown	SSM-TC	GP15646-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 11:3
6	Unknown	SSM-TC	GP15646-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21742mg			Completed		9/20/2010 12:3
7	Unknown	SSM-TC	GP15646-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:78895mg			Completed		9/20/2010 1:22
8	Unknown	SSM-TC	GP15646-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:55957mg			Completed		9/20/2010 2:13
9	Unknown	SSM-TC	F76459-8	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:49944mg			Completed		9/20/2010 3:10
10	Unknown	SSM-TC	F76459-9	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:33077mg			Completed		9/20/2010 4:11
11	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20543mg			Completed		9/20/2010 5:15
12	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 5:26

C:\TOC3201\Data\toc 09-20-10 so.t32

	Type	Analysis	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Notes	Co	Status	A	Date / Time
1	Unknown	SSM-TC	low	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:1189mg			Completed		9/20/2010 9:37
2	Unknown	SSM-TC	high	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:52566mg			Completed		9/20/2010 9:54
3	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21635mg			Completed		9/20/2010 10:2
4	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 10:3
5	Unknown	SSM-TC	ICV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21018mg			Completed		9/20/2010 10:4
6	Unknown	SSM-TC	ICB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 11:0
7	Unknown	SSM-TC	GP15646-MB1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 11:3
8	Unknown	SSM-TC	GP15646-B1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:21742mg			Completed		9/20/2010 12:3
9	Unknown	SSM-TC	GP15646-S1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:78895mg			Completed		9/20/2010 1:22
10	Unknown	SSM-TC	GP15646-D1	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:55957mg			Completed		9/20/2010 2:13
11	Unknown	SSM-TC	F76159-8	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:49944mg			Completed		9/20/2010 3:10
12	Unknown	SSM-TC	F76459-9	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:33077mg			Completed		9/20/2010 4:11
13	Unknown	SSM-TC	CCV	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:20543mg			Completed		9/20/2010 5:15
14	Unknown	SSM-TC	CCB	<Untitled>	0A-0012	C:\TOC	1.000	SSM-TC:259.7mg			Completed		9/20/2010 5:26

Instr.Information

System	SSM-COPY 2
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Sample

Sample Name:	low
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

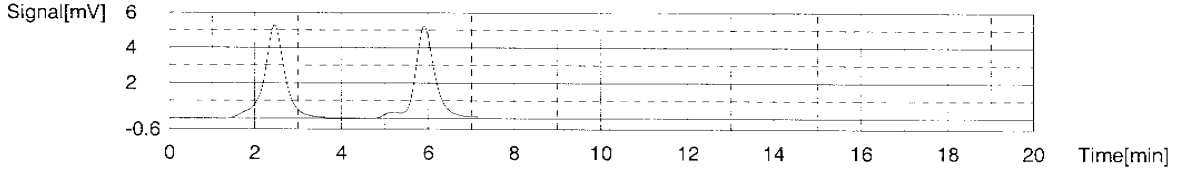
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1189mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	16.76	16.76	1207205ug	1207mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 9:32:19 AM
2	16.12	16.12	1171025ug	1171mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 9:37:16 AM

Mean Area	16.44
Mean CNV	16.44
Mean Conc.	1189mg



Sample

Sample Name:	high
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

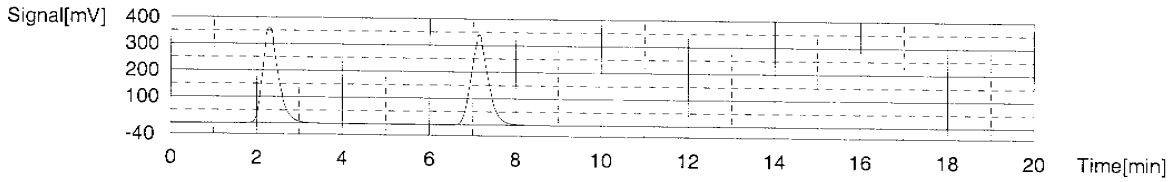
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:52566mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	922.1	922.1	52388002ug	52388mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 9:49:30 AM
2	928.4	928.4	52744155ug	52744mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 9:54:39 AM

Mean Area 925.3
Mean CNV 925.3
Mean Conc. 52566mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

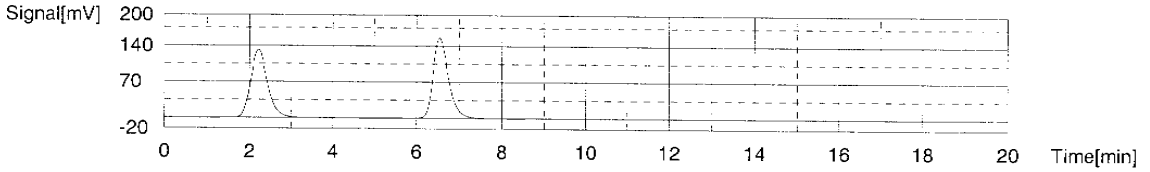
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21635mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	363.3	363.3	20797849ug	20798mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:16:01 AM
2	392.9	392.9	22471200ug	22471mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:21:07 AM

Mean Area	378.1
Mean CNV	378.1
Mean Conc.	21635mg



Sample

Sample Name:	CCB
Sample ID:	<Untitled>
Origin:	Copy 2 of SSM.met
Status	Completed
Chk. Result	

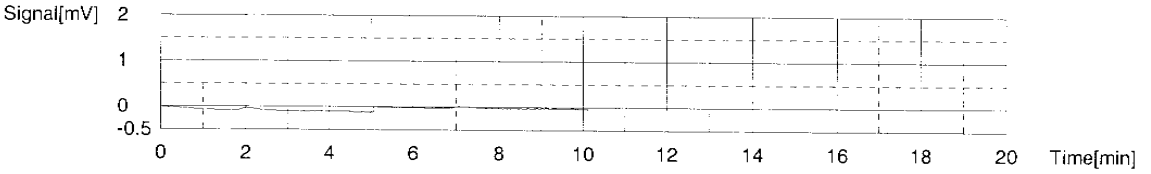
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:27:48 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:35:13 AM

Mean Area	0.000
Mean CNV	0.000
Mean Conc.	259.7mg



Sample

Sample Name: ICV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

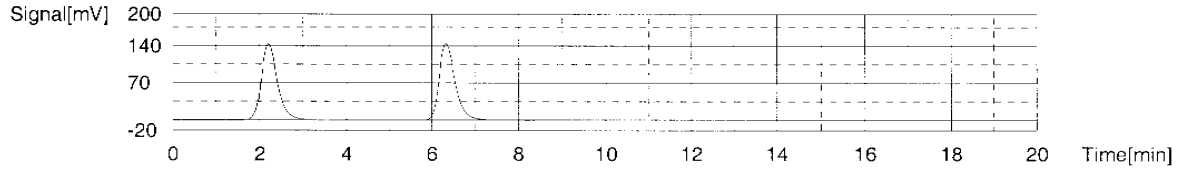
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21018mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	365.4	365.4	20916566ug	20917mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:41:32 AM
2	369.0	369.0	21120082ug	21120mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:47:09 AM

Mean Area 367.2
Mean CNV 367.2
Mean Conc. 21018mg



Sample

Sample Name: ICB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

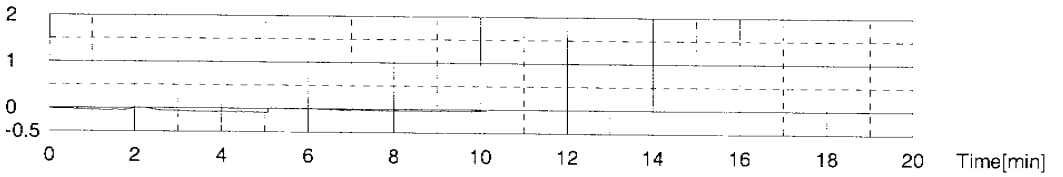
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 10:52:54 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 11:06:59 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc 259.7mg



Sample

Sample Name: GP15646-MB1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

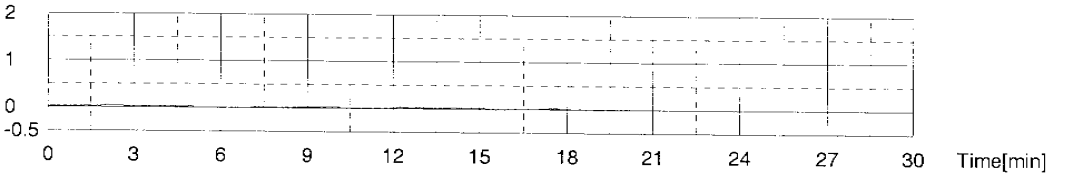
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 11:19:43 AM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 11:27:36 AM
3	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 11:32:56 AM
4	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 11:38:18 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



Sample

Sample Name: GP15646-B1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

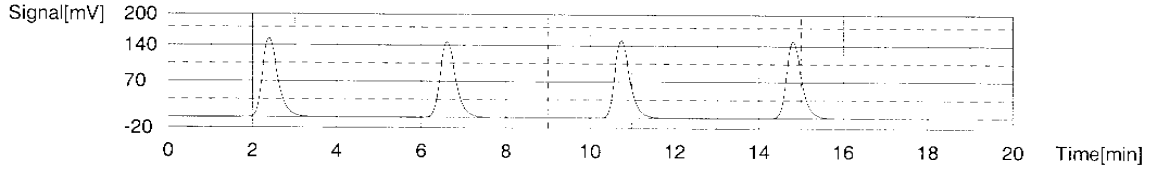
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:21742mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	391.5	391.5	22392055ug	22392mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 12:16:44 PM
2	376.4	376.4	21538420ug	21538mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 12:21:25 PM
3	379.5	379.5	21713669ug	21714mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 12:26:13 PM
4	372.6	372.6	21323598ug	21324mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 12:31:00 PM

Mean Area 380.0
Mean CNV 380.0
Mean Conc. 21742mg



Sample

Sample Name: GP15646-S1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

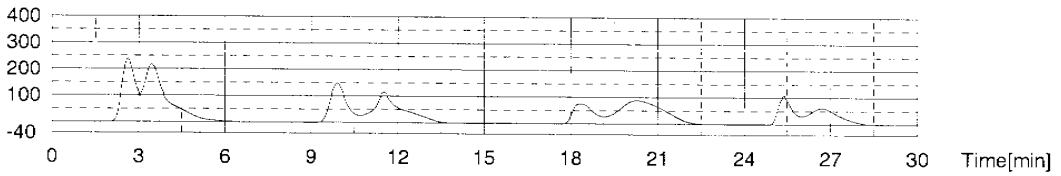
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:78895mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	2015	2015	114171965ug	114172mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 12:47:13 PM
2	1368	1368	77595678ug	77596mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 12:57:22 PM
3	1.173	1.173	326039ug	326.0mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:01:19 PM
4	1352	1352	76691164ug	76691mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:13:10 PM
5	828.9	828.9	47119208ug	47119mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:22:05 PM

Mean Area 1391
Mean CNV 1391
Mean Conc 78895mg



Sample

Sample Name: GP15646-D1
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

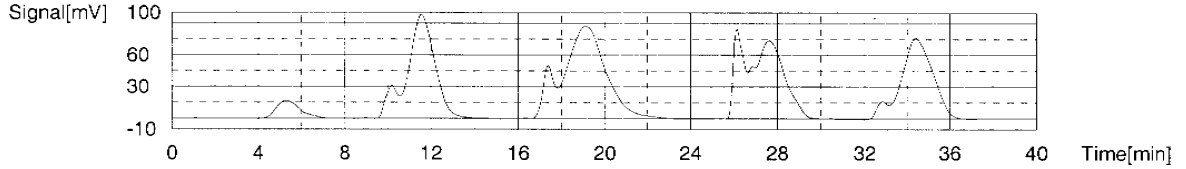
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:55957mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.9646	0.9646	314258ug	314.3mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:25:28 PM
2	128.1	128.1	7501492ug	7501mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:34:36 PM
3	889.0	889.0	50516789ug	50517mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:43:00 PM
4	1247	1247	70755291ug	70755mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 1:53:30 PM
5	995.5	995.5	56537460ug	56537mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:02:20 PM
6	809.4	809.4	46016831ug	46017mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:13:30 PM

Mean Area 985.2
Mean CNV 985.2
Mean Conc. 55957mg



Sample

Sample Name: F76459-8
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

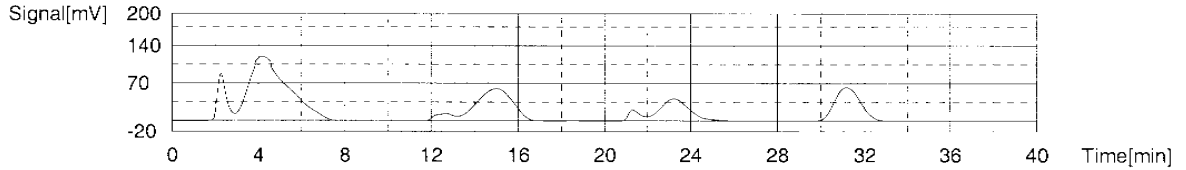
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:49944mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1763	1763	99925869ug	99926mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:22:28 PM
2	0.9437	0.9437	313076ug	313.1mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:28:03 PM
3	762.8	762.8	43382434ug	43382mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:42:13 PM
4	1.302	1.302	333332ug	333.3mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:45:21 PM
5	474.7	474.7	27095528ug	27096mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:56:33 PM
6	1.111	1.111	322534ug	322.5mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 2:59:47 PM
7	515.0	515.0	29373773ug	29374mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 3:10:03 PM

Mean Area 878.9
Mean CNV 878.9
Mean Conc. 49944mg



Sample

Sample Name: F76459-9
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

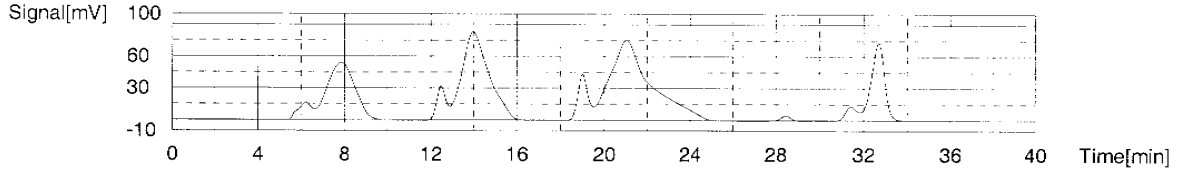
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:33077mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.9691	0.9691	314512ug	314.5mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 3:15:54 PM
2	0.1124	0.1124	266081ug	266.1mg	100.0mg	100uL	E	toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 3:25:26 PM
3	555.3	555.3	31652018ug	31652mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 3:37:46 PM
4	827.7	827.7	47051369ug	47051mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 3:46:58 PM
5	1140	1140	64706353ug	64706mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 3:59:18 PM
6	17.50	17.50	1249039ug	1249mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 4:05:33 PM
7	362.0	362.0	20724357ug	20724mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 4:11:41 PM

Mean Area 580.5
Mean CNV 580.5
Mean Conc. 33077mg



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

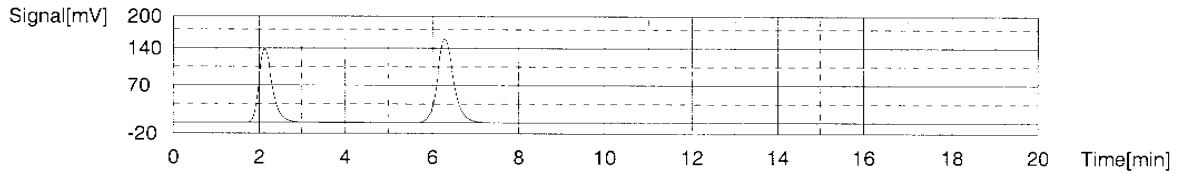
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:20543mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	303.5	303.5	17417228ug	17417mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 5:10:24 PM
2	414.1	414.1	23669681ug	23670mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 5:15:38 PM

Mean Area 358.8
Mean CNV 358.8
Mean Conc. 20543mg



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: Copy 2 of SSM.met
Status Completed
Chk. Result

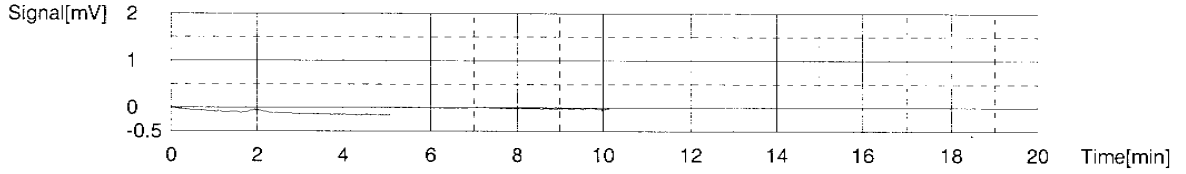
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:259.7mg

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 5:21:31 PM
2	0.000	0.000	259727ug	259.7mg	100.0mg	100uL		toccalso 09-13-10.2010_09_13_10_35_12.cal	9/20/2010 5:26:54 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. 259.7mg



TOC-V Cal Curve Information
toccalso 09-13-10.2010_09_13_10_35_12.cal

Date of Creation 10:10:40 AM 9/13/2010
User
System SSM-COPY 2

Cal. Curve

Sample Name: Untitled
Sample ID: Untitled
Cal. Curve: toccalso 09-13-10.2010_09_13_10_35_12.cal
Status Completed
Comment:

Type	Anal.	Density
Standard	SSM-TC	1.000mg/uL

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:41:23 AM
2	0.000	0.000	0.000ug	100.0mg	100uL	*******		9/13/2010 10:47:27 AM

Mean Area 0.000
Mean CNV 0.000
SD Area 0.000
CV Area 0.00%

AbsC: 1000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	18.00	18.00	000000ug	100.0mg	100uL	*******		9/13/2010 10:52:39 AM
2	18.05	18.05	000000ug	100.0mg	100uL	*******		9/13/2010 10:57:27 AM

Mean Area 18.02
Mean CNV 18.02
SD Area 0.03536
CV Area 0.20%

AbsC: 5000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	84.70	84.70	000000ug	100.0mg	100uL	*******		9/13/2010 11:02:35 AM
2	89.80	89.80	000000ug	100.0mg	100uL	*******		9/13/2010 11:07:25 AM

Mean Area 87.25
Mean CNV 87.25
SD Area 3.606
CV Area 4.13%

AbsC: 10000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	156.9	156.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:12:31 AM
2	170.6	170.6	000000ug	100.0mg	100uL	*******		9/13/2010 11:24:34 AM

Mean Area 163.8
Mean CNV 163.8
SD Area 9.687
CV Area 5.92%

AbsC: 20000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	328.9	328.9	000000ug	100.0mg	100uL	*******		9/13/2010 11:32:30 AM
2	372.2	372.2	000000ug	100.0mg	100uL	*******		9/13/2010 11:38:50 AM

Mean Area	350.6
Mean CNV	350.6
SD Area	30.62
CV Area	8.73%

AbsC: 25000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	444.0	444.0	000000ug	100.0mg	100uL	*******		9/13/2010 11:44:48 AM
2	1.004	1.004	000000ug	100.0mg	100uL	*******	E	9/13/2010 12:28:52 PM
3	405.4	405.4	000000ug	100.0mg	100uL	*******		9/13/2010 12:34:58 PM

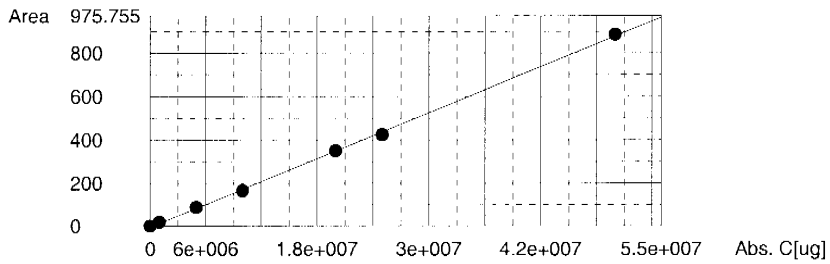
Mean Area	424.7
Mean CNV	424.7
SD Area	27.29
CV Area	6.43%

AbsC: 50000000ug

No.	Area	CNV	Abs C	Weight	Volume	Rem.	Ex.	Date / Time
1	877.0	877.0	000000ug	100.0mg	100uL	*******		9/13/2010 12:41:26 PM
2	897.1	897.1	000000ug	100.0mg	100uL	*******		9/13/2010 12:47:09 PM

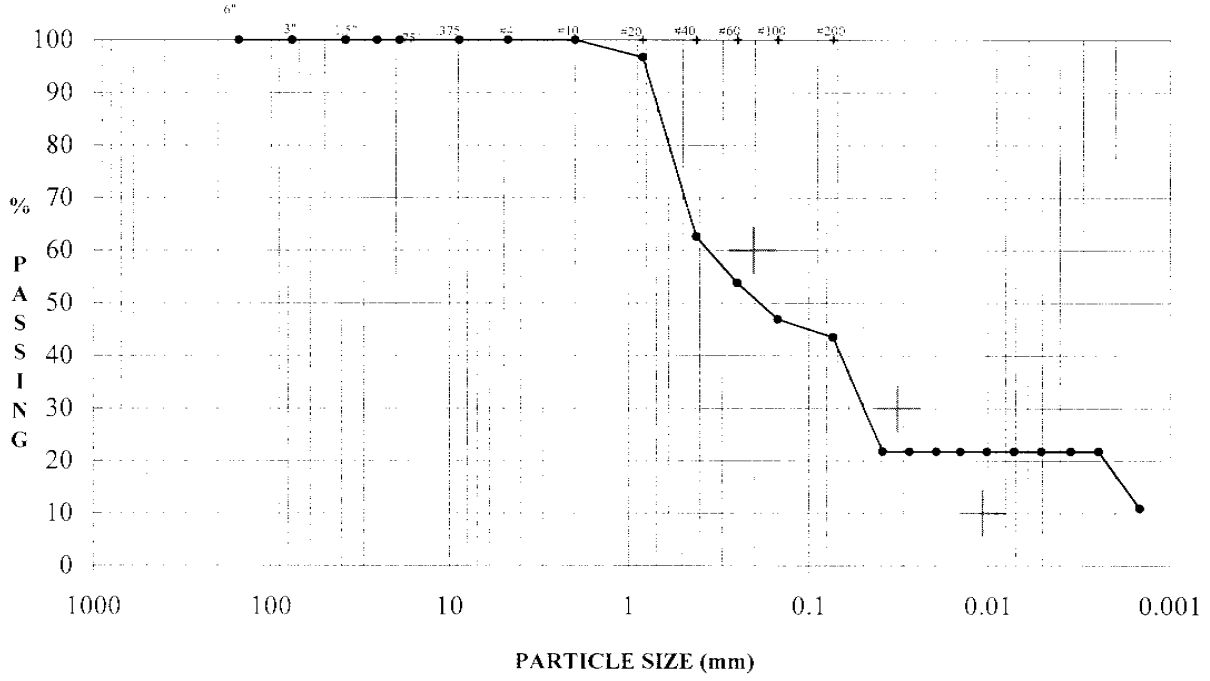
Mean Area	887.0
Mean CNV	887.0
SD Area	14.21
CV Area	1.60%

Slope:	0.00002
Intercept	-4.594
r^2	0.999407
Zero Shift	No



PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	96.7%
#40	62.6%
#60	53.8%
#100	46.9%
#200	43.6%

Hydrometer Data	
Particle Diameter	% Finer
0.039	21.8%
0.028	21.8%
0.020	21.8%
0.014	21.8%
0.010	21.8%
0.007	21.8%
0.005	21.8%
0.003	21.8%
0.002	21.8%

DESCRIPTION

Sample.Bottle#:	T59242-6b	Depth:	-
		USCS:	-
Wet Color:	dark brown		
Description:	0		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	95.4
G_S:	2.65
% Gravel	0.0
% Sand	56.4
% Fines	43.6

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/24/10
Technician:	LE
Reviewer:	sjl

ACCUTEST LAB SE

tare #		Total Wt (g)	8.94
wt soil&tare, moist (g)		Wt Split #10 (g)	8.94
wt soil&tare, dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare, moist (g)		wt soil&tare, dry (g)	#VALUE!	LL	
wt soil&tare, dry (g)		wt soil&tare, wash (g)	#VALUE!	PL	
wt tare (g)		wt tare (g)	0.00	PI	
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.30	#VALUE!	#VALUE!	#16
#40	3.43	#VALUE!	#VALUE!	#40 fine sand
#60	4.24	#VALUE!	#VALUE!	#60
#100	4.37	#VALUE!	#VALUE!	#120
#200	5.18	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME CUM (min)	READING R	TEMP T	HYD EDG H	PARTICLE DIAMETER	% FINER
9/24/10		2.0	9	22	7	#N/A	#VALUE!
	#VALUE!	4.0				#N/A	#VALUE!
	#VALUE!	8.0				#N/A	#VALUE!
	#VALUE!	15.0				#N/A	#VALUE!
	#VALUE!	30.0				#N/A	#VALUE!
	#VALUE!	60.0				#N/A	#VALUE!
	#VALUE!	120.0				#N/A	#VALUE!
	#VALUE!	240.0		22	7	#N/A	#VALUE!
	#VALUE!	480.0				#N/A	#VALUE!
9/25/10 #VALUE!	#VALUE!	1440.0	8	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: dark brown wet-sludge odor

USCS:

DATE #VALUE!
TECH
REVIEW

GN 41495

T59242-6B

Tare 103
wet 5.38g
DY 1.45g

26.95 (27%) solid
73% moist

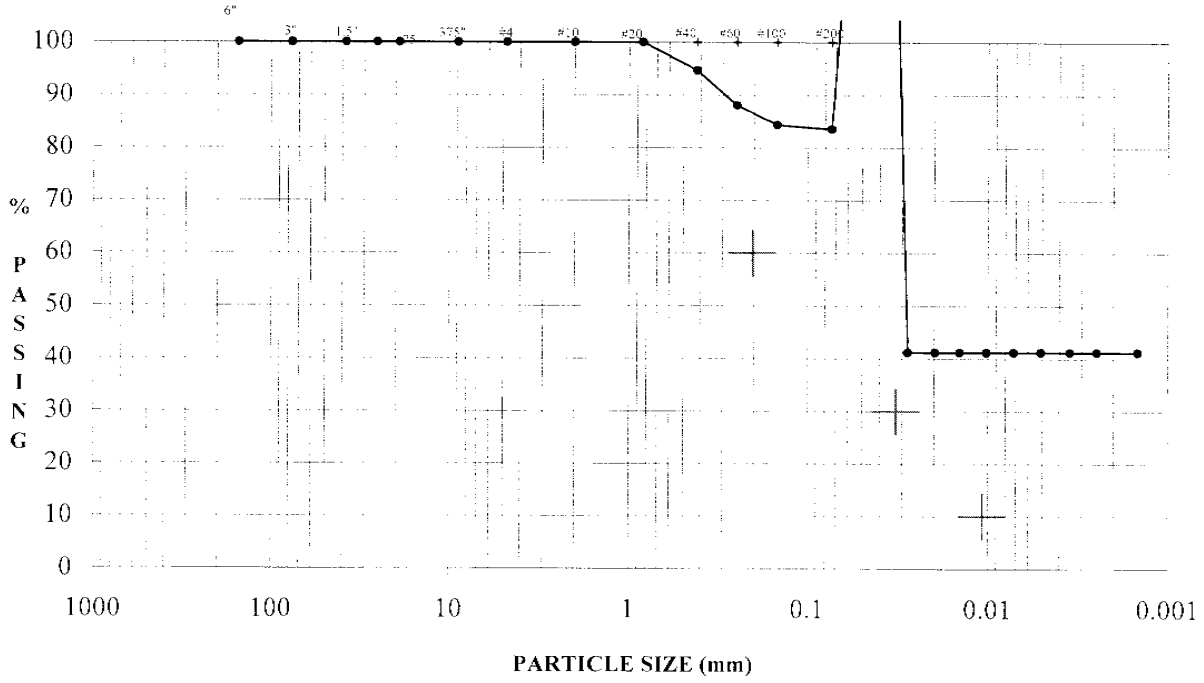
4.9

(very limited ant product (Cont. mostly water)

ACCUTEST F76459

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	94.6%
#60	88.1%
#100	84.3%
#200	83.5%

Hydrometer Data	
Particle Diameter	% Finer
0.039	206.0%
0.028	41.2%
0.020	41.2%
0.014	41.2%
0.010	41.2%
0.007	41.2%
0.005	41.2%
0.003	41.2%
0.002	41.2%

DESCRIPTION

Sample.Bottle#:	T59242-7b	Depth:	-
		USCS:	-
Wet Color:	brown		
Description:	0		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	96.7	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	16.5	PL	-
% Fines	83.5	PI	-

Date:	09/24/10
Technician:	LE
Reviewer:	sjl

ACCUTEST LAB SE

GN 41495

T59242-7B

Tare 102.7
wet 8.78g
DN 1.20g

14.35 (14.4% solid)
(85.6% moist)

tare #			Total Wt (g)		2.43
wt soil&tare,moist (g)			Wt Split #10 (g)		2.43
wt soil&tare,dry (g)			% passing #10		#VALUE!
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		LL	
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	PL	
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PI	
wt tare (g)		wt tare (g)	0.00		
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	0.07	#VALUE!	#VALUE!	#18
#40	0.13	#VALUE!	#VALUE!	#40 fine sand
#60	0.24	#VALUE!	#VALUE!	#60
#100	0.38	#VALUE!	#VALUE!	#120
#200	0.90	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/24/10		2.0	12	20	7	#N/A	#VALUE!
	#VALUE!	4.0	8			#N/A	#VALUE!
	#VALUE!	8.0	8			#N/A	#VALUE!
	#VALUE!	15.0	8			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8	22	7	#N/A	#VALUE!
	#VALUE!	240.0	3	22	7	#N/A	#VALUE!
	#VALUE!	480.0	3	22	7	#N/A	#VALUE!
9/25/10	#VALUE!	1440.0	3	20	7	#N/A	#VALUE!

%C GRVL	#VALUE!
%F GRVL	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES	#VALUE!
%TOTAL	#VALUE!

Wet Color: brown
Description: wet - very odor, (black, tar)
USCS:

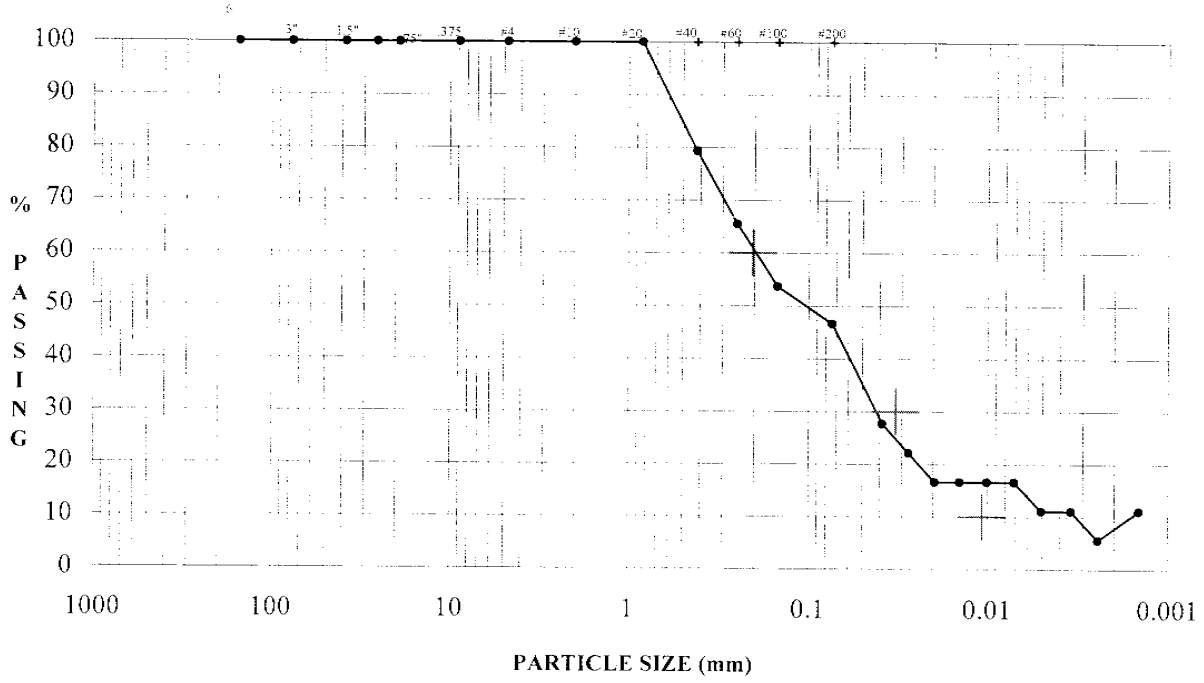
DATE #VALUE!
TECH
REVIEW

3.2

(very limited amt provided (mostly amt. water))

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#20	100.0%
#40	79.3%
#60	65.5%
#100	53.7%
#200	46.6%

Hydrometer Data	
Particle Diameter	% Finer
0.039	27.7%
0.027	22.2%
0.020	16.6%
0.014	16.6%
0.010	16.6%
0.007	16.6%
0.005	11.1%
0.003	11.1%
0.002	5.5%

DESCRIPTION

Sample.Bottle#:	T59242-8b	Depth:	-
		USCS:	-
Wet Color:	dark brown		
Description:	0		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	81.3
G_S:	2.65
% Gravel	0.0
% Sand	53.4
% Fines	46.6

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/24/10
Technician:	LE
Reviewer:	sjl

ACCUTEST LAB SE

GN41495

T59242-8B

tare #		Total Wt (g)	17.37
wt soil&tare,moist (g)		Wt Split #10 (g)	17.37
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)6 per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL: -
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL: -
wt tare (g)		wt tare (g)	0.00	PI: -
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!	
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!	
% moisture	#VALUE!	% fines lost	#VALUE!	

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	3.73	#VALUE!	#VALUE!	#18
#40	6.22	#VALUE!	#VALUE!	#40 fine sand
#60	5.36	#VALUE!	#VALUE!	#60
#100	1.64	#VALUE!	#VALUE!	#120
#200		#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/24/10		2.0	12	22	7	#N/A	#VALUE!
	#VALUE!	4.0	11			#N/A	#VALUE!
	#VALUE!	8.0	10			#N/A	#VALUE!
	#VALUE!	15.0	10			#N/A	#VALUE!
	#VALUE!	30.0	10			#N/A	#VALUE!
	#VALUE!	60.0	10			#N/A	#VALUE!
	#VALUE!	120.0	9			#N/A	#VALUE!
	#VALUE!	240.0	9	22	7	#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
9/25/10 #VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: brown-dark wet-sludge odor

USCS:

DATE #VALUE!
TECH
REVIEW

Tare 100g
wet 5.12g
DRY 1.86 g

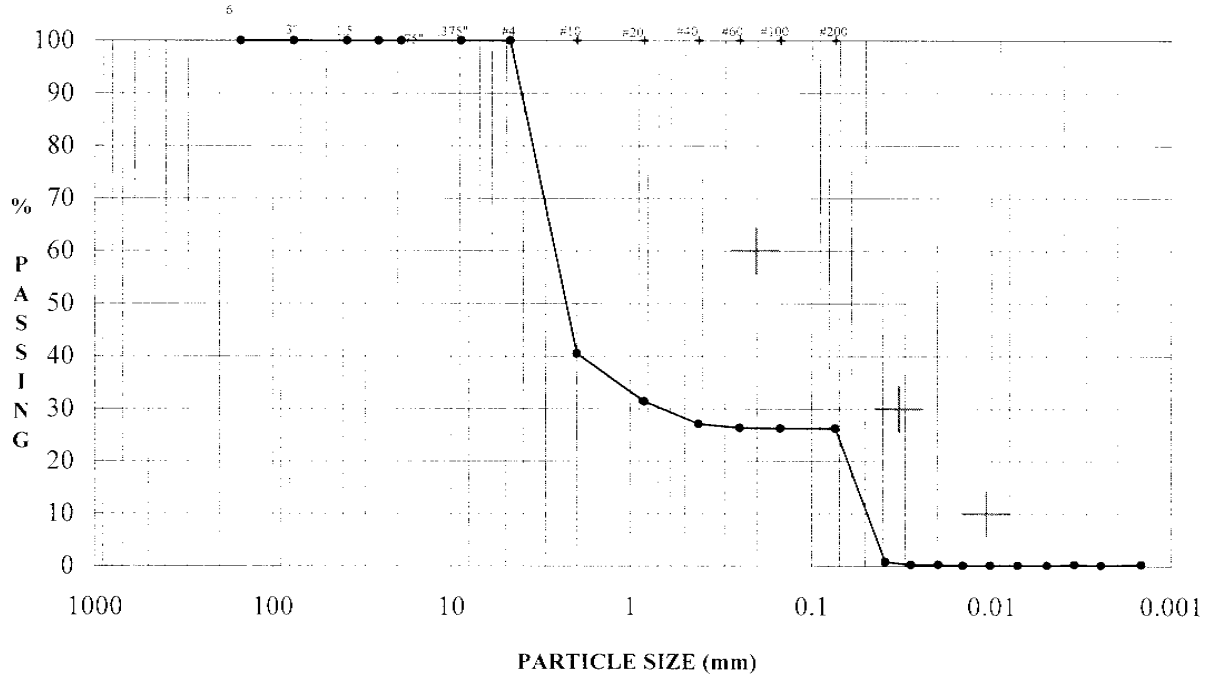
36.3 % solid
63.7 % moist

185

(limited ant provided)
- (cont. water)

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	40.5%
#20	31.4%
#40	27.1%
#60	26.4%
#100	26.3%
#200	26.3%

Hydrometer Data	
Particle Diameter	% Finer
0.039	0.9%
0.028	0.3%
0.020	0.3%
0.014	0.2%
0.010	0.2%
0.007	0.2%
0.005	0.2%
0.003	0.3%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-1.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	20.7	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	73.7	PL	-
% Fines	26.3	PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

GN41495

F76459-1.2

Tare weight 0.98

Wet weight 5.01

Dry weight 4.30g

85.8% solid

14.2% moist

79.3

tare #			Total Wt (g)	229.72	
wt soil&tare,moist (g)			Wt Split#10 (g)	43.52	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	52.78	#VALUE!	#VALUE!	#18
#40	77.96	#VALUE!	#VALUE!	#40 fine sand
#60	92.03	#VALUE!	#VALUE!	#60
#100	96.67	#VALUE!	#VALUE!	#120
#200	98.56	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD EDG H	PARTICLE DIAMETER	% FINER
9/24/10		2.0	12	20	7	#N/A	#VALUE!
	#VALUE!	4.0	9			#N/A	#VALUE!
	#VALUE!	8.0	7			#N/A	#VALUE!
	#VALUE!	15.0	8			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8	22	7	#N/A	#VALUE!
	#VALUE!	240.0	8			#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color, Description: brown rocky

USCS:

DATE #VALUE!

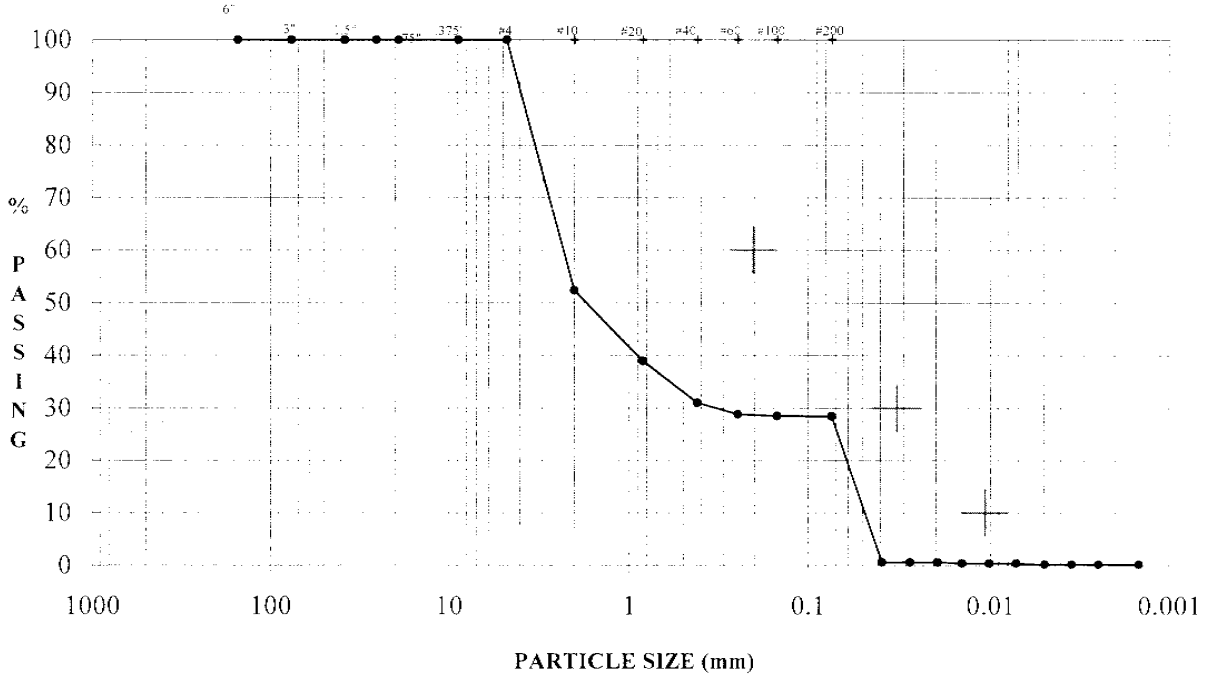
TECH

REVIEW

01/25/10

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	52.4%
#20	38.9%
#40	31.0%
#60	28.8%
#100	28.5%
#200	28.4%

Hydrometer Data	
Particle Diameter	% Finer
0.039	0.6%
0.028	0.6%
0.020	0.6%
0.014	0.4%
0.010	0.4%
0.007	0.4%
0.005	0.2%
0.003	0.2%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-2.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	23.2
G_S:	2.65
% Gravel	0.0
% Sand	71.6
% Fines	28.4

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

F76459

tare #		Total Wt (g)	234.15
wt soil&tare,moist (g)		Wt Split #10 (g)	122.71
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	63.22	#VALUE!	#VALUE!	#18
#40	100.53	#VALUE!	#VALUE!	#40 fine sand
#60	110.71	#VALUE!	#VALUE!	#60
#100	112.21	#VALUE!	#VALUE!	#120
#200	112.49	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
09/24/10		2.0	10	20	7	#N/A	#VALUE!
	#VALUE!	4.0	10			#N/A	#VALUE!
	#VALUE!	8.0	10			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	8			#N/A	#VALUE!
	#VALUE!	240.0	8	22	7	#N/A	#VALUE!
	#VALUE!	480.0	8		7	#N/A	#VALUE!
09/25/10 #VALUE!	#VALUE!	1440.0	8	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!				
%F GRVL:	#VALUE!				
%C SAND:	#VALUE!	Wet Color:	brown		
%M SAND:	#VALUE!	Description:	sticky		
%F SAND:	#VALUE!				
%FINES:	#VALUE!	USCS:	-	DATE	#VALUE!
%TOTAL:	#VALUE!			TECS	
				REVIEW	

GN 41495

F76459-2.2

Tare weight 1.05

wet weight 10.67

Dry weight 9.01

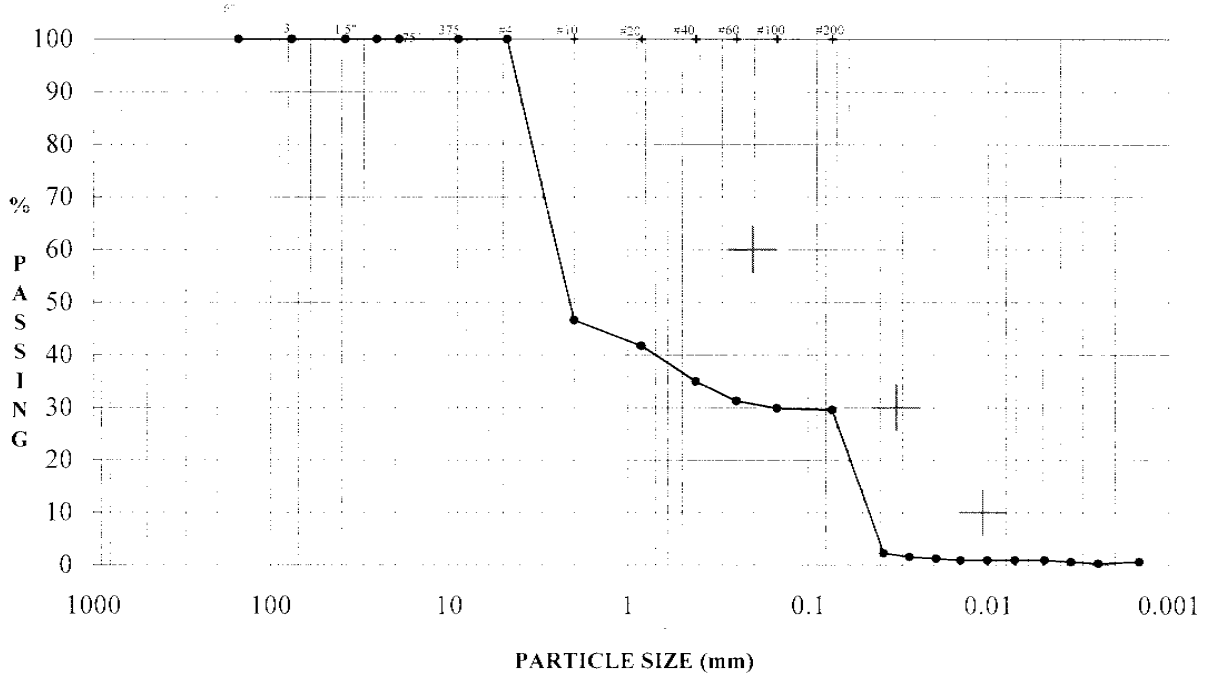
84.4% solid

15.6% moist

76.7

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	46.6%
#20	41.7%
#40	34.9%
#60	31.2%
#100	29.8%
#200	29.5%

Hydrometer Data	
Particle Diameter	% Finer
0.038	2.3%
0.027	1.6%
0.019	1.3%
0.014	1.0%
0.010	1.0%
0.007	1.0%
0.005	1.0%
0.003	0.6%
0.002	0.3%

DESCRIPTION

Sample.Bottle#:	F76459-3.3	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	31.9	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	70.5	PL	-
% Fines	29.5	PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

F76459

GN 41495

QC

F76459-3.3

Tare weight 1.01

wet weight 6.53

Dry weight 5.40

82.7% sld

17.3% moist

tare #			Total Wt (g)	1320	
wt soil&tare,moist (g)			Wt Split #10 (g)	6156	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	15.25	#VALUE!	#VALUE!	#18
#40	36.22	#VALUE!	#VALUE!	#40 fine sand
#60	47.70	#VALUE!	#VALUE!	#60
#100	52.01	#VALUE!	#VALUE!	#120
#200	52.98	#VALUE!	#VALUE!	#200 fines

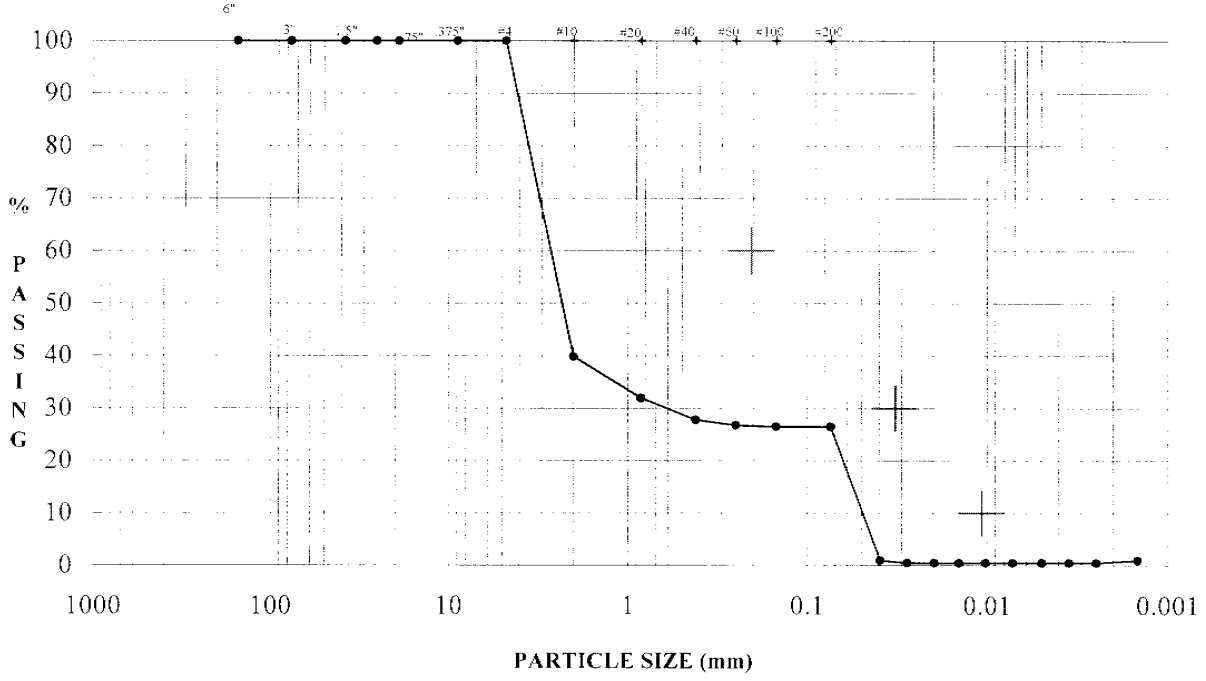
DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
9/24/10		2.0	M	20	7	#N/A	#VALUE!
	#VALUE!	4.0	12			#N/A	#VALUE!
	#VALUE!	8.0	11			#N/A	#VALUE!
	#VALUE!	15.0	10			#N/A	#VALUE!
	#VALUE!	30.0	10			#N/A	#VALUE!
	#VALUE!	60.0	b			#N/A	#VALUE!
	#VALUE!	120.0	n			#N/A	#VALUE!
	#VALUE!	240.0	9	22	7	#N/A	#VALUE!
	#VALUE!	480.0	8	1	1	#N/A	#VALUE!
9/25/10 #VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!				
%F GRVL:	#VALUE!				
%C SAND:	#VALUE!	Wet Color:	brown		
%M SAND:	#VALUE!	Description:	rocks		
%F SAND:	#VALUE!				
%FINES:	#VALUE!	USCS:	-	DATE	#VALUE!
%TOTAL:	#VALUE!			TECH	
				REVIEW	

68.1

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	39.8%
#20	31.9%
#40	27.8%
#60	26.7%
#100	26.5%
#200	26.5%

Hydrometer Data	
Particle Diameter	% Finer
0.039	1.0%
0.028	0.5%
0.020	0.5%
0.014	0.5%
0.010	0.5%
0.007	0.5%
0.005	0.5%
0.003	0.5%
0.002	0.5%

DESCRIPTION			
Sample.Bottle#:	F76459-4.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA			
W_C (%):	20.5	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	73.5	PL	-
% Fines	26.5	PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

F76459

GN41495

F76459-4.2
#10

tare 1.06 g
wet 5.33 g
dry 4.47g

83.9 % solid
16.1 % moist

79.4

tare #			Total Wt (g)	83.40	
wt soil&tare,moist (g)			Wt Split #10 (g)	~~28.14~~ 33.19	
wt soil&tare,dry (g)			% passing #10	#VALUE!	
wt tare (g)					
wt moisture (g)	#VALUE!				
wt dry soil (g)	#VALUE!				
% moisture	#VALUE!				

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO3)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL	
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL	
wt tare (g)		wt tare (g)	0.00	PI	
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

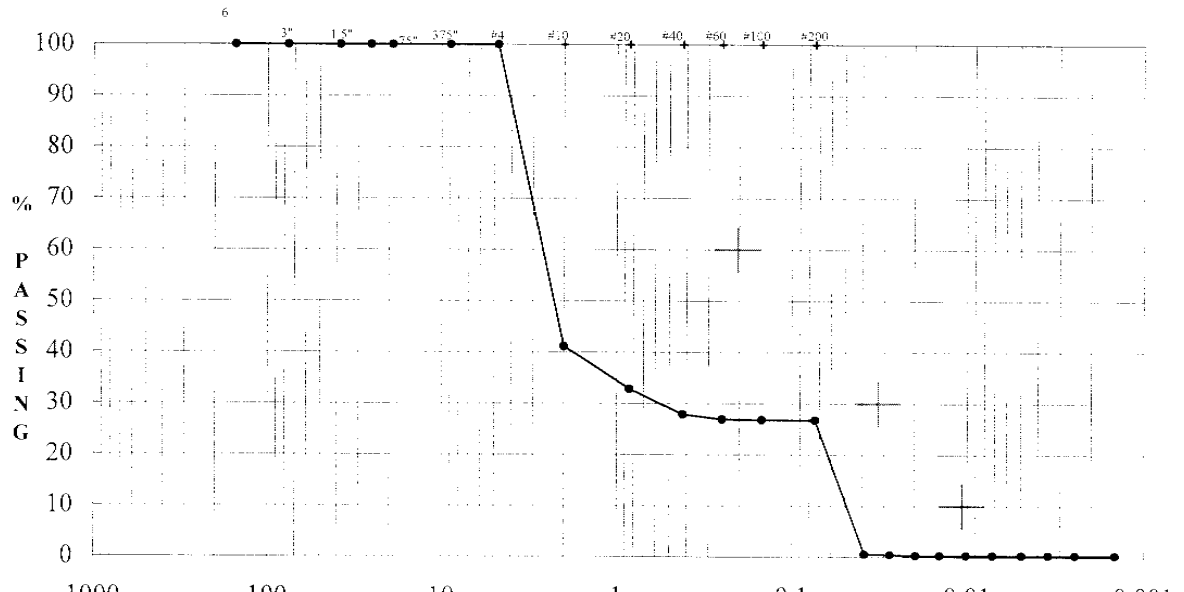
SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	10.60	#VALUE!	#VALUE!	#18
#40	25.23	#VALUE!	#VALUE!	#40 fine sand
#60	27.46	#VALUE!	#VALUE!	#60
#100	27.94	#VALUE!	#VALUE!	#120
#200	28.01	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD HDG H	PARTICLE DIAMETER	% FINER
9/12/16		2.0	9	22	7	#N/A	#VALUE!
	#VALUE!	4.0	8			#N/A	#VALUE!
	#VALUE!	8.0	8			#N/A	#VALUE!
	#VALUE!	15.0	8			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8			#N/A	#VALUE!
	#VALUE!	240.0	8	22	7	#N/A	#VALUE!
	#VALUE!	480.0	7	21	7	#N/A	#VALUE!
9/13/16 #VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!	Wet Color:	brown		
%F GRVL:	#VALUE!	Description:	rocky		
%C SAND:	#VALUE!				
%M SAND:	#VALUE!	USCS:			
%F SAND:	#VALUE!			DATE	#VALUE!
%FINES:	#VALUE!			TECS	
%TOTAL:	#VALUE!			REVIEW	

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	41.1%
#20	32.8%
#40	27.8%
#60	26.9%
#100	26.8%
#200	26.8%

Hydrometer Data	
Particle Diameter	% Finer
0.039	0.6%
0.028	0.5%
0.020	0.3%
0.014	0.3%
0.010	0.3%
0.007	0.3%
0.005	0.3%
0.003	0.3%
0.002	0.3%

DESCRIPTION

Sample.Bottle#:	F76459-5.1	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	25.3
G_S:	2.65
% Gravel	0.0
% Sand	73.2
% Fines	26.8

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

Tare #		Total Wt (g)	248.04
wt soil&tare,moist (g)		Wt Split #10 (g)	101.98
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	
wt tare (g)		wt tare (g)	0.00	PI:	
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	54.34	#VALUE!	#VALUE!	#18
#40	87.04	#VALUE!	#VALUE!	#40 fine sand
#60	93.28	#VALUE!	#VALUE!	#60
#100	93.82	#VALUE!	#VALUE!	#120
#200	94.02	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
7/24/10		2.0	11	20	7	#N/A	#VALUE!
	#VALUE!	4.0	9			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	9			#N/A	#VALUE!
	#VALUE!	240.0	9	22	7	#N/A	#VALUE!
	#VALUE!	480.0	9			#N/A	#VALUE!
7/25/10	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: Brown oxky

USCS:

DATE #VALUE!
TECH
REVIEW

GN41495

F76459-5.1

tare 0.99g
wet 6.90
dry 6.00g

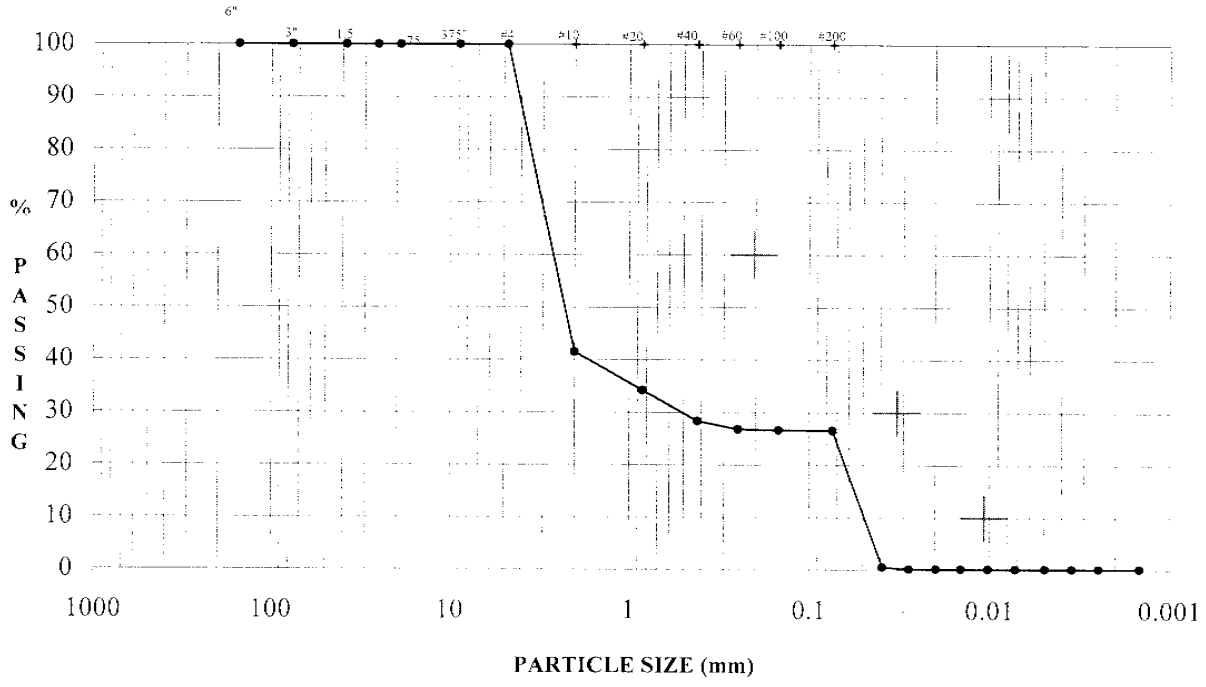
86.95 (87%) solid

13 % moist

74.8

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	41.5%
#20	34.2%
#40	28.4%
#60	26.8%
#100	26.6%
#200	26.6%

Hydrometer Data	
Particle Diameter	% Finer
0.039	0.6%
0.028	0.2%
0.020	0.2%
0.014	0.2%
0.010	0.2%
0.007	0.2%
0.005	0.2%
0.003	0.2%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-6.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	23.2
G_S:	2.65
% Gravel	0.0
% Sand	73.4
% Fines	26.6

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

tare #		Total Wt (g)	20.28
wt soil&tare,moist (g)		Wt Split #10 (g)	33.51
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:
wt tare (g)		wt tare (g)	0.00	PI:
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!	
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!	
% moisture	#VALUE!	% fines lost	#VALUE!	

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	38.67	#VALUE!	#VALUE!	#18
#40	69.23	#VALUE!	#VALUE!	#40 fine sand
#60	77.38	#VALUE!	#VALUE!	#60
#100	78.17	#VALUE!	#VALUE!	#120
#200	78.46	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME CUM (min)	READING R	TEMP T	HYD EDG R	PARTICLE DIAMETER	% FINER
09/24/16		2.0	10	22	7	#N/A	#VALUE!
	#VALUE!	4.0	8			#N/A	#VALUE!
	#VALUE!	8.0	6			#N/A	#VALUE!
	#VALUE!	15.0	5			#N/A	#VALUE!
	#VALUE!	30.0	4			#N/A	#VALUE!
	#VALUE!	60.0	4			#N/A	#VALUE!
	#VALUE!	120.0	3	22	7	#N/A	#VALUE!
	#VALUE!	240.0	3			#N/A	#VALUE!
	#VALUE!	480.0	3			#N/A	#VALUE!
09/25/16 #VALUE!	#VALUE!	1440.0	3	22	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: brown
Description: rock

USCS:

DATE: #VALUE!
TECH:
REVIEW:

GN 41495

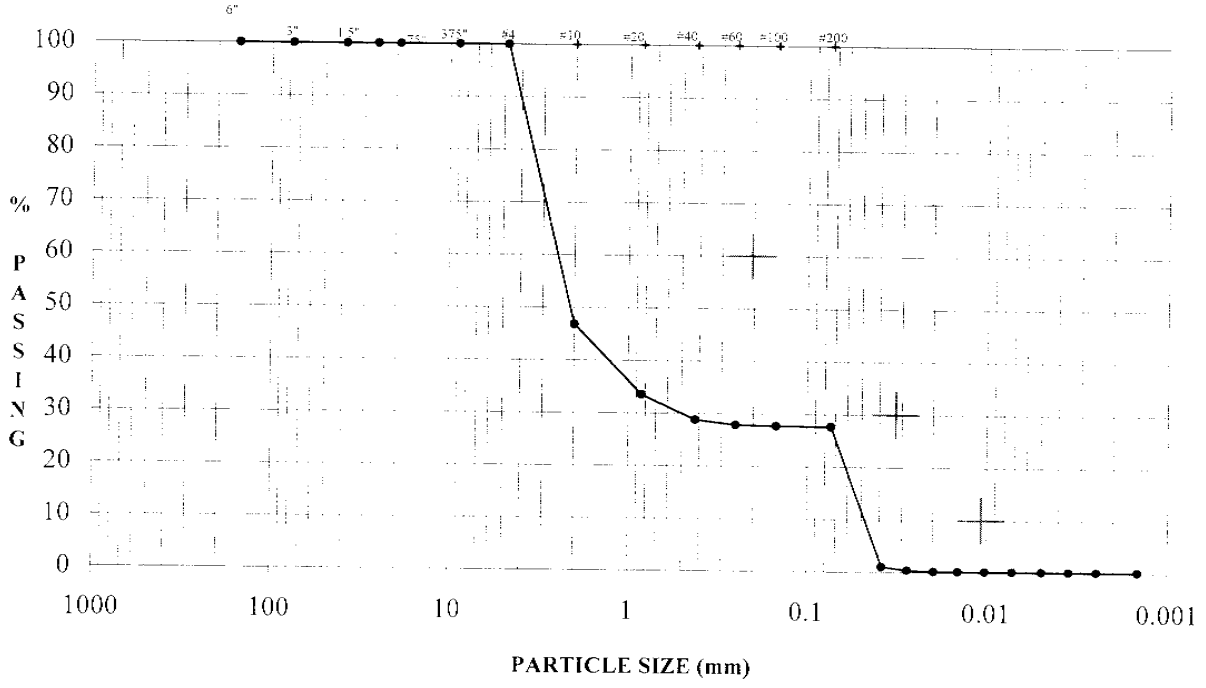
F76459-6.2 #12
tare 1.01 g
wet 6.33 g
dry 5.61 g

88.6% solid
11.4% moist

76.6

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	46.8%
#20	33.5%
#40	28.8%
#60	27.9%
#100	27.7%
#200	27.6%

Hydrometer Data	
Particle Diameter	% Finer
0.039	1.1%
0.028	0.4%
0.020	0.2%
0.014	0.2%
0.010	0.2%
0.007	0.2%
0.005	0.2%
0.003	0.2%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-7.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	23.5
G_S:	2.65
% Gravel	0.0
% Sand	72.4
% Fines	27.6

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

F76459

tare #		Total Wt (g)	210.12
wt soil&tare,moist (g)		Wt Split #10 (g)	98.39
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #		LL:	
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	PL:	
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PI:	
wt tare (g)		wt tare (g)	0.00		
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	62.37	#VALUE!	#VALUE!	#18
#40	84.41	#VALUE!	#VALUE!	#40 fine sand
#60	88.74	#VALUE!	#VALUE!	#60
#100	89.43	#VALUE!	#VALUE!	#120
#200	89.76	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD HDG H	PARTICLE DIAMETER	% FINER
9/12/16		2.0	12	20	7	#N/A	#VALUE!
	#VALUE!	4.0				#N/A	#VALUE!
	#VALUE!	8.0				#N/A	#VALUE!
	#VALUE!	15.0				#N/A	#VALUE!
	#VALUE!	30.0				#N/A	#VALUE!
	#VALUE!	60.0				#N/A	#VALUE!
	#VALUE!	120.0				#N/A	#VALUE!
	#VALUE!	240.0		22	7	#N/A	#VALUE!
	#VALUE!	480.0				#N/A	#VALUE!
9/13/16 #VALUE!	#VALUE!	1440.0		20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color Description: brown rocky

USCS:

DATE: #VALUE!
TECH:
REVIEW:

GN 41495

F76459-7.2

Tare weight 1.00

wet weight 6.88

Dry weight 5.80g

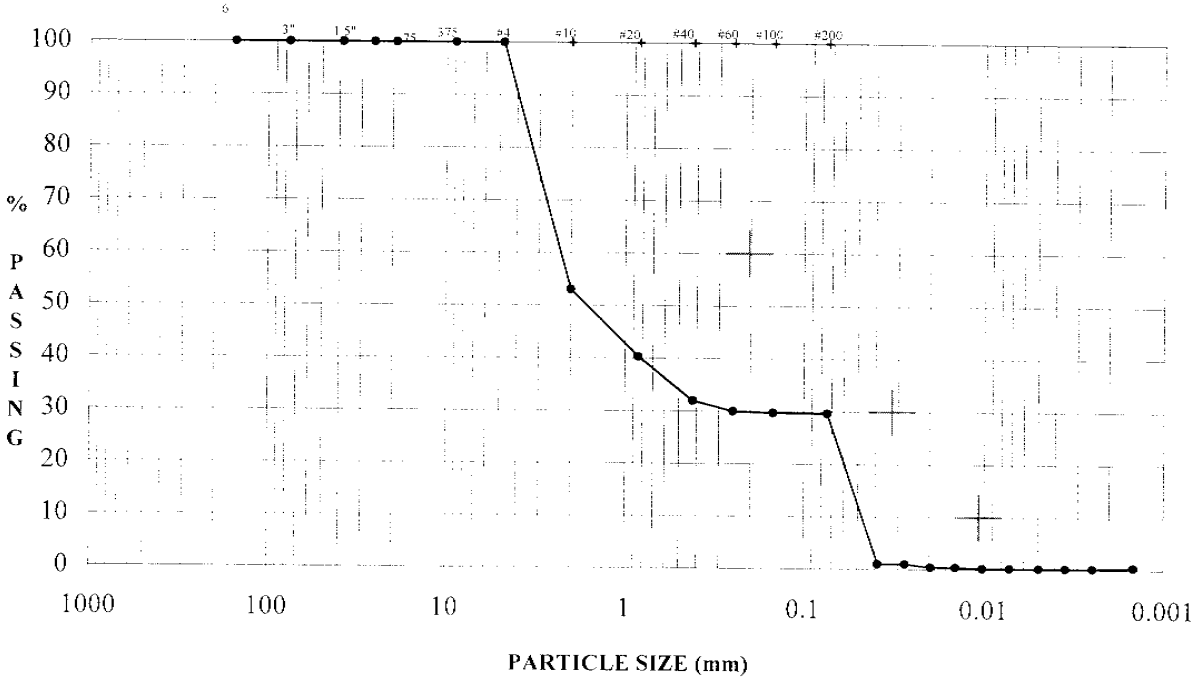
84.3 % solid

15.7 % moist

76.4

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	53.0%
#20	40.3%
#40	31.9%
#60	30.0%
#100	29.7%
#200	29.6%

Hydrometer Data	
Particle Diameter	% Finer
0.039	1.0%
0.027	1.0%
0.020	0.4%
0.014	0.4%
0.010	0.2%
0.007	0.2%
0.005	0.2%
0.003	0.2%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-8.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	23.5	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	70.4	PL	-
% Fines	29.6	PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

F76459

GN 41495

F 76459-82

tare #	
wt soil&tare, moist (g)	
wt soil&tare, dry (g)	
wt tare (g)	
wt moisture (g)	#VALUE!
wt dry soil (g)	#VALUE!
% moisture	#VALUE!

Total Wt (g)	233.42
Wt Split #10 (g)	123.77
% passing #10	#VALUE!

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

fine 1.03g
wet 5.47g
dry 5.42g

90.8% solid
9.2% moist

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #	
wt soil&tare, moist (g)		wt soil&tare, dry (g)	#VALUE!
wt soil&tare, dry (g)		wt soil&tare, wash (g)	#VALUE!
wt tare (g)		wt tare (g)	0.00
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!
% moisture	#VALUE!	% fines lost	#VALUE!

LL:
PL:
PI:

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	62.31	#VALUE!	#VALUE!	#18
#40	103.17	#VALUE!	#VALUE!	#40 fine sand
#60	112.57	#VALUE!	#VALUE!	#60
#100	114.02	#VALUE!	#VALUE!	#120
#200	114.41	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME, CUM (min)	READING R	TEMP T	HYD HDG H	PARTICLE DIAMETER	% FINER
9/24/16		2.0	12	20	7	#N/A	#VALUE!
	#VALUE!	4.0	12			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8			#N/A	#VALUE!
	#VALUE!	240.0	8	22	7	#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: brown
Description: Rocky

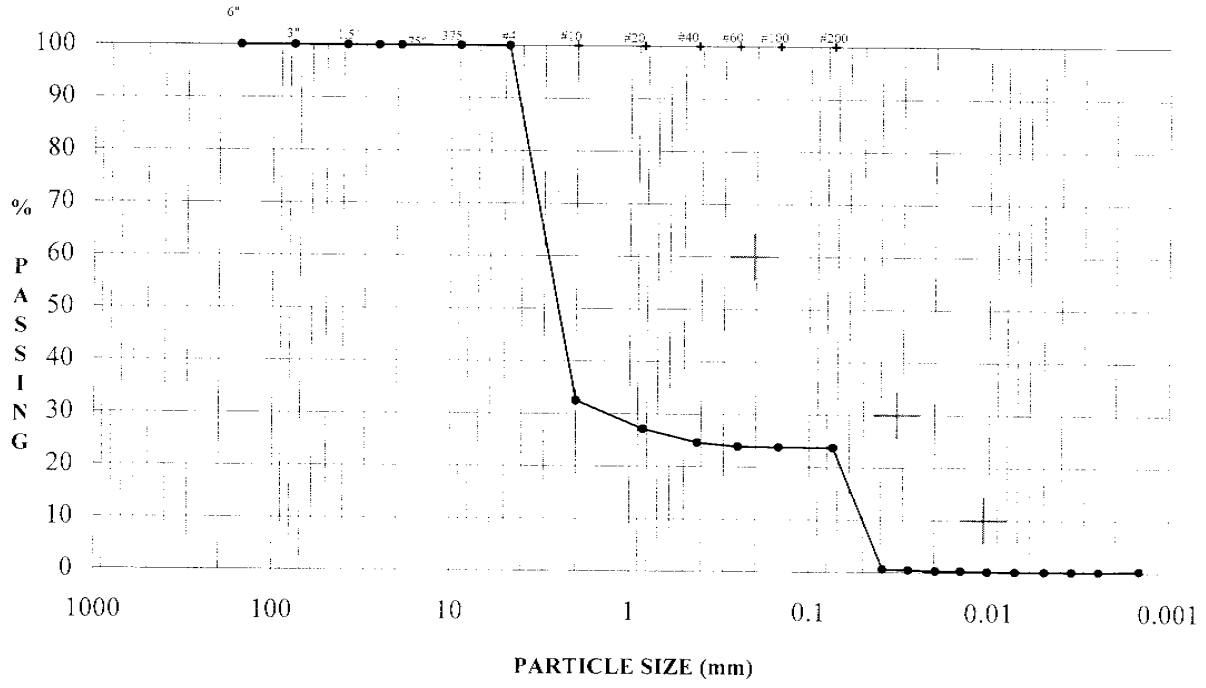
USCS:

DATE #VALUE!
TECH
REVIEW

76.6

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	32.5%
#20	27.1%
#40	24.6%
#60	23.9%
#100	23.8%
#200	23.7%

Hydrometer Data	
Particle Diameter	% Finer
0.039	0.6%
0.028	0.5%
0.020	0.3%
0.014	0.3%
0.010	0.2%
0.007	0.2%
0.005	0.2%
0.003	0.2%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-9.2	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	22.0	C_C	N/A
G_S:	2.65	C_U	N/A
% Gravel	0.0	LL	-
% Sand	76.3	PL	-
% Fines	23.7	PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

F76459

tare #		Total Wt (g)	195.15
wt soil&tare,moist (g)		Wt Split #10 (g)	63.43
wt soil&tare,dry (g)		% passing #10	#VALUE!
wt tare (g)			
wt moisture (g)	#VALUE!		
wt dry soil (g)	#VALUE!		
% moisture	#VALUE!		

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare,moist (g)		wt soil&tare,dry (g)	#VALUE!	LL:	-
wt soil&tare,dry (g)		wt soil&tare,wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	35.01	#VALUE!	#VALUE!	#18
#40	51.62	#VALUE!	#VALUE!	#40 fine sand
#60	55.30	#VALUE!	#VALUE!	#60
#100	56.30	#VALUE!	#VALUE!	#120
#200	56.98	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME,CUM (min)	READING R	TEMP T	HYD RDG H	PARTICLE DIAMETER	% FINER
09/24/10		2.0	11	20	7	#N/A	#VALUE!
	#VALUE!	4.0	10			#N/A	#VALUE!
	#VALUE!	8.0	9			#N/A	#VALUE!
	#VALUE!	15.0	9			#N/A	#VALUE!
	#VALUE!	30.0	8			#N/A	#VALUE!
	#VALUE!	60.0	8			#N/A	#VALUE!
	#VALUE!	120.0	8	22	7	#N/A	#VALUE!
	#VALUE!	240.0	8			#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
#VALUE!	#VALUE!	1440.0	9	20	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: Brown
Description: rocky

USCS:

DATE #VALUE!
TECH
REVIEW

GN41495

F76459-9.2

#14

tare 1.04g

wt 8.50g

dry 7.55g

88.8 % solid

11.2 % moist

2) 09/25/10

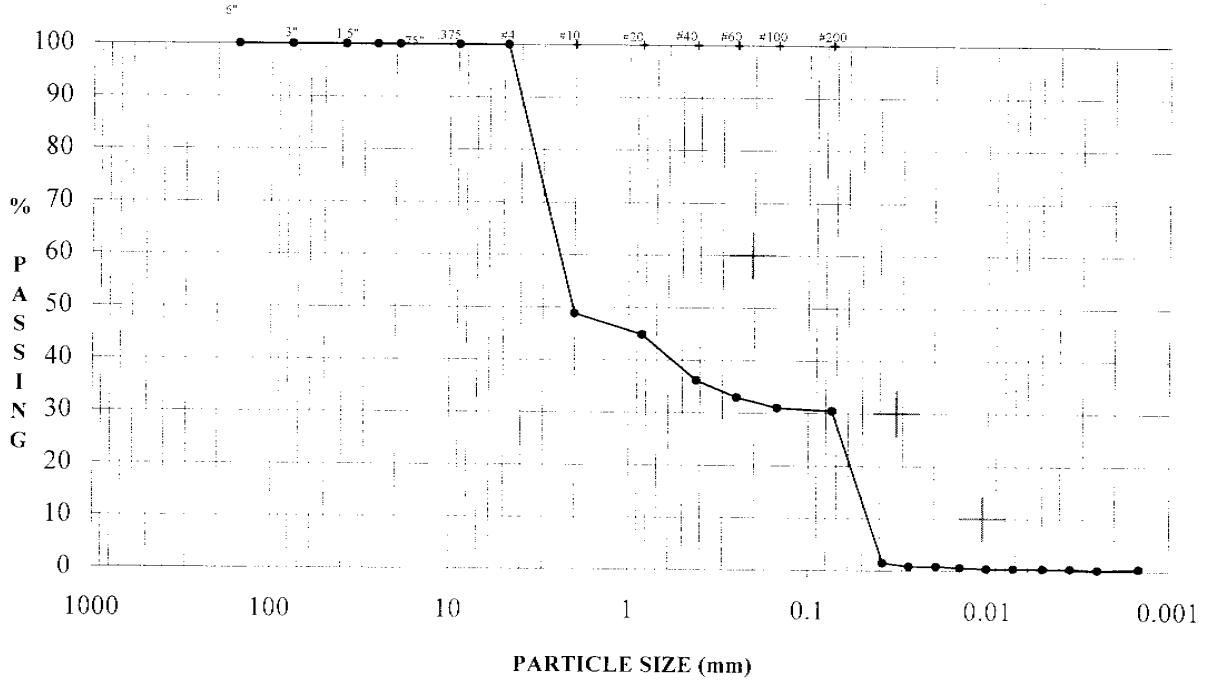
1) 09/24/10

77.9

09/25/10

PARTICLE-SIZE DISTRIBUTION ASTM D 422

US STANDARD SIEVE OPENING SIZES



COBBLE	Coarse	Fine	Cor	Med	Fine	Silt or Clay
	GRAVEL		SAND			FINES

Sieve Data	
Particle Diameter	% Finer
3"	100.0%
1 1/2"	100.0%
1"	100.0%
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	48.8%
#20	44.8%
#40	36.1%
#60	32.9%
#100	31.0%
#200	30.4%

Hydrometer Data	
Particle Diameter	% Finer
0.038	1.5%
0.027	0.8%
0.019	0.8%
0.014	0.6%
0.010	0.4%
0.007	0.4%
0.005	0.4%
0.003	0.4%
0.002	0.2%

DESCRIPTION

Sample.Bottle#:	F76459-3.3 dup	Depth:	-
		USCS:	-
Wet Color:	BROWN		
Description:	ROCK		
Comments:	GN41495		

SAMPLE DATA

W_C (%):	31.9
G_S:	2.65
% Gravel	0.0
% Sand	69.6
% Fines	30.4

C_C	N/A
C_U	N/A
LL	-
PL	-
PI	-

Date:	09/25/10
Technician:	LE
Reviewer:	LTM

ACCUTEST LAB SE

GN 41495

F76459-3

Dupl.

82.7% solid

17.3% moist

tare #				Total Wt (g)	210.09	
wt soil&tare, moist (g)				Wt Split #10 (g)	102.60	
wt soil&tare, dry (g)				% passing #10	#VALUE!	
wt tare (g)						
wt moisture (g)	#VALUE!					
wt dry soil (g)	#VALUE!					
% moisture	#VALUE!					

	SIEVE	wt ret (g)	% ret	% pass	SIEVE
coarse gravel	3.000		#VALUE!	#VALUE!	3.000 coarse gravel
	1.500		#VALUE!	#VALUE!	1.500
	1.000		#VALUE!	#VALUE!	1.000
fine gravel	0.750		#VALUE!	#VALUE!	0.750 fine gravel
	0.375		#VALUE!	#VALUE!	0.375
coarse sand	#4		#VALUE!	#VALUE!	#4 coarse sand
medium sand	#10		#VALUE!	#VALUE!	#10 medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Passing #10 Sieve	#VALUE!	Initial Moist Weight	
Specific Gravity (ASSUMED)	2.65		#VALUE!
ml Dispersing Agent Used (40 ml Na(PO4)n per 1000 ml H2O)	125		

MOISTURE CONTENT (Hygroscopic - #10)

tare #		tare #			
wt soil&tare, moist (g)		wt soil&tare, dry (g)	#VALUE!	LL:	-
wt soil&tare, dry (g)		wt soil&tare, wash (g)	#VALUE!	PL:	-
wt tare (g)		wt tare (g)	0.00	PI:	-
wt moisture (g)	#VALUE!	wt fines lost (g)	#VALUE!		
wt dry soil (g)	#VALUE!	wt dry soil (g)	#VALUE!		
% moisture	#VALUE!	% fines lost	#VALUE!		

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT RETAINED	CUMUL WT RET. CORR.	PERCENT PASSING	
#10	0.00	#VALUE!	#VALUE!	#10 medium sand
#20	18.32	#VALUE!	#VALUE!	#18
#40	51.85	#VALUE!	#VALUE!	#40 fine sand
#60	74.87	#VALUE!	#VALUE!	#60
#100	84.23	#VALUE!	#VALUE!	#120
#200	90.60	#VALUE!	#VALUE!	#200 fines

DATE	TIME	TIME, CUM (min)	READING R	TEMP T	HYD EDG H	PARTICLE DIAMETER	% FINER
9/20/10		2.0	14	22	7	#N/A	#VALUE!
	#VALUE!	4.0	11			#N/A	#VALUE!
	#VALUE!	8.0	11			#N/A	#VALUE!
	#VALUE!	15.0	10			#N/A	#VALUE!
	#VALUE!	30.0	9			#N/A	#VALUE!
	#VALUE!	60.0	9			#N/A	#VALUE!
	#VALUE!	120.0	9			#N/A	#VALUE!
	#VALUE!	240.0	7	22	7	#N/A	#VALUE!
	#VALUE!	480.0	8			#N/A	#VALUE!
9/25/10 #VALUE!	#VALUE!	1440.0	4	22	7	#N/A	#VALUE!

%C GRVL:	#VALUE!
%F GRVL:	#VALUE!
%C SAND:	#VALUE!
%M SAND:	#VALUE!
%F SAND:	#VALUE!
%FINES:	#VALUE!
%TOTAL:	#VALUE!

Wet Color: Brown
Description: rocky

USCS:

DATE #VALUE!
TECH
REVIEW

ANALYTICAL REPORT

Lab Number:	L1013935
Client:	Accutest Accutest Southeast Laboratory 4405 Vineland Road Orlando, FL 32811
ATTN:	Heather Wandry
Phone:	(407) 425-6700
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	01/26/11

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Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1013935-01	F76426-1 SW-09	BLOOMINGTON, IN	09/08/10 11:15
L1013935-02	F76426-3 SW-10	BLOOMINGTON, IN	09/08/10 13:05
L1013935-03	F76426-6 SW-11	BLOOMINGTON, IN	09/08/10 13:40
L1013935-04	F76426-8 SW-12	BLOOMINGTON, IN	09/08/10 14:15
L1013935-05	F76426-10 SW-13	BLOOMINGTON, IN	09/08/10 14:45
L1013935-06	F76426-12 SW-14	BLOOMINGTON, IN	09/08/10 15:15
L1013935-07	F76426-2 SED-09	BLOOMINGTON, IN	09/08/10 11:15
L1013935-08	F76426-4 SED-10	BLOOMINGTON, IN	09/08/10 13:05
L1013935-09	F76426-7 SED-11	BLOOMINGTON, IN	09/08/10 13:40
L1013935-11	F76426-11 SED-13	BLOOMINGTON, IN	09/08/10 14:45
L1013935-12	F76426-13 SED-14	BLOOMINGTON, IN	09/08/10 15:15
L1013935-13	F76426-12 SED-12	BLOOMINGTON, IN	09/09/10 16:15

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report replaces the one previously issued. The report was amended to change the client ID for sample L1013935-13 as requested.

Semi-Volatile Organics by 8270

The surrogate recoveries for L1013935-07, -08, -09, -11, -12 are outside the individual acceptance criteria for 2,4,6-Tribromophenol, but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Case Narrative (continued)

The WG432076-3 LCS/LCSD RPD is above the acceptance criteria for Phenol (31%).

The WG433361-1 Method Blank associated with L1013935-01 through 06 has a concentration above the reporting limits for bis(2-Ethylhexyl)phthalate; however, this is within the method allowances for common laboratory contaminants. The associated samples are reported with a 'B' qualifier for any concentration less than 5 times that found in the method blank.

The WG433639-4/-5 MS/MSD recoveries, associated with L1013935-13, were below the acceptance criteria for 2-Methylphenol (MS 22.8%) and 2,4-Dimethylphenol (6.31%)/(3.76%); however, LCS results were within QC limits. In addition, the associated WG433639-5 MS/MSD RPD(s) are above the acceptance criteria for 2-Methylphenol (36%) and 2,4-Dimethylphenol (49%).

Alkylated PAH

The surrogate recovery for Method Blank WG432087-1 was outside the acceptance criteria for 2-Methylnaphthalene-d10 (42%); however, within the overall criteria. The results are reported with no qualification.

Total Metals

The WG433346-4 MSD recovery for Hardness (136%), performed on L1014191-14, is invalid because the sample concentration is greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: 

Title: Technical Director/Representative Date: 01/26/11

ORGANICS

SEMIVOLATILES

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-01	Date Collected:	09/08/10 11:15
Client ID:	F76426-1 SW-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 14:15		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.521	--	1
2-Methylphenol	ND		ug/l	0.521	--	1
4-Methylphenol	ND		ug/l	0.521	--	1
2,4-Dimethylphenol	ND		ug/l	0.521	--	1
2,4-Dichlorophenol	ND		ug/l	0.521	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.521	--	1
Pentachlorophenol	ND		ug/l	2.08	--	1
Butylbenzylphthalate	ND		ug/l	0.521	--	1
Bis(2-Ethylhexyl)phthalate	1.46	B	ug/l	0.521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-115
Phenol-d5	32		15-115
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	77		15-115
Terphenyl-d14	126		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-01	Date Collected:	09/08/10 11:15
Client ID:	F76426-1 SW-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	10/12/10 00:10		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	60.5		ng/l	9.39	--	1
C1-Naphthalenes	ND		ng/l	9.39	--	1
C2-Naphthalenes	10.1		ng/l	9.39	--	1
C3-Naphthalenes	ND		ng/l	9.39	--	1
C4-Naphthalenes	ND		ng/l	9.39	--	1
2-Methylnaphthalene	ND		ng/l	9.39	--	1
1-Methylnaphthalene	9.42		ng/l	9.39	--	1
Dibenzofuran	19.0		ng/l	9.39	--	1
Acenaphthylene	ND		ng/l	9.39	--	1
Acenaphthene	49.3		ng/l	9.39	--	1
Fluorene	21.1		ng/l	9.39	--	1
C1-Fluorenes	ND		ng/l	9.39	--	1
C2-Fluorenes	ND		ng/l	9.39	--	1
C3-Fluorenes	ND		ng/l	9.39	--	1
Phenanthrene	16.8		ng/l	9.39	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
Anthracene	ND		ng/l	9.39	--	1
Carbazole	12.2		ng/l	9.39	--	1
Fluoranthene	29.0		ng/l	9.39	--	1
Pyrene	22.6		ng/l	9.39	--	1
C1-Fluoranthenes/Pyrenes	9.83		ng/l	9.39	--	1
Benz(a)anthracene	ND		ng/l	9.39	--	1
Chrysene	15.9		ng/l	9.39	--	1
C1-Chrysenes	ND		ng/l	9.39	--	1
C2-Chrysenes	ND		ng/l	9.39	--	1
C3-Chrysenes	ND		ng/l	9.39	--	1
C4-Chrysenes	ND		ng/l	9.39	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-01
Client ID: F76426-1 SW-09
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	11.8		ng/l	9.39	--	1
Benzo(k)fluoranthene	10.8		ng/l	9.39	--	1
Benzo(e)Pyrene	ND		ng/l	9.39	--	1
Benzo(a)pyrene	ND		ng/l	9.39	--	1
Perylene	ND		ng/l	9.39	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.39	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.39	--	1
Benzo(ghi)perylene	ND		ng/l	9.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	88		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-02	Date Collected:	09/08/10 13:05
Client ID:	F76426-3 SW-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 14:54		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.500	--	1
2-Methylphenol	ND		ug/l	0.500	--	1
4-Methylphenol	ND		ug/l	0.500	--	1
2,4-Dimethylphenol	ND		ug/l	0.500	--	1
2,4-Dichlorophenol	ND		ug/l	0.500	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.500	--	1
Pentachlorophenol	ND		ug/l	2.00	--	1
Butylbenzylphthalate	ND		ug/l	0.500	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-115
Phenol-d5	28		15-115
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	74		15-115
Terphenyl-d14	104		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-02	Date Collected:	09/08/10 13:05
Client ID:	F76426-3 SW-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 16:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	73.3		ng/l	10.9	--	1
C1-Naphthalenes	ND		ng/l	10.9	--	1
C2-Naphthalenes	ND		ng/l	10.9	--	1
C3-Naphthalenes	13.7		ng/l	10.9	--	1
C4-Naphthalenes	ND		ng/l	10.9	--	1
2-Methylnaphthalene	ND		ng/l	10.9	--	1
1-Methylnaphthalene	ND		ng/l	10.9	--	1
Dibenzofuran	25.2		ng/l	10.9	--	1
Acenaphthylene	ND		ng/l	10.9	--	1
Acenaphthene	60.3		ng/l	10.9	--	1
Fluorene	32.2		ng/l	10.9	--	1
C1-Fluorenes	ND		ng/l	10.9	--	1
C2-Fluorenes	ND		ng/l	10.9	--	1
C3-Fluorenes	ND		ng/l	10.9	--	1
Phenanthrene	18.3		ng/l	10.9	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
Anthracene	ND		ng/l	10.9	--	1
Carbazole	15.5		ng/l	10.9	--	1
Fluoranthene	26.6		ng/l	10.9	--	1
Pyrene	18.6		ng/l	10.9	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.9	--	1
Benz(a)anthracene	ND		ng/l	10.9	--	1
Chrysene	ND		ng/l	10.9	--	1
C1-Chrysenes	ND		ng/l	10.9	--	1
C2-Chrysenes	ND		ng/l	10.9	--	1
C3-Chrysenes	ND		ng/l	10.9	--	1
C4-Chrysenes	ND		ng/l	10.9	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-02
Client ID: F76426-3 SW-10
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.9	--	1
Benzo(k)fluoranthene	ND		ng/l	10.9	--	1
Benzo(e)Pyrene	ND		ng/l	10.9	--	1
Benzo(a)pyrene	ND		ng/l	10.9	--	1
Perylene	ND		ng/l	10.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.9	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.9	--	1
Benzo(ghi)perylene	ND		ng/l	10.9	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-03	Date Collected:	09/08/10 13:40
Client ID:	F76426-6 SW-11	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 15:33		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.521	--	1
2-Methylphenol	ND		ug/l	0.521	--	1
4-Methylphenol	ND		ug/l	0.521	--	1
2,4-Dimethylphenol	ND		ug/l	0.521	--	1
2,4-Dichlorophenol	ND		ug/l	0.521	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.521	--	1
Pentachlorophenol	ND		ug/l	2.08	--	1
Butylbenzylphthalate	ND		ug/l	0.521	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-115
Phenol-d5	31		15-115
Nitrobenzene-d5	90		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	68		15-115
Terphenyl-d14	121		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-03	Date Collected:	09/08/10 13:40
Client ID:	F76426-6 SW-11	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 18:29		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	81.7		ng/l	9.43	--	1
C1-Naphthalenes	12.2		ng/l	9.43	--	1
C2-Naphthalenes	10.5		ng/l	9.43	--	1
C3-Naphthalenes	11.7		ng/l	9.43	--	1
C4-Naphthalenes	ND		ng/l	9.43	--	1
2-Methylnaphthalene	ND		ng/l	9.43	--	1
1-Methylnaphthalene	13.0		ng/l	9.43	--	1
Dibenzofuran	24.5		ng/l	9.43	--	1
Acenaphthylene	ND		ng/l	9.43	--	1
Acenaphthene	57.8		ng/l	9.43	--	1
Fluorene	25.0		ng/l	9.43	--	1
C1-Fluorenes	ND		ng/l	9.43	--	1
C2-Fluorenes	ND		ng/l	9.43	--	1
C3-Fluorenes	ND		ng/l	9.43	--	1
Phenanthrene	17.7		ng/l	9.43	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
Anthracene	ND		ng/l	9.43	--	1
Carbazole	18.3		ng/l	9.43	--	1
Fluoranthene	24.2		ng/l	9.43	--	1
Pyrene	16.1		ng/l	9.43	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.43	--	1
Benz(a)anthracene	ND		ng/l	9.43	--	1
Chrysene	9.70		ng/l	9.43	--	1
C1-Chrysenes	ND		ng/l	9.43	--	1
C2-Chrysenes	ND		ng/l	9.43	--	1
C3-Chrysenes	ND		ng/l	9.43	--	1
C4-Chrysenes	ND		ng/l	9.43	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-03
Client ID: F76426-6 SW-11
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.43	--	1
Benzo(k)fluoranthene	ND		ng/l	9.43	--	1
Benzo(e)Pyrene	ND		ng/l	9.43	--	1
Benzo(a)pyrene	ND		ng/l	9.43	--	1
Perylene	ND		ng/l	9.43	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.43	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.43	--	1
Benzo(ghi)perylene	ND		ng/l	9.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	90		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-04	Date Collected:	09/08/10 14:15
Client ID:	F76426-8 SW-12	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 16:11		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-115
Phenol-d5	34		15-115
Nitrobenzene-d5	100		30-130
2-Fluorobiphenyl	94		30-130
2,4,6-Tribromophenol	91		15-115
Terphenyl-d14	130		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-04	Date Collected:	09/08/10 14:15
Client ID:	F76426-8 SW-12	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 20:00		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	74.8		ng/l	9.39	--	1
C1-Naphthalenes	12.3		ng/l	9.39	--	1
C2-Naphthalenes	9.89		ng/l	9.39	--	1
C3-Naphthalenes	11.8		ng/l	9.39	--	1
C4-Naphthalenes	ND		ng/l	9.39	--	1
2-Methylnaphthalene	ND		ng/l	9.39	--	1
1-Methylnaphthalene	13.5		ng/l	9.39	--	1
Dibenzofuran	24.1		ng/l	9.39	--	1
Acenaphthylene	ND		ng/l	9.39	--	1
Acenaphthene	59.0		ng/l	9.39	--	1
Fluorene	26.3		ng/l	9.39	--	1
C1-Fluorenes	ND		ng/l	9.39	--	1
C2-Fluorenes	ND		ng/l	9.39	--	1
C3-Fluorenes	ND		ng/l	9.39	--	1
Phenanthrene	20.2		ng/l	9.39	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
Anthracene	ND		ng/l	9.39	--	1
Carbazole	19.2		ng/l	9.39	--	1
Fluoranthene	31.8		ng/l	9.39	--	1
Pyrene	22.8		ng/l	9.39	--	1
C1-Fluoranthenes/Pyrenes	10.3		ng/l	9.39	--	1
Benz(a)anthracene	ND		ng/l	9.39	--	1
Chrysene	14.8		ng/l	9.39	--	1
C1-Chrysenes	ND		ng/l	9.39	--	1
C2-Chrysenes	ND		ng/l	9.39	--	1
C3-Chrysenes	ND		ng/l	9.39	--	1
C4-Chrysenes	ND		ng/l	9.39	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-04
Client ID: F76426-8 SW-12
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 14:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	13.7		ng/l	9.39	--	1
Benzo(k)fluoranthene	10.7		ng/l	9.39	--	1
Benzo(e)Pyrene	11.3		ng/l	9.39	--	1
Benzo(a)pyrene	ND		ng/l	9.39	--	1
Perylene	ND		ng/l	9.39	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.39	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.39	--	1
Benzo(ghi)perylene	11.5		ng/l	9.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	72		50-130
Pyrene-d10	81		50-130
Benzo(b)fluoranthene-d12	91		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-05	Date Collected:	09/08/10 14:45
Client ID:	F76426-10 SW-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 16:50		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.526	--	1
2-Methylphenol	ND		ug/l	0.526	--	1
4-Methylphenol	ND		ug/l	0.526	--	1
2,4-Dimethylphenol	ND		ug/l	0.526	--	1
2,4-Dichlorophenol	ND		ug/l	0.526	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.526	--	1
Pentachlorophenol	ND		ug/l	2.10	--	1
Butylbenzylphthalate	ND		ug/l	0.526	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.526	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-115
Phenol-d5	31		15-115
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	68		15-115
Terphenyl-d14	125		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-05	Date Collected:	09/08/10 14:45
Client ID:	F76426-10 SW-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 21:31		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	73.0		ng/l	9.48	--	1
C1-Naphthalenes	13.9		ng/l	9.48	--	1
C2-Naphthalenes	10.3		ng/l	9.48	--	1
C3-Naphthalenes	10.9		ng/l	9.48	--	1
C4-Naphthalenes	ND		ng/l	9.48	--	1
2-Methylnaphthalene	ND		ng/l	9.48	--	1
1-Methylnaphthalene	16.0		ng/l	9.48	--	1
Dibenzofuran	25.8		ng/l	9.48	--	1
Acenaphthylene	ND		ng/l	9.48	--	1
Acenaphthene	63.0		ng/l	9.48	--	1
Fluorene	27.6		ng/l	9.48	--	1
C1-Fluorenes	ND		ng/l	9.48	--	1
C2-Fluorenes	ND		ng/l	9.48	--	1
C3-Fluorenes	ND		ng/l	9.48	--	1
Phenanthrene	20.4		ng/l	9.48	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
Anthracene	ND		ng/l	9.48	--	1
Carbazole	21.0		ng/l	9.48	--	1
Fluoranthene	29.2		ng/l	9.48	--	1
Pyrene	20.0		ng/l	9.48	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.48	--	1
Benz(a)anthracene	ND		ng/l	9.48	--	1
Chrysene	13.8		ng/l	9.48	--	1
C1-Chrysenes	ND		ng/l	9.48	--	1
C2-Chrysenes	ND		ng/l	9.48	--	1
C3-Chrysenes	ND		ng/l	9.48	--	1
C4-Chrysenes	ND		ng/l	9.48	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-05
Client ID: F76426-10 SW-13
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	11.6		ng/l	9.48	--	1
Benzo(k)fluoranthene	ND		ng/l	9.48	--	1
Benzo(e)Pyrene	ND		ng/l	9.48	--	1
Benzo(a)pyrene	ND		ng/l	9.48	--	1
Perylene	ND		ng/l	9.48	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.48	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.48	--	1
Benzo(ghi)perylene	10.1		ng/l	9.48	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	80		50-130
Benzo(b)fluoranthene-d12	90		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-06	Date Collected:	09/08/10 15:15
Client ID:	F76426-12 SW-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 17:28		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	0.566	B	ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-115
Phenol-d5	30		15-115
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	73		15-115
Terphenyl-d14	124		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-06	Date Collected:	09/08/10 15:15
Client ID:	F76426-12 SW-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 23:03		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	43.6		ng/l	9.62	--	1
C1-Naphthalenes	13.3		ng/l	9.62	--	1
C2-Naphthalenes	11.3		ng/l	9.62	--	1
C3-Naphthalenes	12.1		ng/l	9.62	--	1
C4-Naphthalenes	ND		ng/l	9.62	--	1
2-Methylnaphthalene	ND		ng/l	9.62	--	1
1-Methylnaphthalene	14.5		ng/l	9.62	--	1
Dibenzofuran	29.1		ng/l	9.62	--	1
Acenaphthylene	ND		ng/l	9.62	--	1
Acenaphthene	68.0		ng/l	9.62	--	1
Fluorene	31.3		ng/l	9.62	--	1
C1-Fluorenes	ND		ng/l	9.62	--	1
C2-Fluorenes	ND		ng/l	9.62	--	1
C3-Fluorenes	ND		ng/l	9.62	--	1
Phenanthrene	23.1		ng/l	9.62	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
Anthracene	ND		ng/l	9.62	--	1
Carbazole	21.1		ng/l	9.62	--	1
Fluoranthene	26.9		ng/l	9.62	--	1
Pyrene	17.7		ng/l	9.62	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.62	--	1
Benz(a)anthracene	ND		ng/l	9.62	--	1
Chrysene	ND		ng/l	9.62	--	1
C1-Chrysenes	ND		ng/l	9.62	--	1
C2-Chrysenes	ND		ng/l	9.62	--	1
C3-Chrysenes	ND		ng/l	9.62	--	1
C4-Chrysenes	ND		ng/l	9.62	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-06
Client ID: F76426-12 SW-14
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.62	--	1
Benzo(k)fluoranthene	ND		ng/l	9.62	--	1
Benzo(e)Pyrene	ND		ng/l	9.62	--	1
Benzo(a)pyrene	ND		ng/l	9.62	--	1
Perylene	ND		ng/l	9.62	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.62	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.62	--	1
Benzo(ghi)perylene	ND		ng/l	9.62	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	78		50-130
Pyrene-d10	81		50-130
Benzo(b)fluoranthene-d12	91		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-07	Date Collected:	09/08/10 11:15
Client ID:	F76426-2 SED-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 21:51	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	85%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	202	--	1
2-Methylphenol	ND		ug/kg	202	--	1
4-Methylphenol	ND		ug/kg	202	--	1
2,4-Dimethylphenol	ND		ug/kg	202	--	1
2,4-Dichlorophenol	ND		ug/kg	202	--	1
2,4,6-Trichlorophenol	ND		ug/kg	202	--	1
Pentachlorophenol	ND		ug/kg	808	--	1
Butylbenzylphthalate	ND		ug/kg	202	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	202	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	69		30-130
Phenol-d5	49		30-130
Nitrobenzene-d5	66		30-130
2-Fluorophenol	44		30-130
2,4,6-Tribromophenol	**13**	Q	30-130
Terphenyl-d14	86		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-07	Date Collected:	09/08/10 11:15
Client ID:	F76426-2 SED-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 02:30		
Analyst:	AC		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	9.39		ug/kg	2.78	--	1
C1-Naphthalenes	7.50		ug/kg	2.78	--	1
C2-Naphthalenes	13.0		ug/kg	2.78	--	1
C3-Naphthalenes	19.8		ug/kg	2.78	--	1
C4-Naphthalenes	21.4		ug/kg	2.78	--	1
2-Methylnaphthalene	5.80		ug/kg	2.78	--	1
1-Methylnaphthalene	5.48		ug/kg	2.78	--	1
Dibenzofuran	7.56		ug/kg	2.78	--	1
Acenaphthylene	52.7		ug/kg	2.78	--	1
Acenaphthene	12.2		ug/kg	2.78	--	1
Fluorene	19.7		ug/kg	2.78	--	1
C1-Fluorenes	24.5		ug/kg	2.78	--	1
C2-Fluorenes	28.2		ug/kg	2.78	--	1
C3-Fluorenes	55.5		ug/kg	2.78	--	1
Phenanthrene	247		ug/kg	2.78	--	1
C1-Phenanthrenes/Anthracenes	233		ug/kg	2.78	--	1
C2-Phenanthrenes/Anthracenes	167		ug/kg	2.78	--	1
C3-Phenanthrenes/Anthracenes	59.2		ug/kg	2.78	--	1
C4-Phenanthrenes/Anthracenes	31.4		ug/kg	2.78	--	1
Anthracene	116		ug/kg	2.78	--	1
Carbazole	19.1		ug/kg	2.78	--	1
Fluoranthene	1050		ug/kg	2.78	--	1
Pyrene	777		ug/kg	2.78	--	1
C1-Fluoranthenes/Pyrenes	353		ug/kg	2.78	--	1
Benz(a)anthracene	380		ug/kg	2.78	--	1
Chrysene	430		ug/kg	2.78	--	1
C1-Chrysenes	168		ug/kg	2.78	--	1
C2-Chrysenes	106		ug/kg	2.78	--	1
C3-Chrysenes	128		ug/kg	2.78	--	1
C4-Chrysenes	93.8		ug/kg	2.78	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-07
Client ID: F76426-2 SED-09
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	282		ug/kg	2.78	--	1
Benzo(k)fluoranthene	283		ug/kg	2.78	--	1
Benzo(e)Pyrene	214		ug/kg	2.78	--	1
Benzo(a)pyrene	240		ug/kg	2.78	--	1
Perylene	64.8		ug/kg	2.78	--	1
Indeno(1,2,3-cd)Pyrene	160		ug/kg	2.78	--	1
Dibenz(a,h)anthracene	56.5		ug/kg	2.78	--	1
Benzo(ghi)perylene	154		ug/kg	2.78	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		50-130
Pyrene-d10	88		50-130
Benzo(b)fluoranthene-d12	92		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-08	Date Collected:	09/08/10 13:05
Client ID:	F76426-4 SED-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 22:30	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	79%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	223	--	1
2-Methylphenol	ND		ug/kg	223	--	1
4-Methylphenol	ND		ug/kg	223	--	1
2,4-Dimethylphenol	ND		ug/kg	223	--	1
2,4-Dichlorophenol	ND		ug/kg	223	--	1
2,4,6-Trichlorophenol	ND		ug/kg	223	--	1
Pentachlorophenol	ND		ug/kg	892	--	1
Butylbenzylphthalate	ND		ug/kg	223	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	223	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	62		30-130
Phenol-d5	47		30-130
Nitrobenzene-d5	58		30-130
2-Fluorophenol	49		30-130
2,4,6-Tribromophenol	**20**	Q	30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-08	Date Collected:	09/08/10 13:05
Client ID:	F76426-4 SED-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 04:00		
Analyst:	AC		
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	198		ug/kg	3.41	--	1
C1-Naphthalenes	24.8		ug/kg	3.41	--	1
C2-Naphthalenes	31.8		ug/kg	3.41	--	1
C3-Naphthalenes	34.9		ug/kg	3.41	--	1
C4-Naphthalenes	31.8		ug/kg	3.41	--	1
2-Methylnaphthalene	18.5		ug/kg	3.41	--	1
1-Methylnaphthalene	18.5		ug/kg	3.41	--	1
Dibenzofuran	26.5		ug/kg	3.41	--	1
Acenaphthylene	44.8		ug/kg	3.41	--	1
Acenaphthene	73.5		ug/kg	3.41	--	1
Fluorene	39.2		ug/kg	3.41	--	1
C1-Fluorenes	15.5		ug/kg	3.41	--	1
C2-Fluorenes	22.5		ug/kg	3.41	--	1
C3-Fluorenes	58.9		ug/kg	3.41	--	1
Phenanthrene	234		ug/kg	3.41	--	1
C1-Phenanthrenes/Anthracenes	103		ug/kg	3.41	--	1
C2-Phenanthrenes/Anthracenes	77.5		ug/kg	3.41	--	1
C3-Phenanthrenes/Anthracenes	48.4		ug/kg	3.41	--	1
C4-Phenanthrenes/Anthracenes	30.5		ug/kg	3.41	--	1
Anthracene	66.1		ug/kg	3.41	--	1
Carbazole	33.4		ug/kg	3.41	--	1
Fluoranthene	583		ug/kg	3.41	--	1
Pyrene	519		ug/kg	3.41	--	1
C1-Fluoranthenes/Pyrenes	235		ug/kg	3.41	--	1
Benz(a)anthracene	286		ug/kg	3.41	--	1
Chrysene	370		ug/kg	3.41	--	1
C1-Chrysenes	139		ug/kg	3.41	--	1
C2-Chrysenes	86.5		ug/kg	3.41	--	1
C3-Chrysenes	103		ug/kg	3.41	--	1
C4-Chrysenes	73.7		ug/kg	3.41	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-08
Client ID: F76426-4 SED-10
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	372		ug/kg	3.41	--	1
Benzo(k)fluoranthene	301		ug/kg	3.41	--	1
Benzo(e)Pyrene	274		ug/kg	3.41	--	1
Benzo(a)pyrene	348		ug/kg	3.41	--	1
Perylene	94.3		ug/kg	3.41	--	1
Indeno(1,2,3-cd)Pyrene	247		ug/kg	3.41	--	1
Dibenz(a,h)anthracene	63.0		ug/kg	3.41	--	1
Benzo(ghi)perylene	250		ug/kg	3.41	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		50-130
Pyrene-d10	80		50-130
Benzo(b)fluoranthene-d12	84		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-09	Date Collected:	09/08/10 13:40
Client ID:	F76426-7 SED-11	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 23:09	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	84%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	212	--	1
2-Methylphenol	ND		ug/kg	212	--	1
4-Methylphenol	ND		ug/kg	212	--	1
2,4-Dimethylphenol	ND		ug/kg	212	--	1
2,4-Dichlorophenol	ND		ug/kg	212	--	1
2,4,6-Trichlorophenol	ND		ug/kg	212	--	1
Pentachlorophenol	ND		ug/kg	847	--	1
Butylbenzylphthalate	ND		ug/kg	212	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	212	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	61		30-130
Phenol-d5	46		30-130
Nitrobenzene-d5	63		30-130
2-Fluorophenol	41		30-130
2,4,6-Tribromophenol	**10**	Q	30-130
Terphenyl-d14	77		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-09
Client ID: F76426-7 SED-11
Sample Location: BLOOMINGTON, IN
Matrix: Soil
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/12/10 19:19
Analyst: AC
Percent Solids: 84%

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified
Extraction Method: ALPHA OP-013
Extraction Date: 09/13/10 15:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	23.4		ug/kg	1.24	--	1
C1-Naphthalenes	29.9		ug/kg	1.24	--	1
C2-Naphthalenes	45.1		ug/kg	1.24	--	1
C3-Naphthalenes	67.8		ug/kg	1.24	--	1
C4-Naphthalenes	77.0		ug/kg	1.24	--	1
2-Methylnaphthalene	27.5		ug/kg	1.24	--	1
1-Methylnaphthalene	17.4		ug/kg	1.24	--	1
Dibenzofuran	17.1		ug/kg	1.24	--	1
Acenaphthylene	13.8		ug/kg	1.24	--	1
Acenaphthene	17.6		ug/kg	1.24	--	1
Fluorene	17.8		ug/kg	1.24	--	1
C1-Fluorenes	13.0		ug/kg	1.24	--	1
C2-Fluorenes	44.5		ug/kg	1.24	--	1
C3-Fluorenes	112		ug/kg	1.24	--	1
Phenanthrene	235		ug/kg	1.24	--	1
C1-Phenanthrenes/Anthracenes	213		ug/kg	1.24	--	1
C2-Phenanthrenes/Anthracenes	251		ug/kg	1.24	--	1
C3-Phenanthrenes/Anthracenes	154		ug/kg	1.24	--	1
C4-Phenanthrenes/Anthracenes	82.4		ug/kg	1.24	--	1
Anthracene	27.7		ug/kg	1.24	--	1
Carbazole	29.3		ug/kg	1.24	--	1
Fluoranthene	403		ug/kg	1.24	--	1
Pyrene	412		ug/kg	1.24	--	1
C1-Fluoranthenes/Pyrenes	302		ug/kg	1.24	--	1
Benz(a)anthracene	153		ug/kg	1.24	--	1
Chrysene	245		ug/kg	1.24	--	1
C1-Chrysenes	133		ug/kg	1.24	--	1
C2-Chrysenes	103		ug/kg	1.24	--	1
C3-Chrysenes	83.6		ug/kg	1.24	--	1
C4-Chrysenes	58.7		ug/kg	1.24	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-09
Client ID: F76426-7 SED-11
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	210		ug/kg	1.24	--	1
Benzo(k)fluoranthene	173		ug/kg	1.24	--	1
Benzo(e)Pyrene	174		ug/kg	1.24	--	1
Benzo(a)pyrene	124		ug/kg	1.24	--	1
Perylene	39.0		ug/kg	1.24	--	1
Indeno(1,2,3-cd)Pyrene	145		ug/kg	1.24	--	1
Dibenz(a,h)anthracene	36.3		ug/kg	1.24	--	1
Benzo(ghi)perylene	156		ug/kg	1.24	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	90		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-11	Date Collected:	09/08/10 14:45
Client ID:	F76426-11 SED-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 23:48	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	233	--	1
2-Methylphenol	ND		ug/kg	233	--	1
4-Methylphenol	ND		ug/kg	233	--	1
2,4-Dimethylphenol	ND		ug/kg	233	--	1
2,4-Dichlorophenol	ND		ug/kg	233	--	1
2,4,6-Trichlorophenol	ND		ug/kg	233	--	1
Pentachlorophenol	ND		ug/kg	934	--	1
Butylbenzylphthalate	ND		ug/kg	233	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	233	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	70		30-130
Phenol-d5	59		30-130
Nitrobenzene-d5	73		30-130
2-Fluorophenol	52		30-130
2,4,6-Tribromophenol	**17**	Q	30-130
Terphenyl-d14	86		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-11	Date Collected:	09/08/10 14:45
Client ID:	F76426-11 SED-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 07:00		
Analyst:	AC		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	11.8		ug/kg	2.17	--	1
C1-Naphthalenes	9.96		ug/kg	2.17	--	1
C2-Naphthalenes	19.4		ug/kg	2.17	--	1
C3-Naphthalenes	20.6		ug/kg	2.17	--	1
C4-Naphthalenes	18.2		ug/kg	2.17	--	1
2-Methylnaphthalene	7.94		ug/kg	2.17	--	1
1-Methylnaphthalene	7.19		ug/kg	2.17	--	1
Dibenzofuran	9.12		ug/kg	2.17	--	1
Acenaphthylene	10.6		ug/kg	2.17	--	1
Acenaphthene	20.4		ug/kg	2.17	--	1
Fluorene	17.1		ug/kg	2.17	--	1
C1-Fluorenes	7.31		ug/kg	2.17	--	1
C2-Fluorenes	13.3		ug/kg	2.17	--	1
C3-Fluorenes	43.9		ug/kg	2.17	--	1
Phenanthrene	221		ug/kg	2.17	--	1
C1-Phenanthrenes/Anthracenes	65.2		ug/kg	2.17	--	1
C2-Phenanthrenes/Anthracenes	48.7		ug/kg	2.17	--	1
C3-Phenanthrenes/Anthracenes	29.5		ug/kg	2.17	--	1
C4-Phenanthrenes/Anthracenes	22.4		ug/kg	2.17	--	1
Anthracene	42.4		ug/kg	2.17	--	1
Carbazole	37.2		ug/kg	2.17	--	1
Fluoranthene	504		ug/kg	2.17	--	1
Pyrene	436		ug/kg	2.17	--	1
C1-Fluoranthenes/Pyrenes	175		ug/kg	2.17	--	1
Benz(a)anthracene	273		ug/kg	2.17	--	1
Chrysene	349		ug/kg	2.17	--	1
C1-Chrysenes	105		ug/kg	2.17	--	1
C2-Chrysenes	52.8		ug/kg	2.17	--	1
C3-Chrysenes	76.2		ug/kg	2.17	--	1
C4-Chrysenes	50.2		ug/kg	2.17	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-11
Client ID: F76426-11 SED-13
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	349		ug/kg	2.17	--	1
Benzo(k)fluoranthene	300		ug/kg	2.17	--	1
Benzo(e)Pyrene	263		ug/kg	2.17	--	1
Benzo(a)pyrene	343		ug/kg	2.17	--	1
Perylene	99.2		ug/kg	2.17	--	1
Indeno(1,2,3-cd)Pyrene	271		ug/kg	2.17	--	1
Dibenz(a,h)anthracene	64.4		ug/kg	2.17	--	1
Benzo(ghi)perylene	262		ug/kg	2.17	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		50-130
Pyrene-d10	83		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-12	Date Collected:	09/08/10 15:15
Client ID:	F76426-13 SED-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/13/10 00:27	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	223	--	1
2-Methylphenol	ND		ug/kg	223	--	1
4-Methylphenol	ND		ug/kg	223	--	1
2,4-Dimethylphenol	ND		ug/kg	223	--	1
2,4-Dichlorophenol	ND		ug/kg	223	--	1
2,4,6-Trichlorophenol	ND		ug/kg	223	--	1
Pentachlorophenol	ND		ug/kg	891	--	1
Butylbenzylphthalate	ND		ug/kg	223	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	223	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	66		30-130
Phenol-d5	48		30-130
Nitrobenzene-d5	64		30-130
2-Fluorophenol	31		30-130
2,4,6-Tribromophenol	**8**	Q	30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-12	Date Collected:	09/08/10 15:15
Client ID:	F76426-13 SED-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 09:32		
Analyst:	AC		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	2640		ug/kg	3.17	--	1
C1-Naphthalenes	559		ug/kg	3.17	--	1
C2-Naphthalenes	230		ug/kg	3.17	--	1
C3-Naphthalenes	57.5		ug/kg	3.17	--	1
C4-Naphthalenes	28.2		ug/kg	3.17	--	1
2-Methylnaphthalene	287		ug/kg	3.17	--	1
1-Methylnaphthalene	562		ug/kg	3.17	--	1
Dibenzofuran	398		ug/kg	3.17	--	1
Acenaphthylene	43.4		ug/kg	3.17	--	1
Acenaphthene	874		ug/kg	3.17	--	1
Fluorene	377		ug/kg	3.17	--	1
C1-Fluorenes	30.0		ug/kg	3.17	--	1
C2-Fluorenes	24.5		ug/kg	3.17	--	1
C3-Fluorenes	171		ug/kg	3.17	--	1
Phenanthrene	1230		ug/kg	3.17	--	1
C1-Phenanthrenes/Anthracenes	237		ug/kg	3.17	--	1
C2-Phenanthrenes/Anthracenes	111		ug/kg	3.17	--	1
C3-Phenanthrenes/Anthracenes	58.4		ug/kg	3.17	--	1
C4-Phenanthrenes/Anthracenes	35.0		ug/kg	3.17	--	1
Anthracene	108		ug/kg	3.17	--	1
Carbazole	337		ug/kg	3.17	--	1
Fluoranthene	1770		ug/kg	3.17	--	1
Pyrene	1380		ug/kg	3.17	--	1
C1-Fluoranthenes/Pyrenes	393		ug/kg	3.17	--	1
Benz(a)anthracene	602		ug/kg	3.17	--	1
Chrysene	841		ug/kg	3.17	--	1
C1-Chrysenes	208		ug/kg	3.17	--	1
C2-Chrysenes	104		ug/kg	3.17	--	1
C3-Chrysenes	116		ug/kg	3.17	--	1
C4-Chrysenes	74.8		ug/kg	3.17	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-12
Client ID: F76426-13 SED-14
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	789		ug/kg	3.17	--	1
Benzo(k)fluoranthene	620		ug/kg	3.17	--	1
Benzo(e)Pyrene	566		ug/kg	3.17	--	1
Benzo(a)pyrene	681		ug/kg	3.17	--	1
Perylene	189		ug/kg	3.17	--	1
Indeno(1,2,3-cd)Pyrene	568		ug/kg	3.17	--	1
Dibenz(a,h)anthracene	139		ug/kg	3.17	--	1
Benzo(ghi)perylene	563		ug/kg	3.17	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	86		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-13	Date Collected:	09/09/10 16:15
Client ID:	F76426-12 SED-12	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 17:27	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	85%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	224	--	1
2-Methylphenol	ND		ug/kg	224	--	1
4-Methylphenol	ND		ug/kg	224	--	1
2,4-Dimethylphenol	ND		ug/kg	224	--	1
2,4-Dichlorophenol	ND		ug/kg	224	--	1
2,4,6-Trichlorophenol	ND		ug/kg	224	--	1
Pentachlorophenol	ND		ug/kg	895	--	1
Butylbenzylphthalate	ND		ug/kg	224	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	224	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	66		30-130
Phenol-d5	52		30-130
Nitrobenzene-d5	69		30-130
2-Fluorophenol	44		30-130
2,4,6-Tribromophenol	33		30-130
Terphenyl-d14	78		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID:	L1013935-13	Date Collected:	09/09/10 16:15
Client ID:	F76426-12 SED-12	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 10:40
Analytical Date:	09/26/10 09:46		
Analyst:	AC		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	8.55		ug/kg	2.37	--	1
C1-Naphthalenes	4.54		ug/kg	2.37	--	1
C2-Naphthalenes	9.80		ug/kg	2.37	--	1
C3-Naphthalenes	11.9		ug/kg	2.37	--	1
C4-Naphthalenes	8.77		ug/kg	2.37	--	1
2-Methylnaphthalene	2.65		ug/kg	2.37	--	1
1-Methylnaphthalene	4.18		ug/kg	2.37	--	1
Dibenzofuran	5.35		ug/kg	2.37	--	1
Acenaphthylene	41.6		ug/kg	2.37	--	1
Acenaphthene	13.1		ug/kg	2.37	--	1
Fluorene	9.63		ug/kg	2.37	--	1
C1-Fluorenes	7.31		ug/kg	2.37	--	1
C2-Fluorenes	12.0		ug/kg	2.37	--	1
C3-Fluorenes	22.7		ug/kg	2.37	--	1
Phenanthrene	82.4		ug/kg	2.37	--	1
C1-Phenanthrenes/Anthracenes	62.4		ug/kg	2.37	--	1
C2-Phenanthrenes/Anthracenes	44.2		ug/kg	2.37	--	1
C3-Phenanthrenes/Anthracenes	26.1		ug/kg	2.37	--	1
C4-Phenanthrenes/Anthracenes	13.6		ug/kg	2.37	--	1
Anthracene	30.8		ug/kg	2.37	--	1
Carbazole	7.40		ug/kg	2.37	--	1
Fluoranthene	191		ug/kg	2.37	--	1
Pyrene	216		ug/kg	2.37	--	1
C1-Fluoranthenes/Pyrenes	161		ug/kg	2.37	--	1
Benz(a)anthracene	171		ug/kg	2.37	--	1
Chrysene	230		ug/kg	2.37	--	1
C1-Chrysenes	119		ug/kg	2.37	--	1
C2-Chrysenes	63.2		ug/kg	2.37	--	1
C3-Chrysenes	54.2		ug/kg	2.37	--	1
C4-Chrysenes	39.1		ug/kg	2.37	--	1



Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-13
Client ID: F76426-12 SED-12
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 16:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	183		ug/kg	2.37	--	1
Benzo(k)fluoranthene	193		ug/kg	2.37	--	1
Benzo(e)Pyrene	186		ug/kg	2.37	--	1
Benzo(a)pyrene	198		ug/kg	2.37	--	1
Perylene	46.5		ug/kg	2.37	--	1
Indeno(1,2,3-cd)Pyrene	163		ug/kg	2.37	--	1
Dibenz(a,h)anthracene	44.0		ug/kg	2.37	--	1
Benzo(ghi)perylene	186		ug/kg	2.37	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	80		50-130
Pyrene-d10	82		50-130
Benzo(b)fluoranthene-d12	93		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/12/10 16:35
Analyst: JD

Extraction Method: EPA 3570
Extraction Date: 09/13/10 17:09
Cleanup Method1: EPA 3640A
Cleanup Date1: 09/24/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 07-09,11-12 Batch: WG432076-1					
n-Nitrosodimethylamine	ND		ug/kg	200	--
Pyridine	ND		ug/kg	200	--
Benzaldehyde	ND		ug/kg	400	--
Aniline	ND		ug/kg	200	--
Bis(2-chloroethyl)ether	ND		ug/kg	200	--
Phenol	ND		ug/kg	200	--
2-Chlorophenol	ND		ug/kg	200	--
1,3-Dichlorobenzene	ND		ug/kg	200	--
1,4-Dichlorobenzene	ND		ug/kg	200	--
1,2-Dichlorobenzene	ND		ug/kg	200	--
Benzyl Alcohol	ND		ug/kg	200	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	--
2-Methylphenol	ND		ug/kg	200	--
Acetophenone	ND		ug/kg	200	--
Hexachloroethane	ND		ug/kg	200	--
N-Nitroso-di-n-propylamine	ND		ug/kg	200	--
4-Methylphenol	ND		ug/kg	200	--
Nitrobenzene	ND		ug/kg	200	--
Isophorone	ND		ug/kg	200	--
2-Nitrophenol	ND		ug/kg	200	--
2,4-Dimethylphenol	ND		ug/kg	200	--
Benzoic Acid	ND		ug/kg	1500	--
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--
2,4-Dichlorophenol	ND		ug/kg	200	--
1,2,4-Trichlorobenzene	ND		ug/kg	200	--
Naphthalene	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	200	--
Hexachlorobutadiene	ND		ug/kg	200	--
Caprolactam	ND		ug/kg	200	--
P-Chloro-M-Cresol	ND		ug/kg	200	--
2-Methylnaphthalene	ND		ug/kg	200	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/12/10 16:35
Analyst: JD

Extraction Method: EPA 3570
Extraction Date: 09/13/10 17:09
Cleanup Method1: EPA 3640A
Cleanup Date1: 09/24/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 07-09,11-12 Batch: WG432076-1					
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	--
Hexachlorocyclopentadiene	ND		ug/kg	200	--
2,4,6-Trichlorophenol	ND		ug/kg	200	--
2,4,5-Trichlorophenol	ND		ug/kg	200	--
Biphenyl	ND		ug/kg	200	--
2-Chloronaphthalene	ND		ug/kg	200	--
2-Nitroaniline	ND		ug/kg	200	--
Acenaphthylene	ND		ug/kg	200	--
Dimethylphthalate	ND		ug/kg	200	--
2,6-Dinitrotoluene	ND		ug/kg	200	--
Acenaphthene	ND		ug/kg	200	--
3-Nitroaniline	ND		ug/kg	200	--
2,4-Dinitrophenol	ND		ug/kg	800	--
Dibenzofuran	ND		ug/kg	200	--
2,4-Dinitrotoluene	ND		ug/kg	200	--
4-Nitrophenol	ND		ug/kg	400	--
2,3,4,6-Tetrachlorophenol	ND		ug/kg	200	--
Fluorene	ND		ug/kg	200	--
4-Chlorophenyl-phenylether	ND		ug/kg	200	--
Diethylphthalate	ND		ug/kg	200	--
4-Nitroaniline	ND		ug/kg	200	--
4,6-Dinitro-2-Methylphenol	ND		ug/kg	800	--
Azobenzene	ND		ug/kg	200	--
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	200	--
4-Bromophenyl-phenylether	ND		ug/kg	200	--
Hexachlorobenzene	ND		ug/kg	200	--
Atrazine	ND		ug/kg	200	--
Pentachlorophenol	ND		ug/kg	800	--
Phenanthrene	ND		ug/kg	200	--
Anthracene	ND		ug/kg	200	--
Carbazole	ND		ug/kg	200	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/12/10 16:35
Analyst: JD

Extraction Method: EPA 3570
Extraction Date: 09/13/10 17:09
Cleanup Method1: EPA 3640A
Cleanup Date1: 09/24/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 07-09,11-12 Batch: WG432076-1					
Di-n-butylphthalate	ND		ug/kg	200	--
Fluoranthene	ND		ug/kg	200	--
Benzidine	ND		ug/kg	800	--
Pyrene	ND		ug/kg	200	--
Butylbenzylphthalate	ND		ug/kg	200	--
3,3'-Dichlorobenzidine	ND		ug/kg	200	--
Benz(a)anthracene	ND		ug/kg	200	--
Chrysene	ND		ug/kg	200	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	--
Di-n-octylphthalate	ND		ug/kg	200	--
Benzo(b)fluoranthene	ND		ug/kg	200	--
Benzo(k)fluoranthene	ND		ug/kg	200	--
Benzo(a)pyrene	ND		ug/kg	200	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	200	--
Dibenz(a,h)anthracene	ND		ug/kg	200	--
Benzo(ghi)perylene	ND		ug/kg	200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	63		30-130
Phenol-d5	66		30-130
Nitrobenzene-d5	66		30-130
2-Fluorophenol	89		30-130
2,4,6-Tribromophenol	45		30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/27/10 21:59
Analyst: AC

Extraction Method: ALPHA OP-013
Extraction Date: 09/13/10 15:13

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 07-09,11-12 Batch: WG432087-1					
Naphthalene	ND		ug/kg	0.653	--
C1-Naphthalenes	ND		ug/kg	0.653	--
C2-Naphthalenes	ND		ug/kg	0.653	--
C3-Naphthalenes	ND		ug/kg	0.653	--
C4-Naphthalenes	ND		ug/kg	0.653	--
2-Methylnaphthalene	ND		ug/kg	0.653	--
1-Methylnaphthalene	ND		ug/kg	0.653	--
Dibenzofuran	ND		ug/kg	0.653	--
Acenaphthylene	ND		ug/kg	0.653	--
Acenaphthene	ND		ug/kg	0.653	--
Fluorene	ND		ug/kg	0.653	--
C1-Fluorenes	ND		ug/kg	0.653	--
C2-Fluorenes	ND		ug/kg	0.653	--
C3-Fluorenes	ND		ug/kg	0.653	--
Phenanthrene	ND		ug/kg	0.653	--
C1-Phenanthrenes/Anthracenes	ND		ug/kg	0.653	--
C2-Phenanthrenes/Anthracenes	ND		ug/kg	0.653	--
C3-Phenanthrenes/Anthracenes	ND		ug/kg	0.653	--
C4-Phenanthrenes/Anthracenes	ND		ug/kg	0.653	--
Anthracene	ND		ug/kg	0.653	--
Carbazole	ND		ug/kg	0.653	--
Fluoranthene	ND		ug/kg	0.653	--
Pyrene	ND		ug/kg	0.653	--
C1-Fluoranthenes/Pyrenes	ND		ug/kg	0.653	--
Benz(a)anthracene	ND		ug/kg	0.653	--
Chrysene	ND		ug/kg	0.653	--
C1-Chrysenes	ND		ug/kg	0.653	--
C2-Chrysenes	ND		ug/kg	0.653	--
C3-Chrysenes	ND		ug/kg	0.653	--
C4-Chrysenes	ND		ug/kg	0.653	--
Benzo(b)fluoranthene	ND		ug/kg	0.653	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/27/10 21:59
Analyst: AC

Extraction Method: ALPHA OP-013
Extraction Date: 09/13/10 15:13

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 07-09,11-12 Batch: WG432087-1					
Benzo(k)fluoranthene	ND		ug/kg	0.653	--
Benzo(e)Pyrene	ND		ug/kg	0.653	--
Benzo(a)pyrene	ND		ug/kg	0.653	--
Perylene	ND		ug/kg	0.653	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	0.653	--
Dibenz(a,h)anthracene	ND		ug/kg	0.653	--
Benzo(ghi)perylene	ND		ug/kg	0.653	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	**42**	Q	50-130
Pyrene-d10	87		50-130
Benzo(b)fluoranthene-d12	78		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/25/10 10:15
Analyst: AC

Extraction Method: EPA 3510C
Extraction Date: 09/14/10 13:49

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-06 Batch: WG432240-1					
Naphthalene	ND		ng/l	10.0	--
C1-Naphthalenes	ND		ng/l	10.0	--
C2-Naphthalenes	ND		ng/l	10.0	--
C3-Naphthalenes	ND		ng/l	10.0	--
C4-Naphthalenes	ND		ng/l	10.0	--
2-Methylnaphthalene	ND		ng/l	10.0	--
1-Methylnaphthalene	ND		ng/l	10.0	--
Dibenzofuran	ND		ng/l	10.0	--
Acenaphthylene	ND		ng/l	10.0	--
Acenaphthene	ND		ng/l	10.0	--
Fluorene	ND		ng/l	10.0	--
C1-Fluorenes	ND		ng/l	10.0	--
C2-Fluorenes	ND		ng/l	10.0	--
C3-Fluorenes	ND		ng/l	10.0	--
Phenanthrene	ND		ng/l	10.0	--
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--
Anthracene	ND		ng/l	10.0	--
Carbazole	ND		ng/l	10.0	--
Fluoranthene	ND		ng/l	10.0	--
Pyrene	ND		ng/l	10.0	--
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.0	--
Benz(a)anthracene	ND		ng/l	10.0	--
Chrysene	ND		ng/l	10.0	--
C1-Chrysenes	ND		ng/l	10.0	--
C2-Chrysenes	ND		ng/l	10.0	--
C3-Chrysenes	ND		ng/l	10.0	--
C4-Chrysenes	ND		ng/l	10.0	--
Benzo(b)fluoranthene	ND		ng/l	10.0	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/25/10 10:15
Analyst: AC

Extraction Method: EPA 3510C
Extraction Date: 09/14/10 13:49

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-06 Batch: WG432240-1					
Benzo(k)fluoranthene	ND		ng/l	10.0	--
Benzo(e)Pyrene	ND		ng/l	10.0	--
Benzo(a)pyrene	ND		ng/l	10.0	--
Perylene	ND		ng/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--
Dibenz(a,h)anthracene	ND		ng/l	10.0	--
Benzo(ghi)perylene	ND		ng/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	90		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/15/10 19:50
Analyst: AC

Extraction Method: ALPHA OP-013
Extraction Date: 09/15/10 10:40

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 13 Batch: WG432437-1					
Naphthalene	ND		ug/kg	0.559	--
C1-Naphthalenes	ND		ug/kg	0.559	--
C2-Naphthalenes	ND		ug/kg	0.559	--
C3-Naphthalenes	ND		ug/kg	0.559	--
C4-Naphthalenes	ND		ug/kg	0.559	--
2-Methylnaphthalene	ND		ug/kg	0.559	--
1-Methylnaphthalene	ND		ug/kg	0.559	--
Dibenzofuran	ND		ug/kg	0.559	--
Acenaphthylene	ND		ug/kg	0.559	--
Acenaphthene	ND		ug/kg	0.559	--
Fluorene	ND		ug/kg	0.559	--
C1-Fluorenes	ND		ug/kg	0.559	--
C2-Fluorenes	ND		ug/kg	0.559	--
C3-Fluorenes	ND		ug/kg	0.559	--
Phenanthrene	ND		ug/kg	0.559	--
C1-Phenanthrenes/Anthracenes	ND		ug/kg	0.559	--
C2-Phenanthrenes/Anthracenes	ND		ug/kg	0.559	--
C3-Phenanthrenes/Anthracenes	ND		ug/kg	0.559	--
C4-Phenanthrenes/Anthracenes	ND		ug/kg	0.559	--
Anthracene	ND		ug/kg	0.559	--
Carbazole	ND		ug/kg	0.559	--
Fluoranthene	ND		ug/kg	0.559	--
Pyrene	ND		ug/kg	0.559	--
C1-Fluoranthenes/Pyrenes	ND		ug/kg	0.559	--
Benz(a)anthracene	ND		ug/kg	0.559	--
Chrysene	ND		ug/kg	0.559	--
C1-Chrysenes	ND		ug/kg	0.559	--
C2-Chrysenes	ND		ug/kg	0.559	--
C3-Chrysenes	ND		ug/kg	0.559	--
C4-Chrysenes	ND		ug/kg	0.559	--
Benzo(b)fluoranthene	ND		ug/kg	0.559	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/15/10 19:50
Analyst: AC

Extraction Method: ALPHA OP-013
Extraction Date: 09/15/10 10:40

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 13 Batch: WG432437-1					
Benzo(k)fluoranthene	ND		ug/kg	0.559	--
Benzo(e)Pyrene	ND		ug/kg	0.559	--
Benzo(a)pyrene	ND		ug/kg	0.559	--
Perylene	ND		ug/kg	0.559	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	0.559	--
Dibenz(a,h)anthracene	ND		ug/kg	0.559	--
Benzo(ghi)perylene	ND		ug/kg	0.559	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	78		50-130
Pyrene-d10	82		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/13/10 09:30
Analyst: JS

Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 01-06 Batch: WG433361-1					
Phenol	ND		ug/l	0.500	--
2-Methylphenol	ND		ug/l	0.500	--
4-Methylphenol	ND		ug/l	0.500	--
2,4-Dimethylphenol	ND		ug/l	0.500	--
2,4-Dichlorophenol	ND		ug/l	0.500	--
2,4,6-Trichlorophenol	ND		ug/l	0.500	--
Pentachlorophenol	ND		ug/l	2.00	--
Butylbenzylphthalate	ND		ug/l	0.500	--
Bis(2-Ethylhexyl)phthalate	0.848		ug/l	0.500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-115
Phenol-d5	33		15-115
Nitrobenzene-d5	98		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	79		15-115
Terphenyl-d14	127		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/21/10 16:10
Analyst: JD

Extraction Method: EPA 3570
Extraction Date: 09/23/10 16:13
Cleanup Method1: EPA 3640A
Cleanup Date1: 09/29/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 13 Batch: WG433639-1					
Phenol	ND		ug/kg	200	--
2-Methylphenol	ND		ug/kg	200	--
4-Methylphenol	ND		ug/kg	200	--
2,4-Dimethylphenol	ND		ug/kg	200	--
2,4-Dichlorophenol	ND		ug/kg	200	--
2,4,6-Trichlorophenol	ND		ug/kg	200	--
Pentachlorophenol	ND		ug/kg	800	--
Butylbenzylphthalate	ND		ug/kg	200	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	65		30-130
Phenol-d5	66		30-130
Nitrobenzene-d5	74		30-130
2-Fluorophenol	60		30-130
2,4,6-Tribromophenol	44		30-130
Terphenyl-d14	66		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 07-09,11-12 Batch: WG432076-2 WG432076-3								
n-Nitrosodimethylamine	68		66		40-140	3		30
Pyridine	**0**	Q	**6**	Q	40-140	**200**	Q	30
Benzaldehyde	**30**	Q	49		40-140	**48**	Q	30
Aniline	52		64		40-140	21		30
Bis(2-chloroethyl)ether	66		73		40-140	10		30
Phenol	69		94		30-130	**31**	Q	30
2-Chlorophenol	67		75		30-130	11		30
1,3-Dichlorobenzene	64		67		40-140	5		30
1,4-Dichlorobenzene	65		67		40-140	3		30
1,2-Dichlorobenzene	68		71		40-140	4		30
Benzyl Alcohol	97		105		40-140	8		30
Bis(2-chloroisopropyl)ether	70		75		40-140	7		30
2-Methylphenol	70		77		30-130	10		30
Acetophenone	74		82		40-140	10		30
Hexachloroethane	67		70		40-140	4		30
N-Nitroso-di-n-propylamine	72		81		40-140	12		30
4-Methylphenol	76		86		30-130	12		30
Nitrobenzene	68		77		40-140	12		30
Isophorone	70		80		40-140	13		30
2-Nitrophenol	71		82		30-130	14		30
2,4-Dimethylphenol	57		73		30-130	25		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 07-09,11-12 Batch: WG432076-2 WG432076-3								
Bis(2-chloroethoxy)methane	70		81		40-140	15		30
2,4-Dichlorophenol	71		84		30-130	17		30
1,2,4-Trichlorobenzene	65		72		40-140	10		30
Naphthalene	67		75		40-140	11		30
4-Chloroaniline	42		43		40-140	2		30
Hexachlorobutadiene	71		78		40-140	9		30
Caprolactam	85		93		40-140	9		30
P-Chloro-M-Cresol	72		82		30-130	13		30
2-Methylnaphthalene	64		74		40-140	14		30
Hexachlorocyclopentadiene	57		77		40-140	30		30
2,4,6-Trichlorophenol	68		88		30-130	26		30
2,4,5-Trichlorophenol	65		81		30-130	22		30
Biphenyl	65		84		40-140	26		30
2-Chloronaphthalene	60		78		40-140	26		30
2-Nitroaniline	70		82		40-140	16		30
Acenaphthylene	70		80		40-140	13		30
Dimethylphthalate	74		81		40-140	9		30
2,6-Dinitrotoluene	80		89		40-140	11		30
Acenaphthene	69		79		40-140	14		30
3-Nitroaniline	60		62		40-140	3		30
2,4-Dinitrophenol	72		75		30-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 07-09,11-12 Batch: WG432076-2 WG432076-3								
Dibenzofuran	69		78		40-140	12		30
2,4-Dinitrotoluene	78		90		40-140	14		30
4-Nitrophenol	70		59		30-130	17		30
Fluorene	72		82		40-140	13		30
4-Chlorophenyl-phenylether	69		77		40-140	11		30
Diethylphthalate	74		84		40-140	13		30
4-Nitroaniline	65		75		40-140	14		30
4,6-Dinitro-2-Methylphenol	90		84		30-130	7		30
Azobenzene	74		80		40-140	8		30
NitrosoDiPhenylAmine(NDPA)/DPA	93		97		40-140	4		30
4-Bromophenyl-phenylether	73		81		40-140	10		30
Hexachlorobenzene	74		80		40-140	8		30
Atrazine	72		77		40-140	7		30
Pentachlorophenol	78		84		30-130	7		30
Phenanthrene	75		83		40-140	10		30
Anthracene	77		83		40-140	8		30
Carbazole	78		83		40-140	6		30
Di-n-butylphthalate	79		85		40-140	7		30
Fluoranthene	79		86		40-140	8		30
Benzidine	**3**	Q	**0**	Q	40-140	**200**	Q	30
Pyrene	76		82		40-140	8		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 07-09,11-12 Batch: WG432076-2 WG432076-3								
Butylbenzylphthalate	79		86		40-140	8		30
3,3'-Dichlorobenzidine	58		54		40-140	7		30
Benz(a)anthracene	74		81		40-140	9		30
Chrysene	72		78		40-140	8		30
Bis(2-Ethylhexyl)phthalate	77		84		40-140	9		30
Di-n-octylphthalate	78		84		40-140	7		30
Benzo(b)fluoranthene	70		90		40-140	25		30
Benzo(k)fluoranthene	79		71		40-140	11		30
Benzo(a)pyrene	74		79		40-140	7		30
Indeno(1,2,3-cd)Pyrene	73		78		40-140	7		30
Dibenz(a,h)anthracene	73		78		40-140	7		30
Benzo(ghi)perylene	74		79		40-140	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorobiphenyl	62		79		30-130
Phenol-d5	78		102		30-130
Nitrobenzene-d5	71		78		30-130
2-Fluorophenol	93		106		30-130
2,4,6-Tribromophenol	86		93		30-130
Terphenyl-d14	79		84		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 07-09,11-12 Batch: WG432087-2 WG432087-3								
Naphthalene	91		92		50-130	1		30
2-Methylnaphthalene	103		104		50-130	1		30
Acenaphthylene	112		114		50-130	2		30
Acenaphthene	111		114		50-130	3		30
Fluorene	107		109		50-130	2		30
Phenanthrene	108		109		50-130	1		30
Anthracene	113		115		50-130	2		30
Fluoranthene	111		113		50-130	2		30
Pyrene	116		118		50-130	2		30
Benz(a)anthracene	113		115		50-130	2		30
Chrysene	114		116		50-130	2		30
Benzo(b)fluoranthene	111		113		50-130	2		30
Benzo(k)fluoranthene	110		112		50-130	2		30
Benzo(a)pyrene	124		128		50-130	3		30
Indeno(1,2,3-cd)Pyrene	110		106		50-130	4		30
Dibenz(a,h)anthracene	104		106		50-130	2		30
Benzo(ghi)perylene	109		112		50-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 07-09,11-12 Batch: WG432087-2 WG432087-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	67		64		50-130
Pyrene-d10	83		85		50-130
Benzo(b)fluoranthene-d12	76		79		50-130

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-06 Batch: WG432240-2 WG432240-3								
Naphthalene	92		97		50-130	5		30
2-Methylnaphthalene	90		95		50-130	5		30
Acenaphthylene	97		103		50-130	6		30
Acenaphthene	96		101		50-130	5		30
Fluorene	96		101		50-130	5		30
Phenanthrene	92		97		50-130	5		30
Anthracene	101		105		50-130	4		30
Fluoranthene	81		85		50-130	5		30
Pyrene	88		93		50-130	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-06 Batch: WG432240-2 WG432240-3								
Benz(a)anthracene	101		106		50-130	5		30
Chrysene	100		104		50-130	4		30
Benzo(b)fluoranthene	97		103		50-130	6		30
Benzo(k)fluoranthene	106		112		50-130	6		30
Benzo(a)pyrene	116		120		50-130	3		30
Indeno(1,2,3-cd)Pyrene	104		110		50-130	6		30
Dibenz(a,h)anthracene	105		111		50-130	6		30
Benzo(ghi)perylene	104		109		50-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	88		91		50-130
Pyrene-d10	79		83		50-130
Benzo(b)fluoranthene-d12	91		93		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 13 Batch: WG432437-2 WG432437-3								
Naphthalene	102		103		50-130	1		30
2-Methylnaphthalene	95		97		50-130	2		30
Acenaphthylene	101		105		50-130	4		30
Acenaphthene	102		107		50-130	5		30
Fluorene	100		105		50-130	5		30
Phenanthrene	98		106		50-130	8		30
Anthracene	104		112		50-130	7		30
Fluoranthene	86		94		50-130	9		30
Pyrene	94		104		50-130	10		30
Benz(a)anthracene	109		109		50-130	0		30
Chrysene	113		112		50-130	1		30
Benzo(b)fluoranthene	104		106		50-130	2		30
Benzo(k)fluoranthene	117		121		50-130	3		30
Benzo(a)pyrene	118		124		50-130	5		30
Indeno(1,2,3-cd)Pyrene	104		112		50-130	7		30
Dibenz(a,h)anthracene	102		107		50-130	5		30
Benzo(ghi)perylene	103		108		50-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 13 Batch: WG432437-2 WG432437-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	92		93		50-130
Pyrene-d10	78		87		50-130
Benzo(b)fluoranthene-d12	89		93		50-130

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-06 Batch: WG433361-2 WG433361-3								
Phenol	38		36		30-130	5		30
2-Methylphenol	78		77		30-130	1		30
4-Methylphenol	72		70		30-130	3		30
2,4-Dimethylphenol	81		87		40-140	7		30
2,4-Dichlorophenol	95		96		30-130	1		30
2,4,6-Trichlorophenol	103		101		30-130	2		30
Pentachlorophenol	70		69		30-130	1		30
Butylbenzylphthalate	89		87		40-140	2		30
Bis(2-Ethylhexyl)phthalate	96		93		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-06 Batch: WG433361-2 WG433361-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	66		65		15-115
Phenol-d5	36		32		15-115
Nitrobenzene-d5	90		91		30-130
2-Fluorobiphenyl	86		84		30-130
2,4,6-Tribromophenol	110		106		15-115
Terphenyl-d14	89		86		30-130

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 13 Batch: WG433639-2 WG433639-3								
Phenol	60		59		30-130	2		30
2-Methylphenol	58		57		30-130	2		30
4-Methylphenol	59		58		30-130	2		30
2,4-Dimethylphenol	39		32		30-130	20		30
2,4-Dichlorophenol	60		61		30-130	2		30
2,4,6-Trichlorophenol	62		62		30-130	0		30
Pentachlorophenol	50		43		30-130	15		30
Butylbenzylphthalate	77		77		40-140	0		30
Bis(2-Ethylhexyl)phthalate	70		71		40-140	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 13 Batch: WG433639-2 WG433639-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorobiphenyl	61		58		30-130
Phenol-d5	62		61		30-130
Nitrobenzene-d5	66		65		30-130
2-Fluorophenol	63		60		30-130
2,4,6-Tribromophenol	75		74		30-130
Terphenyl-d14	68		67		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 13 QC Batch ID: WG433639-4 WG433639-5 QC Sample: L1014191-04 Client ID: MS Sample												
Phenol	ND	4660	3050	66		3050	64		30-130	0		30
2-Methylphenol	ND	4660	1060	**23**	Q	1520	32		30-130	**36**	Q	30
4-Methylphenol	ND	4660	2020	43		2320	49		30-130	14		30
2,4-Dimethylphenol	ND	4660	294	**6**	Q	ND	**0**	Q	30-130	NC	Q	30
2,4-Dichlorophenol	ND	4660	3220	69		3350	71		30-130	4		30
2,4,6-Trichlorophenol	ND	4660	3140	67		3620	77		30-130	14		30
Pentachlorophenol	ND	4660	2400	52		2360	50		30-130	2		30
Butylbenzylphthalate	ND	4660	5190	111		5440	115		40-140	5		30
Bis(2-Ethylhexyl)phthalate	ND	4660	4930	106		4980	105		40-140	1		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	76		88		30-130
2-Fluorobiphenyl	77		76		30-130
2-Fluorophenol	63		64		30-130
Nitrobenzene-d5	84		82		30-130
Phenol-d5	73		71		30-130
Terphenyl-d14	97		101		30-130

METALS

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-01
Client ID: F76426-1 SW-09
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	206		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:03	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-02
Client ID: F76426-3 SW-10
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	202		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:04	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-03
Client ID: F76426-6 SW-11
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	202		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:04	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-04
Client ID: F76426-8 SW-12
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 14:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	201		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:05	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-05
Client ID: F76426-10 SW-13
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	192		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:06	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-06
Client ID: F76426-12 SW-14
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	196		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:06	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-06 Batch: WG433346-1										
Hardness	ND		mg/l	0.460	--	1	09/21/10 08:55	09/22/10 12:31	1,6020A	LR

Prep Information

Digestion Method: EPA 3020A

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab	Associated sample(s): 01-06		Batch: WG433346-2		SRM Lot Number: S1SPIKE			
Hardness	94		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG433346-3 WG433346-4 QC Sample: L1014191-14 Client ID: MS Sample												
Hardness	236	1	276	121		281	**136**		75-125	2		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG433346-5 QC Sample: L1014191-14 Client ID: DUP Sample						
Hardness	236	233	mg/l	1		20

Project Name: Not Specified
Project Number: Not Specified

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L1013935
Report Date: 01/26/11

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG433346-6 QC Sample: L1014191-14 Client ID: DUP Sample						
Hardness	236	238	mg/l	1		10

INORGANICS
&
MISCELLANEOUS

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-07
Client ID: F76426-2 SED-09
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.8		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	4.11		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.67		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-08
Client ID: F76426-4 SED-10
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	78.5		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.46		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	2.78		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-09
Client ID: F76426-7 SED-11
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.0		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.66		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.38		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-11
Client ID: F76426-11 SED-13
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	81.3		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	4.55		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.17		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-12
Client ID: F76426-13 SED-14
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	81.2		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.79		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	2.90		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

SAMPLE RESULTS

Lab ID: L1013935-13
Client ID: F76426-12 SED-12
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/09/10 16:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.5		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.02		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.03		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name:

Project Number: Not Specified

Lab Number: L1013935

Report Date: 01/26/11

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 07-09,11-13 Batch: WG432728-1										
% Soot (Rep 1)	ND		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	ND		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 07-09,11-13 QC Batch ID: WG432571-1 QC Sample: L1014193-01 Client ID: DUP Sample						
Solids, Total	49.3	50.2	%	2		20

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG432728-2

Parameter	% Recovery	Qual	QC Criteria
% Soot (Rep 1)	97		75-125
% Soot (Rep 2)	96		75-125

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013935-01A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-01B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-01C	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-01D	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-HARDT(180)
L1013935-02A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-02B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-02C	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-02D	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-HARDT(180)
L1013935-03A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-03B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-03C	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-03D	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-HARDT(180)
L1013935-04A	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-04B	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-04C	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-04D	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-HARDT(180)
L1013935-05A	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-05B	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 01/26/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013935-05C	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-05D	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-HARDT(180)
L1013935-06A	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-06B	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-06C	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1013935-06D	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-HARDT(180)
L1013935-07A	Glass 250ml unpreserved	B	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1013935-08A	Glass 250ml unpreserved	B	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1013935-09A	Glass 250ml unpreserved	B	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1013935-11A	Glass 250ml unpreserved	A	N/A	5	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1013935-12A	Glass 250ml unpreserved	A	N/A	5	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1013935-13A	Glass 100ml unpreserved	C	N/A	4	NA	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1013935-13B	Glass 100ml unpreserved	C	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)

*Values in parentheses indicate holding time in days

Project Name:	Not Specified	**Lab Number:**	L1013935
Project Number:	Not Specified	**Report Date:**	01/26/11

GLOSSARY

Acronyms

EPA · Environmental Protection Agency.

LCS · Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD · Laboratory Control Sample Duplicate: Refer to LCS.

MDL · Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS · Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD · Matrix Spike Sample Duplicate: Refer to MS.

NA · Not Applicable.

NC · Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI · Not Ignitable.

RL · Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD · Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when

Project Name:	Not Specified	**Lab Number:**	L1013935
Project Number:	Not Specified	**Report Date:**	01/26/11

Data Qualifiers

the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	Not Specified	**Lab Number:**	L1013935
Project Number:	Not Specified	**Report Date:**	01/26/11

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

91 Analysis of Soot by Accardi-Dey, Gschwend, 2003; Gustafsson (et. al.), 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised July 19, 2010 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

35285 L1013935

ALPHA Woods Move

Cooler 1 of 2

CSX TRANSPORTATION — CHAIN OF CUSTODY

COC # 1 of 1

LABORATORY INFORMATION		SHIPMENT INFORMATION
Accutest	Phone: 407-425-6700	Shipment Method: FED-EX
4405 Vineland Rd., Suite C-15	Fax: 407-425-0707	Shipment Tracking No:
Orlando, FL 32811		

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 9415829	Proj. State (State of Origin): IN	Company: ARCADIS	Project #: IN000072.0052.00001
CSXT Project Name: IN CREOSOTE	Proj. City: Bloomington	Address: 251 E. Ohio St., Ste. 850	PM: Bryant Griggs
CSXT Contact: Paul J. Kwiatkowski	LWON: ENV 53216	City, State, Zip: Indianapolis, IN 46204	Email: Bryant.Griggs@arcadis-us.com
			Phone: 317-231-6500 Fax: 317-231-6514

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: Data CD only, NO Hard Copy
- ☒ EDD Required, Format: Excel

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Note ⇨ Pres. Code: 0	0	0	0					COMMENTS	LAB USE
									METHODS FOR ANALYSIS: SVOCs, 8270 SIM (SPECIFIED); ALKylated PAHs; Soot Carbon; Hardness									
1/7	SW/SED-09	5	9-8-10	1115	RW	N	G	SO/SW	X	X	X	X						
2/8	SW/SED-10	5	9-8-10	1305	RW	N	G	SO/SW	X	X	X	X						
3/9	SW/SED-11	5	9-8-10	1340	RW	N	G	SO/SW	X	X	X	X						

	Relinquished By	Date Time	Received By	Date Time
1	[signature] / ARCADIS	9-8-10 / 1800	FedEx	
2	FED EX	9/9/10 0925	[signature]	9/9/10 0925
3				

Comments & Special Analytical Requirements:
- See Table 1
- ECO RISC Samples
- Contact Heather Wanner @ Accutest

Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal #	LAB Log Number
				#	#

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

Serial_No:01261113:19

L1013935

ALPHA Woods Hole

COC # 1 of 1 Cooler 2 of 2

CSX TRANSPORTATION — CHAIN OF CUSTODY

LABORATORY INFORMATION		SHIPMENT INFORMATION
Accutest	Phone: 407-425-6700	Shipment Method: FED-EX
4405 Vineland Rd., Suite C-15	Fax: 407-425-0707	Shipment Tracking No:
Orlando, FL 32811		

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 941582S	Proj. State (State of Origin): IN	Company: ARCADIS	Project #: IN000072.0052.00001
CSXT Project Name: IN CREOSOTE	Proj. City: BLOOMINGTON	Address: 251 E OHIO ST., STE 500	PM: BRYANT GIBBS
CSXT Contact: PAUL J. KWASNIEWSKI	LWON: ENV53216	City, State, Zip: INDIANAPOLIS, IN 46204	Email: BRYANT.GIBBS@ARCADIS-US.COM
			Phone: 317-231-6500 Fax: 317-231-6514

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: ~~DATA QA Only~~ NO HARD COPY
- ☒ EDD Required, Format: EXCEL

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Note ⇨	0	0	0	0					COMMENTS	LAB USE
									Pres. Code	METHODS FOR ANALYSIS: SVOCs, 8270 SIM (SCOTT LIST)	ALKYLATED PAH	SOOT CARBON	HARDNESS						
4/10	SW/SED-12	5	9-8-10	1415	RW	N	G	SO/SW		X	X	X	X						
5/11	SW/SED-13	5	9-8-10	1445	RW	N	G	SO/SW		X	X	X	X						
6/12	SW/SED-14	5	9-8-10	1515	RW	N	G	SO/SW		X	X	X	X						

Relinquished By: ARCADIS	Date Time: 9-8-10/ 1800	Received By: FED EX	Date Time:	Comments & Special Analytical Requirements: - SEE TABLE 1 - ECO RISC SAMPLES - CONTACT WATSON WARNER (ACCUTEST)	
Relinquished By: FED EX	Date Time: 9/9/10 0925	Received By:	Date Time: 9/9/10 0925		
Relinquished By:	Date Time:	Received By:	Date Time:		
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal # #	LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES

Rev. 5/21/02

INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

Serial_No:01261113:19

ANALYTICAL REPORT

Lab Number:	L1014191
Client:	Accutest
	,
ATTN:	Heather Wandry
Phone:	(407) 425-6700
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	10/29/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1014191-01	SED-15	BLOOMINGTON, IN	09/08/10 15:45
L1014191-02	SED-16	BLOOMINGTON, IN	09/09/10 09:15
L1014191-03	SED-17	BLOOMINGTON, IN	09/09/10 10:00
L1014191-04	SED-18	BLOOMINGTON, IN	09/09/10 11:05
L1014191-05	FD-1-100909	BLOOMINGTON, IN	09/09/10 00:00
L1014191-06	SED-19	BLOOMINGTON, IN	09/09/10 13:40
L1014191-07	SED-20	BLOOMINGTON, IN	09/09/10 14:15
L1014191-08	SED-21	BLOOMINGTON, IN	09/09/10 14:45
L1014191-09	SED-22	BLOOMINGTON, IN	09/09/10 15:15
L1014191-10	SED-23	BLOOMINGTON, IN	09/09/10 15:30
L1014191-11	SW-15	BLOOMINGTON, IN	09/08/10 15:45
L1014191-12	SW-16	BLOOMINGTON, IN	09/09/10 09:15
L1014191-13	SW-17	BLOOMINGTON, IN	09/09/10 10:00
L1014191-14	SW-18	BLOOMINGTON, IN	09/09/10 11:05
L1014191-15	FD-1-100909	BLOOMINGTON, IN	09/09/10 00:00
L1014191-16	SW-19	BLOOMINGTON, IN	09/09/10 13:40
L1014191-17	SW-20	BLOOMINGTON, IN	09/09/10 14:15
L1014191-18	SW-21	BLOOMINGTON, IN	09/09/10 14:45
L1014191-19	SW-22	BLOOMINGTON, IN	09/09/10 15:15
L1014191-20	SW-23	BLOOMINGTON, IN	09/09/10 15:30

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Semi-Volatile Organics by 8270

The surrogate recoveries for L1014191-01, -03, -07, -08, -09 are outside the individual acceptance criteria for 2,4,6-Tribromophenol, but within the overall method allowances. The results of the original analyses are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recoveries for L1014191-04 are outside the acceptance criteria for 2-Fluorophenol (28%) and 2,4,6-Tribromophenol (11%); however, the sample was not re-extracted due to obvious interferences.

The surrogate recoveries for L1014191-05 are outside the acceptance criteria for 2-Fluorophenol (25%) and 2,4,6-Tribromophenol (15%); however, the sample was not re-extracted due to obvious interferences.

Project Name: Not Specified **Lab Number:** L1014191
Project Number: Not Specified **Report Date:** 10/29/10

Case Narrative (continued)

The WG433361-1 Method Blank associated with L1013935-01 through 06 has concentrations above the reporting limits for bis(2-Ethylhexyl)phthalate; however, they are within the method allowances for common laboratory contaminants. The associated samples are reported and qualified with a 'B' if the concentration is less than five times that found in the method blank.

The WG433367-2/-3 LCS/LCSD recoveries, associated with L1014191-12 through -20, are below the individual acceptance criteria for Phenol (29%)/(27%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

A2-SVOC-8270 The WG433639-4/-5 MS/MSD recoveries, associated with L1014191-01 through -10, were below the acceptance criteria for 2-Methylphenol (MS 22.8%), 2,4-Dimethylphenol (6.31%)/(3.76%); however, LCS results were within QC limits. The results are reported; however, all results are considered to have a potentially low bias for these compounds. In addition, the associated WG433639-5 MS/MSD RPD(s) are above the acceptance criteria for 2-Methylphenol (36%), 2,4-Dimethylphenol (49%).

Alkylated PAH

L1014191-03 was re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range. Diluted analysis was analyzed outside of the analytical holding time and both results are reported.

The following samples have elevated detection limits due to the dilutions required by the elevated concentrations of target compounds in the samples: L1014191-04, WG432656-4,-5, and -6

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Case Narrative (continued)

The matrix spike/matrix spike duplicate was inadvertantly not performed with the original extraction batch. Sample L1014191-14 was re-extracted with a method blank (WG432941-1), LCS/LCSD (WG432941-2/-3), and matrix spike/duplicate (WG432941-4/5). This extraction was done outside of the extraction holding time and both results are reported.

L1014191-19 was analyzed with the method required holding time exceeded.

The WG432656-4 Laboratory Duplicate RPD, performed on L1014191-04, is outside the acceptance criteria for several compounds. The elevated RPD has been attributed to the heterogeneity of the sample utilized for the laboratory duplicate. The integrations and calculations have been reviewed and verified.

The WG432656-5/6 MS/MSD recoveries, performed on L1014191-04, are outside the acceptance criteria for several compounds potentially due to matrix heterogeneity; however, the associated LCS recoveries are within criteria. No further action was required. In addition, the WG432656-5/6 MS/MSD RPDs, performed on L1014191-04, are above the acceptance criteria for several compounds.

Total Metals

A2-6020T The WG433346-4 MSD recovery for Hardness (136%) , performed on L1014191-14, is invalid because the sample concentration is greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: 

Title: Technical Director/Representative Date: 10/29/10

ORGANICS

SEMIVOLATILES

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-01	Date Collected:	09/08/10 15:45
Client ID:	SED-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 08:14	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	83%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	230	--	1
2-Methylphenol	ND		ug/kg	230	--	1
4-Methylphenol	ND		ug/kg	230	--	1
2,4-Dimethylphenol	ND		ug/kg	230	--	1
2,4-Dichlorophenol	ND		ug/kg	230	--	1
2,4,6-Trichlorophenol	ND		ug/kg	230	--	1
Pentachlorophenol	ND		ug/kg	920	--	1
Butylbenzylphthalate	ND		ug/kg	230	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	230	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	67		30-130
Phenol-d5	54		30-130
Nitrobenzene-d5	78		30-130
2-Fluorophenol	34		30-130
2,4,6-Tribromophenol	**15**	Q	30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-01	Date Collected:	09/08/10 15:45
Client ID:	SED-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 00:03		
Analyst:	AC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	88.7		ug/kg	4.80	--	1
C1-Naphthalenes	25.2		ug/kg	4.80	--	1
C2-Naphthalenes	23.6		ug/kg	4.80	--	1
C3-Naphthalenes	23.5		ug/kg	4.80	--	1
C4-Naphthalenes	28.4		ug/kg	4.80	--	1
2-Methylnaphthalene	24.4		ug/kg	4.80	--	1
1-Methylnaphthalene	14.2		ug/kg	4.80	--	1
Dibenzofuran	32.3		ug/kg	4.80	--	1
Acenaphthylene	18.8		ug/kg	4.80	--	1
Acenaphthene	22.6		ug/kg	4.80	--	1
Fluorene	21.8		ug/kg	4.80	--	1
C1-Fluorenes	10.6		ug/kg	4.80	--	1
C2-Fluorenes	25.1		ug/kg	4.80	--	1
C3-Fluorenes	64.2		ug/kg	4.80	--	1
Phenanthrene	276		ug/kg	4.80	--	1
C1-Phenanthrenes/Anthracenes	82.8		ug/kg	4.80	--	1
C2-Phenanthrenes/Anthracenes	77.3		ug/kg	4.80	--	1
C3-Phenanthrenes/Anthracenes	59.6		ug/kg	4.80	--	1
C4-Phenanthrenes/Anthracenes	54.1		ug/kg	4.80	--	1
Anthracene	44.5		ug/kg	4.80	--	1
Carbazole	42.2		ug/kg	4.80	--	1
Fluoranthene	462		ug/kg	4.80	--	1
Pyrene	424		ug/kg	4.80	--	1
C1-Fluoranthenes/Pyrenes	207		ug/kg	4.80	--	1
Benz(a)anthracene	182		ug/kg	4.80	--	1
Chrysene	238		ug/kg	4.80	--	1
C1-Chrysenes	113		ug/kg	4.80	--	1
C2-Chrysenes	137		ug/kg	4.80	--	1
C3-Chrysenes	198		ug/kg	4.80	--	1
C4-Chrysenes	142		ug/kg	4.80	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-01
Client ID: SED-15
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	230		ug/kg	4.80	--	1
Benzo(k)fluoranthene	184		ug/kg	4.80	--	1
Benzo(e)Pyrene	192		ug/kg	4.80	--	1
Benzo(a)pyrene	233		ug/kg	4.80	--	1
Perylene	56.3		ug/kg	4.80	--	1
Indeno(1,2,3-cd)Pyrene	146		ug/kg	4.80	--	1
Dibenz(a,h)anthracene	36.7		ug/kg	4.80	--	1
Benzo(ghi)perylene	171		ug/kg	4.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	90		50-130
Pyrene-d10	97		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-02	Date Collected:	09/09/10 09:15
Client ID:	SED-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 08:52	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	83%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	227	--	1
2-Methylphenol	ND		ug/kg	227	--	1
4-Methylphenol	ND		ug/kg	227	--	1
2,4-Dimethylphenol	ND		ug/kg	227	--	1
2,4-Dichlorophenol	ND		ug/kg	227	--	1
2,4,6-Trichlorophenol	ND		ug/kg	227	--	1
Pentachlorophenol	ND		ug/kg	908	--	1
Butylbenzylphthalate	ND		ug/kg	227	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	227	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	78		30-130
Phenol-d5	67		30-130
Nitrobenzene-d5	91		30-130
2-Fluorophenol	47		30-130
2,4,6-Tribromophenol	30		30-130
Terphenyl-d14	85		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-02	Date Collected:	09/09/10 09:15
Client ID:	SED-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 01:34		
Analyst:	AC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	10.9		ug/kg	3.98	--	1
C1-Naphthalenes	9.99		ug/kg	3.98	--	1
C2-Naphthalenes	17.1		ug/kg	3.98	--	1
C3-Naphthalenes	21.9		ug/kg	3.98	--	1
C4-Naphthalenes	18.1		ug/kg	3.98	--	1
2-Methylnaphthalene	7.79		ug/kg	3.98	--	1
1-Methylnaphthalene	6.44		ug/kg	3.98	--	1
Dibenzofuran	ND		ug/kg	3.98	--	1
Acenaphthylene	13.8		ug/kg	3.98	--	1
Acenaphthene	6.16		ug/kg	3.98	--	1
Fluorene	7.62		ug/kg	3.98	--	1
C1-Fluorenes	5.60		ug/kg	3.98	--	1
C2-Fluorenes	11.0		ug/kg	3.98	--	1
C3-Fluorenes	28.3		ug/kg	3.98	--	1
Phenanthrene	108		ug/kg	3.98	--	1
C1-Phenanthrenes/Anthracenes	41.6		ug/kg	3.98	--	1
C2-Phenanthrenes/Anthracenes	42.0		ug/kg	3.98	--	1
C3-Phenanthrenes/Anthracenes	29.0		ug/kg	3.98	--	1
C4-Phenanthrenes/Anthracenes	18.8		ug/kg	3.98	--	1
Anthracene	24.7		ug/kg	3.98	--	1
Carbazole	15.3		ug/kg	3.98	--	1
Fluoranthene	221		ug/kg	3.98	--	1
Pyrene	182		ug/kg	3.98	--	1
C1-Fluoranthenes/Pyrenes	74.1		ug/kg	3.98	--	1
Benz(a)anthracene	95.1		ug/kg	3.98	--	1
Chrysene	124		ug/kg	3.98	--	1
C1-Chrysenes	40.8		ug/kg	3.98	--	1
C2-Chrysenes	35.2		ug/kg	3.98	--	1
C3-Chrysenes	65.7		ug/kg	3.98	--	1
C4-Chrysenes	58.7		ug/kg	3.98	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-02
Client ID: SED-16
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	114		ug/kg	3.98	--	1
Benzo(k)fluoranthene	97.7		ug/kg	3.98	--	1
Benzo(e)Pyrene	89.4		ug/kg	3.98	--	1
Benzo(a)pyrene	109		ug/kg	3.98	--	1
Perylene	27.9		ug/kg	3.98	--	1
Indeno(1,2,3-cd)Pyrene	80.7		ug/kg	3.98	--	1
Dibenz(a,h)anthracene	19.0		ug/kg	3.98	--	1
Benzo(ghi)perylene	86.6		ug/kg	3.98	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	89		50-130
Pyrene-d10	95		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-03	Date Collected:	09/09/10 10:00
Client ID:	SED-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 09:31	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	228	--	1
2-Methylphenol	ND		ug/kg	228	--	1
4-Methylphenol	ND		ug/kg	228	--	1
2,4-Dimethylphenol	ND		ug/kg	228	--	1
2,4-Dichlorophenol	ND		ug/kg	228	--	1
2,4,6-Trichlorophenol	ND		ug/kg	228	--	1
Pentachlorophenol	ND		ug/kg	912	--	1
Butylbenzylphthalate	ND		ug/kg	228	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	228	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	81		30-130
Phenol-d5	65		30-130
Nitrobenzene-d5	89		30-130
2-Fluorophenol	41		30-130
2,4,6-Tribromophenol	**23**	Q	30-130
Terphenyl-d14	85		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-03	Date Collected:	09/09/10 10:00
Client ID:	SED-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 03:06		
Analyst:	AC		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	137		ug/kg	3.65	--	1
C1-Naphthalenes	105		ug/kg	3.65	--	1
C2-Naphthalenes	113		ug/kg	3.65	--	1
C3-Naphthalenes	91.2		ug/kg	3.65	--	1
C4-Naphthalenes	58.2		ug/kg	3.65	--	1
2-Methylnaphthalene	95.1		ug/kg	3.65	--	1
1-Methylnaphthalene	69.6		ug/kg	3.65	--	1
Dibenzofuran	626		ug/kg	3.65	--	1
Acenaphthylene	67.5		ug/kg	3.65	--	1
Acenaphthene	869		ug/kg	3.65	--	1
Fluorene	674		ug/kg	3.65	--	1
C1-Fluorenes	93.0		ug/kg	3.65	--	1
C2-Fluorenes	113		ug/kg	3.65	--	1
C3-Fluorenes	990		ug/kg	3.65	--	1
Phenanthrene	7730	E	ug/kg	3.65	--	1
C1-Phenanthrenes/Anthracenes	1290		ug/kg	3.65	--	1
C2-Phenanthrenes/Anthracenes	417		ug/kg	3.65	--	1
C3-Phenanthrenes/Anthracenes	163		ug/kg	3.65	--	1
C4-Phenanthrenes/Anthracenes	55.5		ug/kg	3.65	--	1
Anthracene	720		ug/kg	3.65	--	1
Carbazole	1210		ug/kg	3.65	--	1
Fluoranthene	7680	E	ug/kg	3.65	--	1
Pyrene	5820		ug/kg	3.65	--	1
C1-Fluoranthenes/Pyrenes	1510		ug/kg	3.65	--	1
Benz(a)anthracene	3050		ug/kg	3.65	--	1
Chrysene	3410		ug/kg	3.65	--	1
C1-Chrysenes	786		ug/kg	3.65	--	1
C2-Chrysenes	321		ug/kg	3.65	--	1
C3-Chrysenes	278		ug/kg	3.65	--	1
C4-Chrysenes	160		ug/kg	3.65	--	1



Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-03
Client ID: SED-17
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	3180		ug/kg	3.65	--	1
Benzo(k)fluoranthene	2510		ug/kg	3.65	--	1
Benzo(e)Pyrene	1930		ug/kg	3.65	--	1
Benzo(a)pyrene	2690		ug/kg	3.65	--	1
Perylene	690		ug/kg	3.65	--	1
Indeno(1,2,3-cd)Pyrene	2170		ug/kg	3.65	--	1
Dibenz(a,h)anthracene	590		ug/kg	3.65	--	1
Benzo(ghi)perylene	1830		ug/kg	3.65	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	88		50-130
Pyrene-d10	87		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-03	D	Date Collected:	09/09/10 10:00
Client ID:	SED-17		Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)		Extraction Date:	09/16/10 11:48
Analytical Date:	10/28/10 23:17			
Analyst:	AC			
Percent Solids:	81%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Phenanthrene	8520		ug/kg	18.2	--	5
Fluoranthene	8410		ug/kg	18.2	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	81		50-130
Benzo(b)fluoranthene-d12	77		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-04	Date Collected:	09/09/10 11:05
Client ID:	SED-18	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 10:22	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	76%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	248	--	1
2-Methylphenol	ND		ug/kg	248	--	1
4-Methylphenol	ND		ug/kg	248	--	1
2,4-Dimethylphenol	ND		ug/kg	248	--	1
2,4-Dichlorophenol	ND		ug/kg	248	--	1
2,4,6-Trichlorophenol	ND		ug/kg	248	--	1
Pentachlorophenol	ND		ug/kg	993	--	1
Butylbenzylphthalate	ND		ug/kg	248	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	248	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	76		30-130
Phenol-d5	54		30-130
Nitrobenzene-d5	84		30-130
2-Fluorophenol	**28**	Q	30-130
2,4,6-Tribromophenol	**11**	Q	30-130
Terphenyl-d14	87		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-04 D
Client ID: SED-18
Sample Location: BLOOMINGTON, IN
Matrix: Sediment
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/11/10 21:06
Analyst: AC
Percent Solids: 76%

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: ALPHA OP-013
Extraction Date: 09/16/10 11:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	26.4		ug/kg	9.29	--	5
C1-Naphthalenes	24.4		ug/kg	9.29	--	5
C2-Naphthalenes	35.9		ug/kg	9.29	--	5
C3-Naphthalenes	36.4		ug/kg	9.29	--	5
C4-Naphthalenes	33.2		ug/kg	9.29	--	5
2-Methylnaphthalene	22.0		ug/kg	9.29	--	5
1-Methylnaphthalene	15.1		ug/kg	9.29	--	5
Dibenzofuran	32.1		ug/kg	9.29	--	5
Acenaphthylene	91.8		ug/kg	9.29	--	5
Acenaphthene	35.0		ug/kg	9.29	--	5
Fluorene	41.9		ug/kg	9.29	--	5
C1-Fluorenes	21.0		ug/kg	9.29	--	5
C2-Fluorenes	38.7		ug/kg	9.29	--	5
C3-Fluorenes	160		ug/kg	9.29	--	5
Phenanthrene	1180		ug/kg	9.29	--	5
C1-Phenanthrenes/Anthracenes	364		ug/kg	9.29	--	5
C2-Phenanthrenes/Anthracenes	220		ug/kg	9.29	--	5
C3-Phenanthrenes/Anthracenes	97.6		ug/kg	9.29	--	5
C4-Phenanthrenes/Anthracenes	41.3		ug/kg	9.29	--	5
Anthracene	173		ug/kg	9.29	--	5
Carbazole	146		ug/kg	9.29	--	5
Fluoranthene	2960		ug/kg	9.29	--	5
Pyrene	2410		ug/kg	9.29	--	5
C1-Fluoranthenes/Pyrenes	761		ug/kg	9.29	--	5
Benz(a)anthracene	1290		ug/kg	9.29	--	5
Chrysene	1620		ug/kg	9.29	--	5
C1-Chrysenes	441		ug/kg	9.29	--	5
C2-Chrysenes	178		ug/kg	9.29	--	5
C3-Chrysenes	143		ug/kg	9.29	--	5
C4-Chrysenes	98.1		ug/kg	9.29	--	5



Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-04 D
Client ID: SED-18
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	1320		ug/kg	9.29	--	5
Benzo(k)fluoranthene	1220		ug/kg	9.29	--	5
Benzo(e)Pyrene	923		ug/kg	9.29	--	5
Benzo(a)pyrene	585		ug/kg	9.29	--	5
Perylene	216		ug/kg	9.29	--	5
Indeno(1,2,3-cd)Pyrene	740		ug/kg	9.29	--	5
Dibenz(a,h)anthracene	183		ug/kg	9.29	--	5
Benzo(ghi)perylene	746		ug/kg	9.29	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	77		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-05	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 13:35	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	80%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	230	--	1
2-Methylphenol	ND		ug/kg	230	--	1
4-Methylphenol	ND		ug/kg	230	--	1
2,4-Dimethylphenol	ND		ug/kg	230	--	1
2,4-Dichlorophenol	ND		ug/kg	230	--	1
2,4,6-Trichlorophenol	ND		ug/kg	230	--	1
Pentachlorophenol	ND		ug/kg	919	--	1
Butylbenzylphthalate	ND		ug/kg	230	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	230	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	67		30-130
Phenol-d5	45		30-130
Nitrobenzene-d5	72		30-130
2-Fluorophenol	**25**	Q	30-130
2,4,6-Tribromophenol	**15**	Q	30-130
Terphenyl-d14	78		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-05	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 13:48		
Analyst:	AC		
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	40.1		ug/kg	2.96	--	1
C1-Naphthalenes	22.1		ug/kg	2.96	--	1
C2-Naphthalenes	40.9		ug/kg	2.96	--	1
C3-Naphthalenes	58.4		ug/kg	2.96	--	1
C4-Naphthalenes	55.6		ug/kg	2.96	--	1
2-Methylnaphthalene	20.8		ug/kg	2.96	--	1
1-Methylnaphthalene	13.0		ug/kg	2.96	--	1
Dibenzofuran	23.4		ug/kg	2.96	--	1
Acenaphthylene	54.1		ug/kg	2.96	--	1
Acenaphthene	15.8		ug/kg	2.96	--	1
Fluorene	34.6		ug/kg	2.96	--	1
C1-Fluorenes	39.7		ug/kg	2.96	--	1
C2-Fluorenes	64.2		ug/kg	2.96	--	1
C3-Fluorenes	78.6		ug/kg	2.96	--	1
Phenanthrene	387		ug/kg	2.96	--	1
C1-Phenanthrenes/Anthracenes	292		ug/kg	2.96	--	1
C2-Phenanthrenes/Anthracenes	201		ug/kg	2.96	--	1
C3-Phenanthrenes/Anthracenes	92.2		ug/kg	2.96	--	1
C4-Phenanthrenes/Anthracenes	34.5		ug/kg	2.96	--	1
Anthracene	168		ug/kg	2.96	--	1
Carbazole	33.0		ug/kg	2.96	--	1
Fluoranthene	1150		ug/kg	2.96	--	1
Pyrene	960		ug/kg	2.96	--	1
C1-Fluoranthenes/Pyrenes	538		ug/kg	2.96	--	1
Benz(a)anthracene	616		ug/kg	2.96	--	1
Chrysene	599		ug/kg	2.96	--	1
C1-Chrysenes	247		ug/kg	2.96	--	1
C2-Chrysenes	115		ug/kg	2.96	--	1
C3-Chrysenes	124		ug/kg	2.96	--	1
C4-Chrysenes	75.0		ug/kg	2.96	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-05
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	516		ug/kg	2.96	--	1
Benzo(k)fluoranthene	440		ug/kg	2.96	--	1
Benzo(e)Pyrene	346		ug/kg	2.96	--	1
Benzo(a)pyrene	496		ug/kg	2.96	--	1
Perylene	134		ug/kg	2.96	--	1
Indeno(1,2,3-cd)Pyrene	362		ug/kg	2.96	--	1
Dibenz(a,h)anthracene	89.3		ug/kg	2.96	--	1
Benzo(ghi)perylene	322		ug/kg	2.96	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	84		50-130
Benzo(b)fluoranthene-d12	84		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-06	Date Collected:	09/09/10 13:40
Client ID:	SED-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 14:14	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	78%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	241	--	1
2-Methylphenol	ND		ug/kg	241	--	1
4-Methylphenol	ND		ug/kg	241	--	1
2,4-Dimethylphenol	ND		ug/kg	241	--	1
2,4-Dichlorophenol	ND		ug/kg	241	--	1
2,4,6-Trichlorophenol	ND		ug/kg	241	--	1
Pentachlorophenol	ND		ug/kg	963	--	1
Butylbenzylphthalate	ND		ug/kg	241	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	241	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	39		30-130
Phenol-d5	35		30-130
Nitrobenzene-d5	41		30-130
2-Fluorophenol	34		30-130
2,4,6-Tribromophenol	37		30-130
Terphenyl-d14	48		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-06	Date Collected:	09/09/10 13:40
Client ID:	SED-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 15:19		
Analyst:	AC		
Percent Solids:	78%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	17.0		ug/kg	3.19	--	1
C1-Naphthalenes	31.6		ug/kg	3.19	--	1
C2-Naphthalenes	53.8		ug/kg	3.19	--	1
C3-Naphthalenes	52.7		ug/kg	3.19	--	1
C4-Naphthalenes	42.5		ug/kg	3.19	--	1
2-Methylnaphthalene	30.3		ug/kg	3.19	--	1
1-Methylnaphthalene	18.4		ug/kg	3.19	--	1
Dibenzofuran	108		ug/kg	3.19	--	1
Acenaphthylene	85.6		ug/kg	3.19	--	1
Acenaphthene	143		ug/kg	3.19	--	1
Fluorene	186		ug/kg	3.19	--	1
C1-Fluorenes	30.4		ug/kg	3.19	--	1
C2-Fluorenes	45.3		ug/kg	3.19	--	1
C3-Fluorenes	223		ug/kg	3.19	--	1
Phenanthrene	1890		ug/kg	3.19	--	1
C1-Phenanthrenes/Anthracenes	360		ug/kg	3.19	--	1
C2-Phenanthrenes/Anthracenes	160		ug/kg	3.19	--	1
C3-Phenanthrenes/Anthracenes	71.6		ug/kg	3.19	--	1
C4-Phenanthrenes/Anthracenes	34.7		ug/kg	3.19	--	1
Anthracene	359		ug/kg	3.19	--	1
Carbazole	315		ug/kg	3.19	--	1
Fluoranthene	2010		ug/kg	3.19	--	1
Pyrene	1580		ug/kg	3.19	--	1
C1-Fluoranthenes/Pyrenes	470		ug/kg	3.19	--	1
Benz(a)anthracene	749		ug/kg	3.19	--	1
Chrysene	881		ug/kg	3.19	--	1
C1-Chrysenes	242		ug/kg	3.19	--	1
C2-Chrysenes	111		ug/kg	3.19	--	1
C3-Chrysenes	111		ug/kg	3.19	--	1
C4-Chrysenes	80.9		ug/kg	3.19	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-06
Client ID: SED-19
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	748		ug/kg	3.19	--	1
Benzo(k)fluoranthene	651		ug/kg	3.19	--	1
Benzo(e)Pyrene	529		ug/kg	3.19	--	1
Benzo(a)pyrene	612		ug/kg	3.19	--	1
Perylene	165		ug/kg	3.19	--	1
Indeno(1,2,3-cd)Pyrene	538		ug/kg	3.19	--	1
Dibenz(a,h)anthracene	136		ug/kg	3.19	--	1
Benzo(ghi)perylene	492		ug/kg	3.19	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	87		50-130
Benzo(b)fluoranthene-d12	88		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-07	Date Collected:	09/09/10 14:15
Client ID:	SED-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 14:53	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	83%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	213	--	1
2-Methylphenol	ND		ug/kg	213	--	1
4-Methylphenol	ND		ug/kg	213	--	1
2,4-Dimethylphenol	ND		ug/kg	213	--	1
2,4-Dichlorophenol	ND		ug/kg	213	--	1
2,4,6-Trichlorophenol	ND		ug/kg	213	--	1
Pentachlorophenol	ND		ug/kg	852	--	1
Butylbenzylphthalate	ND		ug/kg	213	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	213	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	75		30-130
Phenol-d5	56		30-130
Nitrobenzene-d5	84		30-130
2-Fluorophenol	34		30-130
2,4,6-Tribromophenol	**23**	Q	30-130
Terphenyl-d14	86		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-07	Date Collected:	09/09/10 14:15
Client ID:	SED-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 16:51		
Analyst:	AC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	39.8		ug/kg	3.32	--	1
C1-Naphthalenes	32.4		ug/kg	3.32	--	1
C2-Naphthalenes	46.9		ug/kg	3.32	--	1
C3-Naphthalenes	47.2		ug/kg	3.32	--	1
C4-Naphthalenes	35.1		ug/kg	3.32	--	1
2-Methylnaphthalene	25.6		ug/kg	3.32	--	1
1-Methylnaphthalene	24.4		ug/kg	3.32	--	1
Dibenzofuran	78.1		ug/kg	3.32	--	1
Acenaphthylene	58.6		ug/kg	3.32	--	1
Acenaphthene	120		ug/kg	3.32	--	1
Fluorene	130		ug/kg	3.32	--	1
C1-Fluorenes	34.7		ug/kg	3.32	--	1
C2-Fluorenes	45.2		ug/kg	3.32	--	1
C3-Fluorenes	219		ug/kg	3.32	--	1
Phenanthrene	1810		ug/kg	3.32	--	1
C1-Phenanthrenes/Anthracenes	383		ug/kg	3.32	--	1
C2-Phenanthrenes/Anthracenes	170		ug/kg	3.32	--	1
C3-Phenanthrenes/Anthracenes	82.7		ug/kg	3.32	--	1
C4-Phenanthrenes/Anthracenes	39.1		ug/kg	3.32	--	1
Anthracene	288		ug/kg	3.32	--	1
Carbazole	279		ug/kg	3.32	--	1
Fluoranthene	2480		ug/kg	3.32	--	1
Pyrene	1980		ug/kg	3.32	--	1
C1-Fluoranthenes/Pyrenes	617		ug/kg	3.32	--	1
Benz(a)anthracene	1040		ug/kg	3.32	--	1
Chrysene	1150		ug/kg	3.32	--	1
C1-Chrysenes	310		ug/kg	3.32	--	1
C2-Chrysenes	148		ug/kg	3.32	--	1
C3-Chrysenes	145		ug/kg	3.32	--	1
C4-Chrysenes	100		ug/kg	3.32	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-07
Client ID: SED-20
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	1070		ug/kg	3.32	--	1
Benzo(k)fluoranthene	786		ug/kg	3.32	--	1
Benzo(e)Pyrene	674		ug/kg	3.32	--	1
Benzo(a)pyrene	864		ug/kg	3.32	--	1
Perylene	232		ug/kg	3.32	--	1
Indeno(1,2,3-cd)Pyrene	698		ug/kg	3.32	--	1
Dibenz(a,h)anthracene	182		ug/kg	3.32	--	1
Benzo(ghi)perylene	631		ug/kg	3.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	93		50-130
Pyrene-d10	98		50-130
Benzo(b)fluoranthene-d12	100		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-08	Date Collected:	09/09/10 14:45
Client ID:	SED-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 15:31	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	80%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	234	--	1
2-Methylphenol	ND		ug/kg	234	--	1
4-Methylphenol	ND		ug/kg	234	--	1
2,4-Dimethylphenol	ND		ug/kg	234	--	1
2,4-Dichlorophenol	ND		ug/kg	234	--	1
2,4,6-Trichlorophenol	ND		ug/kg	234	--	1
Pentachlorophenol	ND		ug/kg	936	--	1
Butylbenzylphthalate	ND		ug/kg	234	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	234	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	70		30-130
Phenol-d5	56		30-130
Nitrobenzene-d5	74		30-130
2-Fluorophenol	43		30-130
2,4,6-Tribromophenol	**28**	Q	30-130
Terphenyl-d14	76		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-08	Date Collected:	09/09/10 14:45
Client ID:	SED-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 18:22		
Analyst:	AC		
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	15.8		ug/kg	2.84	--	1
C1-Naphthalenes	10.8		ug/kg	2.84	--	1
C2-Naphthalenes	20.9		ug/kg	2.84	--	1
C3-Naphthalenes	22.5		ug/kg	2.84	--	1
C4-Naphthalenes	17.1		ug/kg	2.84	--	1
2-Methylnaphthalene	8.76		ug/kg	2.84	--	1
1-Methylnaphthalene	7.61		ug/kg	2.84	--	1
Dibenzofuran	26.7		ug/kg	2.84	--	1
Acenaphthylene	71.5		ug/kg	2.84	--	1
Acenaphthene	55.8		ug/kg	2.84	--	1
Fluorene	67.6		ug/kg	2.84	--	1
C1-Fluorenes	22.5		ug/kg	2.84	--	1
C2-Fluorenes	26.8		ug/kg	2.84	--	1
C3-Fluorenes	109		ug/kg	2.84	--	1
Phenanthrene	876		ug/kg	2.84	--	1
C1-Phenanthrenes/Anthracenes	200		ug/kg	2.84	--	1
C2-Phenanthrenes/Anthracenes	103		ug/kg	2.84	--	1
C3-Phenanthrenes/Anthracenes	51.1		ug/kg	2.84	--	1
C4-Phenanthrenes/Anthracenes	27.3		ug/kg	2.84	--	1
Anthracene	161		ug/kg	2.84	--	1
Carbazole	110		ug/kg	2.84	--	1
Fluoranthene	1340		ug/kg	2.84	--	1
Pyrene	1180		ug/kg	2.84	--	1
C1-Fluoranthenes/Pyrenes	407		ug/kg	2.84	--	1
Benz(a)anthracene	587		ug/kg	2.84	--	1
Chrysene	638		ug/kg	2.84	--	1
C1-Chrysenes	198		ug/kg	2.84	--	1
C2-Chrysenes	111		ug/kg	2.84	--	1
C3-Chrysenes	114		ug/kg	2.84	--	1
C4-Chrysenes	76.4		ug/kg	2.84	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-08
Client ID: SED-21
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	557		ug/kg	2.84	--	1
Benzo(k)fluoranthene	405		ug/kg	2.84	--	1
Benzo(e)Pyrene	381		ug/kg	2.84	--	1
Benzo(a)pyrene	431		ug/kg	2.84	--	1
Perylene	119		ug/kg	2.84	--	1
Indeno(1,2,3-cd)Pyrene	360		ug/kg	2.84	--	1
Dibenz(a,h)anthracene	93.3		ug/kg	2.84	--	1
Benzo(ghi)perylene	347		ug/kg	2.84	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	85		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-09	Date Collected:	09/09/10 15:15
Client ID:	SED-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 16:10	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	79%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	236	--	1
2-Methylphenol	ND		ug/kg	236	--	1
4-Methylphenol	ND		ug/kg	236	--	1
2,4-Dimethylphenol	ND		ug/kg	236	--	1
2,4-Dichlorophenol	ND		ug/kg	236	--	1
2,4,6-Trichlorophenol	ND		ug/kg	236	--	1
Pentachlorophenol	ND		ug/kg	943	--	1
Butylbenzylphthalate	ND		ug/kg	236	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	236	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	79		30-130
Phenol-d5	62		30-130
Nitrobenzene-d5	85		30-130
2-Fluorophenol	43		30-130
2,4,6-Tribromophenol	**29**	Q	30-130
Terphenyl-d14	91		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-09	Date Collected:	09/09/10 15:15
Client ID:	SED-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 19:54		
Analyst:	AC		
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	446		ug/kg	4.57	--	1
C1-Naphthalenes	187		ug/kg	4.57	--	1
C2-Naphthalenes	179		ug/kg	4.57	--	1
C3-Naphthalenes	140		ug/kg	4.57	--	1
C4-Naphthalenes	91.4		ug/kg	4.57	--	1
2-Methylnaphthalene	186		ug/kg	4.57	--	1
1-Methylnaphthalene	106		ug/kg	4.57	--	1
Dibenzofuran	247		ug/kg	4.57	--	1
Acenaphthylene	106		ug/kg	4.57	--	1
Acenaphthene	126		ug/kg	4.57	--	1
Fluorene	160		ug/kg	4.57	--	1
C1-Fluorenes	61.4		ug/kg	4.57	--	1
C2-Fluorenes	89.4		ug/kg	4.57	--	1
C3-Fluorenes	206		ug/kg	4.57	--	1
Phenanthrene	2560		ug/kg	4.57	--	1
C1-Phenanthrenes/Anthracenes	582		ug/kg	4.57	--	1
C2-Phenanthrenes/Anthracenes	256		ug/kg	4.57	--	1
C3-Phenanthrenes/Anthracenes	123		ug/kg	4.57	--	1
C4-Phenanthrenes/Anthracenes	82.3		ug/kg	4.57	--	1
Anthracene	740		ug/kg	4.57	--	1
Carbazole	152		ug/kg	4.57	--	1
Fluoranthene	2940		ug/kg	4.57	--	1
Pyrene	2370		ug/kg	4.57	--	1
C1-Fluoranthenes/Pyrenes	785		ug/kg	4.57	--	1
Benz(a)anthracene	1250		ug/kg	4.57	--	1
Chrysene	1250		ug/kg	4.57	--	1
C1-Chrysenes	398		ug/kg	4.57	--	1
C2-Chrysenes	244		ug/kg	4.57	--	1
C3-Chrysenes	286		ug/kg	4.57	--	1
C4-Chrysenes	180		ug/kg	4.57	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-09
Client ID: SED-22
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	1080		ug/kg	4.57	--	1
Benzo(k)fluoranthene	923		ug/kg	4.57	--	1
Benzo(e)Pyrene	770		ug/kg	4.57	--	1
Benzo(a)pyrene	1130		ug/kg	4.57	--	1
Perylene	295		ug/kg	4.57	--	1
Indeno(1,2,3-cd)Pyrene	771		ug/kg	4.57	--	1
Dibenz(a,h)anthracene	194		ug/kg	4.57	--	1
Benzo(ghi)perylene	742		ug/kg	4.57	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	80		50-130
Pyrene-d10	86		50-130
Benzo(b)fluoranthene-d12	87		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-10	Date Collected:	09/09/10 15:30
Client ID:	SED-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:20
Analytical Date:	10/22/10 16:48	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	80%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	234	--	1
2-Methylphenol	ND		ug/kg	234	--	1
4-Methylphenol	ND		ug/kg	234	--	1
2,4-Dimethylphenol	ND		ug/kg	234	--	1
2,4-Dichlorophenol	ND		ug/kg	234	--	1
2,4,6-Trichlorophenol	ND		ug/kg	234	--	1
Pentachlorophenol	ND		ug/kg	935	--	1
Butylbenzylphthalate	ND		ug/kg	234	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	234	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	71		30-130
Phenol-d5	58		30-130
Nitrobenzene-d5	76		30-130
2-Fluorophenol	45		30-130
2,4,6-Tribromophenol	34		30-130
Terphenyl-d14	77		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-10	Date Collected:	09/09/10 15:30
Client ID:	SED-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 21:42		
Analyst:	AC		
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	2.86		ug/kg	1.89	--	1
C1-Naphthalenes	3.01		ug/kg	1.89	--	1
C2-Naphthalenes	7.97		ug/kg	1.89	--	1
C3-Naphthalenes	9.98		ug/kg	1.89	--	1
C4-Naphthalenes	9.89		ug/kg	1.89	--	1
2-Methylnaphthalene	ND		ug/kg	1.89	--	1
1-Methylnaphthalene	ND		ug/kg	1.89	--	1
Dibenzofuran	2.06		ug/kg	1.89	--	1
Acenaphthylene	10.6		ug/kg	1.89	--	1
Acenaphthene	2.54		ug/kg	1.89	--	1
Fluorene	4.50		ug/kg	1.89	--	1
C1-Fluorenes	5.04		ug/kg	1.89	--	1
C2-Fluorenes	10.3		ug/kg	1.89	--	1
C3-Fluorenes	22.7		ug/kg	1.89	--	1
Phenanthrene	57.8		ug/kg	1.89	--	1
C1-Phenanthrenes/Anthracenes	29.1		ug/kg	1.89	--	1
C2-Phenanthrenes/Anthracenes	25.7		ug/kg	1.89	--	1
C3-Phenanthrenes/Anthracenes	17.9		ug/kg	1.89	--	1
C4-Phenanthrenes/Anthracenes	11.6		ug/kg	1.89	--	1
Anthracene	13.8		ug/kg	1.89	--	1
Carbazole	11.7		ug/kg	1.89	--	1
Fluoranthene	150		ug/kg	1.89	--	1
Pyrene	131		ug/kg	1.89	--	1
C1-Fluoranthenes/Pyrenes	54.6		ug/kg	1.89	--	1
Benz(a)anthracene	64.0		ug/kg	1.89	--	1
Chrysene	99.3		ug/kg	1.89	--	1
C1-Chrysenes	34.0		ug/kg	1.89	--	1
C2-Chrysenes	26.2		ug/kg	1.89	--	1
C3-Chrysenes	38.3		ug/kg	1.89	--	1
C4-Chrysenes	34.3		ug/kg	1.89	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-10
Client ID: SED-23
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	97.0		ug/kg	1.89	--	1
Benzo(k)fluoranthene	77.0		ug/kg	1.89	--	1
Benzo(e)Pyrene	73.1		ug/kg	1.89	--	1
Benzo(a)pyrene	52.8		ug/kg	1.89	--	1
Perylene	16.2		ug/kg	1.89	--	1
Indeno(1,2,3-cd)Pyrene	69.1		ug/kg	1.89	--	1
Dibenz(a,h)anthracene	15.4		ug/kg	1.89	--	1
Benzo(ghi)perylene	67.8		ug/kg	1.89	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	79		50-130
Pyrene-d10	84		50-130
Benzo(b)fluoranthene-d12	88		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-11	Date Collected:	09/08/10 15:45
Client ID:	SW-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/21/10 23:13		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.543	--	1
2-Methylphenol	ND		ug/l	0.543	--	1
4-Methylphenol	ND		ug/l	0.543	--	1
2,4-Dimethylphenol	ND		ug/l	0.543	--	1
2,4-Dichlorophenol	ND		ug/l	0.543	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.543	--	1
Pentachlorophenol	ND		ug/l	2.17	--	1
Butylbenzylphthalate	0.570		ug/l	0.543	--	1
Bis(2-Ethylhexyl)phthalate	0.751	B	ug/l	0.543	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	68		15-115
Terphenyl-d14	60		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-11	Date Collected:	09/08/10 15:45
Client ID:	SW-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 00:34		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	24.2		ng/l	9.34	--	1
C1-Naphthalenes	15.8		ng/l	9.34	--	1
C2-Naphthalenes	17.5		ng/l	9.34	--	1
C3-Naphthalenes	11.7		ng/l	9.34	--	1
C4-Naphthalenes	ND		ng/l	9.34	--	1
2-Methylnaphthalene	ND		ng/l	9.34	--	1
1-Methylnaphthalene	14.7		ng/l	9.34	--	1
Dibenzofuran	25.0		ng/l	9.34	--	1
Acenaphthylene	ND		ng/l	9.34	--	1
Acenaphthene	59.9		ng/l	9.34	--	1
Fluorene	27.1		ng/l	9.34	--	1
C1-Fluorenes	ND		ng/l	9.34	--	1
C2-Fluorenes	ND		ng/l	9.34	--	1
C3-Fluorenes	ND		ng/l	9.34	--	1
Phenanthrene	26.6		ng/l	9.34	--	1
C1-Phenanthrenes/Anthracenes	9.83		ng/l	9.34	--	1
C2-Phenanthrenes/Anthracenes	9.53		ng/l	9.34	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
Anthracene	ND		ng/l	9.34	--	1
Carbazole	22.3		ng/l	9.34	--	1
Fluoranthene	35.2		ng/l	9.34	--	1
Pyrene	26.9		ng/l	9.34	--	1
C1-Fluoranthenes/Pyrenes	16.0		ng/l	9.34	--	1
Benz(a)anthracene	10.6		ng/l	9.34	--	1
Chrysene	18.1		ng/l	9.34	--	1
C1-Chrysenes	ND		ng/l	9.34	--	1
C2-Chrysenes	ND		ng/l	9.34	--	1
C3-Chrysenes	ND		ng/l	9.34	--	1
C4-Chrysenes	ND		ng/l	9.34	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-11
Client ID: SW-15
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	16.5		ng/l	9.34	--	1
Benzo(k)fluoranthene	12.5		ng/l	9.34	--	1
Benzo(e)Pyrene	13.0		ng/l	9.34	--	1
Benzo(a)pyrene	ND		ng/l	9.34	--	1
Perylene	ND		ng/l	9.34	--	1
Indeno(1,2,3-cd)Pyrene	11.8		ng/l	9.34	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.34	--	1
Benzo(ghi)perylene	11.7		ng/l	9.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	77		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-12	Date Collected:	09/09/10 09:15
Client ID:	SW-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/21/10 23:52		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-115
Phenol-d5	30		15-115
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	65		15-115
Terphenyl-d14	64		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-12	Date Collected:	09/09/10 09:15
Client ID:	SW-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 02:07		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	14.6		ng/l	10.5	--	1
C1-Naphthalenes	ND		ng/l	10.5	--	1
C2-Naphthalenes	ND		ng/l	10.5	--	1
C3-Naphthalenes	ND		ng/l	10.5	--	1
C4-Naphthalenes	ND		ng/l	10.5	--	1
2-Methylnaphthalene	ND		ng/l	10.5	--	1
1-Methylnaphthalene	ND		ng/l	10.5	--	1
Dibenzofuran	ND		ng/l	10.5	--	1
Acenaphthylene	ND		ng/l	10.5	--	1
Acenaphthene	ND		ng/l	10.5	--	1
Fluorene	ND		ng/l	10.5	--	1
C1-Fluorenes	ND		ng/l	10.5	--	1
C2-Fluorenes	ND		ng/l	10.5	--	1
C3-Fluorenes	ND		ng/l	10.5	--	1
Phenanthrene	11.8		ng/l	10.5	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
Anthracene	ND		ng/l	10.5	--	1
Carbazole	ND		ng/l	10.5	--	1
Fluoranthene	16.4		ng/l	10.5	--	1
Pyrene	13.9		ng/l	10.5	--	1
C1-Fluoranthenes/Pyrenes	11.4		ng/l	10.5	--	1
Benz(a)anthracene	ND		ng/l	10.5	--	1
Chrysene	10.6		ng/l	10.5	--	1
C1-Chrysenes	ND		ng/l	10.5	--	1
C2-Chrysenes	ND		ng/l	10.5	--	1
C3-Chrysenes	ND		ng/l	10.5	--	1
C4-Chrysenes	ND		ng/l	10.5	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-12
Client ID: SW-16
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.5	--	1
Benzo(k)fluoranthene	ND		ng/l	10.5	--	1
Benzo(e)Pyrene	ND		ng/l	10.5	--	1
Benzo(a)pyrene	ND		ng/l	10.5	--	1
Perylene	ND		ng/l	10.5	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.5	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.5	--	1
Benzo(ghi)perylene	ND		ng/l	10.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-13	Date Collected:	09/09/10 10:00
Client ID:	SW-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 00:30		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.495	--	1
2-Methylphenol	ND		ug/l	0.495	--	1
4-Methylphenol	ND		ug/l	0.495	--	1
2,4-Dimethylphenol	ND		ug/l	0.495	--	1
2,4-Dichlorophenol	ND		ug/l	0.495	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.495	--	1
Pentachlorophenol	ND		ug/l	1.98	--	1
Butylbenzylphthalate	ND		ug/l	0.495	--	1
Bis(2-Ethylhexyl)phthalate	1.15		ug/l	0.495	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-115
Phenol-d5	27		15-115
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	61		15-115
Terphenyl-d14	62		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-13	Date Collected:	09/09/10 10:00
Client ID:	SW-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 03:39		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	16.5		ng/l	9.52	--	1
C1-Naphthalenes	ND		ng/l	9.52	--	1
C2-Naphthalenes	ND		ng/l	9.52	--	1
C3-Naphthalenes	ND		ng/l	9.52	--	1
C4-Naphthalenes	ND		ng/l	9.52	--	1
2-Methylnaphthalene	ND		ng/l	9.52	--	1
1-Methylnaphthalene	ND		ng/l	9.52	--	1
Dibenzofuran	ND		ng/l	9.52	--	1
Acenaphthylene	11.8		ng/l	9.52	--	1
Acenaphthene	ND		ng/l	9.52	--	1
Fluorene	ND		ng/l	9.52	--	1
C1-Fluorenes	ND		ng/l	9.52	--	1
C2-Fluorenes	ND		ng/l	9.52	--	1
C3-Fluorenes	ND		ng/l	9.52	--	1
Phenanthrene	43.3		ng/l	9.52	--	1
C1-Phenanthrenes/Anthracenes	17.0		ng/l	9.52	--	1
C2-Phenanthrenes/Anthracenes	14.6		ng/l	9.52	--	1
C3-Phenanthrenes/Anthracenes	10.4		ng/l	9.52	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.52	--	1
Anthracene	10.6		ng/l	9.52	--	1
Carbazole	10.1		ng/l	9.52	--	1
Fluoranthene	97.9		ng/l	9.52	--	1
Pyrene	88.7		ng/l	9.52	--	1
C1-Fluoranthenes/Pyrenes	43.2		ng/l	9.52	--	1
Benz(a)anthracene	33.6		ng/l	9.52	--	1
Chrysene	69.7		ng/l	9.52	--	1
C1-Chrysenes	23.7		ng/l	9.52	--	1
C2-Chrysenes	14.6		ng/l	9.52	--	1
C3-Chrysenes	ND		ng/l	9.52	--	1
C4-Chrysenes	ND		ng/l	9.52	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-13
Client ID: SW-17
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	80.8		ng/l	9.52	--	1
Benzo(k)fluoranthene	51.4		ng/l	9.52	--	1
Benzo(e)Pyrene	56.1		ng/l	9.52	--	1
Benzo(a)pyrene	23.5		ng/l	9.52	--	1
Perylene	ND		ng/l	9.52	--	1
Indeno(1,2,3-cd)Pyrene	50.0		ng/l	9.52	--	1
Dibenz(a,h)anthracene	10.3		ng/l	9.52	--	1
Benzo(ghi)perylene	54.8		ng/l	9.52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	81		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-14	Date Collected:	09/09/10 11:05
Client ID:	SW-18	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 02:26		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.521	--	1
2-Methylphenol	ND		ug/l	0.521	--	1
4-Methylphenol	ND		ug/l	0.521	--	1
2,4-Dimethylphenol	ND		ug/l	0.521	--	1
2,4-Dichlorophenol	ND		ug/l	0.521	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.521	--	1
Pentachlorophenol	ND		ug/l	2.08	--	1
Butylbenzylphthalate	ND		ug/l	0.521	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	55		15-115
Terphenyl-d14	63		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-14	Date Collected:	09/09/10 11:05
Client ID:	SW-18	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 05:13		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	32.3		ng/l	10.8	--	1
C1-Naphthalenes	ND		ng/l	10.8	--	1
C2-Naphthalenes	ND		ng/l	10.8	--	1
C3-Naphthalenes	ND		ng/l	10.8	--	1
C4-Naphthalenes	ND		ng/l	10.8	--	1
2-Methylnaphthalene	ND		ng/l	10.8	--	1
1-Methylnaphthalene	ND		ng/l	10.8	--	1
Dibenzofuran	ND		ng/l	10.8	--	1
Acenaphthylene	ND		ng/l	10.8	--	1
Acenaphthene	ND		ng/l	10.8	--	1
Fluorene	ND		ng/l	10.8	--	1
C1-Fluorenes	ND		ng/l	10.8	--	1
C2-Fluorenes	ND		ng/l	10.8	--	1
C3-Fluorenes	ND		ng/l	10.8	--	1
Phenanthrene	18.5		ng/l	10.8	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
Anthracene	ND		ng/l	10.8	--	1
Carbazole	ND		ng/l	10.8	--	1
Fluoranthene	34.2		ng/l	10.8	--	1
Pyrene	30.6		ng/l	10.8	--	1
C1-Fluoranthenes/Pyrenes	15.5		ng/l	10.8	--	1
Benz(a)anthracene	14.8		ng/l	10.8	--	1
Chrysene	22.0		ng/l	10.8	--	1
C1-Chrysenes	ND		ng/l	10.8	--	1
C2-Chrysenes	ND		ng/l	10.8	--	1
C3-Chrysenes	ND		ng/l	10.8	--	1
C4-Chrysenes	ND		ng/l	10.8	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14
Client ID: SW-18
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	21.3		ng/l	10.8	--	1
Benzo(k)fluoranthene	16.9		ng/l	10.8	--	1
Benzo(e)Pyrene	14.7		ng/l	10.8	--	1
Benzo(a)pyrene	11.1		ng/l	10.8	--	1
Perylene	ND		ng/l	10.8	--	1
Indeno(1,2,3-cd)Pyrene	13.4		ng/l	10.8	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.8	--	1
Benzo(ghi)perylene	14.2		ng/l	10.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	83		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-14	RE	Date Collected:	09/09/10 11:05
Client ID:	SW-18		Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN		Field Prep:	Not Specified
Matrix:	Water		Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)		Extraction Date:	09/17/10 16:17
Analytical Date:	10/01/10 10:48			
Analyst:	AC			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	29.4		ng/l	21.3	--	1
C1-Naphthalenes	ND		ng/l	21.3	--	1
C2-Naphthalenes	ND		ng/l	21.3	--	1
C3-Naphthalenes	ND		ng/l	21.3	--	1
C4-Naphthalenes	ND		ng/l	21.3	--	1
2-Methylnaphthalene	ND		ng/l	21.3	--	1
1-Methylnaphthalene	ND		ng/l	21.3	--	1
Dibenzofuran	ND		ng/l	21.3	--	1
Acenaphthylene	ND		ng/l	21.3	--	1
Acenaphthene	ND		ng/l	21.3	--	1
Fluorene	ND		ng/l	21.3	--	1
C1-Fluorenes	ND		ng/l	21.3	--	1
C2-Fluorenes	ND		ng/l	21.3	--	1
C3-Fluorenes	ND		ng/l	21.3	--	1
Phenanthrene	ND		ng/l	21.3	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
Anthracene	ND		ng/l	21.3	--	1
Carbazole	ND		ng/l	21.3	--	1
Fluoranthene	30.8		ng/l	21.3	--	1
Pyrene	28.3		ng/l	21.3	--	1
C1-Fluoranthenes/Pyrenes	23.7		ng/l	21.3	--	1
Benz(a)anthracene	ND		ng/l	21.3	--	1
Chrysene	ND		ng/l	21.3	--	1
C1-Chrysenes	ND		ng/l	21.3	--	1
C2-Chrysenes	ND		ng/l	21.3	--	1
C3-Chrysenes	ND		ng/l	21.3	--	1
C4-Chrysenes	ND		ng/l	21.3	--	1



Project Name: Not Specified **Lab Number:** L1014191

Project Number: Not Specified **Report Date:** 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14 RE Date Collected: 09/09/10 11:05

Client ID: SW-18 Date Received: 09/10/10

Sample Location: BLOOMINGTON, IN Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	21.3	--	1
Benzo(k)fluoranthene	ND		ng/l	21.3	--	1
Benzo(e)Pyrene	ND		ng/l	21.3	--	1
Benzo(a)pyrene	ND		ng/l	21.3	--	1
Perylene	ND		ng/l	21.3	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	21.3	--	1
Dibenz(a,h)anthracene	ND		ng/l	21.3	--	1
Benzo(ghi)perylene	ND		ng/l	21.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	78		50-130
Pyrene-d10	92		50-130
Benzo(b)fluoranthene-d12	92		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-15	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 04:22		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.505	--	1
2-Methylphenol	ND		ug/l	0.505	--	1
4-Methylphenol	ND		ug/l	0.505	--	1
2,4-Dimethylphenol	ND		ug/l	0.505	--	1
2,4-Dichlorophenol	ND		ug/l	0.505	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.505	--	1
Pentachlorophenol	ND		ug/l	2.02	--	1
Butylbenzylphthalate	ND		ug/l	0.505	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.505	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	82		15-115
Terphenyl-d14	62		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-15	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 08:18		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	13.6		ng/l	9.34	--	1
C1-Naphthalenes	ND		ng/l	9.34	--	1
C2-Naphthalenes	ND		ng/l	9.34	--	1
C3-Naphthalenes	ND		ng/l	9.34	--	1
C4-Naphthalenes	ND		ng/l	9.34	--	1
2-Methylnaphthalene	ND		ng/l	9.34	--	1
1-Methylnaphthalene	ND		ng/l	9.34	--	1
Dibenzofuran	ND		ng/l	9.34	--	1
Acenaphthylene	ND		ng/l	9.34	--	1
Acenaphthene	ND		ng/l	9.34	--	1
Fluorene	ND		ng/l	9.34	--	1
C1-Fluorenes	ND		ng/l	9.34	--	1
C2-Fluorenes	ND		ng/l	9.34	--	1
C3-Fluorenes	ND		ng/l	9.34	--	1
Phenanthrene	18.1		ng/l	9.34	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
C2-Phenanthrenes/Anthracenes	9.50		ng/l	9.34	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
Anthracene	ND		ng/l	9.34	--	1
Carbazole	ND		ng/l	9.34	--	1
Fluoranthene	41.3		ng/l	9.34	--	1
Pyrene	41.1		ng/l	9.34	--	1
C1-Fluoranthenes/Pyrenes	23.9		ng/l	9.34	--	1
Benz(a)anthracene	16.3		ng/l	9.34	--	1
Chrysene	32.6		ng/l	9.34	--	1
C1-Chrysenes	12.8		ng/l	9.34	--	1
C2-Chrysenes	9.38		ng/l	9.34	--	1
C3-Chrysenes	ND		ng/l	9.34	--	1
C4-Chrysenes	ND		ng/l	9.34	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-15
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	31.0		ng/l	9.34	--	1
Benzo(k)fluoranthene	28.4		ng/l	9.34	--	1
Benzo(e)Pyrene	28.2		ng/l	9.34	--	1
Benzo(a)pyrene	ND		ng/l	9.34	--	1
Perylene	ND		ng/l	9.34	--	1
Indeno(1,2,3-cd)Pyrene	24.0		ng/l	9.34	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.34	--	1
Benzo(ghi)perylene	26.5		ng/l	9.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	76		50-130
Benzo(b)fluoranthene-d12	80		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-16	Date Collected:	09/09/10 13:40
Client ID:	SW-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 05:01		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	3.33		ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-115
Phenol-d5	26		15-115
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	62		15-115
Terphenyl-d14	62		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-16	Date Collected:	09/09/10 13:40
Client ID:	SW-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 09:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	21.7		ng/l	9.43	--	1
C1-Naphthalenes	ND		ng/l	9.43	--	1
C2-Naphthalenes	ND		ng/l	9.43	--	1
C3-Naphthalenes	ND		ng/l	9.43	--	1
C4-Naphthalenes	10.5		ng/l	9.43	--	1
2-Methylnaphthalene	ND		ng/l	9.43	--	1
1-Methylnaphthalene	ND		ng/l	9.43	--	1
Dibenzofuran	ND		ng/l	9.43	--	1
Acenaphthylene	ND		ng/l	9.43	--	1
Acenaphthene	ND		ng/l	9.43	--	1
Fluorene	ND		ng/l	9.43	--	1
C1-Fluorenes	ND		ng/l	9.43	--	1
C2-Fluorenes	ND		ng/l	9.43	--	1
C3-Fluorenes	ND		ng/l	9.43	--	1
Phenanthrene	ND		ng/l	9.43	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
Anthracene	ND		ng/l	9.43	--	1
Carbazole	ND		ng/l	9.43	--	1
Fluoranthene	9.43		ng/l	9.43	--	1
Pyrene	ND		ng/l	9.43	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.43	--	1
Benz(a)anthracene	ND		ng/l	9.43	--	1
Chrysene	ND		ng/l	9.43	--	1
C1-Chrysenes	ND		ng/l	9.43	--	1
C2-Chrysenes	ND		ng/l	9.43	--	1
C3-Chrysenes	ND		ng/l	9.43	--	1
C4-Chrysenes	ND		ng/l	9.43	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-16
Client ID: SW-19
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.43	--	1
Benzo(k)fluoranthene	ND		ng/l	9.43	--	1
Benzo(e)Pyrene	ND		ng/l	9.43	--	1
Benzo(a)pyrene	ND		ng/l	9.43	--	1
Perylene	ND		ng/l	9.43	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.43	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.43	--	1
Benzo(ghi)perylene	ND		ng/l	9.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	75		50-130
Benzo(b)fluoranthene-d12	80		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-17	Date Collected:	09/09/10 14:15
Client ID:	SW-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 05:39		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.500	--	1
2-Methylphenol	ND		ug/l	0.500	--	1
4-Methylphenol	ND		ug/l	0.500	--	1
2,4-Dimethylphenol	ND		ug/l	0.500	--	1
2,4-Dichlorophenol	ND		ug/l	0.500	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.500	--	1
Pentachlorophenol	ND		ug/l	2.00	--	1
Butylbenzylphthalate	ND		ug/l	0.500	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-115
Phenol-d5	26		15-115
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	58		15-115
Terphenyl-d14	63		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-17	Date Collected:	09/09/10 14:15
Client ID:	SW-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 11:20		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	28.6		ng/l	9.62	--	1
C1-Naphthalenes	ND		ng/l	9.62	--	1
C2-Naphthalenes	ND		ng/l	9.62	--	1
C3-Naphthalenes	ND		ng/l	9.62	--	1
C4-Naphthalenes	ND		ng/l	9.62	--	1
2-Methylnaphthalene	ND		ng/l	9.62	--	1
1-Methylnaphthalene	ND		ng/l	9.62	--	1
Dibenzofuran	ND		ng/l	9.62	--	1
Acenaphthylene	ND		ng/l	9.62	--	1
Acenaphthene	ND		ng/l	9.62	--	1
Fluorene	ND		ng/l	9.62	--	1
C1-Fluorenes	ND		ng/l	9.62	--	1
C2-Fluorenes	ND		ng/l	9.62	--	1
C3-Fluorenes	ND		ng/l	9.62	--	1
Phenanthrene	ND		ng/l	9.62	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
Anthracene	ND		ng/l	9.62	--	1
Carbazole	ND		ng/l	9.62	--	1
Fluoranthene	9.77		ng/l	9.62	--	1
Pyrene	ND		ng/l	9.62	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.62	--	1
Benz(a)anthracene	ND		ng/l	9.62	--	1
Chrysene	ND		ng/l	9.62	--	1
C1-Chrysenes	ND		ng/l	9.62	--	1
C2-Chrysenes	ND		ng/l	9.62	--	1
C3-Chrysenes	ND		ng/l	9.62	--	1
C4-Chrysenes	ND		ng/l	9.62	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-17
Client ID: SW-20
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.62	--	1
Benzo(k)fluoranthene	ND		ng/l	9.62	--	1
Benzo(e)Pyrene	ND		ng/l	9.62	--	1
Benzo(a)pyrene	ND		ng/l	9.62	--	1
Perylene	ND		ng/l	9.62	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.62	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.62	--	1
Benzo(ghi)perylene	ND		ng/l	9.62	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-18	Date Collected:	09/09/10 14:45
Client ID:	SW-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 06:19		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.515	--	1
2-Methylphenol	ND		ug/l	0.515	--	1
4-Methylphenol	ND		ug/l	0.515	--	1
2,4-Dimethylphenol	ND		ug/l	0.515	--	1
2,4-Dichlorophenol	ND		ug/l	0.515	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.515	--	1
Pentachlorophenol	ND		ug/l	2.06	--	1
Butylbenzylphthalate	ND		ug/l	0.515	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.515	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-115
Phenol-d5	32		15-115
Nitrobenzene-d5	88		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	85		15-115
Terphenyl-d14	64		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-18	Date Collected:	09/09/10 14:45
Client ID:	SW-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 12:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	38.1		ng/l	10.0	--	1
C1-Naphthalenes	ND		ng/l	10.0	--	1
C2-Naphthalenes	ND		ng/l	10.0	--	1
C3-Naphthalenes	ND		ng/l	10.0	--	1
C4-Naphthalenes	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzofuran	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	ND		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
C1-Fluorenes	ND		ng/l	10.0	--	1
C2-Fluorenes	ND		ng/l	10.0	--	1
C3-Fluorenes	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
Carbazole	ND		ng/l	10.0	--	1
Fluoranthene	10.5		ng/l	10.0	--	1
Pyrene	ND		ng/l	10.0	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
C1-Chrysenes	ND		ng/l	10.0	--	1
C2-Chrysenes	ND		ng/l	10.0	--	1
C3-Chrysenes	ND		ng/l	10.0	--	1
C4-Chrysenes	ND		ng/l	10.0	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-18
Client ID: SW-21
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	73		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	81		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-19	Date Collected:	09/09/10 15:15
Client ID:	SW-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 06:57		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.505	--	1
2-Methylphenol	ND		ug/l	0.505	--	1
4-Methylphenol	ND		ug/l	0.505	--	1
2,4-Dimethylphenol	ND		ug/l	0.505	--	1
2,4-Dichlorophenol	ND		ug/l	0.505	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.505	--	1
Pentachlorophenol	ND		ug/l	2.02	--	1
Butylbenzylphthalate	ND		ug/l	0.505	--	1
Bis(2-Ethylhexyl)phthalate	1.28		ug/l	0.505	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-115
Phenol-d5	32		15-115
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	78		15-115
Terphenyl-d14	63		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-19	Date Collected:	09/09/10 15:15
Client ID:	SW-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/29/10 00:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	21.0		ng/l	9.80	--	1
C1-Naphthalenes	ND		ng/l	9.80	--	1
C2-Naphthalenes	ND		ng/l	9.80	--	1
C3-Naphthalenes	ND		ng/l	9.80	--	1
C4-Naphthalenes	ND		ng/l	9.80	--	1
2-Methylnaphthalene	ND		ng/l	9.80	--	1
1-Methylnaphthalene	ND		ng/l	9.80	--	1
Dibenzofuran	ND		ng/l	9.80	--	1
Acenaphthylene	ND		ng/l	9.80	--	1
Acenaphthene	ND		ng/l	9.80	--	1
Fluorene	ND		ng/l	9.80	--	1
C1-Fluorenes	ND		ng/l	9.80	--	1
C2-Fluorenes	ND		ng/l	9.80	--	1
C3-Fluorenes	ND		ng/l	9.80	--	1
Phenanthrene	ND		ng/l	9.80	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
Anthracene	ND		ng/l	9.80	--	1
Carbazole	ND		ng/l	9.80	--	1
Fluoranthene	10.1		ng/l	9.80	--	1
Pyrene	ND		ng/l	9.80	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.80	--	1
Benz(a)anthracene	ND		ng/l	9.80	--	1
Chrysene	ND		ng/l	9.80	--	1
C1-Chrysenes	ND		ng/l	9.80	--	1
C2-Chrysenes	ND		ng/l	9.80	--	1
C3-Chrysenes	ND		ng/l	9.80	--	1
C4-Chrysenes	ND		ng/l	9.80	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-19
Client ID: SW-22
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.80	--	1
Benzo(k)fluoranthene	ND		ng/l	9.80	--	1
Benzo(e)Pyrene	ND		ng/l	9.80	--	1
Benzo(a)pyrene	ND		ng/l	9.80	--	1
Perylene	ND		ng/l	9.80	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.80	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.80	--	1
Benzo(ghi)perylene	ND		ng/l	9.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	70		50-130
Pyrene-d10	75		50-130
Benzo(b)fluoranthene-d12	78		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-20	Date Collected:	09/09/10 15:30
Client ID:	SW-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 07:35		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.617	--	1
2-Methylphenol	ND		ug/l	0.617	--	1
4-Methylphenol	ND		ug/l	0.617	--	1
2,4-Dimethylphenol	ND		ug/l	0.617	--	1
2,4-Dichlorophenol	ND		ug/l	0.617	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.617	--	1
Pentachlorophenol	ND		ug/l	2.47	--	1
Butylbenzylphthalate	ND		ug/l	0.617	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.617	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	54		15-115
Terphenyl-d14	60		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-20	Date Collected:	09/09/10 15:30
Client ID:	SW-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 15:49		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	84.3		ng/l	10.8	--	1
C1-Naphthalenes	12.5		ng/l	10.8	--	1
C2-Naphthalenes	ND		ng/l	10.8	--	1
C3-Naphthalenes	ND		ng/l	10.8	--	1
C4-Naphthalenes	ND		ng/l	10.8	--	1
2-Methylnaphthalene	ND		ng/l	10.8	--	1
1-Methylnaphthalene	ND		ng/l	10.8	--	1
Dibenzofuran	ND		ng/l	10.8	--	1
Acenaphthylene	ND		ng/l	10.8	--	1
Acenaphthene	ND		ng/l	10.8	--	1
Fluorene	ND		ng/l	10.8	--	1
C1-Fluorenes	ND		ng/l	10.8	--	1
C2-Fluorenes	ND		ng/l	10.8	--	1
C3-Fluorenes	ND		ng/l	10.8	--	1
Phenanthrene	ND		ng/l	10.8	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
Anthracene	ND		ng/l	10.8	--	1
Carbazole	ND		ng/l	10.8	--	1
Fluoranthene	11.8		ng/l	10.8	--	1
Pyrene	ND		ng/l	10.8	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.8	--	1
Benz(a)anthracene	ND		ng/l	10.8	--	1
Chrysene	ND		ng/l	10.8	--	1
C1-Chrysenes	ND		ng/l	10.8	--	1
C2-Chrysenes	ND		ng/l	10.8	--	1
C3-Chrysenes	ND		ng/l	10.8	--	1
C4-Chrysenes	ND		ng/l	10.8	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-20
Client ID: SW-23
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.8	--	1
Benzo(k)fluoranthene	ND		ng/l	10.8	--	1
Benzo(e)Pyrene	ND		ng/l	10.8	--	1
Benzo(a)pyrene	ND		ng/l	10.8	--	1
Perylene	ND		ng/l	10.8	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.8	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.8	--	1
Benzo(ghi)perylene	ND		ng/l	10.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	70		50-130
Pyrene-d10	71		50-130
Benzo(b)fluoranthene-d12	74		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/01/10 19:57
Analyst: AC

Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:29

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 11-13,15-20 Batch: WG432506-1					
Naphthalene	ND		ng/l	9.88	--
C1-Naphthalenes	ND		ng/l	9.88	--
C2-Naphthalenes	ND		ng/l	9.88	--
C3-Naphthalenes	ND		ng/l	9.88	--
C4-Naphthalenes	ND		ng/l	9.88	--
2-Methylnaphthalene	ND		ng/l	9.88	--
1-Methylnaphthalene	ND		ng/l	9.88	--
Dibenzofuran	ND		ng/l	9.88	--
Acenaphthylene	ND		ng/l	9.88	--
Acenaphthene	ND		ng/l	9.88	--
Fluorene	ND		ng/l	9.88	--
C1-Fluorenes	ND		ng/l	9.88	--
C2-Fluorenes	ND		ng/l	9.88	--
C3-Fluorenes	ND		ng/l	9.88	--
Phenanthrene	ND		ng/l	9.88	--
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.88	--
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.88	--
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.88	--
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.88	--
Anthracene	ND		ng/l	9.88	--
Carbazole	ND		ng/l	9.88	--
Fluoranthene	ND		ng/l	9.88	--
Pyrene	ND		ng/l	9.88	--
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.88	--
Benz(a)anthracene	ND		ng/l	9.88	--
Chrysene	ND		ng/l	9.88	--
C1-Chrysenes	ND		ng/l	9.88	--
C2-Chrysenes	ND		ng/l	9.88	--
C3-Chrysenes	ND		ng/l	9.88	--
C4-Chrysenes	ND		ng/l	9.88	--
Benzo(b)fluoranthene	ND		ng/l	9.88	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/01/10 19:57
Analyst: AC

Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:29

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 11-13,15-20 Batch: WG432506-1					
Benzo(k)fluoranthene	ND		ng/l	9.88	--
Benzo(e)Pyrene	ND		ng/l	9.88	--
Benzo(a)pyrene	ND		ng/l	9.88	--
Perylene	ND		ng/l	9.88	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.88	--
Dibenz(a,h)anthracene	ND		ng/l	9.88	--
Benzo(ghi)perylene	ND		ng/l	9.88	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		50-130
Pyrene-d10	75		50-130
Benzo(b)fluoranthene-d12	78		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/29/10 19:31
Analyst: AC

Extraction Method: ALPHA OP-013
Extraction Date: 09/16/10 11:48

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-10 Batch: WG432656-1					
Naphthalene	ND		ug/kg	0.318	--
C1-Naphthalenes	ND		ug/kg	0.318	--
C2-Naphthalenes	ND		ug/kg	0.318	--
C3-Naphthalenes	ND		ug/kg	0.318	--
C4-Naphthalenes	ND		ug/kg	0.318	--
2-Methylnaphthalene	ND		ug/kg	0.318	--
1-Methylnaphthalene	ND		ug/kg	0.318	--
Dibenzofuran	ND		ug/kg	0.318	--
Acenaphthylene	ND		ug/kg	0.318	--
Acenaphthene	ND		ug/kg	0.318	--
Fluorene	ND		ug/kg	0.318	--
C1-Fluorenes	ND		ug/kg	0.318	--
C2-Fluorenes	ND		ug/kg	0.318	--
C3-Fluorenes	ND		ug/kg	0.318	--
Phenanthrene	ND		ug/kg	0.318	--
C1-Phenanthrenes/Anthracenes	ND		ug/kg	0.318	--
C2-Phenanthrenes/Anthracenes	ND		ug/kg	0.318	--
C3-Phenanthrenes/Anthracenes	ND		ug/kg	0.318	--
C4-Phenanthrenes/Anthracenes	ND		ug/kg	0.318	--
Anthracene	ND		ug/kg	0.318	--
Carbazole	ND		ug/kg	0.318	--
Fluoranthene	ND		ug/kg	0.318	--
Pyrene	ND		ug/kg	0.318	--
C1-Fluoranthenes/Pyrenes	ND		ug/kg	0.318	--
Benz(a)anthracene	ND		ug/kg	0.318	--
Chrysene	ND		ug/kg	0.318	--
C1-Chrysenes	ND		ug/kg	0.318	--
C2-Chrysenes	ND		ug/kg	0.318	--
C3-Chrysenes	ND		ug/kg	0.318	--
C4-Chrysenes	ND		ug/kg	0.318	--
Benzo(b)fluoranthene	ND		ug/kg	0.318	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/29/10 19:31
Analyst: AC

Extraction Method: ALPHA OP-013
Extraction Date: 09/16/10 11:48

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-10 Batch: WG432656-1					
Benzo(k)fluoranthene	ND		ug/kg	0.318	--
Benzo(e)Pyrene	ND		ug/kg	0.318	--
Benzo(a)pyrene	ND		ug/kg	0.318	--
Perylene	ND		ug/kg	0.318	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	0.318	--
Dibenz(a,h)anthracene	ND		ug/kg	0.318	--
Benzo(ghi)perylene	ND		ug/kg	0.318	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	82		50-130
Pyrene-d10	89		50-130
Benzo(b)fluoranthene-d12	97		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/01/10 05:20
Analyst: AC

Extraction Method: EPA 3510C
Extraction Date: 09/17/10 16:17

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 14 Batch: WG432941-1					
Naphthalene	ND		ng/l	20.0	--
C1-Naphthalenes	ND		ng/l	20.0	--
C2-Naphthalenes	ND		ng/l	20.0	--
C3-Naphthalenes	ND		ng/l	20.0	--
C4-Naphthalenes	ND		ng/l	20.0	--
2-Methylnaphthalene	ND		ng/l	20.0	--
1-Methylnaphthalene	ND		ng/l	20.0	--
Dibenzofuran	ND		ng/l	20.0	--
Acenaphthylene	ND		ng/l	20.0	--
Acenaphthene	ND		ng/l	20.0	--
Fluorene	ND		ng/l	20.0	--
C1-Fluorenes	ND		ng/l	20.0	--
C2-Fluorenes	ND		ng/l	20.0	--
C3-Fluorenes	ND		ng/l	20.0	--
Phenanthrene	ND		ng/l	20.0	--
C1-Phenanthrenes/Anthracenes	ND		ng/l	20.0	--
C2-Phenanthrenes/Anthracenes	ND		ng/l	20.0	--
C3-Phenanthrenes/Anthracenes	ND		ng/l	20.0	--
C4-Phenanthrenes/Anthracenes	ND		ng/l	20.0	--
Anthracene	ND		ng/l	20.0	--
Carbazole	ND		ng/l	20.0	--
Fluoranthene	ND		ng/l	20.0	--
Pyrene	ND		ng/l	20.0	--
C1-Fluoranthenes/Pyrenes	ND		ng/l	20.0	--
Benz(a)anthracene	ND		ng/l	20.0	--
Chrysene	ND		ng/l	20.0	--
C1-Chrysenes	ND		ng/l	20.0	--
C2-Chrysenes	ND		ng/l	20.0	--
C3-Chrysenes	ND		ng/l	20.0	--
C4-Chrysenes	ND		ng/l	20.0	--
Benzo(b)fluoranthene	ND		ng/l	20.0	--

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/01/10 05:20
Analyst: AC

Extraction Method: EPA 3510C
Extraction Date: 09/17/10 16:17

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 14 Batch: WG432941-1					
Benzo(k)fluoranthene	ND		ng/l	20.0	--
Benzo(e)Pyrene	ND		ng/l	20.0	--
Benzo(a)pyrene	ND		ng/l	20.0	--
Perylene	ND		ng/l	20.0	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	20.0	--
Dibenz(a,h)anthracene	ND		ng/l	20.0	--
Benzo(ghi)perylene	ND		ng/l	20.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		50-130
Pyrene-d10	92		50-130
Benzo(b)fluoranthene-d12	92		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/13/10 09:30
Analyst: JS

Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 11 Batch: WG433361-1					
Phenol	ND		ug/l	0.500	--
2-Methylphenol	ND		ug/l	0.500	--
4-Methylphenol	ND		ug/l	0.500	--
2,4-Dimethylphenol	ND		ug/l	0.500	--
2,4-Dichlorophenol	ND		ug/l	0.500	--
2,4,6-Trichlorophenol	ND		ug/l	0.500	--
Pentachlorophenol	ND		ug/l	2.00	--
Butylbenzylphthalate	ND		ug/l	0.500	--
Bis(2-Ethylhexyl)phthalate	0.848		ug/l	0.500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-115
Phenol-d5	33		15-115
Nitrobenzene-d5	98		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	79		15-115
Terphenyl-d14	127		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/21/10 21:17
Analyst: JS

Extraction Method: EPA 3510C
Extraction Date: 09/16/10 16:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 12-20 Batch: WG433367-1					
Phenol	ND		ug/l	0.500	--
2-Methylphenol	ND		ug/l	0.500	--
4-Methylphenol	ND		ug/l	0.500	--
2,4-Dimethylphenol	ND		ug/l	0.500	--
2,4-Dichlorophenol	ND		ug/l	0.500	--
2,4,6-Trichlorophenol	ND		ug/l	0.500	--
Pentachlorophenol	ND		ug/l	2.00	--
Butylbenzylphthalate	ND		ug/l	0.500	--
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-115
Phenol-d5	28		15-115
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	57		15-115
Terphenyl-d14	64		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 10/21/10 16:10
Analyst: JD

Extraction Method: EPA 3570
Extraction Date: 09/23/10 16:13
Cleanup Method1: EPA 3640A
Cleanup Date1: 09/29/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 01-10 Batch: WG433639-1					
Phenol	ND		ug/kg	200	--
2-Methylphenol	ND		ug/kg	200	--
4-Methylphenol	ND		ug/kg	200	--
2,4-Dimethylphenol	ND		ug/kg	200	--
2,4-Dichlorophenol	ND		ug/kg	200	--
2,4,6-Trichlorophenol	ND		ug/kg	200	--
Pentachlorophenol	ND		ug/kg	800	--
Butylbenzylphthalate	ND		ug/kg	200	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	65		30-130
Phenol-d5	66		30-130
Nitrobenzene-d5	74		30-130
2-Fluorophenol	60		30-130
2,4,6-Tribromophenol	44		30-130
Terphenyl-d14	66		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 11-13,15-20 Batch: WG432506-2 WG432506-3								
Naphthalene	78		84		50-130	7		30
2-Methylnaphthalene	76		83		50-130	9		30
Acenaphthylene	78		90		50-130	14		30
Acenaphthene	80		88		50-130	10		30
Fluorene	80		87		50-130	8		30
Phenanthrene	82		88		50-130	7		30
Anthracene	93		99		50-130	6		30
Fluoranthene	69		75		50-130	8		30
Pyrene	75		82		50-130	9		30
Benz(a)anthracene	84		90		50-130	7		30
Chrysene	76		81		50-130	6		30
Benzo(b)fluoranthene	78		85		50-130	9		30
Benzo(k)fluoranthene	78		83		50-130	6		30
Benzo(a)pyrene	88		95		50-130	8		30
Indeno(1,2,3-cd)Pyrene	73		85		50-130	15		30
Dibenz(a,h)anthracene	78		84		50-130	7		30
Benzo(ghi)perylene	69		75		50-130	8		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 11-13,15-20 Batch: WG432506-2 WG432506-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	71		80		50-130
Pyrene-d10	71		76		50-130
Benzo(b)fluoranthene-d12	74		79		50-130

PAHs - Mansfield Lab Associated sample(s): 01-10 Batch: WG432656-2 WG432656-3								
Naphthalene	98		99		50-130	1		30
2-Methylnaphthalene	98		99		50-130	1		30
Acenaphthylene	103		105		50-130	2		30
Acenaphthene	104		104		50-130	0		30
Fluorene	104		106		50-130	2		30
Phenanthrene	108		108		50-130	0		30
Anthracene	124		123		50-130	1		30
Fluoranthene	95		97		50-130	2		30
Pyrene	102		104		50-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-10 Batch: WG432656-2 WG432656-3								
Benz(a)anthracene	113		115		50-130	2		30
Chrysene	103		105		50-130	2		30
Benzo(b)fluoranthene	107		108		50-130	1		30
Benzo(k)fluoranthene	110		112		50-130	2		30
Benzo(a)pyrene	126		125		50-130	1		30
Indeno(1,2,3-cd)Pyrene	106		105		50-130	1		30
Dibenz(a,h)anthracene	112		112		50-130	0		30
Benzo(ghi)perylene	101		103		50-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	87		87		50-130
Pyrene-d10	93		93		50-130
Benzo(b)fluoranthene-d12	98		99		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 14 Batch: WG432941-2 WG432941-3								
Naphthalene	93		92		50-130	1		30
2-Methylnaphthalene	89		85		50-130	5		30
Acenaphthylene	103		100		50-130	3		30
Acenaphthene	99		99		50-130	0		30
Fluorene	104		103		50-130	1		30
Phenanthrene	106		104		50-130	2		30
Anthracene	120		120		50-130	0		30
Fluoranthene	92		92		50-130	0		30
Pyrene	99		100		50-130	1		30
Benz(a)anthracene	111		111		50-130	0		30
Chrysene	99		98		50-130	1		30
Benzo(b)fluoranthene	102		102		50-130	0		30
Benzo(k)fluoranthene	99		101		50-130	2		30
Benzo(a)pyrene	111		113		50-130	2		30
Indeno(1,2,3-cd)Pyrene	102		102		50-130	0		30
Dibenz(a,h)anthracene	100		101		50-130	1		30
Benzo(ghi)perylene	88		89		50-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 14 Batch: WG432941-2 WG432941-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	83		78		50-130
Pyrene-d10	90		90		50-130
Benzo(b)fluoranthene-d12	92		94		50-130

Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 11 Batch: WG433361-2 WG433361-3								
Phenol	38		36		30-130	5		30
2-Methylphenol	78		77		30-130	1		30
4-Methylphenol	72		70		30-130	3		30
2,4-Dimethylphenol	81		87		40-140	7		30
2,4-Dichlorophenol	95		96		30-130	1		30
2,4,6-Trichlorophenol	103		101		30-130	2		30
Pentachlorophenol	70		69		30-130	1		30
Butylbenzylphthalate	89		87		40-140	2		30
Bis(2-Ethylhexyl)phthalate	96		93		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 11 Batch: WG433361-2 WG433361-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	66		65		15-115
Phenol-d5	36		32		15-115
Nitrobenzene-d5	90		91		30-130
2-Fluorobiphenyl	86		84		30-130
2,4,6-Tribromophenol	110		106		15-115
Terphenyl-d14	89		86		30-130

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 12-20 Batch: WG433367-2 WG433367-3								
Phenol	**29**	Q	**27**	Q	30-130	7		30
2-Methylphenol	60		57		30-130	5		30
4-Methylphenol	55		53		30-130	4		30
2,4-Dimethylphenol	61		60		40-140	2		30
2,4-Dichlorophenol	74		74		30-130	0		30
2,4,6-Trichlorophenol	78		80		30-130	3		30
Pentachlorophenol	67		71		30-130	6		30
Butylbenzylphthalate	88		92		40-140	4		30
Bis(2-Ethylhexyl)phthalate	76		80		40-140	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 12-20 Batch: WG433367-2 WG433367-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	46		43		15-115
Phenol-d5	28		26		15-115
Nitrobenzene-d5	83		83		30-130
2-Fluorobiphenyl	65		66		30-130
2,4,6-Tribromophenol	86		89		15-115
Terphenyl-d14	74		76		30-130

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-10 Batch: WG433639-2 WG433639-3								
Phenol	60		59		30-130	2		30
2-Methylphenol	58		57		30-130	2		30
4-Methylphenol	59		58		30-130	2		30
2,4-Dimethylphenol	39		32		30-130	20		30
2,4-Dichlorophenol	60		61		30-130	2		30
2,4,6-Trichlorophenol	62		62		30-130	0		30
Pentachlorophenol	50		43		30-130	15		30
Butylbenzylphthalate	77		77		40-140	0		30
Bis(2-Ethylhexyl)phthalate	70		71		40-140	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-10 Batch: WG433639-2 WG433639-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorobiphenyl	61		58		30-130
Phenol-d5	62		61		30-130
Nitrobenzene-d5	66		65		30-130
2-Fluorophenol	63		60		30-130
2,4,6-Tribromophenol	75		74		30-130
Terphenyl-d14	68		67		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432656-5 WG432656-6 QC Sample: L1014191-04 Client ID: SED-18												
Naphthalene	26.4	41.1	126	**242**	Q	91.1	**154**	Q	50-150	**32**	Q	30
2-Methylnaphthalene	22.0	41.1	128	**258**	Q	60.5	92		50-150	**72**	Q	30
Acenaphthylene	91.8	41.1	609	**1260**	Q	241	**355**	Q	50-150	**87**	Q	30
Acenaphthene	35.0	41.1	605	**1390**	Q	119	**200**	Q	50-150	**134**	Q	30
Fluorene	41.9	41.1	852	**1970**	Q	141	**236**	Q	50-150	**143**	Q	30
Phenanthrene	1180	41.1	9590	**20500**	Q	1920	**1760**	Q	50-150	**133**	Q	30
Anthracene	173	41.1	1970	**4370**	Q	495	**766**	Q	50-150	**120**	Q	30
Fluoranthene	2960	41.1	12700	**23700**	Q	6210	**7730**	Q	50-150	**69**	Q	30
Pyrene	2410	41.1	9250	**16700**	Q	4880	**5880**	Q	50-150	**62**	Q	30
Benz(a)anthracene	1290	41.1	4350	**7450**	Q	2430	**2710**	Q	50-150	**57**	Q	30
Chrysene	1620	41.1	4670	**7420**	Q	2490	**2070**	Q	50-150	**61**	Q	30
Benzo(b)fluoranthene	1320	41.1	3480	**5260**	Q	2190	**2070**	Q	50-150	**46**	Q	30
Benzo(k)fluoranthene	1220	41.1	3310	**5090**	Q	1980	**1810**	Q	50-150	**50**	Q	30
Benzo(a)pyrene	585	41.1	2030	**3520**	Q	1130	**1300**	Q	50-150	**57**	Q	30
Indeno(1,2,3-cd)Pyrene	740	41.1	1920	**2870**	Q	1370	**1500**	Q	50-150	**33**	Q	30
Dibenz(a,h)anthracene	183	41.1	559	**915**	Q	390	**492**	Q	50-150	**36**	Q	30
Benzo(ghi)perylene	746	41.1	1700	**2320**	Q	1280	**1270**	Q	50-150	28		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		69		50-130
Benzo(b)fluoranthene-d12	85		78		50-130

Matrix Spike Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432656-5 WG432656-6 QC Sample: L1014191-04 Client ID: SED-18												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Pyrene-d10	80		80		50-130

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 14 QC Batch ID: WG432941-4 WG432941-5 QC Sample: L1014191-14 Client ID: SW-18												
Naphthalene	29.4	966	1000	100		966	96		50-150	3		30
2-Methylnaphthalene	ND	966	952	98		930	96		50-150	2		30
Acenaphthylene	ND	966	993	103		976	101		50-150	2		30
Acenaphthene	ND	966	1000	104		993	102		50-150	1		30
Fluorene	ND	966	1040	108		999	103		50-150	4		30
Phenanthrene	ND	966	1080	112		1060	109		50-150	2		30
Anthracene	ND	966	849	88		928	96		50-150	9		30
Fluoranthene	30.8	966	972	97		944	94		50-150	3		30
Pyrene	28.3	966	1040	105		1010	101		50-150	3		30
Benz(a)anthracene	ND	966	1070	111		1070	110		50-150	0		30
Chrysene	ND	966	1010	105		999	103		50-150	1		30
Benzo(b)fluoranthene	ND	966	1070	111		1040	107		50-150	3		30
Benzo(k)fluoranthene	ND	966	1030	107		1020	105		50-150	1		30
Benzo(a)pyrene	ND	966	789	82		874	90		50-150	10		30
Indeno(1,2,3-cd)Pyrene	ND	966	1040	108		1020	105		50-150	2		30
Dibenz(a,h)anthracene	ND	966	996	103		995	102		50-150	0		30
Benzo(ghi)perylene	ND	966	905	94		897	92		50-150	1		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	92		88		50-130
Benzo(b)fluoranthene-d12	94		94		50-130

Matrix Spike Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 14 QC Batch ID: WG432941-4 WG432941-5 QC Sample: L1014191-14 Client ID: SW-18												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Pyrene-d10	91		91		50-130

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 12-20 QC Batch ID: WG433367-4 WG433367-5 QC Sample: L1014191-14 Client ID: SW-18												
Phenol	ND	20.6	6.41	31		6.40	31		30-130	0		30
2-Methylphenol	ND	20.6	12.4	60		12.0	58		30-130	3		30
4-Methylphenol	ND	20.6	11.8	57		11.3	54		30-130	4		30
2,4-Dimethylphenol	ND	20.6	11.8	57		9.68	46		40-140	20		30
2,4-Dichlorophenol	ND	20.6	15.5	75		14.9	72		30-130	4		30
2,4,6-Trichlorophenol	ND	20.6	16.4	80		16.1	77		30-130	2		30
Pentachlorophenol	ND	20.6	16.5	80		15.7	75		30-130	5		30
Butylbenzylphthalate	ND	20.6	19.1	93		18.0	86		40-140	6		30
Bis(2-Ethylhexyl)phthalate	ND	20.6	17.6	85		16.2	78		40-140	8		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	92		88		15-115
2-Fluorobiphenyl	70		67		30-130
2-Fluorophenol	48		48		15-115
Nitrobenzene-d5	86		82		30-130
Phenol-d5	30		30		15-115
Terphenyl-d14	78		73		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG433639-4 WG433639-5 QC Sample: L1014191-04 Client ID: SED-18												
Phenol	ND	4660	3050	66		3050	64		30-130	0		30
2-Methylphenol	ND	4660	1060	**23**	Q	1520	32		30-130	**36**	Q	30
4-Methylphenol	ND	4660	2020	43		2320	49		30-130	14		30
2,4-Dimethylphenol	ND	4660	294	**6**	Q	ND	**0**	Q	30-130	NC	Q	30
2,4-Dichlorophenol	ND	4660	3220	69		3350	71		30-130	4		30
2,4,6-Trichlorophenol	ND	4660	3140	67		3620	77		30-130	14		30
Pentachlorophenol	ND	4660	2400	52		2360	50		30-130	2		30
Butylbenzylphthalate	ND	4660	5190	111		5440	115		40-140	5		30
Bis(2-Ethylhexyl)phthalate	ND	4660	4930	106		4980	105		40-140	1		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	76		88		30-130
2-Fluorobiphenyl	77		76		30-130
2-Fluorophenol	63		64		30-130
Nitrobenzene-d5	84		82		30-130
Phenol-d5	73		71		30-130
Terphenyl-d14	97		101		30-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432656-4 QC Sample: L1014191-04 Client ID: SED-18						
Naphthalene	26.4	39.8	ug/kg	**40**	Q	30
C1-Naphthalenes	24.4	21.1	ug/kg	15		30
C2-Naphthalenes	35.9	39.3	ug/kg	9		30
C3-Naphthalenes	36.4	55.9	ug/kg	**42**	Q	30
C4-Naphthalenes	33.2	53.0	ug/kg	**46**	Q	30
2-Methylnaphthalene	22.0	18.8	ug/kg	16		30
1-Methylnaphthalene	15.1	13.5	ug/kg	11		30
Dibenzofuran	32.1	28.0	ug/kg	14		30
Acenaphthylene	91.8	176	ug/kg	**63**	Q	30
Acenaphthene	35.0	42.2	ug/kg	19		30
Fluorene	41.9	64.4	ug/kg	**42**	Q	30
C1-Fluorenes	21.0	38.2	ug/kg	**58**	Q	30
C2-Fluorenes	38.7	63.8	ug/kg	**49**	Q	30
C3-Fluorenes	160	254	ug/kg	**45**	Q	30
Phenanthrene	1180	1330	ug/kg	12		30
C1-Phenanthrenes/Anthracenes	364	548	ug/kg	**40**	Q	30
C2-Phenanthrenes/Anthracenes	220	379	ug/kg	**53**	Q	30
C3-Phenanthrenes/Anthracenes	97.6	154	ug/kg	**45**	Q	30
C4-Phenanthrenes/Anthracenes	41.3	53.1	ug/kg	25		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432656-4 QC Sample: L1014191-04 Client ID: SED-18						
Anthracene	173	283	ug/kg	**48**	Q	30
Carbazole	146	188	ug/kg	25		30
Fluoranthene	2960	4680	ug/kg	**45**	Q	30
Pyrene	2410	3770	ug/kg	**44**	Q	30
C1-Fluoranthenes/Pyrenes	761	1230	ug/kg	**47**	Q	30
Benz(a)anthracene	1290	1760	ug/kg	**31**	Q	30
Chrysene	1620	2020	ug/kg	22		30
C1-Chrysenes	441	551	ug/kg	22		30
C2-Chrysenes	178	242	ug/kg	30		30
C3-Chrysenes	143	198	ug/kg	**32**	Q	30
C4-Chrysenes	98.1	106	ug/kg	8		30
Benzo(b)fluoranthene	1320	1770	ug/kg	29		30
Benzo(k)fluoranthene	1220	1540	ug/kg	23		30
Benzo(e)Pyrene	923	1220	ug/kg	28		30
Benzo(a)pyrene	585	760	ug/kg	26		30
Perylene	216	327	ug/kg	**41**	Q	30
Indeno(1,2,3-cd)Pyrene	740	1070	ug/kg	**36**	Q	30
Dibenz(a,h)anthracene	183	284	ug/kg	**43**	Q	30
Benzo(ghi)perylene	746	1060	ug/kg	**35**	Q	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

PAHs - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432656-4 QC Sample: L1014191-04 Client ID: SED-18

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		69		50-130
Pyrene-d10	78		78		50-130
Benzo(b)fluoranthene-d12	77		77		50-130

METALS

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-11
Client ID: SW-15
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	186		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:07	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-12
Client ID: SW-16
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	201		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:08	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-13
Client ID: SW-17
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	213		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:08	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14
Client ID: SW-18
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	236		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:09	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-15
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	218		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:14	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-16
Client ID: SW-19
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	199		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:14	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-17
Client ID: SW-20
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	192		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:15	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-18
Client ID: SW-21
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	194		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:16	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-19
Client ID: SW-22
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	196		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:16	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-20
Client ID: SW-23
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	204		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:17	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 11-20 Batch: WG433346-1										
Hardness	ND		mg/l	0.460	--	1	09/21/10 08:55	09/22/10 12:31	1,6020A	LR

Prep Information

Digestion Method: EPA 3020A

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab	Associated sample(s): 11-20		Batch: WG433346-2		SRM Lot Number: S1SPIKE			
Hardness	94		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG433346-3 WG433346-4 QC Sample: L1014191-14 Client ID: SW-18												
Hardness	236	1	276	121		281	**136**		75-125	2		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG433346-5 QC Sample: L1014191-14 Client ID: SW-18						
Hardness	236	233	mg/l	1		20

Project Name: Not Specified
Project Number: Not Specified

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG433346-6 QC Sample: L1014191-14 Client ID: SW-18						
Hardness	236	238	mg/l	1		10

INORGANICS
&
MISCELLANEOUS

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-01
Client ID: SED-15
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	82.7		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	4.64		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.12		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-02
Client ID: SED-16
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	83.0		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	3.36		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.19		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-03
Client ID: SED-17
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	81.2		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	2.98		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.01		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-04
Client ID: SED-18
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	75.6		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	1.35		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	1.43		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-05
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	80.0		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	4.20		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	2.77		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-06
Client ID: SED-19
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	78.1		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	2.62		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.07		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-07
Client ID: SED-20
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	82.6		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	2.53		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	2.20		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-08
Client ID: SED-21
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	79.6		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	3.08		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.67		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-09
Client ID: SED-22
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	79.0		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	3.01		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	2.93		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-10
Client ID: SED-23
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	80.1		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	4.01		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	4.92		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name:

Project Number: Not Specified

Lab Number: L1014191

Report Date: 10/29/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 01-10 Batch: WG432729-1										
% Soot (Rep 1)	ND		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	ND		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432729-4 QC Sample: L1014191-04 Client ID: SED-18												
% Soot (Rep 1)	1.35	0.01	-	107		-	-		75-125	-		25
% Soot (Rep 2)	1.43	0.01	-	92		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG432729-3 QC Sample: L1014191-04 Client ID: SED-18						
% Soot (Rep 1)	1.35	1.36	%	1		25
% Soot (Rep 2)	1.43	1.64	%	14		25
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG433284-1 QC Sample: L1014191-04 Client ID: SED-18						
Solids, Total	75.6	76.8	%	2		20

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG432729-2

Parameter	% Recovery	Qual	QC Criteria
% Soot (Rep 1)	107		75-125
% Soot (Rep 2)	112		75-125

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information	Custody Seal
Cooler	
A	Absent
D	Absent
B	Absent
C	Absent
E	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1014191-01A	Glass 250ml unpreserved	B	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-02A	Glass 250ml unpreserved	B	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-03A	Glass 250ml unpreserved	E	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-04A	Glass 250ml unpreserved	D	N/A	3	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-04B	Glass 250ml unpreserved	D	N/A	3	Y	Absent	A2-MS/MSD()
L1014191-04C	Glass 250ml unpreserved	D	N/A	3	Y	Absent	A2-MS/MSD()
L1014191-05A	Glass 250ml unpreserved	E	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-06A	Glass 250ml unpreserved	C	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-07A	Glass 250ml unpreserved	C	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-08A	Glass 250ml unpreserved	C	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-09A	Glass 250ml unpreserved	A	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)
L1014191-10A	Glass 250ml unpreserved	A	N/A	4	Y	Absent	A2-SVOC-8270(14),A2-ALKPAH(14),A2-SOOT(28),A2-TS(7)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1014191-11A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-11B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-11C	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-11D	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-HARDT(180)
L1014191-12A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-12B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-12C	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-12D	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-HARDT(180)
L1014191-13A	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-13B	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-13C	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-13D	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-HARDT(180)
L1014191-14A	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14B	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14C	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14D	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-HARDT(180)
L1014191-14E	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-HARDT(180)
L1014191-14F	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-HARDT(180)
L1014191-14G	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14H	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14I	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14J	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14K	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-14L	Amber 1000ml unpreserved	D	7	3	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-15A	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-15B	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-15C	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1014191-15D	Amber 1000ml unpreserved	E	7	4	Y	Absent	A2-HARDT(180)
L1014191-16A	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-16B	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-16C	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-16D	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-HARDT(180)
L1014191-17A	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-17B	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-17C	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-17D	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-HARDT(180)
L1014191-18A	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-18B	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-18C	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-18D	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-HARDT(180)
L1014191-19A	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-19B	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-19C	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-19D	Amber 1000ml unpreserved	C	7	4	Y	Absent	A2-HARDT(180)
L1014191-20A	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-20B	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-20C	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-ALKPAH(7),A2-SVOC-8270(7)
L1014191-20D	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-HARDT(180)

*Values in parentheses indicate holding time in days

Project Name:	Not Specified	**Lab Number:**	L1014191
Project Number:	Not Specified	**Report Date:**	10/29/10

GLOSSARY

Acronyms

EPA · Environmental Protection Agency.

LCS · Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD · Laboratory Control Sample Duplicate: Refer to LCS.

MDL · Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS · Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD · Matrix Spike Sample Duplicate: Refer to MS.

NA · Not Applicable.

NC · Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI · Not Ignitable.

RL · Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD · Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

Report Format: Data Usability Report

Project Name:	Not Specified	**Lab Number:**	L1014191
Project Number:	Not Specified	**Report Date:**	10/29/10

Data Qualifiers

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

91 Analysis of Soot by Accardi-Dey, Gschwend, 2003; Gustafsson (et. al.), 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised July 19, 2010 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

4 CAA Woods Pole

COC # 1 of 2 L1014191

CSX TRANSPORTATION — CHAIN OF CUSTODY

LABORATORY INFORMATION
Accutest
4405 Vineland Rd., Suite C-15
Orlando, FL 32811
Phone: 407-425-6700
Fax: 407-425-0707

SHIPMENT INFORMATION
Shipment Method: FEDEX
Shipment Tracking No:

CSXT PROJECT INFORMATION
CSXT Project Number: 9415829
CSXT Project Name: IN CREOSOTE
CSXT Contact: PAUL J. KWIATKOWICE
Proj. State (State of Origin): IN
Proj. City: BLOOMINGTON
LWON: ENV 53216

CONSULTANT INFORMATION
Company: ARCADIS
Address: 251 E. OHIO ST., STE 500
City, State, Zip: INDIANAPOLIS, IN 46204
Project #: IN000972.0052.00001
PM: BRYANT GRIGGS
Email: BRYANT.GRIGGS@ARCADIS-US.COM
Phone: 317-231-6500 Fax: 317-231-6514

Turnaround Time:
- [ ] 1 Day Rush
- [ ] 2 Day Rush
- [ ] 3 Day Rush
- [x] Standard 6-13 Days — Specify # Days 7
- [ ] Standard 14 Days
- [ ] Other

Deliverables:
- [ ] CSXT Standard (Level II)
- [ ] Level III
- [x] Level IV
- [x] Other Deliv: NO MAS Copy, DATA CA only
- [x] EDD Required, Format: EXCEL

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	METHODS FOR ANALYSIS: Sieve, 8270 SIM (SEE PCBs)	Aliphatic PAH	Scint Carbon	Hardness	COMMENTS	LAB USE
1	SED-15	1	9-8-10	1545	RW	N	G	SO/SE	X	X	X	X	PROCEEDS ON ICE	
2	SED-16	1	9-9-10	0915	RW	N	G	SO/SE	X	X	X	X		
3	SED-17	1	9-9-10	1000	RW	N	G	SO/SE	X	X	X	X		
4	SED-18	3	9-9-10	1105	RW	N	G	SO/SE	X	X	X	X	MS/MSD	
5	FD-1-100909	1	9-9-10	—	RW	N	G	SO/SE	X	X	X	X	FIELD DUP	
6	SED-19	1	9-9-10	1340	RW	N	G	SO/SE	X	X	X	X		
7	SED-20	1	9-9-10	1415	RW	N	G	SO/SE	X	X	X	X		
8	SED-21	1	9-9-10	1445	RW	N	G	SO/SE	X	X	X	X		
9	SED-22	1	9-9-10	1515	RW	N	G	SO/SE	X	X	X	X		
10	SED-23	1	9-9-10	1530	RW	N	G	SO/SE	X	X	X	X		

	Relinquished By:	Date Time:	Received By:	Date Time:
1	ARCADIS	9-9-10 / 1500	FED EX	
2	FED EX	9/10/10 1015		9/10/10 1015
3				

Received By Laboratory: | Date Time: | Lab Remarks:

Comments & Special Analytical Requirements:
- ECO BOX SAMPLES
- CONTACT HEATHER.WANNER@ACCUTEST
- 365 TAT LEVEL I
- * SW/SED-12 RESUBMITTED (NOT ON COC)

LAB USE: Custody Intact ☐ Yes ☐ No | Custody Seal # | LAB Log Number

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES | Rev. 5/21/02 | INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

Serial No:10201016412

L1014191

Serial_No:10291016:12

CSX TRANSPORTATION

CHAIN OF CUSTODY

COC #: 2 of 2

LABORATORY INFORMATION		SHIPMENT INFORMATION
Accutest	Phone: 407-425-6700	Shipment Method: FedEx
4405 Vineland Rd., Suite C-15	Fax: 407-425-0707	Shipment Tracking No:
Orlando, FL 32811		

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 941525	Proj. State (State of Origin): IN	Company: AECOM	Project #: IN000007.0052.00004
CSXT Project Name: IN OBSOLETE	Proj. City: Bloomington	Address: 251 E. Ohio St. Ste. 500	PM: Bryant Little
CSXT Contact: Dale J. Kinnaird	LWON: ENV 5316	City, State, Zip: Indianapolis, IN 46204	Email: Bryant.Little@aecom.com
			Phone: 317-231-6300 Fax: 317-231-6574

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: Waste Disp Manifest
- ☒ EDD Required, Format: Excel

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

Note ⇨ 3 | 3 | 6

METHODS FOR ANALYSIS: SVOCs; Arsenic, Barium; Mercury

COMMENTS: Possible IDW

LAB USE

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	SVOCs	Arsenic, Barium	Mercury	COMMENTS
11	SW-15	3 4	9-8-10	1545	RW	N	G	SW	X	X	X	
12	SW-16	3 4	9-9-10	0915					X	X	X	
13	SW-17	3 4		1000					X	X	X	
14	SW-18	#12		1105					X	X	X	MS/MSD
15	FD-1-100909	4		—					X	X	X	Fld Dup
16	SW-19	4		1340					X	X	X	
17	SW-20	4		1415					X	X	X	
18	SW-21	4		1445					X	X	X	
19	SW-22	4		1515					X	X	X	
20	SW-23	4	↓	1530	↓	↓	↓	↓	X	X	X	

	Date Time:	Received By:	Date Time:
Relinquished By:	9-9-10/1800	FED EX	
Relinquished By: FED EX	9/10/10 1015		9/10/10 1015
Relinquished By:	Date Time:	Received By:	Date Time:
Received By Laboratory:	Date Time:	Lab Remarks:	

Comments & Special Analytical Requirements:
- SEE TABLE 1
- ECO CLIC CODES
- CONTACT KATHA WANNY @ ACCUTEST

LAB USE: ☐ Yes ☐ Custody Intact ☐ No

Custody Seal # #

LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES

Rev. 5/21/02

INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 1, 2003 Service Request No: K2308419

Katrina Leigh
ARCADIS
26451 Curtiss Wright Parkway, Suite 100
Cleveland, OH 44143

RE: Bloomington, IN / IN000072.0021

Dear Katrina:

Enclosed are the results of the sample(s) submitted to our laboratory on October 25, 2003. For your reference, these analyses have been assigned our service request number K2308419.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3316.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jeff Christian
Laboratory Director

JC/jeb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	ARCADIS	**Service Request No.:**	K2308419
Project:	Bloomington, IN	**Date Received:**	10/25/03
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eleven water samples were received for analysis at Columbia Analytical Services on 10/25/03. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total and Dissolved Metals

Selenium was analyzed and reported by Graphite Furnace Atomic Absorption Spectroscopy (GFAAS) instead of Inductively Coupled Plasma – Mass Spectroscopy (ICP-MS) due to isobaric interference on both the primary Selenium isotope (^{82}Se) and the secondary isotope (^{77}Se).

The control criteria for matrix spike recoveries of Total and Dissolved Barium for sample SW-4 are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

BTEX by EPA Method 8021

No anomalies associated with the analysis of these samples were observed.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3082: Anthracene, Benzo(a)Pyrene, Indeno(1,2,3-cd)pyrene, and Dibenz(a,h)anthracene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 8.5%. The calibration meets the alternative evaluation criteria.

Matrix Spike Recovery Exceptions:
The recovery of Biphenyl, Dibenzothiophene, Benzo(e)pyrene, and Perylene in sample SW-4 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed are in the range expected for this procedure. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 12/1/03

Chain of Custody Documentation

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client ARCADIS Work Order K23 0849

Cooler received on 10/25/03 and opened on 10/25/03 by AP

FX

1. Were custody seals on outside of cooler? If yes, how many and where? 5F — 0739, " " 0717, " " 0728, " " 0761 — (Y) N
2. Were seals intact and signature & date correct? (Y) N
3. Is the shipper's airbill available and filed? If no, record airbill number: 8435 0847 0739 — Y N
4. COC #

Temperature of cooler(s) upon receipt:	8.7	9.4	10.0	7.1	7.9
Temperature Blank:	8.5	9.1	9.9	7.4	6.7

5. Were custody papers properly filled out (ink, signed, etc.)? (Y) N
6. Type of packing material present BUBBLE, MESH
7. Did all bottles arrive in good condition (unbroken)? AP ~~(Y)~~ (N)
8. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (Y) N
9. Did all bottle labels and tags agree with custody papers? (Y) N
10. Were the correct types of bottles used for the tests indicated? (Y) N
11. Were all of the preserved bottles received at the lab with the appropriate pH? (Y) N
12. Were VOA vials checked for absence of air bubbles, and if present, noted below? (Y) N
13. Did the bottles originate from CAS/K or a branch laboratory? (Y) N
14. Are CWA Microbiology samples received with > ½ the 24 hr. hold time remaining from collection? ~~Y N~~
15. Was Cl2/Res negative? (Y) N

Explain any discrepancies: BROKEN: 1 8oz FOR SED-5 → CONTAINED ✓, 1 16oz FOR SED 5 → UNABLE TO CONTAIN, 1 32oz FOR SED-5 → CONTAINED ✓, 1 AMBER FOR SW-4-DUP. 1 4oz FOR SED-6 → UNABLE TO CONTAIN, 1 8oz FOR SED-6 → UNABLE TO CONTAIN, 1 4oz FOR SED 7, SED 8 → UNABLE TO CONTAIN

RESOLUTION:

Samples that required preservation or received out of temperature: → ALL SAMPLES OUT OF TEMP

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

CRFREV.DOC3/5/2003

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22, 23/03
Sample Matrix:	Water	**Date Received:**	10/25/03

Hardness as CaCO3

Prep Method:	CLAA	Units:	mg/L (ppm)
Analysis Method:	6010B/SM 2340B	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SW-1	K2308419-001	0.4	1	11/10/03	11/19/03	308	
SW-2	K2308419-002	0.4	1	11/10/03	11/19/03	308	
SW-3	K2308419-003	0.4	1	11/10/03	11/19/03	294	
SW-4	K2308419-004	0.4	1	11/10/03	11/19/03	287	
SW-4-Dup	K2308419-005	0.4	1	11/10/03	11/19/03	300	
SW-5	K2308419-006	0.4	1	11/10/03	11/19/03	290	
SW-6	K2308419-008	0.4	1	11/10/03	11/19/03	303	
SW-7	K2308419-009	0.4	1	11/10/03	11/19/03	294	
SW-8	K2308419-010	0.4	1	11/10/03	11/19/03	300	
Method Blank	K2308419-MB	0.4	1	11/10/03	11/19/03	ND	

Approved By: _____ Date: 11/25/03

1A/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Date Extracted: 11/10/03
Date Analyzed: 11/19/03

Duplicate Summary
Metals

Sample Name: SW-4
Lab Code: K2308419-004D
Test Notes:

Units: mg/L (ppm)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Hardness as CaCO3	CLAA	6010B/SM 2340B	0.4	287	293	290	2	

Approved By: _____ Date: 11/25/03

DUP/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/10/03
		Date Analyzed:	11/19/03

Laboratory Control Sample Summary
Total Metals

Sample Name:	Laboratory Control Sample	Units:	ug/L (ppb)
Lab Code:	K2308419-LCS	Basis:	NA
Test Notes:			

Source: Inorganic Ventures

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Calcium	CLAA	6010B	12500	12900	103	81-124	
Magnesium	CLAA	6010B	12500	12800	102	72-131	

Approved By: _____ Date: 11/25/03

LCS/032295

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Sample No.	Lab Sample ID.
SW-1	K2308419-001
SW-1	K2308419-001 DISS
SW-2	K2308419-002
SW-2	K2308419-002 DISS
SW-3	K2308419-003
SW-3	K2308419-003 DISS
SW-4	K2308419-004
SW-4	K2308419-004 DISS
SW-4D	K2308419-004D
SW-4 DISSD	K2308419-004D DISS
SW-4S	K2308419-004S
SW-4 DISSS	K2308419-004S DISS
SW-4-Dup	K2308419-005
SW-4-Dup	K2308419-005 DISS
SW-5	K2308419-006
SW-5	K2308419-006 DISS
SW-EB	K2308419-007 DISS
SW-6	K2308419-008
SW-7	K2308419-009
SW-8	K2308419-010

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Total and Dissolved Metals

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Date: 11/25/03

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Sample No.	Lab Sample ID.
Method Blank	K2308419-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Total and Dissolved Metals

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Date: 11/25/03

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-1
Lab Code: K2308419-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.31		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	88.9		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.12		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.28		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.8		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	4.3		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-1
Lab Code: K2308419-001 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.29		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	86.3		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.14		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.11		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	2.1		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	7.2		

% Solids: 0.0

Comments: Dissolved Metals

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-2
Lab Code: K2308419-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.27		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.3		
Barium	200.8	0.05	1	11/10/03	11/24/03	85.6		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.11		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.5		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.18		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.7		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02		
Zinc	200.8	0.5	1	11/10/03	11/24/03	3.9		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-2
Lab Code: K2308419-002 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.28		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	87.1		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.14		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.12		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.8		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	5.6		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-3
Lab Code: K2308419-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.29		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.5		
Barium	200.8	0.05	1	11/10/03	11/24/03	89.2		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.13		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.7		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.40		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.8		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	4.8		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-3
Lab Code: K2308419-003 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.31		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.5		
Barium	200.8	0.05	1	11/10/03	11/24/03	86.7		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.13		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.5		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.12		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.9		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	6.4		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-4
Lab Code: K2308419-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.30		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	85.9		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.12		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.36		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	2.0		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	5.4		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-4 DISS
Lab Code: K2308419-004 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.29		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	87.1		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.13		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.5		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.12		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.8		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02		
Zinc	200.8	0.5	1	11/10/03	11/24/03	6.5		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-4-Dup
Lab Code: K2308419-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.33		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	85.4		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.12		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.7		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.29		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.8		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	5.7		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/22/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-4-Dup
Lab Code: K2308419-005 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.30		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.5		
Barium	200.8	0.05	1	11/10/03	11/24/03	88.4		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.15		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.5		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.10		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	2.4		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02		
Zinc	200.8	0.5	1	11/10/03	11/24/03	6.1		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/23/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-5
Lab Code: K2308419-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.28		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	86.3		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.13		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.22		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.7		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	5.8		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/23/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-5
Lab Code: K2308419-006 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.28		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.4		
Barium	200.8	0.05	1	11/10/03	11/24/03	86.7		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.14		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.11		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	2.0		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	6.7		

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/23/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-EB
Lab Code: K2308419-007 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.05	U	
Arsenic	200.8	0.5	1	11/10/03	11/24/03	0.5	U	
Barium	200.8	0.05	1	11/10/03	11/24/03	0.08		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.04	U	
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.2	U	
Lead	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	0.2	U	
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	3.0		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/23/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-6
Lab Code: K2308419-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.28		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.5		
Barium	200.8	0.05	1	11/10/03	11/24/03	90.0		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.16		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.8		
Lead	200.8	0.02	1	11/10/03	11/24/03	1.04		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	2.1		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	10.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/23/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-7
Lab Code: K2308419-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.28		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.5		
Barium	200.8	0.05	1	11/10/03	11/24/03	86.2		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.13		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/10/03	11/24/03	0.16		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	1.7		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	4.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected: 10/23/03
Date Received: 10/25/03
Units: µG/L
Basis: NA

Sample Name: SW-8
Lab Code: K2308419-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.31		
Arsenic	200.8	0.5	1	11/10/03	11/24/03	1.6		
Barium	200.8	0.05	1	11/10/03	11/24/03	87.8		
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.19		
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.9		
Lead	200.8	0.02	1	11/10/03	11/24/03	2.30		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	2.1		
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02		
Zinc	200.8	0.5	1	11/10/03	11/24/03	12.4		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank
Lab Code: K2308419-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/10/03	11/24/03	0.05	U	
Arsenic	200.8	0.5	1	11/10/03	11/24/03	0.5	U	
Barium	200.8	0.05	1	11/10/03	11/24/03	0.05	U	
Beryllium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/10/03	11/24/03	0.04	U	
Chromium	200.8	0.2	1	11/10/03	11/24/03	0.2	U	
Lead	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/10/03	11/24/03	0.2	U	
Selenium	7740	2.0	1	11/10/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/10/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/10/03	11/24/03	0.5	U	

% Solids: 0.0

Comments:

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	50.0	51.9	104	25.0	25.5	102	24.7	99	200.8
Arsenic	50.0	51.9	104	25.0	24.9	100	25.0	100	200.8
Barium	200	204	102	25.0	24.6	98	26.0	104	200.8
Beryllium	5.0	5.16	103	25.0	24.9	100	25.0	100	200.8
Cadmium	25.0	25.9	104	25.0	25.4	102	25.3	101	200.8
Calcium	12500	12300	98	5000	4980	100	4980	100	6010B
Chromium	20.0	20.2	101	25.0	25.0	100	25.0	100	200.8
Lead	50.0	49.2	98	25.0	24.8	99	26.3	105	200.8
Magnesium	12500	12200	98	5000	4990	100	4970	99	6010B
Magnesium	12500	12200	98	5000	4910	98	4970	99	6010B
Mercury	5.0	4.96	99	5.0	5.10	102	5.17	103	7470A
Nickel	50.0	50.5	101	25.0	24.8	99	25.0	100	200.8
Selenium	25.0	25.8	103	20.0	19.9	100	19.2	96	7740
Thallium	50.0	51.3	103	25.0	25.0	100	26.5	106	200.8
Zinc	50.0	51.8	104	25.0	24.9	100	25.1	100	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.1	100	25.3	101	200.8
Arsenic				25.0	25.4	102	25.4	102	200.8
Barium				25.0	26.0	104	26.7	107	200.8
Beryllium				25.0	25.1	100	25.5	102	200.8
Cadmium				25.0	25.3	101	25.4	102	200.8
Calcium				5000	5020	100	4990	100	6010B
Chromium				25.0	25.0	100	24.8	99	200.8
Lead				25.0	26.7	107	26.2	105	200.8
Magnesium				5000	5010	100	5000	100	6010B
Magnesium				5000	4950	99	4990	100	6010B
Mercury				5.0	5.07	101	5.21	104	7470A
Nickel				25.0	25.3	101	25.5	102	200.8
Selenium				20.0	19.2	96	19.4	97	7740
Thallium				25.0	26.8	107	26.7	107	200.8
Zinc				25.0	25.4	102	25.7	103	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/l

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.6	102			200.8
Arsenic				25.0	25.6	102			200.8
Barium				25.0	26.7	107			200.8
Beryllium				25.0	25.8	103			200.8
Cadmium				25.0	25.3	101			200.8
Calcium				5000	5030	101	5050	101	6010B
Chromium				25.0	24.9	100			200.8
Lead				25.0	27.0	108			200.8
Magnesium				5000	5010	100	5010	100	6010B
Magnesium				5000	5070	101	5170	103	6010B
Mercury				5.0	5.28	106	5.24	105	7470A
Nickel				25.0	25.8	103			200.8
Selenium				20.0	19.7	99			7740
Thallium				25.0	27.1	108			200.8
Zinc				25.0	25.8	103			200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	Method
Calcium				5000	5000	100	5010	100	6010B
Magnesium				5000	4990	100	5000	100	6010B
Magnesium				5000	4960	99	5040	101	6010B
Mercury				5.0	5.42	108			7470A

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				5000	4960	99	4980	100	6010B
Magnesium				5000	4990	100	4970	99	6010B
Magnesium				5000	5080	102	5030	101	6010B

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				5000	4960	99	5020	100	6010B
Magnesium				5000	4930	99	4980	100	6010B
Magnesium				5000	4960	99	5110	102	6010B

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				5000	4910	98	5020	100	6010B
Magnesium				5000	4890	98	4980	100	6010B
Magnesium				5000	4950	99	5000	100	6010B

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				5000	4950	99	4900	98	6010B
Magnesium				5000	4960	99	4920	98	6010B
Magnesium				5000	5020	100	4980	100	6010B

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				5000	5000	100	4880	98	6010B
Magnesium				5000	5070	101	4910	98	6010B
Magnesium				5000	5210	104	5200	104	6010B

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				5000	4830	97	4880	98	6010B
Magnesium				5000	4890	98	4960	99	6010B
Magnesium				5000	4940	99	5170	103	6010B

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS

Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/l

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05	0.07	137		
Arsenic				0.50	0.52	103		
Barium				0.05	0.06	111		
Beryllium				0.02	0.02	111		
Cadmium				0.05	0.05	100		
Calcium				50	58.7	117		
Chromium				0.20	0.20	100		
Lead				0.02	0.02	75		
Magnesium				20	23.5	117		
Mercury	0.20	0.2	105					
Nickel				0.20	0.16	78		
Selenium	5.0	5.1	102					
Thallium				0.02	0.02	89		
Zinc				0.50	0.45	90		

METALS
- 3 -
BLANKS

Client: ARCADIS

Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Antimony	0.05	U	0.05	U	0.05	U	0.05	U					200.8
Arsenic	0.5	U	0.5	U	0.5	U	0.5	U					200.8
Barium	0.05	U	0.05	U	0.05	U	0.05	U					200.8
Beryllium	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Cadmium	0.04	U	0.04	U	0.04	U	0.04	U					200.8
Calcium	50	U	50	U	50	U	50	U					6010B
Chromium	0.2	U	0.2	U	0.2	U	0.2	U					200.8
Lead	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Magnesium	20	U	20	U	20	U	20	U					6010B
Mercury	0.2	U	0.2	U	0.2	U	0.2	U					7470A
Nickel	0.2	U	0.2	U	0.2	U	0.2	U					200.8
Selenium	2.0	U	2.0	U	2.0	U	2.0	U					7740
Thallium	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Zinc	0.5	U	0.5	U	0.5	U	0.5	U					200.8

METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Antimony			0.05	U	0.05	U					200.8
Arsenic			0.5	U	0.5	U					200.8
Barium			0.05	U	0.05	U					200.8
Beryllium			0.02	U	0.02	U					200.8
Cadmium			0.04	U	0.04	U					200.8
Calcium			50	U	50	U	50	U			6010B
Chromium			0.2	U	0.2	U					200.8
Lead			0.02	U	0.02	U					200.8
Magnesium			20	U	20	U	20	U			6010B
Mercury			0.2	U	0.2	U	0.2	U			7470A
Nickel			0.2	U	0.2	U					200.8
Selenium			2.0	U	2.0	U					7740
Thallium			0.02	U	0.02	U					200.8
Zinc			0.5	U	0.5	U					200.8

METALS
-3-
BLANKS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Calcium			50	U	50	U	50	U					6010B
Magnesium			20	U	20	U	20	U					6010B
Mercury			0.2	U									7470A

METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Calcium			50	U	50	U	50	U					6010B
Magnesium			20	U	20	U	20	U					6010B

METALS
-3-
BLANKS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Calcium			50	U	50	U	50	U					6010B
Magnesium			20	U	20	U	20	U					6010B

METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Calcium			50	U	50	U	50	U					6010B
Magnesium			20	U	20	U	20	U					6010B

METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Calcium			50	U	50	U							6010B
Magnesium			20	U	20	U							6010B

METALS
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: ARCADIS

Service Request:K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA ICP-OES 6.2

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Calcium	500000	500000	460000	469000	94			
Magnesium	500000	500000	476000	485000	97			

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Service Request: K2308419
Project No.: IN000072.0021
Units: µg/L
Project Name: Bloomington, IN
Basis: NA
Matrix: WATER
% Solids: 0.0

Sample Name: SW-4S
Lab Code: K2308419-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	21.3		0.30		20.0	105		200.8
Arsenic	70 - 130	25.8		1.4		20.0	122		200.8
Barium		107		85.9		20.0	105		200.8
Beryllium	70 - 130	17.1		0.02	U	20.0	86		200.8
Cadmium	70 - 130	19.4		0.12		20.0	96		200.8
Chromium	70 - 130	21.3		0.6		20.0	104		200.8
Lead	70 - 130	16.0		0.36		20.0	78		200.8
Mercury	79 - 115	1.0		0.2	U	1.0	98		7470A
Nickel	70 - 130	20.8		2.0		20.0	94		200.8
Selenium	40 - 119	13.9		2.0	U	20.0	70		7740
Thallium	70 - 130	16.6		0.02	U	20.0	83		200.8
Zinc	70 - 130	25.2		5.4		20.0	99		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SW-4 DISSS
Lab Code: K2308419-004S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	22.6		0.29		20.0	112		200.8
Arsenic	70 - 130	26.7		1.4		20.0	126		200.8
Barium		112		87.1		20.0	125		200.8
Beryllium	70 - 130	17.3		0.02	U	20.0	86		200.8
Cadmium	70 - 130	20.1		0.13		20.0	100		200.8
Chromium	70 - 130	21.3		0.5		20.0	104		200.8
Lead	70 - 130	15.8		0.12		20.0	78		200.8
Nickel	70 - 130	21.1		1.8		20.0	96		200.8
Selenium	40 - 119	13.7		2.0	U	20.0	69		7740
Thallium	70 - 130	17.5		0.02		20.0	87		200.8
Zinc	70 - 130	25.9		6.5		20.0	97		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SW-4D
Lab Code: K2308419-004D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.30		0.30		1		200.8
Arsenic		1.4		1.4		2		200.8
Barium	20	85.9		85.7		0		200.8
Beryllium		0.02	U	0.02	U			200.8
Cadmium		0.12		0.12		0		200.8
Chromium		0.6		0.8		28		200.8
Lead	20	0.36		0.37		5		200.8
Mercury		0.2	U	0.2	U			7470A
Nickel	20	2.0		2.1		5		200.8
Selenium		2.0	U	2.0	U			7740
Thallium		0.02	U	0.02	U			200.8
Zinc	20	5.4		5.5		1		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308419
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SW-4 DISSD
Lab Code: K2308419-004D DISS

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.29		0.28		2		200.8
Arsenic		1.4		1.4		1		200.8
Barium	20	87.1		87.4		0		200.8
Beryllium		0.02	U	0.02	U			200.8
Cadmium		0.13		0.14		7		200.8
Chromium		0.5		0.6		19		200.8
Lead	20	0.12		0.11		10		200.8
Nickel	20	1.8		2.0		7		200.8
Selenium		2.0	U	2.0	U			7740
Thallium		0.02		0.02	U	200.0		200.8
Zinc	20	6.5		6.2		5		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

- 7 -

LABORATORY CONTROL SAMPLE

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Aqueous LCS Source: Inorganic Ventures Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Antimony	20.0	20.8	104					
Arsenic	20.0	20.7	104					
Barium	20.0	20.8	104					
Beryllium	20.0	20.6	103					
Cadmium	20.0	20.6	103					
Chromium	20.0	19.9	100					
Lead	20.0	21.4	107					
Mercury	5.00	5.03	101					
Nickel	20.0	19.7	99					
Selenium	20.0	17.9	90					
Thallium	20.0	21.8	109					
Zinc	20.0	21.1	106					

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Mercury	253.70	BD	0.2		7470A

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: PQ-S

GFAA ID #: AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Antimony	123		0.05		200.8
Arsenic	75		0.5		200.8
Barium	137		0.05		200.8
Beryllium	9		0.02		200.8
Cadmium	114		0.04		200.8
Chromium	52		0.2		200.8
Lead	208		0.02		200.8
Nickel	62		0.2		200.8
Thallium	205		0.02		200.8
Zinc	66		0.5		200.8

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: TJA ICP-OES 6.2

GFAA ID #: AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Calcium	317.90		50.0		6010B
Magnesium	279.50		20.0		6010B

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: Varian-6 (GFAA) AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Selenium	196.00	BZ	2.0		7740

Comments _____

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA ICP-OES 6.2 Date:

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.6	0.0046000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.6	0.0000000	0.0000000	0.0004500	0.0003400	0.0000000
Cadmium	228.8	0.0000000	0.0000000	-0.0000600	0.0000000	0.0250000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	-0.0000300	0.0000000	0.0000000
Cobalt	228.6	-0.0000200	0.0000000	0.0000370	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	-0.0000800	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0014000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	383.2	0.0000000	0.0000000	0.0041000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	-0.0002000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	-0.0000600	0.0000000	0.0000000
Phosphorus	214.9	0.0069000	0.0000000	0.0056000	0.0041000	0.0000000
Potassium	766.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	-0.0001000	0.0000000	0.0000000
Silicon	288.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	-0.0003000	0.0000000	0.0000000
Sodium	588.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	0.0062000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	-0.0001000	0.0000000	0.0000000
Titanium	334.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.4	0.0000000	0.0000000	0.0000500	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000410	0.0000000	0.0000000

Comments: _____

METALS
-11B-
ICP INTERELEMENT CORRECTION FACTORS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA ICP-OES 6.2 Date:

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Mn	Mo	Ni
Aluminum	308.2	-0.0170000	0.0000000	0.0000000	0.0230000	0.0000000
Antimony	206.8	-0.0032100	0.0200000	0.0000000	0.0049000	-0.0070300
Arsenic	193.6	0.0000000	0.0012000	-0.0015000	0.0008360	0.0000000
Barium	493.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	-0.0000470	0.0000000
Boron	249.6	0.0009000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.8	-0.0059400	0.0000000	0.0000000	0.0000000	-0.0004600
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	-0.0003200	0.0000000
Cobalt	228.6	0.0000000	0.0005500	0.0000000	0.0003050	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	-0.0068000	-0.0008800	0.0000000
Lead	220.3	-0.0078200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	383.2	-0.0029000	-0.0013600	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0004260	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001700
Nickel	231.6	0.0005200	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	0.0076000	0.0000000
Potassium	766.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0007400	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.1	0.0000000	-0.0025000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0002100	0.0000000	0.0000000
Sodium	588.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.0111000	0.0000000	0.0000000
Tin	189.9	0.0000000	-0.0100000	0.0000000	0.0000000	0.0000000
Titanium	334.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.4	0.0000000	-0.0058400	-0.0001000	-0.0092000	0.0000000
Zinc	213.8	-0.0000630	0.0000000	0.0000000	-0.0002000	0.0044800

Comments: _____

METALS
-11B-
ICP INTERELEMENT CORRECTION FACTORS

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA ICP-OES 6.2 Date:

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	308.2	-0.0004000	-0.0028000			
Antimony	206.8	0.0000000	-0.0070000			
Arsenic	193.6	0.0000000	0.0099000			
Barium	493.4	0.0000000	0.0000000			
Beryllium	313.0	0.0000200	0.0011000			
Boron	249.6	0.0000000	0.0000000			
Cadmium	228.8	0.0000000	0.0000900			
Calcium	317.9	0.0000000	0.0005000			
Chromium	267.7	0.0000400	0.0006000			
Cobalt	228.6	0.0018000	0.0000000			
Copper	324.7	-0.0007000	-0.0001000			
Iron	259.9	-0.0011000	0.0003000			
Lead	220.3	0.0007000	0.0000000			
Magnesium	383.2	-0.0042000	0.0000000			
Manganese	257.6	0.0000000	-0.0000700			
Molybdenum	202.0	0.0000000	0.0000000			
Nickel	231.6	0.0000000	0.0000000			
Phosphorus	214.9	0.0000000	0.0000000			
Potassium	766.5	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	288.1	0.0000000	0.0000000			
Silver	328.0	0.0000000	-0.0091000			
Sodium	588.9	0.0000000	0.0000000			
Strontium	421.5	0.0000000	0.0000000			
Thallium	190.8	-0.0005000	0.0000000			
Tin	189.9	0.0072000	0.0000000			
Titanium	334.9	0.0000000	0.0000000			
Vanadium	292.4	0.0003000	0.0000000			
Zinc	213.8	-0.0000200	0.0000000			

Comments: _____

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: PQ-S

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	800.0	200.8
Arsenic	15.00	600.0	200.8
Barium	15.00	700.0	200.8
Beryllium	15.00	500.0	200.8
Cadmium	15.00	1000.0	200.8
Chromium	15.00	300.0	200.8
Lead	15.00	1000.0	200.8
Nickel	15.00	700.0	200.8
Thallium	15.00	700.0	200.8
Zinc	15.00	600.0	200.8

Comments:

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA ICP-OES 6.2

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium	5.00	800000.0	6010B
Magnesium	5.00	25000.0	6010B
Magnesium	5.00	800000.0	6010B

Comments:

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308419

Project No.: IN000072.0021

Project: Bloomington, IN

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
CALIBRATION ZER	11/13/03	METHOD	100	100
ICV	11/13/03	METHOD	100	100
LCSW	11/13/03	METHOD	20	20
K2308419-MB	11/13/03	METHOD	20	20
STANDARD #1	11/13/03	METHOD	100	100
STANDARD #2	11/13/03	METHOD	100	100
STANDARD #3	11/13/03	METHOD	100	100
STANDARD #4	11/13/03	METHOD	100	100
STANDARD #5	11/13/03	METHOD	100	100
K2308419-001	11/13/03	METHOD	20	20
K2308419-001 DI	11/13/03	METHOD	20	20
K2308419-002	11/13/03	METHOD	20	20
K2308419-002 DI	11/13/03	METHOD	20	20
K2308419-003	11/13/03	METHOD	20	20
K2308419-003 DI	11/13/03	METHOD	20	20
K2308419-004	11/13/03	METHOD	20	20
K2308419-004 DI	11/13/03	METHOD	20	20
K2308419-004D	11/13/03	METHOD	20	20
K2308419-005	11/13/03	METHOD	20	20
K2308419-005 DI	11/13/03	METHOD	20	20
K2308419-004S	11/13/03	METHOD	20	20
K2308419-006	11/13/03	METHOD	20	20
K2308419-006 DI	11/13/03	METHOD	20	20
K2308419-008	11/13/03	METHOD	20	20
K2308419-009	11/13/03	METHOD	20	20
K2308419-010	11/13/03	METHOD	20	20
K2308419-007 DI	11/13/03	METHOD	20	20

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308419

Project No.: IN000072.0021

Project: Bloomington, IN

Method: F

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/10/03	CLFAA	50	50
K2308419-MB	11/10/03	CLFAA	50	50
K2308419-001	11/10/03	CLFAA	50	50
K2308419-001 DI	11/10/03	CLFAA	50	50
K2308419-002	11/10/03	CLFAA	50	50
K2308419-002 DI	11/10/03	CLFAA	50	50
K2308419-003	11/10/03	CLFAA	50	50
K2308419-003 DI	11/10/03	CLFAA	50	50
K2308419-004	11/10/03	CLFAA	50	50
K2308419-004 DI	11/10/03	CLFAA	50	50
K2308419-004D D	11/10/03	CLFAA	50	50
K2308419-004S D	11/10/03	CLFAA	50	50
K2308419-004D	11/10/03	CLFAA	50	50
K2308419-005	11/10/03	CLFAA	50	50
K2308419-005 DI	11/10/03	CLFAA	50	50
K2308419-004S	11/10/03	CLFAA	50	50
K2308419-006	11/10/03	CLFAA	50	50
K2308419-006 DI	11/10/03	CLFAA	50	50
K2308419-008	11/10/03	CLFAA	50	50
K2308419-009	11/10/03	CLFAA	50	50
K2308419-010	11/10/03	CLFAA	50	50
K2308419-007 DI	11/10/03	CLFAA	50	50

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308419

Project No.: IN000072.0021

Project: Bloomington, IN

Method: P

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/10/03	CLAA	50	50
K2308419-MB	11/10/03	CLAA	50	50
K2308419-001	11/10/03	CLAA	50	50
K2308419-002	11/10/03	CLAA	50	50
K2308419-003	11/10/03	CLAA	50	50
K2308419-004	11/10/03	CLAA	50	50
K2308419-004D	11/10/03	CLAA	50	50
K2308419-005	11/10/03	CLAA	50	50
K2308419-004S	11/10/03	CLAA	50	50
K2308419-006	11/10/03	CLAA	50	50
K2308419-008	11/10/03	CLAA	50	50
K2308419-009	11/10/03	CLAA	50	50
K2308419-010	11/10/03	CLAA	50	50

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Bloomington, IN

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/10/03	CLFAA	50	50
K2308419-MB	11/10/03	CLFAA	50	50
K2308419-001	11/10/03	CLFAA	50	50
K2308419-001 DI	11/10/03	CLFAA	50	50
K2308419-002	11/10/03	CLFAA	50	50
K2308419-002 DI	11/10/03	CLFAA	50	50
K2308419-003	11/10/03	CLFAA	50	50
K2308419-003 DI	11/10/03	CLFAA	50	50
K2308419-004	11/10/03	CLFAA	50	50
K2308419-004 DI	11/10/03	CLFAA	50	50
K2308419-004D D	11/10/03	CLFAA	50	50
K2308419-004S D	11/10/03	CLFAA	50	50
K2308419-004D	11/10/03	CLFAA	50	50
K2308419-005	11/10/03	CLFAA	50	50
K2308419-005 DI	11/10/03	CLFAA	50	50
K2308419-004S	11/10/03	CLFAA	50	50
K2308419-006	11/10/03	CLFAA	50	50
K2308419-006 DI	11/10/03	CLFAA	50	50
K2308419-008	11/10/03	CLFAA	50	50
K2308419-009	11/10/03	CLFAA	50	50
K2308419-010	11/10/03	CLFAA	50	50
K2308419-007 DI	11/10/03	CLFAA	50	50

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/14/03 End Date: 11/14/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	09:31																X									
STANDARD #1	1.00	09:32																X									
STANDARD #2	1.00	09:34																X									
STANDARD #3	1.00	09:35																X									
STANDARD #4	1.00	09:37																X									
STANDARD #5	1.00	09:39																X									
ICV	1.00	09:40																X									
ICB	1.00	09:42																X									
CCV1	1.00	09:44																X									
CCB1	1.00	09:45																X									
CRA	1.00	09:47																X									
ZZZZZZ	1.00	09:48																									
ZZZZZZ	1.00	09:50																									
ZZZZZZ	1.00	09:52																									
ZZZZZZ	1.00	09:53																									
ZZZZZZ	1.00	09:55																									
K2308419-MB	1.00	09:56																X									
LCSW	1.00	09:58																X									
K2308419-001	1.00	10:00																X									
K2308419-002	1.00	10:01																X									
CCV2	1.00	10:03																X									
CCB2	1.00	10:04																X									
K2308419-003	1.00	10:06																X									
K2308419-004	1.00	10:08																X									
K2308419-004D	1.00	10:09																X									
K2308419-004S	1.00	10:11																X									
K2308419-005	1.00	10:13																X									
K2308419-006	1.00	10:14																X									
K2308419-008	1.00	10:16																X									
K2308419-009	1.00	10:17																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/14/03 End Date: 11/14/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308419-010	1.00	10:19																X									
K2308419-001 DISS	1.00	10:21																X									
CCV3	1.00	10:22																X									
CCB3	1.00	10:24																X									
K2308419-002 DISS	1.00	10:25																X									
K2308419-003 DISS	1.00	10:27																X									
K2308419-004 DISS	1.00	10:29																X									
K2308419-005 DISS	1.00	10:30																X									
K2308419-006 DISS	1.00	10:32																X									
K2308419-007 DISS	1.00	10:34																X									
ZZZZZZ	1.00	10:35																									
ZZZZZZ	1.00	10:37																									
ZZZZZZ	1.00	10:39																									
ZZZZZZ	1.00	10:40																									
CCV4	1.00	10:42																X									
CCB4	1.00	10:43																X									
ZZZZZZ	1.00	10:45																									
ZZZZZZ	1.00	10:47																									
ZZZZZZ	1.00	10:48																									
ZZZZZZ	1.00	10:50																									
ZZZZZZ	1.00	10:51																									
ZZZZZZ	1.00	10:53																									
ZZZZZZ	1.00	10:55																									
ZZZZZZ	1.00	10:56																									
ZZZZZZ	1.00	10:58																									
ZZZZZZ	1.00	11:00																									
CCV5	1.00	11:01																X									
CCB5	1.00	11:03																X									
ZZZZZZ	1.00	11:05																									
ZZZZZZ	1.00	11:06																									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/14/03 End Date: 11/14/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	11:08																												
ZZZZZZ	1.00	11:09																												
ZZZZZZ	1.00	11:11																												
ZZZZZZ	1.00	11:13																												
ZZZZZZ	1.00	11:14																												
ZZZZZZ	1.00	11:16																												
ZZZZZZ	1.00	11:18																												
ZZZZZZ	1.00	11:19																												
CCV6	1.00	11:21																X												
CCB6	1.00	11:23																X												
ZZZZZZ	1.00	11:24																												
ZZZZZZ	1.00	11:26																												
ZZZZZZ	1.00	11:27																												
ZZZZZZ	1.00	11:29																												
ZZZZZZ	1.00	11:31																												
ZZZZZZ	1.00	11:32																												
ZZZZZZ	1.00	11:34																												
ZZZZZZ	1.00	11:36																												
ZZZZZZ	1.00	11:37																												
ZZZZZZ	1.00	11:39																												
CCV7	1.00	11:41																X												
CCB7	1.00	11:42																X												
ZZZZZZ	1.00	11:44																												
ZZZZZZ	1.00	11:46																												

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA ICP-OES 6.2 Method: P

Start Date: 11/19/03 End Date: 11/19/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL-STD1-BLANK	1.00	09:19								X						X											
CAL-STD3	1.00	09:28								X						X											
CAL-STD2	1.00	09:35																									
ICV	1.00	09:38								X						X											
ZZZZZZ	1.00	09:41																									
ICB	1.00	09:44								X						X											
CCV1	1.00	09:46								X						X											
CCB1	1.00	09:49								X						X											
CRI	1.00	09:54								X						X											
ICSA	1.00	10:01								X						X											
ICSAB	1.00	10:03								X						X											
ZZZZZZ	1.00	10:05																									
ZZZZZZ	1.00	10:07																									
ZZZZZZ	1.00	10:09																									
ZZZZZZ	1.00	10:10																									
ZZZZZZ	1.00	10:12																									
ZZZZZZ	1.00	10:14																									
ZZZZZZ	1.00	10:16																									
CCV2	1.00	10:17								X						X											
CCB2	1.00	10:19								X						X											
ZZZZZZ	1.00	10:21																									
ZZZZZZ	1.00	10:23																									
ZZZZZZ	1.00	10:24																									
ZZZZZZ	1.00	10:26																									
ZZZZZZ	1.00	10:28																									
ZZZZZZ	1.00	10:32																									
ZZZZZZ	1.00	10:34																									
ZZZZZZ	1.00	10:35																									
ZZZZZZ	1.00	10:38																									
ZZZZZZ	1.00	10:39																									

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA ICP-OES 6.2 Method: P

Start Date: 11/19/03 End Date: 11/19/03

Sample ID.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN					
CCV3	1.00	10:42								X						X																
CCB3	1.00	10:43								X						X																
CCV4	1.00	11:14								X						X																
CCB4	1.00	11:16								X						X																
ZZZZZZ	1.00	11:19																														
ZZZZZZ	1.00	11:21																														
ZZZZZZ	1.00	11:23																														
ZZZZZZ	1.00	11:25																														
ZZZZZZ	1.00	11:26																														
ZZZZZZ	1.00	11:27																														
ZZZZZZ	1.00	11:29																														
ZZZZZZ	1.00	11:30																														
ZZZZZZ	1.00	11:35																														
ZZZZZZ	1.00	11:36																														
CCV5	1.00	11:38								X						X																
CCB5	1.00	11:40								X						X																
ZZZZZZ	1.00	11:42																														
ZZZZZZ	1.00	11:44																														
ZZZZZZ	1.00	11:49																														
ZZZZZZ	1.00	11:52																														
ZZZZZZ	1.00	11:55																														
ZZZZZZ	1.00	11:57																														
ZZZZZZ	1.00	12:00																														
ZZZZZZ	1.00	12:02																														
ZZZZZZ	1.00	12:03																														
CCV6	1.00	12:05								X						X																
CCB6	1.00	12:07								X						X																
CCV7	1.00	12:13								X						X																
CCB7	1.00	12:14								X						X																
ZZZZZZ	1.00	12:17																														

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA ICP-OES 6.2 Method: P

Start Date: 11/19/03 End Date: 11/19/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	12:19																									
ZZZZZZ	1.00	12:21																									
ZZZZZZ	1.00	12:23																									
ZZZZZZ	1.00	12:25																									
ZZZZZZ	1.00	12:27																									
CCV8	1.00	12:30								X						X											
CCB8	1.00	12:32								X						X											
CCV9	1.00	13:33								X						X											
CCB9	1.00	13:34								X						X											
ZZZZZZ	1.00	13:36																									
ZZZZZZ	1.00	13:41																									
ZZZZZZ	1.00	13:43																									
ZZZZZZ	1.00	13:45																									
ZZZZZZ	1.00	13:48																									
ZZZZZZ	1.00	13:51																									
ZZZZZZ	1.00	13:52																									
ZZZZZZ	1.00	13:55																									
ZZZZZZ	1.00	13:57																									
ZZZZZZ	1.00	13:59																									
CCV10	1.00	14:01								X						X											
CCB10	1.00	14:03								X						X											
ZZZZZZ	1.00	14:05																									
ZZZZZZ	1.00	14:07																									
ZZZZZZ	1.00	14:12																									
ZZZZZZ	1.00	14:18																									
ZZZZZZ	1.00	14:19																									
ZZZZZZ	1.00	14:22																									
ZZZZZZ	1.00	14:27																									
ZZZZZZ	1.00	14:30																									
ZZZZZZ	1.00	14:32																									

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA ICP-OES 6.2 Method: P

Start Date: 11/19/03 End Date: 11/19/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	14:34																									
CCV11	1.00	14:36								X						X											
CCB11	1.00	14:39								X						X											
ZZZZZZ	1.00	14:40																									
ZZZZZZ	1.00	14:42																									
ZZZZZZ	1.00	14:44																									
ZZZZZZ	1.00	14:46																									
ZZZZZZ	1.00	14:47																									
ZZZZZZ	1.00	14:49																									
ZZZZZZ	1.00	14:50																									
ZZZZZZ	1.00	14:52																									
ZZZZZZ	1.00	14:56																									
ZZZZZZ	1.00	14:58																									
CCV12	1.00	15:00								X						X											
CCB12	1.00	15:02								X						X											
ZZZZZZ	1.00	15:03																									
ZZZZZZ	1.00	15:05																									
ZZZZZZ	1.00	15:07																									
ZZZZZZ	1.00	15:08																									
ZZZZZZ	1.00	15:10																									
ZZZZZZ	1.00	15:11																									
ZZZZZZ	1.00	15:13																									
ZZZZZZ	1.00	15:15																									
ZZZZZZ	1.00	15:18																									
CCV13	1.00	15:25								X						X											
CCB13	1.00	15:27								X						X											
ZZZZZZ	1.00	15:29																									
ZZZZZZ	1.00	15:31																									
ZZZZZZ	1.00	15:32																									
ZZZZZZ	1.00	15:34																									

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA ICP-OES 6.2 Method: P

Start Date: 11/19/03 End Date: 11/19/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	15:35																												
CCV14	1.00	15:44								X						X														
CCB14	1.00	15:48								X						X														
CCV15	1.00	15:52								X						X														
CCB15	1.00	15:55								X						X														
ZZZZZZ	1.00	15:57																												
ZZZZZZ	1.00	15:58																												
ZZZZZZ	1.00	16:00																												
ZZZZZZ	1.00	16:02																												
ZZZZZZ	1.00	16:04																												
ZZZZZZ	1.00	16:06																												
CCV16	1.00	16:21								X						X														
CCB16	1.00	16:23								X						X														
ZZZZZZ	1.00	16:26																												
ZZZZZZ	1.00	16:27																												
ZZZZZZ	1.00	16:30																												
ZZZZZZ	1.00	16:32																												
ZZZZZZ	1.00	16:34																												
ZZZZZZ	1.00	16:36																												
ZZZZZZ	1.00	16:38																												
ZZZZZZ	1.00	16:41																												
ZZZZZZ	1.00	16:43																												
CCV17	1.00	16:48								X						X														
CCB17	1.00	16:50								X						X														
ZZZZZZ	1.00	16:52																												
ZZZZZZ	1.00	16:54																												
ZZZZZZ	1.00	16:55																												
K2308419-MB	1.00	17:01								X						X														
LCSW	1.00	17:03								X						X														
K2308419-001	1.00	17:05								X						X														

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA ICP-OES 6.2 Method: P

Start Date: 11/19/03 End Date: 11/19/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308419-002	1.00	17:07								X						X											
K2308419-003	1.00	17:09								X						X											
K2308419-004	1.00	17:11								X						X											
K2308419-004D	1.00	17:13								X						X											
CCV18	1.00	17:15								X						X											
CCB18	1.00	17:16								X						X											
K2308419-004S	1.00	17:18																									
K2308419-005	1.00	17:20								X						X											
K2308419-006	1.00	17:22								X						X											
K2308419-008	1.00	17:24								X						X											
K2308419-009	1.00	17:25								X						X											
K2308419-010	1.00	17:27								X						X											
K2308419-001L	5.00	17:29								X						X											
ZZZZZZ	1.00	17:30																									
ZZZZZZ	1.00	17:32																									
ZZZZZZ	1.00	17:33																									
CCV19	1.00	17:35								X						X											
CCB19	1.00	17:37								X						X											
ZZZZZZ	1.00	17:38																									
ZZZZZZ	1.00	17:39																									
ZZZZZZ	1.00	17:41																									
ZZZZZZ	1.00	17:42																									
CCV20	1.00	17:44								X						X											
CCB20	1.00	17:47								X						X											

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: PQ-S Method: MS

Start Date: 11/24/03 End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	11:27			X	X	X	X	X		X				X				X					X		X	
CALIBRATION STANDARD	1.00	11:30			X	X	X	X	X		X				X				X					X		X	
ICV	1.00	11:33			X	X	X	X	X		X				X				X					X		X	
CCV1	1.00	11:36			X	X	X	X	X		X				X				X					X		X	
ICB	1.00	11:44			X	X	X	X	X		X				X				X					X		X	
CCB1	1.00	11:46			X	X	X	X	X		X				X				X					X		X	
CRA	1.00	11:49			X	X	X	X	X		X				X				X					X		X	
ZZZZZZ	1.00	11:52																									
K2308419-MB	1.00	11:55			X	X	X	X	X		X				X				X					X		X	
K2308419-004	1.00	11:58			X	X	X	X	X		X				X				X					X		X	
K2308419-004D	1.00	12:01			X	X	X	X	X		X				X				X					X		X	
K2308419-004S	1.00	12:04			X	X	X	X	X		X				X				X					X		X	
LCSW	1.00	12:07			X	X	X	X	X		X				X				X					X		X	
K2308419-005	1.00	12:13			X	X	X	X	X		X				X				X					X		X	
K2308419-006	1.00	12:16			X	X	X	X	X		X				X				X					X		X	
K2308419-001	1.00	12:19			X	X	X	X	X		X				X				X					X		X	
CCV2	1.00	12:22			X	X	X	X	X		X				X				X					X		X	
ZZZZZZ	1.00	12:25																									
CCB2	1.00	12:28			X	X	X	X	X		X				X				X					X		X	
K2308419-002	1.00	12:32			X	X	X	X	X		X				X				X					X		X	
K2308419-003	1.00	12:35			X	X	X	X	X		X				X				X					X		X	
K2308419-008	1.00	12:37			X	X	X	X	X		X				X				X					X		X	
K2308419-009	1.00	12:40			X	X	X	X	X		X				X				X					X		X	
K2308419-010	1.00	12:43			X	X	X	X	X		X				X				X					X		X	
K2308419-001 DISS	1.00	12:46			X	X	X	X	X		X				X				X					X		X	
K2308419-002 DISS	1.00	12:49			X	X	X	X	X		X				X				X					X		X	
K2308419-003 DISS	1.00	12:52			X	X	X	X	X		X				X				X					X		X	
CCV3	1.00	12:55			X	X	X	X	X		X				X				X					X		X	
CCB3	1.00	13:01			X	X	X	X	X		X				X				X					X		X	
K2308419-004 DISS	1.00	13:07			X	X	X	X	X		X				X				X					X		X	

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: PQ-S

Method: MS

Start Date: 11/24/03

End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN					
K2308419-004D DISS	1.00	13:10			X	X	X	X	X		X				X				X				X		X							
K2308419-004S DISS	1.00	13:13			X	X	X	X	X		X				X				X				X		X							
K2308419-005 DISS	1.00	13:20			X	X	X	X	X		X				X				X				X		X							
K2308419-006 DISS	1.00	13:23			X	X	X	X	X		X				X				X				X		X							
K2308419-007 DISS	1.00	13:26			X	X	X	X	X		X				X				X				X		X							
ZZZZZZ	1.00	13:29																														
ZZZZZZ	1.00	13:32																														
ZZZZZZ	1.00	13:35																														
CCV4	1.00	13:38			X	X	X	X	X		X				X				X				X		X							
CCB4	1.00	13:45			X	X	X	X	X		X				X				X				X		X							
ZZZZZZ	1.00	13:49																														
ZZZZZZ	1.00	13:52																														
ZZZZZZ	1.00	13:55																														
ZZZZZZ	1.00	14:06																														
ZZZZZZ	1.00	14:09																														
ZZZZZZ	1.00	14:12																														
ZZZZZZ	1.00	14:16																														
ZZZZZZ	1.00	14:19																														
ZZZZZZ	1.00	14:23																														
CCV5	1.00	14:26			X	X	X	X	X		X				X				X				X		X							
CCB5	1.00	14:34			X	X	X	X	X		X				X				X				X		X							

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 1/24/03 End Date: 1/24/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL ZERO	1.00	15:06																		X						
STANDARD 1	1.00	15:10																		X						
STANDARD 2	1.00	15:15																		X						
STANDARD 3	1.00	15:19																		X						
STANDARD 4	1.00	15:23																		X						
STANDARD 5	1.00	15:28																		X						
ICV	1.00	15:32																		X						
ICB	1.00	15:36																		X						
CRDL	1.00	15:41																		X						
CCV1	1.00	15:45																		X						
CCB1	1.00	15:49																		X						
K2308419-MB	1.00	15:53																		X						
LCSW	1.00	15:58																		X						
K2308419-004	1.00	16:02																		X						
K2308419-004A	1.00	16:06	74.0																	X						
K2308419-004D	1.00	16:11																		X						
K2308419-004S	1.00	16:15																		X						
K2308419-001	1.00	16:19																		X						
K2308419-002	1.00	16:24																		X						
K2308419-003	1.00	16:28																		X						
K2308419-005	1.00	16:32																		X						
CCV2	1.00	16:37																		X						
CCB2	1.00	16:41																		X						
K2308419-006	1.00	16:45																		X						
K2308419-008	1.00	16:49																		X						
K2308419-009	1.00	16:54																		X						
K2308419-010	1.00	16:58																		X						
K2308419-001 DISS	1.00	17:02																		X						
K2308419-002 DISS	1.00	17:07																		X						
K2308419-003 DISS	1.00	17:11																		X						

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308419

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 1/24/03 End Date: 1/24/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308419-004 DISS	1.00	17:15																		X						
K2308419-004A DISS	1.00	17:20	72.0																	X						
K2308419-004D DISS	1.00	17:24																		X						
CCV3	1.00	17:29																		X						
CCB3	1.00	17:33																		X						
K2308419-004S DISS	1.00	17:37																		X						
K2308419-005 DISS	1.00	17:41																		X						
K2308419-006 DISS	1.00	17:46																		X						
K2308419-007 DISS	1.00	17:50																		X						
ZZZZZZ	1.00	17:54																								
ZZZZZZ	1.00	17:59																								
ZZZZZZ	1.00	18:03																								
ZZZZZZ	1.00	18:07																								
ZZZZZZ	1.00	18:12																								
ZZZZZZ	1.00	18:16																								
CCV4	1.00	18:20																		X						
CCB4	1.00	18:24																		X						
ZZZZZZ	1.00	18:29																								
ZZZZZZ	1.00	18:33																								
ZZZZZZ	1.00	18:37																								
ZZZZZZ	1.00	18:42																								
ZZZZZZ	1.00	18:46																								
ZZZZZZ	1.00	18:50																								
ZZZZZZ	1.00	18:55																								
ZZZZZZ	1.00	18:59																								
ZZZZZZ	1.00	19:03																								
CCV5	1.00	19:08																		X						
CCB5	1.00	19:12																		X						

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0314752

Service Request Number(s): K2308419

Method: (CLP) 3010A 3020A 3005A 3050B Other-

Analysis for: (ICP) ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBW			X	50	50	5%HCl
LCSW						
K2308419-1	TOTAL					
-2						
-3						
-4						
-4D						
-4S						
-5						
-6						
-8 RM 11/10/05						
-9						
-10						
-1	DISSOLVED					
-2						
-3						
-4						
-5						
-6						
-7						
			RM 11/10/05			

Time Digestion Started: 9:45 AM

Lot # Acids Used: HNO3 423049 HCl 42167 H2O2

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other:

GFAA LCSW = GFLCSW, MET1-25-Q, mls. added

ICP LCSW = QCP CICV-1, MET1-12-Q, 0.250 mls. added
QCP CICV-2, MET1-12-R, 0.250 mls. added
QCP CICV-3, MET1-12-S, 0.250 mls. added
SS6, MET1-21-F, 0.5 mls. added

SPIKE INFO

SS1-MET1-26-R 0.5 mls added SS4-MET1-27-B, mls added

SS5-MET1-26-S, 0.5 mls added

SS6-MET1-27-A, 0.5 mls added

TCLP Spike/LCSE

SS1 mls. added

SS2 mls. added

Additional spikes:

Comments:

Analyst Rachel Moore Date 11/10/05

Reviewer Date 11/10/05

metdig.xls
9/5/02

METALS SPIKE FORM

Service Request # K2308419
Q.C. Sample # 8419-4

Initials /Date: RM 11/10/03

Circle type of digest: GFAA (ICP) FAA ICP-MS Other:_____
Circle type of sample: Soil (Water) Misc. Sludge Oil Other:_____

Solution Name	Element	mls of 1000ppm Std.	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-26-R	HNO3	50.0	1000ml	JT BAKER	X40023	-	-	0.5	Expires: 7/1/04
	Al	*100	1000ml	MET1-26-P	-	9/1/04	200		
	Ag	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Ba	*100	1000ml	MET1-26-P	-	9/1/04	200		
	Be	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Cd	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Co	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Cr	*100	1000ml	MET1-26-P	-	9/1/04	20		
	Cu	*100	1000ml	MET1-26-P	-	9/1/04	25		
	Fe	*100	1000ml	MET1-26-P	-	9/1/04	100		
	Pb	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Mn	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Ni	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Sb	50	1000ml	MET1-22-G	-	7/1/04	50		
	V	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Zn	*100	1000ml	MET1-26-P	-	9/1/04	50		
SS4-MET1-27-B	HNO3	25.0	500ml	JT BAKER	X40023	-	-		Expires: 3/1/04
	As	2.0	500ml	MET1-21-I	-	1/1/05	4		
	Cd	2.0	500ml	MET1-17-D	-	9/30/04	4		
	Pb	2.0	500ml	MET1-10-H	-	4/1/04	4		
	Se	2.0	500ml	MET1-19-C	-	10/31/04	4		
	Tl	2.0	500ml	MET1-19-F	-	10/1/04	4		
	Cu	2.0	500ml	MET1-17-E	-	3/1/04	4		
SS5-MET1-26-S	HNO3	25.0	500ml	JT BAKER	X40023	-	-	0.5	Expires:10/31/04
	As	50.0	500ml	MET1-21-I	-	1/1/05	100		
	Se	50.0	500ml	MET1-19-C	-	10/30/04	100		
	Tl	50.0	500ml	MET1-19-F	-	10/30/04	100		
SS6-MET1-27-A	HNO3	25	500ml	JT BAKER	X40023	-	-	0.5	Expires: 09/01/04
	B	50	500ml	MET1-17-A	-	9/1/04	100		
	Mo	50	500ml	MET1-19-A	-	10/1/04	100		
GFLCSW	HNO3	2.0	200ml	JT BAKER	X40023	-	-		Expires: 01/01/04
(MET1-25-Q)	As, Pb, Se, Tl	1.0	200ml	QCP-CICV-3	S-MEB119011	1/1/04	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		
	Cu	0.5	200ml	MET1-17-E	-	3/1/04	2.5		
QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	IV	R-MEB93119	1/1/04	2500	0.250	Expires: 01/01/04
(MET1-12-Q)	Al, Ba	no dilution	-	IV	R-MEB93119	1/1/04	1000		
	Fe	no dilution	-	IV	R-MEB93119	1/1/04	500		
	Co, Mn, Ni, V, Zn	no dilution	-	IV	R-MEB93119	1/1/04	250		
	Cu, Ag	no dilution	-	IV	R-MEB93119	1/1/04	125		
	Cr	no dilution	-	IV	R-MEB93119	1/1/04	100		
	Be	no dilution	-	IV	R-MEB93119	1/1/04	25		
QCP-CICV-2	Sb	no dilution	-	IV	S-CICP11092	1/30/04	500	0.250	Expires: 01/01/04
(MET1-12-R)									
QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	IV	S-MEB119011	1/104	500	0.250	Expires: 01/01/04
(MET1-12-S)	Cd	no dilution	-	IV	S-MEB119011	1/104	250		

* Denotes Custom Mix CAS-CAL-14

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date

Columbia Analytical Services

Metals Digestion Sheet

Extr/Prep Batch KP0313900

Service Request Number(s): K2308419

Method: (CLP) 3010A 3020A 3005A 3050B Other-_____

Analysis for: ICP (ICP-MS) GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBW			X	50	50	1% HNO3
* LCSW						
K2308419-1	TOTAL					
-2						
-3						
-4						
-4D						
* -4S						
-5						
-6						
-8						
-9						
-10						
-1	DISSOLVED					
-2						
-3						
-4						
-4D						
* -4S						
-5						
-6						
-7						
		BM 11/10/03				

Time Digestion Started: 11:45 AM

Lot # Acids Used: HNO3 MS3-81-E HCl _____ H2O2 _____

LCSS (circle appropriate) **ERA CLP Soil Lot # 246** **EPA Lot # 0287** **Other:**_____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-12-Q, _____ mls. added
QCP CICV-2, MET1-12-R, _____ mls. added
QCP CICV-3, MET1-12-S, _____ mls. added
SS6, MET1-21-F, _____ mls. added

SPIKE INFO

SS1-MET1-26-R,_____mls added SS4-MET1-27-B,_____mls added

SS5-MET1-26-S,_____mls added

SS6-MET1-27-A,_____mls added

TCLP Spike/LCSE

SS1 _____ mls. added

SS2 _____ mls. added

Additional spikes: *1.0ml of 2008 (MS3-62-A) & Ag (MS3-90-C

Comments: _____

Analyst Rachel Moore **Date** 11/10/03

Reviewer _____ **Date** 11/10/03

metdig.xls
9/5/02

Atomic Absorption Data Review Form

Element Hg KB 11/14/03 AA # ____

Analytical Batch
KA0322708

Analysis Lot # ____

Cal Std/CCV Source HG1-23-Y

Service Request Numbers:

K8880, 8419, 8433, 8865, 8757, 8809, 8860, 8825, 8862, 8892

	Yes	No	NA
1) Appropriate Standardization Completed	✓	____	____
2) ICV within 10% of true value.	✓	____	____
3) CCVs in Control	✓	____	____
4) CCB's and/or ICB's below MRL	✓	____	____
5) All reported results within calibration range	✓	____	____
6) Calculations Correct	✓	____	____

Comments :

Reviewed By: _____ Date: 11/14/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
ANALYTICAL WORKSHEET

Method: ~~(Circle One)~~ 7470A 7471A (245.1)	Service Request # : K8880, 8419, 8433, 8865, 8757, 8809, 8860, 8825, 8862, 8892
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	4.96		99.1
2	ICB	—	—	—	0.01		<0.1
3	CCV1	—	—	—	~~5.01~~ 5.10 AB 11/14/03		102.1
4	CCB1	—	—	—	0.01		<0.1
5	CRA	—	—	—	0.21		0.21
6	PBW (ICP031460.0)	100mLS	100mLS	—	0.01		<0.1
7	LCSW ↓	↓		—	5.12		102.1
8	K8880-01	50mLS		—	0.05		<0.1
9	-01D			—	0.05		<0.1
10	-01S			—	0.87	~~0.80~~ 0.87 AB 11/14/03	87.1
11	PBW (ICP031460.7)	20mLS	20mLS	—	0.01		<0.1
12	LCSW ↓			—	5.03		101.1
13	K8419-01 Total			—	0.01		<0.1
14	-02 ↓			—	0.01		<0.1
15	CCV2	—	—	—	5.17		103.1
16	CCB2	—	—	—	0.01		<0.1
17	K8419-03 Total	20mLS	20mLS	—	0.01		<0.1
18	-04			—	0.01		<0.1
19	-04D			—	0.02		<0.1
20	-04S			—	0.98		0.98 98.1
21	-05			—	0.01		<0.1
22	-06			—	0.01		<0.1
23	-08			—	0.02		<0.1
24	-09			—	0.02		<0.1
25	-10 ↓	↓	↓	—	0.03		<0.1

Comments: Reporting Levels:

Waters - 0.2 µg/L	TIME STARTED:
Soil - 0.02 mg/kg	
TCLP - 1 µg/L	
Water Spike Level : 1.0 µg/L	
Soil Spike Level : 5.0 µg/L =	mg/kg
TCLP Spike Level : 5.0 µg/L	

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	1 of 4

[HGFORM.XLW] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K8419-01DISS	20mLS	20mLS	—	0.02		<0.1
27	CCV3	—	—	—	5.07		101%
28	CCB3	—	—	—	0.01		<0.1
29	K8419-02DISS	20mLS	20mLS	—	0.01		<0.1
30	03			—	0.01		<0.1
31	04			—	0.01		<0.1
32	05			—	0.01		<0.1
33	06			—	0.01		<0.1
34	07			—	0.01		<0.1
35	K8862-01			—	0.01		<0.1
36	01D			—	0.01		<0.1
37	01S			—	0.98		0.98/98%
38	K8892-01			—	0.01		<0.1
39	CCV4	—	—	—	5.21		104%
40	CCB4	—	—	—	0.01		<0.1
41	K8892-01D	20mLS	20mLS	—	0.01		<0.1
42	01S			—	1.01		1.01/101%
43	K8881-01			—	0.02		<0.1
44	01D			—	0.01		<0.1
45	01S			—	1.05		1.05/105%
46	02			—	0.02		<0.1
47	PBW(ILP03146C8)			—	0.02		<0.1
48	LCSW			—	5.14		103%
49	K8433-10			—	0.01		<0.1
50	11			—	0.01		<0.1

Comments: Reporting Levels:

Waters - 0.2 µg/L

Soil - 0.02 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	20f4

[Hgform.xlw] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	CCV5	—	—	—	5.28		106%
52	CCB5	—	—	—	0.00		<0.1
53	K8433-11D	20mLs	20mLs	—	0.02		<0.1
54	-11S	↓	↓	—	1.03		1.03/103%
55	-12	↓	↓	—	0.02		<0.1
56	-13	↓	↓	—	0.02		<0.1
57	-14	↓	↓	—	0.01		<0.1
58	-15	↓	↓	—	0.02		<0.1
59	K8865-01	↓	↓	—	0.03		<0.1
60	-01D	↓	↓	—	0.03		<0.1
61	-01S	↓	↓	—	0.99		0.99/99%
62	-02	↓	↓	—	0.02		<0.1
63	CCV6	—	—	—	5.24		105%
64	CCB6	—	—	—	0.01		<0.1
65	K8757-01	20mLs	20mLs	—	0.02		<0.1
66	K8809-04	↓	↓	—	0.02		<0.1
67	-05	↓	↓	—	0.02		<0.1
68	-06	↓	↓	—	0.02		<0.1
69	K8860-01	↓	↓	—	0.01		<0.1
70	-01D	↓	↓	—	0.02		<0.1
71	-01S	↓	↓	—	1.03		1.03/103%
72	-05	↓	↓	—	0.02		<0.1
73	K8825-01	↓	↓	—	0.16		0.16
74	-02	↓	↓	—	0.02		<0.1
75	CCV7	—	—	—	5.42		108%

Comments: Reporting Levels:

Waters - 0.2 µg/L
Soil - 0.02 mg/kg
TCLP - 1 µg/L
Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	3 of 4

[HGFORM.XLW] HG3.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
~~51~~ 76	CCB7	—	—	—	0.01		<0.1
~~52~~ 77	~~K8099-02~~	20mLS	20mLS	—	0.03		<0.1
~~53~~ 78	CCV8						
~~54~~ 79	CCB8	—	—	—			
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							

AB 11/14/03

AB 11/14/03

Comments: Reporting Levels:

Waters - 0.2 µg/L
Soil - 0.02 mg/kg
TCLP - 1 µg/L
Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	4 of 4

[HGFORM.XLW] HG3.XLS

CETAC Hg Analysis Report - 03111400.DB - Friday, November 14, 2003, 11:48:35 AM

Analyst ANGELA BAIRD
Date Started Friday, November 14, 2003, 09:31:10
Worksheet Hg 11/14/03 RUN1
Comment KA0322708
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	14-Nov-2003, 09:31	0.00	9.53	1.00	37	35	31	30	
Standard #1	14-Nov-2003, 09:32	0.20	4.34	1.00	750	792	820	826	
Standard #2	14-Nov-2003, 09:34	0.50	3.22	1.00	1948	2056	2090	2084	
Standard #3	14-Nov-2003, 09:35	1.00	3.26	1.00	3896	4095	4192	4162	
Standard #4	14-Nov-2003, 09:37	5.00	5.30	1.00	17711	18905	19671	19981	
Standard #5	14-Nov-2003, 09:39	10.00	3.07	1.00	37898	39851	40638	40263	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	14-Nov-2003, 09:40	4.96	2.61	1.00	18798	19543	19857	19901	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	14-Nov-2003, 09:42	0.01	21.10	1.00	23	18	11	9	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	14-Nov-2003, 09:44	5.10	2.97	1.00	19205	20153	20487	20443	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	14-Nov-2003, 09:45	0.01	34.80	1.00	14	8	5	-4	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	14-Nov-2003, 09:47	0.21	2.05	1.00	784	821	818	809	
PBW(KP0314606)	14-Nov-2003, 09:48	0.01	10.00	1.00	41	46	34	36	
LCSW(KP0314606)	14-Nov-2003, 09:50	5.12	2.92	1.00	19308	20215	20576	20532	
K8880-01	14-Nov-2003, 09:52	0.05	3.89	1.00	179	177	164	168	
K8880-01D	14-Nov-2003, 09:53	0.05	3.00	1.00	197	194	188	183	
K8880-01S	14-Nov-2003, 09:55	0.87	2.62	1.00	3283	3423	3480	3465	
PBW(KP0314607)	14-Nov-2003, 09:56	0.01	36.10	1.00	44	35	21	9	
LCSW(KP0314607)	14-Nov-2003, 09:58	5.03	3.64	1.00	18754	19801	20302	20264	
K8419-01T	14-Nov-2003, 10:00	0.01	16.40	1.00	14	19	11	8	
K8419-02T	14-Nov-2003, 10:01	0.01	12.00	1.00	35	31	22	29	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	14-Nov-2003, 10:03	5.17	3.00	1.00	19450	20462	20807	20649	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	14-Nov-2003, 10:04	0.01	34.40	1.00	14	8	-1	-1	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8419-03T	14-Nov-2003, 10:06	0.01	8.73	1.00	44	43	36	34	
K8419-04T	14-Nov-2003, 10:08	0.01	28.50	1.00	44	36	30	13	
K8419-04DT	14-Nov-2003, 10:09	0.02	8.46	1.00	69	57	56	56	
K8419-04ST	14-Nov-2003, 10:11	0.98	3.66	1.00	3631	3833	3937	3924	
K8419-05T	14-Nov-2003, 10:13	0.01	9.06	1.00	50	42	40	37	
K8419-06T	14-Nov-2003, 10:14	0.01	17.60	1.00	52	38	34	29	
K8419-08T	14-Nov-2003, 10:16	0.02	12.80	1.00	75	69	57	54	
K8419-09T	14-Nov-2003, 10:17	0.02	15.90	1.00	74	55	57	45	
K8419-10T	14-Nov-2003, 10:19	0.03	1.67	1.00	87	84	85	84	
K8419-01D	14-Nov-2003, 10:21	0.02	8.03	1.00	53	48	48	40	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	14-Nov-2003, 10:22	5.07	4.49	1.00	18693	19974	20589	20607	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	14-Nov-2003, 10:24	0.01	39.60	1.00	26	13	2	4	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8419-02D	14-Nov-2003, 10:25	0.01	11.80	1.00	47	36	36	32	
K8419-03D	14-Nov-2003, 10:27	0.01	23.30	1.00	50	38	29	23	
K8419-04D	14-Nov-2003, 10:29	0.01	4.44	1.00	30	29	29	26	
K8419-05D	14-Nov-2003, 10:30	0.01	30.90	1.00	39	27	12	15	
K8419-06D	14-Nov-2003, 10:32	0.01	18.70	1.00	56	47	35	32	
K8419-07D	14-Nov-2003, 10:34	0.01	26.30	1.00	38	33	21	13	
K8862-01	14-Nov-2003, 10:35	0.01	29.00	1.00	43	35	17	18	
K8862-01D	14-Nov-2003, 10:37	0.01	12.70	1.00	45	49	37	33	
K8862-01S	14-Nov-2003, 10:39	0.98	3.14	1.00	3679	3855	3942	3932	
K8892-01	14-Nov-2003, 10:40	0.01	15.60	1.00	18	20	13	9	

CETAC Hg Analysis Report - 03111400.DB - Friday, November 14, 2003, 11:48:35 AM

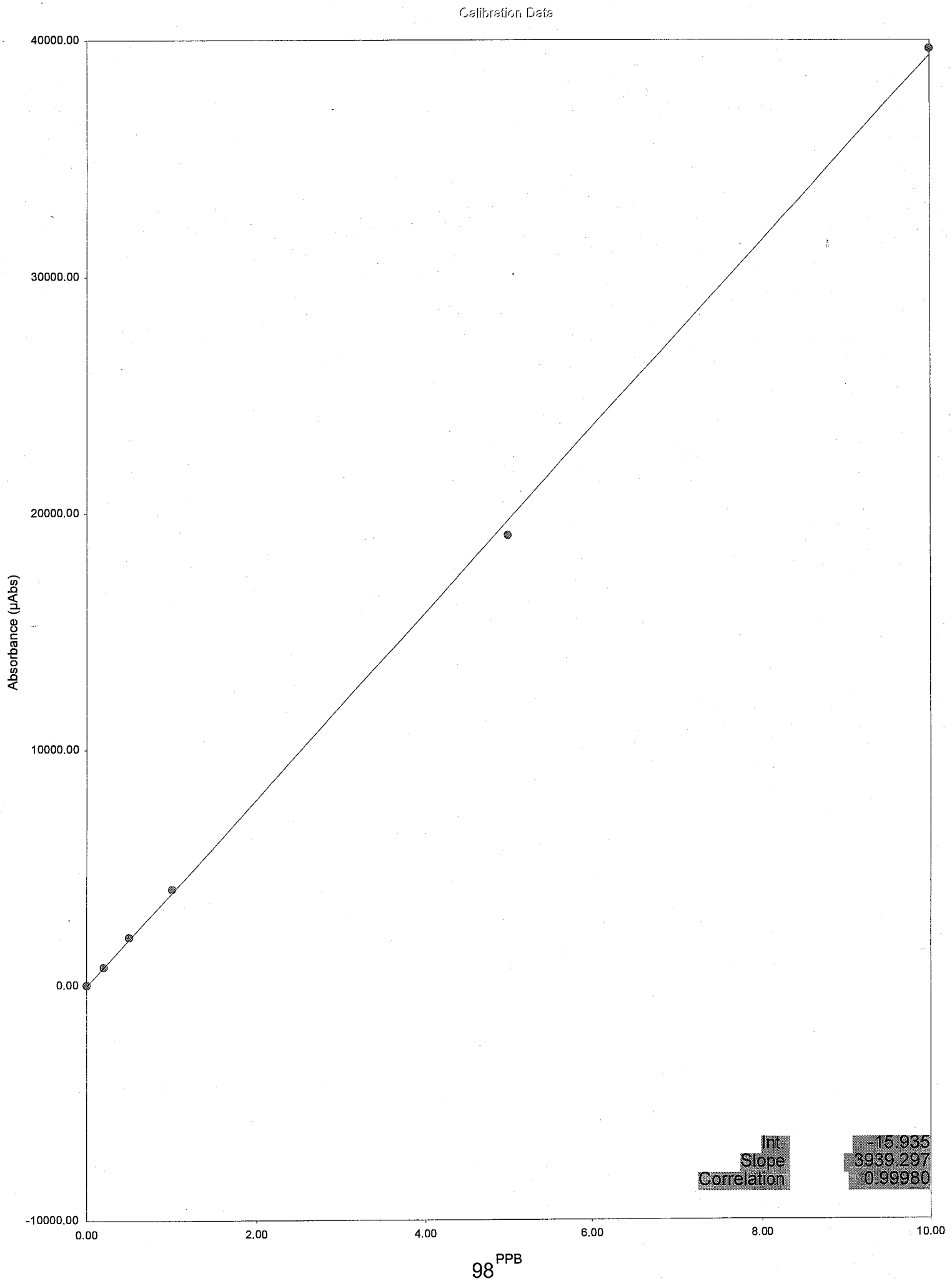
Analyst ANGELA BAIRD
Date Started Friday, November 14, 2003, 10:42:12
Worksheet Hg 11/14/03 RUN1
Comment KA0322708
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV4	14-Nov-2003, 10:42	5.21	3.47	1.00	19489	20570	21043	20945	
CCB4	14-Nov-2003, 10:43	0.01	24.60	1.00	27	29	12	13	
K8892-01D	14-Nov-2003, 10:45	0.01	17.80	1.00	41	33	31	21	
K8892-01S	14-Nov-2003, 10:47	1.01	3.25	1.00	3797	3986	4080	4065	
K8881-01	14-Nov-2003, 10:48	0.02	7.24	1.00	46	44	37	46	
K8881-01D	14-Nov-2003, 10:50	0.01	51.60	1.00	24	19	2	-4	
K8881-01S	14-Nov-2003, 10:51	1.05	2.80	1.00	3935	4114	4190	4166	
K8881-02	14-Nov-2003, 10:53	0.02	6.86	1.00	79	74	66	69	
PBW(KP0314608)	14-Nov-2003, 10:55	0.02	20.00	1.00	62	54	40	35	
LCSW(KP0314608)	14-Nov-2003, 10:56	5.14	3.26	1.00	19286	20298	20716	20647	
K8433-10	14-Nov-2003, 10:58	0.01	20.40	1.00	31	21	16	14	
K8433-11	14-Nov-2003, 11:00	0.01	32.20	1.00	22	13	2	8	
CCV5	14-Nov-2003, 11:01	5.28	3.24	1.00	19827	20805	21284	21224	
CCB5	14-Nov-2003, 11:03	0.00	17.20	1.00	2	6	5	-2	
K8433-11D	14-Nov-2003, 11:05	0.02	11.20	1.00	53	39	43	39	
K8433-11S	14-Nov-2003, 11:06	1.03	3.09	1.00	3843	4038	4117	4097	
K8433-12	14-Nov-2003, 11:08	0.02	9.25	1.00	64	60	54	49	
K8433-13	14-Nov-2003, 11:09	0.02	12.10	1.00	59	49	47	40	
K8433-14	14-Nov-2003, 11:11	0.01	17.90	1.00	52	47	29	37	
K8433-15	14-Nov-2003, 11:13	0.02	15.20	1.00	80	65	52	56	
K8865-01	14-Nov-2003, 11:14	0.03	14.80	1.00	96	94	74	67	
K8865-01D	14-Nov-2003, 11:16	0.03	13.80	1.00	98	93	82	67	
K8865-01S	14-Nov-2003, 11:18	0.99	3.06	1.00	3712	3905	3972	3957	
K8865-02	14-Nov-2003, 11:19	0.02	5.84	1.00	67	61	56	61	
CCV6	14-Nov-2003, 11:21	5.24	3.31	1.00	19649	20736	21154	21025	
CCB6	14-Nov-2003, 11:23	0.01	11.40	1.00	40	33	30	28	
K8757-01	14-Nov-2003, 11:24	0.02	8.28	1.00	59	58	53	46	
K8809-04	14-Nov-2003, 11:26	0.02	2.78	1.00	82	81	79	85	
K8809-05	14-Nov-2003, 11:27	0.02	6.79	1.00	78	77	71	65	
K8809-06	14-Nov-2003, 11:29	0.02	12.70	1.00	86	80	68	61	
K8860-01	14-Nov-2003, 11:31	0.01	17.10	1.00	51	45	35	30	
K8860-01D	14-Nov-2003, 11:32	0.02	15.20	1.00	67	59	46	46	
K8860-01S	14-Nov-2003, 11:34	1.03	4.06	1.00	3809	4070	4157	4159	
K8860-05	14-Nov-2003, 11:36	0.02	18.10	1.00	68	52	44	41	
K8825-01	14-Nov-2003, 11:37	0.16	0.85	1.00	604	612	614	604	
K8825-02	14-Nov-2003, 11:39	0.02	7.25	1.00	76	75	67	63	
CCV7	14-Nov-2003, 11:41	5.42	3.22	1.00	20341	21416	21842	21746	
CCB7	14-Nov-2003, 11:42	0.01	30.40	1.00	26	19	8	6	
K8699-02	14-Nov-2003, 11:44	0.03	4.81	1.00	111	106	104	97	

CETAC Hg Analysis Report - 03111400.DB - Friday, November 14, 2003, 11:48:36 AM

Analyst ANGELA BAIRD
Date Started Friday, November 14, 2003, 11:46:03
Worksheet Hg 11/14/03 RUN1
Comment KA0322708
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV8	14-Nov-2003, 11:46	5.50	2.86	1.00	20763	21775	22127	22008	Q


Calibration Data
40000.00
30000.00
20000.00
10000.00
0.00
-10000.00
Absorbance (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
PPB
Int
Slope
Correlation
-15.935
3939.297
0.99980

Columbia Analytical Services
EPA METHOD 245.1

Extr/Prep Batch
KP0314606

Service Request Number(s): K8880

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PBW	100mls	100mls			
LCSW@	↓	↓			
K8880-01	50mls	↓			
↓ -01D	↓	↓			
↓ -01S	↓	↓			
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

AB 11/13/03

Lot # of Reagents Used:

HNO3:Y23049 **K2S2O8: T44H13** **NaCl :Y07624**

H2SO4: 42357 **KMnO4:V25588** **NH2OH-HCL: Y06477**

HCl: 42167 **SnCl2:Y23648**

LCSS = **ERA CLP Soil Lot # 246** **Other:** Waterbath temp. 95°

@ **LCSW=0.5mls** **ICV Intermediate stock solution.**

*** Source Standard:** Hg1-23-Y 100ppb

**** Source Standard: ICV** Hg1-22-P 1000ppb **TIME STARTED:**

Comments: *10ml Hg1-23-Y 100ppb

Analyst: Angela Baird **Date:** 11/13/03

[HGFORM.XLW] 254.1

Extr/Prep Batch
KP0314607

Columbia Analytical Services
EPA METHOD 7470A

Extr/Prep Batch
KP0314608

Service Request Number(s): K8419, 8433, 8865, 8757, 8809, 8860, 8825, 8862, 8892

Sample	Initial Volume	Final Volume
PBW	20mls.	20mls.
LCSW(A)		
K8419-01 Total		
-02		
-03		
-04		
-04D		
-04S*		
-05		
-06		
-08		
-09		
-10		
K8419-01 DISS		
-02		
-03		
-04		
-05		
-06		
-07		
K8862-01		
-01D		
-01S*		
K8892-01		
-01D		
-01S*		
K8881-01		
-01D		
-01S*		
-02		
AB 11/13/03		

Sample	Initial Volume	Final Volume
PBW	20mls.	20mls.
LCSW(A)		
K8433-10		
-11		
-11D		
-11S*		
-12		
-13		
-14		
-15		
K8865-01		
-01D		
-01S*		
-02		
K8757-01		
K8809-04		
-05		
-06		
K8860-01		
-01D		
-01S*		
-05		
K8825-01		
-02		
AB 11/13/03		
Std. 0.2	0.2 *	100
Std. 0.5	0.5 *	100
Std. 1.0	1.0 *	100
Std. 5.0	5.0 *	100
Std. 10.0	10.0 *	100
ICV	0.5 **	100

18
20
18
1
10
20

Lot # of Reagents Used:
HNO3:Y23049
H2SO4: 42357
HCl:42167
K2S2O8: T44H13
KMnO4:V25588
SnCl2:Y23648
NaCl :Y07624
NH2OH-HCL: Y06477

LCSS =
LCSW=0.1mls
ERA CLP Soil Lot # 246
ICV Intermediate stock solution.
Other: Waterbath temp. 95°

*** Source Standard:** Hg1-23-Y 100ppb
**** Source Standard: ICV** Hg1-22-P 1000ppb

TIME STARTED:

Comments: *0.2 mls Hg1-23-Y 100ppb

Analyst: Angela Baird

Date: 11/13/03

[HGFORM.XLW] 7470

Atomic Absorption Data Review Form

Element Se AA # 6

Analytical Batch
KA0319821
Analysis Lot # _____

Cal Std/CCV Source GFI-28-L

Service Request Numbers:

8419, 8433

	Yes	No	NA
1) Appropriate Standardization Completed	✓	___	___
2) ICV within 10% of true value.	✓	___	___
3) CCVs in Control	✓	___	___
4) CCB's and/or ICB's below MRL	✓	___	___
5) All reported results within calibration range	✓	___	___
6) Calculations Correct	✓	___	___

Comments :

Reviewed By: [signature] Date: 11/25/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
GFAA
ANALYTICAL WORKSHEET

Method: (Circle Method Used) 7060A 7421 7740 7841 200.9 Other: _____ Element: As Pb Se Tl ____	Service Request # : 8419, 8433

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	PBW 8419	50	50		<1		<1
2	LCSW				17.94		90%
3	8419-1				<1		<1
4	4A				14.77		74%
5	4D				<1		<1
6	4S				13.92		13.9/70%
7	1				<1		<1
8	2				<1		<1
9	3				<1		<1
10	5				<1		<1
11	6				<1		<1
12	8				<1		<1
13	9				<1		<1
14	10				<1		<1
15	1 diss				<1		<1
16	2				<1		<1
17	3				<1		<1
18	4				<1		<1
19	4A				14.45		72%
20	4D				<1		<1
21	4S				13.73		13.7/68%
22	5				<1		<1
23	6				<1		<1
24	7				<1		<1
25	PBW 8433				<1		<1

Comments: 8419-4S @ 20 ug/l

Analyst	Date:	Page Number:
[signature]	11/25/03	1

[GFAADATA] GFAA1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
GFAA
ANALYTICAL WORKSHEET

Method: (Circle Method Used) 7060A 7421 7740 7841 200.9 Other: _____ Element: As Pb Se Tl ____	Service Request # : 8433

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	LCSW	50	50		15.78		79%
27	8433 15				<1		<1
28	15A				14.55		73%
29	15D				<1		<1
30	15S				13.69		13.7
31	12				<1		<1
32	13				<1		<1
33	14				<1		<1
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							

Comments: 8433-15S @ 20 µg/l

Analyst	Date:	Page Number:
[signature]	11/25/03	2

[GFAADATA] GFAA2.XLS

Analyst C.J. Bruno
Date Started 2:57 PM 11/24/2003
Worksheet Se 11/24/03 PM V-6
Comment Varian 6
Methods Se

Varian 6
Columbia Analytical Services
1317 S. 13TH Ave.
Kelso, WA 98626

Method: Se (Furnace)

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
CAL ZERO	0.00	5.3	0.0029	0.0399	0.0030	0.0028	1/24/2003	06:30 PM
STANDARD 1	5.00	1.1	0.0213	0.0427	0.0215	0.0212	1/24/2003	10:50 PM
STANDARD 2	10.00	1.0	0.0464	0.0421	0.0468	0.0461	1/24/2003	15:10 PM
STANDARD 3	20.00	0.4	0.0944	0.0539	0.0947	0.0942	1/24/2003	19:30 PM
STANDARD 4	30.00	0.4	0.1457	0.0706	0.1453	0.1460	1/24/2003	23:50 PM
	QC Test: Correlation coefficient 0.9996 within 0.9950 limit							
STANDARD 5	40.00	0.9	0.1961	0.0688	0.1973	0.1949	1/24/2003	28:10 PM
	Curve Fit		= Linear Origin					
	Characteristic Conc		= 1.81 µg/L					
	r		= 0.9996					
	Calculated Conc		= 0.59 4.40 9.57 19.46 30.03					
	Residuals		= -0.59 0.60 0.43 0.54 -0.03					
	QC Test: ICV recovery 103.4%R - within limits							
~ICV	25.84	0.5	0.1254	0.0639	0.1249	0.1259	1/24/2003	32:30 PM
	QC Test: ICB Concentration 0.49 less than limit							
~ICB	0.49	17.7	0.0024	0.0433	0.0027	0.0021	1/24/2003	36:40 PM
	QC Test: CRDL recovery 101.8%R - within limits							
~CRDL	5.09	0.9	0.0247	0.0401	0.0248	0.0245	1/24/2003	41:02 PM
	QC Test: CCV recovery 99.6%R - within limits							
~CCV	19.91	0.2	0.0966	0.0486	0.0964	0.0968	1/24/2003	45:22 PM
	QC Test: CCB Concentration 0.21 less than limit							
~CCB	0.21	16.6	0.0010	0.0399	0.0011	0.0009	1/24/2003	49:32 PM
PBW 8419	0.28	>100	0.0014	0.0424	0.0028	-0.0001	1/24/2003	53:54 PM
LCSW	17.94	1.6	0.0870	0.0504	0.0861	0.0880	1/24/2003	58:12 PM
K8419-04	0.10	12.9	0.0005	0.0505	0.0005	0.0005	1/24/2003	02:30 PM
K8419-04A	14.77	1.2	0.0716	0.0660	0.0711	0.0722	1/24/2003	06:48 PM
K8419-04D	-0.06	>100	-0.0003	0.0560	0.0002	-0.0008	1/24/2003	11:06 PM
K8419-04S	13.92	1.9	0.0675	0.0634	0.0666	0.0684	1/24/2003	15:26 PM
K8419-01	-0.09	>100	-0.0004	0.0643	-0.0009	0.0000	1/24/2003	19:46 PM
K8419-02	-0.03	>100	-0.0002	0.0544	-0.0006	0.0003	1/24/2003	24:04 PM
K8419-03	-0.16	0.9	-0.0008	0.0473	-0.0008	-0.0008	1/24/2003	28:22 PM
K8419-05	-0.23	50.6	-0.0011	0.0534	-0.0007	-0.0015	1/24/2003	32:40 PM
	QC Test: CCV recovery 96.2%R - within limits							
~CCV	19.24	0.5	0.0933	0.0610	0.0936	0.0930	1/24/2003	37:00 PM
	QC Test: CCB Concentration -0.13 less than limit							
~CCB	-0.13	>100	-0.0006	0.0390	-0.0001	-0.0012	1/24/2003	41:12 PM
K8419-06	-0.21	>100	-0.0010	0.0548	-0.0002	-0.0018	1/24/2003	45:32 PM
K8419-08	-0.09	>100	-0.0005	0.0584	-0.0011	0.0002	1/24/2003	49:52 PM
K8419-09	-0.07	>100	-0.0003	0.0567	-0.0008	0.0001	1/24/2003	54:12 PM
K8419-10	-0.17	90.5	-0.0008	0.0608	-0.0013	-0.0003	1/24/2003	58:34 PM
K8419-01 DISS	-0.27	20.9	-0.0013	0.0487	-0.0015	-0.0011	1/24/2003	02:54 PM
K8419-02	0.04	>100	0.0002	0.0670	-0.0005	0.0009	1/24/2003	07:16 PM
K8419-03	-0.20	>100	-0.0010	0.0637	-0.0022	0.0002	1/24/2003	11:36 PM
K8419-04	-0.20	21.6	-0.0009	0.0613	-0.0011	-0.0008	1/24/2003	15:58 PM
K8419-04A	14.43	0.5	0.0700	0.0745	0.0703	0.0698	1/24/2003	20:20 PM

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
K8419-04D	-0.15	71.1	-0.0007	0.0513	-0.0011	-0.0004	1/24/2003	24:40 PM
	QC Test: CCV recovery 95.8%R - within limits							
~CCV	19.15	0.1	0.0929	0.0626	0.0930	0.0928	1/24/2003	29:02 PM
	QC Test: CCB Concentration 0.22 less than limit							
~CCB	0.22	52.7	0.0011	0.0572	0.0007	0.0015	1/24/2003	33:12 PM
K8419-04S	13.73	0.9	0.0666	0.0658	0.0670	0.0662	1/24/2003	37:34 PM
K8419-05	0.05	>100	0.0002	0.0615	0.0013	-0.0008	1/24/2003	41:52 PM
K8419-06	-0.16	52.9	-0.0008	0.0516	-0.0011	-0.0005	1/24/2003	46:12 PM
K8419-07	-0.22	86.9	-0.0011	0.0405	-0.0017	-0.0004	1/24/2003	50:32 PM
PBW8433	-0.39	69.7	-0.0019	0.0406	-0.0009	-0.0028	1/24/2003	54:50 PM
LCSW	15.78	2.4	0.0765	0.0563	0.0778	0.0752	1/24/2003	59:10 PM
K8433-15	-0.34	77.6	-0.0016	0.0563	-0.0025	-0.0007	1/24/2003	03:28 PM
K8433-15A	14.55	1.2	0.0706	0.0537	0.0700	0.0712	1/24/2003	07:46 PM
K8433-15D	-0.26	41.4	-0.0013	0.0491	-0.0009	-0.0016	1/24/2003	12:04 PM
K8433-15S	13.69	0.1	0.0664	0.0557	0.0665	0.0663	1/24/2003	16:24 PM
	QC Test: CCV recovery 96.8%R - within limits							
~CCV	19.37	0.5	0.0940	0.0608	0.0943	0.0937	1/24/2003	20:44 PM
	QC Test: CCB Concentration -0.29 less than limit							
~CCB	-0.29	20.2	-0.0014	0.0464	-0.0012	-0.0016	1/24/2003	24:54 PM
K8433-12	-0.32	3.3	-0.0016	0.0729	-0.0016	-0.0015	1/24/2003	29:16 PM
K8433-13	-0.30	49.7	-0.0015	0.0577	-0.0020	-0.0009	1/24/2003	33:34 PM
K8433-14	-0.11	>100	-0.0006	0.0926	-0.0016	0.0005	1/24/2003	37:52 PM
	-0.53	26.4	-0.0026	0.0966	-0.0030	-0.0021	1/24/2003	42:12 PM
	-0.26	0.5	-0.0013	0.1000	-0.0013	-0.0013	1/24/2003	46:32 PM
	-0.29	71.6	-0.0014	0.0469	-0.0021	-0.0007	1/24/2003	50:52 PM
	-0.18	24.4	-0.0009	0.0492	-0.0010	-0.0007	1/24/2003	55:12 PM
	-0.24	51.7	-0.0012	0.0362	-0.0007	-0.0016	1/24/2003	59:32 PM
	QC Test: CRDL recovery 96.4%R - within limits							
~CRDL	4.82	1.2	0.0234	0.0549	0.0236	0.0232	1/24/2003	03:54 PM
	QC Test: CCV recovery 98.7%R - within limits							
~CCV	19.73	0.4	0.0957	0.0614	0.0955	0.0960	1/24/2003	08:14 PM
	QC Test: CCB Concentration -0.15 less than limit							
~CCB	-0.15	43.3	-0.0007	0.0492	-0.0009	-0.0005	1/24/2003	12:24 PM

Service Request # K8419

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments

Primary Review by [signature] Date 11/19/03

Secondary Review by [signature] Date 11/20/03

Method: CUMNCD Sample Name: CDMNCU Operator: MMR
Run Time: 11/19/03 09:05:36
Comment: ICP2-7-E KA0322954
Mode: IR Corr. Factor: 1

Elem	Cd2288	Mn2576
Avge	521.2	7.564
SDev	2.7	.011
%RSD	.5100	.1441
#1	523.0	7.558
#2	521.0	7.555
#3	518.0	7.590
#4	522.0	7.568
#5	522.0	7.552
#6	519.0	7.562
#7	519.0	7.569
#8	525.0	7.555
#9	518.0	7.564
#10	525.0	7.565

IntStd	1	2	3	4	5	6	7
Mode	*Counts	None	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Cu	--	--	--	--	--	--
Wavlen	324.754	--	--	--	--	--	--
Avge	1037	1	--	--	--	--	--
SDev	6.081849	.0000000	--	--	--	--	--
%RSD	.5865415	.0000000	--	--	--	--	--
#1	1037	1	--	--	--	--	--
#2	1033	1	--	--	--	--	--
#3	1035	1	--	--	--	--	--
#4	1032	1	--	--	--	--	--
#5	1032	1	--	--	--	--	--
#6	1046	1	--	--	--	--	--
#7	1031	1	--	--	--	--	--
#8	1046	1	--	--	--	--	--
#9	1033	1	--	--	--	--	--
#10	1044	1	--	--	--	--	--

Method: EPACLP1 Standard: STD1-Blank
Run Time: 11/19/03 09:19:04

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.0113	-.0013	-.0014	-.0000	.0013	.0109	.0002
#1	.0124	-.0014	-.0020	.0001	.0013	.0109	.0000
#2	.0101	-.0011	-.0007	-.0001	.0013	.0109	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Avge	.0001	.0009	-.0003	.0008	.0004	.0036	.0004
#1	.0002	.0006	-.0003	.0010	.0007	.0034	.0004
#2	.0000	.0011	-.0003	.0006	.0001	.0037	.0004

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Avge	.0009	.0002	.0001	.0006	.0303	-.0006	-.0034
#1	.0000	.0004	.0000	.0000	.0338	-.0001	-.0030
#2	.0017	.0000	.0003	.0013	.0267	-.0010	-.0039

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Avge	.1326	.0002	.0004	.0005	.0466	.0059	.0021
#1	.1367	.0009	.0001	.0006	.0467	.0069	.0023
#2	.1286	-.0004	.0006	.0004	.0466	.0050	.0019

Elem	Tl1908	Li6707	Sr4215
Avge	-.0012	-.0001	-.0001
#1	-.0007	.0003	.0000
#2	-.0017	-.0006	-.0001

Method: EPACLP1 Standard: STD3
Run Time: 11/19/03 09:28:27

Elem	Al3082	As1936	Be3130	Ca3179	Co2286	Cu3247	Fe2599
Avge	1.171	.2545	.6708	3.709	.1321	.1606	2.927
#1	1.171	.2567	.6706	3.708	.1319	.1606	2.925
#2	1.172	.2523	.6710	3.711	.1324	.1607	2.929

Elem	Pb2203	Mg2795	Mg3832	Mn2576	Mo2020	Se1960	V_2924
Avge	.9674	3.676	.2238	1.493	.0549	.1950	.2476
#1	.9656	3.674	.2249	1.493	.0547	.1911	.2474
#2	.9691	3.677	.2227	1.493	.0550	.1989	.2477

Elem	Zn2138	Ti3349
Avge	.4213	.3089
#1	.4209	.3089
#2	.4217	.3089

Method: EPACLP1 Standard: STD2
Run Time: 11/19/03 09:35:09

Elem	Sb2068	Ba4934	B_2496	Cd2288	Cr2677	Ni2316	K_7665
Avge	.4771	.1701	.5754	.0903	3.638	.8445	.6388
#1	.4770	.1696	.5757	.0900	3.632	.8440	.6392
#2	.4773	.1706	.5751	.0906	3.645	.8450	.6384

Elem	Ag3280	Na5889	Sn1899	P_2149	Si2881	Tl1908	Li6707
Avge	.1714	11.00	1.029	1.330	2.092	.1413	.9548
#1	.1716	10.97	1.027	1.329	2.088	.1444	.9519
#2	.1711	11.03	1.031	1.331	2.097	.1381	.9578

Elem	Sr4215
Avge	.3259
#1	.3250
#2	.3269

Method: EPACLP1 Sample Name: ICV Operator: MMR
Run Time: 11/19/03 09:38:55
Comment: ICP2-4-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.910	2.517	2.359	4.993	.1227	.0442	1.225
#1	4.927	2.506	2.366	4.999	.1226	.0518	1.216
#2	4.894	2.527	2.352	4.987	.1228	.0366	1.233

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.30	.5057	1.225	.6174	2.480	2.417	12.18
#1	12.31	.5059	1.224	.6178	2.480	2.424	12.18
#2	12.28	.5055	1.226	.6169	2.480	2.411	12.18

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.24	1.222	1.938	1.239	12.37	2.430	.6186
#1	12.23	1.221	1.929	1.250	12.60	2.398	.6207
#2	12.24	1.222	1.947	1.228	12.14	2.462	.6166

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.72	-.0104	1.241	1.228	.2017	.0487	2.016
#1	12.71	.0025	1.243	1.227	.2462	.0494	2.049
#2	12.74	-.0232	1.239	1.229	.1572	.0480	1.982

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	2.490	.0015	.0024
#1	2.420	.0000	.0024
#2	2.561	.0030	.0024

Method: EPACLP1 Sample Name: ICV-STD4 Operator: MMR
Run Time: 11/19/03 09:41:10
Comment: ICP2-7-D KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0182	.0513	-.0148	.0008	.0002	10.28	-.0004
#1	.0168	.0392	-.0194	.0015	.0002	10.25	-.0034
#2	.0196	.0635	-.0103	.0002	.0002	10.30	.0026

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0135	-.0002	.0016	.0098	.0066	.0015	.0072
#1	.0136	.0022	.0029	.0094	.0076	.0015	.0074
#2	.0134	-.0025	.0003	.0103	.0056	.0015	.0070

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0257	.0001	.0117	-.0093	.3492	.0205	.0004
#1	.0771	-.0002	.0209	-.0059	.5194	.0088	-.0008
#2	-.1286	.0003	.0026	-.0127	.1790	.0321	.0016

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0457	5.036	-.0005	-.0008	5.022	5.099	.0007
#1	.0424	5.083	.0016	-.0008	5.055	5.086	.0012
#2	.0490	4.990	-.0026	-.0008	4.989	5.112	.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0802	5.050	1.966
#1	.0952	5.032	1.961
#2	.0651	5.068	1.972

Method: EPACLP1 Sample Name: ICB Operator: MMR
Run Time: 11/19/03 09:44:29
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0326	.0302	.0202	.0004	.0001	.0164	-.0029
#1	.0406	.0242	.0145	.0006	.0000	.0202	-.0027
#2	.0245	.0363	.0259	.0002	.0002	.0126	-.0030

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0012	-.0024	.0033	.0022	-.0001	-.0200	.0002
#1	.0010	-.0024	.0054	.0022	.0000	-.0252	.0004
#2	.0014	-.0024	.0011	.0022	-.0002	-.0148	-.0000

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0707	-.0000	.0052	-.0068	.3903	.0365	.0053
#1	.0129	.0001	.0052	-.0042	.4783	.0146	.0057
#2	.1286	-.0001	.0052	-.0093	.3022	.0584	.0049

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0224	.0034	-.0008	.0009	.0022	.0188	-.0000
#1	.0279	-.0021	-.0014	.0009	.0024	.0277	.0002
#2	.0168	.0089	-.0003	.0009	.0020	.0099	-.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0201	.0022	.0000
#1	.1253	.0007	.0002
#2	-.0852	.0037	-.0002

Method: EPACLP1 Sample Name: CCV1 Operator: MMR
Run Time: 11/19/03 09:46:29
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.970	5.051	1.957	.5051	.4974	5.013	.4985
#1	4.929	5.038	1.967	.5012	.4948	5.001	.4970
#2	5.022	5.097	1.953	.5125	.5014	5.046	.5038
#3	4.972	5.007	1.944	.5045	.4980	5.011	.4960
#4	4.956	5.064	1.965	.5024	.4955	4.996	.4971

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.976	5.039	.4942	.4958	4.979	4.954	4.990
#1	4.932	4.997	.4885	.4893	4.946	4.911	4.955
#2	5.025	5.090	.5006	.5027	5.034	5.029	5.035
#3	4.976	5.039	.4928	.4955	4.976	4.937	4.992
#4	4.969	5.032	.4951	.4955	4.963	4.939	4.977

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.914	.4950	.4956	5.056	25.13	1.974	.5075
#1	Q4.748	.4915	.4865	5.003	25.68	1.990	.5012
#2	4.986	.4992	.4996	5.125	25.21	1.958	.5168
#3	4.928	.4953	.4969	5.029	24.48	2.016	.5053
#4	4.992	.4940	.4996	5.068	25.14	1.931	.5069

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.27	5.035	.4966	2.482	25.02	5.074	.4981
#1	25.11	5.009	.4920	2.469	25.03	5.039	.4990
#2	25.42	5.067	.5012	2.499	25.27	5.121	.5027
#3	25.36	5.021	.4969	2.489	25.01	5.073	.4962
#4	25.18	5.043	.4963	2.472	24.76	5.063	.4948

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.045	5.037	.5027
#1	4.912	5.013	.4985
#2	4.972	5.051	.5094
#3	5.213	5.075	.5028
#4	5.083	5.011	.5002

Method: EPACLP1 Sample Name: CCB1 Operator: MMR
Run Time: 11/19/03 09:49:19
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0079	.0226	.0385	.0002	.0002	.0227	-.0025
#1	.0122	.0119	.0169	.0002	.0002	.0278	-.0012
#2	.0036	.0332	.0600	.0002	.0002	.0177	-.0038

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0047	.0029	.0043	-.0000	-.0002	-.0059	.0010
#1	.0060	.0035	.0044	-.0013	.0005	-.0118	.0016
#2	.0035	.0024	.0043	.0013	-.0010	.0000	.0004

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0965	.0000	.0078	-.0008	.5663	.0409	.0037
#1	.1158	.0000	Q.0104	-.0059	.6602	.0467	.0041
#2	.0772	.0000	.0052	.0042	.4724	.0351	.0033

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0375	.0055	-.0011	.0017	.0468	.0157	-.0000
#1	.0398	.0172	-.0002	.0026	.0021	.0174	-.0007
#2	.0352	-.0062	-.0019	.0008	.0914	.0140	.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0702	.0034	.0000
#1	.0752	.0037	.0002
#2	.0652	.0030	-.0002

Method: EPACLP1 Sample Name: CRI Operator: MMR
Run Time: 11/19/03 09:54:10
Comment: ICP2-14-B KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0529	.0560	.1095	.0055	.0051	-.0000	.0029
#1	.0617	.0455	.1185	.0048	.0051	.0025	.0027
#2	.0442	.0665	.1004	.0061	.0051	-.0026	.0031

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0587	.0055	.0112	.0094	.0210	.0460	.0235
#1	.0582	.0047	.0139	.0094	.0200	.0460	.0222
#2	.0591	.0063	.0085	.0094	.0220	.0460	.0249

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0289	.0056	.0104	.0127	2.148	.1475	.0140
#1	Q-.0065	.0058	.0078	.0161	1.910	Q.1548	.0132
#2	Q.0642	.0055	.0130	Q.0093	2.386	.1402	.0148

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1348	-.0240	.0099	.0093	.0661	.0109	.0002
#1	.1338	-.0240	.0090	.0093	.0634	.0065	.0002
#2	.1357	-.0240	.0107	.0093	.0688	.0154	.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0651	-.0007	.0002
#1	.0050	.0045	.0002
#2	.1252	-.0060	.0002

Method: EPACLP1 Sample Name: ICSA Operator: MMR
Run Time: 11/19/03 10:01:37
Comment: ICP2-3-F KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	490.3	.0651	-.1782	.0008	.0001	-.0177	.0056
#1	491.8	.0182	-.1101	.0010	-.0000	-.0173	.0031
#2	488.9	.1120	-.2463	.0006	.0002	-.0182	.0081

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	459.8	-.0029	-.0013	.0026	177.1	.1124	245.2
#1	460.4	-.0021	-.0034	.0022	177.4	.0988	245.0
#2	459.2	-.0037	.0008	.0030	176.8	.1260	245.4

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	476.5	.0185	.0085	-.0012	-.4519	-.0422	.0115
#1	478.4	.0186	.0150	.0030	-.5135	-.0056	.0116
#2	474.5	.0185	.0019	-.0055	-.3903	-.0787	.0114

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0118	-.0394	.0058	.0138	-.8726	.1451	.0130
#1	-.0016	-.0276	.0047	.0154	-.8644	.1492	.0128
#2	.0253	-.0511	.0068	.0121	-.8808	.1410	.0133

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.9374	.0052	.0046
#1	1.001	.0060	.0046
#2	.8742	.0045	.0046

Method: EPACLP1 Sample Name: ICSAB Operator: MMR
Run Time: 11/19/03 10:03:07
Comment: ICP2-10-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	500.0	1.067	-.0853	.4772	.4596	-.0123	.9624
#1	501.7	1.106	-.1263	.4789	.4605	-.0044	.9603
#2	498.2	1.027	-.0442	.4755	.4587	-.0202	.9645

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	469.2	.4519	.4402	.4713	180.1	.9750	247.8
#1	469.5	.4503	.4396	.4700	180.7	.9640	247.8
#2	468.9	.4534	.4407	.4726	179.6	.9860	247.7

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	485.0	.4641	.0062	.8858	.7541	-.0466	.9683
#1	487.1	.4659	.0076	.8935	.4783	-.0991	.9688
#2	482.8	.4623	.0049	.8782	1.030	.0059	.9677

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0069	-.0562	.4631	.9407	-.7600	.1527	.0140
#1	-.0181	-.0610	.4620	.9414	-.7704	.1531	.0133
#2	.0043	-.0515	.4642	.9399	-.7495	.1524	.0147

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.8532	.0037	.0048
#1	1.045	.0030	.0046
#2	.6612	.0045	.0050

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 10:05:05
Comment: K2308709 K8710 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0424	L.0151	L-.0115	L.0006	L.0001	L.0012	L-.0005
#1	.0479	L.0120	L-.0217	L.0002	L.0000	L.0000	L-.0018
#2	.0369	L.0182	L-.0013	L.0010	L.0002	L.0025	L.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0177	L-.0024	L.0011	L.0009	.0095	L-.0082	.0126
#1	.0215	L-.0024	L-.0011	L-.0004	.0132	L-.0149	.0187
#2	L.0139	L-.0024	L.0032	L.0022	L.0059	L-.0015	L.0066

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0546	L.0001	.0052	L-.0093	L.6896	L.0336	.0053
#1	L-.0194	L.0001	.0052	L-.0161	L.2846	L.0321	.0057
#2	.1286	L.0001	.0052	L-.0025	1.094	L.0351	L.0049

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0355	L-.0069	L.0003	L.0017	L.0467	L.0550	L.0002
#1	L.0240	L-.0103	L-.0008	L.0026	L.0024	L.0604	L-.0002
#2	L.0470	L-.0035	L.0015	L.0009	.0910	L.0495	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0100	L.0030	L.0002
#1	L.0049	L.0015	L.0002
#2	L.0150	L.0045	L.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 10:07:27
Comment: K2308709 K8710 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.247	2.639	2.509	5.355	.1316	1.028	1.300
#1	5.252	2.630	2.534	5.363	.1319	1.033	1.296
#2	5.243	2.648	2.484	5.347	.1312	1.023	1.305

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.06	.5351	1.315	.6588	2.615	2.510	12.91
#1	13.08	.5351	1.320	.6584	2.622	2.538	12.93
#2	13.05	.5351	1.310	.6592	2.607	2.482	12.88

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.88	1.309	1.004	1.329	13.18	2.527	.6575
#1	12.85	1.312	.9997	1.346	12.93	2.559	.6567
#2	12.91	1.306	1.008	1.312	13.44	2.494	.6583

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.54	-.0120	1.332	1.314	.1892	.0826	.0007
#1	13.59	-.0086	1.335	1.314	.1587	.0768	.0012
#2	13.50	-.0155	1.328	1.314	.2197	.0884	.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	2.675	-.0022	.0004
#1	2.840	-.0022	.0002
#2	2.510	-.0022	.0007

Method: EPACLP1 Sample Name: K8709-01 Operator: MMR
Run Time: 11/19/03 10:09:06
Comment: K2308709 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1082	L.0257	L.0176	.0313	L-.0000	.0654	L-.0028
#1	.1218	.0423	L.0186	.0309	L-.0000	.0692	L-.0028
#2	.0947	L.0090	L.0165	.0317	L-.0000	.0616	L-.0028

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.04	L-.0008	L.0004	L-.0004	.1513	L-.0150	12.03
#1	29.96	L.0004	L.0021	L-.0004	.1520	L-.0209	11.99
#2	30.11	L-.0020	L-.0012	L-.0004	.1506	L-.0090	12.06

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.15	.0137	.0091	L-.0085	3.589	L.0161	L.0017
#1	12.18	.0137	.0104	L-.0042	3.465	.0468	L.0034
#2	12.11	.0136	.0078	L-.0127	3.712	L-.0146	L.0001

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.48	L-.0186	.0064	L.0017	.2156	6.135	.0065
#1	27.35	L-.0186	.0073	L.0026	.2126	6.098	.0068
#2	27.60	L-.0186	.0055	L.0009	.2187	6.173	.0063

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0208	.0176	.2009
#1	L-.0158	.0187	.2000
#2	L-.0258	.0165	.2018

Method: EPACLP1 Sample Name: K8709-02 Operator: MMR
Run Time: 11/19/03 10:10:38
Comment: K2308709 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0943	L.0166	L-.0049	.0088	L.0000	L.0008	L-.0030
#1	.1036	L-.0000	L-.0174	.0090	L.0000	L.0021	L-.0019
#2	.0850	.0332	L.0076	.0086	L.0000	L-.0004	L-.0041

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.536	L-.0028	L.0010	L.0018	.1093	L-.0268	1.160
#1	4.538	L-.0031	L.0021	L.0022	.1090	L-.0268	1.163
#2	4.534	L-.0024	L-.0000	L.0014	.1095	L-.0268	1.158

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.131	.0056	L-.0013	L-.0127	L.4783	L.0102	L.0021
#1	1.093	.0060	L-.0026	L-.0093	L.5839	L.0263	L.0041
#2	1.170	.0052	L.0000	L-.0161	L.3727	L-.0058	L.0000

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.515	L-.0103	L-.0017	L-.0008	.1026	5.831	.0037
#1	2.532	L-.0145	L-.0026	L-.0008	L.0526	5.835	.0021
#2	2.498	L-.0062	L-.0009	L-.0008	.1526	5.828	.0054

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0908	L.0034	.0300
#1	L-.0457	L.0060	.0300
#2	L-.1360	L.0007	.0300

Method: EPACLP1 Sample Name: K8710-01 Operator: MMR
Run Time: 11/19/03 10:12:21
Comment: K2308710 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5388	.0359	L.0287	.2307	L-.0000	.0430	L-.0038
#1	.5209	L.0117	L.0039	.2349	L-.0000	.0430	L-.0009
#2	.5567	.0600	.0535	.2265	L-.0000	.0430	L-.0068

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.51	.0204	.0049	L.0027	.2604	L.0016	7.107
#1	29.79	.0188	L.0023	L-.0004	.2611	L-.0036	7.178
#2	29.23	.0219	.0075	.0058	.2596	L.0068	7.035

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.172	.4200	.0078	L-.0017	24.91	L.0073	L.0045
#1	7.271	.4245	.0078	L-.0008	24.72	L.0000	L.0000
#2	7.072	.4155	.0078	L-.0025	25.11	L.0146	.0090

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	419.5	L.0126	L.0025	.0178	.9447	7.798	.0042
#1	425.2	.0243	L.0017	.0161	.9416	7.857	.0030
#2	413.8	L.0009	L.0034	.0195	.9478	7.738	.0054

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0582	L.0075	.1348
#1	.0883	L.0022	.1365
#2	L.0281	.0127	.1330

Method: EPACLP1 Sample Name: K8710-02 Operator: MMR
Run Time: 11/19/03 10:14:31
Comment: K2308710 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1385	L.0256	L.0163	.0086	L.0001	L.0059	L-.0012
#1	.1576	.0453	L.0298	.0086	L-.0000	L.0072	L-.0015
#2	.1194	L.0060	L.0029	.0086	L.0002	L.0047	L-.0009

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.083	L.0016	L.0015	L.0018	.1568	L-.0105	.9127
#1	4.077	.0055	.0053	L.0022	.1569	L-.0002	.9088
#2	4.089	L-.0024	L-.0023	L.0014	.1566	L-.0209	.9166

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9832	.0091	L.0039	L-.0076	1.133	.0570	L.0050
#1	1.060	.0091	.0052	L-.0025	1.605	.0672	.0066
#2	.9060	.0091	L.0026	L-.0127	L.6602	.0468	L.0033

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.150	L-.0303	L.0021	L.0000	.0692	5.281	.0079
#1	2.166	L-.0254	L.0038	L.0009	.0855	5.257	.0081
#2	2.134	L-.0351	L.0003	L-.0008	L.0530	5.305	.0077

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0442	L.0019	.0291
#1	L.0242	L.0022	.0291
#2	.0643	L.0015	.0291

Method: EPACLP1 Sample Name: K8710-02D Operator: MMR
Run Time: 11/19/03 10:16:05
Comment: K2308710 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1682	.0559	L-.0042	.0090	L.0002	L.0059	L-.0030
#1	.1638	.0453	L-.0019	.0086	L.0002	L.0097	L-.0039
#2	.1727	.0665	L-.0064	.0094	L.0002	L.0021	L-.0022

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.117	L.0037	.0059	L.0023	.1703	L-.0076	.9216
#1	4.106	L.0035	.0054	L.0023	.1693	L.0013	.9185
#2	4.128	L.0039	.0064	L.0023	.1713	L-.0165	.9247

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9896	.0110	L.0000	L-.0059	1.180	L.0322	.0058
#1	1.022	.0110	.0052	L-.0076	.9067	.0584	L.0042
#2	.9574	.0110	L-.0052	L-.0042	1.452	L.0059	.0074

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.183	L-.0096	L.0015	L.0009	L.0244	5.456	.0086
#1	2.176	L-.0021	L.0021	L.0009	L-.0035	5.434	.0091
#2	2.191	L-.0172	L.0008	L.0009	L.0524	5.478	.0081

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0342	L.0052	.0296
#1	L.0542	L.0075	.0296
#2	L.0141	L.0030	.0296

Method: EPACLP1 Sample Name: CCV2 Operator: MMR
Run Time: 11/19/03 10:17:48
Comment: ICP2O-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.003	5.052	1.974	.5056	.4980	5.017	.4938
#1	4.964	5.001	1.962	.5016	.4948	4.985	.4909
#2	5.041	5.103	1.985	.5096	.5012	5.049	.4967

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.978	5.065	.5003	.4955	5.003	4.951	4.969
#1	4.961	5.037	.4976	.4920	4.973	4.951	4.941
#2	4.996	5.094	.5030	.4991	5.033	4.951	4.997

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.967	.4979	.4917	5.091	25.15	1.974	.5073
#1	5.018	.4953	.4865	5.053	25.14	1.975	.5045
#2	4.915	.5006	.4970	5.130	25.16	1.972	.5102

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.31	5.128	.4962	2.483	25.35	5.066	.5015
#1	25.08	5.120	.4945	2.469	25.40	5.028	.4980
#2	25.54	5.137	.4978	2.497	25.31	5.104	.5050

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.027	5.047	.5035
#1	5.013	4.991	.4985
#2	5.042	5.103	.5085

Method: EPACLP1 Sample Name: CCB2 Operator: MMR
Run Time: 11/19/03 10:19:36
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0480	.0498	.0179	.0008	.0000	.0114	-.0020
#1	Q.0628	Q.0695	.0280	.0006	-.0000	.0152	.0001
#2	.0332	.0301	.0078	.0010	.0000	.0076	-.0041

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0050	.0029	.0021	.0022	.0013	-.0238	.0006
#1	.0072	.0031	.0032	.0049	.0010	-.0253	.0008
#2	.0028	.0027	.0010	-.0004	.0017	-.0223	.0004

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0032	.0002	.0026	-.0059	.5164	.0482	.0057
#1	-.0064	.0001	.0026	-.0059	.9771	.0438	.0082
#2	.0000	.0003	.0026	-.0059	.0558	.0526	.0033

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0243	-.0130	-.0002	.0017	.0442	.0243	.0012
#1	.0437	-.0130	.0003	.0026	.0914	.0338	.0016
#2	.0049	-.0130	-.0008	.0009	-.0030	.0147	.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0200	.0022	.0002
#1	-.0150	.0022	.0002
#2	.0551	.0022	.0002

Method: EPACLP1 Sample Name: K8710-02S Operator: MMR
Run Time: 11/19/03 10:21:32
Comment: K2308710 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.161	.5517	.9935	2.081	.0515	1.025	.0479
#1	2.148	.5713	.9710	2.061	.0512	1.016	.0477
#2	2.175	.5320	1.016	2.101	.0518	1.034	.0482

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.111	.2108	.5142	.2562	1.203	.5005	.9185
#1	4.084	.2078	.5121	.2558	1.194	.4953	.9123
#2	4.138	.2137	.5164	.2567	1.211	.5057	.9247

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9646	.5231	.9995	.5161	1.297	.9843	.0608
#1	.9035	.5206	.9890	.5068	1.294	.9756	.0628
#2	1.026	.5257	1.010	.5255	1.300	.9931	.0588

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.152	L.0071	.5028	.5126	.0892	5.421	.0098
#1	2.139	L.0029	.4961	.5101	.1203	5.395	.0100
#2	2.164	L.0112	.5095	.5151	L.0581	5.447	.0095

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	1.111	L.0056	.0294
#1	1.126	L.0067	.0291
#2	1.096	L.0045	.0296

Method: EPACLP1 Sample Name: K8710-01 Operator: MMR
Run Time: 11/19/03 10:23:06
Comment: K2308710 DISSOLVED 25-25 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2837	.0374	L-.0214	.1858	L.0002	.0396	L.0006
#1	.2842	.0510	L-.0248	.1841	L.0002	.0383	L-.0001
#2	.2831	L.0238	L-.0180	.1875	L.0002	.0409	L.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	23.29	.0167	L.0033	L.0009	.0957	L-.0048	6.057
#1	23.09	.0173	.0043	.0031	.0952	L.0056	6.008
#2	23.50	.0161	L.0022	L-.0013	.0962	L-.0151	6.107

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.201	.2604	.0131	L-.0051	21.03	L.0365	L.0029
#1	6.211	.2582	.0157	L-.0076	21.14	L.0088	L.0041
#2	6.192	.2627	.0104	L-.0025	20.92	.0643	L.0016

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	377.0	L.0070	L.0031	.0068	.2419	6.775	.0028
#1	374.6	L.0064	L.0023	.0077	.2418	6.730	.0030
#2	379.5	L.0077	L.0039	.0060	.2419	6.820	.0026

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0574	L.0037	.1168
#1	L-.0027	L.0030	.1155
#2	.1176	L.0045	.1181

Method: EPACLP1 Sample Name: K8710-02 Operator: MMR
Run Time: 11/19/03 10:24:49
Comment: K2308710 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0461	.0483	L.0100	.0088	L.0002	L.0060	L-.0010
#1	.0505	.0634	L.0303	.0090	L.0002	L.0047	L-.0031
#2	.0418	.0333	L-.0104	.0086	L.0002	L.0072	L.0011

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.916	L.0012	.0042	L.0022	.0358	L-.0119	.8659
#1	3.946	L.0039	.0063	L.0022	.0373	L.0074	.8715
#2	3.886	L-.0016	L.0021	L.0022	.0342	L-.0312	.8602

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9804	.0048	.0052	L-.0051	1.259	.0643	L.0049
#1	.9708	.0047	.0052	L-.0110	1.582	.0672	.0058
#2	.9901	.0048	.0052	L.0008	.9360	.0614	L.0041

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.127	L-.0247	L.0021	L.0026	L-.0018	4.988	L-.0012
#1	2.205	L-.0391	L.0032	L.0026	L-.0018	5.008	L-.0030
#2	2.049	L-.0103	L.0009	L.0025	L-.0018	4.967	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0249	L.0000	.0280
#1	L.0249	L.0015	.0283
#2	L.0249	L-.0015	.0278

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 10:26:51
Comment: K2308959 K8973 K8968 K8950 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0061	.0348	L.0215	L-.0000	L.0000	L.0013	L-.0005
#1	L.0148	.0363	L.0328	L.0002	L.0000	L.0025	L-.0000
#2	L-.0026	.0332	L.0102	L-.0002	L.0000	L.0001	L-.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0017	L-.0022	L.0016	L-.0000	L.0013	L-.0193	L.0031
#1	L.0040	L-.0028	L.0021	L.0013	L.0024	L-.0311	L.0035
#2	L-.0006	L-.0016	L.0010	L-.0013	L.0002	L-.0074	L.0027

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0450	L-.0001	L.0039	L-.0059	L.1467	L.0307	L.0024
#1	L.0836	L-.0000	L.0026	L-.0042	.7306	L.0058	L.0049
#2	L-.1736	L-.0001	.0052	L-.0076	L-.4372	.0555	L-.0000

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0168	L-.0145	L-.0023	L-.0008	.0780	L.0365	L-.0002
#1	L.0082	L-.0145	L-.0020	L.0009	.0635	L.0468	L-.0007
#2	L.0253	L-.0145	L-.0025	L-.0025	.0925	L.0263	L.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0401	L-.0019	L-.0002
#1	L-.0050	L.0000	L-.0002
#2	L-.0752	L-.0037	L-.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 10:28:37
Comment: K2308959 K8973 K8968 K8950 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.209	2.628	2.543	5.318	.1310	1.032	1.305
#1	5.215	2.614	2.598	5.333	.1312	1.041	1.304
#2	5.203	2.641	2.489	5.304	.1308	1.023	1.306

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.99	.5373	1.307	.6539	2.601	2.556	12.81
#1	13.00	.5387	1.308	.6530	2.604	2.558	12.83
#2	12.98	.5359	1.306	.6548	2.599	2.555	12.80

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.84	1.304	1.011	1.321	12.91	2.538	.6529
#1	12.88	1.304	1.010	1.343	13.05	2.521	.6517
#2	12.81	1.304	1.013	1.299	12.77	2.556	.6541

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.49	-.0168	1.325	1.307	.2008	.0642	-.0002
#1	13.51	-.0099	1.327	1.306	.1588	.0495	-.0002
#2	13.47	-.0237	1.323	1.308	.2427	.0789	-.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	2.780	.0015	.0002
#1	2.760	.0060	.0002
#2	2.800	-.0030	.0002

Method: EPACLP1 Sample Name: K8959-02 Operator: MMR
Run Time: 11/19/03 10:32:27
Comment: K2308959 25-25 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0431	.0424	L.0099	.0529	L.0002	.6165	L.0006
#1	L.0295	L.0213	L.0304	.0527	L.0002	.6190	L.0016
#2	.0567	.0636	L-.0106	.0531	L.0002	.6139	L-.0005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	35.68	L-.0016	L.0026	.0040	.0194	L-.0141	H31.39
#1	35.75	L-.0039	L.0010	L.0022	.0163	L-.0178	H31.51
#2	35.61	L.0008	.0042	.0058	.0224	L-.0104	H31.27

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.53	.0007	L.0026	L-.0034	1.397	L.0000	L.0034
#1	32.56	L.0004	L.0026	L-.0008	L.5252	L-.0029	L.0017
#2	32.50	.0009	L.0026	L-.0059	2.268	L.0029	.0050

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	39.97	L-.0213	.0097	.0136	.2669	23.79	L.0009
#1	40.33	L-.0131	.0066	.0144	.2195	23.88	L.0002
#2	39.60	L-.0296	.0129	.0128	.3142	23.70	L.0016

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0751	.0194	.2574
#1	.0951	.0180	.2592
#2	L.0550	.0209	.2557

Method: EPACLP1 Sample Name: K8959-02D Operator: MMR
Run Time: 11/19/03 10:34:24
Comment: K2308959 25-25 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0578	.0544	L.0189	.0521	L.0001	.6051	L.0011
#1	.0701	.0514	L.0369	.0527	L.0002	.6139	L.0014
#2	.0455	.0575	L.0008	.0514	L-.0000	.5963	L.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	35.66	L-.0014	L.0015	.0045	.0081	L.0007	H31.39
#1	35.89	L-.0024	L.0010	.0067	.0105	L-.0060	H31.56
#2	35.43	L-.0004	L.0020	L.0022	L.0056	L.0074	H31.22

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.53	.0008	.0052	L-.0127	1.247	L-.0131	.0062
#1	32.68	.0009	.0052	L-.0161	1.282	L-.0205	.0066
#2	32.38	.0006	.0052	L-.0093	1.212	L-.0058	.0058

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	40.02	L-.0303	.0092	.0162	.2390	23.82	L.0012
#1	40.17	L-.0172	.0089	.0162	.2021	23.95	L.0007
#2	39.87	L-.0433	.0095	.0162	.2758	23.69	L.0016

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0150	.0228	.2579
#1	L.0250	.0232	.2596
#2	L.0050	.0224	.2561

Method: EPACLP1 Sample Name: K8959-02S Operator: MMR
Run Time: 11/19/03 10:35:54
Comment: K2308959 25-25 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.074	.5864	1.006	2.136	.0522	1.624	.0460
#1	2.066	.6046	1.001	2.127	.0520	1.600	.0454
#2	2.082	.5682	1.012	2.144	.0525	1.648	.0467

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	35.63	.2121	.5132	.2593	1.032	.5213	H31.26
#1	35.62	.2137	.5132	.2593	1.030	.5399	H31.21
#2	35.64	.2105	.5132	.2593	1.034	.5028	H31.31

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.36	.5126	1.026	.5111	1.699	1.041	.0638
#1	32.49	.5110	1.023	.5237	1.981	1.019	.0638
#2	32.22	.5142	1.028	.4984	1.417	1.063	.0637

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	39.61	L.0078	.5170	.5313	.2818	23.67	L.0009
#1	39.37	L.0113	.5187	.5304	.2758	23.58	L.0012
#2	39.86	L.0044	.5153	.5322	.2879	23.75	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	1.162	.0251	.2568
#1	1.217	.0277	.2561
#2	1.107	.0224	.2574

Method: EPACLP1 Sample Name: K8973-01 Operator: MMR
Run Time: 11/19/03 10:38:15
Comment: K2308973 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0758	.0819	L-.0017	1.133	L-.0000	.1697	L-.0007
#1	.0776	.0939	L-.0107	1.135	L-.0000	.1735	L-.0021
#2	.0740	.0698	L.0074	1.131	L-.0000	.1658	L.0006

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H975.0	L-.0065	.0046	3.587	L-.0017	L.0014	H87.82
#1	H978.7	L-.0055	.0052	3.585	L-.0012	L-.0119	H87.96
#2	H971.3	L-.0075	.0041	3.590	L-.0022	L.0148	H87.67

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.5	.0029	.0052	L-.0068	146.1	.0424	L.0006
#1	107.3	.0029	.0078	L-.0110	145.5	L.0117	L.0034
#2	107.7	.0029	L.0026	L-.0025	146.6	.0730	L-.0023

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	188.3	L-.0442	.0186	.0442	.9276	28.03	.0140
#1	187.5	L-.0421	.0198	.0433	.9590	28.03	.0142
#2	189.1	L-.0462	.0174	.0450	.8961	28.02	.0137

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2006	.0535	3.612
#1	.2356	.0561	3.614
#2	.1655	.0509	3.610

Method: EPACLP1 Sample Name: K8973-02 Operator: MMR
Run Time: 11/19/03 10:39:55
Comment: K2308973 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0899	.1016	L-.0651	.1610	L.0001	.4778	.0048
#1	.0838	.0820	L-.0741	.1594	L-.0000	.4659	.0042
#2	.0961	.1211	L-.0561	.1627	L.0002	.4896	.0054

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	S3059.	L-.0089	L-.0002	1.930	.0180	L.0184	H149.6
#1	S3059.	L-.0098	L-.0024	1.906	.0173	.0310	H148.6
#2	S3058.	L-.0079	L.0020	1.954	.0186	L.0058	H150.7

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	217.2	.0024	L.0013	L-.0025	64.24	L-.0175	L.0018
#1	214.8	.0025	L.0000	L.0093	63.84	L-.0643	L.0018
#2	219.6	.0023	L.0026	L-.0144	64.64	L.0292	L.0018

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	244.4	L-.0346	.0140	.0450	.7447	38.35	.0203
#1	241.9	L-.0436	.0128	.0432	.7242	37.96	.0203
#2	246.8	L-.0257	.0151	.0467	.7653	38.75	.0203

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.3358	.0886	5.824
#1	.2455	.0860	5.750
#2	.4260	.0913	5.897

Method: EPACLP1 Sample Name: CCV3 Operator: MMR
Run Time: 11/19/03 10:42:06
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.036	5.161	2.028	.5119	.5034	5.088	.4956
#1	5.012	5.160	1.994	.5108	.5017	5.084	.4933
#2	5.060	5.163	2.061	.5129	.5051	5.092	.4980

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.015	5.123	.5055	.4987	5.060	5.043	5.012
#1	4.999	5.095	.5034	.4947	5.034	5.034	4.992
#2	5.032	5.152	.5076	.5027	5.085	5.052	5.032

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.954	.5028	.4970	5.109	25.00	1.965	.5119
#1	4.909	.5003	.4943	5.073	24.83	1.955	.5103
#2	4.999	.5052	.4996	5.146	25.16	1.975	.5136

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.40	5.226	.5028	2.513	25.52	5.155	.5246
#1	25.34	5.242	.5024	2.501	25.48	5.142	.5399
#2	25.46	5.209	.5033	2.524	25.56	5.169	.5092

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.997	5.103	.5088
#1	4.852	5.134	.5068
#2	5.142	5.073	.5107

Method: EPACLP1 Sample Name: CCB3 Operator: MMR
Run Time: 11/19/03 10:43:48
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0110	.0438	-.0034	.0002	.0000	.0152	-.0023
#1	.0146	.0150	.0056	.0002	.0000	.0253	-.0009
#2	.0074	Q.0726	-.0125	.0002	.0000	.0051	-.0036

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0011	-.0028	-.0006	-.0027	-.0001	-.0252	.0010
#1	.0020	-.0016	-.0011	-.0040	.0007	-.0252	.0016
#2	.0002	-.0039	.0000	-.0013	-.0010	-.0252	.0004

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0611	-.0001	.0013	-.0085	.0704	.0175	.0033
#1	-.0643	-.0000	.0052	-.0127	.1144	.0351	.0033
#2	-.0579	-.0001	-.0026	-.0042	.0264	-.0000	.0033

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0191	-.0055	-.0020	.0017	.0920	.0188	-.0002
#1	.0253	-.0145	-.0020	.0009	.0919	.0263	-.0002
#2	.0128	.0034	-.0021	.0026	.0920	.0113	-.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0251	-.0007	-.0002
#1	.0150	.0007	-.0002
#2	.0351	-.0022	-.0002

Method: EPACLP1 Sample Name: CCV4 Operator: MMR
Run Time: 11/19/03 11:14:49
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.988	5.027	1.960	.4990	.4998	5.041	.5033
#1	4.987	4.981	1.987	.4967	.4985	5.018	.5035
#2	4.989	5.073	1.934	.5012	.5011	5.065	.5032

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.989	4.999	.4988	.4964	4.997	5.027	4.997
#1	4.976	4.984	.4961	.4947	4.986	5.024	4.984
#2	5.002	5.014	.5016	.4982	5.007	5.029	5.010

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.994	.4994	.4948	5.016	24.51	2.047	.4968
#1	5.039	.4983	.4987	5.024	24.67	2.057	.4948
#2	4.948	.5006	.4910	5.007	24.34	2.037	.4988

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.99	4.978	.4971	2.503	25.19	4.999	.4995
#1	24.88	4.963	.4968	2.498	25.18	4.995	.4972
#2	25.10	4.994	.4975	2.508	25.20	5.003	.5018

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.163	5.026	.5000
#1	5.244	5.009	.4981
#2	5.081	5.043	.5019

Method: EPACLP1 Sample Name: CCB4 Operator: MMR
Run Time: 11/19/03 11:16:26
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0389	.0391	.0390	.0010	.0001	.0192	.0006
#1	.0340	.0272	.0434	.0010	.0002	.0254	.0013
#2	.0438	Q.0510	.0346	.0010	-.0000	.0129	-.0001

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0074	.0026	.0032	.0036	.0015	-.0076	.0011
#1	.0093	.0037	.0032	.0049	.0033	-.0017	.0015
#2	.0054	.0015	.0033	.0022	-.0003	-.0135	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1427	-.0001	.0051	-.0002	.4857	.0249	.0070
#1	.1750	-.0001	.0051	.0006	.4502	.0411	.0078
#2	.1103	-.0001	.0051	-.0010	.5212	.0087	.0062

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0391	.0013	.0012	.0025	.0581	.0208	.0006
#1	.0333	-.0074	.0026	.0025	.0580	.0287	.0001
#2	.0449	.0101	-.0002	.0025	.0582	.0128	.0011

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0852	.0044	.0002
#1	.1055	.0037	.0006
#2	.0649	.0052	-.0002

Method: EPACLP1 Sample Name: K8973-01 Operator: MMR
Run Time: 11/19/03 11:19:33
Comment: K2308973 1/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0384	.0615	L.0037	.1162	L-.0000	.0216	L-.0001
#1	.0330	.0720	L.0059	.1166	L-.0000	.0241	L-.0025
#2	.0439	.0510	L.0014	.1158	L-.0000	L.0191	L.0023

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	102.8	L-.0018	L.0037	.3763	L-.0007	L-.0098	10.95
#1	102.9	L-.0027	L.0022	.3763	L-.0010	L-.0179	10.97
#2	102.6	L-.0008	.0053	.3763	L-.0005	L-.0017	10.94

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.43	.0013	L-.0000	L-.0027	15.10	.0602	.0054
#1	11.46	.0013	L-.0026	L.0022	15.09	.0646	L.0046
#2	11.41	.0013	L.0025	L-.0076	15.11	.0558	.0062

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.76	L-.0034	L.0011	.0067	.1403	2.824	L.0017
#1	18.79	L.0060	L.0008	.0059	.0938	2.832	L.0015
#2	18.73	L-.0129	L.0014	.0076	.1869	2.816	L.0020

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0751	L.0070	.3748
#1	.1259	L.0059	.3752
#2	L.0242	L.0081	.3744

Method: EPACLP1 Sample Name: K8973-02 Operator: MMR
Run Time: 11/19/03 11:21:39
Comment: K2308973 1/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0372	.0466	L.0268	.0177	L.0001	.0489	L-.0015
#1	L.0207	.0361	L.0302	.0177	L.0002	.0501	L-.0015
#2	.0537	.0571	L.0234	.0177	L-.0000	.0477	L-.0014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	157.7	L-.0016	L.0027	.2031	L.0019	L-.0054	21.86
#1	158.1	L-.0028	L.0021	.2044	L.0002	L-.0046	21.94
#2	157.3	L-.0005	L.0032	.2017	L.0036	L-.0061	21.77

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	23.08	.0007	L-.0000	L-.0035	7.073	.0514	L.0030
#1	23.24	.0007	L.0025	L-.0126	6.830	L.0352	L.0022
#2	22.92	.0006	L-.0026	L.0055	7.316	.0675	L.0038

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.43	L-.0041	L.0025	.0067	.1746	3.890	.0038
#1	24.57	L-.0129	L.0008	.0059	.2096	3.905	.0033
#2	24.29	L.0047	.0042	.0075	.1396	3.875	.0043

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0954	.0106	.6107
#1	.1157	.0117	.6132
#2	.0750	L.0095	.6081

Method: EPACLP1 Sample Name: K8968-01 Operator: MMR
Run Time: 11/19/03 11:23:27
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0357	.0526	L.0114	.4691	L.0001	.6537	L-.0003
#1	.0363	.0571	L.0368	.4691	L-.0000	.6475	L-.0017
#2	.0351	.0481	L-.0140	.4691	L.0002	.6600	L.0011

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	137.2	L-.0014	L.0011	.0080	L.0035	L-.0128	24.38
#1	137.2	L-.0020	L.0022	.0067	L.0030	L-.0297	24.39
#2	137.2	L-.0008	L-.0000	.0093	L.0040	L.0042	24.37

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.88	.0224	.0103	L.0014	43.67	L.0043	L.0015
#1	25.88	.0224	.0103	L.0006	43.76	L.0234	L.0023
#2	25.88	.0224	.0103	L.0022	43.59	L-.0148	L.0007

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	145.3	L-.0048	.0054	L.0008	.1713	15.93	.0024
#1	145.8	L.0006	.0054	L.0008	.2150	15.94	.0024
#2	144.9	L-.0102	.0054	L.0008	.1275	15.92	.0024

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1159	.0172	.8018
#1	.1261	.0147	.8024
#2	.1058	.0198	.8012

Method: EPACLP1 Sample Name: K8968-02 Operator: MMR
Run Time: 11/19/03 11:25:04
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0541	.0466	L-.0031	.2133	L-.0000	.3881	L.0001
#1	.0304	.0332	L-.0095	.2155	L-.0000	.3893	L-.0005
#2	.0778	.0600	L.0034	.2110	L-.0000	.3869	L.0007

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	130.1	L-.0010	.0058	.0111	L.0053	L.0042	H31.88
#1	130.2	L-.0027	.0042	.0093	L.0041	L-.0046	H31.96
#2	130.0	L.0007	.0073	.0129	L.0065	L.0131	H31.80

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	34.15	.0070	.0064	L-.0027	9.609	L.0014	L.0046
#1	34.25	.0069	.0051	L-.0076	9.038	L-.0236	L.0030
#2	34.05	.0071	.0077	L.0022	10.18	L.0264	.0062

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	96.90	L-.0230	L.0023	L.0025	.2248	12.83	.0022
#1	97.54	L-.0102	L.0003	L.0009	.1808	12.86	L.0020
#2	96.25	L-.0358	.0043	.0042	.2687	12.80	.0024

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0802	.0121	.8508
#1	L.0548	L.0095	.8555
#2	.1056	.0147	.8461

Method: EPACLP1 Sample Name: K8968-03 Operator: MMR
Run Time: 11/19/03 11:26:25
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0369	.0435	L-.0118	.1235	L-.0000	.3653	L.0003
#1	.0424	.0719	L-.0207	.1227	L-.0000	.3641	L-.0018
#2	.0314	L.0152	L-.0030	.1243	L-.0000	.3664	L.0024

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	101.1	L.0013	L.0020	L.0027	.0093	L-.0024	H32.74
#1	100.4	L.0003	L.0031	L.0022	.0091	L-.0046	H32.55
#2	101.8	L.0022	L.0010	.0031	.0096	L-.0002	H32.94

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	35.01	.0013	.0103	L-.0027	8.129	L.0176	L.0007
#1	34.66	.0021	.0103	L-.0010	8.476	.0440	L.0022
#2	35.36	L.0004	.0103	L-.0043	7.783	L-.0089	L-.0009

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	81.03	L-.0250	L.0029	L-.0000	.1584	11.54	L.0020
#1	80.67	L-.0210	L.0021	L.0008	.1790	11.48	L.0015
#2	81.39	L-.0291	L.0038	L-.0008	.1379	11.60	.0024

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0750	.0114	.7547
#1	.1157	.0103	.7489
#2	L.0343	.0125	.7605

Method: EPACLP1 Sample Name: K8968-04 Operator: MMR
Run Time: 11/19/03 11:27:46
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0407	.0391	L-.0030	.1241	L.0002	.4998	L.0024
#1	.0522	.0421	L.0102	.1239	L.0002	.4911	L.0021
#2	L.0292	.0361	L-.0162	.1243	L.0002	.5086	L.0027

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	94.18	L.0007	L-.0000	.0218	L.0029	L-.0128	H34.55
#1	93.94	L-.0001	L.0010	.0236	L.0041	L-.0253	H34.45
#2	94.42	L.0014	L-.0010	.0200	L.0017	L-.0002	H34.66

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	36.85	.0014	L.0038	L-.0093	9.245	L.0367	L.0030
#1	36.76	.0023	.0051	L-.0076	9.464	L.0352	.0062
#2	36.94	.0005	L.0025	L-.0109	9.026	L.0381	L-.0001

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	118.1	L-.0122	L.0029	L-.0008	.2685	11.35	L.0017
#1	117.7	L-.0237	L.0020	L-.0008	.3071	11.33	.0024
#2	118.6	L-.0007	L.0037	L-.0008	.2299	11.38	L.0011

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0114	.0117	.9358
#1	L-.0469	.0103	.9321
#2	L.0242	.0132	.9394

Method: EPACLP1 Sample Name: K8968-05 Operator: MMR
Run Time: 11/19/03 11:29:09
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1022	.0451	L.0177	.1471	L-.0000	.1300	L-.0028
#1	.1022	.0421	L.0298	.1463	L-.0000	.1300	L-.0062
#2	.1022	.0480	L.0055	.1479	L-.0000	.1301	L.0006

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	89.62	L.0014	L.0026	.0160	.0153	L-.0062	15.71
#1	89.36	L.0003	.0042	.0165	.0151	L.0056	15.66
#2	89.89	L.0026	L.0010	.0156	.0156	L-.0180	15.75

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.37	.0073	L.0038	L-.0027	9.588	L.0234	L.0019
#1	16.40	.0072	.0051	L-.0010	9.505	L-.0353	L.0007
#2	16.34	.0073	L.0025	L-.0043	9.671	.0822	L.0030

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	34.85	L-.0115	.0043	.0059	.1496	11.70	L.0013
#1	34.75	L-.0115	L.0037	.0042	.2206	11.66	L.0015
#2	34.95	L-.0115	.0048	.0076	.0787	11.74	L.0011

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0622	.0106	.4893
#1	L-.1689	.0110	.4869
#2	L.0445	.0103	.4917

Method: EPACLP1 Sample Name: K8968-06 Operator: MMR
Run Time: 11/19/03 11:30:37
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0360	.0332	L.0379	.1954	L.0002	.2726	L-.0009
#1	.0438	.0391	.0500	.1935	L.0002	.2764	.0043
#2	L.0281	L.0272	L.0258	.1972	L.0002	.2688	L-.0061

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	122.8	L-.0001	L.0021	L.0018	L-.0001	L-.0002	H26.12
#1	122.1	L.0011	L.0021	L.0022	L.0009	L-.0017	H25.96
#2	123.5	L-.0012	L.0021	L.0013	L-.0012	L.0013	H26.27

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.80	.0006	L-.0000	L-.0052	7.174	L.0323	L.0006
#1	27.63	.0008	L.0025	L-.0010	6.966	.0499	L.0014
#2	27.97	L.0003	L-.0026	L-.0093	7.381	L.0146	L-.0001

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.7	L-.0142	L.0028	L-.0000	.1608	12.90	L.0017
#1	106.7	L-.0102	L.0026	L-.0009	.2024	12.83	L.0015
#2	108.8	L-.0183	L.0031	L.0009	.1191	12.97	L.0020

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0547	L.0070	.5768
#1	L.0547	L.0066	.5721
#2	L.0547	L.0073	.5815

Method: EPACLP1 Sample Name: K8968-11 Operator: MMR
Run Time: 11/19/03 11:35:21
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0426	.0361	L-.0163	.2051	L.0001	.2141	L.0020
#1	.0377	.0302	L-.0538	.2057	L-.0000	.2104	L.0021
#2	.0475	.0420	L.0213	.2045	L.0002	.2179	L.0018

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	127.3	L.0016	L.0037	L.0027	L.0006	L.0057	H28.55
#1	127.2	L.0022	L.0021	L.0022	L-.0000	L-.0091	H28.58
#2	127.4	L.0010	.0053	.0031	L.0012	L.0205	H28.53

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.40	.0010	L.0025	L-.0060	4.963	L.0323	L.0034
#1	30.51	.0011	L.0025	L.0022	4.871	L.0117	L.0030
#2	30.30	.0010	L.0025	L-.0142	5.055	.0528	L.0038

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.85	L-.0129	L.0034	L.0008	.4781	11.43	L.0011
#1	43.97	L-.0169	L.0031	L.0008	.5188	11.44	L-.0003
#2	43.74	L-.0088	L.0037	L.0009	.4375	11.41	.0024

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0852	L.0052	.5188
#1	L.0547	L.0037	.5208
#2	.1157	L.0066	.5169

Method: EPACLP1 Sample Name: K8968-12 Operator: MMR
Run Time: 11/19/03 11:36:46
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0438	.0406	L.0147	.2080	L.0001	.2140	L-.0004
#1	.0524	.0363	.0544	.2078	L.0002	.2103	L-.0005
#2	.0352	.0450	L-.0251	.2082	L-.0000	.2177	L-.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	128.8	L-.0020	L.0032	.0125	L.0018	L-.0194	H28.85
#1	128.6	L-.0008	.0085	.0156	L.0019	L-.0031	H28.78
#2	128.9	L-.0031	L-.0021	.0093	L.0017	L-.0357	H28.92

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.83	.0008	.0051	L-.0035	4.951	L.0161	.0054
#1	30.76	.0011	.0051	L.0072	5.303	L.0029	.0070
#2	30.91	.0006	.0051	L-.0142	4.599	L.0293	L.0038

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	44.38	L-.0048	L.0023	L-.0000	.4654	11.60	L.0020
#1	44.22	L-.0088	L.0026	L.0008	.5121	11.57	.0024
#2	44.54	L-.0008	L.0020	L-.0008	.4187	11.63	L.0015

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0012	L.0055	.5242
#1	.0750	L.0081	.5229
#2	L-.0774	L.0030	.5255

Method: EPACLP1 Sample Name: CCV5 Operator: MMR
Run Time: 11/19/03 11:38:40
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.014	5.100	1.965	.5016	.5014	5.064	.5040
#1	5.003	5.094	1.996	.5037	.5025	5.088	.5033
#2	5.024	5.106	1.934	.4996	.5002	5.040	.5048

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.027	5.026	.4987	.4987	5.028	5.084	5.015
#1	5.034	5.034	.4986	.4982	5.033	5.089	5.025
#2	5.020	5.019	.4988	.4991	5.022	5.079	5.004

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.074	.5010	.5077	5.051	25.17	2.068	.4992
#1	4.974	.5023	.5116	5.065	25.13	2.051	.4980
#2	5.175	.4998	.5039	5.037	25.21	2.084	.5004

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.06	5.074	.5016	2.525	25.23	5.018	.5030
#1	25.11	5.046	.5006	2.530	25.33	5.019	.5046
#2	25.01	5.102	.5027	2.520	25.13	5.016	.5014

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.264	5.021	.5015
#1	5.274	5.033	.5032
#2	5.254	5.009	.4998

Method: EPACLP1 Sample Name: CCB5 Operator: MMR
Run Time: 11/19/03 11:40:26
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0303	.0318	-.0162	.0002	-.0000	.0092	-.0019
#1	.0243	.0184	-.0316	.0002	-.0000	.0105	-.0031
#2	.0363	.0451	-.0008	.0002	-.0000	.0079	-.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0032	-.0008	.0016	.0018	.0005	-.0223	.0006
#1	.0026	-.0016	.0001	.0013	-.0003	-.0209	.0008
#2	.0038	-.0001	.0031	.0022	.0012	-.0238	.0004

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0386	-.0001	.0077	.0138	.5449	.0440	.0062
#1	-.0968	-.0001	.0025	.0170	.7994	.0264	.0062
#2	.0197	-.0001	Q.0129	.0105	.2904	.0616	.0062

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0135	-.0129	.0006	.0008	.0889	.0105	.0004
#1	.0173	.0074	-.0003	.0007	.1193	.0028	.0006
#2	.0096	-.0331	.0015	.0008	.0585	.0181	.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0141	.0044	.0000
#1	-.0164	.0000	-.0002
#2	.0445	.0088	.0002

Method: EPACLP1 Sample Name: K8968-13 Operator: MMR
Run Time: 11/19/03 11:42:13
Comment: K2308968 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2810	L.0257	L.0291	.2912	L.0002	.8152	L.0009
#1	.2791	L.0213	L.0026	.2920	L.0002	.8102	L.0023
#2	.2828	.0301	.0555	.2904	L.0002	.8203	L-.0006

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	114.4	L.0030	.0048	.0058	.1044	L-.0071	24.13
#1	114.5	L.0018	.0064	.0058	.1029	L.0040	24.14
#2	114.2	.0041	L.0031	.0058	.1060	L-.0182	24.12

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.61	.1679	.0361	L.0031	219.7	L.0205	L.0036
#1	25.60	.1679	.0386	L.0105	220.1	L.0088	L.0040
#2	25.61	.1679	.0335	L-.0043	219.3	L.0323	L.0032

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	222.3	L-.0081	.0221	.0346	.6375	19.04	.0068
#1	222.5	L.0006	.0216	.0346	.6512	19.04	.0070
#2	222.1	L-.0169	.0227	.0346	.6238	19.04	.0066

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1373	.0498	.3859
#1	.1678	.0505	.3868
#2	.1068	.0490	.3851

Method: EPACLP1 Sample Name: K8950-01 Operator: MMR
Run Time: 11/19/03 11:44:07
Comment: K2308950 100-20 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.268	.0765	.0472	.1382	L.0002	.2057	L-.0017
#1	1.256	.0750	L.0163	.1386	L.0002	.2120	L.0007
#2	1.280	.0780	.0781	.1378	L.0002	.1995	L-.0040

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	174.1	L-.0009	L.0003	.0200	4.916	L-.0054	H50.41
#1	174.2	L-.0011	L.0009	.0204	4.918	L-.0090	H50.40
#2	174.0	L-.0007	L-.0003	.0195	4.914	L-.0017	H50.41

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	55.96	1.927	.0093	L.0141	22.80	.0489	L.0034
#1	55.94	1.928	.0158	L.0190	23.06	.0592	L.0034
#2	55.98	1.926	L.0029	L.0091	22.54	L.0386	L.0034

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	105.7	L-.0154	.0090	.0646	2.243	91.43	.0084
#1	105.5	L.0001	.0088	.0646	2.243	91.39	.0089
#2	106.0	L-.0309	.0092	.0646	2.243	91.47	.0079

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1117	.1002	.6107
#1	.1473	.1017	.6107
#2	.0761	.0987	.6107

Method: EPACLP1 Sample Name: PBS Operator: MMR
Run Time: 11/19/03 11:49:41
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0384	.0302	L-.0029	L.0012	L-.0000	L-.0046	L-.0007
#1	.0500	.0571	L-.0096	L.0014	L-.0000	L-.0071	L.0010
#2	L.0269	L.0034	L.0037	L.0010	L-.0000	L-.0021	L-.0025

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0071	L-.0020	L.0028	L.0022	L.0031	L.0094	L.0050
#1	L.0069	L-.0016	.0044	L.0022	L.0014	L.0234	L.0050
#2	L.0074	L-.0024	L.0012	L.0022	L.0048	L-.0046	L.0050

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0067	.0006	L-.0013	L-.0010	L.4917	L.0293	L.0050
#1	L.0132	.0005	L-.0000	L.0022	L.3910	L.0293	.0069
#2	L.0002	.0006	L-.0026	L-.0043	L.5923	L.0293	L.0030

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0237	L.0195	L-.0017	L.0008	L.0149	L.0928	L-.0001
#1	L.0192	.0249	L-.0014	L.0008	L.0586	L.1037	L-.0003
#2	L.0282	L.0141	L-.0020	L.0008	L-.0287	L.0818	L.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0344	L.0052	L.0002
#1	.0750	L.0095	L.0002
#2	L-.0063	L.0008	L.0002

Method: EPACLP1 Sample Name: LCSS Operator: MMR
Run Time: 11/19/03 11:52:46
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	46.07	.1492	.8534	.8698	.2196	.2588	.3321
#1	45.89	.1612	.8973	.8643	.2189	.2639	.3310
#2	46.25	.1373	.8095	.8752	.2202	.2536	.3333

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.51	.6912	1.039	.4555	63.96	.5924	13.67
#1	50.37	.6897	1.033	.4537	63.71	.5918	13.62
#2	50.65	.6927	1.045	.4573	64.21	.5929	13.71

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.21	1.913	.2365	.3722	18.23	.8196	.4413
#1	14.20	1.905	.2365	.3771	18.27	.7726	.4400
#2	14.23	1.920	.2365	.3673	18.19	.8667	.4426

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.809	.3917	.8364	1.347	4.617	6.393	1.345
#1	4.788	.3896	.8341	1.343	4.663	6.372	1.337
#2	4.829	.3937	.8387	1.351	4.570	6.415	1.352

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	H.6355	.0377	.6342
#1	H.5963	.0351	.6308
#2	H.6747	.0402	.6376

Method: EPACLP1 Sample Name: K8940-03 Operator: MMR
Run Time: 11/19/03 11:55:00
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	55.50	.0368	.0841	.6864	.0022	.0263	L-.0008
#1	55.08	.0487	.0937	.6774	.0022	.0269	L-.0011
#2	55.92	L.0249	.0745	.6954	.0022	.0258	L-.0005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.57	.0737	.0313	.0982	162.9	.0770	9.702
#1	37.30	.0729	.0318	.0967	161.7	.0717	9.638
#2	37.84	.0745	.0307	.0996	164.0	.0824	9.765

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.05	H8.207	.0049	.0375	5.043	L-.0103	.0168
#1	10.01	H8.150	.0113	.0366	5.439	L-.0045	.0164
#2	10.10	H8.264	L-.0014	.0384	4.646	L-.0160	.0171

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.954	L-.0209	.2485	.4989	4.935	16.83	3.267
#1	1.941	L-.0291	.2468	.4964	4.857	16.68	3.241
#2	1.966	L-.0128	.2502	.5013	5.013	16.98	3.294

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.5199	.0249	.1614
#1	.4349	.0256	.1599
#2	.6049	.0242	.1629

Method: EPACLP1 Sample Name: K8940-03D Operator: MMR
Run Time: 11/19/03 11:57:19
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	62.66	.0635	.0576	.6933	.0022	.0279	L-.0032
#1	62.93	.0575	.0774	.6974	.0021	.0252	L-.0037
#2	62.39	.0695	L.0378	.6893	.0024	.0307	L-.0027

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.44	.0771	.0315	.0998	164.7	.0677	10.02
#1	37.53	.0764	.0292	.0999	165.2	.0622	10.06
#2	37.34	.0779	.0337	.0998	164.1	.0732	9.986

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.34	H8.123	.0051	.0318	5.519	L-.0292	.0186
#1	10.34	H8.154	L.0038	.0253	5.144	L-.0247	.0160
#2	10.34	H8.093	.0063	.0384	5.895	L-.0336	.0212

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.068	L-.0016	.2539	.4963	5.006	15.02	3.543
#1	2.071	L-.0118	.2525	.4980	5.044	15.10	3.561
#2	2.064	L.0086	.2553	.4946	4.967	14.93	3.525

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.3100	.0362	.1631
#1	.2914	.0381	.1642
#2	.3286	.0344	.1620

Method: EPACLP1 Sample Name: K8940-03S Operator: MMR
Run Time: 11/19/03 12:00:03
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	61.81	.1745	.5537	2.663	.0523	.5184	.0433
#1	61.93	.1492	.5387	2.673	.0523	.5308	.0429
#2	61.68	.1998	.5686	2.652	.0523	.5061	.0436

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.27	.2753	.5203	.3451	164.1	.5544	9.865
#1	37.33	.2758	.5214	.3447	164.4	.5646	9.882
#2	37.20	.2747	.5193	.3455	163.8	.5442	9.848

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.22	H8.594	.4782	.5248	5.348	.4774	.0711
#1	10.23	H8.609	.4730	.5265	5.268	.4950	.0708
#2	10.21	H8.579	.4833	.5232	5.428	.4597	.0713

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.047	L-.0070	.7457	.9934	5.012	15.28	3.337
#1	2.051	L-.0070	.7485	.9976	4.965	15.28	3.343
#2	2.043	L-.0070	.7429	.9892	5.058	15.28	3.332

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.8776	.0326	.1610
#1	.9419	.0337	.1612
#2	.8134	.0315	.1607

Method: EPACLP1 Sample Name: K8940-06 Operator: MMR
Run Time: 11/19/03 12:02:07
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	78.45	.0726	.1070	.8002	.0027	.0341	L-.0044
#1	78.45	.0636	.0861	.8024	.0027	.0342	L-.0046
#2	78.46	.0815	.1280	.7979	.0027	.0340	L-.0041

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	39.66	.0914	.0394	.1179	177.4	.0833	11.67
#1	39.64	.0908	.0405	.1165	177.2	.0981	11.66
#2	39.68	.0920	.0383	.1192	177.7	.0685	11.68

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.05	H8.765	.0098	.0523	6.463	L-.0573	.0182
#1	12.04	H8.754	.0124	.0474	6.256	L-.0735	.0158
#2	12.06	H8.776	.0073	.0573	6.671	L-.0411	.0207

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.564	L-.0148	.2871	.6213	5.592	17.36	4.323
#1	2.563	L-.0054	.2871	.6221	5.558	17.34	4.322
#2	2.565	L-.0242	.2871	.6204	5.626	17.38	4.323

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.5228	.0348	.1860
#1	.6917	.0329	.1860
#2	.3539	.0366	.1860

Method: EPACLP1 Sample Name: K8940-09 Operator: MMR
Run Time: 11/19/03 12:03:52
Comment: K2308940 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	68.91	.0635	.0753	.7312	.0023	.0276	L-.0025
#1	68.65	.0635	.0709	.7271	.0023	.0253	L-.0016
#2	69.17	.0634	.0796	.7352	.0023	.0300	L-.0034

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.11	.0822	.0346	.1089	169.9	.0734	11.19
#1	37.07	.0822	.0363	.1075	169.6	.0760	11.16
#2	37.14	.0822	.0329	.1103	170.2	.0709	11.22

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.58	H8.216	.0093	.0322	5.795	L-.0110	.0186
#1	11.55	H8.195	.0067	.0387	6.185	L.0198	.0189
#2	11.60	H8.237	.0119	.0256	5.404	L-.0418	.0183

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.217	L.0015	.2610	.5289	5.254	12.30	3.821
#1	2.210	L.0117	.2595	.5264	5.304	12.25	3.808
#2	2.223	L-.0087	.2624	.5315	5.203	12.35	3.835

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.4462	.0333	.1652
#1	.4275	.0359	.1646
#2	.4648	.0307	.1659

Method: EPACLP1 Sample Name: CCV6 Operator: MMR
Run Time: 11/19/03 12:05:38
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.033	5.083	1.988	.4984	.5003	5.012	.5043
#1	5.067	5.114	2.004	.5033	.5029	5.042	.5078
#2	5.000	5.052	1.971	.4935	.4977	4.982	.5007

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.047	5.030	.5020	.4964	5.026	5.133	5.008
#1	5.082	5.066	.5058	.4982	5.067	5.167	5.037
#2	5.013	4.995	.4983	.4947	4.984	5.098	4.978

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.168	.5002	.5065	5.066	24.83	2.066	.4988
#1	5.207	.5035	.5065	5.119	25.22	2.098	.5004
#2	5.129	.4968	.5064	5.012	24.43	2.034	.4972

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.98	5.218	.4991	2.526	25.53	5.042	.5002
#1	25.22	5.228	.5013	2.538	25.60	5.082	.5037
#2	24.75	5.209	.4969	2.513	25.46	5.001	.4968

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.412	4.969	.4972
#1	Q5.538	5.018	.5015
#2	5.285	4.920	.4929

Method: EPACLP1 Sample Name: CCB6 Operator: MMR
Run Time: 11/19/03 12:07:41
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0334	.0257	.0114	.0004	.0002	.0204	.0013
#1	.0389	.0062	.0169	.0002	.0002	.0279	.0019
#2	.0279	.0451	.0059	.0006	.0002	.0129	.0006

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0032	.0011	.0021	.0022	.0012	.0020	.0009
#1	.0033	.0026	.0021	.0022	.0012	.0057	.0011
#2	.0031	-.0005	.0021	.0022	.0012	-.0017	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1394	.0014	.0051	-.0052	.5301	.0602	.0062
#1	.1750	.0014	.0051	-.0076	.3319	.0763	.0054
#2	.1038	.0015	.0051	-.0027	.7284	.0440	.0070

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0369	-.0142	.0009	.0008	.0581	.0320	.0006
#1	.0378	-.0101	.0003	.0009	.0579	.0367	.0006
#2	.0359	-.0183	.0014	.0008	.0583	.0274	.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0192	.0011	-.0002
#1	.0242	-.0014	-.0002
#2	.0141	.0037	-.0002

Method: EPACLP1 Sample Name: CCV7 Operator: MMR
Run Time: 11/19/03 12:13:12
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.996	5.011	2.017	.5004	.4974	4.969	.5004
#1	4.980	5.007	1.986	.4984	.4951	4.931	.5027
#2	5.011	5.015	2.048	.5025	.4997	5.007	.4980

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.001	4.991	.4985	.4987	4.986	5.040	4.988
#1	4.985	4.969	.4964	.4982	4.963	5.012	4.968
#2	5.018	5.012	.5006	.4991	5.010	5.068	5.009

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.965	.5000	.5013	5.020	24.86	1.980	.5012
#1	4.952	.4977	.5064	5.014	24.92	1.970	.4996
#2	4.977	.5023	.4962	5.027	24.80	1.990	.5028

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.92	5.027	.4997	2.490	25.11	4.997	.4993
#1	24.82	5.037	.4970	2.482	25.14	4.970	.4970
#2	25.02	5.016	.5023	2.498	25.08	5.024	.5016

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.060	4.960	.4998
#1	5.099	4.945	.4976
#2	5.020	4.975	.5019

Method: EPACLP1 Sample Name: CCB7 Operator: MMR
Run Time: 11/19/03 12:14:49
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0349	.0420	.0079	.0010	.0002	.0168	.0006
#1	.0403	.0302	.0146	.0014	.0002	.0180	-.0012
#2	.0296	Q.0537	.0013	.0006	.0002	.0155	.0023

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0044	.0011	.0026	.0041	.0018	.0105	.0009
#1	.0060	.0011	-.0001	.0050	.0019	.0287	.0011
#2	.0027	.0010	.0053	.0032	.0017	-.0078	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0964	.0011	.0025	.0006	.6544	.0303	.0072
#1	.1735	.0013	.0077	.0120	.6812	.0433	.0061
#2	.0193	.0010	-.0026	-.0109	.6276	.0174	.0084

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0345	-.0184	.0009	.0016	.0394	.0218	.0008
#1	.0470	-.0321	.0026	.0007	.0336	.0248	.0006
#2	.0220	-.0047	-.0009	.0025	.0453	.0188	.0011

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0059	.0073	.0004
#1	-.0041	.0073	.0006
#2	.0158	.0073	.0002

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 12:17:43
Comment: K2308819 K8856 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0368	L.0109	L.0258	L.0002	L-.0000	L.0032	L-.0053
#1	.0380	L.0124	L.0079	L.0002	L-.0000	L.0056	L-.0041
#2	.0357	L.0095	.0437	L.0002	L-.0000	L.0007	L-.0066

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0090	L-.0014	.0043	L.0000	L.0036	L-.0173	L.0054
#1	L.0090	L-.0012	.0043	L.0014	L.0045	L-.0166	L.0054
#2	L.0091	L-.0016	.0042	L-.0013	L.0026	L-.0181	L.0054

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0225	.0005	L-.0000	L-.0125	L.3533	.0605	.0052
#1	L.0192	.0011	L.0025	L-.0142	.9078	.0461	L.0044
#2	L.0257	L-.0000	L-.0026	L-.0109	L-.2013	.0748	.0060

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0226	L-.0079	L-.0006	L-.0000	L.0343	L.0550	L-.0010
#1	L.0207	L-.0047	L-.0003	L-.0009	L.0234	L.0480	L-.0026
#2	L.0246	L-.0112	L-.0009	L.0008	L.0452	L.0620	L.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0108	L.0055	L-.0002
#1	L-.0041	L.0095	L-.0002
#2	L.0257	L.0015	L-.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 12:19:36
Comment: K2308819 K8856 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.210	2.623	2.530	5.245	.1301	1.042	1.304
#1	5.217	2.608	2.543	5.266	.1304	1.043	1.307
#2	5.202	2.637	2.517	5.224	.1298	1.041	1.301

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.99	.5271	1.307	.6604	2.593	2.576	12.81
#1	12.99	.5273	1.308	.6640	2.602	2.561	12.83
#2	12.98	.5269	1.307	.6568	2.583	2.592	12.78

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.97	1.305	1.030	1.309	12.99	2.591	.6461
#1	12.98	1.308	1.029	1.311	12.93	2.572	.6486
#2	12.95	1.302	1.031	1.308	13.05	2.609	.6437

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.19	-.0276	1.329	1.305	.1485	.0938	.0004
#1	13.23	-.0381	1.334	1.304	.1022	.0958	-.0003
#2	13.16	-.0172	1.325	1.305	.1949	.0918	.0011

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	2.633	.0040	.0006
#1	2.683	.0037	.0006
#2	2.583	.0044	.0006

Method: EPACLP1 Sample Name: K8819-03 Operator: MMR
Run Time: 11/19/03 12:21:26
Comment: K2308819 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1981	L.0243	L.0209	.0113	L.0002	.0463	L.0004
#1	.1949	L.0213	L.0187	.0113	L.0002	.0488	.0036
#2	.2013	L.0272	L.0232	.0113	L.0002	.0439	L-.0028

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.76	L.0013	L.0037	.0033	1.986	L-.0139	8.553
#1	18.74	L.0015	.0053	.0033	1.983	L-.0197	8.543
#2	18.79	L.0011	L.0021	.0033	1.988	L-.0080	8.563

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.765	.2556	.0116	L.0072	2.795	L.0234	.0066
#1	8.804	.2554	.0180	L.0088	2.757	L.0234	.0074
#2	8.727	.2558	.0052	L.0056	2.834	L.0234	.0058

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.83	L.0048	L.0028	.0165	.2088	11.56	.0073
#1	12.87	L.0152	L.0034	.0157	.1706	11.54	.0070
#2	12.80	L-.0056	L.0022	.0174	.2470	11.58	.0075

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0609	L.0037	.0857
#1	.0857	L.0037	.0855
#2	L.0361	L.0037	.0859

Method: EPACLP1 Sample Name: K8819-03D Operator: MMR
Run Time: 11/19/03 12:23:09
Comment: K2308819 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1818	.0302	L.0154	.0098	L.0002	.0428	L-.0042
#1	.1831	L.0273	L.0121	.0117	L.0002	.0440	L-.0057
#2	.1805	.0331	L.0188	.0080	L.0002	.0415	L-.0027

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.24	L-.0012	L.0037	.0038	1.934	L-.0022	8.320
#1	18.32	L-.0004	.0042	.0051	1.939	L.0183	8.339
#2	18.15	L-.0019	L.0031	L.0024	1.929	L-.0226	8.301

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.367	.2489	L.0039	L.0031	3.186	L.0234	.0054
#1	8.361	.2493	L.0001	L.0072	3.079	L.0348	.0066
#2	8.373	.2485	.0078	L-.0010	3.293	L.0119	L.0042

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.45	L-.0037	L.0010	.0157	.1701	11.23	.0073
#1	12.44	L-.0031	L.0021	.0157	.1729	11.25	.0080
#2	12.46	L-.0044	L-.0001	.0157	.1674	11.20	.0066

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0363	L.0070	.0836
#1	L.0164	L.0095	.0838
#2	L.0562	L.0044	.0833

Method: EPACLP1 Sample Name: K8819-03S Operator: MMR
Run Time: 11/19/03 12:25:44
Comment: K2308819 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.215	.5388	1.021	2.090	.0526	1.070	.0468
#1	2.220	.5521	1.032	2.086	.0524	1.072	.0473
#2	2.211	.5256	1.010	2.093	.0528	1.068	.0463

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.51	.2102	.5208	.2623	2.988	.5042	8.440
#1	18.49	.2106	.5203	.2623	2.989	.4969	8.422
#2	18.54	.2098	.5213	.2623	2.987	.5116	8.457

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.532	.7712	1.038	.5088	2.852	1.025	.0558
#1	8.538	.7701	1.039	.5088	3.216	1.051	.0578
#2	8.525	.7723	1.036	.5088	2.488	.9992	.0538

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.67	L-.0060	.5132	.5309	.2964	11.32	.0054
#1	12.61	L.0032	.5118	.5283	.2909	11.29	.0057
#2	12.73	L-.0151	.5146	.5334	.3019	11.35	.0052

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	1.067	L.0037	.0851
#1	1.107	L.0059	.0851
#2	1.028	L.0015	.0851

Method: EPACLP1 Sample Name: K8856-01 Operator: MMR
Run Time: 11/19/03 12:27:31
Comment: K2308856 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0604	.0390	L-.0062	.0027	L.0002	.0220	L.0010
#1	.0585	.0391	L-.0140	.0027	L.0002	.0219	L.0012
#2	.0624	.0390	L.0016	.0027	L.0002	.0220	L.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	22.55	L.0003	L.0031	L.0010	.9125	L.0002	15.83
#1	22.58	L-.0016	.0042	L-.0003	.9142	L-.0093	15.87
#2	22.52	L.0022	L.0020	L.0024	.9108	L.0097	15.80

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.35	.3455	.0077	L.0031	5.795	L.0146	.0050
#1	16.42	.3463	.0128	L.0104	5.631	L.0089	L.0046
#2	16.28	.3447	L.0026	L-.0043	5.959	L.0204	.0054

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.63	L-.0123	L.0016	.0300	.1467	27.22	.0022
#1	17.70	L-.0032	L.0022	.0308	.2332	27.27	.0024
#2	17.56	L-.0215	L.0010	.0292	.0601	27.16	L.0020

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1280	.0336	.0685
#1	.0735	.0314	.0687
#2	.1826	.0358	.0683

Method: EPACLP1 Sample Name: CCV8 Operator: MMR
Run Time: 11/19/03 12:30:51
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.028	5.020	1.999	.5025	.5001	4.969	.5048
#1	4.977	4.981	1.983	.4959	.4949	4.931	.4965
#2	5.079	5.059	2.014	.5090	.5053	5.007	.5131

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.013	5.013	.5007	.5018	5.015	5.075	5.003
#1	4.956	4.951	.4951	.4982	4.958	5.014	4.949
#2	5.071	5.074	.5063	.5054	5.073	5.137	5.057

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.039	.5024	.5051	5.094	24.68	1.977	.5000
#1	5.016	.4968	.5013	5.051	24.26	1.924	.4971
#2	5.061	.5080	.5090	5.136	25.11	2.030	.5029

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.05	5.044	.5004	2.501	25.37	5.004	.5090
#1	24.82	4.974	.4940	2.478	24.96	4.959	.5094
#2	25.28	5.115	.5068	2.525	25.78	5.049	.5085

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.059	4.997	.5026
#1	5.119	4.953	.4968
#2	5.000	5.042	.5084

Method: EPACLP1 Sample Name: CCB8 Operator: MMR
Run Time: 11/19/03 12:32:35
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0374	.0345	.0001	.0002	.0002	.0118	-.0000
#1	.0392	.0390	.0035	.0006	.0002	.0131	.0023
#2	.0356	.0301	-.0032	-.0002	.0002	.0106	-.0023

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0029	-.0012	.0027	.0023	-.0003	-.0305	.0009
#1	.0041	-.0012	.0043	.0023	.0007	-.0166	.0011
#2	.0017	-.0012	.0010	.0023	-.0012	-.0444	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0032	.0012	.0012	-.0109	.6633	.0189	.0068
#1	.0321	.0014	.0025	-.0125	.9913	.0260	.0068
#2	-.0386	.0011	-.0000	-.0093	.3354	.0117	.0068

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0380	-.0053	-.0006	.0008	.0534	.0185	.0004
#1	.0367	.0084	-.0003	.0008	.0940	.0254	.0001
#2	.0393	-.0190	-.0009	.0008	.0129	.0115	.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0009	.0030	.0002
#1	-.0338	.0008	.0002
#2	.0356	.0051	.0002

Method: EPACLP1 Sample Name: CCV9 Operator: MMR
Run Time: 11/19/03 13:33:07
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.005	5.001	1.962	.5012	.4996	5.024	.4993
#1	5.014	5.027	1.979	.5033	.5012	5.000	.5060
#2	4.995	4.975	1.945	.4992	.4980	5.047	.4927

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.964	4.965	.4934	.4973	4.967	4.963	4.989
#1	4.985	4.987	.4951	.4982	4.991	5.004	5.006
#2	4.944	4.942	.4916	.4964	4.943	4.922	4.972

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.080	.4999	.5038	5.002	24.09	2.016	.4992
#1	5.125	.5017	.5038	4.999	23.59	2.024	.4988
#2	5.035	.4981	.5038	5.004	24.59	2.007	.4995

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.26	4.941	.4961	2.488	25.42	4.983	.4991
#1	25.31	4.974	.5011	2.500	25.47	4.988	.5012
#2	25.21	4.907	.4912	2.477	25.38	4.977	.4970

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.109	5.048	.5002
#1	5.169	5.074	.5019
#2	5.050	5.022	.4985

Method: EPACLP1 Sample Name: CCB9 Operator: MMR
Run Time: 11/19/03 13:34:55
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0311	.0389	.0113	.0004	.0004	.0230	-.0019
#1	.0366	.0329	.0079	.0010	.0006	.0329	.0006
#2	.0257	.0449	.0147	-.0002	.0002	.0131	-.0043

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0083	.0047	.0022	.0014	.0057	-.0195	.0061
#1	.0136	Q.0098	.0022	.0014	.0105	-.0298	.0115
#2	.0031	-.0005	.0021	.0014	.0009	-.0093	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0033	.0016	.0089	-.0035	.1952	.0691	.0064
#1	.0126	.0019	Q.0102	-.0011	-.4041	.0748	.0068
#2	-.0193	.0012	.0076	-.0060	.7945	.0634	.0060

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0444	-.0064	-.0007	.0033	.0751	.0278	-.0210
#1	.0637	-.0069	-.0013	.0058	.1048	.0315	-.0422
#2	.0252	-.0060	-.0002	.0008	.0454	.0241	.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0356	-.0102	.0006
#1	.0554	-.0240	.0011
#2	.0158	.0037	.0002

Method: EPACLP1 Sample Name: PBS Operator: MMR
Run Time: 11/19/03 13:36:56
Comment: K2308782 K8858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0374	.0420	L.0169	L.0006	L.0001	L.0056	L-.0004
#1	.0428	L.0272	L.0146	L.0010	L.0002	L.0106	L.0004
#2	.0319	.0567	L.0191	L.0002	L-.0000	L.0007	L-.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0073	L-.0022	L.0022	L.0005	L.0050	L-.0042	.0098
#1	L.0088	L-.0016	L.0021	L.0023	L.0055	L.0024	.0092
#2	L.0059	L-.0027	L.0022	L-.0013	L.0045	L-.0108	.0104

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0707	L.0001	L.0025	L-.0076	L.2399	.0433	L.0040
#1	L.0899	L.0003	L.0025	L-.0060	L.1982	.0461	.0068
#2	L.0514	L-.0000	L.0025	L-.0093	L.2817	.0404	L.0012

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0120	L.0018	L-.0014	L.0008	L.0314	L.1400	L-.0017
#1	L.0207	L-.0060	L-.0014	L.0008	L.0177	L.1476	L-.0026
#2	L.0034	L.0097	L-.0014	L.0008	L.0451	L.1324	L-.0008

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0554	L.0030	L.0000
#1	.0852	L.0059	L-.0002
#2	L.0257	L.0000	L.0002

Method: EPACLP1 Sample Name: LCSS Operator: MMR
Run Time: 11/19/03 13:41:38
Comment: K2308782 K8858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	56.91	.2140	.9849	1.053	.2453	.3069	.3701
#1	56.72	.1949	.9980	1.051	.2444	.2996	.3659
#2	57.09	.2332	.9717	1.056	.2463	.3142	.3744

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	54.66	.7817	1.153	.5129	74.67	.6198	15.85
#1	54.51	.7791	1.151	.5120	74.47	.6076	15.81
#2	54.81	.7844	1.156	.5138	74.87	.6320	15.90

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.64	H2.398	.2733	.4196	20.48	.8839	.4932
#1	16.57	H2.392	.2720	.4229	20.27	.8796	.4923
#2	16.71	H2.404	.2746	.4164	20.68	.8882	.4941

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.450	.4548	.9690	1.493	5.085	8.643	1.872
#1	5.454	.4515	.9667	1.489	5.140	8.625	1.867
#2	5.447	.4580	.9714	1.497	5.031	8.660	1.877

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	H.6468	.0427	.6555
#1	.5735	.0431	.6531
#2	H.7200	.0423	.6578

Method: EPACLP1 Sample Name: K8782-03 Operator: MMR
Run Time: 11/19/03 13:43:58
Comment: K2308782 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	66.53	.0605	.0564	.7033	.0037	L.0185	L-.0010
#1	66.56	.0635	.0473	.7033	.0037	L.0148	L-.0023
#2	66.49	.0576	.0655	.7033	.0037	.0221	L.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	28.63	.1039	.0795	.1433	117.2	.0791	H27.50
#1	28.60	.1020	.0779	.1433	117.1	.0827	H27.49
#2	28.67	.1058	.0810	.1433	117.3	.0755	H27.50

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.04	1.562	.0159	.0754	11.24	L-.0111	.0161
#1	29.00	1.560	.0159	.0713	10.73	.0434	.0149
#2	29.09	1.564	.0159	.0795	11.74	L-.0656	.0174

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.464	L-.0252	.3151	.3548	4.015	8.692	8.351
#1	2.464	L-.0129	.3145	.3540	3.926	8.685	8.356
#2	2.463	L-.0375	.3156	.3556	4.104	8.699	8.346

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.3176	.0770	.2761
#1	.3729	.0781	.2763
#2	.2622	.0759	.2758

Method: EPACLP1 Sample Name: K8782-03D Operator: MMR
Run Time: 11/19/03 13:45:44
Comment: K2308782 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	72.62	.0709	.0551	.7247	.0038	L.0175	L-.0007
#1	73.06	.0753	.0932	.7303	.0038	L.0171	L-.0016
#2	72.18	.0665	L.0169	.7192	.0038	L.0179	L.0003

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.21	.1106	.0817	.1490	121.6	.0569	H28.20
#1	30.33	.1116	.0832	.1505	122.4	.0571	H28.34
#2	30.09	.1097	.0802	.1476	120.9	.0568	H28.05

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.65	1.596	.0072	.0781	11.99	L.0066	.0156
#1	29.87	1.605	.0111	.0732	11.89	L.0296	.0143
#2	29.43	1.587	L.0033	.0830	12.09	L-.0165	.0170

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.839	L-.0242	.3344	.3554	3.981	7.523	8.879
#1	2.863	L-.0147	.3368	.3571	3.946	7.566	8.942
#2	2.816	L-.0336	.3321	.3538	4.017	7.480	8.815

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.4394	.0781	.2866
#1	.4102	.0737	.2883
#2	.4687	.0825	.2849

Method: EPACLP1 Sample Name: K8782-03S Operator: MMR
Run Time: 11/19/03 13:48:04
Comment: K2308782 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	71.34	.1853	.5390	2.688	.0534	.4905	.0473
#1	71.37	.1867	.5768	2.695	.0533	.4781	.0471
#2	71.31	.1839	.5011	2.682	.0535	.5029	.0475

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.41	.3010	.5632	.3913	120.1	.5885	H27.88
#1	29.44	.3014	.5609	.3917	120.0	.5738	H27.89
#2	29.39	.3007	.5654	.3908	120.1	.6031	H27.87

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.41	2.071	.4855	.5739	11.57	.4353	.0618
#1	29.47	2.070	.4804	.5649	11.98	.4137	.0650
#2	29.35	2.071	.4906	.5828	11.16	.4568	.0586

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.628	.0207	.8129	.8394	4.227	8.098	8.486
#1	2.646	L.0044	.8120	.8377	4.137	8.094	8.491
#2	2.609	.0371	.8138	.8410	4.317	8.103	8.481

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.7964	.0792	.2823
#1	.7966	.0825	.2827
#2	.7963	.0759	.2819

Method: EPACLP1 Sample Name: K8782-06 Operator: MMR
Run Time: 11/19/03 13:51:13
Comment: K2308782 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	77.29	.0651	.0479	.7045	.0040	.0225	L-.0011
#1	77.09	.0577	.0433	.7016	.0040	.0240	L-.0003
#2	77.48	.0725	.0526	.7074	.0040	.0210	L-.0020

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.17	.1139	.0781	.1512	124.2	.0746	H28.11
#1	31.07	.1135	.0743	.1516	123.7	.0595	H28.05
#2	31.26	.1143	.0818	.1509	124.6	.0897	H28.18

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.81	1.545	.0125	.0897	11.84	.0571	.0165
#1	29.77	1.539	.0138	.0913	11.59	.0843	.0172
#2	29.85	1.551	.0113	.0881	12.10	L.0298	.0159

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.116	L.0176	.3487	.3578	4.021	6.895	9.219
#1	3.125	L.0061	.3464	.3586	4.053	6.875	9.180
#2	3.108	.0292	.3510	.3569	3.990	6.914	9.257

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2399	.0774	.2939
#1	.1238	.0788	.2926
#2	.3560	.0759	.2952

Method: EPACLP1 Sample Name: K8782-09 Operator: MMR
Run Time: 11/19/03 13:52:55
Comment: K2308782 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	81.05	.0815	.0606	.7131	.0040	.0249	L-.0036
#1	80.95	.1051	L.0365	.7114	.0040	L.0199	L-.0014
#2	81.15	.0579	.0847	.7147	.0040	.0298	L-.0058

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.15	.1126	.0766	.1572	127.4	.0998	H27.90
#1	32.14	.1124	.0776	.1559	127.4	.1102	H27.87
#2	32.16	.1128	.0755	.1585	127.4	.0895	H27.92

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.46	1.549	.0063	.0899	11.62	L.0143	.0157
#1	29.39	1.548	L.0038	.0866	11.26	L.0014	.0169
#2	29.53	1.549	.0089	.0932	11.99	L.0272	.0145

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.272	L-.0065	.3686	.3643	4.125	6.964	9.659
#1	3.266	L-.0020	.3680	.3635	4.213	6.963	9.669
#2	3.277	L-.0110	.3692	.3651	4.037	6.965	9.648

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.4680	.0832	.2972
#1	.5074	.0766	.2965
#2	.4285	.0898	.2978

Method: EPACLP1 Sample Name: K8858-03 Operator: MMR
Run Time: 11/19/03 13:55:16
Comment: K2308858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	90.11	.0758	.0558	.7951	.0048	.0284	L-.0007
#1	90.18	.0670	.0700	.7977	.0048	.0295	L-.0010
#2	90.05	.0846	.0415	.7924	.0048	.0273	L-.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	33.97	.1240	.0799	.2085	147.1	.1159	H30.82
#1	34.02	.1233	.0792	.2081	147.5	.1283	H30.85
#2	33.92	.1248	.0806	.2090	146.8	.1036	H30.78

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.86	1.833	.0051	.1058	11.51	L-.0038	.0195
#1	32.80	1.836	L.0026	.1058	11.44	L-.0626	.0192
#2	32.93	1.830	.0077	.1058	11.58	.0550	.0198

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.696	L-.0166	.4107	.4191	4.839	9.333	10.15
#1	2.678	L-.0382	.4110	.4174	4.892	9.341	10.16
#2	2.713	L.0051	.4105	.4208	4.787	9.326	10.13

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.4335	.0916	.3040
#1	.4364	.0934	.3047
#2	.4306	.0898	.3034

Method: EPACLP1 Sample Name: K8858-06 Operator: MMR
Run Time: 11/19/03 13:57:23
Comment: K2308858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.7	.0478	L.0337	.8121	.0051	.0267	L-.0011
#1	107.3	.0464	L-.0022	.8072	.0051	L.0196	L-.0018
#2	108.2	.0492	.0696	.8170	.0051	.0338	L-.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	36.52	.1395	.0783	.2073	158.2	.0971	H32.23
#1	36.42	.1394	.0789	.2072	157.5	.1116	H32.12
#2	36.61	.1395	.0777	.2074	158.8	.0826	H32.34

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	34.20	1.984	.0072	.1138	12.69	L-.0300	.0168
#1	34.07	1.976	.0059	.1178	12.78	L-.0329	.0170
#2	34.34	1.992	.0085	.1098	12.60	L-.0270	.0166

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.509	L-.0167	.4517	.4370	4.879	8.493	11.57
#1	3.502	L-.0301	.4516	.4353	4.799	8.469	11.51
#2	3.516	L-.0034	.4517	.4386	4.958	8.516	11.63

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.5658	.0996	.3275
#1	.5945	.1007	.3254
#2	.5371	.0985	.3297

Method: EPACLP1 Sample Name: K8858-09 Operator: MMR
Run Time: 11/19/03 13:59:06
Comment: K2308858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.9	.0654	.0586	.7941	.0049	.0234	L-.0003
#1	107.4	.0729	.0667	.7883	.0049	.0238	L.0025
#2	108.4	.0580	.0506	.7998	.0049	.0230	L-.0032

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	36.57	.1386	.0749	.2029	154.9	.1064	H31.71
#1	36.42	.1386	.0728	.1997	154.1	.1173	H31.57
#2	36.72	.1386	.0770	.2062	155.6	.0955	H31.84

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	33.73	1.944	.0057	.1071	12.75	L-.0404	.0178
#1	33.58	1.934	.0056	.1176	12.17	L-.0591	.0159
#2	33.88	1.955	.0057	.0965	13.32	L-.0216	.0196

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.712	L-.0007	.4452	.4246	4.884	8.342	11.52
#1	3.689	L-.0214	.4446	.4221	4.879	8.288	11.47
#2	3.734	L.0200	.4458	.4272	4.889	8.396	11.57

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2187	.0963	.3264
#1	.2578	.0956	.3245
#2	.1796	.0970	.3284

Method: EPACLP1 Sample Name: CCV10 Operator: MMR
Run Time: 11/19/03 14:01:42
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.971	4.939	2.009	.4959	.4958	4.947	.4982
#1	4.960	4.934	1.997	.4959	.4942	4.931	.5008
#2	4.982	4.945	2.021	.4959	.4974	4.963	.4955

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.976	4.945	.4944	.4910	4.941	4.987	4.969
#1	4.981	4.943	.4939	.4910	4.931	4.995	4.963
#2	4.972	4.946	.4949	.4910	4.951	4.979	4.976

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.029	.4976	.4949	5.043	24.36	1.993	.4959
#1	5.048	.4970	.4936	5.050	24.46	1.976	.4971
#2	5.010	.4982	.4962	5.035	24.25	2.010	.4947

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.01	4.936	.4917	2.482	25.07	4.972	.5000
#1	24.94	4.948	.4922	2.478	25.00	4.969	.5085
#2	25.07	4.924	.4911	2.486	25.15	4.975	.4915

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.951	4.983	.4944
#1	4.921	4.974	.4938
#2	4.980	4.992	.4950

Method: EPACLP1 Sample Name: CCB10 Operator: MMR
Run Time: 11/19/03 14:03:28
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0368	.0464	.0147	.0004	-.0000	.0180	-.0019
#1	.0392	.0479	.0102	.0002	-.0000	.0180	-.0026
#2	.0343	.0448	.0191	.0006	-.0000	.0180	-.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0021	-.0001	.0015	.0023	.0021	-.0217	.0009
#1	.0022	-.0005	.0021	.0023	.0036	-.0269	.0011
#2	.0021	.0003	.0010	.0023	.0007	-.0166	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0096	.0016	.0012	-.0043	.6484	.0318	.0048
#1	.0385	.0017	-.0000	.0006	.6216	-.0055	.0052
#2	-.0193	.0015	.0025	-.0093	.6753	.0691	.0044

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0444	-.0203	-.0014	.0025	.0425	.0075	.0006
#1	.0451	-.0216	-.0014	.0024	.0397	.0055	.0006
#2	.0438	-.0190	-.0014	.0025	.0454	.0095	.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	-.0636	.0011	.0002
#1	-.0834	.0037	.0002
#2	-.0437	-.0014	.0002

Method: EPACLP1 Sample Name: K8858-12 Operator: MMR
Run Time: 11/19/03 14:05:09
Comment: K2308858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.9	.0505	L.0387	.7802	.0054	.0437	L.0027
#1	108.2	.0579	L.0272	.7855	.0054	.0459	L.0014
#2	107.5	.0430	.0502	.7748	.0054	.0415	.0040

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	35.51	.1277	.0750	.1952	145.5	.0889	H28.45
#1	35.58	.1258	.0727	.1966	146.0	.0863	H28.51
#2	35.43	.1296	.0772	.1938	145.0	.0915	H28.38

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.21	1.677	.0114	.0844	12.92	L-.0155	.0183
#1	30.30	1.682	.0102	.0828	13.00	L-.0054	.0180
#2	30.12	1.673	.0127	.0860	12.85	L-.0256	.0185

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.179	L-.0017	.4103	.4353	5.467	8.467	10.49
#1	3.183	L-.0046	.4120	.4378	5.481	8.475	10.54
#2	3.175	L.0012	.4087	.4328	5.454	8.460	10.43

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2042	.0970	.3068
#1	.1962	.0963	.3081
#2	.2121	.0978	.3056

Method: EPACLP1 Sample Name: K8858-15 Operator: MMR
Run Time: 11/19/03 14:07:55
Comment: K2308858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	95.87	.0475	L.0326	.7638	.0052	.0394	L.0009
#1	95.91	.0343	L.0168	.7634	.0052	.0369	L.0029
#2	95.84	.0608	.0484	.7642	.0052	.0419	L-.0011

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	34.48	.1175	.0703	.1940	139.2	.0912	H27.80
#1	34.40	.1169	.0693	.1926	139.3	.0897	H27.80
#2	34.55	.1181	.0712	.1953	139.2	.0927	H27.80

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.36	1.630	.0123	.0882	11.49	L-.0347	.0162
#1	29.35	1.630	.0123	.0890	11.68	L-.0089	.0150
#2	29.38	1.631	.0123	.0873	11.30	L-.0606	.0174

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.539	L-.0161	.3844	.4238	5.597	9.701	9.498
#1	2.537	L.0042	.3841	.4229	5.585	9.709	9.493
#2	2.540	L-.0363	.3847	.4246	5.608	9.694	9.503

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2665	.0868	.2954
#1	.2862	.0868	.2952
#2	.2469	.0868	.2957

Method: EPACLP1 Sample Name: K8858-18 Operator: MMR
Run Time: 11/19/03 14:12:36
Comment: K2308858 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	77.79	.0636	.0859	.6654	.0047	.0270	L.0014
#1	78.41	.0370	.0953	.6689	.0047	.0279	L-.0020
#2	77.17	.0901	.0764	.6620	.0047	.0262	.0047

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.78	.0999	.0616	.1697	117.6	.1200	23.96
#1	29.94	.0993	.0594	.1685	118.4	.1273	24.10
#2	29.63	.1004	.0639	.1709	116.9	.1128	23.82

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.13	1.392	.0133	.0754	10.15	L.0205	.0168
#1	25.28	1.399	.0134	.0714	9.626	L.0206	.0138
#2	24.98	1.384	.0133	.0795	10.68	L.0205	.0197

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.190	L.0100	.3216	.3614	5.089	11.46	8.093
#1	2.186	L.0162	.3231	.3639	5.166	11.53	8.162
#2	2.194	L.0038	.3202	.3589	5.011	11.38	8.023

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.4070	.0755	.2539
#1	.4024	.0774	.2556
#2	.4116	.0737	.2522

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 14:18:30
Comment: K2308926 K8927 K8941 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0233	L.0243	L-.0021	L.0000	L-.0000	L.0044	L.0000
#1	L.0257	.0301	L.0080	L-.0002	L-.0000	L.0081	L-.0010
#2	L.0210	L.0184	L-.0121	L.0002	L-.0000	L.0007	L.0011

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0046	L-.0003	L.0020	L-.0013	L.0062	L-.0034	L.0034
#1	L.0058	L-.0008	L.0020	L-.0013	.0088	L-.0078	L.0042
#2	L.0034	L.0003	L.0021	L-.0013	L.0036	L.0010	L.0027

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0482	.0005	L.0025	L-.0027	L-.1835	.0418	L.0028
#1	L.0514	.0007	.0051	L-.0093	L-.4578	L.0260	L.0036
#2	L.0450	L.0003	L-.0000	L.0038	L.0909	.0576	L.0020

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0364	L-.0314	L.0003	L-.0009	.1211	L.0570	L-.0001
#1	L.0464	L-.0373	L.0003	L-.0009	.1265	L.0679	L.0001
#2	L.0265	L-.0255	L.0003	L-.0009	.1158	L.0460	L-.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0505	L.0026	L.0000
#1	.1050	L.0044	L.0002
#2	L-.0041	L.0008	L-.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 14:19:57
Comment: K2308926 K8927 K8941 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.118	2.584	2.479	5.132	.1280	1.006	1.306
#1	5.093	2.584	2.439	5.104	.1269	.9913	1.303
#2	5.143	2.584	2.519	5.160	.1290	1.021	1.309

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.83	.5164	1.287	.6424	2.529	2.569	12.61
#1	12.81	.5159	1.282	.6388	2.519	2.567	12.55
#2	12.85	.5170	1.292	.6460	2.539	2.571	12.67

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.92	1.282	.9929	1.300	12.79	2.506	.6359
#1	12.94	1.276	.9801	1.285	13.32	2.503	.6346
#2	12.91	1.287	1.006	1.314	12.26	2.509	.6371

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.05	-.0016	1.298	1.286	.2396	.0659	.0001
#1	12.96	.0140	1.293	1.277	.1964	.0765	.0001
#2	13.14	-.0173	1.302	1.295	.2828	.0553	.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	2.653	.0019	.0004
#1	2.613	.0008	.0006
#2	2.693	.0030	.0002

Method: EPACLP1 Sample Name: K8926-01 Operator: MMR
Run Time: 11/19/03 14:22:13
Comment: K2308926 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4181	.0372	L.0191	.2503	L.0002	.0401	L.0003
#1	.4179	.0357	L.0314	.2521	L.0002	.0500	L-.0016
#2	.4182	.0388	L.0068	.2485	L.0002	.0302	L.0022

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.25	.0151	L.0026	.0041	.2357	L-.0134	7.305
#1	32.28	.0143	L.0031	.0032	.2393	L-.0244	7.318
#2	32.22	.0159	L.0020	.0050	.2321	L-.0024	7.291

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.545	.4289	.0128	L.0014	20.59	L.0017	L.0036
#1	7.506	.4303	.0179	L-.0076	20.41	L-.0199	L.0028
#2	7.583	.4276	.0077	L.0104	20.77	L.0232	L.0044

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	393.2	L-.0202	L.0025	.0133	.8627	7.595	.0022
#1	393.8	L-.0149	L.0017	.0142	.8791	7.617	L.0006
#2	392.6	L-.0254	L.0033	.0124	.8464	7.572	.0038

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0240	L.0019	.1413
#1	L.0290	L.0022	.1415
#2	L.0191	L.0015	.1410

Method: EPACLP1 Sample Name: K8926-02 Operator: MMR
Run Time: 11/19/03 14:27:15
Comment: K2308926 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0868	.0316	L.0334	.0115	L.0001	L.0040	L-.0016
#1	.0940	.0390	.0658	.0121	L.0002	L.0053	L-.0024
#2	.0795	L.0242	L.0011	.0108	L-.0000	L.0028	L-.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.761	L-.0003	L.0020	L.0005	.0884	L-.0174	1.115
#1	4.801	L-.0008	L.0009	L-.0004	.0886	L-.0123	1.124
#2	4.722	L.0003	L.0031	L.0014	.0882	L-.0225	1.106

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.073	.0069	L-.0000	L-.0043	.9287	.0490	L.0040
#1	1.073	.0071	L.0025	L-.0011	L.6574	.0404	L.0037
#2	1.073	.0068	L-.0026	L-.0076	1.200	.0576	L.0044

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.992	L-.0347	L-.0006	L-.0009	.1161	5.800	.0043
#1	3.041	L-.0425	L-.0003	L-.0009	.1268	5.839	.0038
#2	2.943	L-.0269	L-.0009	L-.0009	.1053	5.761	.0047

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0103	L-.0007	.0334
#1	L-.0045	L-.0007	.0338
#2	L.0252	L-.0007	.0329

Method: EPACLP1 Sample Name: K8926-02D Operator: MMR
Run Time: 11/19/03 14:30:43
Comment: K2308926 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0789	.0346	L-.0090	.0113	L.0002	L.0077	L-.0029
#1	.0685	L.0242	L-.0391	.0108	L.0002	L.0127	L.0018
#2	.0893	.0449	L.0211	.0117	L.0002	L.0028	L-.0076

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.703	L-.0001	L.0037	L.0009	.0777	L-.0064	1.100
#1	4.706	L.0003	L.0032	L.0023	.0757	L.0009	1.101
#2	4.699	L-.0005	.0042	L-.0004	.0798	L-.0137	1.100

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.124	.0072	L-.0000	L-.0052	1.120	L.0074	L.0049
#1	1.169	.0065	L-.0000	L-.0060	1.111	L.0117	L.0037
#2	1.079	.0078	L-.0000	L-.0043	1.128	L.0031	.0060

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.544	L-.0145	L.0006	L-.0009	.1105	5.723	.0036
#1	2.538	L-.0073	L.0014	L-.0009	.1159	5.718	.0038
#2	2.551	L-.0217	L-.0003	L-.0009	.1052	5.729	.0034

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0154	L-.0003	.0329
#1	L.0253	L-.0007	.0329
#2	L.0054	L.0000	.0329

Method: EPACLP1 Sample Name: K8926-02S Operator: MMR
Run Time: 11/19/03 14:32:23
Comment: K2308926 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.002	.5049	.9479	1.980	.0501	1.010	.0460
#1	2.008	.5227	.9188	1.977	.0501	1.007	.0452
#2	1.997	.4872	.9769	1.982	.0501	1.014	.0468

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.631	.1997	.4990	.2473	1.091	.4780	1.085
#1	4.632	.1991	.5000	.2468	1.089	.4619	1.085
#2	4.631	.2003	.4979	.2477	1.092	.4941	1.086

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.122	.5043	1.002	.4973	1.060	.9876	.0522
#1	1.122	.5034	.9952	.4973	.9078	.9962	.0522
#2	1.122	.5053	1.008	.4973	1.212	.9790	.0522

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.515	L-.0247	.4848	.4992	.1328	5.751	.0036
#1	2.508	L-.0325	.4839	.4983	.1654	5.748	.0034
#2	2.522	L-.0168	.4857	.5000	.1003	5.755	.0038

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	1.036	L.0066	.0327
#1	1.007	L.0066	.0325
#2	1.066	L.0066	.0329

Method: EPACLP1 Sample Name: K8926-01 Operator: MMR
Run Time: 11/19/03 14:34:29
Comment: K2308926 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2591	L.0210	L-.0016	.2012	L.0001	.0455	L.0008
#1	.2767	.0534	L.0229	.2006	L-.0000	.0529	L.0002
#2	.2415	L-.0115	L-.0260	.2018	L.0002	.0381	L.0014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.59	.0123	L.0022	L.0014	.1028	L-.0001	6.225
#1	25.53	.0136	.0054	.0032	.1036	L-.0022	6.204
#2	25.64	.0109	L-.0011	L-.0004	.1021	L.0021	6.247

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.414	.3323	.0077	L-.0092	18.10	.0576	L.0044
#1	6.472	.3312	.0128	L-.0060	18.24	.0404	.0084
#2	6.356	.3334	L.0025	L-.0125	17.95	.0749	L.0004

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	352.2	L.0020	L.0022	.0050	.1037	6.729	L.0020
#1	350.0	L.0059	L.0034	.0058	.1033	6.721	.0034
#2	354.3	L-.0019	L.0010	.0042	.1041	6.737	L.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0585	L.0030	.1223
#1	.1081	L.0059	.1221
#2	L.0089	L.0000	.1225

Method: EPACLP1 Sample Name: CCV11 Operator: MMR
Run Time: 11/19/03 14:36:12
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.947	4.960	1.950	.4947	.4926	4.926	.4996
#1	4.935	4.949	1.948	.4926	.4911	4.916	.4973
#2	4.960	4.972	1.952	.4967	.4940	4.936	.5019

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.956	4.926	.4883	.4897	4.905	4.984	4.933
#1	4.935	4.905	.4887	.4883	4.883	4.945	4.915
#2	4.976	4.947	.4879	.4910	4.927	5.023	4.950

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.965	.4947	.4949	5.028	23.74	1.971	.4919
#1	5.074	.4926	.4936	4.993	23.63	1.961	.4907
#2	4.856	.4968	.4962	5.063	23.86	1.981	.4931

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.94	4.988	.4918	2.466	24.88	4.966	.4894
#1	24.93	4.957	.4897	2.458	24.87	4.951	.4878
#2	24.94	5.020	.4940	2.475	24.89	4.981	.4910

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.015	4.956	.4929
#1	4.991	4.956	.4912
#2	5.040	4.955	.4946

Method: EPACLP1 Sample Name: CCB11 Operator: MMR
Run Time: 11/19/03 14:39:17
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0240	.0331	-.0154	-.0002	.0002	.0057	-.0020
#1	.0197	.0242	-.0076	-.0002	.0002	.0106	Q-.0053
#2	.0283	.0420	-.0233	-.0002	.0002	.0007	.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0005	-.0020	-.0000	.0005	-.0004	-.0188	.0008
#1	.0020	-.0012	-.0011	-.0013	-.0012	-.0049	.0008
#2	-.0010	-.0027	.0010	.0023	.0005	-.0327	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0354	.0012	-.0013	-.0076	-.0523	.0246	.0028
#1	.0321	.0013	-.0000	-.0142	-.3564	.0174	.0004
#2	-.1029	.0012	-.0026	-.0011	.2519	.0318	.0052

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0284	-.0119	-.0026	.0008	.0672	.0055	-.0003
#1	.0226	-.0034	-.0014	.0008	.0941	.0082	-.0003
#2	.0342	-.0204	-.0037	.0008	.0403	.0029	-.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0753	.0004	-.0002
#1	.0654	.0000	-.0002
#2	.0852	.0008	-.0002

Method: EPACLP1 Sample Name: K8926-02 Operator: MMR
Run Time: 11/19/03 14:40:42
Comment: K2308926 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0513	.0478	L-.0089	.0070	L.0002	L.0053	L-.0014
#1	.0403	.0478	L-.0033	.0068	L.0002	L.0053	L-.0007
#2	.0624	.0478	L-.0145	.0072	L.0002	L.0053	L-.0020

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.565	L-.0001	L.0026	L.0009	.0198	L-.0079	1.065
#1	4.566	L-.0005	L.0021	L-.0004	.0196	L-.0078	1.065
#2	4.565	L.0003	L.0032	L.0023	.0199	L-.0079	1.066

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.131	.0044	.0051	L-.0101	1.227	L.0361	.0052
#1	1.150	.0040	.0076	L-.0109	1.152	.0548	L.0044
#2	1.112	.0049	L.0025	L-.0093	1.301	L.0174	.0060

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.507	L-.0145	L.0009	L.0008	L.0404	5.567	L-.0005
#1	2.519	L-.0164	L.0015	L.0008	L.0404	5.553	L-.0017
#2	2.495	L-.0125	L.0003	L.0008	L.0404	5.580	L.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0455	L.0026	.0323
#1	L.0455	L.0030	.0321
#2	L.0455	L.0022	.0325

Method: EPACLP1 Sample Name: K8927-01 Operator: MMR
Run Time: 11/19/03 14:42:38
Comment: K2308927 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	15.33	.0317	L.0253	.2816	.0008	.9467	L.0005
#1	15.34	.0303	L.0298	.2808	.0009	.9430	L.0011
#2	15.32	.0332	L.0209	.2824	.0007	.9504	L-.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.81	.0233	.0103	.0832	43.61	L.0042	15.91
#1	31.75	.0231	.0119	.0836	43.59	L.0020	15.88
#2	31.87	.0235	.0087	.0828	43.63	L.0064	15.93

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.57	.8401	L.0030	L.0146	51.63	.0404	.0063
#1	16.55	.8404	L.0030	L.0130	51.37	.0562	.0059
#2	16.59	.8398	L.0030	L.0162	51.89	L.0247	.0067

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	117.9	L-.0142	.0621	.0851	1.615	65.04	2.139
#1	117.8	L-.0142	.0623	.0851	1.626	65.03	2.136
#2	118.0	L-.0142	.0618	.0851	1.604	65.05	2.142

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2022	.0522	.3017
#1	.2321	.0518	.3013
#2	.1723	.0526	.3021

Method: EPACLP1 Sample Name: K8941-01 Operator: MMR
Run Time: 11/19/03 14:44:54
Comment: K2308941 TOTAL 25-50 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	83.44	.0312	L.0385	.3802	.0027	.0330	L-.0000
#1	82.80	.0312	.0537	.3769	.0026	.0334	L.0003
#2	84.08	.0311	L.0234	.3834	.0028	.0325	L-.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.89	.1114	.0737	.1716	138.8	.0454	H25.64
#1	29.66	.1114	.0733	.1693	137.8	.0571	H25.47
#2	30.13	.1114	.0740	.1740	139.8	.0336	H25.82

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.96	3.725	.0084	.0840	4.000	L.0097	.0177
#1	26.95	3.699	.0045	.0856	3.776	L.0254	.0178
#2	26.97	3.750	.0123	.0825	4.224	L-.0060	.0176

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.821	L-.0313	.3485	.2131	3.355	30.97	7.149
#1	6.779	L-.0154	.3485	.2098	3.283	30.31	7.097
#2	6.864	L-.0471	.3486	.2164	3.426	31.63	7.200

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.3211	.0347	.2565
#1	.3270	.0336	.2543
#2	.3152	.0358	.2586

Method: EPACLP1 Sample Name: K8941-02 Operator: MMR
Run Time: 11/19/03 14:46:26
Comment: K2308941 TOTAL 25-50 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	129.5	.0467	.0811	.6382	.0020	.0410	L-.0015
#1	129.5	.0599	.0674	.6386	.0020	.0435	L-.0011
#2	129.4	.0334	.0947	.6378	.0020	.0385	L-.0018

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.31	.0681	.0335	.1744	70.82	.0322	13.00
#1	17.31	.0694	.0362	.1758	70.79	.0307	13.00
#2	17.31	.0668	.0307	.1731	70.84	.0337	12.99

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.34	1.230	.0062	.0751	3.952	L.0317	.0091
#1	13.37	1.231	L.0024	.0718	4.062	L.0216	.0091
#2	13.31	1.228	.0101	.0783	3.842	.0417	.0091

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.988	L-.0208	.1441	.1402	1.682	31.72	3.565
#1	5.992	L-.0058	.1438	.1402	1.741	31.68	3.574
#2	5.984	L-.0357	.1444	.1402	1.622	31.75	3.557

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2419	.0208	.4186
#1	.1577	.0183	.4188
#2	.3260	.0234	.4184

Method: EPACLP1 Sample Name: K8941-03 Operator: MMR
Run Time: 11/19/03 14:47:56
Comment: K2308941 TOTAL 25-50 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	21.82	.0333	L.0078	.1239	.0008	L.0146	L.0009
#1	21.97	.0393	L-.0073	.1237	.0009	L.0120	L.0029
#2	21.68	L.0273	L.0230	.1241	.0007	L.0172	L-.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.19	.0232	.0135	.0681	30.96	L-.0014	12.24
#1	27.31	.0232	.0143	.0667	31.13	L.0007	12.28
#2	27.07	.0231	.0128	.0695	30.79	L-.0034	12.20

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.76	2.408	.0060	.0204	2.023	L.0306	.0074
#1	12.82	2.419	.0073	.0335	1.093	.0521	.0075
#2	12.69	2.397	.0047	L.0073	2.953	L.0090	.0074

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.302	L-.0057	.0650	.0507	1.103	33.35	1.268
#1	9.340	L.0111	.0656	.0506	1.057	33.47	1.197
#2	9.265	L-.0226	.0644	.0507	1.148	33.23	1.340

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1389	.0135	.2181
#1	.1081	L.0037	.2194
#2	.1696	.0234	.2168

Method: EPACLP1 Sample Name: K8941-04 Operator: MMR
Run Time: 11/19/03 14:49:29
Comment: K2308941 TOTAL 25-50 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	28.31	.0598	L-.0172	.1456	.0007	L.0146	L-.0015
#1	28.18	.0303	L-.0155	.1450	.0007	L.0197	L-.0015
#2	28.44	.0893	L-.0189	.1462	.0007	L.0096	L-.0014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	23.25	.0285	.0197	.0577	31.79	L.0032	11.27
#1	23.19	.0300	.0197	.0590	31.68	L.0048	11.23
#2	23.31	.0270	.0198	.0564	31.90	L.0015	11.31

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.57	1.180	L.0022	.0229	2.748	L-.0009	.0068
#1	11.48	1.176	L.0022	.0286	2.840	L.0005	.0087
#2	11.65	1.184	L.0022	L.0172	2.655	L-.0024	L.0048

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.876	L-.0147	.0725	.0515	.7297	19.03	1.721
#1	6.835	L-.0263	.0716	.0523	.7289	18.92	1.711
#2	6.916	L-.0030	.0733	.0507	.7305	19.13	1.730

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1302	.0113	.1695
#1	.1408	.0139	.1686
#2	.1197	L.0088	.1703

Method: EPACLP1 Sample Name: K8941-05 Operator: MMR
Run Time: 11/19/03 14:50:57
Comment: K2308941 TOTAL 25-50 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	58.74	.0528	L.0172	.2969	.0018	L.0147	L-.0001
#1	58.44	.0396	L.0231	.2951	.0018	L.0149	L.0013
#2	59.04	.0661	L.0114	.2988	.0018	L.0145	L-.0015

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.23	.0592	.0408	.1196	66.67	L.0206	22.30
#1	42.00	.0587	.0397	.1186	66.32	L.0224	22.19
#2	42.46	.0598	.0419	.1205	67.03	L.0187	22.42

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	23.38	2.688	L.0034	.0593	3.603	L.0169	.0102
#1	23.24	2.673	.0046	.0650	3.955	L.0326	.0109
#2	23.53	2.702	L.0021	.0536	3.251	L.0011	.0095

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.693	L-.0137	.1691	.1187	1.639	43.11	3.279
#1	7.657	L-.0293	.1676	.1187	1.684	42.93	3.264
#2	7.728	L.0019	.1705	.1187	1.593	43.30	3.295

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.2489	.0212	.3056
#1	.2708	.0197	.3034
#2	.2270	.0226	.3077

Method: EPACLP1 Sample Name: K8941-06 Operator: MMR
Run Time: 11/19/03 14:52:45
Comment: K2308941 TOTAL 25-50 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.60	.0452	L-.0095	.1098	.0009	L.0170	L-.0016
#1	26.68	.0423	L-.0457	.1098	.0009	L.0169	L-.0022
#2	26.51	.0481	L.0266	.1098	.0009	L.0170	L-.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.58	.0349	.0191	.0537	33.10	L.0106	10.02
#1	16.69	.0338	.0196	.0542	33.29	L.0120	10.07
#2	16.46	.0361	.0186	.0532	32.91	L.0093	9.961

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.27	.5237	L-.0016	L.0156	1.951	L.0207	.0072
#1	10.29	.5270	L-.0003	L.0189	1.689	L-.0108	.0081
#2	10.25	.5204	L-.0029	L.0123	2.214	.0523	.0064

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.862	L-.0300	.1073	.0650	.6770	22.87	2.267
#1	4.898	L-.0276	.1078	.0658	.6753	22.62	2.297
#2	4.826	L-.0324	.1067	.0641	.6788	23.13	2.236

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1151	.0154	.1146
#1	.1139	.0175	.1152
#2	.1162	.0132	.1139

Method: EPACLP1 Sample Name: PBS Operator: MMR
Run Time: 11/19/03 14:56:34
Comment: K2308926 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0344	L.0272	L.0169	L.0012	L.0002	L-.0006	L-.0043
#1	.0319	L.0065	L.0236	L.0010	L.0002	L-.0043	L-.0061
#2	.0368	.0479	L.0102	L.0014	L.0002	L.0032	L-.0026

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0064	L-.0001	L.0017	L.0018	.0091	L-.0093	L.0059
#1	L.0055	L.0007	L.0002	L.0014	.0081	L-.0020	L.0058
#2	L.0073	L-.0008	L.0032	L.0023	.0100	L-.0166	L.0061

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0899	.0010	L-.0000	L-.0003	L.1714	.0404	L.0032
#1	.1028	.0009	L-.0000	L-.0027	L.4367	L.0347	L.0037
#2	L.0771	.0011	L-.0000	L.0022	L-.0940	.0461	L.0028

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0367	L.0149	L.0020	L.0024	.0693	L.1666	L.0006
#1	L.0502	.0293	L.0026	.0041	L.0448	L.1789	L.0011
#2	L.0233	L.0005	L.0014	L.0007	.0938	L.1543	L.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0653	L.0008	L.0002
#1	.0951	L.0030	L.0002
#2	L.0356	L-.0014	L.0002

Method: EPACLP1 Sample Name: LCSS Operator: MMR
Run Time: 11/19/03 14:58:08
Comment: K2308926 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	46.83	.1844	.9808	.9190	.2372	.2924	.3423
#1	46.96	.1888	1.018	.9213	.2381	.2973	.3430
#2	46.70	.1799	.9434	.9168	.2362	.2875	.3417

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	55.02	.7686	1.122	.4763	69.18	.6207	14.91
#1	55.09	.7698	1.125	.4772	69.26	.6249	14.93
#2	54.95	.7675	1.119	.4753	69.10	.6164	14.88

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	15.53	2.058	.2601	.3964	18.90	.8461	.4673
#1	15.53	2.059	.2613	.4013	18.81	.8647	.4698
#2	15.54	2.056	.2588	.3915	18.99	.8274	.4649

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.286	.4396	.9365	1.407	4.818	7.865	1.544
#1	5.303	.4214	.9385	1.408	4.806	7.882	1.547
#2	5.269	.4579	.9345	1.405	4.831	7.848	1.540

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.5578	.0391	.6268
#1	.5127	.0394	.6281
#2	H.6029	.0387	.6255

Method: EPACLP1 Sample Name: CCV12 Operator: MMR
Run Time: 11/19/03 15:00:21
Comment: ICP2-13-E KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.970	5.001	2.000	.4988	.4962	4.995	.4992
#1	4.970	4.981	1.961	.4984	.4951	4.973	.5049
#2	4.970	5.022	2.039	.4992	.4974	5.017	.4936

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.024	4.974	.4970	.4888	4.966	5.063	4.980
#1	5.029	4.963	.4983	.4883	4.955	5.058	4.973
#2	5.019	4.986	.4956	.4892	4.977	5.068	4.987

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.106	.4989	.4962	5.109	23.24	1.980	.4956
#1	5.151	.4974	.4962	5.099	22.62	1.993	.4956
#2	5.061	.5003	.4962	5.119	23.87	1.967	.4956

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.12	5.040	.4964	2.487	25.21	5.004	.5147
#1	25.03	4.993	.4969	2.478	25.04	5.007	.5347
#2	25.21	5.087	.4959	2.496	25.39	5.001	.4947

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.055	5.027	.4970
#1	5.020	5.109	.4959
#2	5.089	4.945	.4981

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Method: EPACLP1 Sample Name: CCB12 Operator: MMR
Run Time: 11/19/03 15:02:02
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0275	.0169	.0002	.0004	-.0000	.0094	.0008
#1	.0073	-.0054	.0214	.0002	-.0000	.0056	.0002
#2	.0477	.0391	-.0211	.0006	-.0000	.0131	.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0031	-.0008	.0016	.0009	.0011	-.0159	.0011
#1	.0025	.0011	-.0001	-.0004	.0009	-.0137	.0011
#2	.0038	-.0027	.0033	.0023	.0012	-.0181	.0011

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0128	.0010	.0051	-.0035	-.1208	.0074	.0048
#1	.0514	.0002	.0076	-.0093	-.7142	.0232	.0028
#2	-.0257	.0017	.0025	.0022	.4725	-.0084	.0068

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0467	-.0106	.0000	.0016	.1213	.0198	.0004
#1	.0303	-.0321	.0021	.0008	.0452	.0148	-.0003
#2	.0630	.0110	-.0020	.0024	.1973	.0248	.0011

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0406	.0011	.0002
#1	.0555	-.0029	.0002
#2	.0257	.0051	.0002

Method: EPACLP1 Sample Name: K8926-03 Operator: MMR
Run Time: 11/19/03 15:03:44
Comment: K2308926 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.024	.0328	L-.0018	.1624	L-.0000	L.0049	L.0009
#1	1.022	.0445	L-.0007	.1626	L-.0000	L.0012	L.0009
#2	1.025	L.0210	L-.0030	.1622	L-.0000	L.0086	L.0009

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	104.9	.0218	L.0031	.0442	1.224	L-.0200	3.775
#1	104.3	.0231	L.0019	.0456	1.217	L-.0134	3.758
#2	105.4	.0204	.0042	.0429	1.231	L-.0266	3.792

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.163	.2644	L.0013	L.0072	1.176	.0420	L.0044
#1	4.186	.2634	L.0000	L.0039	.8959	L.0204	L.0032
#2	4.141	.2653	L.0026	L.0104	1.456	.0635	.0056

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.485	L.0006	L.0025	.0794	.6932	1.637	.0590
#1	9.435	L-.0203	L.0028	.0777	.6769	1.627	.0567
#2	9.535	.0214	L.0022	.0811	.7096	1.647	.0613

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0607	L.0037	.0911
#1	.0608	L.0044	.0907
#2	.0607	L.0030	.0915

Method: EPACLP1 Sample Name: K8926-03D Operator: MMR
Run Time: 11/19/03 15:05:15
Comment: K2308926 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9565	.0431	.0420	.1611	L.0002	L.0050	L-.0033
#1	.9449	.0446	.0600	.1605	L.0002	L.0037	L-.0038
#2	.9680	.0417	L.0241	.1618	L.0002	L.0062	L-.0029

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.0	.0199	.0042	.0442	1.192	L-.0046	3.783
#1	106.8	.0208	L.0020	.0429	1.188	L-.0060	3.780
#2	107.2	.0189	.0063	.0455	1.197	L-.0031	3.786

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.112	.2673	L.0039	L.0088	.9526	.0434	L.0040
#1	4.090	.2667	L.0000	L.0055	L.5858	L.0061	L.0024
#2	4.135	.2680	.0077	L.0121	1.319	.0807	.0056

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.509	L-.0001	L.0036	.0593	.7511	1.566	.0570
#1	9.527	L-.0007	L.0027	.0593	.7052	1.565	.0567
#2	9.492	L.0006	.0045	.0593	.7970	1.566	.0572

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0610	L.0077	.0915
#1	.1205	L.0066	.0915
#2	L.0014	L.0088	.0915

Method: EPACLP1 Sample Name: K8926-03S Operator: MMR
Run Time: 11/19/03 15:07:11
Comment: K2308926 5/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.131	.4996	.4531	2.128	.0492	.4925	.0482
#1	3.130	.5069	.4609	2.125	.0490	.4950	.0488
#2	3.131	.4923	.4452	2.131	.0494	.4900	.0476

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	127.2	.2174	.4815	.2906	2.417	.4662	4.400
#1	126.9	.2179	.4821	.2901	2.413	.4809	4.388
#2	127.5	.2168	.4809	.2910	2.421	.4516	4.412

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.768	.7835	.4888	.4933	1.087	.5011	.0554
#1	4.748	.7816	.4926	.4843	1.200	.4968	.0574
#2	4.787	.7854	.4849	.5023	.9734	.5054	.0534

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.796	L.0073	.4848	.5507	.8830	2.032	.0664
#1	9.752	L.0171	.4845	.5499	.8559	2.026	.0664
#2	9.841	L-.0025	.4850	.5515	.9101	2.038	.0664

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.5353	L.0044	.1055
#1	.5055	L.0030	.1053
#2	.5650	L.0059	.1057

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 15:08:57
Comment: K2308926 CR-6 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0141	L.0286	L-.0255	L.0010	L.0001	L.0020	L-.0002
#1	L.0159	L.0241	L-.0054	L.0014	L.0002	L.0007	L-.0022
#2	L.0123	.0331	L-.0456	L.0006	L-.0000	L.0032	L.0019

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0027	L-.0014	L.0004	L-.0022	L.0042	H700.0	L.0052
#1	L.0055	L-.0012	L.0004	L-.0040	L.0055	H705.6	L.0054
#2	L-.0002	L-.0016	L.0004	L-.0004	L.0029	H694.4	L.0050

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0161	L-.0001	L.0038	L-.0093	L.0253	L.0375	.0424
#1	L.0064	L-.0001	.0051	L-.0158	L.1326	.0662	.0404
#2	L-.0386	L-.0001	L.0025	L-.0027	L-.0821	L.0088	.0444

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0165	L-.1652	L-.0023	L.0008	.1296	L.0606	L.0004
#1	L.0002	L-.1691	L-.0020	L.0008	.2136	L.0553	L-.0008
#2	L.0329	L-.1613	L-.0026	L.0008	L.0456	L.0660	L.0015

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0140	L-.0007	L.0000
#1	L.0455	L.0015	L.0002
#2	L-.0735	L-.0029	L-.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 15:10:17
Comment: K2308926 CR-6 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0326	.0433	L.0292	L.0014	L.0002	L-.0006	L.0000
#1	.0381	.0479	L.0315	L.0014	L.0002	L-.0018	.0031
#2	L.0270	.0388	L.0270	L.0014	L.0002	L.0007	L-.0030

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0043	.8888	L.0020	L.0005	L.0018	H711.3	L.0069
#1	L.0061	.8822	L.0030	L-.0004	L.0024	H708.8	L.0069
#2	L.0024	.8955	L.0010	L.0014	L.0012	H713.8	L.0069

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0719	L-.0001	L-.0013	L-.0076	L.1296	L.0390	.0396
#1	L.0783	L-.0001	L-.0026	L-.0093	L.0432	.0547	.0396
#2	L.0655	L-.0001	L-.0000	L-.0060	L.2161	L.0232	.0396

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0210	L-.1628	L.0006	L-.0017	.0694	L.0695	L.0004
#1	L.0188	L-.1773	L-.0003	L-.0008	.0938	L.0708	L.0006
#2	L.0233	L-.1484	L.0015	L-.0025	L.0451	L.0682	L.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0041	L.0026	L.0002
#1	.0654	L.0051	L.0002
#2	L-.0735	L.0000	L.0002

Method: EPACLP1 Sample Name: K8926-01 Operator: MMR
Run Time: 11/19/03 15:11:45
Comment: K2308926 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1106	.0403	L.0087	.1495	L-.0000	L.0056	L-.0018
#1	.1027	L.0152	L.0099	.1483	L-.0000	L.0056	L-.0010
#2	.1185	.0654	L.0075	.1507	L-.0000	L.0055	L-.0025

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2155	.0079	L.0025	L.0023	.0933	H1120.	.0427
#1	.2139	.0067	L.0010	L.0023	.0915	H1116.	.0427
#2	.2171	.0090	.0040	L.0023	.0951	H1125.	.0427

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1217	.0023	L-.0013	L-.0043	1.376	L.0361	.1068
#1	L-.0518	.0021	L-.0026	L-.0060	.9377	.0634	.1052
#2	.2953	.0025	L-.0000	L-.0027	1.814	L.0088	.1084

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.340	L-.2793	L.0000	L.0008	.2935	L.2151	L.0015
#1	1.317	L-.2539	L-.0025	L.0008	.3703	L.2068	L.0001
#2	1.363	L-.3048	L.0026	L.0008	.2167	L.2234	.0029

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0741	L.0037	.0159
#1	L.0152	L.0008	.0157
#2	L-.1633	L.0066	.0162

Method: EPACLP1 Sample Name: K8926-02 Operator: MMR
Run Time: 11/19/03 15:13:21
Comment: K2308926 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0564	.0449	L-.0011	.0059	L.0002	L.0068	L.0000
#1	.0636	.0449	L-.0190	.0059	L.0002	L.0081	L-.0003
#2	.0491	.0449	L.0168	.0059	L.0002	L.0056	L.0003

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0381	L-.0001	L.0013	L.0018	.0098	H726.8	.0138
#1	.0379	L-.0008	L.0013	L.0023	.0093	H727.0	.0142
#2	.0383	L.0007	L.0013	L.0014	.0103	H726.5	.0134

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1510	L-.0001	L-.0026	L-.0052	.8154	L.0275	.0484
#1	L.0899	L-.0001	L-.0000	L-.0043	1.045	L-.0027	.0492
#2	.2121	L-.0001	L-.0052	L-.0060	L.5858	.0576	.0476

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0483	L-.1998	L.0008	L-.0017	.1205	L.1324	L-.0008
#1	L.0579	L-.2017	L.0003	L-.0009	.1098	L.1423	L-.0017
#2	L.0387	L-.1978	L.0014	L-.0026	.1312	L.1224	L.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0091	L.0044	.0011
#1	L-.0438	L.0059	.0011
#2	L.0256	L.0030	.0011

Method: EPACLP1 Sample Name: K8926-02D Operator: MMR
Run Time: 11/19/03 15:15:27
Comment: K2308926 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0405	L.0198	L-.0033	.0063	L.0002	L.0019	L.0008
#1	.0612	L.0213	L.0279	.0068	L.0002	L.0032	L.0001
#2	L.0197	L.0183	L-.0344	.0059	L.0002	L.0007	L.0016

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0299	L-.0012	L.0014	L-.0004	L.0048	H724.4	.0115
#1	.0321	L-.0008	L.0024	L-.0004	L.0048	H728.3	.0115
#2	.0277	L-.0016	L.0005	L-.0004	L.0048	H720.6	.0115

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0065	L-.0001	L-.0000	L-.0076	L.2042	L.0332	.0316
#1	L.0514	L-.0001	L-.0000	L-.0076	L.5679	L.0117	.0316
#2	L-.0643	L-.0001	L-.0000	L-.0076	L-.1596	.0548	.0316

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0284	L-.1659	L-.0003	L-.0000	.0887	L.0995	L-.0008
#1	L.0239	L-.1965	L.0003	L-.0009	.1317	L.1091	L-.0003
#2	L.0329	L-.1352	L-.0009	L.0008	L.0456	L.0899	L-.0012

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0289	L.0026	.0006
#1	L-.0041	L.0044	.0006
#2	L-.0537	L.0008	.0006

Method: EPACLP1 Sample Name: K8926-02S Operator: MMR
Run Time: 11/19/03 15:18:35
Comment: K2308926 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0369	L.0171	L.0259	.0041	L.0002	L-.0005	L-.0014
#1	.0393	L-.0022	L.0203	.0047	L.0002	L-.0043	L.0003
#2	.0345	.0363	L.0315	.0035	L.0002	L.0032	L-.0032

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0289	.8754	L.0010	L-.0027	.0110	H693.9	.0108
#1	.0293	.8795	L.0021	L-.0013	.0134	H697.3	.0108
#2	.0284	.8712	L-.0000	L-.0040	.0086	H690.5	.0108

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0268	L-.0001	L-.0039	L-.0093	L.1684	L.0246	.0356
#1	L.0590	L-.0001	L-.0026	L-.0043	L.5739	L.0002	.0372
#2	L-.0053	L-.0001	L-.0052	L-.0142	L-.2371	.0490	.0340

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0265	L-.1473	L.0005	L-.0017	.0777	L.0851	L.0011
#1	L.0329	L-.1460	L.0020	L-.0008	L.0450	L.0907	L.0020
#2	L.0201	L-.1487	L-.0009	L-.0025	.1105	L.0794	L.0001

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0802	L.0026	.0022
#1	.1347	L.0051	.0024
#2	L.0256	L.0000	.0019

Method: EPACLP1 Sample Name: CCV13 Operator: MMR
Run Time: 11/19/03 15:25:17
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.915	4.909	1.939	.4918	.4909	4.962	.4999
#1	4.919	4.881	2.029	.4910	.4907	4.916	.4969
#2	4.911	4.937	1.850	.4926	.4911	5.008	.5029

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.913	4.897	.4884	.4847	4.884	4.964	4.892
#1	4.910	4.891	.4870	.4838	4.876	4.958	4.889
#2	4.916	4.902	.4899	.4856	4.892	4.970	4.896

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.952	.4939	.4846	5.002	23.47	1.968	.4895
#1	5.049	.4939	.4782	5.024	23.33	1.938	.4875
#2	4.856	.4940	.4910	4.981	23.60	1.999	.4915

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.92	5.021	.4873	2.459	24.97	4.919	.4915
#1	24.87	5.050	.4884	2.460	24.81	4.912	.4965
#2	24.97	4.992	.4863	2.458	25.13	4.927	.4864

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.926	4.937	.4903
#1	4.991	4.940	.4899
#2	4.862	4.934	.4907

Method: EPACLP1 Sample Name: CCB13 Operator: MMR
Run Time: 11/19/03 15:27:07
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0330	.0419	.0213	.0010	.0006	.0205	.0010
#1	.0207	.0300	.0102	.0010	.0008	.0230	.0005
#2	.0453	Q.0537	.0324	.0010	.0004	.0180	.0015

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0102	.0049	-.0016	-.0009	.0062	.0133	.0073
#1	.0103	Q.0068	-.0032	-.0013	.0072	.0038	.0096
#2	.0101	.0030	.0001	-.0004	.0053	.0229	.0050

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0257	.0011	.0051	.0014	.1147	.0174	.0040
#1	-.0322	.0012	.0077	.0038	-.3445	-.0084	.0028
#2	.0835	.0011	.0025	-.0011	.5739	.0433	.0053

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0826	.0026	.0009	.0049	.1320	.0155	.0001
#1	.0829	-.0085	-.0008	.0058	.1323	.0102	.0006
#2	.0823	.0136	.0026	.0041	.1317	.0208	-.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	-.0041	.0070	.0006
#1	-.0140	.0095	.0006
#2	.0058	.0044	.0006

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 15:29:48
Comment: K2308927 CR-6 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0563	.0448	L.0302	L.0014	L.0002	L.0032	L-.0008
#1	.0624	.0566	.0726	L.0018	L.0002	L.0032	L.0005
#2	.0502	.0331	L-.0122	L.0010	L.0002	L.0032	L-.0020

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0049	L.0005	L.0036	L.0023	L.0026	H682.7	L.0044
#1	L.0064	L.0026	.0047	L.0023	L.0028	H674.9	L.0042
#2	L.0034	L-.0016	L.0025	L.0023	L.0024	H690.5	L.0046

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0514	L.0000	L.0012	L-.0117	.7975	.0418	.0308
#1	L.0900	L.0002	L.0025	L-.0191	1.158	L.0318	.0316
#2	L.0128	L-.0001	L-.0000	L-.0044	L.4367	.0519	.0300

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0383	L-.1606	L-.0011	L-.0017	.1535	L.0736	L-.0028
#1	L.0470	L-.1638	L.0003	L-.0008	.1207	L.0746	L-.0049
#2	L.0297	L-.1574	L-.0026	L-.0026	.1863	L.0726	L-.0008

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0190	L.0084	L.0002
#1	L-.0438	.0102	.0006
#2	L.0058	L.0066	L-.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 15:31:12
Comment: K2308927 CR-6 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0357	.0368	L.0281	L.0014	L.0002	L.0069	L-.0038
#1	L.0124	.0324	L.0271	L.0006	L.0002	L.0007	L-.0030
#2	.0589	.0411	L.0291	.0023	L.0002	L.0130	L-.0046

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0038	.9264	L.0025	L.0018	L.0026	H691.4	L.0046
#1	L.0030	.9255	L-.0002	L-.0013	L.0014	H691.1	L.0046
#2	L.0045	.9274	.0052	.0050	L.0038	H691.7	L.0046

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0655	L-.0002	L-.0026	L.0006	.9168	.0490	.0312
#1	L.0269	L-.0002	L-.0000	L.0071	L-.1059	.0490	.0276
#2	.1041	L-.0001	L-.0052	L-.0060	1.940	.0490	.0348

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0108	L-.1612	L.0003	L-.0017	L.0450	L.0547	L.0001
#1	L-.0024	L-.1677	L-.0006	L-.0026	L.0453	L.0437	L-.0003
#2	L.0239	L-.1546	L.0011	L-.0008	L.0447	L.0656	L.0006

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0438	L.0030	L.0000
#1	L-.0636	L-.0029	L-.0002
#2	L-.0239	L.0088	L.0002

Method: EPACLP1 Sample Name: K8927-01 Operator: MMR
Run Time: 11/19/03 15:32:37
Comment: K2308927 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0862	L.0227	L-.0035	.0585	L.0001	L.0068	L-.0015
#1	.0820	L.0095	L.0010	.0575	L.0002	L.0006	L-.0039
#2	.0904	.0359	L-.0080	.0595	L-.0000	L.0130	L.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1437	L.0016	L.0024	L.0018	.0974	H735.4	.0686
#1	.1417	L.0018	L.0014	L.0014	.0958	H729.1	.0684
#2	.1457	L.0014	L.0035	L.0023	.0989	H741.7	.0688

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1603	.0029	L.0012	L-.0109	1.606	L.0375	.0848
#1	.1539	.0029	L-.0026	L-.0043	1.146	.0404	.0828
#2	.1668	.0029	.0051	L-.0174	2.065	L.0347	.0868

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6062	L-.1783	L.0012	L-.0017	.4292	L.2841	.0121
#1	.5889	L-.1718	L.0008	L-.0026	.3805	L.2765	.0126
#2	.6236	L-.1848	L.0015	L-.0008	.4780	L.2918	.0117

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0741	L.0026	.0078
#1	L-.0443	L-.0029	.0075
#2	L-.1038	L.0081	.0080

Method: EPACLP1 Sample Name: K8927-01D Operator: MMR
Run Time: 11/19/03 15:34:09
Comment: K2308927 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0832	.0360	L-.0101	.0577	L-.0000	L.0068	L.0002
#1	.0867	.0330	L.0055	.0583	L-.0000	L.0081	L.0006
#2	.0797	.0390	L-.0258	.0571	L-.0000	L.0056	L-.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1285	L.0009	L.0008	L.0014	.1038	H738.4	.0605
#1	.1299	L.0010	L.0023	L.0014	.1037	H740.0	.0607
#2	.1271	L.0007	L-.0007	L.0014	.1039	H736.8	.0603

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0221	.0028	L-.0026	L-.0052	1.456	L.0318	.0760
#1	L.0575	.0027	.0051	L-.0060	1.403	L-.0027	.0764
#2	L-.0132	.0028	L-.0103	L-.0043	1.510	.0662	.0756

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5068	L-.1901	L-.0006	L-.0009	.3837	L.2715	.0130
#1	.5126	L-.2096	L-.0008	L-.0009	.3916	L.2692	.0130
#2	.5011	L-.1705	L-.0004	L-.0009	.3757	L.2738	.0130

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0400	L.0040	.0078
#1	L-.0543	L.0022	.0080
#2	.1342	L.0059	.0075

Method: EPACLP1 Sample Name: K8927-01S Operator: MMR
Run Time: 11/19/03 15:35:32
Comment: K2308927 CR-6 30/30 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0923	L.0105	L.0156	.0605	L-.0000	L.0031	L-.0020
#1	.0940	L.0222	L.0044	.0607	L-.0000	L.0031	L-.0025
#2	.0905	L-.0012	L.0268	.0603	L-.0000	L.0031	L-.0014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1514	.8387	L.0020	L.0019	.1338	H691.1	.0725
#1	.1536	.8423	L-.0002	L.0014	.1353	H695.4	.0730
#2	.1492	.8351	.0042	L.0023	.1322	H686.8	.0719

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0810	.0031	L.0012	L-.0003	1.597	.0605	.1048
#1	L.0906	.0031	.0051	L-.0027	1.612	.0490	.1044
#2	L.0714	.0030	L-.0026	L.0022	1.582	.0720	.1052

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6123	L-.1621	L.0015	L-.0000	.3479	.3168	.0172
#1	.6165	L-.1791	L.0024	L-.0009	.3912	.3131	.0167
#2	.6082	L-.1452	L.0006	L.0008	.3045	.3204	.0176

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0445	L.0040	.0086
#1	L.0150	L.0030	.0088
#2	L-.1040	L.0051	.0084

Method: EPACLP1 Sample Name: CCV14 Operator: MMR
Run Time: 11/19/03 15:44:56
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.988	5.069	1.991	.5091	.5013	5.107	.5053
#1	4.999	5.067	1.987	.5091	.5027	5.092	.5030
#2	4.976	5.070	1.994	.5091	.5000	5.122	.5076

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.016	5.102	.5018	.4844	5.014	5.054	4.976
#1	5.007	5.100	.5038	.4848	5.009	5.037	4.976
#2	5.025	5.105	.4997	.4839	5.019	5.071	4.976

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.999	.5014	.5074	5.224	23.53	2.020	.5053
#1	4.954	.5014	.5022	5.203	23.11	1.993	.5053
#2	5.044	.5014	.5126	5.244	23.94	2.048	.5053

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.68	5.338	.4948	2.511	25.86	5.109	.4985
#1	25.72	5.316	.4939	2.507	25.87	5.106	.4980
#2	25.64	5.361	.4957	2.515	25.85	5.111	.4990

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.098	5.063	.5024
#1	5.032	5.082	.5028
#2	5.163	5.044	.5020

Method: EPACLP1 Sample Name: CCB14 Operator: MMR
Run Time: 11/19/03 15:48:29
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0363	.0211	.0032	.0004	.0002	.0291	-.0001
#1	.0454	Q.0543	-.0149	.0002	.0004	.0354	.0012
#2	.0271	-.0122	.0214	.0006	-.0000	.0228	-.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0062	.0033	.0027	-.0000	.0024	-.0074	.0035
#1	.0082	Q.0059	.0033	.0013	.0051	-.0060	.0054
#2	.0041	.0008	.0020	-.0013	-.0002	-.0089	.0016

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0161	.0009	.0052	-.0042	.1408	.0131	.0037
#1	.0643	.0007	.0078	-.0008	.2729	.0117	.0049
#2	-.0321	.0010	.0026	-.0076	.0088	.0146	.0025

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0901	-.0116	.0004	.0026	.1248	.0205	-.0023
#1	.0963	.0022	.0004	.0026	.1579	.0263	-.0049
#2	.0838	-.0254	.0003	.0026	.0917	.0147	.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0150	.0022	.0004
#1	.0551	.0030	.0007
#2	-.0250	.0015	.0002

Method: EPACLP1 Sample Name: CCV15 Operator: MMR
Run Time: 11/19/03 15:52:49
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.983	4.975	1.975	.4951	.4964	4.965	.4920
#1	4.997	4.981	1.978	.4979	.4990	5.001	.4943
#2	4.969	4.969	1.973	.4922	.4937	4.929	.4896

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.948	4.962	.4933	.4945	4.954	4.968	4.958
#1	4.965	4.985	.4954	.4959	4.976	4.958	4.979
#2	4.932	4.939	.4911	.4931	4.932	4.979	4.937

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.023	.4948	.4922	4.947	24.37	2.034	.4959
#1	5.098	.4973	.4935	4.957	24.15	2.074	.4959
#2	4.948	.4923	.4909	4.936	24.58	1.994	.4959

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.80	4.939	.4936	2.483	24.94	4.959	.4946
#1	24.95	4.935	.4955	2.494	25.09	4.970	.4960
#2	24.64	4.942	.4917	2.472	24.78	4.948	.4932

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.876	4.957	.4950
#1	4.876	4.997	.4974
#2	4.876	4.916	.4926

Method: EPACLP1 Sample Name: CCB15 Operator: MMR
Run Time: 11/19/03 15:55:36
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0392	.0421	.0078	.0000	.0001	.0314	.0006
#1	Q.0614	Q.0631	-.0036	.0006	.0002	.0438	.0024
#2	.0171	.0212	.0192	-.0006	-.0000	.0190	-.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0039	.0003	.0016	.0015	.0009	-.0084	.0018
#1	.0067	.0030	.0043	.0015	.0020	.0056	.0027
#2	.0012	-.0024	-.0011	.0015	-.0002	-.0224	.0008

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0037	.0005	.0039	-.0044	-.1582	.0295	.0023
#1	.0850	.0008	.0052	.0053	.2456	.0266	.0027
#2	-.0776	.0002	.0026	-.0141	-.5619	.0325	.0019

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0428	-.0079	-.0002	.0008	.0814	.0149	-.0002
#1	.0581	-.0085	.0010	.0008	.1241	.0252	-.0011
#2	.0274	-.0073	-.0014	.0009	.0386	.0045	.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	-.0294	.0004	.0000
#1	-.0103	.0030	.0002
#2	-.0486	-.0022	-.0002

Method: EPACLP1 Sample Name: BLANK Operator: MMR
Run Time: 11/19/03 15:57:17
Comment: K2308872 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0755	L.0197	L.0088	L.0019	L.0001	.0575	L-.0010
#1	.0699	L.0152	L-.0014	.0023	L.0002	.0587	L-.0008
#2	.0810	L.0242	L.0189	L.0014	L-.0000	.0562	L-.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.800	L.0003	L.0010	L.0011	.0150	L.0048	.0466
#1	2.787	L.0003	L-.0000	L-.0003	.0151	L.0129	.0464
#2	2.813	L.0003	L.0021	L.0024	.0149	L-.0033	.0468

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0785	.0008	.0065	L-.0003	L.4182	L.0251	L.0047
#1	L.0525	L.0004	.0052	L.0021	L.3196	.0563	L.0035
#2	.1045	.0012	.0078	L-.0028	L.5169	L-.0062	.0059

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0032	L-.0125	L-.0005	L-.0009	L.0320	1.753	L.0012
#1	L-.0096	L-.0034	L-.0002	L-.0009	L.0376	1.738	L.0017
#2	L.0031	L-.0216	L-.0008	L-.0009	L.0265	1.767	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1042	L.0000	.0094
#1	.0756	L.0015	.0094
#2	.1329	L-.0014	.0094

Method: EPACLP1 Sample Name: SN Operator: MMR
Run Time: 11/19/03 16:06:24
Comment: MET1-22-D STANDARD CHECK KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0424	.1979	L.0123	.0037	L.0001	L.0103	L-.0018
#1	.0442	.2158	L.0055	.0068	L-.0000	L.0091	L-.0009
#2	.0407	.1800	L.0191	L.0006	L.0002	L.0115	L-.0028

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0049	L-.0027	.0079	L.0020	L.0029	L-.0201	L.0047
#1	L.0043	L-.0035	.0069	L.0024	L.0056	L-.0268	L.0055
#2	L.0056	L-.0020	.0090	L.0015	L.0002	L-.0135	L.0039

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0483	.0019	L.0026	L.0005	L.0083	L-.0092	L.0035
#1	L-.0711	.0025	.0052	L-.0060	L.3504	L.0266	L.0035
#2	L-.0255	.0013	L-.0000	L.0069	L-.3338	L-.0449	L.0035

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0373	48.67	L-.0008	L.0008	.0816	L.0363	L-.0009
#1	L.0351	48.68	L-.0014	L.0009	.1249	L.0460	L-.0011
#2	L.0396	48.67	L-.0003	L.0008	L.0382	L.0266	L-.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0008	L.0008	L.0002
#1	L-.0103	L.0030	L.0002
#2	L.0088	L-.0014	L.0002

Method: EPACLP1 Sample Name: LCS Operator: MMR
Run Time: 11/19/03 15:58:44
Comment: K2308872 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.680	.9527	1.725	3.770	.0919	1.859	.0838
#1	3.682	.9871	1.711	3.783	.0920	1.857	.0826
#2	3.679	.9182	1.739	3.757	.0918	1.862	.0851

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0216	.3758	.9195	.4691	1.860	.8807	.0292
#1	.0217	.3781	.9195	.4696	1.863	.8719	.0292
#2	.0214	.3735	.9195	.4687	1.858	.8895	.0292

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1196	.9262	1.843	.9071	L.2980	1.833	.1066
#1	.1391	.9277	1.850	.9176	L.3073	1.845	.1075
#2	.1001	.9247	1.835	.8966	L.2888	1.821	.1058

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0116	L-.0299	.9222	.9003	.0747	L.1146	.0038
#1	L-.0090	L-.0292	.9246	.8994	.0745	L.1293	.0031
#2	L-.0141	L-.0305	.9198	.9012	.0748	L.0998	.0045

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	1.770	L-.0007	L.0000
#1	1.823	L-.0029	L.0002
#2	1.718	L.0015	L-.0002

Method: EPACLP1 Sample Name: K8872-01 Operator: MMR
Run Time: 11/19/03 16:00:57
Comment: K2308872 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0632	L.0226	L.0032	L.0004	L-.0000	L-.0059	L-.0001
#1	.0724	.0331	L-.0059	L.0006	L-.0000	L-.0009	L-.0007
#2	.0540	L.0122	L.0122	L.0002	L-.0000	L-.0109	L.0005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0619	L.0019	L.0010	.0038	.0212	L.0299	.0473
#1	.0616	L.0019	L.0010	.0052	.0214	.0365	.0472
#2	.0621	L.0019	L.0011	L.0024	.0210	L.0233	.0475

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1403	.0015	.0052	L-.0044	L-.0071	L.0191	L.0047
#1	L.0980	.0013	.0052	L-.0060	L.2888	L.0206	.0059
#2	.1826	.0017	.0052	L-.0028	L-.3030	L.0176	L.0035

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0397	L-.0085	L.0004	L.0008	L-.0060	L.1987	L.0007
#1	L-.0224	L-.0255	L.0004	L.0009	L.0374	L.2074	L.0007
#2	L-.0569	L.0084	L.0004	L.0008	L-.0494	L.1900	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0755	L.0019	L.0002
#1	.0851	L.0059	L.0002
#2	.0660	L-.0022	L.0002

Method: EPACLP1 Sample Name: K8872-01D Operator: MMR
Run Time: 11/19/03 16:02:28
Comment: K2308872 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0533	.0437	L.0122	L.0008	L-.0000	L-.0022	L-.0019
#1	.0379	.0392	L-.0035	L.0014	L-.0000	L-.0034	L-.0007
#2	.0687	.0482	L.0280	L.0002	L-.0000	L-.0010	L-.0031

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0535	L-.0010	L.0016	L.0020	.0125	.0329	.0431
#1	.0518	L-.0004	L.0011	L.0015	.0119	.0336	.0429
#2	.0551	L-.0016	L.0022	L.0024	.0132	.0321	.0433

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0882	.0010	.0052	L.0013	L.0268	L.0325	L.0047
#1	L.0394	.0007	.0052	L.0069	L.0792	L.0325	L.0043
#2	.1370	.0014	.0052	L-.0044	L-.0256	L.0325	.0051

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0505	L.0057	L-.0005	L.0017	L.0105	L.1746	L.0014
#1	L-.0684	L.0109	L-.0014	L.0025	L.0217	L.1759	L.0003
#2	L-.0326	L.0005	L.0003	L.0008	L-.0006	L.1733	.0026

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0613	L.0022	L.0002
#1	L.0565	L.0037	L.0002
#2	.0660	L.0008	L.0002

Method: EPACLP1 Sample Name: K8872-01S Operator: MMR
Run Time: 11/19/03 16:04:09
Comment: K2308872 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.938	.9840	1.926	4.152	.1004	1.971	.0855
#1	3.947	.9901	1.912	4.171	.1006	1.979	.0890
#2	3.930	.9780	1.940	4.133	.1002	1.964	.0820

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0695	.4046	.9825	.5059	2.022	.9523	.0528
#1	.0693	.4044	.9869	.5091	2.029	.9561	.0530
#2	.0698	.4048	.9782	.5027	2.014	.9486	.0526

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1582	1.004	1.992	.9718	L.4676	2.139	.1143
#1	L.0931	1.008	1.988	.9710	L.6217	2.139	.1147
#2	.2233	1.000	1.996	.9726	L.3134	2.139	.1138

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0247	L.0076	1.007	.9398	L-.0591	L.1548	L-.0004
#1	L-.0179	L.0115	1.012	.9415	L-.1022	L.1662	L-.0011
#2	L-.0314	L.0037	1.002	.9381	L-.0161	L.1435	L.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	1.923	L.0055	L.0002
#1	1.871	L.0015	L.0002
#2	1.976	L.0096	L.0002

Method: EPACLP1 Sample Name: CCV16 Operator: MMR
Run Time: 11/19/03 16:21:42
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.943	4.926	1.937	.4940	.4929	4.973	.4968
#1	4.945	4.940	1.942	.4955	.4931	4.954	.4967
#2	4.940	4.913	1.933	.4926	.4927	4.991	.4969

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.899	4.910	.4899	.4940	4.914	4.869	4.918
#1	4.909	4.921	.4911	.4959	4.926	4.880	4.926
#2	4.890	4.900	.4887	.4922	4.902	4.858	4.911

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.981	.4911	.4922	4.918	24.60	1.976	.4939
#1	5.020	.4911	.4883	4.943	24.81	1.970	.4935
#2	4.942	.4912	.4961	4.894	24.39	1.982	.4942

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.94	4.908	.4922	2.461	24.65	4.934	.4974
#1	24.95	4.940	.4928	2.469	24.52	4.936	.5044
#2	24.93	4.876	.4916	2.454	24.78	4.932	.4904

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.795	4.991	.4941
#1	4.771	4.999	.4952
#2	4.819	4.984	.4930

Method: EPACLP1 Sample Name: CCB16 Operator: MMR
Run Time: 11/19/03 16:23:31
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0195	.0182	.0135	.0002	.0002	.0128	-.0011
#1	.0121	.0122	.0079	.0002	.0002	.0140	-.0026
#2	.0269	.0242	.0191	.0002	.0002	.0115	.0003

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0018	-.0000	-.0006	.0015	-.0007	-.0172	.0016
#1	.0003	-.0004	-.0023	.0015	-.0010	-.0194	.0020
#2	.0033	.0003	.0011	.0015	-.0005	-.0150	.0012

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0427	.0010	.0039	-.0052	-.1582	.0251	.0047
#1	-.0061	.0009	.0052	-.0092	-.2969	-.0121	.0043
#2	.0915	.0012	.0026	-.0011	-.0194	.0623	.0051

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0233	-.0092	-.0002	.0009	.0624	.0139	.0003
#1	.0108	-.0177	-.0008	.0009	.0870	.0172	.0003
#2	.0357	-.0008	.0003	.0008	.0378	.0105	.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	-.0199	.0015	.0000
#1	-.0199	.0008	.0002
#2	-.0199	.0022	-.0002

Method: EPACLP1 Sample Name: PBE Operator: MMR
Run Time: 11/19/03 16:26:12
Comment: K2308869 K8904 K8944 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0713	.0512	L.0178	.7197	L.0002	.2091	L-.0020
#1	.0662	.0512	L.0076	.7135	L.0002	.2128	L-.0010
#2	.0763	.0512	L.0279	.7258	L.0002	.2054	L-.0030

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.7646	L.0013	L.0037	.0080	L.0060	L.0049	.0294
#1	.7609	L.0019	L.0032	.0070	L.0068	L.0144	.0292
#2	.7682	L.0007	.0043	.0089	L.0051	L-.0047	.0296

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1598	.0018	L.0039	L.0110	1.445	L.0236	.0071
#1	.1891	.0018	.0078	L.0150	1.380	L.0266	.0075
#2	.1306	.0018	L-.0000	L.0069	1.509	L.0206	.0067

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1198.	L-.0150	L.0015	.3898	L.0264	L.1291	L-.0016
#1	H1188.	L-.0163	L.0033	.3881	L-.0495	L.1351	L-.0035
#2	H1208.	L-.0138	L-.0003	.3915	.1022	L.1230	L.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0470	L.0004	.0087
#1	.1043	L-.0007	.0085
#2	L-.0104	L.0015	.0089

Method: EPACLP1 Sample Name: LCSE Operator: MMR
Run Time: 11/19/03 16:27:55
Comment: K2308869 K8904 K8944 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0640	L.0185	4.707	10.27	L-.0000	.1942	.9245
#1	.0419	L.0196	4.721	10.36	L-.0000	.1905	.9265
#2	.0861	L.0174	4.694	10.18	L-.0000	.1979	.9225

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.7908	4.702	.0112	.0070	.0088	4.626	.0304
#1	.7918	4.725	.0085	.0052	.0090	4.654	.0308
#2	.7899	4.679	.0139	.0089	.0085	4.598	.0300

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1012	.0019	L.0039	L.0029	1.648	1.050	.9201
#1	L.0394	.0016	L-.0000	L.0118	1.614	1.053	.9233
#2	.1630	.0022	.0078	L-.0060	1.682	1.047	.9169

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1195.	.0449	L.0017	.3834	L-.0085	L.1837	.0031
#1	H1203.	.0517	L.0007	.3833	L-.0486	L.1797	.0031
#2	H1186.	.0382	L.0028	.3834	L.0316	L.1876	.0031

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0964	L.0048	.0085
#1	L-.1537	L.0030	.0085
#2	L-.0390	L.0066	.0085

Method: EPACLP1 Sample Name: K8869-01 Operator: MMR
Run Time: 11/19/03 16:30:05
Comment: K2308869 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2268	.0587	L.0188	.4996	L-.0000	1.338	L.0019
#1	.2028	.0511	L.0313	.5021	L-.0000	1.340	L.0000
#2	.2508	.0662	L.0063	.4971	L-.0000	1.335	.0038

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	487.0	L.0018	L.0032	.0576	.1635	L-.0211	23.23
#1	488.0	.0063	L.0021	.0576	.1635	L-.0182	23.28
#2	486.1	L-.0026	.0043	.0576	.1635	L-.0241	23.19

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.95	1.196	.0104	L.0110	44.32	L.0221	L.0045
#1	26.08	1.198	.0104	L.0150	44.47	L.0325	L.0025
#2	25.82	1.194	.0104	L.0070	44.18	L.0117	.0065

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1146.	L-.0014	.0046	.3636	7.932	3.752	.0115
#1	H1150.	L-.0059	.0052	.3644	7.891	3.750	.0105
#2	H1142.	L.0031	L.0040	.3628	7.973	3.754	.0124

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0354	L.0022	.9828
#1	L.0211	L.0022	.9841
#2	L.0497	L.0022	.9815

Method: EPACLP1 Sample Name: PBE Operator: MMR
Run Time: 11/19/03 16:32:14
Comment: K2308869 K8904 K8944 TCLP RERUN KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0393	L.0153	L.0146	.7328	L.0002	.2103	L-.0043
#1	.0528	L.0212	L.0213	.7304	L.0002	.2103	L-.0045
#2	L.0257	L.0093	L.0079	.7353	L.0002	.2104	L-.0041

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.7827	L.0003	L.0021	.0080	L.0041	L-.0076	.0298
#1	.7786	L-.0000	L.0011	.0089	L.0041	L-.0062	.0296
#2	.7868	L.0007	L.0032	.0070	L.0041	L-.0091	.0300

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1598	.0014	L.0026	L.0021	1.312	L.0117	L.0031
#1	.1891	.0014	L.0026	L.0005	1.429	L.0206	L.0019
#2	.1306	.0015	L.0026	L.0037	1.195	L.0028	L.0043

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1227.	L-.0079	L-.0002	.4009	L-.0085	L.1361	L.0003
#1	H1224.	L-.0008	L-.0008	.4000	L.0318	L.1304	L.0003
#2	H1230.	L-.0151	L.0003	.4017	L-.0489	L.1418	L.0003

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0279	L-.0025	.0087
#1	L.0374	L.0015	.0085
#2	L.0183	L-.0066	.0089

verification mmr 11/19/03

Method: EPACLP1 Sample Name: K8869-01D Operator: MMR
Run Time: 11/19/03 16:34:17
Comment: K2308869 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2286	.0512	.0617	.5111	L.0001	1.377	L-.0031
#1	.2040	.0601	.0720	.5070	L-.0000	1.382	L-.0026
#2	.2532	.0422	.0514	.5152	L.0002	1.372	L-.0036

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	496.6	L.0014	L-.0001	.0562	.1708	L-.0101	23.69
#1	493.1	L.0005	L-.0001	.0539	.1685	L-.0211	23.55
#2	500.2	L.0024	L-.0002	.0585	.1732	L.0009	23.84

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.54	1.221	.0091	L.0037	44.96	L.0236	L.0001
#1	26.30	1.214	.0078	L.0021	44.87	L.0028	L-.0015
#2	26.79	1.227	.0104	L.0053	45.06	.0444	L.0017

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1177.	L-.0164	.0054	.3695	8.130	3.753	.0119
#1	H1170.	L-.0060	L.0022	.3679	8.052	3.738	.0119
#2	H1184.	L-.0268	.0086	.3712	8.207	3.768	.0119

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0547	L.0055	1.007
#1	L-.0457	L.0059	.9998
#2	.1551	L.0052	1.014

Method: EPACLP1 Sample Name: K8869-01S Operator: MMR
Run Time: 11/19/03 16:36:38
Comment: K2308869 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2336	.0526	4.676	9.959	L.0002	1.356	.9190
#1	.2250	.0603	4.657	9.915	L.0002	1.352	.9140
#2	.2422	.0448	4.695	10.00	L.0002	1.360	.9240

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	487.7	4.495	.0107	.0581	.1712	4.428	23.31
#1	486.4	4.482	.0118	.0585	.1688	4.406	23.24
#2	489.1	4.509	.0095	.0576	.1735	4.449	23.39

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.23	1.199	.0130	L.0029	44.89	1.012	.9196
#1	26.11	1.194	.0130	L.0005	45.07	1.009	.9184
#2	26.34	1.203	.0130	L.0053	44.72	1.015	.9208

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1158.	.0382	.0100	.3656	7.928	3.904	.0178
#1	H1153.	.0453	.0117	.3631	7.966	3.885	.0175
#2	H1162.	.0312	.0084	.3681	7.889	3.924	.0180

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1214	L.0015	.9954
#1	L.0305	L-.0007	.9915
#2	.2122	L.0037	.9993

Method: EPACLP1 Sample Name: K8904-01 Operator: MMR
Run Time: 11/19/03 16:38:51
Comment: K2308904 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6104	.0708	.1160	1.247	.0064	.2145	.0268
#1	.6079	.0723	.1319	1.247	.0064	.2145	.0287
#2	.6129	.0693	.1002	1.246	.0064	.2145	.0248

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	107.7	L.0025	L.0021	8.235	.0249	L.0094	2.157
#1	107.6	L.0019	L.0021	8.240	.0243	L-.0054	2.157
#2	107.8	L.0031	L.0022	8.230	.0255	L.0241	2.156

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.518	3.252	L-.0039	.0272	3.226	L.0370	L.0020
#1	2.473	3.248	L-.0026	.0312	2.613	L.0206	L.0004
#2	2.564	3.255	L-.0052	.0231	3.840	.0534	L.0036

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1195.	L-.0086	L.0021	5.908	.4998	1.596	L.0019
#1	H1198.	L-.0164	L.0000	5.911	.5432	1.591	L.0007
#2	H1192.	L-.0007	.0041	5.906	.4563	1.601	.0031

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0113	L.0070	.1435
#1	.0733	L.0066	.1438
#2	L-.0508	L.0074	.1433

Method: EPACLP1 Sample Name: K8904-01D Operator: MMR
Run Time: 11/19/03 16:41:44
Comment: K2308904 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6176	.0842	.1206	1.262	.0064	.2034	.0282
#1	.6226	.0782	.1364	1.261	.0064	.2071	.0271
#2	.6127	.0901	.1048	1.263	.0064	.1996	.0294

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	109.3	L.0027	.0043	8.367	.0277	L-.0149	2.189
#1	109.3	L.0027	L.0032	8.377	.0259	L-.0083	2.191
#2	109.4	L.0027	.0054	8.358	.0295	L-.0215	2.187

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.417	3.300	L.0039	L.0191	3.011	L.0295	.0064
#1	2.479	3.301	L.0026	L.0183	2.890	L.0266	.0052
#2	2.356	3.298	.0052	L.0199	3.131	L.0325	.0076

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1214.	L-.0073	L.0004	6.002	.5271	1.513	.0031
#1	H1216.	L-.0073	L.0007	6.004	.5376	1.521	.0031
#2	H1212.	L-.0073	L.0001	6.000	.5165	1.505	.0031

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0121	L.0059	.1457
#1	L.0261	L.0015	.1455
#2	L-.0503	.0103	.1459

Method: EPACLP1 Sample Name: K8904-01S Operator: MMR
Run Time: 11/19/03 16:43:22
Comment: K2308904 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6344	.0650	4.818	10.82	.0065	.2096	.9600
#1	.6462	.0830	4.725	10.56	.0064	.2046	.9451
#2	.6225	.0471	4.911	11.07	.0066	.2146	.9748

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	106.4	4.627	.0095	8.231	.0211	4.550	2.146
#1	105.0	4.557	.0139	8.075	.0226	4.516	2.111
#2	107.9	4.697	.0052	8.388	.0196	4.584	2.180

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.411	3.227	L.0026	L.0191	2.169	1.009	.9291
#1	2.524	3.174	L-.0000	.0264	3.470	.9581	.9187
#2	2.297	3.281	.0052	L.0118	.8683	1.059	.9396

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1196.	.0357	.0042	5.839	.4540	1.587	.0056
#1	H1171.	.0383	.0076	5.750	.4562	1.586	.0063
#2	H1221.	.0332	L.0009	5.928	.4519	1.589	.0049

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0922	L.0026	.1438
#1	.1203	L.0074	.1407
#2	.0642	L-.0022	.1468

Method: EPACLP1 Sample Name: CCV17 Operator: MMR
Run Time: 11/19/03 16:48:48
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.136	5.085	2.050	.5132	.5105	5.189	.5066
#1	5.103	5.058	2.049	.5099	.5082	5.153	.5003
#2	5.169	5.111	2.051	.5165	.5129	5.225	.5129

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.002	5.055	.5011	.5133	5.063	4.971	5.068
#1	4.973	5.023	.4975	.5097	5.035	4.930	5.043
#2	5.032	5.086	.5046	.5170	5.090	5.012	5.092

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.215	.5067	.5065	5.041	24.80	2.067	.5118
#1	5.169	.5041	.4987	5.017	24.59	2.074	.5089
#2	5.260	.5092	.5143	5.066	25.01	2.060	.5147

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.86	5.009	.5091	2.527	25.35	5.099	.5178
#1	25.75	4.932	.5068	2.511	25.13	5.082	.5199
#2	25.97	5.086	.5113	2.543	25.58	5.115	.5157

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	5.052	5.227	.5150
#1	5.000	5.231	.5113
#2	5.105	5.224	.5187

Method: EPACLP1 Sample Name: CCB17 Operator: MMR
Run Time: 11/19/03 16:50:34
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0461	.0257	.0258	.0002	-.0000	.0065	-.0022
#1	.0270	-.0057	.0259	-.0006	-.0000	.0091	-.0046
#2	Q.0652	Q.0571	.0257	.0010	-.0000	.0040	.0001

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0019	-.0010	.0037	.0024	.0007	-.0224	.0014
#1	-.0002	-.0027	.0021	.0015	.0012	-.0327	.0016
#2	.0040	.0007	.0053	.0034	.0002	-.0121	.0012

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0330	.0002	.0013	-.0068	.6217	.0325	.0063
#1	-.0711	.0003	-.0000	-.0011	.0854	.0206	.0043
#2	.1371	.0001	.0026	-.0125	1.158	.0444	.0083

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0472	-.0112	-.0008	.0025	.0380	.0202	.0010
#1	.0351	-.0034	-.0026	.0025	.0385	.0098	.0003
#2	.0594	-.0190	.0009	.0026	.0374	.0306	.0017

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0135	.0019	.0002
#1	.0088	-.0059	.0002
#2	.0183	.0096	.0002

Method: EPACLP1 Sample Name: K8944-01 Operator: MMR
Run Time: 11/19/03 16:52:15
Comment: K2308944 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.016	.3100	.0565	.3965	.0014	.5477	.0218
#1	7.087	.2966	.0843	.4025	.0015	.5439	.0211
#2	6.944	.3234	L.0286	.3906	.0013	.5515	.0225

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	99.34	.0083	.0090	.0082	8.500	L.0159	8.738
#1	100.2	.0087	.0118	.0068	8.566	.0387	8.806
#2	98.49	.0079	.0062	.0096	8.433	L-.0069	8.670

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.422	.5188	.0291	.0366	9.490	L.0363	.0068
#1	9.536	.5230	.0239	.0431	9.554	.0423	.0076
#2	9.309	.5145	.0343	.0301	9.425	L.0304	.0059

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1209.	L-.0050	.0060	9.285	1.540	6.430	.0054
#1	H1219.	.0204	.0068	9.349	1.547	6.476	.0059
#2	H1199.	L-.0303	.0052	9.220	1.533	6.385	.0049

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0574	.9589	.4134
#1	L.0188	.9684	.4182
#2	.0960	.9493	.4087

Method: EPACLP1 Sample Name: K8944-01D Operator: MMR
Run Time: 11/19/03 16:54:04
Comment: K2308944 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.164	.2921	L.0366	.4023	.0015	.5426	.0215
#1	7.136	.2875	L.0187	.4017	.0015	.5513	.0228
#2	7.192	.2966	.0546	.4029	.0015	.5338	.0203

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	100.9	.0077	.0128	.0091	8.652	L-.0005	8.889
#1	100.8	.0079	.0138	.0105	8.633	L.0003	8.871
#2	101.0	.0076	.0118	.0077	8.670	L-.0013	8.907

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.601	.5277	.0343	.0390	9.258	.0408	.0084
#1	9.588	.5268	.0395	.0317	9.382	L.0155	.0101
#2	9.614	.5286	.0291	.0463	9.135	.0661	.0068

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1230.	L-.0108	.0049	9.404	1.575	6.846	.0038
#1	H1225.	L-.0264	.0064	9.378	1.610	6.838	.0035
#2	H1236.	L.0048	L.0034	9.430	1.539	6.853	.0040

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0804	.9835	.4228
#1	.1331	.9809	.4217
#2	L.0278	.9861	.4239

Method: EPACLP1 Sample Name: K8944-01S Operator: MMR
Run Time: 11/19/03 16:55:55
Comment: K2308944 TCLP KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.386	.3138	4.900	10.36	.0016	.5598	.9968
#1	7.399	.2927	4.929	10.42	.0015	.5585	1.0000
#2	7.373	.3350	4.871	10.31	.0017	.5610	.9936

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	104.4	4.835	.0174	.0124	8.925	4.817	9.159
#1	104.6	4.844	.0169	.0105	8.956	4.815	9.185
#2	104.1	4.825	.0180	.0142	8.894	4.819	9.133

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.795	.5446	.0304	.0415	9.816	1.087	.9433
#1	9.723	.5470	.0291	.0366	9.332	1.093	.9421
#2	9.866	.5423	.0317	.0463	10.30	1.081	.9445

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1265.	.0479	.0088	9.701	1.652	7.170	.0063
#1	H1270.	.0506	.0068	9.718	1.677	7.180	.0063
#2	H1261.	.0452	.0107	9.684	1.628	7.159	.0063

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0789	1.010	.4376
#1	.0740	1.013	.4395
#2	.0839	1.007	.4356

Method: EPACLP1 Sample Name: PBW Operator: MMR
Run Time: 11/19/03 17:01:53
Comment: K2308419 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0491	.0511	L.0371	L.0008	L.0001	L-.0022	L-.0009
#1	L.0158	.0361	L.0282	L.0006	L.0002	L-.0034	L.0001
#2	.0824	.0662	.0460	L.0010	L-.0000	L-.0009	L-.0019

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0328	L-.0016	L.0038	L.0011	L.0032	L.0012	L.0066
#1	.0320	L.0015	L.0022	L-.0012	L.0010	L.0027	L.0066
#2	.0335	L-.0047	.0054	.0034	L.0054	L-.0003	L.0066

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0460	L.0003	L.0026	L-.0068	.7820	L.0117	.0055
#1	L.0915	L.0002	.0052	L-.0141	L-.0071	L.0236	L.0027
#2	L.0004	L.0003	L-.0000	L.0005	1.571	L-.0002	.0083

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0488	L.0070	L-.0003	L-.0008	L.0270	L.0972	L-.0002
#1	L.0191	L.0084	L.0004	L-.0008	L-.0487	L.0835	L-.0011
#2	.0786	L.0057	L-.0009	L-.0009	.1027	L.1110	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0104	L.0052	L.0002
#1	L-.0103	L.0000	L.0002
#2	L-.0104	.0103	L.0002

Method: EPACLP1 Sample Name: LCSW Operator: MMR
Run Time: 11/19/03 17:03:38
Comment: K2308419 KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.285	2.623	2.555	5.321	.1319	1.076	1.317
#1	5.296	2.614	2.536	5.336	.1318	1.081	1.321
#2	5.273	2.632	2.574	5.307	.1320	1.071	1.313

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.86	.5230	1.297	.6682	2.591	2.559	12.85
#1	12.87	.5249	1.300	.6709	2.595	2.572	12.86
#2	12.86	.5211	1.295	.6654	2.587	2.547	12.85

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.54	1.302	1.033	1.318	12.50	2.684	.6507
#1	13.58	1.303	1.032	1.312	12.51	2.657	.6519
#2	13.49	1.301	1.034	1.324	12.49	2.711	.6495

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.57	-.0204	1.332	1.303	.0782	.0664	.0014
#1	13.59	-.0211	1.335	1.300	.0645	.0714	.0021
#2	13.55	-.0198	1.329	1.306	.0920	.0614	.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	2.649	-.0014	.0002
#1	2.654	-.0022	.0002
#2	2.644	-.0007	.0002

Method: EPACLP1 Sample Name: K8419-01 Operator: MMR
Run Time: 11/19/03 17:05:18
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0976	.0511	L.0211	.0835	L.0002	.0871	L-.0005
#1	.1031	.0630	L.0346	.0849	L.0002	.0846	L-.0001
#2	.0920	.0392	L.0076	.0821	L.0002	.0896	L-.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	105.2	L-.0016	L.0033	L.0025	.0819	L-.0158	10.96
#1	105.5	L-.0016	.0054	L.0025	.0822	L-.0121	11.00
#2	104.8	L-.0016	L.0011	L.0025	.0815	L-.0195	10.92

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.69	.0289	.0104	L-.0036	4.046	.0459	.0063
#1	11.76	.0290	.0104	L-.0125	4.185	.0474	.0067
#2	11.63	.0287	.0104	L.0053	3.907	.0444	.0059

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.51	L.0090	L.0007	.0059	.0650	4.062	.0028
#1	42.66	L.0057	L.0004	.0043	.1404	4.073	.0031
#2	42.35	L.0122	L.0010	.0076	L-.0104	4.052	.0026

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0277	L.0052	.3689
#1	.0659	L.0044	.3712
#2	L-.0105	L.0059	.3665

Method: EPACLP1 Sample Name: K8419-02 Operator: MMR
Run Time: 11/19/03 17:07:11
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0694	.0646	L.0099	.0821	L.0002	.0895	L.0005
#1	.0688	.0631	L.0280	.0821	L.0002	.0895	L-.0015
#2	.0700	.0661	L-.0081	.0821	L.0002	.0895	L.0025

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	105.1	L-.0026	L.0032	L.0020	.0554	L-.0158	11.04
#1	105.2	L-.0031	L.0032	L.0025	.0547	L-.0121	11.05
#2	105.0	L-.0020	L.0032	L.0015	.0561	L-.0195	11.02

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.79	.0212	L.0039	L-.0117	3.793	L.0147	.0063
#1	11.80	.0212	L.0026	L-.0125	3.414	L-.0002	.0067
#2	11.78	.0212	.0052	L-.0109	4.173	L.0295	.0059

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.51	L-.0060	L.0012	.0043	.1055	4.145	.0028
#1	43.57	L-.0073	L.0009	.0043	.0704	4.151	.0031
#2	43.46	L-.0047	L.0015	.0043	.1407	4.140	.0026

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0134	L.0011	.3754
#1	L.0564	L.0000	.3765
#2	L-.0296	L.0022	.3743

Method: EPACLP1 Sample Name: K8419-03 Operator: MMR
Run Time: 11/19/03 17:09:43
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1167	.0706	L.0018	.0780	L.0002	.0984	.0031
#1	.1131	.0721	L.0007	.0784	L.0002	.0997	L.0023
#2	.1203	.0691	L.0029	.0775	L.0002	.0972	.0038

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	100.4	L-.0016	L.0010	L.0025	.1160	L-.0099	10.40
#1	100.7	L-.0024	L-.0001	L.0015	.1155	L.0055	10.43
#2	100.1	L-.0008	L.0021	.0034	.1165	L-.0254	10.36

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.18	.0212	.0065	L-.0068	3.898	L.0117	L.0047
#1	11.16	.0212	L.0026	L-.0125	3.248	L.0028	L.0043
#2	11.20	.0212	.0104	L-.0011	4.549	L.0206	.0051

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.98	L-.0112	L.0024	.0051	.0776	4.092	.0035
#1	43.15	L-.0099	L.0026	.0043	.0777	4.095	.0040
#2	42.81	L-.0125	L.0021	.0059	.0775	4.089	.0031

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0417	L.0063	.3647
#1	L.0083	L.0066	.3669
#2	.0752	L.0059	.3625

Method: EPACLP1 Sample Name: K8419-04 Operator: MMR
Run Time: 11/19/03 17:11:20
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0883	.0407	L-.0003	.0763	L-.0000	.0899	L-.0008
#1	.0957	.0453	L-.0082	.0759	L-.0000	.0949	L-.0006
#2	.0809	.0362	L.0077	.0767	L-.0000	.0849	L-.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	98.29	L-.0029	L.0010	L.0025	.1032	L-.0158	10.08
#1	97.82	L-.0035	L.0032	.0034	.1027	L.0011	10.02
#2	98.77	L-.0024	L-.0012	L.0015	.1037	L-.0328	10.14

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.76	.0263	.0091	L.0021	3.642	L.0117	L.0039
#1	10.67	.0262	.0104	L.0070	4.247	L-.0002	.0059
#2	10.85	.0265	.0078	L-.0028	3.038	L.0236	L.0019

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	41.51	L-.0170	L-.0002	.0042	.1120	4.064	.0021
#1	41.14	L-.0112	L.0010	.0059	.1448	4.042	.0031
#2	41.88	L-.0229	L-.0014	L.0025	.0793	4.085	L.0012

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0011	L.0022	.3532
#1	L-.0489	L.0074	.3504
#2	L.0466	L-.0029	.3560

Method: EPACLP1 Sample Name: K8419-04D Operator: MMR
Run Time: 11/19/03 17:13:02
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0847	.0496	L.0189	.0777	L-.0000	.0960	L-.0020
#1	.0884	.0571	L-.0105	.0784	L-.0000	.0948	L-.0005
#2	.0810	.0421	.0482	.0771	L-.0000	.0972	L-.0035

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	100.5	L.0003	L.0032	.0038	.1105	L-.0062	10.27
#1	100.5	L-.0020	L.0021	.0052	.1117	L-.0210	10.28
#2	100.5	L.0026	.0044	L.0025	.1093	L.0085	10.26

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.02	.0268	.0065	L-.0084	4.206	.0519	.0051
#1	10.98	.0267	.0052	L-.0044	4.364	.0593	.0076
#2	11.07	.0270	.0078	L-.0125	4.049	.0444	L.0027

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.14	L.0005	L.0030	.0059	.1191	4.174	.0028
#1	42.31	L-.0125	L.0015	.0076	.0733	4.184	L.0017
#2	41.97	L.0136	.0045	.0043	.1649	4.164	.0040

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.1230	L.0063	.3606
#1	.1135	L.0081	.3617
#2	.1326	L.0044	.3595

Method: EPACLP1 Sample Name: CCV18 Operator: MMR
Run Time: 11/19/03 17:15:03
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.965	4.954	1.994	.4951	.4914	5.012	.4938
#1	4.919	4.935	1.996	.4922	.4899	5.019	.4922
#2	5.011	4.973	1.991	.4979	.4929	5.006	.4955

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.876	4.884	.4870	.4977	4.895	4.859	4.911
#1	4.861	4.868	.4822	.4949	4.876	4.845	4.893
#2	4.891	4.901	.4917	.5004	4.914	4.872	4.928

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.202	.4895	.4857	4.965	24.51	1.990	.4959
#1	5.228	.4875	.4857	4.954	24.45	1.949	.4950
#2	5.176	.4915	.4857	4.977	24.57	2.030	.4967

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.04	4.860	.4917	2.456	24.66	4.951	.5007
#1	25.00	4.889	.4907	2.447	24.50	4.947	.5058
#2	25.08	4.832	.4926	2.465	24.83	4.956	.4956

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.900	5.026	.4959
#1	4.972	5.021	.4939
#2	4.828	5.032	.4978

Method: EPACLP1 Sample Name: CCB18 Operator: MMR
Run Time: 11/19/03 17:16:41
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0454	.0466	.0156	.0004	.0002	.0077	-.0012
#1	.0344	.0272	.0168	.0006	-.0000	.0165	-.0012
#2	Q.0564	Q.0660	.0144	.0002	.0004	-.0010	-.0012

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0065	.0021	.0026	.0038	.0021	.0159	.0014
#1	.0036	-.0004	.0032	.0024	.0010	-.0017	.0016
#2	.0093	.0046	.0021	.0052	.0032	.0336	.0012

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1924	.0004	.0039	-.0028	.4552	.0132	.0063
#1	.0720	.0009	.0026	-.0060	.4614	-.0062	.0051
#2	Q.3127	-.0001	.0052	.0005	.4491	.0325	.0075

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0418	-.0151	.0015	.0008	.0589	.0196	.0003
#1	.0223	-.0216	-.0003	-.0008	.1028	.0212	.0007
#2	.0613	-.0085	.0033	.0025	.0151	.0179	-.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0231	.0059	.0000
#1	-.0103	.0066	-.0002
#2	.0565	.0052	.0002

Method: EPACLP1 Sample Name: K8419-04S Operator: MMR
Run Time: 11/19/03 17:18:14
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.980	.5059	.9516	1.961	.0474	1.021	.0409
#1	1.973	.5090	.9550	1.965	.0473	1.021	.0424
#2	1.987	.5029	.9482	1.956	.0475	1.021	.0394

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	99.30	.1852	.4636	.2383	1.033	.4379	10.19
#1	99.42	.1836	.4652	.2415	1.033	.4372	10.19
#2	99.19	.1867	.4619	.2351	1.032	.4386	10.18

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.02	.4897	.9006	.4672	4.012	1.003	.0507
#1	10.90	.4900	.9019	.4696	4.006	1.023	.0507
#2	11.14	.4894	.8993	.4647	4.018	.9817	.0507

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.11	L-.0091	.4634	.4712	.1184	4.191	.0033
#1	42.10	L-.0001	.4642	.4729	.1081	4.190	.0035
#2	42.13	L-.0182	.4625	.4695	.1287	4.191	.0031

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.9777	L.0055	.3582
#1	.9824	L.0074	.3586
#2	.9729	L.0037	.3578

Method: EPACLP1 Sample Name: K8419-05 Operator: MMR
Run Time: 11/19/03 17:20:37
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0872	.0451	L.0200	.0792	L.0001	.0996	L.0003
#1	.0822	.0481	L.0099	.0792	L.0002	.1022	.0036
#2	.0921	.0421	L.0302	.0792	L-.0000	.0971	L-.0031

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	102.6	L-.0016	L.0016	L.0011	.0902	L.0078	10.52
#1	102.1	L-.0016	L.0010	L.0025	.0907	L.0247	10.47
#2	103.1	L-.0016	L.0022	L-.0003	.0898	L-.0092	10.58

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.24	.0236	.0065	L-.0084	3.575	L.0281	L.0035
#1	11.16	.0236	.0078	L-.0060	3.821	.0772	L.0035
#2	11.32	.0236	.0052	L-.0109	3.328	L-.0210	L.0035

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.64	L.0012	L.0007	.0059	.0777	4.272	.0024
#1	43.33	L-.0125	L.0027	.0059	.0781	4.249	.0021
#2	43.95	L.0148	L-.0014	.0059	.0774	4.294	.0026

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0393	L.0033	.3702
#1	L-.0393	L.0015	.3673
#2	L-.0393	L.0052	.3730

Method: EPACLP1 Sample Name: K8419-06 Operator: MMR
Run Time: 11/19/03 17:22:23
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0743	.0482	L.0313	.0759	L-.0000	.0898	L-.0016
#1	.0761	.0542	L.0392	.0759	L-.0000	.0923	L-.0002
#2	.0725	.0421	L.0235	.0759	L-.0000	.0874	L-.0029

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	99.26	L-.0016	L.0021	L.0025	.0666	L-.0018	10.18
#1	99.55	L-.0027	L.0033	L.0025	.0659	L.0188	10.21
#2	98.98	L-.0004	L.0010	L.0025	.0673	L-.0224	10.15

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.85	.0201	L.0039	L-.0052	4.136	L.0370	.0059
#1	10.89	.0197	.0052	L-.0028	3.784	.0504	.0051
#2	10.81	.0204	L.0026	L-.0076	4.487	L.0236	.0067

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.20	L-.0079	L.0012	.0051	.1607	3.921	.0031
#1	42.40	L.0044	L.0021	.0042	.1659	3.936	.0026
#2	42.00	L-.0203	L.0003	.0059	.1555	3.905	.0035

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0086	L.0026	.3571
#1	L-.0010	L.0030	.3586
#2	L.0181	L.0022	.3556

Method: EPACLP1 Sample Name: K8419-08 Operator: MMR
Run Time: 11/19/03 17:24:02
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1543	.0437	L-.0175	.0792	L.0002	.0895	L-.0011
#1	.1574	.0482	L.0050	.0792	L.0002	.0895	L-.0009
#2	.1512	.0392	L-.0401	.0792	L.0002	.0895	L-.0013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	103.7	L-.0006	L.0031	L.0020	.2267	L.0084	10.72
#1	103.3	L-.0020	L.0031	L.0015	.2269	L-.0019	10.68
#2	104.1	L.0007	L.0032	L.0025	.2264	L.0188	10.76

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.59	.0385	.0052	L-.0003	3.565	L.0043	L.0044
#1	11.52	.0383	.0052	L.0005	3.612	L-.0032	L.0028
#2	11.67	.0388	.0052	L-.0011	3.519	L.0117	.0060

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.93	L-.0255	L.0038	.0110	.0994	4.187	.0040
#1	43.79	L-.0333	L.0021	.0110	.1240	4.179	.0045
#2	44.07	L-.0176	.0056	.0110	.0748	4.195	.0035

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0256	L.0030	.3782
#1	L-.0018	L.0037	.3765
#2	L-.0495	L.0022	.3799

Method: EPACLP1 Sample Name: K8419-09 Operator: MMR
Run Time: 11/19/03 17:25:42
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0453	.0302	L-.0091	.0753	L-.0000	.0811	L.0002
#1	.0440	L.0272	L-.0103	.0759	L-.0000	.0773	L-.0006
#2	.0465	.0332	L-.0080	.0747	L-.0000	.0848	L.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	100.4	L-.0029	L-.0006	L.0006	.0534	L-.0246	10.49
#1	100.8	L-.0012	L-.0011	L-.0003	.0539	L-.0268	10.53
#2	100.0	L-.0047	L-.0001	L.0015	.0530	L-.0224	10.46

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.15	.0190	.0065	L-.0076	3.396	L.0013	L.0011
#1	11.24	.0189	.0078	L-.0092	3.359	L.0087	L.0011
#2	11.07	.0191	.0052	L-.0060	3.433	L-.0062	L.0011

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.29	L-.0047	L.0001	L.0026	.0677	4.006	L.0014
#1	43.44	L.0018	L.0015	L.0026	.0782	4.024	L.0017
#2	43.14	L-.0112	L-.0014	L.0025	L.0573	3.988	L.0012

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0325	L.0059	.3704
#1	L.0373	.0118	.3721
#2	L.0278	L.0000	.3686

Method: EPACLP1 Sample Name: K8419-10 Operator: MMR
Run Time: 11/19/03 17:27:21
Comment: K2308419 TOTAL KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2742	L.0272	L.0259	.0788	L-.0000	.0820	L.0002
#1	.2841	L.0242	L.0180	.0792	L-.0000	.0795	L.0004
#2	.2643	.0302	L.0338	.0784	L-.0000	.0845	L-.0000

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	102.4	L.0004	L.0032	.0043	.4151	L.0105	10.65
#1	102.6	L-.0000	.0044	.0034	.4176	L.0098	10.67
#2	102.2	L.0007	L.0021	.0052	.4127	L.0112	10.63

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.49	.0425	.0078	L.0013	4.074	.0593	L.0048
#1	11.49	.0425	.0078	L-.0027	4.117	.0504	.0076
#2	11.48	.0425	.0078	L.0054	4.031	.0683	L.0020

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.64	L.0051	L.0033	.0126	.1169	4.322	.0082
#1	43.81	L.0162	L.0021	.0143	.1600	4.346	.0077
#2	43.47	L-.0059	.0045	.0109	.0737	4.298	.0087

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0736	L.0033	.3745
#1	.0927	L.0044	.3756
#2	L.0545	L.0022	.3734

Method: EPACLP1 Sample Name: K8419-01L Operator: MMR
Run Time: 11/19/03 17:29:12
Comment: K2308419 TOTAL 2/10 DILUTION KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0369	.0392	L.0202	.0165	L.0001	L.0120	L.0003
#1	.0406	.0363	.0484	.0167	L.0002	L.0133	L-.0004
#2	.0331	.0422	L-.0079	.0163	L-.0000	L.0107	L.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.54	L-.0014	L.0009	L.0001	.0162	L-.0253	2.177
#1	20.52	L-.0004	L.0009	L.0015	.0163	L-.0165	2.176
#2	20.55	L-.0024	L.0009	L-.0012	.0161	L-.0342	2.179

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.242	.0065	L-.0013	L-.0011	.9854	.0459	L.0043
#1	2.199	.0060	L-.0026	L.0069	.8559	.0563	L.0027
#2	2.284	.0070	L-.0000	L-.0092	1.115	L.0355	.0059

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.201	L-.0353	L-.0012	.0034	L.0559	.7847	L.0014
#1	8.195	L-.0398	L-.0003	.0042	.0885	.7894	L.0007
#2	8.206	L-.0307	L-.0020	L.0026	L.0233	.7801	.0021

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0183	L.0037	.0707
#1	L-.0199	L.0066	.0702
#2	L.0565	L.0008	.0711

Method: EPACLP1 Sample Name: K8419-01 Operator: MMR
Run Time: 11/19/03 17:30:45
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0687	.0676	L.0189	.0771	L-.0000	.0861	L-.0036
#1	.0749	.0422	L-.0014	.0767	L-.0000	.0873	L-.0039
#2	.0625	.0931	L.0393	.0775	L-.0000	.0849	L-.0033

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	98.97	L-.0020	L.0038	L.0029	.0188	L-.0018	10.31
#1	98.76	L-.0016	L.0031	.0034	.0187	L-.0077	10.28
#2	99.17	L-.0023	.0044	L.0024	.0189	L.0041	10.35

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.96	.0242	.0078	L-.0011	3.803	L.0385	.0051
#1	10.97	.0242	.0052	L-.0044	4.117	.0534	.0059
#2	10.95	.0242	.0103	L.0021	3.488	L.0236	L.0043

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	39.97	L-.0066	L.0027	.0059	L.0361	3.786	L.0019
#1	39.80	L-.0216	L.0027	.0059	.0793	3.780	.0021
#2	40.15	L.0083	L.0027	.0059	L-.0071	3.793	L.0017

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0233	L.0066	.3443
#1	L.0567	L.0074	.3430
#2	L-.0102	L.0059	.3456

Method: EPACLP1 Sample Name: K8419-02 Operator: MMR
Run Time: 11/19/03 17:32:29
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0596	.0317	L.0122	.0796	L.0002	.0871	L-.0003
#1	.0639	.0303	L.0235	.0800	L.0002	.0921	L.0002
#2	.0553	.0332	L.0010	.0792	L.0002	.0822	L-.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	102.2	L-.0008	L.0032	L.0024	.0179	L-.0047	10.76
#1	102.2	L-.0008	L.0021	L.0024	.0181	L.0056	10.75
#2	102.2	L-.0008	.0043	L.0024	.0177	L-.0150	10.77

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.58	.0193	L.0013	L.0005	3.775	L.0266	.0059
#1	11.60	.0194	L-.0000	L.0069	3.988	L.0385	.0067
#2	11.56	.0192	L.0026	L-.0060	3.562	L.0147	.0051

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.52	L-.0125	L.0006	.0059	.0770	3.938	L.0010
#1	42.50	L-.0177	L.0020	.0059	.0769	3.937	L.0007
#2	42.55	L-.0073	L-.0008	.0059	.0771	3.939	L.0012

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0246	L.0081	.3639
#1	L-.0198	.0118	.3639
#2	L-.0293	L.0044	.3639

Method: EPACLP1 Sample Name: K8419-03 Operator: MMR
Run Time: 11/19/03 17:33:53
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0300	L.0227	L.0180	.0777	L.0002	.0885	L-.0005
#1	.0429	.0392	L.0101	.0780	L.0002	.0923	L.0020
#2	L.0171	L.0062	L.0260	.0775	L.0002	.0848	L-.0030

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	100.4	L-.0022	L-.0017	L-.0012	.0206	L-.0246	10.44
#1	100.4	L-.0039	L-.0033	L.0015	.0213	L-.0268	10.43
#2	100.5	L-.0004	L-.0001	L-.0040	.0198	L-.0224	10.45

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.15	.0167	L.0026	L-.0100	2.758	.0429	L-.0026
#1	11.15	.0169	L.0026	L-.0060	3.069	.0415	L.0003
#2	11.15	.0166	L.0026	L-.0141	2.446	.0444	L-.0054

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.51	L-.0125	L.0000	.0043	L.0302	3.977	L.0003
#1	43.48	L-.0099	L.0003	.0059	.0734	3.994	L.0007
#2	43.55	L-.0151	L-.0002	L.0026	L-.0130	3.961	L-.0002

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0279	L.0011	.3684
#1	.0948	L.0044	.3682
#2	L-.0389	L-.0022	.3686

Method: EPACLP1 Sample Name: CCV19 Operator: MMR
Run Time: 11/19/03 17:35:29
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.979	4.910	1.956	.4932	.4898	4.994	.4916
#1	4.876	4.814	1.949	.4823	.4805	4.912	.4760
#2	5.081	5.006	1.964	.5041	.4990	5.076	.5071

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.828	4.854	.4820	.4926	4.871	4.819	4.891
#1	4.751	4.771	.4730	.4820	4.782	4.735	4.808
#2	4.905	4.936	.4910	.5032	4.959	4.902	4.974

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.942	.4874	.4818	4.939	24.41	1.966	.4942
#1	4.753	.4788	.4702	4.870	24.02	1.943	.4852
#2	5.130	.4961	.4935	5.009	24.81	1.988	.5032

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.02	4.830	.4854	2.450	24.38	4.924	.4914
#1	24.54	4.737	.4749	2.410	23.88	4.831	.4820
#2	25.51	4.923	.4958	2.489	24.89	5.017	.5007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.924	5.019	.4948
#1	4.781	4.915	.4843
#2	5.067	5.124	.5052

Method: EPACLP1 Sample Name: CCB19 Operator: MMR
Run Time: 11/19/03 17:37:10
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0220	.0286	-.0271	.0006	-.0000	.0102	-.0025
#1	.0281	.0301	-.0328	.0006	-.0000	.0165	-.0015
#2	.0160	.0271	-.0214	.0006	-.0000	.0040	-.0034

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0037	-.0002	.0005	.0001	.0007	-.0054	.0014
#1	.0048	.0003	.0033	.0015	.0020	-.0061	.0016
#2	.0025	-.0008	-.0022	-.0012	-.0005	-.0047	.0012

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1338	-.0001	.0013	-.0125	.1131	.0206	.0015
#1	.1241	-.0001	.0078	-.0076	.2333	.0504	.0027
#2	.1436	-.0001	-.0052	-.0173	-.0071	-.0091	.0002

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0338	-.0014	-.0006	.0017	-.0488	.0115	.0007
#1	.0383	.0044	-.0008	.0026	-.0489	.0239	.0007
#2	.0293	-.0073	-.0003	.0009	-.0488	-.0009	.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0422	.0011	-.0002
#1	.0279	.0008	-.0002
#2	.0565	.0015	-.0002

Method: EPACLP1 Sample Name: K8419-04 Operator: MMR
Run Time: 11/19/03 17:38:31
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0614	.0392	L-.0182	.0798	L.0002	.1220	L-.0043
#1	.0553	L.0182	L.0055	.0804	L.0002	.1245	L-.0087
#2	.0676	.0601	L-.0419	.0792	L.0002	.1196	L.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	102.1	L-.0026	L.0015	L.0011	.0226	L-.0055	10.49
#1	102.4	L-.0047	L.0021	L.0024	.0233	L-.0194	10.51
#2	101.8	L-.0004	L.0010	L-.0003	.0218	L.0085	10.46

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.26	.0242	L.0013	L-.0109	3.547	L.0102	L.0031
#1	11.27	.0243	L.0026	L-.0173	3.760	L.0147	L.0019
#2	11.25	.0242	L-.0000	L-.0044	3.334	L.0057	L.0043

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.46	L-.0164	L-.0003	.0085	L-.0110	4.309	L-.0002
#1	43.59	L-.0151	L-.0014	.0077	L-.0083	4.314	L-.0030
#2	43.33	L-.0177	L.0009	.0093	L-.0137	4.304	.0026

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L.0185	L.0070	.3712
#1	L-.0484	L.0096	.3734
#2	.0853	L.0044	.3691

Method: EPACLP1 Sample Name: K8419-05 Operator: MMR
Run Time: 11/19/03 17:39:53
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0571	L.0242	L.0134	.0775	L.0002	.0898	L-.0011
#1	.0553	.0363	L.0123	.0775	L.0002	.0922	L-.0011
#2	.0589	L.0122	L.0145	.0775	L.0002	.0873	L-.0012

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	100.1	L-.0008	L.0010	.0038	.0212	L.0004	10.28
#1	100.4	L-.0020	L.0021	L.0024	.0218	L-.0032	10.32
#2	99.68	L.0003	L-.0000	.0052	.0206	L.0041	10.23

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.09	.0212	L.0013	L-.0052	3.957	L.0132	L.0043
#1	11.16	.0212	L-.0000	L.0005	3.482	L-.0062	L.0043
#2	11.02	.0211	L.0026	L-.0109	4.431	L.0325	L.0043

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.57	L-.0118	L.0026	.0042	.0763	4.073	L-.0025
#1	42.89	L-.0163	L.0003	.0042	L-.0078	4.101	L-.0072
#2	42.25	L-.0073	.0050	.0043	.1604	4.046	.0021

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0341	L.0019	.3634
#1	L-.0676	L.0030	.3656
#2	L-.0007	L.0008	.3612

Method: EPACLP1 Sample Name: K8419-06 Operator: MMR
Run Time: 11/19/03 17:41:16
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0572	.0527	L-.0205	.0796	L.0001	.0884	L-.0003
#1	.0541	.0452	L-.0013	.0792	L-.0000	.0847	L-.0023
#2	.0602	.0602	L-.0396	.0800	L.0002	.0921	L.0018

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	104.5	L-.0035	L.0032	L.0020	.0201	L-.0268	10.74
#1	103.8	L-.0008	L.0032	L.0024	.0211	L-.0194	10.66
#2	105.2	L-.0062	L.0032	L.0015	.0191	L-.0342	10.83

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.45	.0186	L.0013	L-.0020	3.670	L.0176	L.0031
#1	11.34	.0192	L-.0000	L.0037	3.951	L-.0300	L.0043
#2	11.56	.0181	L.0026	L-.0076	3.390	.0653	L.0018

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	44.72	L-.0073	L.0000	.0059	L.0342	4.093	L.0007
#1	44.27	L-.0034	L.0020	.0059	L-.0086	4.065	L.0007
#2	45.18	L-.0112	L-.0020	.0059	.0770	4.120	L.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	.0805	L.0048	.3804
#1	.0662	L.0081	.3765
#2	.0949	L.0015	.3843

Method: EPACLP1 Sample Name: K8419-07 Operator: MMR
Run Time: 11/19/03 17:42:45
Comment: K2308419 DISSOLVED KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0361	L.0212	L.0033	L.0002	L.0002	L.0053	L-.0017
#1	.0331	L.0242	L.0101	L.0002	L.0002	L.0015	L-.0011
#2	.0392	L.0183	L-.0035	L.0002	L.0002	L.0090	L-.0023

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0551	L-.0014	L.0005	L.0024	L.0048	L-.0194	.0146
#1	.0652	L-.0004	L-.0001	L.0024	L.0049	L-.0253	.0156
#2	.0450	L-.0023	L.0011	L.0024	L.0046	L-.0135	.0136

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1013	L.0003	L.0039	L-.0011	L.3628	L.0370	L.0039
#1	.1371	L.0004	L.0026	L-.0044	L.4984	L.0355	L.0043
#2	L.0655	L.0002	.0052	L.0021	L.2271	L.0385	L.0035

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0437	L-.0131	L-.0017	.0068	L-.0272	L.1046	L-.0007
#1	L.0440	L-.0294	L-.0020	.0076	L-.0706	L.1090	L-.0007
#2	L.0434	L.0031	L-.0014	.0059	L.0162	L.1002	L-.0007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	L-.0438	L-.0011	L.0002
#1	L-.0868	L-.0022	L.0002
#2	L-.0008	L.0000	L.0002

Method: EPACLP1 Sample Name: CCV20 Operator: MMR
Run Time: 11/19/03 17:44:34
Comment: ICP2-14-C KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.052	4.969	1.972	.5010	.4974	5.088	.4975
#1	5.028	4.937	1.955	.4979	.4954	5.073	.4932
#2	5.077	5.000	1.988	.5041	.4995	5.103	.5018

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.884	4.909	.4882	.5018	4.927	4.853	4.955
#1	4.863	4.885	.4876	.4968	4.903	4.831	4.935
#2	4.904	4.932	.4889	.5069	4.951	4.875	4.975

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.166	.4937	.4935	4.961	24.57	2.021	.5003
#1	5.124	.4913	.4883	4.941	23.91	2.027	.4950
#2	5.208	.4961	.4987	4.981	25.24	2.015	.5056

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.47	4.905	.4942	2.469	24.74	4.980	.4988
#1	25.35	4.871	.4897	2.461	24.70	4.954	.4970
#2	25.59	4.940	.4987	2.477	24.78	5.005	.5007

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	4.871	5.123	.5024
#1	4.809	5.096	.5000
#2	4.933	5.150	.5048

Method: EPACLP1 Sample Name: CCB20 Operator: MMR
Run Time: 11/19/03 17:47:18
Comment: KA0322954
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0331	.0332	.0225	.0002	.0001	.0041	-.0037
#1	.0344	.0182	.0236	-.0002	.0002	.0041	-.0045
#2	.0318	.0482	.0214	.0006	-.0000	.0041	-.0029

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2795
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0035	-.0004	-.0001	.0006	.0004	.0019	.0012
#1	.0055	-.0001	-.0001	-.0003	-.0022	-.0003	.0012
#2	.0016	-.0008	-.0001	.0015	.0029	.0041	.0012

Elem	Mg3832	Mn2576	Mo2020	Ni2316	K_7665	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0330	-.0001	.0013	-.0028	.6063	.0429	.0035
#1	.0655	-.0001	-.0026	-.0076	.4059	.0861	.0043
#2	.0005	-.0000	.0052	.0021	.8066	-.0002	.0027

Elem	Na5889	Sn1899	V_2924	Zn2138	P_2149	Si2881	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0377	-.0151	-.0006	.0025	.0353	.0165	.0014
#1	.0543	-.0203	-.0009	.0025	.0325	.0139	.0012
#2	.0210	-.0099	-.0002	.0025	.0381	.0192	.0017

Elem	Tl1908	Li6707	Sr4215
Units	ppm	ppm	ppm
Avge	-.0103	.0070	.0000
#1	-.0199	.0081	.0002
#2	-.0008	.0059	-.0002

Service Request # K2308419_____
Calibration _____112403A_____
QC in calibration__112403A_____
QC Service Request # K2308419_____
PQS - Sample Position Method Blank # 7_____
PQS – Sample Position LCSW _____# 11_

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control			X
15. Serial dilution run			X
16. Post spike in control			X

Comments: Report Se/GFAA. Cd - 114

Primary Review by _____ Date 11/24/03
Secondary Review by _____ Date 11/24/03
R:\icp\misc\data review forms\icpms review form

PLASMAQUAD INSTRUMENT LOG

PQ-S Ser# 971114

Date: 11/24/97

Operator: B 2

Pressures

(i) Pumping state

(ii) Operate state

Anal(3):

Expn (2): 1.4×10^{0} Inter(1): 1.0×10^{-4} Anal(3): 2.4×10^{-6}

Ion lens settings

EXTR: 1.96 L1: 7.54 L3: 5.15

COLL: 5.60 L2: 5.50 L4: 16.1 Pole Bias: 3.40

SX300 quadrupole

Max mass >280 amu? Y / N

ICP generator parameters at normal forward power (~~15~~ 1350 W)

Refl.pwr: < 5 Plate current: Grid Current:

N.A. PA Voltage:

PA Fillament:

Multiplier high voltage settings

HT1 (ext. dyn. range only): 0.00 HT2: 2.0 V

Scans on performance monitoring solution

Full range?: Y / N Low mass?: Y / N High mass?: Y / N

Water/Gas

Water Temp: 6°C Water Level: FULL

11/24/97

Gas flows

Neb: 0.950 Aux: 1.2 Cool: 14.0 Neb back pressure:

Other comments: (Changes to instrument/faults noted/service work carried out etc.):

25amb In 2820 x 06

Integrals for : 25 ppb Tuning Standard 1

Peak	Li 6	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
CPS	8794295	1498099	1948352	1401419	1143723	509712	815517	762519

Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 09:54:55
Last sample started at : **********

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	59924	0.0	1.0000
Magnesium	Mg	24	0.0	77934	0.0	1.0000
Cobalt	Co	59	0.0	56057	0.0	1.0000
Indium	In	115	0.0	45749	0.0	1.0000
Lead	Pb	208	0.0	20389	0.0	1.0000
Bismuth	Bi	209	0.0	32621	0.0	1.0000
Uranium	U	238	0.0	30501	0.0	1.0000

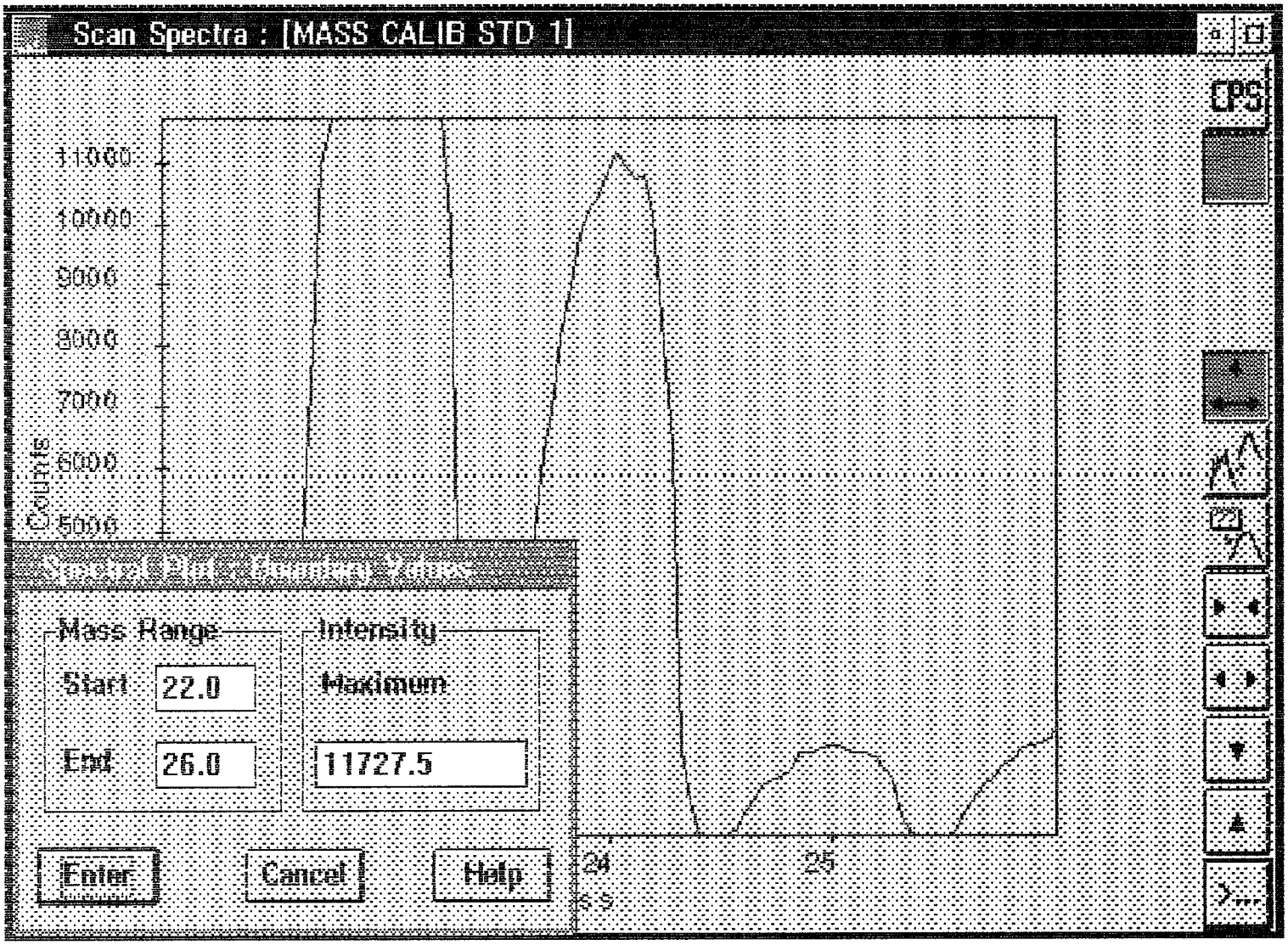
PQ-S #971114 Operator: Greg Jasper KA0322612

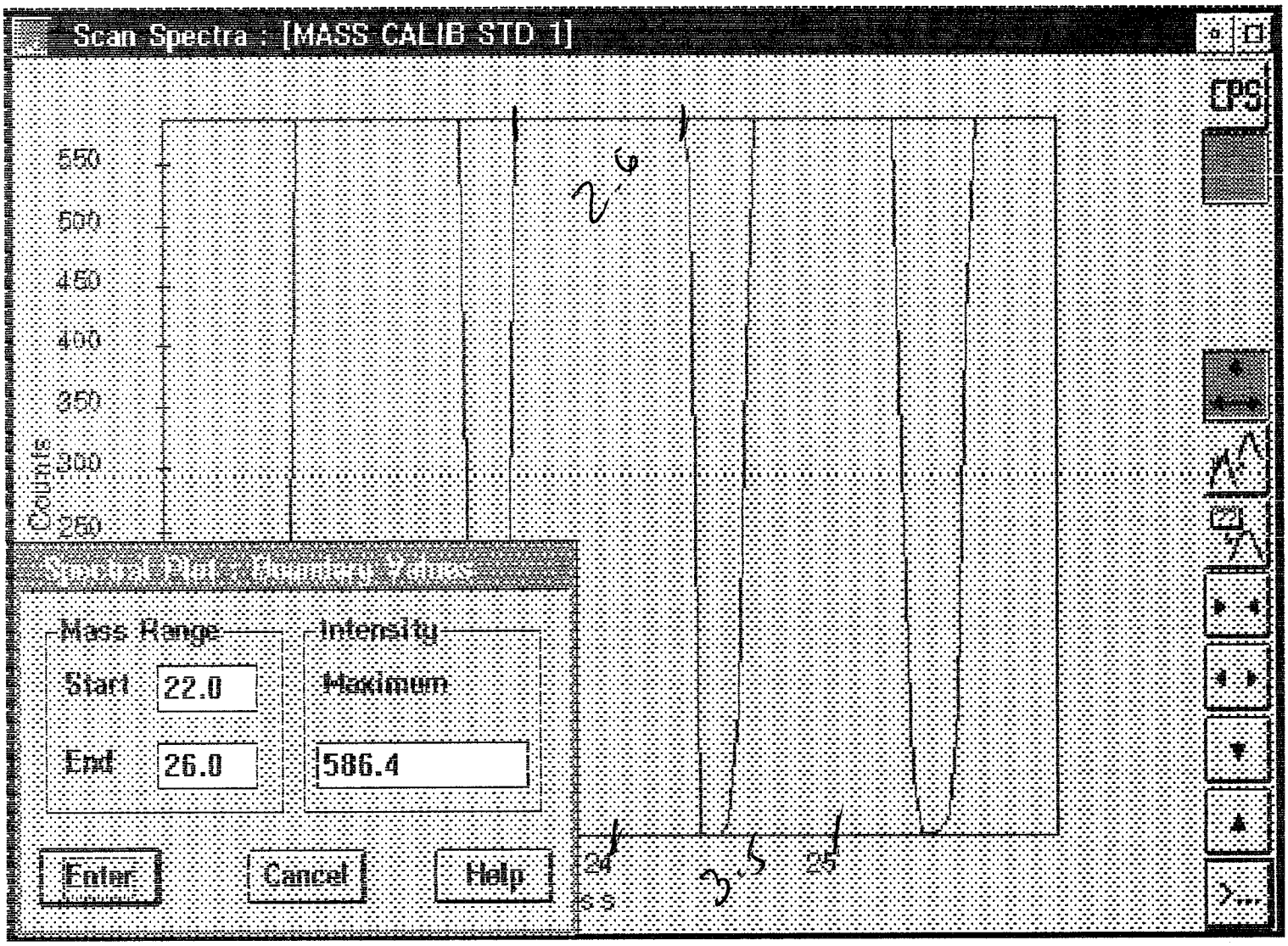
Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Mon Nov 24 2003 09:54:55
Last repeat started at : Mon Nov 24 2003 09:54:55
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

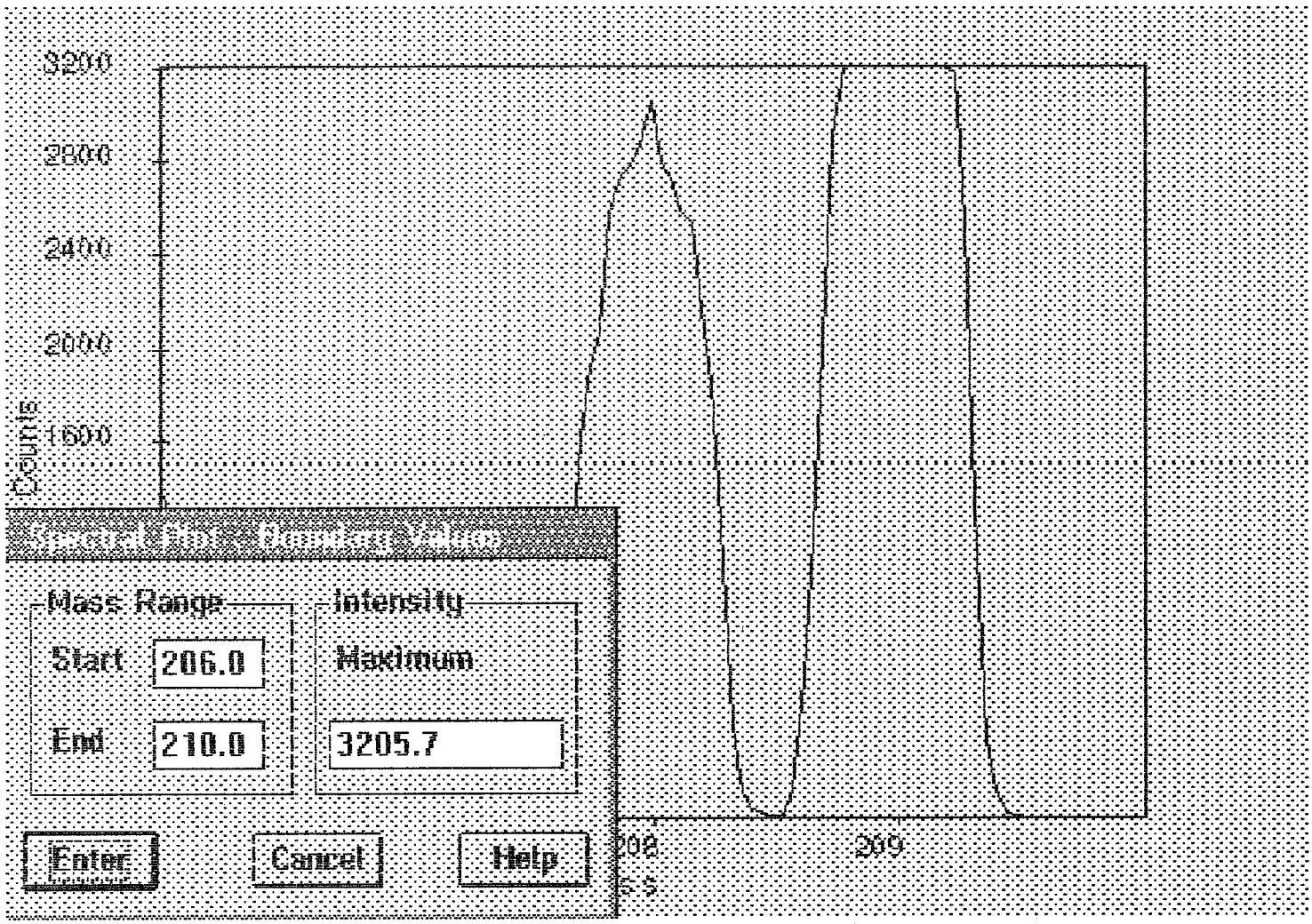
Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth	Uranium
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Peak Height
11/24/03

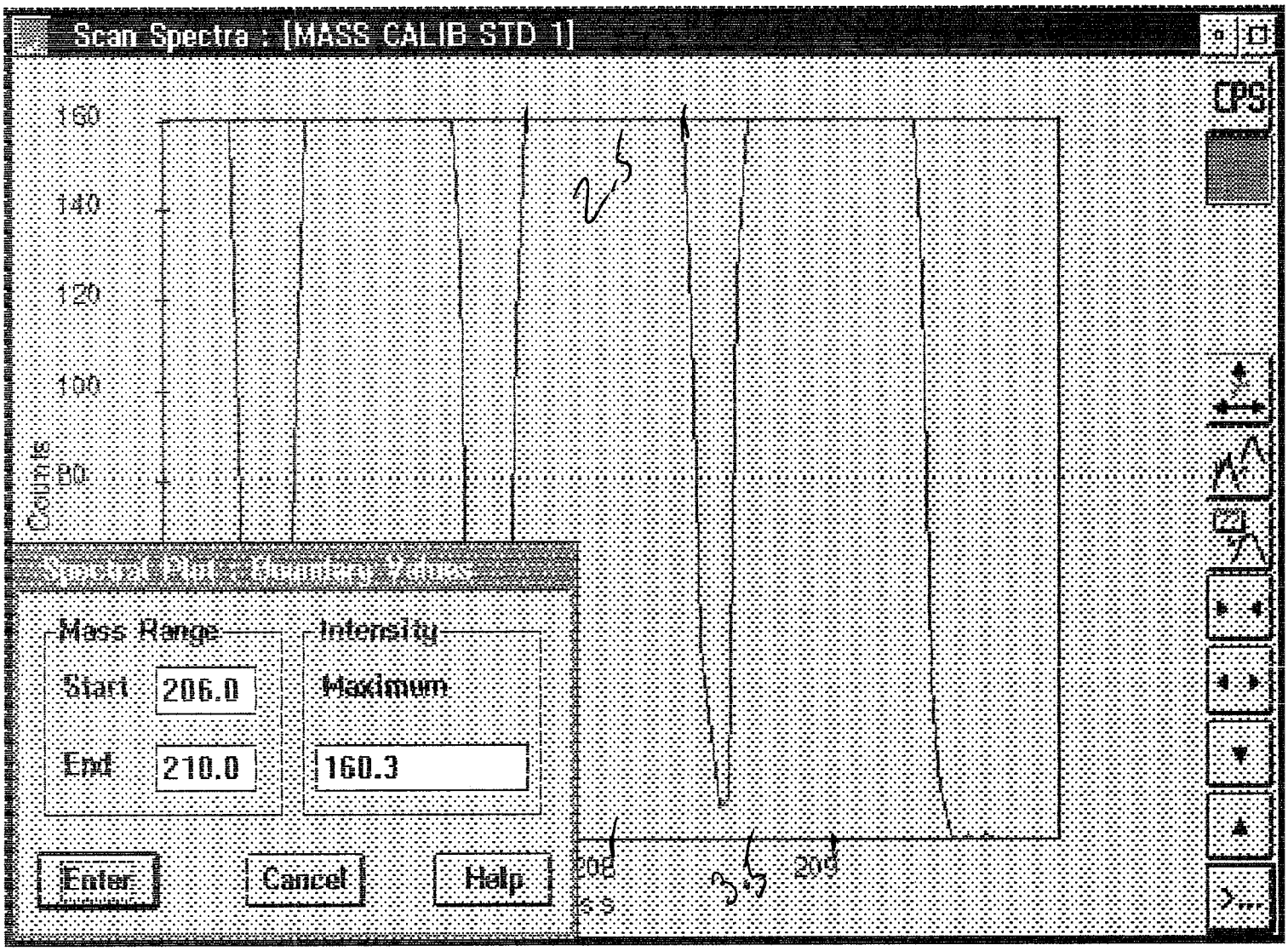



Scan Spectra : [MASS CALIB STD 1]
CPS
550
500
450
400
350
300
250
Counts
Mass Range
Start
22.0
End
26.0
Intensity
Maximum
586.4
Enter
Cancel
Help
24
25
m/z

Peak Height
11/24/03



11/24/03
590 PBA HI/16K
RES = 2.5/3.5 = 0.71



Multi-Element Calibration Mon Nov 24 2003
Calibration graph coefficients for selected isotopes.
Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 10:02:19
Last sample started at : Mon Nov 24 2003 10:02:57

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	59822	0.0	1.0000
Magnesium	Mg	24	0.0	77928	0.0	1.0000
Cobalt	Co	59	0.0	56044	0.0	1.0000
Indium	In	115	0.0	45679	0.0	1.0000
Lead	Pb	208	0.0	20020	0.0	1.0000
Bismuth	Bi	209	0.0	32640	0.0	1.0000

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Mon Nov 24 2003 10:02:19
Last repeat started at : Mon Nov 24 2003 10:02:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : Short Term Stability
First repeat started at : Mon Nov 24 2003 10:02:57
Last repeat started at : Mon Nov 24 2003 10:04:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.29	25.09	24.89	24.94	25.53	24.99
Run 2	25.25	25.00	24.80	24.88	25.07	24.92
Run 3	25.33	25.10	24.81	24.85	25.04	24.65
Run 4	25.28	25.04	24.63	24.45	24.58	24.65
Run 5	25.27	25.24	24.82	23.72	23.38	23.85
Mean	25.29	25.10	24.79	24.57	24.72	24.61
Std Dev	0.0327	0.0912	0.0936	0.5130	0.8213	0.4505
%SD	0.1293	0.3634	0.3776	2.088	3.322	1.830

Multi-Element Concentrations Mon Nov 24 2003

Concentration summary for samples.

User Name : MANAGER
Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC

Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 10:02:19
Last sample started at : Mon Nov 24 2003 10:02:57
Interference Equations : DEFAULT

Concentration units : ppb

Text

Sample Name	25 ppb Tuning Standa rd	Short Term Stability
Dilution Factor	1.0000	1.0000

Element	Isotope	Concentration	Concentration
Lithium	Li 6	*********	*********
Beryllium	Be 9	25.00	25.29
Magnesium	Mg 24	25.00	25.10
Cobalt	Co 59	25.00	24.79
Indium	In 115	25.00	24.57
Lead	Pb 208	25.00	24.72
Bismuth	Bi 209	25.00	24.61

Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : 112403A
User Name : GREG
Analysis procedure : EPA Method 200.8
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 11:27:36
Last sample started at : **********
Internal standards : Li 6 Ga 71 In 115 Lu 1 (interpolating)
Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Analytical Batch
KA0322613

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	394.5	58092	0.0	1.0000
Chromium	Cr	52	6915	42523	0.0	1.0000
Chromium	Cr	53	690.6	4863	0.0	1.0000
Nickel	Ni	60	5455	11459	0.0	1.0000
Nickel	Ni	61	37971	594.1	0.0	1.0000
Nickel	Ni	62	2703	1636	0.0	1.0000
Zinc	Zn	66	731.0	6567	0.0	1.0000
Zinc	Zn	67	177.5	1118	0.0	1.0000
Zinc	Zn	68	602.8	4593	0.0	1.0000
Arsenic	As	75	-56.97	4134	0.0	1.0000
Selenium	Se	77	113.1	396.6	0.0	1.0000
Selenium	Se	78	13327	1248	0.0	1.0000
Selenium	Se	82	59.76	484.1	0.0	1.0000
Molybdenum	Mo	95	218.1	4046	0.0	1.0000
Molybdenum	Mo	97	131.1	2481	0.0	1.0000
Molybdenum	Mo	98	295.9	6254	0.0	1.0000
Cadmium	Cd	111	644.7	3482	0.0	1.0000
Cadmium	Cd	112	678.0	6646	0.0	1.0000
Cadmium	Cd	114	955.4	8053	0.0	1.0000
Antimony	Sb	121	101.6	7115	0.0	1.0000
Antimony	Sb	123	102.6	5286	0.0	1.0000
Barium	Ba	135	39.43	2224	0.0	1.0000
Barium	Ba	137	56.22	3838	0.0	1.0000
Barium	Ba	138	224.9	24628	0.0	1.0000
Thallium	Tl	203	92.69	10309	0.0	1.0000
Thallium	Tl	205	136.0	24508	0.0	1.0000
Lead	Pb	206	112.3	8766	0.0	1.0000
Lead	Pb	207	100.6	6719	0.0	1.0000
Lead	Pb	208	398.2	32195	0.0	1.0000

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Calibration Blank
First repeat started at : Mon Nov 24 2003 11:27:36
Last repeat started at : Mon Nov 24 2003 11:29:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	-0.0005	0.0068	-0.0008	0.0012	-1.514	0.0182	0.0033
Run 2	0.0003	-0.0087	0.0156	-0.0052	1.121	0.0582	-0.0020
Run 3	0.0002	0.0018	-0.0148	0.0040	0.3935	-0.0764	-0.0012
Mean	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Std Dev	0.0004	0.0079	0.0152	0.0047	1.361	0.0691	0.0029
%SD	195340	589100	1870400	456720	10346000	3159900	167160

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0072	0.0048	0.0041	0.0040	0.1778	0.0225
Run 2	-0.0003	0.0005	0.0016	0.0155	-0.0454	0.0168
Run 3	0.0075	-0.0053	-0.0057	-0.0195	-0.1324	-0.0393
Mean	0.0000	-0.0000	0.0000	0.0000	0.0	0.0000
Std Dev	0.0073	0.0050	0.0051	0.0178	0.1600	0.0342
%SD	5373200	5994600	4354100	903210	0.0	1309100

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0012	-0.0063	0.0053	-0.0043	-0.0014	0.0035
Run 2	0.0093	-0.0001	-0.0035	0.0020	-0.0026	-0.0034
Run 3	-0.0081	0.0064	-0.0017	0.0023	0.0040	-0.0002
Mean	0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000
Std Dev	0.0088	0.0063	0.0046	0.0037	0.0035	0.0035
%SD	9420300	306710	189260	280160	188880	190590

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0027	-0.0049	0.0049	0.0085	0.0004	0.0014
Run 2	0.0012	0.0043	-0.0084	-0.0046	-0.0006	-0.0002
Run 3	0.0014	0.0006	0.0035	-0.0039	0.0002	-0.0012
Mean	-0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000
Std Dev	0.0023	0.0046	0.0073	0.0073	0.0005	0.0013
%SD	358890	534360	2026300	46161000	30433	120020

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0007	0.0007	0.0036	0.0013
Run 2	-0.0001	0.0009	-0.0011	0.0006
Run 3	-0.0007	-0.0016	-0.0025	-0.0019
Mean	0.0000	0.0000	0.0000	0.0000
Std Dev	0.0007	0.0013	0.0032	0.0016
%SD	50952	38567	566330	97177

Internal Standard Drift% relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.75	99.48	100.2	99.84
Run 2	99.33	100.3	98.88	101.3
Run 3	100.9	100.2	101.0	98.90
Mean	100.00	100.00	100.00	100.00
Std Dev	0.8286	0.4505	1.048	1.191

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Calibration Standard
First repeat started at : Mon Nov 24 2003 11:30:37
Last repeat started at : Mon Nov 24 2003 11:32:14
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.66	24.84	24.91	24.92	26.60	24.57	24.67
Run 2	25.36	25.30	24.85	24.96	24.24	25.00	25.11
Run 3	24.97	24.86	25.25	25.12	24.16	25.42	25.21
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.3531	0.2567	0.2160	0.1084	1.383	0.4262	0.2884
%SD	1.413	1.027	0.8639	0.4336	5.531	1.705	1.154

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.42	24.74	24.90	24.48	24.68	24.78
Run 2	25.24	25.15	24.86	25.22	25.10	25.06
Run 3	25.33	25.11	25.25	25.30	25.22	25.16
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.5000	0.2264	0.2141	0.4521	0.2842	0.1970
%SD	2.000	0.9054	0.8565	1.808	1.137	0.7882

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.64	23.82	24.31	25.17	25.01	24.94
Run 2	25.64	25.40	25.60	24.96	24.85	25.11
Run 3	24.72	25.78	25.09	24.87	25.14	24.95
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.5554	1.042	0.6487	0.1547	0.1441	0.0949
%SD	2.222	4.168	2.595	0.6187	0.5762	0.3797

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.93	24.64	24.81	24.81	24.87	24.18
Run 2	24.78	24.91	25.68	25.59	24.99	24.67
Run 3	25.29	25.45	24.52	24.60	25.13	26.15
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.2628	0.4154	0.6024	0.5225	0.1307	1.030
%SD	1.051	1.661	2.410	2.090	0.5227	4.119

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

ns4-23.E

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	24.48	25.07	25.95	25.21
Run 2	25.62	24.99	24.90	25.11
Run 3	24.89	24.93	24.15	24.68
Mean	25.00	25.00	25.00	25.00
Std Dev	0.5775	0.0701	0.9084	0.2798
%SD	2.310	0.2806	3.634	1.119

ns4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.8	101.0	99.49	96.29
Run 2	101.2	100.5	100.2	97.24
Run 3	102.2	99.62	100.8	97.83
Mean	102.1	100.4	100.2	97.12
Std Dev	0.8117	0.7105	0.6449	0.7761

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #1
First repeat started at : Mon Nov 24 2003 11:33:25
Last repeat started at : Mon Nov 24 2003 11:35:03
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	5.198	20.21	19.98	49.60	40.11	49.88	51.73
Run 2	5.157	20.10	20.75	50.69	44.28	51.46	52.22
Run 3	5.113	20.25	20.15	50.30	46.05	50.09	51.47
Mean	5.156	20.19	20.29	50.20	43.48	50.48	51.80
Std Dev	0.0424	0.0759	0.4045	0.5518	3.047	0.8585	0.3827
%SD	0.8220	0.3761	1.993	1.099	7.008	1.701	0.7387

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	57.97	55.48	51.48	52.18	52.91	52.35
Run 2	58.13	56.38	52.48	52.36	53.55	52.69
Run 3	56.94	54.99	51.58	52.09	52.36	52.24
Mean	57.68	55.62	51.85	52.21	52.94	52.43
Std Dev	0.6449	0.7056	0.5491	0.1341	0.5920	0.2342
%SD	1.118	1.269	1.059	0.2569	1.118	0.4467

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	51.07	48.44	50.40	25.86	25.96	25.74
Run 2	49.93	50.94	54.84	26.11	26.19	26.24
Run 3	51.71	49.55	53.78	25.62	25.65	25.77
Mean	50.90	49.64	53.00	25.86	25.93	25.92
Std Dev	0.8982	1.253	2.320	0.2453	0.2676	0.2779
%SD	1.764	2.525	4.377	0.9484	1.032	1.072

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	50.20	51.56	201.3	202.5	196.5	51.01
Run 2	52.66	53.56	202.0	201.6	201.0	50.35
Run 3	53.07	50.61	198.7	206.7	205.8	52.48
Mean	51.97	51.91	200.7	203.6	201.1	51.28
Std Dev	1.549	1.507	1.747	2.724	4.616	1.087
%SD	2.981	2.902	0.8705	1.338	2.295	2.119

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	52.07	45.99	51.05	49.11
Run 2	49.44	46.41	51.36	48.96
Run 3	52.35	47.53	51.92	49.48
Mean	51.29	46.64	51.44	49.18
Std Dev	1.605	0.7931	0.4442	0.2648
%SD	3.130	1.700	0.8635	0.5383

hs4-21-F

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.76	98.79	99.28	98.34
Run 2	100.9	97.76	98.57	99.12
Run 3	100.7	98.52	98.90	95.63
Mean	100.5	98.36	98.92	97.69
Std Dev	0.6225	0.5358	0.3532	1.831

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #2
First repeat started at : Mon Nov 24 2003 11:36:47
Last repeat started at : Mon Nov 24 2003 11:38:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.81	25.25	25.52	24.99	23.11	25.03	24.82
Run 2	24.80	24.99	25.02	24.91	16.73	24.77	24.61
Run 3	25.22	24.75	24.73	25.25	26.35	24.54	25.30
Mean	24.94	25.00	25.09	25.05	22.06	24.78	24.91
Std Dev	0.2386	0.2478	0.3976	0.1805	4.894	0.2461	0.3540
%SD	0.9565	0.9913	1.584	0.7207	22.18	0.9929	1.421

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.81	24.41	25.04	24.35	25.07	24.96
Run 2	24.60	24.92	24.73	24.83	24.83	24.50
Run 3	24.68	24.83	24.91	25.20	25.04	24.95
Mean	24.69	24.72	24.90	24.79	24.98	24.80
Std Dev	0.1055	0.2707	0.1558	0.4274	0.1307	0.2603
%SD	0.4272	1.095	0.6257	1.724	0.5232	1.049

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	26.60	25.74	24.96	25.14	25.36	25.59
Run 2	24.34	24.88	25.60	25.02	24.65	25.15
Run 3	26.54	24.64	24.76	25.62	25.40	25.51
Mean	25.82	25.09	25.11	25.26	25.13	25.42
Std Dev	1.288	0.5759	0.4384	0.3198	0.4199	0.2335
%SD	4.988	2.295	1.746	1.266	1.670	0.9185

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.38	25.25	25.09	24.76	25.23	25.47
Run 2	24.61	26.16	24.75	24.44	24.84	25.09
Run 3	24.86	25.20	25.03	24.62	25.03	24.93
Mean	24.61	25.54	24.96	24.61	25.03	25.16
Std Dev	0.2424	0.5428	0.1826	0.1608	0.1983	0.2747
%SD	0.9849	2.125	0.7318	0.6533	0.7919	1.092

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	24.72	24.61	24.64	24.65
Run 2	25.18	25.28	25.09	24.96
Run 3	24.99	24.38	24.84	24.82
Mean	24.96	24.76	24.86	24.81
Std Dev	0.2338	0.4687	0.2264	0.1541
%SD	0.9368	1.893	0.9107	0.6214

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.3	98.61	97.71	98.88
Run 2	100.8	99.40	99.14	98.14
Run 3	101.9	99.22	96.56	95.54
Mean	101.0	99.08	97.80	97.52
Std Dev	0.8160	0.4150	1.293	1.754

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #3
First repeat started at : Mon Nov 24 2003 11:44:09
Last repeat started at : Mon Nov 24 2003 11:45:48
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0043	-0.0103	-0.0302	0.0076	0.6222	0.0326	-0.0121
Run 2	0.0020	-0.0057	-0.0249	-0.0258	1.904	0.1324	0.0088
Run 3	0.0027	-0.0072	-0.0289	-0.0185	2.823	0.0040	0.0026
Mean	0.0030	-0.0077	-0.0280	-0.0122	1.783	0.0564	-0.0003
Std Dev	0.0012	0.0024	0.0028	0.0176	1.105	0.0674	0.0107
%SD	39.11	30.62	9.912	143.6	61.99	119.6	4163

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1127	-0.0036	-0.0068	-0.0103	0.2550	-0.0458
Run 2	0.1341	-0.0016	-0.0049	-0.0244	0.3330	-0.0379
Run 3	0.0270	-0.0168	-0.0068	0.0090	0.0727	-0.0175
Mean	0.0913	-0.0073	-0.0062	-0.0086	0.2202	-0.0337
Std Dev	0.0567	0.0083	0.0011	0.0167	0.1336	0.0146
%SD	62.07	112.8	17.63	195.1	60.65	43.24

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0202	0.0321	0.0234	0.0039	0.0107	0.0006
Run 2	-0.0030	0.0121	0.0228	0.0053	0.0073	0.0057
Run 3	0.0185	0.0264	0.0175	0.0171	0.0095	0.0033
Mean	0.0119	0.0235	0.0213	0.0087	0.0092	0.0032
Std Dev	0.0130	0.0103	0.0032	0.0072	0.0017	0.0025
%SD	108.9	43.87	15.26	82.74	18.72	78.07

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0451	0.0301	0.0119	0.0017	-0.0013	-0.0016
Run 2	0.0304	0.0351	0.0136	-0.0083	-0.0011	-0.0011
Run 3	0.0335	0.0229	0.0085	0.0022	-0.0013	-0.0039
Mean	0.0363	0.0294	0.0113	-0.0015	-0.0012	-0.0022
Std Dev	0.0077	0.0061	0.0026	0.0059	0.0001	0.0015
%SD	21.24	20.89	22.84	403.3	9.264	66.94

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0001	0.0011	0.0014	0.0000
Run 2	0.0003	-0.0039	-0.0011	-0.0017
Run 3	0.0009	0.0002	0.0002	0.0013
Mean	0.0004	-0.0009	0.0002	-0.0001
Std Dev	0.0005	0.0027	0.0012	0.0015
%SD	131.8	310.8	689.0	1106



Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.1	99.42	99.81	97.08
Run 2	100.9	99.31	99.09	94.95
Run 3	101.2	99.61	96.67	95.67
Mean	100.8	99.45	98.53	95.90
Std Dev	0.5343	0.1512	1.648	1.082

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #4
First repeat started at : Mon Nov 24 2003 11:46:51
Last repeat started at : Mon Nov 24 2003 11:48:29
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0022	-0.0039	-0.0528	-0.0121	1.337	0.0131	0.0010
Run 2	0.0036	-0.0109	-0.0465	-0.0154	0.3069	-0.0228	0.0066
Run 3	0.0021	-0.0109	-0.0366	-0.0015	2.586	0.0592	-0.0035
Mean	0.0026	-0.0086	-0.0453	-0.0097	1.410	0.0165	0.0013
Std Dev	0.0008	0.0040	0.0082	0.0073	1.141	0.0411	0.0051
%SD	32.41	46.77	18.12	74.88	80.95	248.9	375.4

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0188	-0.0028	0.0035	-0.0291	-0.0917	-0.0105
Run 2	0.0440	0.0239	-0.0065	-0.0213	0.0661	-0.0431
Run 3	0.0330	0.0153	-0.0086	0.0237	-0.3139	-0.0090
Mean	0.0319	0.0121	-0.0039	-0.0089	-0.1132	-0.0208
Std Dev	0.0126	0.0136	0.0065	0.0285	0.1909	0.0193
%SD	39.61	112.6	167.1	320.4	168.7	92.37

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0176	0.0145	0.0119	0.0102	0.0096	0.0025
Run 2	0.0066	0.0340	0.0027	0.0069	0.0029	-0.0022
Run 3	0.0092	0.0154	0.0173	0.0052	0.0082	0.0046
Mean	0.0112	0.0213	0.0107	0.0075	0.0069	0.0016
Std Dev	0.0058	0.0110	0.0074	0.0025	0.0035	0.0035
%SD	51.68	51.47	69.49	34.15	50.72	213.0

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0291	0.0271	-0.0002	0.0002	-0.0002	-0.0014
Run 2	0.0307	0.0193	0.0159	0.0033	-0.0004	-0.0028
Run 3	0.0195	0.0107	-0.0028	0.0034	-0.0024	-0.0016
Mean	0.0264	0.0190	0.0043	0.0023	-0.0010	-0.0019
Std Dev	0.0061	0.0082	0.0101	0.0018	0.0012	0.0007
%SD	23.06	43.12	236.0	79.23	120.1	37.89

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0004	-0.0012	-0.0011	-0.0018
Run 2	0.0007	-0.0016	-0.0013	0.0012
Run 3	-0.0008	0.0004	0.0023	-0.0003
Mean	-0.0002	-0.0008	-0.0000	-0.0003
Std Dev	0.0008	0.0011	0.0020	0.0015
%SD	435.7	136.6	4503	491.3



Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.9	99.75	98.66	98.71
Run 2	101.3	100.5	100.2	96.74
Run 3	101.9	100.7	98.81	96.82
Mean	101.7	100.3	99.21	97.42
Std Dev	0.3443	0.4802	0.8260	1.118

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #5
First repeat started at : Mon Nov 24 2003 11:49:34
Last repeat started at : Mon Nov 24 2003 11:51:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0213	0.2006	0.1922	0.1589	2.201	0.2086	0.4520
Run 2	0.0222	0.1969	0.1665	0.1681	0.5003	0.1743	0.4316
Run 3	0.0229	0.2029	0.1650	0.1626	10.21	0.0864	0.4590
Mean	0.0221	0.2001	0.1746	0.1632	4.303	0.1564	0.4475
Std Dev	0.0008	0.0031	0.0153	0.0046	5.183	0.0630	0.0143
%SD	3.657	1.530	8.748	2.843	120.5	40.28	3.186

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4198	0.4566	0.5015	1.068	1.369	0.9948
Run 2	0.4210	0.3879	0.5478	1.020	0.9680	1.092
Run 3	0.4487	0.4121	0.4960	1.105	1.158	1.040
Mean	0.4298	0.4189	0.5151	1.065	1.165	1.042
Std Dev	0.0164	0.0348	0.0285	0.0428	0.2008	0.0485
%SD	3.806	8.310	5.529	4.022	17.24	4.655

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0707	0.0683	0.0403	0.0533	0.0499	0.0448
Run 2	0.0630	0.0644	0.0751	0.0604	0.0541	0.0576
Run 3	0.0618	0.0759	0.0558	0.0526	0.0513	0.0479
Mean	0.0652	0.0695	0.0571	0.0554	0.0518	0.0501
Std Dev	0.0048	0.0058	0.0174	0.0043	0.0021	0.0067
%SD	7.365	8.385	30.51	7.795	4.060	13.38

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0645	0.0650	0.0451	0.0451	0.0488	0.0179
Run 2	0.0515	0.0791	0.0559	0.0636	0.0405	0.0163
Run 3	0.0551	0.0620	0.0461	0.0578	0.0477	0.0141
Mean	0.0570	0.0687	0.0490	0.0555	0.0457	0.0161
Std Dev	0.0067	0.0091	0.0059	0.0094	0.0045	0.0019
%SD	11.82	13.24	12.12	17.01	9.865	11.69

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

water CRA ms4-23-c

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0172	0.0132	0.0213	0.0163
Run 2	0.0196	0.0133	0.0153	0.0166
Run 3	0.0168	0.0123	0.0141	0.0120
Mean	0.0179	0.0129	0.0169	0.0150
Std Dev	0.0015	0.0006	0.0038	0.0025
%SD	8.662	4.408	22.60	17.03

water CRA ws4-23-c

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.5	100.1	100.6	97.24
Run 2	102.0	100.8	97.22	93.05
Run 3	102.2	100.1	98.49	96.86
Mean	101.9	100.4	98.78	95.72
Std Dev	0.3661	0.4185	1.719	2.316

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #6
First repeat started at : Mon Nov 24 2003 11:52:14
Last repeat started at : Mon Nov 24 2003 11:53:52
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0468	0.3852	0.3691	0.3783	3.465	0.3379	0.9898
Run 2	0.0448	0.3911	0.4087	0.4022	3.386	0.2731	1.063
Run 3	0.0449	0.4232	0.4081	0.4145	16.38	0.4016	0.9992
Mean	0.0455	0.3999	0.3953	0.3984	7.745	0.3375	1.017
Std Dev	0.0011	0.0204	0.0227	0.0184	7.481	0.0643	0.0396
%SD	2.465	5.113	5.746	4.616	96.60	19.04	3.889

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.9030	0.9229	0.9555	2.086	1.784	1.963
Run 2	1.068	0.9856	1.062	2.096	2.585	2.143
Run 3	0.8662	0.9767	1.043	2.052	2.401	2.094
Mean	0.9458	0.9617	1.020	2.078	2.257	2.067
Std Dev	0.1076	0.0339	0.0570	0.0232	0.4195	0.0929
%SD	11.38	3.528	5.585	1.117	18.59	4.496

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1063	0.1009	0.1081	0.1228	0.1129	0.0939
Run 2	0.1222	0.1259	0.1018	0.1000	0.1126	0.1037
Run 3	0.0863	0.1022	0.1172	0.1160	0.1104	0.1075
Mean	0.1050	0.1097	0.1090	0.1129	0.1120	0.1017
Std Dev	0.0180	0.0141	0.0078	0.0117	0.0014	0.0070
%SD	17.15	12.82	7.116	10.35	1.227	6.918

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1202	0.1124	0.0840	0.1114	0.0990	0.0398
Run 2	0.1189	0.1158	0.1041	0.0902	0.1008	0.0355
Run 3	0.1120	0.1108	0.1222	0.1035	0.1043	0.0359
Mean	0.1170	0.1130	0.1034	0.1017	0.1014	0.0371
Std Dev	0.0044	0.0026	0.0191	0.0107	0.0027	0.0024
%SD	3.751	2.269	18.48	10.51	2.654	6.359

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0442	0.0388	0.0384	0.0366
Run 2	0.0396	0.0307	0.0344	0.0370
Run 3	0.0366	0.0368	0.0352	0.0352
Mean	0.0402	0.0354	0.0360	0.0363
Std Dev	0.0038	0.0042	0.0021	0.0010
%SD	9.529	11.95	5.819	2.662

SOIC CRA ws4.23.D

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.5	101.7	100.3	94.14
Run 2	101.8	99.79	98.03	95.45
Run 3	102.8	100.3	97.16	93.91
Mean	102.4	100.6	98.48	94.50
Std Dev	0.5111	0.9752	1.591	0.8317

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #7
First repeat started at : Mon Nov 24 2003 11:55:40
Last repeat started at : Mon Nov 24 2003 11:57:17
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0010	0.0311	-0.0302	-0.0599	6.885	-0.0469	0.2418
Run 2	-0.0004	0.0253	-0.0572	-0.0338	10.64	0.0465	0.2409
Run 3	0.0006	0.0507	-0.0589	-0.0556	-1.554	-0.1036	0.2242
Mean	0.0004	0.0357	-0.0488	-0.0498	5.325	-0.0347	0.2357
Std Dev	0.0007	0.0133	0.0161	0.0140	6.247	0.0758	0.0099
%SD	172.7	37.28	33.05	28.07	117.3	218.7	4.196

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2469	0.2373	-0.0089	-0.0171	0.0762	-0.0339
Run 2	0.2443	0.1944	-0.0014	-0.0211	-0.1466	-0.0253
Run 3	0.2097	0.2004	0.0066	-0.0187	0.1327	0.0026
Mean	0.2336	0.2107	-0.0012	-0.0190	0.0208	-0.0188
Std Dev	0.0208	0.0232	0.0078	0.0020	0.1476	0.0191
%SD	8.901	11.02	628.3	10.79	711.5	101.3

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0016	0.0182	-0.0026	0.0023	0.0024	-0.0025
Run 2	0.0087	0.0071	0.0007	0.0152	0.0058	-0.0016
Run 3	0.0052	0.0103	-0.0028	0.0049	0.0064	-0.0013
Mean	0.0041	0.0119	-0.0016	0.0075	0.0048	-0.0018
Std Dev	0.0053	0.0057	0.0020	0.0068	0.0021	0.0006
%SD	128.4	48.32	127.4	91.76	44.18	34.02

8/19 METHOD BLANK

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0058	0.0015	-0.0001	0.0011	-0.0031	-0.0023
Run 2	0.0032	0.0031	-0.0029	-0.0052	-0.0051	-0.0035
Run 3	0.0048	0.0046	-0.0026	-0.0011	-0.0034	-0.0031
Mean	0.0046	0.0030	-0.0019	-0.0017	-0.0039	-0.0030
Std Dev	0.0013	0.0016	0.0015	0.0032	0.0011	0.0006
%SD	28.30	51.48	82.01	184.5	27.60	20.74

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0016	-0.0050	-0.0029	-0.0057
Run 2	-0.0025	-0.0036	-0.0062	-0.0043
Run 3	-0.0018	-0.0056	-0.0046	-0.0040
Mean	-0.0020	-0.0047	-0.0045	-0.0047
Std Dev	0.0005	0.0010	0.0016	0.0009
%SD	24.14	21.82	36.13	19.24

8419 method Blank

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.0	101.6	99.97	94.70
Run 2	104.0	103.1	100.4	94.88
Run 3	104.2	101.9	98.83	93.06
Mean	104.1	102.2	99.74	94.21
Std Dev	0.1340	0.7540	0.8178	1.003

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #8
First repeat started at : Mon Nov 24 2003 11:58:49
Last repeat started at : Mon Nov 24 2003 12:00:28
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0017	0.5754	9.749	20.60	288.1	1.905	5.421
Run 2	0.0030	0.5962	9.251	21.38	275.1	1.955	5.457
Run 3	0.0047	0.5936	9.092	18.91	277.0	2.005	5.350
Mean	0.0032	0.5884	9.364	20.29	280.0	1.955	5.409
Std Dev	0.0015	0.0113	0.3427	1.261	7.017	0.0501	0.0545
%SD	48.37	1.926	3.659	6.216	2.506	2.565	1.008

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.239	7.403	1.349	3.700	8.842	2.579
Run 2	8.861	7.763	1.386	4.109	9.460	2.807
Run 3	9.143	7.457	1.432	4.036	8.556	2.915
Mean	9.081	7.541	1.389	3.948	8.952	2.767
Std Dev	0.1967	0.1938	0.0415	0.2182	0.4618	0.1718
%SD	2.166	2.570	2.989	5.525	5.158	6.209

8419-4 TOTAL

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.417	3.573	3.543	0.1719	0.1333	0.1212
Run 2	3.720	3.407	3.756	0.1650	0.1396	0.1176
Run 3	3.850	3.480	3.639	0.1728	0.1284	0.1319
Mean	3.662	3.486	3.646	0.1699	0.1338	0.1235
Std Dev	0.2221	0.0832	0.1065	0.0043	0.0056	0.0075
%SD	6.064	2.387	2.922	2.506	4.197	6.041

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3031	0.2972	84.49	85.17	88.00	0.0238
Run 2	0.3038	0.2991	87.26	86.26	86.06	0.0199
Run 3	0.2911	0.3067	89.60	86.23	86.17	0.0212
Mean	0.2993	0.3010	87.12	85.89	86.75	0.0216
Std Dev	0.0072	0.0050	2.561	0.6164	1.088	0.0020
%SD	2.389	1.667	2.939	0.7177	1.254	9.163

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0188	0.3353	0.3642	0.3607
Run 2	0.0201	0.3027	0.3485	0.3523
Run 3	0.0195	0.3516	0.3357	0.3525
Mean	0.0195	0.3298	0.3495	0.3551
Std Dev	0.0006	0.0249	0.0142	0.0048
%SD	3.258	7.556	4.074	1.354

8419-4 tom

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.2	74.29	74.96	82.25
Run 2	98.96	73.02	75.09	83.37
Run 3	100.2	74.57	75.36	80.88
Mean	99.77	73.96	75.13	82.17
Std Dev	0.7078	0.8217	0.2033	1.247

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #2
First repeat started at : Mon Nov 24 2003 12:01:32
Last repeat started at : Mon Nov 24 2003 12:03:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0037	0.7799	9.031	19.98	263.6	1.861	5.520
Run 2	0.0033	0.7706	8.913	20.42	275.8	2.187	5.402
Run 3	0.0029	0.7868	9.240	20.80	263.3	2.121	5.502
Mean	0.0033	0.7791	9.061	20.40	267.5	2.056	5.475
Std Dev	0.0004	0.0081	0.1652	0.4110	7.119	0.1723	0.0634
%SD	12.95	1.039	1.823	2.015	2.661	8.379	1.158

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.305	7.701	1.399	4.340	9.092	3.069
Run 2	9.263	7.619	1.414	4.102	8.290	2.797
Run 3	9.006	7.565	1.445	4.034	8.316	2.938
Mean	9.191	7.628	1.419	4.159	8.566	2.935
Std Dev	0.1618	0.0685	0.0233	0.1609	0.4555	0.1363
%SD	1.760	0.8979	1.643	3.870	5.318	4.645

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.479	3.833	3.769	0.1730	0.1332	0.1368
Run 2	3.673	3.718	3.498	0.1708	0.1367	0.1183
Run 3	3.308	3.652	3.465	0.1674	0.1121	0.1181
Mean	3.487	3.734	3.578	0.1704	0.1273	0.1244
Std Dev	0.1826	0.0913	0.1670	0.0028	0.0133	0.0107
%SD	5.237	2.445	4.669	1.648	10.47	8.607

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2798	0.2959	86.81	85.94	89.37	0.0165
Run 2	0.2879	0.3055	86.16	88.76	88.20	0.0206
Run 3	0.2663	0.2950	84.35	82.51	81.10	0.0143
Mean	0.2780	0.2988	85.78	85.74	86.22	0.0171
Std Dev	0.0109	0.0058	1.274	3.131	4.476	0.0032
%SD	3.933	1.943	1.485	3.652	5.191	18.64

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

8419-4D4 Tot.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0192	0.3334	0.3214	0.3500
Run 2	0.0169	0.3310	0.3500	0.3387
Run 3	0.0208	0.3529	0.4133	0.4323
Mean	0.0190	0.3391	0.3615	0.3737
Std Dev	0.0019	0.0120	0.0470	0.0511
%SD	10.19	3.537	13.01	13.68

8419-4D P
TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.54	73.48	73.98	83.28
Run 2	100.2	74.21	76.76	81.59
Run 3	100.8	74.64	78.07	80.22
Mean	100.2	74.11	76.27	81.70
Std Dev	0.6396	0.5849	2.089	1.531

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #10
First repeat started at : Mon Nov 24 2003 12:04:25
Last repeat started at : Mon Nov 24 2003 12:06:02
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	17.31	21.33	29.76	40.35	280.0	21.13	25.59
Run 2	16.88	21.31	30.21	41.32	296.1	20.86	25.45
Run 3	17.01	21.16	29.59	39.22	283.5	20.49	24.54
Mean	17.07	21.27	29.86	40.30	286.5	20.82	25.19
Std Dev	0.2192	0.0955	0.3172	1.049	8.479	0.3210	0.5702
%SD	1.284	0.4489	1.063	2.602	2.959	1.542	2.263

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	29.96	27.45	26.08	27.20	32.15	25.75
Run 2	29.33	27.52	26.02	27.38	31.51	25.35
Run 3	28.41	26.62	25.44	26.23	30.40	25.35
Mean	29.23	27.20	25.84	26.94	31.36	25.49
Std Dev	0.7794	0.5024	0.3549	0.6158	0.8846	0.2312
%SD	2.666	1.847	1.373	2.286	2.821	0.9073

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Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.06	24.38	24.86	19.06	18.80	19.02
Run 2	26.96	27.47	27.93	19.61	19.54	19.54
Run 3	28.10	27.74	27.36	20.08	19.89	19.69
Mean	26.71	26.53	26.72	19.58	19.41	19.42
Std Dev	1.536	1.866	1.633	0.5094	0.5548	0.3502
%SD	5.753	7.033	6.110	2.601	2.858	1.803

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.18	20.61	104.3	101.3	102.0	16.87
Run 2	20.71	21.48	107.3	107.6	107.2	15.61
Run 3	20.66	21.82	110.9	112.7	106.6	17.32
Mean	20.85	21.30	107.5	107.2	105.3	16.60
Std Dev	0.2860	0.6276	3.311	5.736	2.881	0.8859
%SD	1.372	2.946	3.081	5.351	2.737	5.337

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	16.21	15.37	15.52	15.53
Run 2	16.35	15.37	15.43	16.02
Run 3	17.18	16.10	17.04	16.39
Mean	16.58	15.61	16.00	15.98
Std Dev	0.5254	0.4212	0.9043	0.4323
%SD	3.169	2.698	5.653	2.706

8449-45PK TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.18	71.11	76.32	79.49
Run 2	99.56	71.63	74.42	77.85
Run 3	100.1	74.11	72.36	76.51
Mean	99.63	72.28	74.37	77.95
Std Dev	0.4885	1.602	1.979	1.491

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #11
First repeat started at : Mon Nov 24 2003 12:07:18
Last repeat started at : Mon Nov 24 2003 12:08:57
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	20.79	20.02	20.40	19.99	29.90	19.93	21.23
Run 2	20.52	19.63	19.90	19.76	32.90	19.53	21.09
Run 3	20.36	19.98	20.26	20.27	27.95	19.68	21.09
Mean	20.56	19.88	20.19	20.00	30.25	19.71	21.13
Std Dev	0.2176	0.2191	0.2568	0.2563	2.495	0.2011	0.0837
%SD	1.058	1.102	1.272	1.281	8.247	1.020	0.3960

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.83	20.76	20.73	20.79	22.63	21.44
Run 2	21.44	20.78	20.59	20.90	22.33	20.84
Run 3	21.54	21.22	20.70	20.93	22.12	21.09
Mean	21.60	20.92	20.67	20.87	22.36	21.12
Std Dev	0.2003	0.2625	0.0744	0.0698	0.2574	0.2998
%SD	0.9274	1.254	0.3599	0.3346	1.151	1.420

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	19.44	19.22	19.44	20.56	20.59	20.49
Run 2	18.93	18.43	18.53	20.36	20.35	20.57
Run 3	19.80	20.24	20.62	20.93	20.91	20.62
Mean	19.39	19.30	19.53	20.62	20.62	20.56
Std Dev	0.4360	0.9032	1.047	0.2868	0.2816	0.0663
%SD	2.248	4.680	5.360	1.391	1.366	0.3227

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	20.19	21.04	20.88	20.78	20.54	21.43
Run 2	20.39	19.94	20.91	20.72	20.73	20.92
Run 3	20.27	21.27	20.29	20.87	21.24	22.52
Mean	20.28	20.75	20.70	20.79	20.84	21.63
Std Dev	0.1015	0.7125	0.3468	0.0776	0.3589	0.8196
%SD	0.5002	3.433	1.676	0.3732	1.722	3.790

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	21.98	21.79	21.22	21.58
Run 2	21.86	20.94	21.05	20.90
Run 3	21.42	20.89	21.89	21.60
Mean	21.75	21.21	21.38	21.36
Std Dev	0.2906	0.5067	0.4466	0.3984
%SD	1.336	2.389	2.088	1.865



Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.0	98.65	93.47	84.20
Run 2	102.8	98.61	94.88	86.63
Run 3	101.9	98.10	93.06	83.43
Mean	102.6	98.45	93.80	84.75
Std Dev	0.5655	0.3033	0.9574	1.668

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #12
First repeat started at : Mon Nov 24 2003 12:13:20
Last repeat started at : Mon Nov 24 2003 12:14:56
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0074	0.6462	8.758	21.88	259.5	1.618	5.629
Run 2	0.0056	0.6602	8.974	21.01	271.5	1.950	5.780
Run 3	0.0072	0.7011	9.373	20.10	266.4	1.814	5.759
Mean	0.0067	0.6692	9.035	20.99	265.8	1.794	5.723
Std Dev	0.0010	0.0285	0.3124	0.8889	6.028	0.1670	0.0816
%SD	14.48	4.262	3.458	4.234	2.267	9.311	1.425

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.295	7.784	1.373	4.341	7.818	2.897
Run 2	8.783	7.630	1.424	4.129	7.528	2.810
Run 3	9.275	7.812	1.466	4.172	7.820	3.057
Mean	9.118	7.742	1.421	4.214	7.722	2.921
Std Dev	0.2900	0.0981	0.0466	0.1118	0.1680	0.1252
%SD	3.181	1.267	3.277	2.654	2.175	4.285

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.538	3.532	3.544	0.1655	0.1243	0.1292
Run 2	3.686	3.970	3.670	0.1762	0.1311	0.1286
Run 3	3.731	3.620	3.488	0.1720	0.1319	0.1143
Mean	3.652	3.707	3.567	0.1712	0.1291	0.1240
Std Dev	0.1014	0.2314	0.0933	0.0054	0.0042	0.0084
%SD	2.775	6.240	2.617	3.135	3.226	6.758

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3064	0.3393	87.16	85.30	82.65	0.0100
Run 2	0.3040	0.3170	84.97	86.28	88.86	0.0195
Run 3	0.2881	0.3393	86.34	84.68	82.70	0.0151
Mean	0.2995	0.3319	86.16	85.42	84.74	0.0149
Std Dev	0.0100	0.0129	1.107	0.8088	3.570	0.0048
%SD	3.323	3.881	1.285	0.9469	4.213	32.13

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8419-5 TOTAL

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0167	0.2886	0.3107	0.2939
Run 2	0.0183	0.2882	0.2875	0.2906
Run 3	0.0211	0.2524	0.3370	0.2884
Mean	0.0187	0.2764	0.3118	0.2910
Std Dev	0.0022	0.0208	0.0248	0.0028
%SD	11.95	7.525	7.942	0.9512

8419-5 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.8	74.29	76.28	80.19
Run 2	101.1	74.77	73.15	80.52
Run 3	101.4	74.33	76.01	80.96
Mean	101.1	74.46	75.15	80.56
Std Dev	0.2786	0.2680	1.733	0.3836

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #13
First repeat started at : Mon Nov 24 2003 12:16:08
Last repeat started at : Mon Nov 24 2003 12:17:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0043	0.5891	9.476	21.21	281.3	1.696	5.930
Run 2	0.0034	0.5585	9.275	21.38	256.8	1.614	5.638
Run 3	0.0046	0.5910	9.472	20.42	265.7	1.705	5.693
Mean	0.0041	0.5796	9.408	21.00	267.9	1.672	5.754
Std Dev	0.0006	0.0182	0.1147	0.5143	12.40	0.0497	0.1552
%SD	14.44	3.144	1.219	2.449	4.628	2.974	2.697

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.285	7.664	1.432	4.462	7.608	3.156
Run 2	9.209	7.679	1.448	4.388	7.692	3.139
Run 3	8.960	7.697	1.342	4.522	6.800	2.970
Mean	9.151	7.680	1.407	4.457	7.367	3.088
Std Dev	0.1697	0.0164	0.0571	0.0673	0.4924	0.1029
%SD	1.855	0.2139	4.056	1.510	6.684	3.331

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.267	3.290	3.447	0.1868	0.1365	0.1232
Run 2	3.404	3.606	3.326	0.1907	0.1469	0.1384
Run 3	3.641	3.595	3.460	0.1845	0.1264	0.1309
Mean	3.438	3.497	3.411	0.1873	0.1366	0.1309
Std Dev	0.1888	0.1795	0.0742	0.0032	0.0103	0.0076
%SD	5.493	5.133	2.175	1.684	7.509	5.798

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2649	0.2771	86.84	85.89	85.77	0.0211
Run 2	0.3095	0.2791	88.06	86.92	86.98	0.0236
Run 3	0.2788	0.2779	86.07	86.02	84.80	0.0169
Mean	0.2844	0.2780	86.99	86.28	85.85	0.0205
Std Dev	0.0228	0.0010	0.9997	0.5604	1.091	0.0034
%SD	8.032	0.3554	1.149	0.6496	1.271	16.49

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0176	0.2241	0.2576	0.2362
Run 2	0.0152	0.1946	0.2169	0.2149
Run 3	0.0181	0.1945	0.2232	0.2047
Mean	0.0170	0.2044	0.2326	0.2186
Std Dev	0.0015	0.0171	0.0219	0.0161
%SD	9.053	8.355	9.435	7.346

$419-6
TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.8	73.28	76.24	72.38
Run 2	100.3	73.83	73.66	78.47
Run 3	101.7	75.03	76.05	77.67
Mean	101.3	74.05	75.32	76.17
Std Dev	0.8523	0.8928	1.437	3.306

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #14
First repeat started at : Mon Nov 24 2003 12:19:06
Last repeat started at : Mon Nov 24 2003 12:20:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0037	0.5743	8.925	20.41	268.4	1.904	4.433
Run 2	0.0052	0.5658	8.519	21.39	255.3	1.657	4.246
Run 3	0.0024	0.5653	8.658	18.80	276.8	1.777	4.190
Mean	0.0038	0.5685	8.701	20.20	266.8	1.779	4.290
Std Dev	0.0014	0.0050	0.2065	1.307	10.84	0.1234	0.1273
%SD	37.38	0.8874	2.374	6.473	4.064	6.935	2.968

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.366	6.552	1.426	4.332	7.681	2.992
Run 2	7.580	6.523	1.403	4.163	7.045	2.820
Run 3	7.628	6.317	1.357	4.264	6.677	2.955
Mean	7.858	6.464	1.395	4.253	7.134	2.923
Std Dev	0.4408	0.1281	0.0352	0.0848	0.5084	0.0903
%SD	5.610	1.982	2.525	1.994	7.126	3.088

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.467	3.251	3.368	0.1822	0.1202	0.1276
Run 2	3.368	3.253	3.244	0.1597	0.1222	0.1212
Run 3	3.435	3.316	3.436	0.1528	0.1140	0.1061
Mean	3.423	3.273	3.350	0.1649	0.1188	0.1183
Std Dev	0.0504	0.0368	0.0973	0.0154	0.0043	0.0110
%SD	1.472	1.123	2.905	9.319	3.585	9.328

8419-1 TOTAL

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3065	0.2976	89.34	88.18	90.35	0.0155
Run 2	0.2691	0.3068	87.96	88.55	89.44	0.0164
Run 3	0.2814	0.3095	88.30	90.05	91.03	0.0130
Mean	0.2856	0.3046	88.53	88.93	90.27	0.0150
Std Dev	0.0190	0.0062	0.7203	0.9909	0.7995	0.0018
%SD	6.666	2.051	0.8136	1.114	0.8856	11.77

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0165	0.2803	0.2980	0.2779
Run 2	0.0142	0.2681	0.3046	0.2812
Run 3	0.0240	0.2570	0.2758	0.2804
Mean	0.0183	0.2685	0.2928	0.2798
Std Dev	0.0051	0.0117	0.0151	0.0017
%SD	28.17	4.347	5.158	0.6173

8419-1 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.9	71.12	72.71	77.27
Run 2	101.0	73.76	75.29	76.91
Run 3	99.59	73.62	75.56	78.32
Mean	100.5	72.84	74.52	77.50
Std Dev	0.8021	1.485	1.570	0.7354

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #15
First repeat started at : Mon Nov 24 2003 12:22:01
Last repeat started at : Mon Nov 24 2003 12:23:39
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.11	25.25	25.68	25.35	35.20	25.15	25.10
Run 2	24.71	24.65	25.19	25.20	38.40	25.17	25.15
Run 3	25.27	24.98	25.40	25.19	40.09	24.71	24.97
Mean	25.03	24.96	25.42	25.25	37.90	25.01	25.08
Std Dev	0.2887	0.2989	0.2477	0.0879	2.483	0.2606	0.0893
%SD	1.153	1.197	0.9744	0.3481	6.551	1.042	0.3562

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.69	25.01	25.10	24.98	24.99	25.29
Run 2	25.13	24.70	24.95	25.05	25.29	25.30
Run 3	25.64	25.00	25.02	25.24	24.73	25.63
Mean	25.49	24.91	25.02	25.09	25.00	25.41
Std Dev	0.3105	0.1744	0.0776	0.1351	0.2816	0.1936
%SD	1.218	0.7002	0.3100	0.5385	1.126	0.7619

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.46	24.05	25.04	25.10	25.11	24.99
Run 2	24.45	23.03	24.63	24.96	24.91	25.17
Run 3	24.91	23.99	26.37	25.29	24.86	25.65
Mean	24.94	23.69	25.35	25.11	24.96	25.27
Std Dev	0.5049	0.5727	0.9092	0.1650	0.1315	0.3403
%SD	2.025	2.417	3.587	0.6569	0.5269	1.347

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.94	24.88	25.05	26.41	25.92	26.40
Run 2	24.51	25.29	25.49	25.60	25.43	26.02
Run 3	24.76	23.90	24.74	25.94	25.07	28.10
Mean	24.73	24.69	25.10	25.98	25.47	26.84
Std Dev	0.2137	0.7144	0.3744	0.4083	0.4292	1.104
%SD	0.8641	2.894	1.492	1.571	1.685	4.114

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

CLV 11-24-03

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	26.20	26.48	25.66	26.06
Run 2	26.72	24.85	26.57	25.74
Run 3	26.72	25.47	25.74	27.15
Mean	26.55	25.60	25.99	26.32
Std Dev	0.3021	0.8202	0.5008	0.7354
%SD	1.138	3.204	1.927	2.794

CLV 4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.2	101.1	97.63	87.25
Run 2	104.3	100.3	97.51	88.65
Run 3	104.4	100.2	95.18	85.33
Mean	104.3	100.5	96.77	87.07
Std Dev	0.1125	0.5011	1.382	1.668

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #16
First repeat started at : Mon Nov 24 2003 12:25:26
Last repeat started at : Mon Nov 24 2003 12:27:05
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	9.691	60.06	92.96	98.58	63.91	88.37	30.58
Run 2	9.246	64.15	98.36	101.6	52.28	105.4	34.37
Run 3	0.0922	1.353	2.079	2.412	-5.214	2.532	1.103
Mean	6.343	41.85	64.47	67.54	36.99	65.43	22.02
Std Dev	5.418	35.13	54.10	56.43	37.01	55.13	18.21
%SD	85.41	83.95	83.91	83.54	100.0	84.26	82.71

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	44.79	38.14	156.6	180.6	5472	233.6
Run 2	56.28	35.76	199.6	180.7	6389	236.1
Run 3	1.718	1.077	2.378	2.576	47.15	1.389
Mean	34.26	24.99	119.5	121.0	3969	157.0
Std Dev	28.77	20.74	103.7	103.4	3428	134.8
%SD	83.95	83.01	86.77	85.47	86.35	85.84

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	344.3	285.3	295.1	554.3	317.7	362.5
Run 2	240.6	277.3	238.1	654.5	338.6	425.4
Run 3	0.4117	0.5915	0.4214	0.9175	0.5131	0.5399
Mean	195.1	187.7	177.9	403.3	218.9	262.8
Std Dev	176.4	162.1	156.3	352.0	189.5	229.3
%SD	90.41	86.36	87.87	87.29	86.53	87.25

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	478.1	478.8	181.6	101.2	56.77	108.1
Run 2	323.9	337.5	142.5	99.60	76.90	115.9
Run 3	0.3317	0.4109	0.0769	0.1090	0.0716	0.0825
Mean	250.8	272.3	108.1	66.97	44.58	74.70
Std Dev	223.0	245.8	95.54	57.91	39.84	64.74
%SD	88.94	90.28	88.41	86.47	89.36	86.67

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Sample tube in error Solution no I.S.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	100.0	182.6	162.8	160.5
Run 2	81.86	131.5	187.4	157.8
Run 3	0.0648	0.0886	0.1713	0.1206
Mean	60.65	104.7	116.8	106.1
Std Dev	53.25	94.16	101.8	91.81
%SD	87.80	89.91	87.11	86.51

11/24/83

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	0.1496	0.8393	0.0314	0.0146
Run 2	0.1466	0.9462	0.0296	0.0139
Run 3	12.36	16.40	17.16	16.31
Mean	4.218	6.062	5.741	5.448
Std Dev	7.049	8.954	9.891	9.411

Internal Standard Drift outside drift window.
Failed isotopes = Li 6Ga 71In 115Lu 175
Specified action is to continue with procedure.

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #17
First repeat started at : Mon Nov 24 2003 12:28:07
Last repeat started at : Mon Nov 24 2003 12:29:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0040	0.0006	0.0963	-0.0897	8.037	-0.1640	0.0071
Run 2	0.0039	0.0023	0.0675	-0.1086	7.669	-0.0846	-0.0074
Run 3	0.0053	-0.0029	0.0607	-0.0768	12.51	-0.0403	0.0159
Mean	0.0044	0.0000	0.0749	-0.0917	9.405	-0.0963	0.0052
Std Dev	0.0008	0.0026	0.0189	0.0160	2.694	0.0627	0.0118
%SD	17.78	32162	25.25	17.49	28.65	65.05	226.2

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0483	0.0039	0.0246	0.0112	-0.0032	0.0637
Run 2	0.0597	0.0002	0.0324	0.0109	0.1066	0.0977
Run 3	0.1090	0.0056	0.0283	0.0074	0.2467	0.0899
Mean	0.0723	0.0032	0.0284	0.0098	0.1167	0.0838
Std Dev	0.0322	0.0028	0.0039	0.0021	0.1253	0.0179
%SD	44.55	86.45	13.66	21.43	107.3	21.31

CLB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0353	0.0454	0.0234	0.0177	0.0149	0.0059
Run 2	0.0435	0.0146	0.0206	0.0288	0.0118	0.0079
Run 3	0.0193	0.0277	0.0171	0.0300	0.0198	0.0088
Mean	0.0327	0.0292	0.0204	0.0255	0.0155	0.0075
Std Dev	0.0123	0.0155	0.0032	0.0068	0.0040	0.0015
%SD	37.55	52.90	15.50	26.61	25.93	19.80

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0394	0.0326	0.0037	0.0045	-0.0005	0.0015
Run 2	0.0213	0.0199	0.0061	0.0106	0.0005	0.0026
Run 3	0.0248	0.0228	-0.0007	0.0010	0.0005	0.0013
Mean	0.0285	0.0251	0.0030	0.0054	0.0002	0.0018
Std Dev	0.0096	0.0067	0.0035	0.0049	0.0006	0.0007
%SD	33.62	26.54	114.6	90.94	375.3	40.89

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0034	0.0042	0.0062	0.0034
Run 2	0.0008	0.0001	0.0029	0.0046
Run 3	0.0021	-0.0034	-0.0017	0.0001
Mean	0.0021	0.0003	0.0025	0.0027
Std Dev	0.0013	0.0038	0.0040	0.0023
%SD	60.21	1213	160.4	87.20

CCB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.6	99.49	97.56	85.16
Run 2	102.8	100.4	98.11	88.94
Run 3	103.0	99.65	96.42	89.42
Mean	102.8	99.85	97.36	87.84
Std Dev	0.1681	0.4944	0.8613	2.329

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #18
First repeat started at : Mon Nov 24 2003 12:32:03
Last repeat started at : Mon Nov 24 2003 12:33:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0027	0.4486	9.324	23.71	278.3	1.645	3.920
Run 2	0.0042	0.4745	8.688	22.10	287.7	1.543	3.844
Run 3	0.0031	0.4753	8.990	21.86	264.8	1.772	3.945
Mean	0.0034	0.4661	9.001	22.56	276.9	1.653	3.903
Std Dev	0.0008	0.0152	0.3184	1.004	11.46	0.1148	0.0524
%SD	23.25	3.258	3.537	4.452	4.140	6.942	1.344

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	7.899	5.885	1.310	4.056	6.999	2.735
Run 2	8.092	5.958	1.318	4.183	7.076	2.888
Run 3	7.568	5.872	1.312	4.213	7.429	2.800
Mean	7.853	5.905	1.313	4.151	7.168	2.808
Std Dev	0.2651	0.0464	0.0045	0.0831	0.2297	0.0766
%SD	3.375	0.7860	0.3402	2.001	3.205	2.729

8/19-2 ppb

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.112	3.018	3.166	0.1490	0.1111	0.1019
Run 2	3.173	3.139	3.194	0.1677	0.1220	0.1139
Run 3	3.204	2.950	3.197	0.1597	0.1121	0.1041
Mean	3.163	3.036	3.186	0.1588	0.1151	0.1066
Std Dev	0.0468	0.0955	0.0170	0.0094	0.0061	0.0064
%SD	1.478	3.146	0.5327	5.927	5.263	5.968

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2985	0.2905	82.64	85.06	86.67	0.0253
Run 2	0.3015	0.2710	87.48	87.46	85.89	0.0212
Run 3	0.2808	0.2568	83.07	84.38	82.87	0.0251
Mean	0.2936	0.2728	84.40	85.63	85.14	0.0239
Std Dev	0.0112	0.0169	2.678	1.620	2.007	0.0023
%SD	3.808	6.212	3.173	1.892	2.358	9.772

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0248	0.1903	0.1716	0.1887
Run 2	0.0181	0.1494	0.1944	0.1688
Run 3	0.0202	0.1656	0.1690	0.1675
Mean	0.0210	0.1684	0.1784	0.1750
Std Dev	0.0034	0.0206	0.0140	0.0119
%SD	16.09	12.21	7.846	6.778

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.3	74.01	77.20	75.31
Run 2	101.9	74.26	74.32	78.03
Run 3	102.4	74.68	78.30	74.93
Mean	102.2	74.32	76.61	76.09
Std Dev	0.2943	0.3387	2.053	1.692

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #19
First repeat started at : Mon Nov 24 2003 12:35:14
Last repeat started at : Mon Nov 24 2003 12:36:51
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0050	0.7109	9.323	21.48	275.0	1.924	4.829
Run 2	0.0043	0.7175	9.875	24.75	287.0	1.657	4.763
Run 3	0.0049	0.6828	9.500	23.42	269.4	1.719	4.716
Mean	0.0047	0.7037	9.566	23.22	277.1	1.767	4.769
Std Dev	0.0004	0.0184	0.2820	1.640	9.004	0.1398	0.0569
%SD	8.017	2.619	2.948	7.065	3.249	7.914	1.194

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.409	6.979	1.496	4.553	7.506	3.117
Run 2	8.524	7.093	1.527	4.426	7.281	3.099
Run 3	8.588	6.619	1.547	4.493	7.366	3.299
Mean	8.507	6.897	1.523	4.491	7.384	3.172
Std Dev	0.0910	0.2473	0.0256	0.0637	0.1136	0.1107
%SD	1.070	3.586	1.684	1.418	1.538	3.490

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.423	3.293	3.478	0.1788	0.1245	0.1295
Run 2	3.705	3.373	3.661	0.1911	0.1377	0.1304
Run 3	3.510	3.386	3.291	0.1862	0.1255	0.1158
Mean	3.546	3.350	3.477	0.1854	0.1293	0.1252
Std Dev	0.1443	0.0504	0.1851	0.0062	0.0073	0.0082
%SD	4.069	1.505	5.323	3.344	5.675	6.562

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3132	0.2911	85.12	88.13	83.62	0.0238
Run 2	0.2725	0.2834	88.07	91.71	89.28	0.0248
Run 3	0.2854	0.2906	86.87	87.82	86.42	0.0182
Mean	0.2904	0.2884	86.69	89.22	86.44	0.0223
Std Dev	0.0208	0.0043	1.482	2.165	2.833	0.0036
%SD	7.175	1.493	1.710	2.427	3.277	16.11

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0178	0.3902	0.3916	0.4127
Run 2	0.0179	0.3637	0.4031	0.4015
Run 3	0.0170	0.3793	0.4024	0.3970
Mean	0.0176	0.3777	0.3990	0.4037
Std Dev	0.0005	0.0133	0.0064	0.0081
%SD	2.886	3.526	1.612	2.002

8419-3 total

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.1	72.40	77.84	74.31
Run 2	101.9	72.18	72.77	74.70
Run 3	101.3	72.80	75.02	77.14
Mean	101.5	72.46	75.21	75.39
Std Dev	0.4088	0.3120	2.537	1.533

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #20
First repeat started at : Mon Nov 24 2003 12:37:55
Last repeat started at : Mon Nov 24 2003 12:39:32
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0093	0.7798	9.944	22.27	274.9	2.129	10.61
Run 2	0.0110	0.8027	9.670	24.28	268.7	2.021	10.78
Run 3	0.0091	0.7851	9.355	24.14	296.5	2.041	10.86
Mean	0.0098	0.7892	9.656	23.56	280.0	2.064	10.75
Std Dev	0.0011	0.0120	0.2949	1.120	14.58	0.0576	0.1288
%SD	10.72	1.519	3.054	4.754	5.209	2.792	1.198

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	13.42	12.43	1.529	4.773	7.236	3.212
Run 2	13.86	12.63	1.553	4.887	7.754	3.215
Run 3	13.58	12.90	1.545	4.804	7.206	3.141
Mean	13.62	12.65	1.543	4.821	7.399	3.189
Std Dev	0.2245	0.2377	0.0126	0.0590	0.3082	0.0417
%SD	1.648	1.879	0.8151	1.223	4.165	1.306

8419-8 Tomc

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.216	3.403	3.502	0.2022	0.1570	0.1598
Run 2	3.306	3.231	3.192	0.1966	0.1668	0.1561
Run 3	3.146	3.352	3.329	0.2018	0.1569	0.1629
Mean	3.223	3.329	3.341	0.2002	0.1603	0.1596
Std Dev	0.0803	0.0883	0.1556	0.0031	0.0057	0.0034
%SD	2.491	2.652	4.658	1.563	3.558	2.135

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2730	0.2961	88.71	90.79	93.87	0.0160
Run 2	0.2801	0.2616	87.95	88.14	87.06	0.0133
Run 3	0.2709	0.2921	89.16	90.93	90.93	0.0176
Mean	0.2747	0.2833	88.61	89.95	90.62	0.0156
Std Dev	0.0048	0.0188	0.6090	1.573	3.413	0.0022
%SD	1.750	6.651	0.6873	1.748	3.766	13.82

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0204	0.9898	1.055	1.044
Run 2	0.0135	0.9923	1.084	1.060
Run 3	0.0157	1.029	1.033	1.030
Mean	0.0165	1.004	1.057	1.045
Std Dev	0.0035	0.0217	0.0257	0.0154
%SD	21.19	2.167	2.428	1.476

8419-8 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.9	72.03	73.80	71.32
Run 2	100.0	70.35	75.87	76.02
Run 3	101.0	71.07	74.41	75.70
Mean	100.6	71.15	74.69	74.35
Std Dev	0.5181	0.8398	1.063	2.624

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #21
First repeat started at : Mon Nov 24 2003 12:40:35
Last repeat started at : Mon Nov 24 2003 12:42:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0031	0.5590	9.012	22.90	291.1	1.758	4.775
Run 2	0.0025	0.5663	9.005	20.89	276.0	1.651	4.788
Run 3	0.0029	0.5756	9.143	20.86	277.3	1.646	4.756
Mean	0.0028	0.5670	9.053	21.55	281.5	1.685	4.773
Std Dev	0.0003	0.0083	0.0775	1.170	8.387	0.0633	0.0162
%SD	10.75	1.466	0.8565	5.428	2.980	3.753	0.3401

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.479	6.820	1.450	4.709	6.953	3.208
Run 2	8.100	6.688	1.508	4.426	6.411	3.196
Run 3	8.436	6.771	1.406	4.638	6.007	3.125
Mean	8.338	6.760	1.455	4.591	6.457	3.176
Std Dev	0.2071	0.0669	0.0511	0.1470	0.4747	0.0450
%SD	2.484	0.9890	3.514	3.202	7.352	1.415

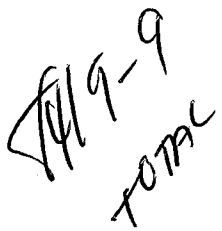
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Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.324	3.535	3.385	0.1703	0.1386	0.1338
Run 2	3.396	3.295	3.480	0.1690	0.1193	0.1293
Run 3	3.623	3.477	3.569	0.1752	0.1333	0.1308
Mean	3.447	3.436	3.478	0.1715	0.1304	0.1313
Std Dev	0.1559	0.1257	0.0917	0.0033	0.0100	0.0023
%SD	4.523	3.658	2.637	1.901	7.663	1.773

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2495	0.2889	87.83	90.07	88.55	0.0205
Run 2	0.2610	0.2925	83.62	82.92	85.45	0.0156
Run 3	0.2724	0.2582	87.35	85.57	86.52	0.0228
Mean	0.2609	0.2799	86.27	86.19	86.84	0.0196
Std Dev	0.0115	0.0189	2.309	3.616	1.575	0.0037
%SD	4.398	6.742	2.676	4.195	1.814	18.87

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0158	0.1464	0.1797	0.1629
Run 2	0.0149	0.1498	0.1902	0.1695
Run 3	0.0190	0.1492	0.1613	0.1609
Mean	0.0166	0.1485	0.1771	0.1644
Std Dev	0.0021	0.0018	0.0146	0.0045
%SD	12.87	1.219	8.266	2.722



Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.0	71.73	74.32	74.00
Run 2	101.3	73.18	76.52	75.98
Run 3	101.1	73.56	73.39	76.70
Mean	101.1	72.82	74.74	75.56
Std Dev	0.1786	0.9662	1.610	1.398

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #22
First repeat started at : Mon Nov 24 2003 12:43:37
Last repeat started at : Mon Nov 24 2003 12:45:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0145	0.8872	9.188	21.39	262.0	1.838	12.45
Run 2	0.0174	0.8812	9.349	22.10	256.8	2.213	12.54
Run 3	0.0157	0.8766	8.643	21.24	258.1	2.093	12.23
Mean	0.0159	0.8817	9.060	21.58	259.0	2.048	12.41
Std Dev	0.0015	0.0053	0.3697	0.4592	2.729	0.1914	0.1591
%SD	9.362	0.6013	4.080	2.128	1.054	9.349	1.282

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	14.92	14.38	1.555	4.805	6.365	3.088
Run 2	14.47	14.35	1.625	4.602	5.835	3.104
Run 3	15.39	14.35	1.551	4.833	5.843	3.128
Mean	14.93	14.36	1.577	4.747	6.014	3.107
Std Dev	0.4645	0.0145	0.0415	0.1261	0.3040	0.0204
%SD	3.112	0.1011	2.632	2.656	5.054	0.6574

8/19-10 Tonic

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.156	3.161	3.257	0.2350	0.1832	0.1922
Run 2	3.313	3.005	3.141	0.2259	0.1980	0.1855
Run 3	3.365	3.475	3.243	0.2325	0.1977	0.2018
Mean	3.278	3.214	3.214	0.2311	0.1930	0.1932
Std Dev	0.1087	0.2396	0.0631	0.0047	0.0084	0.0082
%SD	3.316	7.455	1.965	2.035	4.378	4.240

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2889	0.2996	88.09	87.68	91.13	0.0189
Run 2	0.2991	0.3324	89.47	87.09	86.26	0.0159
Run 3	0.2945	0.3087	89.43	88.49	88.15	0.0183
Mean	0.2941	0.3135	89.00	87.75	88.51	0.0177
Std Dev	0.0051	0.0169	0.7835	0.7002	2.453	0.0016
%SD	1.734	5.402	0.8803	0.7979	2.771	8.778

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0197	2.124	2.351	2.282
Run 2	0.0170	2.283	2.285	2.296
Run 3	0.0249	2.208	2.413	2.310
Mean	0.0205	2.205	2.349	2.296
Std Dev	0.0040	0.0793	0.0636	0.0143
%SD	19.61	3.597	2.708	0.6214

8419-10 tom

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.2	73.14	74.25	78.31
Run 2	100.4	73.15	76.09	77.18
Run 3	101.8	73.31	73.06	76.89
Mean	100.8	73.20	74.47	77.46
Std Dev	0.8828	0.0971	1.524	0.7474

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #23
First repeat started at : Mon Nov 24 2003 12:46:45
Last repeat started at : Mon Nov 24 2003 12:48:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0030	0.5967	8.872	22.27	263.6	2.125	7.185
Run 2	0.0018	0.6018	8.447	21.76	247.3	1.921	7.052
Run 3	0.0008	0.5845	8.832	23.45	285.3	2.170	7.264
Mean	0.0019	0.5943	8.717	22.49	265.4	2.072	7.167
Std Dev	0.0011	0.0089	0.2348	0.8671	19.09	0.1328	0.1069
%SD	56.86	1.503	2.694	3.855	7.191	6.409	1.491

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	10.68	9.178	1.369	4.359	5.301	2.947
Run 2	10.10	9.198	1.368	4.185	5.194	2.971
Run 3	10.75	9.472	1.316	4.390	5.294	2.913
Mean	10.51	9.283	1.351	4.311	5.263	2.944
Std Dev	0.3575	0.1642	0.0300	0.1106	0.0601	0.0290
%SD	3.401	1.769	2.222	2.566	1.141	0.9863

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.222	3.328	3.136	0.2153	0.1410	0.1504
Run 2	3.157	3.151	3.189	0.1878	0.1384	0.1291
Run 3	3.302	3.438	3.646	0.2051	0.1490	0.1450
Mean	3.227	3.305	3.324	0.2027	0.1428	0.1415
Std Dev	0.0729	0.1450	0.2803	0.0139	0.0055	0.0111
%SD	2.260	4.386	8.432	6.865	3.848	7.828

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2995	0.3083	87.43	86.79	85.02	0.0158
Run 2	0.2396	0.2623	88.90	86.06	86.38	0.0159
Run 3	0.2886	0.3098	87.23	85.97	91.31	0.0120
Mean	0.2759	0.2935	87.85	86.28	87.57	0.0145
Std Dev	0.0319	0.0270	0.9131	0.4508	3.307	0.0022
%SD	11.57	9.191	1.039	0.5225	3.777	15.08

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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DISS.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0135	0.0898	0.1049	0.1018
Run 2	0.0174	0.1049	0.1416	0.1194
Run 3	0.0171	0.1018	0.0939	0.1107
Mean	0.0160	0.0989	0.1134	0.1107
Std Dev	0.0022	0.0080	0.0250	0.0088
%SD	13.58	8.097	22.03	7.958

4419-1 DBS-

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.8	73.15	73.37	75.34
Run 2	100.5	73.88	76.49	75.11
Run 3	101.9	72.76	73.44	72.43
Mean	101.1	73.26	74.43	74.30
Std Dev	0.7624	0.5694	1.782	1.617

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #24
First repeat started at : Mon Nov 24 2003 12:49:28
Last repeat started at : Mon Nov 24 2003 12:51:05
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0005	0.6170	8.567	21.54	274.8	1.747	5.537
Run 2	0.0005	0.5924	8.509	21.62	270.9	1.993	5.553
Run 3	0.0002	0.5886	9.274	23.41	264.3	1.664	5.583
Mean	0.0004	0.5993	8.783	22.19	270.0	1.801	5.558
Std Dev	0.0001	0.0154	0.4259	1.058	5.324	0.1711	0.0235
%SD	38.45	2.574	4.849	4.770	1.972	9.501	0.4222

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.487	7.728	1.313	4.522	5.602	2.974
Run 2	9.237	7.562	1.385	4.358	5.220	2.915
Run 3	8.848	7.635	1.449	4.048	5.014	2.895
Mean	9.191	7.641	1.382	4.309	5.279	2.928
Std Dev	0.3219	0.0835	0.0678	0.2406	0.2982	0.0409
%SD	3.502	1.093	4.907	5.584	5.650	1.398

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.472	3.484	3.446	0.1976	0.1425	0.1446
Run 2	3.170	3.303	3.285	0.1916	0.1477	0.1354
Run 3	3.238	3.084	3.503	0.1865	0.1246	0.1372
Mean	3.293	3.290	3.411	0.1919	0.1383	0.1391
Std Dev	0.1588	0.2001	0.1131	0.0056	0.0121	0.0049
%SD	4.821	6.080	3.316	2.900	8.762	3.501

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3160	0.3096	91.02	89.46	88.45	0.0140
Run 2	0.2819	0.2530	85.86	88.58	89.75	0.0081
Run 3	0.2753	0.2702	84.36	83.29	84.06	0.0084
Mean	0.2911	0.2776	87.08	87.11	87.42	0.0101
Std Dev	0.0218	0.0290	3.495	3.340	2.984	0.0033
%SD	7.498	10.46	4.014	3.834	3.414	32.81

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8419.2 DISS.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0154	0.1195	0.1254	0.1202
Run 2	0.0174	0.1101	0.1420	0.1252
Run 3	0.0167	0.1163	0.1104	0.1170
Mean	0.0165	0.1153	0.1259	0.1208
Std Dev	0.0010	0.0048	0.0158	0.0041
%SD	6.038	4.135	12.56	3.407

8419-2 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.4	72.14	70.74	73.76
Run 2	101.3	72.55	73.02	77.46
Run 3	102.0	74.27	74.84	77.67
Mean	101.6	72.98	72.86	76.30
Std Dev	0.3860	1.130	2.055	2.199

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #25
First repeat started at : Mon Nov 24 2003 12:52:17
Last repeat started at : Mon Nov 24 2003 12:53:54
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0013	0.5363	9.858	22.99	278.8	1.896	6.309
Run 2	0.0009	0.5451	9.242	24.18	276.0	1.784	6.252
Run 3	0.0024	0.5461	10.37	22.56	279.6	1.903	6.535
Mean	0.0015	0.5425	9.822	23.24	278.2	1.861	6.365
Std Dev	0.0008	0.0054	0.5637	0.8422	1.875	0.0668	0.1496
%SD	52.68	0.9945	5.739	3.623	0.6740	3.588	2.351

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.624	8.350	1.445	4.809	5.422	3.213
Run 2	9.983	8.210	1.506	4.348	4.751	3.116
Run 3	9.905	8.600	1.506	4.421	4.737	3.059
Mean	9.838	8.387	1.486	4.526	4.970	3.129
Std Dev	0.1888	0.1978	0.0355	0.2479	0.3913	0.0776
%SD	1.919	2.359	2.387	5.477	7.873	2.481

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.435	3.728	3.486	0.2070	0.1521	0.1508
Run 2	3.613	3.560	3.698	0.2041	0.1489	0.1328
Run 3	3.298	3.790	3.571	0.1917	0.1431	0.1123
Mean	3.449	3.693	3.585	0.2009	0.1480	0.1319
Std Dev	0.1578	0.1191	0.1063	0.0081	0.0045	0.0193
%SD	4.577	3.224	2.966	4.031	3.049	14.61

8419-3 Diss.

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3346	0.3002	89.49	90.08	88.71	0.0185
Run 2	0.2801	0.3037	88.27	86.19	90.28	0.0166
Run 3	0.2938	0.3184	81.33	83.86	87.03	0.0186
Mean	0.3028	0.3074	86.36	86.71	88.67	0.0179
Std Dev	0.0283	0.0097	4.405	3.142	1.622	0.0011
%SD	9.352	3.141	5.100	3.623	1.829	6.205

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0191	0.1182	0.1207	0.1214
Run 2	0.0158	0.1156	0.1259	0.1194
Run 3	0.0163	0.1122	0.1201	0.1164
Mean	0.0171	0.1153	0.1223	0.1191
Std Dev	0.0018	0.0030	0.0032	0.0025
%SD	10.49	2.592	2.592	2.106

4/19-3 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.73	70.91	71.58	76.28
Run 2	100.8	73.34	72.76	72.85
Run 3	101.0	71.47	76.18	70.73
Mean	100.5	71.91	73.51	73.29
Std Dev	0.7017	1.276	2.391	2.796

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #26
First repeat started at : Mon Nov 24 2003 12:55:06
Last repeat started at : Mon Nov 24 2003 12:56:42
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.33	25.00	25.32	25.44	33.54	25.47	24.97
Run 2	24.71	25.18	25.26	25.35	26.97	25.20	25.63
Run 3	25.32	24.69	25.38	25.63	39.54	25.34	25.48
Mean	25.12	24.96	25.32	25.47	33.35	25.34	25.36
Std Dev	0.3535	0.2472	0.0578	0.1390	6.286	0.1324	0.3438
%SD	1.407	0.9905	0.2282	0.5457	18.85	0.5224	1.356

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.73	25.44	25.52	25.79	23.77	26.51
Run 2	25.53	25.69	25.69	26.32	24.12	26.36
Run 3	25.68	25.25	25.06	25.76	23.78	26.01
Mean	25.65	25.46	25.42	25.96	23.89	26.29
Std Dev	0.1045	0.2208	0.3307	0.3127	0.1979	0.2558
%SD	0.4073	0.8672	1.301	1.204	0.8282	0.9730

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.59	25.17	24.28	25.26	25.31	25.48
Run 2	24.89	25.10	24.55	24.74	24.89	25.12
Run 3	23.78	24.12	24.13	25.09	25.22	25.27
Mean	24.42	24.80	24.32	25.03	25.14	25.29
Std Dev	0.5769	0.5881	0.2131	0.2611	0.2165	0.1828
%SD	2.362	2.371	0.8762	1.043	0.8611	0.7227

CLV ns4-23-E

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.85	24.19	25.56	26.57	25.97	27.09
Run 2	24.70	25.68	26.65	26.18	25.98	26.94
Run 3	24.80	25.34	26.35	25.25	26.01	27.41
Mean	24.78	25.07	26.19	26.00	25.99	27.15
Std Dev	0.0761	0.7795	0.5651	0.6775	0.0196	0.2355
%SD	0.3070	3.109	2.158	2.606	0.0753	0.8674

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	26.80	26.95	27.34	27.10
Run 2	26.38	26.71	26.50	26.95
Run 3	27.13	25.69	26.16	26.01
Mean	26.77	26.45	26.67	26.69
Std Dev	0.3721	0.6648	0.6082	0.5903
%SD	1.390	2.513	2.281	2.212

CCV 54-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.3	100.9	96.69	81.61
Run 2	104.0	98.20	96.91	83.26
Run 3	104.2	99.03	93.53	81.18
Mean	104.2	99.38	95.71	82.02
Std Dev	0.1132	1.394	1.889	1.100

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #27
First repeat started at : Mon Nov 24 2003 13:01:48
Last repeat started at : Mon Nov 24 2003 13:03:28
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0026	0.0015	0.1301	-0.1181	16.50	-0.0188	0.0225
Run 2	0.0030	-0.0174	0.1350	-0.1213	21.91	-0.1857	0.0200
Run 3	0.0025	-0.0042	0.1025	-0.0965	10.88	-0.0647	0.0226
Mean	0.0027	-0.0067	0.1226	-0.1120	16.43	-0.0898	0.0217
Std Dev	0.0003	0.0097	0.0175	0.0135	5.517	0.0862	0.0015
%SD	10.73	144.0	14.30	12.02	33.58	96.03	6.845

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0454	0.0040	0.0315	-0.0005	-1.811	0.0825
Run 2	0.0777	0.0078	0.0208	0.0499	-1.777	0.0935
Run 3	0.0767	0.0198	0.0294	0.0518	-1.725	0.1231
Mean	0.0666	0.0105	0.0272	0.0338	-1.771	0.0997
Std Dev	0.0184	0.0082	0.0057	0.0297	0.0434	0.0210
%SD	27.59	77.85	20.86	87.85	2.452	21.04

CLB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0312	0.0297	0.0242	0.0417	0.0296	0.0221
Run 2	0.0280	0.0317	0.0229	0.0456	0.0205	0.0218
Run 3	0.0216	0.0194	0.0076	0.0347	0.0242	0.0190
Mean	0.0269	0.0270	0.0182	0.0407	0.0248	0.0210
Std Dev	0.0049	0.0066	0.0093	0.0055	0.0046	0.0017
%SD	18.10	24.63	50.80	13.51	18.47	8.040

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0198	0.0339	0.0089	0.0060	0.0000	0.0053
Run 2	0.0206	0.0241	-0.0028	0.0070	-0.0007	0.0034
Run 3	0.0169	0.0209	0.0101	0.0007	-0.0006	0.0047
Mean	0.0191	0.0263	0.0054	0.0046	-0.0004	0.0045
Std Dev	0.0020	0.0068	0.0072	0.0034	0.0004	0.0009
%SD	10.34	25.74	132.5	74.03	90.31	20.90

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0059	0.0068	-0.0016	0.0041
Run 2	0.0037	0.0059	-0.0060	0.0018
Run 3	0.0035	0.0053	0.0055	0.0051
Mean	0.0044	0.0060	-0.0007	0.0037
Std Dev	0.0013	0.0008	0.0058	0.0017
%SD	29.40	12.62	834.6	46.25

NCB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.4	96.97	94.17	82.59
Run 2	103.0	97.03	92.75	83.15
Run 3	104.6	97.40	94.67	83.82
Mean	103.0	97.13	93.86	83.19
Std Dev	1.583	0.2320	0.9940	0.6149

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #28
First repeat started at : Mon Nov 24 2003 13:07:38
Last repeat started at : Mon Nov 24 2003 13:09:16
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0027	0.5205	8.671	22.78	269.0	1.700	6.583
Run 2	0.0013	0.5052	9.540	24.45	290.1	1.945	6.401
Run 3	0.0026	0.5055	8.609	20.67	261.6	1.821	6.616
Mean	0.0022	0.5104	8.940	22.64	273.6	1.822	6.533
Std Dev	0.0008	0.0087	0.5207	1.895	14.79	0.1224	0.1155
%SD	36.06	1.711	5.824	8.372	5.406	6.716	1.768

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.874	8.478	1.446	4.304	5.292	3.027
Run 2	10.17	8.450	1.433	4.467	5.271	3.005
Run 3	10.16	8.578	1.447	4.331	5.092	3.140
Mean	10.07	8.502	1.442	4.367	5.219	3.057
Std Dev	0.1677	0.0673	0.0079	0.0873	0.1097	0.0723
%SD	1.666	0.7911	0.5483	1.999	2.103	2.365

8419-4 Diss.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.614	3.519	3.696	0.2001	0.1404	0.1359
Run 2	3.789	3.513	3.523	0.1998	0.1455	0.1347
Run 3	3.584	3.610	3.419	0.1860	0.1268	0.1285
Mean	3.662	3.547	3.546	0.1953	0.1376	0.1330
Std Dev	0.1106	0.0541	0.1401	0.0081	0.0096	0.0040
%SD	3.021	1.524	3.952	4.125	7.012	2.971

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3214	0.3166	87.34	87.80	88.43	0.0203
Run 2	0.2738	0.2553	87.81	87.41	85.65	0.0177
Run 3	0.2781	0.2952	82.91	86.15	83.76	0.0199
Mean	0.2911	0.2890	86.02	87.12	85.95	0.0193
Std Dev	0.0263	0.0311	2.706	0.8599	2.353	0.0014
%SD	9.046	10.77	3.146	0.9871	2.737	7.431

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0236	0.1160	0.1374	0.1255
Run 2	0.0227	0.1117	0.1248	0.1261
Run 3	0.0188	0.0909	0.1063	0.1116
Mean	0.0217	0.1062	0.1229	0.1211
Std Dev	0.0026	0.0134	0.0157	0.0082
%SD	11.82	12.63	12.75	6.788

8419-4 DSS.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.1	72.70	71.56	73.41
Run 2	101.5	72.49	73.80	72.14
Run 3	102.2	73.21	74.61	78.45
Mean	101.6	72.80	73.32	74.67
Std Dev	0.5365	0.3693	1.578	3.339

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #29
First repeat started at : Mon Nov 24 2003 13:10:37
Last repeat started at : Mon Nov 24 2003 13:12:15
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0013	0.6036	9.331	23.28	283.2	1.936	6.060
Run 2	0.0011	0.6085	9.495	23.26	291.4	1.937	6.317
Run 3	0.0023	0.6403	8.610	23.74	290.1	1.974	6.281
Mean	0.0016	0.6175	9.145	23.43	288.2	1.949	6.219
Std Dev	0.0006	0.0199	0.4709	0.2729	4.400	0.0218	0.1395
%SD	40.11	3.229	5.149	1.165	1.526	1.119	2.243

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.256	8.017	1.408	4.526	4.767	3.111
Run 2	9.673	8.372	1.424	4.779	5.552	3.260
Run 3	9.488	8.371	1.438	4.614	5.245	3.152
Mean	9.473	8.253	1.423	4.640	5.188	3.174
Std Dev	0.2090	0.2046	0.0148	0.1284	0.3959	0.0772
%SD	2.206	2.479	1.043	2.767	7.632	2.433

8419-404 D.S.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.027	3.833	3.483	0.1867	0.1448	0.1413
Run 2	3.792	3.919	3.408	0.2022	0.1311	0.1418
Run 3	3.530	3.829	3.731	0.2083	0.1501	0.1445
Mean	3.783	3.860	3.541	0.1991	0.1420	0.1425
Std Dev	0.2484	0.0509	0.1686	0.0111	0.0098	0.0017
%SD	6.567	1.318	4.763	5.593	6.932	1.223

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3061	0.3304	89.58	88.10	87.97	0.0165
Run 2	0.2902	0.2696	87.52	84.68	86.71	0.0160
Run 3	0.2925	0.2492	88.03	89.28	89.74	0.0197
Mean	0.2963	0.2830	88.38	87.35	88.14	0.0174
Std Dev	0.0085	0.0423	1.074	2.386	1.525	0.0020
%SD	2.885	14.93	1.215	2.731	1.730	11.65

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0184	0.1058	0.1127	0.1122
Run 2	0.0206	0.0914	0.1169	0.0994
Run 3	0.0193	0.0998	0.1363	0.1153
Mean	0.0194	0.0990	0.1220	0.1090
Std Dev	0.0011	0.0073	0.0126	0.0084
%SD	5.626	7.337	10.31	7.733

8419-4D8 DISS-

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.4	73.37	71.66	73.13
Run 2	101.1	70.55	72.18	75.83
Run 3	101.7	71.18	72.15	71.93
Mean	101.7	71.70	72.00	73.63
Std Dev	0.6415	1.482	0.2903	1.996

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #30
First repeat started at : Mon Nov 24 2003 13:13:28
Last repeat started at : Mon Nov 24 2003 13:15:06
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	17.36	20.92	29.66	41.43	302.0	20.98	25.68
Run 2	17.11	21.85	30.08	40.80	296.0	21.30	26.24
Run 3	17.45	21.07	29.85	41.86	312.8	21.00	25.75
Mean	17.31	21.28	29.87	41.36	303.6	21.09	25.89
Std Dev	0.1787	0.5009	0.2078	0.5337	8.467	0.1779	0.3057
%SD	1.033	2.354	0.6958	1.290	2.789	0.8436	1.181

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	30.07	27.99	26.77	27.53	29.15	26.22
Run 2	30.39	28.38	26.99	27.68	29.09	27.00
Run 3	29.45	27.91	26.33	28.29	29.02	26.33
Mean	29.97	28.09	26.69	27.83	29.09	26.51
Std Dev	0.4791	0.2517	0.3349	0.4006	0.0672	0.4250
%SD	1.599	0.8960	1.255	1.439	0.2311	1.603

$419.4 SPK DISS.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	27.42	26.34	26.68	19.80	19.73	19.72
Run 2	26.36	27.32	28.64	20.25	19.98	20.12
Run 3	26.87	27.17	27.31	20.20	20.08	20.47
Mean	26.88	26.95	27.54	20.09	19.93	20.10
Std Dev	0.5309	0.5276	1.000	0.2454	0.1821	0.3733
%SD	1.975	1.958	3.631	1.222	0.9138	1.857

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	22.75	21.70	108.7	111.0	109.5	17.59
Run 2	21.74	22.84	110.3	111.3	115.3	17.32
Run 3	22.34	23.31	115.3	113.4	114.2	16.77
Mean	22.28	22.62	111.4	111.9	113.0	17.22
Std Dev	0.5092	0.8269	3.420	1.318	3.063	0.4193
%SD	2.286	3.656	3.070	1.178	2.710	2.434

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	17.68	15.34	16.87	16.10
Run 2	17.76	15.85	15.77	15.64
Run 3	17.04	15.38	15.84	15.67
Mean	17.49	15.52	16.16	15.81
Std Dev	0.3959	0.2828	0.6151	0.2560
%SD	2.263	1.821	3.806	1.620

8419-45 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.34	69.39	70.15	69.45
Run 2	98.82	69.20	68.89	70.33
Run 3	98.55	68.91	67.08	68.02
Mean	98.57	69.17	68.71	69.27
Std Dev	0.2409	0.2457	1.540	1.164

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #31
First repeat started at : Mon Nov 24 2003 13:20:06
Last repeat started at : Mon Nov 24 2003 13:21:43
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0009	0.5233	8.943	22.86	281.8	2.376	5.932
Run 2	0.0026	0.5554	9.040	23.57	297.1	2.461	6.204
Run 3	0.0018	0.5450	8.975	22.80	281.7	2.272	6.140
Mean	0.0018	0.5412	8.986	23.08	286.8	2.370	6.092
Std Dev	0.0008	0.0164	0.0496	0.4271	8.858	0.0946	0.1423
%SD	46.63	3.033	0.5516	1.851	3.088	3.991	2.335

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.459	8.121	1.423	4.678	4.653	3.201
Run 2	9.732	8.284	1.436	4.681	4.398	3.111
Run 3	9.407	8.241	1.487	4.487	4.370	3.348
Mean	9.533	8.215	1.449	4.615	4.474	3.220
Std Dev	0.1744	0.0846	0.0338	0.1111	0.1559	0.1200
%SD	1.829	1.030	2.330	2.407	3.485	3.728

8/19-5 DISS.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.440	3.534	3.553	0.2016	0.1545	0.1642
Run 2	3.737	3.680	3.280	0.2075	0.1565	0.1442
Run 3	3.586	3.561	3.539	0.2007	0.1365	0.1359
Mean	3.588	3.592	3.457	0.2033	0.1492	0.1481
Std Dev	0.1487	0.0774	0.1534	0.0037	0.0110	0.0146
%SD	4.144	2.155	4.438	1.810	7.399	9.828

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2769	0.2543	90.46	90.41	90.37	0.0199
Run 2	0.2828	0.3450	87.48	88.25	86.66	0.0286
Run 3	0.3026	0.2870	88.81	86.60	86.54	0.0135
Mean	0.2874	0.2955	88.92	88.42	87.86	0.0207
Std Dev	0.0135	0.0459	1.490	1.907	2.178	0.0076
%SD	4.685	15.54	1.676	2.157	2.479	36.56

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0230	0.0988	0.1013	0.1032
Run 2	0.0220	0.0980	0.0936	0.0947
Run 3	0.0221	0.1028	0.0947	0.0956
Mean	0.0224	0.0998	0.0965	0.0978
Std Dev	0.0006	0.0026	0.0042	0.0047
%SD	2.604	2.570	4.321	4.778

8419.5 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.3	72.18	71.53	73.49
Run 2	101.8	72.21	72.39	71.01
Run 3	102.8	72.01	72.74	73.89
Mean	102.3	72.13	72.22	72.80
Std Dev	0.4871	0.1079	0.6263	1.563

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #32
First repeat started at : Mon Nov 24 2003 13:23:09
Last repeat started at : Mon Nov 24 2003 13:24:48
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0017	0.6127	9.567	23.81	279.6	1.945	6.746
Run 2	0.0017	0.6021	9.612	22.08	271.5	2.109	6.475
Run 3	0.0013	0.6181	9.287	21.38	270.1	2.045	6.767
Mean	0.0015	0.6110	9.488	22.42	273.7	2.033	6.663
Std Dev	0.0002	0.0081	0.1761	1.251	5.123	0.0827	0.1626
%SD	15.77	1.331	1.856	5.577	1.871	4.070	2.441

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.701	8.868	1.439	4.799	4.808	3.191
Run 2	9.829	8.502	1.479	4.520	4.006	3.229
Run 3	10.28	8.778	1.315	4.961	4.589	3.188
Mean	9.937	8.716	1.411	4.760	4.468	3.202
Std Dev	0.3045	0.1904	0.0856	0.2228	0.4149	0.0230
%SD	3.065	2.184	6.069	4.680	9.287	0.7188

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.436	3.624	3.490	0.2065	0.1583	0.1510
Run 2	3.349	3.251	3.353	0.2098	0.1564	0.1354
Run 3	3.514	3.376	3.539	0.1975	0.1480	0.1370
Mean	3.433	3.417	3.461	0.2046	0.1542	0.1411
Std Dev	0.0825	0.1899	0.0963	0.0064	0.0055	0.0086
%SD	2.403	5.557	2.782	3.116	3.555	6.092

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2764	0.2923	86.79	86.02	84.33	0.0153
Run 2	0.2746	0.2691	86.25	89.56	88.76	0.0102
Run 3	0.2729	0.2714	87.13	84.59	84.68	0.0160
Mean	0.2747	0.2776	86.72	86.72	85.92	0.0138
Std Dev	0.0018	0.0128	0.4446	2.561	2.465	0.0032
%SD	0.6445	4.605	0.5126	2.953	2.868	22.82

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

8419-6
DISS.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0180	0.1037	0.1341	0.1176
Run 2	0.0182	0.0925	0.1065	0.1053
Run 3	0.0171	0.1060	0.1202	0.1162
Mean	0.0178	0.1007	0.1203	0.1130
Std Dev	0.0006	0.0072	0.0138	0.0068
%SD	3.125	7.175	11.48	5.978

8419-6 DISS

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	70.82	73.89	73.28
Run 2	101.6	73.33	73.13	71.81
Run 3	101.2	71.38	74.32	71.33
Mean	101.5	71.85	73.78	72.14
Std Dev	0.2556	1.319	0.6023	1.014

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #33
First repeat started at : Mon Nov 24 2003 13:26:03
Last repeat started at : Mon Nov 24 2003 13:27:40
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0006	0.1002	0.7176	-0.0655	22.44	0.0798	3.053
Run 2	-0.0004	0.0833	0.4709	-0.0255	20.80	0.1005	3.022
Run 3	0.0008	0.0841	0.3548	-0.0628	19.92	-0.0167	2.922
Mean	0.0003	0.0892	0.5145	-0.0513	21.05	0.0545	2.999
Std Dev	0.0006	0.0095	0.1853	0.0223	1.280	0.0626	0.0683
%SD	195.8	10.68	36.01	43.59	6.082	114.8	2.276

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.876	2.931	0.1118	0.0901	-2.150	0.4052
Run 2	2.852	2.811	0.0607	0.0689	-2.452	0.2421
Run 3	2.677	2.925	0.0426	0.0593	-2.399	0.1703
Mean	2.802	2.889	0.0717	0.0727	-2.334	0.2725
Std Dev	0.1085	0.0677	0.0359	0.0157	0.1611	0.1204
%SD	3.874	2.342	50.01	21.65	6.901	44.17

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0992	0.0873	0.0541	0.0333	0.0285	0.0196
Run 2	0.0481	0.0496	0.0459	0.0503	0.0243	0.0204
Run 3	0.0401	0.0427	0.0306	0.0418	0.0290	0.0231
Mean	0.0624	0.0599	0.0435	0.0418	0.0273	0.0211
Std Dev	0.0321	0.0240	0.0119	0.0085	0.0025	0.0018
%SD	51.36	40.11	27.44	20.24	9.346	8.771

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0028	0.0025	0.0900	0.0999	0.0922	0.0043
Run 2	0.0048	-0.0023	0.0685	0.0724	0.0719	0.0015
Run 3	0.0122	-0.0039	0.0763	0.0795	0.0785	0.0023
Mean	0.0066	-0.0012	0.0783	0.0840	0.0809	0.0027
Std Dev	0.0049	0.0033	0.0109	0.0143	0.0104	0.0014
%SD	74.92	267.6	13.90	17.01	12.81	54.10

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

8419-7 DISS-

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0056	0.0172	0.0241	0.0201
Run 2	0.0063	0.0130	0.0215	0.0143
Run 3	0.0016	0.0079	0.0191	0.0146
Mean	0.0045	0.0127	0.0216	0.0163
Std Dev	0.0025	0.0046	0.0025	0.0032
%SD	56.72	36.40	11.61	19.85

8419-7 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	106.8	103.8	96.75	82.20
Run 2	105.1	103.5	97.94	79.68
Run 3	104.3	102.5	96.00	81.37
Mean	105.4	103.3	96.89	81.08
Std Dev	1.247	0.6921	0.9778	1.284

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #34
First repeat started at : Mon Nov 24 2003 13:29:49
Last repeat started at : Mon Nov 24 2003 13:31:26
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	-0.0010	0.1422	0.2469	-0.1281	17.02	0.0229	0.9437
Run 2	-0.0014	0.1394	0.2409	-0.1313	11.13	-0.0634	0.9203
Run 3	-0.0004	0.1443	0.2122	-0.1154	13.97	-0.0029	0.9608
Mean	-0.0009	0.1420	0.2333	-0.1249	14.04	-0.0145	0.9416
Std Dev	0.0005	0.0025	0.0186	0.0084	2.948	0.0443	0.0203
%SD	49.74	1.742	7.960	6.727	21.00	305.8	2.159

See memo 8433 Method Blank 11/24/03

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.8832	0.9377	0.0332	0.0687	-2.079	0.1549
Run 2	0.8712	0.8543	0.0425	0.0434	-2.184	0.1481
Run 3	0.9570	0.8731	0.0352	0.0635	-2.031	0.1605
Mean	0.9038	0.8884	0.0369	0.0585	-2.098	0.1545
Std Dev	0.0465	0.0438	0.0049	0.0134	0.0783	0.0062
%SD	5.141	4.927	13.21	22.82	3.731	4.020

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0266	0.0167	0.0131	0.0329	0.0206	0.0215
Run 2	0.0328	0.0296	0.0049	0.0388	0.0209	0.0225
Run 3	0.0218	0.0103	0.0162	0.0468	0.0261	0.0152
Mean	0.0271	0.0189	0.0114	0.0395	0.0225	0.0197
Std Dev	0.0055	0.0098	0.0058	0.0069	0.0031	0.0039
%SD	20.48	52.13	51.15	17.60	13.65	20.00

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0062	-0.0024	0.0085	-0.0039	-0.0025	0.0005
Run 2	-0.0003	-0.0024	0.0054	-0.0012	-0.0006	-0.0013
Run 3	-0.0046	-0.0050	0.0021	0.0022	-0.0021	-0.0023
Mean	0.0004	-0.0033	0.0053	-0.0010	-0.0017	-0.0010
Std Dev	0.0054	0.0015	0.0032	0.0030	0.0010	0.0014
%SD	1250	45.41	60.44	315.9	59.84	141.5

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0009	-0.0046	-0.0026	-0.0031
Run 2	-0.0014	-0.0038	-0.0032	-0.0039
Run 3	-0.0020	-0.0025	-0.0052	-0.0049
Mean	-0.0014	-0.0036	-0.0037	-0.0040
Std Dev	0.0005	0.0011	0.0014	0.0009
%SD	37.36	30.12	38.00	23.03

8433 method blank

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.7	94.89	90.97	78.31
Run 2	101.6	95.25	90.76	78.32
Run 3	101.4	95.27	90.76	81.51
Mean	101.6	95.14	90.83	79.38
Std Dev	0.1492	0.2136	0.1198	1.842

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #35
First repeat started at : Mon Nov 24 2003 13:32:37
Last repeat started at : Mon Nov 24 2003 13:34:15
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	19.62	19.28	19.39	20.01	35.86	20.29	21.58
Run 2	19.49	19.19	19.79	20.04	39.60	19.73	21.89
Run 3	19.36	19.73	19.63	20.28	37.61	20.32	21.81
Mean	19.49	19.40	19.60	20.11	37.69	20.11	21.76
Std Dev	0.1258	0.2903	0.1989	0.1460	1.868	0.3330	0.1620
%SD	0.6457	1.496	1.014	0.7262	4.957	1.656	0.7447

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.63	21.39	20.79	20.93	19.35	21.42
Run 2	21.27	21.75	20.83	21.38	19.29	21.22
Run 3	21.25	21.71	20.63	21.54	19.71	21.41
Mean	21.38	21.62	20.75	21.28	19.45	21.35
Std Dev	0.2132	0.1970	0.1064	0.3170	0.2251	0.1109
%SD	0.9973	0.9114	0.5128	1.489	1.157	0.5197

8433 CSW

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	19.01	18.17	18.39	20.30	20.72	20.71
Run 2	19.97	18.38	18.80	20.16	20.00	20.24
Run 3	19.57	18.77	18.72	19.82	19.58	19.82
Mean	19.51	18.44	18.64	20.09	20.10	20.26
Std Dev	0.4814	0.3053	0.2135	0.2461	0.5745	0.4472
%SD	2.467	1.655	1.145	1.225	2.858	2.207

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	19.30	19.23	20.66	20.67	20.17	20.84
Run 2	20.14	19.45	20.06	20.51	20.84	22.20
Run 3	19.11	19.66	20.29	20.64	19.67	21.77
Mean	19.52	19.45	20.34	20.61	20.23	21.60
Std Dev	0.5483	0.2183	0.3034	0.0853	0.5831	0.6936
%SD	2.809	1.123	1.492	0.4139	2.883	3.211

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	21.33	21.42	20.44	20.51
Run 2	21.88	21.22	20.80	20.86
Run 3	20.98	20.46	20.62	20.96
Mean	21.40	21.03	20.62	20.78
Std Dev	0.4529	0.5060	0.1756	0.2383
%SD	2.117	2.406	0.8516	1.147

8433
LCSW

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.2	92.15	86.98	75.71
Run 2	101.1	91.38	88.62	75.19
Run 3	100.8	90.24	89.63	75.10
Mean	100.7	91.26	88.41	75.33
Std Dev	0.4520	0.9620	1.334	0.3315

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #36
First repeat started at : Mon Nov 24 2003 13:35:25
Last repeat started at : Mon Nov 24 2003 13:37:03
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0067	0.0185	0.1263	-0.1226	12.07	-0.1124	0.0107
Run 2	0.0040	0.0158	0.1388	-0.1118	11.81	-0.0711	0.0179
Run 3	0.0038	0.0085	0.0993	-0.1146	19.00	-0.1304	0.0218
Mean	0.0048	0.0143	0.1215	-0.1164	14.30	-0.1046	0.0168
Std Dev	0.0016	0.0051	0.0202	0.0056	4.075	0.0304	0.0056
%SD	33.87	35.99	16.65	4.789	28.51	29.06	33.33

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0876	0.0118	0.0303	0.1071	-2.367	0.1422
Run 2	0.1142	0.0130	0.0149	0.0695	-2.389	0.0859
Run 3	0.0735	-0.0083	0.0145	0.0461	-2.217	0.0544
Mean	0.0918	0.0055	0.0199	0.0742	-2.324	0.0942
Std Dev	0.0207	0.0120	0.0090	0.0308	0.0937	0.0445
%SD	22.55	217.8	45.13	41.42	4.030	47.29

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2376	0.2516	0.2896	0.0356	0.0197	0.0209
Run 2	0.1329	0.1138	0.0972	0.0340	0.0182	0.0191
Run 3	0.0516	0.0613	0.0660	0.0346	0.0172	0.0295
Mean	0.1407	0.1422	0.1509	0.0347	0.0184	0.0232
Std Dev	0.0932	0.0983	0.1211	0.0008	0.0012	0.0056
%SD	66.26	69.14	80.23	2.377	6.760	24.17

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1326	0.1122	0.0165	0.0096	0.0007	0.0082
Run 2	0.0489	0.0542	0.0074	0.0077	0.0010	0.0003
Run 3	0.0217	0.0245	0.0125	0.0100	0.0015	0.0091
Mean	0.0678	0.0636	0.0121	0.0091	0.0011	0.0059
Std Dev	0.0578	0.0446	0.0046	0.0012	0.0004	0.0048
%SD	85.31	70.08	37.68	13.25	35.10	82.26

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

not used 11/24/03

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0068	0.0008	0.0018	0.0015
Run 2	0.0071	0.0053	0.0026	0.0031
Run 3	0.0086	0.0067	0.0071	0.0070
Mean	0.0075	0.0043	0.0045	0.0039
Std Dev	0.0009	0.0031	0.0023	0.0028
%SD	12.60	72.99	51.59	72.69

11/12/03

Internal Standard Drift, % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	97.54	93.61	82.03
Run 2	103.9	97.55	95.99	80.16
Run 3	103.6	98.86	94.37	77.78
Mean	103.0	97.98	94.66	79.99
Std Dev	1.225	0.7589	1.215	2.130

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #37
First repeat started at : Mon Nov 24 2003 13:38:40
Last repeat started at : Mon Nov 24 2003 13:40:16
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.99	24.64	24.82	25.56	29.90	25.61	25.42
Run 2	25.18	24.86	24.60	25.63	34.76	25.05	25.81
Run 3	25.27	24.82	25.56	25.68	38.21	25.91	25.95
Mean	25.48	24.77	24.99	25.62	34.29	25.52	25.73
Std Dev	0.4411	0.1208	0.5003	0.0580	4.172	0.4328	0.2747
%SD	1.731	0.4878	2.002	0.2262	12.17	1.695	1.068

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.76	25.47	25.23	25.97	23.65	25.95
Run 2	25.66	25.95	25.57	26.09	24.04	26.41
Run 3	25.72	25.64	25.36	26.07	24.12	26.13
Mean	25.72	25.68	25.39	26.04	23.93	26.16
Std Dev	0.0511	0.2420	0.1712	0.0684	0.2501	0.2332
%SD	0.1987	0.9422	0.6741	0.2628	1.045	0.8912

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.03	24.41	24.42	25.47	25.33	25.04
Run 2	24.55	24.91	23.91	25.38	25.08	25.40
Run 3	24.67	23.63	23.14	25.09	25.01	25.83
Mean	24.42	24.32	23.82	25.31	25.14	25.42
Std Dev	0.3376	0.6434	0.6454	0.2009	0.1729	0.3927
%SD	1.383	2.646	2.709	0.7938	0.6876	1.545

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.87	25.54	26.32	26.49	25.98	26.58
Run 2	25.23	25.56	26.05	26.77	26.01	26.08
Run 3	24.00	24.78	26.39	26.83	26.25	27.01
Mean	24.70	25.29	26.25	26.70	26.08	26.56
Std Dev	0.6297	0.4429	0.1809	0.1853	0.1519	0.4650
%SD	2.549	1.751	0.6890	0.6942	0.5825	1.751

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

CLV 11-24-03

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	27.04	25.81	26.26	26.36
Run 2	26.60	26.66	25.96	26.11
Run 3	26.36	26.66	25.19	26.05
Mean	26.66	26.38	25.80	26.18
Std Dev	0.3485	0.4945	0.5510	0.1637
%SD	1.307	1.874	2.135	0.6254

CLV ns4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.5	98.15	93.58	80.98
Run 2	104.2	97.44	93.91	83.14
Run 3	104.8	97.49	92.85	80.64
Mean	104.2	97.69	93.45	81.59
Std Dev	0.6461	0.3953	0.5438	1.356

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #38
First repeat started at : Mon Nov 24 2003 13:45:52
Last repeat started at : Mon Nov 24 2003 13:47:29
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0021	0.0039	0.0184	-0.1296	13.31	0.0470	0.0243
Run 2	0.0030	-0.0074	0.0408	-0.0965	14.43	-0.0243	0.0265
Run 3	0.0032	0.0001	0.0255	-0.1037	10.74	0.1201	0.0161
Mean	0.0028	-0.0011	0.0282	-0.1099	12.82	0.0476	0.0223
Std Dev	0.0006	0.0058	0.0115	0.0174	1.894	0.0722	0.0055
%SD	22.65	507.3	40.59	15.83	14.77	151.6	24.56

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0319	-0.0061	-0.0006	0.0483	-2.131	0.0269
Run 2	0.0799	-0.0117	-0.0092	0.0704	-1.799	0.0167
Run 3	0.0416	-0.0009	0.0238	0.0136	-2.051	0.0760
Mean	0.0511	-0.0062	0.0046	0.0441	-1.993	0.0399
Std Dev	0.0254	0.0054	0.0171	0.0286	0.1734	0.0317
%SD	49.60	87.35	369.3	64.90	8.700	79.64

CCB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0360	0.0356	0.0245	0.0462	0.0292	0.0241
Run 2	0.0414	0.0207	0.0155	0.0452	0.0272	0.0242
Run 3	0.0128	0.0376	0.0275	0.0440	0.0216	0.0211
Mean	0.0301	0.0313	0.0225	0.0451	0.0260	0.0231
Std Dev	0.0152	0.0093	0.0062	0.0011	0.0039	0.0018
%SD	50.65	29.56	27.64	2.425	15.20	7.689

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0228	0.0179	0.0240	-0.0016	0.0012	0.0008
Run 2	0.0126	0.0163	0.0162	0.0102	-0.0011	0.0051
Run 3	0.0155	0.0178	0.0153	0.0037	-0.0011	0.0028
Mean	0.0170	0.0173	0.0185	0.0041	-0.0003	0.0029
Std Dev	0.0053	0.0009	0.0048	0.0060	0.0013	0.0022
%SD	30.96	5.080	25.96	145.2	386.3	74.91

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0013	-0.0001	0.0080	0.0032
Run 2	0.0033	0.0009	0.0045	0.0023
Run 3	0.0014	0.0040	0.0065	0.0021
Mean	0.0020	0.0016	0.0063	0.0025
Std Dev	0.0011	0.0022	0.0017	0.0006
%SD	55.30	134.3	27.52	24.77

CCB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.4	99.65	93.15	82.44
Run 2	104.0	98.37	93.93	83.58
Run 3	104.8	100.1	93.75	80.16
Mean	104.4	99.38	93.61	82.06
Std Dev	0.4277	0.8978	0.4069	1.739

FQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #39
First repeat started at : Mon Nov 24 2003 13:49:05
Last repeat started at : Mon Nov 24 2003 13:50:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0089	0.6809	7.944	22.57	284.8	2.177	17.10
Run 2	0.0073	0.7109	8.438	21.52	268.9	2.368	17.07
Run 3	0.0071	0.7349	7.682	26.12	308.1	2.638	17.28
Mean	0.0078	0.7089	8.021	23.40	287.3	2.394	17.15
Std Dev	0.0010	0.0271	0.3836	2.408	19.74	0.2317	0.1112
%SD	13.10	3.820	4.783	10.29	6.871	9.677	0.6482

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	18.71	18.91	1.578	3.622	5.104	2.742
Run 2	19.15	19.21	1.534	3.935	5.243	2.859
Run 3	18.80	19.10	1.653	4.233	5.942	3.159
Mean	18.89	19.07	1.588	3.930	5.430	2.920
Std Dev	0.2304	0.1524	0.0599	0.3056	0.4491	0.2150
%SD	1.220	0.7989	3.772	7.776	8.271	7.365

8433-15

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.047	3.086	3.157	0.2657	0.2080	0.2054
Run 2	3.245	3.394	2.962	0.2639	0.2048	0.1901
Run 3	3.102	3.148	2.919	0.2735	0.2098	0.2050
Mean	3.131	3.209	3.013	0.2677	0.2075	0.2002
Std Dev	0.1022	0.1628	0.1271	0.0051	0.0025	0.0087
%SD	3.264	5.072	4.218	1.913	1.207	4.345

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3490	0.3364	88.88	87.78	87.28	0.0190
Run 2	0.3325	0.2959	86.49	85.50	86.36	0.0165
Run 3	0.2974	0.3177	84.56	88.15	85.35	0.0234
Mean	0.3263	0.3167	86.65	87.14	86.33	0.0196
Std Dev	0.0264	0.0203	2.164	1.433	0.9684	0.0035
%SD	8.077	6.396	2.497	1.644	1.122	17.75

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0295	0.6943	0.7507	0.7500
Run 2	0.0258	0.6584	0.7140	0.7086
Run 3	0.0145	0.6302	0.6803	0.6742
Mean	0.0232	0.6610	0.7150	0.7109
Std Dev	0.0078	0.0322	0.0352	0.0379
%SD	33.63	4.865	4.921	5.334

8433-15

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.3	72.86	72.33	73.81
Run 2	101.0	72.36	72.49	72.03
Run 3	100.1	70.75	72.69	71.78
Mean	100.4	71.99	72.51	72.54
Std Dev	0.4829	1.102	0.1802	1.110

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #40
First repeat started at : Mon Nov 24 2003 13:52:48
Last repeat started at : Mon Nov 24 2003 13:54:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0066	0.6967	8.567	24.64	317.6	2.296	16.79
Run 2	0.0087	0.6871	8.650	23.75	301.3	2.565	16.75
Run 3	0.0070	0.6620	8.180	23.70	295.6	2.632	16.35
Mean	0.0074	0.6819	8.466	24.03	304.8	2.498	16.63
Std Dev	0.0011	0.0179	0.2506	0.5279	11.42	0.1780	0.2416
%SD	14.60	2.630	2.960	2.196	3.745	7.126	1.452

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	18.84	18.45	1.666	4.030	5.617	3.046
Run 2	18.78	18.46	1.599	4.037	5.477	2.904
Run 3	18.23	18.07	1.635	3.783	4.687	2.904
Mean	18.62	18.33	1.633	3.950	5.260	2.951
Std Dev	0.3377	0.2178	0.0335	0.1448	0.5014	0.0824
%SD	1.814	1.188	2.051	3.666	9.532	2.790

8433-1500

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.983	2.893	3.195	0.2753	0.2029	0.1905
Run 2	3.173	3.012	3.074	0.2828	0.2235	0.2194
Run 3	2.932	2.925	3.060	0.2475	0.1972	0.1916
Mean	3.030	2.943	3.109	0.2685	0.2079	0.2005
Std Dev	0.1267	0.0618	0.0744	0.0186	0.0138	0.0164
%SD	4.184	2.099	2.392	6.925	6.644	8.162

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3234	0.2958	83.94	87.57	87.94	0.0192
Run 2	0.3276	0.3277	90.76	89.17	90.36	0.0189
Run 3	0.2826	0.3174	81.36	84.45	84.96	0.0264
Mean	0.3112	0.3136	85.35	87.07	87.76	0.0215
Std Dev	0.0249	0.0163	4.855	2.400	2.703	0.0043
%SD	7.989	5.199	5.688	2.756	3.080	19.92

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0195	0.6595	0.7481	0.6763
Run 2	0.0210	0.6591	0.7160	0.6750
Run 3	0.0229	0.6518	0.6517	0.6964
Mean	0.0211	0.6568	0.7052	0.6825
Std Dev	0.0017	0.0044	0.0491	0.0120
%SD	8.216	0.6638	6.963	1.762

8433-1504

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.9	70.70	73.56	73.37
Run 2	100.6	71.96	70.39	71.05
Run 3	100.9	73.04	76.40	72.09
Mean	100.8	71.90	73.45	72.17
Std Dev	0.1319	1.172	3.008	1.163

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #41
First repeat started at : Mon Nov 24 2003 13:55:30
Last repeat started at : Mon Nov 24 2003 13:57:07
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	17.45	22.05	29.83	44.37	303.6	22.24	36.41
Run 2	17.30	21.91	29.27	43.80	291.1	22.28	36.70
Run 3	17.52	22.35	29.86	43.05	318.8	22.58	35.95
Mean	17.42	22.10	29.65	43.74	304.5	22.37	36.35
Std Dev	0.1128	0.2228	0.3307	0.6623	13.89	0.1822	0.3806
%SD	0.6473	1.008	1.115	1.514	4.560	0.8146	1.047

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	38.89	37.90	27.39	27.89	29.50	26.86
Run 2	38.85	38.30	27.42	27.80	29.81	26.83
Run 3	38.95	37.91	27.38	27.62	29.21	26.75
Mean	38.89	38.03	27.39	27.77	29.51	26.82
Std Dev	0.0481	0.2273	0.0231	0.1369	0.2999	0.0586
%SD	0.1236	0.5977	0.0843	0.4931	1.016	0.2186

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	26.33	26.66	26.95	19.89	19.66	19.95
Run 2	27.43	26.54	25.34	19.95	20.08	19.71
Run 3	26.92	27.37	28.04	20.59	20.18	20.07
Mean	26.89	26.86	26.77	20.14	19.97	19.91
Std Dev	0.5456	0.4498	1.361	0.3867	0.2793	0.1819
%SD	2.029	1.675	5.082	1.920	1.398	0.9136

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	20.16	21.47	108.4	106.0	105.8	16.81
Run 2	21.54	21.01	103.9	112.3	110.7	17.06
Run 3	21.23	21.43	110.5	109.9	108.3	18.22
Mean	20.98	21.30	107.6	109.4	108.3	17.36
Std Dev	0.7275	0.2541	3.379	3.192	2.436	0.7516
%SD	3.468	1.193	3.139	2.917	2.250	4.329

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8433-1558

8433-1550K

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	16.96	16.09	16.13	16.04
Run 2	18.00	16.72	16.39	16.71
Run 3	17.40	17.14	16.57	16.67
Mean	17.45	16.65	16.36	16.47
Std Dev	0.5202	0.5306	0.2234	0.3785
%SD	2.981	3.187	1.365	2.298

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.97	68.45	70.83	69.97
Run 2	99.68	68.34	70.94	69.41
Run 3	99.67	68.96	69.59	68.89
Mean	99.78	68.58	70.45	69.42
Std Dev	0.1711	0.3342	0.7519	0.5400

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #42
First repeat started at : Mon Nov 24 2003 14:06:37
Last repeat started at : Mon Nov 24 2003 14:08:14
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0019	0.1005	0.2642	-0.0978	20.74	0.0036	0.6443
Run 2	0.0012	0.1200	0.3867	-0.1365	18.02	0.0209	0.6110
Run 3	0.0012	0.1116	0.4595	-0.1470	5.379	-0.0684	0.6498
Mean	0.0014	0.1107	0.3701	-0.1271	14.71	-0.0146	0.6350
Std Dev	0.0004	0.0097	0.0987	0.0259	8.196	0.0473	0.0210
%SD	30.30	8.799	26.66	20.38	55.71	323.3	3.305

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.5918	0.6103	0.0382	0.0373	-1.334	0.1379
Run 2	0.5937	0.5875	0.0108	0.0838	-1.247	0.0942
Run 3	0.6860	0.5918	0.0028	0.0709	-1.180	0.0622
Mean	0.6238	0.5966	0.0173	0.0640	-1.254	0.0981
Std Dev	0.0539	0.0121	0.0186	0.0240	0.0771	0.0380
%SD	8.636	2.026	107.6	37.48	6.150	38.72

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0242	0.0297	0.0178	0.0434	0.0190	0.0245
Run 2	0.0228	0.0191	0.0158	0.0386	0.0193	0.0211
Run 3	0.0255	0.0201	0.0263	0.0521	0.0182	0.0155
Mean	0.0242	0.0230	0.0200	0.0447	0.0188	0.0204
Std Dev	0.0014	0.0058	0.0056	0.0068	0.0005	0.0046
%SD	5.676	25.45	28.04	15.27	2.882	22.47

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0049	0.0031	-0.0001	0.0094	-0.0006	-0.0014
Run 2	0.0065	-0.0016	0.0081	0.0075	0.0004	-0.0005
Run 3	0.0045	0.0047	0.0178	0.0061	0.0011	0.0016
Mean	0.0053	0.0021	0.0086	0.0076	0.0003	-0.0001
Std Dev	0.0011	0.0033	0.0090	0.0017	0.0008	0.0015
%SD	20.29	160.8	104.4	21.65	255.7	1663

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

#433 METHOD BLANK

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0011	0.0012	-0.0078	-0.0028
Run 2	-0.0010	0.0020	-0.0019	-0.0018
Run 3	-0.0011	-0.0029	-0.0009	-0.0015
Mean	-0.0011	0.0001	-0.0035	-0.0020
Std Dev	0.0001	0.0026	0.0037	0.0007
%SD	5.370	2269	105.6	32.37

4433 method blank

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.3	99.55	97.32	79.51
Run 2	103.7	99.32	93.94	77.46
Run 3	103.9	99.06	94.76	81.32
Mean	103.9	99.31	95.34	79.43
Std Dev	0.2932	0.2449	1.763	1.933

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #43
First repeat started at : Mon Nov 24 2003 14:09:50
Last repeat started at : Mon Nov 24 2003 14:11:28
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0016	0.4955	6.916	25.36	314.8	2.561	26.86
Run 2	0.0031	0.5021	6.629	25.77	291.7	2.748	27.38
Run 3	0.0015	0.5006	6.974	25.28	314.6	2.711	27.05
Mean	0.0020	0.4994	6.840	25.47	307.0	2.673	27.10
Std Dev	0.0009	0.0034	0.1849	0.2642	13.28	0.0991	0.2627
%SD	42.92	0.6880	2.704	1.037	4.327	3.707	0.9694

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	29.26	29.42	1.552	3.999	5.768	2.615
Run 2	28.30	29.59	1.595	3.736	5.279	2.634
Run 3	28.57	29.73	1.603	3.861	5.342	2.592
Mean	28.71	29.58	1.583	3.865	5.463	2.613
Std Dev	0.4932	0.1553	0.0278	0.1316	0.2657	0.0206
%SD	1.718	0.5251	1.757	3.405	4.863	0.7901

4433.10

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.805	2.736	2.695	0.2374	0.1981	0.1826
Run 2	2.812	2.554	2.707	0.2298	0.1760	0.1638
Run 3	2.860	2.651	2.751	0.2556	0.1873	0.1772
Mean	2.826	2.647	2.717	0.2410	0.1871	0.1746
Std Dev	0.0301	0.0907	0.0297	0.0132	0.0111	0.0097
%SD	1.064	3.428	1.094	5.486	5.919	5.542

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2378	0.2200	123.2	126.0	124.1	0.0185
Run 2	0.2148	0.2201	122.0	118.2	124.4	0.0180
Run 3	0.2286	0.2119	124.5	123.4	117.5	0.0190
Mean	0.2271	0.2173	123.2	122.5	122.0	0.0185
Std Dev	0.0116	0.0047	1.277	3.973	3.873	0.0005
%SD	5.111	2.176	1.036	3.243	3.175	2.841

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0220	0.1552	0.1555	0.1575
Run 2	0.0173	0.1647	0.1716	0.1731
Run 3	0.0218	0.1451	0.1684	0.1455
Mean	0.0204	0.1550	0.1651	0.1587
Std Dev	0.0027	0.0098	0.0085	0.0138
%SD	13.03	6.332	5.171	8.717

$433.10

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.83	70.74	74.00	73.14
Run 2	100.7	71.19	74.82	71.30
Run 3	98.82	71.21	74.40	73.75
Mean	99.77	71.05	74.41	72.73
Std Dev	0.9236	0.2667	0.4106	1.274

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #44
First repeat started at : Mon Nov 24 2003 14:12:42
Last repeat started at : Mon Nov 24 2003 14:14:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0016	0.5713	6.169	23.61	284.8	2.860	4.667
Run 2	0.0004	0.5970	6.299	22.78	279.9	3.084	4.929
Run 3	0.0009	0.5605	6.628	22.52	268.4	3.288	4.677
Mean	0.0010	0.5763	6.365	22.97	277.7	3.077	4.757
Std Dev	0.0006	0.0188	0.2365	0.5703	8.393	0.2138	0.1483
%SD	59.49	3.258	3.715	2.483	3.022	6.948	3.117

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.610	7.547	1.895	3.498	4.583	2.615
Run 2	8.431	7.462	1.860	3.690	5.117	2.635
Run 3	8.496	7.394	1.859	3.651	4.501	2.672
Mean	8.512	7.468	1.871	3.613	4.734	2.641
Std Dev	0.0905	0.0768	0.0206	0.1013	0.3348	0.0288
%SD	1.063	1.028	1.099	2.804	7.072	1.092

$433.11

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.561	3.728	3.576	0.1473	0.0914	0.0759
Run 2	3.763	3.770	3.642	0.1406	0.0856	0.0908
Run 3	3.861	3.832	3.511	0.1309	0.0847	0.0888
Mean	3.729	3.777	3.576	0.1396	0.0872	0.0852
Std Dev	0.1527	0.0520	0.0654	0.0083	0.0036	0.0081
%SD	4.095	1.376	1.830	5.924	4.144	9.455

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0933	0.1013	103.4	105.3	104.0	0.0072
Run 2	0.1009	0.1215	103.6	107.8	109.7	0.0046
Run 3	0.1006	0.1129	101.1	108.1	101.9	0.0017
Mean	0.0982	0.1119	102.7	107.1	105.2	0.0045
Std Dev	0.0043	0.0101	1.398	1.506	4.065	0.0028
%SD	4.387	9.068	1.361	1.406	3.864	61.41

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0101	0.0777	0.0869	0.0872
Run 2	0.0076	0.0765	0.0873	0.0802
Run 3	0.0081	0.0677	0.0858	0.0775
Mean	0.0086	0.0740	0.0867	0.0816
Std Dev	0.0013	0.0055	0.0008	0.0050
%SD	15.26	7.369	0.8769	6.164

8433-11

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.7	74.33	78.58	70.88
Run 2	102.4	72.44	75.24	74.09
Run 3	101.8	73.59	77.27	72.54
Mean	102.6	73.46	77.03	72.50
Std Dev	0.9439	0.9517	1.683	1.603

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #45
First repeat started at : Mon Nov 24 2003 14:16:11
Last repeat started at : Mon Nov 24 2003 14:17:50
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0019	0.4364	6.232	29.29	353.6	4.855	5.332
Run 2	0.0014	0.4398	5.783	29.78	326.8	4.630	5.313
Run 3	0.0009	0.4507	5.711	27.66	336.3	5.139	5.366
Mean	0.0014	0.4423	5.909	28.91	338.9	4.875	5.337
Std Dev	0.0005	0.0075	0.2822	1.110	13.56	0.2549	0.0269
%SD	37.38	1.690	4.777	3.840	4.002	5.228	0.5036

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.966	8.349	2.676	3.569	4.659	2.480
Run 2	10.13	8.398	2.707	3.710	4.720	2.502
Run 3	10.48	8.845	2.770	3.701	4.511	2.549
Mean	10.19	8.531	2.718	3.660	4.630	2.510
Std Dev	0.2646	0.2736	0.0478	0.0790	0.1077	0.0356
%SD	2.596	3.207	1.757	2.157	2.326	1.419

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.669	5.660	5.391	0.1937	0.1445	0.1522
Run 2	5.490	5.492	5.164	0.2240	0.1328	0.1403
Run 3	5.538	5.314	5.453	0.1841	0.1491	0.1386
Mean	5.566	5.489	5.336	0.2006	0.1421	0.1437
Std Dev	0.0924	0.1733	0.1520	0.0208	0.0084	0.0074
%SD	1.661	3.157	2.848	10.39	5.901	5.181

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1527	0.1845	132.7	135.0	131.8	0.0073
Run 2	0.1527	0.1590	129.3	134.1	134.6	0.0128
Run 3	0.1748	0.1737	131.7	132.3	132.3	0.0141
Mean	0.1601	0.1724	131.2	133.8	132.9	0.0114
Std Dev	0.0128	0.0128	1.703	1.372	1.507	0.0036
%SD	7.978	7.421	1.298	1.025	1.133	31.89

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8433.12

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0122	0.5221	0.5782	0.5619
Run 2	0.0129	0.4971	0.5689	0.5615
Run 3	0.0130	0.5253	0.5311	0.5405
Mean	0.0127	0.5148	0.5594	0.5546
Std Dev	0.0004	0.0155	0.0250	0.0123
%SD	3.354	3.002	4.463	2.211

8433-12

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.73	68.25	68.01	70.69
Run 2	98.04	67.56	68.90	69.86
Run 3	97.58	66.67	69.29	67.20
Mean	98.12	67.49	68.73	69.25
Std Dev	0.5806	0.7904	0.6541	1.826

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #46
First repeat started at : Mon Nov 24 2003 14:19:44
Last repeat started at : Mon Nov 24 2003 14:21:22
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0013	0.5706	5.289	36.74	418.0	5.317	5.090
Run 2	0.0012	0.5897	5.275	35.79	430.4	5.071	5.053
Run 3	0.0013	0.5717	5.126	36.42	416.0	5.023	5.067
Mean	0.0012	0.5773	5.230	36.31	421.5	5.137	5.070
Std Dev	0.0001	0.0107	0.0901	0.4840	7.815	0.1579	0.0183
%SD	4.536	1.858	1.724	1.333	1.854	3.073	0.3604

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	15.16	12.74	2.824	4.180	4.697	2.514
Run 2	15.87	13.09	2.768	4.318	4.974	2.434
Run 3	15.16	12.65	2.752	4.216	4.478	2.344
Mean	15.40	12.82	2.788	4.238	4.716	2.431
Std Dev	0.4103	0.2310	0.0358	0.0717	0.2487	0.0852
%SD	2.664	1.801	1.282	1.693	5.273	3.506

8433-13

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.680	2.628	2.642	0.1704	0.1374	0.1024
Run 2	2.584	2.346	2.313	0.1516	0.1237	0.1025
Run 3	2.564	2.519	2.475	0.1566	0.1155	0.1014
Mean	2.609	2.497	2.477	0.1595	0.1255	0.1021
Std Dev	0.0620	0.1422	0.1644	0.0097	0.0111	0.0006
%SD	2.378	5.696	6.637	6.101	8.824	0.5960

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1002	0.0859	303.0	303.8	307.3	0.0054
Run 2	0.1146	0.1066	291.0	290.9	294.6	0.0033
Run 3	0.1017	0.0859	301.8	302.3	289.1	0.0050
Mean	0.1055	0.0928	298.6	299.0	297.0	0.0046
Std Dev	0.0079	0.0119	6.574	7.069	9.302	0.0011
%SD	7.493	12.84	2.202	2.365	3.132	23.65

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0049	0.0404	0.0538	0.0411
Run 2	0.0020	0.0472	0.0398	0.0455
Run 3	0.0029	0.0390	0.0482	0.0375
Mean	0.0033	0.0422	0.0473	0.0414
Std Dev	0.0015	0.0044	0.0070	0.0040
%SD	45.58	10.38	14.85	9.705

8433-B

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.04	66.75	66.52	66.01
Run 2	98.08	66.33	69.61	67.53
Run 3	98.27	67.21	69.59	69.72
Mean	98.13	66.76	68.57	67.75
Std Dev	0.1231	0.4414	1.780	1.864

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #47
First repeat started at : Mon Nov 24 2003 14:23:05
Last repeat started at : Mon Nov 24 2003 14:24:43
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0016	1.620	6.838	27.45	342.8	3.735	6.439
Run 2	0.0020	1.674	7.005	29.84	346.1	3.916	6.646
Run 3	0.0007	1.642	6.689	27.41	354.3	3.820	6.249
Mean	0.0015	1.645	6.844	28.23	347.7	3.824	6.445
Std Dev	0.0007	0.0269	0.1581	1.392	5.914	0.0907	0.1984
%SD	46.15	1.637	2.310	4.931	1.701	2.371	3.079

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	11.89	10.58	1.764	3.495	4.871	2.588
Run 2	12.21	10.40	1.691	3.569	5.308	2.620
Run 3	12.25	10.69	1.775	3.653	5.738	2.747
Mean	12.12	10.56	1.743	3.572	5.306	2.652
Std Dev	0.1987	0.1475	0.0458	0.0792	0.4337	0.0841
%SD	1.640	1.397	2.630	2.216	8.174	3.171

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.531	2.581	2.499	0.1678	0.1174	0.1031
Run 2	2.460	2.543	2.626	0.1615	0.1275	0.1056
Run 3	2.540	2.686	2.506	0.1617	0.1250	0.1070
Mean	2.510	2.604	2.544	0.1637	0.1233	0.1052
Std Dev	0.0442	0.0739	0.0717	0.0036	0.0053	0.0020
%SD	1.760	2.838	2.817	2.205	4.273	1.875

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4518	0.5078	157.2	156.8	160.7	0.0126
Run 2	0.5045	0.4830	162.5	160.9	163.2	0.0200
Run 3	0.5105	0.4544	158.0	163.9	154.6	0.0186
Mean	0.4889	0.4817	159.2	160.5	159.5	0.0171
Std Dev	0.0323	0.0267	2.852	3.575	4.455	0.0039
%SD	6.603	5.552	1.791	2.227	2.793	22.99

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8433-14

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0168	0.2594	0.2682	0.2711
Run 2	0.0204	0.2378	0.2290	0.2533
Run 3	0.0218	0.2364	0.2616	0.2567
Mean	0.0197	0.2446	0.2529	0.2604
Std Dev	0.0026	0.0129	0.0210	0.0094
%SD	13.01	5.281	8.285	3.628

8433-14

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.4	70.85	72.96	69.07
Run 2	100.7	70.70	73.24	72.21
Run 3	101.0	70.85	73.56	69.76
Mean	101.0	70.80	73.25	70.34
Std Dev	0.3418	0.0891	0.2958	1.648

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #48
First repeat started at : Mon Nov 24 2003 14:26:10
Last repeat started at : Mon Nov 24 2003 14:27:47
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.38	24.87	24.94	25.68	41.77	25.85	25.91
Run 2	26.22	24.80	25.28	25.89	42.67	25.88	25.60
Run 3	25.80	25.02	25.15	25.81	44.24	25.72	25.89
Mean	25.80	24.90	25.12	25.79	42.89	25.82	25.80
Std Dev	0.4160	0.1157	0.1719	0.1058	1.251	0.0849	0.1752
%SD	1.612	0.4646	0.6840	0.4102	2.917	0.3288	0.6789

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.39	25.85	25.54	26.16	24.79	26.01
Run 2	25.84	25.62	25.55	26.07	24.50	26.46
Run 3	25.98	25.41	25.79	26.64	25.02	26.80
Mean	25.74	25.63	25.63	26.29	24.77	26.42
Std Dev	0.3106	0.2193	0.1424	0.3034	0.2633	0.3971
%SD	1.207	0.8556	0.5559	1.154	1.063	1.503

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.66	24.51	23.01	24.94	25.15	24.85
Run 2	23.54	23.93	24.33	25.56	25.48	25.64
Run 3	24.45	25.24	23.67	25.46	25.80	25.50
Mean	23.88	24.56	23.67	25.32	25.47	25.33
Std Dev	0.4964	0.6576	0.6582	0.3350	0.3253	0.4253
%SD	2.078	2.677	2.781	1.323	1.277	1.679

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.86	24.95	27.23	26.60	26.10	27.25
Run 2	25.00	26.44	26.77	26.18	26.31	27.54
Run 3	25.72	25.31	26.31	27.35	27.03	27.12
Mean	24.86	25.57	26.77	26.71	26.48	27.31
Std Dev	0.9389	0.7800	0.4603	0.5943	0.4865	0.2151
%SD	3.777	3.051	1.719	2.225	1.837	0.7878

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

CLV 11-24-03 JE

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	27.82	27.03	27.47	27.90
Run 2	27.38	26.95	26.65	26.78
Run 3	26.15	26.14	27.53	26.41
Mean	27.12	26.71	27.22	27.03
Std Dev	0.8653	0.4912	0.4895	0.7758
%SD	3.191	1.839	1.798	2.870

CLV ns4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.2	99.30	95.51	78.10
Run 2	105.2	98.48	91.79	78.08
Run 3	104.0	96.74	90.54	77.47
Mean	104.5	98.17	92.61	77.88
Std Dev	0.6170	1.306	2.587	0.3580

FQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #49
First repeat started at : Mon Nov 24 2003 14:34:07
Last repeat started at : Mon Nov 24 2003 14:35:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0019	0.0043	0.0603	-0.0737	17.08	0.1375	0.0204
Run 2	0.0019	-0.0021	0.0348	-0.0993	18.94	-0.0235	0.0374
Run 3	0.0029	0.0187	0.0687	-0.0828	20.28	0.0982	0.0144
Mean	0.0022	0.0070	0.0546	-0.0852	18.77	0.0707	0.0241
Std Dev	0.0006	0.0107	0.0177	0.0130	1.607	0.0839	0.0119
%SD	28.02	152.6	32.38	15.24	8.563	118.6	49.38

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0886	0.0164	0.0157	0.0361	-1.571	0.0572
Run 2	0.0387	0.0322	0.0184	0.0639	-1.385	0.0954
Run 3	-0.0110	0.0311	0.0080	0.0764	-1.493	0.0728
Mean	0.0388	0.0266	0.0140	0.0588	-1.483	0.0751
Std Dev	0.0498	0.0088	0.0053	0.0206	0.0931	0.0192
%SD	128.4	33.09	38.15	35.09	6.276	25.58

CLB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0246	0.0424	0.0304	0.0421	0.0221	0.0253
Run 2	0.0553	0.0464	0.0301	0.0490	0.0283	0.0280
Run 3	0.0512	0.0435	0.0196	0.0537	0.0228	0.0298
Mean	0.0437	0.0441	0.0267	0.0483	0.0244	0.0277
Std Dev	0.0167	0.0021	0.0061	0.0058	0.0034	0.0023
%SD	38.20	4.726	23.02	12.11	13.83	8.197

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0249	0.0180	0.0115	0.0086	-0.0003	0.0017
Run 2	0.0165	0.0154	0.0090	0.0053	0.0017	0.0000
Run 3	0.0131	0.0126	0.0089	0.0191	0.0034	0.0007
Mean	0.0182	0.0153	0.0098	0.0110	0.0016	0.0008
Std Dev	0.0061	0.0027	0.0014	0.0072	0.0019	0.0009
%SD	33.43	17.89	14.58	65.80	117.3	106.2

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0052	0.0032	0.0105	0.0057
Run 2	0.0032	0.0047	0.0068	0.0044
Run 3	0.0045	0.0038	0.0056	0.0045
Mean	0.0043	0.0039	0.0076	0.0048
Std Dev	0.0010	0.0007	0.0026	0.0008
%SD	23.51	18.42	33.43	15.55

(LB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.2	97.02	91.85	77.76
Run 2	102.1	97.57	93.13	82.94
Run 3	102.3	98.26	89.44	77.00
Mean	102.5	97.62	91.48	79.23
Std Dev	0.5858	0.6193	1.876	3.229

BTEX
Method 8021

Organic Analysis:
BTEX

Summary Package

Sample and QC Results

Client: ARCADIS **Service Request:** K2308419
Project: Bloomington, IN/IN000072.0021

Cover Page - Organic Analysis Data Package
BTEX

Sample Name	Lab Code	Date Collected	Date Received
SW-1	K2308419-001	10/22/2003	10/25/2003
SW-2	K2308419-002	10/22/2003	10/25/2003
SW-3	K2308419-003	10/22/2003	10/25/2003
SW-4	K2308419-004	10/22/2003	10/25/2003
SW-4-Dup	K2308419-005	10/22/2003	10/25/2003
SW-5	K2308419-006	10/23/2003	10/25/2003
SW-6	K2308419-008	10/23/2003	10/25/2003
SW-7	K2308419-009	10/23/2003	10/25/2003
SW-8	K2308419-010	10/23/2003	10/25/2003
Trip Blank	K2308419-011	10/23/2003	10/25/2003
SW-4MS	KWG0317355-1	10/22/2003	10/25/2003
SW-4DMS	KWG0317355-2	10/22/2003	10/25/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: christina Quinn Name: CHRISTINA QUINN

Date: 10/30/03 Title: SCIENTIST

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-1	**Units:**	ug/L
Lab Code:	K2308419-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-2	**Units:**	ug/L
Lab Code:	K2308419-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-3	**Units:**	ug/L
Lab Code:	K2308419-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-4	**Units:**	ug/L
Lab Code:	K2308419-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-4-Dup	**Units:**	ug/L
Lab Code:	K2308419-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-5	**Units:**	ug/L
Lab Code:	K2308419-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-6	**Units:**	ug/L
Lab Code:	K2308419-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

BTEX

Sample Name: SW-7
Lab Code: K2308419-009

Extraction Method: EPA 5030B
Analysis Method: 8021B

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-8	**Units:**	ug/L
Lab Code:	K2308419-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K2308419-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0317355-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419

Surrogate Recovery Summary
BTEX

Extraction Method: EPA 5030B
Analysis Method: 8021B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
SW-1	K2308419-001	96
SW-2	K2308419-002	96
SW-3	K2308419-003	96
SW-4	K2308419-004	96
SW-4-Dup	K2308419-005	97
SW-5	K2308419-006	97
SW-6	K2308419-008	96
SW-7	K2308419-009	97
SW-8	K2308419-010	96
Trip Blank	K2308419-011	96
Method Blank	KWG0317355-4	96
SW-4MS	KWG0317355-1	96
SW-4DMS	KWG0317355-2	97
Lab Control Sample	KWG0317355-3	97

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene	84-114

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/28/2003
Time Analyzed: 21:26

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F015.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-2
Analysis Lot: KWG0317374
Column : DB-VRX

		a,a,a-Trifluorotoluene	
		Area	RT
	Results ==>	528,215	4.82
	Upper Limit ==>	1,056,430	4.97
	Lower Limit ==>	264,108	4.67
	ICAL Result ==>	491,716	5.02
Associated Analyses			
Lab Control Sample	KWG0317355-3	513,829	4.80
SW-4MS	KWG0317355-1	527,462	4.81
SW-4DMS	KWG0317355-2	523,303	4.81
Method Blank	KWG0317355-4	522,794	4.81
Trip Blank	K2308419-011	524,861	4.81
SW-1	K2308419-001	522,382	4.81
SW-2	K2308419-002	523,999	4.81
SW-3	K2308419-003	533,858	4.81
SW-4	K2308419-004	517,853	4.81
SW-4-Dup	K2308419-005	525,962	4.81

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Analyzed:**	10/28/2003
		Time Analyzed:	21:26

Internal Standard Area and RT Summary
BTEX

File ID:	J:\GC06B\DATA\102803\1028F015.D\1028R015.D	**Lab Code:**	KWG0317374-2
Instrument ID:	GC06B	**Analysis Lot:**	KWG0317374
Analysis Method:	8021B	**Column :**	DB-624

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	4,566,861	3.77
	Upper Limit ==>	9,133,722	3.92
	Lower Limit ==>	2,283,431	3.62
	ICAL Result ==>	8,211,624	3.93
Associated Analyses			
Lab Control Sample	KWG0317355-3	4,531,121	3.76
SW-4MS	KWG0317355-1	4,590,999	3.77
SW-4DMS	KWG0317355-2	4,593,968	3.76
Method Blank	KWG0317355-4	4,570,883	3.76
Trip Blank	K2308419-011	4,538,890	3.77
SW-1	K2308419-001	4,544,833	3.76
SW-2	K2308419-002	4,545,964	3.77
SW-3	K2308419-003	4,530,485	3.78
SW-4	K2308419-004	4,518,175	3.77
SW-4-Dup	K2308419-005	4,530,703	3.77

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Analyzed:**	10/29/2003
		Time Analyzed:	04:18

Internal Standard Area and RT Summary
BTEX

File ID:	J:\GC06B\DATA\102803\1028F028.D	**Lab Code:**	KWG0317374-3
Instrument ID:	GC06B	**Analysis Lot:**	KWG0317374
Analysis Method:	8021B	**Column :**	DB-VRX

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	522,352	4.81
	Upper Limit ==>	1,044,704	4.96
	Lower Limit ==>	261,176	4.66
	ICAL Result ==>	491,716	5.02
Associated Analyses			
SW-5	K2308419-006	523,236	4.82
SW-6	K2308419-008	518,849	4.82
SW-7	K2308419-009	521,210	4.82
SW-8	K2308419-010	525,645	4.82

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003
Time Analyzed: 04:18

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F028.D\1028R028.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-3
Analysis Lot: KWG0317374
Column : DB-624

		a,a,a-Trifluorotoluene	
		Area	RT
	Results ==>	4,540,082	3.77
	Upper Limit ==>	9,080,164	3.92
	Lower Limit ==>	2,270,041	3.62
	ICAL Result ==>	8,211,624	3.93
Associated Analyses			
SW-5	K2308419-006	4,509,732	3.78
SW-6	K2308419-008	4,542,473	3.78
SW-7	K2308419-009	4,515,057	3.78
SW-8	K2308419-010	4,523,216	3.78

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Water	**Date Analyzed:**	10/28/2003

Matrix Spike/Duplicate Matrix Spike Summary
BTEX

Sample Name:	SW-4	**Units:**	ug/L
Lab Code:	K2308419-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B	**Extraction Lot:**	KWG0317355

Analyte Name	Sample Result	SW-4MS KWG0317355-1 Matrix Spike			SW-4DMS KWG0317355-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Benzene	ND	20.2	20.0	101	20.7	20.0	104	60-140	2	30
Toluene	ND	19.7	20.0	98	20.3	20.0	102	66-135	3	30
Ethylbenzene	ND	20.4	20.0	102	21.0	20.0	105	74-134	3	30
m,p-Xylenes	ND	40.1	40.0	100	41.2	40.0	103	70-138	3	30
o-Xylene	ND	19.8	20.0	99	20.4	20.0	102	66-132	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Water	**Date Analyzed:**	10/28/2003

Lab Control Spike Summary
BTEX

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8021B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0317355

	Lab Control Sample KWG0317355-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Benzene	19.7	20.0	99	79-117
Toluene	19.1	20.0	96	79-117
Ethylbenzene	19.7	20.0	99	76-124
m,p-Xylenes	39.3	40.0	98	76-129
o-Xylene	19.4	20.0	97	74-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 10/29/2003
Time Analyzed: 00:04

Method Blank Summary
BTEX

Sample Name: Method Blank
Lab Code: KWG0317355-4

File ID: J:\GC06B\DATA\102803\1028F020.D
Instrument ID: GC06B

Extraction Method: EPA 5030B
Analysis Method: 8021B

Level: Low
Extraction Lot: KWG0317355

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317355-3	J:\GC06B\DATA\102803\1028F016.D	10/28/03	21:58
SW-4MS	KWG0317355-1	J:\GC06B\DATA\102803\1028F017.D	10/28/03	22:30
SW-4DMS	KWG0317355-2	J:\GC06B\DATA\102803\1028F018.D	10/28/03	23:01
Trip Blank	K2308419-011	J:\GC06B\DATA\102803\1028F021.D	10/29/03	00:36
SW-1	K2308419-001	J:\GC06B\DATA\102803\1028F022.D	10/29/03	01:08
SW-2	K2308419-002	J:\GC06B\DATA\102803\1028F023.D	10/29/03	01:40
SW-3	K2308419-003	J:\GC06B\DATA\102803\1028F024.D	10/29/03	02:11
SW-4	K2308419-004	J:\GC06B\DATA\102803\1028F025.D	10/29/03	02:43
SW-4-Dup	K2308419-005	J:\GC06B\DATA\102803\1028F026.D	10/29/03	03:15
SW-5	K2308419-006	J:\GC06B\DATA\102803\1028F029.D	10/29/03	04:50
SW-6	K2308419-008	J:\GC06B\DATA\102803\1028F030.D	10/29/03	05:22
SW-7	K2308419-009	J:\GC06B\DATA\102803\1028F031.D	10/29/03	05:54
SW-8	K2308419-010	J:\GC06B\DATA\102803\1028F032.D	10/29/03	06:25

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Water	**Date Analyzed:**	10/28/2003
		Time Analyzed:	21:58

Lab Control Sample Summary
BTEX

Sample Name:	Lab Control Sample	**File ID:**	J:\GC06B\DATA\102803\1028F016.D
Lab Code:	KWG0317355-3	**Instrument ID:**	GC06B
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B	**Extraction Lot:**	KWG0317355

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SW-4MS	KWG0317355-1	J:\GC06B\DATA\102803\1028F017.D	10/28/03	22:30
SW-4DMS	KWG0317355-2	J:\GC06B\DATA\102803\1028F018.D	10/28/03	23:01
Method Blank	KWG0317355-4	J:\GC06B\DATA\102803\1028F020.D	10/29/03	00:04
Trip Blank	K2308419-011	J:\GC06B\DATA\102803\1028F021.D	10/29/03	00:36
SW-1	K2308419-001	J:\GC06B\DATA\102803\1028F022.D	10/29/03	01:08
SW-2	K2308419-002	J:\GC06B\DATA\102803\1028F023.D	10/29/03	01:40
SW-3	K2308419-003	J:\GC06B\DATA\102803\1028F024.D	10/29/03	02:11
SW-4	K2308419-004	J:\GC06B\DATA\102803\1028F025.D	10/29/03	02:43
SW-4-Dup	K2308419-005	J:\GC06B\DATA\102803\1028F026.D	10/29/03	03:15
SW-5	K2308419-006	J:\GC06B\DATA\102803\1028F029.D	10/29/03	04:50
SW-6	K2308419-008	J:\GC06B\DATA\102803\1028F030.D	10/29/03	05:22
SW-7	K2308419-009	J:\GC06B\DATA\102803\1028F031.D	10/29/03	05:54
SW-8	K2308419-010	J:\GC06B\DATA\102803\1028F032.D	10/29/03	06:25

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Level ID	File ID	Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D\0625R003.D	E	J:\GC06B\DATA\062503\0625F007.D\0625R007.D
B	J:\GC06B\DATA\062503\0625F004.D\0625R004.D	F	J:\GC06B\DATA\062503\0625F008.D\0625R008.D
C	J:\GC06B\DATA\062503\0625F005.D\0625R005.D	G	J:\GC06B\DATA\062503\0625F009.D\0625R009.D
D	J:\GC06B\DATA\062503\0625F006.D\0625R006.D	H	J:\GC06B\DATA\062503\0625F010.D\0625R010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.14	B	0.50	2.48	C	1.0	2.52	D	5.0	2.67	E	20	3.28
	F	50	2.54	G	100	2.61	H	200	2.47						
Toluene				B	0.50	2.47	C	1.0	2.53	D	5.0	2.62	E	20	3.15
	F	50	2.44	G	100	2.50	H	200	2.33						
Ethylbenzene				B	0.50	2.14	C	1.0	2.18	D	5.0	2.31	E	20	2.78
	F	50	2.16	G	100	2.21	H	200	2.05						
m,p-Xylenes				B	1.0	2.39	C	2.0	2.49	D	10	2.65	E	40	3.15
	F	100	2.39	G	200	2.40	H	400	2.14						
o-Xylene	A	0.40	2.40	B	0.50	2.55	C	1.0	2.75	D	5.0	2.34	E	20	2.78
	F	50	2.14	G	100	2.19	H	200	2.02						
1,4-Difluorobenzene				B	25	0.950	C	40	0.951	D	50	0.949	E	100	1.22
	F	150	0.963												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	12.3		≤ 20	2.59		0.01
Toluene	MS	AverageRF	% RSD	10.4		≤ 20	2.58		0.01
Ethylbenzene	MS	AverageRF	% RSD	10.7		≤ 20	2.26		0.01
m,p-Xylenes	MS	AverageRF	% RSD	12.6		≤ 20	2.52		0.01
o-Xylene	MS	AverageRF	% RSD	11.8		≤ 20	2.40		0.01
1,4-Difluorobenzene	SURR	AverageRF	% RSD	11.7		≤ 20	1.01		

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003
Date Analyzed: 06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration ID: CAL2726
Units: ug/L

File ID: J:\GC06B\DATA\062503\0625F012.D\0625R012.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	18	2.59	2.38	-8	NA	± 15 %	AverageRF
Toluene	20	18	2.58	2.36	-8	NA	± 15 %	AverageRF
Ethylbenzene	20	18	2.26	2.07	-9	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	2.52	2.53	0	NA	± 15 %	AverageRF
o-Xylene	20	19	2.40	2.27	-5	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Level ID	File ID	Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D	E	J:\GC06B\DATA\062503\0625F007.D
B	J:\GC06B\DATA\062503\0625F004.D	F	J:\GC06B\DATA\062503\0625F008.D
C	J:\GC06B\DATA\062503\0625F005.D	G	J:\GC06B\DATA\062503\0625F009.D
D	J:\GC06B\DATA\062503\0625F006.D	H	J:\GC06B\DATA\062503\0625F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.59	B	0.50	2.54	C	1.0	2.59	D	5.0	2.78	E	20	3.43
	F	50	2.68	G	100	2.79	H	200	2.70						
Toluene				B	0.50	2.30	C	1.0	2.29	D	5.0	2.50	E	20	3.20
	F	50	2.53	G	100	2.65	H	200	2.54						
Ethylbenzene	A	0.40	1.74	B	0.50	2.09	C	1.0	2.04	D	5.0	2.31	E	20	2.98
	F	50	2.35	G	100	2.45	H	200	2.36						
m,p-Xylenes				B	1.0	2.13	C	2.0	2.32	D	10	2.57	E	40	3.28
	F	100	2.60	G	200	2.74	H	400	2.66						
o-Xylene				B	0.50	1.73	C	1.0	1.95	D	5.0	2.18	E	20	2.82
	F	50	2.26	G	100	2.37	H	200	2.29						
1,4-Difluorobenzene				B	25	0.986	C	40	0.979	D	50	0.962	E	100	1.26
	F	150	1.00												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	10.3		≤ 20	2.76		0.01
Toluene	MS	AverageRF	% RSD	11.9		≤ 20	2.57		0.01
Ethylbenzene	MS	AverageRF	% RSD	15.8		≤ 20	2.29		0.01
m,p-Xylenes	MS	AverageRF	% RSD	13.8		≤ 20	2.62		0.01
o-Xylene	MS	AverageRF	% RSD	15.4		≤ 20	2.23		0.01
1,4-Difluorobenzene	SURR	AverageRF	% RSD	12.0		≤ 20	1.04		

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003
Date Analyzed: 06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration ID: CAL2726
Units: ug/L

File ID: J:\GC06B\DATA\062503\0625F012.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	2.76	2.57	-7	NA	± 15 %	AverageRF
Toluene	20	18	2.57	2.35	-9	NA	± 15 %	AverageRF
Ethylbenzene	20	19	2.29	2.14	-7	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	2.23	2.16	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D\1028R015.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.59	2.52	-3	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.58	2.42	-6	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.26	2.16	-5	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.52	2.42	-4	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.11	-12	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	97		1.01	0.979	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.76	2.59	-6	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.57	2.40	-7	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.29	2.21	-3	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	0.01	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	0.01	2.23	2.10	-6	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.04	1.00	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F028.D\1028R028.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.59	2.60	0	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.58	2.51	-3	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.26	2.22	-2	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	0.01	2.52	2.50	-1	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.18	-9	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.01	0.966	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F028.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.76	2.70	-2	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.57	2.50	-3	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.29	2.31	1	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.62	2.54	-3	NA	± 15 %	AverageRF
o-Xylene	20	20	0.01	2.23	2.19	-2	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.04	0.994	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F034.D\1028R034.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.59	2.62	1	NA	± 15 %	AverageRF
Toluene	20	20	0.01	2.58	2.53	-2	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.26	2.24	-1	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	0.01	2.52	2.53	0	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.21	-8	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	97		1.01	0.973	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F034.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.76	2.70	-2	NA	± 15 %	AverageRF
Toluene	20	20	0.01	2.57	2.52	-2	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.29	2.31	1	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.62	2.53	-3	NA	± 15 %	AverageRF
o-Xylene	20	20	0.01	2.23	2.20	-1	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.04	0.996	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS **Service Request:** K2308419
Project: Bloomington, IN/IN000072.0021

Analysis Run Log
BTEX

Analysis Method: 8021B

Analysis Lot: KWG0317374
Instrument ID: GC06B
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1028F001.D	Instrument Blank	KWG0317374-5	10/28/2003	13:40		10/28/2003	13:56
1028F002.D	Continuing Calibration Verification	KWG0317374-1	10/28/2003	14:12		10/28/2003	14:28
1028F003.D	ZZZZZZ	ZZZZZZ	10/28/2003	15:05		10/28/2003	15:21
1028F004.D	ZZZZZZ	ZZZZZZ	10/28/2003	15:37		10/28/2003	15:53
1028F005.D	ZZZZZZ	ZZZZZZ	10/28/2003	16:08		10/28/2003	16:24
1028F006.D	Instrument Blank	KWG0317374-6	10/28/2003	16:40		10/28/2003	16:56
1028F007.D	ZZZZZZ	ZZZZZZ	10/28/2003	17:12		10/28/2003	17:28
1028F008.D	ZZZZZZ	ZZZZZZ	10/28/2003	17:44		10/28/2003	18:00
1028F009.D	ZZZZZZ	ZZZZZZ	10/28/2003	18:16		10/28/2003	18:32
1028F010.D	ZZZZZZ	ZZZZZZ	10/28/2003	18:47		10/28/2003	19:03
1028F011.D	ZZZZZZ	ZZZZZZ	10/28/2003	19:19		10/28/2003	19:35
1028F012.D	ZZZZZZ	ZZZZZZ	10/28/2003	19:51		10/28/2003	20:07
1028F013.D	ZZZZZZ	ZZZZZZ	10/28/2003	20:23		10/28/2003	20:39
1028F014.D	Instrument Blank	KWG0317374-7	10/28/2003	20:54		10/28/2003	21:10
1028F015.D	Continuing Calibration Verification	KWG0317374-2	10/28/2003	21:26		10/28/2003	21:42
1028F016.D	Lab Control Sample	KWG0317355-3	10/28/2003	21:58		10/28/2003	22:14
1028F017.D	SW-4MS	KWG0317355-1	10/28/2003	22:30		10/28/2003	22:46
1028F018.D	SW-4DMS	KWG0317355-2	10/28/2003	23:01		10/28/2003	23:17
1028F019.D	Instrument Blank	KWG0317374-8	10/28/2003	23:33		10/28/2003	23:49
1028F020.D	Method Blank	KWG0317355-4	10/29/2003	00:04		10/29/2003	00:20
1028F021.D	Trip Blank	K2308419-011	10/29/2003	00:36		10/29/2003	00:52
1028F022.D	SW-1	K2308419-001	10/29/2003	01:08		10/29/2003	01:24
1028F023.D	SW-2	K2308419-002	10/29/2003	01:40		10/29/2003	01:56
1028F024.D	SW-3	K2308419-003	10/29/2003	02:11		10/29/2003	02:27
1028F025.D	SW-4	K2308419-004	10/29/2003	02:43		10/29/2003	02:59
1028F026.D	SW-4-Dup	K2308419-005	10/29/2003	03:15		10/29/2003	03:31
1028F027.D	Instrument Blank	KWG0317374-9	10/29/2003	03:47		10/29/2003	04:03
1028F028.D	Continuing Calibration Verification	KWG0317374-3	10/29/2003	04:18		10/29/2003	04:34
1028F029.D	SW-5	K2308419-006	10/29/2003	04:50		10/29/2003	05:06
1028F030.D	SW-6	K2308419-008	10/29/2003	05:22		10/29/2003	05:38
1028F031.D	SW-7	K2308419-009	10/29/2003	05:54		10/29/2003	06:10
1028F032.D	SW-8	K2308419-010	10/29/2003	06:25		10/29/2003	06:41
1028F033.D	Instrument Blank	KWG0317374-10	10/29/2003	06:57		10/29/2003	07:13
1028F034.D	Continuing Calibration Verification	KWG0317374-4	10/29/2003	07:29		10/29/2003	07:45

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003

Extraction Prep Log
BTEX

Extraction Method: EPA 5030B
Analysis Method: 8021B

Extraction Lot: KWG0317355
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SW-1	K2308419-001	10/22/03	10/25/03	10ml	10ml	NA	
SW-2	K2308419-002	10/22/03	10/25/03	10ml	10ml	NA	
SW-3	K2308419-003	10/22/03	10/25/03	10ml	10ml	NA	
SW-4	K2308419-004	10/22/03	10/25/03	10ml	10ml	NA	
SW-4-Dup	K2308419-005	10/22/03	10/25/03	10ml	10ml	NA	
SW-5	K2308419-006	10/23/03	10/25/03	10ml	10ml	NA	
SW-6	K2308419-008	10/23/03	10/25/03	10ml	10ml	NA	
SW-7	K2308419-009	10/23/03	10/25/03	10ml	10ml	NA	
SW-8	K2308419-010	10/23/03	10/25/03	10ml	10ml	NA	
Trip Blank	K2308419-011	10/23/03	10/25/03	10ml	10ml	NA	
Method Blank	KWG0317355-4	NA	NA	10ml	10ml	NA	
SW-4MS	KWG0317355-1	10/22/03	10/25/03	10ml	10ml	NA	
SW-4DMS	KWG0317355-2	10/22/03	10/25/03	10ml	10ml	NA	
Lab Control Sample	KWG0317355-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
BTEX

Validation Package

Organic Analysis:
BTEX

Validation Package

QC Reports

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419

Surrogate Recovery Summary
BTEX

Extraction Method: EPA 5030B
Analysis Method: 8021B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
SW-1	K2308419-001	96
SW-2	K2308419-002	96
SW-3	K2308419-003	96
SW-4	K2308419-004	96
SW-4-Dup	K2308419-005	97
SW-5	K2308419-006	97
SW-6	K2308419-008	96
SW-7	K2308419-009	97
SW-8	K2308419-010	96
Trip Blank	K2308419-011	96
Method Blank	KWG0317355-4	96
SW-4MS	KWG0317355-1	96
SW-4DMS	KWG0317355-2	97
Lab Control Sample	KWG0317355-3	97

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene	84-114

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/28/2003
Time Analyzed: 21:26

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F015.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-2
Analysis Lot: KWG0317374
Column : DB-VRX

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	528,215	4.82
	Upper Limit ==>	1,056,430	4.97
	Lower Limit ==>	264,108	4.67
	ICAL Result ==>	491,716	5.02
Associated Analyses			
Lab Control Sample	KWG0317355-3	513,829	4.80
SW-4MS	KWG0317355-1	527,462	4.81
SW-4DMS	KWG0317355-2	523,303	4.81
Method Blank	KWG0317355-4	522,794	4.81
Trip Blank	K2308419-011	524,861	4.81
SW-1	K2308419-001	522,382	4.81
SW-2	K2308419-002	523,999	4.81
SW-3	K2308419-003	533,858	4.81
SW-4	K2308419-004	517,853	4.81
SW-4-Dup	K2308419-005	525,962	4.81

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Analyzed:**	10/28/2003
		Time Analyzed:	21:26

Internal Standard Area and RT Summary
BTEX

File ID:	J:\GC06B\DATA\102803\1028F015.D\1028R015.D	**Lab Code:**	KWG0317374-2
Instrument ID:	GC06B	**Analysis Lot:**	KWG0317374
Analysis Method:	8021B	**Column :**	DB-624

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	4,566,861	3.77
	Upper Limit ==>	9,133,722	3.92
	Lower Limit ==>	2,283,431	3.62
	ICAL Result ==>	8,211,624	3.93
Associated Analyses			
Lab Control Sample	KWG0317355-3	4,531,121	3.76
SW-4MS	KWG0317355-1	4,590,999	3.77
SW-4DMS	KWG0317355-2	4,593,968	3.76
Method Blank	KWG0317355-4	4,570,883	3.76
Trip Blank	K2308419-011	4,538,890	3.77
SW-1	K2308419-001	4,544,833	3.76
SW-2	K2308419-002	4,545,964	3.77
SW-3	K2308419-003	4,530,485	3.78
SW-4	K2308419-004	4,518,175	3.77
SW-4-Dup	K2308419-005	4,530,703	3.77

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Analyzed:**	10/29/2003
		Time Analyzed:	04:18

Internal Standard Area and RT Summary
BTEX

File ID:	J:\GC06B\DATA\102803\1028F028.D	**Lab Code:**	KWG0317374-3
Instrument ID:	GC06B	**Analysis Lot:**	KWG0317374
Analysis Method:	8021B	**Column :**	DB-VRX

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	522,352	4.81
	Upper Limit ==>	1,044,704	4.96
	Lower Limit ==>	261,176	4.66
	ICAL Result ==>	491,716	5.02
Associated Analyses			
SW-5	K2308419-006	523,236	4.82
SW-6	K2308419-008	518,849	4.82
SW-7	K2308419-009	521,210	4.82
SW-8	K2308419-010	525,645	4.82

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003
Time Analyzed: 04:18

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F028.D\1028R028.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-3
Analysis Lot: KWG0317374
Column : DB-624

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	4,540,082	3.77
	Upper Limit ==>	9,080,164	3.92
	Lower Limit ==>	2,270,041	3.62
	ICAL Result ==>	8,211,624	3.93
Associated Analyses			
SW-5	K2308419-006	4,509,732	3.78
SW-6	K2308419-008	4,542,473	3.78
SW-7	K2308419-009	4,515,057	3.78
SW-8	K2308419-010	4,523,216	3.78

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Water	**Date Analyzed:**	10/28/2003

Matrix Spike/Duplicate Matrix Spike Summary
BTEX

Sample Name:	SW-4	**Units:**	ug/L
Lab Code:	K2308419-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B	**Extraction Lot:**	KWG0317355

Analyte Name	Sample Result	SW-4MS KWG0317355-1 Matrix Spike			SW-4DMS KWG0317355-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Benzene	ND	20.2	20.0	101	20.7	20.0	104	60-140	2	30
Toluene	ND	19.7	20.0	98	20.3	20.0	102	66-135	3	30
Ethylbenzene	ND	20.4	20.0	102	21.0	20.0	105	74-134	3	30
m,p-Xylenes	ND	40.1	40.0	100	41.2	40.0	103	70-138	3	30
o-Xylene	ND	19.8	20.0	99	20.4	20.0	102	66-132	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Water	**Date Analyzed:**	10/28/2003

Lab Control Spike Summary
BTEX

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8021B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0317355

	Lab Control Sample KWG0317355-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Benzene	19.7	20.0	99	79-117
Toluene	19.1	20.0	96	79-117
Ethylbenzene	19.7	20.0	99	76-124
m,p-Xylenes	39.3	40.0	98	76-129
o-Xylene	19.4	20.0	97	74-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 10/29/2003
Time Analyzed: 00:04

Method Blank Summary
BTEX

Sample Name: Method Blank
Lab Code: KWG0317355-4

File ID: J:\GC06B\DATA\102803\1028F020.D
Instrument ID: GC06B

Extraction Method: EPA 5030B
Analysis Method: 8021B

Level: Low
Extraction Lot: KWG0317355

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317355-3	J:\GC06B\DATA\102803\1028F016.D	10/28/03	21:58
SW-4MS	KWG0317355-1	J:\GC06B\DATA\102803\1028F017.D	10/28/03	22:30
SW-4DMS	KWG0317355-2	J:\GC06B\DATA\102803\1028F018.D	10/28/03	23:01
Trip Blank	K2308419-011	J:\GC06B\DATA\102803\1028F021.D	10/29/03	00:36
SW-1	K2308419-001	J:\GC06B\DATA\102803\1028F022.D	10/29/03	01:08
SW-2	K2308419-002	J:\GC06B\DATA\102803\1028F023.D	10/29/03	01:40
SW-3	K2308419-003	J:\GC06B\DATA\102803\1028F024.D	10/29/03	02:11
SW-4	K2308419-004	J:\GC06B\DATA\102803\1028F025.D	10/29/03	02:43
SW-4-Dup	K2308419-005	J:\GC06B\DATA\102803\1028F026.D	10/29/03	03:15
SW-5	K2308419-006	J:\GC06B\DATA\102803\1028F029.D	10/29/03	04:50
SW-6	K2308419-008	J:\GC06B\DATA\102803\1028F030.D	10/29/03	05:22
SW-7	K2308419-009	J:\GC06B\DATA\102803\1028F031.D	10/29/03	05:54
SW-8	K2308419-010	J:\GC06B\DATA\102803\1028F032.D	10/29/03	06:25

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Water	**Date Analyzed:**	10/28/2003
		Time Analyzed:	21:58

Lab Control Sample Summary
BTEX

Sample Name:	Lab Control Sample	**File ID:**	J:\GC06B\DATA\102803\1028F016.D
Lab Code:	KWG0317355-3	**Instrument ID:**	GC06B
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B	**Extraction Lot:**	KWG0317355

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SW-4MS	KWG0317355-1	J:\GC06B\DATA\102803\1028F017.D	10/28/03	22:30
SW-4DMS	KWG0317355-2	J:\GC06B\DATA\102803\1028F018.D	10/28/03	23:01
Method Blank	KWG0317355-4	J:\GC06B\DATA\102803\1028F020.D	10/29/03	00:04
Trip Blank	K2308419-011	J:\GC06B\DATA\102803\1028F021.D	10/29/03	00:36
SW-1	K2308419-001	J:\GC06B\DATA\102803\1028F022.D	10/29/03	01:08
SW-2	K2308419-002	J:\GC06B\DATA\102803\1028F023.D	10/29/03	01:40
SW-3	K2308419-003	J:\GC06B\DATA\102803\1028F024.D	10/29/03	02:11
SW-4	K2308419-004	J:\GC06B\DATA\102803\1028F025.D	10/29/03	02:43
SW-4-Dup	K2308419-005	J:\GC06B\DATA\102803\1028F026.D	10/29/03	03:15
SW-5	K2308419-006	J:\GC06B\DATA\102803\1028F029.D	10/29/03	04:50
SW-6	K2308419-008	J:\GC06B\DATA\102803\1028F030.D	10/29/03	05:22
SW-7	K2308419-009	J:\GC06B\DATA\102803\1028F031.D	10/29/03	05:54
SW-8	K2308419-010	J:\GC06B\DATA\102803\1028F032.D	10/29/03	06:25

Organic Analysis:
BTEX

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-1	**Units:**	ug/L
Lab Code:	K2308419-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F022.D
Lab ID: K2308419-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 01:08
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F022.D\1028R022.D
Lab ID: K2308419-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 01:08
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245411	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F022.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F022.D\1028R022.D			**Vial:**	165
Acqu Date:	10/29/2003 01:08	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-001				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.76	-0.01	522382	4544833	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.25	-0.01	3.27	-0.01	1036088	8696564	95.59	95.15			96OK
							%Recovery =	96OK	95OK	Limits =	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F022.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F022.D\1028R022.D\data.gc
Acq On : 29 Oct 2003 01:08 am Operator: tf
Sample : k2308419-001 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.76	522382	4544833	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.25	3.27	1036088	8696564	95.594	95.147
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

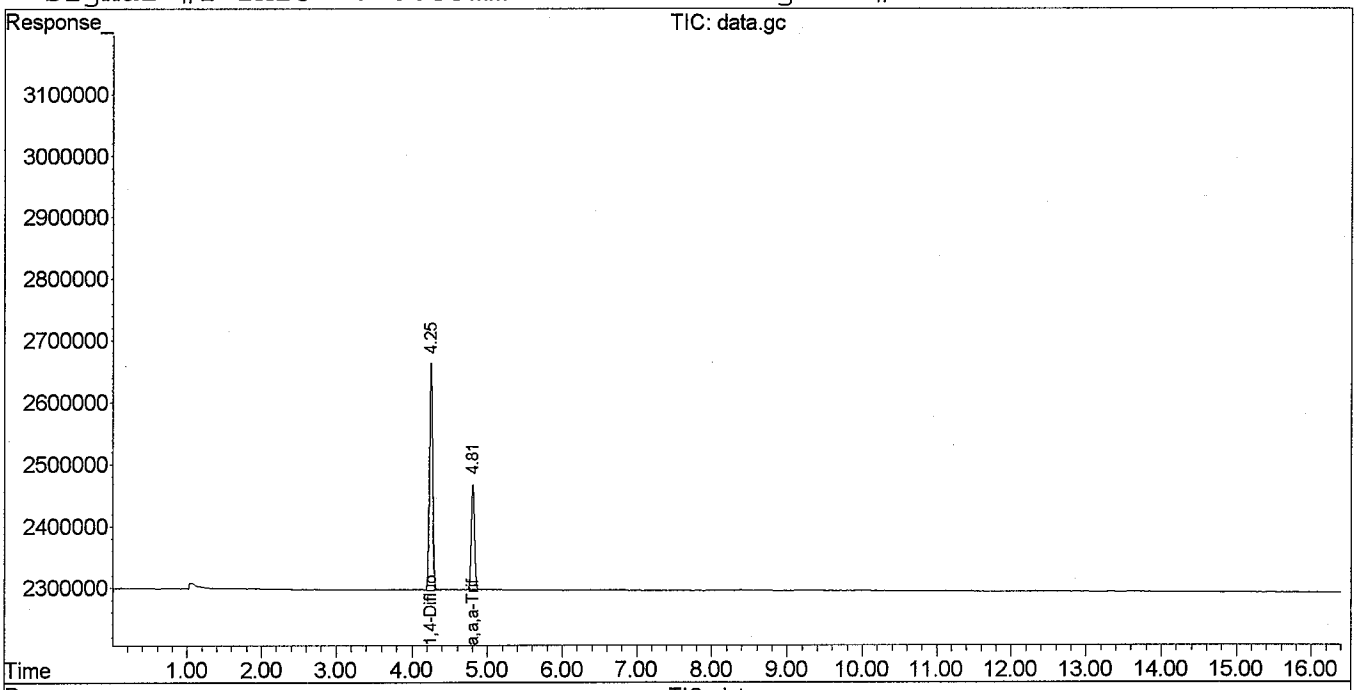
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

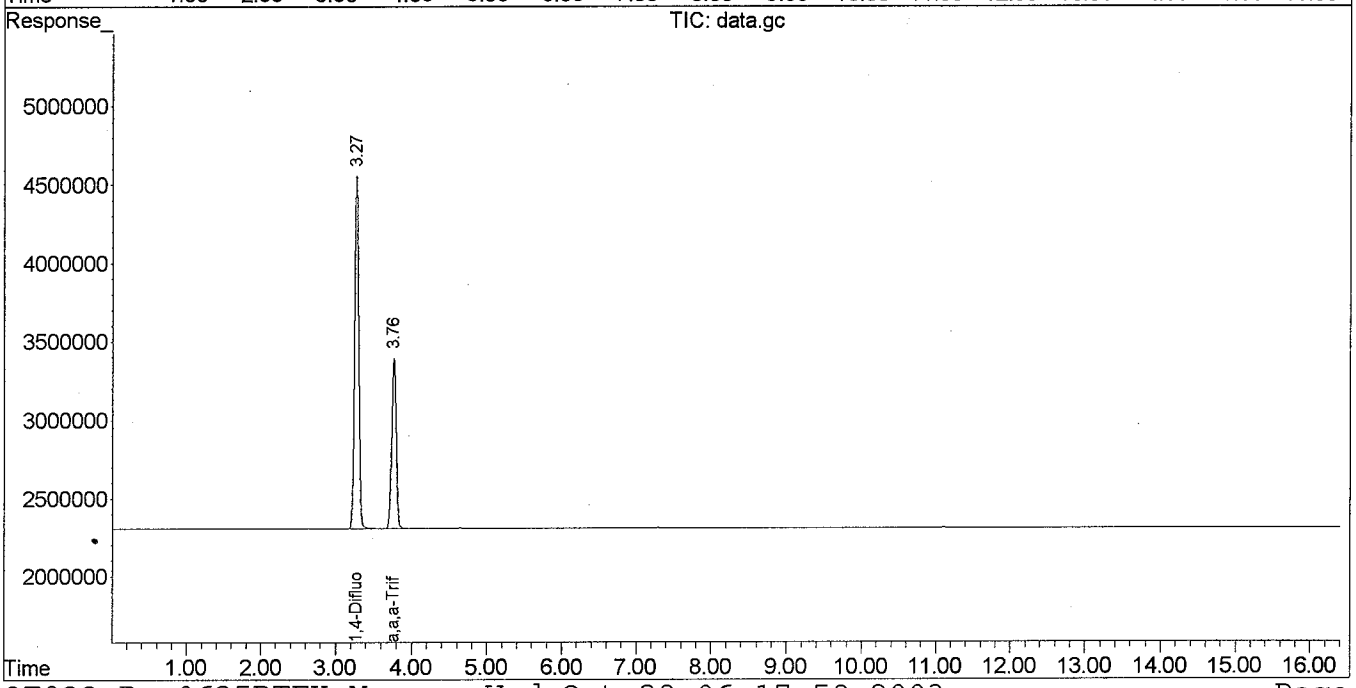
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F022.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F022.D\1028R022.D\data.gc
Acq On : 29 Oct 2003 01:08 am Operator: tf
Sample : k2308419-001 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

BTEX

Sample Name: SW-2
Lab Code: K2308419-002

Extraction Method: EPA 5030B
Analysis Method: 8021B

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F023.D
Lab ID: K2308419-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 01:40
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/29/03

Secondary Review: [signature]

Exception Report

Data File: J:\GC06B\DATA\102803\1028F023.D\1028R023.D
Lab ID: K2308419-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 01:40
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245415	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F023.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F023.D\1028R023.D			**Vial:**	165
Acqu Date:	10/29/2003 01:40	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-002				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.77	523999	4545964	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.28	1043592	8755931	95.99	95.77			96OK
				%Recovery =		96OK	96OK	**Limits =**	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F023.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F023.D\1028R023.D\data.gc
Acq On : 29 Oct 2003 01:40 am Operator: tf
Sample : k2308419-002 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:47 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.77	523999	4545964	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.28	1043592	8755931	95.989	95.773
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

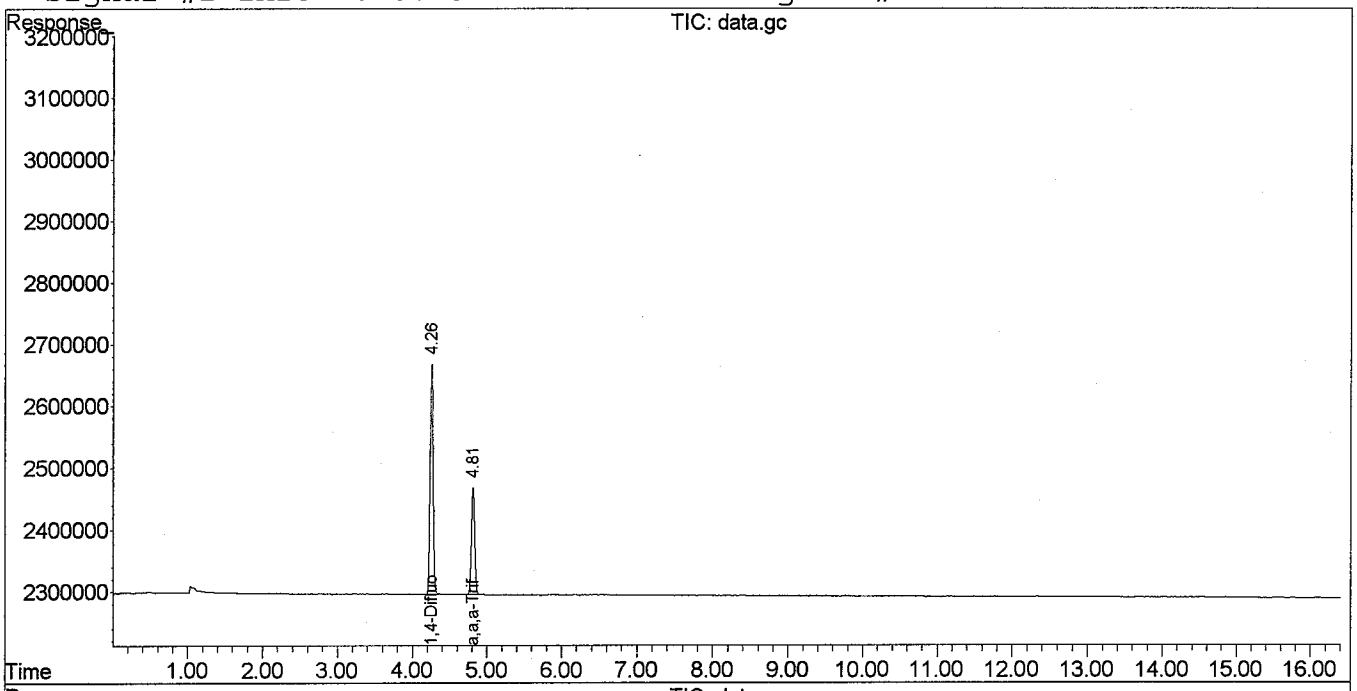
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

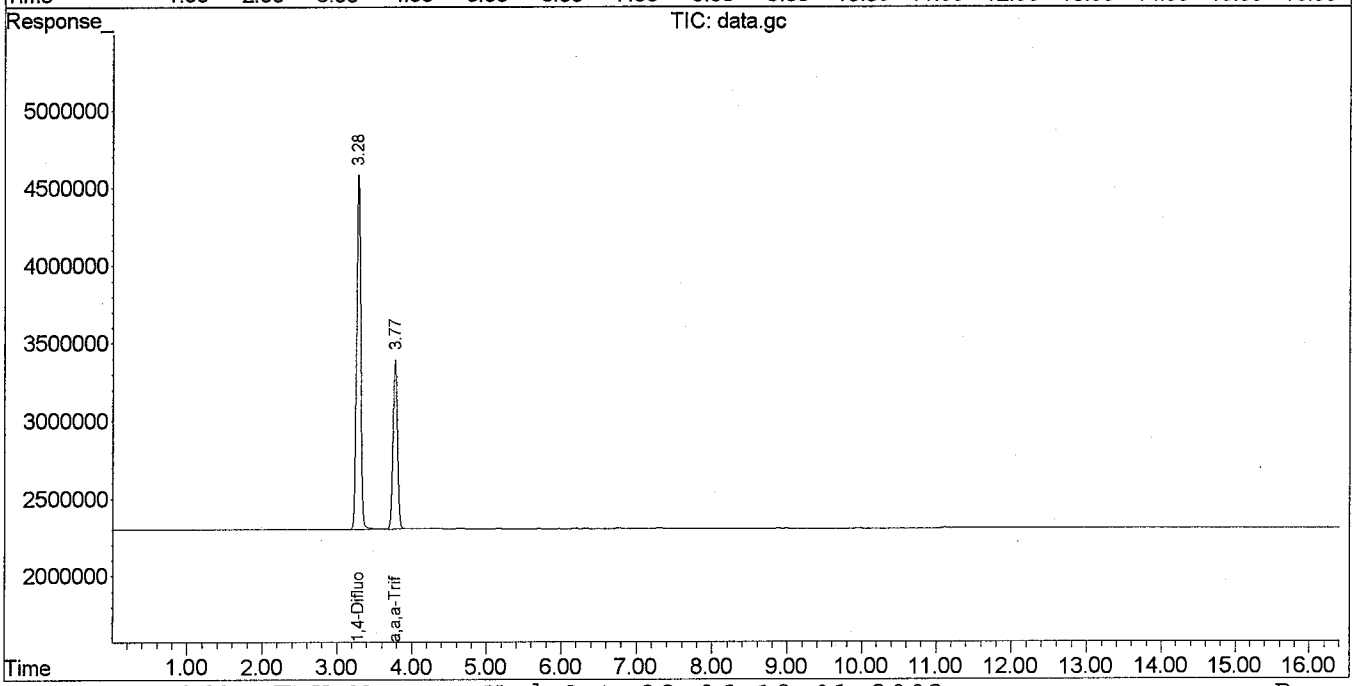
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F023.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F023.D\1028R023.D\data.gc
Acq On : 29 Oct 2003 01:40 am Operator: tf
Sample : k2308419-002 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-3	**Units:**	ug/L
Lab Code:	K2308419-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F024.D
Lab ID: K2308419-003
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 02:11
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F024.D\1028R024.D
Lab ID: K2308419-003
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 02:11
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245412	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F024.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F024.D\1028R024.D			**Vial:**	165
Acqu Date:	10/29/2003 02:11	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-003				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81 -0.01	3.78 +0.01	533858	4530485	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.29 +0.01	1054128	8726563	95.17	95.78			96OK
					%Recovery =	95OK	96OK	Limits =	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F024.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F024.D\1028R024.D\data.gc
Acq On : 29 Oct 2003 02:11 am Operator: tf
Sample : k2308419-003 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:49 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.78	533858	4530485	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.29	1054128	8726563	95.167	95.778
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

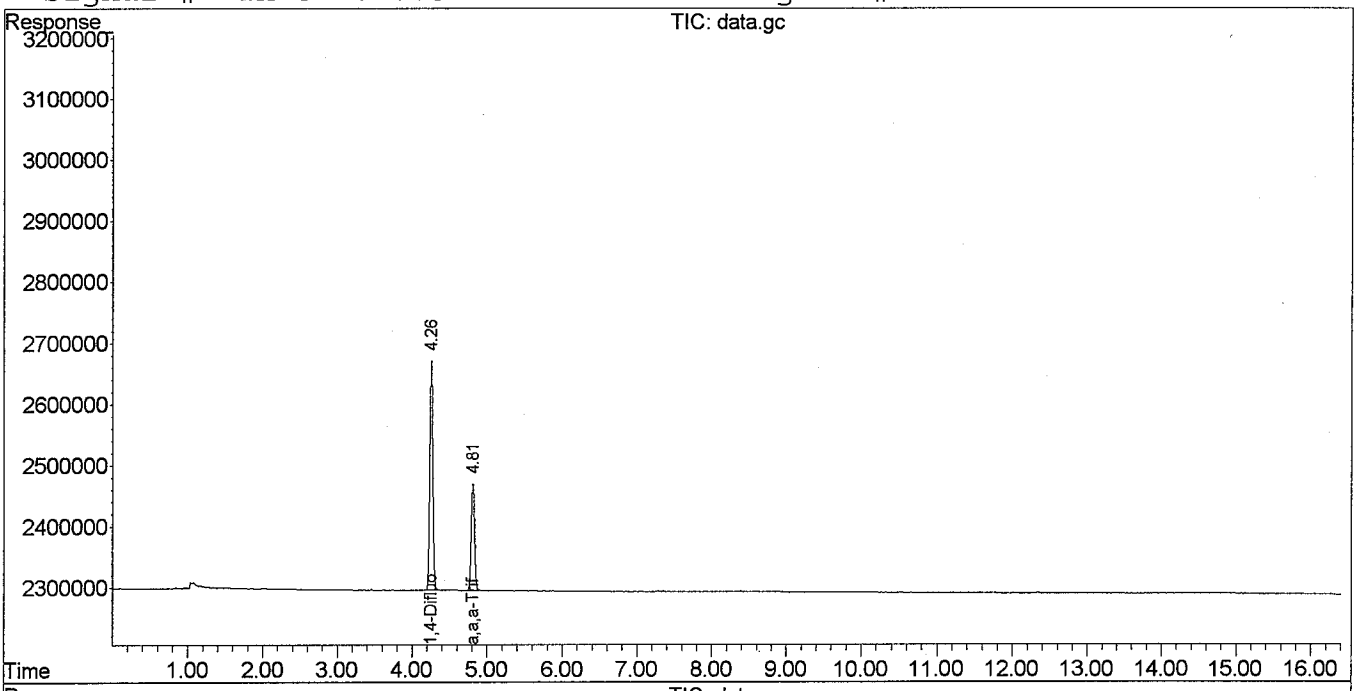
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

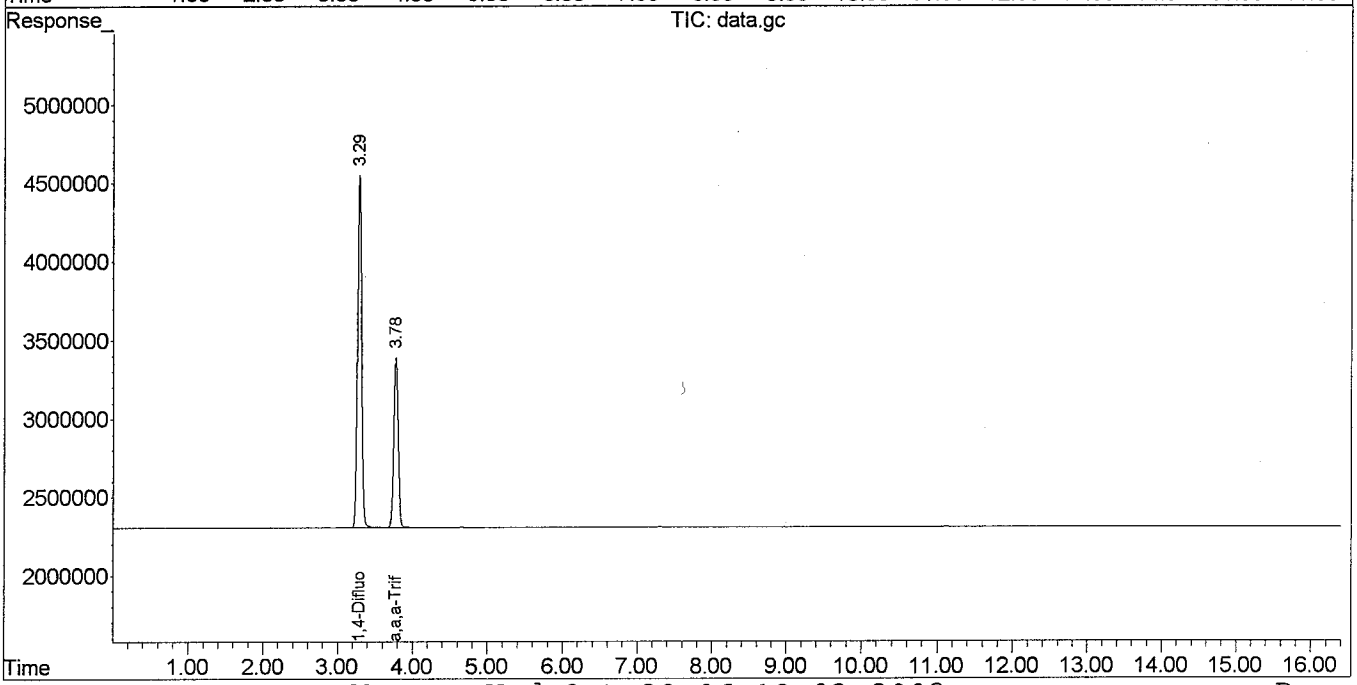
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F024.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F024.D\1028R024.D\data.gc
Acq On : 29 Oct 2003 02:11 am Operator: tf
Sample : k2308419-003 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-4	**Units:**	ug/L
Lab Code:	K2308419-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F025.D
Lab ID: K2308419-004
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 02:43
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F025.D\1028R025.D
Lab ID: K2308419-004
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 02:43
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/29/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245416	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F025.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F025.D\1028R025.D			**Vial:**	165
Acqu Date:	10/29/2003 02:43	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-004				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.77	517853	4518175	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.25	-0.01	3.28	1034263	8666678	96.26	95.38			96OK
						%Recovery =	96OK	95OK	Limits =	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F025.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F025.D\1028R025.D\data.gc
Acq On : 29 Oct 2003 02:43 am Operator: tf
Sample : k2308419-004 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:52 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.77	517853	4518175	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.25	3.28	1034263	8666678	96.260	95.380
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

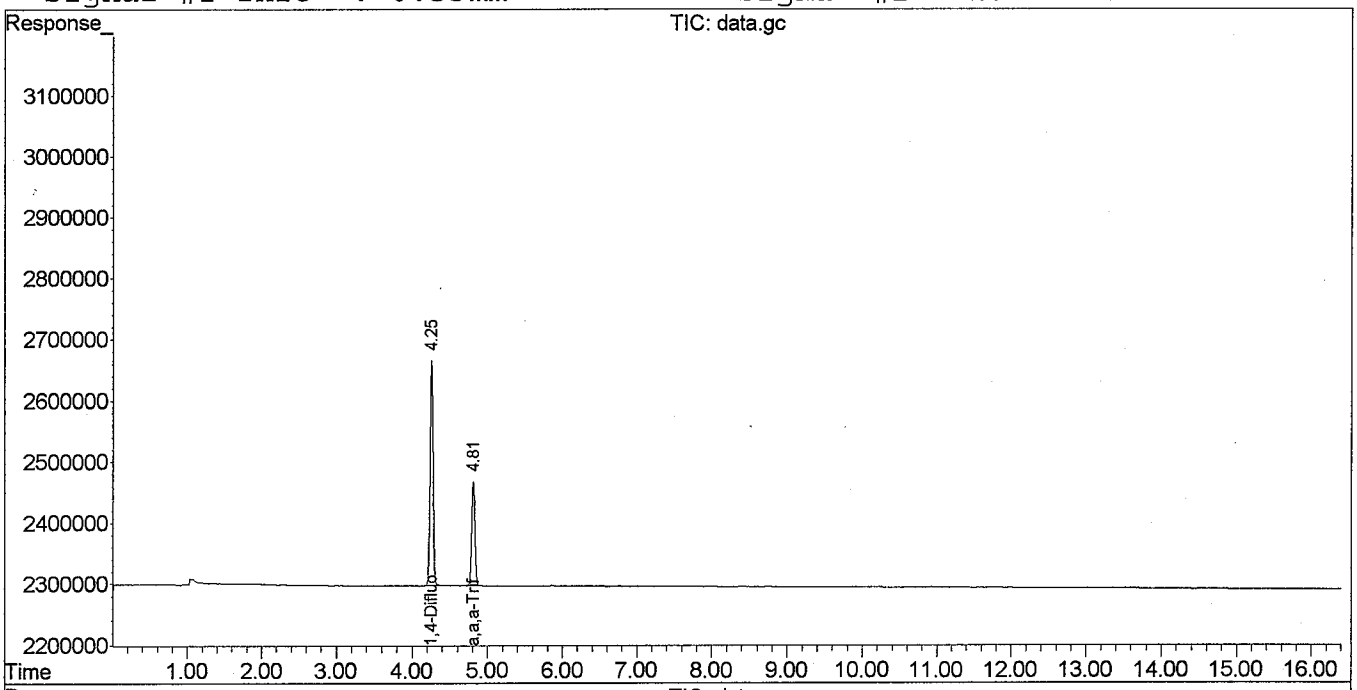
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

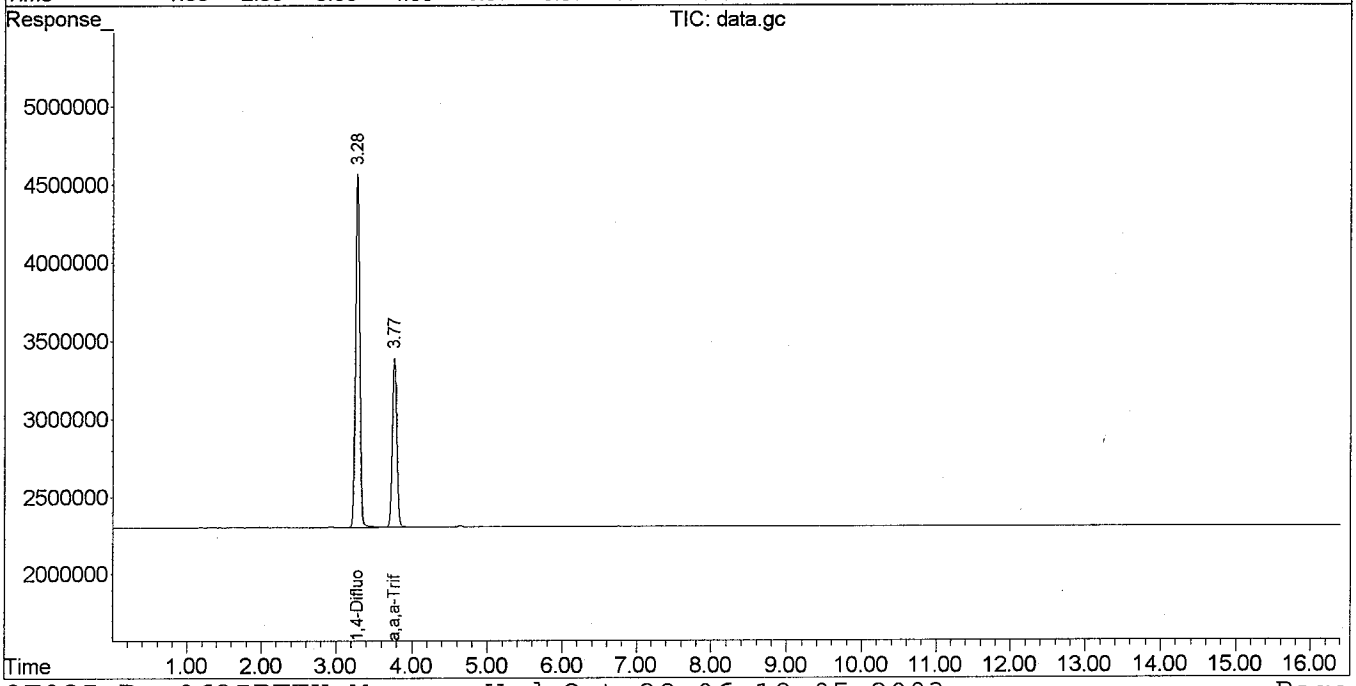
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F025.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F025.D\1028R025.D\data.gc
Acq On : 29 Oct 2003 02:43 am Operator: tf
Sample : k2308419-004 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-4-Dup	**Units:**	ug/L
Lab Code:	K2308419-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F026.D
Lab ID: K2308419-005
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 03:15
Date Quantitated: 10/29/2003 06:43
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: Yoholoz

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F026.D\1028R026.D
Lab ID: K2308419-005
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 03:15
Date Quantitated: 10/29/2003 06:43
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245413	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F026.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F026.D\1028R026.D			**Vial:**	165
Acqu Date:	10/29/2003 03:15	**Quant Date:**	10/29/2003 06:43	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-005				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.77	525962	4530703	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.28	1056458	8708184	96.81	95.57			97OK
					%Recovery =	97OK	96OK	Limits =	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene				0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene	5.87	-0.01	4.65	5782	36862m	0.2140	0.1580	0.21J	0.16J	**0.21J**
1	Ethylbenzene				0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes				0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene				0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

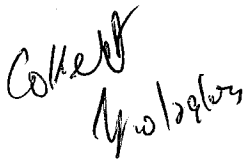
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F026.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F026.D\1028R026.D\data.gc
Acq On : 29 Oct 2003 03:15 am Operator: tf
Sample : k2308419-005 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:54 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.77	525962	4530703	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.28	1056458	8708184	96.810	95.571
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	5.87	4.65	5782	36862	0.214	0.158m#
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.



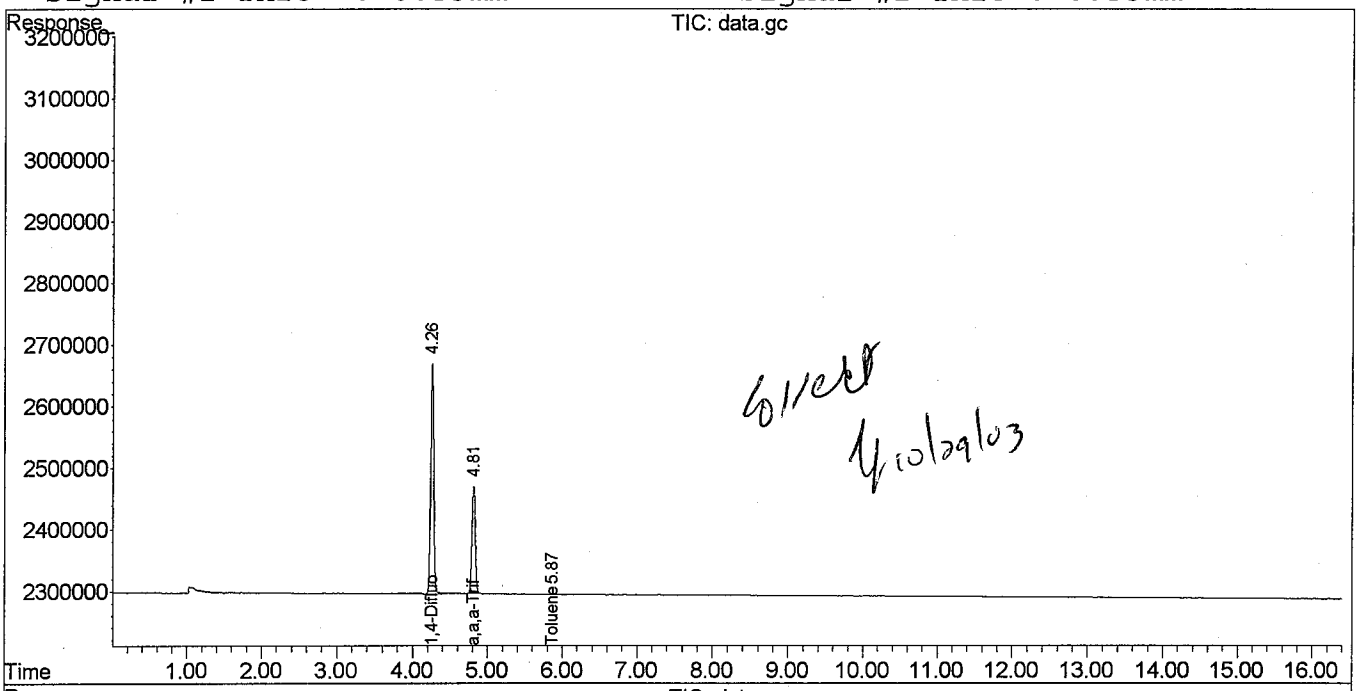
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

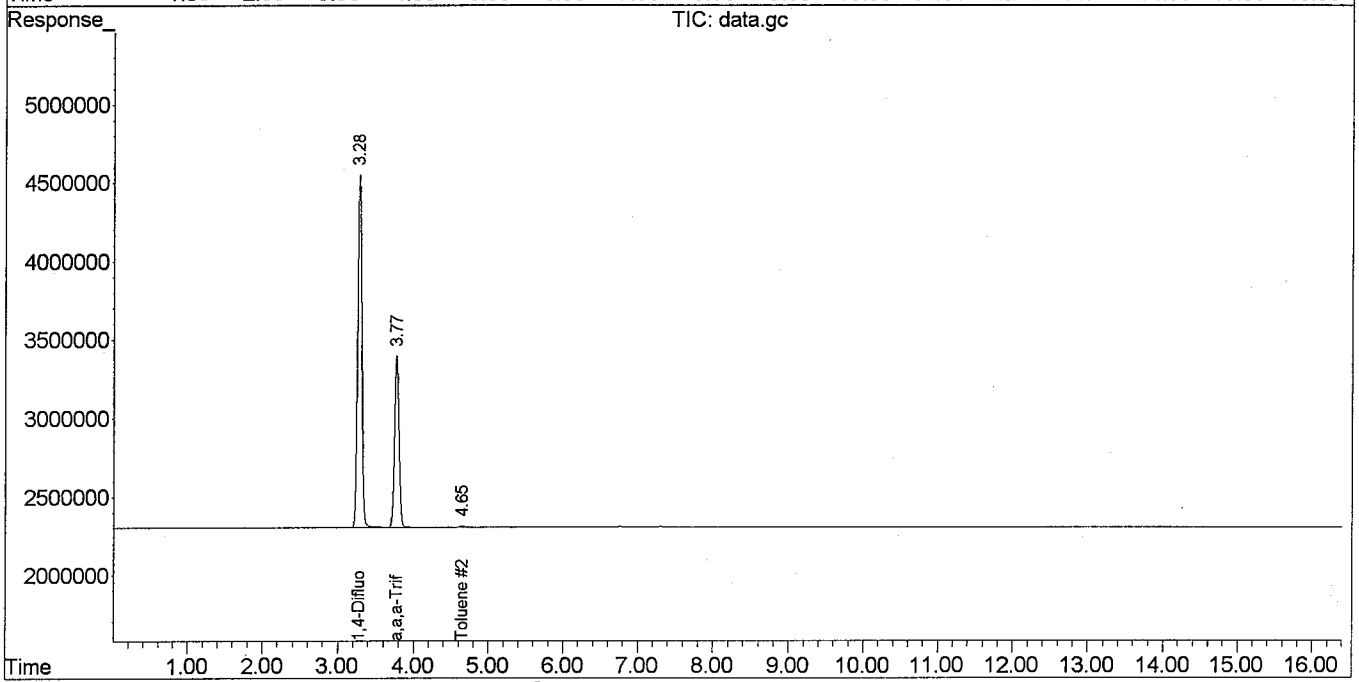
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F026.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F026.D\1028R026.D\data.gc
Acq On : 29 Oct 2003 03:15 am Operator: tf
Sample : k2308419-005 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

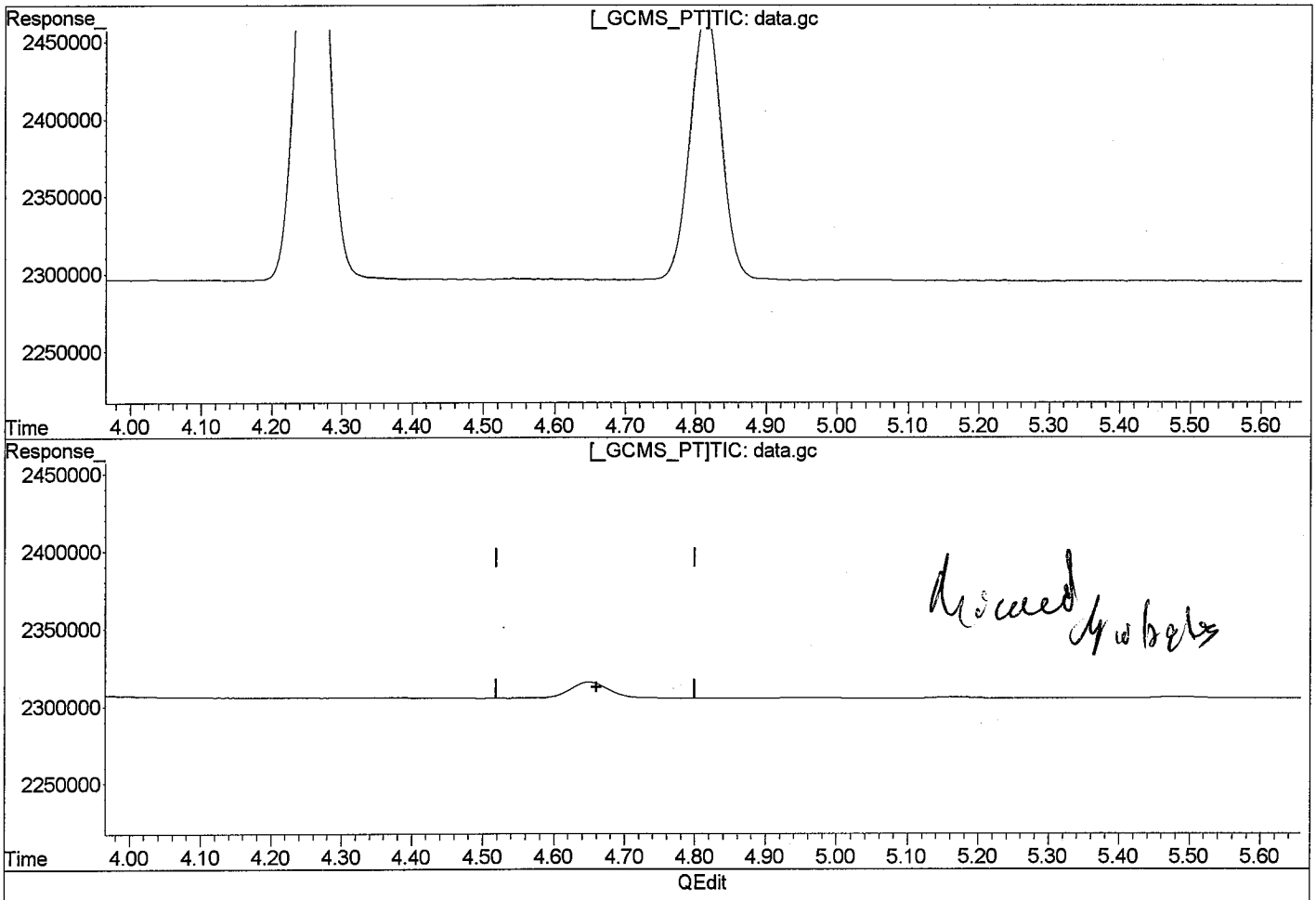




Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\102803\1028F026.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F026.D\1028R026.D\data.gc
Acq On : 29 Oct 2003 03:15 am Operator: tf
Sample : k2308419-005 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration



Missed by both

8/03/03

(5) Toluene (T)

5.87min 0.214ug/L

response 5782

(5) Toluene #2 (T)

0.00min 0.000ug/L

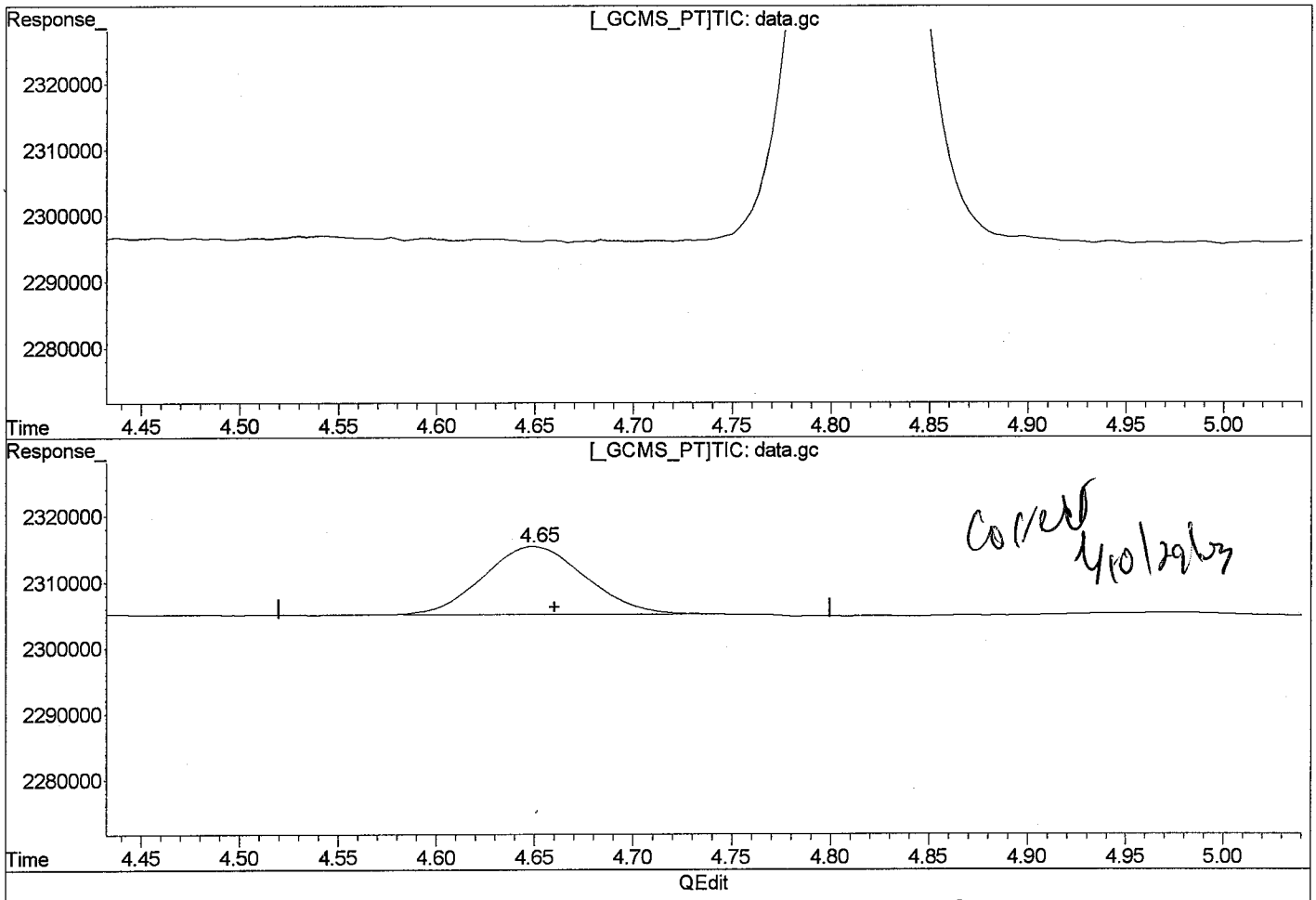
response 0

(+) = Expected Retention Time
1028F026.D 0625BTEX.M Wed Oct 29 06:45:23 2003

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\102803\1028F026.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F026.D\1028R026.D\data.gc
Acq On : 29 Oct 2003 03:15 am Operator: tf
Sample : k2308419-005 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration



Correct 4/10/2026

(5) Toluene (T)

5.87min 0.214ug/L

response 5782

(5) Toluene #2 (T)

4.65min 0.158ug/L m

response 36862

(+) = Expected Retention Time
1028F026.D 0625BTEX.M Wed Oct 29 06:45:34 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-5	**Units:**	ug/L
Lab Code:	K2308419-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F029.D
Lab ID: K2308419-006
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 04:50
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F029.D\1028R029.D
Lab ID: K2308419-006
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 04:50
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/29/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245417	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F029.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F029.D\1028R029.D			**Vial:**	165
Acqu Date:	10/29/2003 04:50	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-006				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82 +0.01	3.78 +0.01	523236	4509732	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2	Rpt
1	1,4-Difluorobenzene	4.26	3.29 +0.01	1052914	8744565	96.99	96.42	97OK
				%Recovery =		97OK	96OK	**Limits =** 84-114

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F029.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F029.D\1028R029.D\data.gc
Acq On : 29 Oct 2003 04:50 am Operator: tf
Sample : k2308419-006 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:15:01 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.78	523236	4509732	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.29	1052914	8744565	96.988	96.417
3)	S	Bromofluorobenze	8.40	7.30	17023	136111	0.658	0.658
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

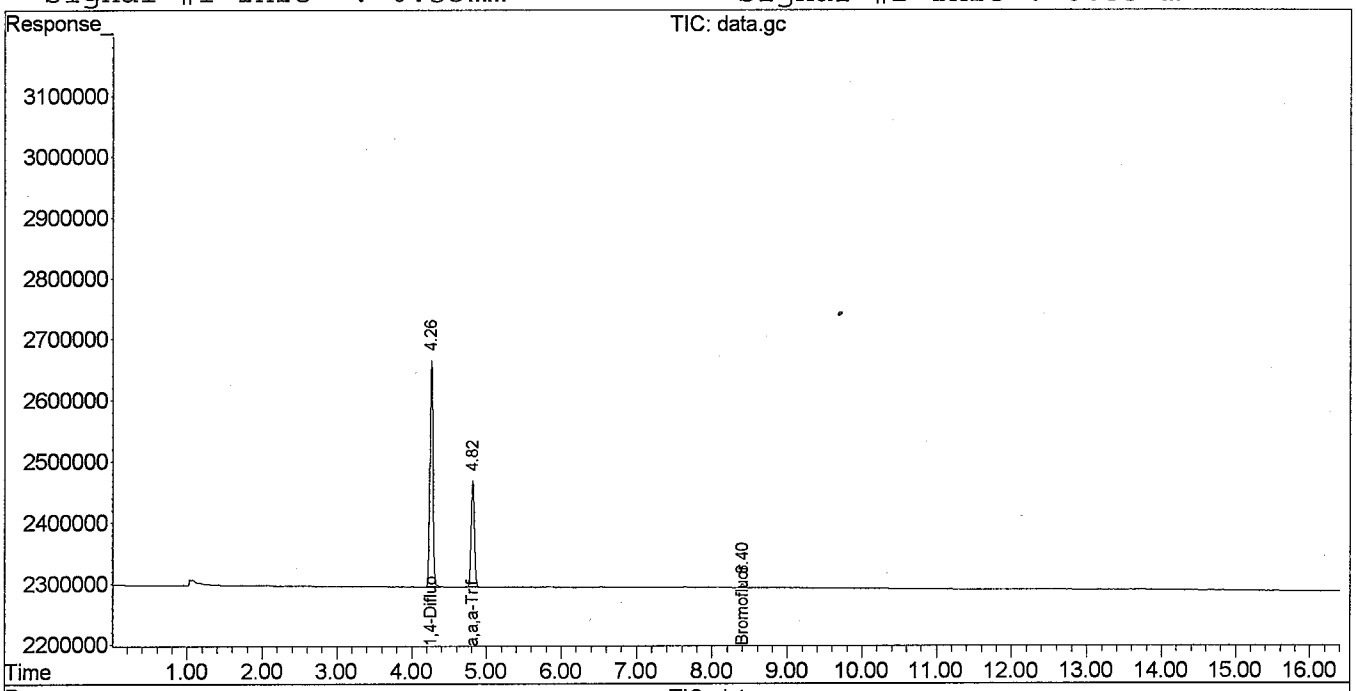
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

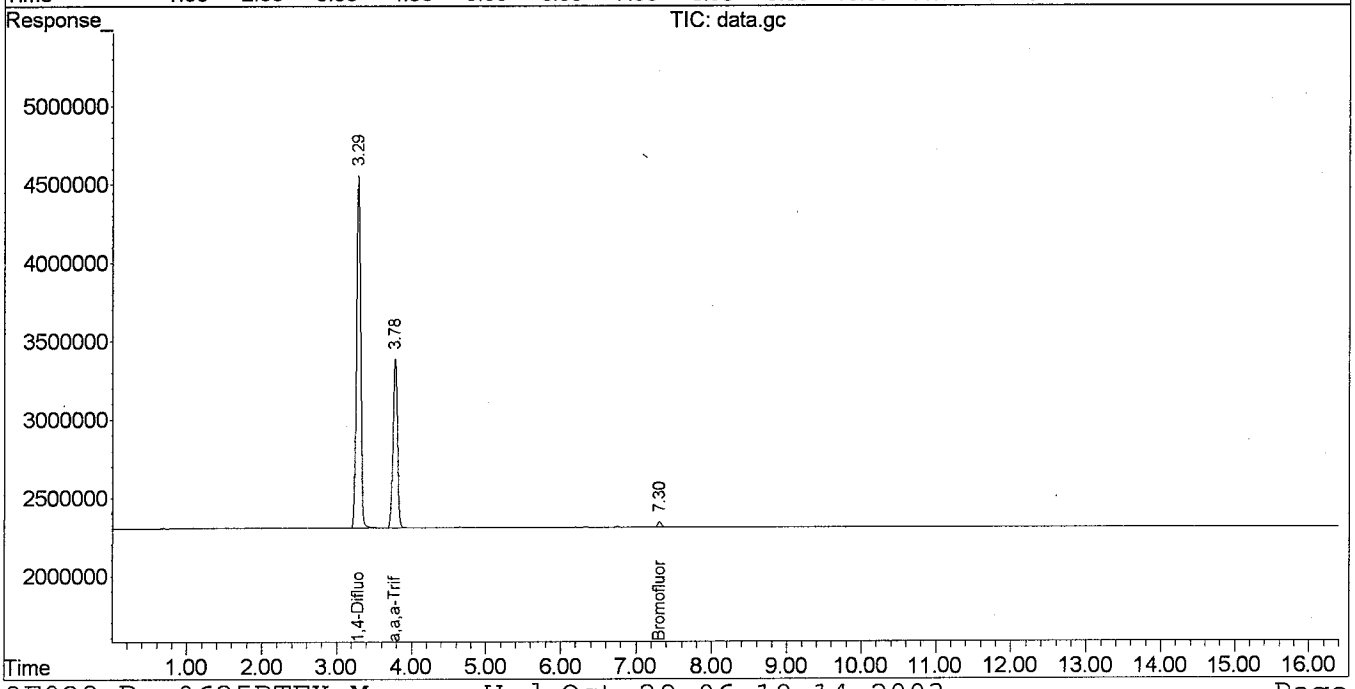
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F029.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F029.D\1028R029.D\data.gc
Acq On : 29 Oct 2003 04:50 am Operator: tf
Sample : k2308419-006 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-6	**Units:**	ug/L
Lab Code:	K2308419-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F030.D
Lab ID: K2308419-008
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 05:22
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F030.D\1028R030.D
Lab ID: K2308419-008
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 05:22
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/29/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245418	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F030.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F030.D\1028R030.D			**Vial:**	165
Acqu Date:	10/29/2003 05:22	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-008				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82	+0.01	3.78	+0.01	518849	4542473	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.29	+0.01	1038192	8743490	96.44	95.71			96OK
						%Recovery =	96OK	96OK	Limits =	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F030.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F030.D\1028R030.D\data.gc
Acq On : 29 Oct 2003 05:22 am Operator: tf
Sample : k2308419-008 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:15:03 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.78	518849	4542473	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.29	1038192	8743490	96.440	95.710
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

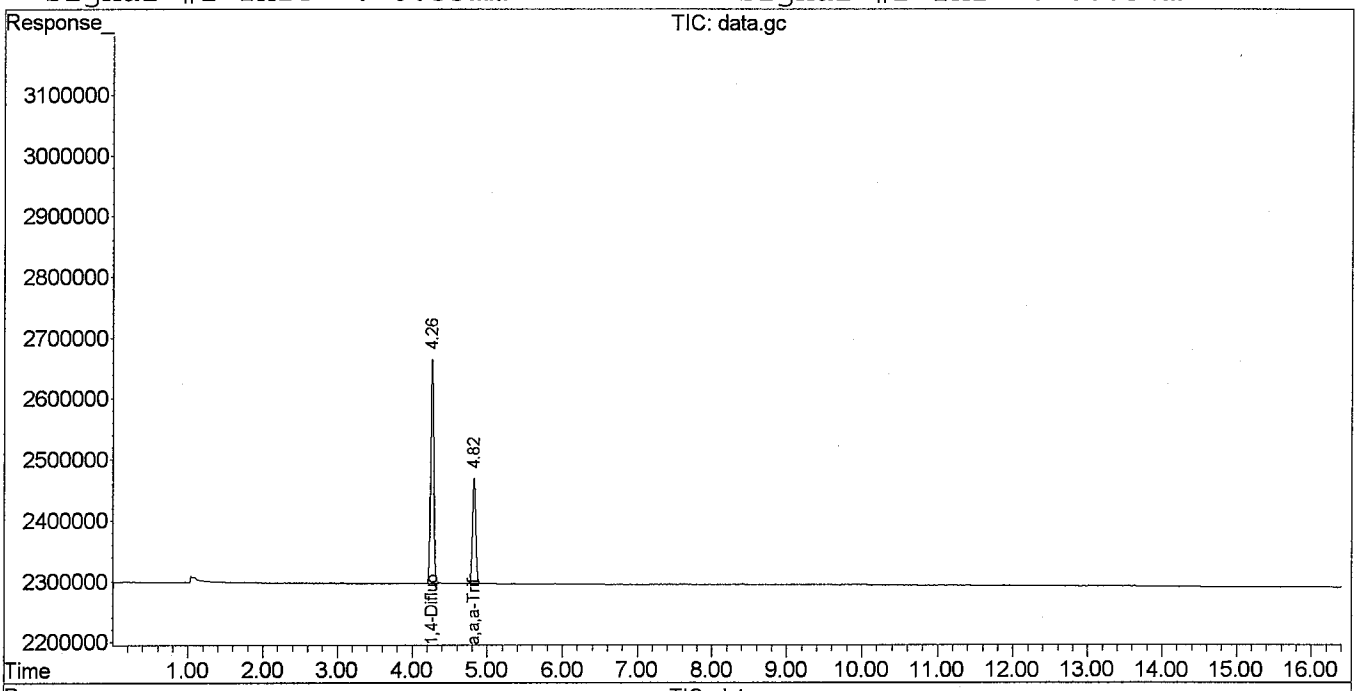
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

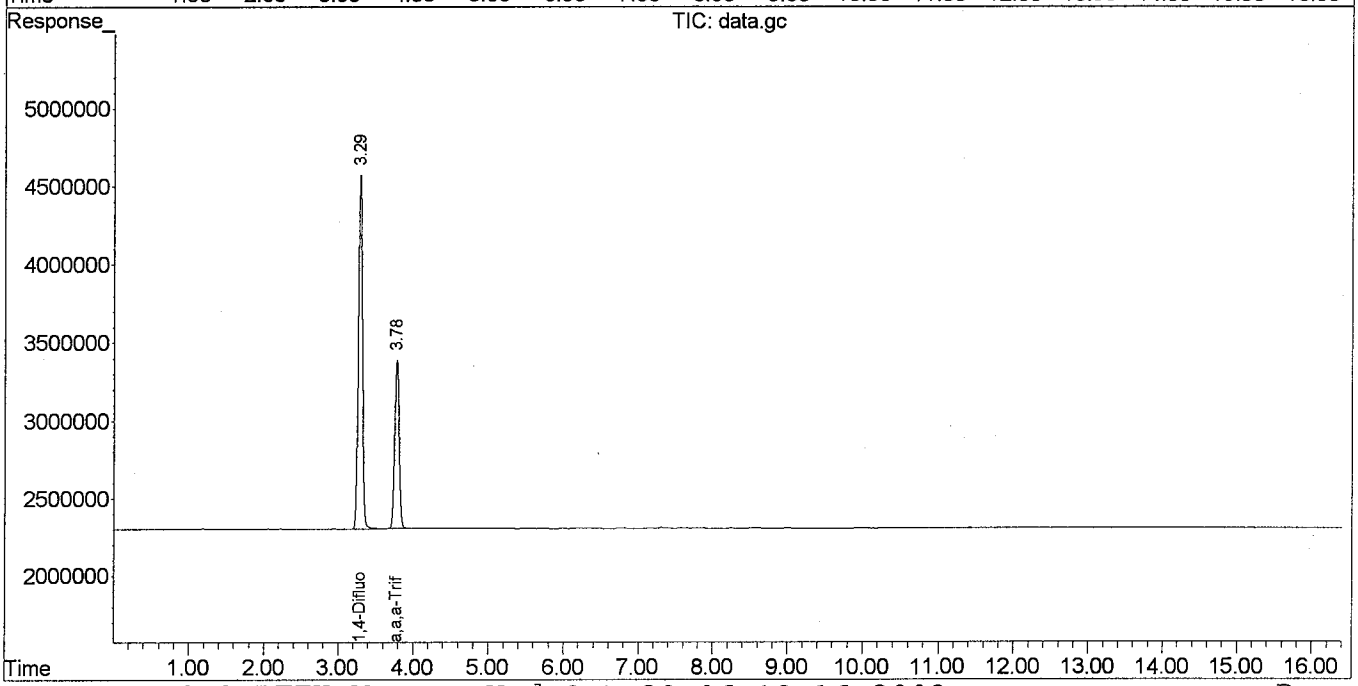
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F030.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F030.D\1028R030.D\data.gc
Acq On : 29 Oct 2003 05:22 am Operator: tf
Sample : k2308419-008 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-7	**Units:**	ug/L
Lab Code:	K2308419-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F031.D
Lab ID: K2308419-009
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 05:54
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F031.D\1028R031.D
Lab ID: K2308419-009
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 05:54
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/29/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245419	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F031.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F031.D\1028R031.D			**Vial:**	165
Acqu Date:	10/29/2003 05:54	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-009				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82 +0.01	3.78 +0.01	521210	4515057	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2	Rpt
1	1,4-Difluorobenzene	4.26	3.29 +0.01	1047846	8735339	96.90	96.20	97OK
				%Recovery =		97OK	96OK	**Limits =** 84-114

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F031.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F031.D\1028R031.D\data.gc
Acq On : 29 Oct 2003 05:54 am Operator: tf
Sample : k2308419-009 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:15:06 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

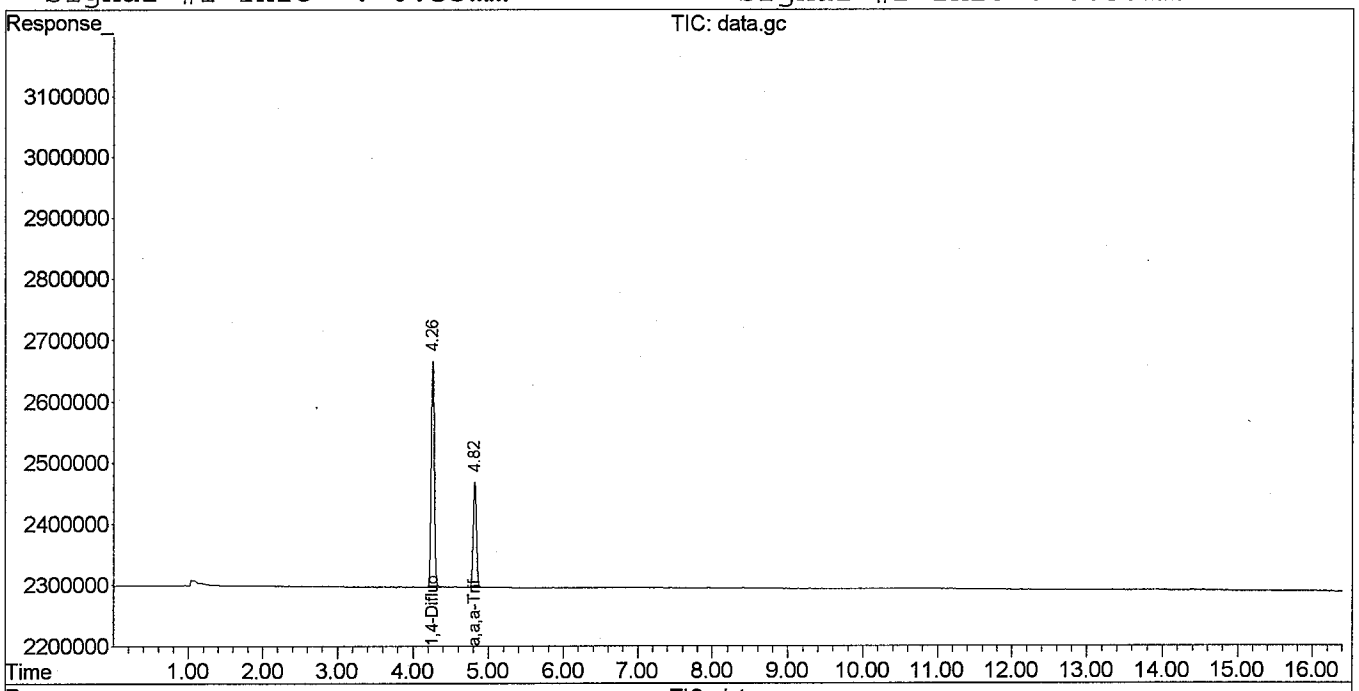
		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.78	521210	4515057	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.29	1047846	8735339	96.896	96.202
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

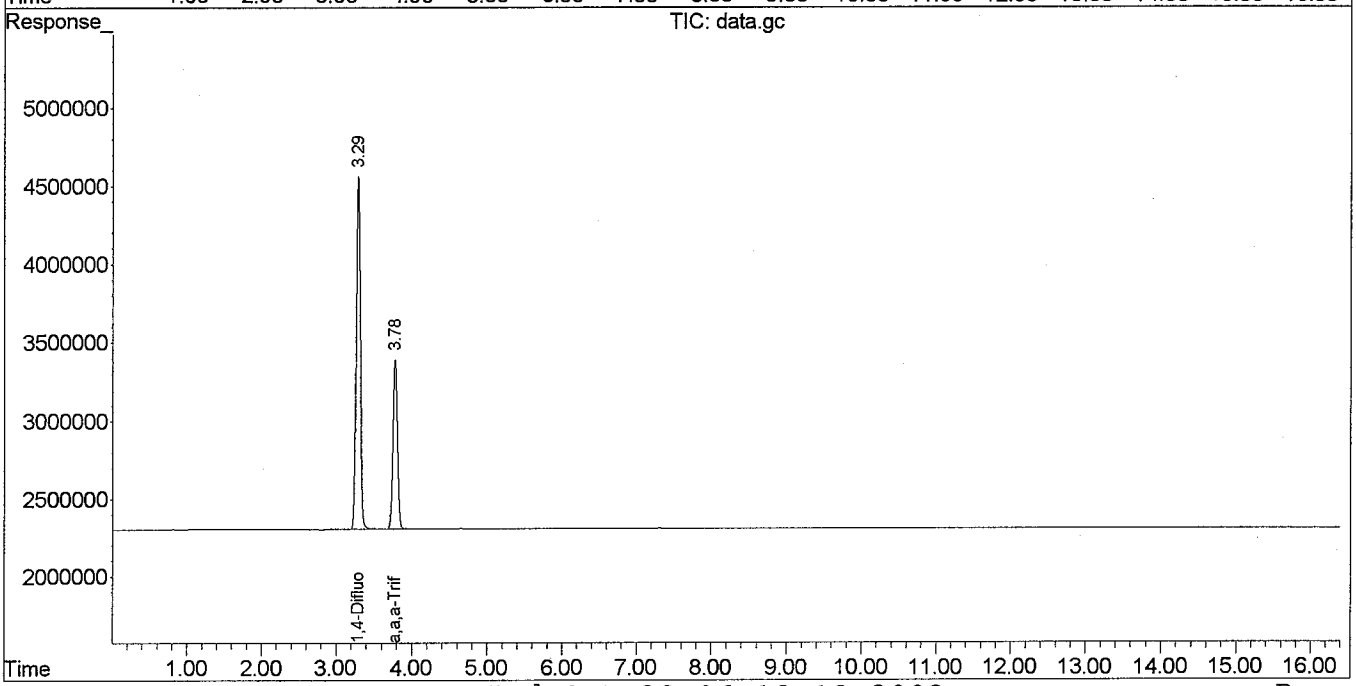
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F031.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F031.D\1028R031.D\data.gc
Acq On : 29 Oct 2003 05:54 am Operator: tf
Sample : k2308419-009 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-8	**Units:**	ug/L
Lab Code:	K2308419-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F032.D
Lab ID: K2308419-010
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 06:25
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F032.D\1028R032.D
Lab ID: K2308419-010
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 06:25
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245414	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F032.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F032.D\1028R032.D			**Vial:**	165
Acqu Date:	10/29/2003 06:25	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-010				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82 +0.01	3.78 +0.01	525645	4523216	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.29 +0.01	1049176	8706984	96.20	95.72			96OK
				%Recovery =		96OK	96OK	**Limits =**	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F032.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F032.D\1028R032.D\data.gc
Acq On : 29 Oct 2003 06:25 am Operator: tf
Sample : k2308419-010 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:15:08 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.78	525645	4523216	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.29	1049176	8706984	96.200	95.716
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

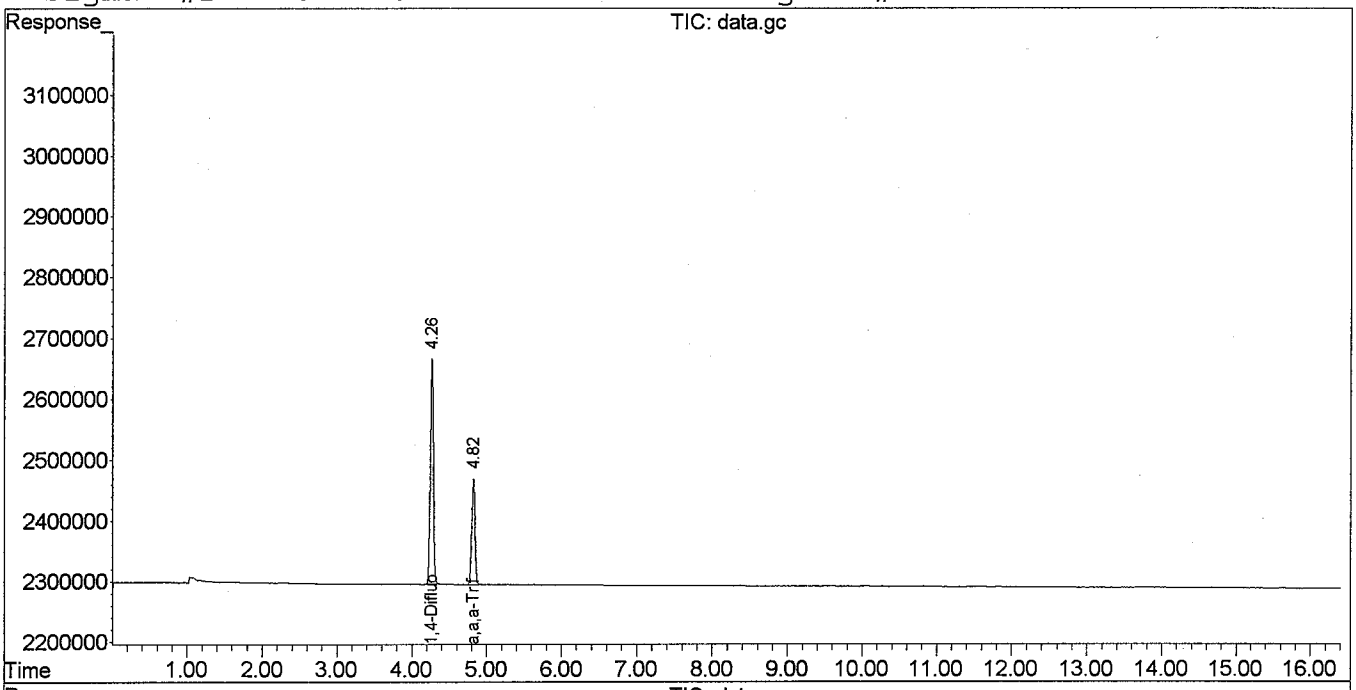
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

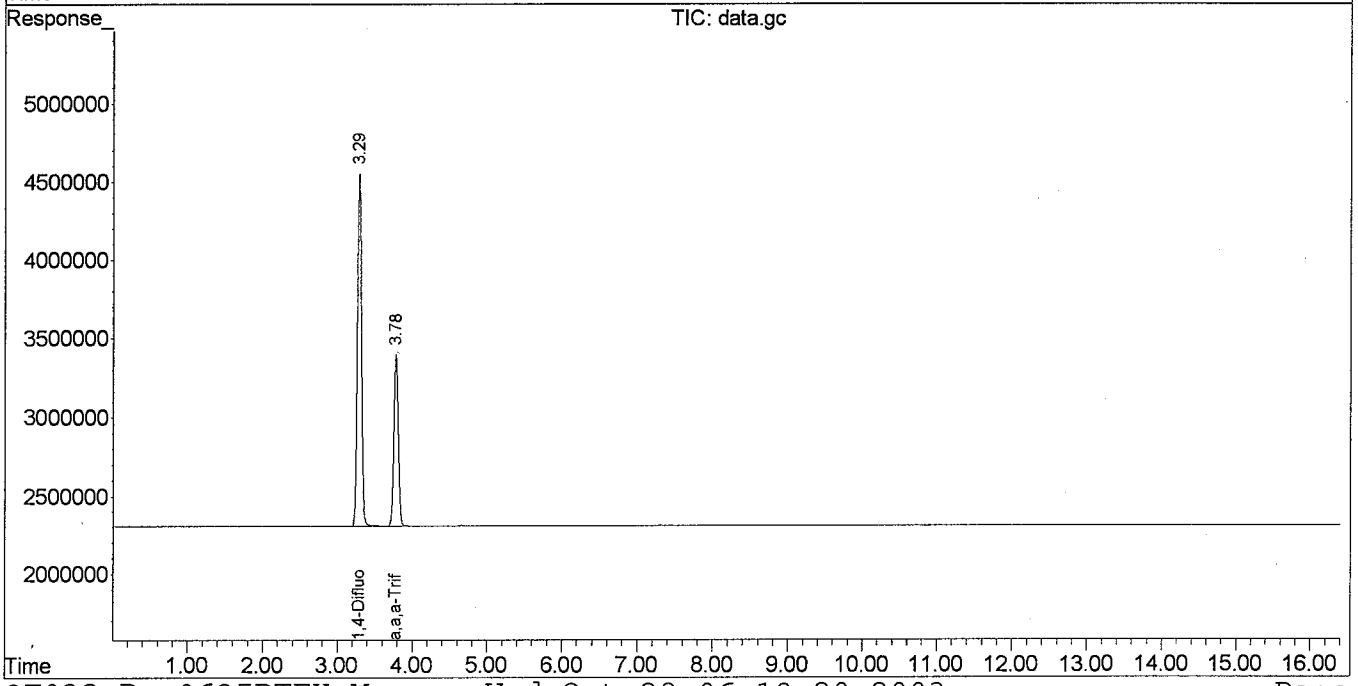
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F032.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F032.D\1028R032.D\data.gc
Acq On : 29 Oct 2003 06:25 am Operator: tf
Sample : k2308419-010 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K2308419-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F021.D
Lab ID: K2308419-011
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 00:36
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F021.D\1028R021.D
Lab ID: K2308419-011
RunType: SMPL
Matrix: WATER

Date Acquired: 10/29/2003 00:36
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	K2308419
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245420	**Prep Date:**	10/29/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1146
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F021.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F021.D\1028R021.D			**Vial:**	165
Acqu Date:	10/29/2003 00:36	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308419-011				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.77		524861	4538890	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.25	-0.01	3.27	-0.01	1046655	8748956	96.11	95.85			96OK
						%Recovery =		96OK	96OK	Limits =	84-114	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F021.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F021.D\1028R021.D\data.gc
Acq On : 29 Oct 2003 00:36 am Operator: tf
Sample : k2308419-011 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.77	524861	4538890	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.25	3.27	1046655	8748956	96.113	95.846
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

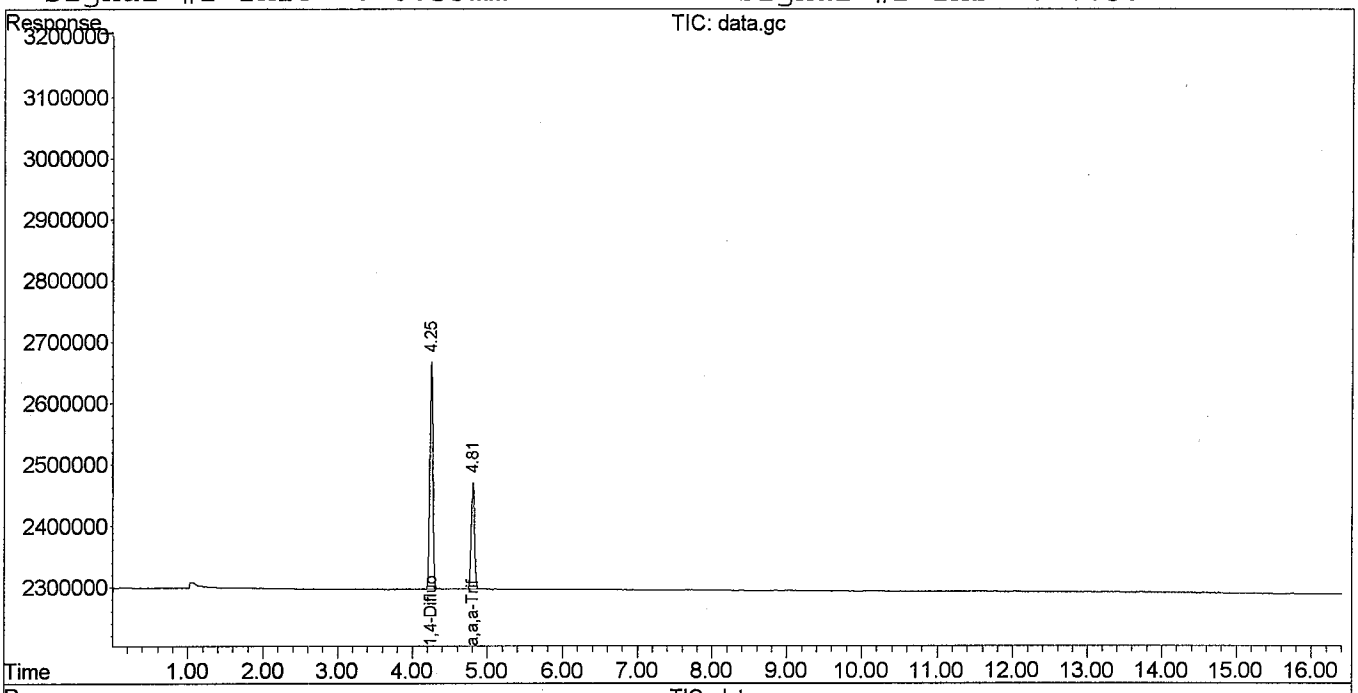
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

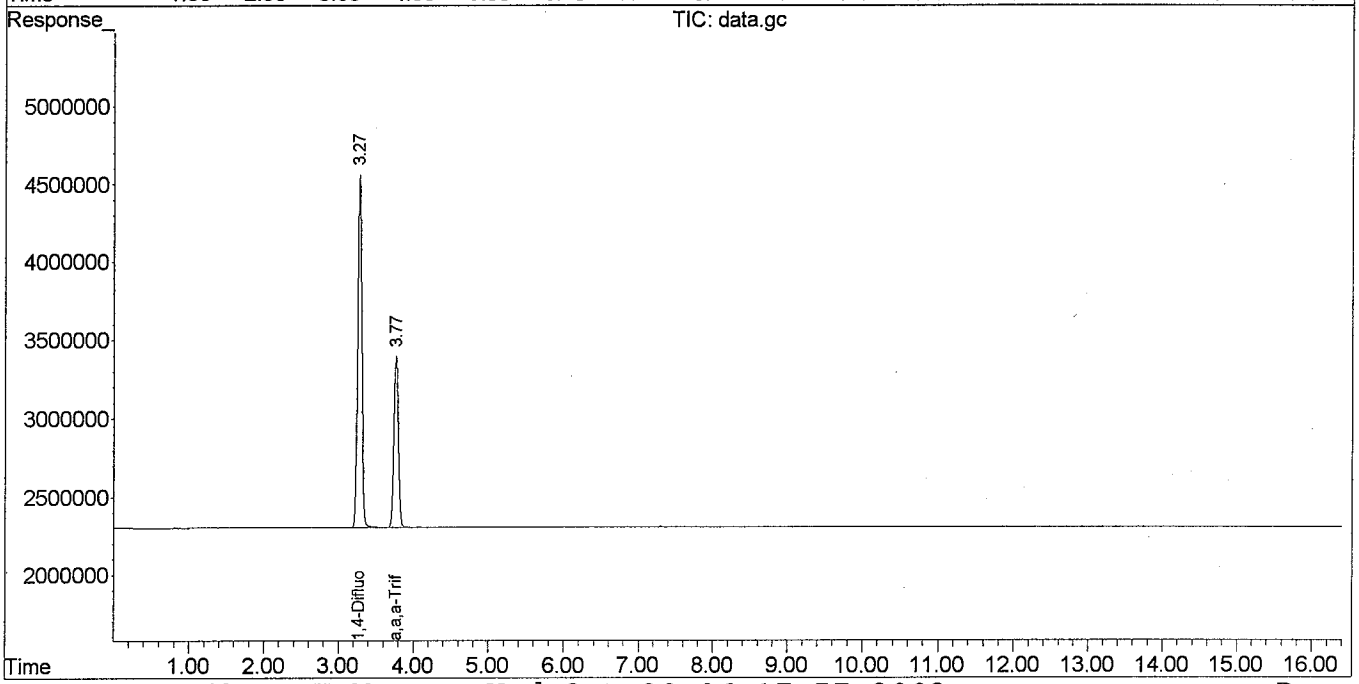
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F021.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F021.D\1028R021.D\data.gc
Acq On : 29 Oct 2003 00:36 am Operator: tf
Sample : k2308419-011 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

BTEX

Sample Name: Method Blank
Lab Code: KWG0317355-4

Extraction Method: EPA 5030B
Analysis Method: 8021B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	1	10/29/03	10/29/03	KWG0317355	
Toluene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
Ethylbenzene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
m,p-Xylenes	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	
o-Xylene	ND	U	1.0	1	10/29/03	10/29/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/29/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F020.D
Lab ID: KWG0317355-4
RunType: MB
Matrix: WATER

Date Acquired: 10/29/2003 00:04
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	0	70	130	NA

Primary Review: 10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F020.D\1028R020.D
Lab ID: KWG0317355-4
RunType: MB
Matrix: WATER

Date Acquired: 10/29/2003 00:04
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	0	70	130	ok

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/28/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
		Prep Date:	10/29/2003		
Prep Ref:	245424				

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F020.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F020.D\1028R020.D			**Vial:**	165
Acqu Date:	10/29/2003 00:04	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317355-4				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.76	-0.01	522794	4570883	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.25	-0.01	3.27	-0.01	1042012	8819468	96.06	95.94			96OK
						%Recovery =		96OK	96OK	Limits =	84-114	
1	Bromofluorobenzene	0.00				0	0		0.0000			0*
						%Recovery =		0*	0*	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.059U	0.059U	0.059U
1	Toluene			0	0	0.0000	0.0000	0.070U	0.070U	0.070U
1	Ethylbenzene			0	0	0.0000	0.0000	0.092U	0.092U	0.092U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
1	o-Xylene			0	0	0.0000	0.0000	0.13U	0.13U	0.13U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F020.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F020.D\1028R020.D\data.gc
Acq On : 29 Oct 2003 00:04 am Operator: tf
Sample : kwg031735-4mb Inst : GC06B
Misc : 5 ml/5ml Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:40 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.76	522794	4570883	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.25	3.27	1042012	8819468	96.064	95.942
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

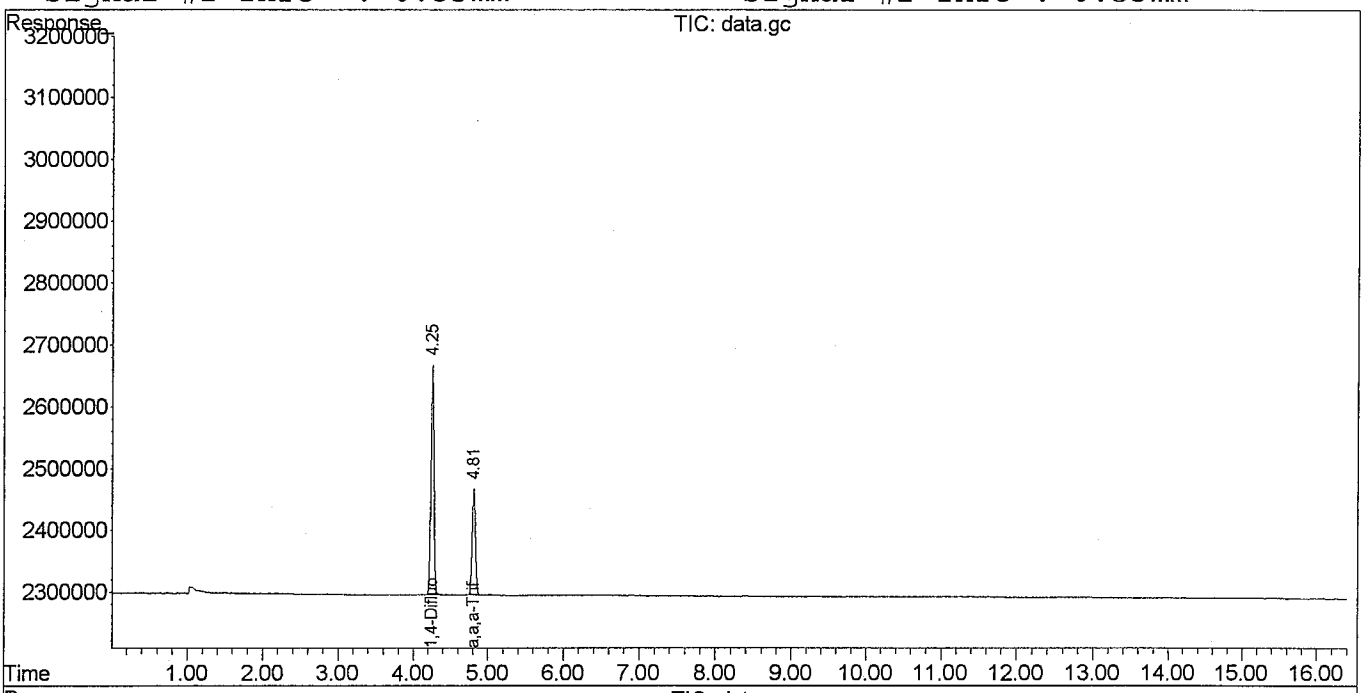
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

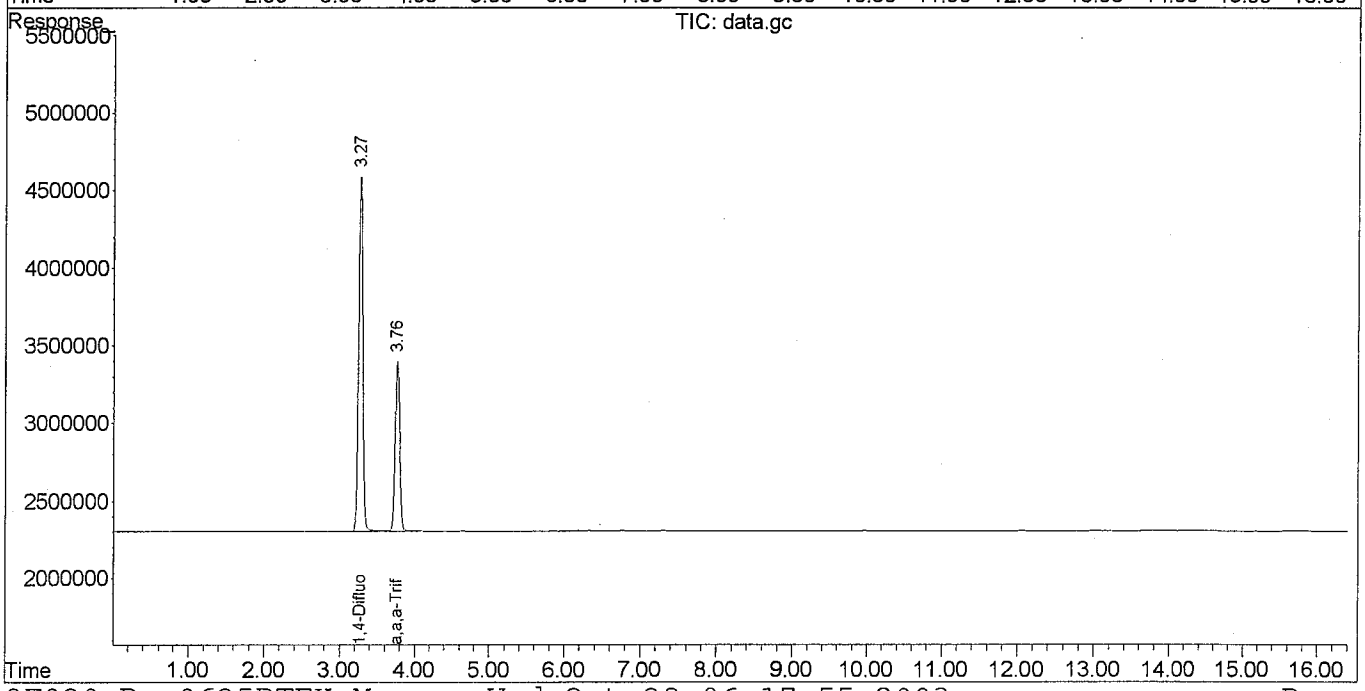
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F020.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F020.D\1028R020.D\data.gc
Acq On : 29 Oct 2003 00:04 am Operator: tf
Sample : kwg031735-4mb Inst : GC06B
Misc : 5 ml w/b/s/o Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-4MS	**Units:**	ug/L
Lab Code:	KWG0317355-1	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**20.2**		0.50	1	10/28/03	10/28/03	KWG0317355	
Toluene	**19.7**		1.0	1	10/28/03	10/28/03	KWG0317355	
Ethylbenzene	**20.4**		1.0	1	10/28/03	10/28/03	KWG0317355	
m,p-Xylenes	**40.1**		1.0	1	10/28/03	10/28/03	KWG0317355	
o-Xylene	**19.8**		1.0	1	10/28/03	10/28/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	84-114	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F017.D
Lab ID: KWG0317355-1 -- K2308419-004MS
RunType: MS
Matrix: WATER

Date Acquired: 10/28/2003 22:30
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	0	70	130	ARP

Primary Review: 10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F017.D\1028R017.D
Lab ID: KWG0317355-1 -- K2308419-004MS
RunType: MS
Matrix: WATER

Date Acquired: 10/28/2003 22:30
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	0	70	130	NA

Primary Review: 10/29/03

Secondary Review: 10/29/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/31/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245421	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F017.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F017.D\1028R017.D			**Vial:**	165
Acqu Date:	10/28/2003 22:30	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317355-1 -- K2308419-004MS				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.77		527462	4590999	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.25	-0.01	3.27	-0.01	1048087	8900036	95.77	96.39			96OK
						%Recovery =		96OK	96OK	Limits =	84-114	
1	Bromofluorobenzene	0.00				0	0		0.0000			0*
						%Recovery =		0*	0*	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene	4.00	-0.01	2.92		566597	4811422	19.43	20.24	19.4	20.2	**20.2**
1	Toluene	5.86	-0.02	4.64	-0.01	534544	4627380	19.69	19.55	19.7	19.5	**19.7**
1	Ethylbenzene	7.42	-0.01	6.19	-0.01	491611	4128336	20.36	19.88	20.4	19.9	**20.4**
1	m,p-Xylenes	7.64	-0.01	6.32	-0.01	1089983	9279738	39.51	40.15	39.5	40.1	**40.1**
1	o-Xylene	8.02		6.73	-0.01	466414	4026216	19.84	18.29	19.8	18.3	**19.8**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F017.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F017.D\1028R017.D\data.gc
Acq On : 28 Oct 2003 10:30 pm Operator: tf
Sample : k2308419-004ms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:33 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.77	527462	4590999	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.25	3.27	1048087	8900036	95.769	96.394
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	4.00	2.92	566597	4811422	19.427	20.240
5)	T	Toluene	5.86	4.64	534544	4627380	19.687	19.547
6)	T	Ethylbenzene	7.42	6.19	491611	4128336	20.361	19.881
7)	T	m,p-Xylenes	7.64	6.32	1089983	9279738	39.510	40.148
8)	T	o-Xylene	8.02	6.73	466414	4026216	19.843	18.292

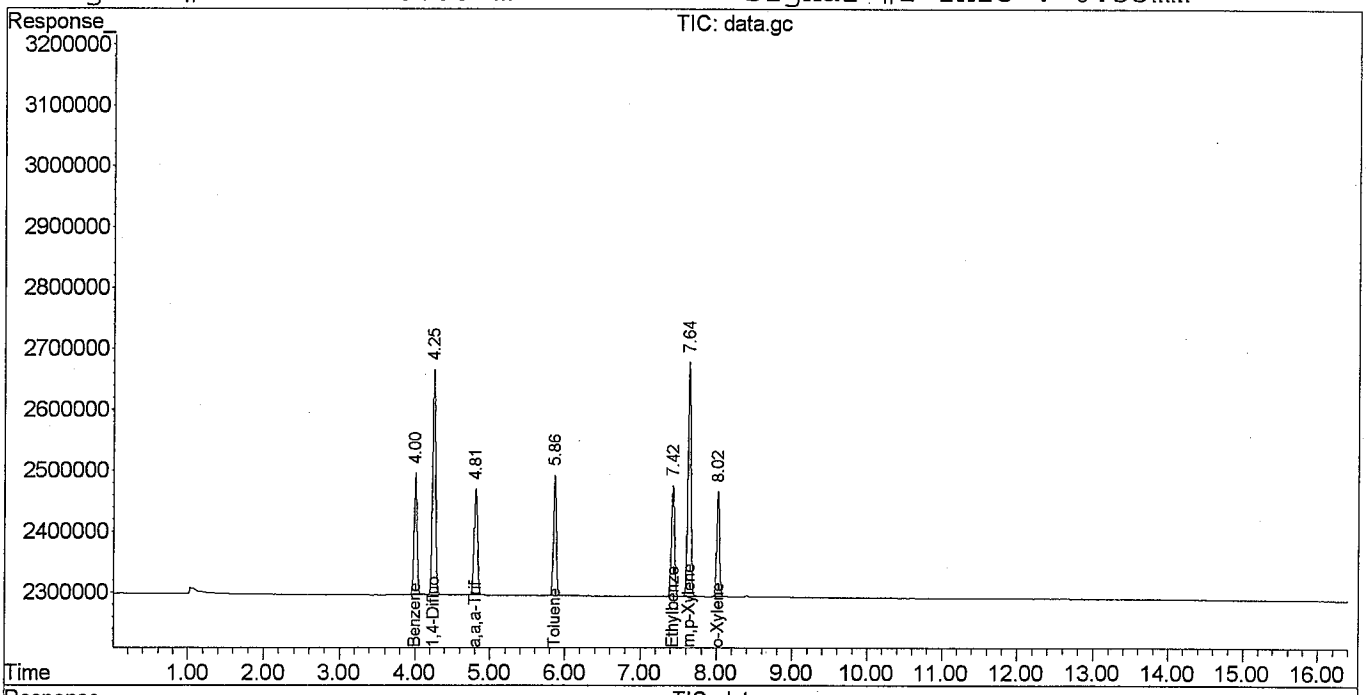
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

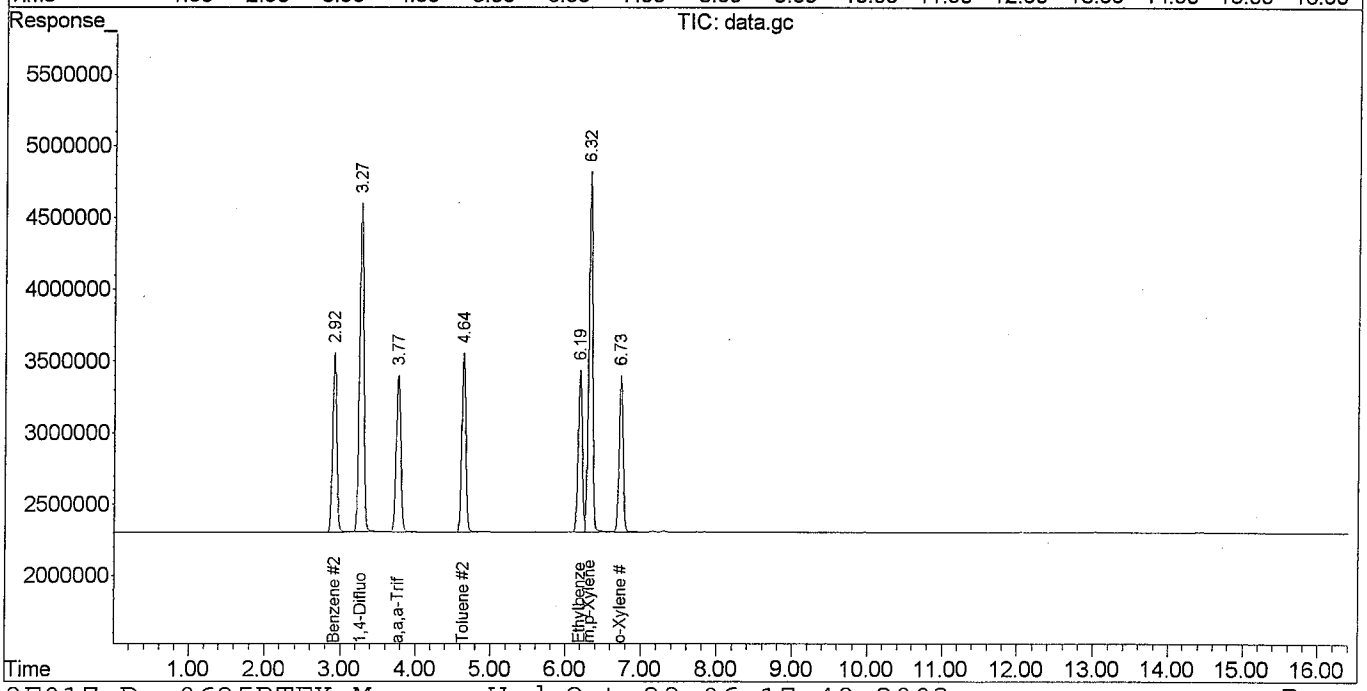
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F017.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F017.D\1028R017.D\data.gc
Acq On : 28 Oct 2003 10:30 pm Operator: tf
Sample : k2308419-004ms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Water	**Date Received:**	10/25/2003

BTEX

Sample Name:	SW-4DMS	**Units:**	ug/L
Lab Code:	KWG0317355-2	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**20.7**		0.50	1	10/28/03	10/28/03	KWG0317355	
Toluene	**20.3**		1.0	1	10/28/03	10/28/03	KWG0317355	
Ethylbenzene	**21.0**		1.0	1	10/28/03	10/28/03	KWG0317355	
m,p-Xylenes	**41.2**		1.0	1	10/28/03	10/28/03	KWG0317355	
o-Xylene	**20.4**		1.0	1	10/28/03	10/28/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F018.D
Lab ID: KWG0317355-2 -- K2308419-004DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/28/2003 23:01
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	0	70	130	DNR

Primary Review: 10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F018.D\1028R018.D
Lab ID: KWG0317355-2 -- K2308419-004DMS
RunType: DMS
Matrix: WATER

Date Acquired: 10/28/2003 23:01
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	0	70	130	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/31/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
Prep Ref:	245422	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F018.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F018.D\1028R018.D			**Vial:**	165
Acqu Date:	10/28/2003 23:01	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317355-2 -- K2308419-004DMS				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81	-0.01	3.76	-0.01	523303	4593968	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.25	-0.01	3.27	-0.01	1040225	8925455	95.81	96.61			97OK
							%Recovery =	96OK	97OK	Limits =	84-114	
1	Bromofluorobenzene	0.00				0	0		0.0000			0*
							%Recovery =	0*	0*	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene	4.00	-0.01	2.92		581980	4927289	20.11	20.71	20.1	20.7	**20.7**
1	Toluene	5.86	-0.02	4.64	-0.01	547017	4785917	20.31	20.20	20.3	20.2	**20.3**
1	Ethylbenzene	7.43		6.19	-0.01	502550	4229712	20.98	20.36	21.0	20.4	**21.0**
1	m,p-Xylenes	7.64	-0.01	6.32	-0.01	1104154	9521661	40.34	41.17	40.3	41.2	**41.2**
1	o-Xylene	8.02		6.74		476261	4149427	20.42	18.84	20.4	18.8	**20.4**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F018.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F018.D\1028R018.D\data.gc
Acq On : 28 Oct 2003 11:01 pm Operator: tf
Sample : k2308419-004dms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:35 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.76	523303	4593968	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.25	3.27	1040225	8925455	95.806	96.607
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	4.00	2.92	581980	4927289	20.113	20.714
5)	T	Toluene	5.86	4.64	547017	4785917	20.306	20.203
6)	T	Ethylbenzene	7.43	6.19	502550	4229712	20.979	20.356
7)	T	m,p-Xylenes	7.64	6.32	1104154	9521661	40.342	41.168
8)	T	o-Xylene	8.02	6.74	476261	4149427	20.423	18.840

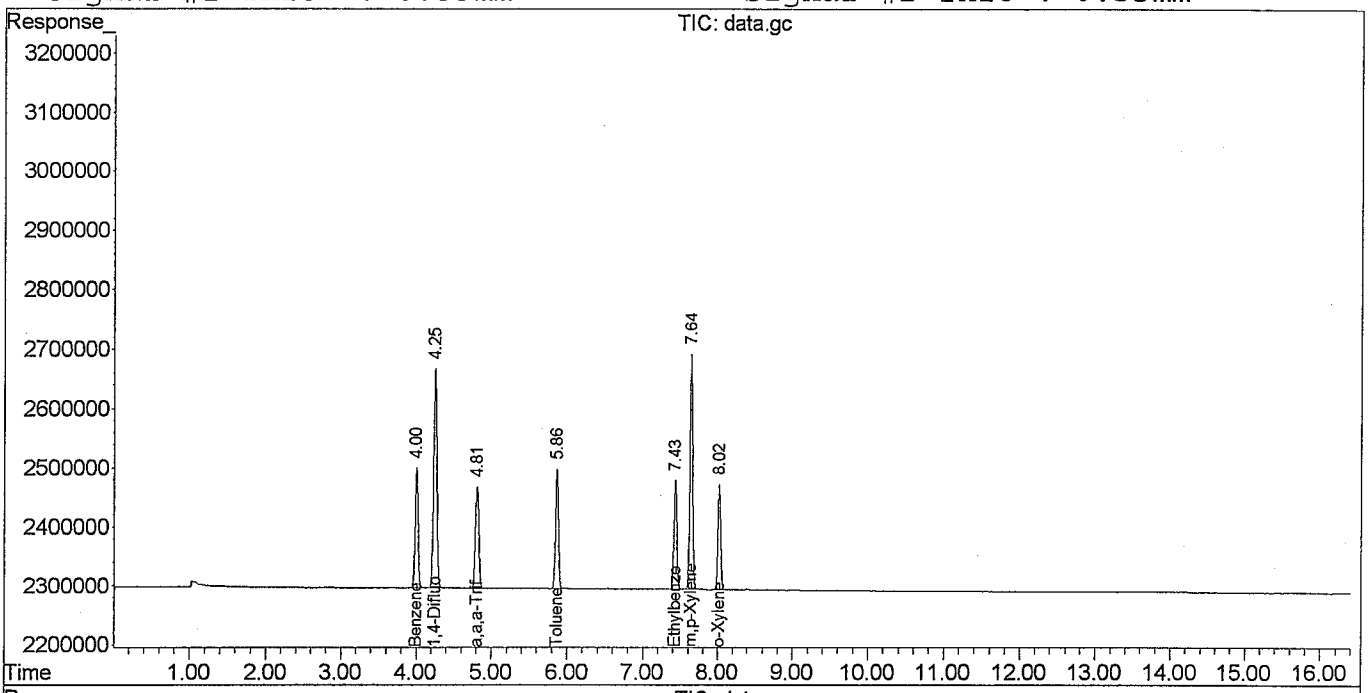
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

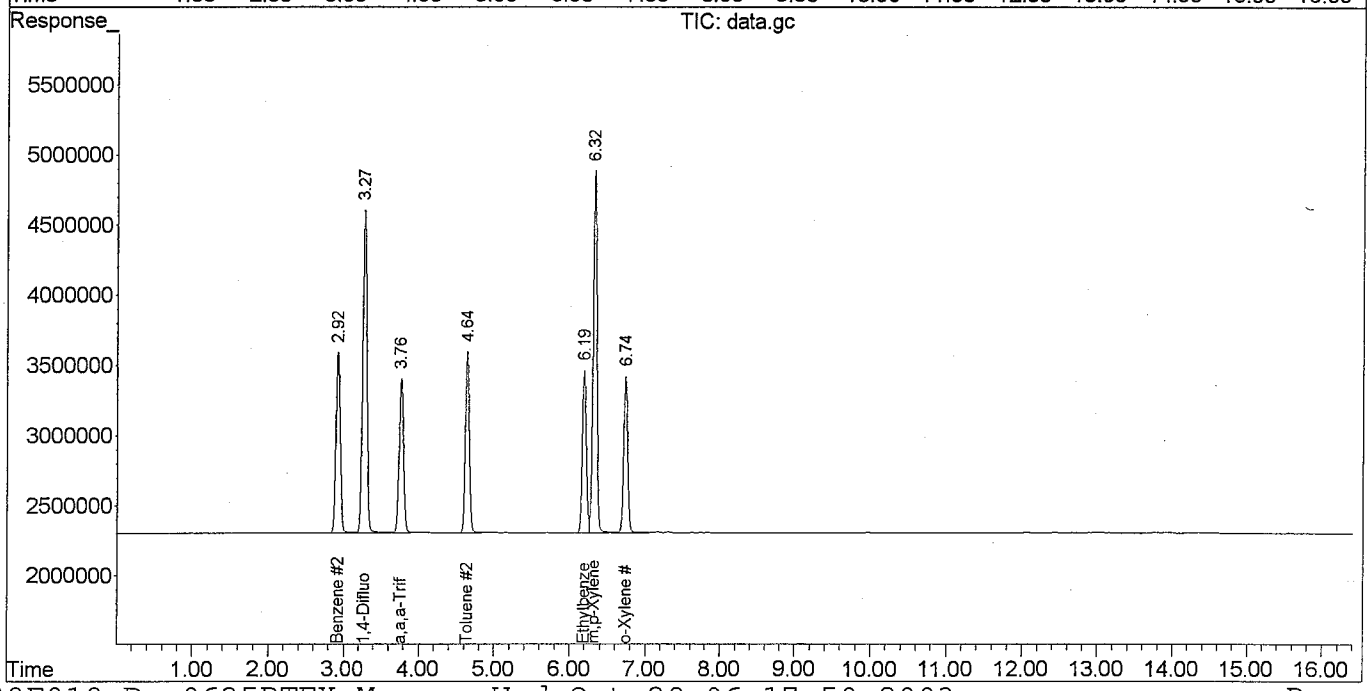
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F018.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F018.D\1028R018.D\data.gc
Acq On : 28 Oct 2003 11:01 pm Operator: tf
Sample : k2308419-004dms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX

Sample Name:	Lab Control Sample	**Units:**	ug/L
Lab Code:	KWG0317355-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**19.7**		0.50	1	10/28/03	10/28/03	KWG0317355	
Toluene	**19.1**		1.0	1	10/28/03	10/28/03	KWG0317355	
Ethylbenzene	**19.7**		1.0	1	10/28/03	10/28/03	KWG0317355	
m,p-Xylenes	**39.3**		1.0	1	10/28/03	10/28/03	KWG0317355	
o-Xylene	**19.4**		1.0	1	10/28/03	10/28/03	KWG0317355	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	97	84-114	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F016.D
Lab ID: KWG0317355-3
RunType: LCS
Matrix: WATER

Date Acquired: 10/28/2003 21:58
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	1	70	130	NR

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F016.D\1028R016.D
Lab ID: KWG0317355-3
RunType: LCS
Matrix: WATER

Date Acquired: 10/28/2003 21:58
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Bromofluorobenzene	1	70	130	NR

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/31/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317355	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5030B		
		Prep Date:	10/28/2003		
Prep Ref:	245423				

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:	J:\GC06B\DATA\102803\1028F020.D	**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F016.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F016.D\1028R016.D			**Vial:**	165
Acqu Date:	10/28/2003 21:58	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317355-3				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.80	-0.02	3.76	-0.01	513829	4531121	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.24	-0.02	3.26	-0.02	1029958	8859291	96.61	97.22			97OK
						-	%Recovery =	97OK	97OK	Limits =	84-114	
1	Bromofluorobenzene	8.39	-0.01	7.29	-0.02	17483	143474	0.6890	0.6900			1*
							%Recovery =	1*	1*	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene	4.00	-0.01	2.91	-0.01	541365	4633587	19.06	19.75	19.1	19.7	**19.7**
1	Toluene	5.86	-0.02	4.63	-0.02	506259	4465291	19.14	19.11	19.1	19.1	**19.1**
1	Ethylbenzene	7.42	-0.01	6.18	-0.02	464171	3972927	19.73	19.39	19.7	19.4	**19.7**
1	m,p-Xylenes	7.63	-0.02	6.32	-0.01	1027884	8963715	38.25	39.29	38.2	39.3	**39.3**
1	o-Xylene	8.01	-0.01	6.73	-0.01	443418	3914589	19.37	18.02	19.4	18.0	**19.4**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F016.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F016.D\1028R016.D\data.gc
Acq On : 28 Oct 2003 09:58 pm Operator: tf
Sample : kwg031735-3lcs Inst : GC06B
Misc : 5 Point Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:31 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.80	3.76	513829	4531121	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.24	3.26	1029958	8859291	96.610	97.221
3)	S	Bromofluorobenze	8.39	7.29	17483	143474	0.689	0.690
		Target Compounds						
4)	T	Benzene	4.00	2.91	541365	4633587	19.055	19.749
5)	T	Toluene	5.86	4.63	506259	4465291	19.140	19.111
6)	T	Ethylbenzene	7.42	6.18	464171	3972927	19.734	19.385
7)	T	m,p-Xylenes	7.63	6.32	1027884	8963715	38.248	39.293
8)	T	o-Xylene	8.01	6.73	443418	3914589	19.365	18.020

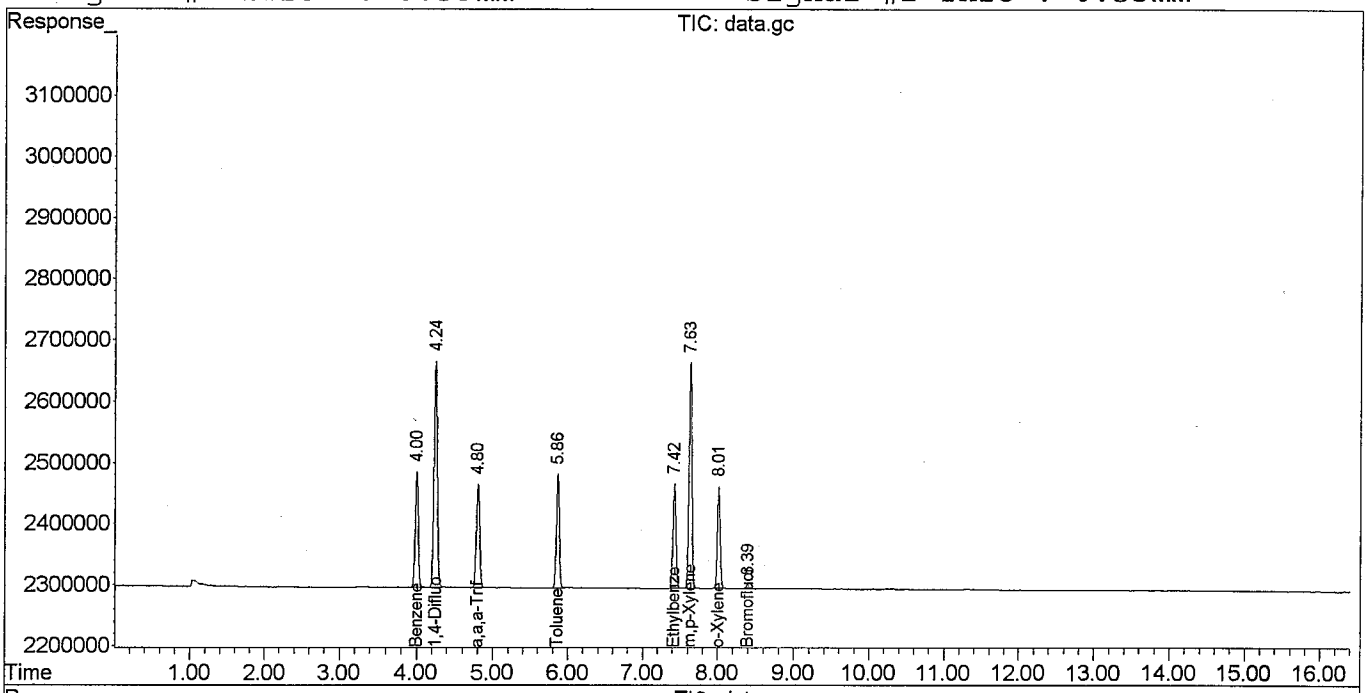
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

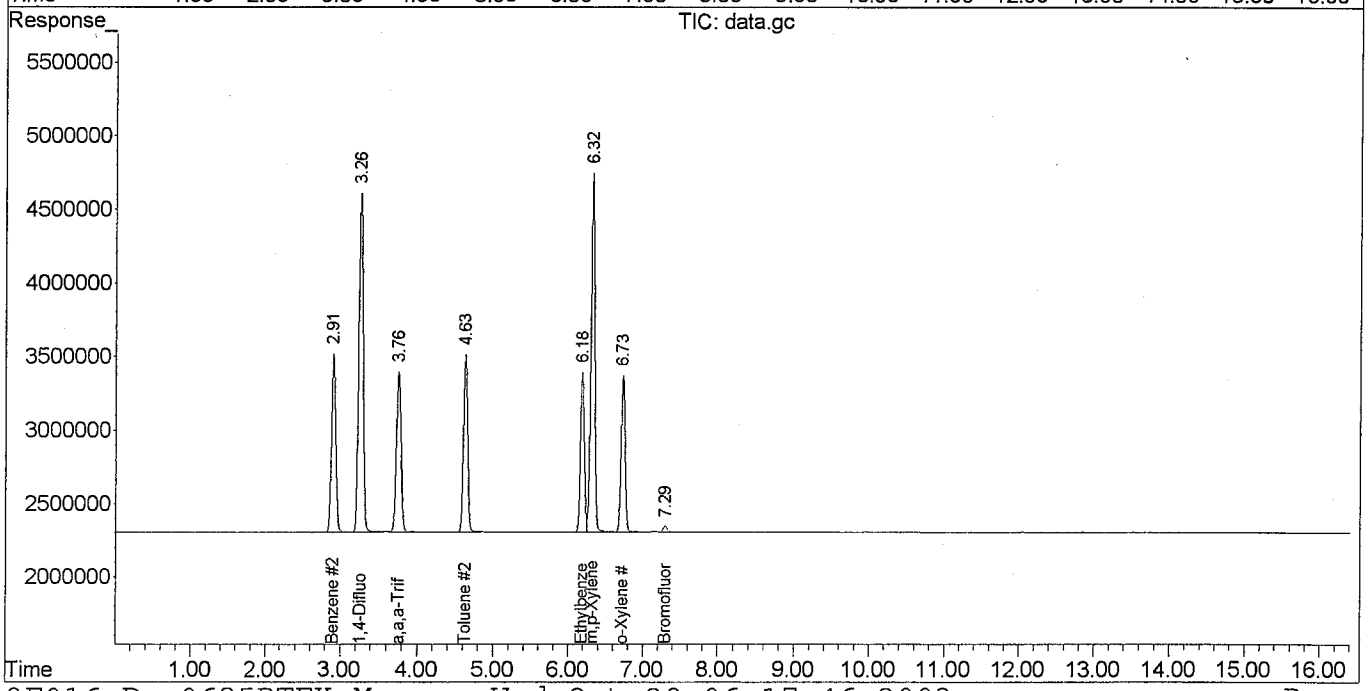
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F016.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F016.D\1028R016.D\data.gc
Acq On : 28 Oct 2003 09:58 pm Operator: tf
Sample : kwg031735-3lcs Inst : GC06B
Misc : 5 Multiplr Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Organic Analysis:
BTEX

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Level ID	File ID	Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D\0625R003.D	E	J:\GC06B\DATA\062503\0625F007.D\0625R007.D
B	J:\GC06B\DATA\062503\0625F004.D\0625R004.D	F	J:\GC06B\DATA\062503\0625F008.D\0625R008.D
C	J:\GC06B\DATA\062503\0625F005.D\0625R005.D	G	J:\GC06B\DATA\062503\0625F009.D\0625R009.D
D	J:\GC06B\DATA\062503\0625F006.D\0625R006.D	H	J:\GC06B\DATA\062503\0625F010.D\0625R010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.14	B	0.50	2.48	C	1.0	2.52	D	5.0	2.67	E	20	3.28
	F	50	2.54	G	100	2.61	H	200	2.47						
Toluene				B	0.50	2.47	C	1.0	2.53	D	5.0	2.62	E	20	3.15
	F	50	2.44	G	100	2.50	H	200	2.33						
Ethylbenzene				B	0.50	2.14	C	1.0	2.18	D	5.0	2.31	E	20	2.78
	F	50	2.16	G	100	2.21	H	200	2.05						
m,p-Xylenes				B	1.0	2.39	C	2.0	2.49	D	10	2.65	E	40	3.15
	F	100	2.39	G	200	2.40	H	400	2.14						
o-Xylene	A	0.40	2.40	B	0.50	2.55	C	1.0	2.75	D	5.0	2.34	E	20	2.78
	F	50	2.14	G	100	2.19	H	200	2.02						
1,4-Difluorobenzene				B	25	0.950	C	40	0.951	D	50	0.949	E	100	1.22
	F	150	0.963												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	12.3		≤ 20	2.59		0.01
Toluene	MS	AverageRF	% RSD	10.4		≤ 20	2.58		0.01
Ethylbenzene	MS	AverageRF	% RSD	10.7		≤ 20	2.26		0.01
m,p-Xylenes	MS	AverageRF	% RSD	12.6		≤ 20	2.52		0.01
o-Xylene	MS	AverageRF	% RSD	11.8		≤ 20	2.40		0.01
1,4-Difluorobenzene	SURR	AverageRF	% RSD	11.7		≤ 20	1.01		

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Calibration Date:**	06/25/2003
		Date Analyzed:	06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type:	Internal Standard	**Calibration ID:**	CAL2726
Analysis Method:	8021B	**Units:**	ug/L
File ID:	J:\GC06B\DATA\062503\0625F012.D\0625R012.D	**Column ID:**	DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	18	2.59	2.38	-8	NA	± 15 %	AverageRF
Toluene	20	18	2.58	2.36	-8	NA	± 15 %	AverageRF
Ethylbenzene	20	18	2.26	2.07	-9	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	2.52	2.53	0	NA	± 15 %	AverageRF
o-Xylene	20	19	2.40	2.27	-5	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D
B	J:\GC06B\DATA\062503\0625F004.D
C	J:\GC06B\DATA\062503\0625F005.D
D	J:\GC06B\DATA\062503\0625F006.D
E	J:\GC06B\DATA\062503\0625F007.D
F	J:\GC06B\DATA\062503\0625F008.D
G	J:\GC06B\DATA\062503\0625F009.D
H	J:\GC06B\DATA\062503\0625F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.59	B	0.50	2.54	C	1.0	2.59	D	5.0	2.78	E	20	3.43
	F	50	2.68	G	100	2.79	H	200	2.70						
Toluene				B	0.50	2.30	C	1.0	2.29	D	5.0	2.50	E	20	3.20
	F	50	2.53	G	100	2.65	H	200	2.54						
Ethylbenzene	A	0.40	1.74	B	0.50	2.09	C	1.0	2.04	D	5.0	2.31	E	20	2.98
	F	50	2.35	G	100	2.45	H	200	2.36						
m,p-Xylenes				B	1.0	2.13	C	2.0	2.32	D	10	2.57	E	40	3.28
	F	100	2.60	G	200	2.74	H	400	2.66						
o-Xylene				B	0.50	1.73	C	1.0	1.95	D	5.0	2.18	E	20	2.82
	F	50	2.26	G	100	2.37	H	200	2.29						
1,4-Difluorobenzene				B	25	0.986	C	40	0.979	D	50	0.962	E	100	1.26
	F	150	1.00												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	10.3		≤ 20	2.76		0.01
Toluene	MS	AverageRF	% RSD	11.9		≤ 20	2.57		0.01
Ethylbenzene	MS	AverageRF	% RSD	15.8		≤ 20	2.29		0.01
m,p-Xylenes	MS	AverageRF	% RSD	13.8		≤ 20	2.62		0.01
o-Xylene	MS	AverageRF	% RSD	15.4		≤ 20	2.23		0.01
1,4-Difluorobenzene	SURR	AverageRF	% RSD	12.0		≤ 20	1.04		

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Calibration Date:**	06/25/2003
		Date Analyzed:	06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type:	Internal Standard	**Calibration ID:**	CAL2726
Analysis Method:	8021B	**Units:**	ug/L
File ID:	J:\GC06B\DATA\062503\0625F012.D	**Column ID:**	DB-VRX

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	2.76	2.57	-7	NA	± 15 %	AverageRF
Toluene	20	18	2.57	2.35	-9	NA	± 15 %	AverageRF
Ethylbenzene	20	19	2.29	2.14	-7	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	2.23	2.16	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

DATA ANALYSIS PARAMETERS

Method Name: J:\GC06B\METHODS\0625BTEX.M

Percent Report Settings

Sort By: Signal

Output Destination
Screen: No
Printer: No
File: No

Integration Events: Meth Default

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
Screen: No
Printer: Yes
File: No

Generate Report During Run Method: Yes

CAL-~~2669~~ 2726
Calibration Last Updated: Wed Jun 25 15:11:43 2003

Reference Window: 2.00 Minutes
Non-Reference Window: 1.00 Minutes
Correlation Window: 0.10 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

1) a,a,a-Trifluorotoluene (ISTD)

Ret. Time 5.02 min., Extract & Integrate from 4.87 to 5.17 min.

Lvl	ID	Conc (ug/L)	Response
1		50.000	624075
2		50.000	585621
3		50.000	622262
4		50.000	635099
5		50.000	491716
6		50.000	619415
7		50.000	611566
8		50.000	617124
w_cc		50.000	-1
s_cc		50.000	-1
ws_c		50.000	-1
9		50.000	547868
10		50.000	549463

ISTD conc: 50.000 ug/L
Curve Fit: Avg. RF

---

2) 1,4-Difluorobenzene ( )
Ret. Time 4.46 min., Extract & Integrate from 4.31 to 4.61 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	288714
3		40.000	487376
4		50.000	610726
5		100.000	1238044
6		150.000	1860958
7		not used for this compound	
8		not used for this compound	
w_cc		100.000	-1
s_cc		not used for this compound	
ws_c		100.000	-1
9		not used for this compound	
10		50.000	539464

Curve Fit: Linear

---

3) Bromofluorobenzene ( )
Ret. Time 8.61 min., Extract & Integrate from 8.47 to 8.75 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	707425
3		40.000	1119678
4		50.000	1446365
5		100.000	2975551
6		150.000	4429040
7		not used for this compound	
8		not used for this compound	
w_cc		not used for this compound	
s_cc		50.000	-1
ws_c		100.000	-1
9		not used for this compound	
10		not used for this compound	

1/06/03

RE 6/26/03

Curve Fit: Avg. RF

---

4) Benzene ( )

Ret. Time 4.22 min., Extract & Integrate from 4.07 to 4.37 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	12951
2		0.500	14899
3		1.000	32260
4		5.000	176263
5		20.000	675119
6		50.000	1659647
7		100.000	3418337
8		200.000	6676838
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

---

5) Toluene ( )

Ret. Time 6.08 min., Extract & Integrate from 5.94 to 6.22 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	13478
3		1.000	28497
4		5.000	159031
5		20.000	630057
6		50.000	1564197
7		100.000	3240439
8		200.000	6279842
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		not used for this compound	
10		50.000	-1

Curve Fit: Avg. RF

---

6) Ethylbenzene ( )

Ret. Time 7.64 min., Extract & Integrate from 7.50 to 7.78 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	8686
2		0.500	12240
3		1.000	25444
4		5.000	146396
5		20.000	585982
6		50.000	1453256
7		100.000	2994342

11/6/25/03

8	200.000	5818870
w_cc	20.000	-1
s_cc	20.000	-1
ws_c	100.000	-1
9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

---

7) m,p-Xylenes ( )

Ret. Time 7.85 min., Extract & Integrate from 7.71 to 7.99 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		1.000	24992
3		2.000	57729
4		10.000	326201
5		40.000	1289801
6		100.000	3216954
7		200.000	6714657
8		400.000	13151828
w_cc		40.000	-1
s_cc		40.000	-1
ws_c		200.000	-1
9		not used for this compound	
10		not used for this compound	

Curve Fit: Avg. RF

---

8) o-Xylene ( )

Ret. Time 8.23 min., Extract & Integrate from 8.09 to 8.37 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	10114
3		1.000	24263
4		5.000	138657
5		20.000	554704
6		50.000	1397221
7		100.000	2898404
8		200.000	5656098
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

---

9) Signal #2 ( )

Ret. Time 0.00 min., Extract & Integrate from 0.00 to 0.00 min.

Lvl	ID	Conc ( )	Response
1		not used for this compound	

11/6/03

6/03

2	not used for this compound	
3	not used for this compound	
4	not used for this compound	
5	not used for this compound	
6	not used for this compound	
7	not used for this compound	
8	not used for this compound	
w_cc	not used for this compound	
s_cc	not used for this compound	
ws_c	not used for this compound	
9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

---

10) a,a,a-Trifluorotoluene #2 (ISTD)
Ret. Time 3.93 min., Extract & Integrate from 3.78 to 4.08 min.

Lvl	ID	Conc (ug/L)	Response
1		50.000	10036198
2		50.000	9543141
3		50.000	10219304
4		50.000	10303214
5		50.000	8211624
6		50.000	10320586
7		50.000	9918435
8		50.000	9794175
w_cc		50.000	-1
s_cc		50.000	-1
ws_c		50.000	-1
9		50.000	8854112
10		50.000	9249953

ISTD conc: 50.000 ug/L
Curve Fit: Avg. RF

---

11) 1,4-Difluorobenzene #2 ( )
Ret. Time 3.43 min., Extract & Integrate from 3.28 to 3.58 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	4530615
3		40.000	7774325
4		50.000	9774453
5		100.000	19965916
6		150.000	29813813
7		not used for this compound	
8		not used for this compound	
w_cc		100.000	-1
s_cc		not used for this compound	
ws_c		100.000	-1
9		not used for this compound	
10		not used for this compound	

4/22/03

Curve Fit: Avg. RF

---

12) Bromofluorobenzene #2 ( )
Ret. Time 7.48 min., Extract & Integrate from 7.34 to 7.62 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	11092868
3		40.000	17457308
4		50.000	22558443
5		100.000	45213817
6		150.000	63989124
7		not used for this compound	
8		not used for this compound	
w_cc		not used for this compound	
s_cc		50.000	-1
ws_c		100.000	-1
9		not used for this compound	
10		not used for this compound	

Curve Fit: Avg. RF

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13) Benzene #2 ( )
Ret. Time 3.07 min., Extract & Integrate from 2.92 to 3.22 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	172185
2		0.500	236800
3		1.000	515480
4		5.000	2753134
5		20.000	10762100
6		50.000	26167541
7		100.000	51773274
8		200.000	96758587
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

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14) Toluene #2 ( )
Ret. Time 4.82 min., Extract & Integrate from 4.68 to 4.96 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	235292
3		1.000	517593
4		5.000	2696439
5		20.000	10358855
6		50.000	25202171
7		100.000	49652398
8		200.000	91435586
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1

12/6/5/03

9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

---

15) Ethylbenzene #2 ( )
Ret. Time 6.37 min., Extract & Integrate from 6.23 to 6.51 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	204291
3		1.000	446426
4		5.000	2377488
5		20.000	9132048
6		50.000	22263267
7		100.000	43897650
8		200.000	80231634
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

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16) m,p-Xylenes #2 ( )
Ret. Time 6.51 min., Extract & Integrate from 6.37 to 6.65 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		1.000	456856
3		2.000	1019446
4		10.000	5464117
5		40.000	20701957
6		100.000	49315024
7		200.000	95194502
8		400.000	167833595
w_cc		40.000	-1
s_cc		40.000	-1
ws_c		200.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

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17) o-Xylene #2 ( )
Ret. Time 6.92 min., Extract & Integrate from 6.78 to 7.06 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	192695
2		0.500	243628
3		1.000	562991
4		5.000	2411992
5		20.000	9141729

6	50.000	22038198
7	100.000	43472574
8	200.000	79082953
w_cc	20.000	-1
s_cc	20.000	-1
ws_c	100.000	-1
9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

END OF DATA ANALYSIS PARAMETERS

Wed Jun 25 15:15:21 2003

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F001.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F001.D\0625R001.D\data.gc
Acq On : 25 Jun 2003 09:23 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:29 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.93	617501	10003176	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.43	10104	192802	0.855	1.049
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

6/26/03

6/26/03

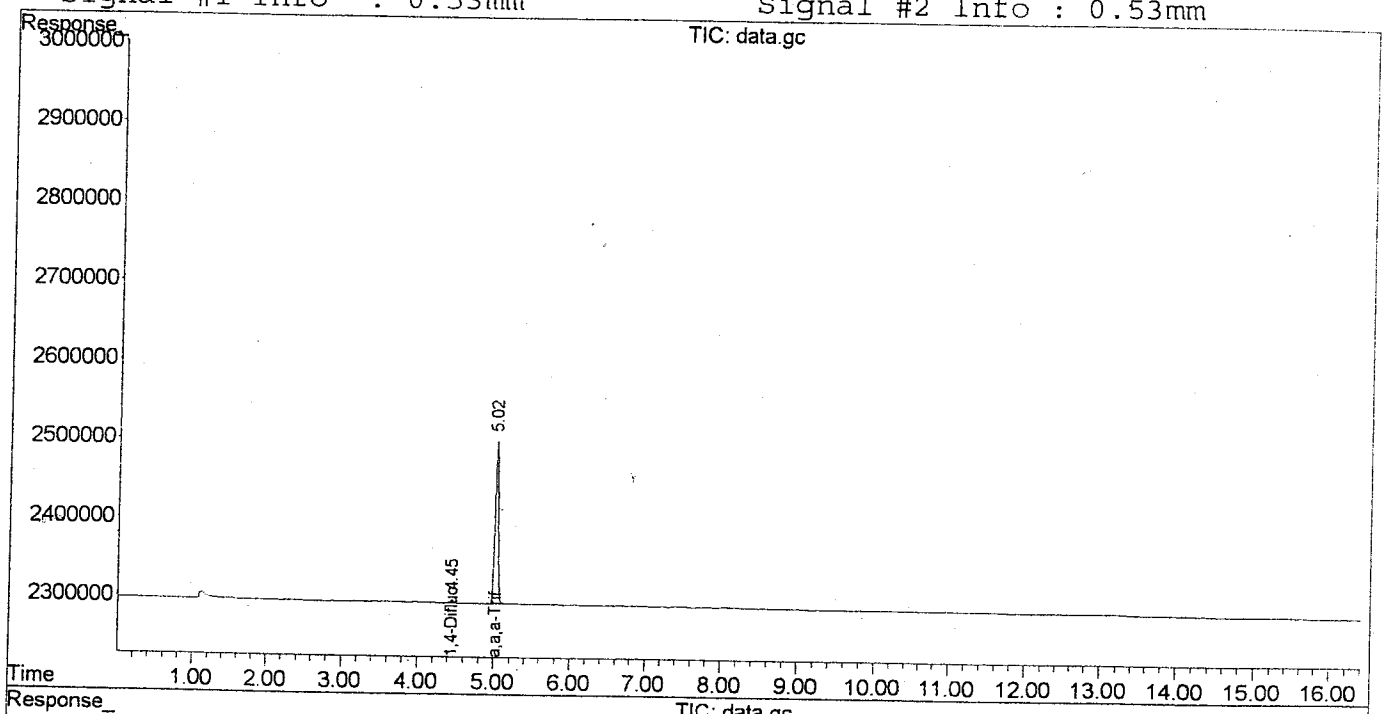
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

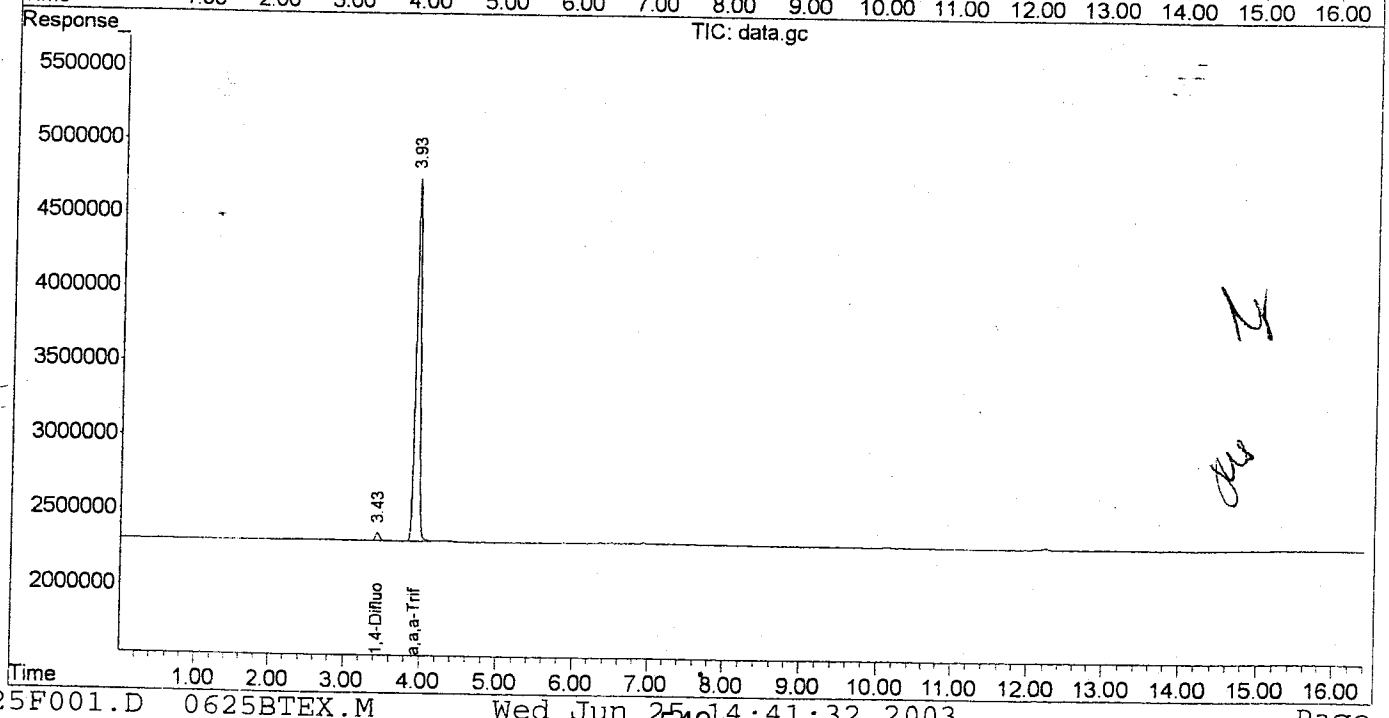
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F001.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F001.D\0625R001.D\data.gc
Acq On : 25 Jun 2003 09:23 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F002.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F002.D\0625R002.D\data.gc
Acq On : 25 Jun 2003 09:55 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:34 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	468105	7579346	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.43	16640	261227	1.858	1.876
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

6/25/03

6/26/03

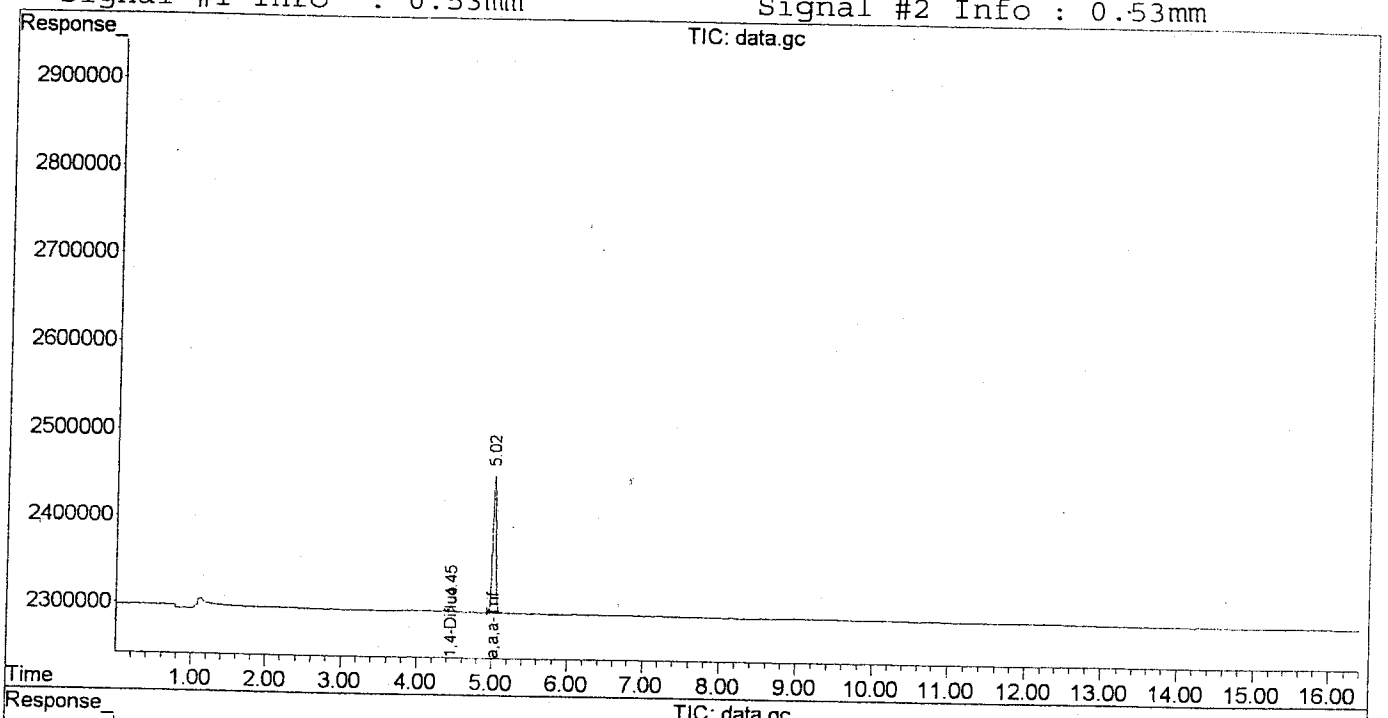
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

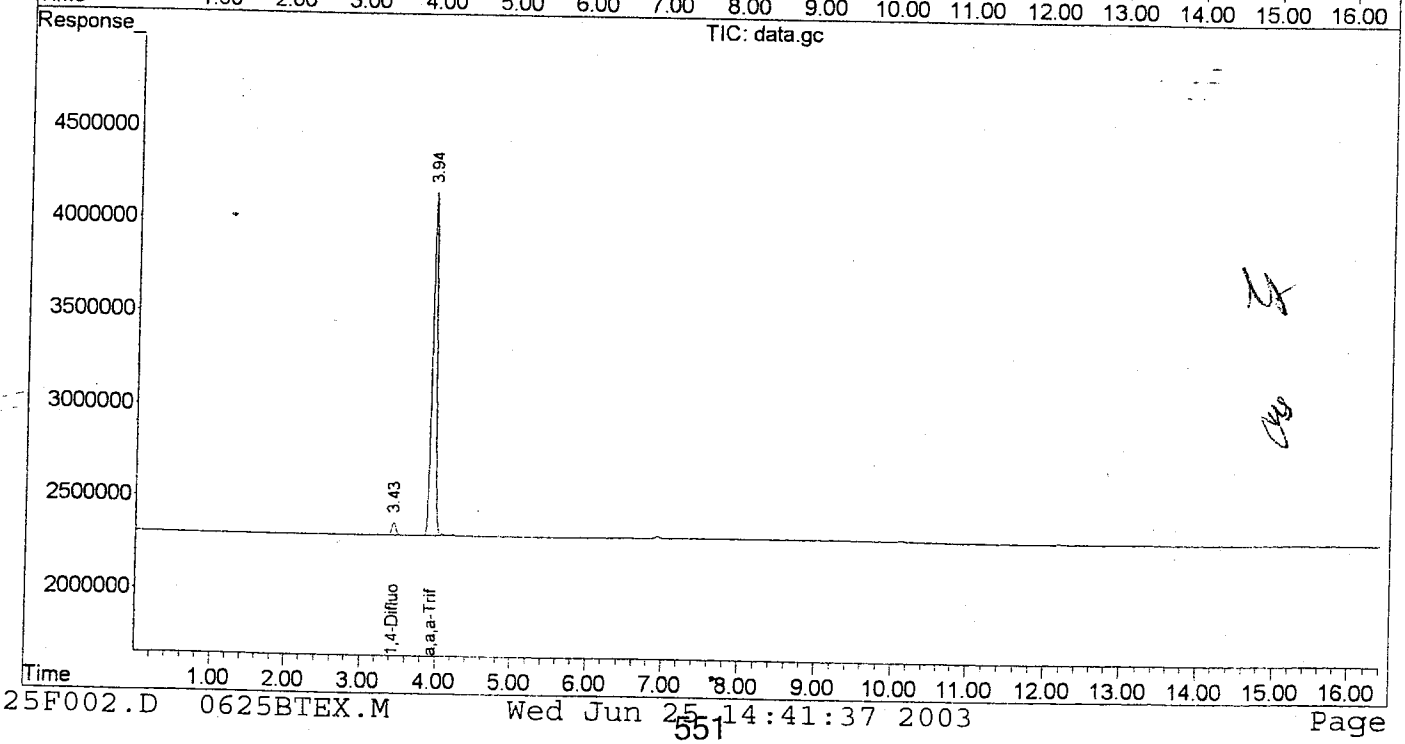
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F002.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F002.D\0625R002.D\data.gc
Acq On : 25 Jun 2003 09:55 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:38 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	624075	10036198	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	0.00	3.44	0	86381	N.D.	0.469 #
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	4.21	3.08	12951	172185	0.401m	0.364
5)	T	Toluene	6.09	4.82	8746	168570	0.225	0.369 #
6)	T	Ethylbenzene	7.64	6.37	8686	143713	0.264m	0.364 #
7)	T	m,p-Xylenes	7.85	6.50	18283	327019	0.948	0.737m
8)	T	o-Xylene	8.23	6.92	8343	192695	0.314	0.473 #

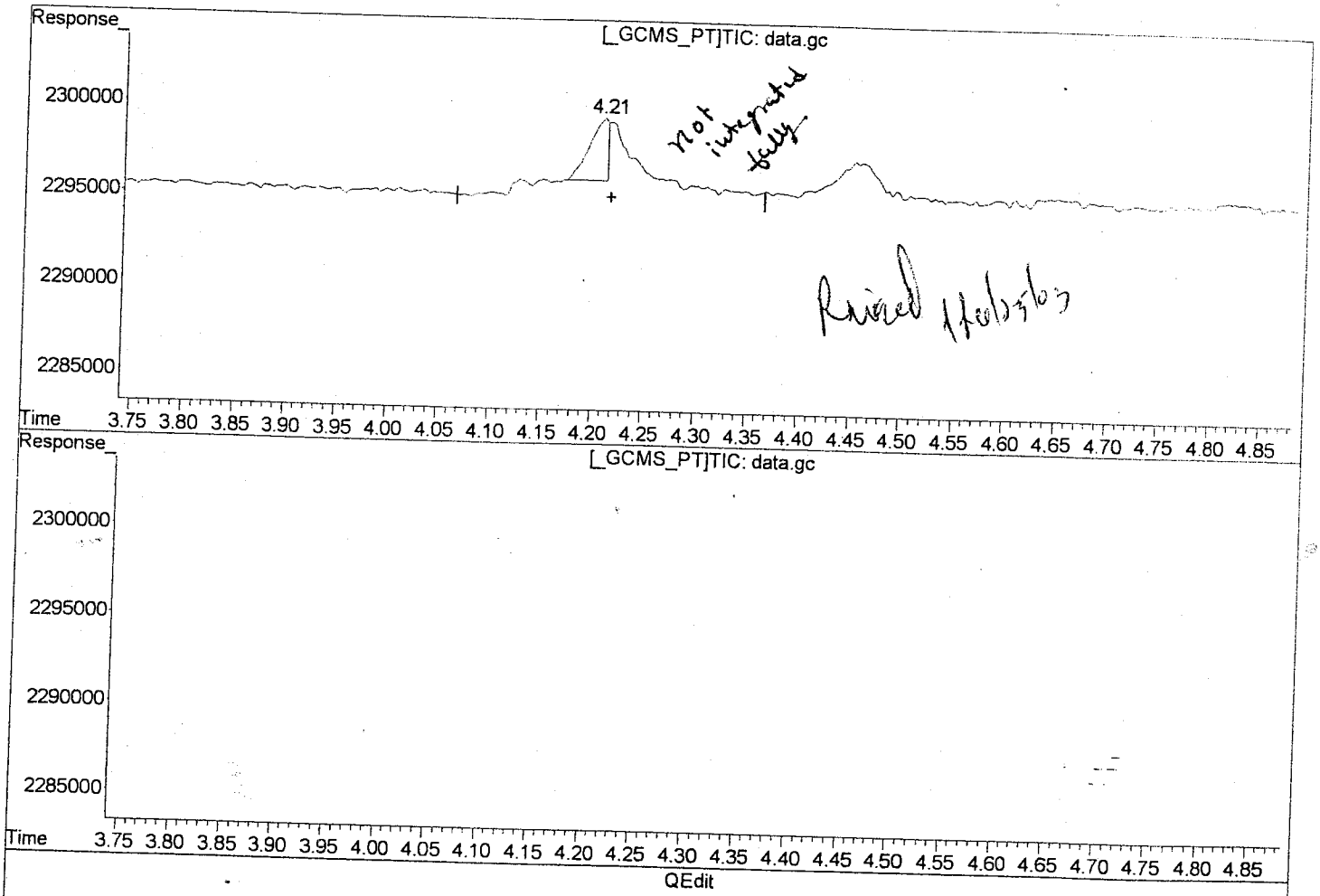
Correct
Initials
6/26/03

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(4) Benzene (T)

4.21min 0.145ug/L

response 4681

(4) Benzene #2 (T)

3.08min 0.364ug/L

response 172185

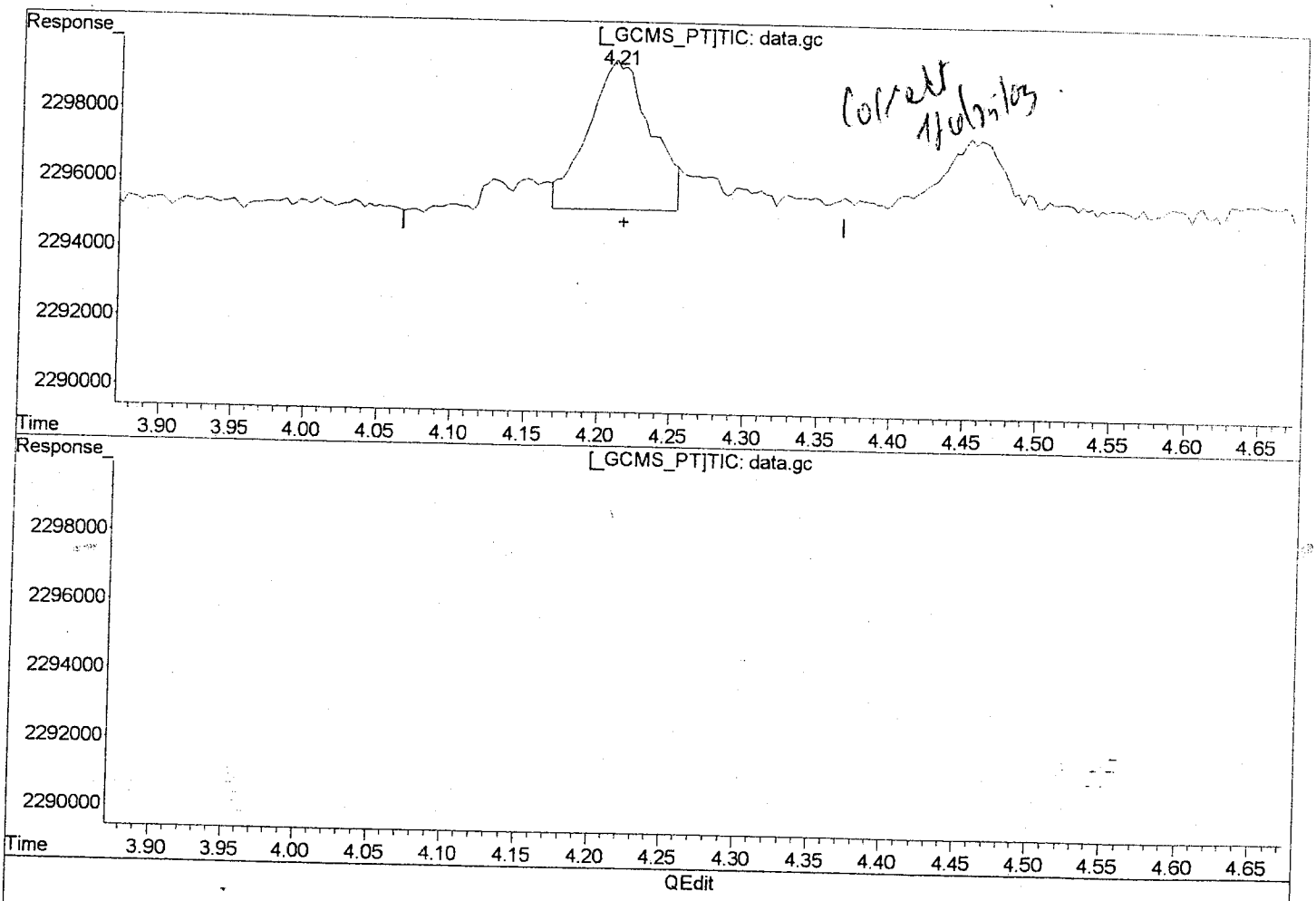
6/26/03

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(4) Benzene (T)

4.21min 0.401ug/L m

response 12951

(4) Benzene #2 (T)

3.08min 0.364ug/L

response 172185

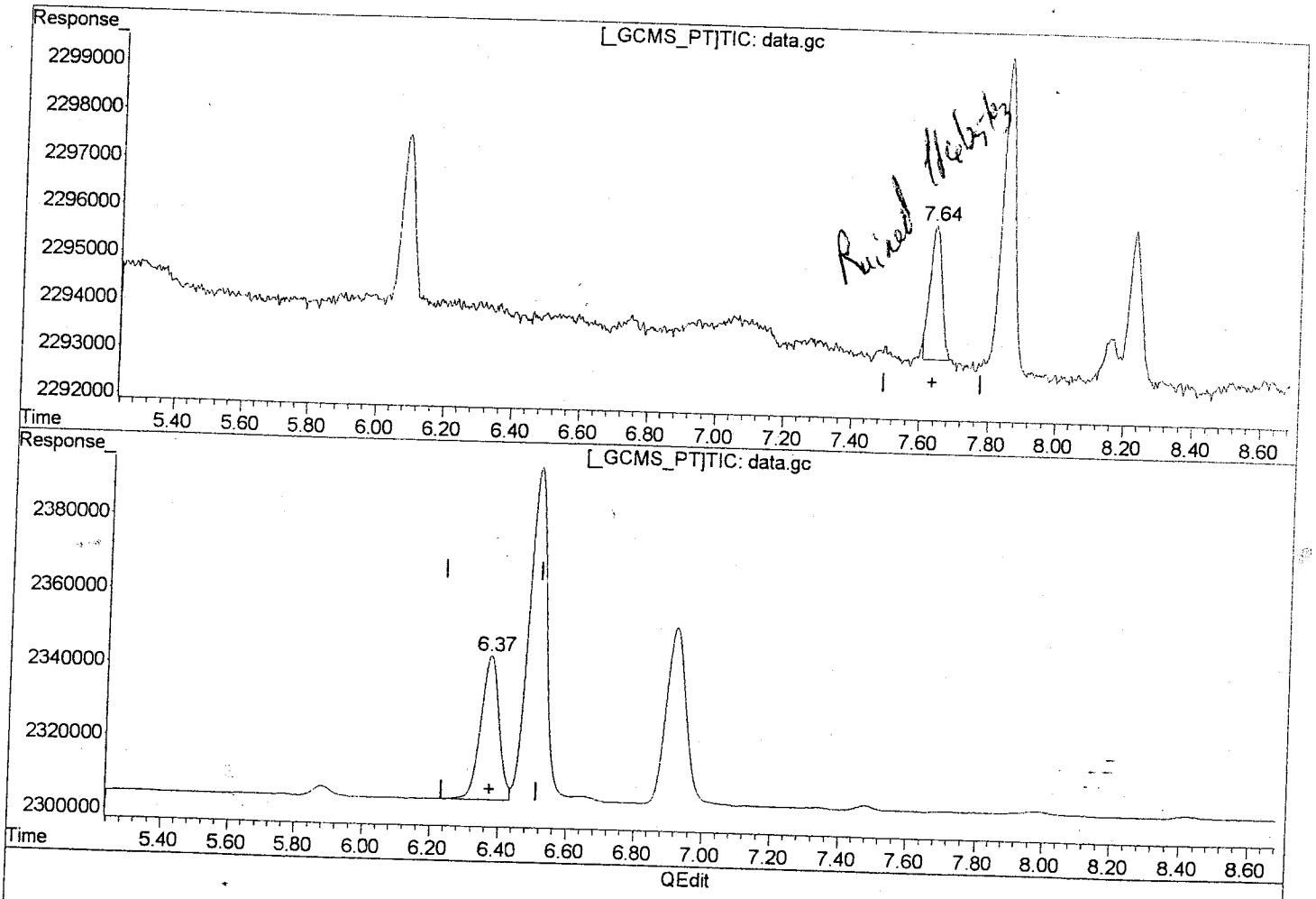
JS 6/26/03

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.64min 0.207ug/L

response 7071

(6) Ethylbenzene #2 (T)

6.37min 0.364ug/L

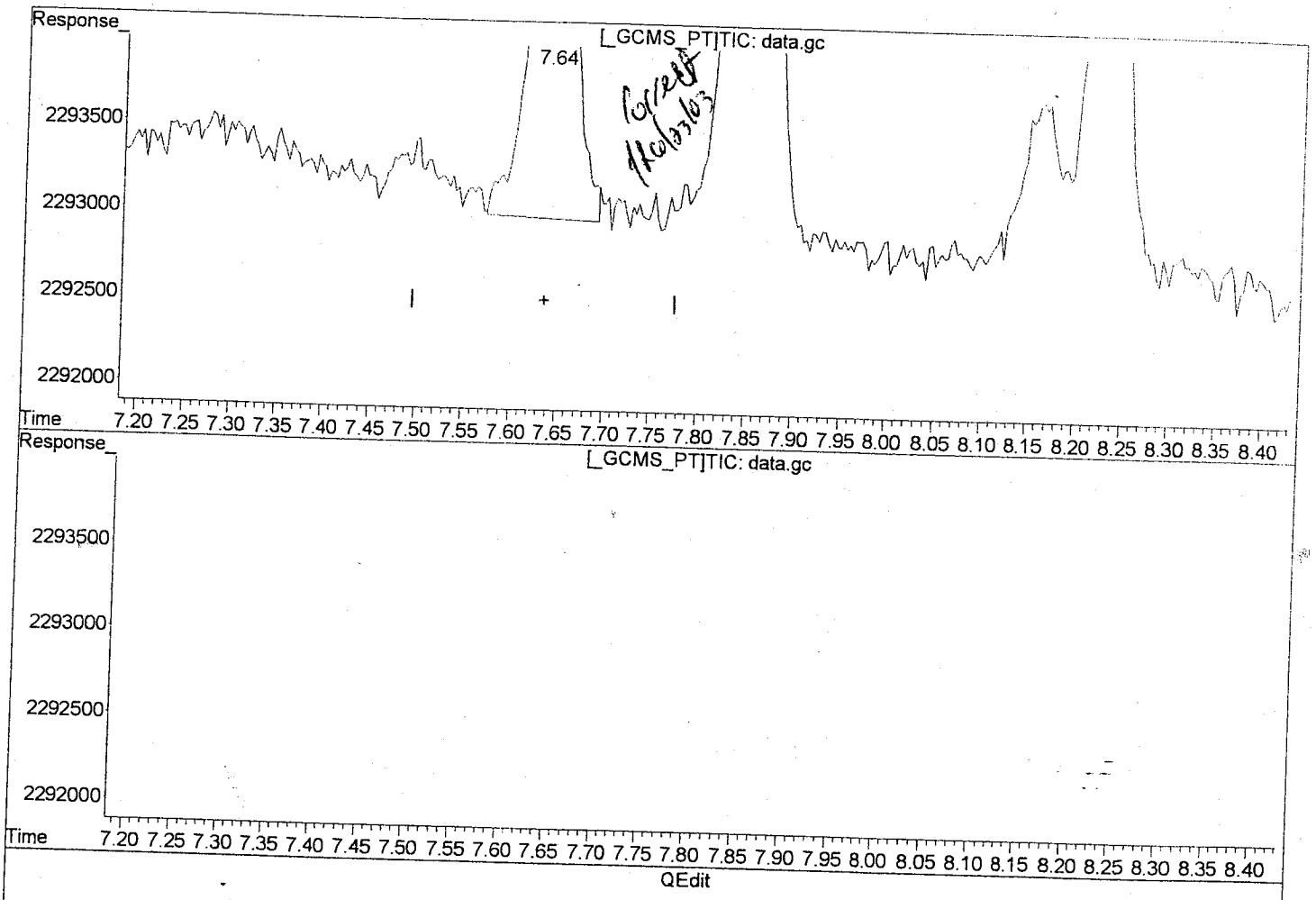
response 143713

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.64min 0.264ug/L m

response 8686

(6) Ethylbenzene #2 (T)

6.37min 0.364ug/L

response 143713

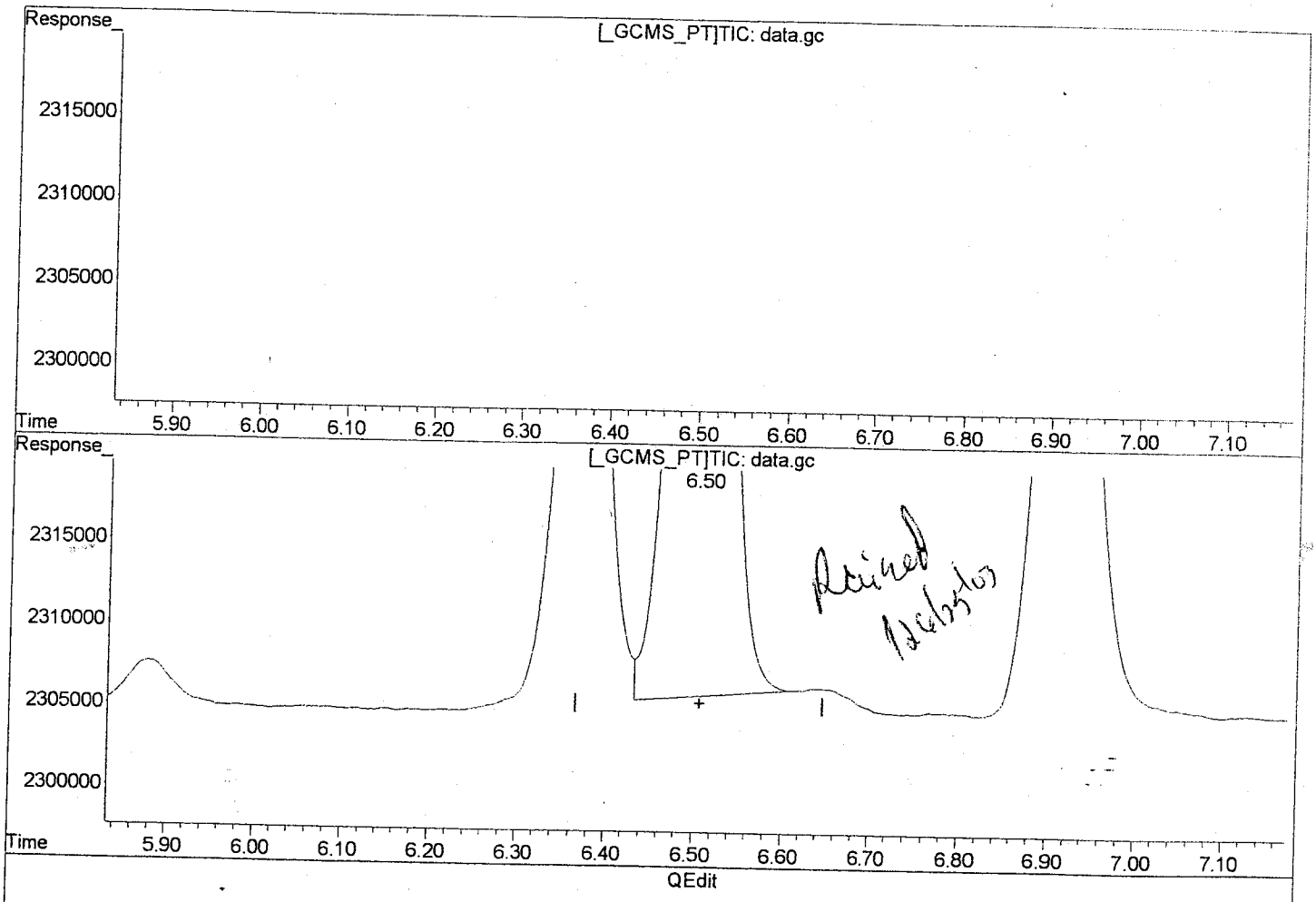
6/26/03

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(7) m,p-Xylenes (T)

7.85min 0.948ug/L

response 18283

(7) m,p-Xylenes #2 (T)

6.50min 0.712ug/L

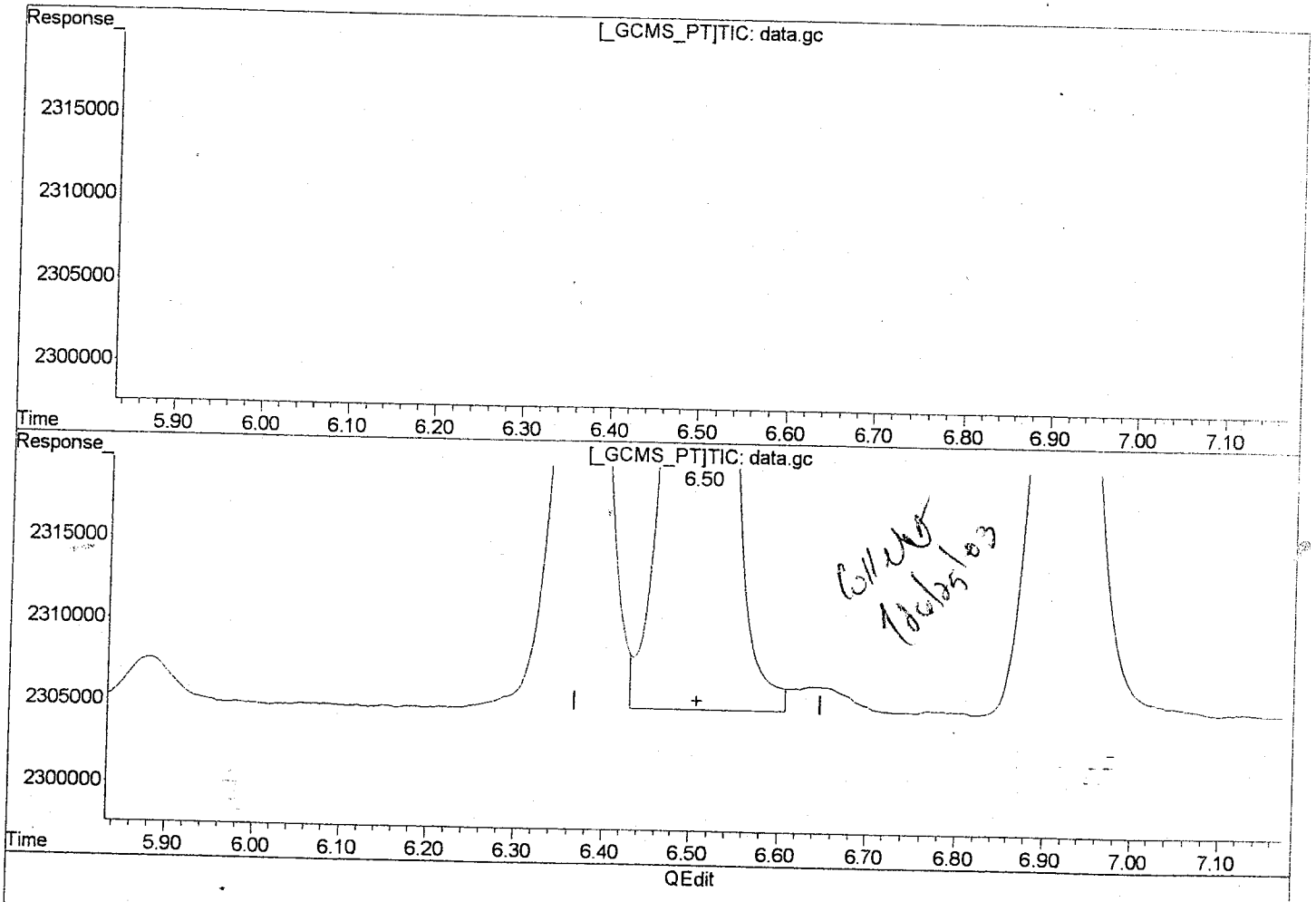
response 315884

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(7) m,p-Xylenes (T)

7.85min 0.948ug/L

response 18283

(7) m,p-Xylenes #2 (T)

6.50min 0.737ug/L m

response 327019

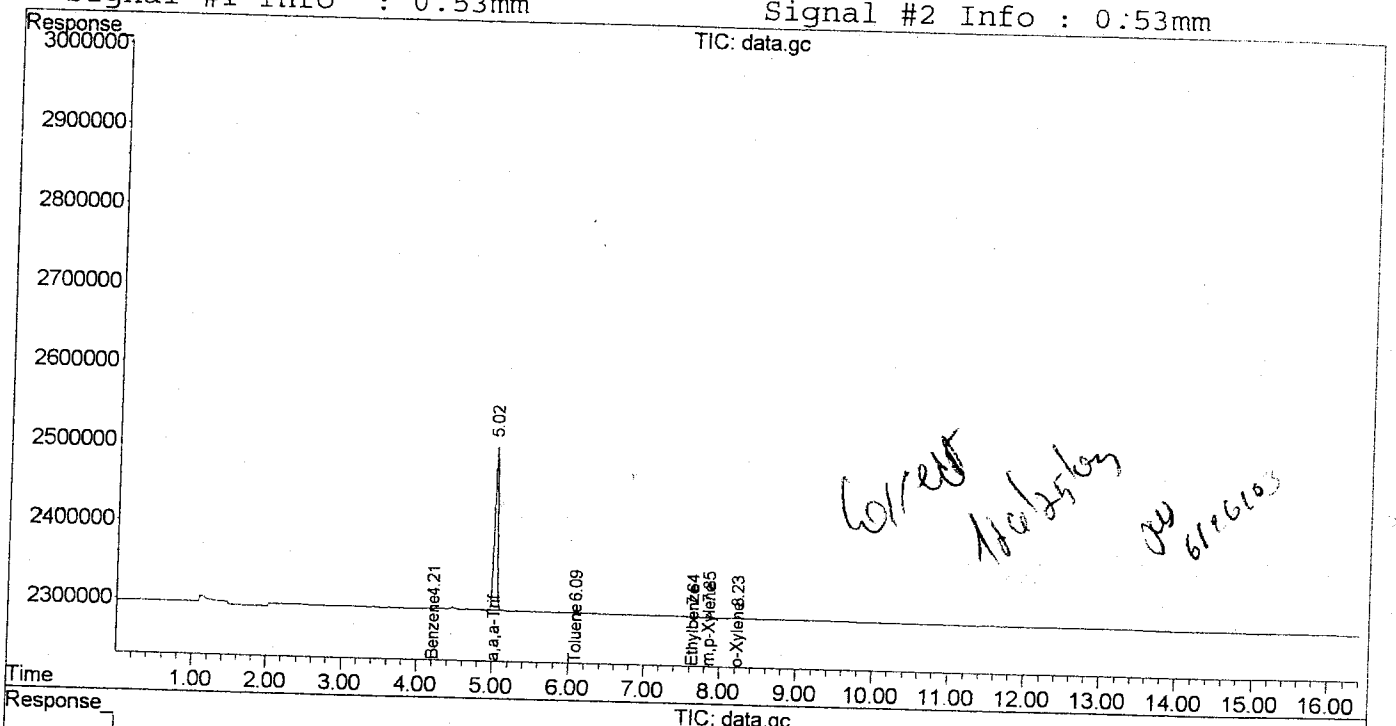
(+) = Expected Retention Time

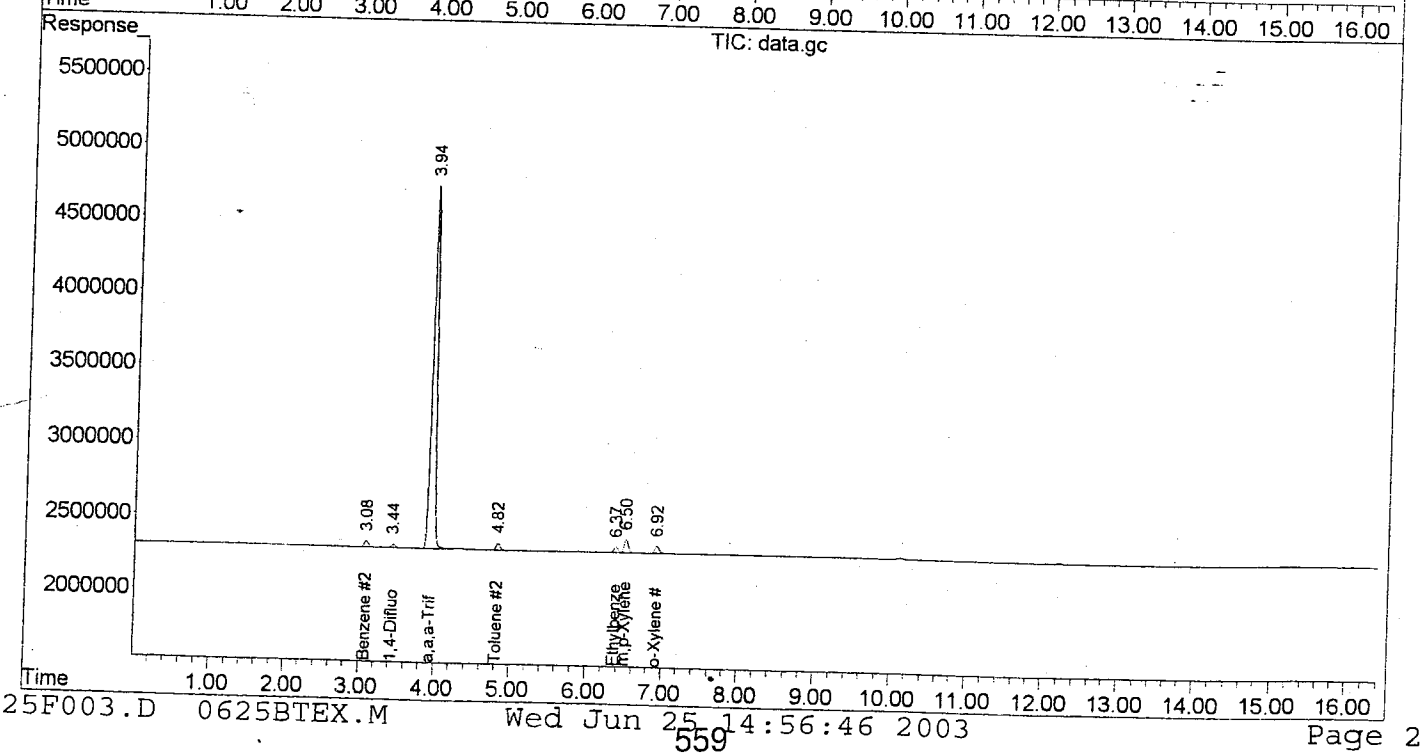
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:57 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm



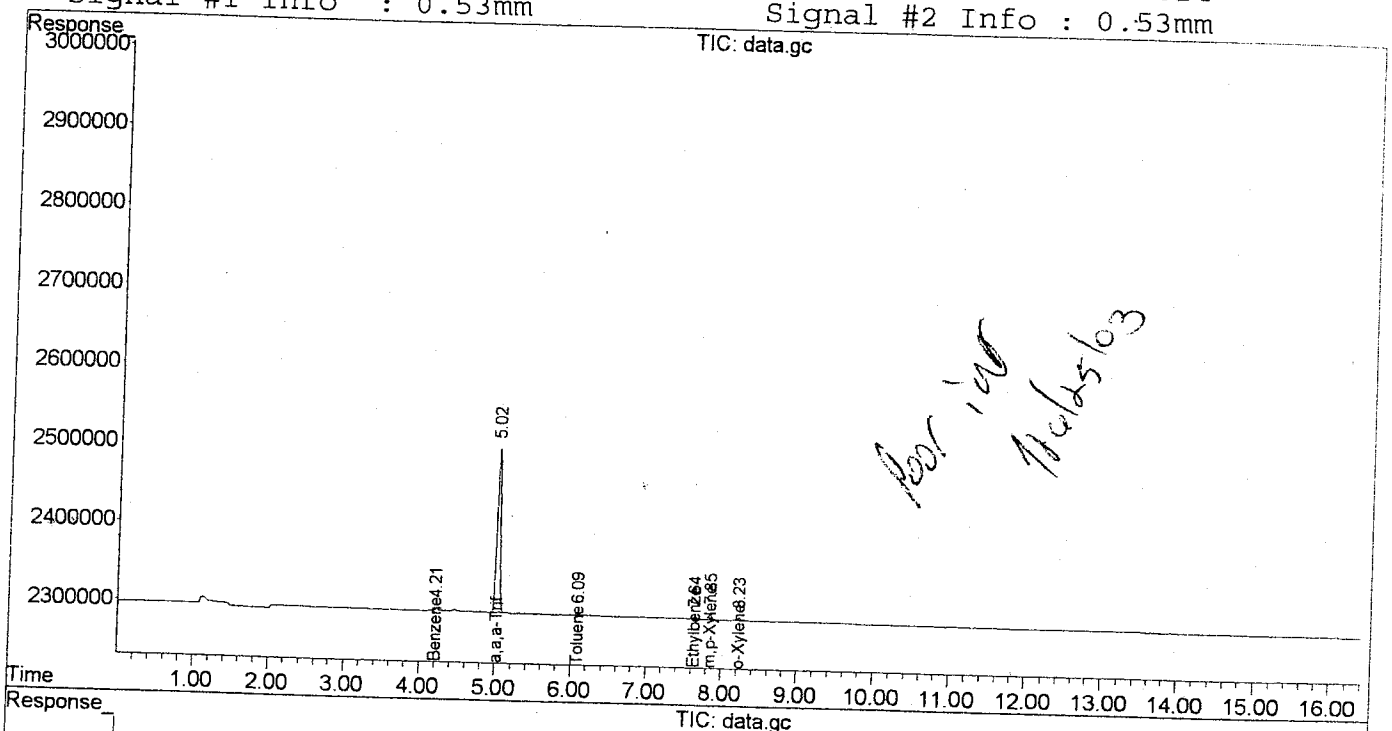


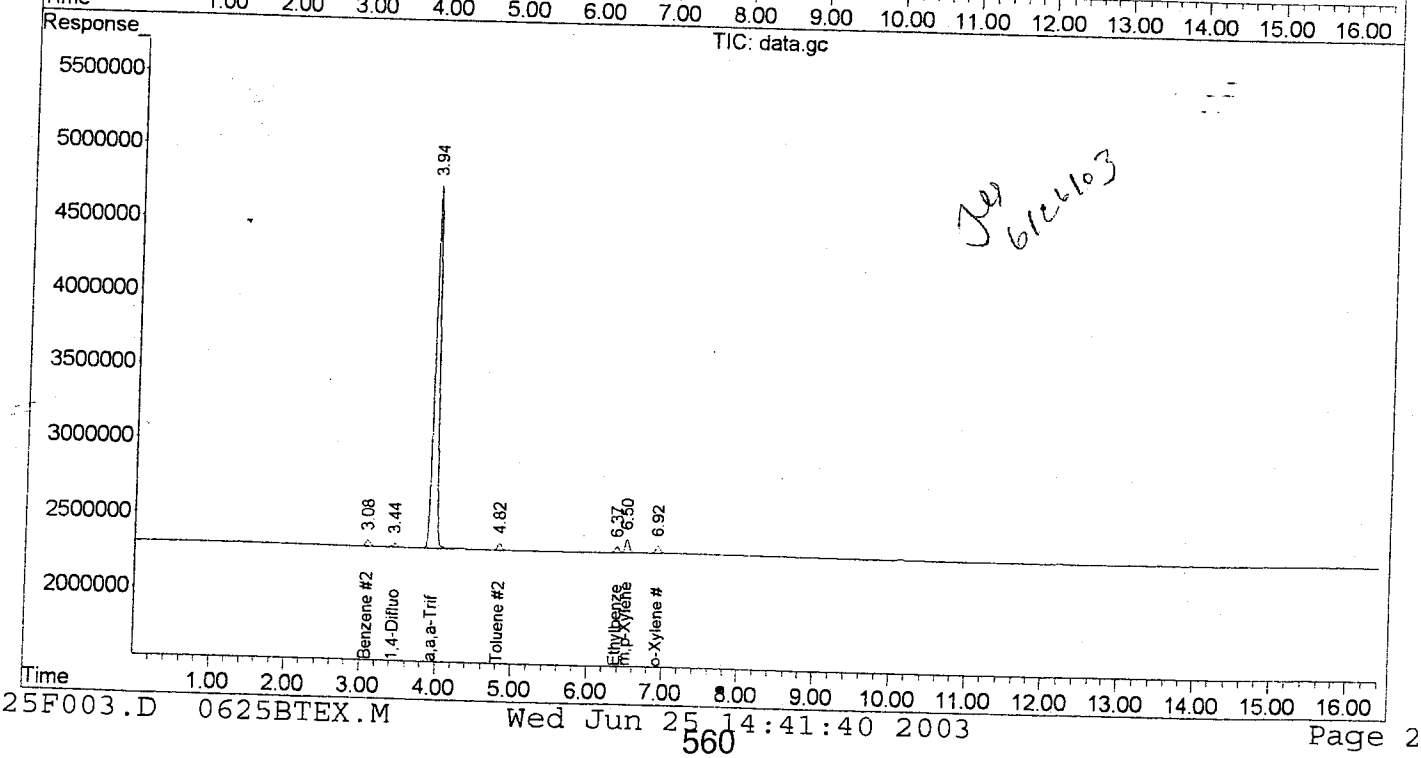
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:41 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	585621	9543141	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.46	3.44	288714	4530615	25.774	25.843
3)	S	Bromofluorobenze	8.60	7.47	707425	11092868	27.225	27.813
		Target Compounds						
4)	T	Benzene	4.21	3.08	14899	236800	0.491m	0.526
5)	T	Toluene	6.08	4.82	13478	235292	0.410	0.541 #
6)	T	Ethylbenzene	7.63	6.37	12240	204291	0.419m	0.544 #
7)	T	m,p-Xylenes	7.84	6.50	24992	456856	1.211	1.083
8)	T	o-Xylene	8.22	6.91	10114	243628	0.403	0.629 #

Collect
1 of 6/26/03

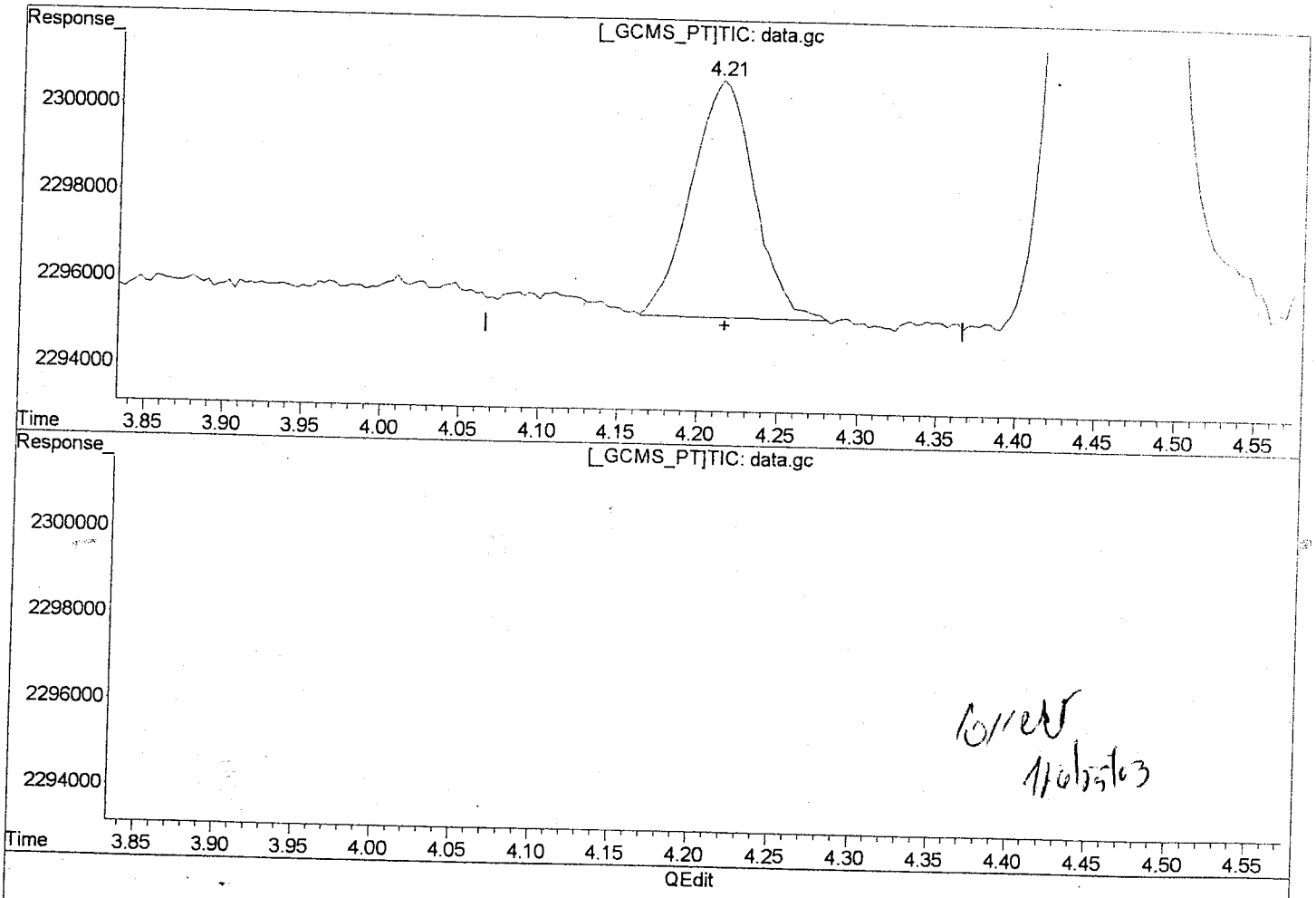
JW 6/26/03

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



Correct
1/6/2003

(4) Benzene (T)

4.21min 0.491ug/L m

response 14899

(4) Benzene #2 (T)

3.08min 0.526ug/L

response 236800

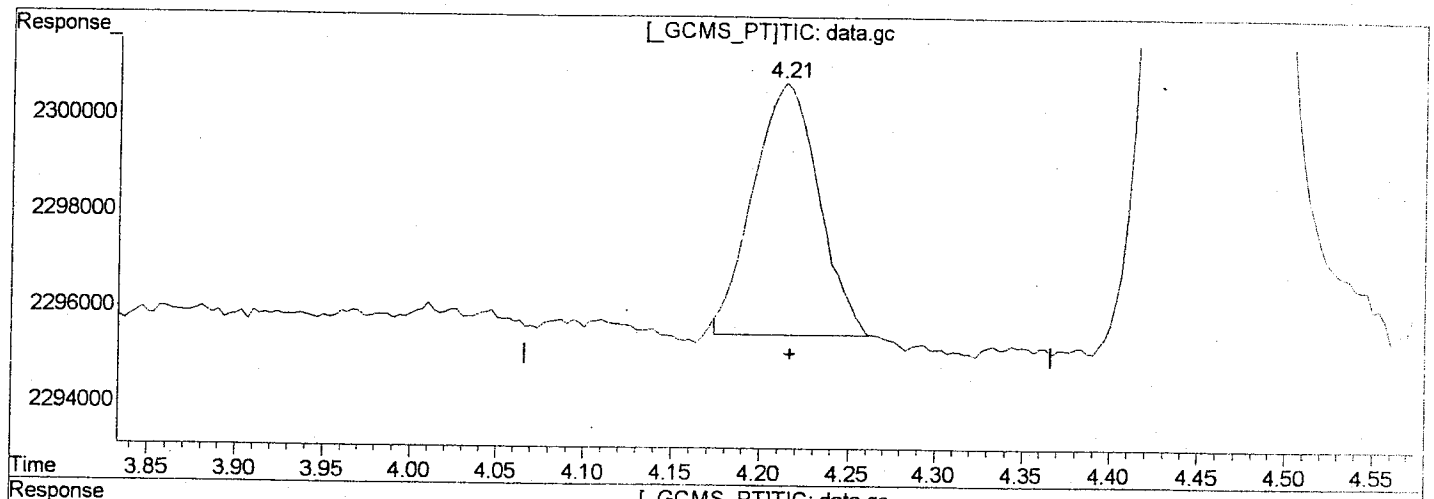
AW 6/26/03

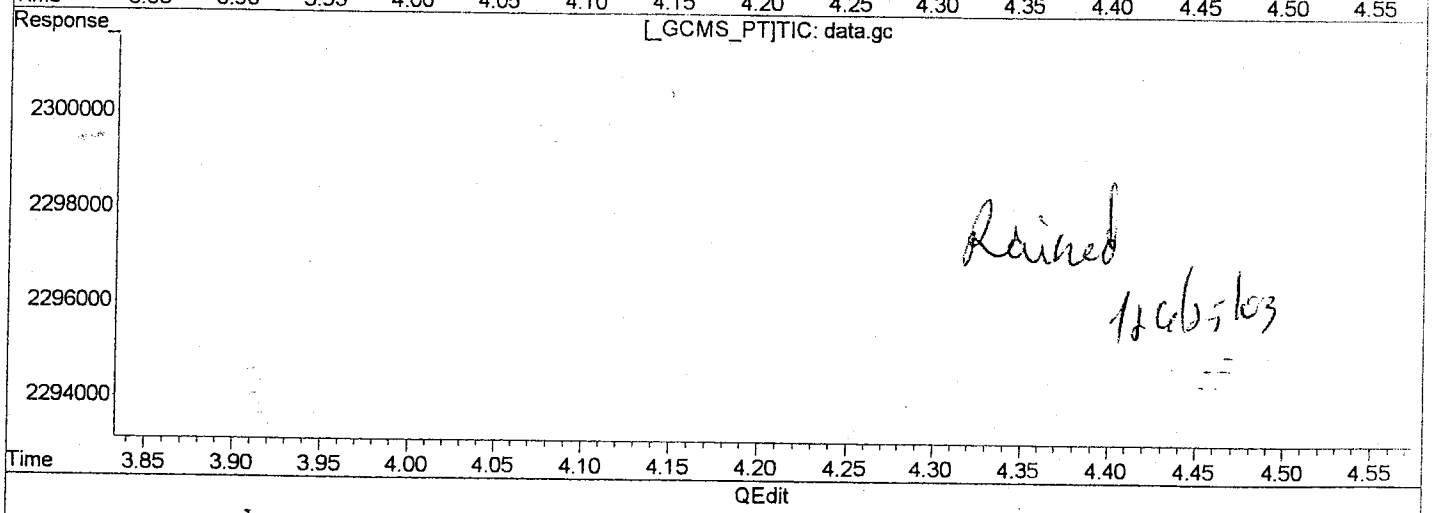
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration





Rained
12/6/03

(4) Benzene (T)

4.21min 0.442ug/L

response 13422

JW 6/26/03

(4) Benzene #2 (T)

3.08min 0.526ug/L

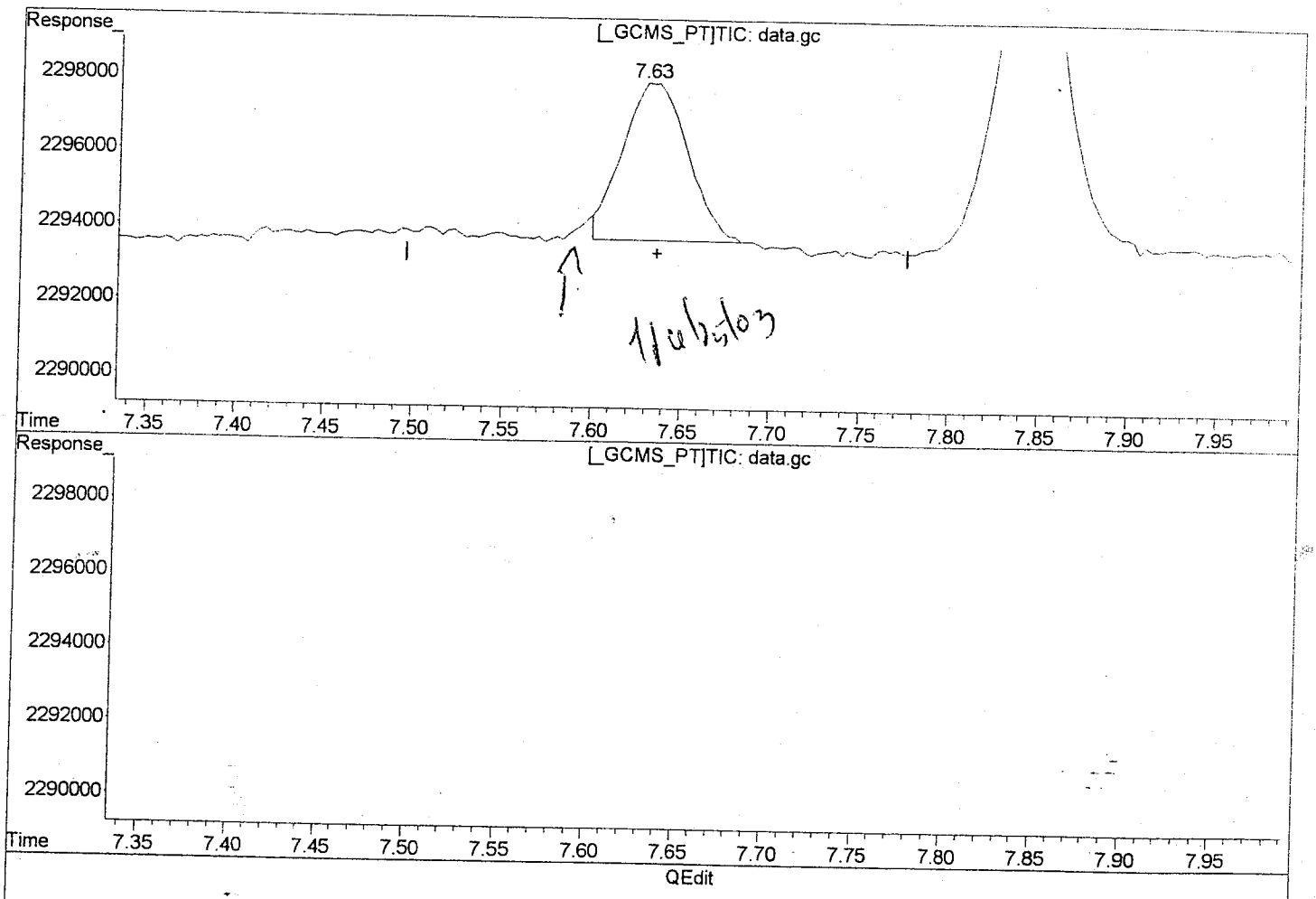
response 236800

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.63min 0.359ug/L

response 10654

6/26/03

(6) Ethylbenzene #2 (T)

6.37min 0.544ug/L

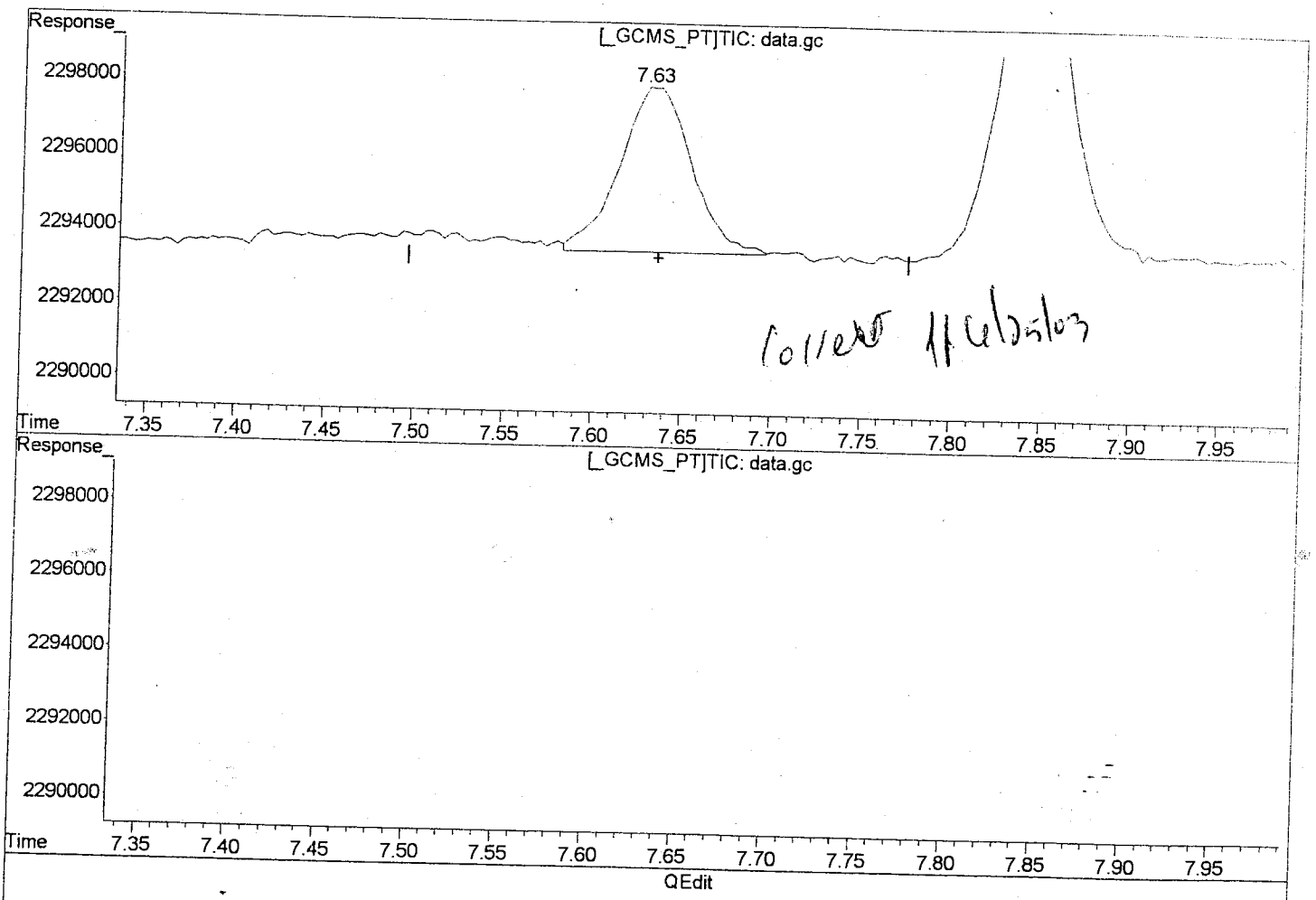
response 204291

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.63min 0.419ug/L m

response 12240

(6) Ethylbenzene #2 (T)

6.37min 0.544ug/L

response 204291

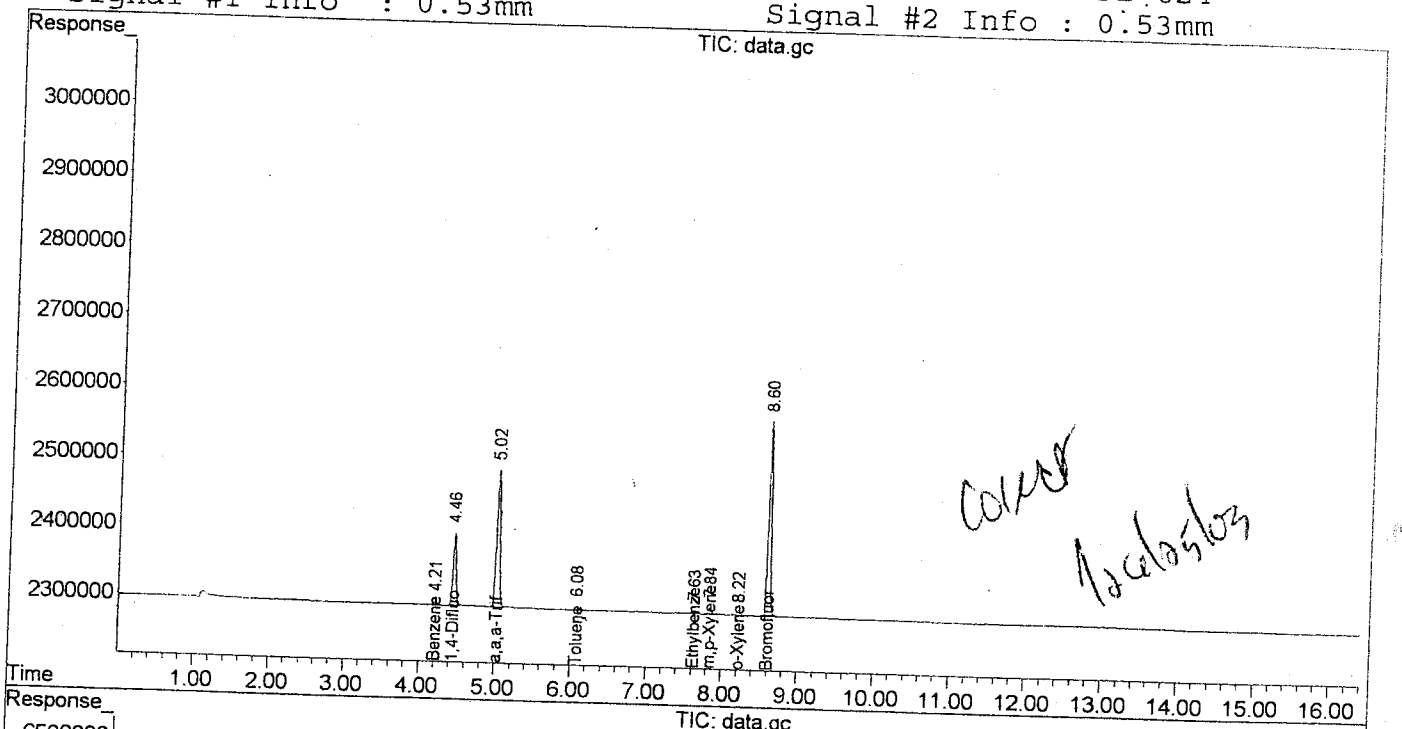
(+) = Expected Retention Time

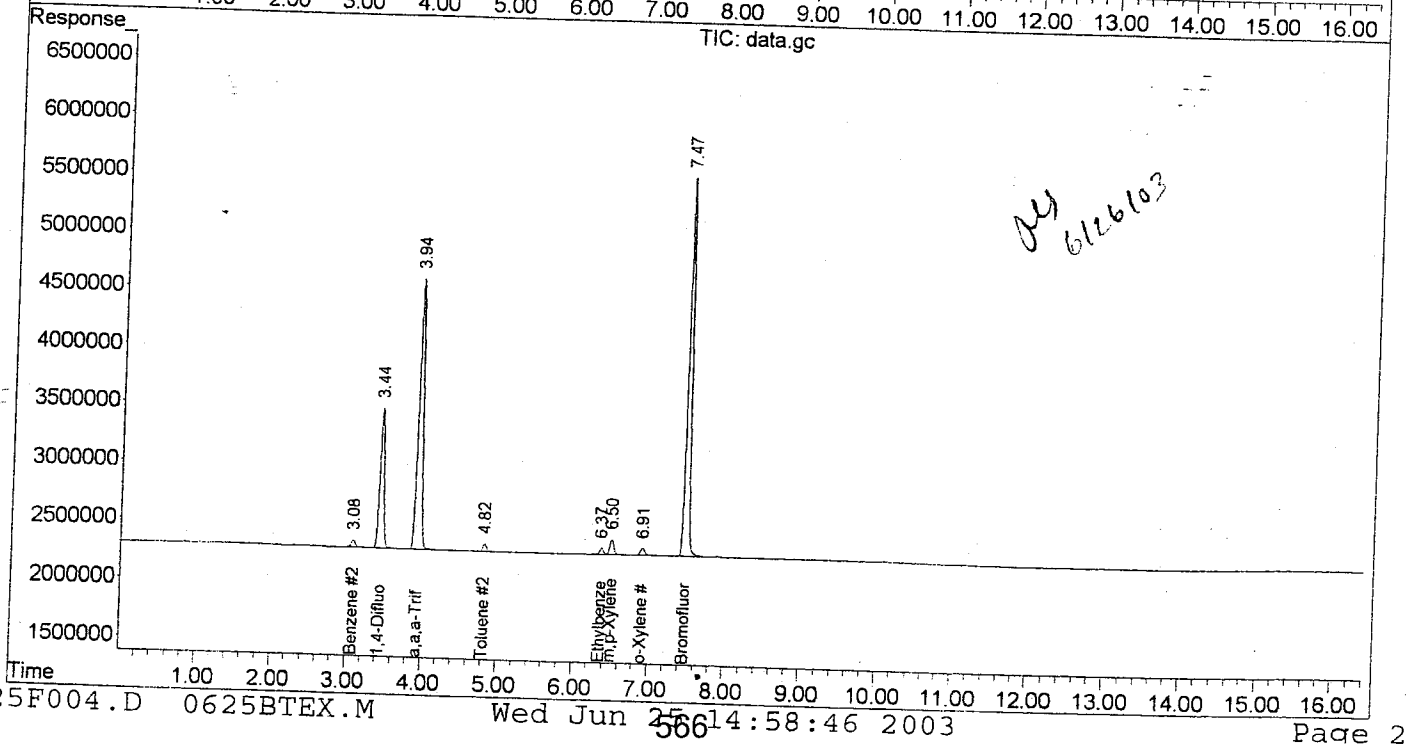
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:59 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm



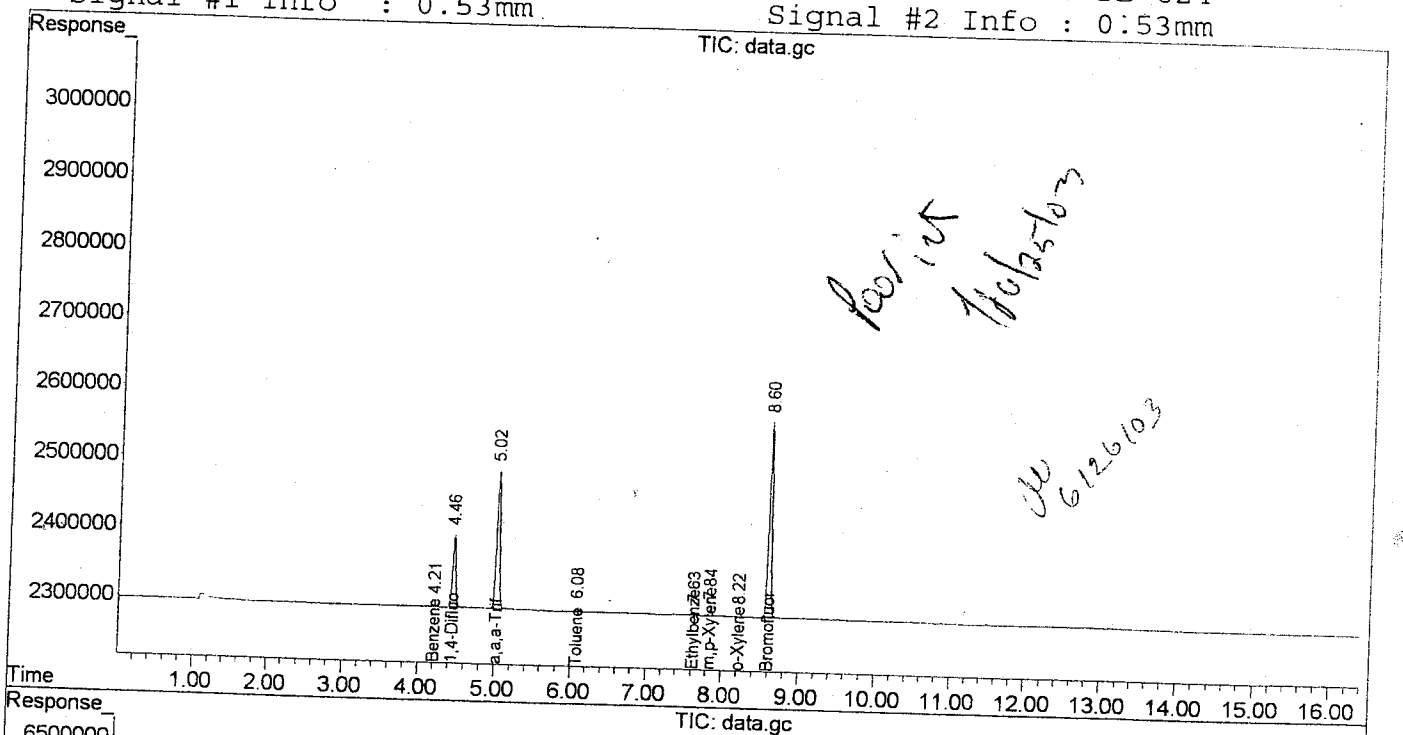


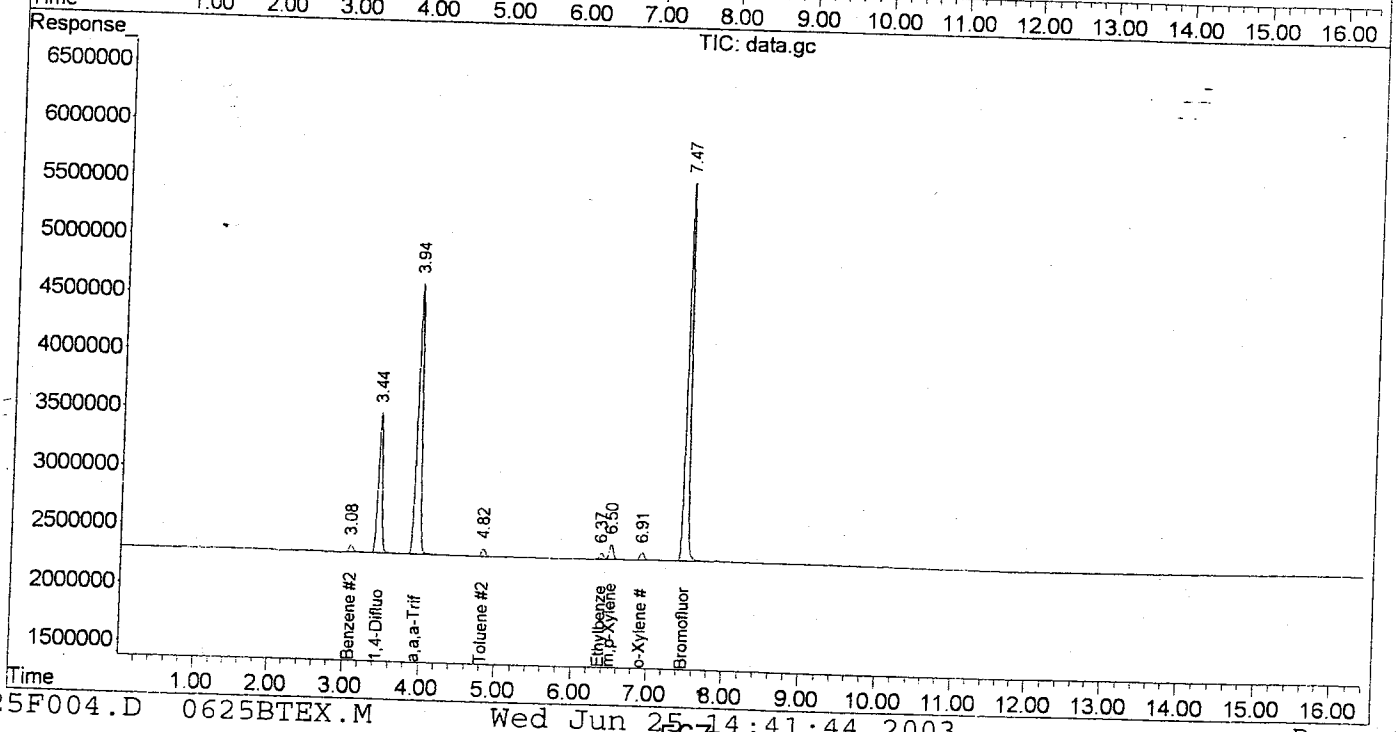
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F005.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F005.D\0625R005.D\data.gc
Acq On : 25 Jun 2003 11:30 am Operator: JW
Sample : hcv2-26o 1ppb/40ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	a,a,a-Trifluorot	5.02	3.94	622262	10219304	50.000	50.000	
		System Monitoring Compounds							
2)	S	1,4-Difluorobenz	4.45	3.44	487376	7774325	40.947	41.411	
3)	S	Bromofluorobenze	8.60	7.47	1119678	17457308	40.553	40.874	
		Target Compounds							
4)	T	Benzene	4.21	3.08	32260	515480	1.000	1.069	
5)	T	Toluene	6.08	4.82	28497	517593	0.878	1.112	#
6)	T	Ethylbenzene	7.63	6.37	25444	446426	0.862	1.110	#
7)	T	m,p-Xylenes	7.84	6.50	57729	1019446	2.197	2.256	#
8)	T	o-Xylene	8.22	6.91	24263	562991	0.898	1.358	#

6/26/03

6/26/03

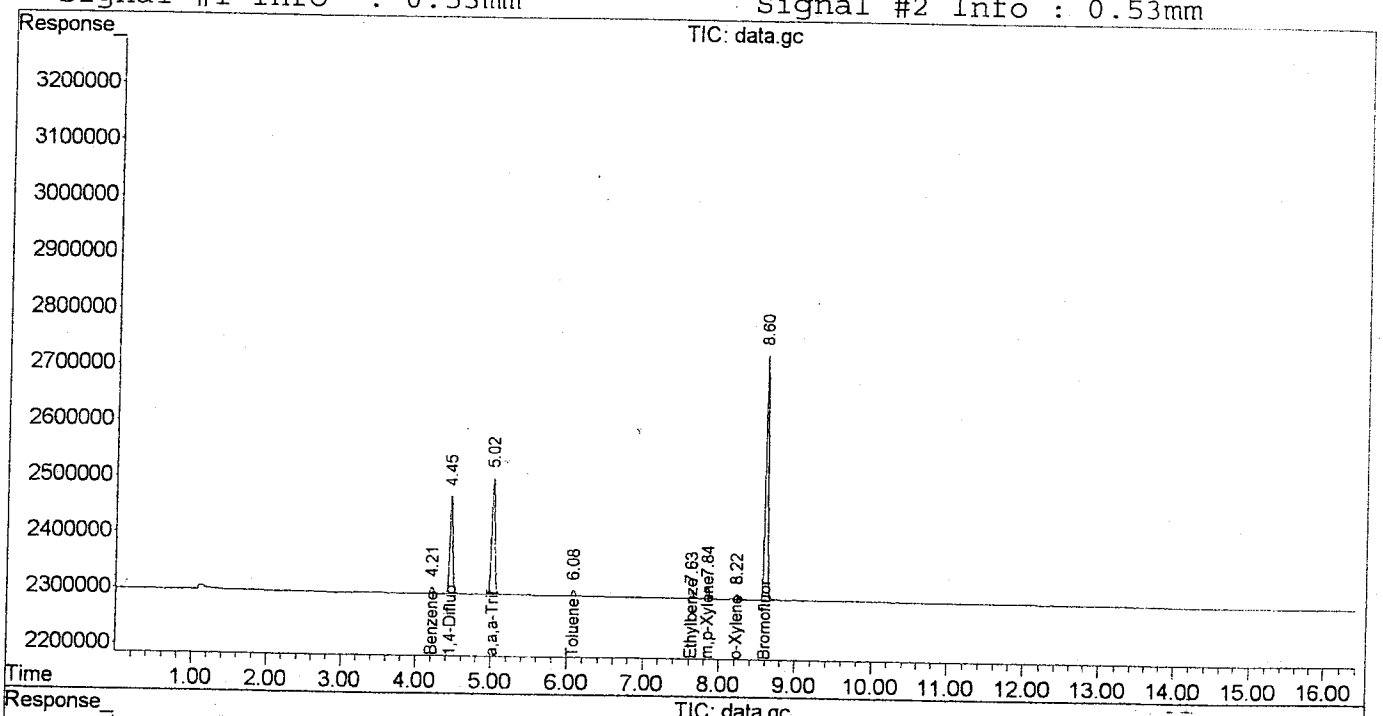
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

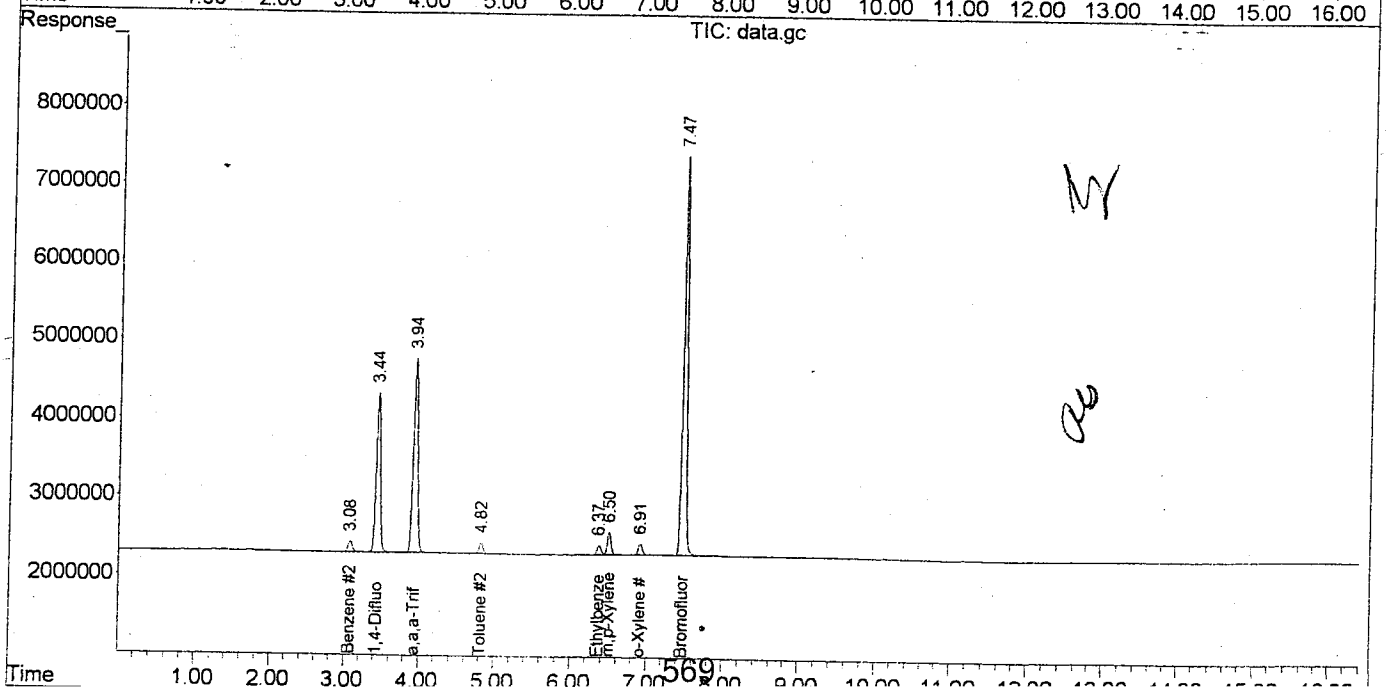
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F005.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F005.D\0625R005.D\data.gc
Acq On : 25 Jun 2003 11:30 am Operator: JW
Sample : hcv2-26o 1ppb/40ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F006.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F006.D\0625R006.D\data.gc
Acq On : 25 Jun 2003 12:02 pm Operator: JW
Sample : hcv2-26p 5ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:49 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	635099	10303214	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.46	3.45	610726	9774453	50.273	51.641
3)	S	Bromofluorobenze	8.61	7.48	1446365	22558443	51.327	52.388
		Target Compounds						
4)	T	Benzene	4.22	3.09	176263	2753134	5.349	5.664
5)	T	Toluene	6.09	4.83	159031	2696439	5.082	5.744
6)	T	Ethylbenzene	7.64	6.37	146396	2377488	5.068	5.861
7)	T	m,p-Xylenes	7.85	6.51	326201	5464117	10.474	11.995
8)	T	o-Xylene	8.23	6.92	138657	2411992	4.987	5.771

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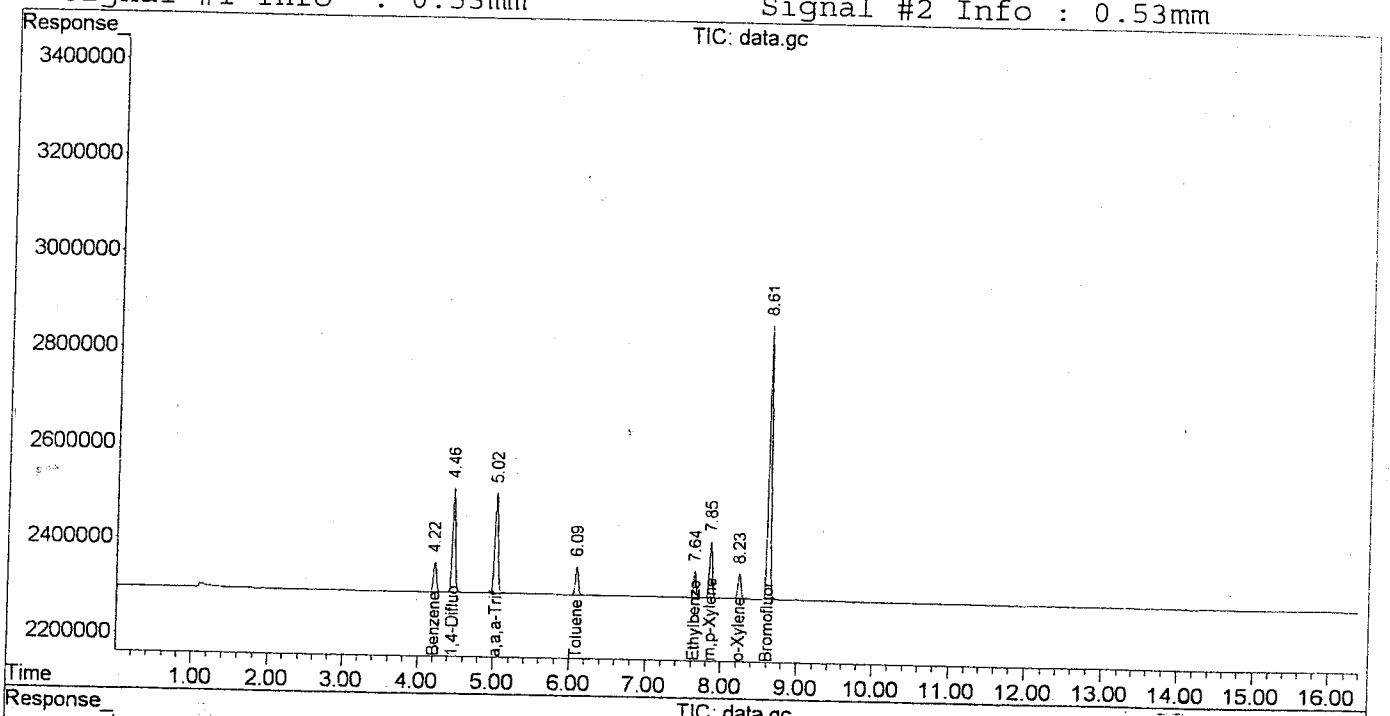
JW 6/26/03

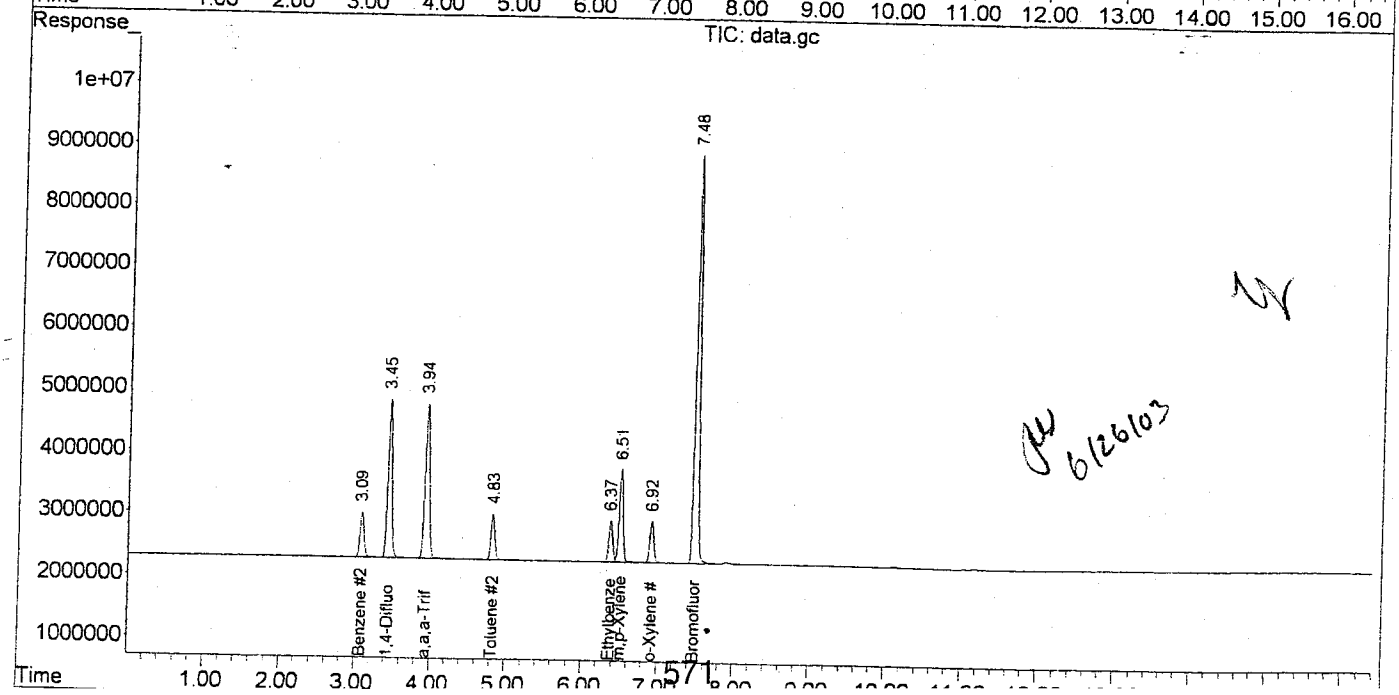
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F006.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F006.D\0625R006.D\data.gc
Acq On : 25 Jun 2003 12:02 pm Operator: JW
Sample : hcv2-26p 5ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F007.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F007.D\0625R007.D\data.gc
Acq On : 25 Jun 2003 12:34 pm Operator: JW
Sample : hcv2-26q 20ppb/100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:53 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.93	491716	8211624	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.46	3.44	1238044	19965916	131.629	132.353
3)	S	Bromofluorobenze	8.60	7.47	2975551	45213817	136.383	131.745
		Target Compounds						
4)	T	Benzene	4.21	3.08	675119	10762100	26.461	27.781
5)	T	Toluene	6.08	4.81	630057	10358855	26.262	27.688
6)	T	Ethylbenzene	7.63	6.36	585982	9132048	26.386	28.246
7)	T	m,p-Xylenes	7.84	6.49	1289801	20701957	51.964	57.022
8)	T	o-Xylene	8.22	6.90	554704	9141729	25.730	27.442

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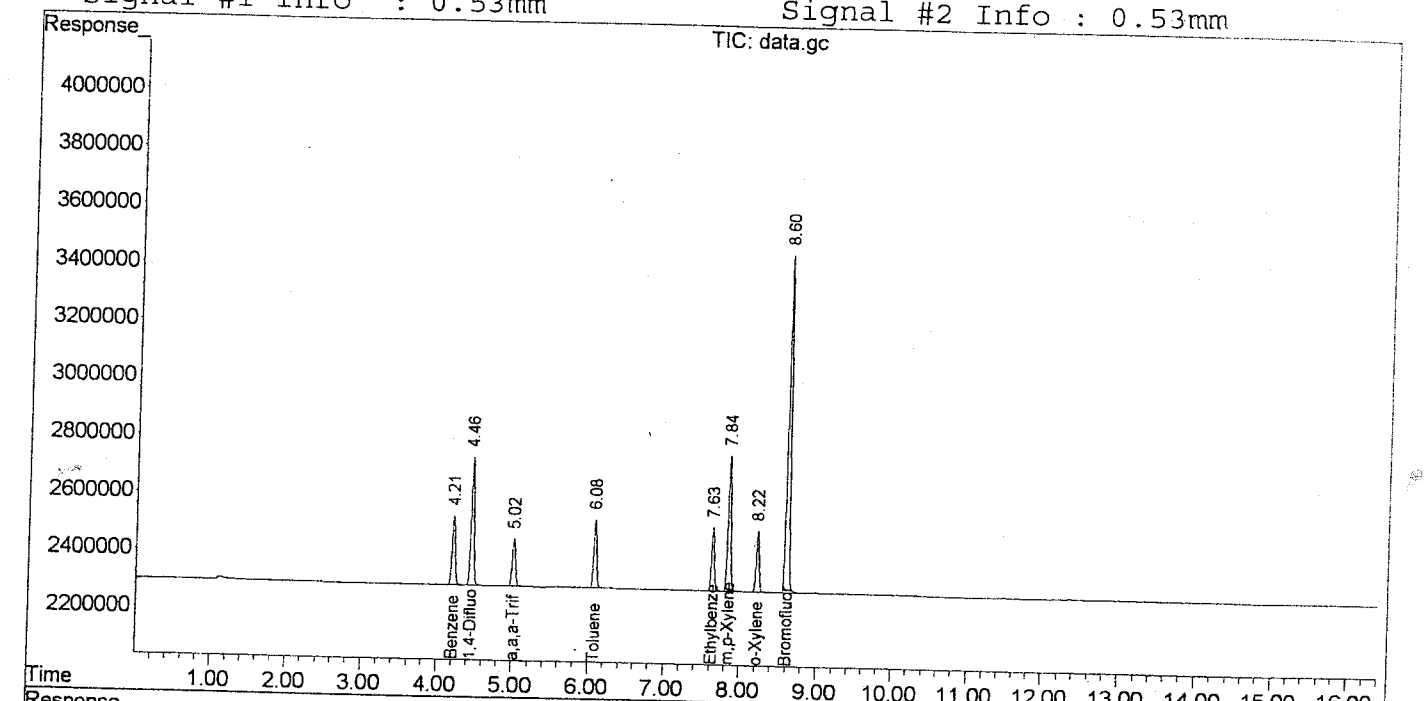
JW 6/26/03

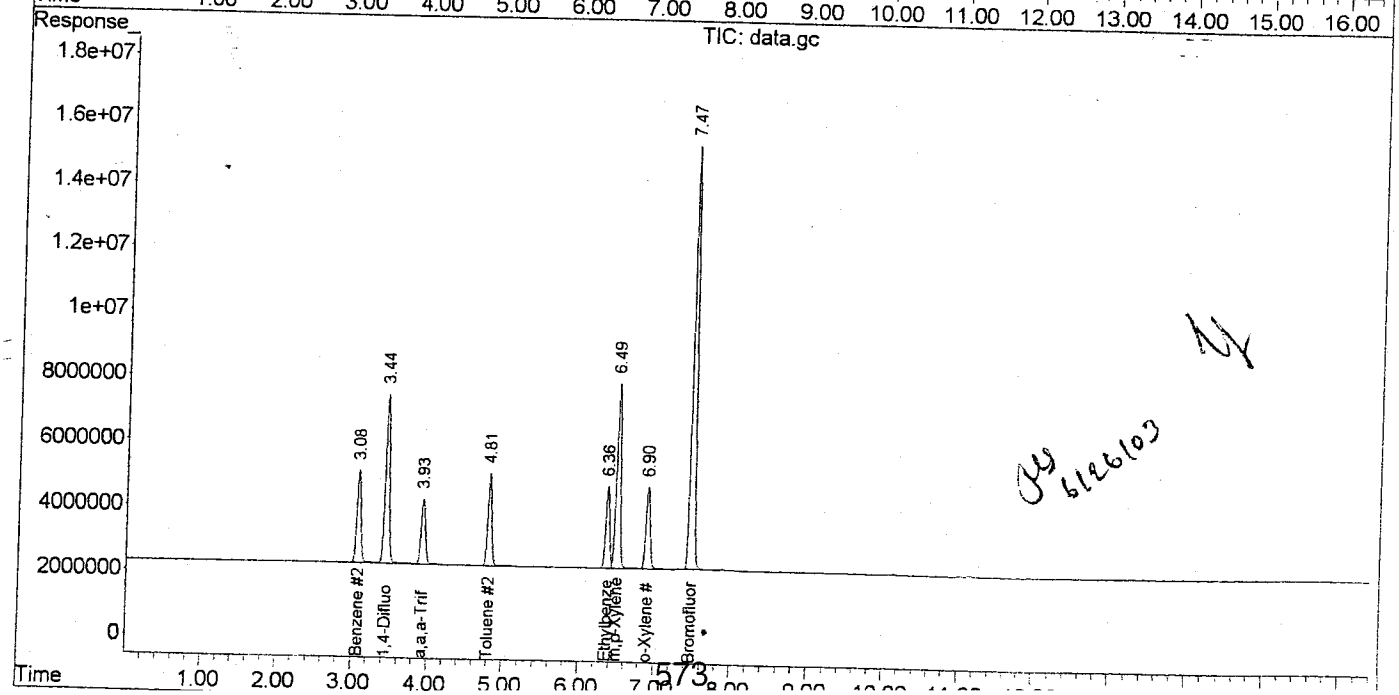
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F007.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F007.D\0625R007.D\data.gc
Acq On : 25 Jun 2003 12:34 pm Operator: JW
Sample : hcv2-26q 20ppb/100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F008.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F008.D\0625R008.D\data.gc
Acq On : 25 Jun 2003 01:06 pm Operator: JW
Sample : hcv2-26r 50ppb/150ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:57 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	619415	10320586	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.44	1860958	29813813	157.067	157.249
3)	S	Bromofluorobenze	8.60	7.46	4429040	63989124	161.152	148.353
		Target Compounds						
4)	T	Benzene	4.21	3.08	1659647	26167541	51.638	53.746
5)	T	Toluene	6.08	4.81	1564197	25202171	51.819	53.598
6)	T	Ethylbenzene	7.63	6.36	1453256	22263267	51.991	54.790
7)	T	m,p-Xylenes	7.84	6.50	3216954	49315024	102.522	108.078
8)	T	o-Xylene	8.22	6.90	1397221	22038198	51.440	52.636

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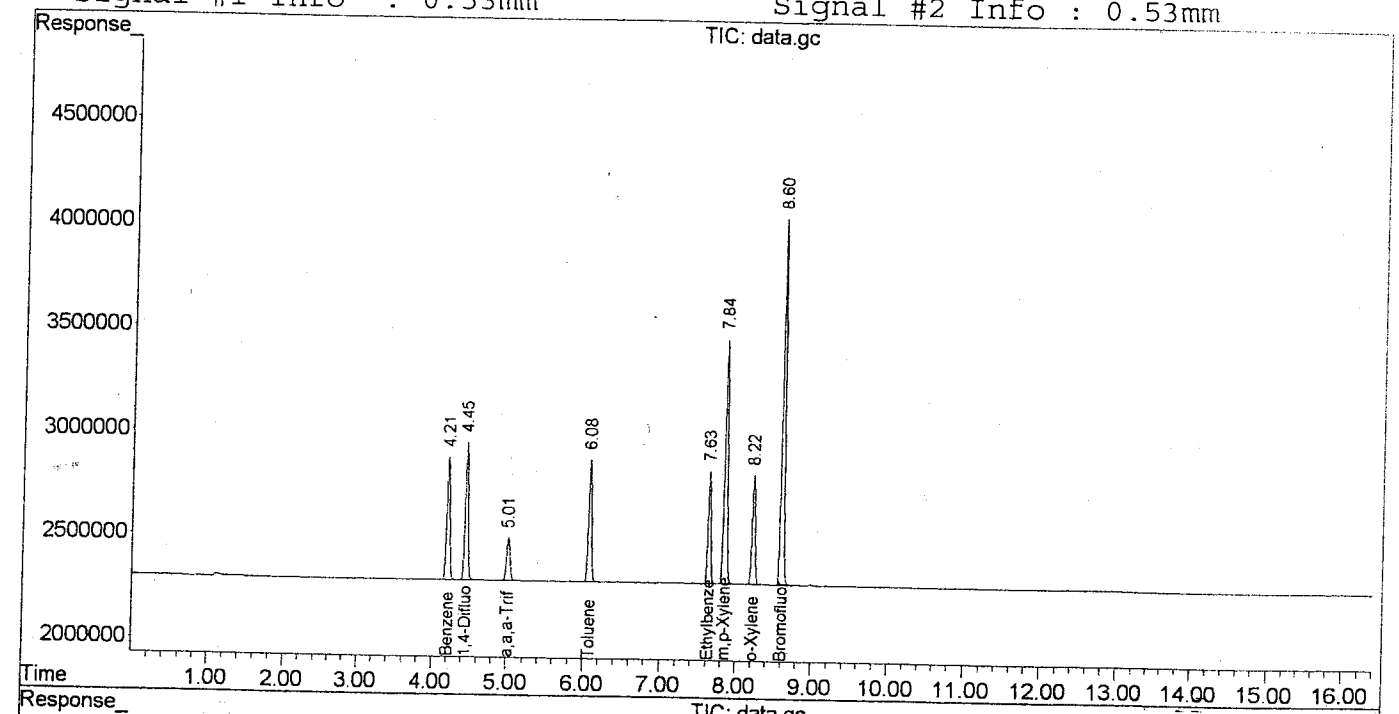
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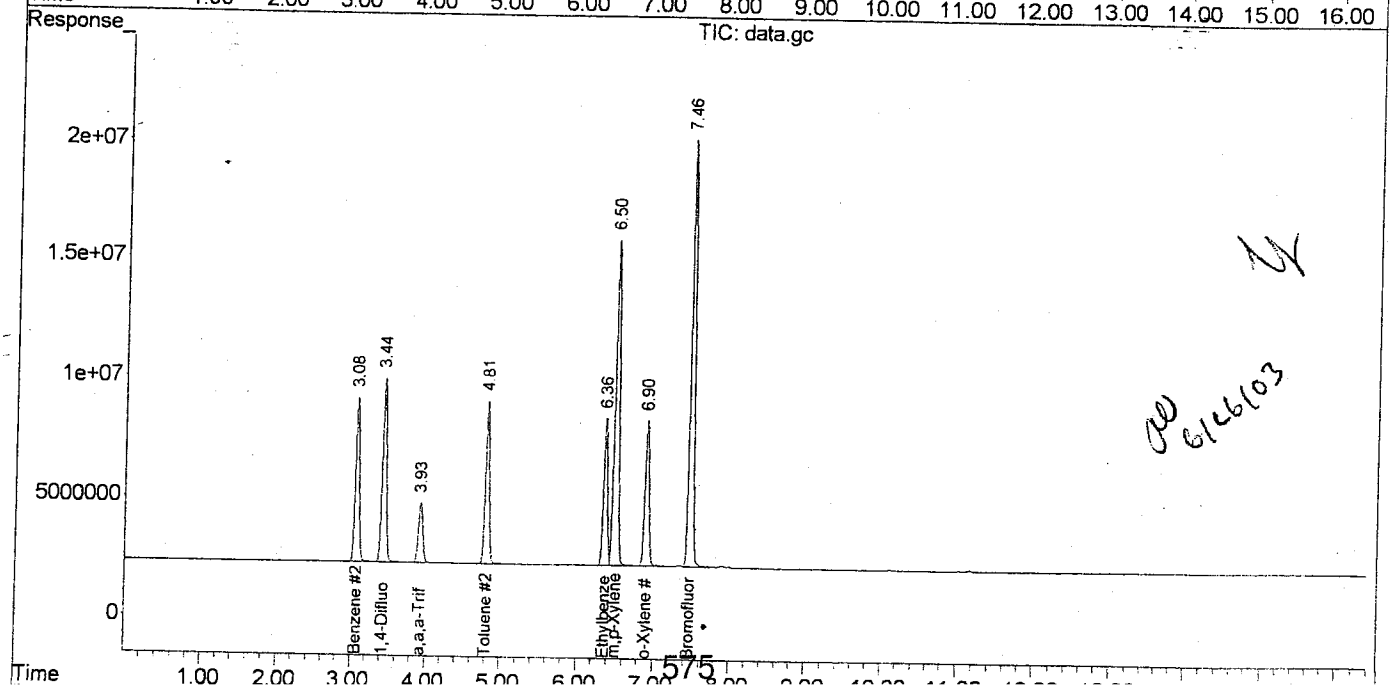
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F008.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F008.D\0625R008.D\data.gc
Acq On : 25 Jun 2003 01:06 pm Operator: JW
Sample : hcv2-26r 50ppb/150ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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JW 6/26/03

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F009.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F009.D\0625R009.D\data.gc
Acq On : 25 Jun 2003 01:38 pm Operator: JW
Sample : hcv2-26s 100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42:01 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	a,a,a-Trifluorot	5.01	3.93	611566	9918435	50.000	50.000	
		System Monitoring Compounds							
2)	S	1,4-Difluorobenz	0.00	0.00	0	0	N.D.	N.D.	
3)	S	Bromofluorobenze	8.60	0.00	33461	0	1.233	N.D.	#
		Target Compounds							
4)	T	Benzene	4.20	3.07	3418337	51773274	107.723	110.649	
5)	T	Toluene	6.07	4.81	3240439	49652398	108.796	109.878	
6)	T	Ethylbenzene	7.63	6.36	2994342	43897650	108.548	112.413	
7)	T	m,p-Xylenes	7.84	6.49	6714657	95194502	216.324	217.086	
8)	T	o-Xylene	8.22	6.90	2898404	43472574	108.067	108.041	

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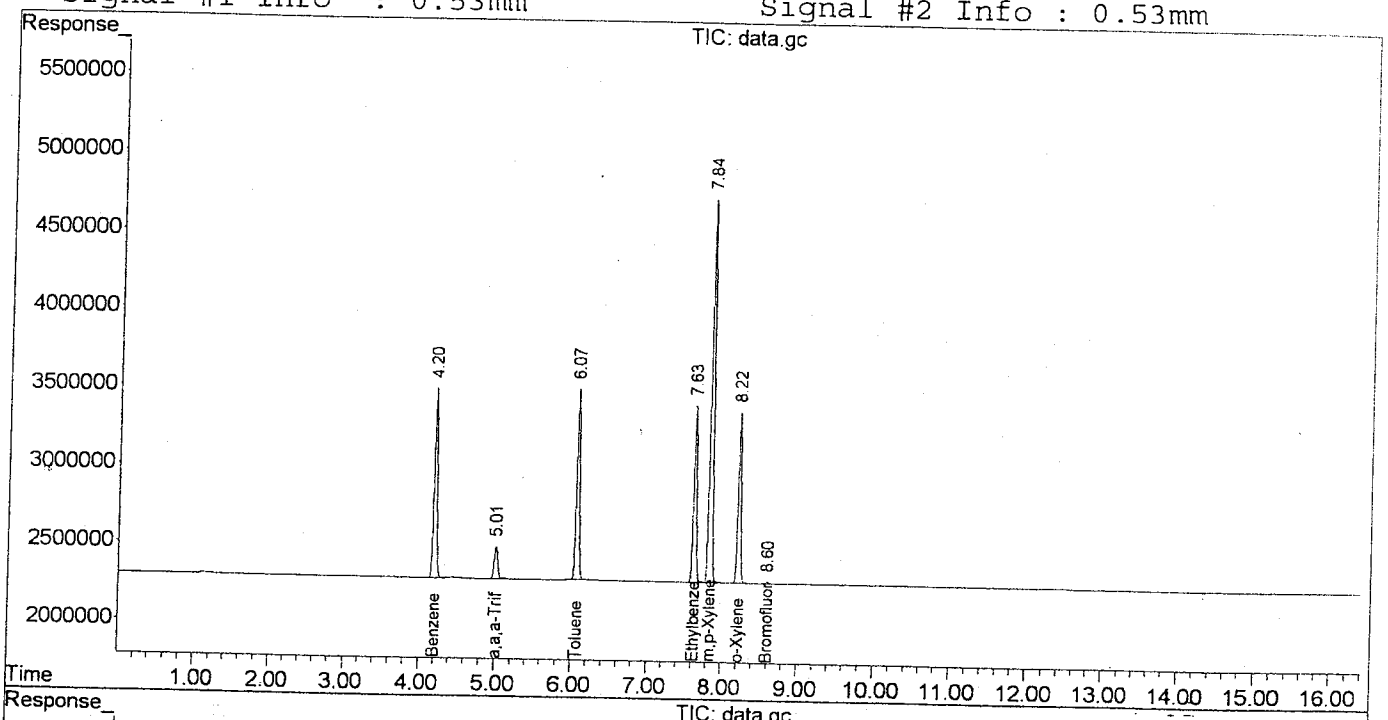
JW 6/26/03

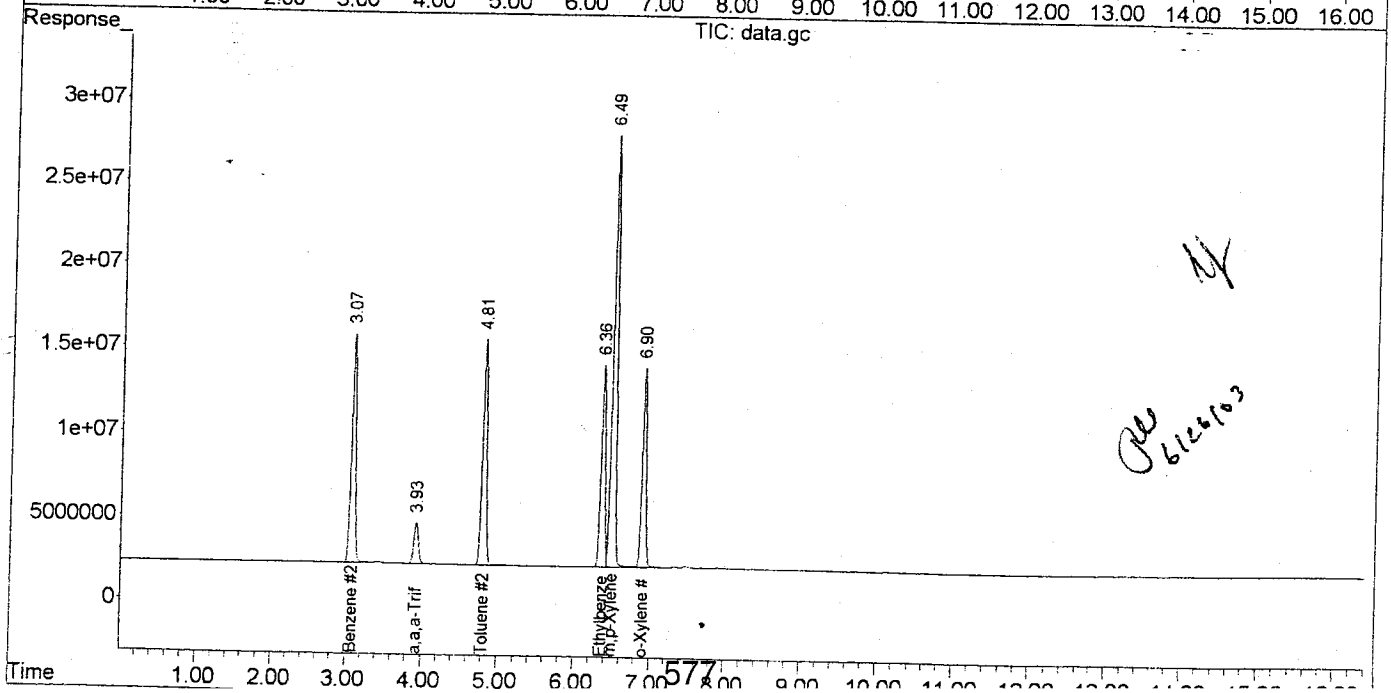
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F009.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F009.D\0625R009.D\data.gc
Acq On : 25 Jun 2003 01:38 pm Operator: JW
Sample : hcv2-26s 100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F010.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F010.D\0625R010.D\data.gc
Acq On : 25 Jun 2003 02:10 pm Operator: JW
Sample : hcv2-26t 200ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42:05 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	617124	9794175	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	0.00	0.00	0	0	N.D.	N.D.
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	4.20	3.07	6676838	96758587	208.513	209.414
5)	T	Toluene	6.07	4.81	6279842	91435586	209.001	204.908
6)	T	Ethylbenzene	7.63	6.36	5818870	80231634	209.081	208.064
7)	T	m,p-Xylenes	7.84	6.49	13151828	167.8E6	419.543	387.592
8)	T	o-Xylene	8.22	6.90	5656098	79082953	208.979	199.035

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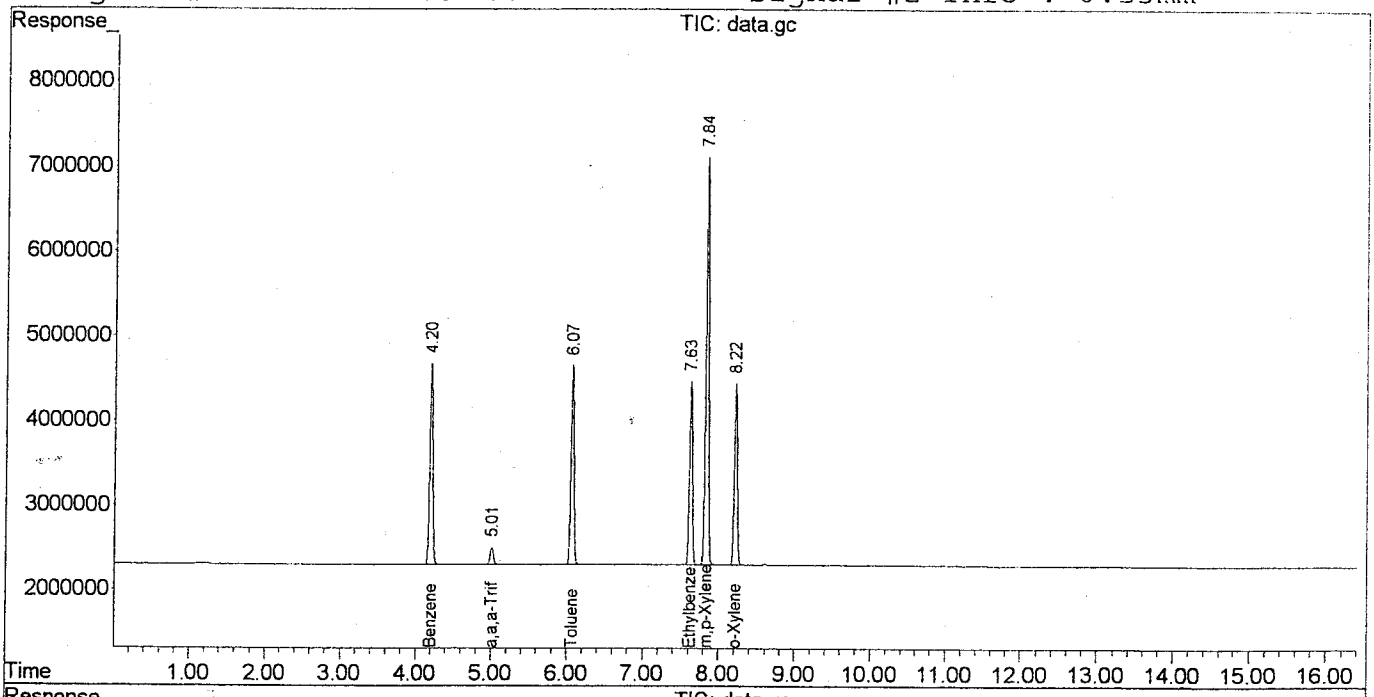
JW 6/26/03

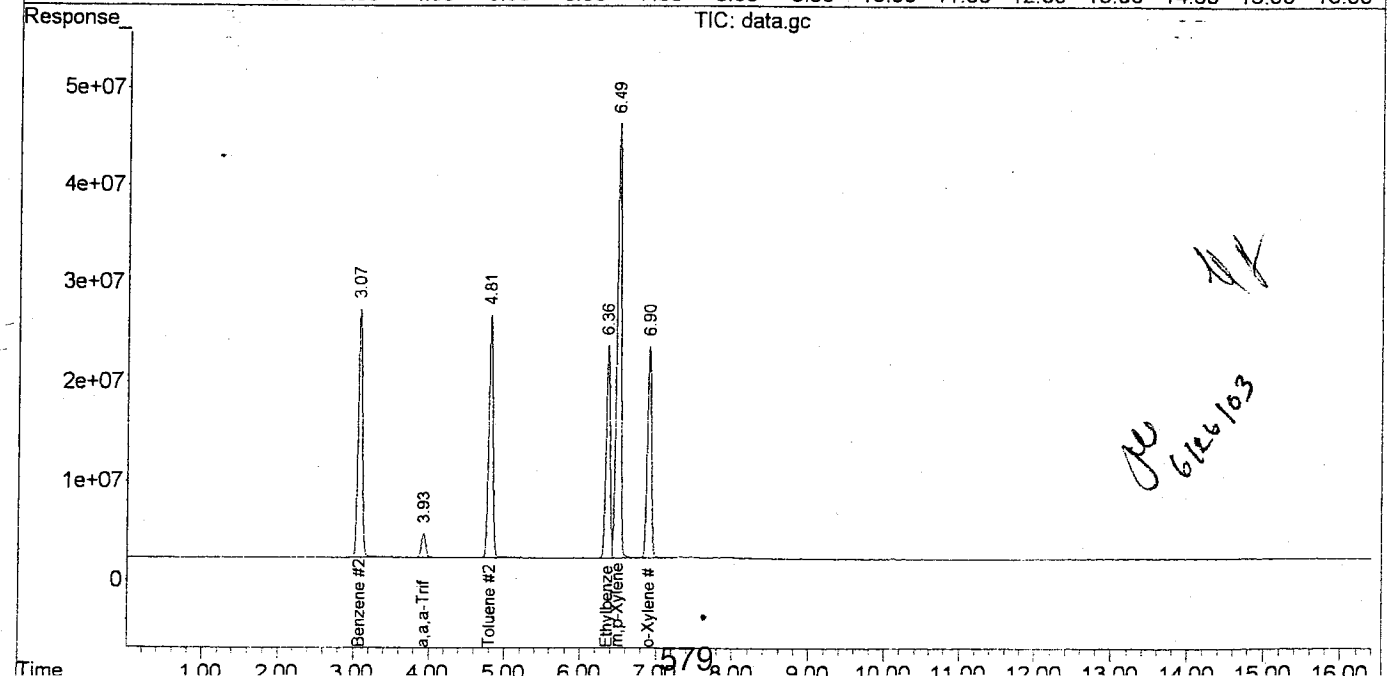
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F010.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F010.D\0625R010.D\data.gc
Acq On : 25 Jun 2003 02:10 pm Operator: JW
Sample : hcv2-26t 200ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F011.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F011.D\0625R011.D\data.gc
Acq On : 25 Jun 2003 02:43 pm Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44:14 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	607185	8559548	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.43	12061	181692	2.792	1.055 #
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	6.07	4.81	3883	101103	0.124	0.229 #
6)	T	Ethylbenzene	7.63	6.36	6958	116350	0.250	0.301
7)	T	m,p-Xylenes	7.84	6.49	17454	296903	0.550	0.689 #
8)	T	o-Xylene	8.22	6.91	8358	203873	0.309	0.497 #

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JW 7/6/03

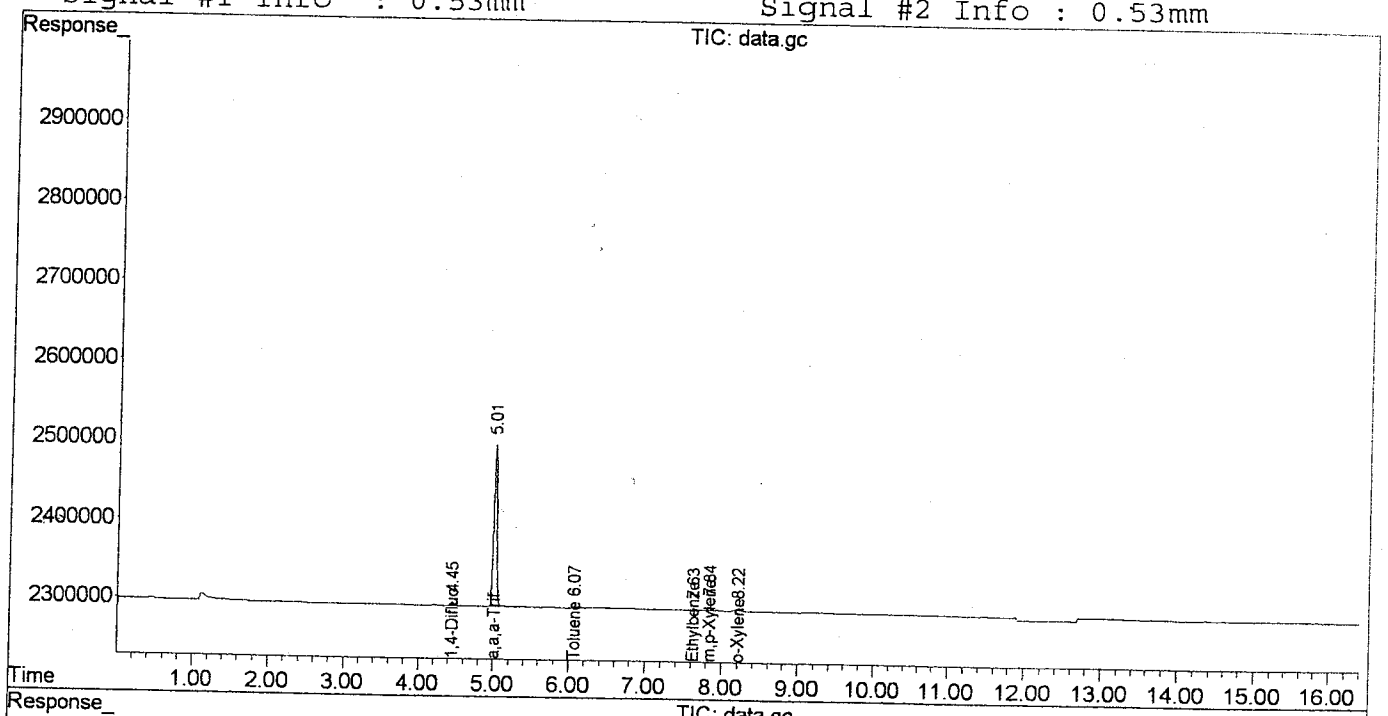
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

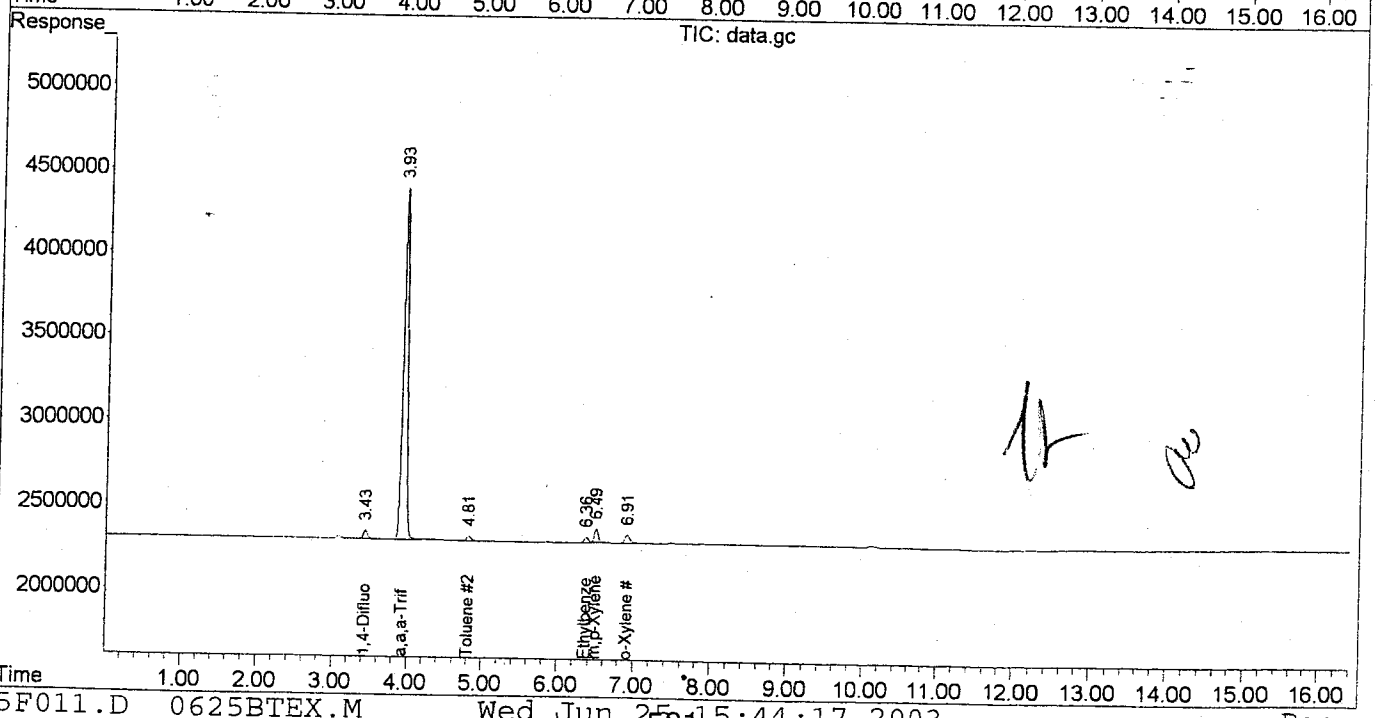
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F011.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F011.D\0625R011.D\data.gc
Acq On : 25 Jun 2003 02:43 pm Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:43:14 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.97	3.89	576978	8851755	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.42	3.39	548933	8139200	45.816	45.721
3)	S	Bromofluorobenze	8.55	7.41f	1323536	20749878	46.429	51.096
		Target Compounds						
4)	T	Benzene	4.17	3.04	592520	8410375	18.573	18.350
5)	T	Toluene	6.03	4.76	542745	8370137	18.273	18.338
6)	T	Ethylbenzene	7.58	6.31	493519	7311556	18.686	18.262m
7)	T	m,p-Xylenes	7.80	6.44	1129168	17914558	37.418	40.199
8)	T	o-Xylene	8.17	6.85	498253	8036709	19.379	18.938

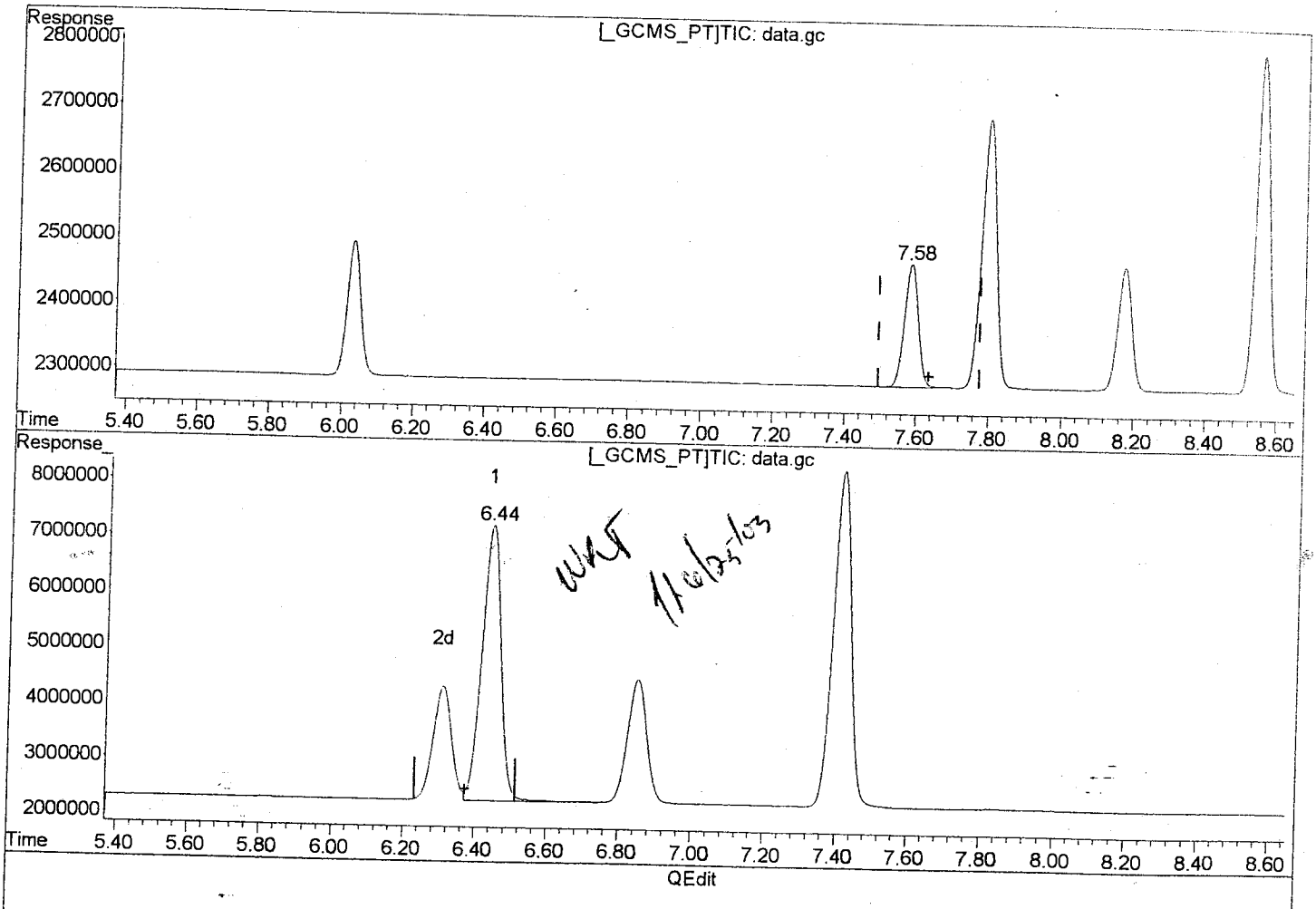
correct.
11/6/03
JW 6/26/03

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.58min 18.686ug/L

response 493519

(6) Ethylbenzene #2 (T)

6.44min 44.745ug/L

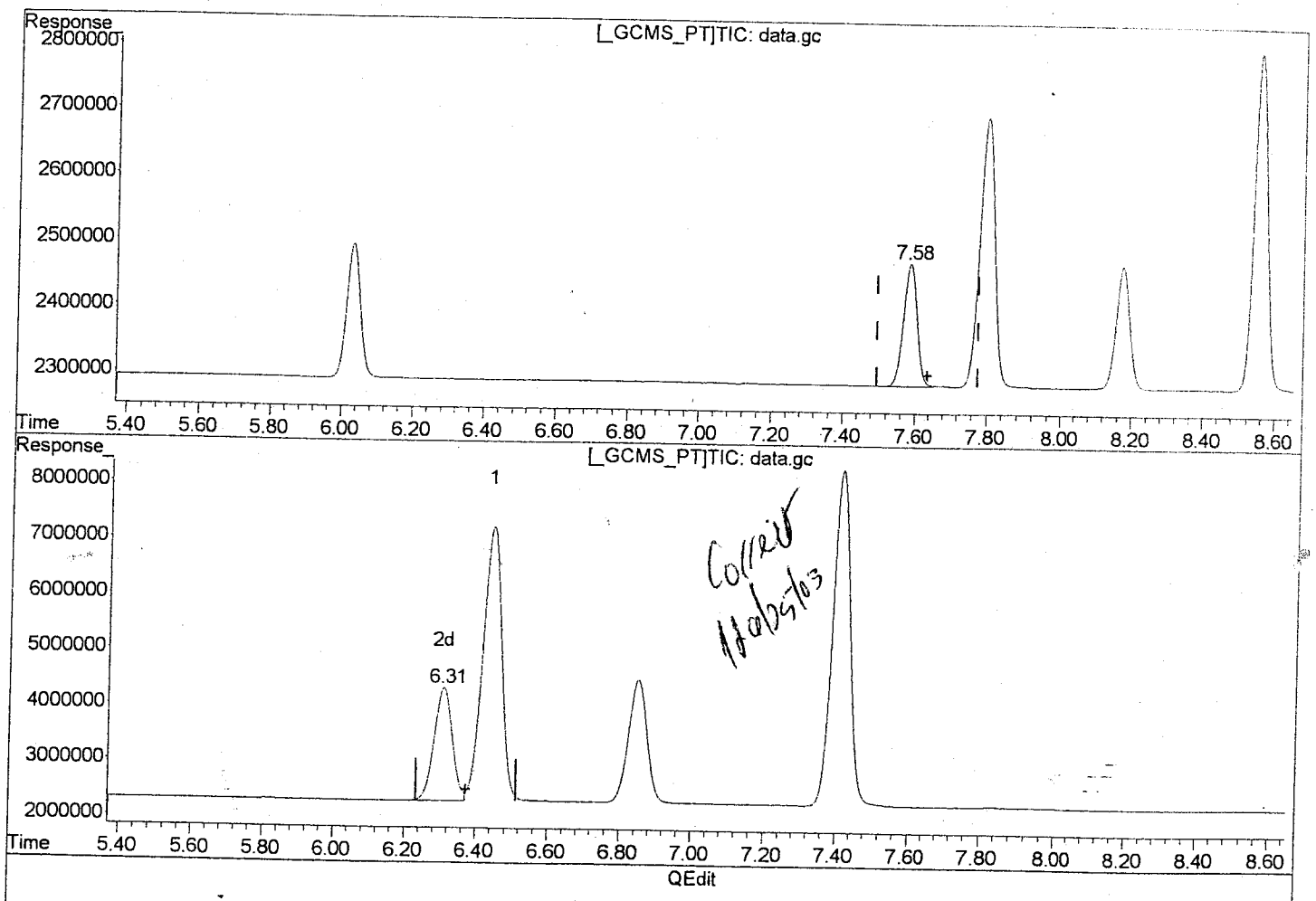
response 17914558

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.58min 18.686ug/L

response 493519

JW 6/26/03

(6) Ethylbenzene #2 (T)

6.31min 18.262ug/L m

response 7311556

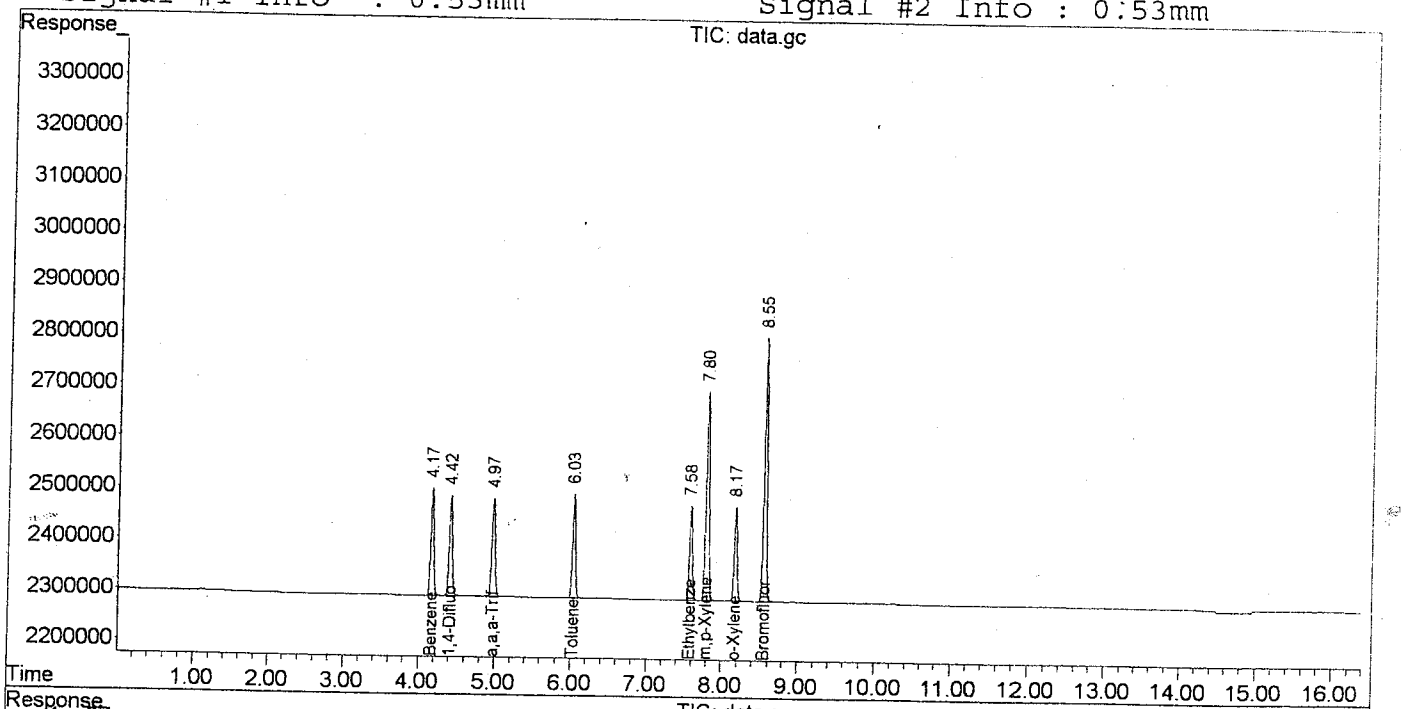
(+) = Expected Retention Time

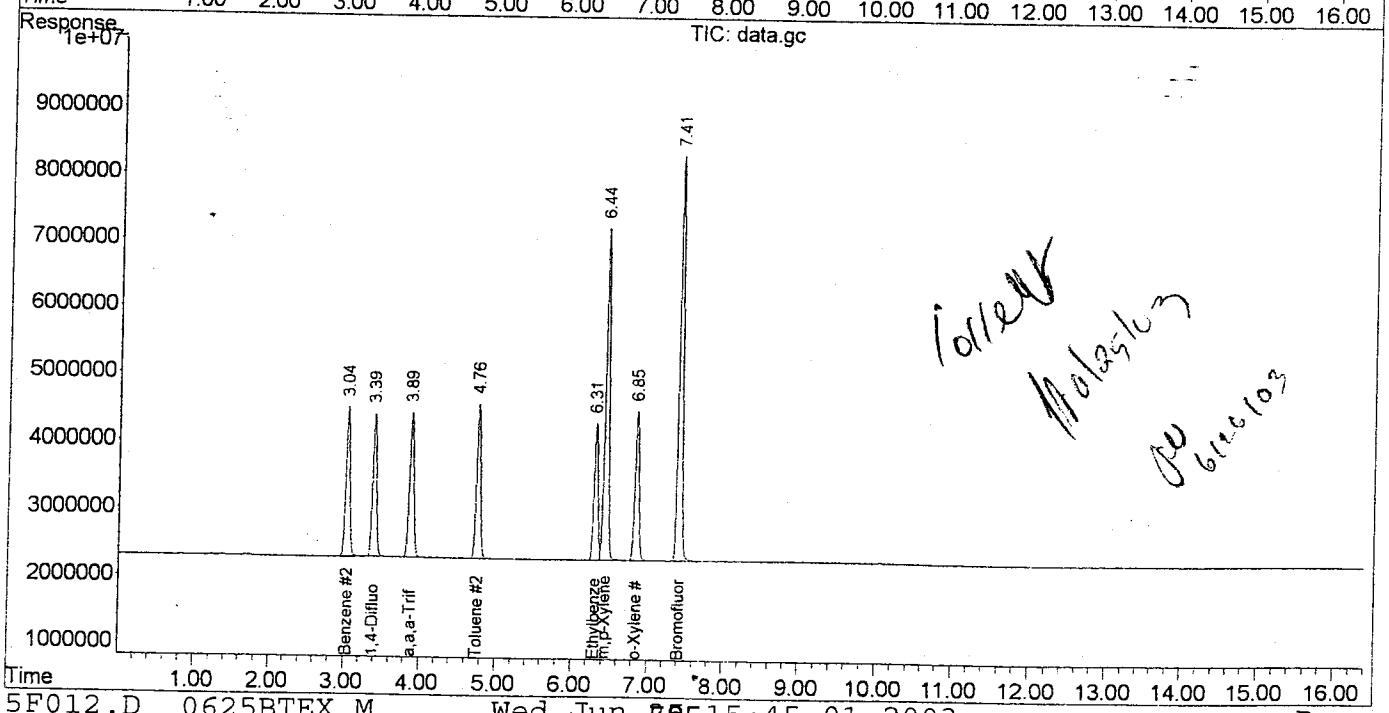
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm



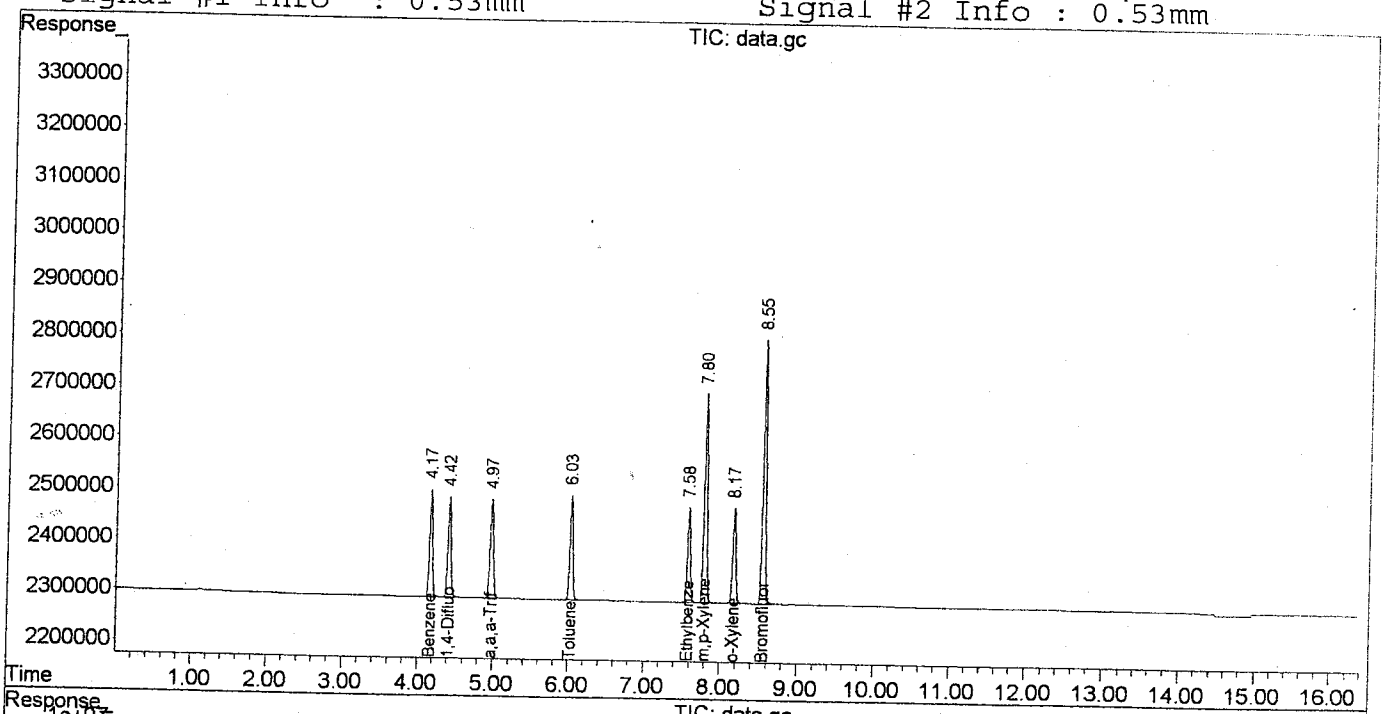


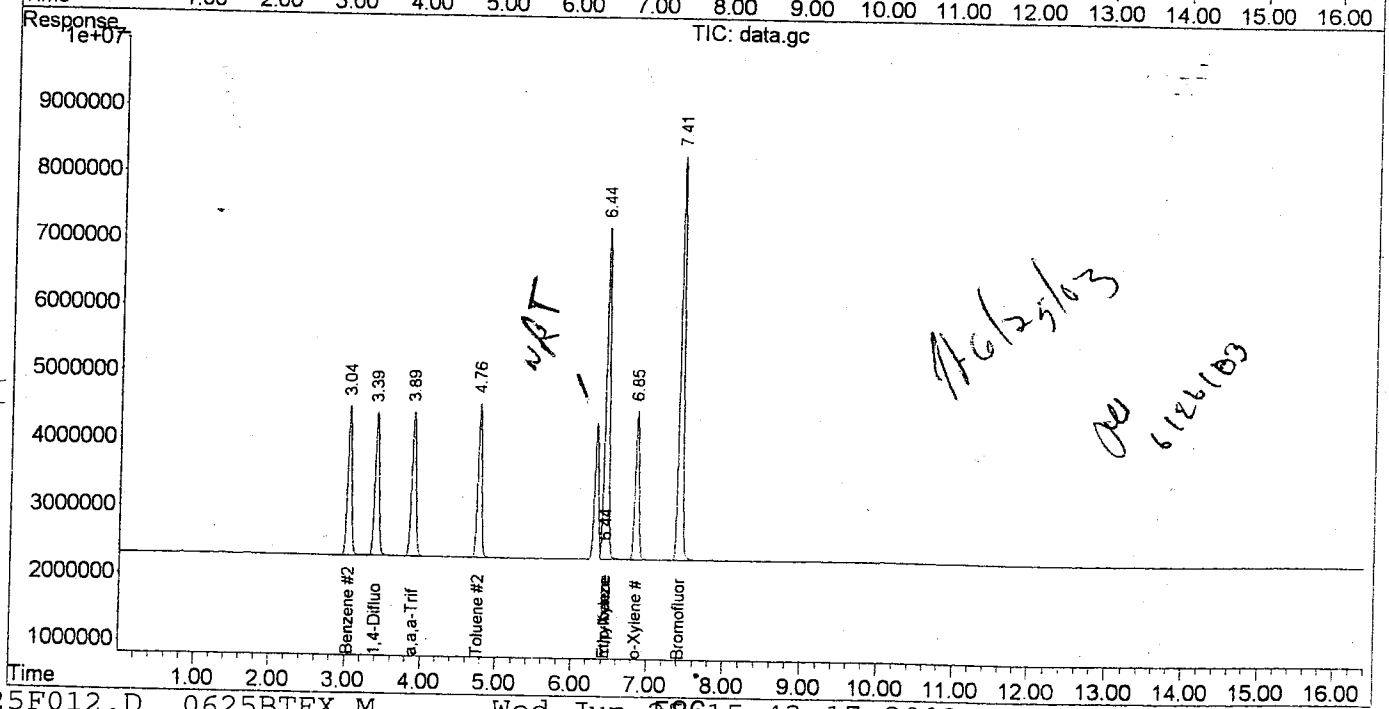
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





NPT - 1

6/25/03

6/26/03

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\071103\0711F031.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\071103\0711F031.D\0711R031.D\data.gc
Acq On : 12 Jul 2003 00:55 am Operator: JW
Sample : btex@50ppb nelac Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jul 14 08:21:47 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Wed Jul 09 08:10:08 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.85	3.80	615988	7967916	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.31	1176003	14999510	92.015	93.605
3)	S	Bromofluorobenze	8.44f	0.00	18504	0	0.608	N.D. #
		Target Compounds						
4)	T	Benzene	4.05	2.95	1712213	21004711	50.271	50.911
5)	T	Toluene	5.91	4.68	1632779	20450523	51.491	49.774
6)	T	Ethylbenzene	7.47	6.23	1440718	18064855	51.094	50.125
7)	T	m,p-Xylenes	7.68	6.36	3271257	40008772	101.537	99.734
8)	T	o-Xylene	8.06	6.77	1415320	17777810	51.560	46.538

JW
7/14/03

MC

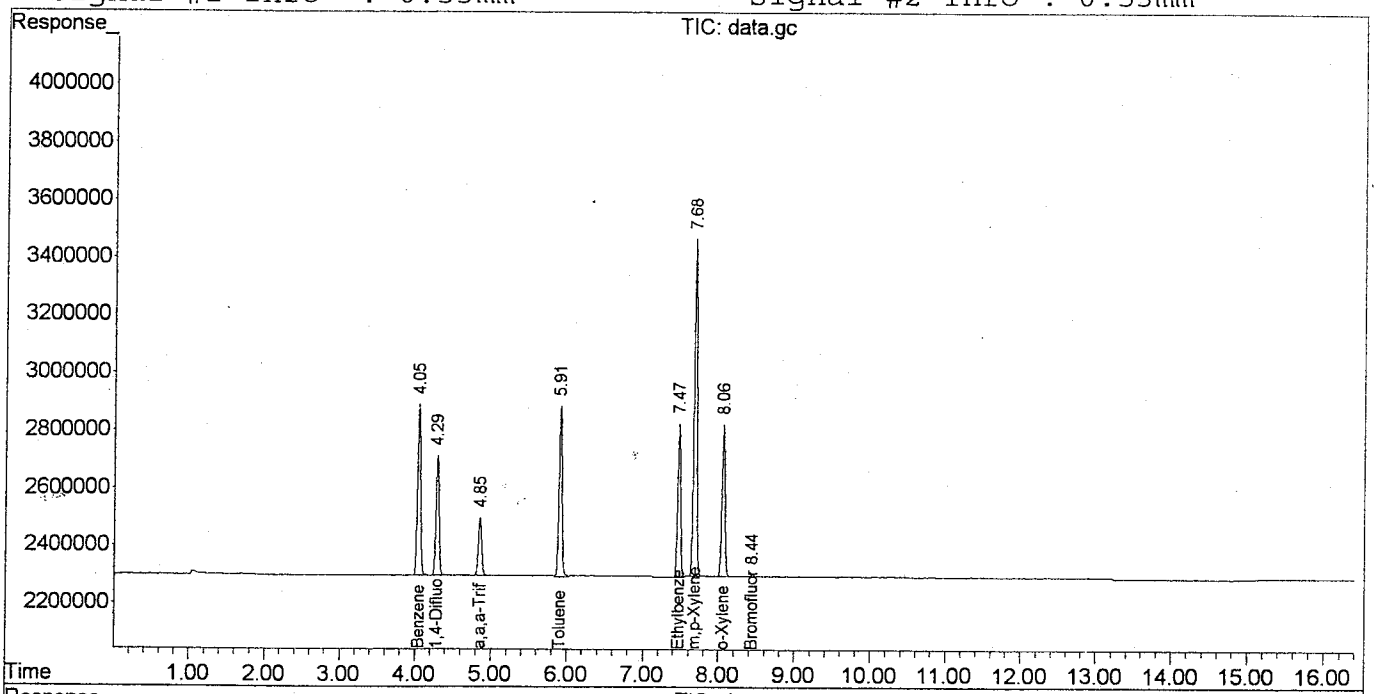
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

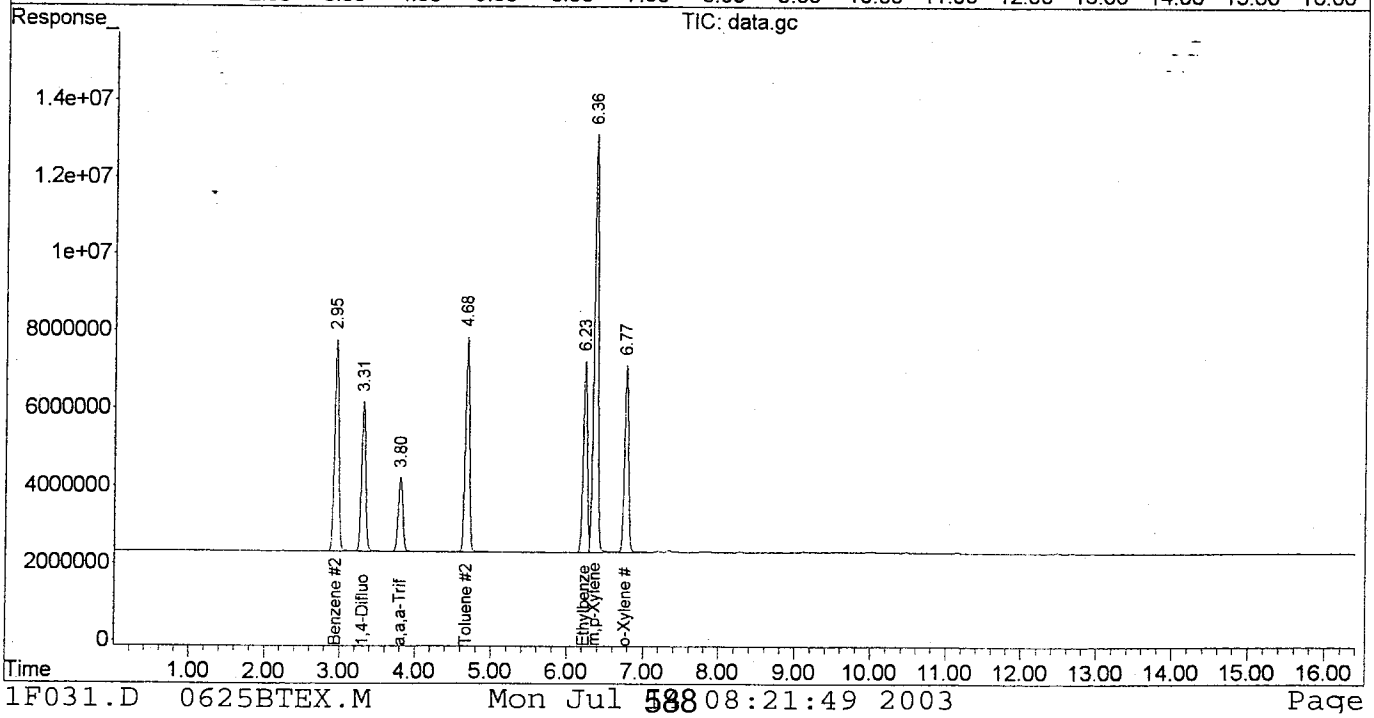
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\071103\0711F031.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\071103\0711F031.D\0711R031.D\data.gc
Acq On : 12 Jul 2003 00:55 am Operator: JW
Sample : btex@50ppb nelac Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jul 14 8:23 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Wed Jul 09 08:10:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D\1028R015.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.59	2.52	-3	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.58	2.42	-6	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.26	2.16	-5	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.52	2.42	-4	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.11	-12	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	97		1.01	0.979	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.76	2.59	-6	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.57	2.40	-7	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.29	2.21	-3	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	0.01	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	0.01	2.23	2.10	-6	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.04	1.00	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC06B\DATA\102803\1028F015.D
Lab ID: KWG0317374-2
RunType: CCV
Matrix: SOIL

Date Acquired: 10/28/2003 21:26
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.20	NA	0.15	NA

Primary Review: 10/29/03

Secondary Review: 10/29/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F015.D\1028R015.D
Lab ID: KWG0317374-2
RunType: CCV
Matrix: SOIL

Date Acquired: 10/28/2003 21:26
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.16	NA	0.15	NA

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/29/2003

Analysis Lot:	KWG0317374	**Prep Lot:**		**Report Group:**	
Analysis Method:	8021B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F015.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F015.D\1028R015.D			**Vial:**	165
Acqu Date:	10/28/2003 21:26	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317374-2				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82* -0.20	3.77* -0.16	528215	4566861	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.28	1056429	8946080	96.39	97.41			NA
				%Recovery =		NA	NA	Limits =	84-114	
1	Bromofluorobenzene	8.40	7.31	2286663	18852316	87.62	89.98			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene	4.01	2.92	546663	4594520	18.72	19.43			
1	Toluene	5.88	4.65	506228	4429457	18.62	18.81			
1	Ethylbenzene	7.43	6.20	467157	3939882	19.32	19.07			
1	m,p-Xylenes	7.65	6.33	1033649	8857098	37.42	38.52			
1	o-Xylene	8.02	6.74	443681	3859480	18.85	17.63			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F015.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F015.D\1028R015.D\data.gc
Acq On : 28 Oct 2003 09:26 pm Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:28 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.77	528215	4566861	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.28	1056429	8946080	96.394	97.405
3)	S	Bromofluorobenze	8.40	7.31	2286663	18852316	87.620	89.981
		Target Compounds						
4)	T	Benzene	4.01	2.92	546663	4594520	18.717	19.430
5)	T	Toluene	5.88	4.65	506228	4429457	18.617	18.810
6)	T	Ethylbenzene	7.43	6.20	467157	3939882	19.321	19.074
7)	T	m,p-Xylenes	7.65	6.33	1033649	8857098	37.415	38.522
8)	T	o-Xylene	8.02	6.74	443681	3859480	18.849	17.627

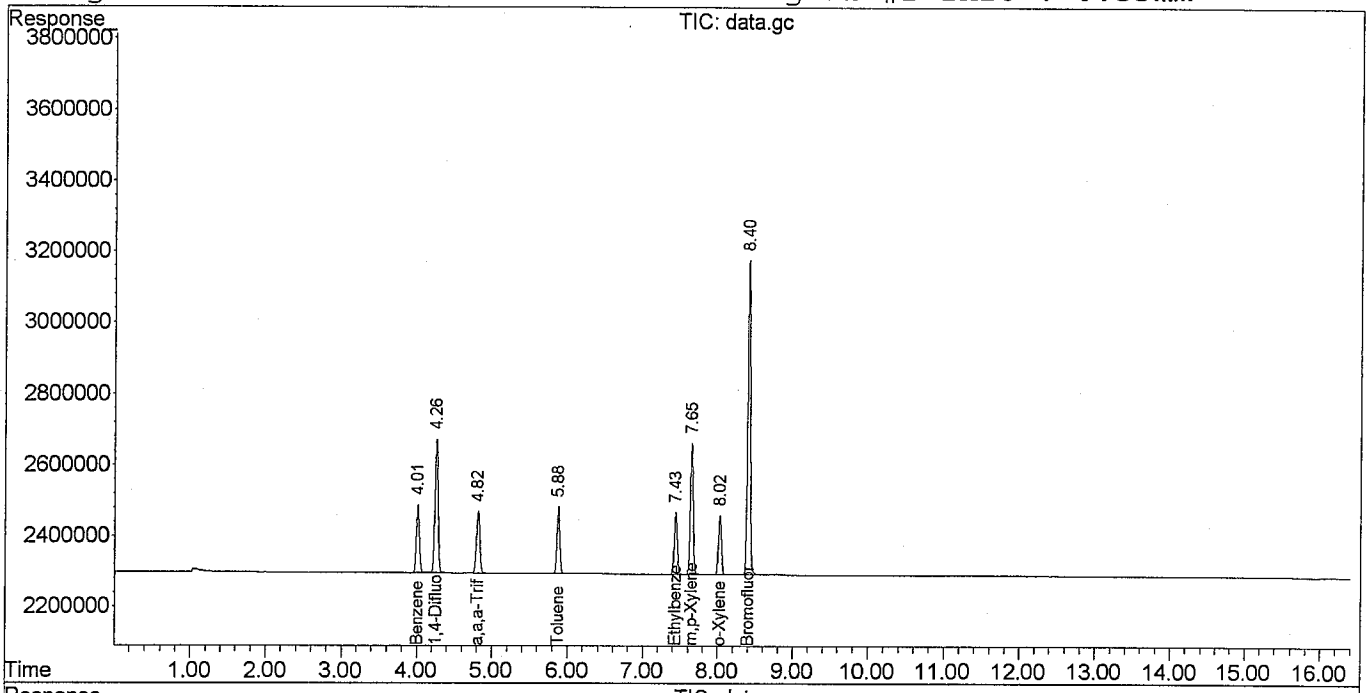
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

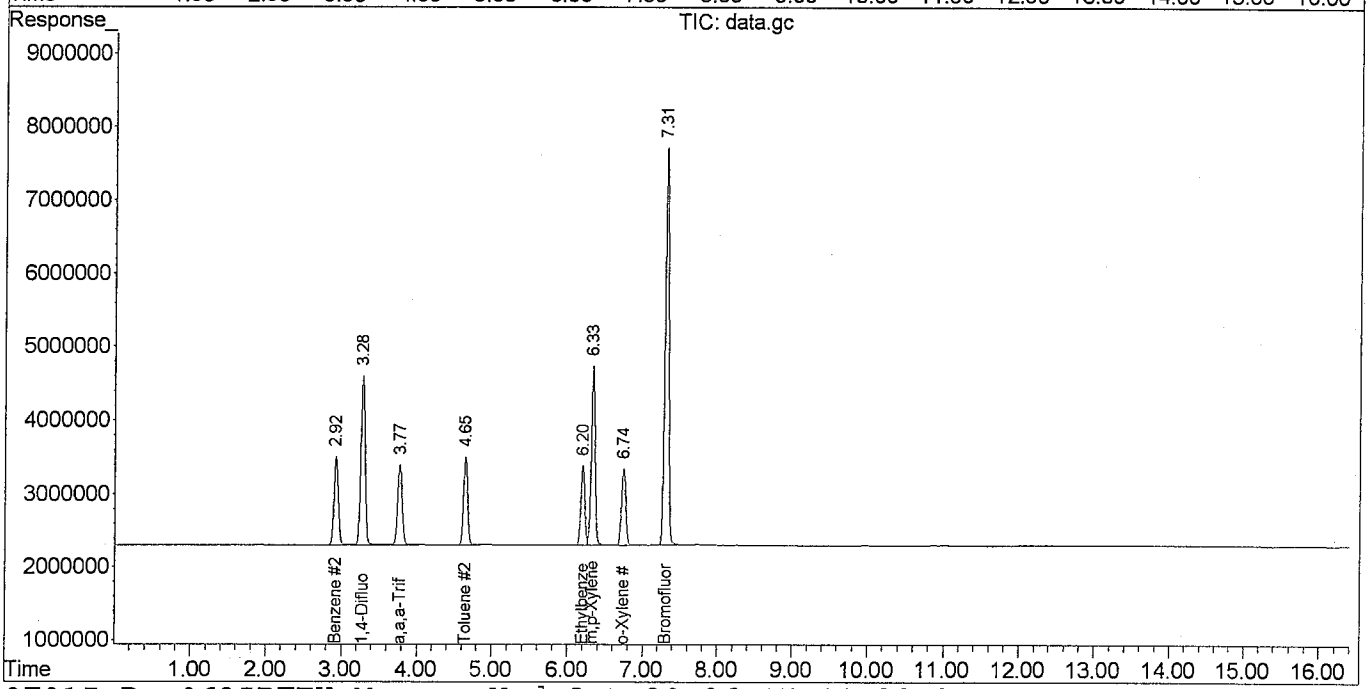
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F015.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F015.D\1028R015.D\data.gc
Acq On : 28 Oct 2003 09:26 pm Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F028.D\1028R028.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.59	2.60	0	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.58	2.51	-3	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.26	2.22	-2	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	0.01	2.52	2.50	-1	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.18	-9	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.01	0.966	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F028.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.76	2.70	-2	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.57	2.50	-3	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.29	2.31	1	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.62	2.54	-3	NA	± 15 %	AverageRF
o-Xylene	20	20	0.01	2.23	2.19	-2	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.04	0.994	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC06B\DATA\102803\1028F028.D
Lab ID: KWG0317374-3
RunType: CCV
Matrix: SOIL

Date Acquired: 10/29/2003 04:18
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.21	NA	0.15	NA

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F028.D\1028R028.D
Lab ID: KWG0317374-3
RunType: CCV
Matrix: SOIL

Date Acquired: 10/29/2003 04:18
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.16	NA	0.15	NA

Primary Review: 10/29/03

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/29/2003

Analysis Lot:	KWG0317374	**Prep Lot:**		**Report Group:**	
Analysis Method:	8021B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F028.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F028.D\1028R028.D			**Vial:**	165
Acqu Date:	10/29/2003 04:18	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317374-3				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.81* -0.21	3.77* -0.16	522352	4540082	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.28	1038733	8775135	95.84	96.11			NA
				%Recovery =		NA	NA	Limits =	84-114	
1	Bromofluorobenzene	8.39	7.30	2231794	18468536	86.48	88.67			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene	4.01	2.93	563276	4724026	19.50	20.10			
1	Toluene	5.87	4.65	523195	4553602	19.46	19.45			
1	Ethylbenzene	7.42	6.19	482470	4039829	20.18	19.67			
1	m,p-Xylenes	7.64	6.32	1060868	9085074	38.83	39.75			
1	o-Xylene	8.01	6.73	456663	3963131	19.62	18.21			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F028.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F028.D\1028R028.D\data.gc
Acq On : 29 Oct 2003 04:18 am Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:59 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.81	3.77	522352	4540082	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.28	1038733	8775135	95.843	96.107
3)	S	Bromofluorobenze	8.39	7.30	2231794	18468536	86.478	88.669
		Target Compounds						
4)	T	Benzene	4.01	2.93	563276	4724026	19.502	20.095
5)	T	Toluene	5.87	4.65	523195	4553602	19.457	19.451
6)	T	Ethylbenzene	7.42	6.19	482470	4039829	20.178	19.673
7)	T	m,p-Xylenes	7.64	6.32	1060868	9085074	38.831	39.747
8)	T	o-Xylene	8.01	6.73	456663	3963131	19.618	18.208

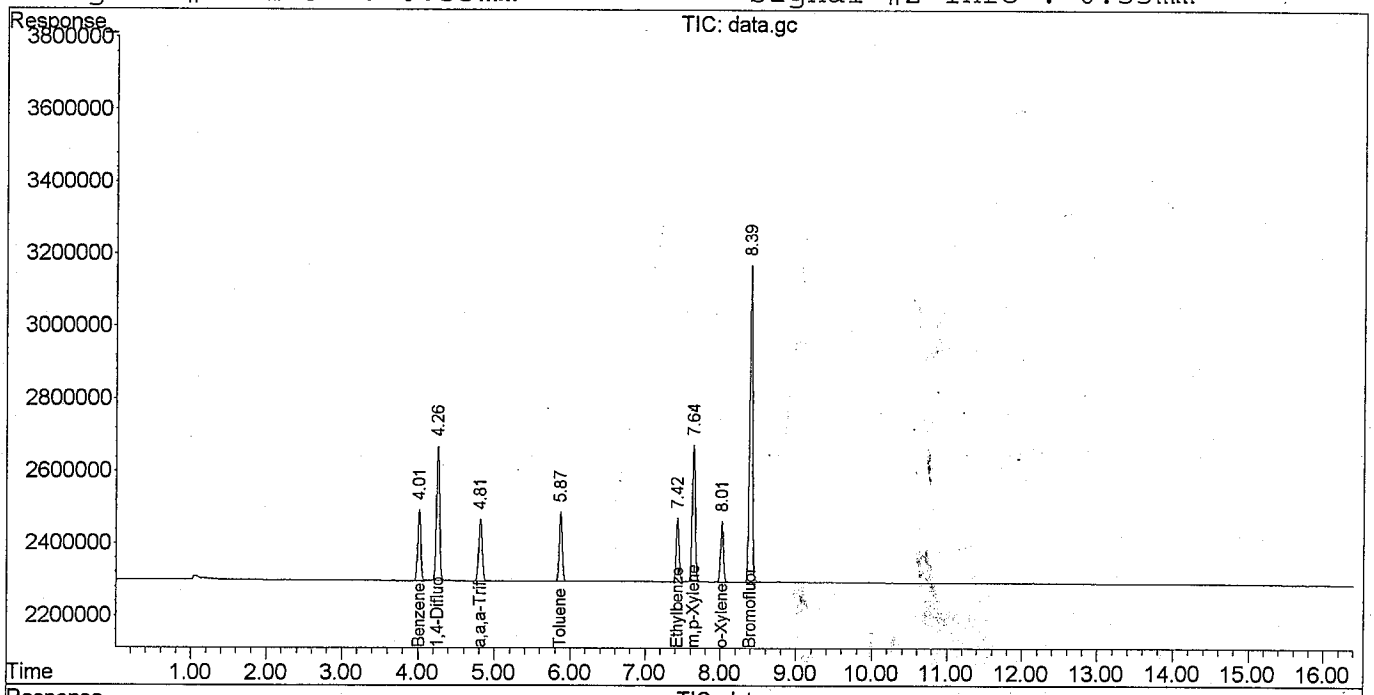
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

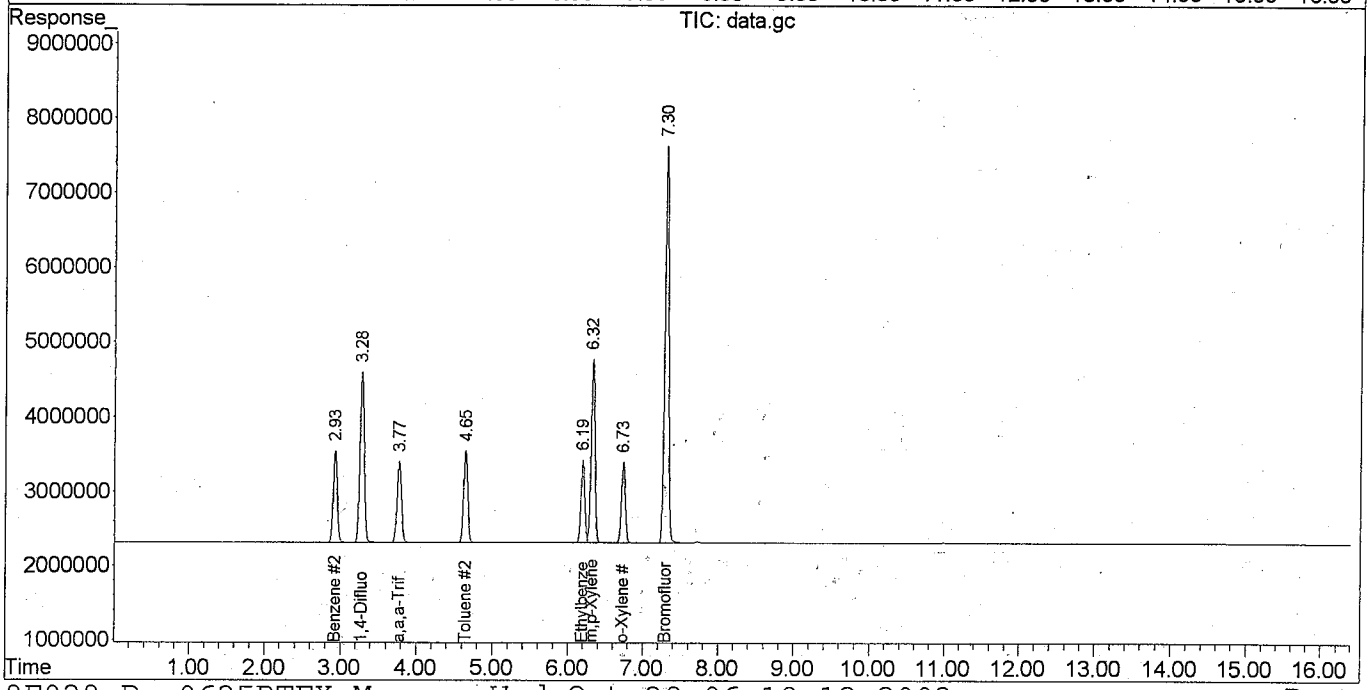
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F028.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F028.D\1028R028.D\data.gc
Acq On : 29 Oct 2003 04:18 am Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F034.D\1028R034.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.59	2.62	1	NA	± 15 %	AverageRF
Toluene	20	20	0.01	2.58	2.53	-2	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.26	2.24	-1	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	0.01	2.52	2.53	0	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.21	-8	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	97		1.01	0.973	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 10/29/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F034.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.76	2.70	-2	NA	± 15 %	AverageRF
Toluene	20	20	0.01	2.57	2.52	-2	NA	± 15 %	AverageRF
Ethylbenzene	20	20	0.01	2.29	2.31	1	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.62	2.53	-3	NA	± 15 %	AverageRF
o-Xylene	20	20	0.01	2.23	2.20	-1	NA	± 15 %	AverageRF
1,4-Difluorobenzene	100	96		1.04	0.996	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC06B\DATA\102803\1028F034.D
Lab ID: KWG0317374-4
RunType: CCV
Matrix: SOIL

Date Acquired: 10/29/2003 07:29
Date Quantitated: 10/29/2003 06:43
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.20	NA	0.15	NA

Primary Review: 11/10/29/03

Secondary Review: eq 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F034.D\1028R034.D
Lab ID: KWG0317374-4
RunType: CCV
Matrix: SOIL

Date Acquired: 10/29/2003 07:29
Date Quantitated: 10/29/2003 06:43
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.15	NA	0.15	NA

Primary Review: 1/ 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/29/2003

Analysis Lot:	KWG0317374	**Prep Lot:**		**Report Group:**	
Analysis Method:	8021B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ201
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F034.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F034.D\1028R034.D			**Vial:**	165
Acqu Date:	10/29/2003 07:29	**Quant Date:**	10/29/2003 06:43	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317374-4				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82* -0.20	3.78* -0.15	530065	4543149	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.29	1056279	8841655	96.04	96.77			NA
				%Recovery =		NA	NA	Limits =	84-114	
1	Bromofluorobenzene	8.40	7.31	2367534	19442243	90.40	93.28			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	Benzene	4.02	2.93	571801	4753489	19.51	20.21			
1	Toluene	5.88	4.66	533876	4590922	19.57	19.60			
1	Ethylbenzene	7.43	6.20	490282	4078699	20.21	19.85			
1	m,p-Xylenes	7.65	6.33	1073339	9183244	38.72	40.15			
1	o-Xylene	8.02	6.74	466675	4014393	19.76	18.43			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F034.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F034.D\1028R034.D\data.gc
Acq On : 29 Oct 2003 07:29 am Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:45:55 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.78	530065	4543149	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.29	1056279	8841655	96.044	96.770
3)	S	Bromofluorobenze	8.40	7.31	2367534	19442243	90.402	93.281
		Target Compounds						
4)	T	Benzene	4.02	2.93	571801	4753489	19.510	20.207
5)	T	Toluene	5.88	4.66	533876	4590922	19.565	19.597
6)	T	Ethylbenzene	7.43	6.20	490282	4078699	20.206	19.849
7)	T	m,p-Xylenes	7.65	6.33	1073339	9183244	38.716	40.149
8)	T	o-Xylene	8.02	6.74	466675	4014393	19.757	18.431

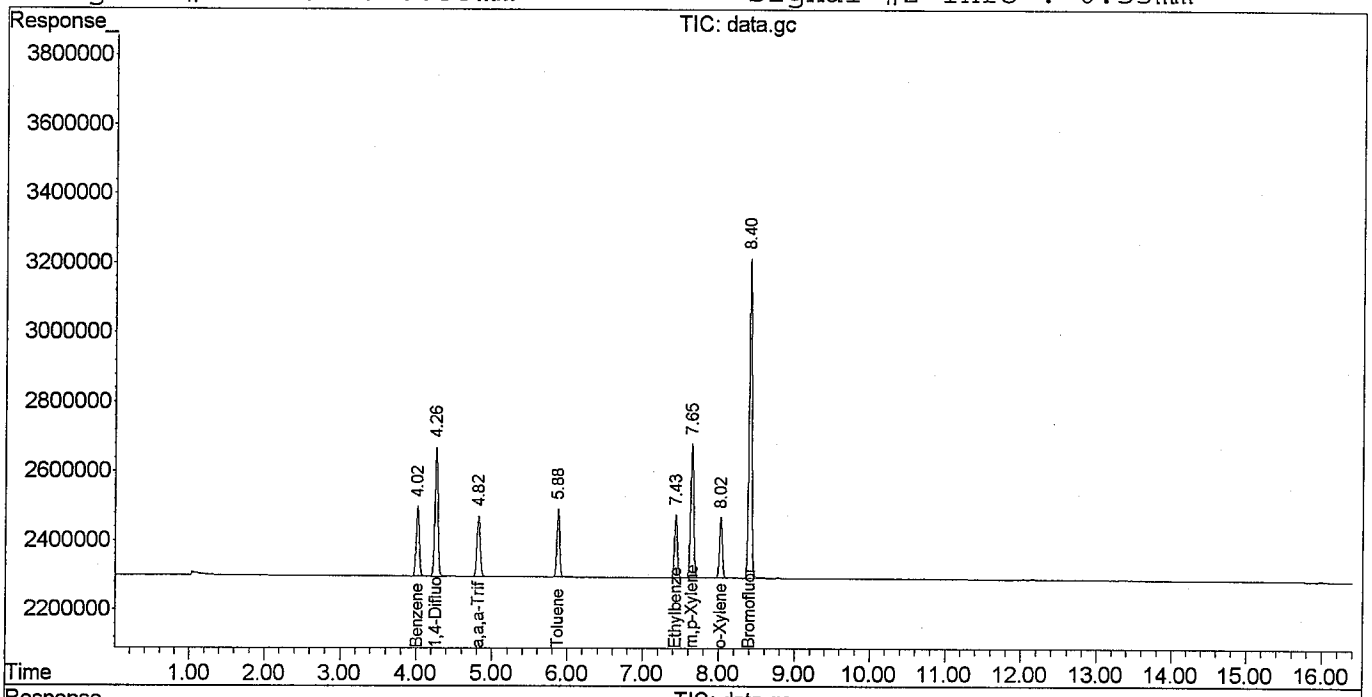
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

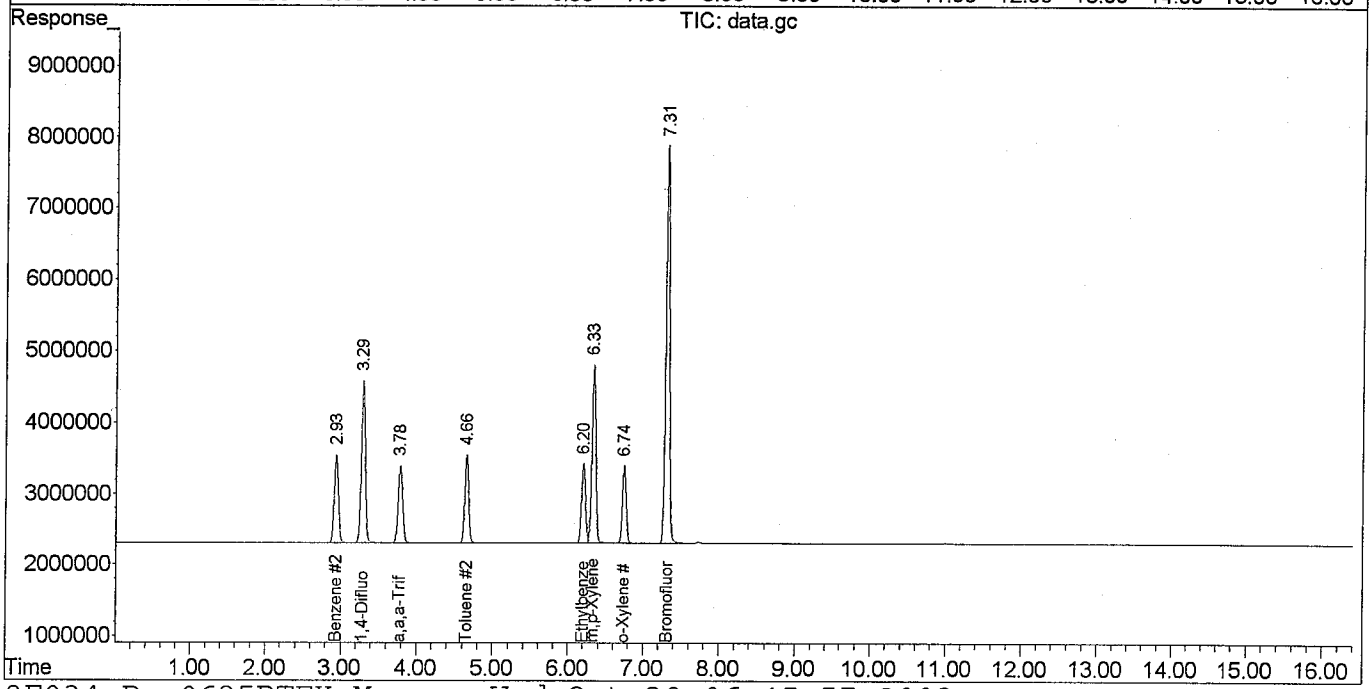
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F034.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F034.D\1028R034.D\data.gc
Acq On : 29 Oct 2003 07:29 am Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Organic Analysis:
BTEX

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0317355	**Prep Method:**	EPA 5030B	**Prep Date:**	10/29/03 00:00
Department:	PHC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K2308419-001	SW-1	8021-BTEX	WATER	10ml	10ml
K2308419-002	SW-2	8021-BTEX	WATER	10ml	10ml
K2308419-003	SW-3	8021-BTEX	WATER	10ml	10ml
K2308419-004	SW-4	8021-BTEX	WATER	10ml	10ml
K2308419-005	SW-4-Dup	8021-BTEX	WATER	10ml	10ml
K2308419-006	SW-5	8021-BTEX	WATER	10ml	10ml
K2308419-008	SW-6	8021-BTEX	WATER	10ml	10ml
K2308419-009	SW-7	8021-BTEX	WATER	10ml	10ml
K2308419-010	SW-8	8021-BTEX	WATER	10ml	10ml
K2308419-011	Trip Blank	8021-BTEX	WATER	10ml	10ml
KWG0317355-1	Matrix Spike	8021-BTEX	WATER	10ml	10ml
KWG0317355-2	Duplicate Matrix Spike	8021-BTEX	WATER	10ml	10ml
KWG0317355-3	Lab Control Sample	8021-BTEX	WATER	10ml	10ml
KWG0317355-4	Method Blank	8021-BTEX	WATER	10ml	10ml

Lab Code	Parent Lab Code	Comments
KWG0317355-1	K2308419-004	
KWG0317355-2	K2308419-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308419-001	245411	HCV2-34T @920 ppm				
K2308419-002	245415	HCV2-34T				
K2308419-003	245412	HCV2-34T				
K2308419-004	245416	HCV2-34T				
K2308419-005	245413	HCV2-34T				
K2308419-006	245417	HCV2-34T				
K2308419-008	245418	HCV2-34T				
K2308419-009	245419	HCV2-34T				
K2308419-010	245414	HCV2-34T				
K2308419-011	245420	HCV2-34T				
KWG0317355-1	245421	HCV2-34T		HCV236-L @100P	8.6uL	
KWG0317355-2	245422	HCV2-34T		HCV236-L @100P	8.6uL	
KWG0317355-3	245423	HCV2-34T		HCV236-L @100P	10uL	
KWG0317355-4	245424	HCV2-34T				

Comments:

Started By: TFillmor Assisted By:

Completed By: TFillmor Assisted By:

Training: Yes (No) / Yes (No)

Reviewed By: Date: 10/28/03 Storage:

Chain of Custody

Relinquished By: Date: 10/28/03

Received By: Date:

Extracts Examined: (Yes) No

Polynuclear Aromatic Hydrocarbons

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Summary Package

Sample and QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
SW-1	K2308419-001	10/22/2003	10/25/2003
SW-2	K2308419-002	10/22/2003	10/25/2003
SW-3	K2308419-003	10/22/2003	10/25/2003
SW-4	K2308419-004	10/22/2003	10/25/2003
SW-4-Dup	K2308419-005	10/22/2003	10/25/2003
SW-5	K2308419-006	10/23/2003	10/25/2003
SW-6	K2308419-008	10/23/2003	10/25/2003
SW-7	K2308419-009	10/23/2003	10/25/2003
SW-8	K2308419-010	10/23/2003	10/25/2003
SW-4MS	KWG0317378-1	10/22/2003	10/25/2003
SW-4DMS	KWG0317378-2	10/22/2003	10/25/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Julie Gosk
Name: Julie Gosk

Date: 11-13-03
Title: Scientist

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-1
Lab Code: K2308419-001

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.054**		0.020	1	10/29/03	11/10/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthene	**0.028**		0.020	1	10/29/03	11/10/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Fluoranthene	**0.024**		0.020	1	10/29/03	11/10/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-1
Lab Code: K2308419-001

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/10/03	Acceptable
Fluoranthene-d10	86	18-137	11/10/03	Acceptable
Terphenyl-d14	93	18-153	11/10/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-2
Lab Code: K2308419-002

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.071**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	**0.034**		0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**0.024**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-2
Lab Code: K2308419-002

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	74	37-107	11/08/03	Acceptable
Fluoranthene-d10	88	18-137	11/08/03	Acceptable
Terphenyl-d14	101	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-3
Lab Code: K2308419-003

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.074**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-3
Lab Code: K2308419-003

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	67	37-107	11/08/03	Acceptable
Fluoranthene-d10	80	18-137	11/08/03	Acceptable
Terphenyl-d14	87	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4
Lab Code: K2308419-004

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4
Lab Code: K2308419-004

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	68	37-107	11/08/03	Acceptable
Fluoranthene-d10	78	18-137	11/08/03	Acceptable
Terphenyl-d14	104	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4-Dup
Lab Code: K2308419-005

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4-Dup
Lab Code: K2308419-005

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	37-107	11/08/03	Acceptable
Fluoranthene-d10	83	18-137	11/08/03	Acceptable
Terphenyl-d14	103	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-5
Lab Code: K2308419-006

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-5
Lab Code: K2308419-006

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/08/03	Acceptable
Fluoranthene-d10	83	18-137	11/08/03	Acceptable
Terphenyl-d14	109	18-153	11/08/03	Acceptable

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-6
Lab Code: K2308419-008

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	**0.033**		0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**0.076**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	**0.077**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	**0.039**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	**0.030**		0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	**0.048**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	**0.027**		0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-6
Lab Code: K2308419-008

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**0.038**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	**0.029**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	**0.030**		0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**0.025**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	**0.022**		0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	37-107	11/08/03	Acceptable
Fluoranthene-d10	86	18-137	11/08/03	Acceptable
Terphenyl-d14	108	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-7
Lab Code: K2308419-009

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-7
Lab Code: K2308419-009

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/08/03	Acceptable
Fluoranthene-d10	86	18-137	11/08/03	Acceptable
Terphenyl-d14	108	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-8
Lab Code: K2308419-010

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Phenanthrene	**0.064**		0.020	1	10/29/03	11/10/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Fluoranthene	**0.20**		0.020	1	10/29/03	11/10/03	KWG0317378	
Pyrene	**0.16**		0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	**0.058**		0.020	1	10/29/03	11/10/03	KWG0317378	
Benz(a)anthracene	**0.070**		0.020	1	10/29/03	11/10/03	KWG0317378	
Chrysene	**0.11**		0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(b)fluoranthene	**0.083**		0.020	1	10/29/03	11/10/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-8
Lab Code: K2308419-010

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**0.10**		0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(e)pyrene	**0.073**		0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(a)pyrene	**0.068**		0.020	1	10/29/03	11/10/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**0.072**		0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(g,h,i)perylene	**0.056**		0.020	1	10/29/03	11/10/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/10/03	Acceptable
Fluoranthene-d10	91	18-137	11/10/03	Acceptable
Terphenyl-d14	109	18-153	11/10/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317378-4

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317378-4

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	79	37-107	11/08/03	Acceptable
Fluoranthene-d10	90	18-137	11/08/03	Acceptable
Terphenyl-d14	128	18-153	11/08/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SW-1	K2308419-001	71	86	93
SW-2	K2308419-002	74	88	101
SW-3	K2308419-003	67	80	87
SW-4	K2308419-004	68	78	104
SW-4-Dup	K2308419-005	72	83	103
SW-5	K2308419-006	71	83	109
SW-6	K2308419-008	75	86	108
SW-7	K2308419-009	71	86	108
SW-8	K2308419-010	71	91	109
Method Blank	KWG0317378-4	79	90	128
SW-4MS	KWG0317378-1	77	89	97
SW-4DMS	KWG0317378-2	56	70	75
Lab Control Sample	KWG0317378-3	77	88	96

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	37-107
Sur2 = Fluoranthene-d10	18-137
Sur3 = Terphenyl-d14	18-153

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003
Time Analyzed: 06:24

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\110803\1108F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318114-2
Analysis Lot: KWG0318114

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	239,888	5.57	126,408	8.06	194,461	11.00
	Upper Limit ==>	479,776	6.07	252,816	8.56	388,922	11.50
	Lower Limit ==>	119,944	5.07	63,204	7.56	97,231	10.50
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
Method Blank	KWG0317378-4	264,106	5.58	132,762	8.06	187,944	11.01
Lab Control Sample	KWG0317378-3	253,496	5.58	131,865	8.06	190,352	11.01
SW-4MS	KWG0317378-1	237,913	5.58	123,071	8.06	173,201	11.01
SW-4DMS	KWG0317378-2	282,397	5.58	148,601	8.06	216,184	11.01
SW-2	K2308419-002	244,369	5.58	125,429	8.07	177,960	11.01
SW-3	K2308419-003	251,456	5.58	128,489	8.06	173,811	11.01
SW-4	K2308419-004	229,769	5.58	118,606	8.06	164,714	11.01
SW-4-Dup	K2308419-005	263,339	5.58	136,505	8.07	192,756	11.01
SW-5	K2308419-006	234,660	5.58	118,094	8.06	157,617	11.01
SW-6	K2308419-008	240,872	5.58	123,393	8.06	177,478	11.00
SW-7	K2308419-009	233,570	5.58	118,300	8.06	162,759	11.01

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003
Time Analyzed: 06:24

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\110803\1108F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318114-2
Analysis Lot: KWG0318114

		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT
	Results ==>	182,400	17.13	103,780	21.51
	Upper Limit ==>	364,800	17.63	207,560	22.01
	Lower Limit ==>	91,200	16.63	51,890	21.01
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
Method Blank	KWG0317378-4	150,452	17.13	75,250	21.52
Lab Control Sample	KWG0317378-3	187,093	17.13	119,257	21.52
SW-4MS	KWG0317378-1	161,409	17.13	101,634	21.52
SW-4DMS	KWG0317378-2	203,022	17.13	126,944	21.52
SW-2	K2308419-002	157,396	17.13	90,584	21.52
SW-3	K2308419-003	148,584	17.13	85,631	21.52
SW-4	K2308419-004	128,344	17.13	68,924	21.53
SW-4-Dup	K2308419-005	166,053	17.13	92,255	21.53
SW-5	K2308419-006	124,860	17.14	68,811	21.53
SW-6	K2308419-008	148,622	17.13	83,869	21.52
SW-7	K2308419-009	139,150	17.13	72,896	21.52

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111003\1110F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318161-2
Analysis Lot: KWG0318161

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	261,683	5.57	135,317	8.05	202,057	11.00
	Upper Limit ==>	523,366	6.07	270,634	8.55	404,114	11.50
	Lower Limit ==>	130,842	5.07	67,659	7.55	101,029	10.50
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
SW-1	K2308419-001	242,761	5.58	126,340	8.06	189,297	11.00
SW-8	K2308419-010	240,409	5.58	124,272	8.06	174,885	11.00

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111003\1110F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318161-2
Analysis Lot: KWG0318161

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	190,256	17.12	118,159	21.51
	Upper Limit ==>	380,512	17.62	236,318	22.01
	Lower Limit ==>	95,128	16.62	59,080	21.01
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
SW-1	K2308419-001	164,944	17.13	87,828	21.52
SW-8	K2308419-010	159,026	17.13	90,019	21.51

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308419
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/29/2003
Sample Matrix:	Water	**Date Analyzed:**	11/08/2003

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	SW-4	**Units:**	ug/L
Lab Code:	K2308419-004	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0317378

Analyte Name	Sample Result	SW-4MS KWG0317378-1 Matrix Spike Result	Matrix Spike Expected	Matrix Spike %Rec	SW-4DMS KWG0317378-2 Duplicate Matrix Spike Result	Duplicate Matrix Spike Expected	Duplicate Matrix Spike %Rec		%Rec Limits	RPD	RPD Limit
Naphthalene	ND	3.53	4.90	72	3.35	4.90	68		28-110	5	30
2-Methylnaphthalene	ND	3.54	4.90	72	3.40	4.90	69		29-107	4	30
1-Methylnaphthalene	ND	3.68	4.90	75	3.46	4.90	71		18-121	6	30
Biphenyl	ND	3.67	4.90	75	3.36	4.90	69	*	70-130	9	30
Acenaphthylene	ND	4.02	4.90	82	3.53	4.90	72		42-112	13	30
Dibenzofuran	ND	3.91	4.90	80	3.43	4.90	70		42-107	13	30
Acenaphthene	ND	3.83	4.90	78	3.37	4.90	69		41-105	13	30
Fluorene	ND	4.11	4.90	84	3.54	4.90	72		40-115	15	30
Dibenzothiophene	ND	4.01	4.90	82	3.32	4.90	68	*	70-130	19	30
Phenanthrene	ND	3.99	4.90	81	3.27	4.90	67		40-112	20	30
Anthracene	ND	3.91	4.90	80	3.07	4.90	63		25-118	24	30
Fluoranthene	ND	4.13	4.90	84	3.26	4.90	67		32-131	23	30
Pyrene	ND	4.14	4.90	85	3.26	4.90	66		27-131	24	30
Benz(a)anthracene	ND	3.80	4.90	77	2.98	4.90	61		21-133	24	30
Chrysene	ND	3.75	4.90	77	2.93	4.90	60		24-128	24	30
Benzo(b)fluoranthene	ND	4.07	4.90	83	3.19	4.90	65		17-142	24	30
Benzo(k)fluoranthene	ND	4.01	4.90	82	3.15	4.90	64		19-135	24	30
Benzo(e)pyrene	ND	3.69	4.90	75	2.91	4.90	59	*	70-130	24	30
Benzo(a)pyrene	ND	3.99	4.90	81	3.16	4.90	64		10-146	23	30
Perylene	ND	3.88	4.90	79	3.05	4.90	62	*	70-130	24	30
Indeno(1,2,3-cd)pyrene	ND	4.24	4.90	86	3.18	4.90	65		16-145	28	30
Dibenz(a,h)anthracene	ND	4.23	4.90	86	3.13	4.90	64		16-142	30	30
Benzo(g,h,i)perylene	ND	3.78	4.90	77	2.87	4.90	58		18-132	27	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0317378

	Lab Control Sample KWG0317378-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Naphthalene	3.85	5.00	77	44-101
2-Methylnaphthalene	3.93	5.00	79	36-106
1-Methylnaphthalene	4.01	5.00	80	37-110
Biphenyl	3.96	5.00	79	36-113
Acenaphthylene	4.13	5.00	83	49-114
Dibenzofuran	4.13	5.00	83	40-115
Acenaphthene	4.02	5.00	80	48-107
Fluorene	4.35	5.00	87	55-111
Dibenzothiophene	4.25	5.00	85	44-121
Phenanthrene	4.26	5.00	85	56-108
Anthracene	4.17	5.00	83	42-117
Fluoranthene	4.65	5.00	93	61-123
Pyrene	4.43	5.00	89	53-123
Benz(a)anthracene	4.46	5.00	89	53-123
Chrysene	4.41	5.00	88	57-118
Benzo(b)fluoranthene	4.89	5.00	98	57-132
Benzo(k)fluoranthene	4.64	5.00	93	54-126
Benzo(e)pyrene	4.35	5.00	87	46-133
Benzo(a)pyrene	4.44	5.00	89	38-142
Perylene	3.95	5.00	79	25-135
Indeno(1,2,3-cd)pyrene	5.27	5.00	105	49-139
Dibenz(a,h)anthracene	5.01	5.00	100	47-138
Benzo(g,h,i)perylene	4.47	5.00	89	50-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003
Time Analyzed: 08:13

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317378-4

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

File ID: J:\MS11\DATA\110803\1108F005.D
Instrument ID: MS11

Level: Low
Extraction Lot: KWG0317378

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317378-3	J:\MS11\DATA\110803\1108F011.D	11/08/03	11:50
SW-4MS	KWG0317378-1	J:\MS11\DATA\110803\1108F012.D	11/08/03	12:27
SW-4DMS	KWG0317378-2	J:\MS11\DATA\110803\1108F013.D	11/08/03	13:04
SW-2	K2308419-002	J:\MS11\DATA\110803\1108F015.D	11/08/03	14:18
SW-3	K2308419-003	J:\MS11\DATA\110803\1108F016.D	11/08/03	14:55
SW-4	K2308419-004	J:\MS11\DATA\110803\1108F017.D	11/08/03	15:32
SW-4-Dup	K2308419-005	J:\MS11\DATA\110803\1108F018.D	11/08/03	16:09
SW-5	K2308419-006	J:\MS11\DATA\110803\1108F019.D	11/08/03	16:45
SW-6	K2308419-008	J:\MS11\DATA\110803\1108F020.D	11/08/03	17:21
SW-7	K2308419-009	J:\MS11\DATA\110803\1108F021.D	11/08/03	17:57
SW-1	K2308419-001	J:\MS11\DATA\111003\1110F005.D	11/10/03	16:49
SW-8	K2308419-010	J:\MS11\DATA\111003\1110F006.D	11/10/03	17:25

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003
Time Analyzed: 11:50

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: Lab Control Sample
Lab Code: KWG0317378-3

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

File ID: J:\MS11\DATA\110803\1108F011.D
Instrument ID: MS11

Level: Low
Extraction Lot: KWG0317378

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0317378-4	J:\MS11\DATA\110803\1108F005.D	11/08/03	08:13
SW-4MS	KWG0317378-1	J:\MS11\DATA\110803\1108F012.D	11/08/03	12:27
SW-4DMS	KWG0317378-2	J:\MS11\DATA\110803\1108F013.D	11/08/03	13:04
SW-2	K2308419-002	J:\MS11\DATA\110803\1108F015.D	11/08/03	14:18
SW-3	K2308419-003	J:\MS11\DATA\110803\1108F016.D	11/08/03	14:55
SW-4	K2308419-004	J:\MS11\DATA\110803\1108F017.D	11/08/03	15:32
SW-4-Dup	K2308419-005	J:\MS11\DATA\110803\1108F018.D	11/08/03	16:09
SW-5	K2308419-006	J:\MS11\DATA\110803\1108F019.D	11/08/03	16:45
SW-6	K2308419-008	J:\MS11\DATA\110803\1108F020.D	11/08/03	17:21
SW-7	K2308419-009	J:\MS11\DATA\110803\1108F021.D	11/08/03	17:57
SW-1	K2308419-001	J:\MS11\DATA\111003\1110F005.D	11/10/03	16:49
SW-8	K2308419-010	J:\MS11\DATA\111003\1110F006.D	11/10/03	17:25

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003
Time Analyzed: 06:03

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\110803\1108F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318114

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	33.9	380352	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	37.2	417344	PASS
70	69	0	2	0.6	2659	PASS
127	198	10	80	44.6	500096	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	49.1	1120768	PASS
199	198	5	9	7.1	79336	PASS
275	198	10	60	34.5	386624	PASS
365	442	1	50	2.4	55064	PASS
441	443	0	100	74.0	336640	PASS
442	442	100	100	100.0	2282496	PASS
443	442	15	24	19.9	455104	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318114-2	J:\MS11\DATA\110803\1108F002.D	11/08/2003	06:24	
Method Blank	KWG0317378-4	J:\MS11\DATA\110803\1108F005.D	11/08/2003	08:13	
Lab Control Sample	KWG0317378-3	J:\MS11\DATA\110803\1108F011.D	11/08/2003	11:50	
SW-4MS	KWG0317378-1	J:\MS11\DATA\110803\1108F012.D	11/08/2003	12:27	
SW-4DMS	KWG0317378-2	J:\MS11\DATA\110803\1108F013.D	11/08/2003	13:04	
SW-2	K2308419-002	J:\MS11\DATA\110803\1108F015.D	11/08/2003	14:18	
SW-3	K2308419-003	J:\MS11\DATA\110803\1108F016.D	11/08/2003	14:55	
SW-4	K2308419-004	J:\MS11\DATA\110803\1108F017.D	11/08/2003	15:32	
SW-4-Dup	K2308419-005	J:\MS11\DATA\110803\1108F018.D	11/08/2003	16:09	
SW-5	K2308419-006	J:\MS11\DATA\110803\1108F019.D	11/08/2003	16:45	
SW-6	K2308419-008	J:\MS11\DATA\110803\1108F020.D	11/08/2003	17:21	
SW-7	K2308419-009	J:\MS11\DATA\110803\1108F021.D	11/08/2003	17:57	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003
Time Analyzed: 14:40

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111003\1110F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318161

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.1	458304	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	44.3	494528	PASS
70	69	0	2	0.6	2929	PASS
127	198	10	80	48.6	541696	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	66.2	1115648	PASS
199	198	5	9	7.0	77712	PASS
275	198	10	60	30.6	341760	PASS
365	442	1	50	2.4	40600	PASS
441	443	0	100	72.7	246848	PASS
442	442	100	100	100.0	1684480	PASS
443	442	15	24	20.1	339392	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318161-2	J:\MS11\DATA\111003\1110F002.D	11/10/2003	15:00	
SW-1	K2308419-001	J:\MS11\DATA\111003\1110F005.D	11/10/2003	16:49	
SW-8	K2308419-010	J:\MS11\DATA\111003\1110F006.D	11/10/2003	17:25	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\110703\1107F010.D	F	J:\MS11\DATA\110703\1107F015.D
B	J:\MS11\DATA\110703\1107F011.D	G	J:\MS11\DATA\110703\1107F016.D
C	J:\MS11\DATA\110703\1107F012.D	H	J:\MS11\DATA\110703\1107F017.D
D	J:\MS11\DATA\110703\1107F013.D	I	J:\MS11\DATA\110703\1107F018.D
E	J:\MS11\DATA\110703\1107F014.D	J	J:\MS11\DATA\110703\1107F019.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
2-Methylnaphthalene	A	10	0.592	B	20	0.617	C	40	0.597	D	100	0.643	E	500	0.653
	F	1000	0.688	G	2000	0.717	H	5000	0.719	I	8000	0.734	J	10000	0.716
1-Methylnaphthalene	A	10	0.538	B	20	0.612	C	40	0.534	D	100	0.601	E	500	0.623
	F	1000	0.650	G	2000	0.676	H	5000	0.674	I	8000	0.684	J	10000	0.667
C2-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C3-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C4-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
Biphenyl	A	10	0.744	B	20	0.715	C	40	0.720	D	100	0.787	E	500	0.805
	F	1000	0.845	G	2000	0.875	H	5000	0.873	I	8000	0.880	J	10000	0.852
Acenaphthylene	A	10	1.83	B	20	1.82	C	40	1.71	D	100	1.79	E	500	1.84
	F	1000	1.97	G	2000	2.06	H	5000	2.05	I	8000	2.12	J	10000	2.07
Dibenzofuran	A	10	1.44	B	20	1.49	C	40	1.45	D	100	1.54	E	500	1.53
	F	1000	1.62	G	2000	1.70	H	5000	1.70	I	8000	1.75	J	10000	1.70
Acenaphthene	A	10	1.14	B	20	1.09	C	40	1.07	D	100	1.18	E	500	1.17
	F	1000	1.23	G	2000	1.25	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluorene	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C1-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C2-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C3-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibenzothiophene	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C1-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C2-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C3-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
Phenanthrene	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Anthracene	A	10	0.828	B	20	0.870	C	40	0.887	D	100	0.919	E	500	0.962
	F	1000	1.11	G	2000	1.18	H	5000	1.19	I	8000	1.22	J	10000	1.19
C1-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C2-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C3-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C4-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluoranthene	A	10	1.03	B	20	1.06	C	40	1.05	D	100	1.15	E	500	1.14
	F	1000	1.31	G	2000	1.36	H	5000	1.32	I	8000	1.35	J	10000	1.29
Pyrene	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
C1-Fluoranthenes/Pyrenes	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
Benz(a)anthracene	A	10	1.06	B	20	0.923	C	40	0.887	D	100	1.01	E	500	0.976
	F	1000	0.962	G	2000	1.01	H	5000	1.03	I	8000	1.07	J	10000	1.04
Chrysene	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C1-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C2-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
C3-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C4-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
Benzo(b)fluoranthene	A	10	1.19	B	20	1.15	C	40	1.14	D	100	1.20	E	500	1.30
	F	1000	1.38	G	2000	1.45	H	5000	1.48	I	8000	1.54	J	10000	1.52
Benzo(k)fluoranthene	A	10	1.56	B	20	1.35	C	40	1.41	D	100	1.70	E	500	1.74
	F	1000	1.80	G	2000	1.89	H	5000	1.85	I	8000	1.82	J	10000	1.84
Benzo(e)pyrene	A	10	1.40	B	20	1.41	C	40	1.39	D	100	1.48	E	500	1.50
	F	1000	1.54	G	2000	1.59	H	5000	1.55	I	8000	1.56	J	10000	1.57
Benzo(a)pyrene	A	10	0.993	B	20	0.923	C	40	1.01	D	100	0.938	E	500	1.03
	F	1000	1.15	G	2000	1.25	H	5000	1.32	I	8000	1.37	J	10000	1.36
Perylene	A	10	1.09	B	20	1.19	C	40	1.09	D	100	1.13	E	500	1.21
	F	1000	1.32	G	2000	1.40	H	5000	1.42	I	8000	1.45	J	10000	1.45
Indeno(1,2,3-cd)pyrene	A	10	0.693	B	20	0.554	C	40	0.589	D	100	0.554	E	500	0.599
	F	1000	0.677	G	2000	0.720	H	5000	0.797	I	8000	0.872	J	10000	0.848
Dibenz(a,h)anthracene	A	10	0.737	B	20	0.798	C	40	0.841	D	100	0.918	E	500	0.947
	F	1000	1.05	G	2000	1.08	H	5000	1.15	I	8000	1.21	J	10000	1.19
Benzo(g,h,i)perylene	A	10	1.35	B	20	1.01	C	40	1.01	D	100	1.06	E	500	1.04
	F	1000	1.17	G	2000	1.16	H	5000	1.19	I	8000	1.23	J	10000	1.21
Fluorene-d10							C	40	0.872	D	100	0.932	E	500	0.945
	F	1000	1.01	G	2000	1.05	H	5000	1.05	I	8000	1.09	J	10000	1.05
Fluoranthene-d10				B	20	0.932	C	40	0.836	D	100	0.957	E	500	0.930
	F	1000	1.05	G	2000	1.09	H	5000	1.07	I	8000	1.10	J	10000	1.05
Terphenyl-d14	A	10	1.01	B	20	0.919	C	40	0.836	D	100	0.911	E	500	0.898
	F	1000	0.918	G	2000	0.935	H	5000	0.889	I	8000	0.900	J	10000	0.896

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	1.8		≤ 15	1.13		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	8.1		≤ 15	0.668		0.01
1-Methylnaphthalene	MS	AverageRF	% RSD	8.8		≤ 15	0.626		0.01
C2-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C3-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C4-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
Biphenyl	MS	AverageRF	% RSD	8.0		≤ 15	0.810		0.01
Acenaphthylene	MS	AverageRF	% RSD	7.5		≤ 15	1.93		0.01
Dibenzofuran	MS	AverageRF	% RSD	7.3		≤ 15	1.59		0.01
Acenaphthene	MS	AverageRF	% RSD	5.6		≤ 15	1.19		0.01
Fluorene	MS	AverageRF	% RSD	10.7		≤ 15	1.27		0.01
C1-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C2-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C3-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
Dibenzothiophene	MS	AverageRF	% RSD	7.8		≤ 15	1.15		0.01
C1-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C2-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C3-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
Phenanthrene	MS	AverageRF	% RSD	4.5		≤ 15	1.21		0.01
Anthracene	MS	AverageRF	% RSD	15.1	*	≤ 15	1.04		0.01
C1-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C2-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C3-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C4-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
Fluoranthene	MS	AverageRF	% RSD	11.0		≤ 15	1.21		0.01
Pyrene	MS	AverageRF	% RSD	4.9		≤ 15	1.31		0.01
C1-Fluoranthenes/Pyrenes	TRG	AverageRF	% RSD	4.9		≤ 15	1.31		
Benz(a)anthracene	MS	AverageRF	% RSD	5.8		≤ 15	0.995		0.01
Chrysene	MS	AverageRF	% RSD	3.8		≤ 15	1.06		0.01
C1-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C2-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C3-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C4-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
Benzo(b)fluoranthene	MS	AverageRF	% RSD	11.8		≤ 15	1.34		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	11.3		≤ 15	1.69		0.01
Benzo(e)pyrene	MS	AverageRF	% RSD	5.1		≤ 15	1.50		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	15.7	*	≤ 15	1.14		0.01
Perylene	MS	AverageRF	% RSD	11.7		≤ 15	1.27		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	17.1	*	≤ 15	0.690		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	17.0	*	≤ 15	0.992		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	9.6		≤ 15	1.14		0.01
Fluorene-d10	SURR	AverageRF	% RSD	7.5		≤ 15	1.00		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Fluoranthene-d10	SURR	AverageRF	% RSD	9.1		≤ 15	1.00		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.8		≤ 15	0.911		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003
Date Analyzed: 11/07/2003

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL3082
Units: ng/ml

File ID: J:\MS11\DATA\110703\1107F023.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	1.13	1.17	4	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.668	0.720	8	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.626	0.677	8	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.810	0.887	10	NA	± 20 %	AverageRF
Acenaphthylene	2000	2100	1.93	2.07	7	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	1.59	1.72	8	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	1.19	1.26	6	NA	± 20 %	AverageRF
Fluorene	2000	2200	1.27	1.40	10	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	1.15	1.20	4	NA	± 20 %	AverageRF
Phenanthrene	2000	2000	1.21	1.24	2	NA	± 20 %	AverageRF
Anthracene	2000	2200	1.04	1.14	10	NA	± 20 %	AverageRF
Fluoranthene	2000	2100	1.21	1.29	7	NA	± 20 %	AverageRF
Pyrene	2000	2100	1.31	1.37	4	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2000	0.995	0.975	-2	NA	± 20 %	AverageRF
Chrysene	2000	2100	1.06	1.11	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2100	1.34	1.41	6	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2200	1.69	1.89	11	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	1.50	1.58	5	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	1.14	1.20	6	NA	± 20 %	AverageRF
Perylene	2000	2200	1.27	1.39	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1800	0.690	0.636	-8	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2000	0.992	1.00	1	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	2000	1.14	1.14	0	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318114
Units: ng/ml

File ID: J:\MS11\DATA\110803\1108F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	0.01	1.13	1.17	3	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.01	0.668	0.726	9	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.01	0.626	0.681	9	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.01	0.810	0.902	11	NA	± 20 %	AverageRF
Acenaphthylene	2000	2200	0.01	1.93	2.09	8	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	0.01	1.59	1.76	11	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	0.01	1.19	1.25	6	NA	± 20 %	AverageRF
Fluorene	2000	2300	0.01	1.27	1.44	13	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	0.01	1.15	1.20	4	NA	± 20 %	AverageRF
Phenanthrene	2000	2100	0.01	1.21	1.24	3	NA	± 20 %	AverageRF
Anthracene	2000	2300	0.01	1.04	1.17	13	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.32	9	NA	± 20 %	AverageRF
Pyrene	2000	2100	0.01	1.31	1.40	7	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	1900	0.01	0.995	0.968	-3	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.11	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2100	0.01	1.34	1.41	5	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2300	0.01	1.69	1.93	14	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	0.01	1.50	1.60	7	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.18	4	NA	± 20 %	AverageRF
Perylene	2000	2200	0.01	1.27	1.38	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1700	0.01	0.690	0.591	-14	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	1900	0.01	0.992	0.948	-4	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1900	0.01	1.14	1.08	-6	NA	± 20 %	AverageRF
Fluorene-d10	2000	2300	0.01	1.00	1.13	13	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2000	0.01	1.00	1.02	2	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2000	0.01	0.911	0.907	-1	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318161
Units: ng/ml

File ID: J:\MS11\DATA\111003\1110F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2000	0.01	1.13	1.15	2	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2100	0.01	0.668	0.710	6	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2100	0.01	0.626	0.664	6	NA	± 20 %	AverageRF
Biphenyl	2000	2100	0.01	0.810	0.870	7	NA	± 20 %	AverageRF
Acenaphthylene	2000	2200	0.01	1.93	2.10	9	NA	± 20 %	AverageRF
Dibenzofuran	2000	2100	0.01	1.59	1.70	7	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	0.01	1.19	1.24	4	NA	± 20 %	AverageRF
Fluorene	2000	2200	0.01	1.27	1.40	10	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2000	0.01	1.15	1.17	1	NA	± 20 %	AverageRF
Phenanthrene	2000	2000	0.01	1.21	1.22	1	NA	± 20 %	AverageRF
Anthracene	2000	2200	0.01	1.04	1.16	12	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.32	9	NA	± 20 %	AverageRF
Pyrene	2000	2200	0.01	1.31	1.41	8	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2100	0.01	0.995	1.04	5	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.10	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2300	0.01	1.34	1.51	13	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2100	0.01	1.69	1.79	6	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	0.01	1.50	1.57	4	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.20	6	NA	± 20 %	AverageRF
Perylene	2000	2100	0.01	1.27	1.36	7	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	2100	0.01	0.690	0.720	4	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2000	0.01	0.992	0.977	-2	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1800	0.01	1.14	1.05	-8	NA	± 20 %	AverageRF
Fluorene-d10	2000	2200	0.01	1.00	1.11	11	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2100	0.01	1.00	1.04	4	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2000	0.01	0.911	0.926	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM

Analysis Lot: KWG0318114
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1108F001.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318114-1	11/8/2003	06:03		11/8/2003	06:16
1108F002.D	Continuing Calibration Verification	KWG0318114-2	11/8/2003	06:24		11/8/2003	06:51
1108F004.D	ZZZZZZ	ZZZZZZ	11/8/2003	07:36		11/8/2003	08:03
1108F005.D	Method Blank	KWG0317378-4	11/8/2003	08:13		11/8/2003	08:40
1108F006.D	ZZZZZZ	ZZZZZZ	11/8/2003	08:48		11/8/2003	09:15
1108F007.D	ZZZZZZ	ZZZZZZ	11/8/2003	09:24		11/8/2003	09:51
1108F008.D	ZZZZZZ	ZZZZZZ	11/8/2003	10:00		11/8/2003	10:27
1108F009.D	ZZZZZZ	ZZZZZZ	11/8/2003	10:36		11/8/2003	11:03
1108F010.D	ZZZZZZ	ZZZZZZ	11/8/2003	11:13		11/8/2003	11:40
1108F011.D	Lab Control Sample	KWG0317378-3	11/8/2003	11:50		11/8/2003	12:17
1108F012.D	SW-4MS	KWG0317378-1	11/8/2003	12:27		11/8/2003	12:54
1108F013.D	SW-4DMS	KWG0317378-2	11/8/2003	13:04		11/8/2003	13:31
1108F015.D	SW-2	K2308419-002	11/8/2003	14:18		11/8/2003	14:45
1108F016.D	SW-3	K2308419-003	11/8/2003	14:55		11/8/2003	15:22
1108F017.D	SW-4	K2308419-004	11/8/2003	15:32		11/8/2003	15:59
1108F018.D	SW-4-Dup	K2308419-005	11/8/2003	16:09		11/8/2003	16:36
1108F019.D	SW-5	K2308419-006	11/8/2003	16:45		11/8/2003	17:12
1108F020.D	SW-6	K2308419-008	11/8/2003	17:21		11/8/2003	17:48
1108F021.D	SW-7	K2308419-009	11/8/2003	17:57		11/8/2003	18:24

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM

Analysis Lot: KWG0318161
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1110F001.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318161-1	11/10/2003	14:40		11/10/2003	14:53
1110F002.D	Continuing Calibration Verification	KWG0318161-2	11/10/2003	15:00		11/10/2003	15:27
1110F003.D	Instrument Blank	KWG0318161-3	11/10/2003	15:37		11/10/2003	16:04
1110F004.D	ZZZZZZ	ZZZZZZ	11/10/2003	16:13		11/10/2003	16:40
1110F005.D	SW-1	K2308419-001	11/10/2003	16:49		11/10/2003	17:16
1110F006.D	SW-8	K2308419-010	11/10/2003	17:25		11/10/2003	17:52
1110F007.D	ZZZZZZ	ZZZZZZ	11/10/2003	18:00		11/10/2003	18:27
1110F008.D	ZZZZZZ	ZZZZZZ	11/10/2003	18:36		11/10/2003	19:03

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Extraction Lot: KWG0317378
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SW-1	K2308419-001	10/22/03	10/25/03	1010ml	1ml	NA	
SW-2	K2308419-002	10/22/03	10/25/03	1010ml	1ml	NA	
SW-3	K2308419-003	10/22/03	10/25/03	1030ml	1ml	NA	
SW-4	K2308419-004	10/22/03	10/25/03	1020ml	1ml	NA	
SW-4-Dup	K2308419-005	10/22/03	10/25/03	1010ml	1ml	NA	
SW-5	K2308419-006	10/23/03	10/25/03	1040ml	1ml	NA	
SW-6	K2308419-008	10/23/03	10/25/03	1020ml	1ml	NA	
SW-7	K2308419-009	10/23/03	10/25/03	1010ml	1ml	NA	
SW-8	K2308419-010	10/23/03	10/25/03	1030ml	1ml	NA	
Method Blank	KWG0317378-4	NA	NA	1000ml	1ml	NA	
SW-4MS	KWG0317378-1	10/22/03	10/25/03	1020ml	1ml	NA	
SW-4DMS	KWG0317378-2	10/22/03	10/25/03	1020ml	1ml	NA	
Lab Control Sample	KWG0317378-3	NA	NA	1000ml	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

QC Reports

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SW-1	K2308419-001	71	86	93
SW-2	K2308419-002	74	88	101
SW-3	K2308419-003	67	80	87
SW-4	K2308419-004	68	78	104
SW-4-Dup	K2308419-005	72	83	103
SW-5	K2308419-006	71	83	109
SW-6	K2308419-008	75	86	108
SW-7	K2308419-009	71	86	108
SW-8	K2308419-010	71	91	109
Method Blank	KWG0317378-4	79	90	128
SW-4MS	KWG0317378-1	77	89	97
SW-4DMS	KWG0317378-2	56	70	75
Lab Control Sample	KWG0317378-3	77	88	96

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	37-107
Sur2 = Fluoranthene-d10	18-137
Sur3 = Terphenyl-d14	18-153

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003
Time Analyzed: 06:24

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\110803\1108F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318114-2
Analysis Lot: KWG0318114

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	RT	Area	RT	Area	RT
Results ==>		239,888	5.57	126,408	8.06	194,461	11.00
Upper Limit ==>		479,776	6.07	252,816	8.56	388,922	11.50
Lower Limit ==>		119,944	5.07	63,204	7.56	97,231	10.50
ICAL Result ==>		278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
Method Blank	KWG0317378-4	264,106	5.58	132,762	8.06	187,944	11.01
Lab Control Sample	KWG0317378-3	253,496	5.58	131,865	8.06	190,352	11.01
SW-4MS	KWG0317378-1	237,913	5.58	123,071	8.06	173,201	11.01
SW-4DMS	KWG0317378-2	282,397	5.58	148,601	8.06	216,184	11.01
SW-2	K2308419-002	244,369	5.58	125,429	8.07	177,960	11.01
SW-3	K2308419-003	251,456	5.58	128,489	8.06	173,811	11.01
SW-4	K2308419-004	229,769	5.58	118,606	8.06	164,714	11.01
SW-4-Dup	K2308419-005	263,339	5.58	136,505	8.07	192,756	11.01
SW-5	K2308419-006	234,660	5.58	118,094	8.06	157,617	11.01
SW-6	K2308419-008	240,872	5.58	123,393	8.06	177,478	11.00
SW-7	K2308419-009	233,570	5.58	118,300	8.06	162,759	11.01

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003
Time Analyzed: 06:24

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\110803\1108F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318114-2
Analysis Lot: KWG0318114

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	182,400	17.13	103,780	21.51
	Upper Limit ==>	364,800	17.63	207,560	22.01
	Lower Limit ==>	91,200	16.63	51,890	21.01
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
Method Blank	KWG0317378-4	150,452	17.13	75,250	21.52
Lab Control Sample	KWG0317378-3	187,093	17.13	119,257	21.52
SW-4MS	KWG0317378-1	161,409	17.13	101,634	21.52
SW-4DMS	KWG0317378-2	203,022	17.13	126,944	21.52
SW-2	K2308419-002	157,396	17.13	90,584	21.52
SW-3	K2308419-003	148,584	17.13	85,631	21.52
SW-4	K2308419-004	128,344	17.13	68,924	21.53
SW-4-Dup	K2308419-005	166,053	17.13	92,255	21.53
SW-5	K2308419-006	124,860	17.14	68,811	21.53
SW-6	K2308419-008	148,622	17.13	83,869	21.52
SW-7	K2308419-009	139,150	17.13	72,896	21.52

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111003\1110F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318161-2
Analysis Lot: KWG0318161

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	261,683	5.57	135,317	8.05	202,057	11.00
	Upper Limit ==>	523,366	6.07	270,634	8.55	404,114	11.50
	Lower Limit ==>	130,842	5.07	67,659	7.55	101,029	10.50
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
SW-1	K2308419-001	242,761	5.58	126,340	8.06	189,297	11.00
SW-8	K2308419-010	240,409	5.58	124,272	8.06	174,885	11.00

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111003\1110F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318161-2
Analysis Lot: KWG0318161

		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT
	Results ==>	190,256	17.12	118,159	21.51
	Upper Limit ==>	380,512	17.62	236,318	22.01
	Lower Limit ==>	95,128	16.62	59,080	21.01
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
SW-1	K2308419-001	164,944	17.13	87,828	21.52
SW-8	K2308419-010	159,026	17.13	90,019	21.51

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4
Lab Code: K2308419-004

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low
Extraction Lot: KWG0317378

Analyte Name	Sample Result	SW-4MS KWG0317378-1 Matrix Spike Result	Expected	%Rec	SW-4DMS KWG0317378-2 Duplicate Matrix Spike Result	Expected	%Rec		%Rec Limits	RPD	RPD Limit
Naphthalene	ND	3.53	4.90	72	3.35	4.90	68		28-110	5	30
2-Methylnaphthalene	ND	3.54	4.90	72	3.40	4.90	69		29-107	4	30
1-Methylnaphthalene	ND	3.68	4.90	75	3.46	4.90	71		18-121	6	30
Biphenyl	ND	3.67	4.90	75	3.36	4.90	69	*	70-130	9	30
Acenaphthylene	ND	4.02	4.90	82	3.53	4.90	72		42-112	13	30
Dibenzofuran	ND	3.91	4.90	80	3.43	4.90	70		42-107	13	30
Acenaphthene	ND	3.83	4.90	78	3.37	4.90	69		41-105	13	30
Fluorene	ND	4.11	4.90	84	3.54	4.90	72		40-115	15	30
Dibenzothiophene	ND	4.01	4.90	82	3.32	4.90	68	*	70-130	19	30
Phenanthrene	ND	3.99	4.90	81	3.27	4.90	67		40-112	20	30
Anthracene	ND	3.91	4.90	80	3.07	4.90	63		25-118	24	30
Fluoranthene	ND	4.13	4.90	84	3.26	4.90	67		32-131	23	30
Pyrene	ND	4.14	4.90	85	3.26	4.90	66		27-131	24	30
Benz(a)anthracene	ND	3.80	4.90	77	2.98	4.90	61		21-133	24	30
Chrysene	ND	3.75	4.90	77	2.93	4.90	60		24-128	24	30
Benzo(b)fluoranthene	ND	4.07	4.90	83	3.19	4.90	65		17-142	24	30
Benzo(k)fluoranthene	ND	4.01	4.90	82	3.15	4.90	64		19-135	24	30
Benzo(e)pyrene	ND	3.69	4.90	75	2.91	4.90	59	*	70-130	24	30
Benzo(a)pyrene	ND	3.99	4.90	81	3.16	4.90	64		10-146	23	30
Perylene	ND	3.88	4.90	79	3.05	4.90	62	*	70-130	24	30
Indeno(1,2,3-cd)pyrene	ND	4.24	4.90	86	3.18	4.90	65		16-145	28	30
Dibenz(a,h)anthracene	ND	4.23	4.90	86	3.13	4.90	64		16-142	30	30
Benzo(g,h,i)perylene	ND	3.78	4.90	77	2.87	4.90	58		18-132	27	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0317378

Analyte Name	Lab Control Sample KWG0317378-3 Lab Control Spike Result	Expected	%Rec	%Rec Limits
Naphthalene	3.85	5.00	77	44-101
2-Methylnaphthalene	3.93	5.00	79	36-106
1-Methylnaphthalene	4.01	5.00	80	37-110
Biphenyl	3.96	5.00	79	36-113
Acenaphthylene	4.13	5.00	83	49-114
Dibenzofuran	4.13	5.00	83	40-115
Acenaphthene	4.02	5.00	80	48-107
Fluorene	4.35	5.00	87	55-111
Dibenzothiophene	4.25	5.00	85	44-121
Phenanthrene	4.26	5.00	85	56-108
Anthracene	4.17	5.00	83	42-117
Fluoranthene	4.65	5.00	93	61-123
Pyrene	4.43	5.00	89	53-123
Benz(a)anthracene	4.46	5.00	89	53-123
Chrysene	4.41	5.00	88	57-118
Benzo(b)fluoranthene	4.89	5.00	98	57-132
Benzo(k)fluoranthene	4.64	5.00	93	54-126
Benzo(e)pyrene	4.35	5.00	87	46-133
Benzo(a)pyrene	4.44	5.00	89	38-142
Perylene	3.95	5.00	79	25-135
Indeno(1,2,3-cd)pyrene	5.27	5.00	105	49-139
Dibenz(a,h)anthracene	5.01	5.00	100	47-138
Benzo(g,h,i)perylene	4.47	5.00	89	50-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003
Time Analyzed: 08:13

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317378-4

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

File ID: J:\MS11\DATA\110803\1108F005.D
Instrument ID: MS11

Level: Low
Extraction Lot: KWG0317378

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317378-3	J:\MS11\DATA\110803\1108F011.D	11/08/03	11:50
SW-4MS	KWG0317378-1	J:\MS11\DATA\110803\1108F012.D	11/08/03	12:27
SW-4DMS	KWG0317378-2	J:\MS11\DATA\110803\1108F013.D	11/08/03	13:04
SW-2	K2308419-002	J:\MS11\DATA\110803\1108F015.D	11/08/03	14:18
SW-3	K2308419-003	J:\MS11\DATA\110803\1108F016.D	11/08/03	14:55
SW-4	K2308419-004	J:\MS11\DATA\110803\1108F017.D	11/08/03	15:32
SW-4-Dup	K2308419-005	J:\MS11\DATA\110803\1108F018.D	11/08/03	16:09
SW-5	K2308419-006	J:\MS11\DATA\110803\1108F019.D	11/08/03	16:45
SW-6	K2308419-008	J:\MS11\DATA\110803\1108F020.D	11/08/03	17:21
SW-7	K2308419-009	J:\MS11\DATA\110803\1108F021.D	11/08/03	17:57
SW-1	K2308419-001	J:\MS11\DATA\111003\1110F005.D	11/10/03	16:49
SW-8	K2308419-010	J:\MS11\DATA\111003\1110F006.D	11/10/03	17:25

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Extracted: 10/29/2003
Date Analyzed: 11/08/2003
Time Analyzed: 11:50

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: Lab Control Sample
Lab Code: KWG0317378-3

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

File ID: J:\MS11\DATA\110803\1108F011.D
Instrument ID: MS11

Level: Low
Extraction Lot: KWG0317378

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0317378-4	J:\MS11\DATA\110803\1108F005.D	11/08/03	08:13
SW-4MS	KWG0317378-1	J:\MS11\DATA\110803\1108F012.D	11/08/03	12:27
SW-4DMS	KWG0317378-2	J:\MS11\DATA\110803\1108F013.D	11/08/03	13:04
SW-2	K2308419-002	J:\MS11\DATA\110803\1108F015.D	11/08/03	14:18
SW-3	K2308419-003	J:\MS11\DATA\110803\1108F016.D	11/08/03	14:55
SW-4	K2308419-004	J:\MS11\DATA\110803\1108F017.D	11/08/03	15:32
SW-4-Dup	K2308419-005	J:\MS11\DATA\110803\1108F018.D	11/08/03	16:09
SW-5	K2308419-006	J:\MS11\DATA\110803\1108F019.D	11/08/03	16:45
SW-6	K2308419-008	J:\MS11\DATA\110803\1108F020.D	11/08/03	17:21
SW-7	K2308419-009	J:\MS11\DATA\110803\1108F021.D	11/08/03	17:57
SW-1	K2308419-001	J:\MS11\DATA\111003\1110F005.D	11/10/03	16:49
SW-8	K2308419-010	J:\MS11\DATA\111003\1110F006.D	11/10/03	17:25

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-1
Lab Code: K2308419-001

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.054**		0.020	1	10/29/03	11/10/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthene	**0.028**		0.020	1	10/29/03	11/10/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Fluoranthene	**0.024**		0.020	1	10/29/03	11/10/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-1
Lab Code: K2308419-001

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/10/03	Acceptable
Fluoranthene-d10	86	18-137	11/10/03	Acceptable
Terphenyl-d14	93	18-153	11/10/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111003\1110F005.D
Lab ID: K2308419-001
RunType: SMPL
Matrix: WATER

Date Acquired: 11/10/2003 16:49
Date Quantitated: 11/11/2003 13:42
Batch ID: KWG0318161
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/11/3

Secondary Review: 11/12/3

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318161	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245658	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\111003\1110F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111003\1110F005.D			**Instrument:**	MS11
Acqu Date:	11/10/2003 16:49	**Quant Date:**	11/11/2003 13:42	**Vial:**	3
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	242761	1,000.00	OK
2	Acenaphthene-d10	8.06	0.01	164	126340	1,000.00	OK
3	Phenanthrene-d10	11.00	0.00	188	189297	1,000.00	OK
4	Chrysene-d12	17.13	0.01	240	164944	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	87828	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.00	0.00	0.00	176	180559	1,429	71	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	325212	1,717	86	18-137	OK	
4	Terphenyl-d14	14.73	0.00	0.00	244	280426	1,865	93	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	15074	54.92	0.054		
1	2-Methylnaphthalene	6.42	0.01	0.00	142	749	4.62	0.0046	J	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	1089	7.17	0.0071	J	
1	Biphenyl	7.09		0.00	154	1274	6.48	0.0064	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	567	2.33	0.0023	J	
2	Acenaphthene	8.11		0.00	154	4258	28.38	0.028		
2	Dibenzofuran	8.41	0.01	0.00	168	2632	13.09	0.013	J	
2	Fluorene	9.06	0.01	0.00	166	2247	13.98	0.014	J	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111003\1110F005.D			**Instrument:**	MS11
Acqu Date:	11/10/2003 16:49	**Quant Date:**	11/11/2003 13:42	**Vial:**	3
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-001			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene	10.79	0.01	0.00	184	553	2.53	0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	3243	14.14	0.014	J	
3	Anthracene	11.15	0.01	0.00	178	550	2.81	0.0028	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	1025**m**	4.47	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.73		0.00	202	5437	23.81	0.024		
4	Pyrene	14.24		0.00	202	2970	13.78	0.014	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.10	0.01	0.00	228	415**m**	2.53	0.0025	J	
4	Chrysene	17.18		0.00	228	788	4.49	0.0044	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.11	0.01	0.00	252	219	1.87	0.0020	U	
5	Benzo(k)fluoranthene	20.18	0.01	0.00	252	321**m**	2.16	0.0021	J	
5	Benzo(e)pyrene				252	0**d**		0.0019	U	
5	Benzo(a)pyrene				252	0		0.0016	U	
5	Perylene				252	0**d**		0.0012	U	
5	Indeno(1,2,3-cd)pyrene				276	0		0.0021	U	
5	Dibenz(a,h)anthracene				278	0		0.0017	U	
5	Benzo(g,h,i)perylene	24.55		0.00	276	234	2.33	0.0037	U	

Prep Amount: 1010 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F005.D Vial: 3
Acq On : 10 Nov 2003 4:49 pm Operator: LWeiskopf
Sample : K2308419-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 18:04:12 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

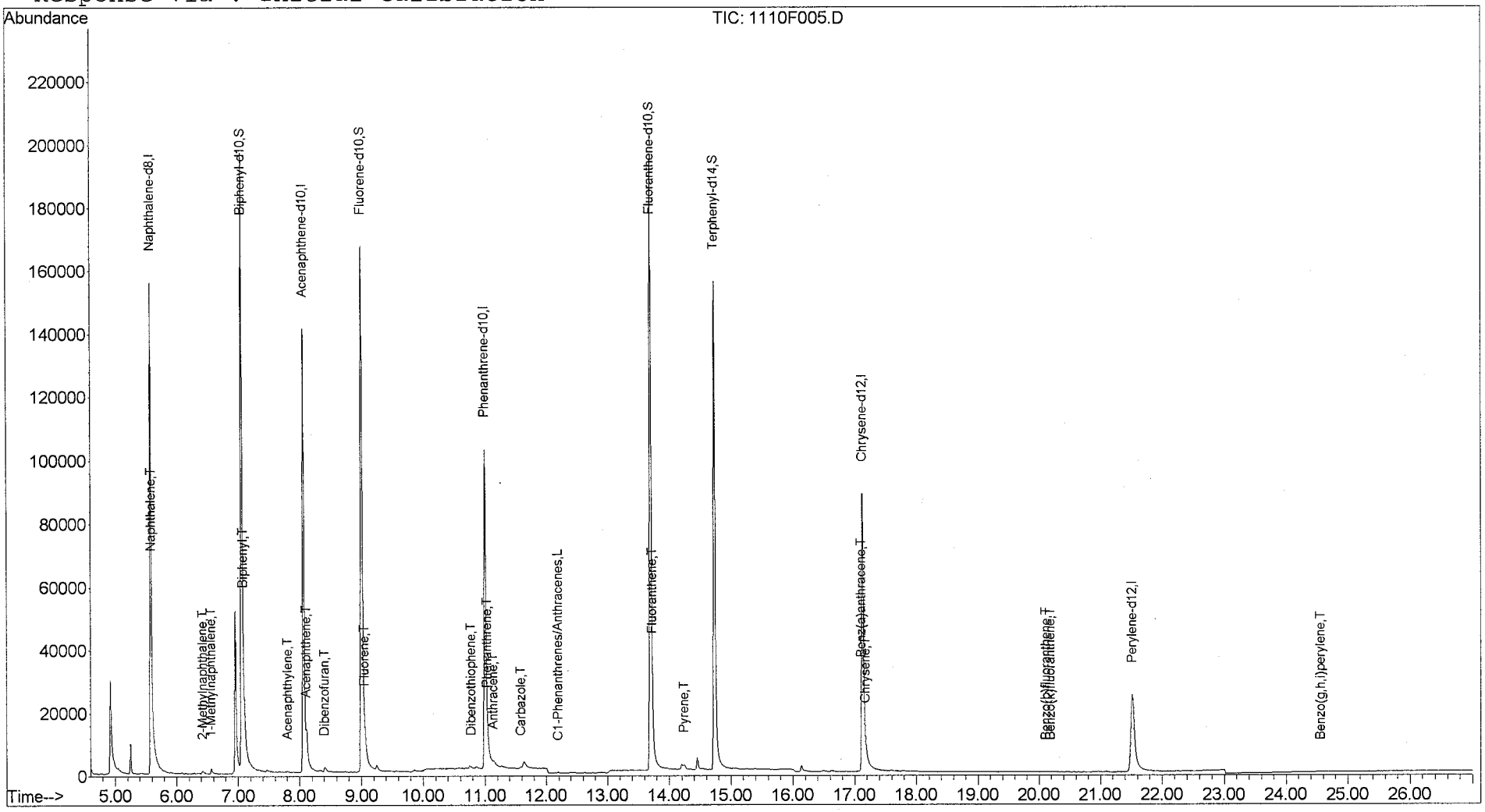
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	242761	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	126340	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	189297	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	164944	1000.00	ng/ml	0.01
48) Perylene-d12	21.52	264	87828	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	289710	1629.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 162.91%			
16) Fluorene-d10	9.00	176	180559	1428.97	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 142.90%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	325212	1716.50	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 171.65%			
41) Terphenyl-d14	14.73	244	280426	1865.43	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 186.54%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	15074	54.92	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	749	4.62	ng/ml	97
4) 1-Methylnaphthalene	6.57	142	1089	7.17	ng/ml	89
6) Biphenyl	7.09	154	1274	6.48	ng/ml	96
12) Acenaphthylene	7.80	152	567	2.33	ng/ml	95
13) Acenaphthene	8.11	154	4258	28.38	ng/ml	95
14) Dibenzofuran	8.41	168	2632	13.09	ng/ml	94
17) Fluorene	9.06	166	2247	13.98	ng/ml	96
24) Dibenzothiophene	10.79	184	553	2.53	ng/ml	77
28) Phenanthrene	11.05	178	3243	14.14	ng/ml	98
29) Anthracene	11.15	178	550	2.81	ng/ml	100
30) Carbazole	11.58	167	1468	9.48	ng/ml	92
32) C1-Phenanthrenes/Anthracen	12.19	192	1025m	4.47	ng/ml	
36) Fluoranthene	13.73	202	5437	23.81	ng/ml	99
39) Pyrene	14.24	202	2970	13.78	ng/ml	98
42) Benz(a)anthracene	17.10	228	415m	2.53	ng/ml	
43) Chrysene	17.18	228	788	4.49	ng/ml	77
49) Benzo(b)fluoranthene	20.11	252	219	1.87	ng/ml	54
50) Benzo(k)fluoranthene	20.18	252	321m	2.16	ng/ml	
56) Benzo(g,h,i)perylene	24.55	276	234	2.33	ng/ml	83

(#) = qualifier out of range (m) = manual integration

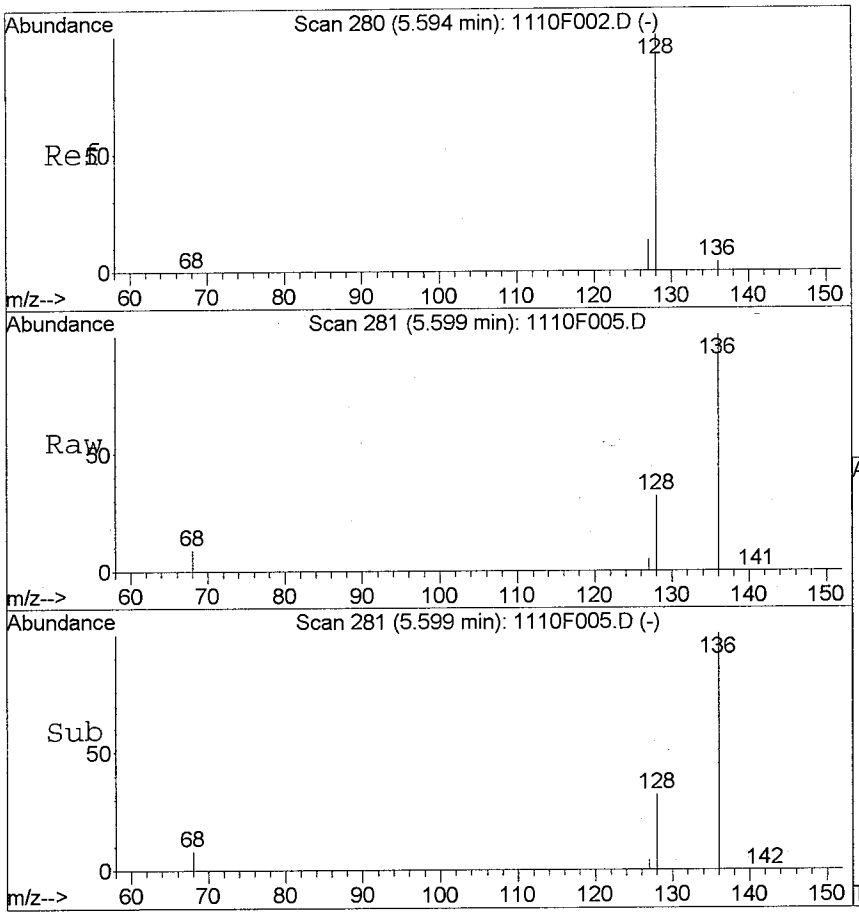
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F005.D Vial: 3
Acq On : 10 Nov 2003 4:49 pm Operator: LWeiskopf
Sample : K2308419-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Initial Calibration



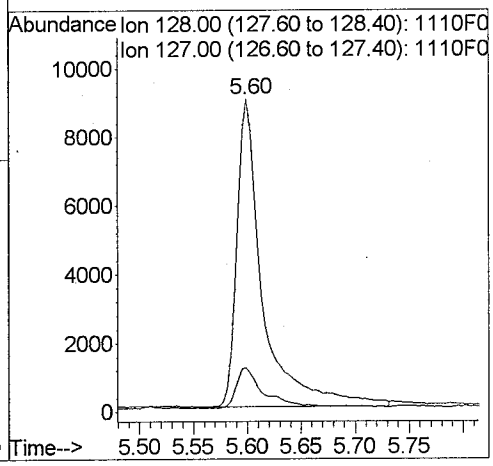
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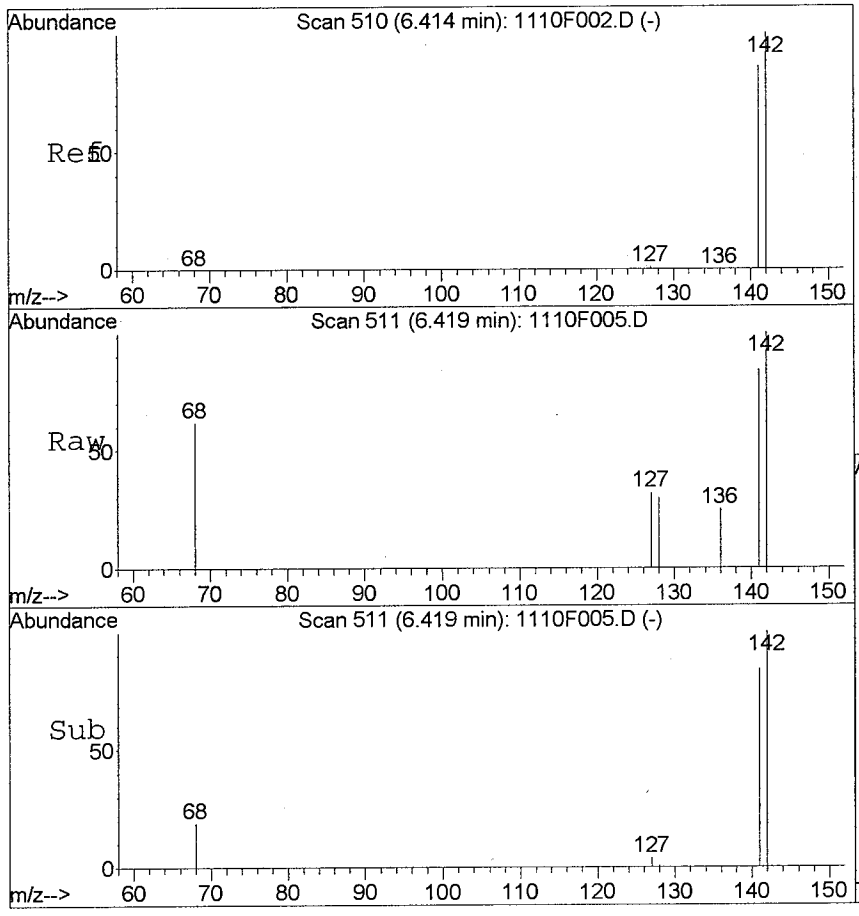


#2
Naphthalene
Concen: 54.92 ng/ml
RT: 5.60 min Scan# 281
Delta R.T. 0.00 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:128 Resp: 15074

Ion	Ratio	Lower	Upper
128	100		
127	13.1	0.0	43.3

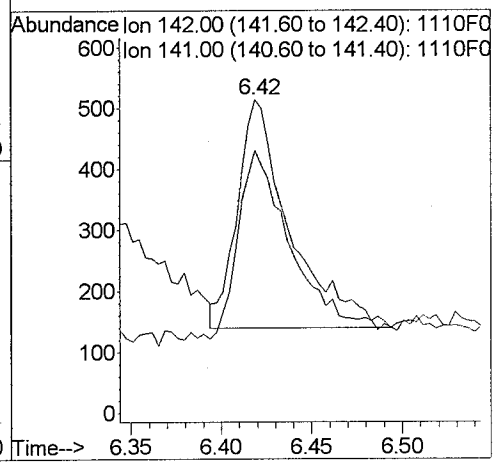


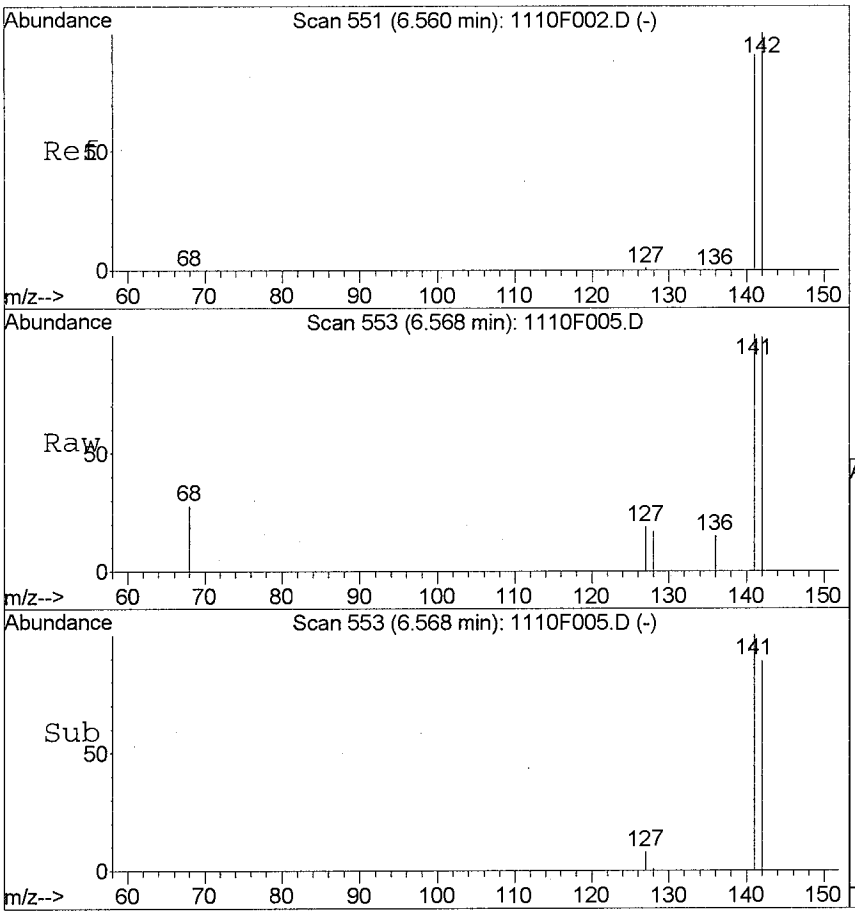


#3
2-Methylnaphthalene
Concen: 4.62 ng/ml
RT: 6.42 min Scan# 511
Delta R.T. 0.00 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:142 Resp: 749

Ion	Ratio	Lower	Upper
142	100		
141	82.6	55.7	115.7

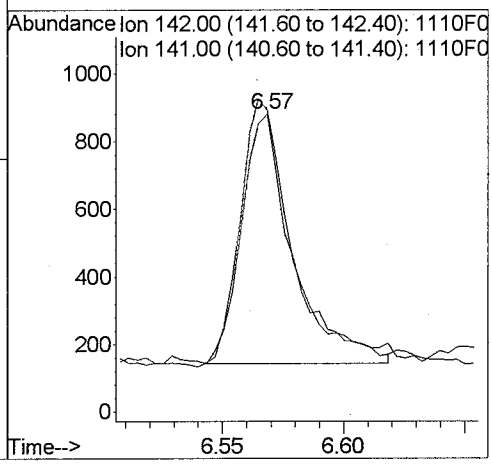


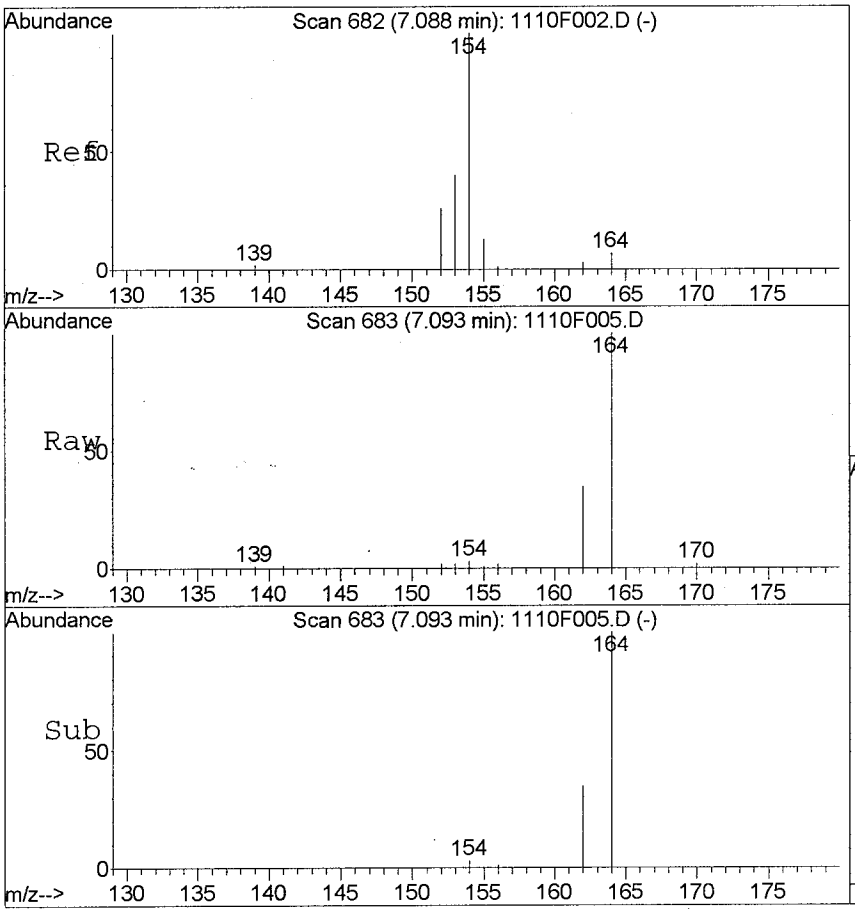


#4
1-Methylnaphthalene
Concen: 7.17 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:142 Resp: 1089

Ion	Ratio	Lower	Upper
142	100		
141	101.2	60.8	120.8

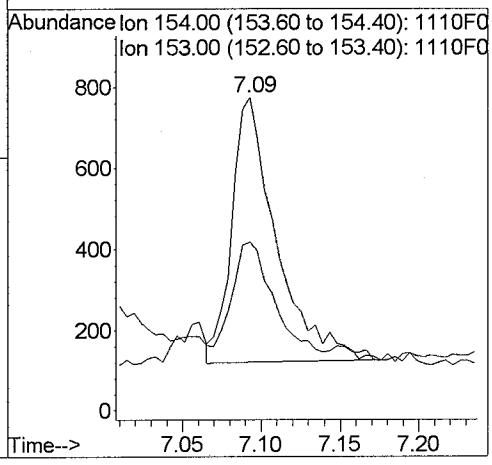


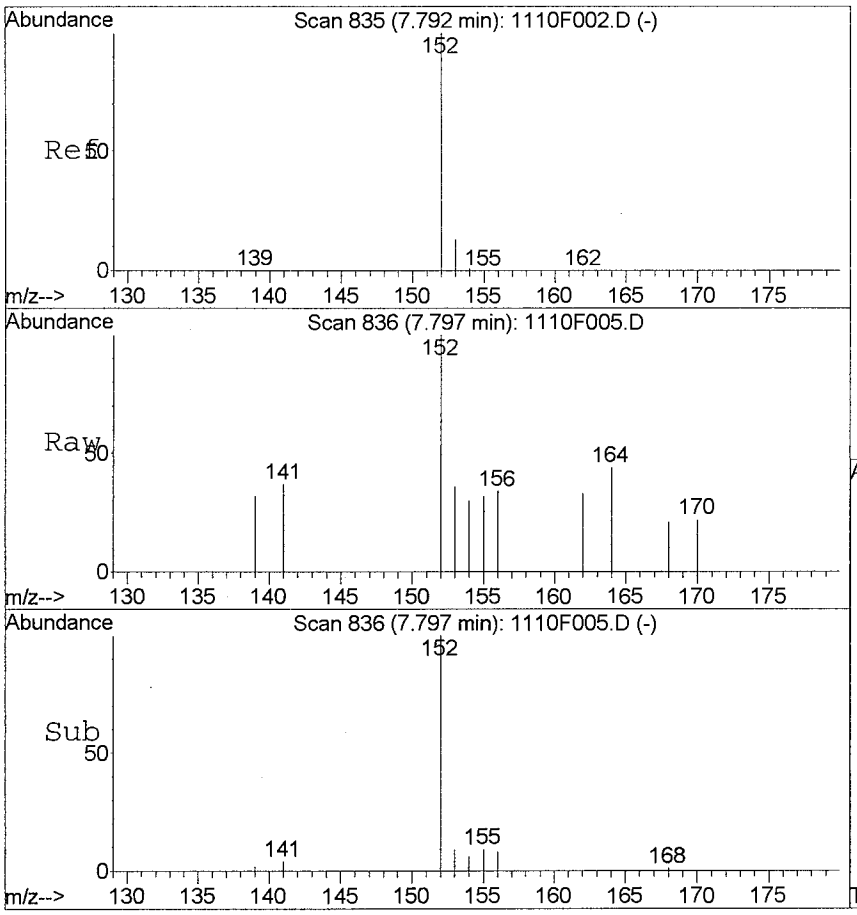


#6
Biphenyl
Concen: 6.48 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:154 Resp: 1274

Ion	Ratio	Lower	Upper
154	100		
153	42.6	10.4	70.4

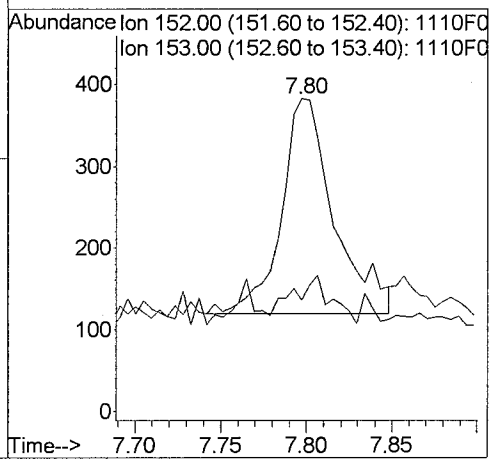


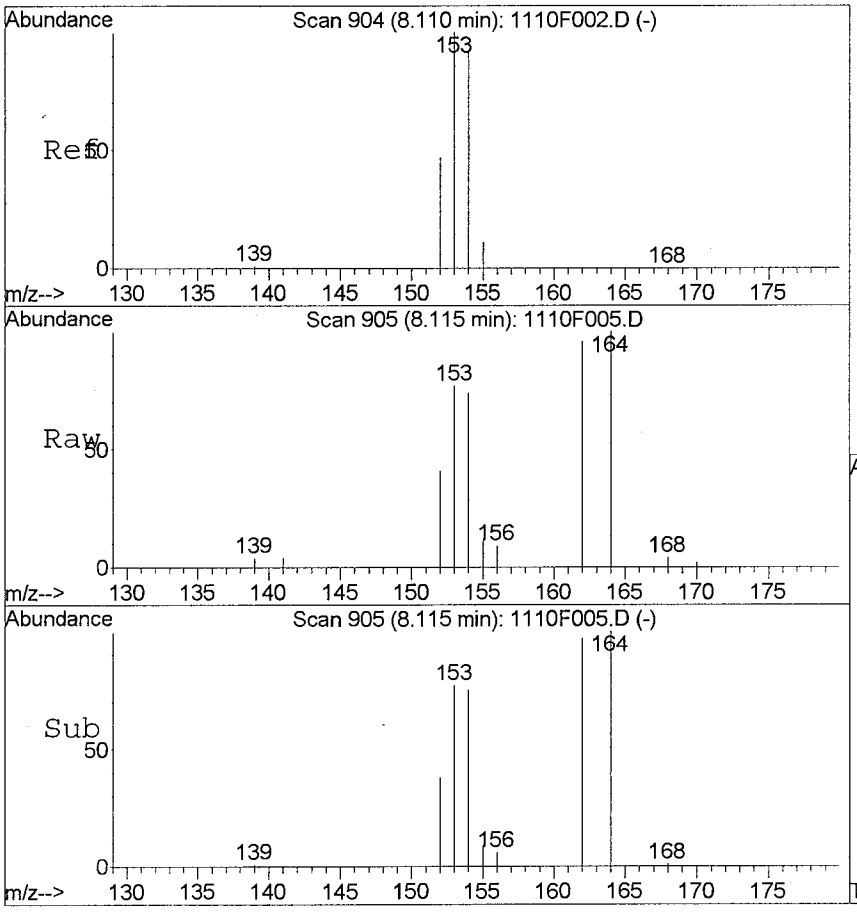


#12
Acenaphthylene
Concen: 2.33 ng/ml
RT: 7.80 min Scan# 836
Delta R.T. 0.00 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:152 Resp: 567

Ion	Ratio	Lower	Upper
152	100		
153	11.4	0.0	43.2

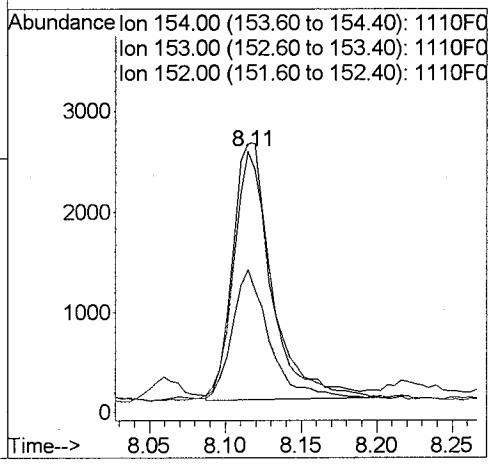


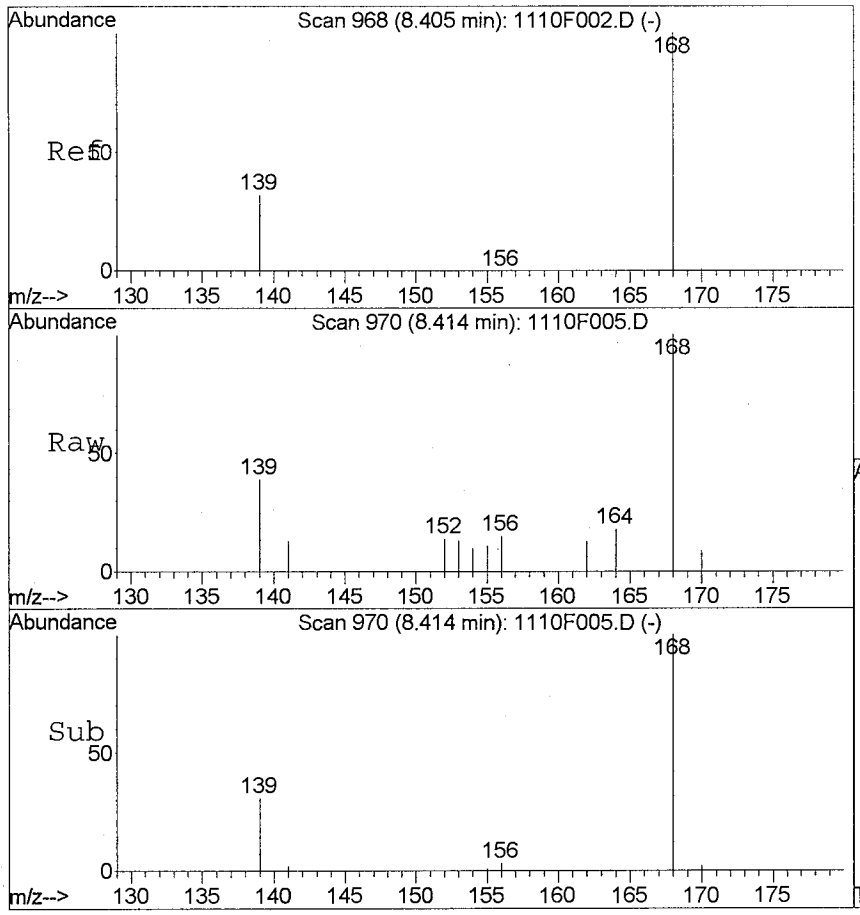


#13
Acenaphthene
Concen: 28.38 ng/ml
RT: 8.11 min Scan# 905
Delta R.T. 0.00 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:154 Resp: 4258

Ion	Ratio	Lower	Upper
154	100		
153	102.2	78.3	138.3
152	52.5	20.9	80.9

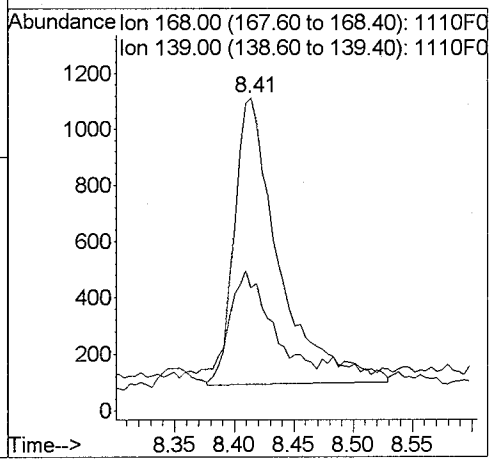


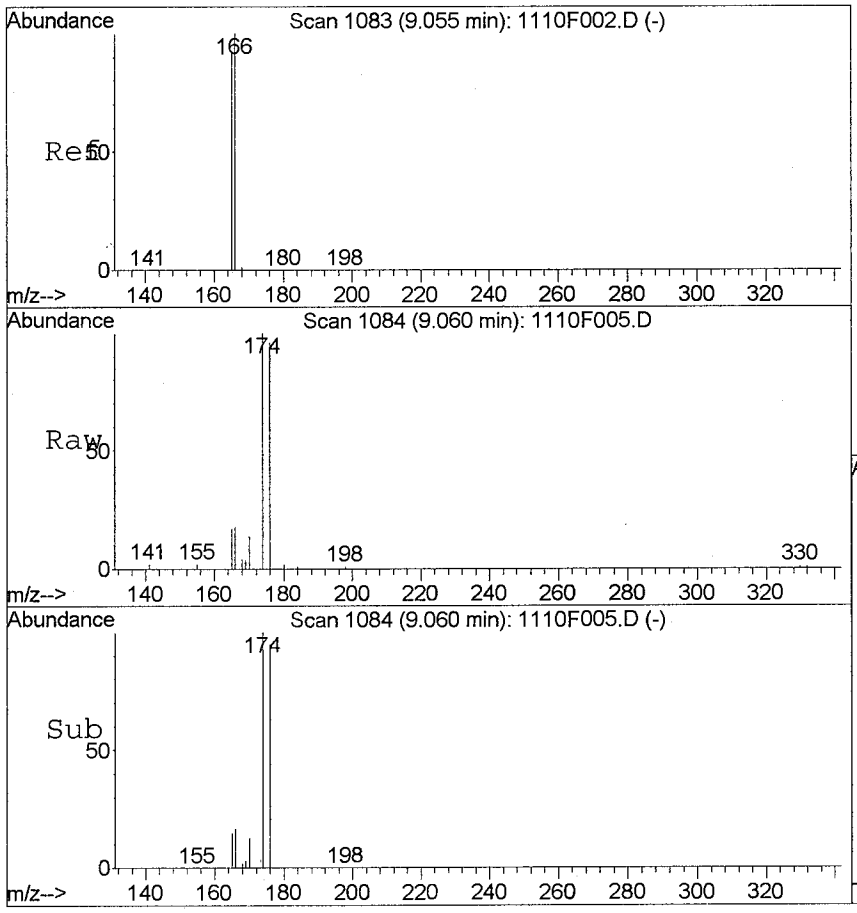


#14
Dibenzofuran
Concen: 13.09 ng/ml
RT: 8.41 min Scan# 970
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:168 Resp: 2632

Ion	Ratio	Lower	Upper
168	100		
139	28.4	2.0	62.0

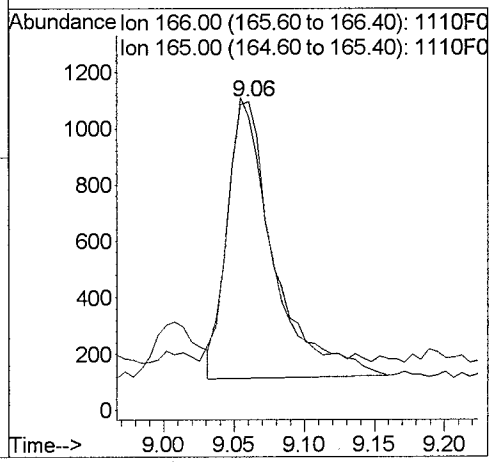


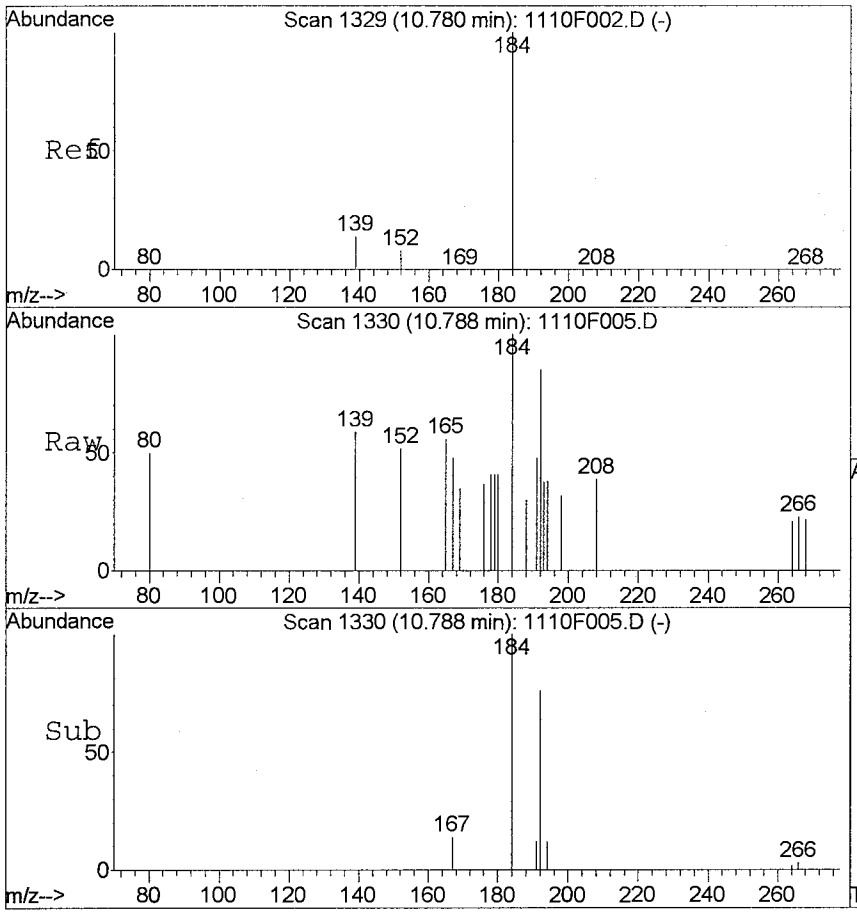


#17
Fluorene
Concen: 13.98 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:166 Resp: 2247

Ion	Ratio	Lower	Upper
166	100		
165	88.2	62.3	122.3

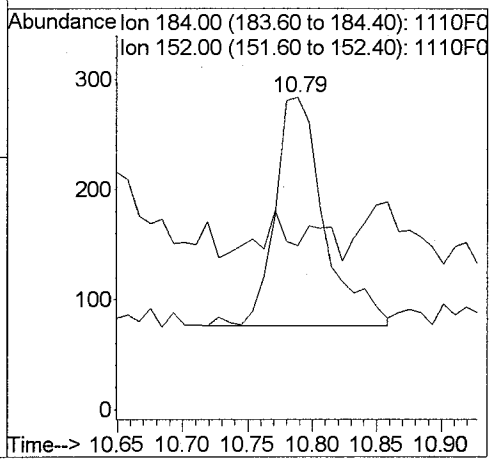


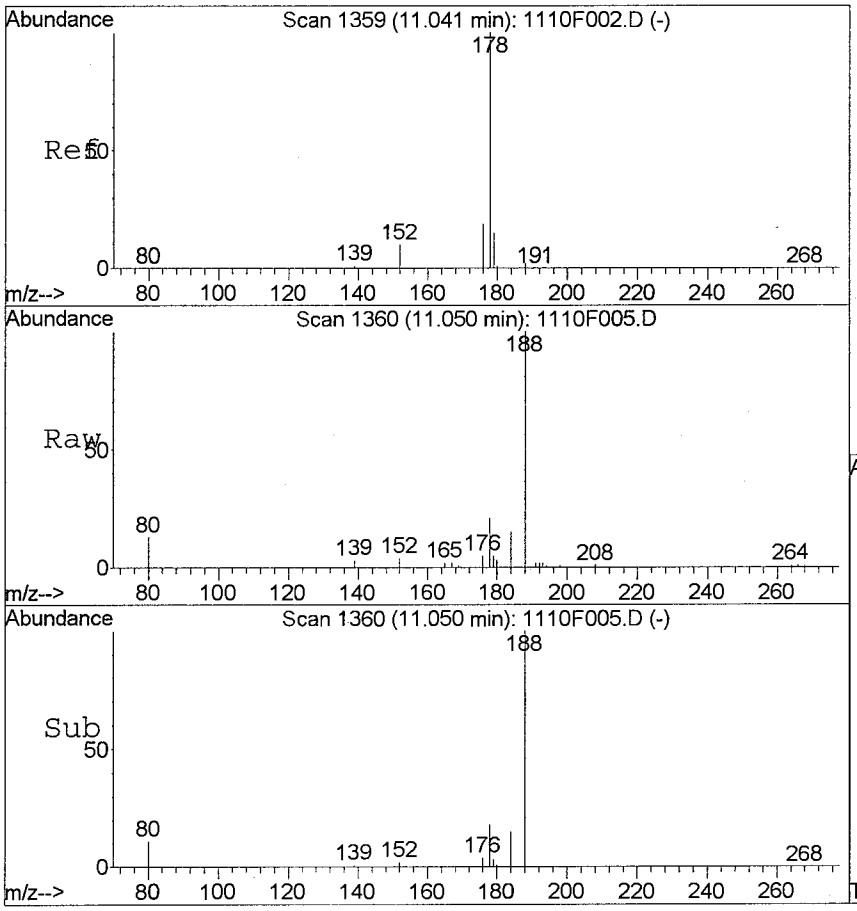


#24
Dibenzothiophene
Concen: 2.53 ng/ml
RT: 10.79 min Scan# 1330
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:184 Resp: 553

Ion	Ratio	Lower	Upper
184	100		
152	0.0	0.0	38.3

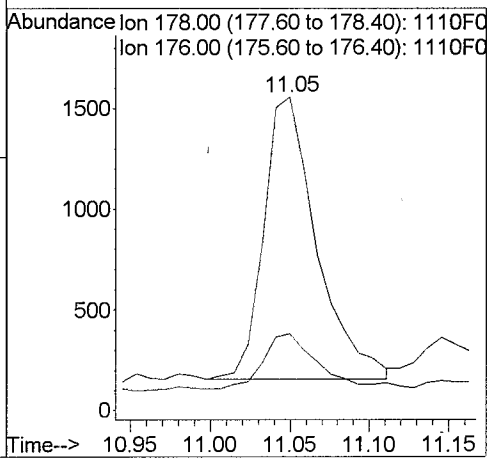


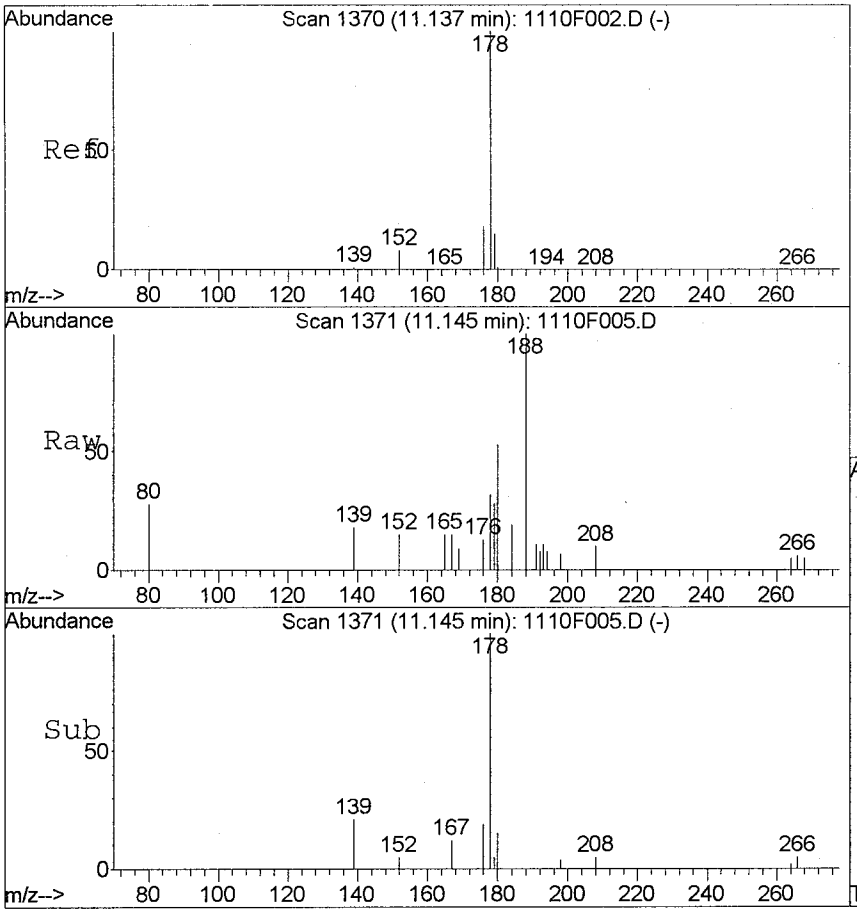


#28
Phenanthrene
Concen: 14.14 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:178 Resp: 3243

Ion	Ratio	Lower	Upper
178	100		
176	19.6	0.0	48.6

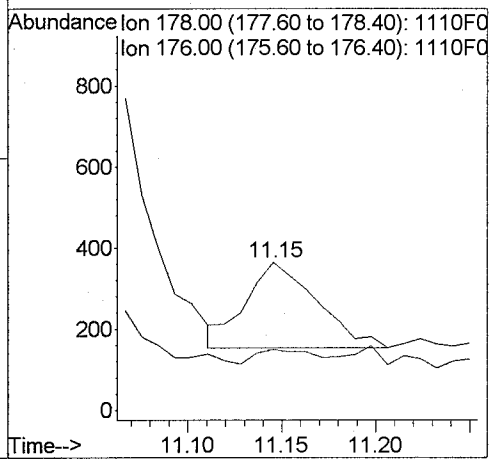


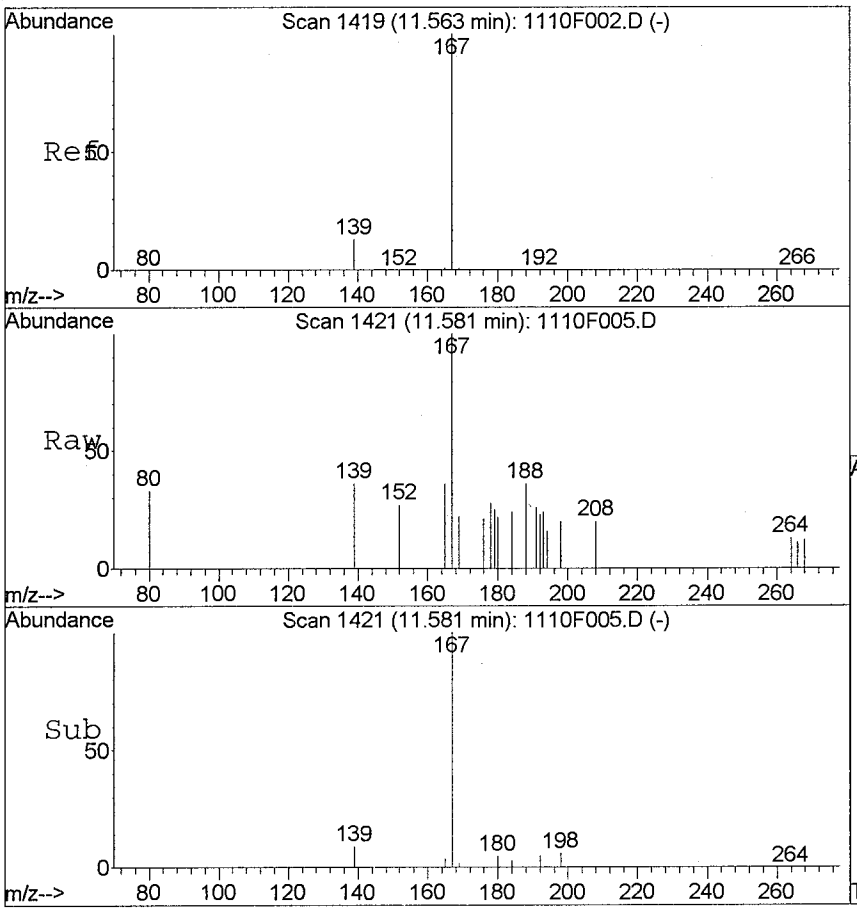


#29
Anthracene
Concen: 2.81 ng/ml
RT: 11.15 min Scan# 1371
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:178 Resp: 550

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	48.1

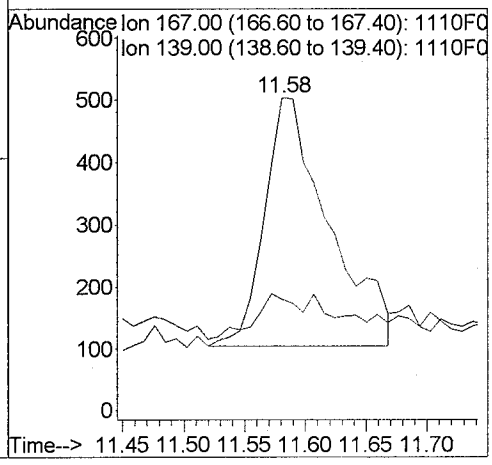


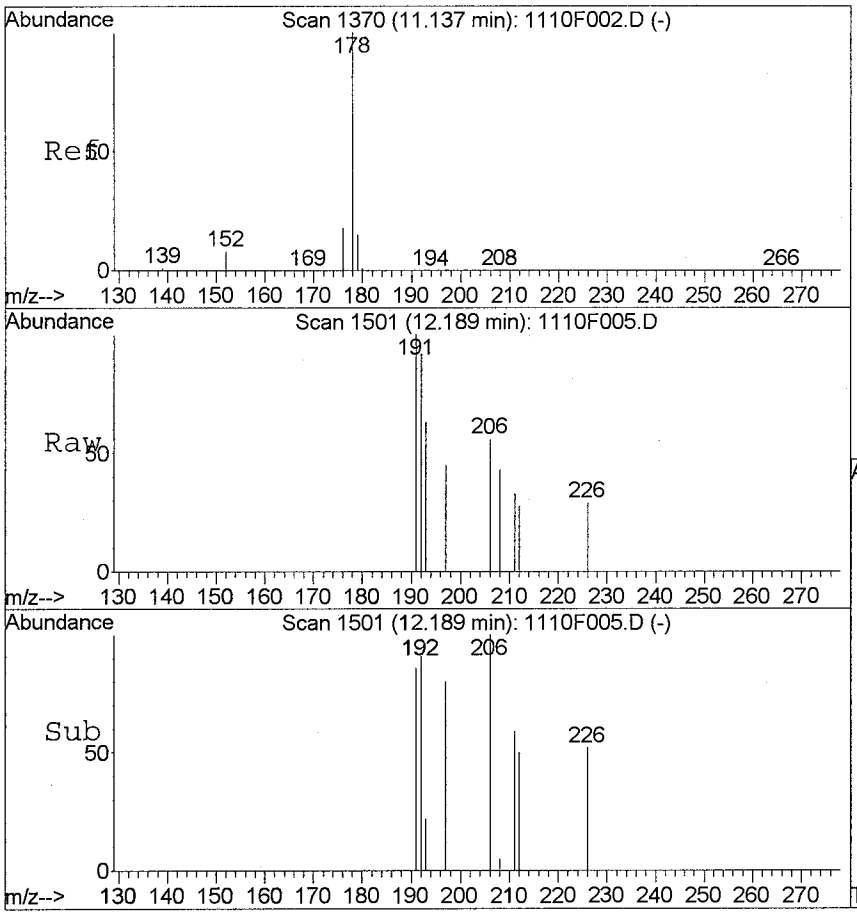


#30
Carbazole
Concen: 9.48 ng/ml
RT: 11.58 min Scan# 1421
Delta R.T. 0.02 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:167 Resp: 1468

Ion	Ratio	Lower	Upper
167	100		
139	16.1	0.0	42.8

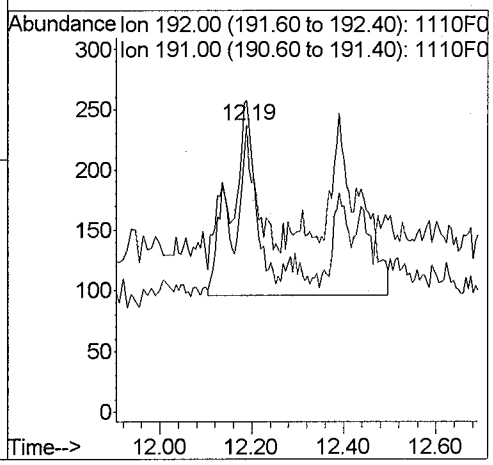


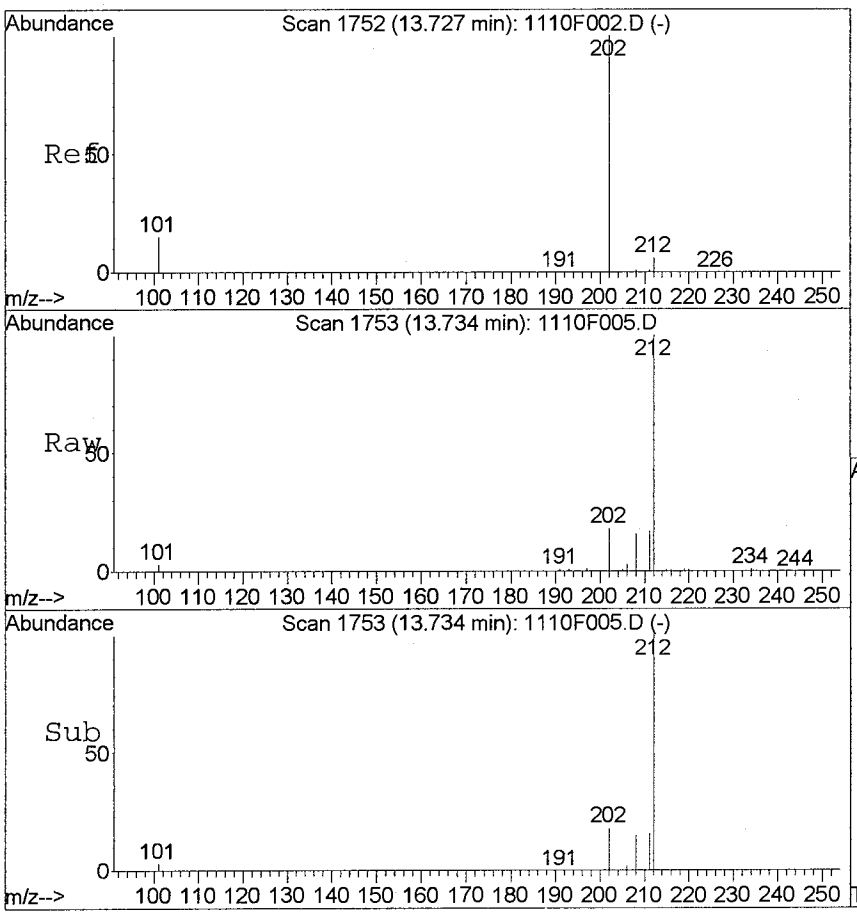


#32
C1-Phenanthrenes/Anthracenes
Concen: 4.47 ng/ml m
RT: 12.19 min Scan# 1501
Delta R.T. -0.03 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:192 Resp: 1025

Ion	Ratio	Lower	Upper
192	100		
191	108.9	25.3	85.3#

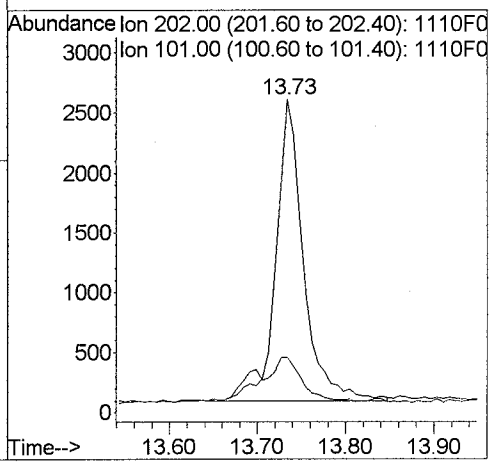


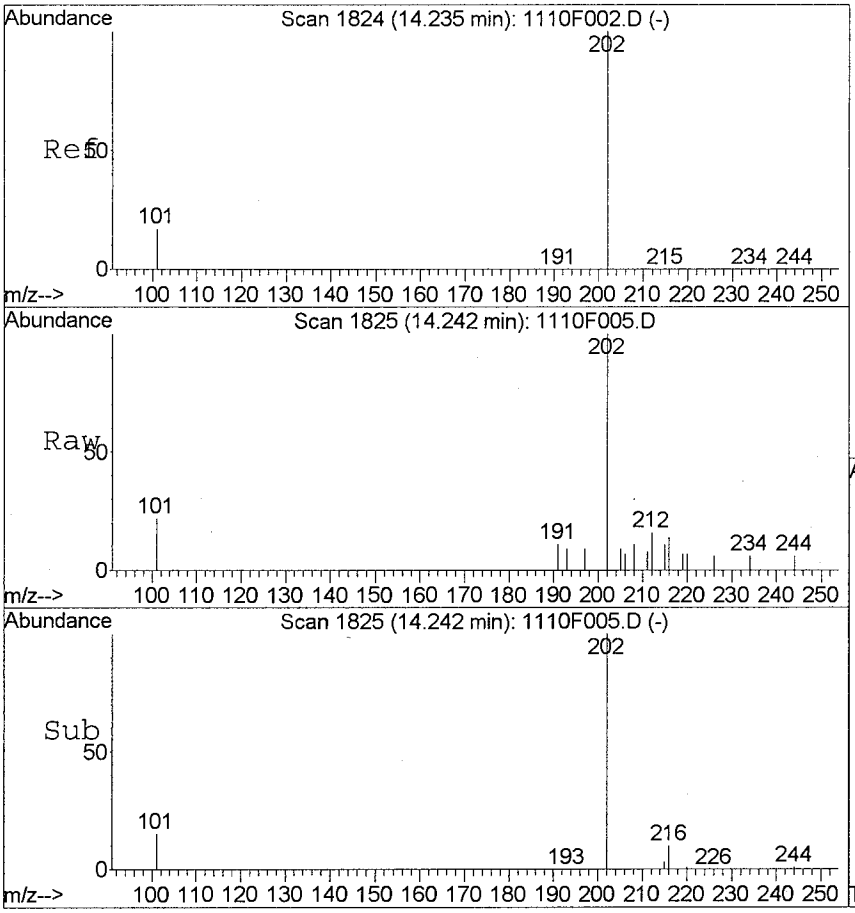


#36
Fluoranthene
Concen: 23.81 ng/ml
RT: 13.73 min Scan# 1753
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:202 Resp: 5437

Ion	Ratio	Lower	Upper
202	100		
101	14.6	0.0	45.2

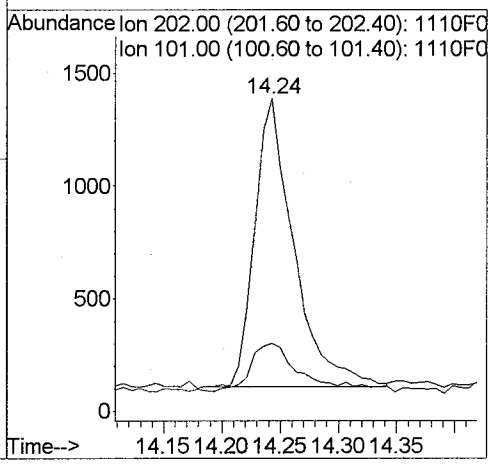


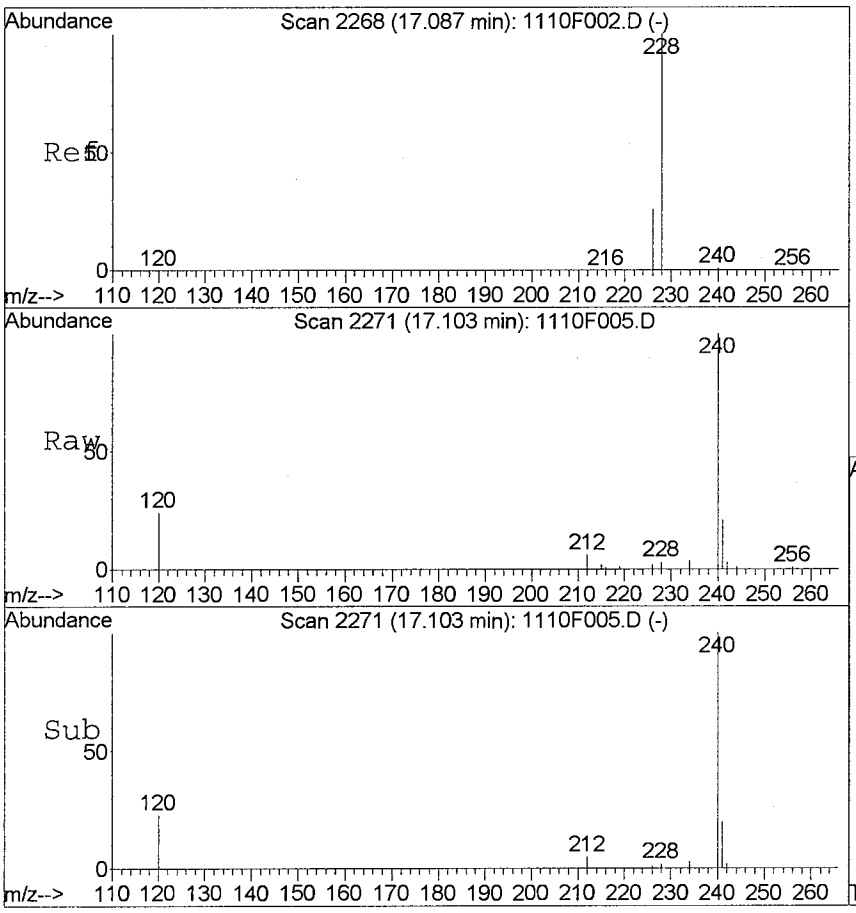


#39
Pyrene
Concen: 13.78 ng/ml
RT: 14.24 min Scan# 1825
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:202 Resp: 2970

Ion	Ratio	Lower	Upper
202	100		
101	16.4	0.0	47.1

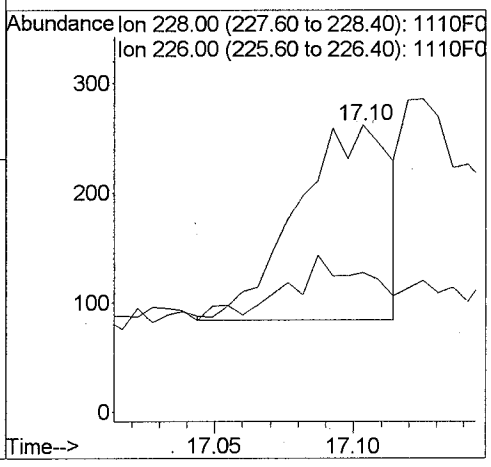


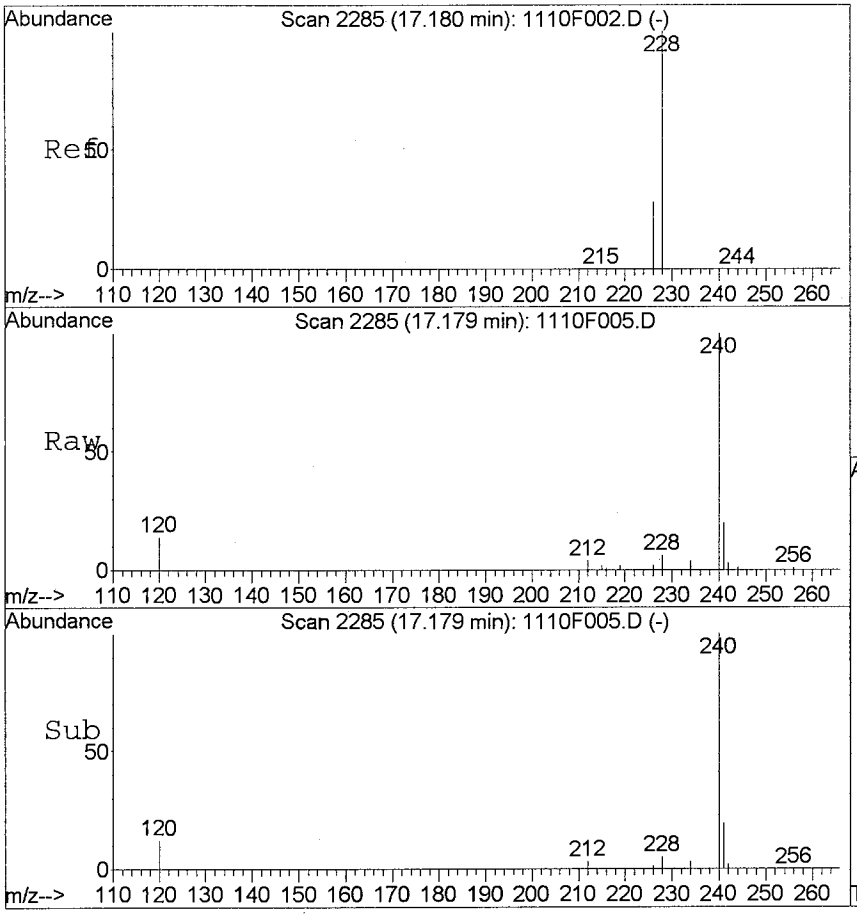


#42
Benz(a)anthracene
Concen: 2.53 ng/ml m
RT: 17.10 min Scan# 2271
Delta R.T. 0.02 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:228 Resp: 415

Ion	Ratio	Lower	Upper
228	100		
226	48.5	0.0	55.8

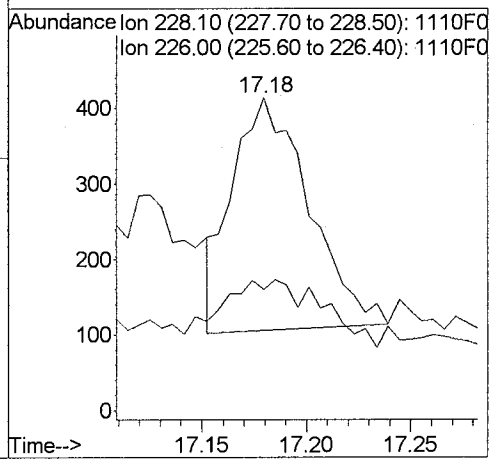


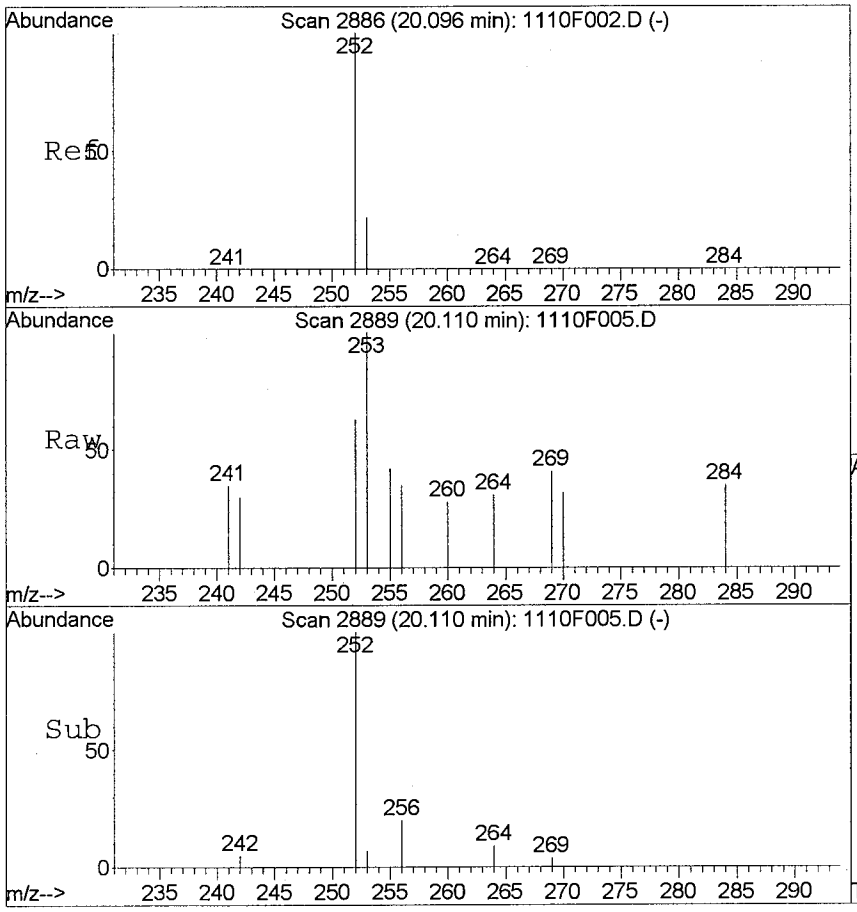


#43
Chrysene
Concen: 4.49 ng/ml
RT: 17.18 min Scan# 2285
Delta R.T. -0.00 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:228 Resp: 788

Ion	Ratio	Lower	Upper
228	100		
226	16.3	0.0	58.3

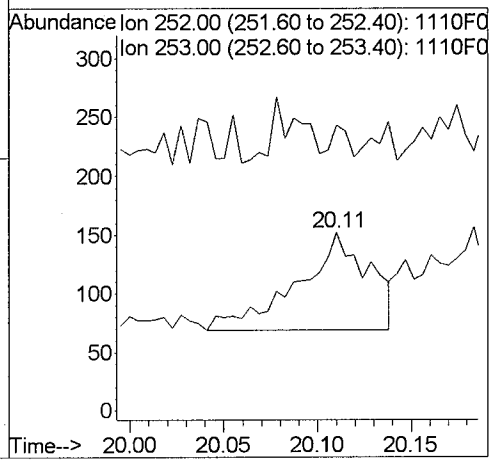


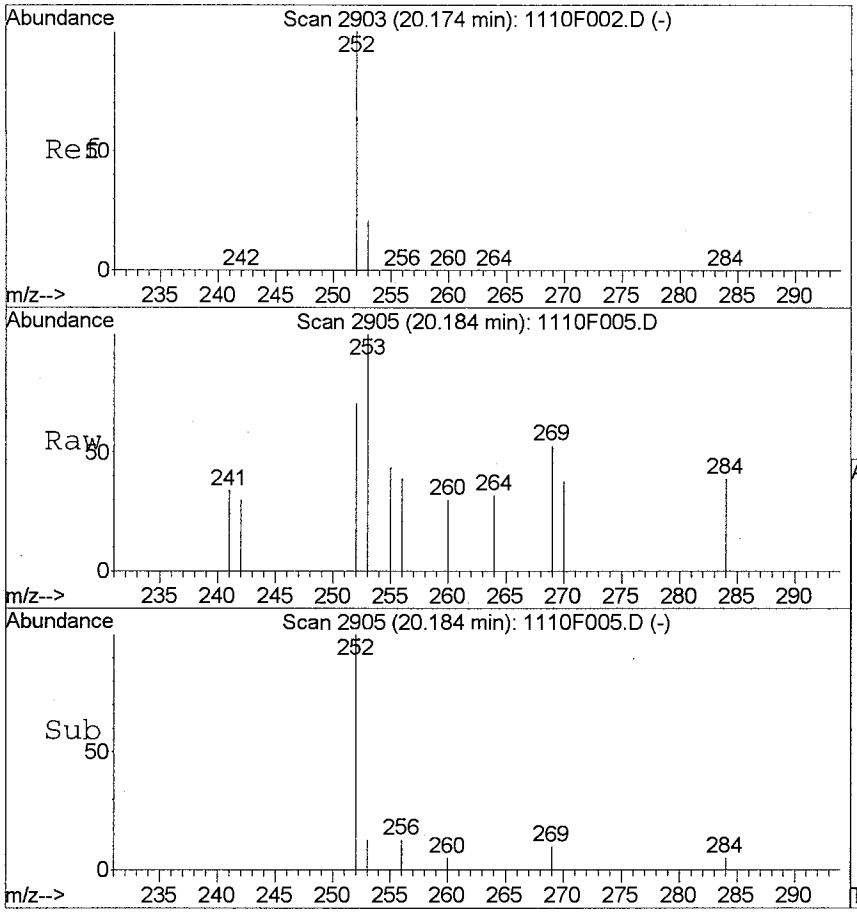


#49
Benzo(b)fluoranthene
Concen: 1.87 ng/ml
RT: 20.11 min Scan# 2889
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:252 Resp: 219

Ion	Ratio	Lower	Upper
252	100		
253	0.0	0.0	52.0

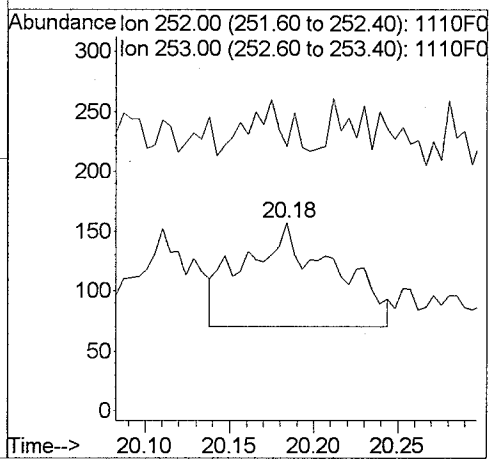


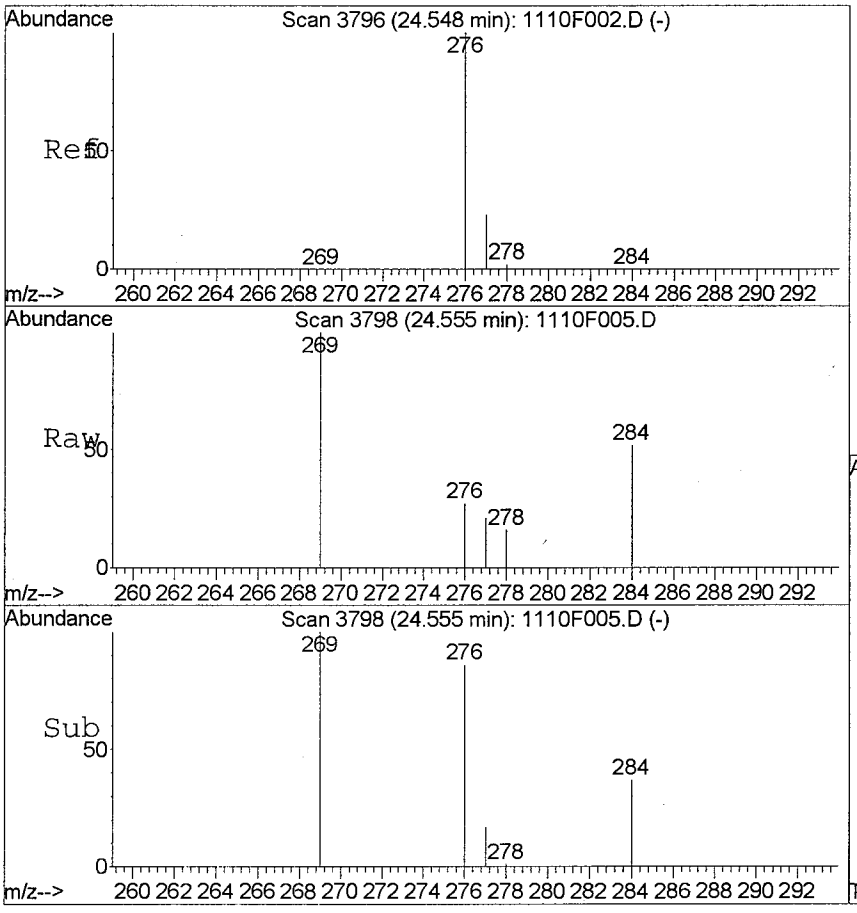


#50
Benzo(k)fluoranthene
Concen: 2.16 ng/ml m
RT: 20.18 min Scan# 2905
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:252 Resp: 321

Ion	Ratio	Lower	Upper
252	100		
253	140.8	0.0	51.8#

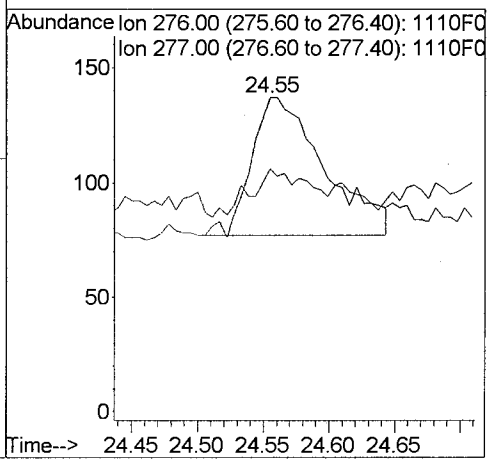




#56
Benzo(g,h,i)perylene
Concen: 2.33 ng/ml
RT: 24.55 min Scan# 3798
Delta R.T. 0.01 min
Lab File: 1110F005.D
Acq: 10 Nov 2003 4:49 pm

Tgt Ion:276 Resp: 234

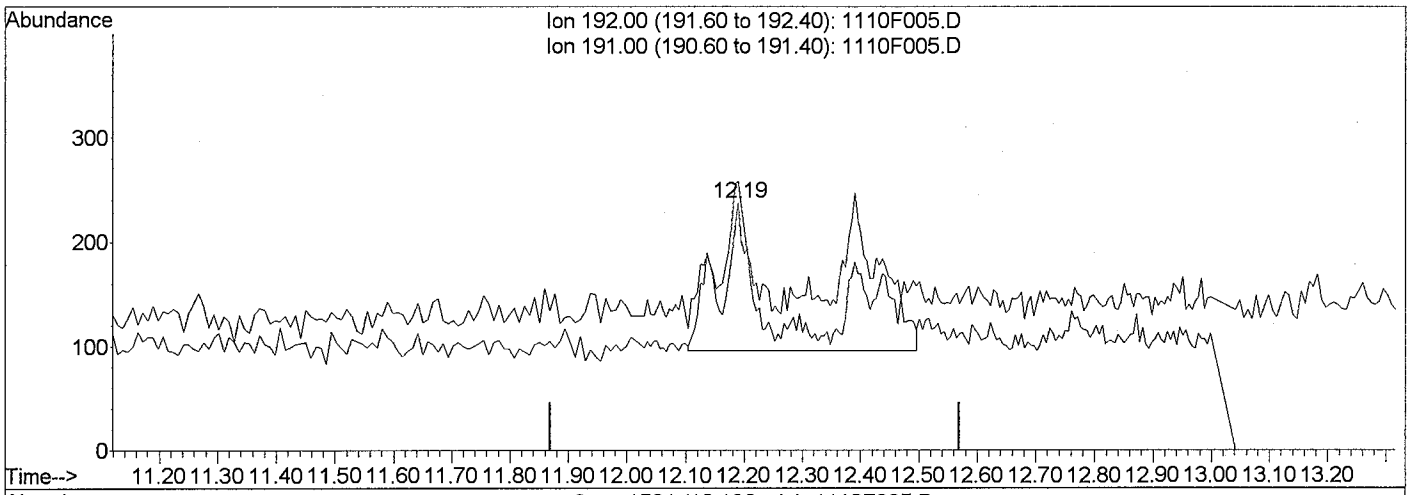
Ion	Ratio	Lower	Upper
276	100		
277	31.7	0.0	53.4

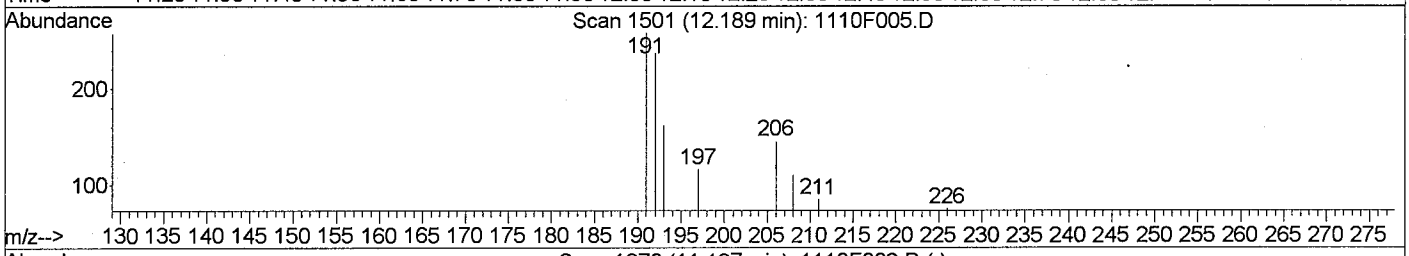


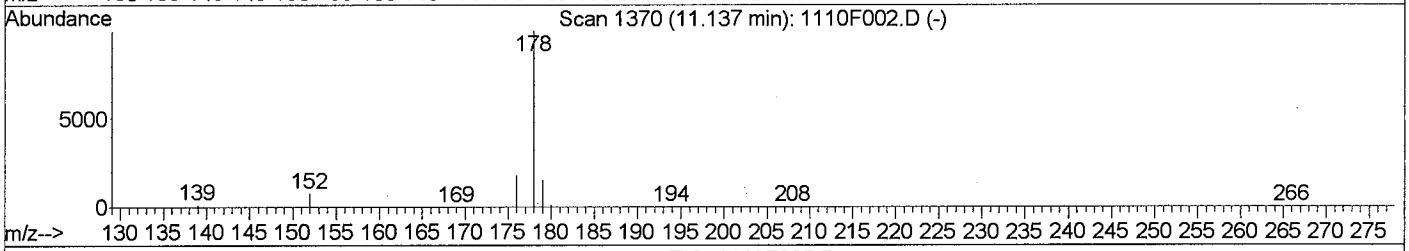
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F005.D Vial: 3
Acq On : 10 Nov 2003 4:49 pm Operator: LWeiskopf
Sample : K2308419-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F005.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 4.47ng/ml m

response 1025

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	108.86#
0.00	0.00	0.00
0.00	0.00	0.00

11/12/13

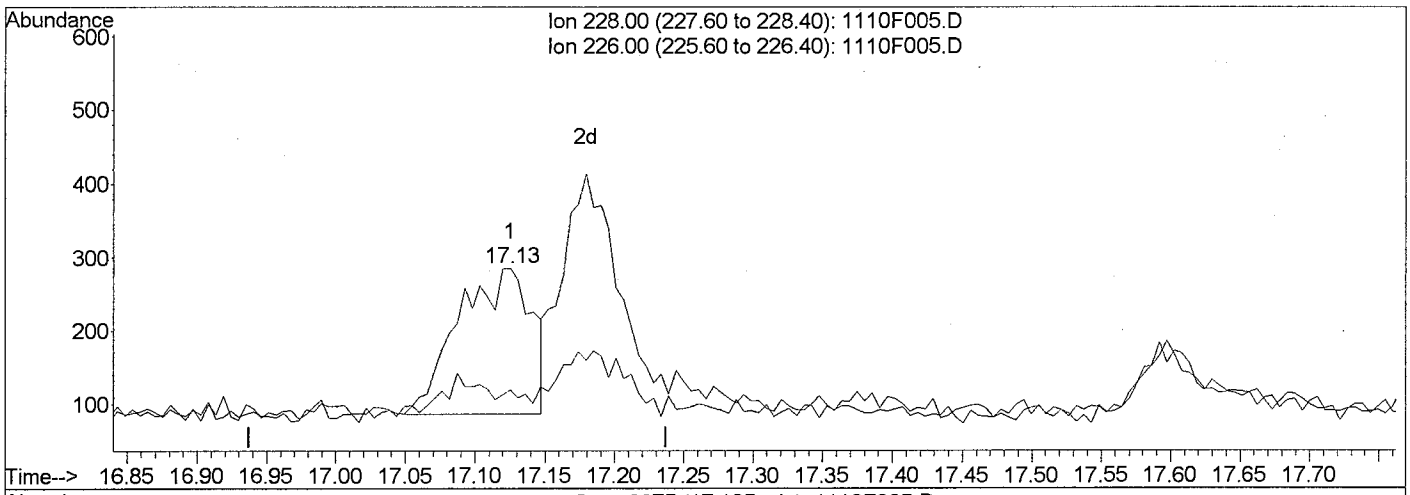
11/12/13

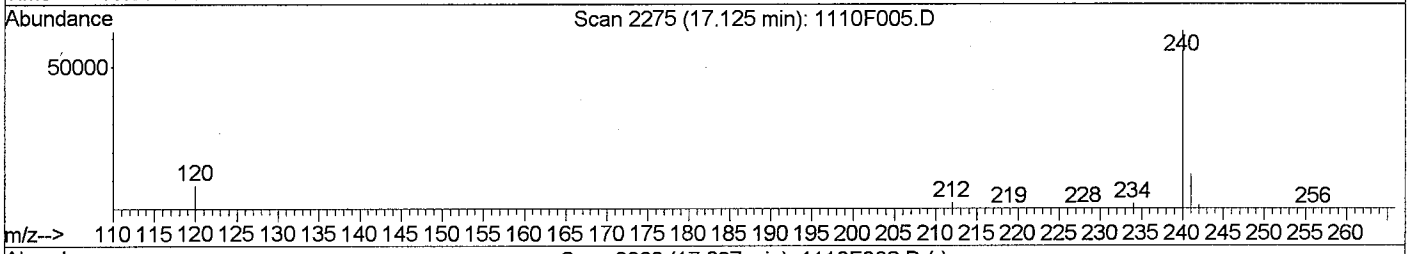
1110F005.D 1107ALK.M Tue Nov 11 13:44:17 2003

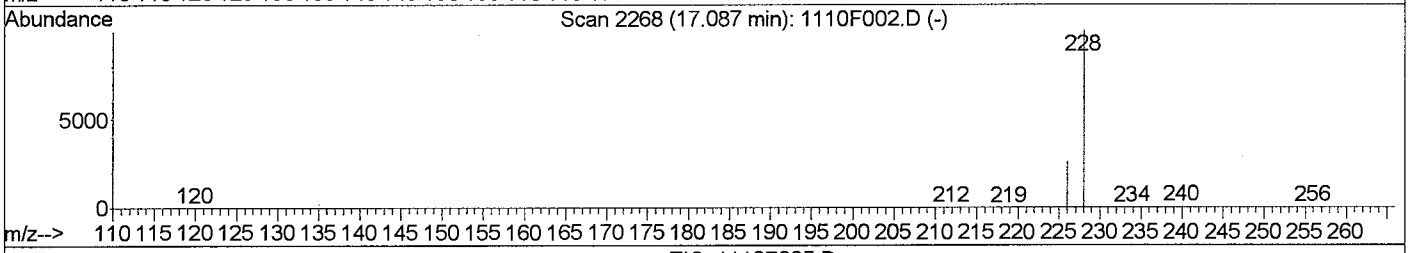
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F005.D Vial: 3
Acq On : 10 Nov 2003 4:49 pm Operator: LWeiskopf
Sample : K2308419-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F005.D

(42) Benz(a)anthracene (T)

17.13min 4.40ng/ml

response 722

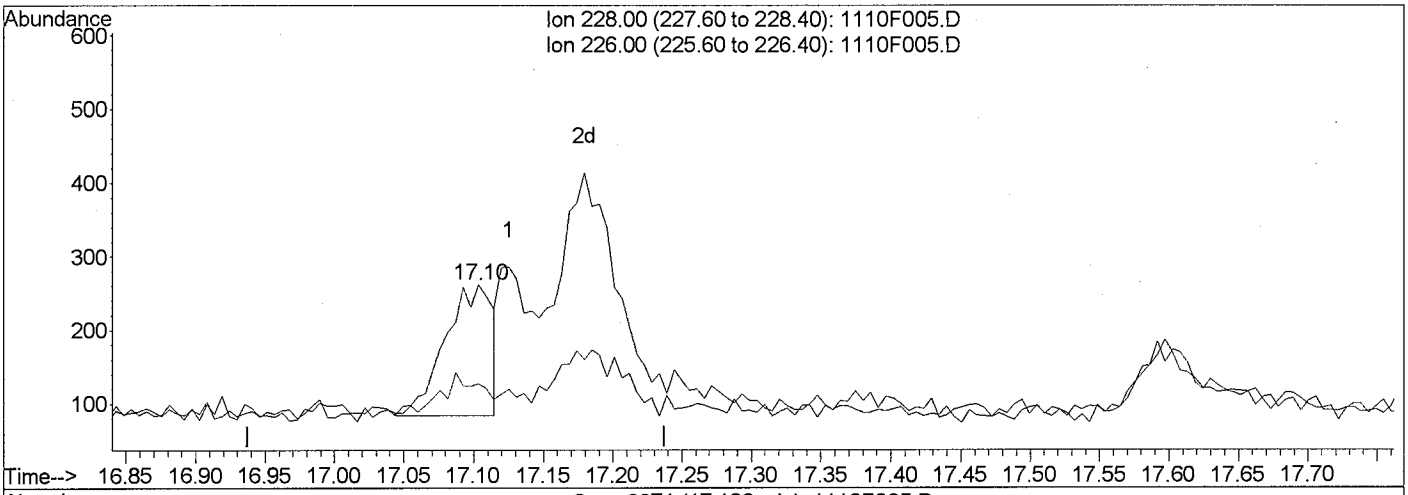
Ion	Exp%	Act%
228.00	100	100
226.00	25.80	11.56
0.00	0.00	0.00
0.00	0.00	0.00

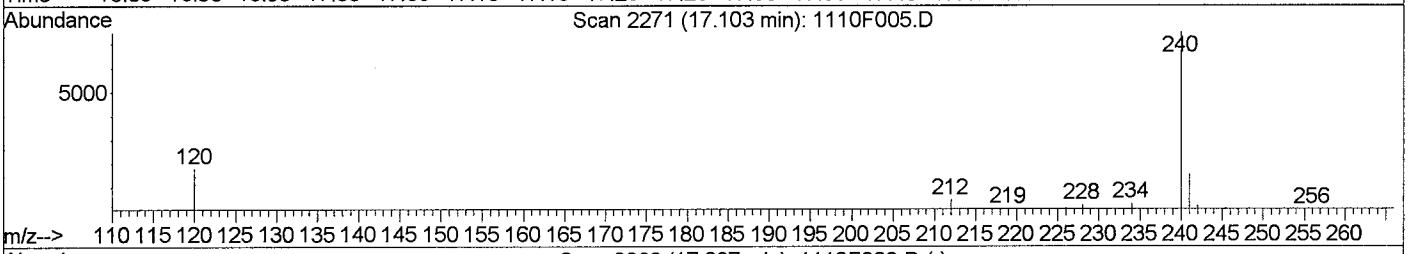
1110F005.D 1107ALK.M Tue Nov 11 13:44:26 2003

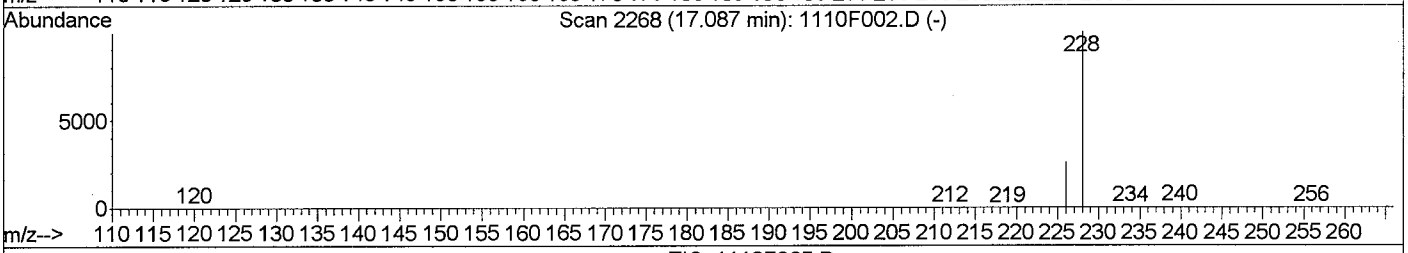
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F005.D Vial: 3
Acq On : 10 Nov 2003 4:49 pm Operator: LWeiskopf
Sample : K2308419-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F005.D

(42) Benz(a)anthracene (T)

17.10min 2.53ng/ml m

response 415

Ion	Exp%	Act%
228.00	100	100
226.00	25.80	48.47
0.00	0.00	0.00
0.00	0.00	0.00

was integrated
LW 11/11/03

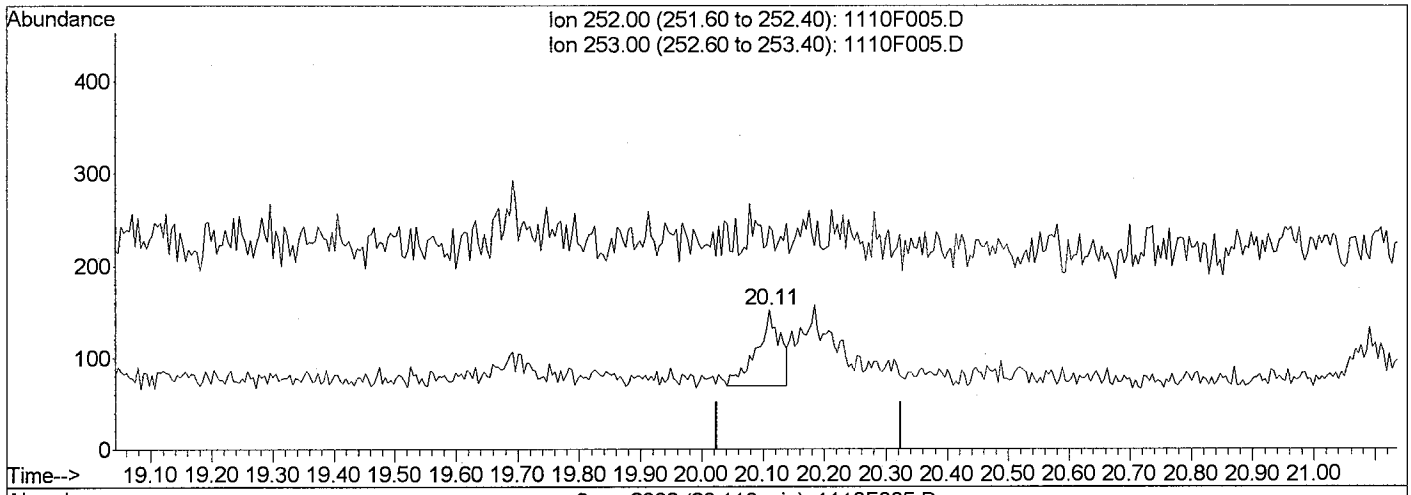
JW 11/12/03

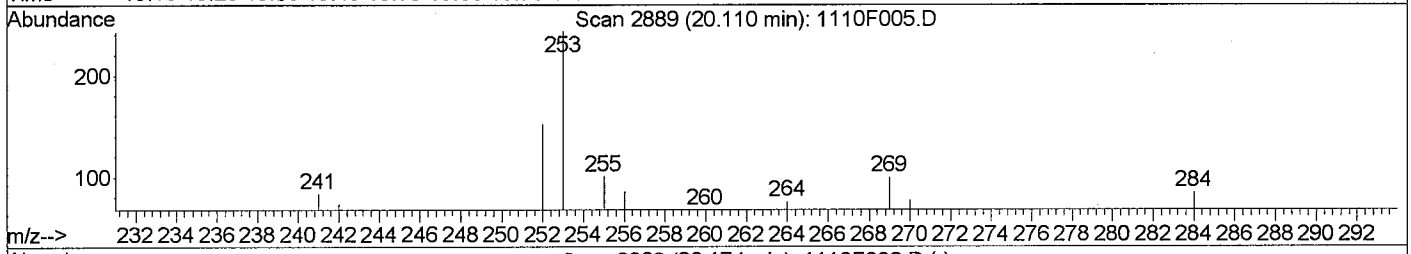
1110F005.D 1107ALK.M Tue Nov 11 13:44:30 2003

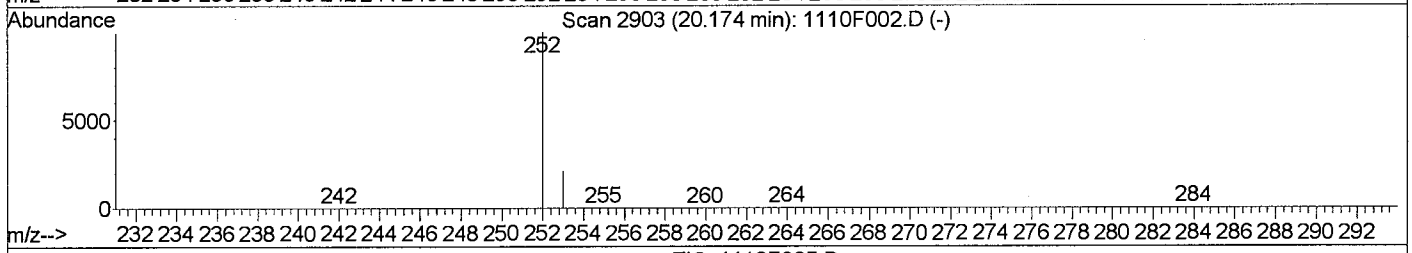
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F005.D Vial: 3
Acq On : 10 Nov 2003 4:49 pm Operator: LWeiskopf
Sample : K2308419-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F005.D

(50) Benzo(k)fluoranthene (T)

20.11min 1.47ng/ml

response 219

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	0.00
0.00	0.00	0.00
0.00	0.00	0.00

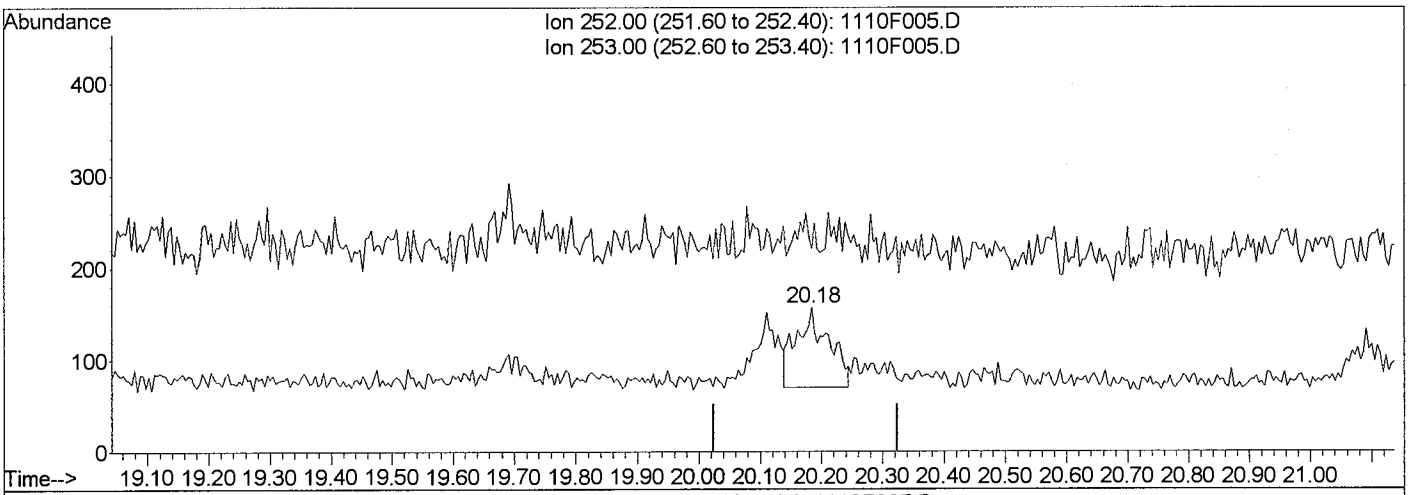
1110F005.D 1107ALK.M Tue Nov 11 13:44:36 2003

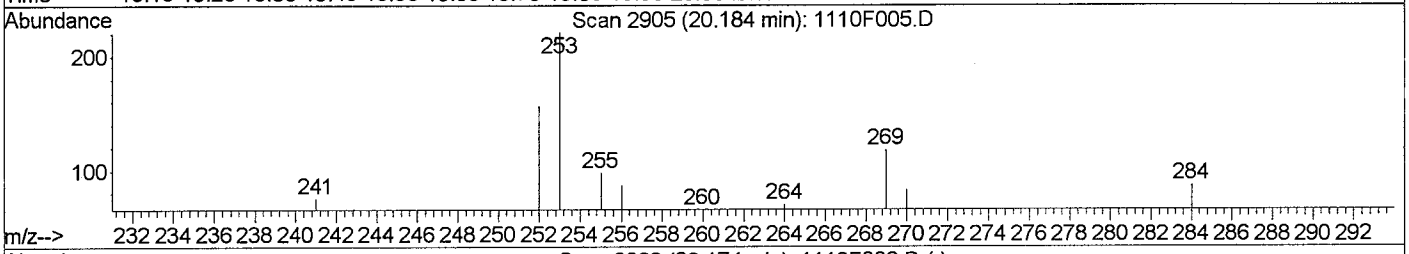
Quantitation Report (Qedit)

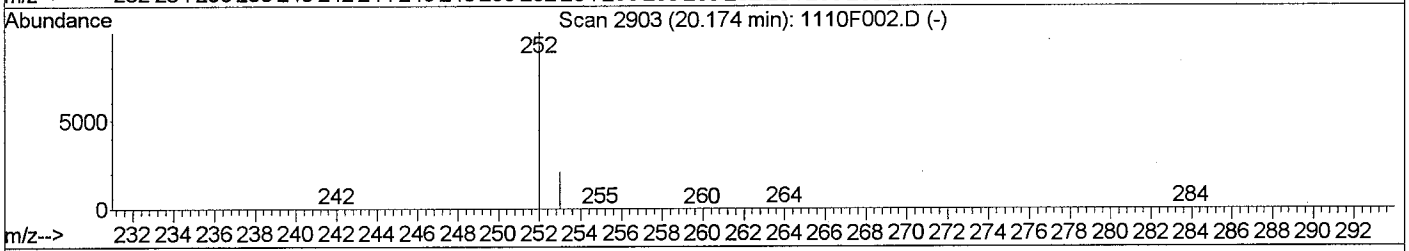
Data File : J:\MS11\DATA\111003\1110F005.D
Acq On : 10 Nov 2003 4:49 pm
Sample : K2308419-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F005.D

(50) Benzo(k)fluoranthene (T)

20.18min 2.16ng/ml m

response 321

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	140.76#
0.00	0.00	0.00
0.00	0.00	0.00

11/11/3

wrong peak

11/12/3

1110F005.D 1107ALK.M Tue Nov 11 13:44:40 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-2
Lab Code: K2308419-002

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.071**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	**0.034**		0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**0.024**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-2
Lab Code: K2308419-002

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	74	37-107	11/08/03	Acceptable
Fluoranthene-d10	88	18-137	11/08/03	Acceptable
Terphenyl-d14	101	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F015.D
Lab ID: K2308419-002
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 14:18
Date Quantitated: 11/10/2003 17:06
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: ~~not~~ 11/11/03

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245659	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F015.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 14:18	**Quant Date:**	11/10/2003 17:06	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	244369	1,000.00	OK
2	Acenaphthene-d10	8.07	0.01	164	125429	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	177960	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	157396	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	90584	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.01	0.01	0.00	176	185149	1,476	74	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	314715	1,767	88	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	291179	2,030	101	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	19928	72.12	0.071		
1	2-Methylnaphthalene	6.42	0.01	0.00	142	947	5.80	0.0057	J	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	1513	9.89	0.0098	J	
1	Biphenyl	7.10	0.01	0.00	154	1376	6.96	0.0069	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	785	3.25	0.0032	J	
2	Acenaphthene	8.12	0.01	0.00	154	5070	34.04	0.034		
2	Dibenzofuran	8.41		0.00	168	2973	14.89	0.015	J	
2	Fluorene	9.06	0.01	0.00	166	2484	15.57	0.015	J	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F015.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 14:18	**Quant Date:**	11/10/2003 17:06	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-002			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene	10.79	0.01	0.00	184	734	3.57	0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	3550	16.46	0.016	J	
3	Anthracene	11.15	0.01	0.00	178	608	3.30	0.0033	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	1184**m**	5.49	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	5101	23.76	0.024		
4	Pyrene	14.25	0.01	0.00	202	3110	15.12	0.015	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.09		0.00	228	248	1.58	0.0021	U	
4	Chrysene	17.17	-0.01	0.00	228	642	3.83	0.0038	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene				252	0		0.0020	U	
5	Benzo(k)fluoranthene				252	0		0.0014	U	
5	Benzo(e)pyrene				252	0		0.0019	U	
5	Benzo(a)pyrene				252	0		0.0016	U	
5	Perylene				252	0**d**		0.0012	U	
5	Indeno(1,2,3-cd)pyrene	24.10	0.01	0.00	276	419**m**	6.70	0.0066	J	
5	Dibenz(a,h)anthracene	24.15	0.01	0.00	278	372	4.14	0.0041	J	
5	Benzo(g,h,i)perylene	24.56	0.01	0.00	276	1344	12.96	0.013	J	

Prep Amount: 1010 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F015.D Vial: 12
Acq On : 8 Nov 2003 2:18 pm Operator: LWeiskopf
Sample : K2308419-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:04 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

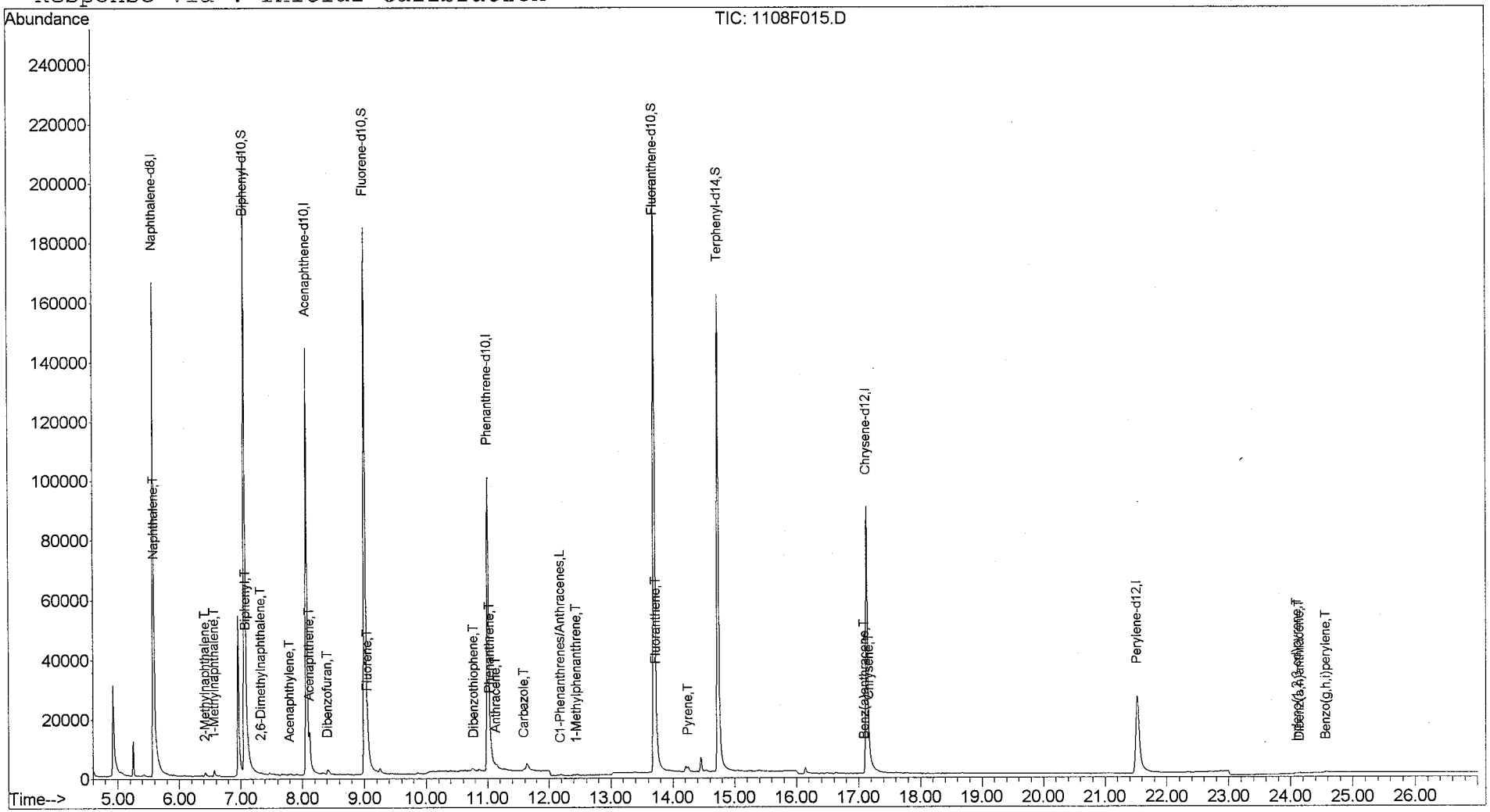
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	244369	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.07	164	125429	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	177960	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	157396	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	90584	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	283621	1584.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 158.44%			
16) Fluorene-d10	9.01	176	185149	1475.94	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 147.59%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	314715	1766.92	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 176.69%			
41) Terphenyl-d14	14.74	244	291179	2029.85	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 202.98%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	19928	72.12	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	947	5.80	ng/ml	95
4) 1-Methylnaphthalene	6.57	142	1513	9.89	ng/ml	79
6) Biphenyl	7.10	154	1376	6.96	ng/ml	96
7) 2,6-Dimethylnaphthalene	7.34	156	251	1.80	ng/ml	95
12) Acenaphthylene	7.80	152	785	3.25	ng/ml	86
13) Acenaphthene	8.12	154	5070	34.04	ng/ml	97
14) Dibenzofuran	8.41	168	2973	14.89	ng/ml	96
17) Fluorene	9.06	166	2484	15.57	ng/ml	95
24) Dibenzothiophene	10.79	184	734	3.57	ng/ml	92
28) Phenanthrene	11.05	178	3550	16.46	ng/ml	98
29) Anthracene	11.15	178	608	3.30	ng/ml	77
30) Carbazole	11.58	167	1732	11.89	ng/ml	96
31) 1-Methylphenanthrene	12.44	192	190	1.30	ng/ml	82
32) C1-Phenanthrenes/Anthracen	12.19	192	1184m	5.49	ng/ml	
36) Fluoranthene	13.74	202	5101	23.76	ng/ml	96
39) Pyrene	14.25	202	3110	15.12	ng/ml	99
42) Benz(a)anthracene	17.09	228	248	1.58	ng/ml	80
43) Chrysene	17.17	228	642	3.83	ng/ml	76
54) Indeno(1,2,3-cd)pyrene	24.10	276	419m	6.70	ng/ml	
55) Dibenz(a,h)anthracene	24.15	278	372	4.14	ng/ml	87
56) Benzo(g,h,i)perylene	24.56	276	1344	12.96	ng/ml	96

(#) = qualifier out of range (m) = manual integration

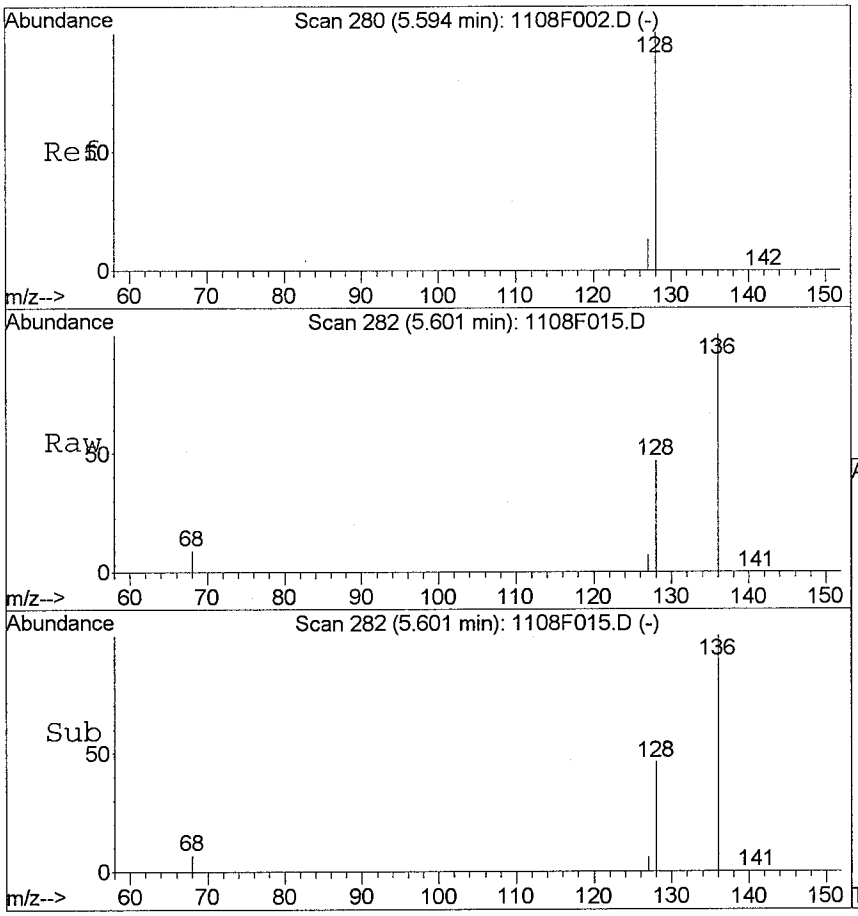
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F015.D Vial: 12
Acq On : 8 Nov 2003 2:18 pm Operator: LWeiskopf
Sample : K2308419-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:06 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration



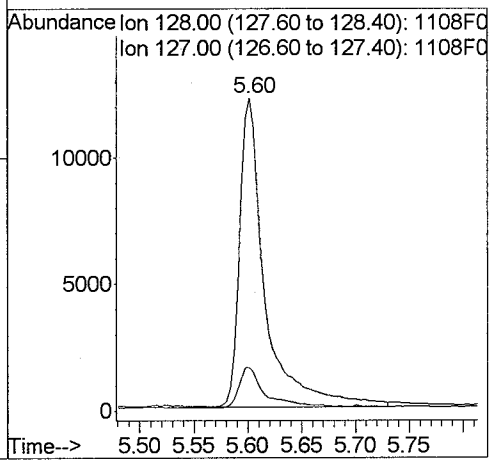
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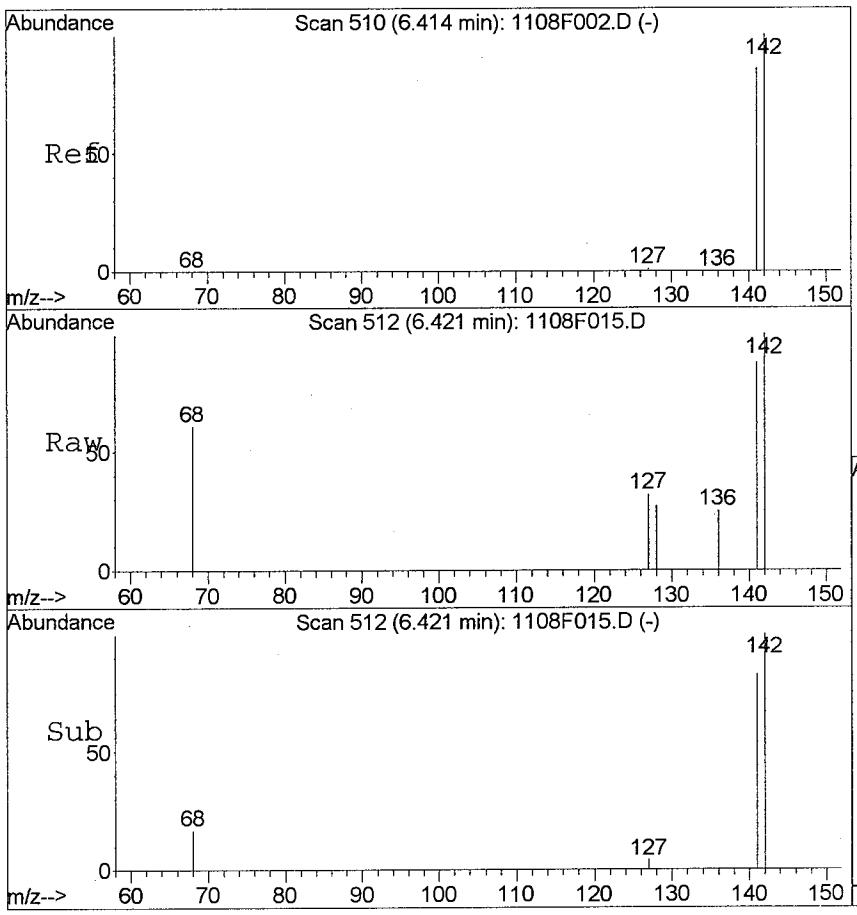


#2
Naphthalene
Concen: 72.12 ng/ml
RT: 5.60 min Scan# 282
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:128 Resp: 19928

Ion	Ratio	Lower	Upper
128	100		
127	13.0	0.0	43.5

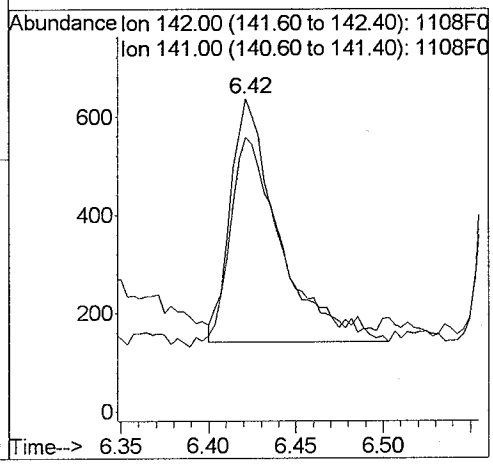


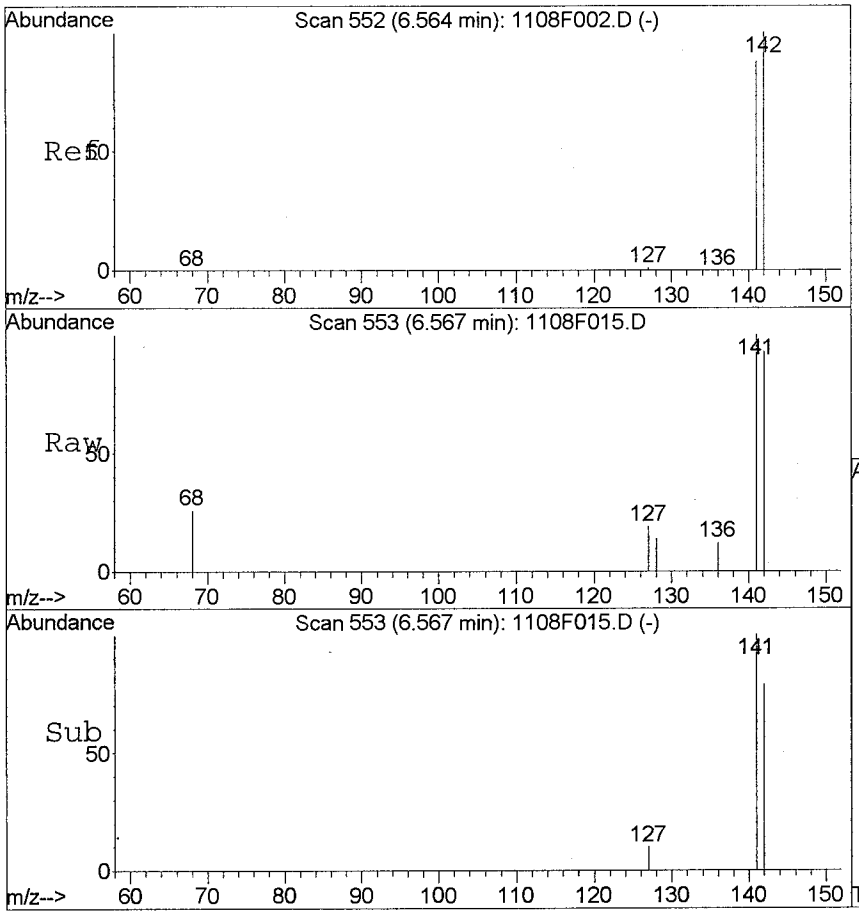


#3
2-Methylnaphthalene
Concen: 5.80 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:142 Resp: 947

Ion	Ratio	Lower	Upper
142	100		
141	81.3	56.1	116.1

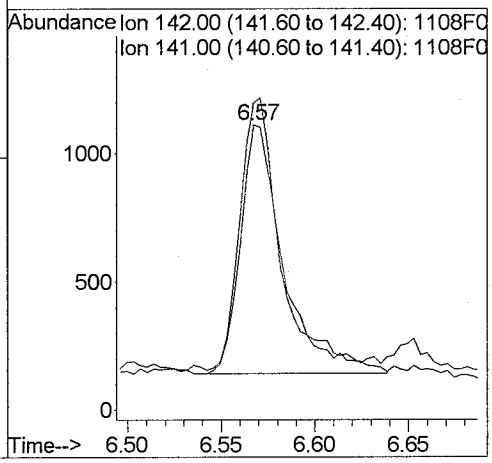


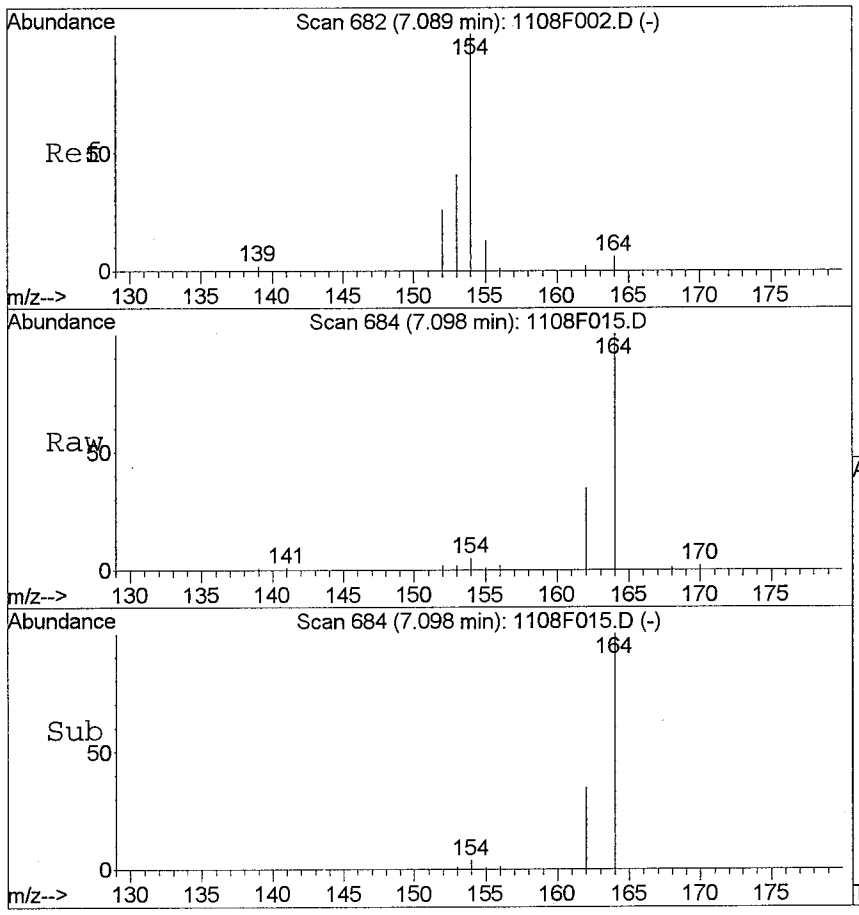


#4
1-Methylnaphthalene
Concen: 9.89 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.00 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:142 Resp: 1513

Ion	Ratio	Lower	Upper
142	100		
141	107.7	58.4	118.4

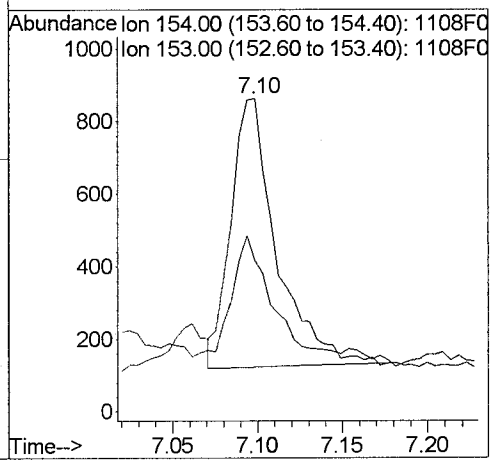


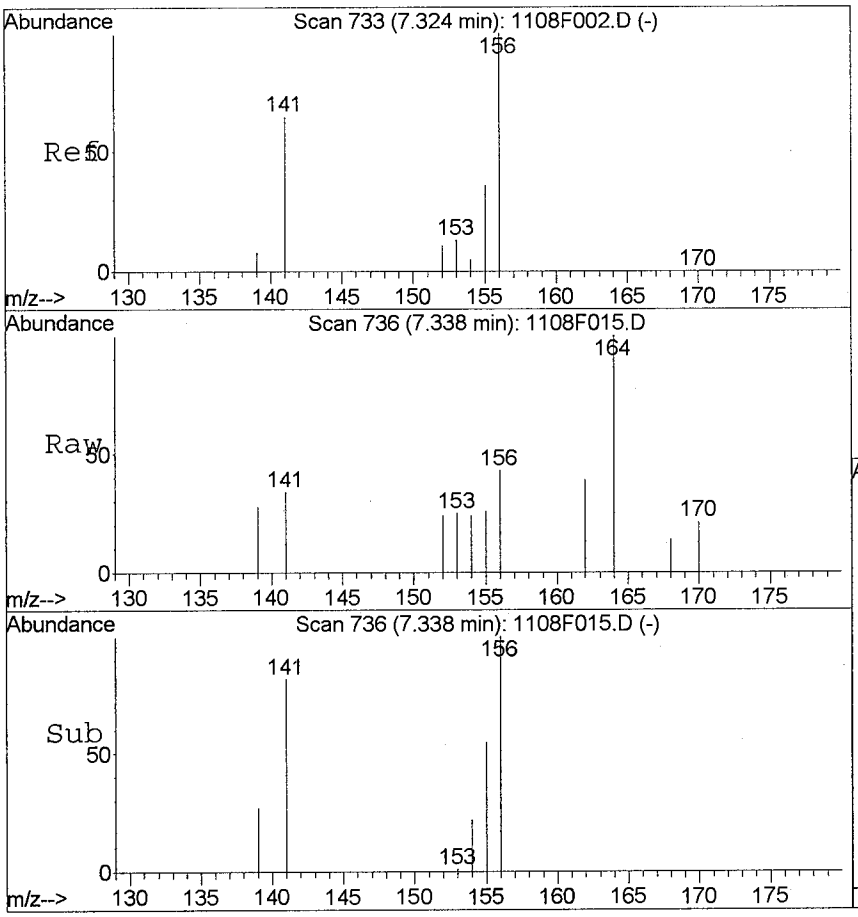


#6
Biphenyl
Concen: 6.96 ng/ml
RT: 7.10 min Scan# 684
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:154 Resp: 1376

Ion	Ratio	Lower	Upper
154	100		
153	37.7	10.5	70.5

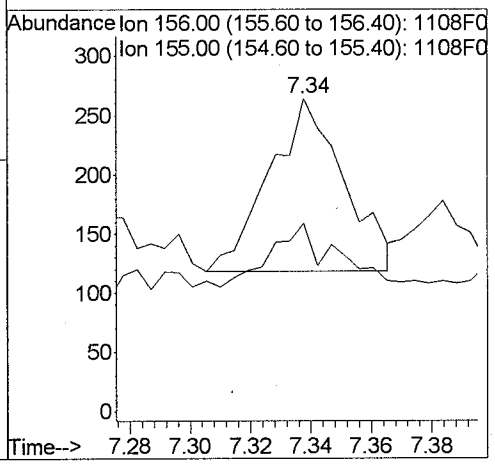


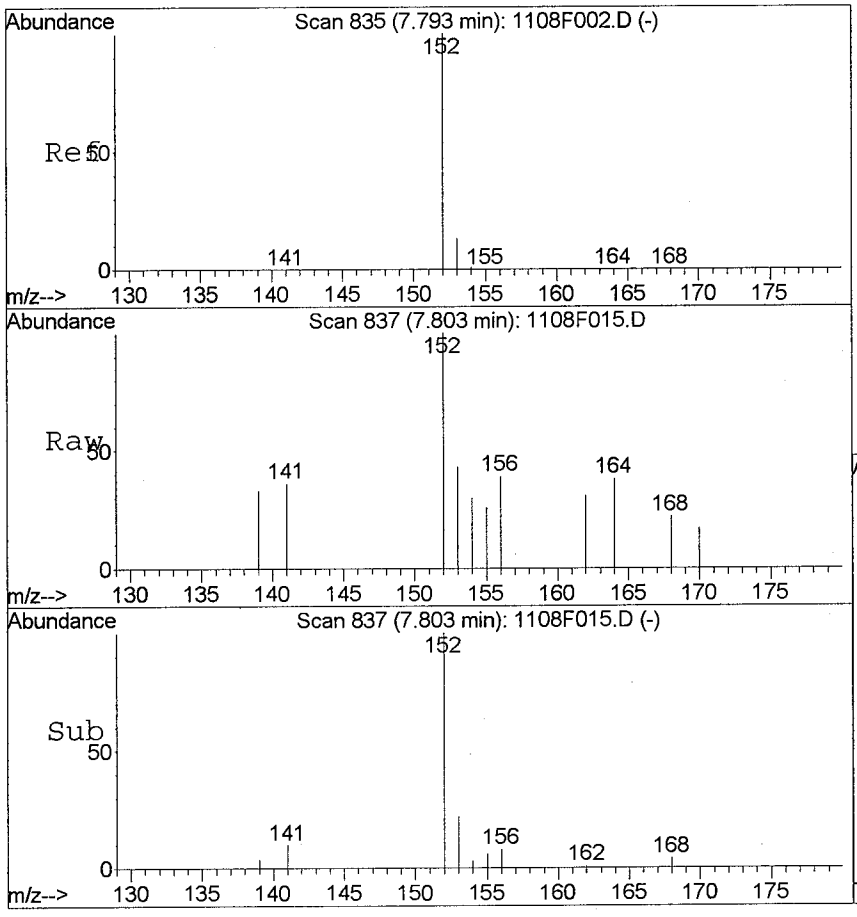


#7
2,6-Dimethylnaphthalene
Concen: 1.80 ng/ml
RT: 7.34 min Scan# 736
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:156 Resp: 251

Ion	Ratio	Lower	Upper
156	100		
155	33.6	6.3	66.3

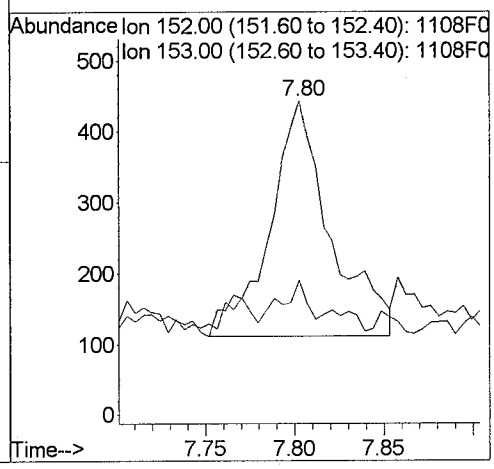


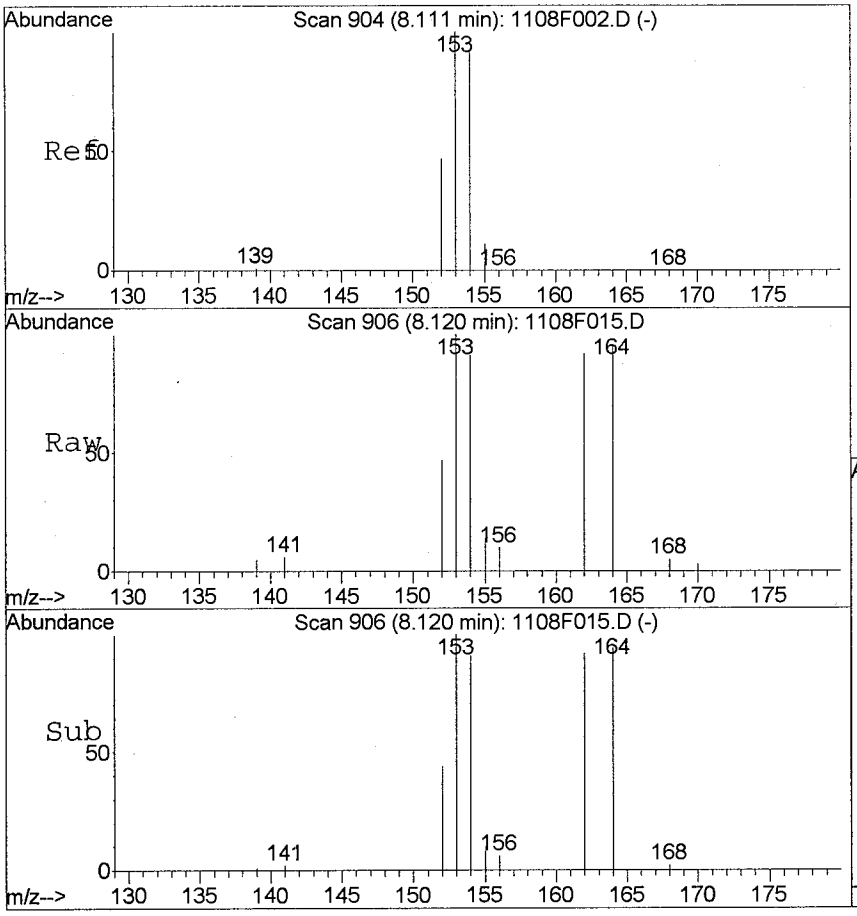


#12
Acenaphthylene
Concen: 3.25 ng/ml
RT: 7.80 min Scan# 837
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:152 Resp: 785

Ion	Ratio	Lower	Upper
152	100		
153	18.7	0.0	43.2

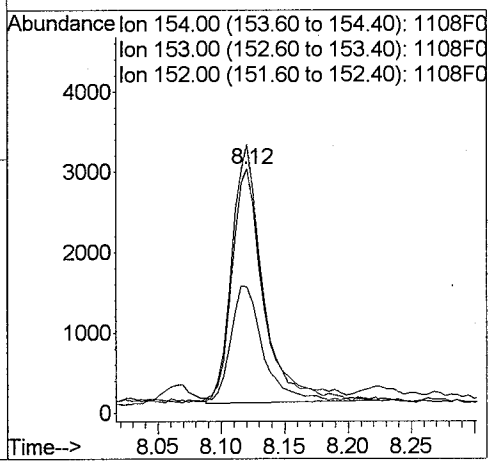


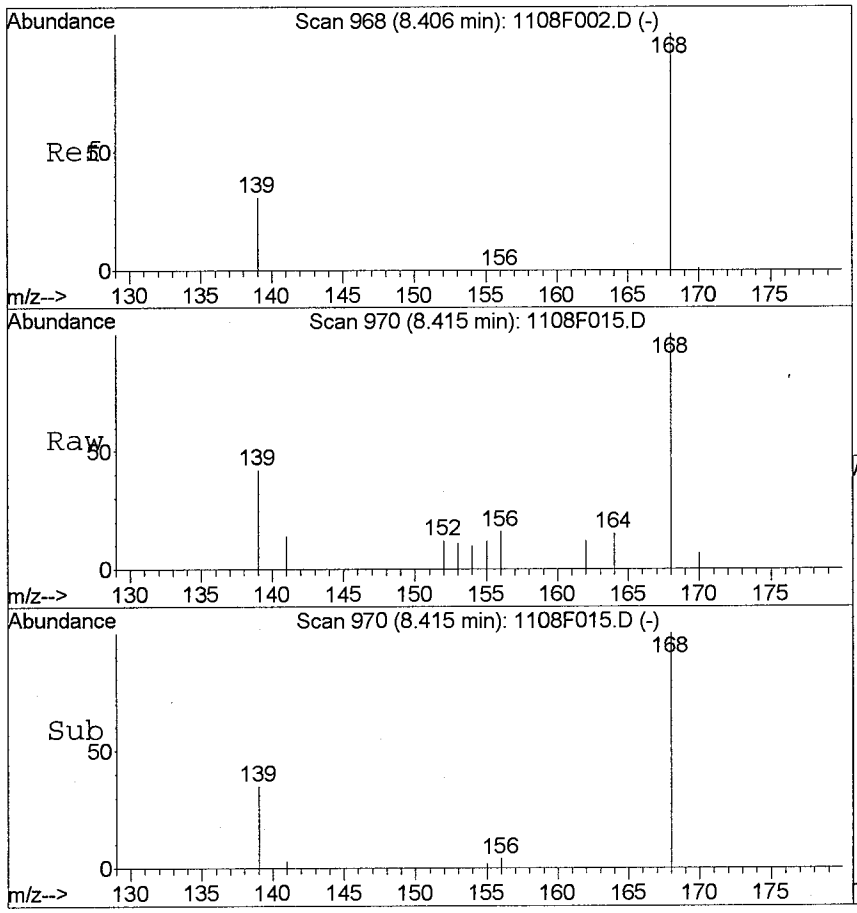


#13
Acenaphthene
Concen: 34.04 ng/ml
RT: 8.12 min Scan# 906
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:154 Resp: 5070

Ion	Ratio	Lower	Upper
154	100		
153	111.1	78.6	138.6
152	48.3	21.5	81.5

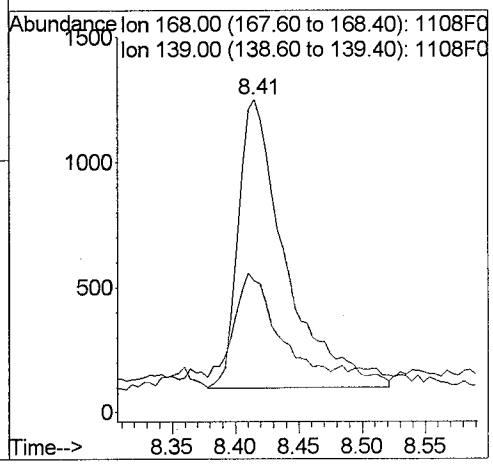


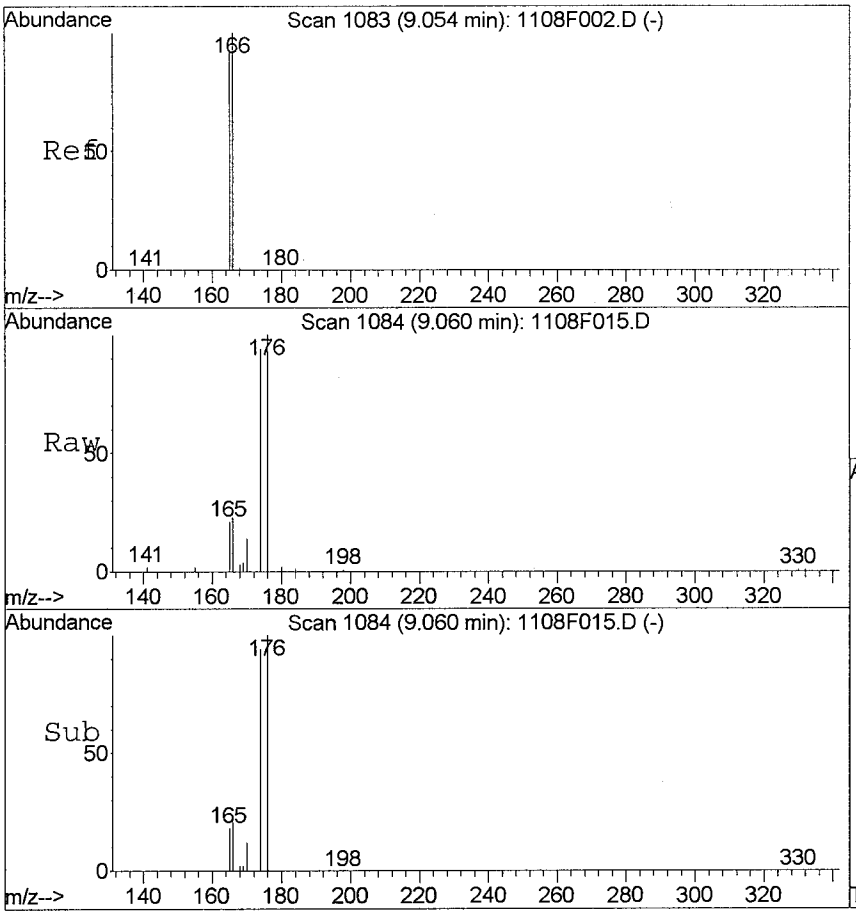


#14
Dibenzofuran
Concen: 14.89 ng/ml
RT: 8.41 min Scan# 970
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:168 Resp: 2973

Ion	Ratio	Lower	Upper
168	100		
139	33.6	1.2	61.2

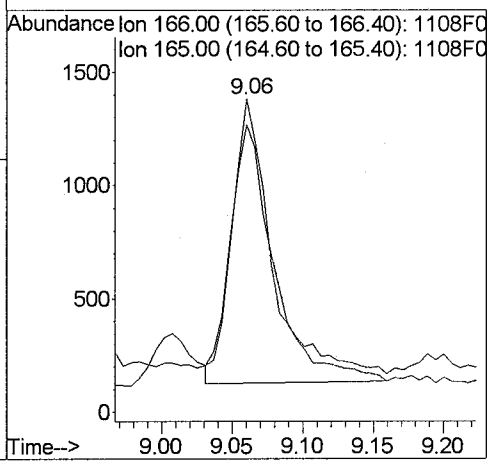


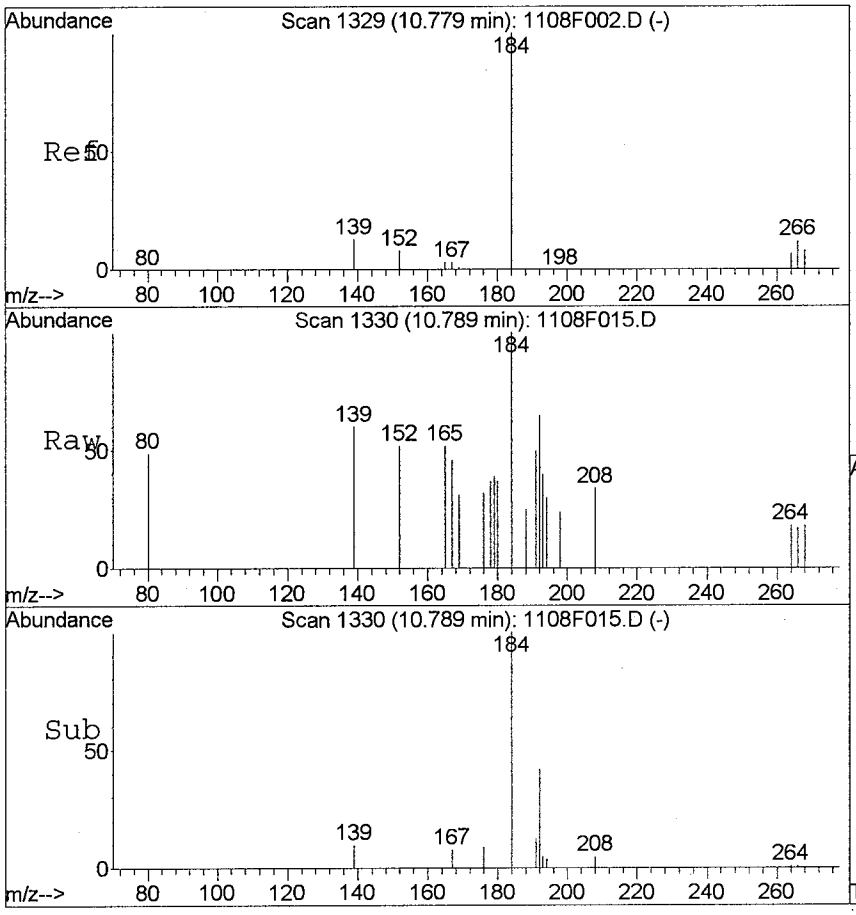


#17
Fluorene
Concen: 15.57 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:166 Resp: 2484

Ion	Ratio	Lower	Upper
166	100		
165	88.4	62.9	122.9

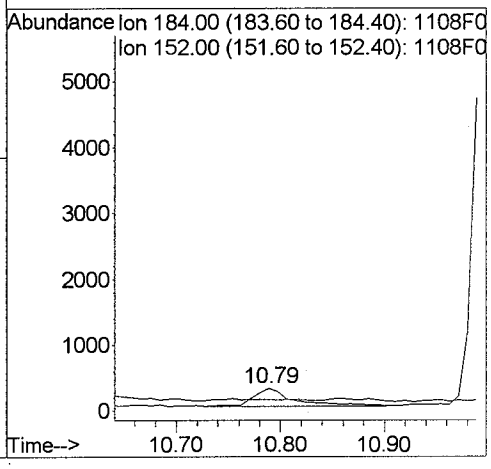


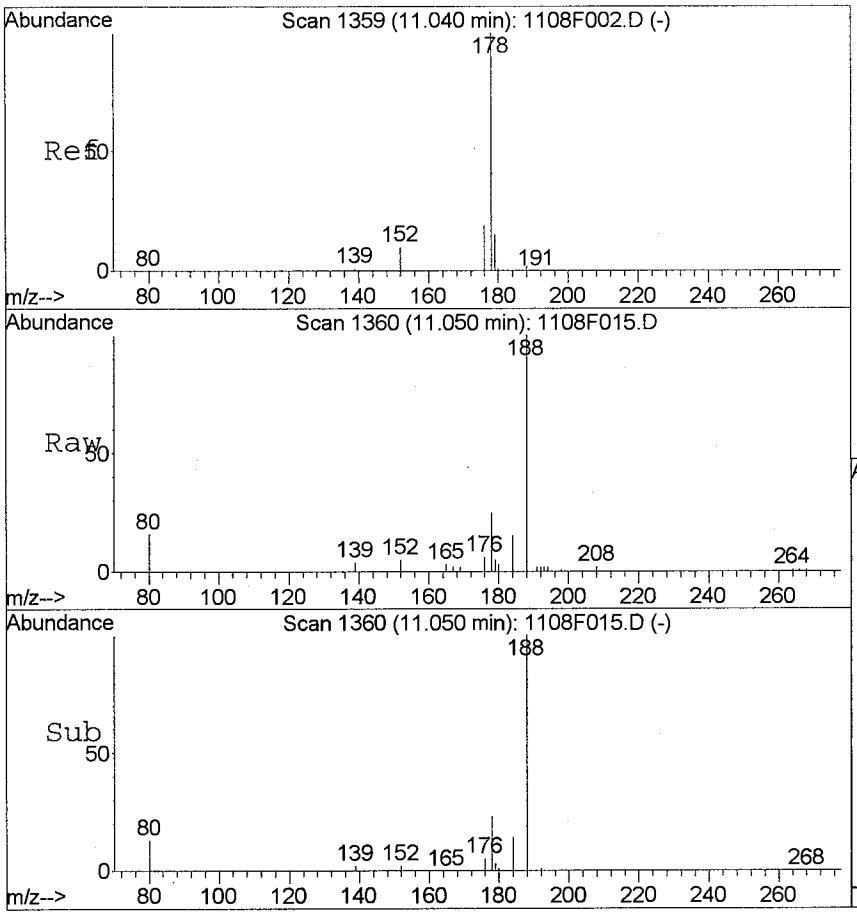


#24
Dibenzothiophene
Concen: 3.57 ng/ml
RT: 10.79 min Scan# 1330
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:184 Resp: 734

Ion	Ratio	Lower	Upper
184	100		
152	10.9	0.0	38.2

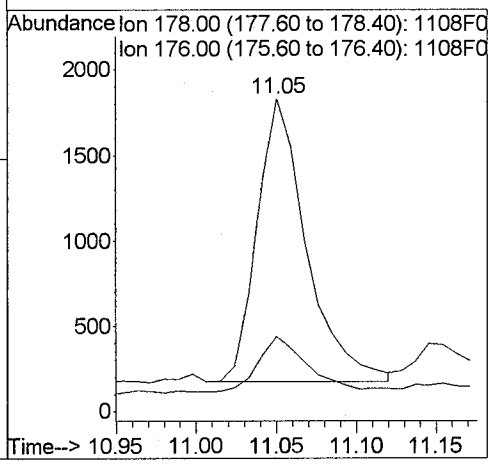


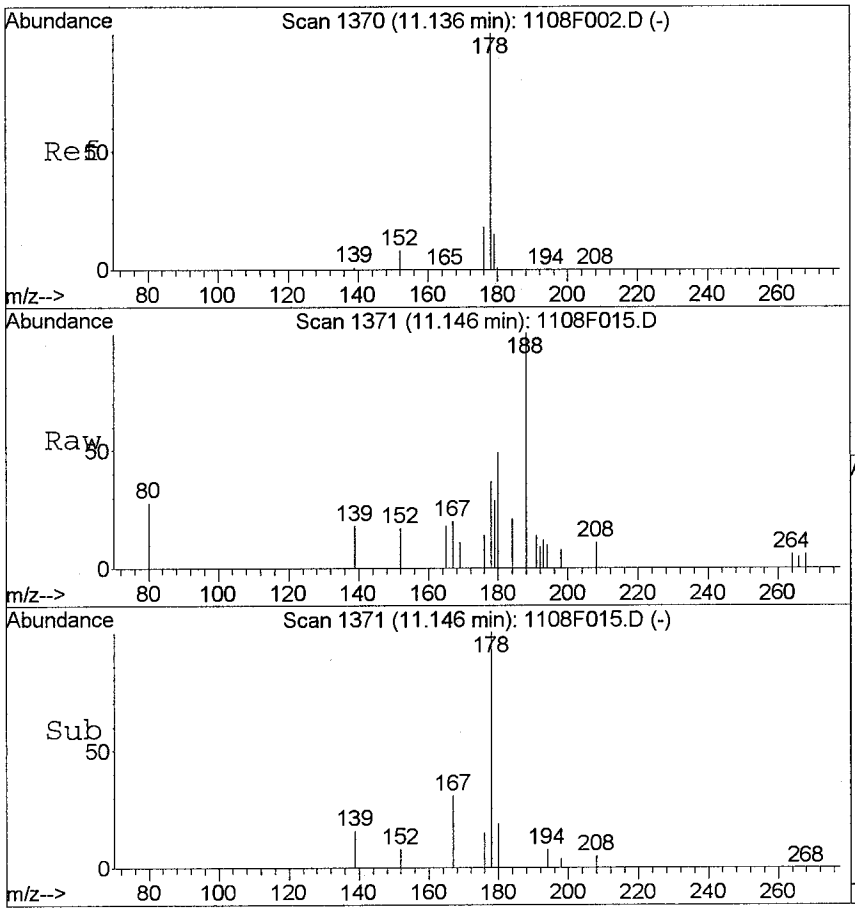


#28
Phenanthrene
Concen: 16.46 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:178 Resp: 3550

Ion	Ratio	Lower	Upper
178	100		
176	19.8	0.0	48.7

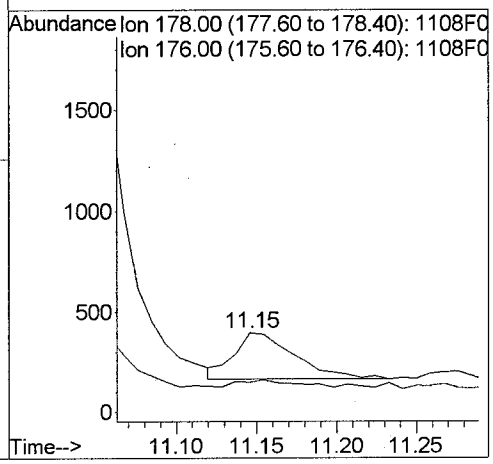


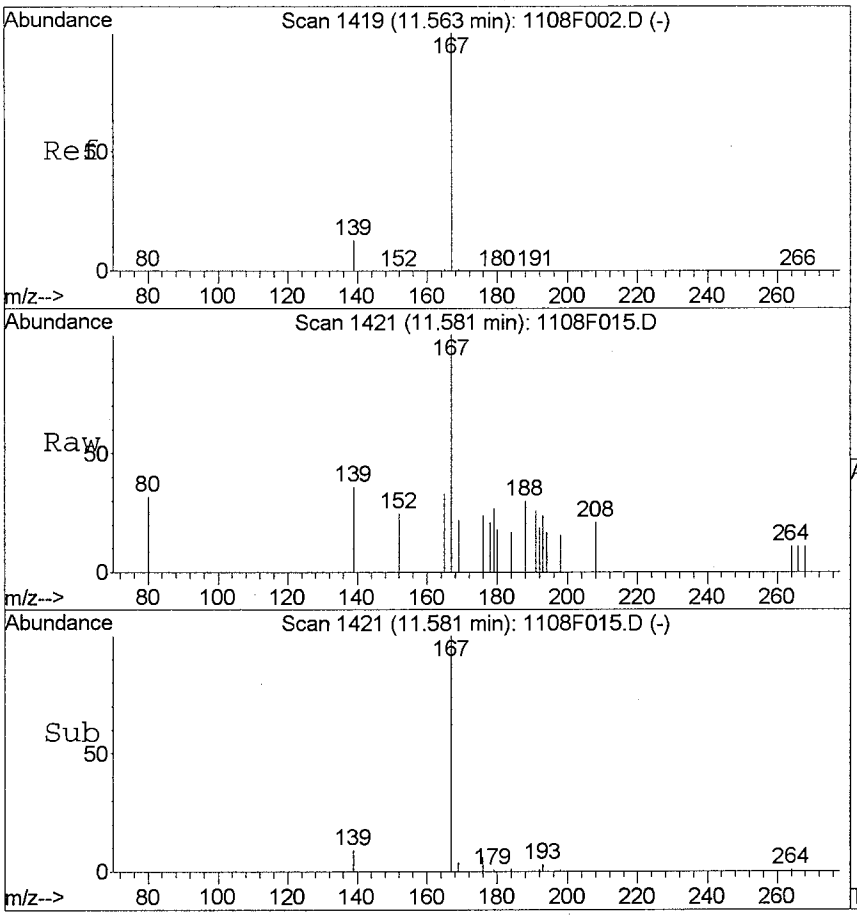


#29
Anthracene
Concen: 3.30 ng/ml
RT: 11.15 min Scan# 1371
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:178 Resp: 608

Ion	Ratio	Lower	Upper
178	100		
176	8.2	0.0	48.3

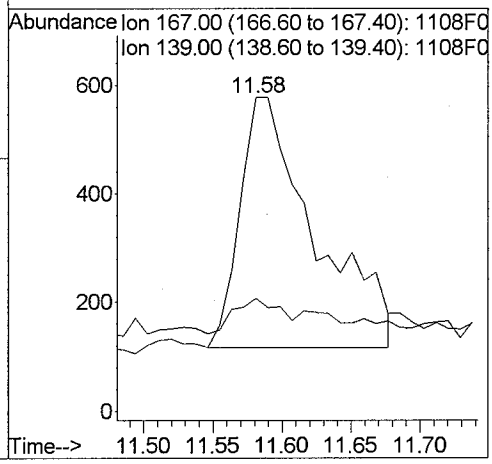


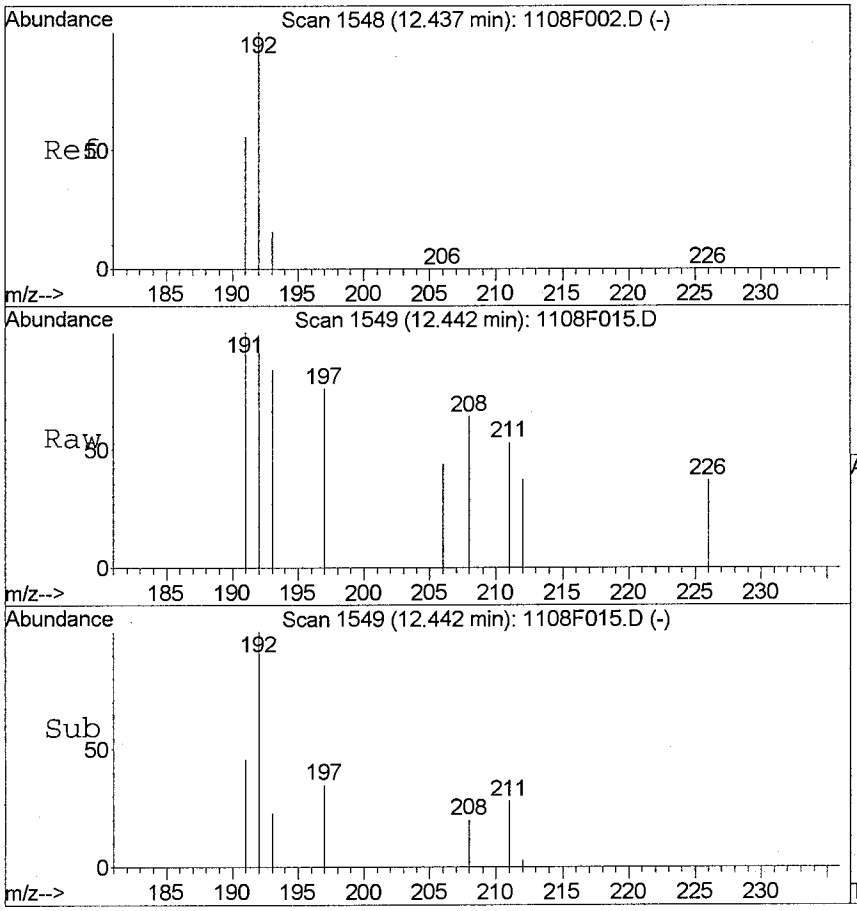


#30
Carbazole
Concen: 11.89 ng/ml
RT: 11.58 min Scan# 1421
Delta R.T. 0.02 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:167 Resp: 1732

Ion	Ratio	Lower	Upper
167	100		
139	14.1	0.0	42.6

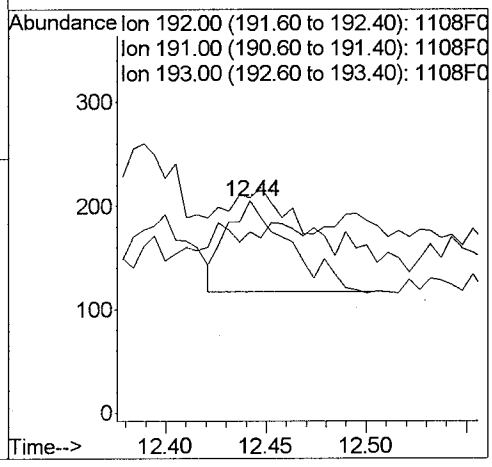


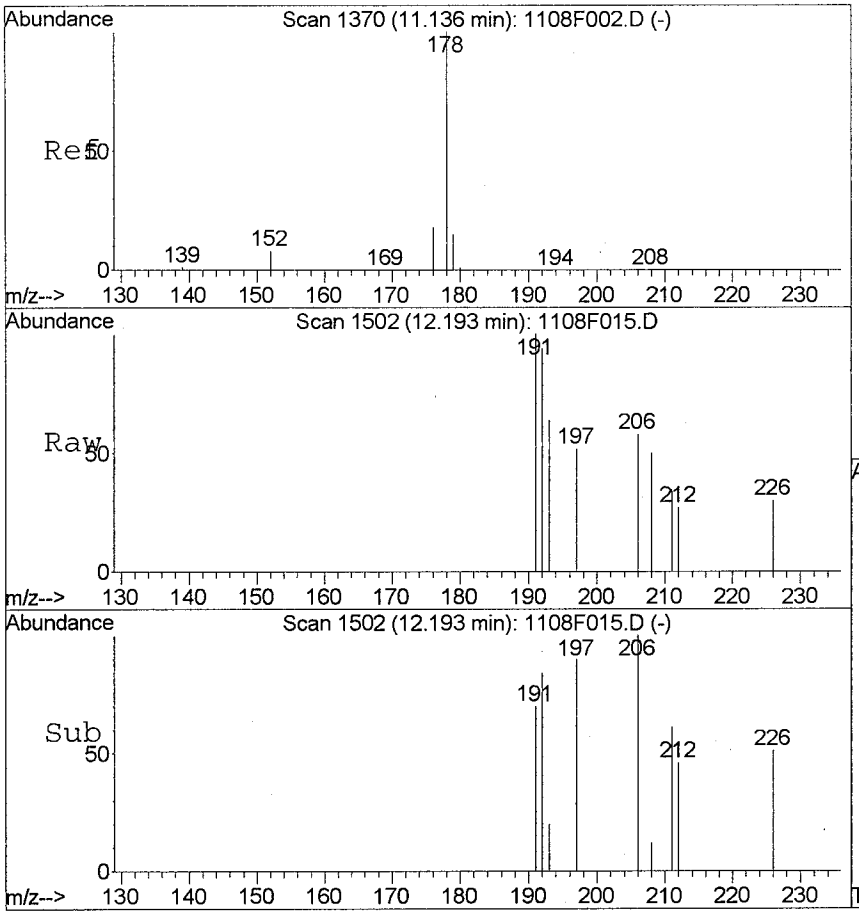


#31
1-Methylphenanthrene
Concen: 1.30 ng/ml
RT: 12.44 min Scan# 1549
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:192 Resp: 190

Ion	Ratio	Lower	Upper
192	100		
191	43.2	26.3	86.3
193	22.7	0.0	45.7

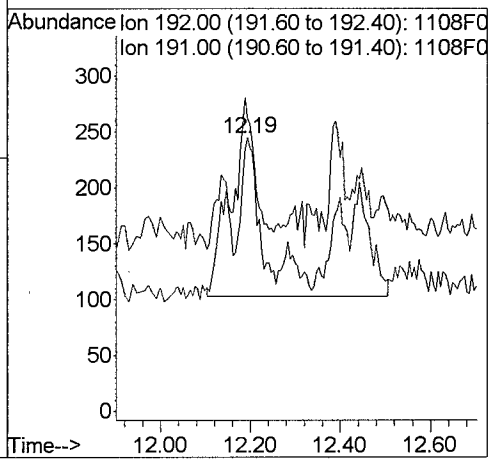


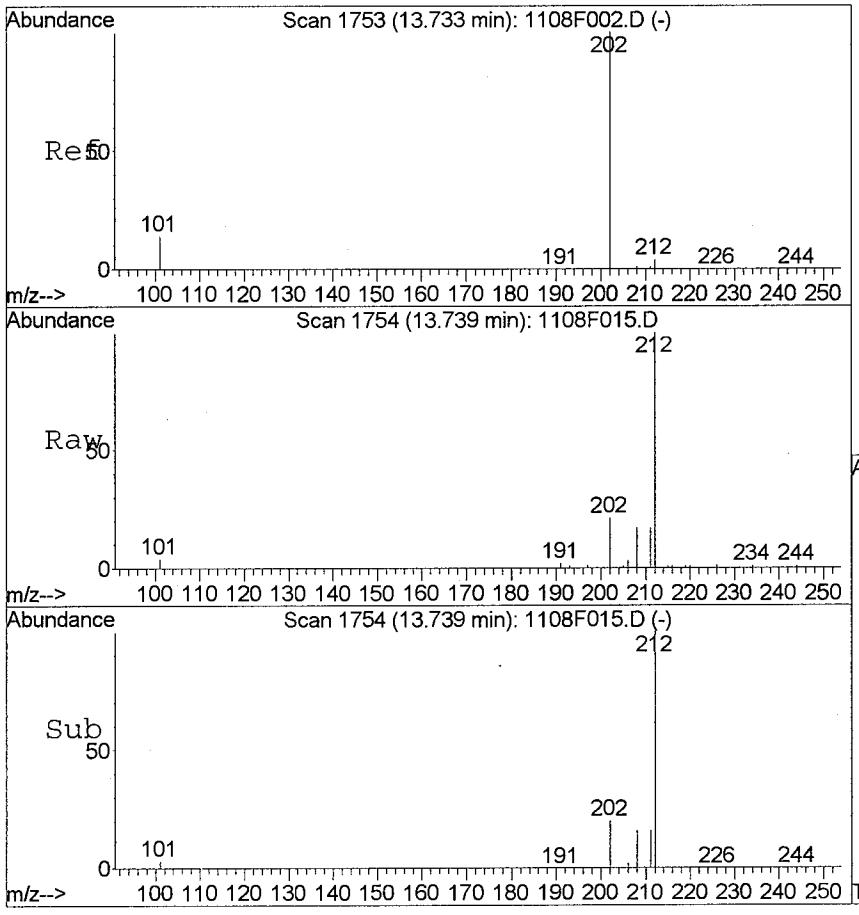


#32
C1-Phenanthrenes/Anthracenes
Concen: 5.49 ng/ml m
RT: 12.19 min Scan# 1502
Delta R.T. -0.03 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:192 Resp: 1184

Ion	Ratio	Lower	Upper
192	100		
191	106.9	25.3	85.3#

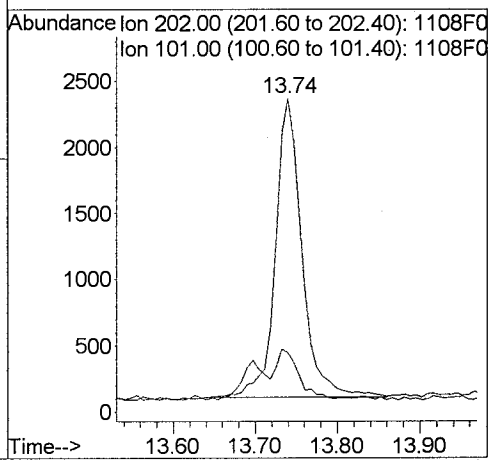


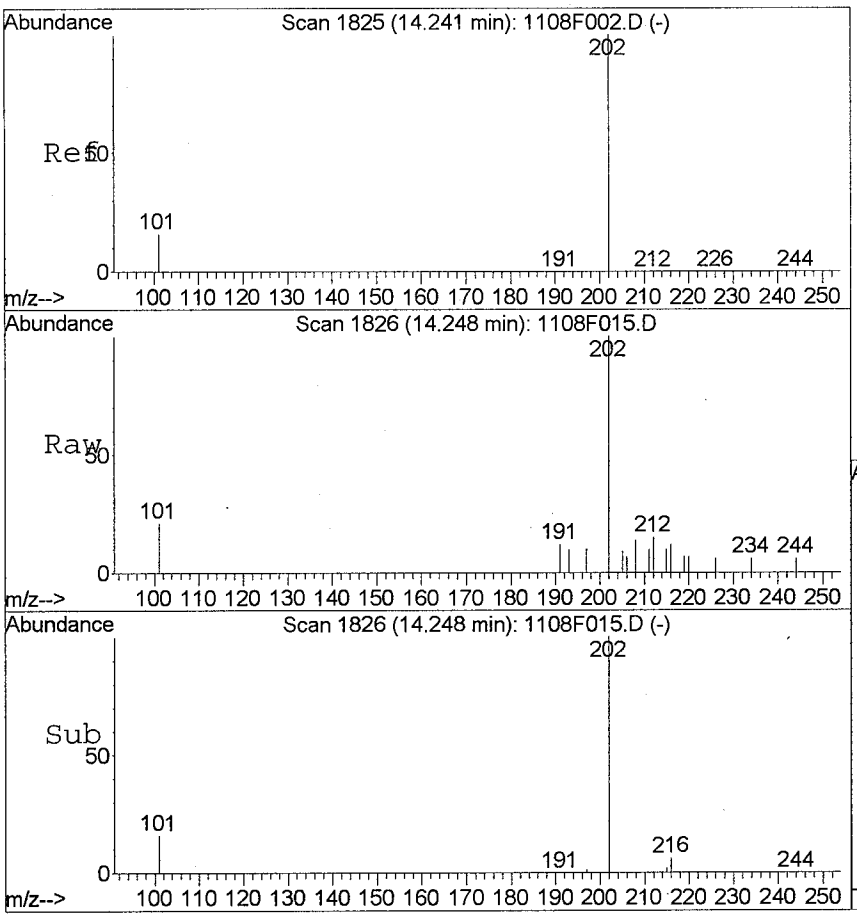


#36
Fluoranthene
Concen: 23.76 ng/ml
RT: 13.74 min Scan# 1754
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:202 Resp: 5101

Ion	Ratio	Lower	Upper
202	100		
101	15.9	0.0	44.3

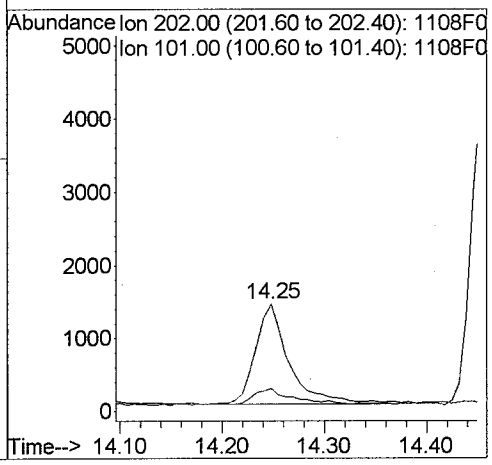


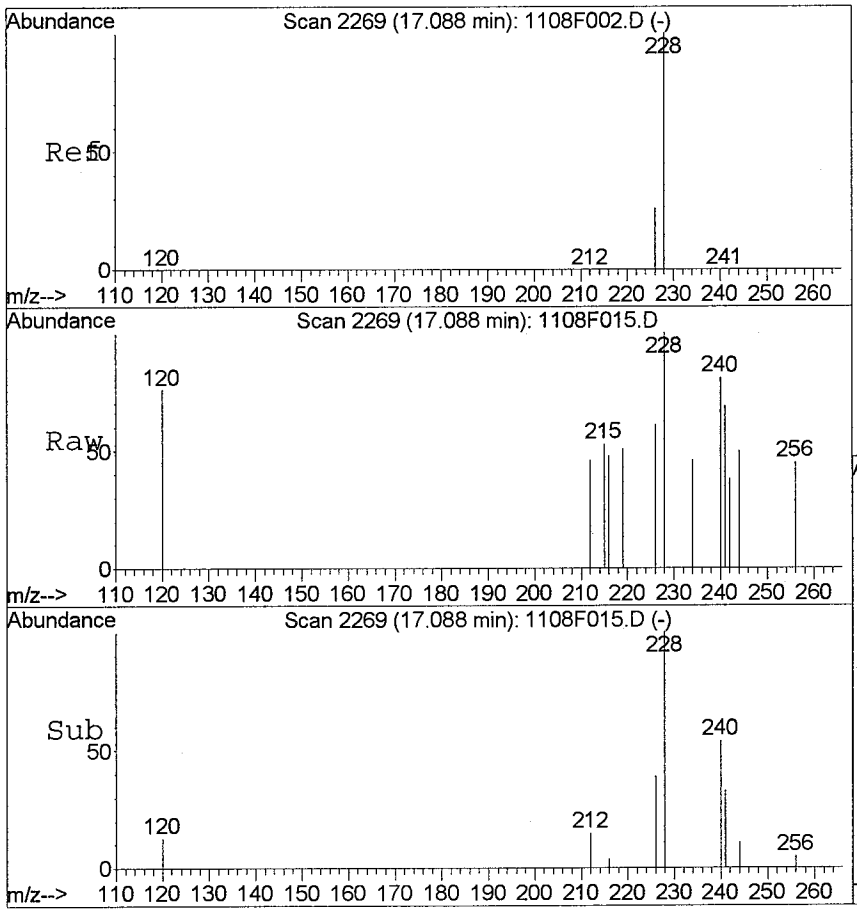


#39
Pyrene
Concen: 15.12 ng/ml
RT: 14.25 min Scan# 1826
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:202 Resp: 3110

Ion	Ratio	Lower	Upper
202	100		
101	15.8	0.0	46.2

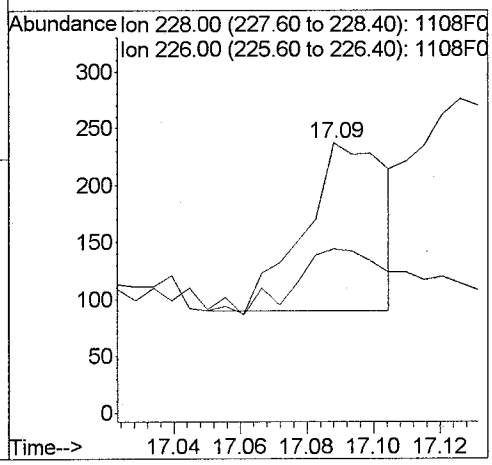


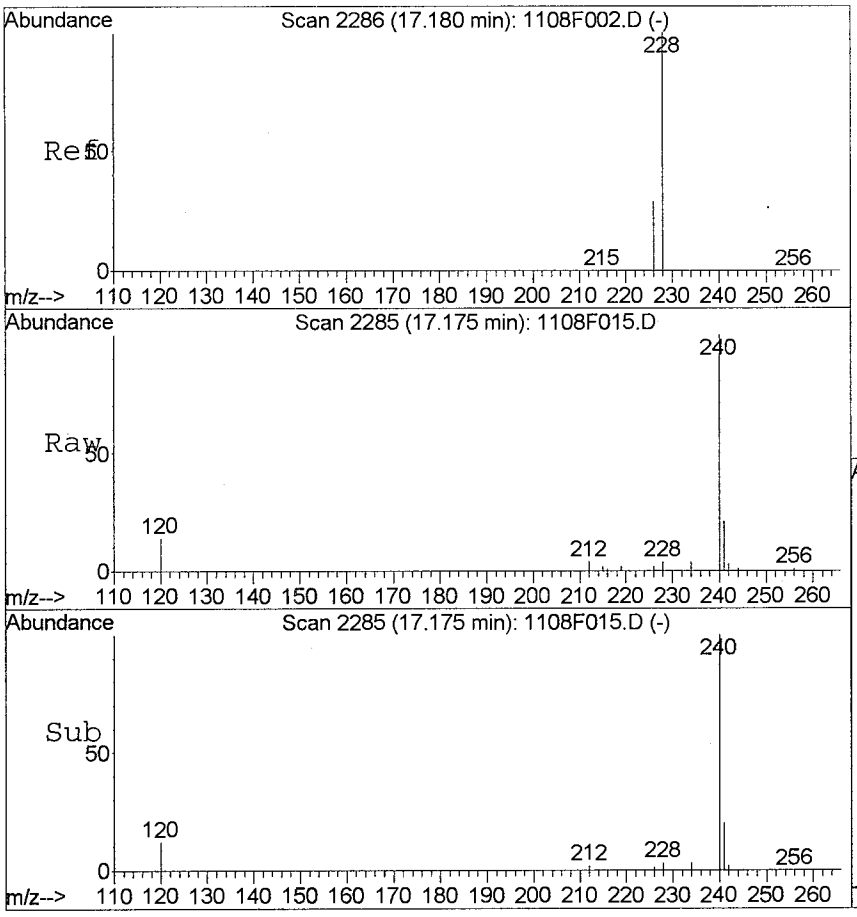


#42
Benz(a)anthracene
Concen: 1.58 ng/ml
RT: 17.09 min Scan# 2269
Delta R.T. 0.00 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:228 Resp: 248

Ion	Ratio	Lower	Upper
228	100		
226	36.1	0.0	55.8

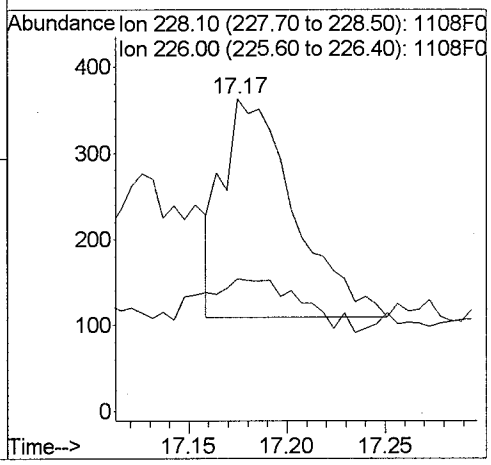


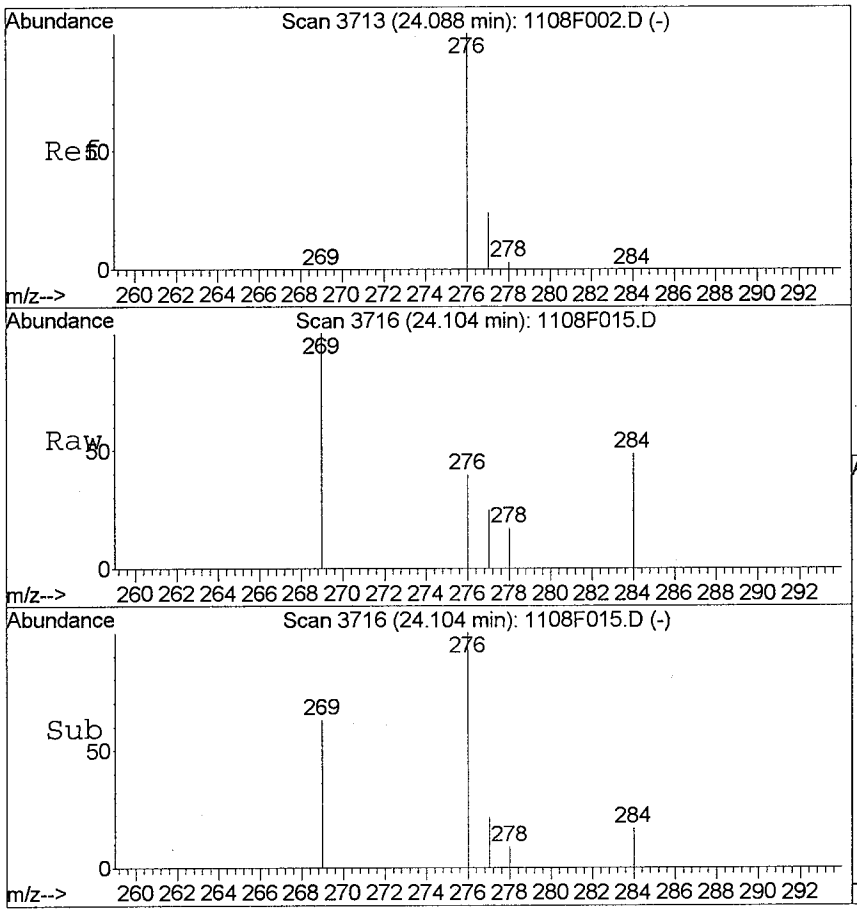


#43
Chrysene
Concen: 3.83 ng/ml
RT: 17.17 min Scan# 2285
Delta R.T. -0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:228 Resp: 642

Ion	Ratio	Lower	Upper
228	100		
226	15.7	0.0	58.5

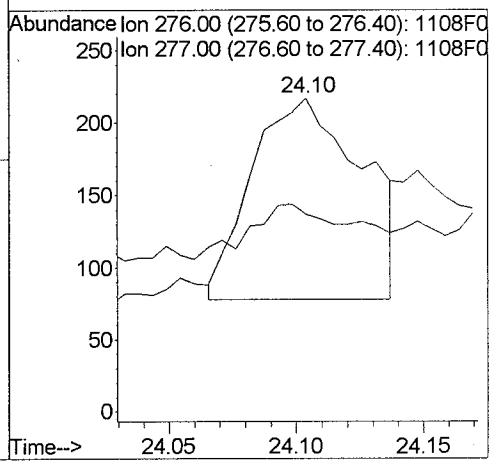


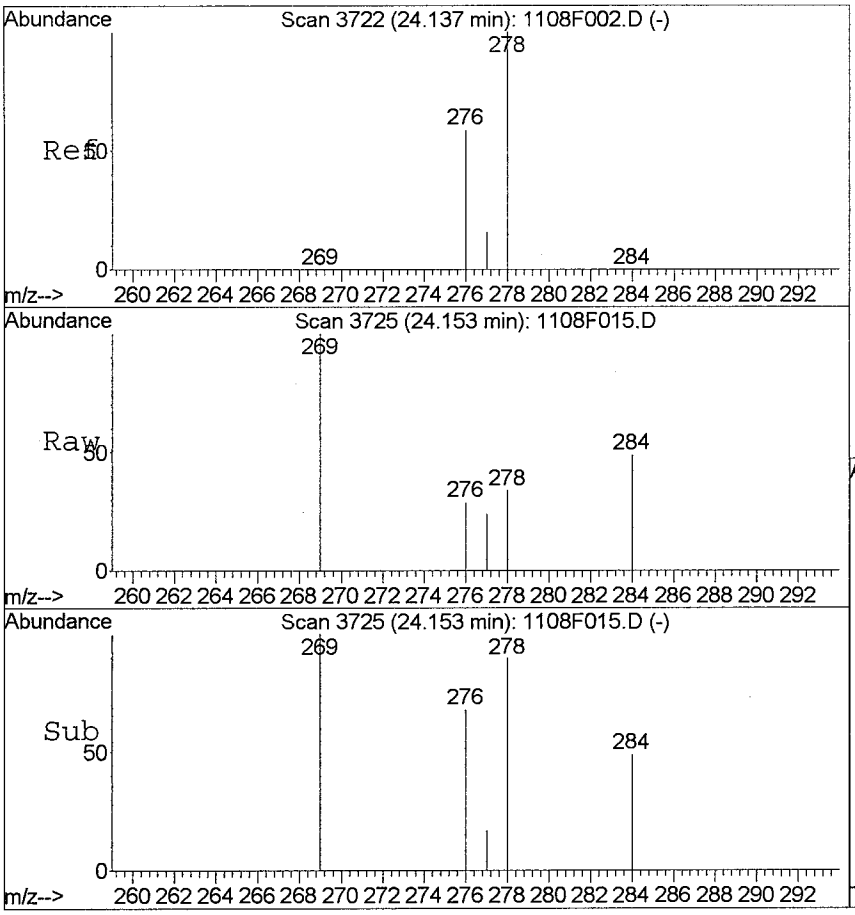


#54
Indeno(1,2,3-cd)pyrene
Concen: 6.70 ng/ml m
RT: 24.10 min Scan# 3716
Delta R.T. 0.02 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:276 Resp: 419

Ion	Ratio	Lower	Upper
276	100		
277	63.1	0.0	54.0#

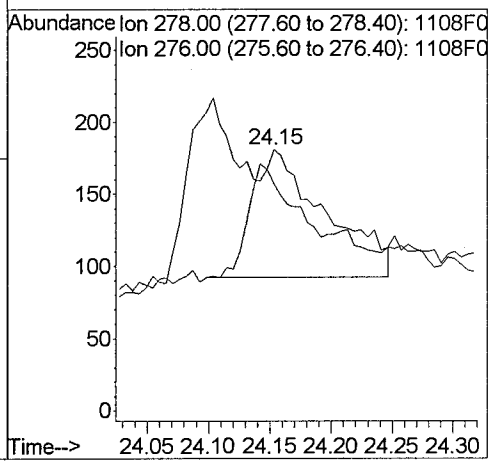


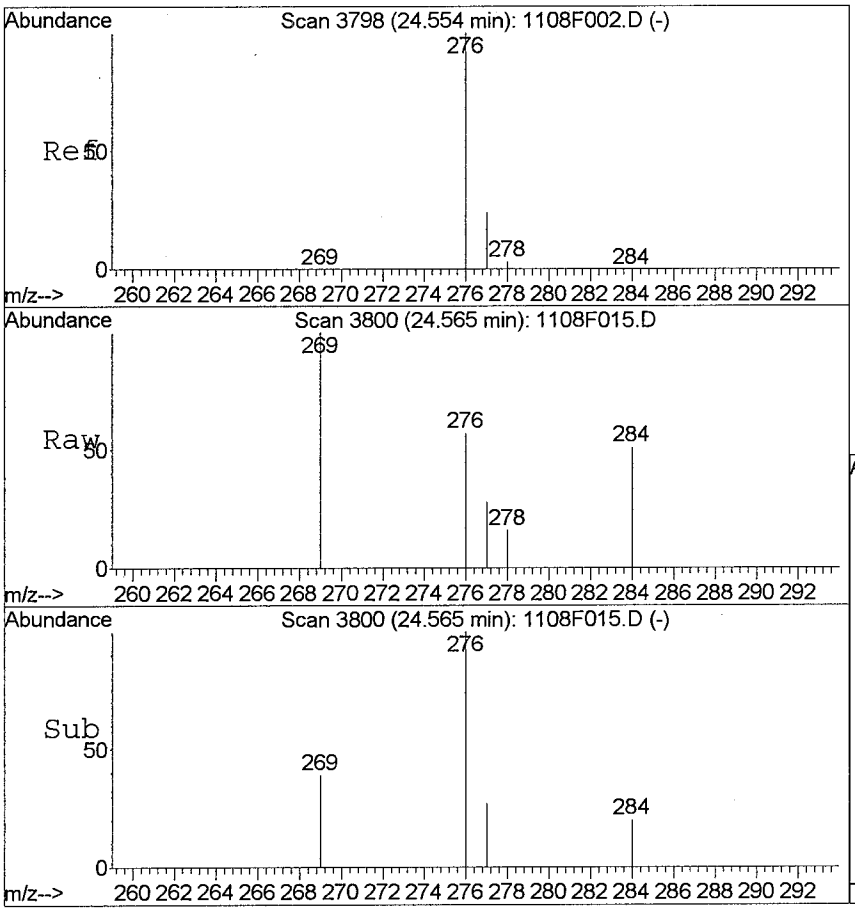


#55
Dibenz(a,h)anthracene
Concen: 4.14 ng/ml
RT: 24.15 min Scan# 3725
Delta R.T. 0.02 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:278 Resp: 372

Ion	Ratio	Lower	Upper
278	100		
276	49.4	29.0	89.0

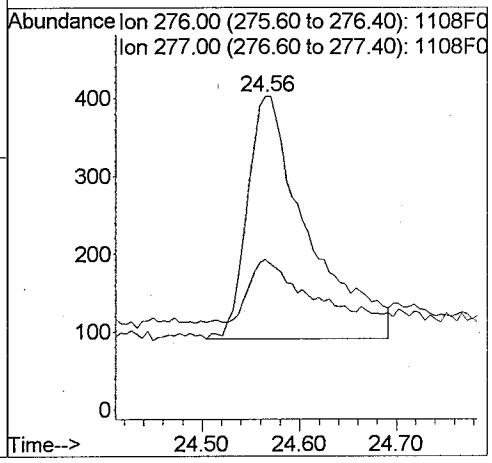




#56
Benzo(g,h,i)perylene
Concen: 12.96 ng/ml
RT: 24.56 min Scan# 3800
Delta R.T. 0.01 min
Lab File: 1108F015.D
Acq: 8 Nov 2003 2:18 pm

Tgt Ion:276 Resp: 1344

Ion	Ratio	Lower	Upper
276	100		
277	26.0	0.0	54.3

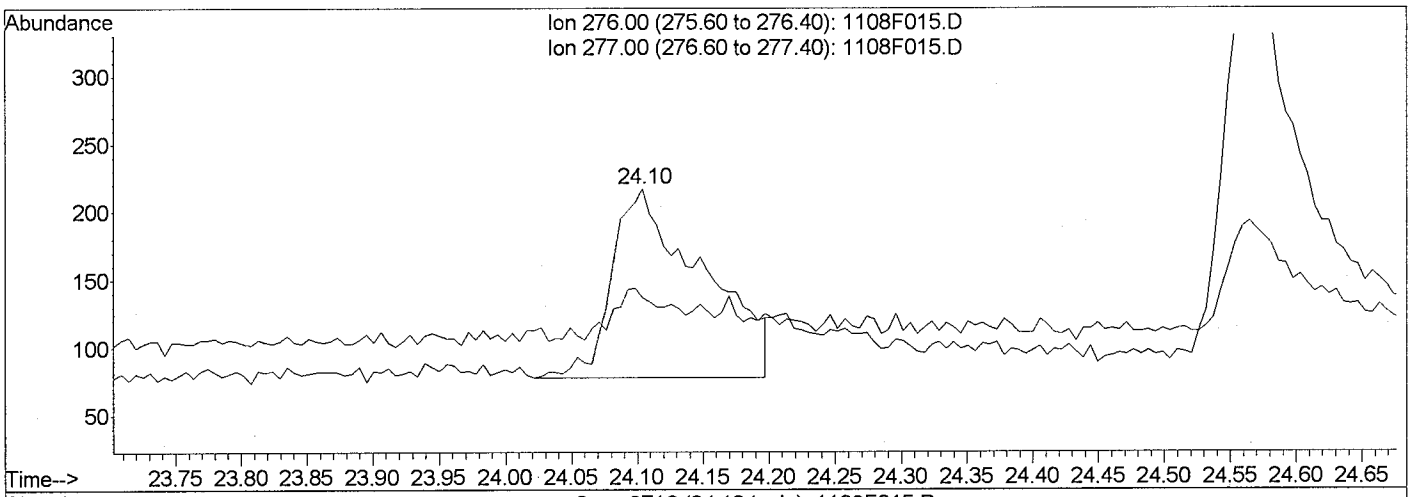


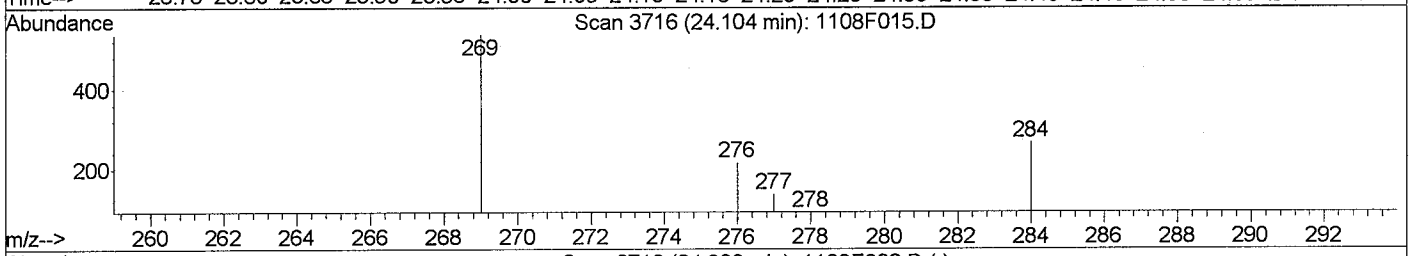
Quantitation Report (Qedit)

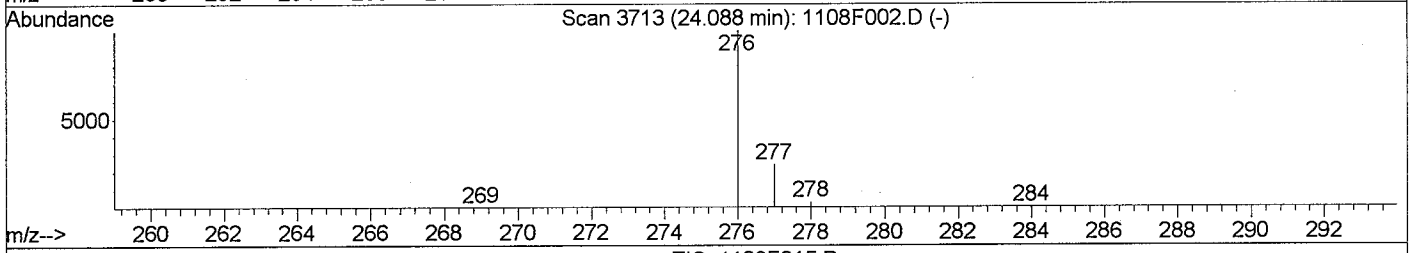
Data File : J:\MS11\DATA\110803\1108F015.D
Acq On : 8 Nov 2003 2:18 pm
Sample : K2308419-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:33 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F015.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.10min 10.67ng/ml

response 667

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	17.27
0.00	0.00	0.00
0.00	0.00	0.00

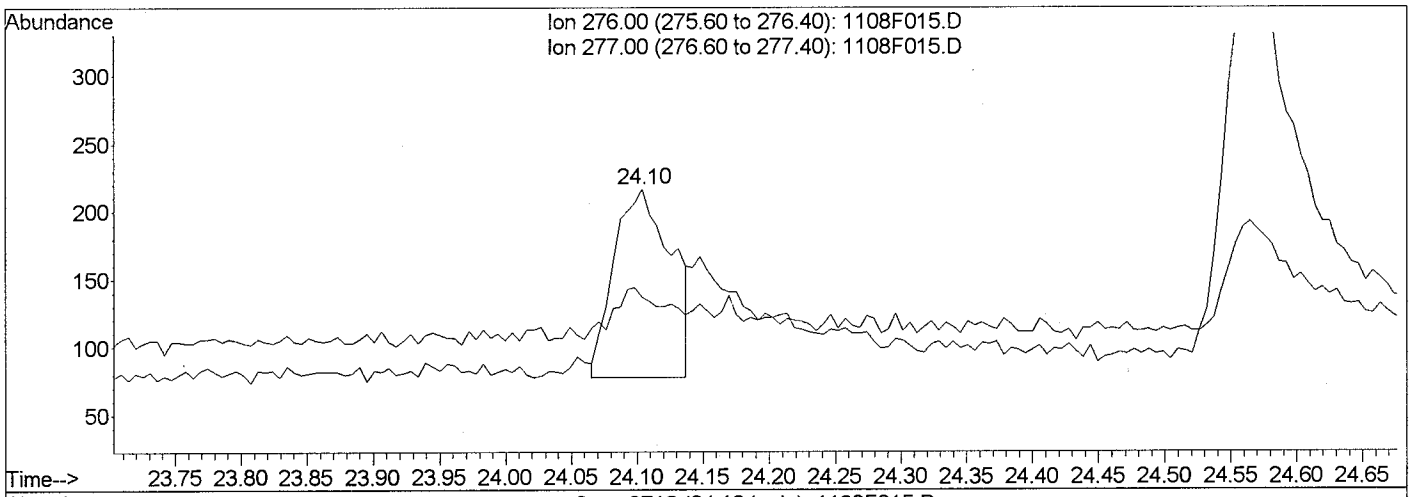
1108F015.D 1107ALK.M Mon Nov 10 16:36:08 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F015.D
Acq On : 8 Nov 2003 2:18 pm
Sample : K2308419-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:33 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F015.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.10min 6.70ng/ml m

response 419

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	63.13#
0.00	0.00	0.00
0.00	0.00	0.00

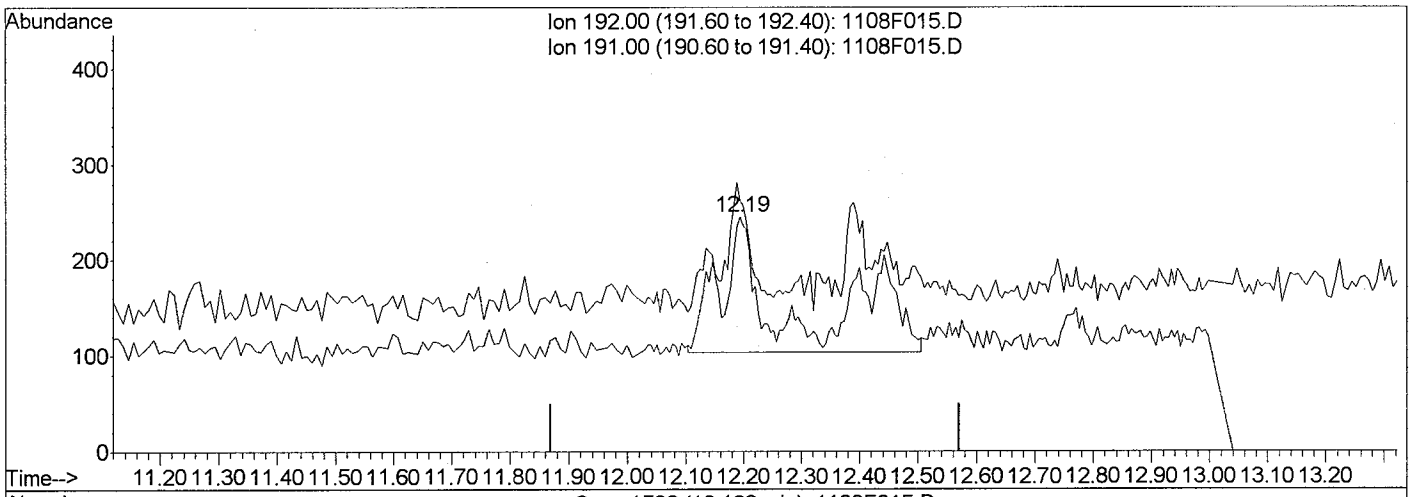
over integrated
11/11/03
mt
11/11/03

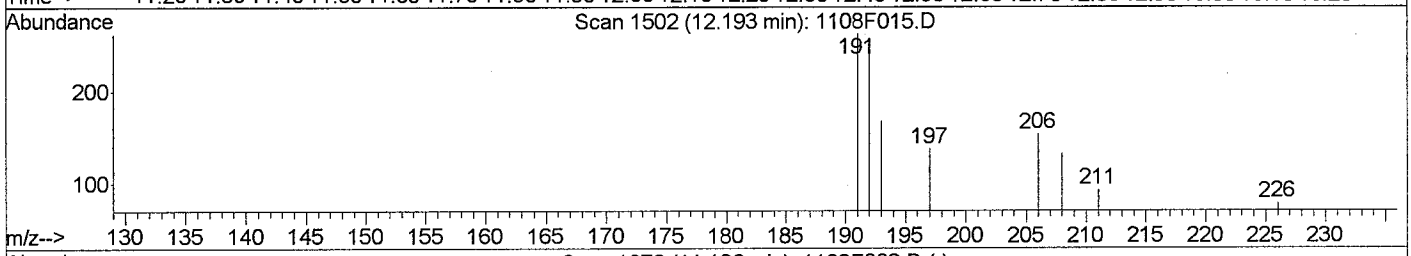
1108F015.D 1107ALK.M Mon Nov 10 16:36:14 2003

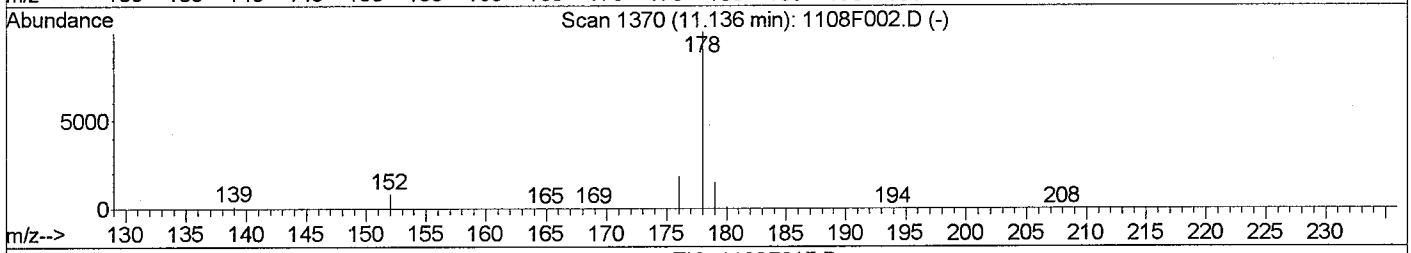
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F015.D Vial: 12
Acq On : 8 Nov 2003 2:18 pm Operator: LWeiskopf
Sample : K2308419-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F015.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 5.49ng/ml m

response 1184

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	106.94#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

mrt 11/11/03

1108F015.D 1107ALK.M Mon Nov 10 17:08:50 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-3
Lab Code: K2308419-003

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.074**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-3
Lab Code: K2308419-003

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	67	37-107	11/08/03	Acceptable
Fluoranthene-d10	80	18-137	11/08/03	Acceptable
Terphenyl-d14	87	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F016.D
Lab ID: K2308419-003
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 14:55
Date Quantitated: 11/10/2003 17:06
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: mt 11/14/03

Printed: 11/10/2003 17:47:22
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245664	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F016.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 14:55	**Quant Date:**	11/10/2003 17:06	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	251456	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	128489	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	173811	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	148584	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	85631	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.01	0.01	0.00	176	172311	1,341	67	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	277406	1,595	80	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	236467	1,746	87	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	21548	75.79	0.074		
1	2-Methylnaphthalene	6.42	0.01	0.00	142	778	4.63	0.0045	J	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	1193	7.58	0.0074	J	
1	Biphenyl	7.10	0.01	0.00	154	1223	6.01	0.0058	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.81	0.02	0.00	152	515	2.08	0.0020	J	
2	Acenaphthene	8.12	0.01	0.00	154	1982	12.99	0.013	J	
2	Dibenzofuran	8.42	0.01	0.00	168	1259	6.16	0.0071	U	
2	Fluorene	9.06	0.01	0.00	166	986	6.03	0.0059	J	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F016.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 14:55	**Quant Date:**	11/10/2003 17:06	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-003			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene				184	0d		0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	1588m	7.54	0.0073	J	
3	Anthracene	11.15	0.01	0.00	178	476	2.64	0.0026	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	886m	4.21	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	3045	14.52	0.014	J	
4	Pyrene	14.24		0.00	202	2164	11.14	0.011	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.09		0.00	228	267	1.81	0.0021	U	
4	Chrysene	17.19	0.01	0.00	228	815	5.15	0.0050	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.13	0.03	0.00	252	427m	3.74	0.0036	J	
5	Benzo(k)fluoranthene	20.18		0.00	252	425m	2.93	0.0028	J	
5	Benzo(e)pyrene	21.11	0.03	0.00	252	372m	2.90	0.0028	J	
5	Benzo(a)pyrene				252	0		0.0016	U	
5	Perylene				252	0d		0.0012	U	
5	Indeno(1,2,3-cd)pyrene	24.10	0.01	0.00	276	208	3.52	0.0034	J	
5	Dibenz(a,h)anthracene				278	0		0.0017	U	
5	Benzo(g,h,i)perylene	24.56	0.01	0.00	276	571	5.83	0.0057	J	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F016.D Vial: 13
Acq On : 8 Nov 2003 2:55 pm Operator: LWeiskopf
Sample : K2308419-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:07 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

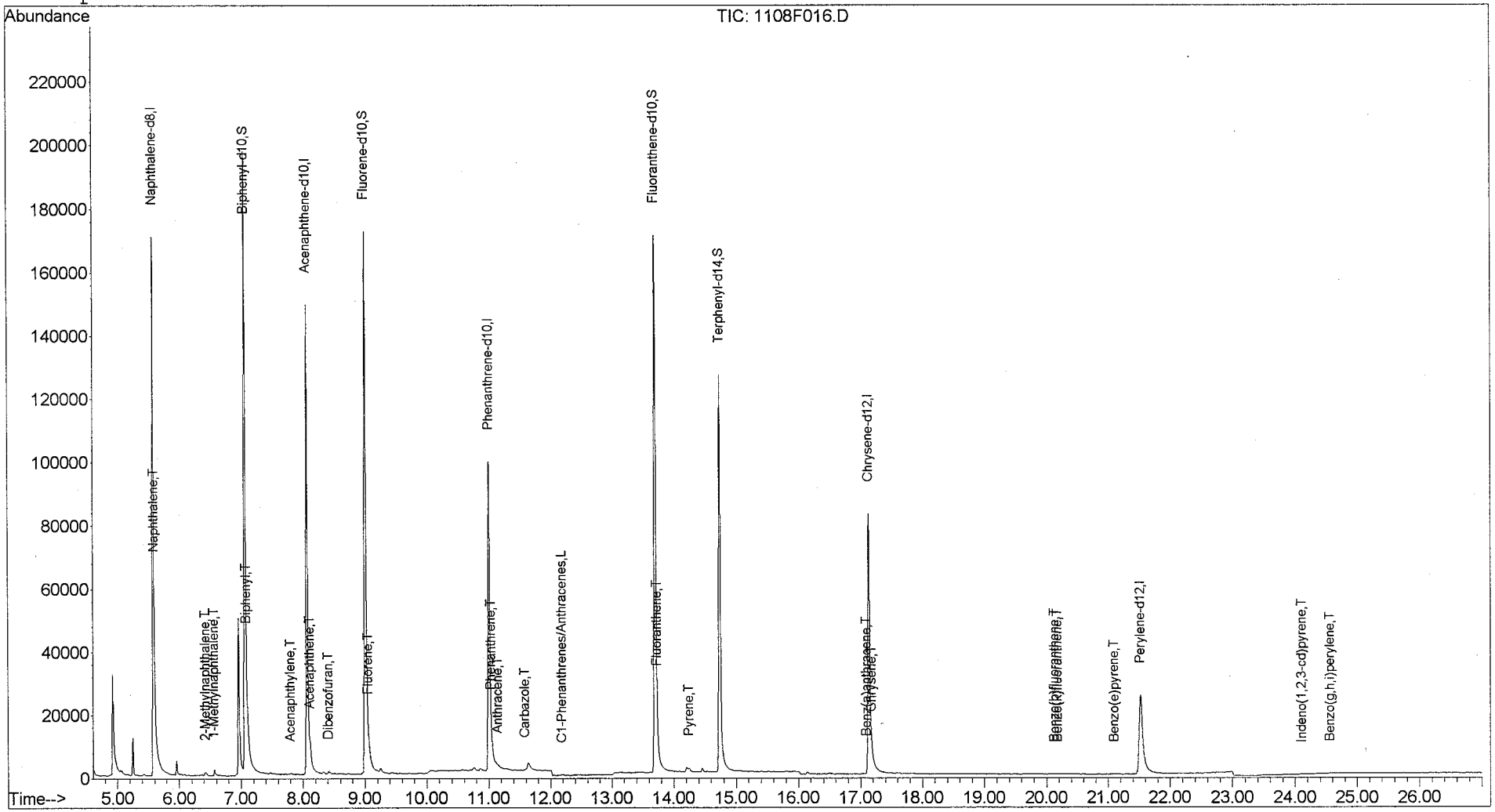
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	251456	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	128489	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	173811	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	148584	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	85631	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	267353	1451.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 145.14%			
16) Fluorene-d10	9.01	176	172311	1340.89	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 134.09%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	277406	1594.63	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 159.46%			
41) Terphenyl-d14	14.74	244	236467	1746.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 174.62%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	21548	75.79	ng/ml	98
3) 2-Methylnaphthalene	6.42	142	778	4.63	ng/ml	89
4) 1-Methylnaphthalene	6.57	142	1193	7.58	ng/ml	80
6) Biphenyl	7.10	154	1223	6.01	ng/ml	99
12) Acenaphthylene	7.81	152	515	2.08	ng/ml	84
13) Acenaphthene	8.12	154	1982	12.99	ng/ml	95
14) Dibenzofuran	8.42	168	1259	6.16	ng/ml	98
17) Fluorene	9.06	166	986	6.03	ng/ml	98
28) Phenanthrene	11.05	178	1588m	7.54	ng/ml	
29) Anthracene	11.15	178	476	2.64	ng/ml	88
30) Carbazole	11.58	167	1144	8.04	ng/ml	86
32) C1-Phenanthrenes/Anthracen	12.19	192	886m	4.21	ng/ml	
36) Fluoranthene	13.74	202	3045	14.52	ng/ml	96
39) Pyrene	14.24	202	2164	11.14	ng/ml	98
42) Benz(a)anthracene	17.09	228	267	1.81	ng/ml	87
43) Chrysene	17.19	228	815	5.15	ng/ml	81
49) Benzo(b)fluoranthene	20.13	252	427m	3.74	ng/ml	
50) Benzo(k)fluoranthene	20.18	252	425m	2.93	ng/ml	
51) Benzo(e)pyrene	21.11	252	372m	2.90	ng/ml	
54) Indeno(1,2,3-cd)pyrene	24.10	276	208	3.52	ng/ml	83
56) Benzo(g,h,i)perylene	24.56	276	571	5.83	ng/ml	95

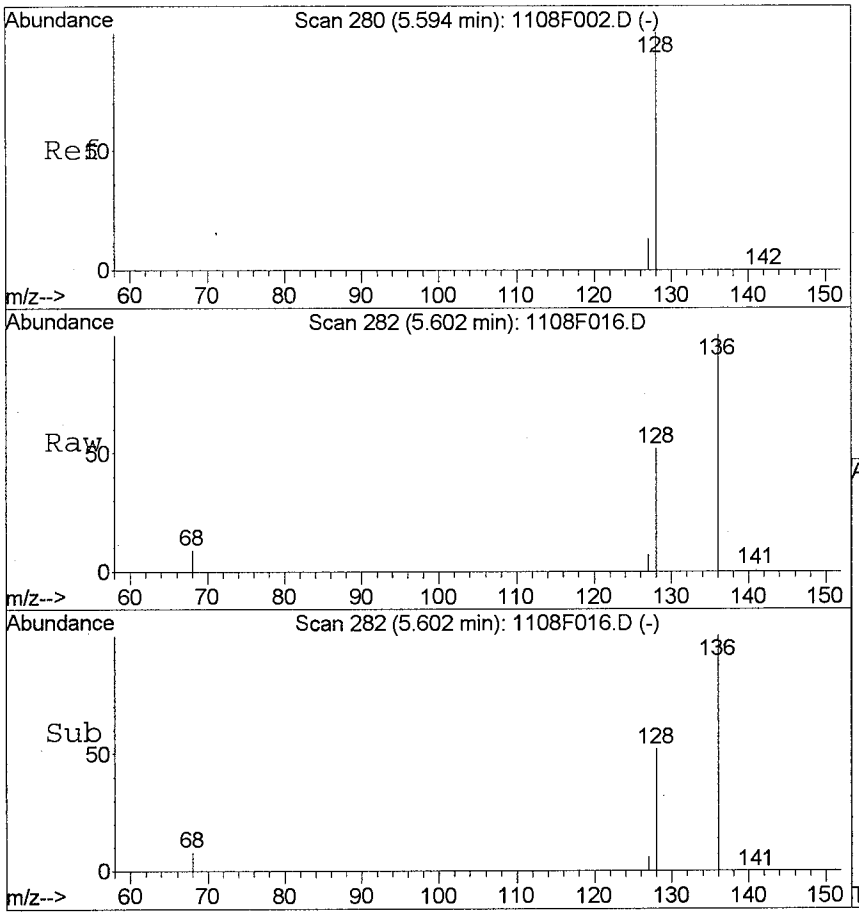
(#) = qualifier out of range (m) = manual integration
1108F016.D 1107ALK.M Mon Nov 10 17:11:25 2003 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F016.D Vial: 13
Acq On : 8 Nov 2003 2:55 pm Operator: LWeiskopf
Sample : K2308419-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:06 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

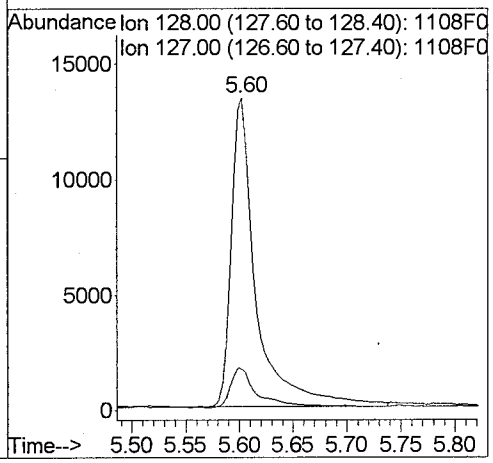


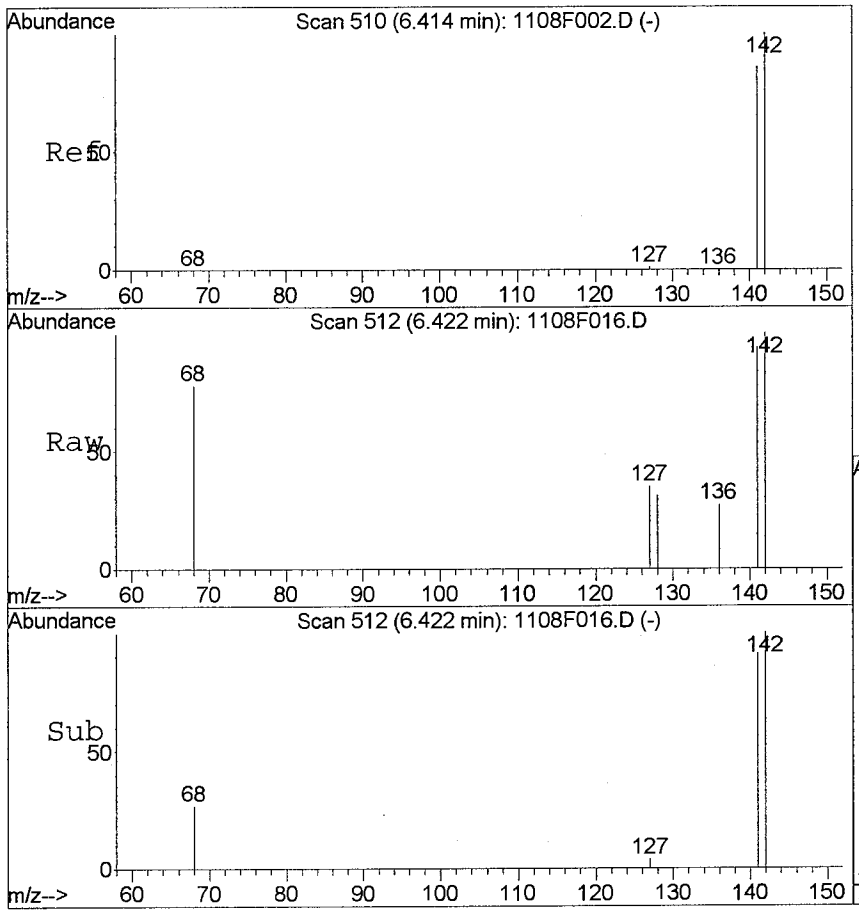


#2
Naphthalene
Concen: 75.79 ng/ml
RT: 5.60 min Scan# 282
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:128 Resp: 21548

Ion	Ratio	Lower	Upper
128	100		
127	12.6	0.0	43.5

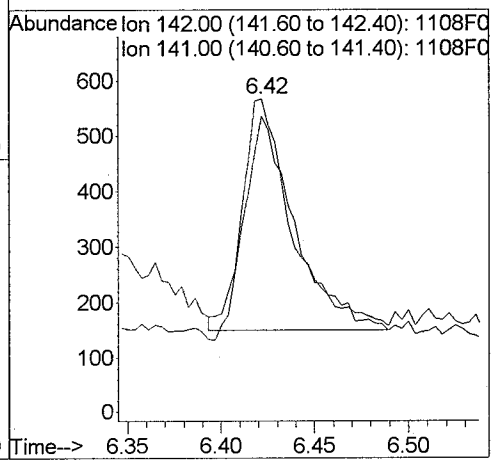


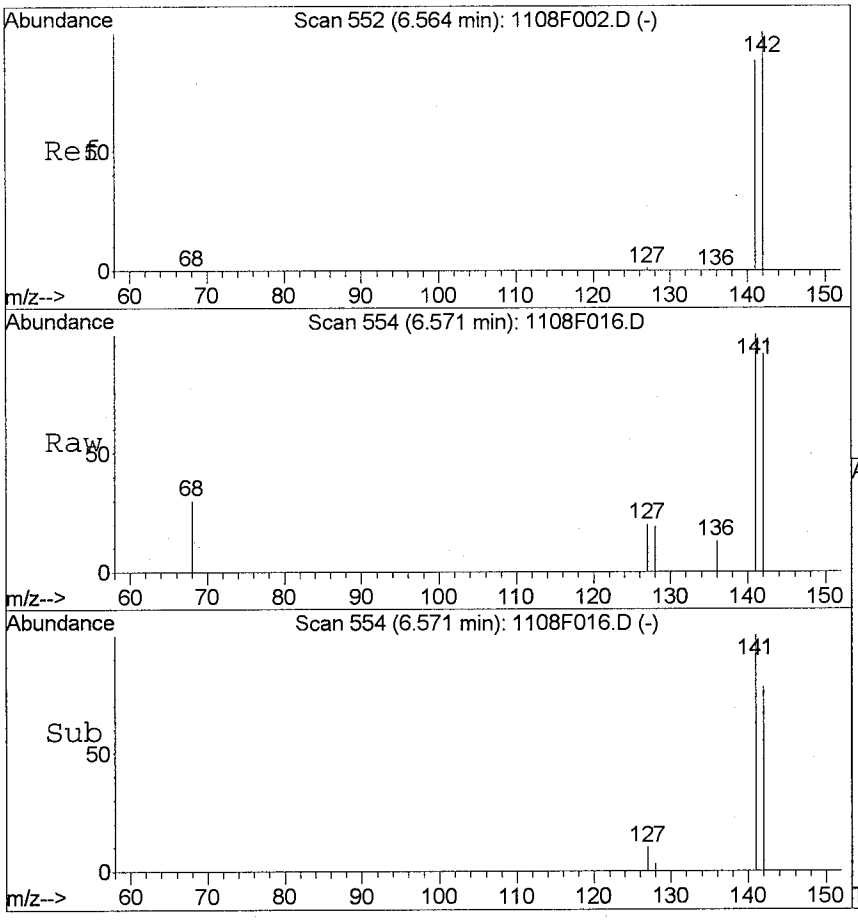


#3
2-Methylnaphthalene
Concen: 4.63 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:142 Resp: 778

Ion	Ratio	Lower	Upper
142	100		
141	96.2	56.1	116.1

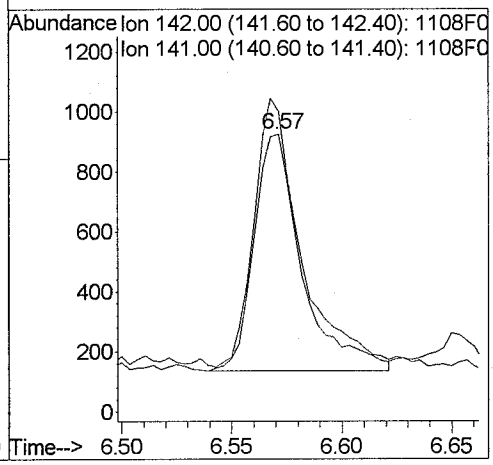


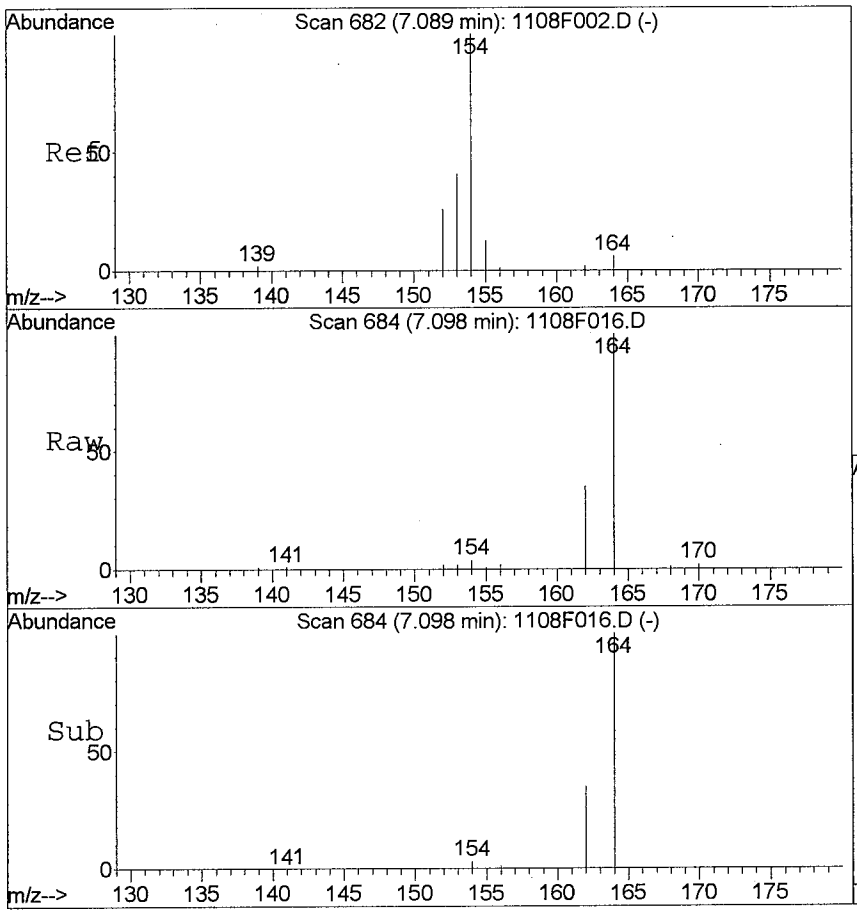


#4
1-Methylnaphthalene
Concen: 7.58 ng/ml
RT: 6.57 min Scan# 554
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:142 Resp: 1193

Ion	Ratio	Lower	Upper
142	100		
141	107.2	58.4	118.4

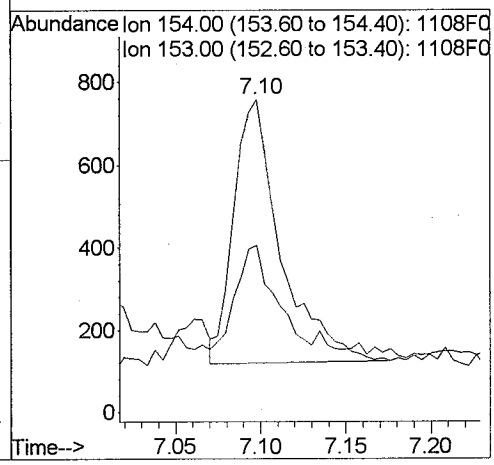


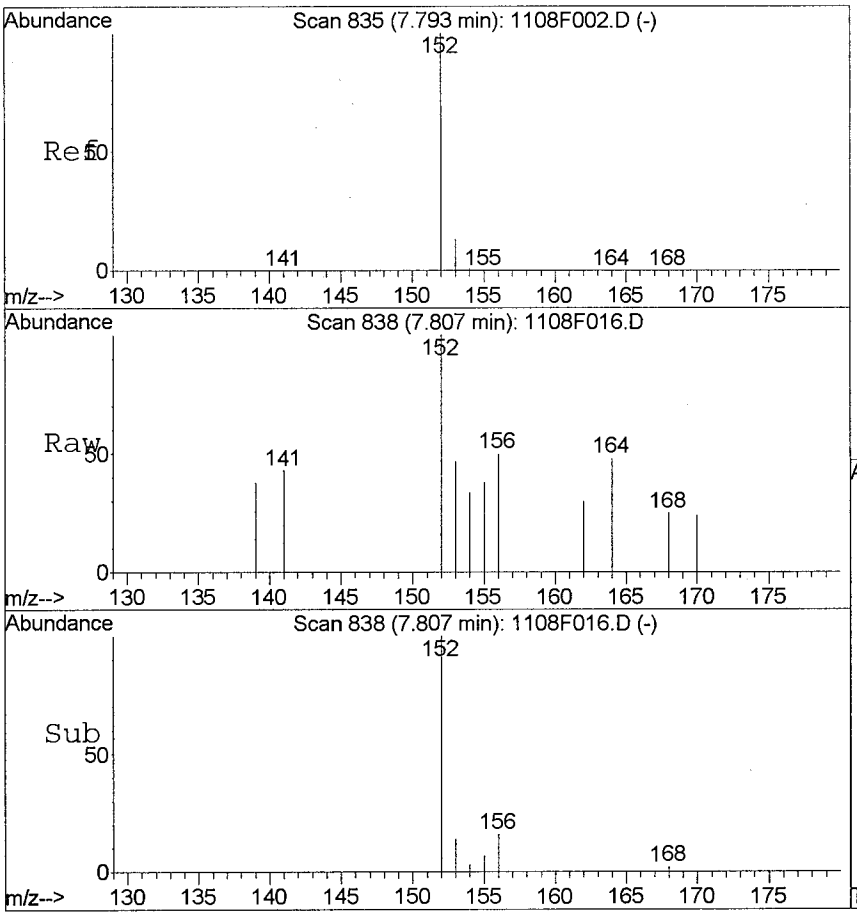


#6
Biphenyl
Concen: 6.01 ng/ml
RT: 7.10 min Scan# 684
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:154 Resp: 1223

Ion	Ratio	Lower	Upper
154	100		
153	39.7	10.5	70.5

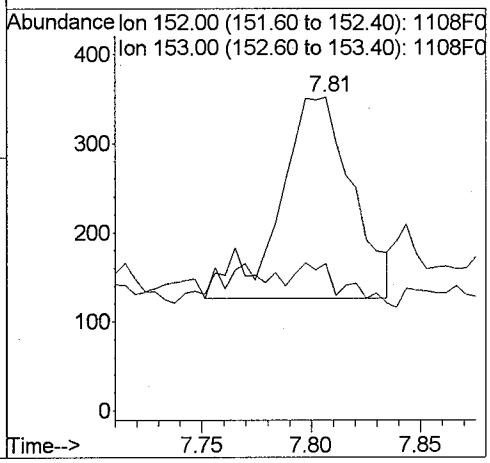


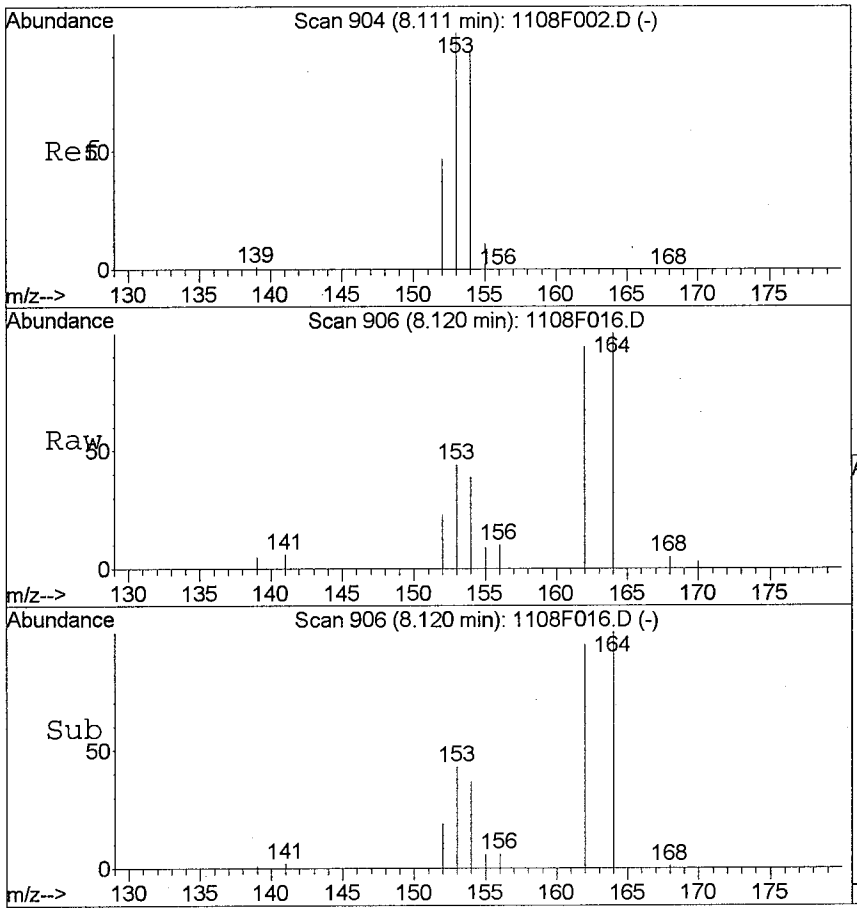


#12
Acenaphthylene
Concen: 2.08 ng/ml
RT: 7.81 min Scan# 838
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:152 Resp: 515

Ion	Ratio	Lower	Upper
152	100		
153	19.5	0.0	43.2

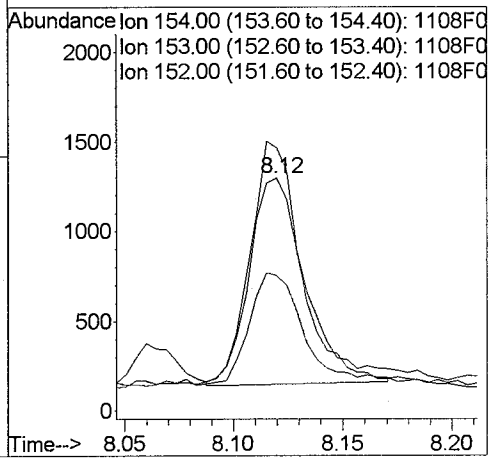


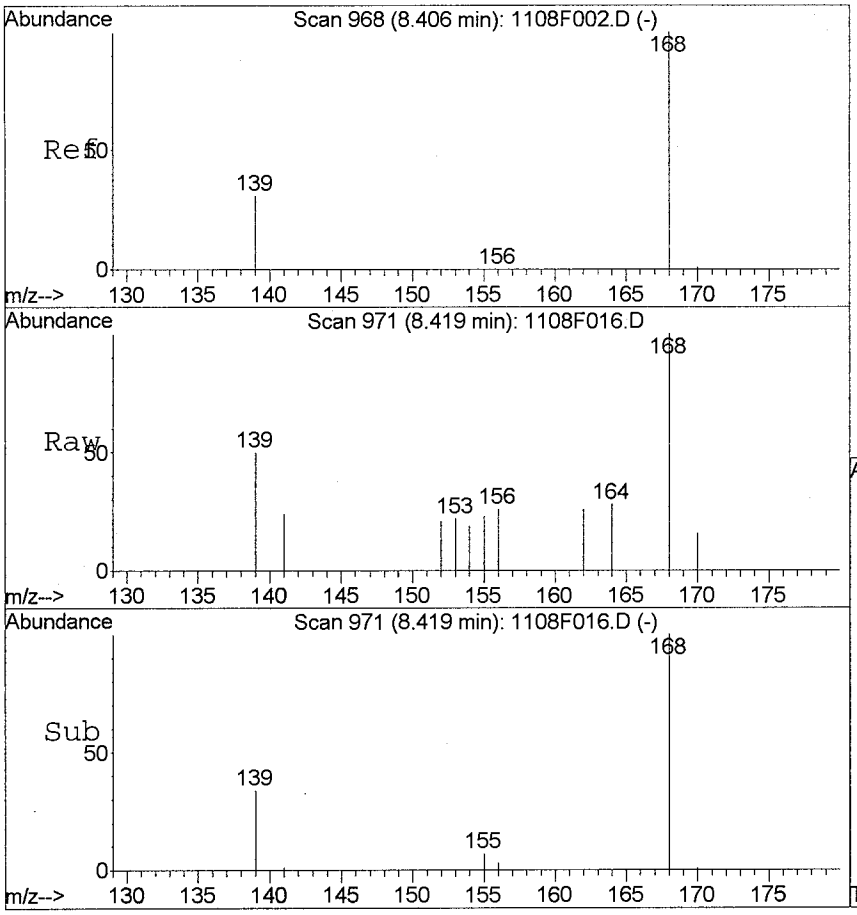


#13
Acenaphthene
Concen: 12.99 ng/ml
RT: 8.12 min Scan# 906
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:154 Resp: 1982

Ion	Ratio	Lower	Upper
154	100		
153	114.7	78.6	138.6
152	53.0	21.5	81.5

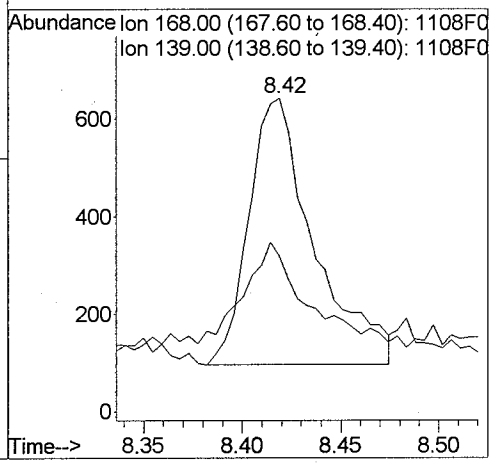


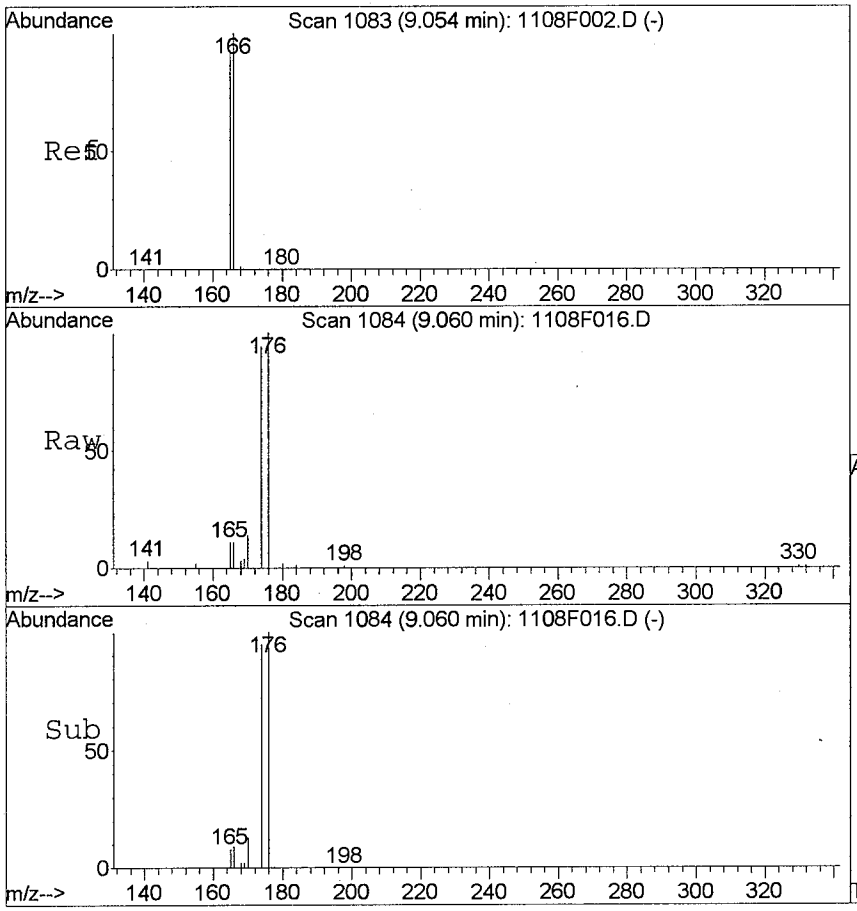


#14
Dibenzofuran
Concen: 6.16 ng/ml
RT: 8.42 min Scan# 971
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:168 Resp: 1259

Ion	Ratio	Lower	Upper
168	100		
139	32.3	1.2	61.2

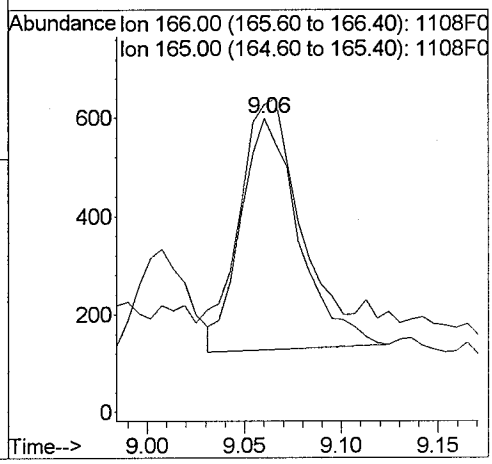


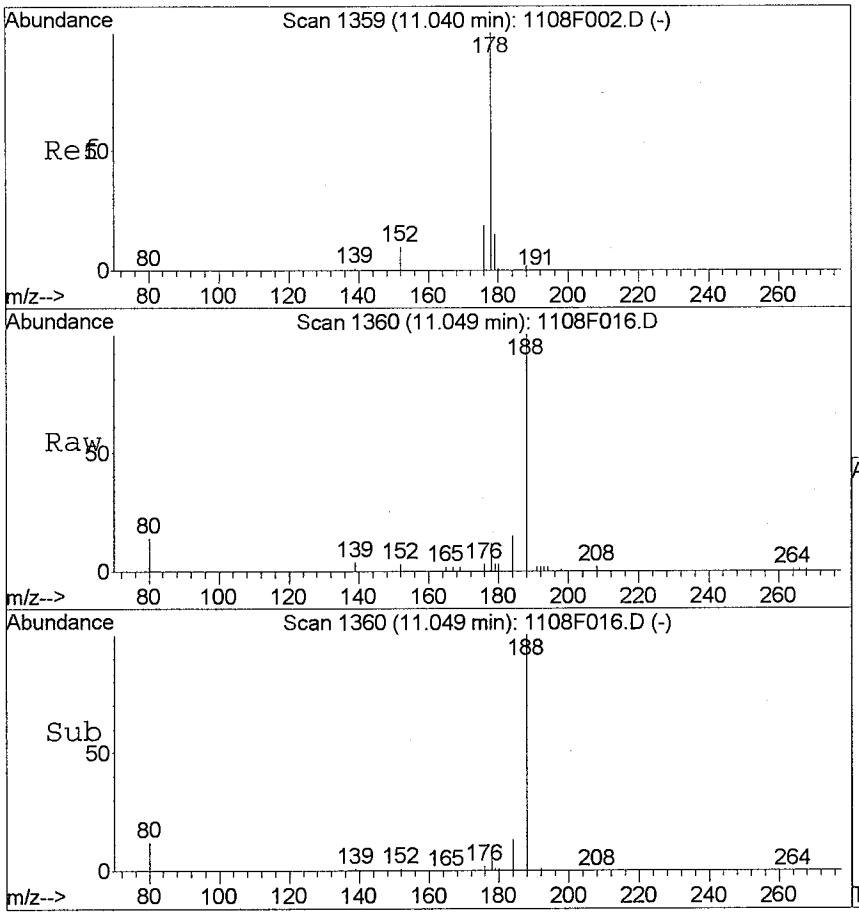


#17
Fluorene
Concen: 6.03 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:166 Resp: 986

Ion	Ratio	Lower	Upper
166	100		
165	91.3	62.9	122.9

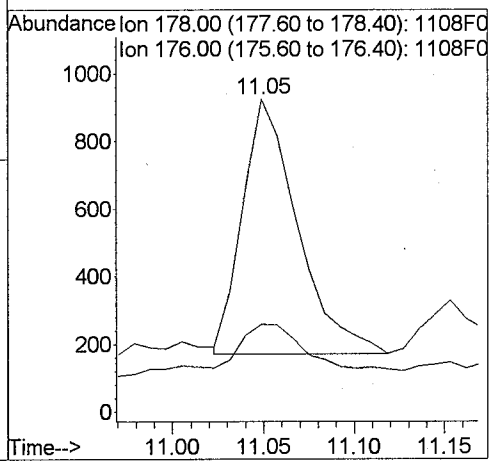


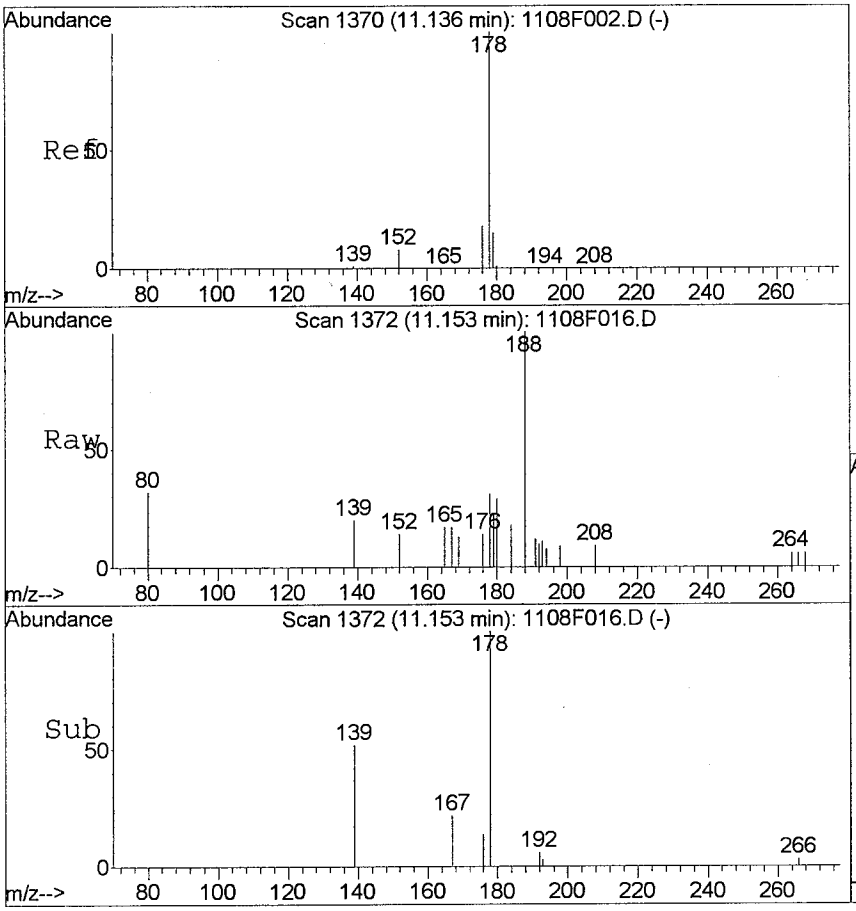


#28
Phenanthrene
Concen: 7.54 ng/ml m
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:178 Resp: 1588

Ion	Ratio	Lower	Upper
178	100		
176	27.9	0.0	48.7

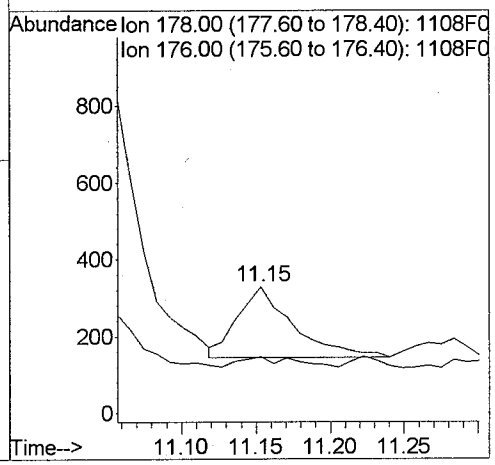


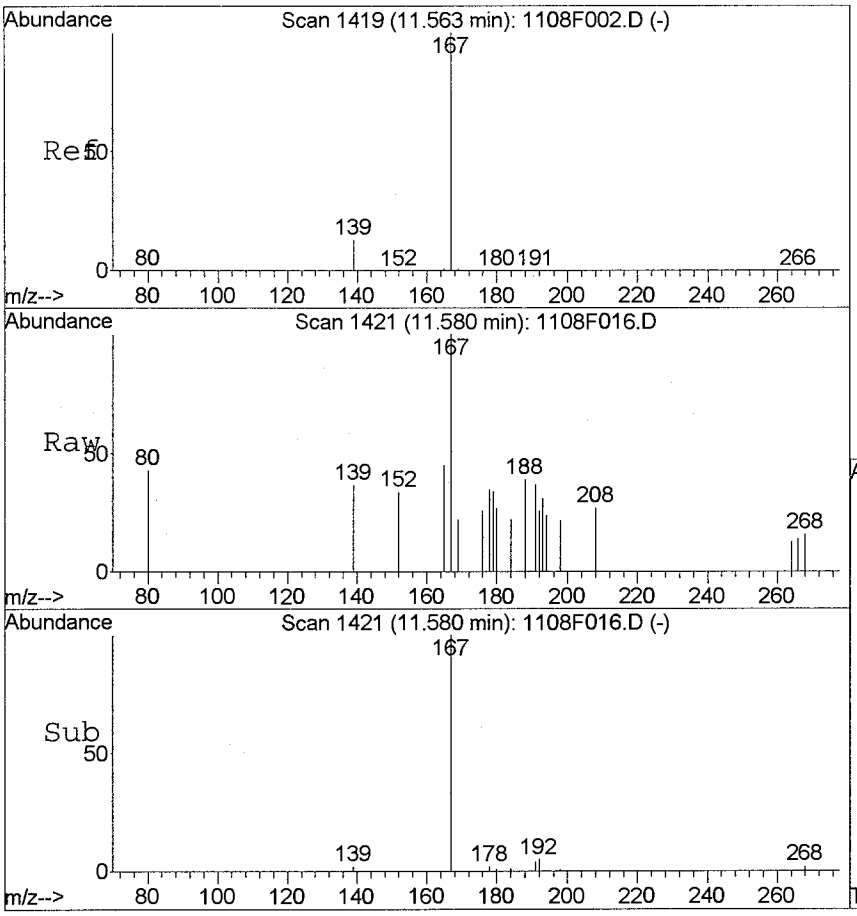


#29
Anthracene
Concen: 2.64 ng/ml
RT: 11.15 min Scan# 1372
Delta R.T. 0.02 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:178 Resp: 476

Ion	Ratio	Lower	Upper
178	100		
176	13.0	0.0	48.3

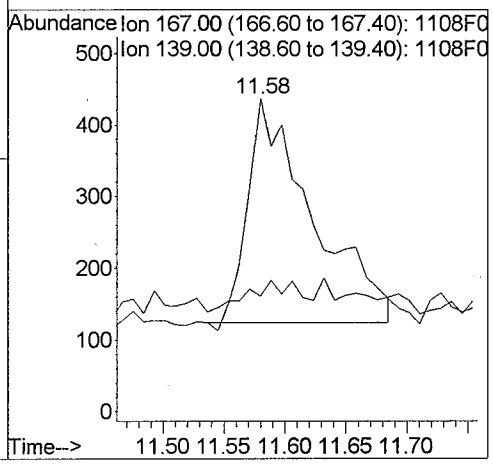


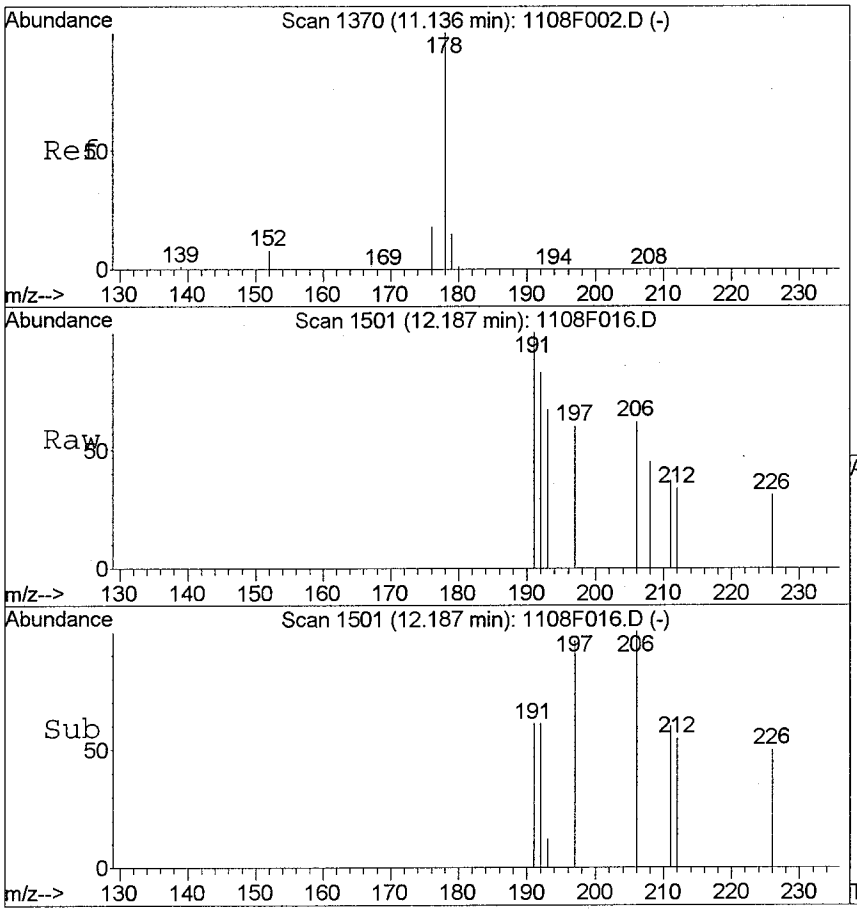


#30
Carbazole
Concen: 8.04 ng/ml
RT: 11.58 min Scan# 1421
Delta R.T. 0.02 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:167 Resp: 1144

Ion	Ratio	Lower	Upper
167	100		
139	7.0	0.0	42.6

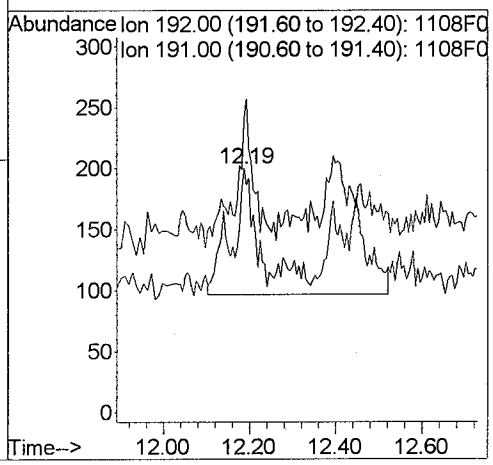


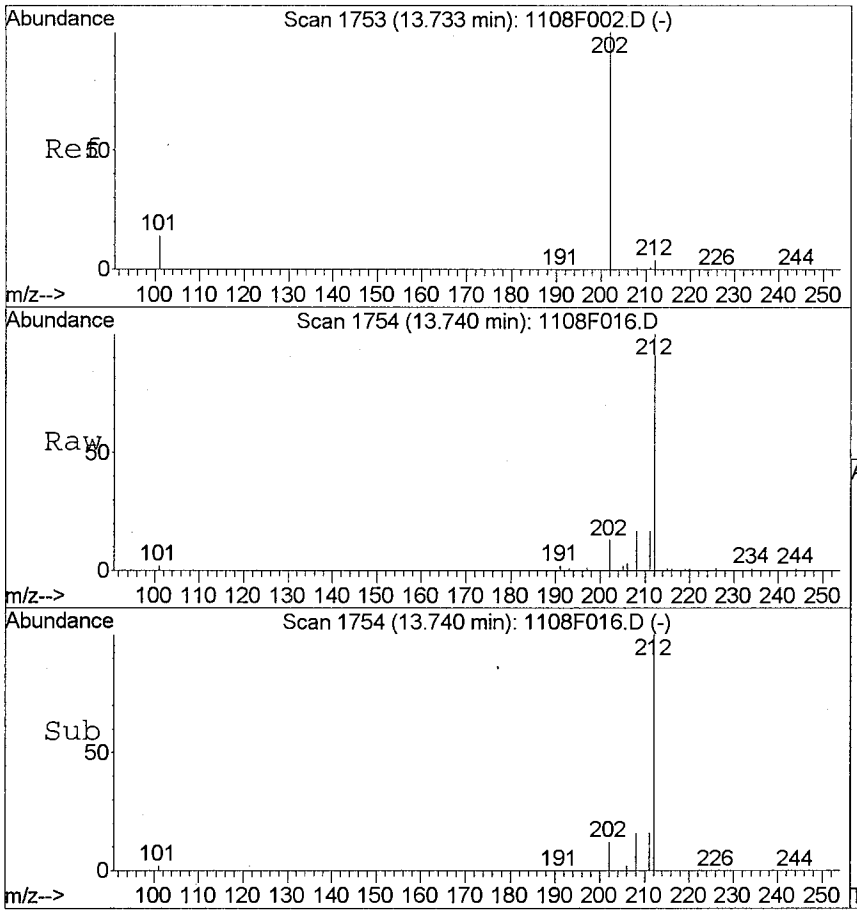


#32
C1-Phenanthrenes/Anthracenes
Concen: 4.21 ng/ml m
RT: 12.19 min Scan# 1501
Delta R.T. -0.03 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:192 Resp: 886

Ion	Ratio	Lower	Upper
192	100		
191	121.0	25.3	85.3#

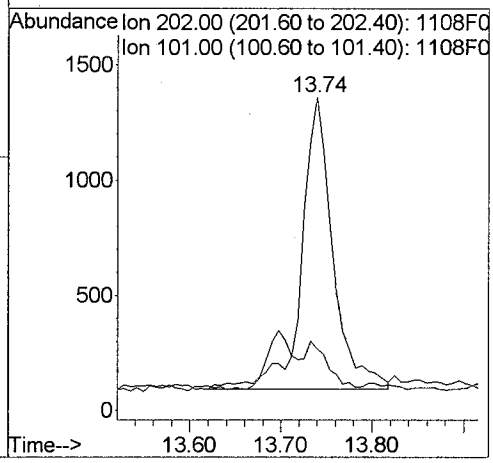


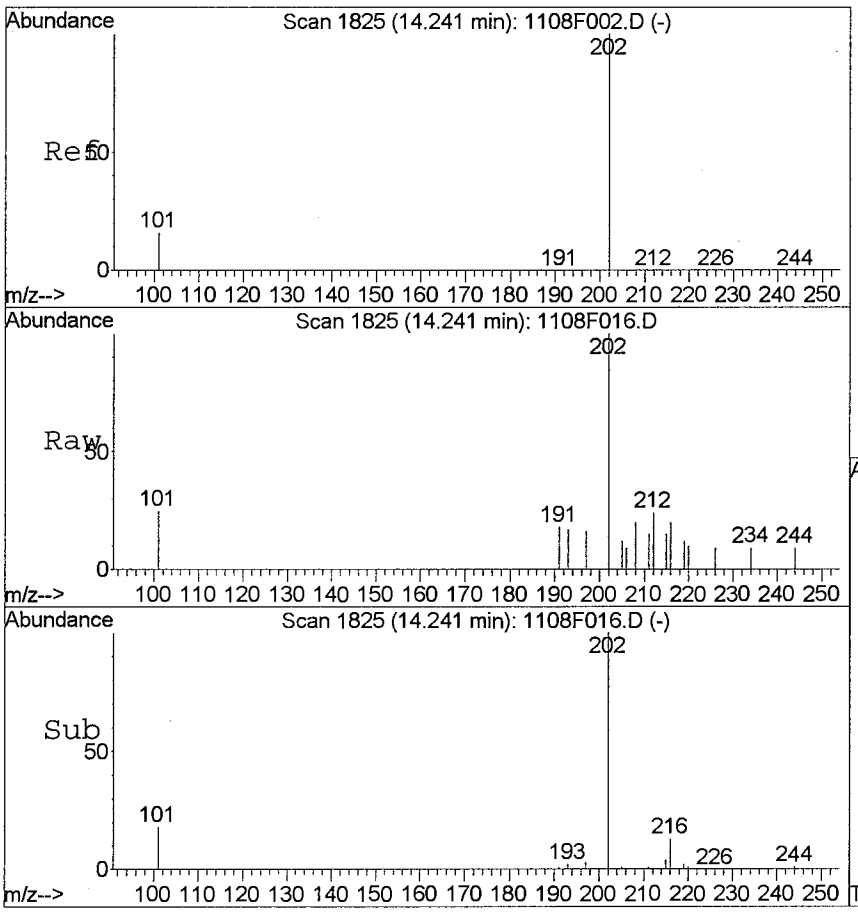


#36
Fluoranthene
Concen: 14.52 ng/ml
RT: 13.74 min Scan# 1754
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:202 Resp: 3045

Ion	Ratio	Lower	Upper
202	100		
101	12.6	0.0	44.3

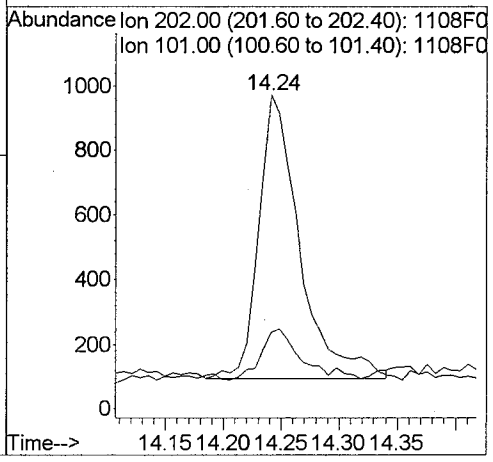


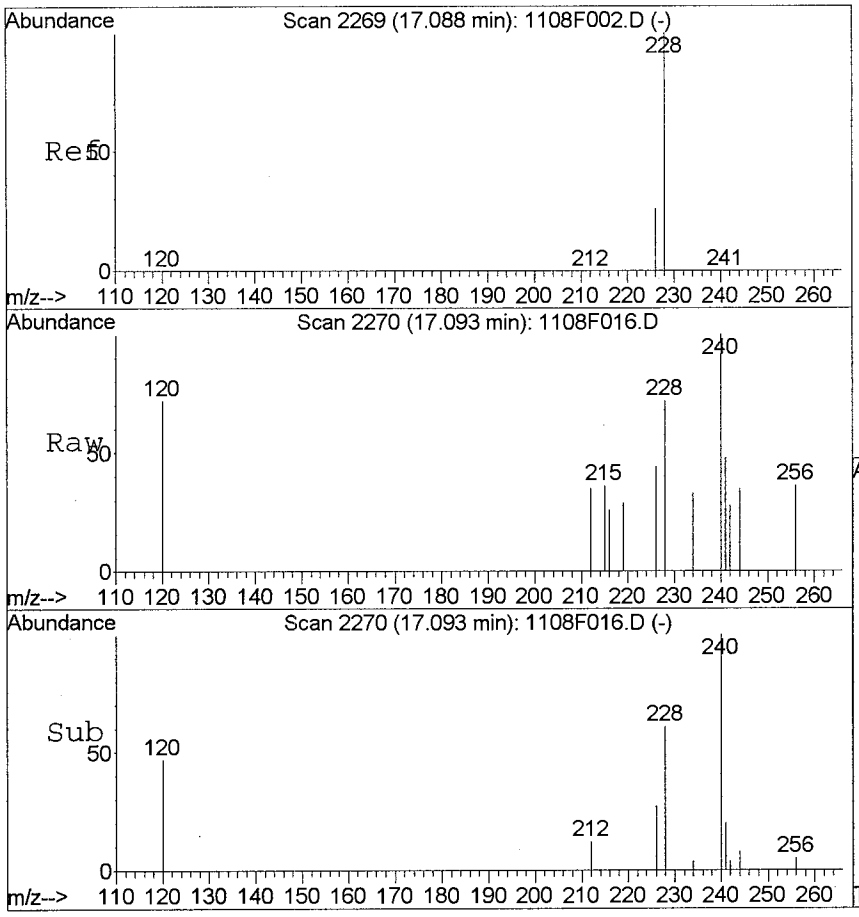


#39
Pyrene
Concen: 11.14 ng/ml
RT: 14.24 min Scan# 1825
Delta R.T. -0.00 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:202 Resp: 2164

Ion	Ratio	Lower	Upper
202	100		
101	15.3	0.0	46.2

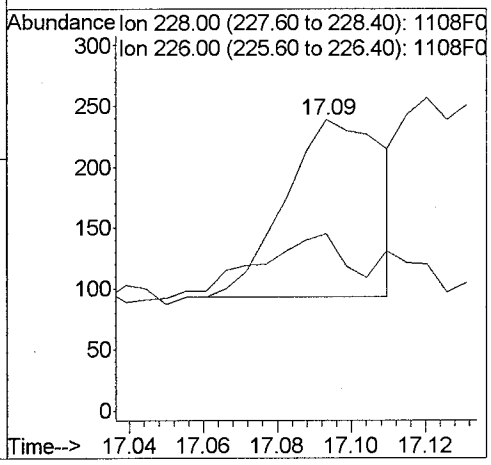


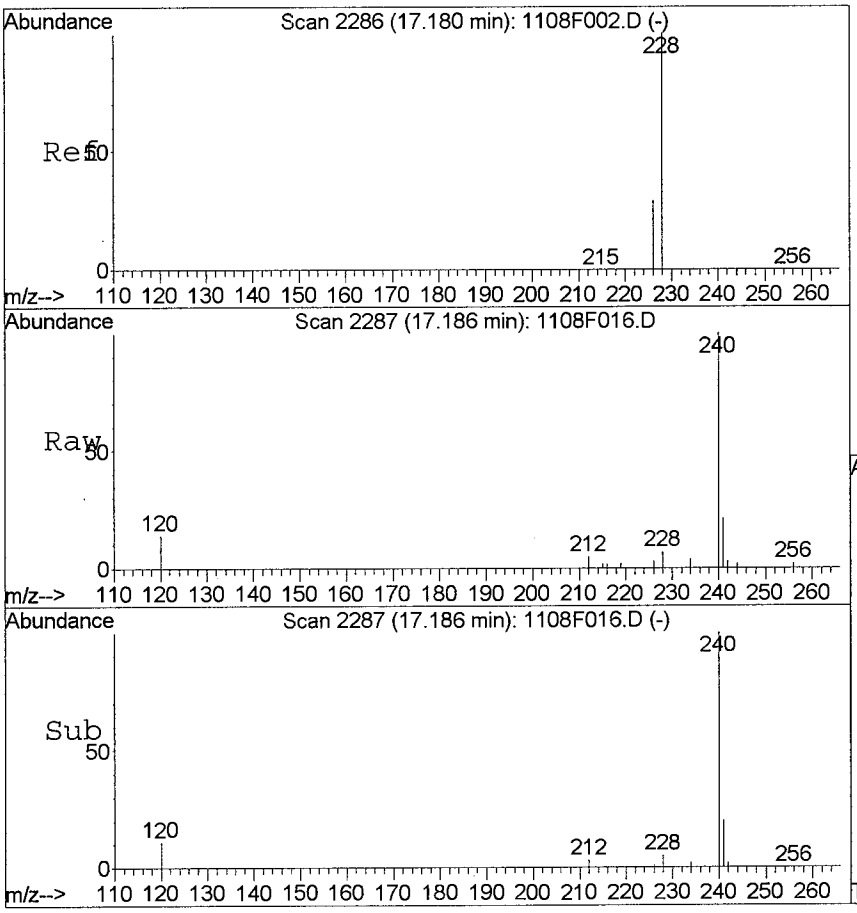


#42
Benz(a)anthracene
Concen: 1.81 ng/ml
RT: 17.09 min Scan# 2270
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:228 Resp: 267

Ion	Ratio	Lower	Upper
228	100		
226	32.2	0.0	55.8

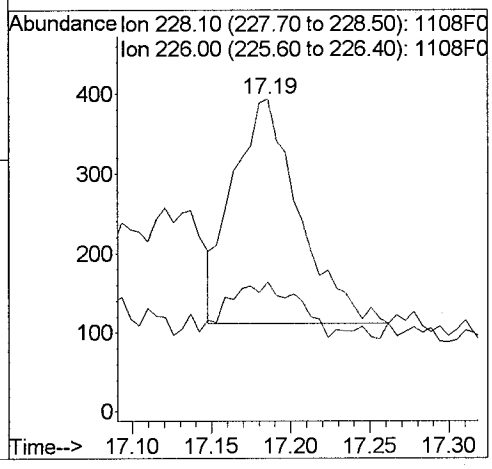


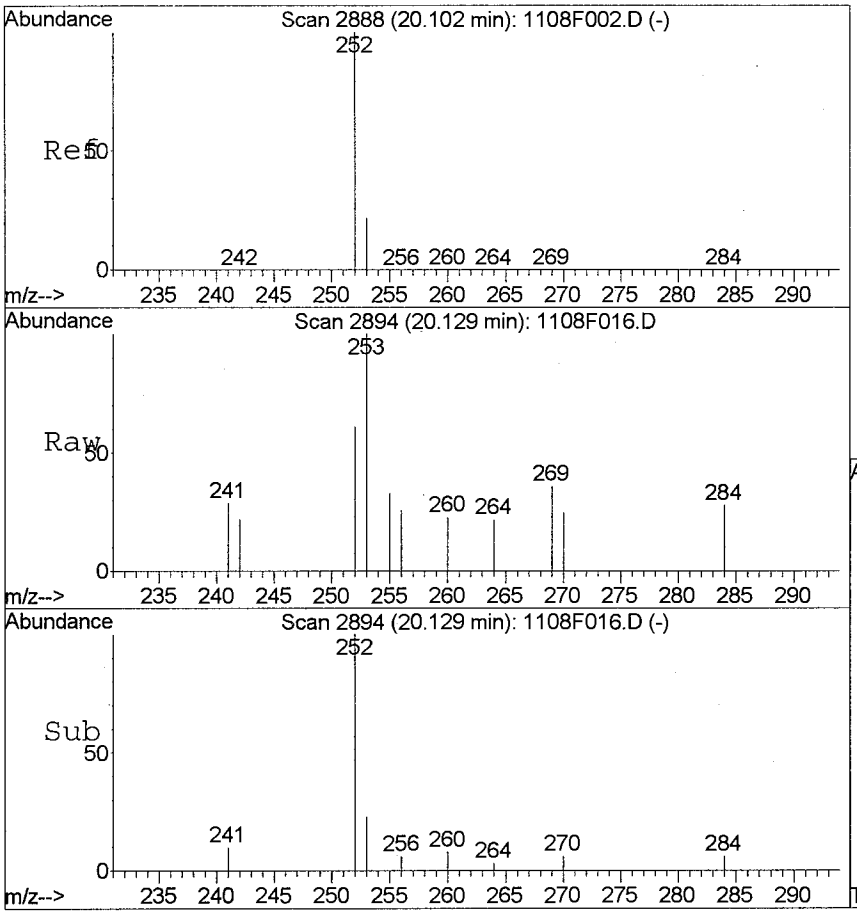


#43
Chrysene
Concen: 5.15 ng/ml
RT: 17.19 min Scan# 2287
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:228 Resp: 815

Ion	Ratio	Lower	Upper
228	100		
226	18.4	0.0	58.5

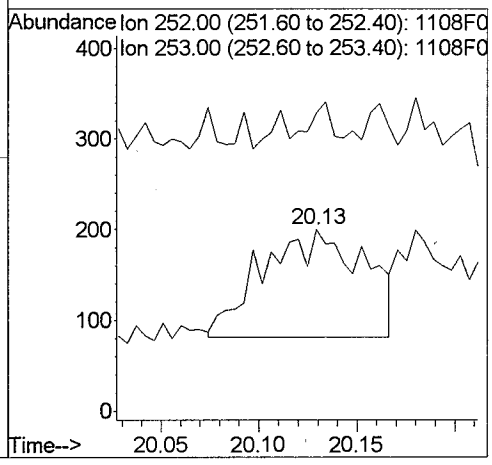


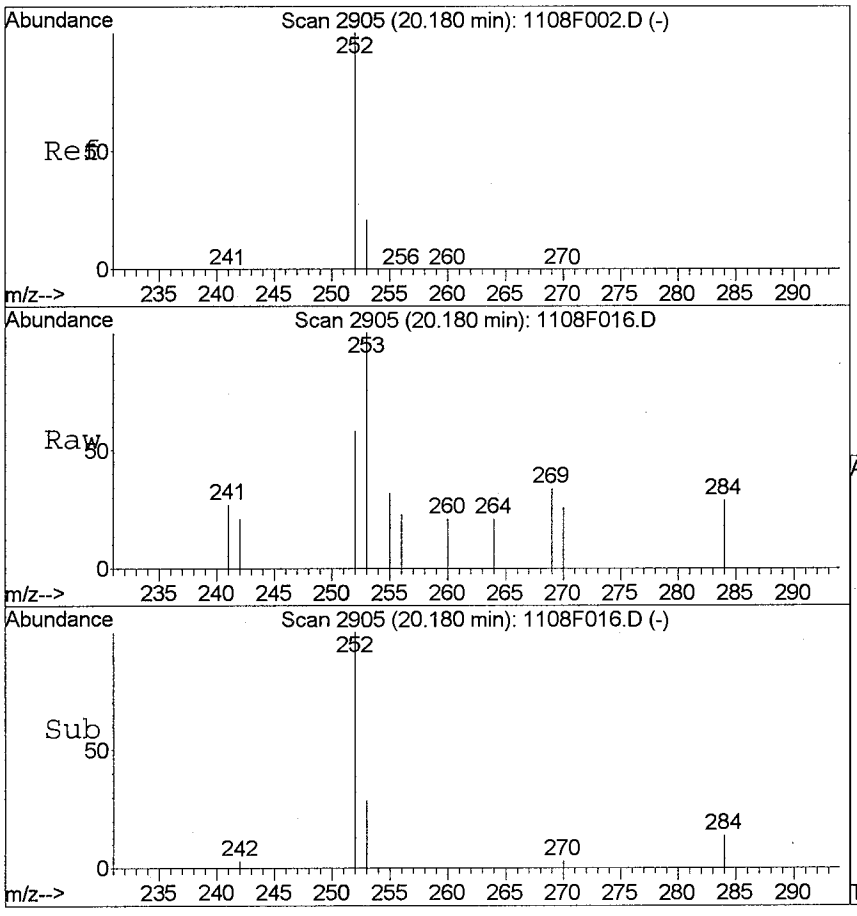


#49
Benzo(b)fluoranthene
Concen: 3.74 ng/ml m
RT: 20.13 min Scan# 2894
Delta R.T. 0.03 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:252 Resp: 427

Ion	Ratio	Lower	Upper
252	100		
253	164.5	0.0	51.9#

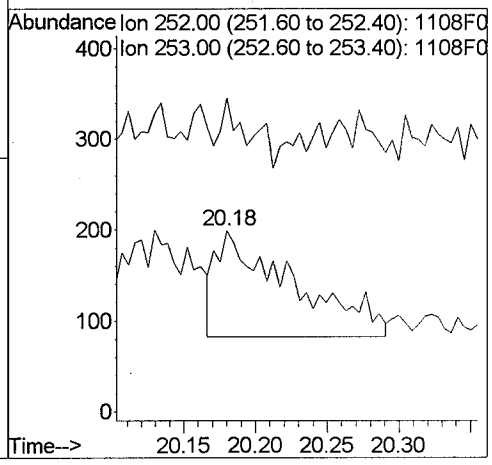


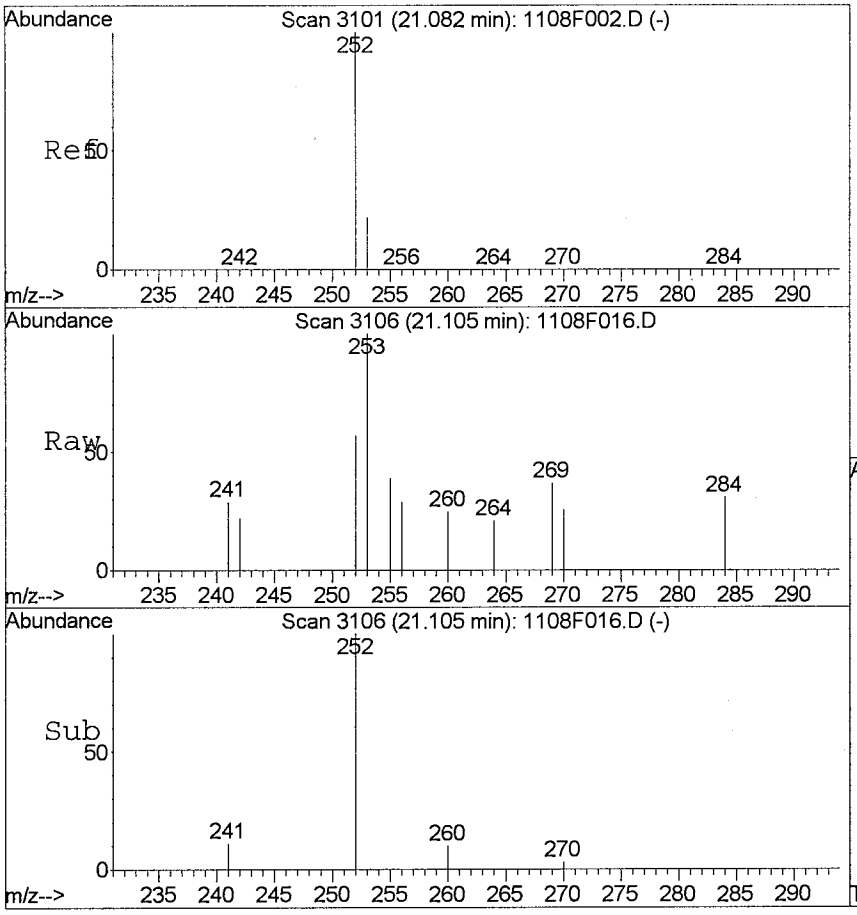


#50
Benzo(k)fluoranthene
Concen: 2.93 ng/ml m
RT: 20.18 min Scan# 2905
Delta R.T. 0.00 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:252 Resp: 425

Ion	Ratio	Lower	Upper
252	100		
253	173.9	0.0	51.7#

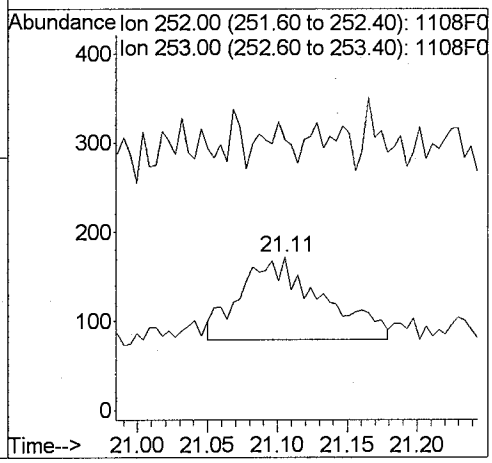


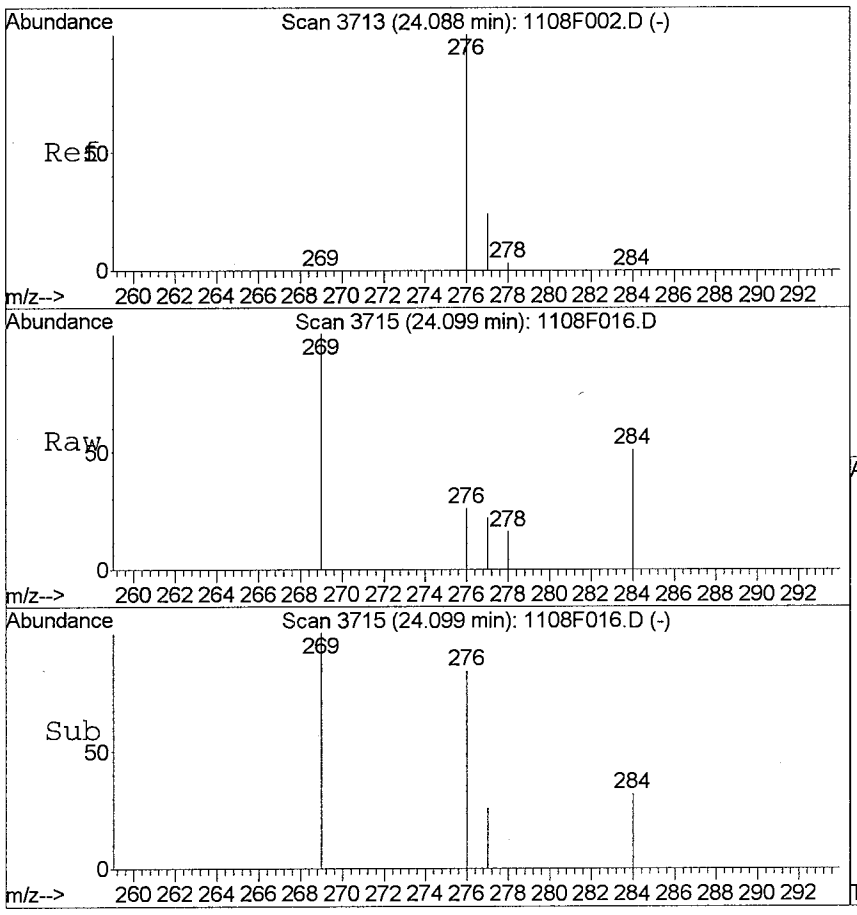


#51
Benzo(e)pyrene
Concen: 2.90 ng/ml m
RT: 21.11 min Scan# 3106
Delta R.T. 0.02 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:252 Resp: 372

Ion	Ratio	Lower	Upper
252	100		
253	176.2	0.0	51.8#

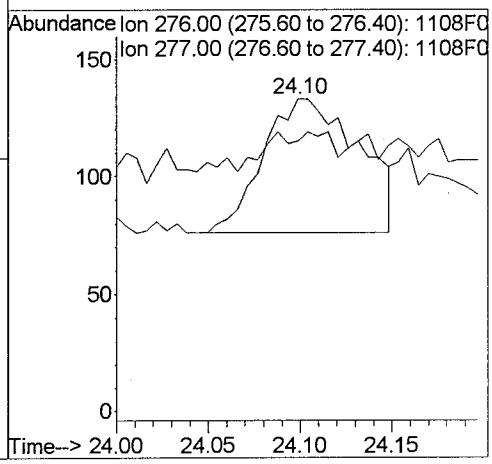


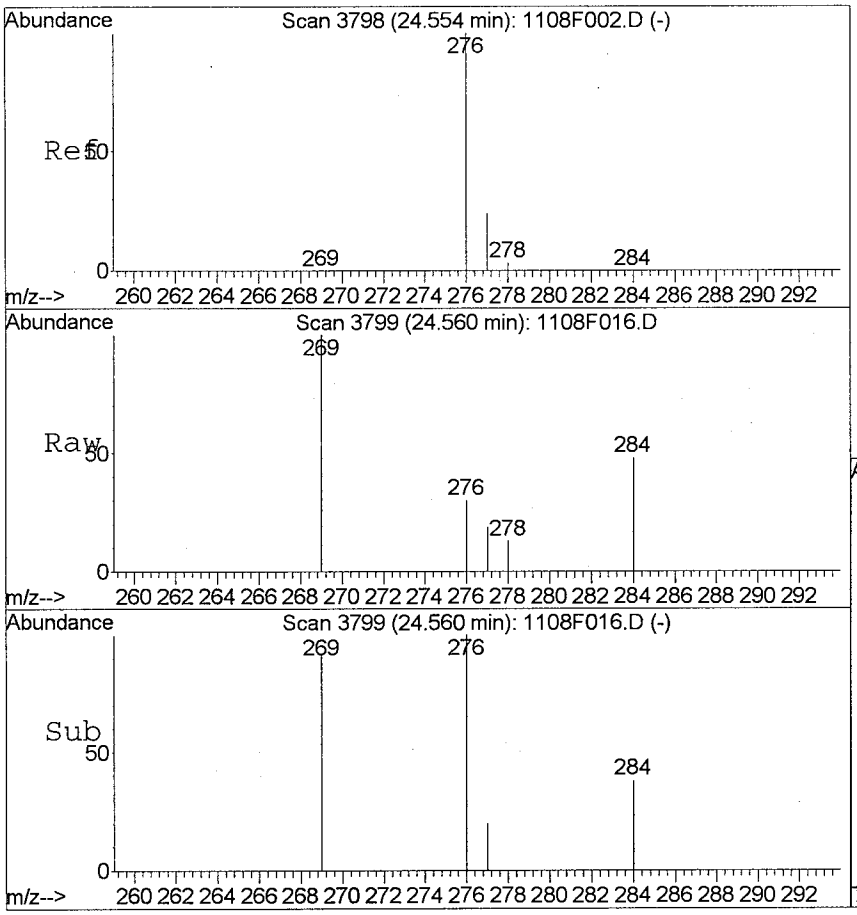


#54
Indeno(1,2,3-cd)pyrene
Concen: 3.52 ng/ml
RT: 24.10 min Scan# 3715
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:276 Resp: 208

Ion	Ratio	Lower	Upper
276	100		
277	15.8	0.0	54.0

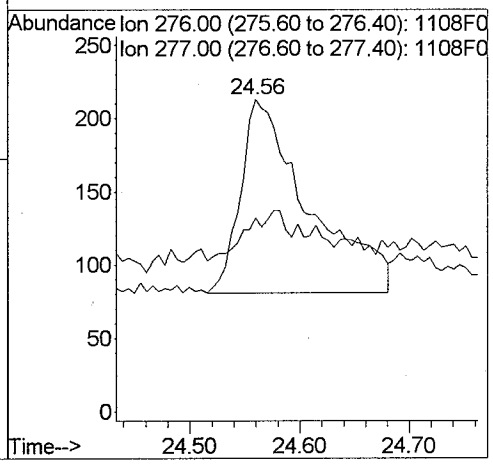




#56
Benzo(g,h,i)perylene
Concen: 5.83 ng/ml
RT: 24.56 min Scan# 3799
Delta R.T. 0.01 min
Lab File: 1108F016.D
Acq: 8 Nov 2003 2:55 pm

Tgt Ion:276 Resp: 571

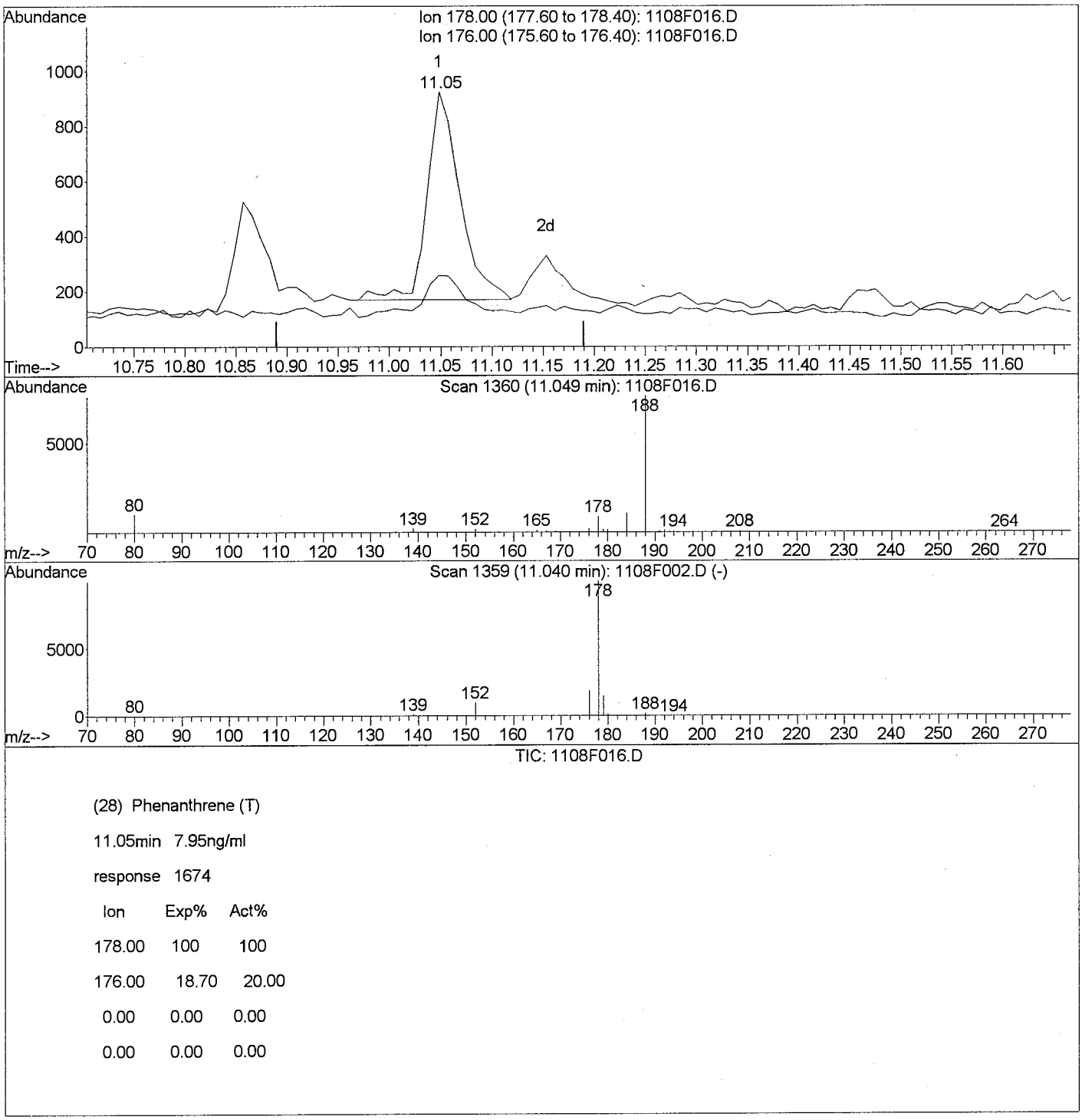
Ion	Ratio	Lower	Upper
276	100		
277	22.0	0.0	54.3



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F016.D Vial: 13
Acq On : 8 Nov 2003 2:55 pm Operator: LWeiskopf
Sample : K2308419-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F016.D

(28) Phenanthrene (T)

11.05min 7.95ng/ml

response 1674

Ion	Exp%	Act%
178.00	100	100
176.00	18.70	20.00
0.00	0.00	0.00
0.00	0.00	0.00

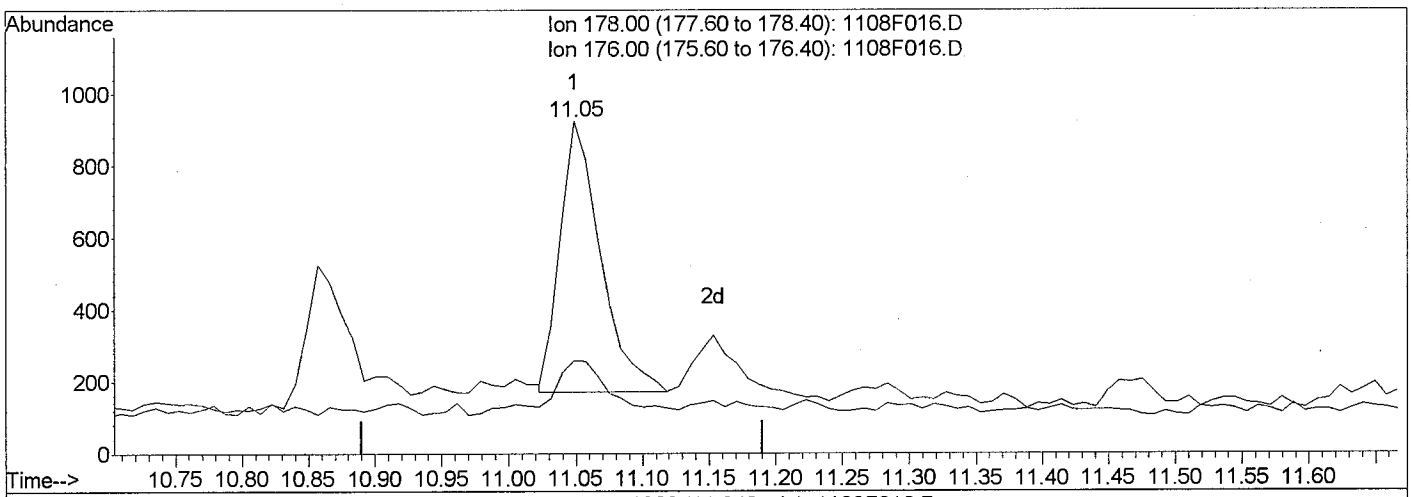
1108F016.D 1107ALK.M Mon Nov 10 16:36:36 2003

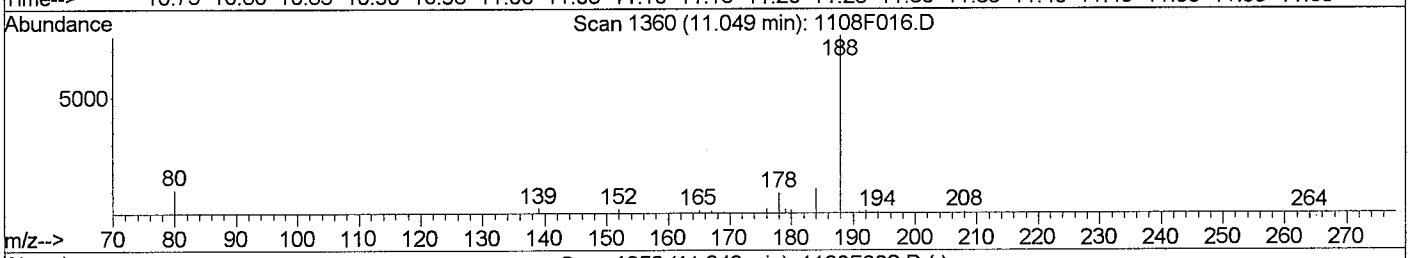
Quantitation Report (Qedit)

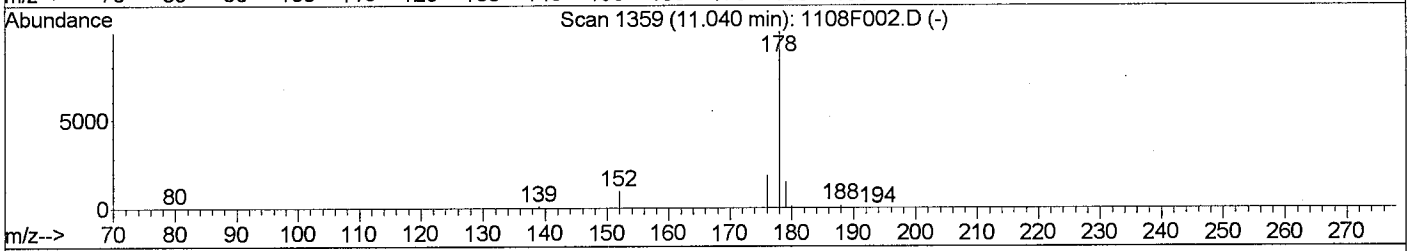
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Acq On : 8 Nov 2003 2:55 pm
Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(28) Phenanthrene (T)

11.05min 7.54ng/ml m

response 1588

Ion	Exp%	Act%
178.00	100	100
176.00	18.70	27.89
0.00	0.00	0.00
0.00	0.00	0.00

over integrated lwc/10/3 11/11/03

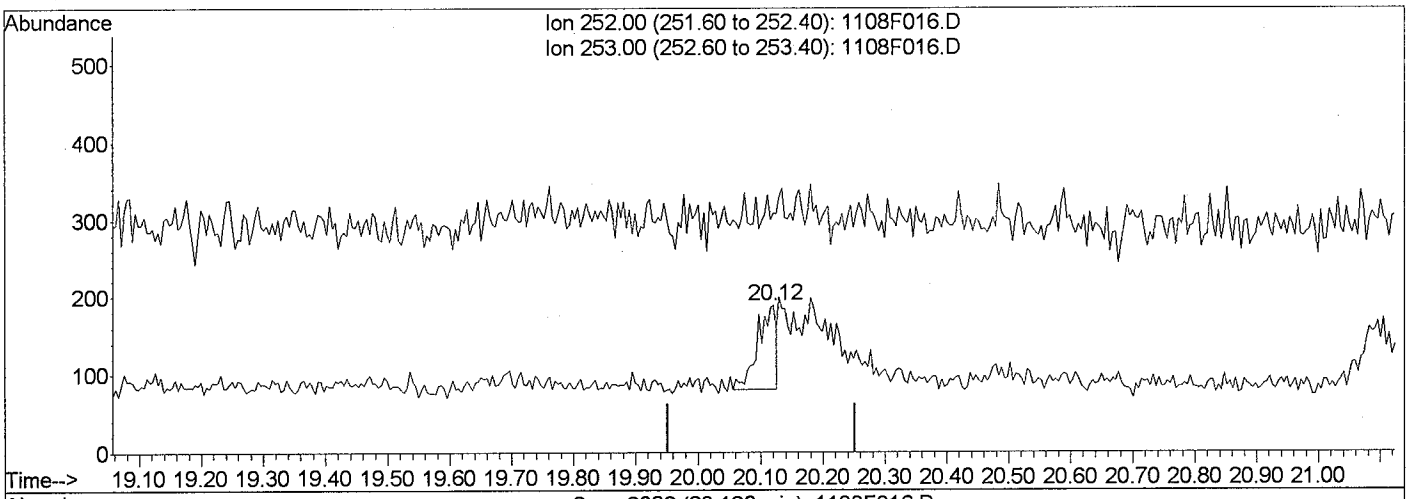
1108F016.D 1107ALK.M Mon Nov 10 16:36:40 2003

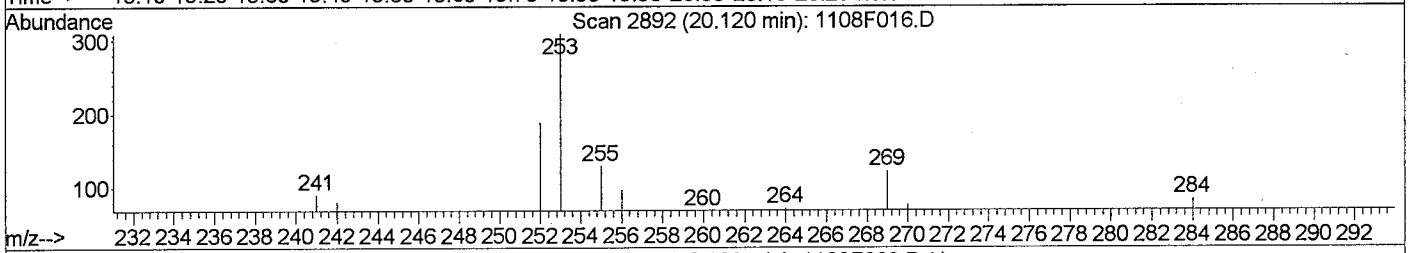
Quantitation Report (Qedit)

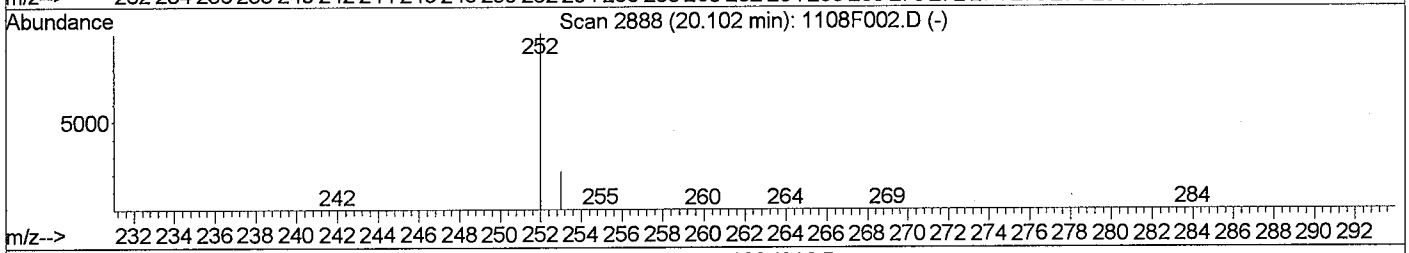
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Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(49) Benzo(b)fluoranthene (T)

20.12min 1.92ng/ml

response 220

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	8.26
0.00	0.00	0.00
0.00	0.00	0.00

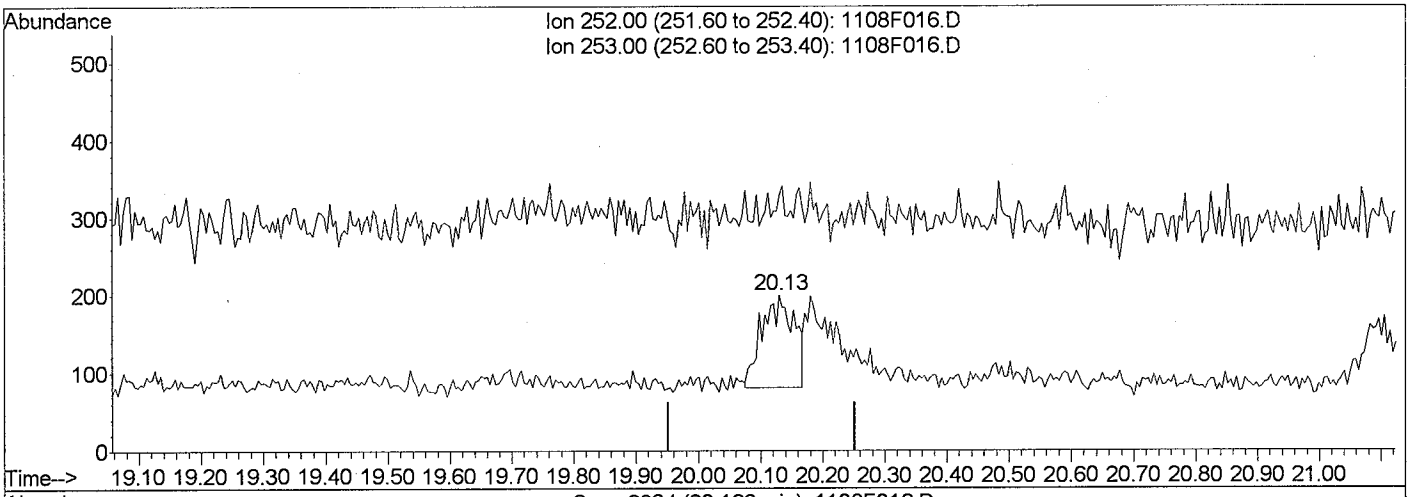
1108F016.D 1107ALK.M Mon Nov 10 16:36:52 2003

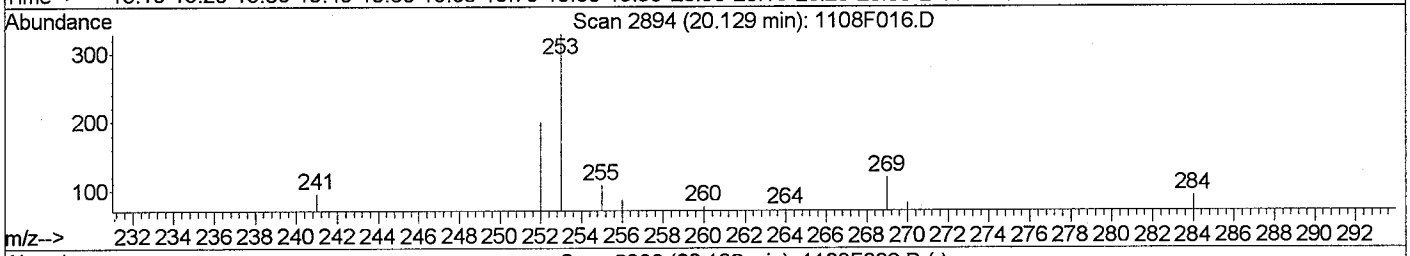
Quantitation Report (Qedit)

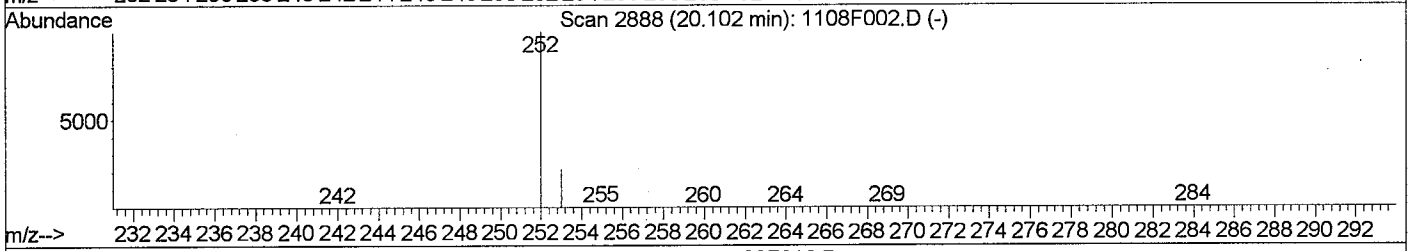
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Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(49) Benzo(b)fluoranthene (T)

20.13min 3.74ng/ml m

response 427

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	164.50#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
incomplete
mt 11/11/03

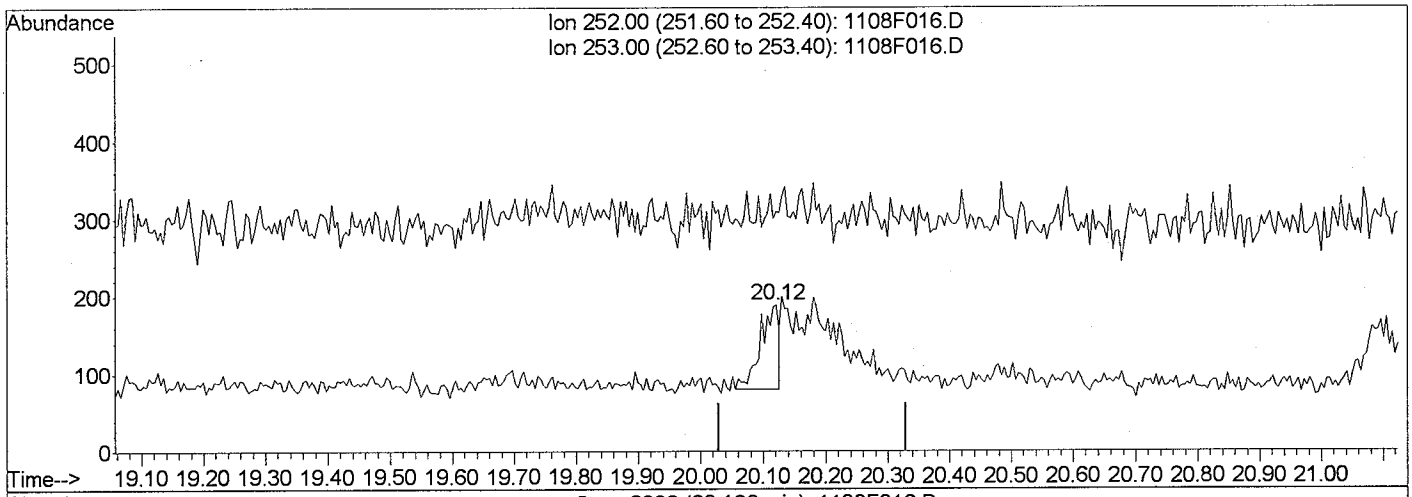
1108F016.D 1107ALK.M Mon Nov 10 16:36:57 2003

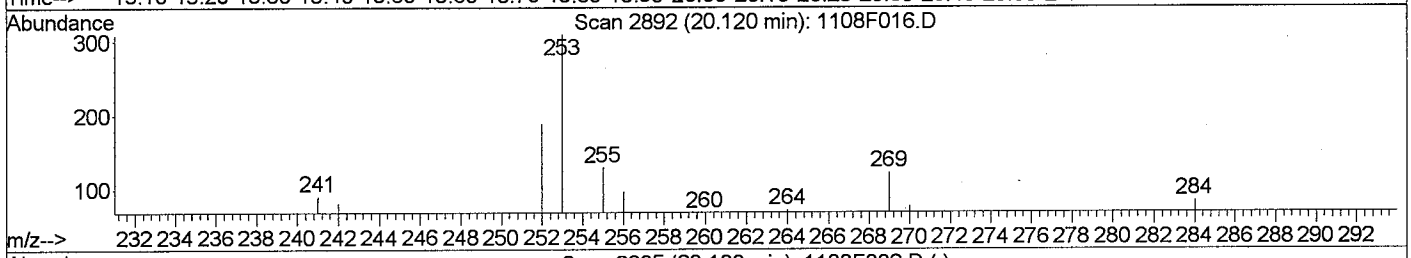
Quantitation Report (Qedit)

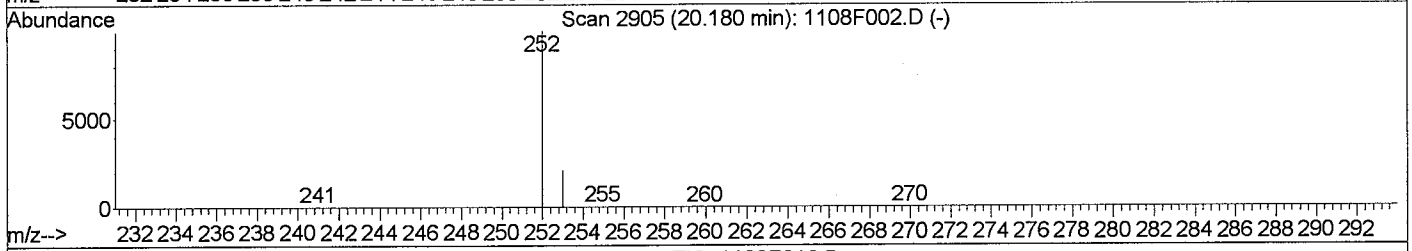
Data File : J:\MS11\DATA\110803\1108F016.D
Acq On : 8 Nov 2003 2:55 pm
Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(50) Benzo(k)fluoranthene (T)

20.12min 1.52ng/ml

response 220

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	8.26
0.00	0.00	0.00
0.00	0.00	0.00

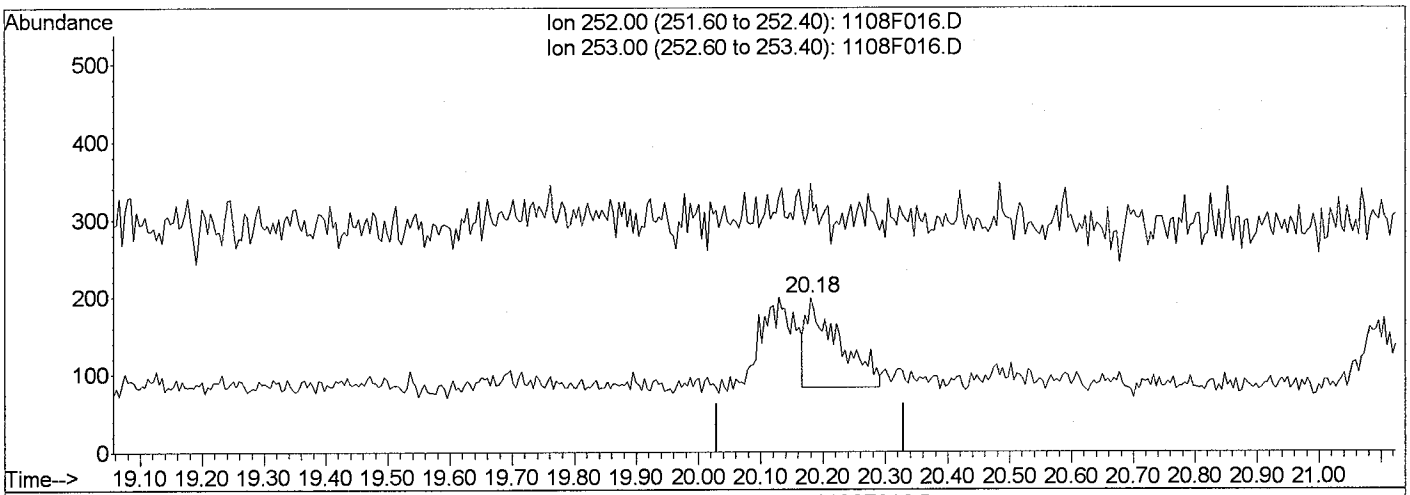
1108F016.D 1107ALK.M Mon Nov 10 16:36:59 2003

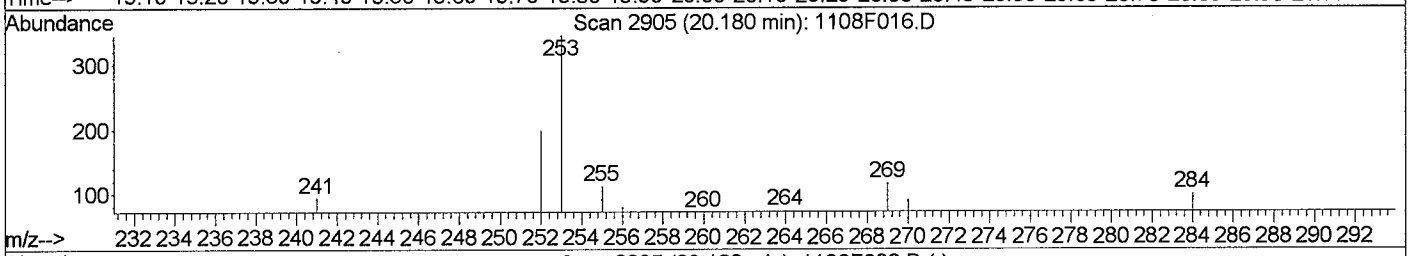
Quantitation Report (Qedit)

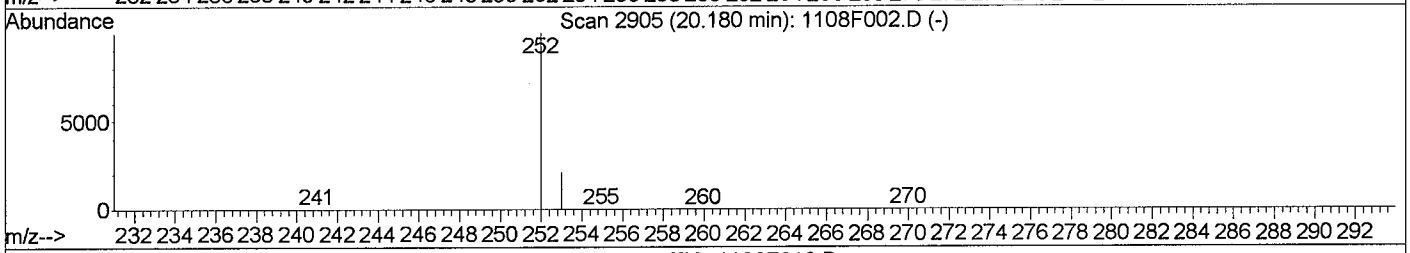
Data File : J:\MS11\DATA\110803\1108F016.D
Acq On : 8 Nov 2003 2:55 pm
Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(50) Benzo(k)fluoranthene (T)

20.18min 2.93ng/ml m

response 425

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	173.87#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/10/03 mnt 11/11/03

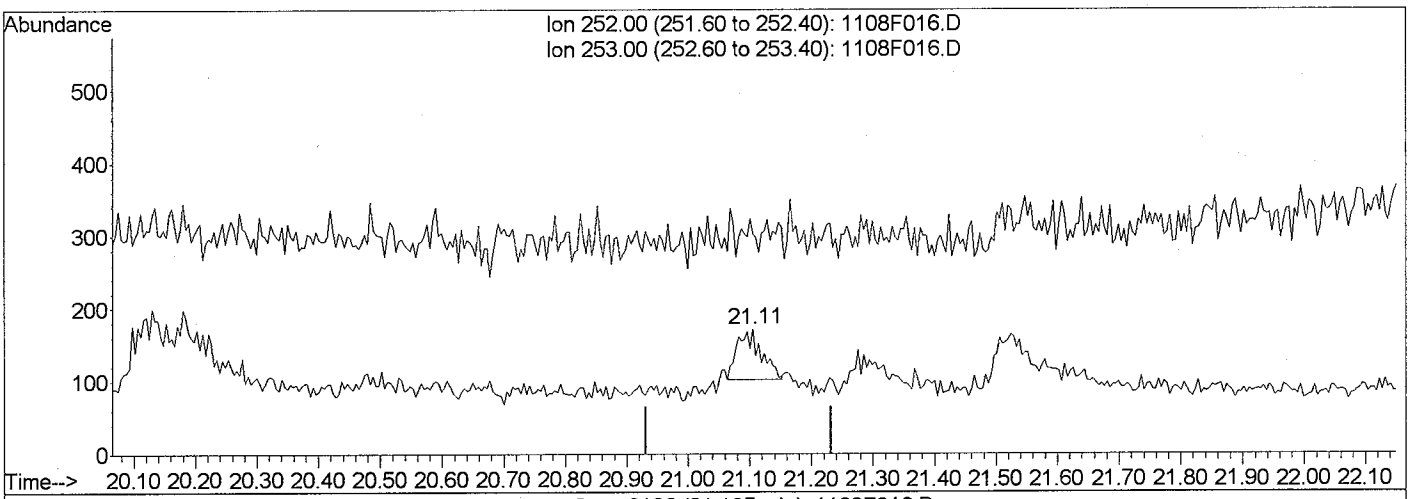
1108F016.D 1107ALK.M Mon Nov 10 16:37:05 2003

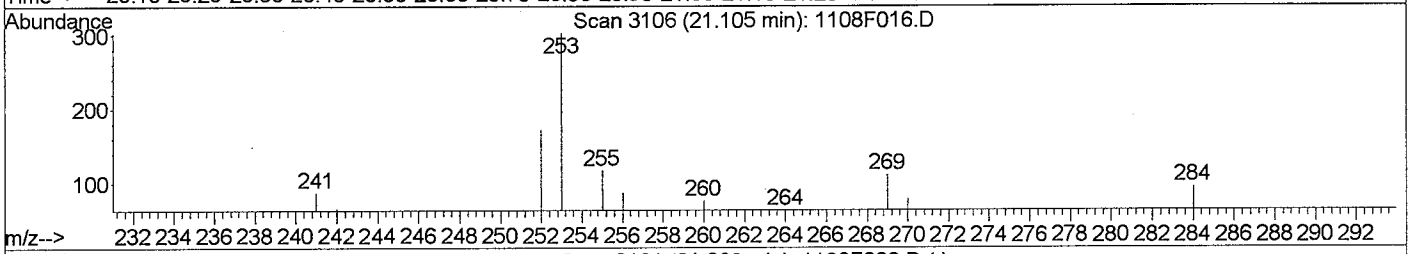
Quantitation Report (Qedit)

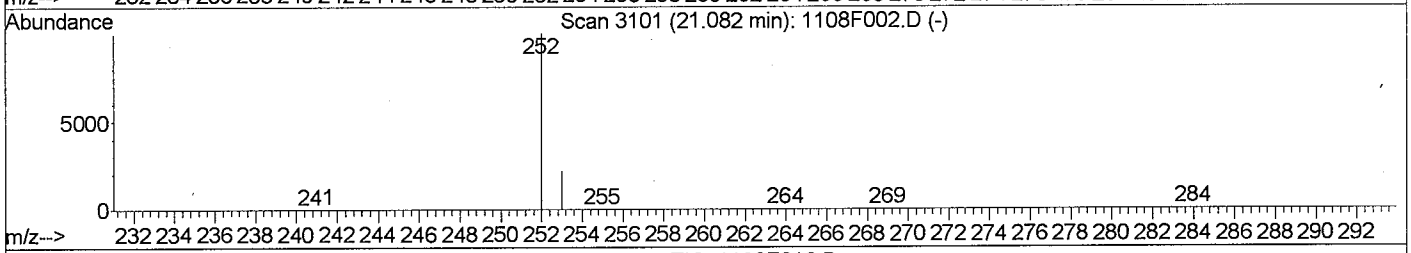
Data File : J:\MS11\DATA\110803\1108F016.D
Acq On : 8 Nov 2003 2:55 pm
Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(51) Benzo(e)pyrene (T)

21.11min 1.43ng/ml

response 184

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	34.29
0.00	0.00	0.00
0.00	0.00	0.00

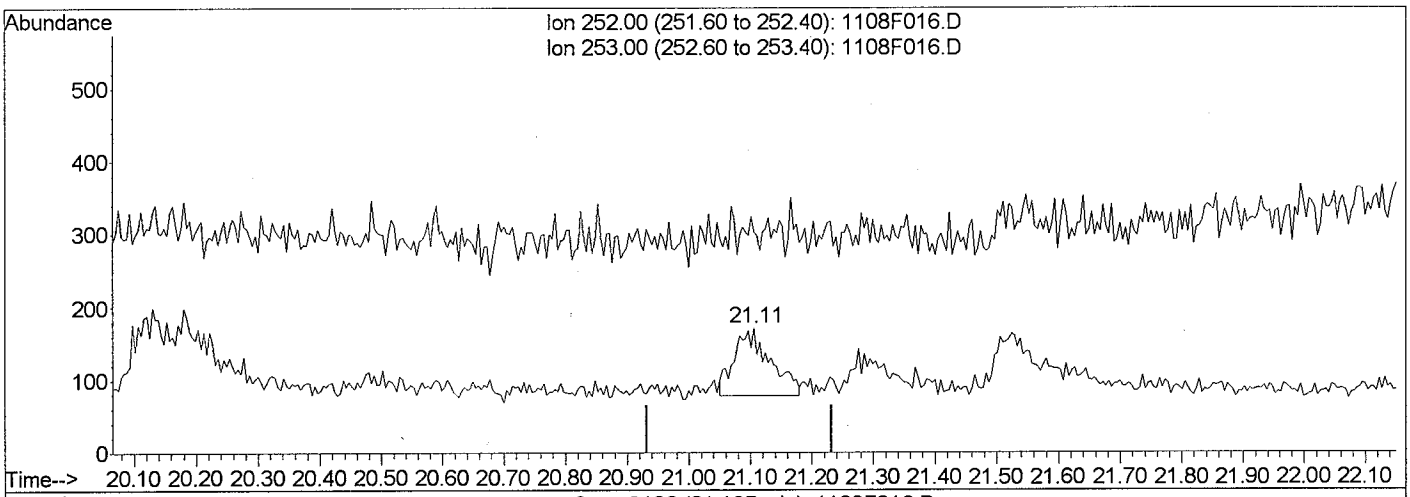
1108F016.D 1107ALK.M Mon Nov 10 16:37:08 2003

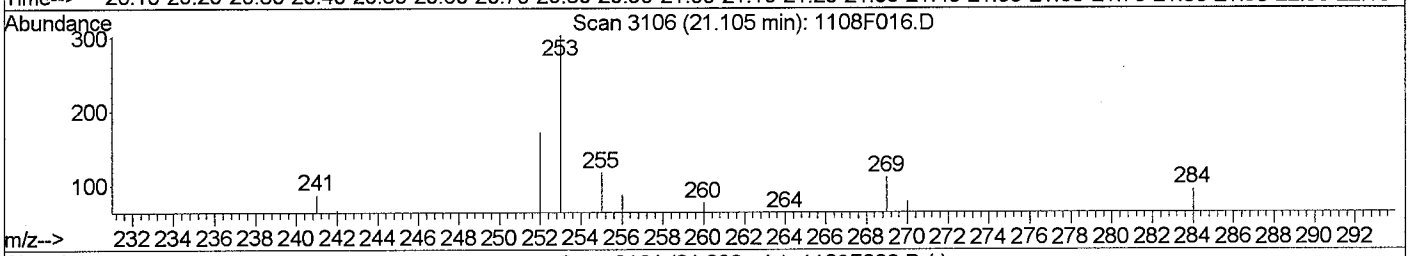
Quantitation Report (Qedit)

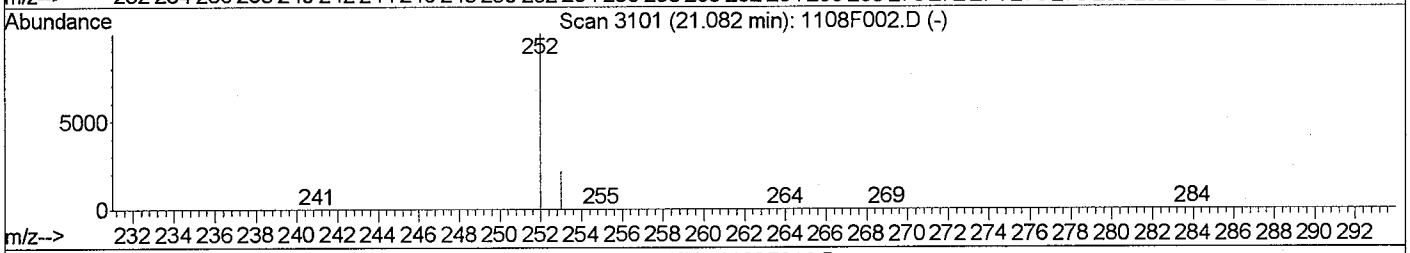
Data File : J:\MS11\DATA\110803\1108F016.D
Acq On : 8 Nov 2003 2:55 pm
Sample : K2308419-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:34 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(51) Benzo(e)pyrene (T)

21.11min 2.90ng/ml m

response 372

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	176.16#
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

complete

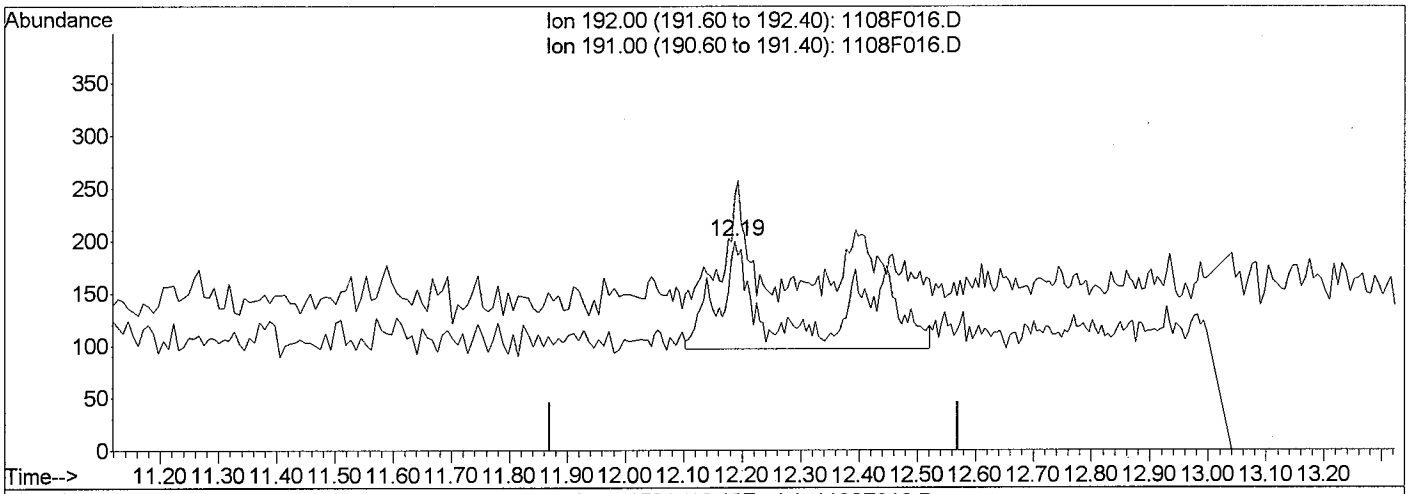
MT 11/11/03

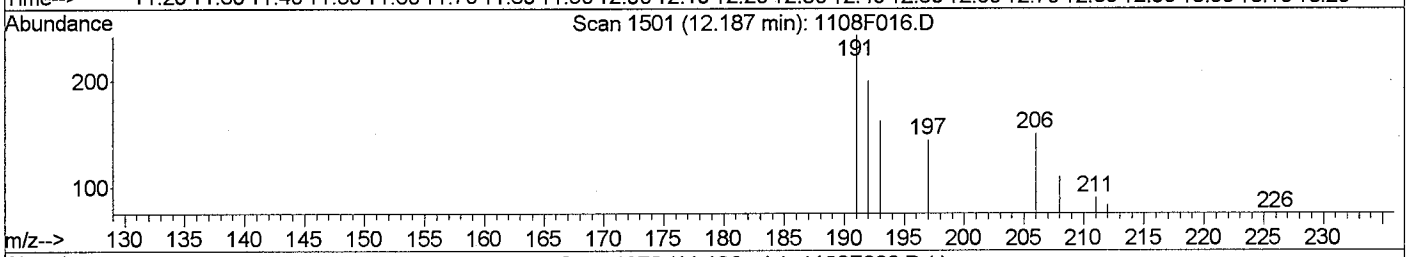
1108F016.D 1107ALK.M Mon Nov 10 16:37:12 2003

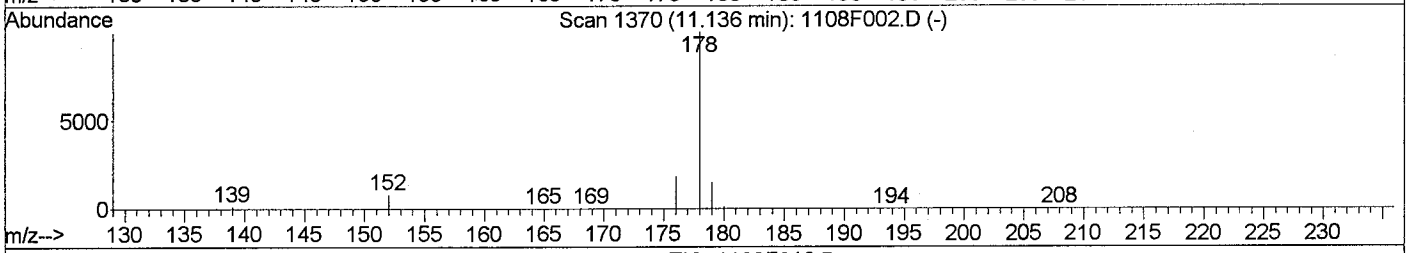
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F016.D Vial: 13
Acq On : 8 Nov 2003 2:55 pm Operator: LWeiskopf
Sample : K2308419-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F016.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 4.21ng/ml m

response 886

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	121.00#
0.00	0.00	0.00
0.00	0.00	0.00

lw 11/10/3

mt 11/11/03

1108F016.D 1107ALK.M Mon Nov 10 17:09:14 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4
Lab Code: K2308419-004

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4
Lab Code: K2308419-004

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	68	37-107	11/08/03	Acceptable
Fluoranthene-d10	78	18-137	11/08/03	Acceptable
Terphenyl-d14	104	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F017.D
Lab ID: K2308419-004
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 15:32
Date Quantitated: 11/10/2003 17:07
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: mat 11/11/03

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245660	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F017.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 15:32	**Quant Date:**	11/10/2003 17:07	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-004			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	229769	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	118606	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	164714	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	128344	1,000.00	OK
5	Perylene-d12	21.53	0.02	264	68924	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.01	0.01	0.00	176	161489	1,361	68	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	256885	1,558	78	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	244377	2,089	104	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1685	6.49	0.0064	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	230	1.50	0.0027	U	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	294	2.04	0.0025	U	
1	Biphenyl	7.09		0.00	154	797	4.28	0.0042	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene				152	0d		0.0018	U	
2	Acenaphthene	8.12	0.01	0.00	154	949	6.74	0.0066	J	
2	Dibenzofuran	8.42	0.01	0.00	168	263	1.39	0.0071	U	
2	Fluorene	9.06	0.01	0.00	166	339	2.25	0.0026	U	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F017.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 15:32	**Quant Date:**	11/10/2003 17:07	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-004			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene				184	0**d**		0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	1426	7.14	0.0070	J	
3	Anthracene	11.15	0.01	0.00	178	446	2.62	0.0026	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	779**m**	3.90	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	3763	18.94	0.019	J	
4	Pyrene	14.24		0.00	202	2846	16.97	0.017	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.11	0.02	0.00	228	346	2.71	0.0027	J	
4	Chrysene	17.19	0.01	0.00	228	1046	7.66	0.0075	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.12	0.02	0.00	252	358**m**	3.89	0.0038	J	
5	Benzo(k)fluoranthene	20.15	-0.03	0.00	252	524**m**	4.49	0.0044	J	
5	Benzo(e)pyrene	21.10	0.02	0.00	252	377**m**	3.65	0.0036	J	
5	Benzo(a)pyrene	21.29	0.02	0.00	252	167	2.13	0.0021	J	
5	Perylene				252	0**d**		0.0012	U	
5	Indeno(1,2,3-cd)pyrene	24.10	0.01	0.00	276	212	4.46	0.0044	J	
5	Dibenz(a,h)anthracene				278	0		0.0017	U	
5	Benzo(g,h,i)perylene	24.57	0.02	0.00	276	331	4.20	0.0041	J	

Prep Amount: 1020 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F017.D Vial: 14
Acq On : 8 Nov 2003 3:32 pm Operator: LWeiskopf
Sample : K2308419-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:10 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

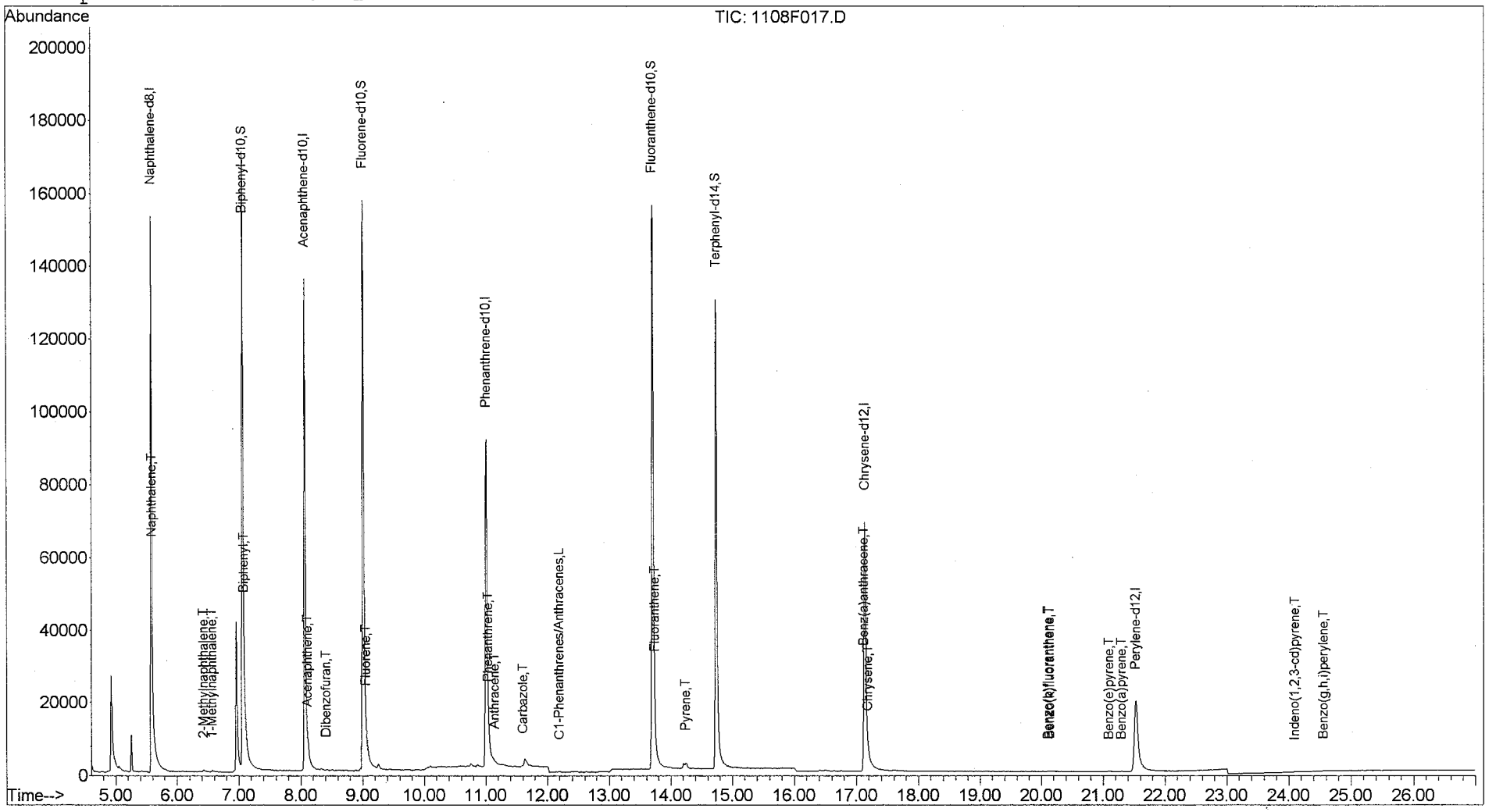
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	229769	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	118606	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	164714	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	128344	1000.00	ng/ml	0.00
48) Perylene-d12	21.53	264	68924	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	231408	1374.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 137.48%			
16) Fluorene-d10	9.01	176	161489	1361.39	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 136.14%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	256885	1558.22	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 155.82%			
41) Terphenyl-d14	14.74	244	244377	2089.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 208.92%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1685	6.49	ng/ml	93
3) 2-Methylnaphthalene	6.42	142	230	1.50	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	294	2.04	ng/ml#	49
6) Biphenyl	7.09	154	797	4.28	ng/ml	91
13) Acenaphthene	8.12	154	949	6.74	ng/ml	90
14) Dibenzofuran	8.42	168	263	1.39	ng/ml	98
17) Fluorene	9.06	166	339	2.25	ng/ml	86
28) Phenanthrene	11.05	178	1426	7.14	ng/ml	95
29) Anthracene	11.15	178	446	2.62	ng/ml	96
30) Carbazole	11.60	167	696	5.16	ng/ml	84
32) C1-Phenanthrenes/Anthracen	12.19	192	779m	3.90	ng/ml	
36) Fluoranthene	13.74	202	3763	18.94	ng/ml	98
39) Pyrene	14.24	202	2846	16.97	ng/ml	100
42) Benz(a)anthracene	17.11	228	346	2.71	ng/ml	91
43) Chrysene	17.19	228	1046	7.66	ng/ml	99
49) Benzo(b)fluoranthene	20.12	252	358m	3.89	ng/ml	
50) Benzo(k)fluoranthene	20.15	252	524m	4.49	ng/ml	
51) Benzo(e)pyrene	21.10	252	377m	3.65	ng/ml	
52) Benzo(a)pyrene	21.29	252	167	2.13	ng/ml	52
54) Indeno(1,2,3-cd)pyrene	24.10	276	212	4.46	ng/ml	94
56) Benzo(g,h,i)perylene	24.57	276	331	4.20	ng/ml	91

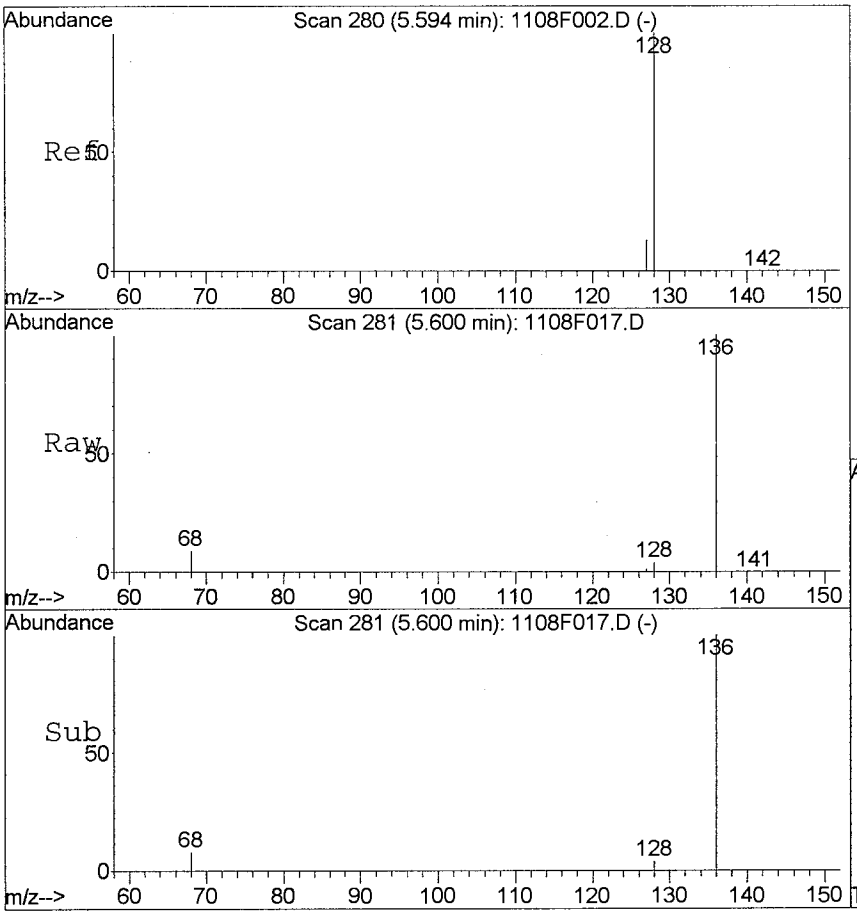
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F017.D Vial: 14
Acq On : 8 Nov 2003 3:32 pm Operator: LWeiskopf
Sample : K2308419-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:07 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

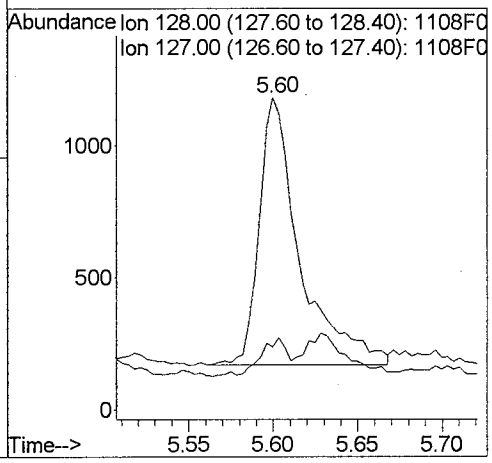


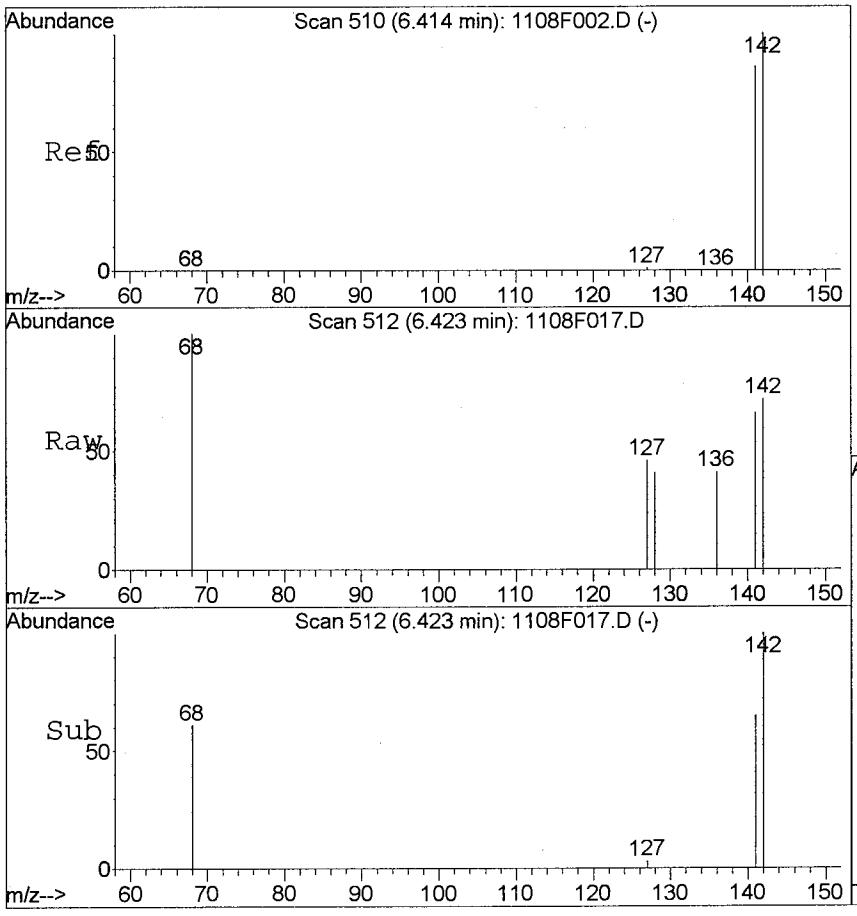


#2
Naphthalene
Concen: 6.49 ng/ml
RT: 5.60 min Scan# 281
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:128 Resp: 1685

Ion	Ratio	Lower	Upper
128	100		
127	10.8	0.0	43.5

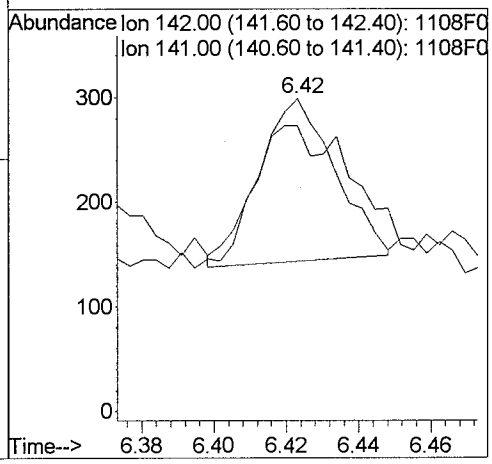


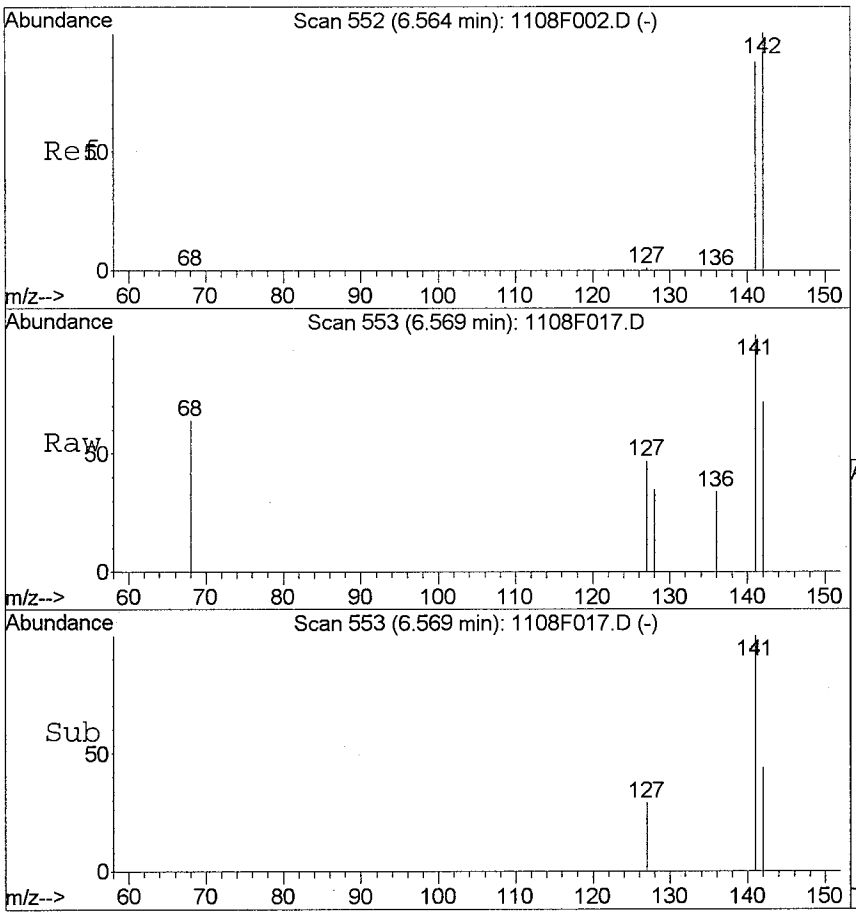


#3
2-Methylnaphthalene
Concen: 1.50 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:142 Resp: 230

Ion	Ratio	Lower	Upper
142	100		
141	84.7	56.1	116.1

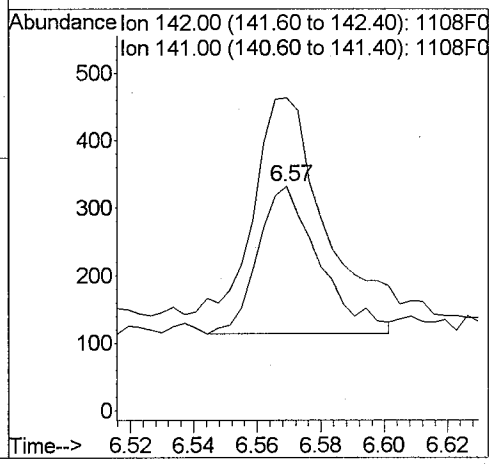


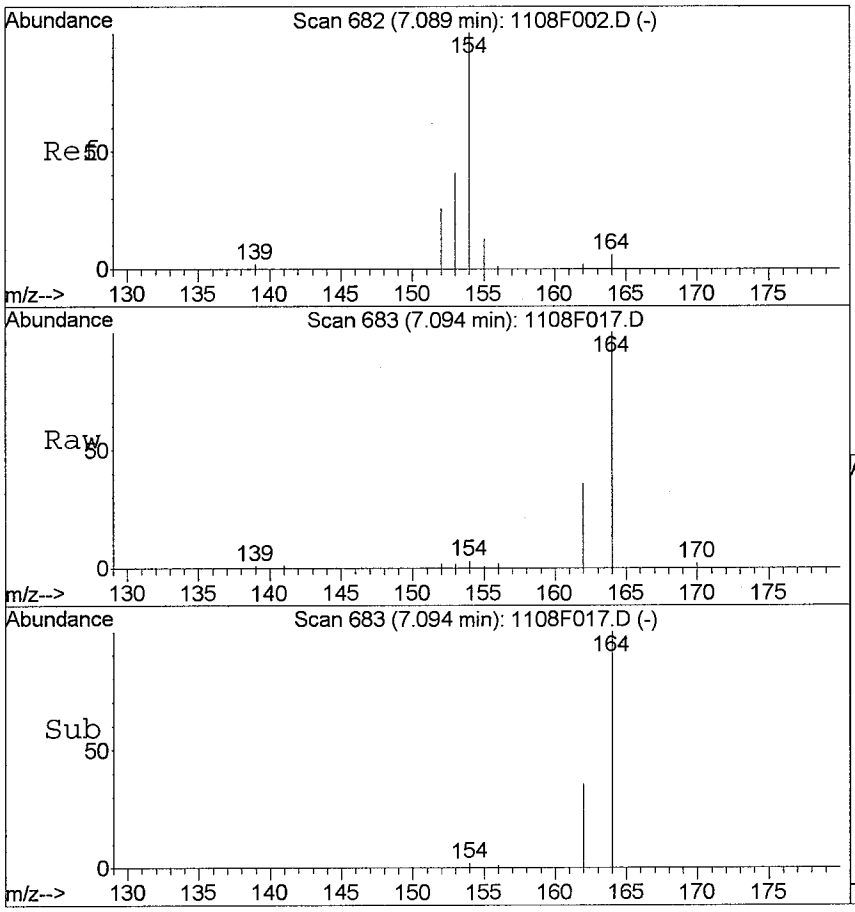


#4
1-Methylnaphthalene
Concen: 2.04 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:142 Resp: 294

Ion	Ratio	Lower	Upper
142	100		
141	135.8	58.4	118.4#

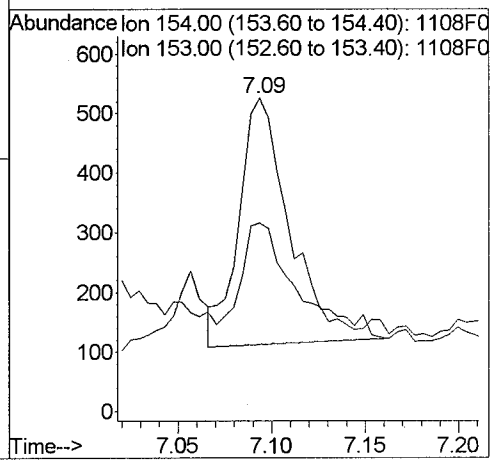


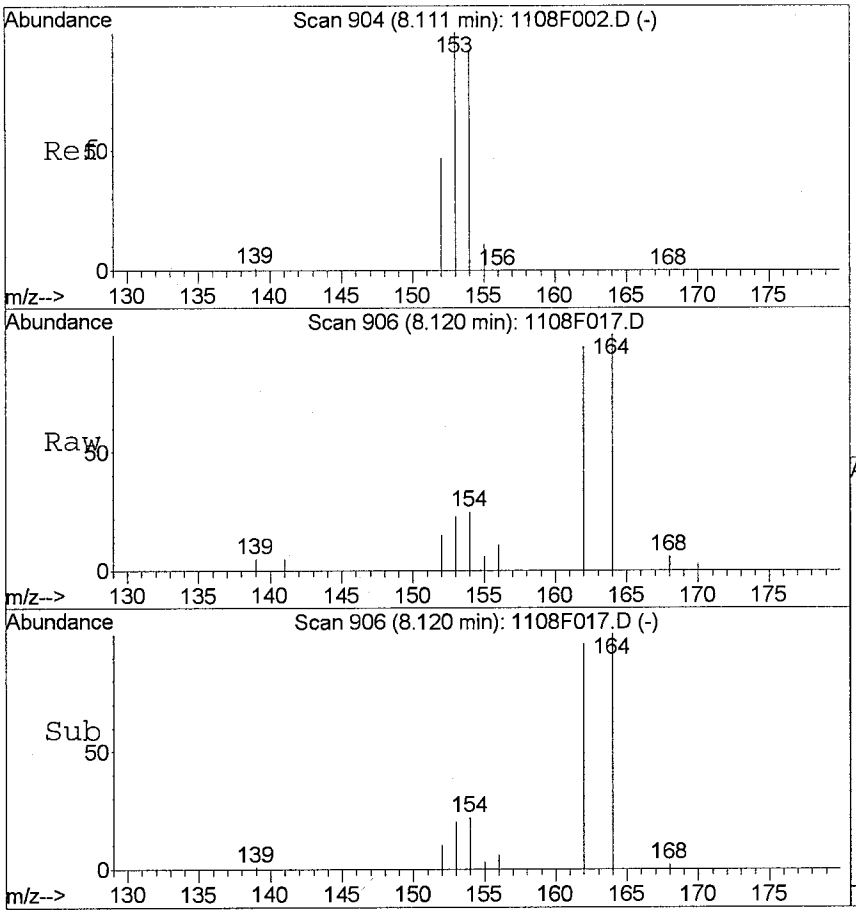


#6
Biphenyl
Concen: 4.28 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:154 Resp: 797

Ion	Ratio	Lower	Upper
154	100		
153	45.9	10.5	70.5

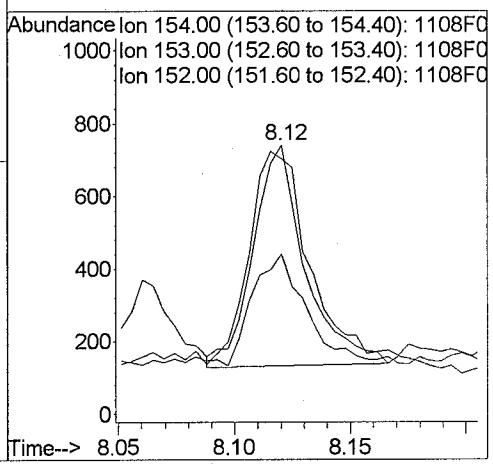


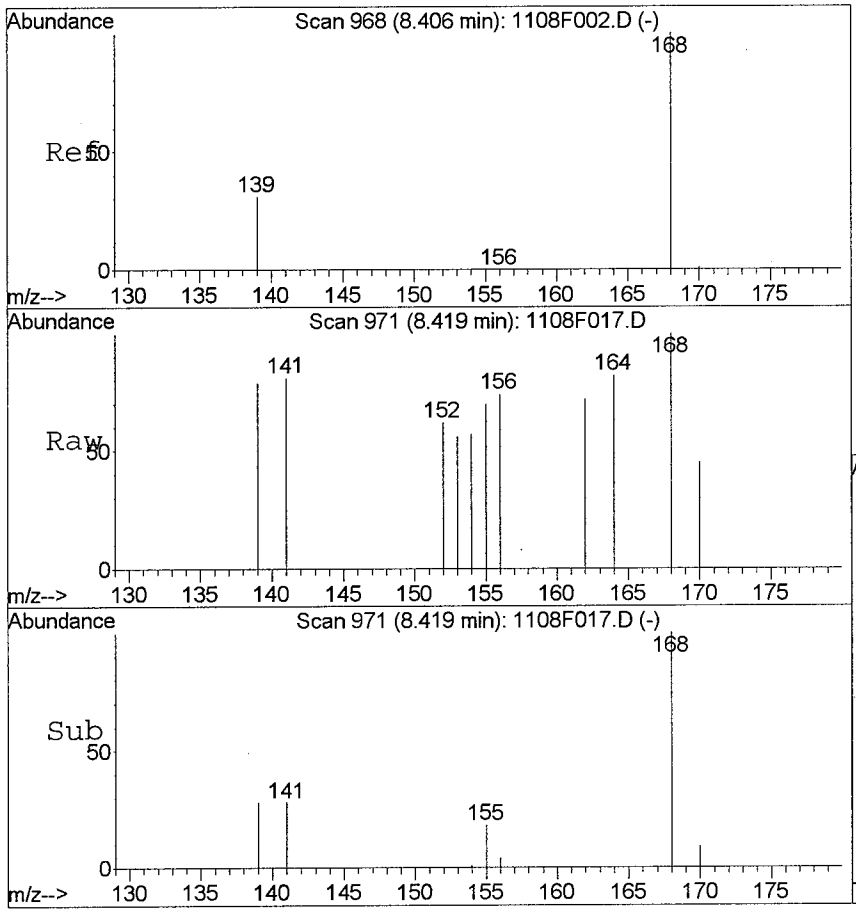


#13
Acenaphthene
Concen: 6.74 ng/ml
RT: 8.12 min Scan# 906
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:154 Resp: 949

Ion	Ratio	Lower	Upper
154	100		
153	94.2	78.6	138.6
152	49.0	21.5	81.5

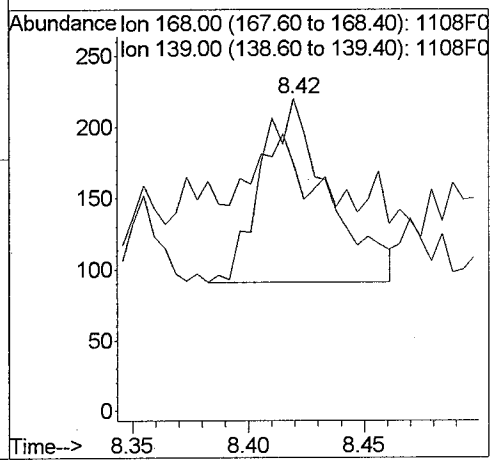


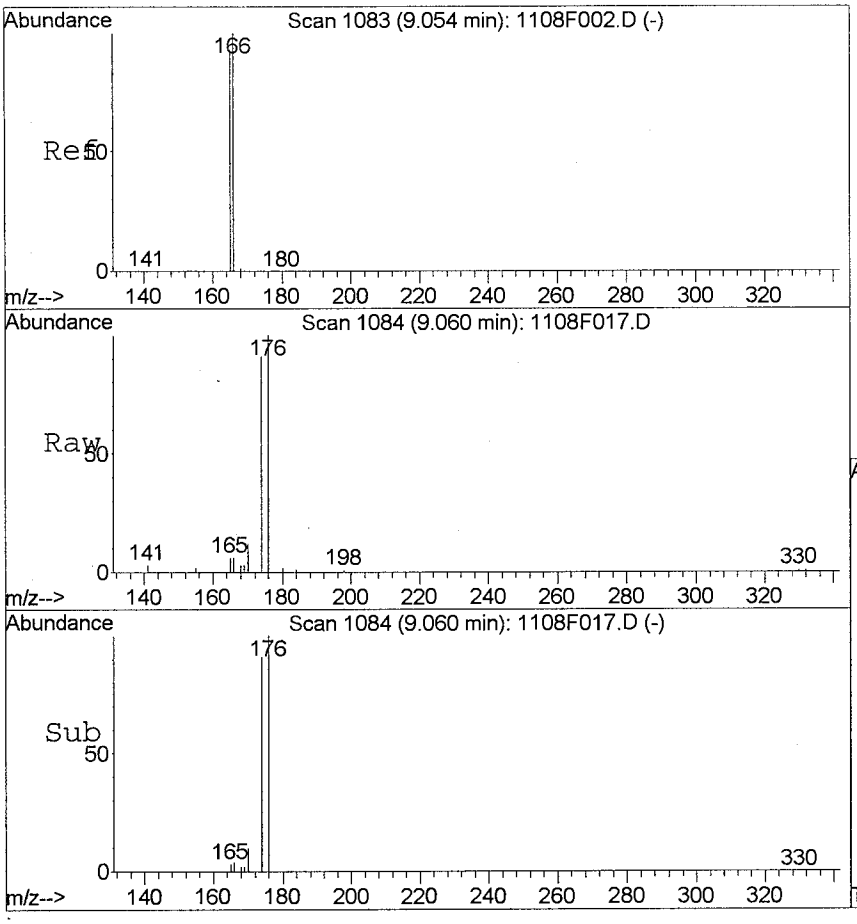


#14
Dibenzofuran
Concen: 1.39 ng/ml
RT: 8.42 min Scan# 971
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:168 Resp: 263

Ion	Ratio	Lower	Upper
168	100		
139	32.6	1.2	61.2

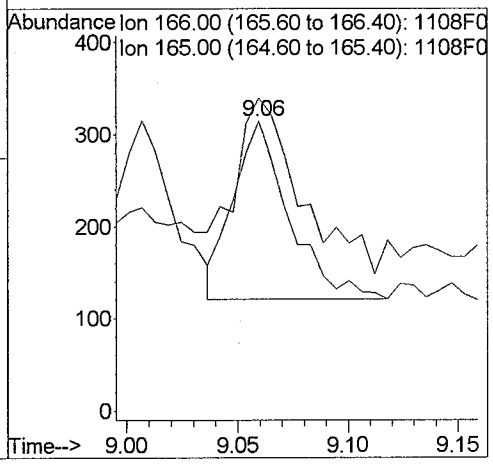


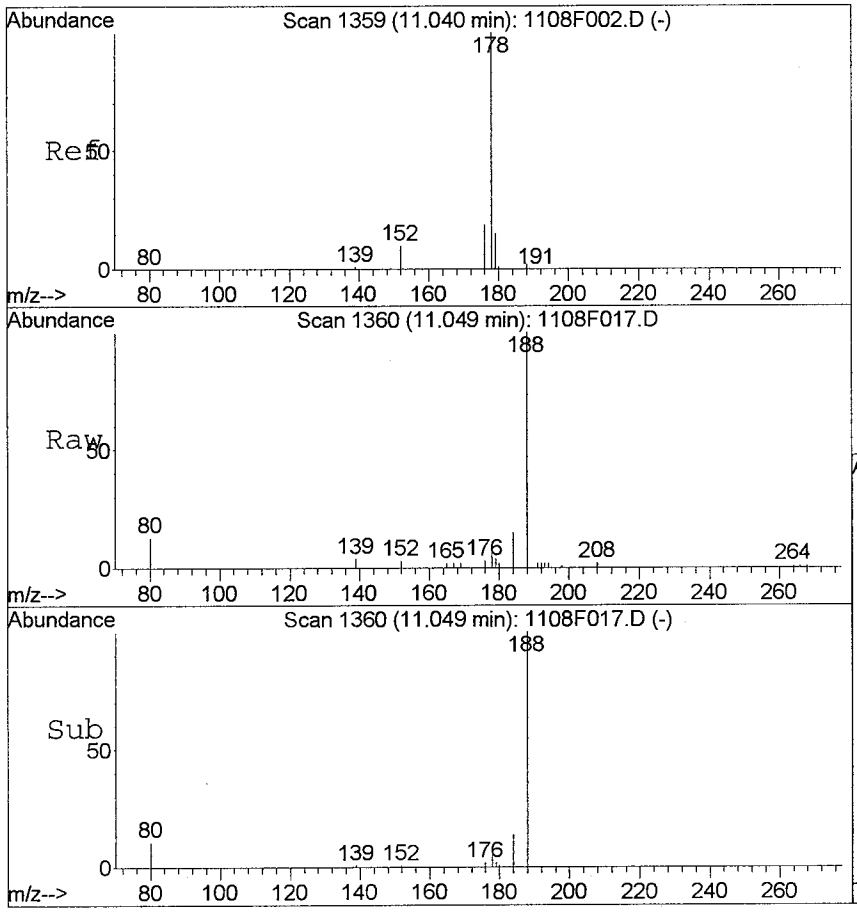


#17
Fluorene
Concen: 2.25 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:166 Resp: 339

Ion	Ratio	Lower	Upper
166	100		
165	79.9	62.9	122.9

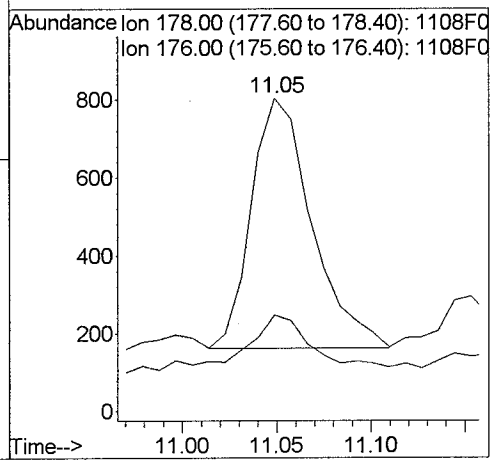


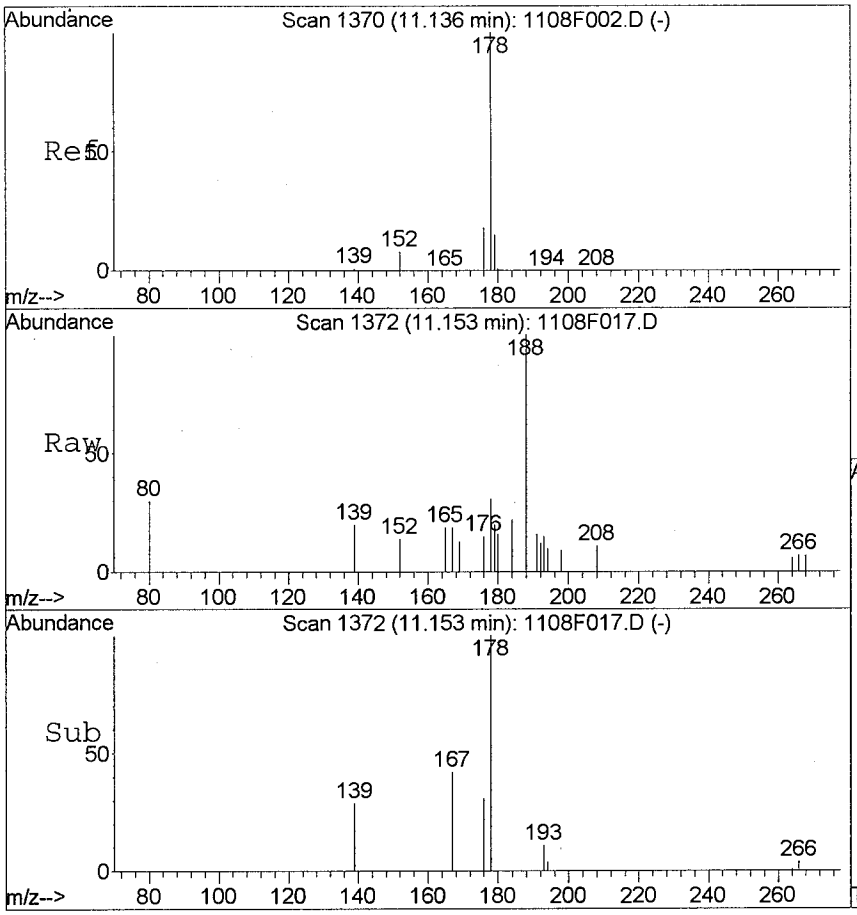


#28
Phenanthrene
Concen: 7.14 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:178 Resp: 1426

Ion	Ratio	Lower	Upper
178	100		
176	20.7	0.0	48.7

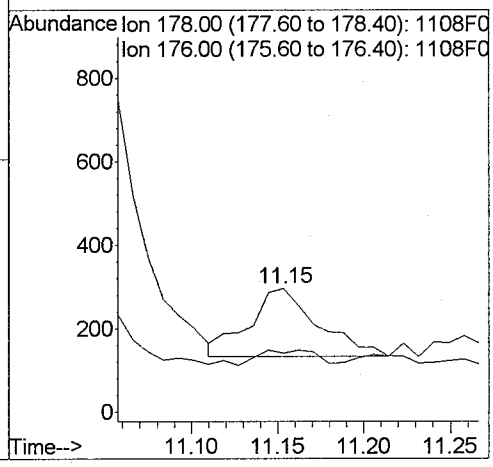


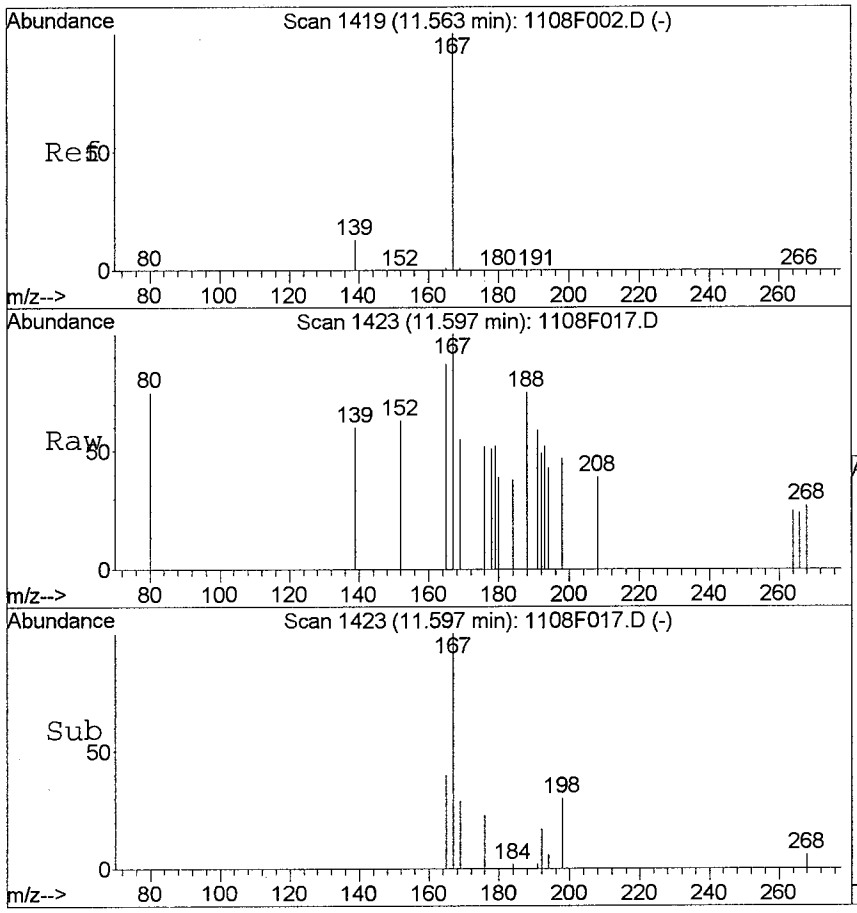


#29
Anthracene
Concen: 2.62 ng/ml
RT: 11.15 min Scan# 1372
Delta R.T. 0.02 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:178 Resp: 446

Ion	Ratio	Lower	Upper
178	100		
176	16.7	0.0	48.3

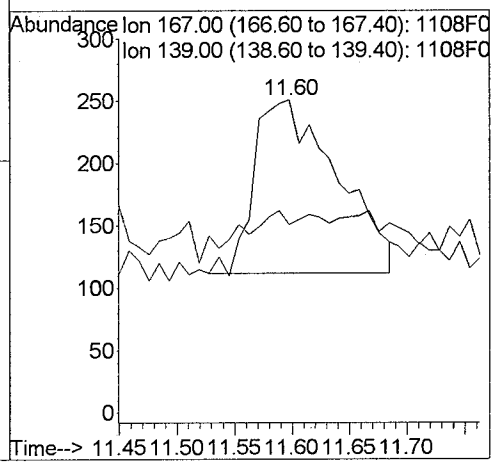


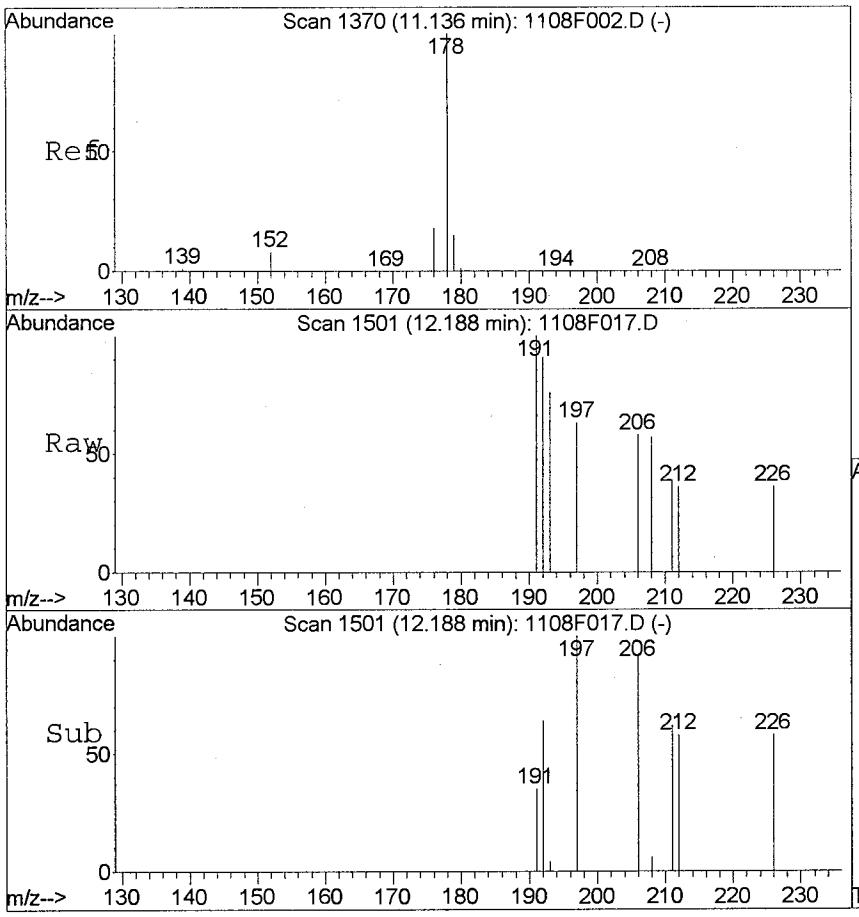


#30
Carbazole
Concen: 5.16 ng/ml
RT: 11.60 min Scan# 1423
Delta R.T. 0.03 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:167 Resp: 696

Ion	Ratio	Lower	Upper
167	100		
139	6.5	0.0	42.6

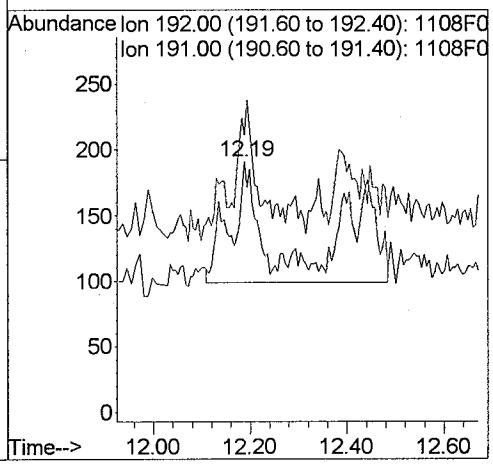


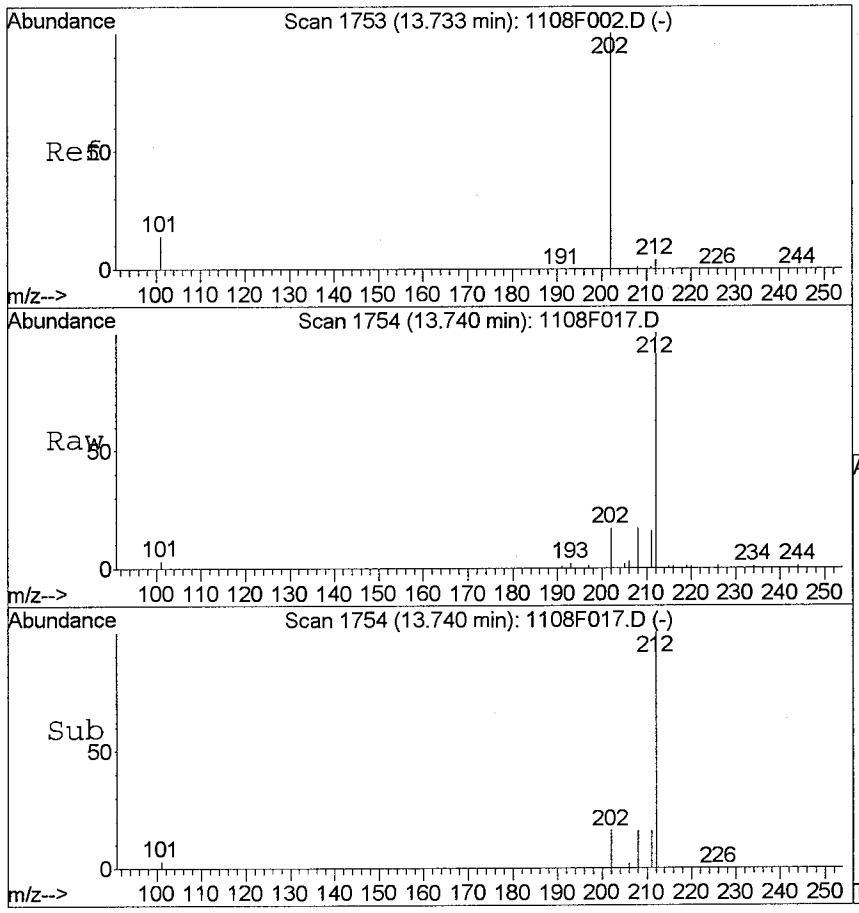


#32
C1-Phenanthrenes/Anthracenes
Concen: 3.90 ng/ml m
RT: 12.19 min Scan# 1501
Delta R.T. -0.03 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:192 Resp: 779

Ion	Ratio	Lower	Upper
192	100		
191	110.5	25.3	85.3#

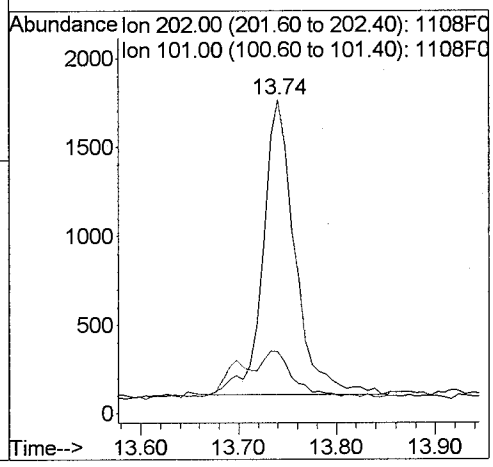


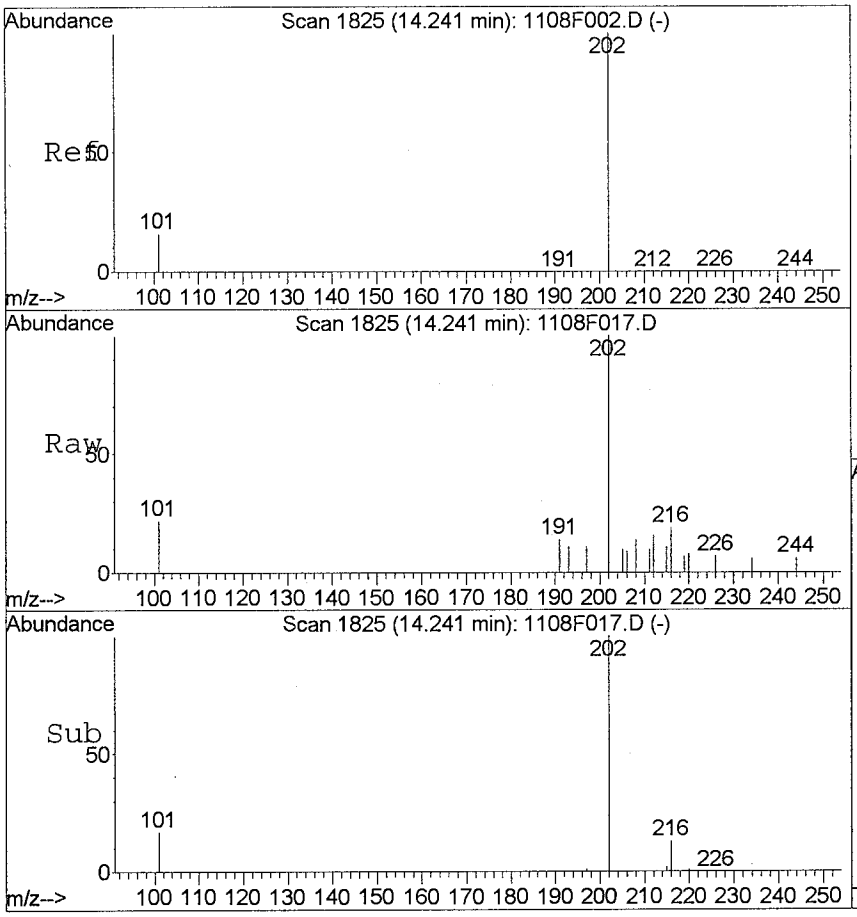


#36
Fluoranthene
Concen: 18.94 ng/ml
RT: 13.74 min Scan# 1754
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:202 Resp: 3763

Ion	Ratio	Lower	Upper
202	100		
101	15.0	0.0	44.3

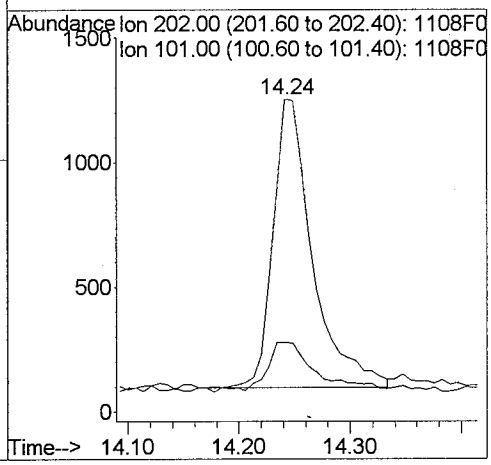


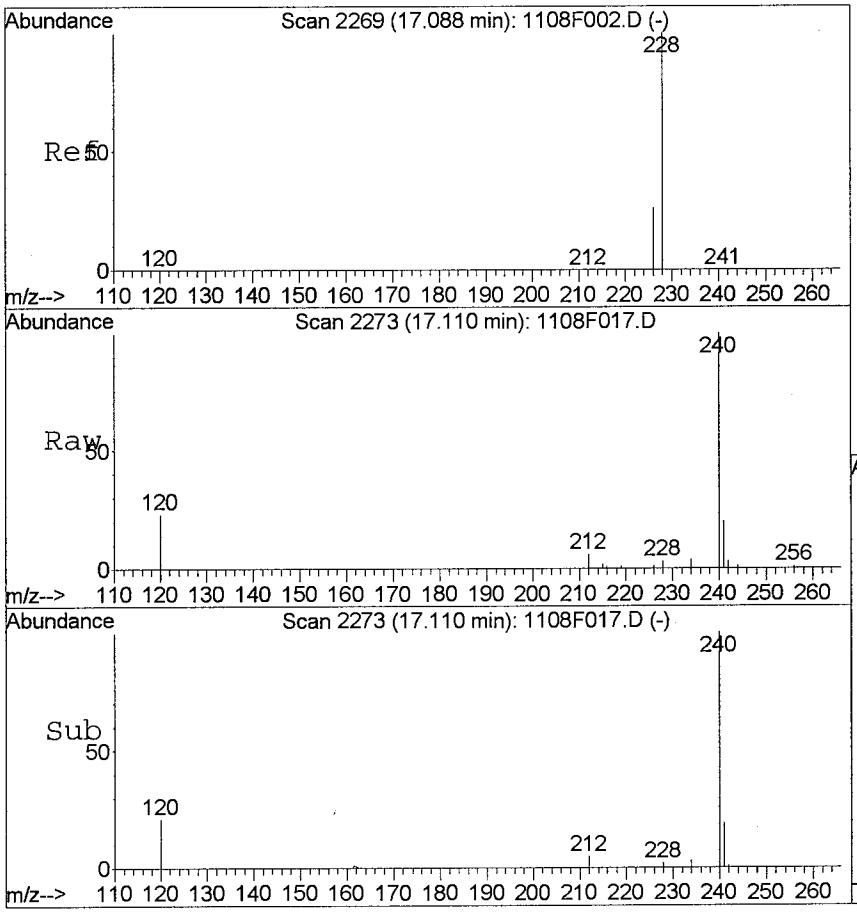


#39
Pyrene
Concen: 16.97 ng/ml
RT: 14.24 min Scan# 1825
Delta R.T. -0.00 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:202 Resp: 2846

Ion	Ratio	Lower	Upper
202	100		
101	16.0	0.0	46.2

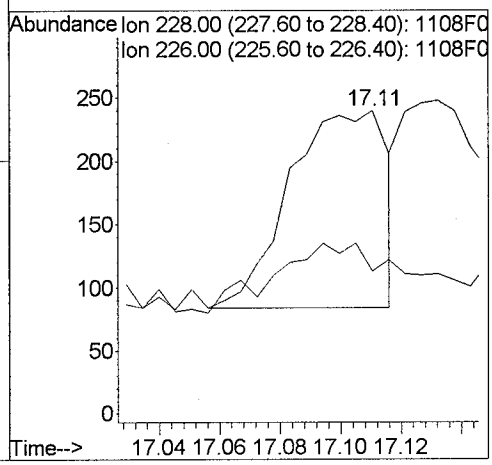


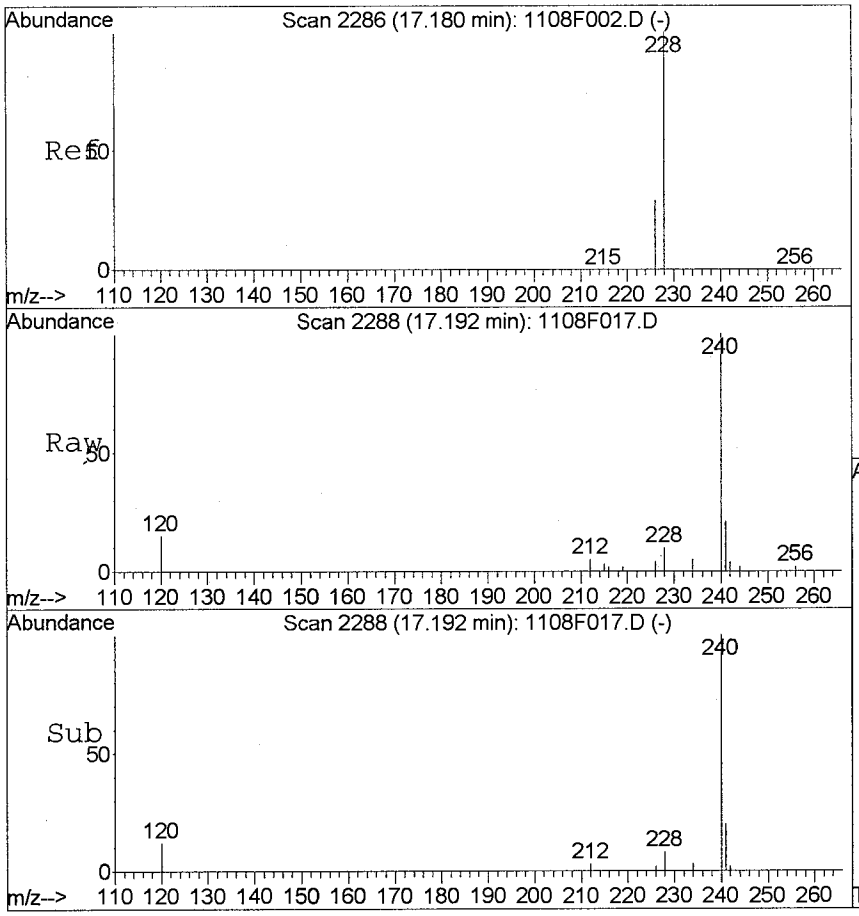


#42
Benz(a)anthracene
Concen: 2.71 ng/ml
RT: 17.11 min Scan# 2273
Delta R.T. 0.02 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:228 Resp: 346

Ion	Ratio	Lower	Upper
228	100		
226	21.2	0.0	55.8

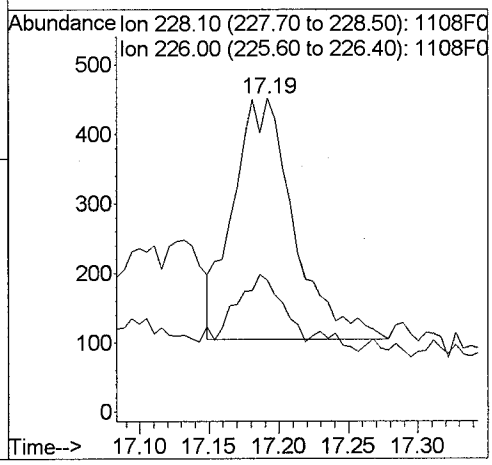


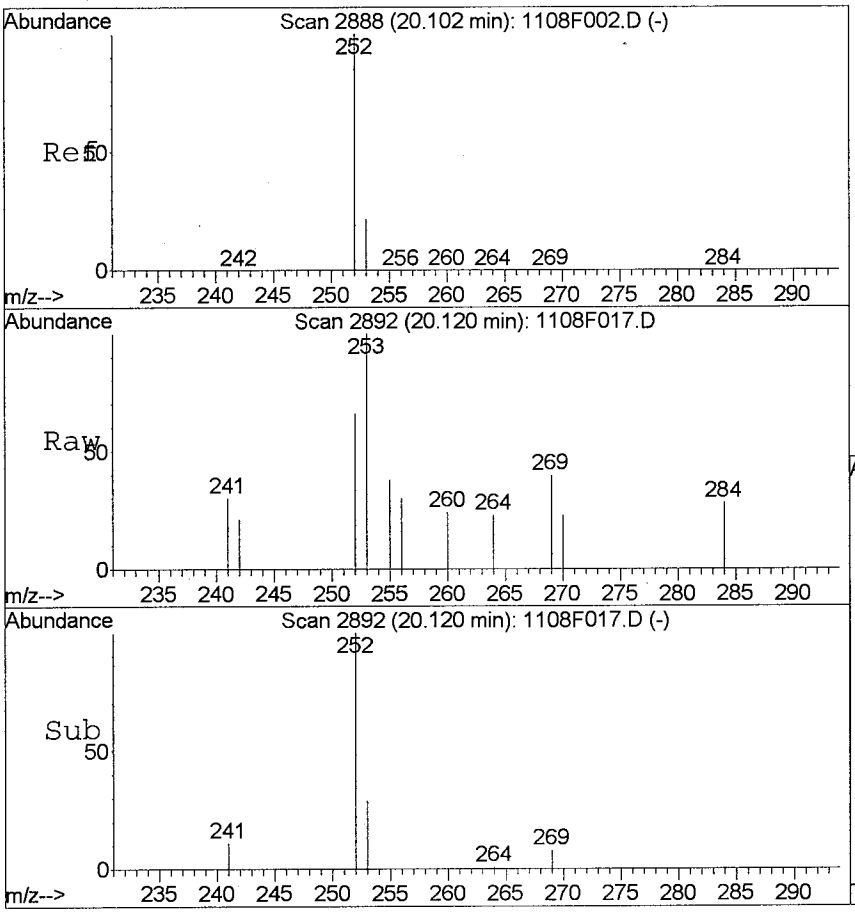


#43
Chrysene
Concen: 7.66 ng/ml
RT: 17.19 min Scan# 2288
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:228 Resp: 1046

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	58.5

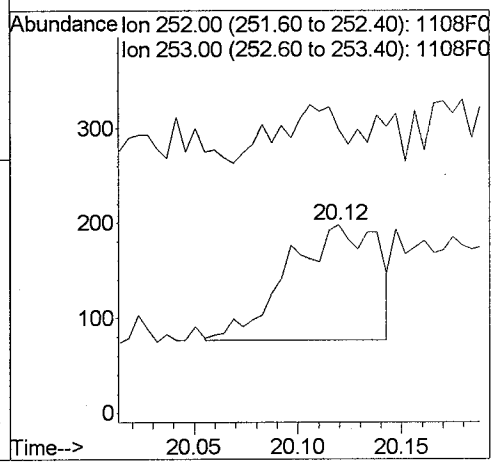


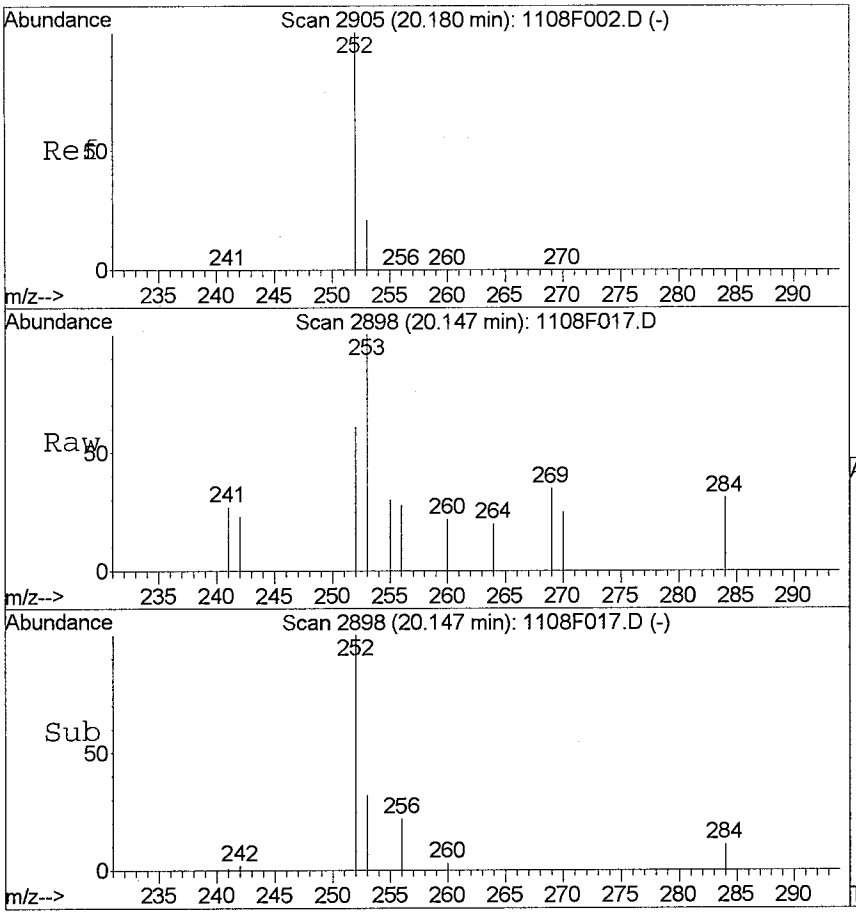


#49
Benzo(b)fluoranthene
Concen: 3.89 ng/ml m
RT: 20.12 min Scan# 2892
Delta R.T. 0.02 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:252 Resp: 358

Ion	Ratio	Lower	Upper
252	100		
253	151.0	0.0	51.9#

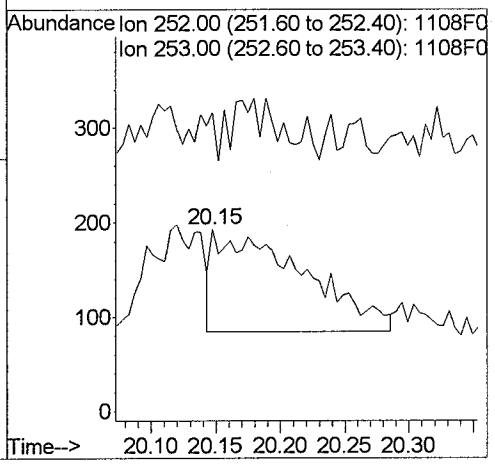


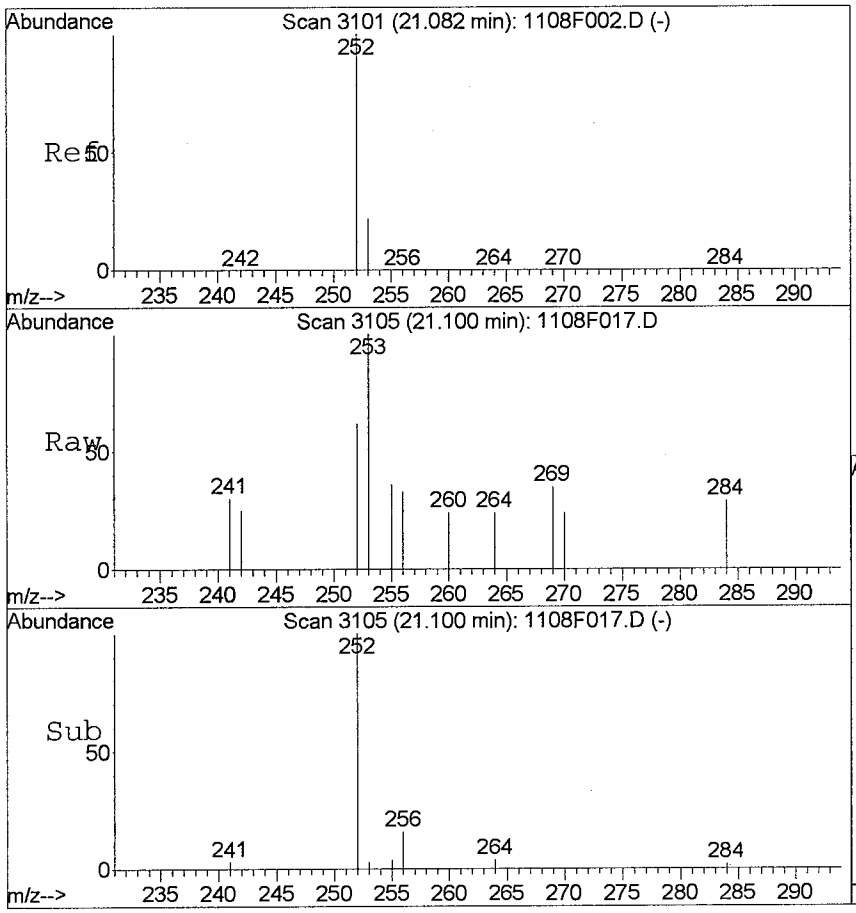


#50
Benzo(k)fluoranthene
Concen: 4.49 ng/ml m
RT: 20.15 min Scan# 2898
Delta R.T. -0.03 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:252 Resp: 524

Ion	Ratio	Lower	Upper
252	100		
253	163.7	0.0	51.7#

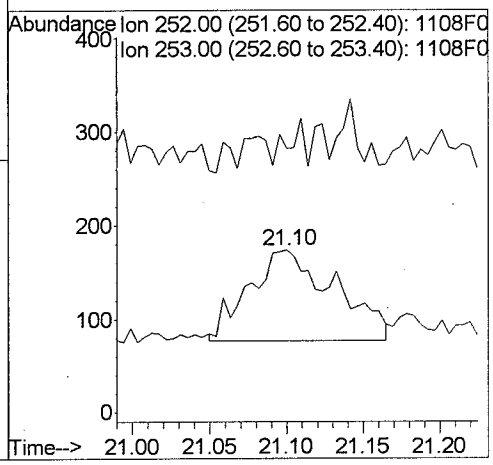


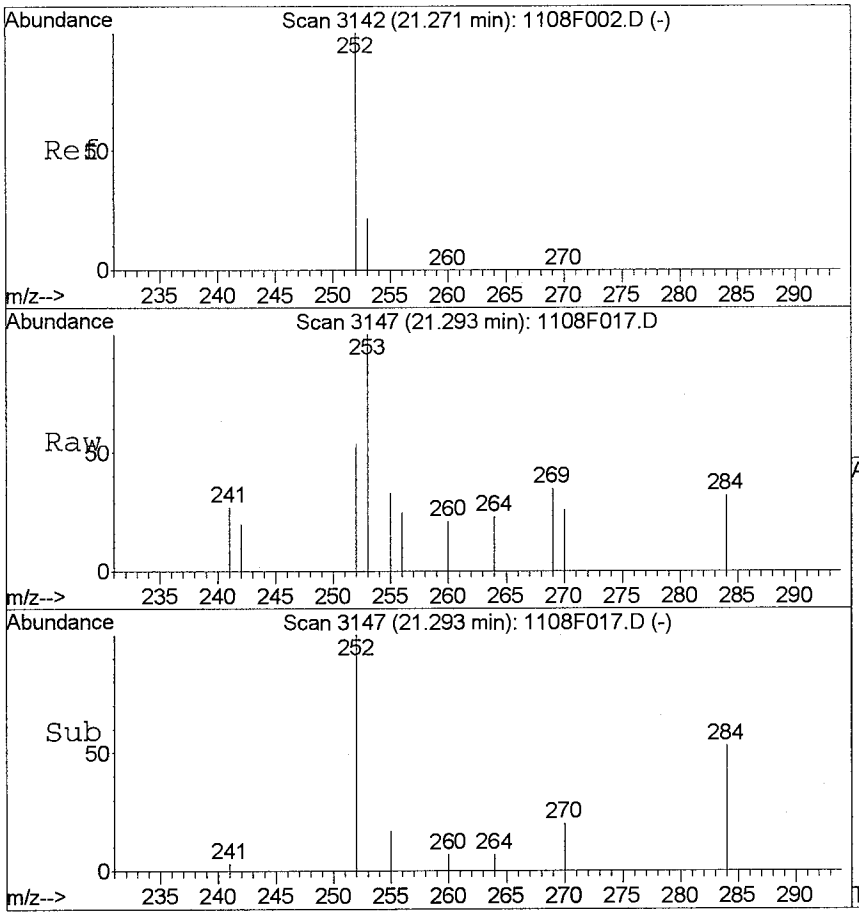


#51
Benzo(e)pyrene
Concen: 3.65 ng/ml m
RT: 21.10 min Scan# 3105
Delta R.T. 0.02 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:252 Resp: 377

Ion	Ratio	Lower	Upper
252	100		
253	162.1	0.0	51.8#

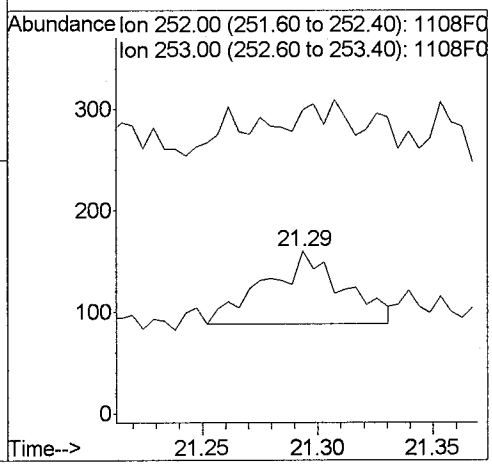


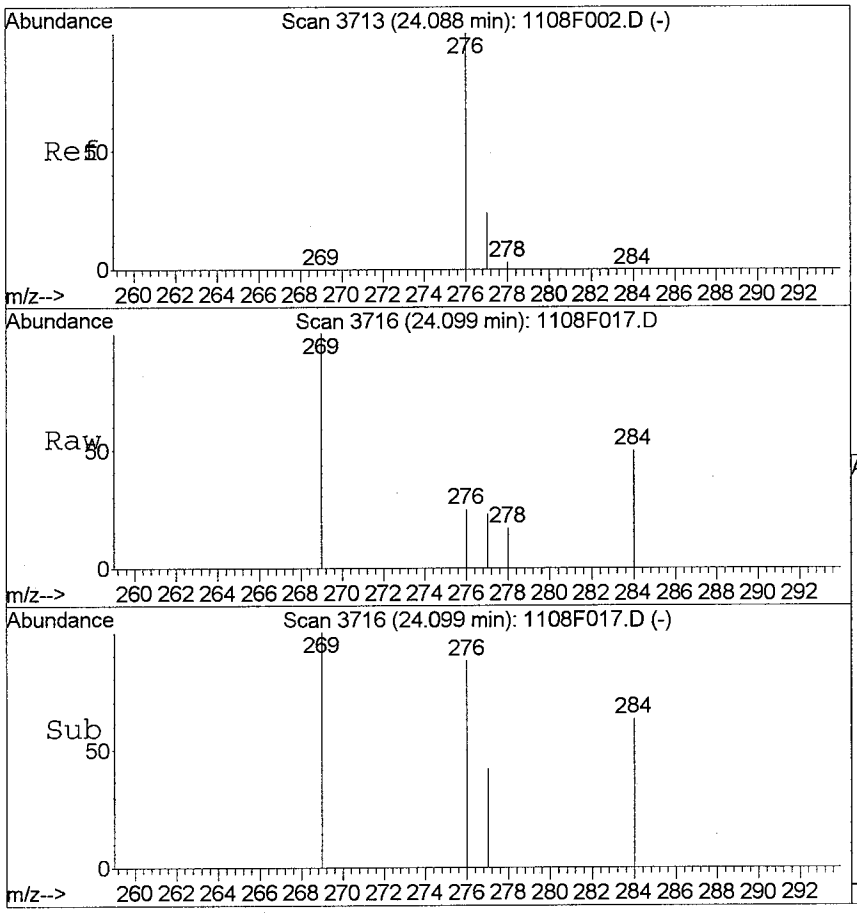


#52
Benzo(a)pyrene
Concen: 2.13 ng/ml
RT: 21.29 min Scan# 3147
Delta R.T. 0.02 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:252 Resp: 167

Ion	Ratio	Lower	Upper
252	100		
253	44.4	0.0	51.7

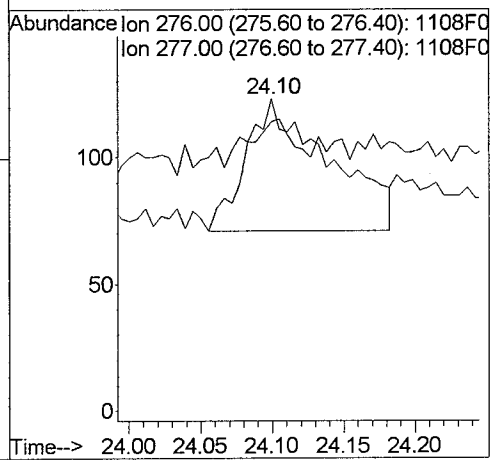


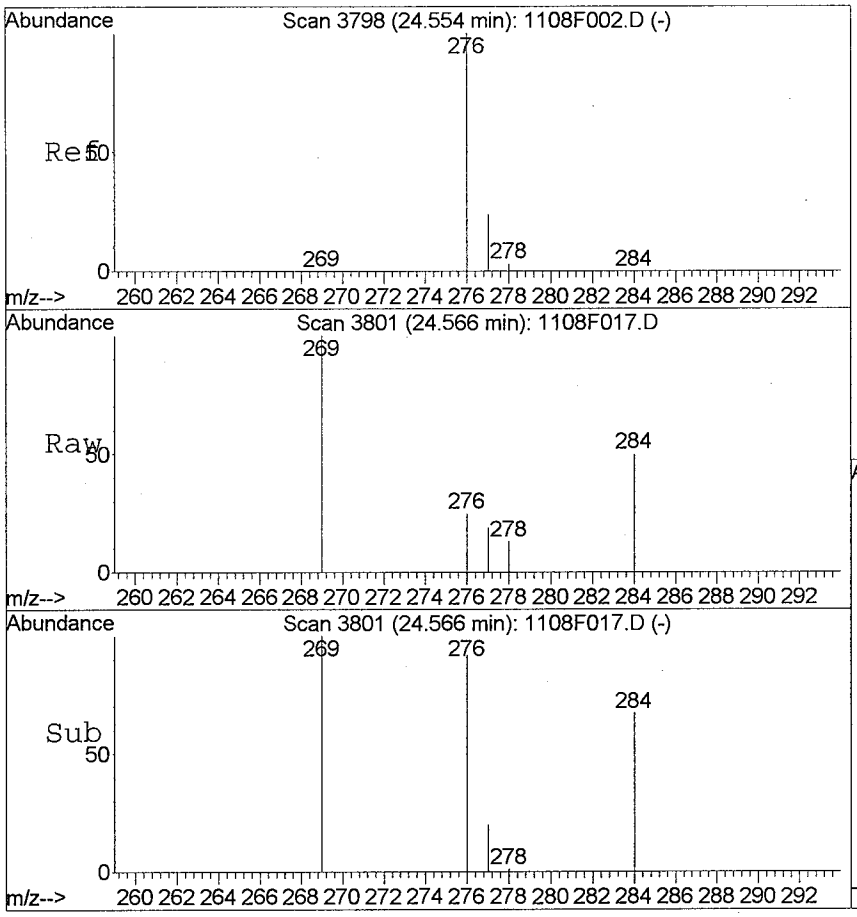


#54
Indeno(1,2,3-cd)pyrene
Concen: 4.46 ng/ml
RT: 24.10 min Scan# 3716
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:276 Resp: 212

Ion	Ratio	Lower	Upper
276	100		
277	26.9	0.0	54.0

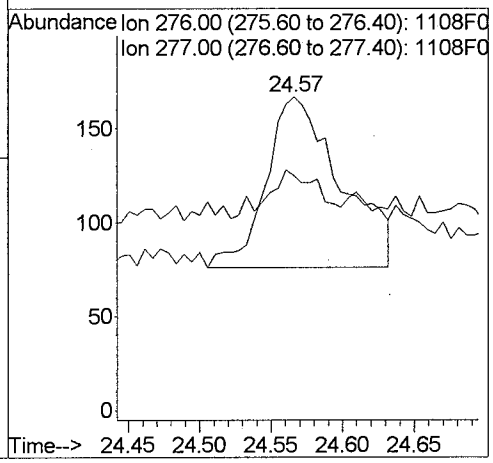




#56
Benzo(g,h,i)perylene
Concen: 4.20 ng/ml
RT: 24.57 min Scan# 3801
Delta R.T. 0.01 min
Lab File: 1108F017.D
Acq: 8 Nov 2003 3:32 pm

Tgt Ion:276 Resp: 331

Ion	Ratio	Lower	Upper
276	100		
277	19.8	0.0	54.3

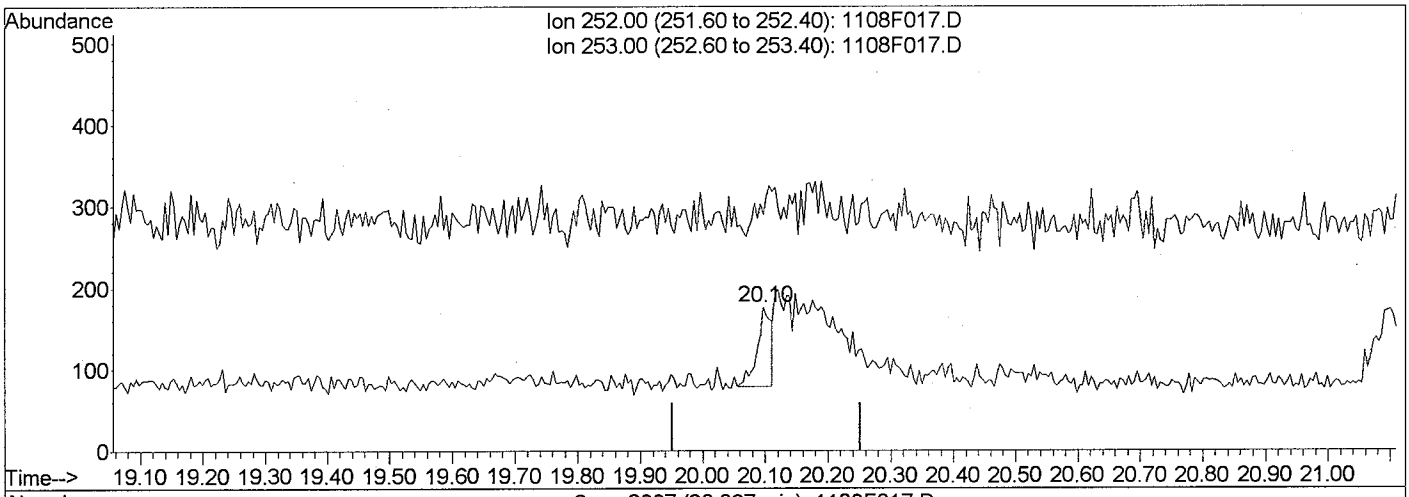


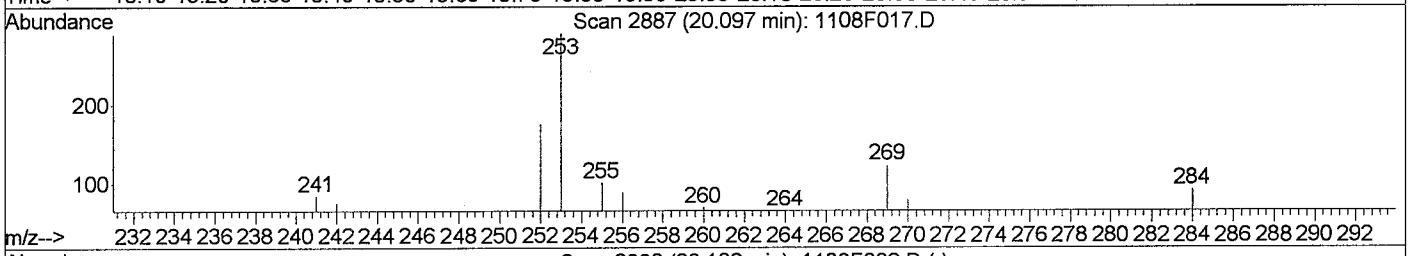
Quantitation Report (Qedit)

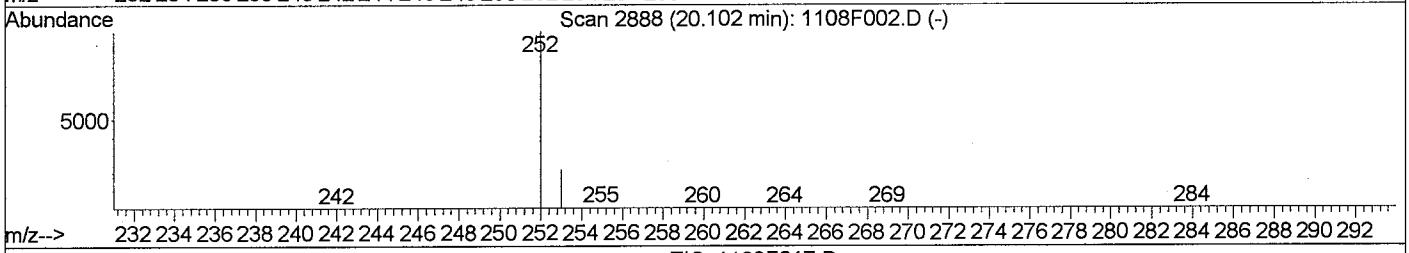
Data File : J:\MS11\DATA\110803\1108F017.D
Acq On : 8 Nov 2003 3:32 pm
Sample : K2308419-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:35 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F017.D

(49) Benzo(b)fluoranthene (T)

20.10min 1.62ng/ml

response 149

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	15.46
0.00	0.00	0.00
0.00	0.00	0.00

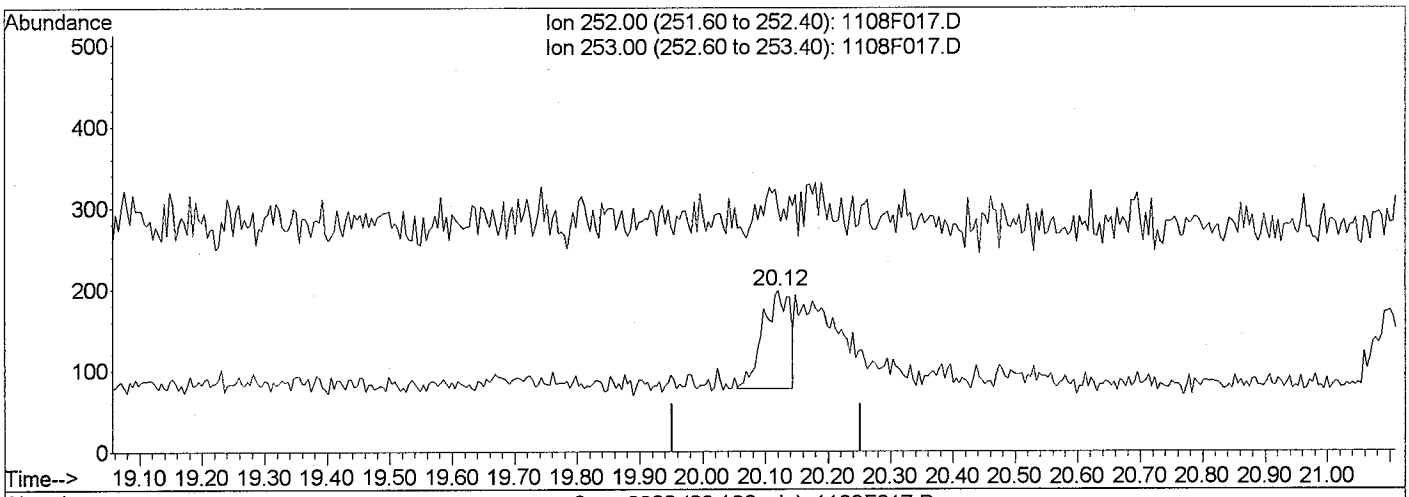
1108F017.D 1107ALK.M Mon Nov 10 16:37:46 2003

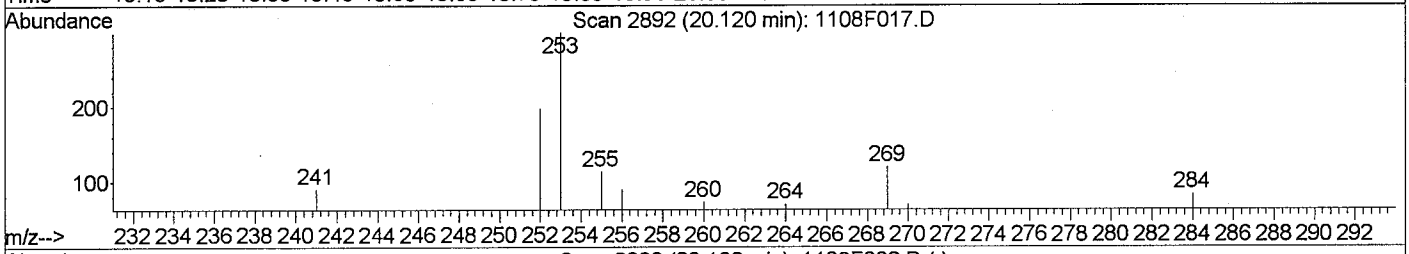
Quantitation Report (Qedit)

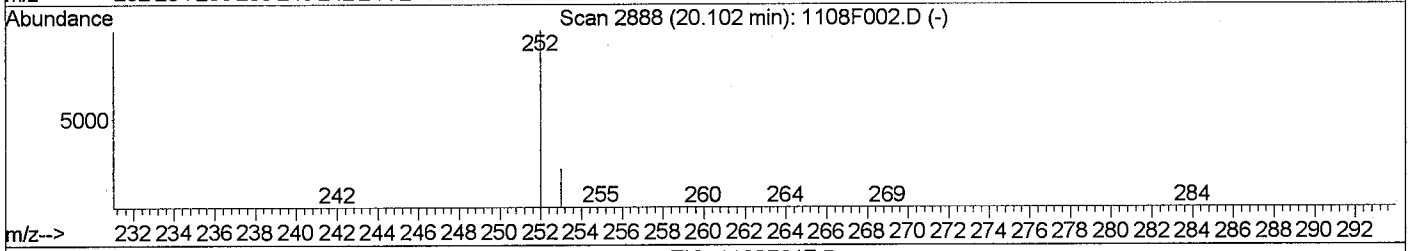
Data File : J:\MS11\DATA\110803\1108F017.D
Acq On : 8 Nov 2003 3:32 pm
Sample : K2308419-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:35 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F017.D

(49) Benzo(b)fluoranthene (T)

20.12min 3.89ng/ml m

response 358

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	151.01#
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/03 mt 11/11/03

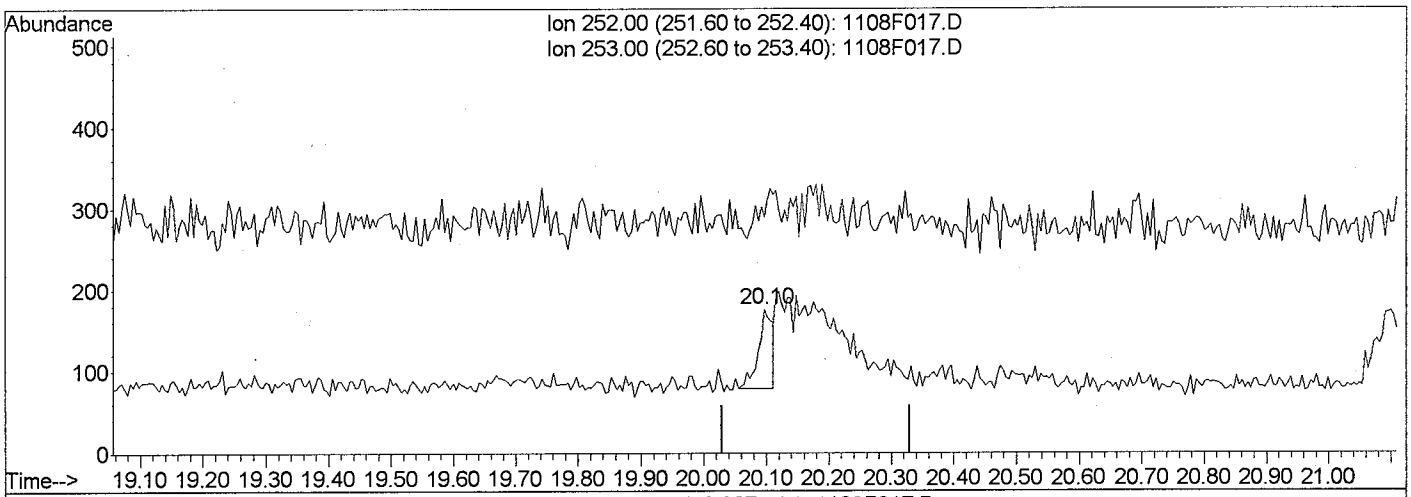
1108F017.D 1107ALK.M Mon Nov 10 16:37:51 2003

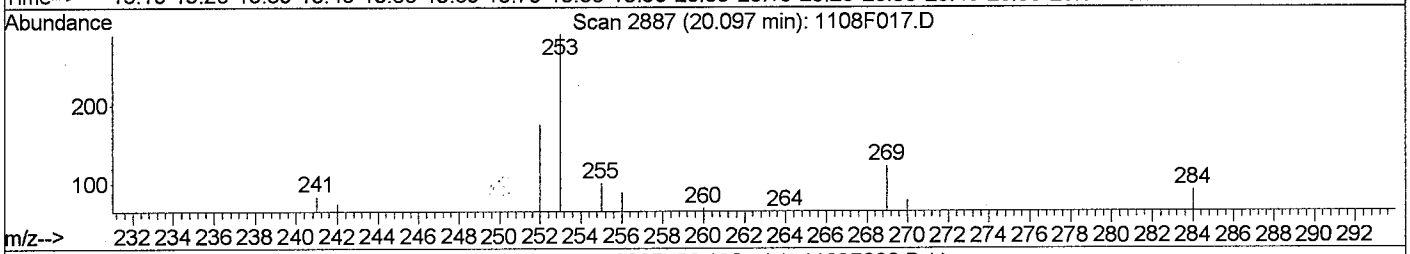
Quantitation Report (Qedit)

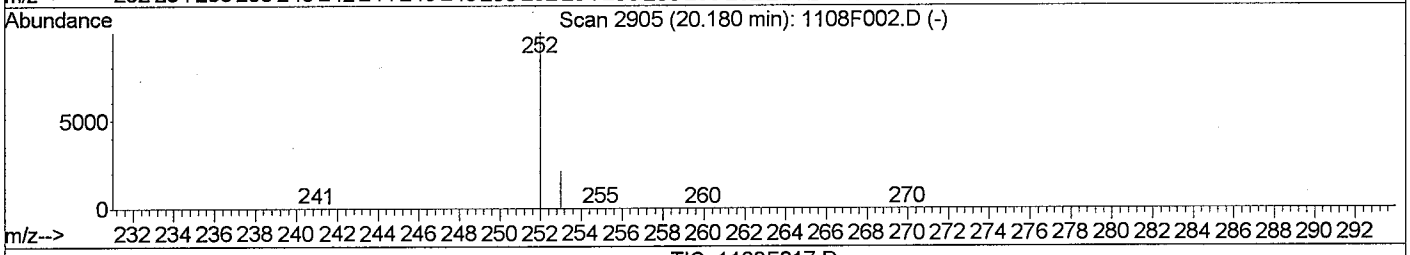
Data File : J:\MS11\DATA\110803\1108F017.D
Acq On : 8 Nov 2003 3:32 pm
Sample : K2308419-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:35 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F017.D

(50) Benzo(k)fluoranthene (T)

20.10min 1.28ng/ml

response 149

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	15.46
0.00	0.00	0.00
0.00	0.00	0.00

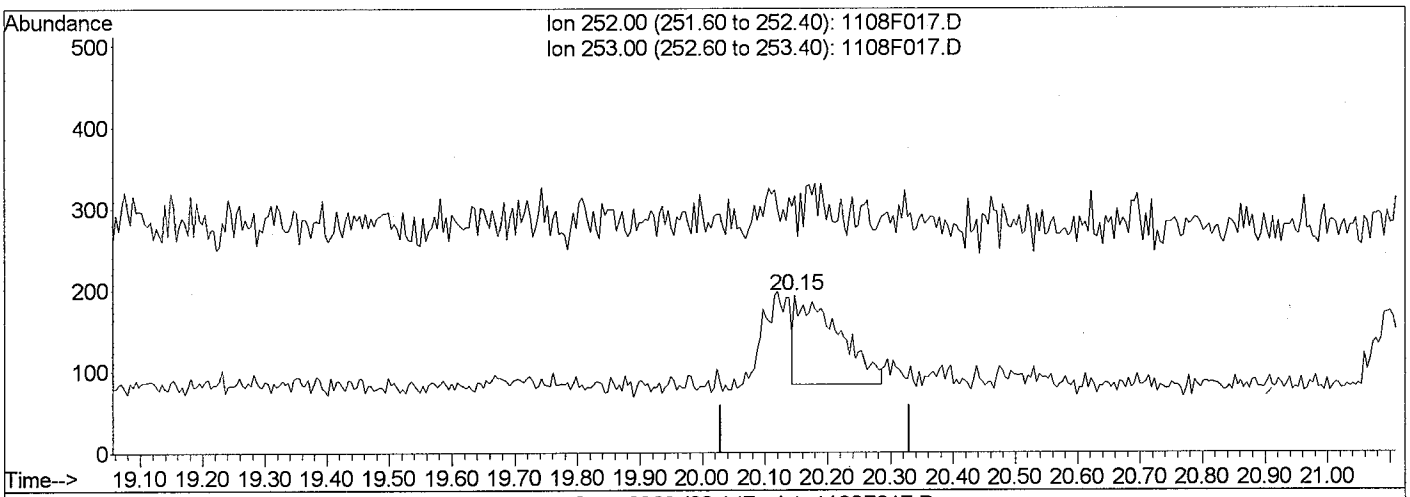
1108F017.D 1107ALK.M Mon Nov 10 16:37:54 2003

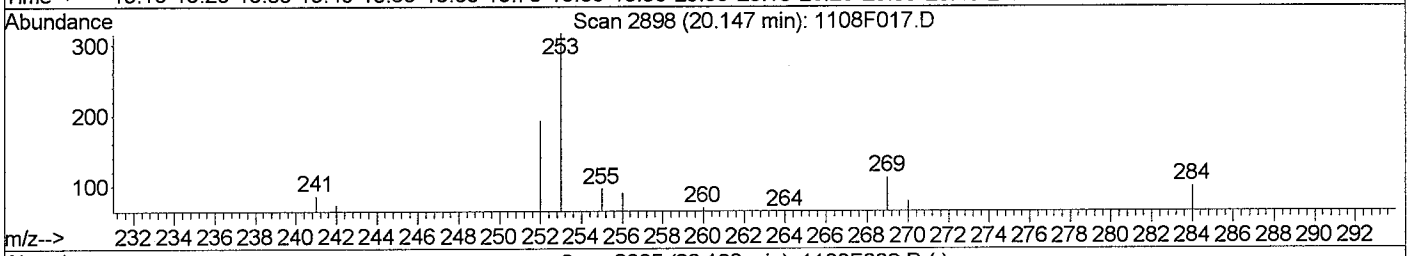
Quantitation Report (Qedit)

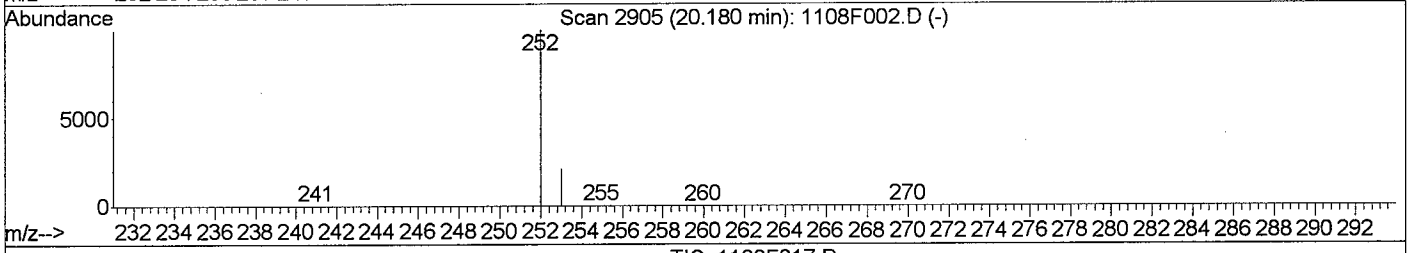
Data File : J:\MS11\DATA\110803\1108F017.D
Acq On : 8 Nov 2003 3:32 pm
Sample : K2308419-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:35 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F017.D

(50) Benzo(k)fluoranthene (T)

20.15min 4.49ng/ml m

response 524

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	163.73#
0.00	0.00	0.00
0.00	0.00	0.00

wmm peak 11/10/03 mt 11/11/03

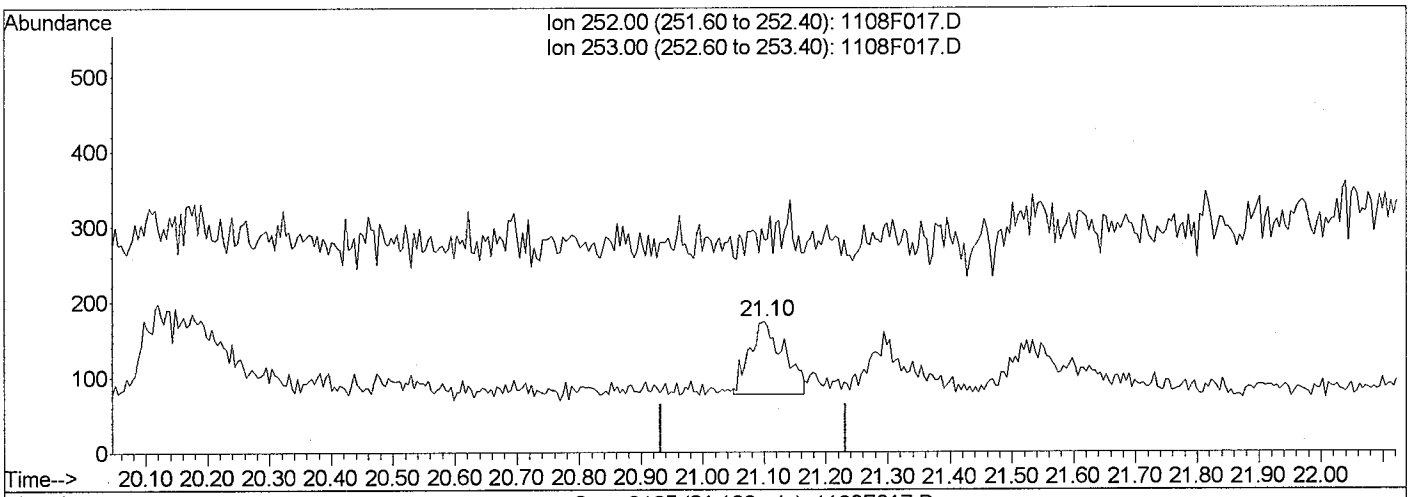
1108F017.D 1107ALK.M Mon Nov 10 16:38:10 2003

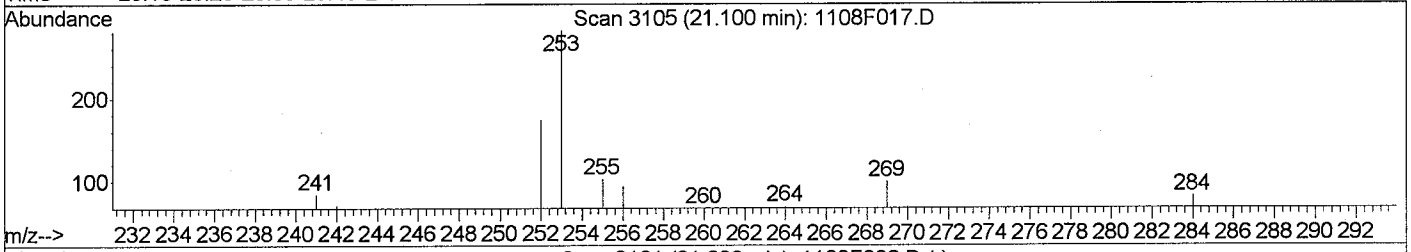
Quantitation Report (Qedit)

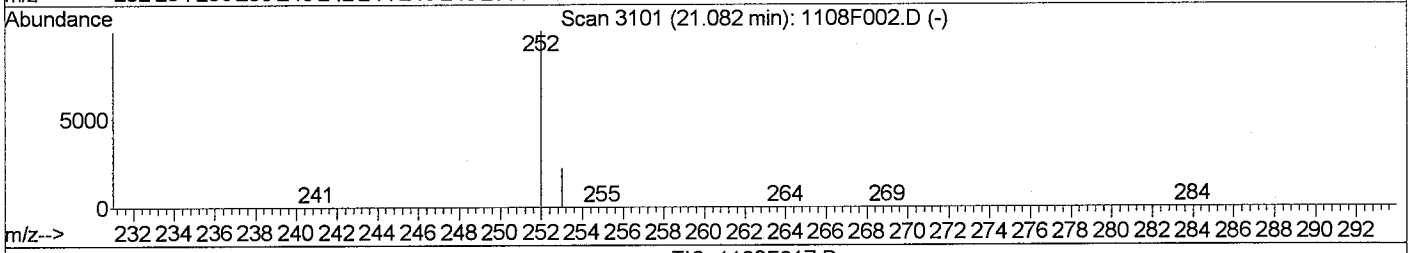
Data File : J:\MS11\DATA\110803\1108F017.D
Acq On : 8 Nov 2003 3:32 pm
Sample : K2308419-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:35 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F017.D

(51) Benzo(e)pyrene (T)

21.10min 3.65ng/ml m

response 377

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	162.07#
0.00	0.00	0.00
0.00	0.00	0.00

missed

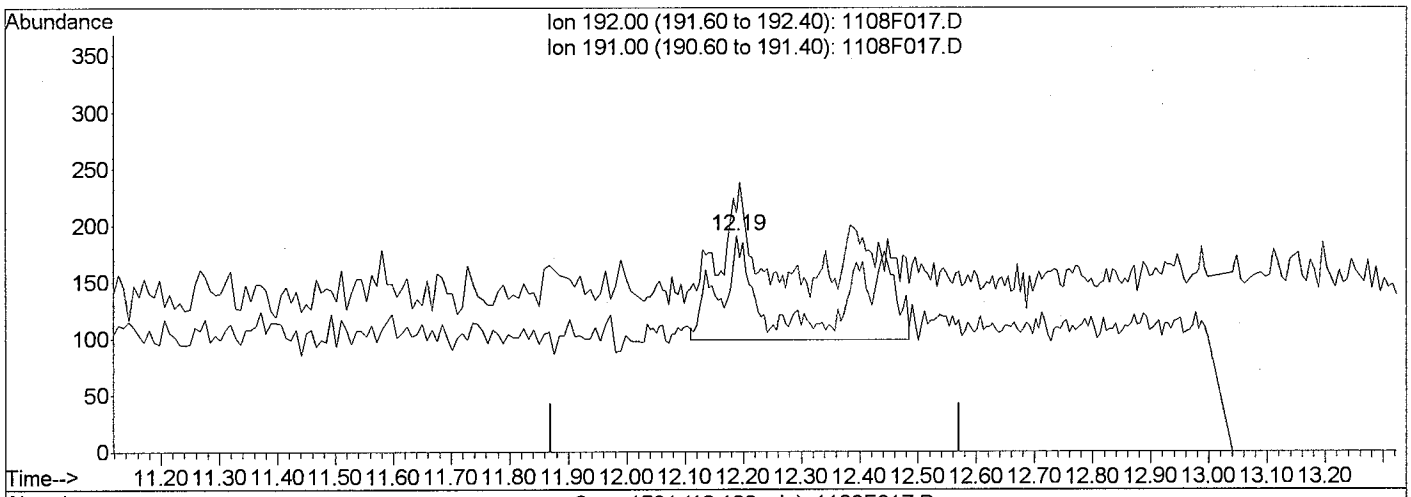
11/10/03
mt
11/11/03

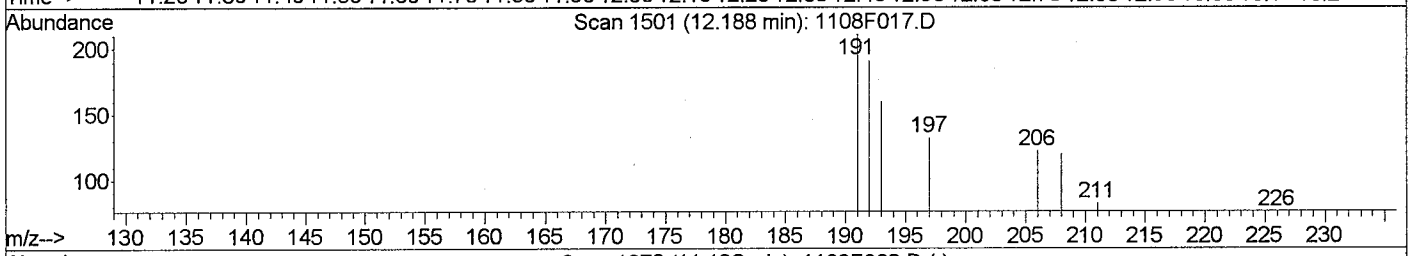
1108F017.D 1107ALK.M Mon Nov 10 16:38:17 2003

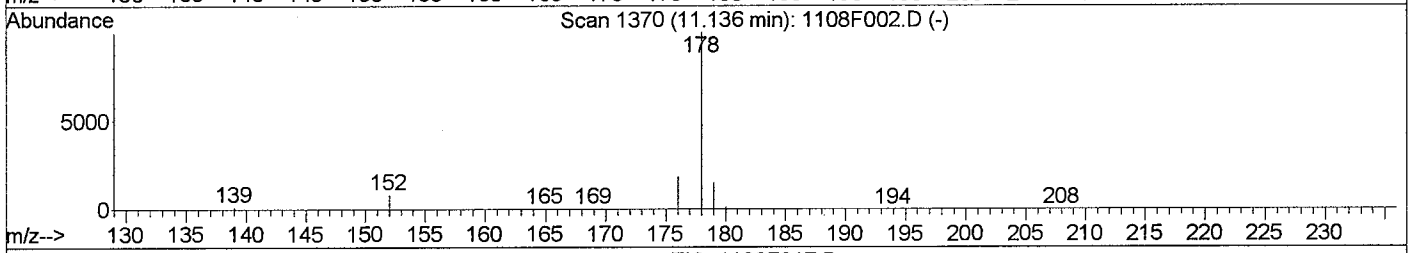
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F017.D Vial: 14
Acq On : 8 Nov 2003 3:32 pm Operator: LWeiskopf
Sample : K2308419-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:07 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F017.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 3.90ng/ml m

response 779

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	110.47#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03 mt 11/11/03

1108F017.D 1107ALK.M Mon Nov 10 17:09:36 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4-Dup
Lab Code: K2308419-005

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4-Dup
Lab Code: K2308419-005

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	37-107	11/08/03	Acceptable
Fluoranthene-d10	83	18-137	11/08/03	Acceptable
Terphenyl-d14	103	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F018.D
Lab ID: K2308419-005
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 16:09
Date Quantitated: 11/10/2003 17:07
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/3

Secondary Review: mt 11/11/03

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245662	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F018.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 16:09	**Quant Date:**	11/10/2003 17:07	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-005			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	263339	1,000.00	OK
2	Acenaphthene-d10	8.07	0.01	164	136505	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	192756	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	166053	1,000.00	OK
5	Perylene-d12	21.53	0.02	264	92255	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	9.01	0.01	0.00	176	195420	1,431	72	37-107	OK
3	Fluoranthene-d10	13.70	0.01	0.00	212	321847	1,668	83	18-137	OK
4	Terphenyl-d14	14.74	0.01	0.00	244	310975	2,055	103	18-153	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1724	5.79	0.0057	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	269	1.53	0.0027	U	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	411	2.49	0.0025	U	
1	Biphenyl	7.09		0.00	154	1005	4.71	0.0047	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene				152	0d		0.0018	U	
2	Acenaphthene	8.12	0.01	0.00	154	1069	6.59	0.0065	J	
2	Dibenzofuran	8.42	0.01	0.00	168	262	1.21	0.0071	U	
2	Fluorene	9.06	0.01	0.00	166	387	2.23	0.0026	U	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F018.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 16:09	**Quant Date:**	11/10/2003 17:07	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-005			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene				184	0**d**		0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	1476	6.32	0.0063	J	
3	Anthracene	11.15	0.01	0.00	178	421	2.11	0.0021	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	1088**m**	4.66	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	4305	18.51	0.018	J	
4	Pyrene	14.24		0.00	202	3098	14.27	0.014	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.10	0.01	0.00	228	449	2.72	0.0027	J	
4	Chrysene	17.18		0.00	228	1171	6.63	0.0066	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.11	0.01	0.00	252	436	3.54	0.0035	J	
5	Benzo(k)fluoranthene	20.17	-0.01	0.00	252	655**m**	4.19	0.0041	J	
5	Benzo(e)pyrene	21.09	0.01	0.00	252	457**m**	3.30	0.0033	J	
5	Benzo(a)pyrene	21.29	0.02	0.00	252	242	2.31	0.0023	J	
5	Perylene				252	0**d**		0.0012	U	
5	Indeno(1,2,3-cd)pyrene	24.09		0.00	276	147	2.31	0.0023	J	
5	Dibenz(a,h)anthracene				278	0		0.0017	U	
5	Benzo(g,h,i)perylene	24.57	0.02	0.00	276	331**m**	3.13	0.0037	U	

Prep Amount:	1010 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F018.D Vial: 15
Acq On : 8 Nov 2003 4:09 pm Operator: LWeiskopf
Sample : K2308419-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:13 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

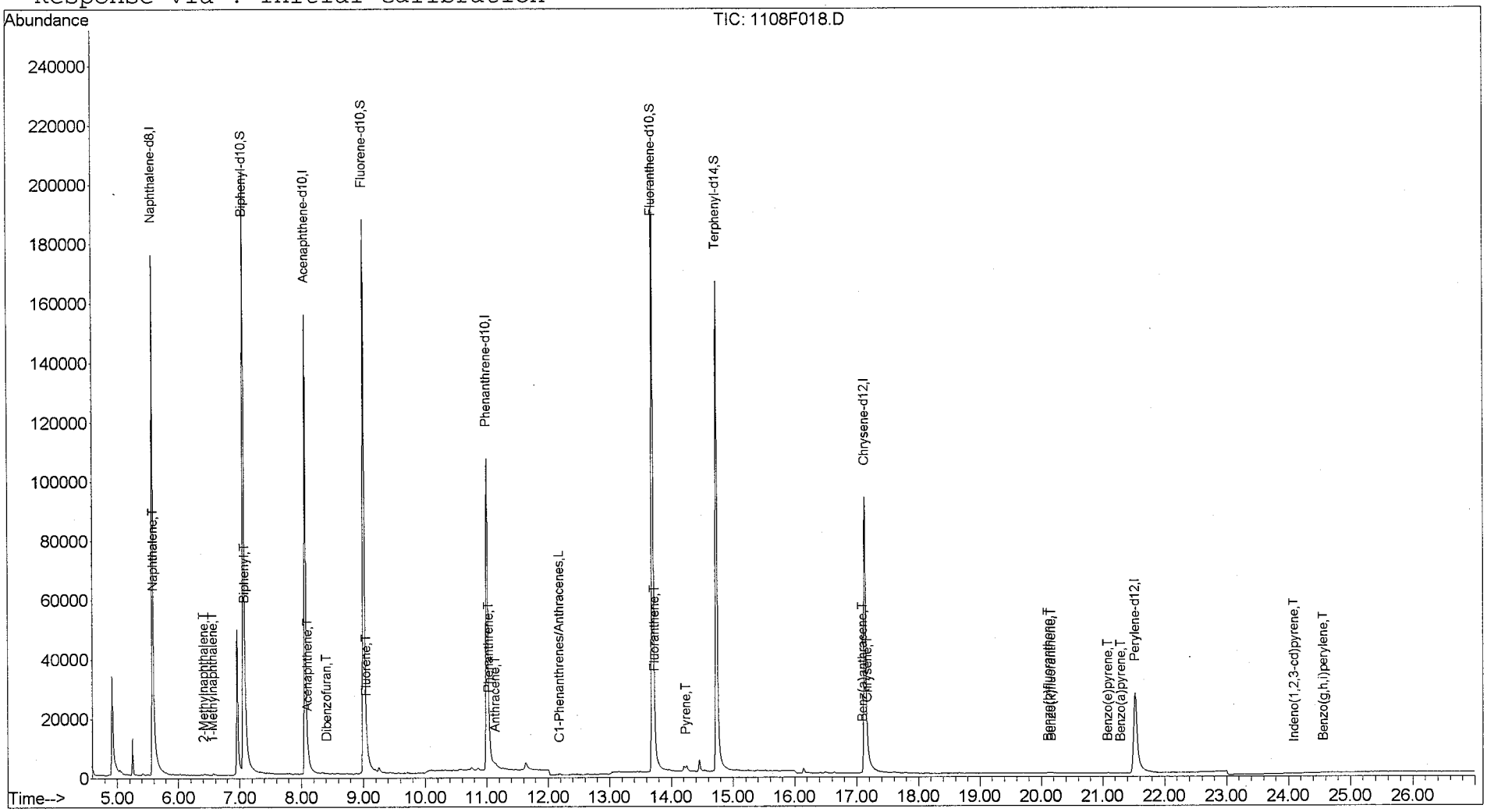
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	263339	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.07	164	136505	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	192756	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	166053	1000.00	ng/ml	0.00
48) Perylene-d12	21.53	264	92255	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	278247	1442.39	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 144.24%			
16) Fluorene-d10	9.01	176	195420	1431.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 143.14%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	321847	1668.26	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 166.83%			
41) Terphenyl-d14	14.74	244	310975	2054.83	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 205.48%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1724	5.79	ng/ml	94
3) 2-Methylnaphthalene	6.42	142	269	1.53	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	411	2.49	ng/ml	70
6) Biphenyl	7.09	154	1005	4.71	ng/ml	98
13) Acenaphthene	8.12	154	1069	6.59	ng/ml	95
14) Dibenzofuran	8.42	168	262	1.21	ng/ml	96
17) Fluorene	9.06	166	387	2.23	ng/ml	90
28) Phenanthrene	11.05	178	1476	6.32	ng/ml	98
29) Anthracene	11.15	178	421	2.11	ng/ml	83
32) C1-Phenanthrenes/Anthracen	12.19	192	1088m	4.66	ng/ml	
36) Fluoranthene	13.74	202	4305	18.51	ng/ml	96
39) Pyrene	14.24	202	3098	14.27	ng/ml	90
42) Benz(a)anthracene	17.10	228	449	2.72	ng/ml	83
43) Chrysene	17.18	228	1171	6.63	ng/ml	91
49) Benzo(b)fluoranthene	20.11	252	436	3.54	ng/ml	70
50) Benzo(k)fluoranthene	20.17	252	655m	4.19	ng/ml	
51) Benzo(e)pyrene	21.09	252	457m	3.30	ng/ml	
52) Benzo(a)pyrene	21.29	252	242	2.31	ng/ml	54
54) Indeno(1,2,3-cd)pyrene	24.09	276	147	2.31	ng/ml	90
56) Benzo(g,h,i)perylene	24.57	276	331m	3.13	ng/ml	

(#) = qualifier out of range (m) = manual integration
1108F018.D 1107ALK.M Mon Nov 10 17:11:40 2003 Page 1

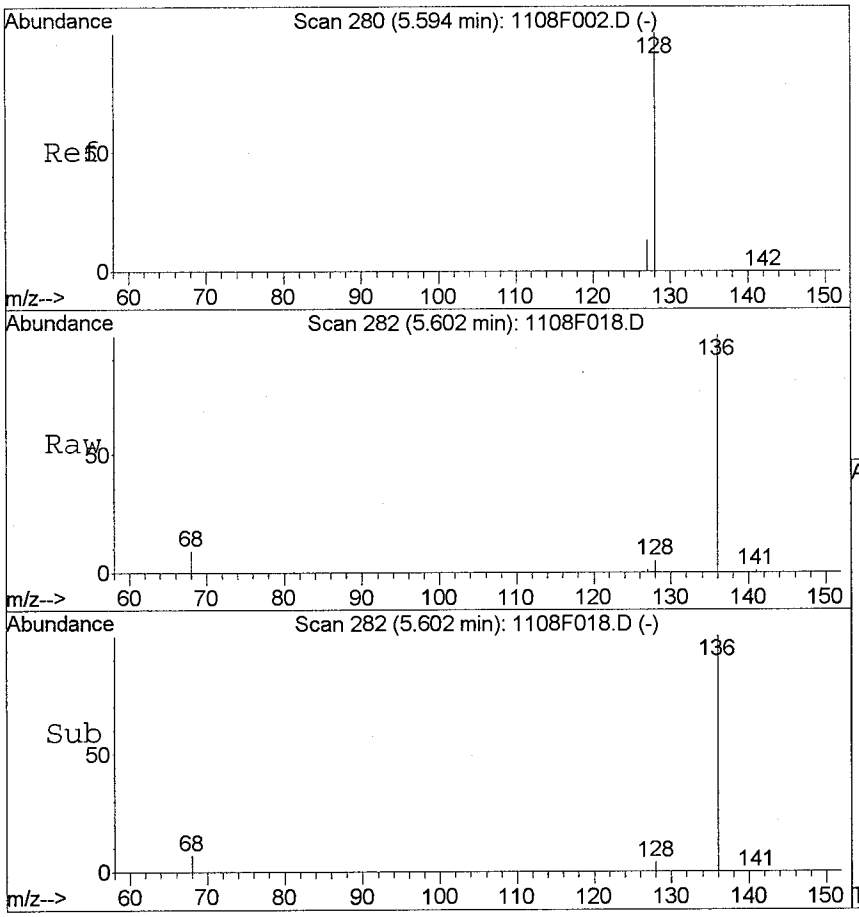
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F018.D Vial: 15
Acq On : 8 Nov 2003 4:09 pm Operator: LWeiskopf
Sample : K2308419-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:07 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration



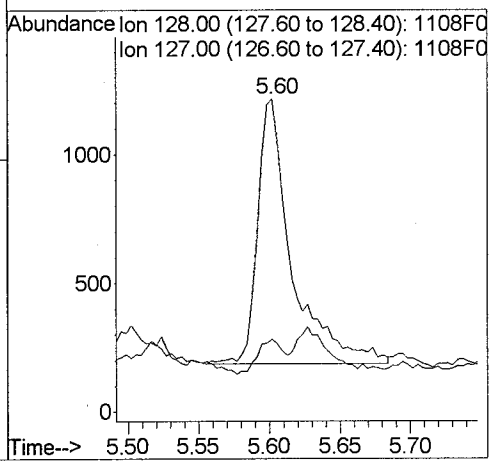
769

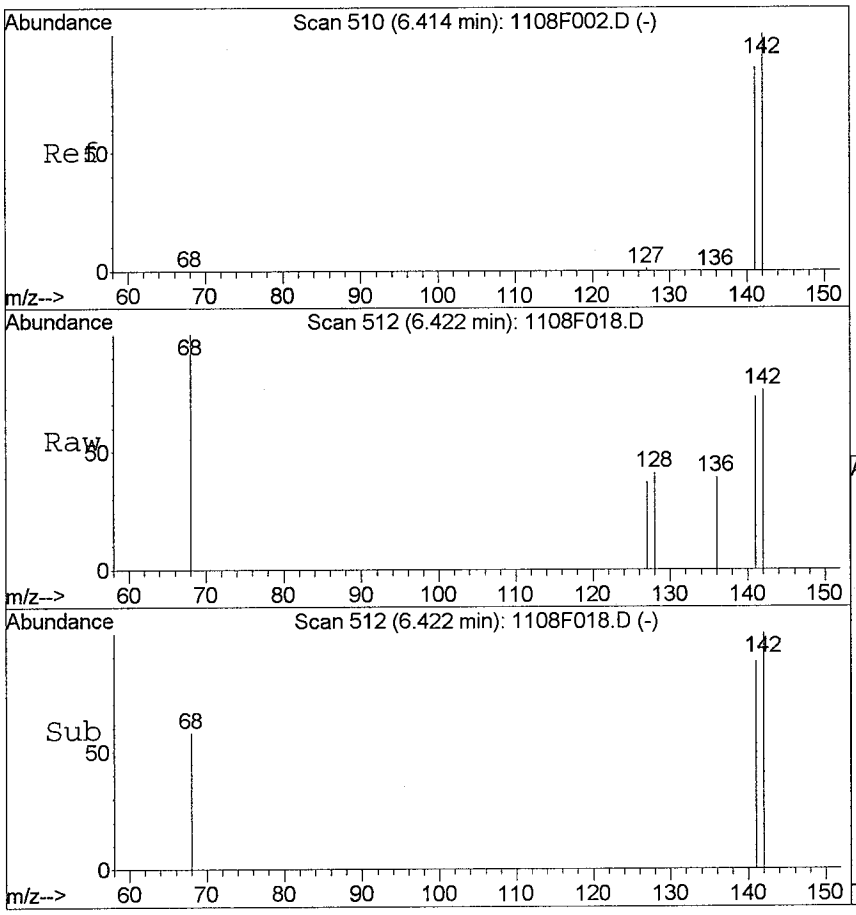


#2
Naphthalene
Concen: 5.79 ng/ml
RT: 5.60 min Scan# 282
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:128 Resp: 1724

Ion	Ratio	Lower	Upper
128	100		
127	11.2	0.0	43.5

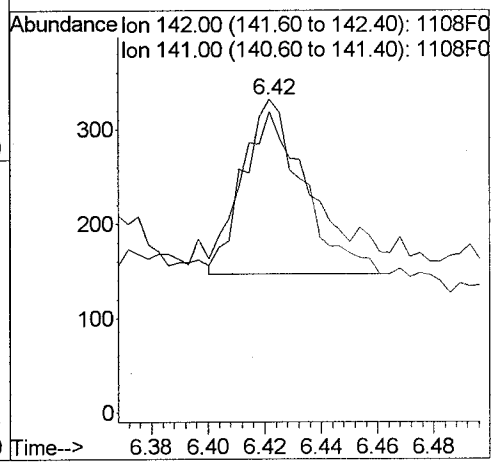


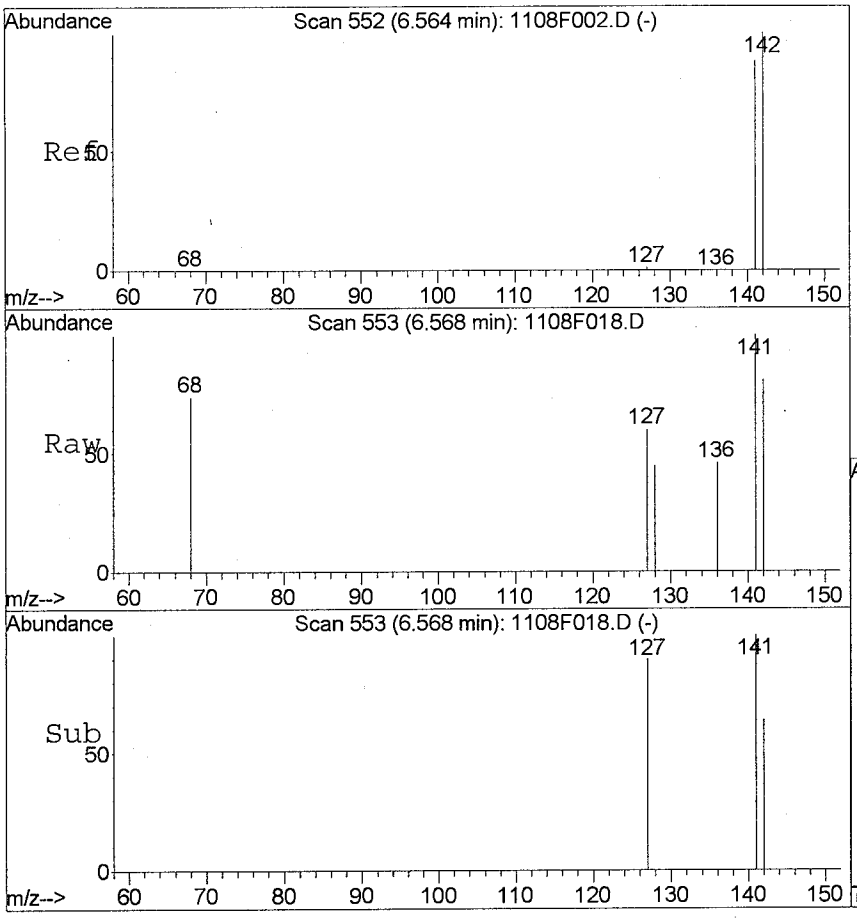


#3
2-Methylnaphthalene
Concen: 1.53 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:142 Resp: 269

Ion	Ratio	Lower	Upper
142	100		
141	84.3	56.1	116.1

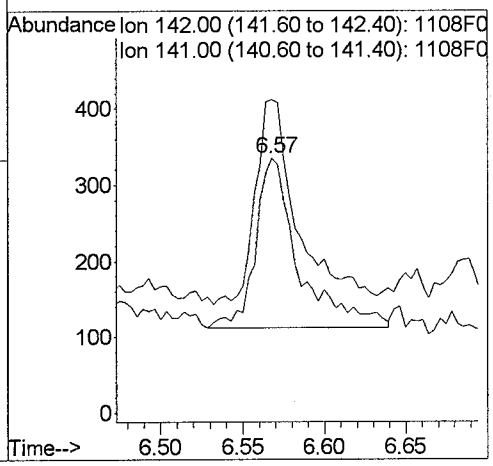


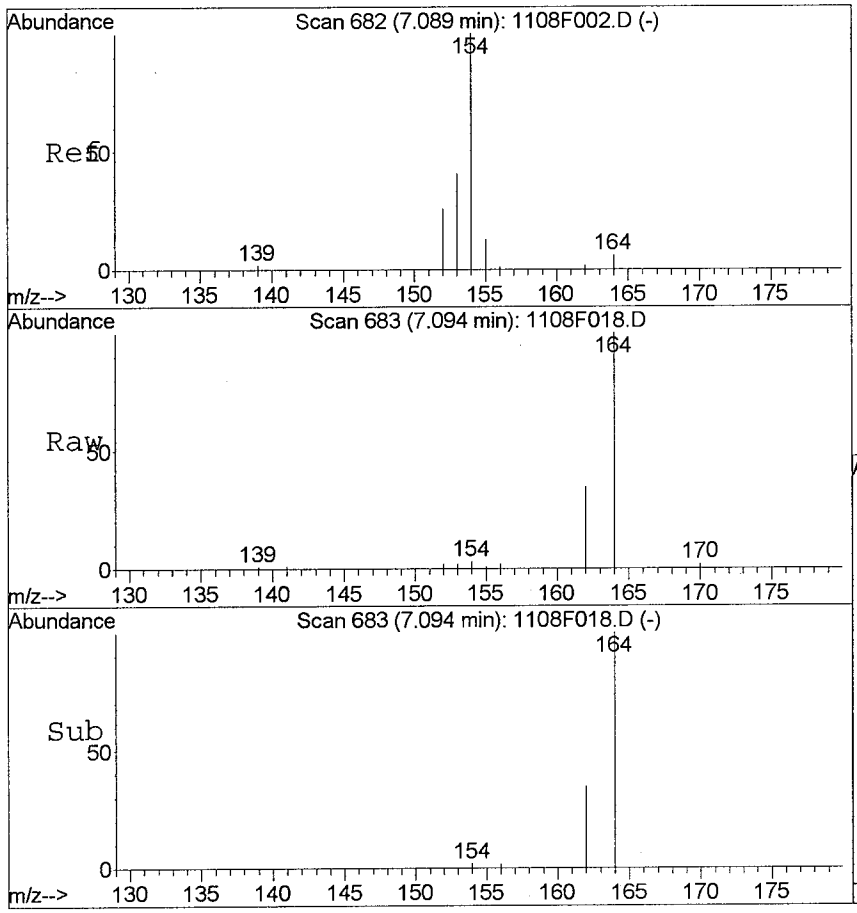


#4
1-Methylnaphthalene
Concen: 2.49 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.00 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:142 Resp: 411

Ion	Ratio	Lower	Upper
142	100		
141	116.1	58.4	118.4

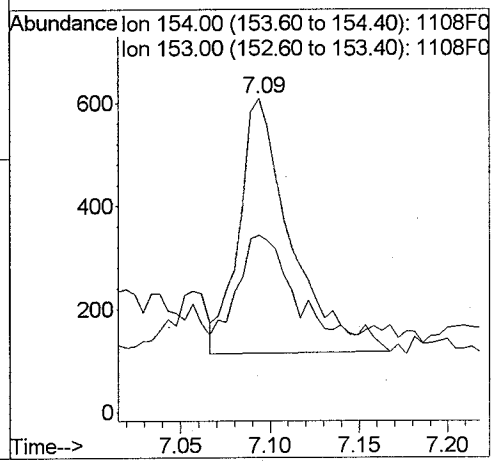


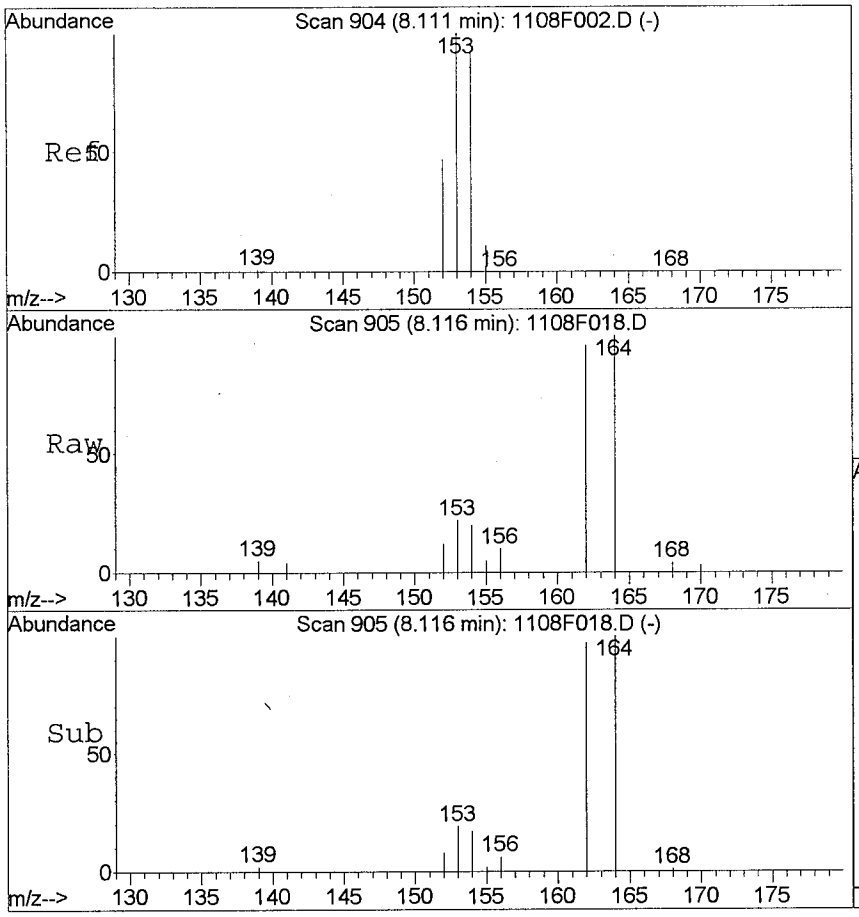


#6
Biphenyl
Concen: 4.71 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:154 Resp: 1005

Ion	Ratio	Lower	Upper
154	100		
153	39.2	10.5	70.5

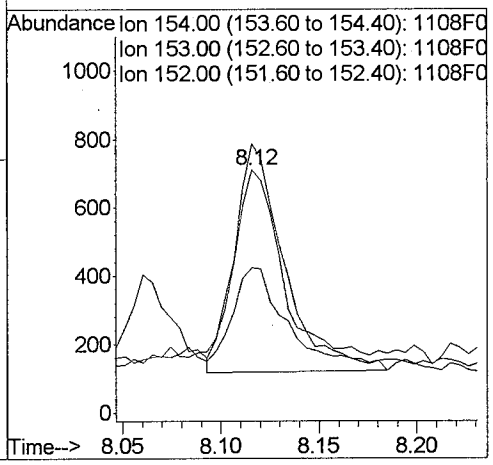


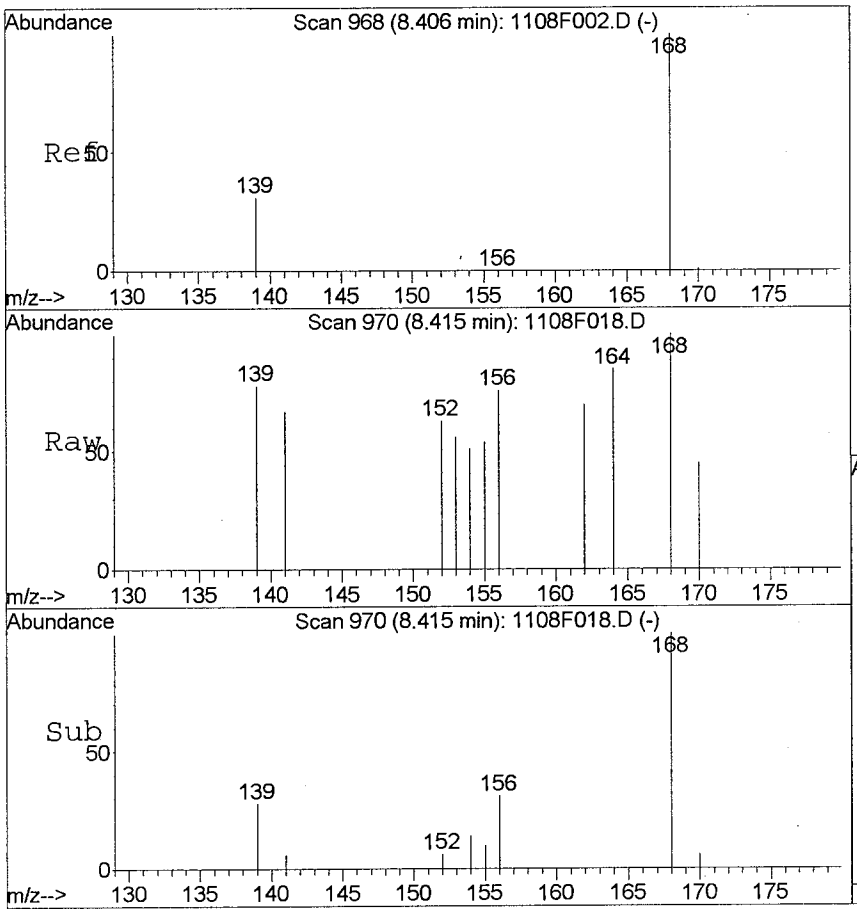


#13
Acenaphthene
Concen: 6.59 ng/ml
RT: 8.12 min Scan# 905
Delta R.T. 0.00 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:154 Resp: 1069

Ion	Ratio	Lower	Upper
154	100		
153	104.4	78.6	138.6
152	46.5	21.5	81.5

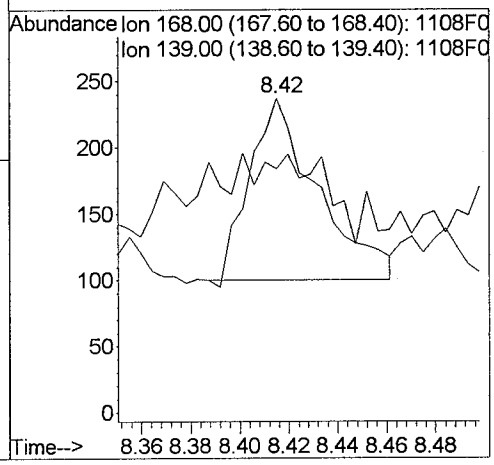


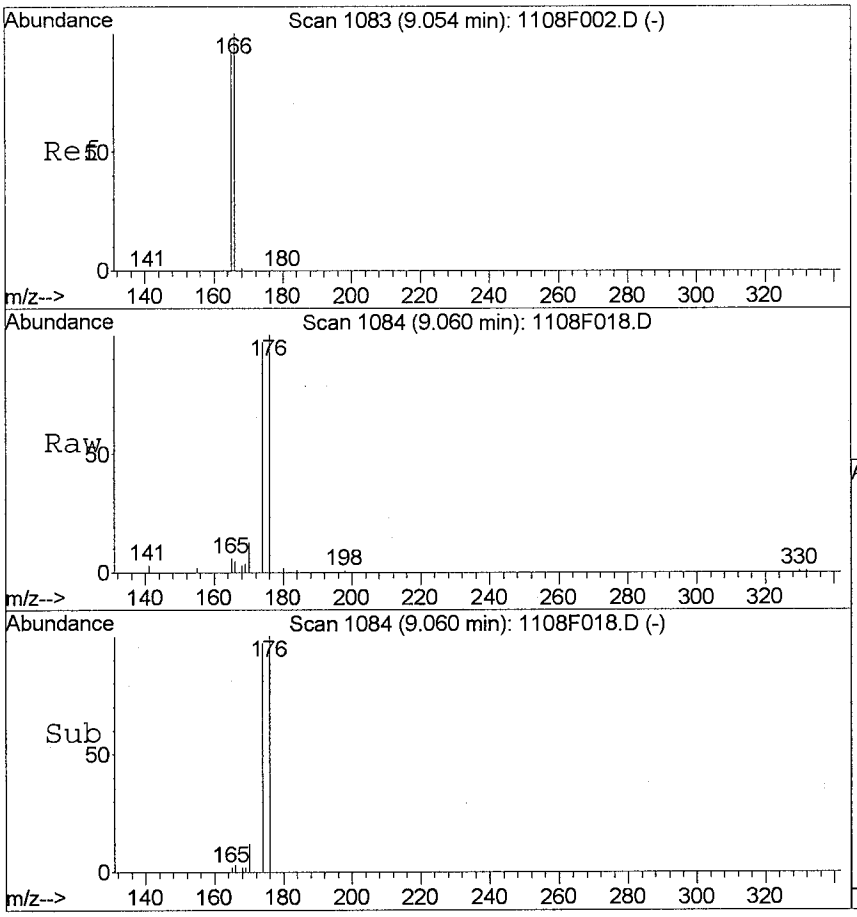


#14
Dibenzofuran
Concen: 1.21 ng/ml
RT: 8.42 min Scan# 970
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:168 Resp: 262

Ion	Ratio	Lower	Upper
168	100		
139	33.6	1.2	61.2

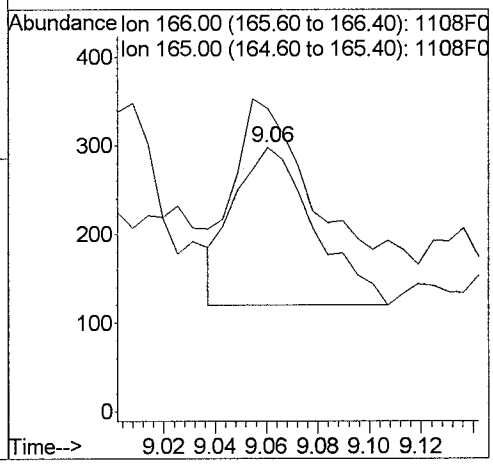


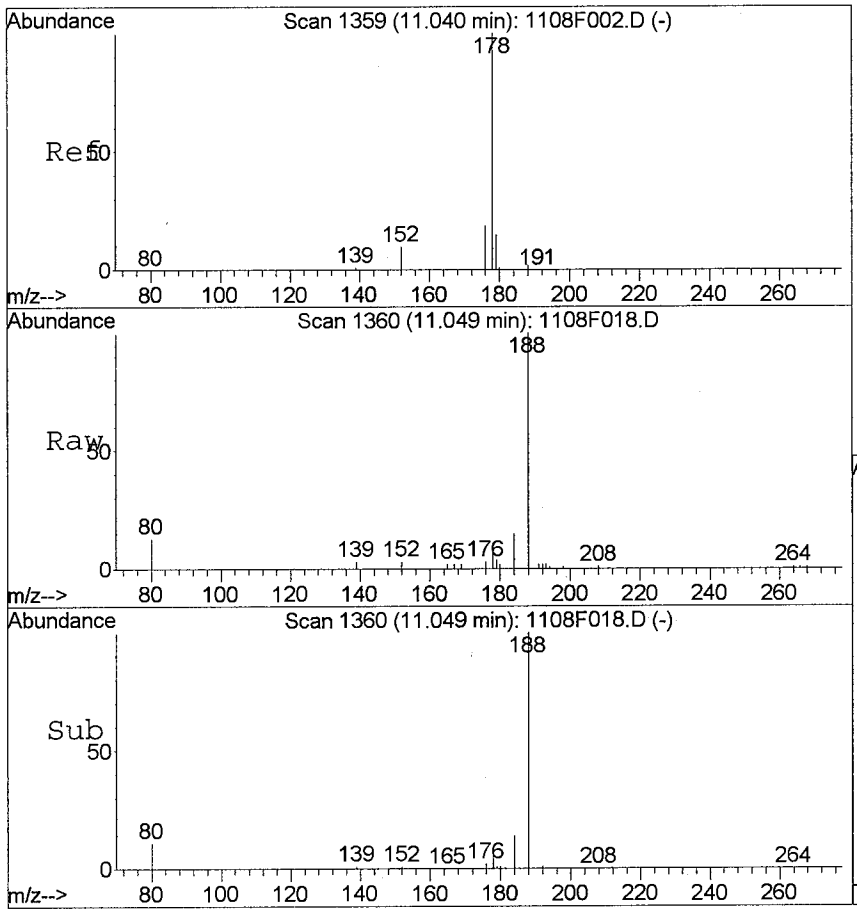


#17
Fluorene
Concen: 2.23 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:166 Resp: 387

Ion	Ratio	Lower	Upper
166	100		
165	83.7	62.9	122.9

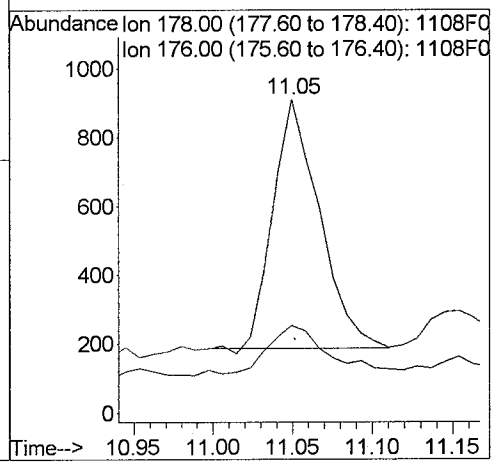


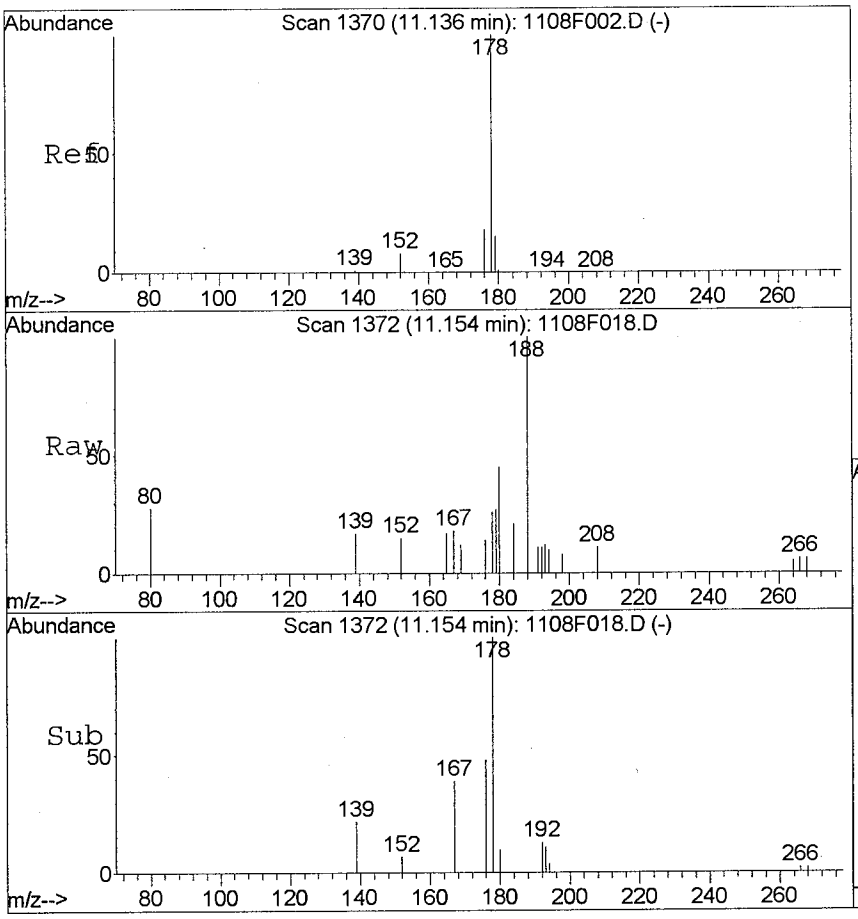


#28
Phenanthrene
Concen: 6.32 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:178 Resp: 1476

Ion	Ratio	Lower	Upper
178	100		
176	17.8	0.0	48.7

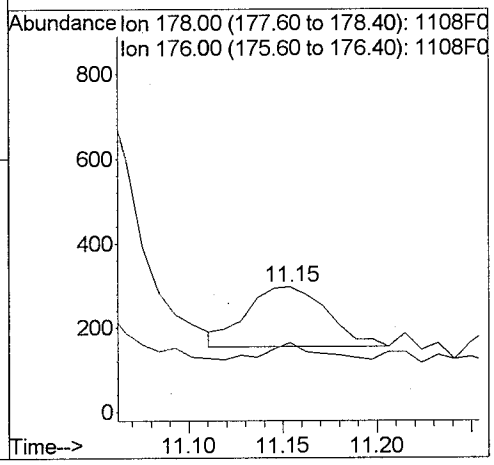


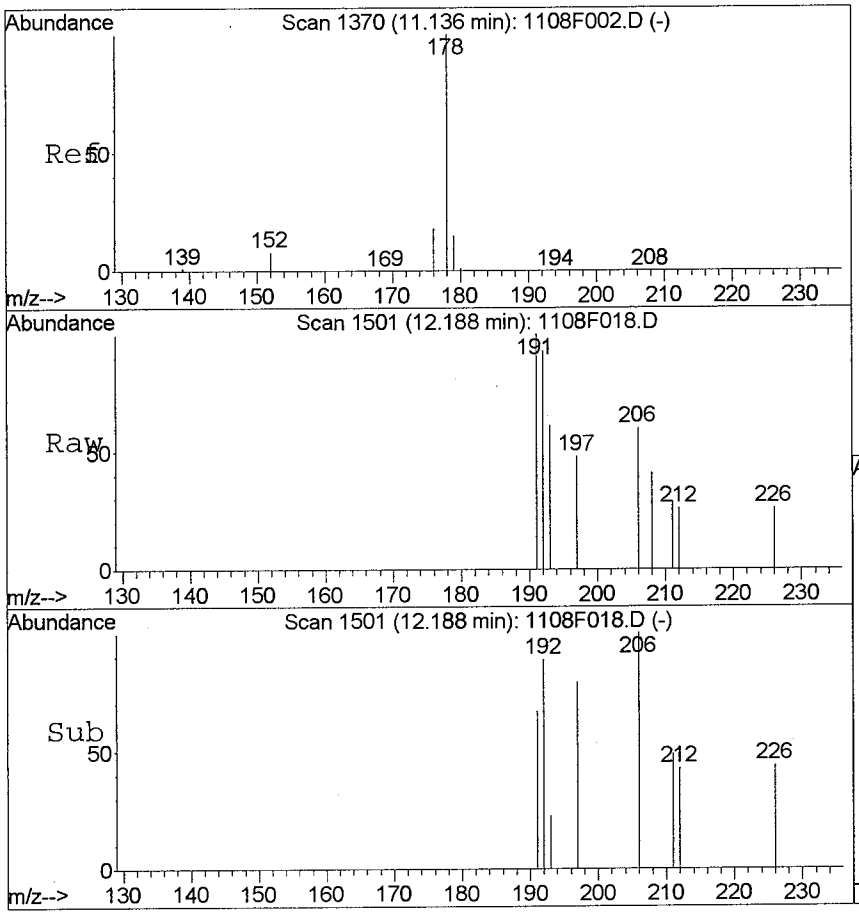


#29
Anthracene
Concen: 2.11 ng/ml
RT: 11.15 min Scan# 1372
Delta R.T. 0.02 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:178 Resp: 421

Ion	Ratio	Lower	Upper
178	100		
176	26.1	0.0	48.3

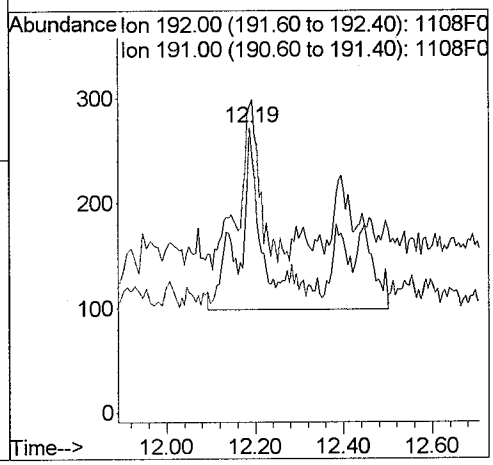


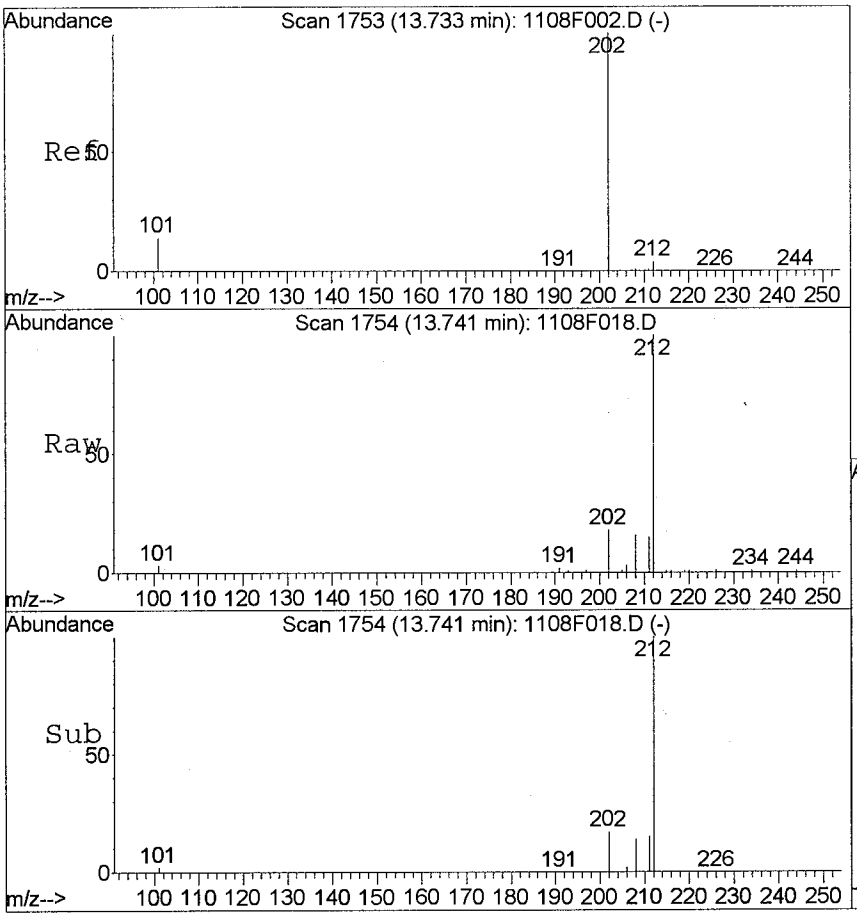


#32
C1-Phenanthrenes/Anthracenes
Concen: 4.66 ng/ml m
RT: 12.19 min Scan# 1501
Delta R.T. -0.03 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:192 Resp: 1088

Ion	Ratio	Lower	Upper
192	100		
191	107.7	25.3	85.3#

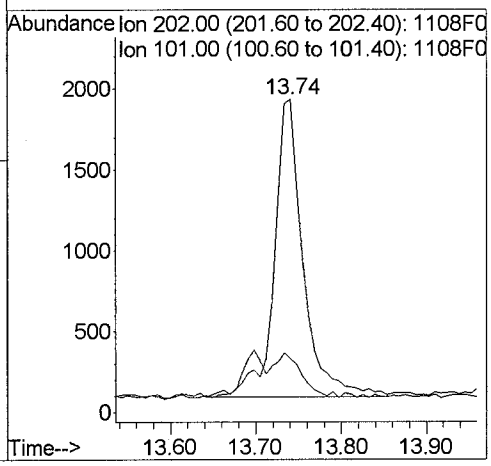


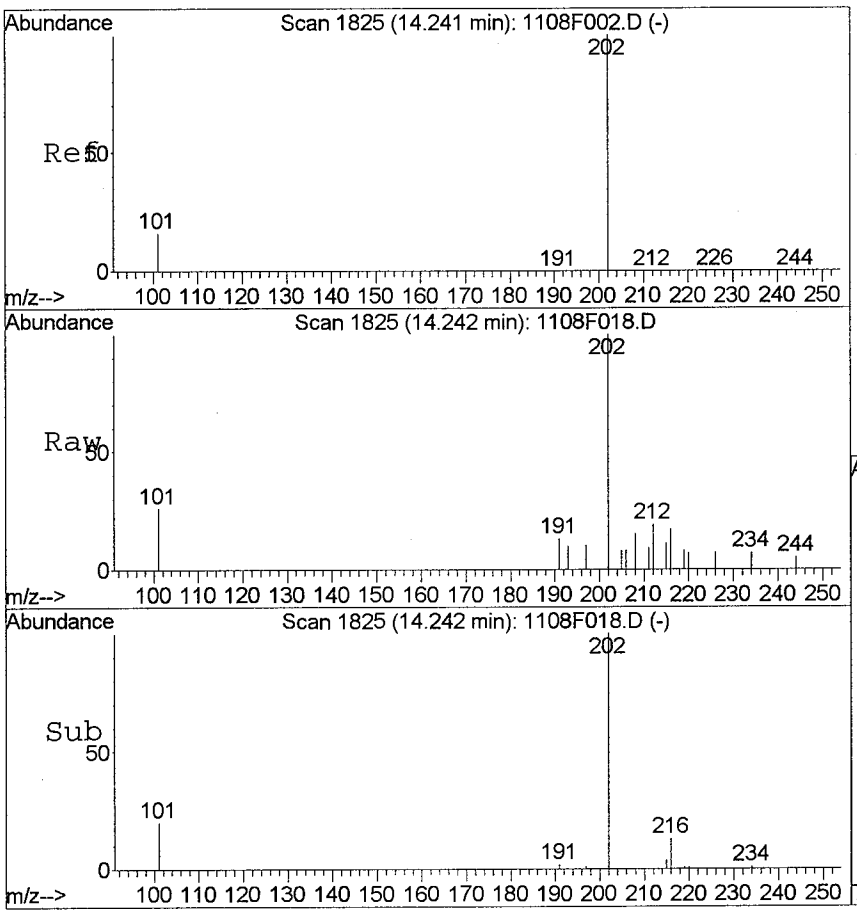


#36
Fluoranthene
Concen: 18.51 ng/ml
RT: 13.74 min Scan# 1754
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:202 Resp: 4305

Ion	Ratio	Lower	Upper
202	100		
101	12.6	0.0	44.3

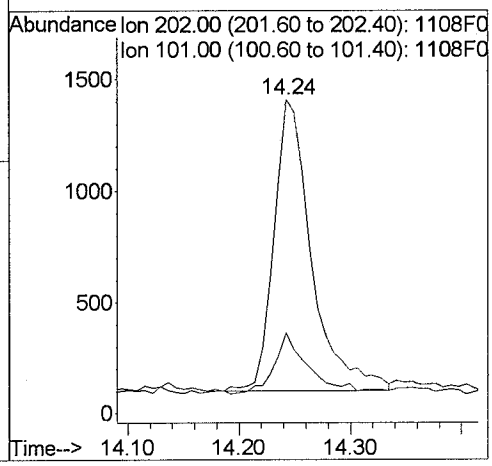


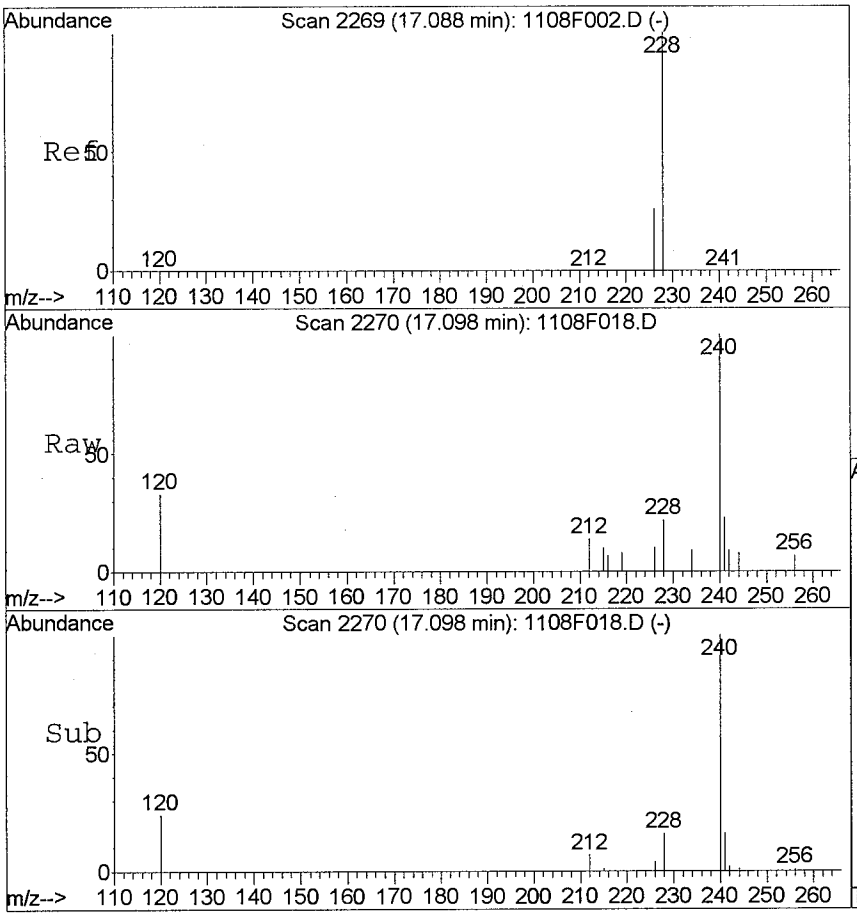


#39
Pyrene
Concen: 14.27 ng/ml
RT: 14.24 min Scan# 1825
Delta R.T. 0.00 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:202 Resp: 3098

Ion	Ratio	Lower	Upper
202	100		
101	20.5	0.0	46.2

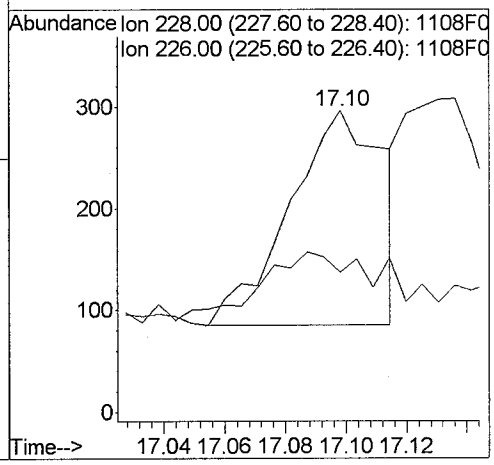


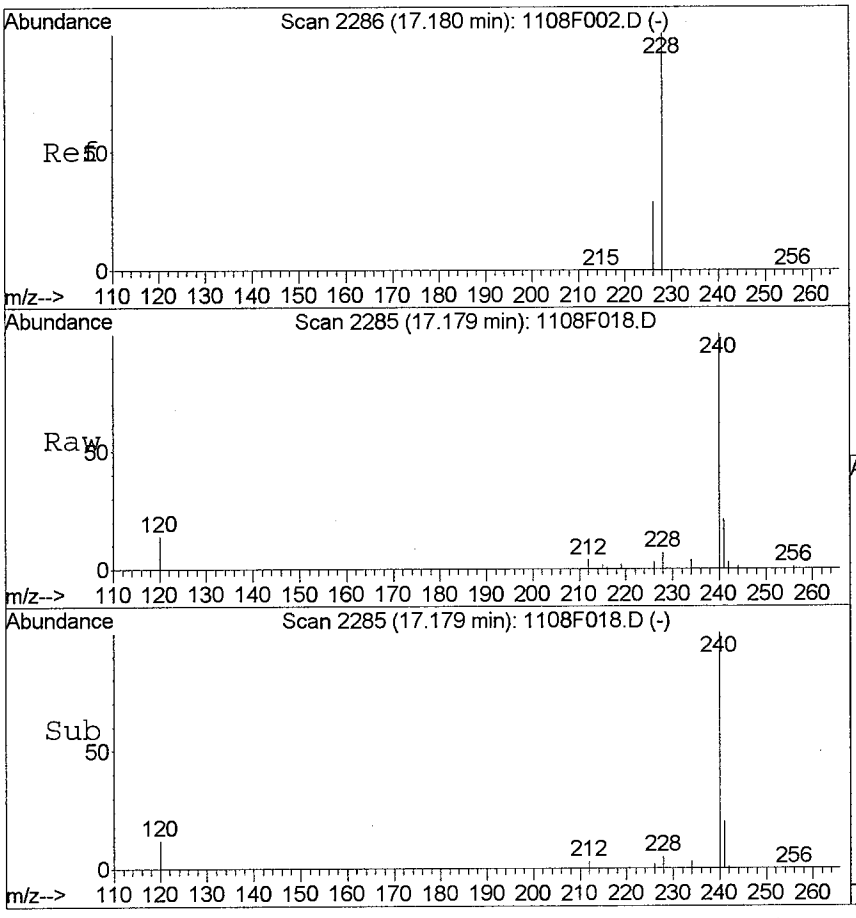


#42
Benz(a)anthracene
Concen: 2.72 ng/ml
RT: 17.10 min Scan# 2270
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:228 Resp: 449

Ion	Ratio	Lower	Upper
228	100		
226	17.1	0.0	55.8

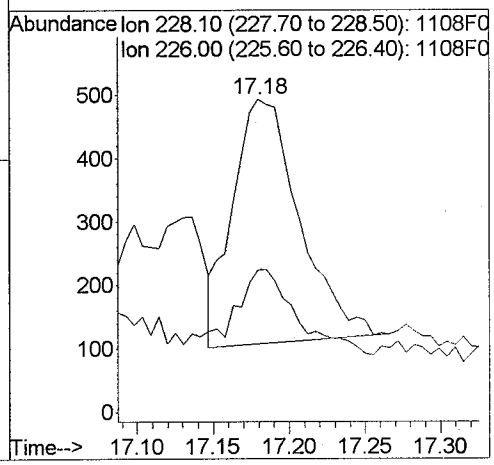


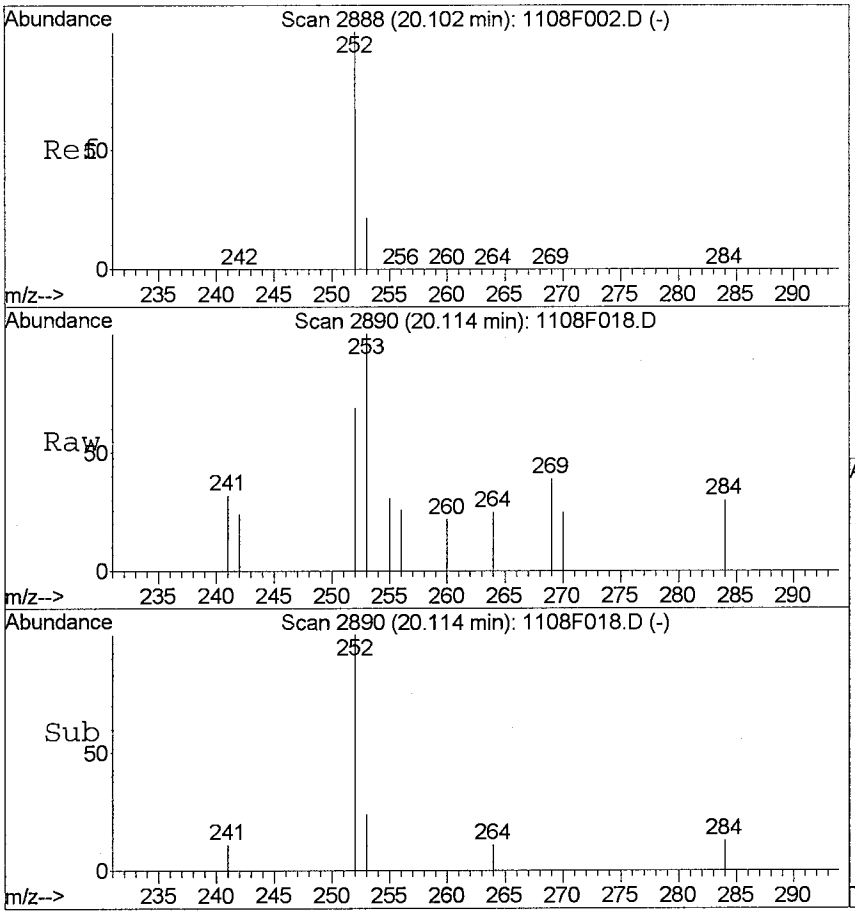


#43
Chrysene
Concen: 6.63 ng/ml
RT: 17.18 min Scan# 2285
Delta R.T. -0.00 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:228 Resp: 1171

Ion	Ratio	Lower	Upper
228	100		
226	33.2	0.0	58.5

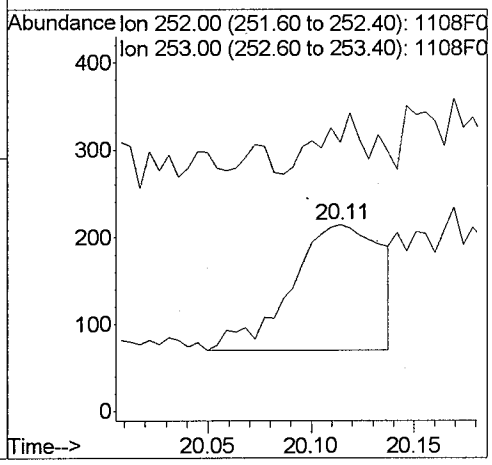


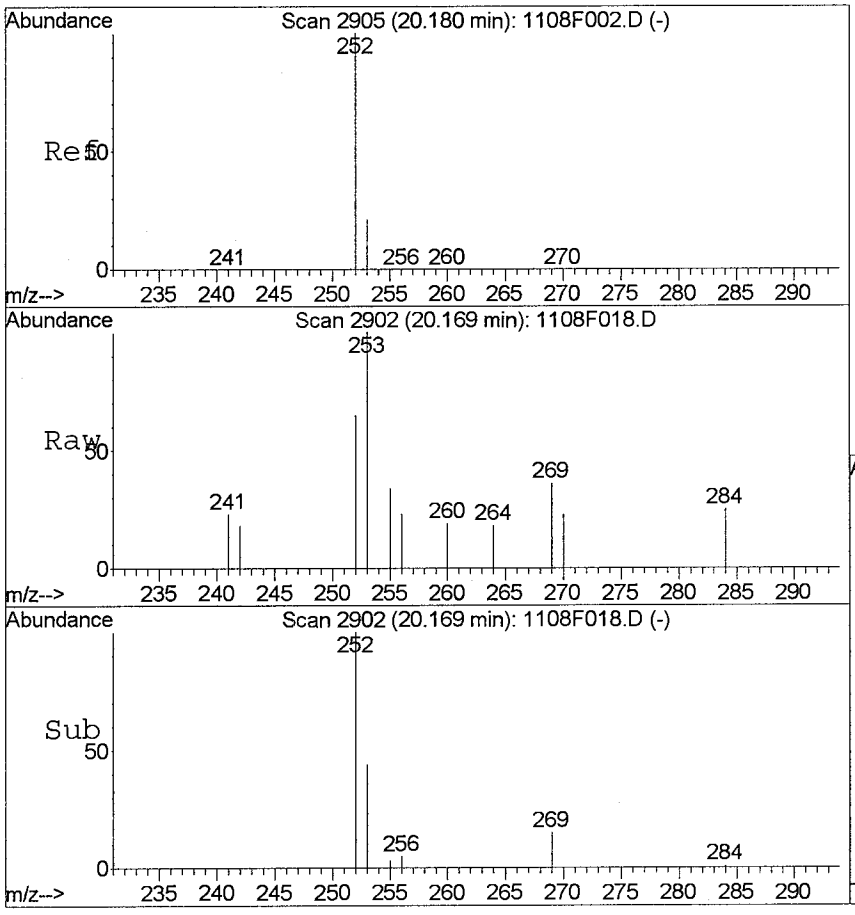


#49
Benzo(b)fluoranthene
Concen: 3.54 ng/ml
RT: 20.11 min Scan# 2890
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:252 Resp: 436

Ion	Ratio	Lower	Upper
252	100		
253	7.6	0.0	51.9

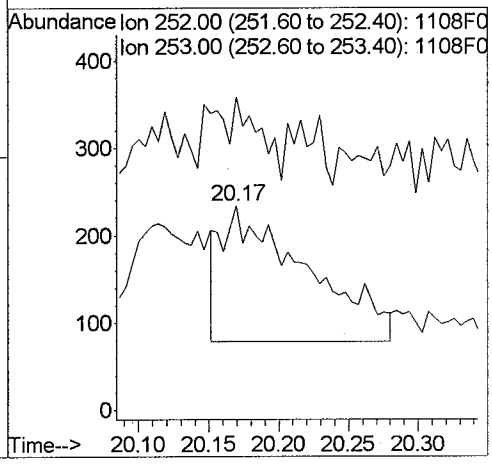


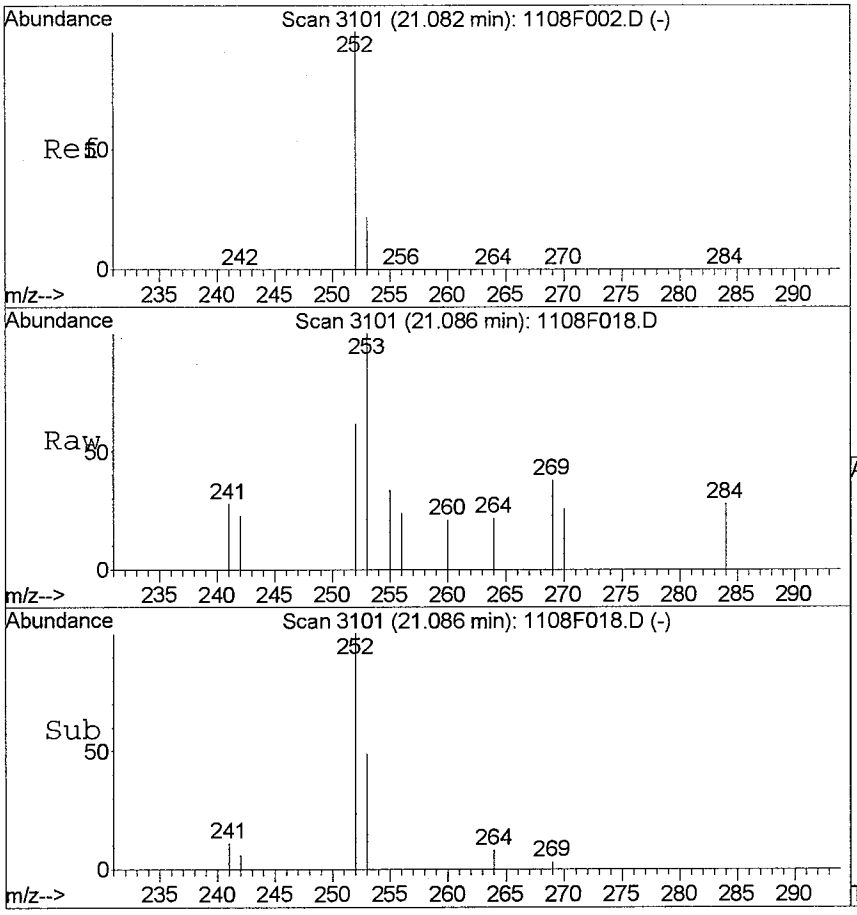


#50
Benzo(k)fluoranthene
Concen: 4.19 ng/ml m
RT: 20.17 min Scan# 2902
Delta R.T. -0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:252 Resp: 655

Ion	Ratio	Lower	Upper
252	100		
253	153.4	0.0	51.7#

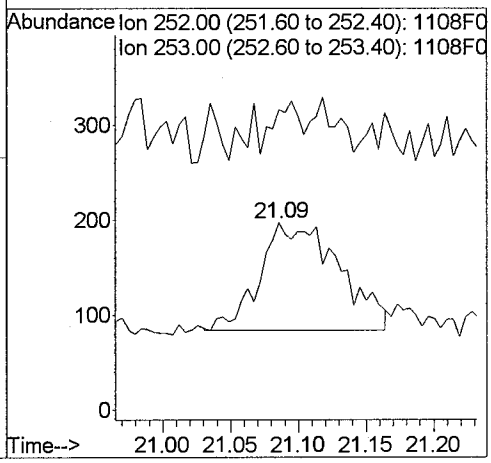


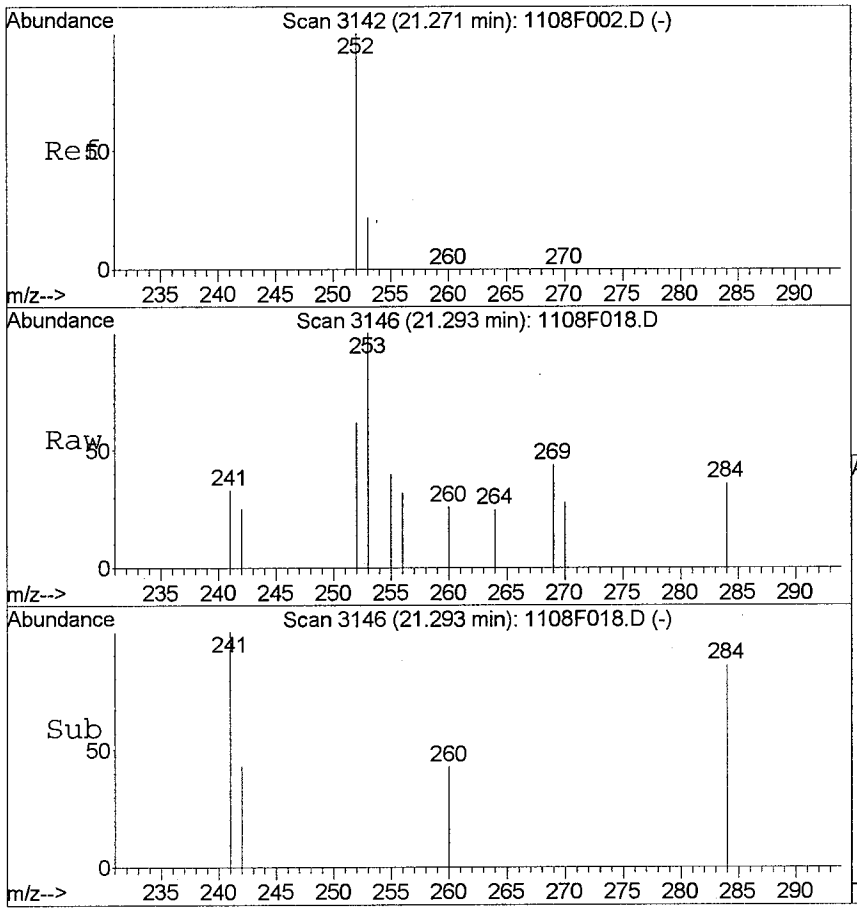


#51
Benzo(e)pyrene
Concen: 3.30 ng/ml m
RT: 21.09 min Scan# 3101
Delta R.T. 0.00 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:252 Resp: 457

Ion	Ratio	Lower	Upper
252	100		
253	160.4	0.0	51.8#

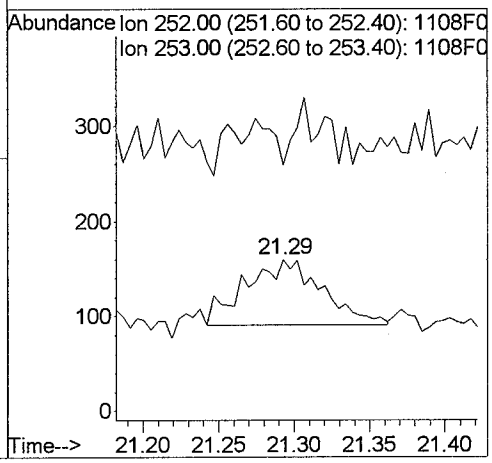


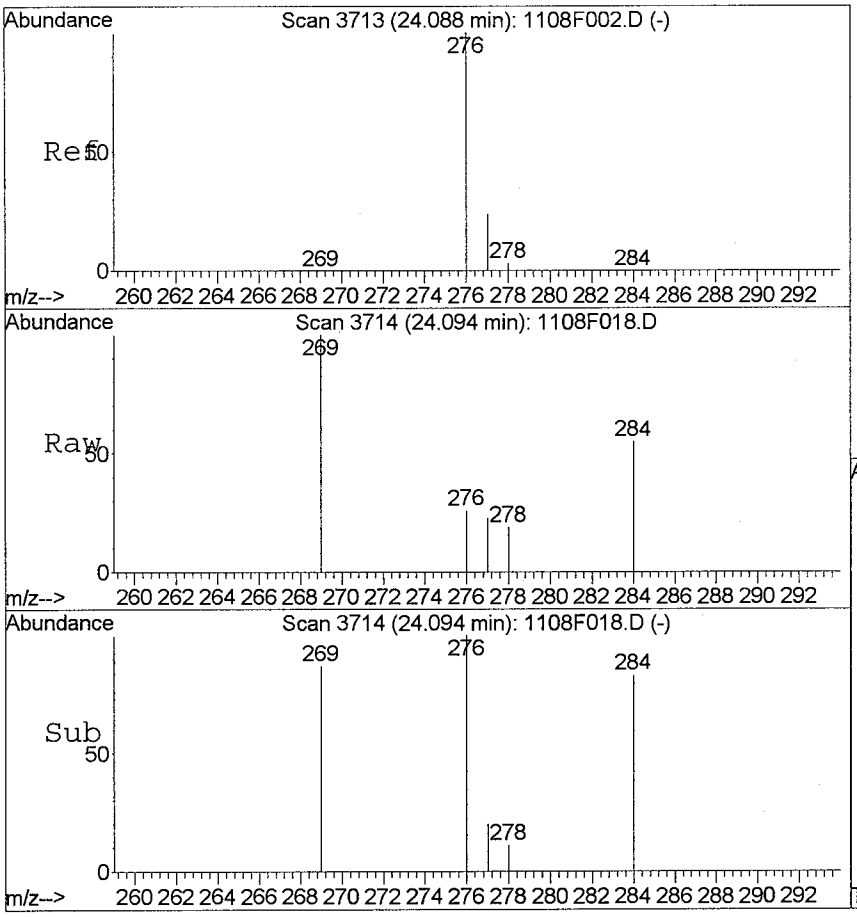


#52
Benzo(a)pyrene
Concen: 2.31 ng/ml
RT: 21.29 min Scan# 3146
Delta R.T. 0.02 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:252 Resp: 242

Ion	Ratio	Lower	Upper
252	100		
253	0.0	0.0	51.7

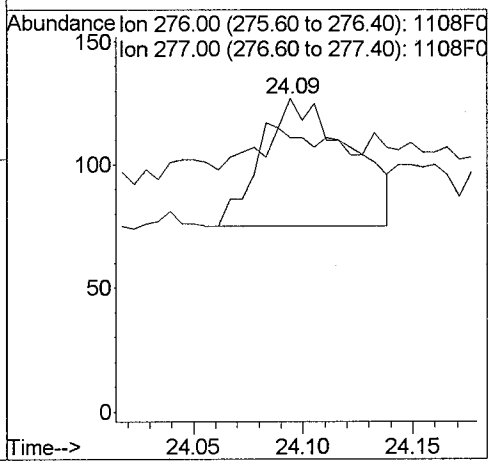


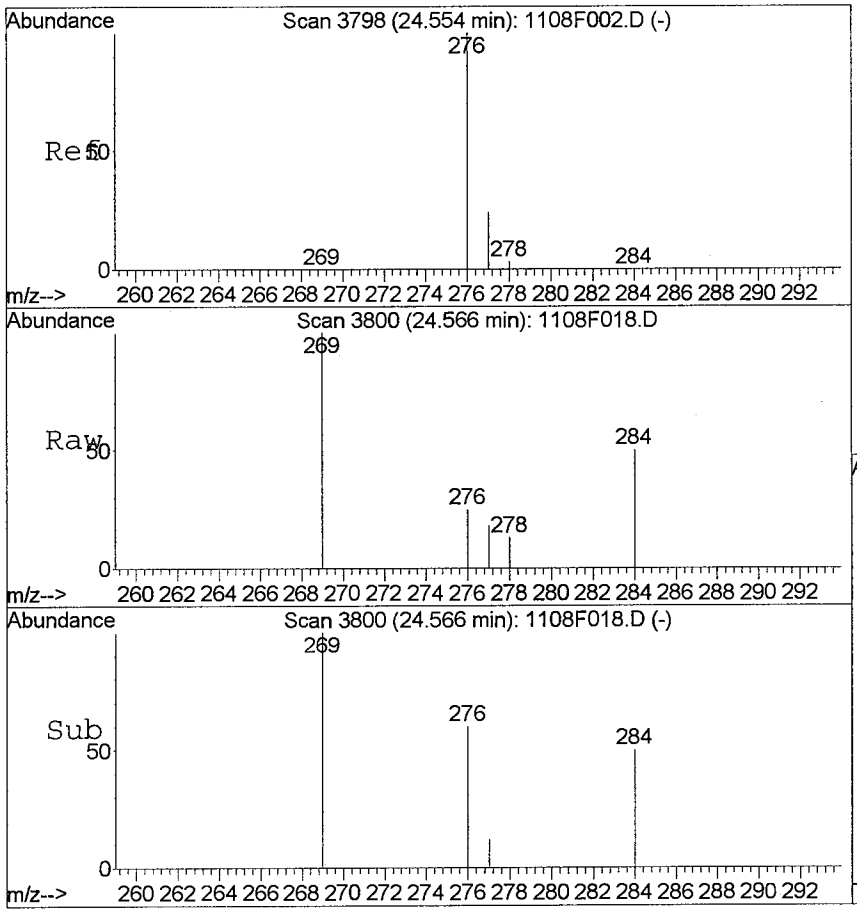


#54
Indeno(1,2,3-cd)pyrene
Concen: 2.31 ng/ml
RT: 24.09 min Scan# 3714
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:276 Resp: 147

Ion	Ratio	Lower	Upper
276	100		
277	19.2	0.0	54.0

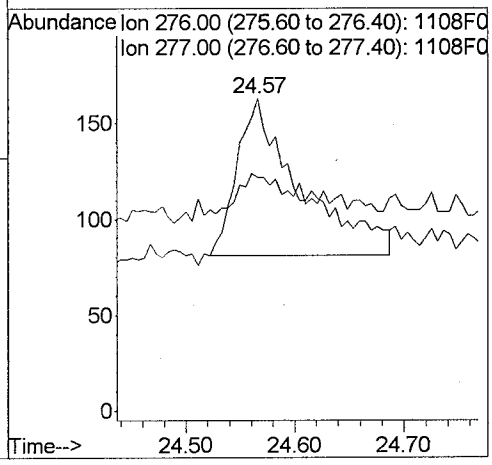




#56
Benzo(g,h,i)perylene
Concen: 3.13 ng/ml m
RT: 24.57 min Scan# 3800
Delta R.T. 0.01 min
Lab File: 1108F018.D
Acq: 8 Nov 2003 4:09 pm

Tgt Ion:276 Resp: 331

Ion	Ratio	Lower	Upper
276	100		
277	74.8	0.0	54.3#

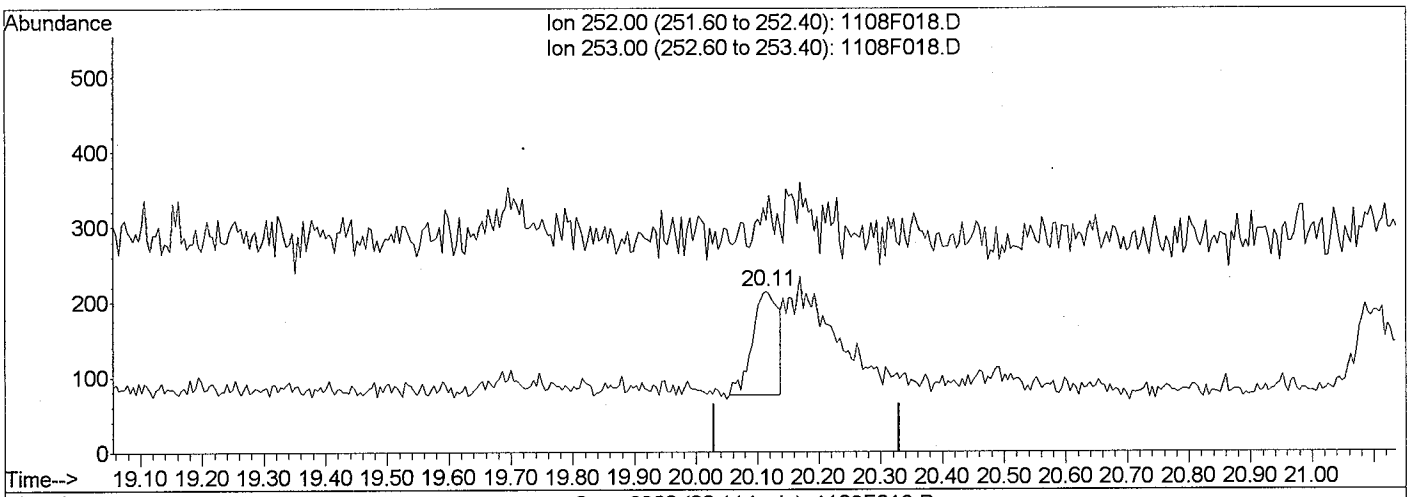


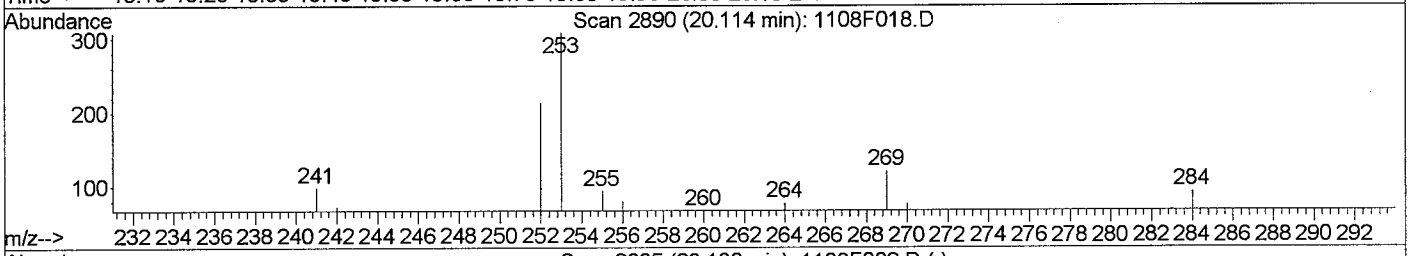
Quantitation Report (Qedit)

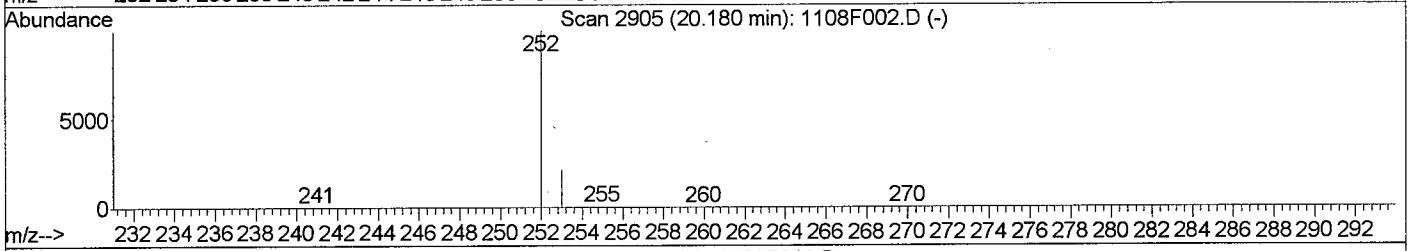
Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F018.D

(50) Benzo(k)fluoranthene (T)

20.11min 2.59ng/ml

response 404

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.01
0.00	0.00	0.00
0.00	0.00	0.00

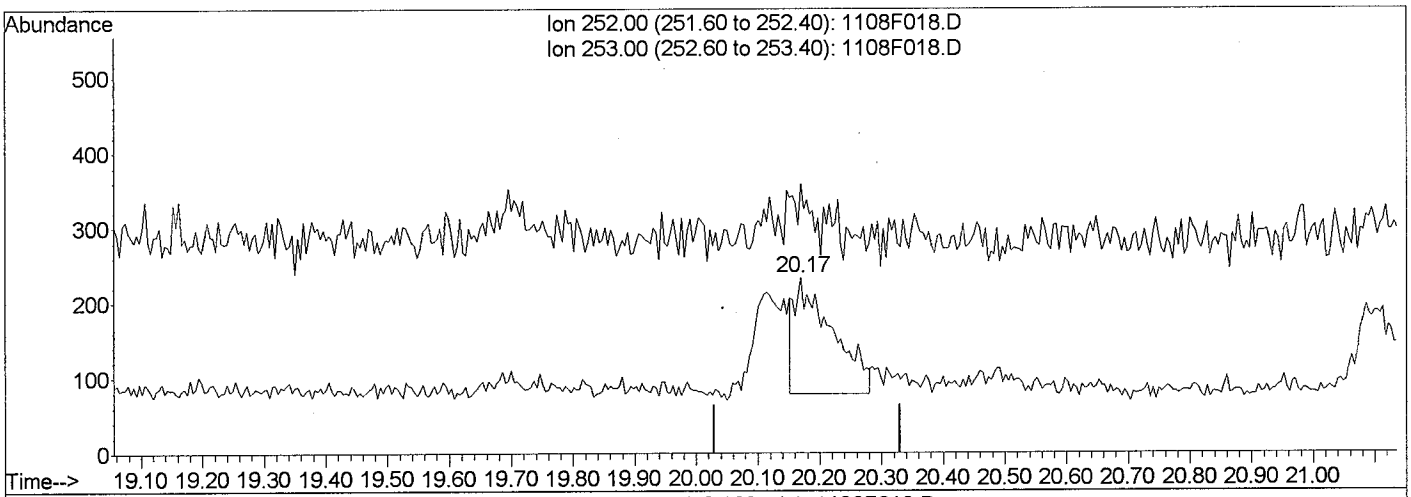
1108F018.D 1107ALK.M Mon Nov 10 16:38:56 2003

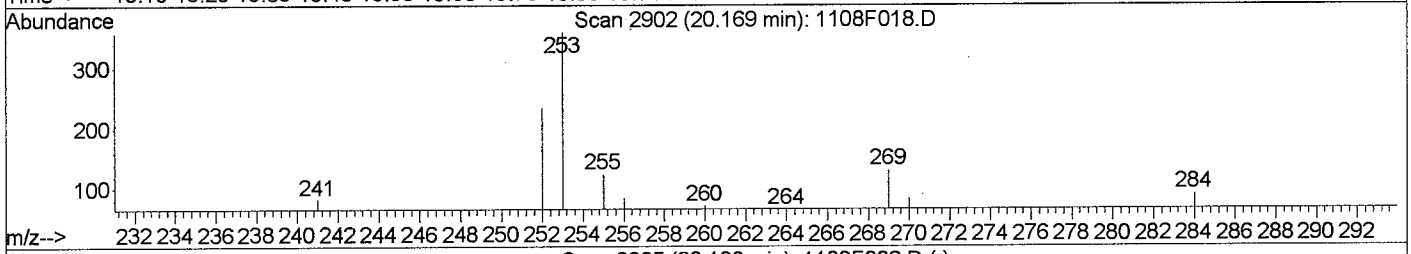
Quantitation Report (Qedit)

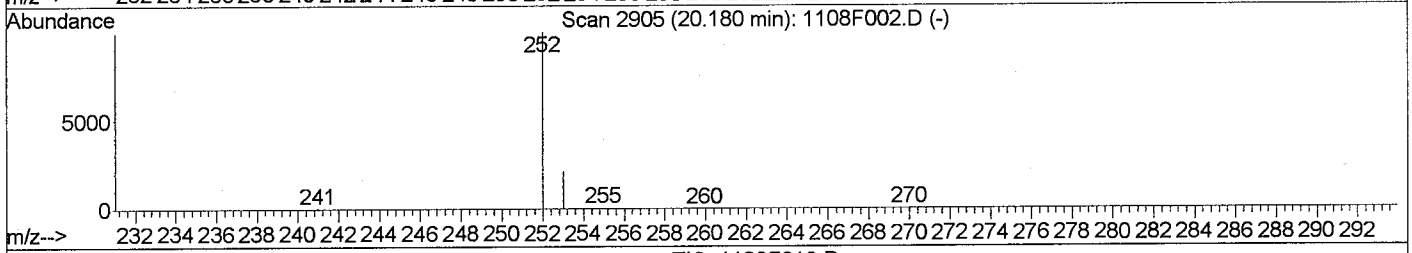
Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F018.D

(50) Benzo(k)fluoranthene (T)

20.17min 4.19ng/ml m

response 655

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	153.42#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak
11/11/03
mt
11/11/03

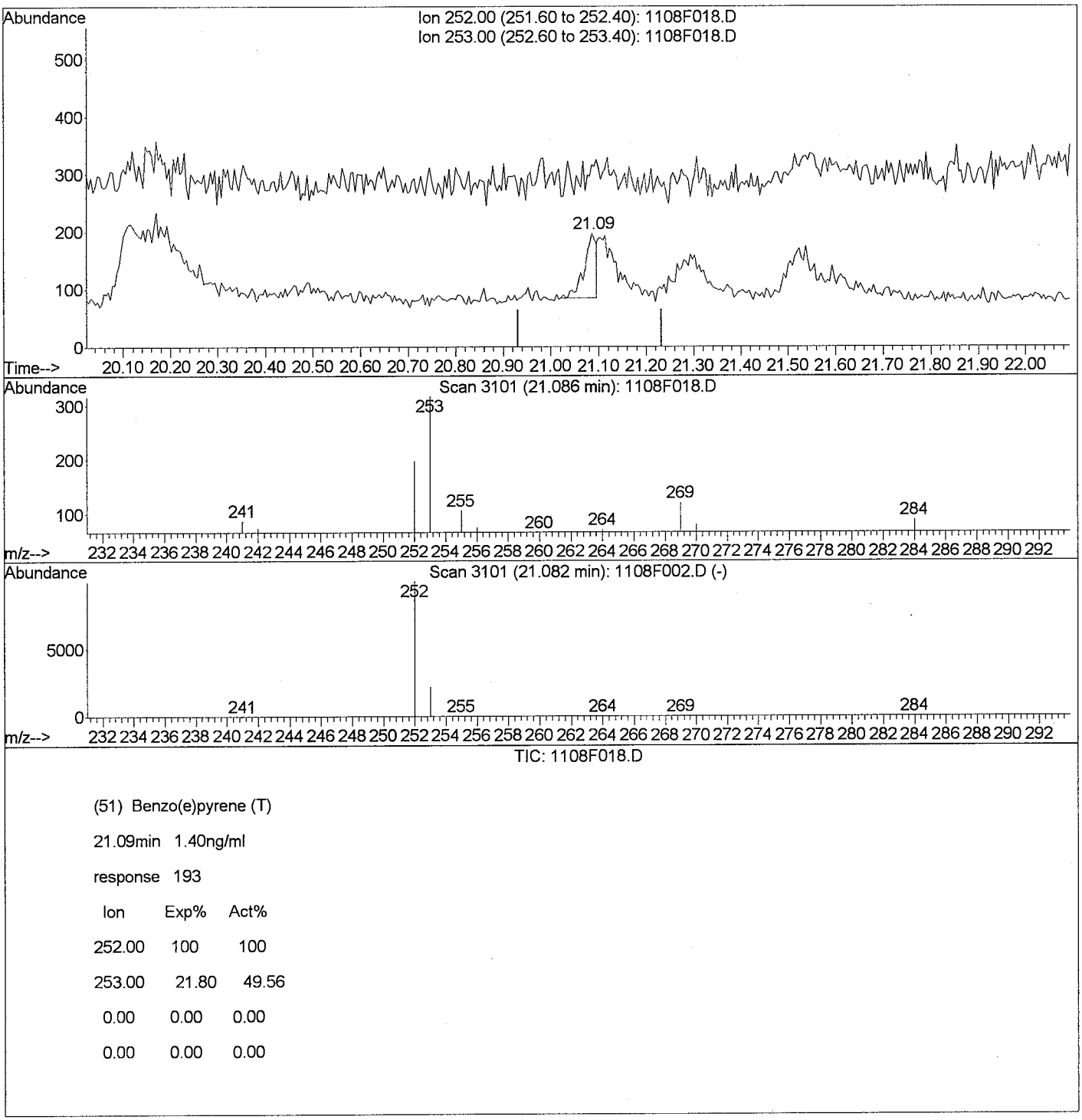
1108F018.D 1107ALK.M Mon Nov 10 16:39:01 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F018.D

(51) Benzo(e)pyrene (T)

21.09min 1.40ng/ml

response 193

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	49.56
0.00	0.00	0.00
0.00	0.00	0.00

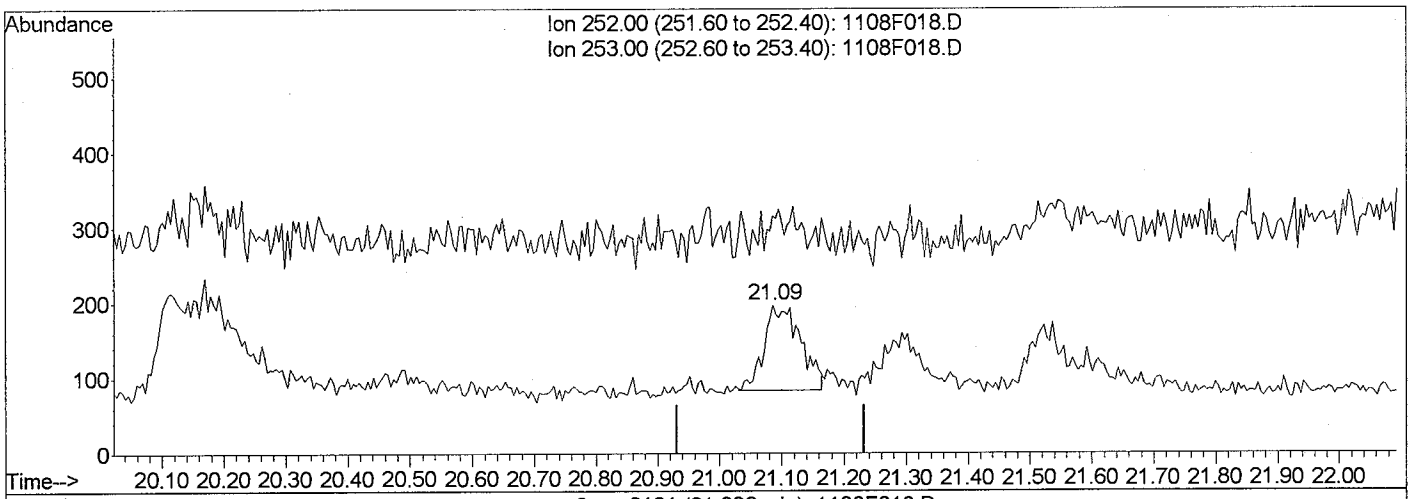
1108F018.D 1107ALK.M Mon Nov 10 16:39:04 2003

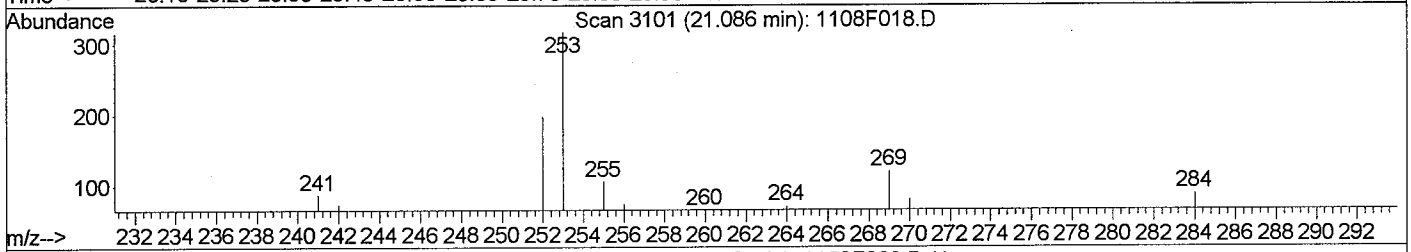
Quantitation Report (Qedit)

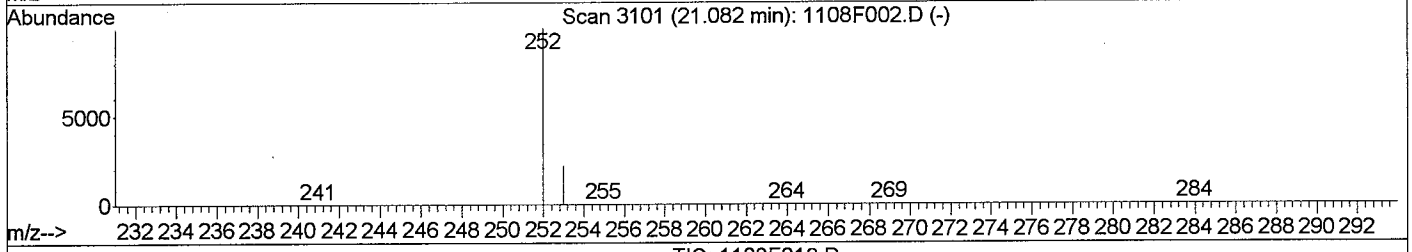
Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F018.D

(51) Benzo(e)pyrene (T)

21.09min 3.30ng/ml m

response 457

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	160.41#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
complete
mt
11/11/03

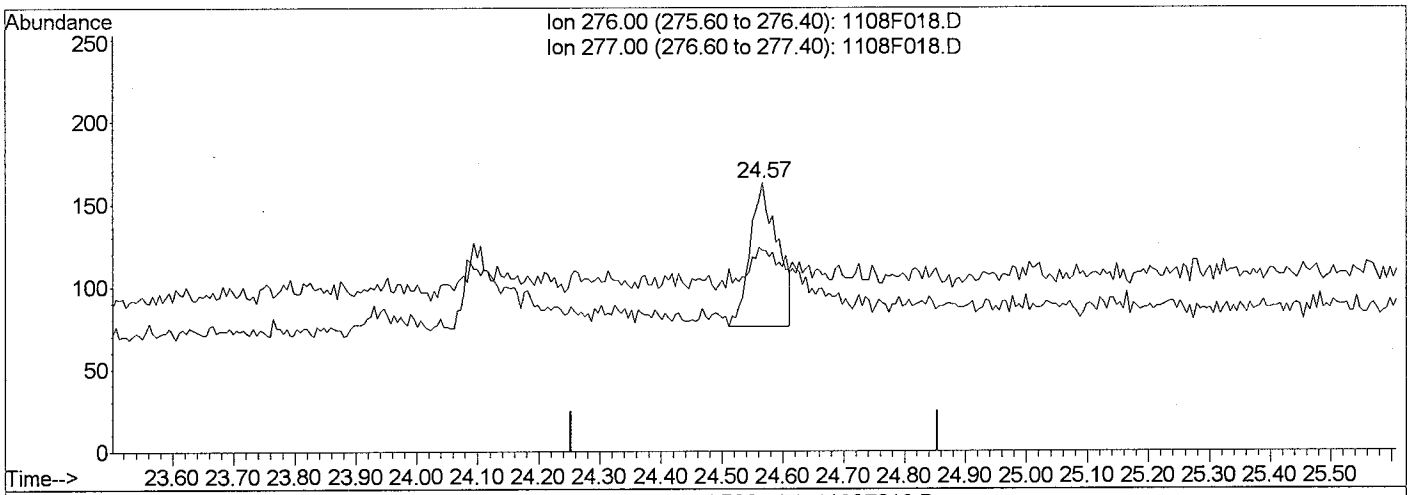
1108F018.D 1107ALK.M Mon Nov 10 16:39:08 2003

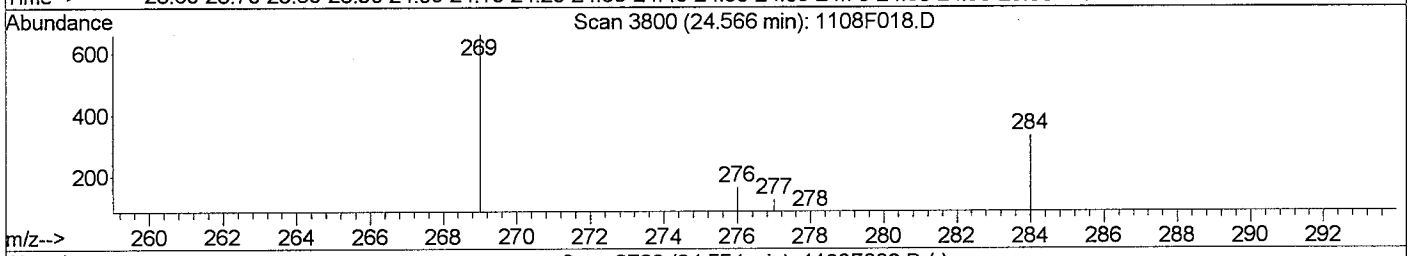
Quantitation Report (Qedit)

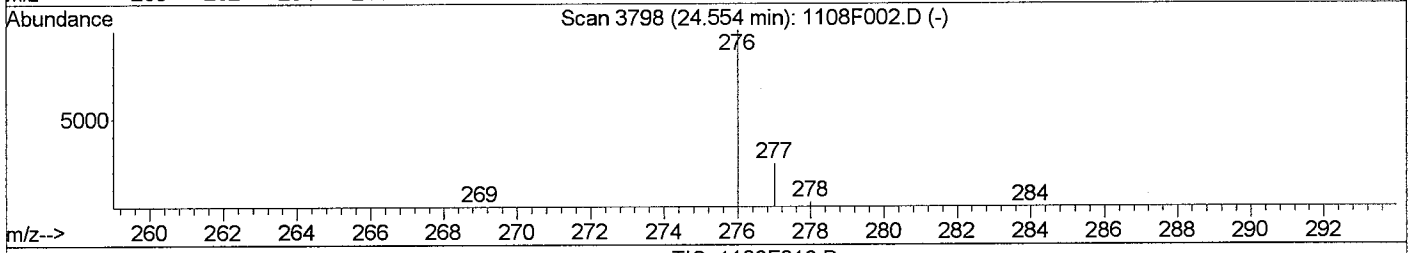
Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F018.D

(56) Benzo(g,h,i)perylene (T)

24.57min 2.57ng/ml

response 271

Ion	Exp%	Act%
276.00	100	100
277.00	24.30	16.09
0.00	0.00	0.00
0.00	0.00	0.00

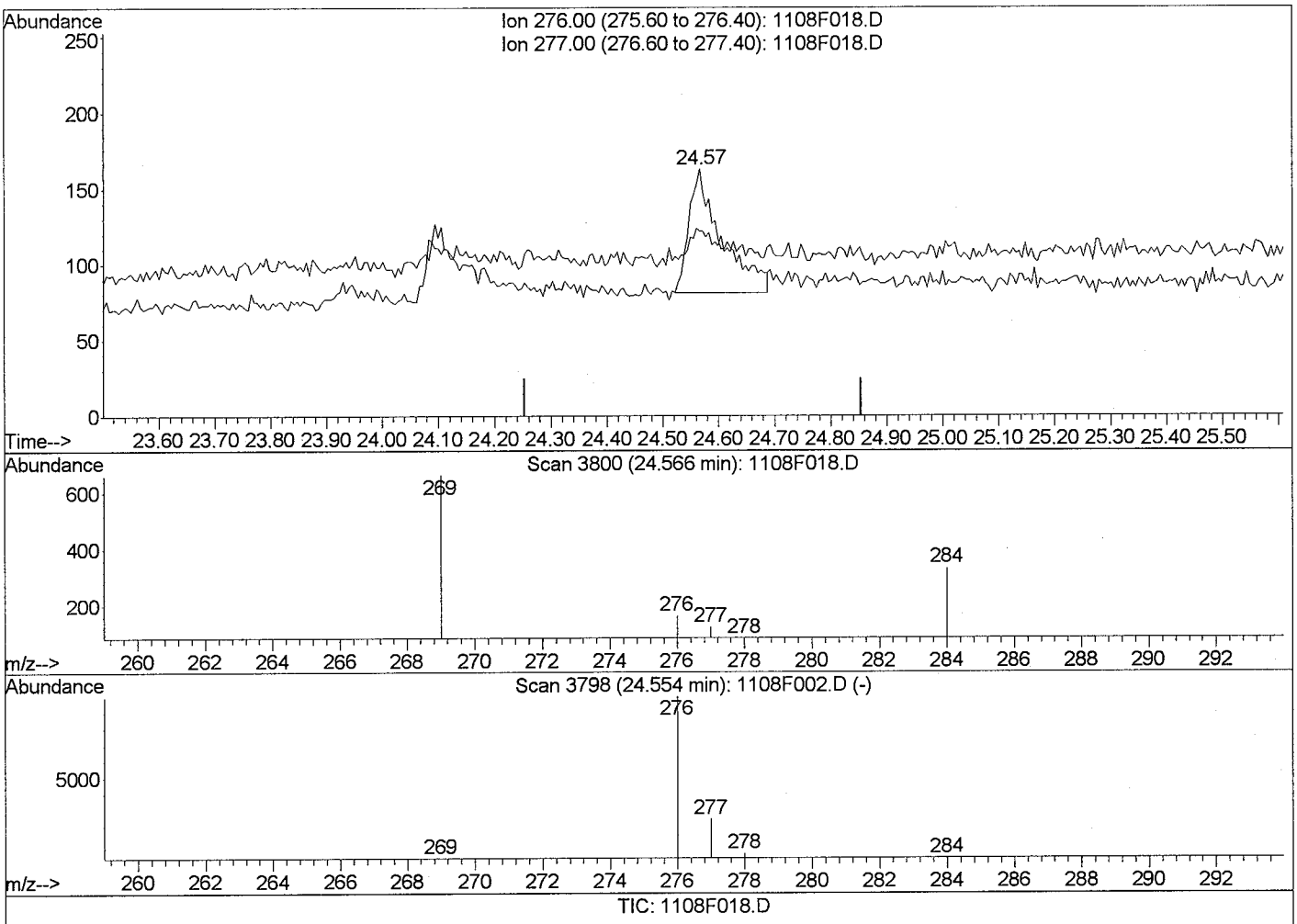
1108F018.D 1107ALK.M Mon Nov 10 16:39:16 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F018.D

(56) Benzo(g,h,i)perylene (T)

24.57min 3.13ng/ml m

response 331

Ion	Exp%	Act%
276.00	100	100
277.00	24.30	74.85#
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03 mt 11/11/03

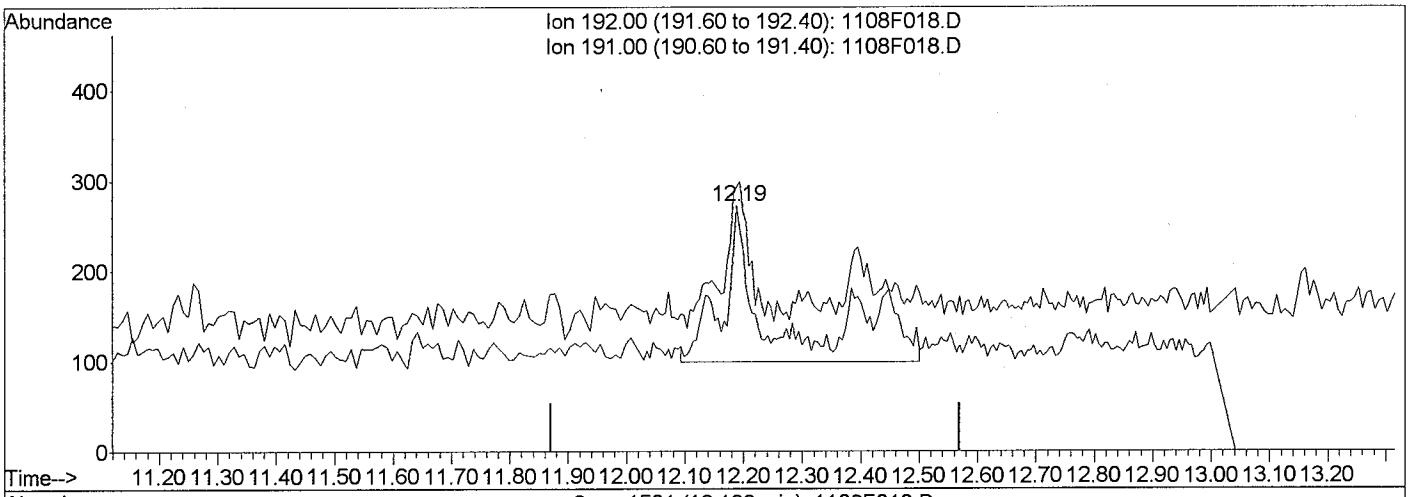
1108F018.D 1107ALK.M Mon Nov 10 16:39:20 2003

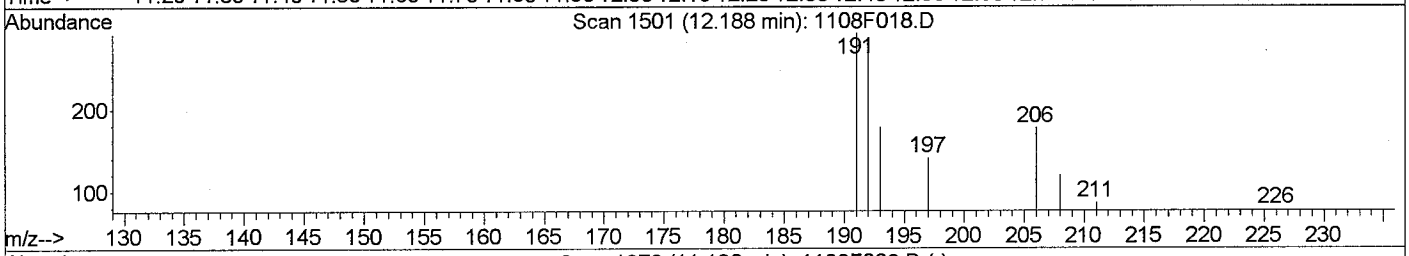
Quantitation Report (Qedit)

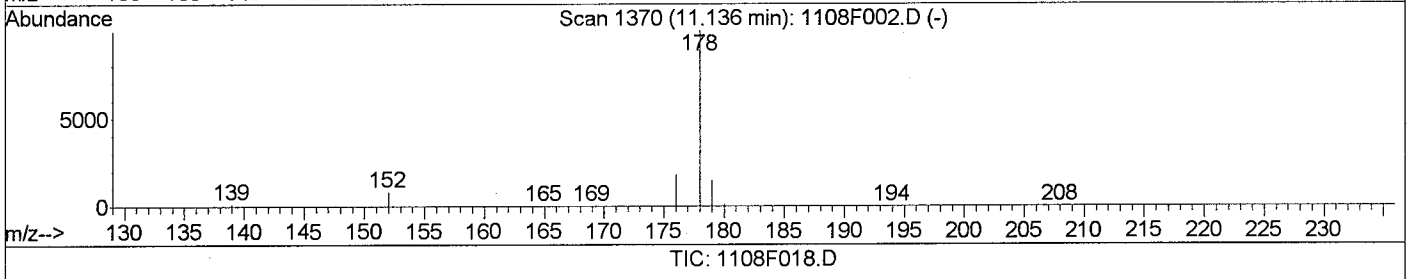
Data File : J:\MS11\DATA\110803\1108F018.D
Acq On : 8 Nov 2003 4:09 pm
Sample : K2308419-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:07 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 4.66ng/ml m

response 1088

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	107.72#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

mt 11/11/03

1108F018.D 1107ALK.M Mon Nov 10 17:09:54 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-5
Lab Code: K2308419-006

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-5
Lab Code: K2308419-006

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/08/03	Acceptable
Fluoranthene-d10	83	18-137	11/08/03	Acceptable
Terphenyl-d14	109	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F019.D
Lab ID: K2308419-006
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 16:45
Date Quantitated: 11/10/2003 16:37
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: not 11/11/03

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245661	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F019.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 16:45	**Quant Date:**	11/10/2003 16:37	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	234660	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	118094	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	157617	1,000.00	OK
4	Chrysene-d12	17.14	0.01	240	124860	1,000.00	OK
5	Perylene-d12	21.53	0.02	264	68811	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.01	0.01	0.00	176	167555	1,419	71	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	260923	1,654	83	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	247660	2,176	109	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1485	5.60	0.0054	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	193	1.23	0.0027	U	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	251	1.71	0.0025	U	
1	Biphenyl	7.09		0.00	154	730	3.84	0.0037	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene				152	0d		0.0018	U	
2	Acenaphthene	8.12	0.01	0.00	154	379	2.70	0.0026	J	
2	Dibenzofuran	8.41		0.00	168	182	0.9700	0.0071	U	
2	Fluorene	9.06	0.01	0.00	166	270	1.80	0.0026	U	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F019.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 16:45	**Quant Date:**	11/10/2003 16:37	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-006			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene				184	0d		0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	792	4.15	0.0040	J	
3	Anthracene	11.14		0.00	178	303	1.86	0.0018	J	
3	C1-Phenanthrenes/Anthracenes				192	0		0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	1267m	6.66	0.0064	J	
4	Pyrene	14.24		0.00	202	1291	7.91	0.0076	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.10	0.01	0.00	228	151	1.22	0.0021	U	
4	Chrysene	17.18		0.00	228	379	2.85	0.0027	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene				252	0		0.0020	U	
5	Benzo(k)fluoranthene				252	0		0.0014	U	
5	Benzo(e)pyrene				252	0		0.0019	U	
5	Benzo(a)pyrene				252	0		0.0016	U	
5	Perylene				252	0		0.0012	U	
5	Indeno(1,2,3-cd)pyrene				276	0		0.0021	U	
5	Dibenz(a,h)anthracene				278	0		0.0017	U	
5	Benzo(g,h,i)perylene	24.57	0.02	0.00	276	102	1.30	0.0037	U	

Prep Amount:	1040 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F019.D Vial: 16
Acq On : 8 Nov 2003 4:45 pm Operator: LWeiskopf
Sample : K2308419-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:16 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

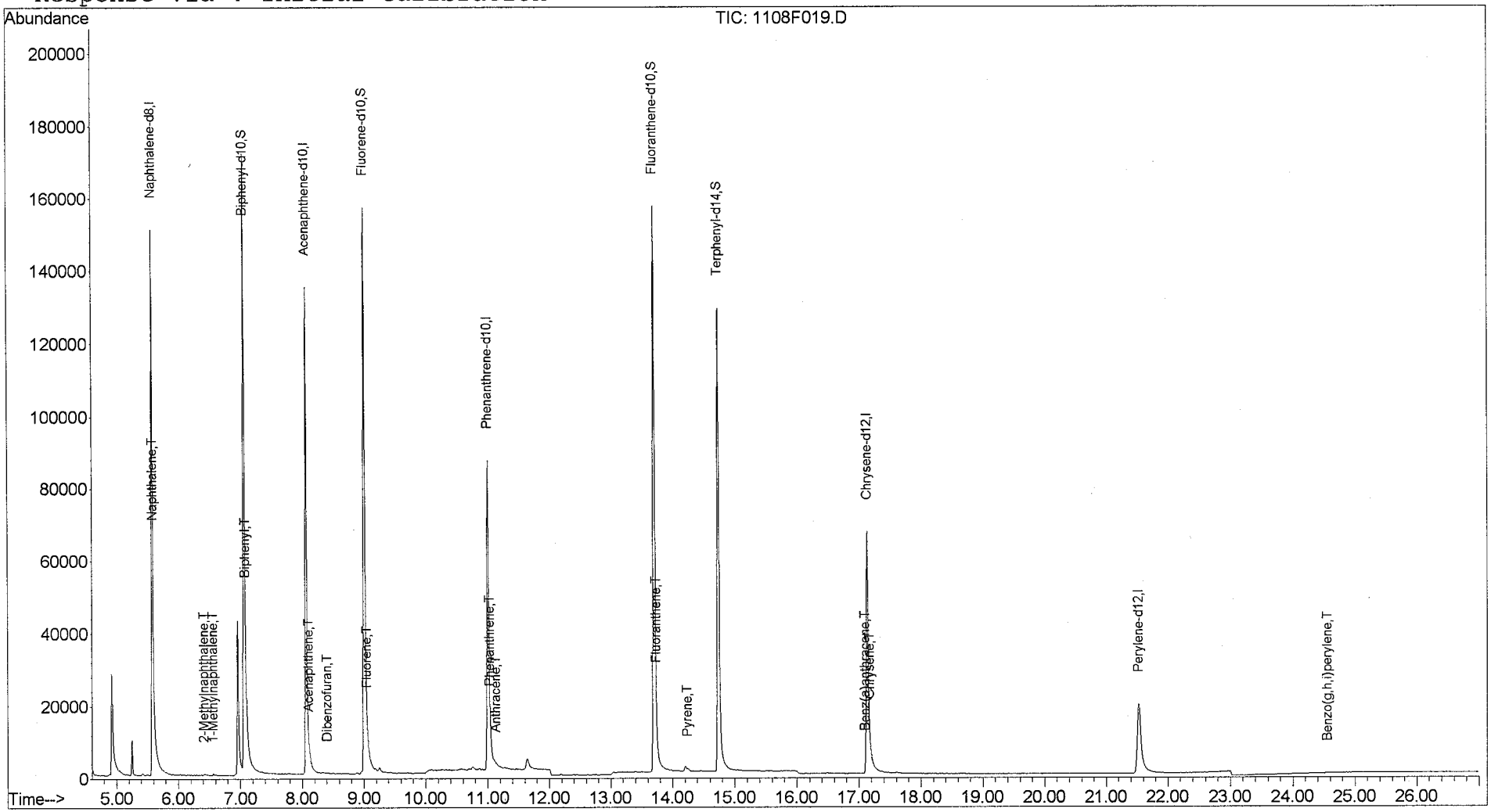
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	234660	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	118094	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	157617	1000.00	ng/ml	0.00
38) Chrysene-d12	17.14	240	124860	1000.00	ng/ml	0.00
48) Perylene-d12	21.53	264	68811	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	240123	1396.89	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 139.69%			
16) Fluorene-d10	9.01	176	167555	1418.65	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 141.87%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	260923	1653.98	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 165.40%			
41) Terphenyl-d14	14.74	244	247660	2176.36	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 217.64%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1485	5.60	ng/ml	88
3) 2-Methylnaphthalene	6.42	142	193	1.23	ng/ml	94
4) 1-Methylnaphthalene	6.57	142	251	1.71	ng/ml#	47
6) Biphenyl	7.09	154	730	3.84	ng/ml	98
13) Acenaphthene	8.12	154	379	2.70	ng/ml	99
14) Dibenzofuran	8.41	168	182	0.97	ng/ml	51
17) Fluorene	9.06	166	270	1.80	ng/ml	86
28) Phenanthrene	11.05	178	792	4.15	ng/ml	92
29) Anthracene	11.14	178	303	1.86	ng/ml	70
36) Fluoranthene	13.74	202	1267m	6.66	ng/ml	
39) Pyrene	14.24	202	1291	7.91	ng/ml	100
42) Benz(a)anthracene	17.10	228	151	1.22	ng/ml	49
43) Chrysene	17.18	228	379	2.85	ng/ml	90
56) Benzo(g,h,i)perylene	24.57	276	102	1.30	ng/ml	61

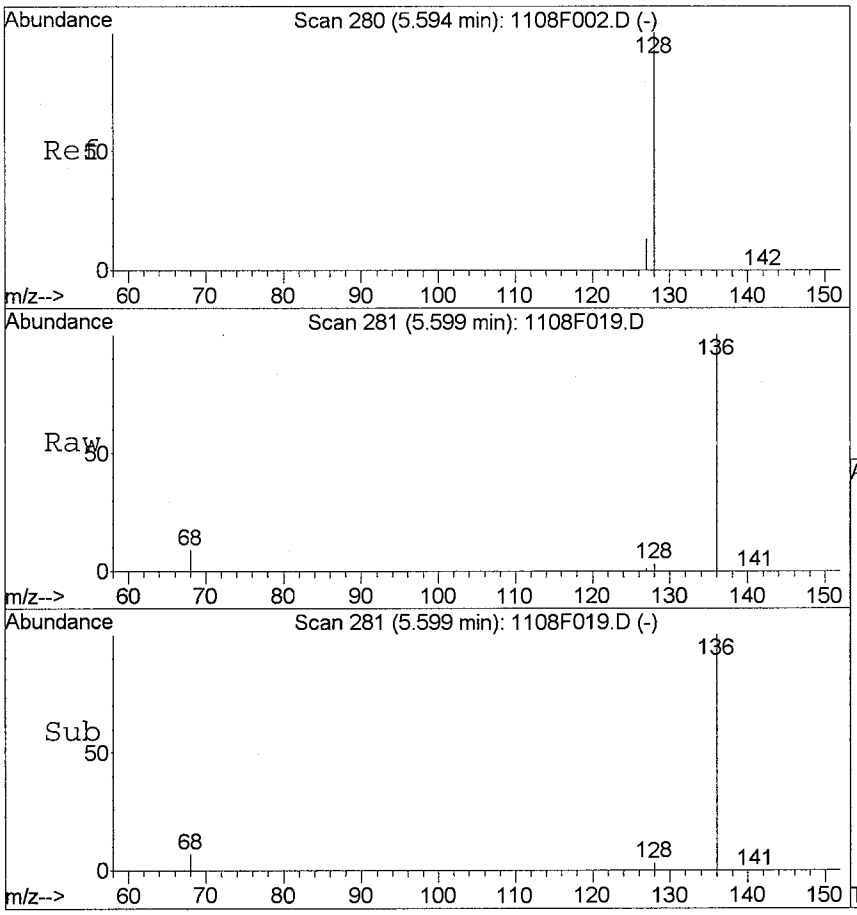
(#) = qualifier out of range (m) = manual integration
1108F019.D 1107ALK.M Mon Nov 10 17:11:46 2003 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F019.D Vial: 16
Acq On : 8 Nov 2003 4:45 pm Operator: LWeiskopf
Sample : K2308419-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:37 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

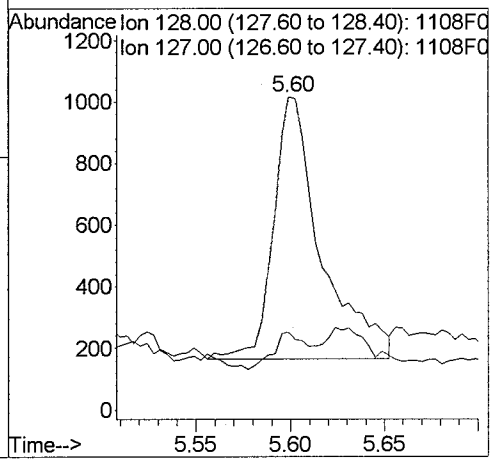


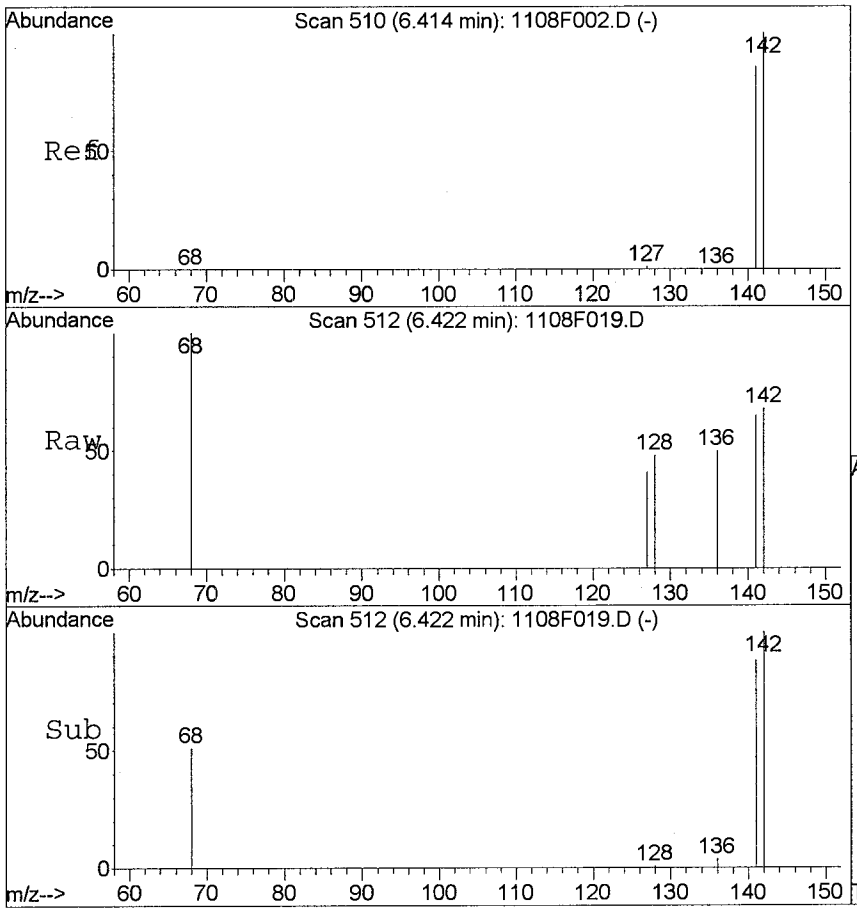


#2
Naphthalene
Concen: 5.60 ng/ml
RT: 5.60 min Scan# 281
Delta R.T. 0.00 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:128 Resp: 1485

Ion	Ratio	Lower	Upper
128	100		
127	8.8	0.0	43.5

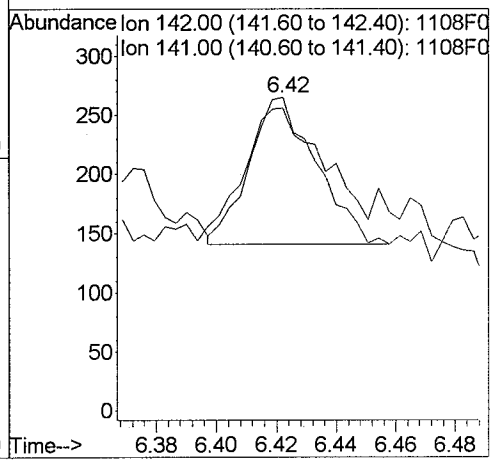


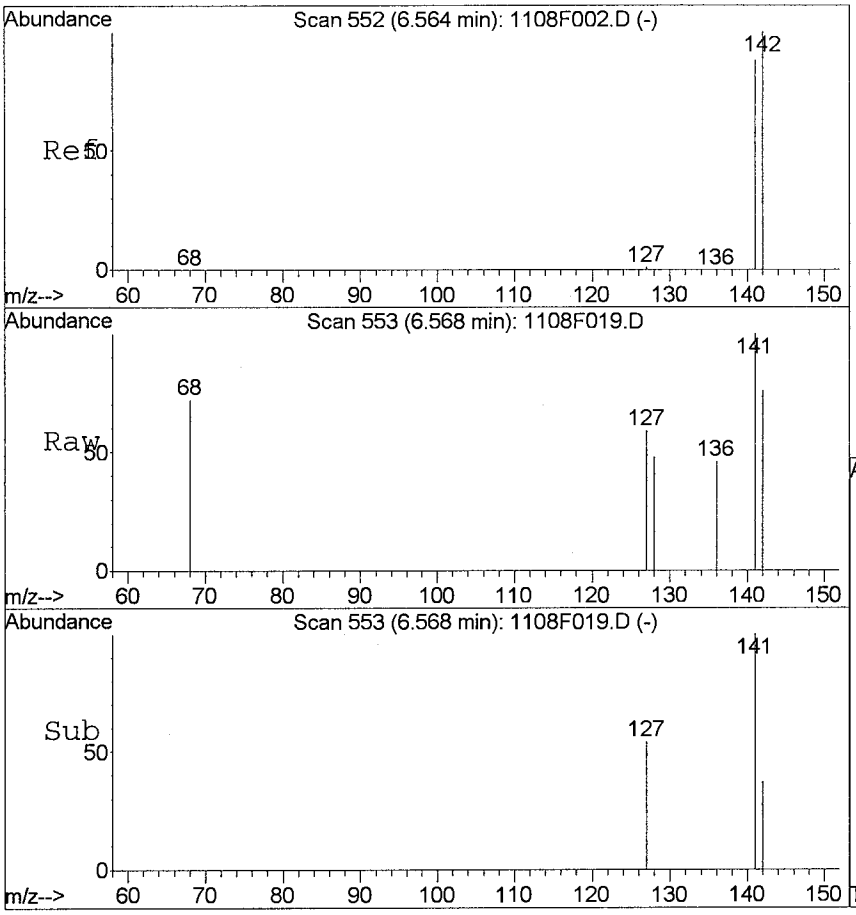


#3
2-Methylnaphthalene
Concen: 1.23 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:142 Resp: 193

Ion	Ratio	Lower	Upper
142	100		
141	80.6	56.1	116.1

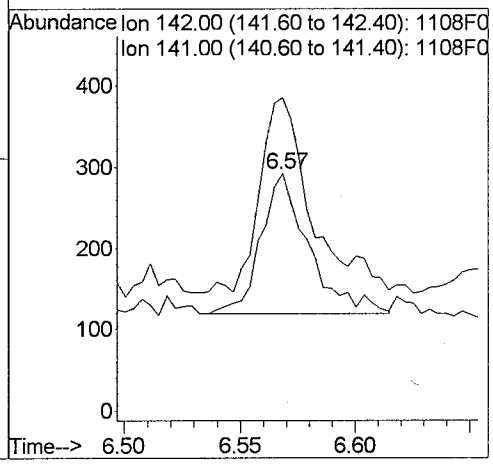


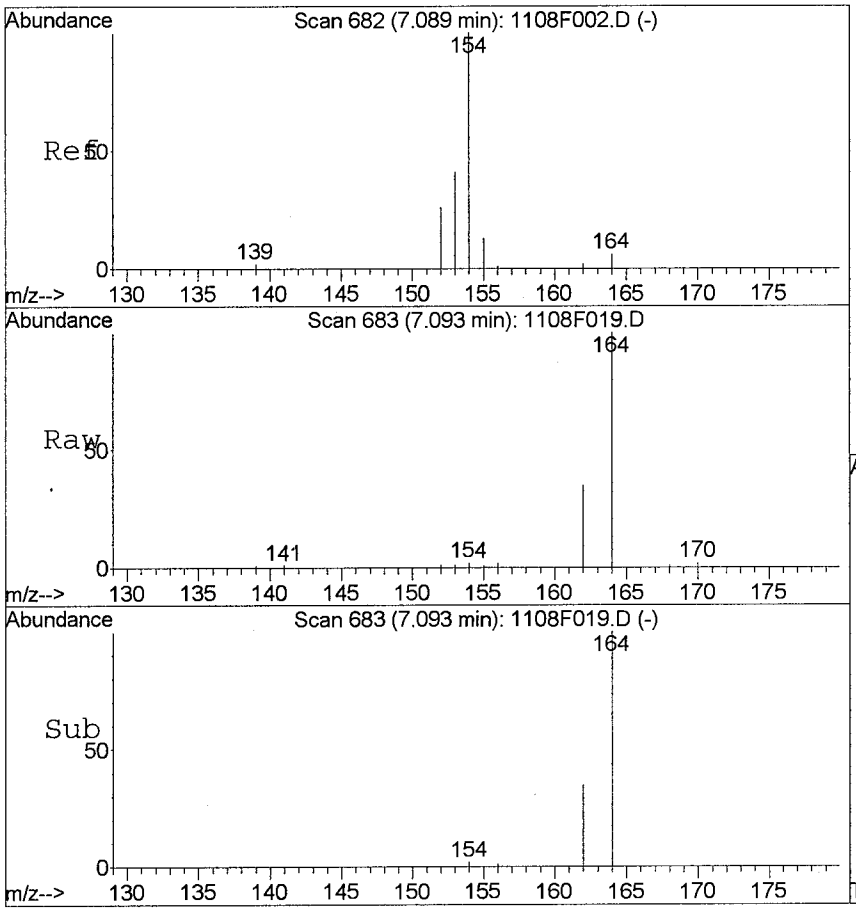


#4
1-Methylnaphthalene
Concen: 1.71 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.00 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:142 Resp: 251

Ion	Ratio	Lower	Upper
142	100		
141	138.2	58.4	118.4#

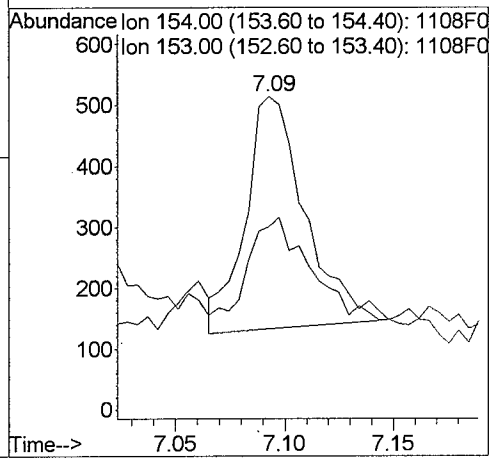


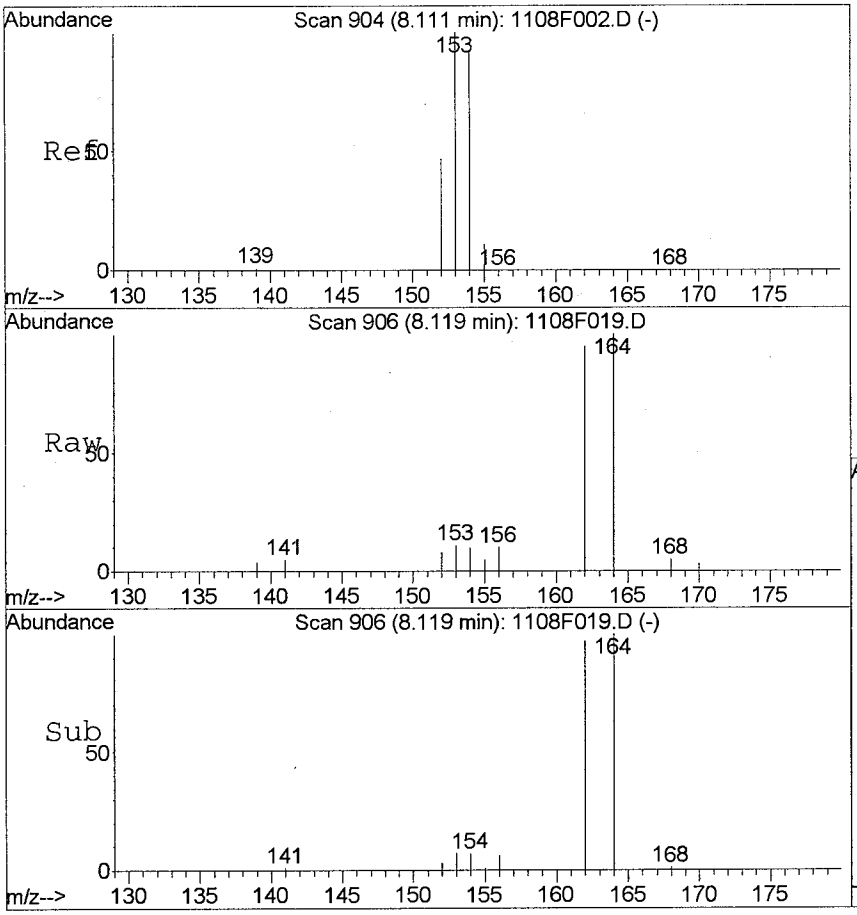


#6
Biphenyl
Concen: 3.84 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:154 Resp: 730

Ion	Ratio	Lower	Upper
154	100		
153	41.5	10.5	70.5

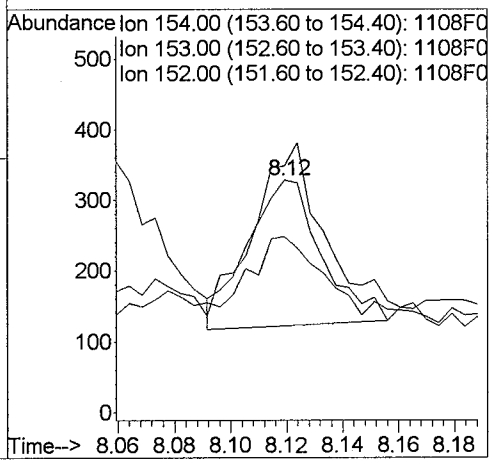


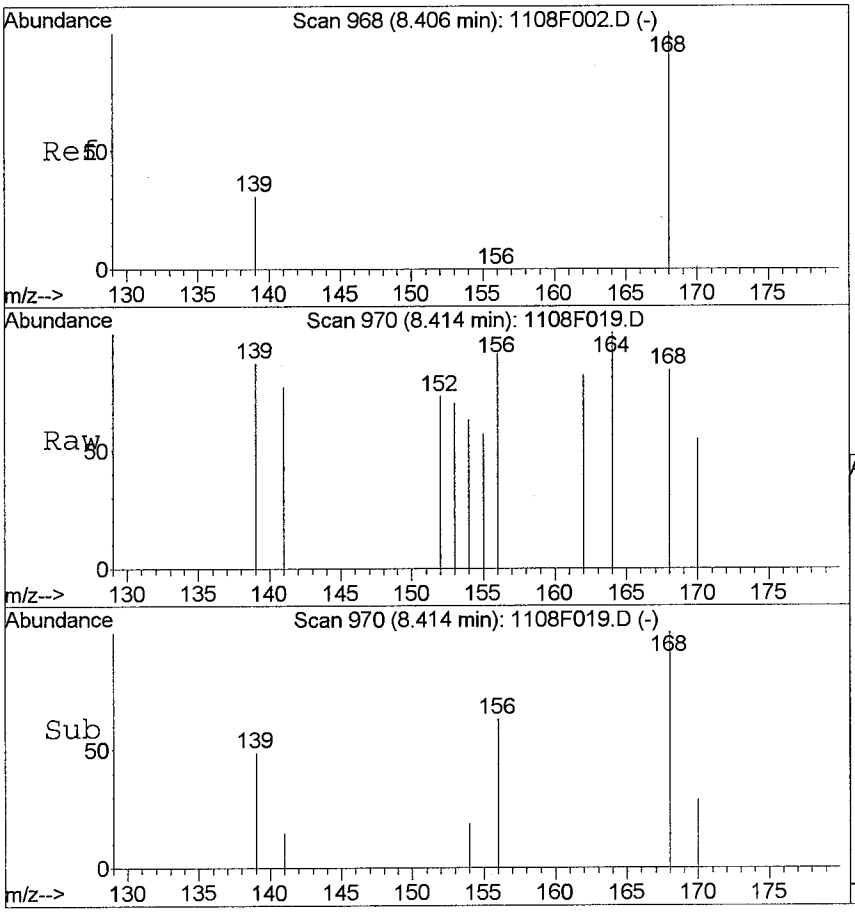


#13
Acenaphthene
Concen: 2.70 ng/ml
RT: 8.12 min Scan# 906
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:154 Resp: 379

Ion	Ratio	Lower	Upper
154	100		
153	106.5	78.6	138.6
152	51.8	21.5	81.5

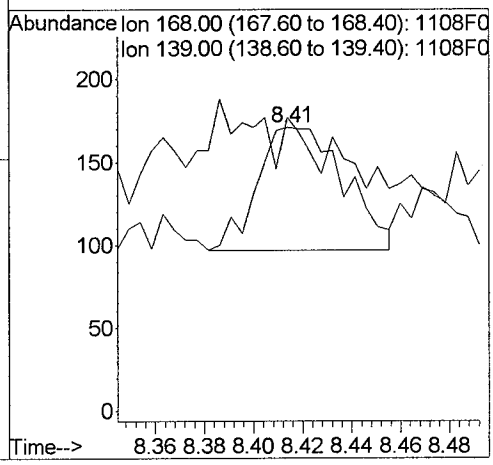


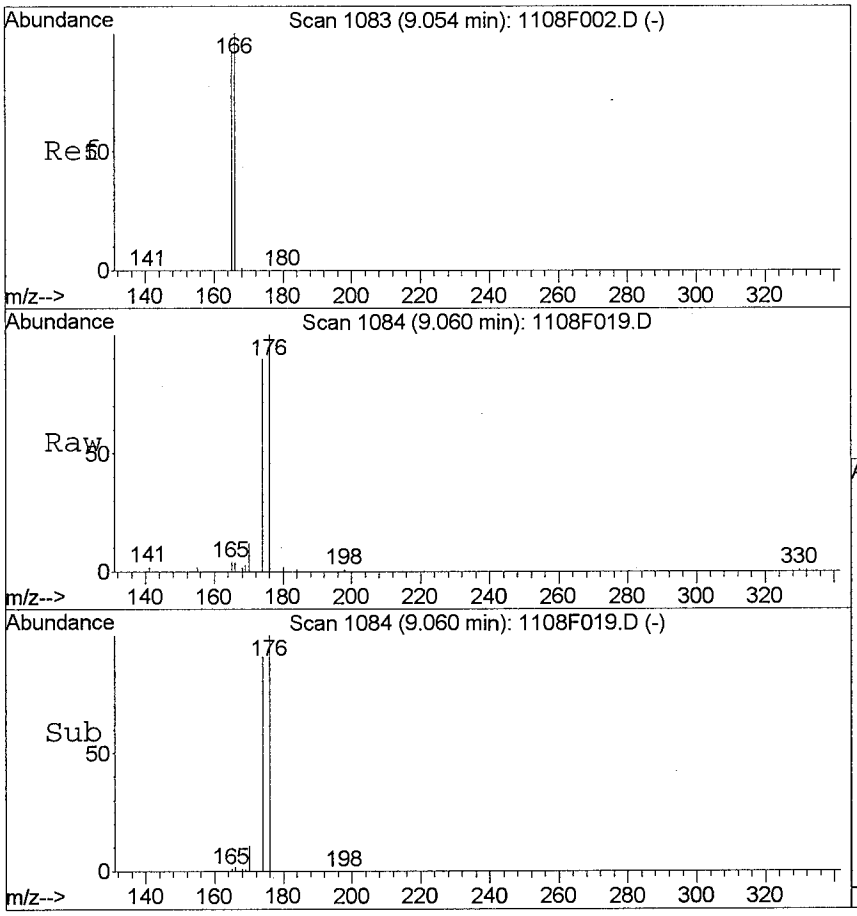


#14
Dibenzofuran
Concen: 0.97 ng/ml
RT: 8.41 min Scan# 970
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:168 Resp: 182

Ion	Ratio	Lower	Upper
168	100		
139	58.1	1.2	61.2

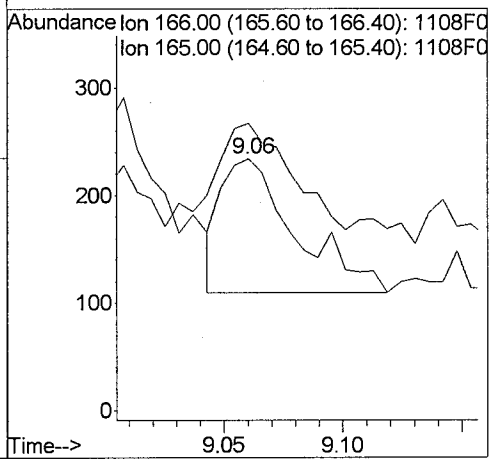


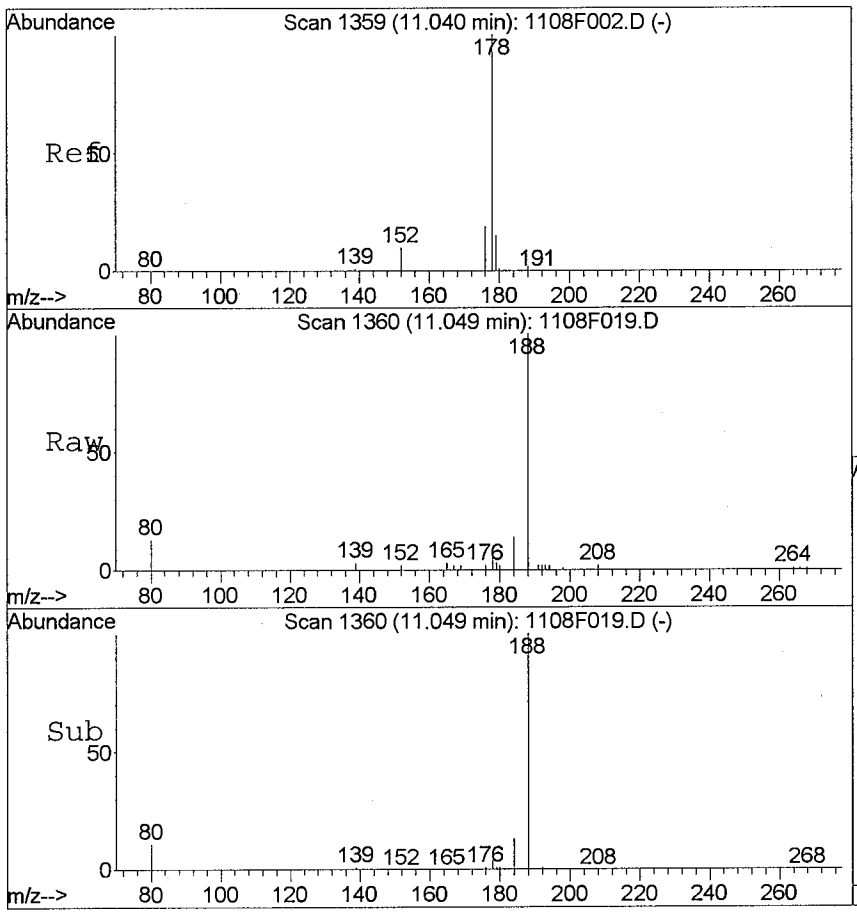


#17
Fluorene
Concen: 1.80 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:166 Resp: 270

Ion	Ratio	Lower	Upper
166	100		
165	79.0	62.9	122.9

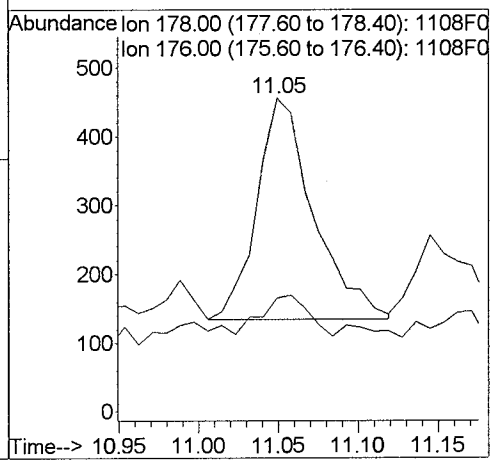


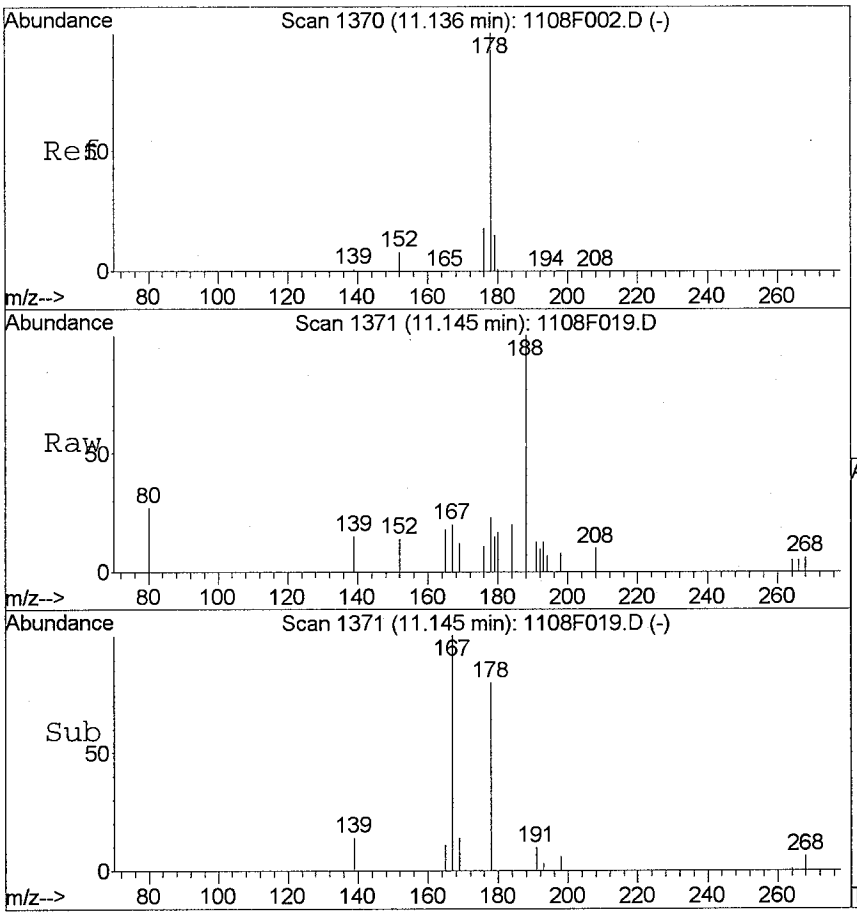


#28
Phenanthrene
Concen: 4.15 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:178 Resp: 792

Ion	Ratio	Lower	Upper
178	100		
176	15.0	0.0	48.7

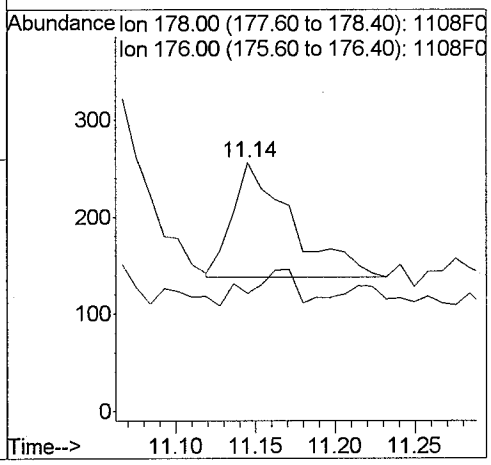


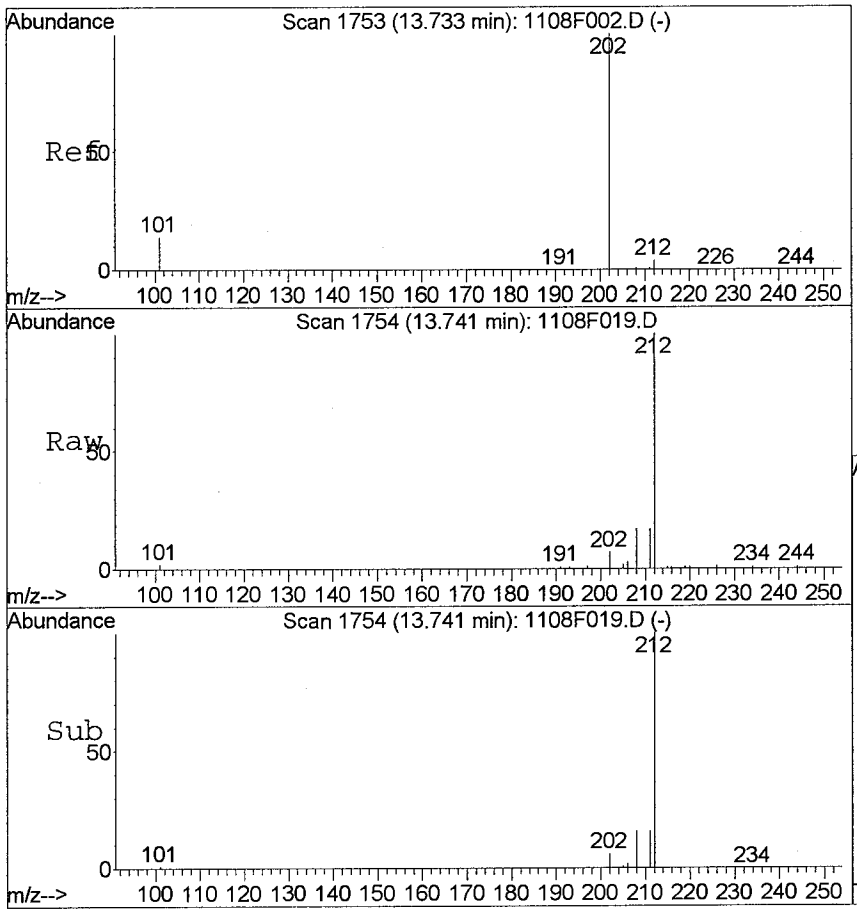


#29
Anthracene
Concen: 1.86 ng/ml
RT: 11.14 min Scan# 1371
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:178 Resp: 303

Ion	Ratio	Lower	Upper
178	100		
176	5.1	0.0	48.3

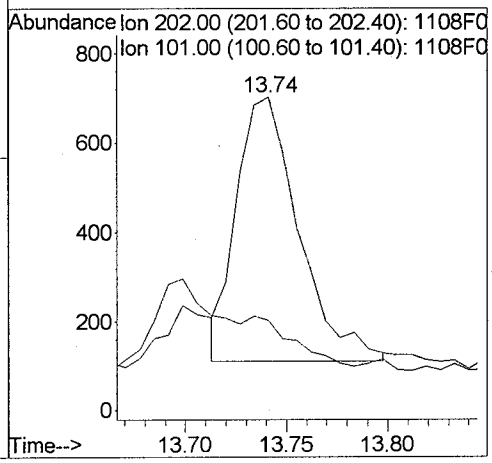


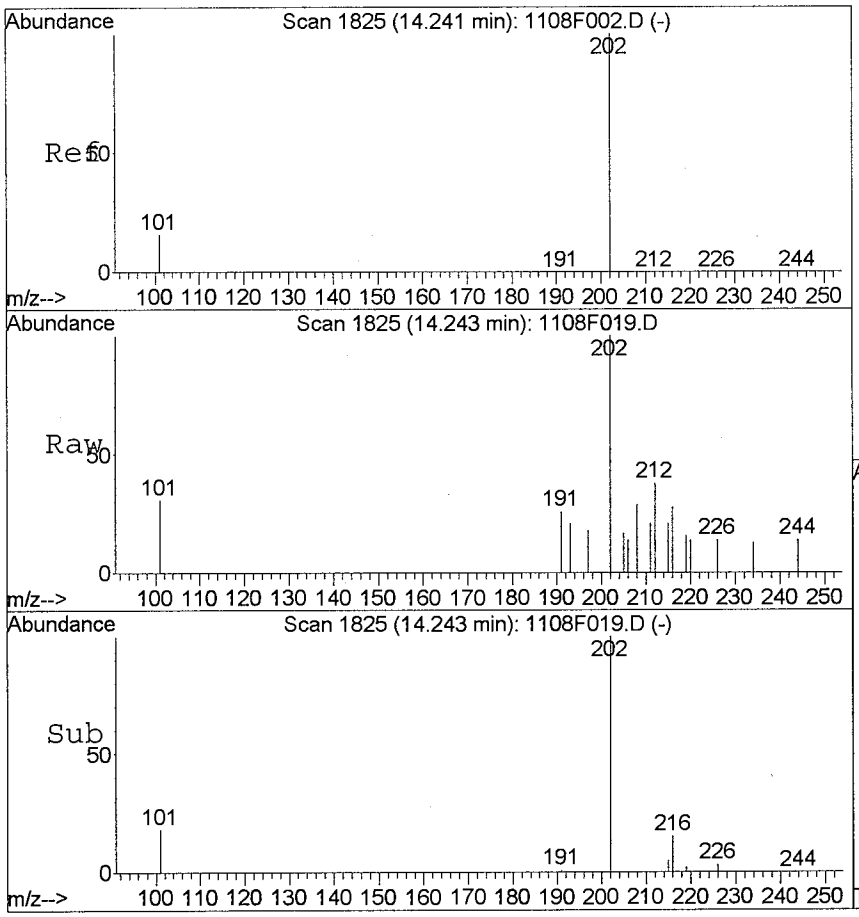


#36
Fluoranthene
Concen: 6.66 ng/ml m
RT: 13.74 min Scan# 1754
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:202 Resp: 1267

Ion	Ratio	Lower	Upper
202	100		
101	28.9	0.0	44.3

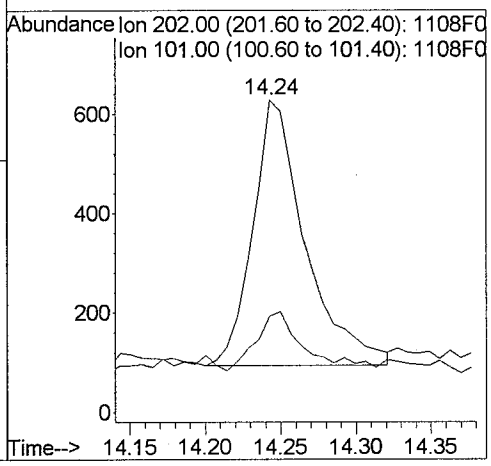


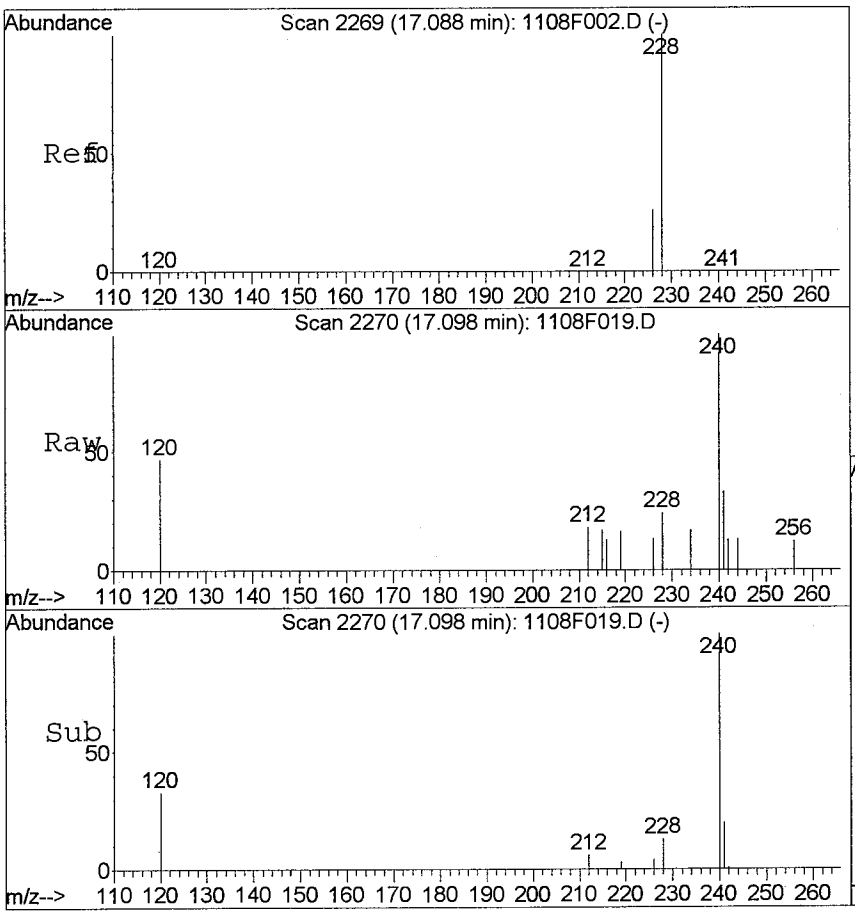


#39
Pyrene
Concen: 7.91 ng/ml
RT: 14.24 min Scan# 1825
Delta R.T. 0.00 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:202 Resp: 1291

Ion	Ratio	Lower	Upper
202	100		
101	16.3	0.0	46.2

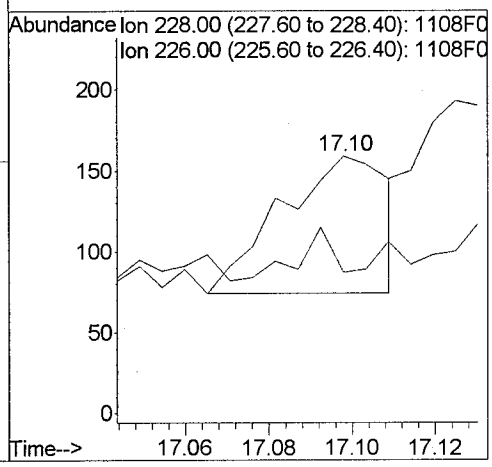


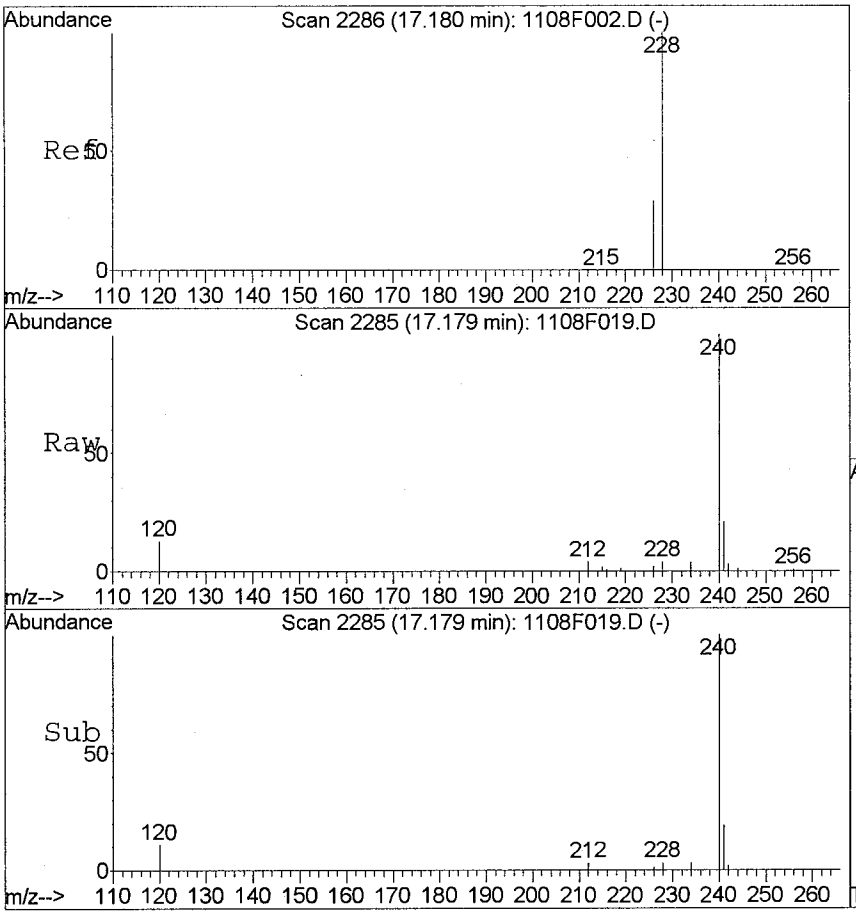


#42
Benz(a)anthracene
Concen: 1.22 ng/ml
RT: 17.10 min Scan# 2270
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:228 Resp: 151

Ion	Ratio	Lower	Upper
228	100		
226	0.0	0.0	55.8

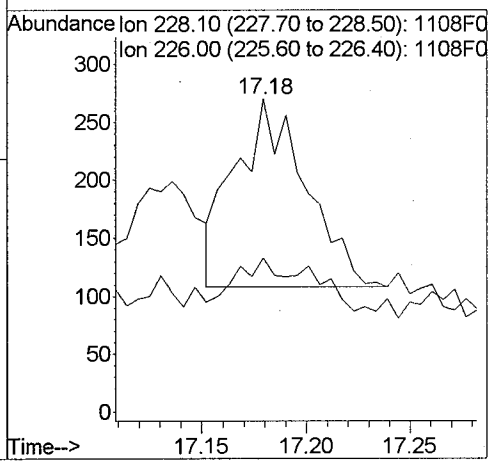


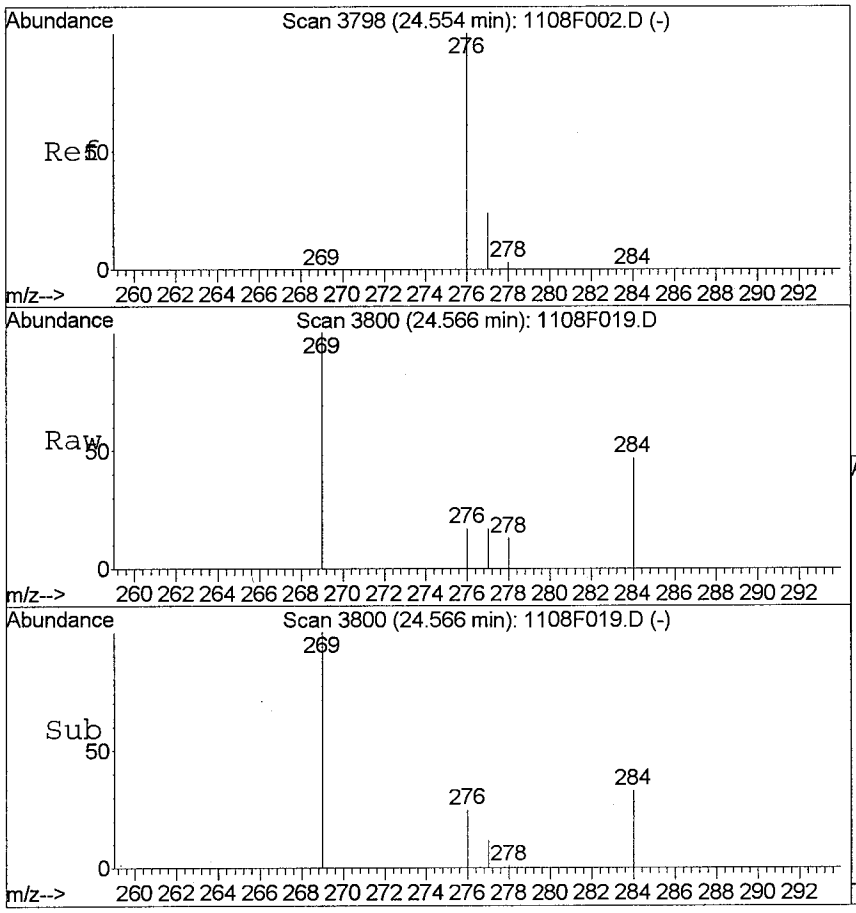


#43
Chrysene
Concen: 2.85 ng/ml
RT: 17.18 min Scan# 2285
Delta R.T. -0.00 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:228 Resp: 379

Ion	Ratio	Lower	Upper
228	100		
226	23.5	0.0	58.5

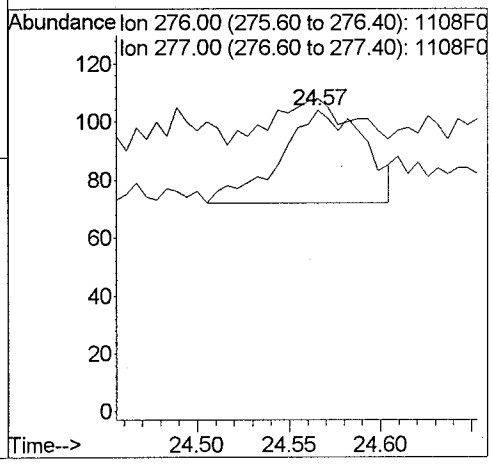




#56
Benzo(g,h,i)perylene
Concen: 1.30 ng/ml
RT: 24.57 min Scan# 3800
Delta R.T. 0.01 min
Lab File: 1108F019.D
Acq: 8 Nov 2003 4:45 pm

Tgt Ion:276 Resp: 102

Ion	Ratio	Lower	Upper
276	100		
277	43.8	0.0	54.3



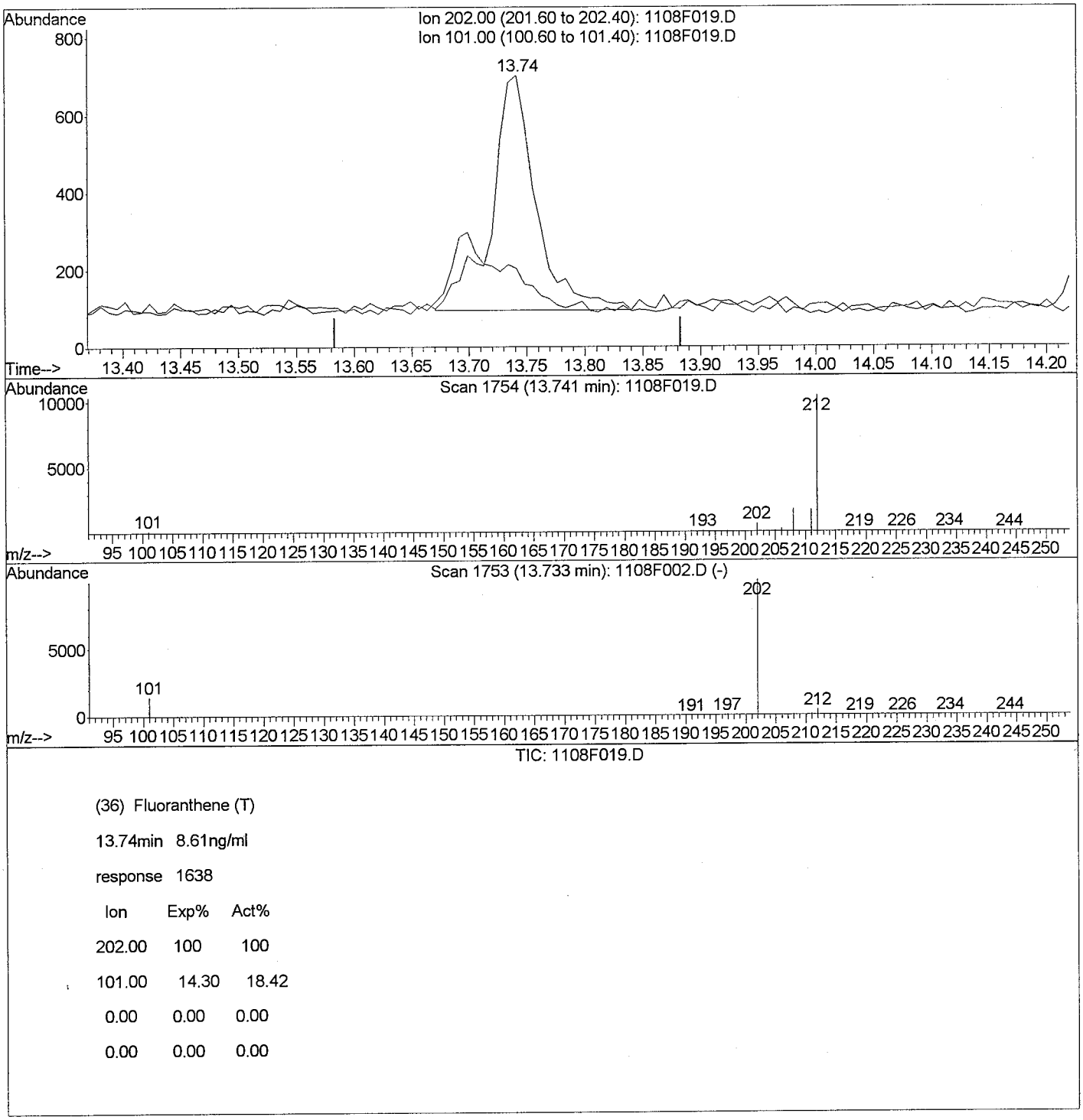
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F019.D
Acq On : 8 Nov 2003 4:45 pm
Sample : K2308419-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:37 2003

Vial: 16
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F019.D

(36) Fluoranthene (T)

13.74min 8.61ng/ml

response 1638

Ion	Exp%	Act%
202.00	100	100
101.00	14.30	18.42
0.00	0.00	0.00
0.00	0.00	0.00

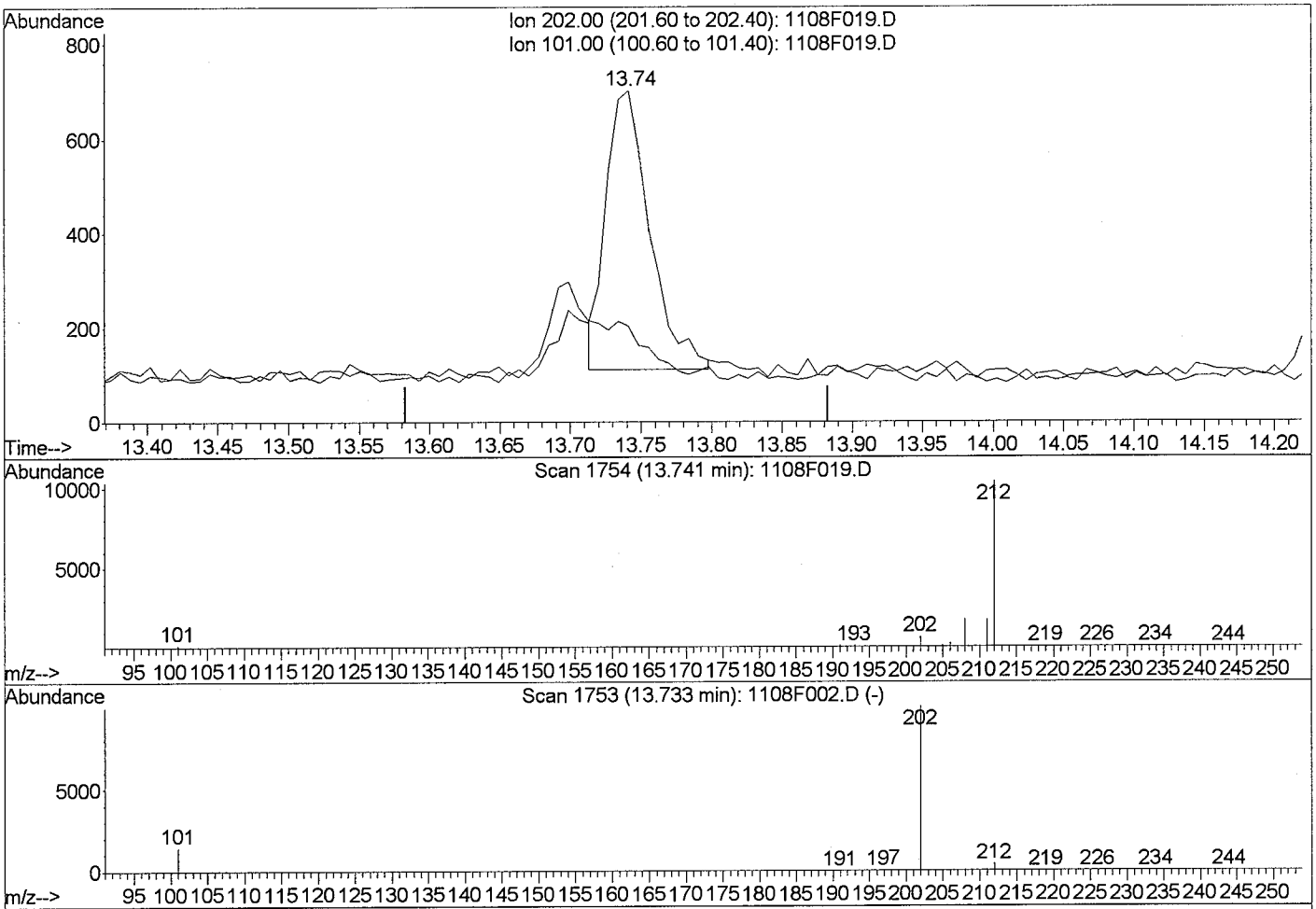
1108F019.D 1107ALK.M Mon Nov 10 16:39:45 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F019.D
Acq On : 8 Nov 2003 4:45 pm
Sample : K2308419-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:37 2003

Vial: 16
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F019.D

(36) Fluoranthene (T)

13.74min 6.66ng/ml m

response 1267

Ion	Exp%	Act%
202.00	100	100
101.00	14.30	28.92
0.00	0.00	0.00
0.00	0.00	0.00

over integrated
11/10/03
11/11/03

1108F019.D 1107ALK.M Mon Nov 10 16:39:50 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-6
Lab Code: K2308419-008

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	**0.033**		0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**0.076**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	**0.077**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	**0.039**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	**0.030**		0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	**0.048**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	**0.027**		0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-6
Lab Code: K2308419-008

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**0.038**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	**0.029**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	**0.030**		0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**0.025**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	**0.022**		0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	37-107	11/08/03	Acceptable
Fluoranthene-d10	86	18-137	11/08/03	Acceptable
Terphenyl-d14	108	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F020.D
Lab ID: K2308419-008
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 17:21
Date Quantitated: 11/10/2003 17:08
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: mrt 11/14/03

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245663	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F020.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 17:21	**Quant Date:**	11/10/2003 17:08	**Vial:**	17
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-008			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	240872	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	123393	1,000.00	OK
3	Phenanthrene-d10	11.00	0.00	188	177478	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	148622	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	83869	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.00	0.00	0.00	176	185028	1,499	75	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	305006	1,717	86	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	292478	2,159	108	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	2318	8.51	0.0083	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	797	4.96	0.0049	J	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	575	3.81	0.0037	J	
1	Biphenyl	7.09		0.00	154	876	4.49	0.0044	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	1397	5.88	0.0058	J	
2	Acenaphthene	8.12	0.01	0.00	154	637	4.35	0.0043	J	
2	Dibenzofuran	8.42	0.01	0.00	168	402	2.05	0.0071	U	
2	Fluorene	9.06	0.01	0.00	166	563	3.59	0.0035	J	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F020.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 17:21	**Quant Date:**	11/10/2003 17:08	**Vial:**	17
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-008			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene	10.79	0.01	0.00	184	611	2.98	0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	7145	33.22	0.033		
3	Anthracene	11.15	0.01	0.00	178	1244	6.77	0.0066	J	
3	C1-Phenanthrenes/Anthracenes	12.20	?	N	192	3647**m**	16.96	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	16508	77.10	0.076		
4	Pyrene	14.24		0.00	202	15204	78.27	0.077		
4	C1-Fluoranthenes/Pyrenes	15.08	?	?	216	7794**m**	40.12	0.039		
4	Benz(a)anthracene	17.09		0.00	228	4494	30.39	0.030		
4	Chrysene	17.19	0.01	0.00	228	7704	48.71	0.048		
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.12	0.02	0.00	252	3047	27.21	0.027		
5	Benzo(k)fluoranthene	20.17	-0.01	0.00	252	5522**m**	38.87	0.038		
5	Benzo(e)pyrene	21.10	0.02	0.00	252	3772	30.00	0.029		
5	Benzo(a)pyrene	21.29	0.02	0.00	252	2903	30.48	0.030		
5	Perylene	21.61	0.01	0.00	252	821**m**	7.68	0.0075	J	
5	Indeno(1,2,3-cd)pyrene	24.10	0.01	0.00	276	1490	25.74	0.025		
5	Dibenz(a,h)anthracene	24.15	0.01	0.00	278	175	2.10	0.0021	J	
5	Benzo(g,h,i)perylene	24.56	0.01	0.00	276	2127	22.16	0.022		

Prep Amount: 1020 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F020.D Vial: 17
Acq On : 8 Nov 2003 5:21 pm Operator: LWeiskopf
Sample : K2308419-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:19 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	240872	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	123393	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	177478	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	148622	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	83869	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	263455	1493.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 149.31%			
16) Fluorene-d10	9.00	176	185028	1499.31	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 149.93%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	305006	1717.06	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 171.71%			
41) Terphenyl-d14	14.74	244	292478	2159.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 215.93%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2318	8.51	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	797	4.96	ng/ml	82
4) 1-Methylnaphthalene	6.57	142	575	3.81	ng/ml	82
6) Biphenyl	7.09	154	876	4.49	ng/ml	96
12) Acenaphthylene	7.80	152	1397	5.88	ng/ml	99
13) Acenaphthene	8.12	154	637	4.35	ng/ml	97
14) Dibenzofuran	8.42	168	402	2.05	ng/ml	100
17) Fluorene	9.06	166	563	3.59	ng/ml	86
24) Dibenzothiophene	10.79	184	611	2.98	ng/ml	77
28) Phenanthrene	11.05	178	7145	33.22	ng/ml	97
29) Anthracene	11.15	178	1244	6.77	ng/ml	91
30) Carbazole	11.59	167	1248	8.59	ng/ml	91
31) 1-Methylphenanthrene	12.44	192	513	3.51	ng/ml	98
32) C1-Phenanthrenes/Anthracen	12.20	192	3647m	16.96	ng/ml	
36) Fluoranthene	13.74	202	16508	77.10	ng/ml	97
39) Pyrene	14.24	202	15204	78.27	ng/ml	97
40) C1-Fluoranthenes/Pyrenes	15.08	216	7794m	40.12	ng/ml	
42) Benz(a)anthracene	17.09	228	4494	30.39	ng/ml	71
43) Chrysene	17.19	228	7704	48.71	ng/ml	99
49) Benzo(b)fluoranthene	20.12	252	3047	27.21	ng/ml	97
50) Benzo(k)fluoranthene	20.17	252	5522m	38.87	ng/ml	
51) Benzo(e)pyrene	21.10	252	3772	30.00	ng/ml	98
52) Benzo(a)pyrene	21.29	252	2903	30.48	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1108F020.D 1107ALK.M Mon Nov 10 17:11:52 2003 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F020.D Vial: 17
Acq On : 8 Nov 2003 5:21 pm Operator: LWeiskopf
Sample : K2308419-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:19 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

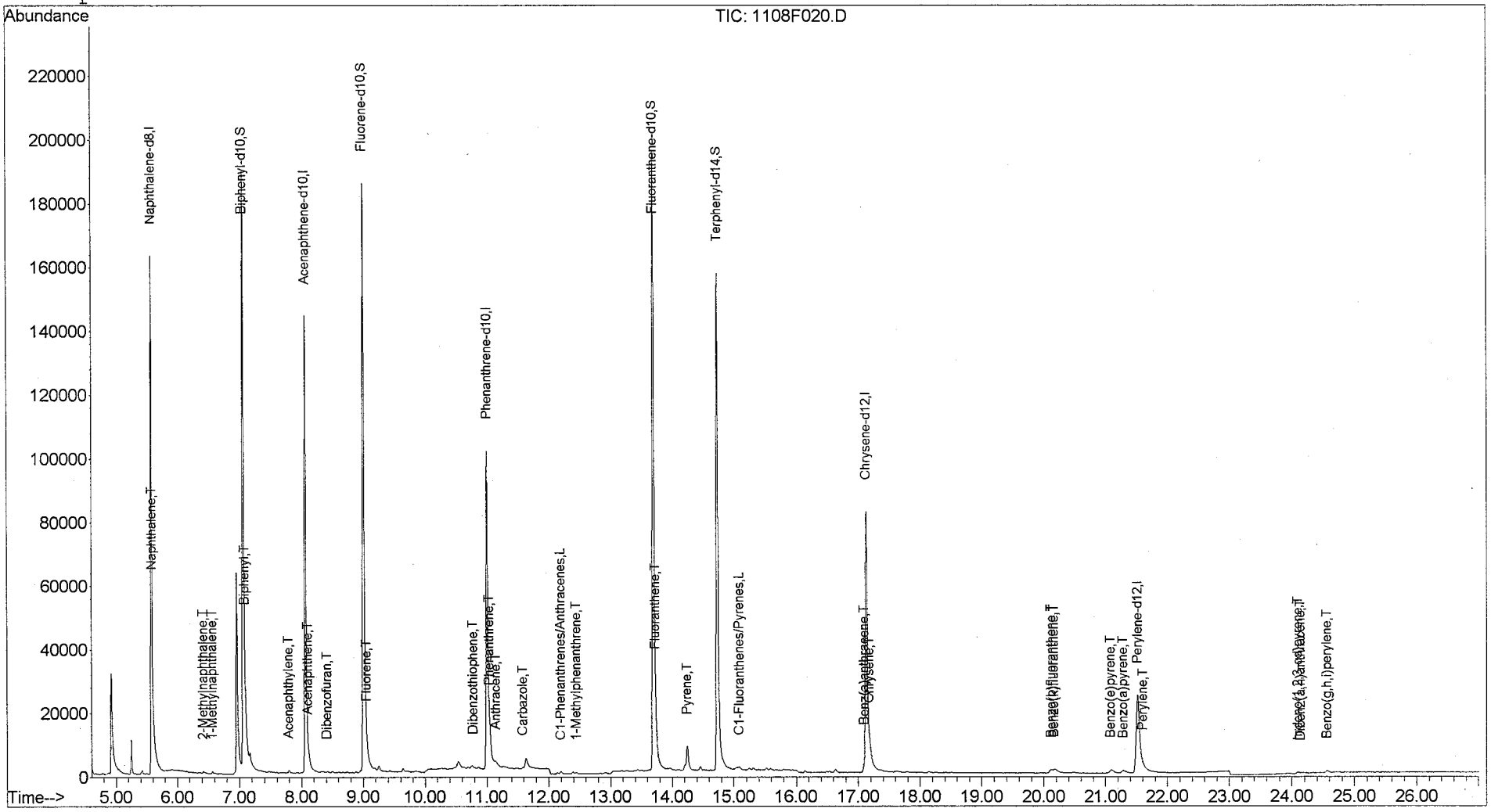
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.61	252	821m	7.68	ng/ml	
54)	Indeno(1,2,3-cd)pyrene	24.10	276	1490	25.74	ng/ml	93
55)	Dibenz(a,h)anthracene	24.15	278	175	2.10	ng/ml#	1
56)	Benzo(g,h,i)perylene	24.56	276	2127	22.16	ng/ml	94

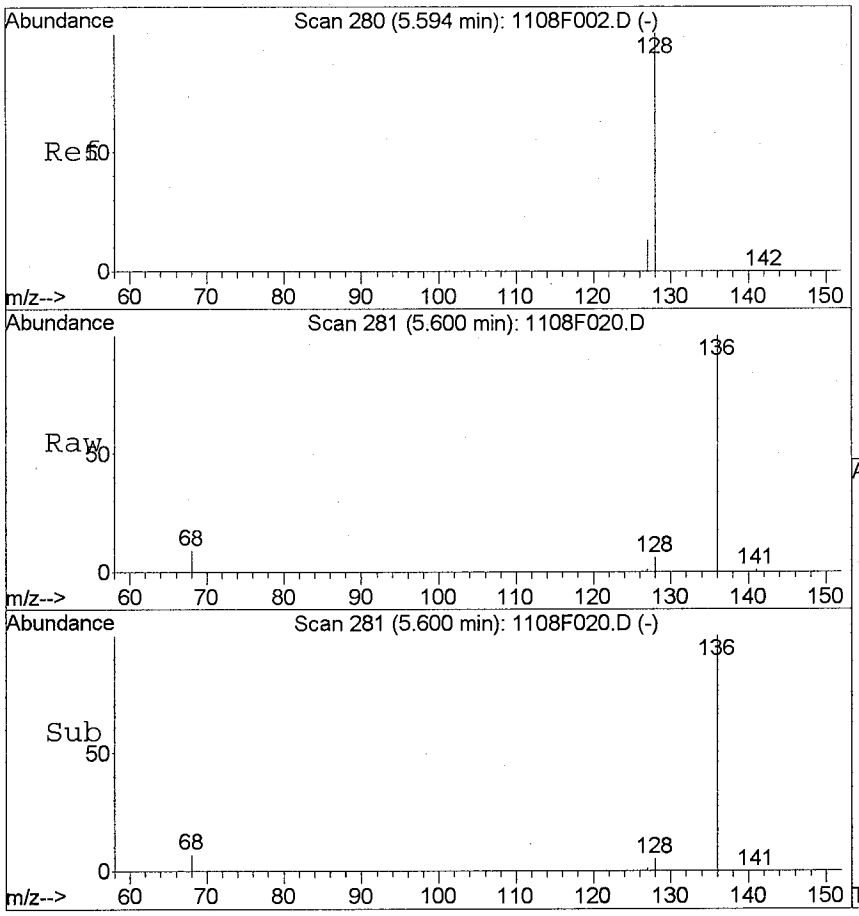
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F020.D Vial: 17
Acq On : 8 Nov 2003 5:21 pm Operator: LWeiskopf
Sample : K2308419-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:08 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

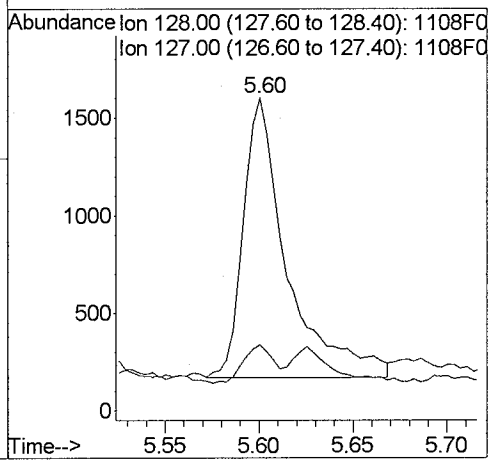


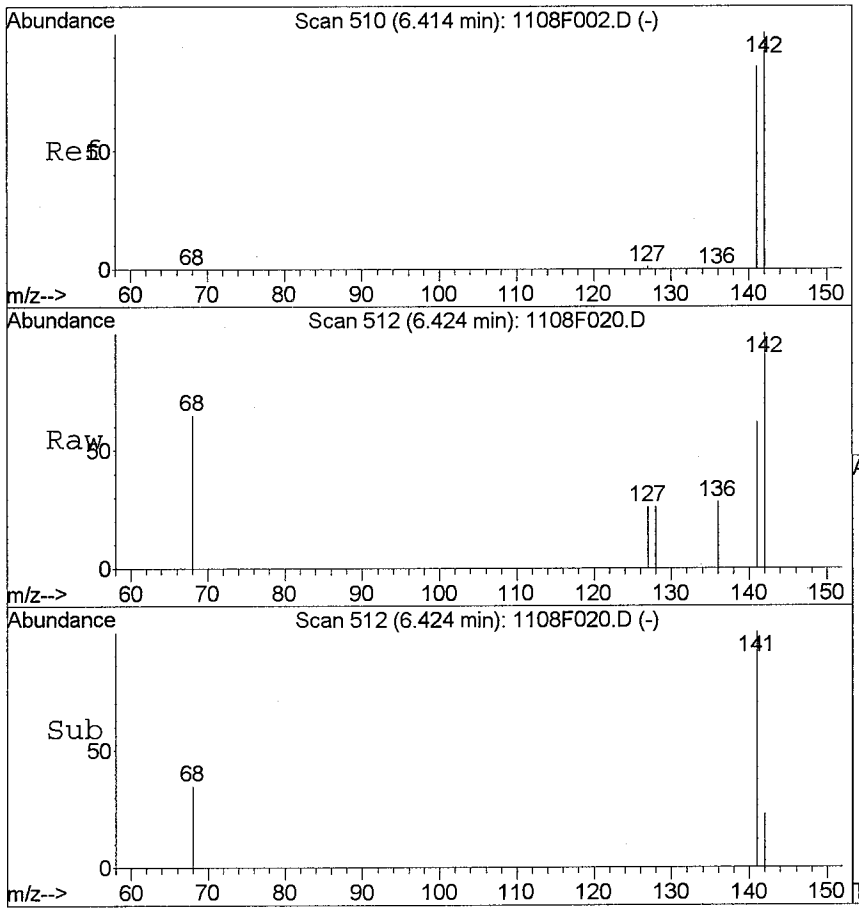


#2
Naphthalene
Concen: 8.51 ng/ml
RT: 5.60 min Scan# 281
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:128 Resp: 2318

Ion	Ratio	Lower	Upper
128	100		
127	13.0	0.0	43.5

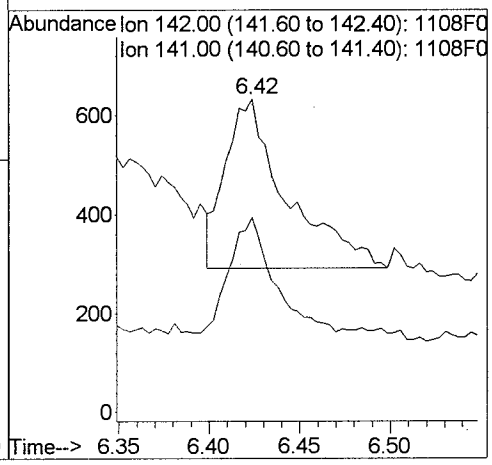


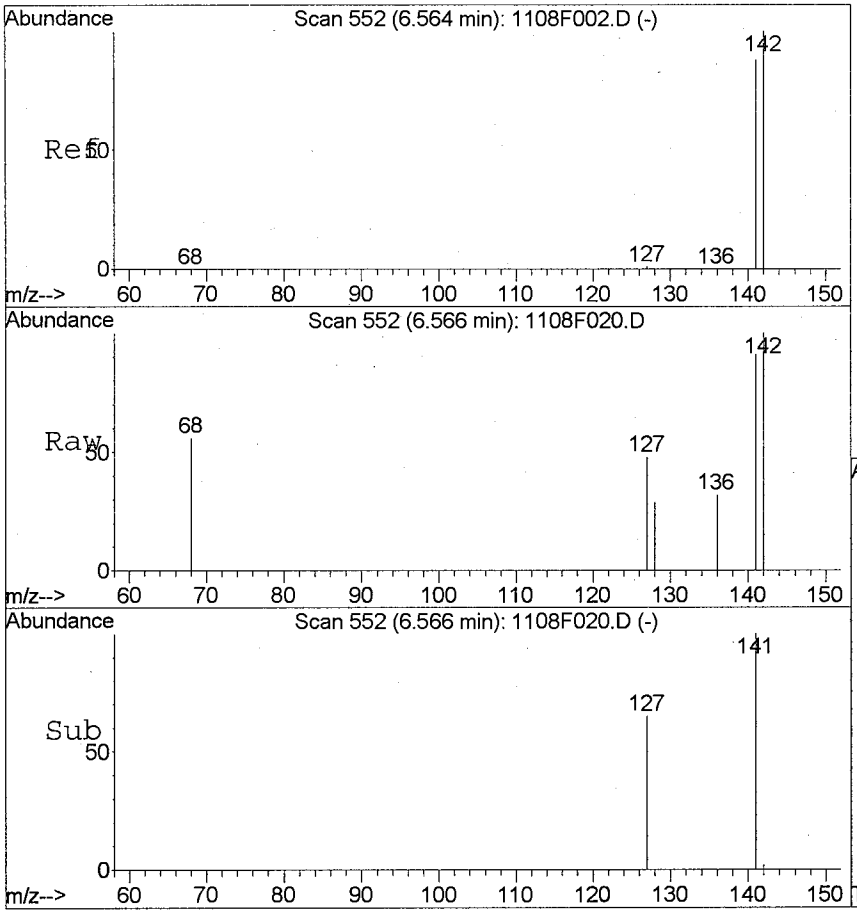


#3
2-Methylnaphthalene
Concen: 4.96 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:142 Resp: 797

Ion	Ratio	Lower	Upper
142	100		
141	69.1	56.1	116.1

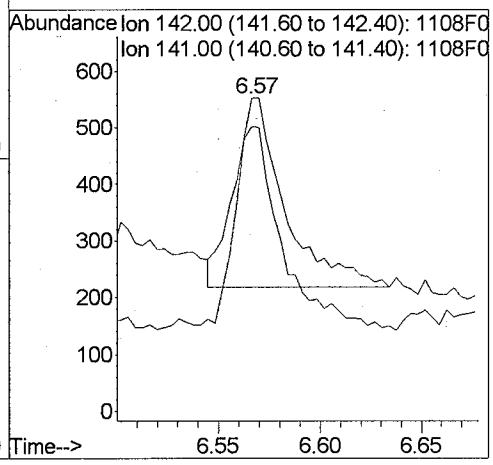


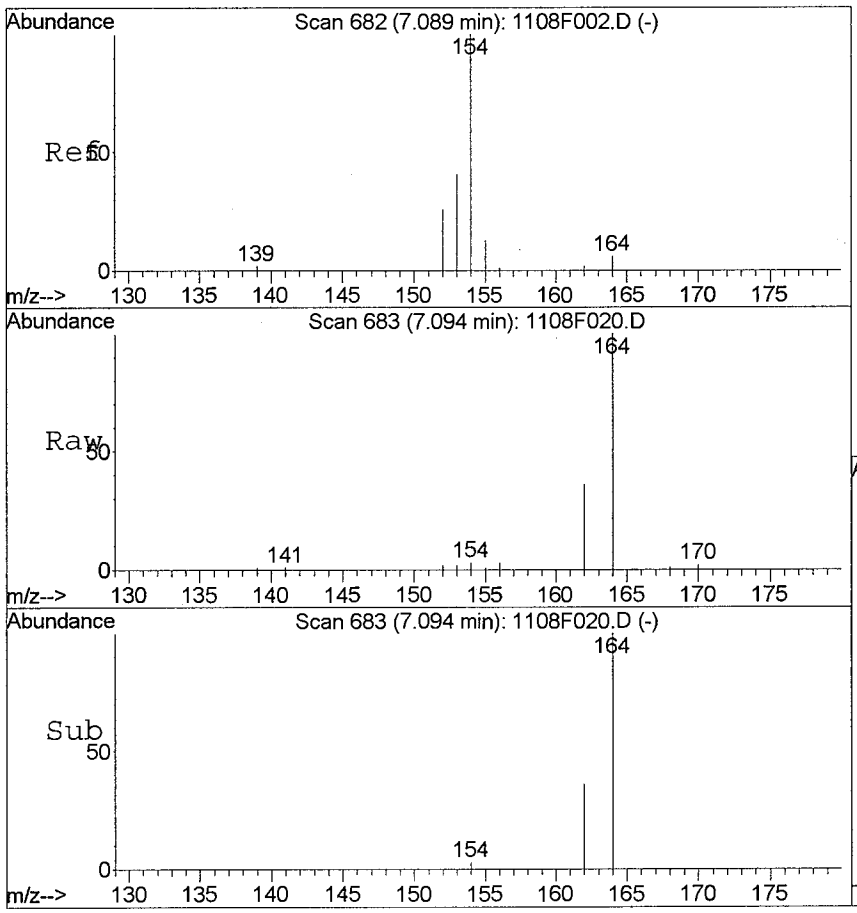


#4
1-Methylnaphthalene
Concen: 3.81 ng/ml
RT: 6.57 min Scan# 552
Delta R.T. 0.00 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:142 Resp: 575

Ion	Ratio	Lower	Upper
142	100		
141	105.4	58.4	118.4

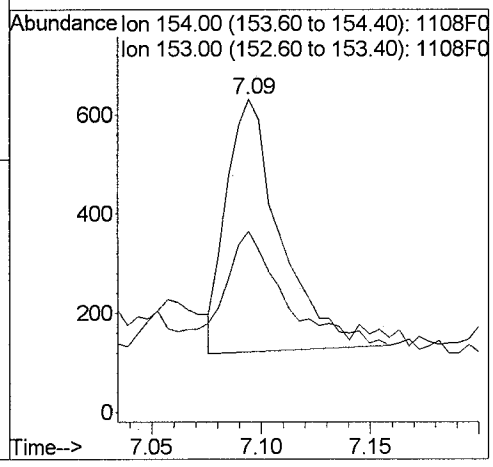


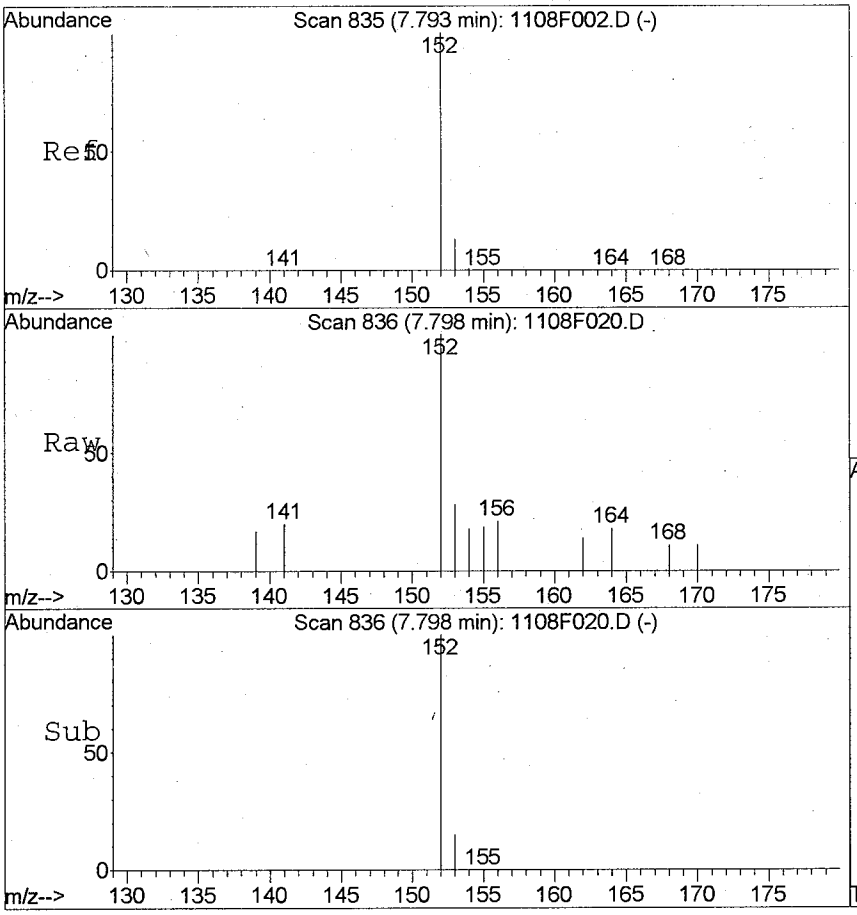


#6
Biphenyl
Concen: 4.49 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:154 Resp: 876

Ion	Ratio	Lower	Upper
154	100		
153	43.1	10.5	70.5

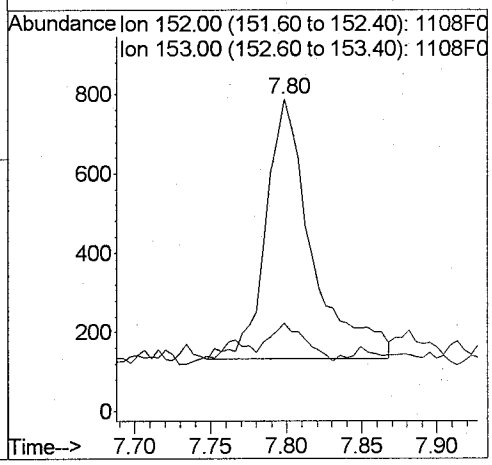


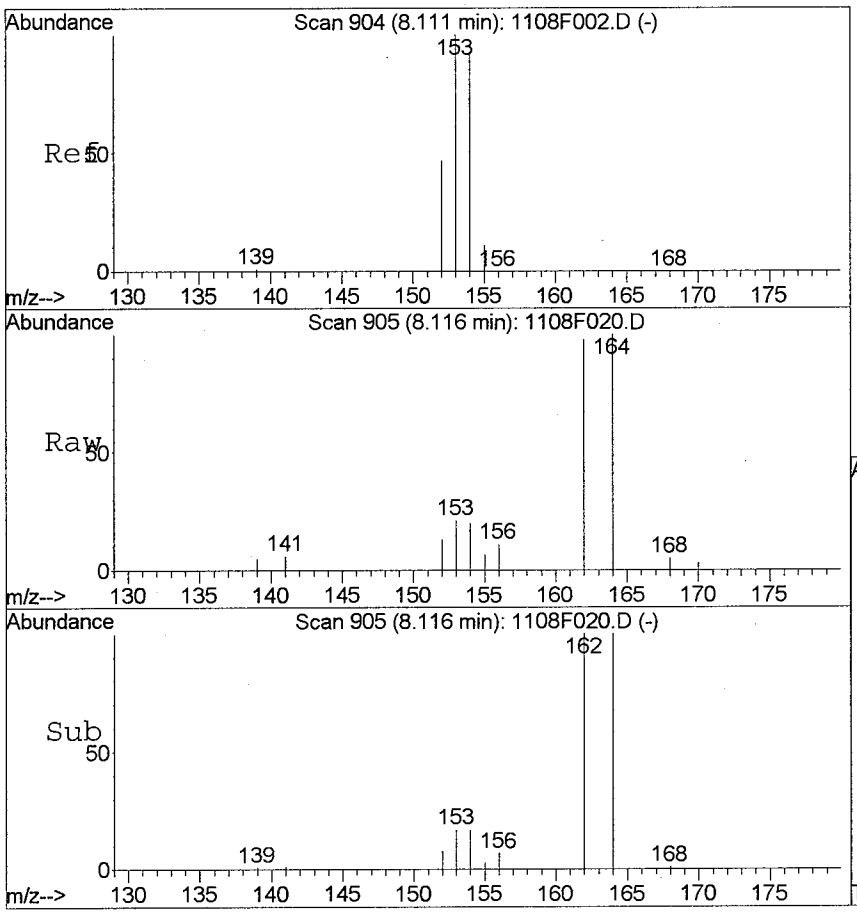


#12
Acenaphthylene
Concen: 5.88 ng/ml
RT: 7.80 min Scan# 836
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:152 Resp: 1397

Ion	Ratio	Lower	Upper
152	100		
153	12.7	0.0	43.2

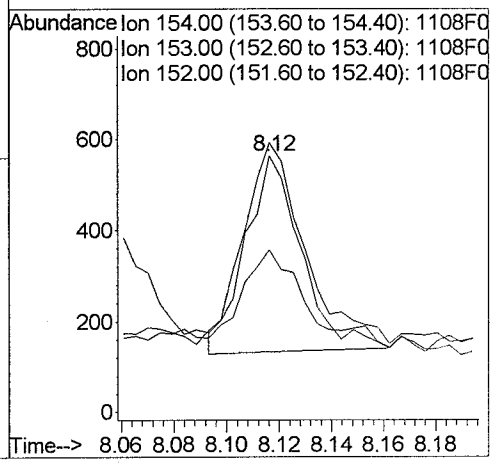


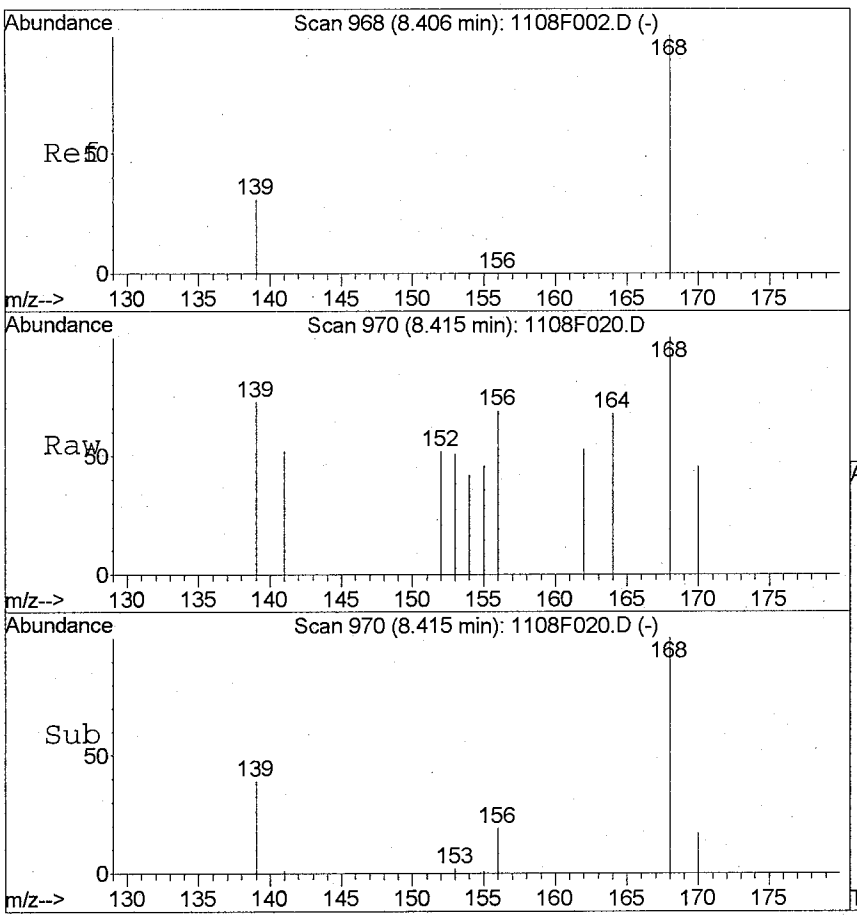


#13
Acenaphthene
Concen: 4.35 ng/ml
RT: 8.12 min Scan# 905
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:154 Resp: 637

Ion	Ratio	Lower	Upper
154	100		
153	104.5	78.6	138.6
152	50.7	21.5	81.5

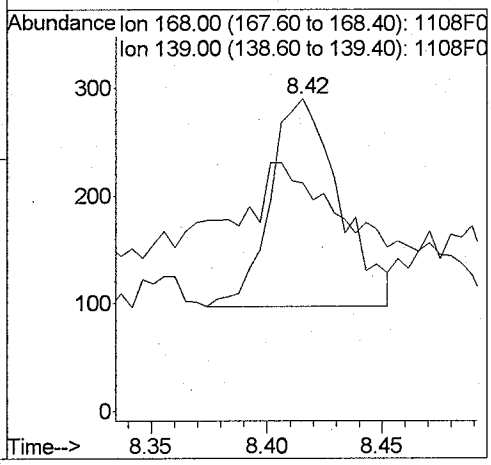


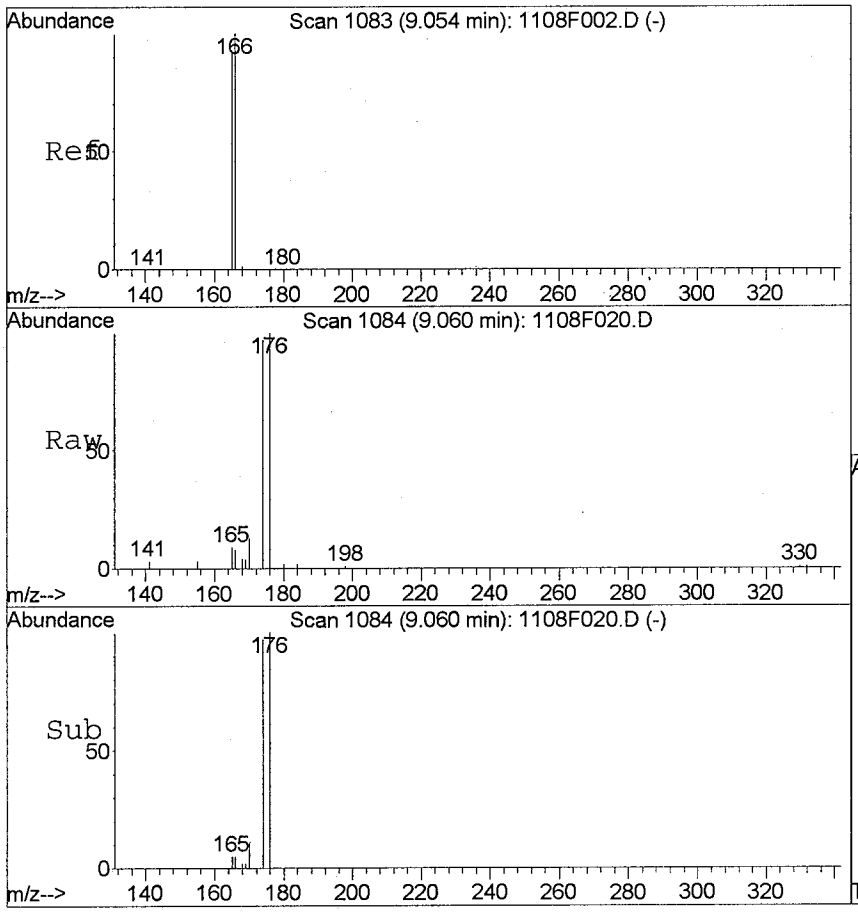


#14
Dibenzofuran
Concen: 2.05 ng/ml
RT: 8.42 min Scan# 970
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:168 Resp: 402

Ion	Ratio	Lower	Upper
168	100		
139	31.1	1.2	61.2

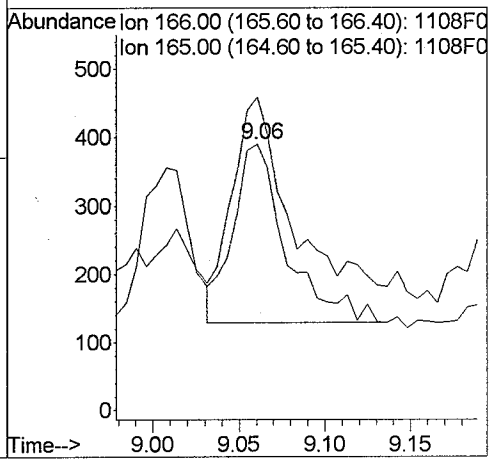


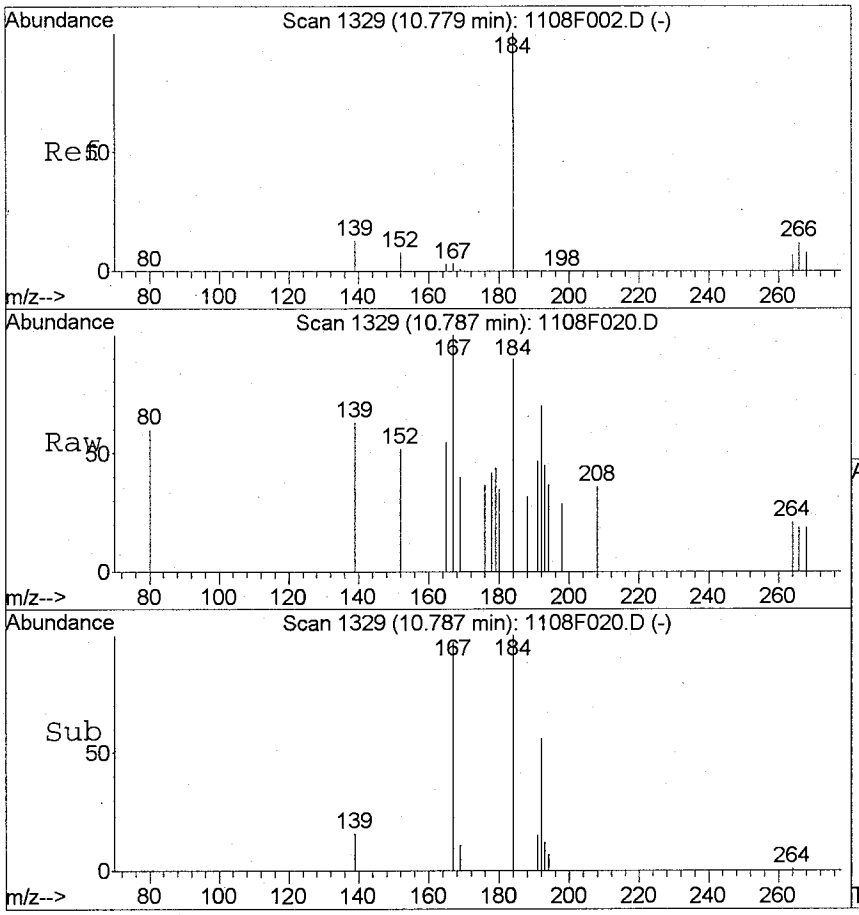


#17
Fluorene
Concen: 3.59 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:166 Resp: 563

Ion	Ratio	Lower	Upper
166	100		
165	106.1	62.9	122.9

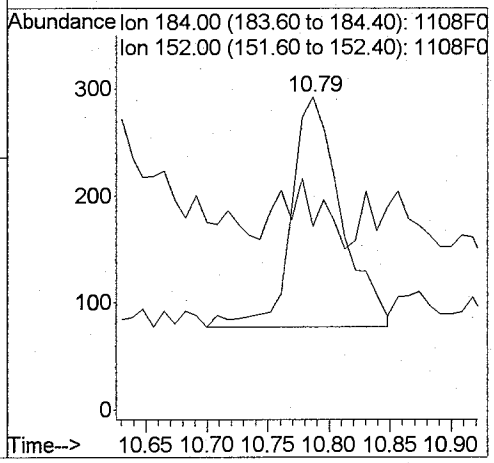


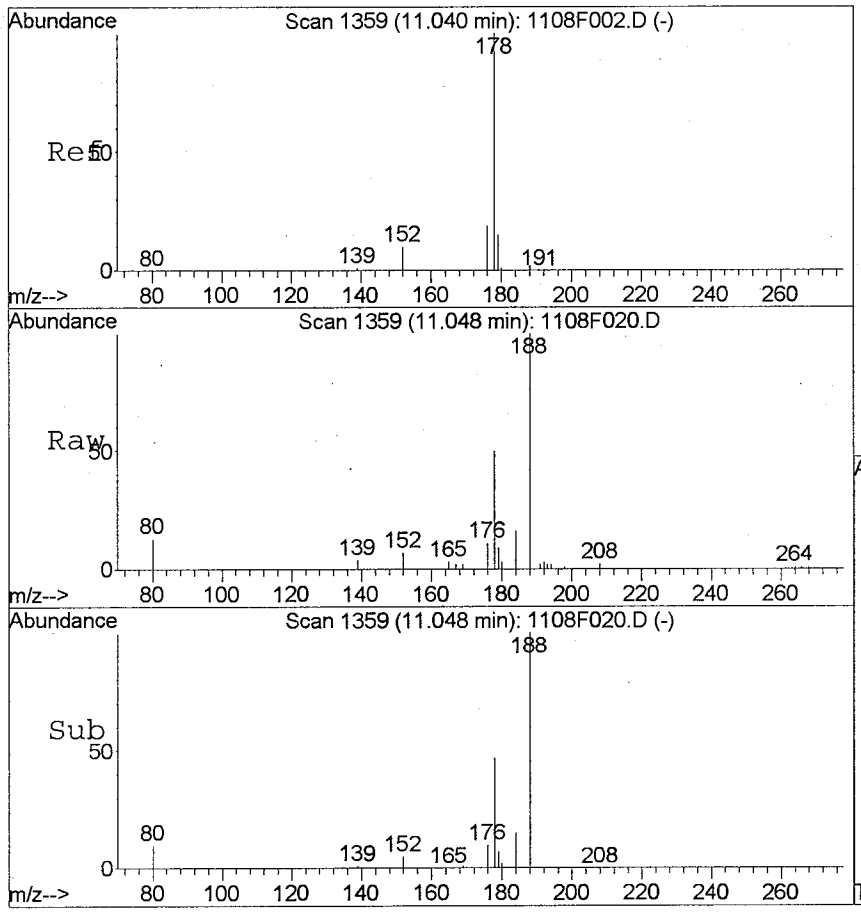


#24
Dibenzothiophene
Concen: 2.98 ng/ml
RT: 10.79 min Scan# 1329
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:184 Resp: 611

Ion	Ratio	Lower	Upper
184	100		
152	0.0	0.0	38.2

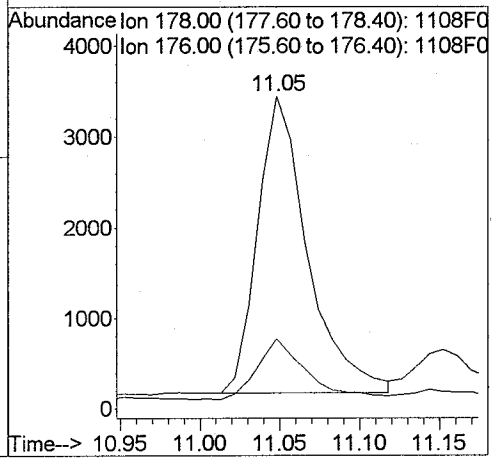


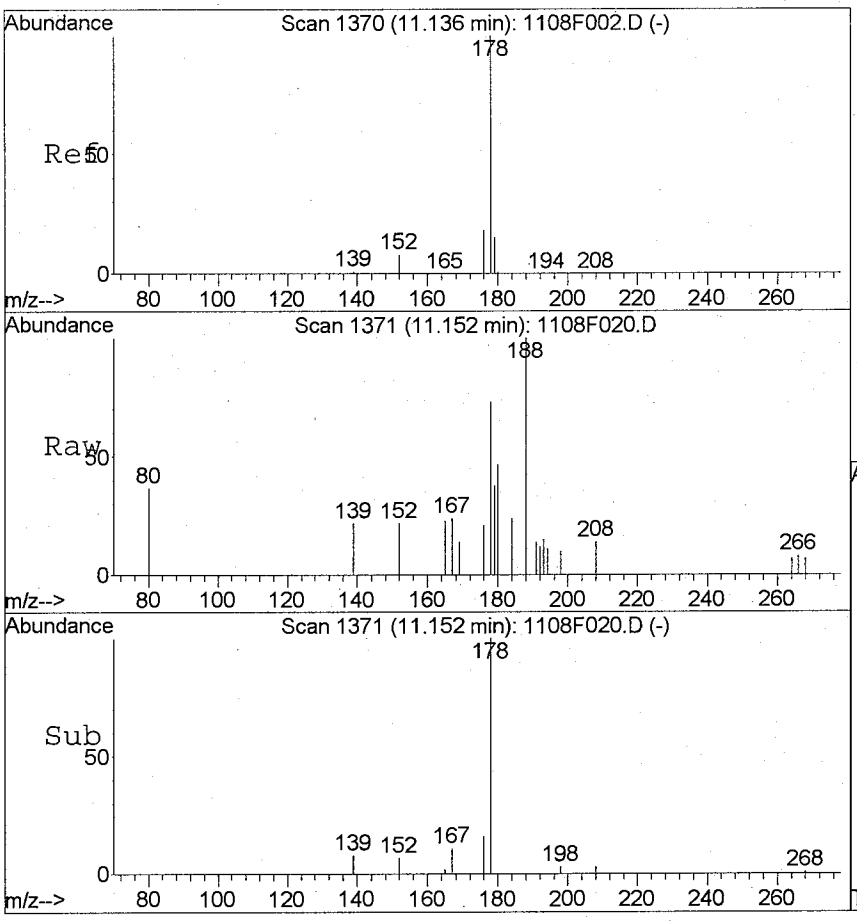


#28
Phenanthrene
Concen: 33.22 ng/ml
RT: 11.05 min Scan# 1359
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:178 Resp: 7145

Ion	Ratio	Lower	Upper
178	100		
176	20.3	0.0	48.7

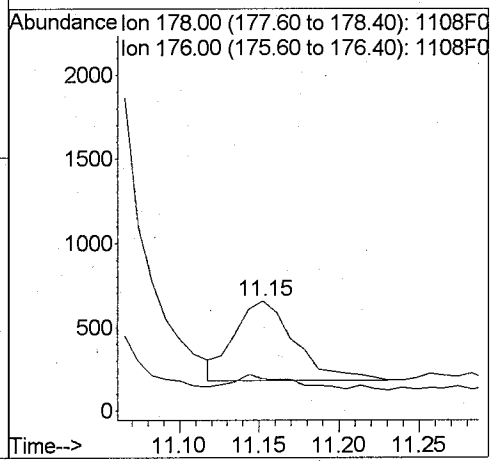


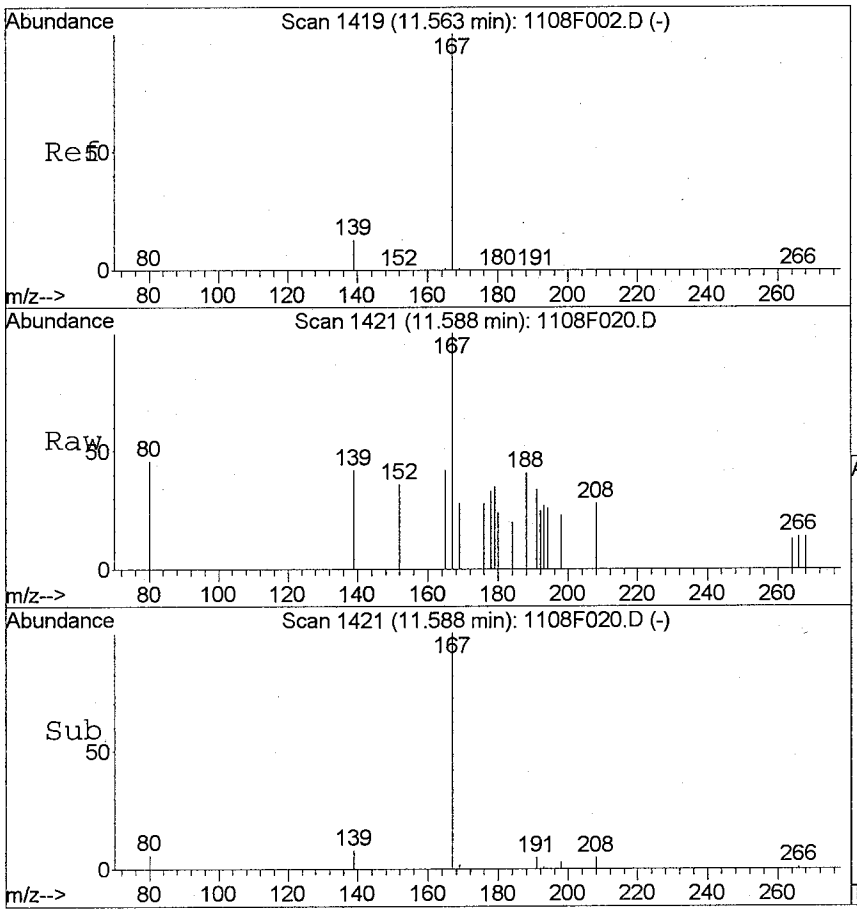


#29
Anthracene
Concen: 6.77 ng/ml
RT: 11.15 min Scan# 1371
Delta R.T. 0.02 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:178 Resp: 1244

Ion	Ratio	Lower	Upper
178	100		
176	14.3	0.0	48.3

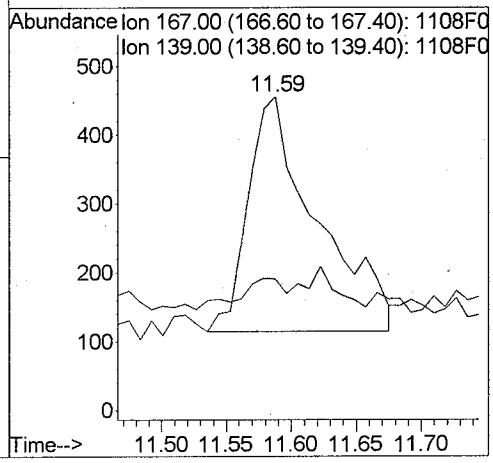


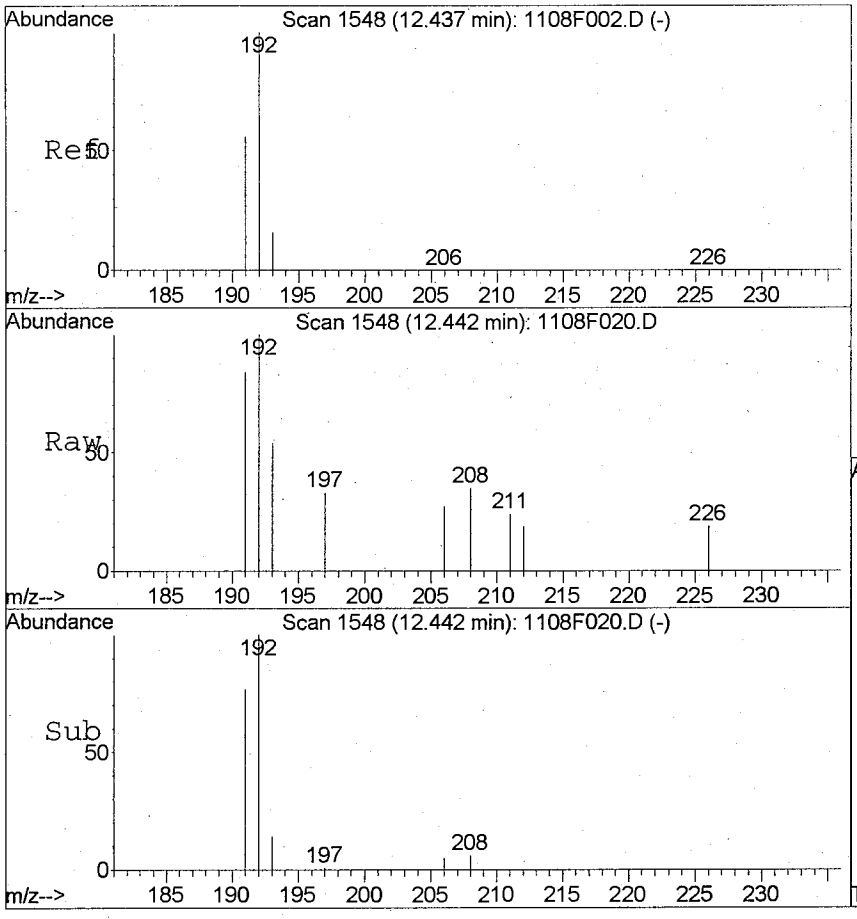


#30
Carbazole
Concen: 8.59 ng/ml
RT: 11.59 min Scan# 1421
Delta R.T. 0.03 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:167 Resp: 1248

Ion	Ratio	Lower	Upper
167	100		
139	9.1	0.0	42.6

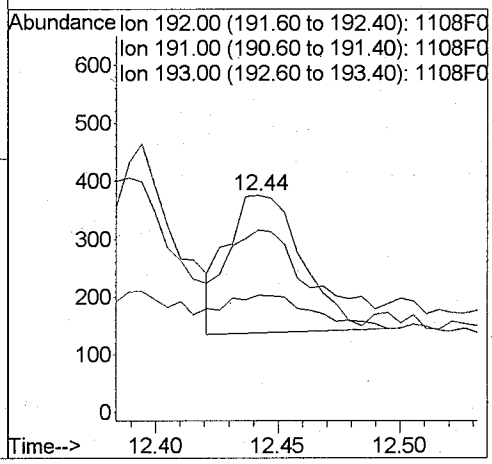


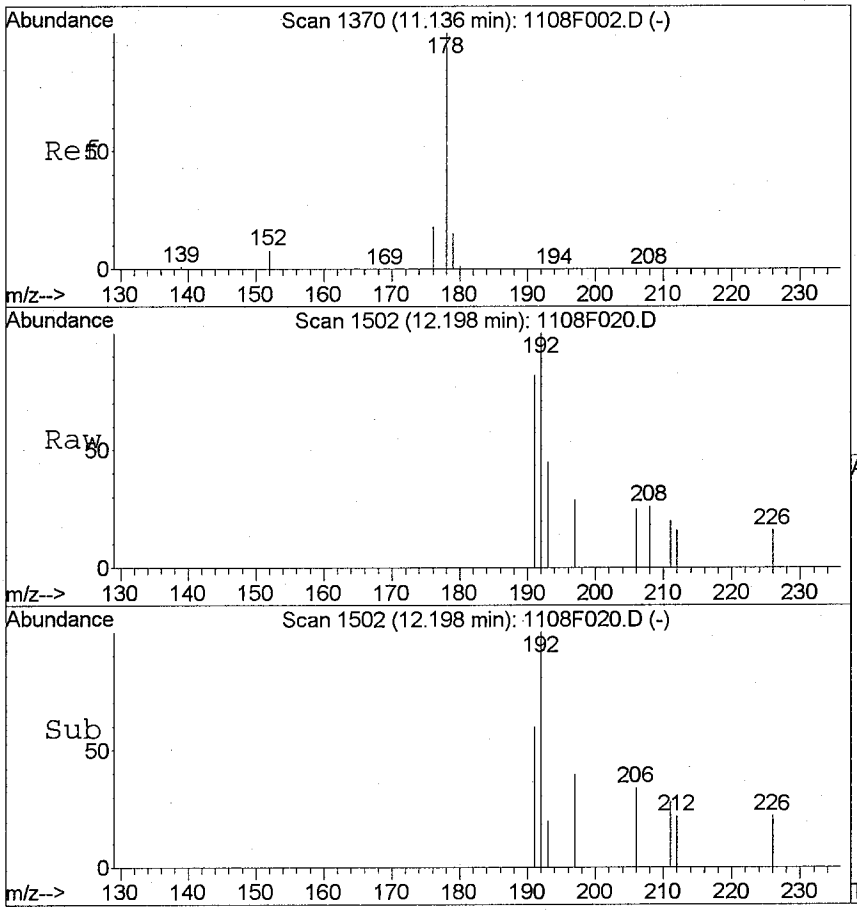


#31
1-Methylphenanthrene
Concen: 3.51 ng/ml
RT: 12.44 min Scan# 1548
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:192 Resp: 513

Ion	Ratio	Lower	Upper
192	100		
191	55.4	26.3	86.3
193	13.0	0.0	45.7

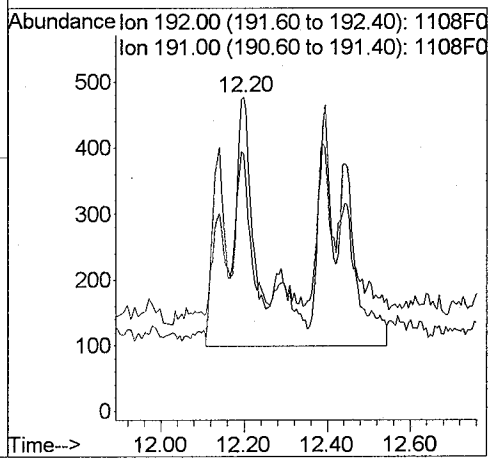


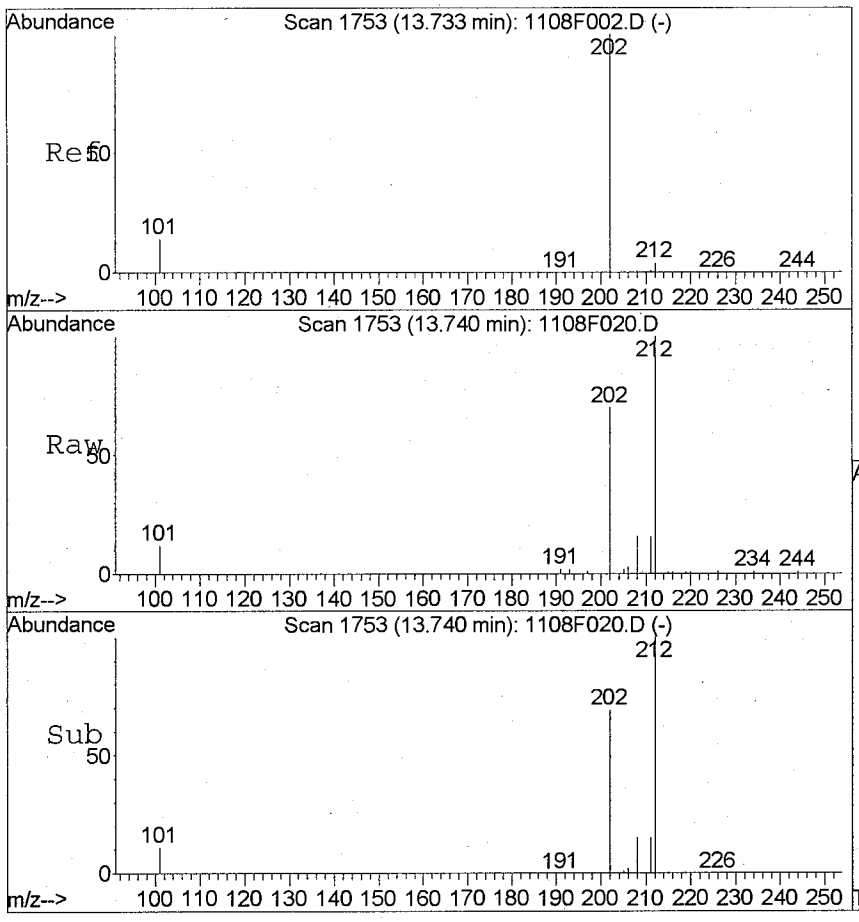


#32
C1-Phenanthrenes/Anthracenes
Concen: 16.96 ng/ml m
RT: 12.20 min Scan# 1502
Delta R.T. -0.02 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:192 Resp: 3647

Ion	Ratio	Lower	Upper
192	100		
191	81.8	25.3	85.3

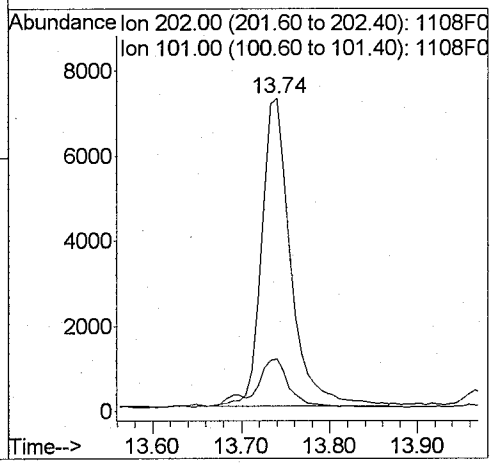


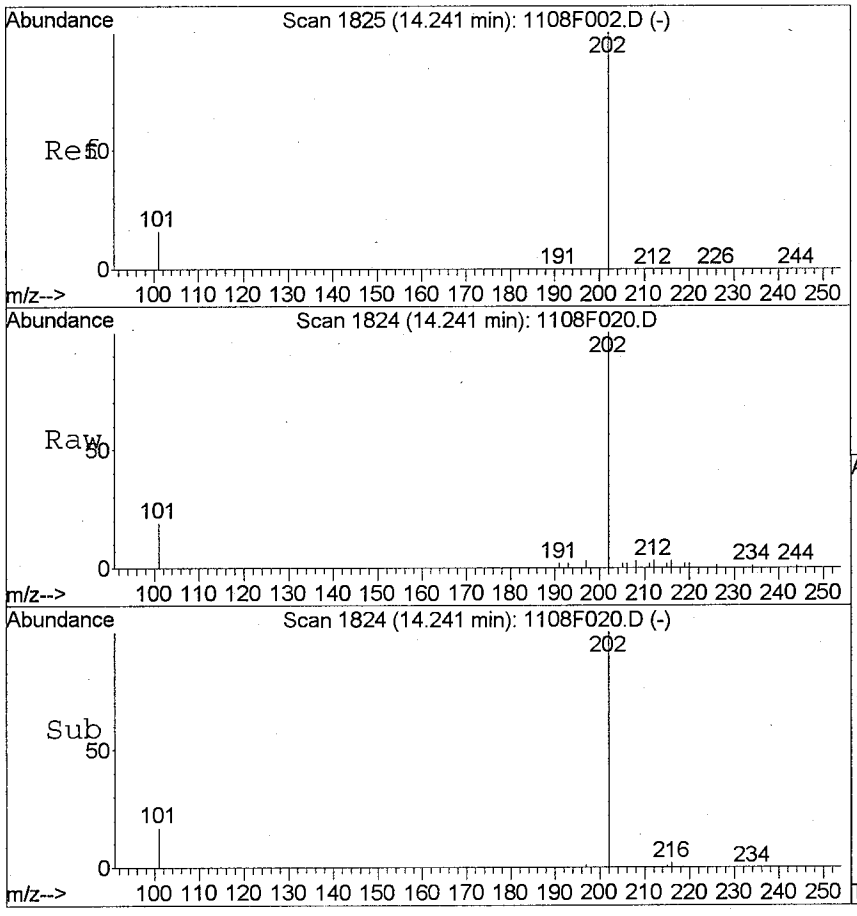


#36
Fluoranthene
Concen: 77.10 ng/ml
RT: 13.74 min Scan# 1753
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:202 Resp: 16508

Ion	Ratio	Lower	Upper
202	100		
101	15.4	0.0	44.3

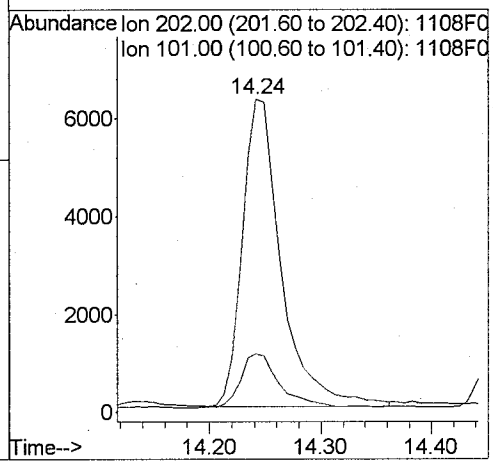


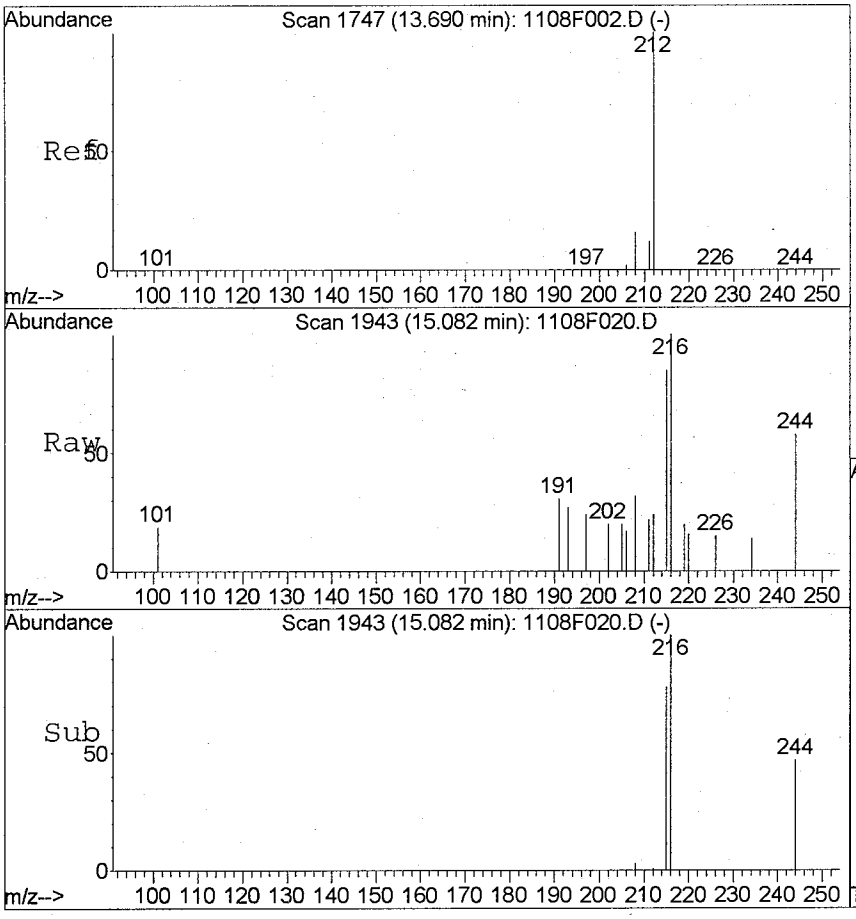


#39
Pyrene
Concen: 78.27 ng/ml
RT: 14.24 min Scan# 1824
Delta R.T. -0.00 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:202 Resp: 15204

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	46.2

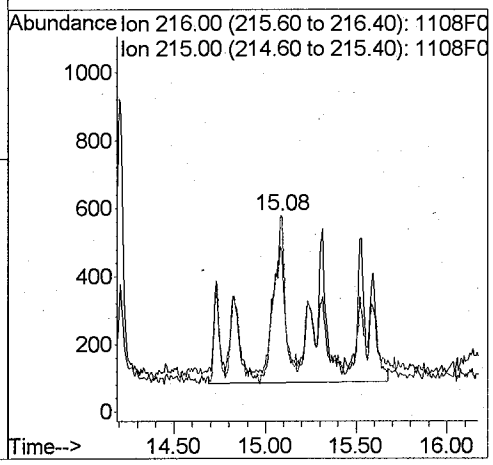


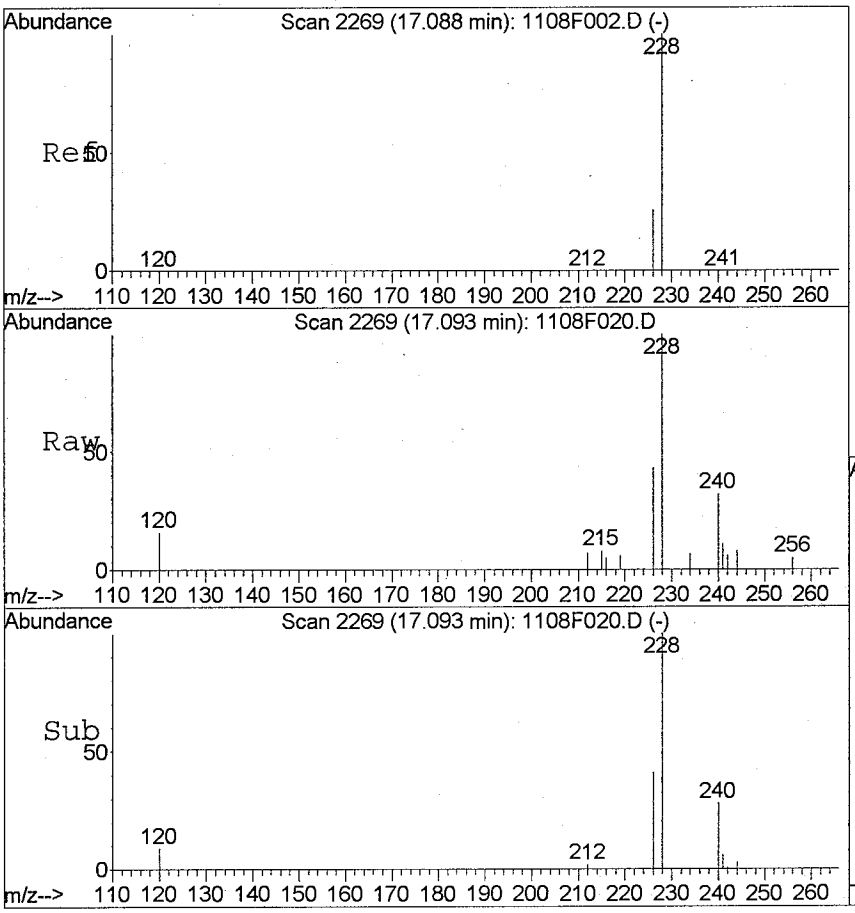


#40
C1-Fluoranthenes/Pyrenes
Concen: 40.12 ng/ml m
RT: 15.08 min Scan# 1943
Delta R.T. -0.47 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:216 Resp: 7794

Ion	Ratio	Lower	Upper
216	100		
215	84.6	54.8	114.8

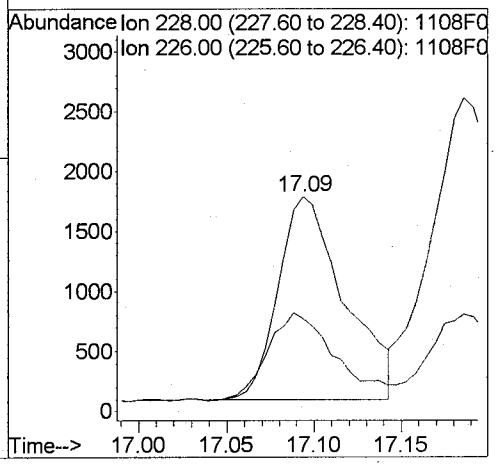


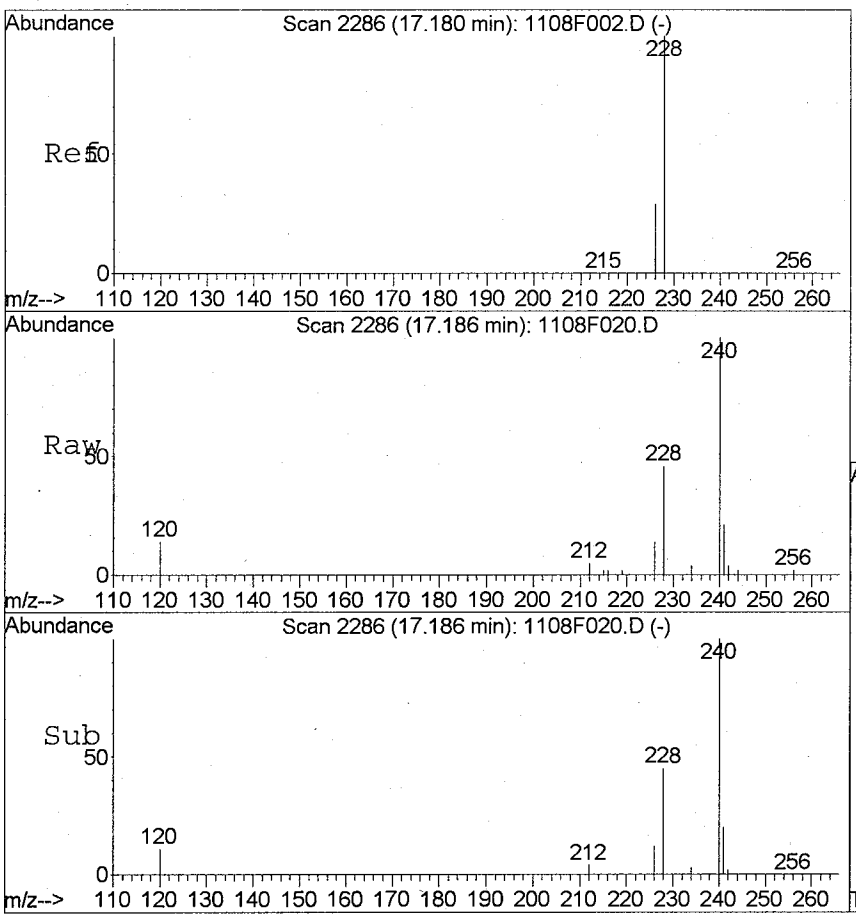


#42
Benz(a)anthracene
Concen: 30.39 ng/ml
RT: 17.09 min Scan# 2269
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:228 Resp: 4494

Ion	Ratio	Lower	Upper
228	100		
226	40.4	0.0	55.8

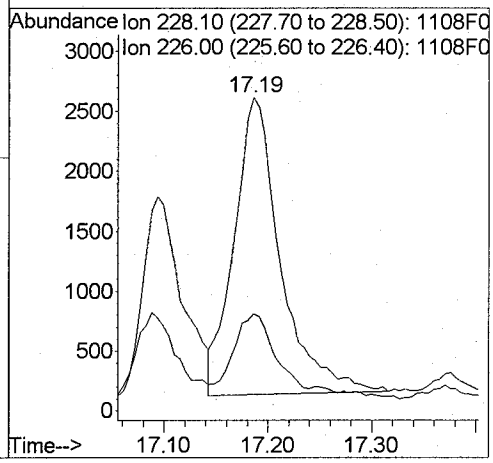


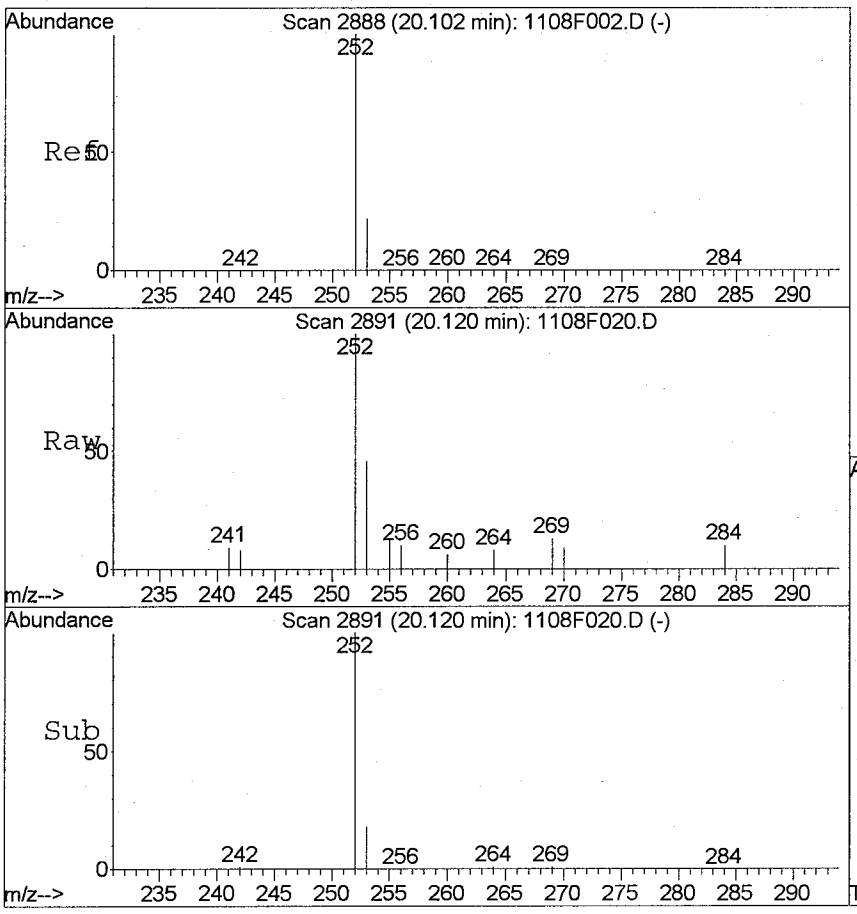


#43
Chrysene
Concen: 48.71 ng/ml
RT: 17.19 min Scan# 2286
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:228 Resp: 7704

Ion	Ratio	Lower	Upper
228	100		
226	28.1	0.0	58.5

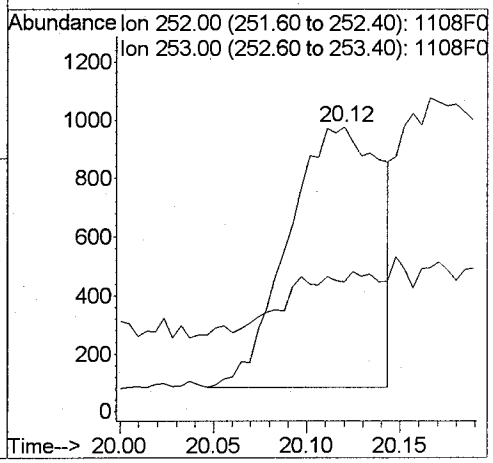


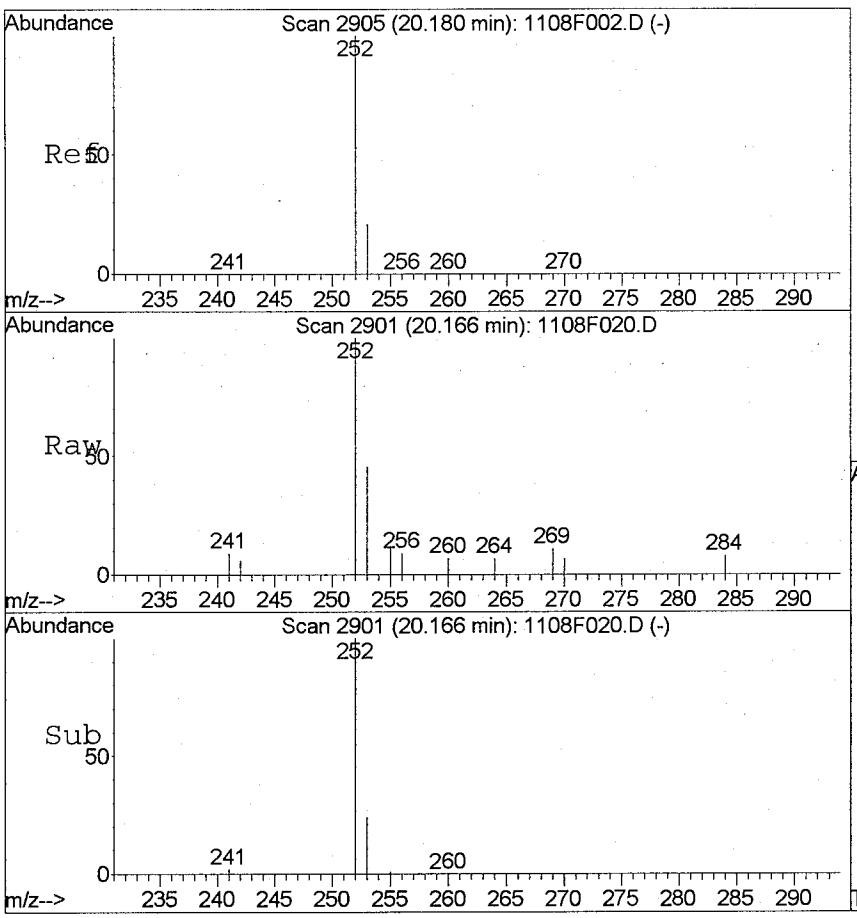


#49
Benzo(b)fluoranthene
Concen: 27.21 ng/ml
RT: 20.12 min Scan# 2891
Delta R.T. 0.02 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:252 Resp: 3047

Ion	Ratio	Lower	Upper
252	100		
253	20.4	0.0	51.9

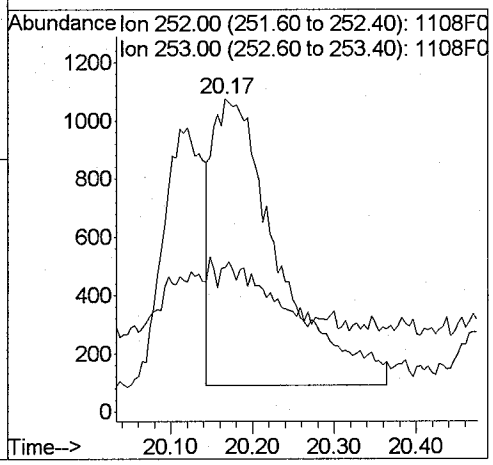


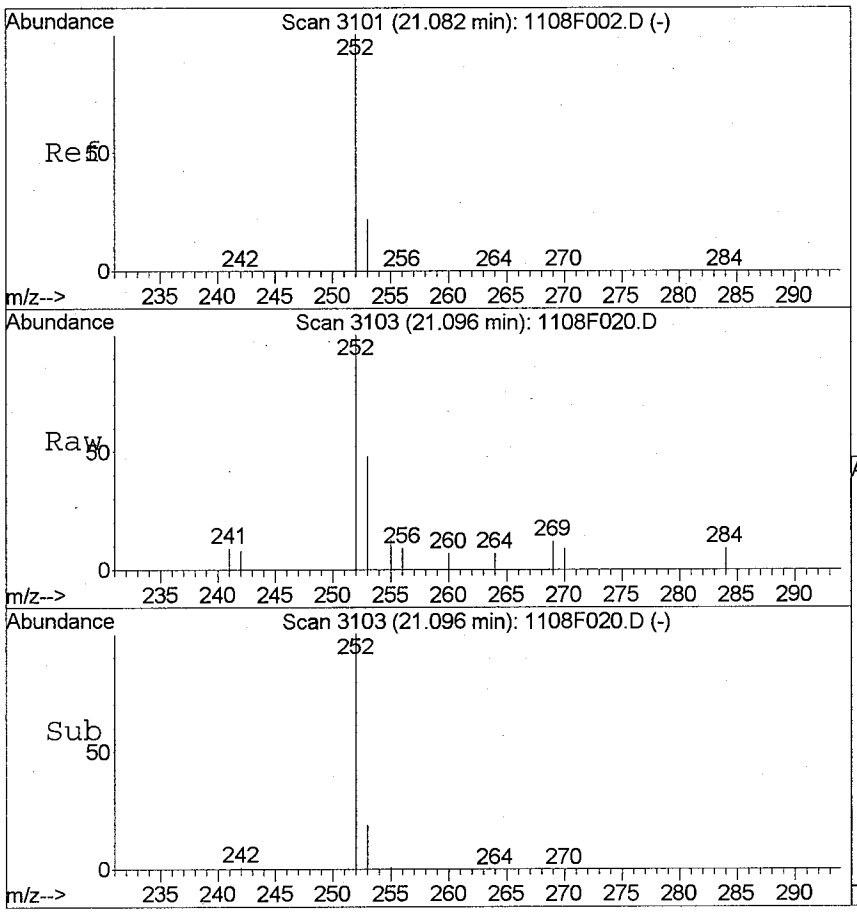


#50
Benzo(k)fluoranthene
Concen: 38.87 ng/ml m
RT: 20.17 min Scan# 2901
Delta R.T. -0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:252 Resp: 5522

Ion	Ratio	Lower	Upper
252	100		
253	46.1	0.0	51.7

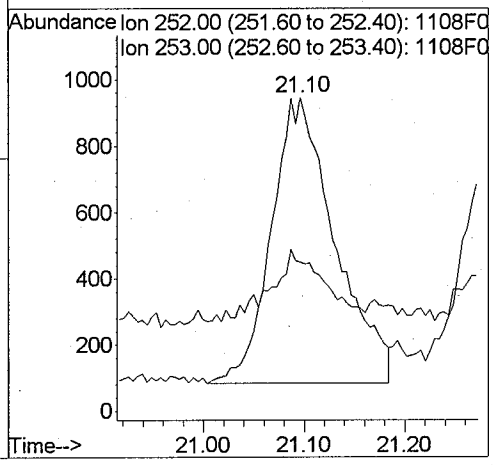


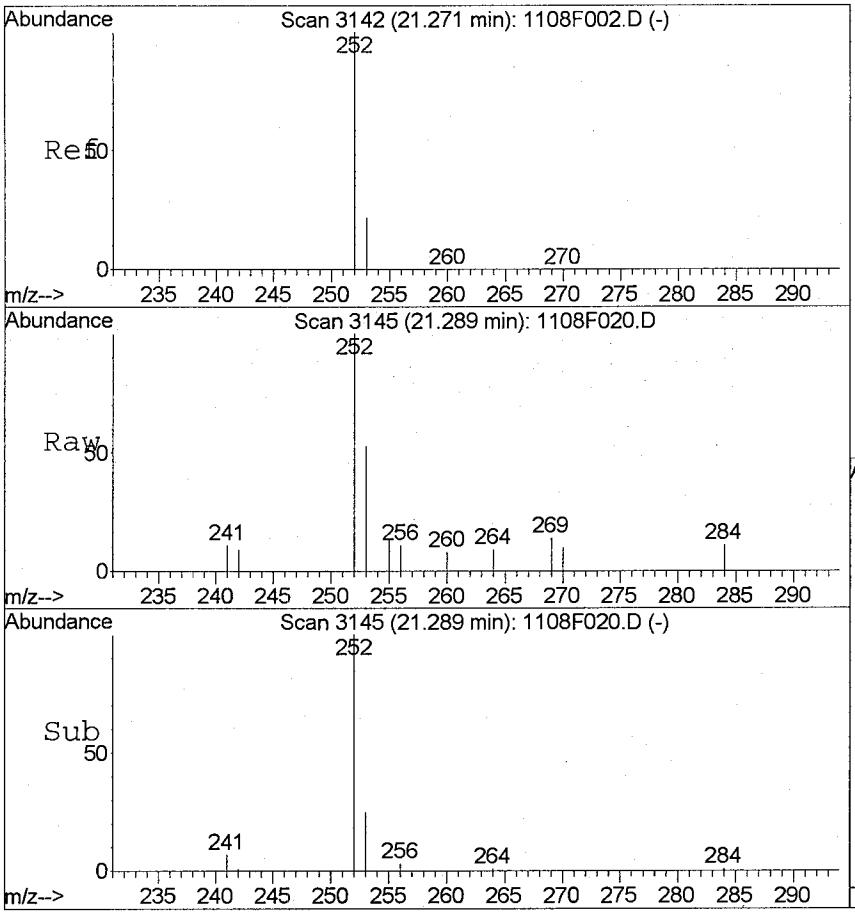


#51
Benzo(e)pyrene
Concen: 30.00 ng/ml
RT: 21.10 min Scan# 3103
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:252 Resp: 3772

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.8

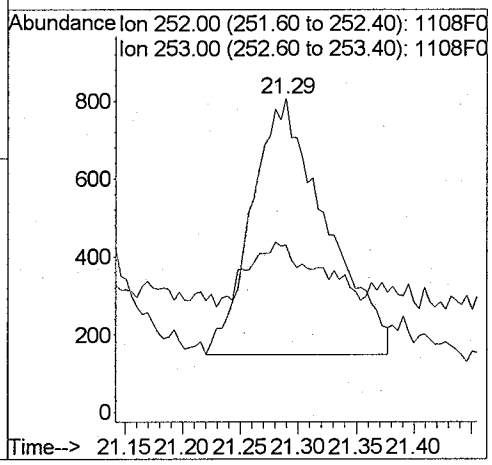


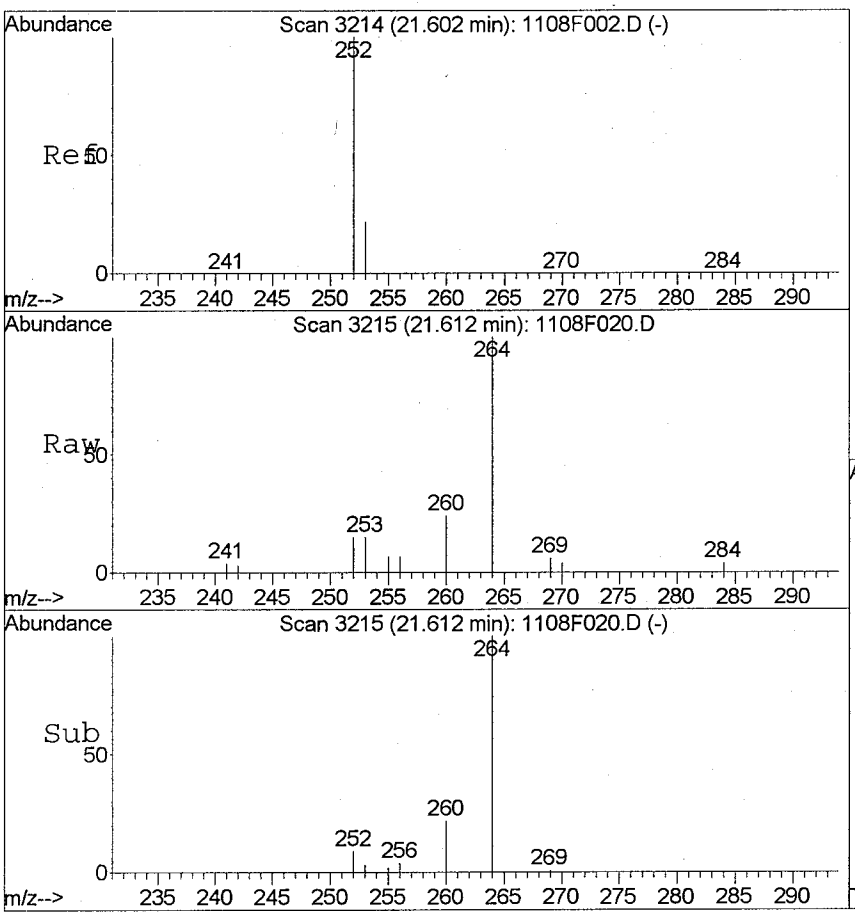


#52
Benzo(a)pyrene
Concen: 30.48 ng/ml
RT: 21.29 min Scan# 3145
Delta R.T. 0.02 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:252 Resp: 2903

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.7

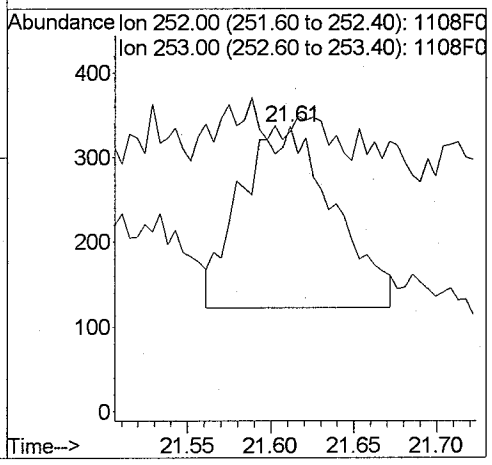


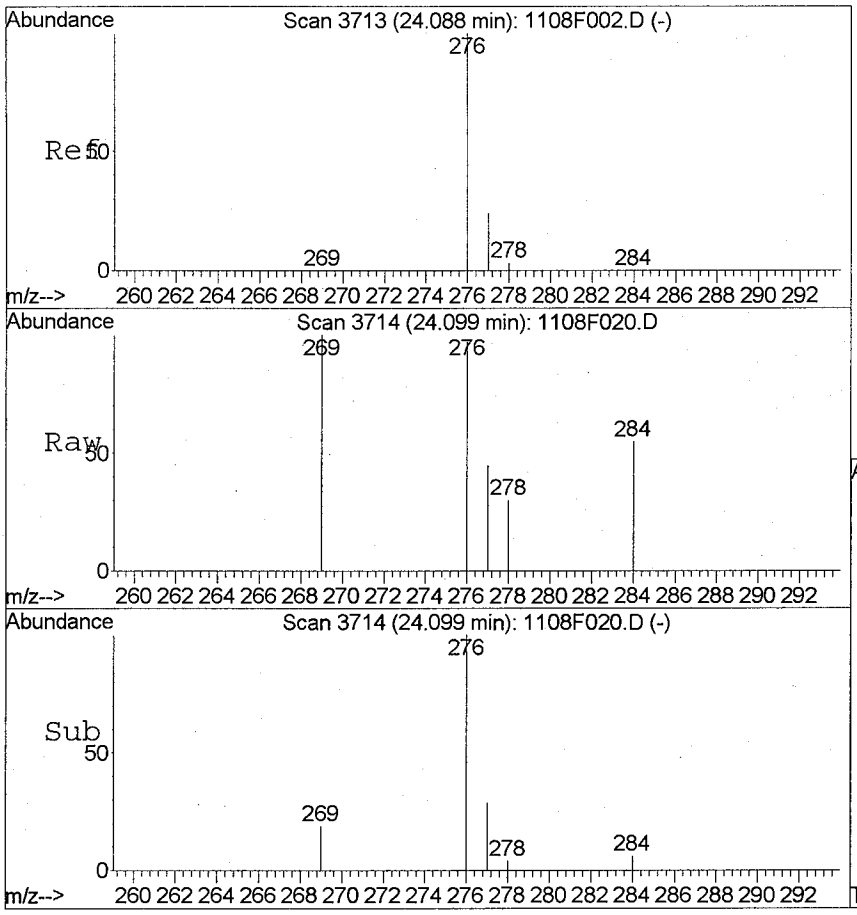


#53
Perylene
Concen: 7.68 ng/ml m
RT: 21.61 min Scan# 3215
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:252 Resp: 821

Ion	Ratio	Lower	Upper
252	100		
253	98.2	0.0	52.0#

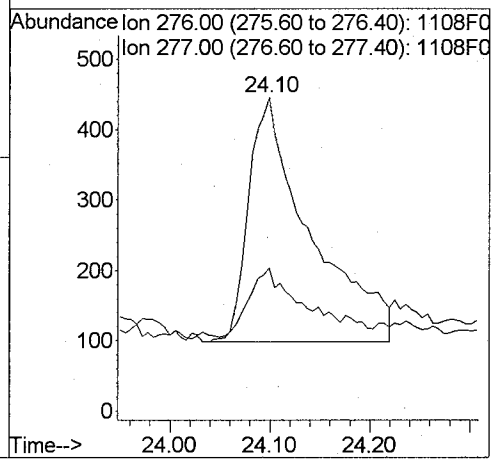


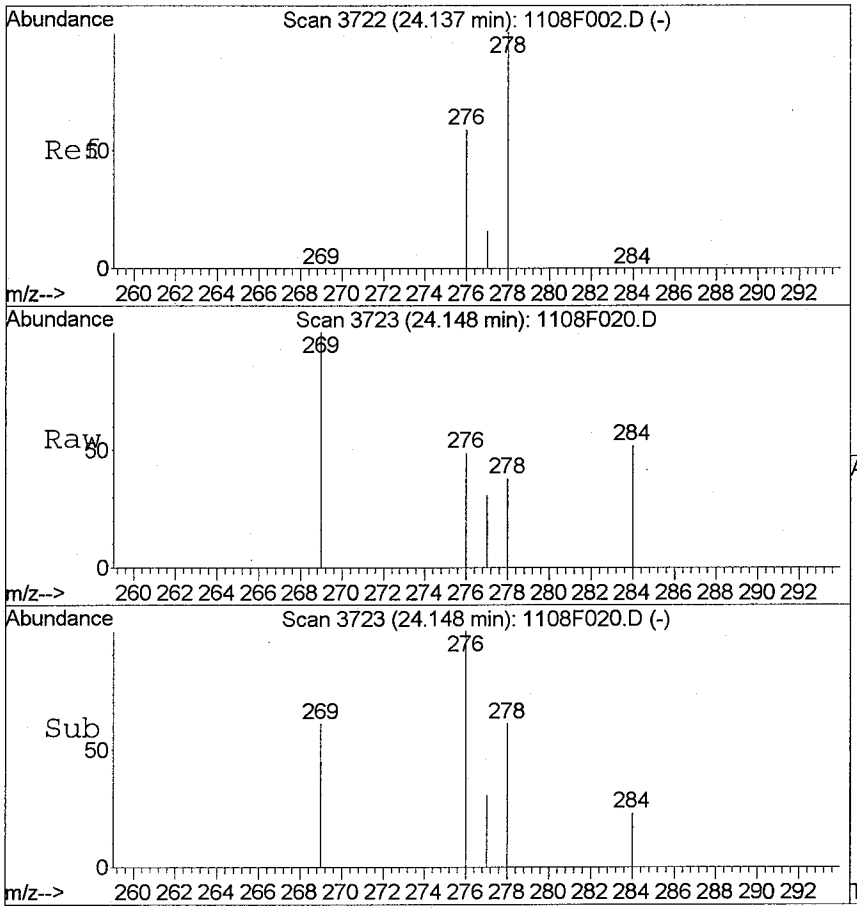


#54
Indeno(1,2,3-cd)pyrene
Concen: 25.74 ng/ml
RT: 24.10 min Scan# 3714
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:276 Resp: 1490

Ion	Ratio	Lower	Upper
276	100		
277	27.6	0.0	54.0

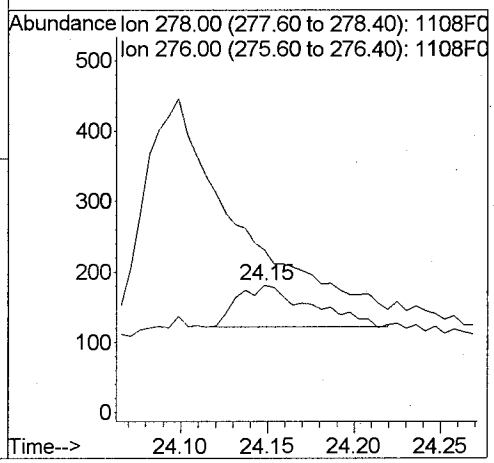


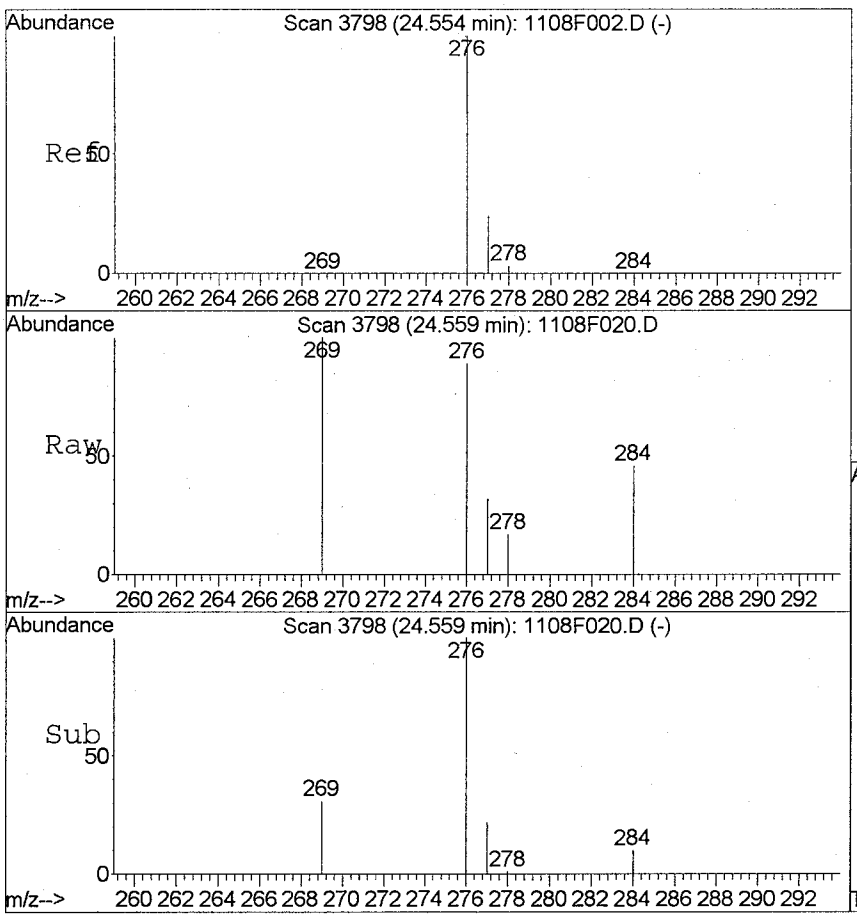


#55
Dibenz(a,h)anthracene
Concen: 2.10 ng/ml
RT: 24.15 min Scan# 3723
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:278 Resp: 175

Ion	Ratio	Lower	Upper
278	100		
276	142.4	29.0	89.0#

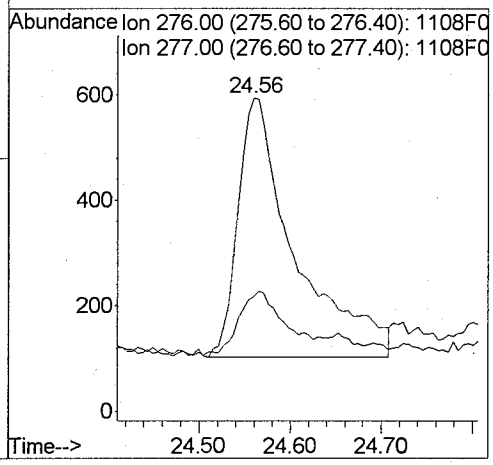




#56
Benzo(g,h,i)perylene
Concen: 22.16 ng/ml
RT: 24.56 min Scan# 3798
Delta R.T. 0.01 min
Lab File: 1108F020.D
Acq: 8 Nov 2003 5:21 pm

Tgt Ion:276 Resp: 2127

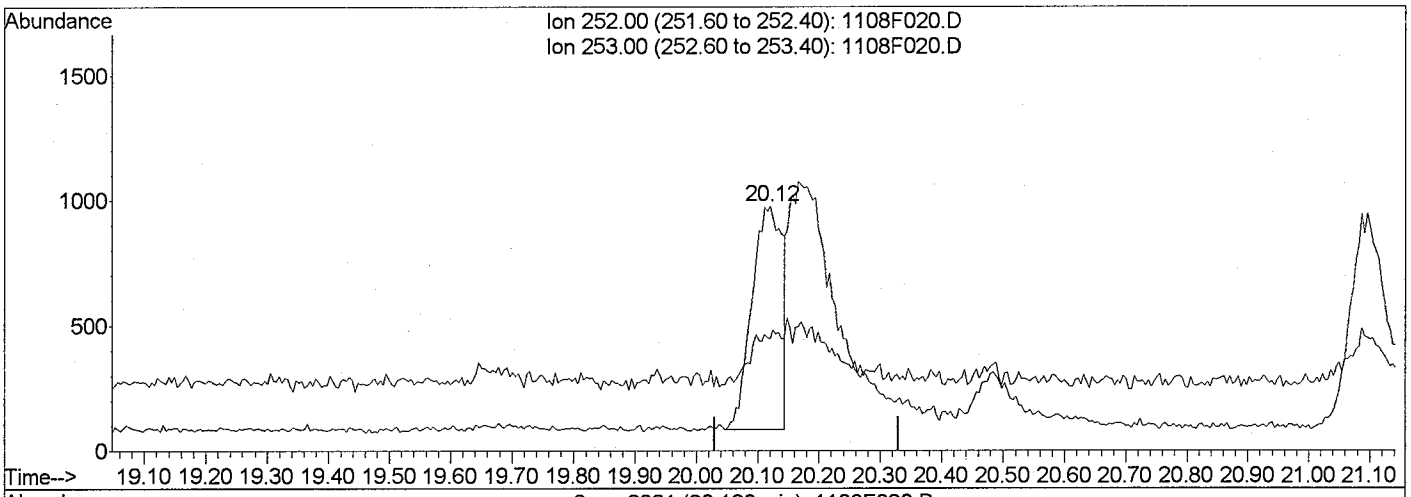
Ion	Ratio	Lower	Upper
276	100		
277	21.3	0.0	54.3

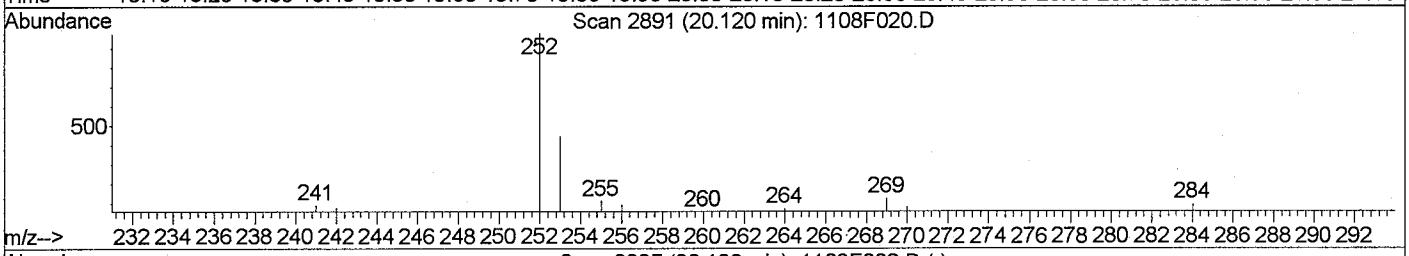


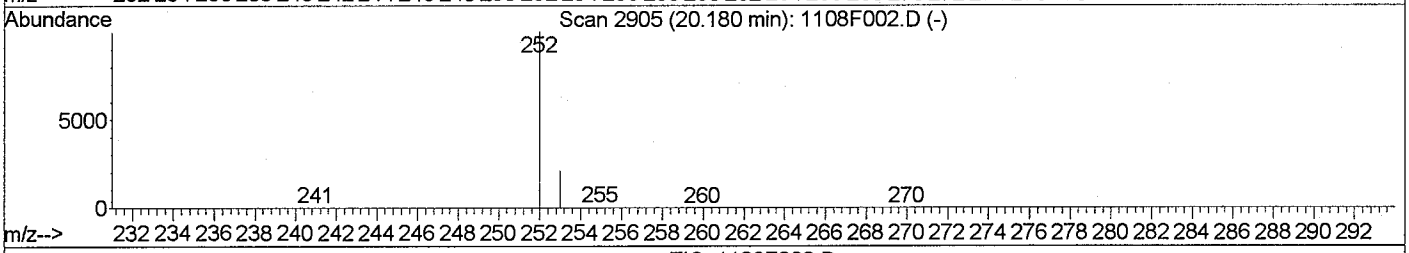
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F020.D Vial: 17
Acq On : 8 Nov 2003 5:21 pm Operator: LWeiskopf
Sample : K2308419-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:37 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F020.D

(50) Benzo(k)fluoranthene (T)

20.12min 21.45ng/ml

response 3047

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	20.43
0.00	0.00	0.00
0.00	0.00	0.00

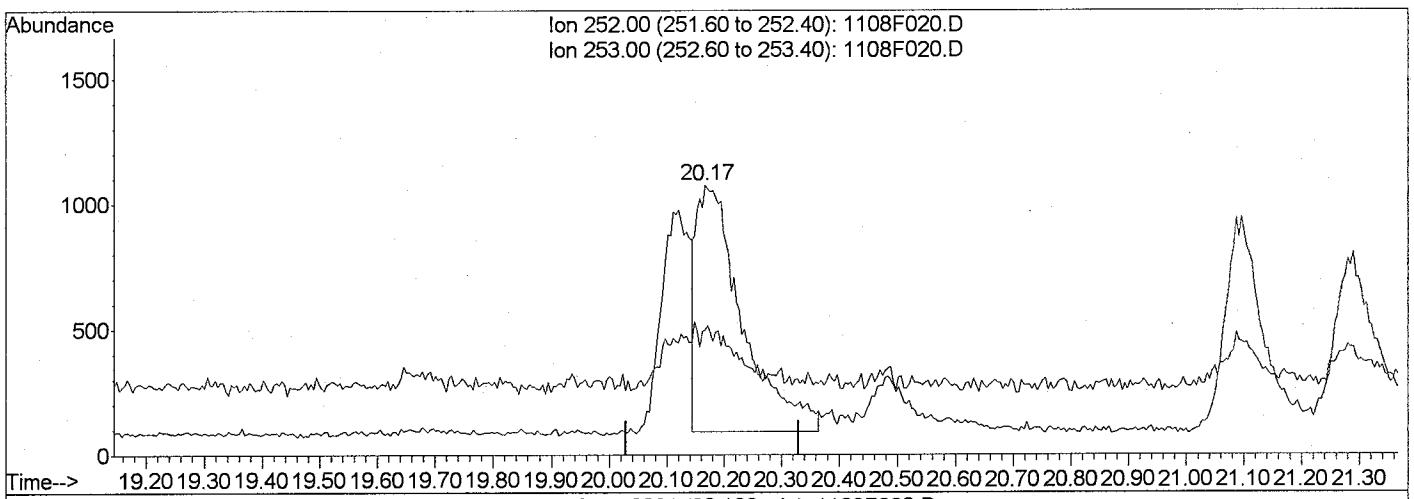
1108F020.D 1107ALK.M Mon Nov 10 16:40:31 2003

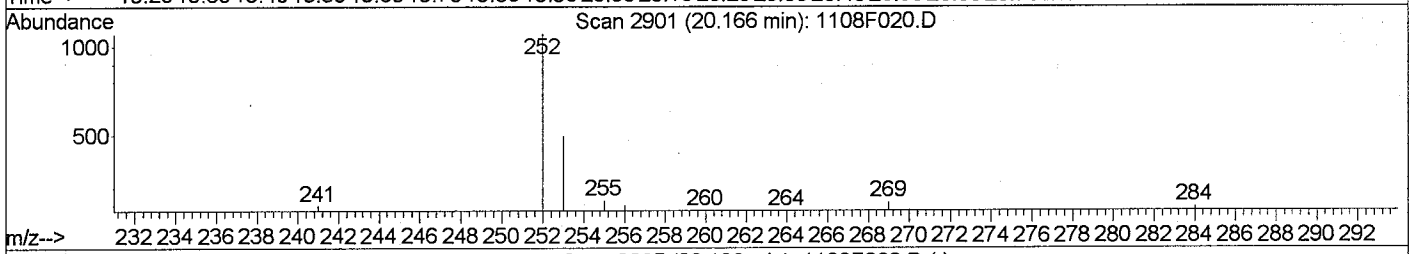
Quantitation Report (Qedit)

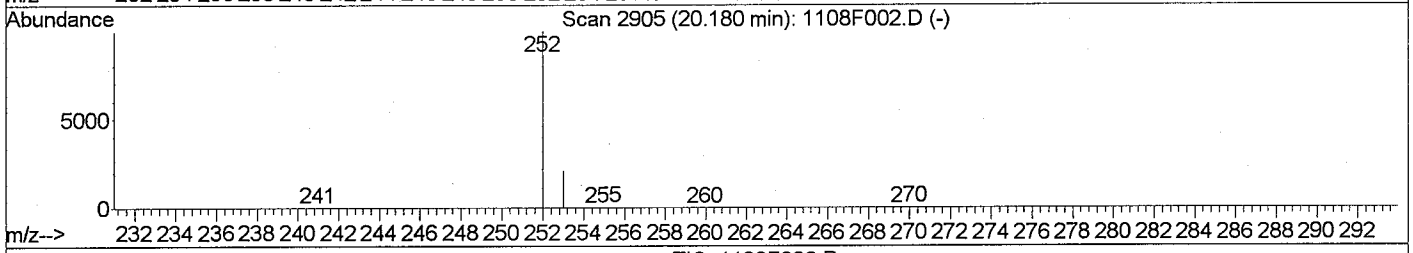
Data File : J:\MS11\DATA\110803\1108F020.D
Acq On : 8 Nov 2003 5:21 pm
Sample : K2308419-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:38 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F020.D

(50) Benzo(k)fluoranthene (T)

20.17min 38.87ng/ml m

response 5522

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	46.14
0.00	0.00	0.00
0.00	0.00	0.00

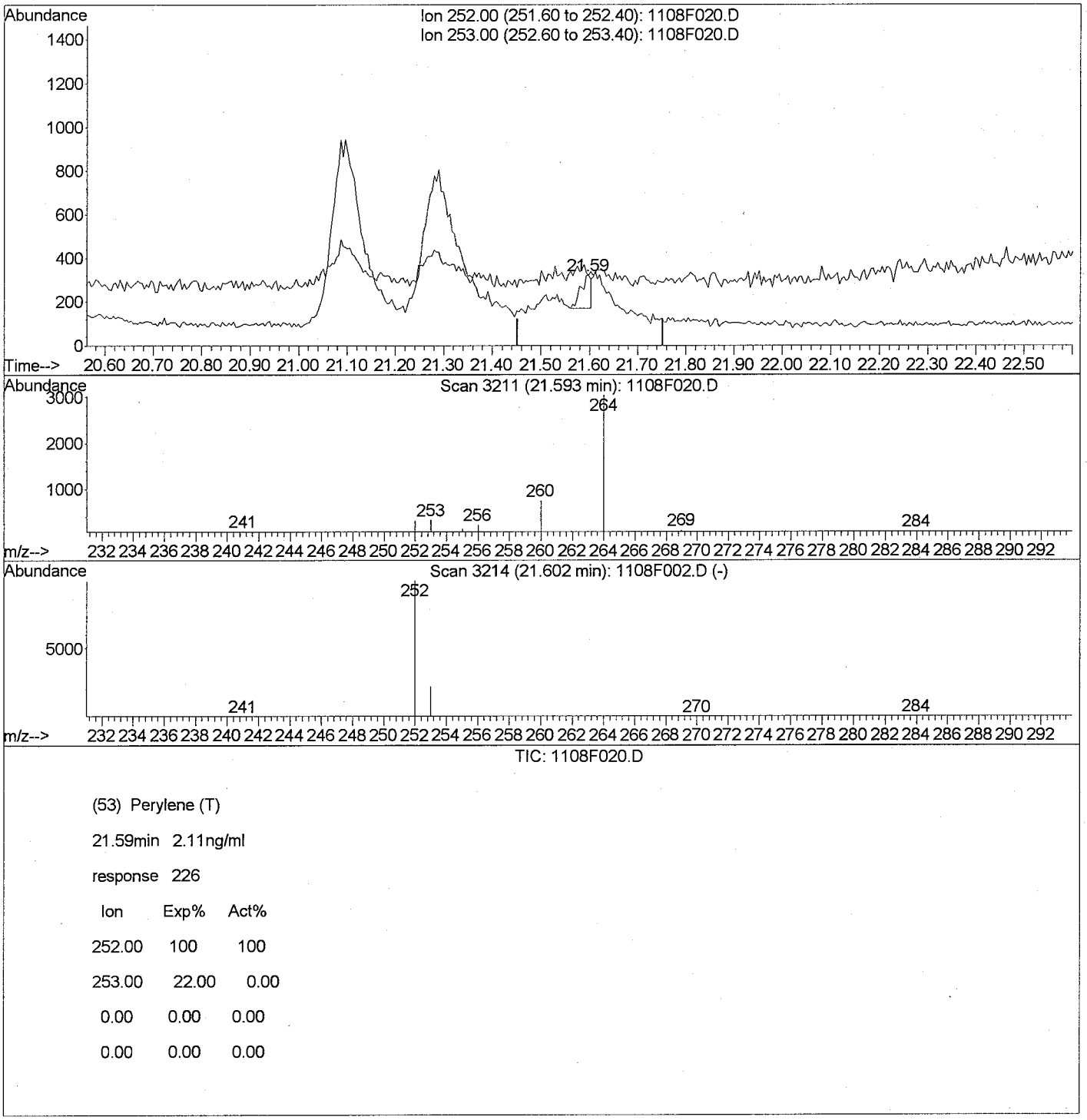
wrong peak 11/14/03
not 11/14/03

1108F020.D 1107ALK.M Mon Nov 10 16:40:38 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F020.D Vial: 17
Acq On : 8 Nov 2003 5:21 pm Operator: LWeiskopf
Sample : K2308419-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:38 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F020.D

(53) Perylene (T)

21.59min 2.11ng/ml

response 226

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

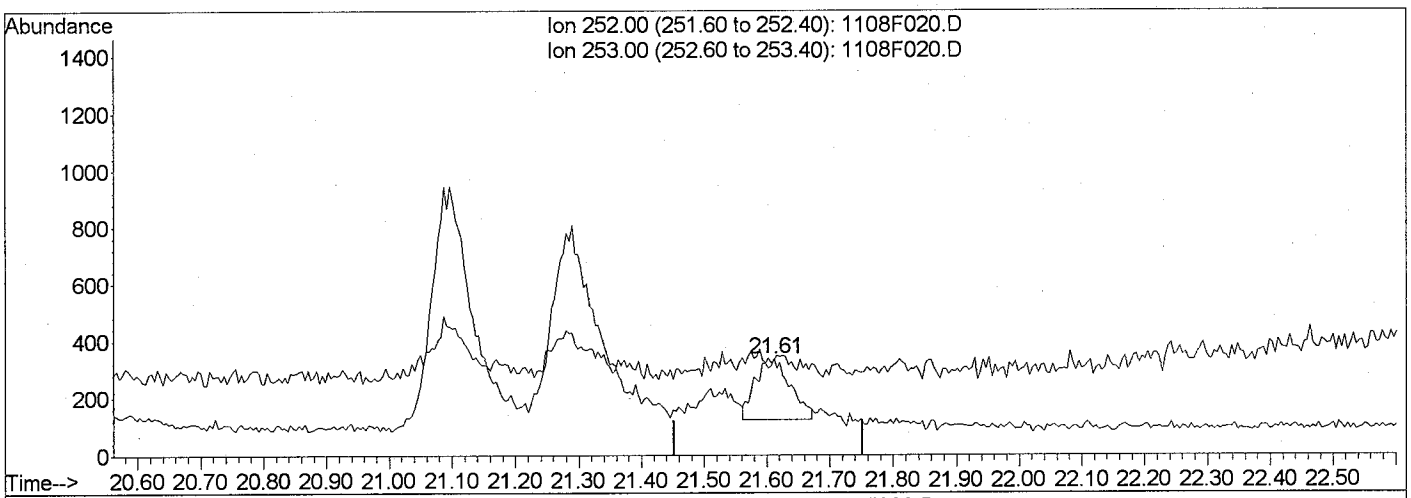
1108F020.D 1107ALK.M Mon Nov 10 16:40:42 2003

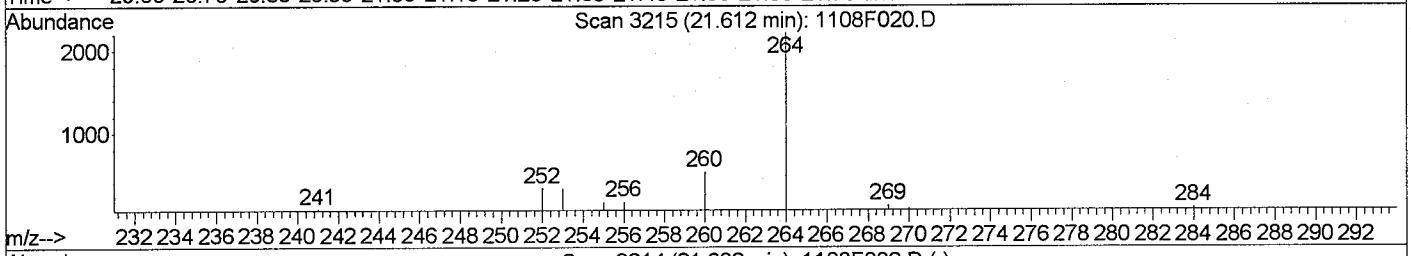
Quantitation Report (Qedit)

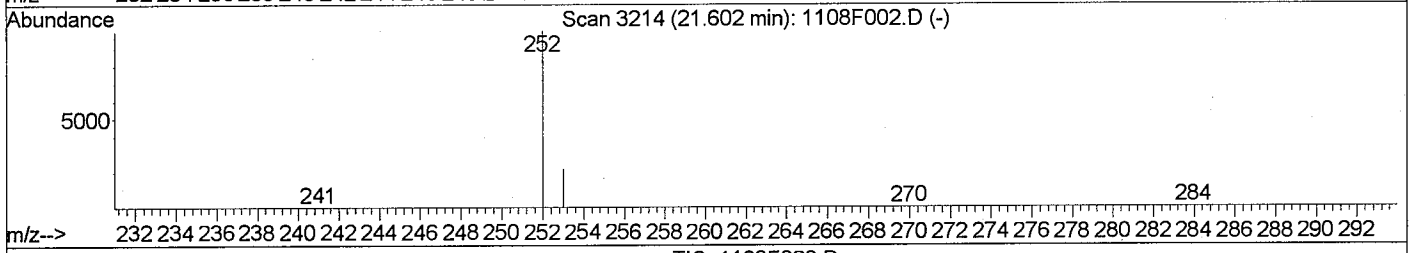
Data File : J:\MS11\DATA\110803\1108F020.D
Acq On : 8 Nov 2003 5:21 pm
Sample : K2308419-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:38 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F020.D

(53) Perylene (T)

21.61min 7.68ng/ml m

response 821

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	98.22#
0.00	0.00	0.00
0.00	0.00	0.00

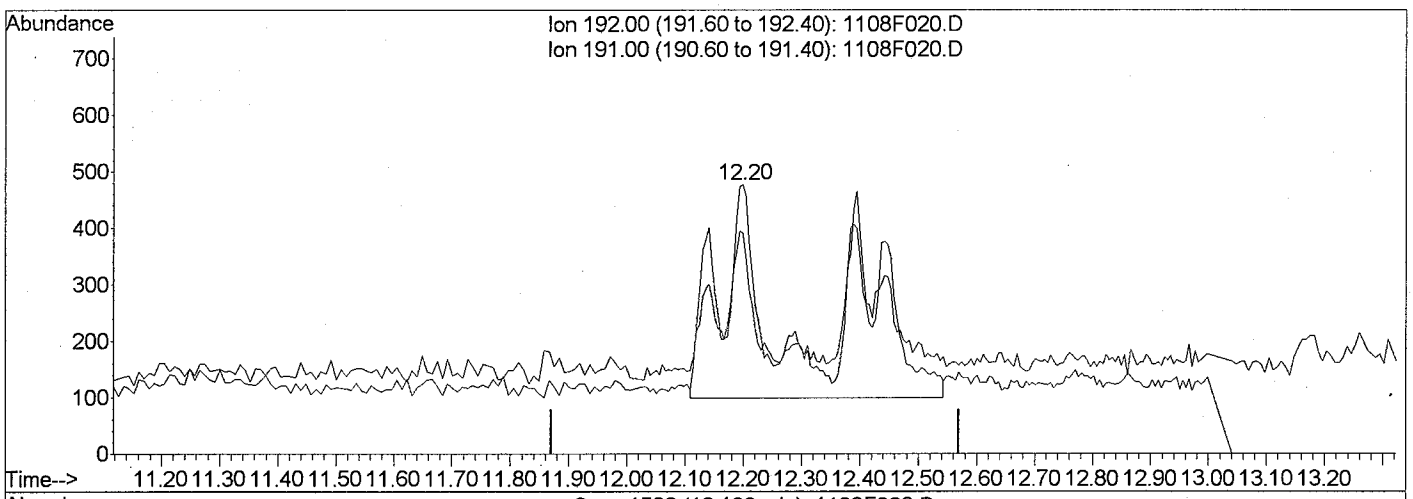
11/10/03
incomplete
mt
11/11/03

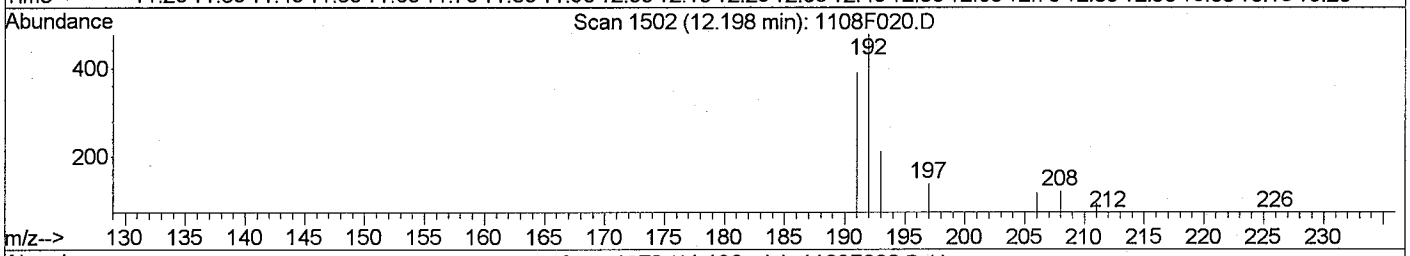
1108F020.D 1107ALK.M Mon Nov 10 16:40:47 2003

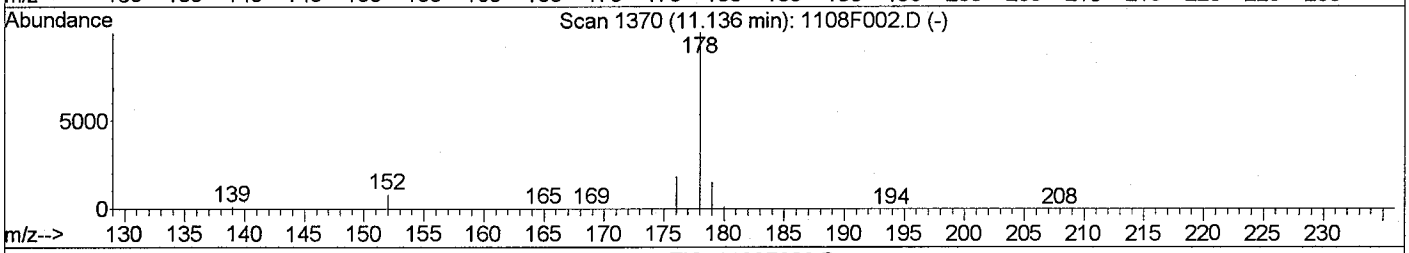
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F020.D Vial: 17
Acq On : 8 Nov 2003 5:21 pm Operator: LWeiskopf
Sample : K2308419-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:07 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F020.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.20min 16.96ng/ml m

response 3647

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	81.76
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

mat 11/11/03

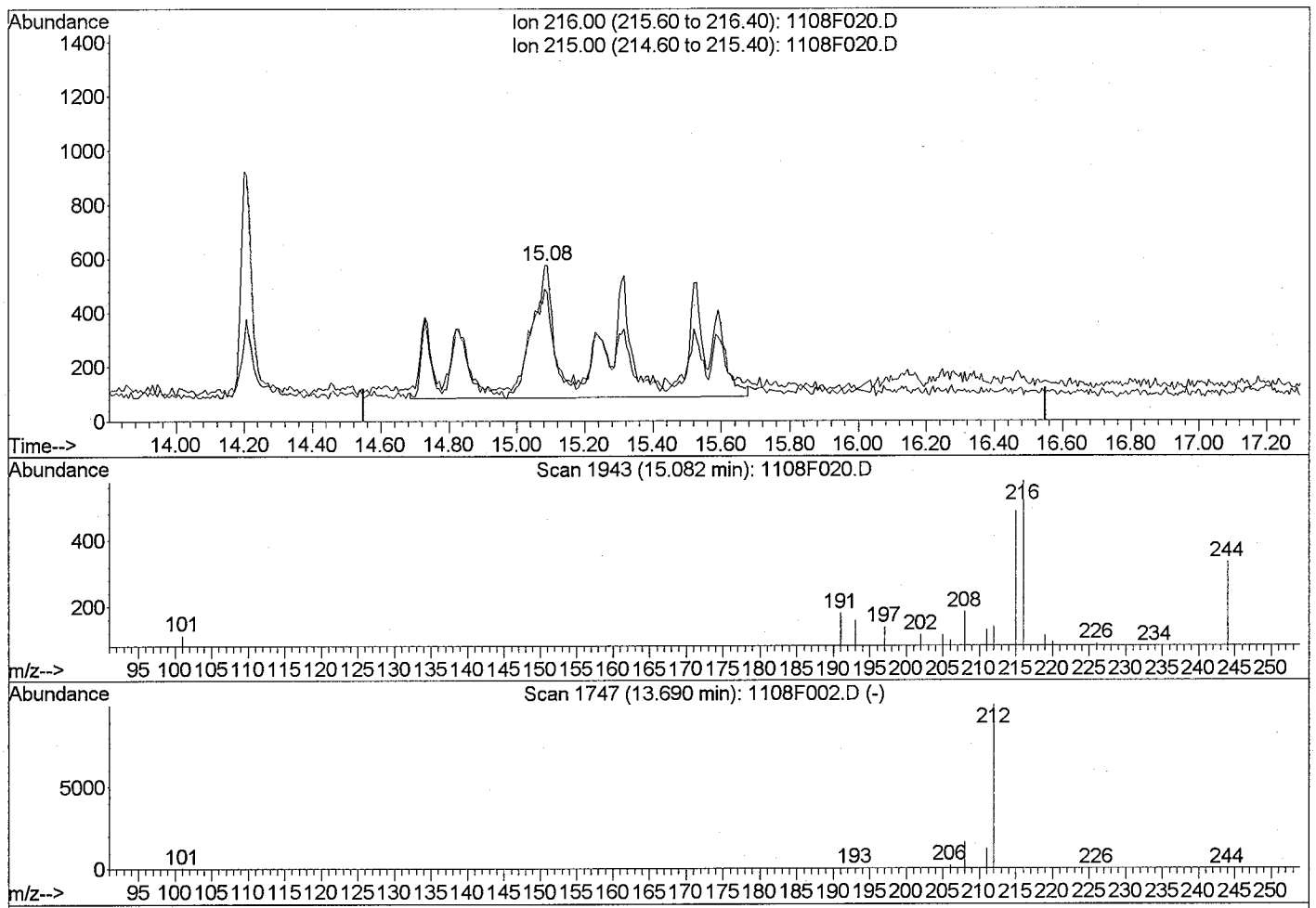
1108F020.D 1107ALK.M Mon Nov 10 17:10:23 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F020.D
Acq On : 8 Nov 2003 5:21 pm
Sample : K2308419-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:08 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F020.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.08min 40.12ng/ml m

response 7794

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	84.60
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
mat 11/11/03

1108F020.D 1107ALK.M Mon Nov 10 17:10:33 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-7
Lab Code: K2308419-009

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-7
Lab Code: K2308419-009

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/08/03	Acceptable
Fluoranthene-d10	86	18-137	11/08/03	Acceptable
Terphenyl-d14	108	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F021.D
Lab ID: K2308419-009
RunType: SMPL
Matrix: WATER

Date Acquired: 11/08/2003 17:57
Date Quantitated: 11/10/2003 17:08
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: mt 11/11/03

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245665	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F021.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 17:57	**Quant Date:**	11/10/2003 17:08	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	233570	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	118300	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	162759	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	139150	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	72896	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	9.01	0.01	0.00	176	168444	1,424	71	37-107	OK
3	Fluoranthene-d10	13.70	0.01	0.00	212	281443	1,728	86	18-137	OK
4	Terphenyl-d14	14.74	0.01	0.00	244	275089	2,169	108	18-153	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1321	5.00	0.0050	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	248	1.59	0.0027	U	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	243	1.66	0.0025	U	
1	Biphenyl	7.09		0.00	154	785	4.15	0.0041	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene				152	0d		0.0018	U	
2	Acenaphthene	8.12	0.01	0.00	154	379	2.70	0.0027	J	
2	Dibenzofuran	8.42	0.01	0.00	168	193	1.02	0.0071	U	
2	Fluorene	9.05		0.00	166	335	2.23	0.0026	U	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F021.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 17:57	**Quant Date:**	11/10/2003 17:08	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-009			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene				184	0**d**		0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	617	3.13	0.0032	U	
3	Anthracene	11.14		0.00	178	236	1.40	0.0014	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	515**m**	2.61	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	1351	6.88	0.0068	J	
4	Pyrene	14.25	0.01	0.00	202	1073	5.90	0.0058	J	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene				228	0**d**		0.0021	U	
4	Chrysene	17.18		0.00	228	440**m**	2.97	0.0029	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene				252	0		0.0020	U	
5	Benzo(k)fluoranthene				252	0		0.0014	U	
5	Benzo(e)pyrene				252	0		0.0019	U	
5	Benzo(a)pyrene				252	0		0.0016	U	
5	Perylene				252	0		0.0012	U	
5	Indeno(1,2,3-cd)pyrene				276	0		0.0021	U	
5	Dibenz(a,h)anthracene				278	0		0.0017	U	
5	Benzo(g,h,i)perylene				276	0		0.0037	U	

Prep Amount:	1010 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F021.D Vial: 18
Acq On : 8 Nov 2003 5:57 pm Operator: LWeiskopf
Sample : K2308419-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:22 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

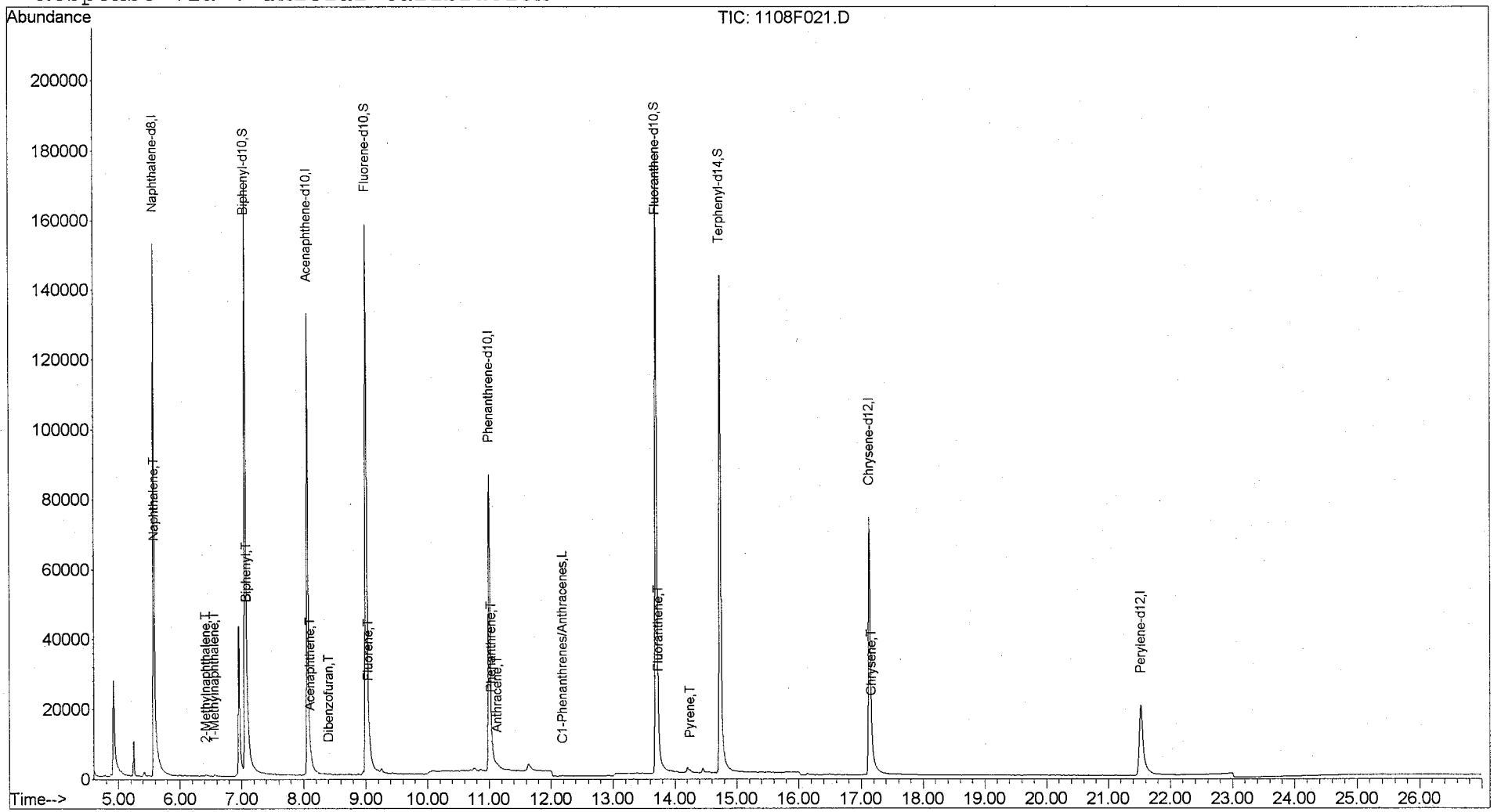
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	233570	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	118300	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	162759	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	139150	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	72896	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	248651	1453.25	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 145.32%			
16) Fluorene-d10	9.01	176	168444	1423.69	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 142.37%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	281443	1727.69	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 172.77%			
41) Terphenyl-d14	14.74	244	275089	2169.14	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 216.91%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1321	5.00	ng/ml	91
3) 2-Methylnaphthalene	6.42	142	248	1.59	ng/ml	85
4) 1-Methylnaphthalene	6.57	142	243	1.66	ng/ml#	30
6) Biphenyl	7.09	154	785	4.15	ng/ml	87
13) Acenaphthene	8.12	154	379	2.70	ng/ml	97
14) Dibenzofuran	8.42	168	193	1.02	ng/ml	87
17) Fluorene	9.05	166	335	2.23	ng/ml	96
28) Phenanthrene	11.05	178	617	3.13	ng/ml	98
29) Anthracene	11.14	178	236	1.40	ng/ml	45
32) C1-Phenanthrenes/Anthracen	12.19	192	515m	2.61	ng/ml	
36) Fluoranthene	13.74	202	1351	6.88	ng/ml	93
39) Pyrene	14.25	202	1073	5.90	ng/ml	96
43) Chrysene	17.18	228	440m	2.97	ng/ml	

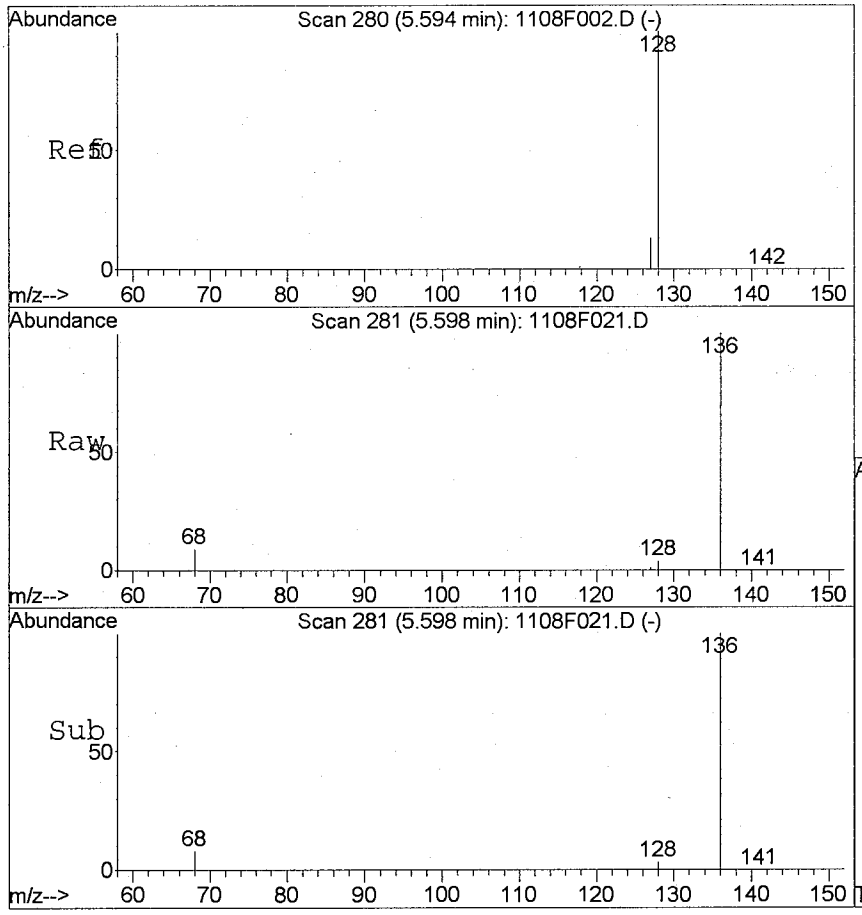
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F021.D Vial: 18
Acq On : 8 Nov 2003 5:57 pm Operator: LWeiskopf
Sample : K2308419-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:08 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

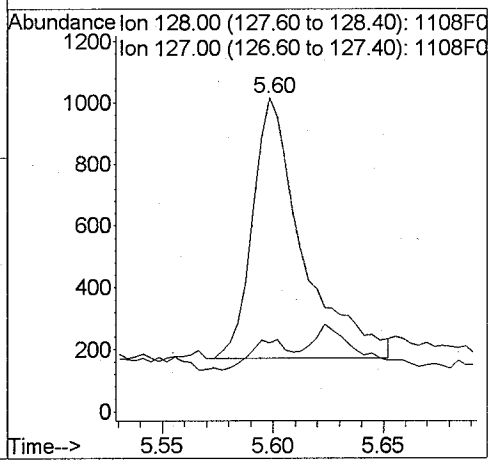


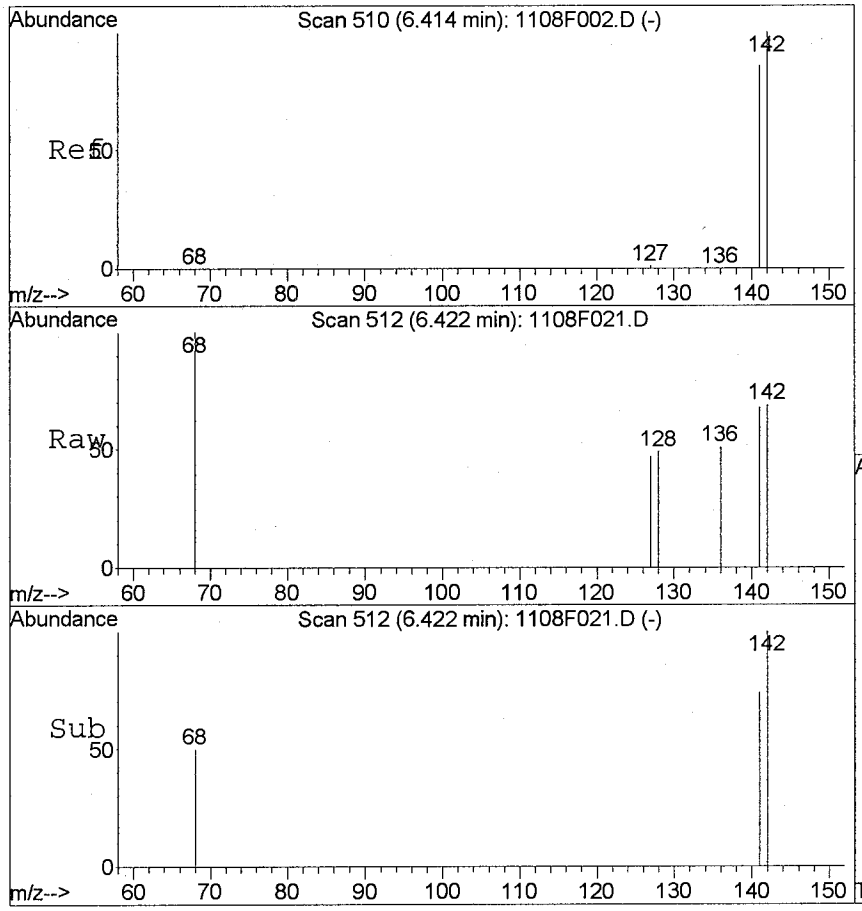


#2
Naphthalene
Concen: 5.00 ng/ml
RT: 5.60 min Scan# 281
Delta R.T. 0.00 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:128 Resp: 1321

Ion	Ratio	Lower	Upper
128	100		
127	10.1	0.0	43.5

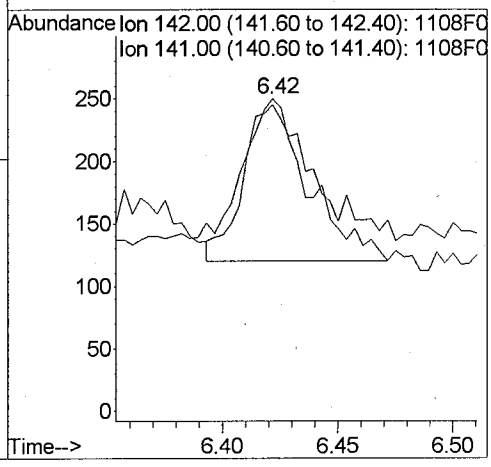


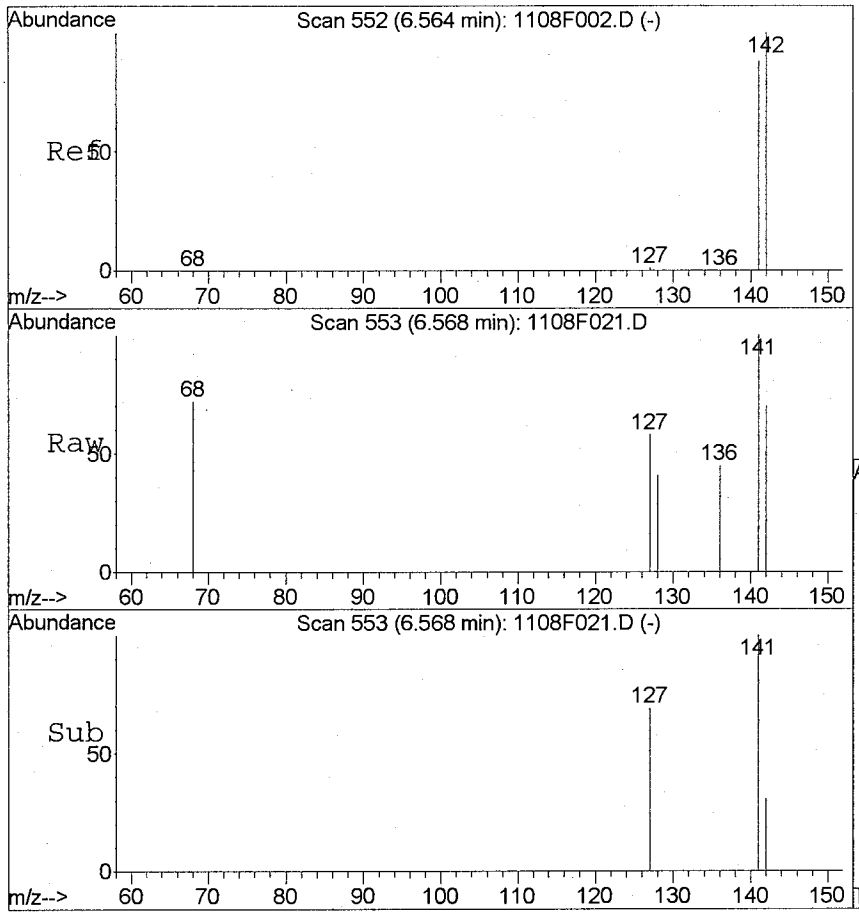


#3
2-Methylnaphthalene
Concen: 1.59 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:142 Resp: 248

Ion	Ratio	Lower	Upper
142	100		
141	72.3	56.1	116.1

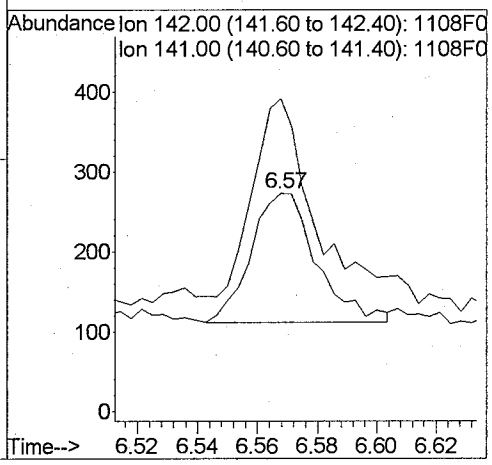


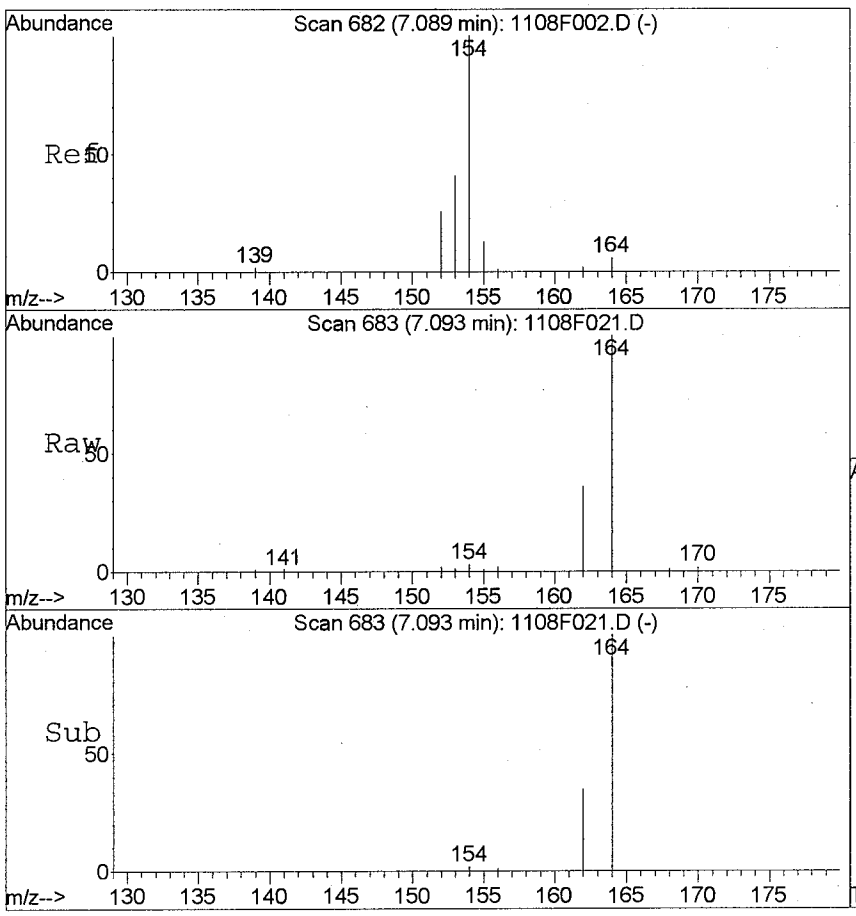


#4
1-Methylnaphthalene
Concen: 1.66 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.00 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:142 Resp: 243

Ion	Ratio	Lower	Upper
142	100		
141	153.4	58.4	118.4#

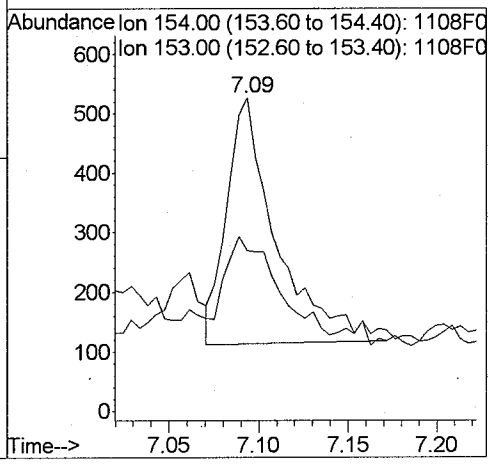


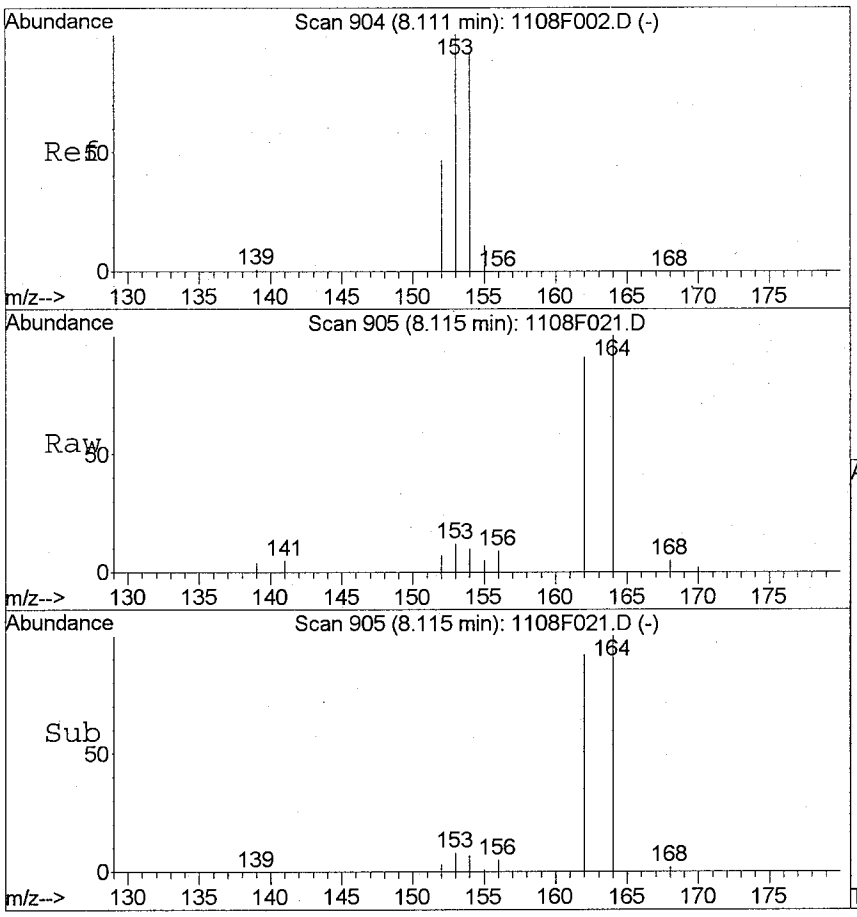


#6
Biphenyl
Concen: 4.15 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:154 Resp: 785

Ion	Ratio	Lower	Upper
154	100		
153	32.5	10.5	70.5

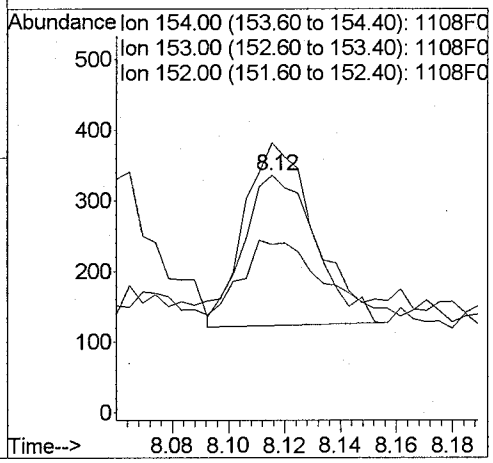


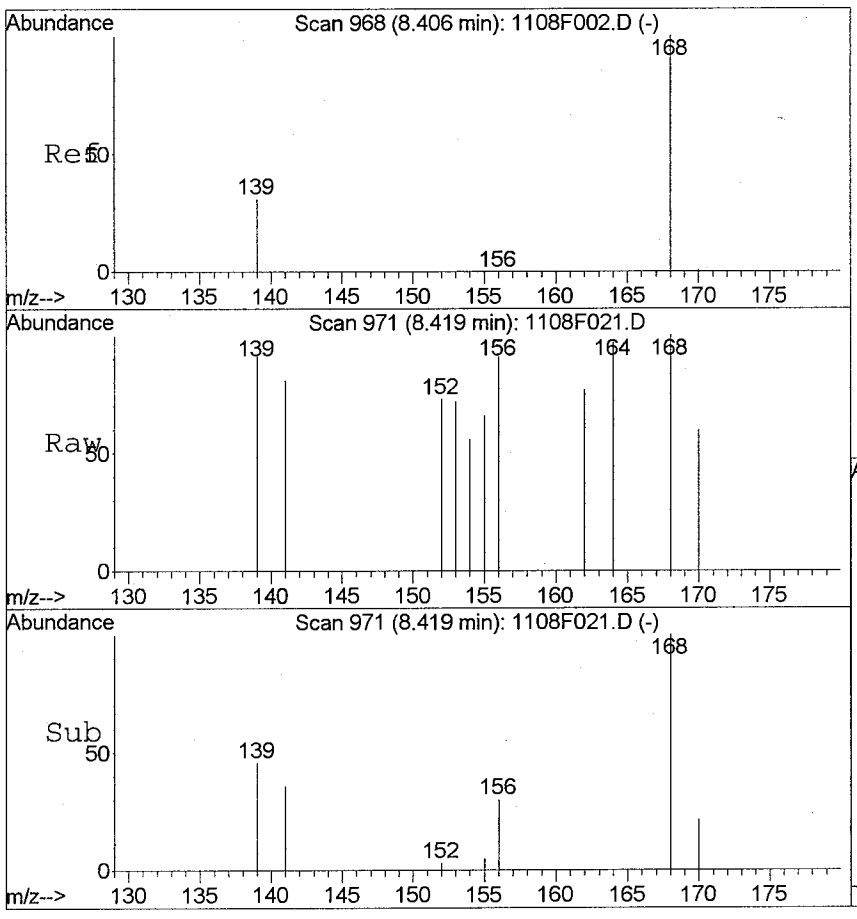


#13
Acenaphthene
Concen: 2.70 ng/ml
RT: 8.12 min Scan# 905
Delta R.T. 0.00 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:154 Resp: 379

Ion	Ratio	Lower	Upper
154	100		
153	107.2	78.6	138.6
152	47.8	21.5	81.5

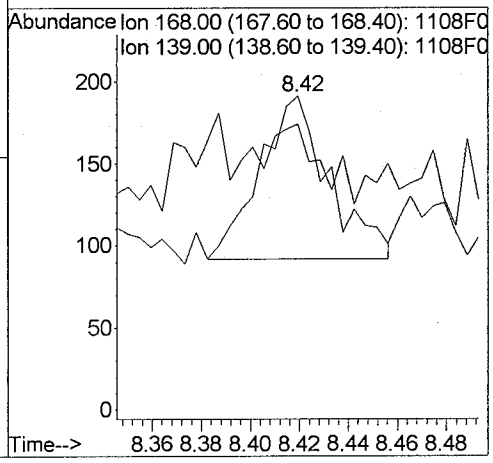


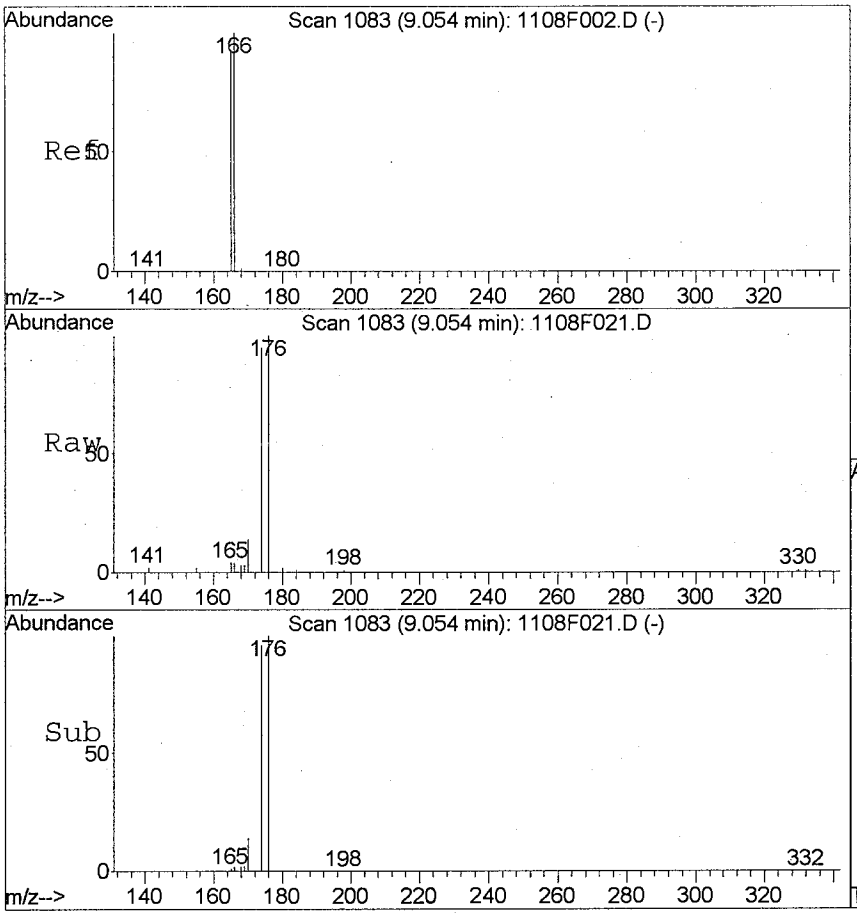


#14
Dibenzofuran
Concen: 1.02 ng/ml
RT: 8.42 min Scan# 971
Delta R.T. 0.01 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:168 Resp: 193

Ion	Ratio	Lower	Upper
168	100		
139	24.2	1.2	61.2

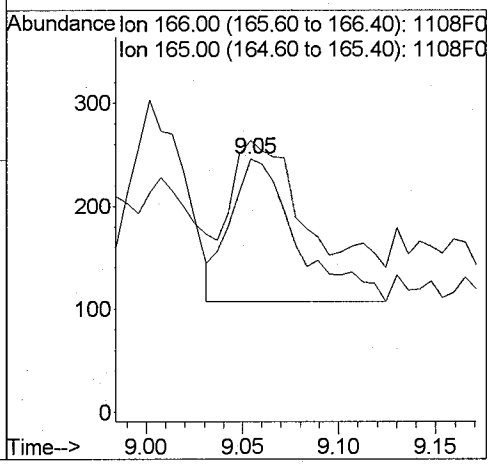


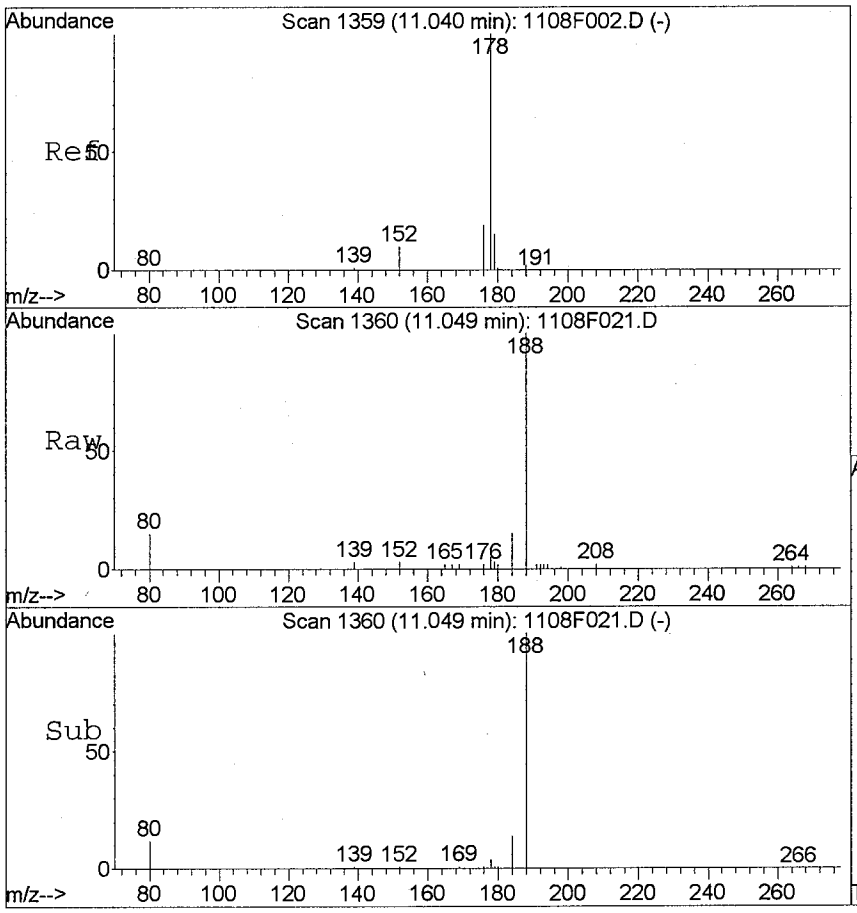


#17
Fluorene
Concen: 2.23 ng/ml
RT: 9.05 min Scan# 1083
Delta R.T. 0.00 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:166 Resp: 335

Ion	Ratio	Lower	Upper
166	100		
165	89.2	62.9	122.9

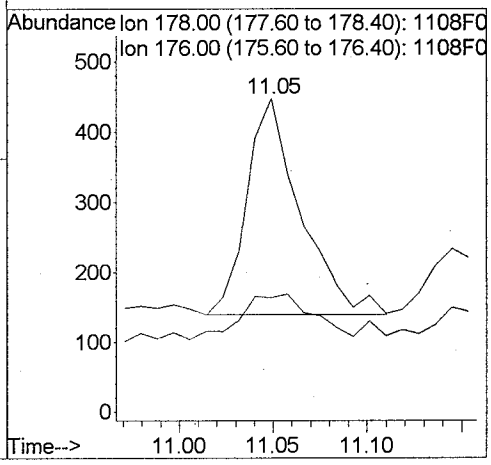


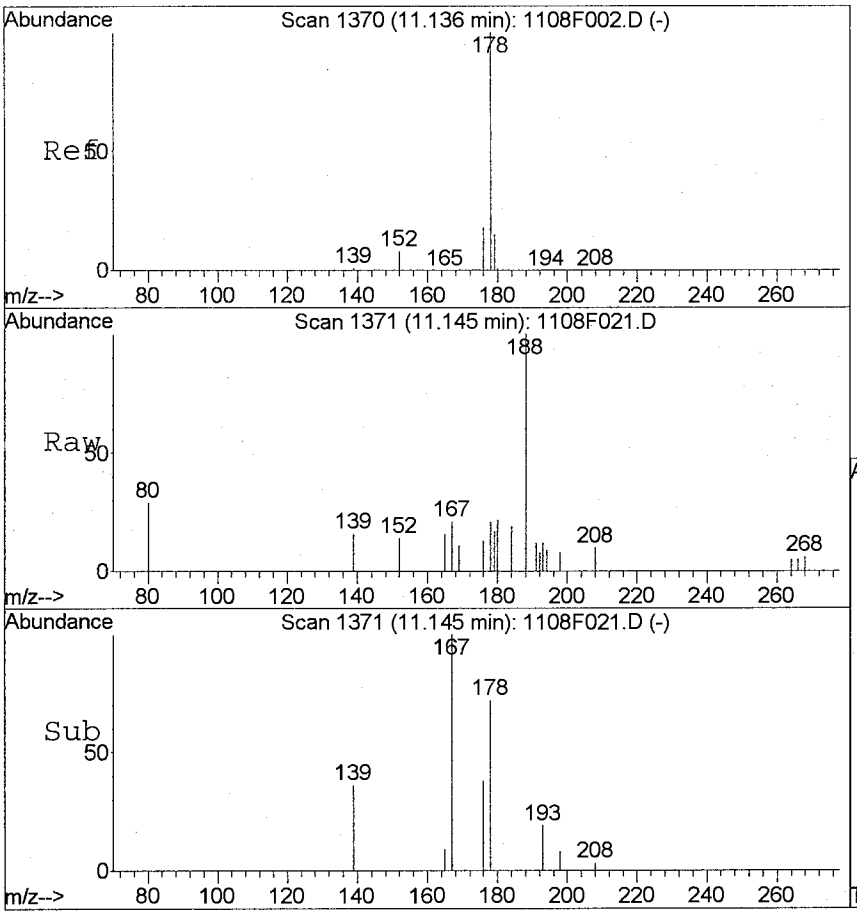


#28
Phenanthrene
Concen: 3.13 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:178 Resp: 617

Ion	Ratio	Lower	Upper
178	100		
176	17.8	0.0	48.7

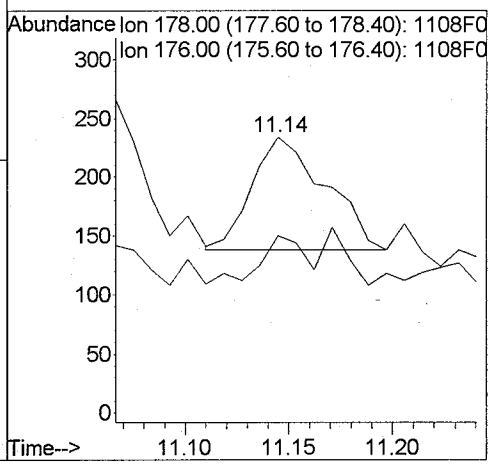


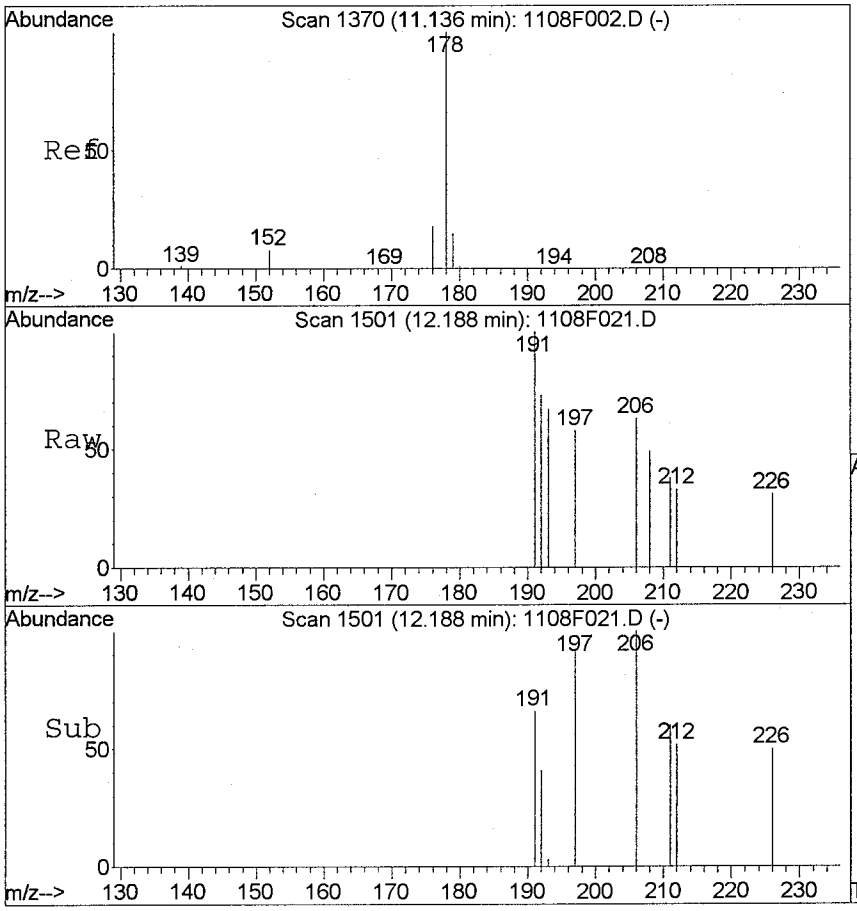


#29
Anthracene
Concen: 1.40 ng/ml
RT: 11.14 min Scan# 1371
Delta R.T. 0.01 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:178 Resp: 236

Ion	Ratio	Lower	Upper
178	100		
176	42.7	0.0	48.3

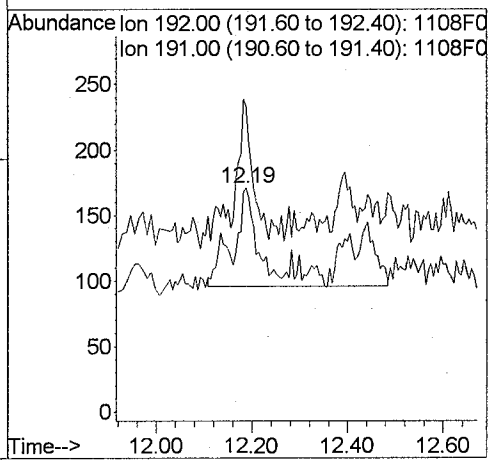


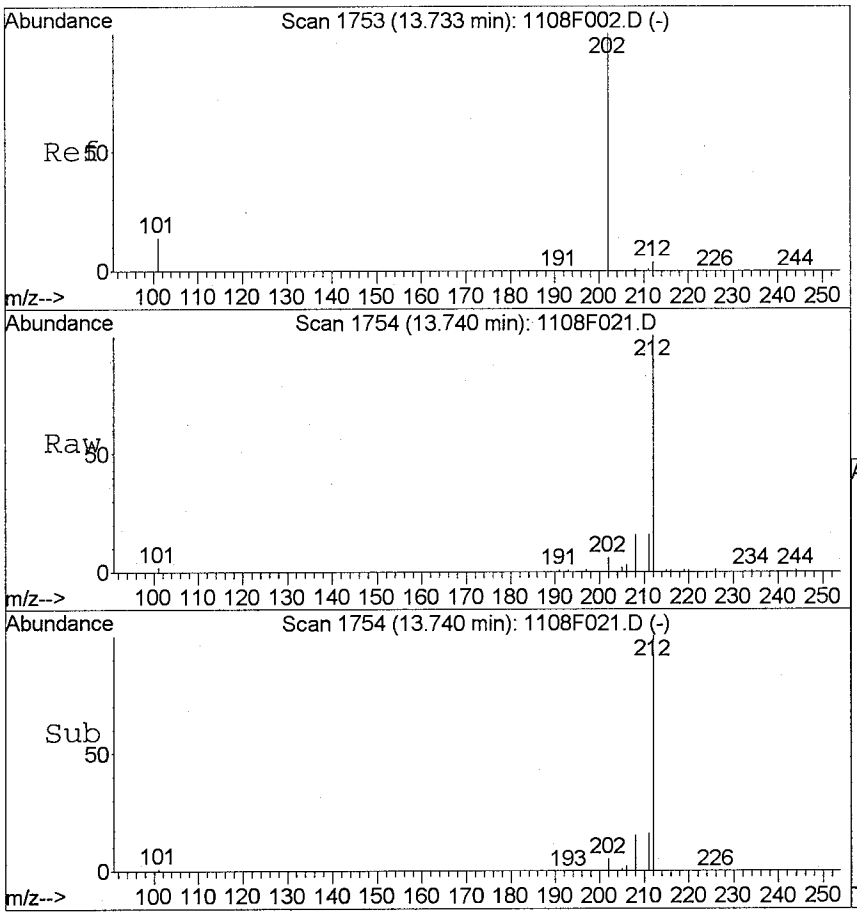


#32
C1-Phenanthrenes/Anthracenes
Concen: 2.61 ng/ml m
RT: 12.19 min Scan# 1501
Delta R.T. -0.03 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:192 Resp: 515

Ion	Ratio	Lower	Upper
192	100		
191	136.3	25.3	85.3#

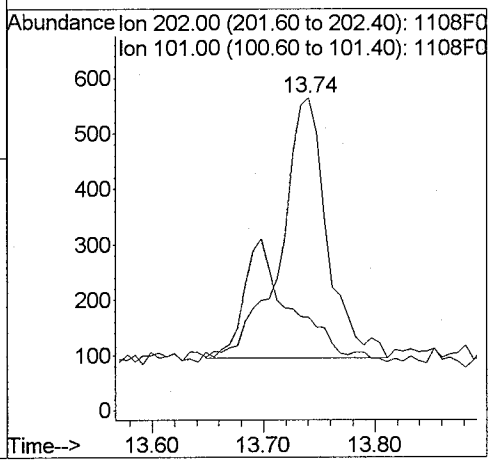


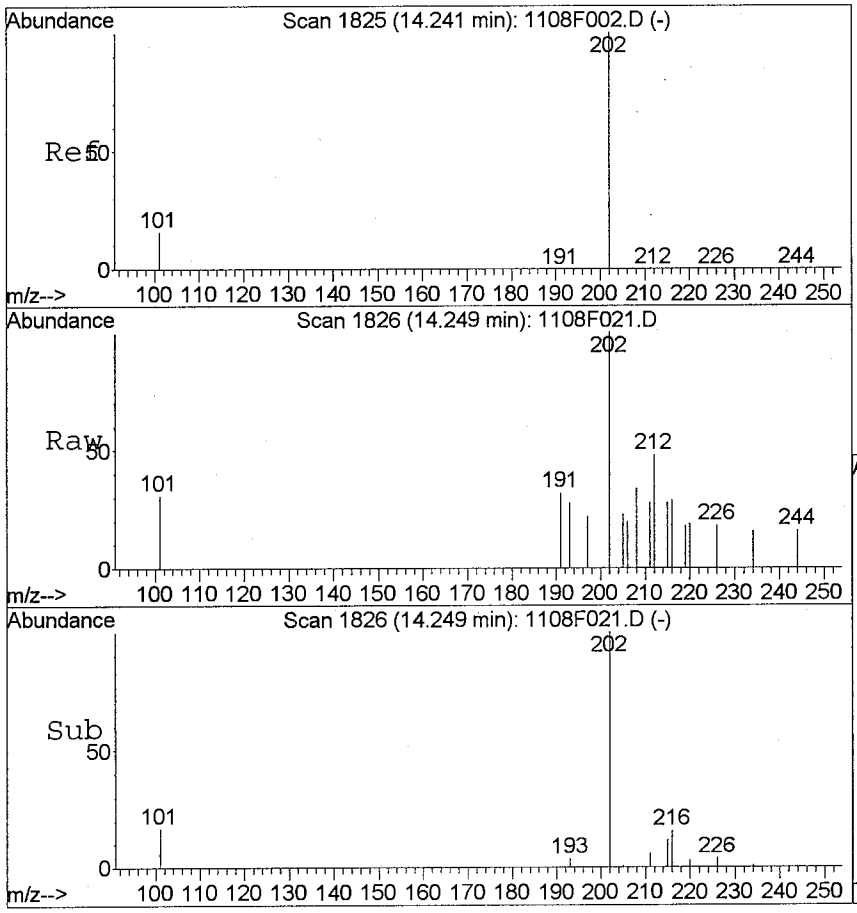


#36
Fluoranthene
Concen: 6.88 ng/ml
RT: 13.74 min Scan# 1754
Delta R.T. 0.01 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:202 Resp: 1351

Ion	Ratio	Lower	Upper
202	100		
101	17.3	0.0	44.3

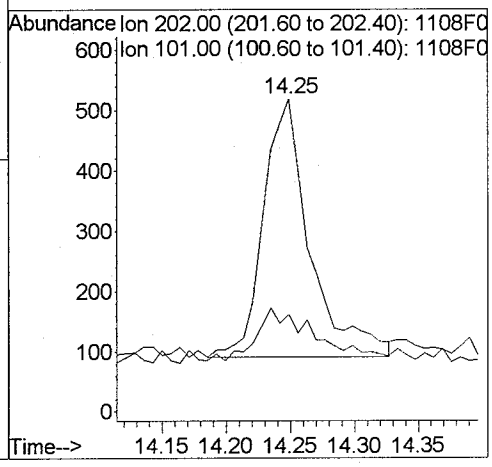


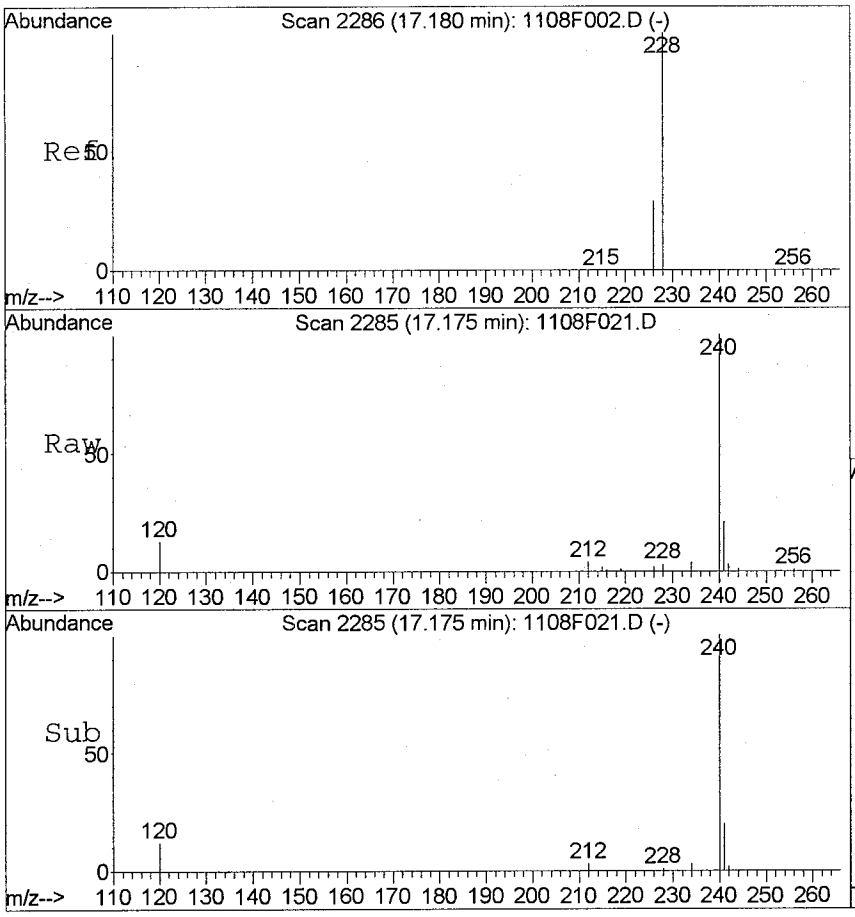


#39
Pyrene
Concen: 5.90 ng/ml
RT: 14.25 min Scan# 1826
Delta R.T. 0.01 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:202 Resp: 1073

Ion	Ratio	Lower	Upper
202	100		
101	17.8	0.0	46.2

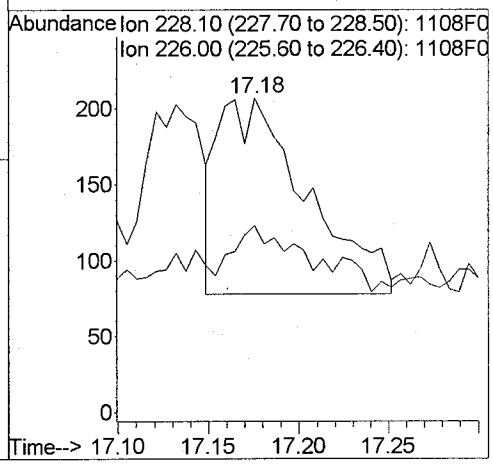




#43
Chrysene
Concen: 2.97 ng/ml m
RT: 17.18 min Scan# 2285
Delta R.T. -0.00 min
Lab File: 1108F021.D
Acq: 8 Nov 2003 5:57 pm

Tgt Ion:228 Resp: 440

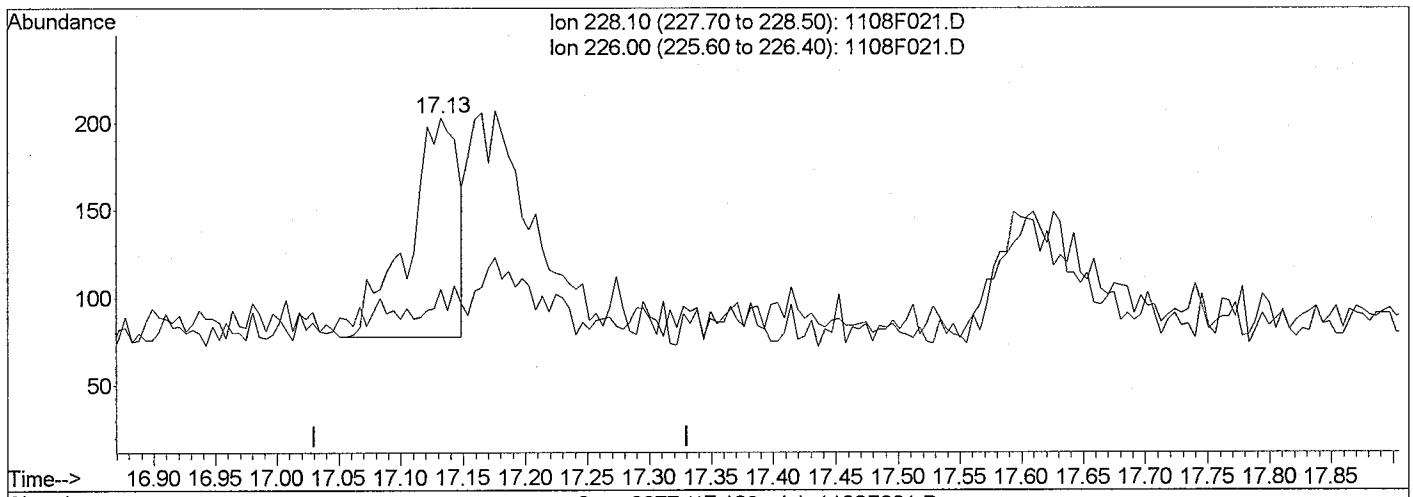
Ion	Ratio	Lower	Upper
228	100		
226	59.4	0.0	58.5#

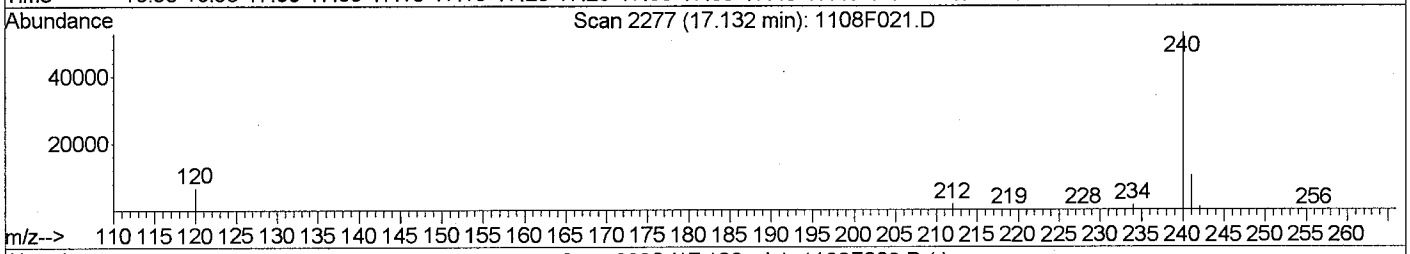


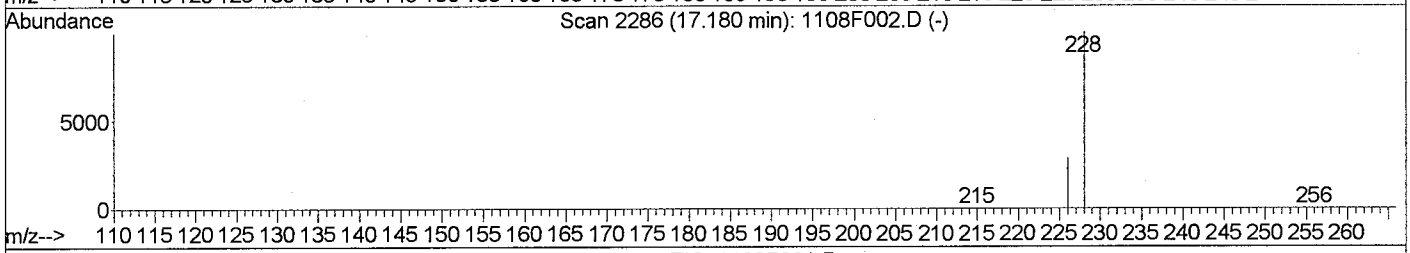
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F021.D Vial: 18
Acq On : 8 Nov 2003 5:57 pm Operator: LWeiskopf
Sample : K2308419-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F021.D

(43) Chrysene (T)

17.13min 2.33ng/ml

response 345

Ion	Exp%	Act%
228.10	100	100
226.00	28.50	13.60
0.00	0.00	0.00
0.00	0.00	0.00

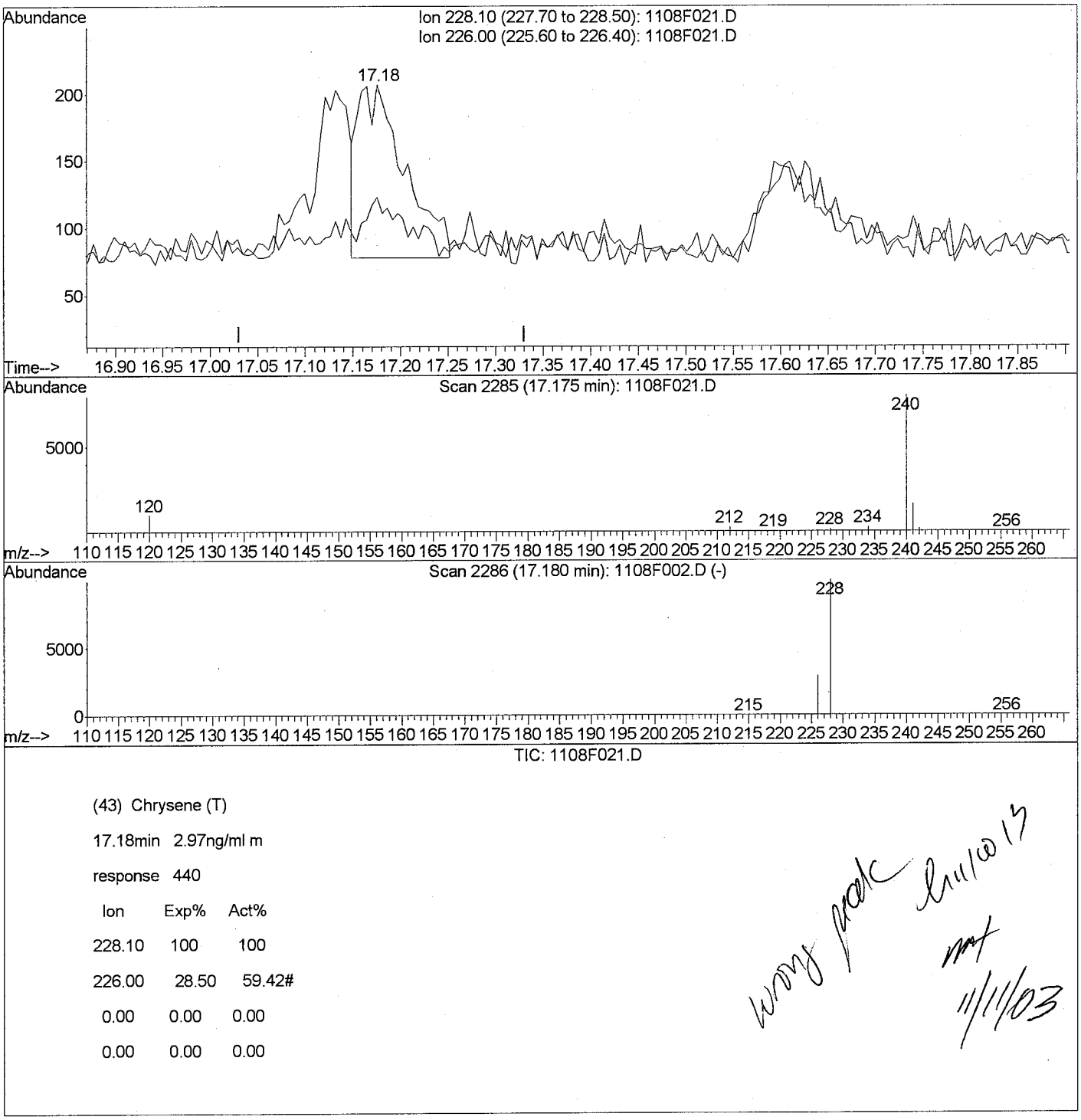
1108F021.D 1107ALK.M Mon Nov 10 16:45:03 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F021.D
Acq On : 8 Nov 2003 5:57 pm
Sample : K2308419-009
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:42 2003

Vial: 18
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



(43) Chrysene (T)

17.18min 2.97ng/ml m

response 440

Ion	Exp%	Act%
228.10	100	100
226.00	28.50	59.42#
0.00	0.00	0.00
0.00	0.00	0.00

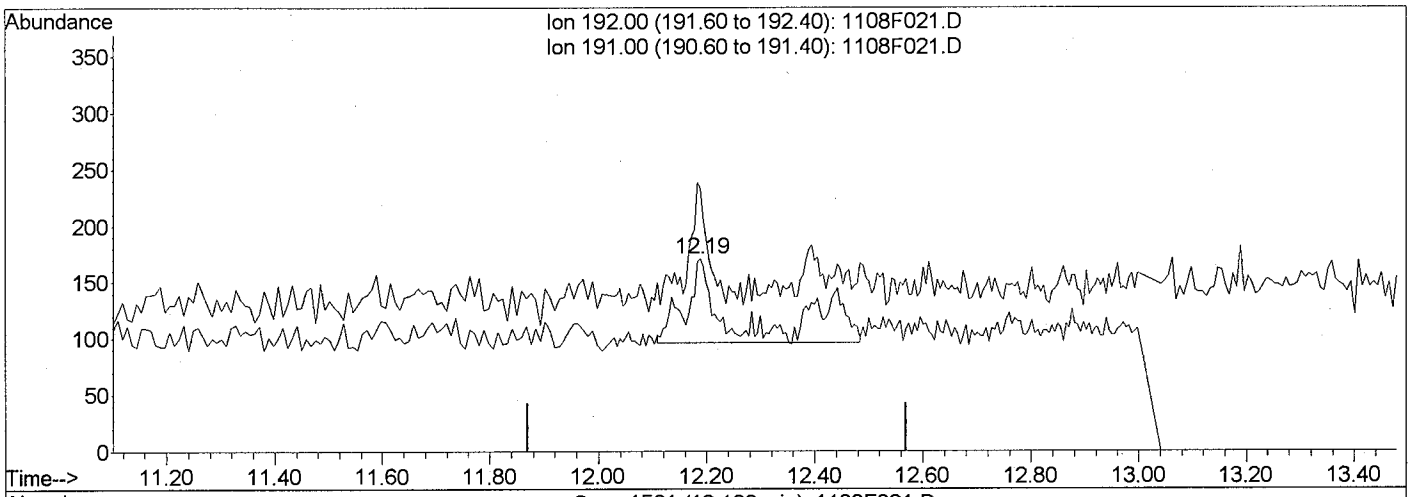
wrong peak 11/10/03 mt 11/11/03

1108F021.D 1107ALK.M Mon Nov 10 16:45:08 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F021.D Vial: 18
Acq On : 8 Nov 2003 5:57 pm Operator: LWeiskopf
Sample : K2308419-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:08 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F021.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 2.61ng/ml m

response 515

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	136.26#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

mrt 11/11/03

1108F021.D 1107ALK.M Mon Nov 10 17:10:56 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-8
Lab Code: K2308419-010

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Phenanthrene	**0.064**		0.020	1	10/29/03	11/10/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Fluoranthene	**0.20**		0.020	1	10/29/03	11/10/03	KWG0317378	
Pyrene	**0.16**		0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	**0.058**		0.020	1	10/29/03	11/10/03	KWG0317378	
Benz(a)anthracene	**0.070**		0.020	1	10/29/03	11/10/03	KWG0317378	
Chrysene	**0.11**		0.020	1	10/29/03	11/10/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(b)fluoranthene	**0.083**		0.020	1	10/29/03	11/10/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/23/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-8
Lab Code: K2308419-010

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**0.10**		0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(e)pyrene	**0.073**		0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(a)pyrene	**0.068**		0.020	1	10/29/03	11/10/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**0.072**		0.020	1	10/29/03	11/10/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/10/03	KWG0317378	
Benzo(g,h,i)perylene	**0.056**		0.020	1	10/29/03	11/10/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	11/10/03	Acceptable
Fluoranthene-d10	91	18-137	11/10/03	Acceptable
Terphenyl-d14	109	18-153	11/10/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111003\1110F006.D
Lab ID: K2308419-010
RunType: SMPL
Matrix: WATER

Date Acquired: 11/10/2003 17:25
Date Quantitated: 11/11/2003 13:43
Batch ID: KWG0318161
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/12/03

Secondary Review: 11/12/3

Printed: 11/11/2003 13:58:22
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/25/2003

Analysis Lot:	KWG0318161	**Prep Lot:**	KWG0317378	**Report Group:**	K2308419
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245666	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ2506
Tune Ref:	J:\MS11\DATA\111003\1110F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111003\1110F006.D			**Instrument:**	MS11
Acqu Date:	11/10/2003 17:25	**Quant Date:**	11/11/2003 13:43	**Vial:**	4
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-010			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	240409	1,000.00	OK
2	Acenaphthene-d10	8.06	0.01	164	124272	1,000.00	OK
3	Phenanthrene-d10	11.00	0.00	188	174885	1,000.00	OK
4	Chrysene-d12	17.13	0.01	240	159026	1,000.00	OK
5	Perylene-d12	21.51	0.00	264	90019	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	9.00	0.00	0.00	176	175451	1,412	71	37-107	OK	
3	Fluoranthene-d10	13.70	0.01	0.00	212	318431	1,819	91	18-137	OK	
4	Terphenyl-d14	14.73	0.00	0.00	244	314713	2,171	109	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1896	6.97	0.0068	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	482	3.00	0.0029	J	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	403	2.68	0.0026	J	
1	Biphenyl	7.09		0.00	154	773	3.97	0.0039	J	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	855	3.57	0.0035	J	
2	Acenaphthene	8.12	0.01	0.00	154	764	5.18	0.0050	J	
2	Dibenzofuran	8.41	0.01	0.00	168	588	2.97	0.0071	U	
2	Fluorene	9.06	0.01	0.00	166	714	4.52	0.0044	J	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111003\1110F006.D			**Instrument:**	MS11
Acqu Date:	11/10/2003 17:25	**Quant Date:**	11/11/2003 13:43	**Vial:**	4
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308419-010			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		0.020	U	
3	Dibenzothiophene	10.78		0.00	184	825	4.09	0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	14025	66.17	0.064		
3	Anthracene	11.14		0.00	178	2034	11.23	0.011	J	
3	C1-Phenanthrenes/Anthracenes	12.19	?	N	192	4338**m**	20.47	0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.73		0.00	202	43515	206.25	0.20		
4	Pyrene	14.24		0.00	202	33882	163.00	0.16		
4	C1-Fluoranthenes/Pyrenes	15.08	?	?	216	12359**m**	59.46	0.058		
4	Benz(a)anthracene	17.09		0.00	228	11463	72.43	0.070		
4	Chrysene	17.18		0.00	228	19081	112.75	0.11		
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.11	0.01	0.00	252	10253	85.31	0.083		
5	Benzo(k)fluoranthene	20.17		0.00	252	16260**m**	106.63	0.10		
5	Benzo(e)pyrene	21.09	0.01	0.00	252	10202	75.61	0.073		
5	Benzo(a)pyrene	21.28	0.01	0.00	252	7187	70.31	0.068		
5	Perylene	21.60		0.00	252	2220	19.35	0.019	J	
5	Indeno(1,2,3-cd)pyrene	24.09	0.01	0.00	276	4600	74.02	0.072		
5	Dibenz(a,h)anthracene	24.13	-0.01	0.00	278	720**m**	8.06	0.0078	J	
5	Benzo(g,h,i)perylene	24.55		0.00	276	5905	57.32	0.056		

Prep Amount: 1030 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 18:03:02 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	240409	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	124272	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	174885	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	159026	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	90019	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	249527	1416.88	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 141.69%			
16) Fluorene-d10	9.00	176	175451	1411.65	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 141.17%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	318431	1819.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 181.92%			
41) Terphenyl-d14	14.73	244	314713	2171.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 217.14%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1896	6.97	ng/ml	96
3) 2-Methylnaphthalene	6.42	142	482	3.00	ng/ml	97
4) 1-Methylnaphthalene	6.57	142	403	2.68	ng/ml	87
6) Biphenyl	7.09	154	773	3.97	ng/ml	89
12) Acenaphthylene	7.80	152	855	3.57	ng/ml	96
13) Acenaphthene	8.12	154	764	5.18	ng/ml	94
14) Dibenzofuran	8.41	168	588	2.97	ng/ml	99
17) Fluorene	9.06	166	714	4.52	ng/ml	79
24) Dibenzothiophene	10.78	184	825	4.09	ng/ml	100
28) Phenanthrene	11.05	178	14025	66.17	ng/ml	100
29) Anthracene	11.14	178	2034	11.23	ng/ml	100
30) Carbazole	11.58	167	2311	16.15	ng/ml	94
31) 1-Methylphenanthrene	12.44	192	609	4.23	ng/ml	97
32) C1-Phenanthrenes/Anthracen	12.19	192	4338m	20.47	ng/ml	
36) Fluoranthene	13.73	202	43515	206.25	ng/ml	99
39) Pyrene	14.24	202	33882	163.00	ng/ml	99
40) C1-Fluoranthenes/Pyrenes	15.08	216	12359m	59.46	ng/ml	
42) Benz(a)anthracene	17.09	228	11463	72.43	ng/ml	92
43) Chrysene	17.18	228	19081	112.75	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	10253	85.31	ng/ml	94
50) Benzo(k)fluoranthene	20.17	252	16260m	106.63	ng/ml	
51) Benzo(e)pyrene	21.09	252	10202	75.61	ng/ml	93
52) Benzo(a)pyrene	21.28	252	7187	70.31	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 18:03:02 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

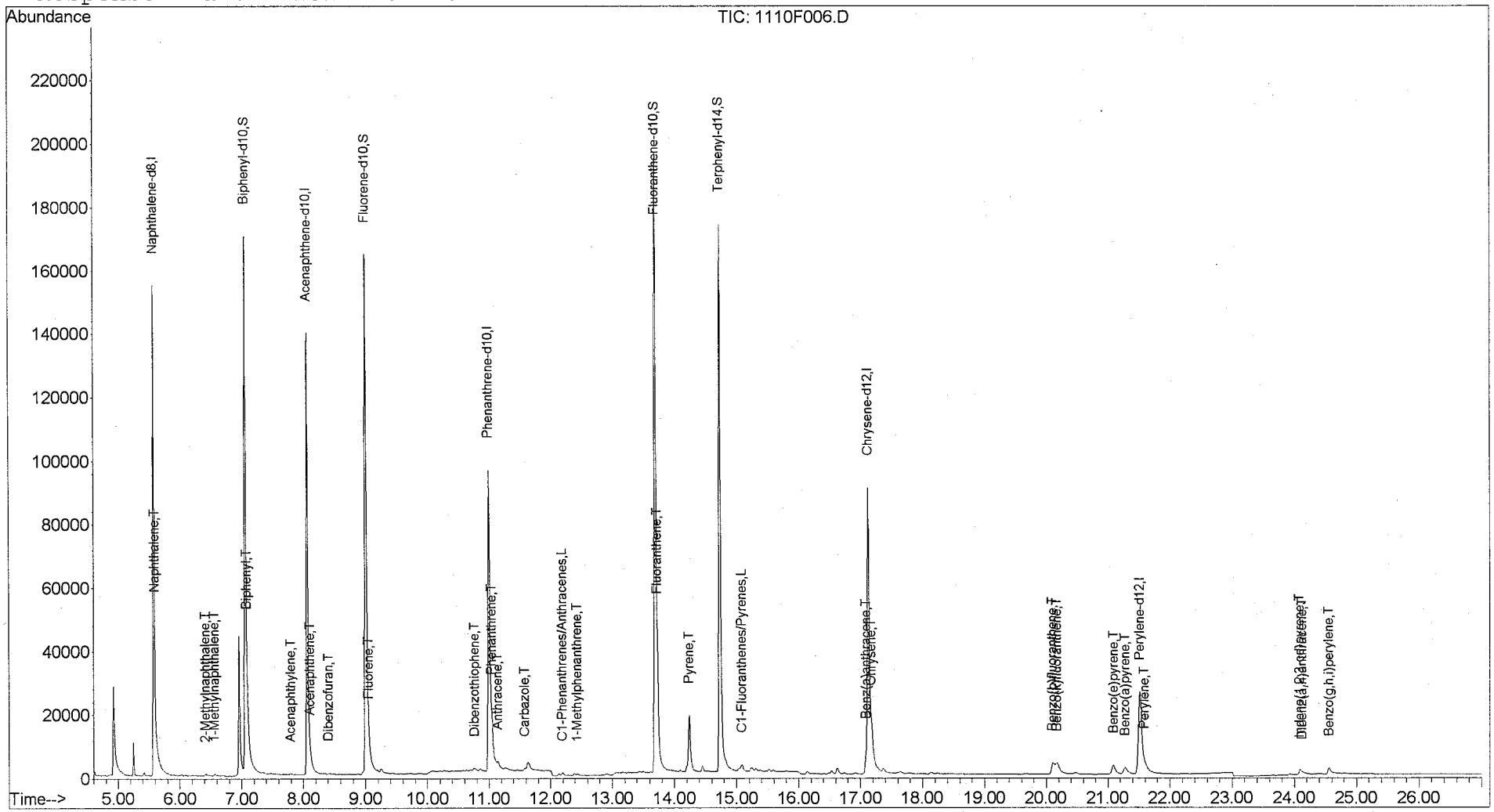
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.60	252	2220	19.35	ng/ml	93
54)	Indeno(1,2,3-cd)pyrene	24.09	276	4600	74.02	ng/ml	85
55)	Dibenz(a,h)anthracene	24.13	278	720m	8.06	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	5905	57.32	ng/ml	100

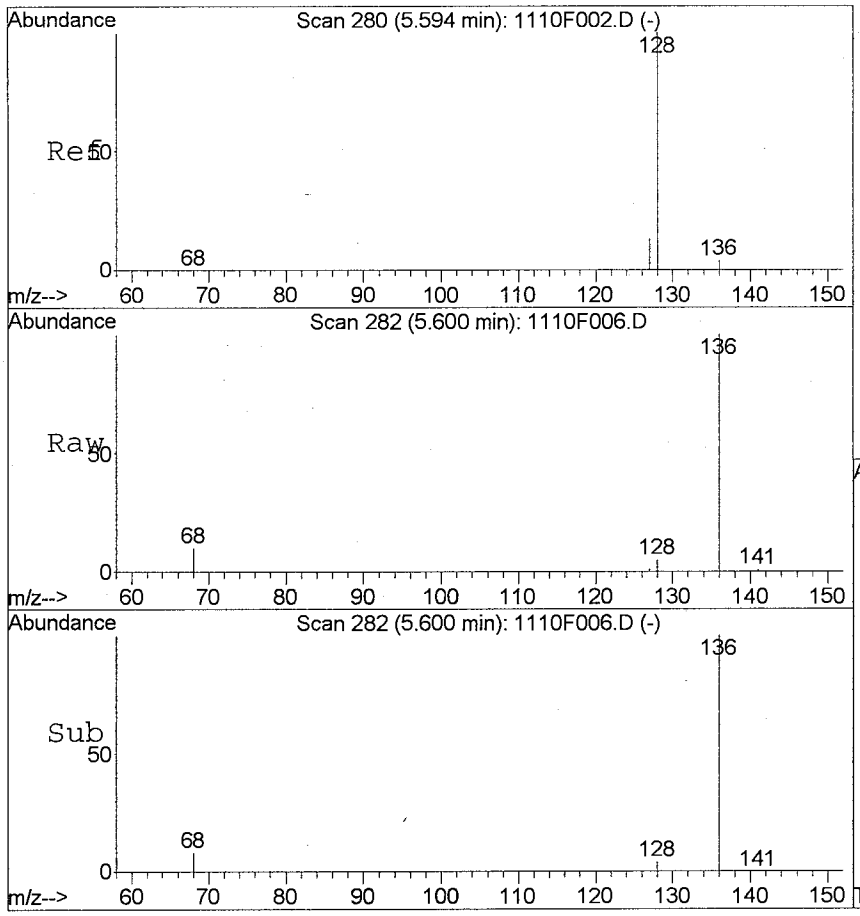
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:43 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Initial Calibration

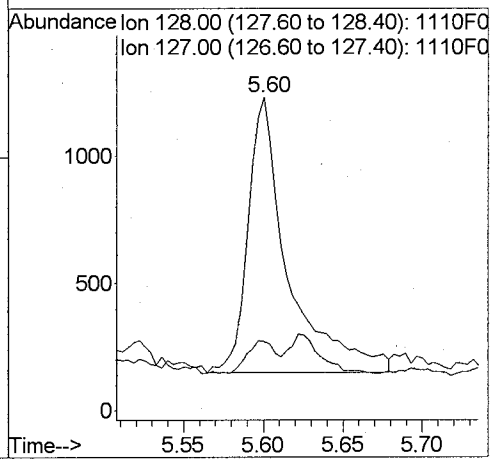


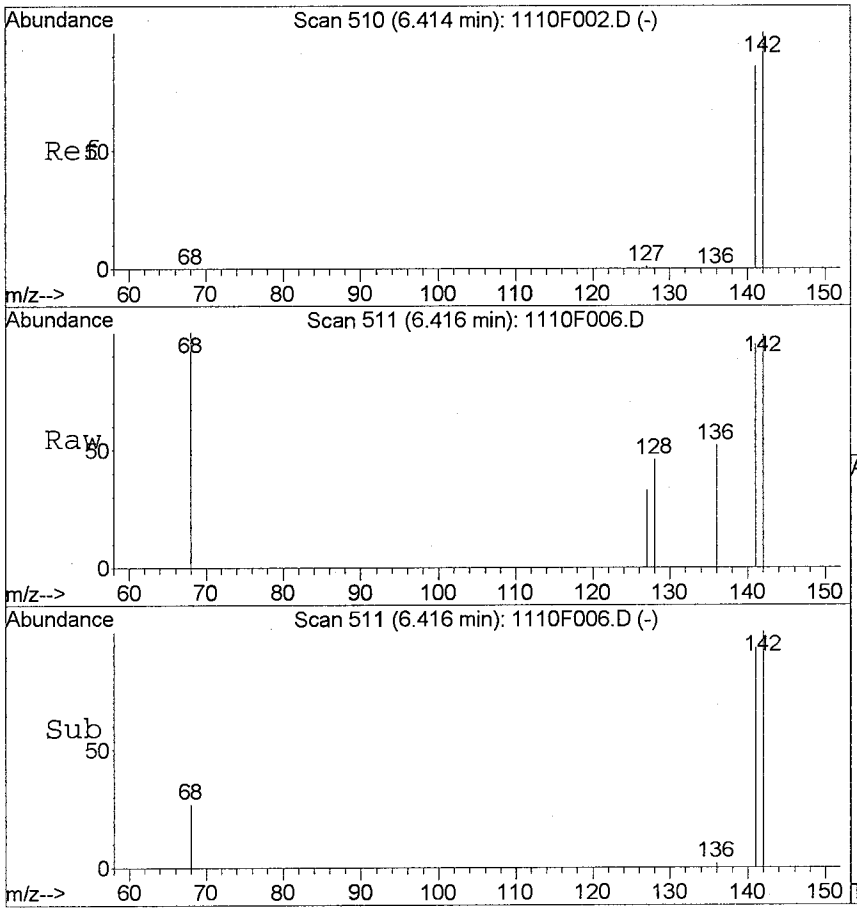


#2
Naphthalene
Concen: 6.97 ng/ml
RT: 5.60 min Scan# 282
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:128 Resp: 1896

Ion	Ratio	Lower	Upper
128	100		
127	11.6	0.0	43.3

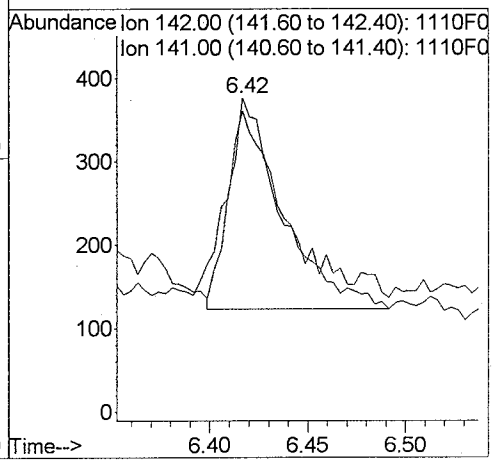


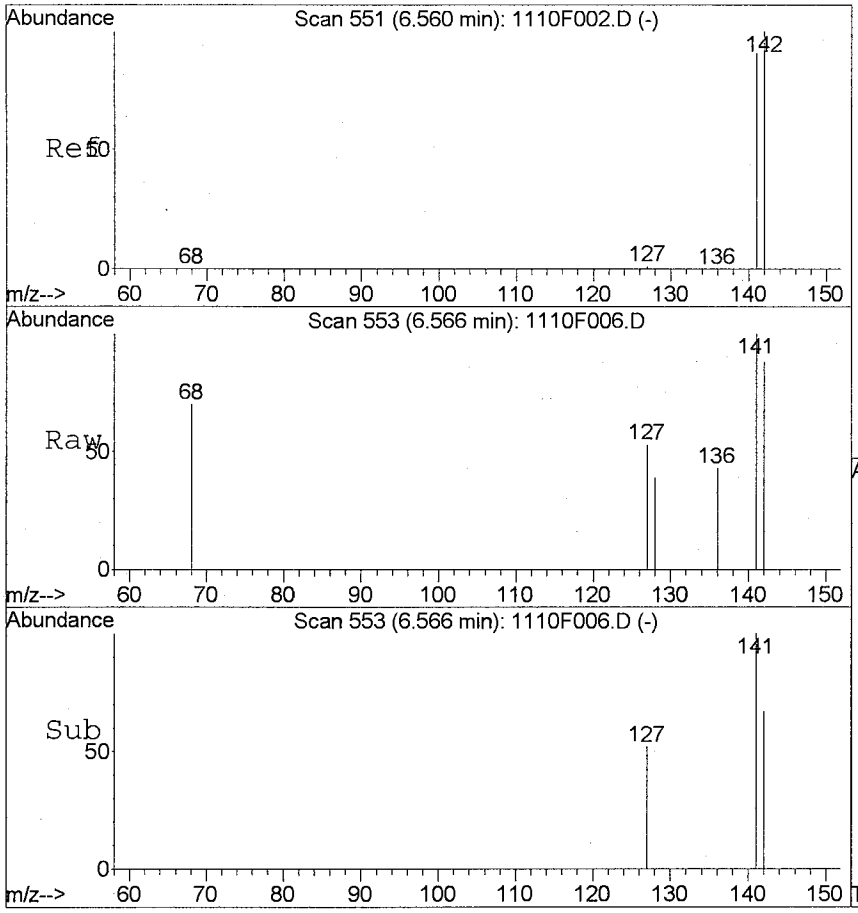


#3
2-Methylnaphthalene
Concen: 3.00 ng/ml
RT: 6.42 min Scan# 511
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:142 Resp: 482

Ion	Ratio	Lower	Upper
142	100		
141	88.2	55.7	115.7

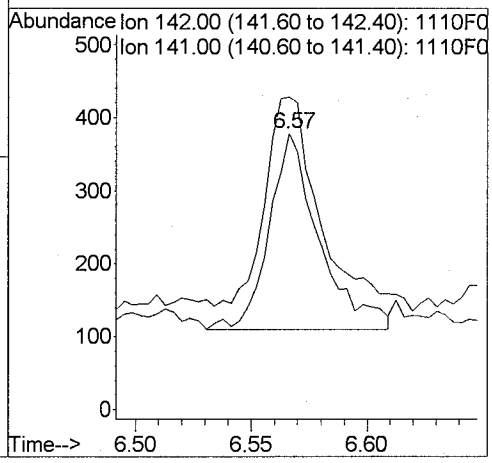


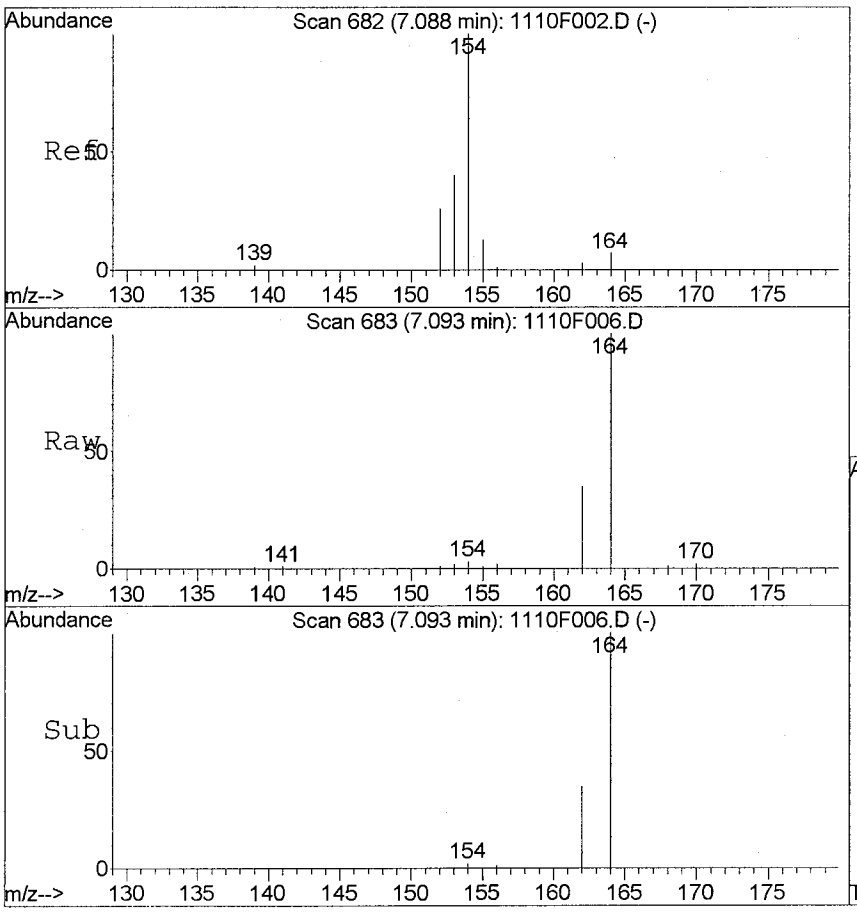


#4
1-Methylnaphthalene
Concen: 2.68 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:142 Resp: 403

Ion	Ratio	Lower	Upper
142	100		
141	103.4	60.8	120.8

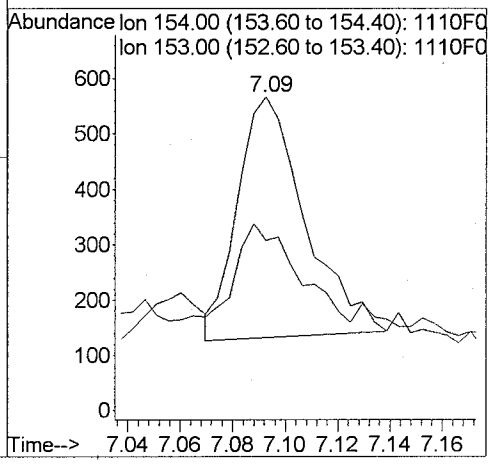


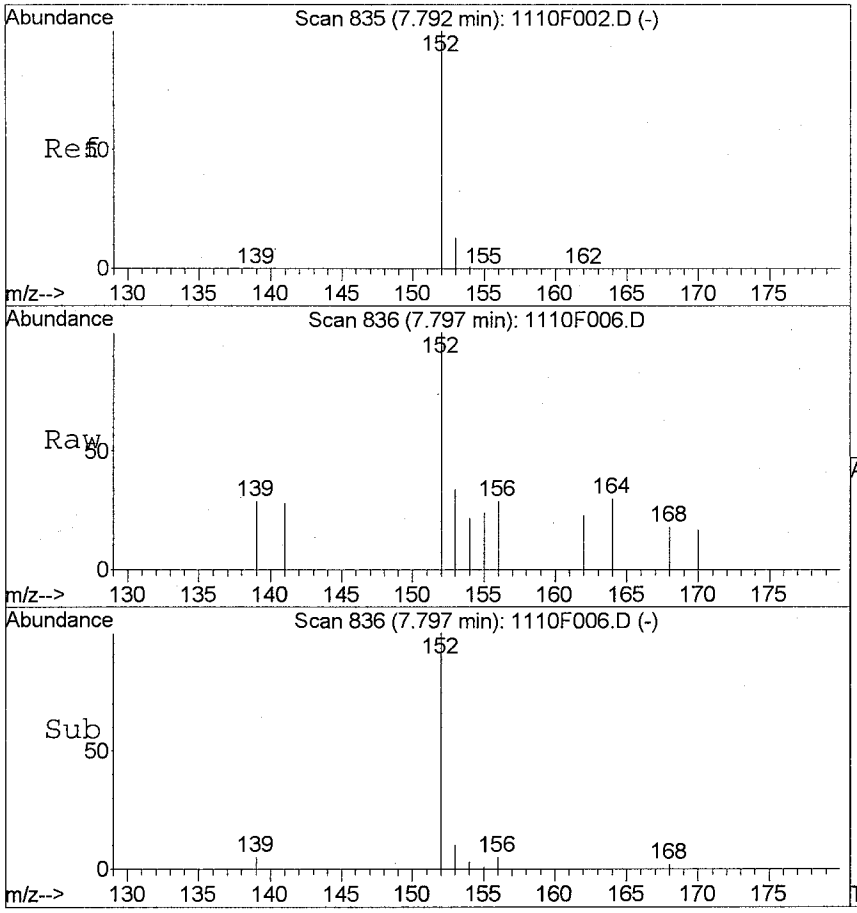


#6
Biphenyl
Concen: 3.97 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:154 Resp: 773

Ion	Ratio	Lower	Upper
154	100		
153	33.6	10.4	70.4

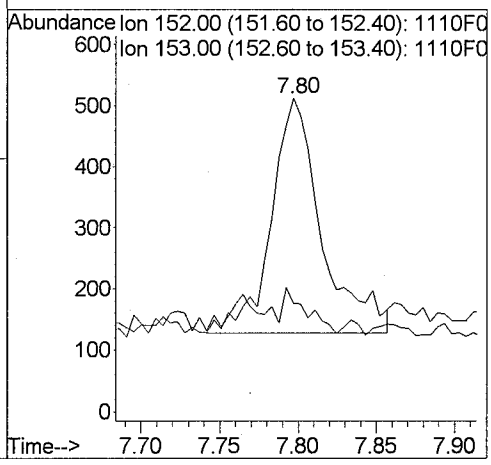


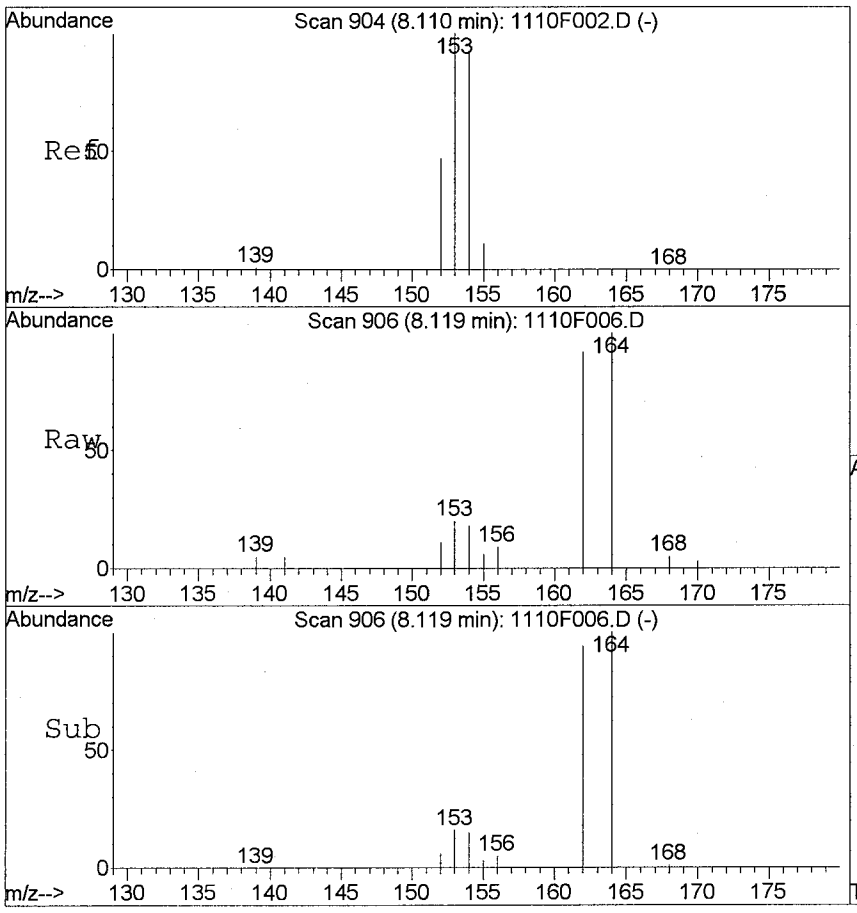


#12
Acenaphthylene
Concen: 3.57 ng/ml
RT: 7.80 min Scan# 836
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:152 Resp: 855

Ion	Ratio	Lower	Upper
152	100		
153	11.7	0.0	43.2

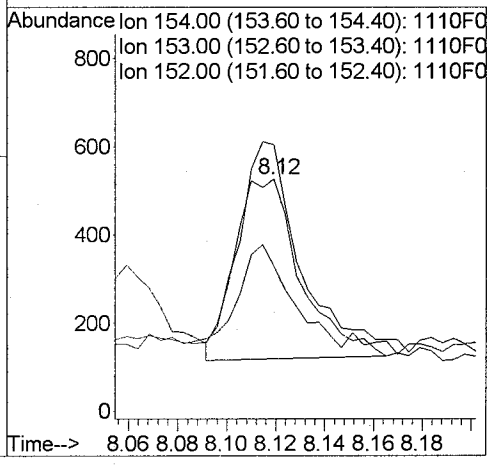


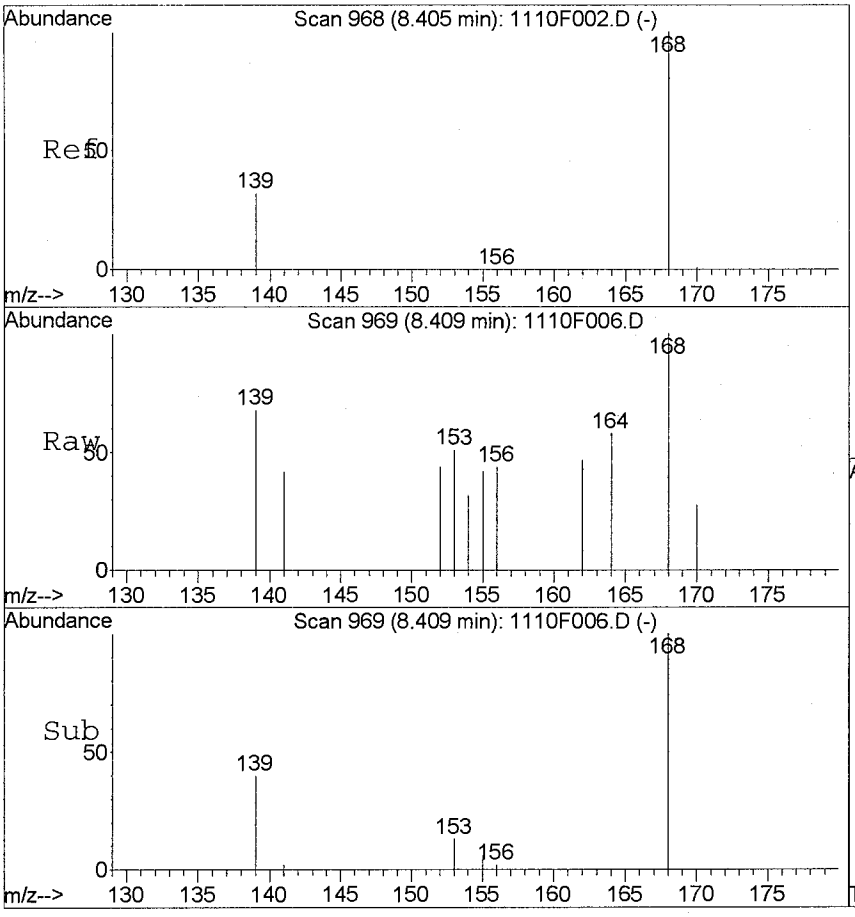


#13
Acenaphthene
Concen: 5.18 ng/ml
RT: 8.12 min Scan# 906
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:154 Resp: 764

Ion	Ratio	Lower	Upper
154	100		
153	111.4	78.3	138.3
152	42.3	20.9	80.9

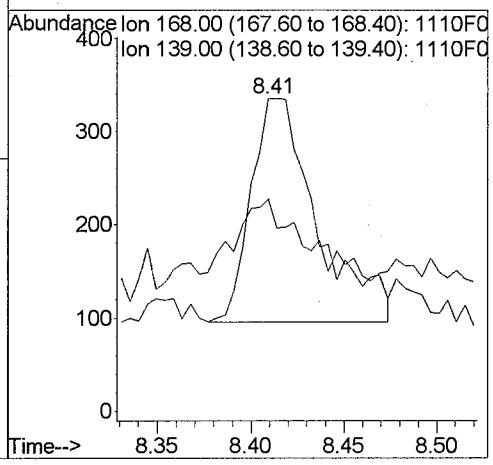


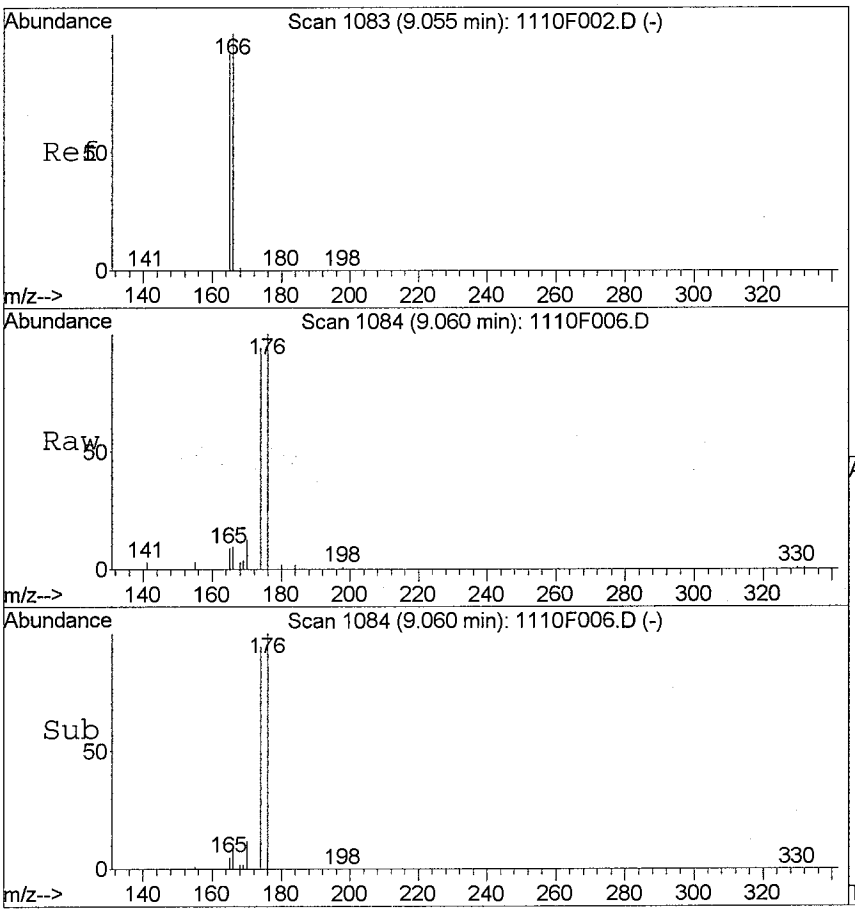


#14
Dibenzofuran
Concen: 2.97 ng/ml
RT: 8.41 min Scan# 969
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:168 Resp: 588

Ion	Ratio	Lower	Upper
168	100		
139	32.6	2.0	62.0

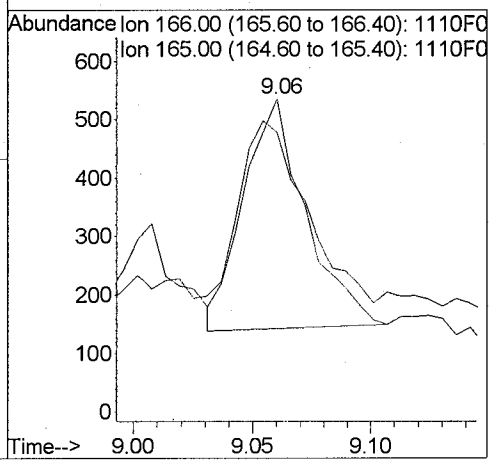


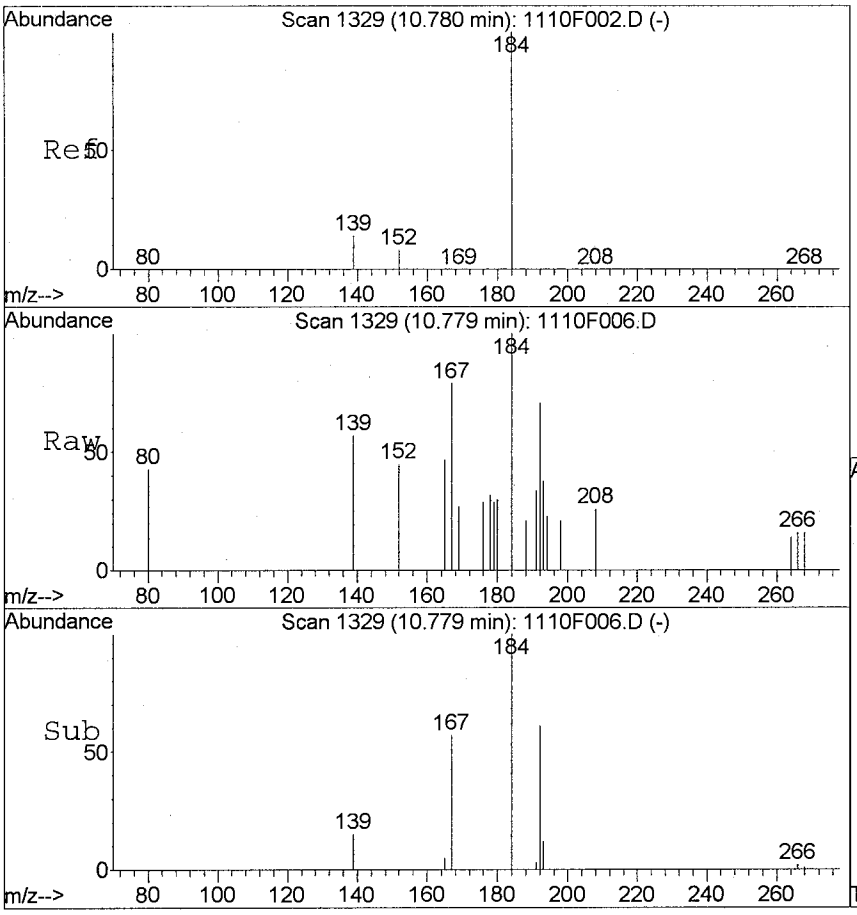


#17
Fluorene
Concen: 4.52 ng/ml
RT: 9.06 min Scan# 1084
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:166 Resp: 714

Ion	Ratio	Lower	Upper
166	100		
165	72.3	62.3	122.3

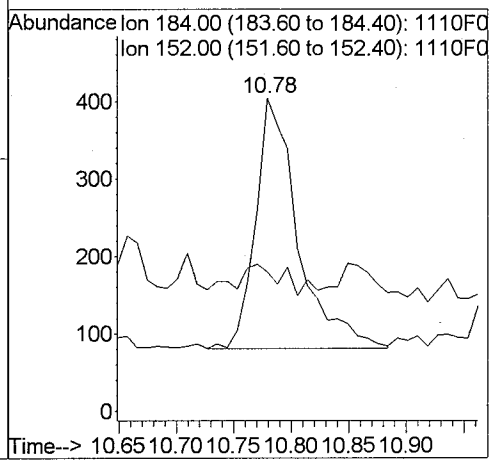


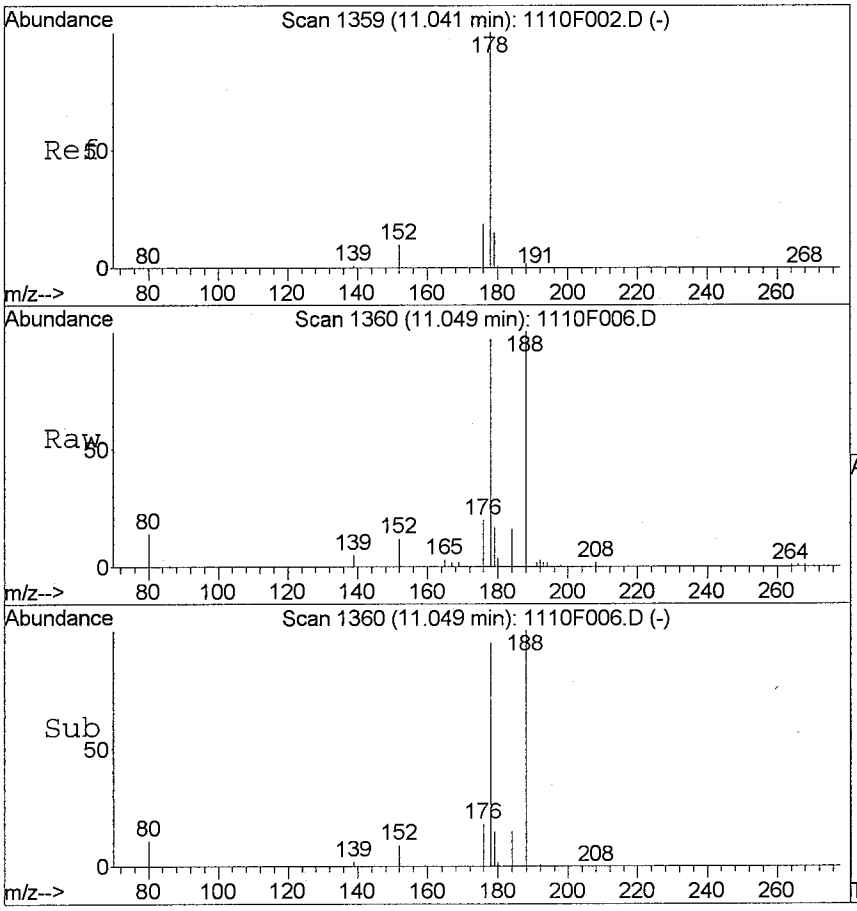


#24
Dibenzothiophene
Concen: 4.09 ng/ml
RT: 10.78 min Scan# 1329
Delta R.T. -0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:184 Resp: 825

Ion	Ratio	Lower	Upper
184	100		
152	8.4	0.0	38.3

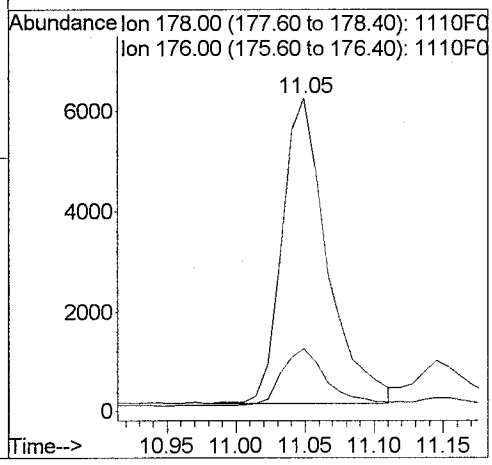


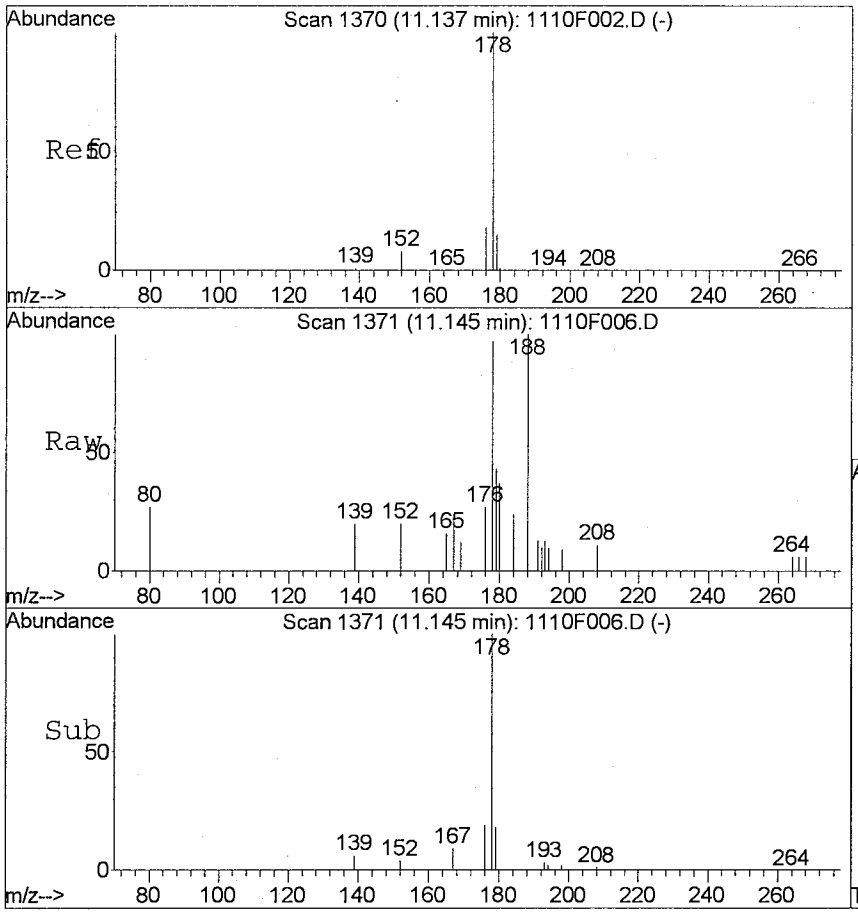


#28
Phenanthrene
Concen: 66.17 ng/ml
RT: 11.05 min Scan# 1360
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:178 Resp: 14025

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	48.6

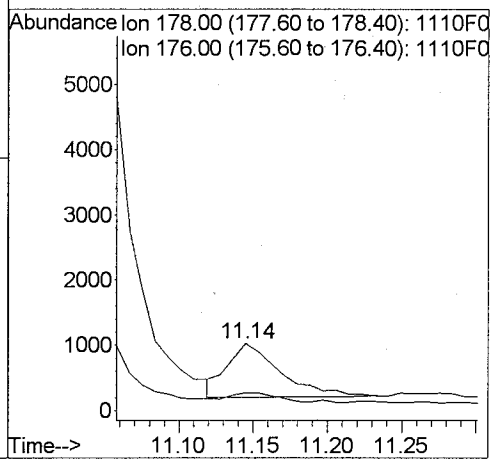


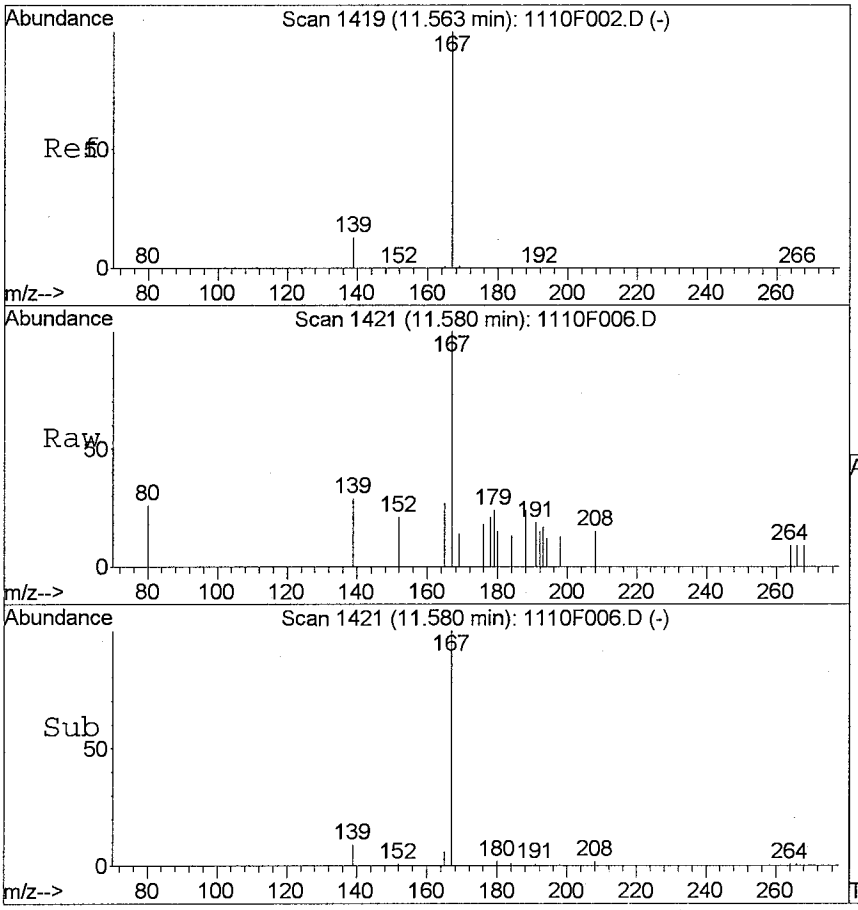


#29
Anthracene
Concen: 11.23 ng/ml
RT: 11.14 min Scan# 1371
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:178 Resp: 2034

Ion	Ratio	Lower	Upper
178	100		
176	18.3	0.0	48.1

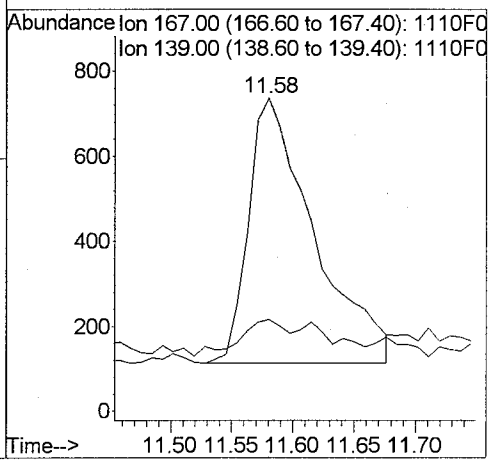


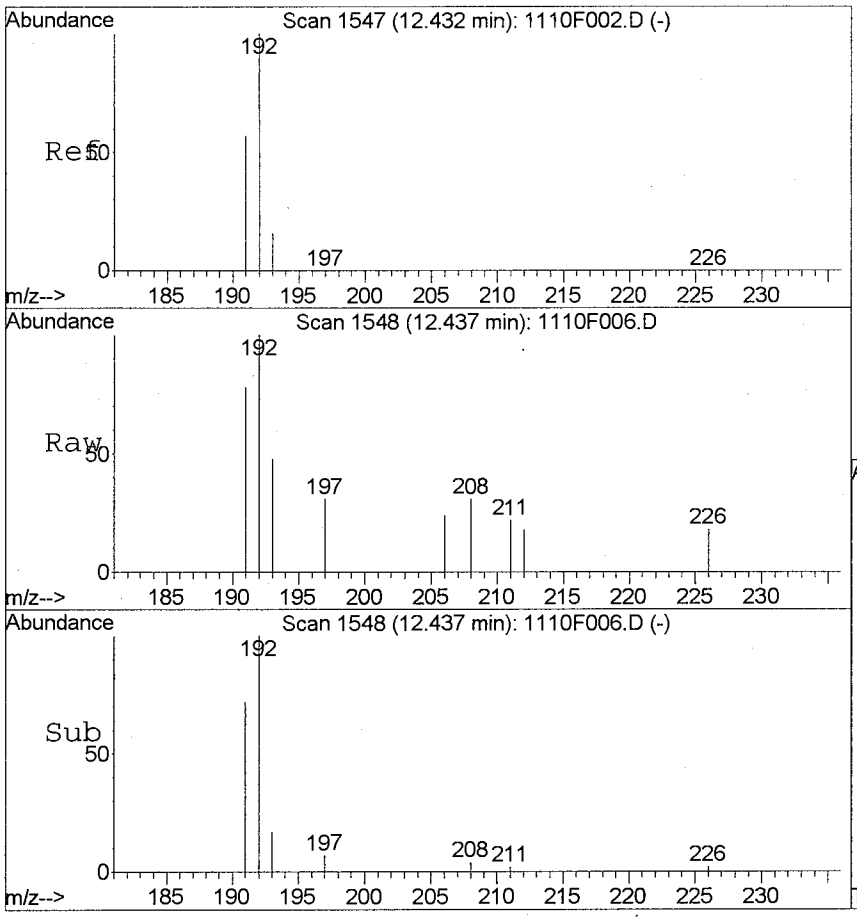


#30
Carbazole
Concen: 16.15 ng/ml
RT: 11.58 min Scan# 1421
Delta R.T. 0.02 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:167 Resp: 2311

Ion	Ratio	Lower	Upper
167	100		
139	10.3	0.0	42.8

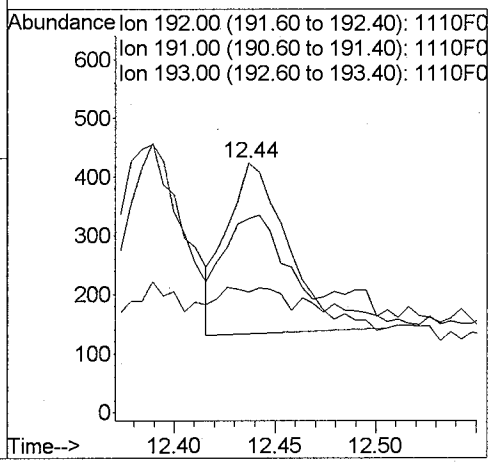


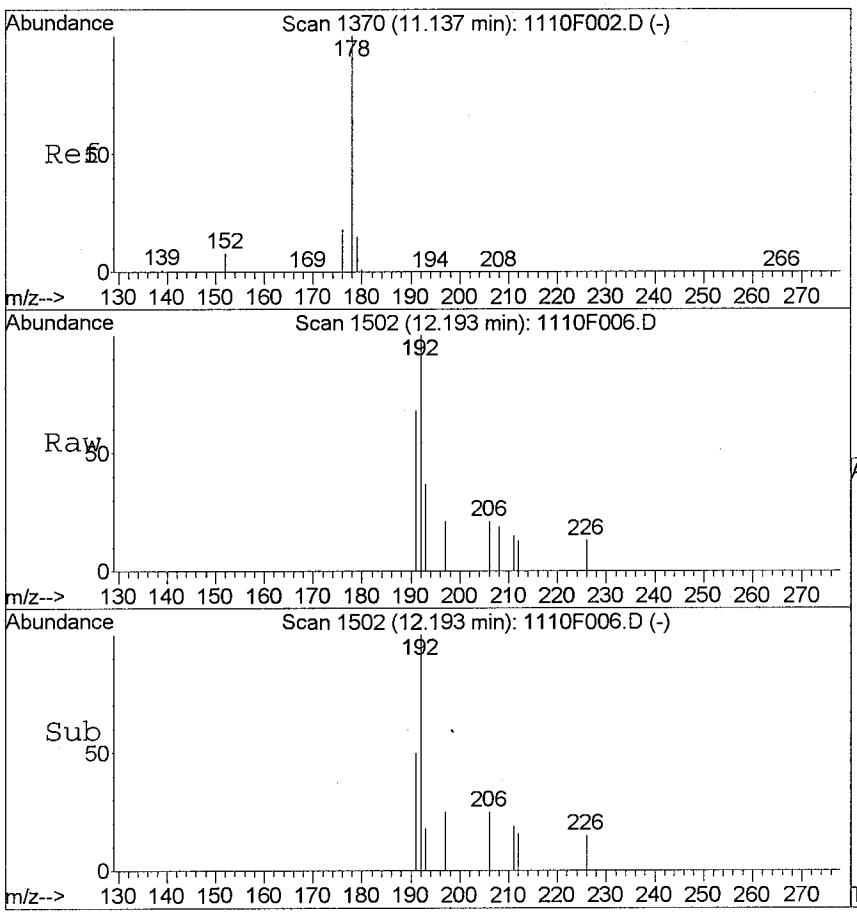


#31
1-Methylphenanthrene
Concen: 4.23 ng/ml
RT: 12.44 min Scan# 1548
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:192 Resp: 609

Ion	Ratio	Lower	Upper
192	100		
191	55.2	26.6	86.6
193	17.8	0.0	45.8

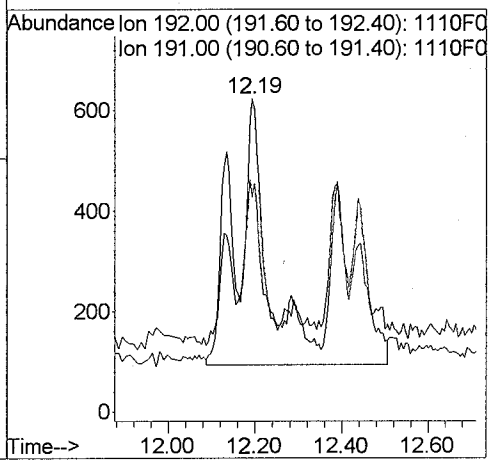


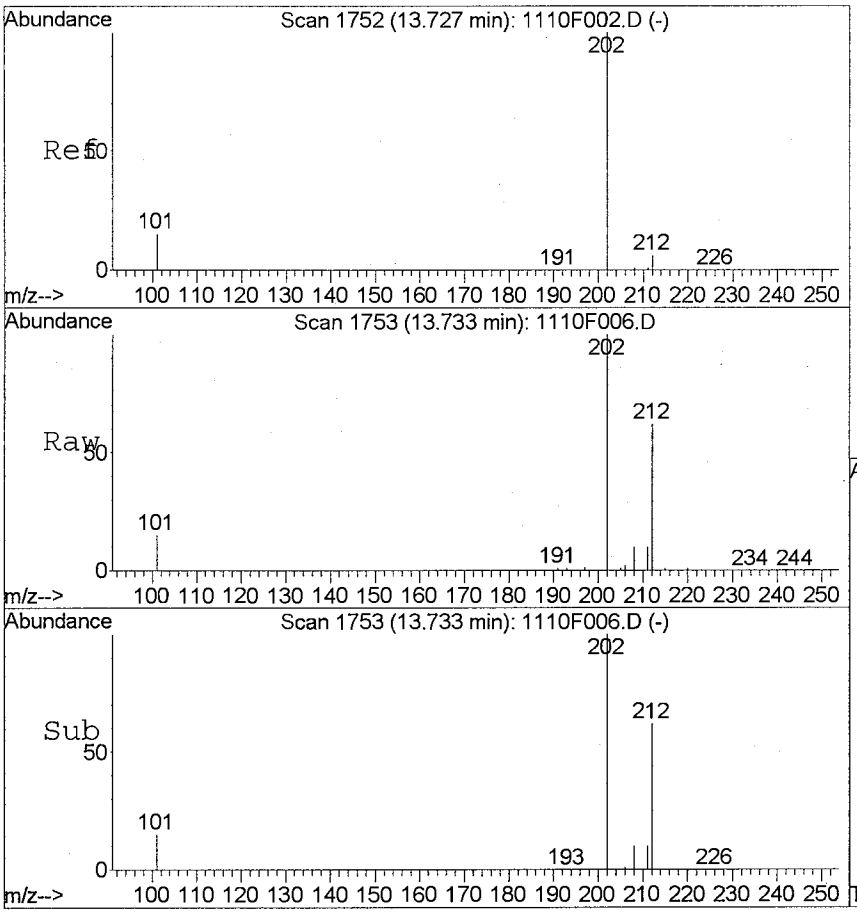


#32
C1-Phenanthrenes/Anthracenes
Concen: 20.47 ng/ml m
RT: 12.19 min Scan# 1502
Delta R.T. -0.03 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:192 Resp: 4338

Ion	Ratio	Lower	Upper
192	100		
191	68.4	25.3	85.3

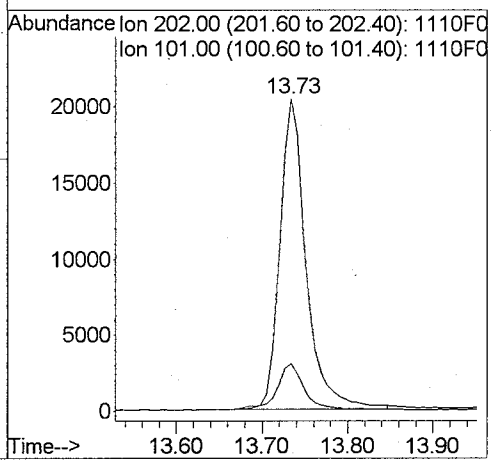


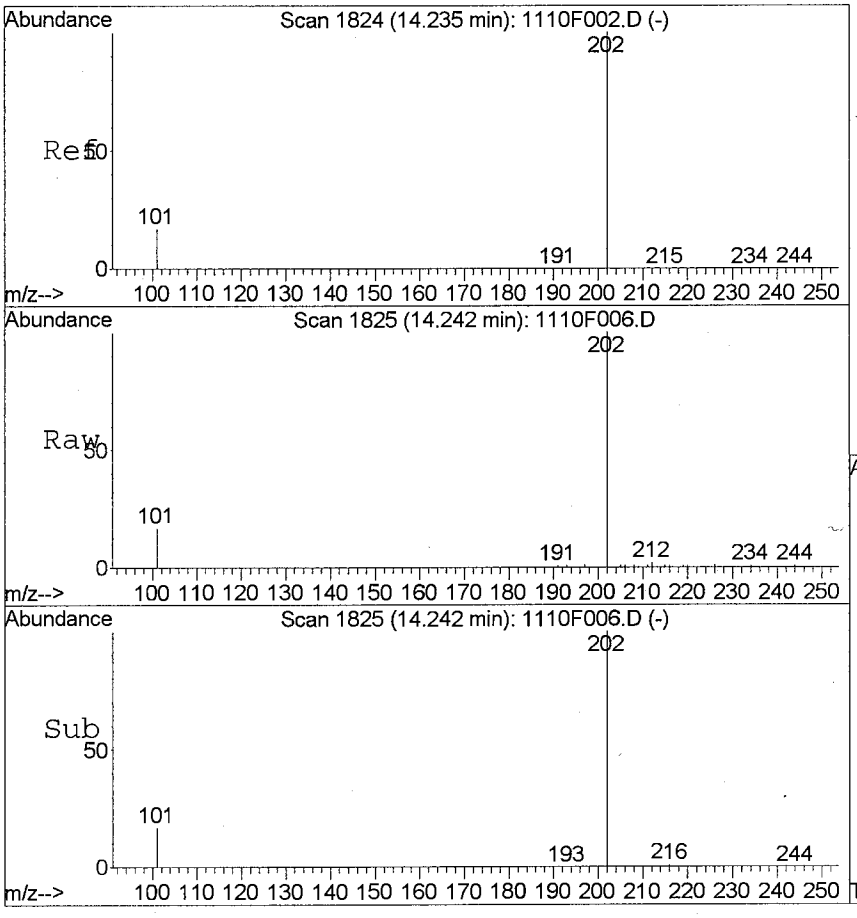


#36
Fluoranthene
Concen: 206.25 ng/ml
RT: 13.73 min Scan# 1753
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:202 Resp: 43515

Ion	Ratio	Lower	Upper
202	100		
101	14.7	0.0	45.2

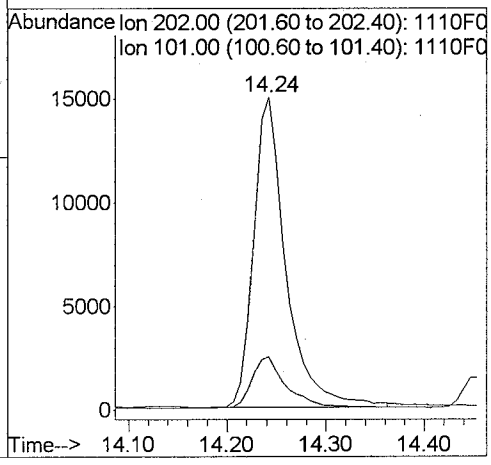


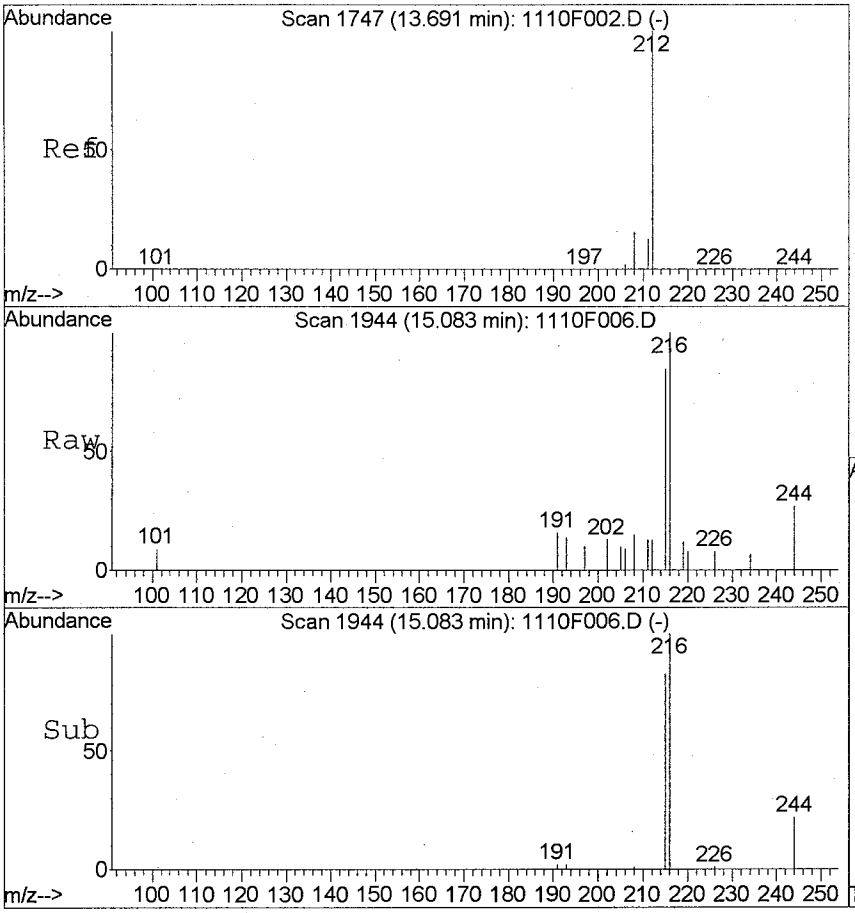


#39
Pyrene
Concen: 163.00 ng/ml
RT: 14.24 min Scan# 1825
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:202 Resp: 33882

Ion	Ratio	Lower	Upper
202	100		
101	16.6	0.0	47.1

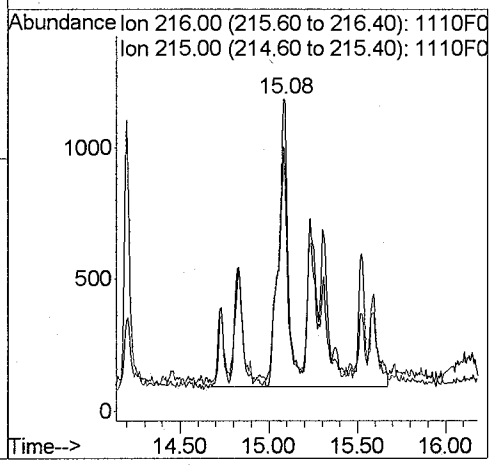


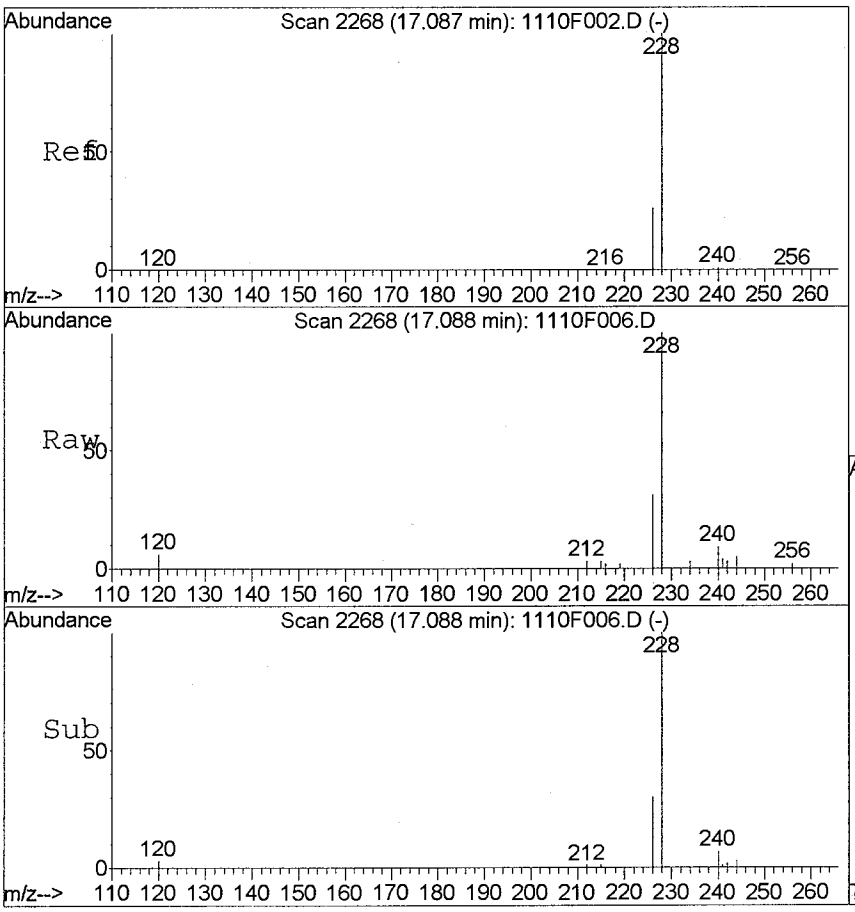


#40
C1-Fluoranthenes/Pyrenes
Concen: 59.46 ng/ml m
RT: 15.08 min Scan# 1944
Delta R.T. -0.47 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:216 Resp: 12359

Ion	Ratio	Lower	Upper
216	100		
215	84.7	54.8	114.8

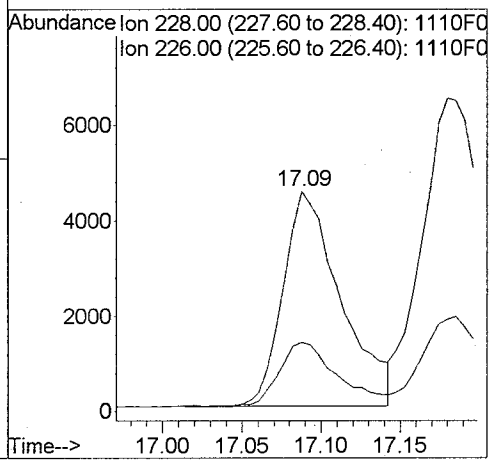


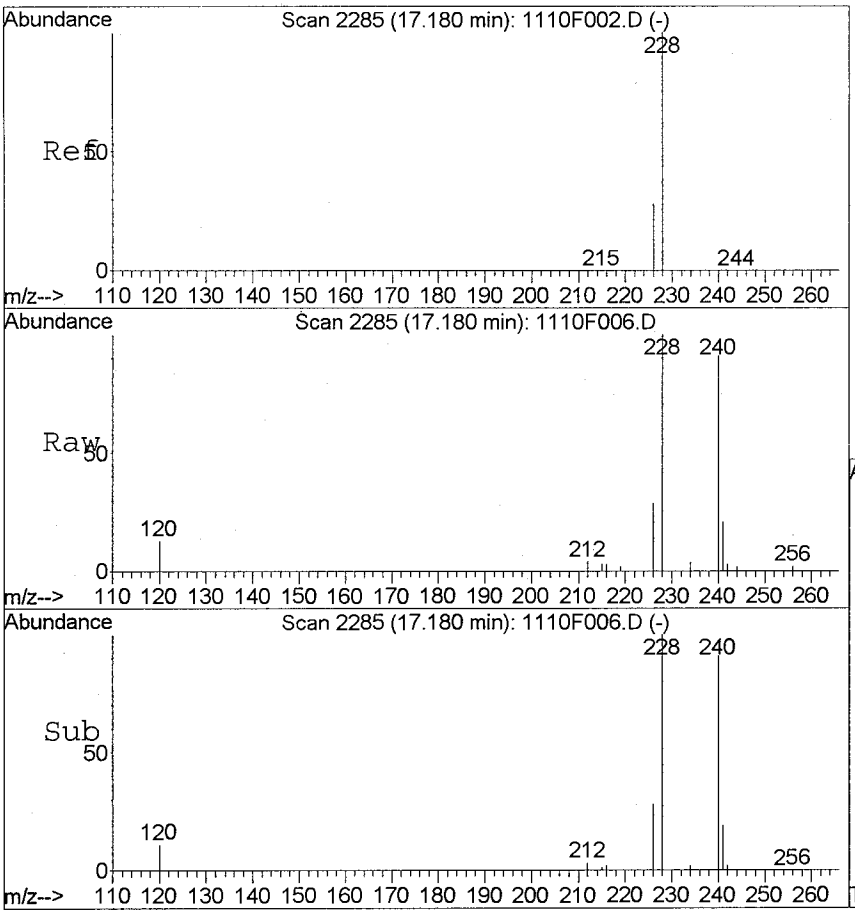


#42
Benz(a)anthracene
Concen: 72.43 ng/ml
RT: 17.09 min Scan# 2268
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:228 Resp: 11463

Ion	Ratio	Lower	Upper
228	100		
226	29.9	0.0	55.8

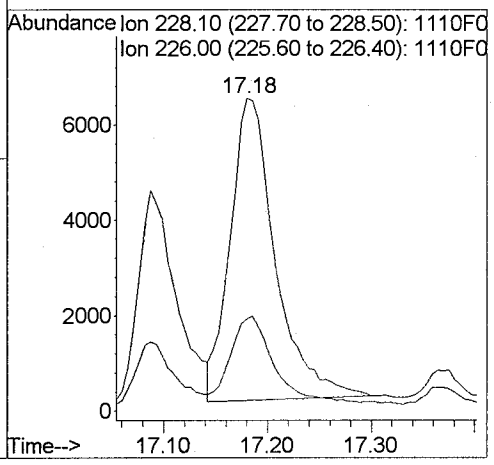


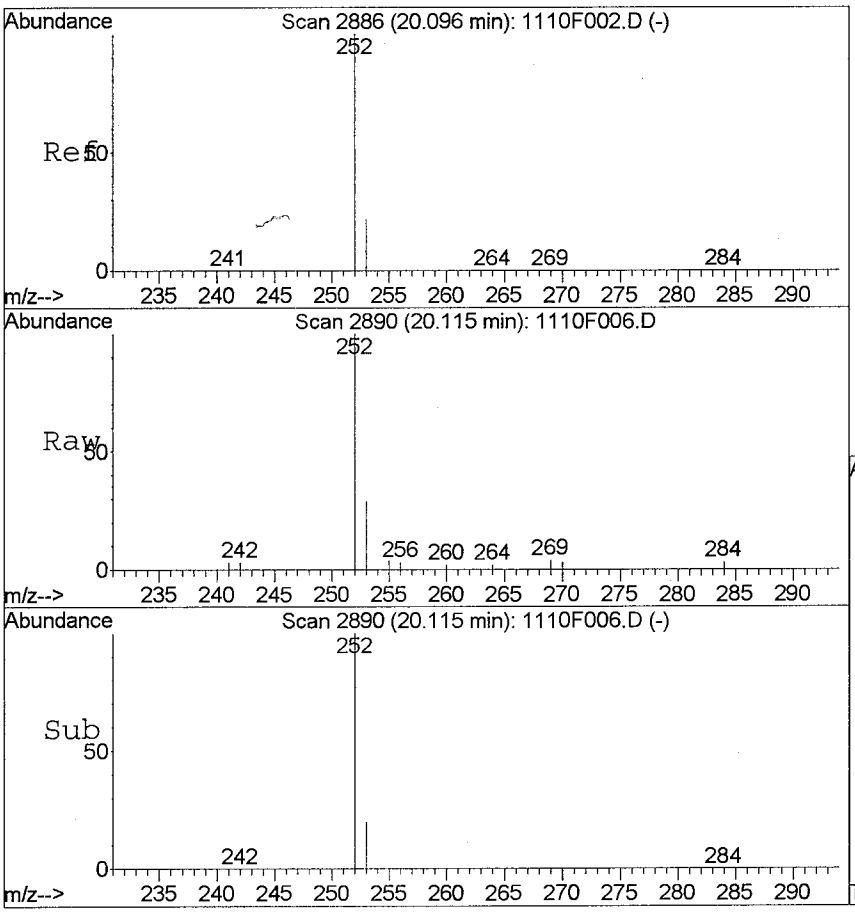


#43
Chrysene
Concen: 112.75 ng/ml
RT: 17.18 min Scan# 2285
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:228 Resp: 19081

Ion	Ratio	Lower	Upper
228	100		
226	28.0	0.0	58.3

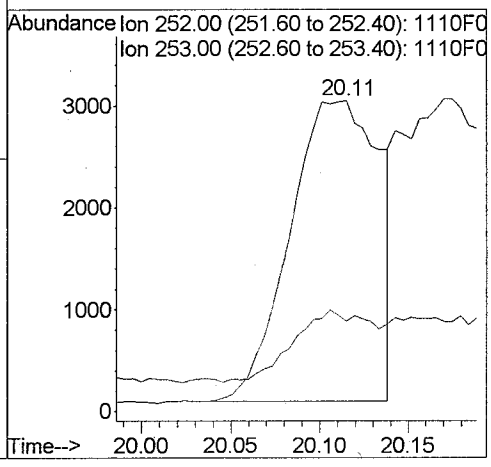


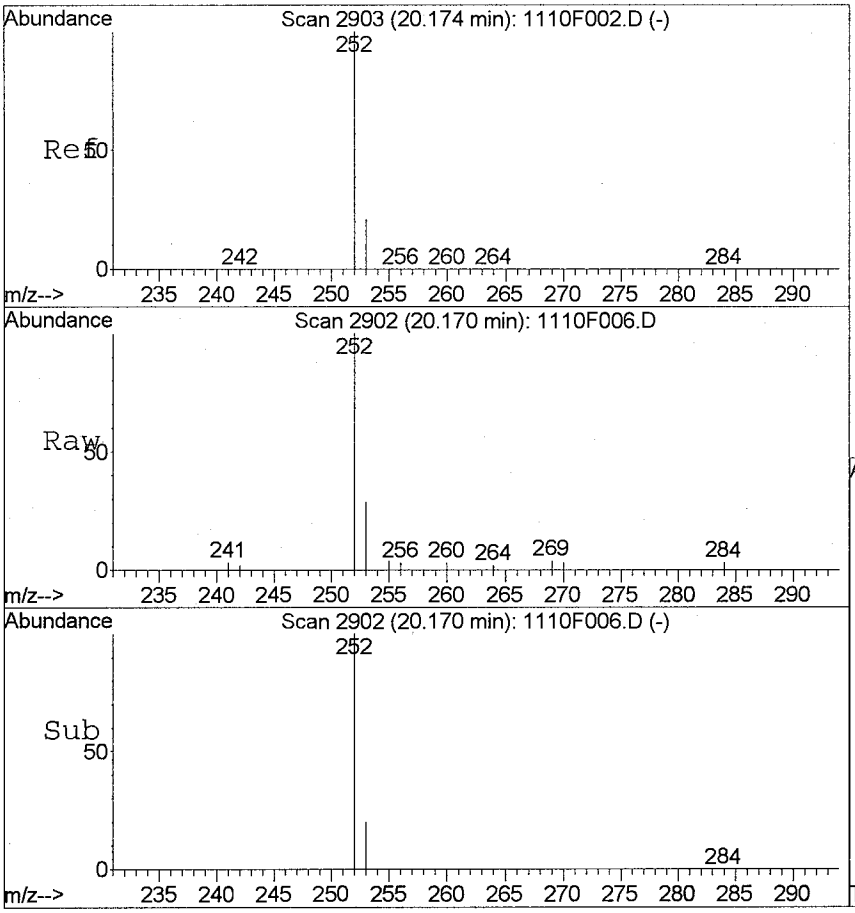


#49
Benzo(b)fluoranthene
Concen: 85.31 ng/ml
RT: 20.11 min Scan# 2890
Delta R.T. 0.02 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:252 Resp: 10253

Ion	Ratio	Lower	Upper
252	100		
253	19.1	0.0	52.0

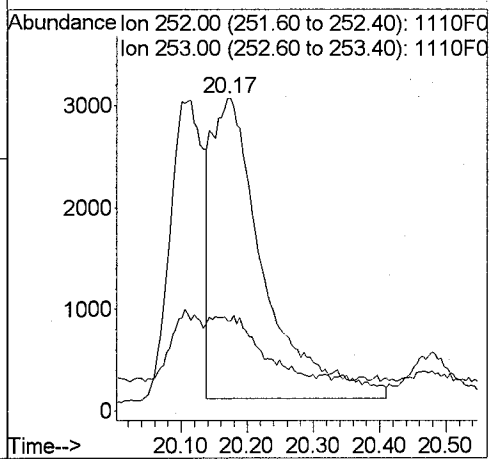


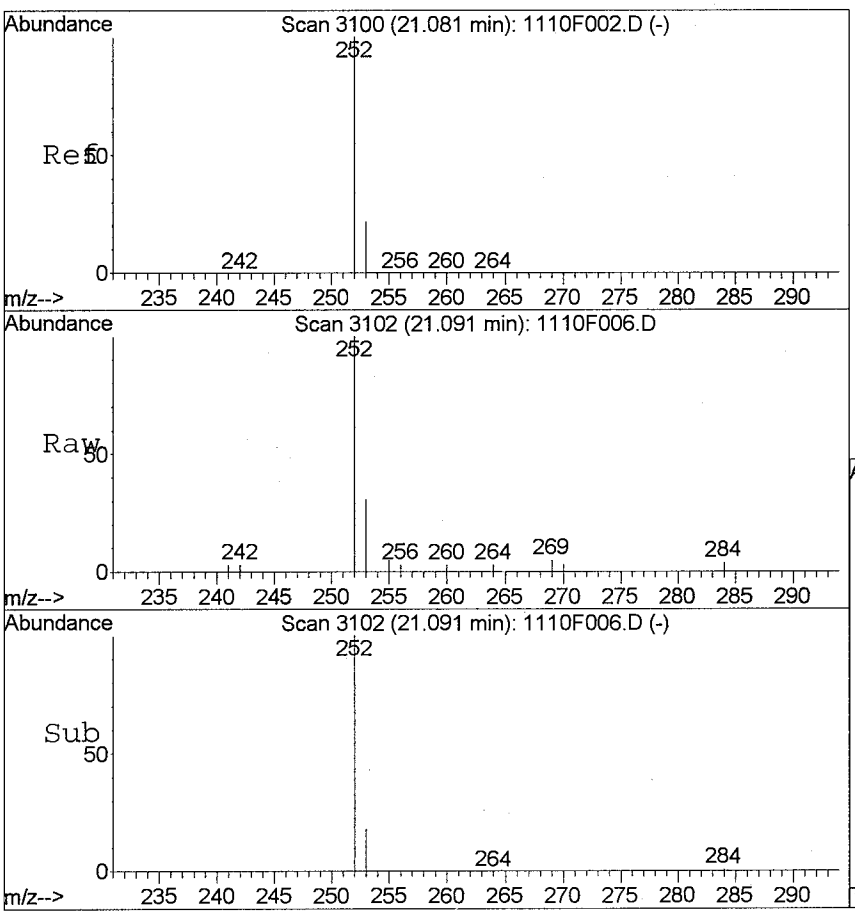


#50
Benzo(k)fluoranthene
Concen: 106.63 ng/ml m
RT: 20.17 min Scan# 2902
Delta R.T. -0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:252 Resp: 16260

Ion	Ratio	Lower	Upper
252	100		
253	28.9	0.0	51.8

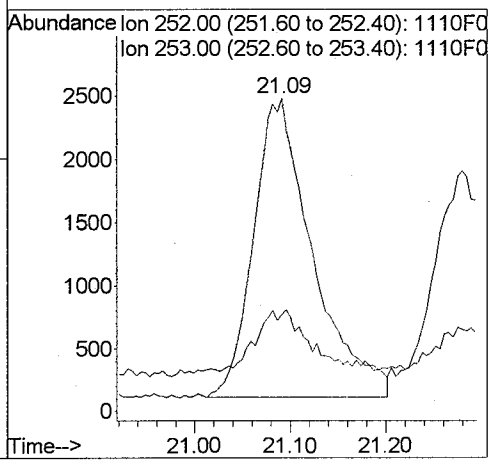


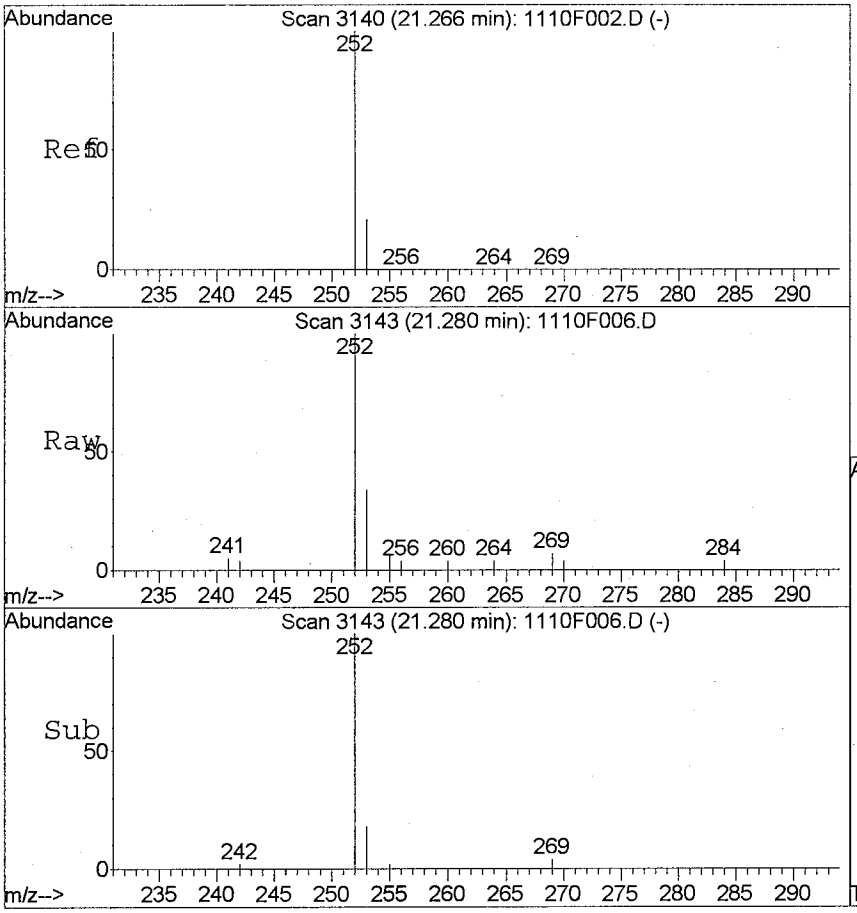


#51
Benzo(e)pyrene
Concen: 75.61 ng/ml
RT: 21.09 min Scan# 3102
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:252 Resp: 10202

Ion	Ratio	Lower	Upper
252	100		
253	18.2	0.0	51.6

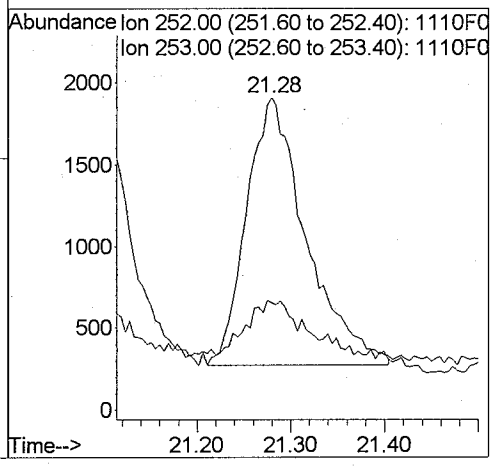


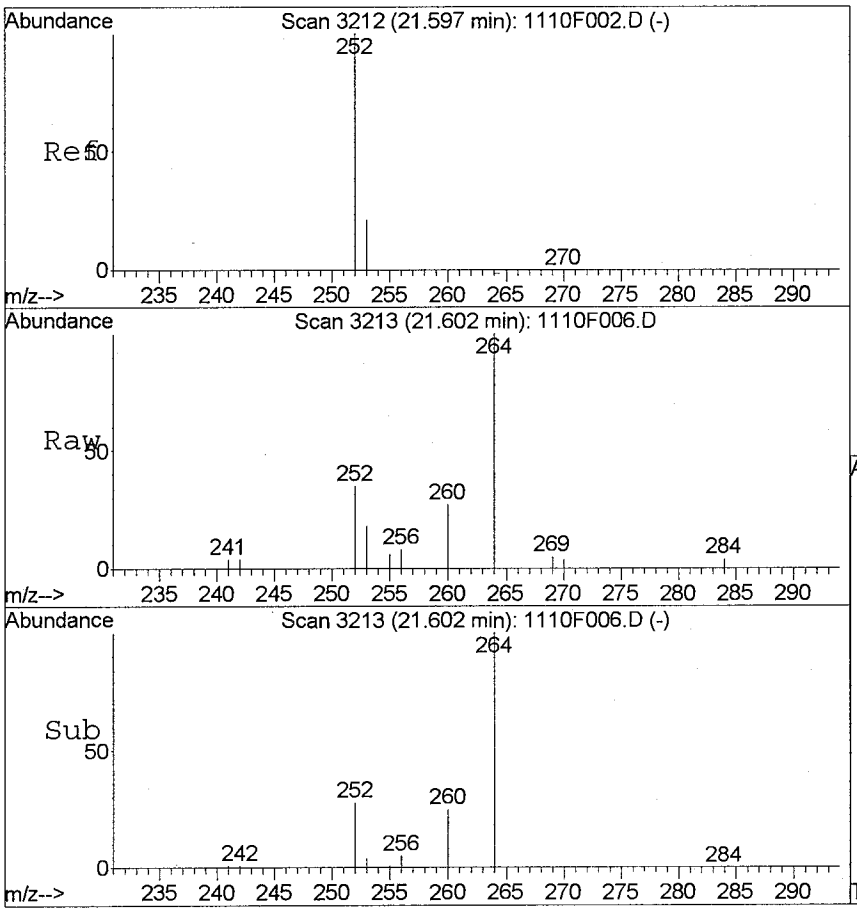


#52
Benzo(a)pyrene
Concen: 70.31 ng/ml
RT: 21.28 min Scan# 3143
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:252 Resp: 7187

Ion	Ratio	Lower	Upper
252	100		
253	19.9	0.0	51.5

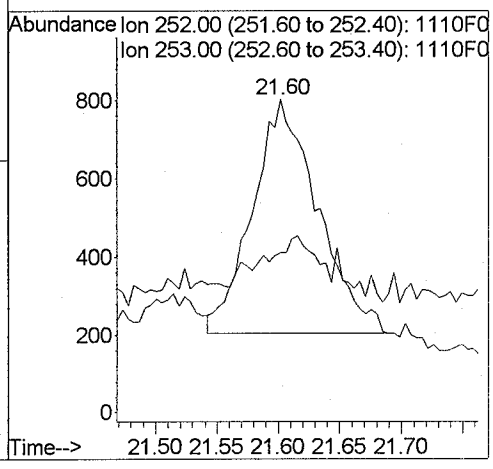


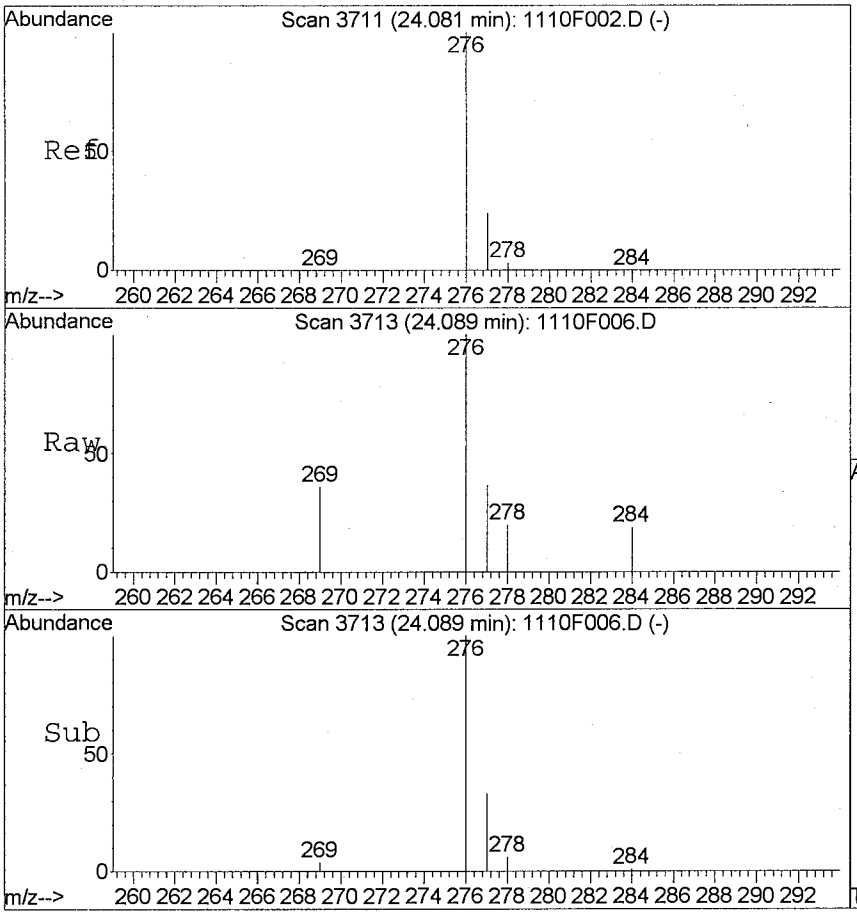


#53
Perylene
Concen: 19.35 ng/ml
RT: 21.60 min Scan# 3213
Delta R.T. 0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:252 Resp: 2220

Ion	Ratio	Lower	Upper
252	100		
253	17.9	0.0	51.4

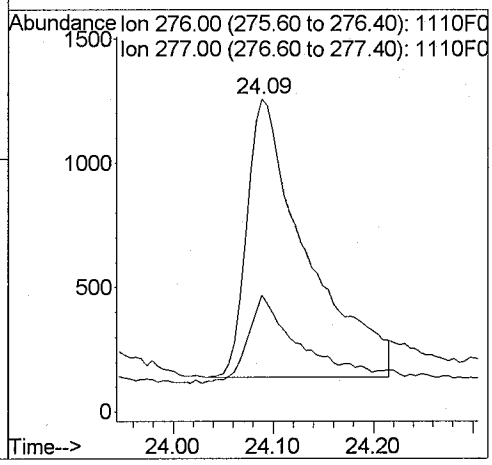


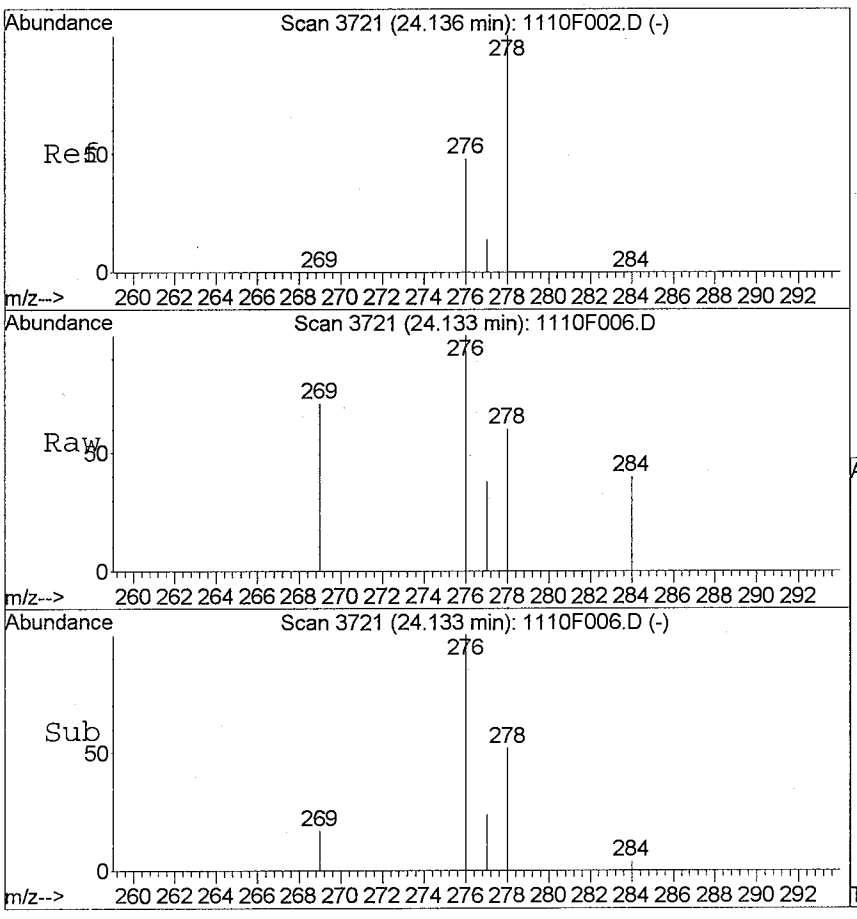


#54
Indeno(1,2,3-cd)pyrene
Concen: 74.02 ng/ml
RT: 24.09 min Scan# 3713
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:276 Resp: 4600

Ion	Ratio	Lower	Upper
276	100		
277	30.9	0.0	53.8

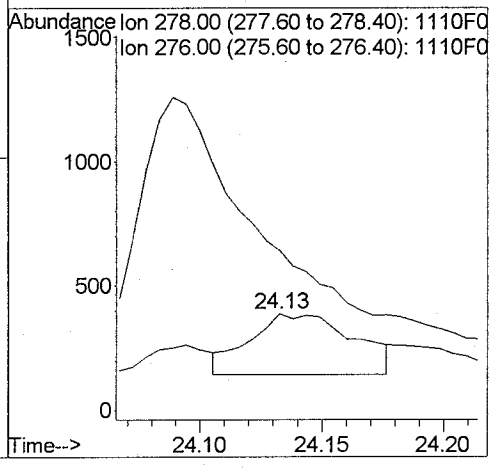


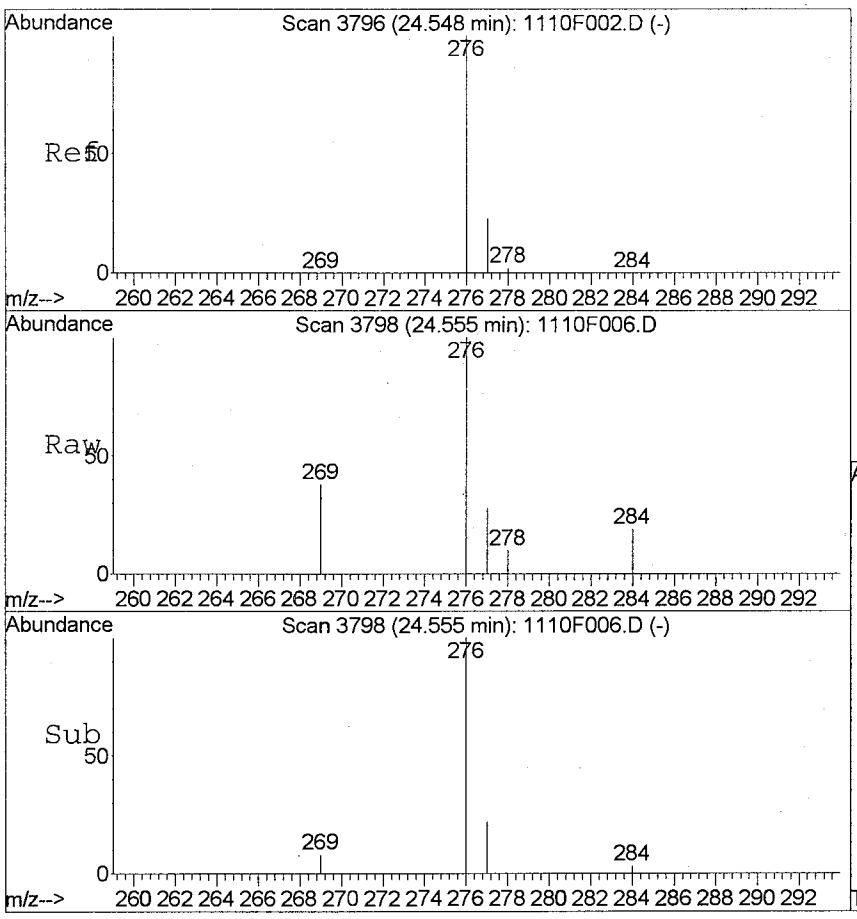


#55
Dibenz(a,h)anthracene
Concen: 8.06 ng/ml m
RT: 24.13 min Scan# 3721
Delta R.T. -0.00 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:278 Resp: 720

Ion	Ratio	Lower	Upper
278	100		
276	165.7	17.9	77.9#

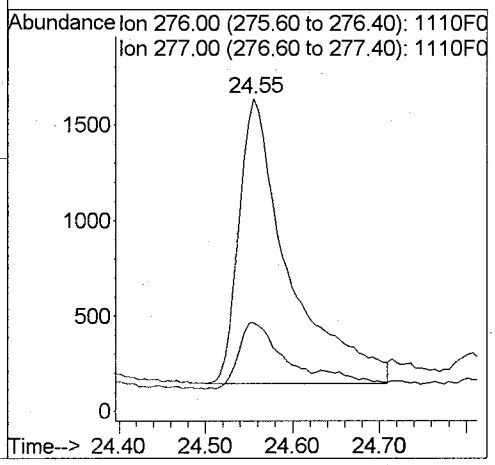




#56
Benzo(g,h,i)perylene
Concen: 57.32 ng/ml
RT: 24.55 min Scan# 3798
Delta R.T. 0.01 min
Lab File: 1110F006.D
Acq: 10 Nov 2003 5:25 pm

Tgt Ion:276 Resp: 5905

Ion	Ratio	Lower	Upper
276	100		
277	23.2	0.0	53.4

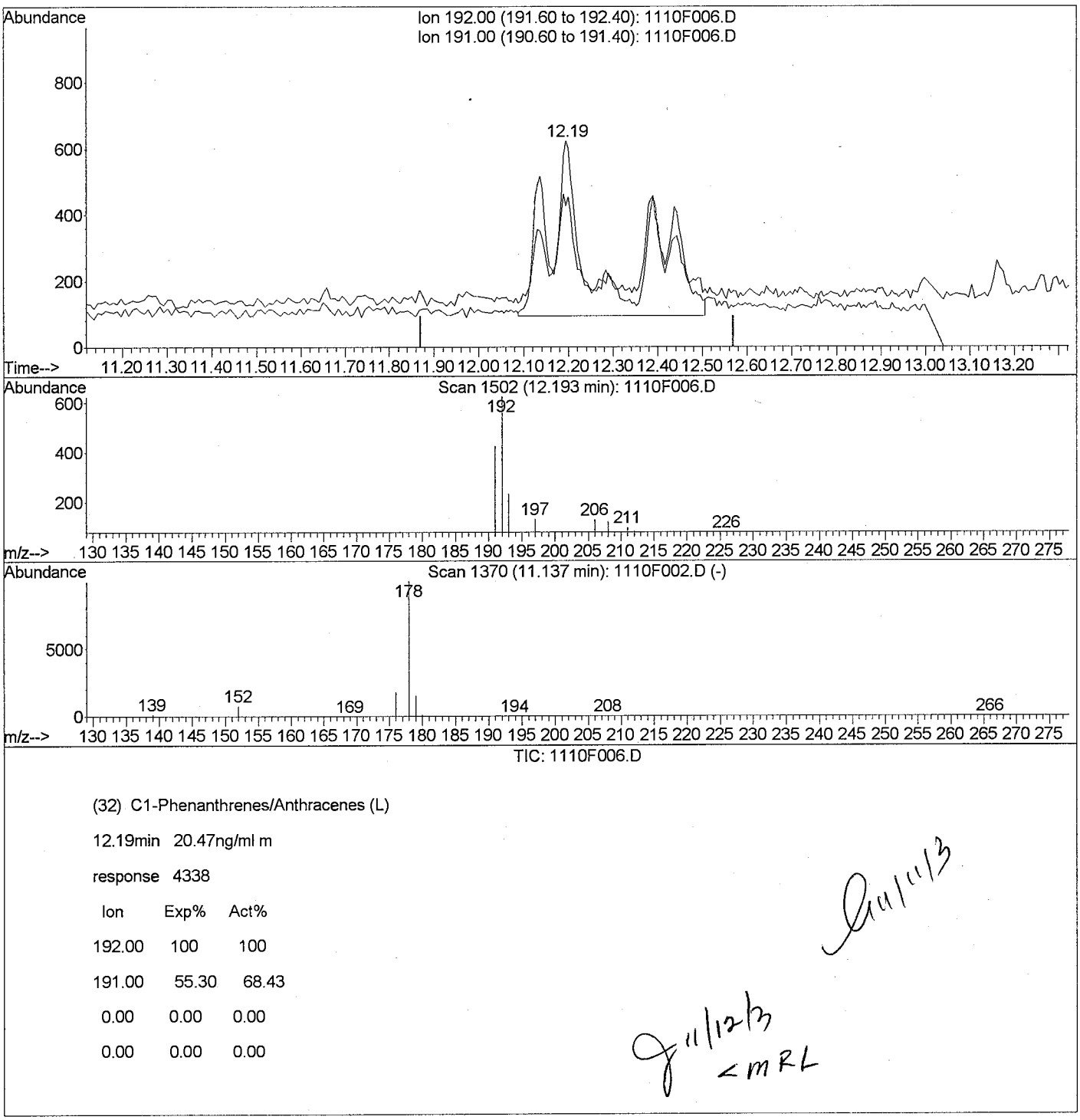


Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F006.D
Acq On : 10 Nov 2003 5:25 pm
Sample : K2308419-010
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration



TIC: 1110F006.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.19min 20.47ng/ml m

response 4338

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	68.43
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

11/12/03
< MRL

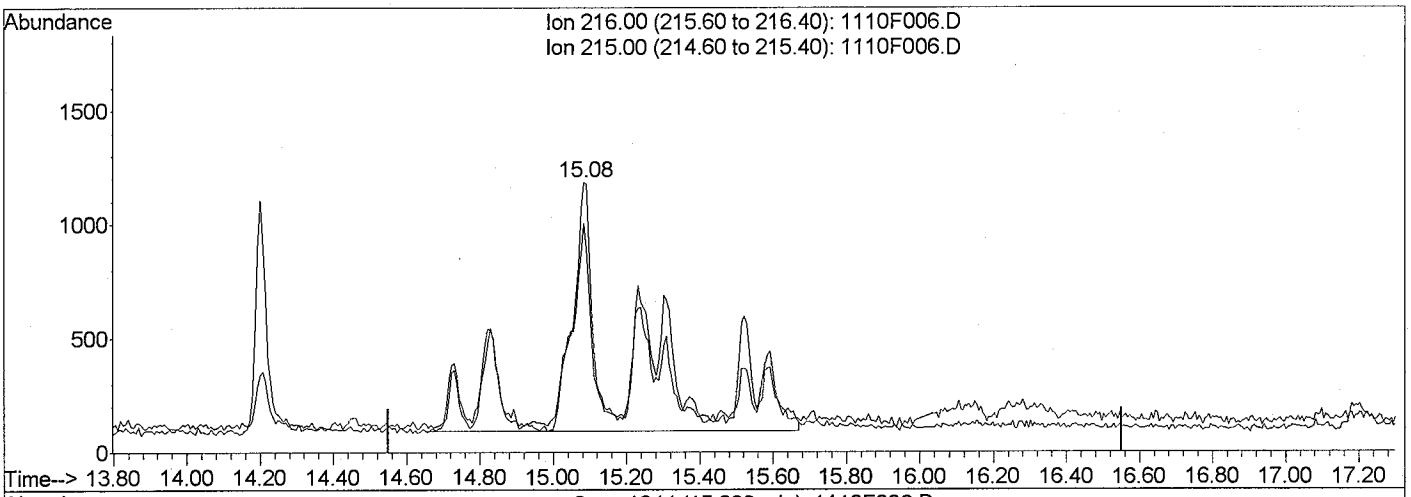
1110F006.D 1107ALK.M Tue Nov 11 13:45:15 2003

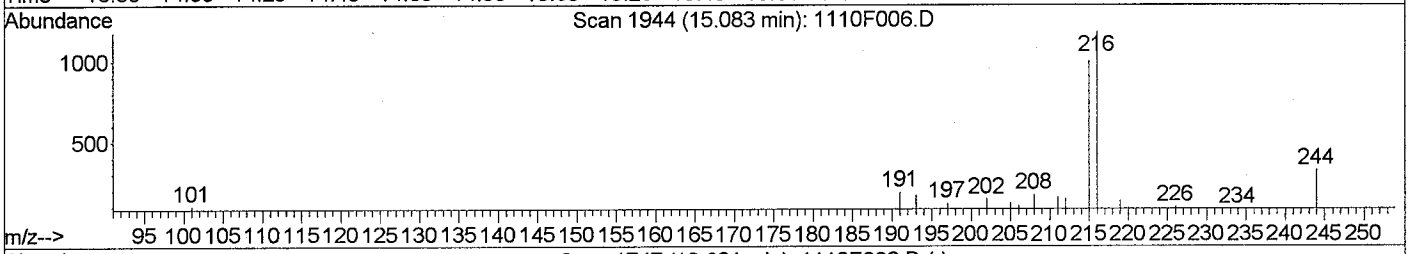
Quantitation Report (Qedit)

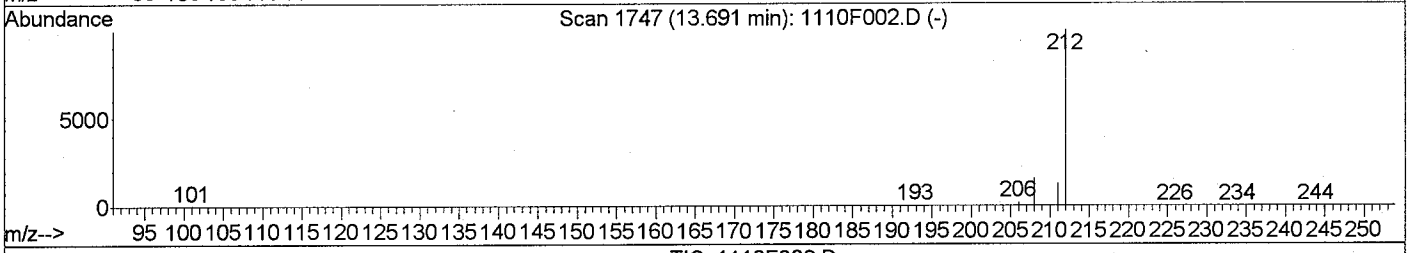
Data File : J:\MS11\DATA\111003\1110F006.D
Acq On : 10 Nov 2003 5:25 pm
Sample : K2308419-010
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F006.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.08min 59.46ng/ml m

response 12359

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	84.73
0.00	0.00	0.00
0.00	0.00	0.00

11/11/3

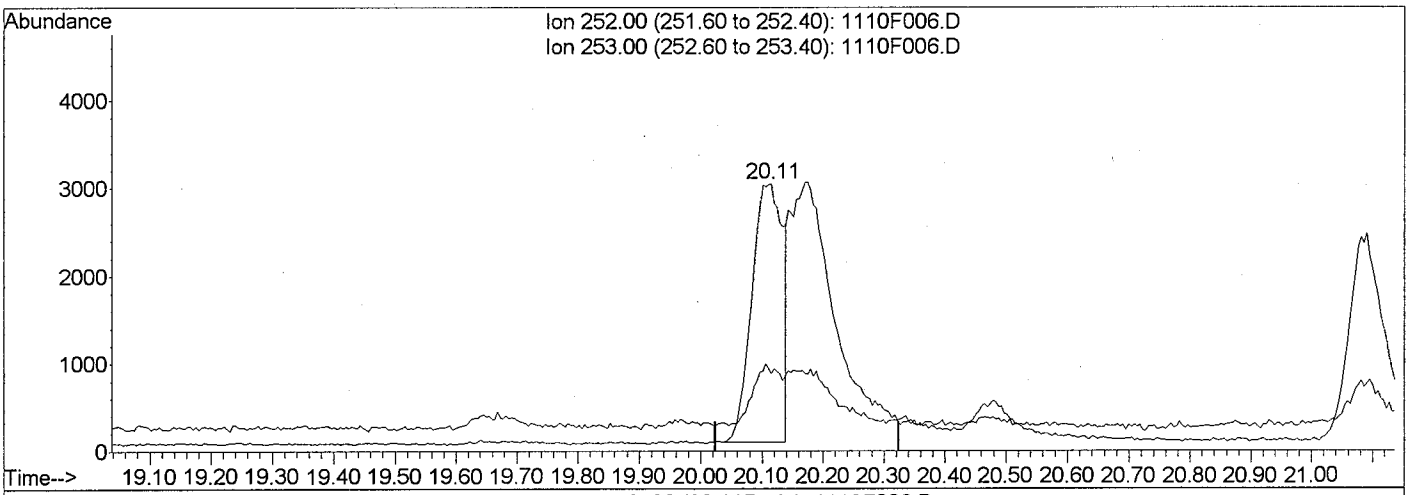
11/12/3

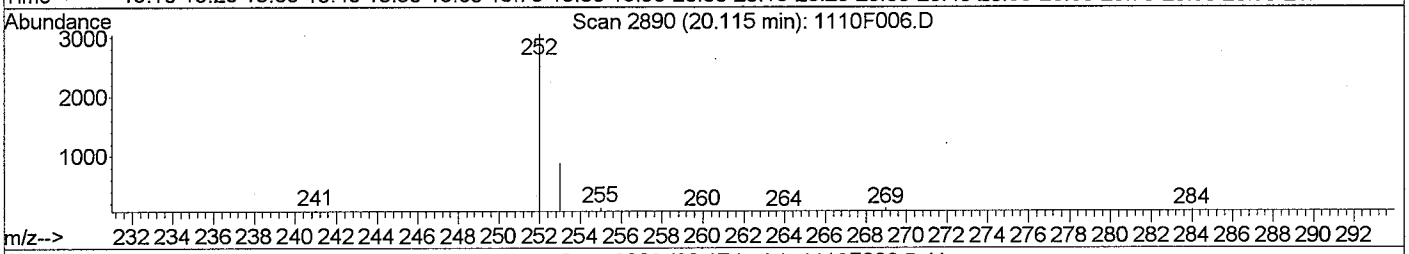
1110F006.D 1107ALK.M Tue Nov 11 13:45:25 2003

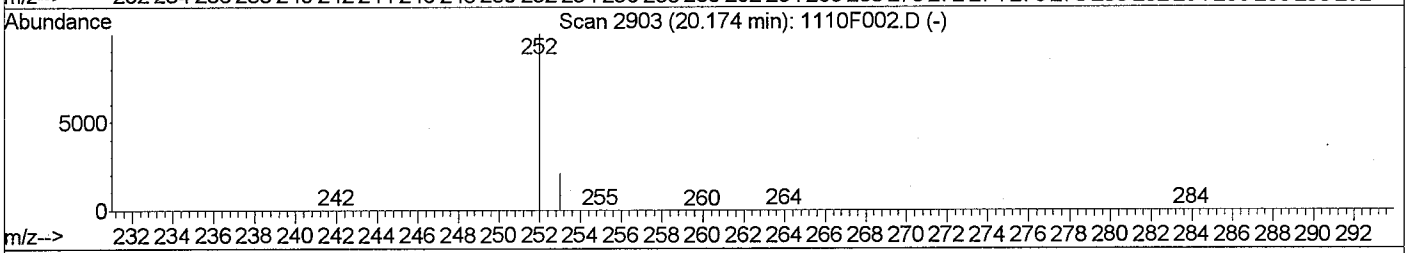
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F006.D

(50) Benzo(k)fluoranthene (T)

20.11min 67.24ng/ml

response 10253

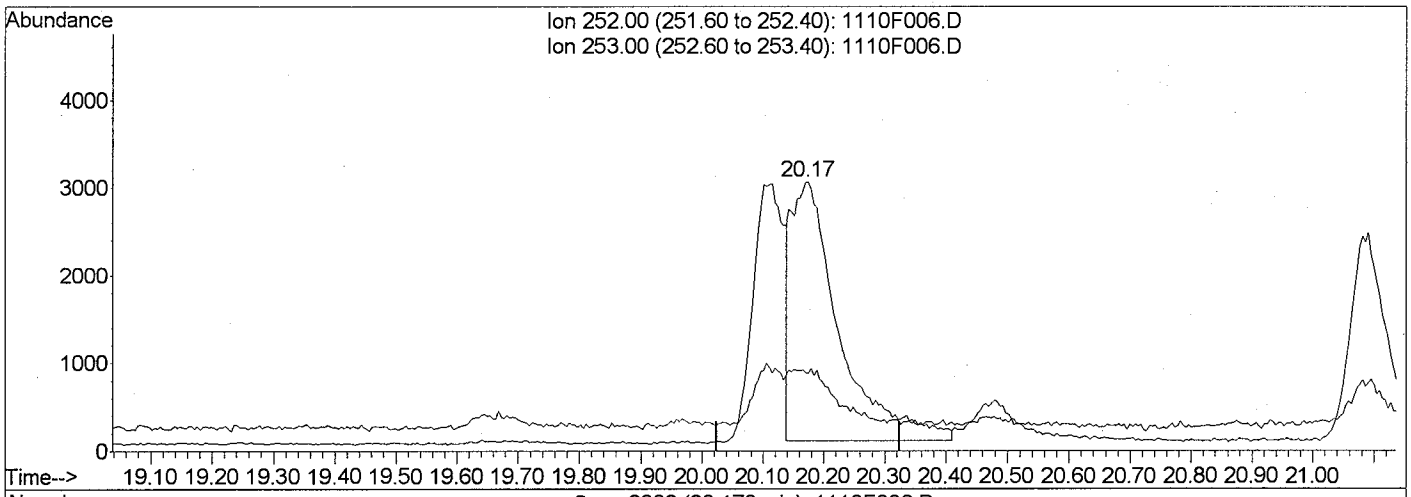
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	19.06
0.00	0.00	0.00
0.00	0.00	0.00

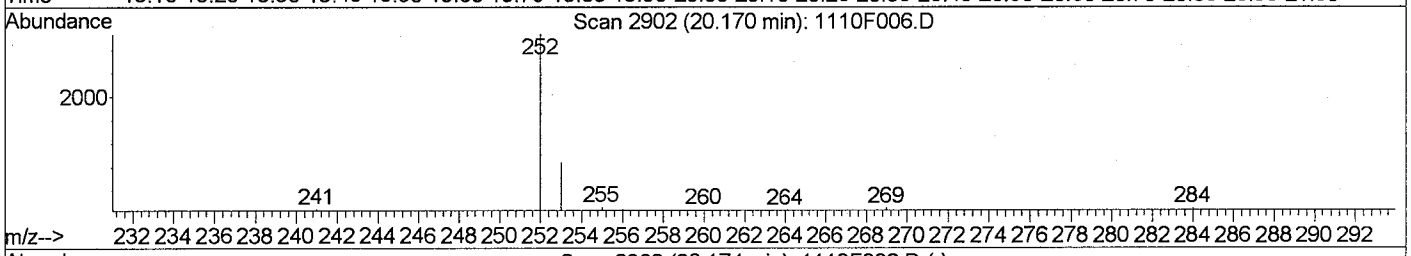
1110F006.D 1107ALK.M Tue Nov 11 13:45:32 2003

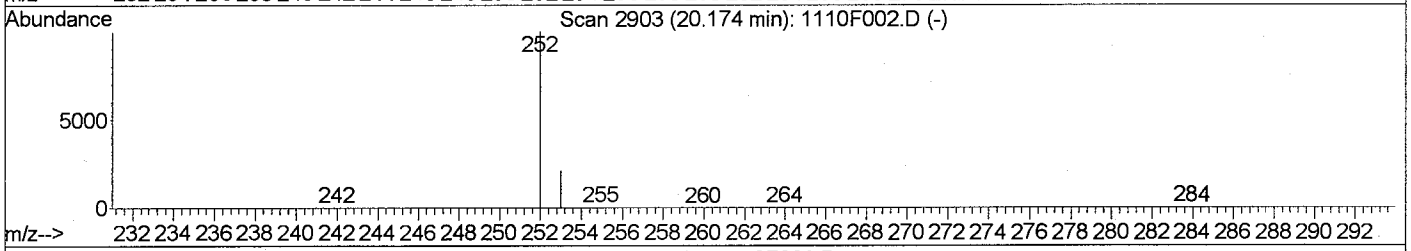
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F006.D

(50) Benzo(k)fluoranthene (T)

20.17min 106.63ng/ml m

response 16260

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	28.88
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/12/13

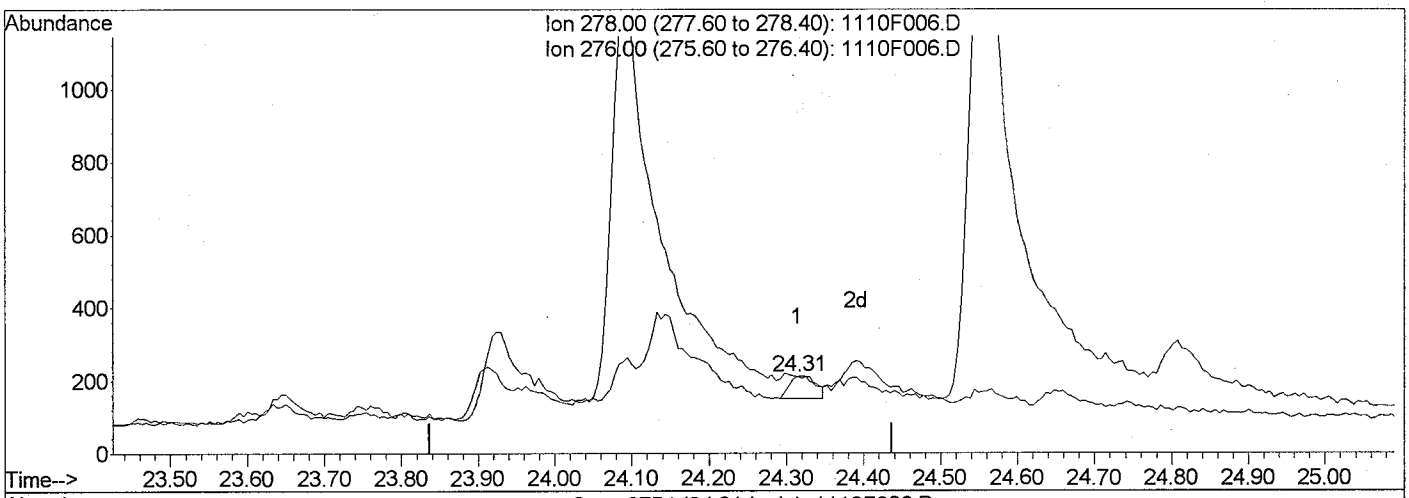
11/12/13

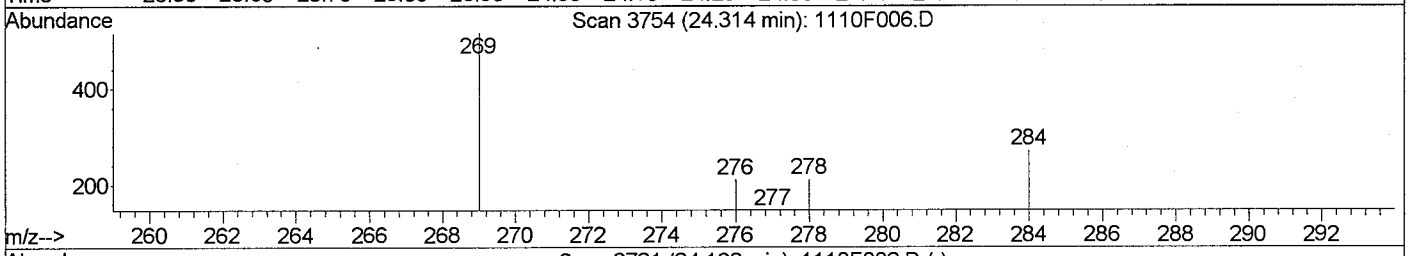
1110F006.D 1107ALK.M Tue Nov 11 13:45:37 2003

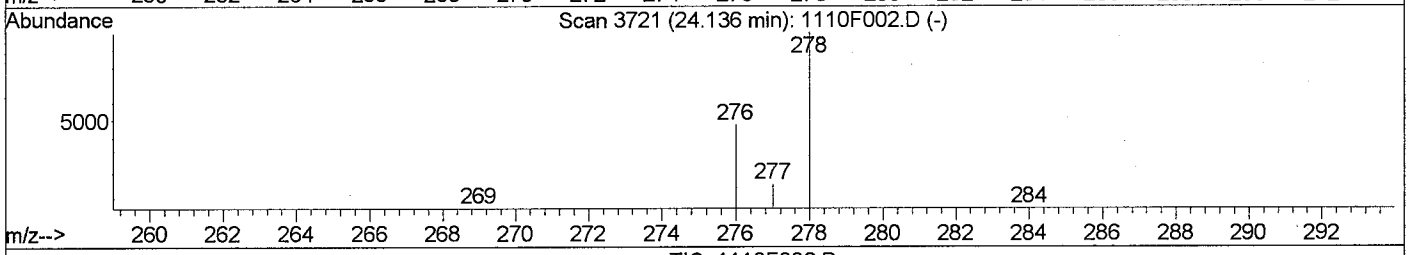
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration







TIC: 1110F006.D

(55) Dibenz(a,h)anthracene (T)

24.31min 1.63ng/ml

response 146

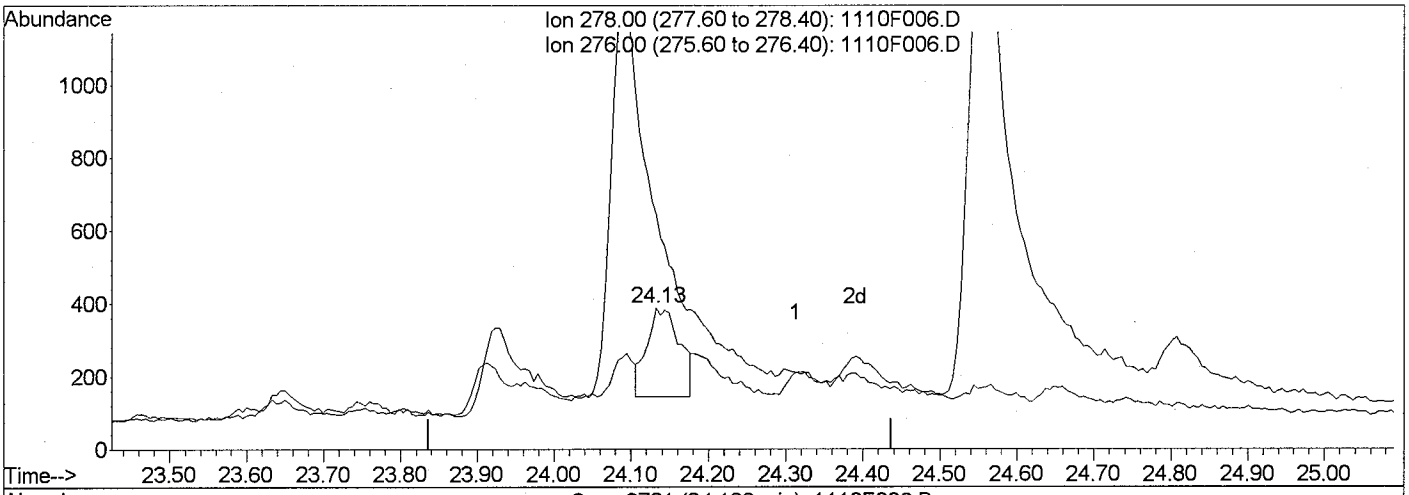
Ion	Exp%	Act%
278.00	100	100
276.00	47.90	47.54
0.00	0.00	0.00
0.00	0.00	0.00

1110F006.D 1107ALK.M Tue Nov 11 13:45:42 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F006.D Vial: 4
Acq On : 10 Nov 2003 5:25 pm Operator: LWeiskopf
Sample : K2308419-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 13:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Multiple Level Calibration



TIC: 1110F006.D

(55) Dibenz(a,h)anthracene (T)

24.13min 8.06ng/ml m

response 720

Ion	Exp%	Act%
278.00	100	100
276.00	47.90	165.72#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/11/13

J 11/12/13

1110F006.D 1107ALK.M Tue Nov 11 13:45:46 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317378-4

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317378-4

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	79	37-107	11/08/03	Acceptable
Fluoranthene-d10	90	18-137	11/08/03	Acceptable
Terphenyl-d14	128	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F005.D
Lab ID: KWG0317378-4
RunType: MB
Matrix: WATER

Date Acquired: 11/08/2003 08:13
Date Quantitated: 11/10/2003 16:24
Batch ID: KWG0318114
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8419

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	Pentachlorophenol	-25.4	NA	20	
Surrogates	2,4,6-Tribromophenol	0	6	133	
Std MRL Unsupported by ICAL	Pentachlorophenol	5.0	1.0	NA	

Primary Review: 11/11/03

Secondary Review: mt 11/11/03

Printed: 11/10/2003 17:46:41
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/04/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245670	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\110803\1108F005.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 08:13	**Quant Date:**	11/10/2003 16:24	**Vial:**	2
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317378-4			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	264106	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	132762	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	187944	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	150452	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	75250	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Biphenyl-d10	7.06	0.00	0.00	164	318726	1,647	82	34-115	OK
2	Fluorene-d10	9.00	0.00	0.00	176	209675	1,579	79	37-107	OK
2	2,4,6-Tribromophenol			0.00	330	0		0	6-133	*
3	Fluoranthene-d10	13.70	0.01	0.00	212	340437	1,810	90	18-137	OK
4	Terphenyl-d14	14.74	0.01	0.00	244	349778	2,551	128	18-153	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1206	4.04	0.00404	J	
1	2-Methylnaphthalene	6.42	0.01	0.00	142	317	1.80	0.0027	U	
1	1-Methylnaphthalene	6.57	0.01	0.00	142	270	1.63	0.0025	U	
1	Biphenyl	7.09		0.00	154	1092	5.11	0.00511	J	
1	2,6-Dimethylnaphthalene				156	0d		0.0024	U	
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene				152	0d		0.0018	U	
2	Acenaphthene	8.11		0.00	154	213	1.35	0.0020	U	
2	Dibenzofuran	8.42	0.01	0.00	168	407	1.93	0.0071	U	
2	2,3,5-Trimethylnaphthalene				170	0d		0.0011	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F005.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 08:13	**Quant Date:**	11/10/2003 16:24	**Vial:**	2
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317378-4			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	9.05		0.00	166	258	1.53	0.0026	U	
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	
2	C3-Fluorenes				208	0		0.020	U	
2	Pentachlorophenol				266	0		0.095	U	
3	Dibenzothiophene				184	0**d**		0.0041	U	
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	998	4.38	0.00438	J	
3	Anthracene	11.15	0.01	0.00	178	117	0.6000	0.0011	U	
3	Carbazole				167	0		0.019	U	
3	1-Methylphenanthrene	12.45	0.01	0.00	192	143	0.9200	0.0020	U	
3	C1-Phenanthrenes/Anthracenes				192	0		0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	435	1.92	0.0024	U	
4	Pyrene	14.25	0.01	0.00	202	293	1.49	0.0023	U	
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.09		0.00	228	105**m**	0.7000	0.0021	U	
4	Chrysene	17.19	0.01	0.00	228	224	1.40	0.00140	J	
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene				252	0**d**		0.0020	U	
5	Benzo(k)fluoranthene				252	0**d**		0.0014	U	
5	Benzo(e)pyrene				252	0**d**		0.0019	U	
5	Benzo(a)pyrene				252	0		0.0016	U	
5	Perylene				252	0**d**		0.0012	U	
5	Indeno(1,2,3-cd)pyrene	24.10	0.01	0.00	276	68**m**	1.31	0.0021	U	
5	Dibenz(a,h)anthracene	24.15	0.01	0.00	278	69**m**	0.9200	0.0017	U	
5	Benzo(g,h,i)perylene	24.56	0.01	0.00	276	196	2.28	0.0037	U	

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F005.D Vial: 2
Acq On : 8 Nov 2003 8:13 am Operator: LWeiskopf
Sample : KWG0317378-4 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:34 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

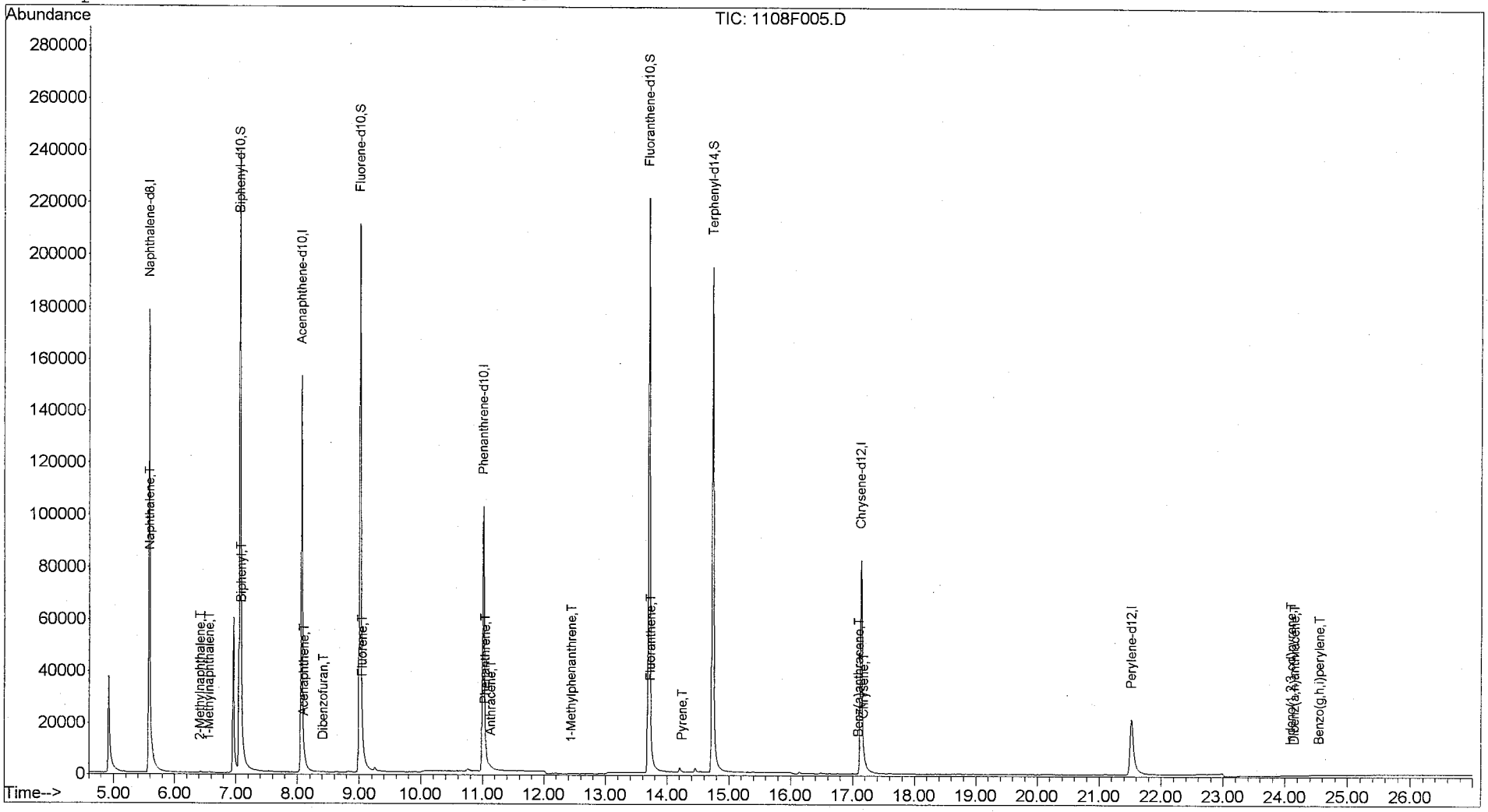
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	264106	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	132762	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	187944	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	150452	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	75250	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	318726	1647.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 164.74%			
16) Fluorene-d10	9.00	176	209675	1579.13	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 157.91%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	340437	1809.79	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 180.98%			
41) Terphenyl-d14	14.74	244	349778	2550.89	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 255.09%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1206	4.04	ng/ml	94
3) 2-Methylnaphthalene	6.42	142	317	1.80	ng/ml	75
4) 1-Methylnaphthalene	6.57	142	270	1.63	ng/ml	86
6) Biphenyl	7.09	154	1092	5.11	ng/ml	94
13) Acenaphthene	8.11	154	213	1.35	ng/ml	80
14) Dibenzofuran	8.42	168	407	1.93	ng/ml	91
17) Fluorene	9.05	166	258	1.53	ng/ml#	60
28) Phenanthrene	11.05	178	998	4.38	ng/ml	90
29) Anthracene	11.15	178	117	0.60	ng/ml	54
31) 1-Methylphenanthrene	12.45	192	143	0.92	ng/ml	96
36) Fluoranthene	13.74	202	435	1.92	ng/ml	64
39) Pyrene	14.25	202	293	1.49	ng/ml	75
42) Benz(a)anthracene	17.09	228	105m	0.70	ng/ml	
43) Chrysene	17.19	228	224	1.40	ng/ml	99
54) Indeno(1,2,3-cd)pyrene	24.10	276	68m	1.31	ng/ml	
55) Dibenz(a,h)anthracene	24.15	278	69m	0.92	ng/ml	
56) Benzo(g,h,i)perylene	24.56	276	196	2.28	ng/ml	100

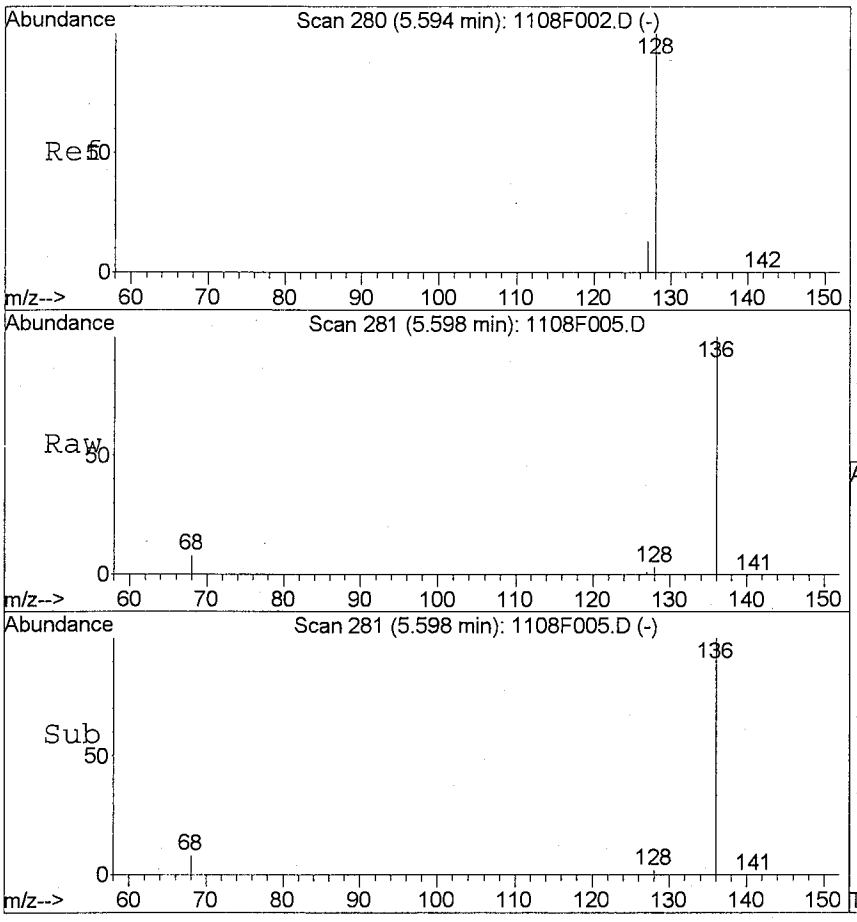
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F005.D Vial: 2
Acq On : 8 Nov 2003 8:13 am Operator: LWeiskopf
Sample : KWG0317378-4 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:24 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

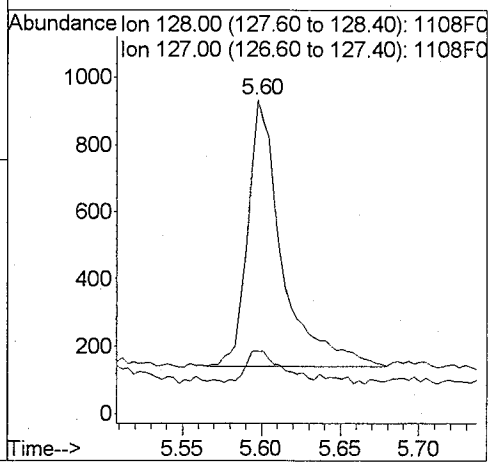


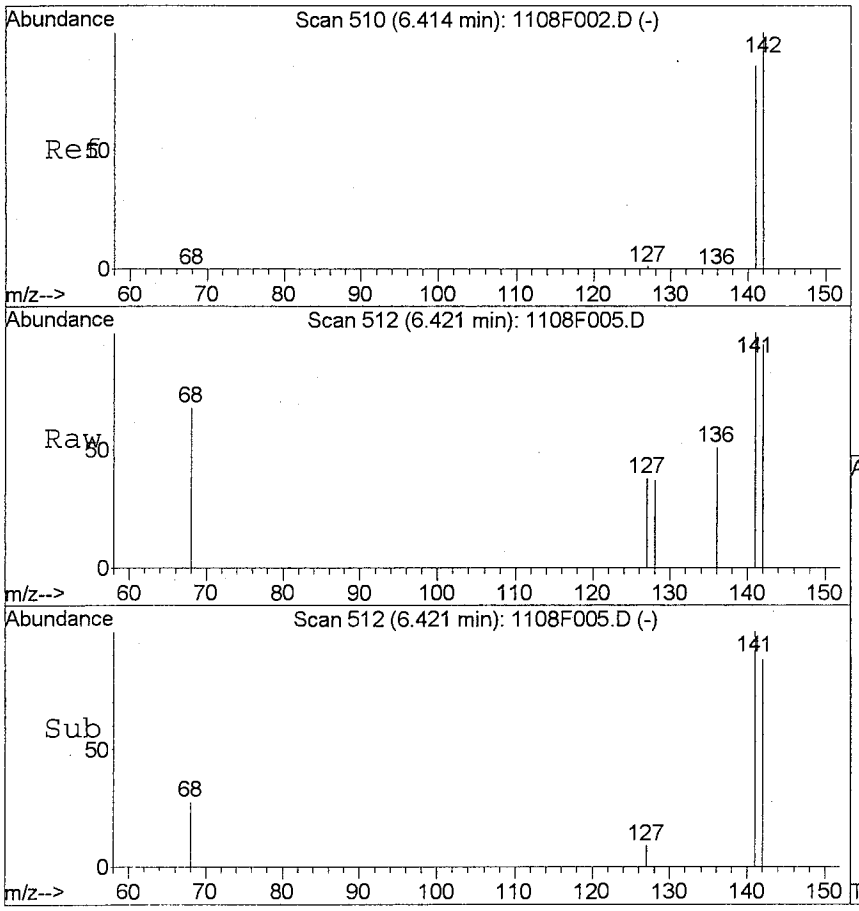


#2
Naphthalene
Concen: 4.04 ng/ml
RT: 5.60 min Scan# 281
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:128 Resp: 1206

Ion	Ratio	Lower	Upper
128	100		
127	11.1	0.0	43.5

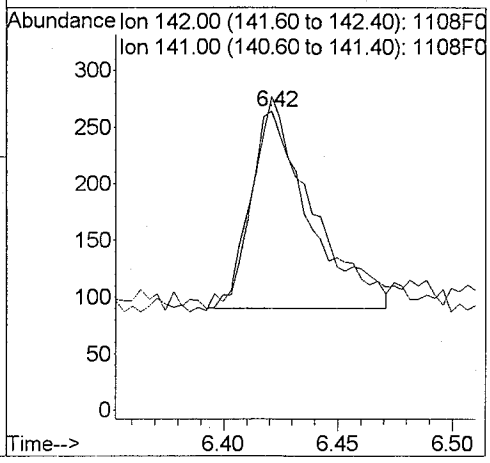


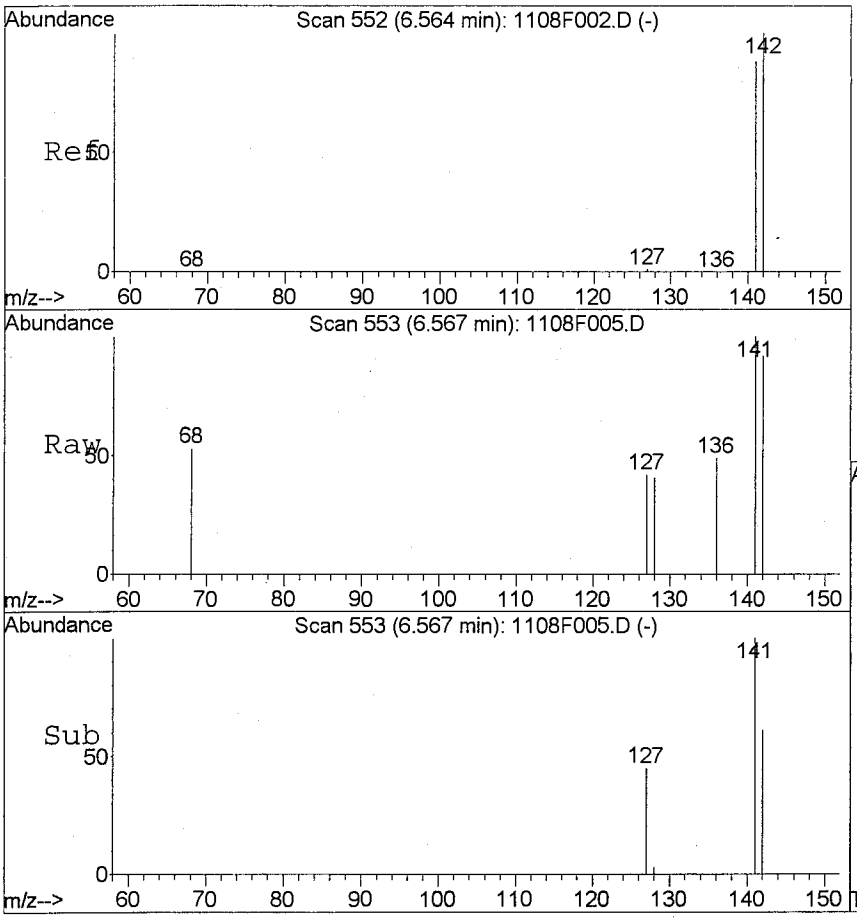


#3
2-Methylnaphthalene
Concen: 1.80 ng/ml
RT: 6.42 min Scan# 512
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:142 Resp: 317

Ion	Ratio	Lower	Upper
142	100		
141	108.6	56.1	116.1

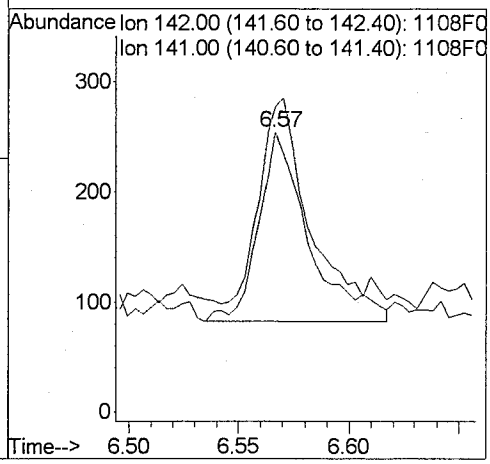


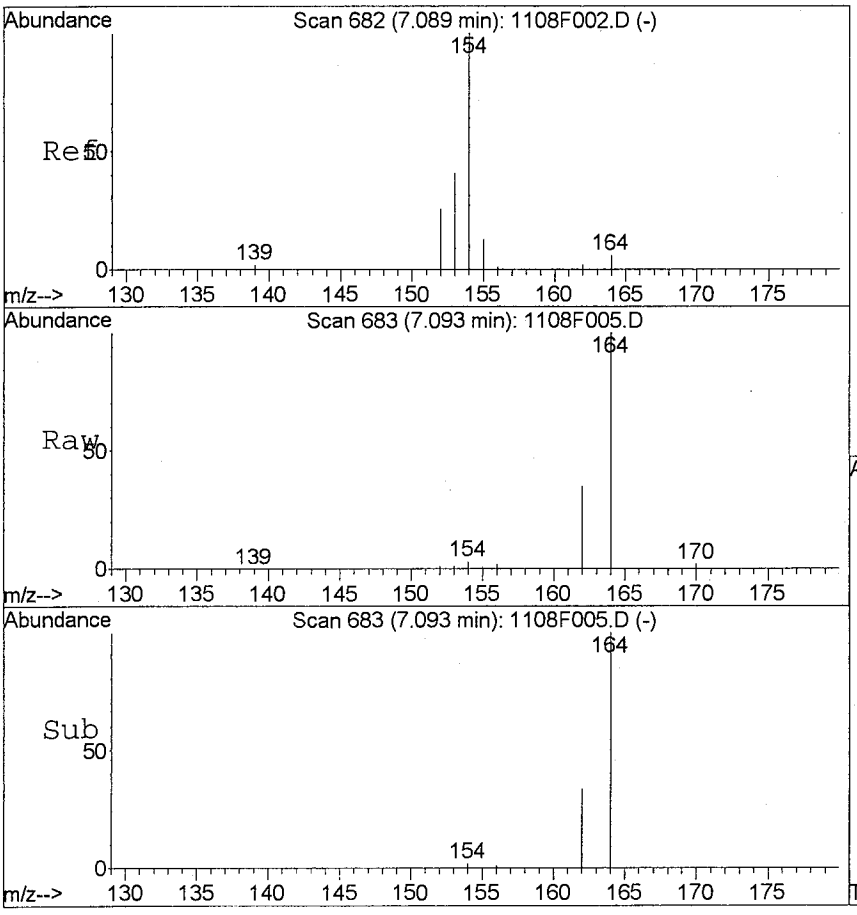


#4
1-Methylnaphthalene
Concen: 1.63 ng/ml
RT: 6.57 min Scan# 553
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:142 Resp: 270

Ion	Ratio	Lower	Upper
142	100		
141	101.7	58.4	118.4

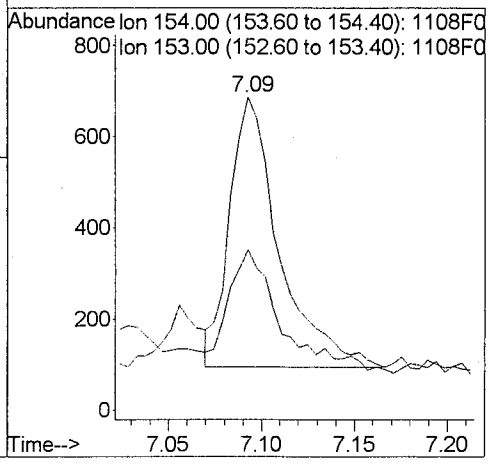


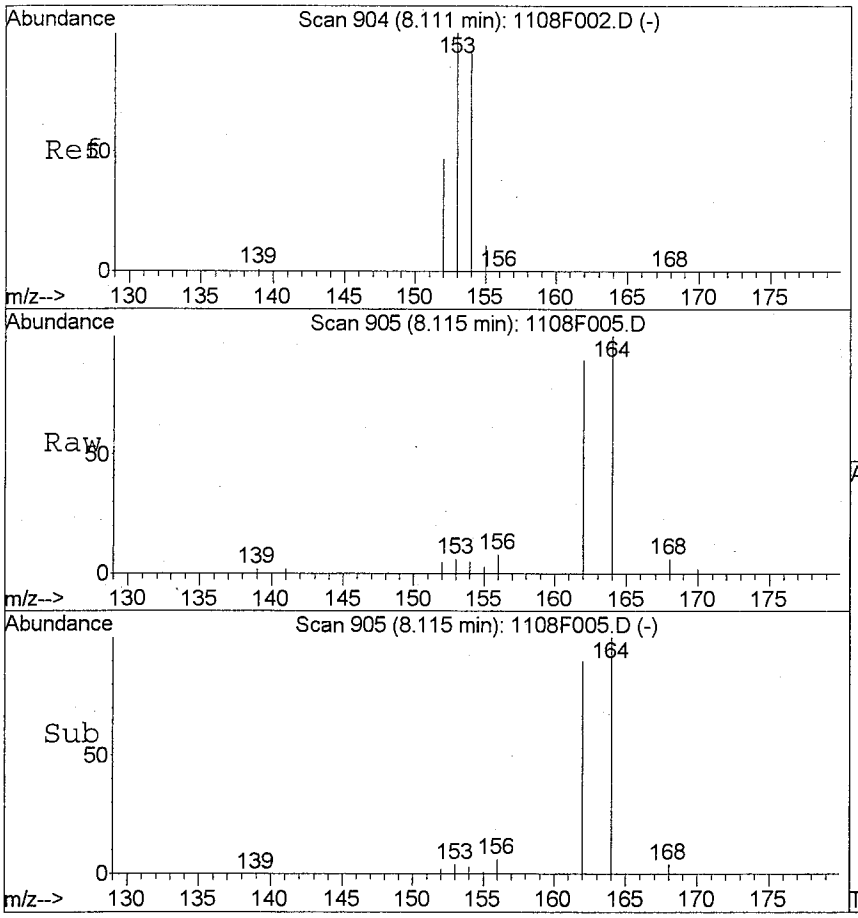


#6
Biphenyl
Concen: 5.11 ng/ml
RT: 7.09 min Scan# 683
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:154 Resp: 1092

Ion	Ratio	Lower	Upper
154	100		
153	44.2	10.5	70.5

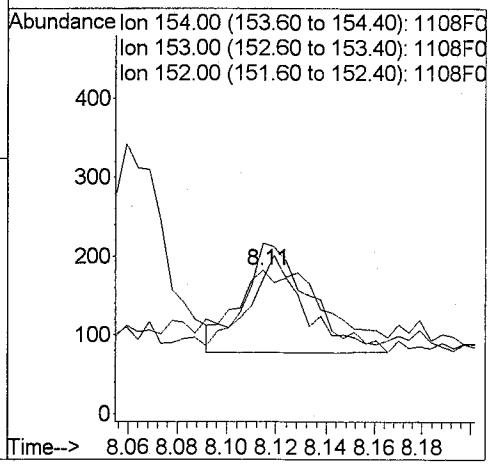


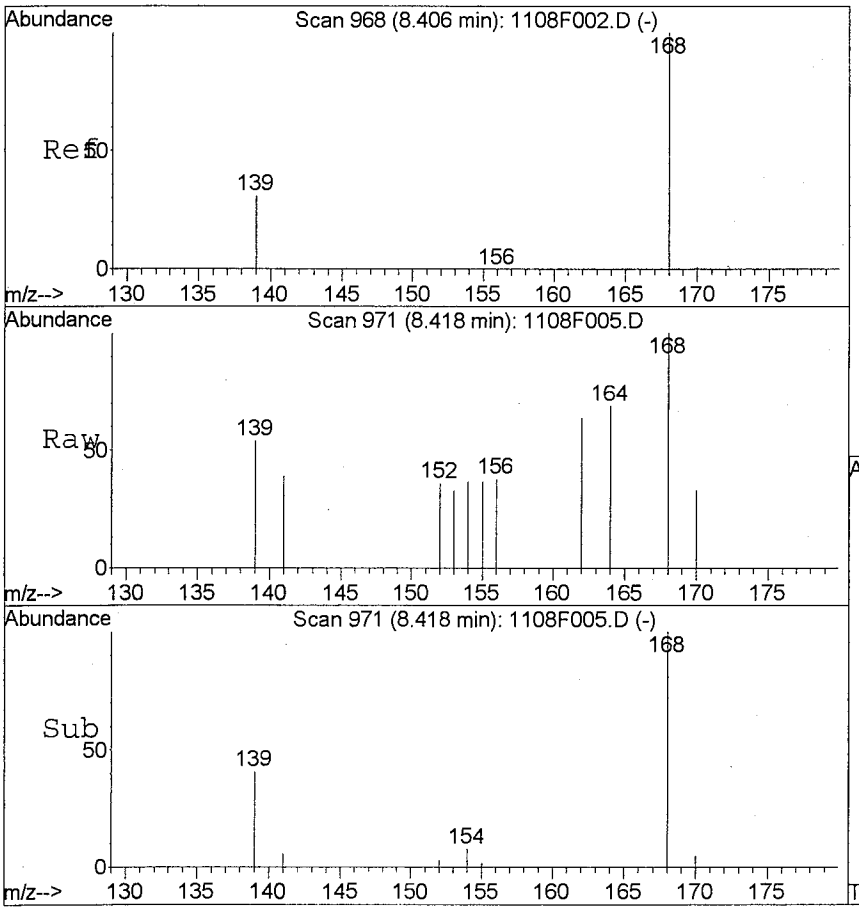


#13
Acenaphthene
Concen: 1.35 ng/ml
RT: 8.11 min Scan# 905
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:154 Resp: 213

Ion	Ratio	Lower	Upper
154	100		
153	126.0	78.6	138.6
152	71.2	21.5	81.5

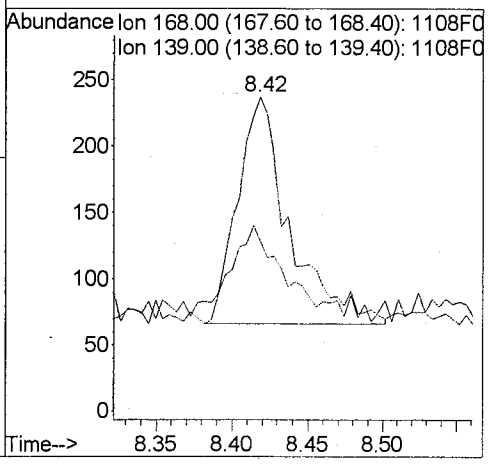


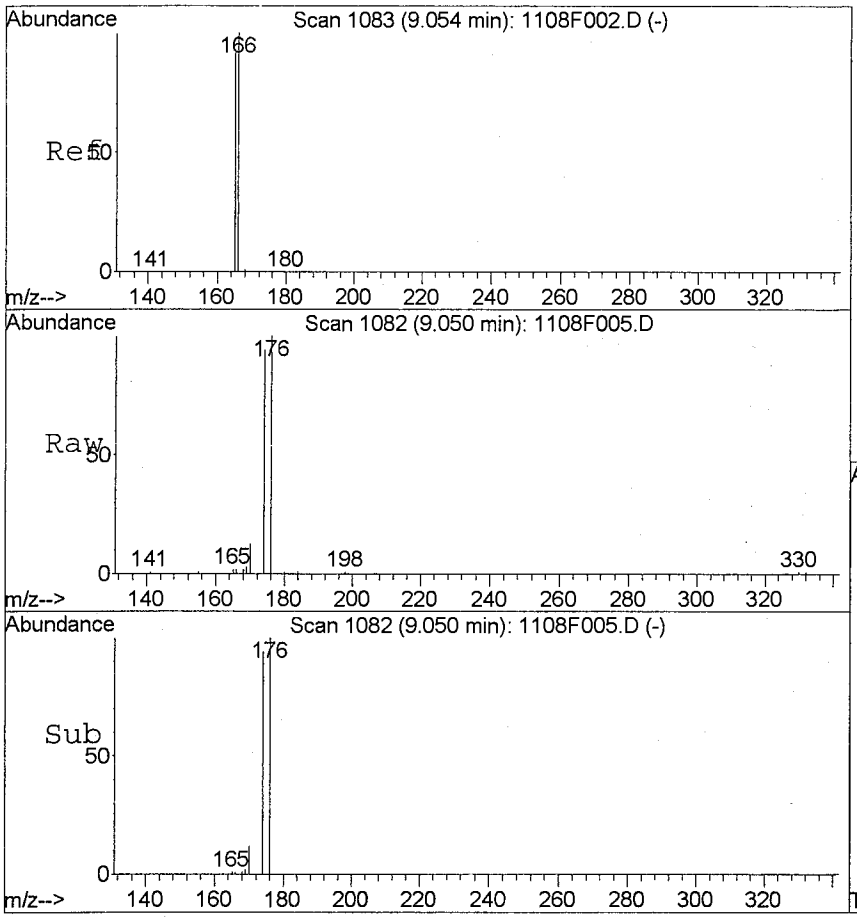


#14
Dibenzofuran
Concen: 1.93 ng/ml
RT: 8.42 min Scan# 971
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:168 Resp: 407

Ion	Ratio	Lower	Upper
168	100		
139	26.3	1.2	61.2

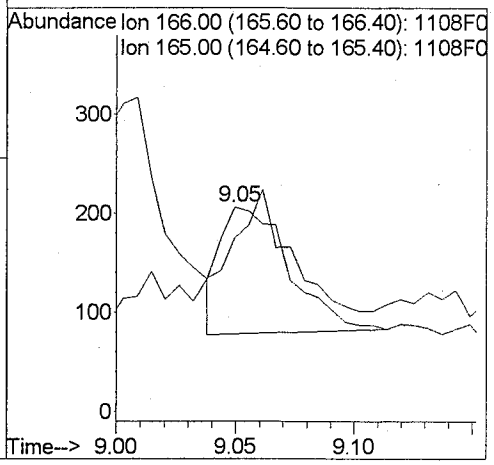


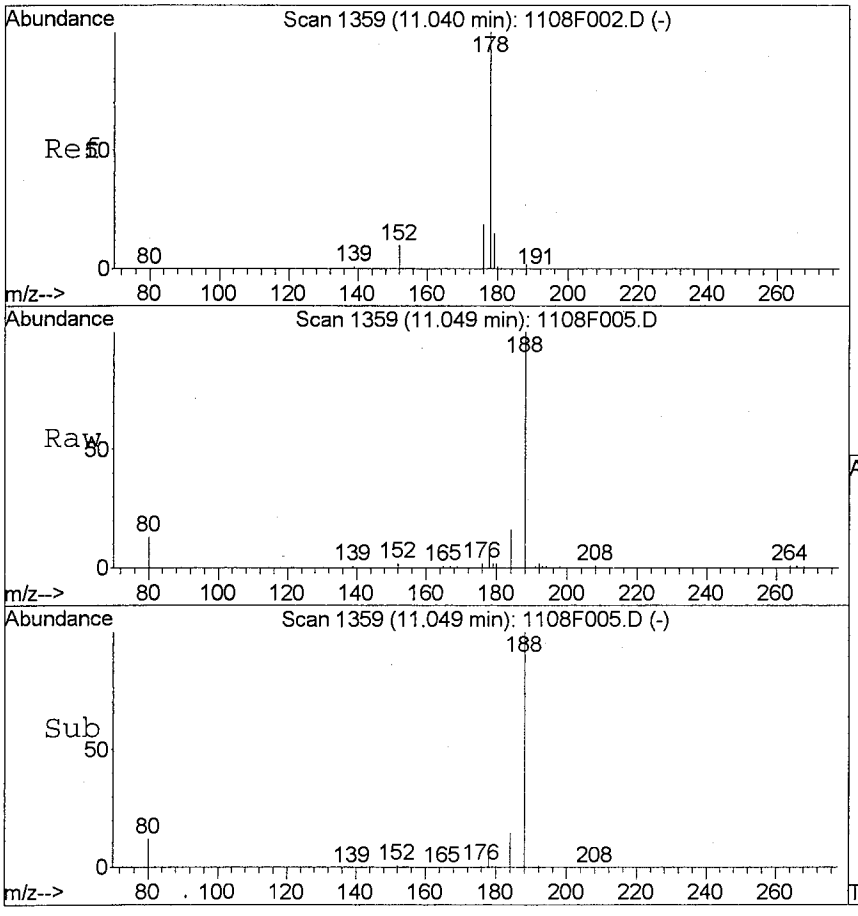


#17
Fluorene
Concen: 1.53 ng/ml
RT: 9.05 min Scan# 1082
Delta R.T. -0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:166 Resp: 258

Ion	Ratio	Lower	Upper
166	100		
165	54.5	62.9	122.9#

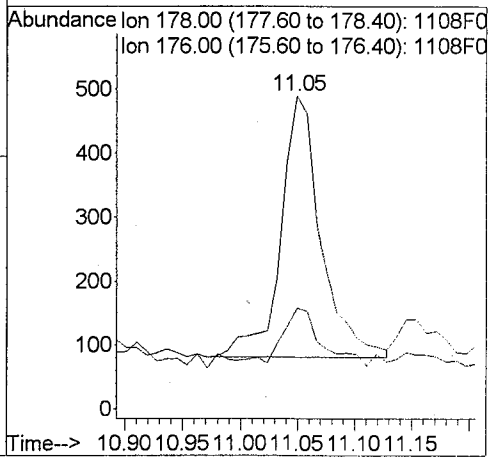


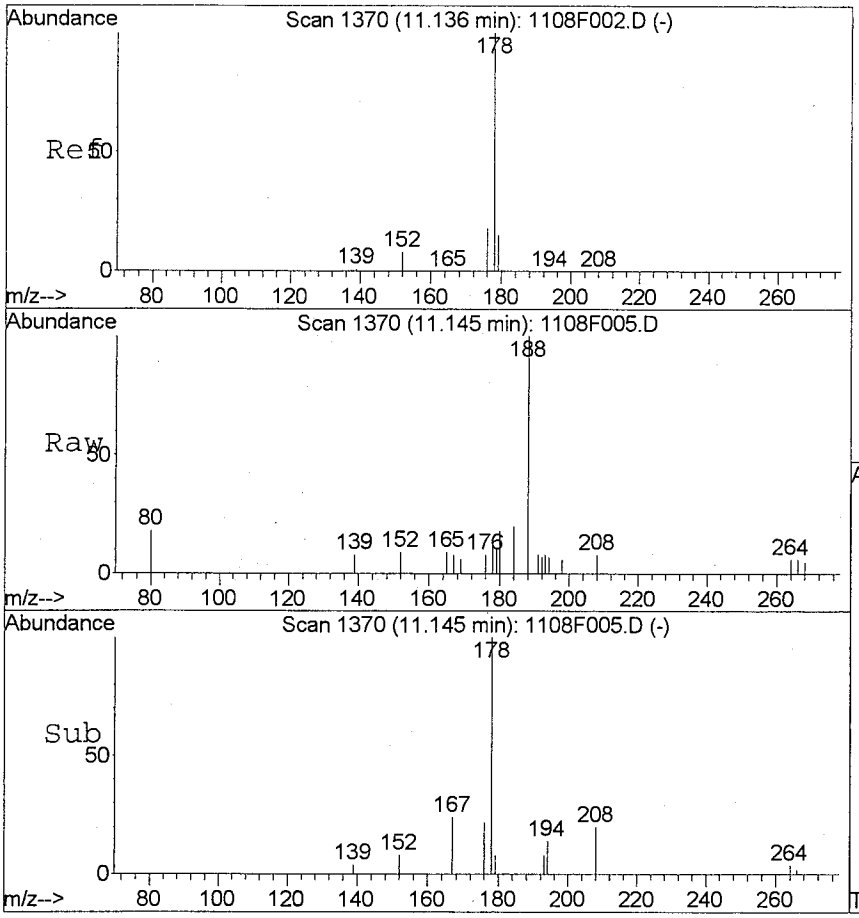


#28
Phenanthrene
Concen: 4.38 ng/ml
RT: 11.05 min Scan# 1359
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:178 Resp: 998

Ion	Ratio	Lower	Upper
178	100		
176	23.0	0.0	48.7

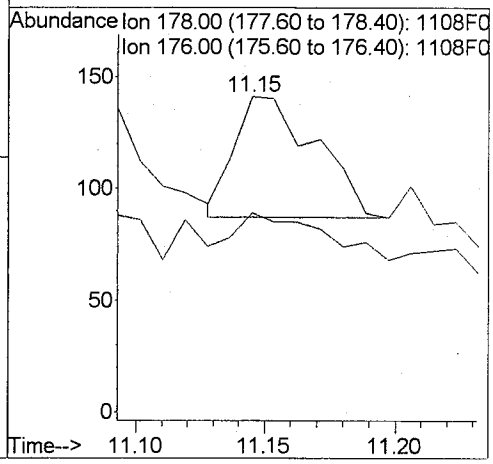


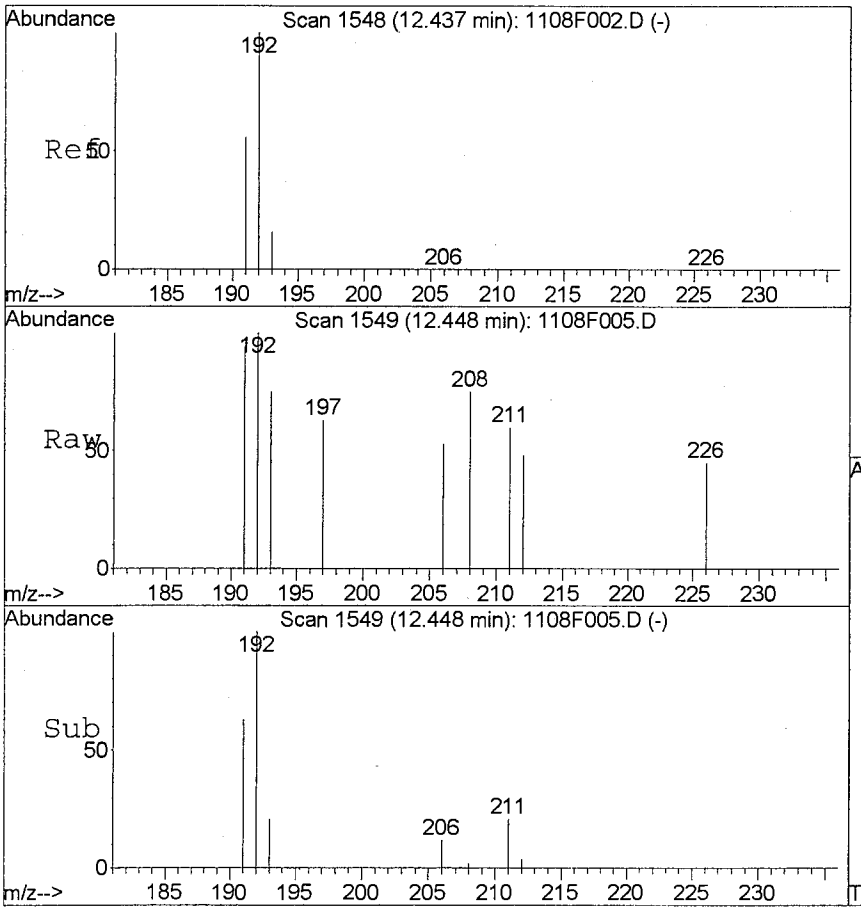


#29
Anthracene
Concen: 0.60 ng/ml
RT: 11.15 min Scan# 1370
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:178 Resp: 117

Ion	Ratio	Lower	Upper
178	100		
176	38.9	0.0	48.3

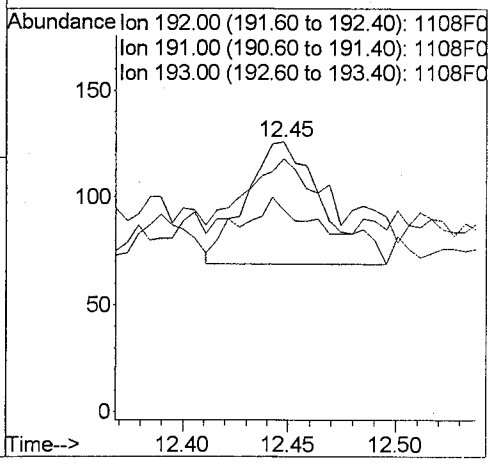


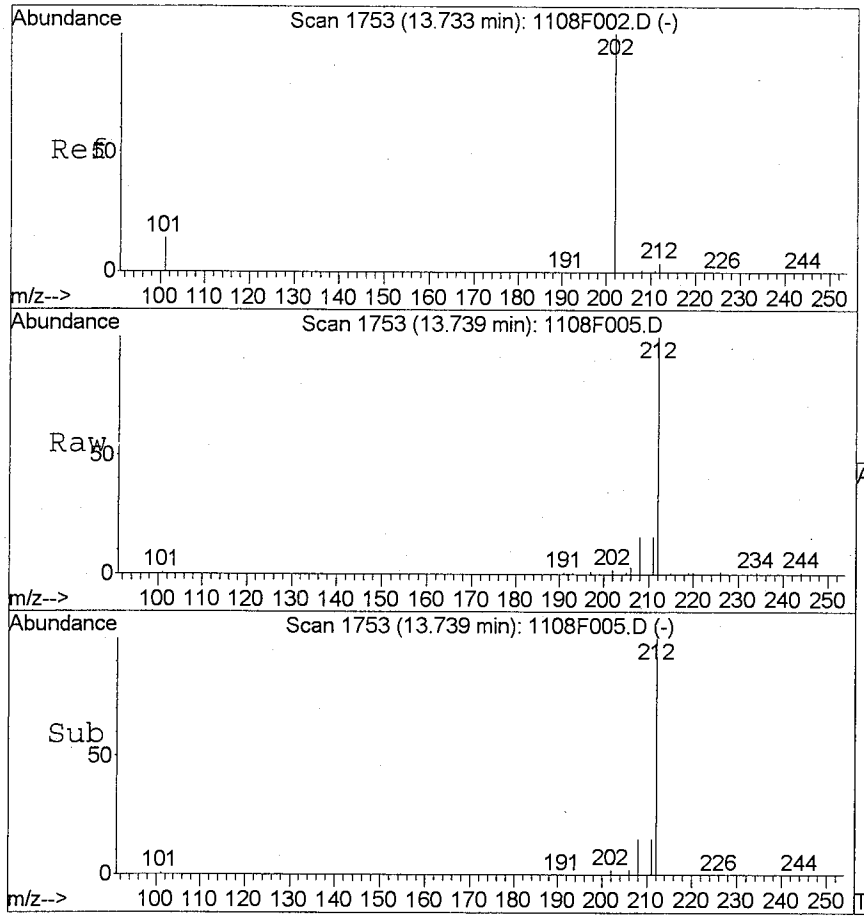


#31
1-Methylphenanthrene
Concen: 0.92 ng/ml
RT: 12.45 min Scan# 1549
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:192 Resp: 143

Ion	Ratio	Lower	Upper
192	100		
191	54.4	26.3	86.3
193	19.3	0.0	45.7

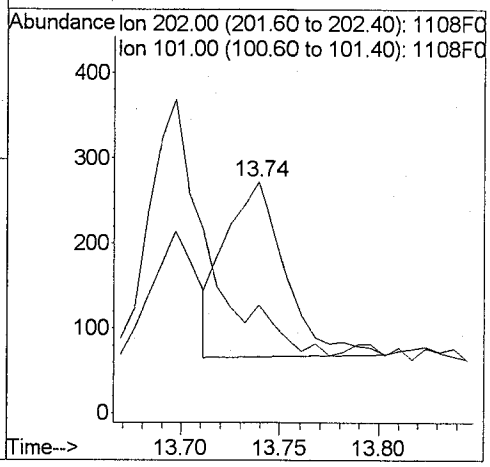


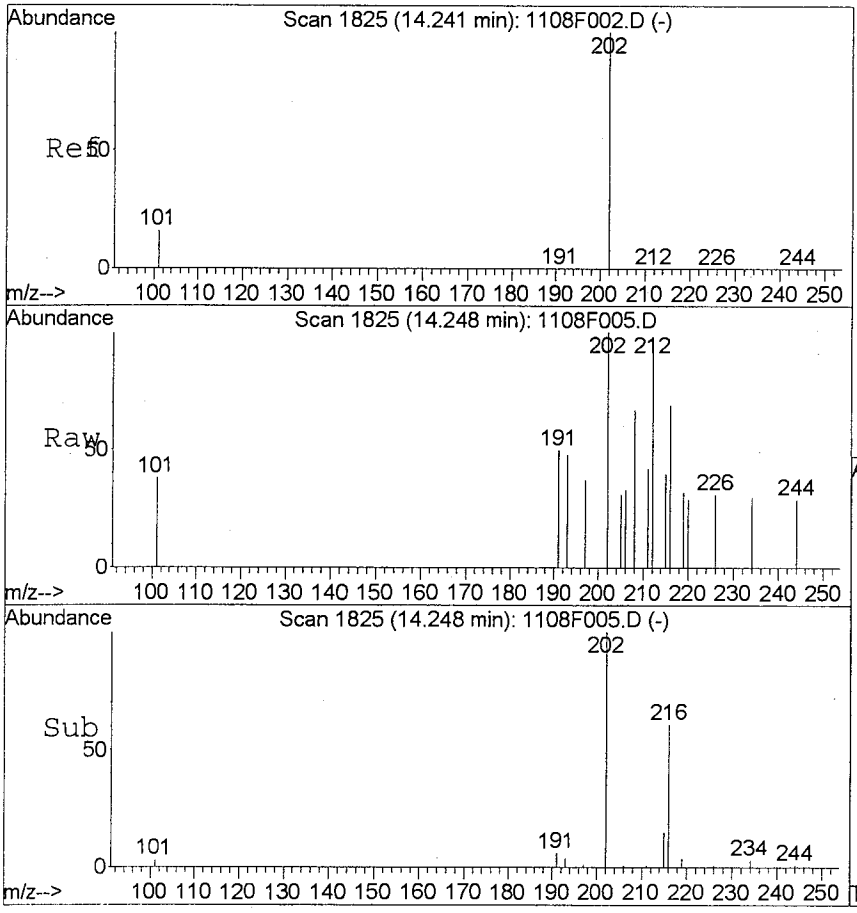


#36
Fluoranthene
Concen: 1.92 ng/ml
RT: 13.74 min Scan# 1753
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:202 Resp: 435

Ion	Ratio	Lower	Upper
202	100		
101	29.1	0.0	44.3

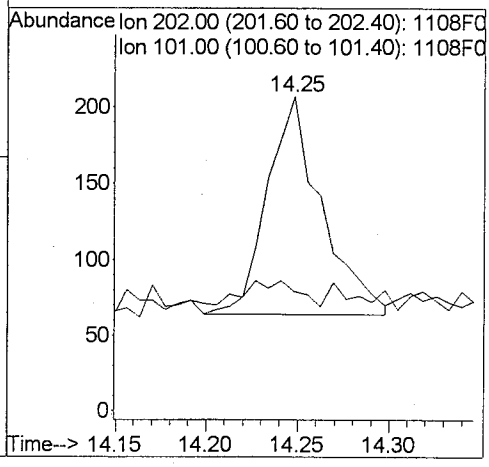


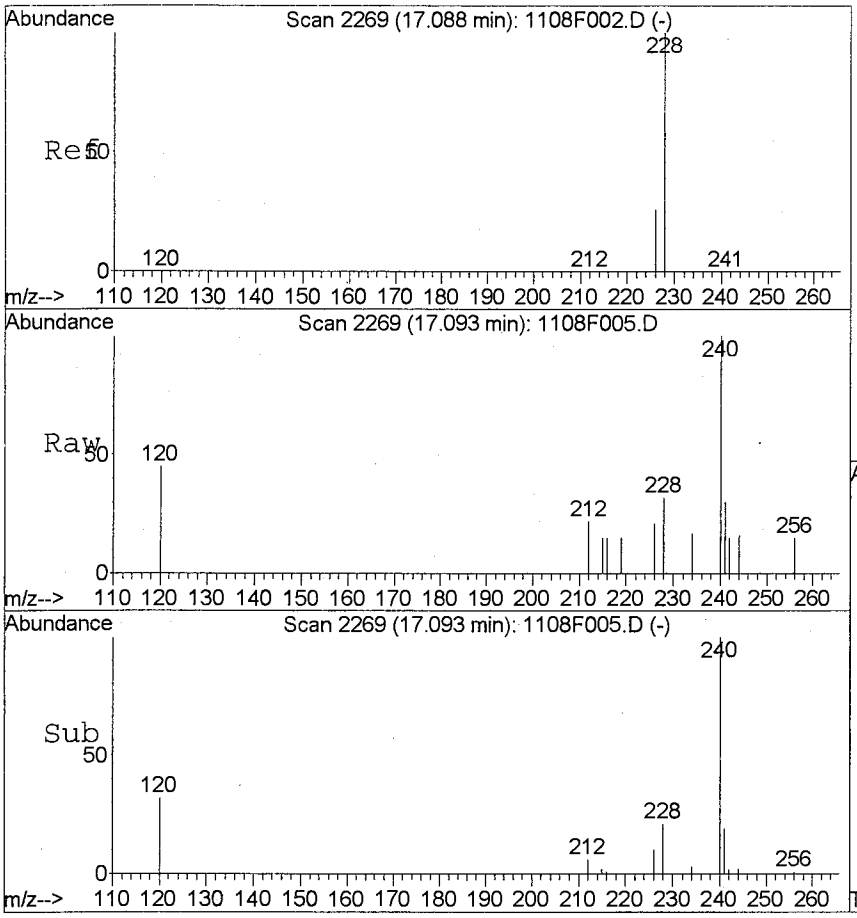


#39
Pyrene
Concen: 1.49 ng/ml
RT: 14.25 min Scan# 1825
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:202 Resp: 293

Ion	Ratio	Lower	Upper
202	100		
101	5.6	0.0	46.2

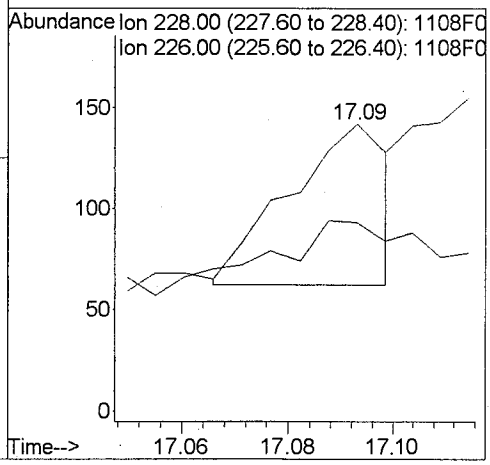


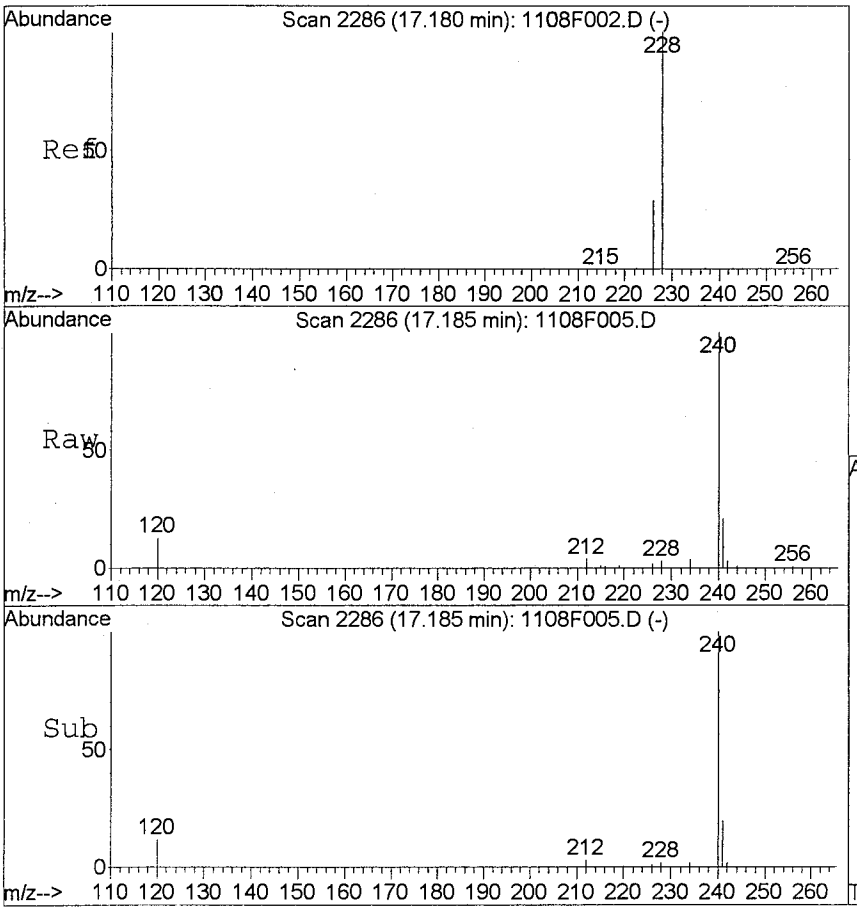


#42
Benz(a)anthracene
Concen: 0.70 ng/ml m
RT: 17.09 min Scan# 2269
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:228 Resp: 105

Ion	Ratio	Lower	Upper
228	100		
226	65.5	0.0	55.8#

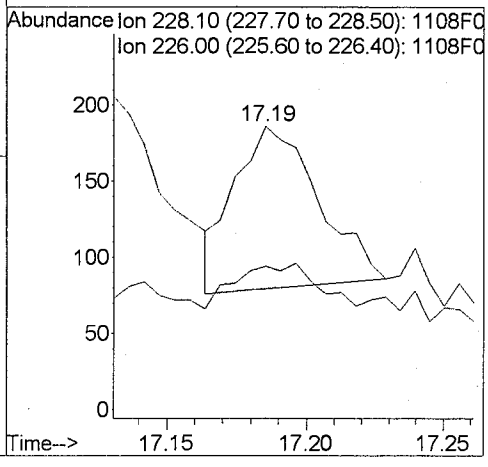


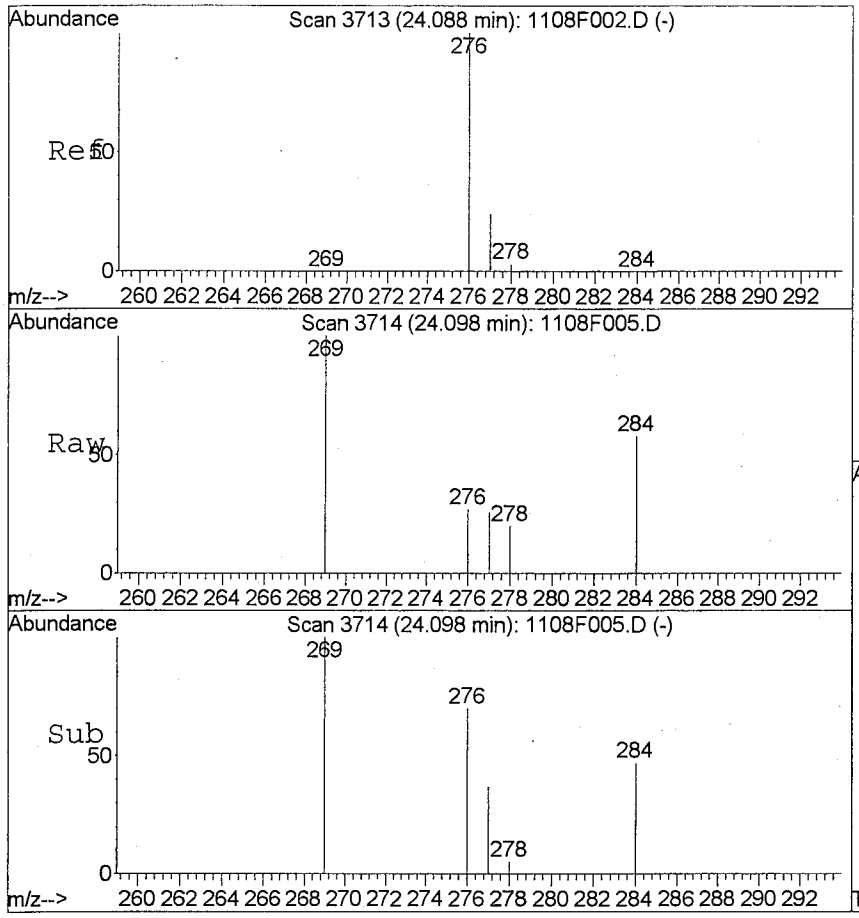


#43
Chrysene
Concen: 1.40 ng/ml
RT: 17.19 min Scan# 2286
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:228 Resp: 224

Ion	Ratio	Lower	Upper
228	100		
226	28.0	0.0	58.5

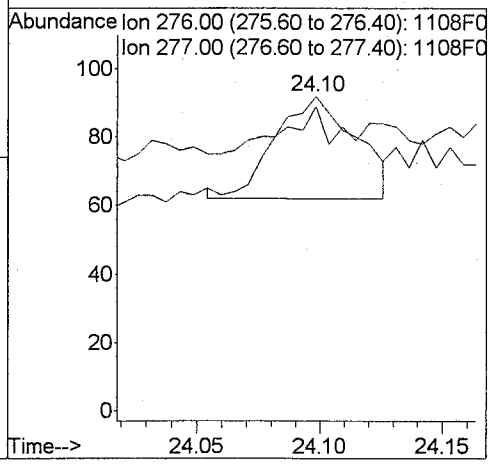


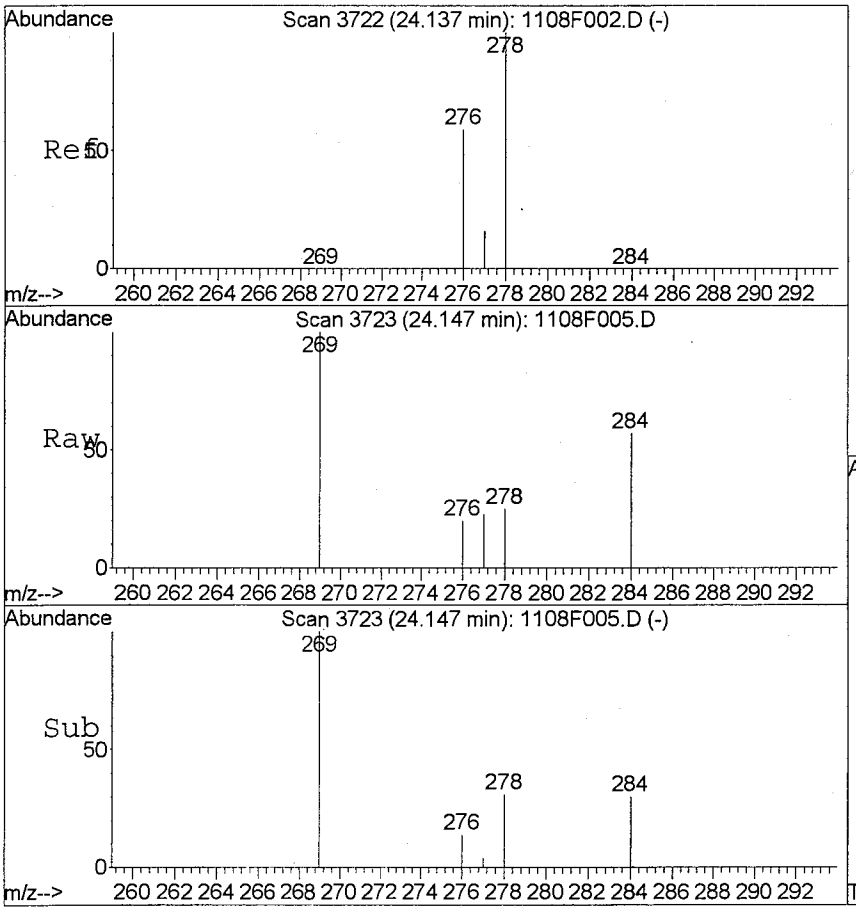


#54
Indeno(1,2,3-cd)pyrene
Concen: 1.31 ng/ml m
RT: 24.10 min Scan# 3714
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:276 Resp: 68

Ion	Ratio	Lower	Upper
276	100		
277	96.7	0.0	54.0#

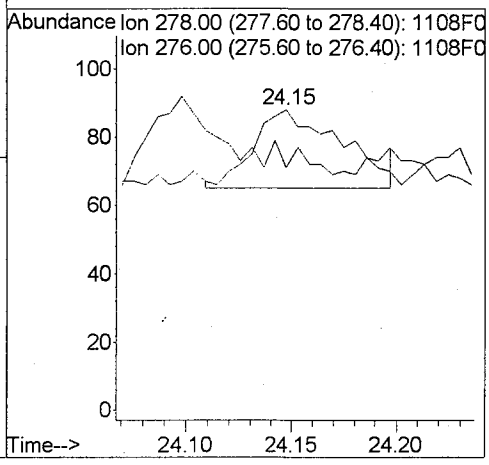


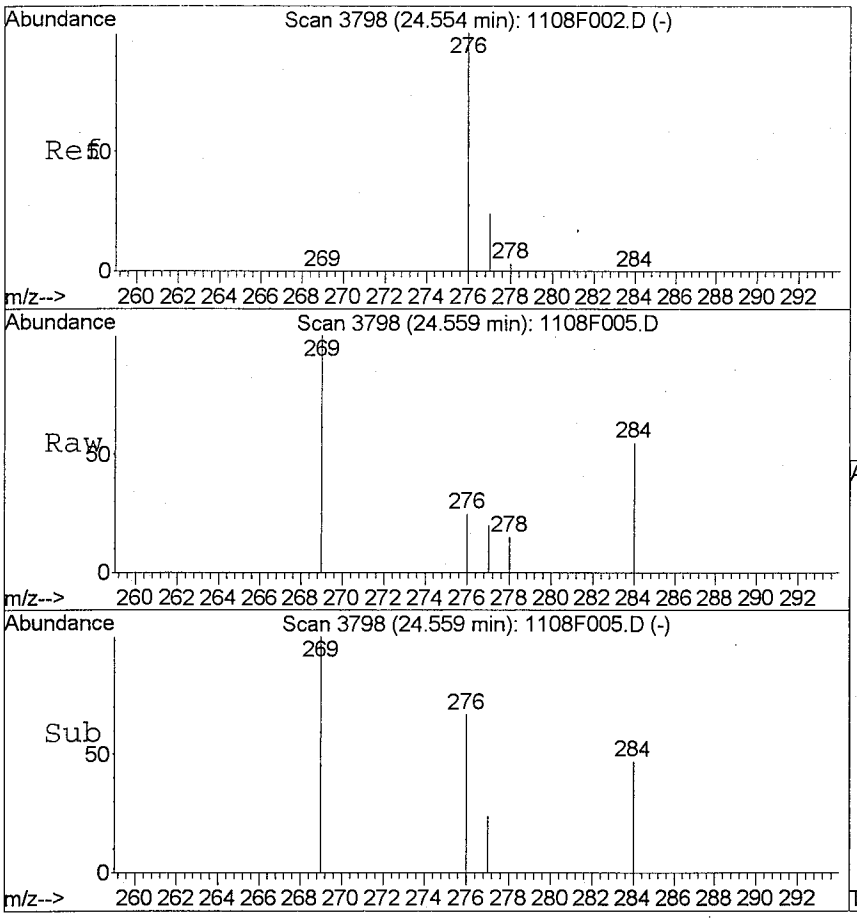


#55
Dibenz(a,h)anthracene
Concen: 0.92 ng/ml m
RT: 24.15 min Scan# 3723
Delta R.T. 0.01 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:278 Resp: 69

Ion	Ratio	Lower	Upper
278	100		
276	80.7	29.0	89.0

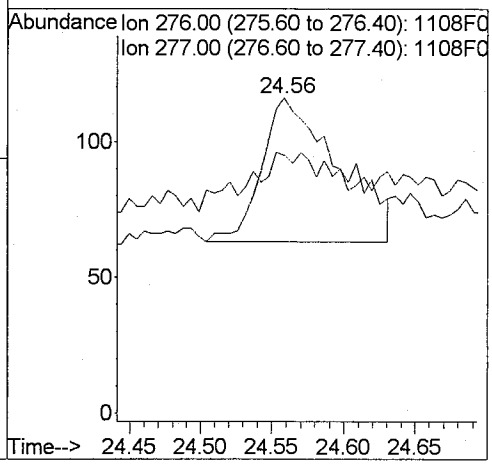




#56
Benzo(g,h,i)perylene
Concen: 2.28 ng/ml
RT: 24.56 min Scan# 3798
Delta R.T. 0.00 min
Lab File: 1108F005.D
Acq: 8 Nov 2003 8:13 am

Tgt Ion:276 Resp: 196

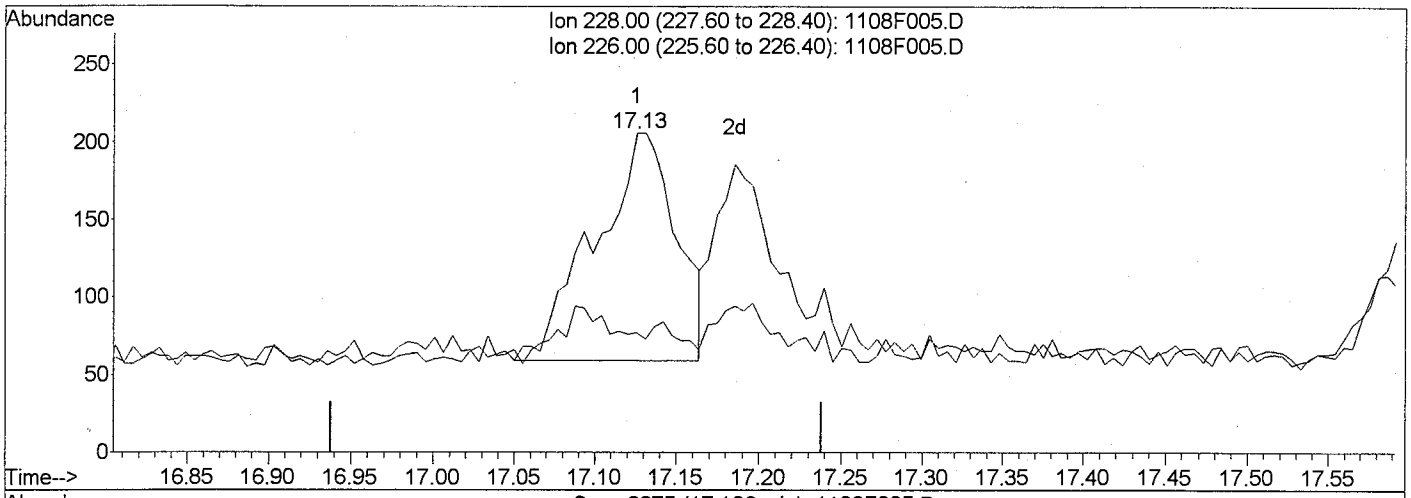
Ion	Ratio	Lower	Upper
276	100		
277	24.5	0.0	54.3

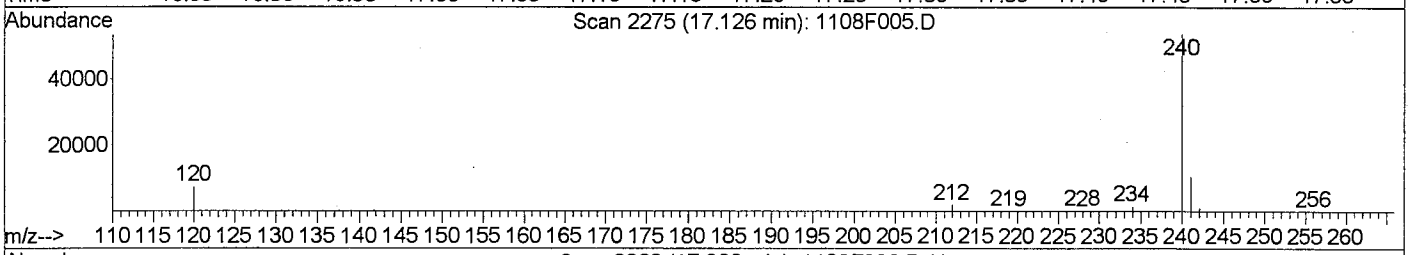


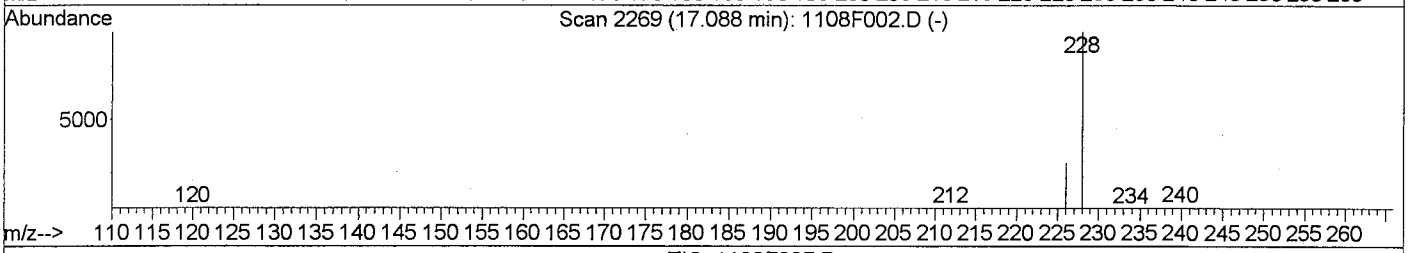
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F005.D Vial: 2
Acq On : 8 Nov 2003 8:13 am Operator: LWeiskopf
Sample : KWG0317378-4 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F005.D

(42) Benz(a)anthracene (T)

17.13min 3.40ng/ml

response 509

Ion	Exp%	Act%
228.00	100	100
226.00	25.80	7.48
0.00	0.00	0.00
0.00	0.00	0.00

1108F005.D 1107ALK.M Mon Nov 10 16:26:50 2003

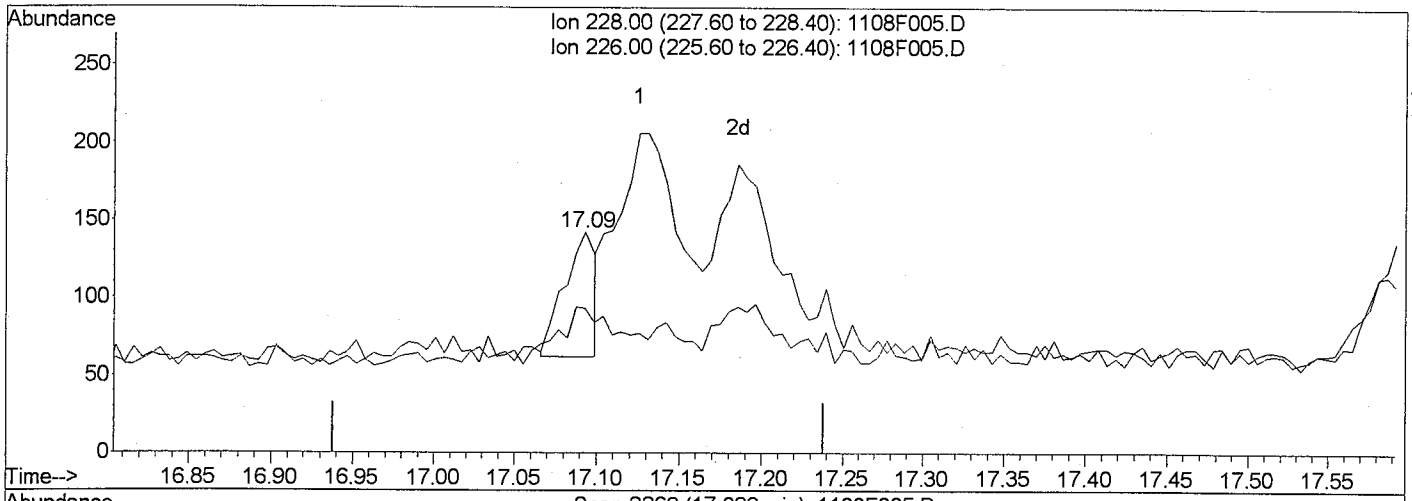
Quantitation Report (Qedit)

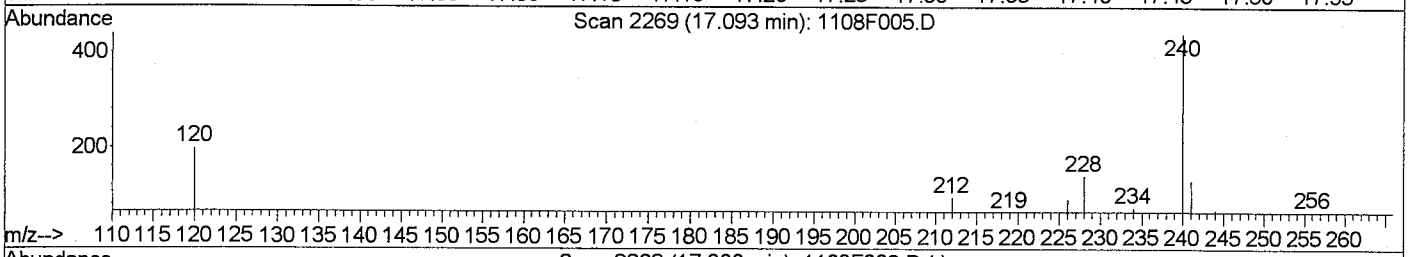
Data File : J:\MS11\DATA\110803\1108F005.D
Acq On : 8 Nov 2003 8:13 am
Sample : KWG0317378-4 MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:24 2003

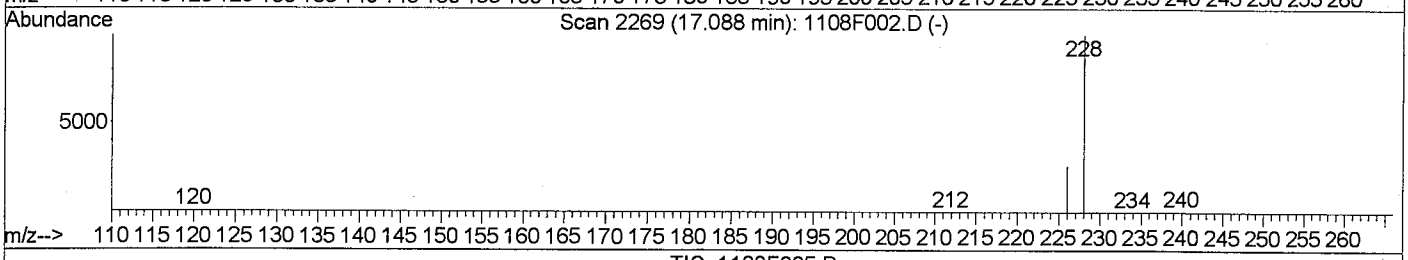
Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F005.D

(42) Benz(a)anthracene (T)

17.09min 0.70ng/ml m

response 105

Ion	Exp%	Act%
228.00	100	100
226.00	25.80	65.49#
0.00	0.00	0.00
0.00	0.00	0.00

over integrated LW 11/10/03
MT 11/11/03

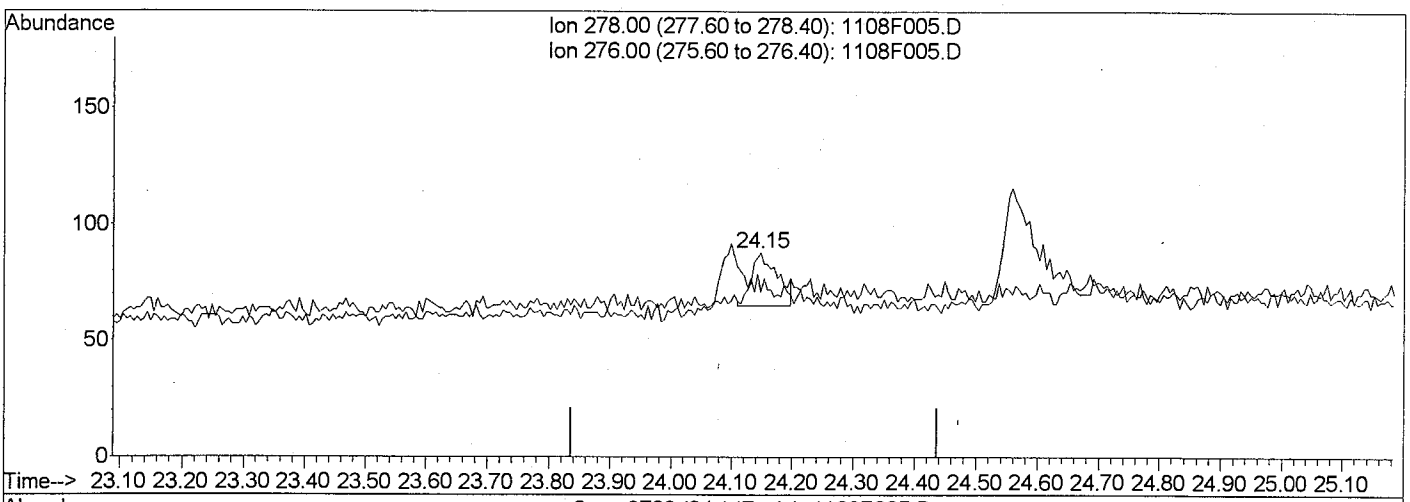
1108F005.D 1107ALK.M Mon Nov 10 16:26:56 2003

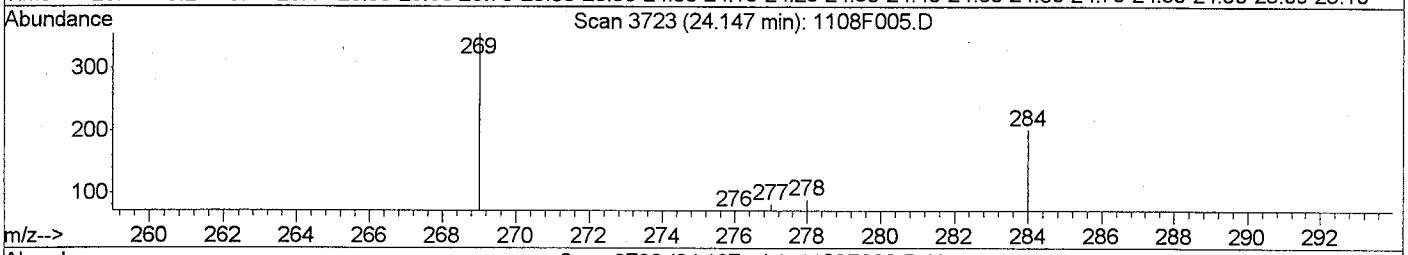
Quantitation Report (Qedit)

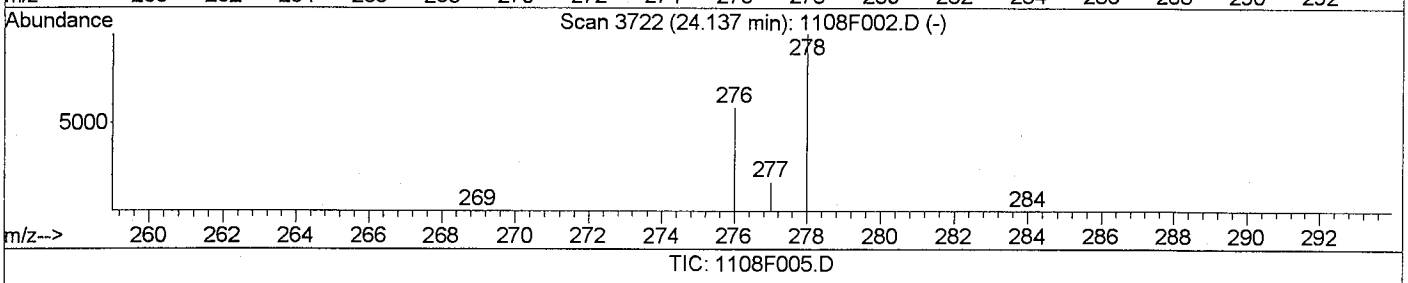
Data File : J:\MS11\DATA\110803\1108F005.D
Acq On : 8 Nov 2003 8:13 am
Sample : KWG0317378-4 MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:24 2003

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F005.D

(55) Dibenz(a,h)anthracene (T)

24.15min 0.92ng/ml m

response 69

Ion	Exp%	Act%
278.00	100	100
276.00	59.00	80.68
0.00	0.00	0.00
0.00	0.00	0.00

missed 11/10/03

mt 11/11/03

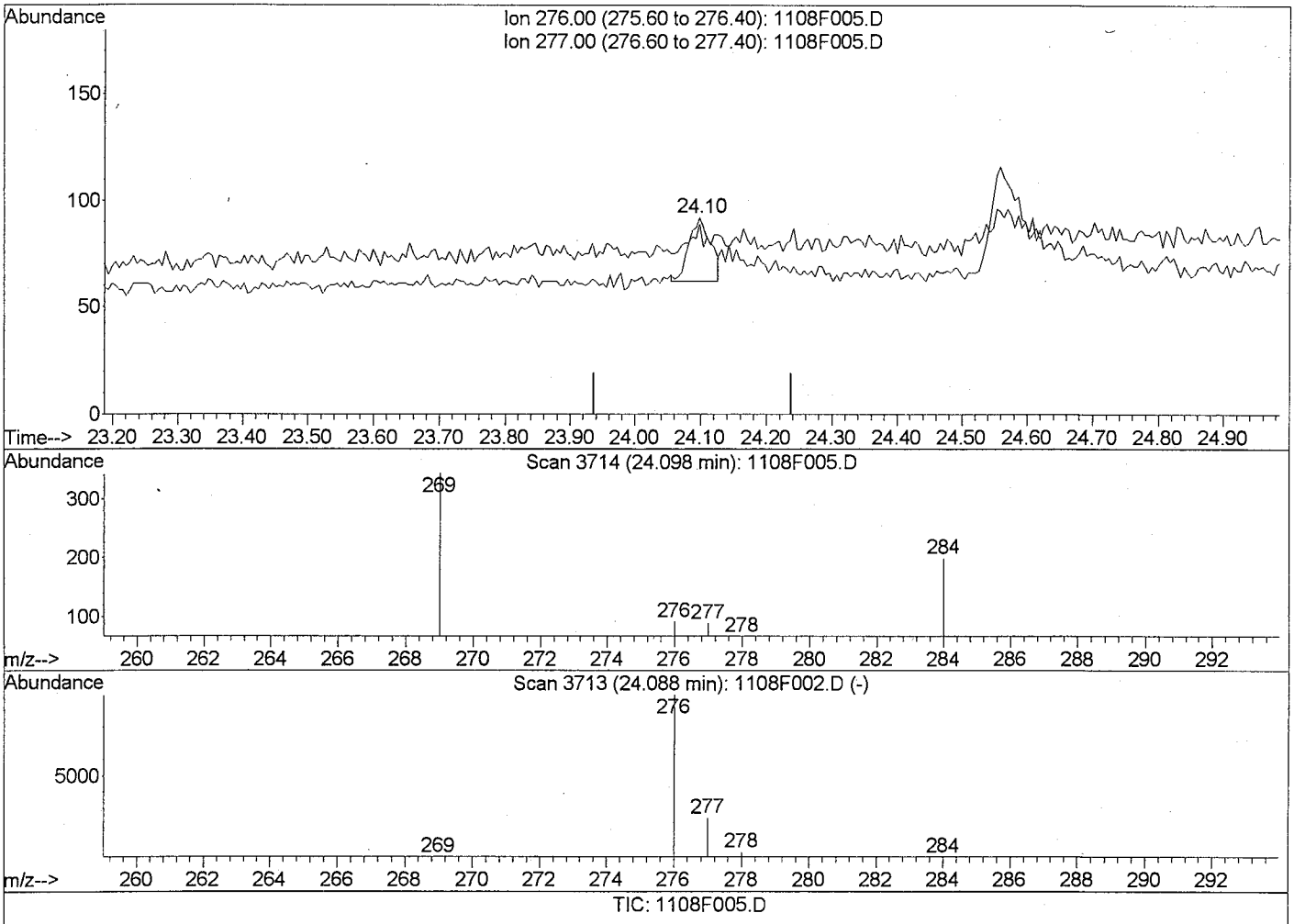
mt 11/11/03

1108F005.D 1107ALK.M Mon Nov 10 16:27:11 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F005.D Vial: 2
Acq On : 8 Nov 2003 8:13 am Operator: LWeiskopf
Sample : KWG0317378-4 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F005.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.10min 1.31ng/ml m

response 68

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	96.74#
0.00	0.00	0.00
0.00	0.00	0.00

missed Q 11/10/3 mt 11/11/03

1108F005.D 1107ALK.M Mon Nov 10 16:27:16 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4MS
Lab Code: KWG0317378-1

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**3.53**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	**3.54**		0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	**3.68**		0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	**3.67**		0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	**4.02**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	**3.91**		0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	**3.83**		0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	**4.11**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	**4.01**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	**3.99**		0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	**3.91**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**4.13**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	**4.14**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	**3.80**		0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	**3.75**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	**4.07**		0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4MS
Lab Code: KWG0317378-1

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**4.01**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	**3.69**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	**3.99**		0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	**3.88**		0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**4.24**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	**4.23**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	**3.78**		0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	77	37-107	11/08/03	Acceptable
Fluoranthene-d10	89	18-137	11/08/03	Acceptable
Terphenyl-d14	97	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F012.D
Lab ID: KWG0317378-1 -- K2308419-004MS
RunType: MS
Matrix: WATER

Date Acquired: 11/08/2003 12:27
Date Quantitated: 11/10/2003 16:30
Batch ID: KWG0318114
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	Pentachlorophenol	-25.4	NA	20	
Surrogates	2,4,6-Tribromophenol	0	6	133	
Std MRL Unsupported by ICAL	Pentachlorophenol	5.0	0.99	NA	

Primary Review: 11/10/03

Secondary Review: mt 11/11/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/04/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245667	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\110803\1108F012.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 12:27	**Quant Date:**	11/10/2003 16:30	**Vial:**	9
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0317378-1 -- K2308419-004MS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	237913	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	123071	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	173201	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	161409	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	101634	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.06	0.00	0.00	164	276361	1,586	79	34-115	OK	
2	Fluorene-d10	9.01	0.01	0.00	176	189812	1,542	77	37-107	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	6-133	*	
3	Fluoranthene-d10	13.70	0.01	0.00	212	309251	1,784	89	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	285619	1,942	97	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	968738	3,601	3.53		
1	2-Methylnaphthalene	6.42	0.01	0.00	142	573276	3,609	3.54		
1	1-Methylnaphthalene	6.57	0.01	0.00	142	558296	3,749	3.68		
1	Biphenyl	7.09		0.00	154	721062	3,744	3.67		
1	2,6-Dimethylnaphthalene	7.33	0.01	0.00	156	485421	3,583	3.51		
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	971718	4,098	4.02		
2	Acenaphthene	8.12	0.01	0.00	154	571222	3,909	3.83		
2	Dibenzofuran	8.41		0.00	168	780544	3,984	3.91		
2	2,3,5-Trimethylnaphthalene	8.83	0.01	0.00	170	495756	3,787	3.71		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F012.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 12:27	**Quant Date:**	11/10/2003 16:30	**Vial:**	9
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0317378-1 -- K2308419-004MS			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	9.06	0.01	0.00	166	655639	4,188	4.11		
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	
2	C3-Fluorenes				208	0		0.020	U	
2	Pentachlorophenol				266	0		0.095	U	
3	Dibenzothiophene	10.79	0.01	0.00	184	818293	4,095	4.01		
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	855110	4,074	3.99		
3	Anthracene	11.14		0.00	178	714492	3,984	3.91		
3	Carbazole	11.57	0.01	0.00	167	692108	4,883	4.79		
3	1-Methylphenanthrene	12.44		0.00	192	602397	4,227	4.14		
3	C1-Phenanthrenes/Anthracenes				192	0		0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	879682	4,210	4.13		
4	Pyrene	14.24		0.00	202	891931	4,228	4.14		
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.09		0.00	228	622044	3,873	3.80		
4	Chrysene	17.19	0.01	0.00	228	657228	3,826	3.75		
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.11	0.01	0.00	252	562779	4,148	4.07		
5	Benzo(k)fluoranthene	20.19	0.01	0.00	252	704719**m**	4,093	4.01		
5	Benzo(e)pyrene	21.09	0.01	0.00	252	572718	3,759	3.69		
5	Benzo(a)pyrene	21.28	0.01	0.00	252	470143	4,074	3.99		
5	Perylene	21.61	0.01	0.00	252	513193	3,961	3.88		
5	Indeno(1,2,3-cd)pyrene	24.09		0.00	276	303251	4,322	4.24		
5	Dibenz(a,h)anthracene	24.15	0.01	0.00	278	435074**m**	4,315	4.23		
5	Benzo(g,h,i)perylene	24.56	0.01	0.00	276	448126	3,853	3.78		

Prep Amount: 1020 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F012.D Vial: 9
Acq On : 8 Nov 2003 12:27 pm Operator: LWeiskopf
Sample : KWG0317378-1 K2308419-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:55 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	237913	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	123071	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	173201	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	161409	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	101634	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	276361	1585.71	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 158.57%			
16) Fluorene-d10	9.01	176	189812	1542.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 154.21%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	309251	1783.95	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 178.40%			
41) Terphenyl-d14	14.74	244	285619	1941.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 194.16%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	968738	3601.15	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	573276	3608.84	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	558296	3749.48	ng/ml	99
6) Biphenyl	7.09	154	721062	3743.56	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	485421	3582.56	ng/ml	100
12) Acenaphthylene	7.80	152	971718	4097.99	ng/ml	100
13) Acenaphthene	8.12	154	571222	3908.71	ng/ml	98
14) Dibenzofuran	8.41	168	780544	3984.27	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.83	170	495756	3786.94	ng/ml	96
17) Fluorene	9.06	166	655639	4188.07	ng/ml	100
24) Dibenzothiophene	10.79	184	818293	4094.86	ng/ml	99
28) Phenanthrene	11.05	178	855110	4073.60	ng/ml	100
29) Anthracene	11.14	178	714492	3984.12	ng/ml	99
30) Carbazole	11.57	167	692108	4882.57	ng/ml	100
31) 1-Methylphenanthrene	12.44	192	602397	4226.59	ng/ml	99
36) Fluoranthene	13.74	202	879682	4209.95	ng/ml	100
39) Pyrene	14.24	202	891931	4227.67	ng/ml	97
42) Benz(a)anthracene	17.09	228	622044	3872.66	ng/ml	100
43) Chrysene	17.19	228	657228	3826.38	ng/ml	100
49) Benzo(b)fluoranthene	20.11	252	562779	4147.68	ng/ml	100
50) Benzo(k)fluoranthene	20.19	252	704719m	4093.30	ng/ml	
51) Benzo(e)pyrene	21.09	252	572718	3759.35	ng/ml	100
52) Benzo(a)pyrene	21.28	252	470143	4073.59	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F012.D Vial: 9
Acq On : 8 Nov 2003 12:27 pm Operator: LWeiskopf
Sample : KWG0317378-1 K2308419-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:55 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

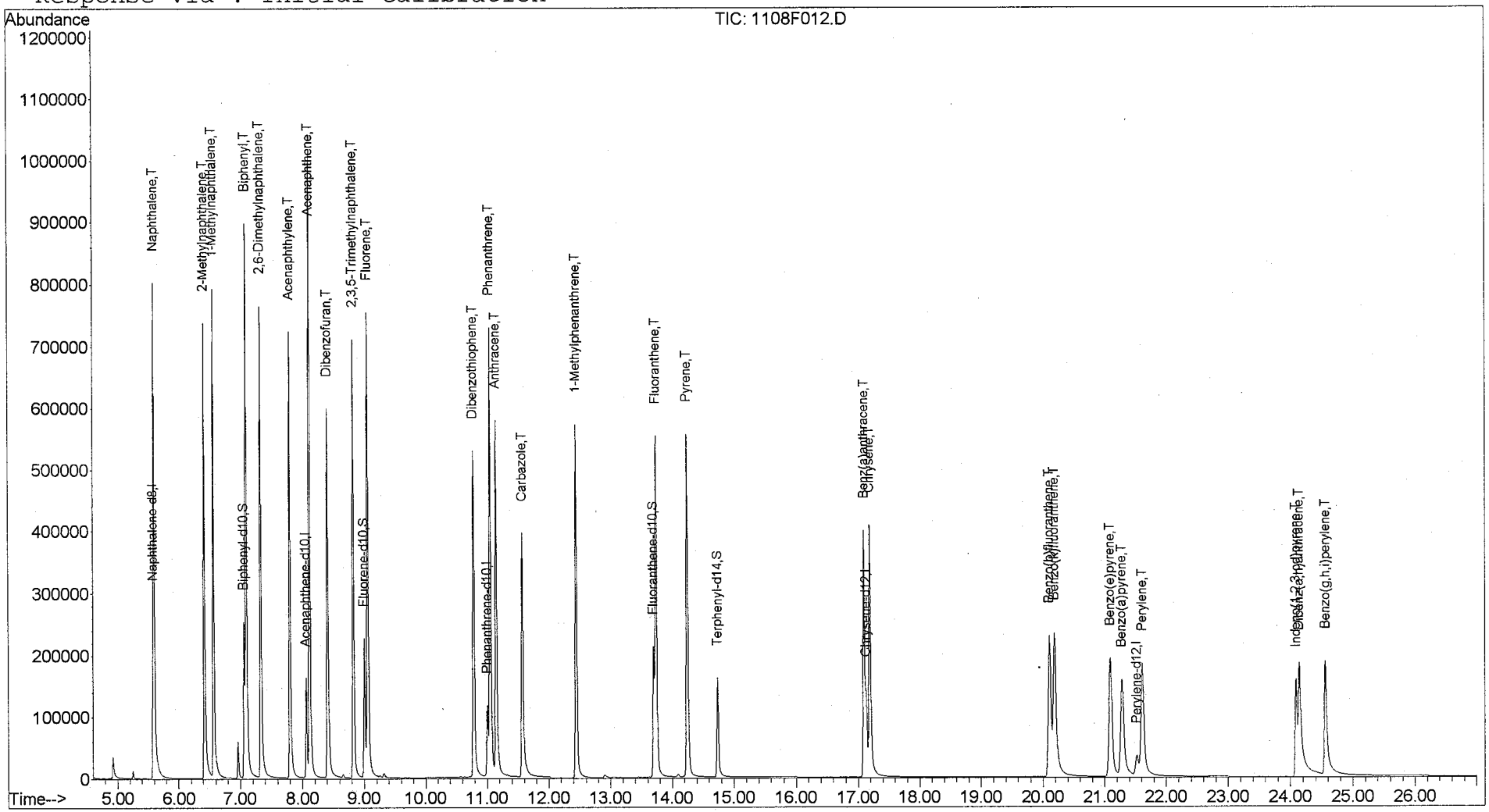
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.61	252	513193	3961.21	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	303251	4322.28	ng/ml	100
55)	Dibenz(a,h)anthracene	24.15	278	435074m	4314.98	ng/ml	
56)	Benzo(g,h,i)perylene	24.56	276	448126	3852.62	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F012.D Vial: 9
Acq On : 8 Nov 2003 12:27 pm Operator: LWeiskopf
Sample : KWG0317378-1 K2308419-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:30 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration



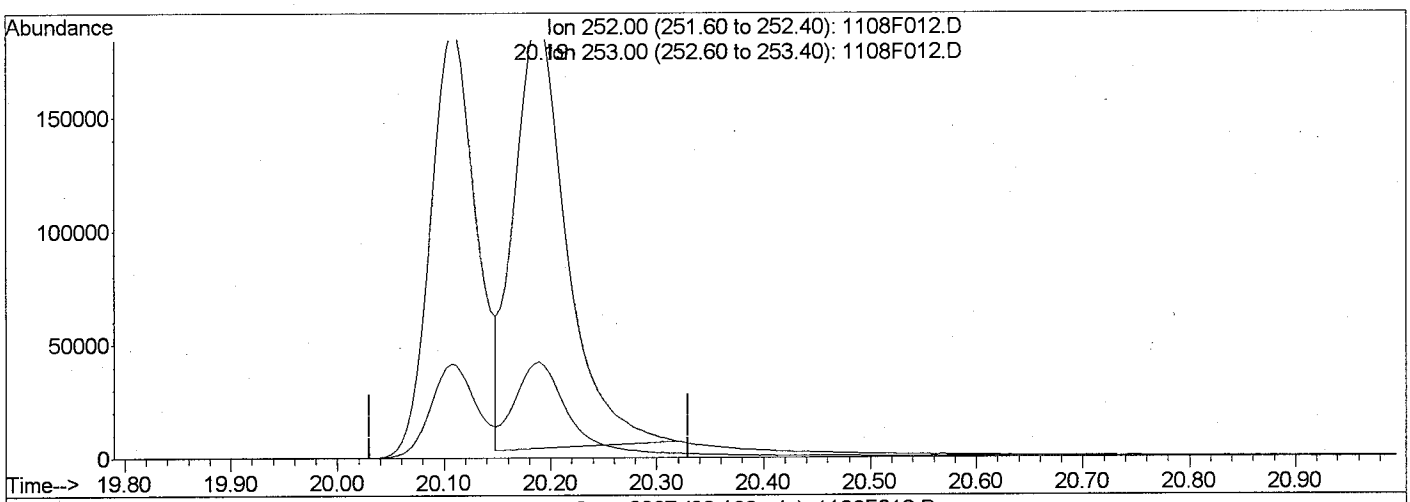
903

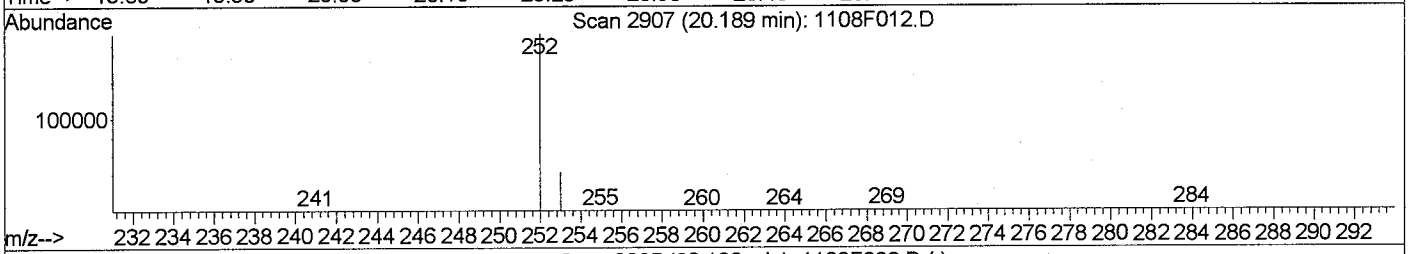
Quantitation Report (Qedit)

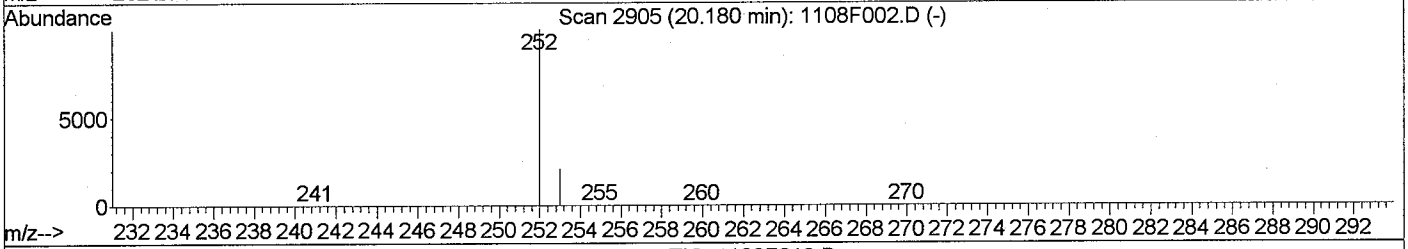
Data File : J:\MS11\DATA\110803\1108F012.D
Acq On : 8 Nov 2003 12:27 pm
Sample : KWG0317378-1 K2308419-004MS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:06 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F012.D

(50) Benzo(k)fluoranthene (T)

20.19min 3760.93ng/ml

response 647497

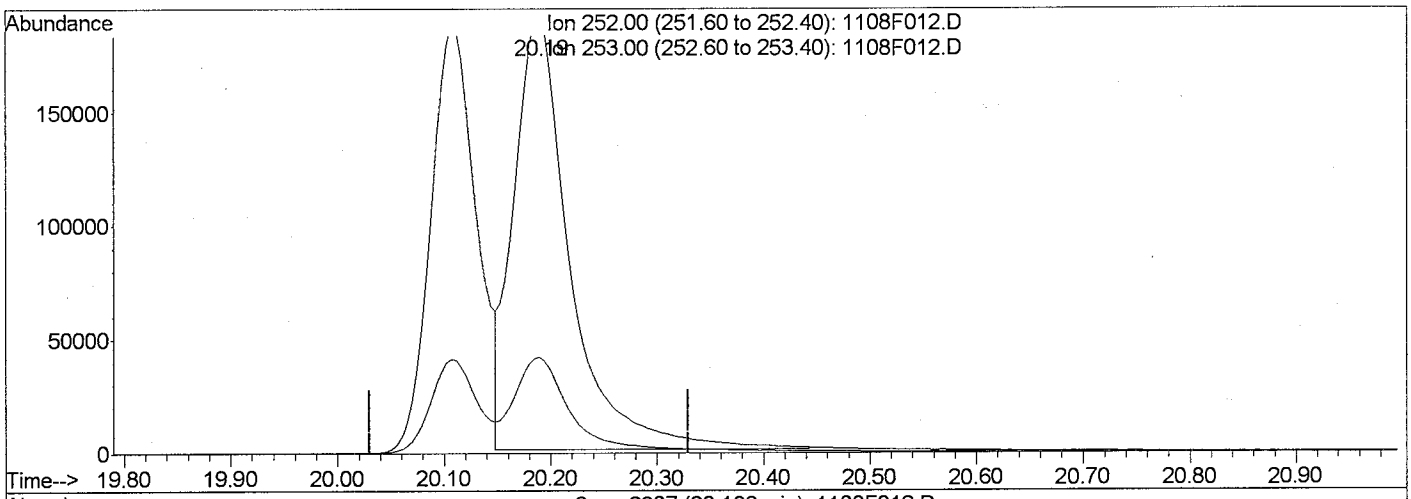
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.78
0.00	0.00	0.00
0.00	0.00	0.00

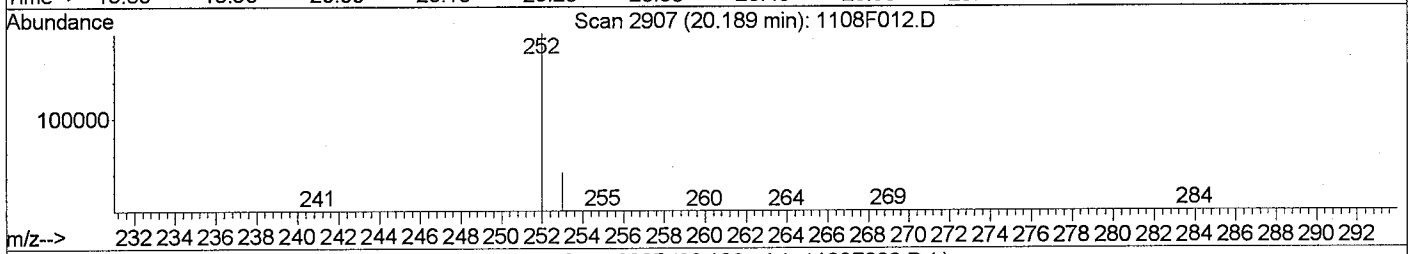
1108F012.D 1107ALK.M Mon Nov 10 16:32:18 2003

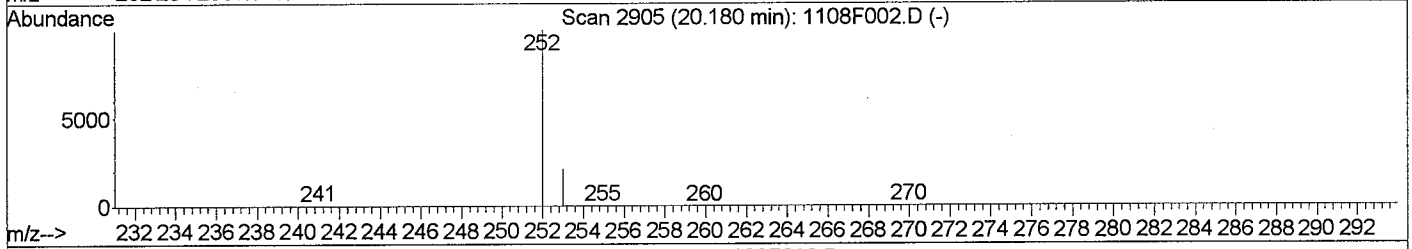
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F012.D Vial: 9
Acq On : 8 Nov 2003 12:27 pm Operator: LWeiskopf
Sample : KWG0317378-1 K2308419-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F012.D

(50) Benzo(k)fluoranthene (T)

20.19min 4093.30ng/ml m

response 704719

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.98
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/03 mt 11/11/03

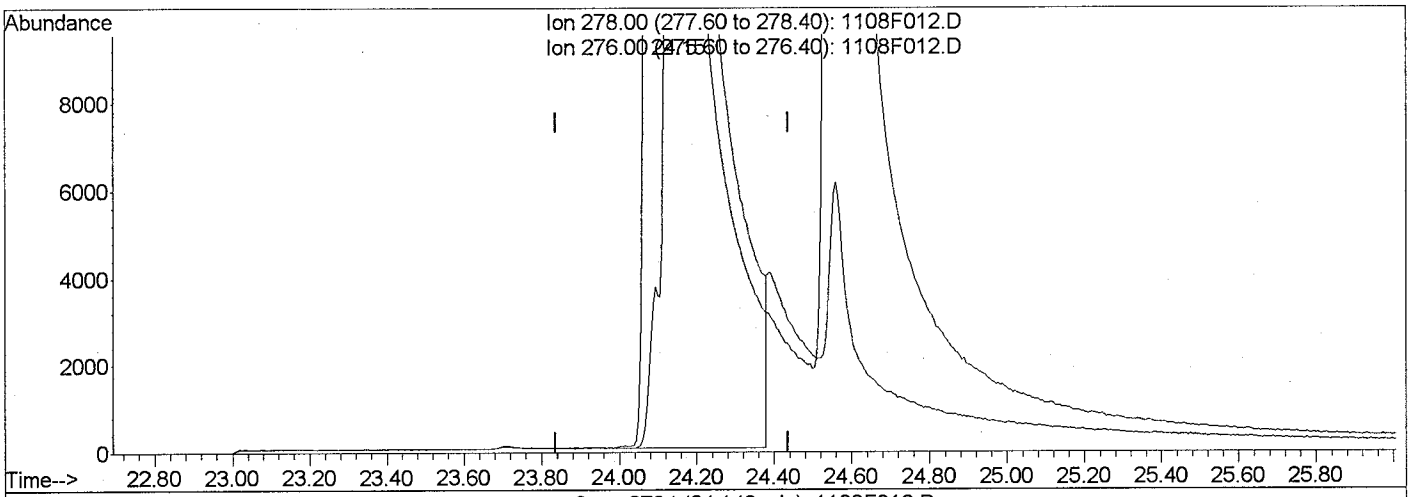
1108F012.D 1107ALK.M Mon Nov 10 16:32:23 2003

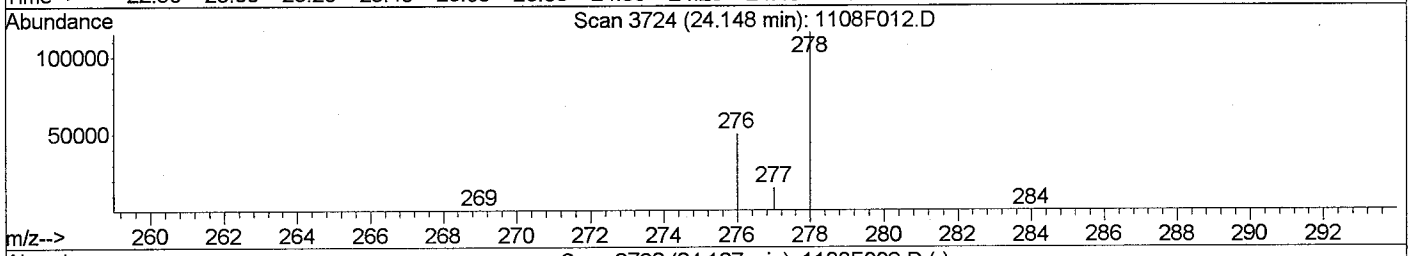
Quantitation Report (Qedit)

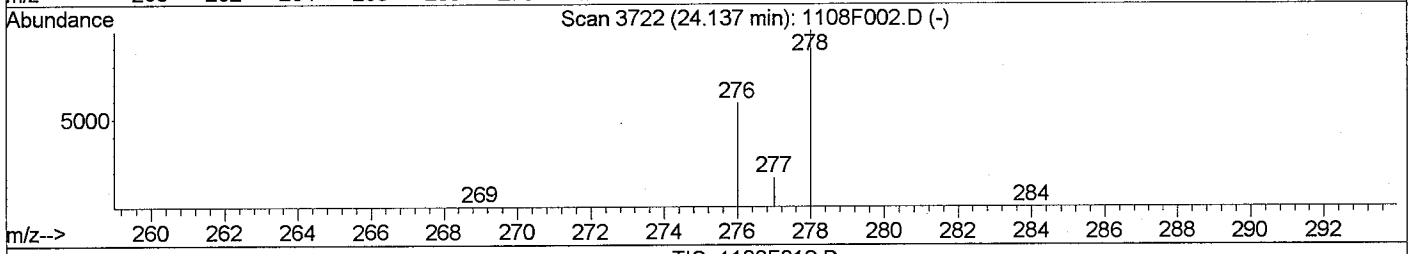
Data File : J:\MS11\DATA\110803\1108F012.D
Acq On : 8 Nov 2003 12:27 pm
Sample : KWG0317378-1 K2308419-004MS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:29 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F012.D

(55) Dibenz(a,h)anthracene (T)

24.15min 4076.02ng/ml

response 410980

Ion	Exp%	Act%
278.00	100	100
276.00	59.00	43.07
0.00	0.00	0.00
0.00	0.00	0.00

1108F012.D 1107ALK.M Mon Nov 10 16:32:29 2003

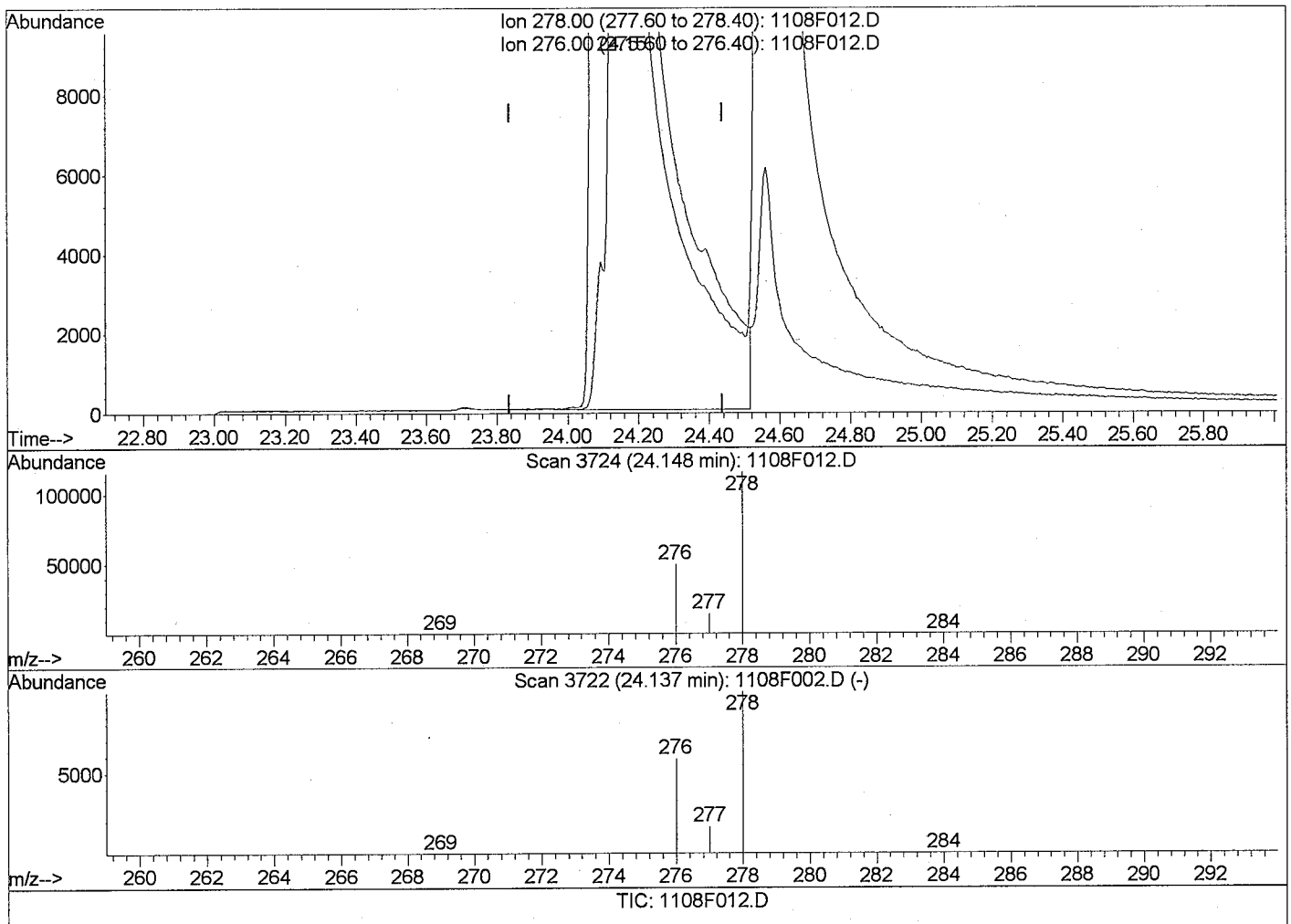
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F012.D
Acq On : 8 Nov 2003 12:27 pm
Sample : KWG0317378-1 K2308419-004MS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:30 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F012.D

(55) Dibenz(a,h)anthracene (T)

24.15min 4314.98ng/ml m

response 435074

Ion	Exp%	Act%
278.00	100	100
276.00	59.00	43.16
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/03 mk 11/11/03

1108F012.D 1107ALK.M Mon Nov 10 16:32:34 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4DMS
Lab Code: KWG0317378-2

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**3.35**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	**3.40**		0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	**3.46**		0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	**3.36**		0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	**3.53**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	**3.43**		0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	**3.37**		0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	**3.54**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	**3.32**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	**3.27**		0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	**3.07**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**3.26**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	**3.26**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	**2.98**		0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	**2.93**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	**3.19**		0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: 10/22/2003
Date Received: 10/25/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SW-4DMS
Lab Code: KWG0317378-2

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**3.15**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	**2.91**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	**3.16**		0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	**3.05**		0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**3.18**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	**3.13**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	**2.87**		0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	56	37-107	11/08/03	Acceptable
Fluoranthene-d10	70	18-137	11/08/03	Acceptable
Terphenyl-d14	75	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F013.D
Lab ID: KWG0317378-2 -- K2308419-004DMS
RunType: DMS
Matrix: WATER

Date Acquired: 11/08/2003 13:04
Date Quantitated: 11/10/2003 16:30
Batch ID: KWG0318114
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	Pentachlorophenol	-25.4	NA	20	
Surrogates	2,4,6-Tribromophenol	0	6	133	
Std MRL Unsupported by ICAL	Pentachlorophenol	5.0	0.99	NA	

Primary Review: 11/11/03

Secondary Review: mrt 11/11/03

Printed: 11/10/2003 17:47:13
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/04/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245668	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\110803\1108F013.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 13:04	**Quant Date:**	11/10/2003 16:30	**Vial:**	10
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0317378-2 -- K2308419-004DMS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	282397	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	148601	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	216184	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	203022	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	126944	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.06	0.00	0.00	164	263221	1,272	64	34-115	OK	
2	Fluorene-d10	9.01	0.01	0.00	176	167825	1,129	56	37-107	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	6-133	*	
3	Fluoranthene-d10	13.70	0.01	0.00	212	301757	1,395	70	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	278515	1,505	75	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1090498	3,415	3.35		
1	2-Methylnaphthalene	6.42	0.01	0.00	142	654513	3,471	3.40		
1	1-Methylnaphthalene	6.57	0.01	0.00	142	623729	3,529	3.46		
1	Biphenyl	7.09		0.00	154	783564	3,427	3.36		
1	2,6-Dimethylnaphthalene	7.33	0.01	0.00	156	539734	3,356	3.29		
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	1030844	3,600	3.53		
2	Acenaphthene	8.12	0.01	0.00	154	606531	3,437	3.37		
2	Dibenzofuran	8.41		0.00	168	827101	3,497	3.43		
2	2,3,5-Trimethylnaphthalene	8.83	0.01	0.00	170	511833	3,238	3.17		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F013.D		**Instrument:** MS11
Acqu Date:	11/08/2003 13:04	**Quant Date:** 11/10/2003 16:30	**Vial:** 10
Run Type:	DMS		**Dilution:** 1.0
Lab ID:	KWG0317378-2 -- K2308419-004DMS		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	9.06	0.01	0.00	166	682327	3,610	3.54		
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	
2	C3-Fluorenes				208	0		0.020	U	
2	Pentachlorophenol				266	0		0.095	U	
3	Dibenzothiophene	10.78		0.00	184	843829	3,383	3.32		
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	873495	3,334	3.27		
3	Anthracene	11.15	0.01	0.00	178	700520	3,130	3.07		
3	Carbazole	11.57	0.01	0.00	167	738890	4,176	4.09		
3	1-Methylphenanthrene	12.44		0.00	192	594064	3,339	3.27		
3	C1-Phenanthrenes/Anthracenes				192	0		0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	868447	3,330	3.26		
4	Pyrene	14.24		0.00	202	882049	3,324	3.26		
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.09		0.00	228	614251	3,040	2.98		
4	Chrysene	17.19	0.01	0.00	228	646362	2,992	2.93		
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.11	0.01	0.00	252	551793	3,256	3.19		
5	Benzo(k)fluoranthene	20.19	0.01	0.00	252	690818**m**	3,213	3.15		
5	Benzo(e)pyrene	21.09	0.01	0.00	252	564016	2,964	2.91		
5	Benzo(a)pyrene	21.28	0.01	0.00	252	464180	3,220	3.16		
5	Perylene	21.61	0.01	0.00	252	503895	3,114	3.05		
5	Indeno(1,2,3-cd)pyrene	24.09		0.00	276	284417	3,246	3.18		
5	Dibenz(a,h)anthracene	24.14		0.00	278	402304**m**	3,194	3.13		
5	Benzo(g,h,i)perylene	24.55		0.00	276	424628	2,923	2.87		

Prep Amount: 1020 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F013.D Vial: 10
Acq On : 8 Nov 2003 1:04 pm Operator: LWeiskopf
Sample : KWG0317378-2 K2308419-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:58 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	282397	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	148601	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	216184	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	203022	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	126944	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	263221	1272.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 127.24%			
16) Fluorene-d10	9.01	176	167825	1129.23	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 112.92%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	301757	1394.62	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 139.46%			
41) Terphenyl-d14	14.74	244	278515	1505.23	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 150.52%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1090498	3415.21	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	654513	3471.20	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	623729	3529.07	ng/ml	98
6) Biphenyl	7.09	154	783564	3427.24	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	539734	3355.92	ng/ml	99
12) Acenaphthylene	7.80	152	1030844	3600.45	ng/ml	100
13) Acenaphthene	8.12	154	606531	3437.28	ng/ml	98
14) Dibenzofuran	8.41	168	827101	3496.58	ng/ml	97
15) 2,3,5-Trimethylnaphthalene	8.83	170	511833	3238.05	ng/ml	100
17) Fluorene	9.06	166	682327	3609.73	ng/ml	100
24) Dibenzothiophene	10.78	184	843829	3383.07	ng/ml	96
28) Phenanthrene	11.05	178	873495	3333.83	ng/ml	100
29) Anthracene	11.15	178	700520	3129.55	ng/ml	100
30) Carbazole	11.57	167	738890	4176.20	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	594064	3339.39	ng/ml	99
36) Fluoranthene	13.74	202	868447	3329.83	ng/ml	100
39) Pyrene	14.24	202	882049	3323.89	ng/ml	97
42) Benz(a)anthracene	17.09	228	614251	3040.32	ng/ml	100
43) Chrysene	17.19	228	646362	2991.80	ng/ml	100
49) Benzo(b)fluoranthene	20.11	252	551793	3255.90	ng/ml	100
50) Benzo(k)fluoranthene	20.19	252	690818m	3212.54	ng/ml	
51) Benzo(e)pyrene	21.09	252	564016	2964.08	ng/ml	100
52) Benzo(a)pyrene	21.28	252	464180	3220.03	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F013.D Vial: 10
Acq On : 8 Nov 2003 1:04 pm Operator: LWeiskopf
Sample : KWG0317378-2 K2308419-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:58 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

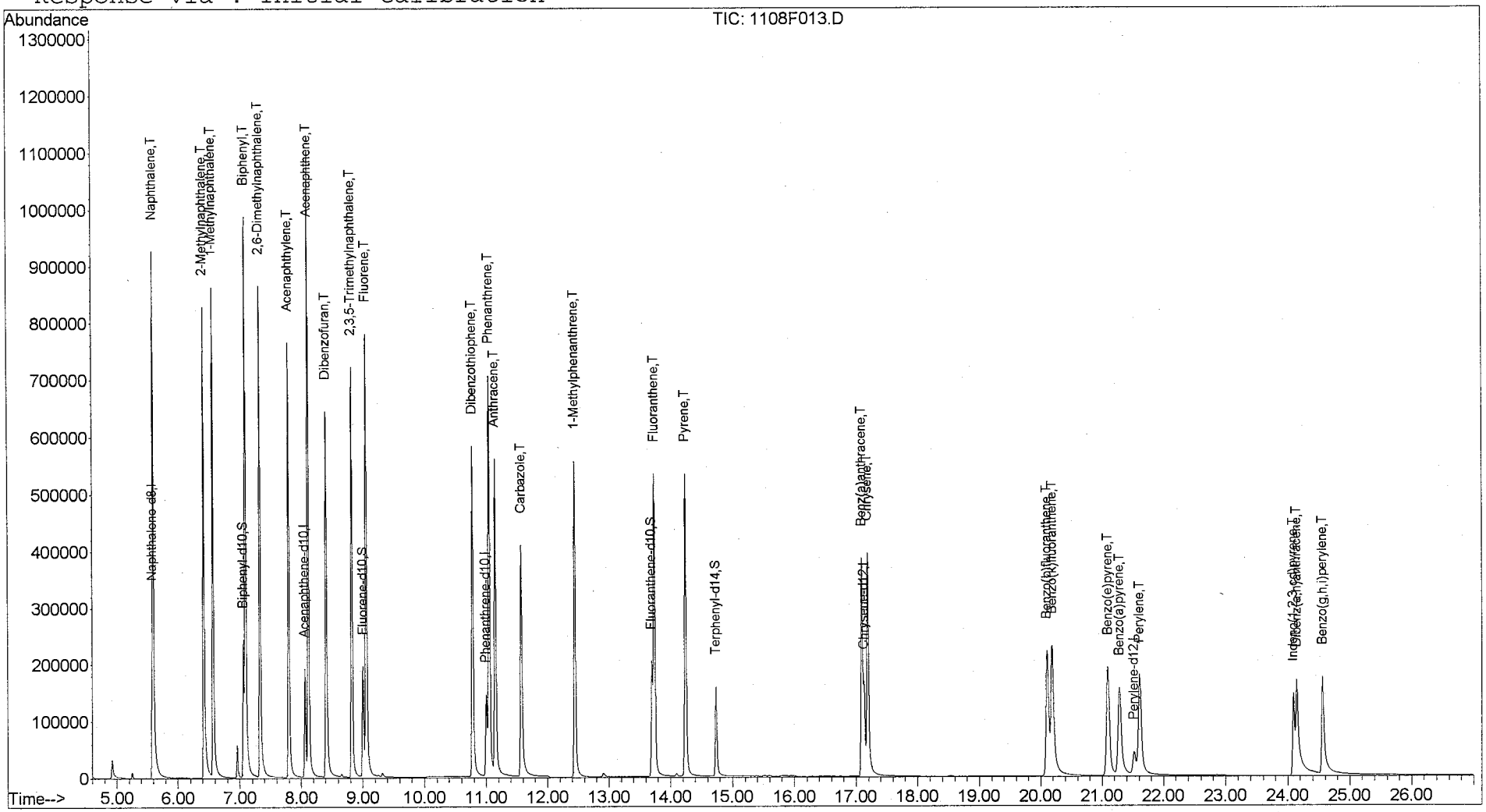
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.61	252	503895	3113.96	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	284417	3245.59	ng/ml	99
55)	Dibenz(a,h)anthracene	24.14	278	402304m	3194.45	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	424628	2922.75	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F013.D Vial: 10
Acq On : 8 Nov 2003 1:04 pm Operator: LWeiskopf
Sample : KWG0317378-2 K2308419-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:30 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration



915

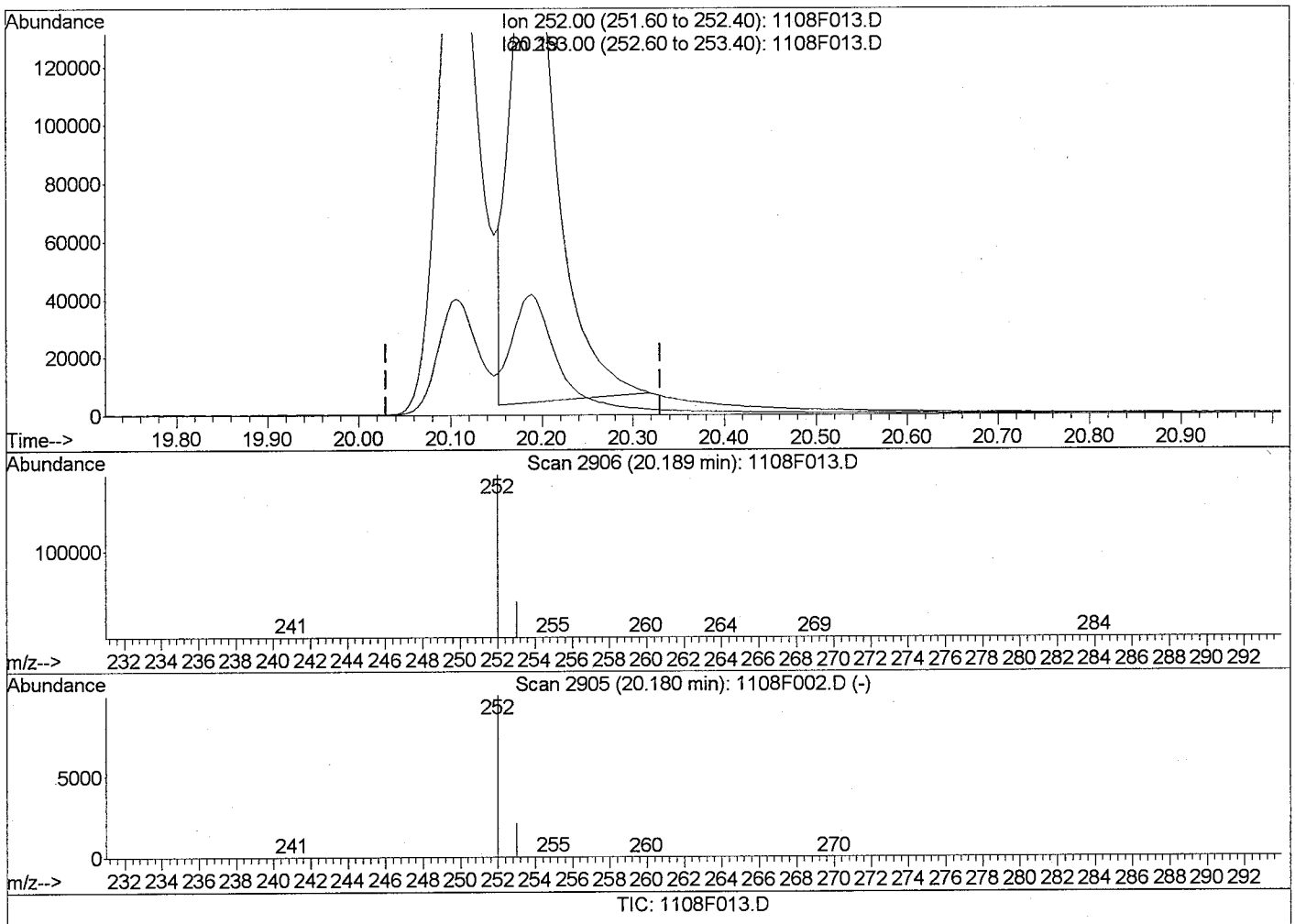
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F013.D
Acq On : 8 Nov 2003 1:04 pm
Sample : KWG0317378-2 K2308419-004DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:06 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F013.D

(50) Benzo(k)fluoranthene (T)

20.19min 2865.57ng/ml

response 616208

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	22.02
0.00	0.00	0.00
0.00	0.00	0.00

1108F013.D 1107ALK.M Mon Nov 10 16:32:49 2003

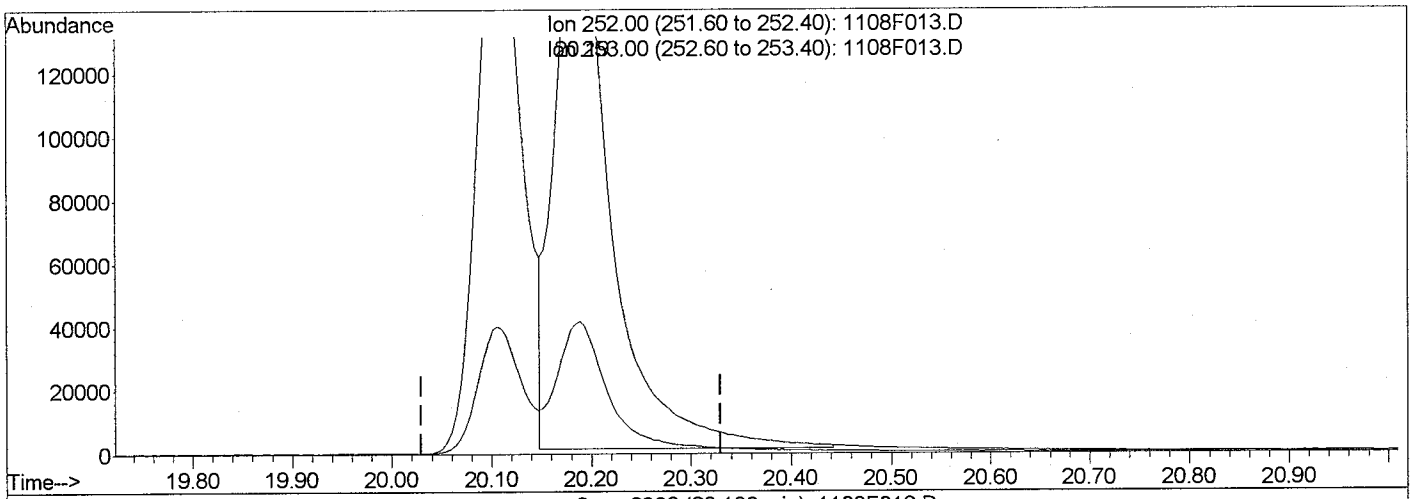
Quantitation Report (Qedit)

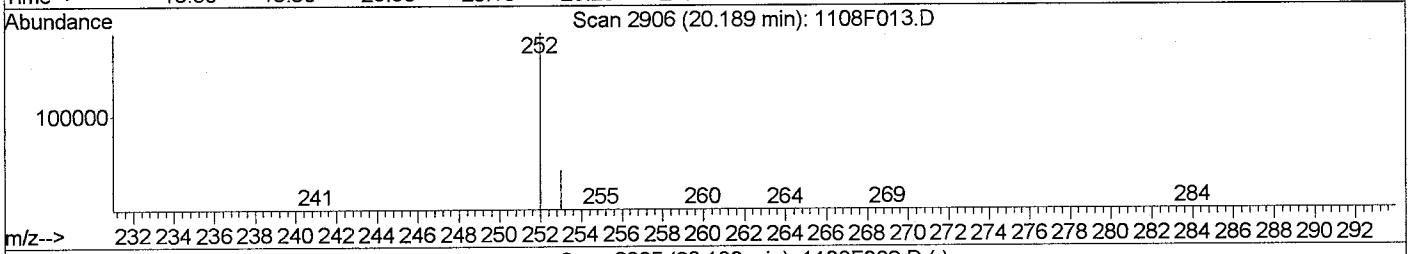
Data File : J:\MS11\DATA\110803\1108F013.D
Acq On : 8 Nov 2003 1:04 pm
Sample : KWG0317378-2 K2308419-004DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:30 2003

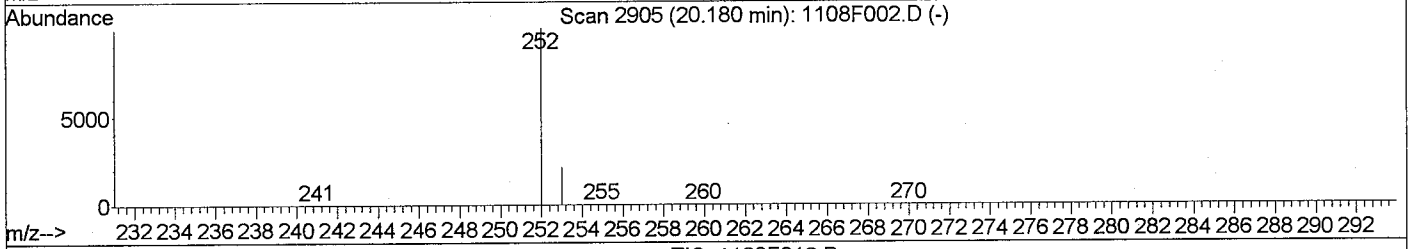
Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F013.D

(50) Benzo(k)fluoranthene (T)

20.19min 3212.54ng/ml m

response 690818

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	22.19
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03
mt
11/11/03

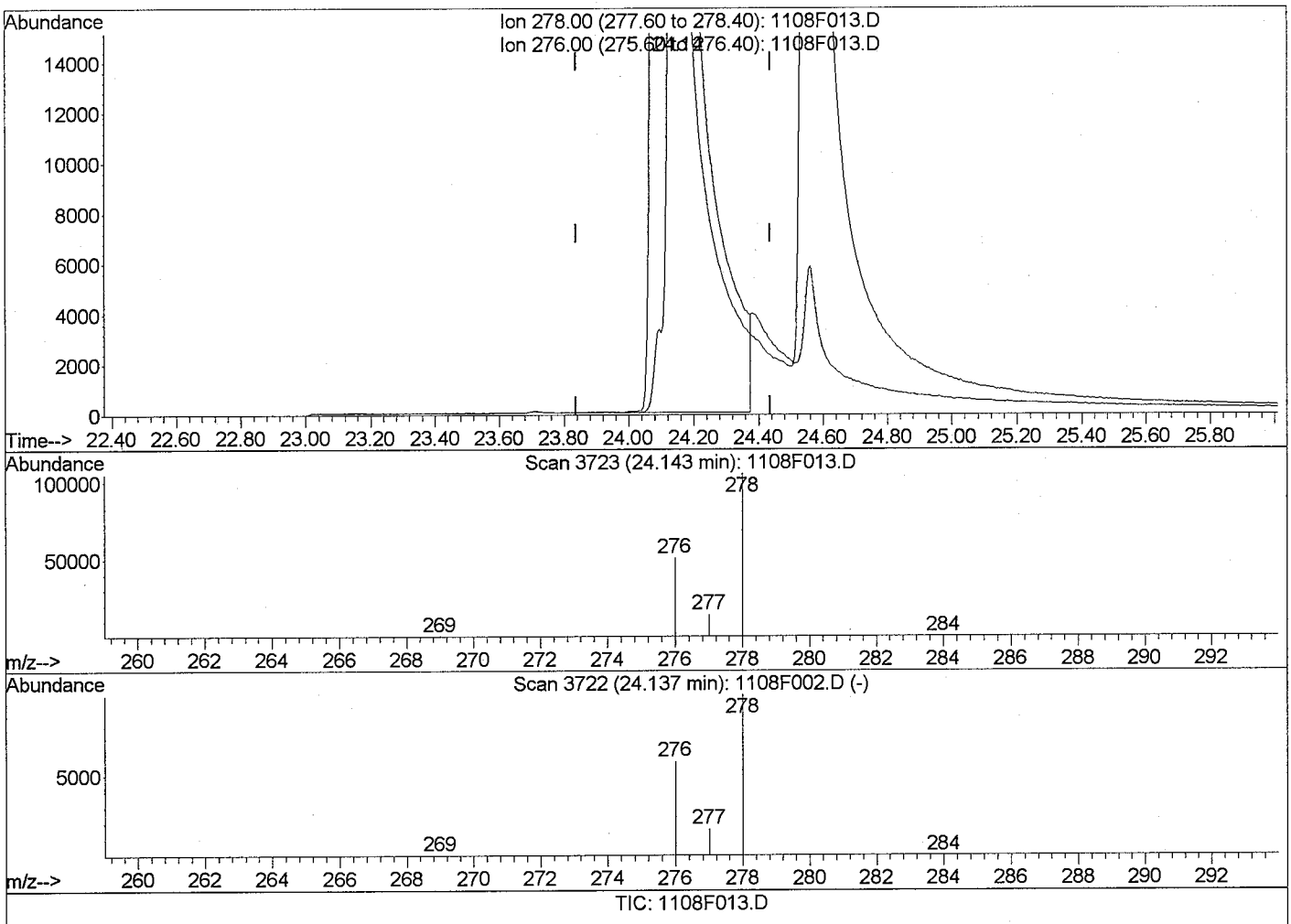
1108F013.D 1107ALK.M Mon Nov 10 16:32:54 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F013.D
Acq On : 8 Nov 2003 1:04 pm
Sample : KWG0317378-2 K2308419-004DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:30 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 3011.52ng/ml

response 379266

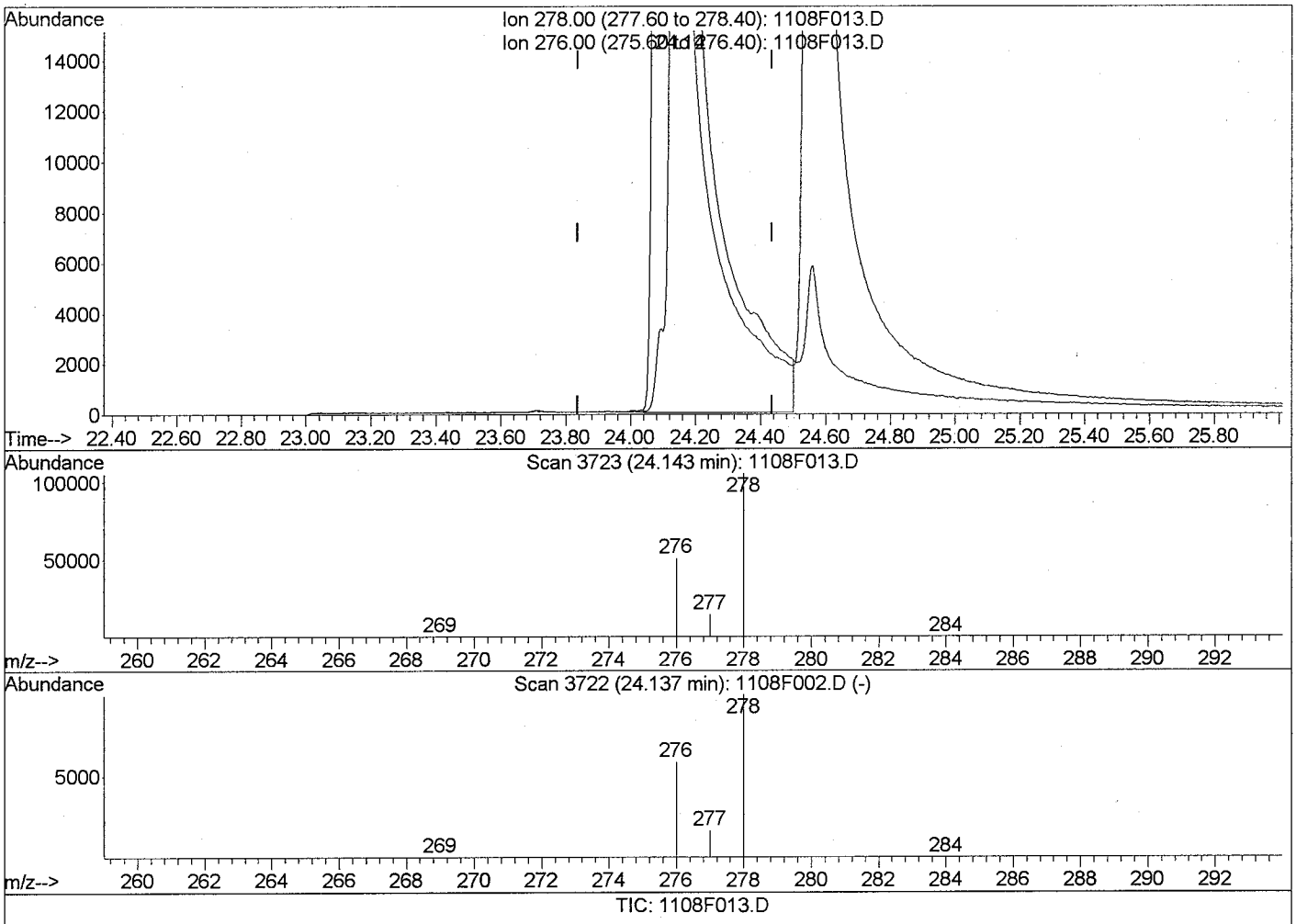
Ion	Exp%	Act%
278.00	100	100
276.00	59.00	48.06
0.00	0.00	0.00
0.00	0.00	0.00

1108F013.D 1107ALK.M Mon Nov 10 16:33:00 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F013.D Vial: 10
Acq On : 8 Nov 2003 1:04 pm Operator: LWeiskopf
Sample : KWG0317378-2 K2308419-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:30 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 3194.45ng/ml m

response 402304

Ion	Exp%	Act%
278.00	100	100
276.00	59.00	48.16
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03 mnt 11/11/03

1108F013.D 1107ALK.M Mon Nov 10 16:33:14 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Lab Control Sample
Lab Code: KWG0317378-3

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**3.85**		0.020	1	10/29/03	11/08/03	KWG0317378	
2-Methylnaphthalene	**3.93**		0.020	1	10/29/03	11/08/03	KWG0317378	
1-Methylnaphthalene	**4.01**		0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Naphthalenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Biphenyl	**3.96**		0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthylene	**4.13**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzofuran	**4.13**		0.020	1	10/29/03	11/08/03	KWG0317378	
Acenaphthene	**4.02**		0.020	1	10/29/03	11/08/03	KWG0317378	
Fluorene	**4.35**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Fluorenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenzothiophene	**4.25**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Dibenzothiophenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Phenanthrene	**4.26**		0.020	1	10/29/03	11/08/03	KWG0317378	
Anthracene	**4.17**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Phenanthrenes/Anthracenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Fluoranthene	**4.65**		0.020	1	10/29/03	11/08/03	KWG0317378	
Pyrene	**4.43**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Fluoranthenes/Pyrenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benz(a)anthracene	**4.46**		0.020	1	10/29/03	11/08/03	KWG0317378	
Chrysene	**4.41**		0.020	1	10/29/03	11/08/03	KWG0317378	
C1-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C2-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C3-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
C4-Chrysenes	ND	U	0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(b)fluoranthene	**4.89**		0.020	1	10/29/03	11/08/03	KWG0317378	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308419
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Lab Control Sample
Lab Code: KWG0317378-3

Extraction Method: EPA 3520C
Analysis Method: 8270C SIM

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**4.64**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(e)pyrene	**4.35**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(a)pyrene	**4.44**		0.020	1	10/29/03	11/08/03	KWG0317378	
Perylene	**3.95**		0.020	1	10/29/03	11/08/03	KWG0317378	
Indeno(1,2,3-cd)pyrene	**5.27**		0.020	1	10/29/03	11/08/03	KWG0317378	
Dibenz(a,h)anthracene	**5.01**		0.020	1	10/29/03	11/08/03	KWG0317378	
Benzo(g,h,i)perylene	**4.47**		0.020	1	10/29/03	11/08/03	KWG0317378	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	77	37-107	11/08/03	Acceptable
Fluoranthene-d10	88	18-137	11/08/03	Acceptable
Terphenyl-d14	96	18-153	11/08/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\110803\1108F011.D
Lab ID: KWG0317378-3
RunType: LCS
Matrix: WATER

Date Acquired: 11/08/2003 11:50
Date Quantitated: 11/10/2003 16:29
Batch ID: KWG0318114
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8419

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	Pentachlorophenol	-25.4	NA	20	
Surrogates	2,4,6-Tribromophenol	0	6	133	
Std MRL Unsupported by ICAL	Pentachlorophenol	5.0	1.0	NA	

Primary Review: 11/11/03

Secondary Review: mt 11/11/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/04/2003

Analysis Lot:	KWG0318114	**Prep Lot:**	KWG0317378	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3520C		
Prep Ref:	245669	**Prep Date:**	10/29/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:	J:\MS11\DATA\110803\1108F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\110803\1108F011.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 11:50	**Quant Date:**	11/10/2003 16:29	**Vial:**	8
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317378-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.58	0.01	136	253496	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	131865	1,000.00	OK
3	Phenanthrene-d10	11.01	0.01	188	190352	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	187093	1,000.00	OK
5	Perylene-d12	21.52	0.01	264	119257	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.06	0.00	0.00	164	282100	1,519	76	34-115	OK	
2	Fluorene-d10	9.01	0.01	0.00	176	202142	1,533	77	37-107	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	6-133	*	
3	Fluoranthene-d10	13.70	0.01	0.00	212	333507	1,751	88	18-137	OK	
4	Terphenyl-d14	14.74	0.01	0.00	244	328105	1,924	96	18-153	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.60	0.01	0.00	128	1103057	3,848	3.85		
1	2-Methylnaphthalene	6.42	0.01	0.00	142	664605	3,927	3.93		
1	1-Methylnaphthalene	6.57	0.01	0.00	142	635571	4,006	4.01		
1	Biphenyl	7.09		0.00	154	813599	3,964	3.96		
1	2,6-Dimethylnaphthalene	7.33	0.01	0.00	156	566922	3,927	3.93		
1	C2-Naphthalenes				156	0		0.020	U	
1	C3-Naphthalenes				170	0		0.020	U	
1	C4-Naphthalenes				184	0		0.020	U	
2	Acenaphthylene	7.80	0.01	0.00	152	1049550	4,131	4.13		
2	Acenaphthene	8.11		0.00	154	628980	4,017	4.02		
2	Dibenzofuran	8.41		0.00	168	867205	4,131	4.13		
2	2,3,5-Trimethylnaphthalene	8.83	0.01	0.00	170	571140	4,072	4.07		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F011.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 11:50	**Quant Date:**	11/10/2003 16:29	**Vial:**	8
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317378-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	9.06	0.01	0.00	166	730014	4,352	4.35		
2	C1-Fluorenes				180	0		0.020	U	
2	C2-Fluorenes				194	0		0.020	U	
2	C3-Fluorenes				208	0		0.020	U	
2	Pentachlorophenol				266	0		0.095	U	
3	Dibenzothiophene	10.78		0.00	184	933701	4,251	4.25		
3	C1-Dibenzothiophenes				198	0		0.020	U	
3	C2-Dibenzothiophenes				212	0		0.020	U	
3	C3-Dibenzothiophenes				226	0		0.020	U	
3	Phenanthrene	11.05	0.01	0.00	178	983444	4,263	4.26		
3	Anthracene	11.14		0.00	178	821102	4,166	4.17		
3	Carbazole	11.57	0.01	0.00	167	792286	5,086	5.09		
3	1-Methylphenanthrene	12.44		0.00	192	718153	4,585	4.58		
3	C1-Phenanthrenes/Anthracenes				192	0		0.020	U	
3	C2-Phenanthrenes/Anthracenes				206	0		0.020	U	
3	C3-Phenanthrenes/Anthracenes				220	0		0.020	U	
3	C4-Phenanthrenes/Anthracenes				234	0		0.020	U	
3	Fluoranthene	13.74	0.01	0.00	202	1068672	4,654	4.65		
4	Pyrene	14.24		0.00	202	1084551	4,435	4.43		
4	C1-Fluoranthenes/Pyrenes				216	0		0.020	U	
4	Benz(a)anthracene	17.09		0.00	228	830568	4,461	4.46		
4	Chrysene	17.19	0.01	0.00	228	877725	4,409	4.41		
4	C1-Chrysenes				242	0		0.020	U	
4	C2-Chrysenes				256	0		0.020	U	
4	C3-Chrysenes				270	0		0.020	U	
4	C4-Chrysenes				284	0		0.020	U	
5	Benzo(b)fluoranthene	20.11	0.01	0.00	252	779022	4,893	4.89		
5	Benzo(k)fluoranthene	20.19	0.01	0.00	252	936903**m**	4,638	4.64		
5	Benzo(e)pyrene	21.09	0.01	0.00	252	777188	4,348	4.35		
5	Benzo(a)pyrene	21.28	0.01	0.00	252	601778	4,444	4.44		
5	Perylene	21.61	0.01	0.00	252	599976	3,947	3.95		
5	Indeno(1,2,3-cd)pyrene	24.09		0.00	276	434231	5,275	5.27		
5	Dibenz(a,h)anthracene	24.14		0.00	278	593195**m**	5,014	5.01		
5	Benzo(g,h,i)perylene	24.55		0.00	276	610476	4,473	4.47		

Prep Amount: 1000 ml **Dilution:** 1.0
Prep Final Vol: 1 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F011.D Vial: 8
Acq On : 8 Nov 2003 11:50 am Operator: LWeiskopf
Sample : KWG0317378-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:52 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	253496	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	131865	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.01	188	190352	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	187093	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	119257	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	282100	1519.14	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 151.91%			
16) Fluorene-d10	9.01	176	202142	1532.76	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 153.28%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	333507	1750.53	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 175.05%			
41) Terphenyl-d14	14.74	244	328105	1924.21	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 192.42%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1103057	3848.40	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	664605	3926.58	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	635571	4006.06	ng/ml	99
6) Biphenyl	7.09	154	813599	3964.33	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	566922	3926.85	ng/ml	100
12) Acenaphthylene	7.80	152	1049550	4131.04	ng/ml	100
13) Acenaphthene	8.11	154	628980	4016.90	ng/ml	100
14) Dibenzofuran	8.41	168	867205	4131.42	ng/ml	100
15) 2,3,5-Trimethylnaphthalene	8.83	170	571140	4071.83	ng/ml	98
17) Fluorene	9.06	166	730014	4352.17	ng/ml	100
24) Dibenzothiophene	10.78	184	933701	4251.39	ng/ml	96
28) Phenanthrene	11.05	178	983444	4262.84	ng/ml	100
29) Anthracene	11.14	178	821102	4166.05	ng/ml	100
30) Carbazole	11.57	167	792286	5085.69	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	718153	4584.77	ng/ml	100
36) Fluoranthene	13.74	202	1068672	4653.60	ng/ml	100
39) Pyrene	14.24	202	1084551	4434.96	ng/ml	97
42) Benz(a)anthracene	17.09	228	830568	4461.01	ng/ml	100
43) Chrysene	17.19	228	877725	4408.61	ng/ml	100
49) Benzo(b)fluoranthene	20.11	252	779022	4892.97	ng/ml	100
50) Benzo(k)fluoranthene	20.19	252	936903m	4637.75	ng/ml	
51) Benzo(e)pyrene	21.09	252	777188	4347.64	ng/ml	100
52) Benzo(a)pyrene	21.28	252	601778	4443.63	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F011.D Vial: 8
Acq On : 8 Nov 2003 11:50 am Operator: LWeiskopf
Sample : KWG0317378-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:08:52 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

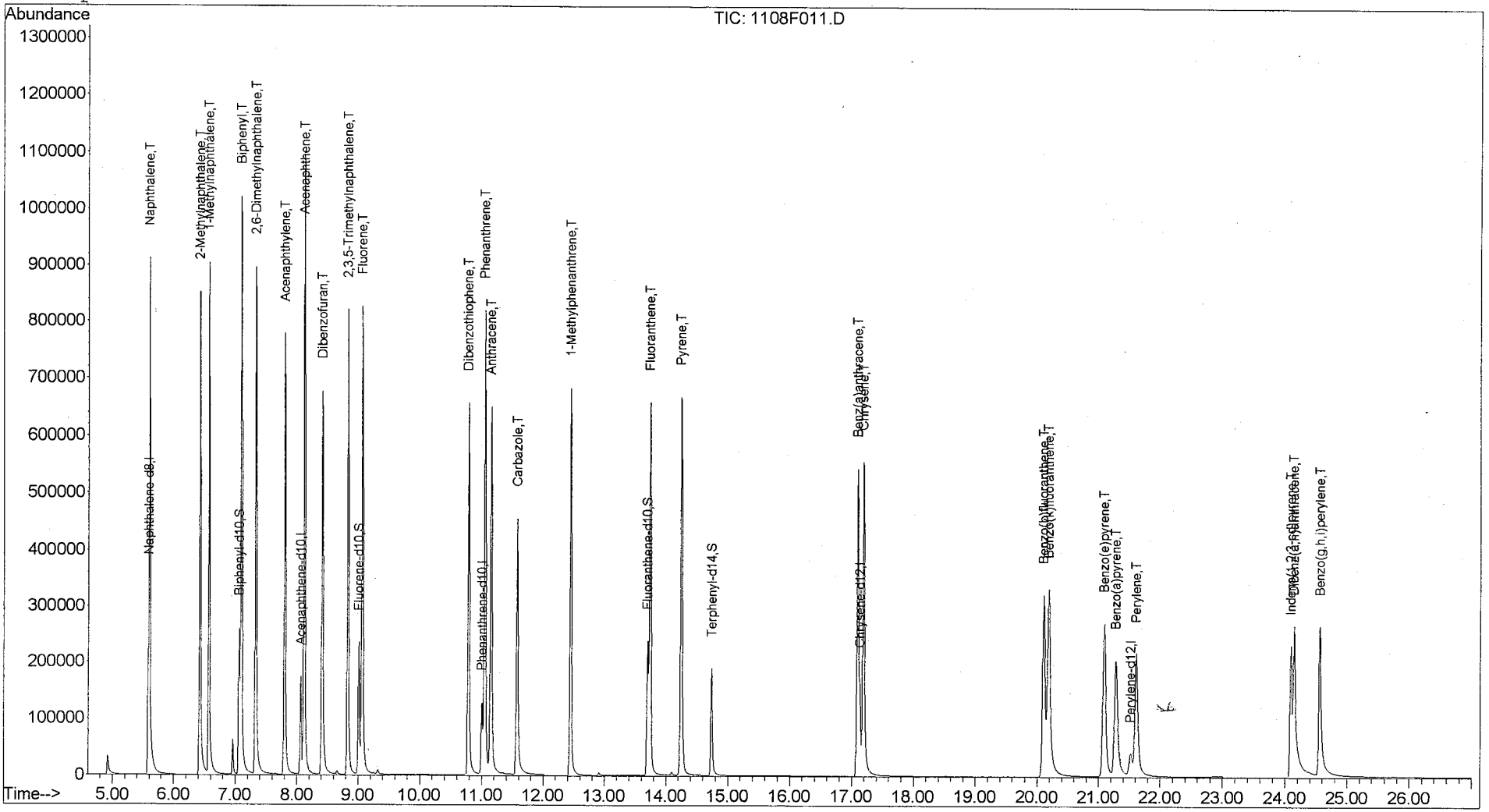
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53) Perylene	21.61	252	599976	3946.71	ng/ml	100
54) Indeno(1,2,3-cd)pyrene	24.09	276	434231	5274.57	ng/ml	100
55) Dibenz(a,h)anthracene	24.14	278	593195m	5013.81	ng/ml	
56) Benzo(g,h,i)perylene	24.55	276	610476	4472.80	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F011.D Vial: 8
Acq On : 8 Nov 2003 11:50 am Operator: LWeiskopf
Sample : KWG0317378-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:29 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

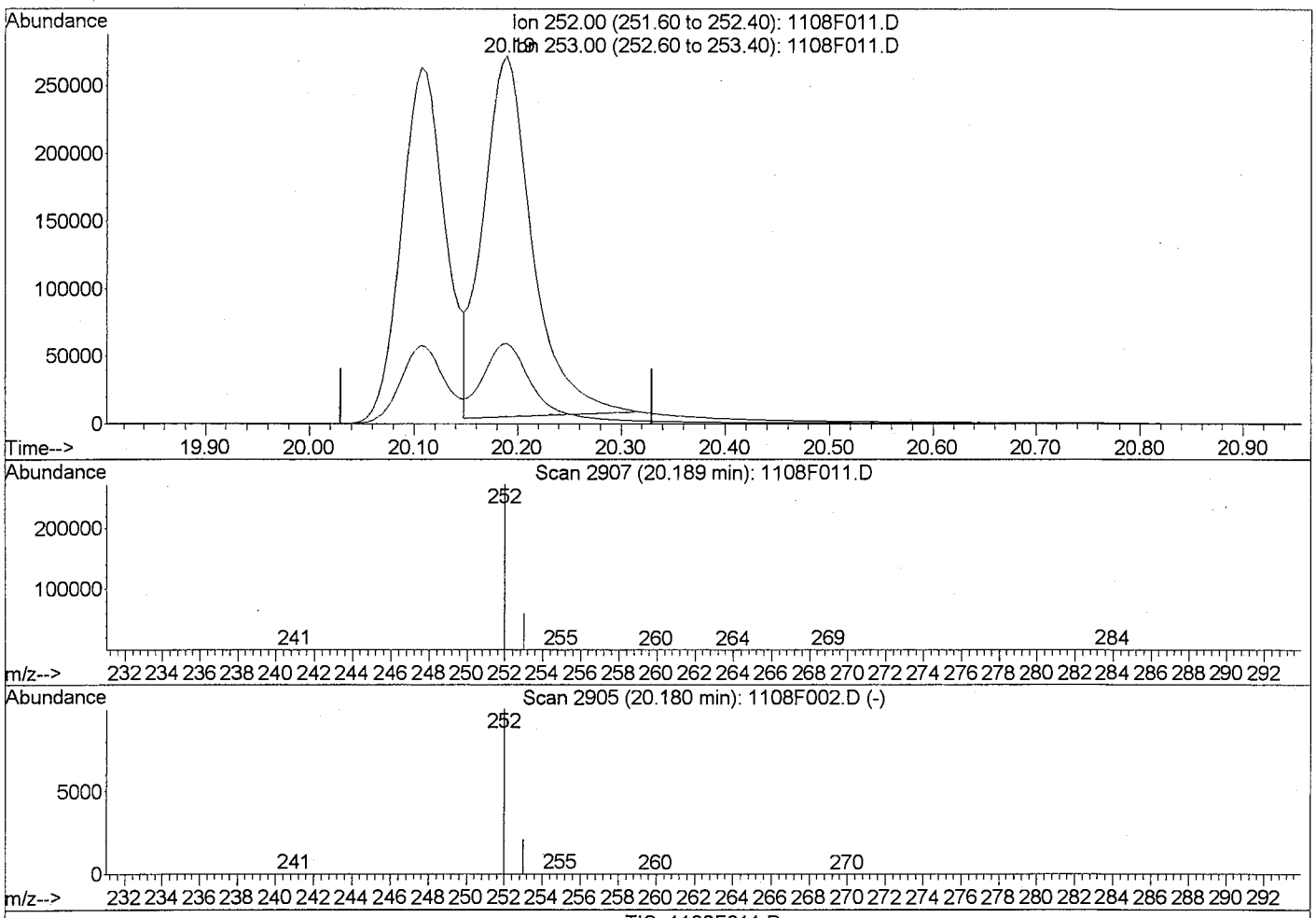


927

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F011.D Vial: 8
Acq On : 8 Nov 2003 11:50 am Operator: LWeiskopf
Sample : KWG0317378-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F011.D

(50) Benzo(k)fluoranthene (T)

20.19min 4357.64ng/ml

response 880316

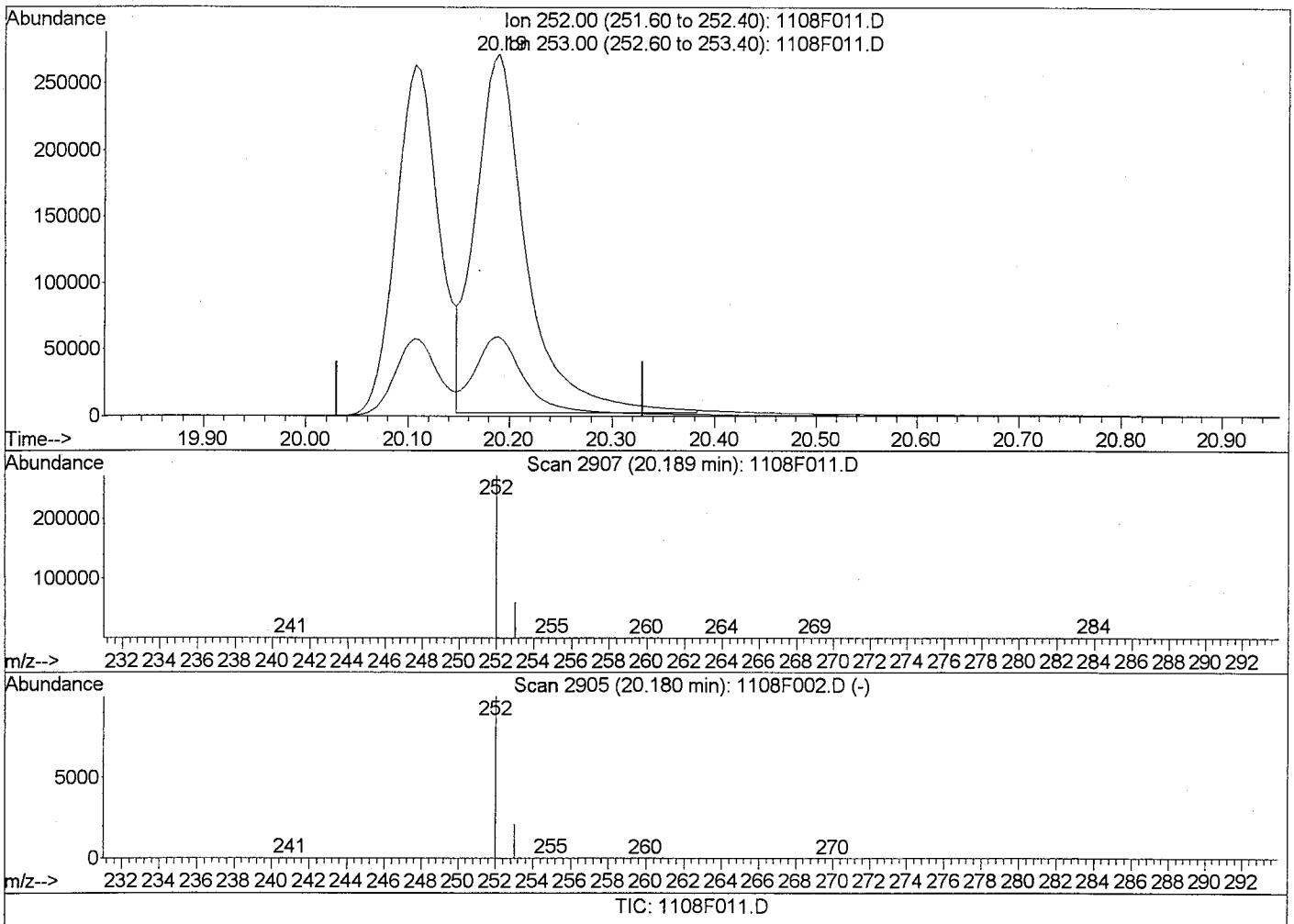
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.71
0.00	0.00	0.00
0.00	0.00	0.00

1108F011.D 1107ALK.M Mon Nov 10 16:31:39 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F011.D Vial: 8
Acq On : 8 Nov 2003 11:50 am Operator: LWeiskopf
Sample : KWG0317378-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F011.D

(50) Benzo(k)fluoranthene (T)

20.19min 4637.75ng/ml m

response 936903

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.85
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/03 mt 11/11/03

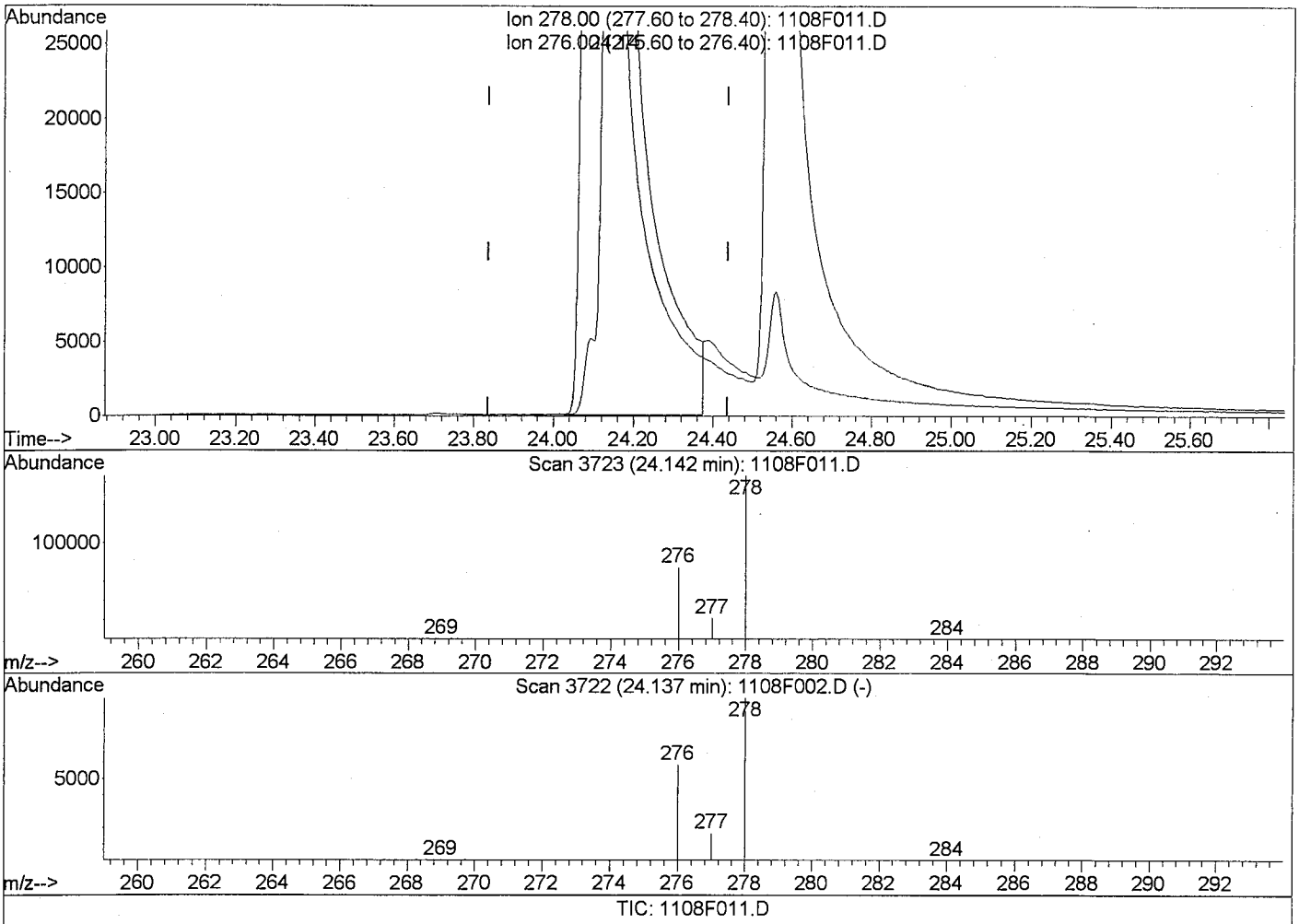
1108F011.D 1107ALK.M Mon Nov 10 16:31:44 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F011.D
Acq On : 8 Nov 2003 11:50 am
Sample : KWG0317378-3 LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:29 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F011.D

(55) Dibenz(a,h)anthracene (T)

24.14min 4763.57ng/ml

response 563589

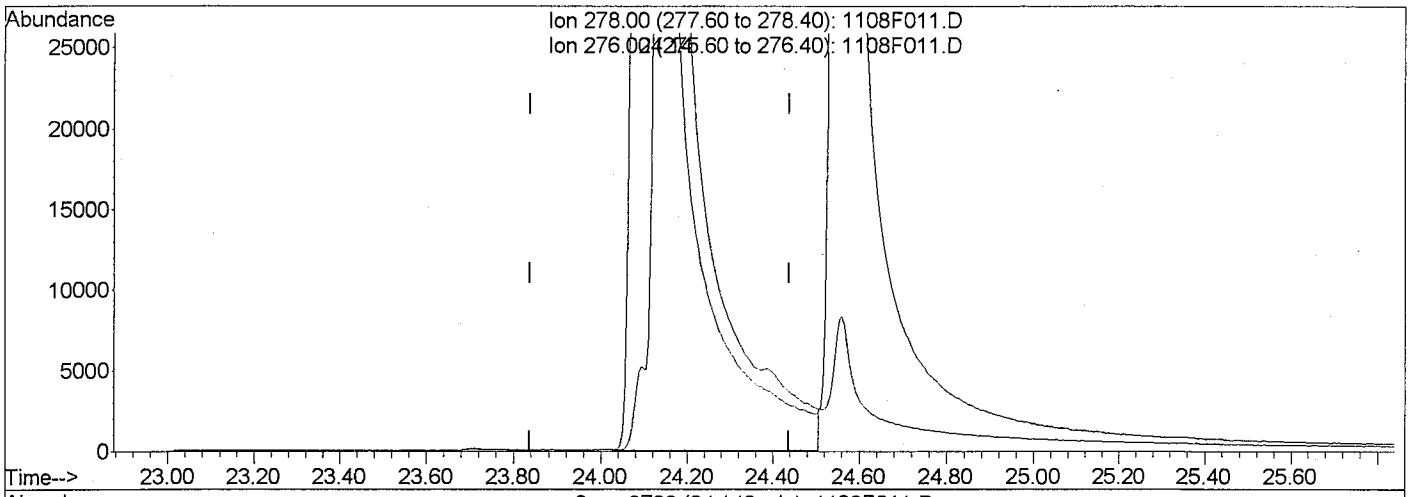
Ion	Exp%	Act%
278.00	100	100
276.00	59.00	43.78
0.00	0.00	0.00
0.00	0.00	0.00

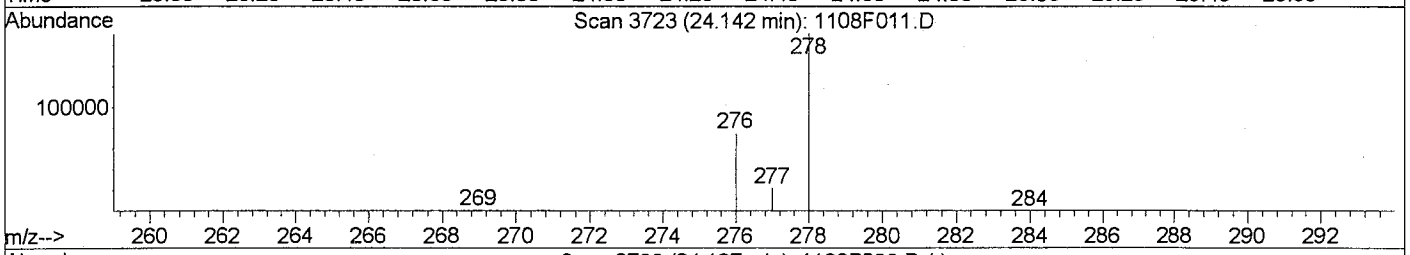
1108F011.D 1107ALK.M Mon Nov 10 16:31:50 2003

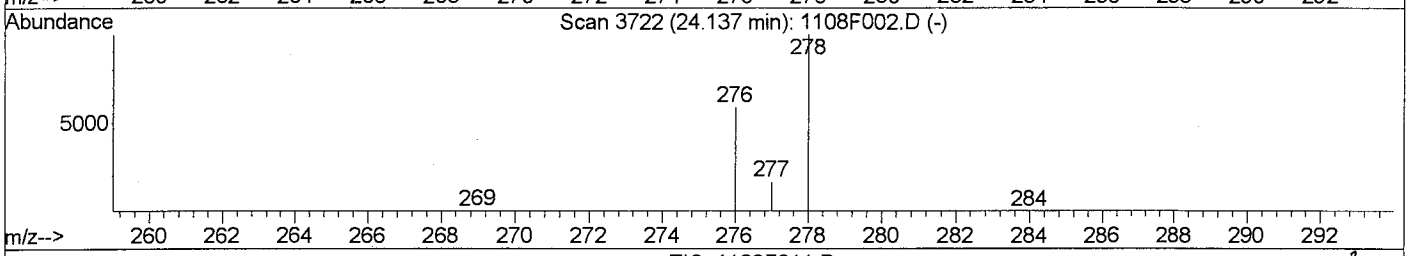
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F011.D Vial: 8
Acq On : 8 Nov 2003 11:50 am Operator: LWeiskopf
Sample : KWG0317378-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F011.D

(55) Dibenz(a,h)anthracene (T)

24.14min 5013.81ng/ml m

response 593195

Ion	Exp%	Act%
278.00	100	100
276.00	59.00	43.83
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

complete

mnt 11/11/03

1108F011.D 1107ALK.M Mon Nov 10 16:32:00 2003

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003
Time Analyzed: 06:03

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\110803\1108F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318114

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	33.9	380352	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	37.2	417344	PASS
70	69	0	2	0.6	2659	PASS
127	198	10	80	44.6	500096	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	49.1	1120768	PASS
199	198	5	9	7.1	79336	PASS
275	198	10	60	34.5	386624	PASS
365	442	1	50	2.4	55064	PASS
441	443	0	100	74.0	336640	PASS
442	442	100	100	100.0	2282496	PASS
443	442	15	24	19.9	455104	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318114-2	J:\MS11\DATA\110803\1108F002.D	11/08/2003	06:24	
Method Blank	KWG0317378-4	J:\MS11\DATA\110803\1108F005.D	11/08/2003	08:13	
Lab Control Sample	KWG0317378-3	J:\MS11\DATA\110803\1108F011.D	11/08/2003	11:50	
SW-4MS	KWG0317378-1	J:\MS11\DATA\110803\1108F012.D	11/08/2003	12:27	
SW-4DMS	KWG0317378-2	J:\MS11\DATA\110803\1108F013.D	11/08/2003	13:04	
SW-2	K2308419-002	J:\MS11\DATA\110803\1108F015.D	11/08/2003	14:18	
SW-3	K2308419-003	J:\MS11\DATA\110803\1108F016.D	11/08/2003	14:55	
SW-4	K2308419-004	J:\MS11\DATA\110803\1108F017.D	11/08/2003	15:32	
SW-4-Dup	K2308419-005	J:\MS11\DATA\110803\1108F018.D	11/08/2003	16:09	
SW-5	K2308419-006	J:\MS11\DATA\110803\1108F019.D	11/08/2003	16:45	
SW-6	K2308419-008	J:\MS11\DATA\110803\1108F020.D	11/08/2003	17:21	
SW-7	K2308419-009	J:\MS11\DATA\110803\1108F021.D	11/08/2003	17:57	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\110803\1108F001.D
Lab ID: KWG0318114-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/08/2003 06:03
Date Quantitated:
Batch ID: KWG0318114
Analysis Method: 8270C SIM
ListJoinID: LJ2506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/10/03

Secondary Review: 11/11/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	TUNE-8270	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318114	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL3082
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\110803\1108F001.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 06:03	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318114-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	33.9	380352	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	37.2	417344	Pass
70	69	0	2	0.6	2659	Pass
127	198	10	80	44.6	500096	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	49.1	1120768	Pass
199	198	5	9	7.1	79336	Pass
275	198	10	60	34.5	386624	Pass
365	442	1	50	2.4	55064	Pass
441	443	0.01	100	74.0	336640	Pass
442	442	100	100	100.0	2282496	Pass
443	442	15	24	19.9	455104	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

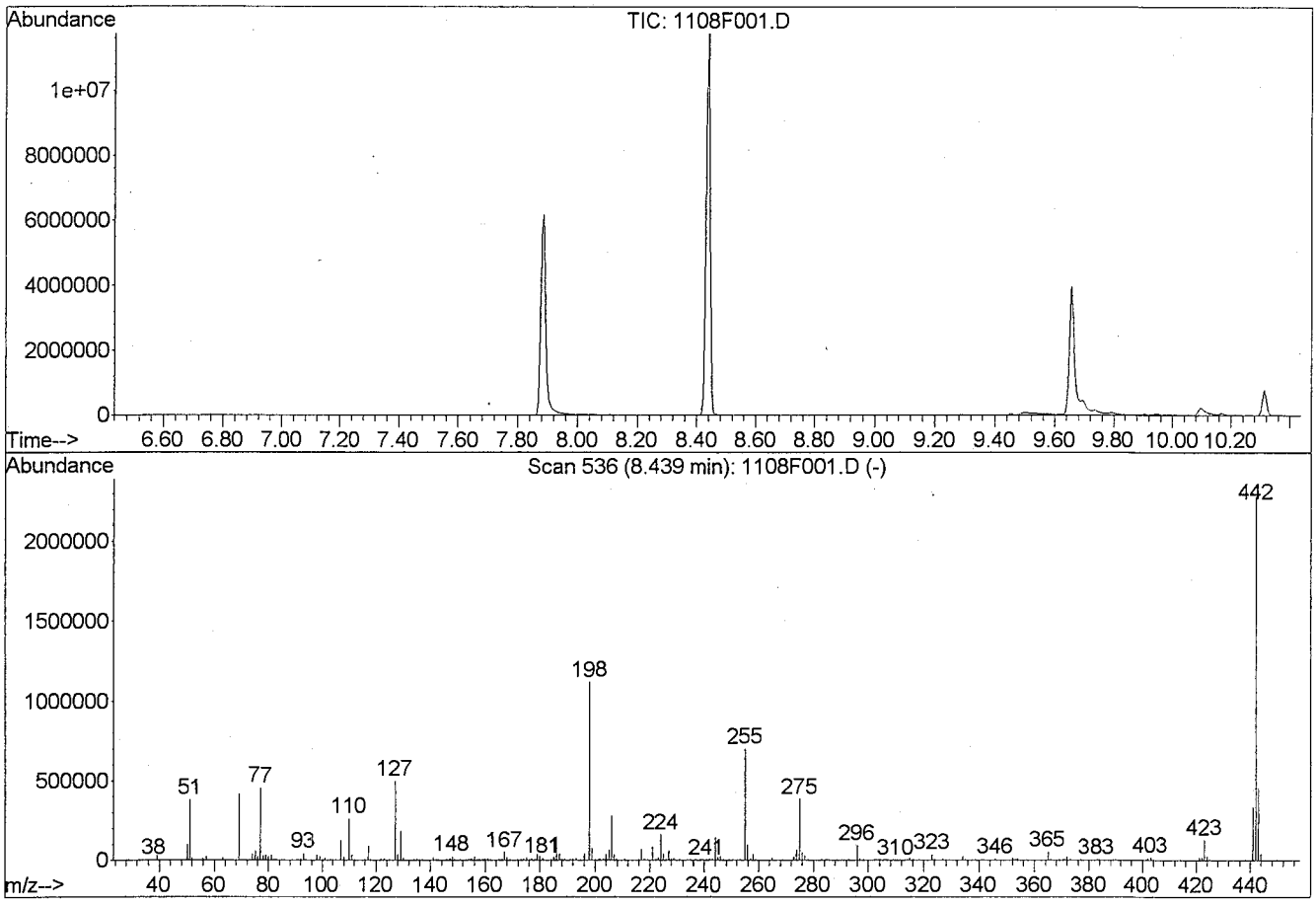
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\110803\1108F001.D
Acq On : 8 Nov 2003 6:03 am
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.9	380352	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	2659	PASS
127	198	10	80	44.6	500096	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	49.1	1120768	PASS
199	198	5	9	7.1	79336	PASS
275	198	10	60	34.5	386624	PASS
365	442	1	50	2.4	55064	PASS
441	443	0.01	100	74.0	336640	PASS
442	442	30	100	100.0	2282496	PASS
443	442	15	24	19.9	455104	PASS

1108F001.D DFTPPPAH.M Mon Nov 10 16:06:27 2003

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	1717	55.00	2028	69.00	417344	82.00	8168
38.10	5399	56.00	12749	70.00	2659	83.00	7582
39.10	30976	57.00	25808	73.00	3519	84.00	1091
40.05	913	58.00	1477	74.00	39448	85.00	6637
41.10	883	61.00	5712	75.00	62368	86.00	8734
44.00	261	62.10	5515	76.10	26040	87.00	3646
45.00	760	63.00	16440	77.00	457536	87.90	1469
50.10	100272	64.00	2208	78.10	29472	89.00	1004
51.10	380352	65.10	7423	79.00	32352	91.00	7142
52.10	19064	66.10	857	80.00	24032	92.00	7335
53.00	1028	67.10	789	81.00	34000	93.00	45224

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	3486	107.00	130592	120.00	2064	132.00	1841
95.00	1004	108.00	20496	121.10	789	133.00	1073
96.00	2293	110.00	263936	122.00	9732	134.00	6233
98.00	38936	111.00	39336	123.00	14014	135.00	14447
99.00	29736	112.00	4629	124.00	5927	136.00	5585
100.00	2931	112.90	1340	125.00	5911	137.00	7953
101.00	16464	114.90	814	127.00	500096	138.00	1630
102.00	708	116.00	8131	128.00	38184	139.00	1070
103.00	7447	117.00	94352	129.00	187456	140.00	2539
104.00	10959	118.00	7689	130.00	16976	141.00	22424
105.00	10959	119.00	1136	131.00	3434	142.00	8277

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.00	5651	154.00	7065	164.90	10002	176.00	6856
144.00	1516	155.00	14094	166.00	7382	177.00	10180
144.90	1612	156.00	21256	167.00	51496	178.00	3472
146.00	4751	157.00	5053	168.00	21296	178.90	35984
147.00	12670	158.00	4964	169.00	3787	180.00	25776
148.00	25816	159.00	3270	170.00	1688	181.00	12266
148.90	4949	160.00	7580	171.00	2091	182.00	2057
150.00	1504	161.00	10993	171.90	4348	182.90	1288
151.00	3179	161.90	3116	173.00	5673	184.00	2969
151.90	1942	163.00	1053	174.00	11157	185.00	19408
153.00	7795	163.90	2132	175.00	18184	186.00	149760

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
187.00	41360	198.90	79336	212.90	875	226.90	62560
188.00	4119	200.00	5153	214.90	2613	228.00	8216
188.90	8692	201.50	7563	216.00	5743	228.90	13402
190.00	1201	203.00	6940	216.90	70848	229.90	1853
191.00	4054	204.00	37248	217.90	8435	231.00	6266
192.00	11191	205.00	65160	219.00	831	232.00	1357
193.00	12817	206.00	281856	221.00	84248	232.90	1422
194.00	2862	207.00	38256	223.00	15370	233.90	4709
195.00	1963	207.90	7964	224.00	162816	234.90	5058
196.00	40720	209.00	2575	225.00	41256	235.90	3048
197.90	1120768	210.90	11238	226.00	4698	236.90	4665

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
238.00	1024	248.90	4647	260.90	1291	276.00	51736
238.90	2634	250.00	1064	263.90	2009	276.90	28032
239.90	2021	251.00	1002	264.90	14857	277.90	4844
240.90	3961	251.90	1500	265.85	1837	279.00	1427
242.00	8809	253.00	3369	267.90	593	282.00	756
243.00	10754	255.00	699648	269.90	1002	283.00	3043
244.00	145728	255.90	102176	270.90	2448	284.00	2190
245.00	19992	256.90	8156	272.00	2226	285.00	5446
245.90	24704	257.90	37232	273.00	23224	285.90	932
246.90	5023	258.90	5855	273.90	63696	289.00	1266
247.90	1334	259.90	1089	275.00	386624	289.90	1091

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
290.90	1151	307.90	1211	323.00	38208	335.90	866
292.00	1142	309.00	1166	324.00	6973	339.00	698
292.90	6505	309.90	1406	324.90	667	340.00	549
294.00	1567	312.90	1040	326.00	1021	340.90	4456
295.90	92064	314.00	4942	326.90	6359	342.00	1309
297.00	12144	314.90	11961	328.00	3562	345.90	8387
298.00	1014	316.00	7217	329.00	810	346.90	1546
301.00	1509	316.90	1180	331.90	2840	350.90	1071
301.90	1873	319.90	553	333.00	3848	352.00	12669
303.00	10938	321.00	3384	334.00	25440	353.00	9425
304.00	3438	322.00	1995	335.00	7121	354.00	14947

Scan 536 (8.439 min): 1108F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
355.00	3195	382.90	6446	410.10	522	444.00	42344
358.90	1010	383.90	2433	414.90	864	444.90	2270
364.90	55064	384.90	684	421.00	16752		
365.90	7317	389.90	3740	422.00	16226		
366.90	523	390.90	3129	423.00	130088		
369.90	1819	392.00	1925	424.00	26656		
371.00	4094	400.90	1640	425.00	2687		
372.00	26008	401.90	11936	439.20	770		
373.00	6147	403.00	17336	441.00	336640		
374.00	692	404.00	5850	442.00	2282496		
377.00	523	405.00	1114	443.00	455104		

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003
Time Analyzed: 14:40

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111003\1110F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318161

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.1	458304	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	44.3	494528	PASS
70	69	0	2	0.6	2929	PASS
127	198	10	80	48.6	541696	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	66.2	1115648	PASS
199	198	5	9	7.0	77712	PASS
275	198	10	60	30.6	341760	PASS
365	442	1	50	2.4	40600	PASS
441	443	0	100	72.7	246848	PASS
442	442	100	100	100.0	1684480	PASS
443	442	15	24	20.1	339392	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318161-2	J:\MS11\DATA\111003\1110F002.D	11/10/2003	15:00	
SW-1	K2308419-001	J:\MS11\DATA\111003\1110F005.D	11/10/2003	16:49	
SW-8	K2308419-010	J:\MS11\DATA\111003\1110F006.D	11/10/2003	17:25	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\111003\1110F001.D
Lab ID: KWG0318161-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/10/2003 14:40
Date Quantitated:
Batch ID: KWG0318161
Analysis Method: 8270C SIM
ListJoinID: LJ4434

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/11/3

Secondary Review: 11/12/3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	TUNE-8270	**Collect Date:**		**Receive Date:**	11/11/2003

Analysis Lot:	KWG0318161	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL3082
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\111003\1110F001.D			**Instrument:**	MS11
Acqu Date:	11/10/2003 14:40	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318161-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.1	458304	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	44.3	494528	Pass
70	69	0	2	0.6	2929	Pass
127	198	10	80	48.6	541696	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	66.2	1115648	Pass
199	198	5	9	7.0	77712	Pass
275	198	10	60	30.6	341760	Pass
365	442	1	50	2.4	40600	Pass
441	443	0.01	100	72.7	246848	Pass
442	442	100	100	100.0	1684480	Pass
443	442	15	24	20.1	339392	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

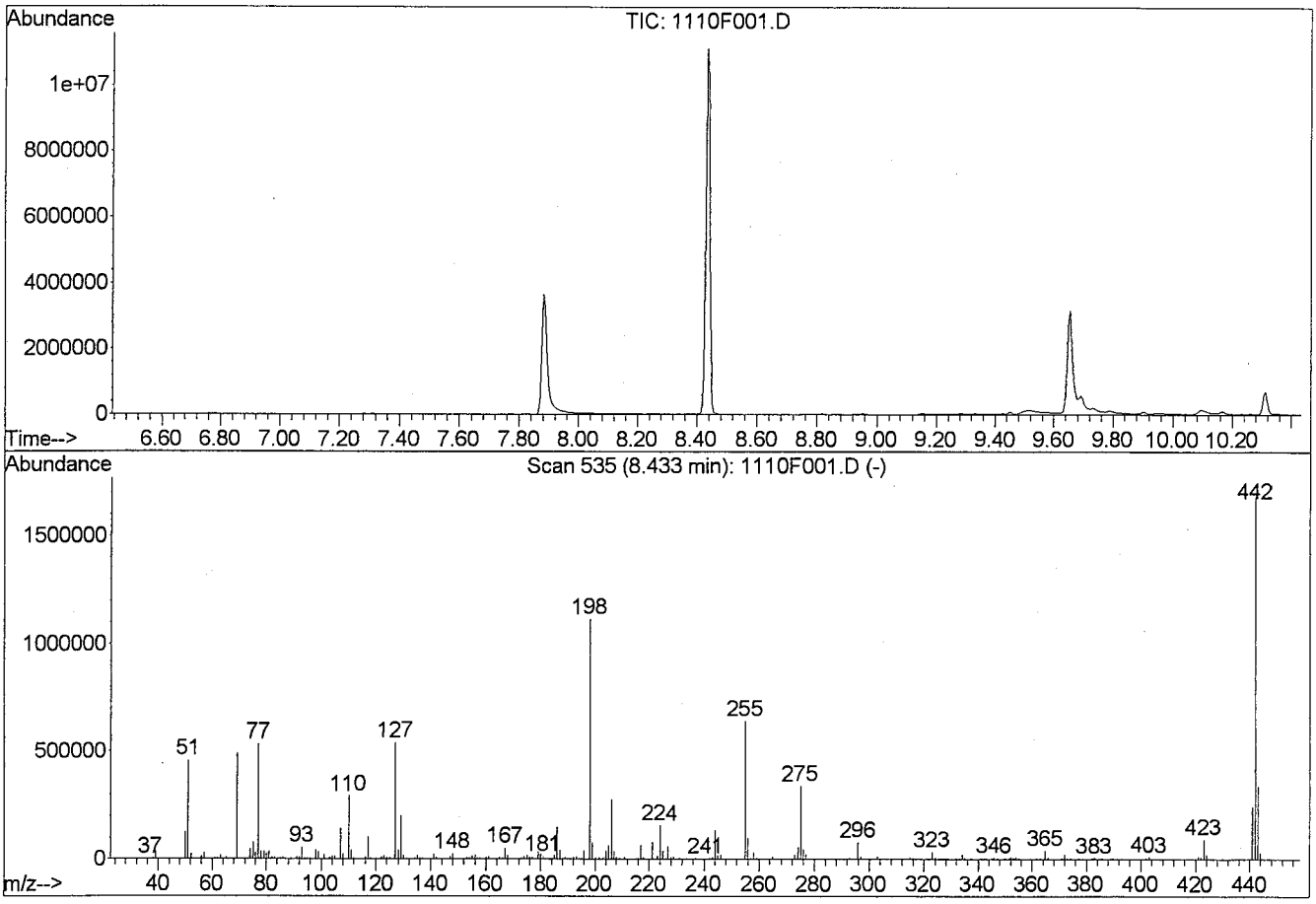
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\111003\1110F001.D
Acq On : 10 Nov 2003 2:40 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 535

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.1	458304	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	2929	PASS
127	198	10	80	48.6	541696	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	66.2	1115648	PASS
199	198	5	9	7.0	77712	PASS
275	198	10	60	30.6	341760	PASS
365	442	1	50	2.4	40600	PASS
441	443	0.01	100	72.7	246848	PASS
442	442	30	100	100.0	1684480	PASS
443	442	15	24	20.1	339392	PASS

1110F001.D DFTPPPAH.M Mon Nov 10 17:50:39 2003

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	586	53.10	1324	69.00	494528	81.00	37105
37.00	2019	55.05	2307	70.00	2929	82.00	10110
38.10	6629	56.00	13557	71.05	262	83.00	9733
39.10	37304	57.00	30261	73.00	3968	84.00	680
40.00	705	59.00	123	74.00	47480	85.00	5878
41.10	672	61.00	6842	75.00	76896	86.00	10414
44.00	26	62.00	6866	76.10	30096	87.00	4845
45.00	1047	63.00	18912	77.00	534720	88.00	1813
50.10	122648	64.00	2468	78.00	37384	88.90	1151
51.10	458304	65.10	9582	79.00	36200	91.00	9132
52.10	24128	66.00	759	80.00	25720	92.00	9292

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	53384	105.00	11687	119.00	1342	131.00	3482
94.00	4232	107.00	142784	120.00	2010	132.00	1794
95.00	1506	108.00	22872	121.00	1005	132.90	867
96.00	3561	110.00	294528	122.00	9212	134.00	6428
98.00	41824	111.00	41440	123.00	15159	135.00	17384
99.00	32216	112.00	4796	123.90	7691	136.00	6783
100.00	3073	113.00	1770	125.00	6341	137.00	7724
101.00	20360	114.90	775	127.00	541696	138.00	1795
102.00	1664	116.00	8888	128.00	42056	138.90	1095
103.00	6982	117.00	103416	129.00	200832	140.00	3172
104.00	13359	118.00	7603	130.00	17280	141.00	25360

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.00	8704	151.90	2615	163.00	1061	174.00	12655
143.00	5324	153.00	7326	164.00	1408	175.00	18848
143.90	1159	154.00	6457	164.90	9219	176.00	8048
145.00	1673	155.00	15532	166.00	7590	176.90	9511
146.00	5209	156.00	20040	167.00	51848	178.00	4281
147.00	12602	157.00	5238	168.00	20528	178.90	36560
147.90	25936	157.90	5282	169.00	4067	180.00	25368
149.00	5518	159.00	3668	169.90	1939	180.90	12076
150.00	2018	160.00	7937	170.90	2495	182.00	1882
151.00	3238	161.00	11766	171.90	4679	182.90	1093
151.60	2580	161.90	2729	173.00	6623	184.00	3217

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
185.00	19400	196.00	39592	209.00	2824	225.00	39784
186.00	147712	197.90	1115648	211.00	11148	226.00	3957
187.00	41400	198.90	77712	212.90	1215	226.90	58104
188.00	4696	200.00	5253	215.00	2891	228.00	8987
189.00	8319	201.40	6875	216.00	6507	228.90	12313
189.90	1713	203.00	7274	216.90	66328	230.00	1965
191.00	4317	204.00	37824	217.90	8536	231.00	6055
192.00	10661	205.00	63440	218.90	829	232.00	1464
193.00	13180	206.00	279232	221.00	80648	233.00	1291
194.00	3069	207.00	37048	222.90	16488	233.90	3741
195.00	2112	208.00	8853	224.00	156736	234.90	4597

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
236.00	2902	247.00	4524	259.00	5431	274.00	56136
237.00	5876	247.90	901	260.00	1145	275.00	341760
237.90	908	249.00	4229	260.90	1458	276.00	48880
238.90	2090	249.90	1190	263.90	753	276.90	23680
239.90	1931	251.00	968	264.90	13160	277.90	4111
241.00	3761	252.00	1302	265.80	2085	278.90	830
242.00	8362	253.00	2822	267.80	188	281.90	587
243.00	10236	255.00	640832	270.00	849	282.90	3023
244.00	132800	255.90	97288	270.90	1257	284.00	1676
245.00	17984	256.90	7821	272.00	2201	285.00	4811
246.00	22856	257.90	32728	272.90	20720	286.00	791

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.90	1245	302.00	1951	317.00	1025	334.00	19832
289.90	839	303.00	10939	320.90	3225	335.00	5451
291.00	603	304.00	2799	322.00	1749	336.00	783
292.00	1710	305.00	537	323.00	33464	339.00	856
292.90	5791	307.90	1290	324.00	6069	340.00	624
294.00	1406	308.90	1041	325.00	721	341.00	3414
295.00	2170	310.00	1070	326.00	544	342.00	1085
295.90	79424	313.00	866	326.90	5121	345.90	7488
296.90	12062	313.90	4661	327.90	2977	346.90	1782
298.00	1015	314.90	9487	331.90	2482	351.00	614
301.00	1521	315.90	6803	333.00	3496	352.00	9852

Scan 535 (8.433 min): 1110F001.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
353.00	7444	374.00	507	404.00	4659	443.00	339392
354.00	11405	376.90	957	404.90	593	444.00	30240
355.00	2604	382.90	5702	410.00	692	444.90	2025
358.90	1044	383.90	1485	414.90	917		
364.90	40600	385.00	596	421.00	12058		
365.90	6683	389.90	3191	422.00	11160		
366.90	653	391.00	1825	423.00	93256		
369.90	905	392.00	1616	424.00	19656		
370.90	3009	400.90	1524	425.00	2129		
372.00	21616	401.90	8341	441.00	246848		
373.00	4913	403.00	11763	442.00	1684480		

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\110703\1107F010.D	F	J:\MS11\DATA\110703\1107F015.D
B	J:\MS11\DATA\110703\1107F011.D	G	J:\MS11\DATA\110703\1107F016.D
C	J:\MS11\DATA\110703\1107F012.D	H	J:\MS11\DATA\110703\1107F017.D
D	J:\MS11\DATA\110703\1107F013.D	I	J:\MS11\DATA\110703\1107F018.D
E	J:\MS11\DATA\110703\1107F014.D	J	J:\MS11\DATA\110703\1107F019.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
2-Methylnaphthalene	A	10	0.592	B	20	0.617	C	40	0.597	D	100	0.643	E	500	0.653
	F	1000	0.688	G	2000	0.717	H	5000	0.719	I	8000	0.734	J	10000	0.716
1-Methylnaphthalene	A	10	0.538	B	20	0.612	C	40	0.534	D	100	0.601	E	500	0.623
	F	1000	0.650	G	2000	0.676	H	5000	0.674	I	8000	0.684	J	10000	0.667
C2-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C3-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C4-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
Biphenyl	A	10	0.744	B	20	0.715	C	40	0.720	D	100	0.787	E	500	0.805
	F	1000	0.845	G	2000	0.875	H	5000	0.873	I	8000	0.880	J	10000	0.852
Acenaphthylene	A	10	1.83	B	20	1.82	C	40	1.71	D	100	1.79	E	500	1.84
	F	1000	1.97	G	2000	2.06	H	5000	2.05	I	8000	2.12	J	10000	2.07
Dibenzofuran	A	10	1.44	B	20	1.49	C	40	1.45	D	100	1.54	E	500	1.53
	F	1000	1.62	G	2000	1.70	H	5000	1.70	I	8000	1.75	J	10000	1.70
Acenaphthene	A	10	1.14	B	20	1.09	C	40	1.07	D	100	1.18	E	500	1.17
	F	1000	1.23	G	2000	1.25	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluorene	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C1-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C2-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C3-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\110703\1107F010.D	F	J:\MS11\DATA\110703\1107F015.D
B	J:\MS11\DATA\110703\1107F011.D	G	J:\MS11\DATA\110703\1107F016.D
C	J:\MS11\DATA\110703\1107F012.D	H	J:\MS11\DATA\110703\1107F017.D
D	J:\MS11\DATA\110703\1107F013.D	I	J:\MS11\DATA\110703\1107F018.D
E	J:\MS11\DATA\110703\1107F014.D	J	J:\MS11\DATA\110703\1107F019.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
2-Methylnaphthalene	A	10	0.592	B	20	0.617	C	40	0.597	D	100	0.643	E	500	0.653
	F	1000	0.688	G	2000	0.717	H	5000	0.719	I	8000	0.734	J	10000	0.716
1-Methylnaphthalene	A	10	0.538	B	20	0.612	C	40	0.534	D	100	0.601	E	500	0.623
	F	1000	0.650	G	2000	0.676	H	5000	0.674	I	8000	0.684	J	10000	0.667
C2-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C3-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C4-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
Biphenyl	A	10	0.744	B	20	0.715	C	40	0.720	D	100	0.787	E	500	0.805
	F	1000	0.845	G	2000	0.875	H	5000	0.873	I	8000	0.880	J	10000	0.852
Acenaphthylene	A	10	1.83	B	20	1.82	C	40	1.71	D	100	1.79	E	500	1.84
	F	1000	1.97	G	2000	2.06	H	5000	2.05	I	8000	2.12	J	10000	2.07
Dibenzofuran	A	10	1.44	B	20	1.49	C	40	1.45	D	100	1.54	E	500	1.53
	F	1000	1.62	G	2000	1.70	H	5000	1.70	I	8000	1.75	J	10000	1.70
Acenaphthene	A	10	1.14	B	20	1.09	C	40	1.07	D	100	1.18	E	500	1.17
	F	1000	1.23	G	2000	1.25	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluorene	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C1-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C2-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C3-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibenzothiophene	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C1-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C2-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C3-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
Phenanthrene	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Anthracene	A	10	0.828	B	20	0.870	C	40	0.887	D	100	0.919	E	500	0.962
	F	1000	1.11	G	2000	1.18	H	5000	1.19	I	8000	1.22	J	10000	1.19
C1-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C2-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C3-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C4-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluoranthene	A	10	1.03	B	20	1.06	C	40	1.05	D	100	1.15	E	500	1.14
	F	1000	1.31	G	2000	1.36	H	5000	1.32	I	8000	1.35	J	10000	1.29
Pyrene	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
C1-Fluoranthenes/Pyrenes	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
Benz(a)anthracene	A	10	1.06	B	20	0.923	C	40	0.887	D	100	1.01	E	500	0.976
	F	1000	0.962	G	2000	1.01	H	5000	1.03	I	8000	1.07	J	10000	1.04
Chrysene	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C1-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C2-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
C3-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C4-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
Benzo(b)fluoranthene	A	10	1.19	B	20	1.15	C	40	1.14	D	100	1.20	E	500	1.30
	F	1000	1.38	G	2000	1.45	H	5000	1.48	I	8000	1.54	J	10000	1.52
Benzo(k)fluoranthene	A	10	1.56	B	20	1.35	C	40	1.41	D	100	1.70	E	500	1.74
	F	1000	1.80	G	2000	1.89	H	5000	1.85	I	8000	1.82	J	10000	1.84
Benzo(e)pyrene	A	10	1.40	B	20	1.41	C	40	1.39	D	100	1.48	E	500	1.50
	F	1000	1.54	G	2000	1.59	H	5000	1.55	I	8000	1.56	J	10000	1.57
Benzo(a)pyrene	A	10	0.993	B	20	0.923	C	40	1.01	D	100	0.938	E	500	1.03
	F	1000	1.15	G	2000	1.25	H	5000	1.32	I	8000	1.37	J	10000	1.36
Perylene	A	10	1.09	B	20	1.19	C	40	1.09	D	100	1.13	E	500	1.21
	F	1000	1.32	G	2000	1.40	H	5000	1.42	I	8000	1.45	J	10000	1.45
Indeno(1,2,3-cd)pyrene	A	10	0.693	B	20	0.554	C	40	0.589	D	100	0.554	E	500	0.599
	F	1000	0.677	G	2000	0.720	H	5000	0.797	I	8000	0.872	J	10000	0.848
Dibenz(a,h)anthracene	A	10	0.737	B	20	0.798	C	40	0.841	D	100	0.918	E	500	0.947
	F	1000	1.05	G	2000	1.08	H	5000	1.15	I	8000	1.21	J	10000	1.19
Benzo(g,h,i)perylene	A	10	1.35	B	20	1.01	C	40	1.01	D	100	1.06	E	500	1.04
	F	1000	1.17	G	2000	1.16	H	5000	1.19	I	8000	1.23	J	10000	1.21
Fluorene-d10							C	40	0.872	D	100	0.932	E	500	0.945
	F	1000	1.01	G	2000	1.05	H	5000	1.05	I	8000	1.09	J	10000	1.05
Fluoranthene-d10				B	20	0.932	C	40	0.836	D	100	0.957	E	500	0.930
	F	1000	1.05	G	2000	1.09	H	5000	1.07	I	8000	1.10	J	10000	1.05
Terphenyl-d14	A	10	1.01	B	20	0.919	C	40	0.836	D	100	0.911	E	500	0.898
	F	1000	0.918	G	2000	0.935	H	5000	0.889	I	8000	0.900	J	10000	0.896

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Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	1.8		≤ 15	1.13		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	8.1		≤ 15	0.668		0.01
1-Methylnaphthalene	MS	AverageRF	% RSD	8.8		≤ 15	0.626		0.01
C2-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C3-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C4-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
Biphenyl	MS	AverageRF	% RSD	8.0		≤ 15	0.810		0.01
Acenaphthylene	MS	AverageRF	% RSD	7.5		≤ 15	1.93		0.01
Dibenzofuran	MS	AverageRF	% RSD	7.3		≤ 15	1.59		0.01
Acenaphthene	MS	AverageRF	% RSD	5.6		≤ 15	1.19		0.01
Fluorene	MS	AverageRF	% RSD	10.7		≤ 15	1.27		0.01
C1-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C2-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C3-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
Dibenzothiophene	MS	AverageRF	% RSD	7.8		≤ 15	1.15		0.01
C1-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C2-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C3-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
Phenanthrene	MS	AverageRF	% RSD	4.5		≤ 15	1.21		0.01
Anthracene	MS	AverageRF	% RSD	15.1	*	≤ 15	1.04		0.01
C1-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C2-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C3-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C4-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
Fluoranthene	MS	AverageRF	% RSD	11.0		≤ 15	1.21		0.01
Pyrene	MS	AverageRF	% RSD	4.9		≤ 15	1.31		0.01
C1-Fluoranthenes/Pyrenes	TRG	AverageRF	% RSD	4.9		≤ 15	1.31		
Benz(a)anthracene	MS	AverageRF	% RSD	5.8		≤ 15	0.995		0.01
Chrysene	MS	AverageRF	% RSD	3.8		≤ 15	1.06		0.01
C1-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C2-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C3-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C4-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
Benzo(b)fluoranthene	MS	AverageRF	% RSD	11.8		≤ 15	1.34		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	11.3		≤ 15	1.69		0.01
Benzo(e)pyrene	MS	AverageRF	% RSD	5.1		≤ 15	1.50		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	15.7	*	≤ 15	1.14		0.01
Perylene	MS	AverageRF	% RSD	11.7		≤ 15	1.27		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	17.1	*	≤ 15	0.690		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	17.0	*	≤ 15	0.992		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	9.6		≤ 15	1.14		0.01
Fluorene-d10	SURR	AverageRF	% RSD	7.5		≤ 15	1.00		0.01

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† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Fluoranthene-d10	SURR	AverageRF	% RSD	9.1		≤ 15	1.00		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.8		≤ 15	0.911		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Calibration Date: 11/07/2003
Date Analyzed: 11/07/2003

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL3082
Units: ng/ml

File ID: J:\MS11\DATA\110703\1107F023.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	1.13	1.17	4	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.668	0.720	8	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.626	0.677	8	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.810	0.887	10	NA	± 20 %	AverageRF
Acenaphthylene	2000	2100	1.93	2.07	7	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	1.59	1.72	8	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	1.19	1.26	6	NA	± 20 %	AverageRF
Fluorene	2000	2200	1.27	1.40	10	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	1.15	1.20	4	NA	± 20 %	AverageRF
Phenanthrene	2000	2000	1.21	1.24	2	NA	± 20 %	AverageRF
Anthracene	2000	2200	1.04	1.14	10	NA	± 20 %	AverageRF
Fluoranthene	2000	2100	1.21	1.29	7	NA	± 20 %	AverageRF
Pyrene	2000	2100	1.31	1.37	4	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2000	0.995	0.975	-2	NA	± 20 %	AverageRF
Chrysene	2000	2100	1.06	1.11	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2100	1.34	1.41	6	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2200	1.69	1.89	11	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	1.50	1.58	5	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	1.14	1.20	6	NA	± 20 %	AverageRF
Perylene	2000	2200	1.27	1.39	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1800	0.690	0.636	-8	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2000	0.992	1.00	1	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	2000	1.14	1.14	0	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Injection Log

Directory: J:\MS11\DATA\110703

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1107F001.D	1.	CCV LOC		7 Nov 2003 11:2
2	2	1107F002.D	1.	IB		7 Nov 2003 12:0
3	2	1107F003.D	1.	IB		7 Nov 2003 12:3
4	1	1107F004.D	1.	DFTPP @ 50ug/mL | SVM15-97C		7 Nov 2003 13:2
5	2	1107F005.D	1.	SIM PAH @ 1.0ug/mL | SVM15-94K		7 Nov 2003 13:4
6	3	1107F006.D	1.	ALKH CCV		7 Nov 2003 14:1
7	1	1107F007.D	1.	IB		7 Nov 2003 14:5
8	2	1107F008.D	1.	DFTPP @ 50ug/mL | SVM15-97C		7 Nov 2003 15:3
9	3	1107F009.D	1.	IB		7 Nov 2003 15:5
10	4	1107F010.D	1.	SIM PAH ICAL @ 0.01ug/mL | SVM15-55A		7 Nov 2003 16:2
11	5	1107F011.D	1.	SIM PAH ICAL @ 0.02ug/mL | SVM15-55B		7 Nov 2003 17:0
12	6	1107F012.D	1.	SIM PAH ICAL @ 0.04ug/mL | SVM15-55C		7 Nov 2003 17:3
13	7	1107F013.D	1.	SIM PAH ICAL @ 0.1ug/mL | SVM15-55D		7 Nov 2003 18:1
14	8	1107F014.D	1.	SIM PAH ICAL @ 0.5ug/mL | SVM15-55E		7 Nov 2003 18:5
15	9	1107F015.D	1.	SIM PAH ICAL @ 1.0ug/mL | SVM15-55J		7 Nov 2003 19:2
16	10	1107F016.D	1.	SIM PAH ICAL @ 2.0ug/mL | SVM15-55F		7 Nov 2003 20:0
17	11	1107F017.D	1.	SIM PAH ICAL @ 5.0ug/mL | SVM15-55G		7 Nov 2003 20:3
18	12	1107F018.D	1.	SIM PAH ICAL @ 8.0ug/mL | SVM15-55H		7 Nov 2003 21:1
19	13	1107F019.D	1.	SIM PAH ICAL @ 10ug/mL | SVM15-55I		7 Nov 2003 21:5
20	14	1107F020.D	1.	DCM		7 Nov 2003 22:2
21	14	1107F021.D	1.	DCM		7 Nov 2003 23:0
22	2	1107F022.D	1.	DFTPP @ 50ug/mL | SVM15-97C		7 Nov 2003 23:3
23	15	1107F023.D	1.	SIM PAH ICV @ 2.0ug/mL | SVM15-97E		7 Nov 2003 23:5

SIM-PAH/ALKH ICAL

CAL 3082

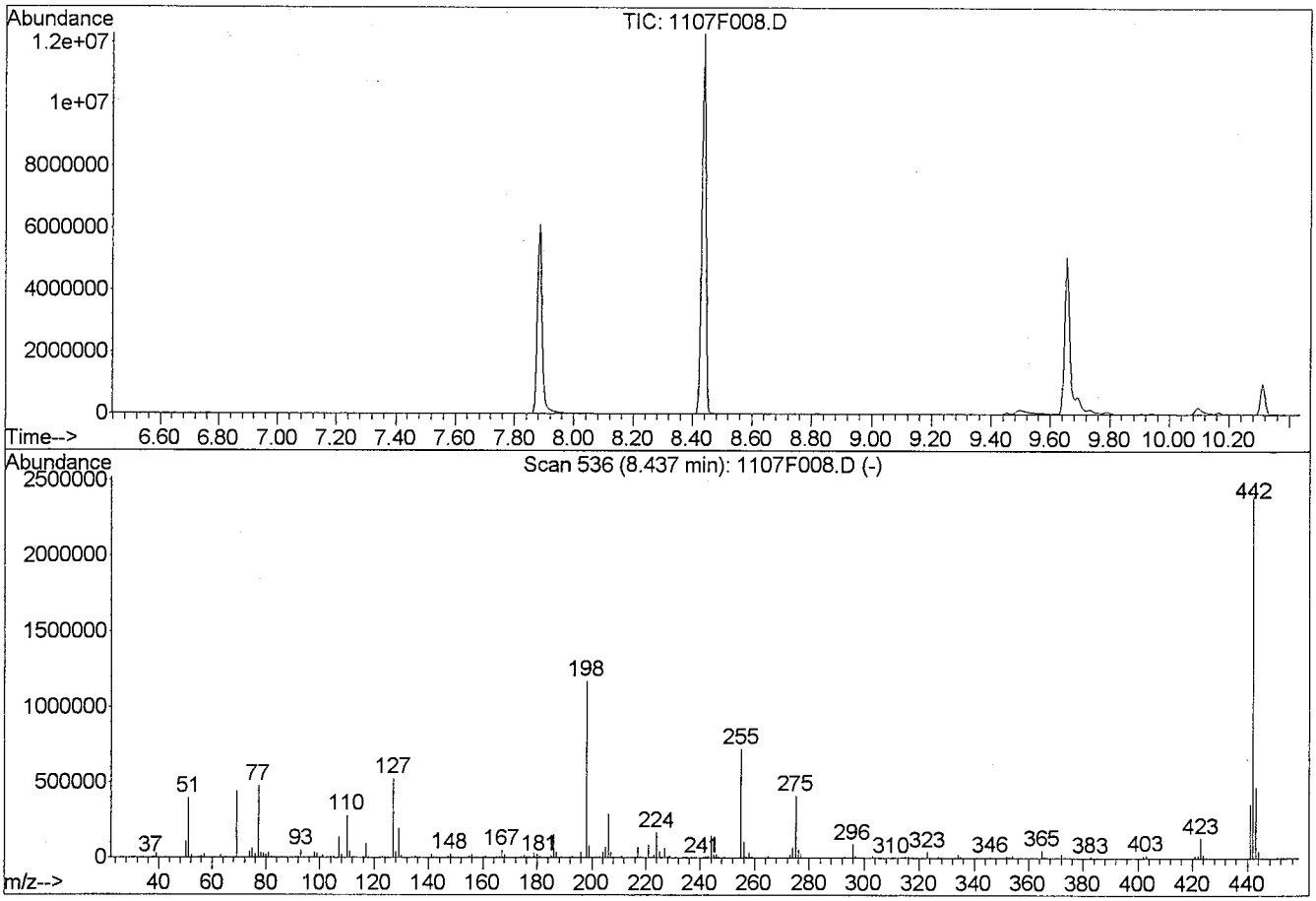
11/10/03

mt
11/11/03

DFTPP

Data File : J:\MS11\DATA\110703\1107F008.D
Acq On : 7 Nov 2003 3:30 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.8	397056	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2312	PASS
127	198	10	80	44.7	525120	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	48.9	1174016	PASS
199	198	5	9	6.9	81120	PASS
275	198	10	60	35.1	412480	PASS
365	442	1	50	2.3	54280	PASS
441	443	0.01	100	76.5	360384	PASS
442	442	30	100	100.0	2399744	PASS
443	442	15	24	19.6	471040	PASS

11/10/03 mt 11/11/03

1107F008.D DFTPPPAH.M Mon Nov 10 14:43:08 2003

Scan 536 (8.437 min): 1107F008.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
237.90	876	249.00	5452	260.90	1521	275.00	412480
238.90	2370	250.00	1145	263.00	808	276.00	55904
240.00	2116	250.90	1240	263.80	1616	277.00	28432
240.90	3449	252.00	1429	264.90	14858	277.90	5422
242.00	9006	253.00	2641	266.00	2869	279.00	1058
243.00	11632	255.00	724928	267.90	633	280.90	582
244.00	148992	256.00	106064	269.90	1358	281.90	825
245.00	19976	256.90	8449	270.90	1583	282.90	3368
245.90	23432	257.90	36192	272.00	2401	284.00	2305
246.90	4864	258.90	5511	272.90	24040	284.90	5196
248.00	1167	259.90	908	273.90	65736	285.90	957

Scan 536 (8.437 min): 1107F008.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.90	1659	303.00	12309	319.90	555	333.00	4306
289.90	961	304.00	3740	320.90	4007	334.00	25536
290.90	783	307.90	1440	322.00	2160	335.00	6870
292.00	1798	308.90	1257	323.00	40600	335.90	684
292.90	6894	309.90	1606	324.00	6538	338.90	547
294.00	2047	311.90	530	325.00	654	340.00	732
295.90	91872	313.00	772	325.90	657	340.90	4693
296.90	12398	314.00	5073	326.90	7244	342.00	1252
297.90	729	314.90	10787	327.90	3918	345.90	8504
300.90	1473	316.00	7710	329.00	883	346.90	1776
302.00	2126	316.90	1196	331.90	3056	351.00	1239

Scan 536 (8.437 min): 1107F008.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

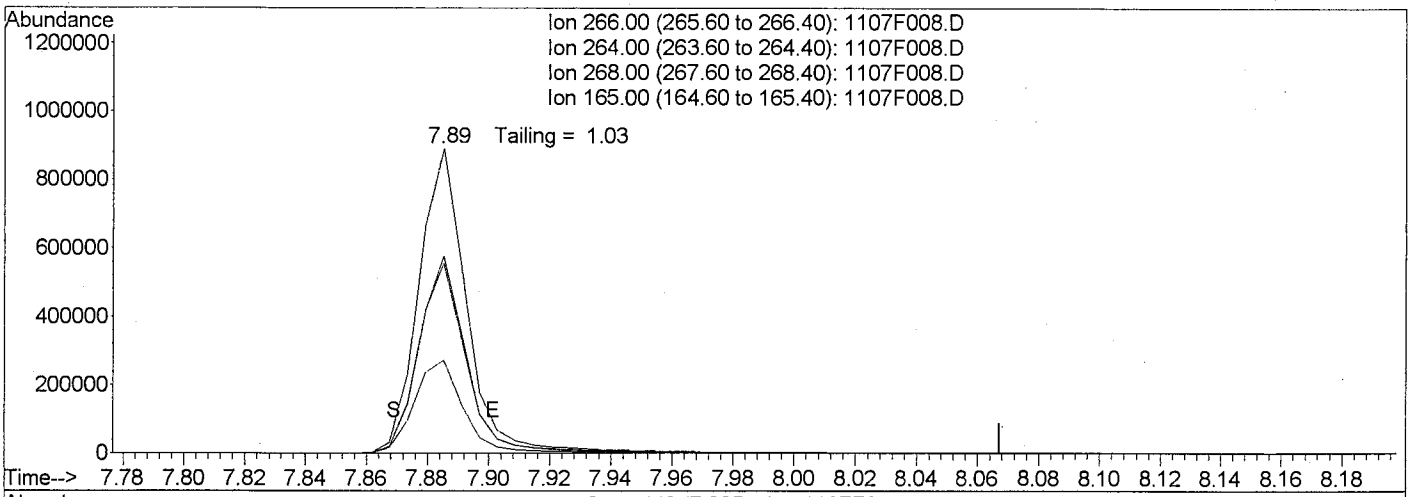
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
352.00	12371	373.00	6935	401.90	11870	439.10	771
352.90	9881	373.90	1109	403.00	17040	441.00	360384
354.00	16156	376.90	919	403.90	5677	442.00	2399744
355.00	2799	382.90	7323	404.90	857	443.00	471040
358.90	897	383.90	2575	410.00	613	444.00	45040
364.90	54280	385.00	622	414.90	806	445.00	2775
365.90	8521	390.00	3421	420.90	16324		
367.00	500	390.90	2342	422.00	17400		
369.90	1524	392.00	2811	423.00	134272		
370.90	3878	396.80	575	424.00	27512		
372.00	27056	400.90	1582	425.00	2946		

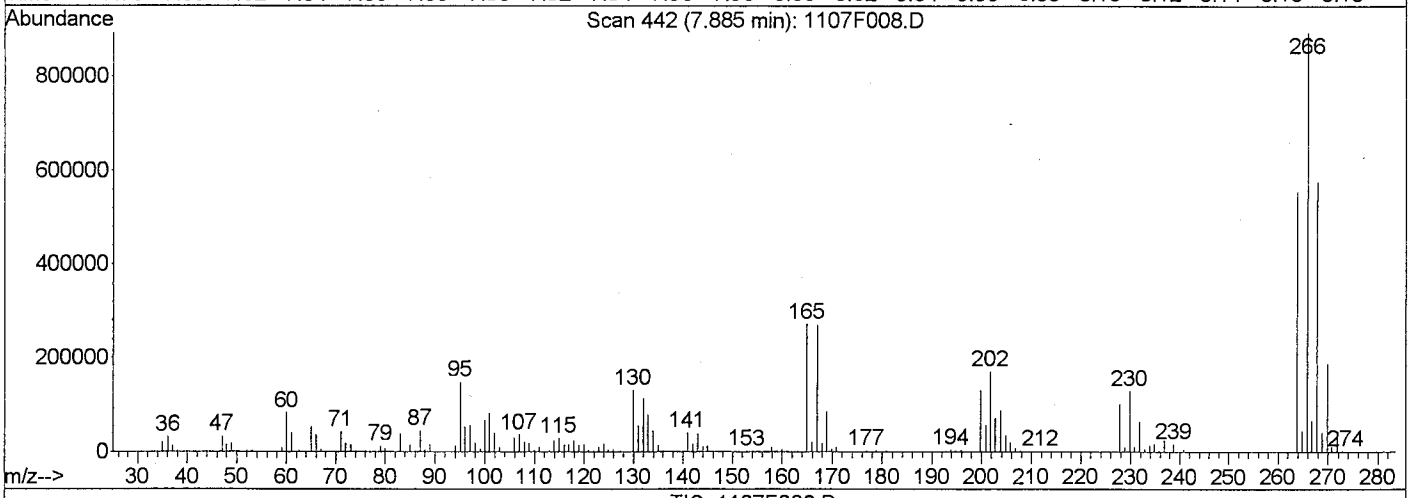
11/10/03

mt 11/11/03

Data File : J:\MS11\DATA\110703\1107F008.D Vial: 2
Acq On : 7 Nov 2003 3:30 pm Operator: LWeiskopf
Sample : DFTPP @ 50ug/mL | SVM15-97C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Jun 11 11:12:55 2002
Response via : Single Level Calibration





TIC: 1107F008.D

(1) Pentachlorophenol

7.57min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	64.50	0.00#
268.00	63.70	0.00#
165.00	28.70	0.00

11/10/03
mnt 11/11/03

1107F008.D DFTPPPAH.M Mon Nov 10 14:43:20 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:39 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mat 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	254806	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	131052	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	182190	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	148792	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	87118	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	2235	12.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.21%		
16) Fluorene-d10	9.01	176	1726	12.88	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.29%		
21) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.70	212	2197	11.96	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.20%		
41) Terphenyl-d14	14.74	244	1505	10.31	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.03%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2879	9.47	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	1508	8.16	ng/ml	100
4) 1-Methylnaphthalene	6.57	142	1370	8.06	ng/ml	98
6) Biphenyl	7.10	154	1897	8.35	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.33	156	1170	7.41	ng/ml	92
12) Acenaphthylene	7.80	152	2392	8.92	ng/ml	99
13) Acenaphthene	8.12	154	1500	8.95	ng/ml	95
14) Dibenzofuran	8.41	168	1888	8.04	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.83	170	1315	8.96	ng/ml	93
17) Fluorene	9.06	166	1424	7.67	ng/ml	100
24) Dibenzothiophene	10.79	184	1882	8.02	ng/ml	99
28) Phenanthrene	11.05	178	2256	9.36	ng/ml	95
29) Anthracene	11.15	178	1508	7.12	ng/ml	92
30) Carbazole	11.58	167	1238	7.19	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	1356	8.36	ng/ml	97
36) Fluoranthene	13.74	202	1882	8.06	ng/ml	99
39) Pyrene	14.24	202	1957	8.79	ng/ml	99
42) Benz(a)anthracene	17.09	228	1570	9.54	ng/ml	95
43) Chrysene	17.19	228	1467	8.78	ng/ml	98
49) Benzo(b)fluoranthene	20.11	252	1041	7.78	ng/ml	91
50) Benzo(k)fluoranthene	20.19	252	1361m	10.52	ng/ml	
51) Benzo(e)pyrene	21.09	252	1218m	8.81	ng/ml	
52) Benzo(a)pyrene	21.27	252	865	7.56	ng/ml	87

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:39 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03

mnt 11/11/03

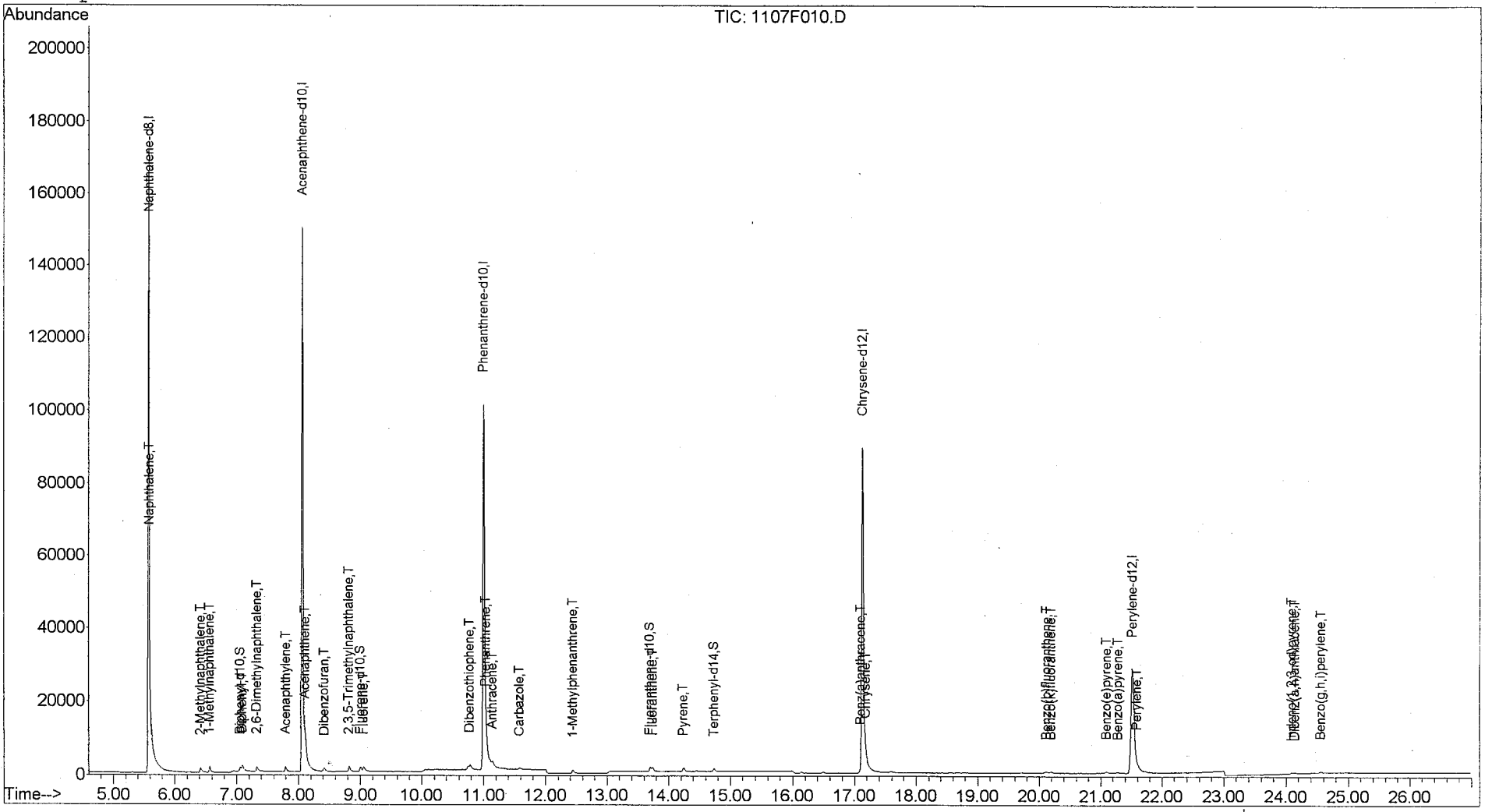
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53) Perylene	21.60	252	946	7.91	ng/ml	94
54) Indeno(1,2,3-cd)pyrene	24.09	276	604m	5.21	ng/ml	
55) Dibenz(a,h)anthracene	24.15	278	642m	5.03	ng/ml	
56) Benzo(g,h,i)perylene	24.55	276	1173m	8.07	ng/ml	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: 1107ALK.RES

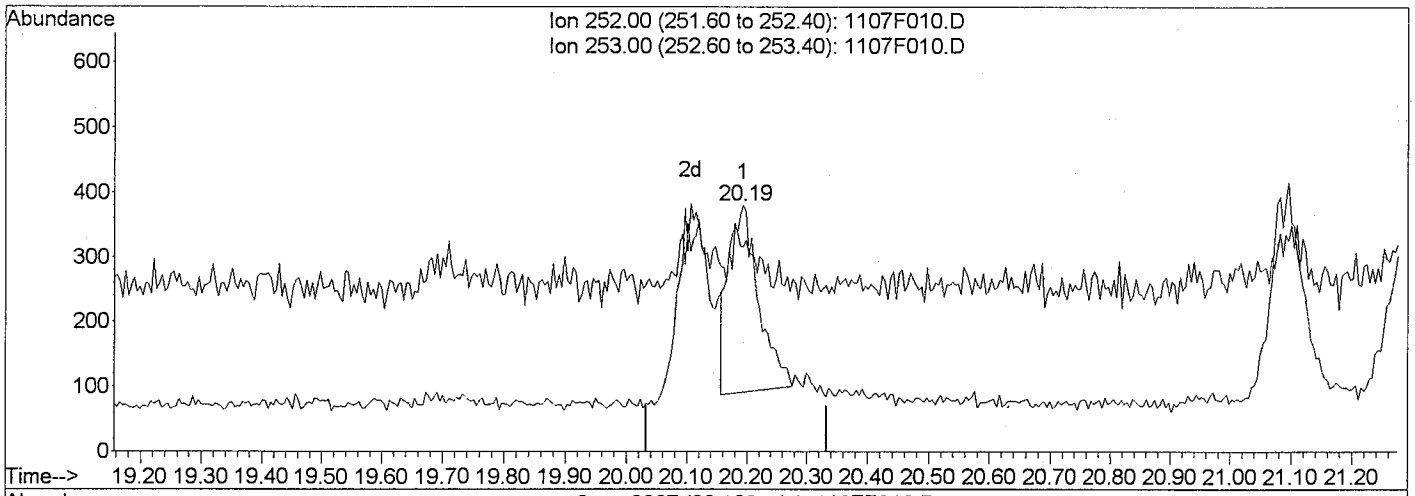
Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

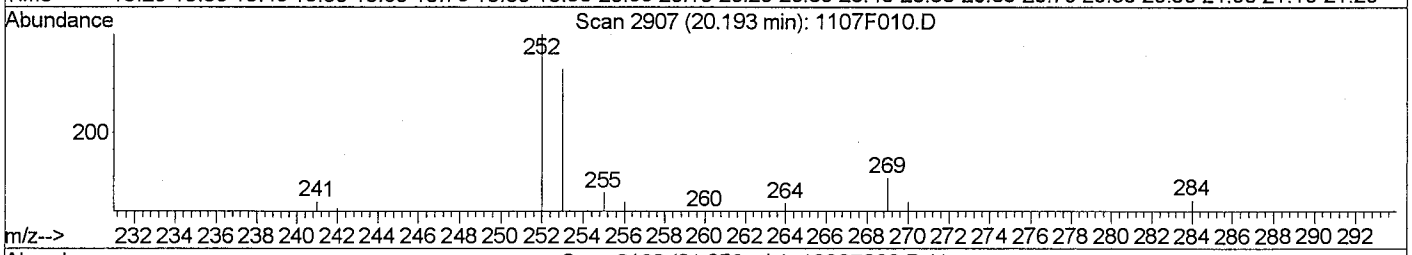


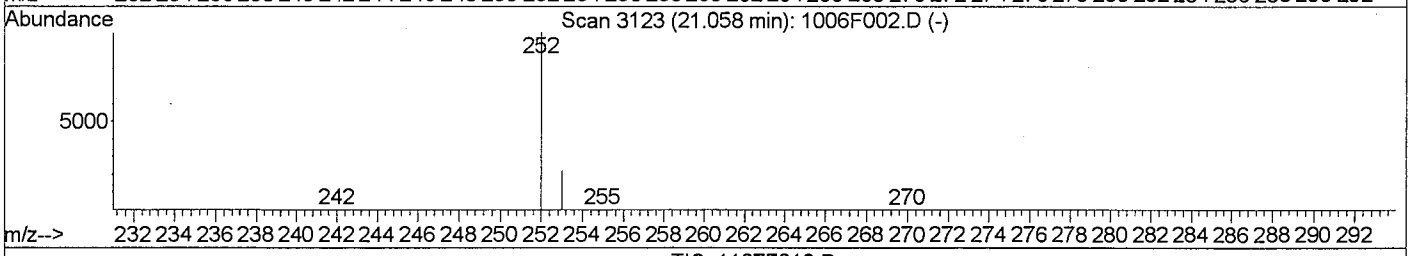
958

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(50) Benzo(k)fluoranthene (T)

20.19min 7.84ng/ml

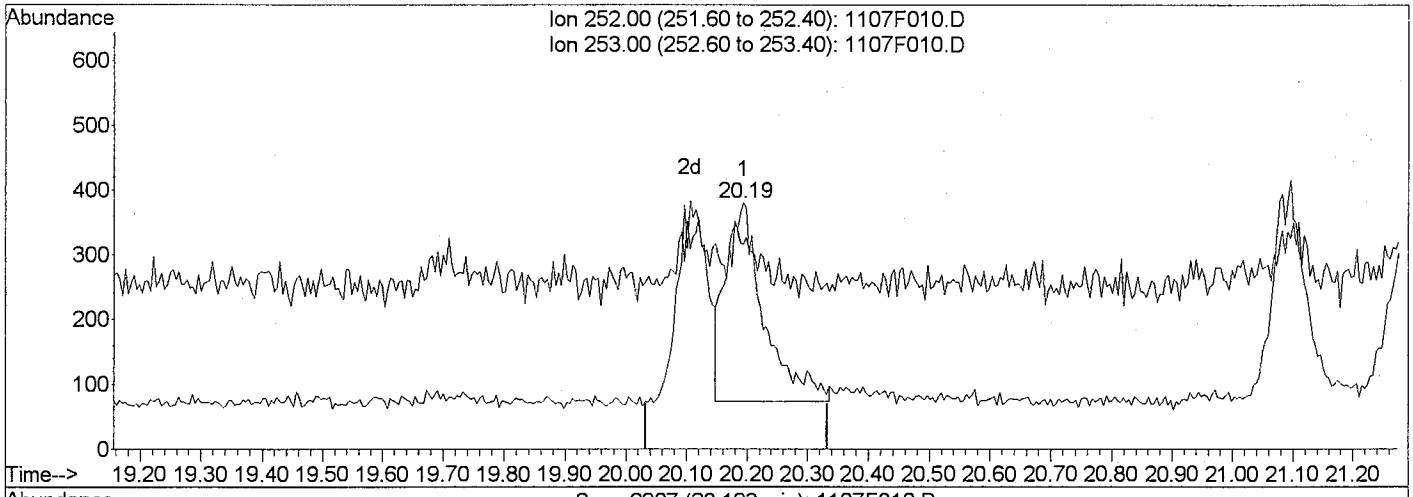
response 1014

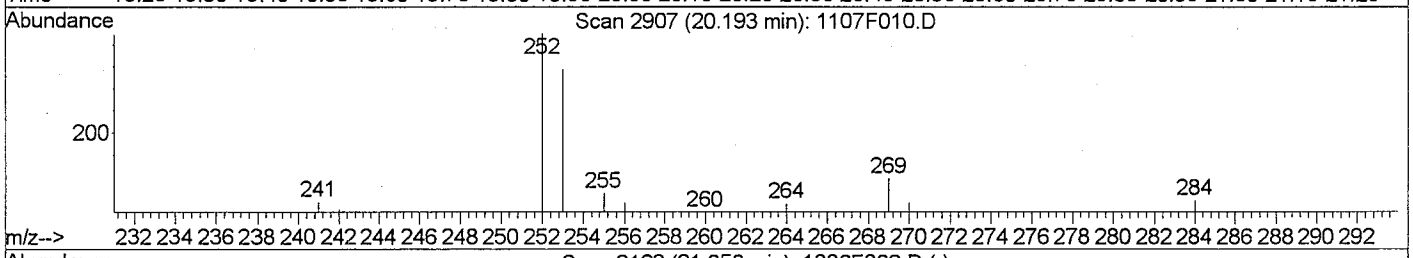
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	17.86
0.00	0.00	0.00
0.00	0.00	0.00

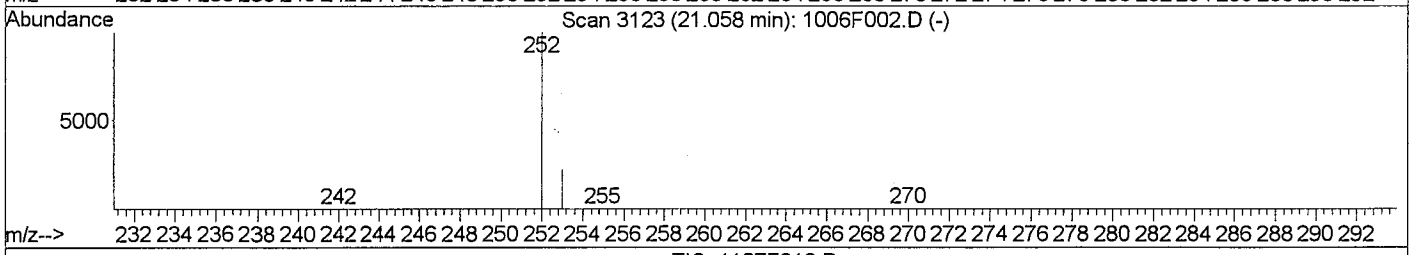
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(50) Benzo(k)fluoranthene (T)

20.19min 10.52ng/ml m

response 1361

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	83.16#
0.00	0.00	0.00
0.00	0.00	0.00

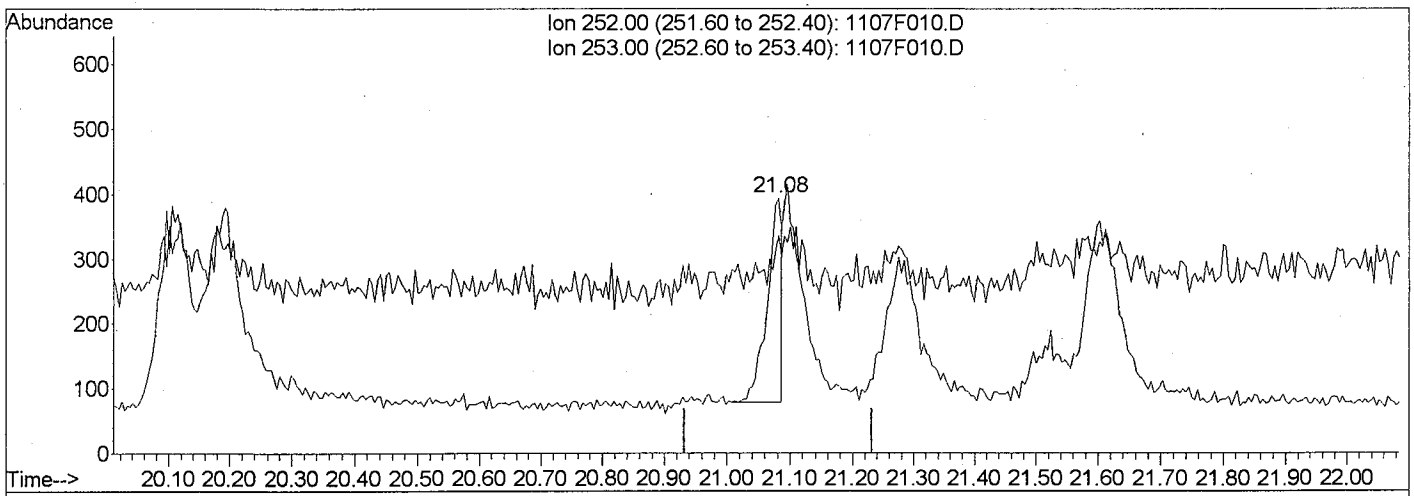
11/10/03 incomplete mm 11/11/03

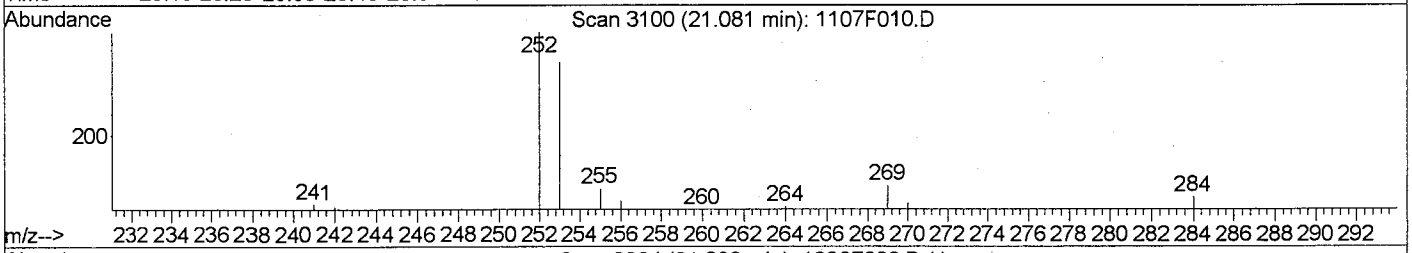
1107F010.D 1107ALK.M Sat Nov 08 06:42:21 2003

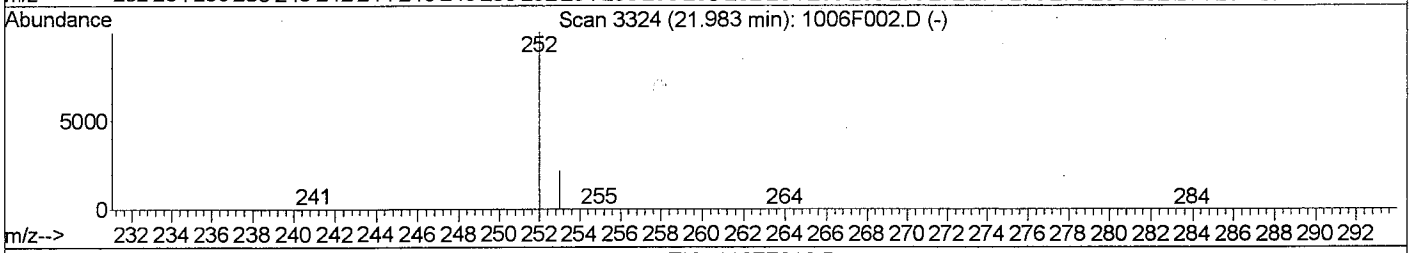
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(51) Benzo(e)pyrene (T)

21.08min 3.63ng/ml

response 502

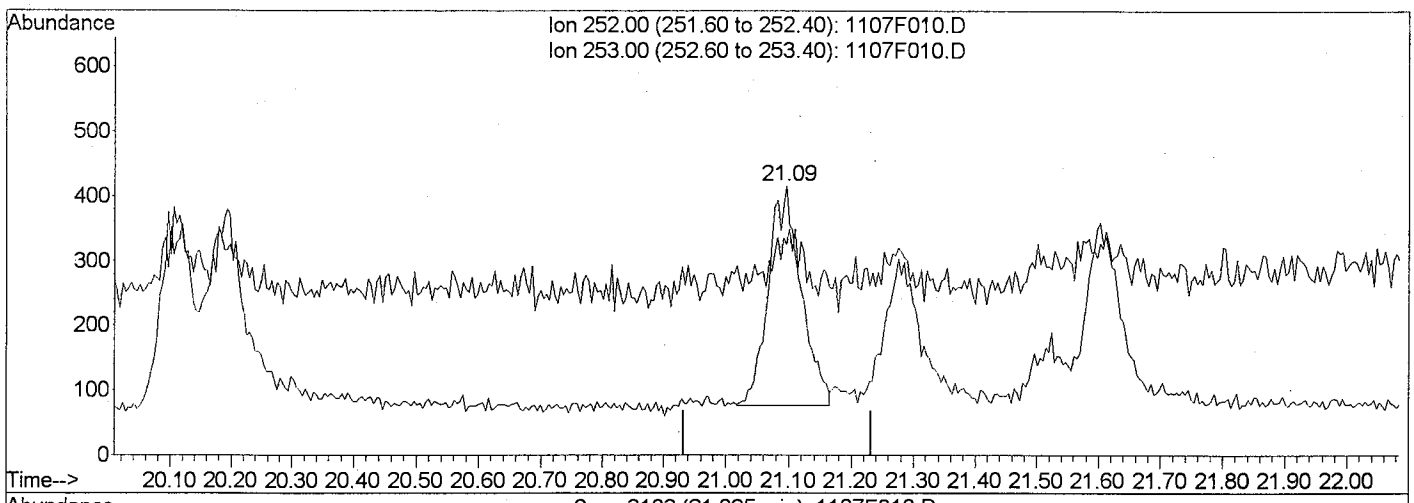
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	16.77
0.00	0.00	0.00
0.00	0.00	0.00

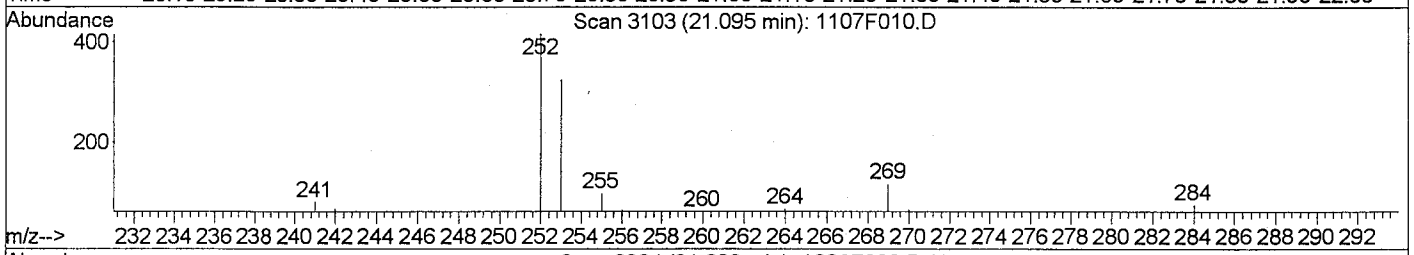
1107F010.D 1107ALK.M Sat Nov 08 06:42:24 2003

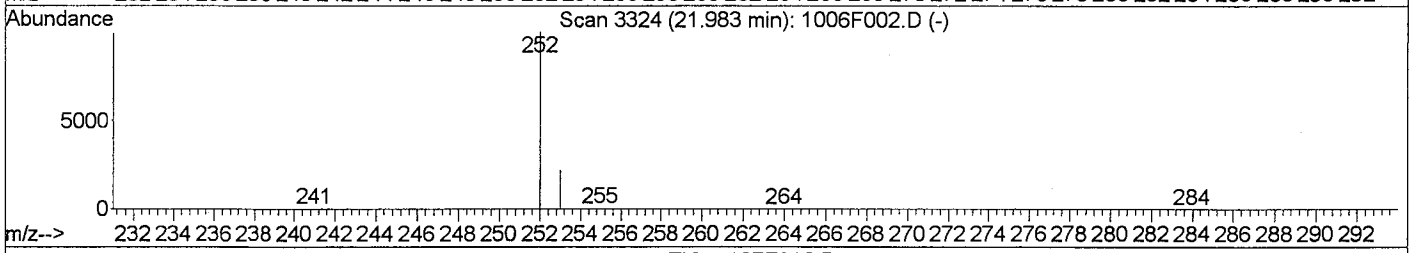
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(51) Benzo(e)pyrene (T)

21.09min 8.81ng/ml m

response 1218

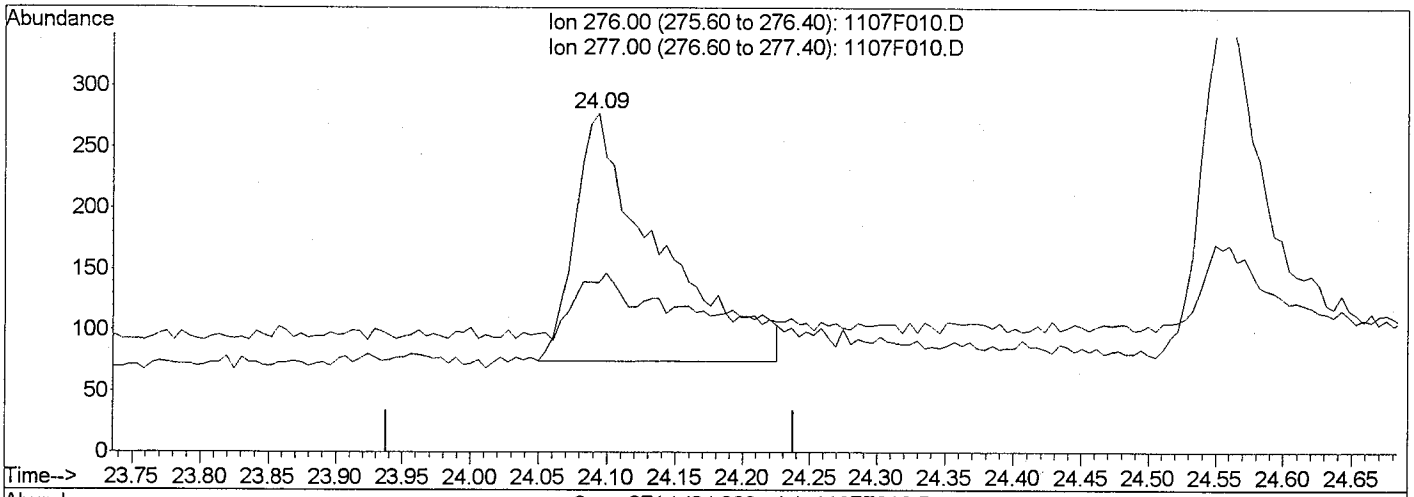
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	78.13#
0.00	0.00	0.00
0.00	0.00	0.00

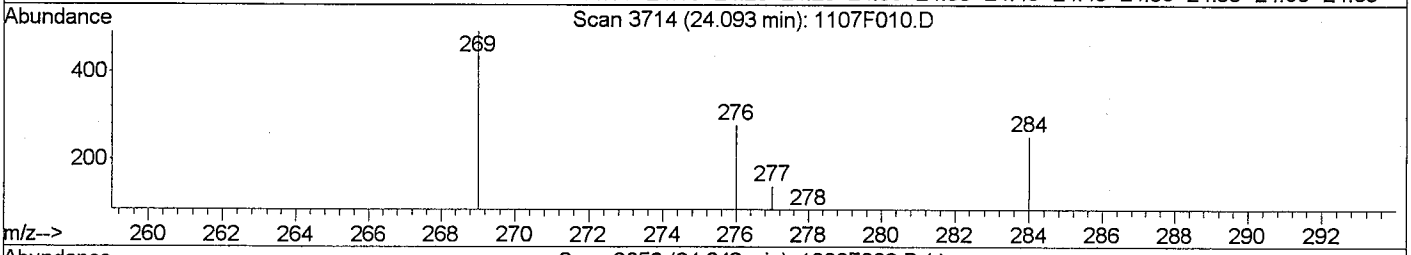
complete 11/10/03
mst 11/11/03

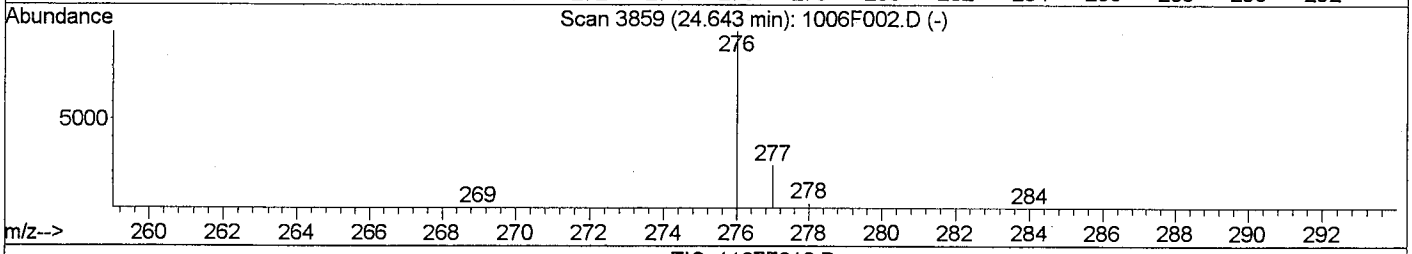
1107F010.D 1107ALK.M Sat Nov 08 06:42:29 2003

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 7.43ng/ml

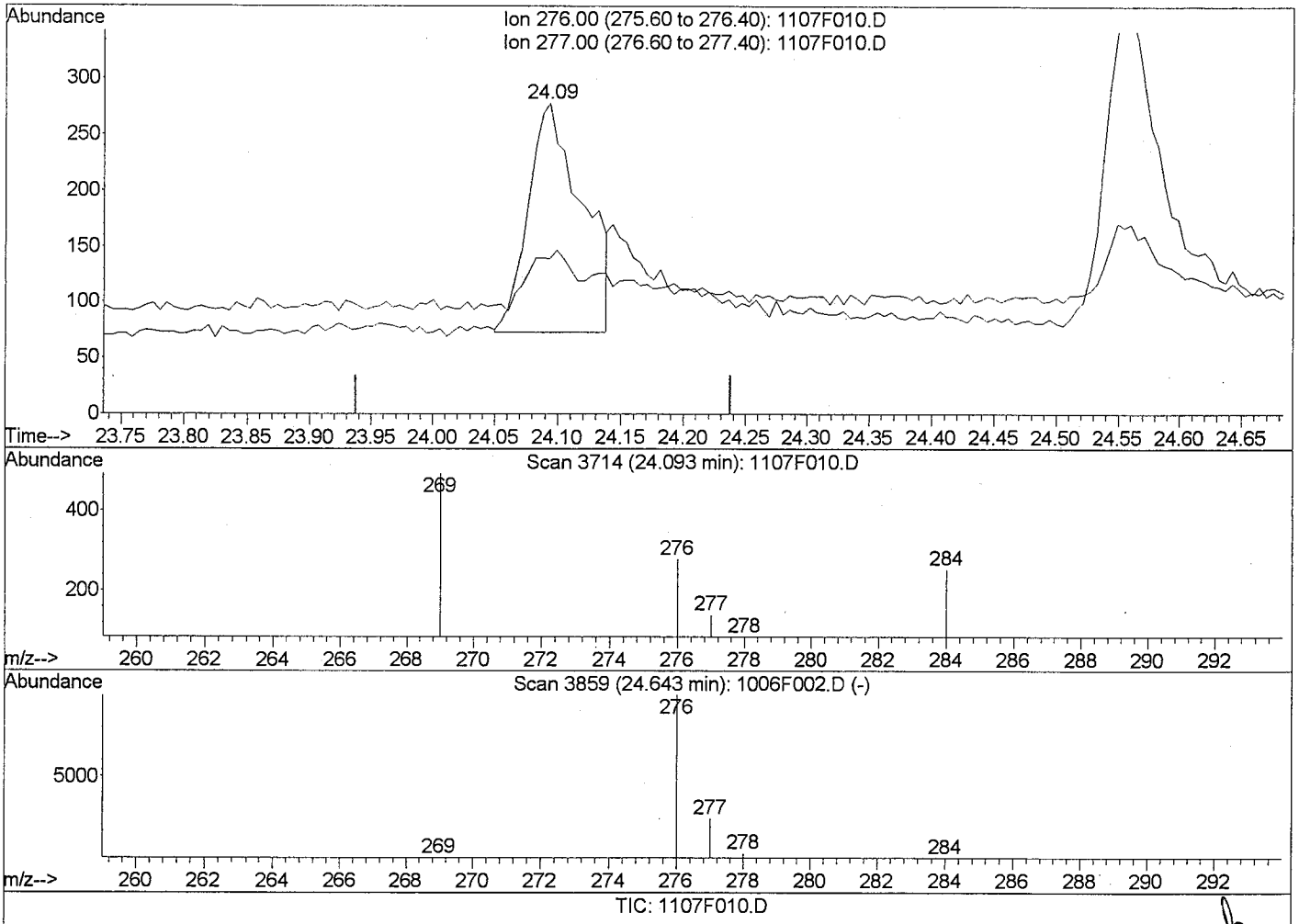
response 861

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	20.69
0.00	0.00	0.00
0.00	0.00	0.00

1107F010.D 1107ALK.M Sat Nov 08 06:42:36 2003

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 5.21ng/ml m

response 604

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	50.00
0.00	0.00	0.00
0.00	0.00	0.00

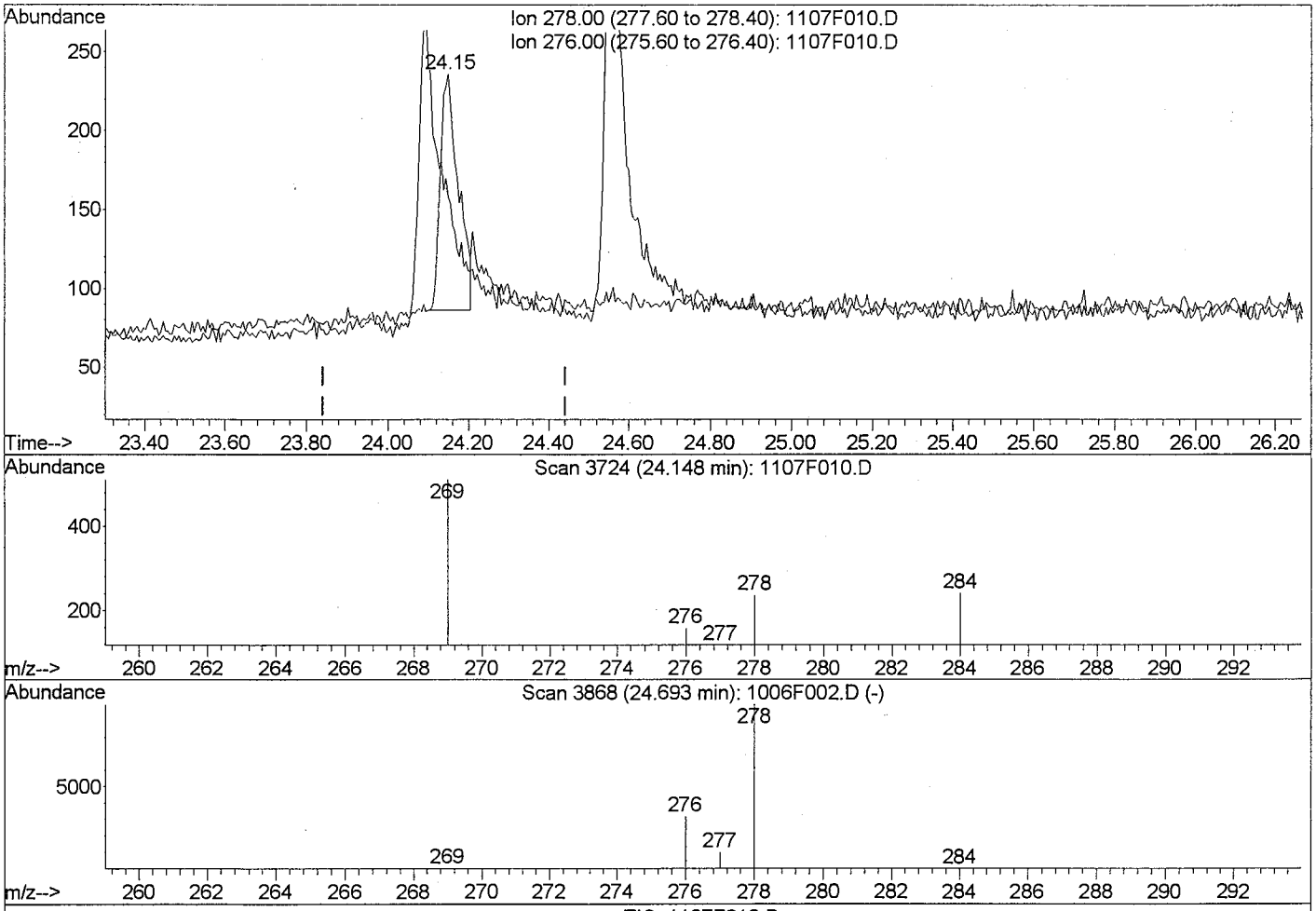
over integrated
11/11/03

1107F010.D 1107ALK.M Sat Nov 08 06:42:43 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(55) Dibenz(a,h)anthracene (T)

24.15min 3.61ng/ml

response 461

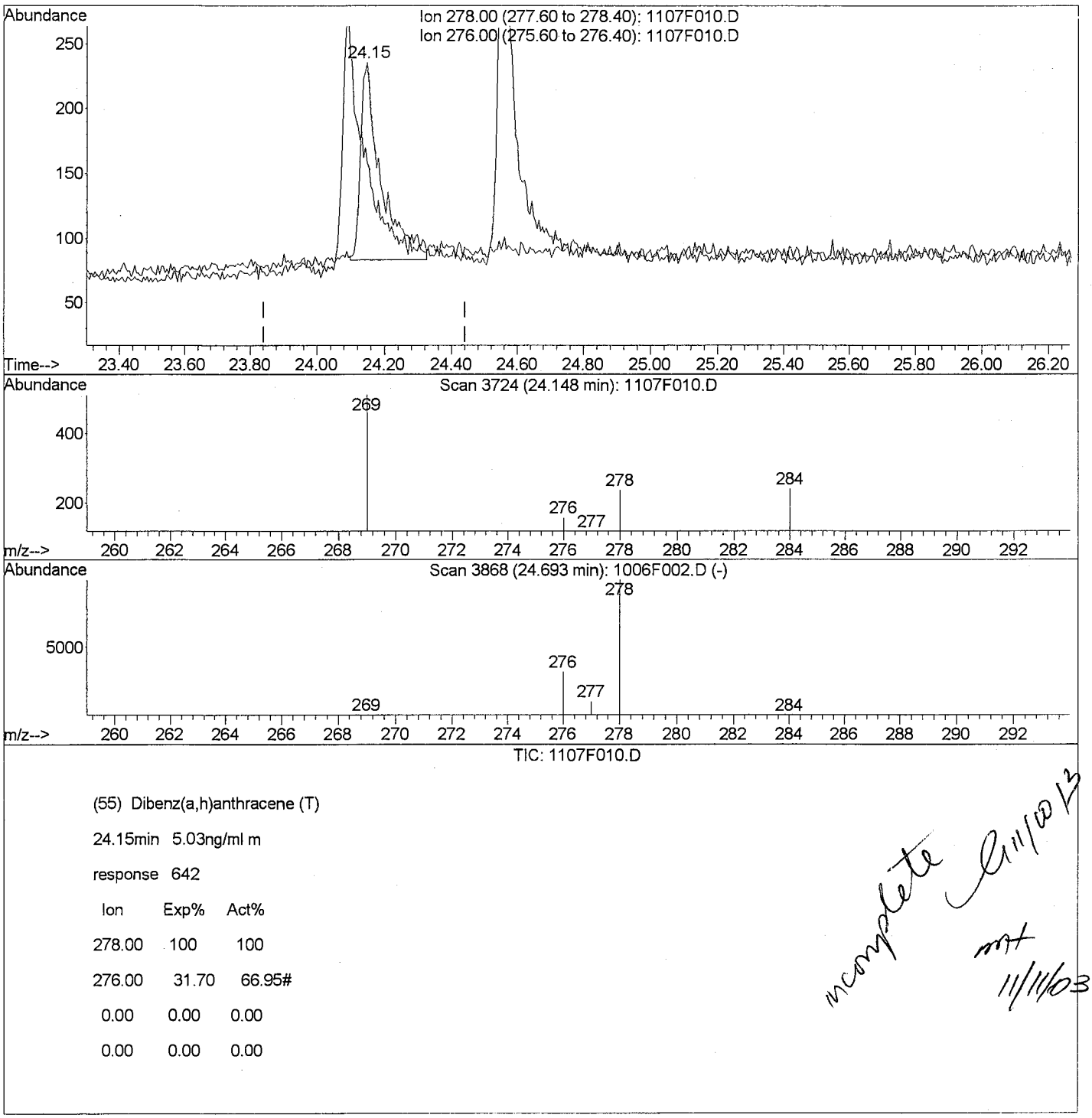
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	31.33
0.00	0.00	0.00
0.00	0.00	0.00

1107F010.D 1107ALK.M Sat Nov 08 06:42:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(55) Dibenz(a,h)anthracene (T)

24.15min 5.03ng/ml m

response 642

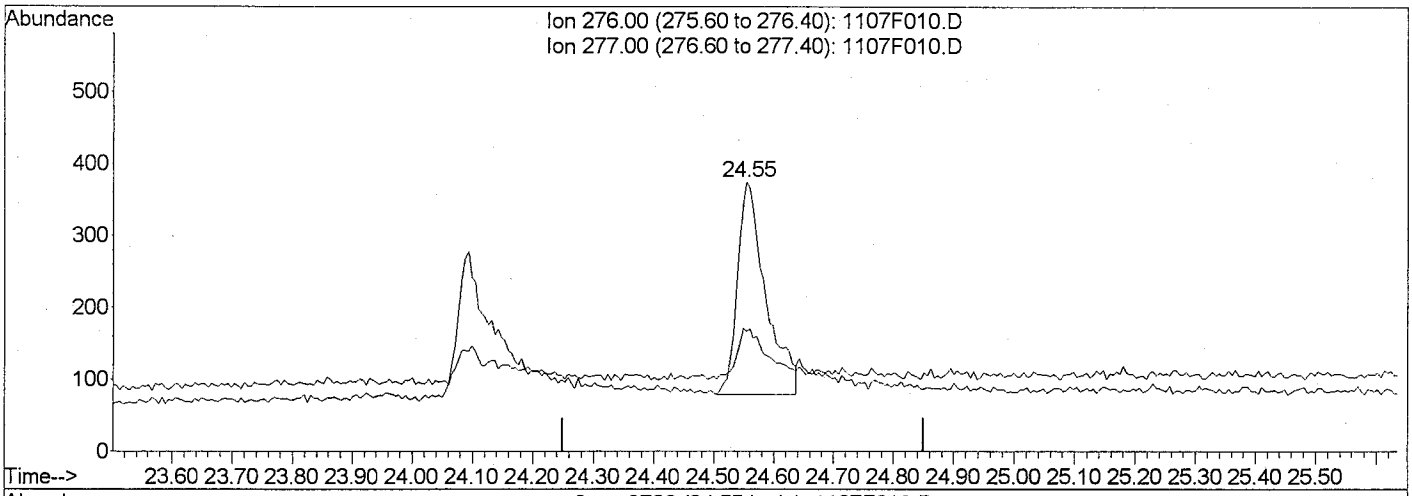
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	66.95#
0.00	0.00	0.00
0.00	0.00	0.00

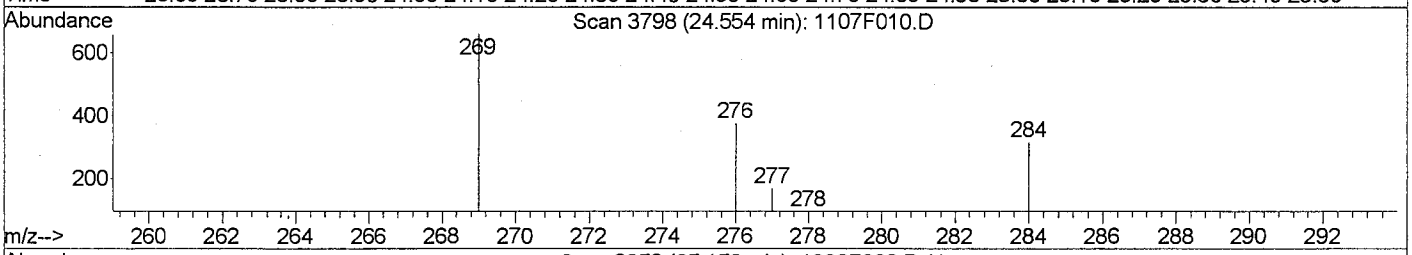
complete 11/12/03
mt
11/11/03

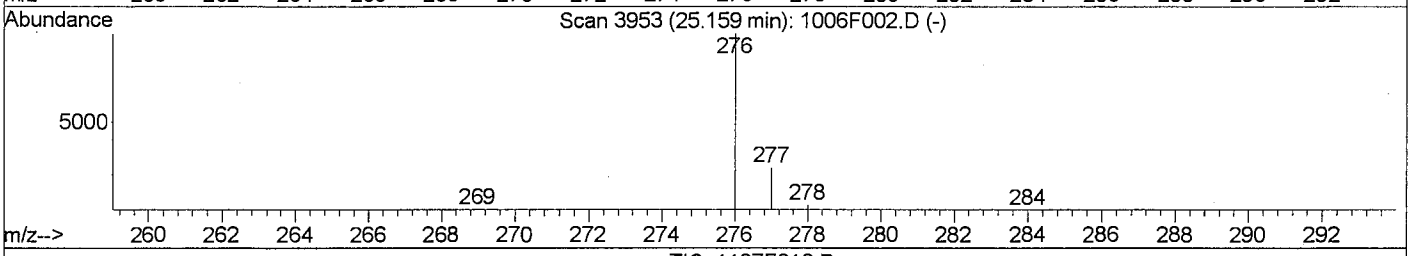
1107F010.D 1107ALK.M Sat Nov 08 06:42:53 2003

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(56) Benzo(g,h,i)perylene (T)

24.55min 6.64ng/ml

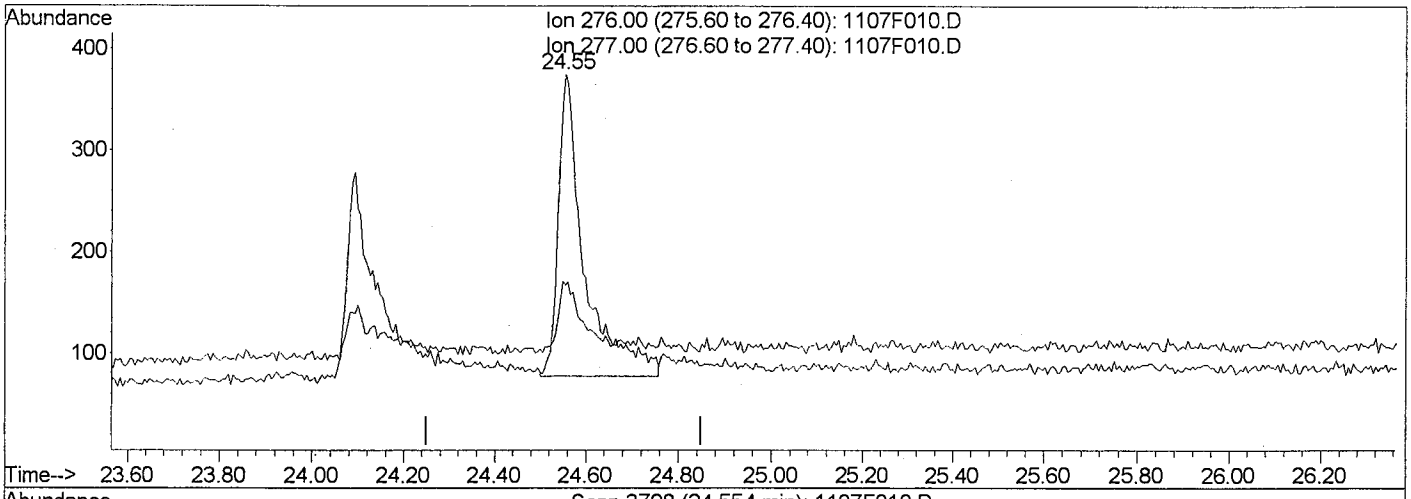
response 966

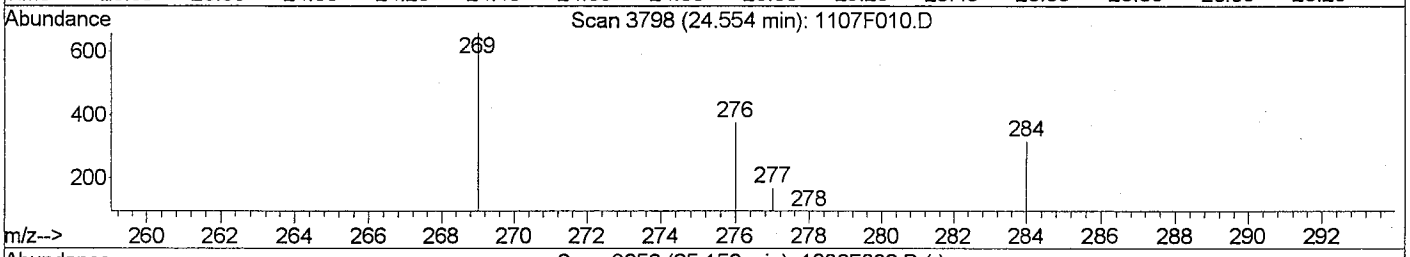
Ion	Exp%	Act%
276.00	100	100
277.00	24.00	22.64
0.00	0.00	0.00
0.00	0.00	0.00

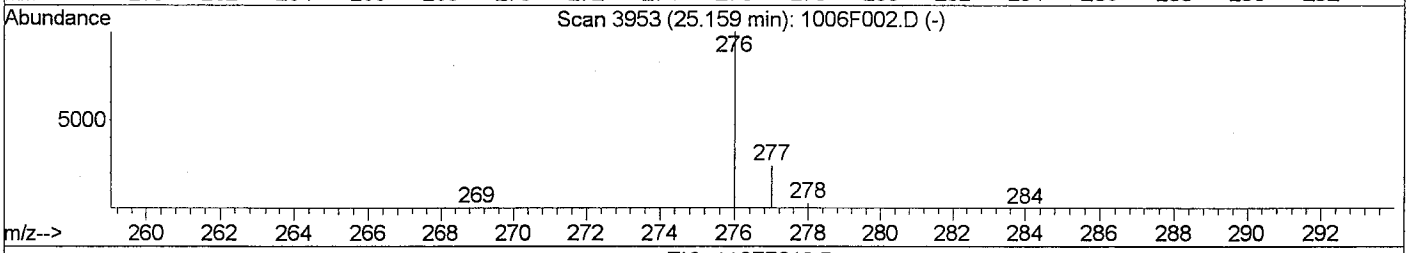
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(56) Benzo(g,h,i)perylene (T)

24.55min 8.07ng/ml m

response 1173

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	44.53
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

not 11/11/03

1107F010.D 1107ALK.M Sat Nov 08 06:43:02 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03
mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	268823	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	136863	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	196388	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	164123	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	98214	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	3895	19.98	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	2.00%		
16) Fluorene-d10	9.01	176	2711	19.37	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.94%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.70	212	3659	18.48	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	1.85%		
41) Terphenyl-d14	14.73	244	3016	18.74	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.87%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	6045	18.85	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	3318m	17.02	ng/ml	
4) 1-Methylnaphthalene	6.57	142	3288m	18.33	ng/ml	
6) Biphenyl	7.10	154	3844	16.03	ng/ml	97
7) 2,6-Dimethylnaphthalene	7.33	156	2915	17.49	ng/ml	97
12) Acenaphthylene	7.80	152	4989	17.81	ng/ml	100
13) Acenaphthene	8.11	154	2986	17.06	ng/ml	98
14) Dibenzofuran	8.41	168	4066	16.57	ng/ml	83
15) 2,3,5-Trimethylnaphthalene	8.82	170	2665	17.38	ng/ml	99
17) Fluorene	9.06	166	3208	16.55	ng/ml	99
24) Dibenzothiophene	10.79	184	4271	16.88	ng/ml	100
28) Phenanthrene	11.05	178	4721	18.16	ng/ml	97
29) Anthracene	11.15	178	3419	14.98	ng/ml	96
30) Carbazole	11.58	167	2698	14.53	ng/ml	90
31) 1-Methylphenanthrene	12.44	192	2905	16.62	ng/ml	100
36) Fluoranthene	13.74	202	4163	16.54	ng/ml	98
39) Pyrene	14.25	202	4257	17.33	ng/ml	98
42) Benz(a)anthracene	17.09	228	3030	16.69	ng/ml	97
43) Chrysene	17.18	228	3534m	19.18	ng/ml	
49) Benzo(b)fluoranthene	20.11	252	2257	14.95	ng/ml	90
50) Benzo(k)fluoranthene	20.19	252	2645m	18.13	ng/ml	
51) Benzo(e)pyrene	21.09	252	2771	17.78	ng/ml	93
52) Benzo(a)pyrene	21.28	252	1814m	14.07	ng/ml	

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03
mrt 11/14/03

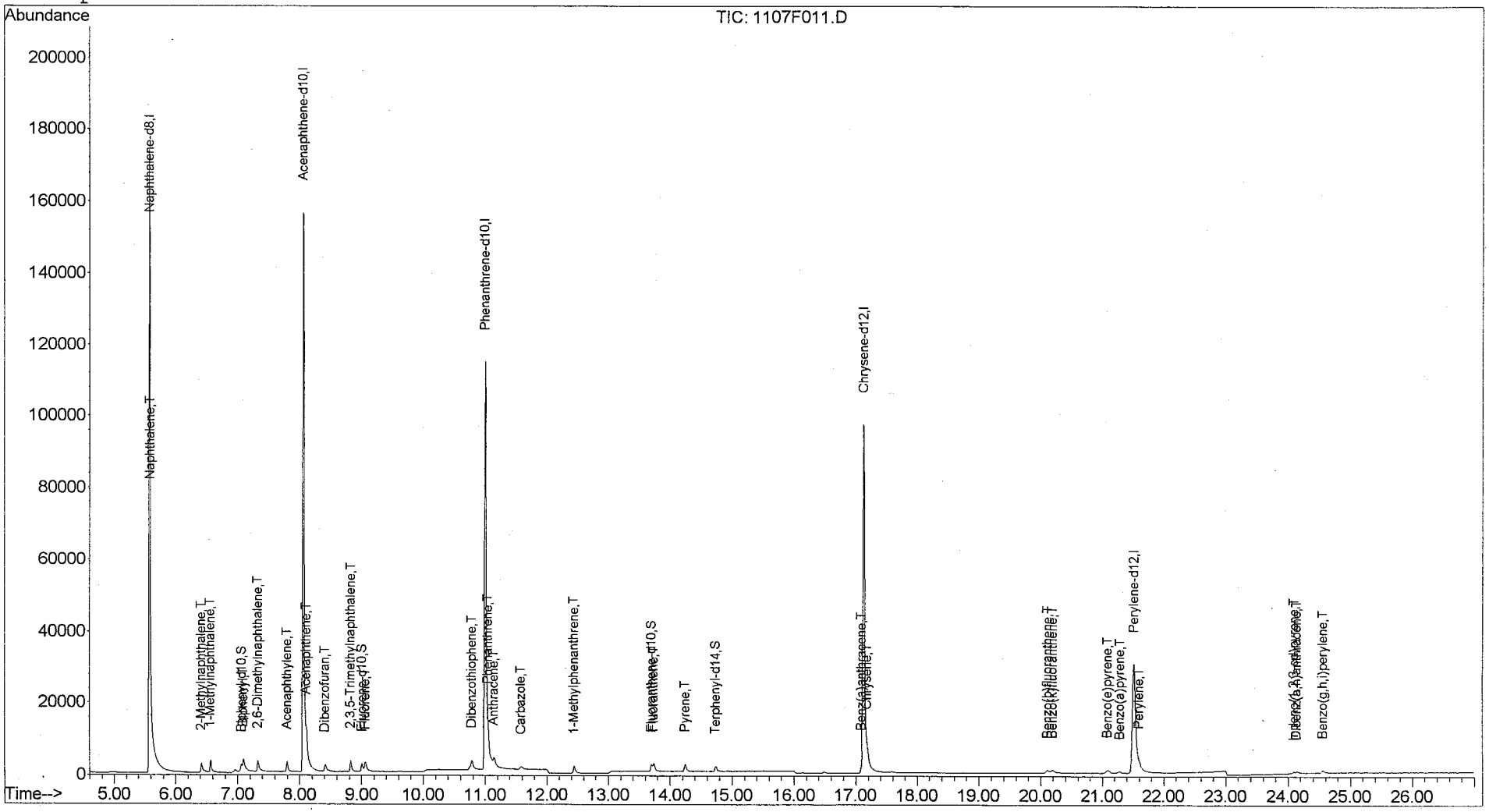
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.61	252	2332	17.29	ng/ml	96
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1089m	8.33	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	1567m	10.90	ng/ml	
56)	Benzo(g,h,i)perylene	24.56	276	1993	12.16	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:42 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

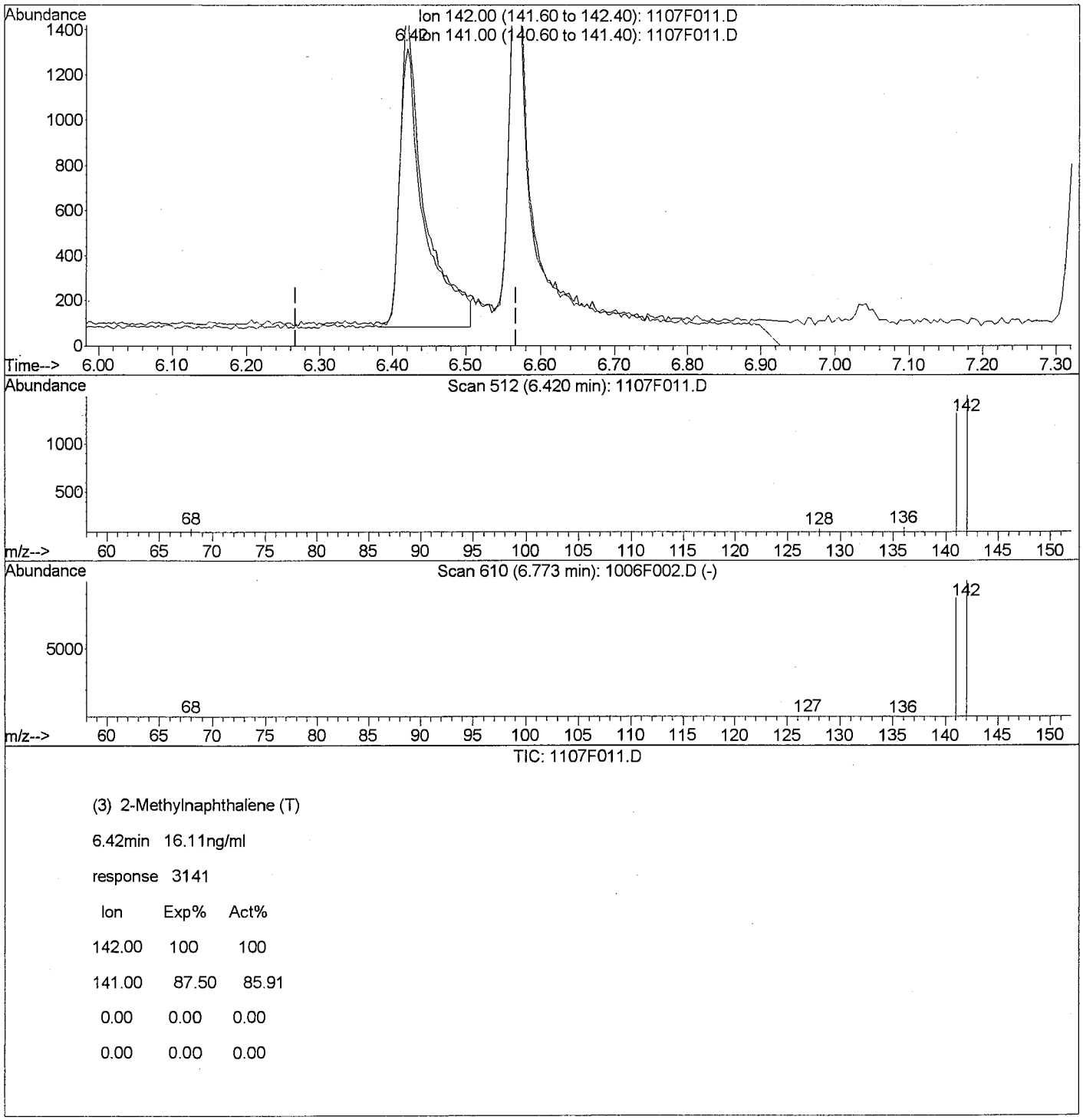


971

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(3) 2-Methylnaphthalene (T)

6.42min 16.11ng/ml

response 3141

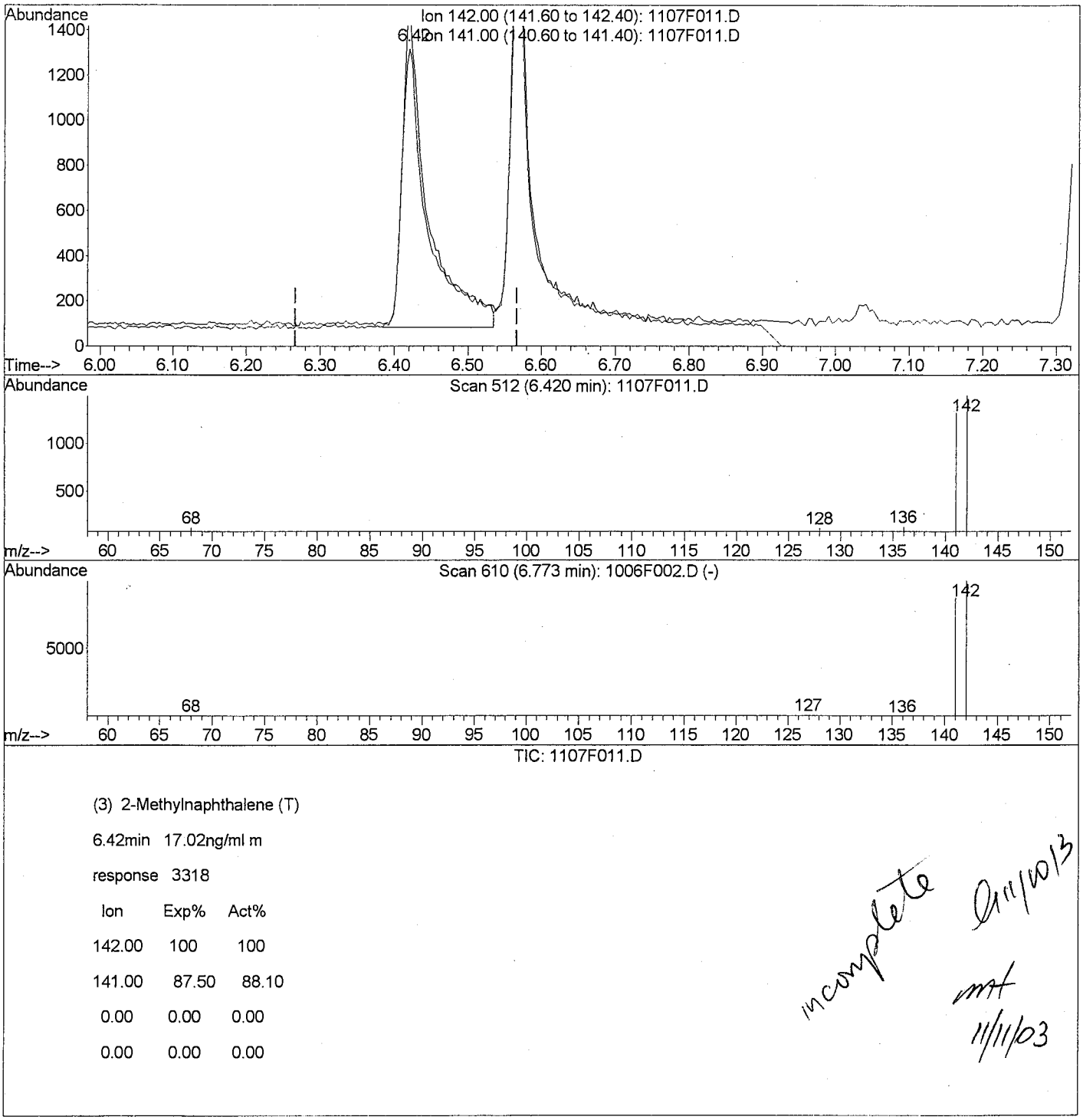
Ion	Exp%	Act%
142.00	100	100
141.00	87.50	85.91
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:43:16 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(3) 2-Methylnaphthalene (T)

6.42min 17.02ng/ml m

response 3318

Ion	Exp%	Act%
142.00	100	100
141.00	87.50	88.10
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

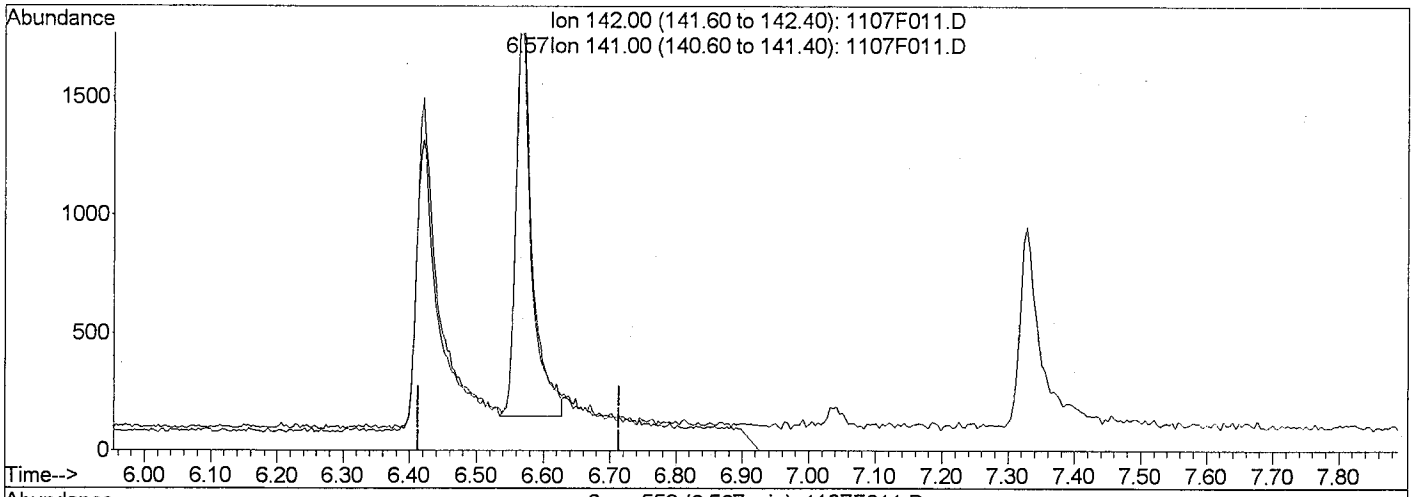
mt 11/11/03

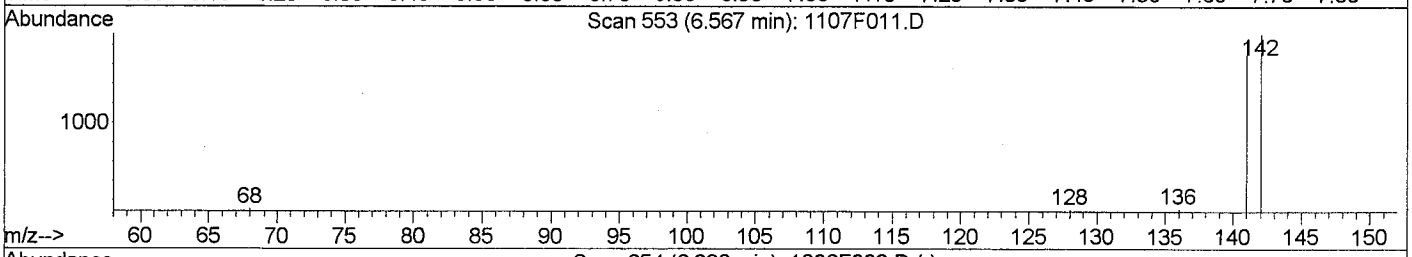
1107F011.D 1107ALK.M Sat Nov 08 06:43:21 2003

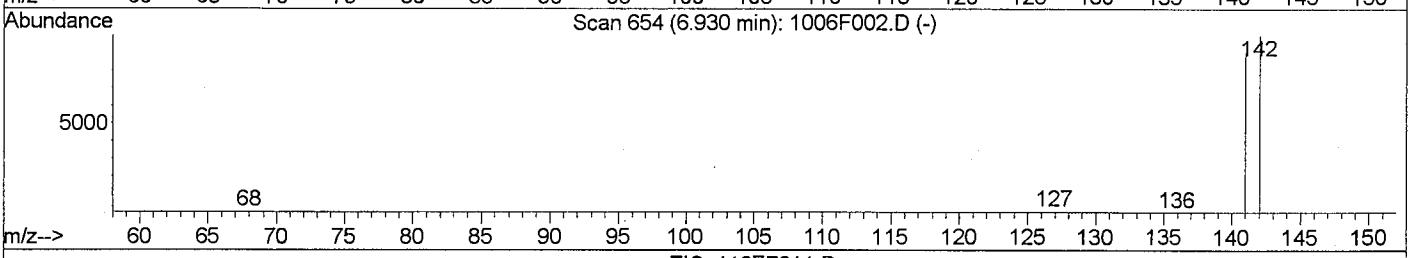
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(4) 1-Methylnaphthalene (T)

6.57min 16.36ng/ml

response 2935

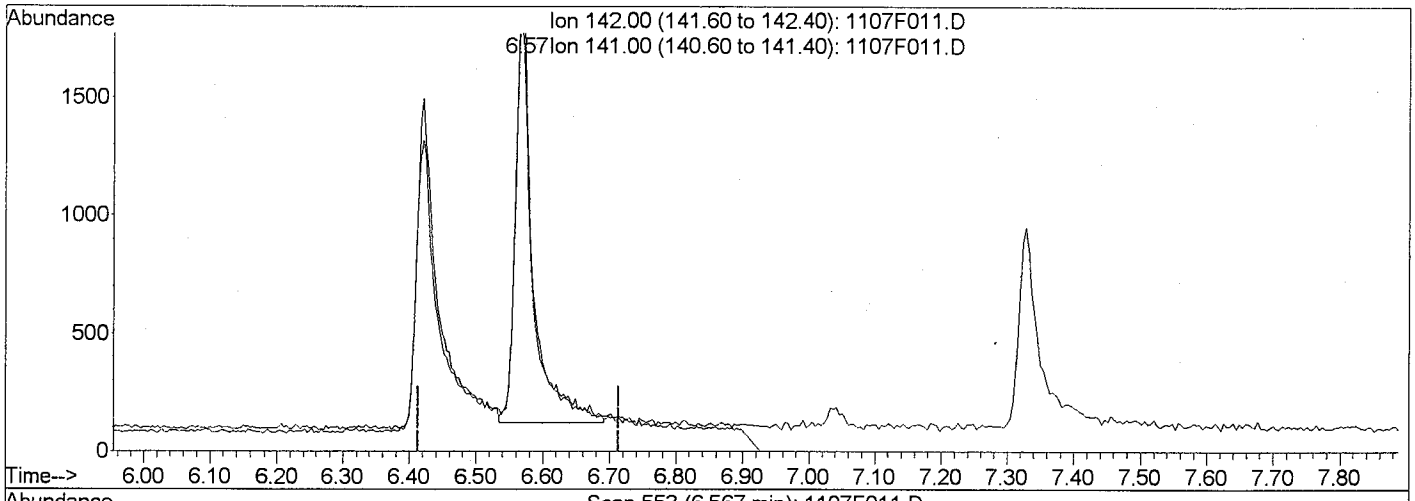
Ion	Exp%	Act%
142.00	100	100
141.00	90.60	95.16
0.00	0.00	0.00
0.00	0.00	0.00

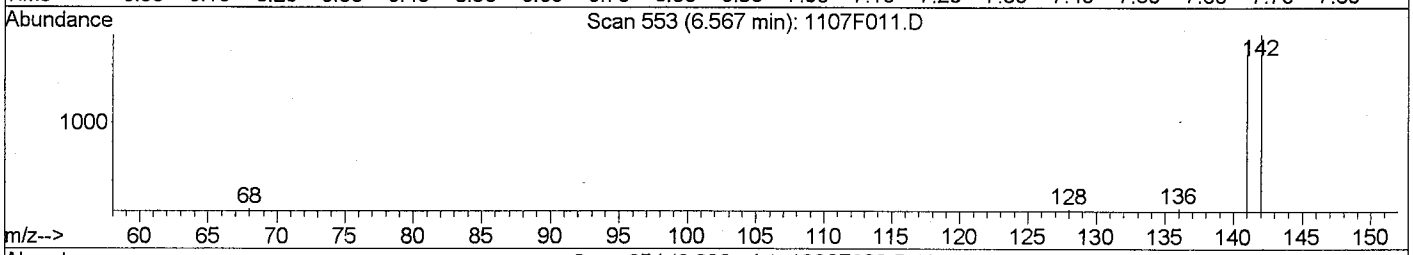
1107F011.D 1107ALK.M Sat Nov 08 06:43:27 2003

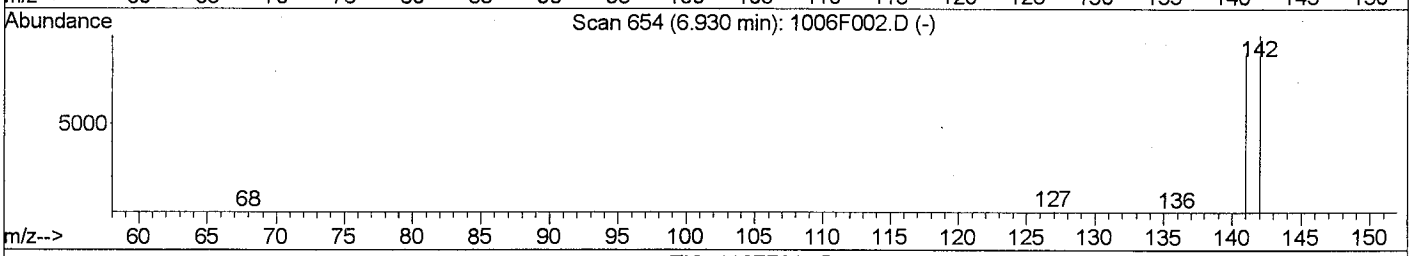
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(4) 1-Methylnaphthalene (T)

6.57min 18.33ng/ml m

response 3288

Ion	Exp%	Act%
142.00	100	100
141.00	90.60	97.35
0.00	0.00	0.00
0.00	0.00	0.00

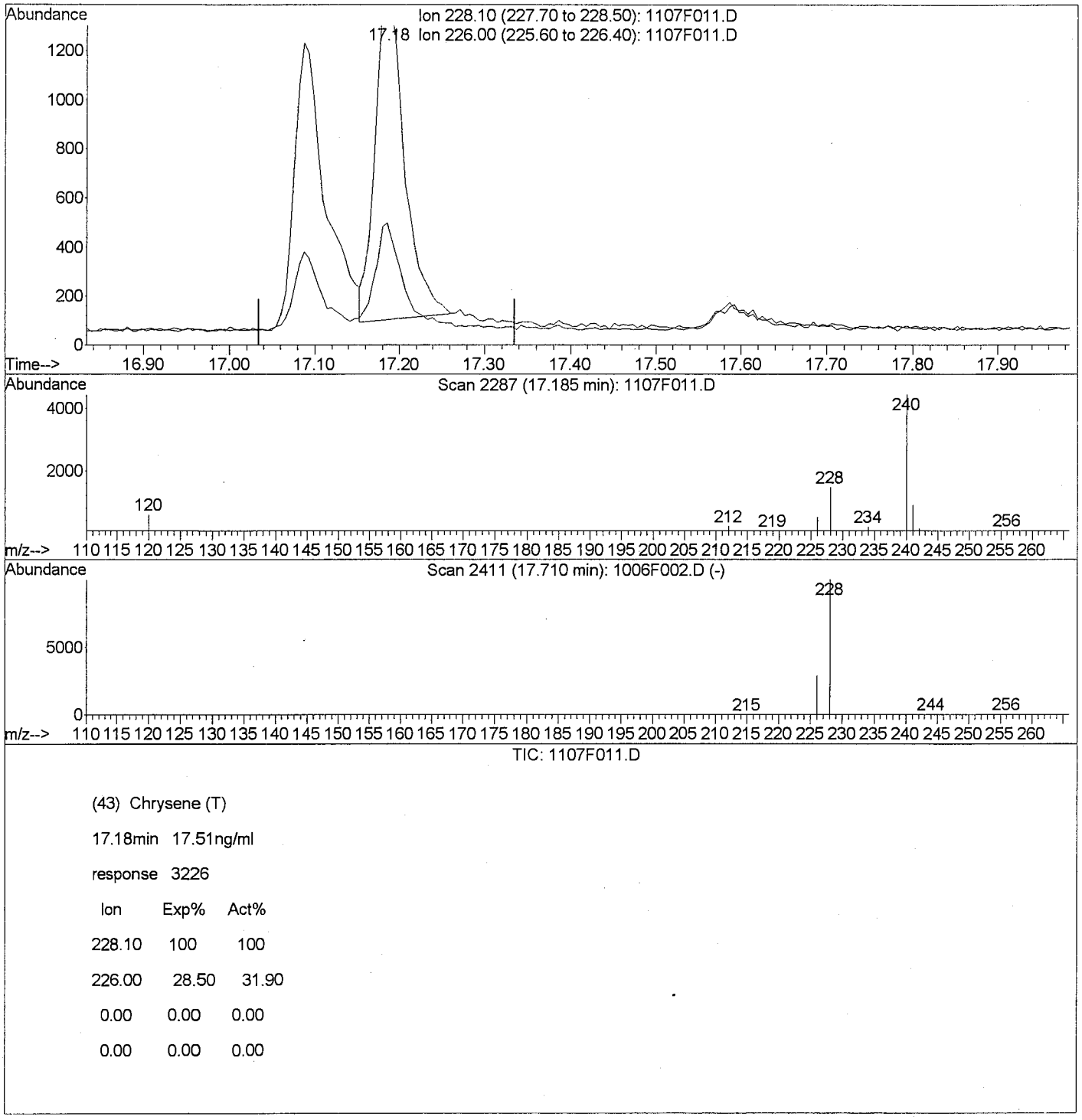
complete dl 11/10/3
mst 11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:43:32 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(43) Chrysene (T)

17.18min 17.51ng/ml

response 3226

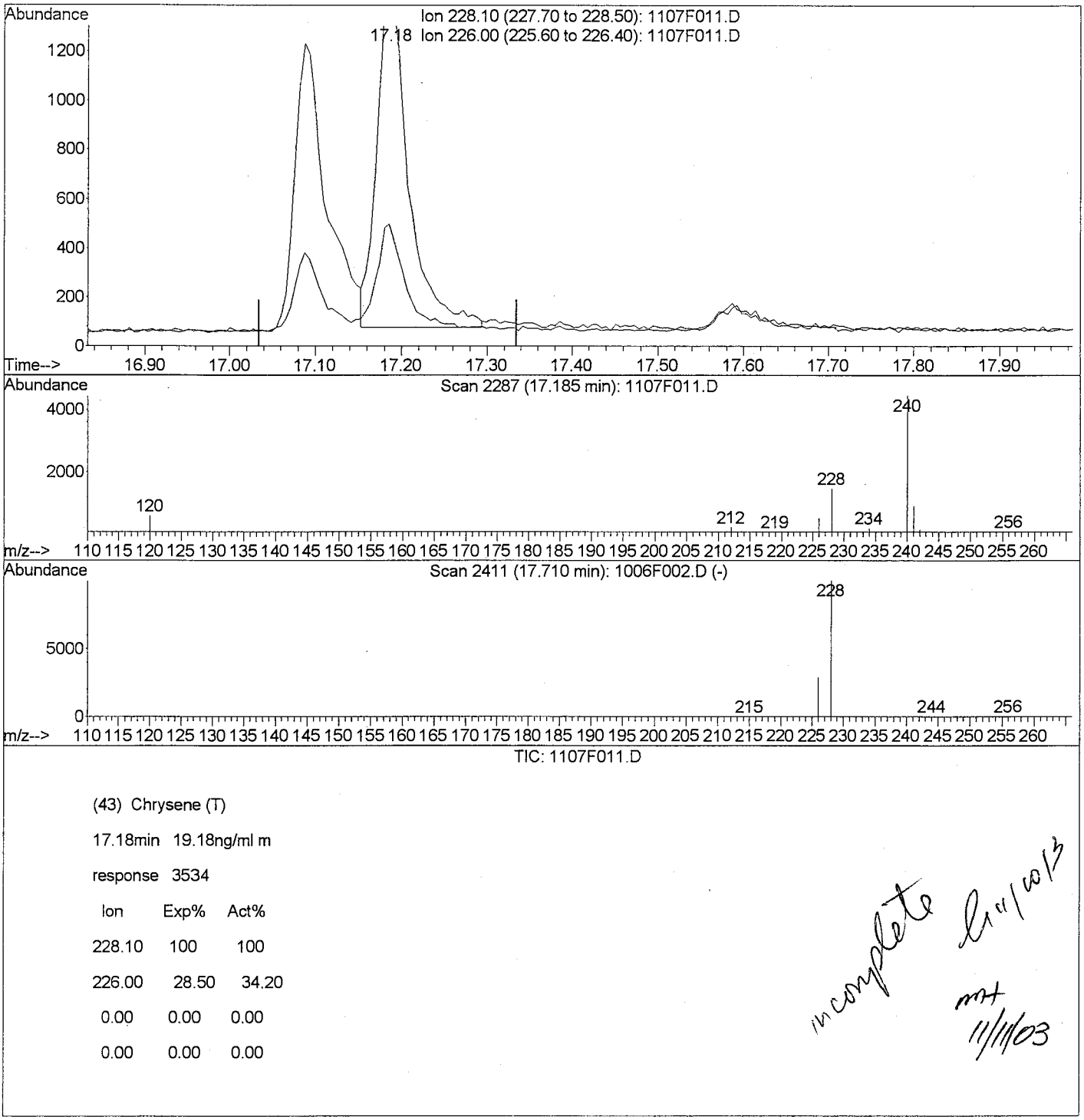
Ion	Exp%	Act%
228.10	100	100
226.00	28.50	31.90
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:43:52 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(43) Chrysene (T)

17.18min 19.18ng/ml m

response 3534

Ion	Exp%	Act%
228.10	100	100
226.00	28.50	34.20
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

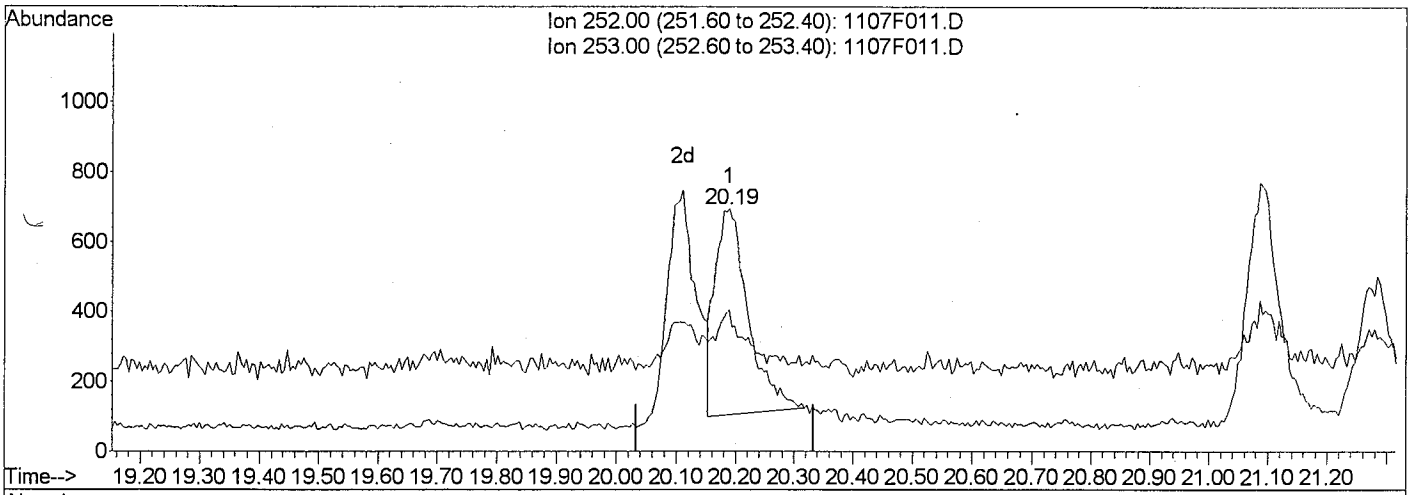
mt 11/11/03

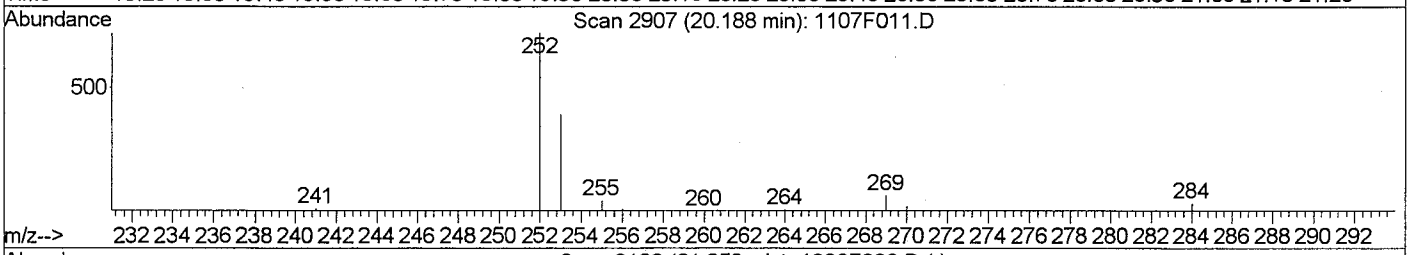
1107F011.D 1107ALK.M Sat Nov 08 06:43:57 2003

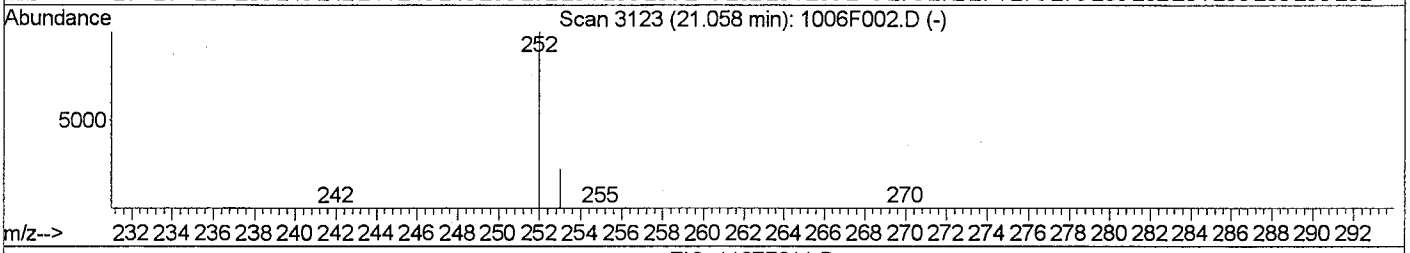
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(50) Benzo(k)fluoranthene (T)

20.19min 15.99ng/ml

response 2332

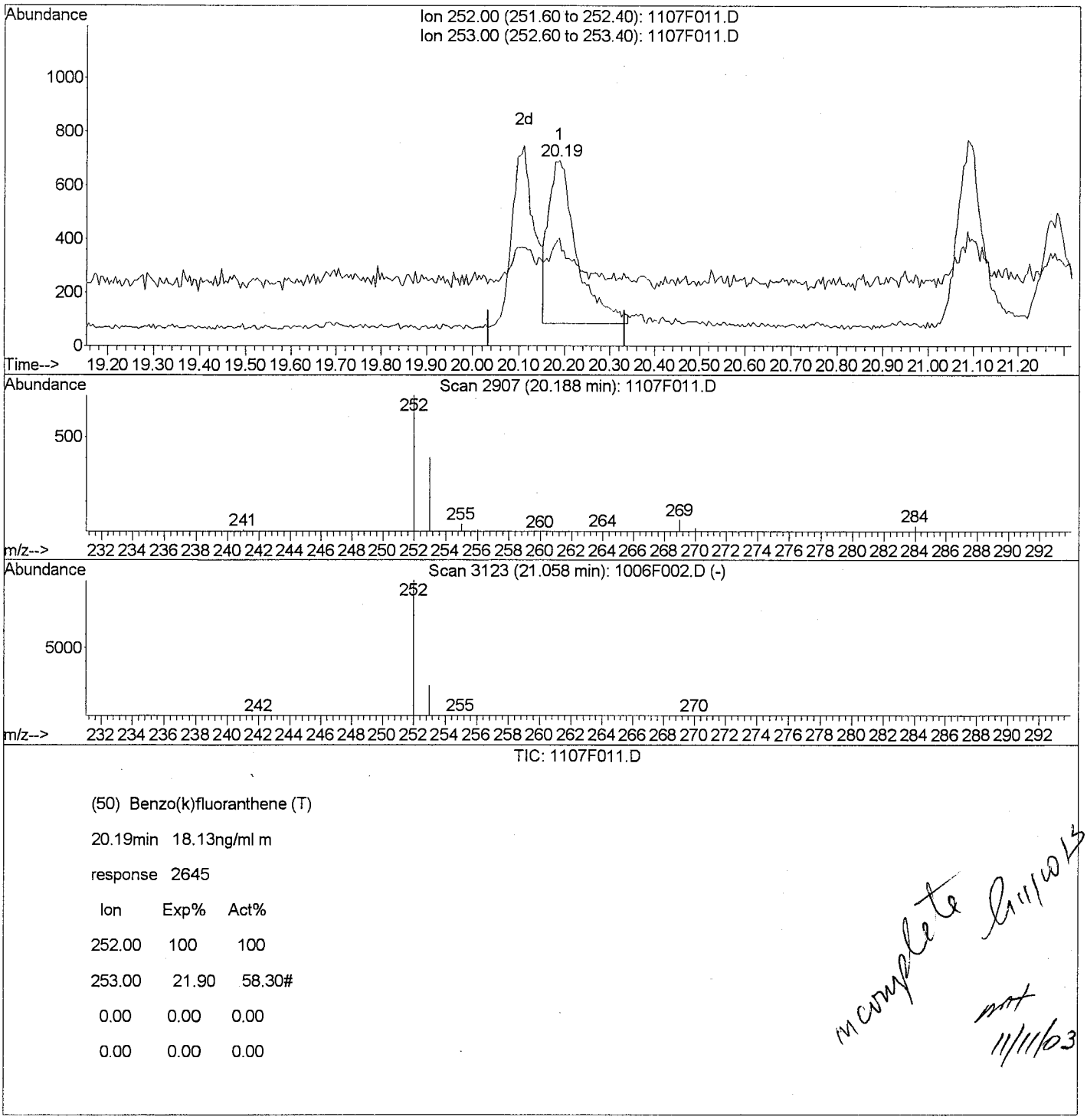
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	26.54
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:44:04 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(50) Benzo(k)fluoranthene (T)

20.19min 18.13ng/ml m

response 2645

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	58.30#
0.00	0.00	0.00
0.00	0.00	0.00

mcomplete 11/11/03

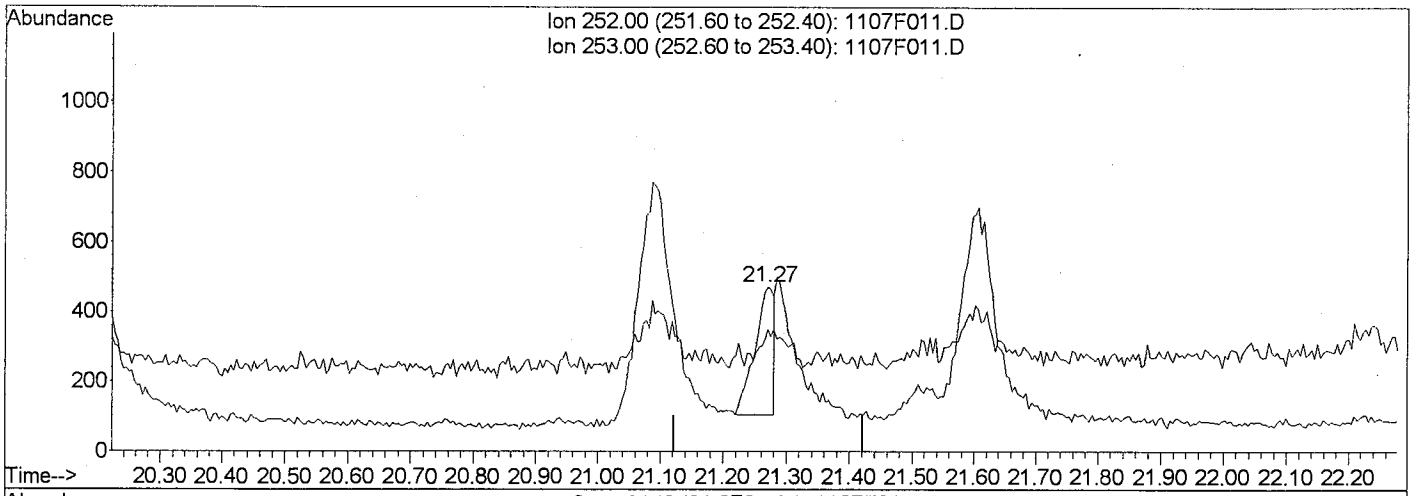
mx 11/11/03

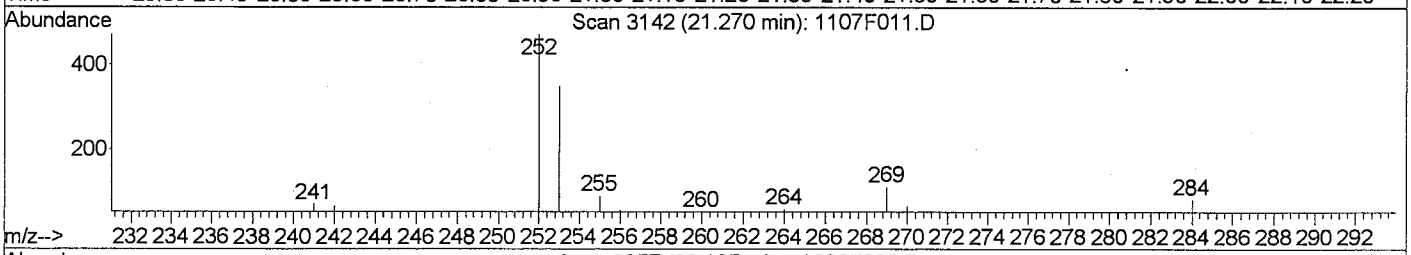
1107F011.D 1107ALK.M Sat Nov 08 06:44:10 2003

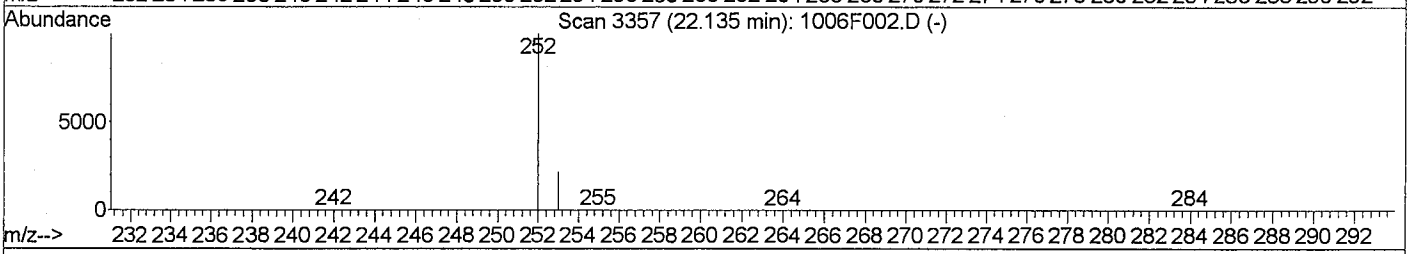
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(52) Benzo(a)pyrene (T)

21.27min 5.91ng/ml

response 762

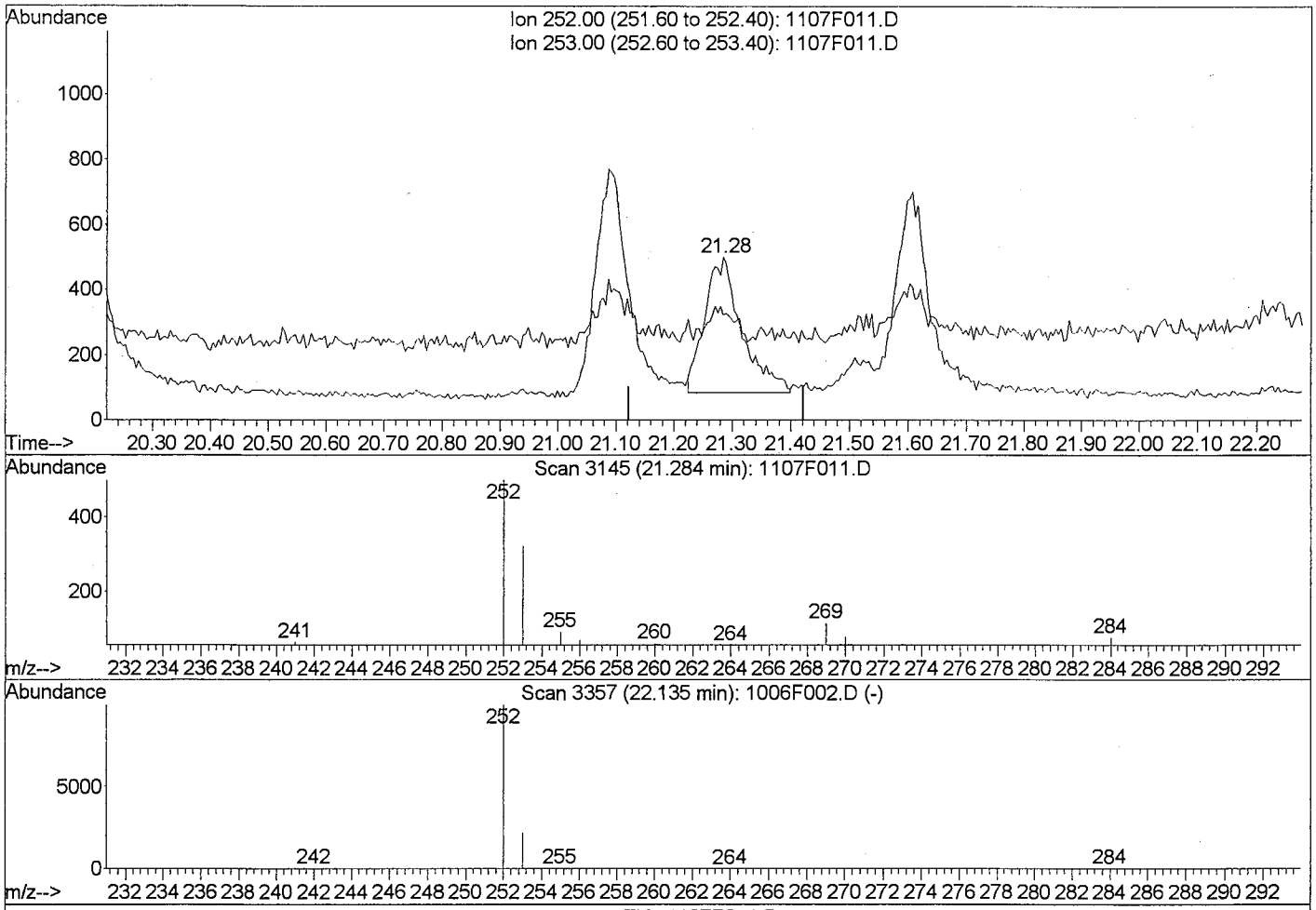
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	20.92
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:44:13 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(52) Benzo(a)pyrene (T)

21.28min 14.07ng/ml m

response 1814

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	64.60#
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/11/03

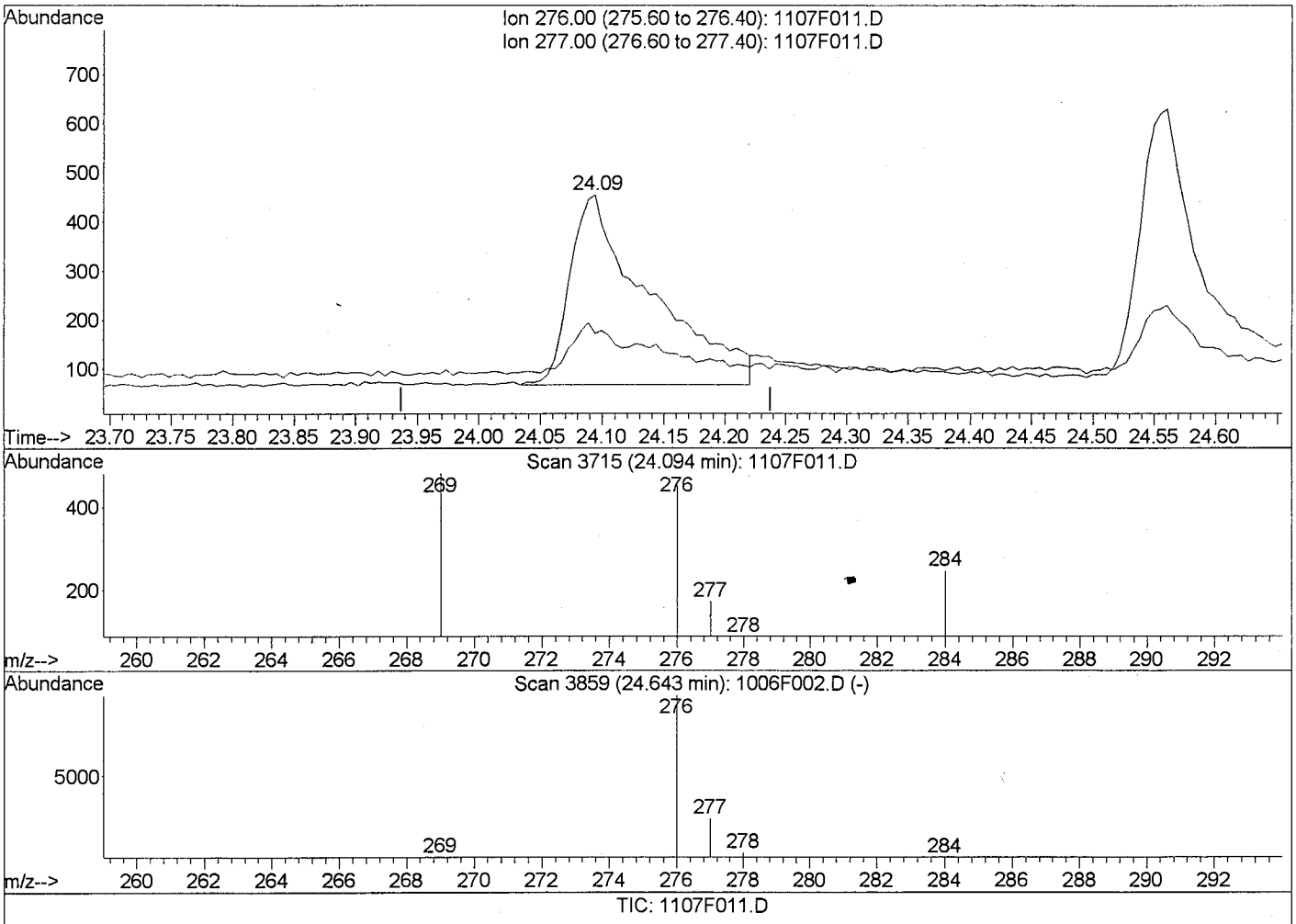
mnt 11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:44:18 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 13.42ng/ml

response 1753

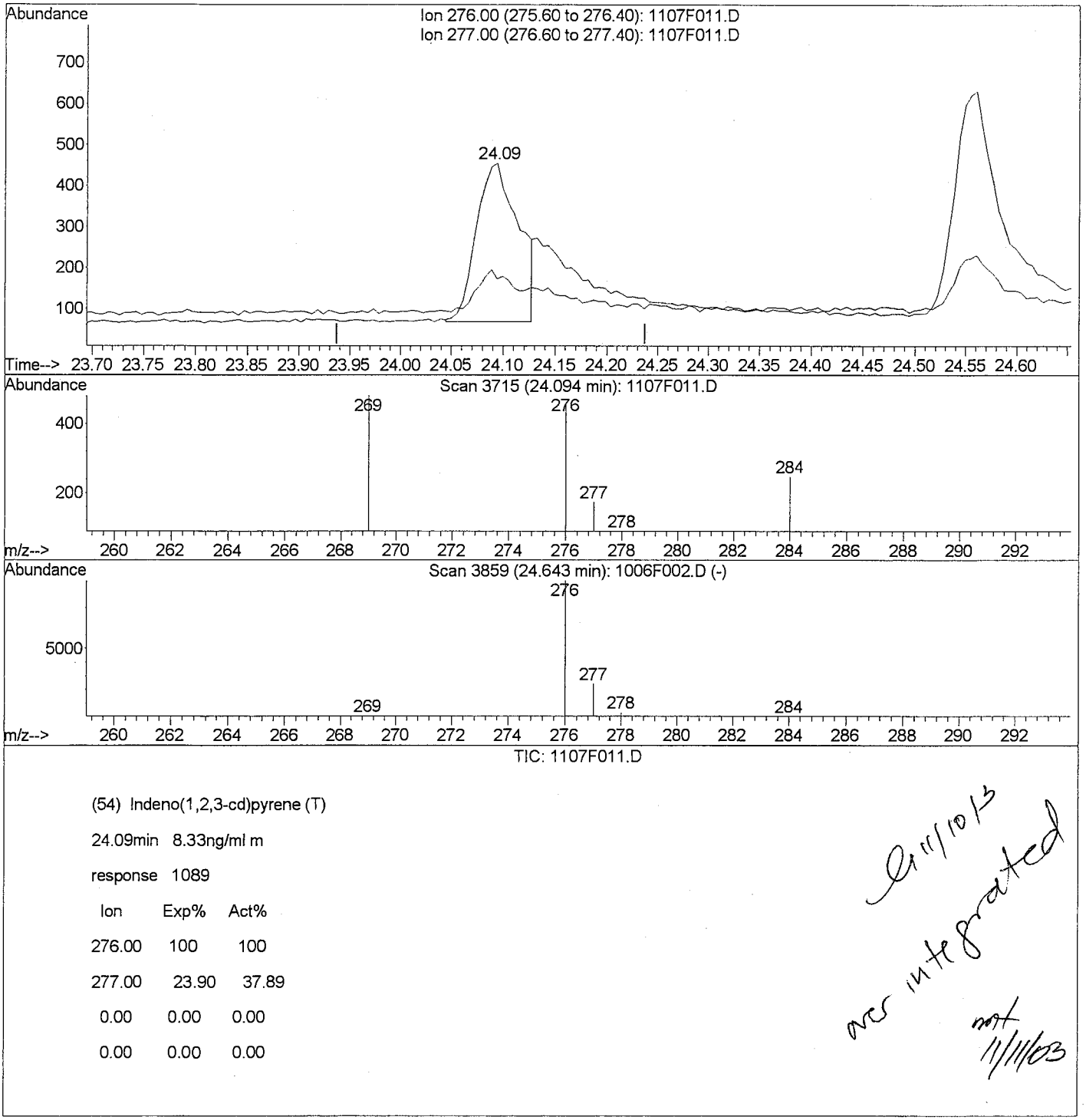
Ion	Exp%	Act%
276.00	100	100
277.00	23.90	20.67
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:44:23 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 8.33ng/ml m

response 1089

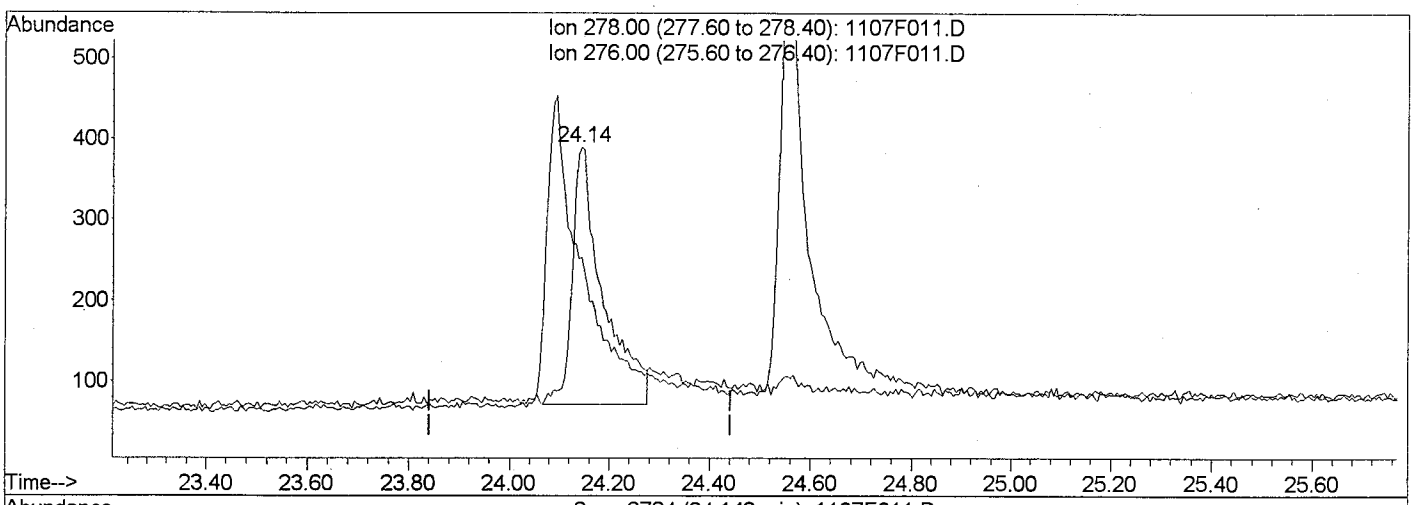
Ion	Exp%	Act%
276.00	100	100
277.00	23.90	37.89
0.00	0.00	0.00
0.00	0.00	0.00

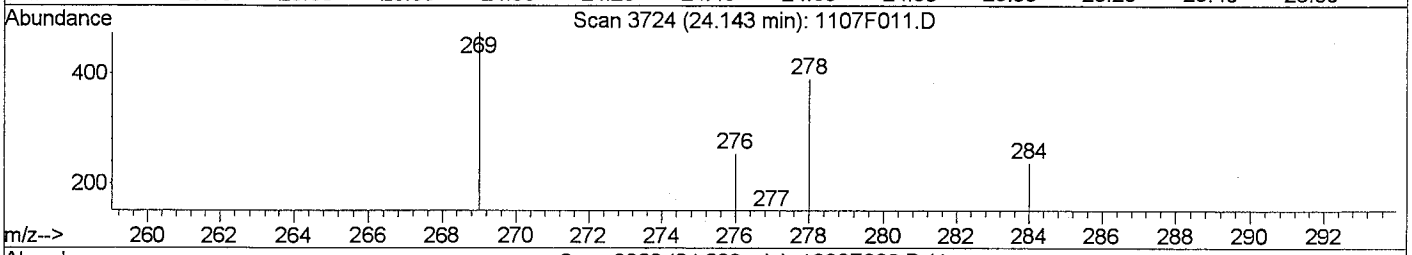
11/10/03
ares integrated
mst 11/11/03

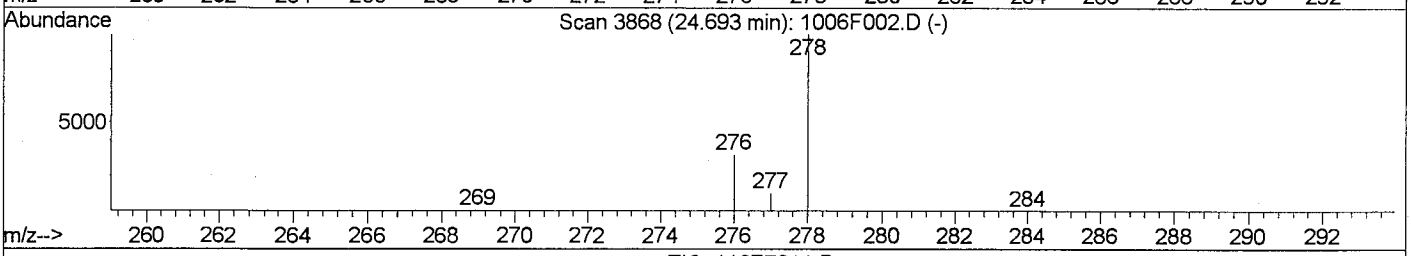
1107F011.D 1107ALK.M Sat Nov 08 06:44:28 2003

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(55) Dibenz(a,h)anthracene (T)

24.14min 9.46ng/ml

response 1360

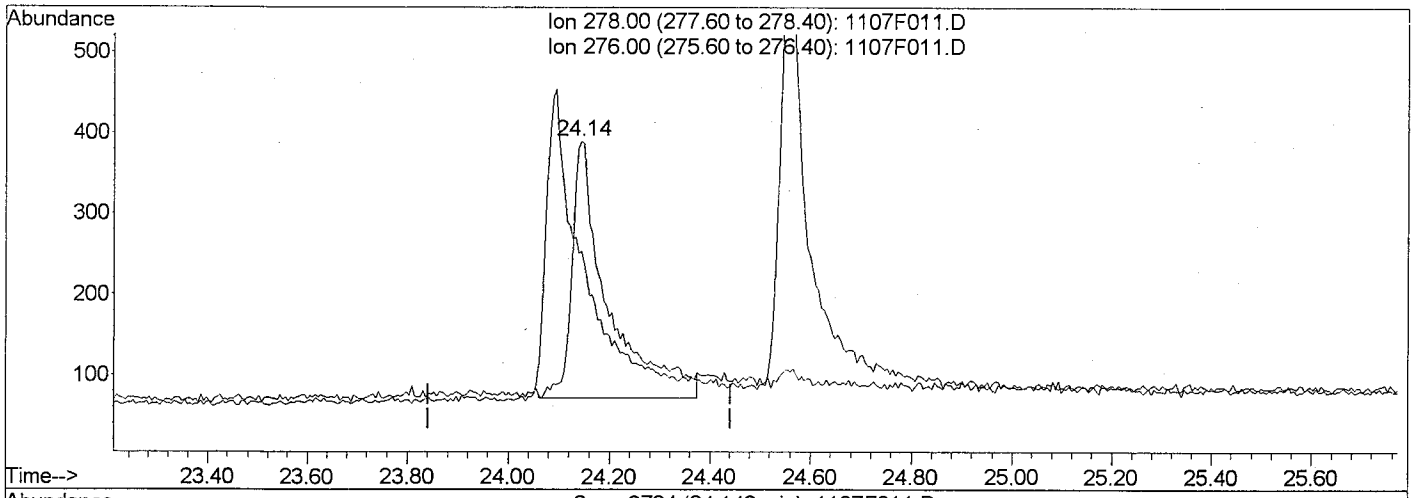
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	44.83
0.00	0.00	0.00
0.00	0.00	0.00

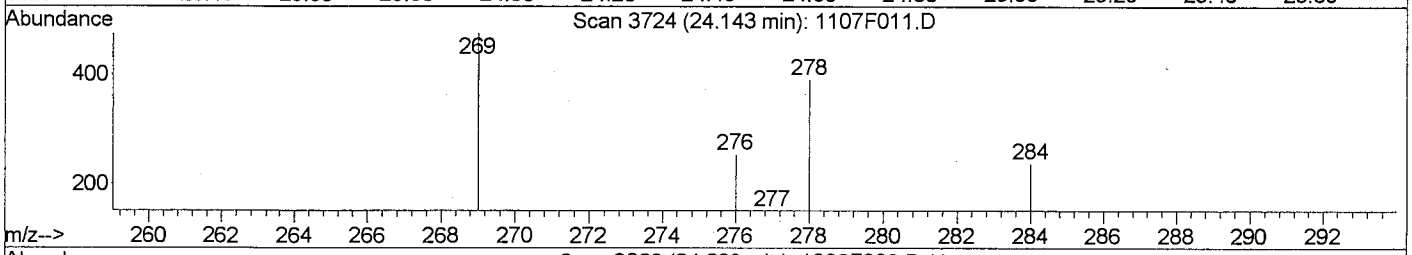
1107F011.D 1107ALK.M Sat Nov 08 06:44:33 2003

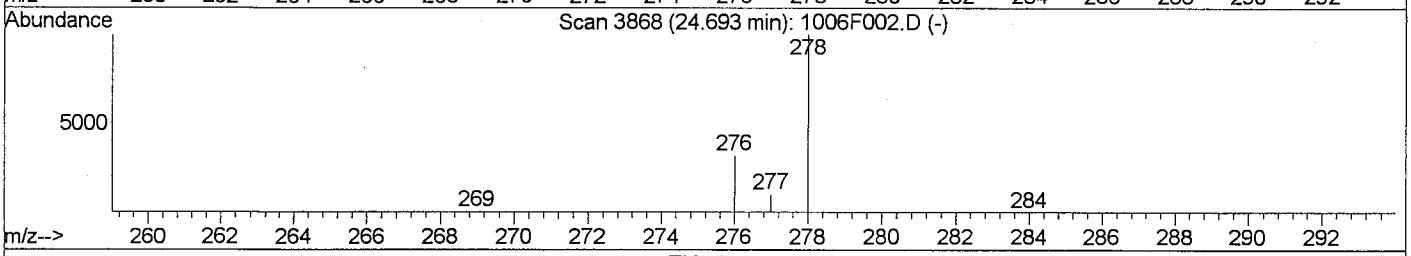
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(55) Dibenz(a,h)anthracene (T)

24.14min 10.90ng/ml m

response 1567

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	64.87#
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/3
mt
11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:44:37 2003

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:46 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mst 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	216388	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	109234	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	155830	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	139272	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	79633	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	5411	34.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.45%		
16) Fluorene-d10	9.01	176	3811	34.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.41%		
21) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.70	212	5209	33.15	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.31%		
41) Terphenyl-d14	14.74	244	4658	34.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.41%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	9387	36.36	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	5170	32.95	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	4625	32.02	ng/ml	98
6) Biphenyl	7.10	154	6232	32.30	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.33	156	4371	32.58	ng/ml	99
12) Acenaphthylene	7.80	152	7458	33.36	ng/ml	100
13) Acenaphthene	8.11	154	4693	33.58	ng/ml	95
14) Dibenzofuran	8.41	168	6352	32.44	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.83	170	4224	34.51	ng/ml	96
17) Fluorene	9.06	166	4770	30.83	ng/ml	94
24) Dibenzothiophene	10.78	184	6455	32.15	ng/ml	98
28) Phenanthrene	11.05	178	6945	33.68	ng/ml	100
29) Anthracene	11.15	178	5526	30.51	ng/ml	98
30) Carbazole	11.58	167	4058	27.55	ng/ml	92
31) 1-Methylphenanthrene	12.44	192	4467	32.21	ng/ml	99
36) Fluoranthene	13.74	202	6571	32.90	ng/ml	98
39) Pyrene	14.24	202	6655	31.93	ng/ml	100
42) Benz(a)anthracene	17.09	228	4943	32.09	ng/ml	94
43) Chrysene	17.18	228	5593	35.78	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	3643	29.77	ng/ml	94
50) Benzo(k)fluoranthene	20.18	252	4495m	38.00	ng/ml	
51) Benzo(e)pyrene	21.09	252	4433	35.08	ng/ml	94
52) Benzo(a)pyrene	21.27	252	3223m	30.83	ng/ml	

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:46 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

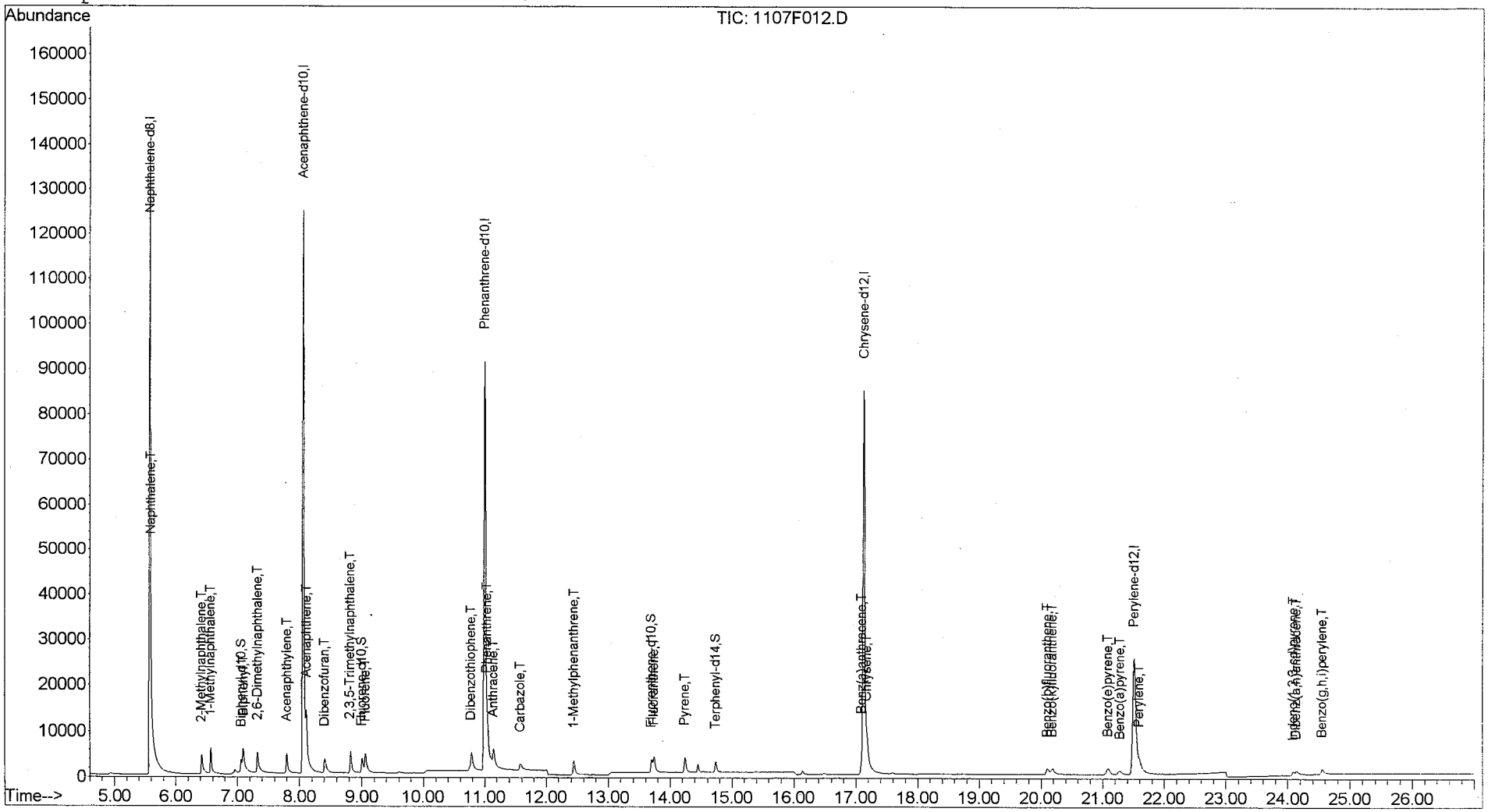
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.60	252	3481	31.84	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1877m	17.72	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	2679m	22.98	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	3216	24.19	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1107F012.D 1107ALK.M Sat Nov 08 07:09:15 2003 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

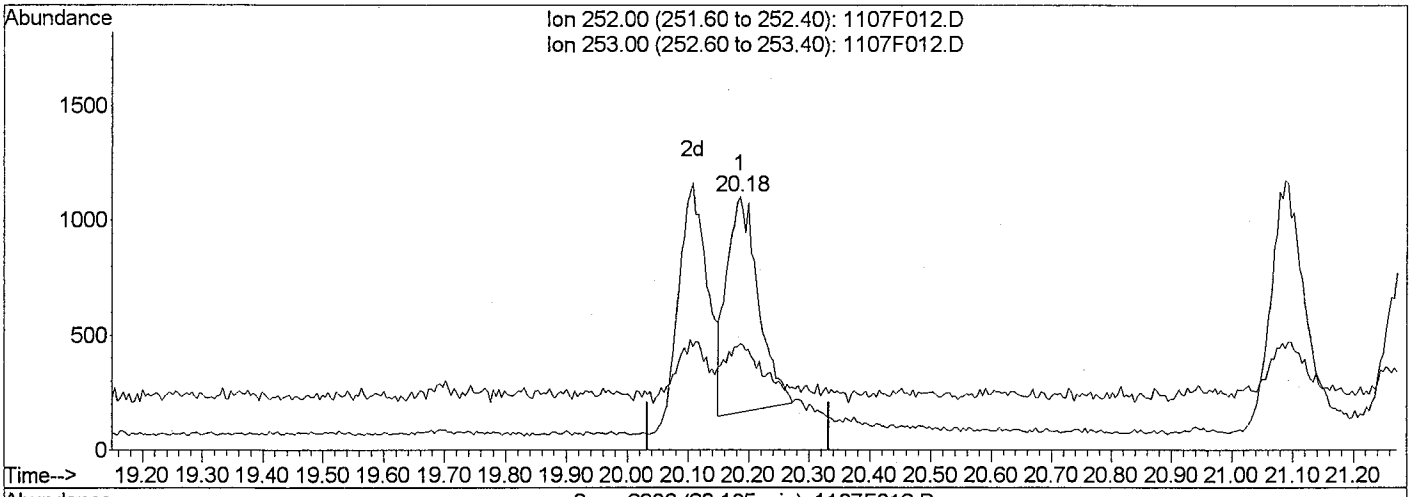


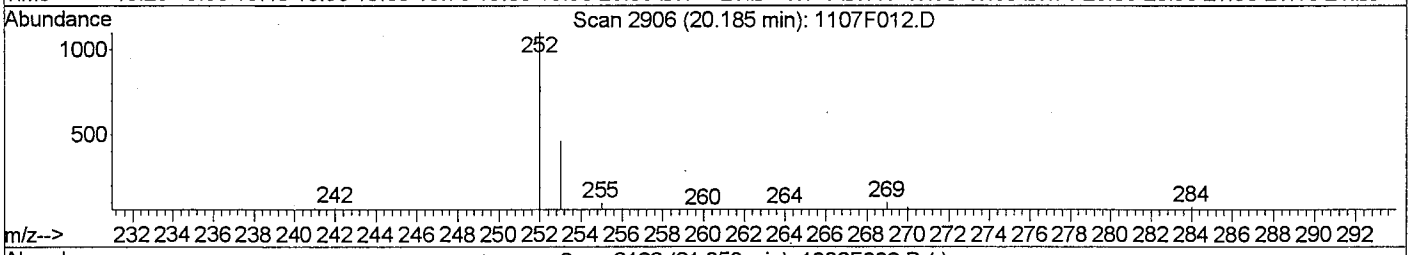
886

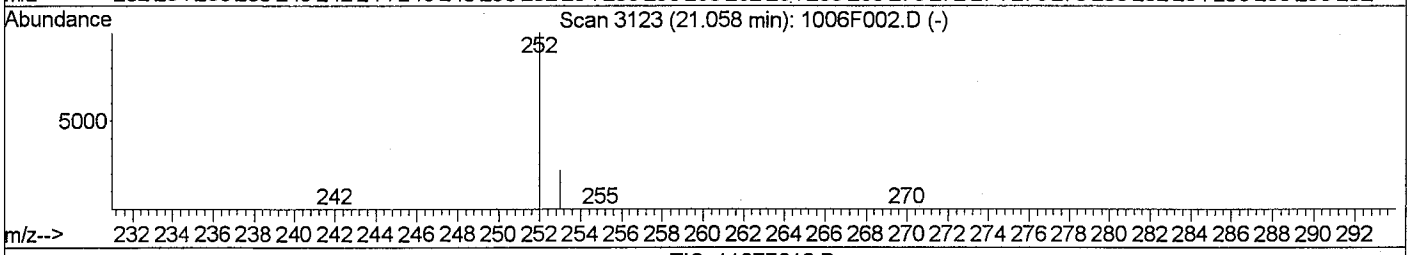
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F012.D

(50) Benzo(k)fluoranthene (T)

20.18min 29.04ng/ml

response 3435

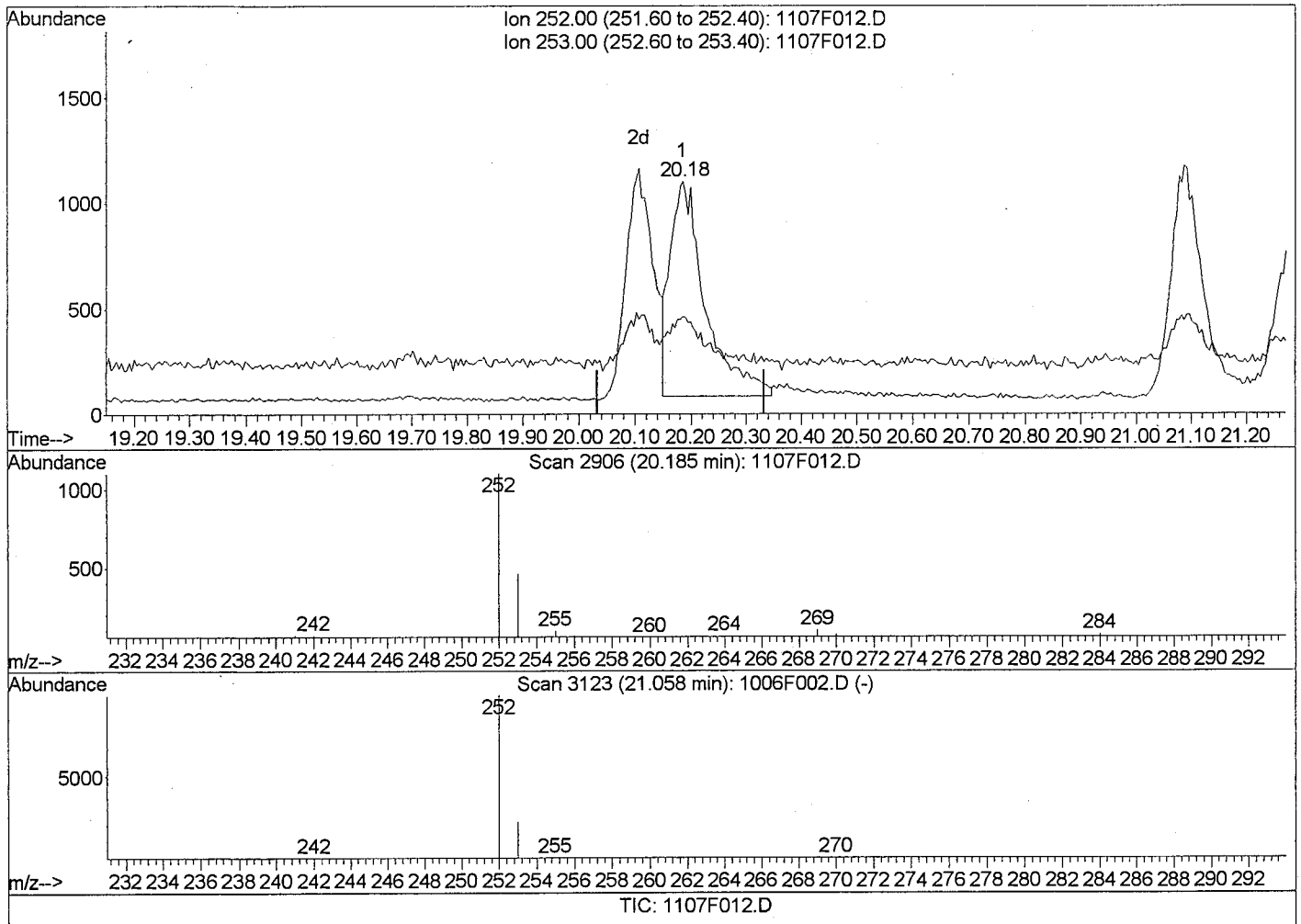
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.02
0.00	0.00	0.00
0.00	0.00	0.00

1107F012.D 1107ALK.M Sat Nov 08 07:00:03 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(50) Benzo(k)fluoranthene (T)

20.18min 38.00ng/ml m

response 4495

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	41.89
0.00	0.00	0.00
0.00	0.00	0.00

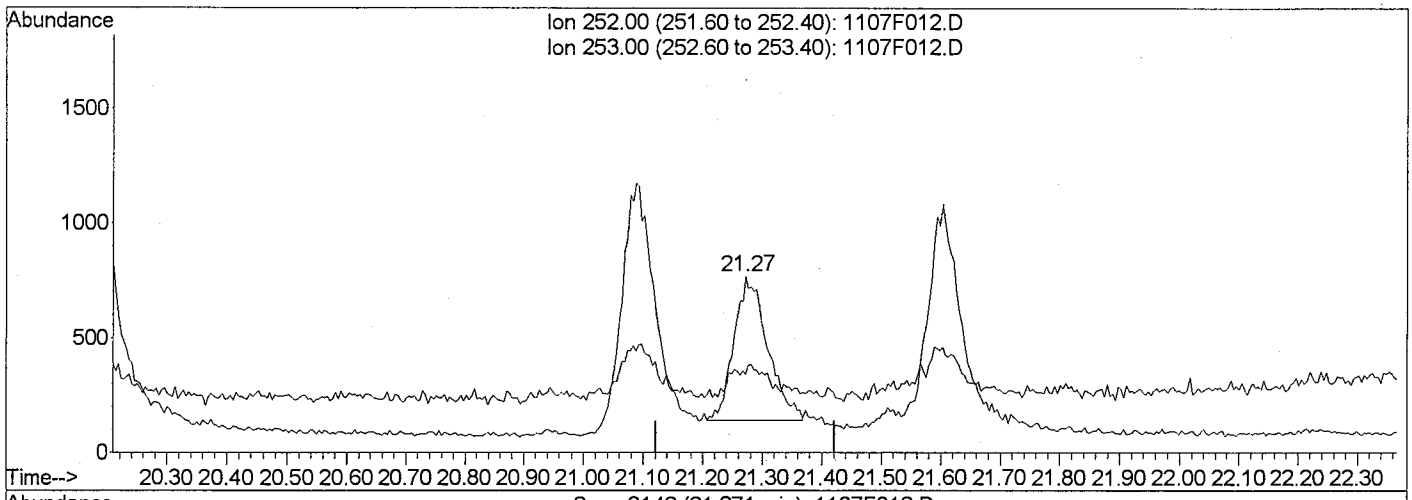
11/10/03 complete mt 11/11/03

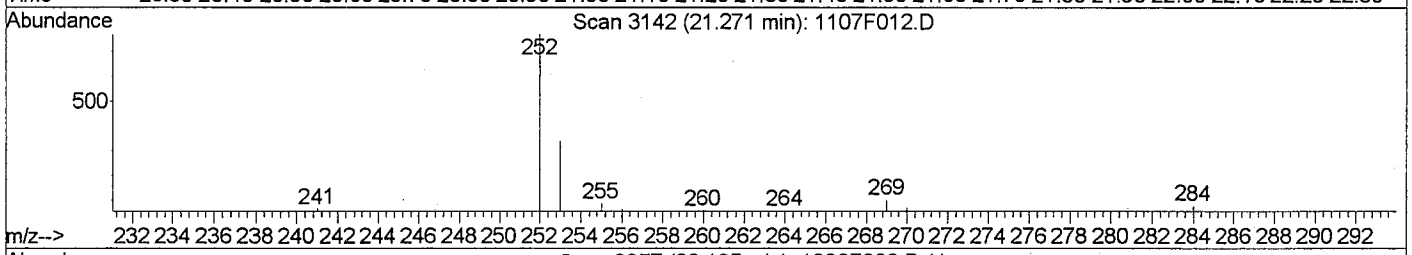
1107F012.D 1107ALK.M Sat Nov 08 07:00:08 2003

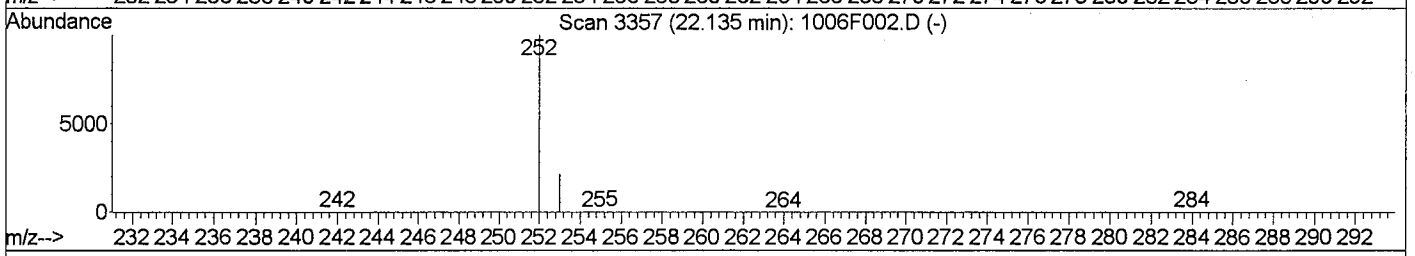
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F012.D

(52) Benzo(a)pyrene (T)

21.27min 23.49ng/ml

response 2456

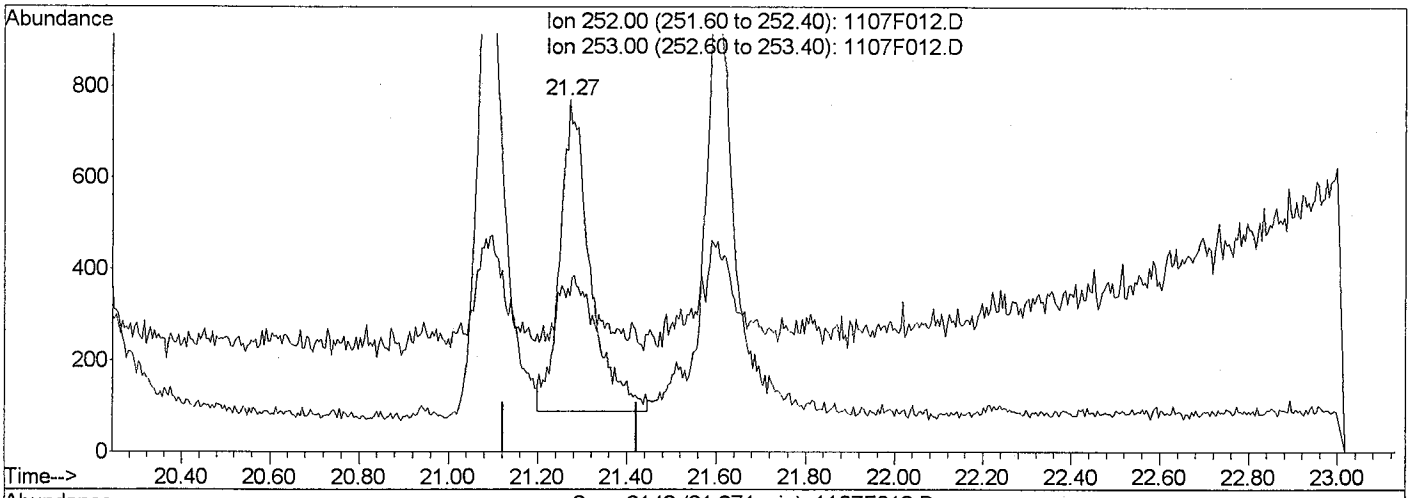
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	14.15
0.00	0.00	0.00
0.00	0.00	0.00

1107F012.D 1107ALK.M Sat Nov 08 07:00:11 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(52) Benzo(a)pyrene (T)

21.27min 30.83ng/ml m

response 3223

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	44.16
0.00	0.00	0.00
0.00	0.00	0.00

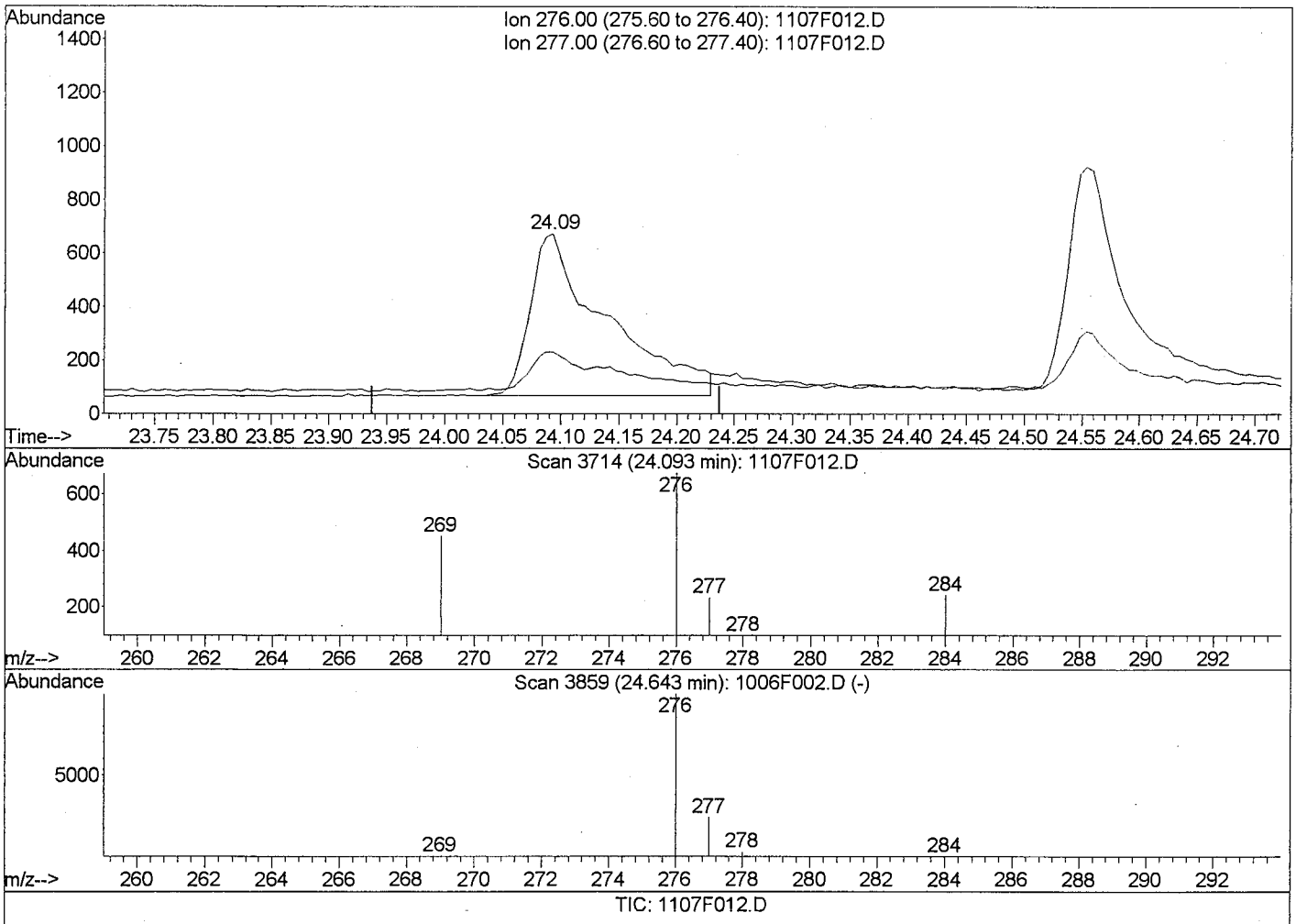
11/10/03
complete
mt
11/11/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:18 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 26.12ng/ml

response 2767

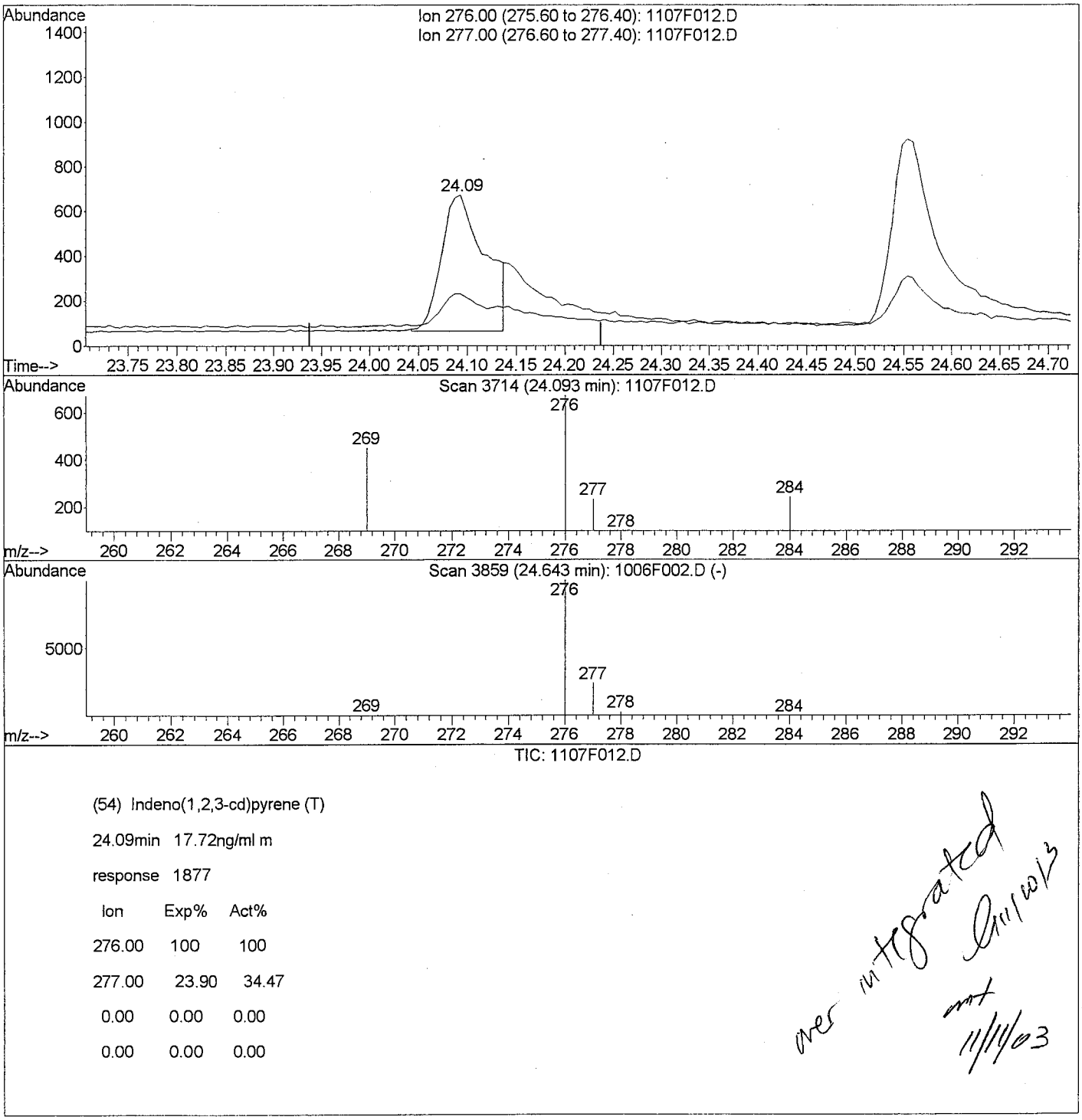
Ion	Exp%	Act%
276.00	100	100
277.00	23.90	23.80
0.00	0.00	0.00
0.00	0.00	0.00

1107F012.D 1107ALK.M Sat Nov 08 07:00:22 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 17.72ng/ml m

response 1877

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	34.47
0.00	0.00	0.00
0.00	0.00	0.00

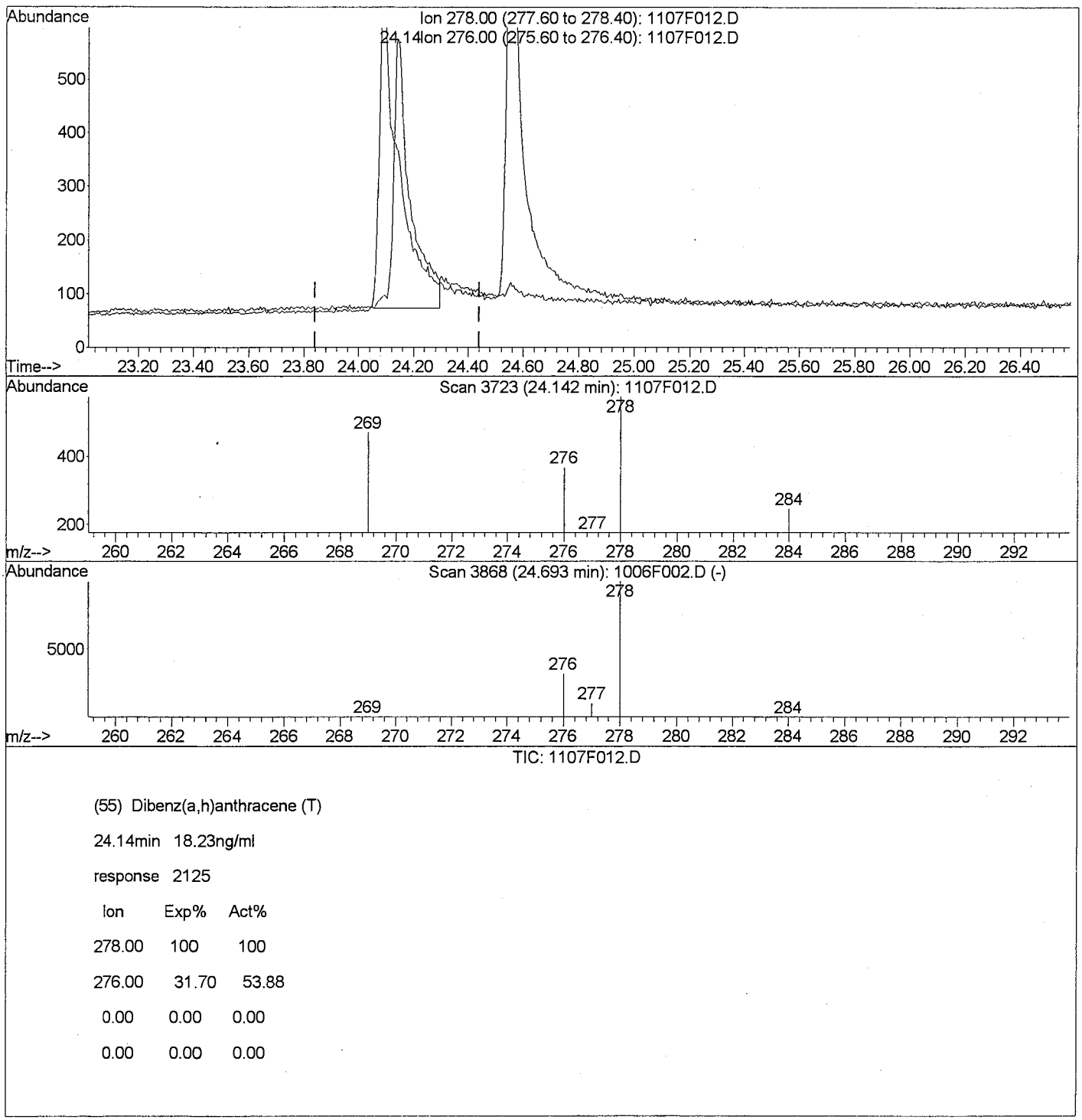
over integrated
11/14/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:27 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(55) Dibenz(a,h)anthracene (T)

24.14min 18.23ng/ml

response 2125

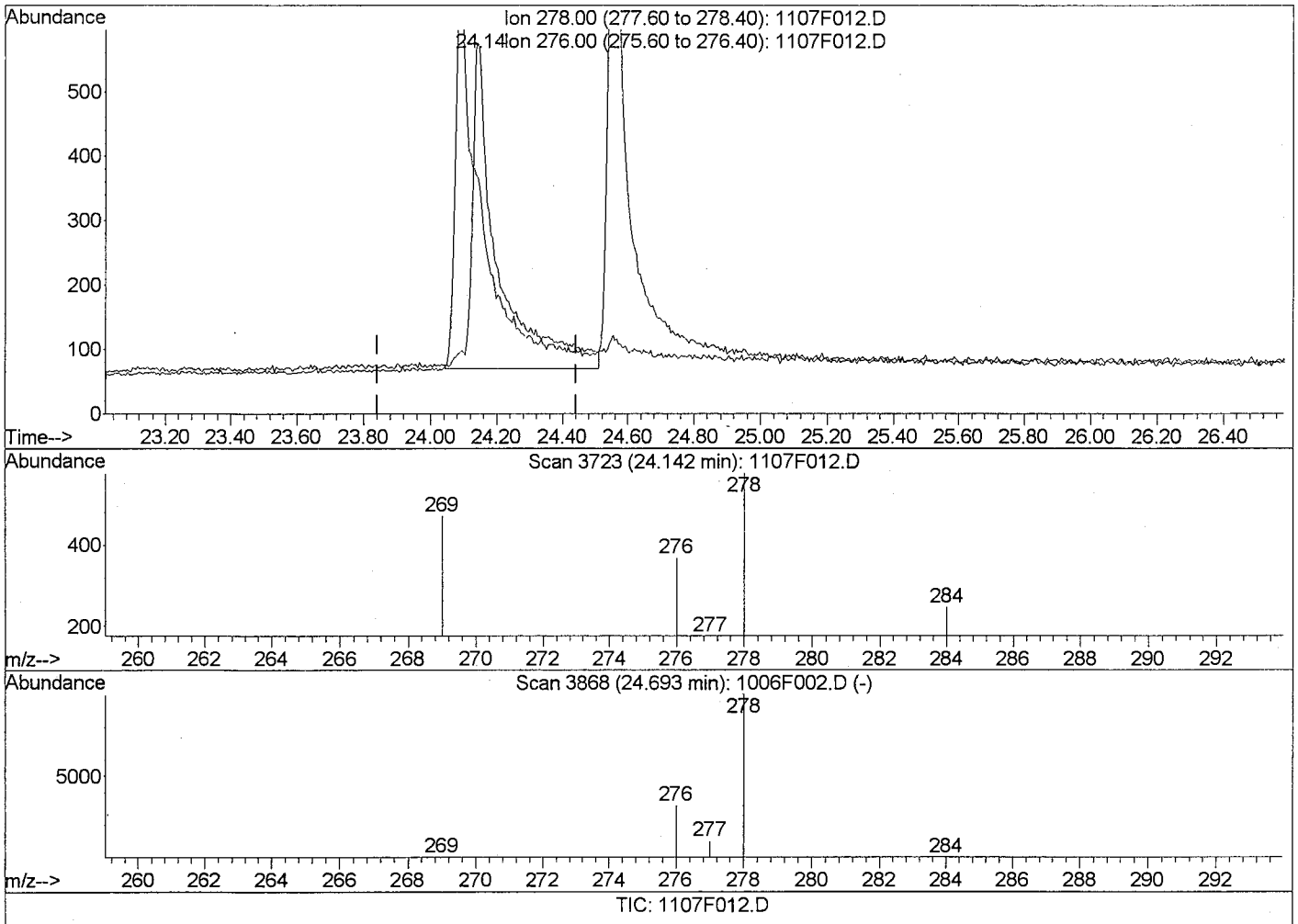
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	53.88
0.00	0.00	0.00
0.00	0.00	0.00

1107F012.D 1107ALK.M Sat Nov 08 07:00:31 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(55) Dibenz(a,h)anthracene (T)

24.14min 22.98ng/ml m

response 2679

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	63.72#
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

mt 11/11/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:36 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:49 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	269417	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	138187	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	198025	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	190599	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	116819	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	18581	95.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.51%		
16) Fluorene-d10	9.01	176	12881	91.17	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.12%		
21) 2,4,6 Tribromophenol	9.60	330	1038	51.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.18%		
37) Fluoranthene-d10	13.70	212	18952	94.92	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.49%		
41) Terphenyl-d14	14.74	244	17364	92.89	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.29%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	30685	95.46	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	17327	88.69	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	16186	90.01	ng/ml	99
6) Biphenyl	7.09	154	21211	88.28	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.33	156	14268	85.43	ng/ml	99
12) Acenaphthylene	7.80	152	24786	87.63	ng/ml	99
13) Acenaphthene	8.12	154	16374	92.63	ng/ml	100
14) Dibenzofuran	8.41	168	21296	85.97	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.83	170	13888	89.70	ng/ml	95
17) Fluorene	9.06	166	16382	83.69	ng/ml	96
22) Pentachlorophenol	10.79	266	3333	149.16	ng/ml	95
24) Dibenzothiophene	10.78	184	21622	84.75	ng/ml	96
28) Phenanthrene	11.05	178	22900	87.38	ng/ml	98
29) Anthracene	11.15	178	18208	79.11	ng/ml	100
30) Carbazole	11.58	167	13701	73.19	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	14880	84.44	ng/ml	98
36) Fluoranthene	13.74	202	22697	89.43	ng/ml	98
39) Pyrene	14.24	202	23306	81.71	ng/ml	99
42) Benz(a)anthracene	17.09	228	19165	90.93	ng/ml	99
43) Chrysene	17.18	228	20378	95.25	ng/ml	97
49) Benzo(b)fluoranthene	20.10	252	13968	77.80	ng/ml	97
50) Benzo(k)fluoranthene	20.19	252	19803m	114.13	ng/ml	
51) Benzo(e)pyrene	21.09	252	17285	93.25	ng/ml	97

(#) = qualifier out of range (m) = manual integration
1107F013.D 1107ALK.M Sat Nov 08 07:09:18 2003 Page 1

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:49 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

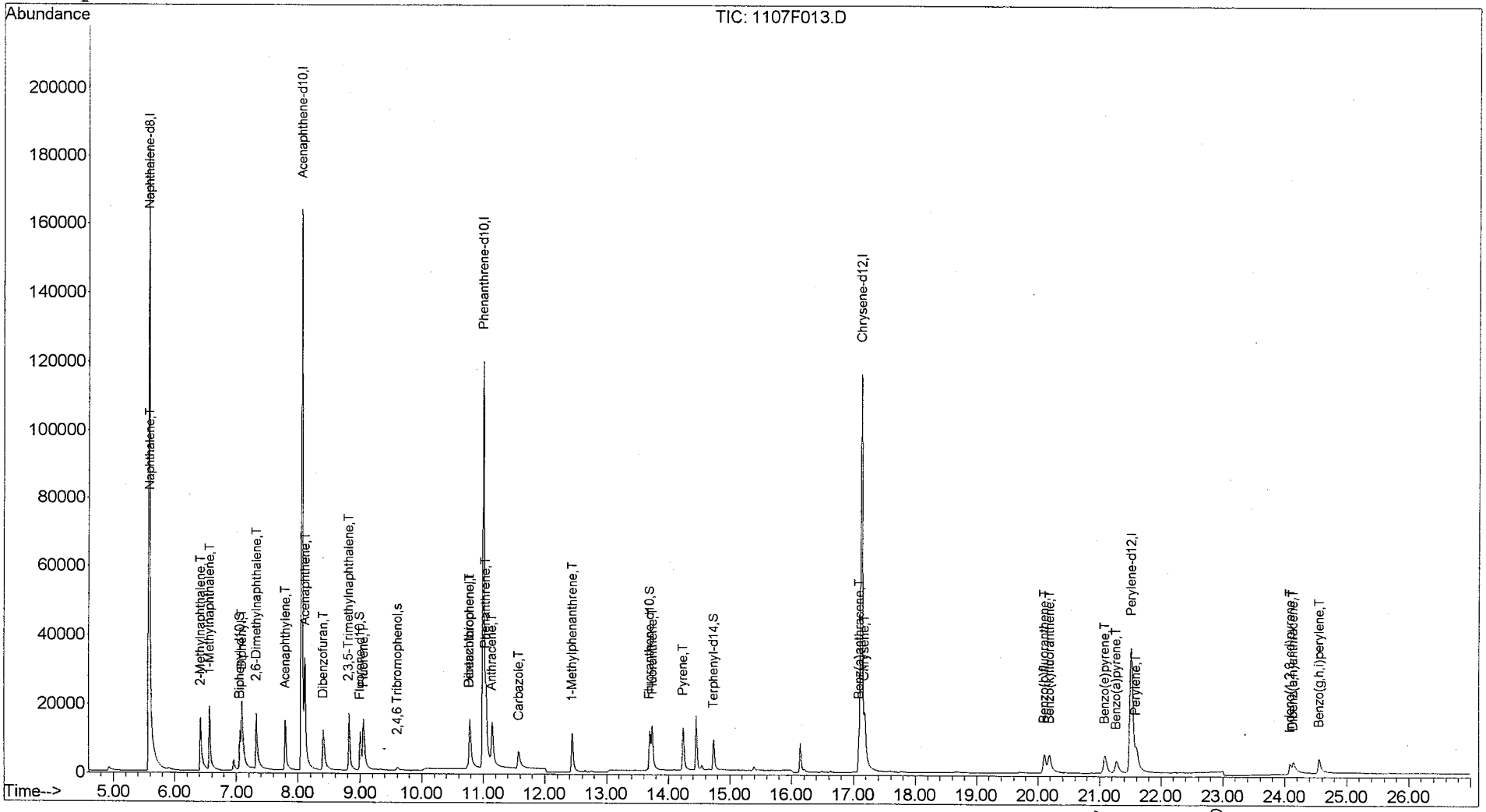
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	10958	71.44	ng/ml	98
53)	Perylene	21.60	252	13243	82.57	ng/ml	98
54)	Indeno(1,2,3-cd)pyrene	24.09	276	6471m	41.64	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	10725m	62.71	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	12369	63.43	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

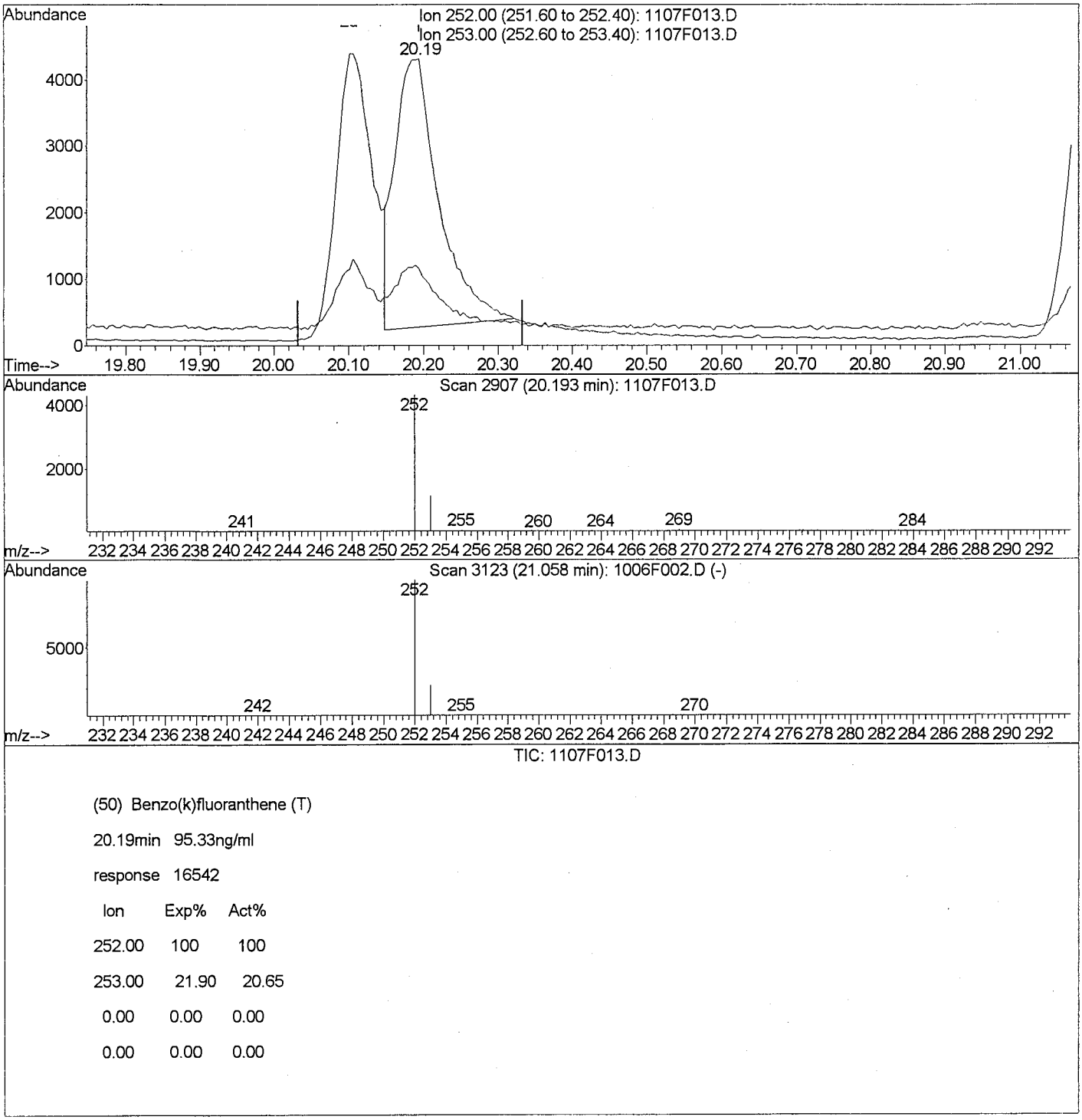


666

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F013.D

(50) Benzo(k)fluoranthene (T)

20.19min 95.33ng/ml

response 16542

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	20.65
0.00	0.00	0.00
0.00	0.00	0.00

1107F013.D 1107ALK.M Sat Nov 08 07:01:11 2003

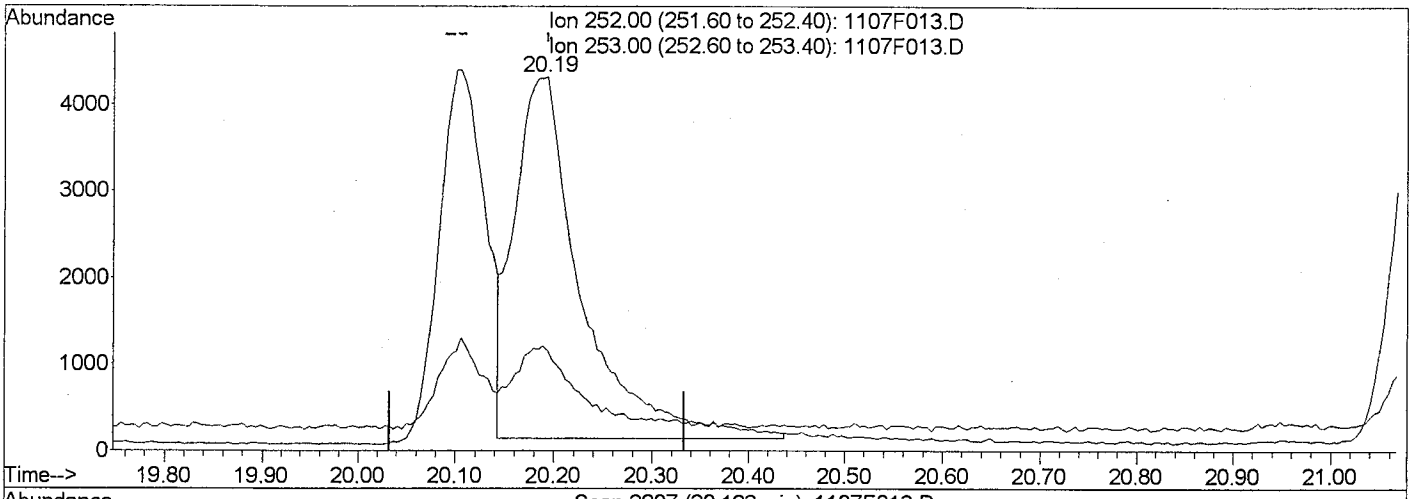
Quantitation Report (Qedit)

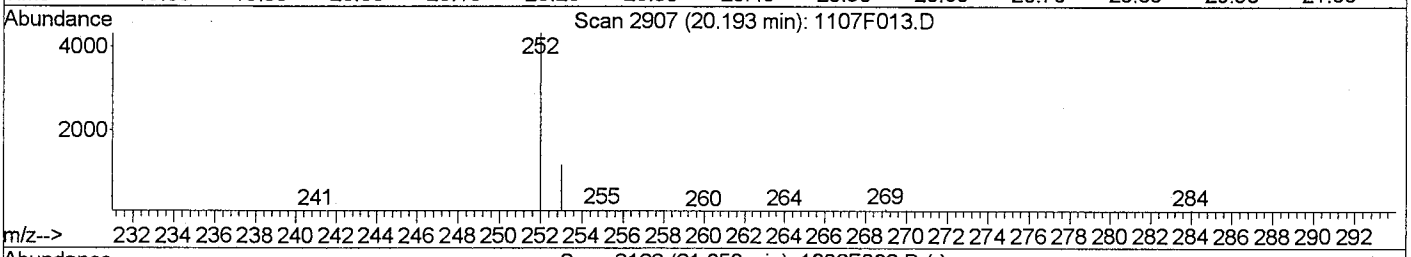
Data File : J:\MS11\DATA\110703\1107F013.D
Acq On : 7 Nov 2003 6:15 pm
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003

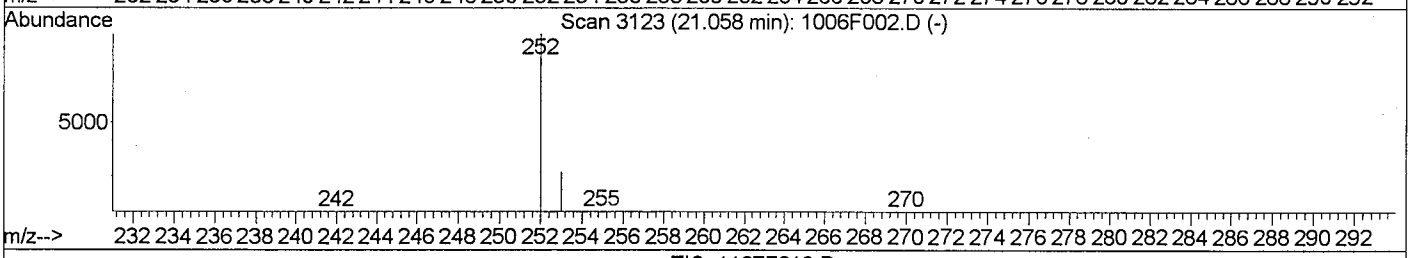
Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F013.D

(50) Benzo(k)fluoranthene (T)

20.19min 114.13ng/ml m

response 19803

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	26.96
0.00	0.00	0.00
0.00	0.00	0.00

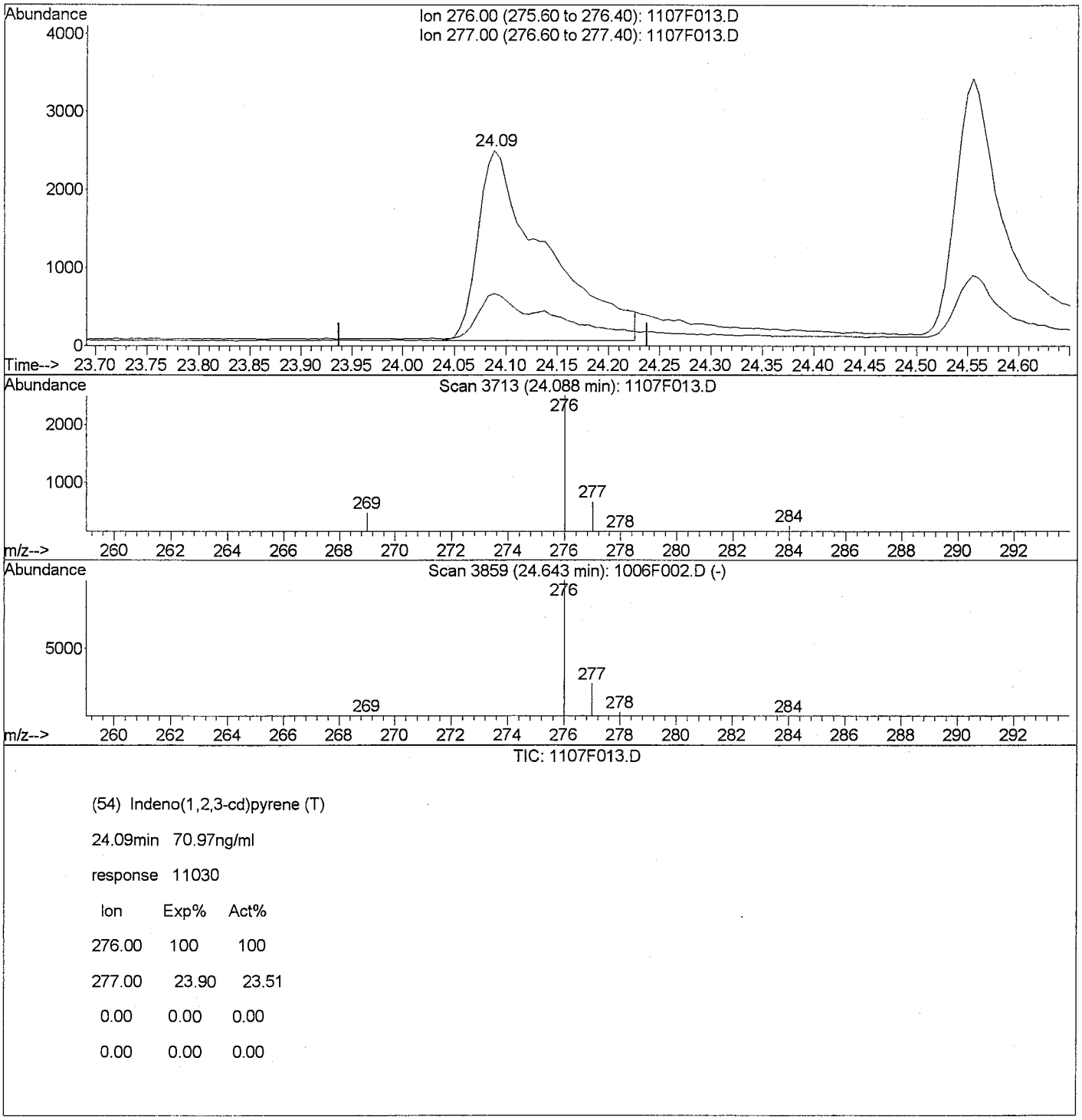
complete 11/11/03
mt
11/11/03

1107F013.D 1107ALK.M Sat Nov 08 07:01:17 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 70.97ng/ml

response 11030

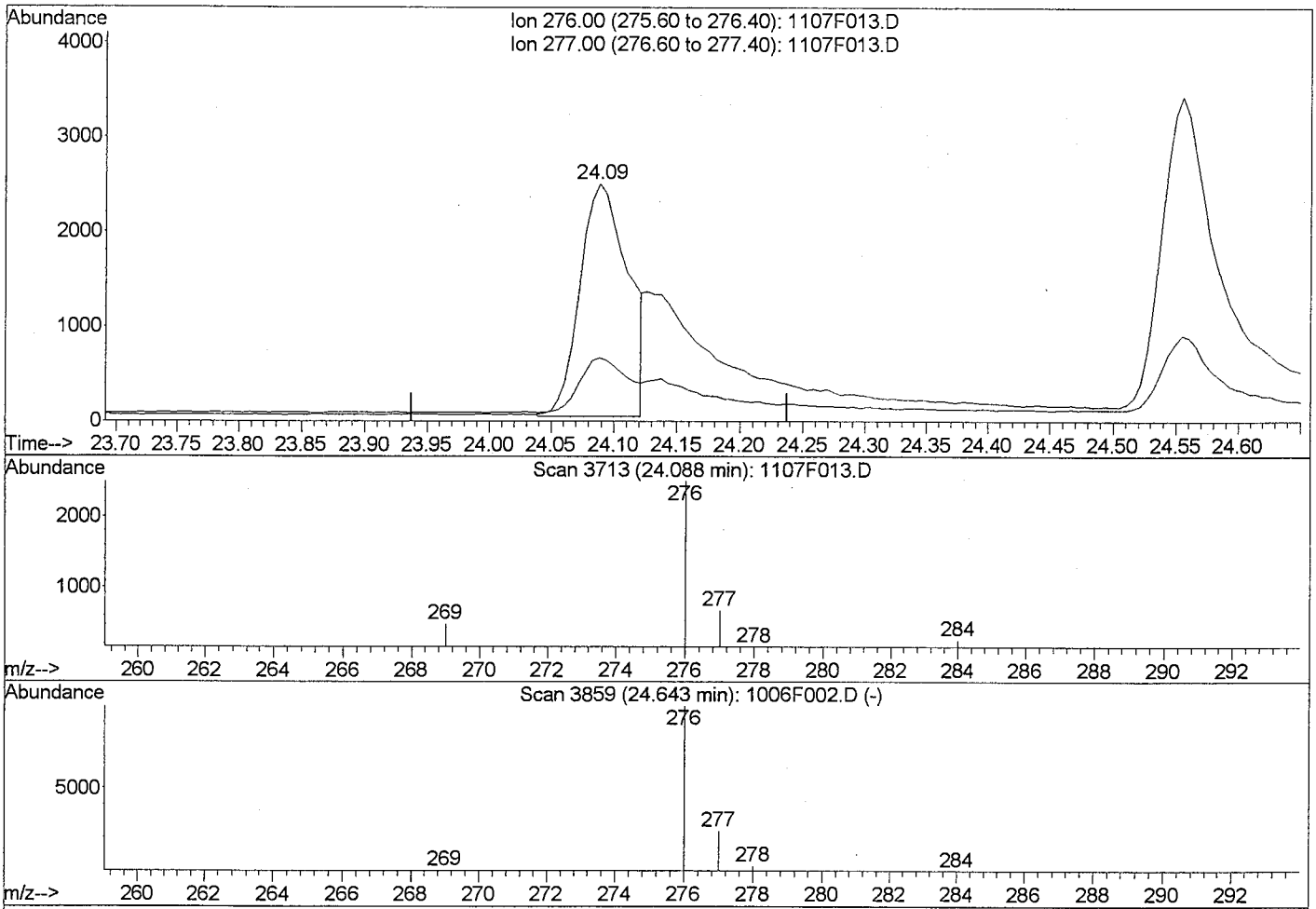
Ion	Exp%	Act%
276.00	100	100
277.00	23.90	23.51
0.00	0.00	0.00
0.00	0.00	0.00

1107F013.D 1107ALK.M Sat Nov 08 07:01:24 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F013.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 41.64ng/ml m

response 6471

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	26.73
0.00	0.00	0.00
0.00	0.00	0.00

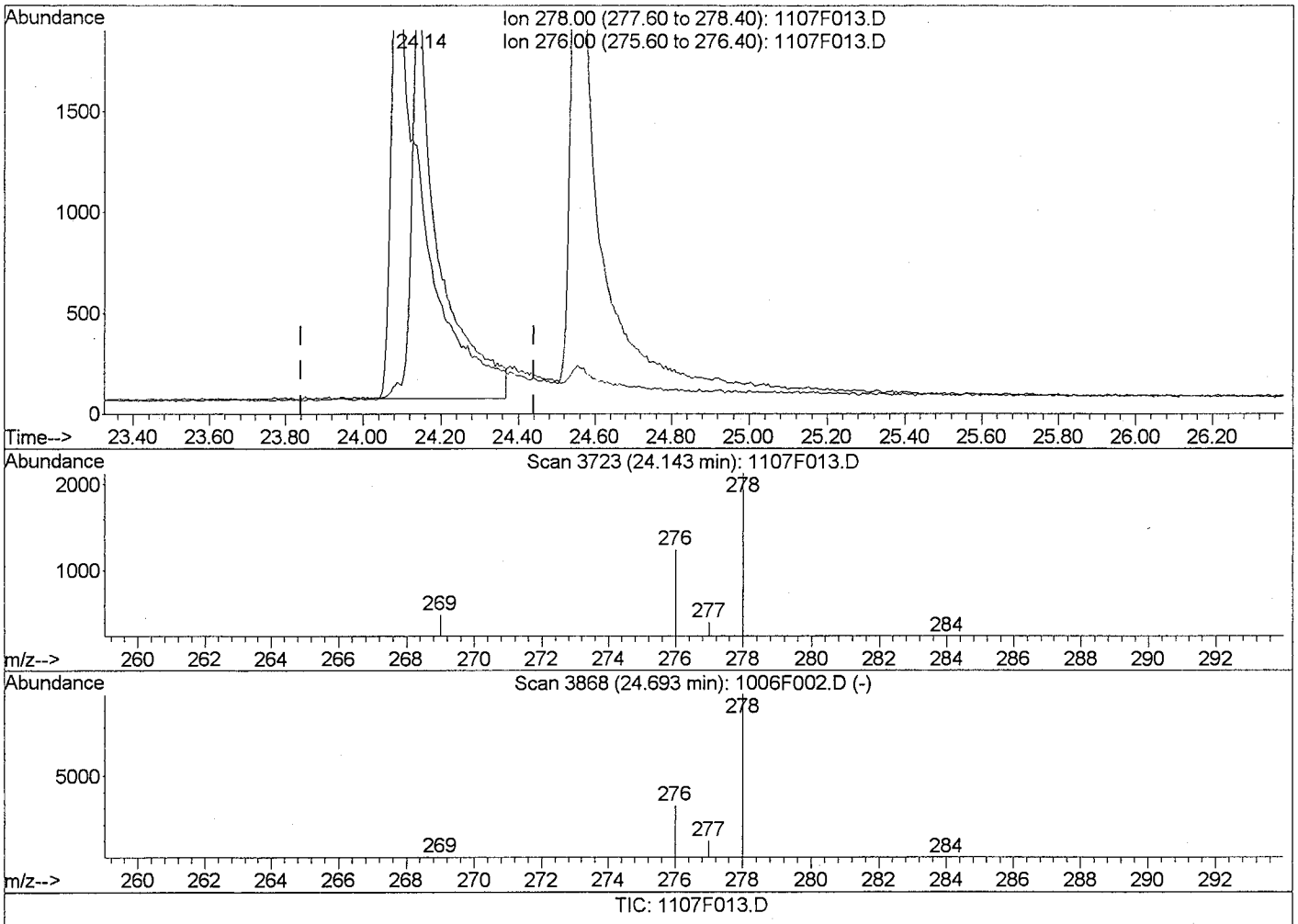
11/10/03
over integrated
mt
11/11/03

1107F013.D 1107ALK.M Sat Nov 08 07:01:29 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 55.98ng/ml

response 9574

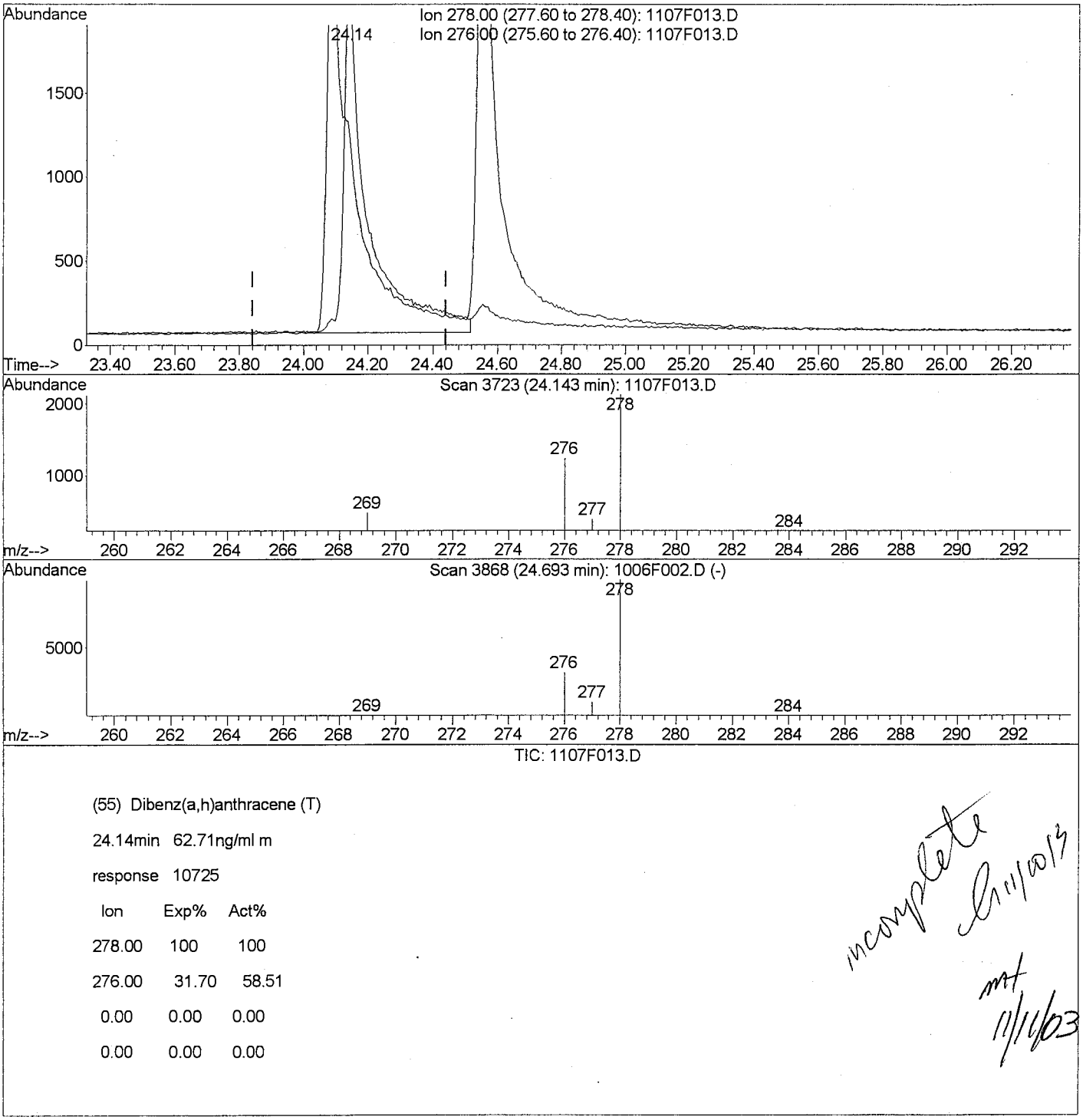
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	56.56
0.00	0.00	0.00
0.00	0.00	0.00

1107F013.D 1107ALK.M Sat Nov 08 07:01:33 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 62.71ng/ml m

response 10725

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	58.51
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

mt 11/14/03

1107F013.D 1107ALK.M Sat Nov 08 07:01:39 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:52 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	243984	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	125357	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	173255	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	153386	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	93296	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	84457	477.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 47.74%			
16) Fluorene-d10	9.00	176	59218	462.03	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 46.20%			
21) 2,4,6 Tribromophenol	9.60	330	5331	293.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 29.35%			
37) Fluoranthene-d10	13.70	212	80552	461.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 46.11%			
41) Terphenyl-d14	14.73	244	68882	457.87	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 45.79%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	136443	468.73	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	79645	450.15	ng/ml	98
4) 1-Methylnaphthalene	6.56	142	75951	466.41	ng/ml	100
6) Biphenyl	7.09	154	98167	451.18	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	67759	447.98	ng/ml	99
12) Acenaphthylene	7.80	152	115594	450.53	ng/ml	99
13) Acenaphthene	8.12	154	73238	456.71	ng/ml	100
14) Dibenzofuran	8.41	168	95648	425.64	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.83	170	64464	458.98	ng/ml	90
17) Fluorene	9.06	166	76880	432.93	ng/ml	100
22) Pentachlorophenol	10.78	266	21405	1055.96	ng/ml	99
24) Dibenzothiophene	10.78	184	96252	431.23	ng/ml	96
28) Phenanthrene	11.05	178	99421	433.60	ng/ml	100
29) Anthracene	11.14	178	83307	413.68	ng/ml	100
30) Carbazole	11.57	167	65358	399.08	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	66881	433.81	ng/ml	98
36) Fluoranthene	13.73	202	98751	444.71	ng/ml	99
39) Pyrene	14.24	202	97338	424.08	ng/ml	98
42) Benz(a)anthracene	17.09	228	74844	441.23	ng/ml	99
43) Chrysene	17.19	228	80663	468.53	ng/ml	99
49) Benzo(b)fluoranthene	20.10	252	60539	422.21	ng/ml	98
50) Benzo(k)fluoranthene	20.18	252	81058m	584.94	ng/ml	
51) Benzo(e)pyrene	21.09	252	69802	471.50	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:52 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03
mt
11/11/03

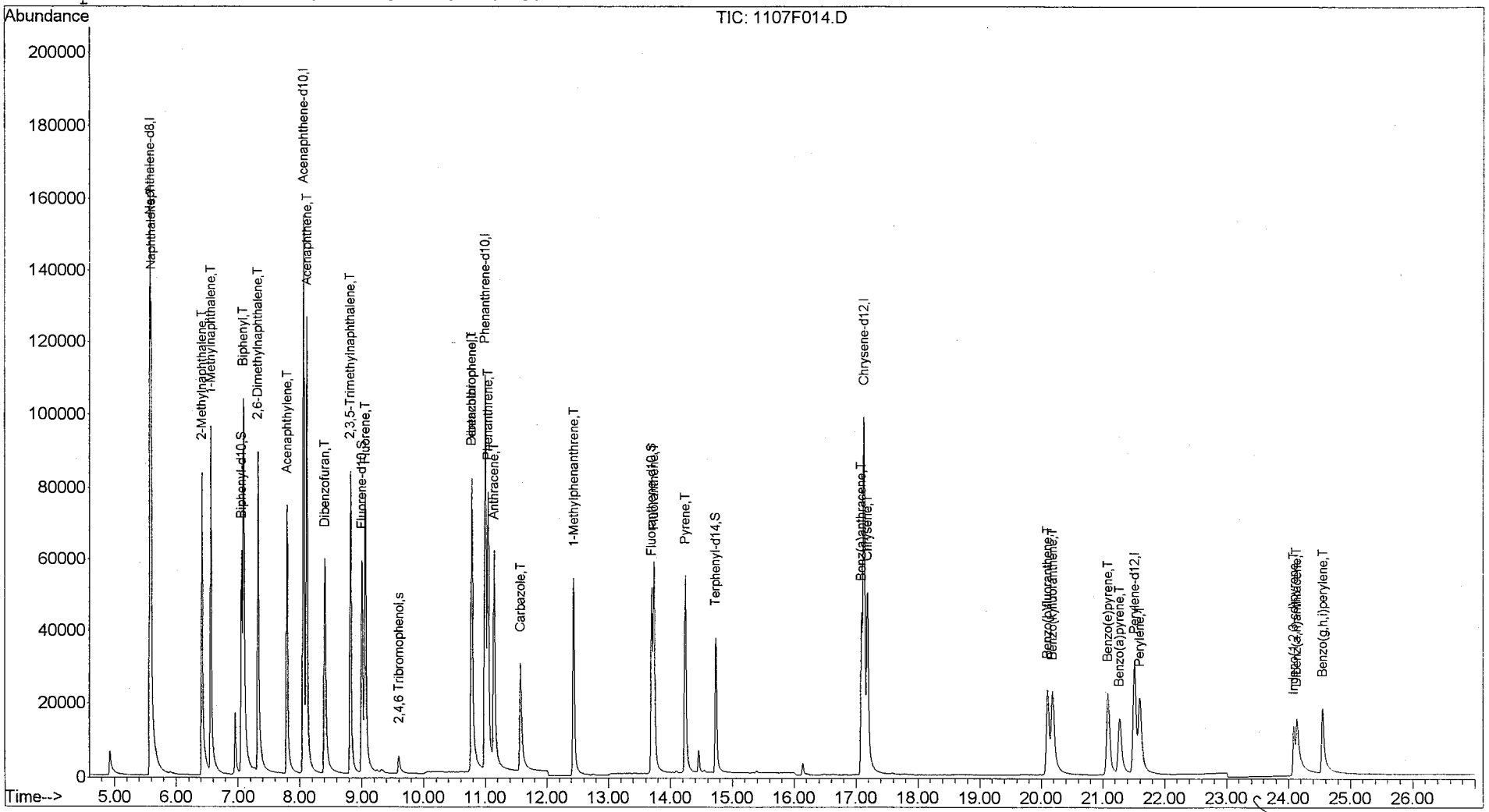
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	48209	393.56	ng/ml	100
53)	Perylene	21.60	252	56290	439.44	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	27965m	225.31	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	44164m	323.34	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	48726	312.88	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1107F014.D 1107ALK.M Sat Nov 08 07:09:21 2003 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

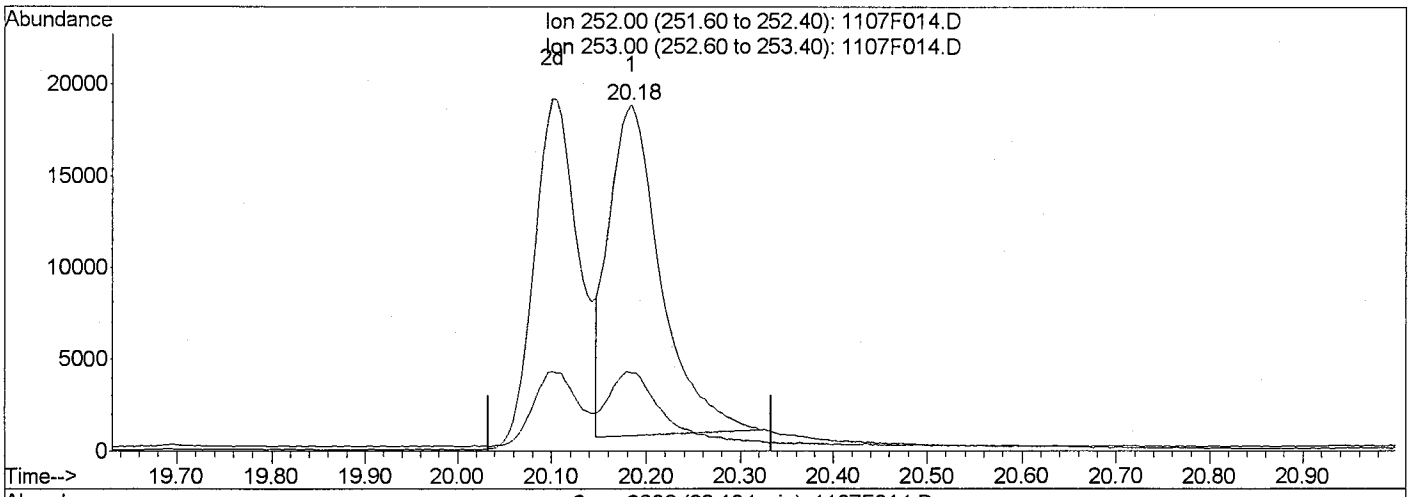


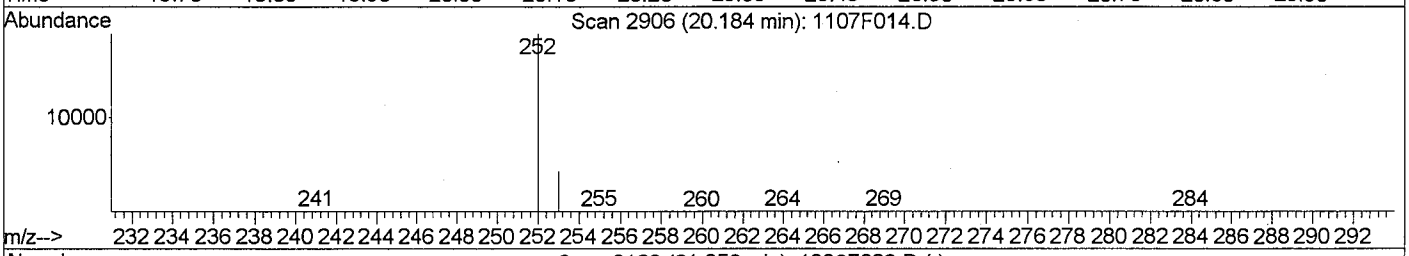
1008

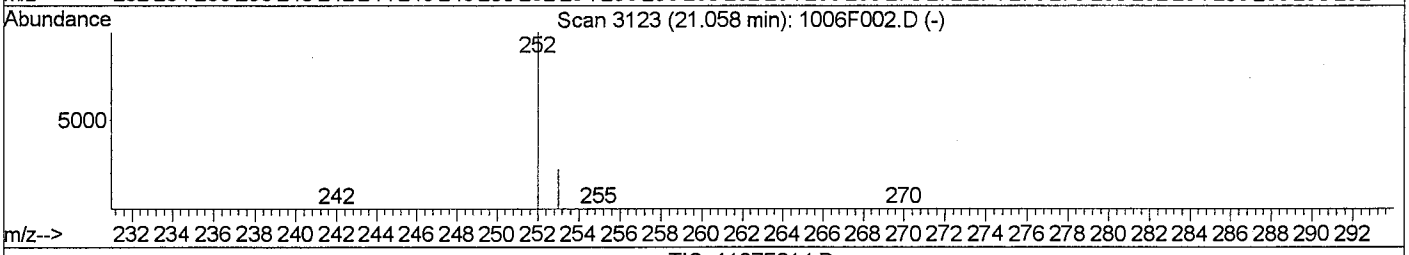
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F014.D

(50) Benzo(k)fluoranthene (T)

20.18min 496.21ng/ml

response 68763

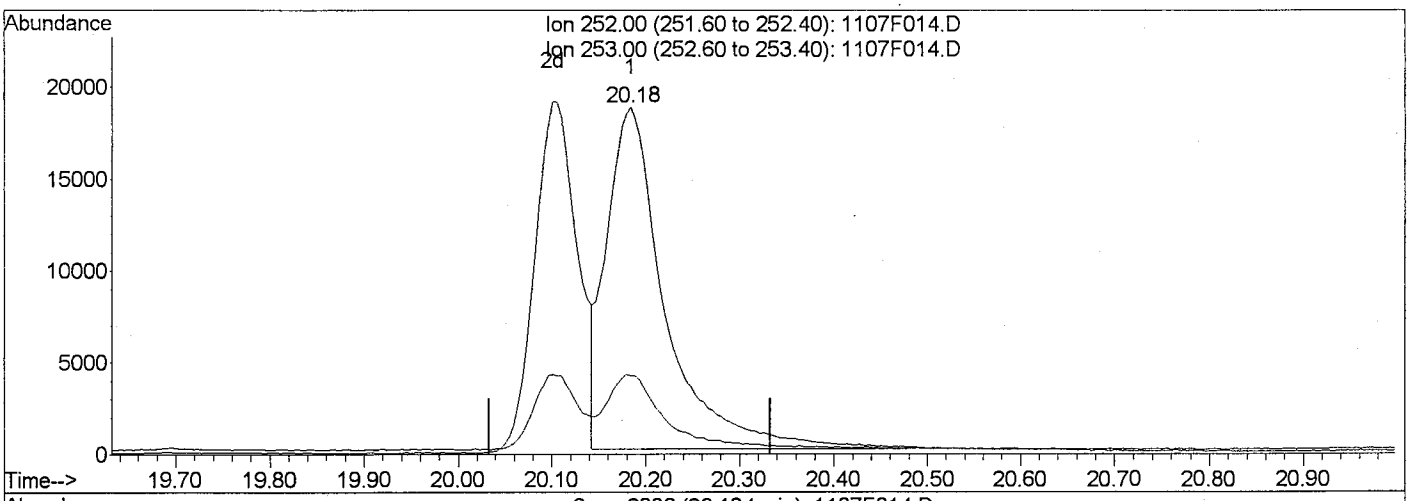
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.19
0.00	0.00	0.00
0.00	0.00	0.00

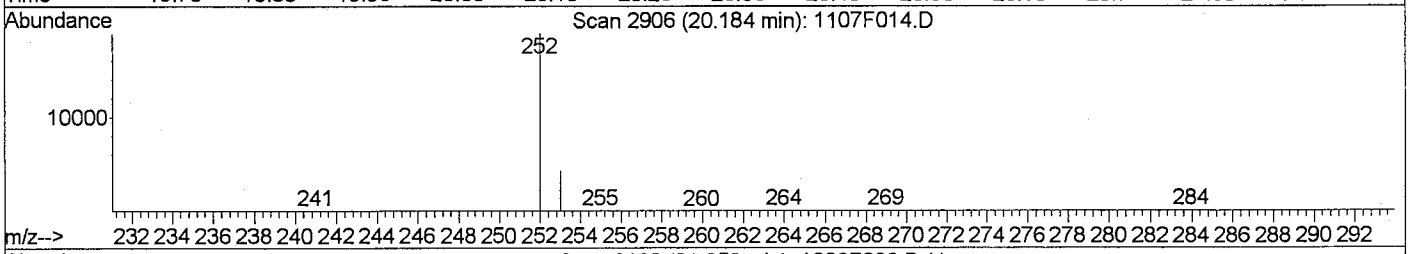
1107F014.D 1107ALK.M Sat Nov 08 07:02:07 2003

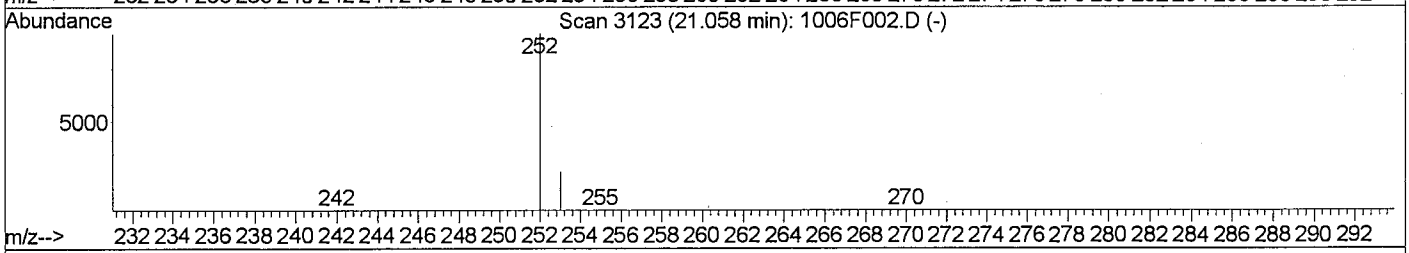
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F014.D

(50) Benzo(k)fluoranthene (T)

20.18min 584.94ng/ml m

response 81058

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.67
0.00	0.00	0.00
0.00	0.00	0.00

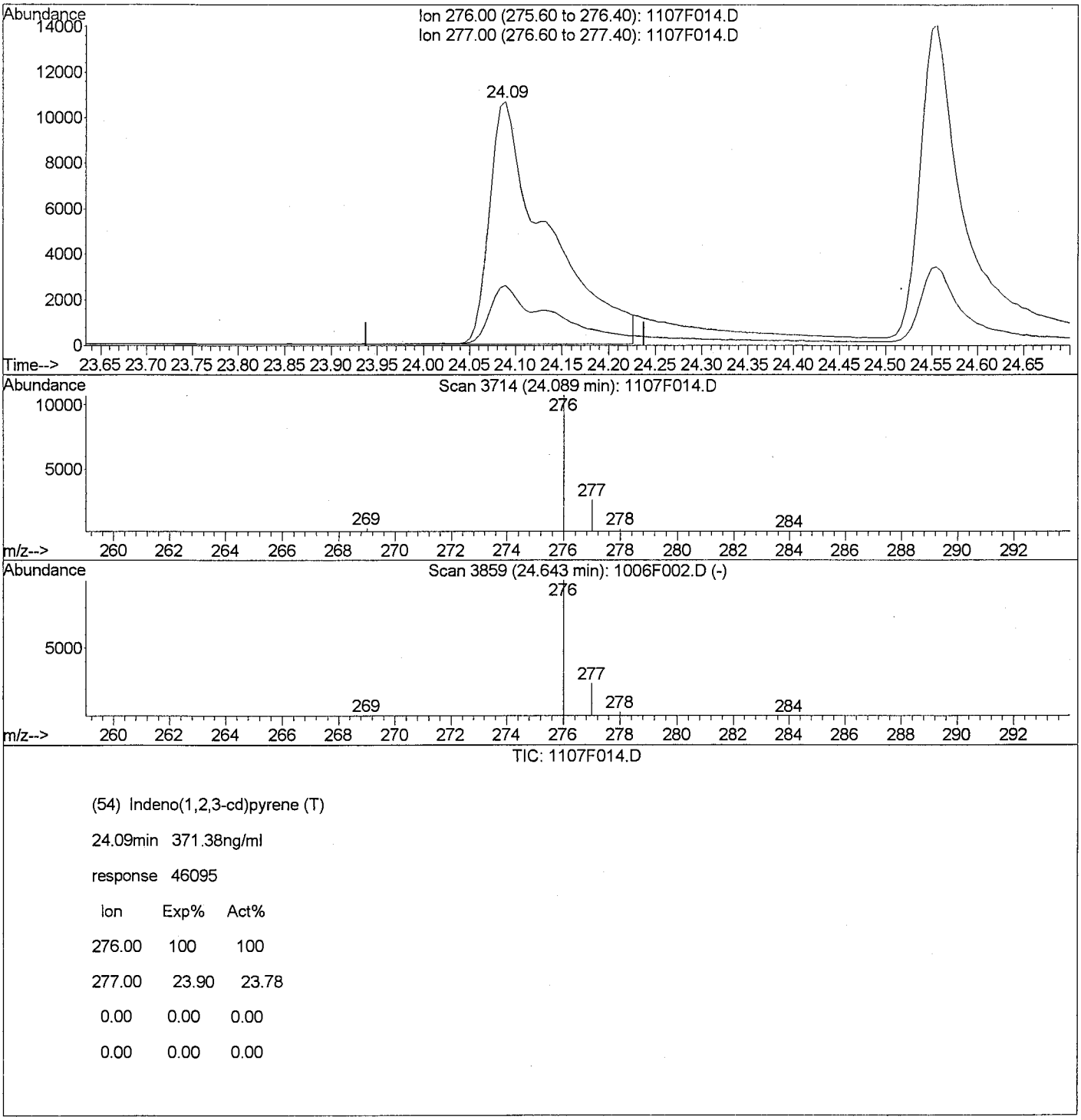
incomplete 11/11/03 mt 11/11/03

1107F014.D 1107ALK.M Sat Nov 08 07:02:13 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F014.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 371.38ng/ml

response 46095

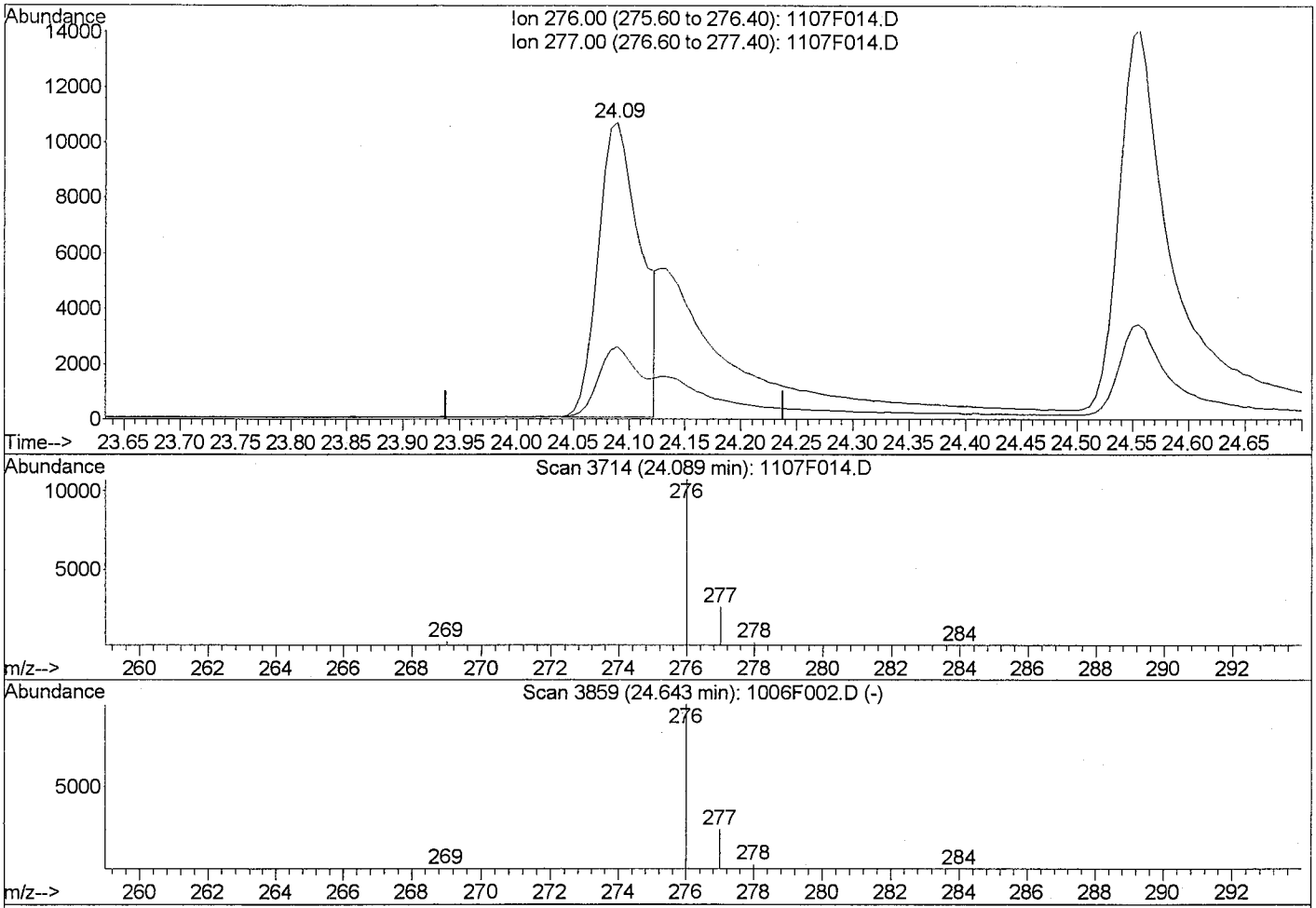
Ion	Exp%	Act%
276.00	100	100
277.00	23.90	23.78
0.00	0.00	0.00
0.00	0.00	0.00

1107F014.D 1107ALK.M Sat Nov 08 07:02:18 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 225.31ng/ml m

response 27965

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	24.52
0.00	0.00	0.00
0.00	0.00	0.00

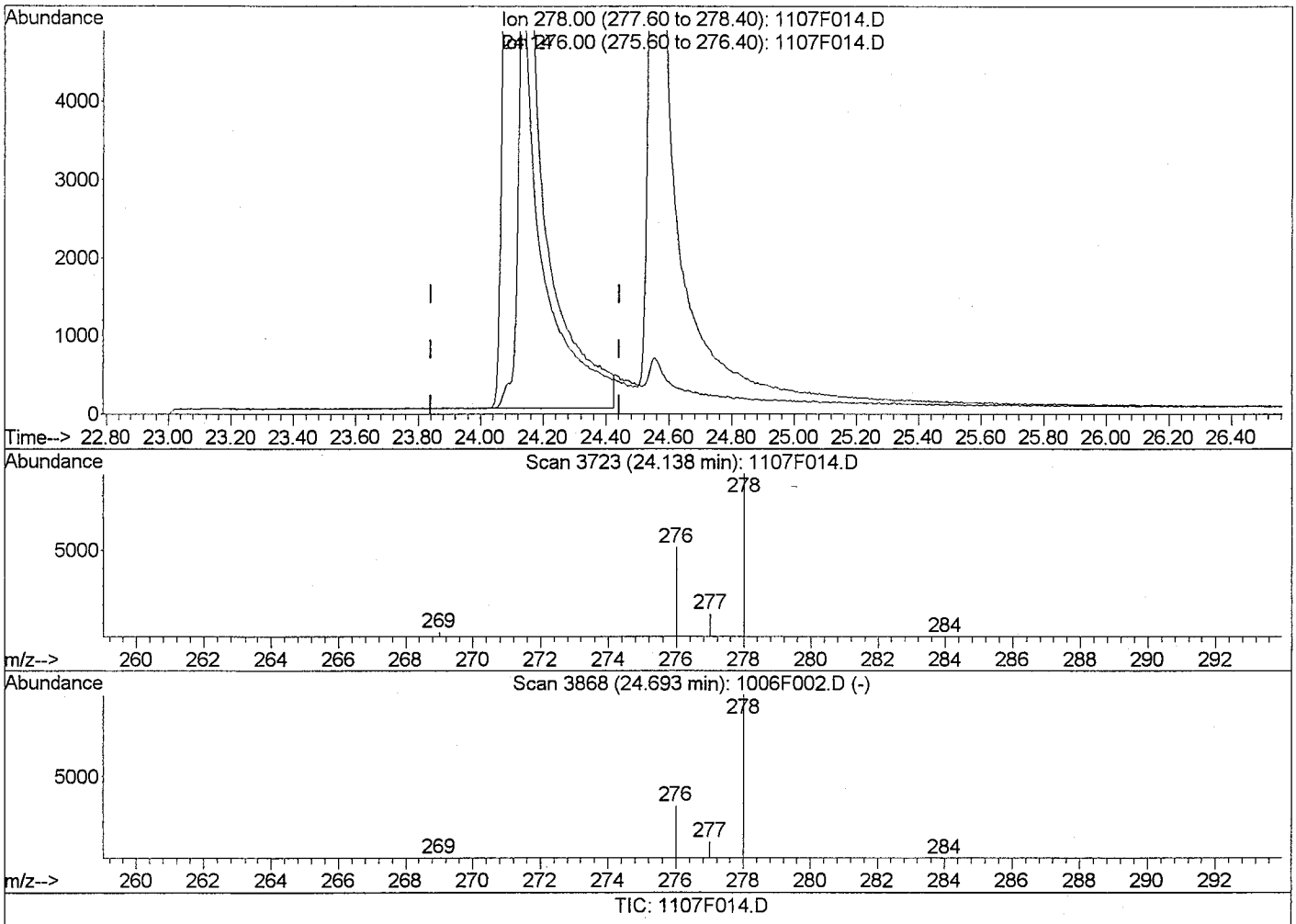
over integrated 11/10/03 mt 11/11/03

1107F014.D 1107ALK.M Sat Nov 08 07:02:31 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 307.04ng/ml

response 41938

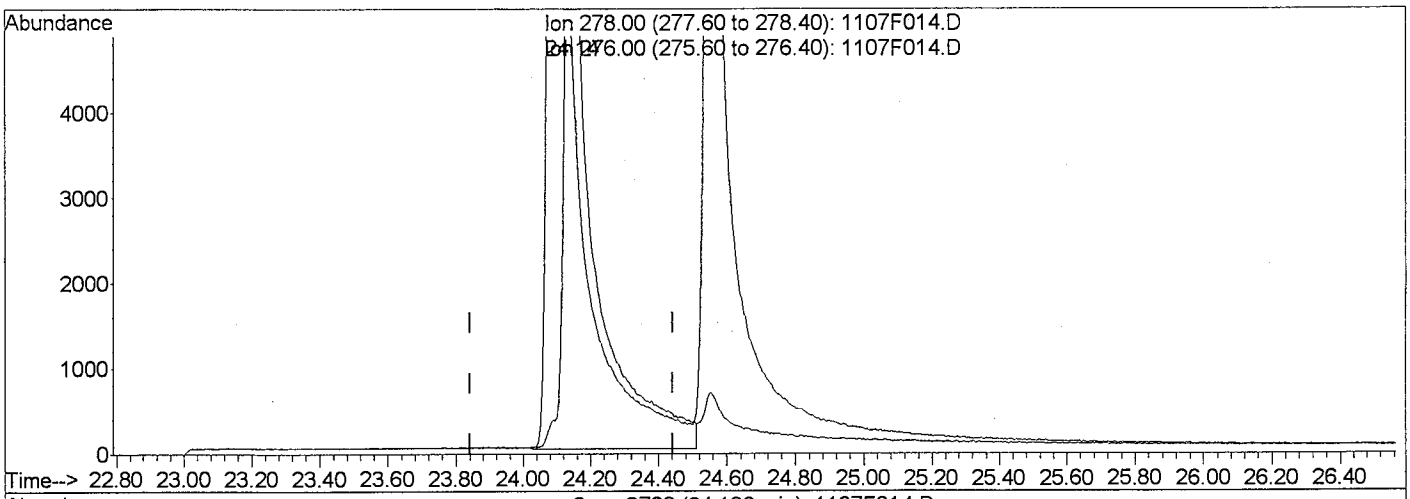
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	55.56
0.00	0.00	0.00
0.00	0.00	0.00

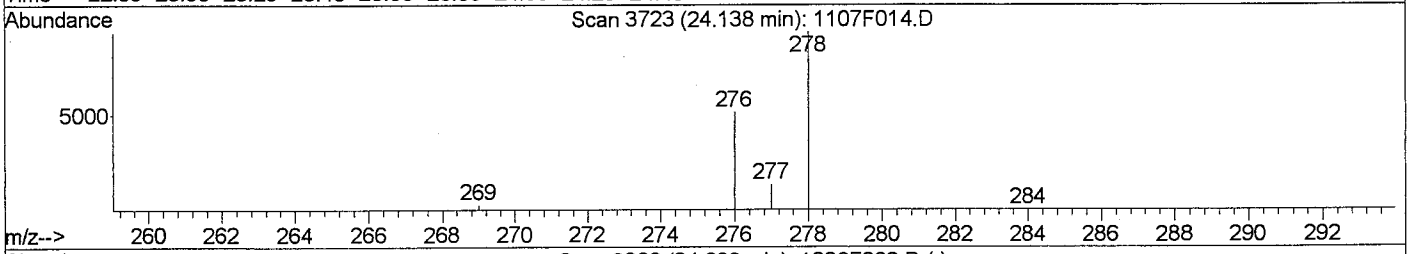
1107F014.D 1107ALK.M Sat Nov 08 07:02:35 2003

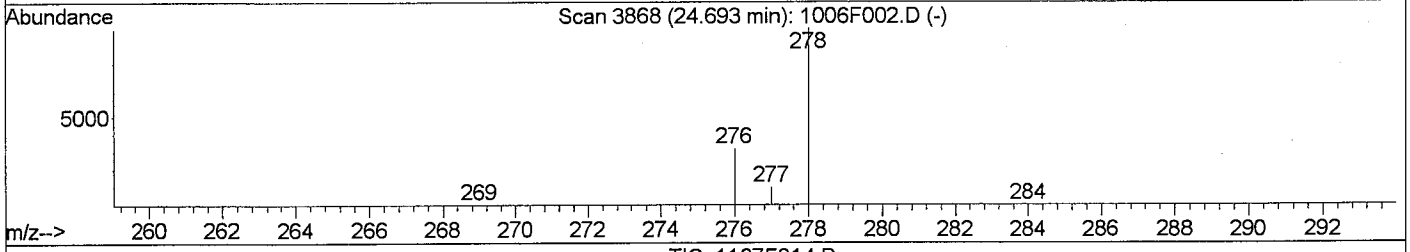
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F014.D

(55) Dibenz(a,h)anthracene (T)

24.14min 323.34ng/ml m

response 44164

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	56.07
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03
mt 11/11/03

1107F014.D 1107ALK.M Sat Nov 08 07:02:39 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:56 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	266248	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	136639	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	186916	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	174814	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	107089	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	196231	1016.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 101.64%			
16) Fluorene-d10	9.00	176	137764	986.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 98.61%			
21) 2,4,6 Tribromophenol	9.60	330	13128	663.05	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 66.30%			
37) Fluoranthene-d10	13.70	212	195549	1037.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 103.76%			
41) Terphenyl-d14	14.73	244	160412	935.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 93.56%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	303720	956.14	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	183088	948.27	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	172952	973.26	ng/ml	97
6) Biphenyl	7.09	154	224927	947.32	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.33	156	157409	953.66	ng/ml	98
12) Acenaphthylene	7.79	152	269455	963.49	ng/ml	100
13) Acenaphthene	8.12	154	167723	959.55	ng/ml	99
14) Dibenzofuran	8.41	168	221987	906.29	ng/ml	89
15) 2,3,5-Trimethylnaphthalene	8.83	170	149167	974.36	ng/ml	90
17) Fluorene	9.05	166	180398	931.98	ng/ml	98
22) Pentachlorophenol	10.78	266	70977	3212.36	ng/ml	97
24) Dibenzothiophene	10.78	184	229776	954.20	ng/ml	98
28) Phenanthrene	11.04	178	234804	949.21	ng/ml	99
29) Anthracene	11.15	178	207208	953.74	ng/ml	99
30) Carbazole	11.57	167	164951	933.59	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	163939	985.63	ng/ml	98
36) Fluoranthene	13.73	202	244535	1020.74	ng/ml	98
39) Pyrene	14.24	202	242068	925.36	ng/ml	98
42) Benz(a)anthracene	17.09	228	168145	869.77	ng/ml	100
43) Chrysene	17.19	228	191935	978.19	ng/ml	99
49) Benzo(b)fluoranthene	20.10	252	147720	897.54	ng/ml	99
50) Benzo(k)fluoranthene	20.18	252	192503m	1210.23	ng/ml	
51) Benzo(e)pyrene	21.09	252	164764	969.60	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:56 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 amt 11/11/03

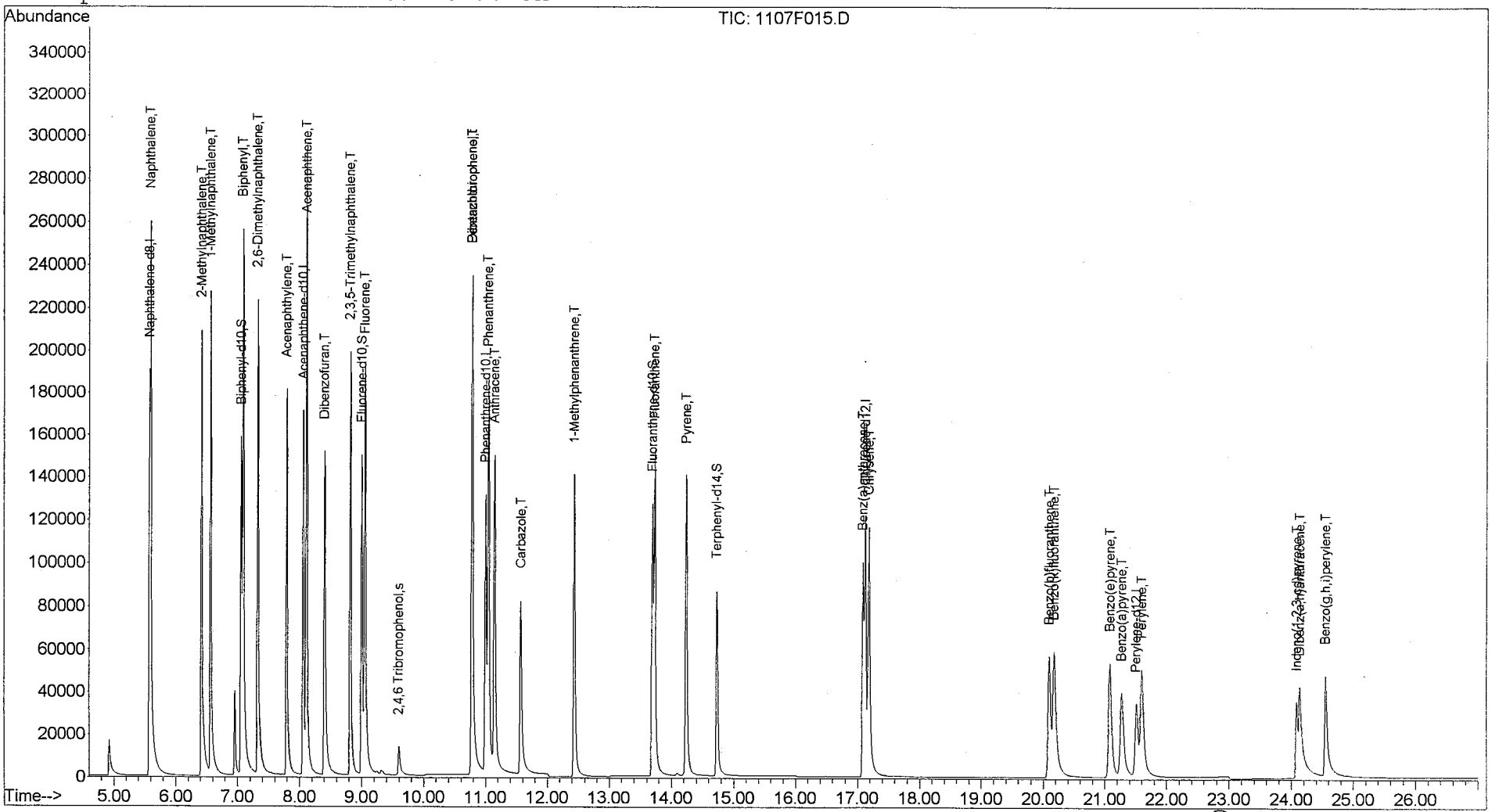
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	122944	874.39	ng/ml	99
53)	Perylene	21.60	252	141665	963.49	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	72483	508.76	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	111963m	714.14	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	125716	703.27	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

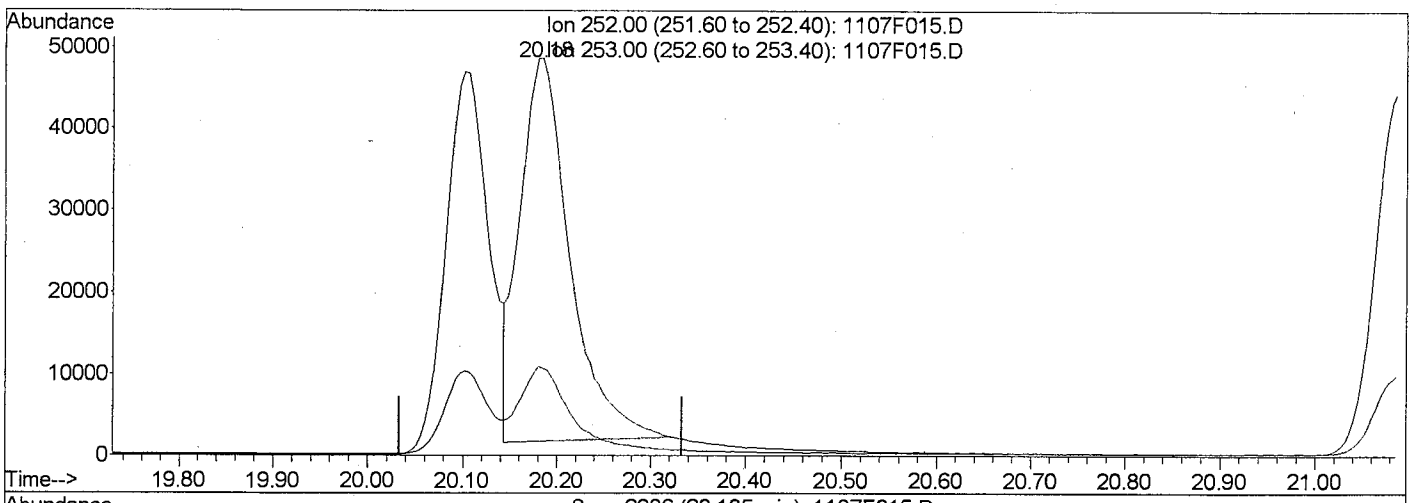


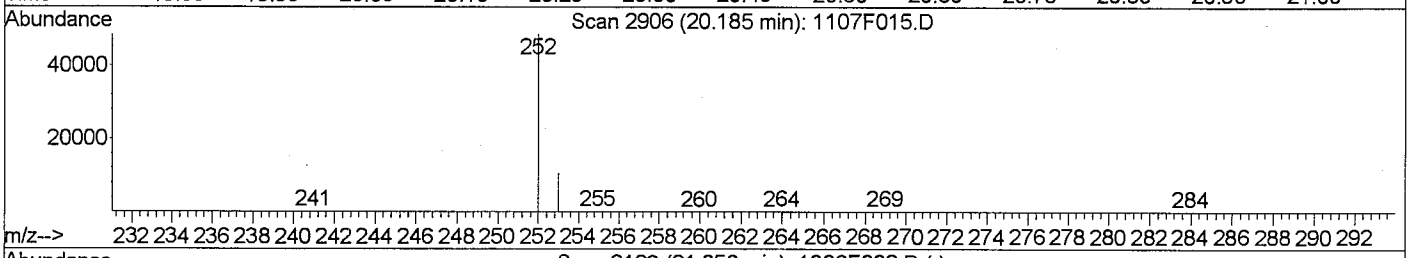
1017

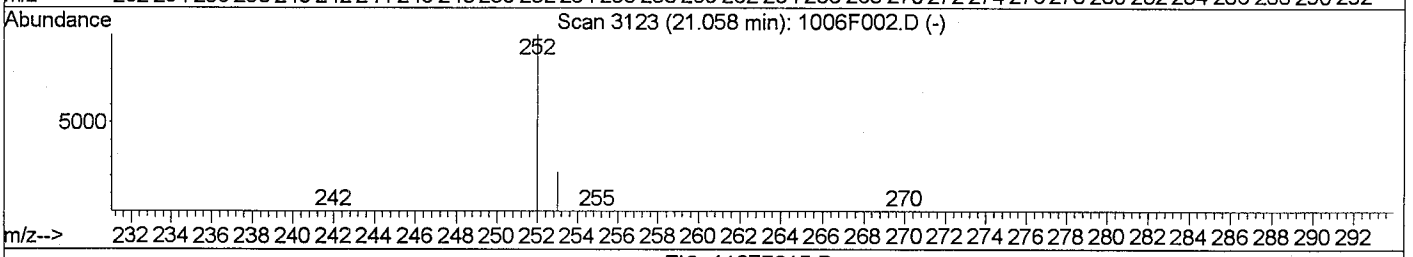
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F015.D

(50) Benzo(k)fluoranthene (T)

20.18min 1092.84ng/ml

response 173830

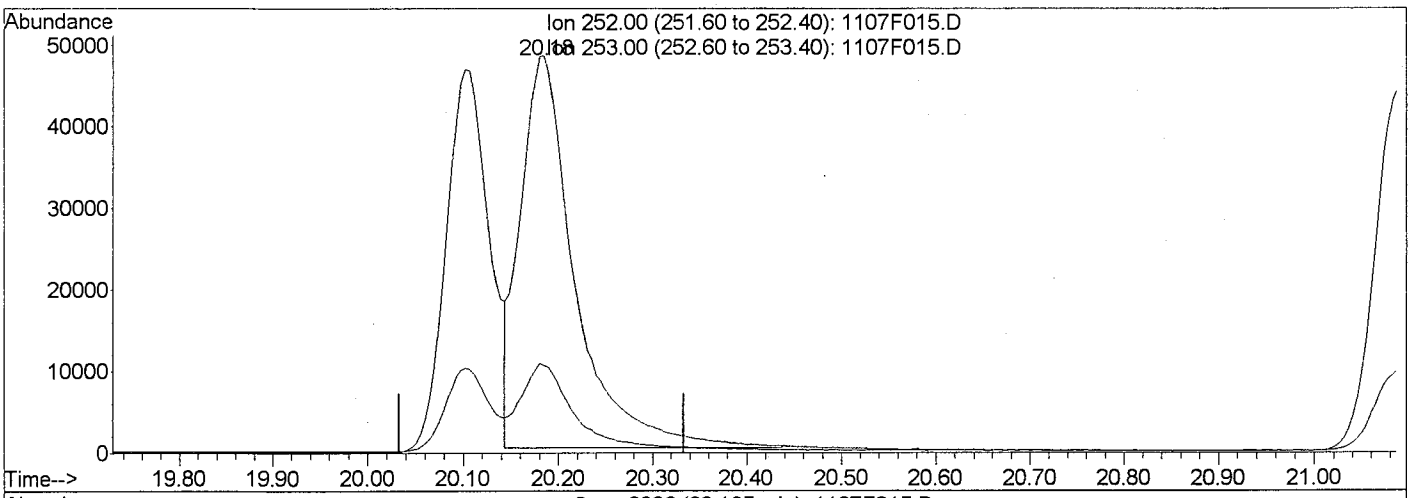
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.63
0.00	0.00	0.00
0.00	0.00	0.00

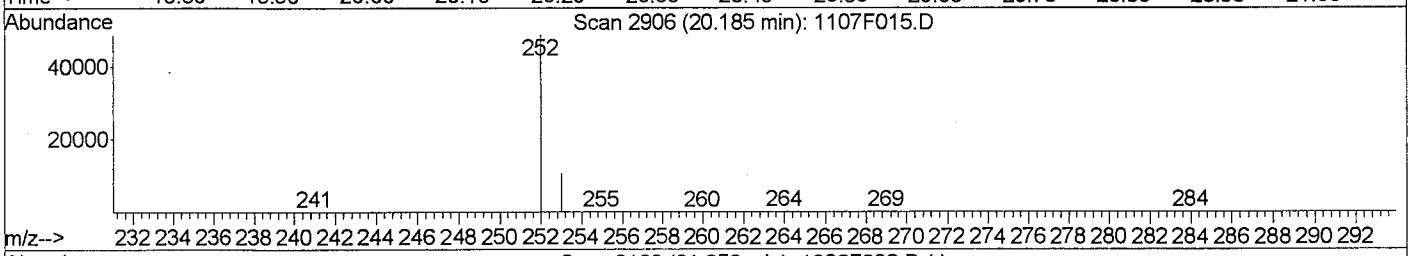
1107F015.D 1107ALK.M Sat Nov 08 07:03:09 2003

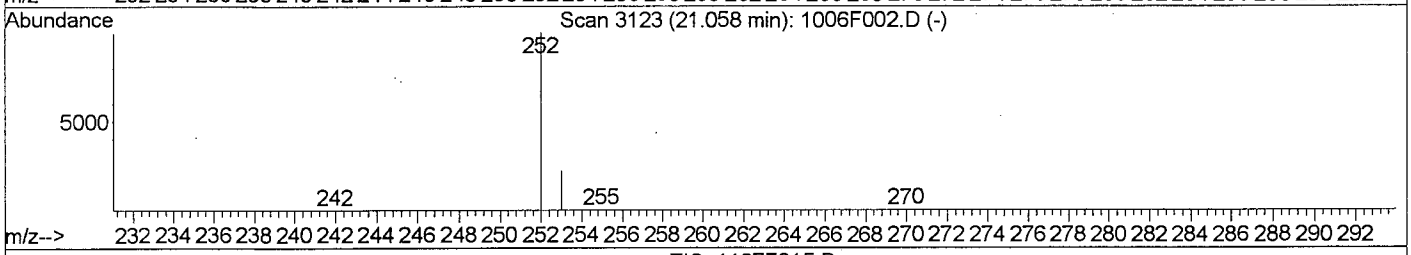
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F015.D

(50) Benzo(k)fluoranthene (T)

20.18min 1210.23ng/ml m

response 192503

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.03
0.00	0.00	0.00
0.00	0.00	0.00

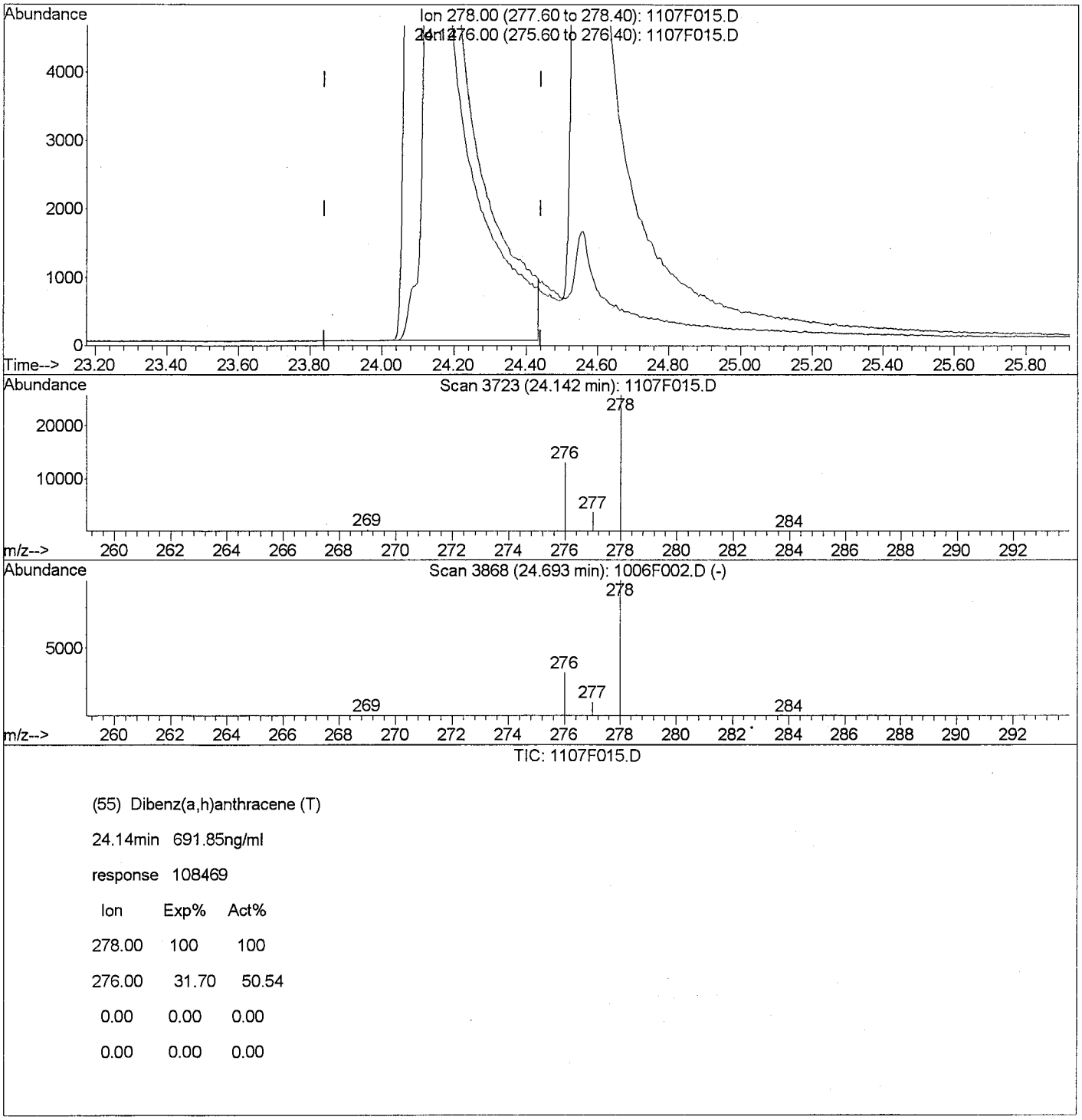
complete 11/10/03
mt 11/11/03

1107F015.D 1107ALK.M Sat Nov 08 07:03:14 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 691.85ng/ml

response 108469

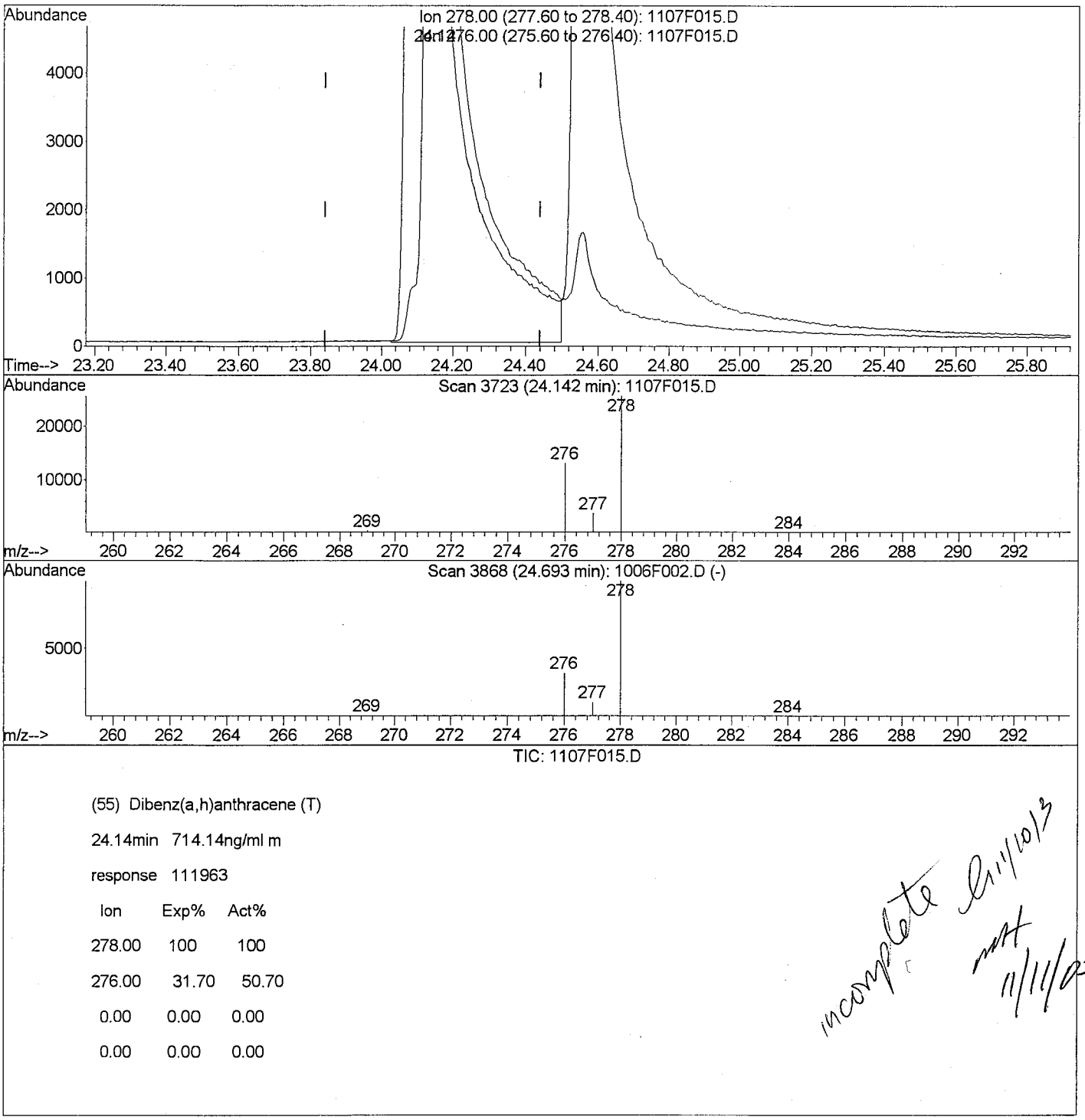
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	50.54
0.00	0.00	0.00
0.00	0.00	0.00

1107F015.D 1107ALK.M Sat Nov 08 07:03:20 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 714.14ng/ml m

response 111963

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	50.70
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/14/03 mt 11/14/03

1107F015.D 1107ALK.M Sat Nov 08 07:03:28 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:59 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	278033	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	143768	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	205570	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	199135	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	120438	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	422935	2097.80	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 209.78%			
16) Fluorene-d10	9.00	176	301815	2053.26	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 205.33%			
21) 2,4,6 Tribromophenol	9.60	330	33721	1618.68	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 161.87%			
37) Fluoranthene-d10	13.70	212	447659	2159.79	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 215.98%			
41) Terphenyl-d14	14.73	244	372315	1906.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 190.63%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	647096	1950.78	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	398887	1978.38	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	376059	2026.52	ng/ml	99
6) Biphenyl	7.09	154	486537	1962.28	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	344227	1997.09	ng/ml	99
12) Acenaphthylene	7.80	152	593276	2016.19	ng/ml	100
13) Acenaphthene	8.11	154	360355	1959.38	ng/ml	99
14) Dibenzofuran	8.41	168	487546	1891.77	ng/ml	97
15) 2,3,5-Trimethylnaphthalene	8.82	170	323751	2009.89	ng/ml	100
17) Fluorene	9.06	166	397752	1952.99	ng/ml	99
22) Pentachlorophenol	10.77	266	202620	8715.69	ng/ml	100
24) Dibenzothiophene	10.78	184	512877	1936.58	ng/ml	98
28) Phenanthrene	11.04	178	522812	1921.71	ng/ml	99
29) Anthracene	11.15	178	485749	2032.92	ng/ml	100
30) Carbazole	11.56	167	386029	1986.58	ng/ml	97
31) 1-Methylphenanthrene	12.44	192	372629	2037.02	ng/ml	99
36) Fluoranthene	13.73	202	559453	2123.36	ng/ml	99
39) Pyrene	14.24	202	556735	1868.33	ng/ml	99
42) Benz(a)anthracene	17.09	228	400788	1819.97	ng/ml	100
43) Chrysene	17.18	228	444428	1988.38	ng/ml	100
49) Benzo(b)fluoranthene	20.10	252	349753	1889.55	ng/ml	100
50) Benzo(k)fluoranthene	20.18	252	454775m	2542.20	ng/ml	
51) Benzo(e)pyrene	21.09	252	383175	2004.96	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:59 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mnt 11/11/03

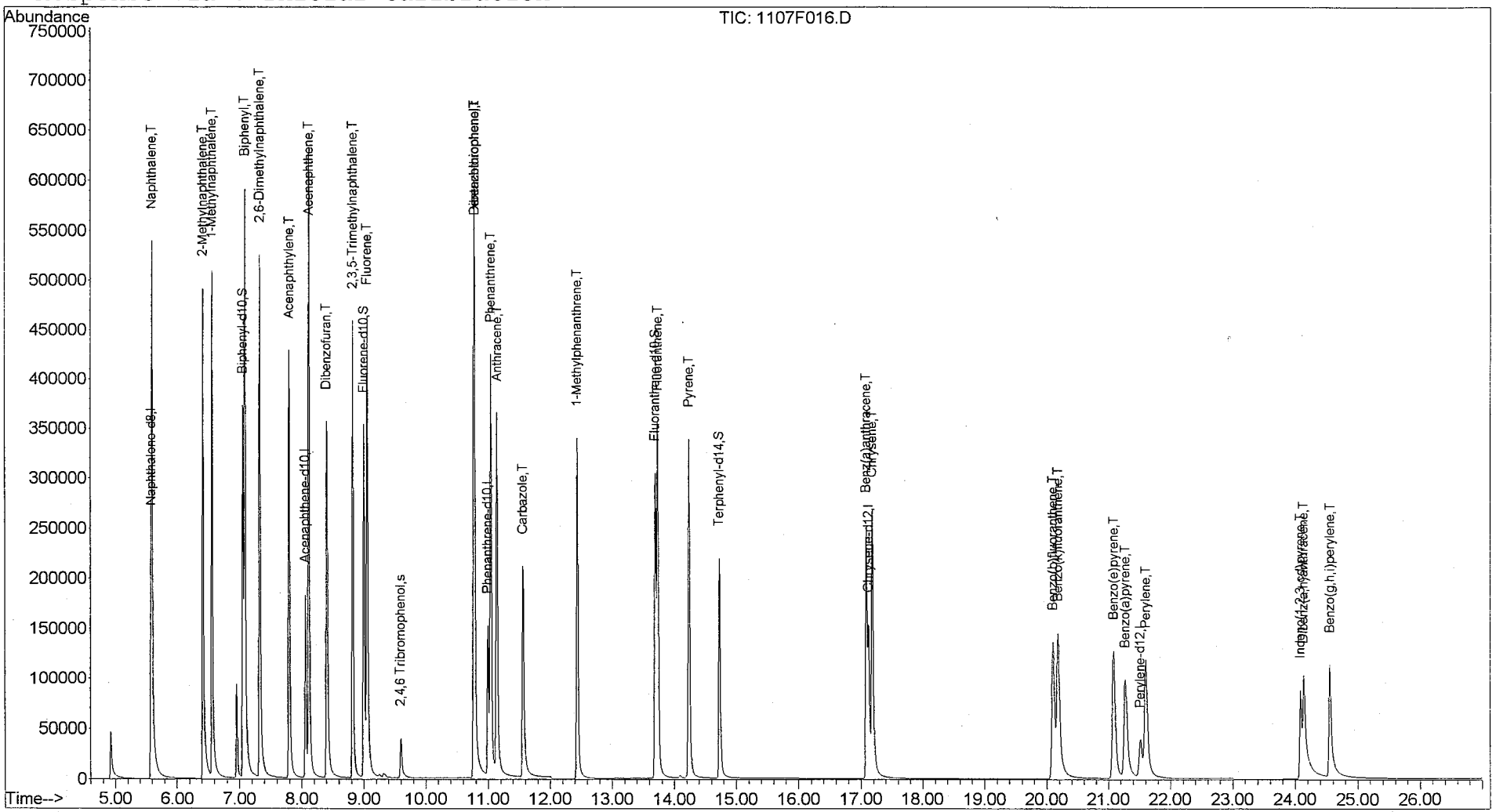
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	300946	1903.13	ng/ml	100
53)	Perylene	21.61	252	337866	2043.19	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	173444	1082.48	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	260549m	1477.67	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	280576	1395.60	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

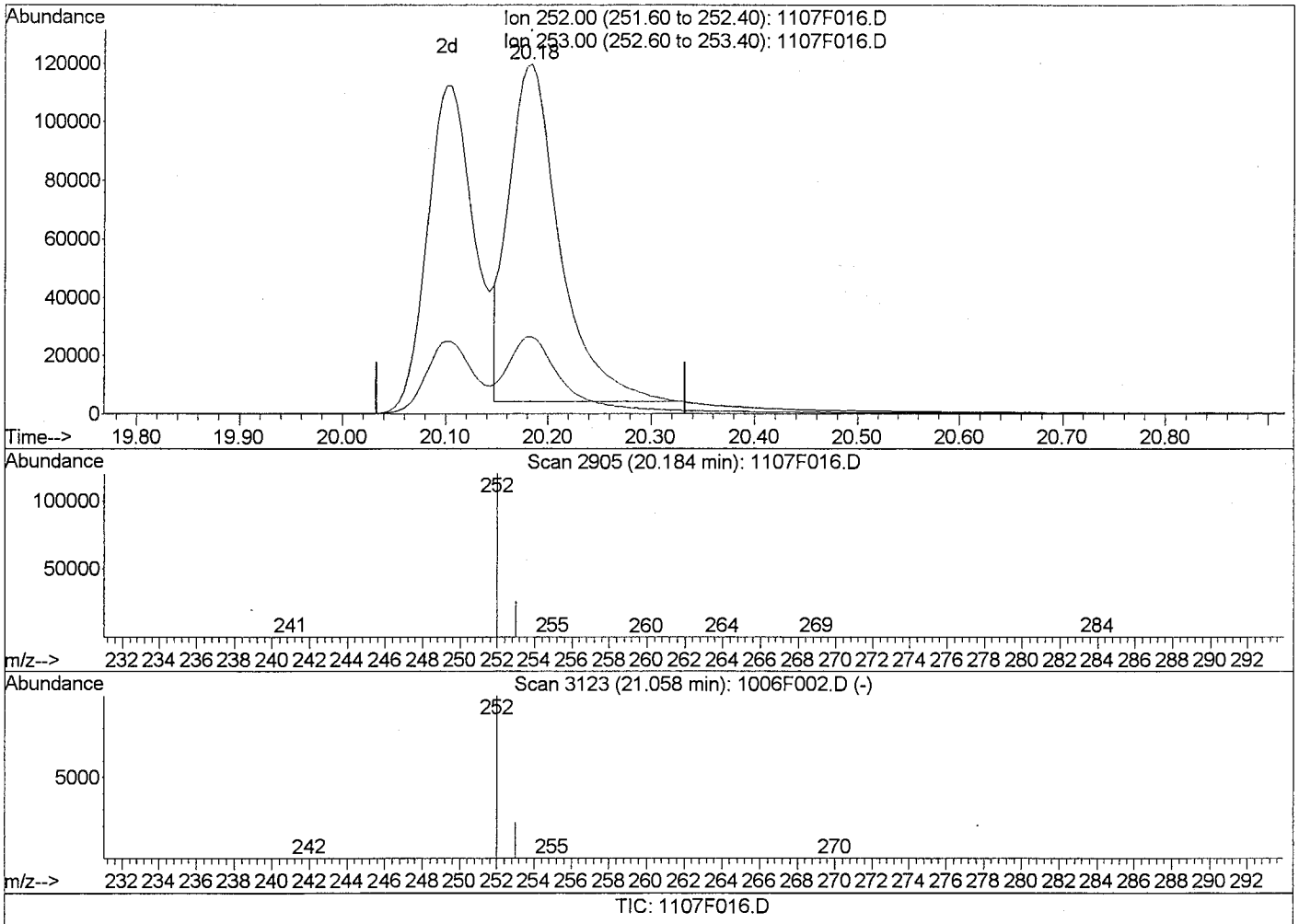


1024

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F016.D

(50) Benzo(k)fluoranthene (T)

20.18min 2231.58ng/ml

response 399209

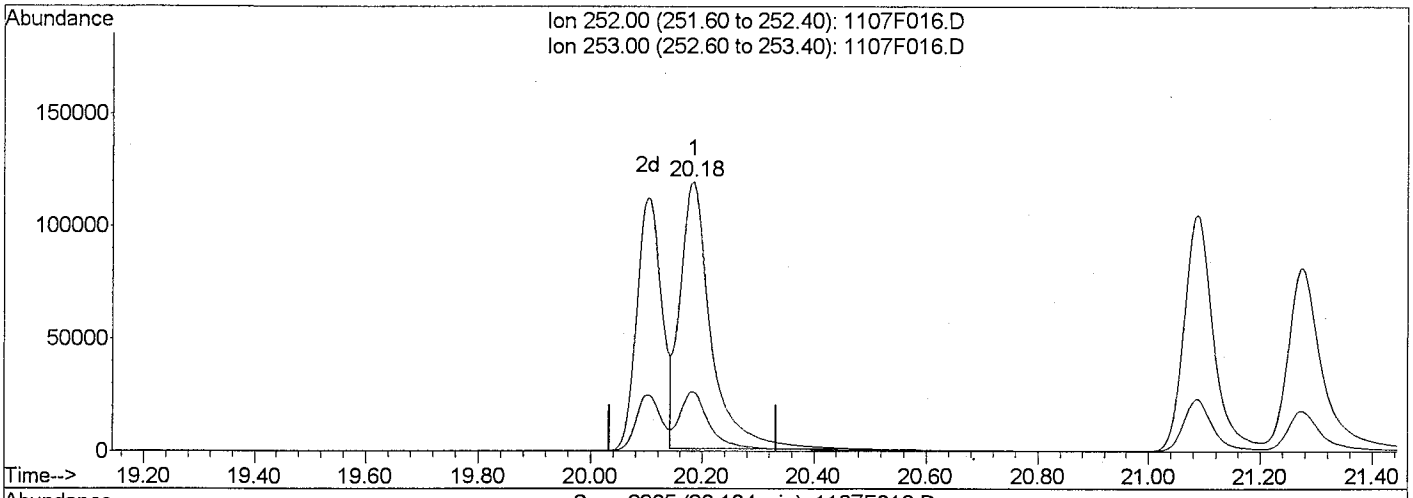
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.78
0.00	0.00	0.00
0.00	0.00	0.00

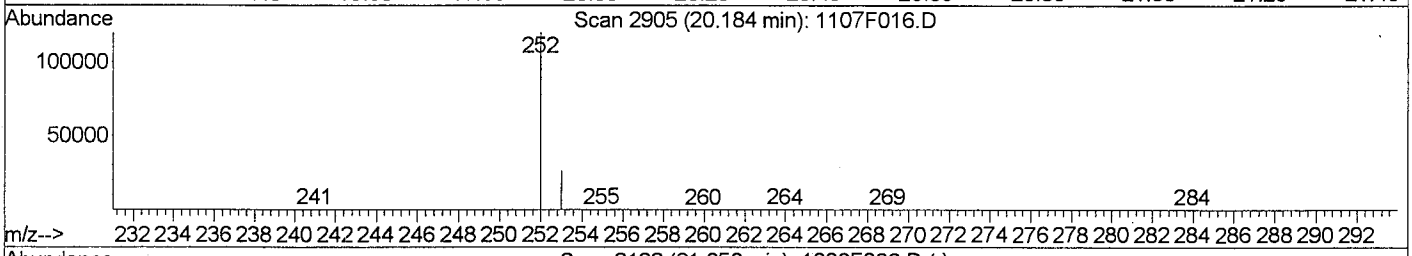
1107F016.D 1107ALK.M Sat Nov 08 07:03:56 2003

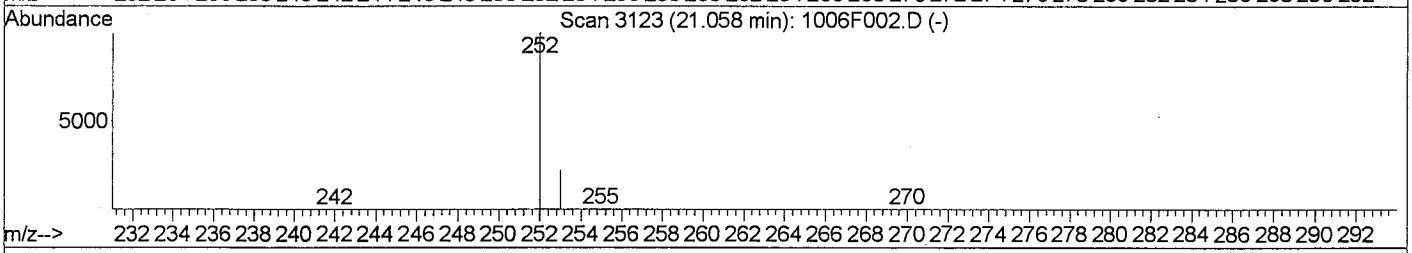
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F016.D

(50) Benzo(k)fluoranthene (T)

20.18min 2542.20ng/ml m

response 454775

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.99
0.00	0.00	0.00
0.00	0.00	0.00

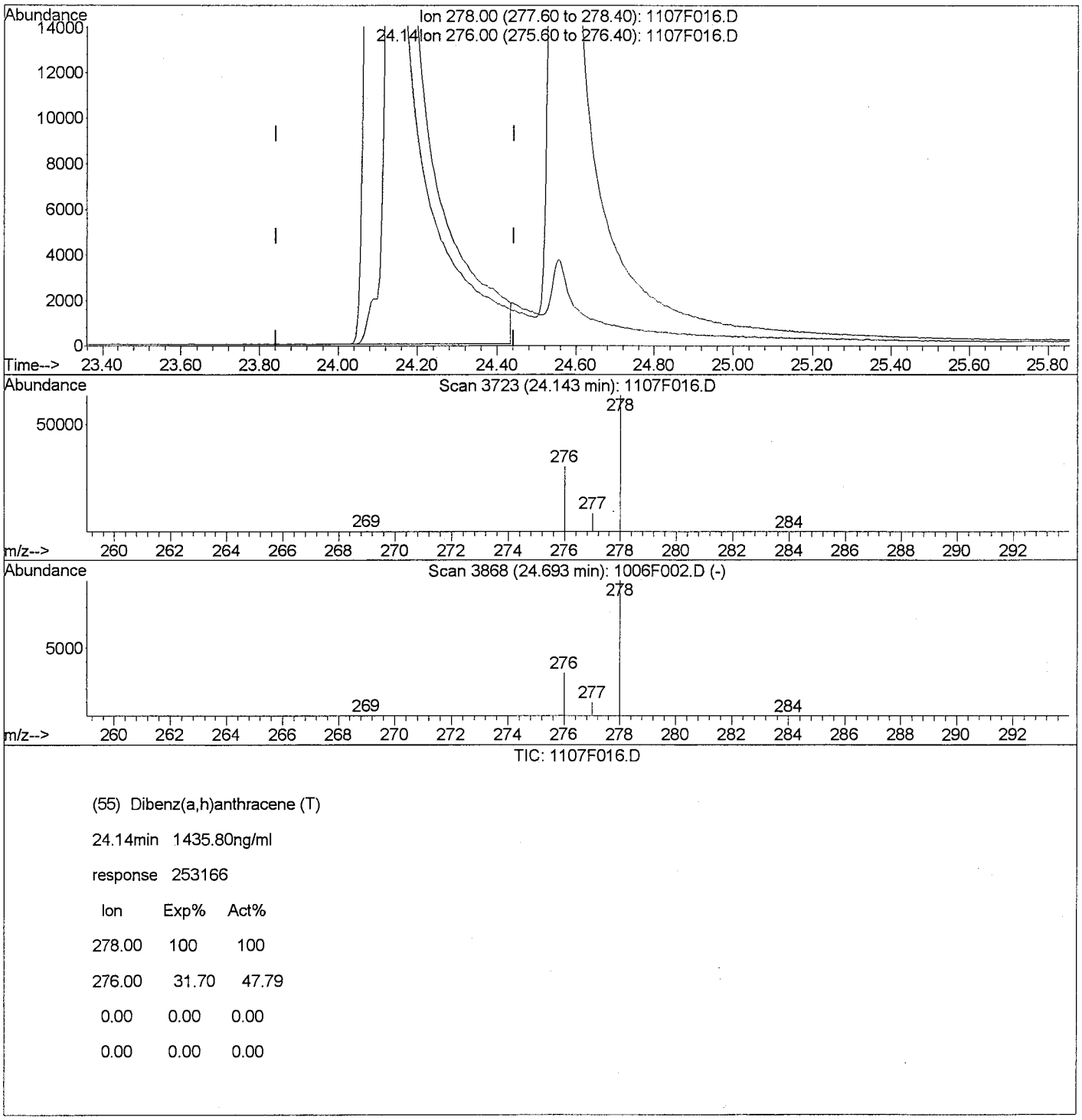
incomplete lw 11/10/3
mt 11/10/03

1107F016.D 1107ALK.M Sat Nov 08 07:04:03 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F016.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1435.80ng/ml

response 253166

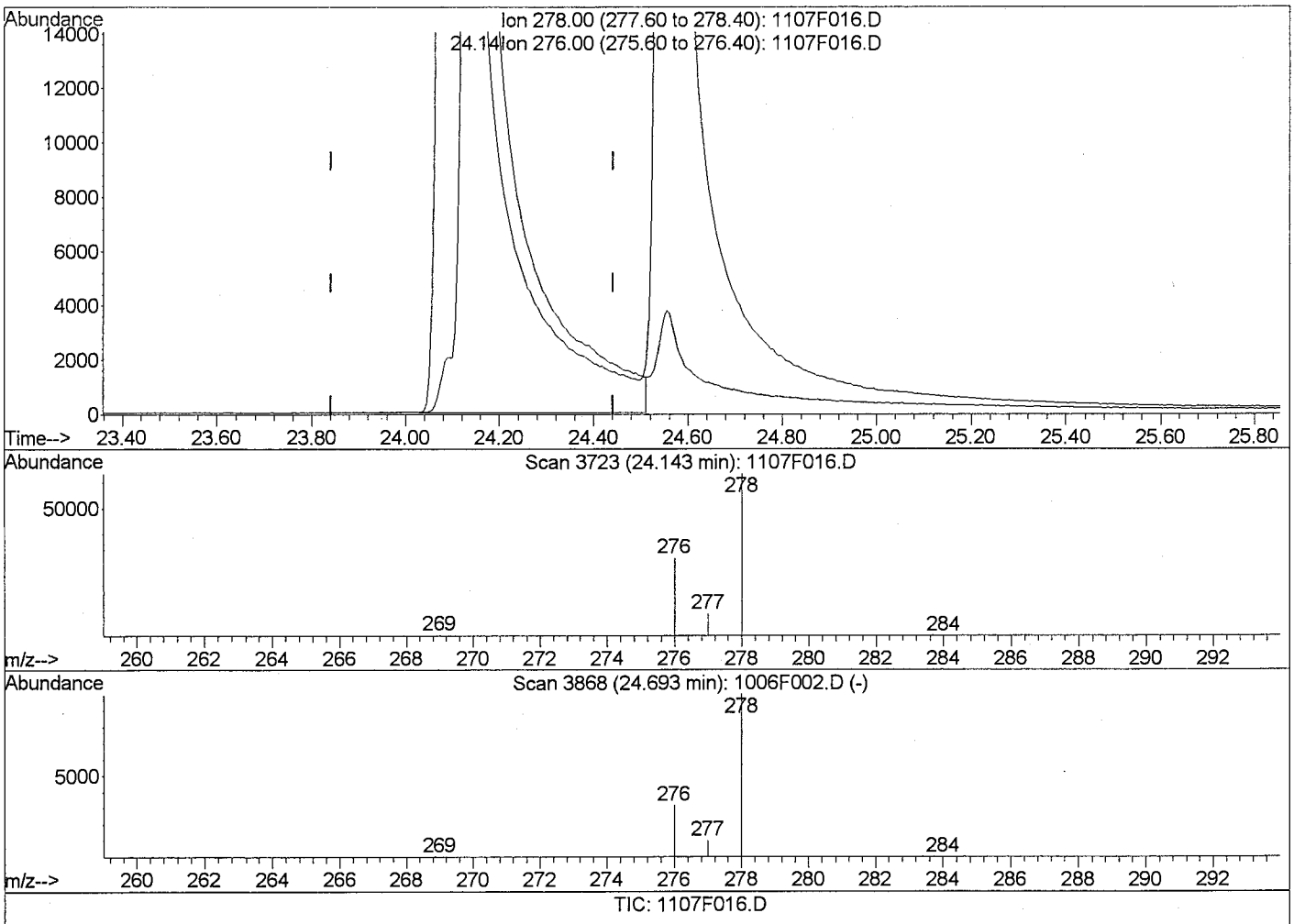
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	47.79
0.00	0.00	0.00
0.00	0.00	0.00

1107F016.D 1107ALK.M Sat Nov 08 07:04:09 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 1477.67ng/ml m

response 260549

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	47.87
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03
mt
11/11/03

1107F016.D 1107ALK.M Sat Nov 08 07:04:20 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:02 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	276266	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	148122	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	223217	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	225298	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	141638	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	1028163	5132.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 513.24%			
16) Fluorene-d10	9.00	176	780474	5153.51	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 515.35%			
21) 2,4,6 Tribromophenol	9.59	330	98444	4586.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 458.66%			
37) Fluoranthene-d10	13.70	212	1195208	5310.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 531.06%			
41) Terphenyl-d14	14.73	244	1001999	4534.53	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 453.45%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1564149	4745.54	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	993787	4960.47	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	931440	5051.48	ng/ml	99
6) Biphenyl	7.09	154	1206436	4896.87	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.32	156	873422	5099.72	ng/ml	100
12) Acenaphthylene	7.79	152	1520506	5015.40	ng/ml	100
13) Acenaphthene	8.12	154	915114	4829.53	ng/ml	99
14) Dibenzofuran	8.41	168	1259413	4743.12	ng/ml	94
15) 2,3,5-Trimethylnaphthalene	8.82	170	841650	5071.48	ng/ml	100
17) Fluorene	9.05	166	1037277	4943.39	ng/ml	99
22) Pentachlorophenol	10.77	266	649759	27127.78	ng/ml	99
24) Dibenzothiophene	10.78	184	1368220	4757.85	ng/ml	99
28) Phenanthrene	11.04	178	1388441	4700.04	ng/ml	98
29) Anthracene	11.14	178	1329194	5123.06	ng/ml	99
30) Carbazole	11.56	167	1064410	5044.61	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	1007664	5073.03	ng/ml	99
36) Fluoranthene	13.73	202	1475181	5156.29	ng/ml	98
39) Pyrene	14.24	202	1493115	4428.81	ng/ml	98
42) Benz(a)anthracene	17.09	228	1160974	4659.76	ng/ml	100
43) Chrysene	17.19	228	1218841	4819.88	ng/ml	99
49) Benzo(b)fluoranthene	20.10	252	1045711	4803.88	ng/ml	99
50) Benzo(k)fluoranthene	20.18	252	1307838m	6216.57	ng/ml	
51) Benzo(e)pyrene	21.09	252	1096069	4876.76	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1107F017.D 1107ALK.M Sat Nov 08 07:09:30 2003 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:02 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

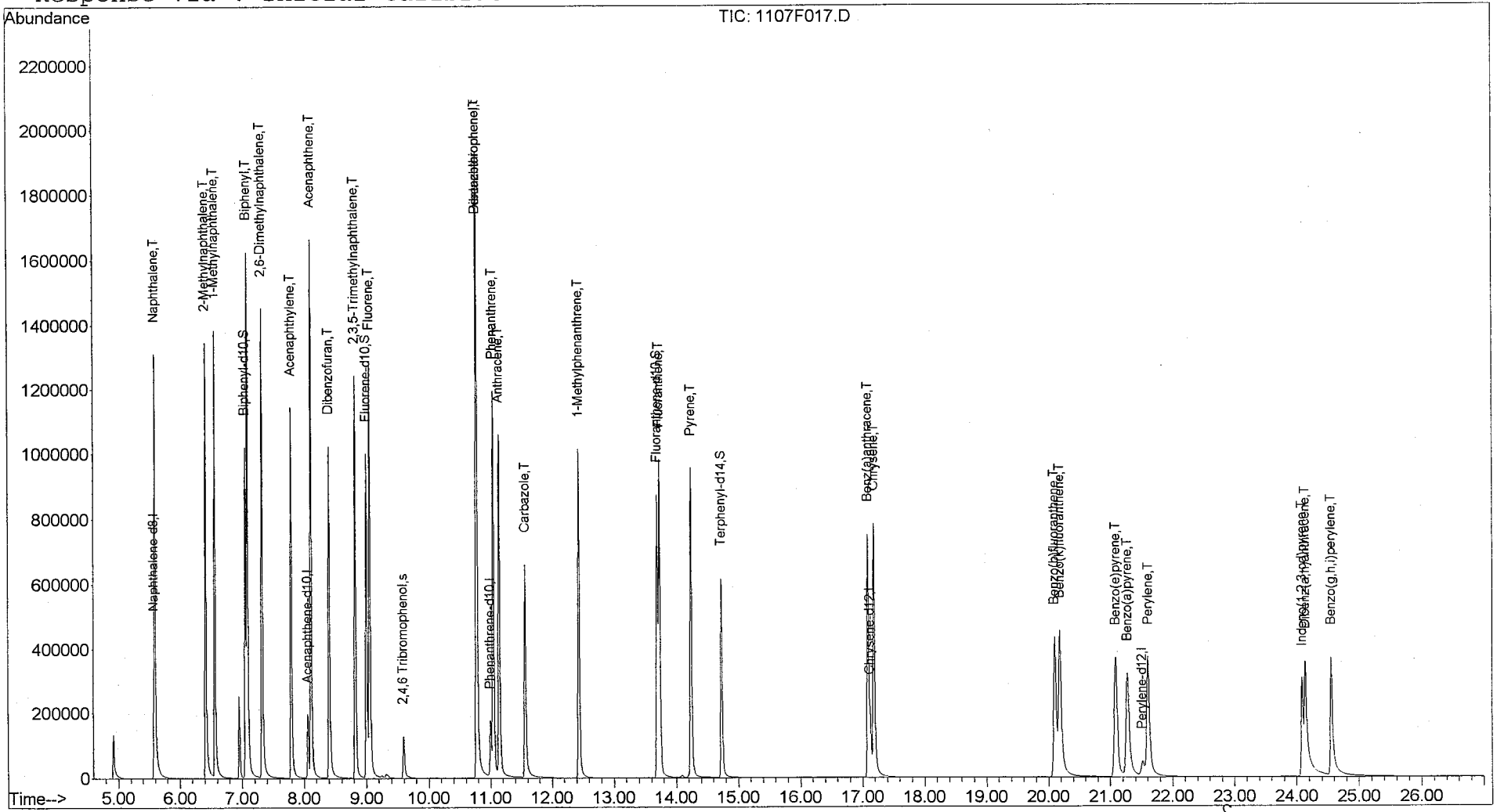
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	938040	5044.12	ng/ml	100
53)	Perylene	21.61	252	1004440	5165.03	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	564137	2993.85	ng/ml	99
55)	Dibenz(a,h)anthracene	24.14	278	817645m	3943.09	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	843877	3569.22	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

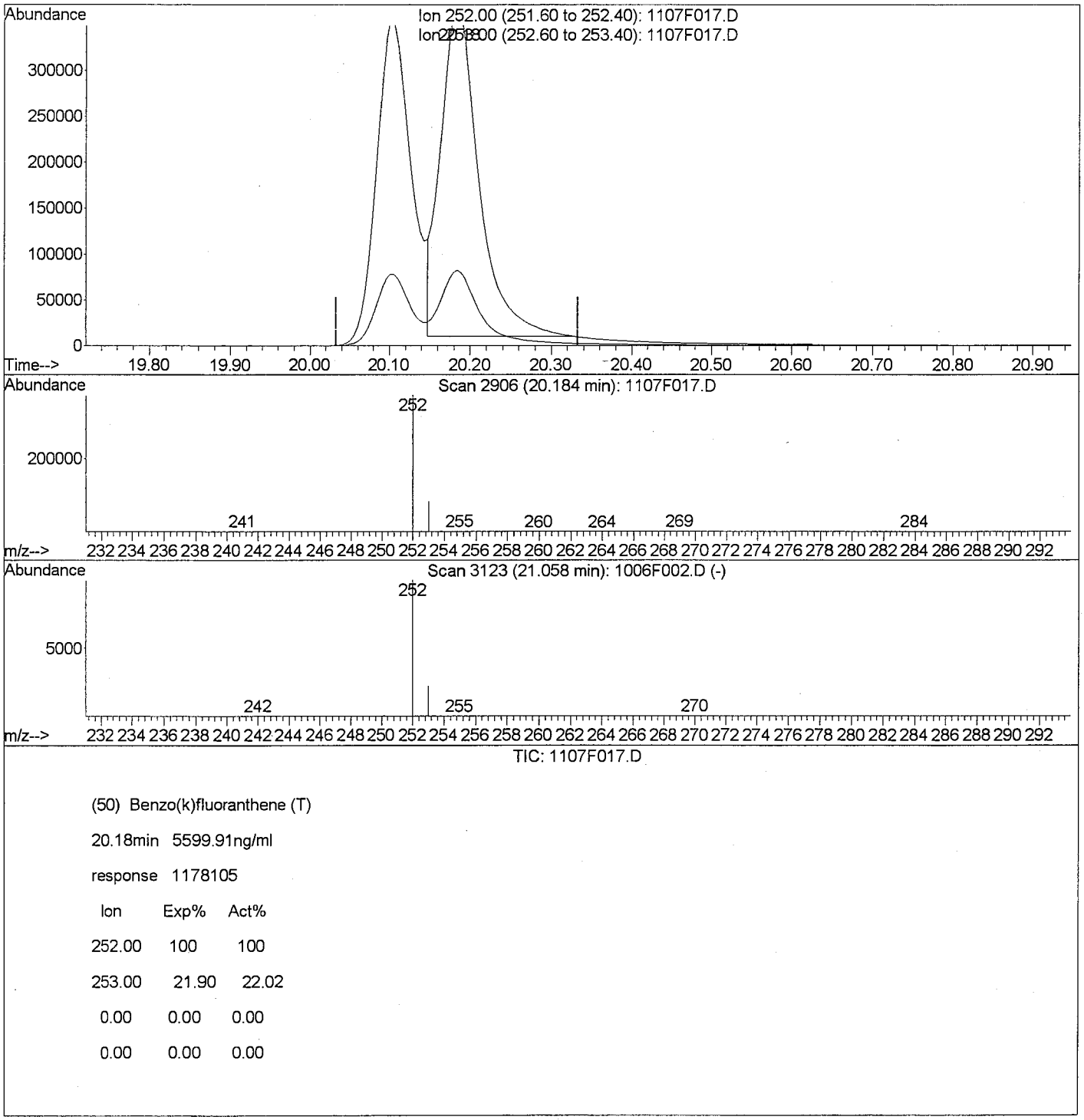


1031

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 5599.91ng/ml

response 1178105

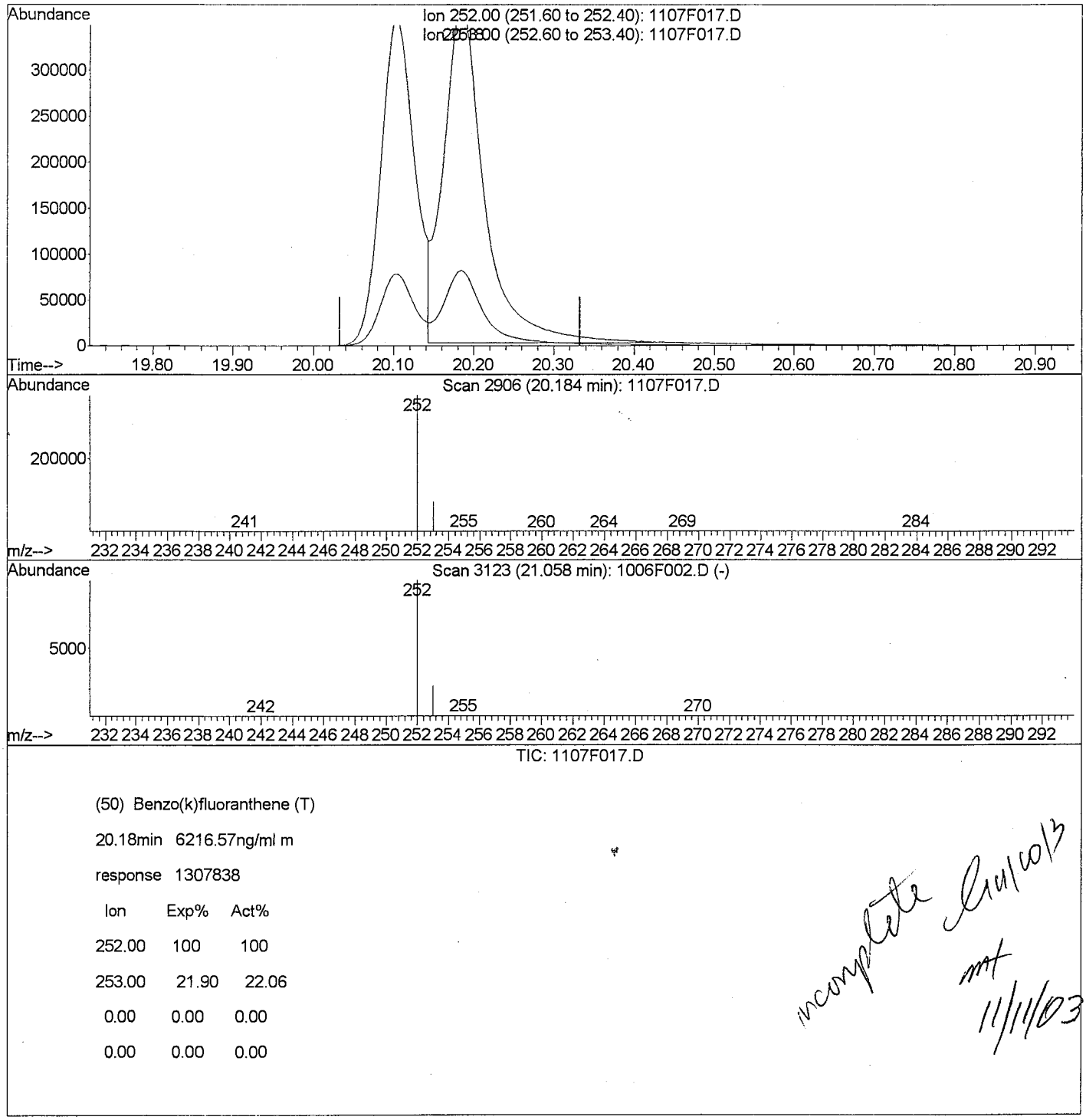
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.02
0.00	0.00	0.00
0.00	0.00	0.00

1107F017.D 1107ALK.M Sat Nov 08 07:04:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 6216.57ng/ml m

response 1307838

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.06
0.00	0.00	0.00
0.00	0.00	0.00

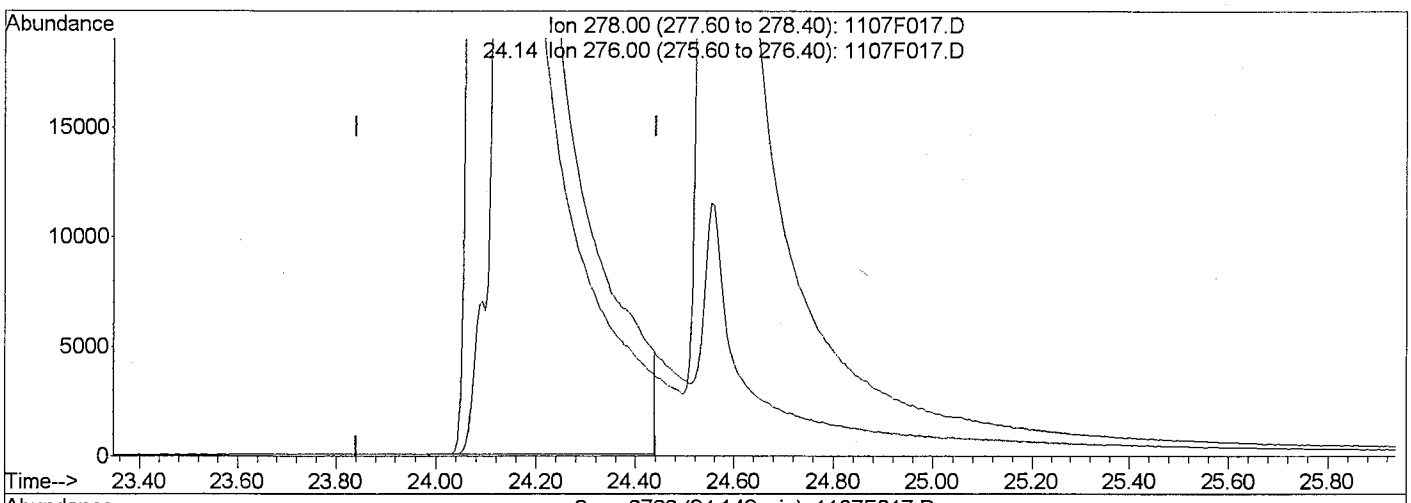
complete 11/10/03 mt 11/11/03

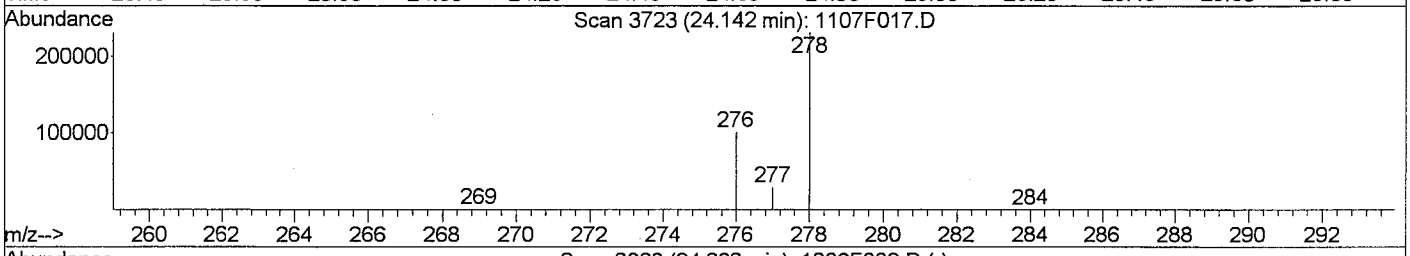
1107F017.D 1107ALK.M Sat Nov 08 07:04:54 2003

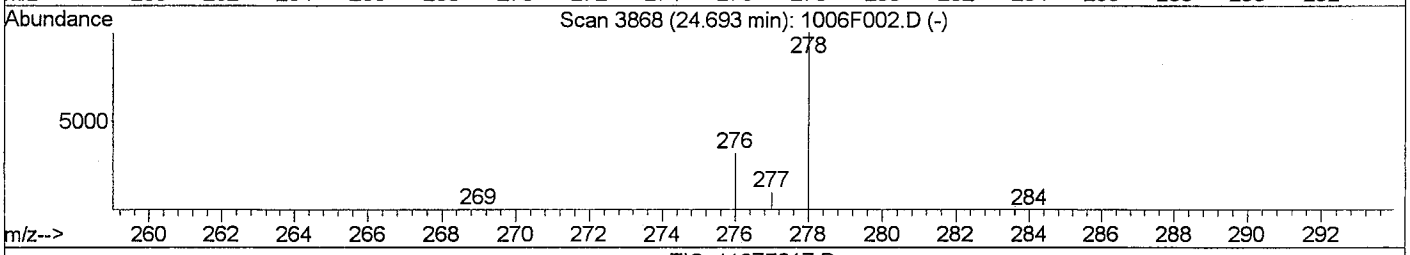
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F017.D

(55) Dibenz(a,h)anthracene (T)

24.14min 3859.39ng/ml

response 800289

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	43.56
0.00	0.00	0.00
0.00	0.00	0.00

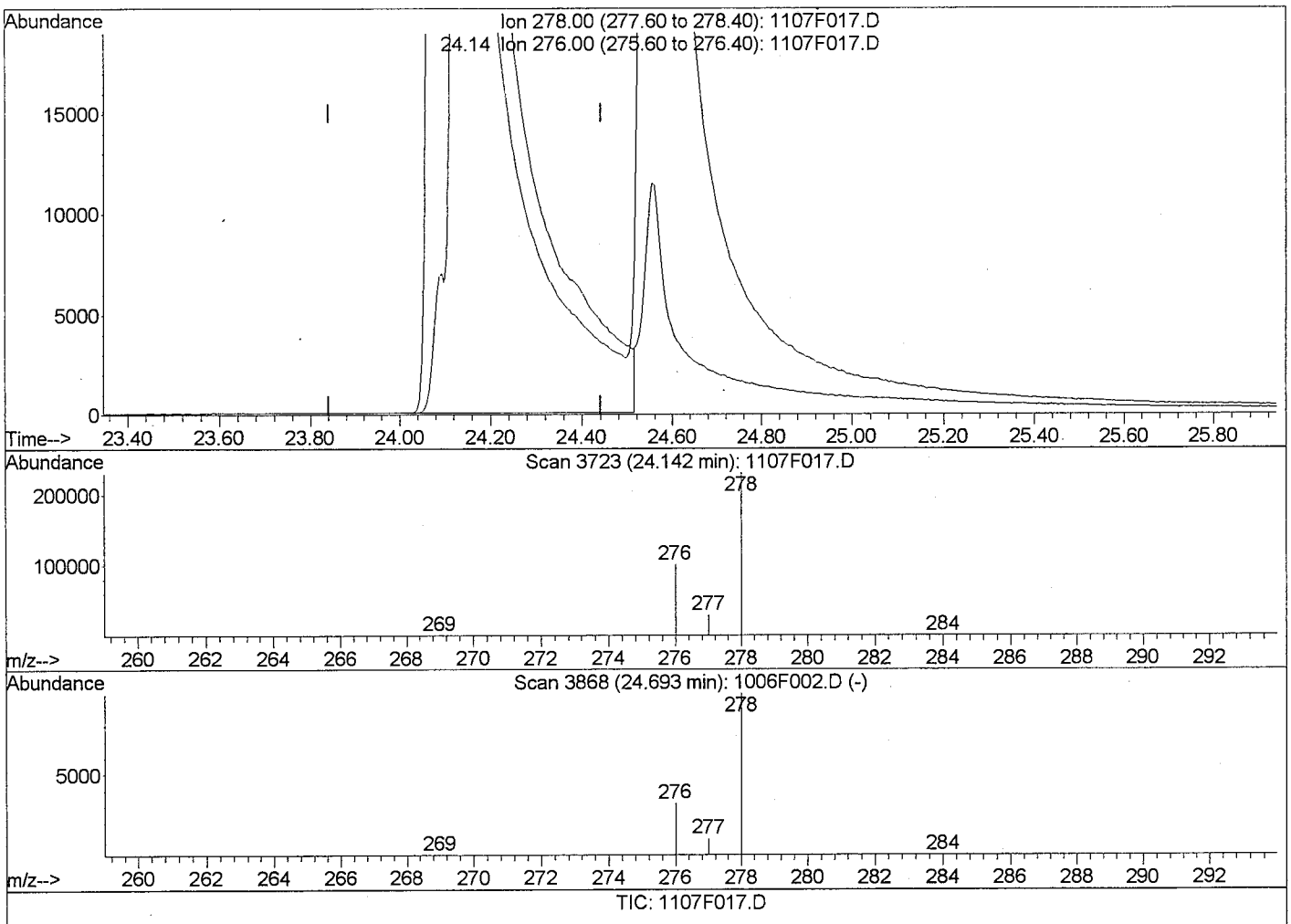
1107F017.D 1107ALK.M Sat Nov 08 07:05:00 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D
Acq On : 7 Nov 2003 8:38 pm
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 3943.09ng/ml m

response 817645

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	43.59
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03

mnt 11/11/03

1107F017.D 1107ALK.M Sat Nov 08 07:05:07 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:05 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	263851	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	139342	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	216348	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	226183	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	145486	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	1582623	8271.91	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 827.19%			
16) Fluorene-d10	9.00	176	1212406	8510.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 851.00%			
21) 2,4,6 Tribromophenol	9.59	330	164830	8163.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 816.35%			
37) Fluoranthene-d10	13.70	212	1906411	8739.52	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 873.95%			
41) Terphenyl-d14	14.73	244	1628200	7339.57	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 733.96%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2423976	7700.25	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	1549238	8096.85	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	1444311	8201.50	ng/ml	98
6) Biphenyl	7.09	154	1856873	7891.60	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.33	156	1351686	8263.54	ng/ml	99
12) Acenaphthylene	7.80	152	2360735	8277.56	ng/ml	99
13) Acenaphthene	8.11	154	1405239	7883.47	ng/ml	99
14) Dibenzofuran	8.40	168	1951754	7813.73	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.82	170	1303784	8351.15	ng/ml	98
17) Fluorene	9.05	166	1618816	8200.97	ng/ml	99
22) Pentachlorophenol	10.78	266	1098723	48762.70	ng/ml	98
24) Dibenzothiophene	10.78	184	2158559	7744.50	ng/ml	98
28) Phenanthrene	11.05	178	2176476	7601.56	ng/ml	100
29) Anthracene	11.15	178	2103558	8365.08	ng/ml	99
30) Carbazole	11.56	167	1719865	8409.84	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	1600397	8312.92	ng/ml	99
36) Fluoranthene	13.73	202	2342391	8447.45	ng/ml	97
39) Pyrene	14.24	202	2385159	7047.08	ng/ml	98
42) Benz(a)anthracene	17.09	228	1927576	7706.36	ng/ml	99
43) Chrysene	17.19	228	1977742	7790.34	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	1792964	8018.82	ng/ml	99
50) Benzo(k)fluoranthene	20.19	252	2114516m	9785.12	ng/ml	
51) Benzo(e)pyrene	21.09	252	1821102	7888.35	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1107F018.D 1107ALK.M Sat Nov 08 07:09:33 2003 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:05 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

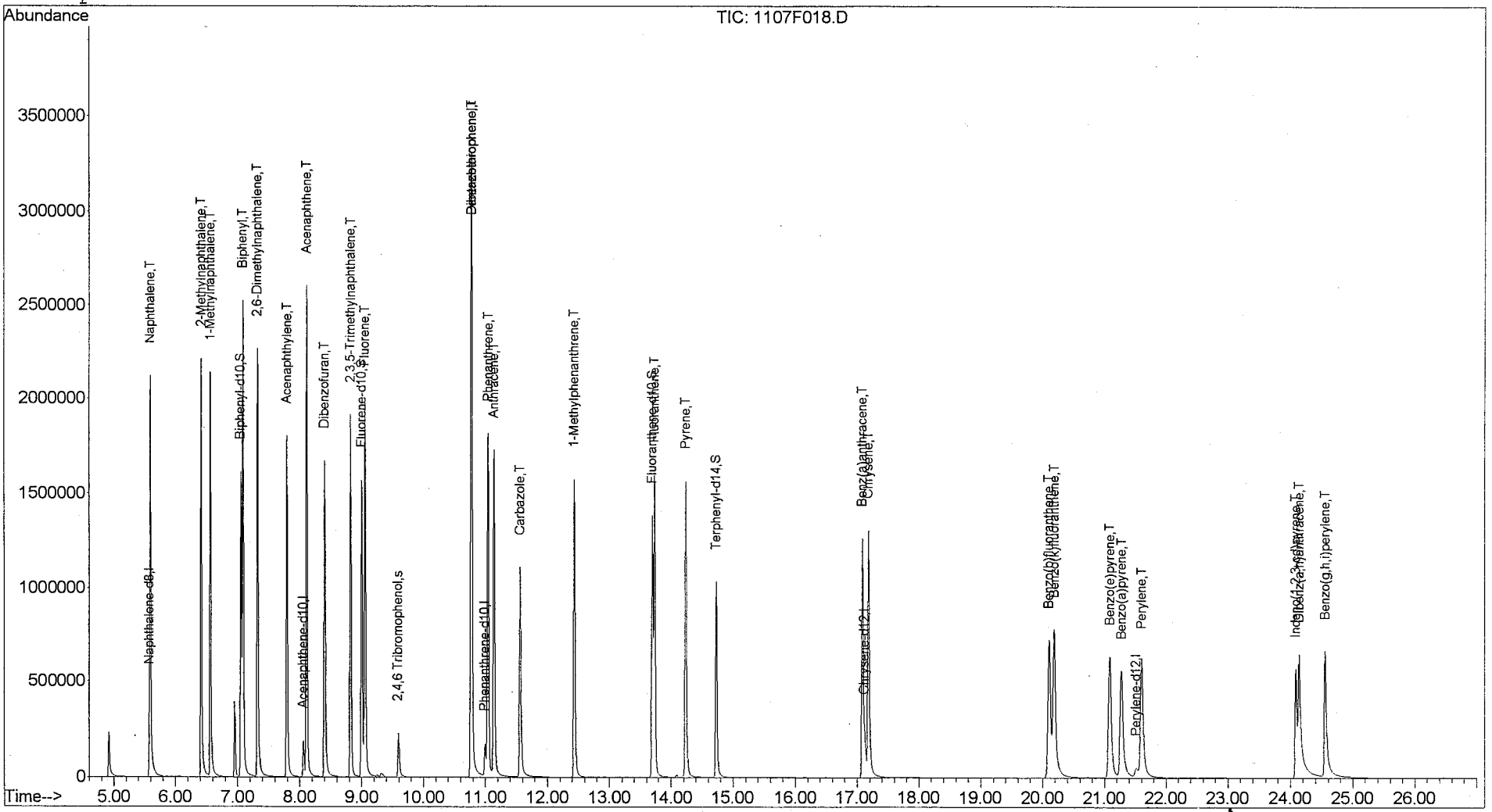
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	1595718	8353.69	ng/ml	100
53)	Perylene	21.61	252	1689309	8457.00	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1014603	5242.03	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	1407676m	6608.97	ng/ml	
56)	Benzo(g,h,i)perylene	24.56	276	1431303	5893.65	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1107F018.D 1107ALK.M Sat Nov 08 07:09:33 2003 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

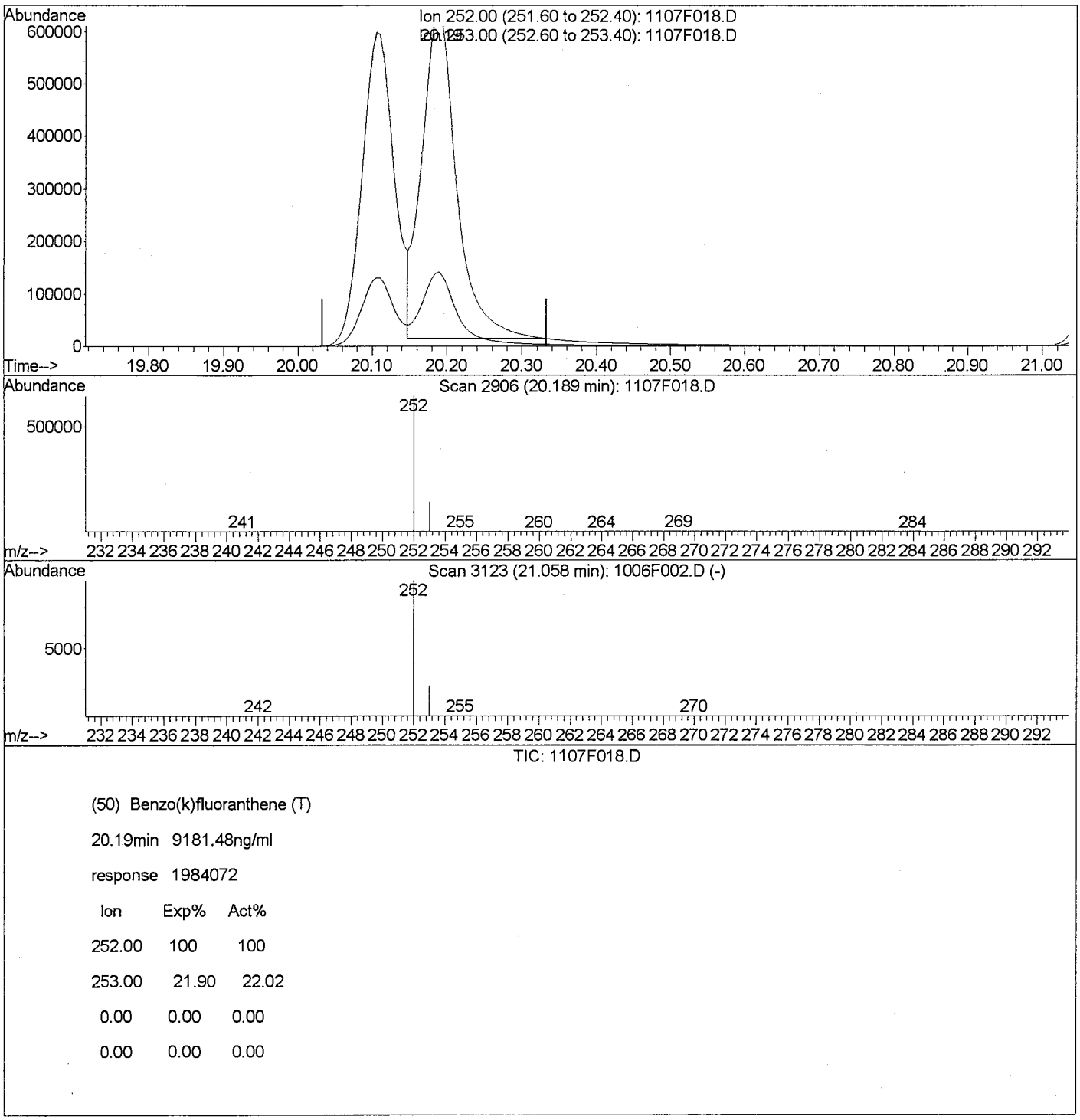


1038

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.19min 9181.48ng/ml

response 1984072

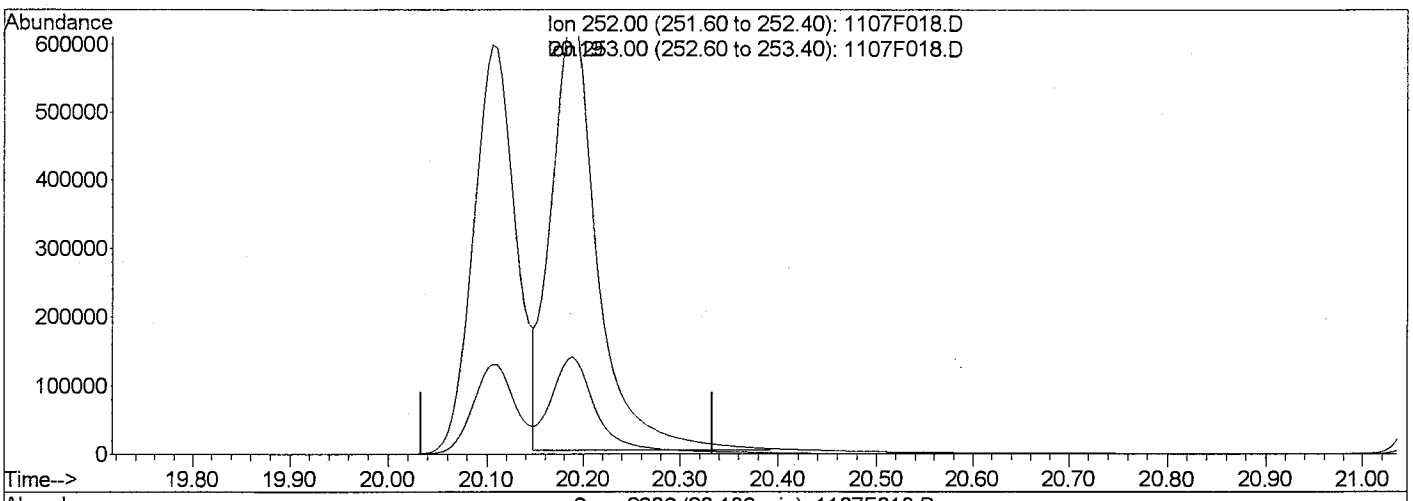
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.02
0.00	0.00	0.00
0.00	0.00	0.00

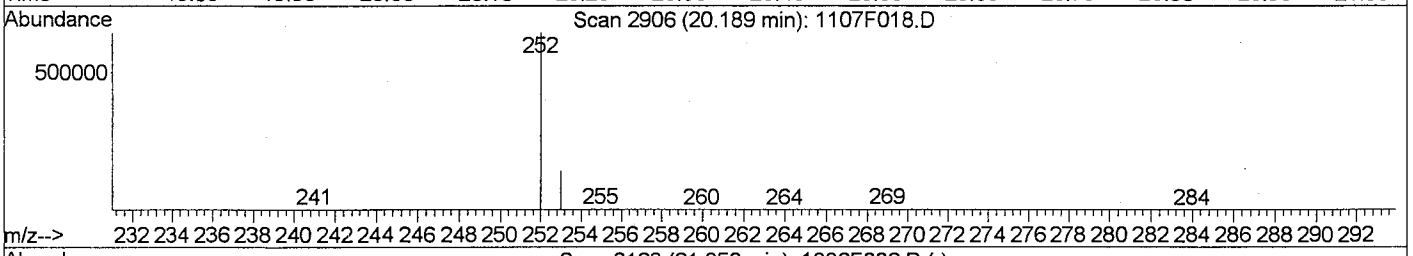
1107F018.D 1107ALK.M Sat Nov 08 07:07:40 2003

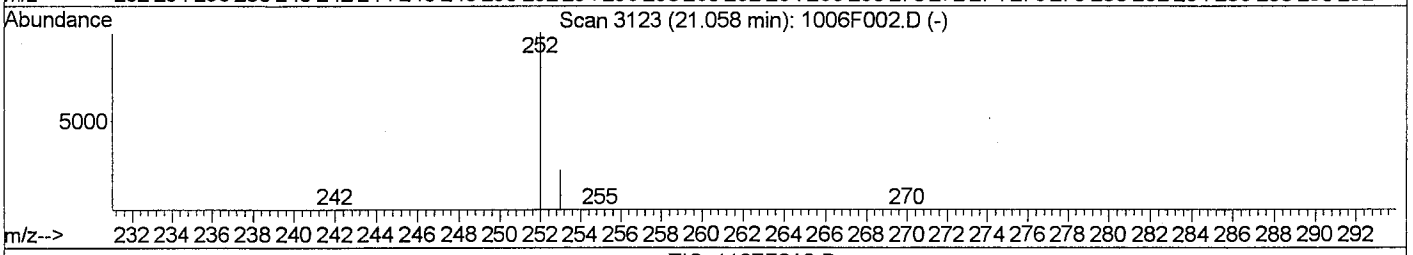
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F018.D

(50) Benzo(k)fluoranthene (T)

20.19min 9785.12ng/ml m

response 2114516

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.05
0.00	0.00	0.00
0.00	0.00	0.00

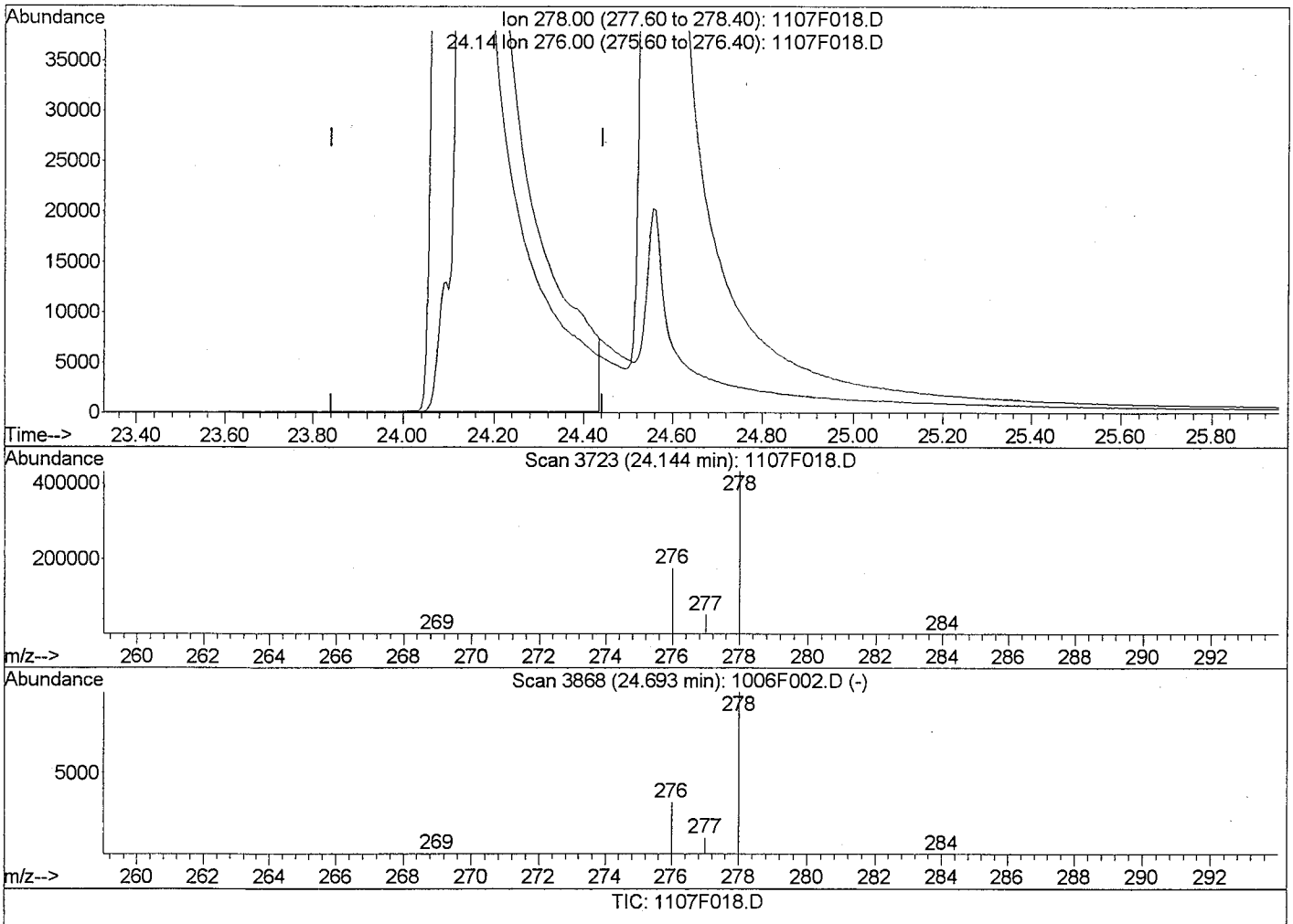
complete 11/10/03 mt 11/11/03

1107F018.D 1107ALK.M Sat Nov 08 07:07:45 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 6490.14ng/ml

response 1382366

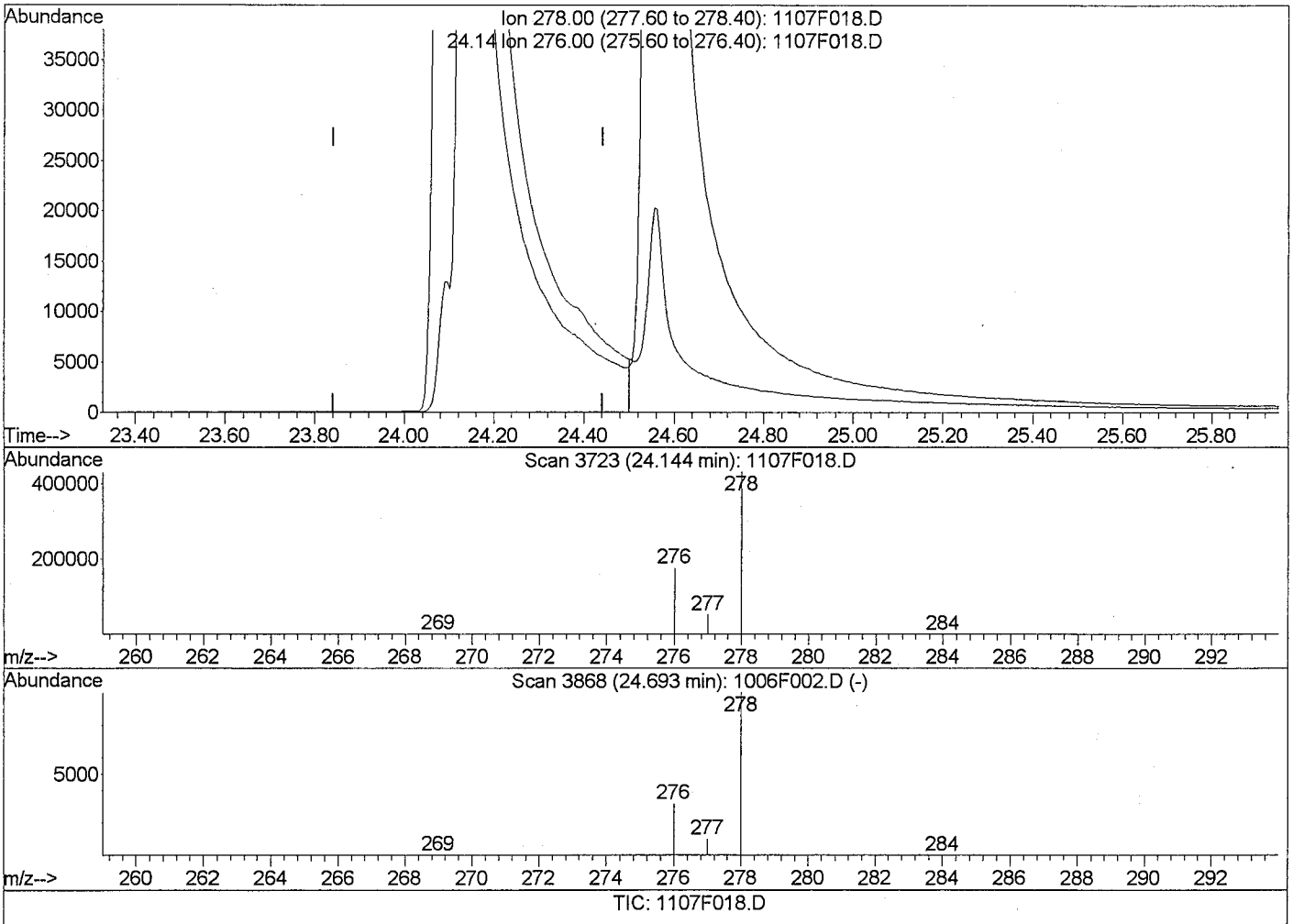
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	40.40
0.00	0.00	0.00
0.00	0.00	0.00

1107F018.D 1107ALK.M Sat Nov 08 07:07:53 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 6608.97ng/ml m

response 1407676

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	40.43
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03
11/11/03

1107F018.D 1107ALK.M Sat Nov 08 07:08:02 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:09 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mrt 11/11/03 JW 11/10/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	263518	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	137662	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	207450	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	201623	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	125321	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	1910510	9998.30	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 999.83%			
16) Fluorene-d10	9.00	176	1448919	10294.24	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 1029.42%			
21) 2,4,6 Tribromophenol	9.60	330	197545	9903.16	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 990.32%			
37) Fluoranthene-d10	13.70	212	2170558	10377.24	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 1037.72%			
41) Terphenyl-d14	14.73	244	1807524	9140.43	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 914.04%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2966406	9435.30	ng/ml	98
3) 2-Methylnaphthalene	6.42	142	1887554	9877.48	ng/ml	100
4) 1-Methylnaphthalene	6.57	142	1758228	9996.69	ng/ml	99
6) Biphenyl	7.09	154	2244325	9550.30	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	1636147	10015.24	ng/ml	99
12) Acenaphthylene	7.79	152	2847161	10104.97	ng/ml	99
13) Acenaphthene	8.12	154	1699634	9651.41	ng/ml	100
14) Dibenzofuran	8.41	168	2339737	9481.31	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.83	170	1564116	10140.93	ng/ml	93
17) Fluorene	9.06	166	1929450	9893.94	ng/ml	99
22) Pentachlorophenol	10.78	266	1303524	58558.04	ng/ml	99
24) Dibenzothiophene	10.78	184	2549455	9539.30	ng/ml	97
28) Phenanthrene	11.05	178	2555490	9308.13	ng/ml	99
29) Anthracene	11.15	178	2472669	10254.65	ng/ml	99
30) Carbazole	11.56	167	1974027	10066.67	ng/ml	97
31) 1-Methylphenanthrene	12.44	192	1854548	10046.23	ng/ml	100
36) Fluoranthene	13.74	202	2669632	10040.54	ng/ml	99
39) Pyrene	14.24	202	2713582	8994.03	ng/ml	97
42) Benz(a)anthracene	17.09	228	2097665	9407.93	ng/ml	100
43) Chrysene	17.18	228	2147580	9489.77	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	1905811	9895.01	ng/ml	100
50) Benzo(k)fluoranthene	20.19	252	2303034m	12372.38	ng/ml	
51) Benzo(e)pyrene	21.09	252	1969252	9902.63	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:09 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mrt 11/11/03 11/10/03

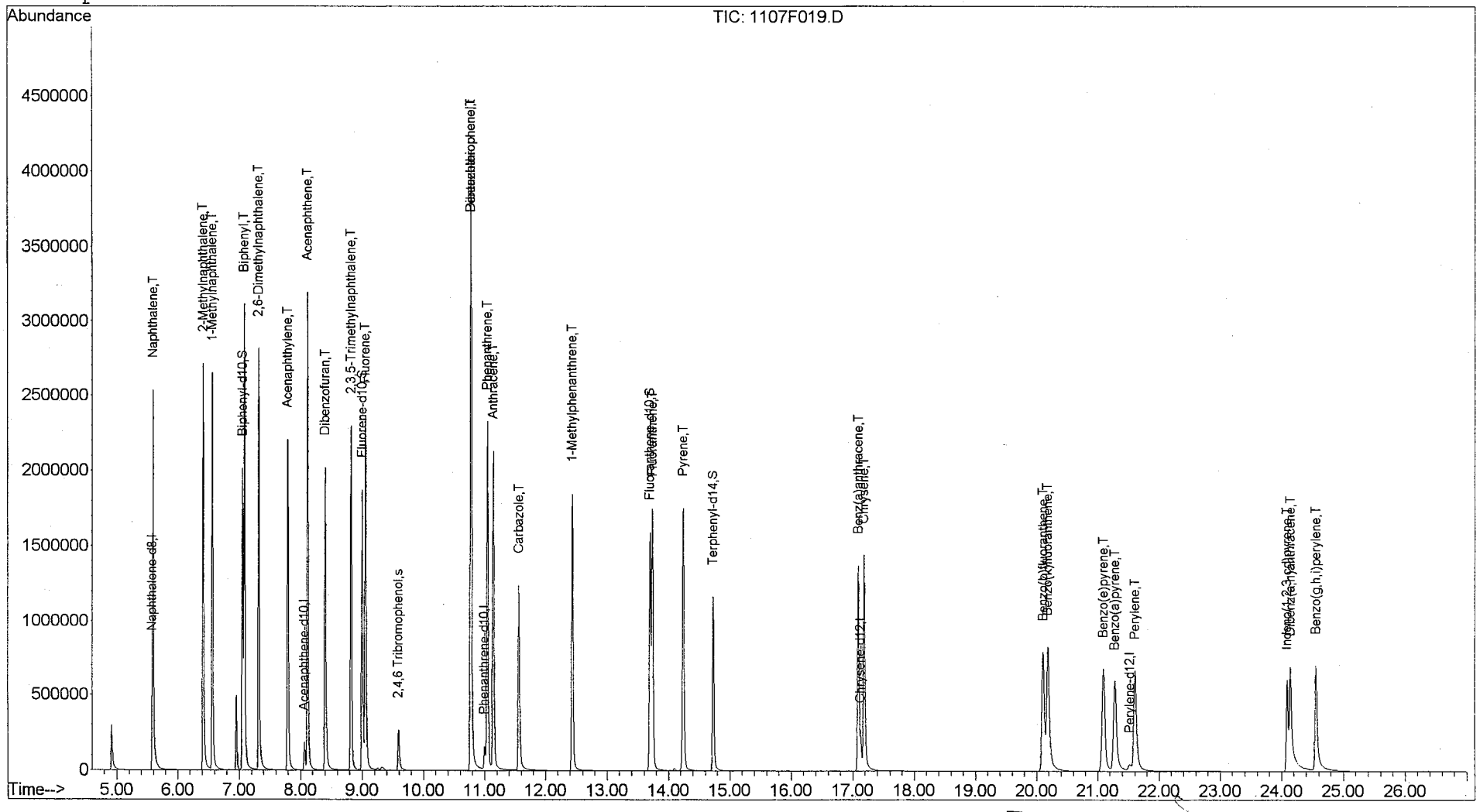
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	1708076	10380.70 ng/ml	100
53)	Perylene	21.61	252	1811713	10529.17 ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1062171	6370.82 ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	1490083m	8121.55 ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	1517060	7251.92 ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003 Quant Results File: 1107ALK.RES

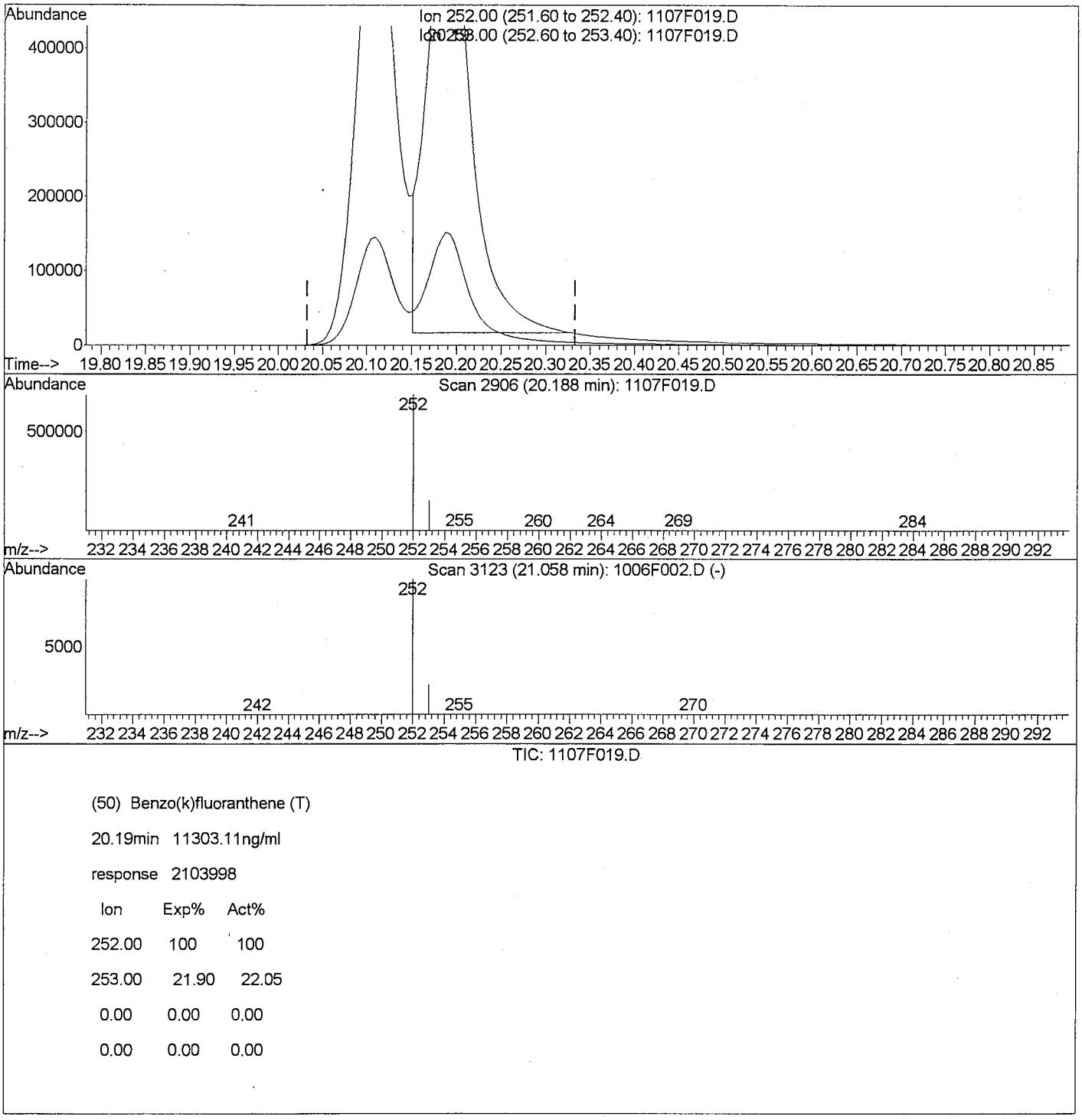
Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F019.D

(50) Benzo(k)fluoranthene (T)

20.19min 11303.11ng/ml

response 2103998

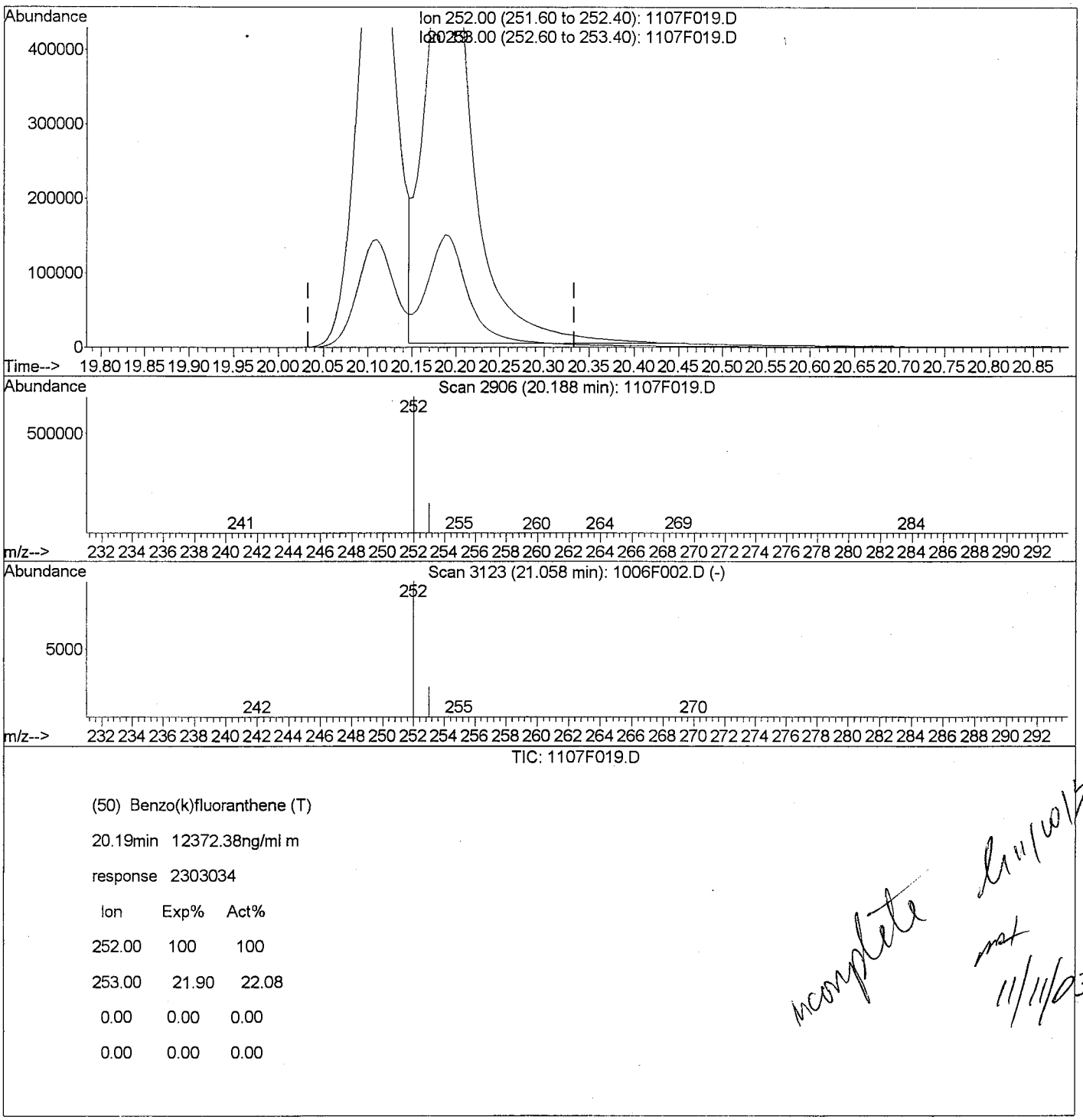
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.05
0.00	0.00	0.00
0.00	0.00	0.00

1107F019.D 1107ALK.M Sat Nov 08 07:08:28 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.19min 12372.38ng/ml m

response 2303034

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.08
0.00	0.00	0.00
0.00	0.00	0.00

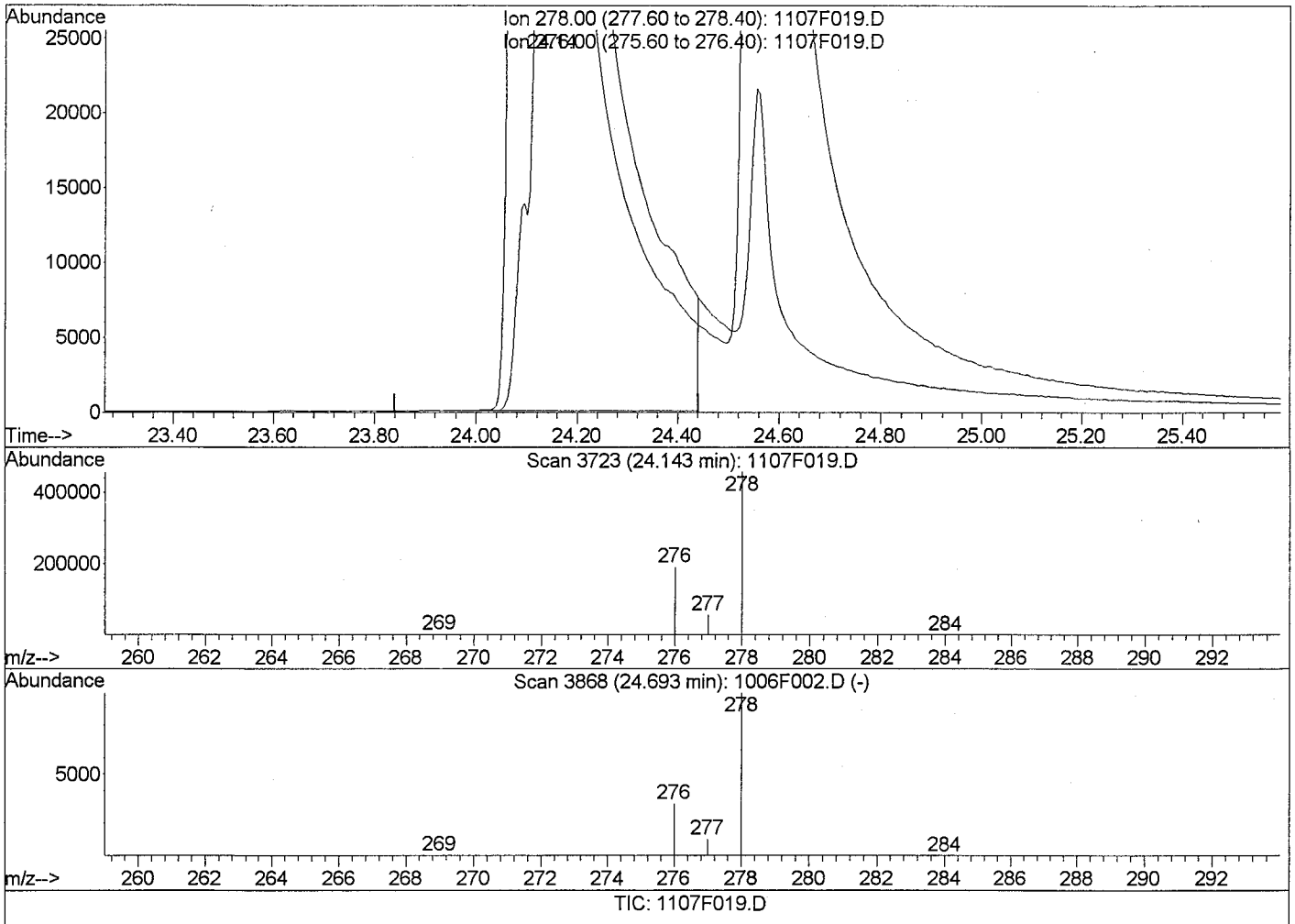
incomplete 11/10/03
mt 11/11/03

1107F019.D 1107ALK.M Sat Nov 08 07:08:35 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 7976.85ng/ml

response 1463536

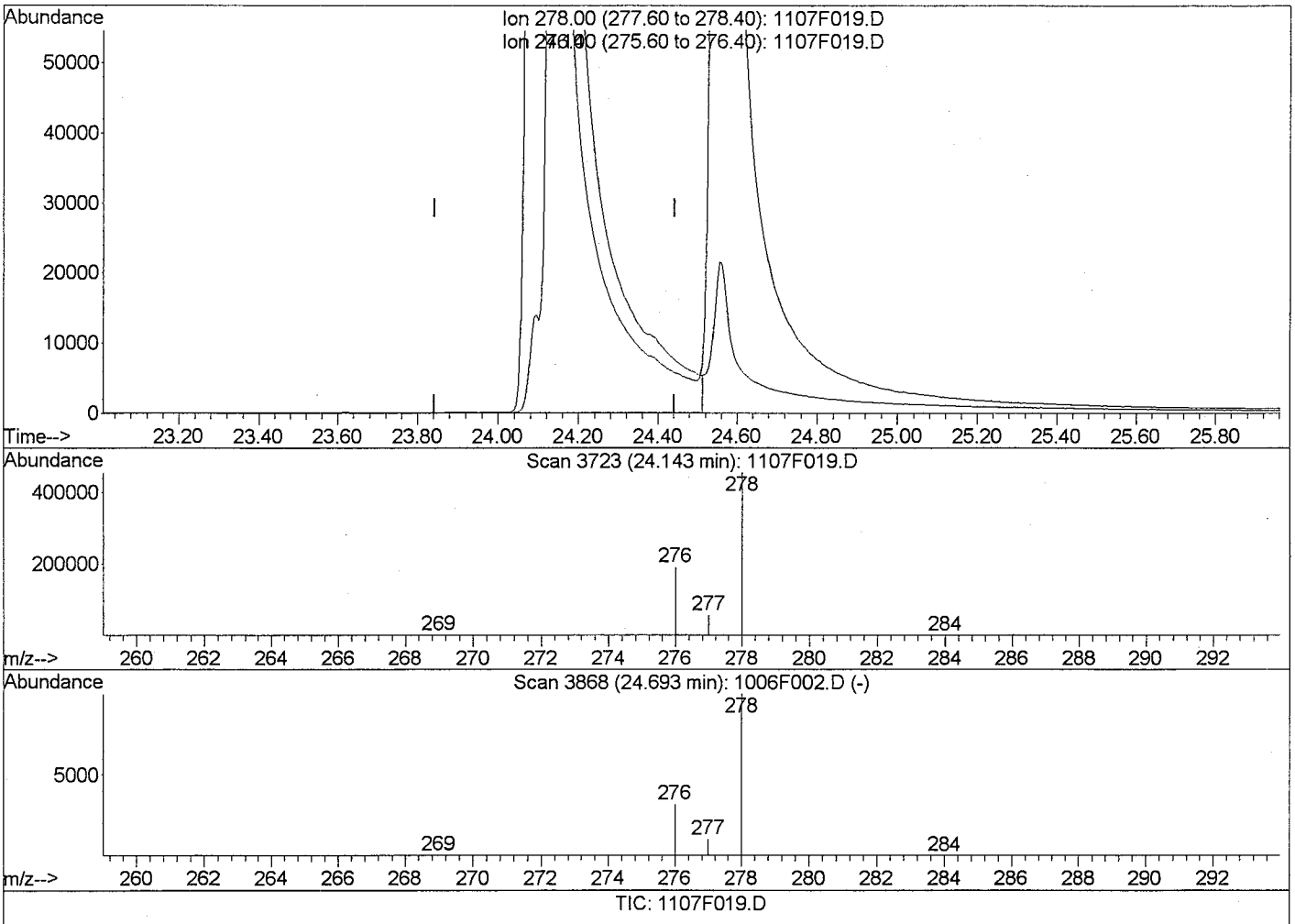
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	41.61
0.00	0.00	0.00
0.00	0.00	0.00

1107F019.D 1107ALK.M Sat Nov 08 07:08:42 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F019.D

(55) Dibenz(a,h)anthracene (T)

24.14min 8121.55ng/ml m

response 1490083

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	41.64
0.00	0.00	0.00
0.00	0.00	0.00

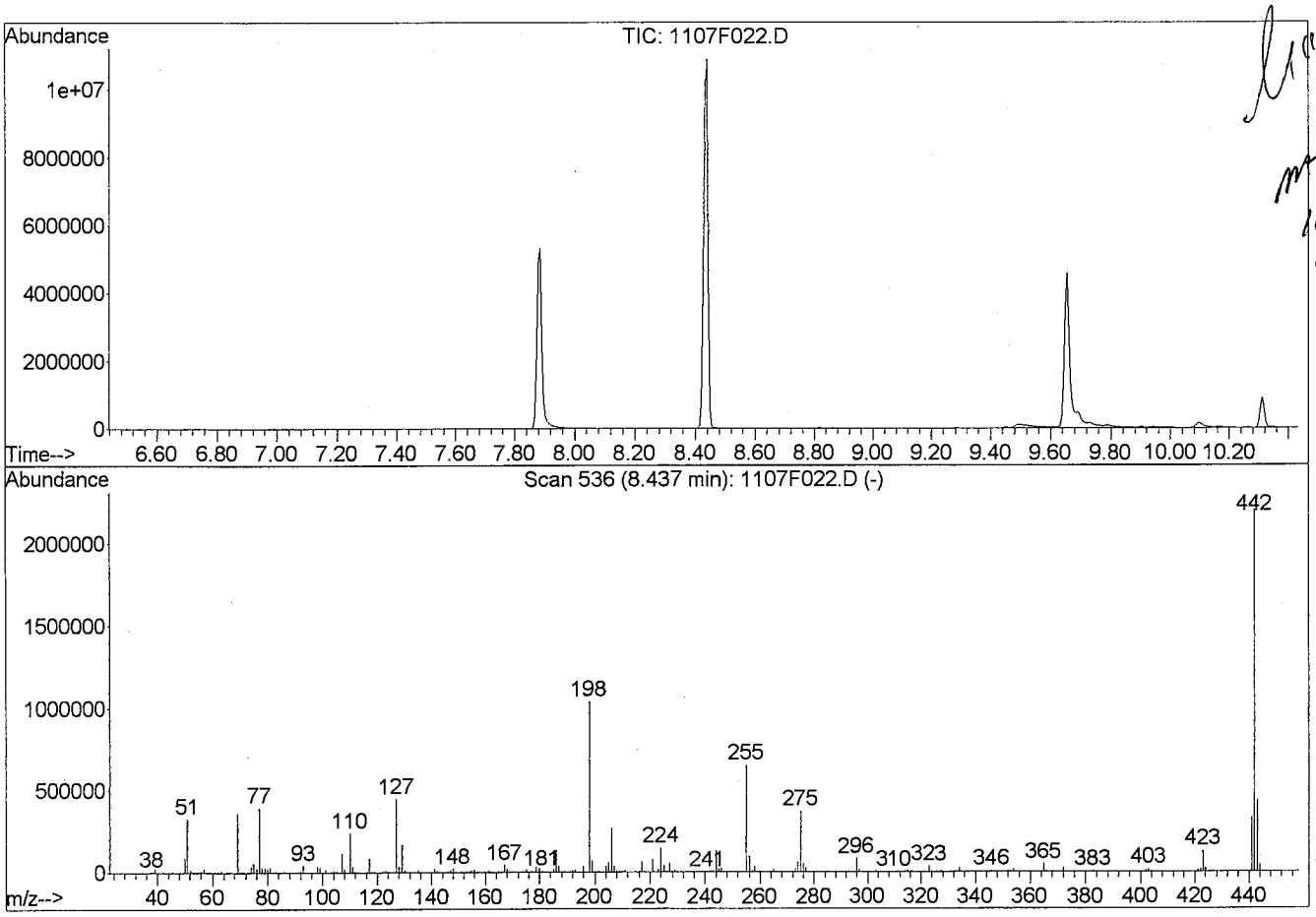
incomplete 11/10/03
mt 11/11/03

1107F019.D 1107ALK.M Sat Nov 08 07:08:51 2003

DFTPP

Data File : J:\MS11\DATA\110703\1107F022.D
Acq On : 7 Nov 2003 11:36 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.7	329344	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	2100	PASS
127	198	10	80	43.1	448256	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	47.1	1039680	PASS
199	198	5	9	6.6	68888	PASS
275	198	10	60	35.8	371968	PASS
365	442	1	50	2.2	49192	PASS
441	443	0.01	100	75.3	330624	PASS
442	442	30	100	100.0	2205184	PASS
443	442	15	24	19.9	439104	PASS

1107F022.D DFTPPPAH.M Mon Nov 10 14:43:48 2003

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	585	53.10	655	67.00	1015	81.00	28544
37.10	1649	55.00	2018	69.00	366016	82.00	6486
38.00	4877	56.00	10126	70.00	2100	83.00	7206
39.10	26496	57.00	23376	73.00	3193	83.95	533
40.00	1019	58.00	1208	74.00	35320	85.00	5257
41.10	898	61.00	4706	75.00	56600	86.00	7926
44.00	33	62.00	4858	76.10	22904	87.00	3671
45.00	804	63.00	14088	77.00	393920	88.00	1426
50.10	89680	64.10	2008	78.00	27152	89.00	1046
51.10	329344	65.10	6551	79.00	26960	91.00	6251
52.10	16976	66.00	556	80.00	20600	92.00	7379

11/10/03

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	42792	105.00	8780	118.90	833	131.00	2652
94.00	3132	107.00	116656	120.00	1583	132.00	2225
95.00	955	108.00	18400	121.00	752	132.90	647
96.10	2286	110.00	240704	122.00	8442	134.00	5025
98.00	33456	111.00	34648	123.00	11817	135.00	14062
99.00	27144	111.90	3751	123.90	5230	136.00	5209
100.00	2310	113.00	976	125.00	6033	137.00	6889
101.00	15647	115.10	594	127.00	448256	137.90	1571
102.00	826	116.00	6903	128.00	35592	139.00	1000
103.00	6550	117.00	85200	129.00	170944	140.00	1818
104.00	10464	118.00	6164	130.00	13548	141.00	21624

mt 11/11/03

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.00	7489	153.00	7082	164.00	1801	175.00	17048
143.00	5382	154.00	5745	165.00	8410	176.00	6164
144.00	1415	155.00	12251	166.00	6773	176.90	8781
145.00	1327	156.00	18064	167.00	44584	177.90	2722
146.00	3811	157.00	3830	168.00	18832	178.90	33328
147.00	12008	158.00	4041	169.00	3485	180.00	23600
148.00	21880	159.00	3505	170.00	1526	181.00	11030
149.00	4838	159.90	7066	170.90	1841	182.00	1614
150.00	1398	161.00	10945	172.00	3906	182.90	1109
151.00	2983	161.90	2988	173.00	6096	184.00	2716
151.90	1664	163.00	941	174.00	9800	185.00	16856

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.00	133888	197.90	1039680	210.00	3659	225.00	41144
187.00	36992	198.90	68888	211.00	10786	226.00	3840
188.00	3791	200.00	5034	212.90	742	226.90	55592
189.00	8470	201.50	5705	214.90	2705	227.90	7346
189.90	1578	203.00	5936	216.00	6027	228.90	11841
191.00	3871	204.00	35008	216.90	66720	229.90	1919
192.00	10892	205.00	60272	217.90	7974	231.00	6032
193.00	11670	206.00	269120	218.90	758	232.00	963
193.90	2853	207.00	33768	221.00	78792	233.00	1230
194.90	2387	208.00	7589	223.00	15420	234.00	3819
196.00	36544	208.90	2337	224.00	147136	234.90	4967

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
235.90	2527	246.90	4893	259.00	5280	273.90	59592
237.00	4590	247.90	1074	259.90	1020	275.00	371968
237.90	761	248.90	5404	260.90	946	276.00	48840
238.90	2564	249.90	953	263.90	1401	276.90	25120
240.00	1801	251.00	1010	264.90	15235	277.90	3357
241.00	3329	252.00	1156	265.85	1632	278.90	978
242.00	8396	252.90	2438	267.90	617	281.90	905
243.00	9909	255.00	653696	270.00	772	283.00	3046
244.00	133504	256.00	98408	271.00	2011	283.90	2231
245.00	19496	257.00	8253	272.00	2088	285.00	4388
245.90	22848	257.90	35040	272.90	22840	286.00	1029

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.90	1108	303.00	10899	321.90	2590	335.00	5884
289.90	1269	303.90	2923	323.00	36808	335.90	600
290.90	1072	307.90	1995	324.00	6712	339.00	771
292.00	1531	309.00	924	325.00	553	340.90	4662
293.00	6242	310.00	1485	325.90	884	342.00	1212
293.90	1883	312.90	837	326.90	5623	345.90	8654
295.90	84792	314.00	4675	327.90	3538	346.90	1408
296.90	11872	314.90	11088	328.90	569	349.90	507
298.00	913	316.00	6441	332.00	2636	351.00	695
301.00	1338	317.00	969	333.00	4268	352.00	11221
301.90	1882	321.00	3531	334.00	23320	352.90	9068

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
354.00	14617	376.90	705	405.00	842	442.00	2205184
355.00	2781	382.90	6254	409.80	550	443.00	439104
358.90	844	383.90	2189	414.90	924	444.00	40720
364.90	49192	384.90	604	421.00	14710	445.00	2165
365.90	7939	389.90	3761	422.00	15766		
366.90	638	391.00	2618	423.00	128152		
369.90	1501	391.90	2250	424.00	25464		
371.00	4280	400.90	1979	425.00	2538		
372.00	25456	401.90	10582	437.90	843		
373.00	6378	402.90	16776	438.90	897		
373.90	573	404.00	6192	441.00	330624		

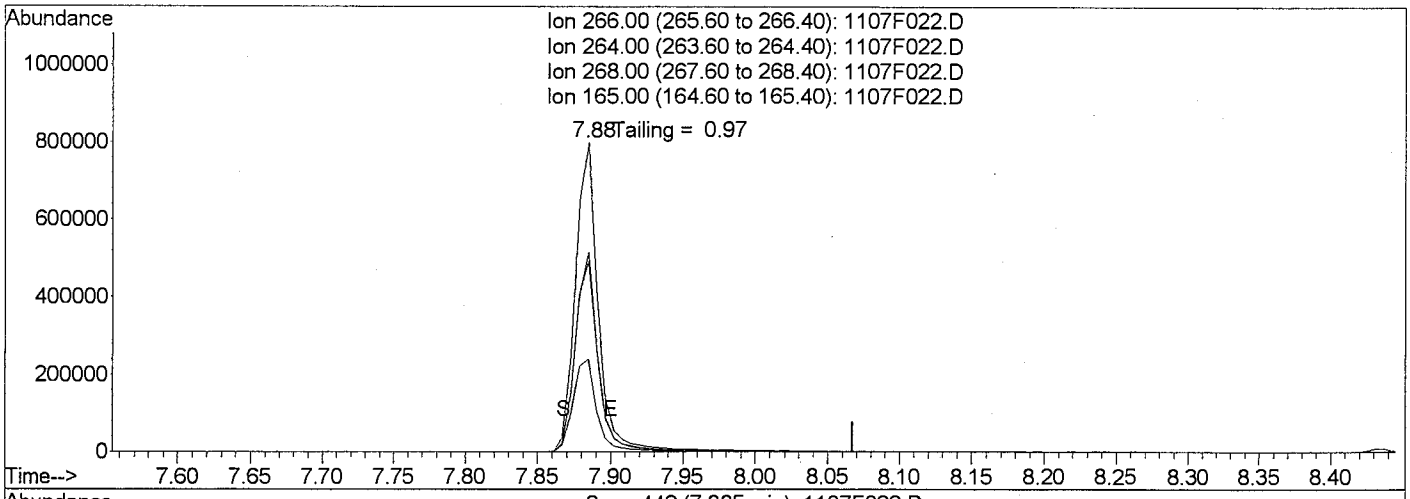
11/10/17
mrt 11/11/02

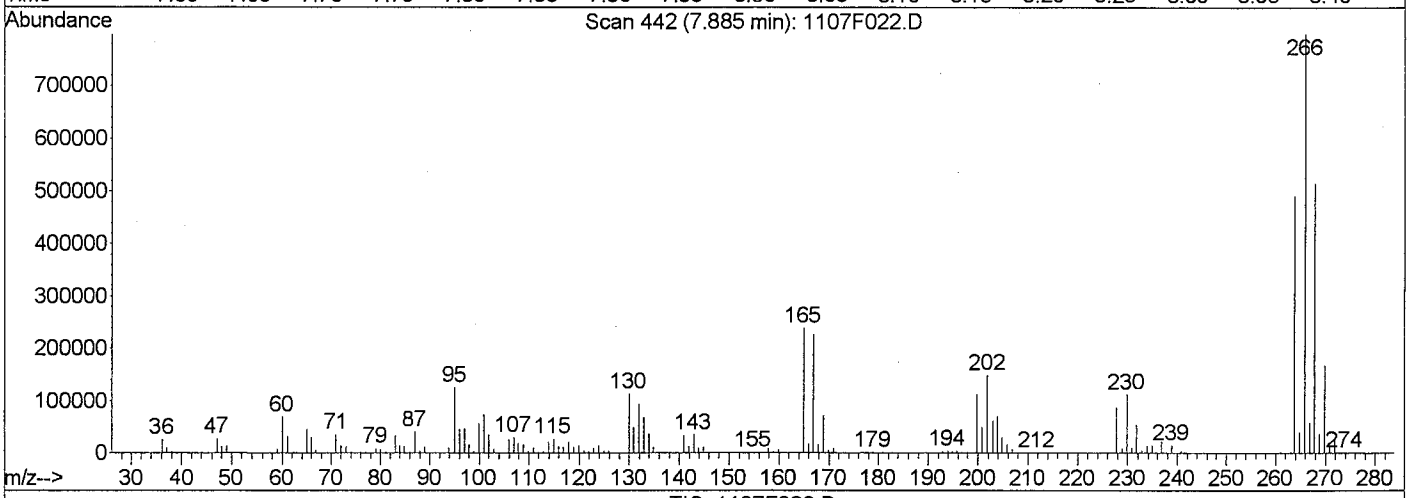
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F022.D
Acq On : 7 Nov 2003 11:36 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:41 2003

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Jun 11 11:12:55 2002
Response via : Single Level Calibration





TIC: 1107F022.D

(1) Pentachlorophenol

7.57min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	64.50	0.00#
268.00	63.70	0.00#
165.00	28.70	0.00

11/10/03 mt 11/11/03

1107F022.D DFTPPPAH.M Mon Nov 10 14:43:58 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:44:59 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 08 07:14:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mrt 11/11/03 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	228894	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.07	164	119020	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	175521	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	163814	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	96785	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	339696	2025.92	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 202.59%			
16) Fluorene-d10	9.00	176	262573	2205.85	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 220.58%			
21) 2,4,6 Tribromophenol	9.60	330	25010	1843.71	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 184.37%			
37) Fluoranthene-d10	13.70	212	351044	1998.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 199.83%			
41) Terphenyl-d14	14.73	244	288903	1935.08	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 193.51%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	536784	2074.05	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	329703	2157.30	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	310037	2164.23	ng/ml	99
6) Biphenyl	7.09	154	405941	2190.58	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	284908	2185.56	ng/ml	99
12) Acenaphthylene	7.80	152	492080	2145.86	ng/ml	100
13) Acenaphthene	8.12	154	299546	2119.47	ng/ml	99
14) Dibenzofuran	8.41	168	409681	2162.38	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.83	170	268917	2124.10	ng/ml	91
17) Fluorene	9.06	166	334079	2206.65	ng/ml	99
22) Pentachlorophenol	10.78	266	68138m	3547.92	ng/ml	
24) Dibenzothiophene	10.78	184	420930	2078.55	ng/ml	99
28) Phenanthrene	11.05	178	434328	2041.72	ng/ml	100
29) Anthracene	11.14	178	398532	2192.90	ng/ml	100
30) Carbazole	11.57	167	315711	2197.79	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	303509	2101.36	ng/ml	99
36) Fluoranthene	13.73	202	452451	2136.70	ng/ml	99
39) Pyrene	14.24	202	447228	2088.70	ng/ml	98
42) Benz(a)anthracene	17.09	228	319542	1960.17	ng/ml	100
43) Chrysene	17.19	228	363173	2083.35	ng/ml	100
49) Benzo(b)fluoranthene	20.11	252	273090	2113.51	ng/ml	100
50) Benzo(k)fluoranthene	20.18	252	365589m	2229.88	ng/ml	
51) Benzo(e)pyrene	21.09	252	306077	2109.76	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1107F023.D 1107ALK.M Mon Nov 10 14:46:25 2003 Page 1

Quantitation Report (QT-Reviewed)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:44:59 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 08 07:14:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mnt 11/11/03 11/10/03

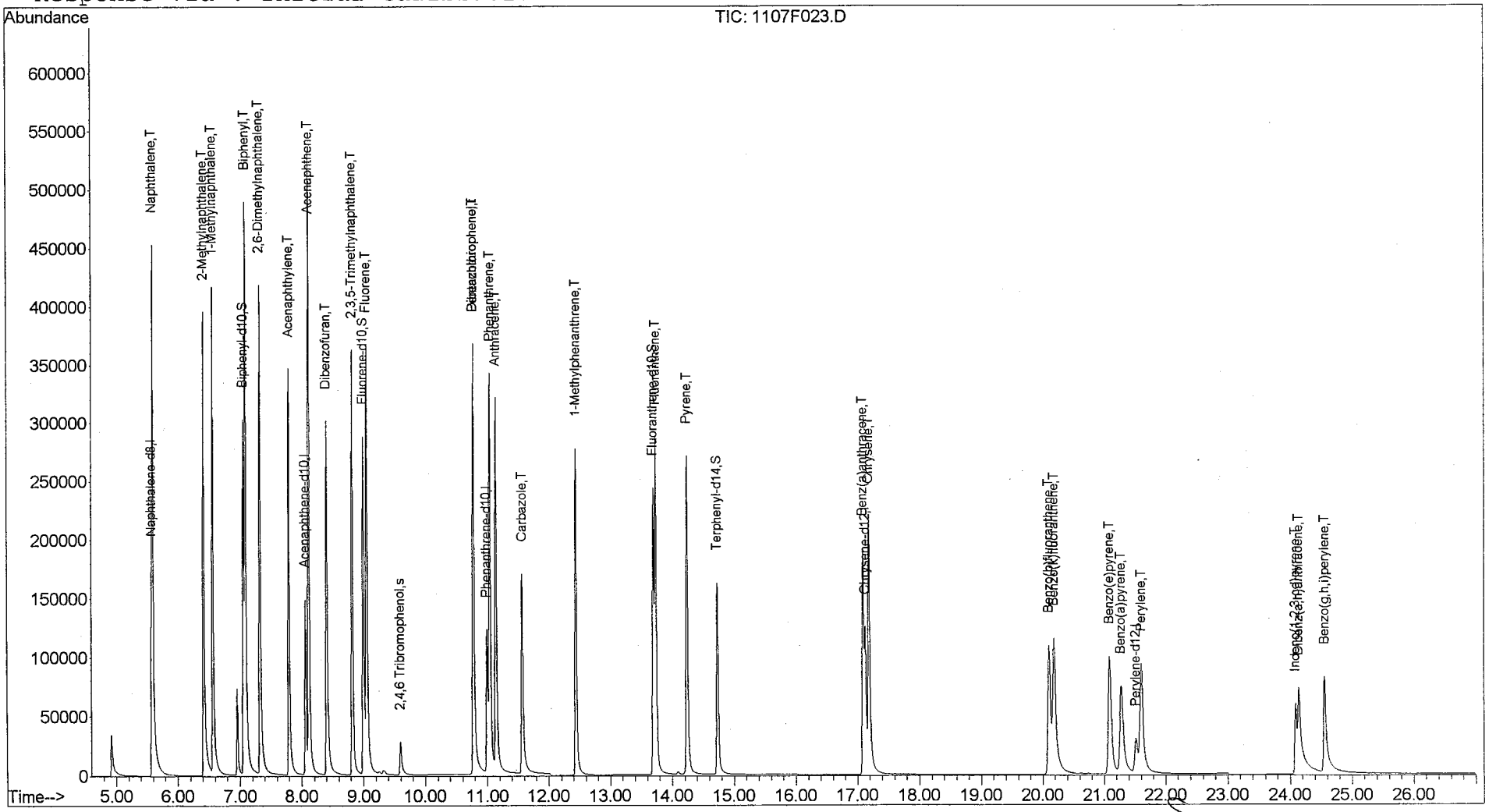
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	232633	2116.65	ng/ml	99
53)	Perylene	21.61	252	269531	2184.67	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	123107	1842.57	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	193513m	2015.38	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	221079	1995.88	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Initial Calibration



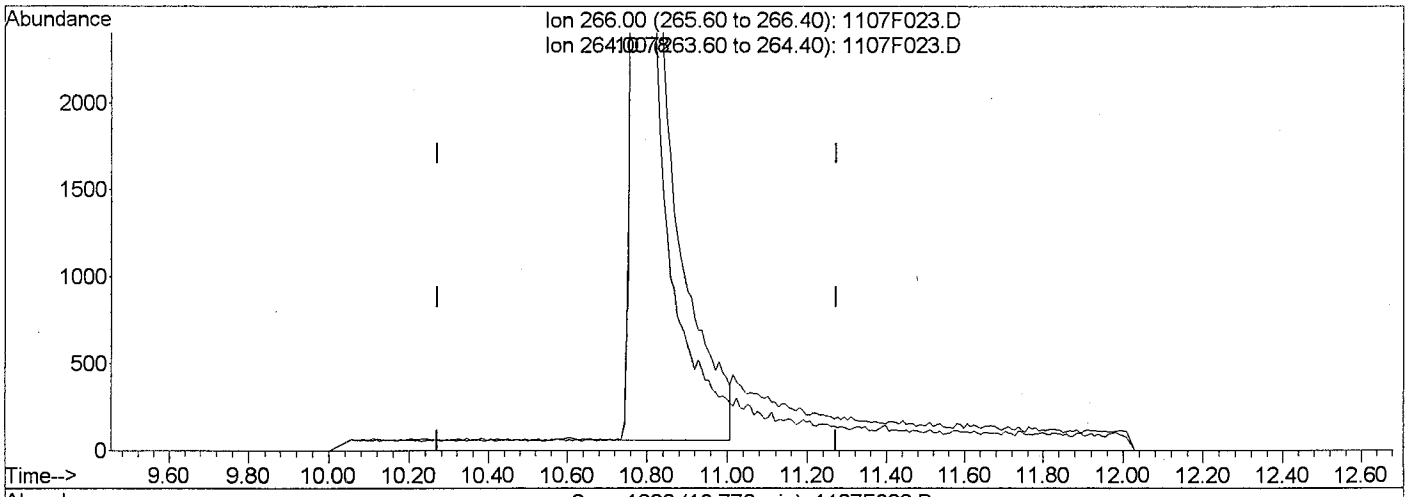
1107F023.D 1107ALK.M Mon Nov 10 14:46:25 2003 Page 3

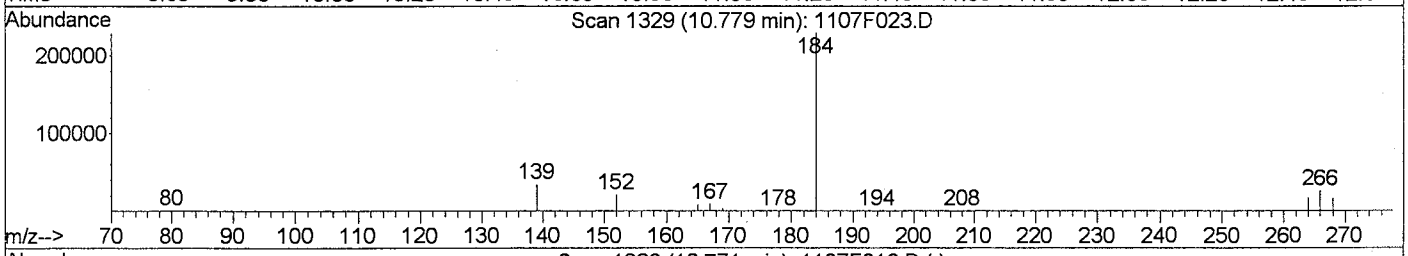
1056

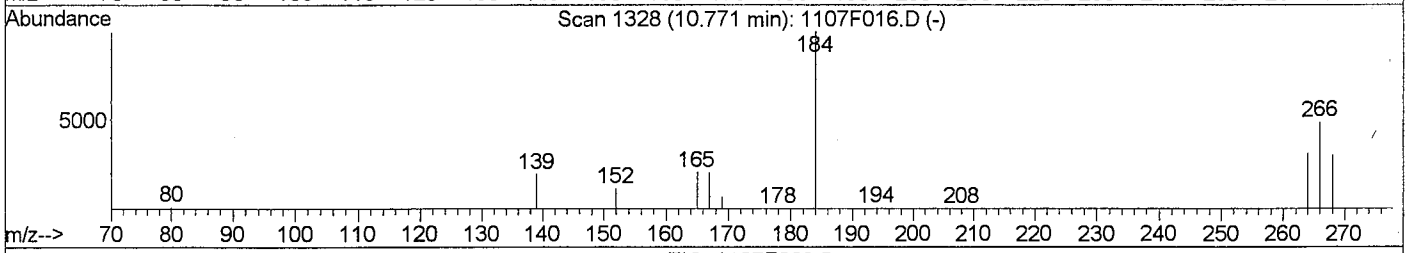
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Single Level Calibration







TIC: 1107F023.D

(22) Pentachlorophenol (t)

10.78min 3308.82ng/ml

response 63546

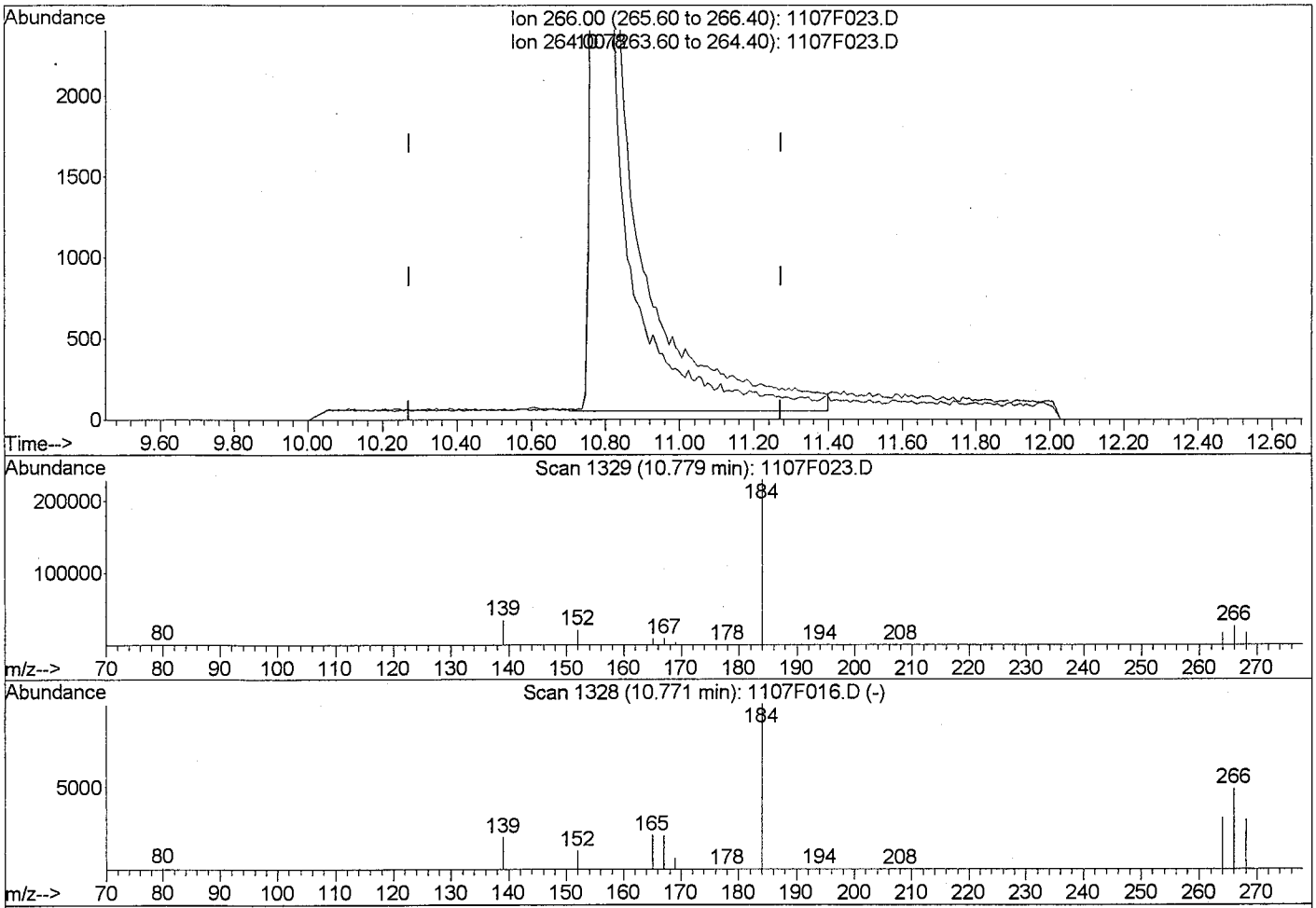
Ion	Exp%	Act%
266.00	100	100
264.00	64.00	62.65
0.00	0.00	0.00
0.00	0.00	0.00

1107F023.D 1107ALK.M Mon Nov 10 14:45:42 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Single Level Calibration



TIC: 1107F023.D

(22) Pentachlorophenol (t)

10.78min 3547.92ng/ml m

response 68138

Ion	Exp%	Act%
266.00	100	100
264.00	64.00	62.73
0.00	0.00	0.00
0.00	0.00	0.00

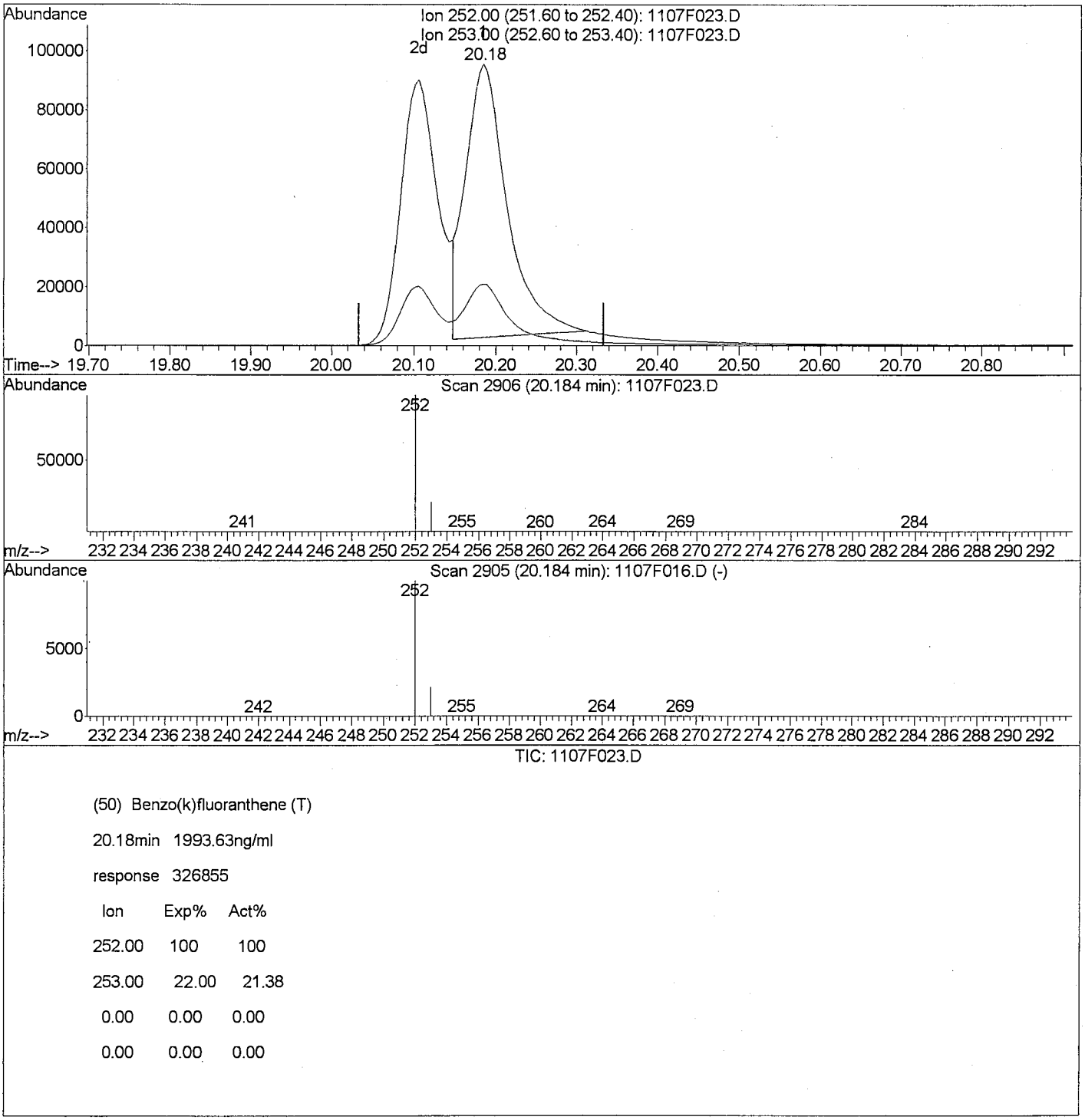
11/10/03
incomplete
mt
11/11/03

1107F023.D 1107ALK.M Mon Nov 10 14:45:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 1993.63ng/ml

response 326855

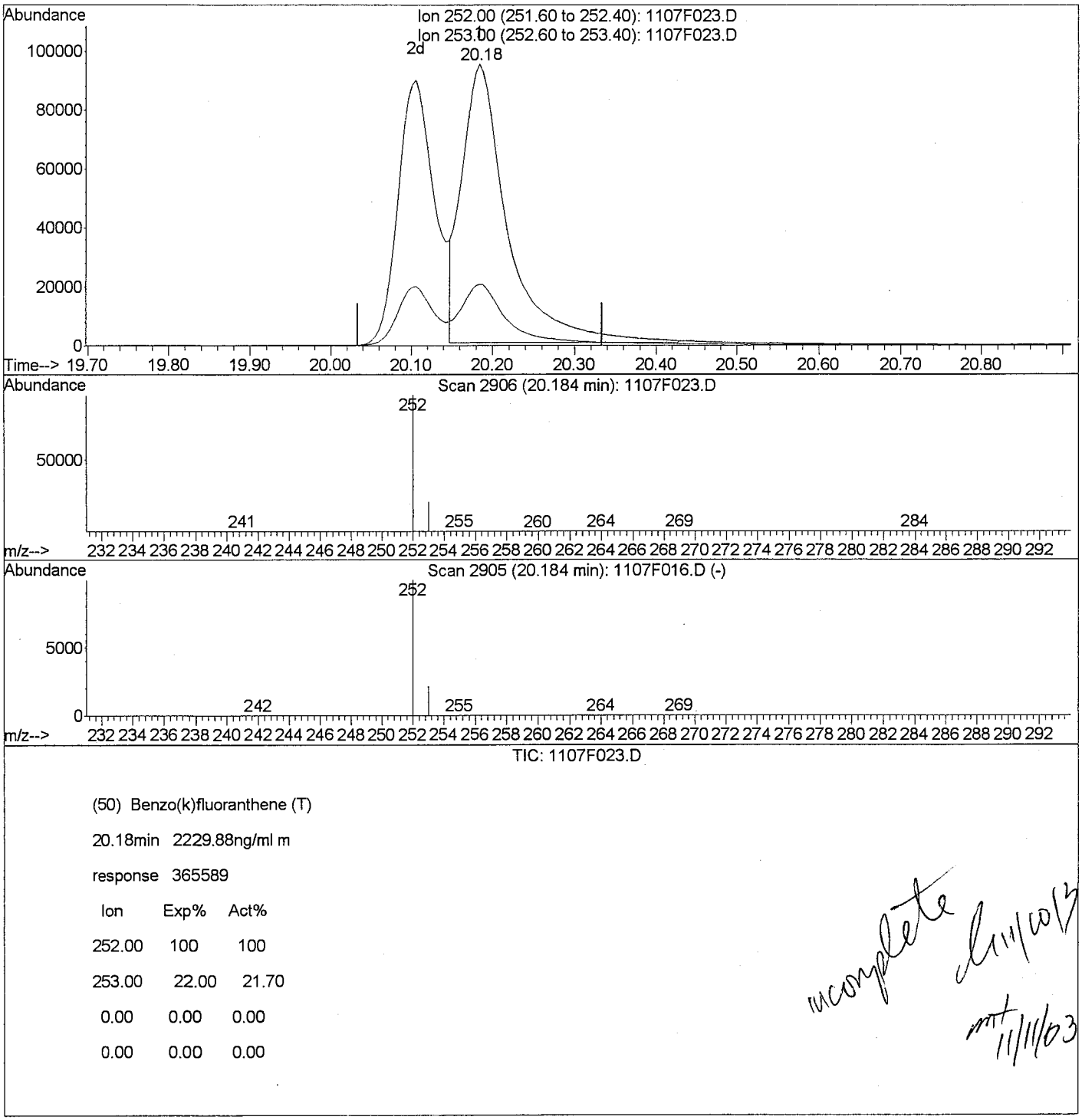
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.38
0.00	0.00	0.00
0.00	0.00	0.00

1107F023.D 1107ALK.M Mon Nov 10 14:45:59 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 2229.88ng/ml m

response 365589

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.70
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

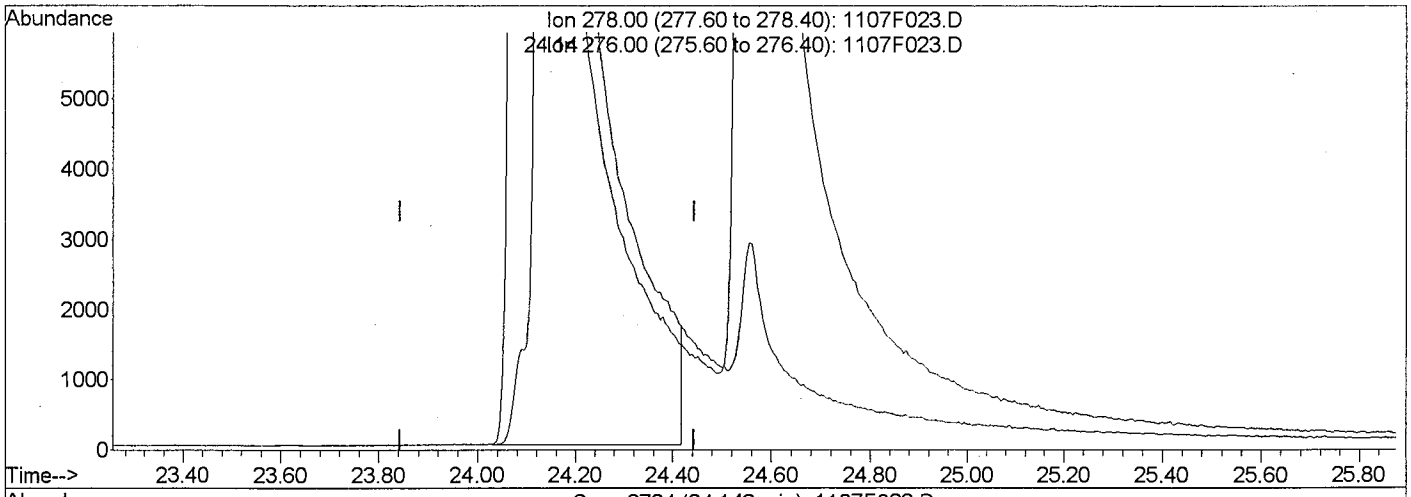
mt 11/11/03

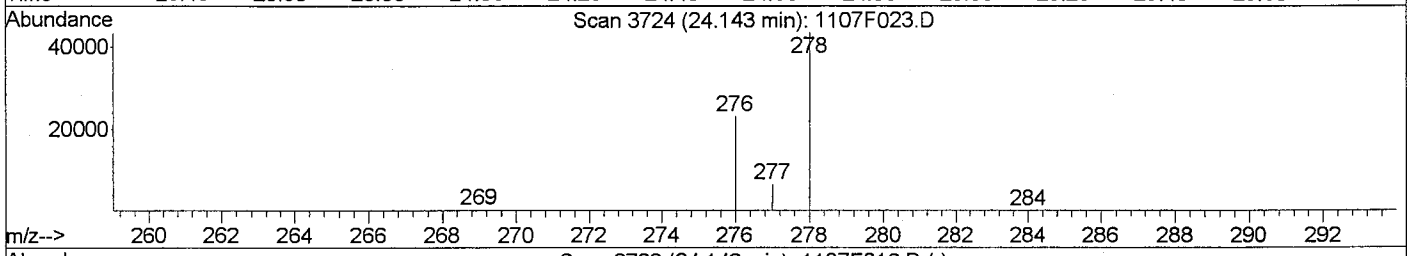
1107F023.D 1107ALK.M Mon Nov 10 14:46:04 2003

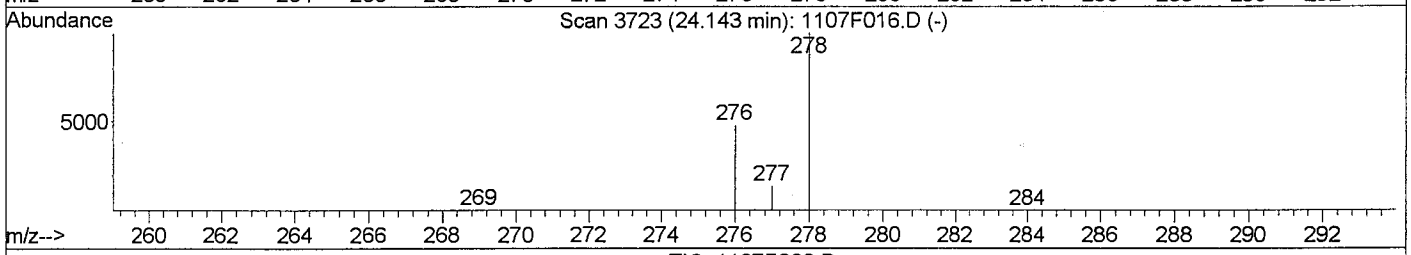
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration







TIC: 1107F023.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1932.80ng/ml

response 185584

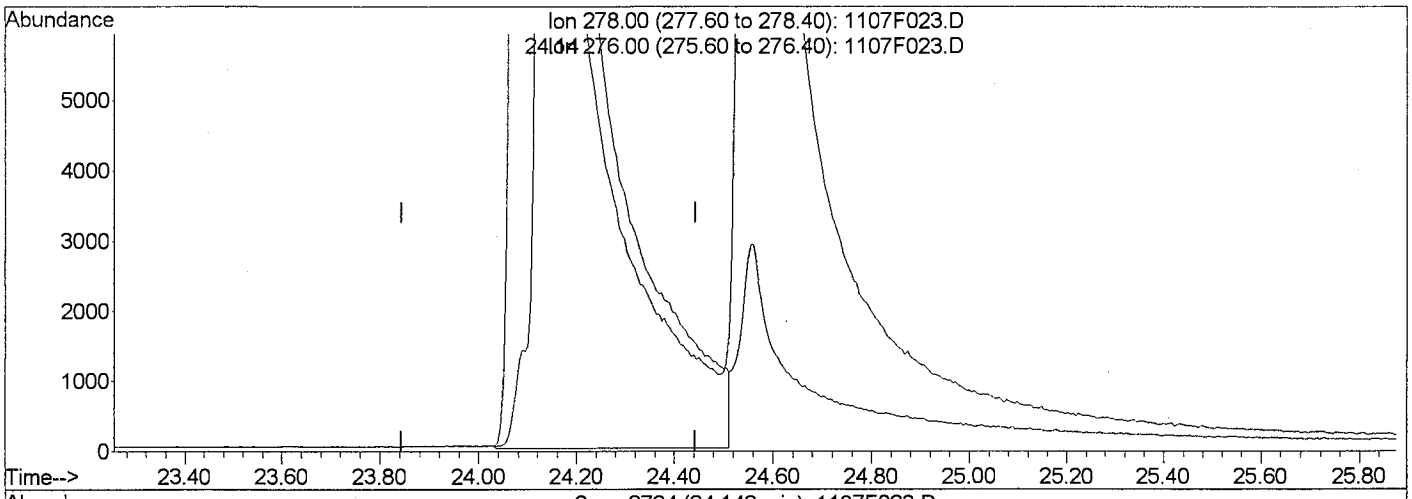
Ion	Exp%	Act%
278.00	100	100
276.00	47.90	53.14
0.00	0.00	0.00
0.00	0.00	0.00

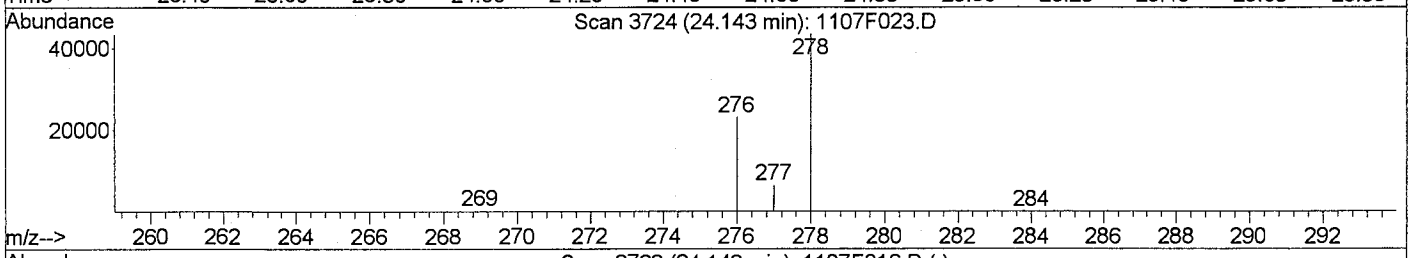
1107F023.D 1107ALK.M Mon Nov 10 14:46:11 2003

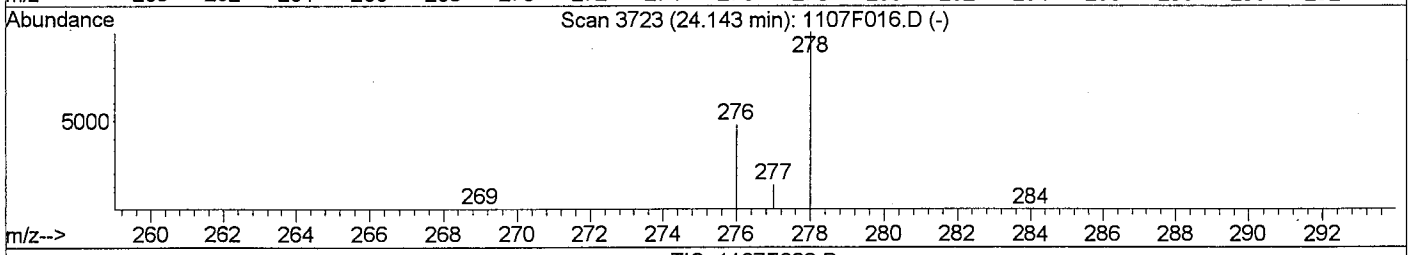
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration







TIC: 1107F023.D

(55) Dibenz(a,h)anthracene (T)

24.14min 2015.38ng/ml m

response 193513

Ion	Exp%	Act%
278.00	100	100
276.00	47.90	53.27
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03

mt 11/11/03

1107F023.D 1107ALK.M Mon Nov 10 14:46:16 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/08/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318114
Units: ng/ml

File ID: J:\MS11\DATA\110803\1108F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	0.01	1.13	1.17	3	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.01	0.668	0.726	9	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.01	0.626	0.681	9	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.01	0.810	0.902	11	NA	± 20 %	AverageRF
Acenaphthylene	2000	2200	0.01	1.93	2.09	8	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	0.01	1.59	1.76	11	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	0.01	1.19	1.25	6	NA	± 20 %	AverageRF
Fluorene	2000	2300	0.01	1.27	1.44	13	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	0.01	1.15	1.20	4	NA	± 20 %	AverageRF
Phenanthrene	2000	2100	0.01	1.21	1.24	3	NA	± 20 %	AverageRF
Anthracene	2000	2300	0.01	1.04	1.17	13	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.32	9	NA	± 20 %	AverageRF
Pyrene	2000	2100	0.01	1.31	1.40	7	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	1900	0.01	0.995	0.968	-3	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.11	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2100	0.01	1.34	1.41	5	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2300	0.01	1.69	1.93	14	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	0.01	1.50	1.60	7	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.18	4	NA	± 20 %	AverageRF
Perylene	2000	2200	0.01	1.27	1.38	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1700	0.01	0.690	0.591	-14	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	1900	0.01	0.992	0.948	-4	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1900	0.01	1.14	1.08	-6	NA	± 20 %	AverageRF
Fluorene-d10	2000	2300	0.01	1.00	1.13	13	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2000	0.01	1.00	1.02	2	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2000	0.01	0.911	0.907	-1	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS11\DATA\110803\1108F002.D
Lab ID: KWG0318114-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/08/2003 06:24
Date Quantitated: 11/10/2003 16:05
Batch ID: KWG0318114
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Enviroquant/Stealth Calibration Check	2,4,6-Tribromophenol	Calc	0.00	1957.44	
	Pentachlorophenol	Calc	0.00	3730.18	

Primary Review: 11/10/03

Secondary Review: mt 11/14/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-PAH	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318114	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\110803\1108F001.D	**Method ID:**	MJ138
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\110803\1108F002.D			**Instrument:**	MS11
Acqu Date:	11/08/2003 06:24	**Quant Date:**	11/10/2003 16:05	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318114-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.57	-0.01	136	239888	1,000.00	OK
2	Acenaphthene-d10	8.06	0.00	164	126408	1,000.00	OK
3	Phenanthrene-d10	11.00	0.00	188	194461	1,000.00	OK
4	Chrysene-d12	17.13	0.00	240	182400	1,000.00	OK
5	Perylene-d12	21.51	0.00	264	103780	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Biphenyl-d10	7.06			164	362250	2,061		34-115	NA
2	Fluorene-d10	9.00			176	286251	2,264		37-107	NA
2	2,4,6-Tribromophenol	9.60			330	28201	1,957		6-133	NA
3	Fluoranthene-d10	13.69			212	397546	2,043		18-137	NA
4	Terphenyl-d14	14.73			244	330772	1,990		18-153	NA

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.59			128	560085	2,065			
1	2-Methylnaphthalene	6.41			142	348168	2,174			
1	1-Methylnaphthalene	6.56			142	326861	2,177			
1	Biphenyl	7.09			154	432731	2,228			
1	2,6-Dimethylnaphthalene	7.32			156	303406	2,221			
1	C2-Naphthalenes				156	0				
1	C3-Naphthalenes				170	0				
1	C4-Naphthalenes				184	0				
2	Acenaphthylene	7.79			152	527467	2,166			
2	Acenaphthene	8.11			154	317225	2,113			
2	Dibenzofuran	8.41			168	445348	2,213			
2	2,3,5-Trimethylnaphthalene	8.82			170	286816	2,133			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\110803\1108F002.D		**Instrument:** MS11
Acqu Date:	11/08/2003 06:24	**Quant Date:** 11/10/2003 16:05	**Vial:** 2
Run Type:	CCV		**Dilution:** 1.0
Lab ID:	KWG0318114-2		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	9.05			166	363491	2,261			
2	C1-Fluorenes				180	0				
2	C2-Fluorenes				194	0				
2	C3-Fluorenes				208	0				
2	Pentachlorophenol	10.77			266	76085	3,730			
3	Dibenzothiophene	10.78			184	468335	2,087			
3	C1-Dibenzothiophenes				198	0				
3	C2-Dibenzothiophenes				212	0				
3	C3-Dibenzothiophenes				226	0				
3	Phenanthrene	11.04			178	484186	2,054			
3	Anthracene	11.14			178	454305	2,256			
3	Carbazole	11.56			167	353648	2,222			
3	1-Methylphenanthrene	12.44			192	340315	2,127			
3	C1-Phenanthrenes/Anthracenes				192	0				
3	C2-Phenanthrenes/Anthracenes				206	0				
3	C3-Phenanthrenes/Anthracenes				220	0				
3	C4-Phenanthrenes/Anthracenes				234	0				
3	Fluoranthene	13.73			202	512907	2,186			
4	Pyrene	14.24			202	509389	2,137			
4	C1-Fluoranthenes/Pyrenes				216	0				
4	Benz(a)anthracene	17.09			228	353187	1,946			
4	Chrysene	17.18			228	405270	2,088			
4	C1-Chrysenes				242	0				
4	C2-Chrysenes				256	0				
4	C3-Chrysenes				270	0				
4	C4-Chrysenes				284	0				
5	Benzo(b)fluoranthene	20.10			252	292218	2,109			
5	Benzo(k)fluoranthene	20.18			252	401166**m**	2,282			
5	Benzo(e)pyrene	21.08			252	331428	2,131			
5	Benzo(a)pyrene	21.27			252	245298	2,081			
5	Perylene	21.60			252	287305	2,172			
5	Indeno(1,2,3-cd)pyrene	24.09			276	122700	1,713			
5	Dibenz(a,h)anthracene	24.14			278	196841**m**	1,912			
5	Benzo(g,h,i)perylene	24.55			276	223835	1,885			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:01:13 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 08 07:14:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.57	136	239888	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	126408	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	194461	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	182400	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	103780	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	362250	2061.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 206.14%			
16) Fluorene-d10	9.00	176	286251	2264.22	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 226.42%			
21) 2,4,6 Tribromophenol	9.60	330	28201	1957.44	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 195.74%			
37) Fluoranthene-d10	13.69	212	397546	2042.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 204.26%			
41) Terphenyl-d14	14.73	244	330772	1989.76	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 198.98%			
Target Compounds						Qvalue
2) Naphthalene	5.59	128	560085	2064.90	ng/ml	100
3) 2-Methylnaphthalene	6.41	142	348168	2173.71	ng/ml	99
4) 1-Methylnaphthalene	6.56	142	326861	2177.11	ng/ml	99
6) Biphenyl	7.09	154	432731	2228.13	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.32	156	303406	2220.79	ng/ml	100
12) Acenaphthylene	7.79	152	527467	2165.74	ng/ml	100
13) Acenaphthene	8.11	154	317225	2113.38	ng/ml	99
14) Dibenzofuran	8.41	168	445348	2213.26	ng/ml	98
15) 2,3,5-Trimethylnaphthalene	8.82	170	286816	2133.07	ng/ml	96
17) Fluorene	9.05	166	363491	2260.60	ng/ml	100
22) Pentachlorophenol	10.77	266	76085	3730.18	ng/ml	99
24) Dibenzothiophene	10.78	184	468335	2087.39	ng/ml	98
28) Phenanthrene	11.04	178	484186	2054.41	ng/ml	100
29) Anthracene	11.14	178	454305	2256.32	ng/ml	99
30) Carbazole	11.56	167	353648	2222.10	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	340315	2126.70	ng/ml	99
36) Fluoranthene	13.73	202	512907	2186.29	ng/ml	99
39) Pyrene	14.24	202	509389	2136.60	ng/ml	99
42) Benz(a)anthracene	17.09	228	353187	1945.79	ng/ml	100
43) Chrysene	17.18	228	405270	2087.95	ng/ml	100
49) Benzo(b)fluoranthene	20.10	252	292218	2109.11	ng/ml	100
50) Benzo(k)fluoranthene	20.18	252	401166m	2281.95	ng/ml	
51) Benzo(e)pyrene	21.08	252	331428	2130.53	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:01:13 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 08 07:14:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

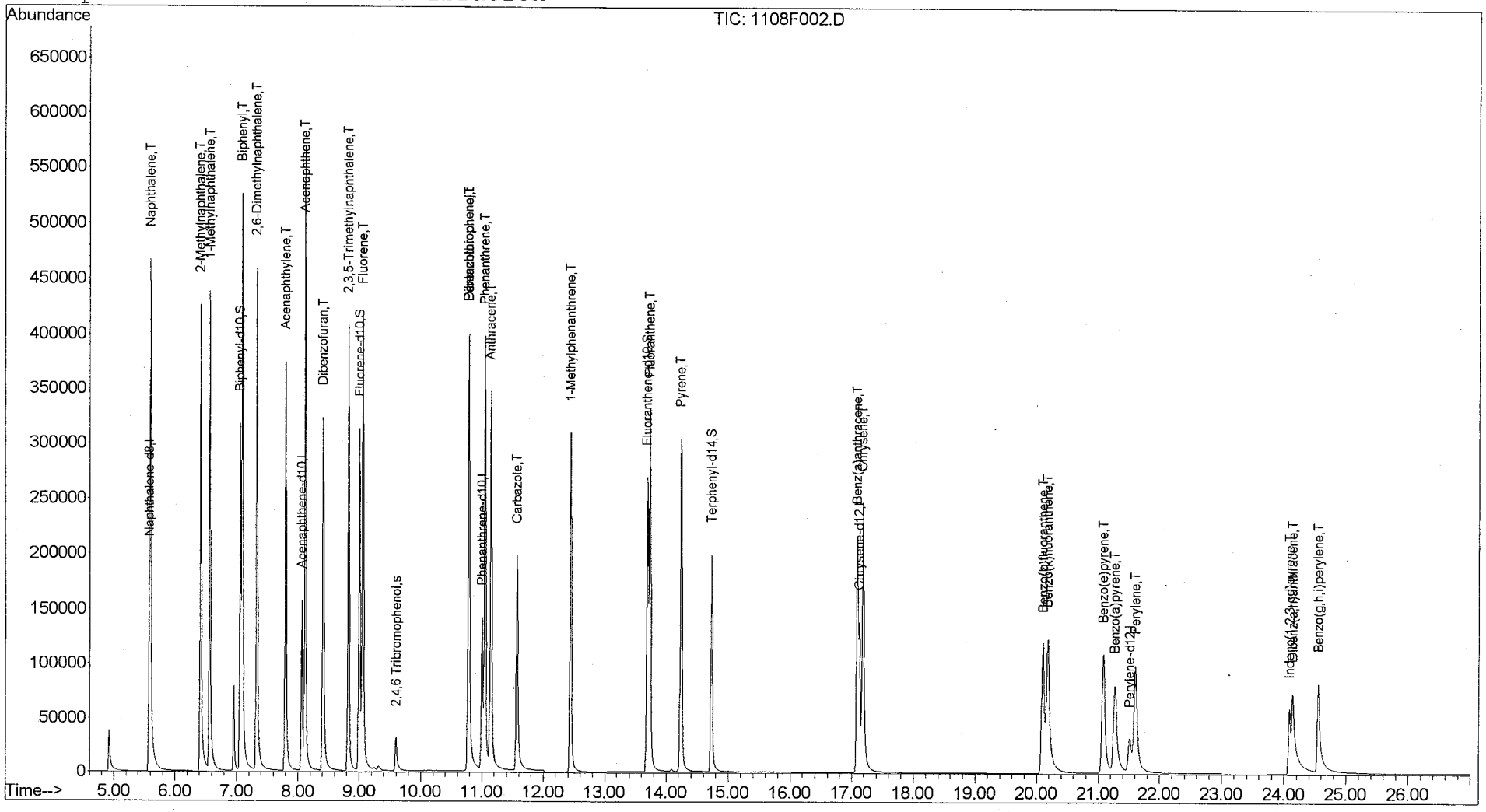
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	245298	2081.45	ng/ml	99
53)	Perylene	21.60	252	287305	2171.78	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	122700	1712.70	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	196841m	1911.86	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	223835	1884.56	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:05 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration

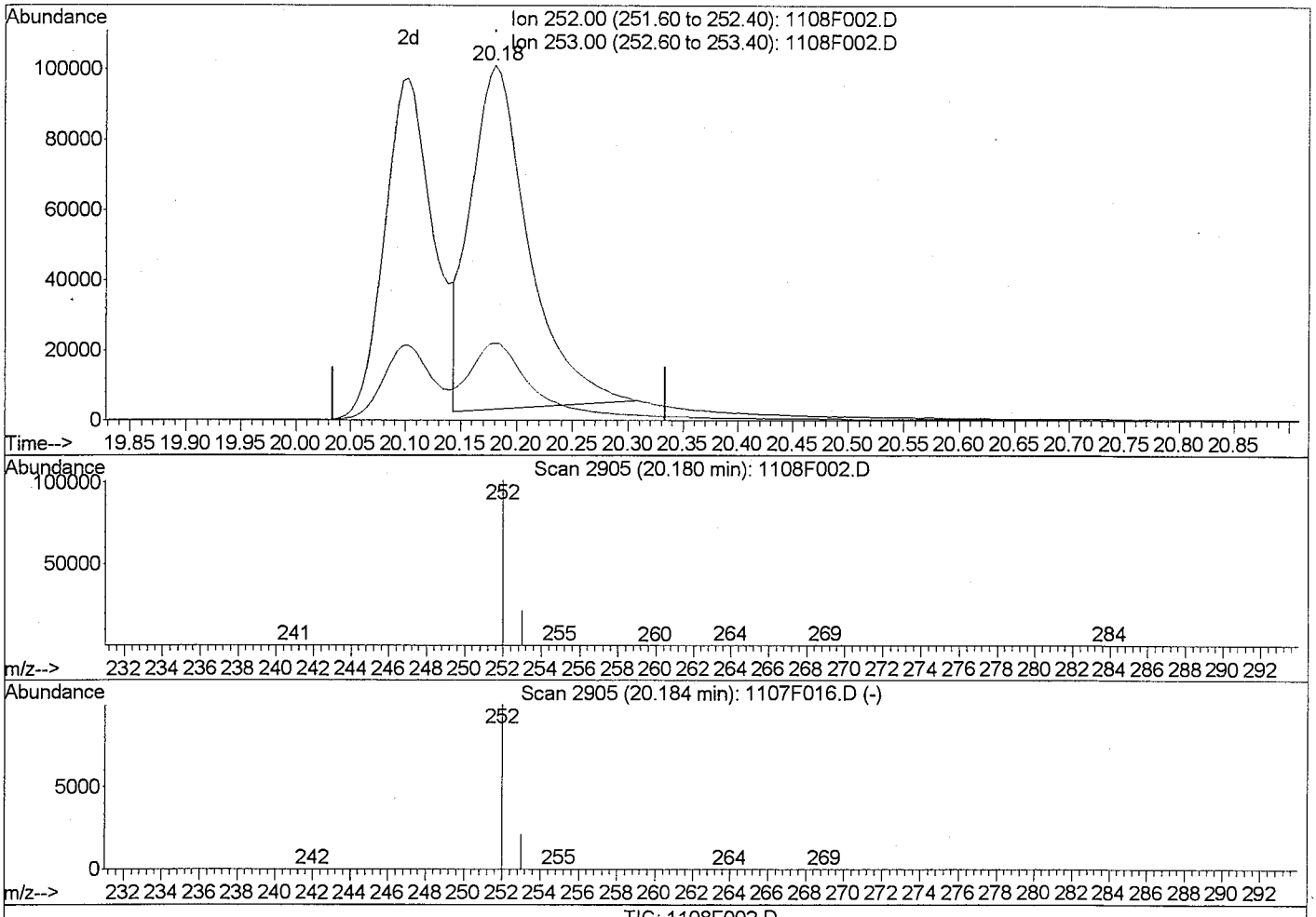


1069

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 13:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 15:37:35 2003
Response via : Multiple Level Calibration



TIC: 1108F002.D

(50) Benzo(k)fluoranthene (T)

20.18min 2008.78ng/ml

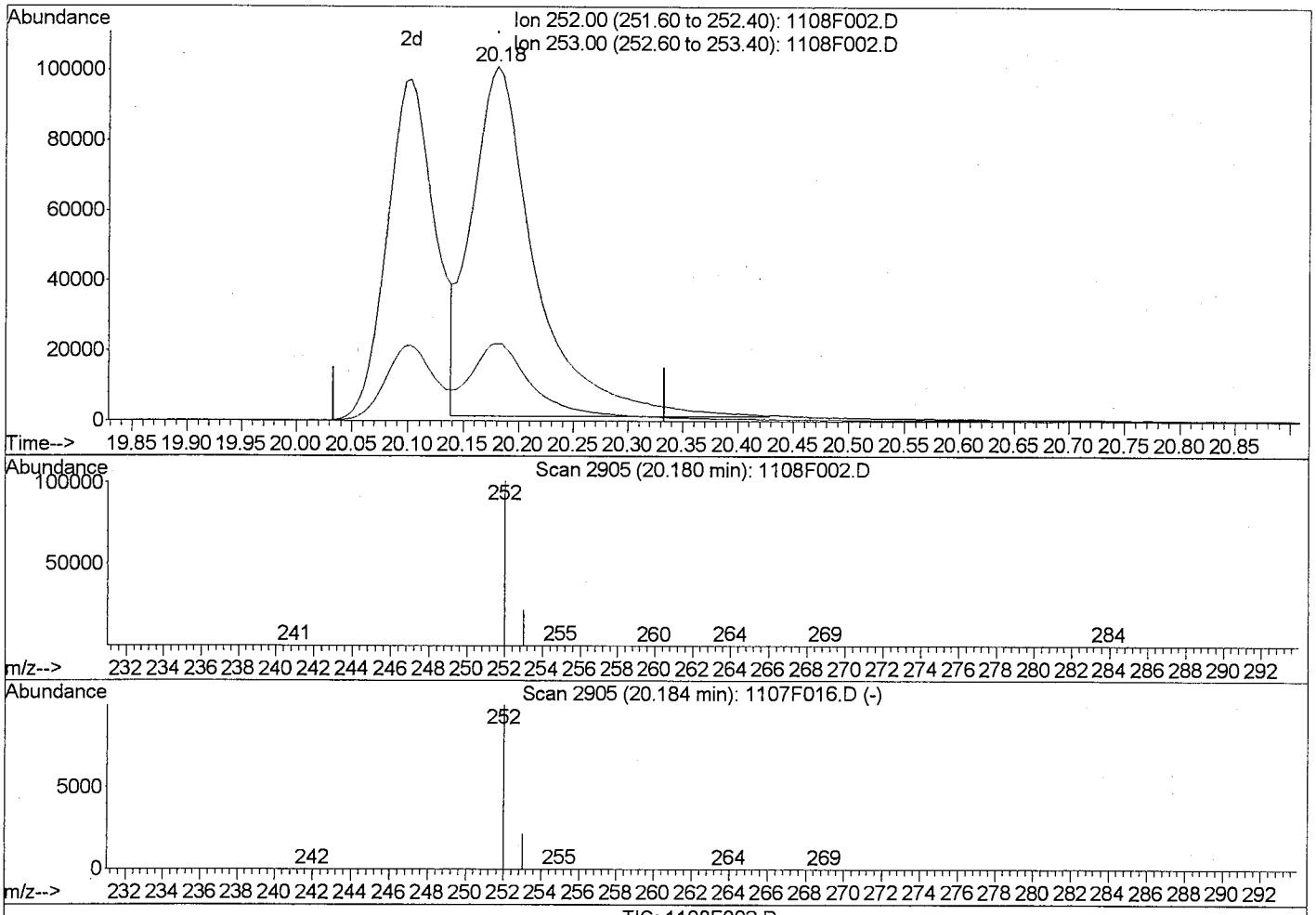
response 353142

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.42
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:04 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 15:37:35 2003
Response via : Multiple Level Calibration



TIC: 1108F002.D

(50) Benzo(k)fluoranthene (T)

20.18min 2281.95ng/ml m

response 401166

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.69
0.00	0.00	0.00
0.00	0.00	0.00

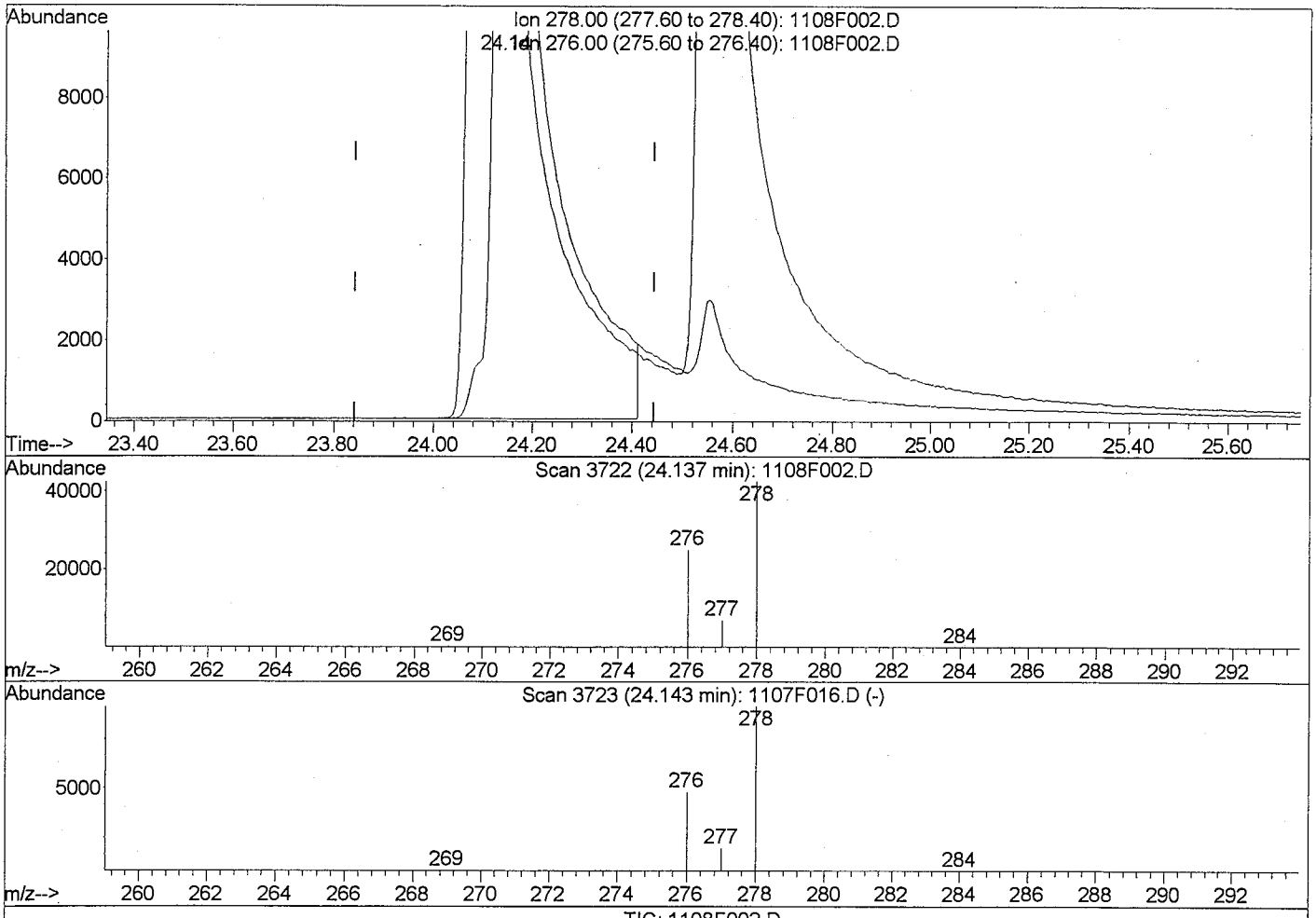
incomplete 11/10/03
mt
11/11/03

1108F002.D 1107ALK.M Mon Nov 10 16:07:18 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:04 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 15:37:35 2003
Response via : Multiple Level Calibration



TIC: 1108F002.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1811.86ng/ml

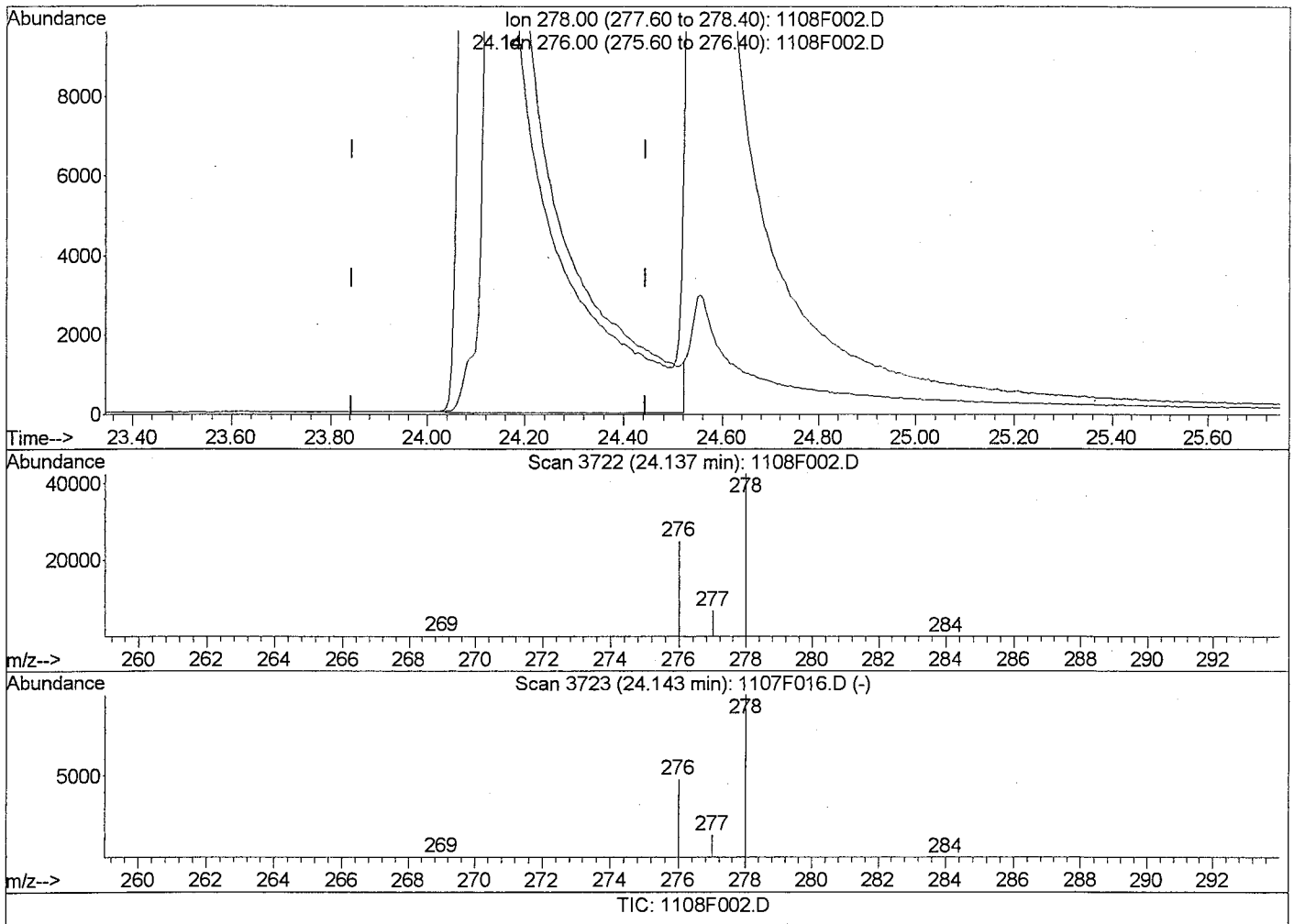
response 186545

Ion	Exp%	Act%
278.00	100	100
276.00	47.90	58.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F002.D Vial: 2
Acq On : 8 Nov 2003 6:24 am Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:05 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 15:37:35 2003
Response via : Multiple Level Calibration



TIC: 1108F002.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1911.86ng/ml m

response 196841

Ion	Exp%	Act%
278.00	100	100
276.00	47.90	58.96
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/11/03 11/11/03

1108F002.D 1107ALK.M Mon Nov 10 16:07:31 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:09:28 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

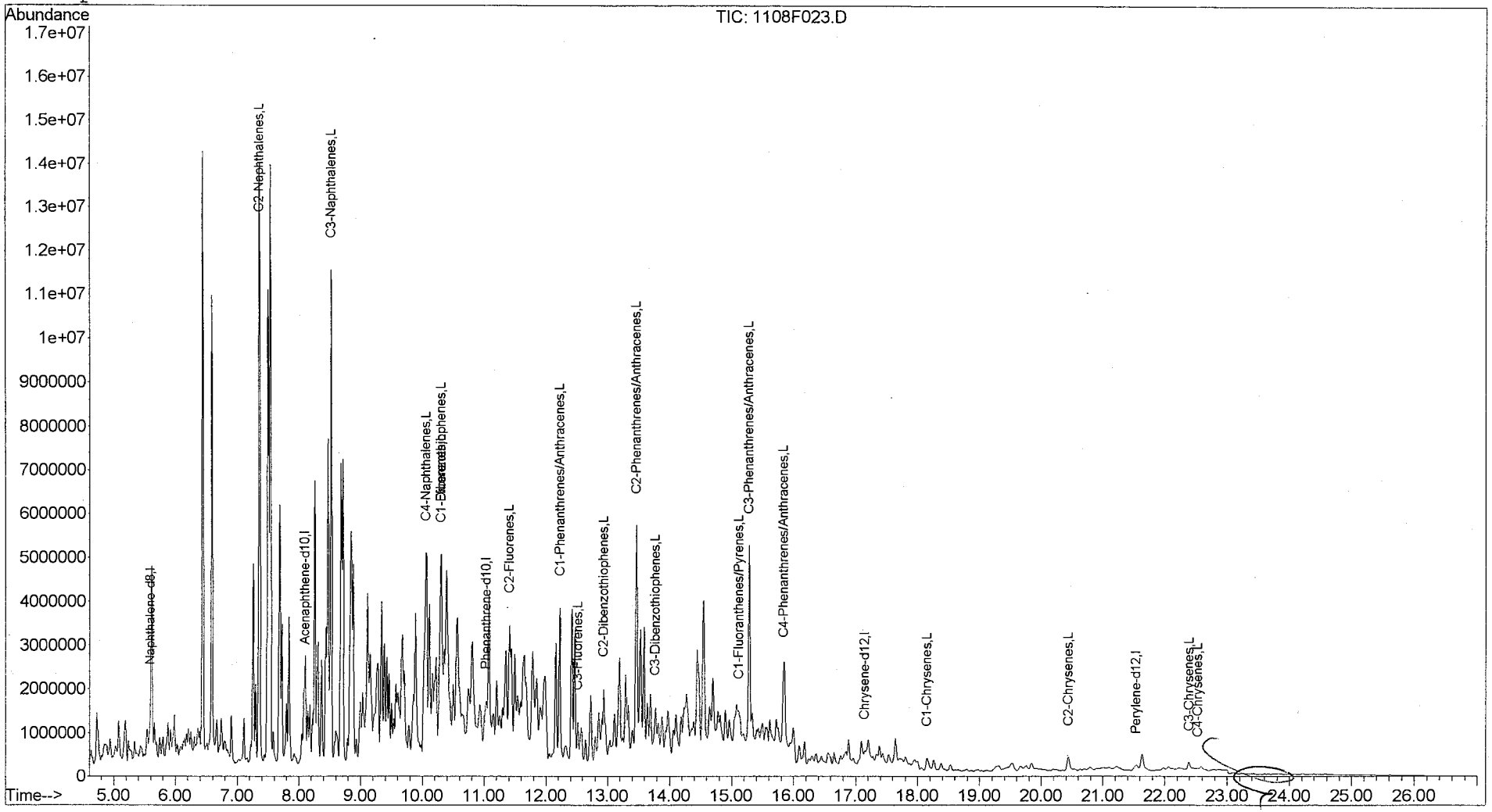
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.59	136	276049	1000.00	ng/ml	0.01
11) Acenaphthene-d10	8.08	164	286932	1000.00	ng/ml	0.02
23) Phenanthrene-d10	11.02	188	316604	1000.00	ng/ml	0.03
38) Chrysene-d12	17.15	240	262133	1000.00	ng/ml	0.02
48) Perylene-d12	21.55	264	295912	1000.00	ng/ml	0.04
System Monitoring Compounds						
5) Biphenyl-d10	0.00	164	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
16) Fluorene-d10	0.00	176	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	0.00	212	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
41) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
8) C2-Naphthalenes	7.36	156	34373899m	110127.49	ng/ml	
9) C3-Naphthalenes	8.53	170	37090939m	118832.37	ng/ml	
10) C4-Naphthalenes	10.06	184	30909396m	99027.87	ng/ml	
18) C1-Fluorenes	10.30	180	3044595m	8341.71	ng/ml	
19) C2-Fluorenes	11.41	194	6637654m	18186.12	ng/ml	
20) C3-Fluorenes	12.52	208	8720474m	23892.71	ng/ml	
25) C1-Dibenzothiophenes	10.31	198	12423275m	34009.48	ng/ml	
26) C2-Dibenzothiophenes	12.93	212	9783716m	26783.53	ng/ml	
27) C3-Dibenzothiophenes	13.78	226	9314699m	25499.56	ng/ml	
32) C1-Phenanthrenes/Anthracen	12.22	192	12082507m	31488.18	ng/ml	
33) C2-Phenanthrenes/Anthracen	13.47	206	16760296m	43678.95	ng/ml	
34) C3-Phenanthrenes/Anthracen	15.28	220	18193128m	47413.05	ng/ml	
35) C4-Phenanthrenes/Anthracen	15.83	234	12353718m	32194.98	ng/ml	
40) C1-Fluoranthenes/Pyrenes	15.11	216	7167351m	20918.69	ng/ml	
44) C1-Chrysenes	18.15	242	2273417m	8150.00	ng/ml	
45) C2-Chrysenes	20.44	256	4338465m	15553.02	ng/ml	
46) C3-Chrysenes	22.39	270	4317660m	15478.43	ng/ml	
47) C4-Chrysenes	22.53	284	4208913m	15088.58	ng/ml	

(#) = qualifier out of range (m) = manual integration

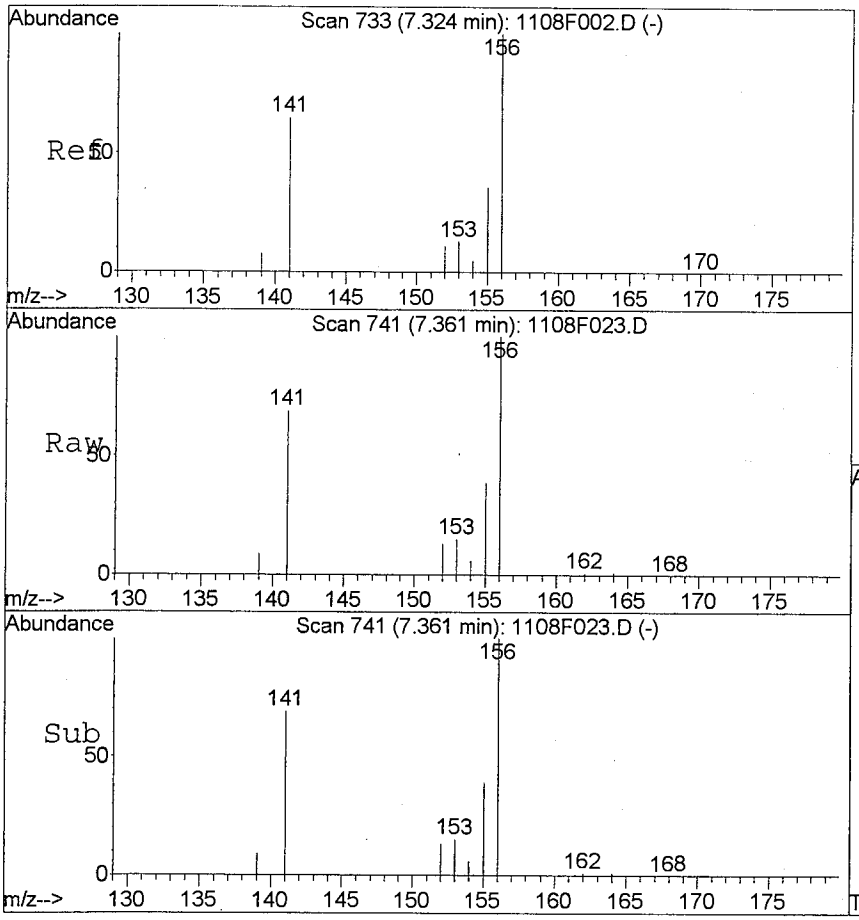
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:34 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Initial Calibration



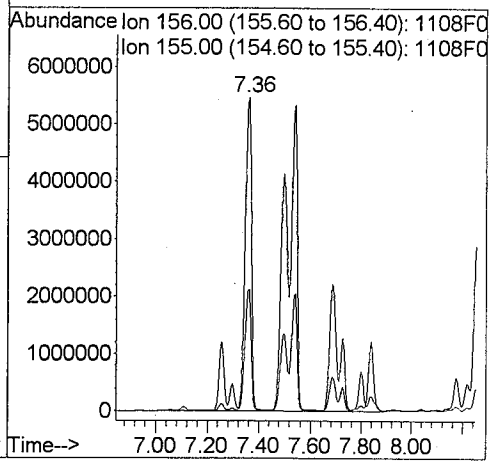
1075

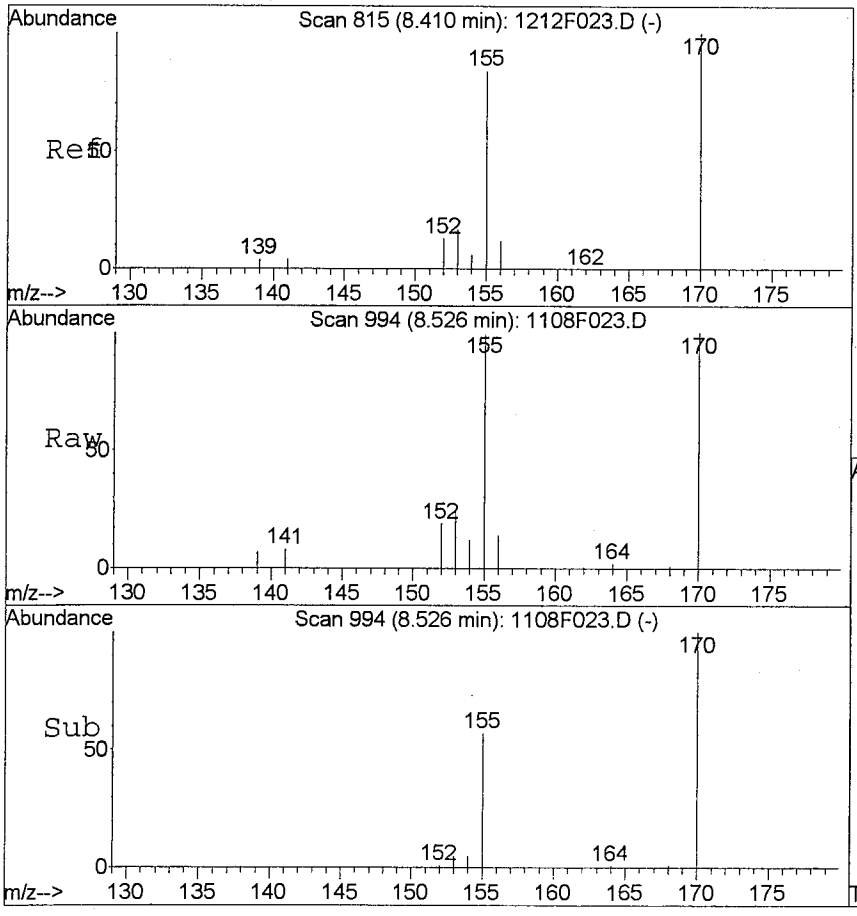


#8
C2-Naphthalenes
Concen: 110127.49 ng/ml m
RT: 7.36 min Scan# 741
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:156 Resp:34373899

Ion	Ratio	Lower	Upper
156	100		
155	38.7	8.3	68.3

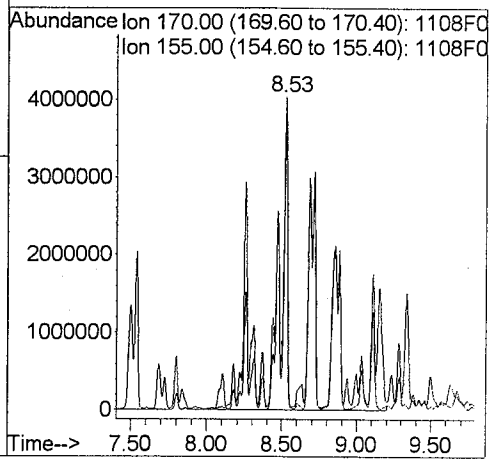


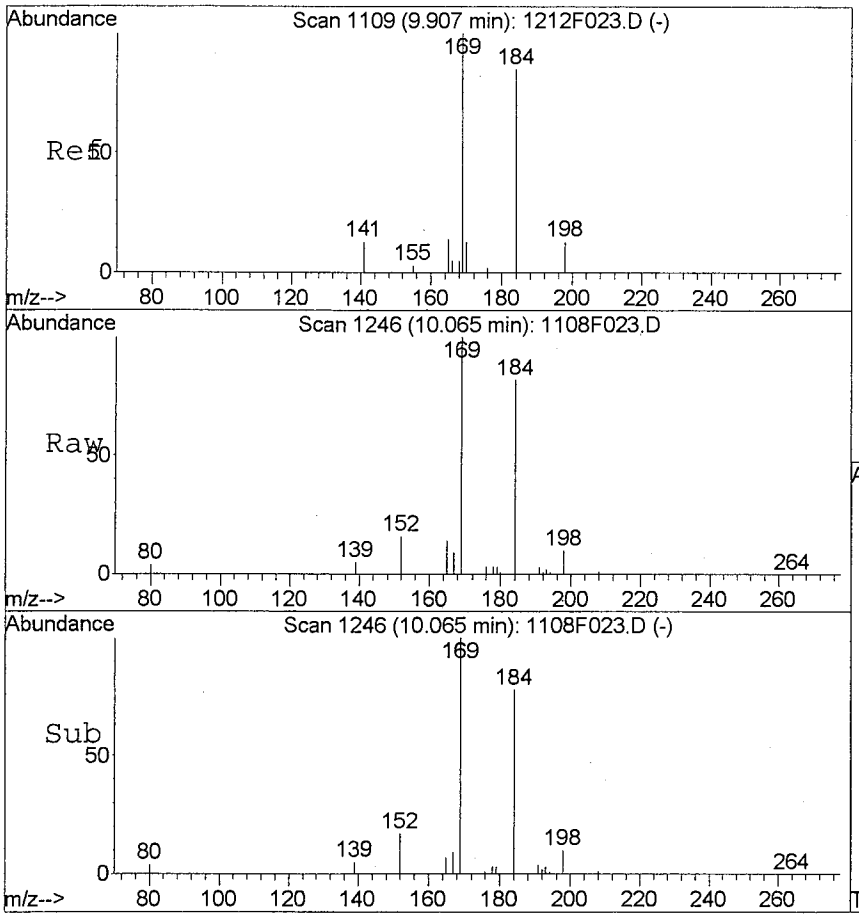


#9
C3-Naphthalenes
Concen: 118832.37 ng/ml m
RT: 8.53 min Scan# 994
Delta R.T. -0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:170 Resp:37090939

Ion	Ratio	Lower	Upper
170	100		
155	98.8	56.9	116.9

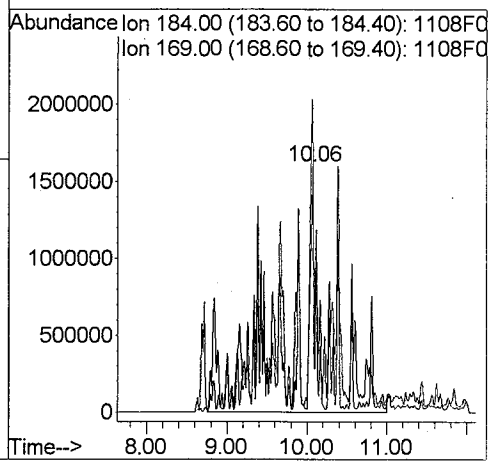


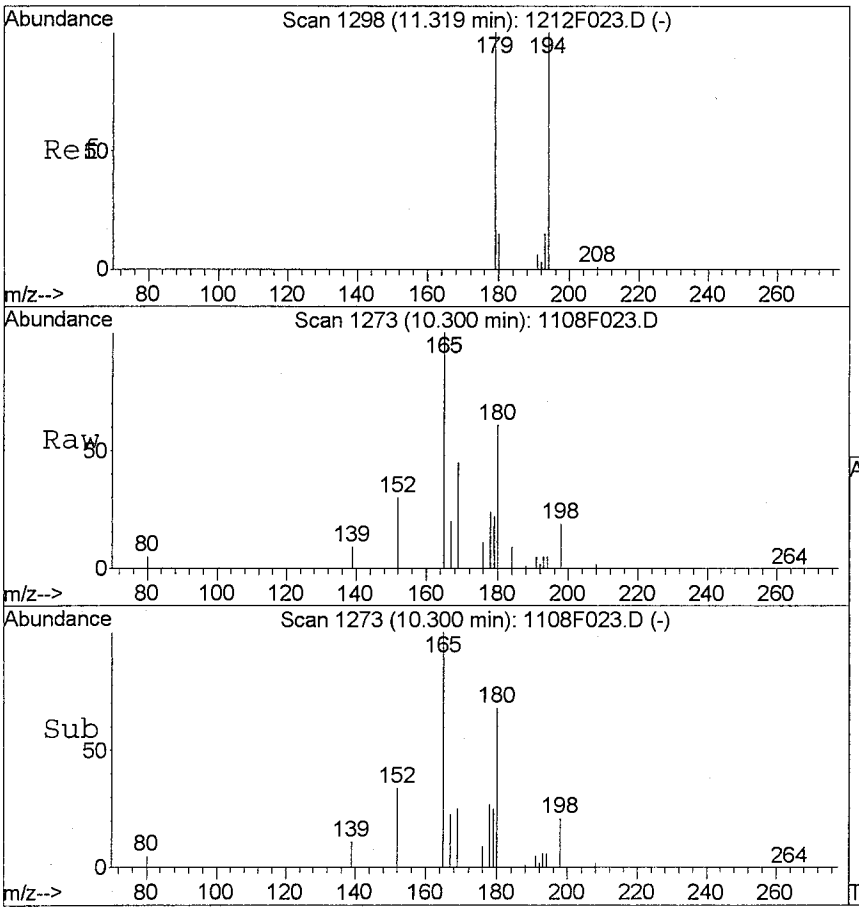


#10
C4-Naphthalenes
Concen: 99027.87 ng/ml m
RT: 10.06 min Scan# 1246
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:184 Resp:30909396

Ion	Ratio	Lower	Upper
184	100		
169	122.2	89.7	149.7

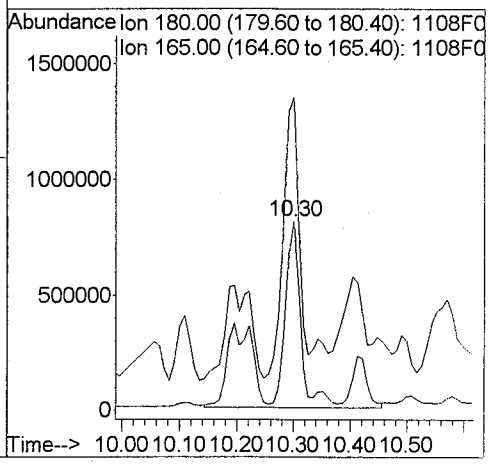


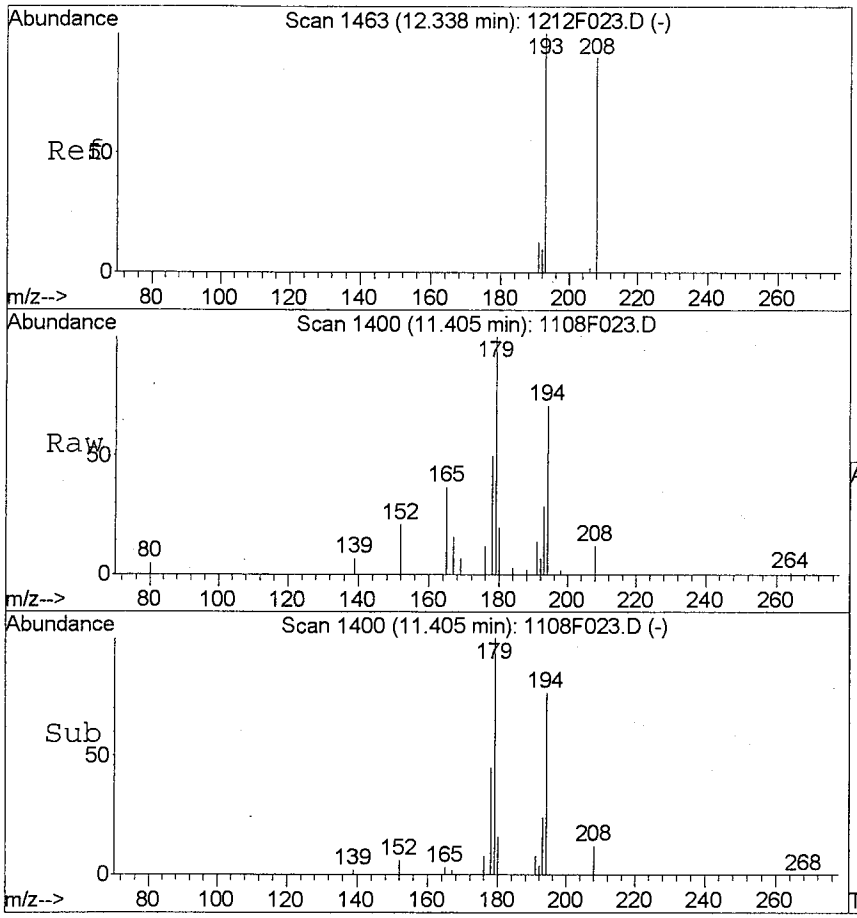


#18
C1-Fluorenes
Concen: 8341.71 ng/ml m
RT: 10.30 min Scan# 1273
Delta R.T. -0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:180 Resp: 3044595

Ion	Ratio	Lower	Upper
180	100		
165	164.9	148.7	208.7

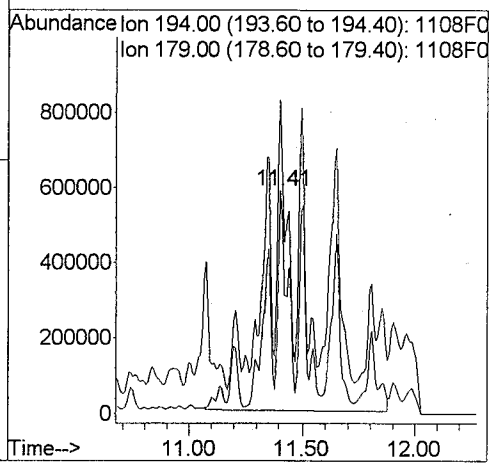


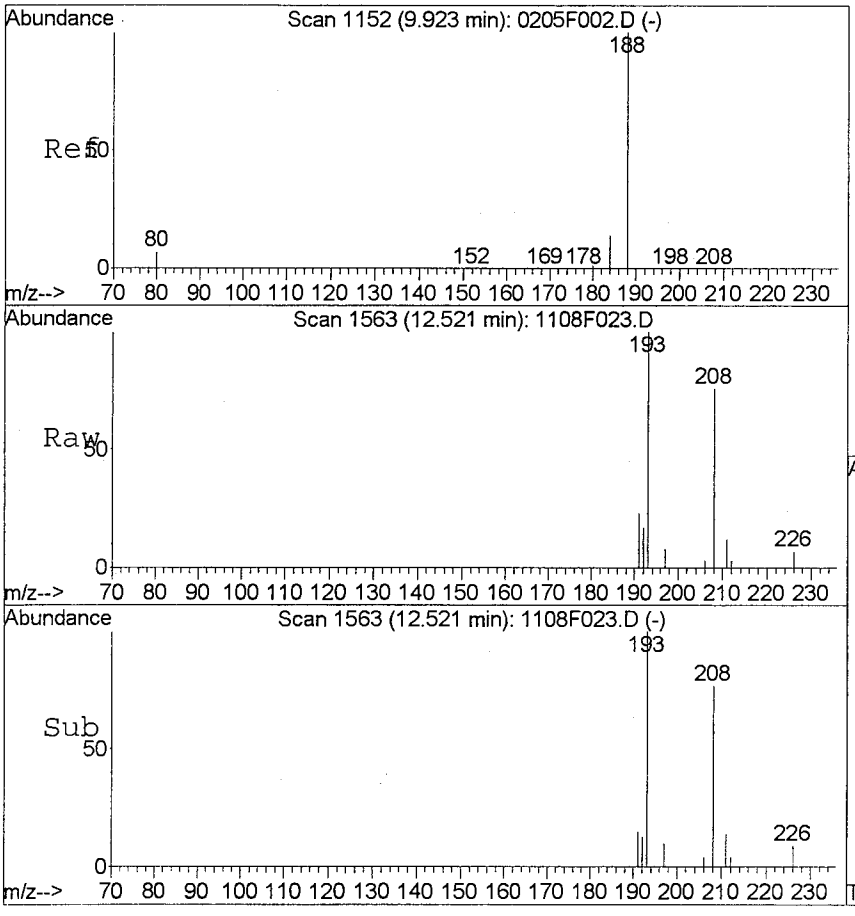


#19
C2-Fluorenes
Concen: 18186.12 ng/ml m
RT: 11.41 min Scan# 1400
Delta R.T. -0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:194 Resp: 6637654

Ion	Ratio	Lower	Upper
194	100		
179	140.6	107.0	167.0

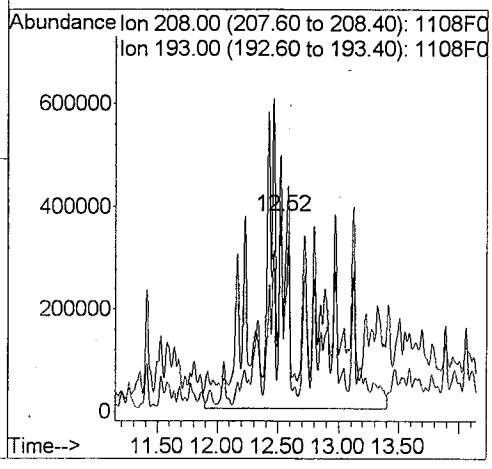


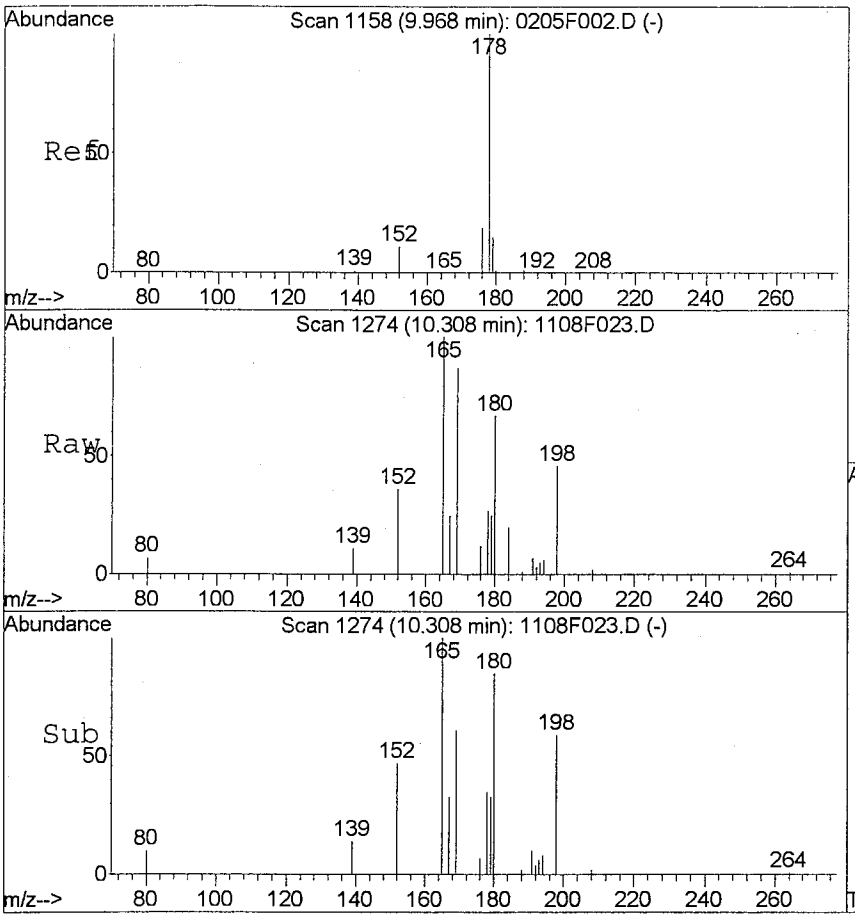


#20
C3-Fluorenes
Concen: 23892.71 ng/ml m
RT: 12.52 min Scan# 1563
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:208 Resp: 8720474

Ion	Ratio	Lower	Upper
208	100		
193	131.0	92.0	152.0

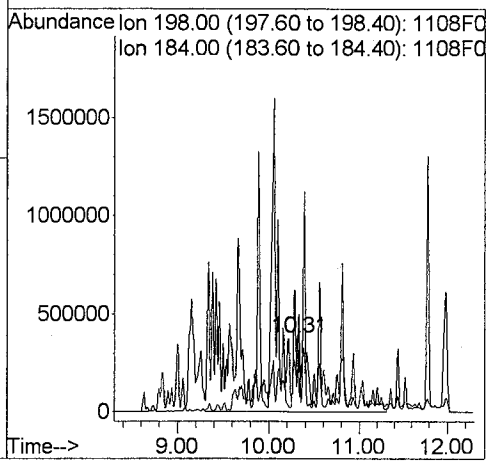


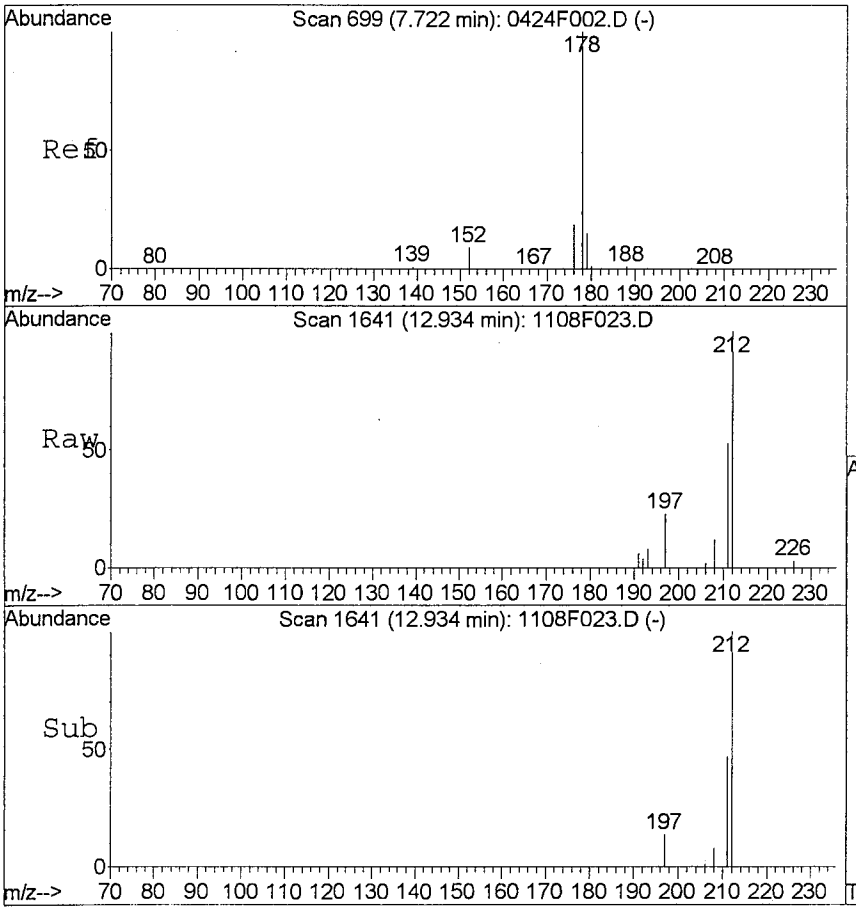


#25
C1-Dibenzothiophenes
Concen: 34009.48 ng/ml m
RT: 10.31 min Scan# 1274
Delta R.T. 0.10 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:198 Resp:12423275

Ion	Ratio	Lower	Upper
198	100		
184	42.6	74.1	134.1#

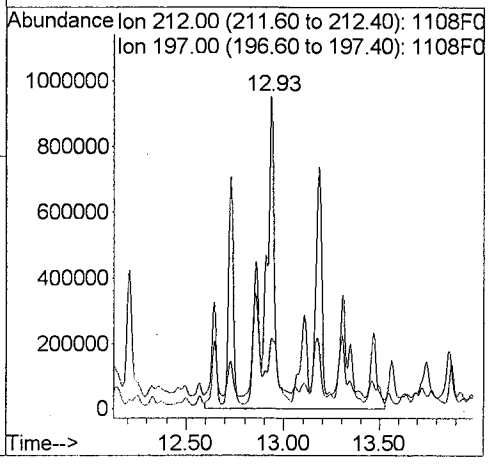


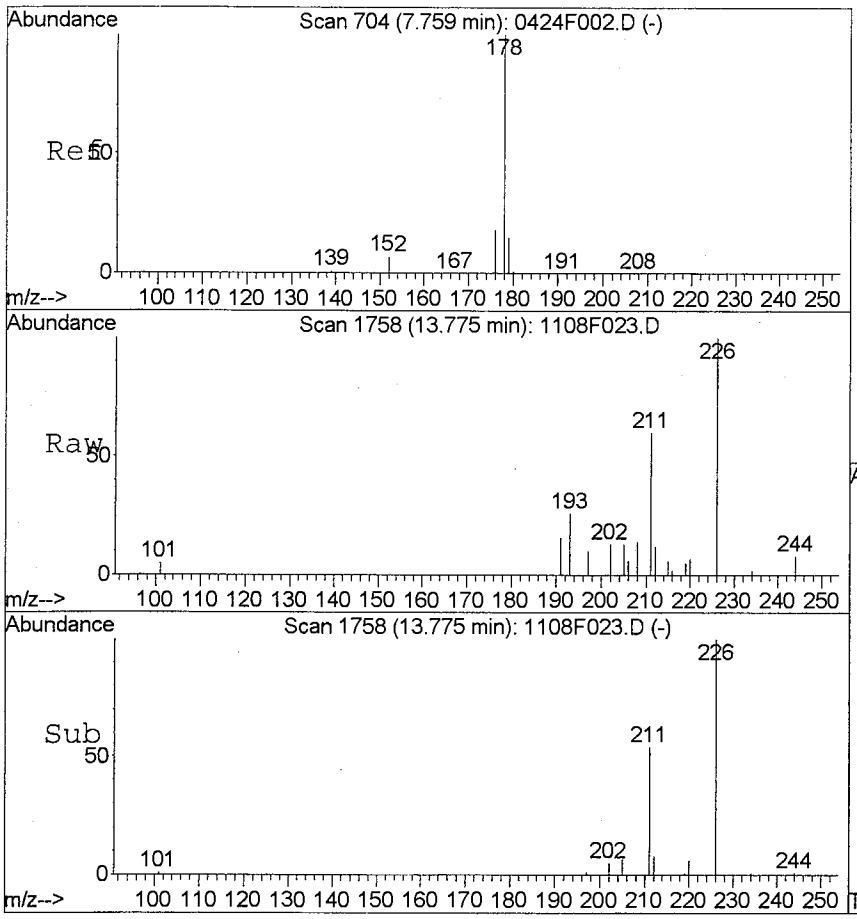


#26
C2-Dibenzothiophenes
Concen: 26783.53 ng/ml m
RT: 12.93 min Scan# 1641
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:212 Resp: 9783716

Ion	Ratio	Lower	Upper
212	100		
197	22.5	0.0	53.8

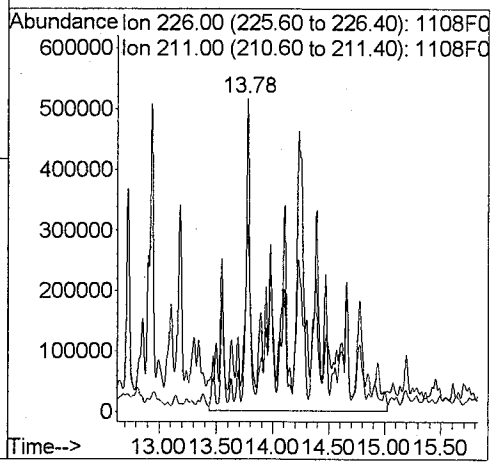


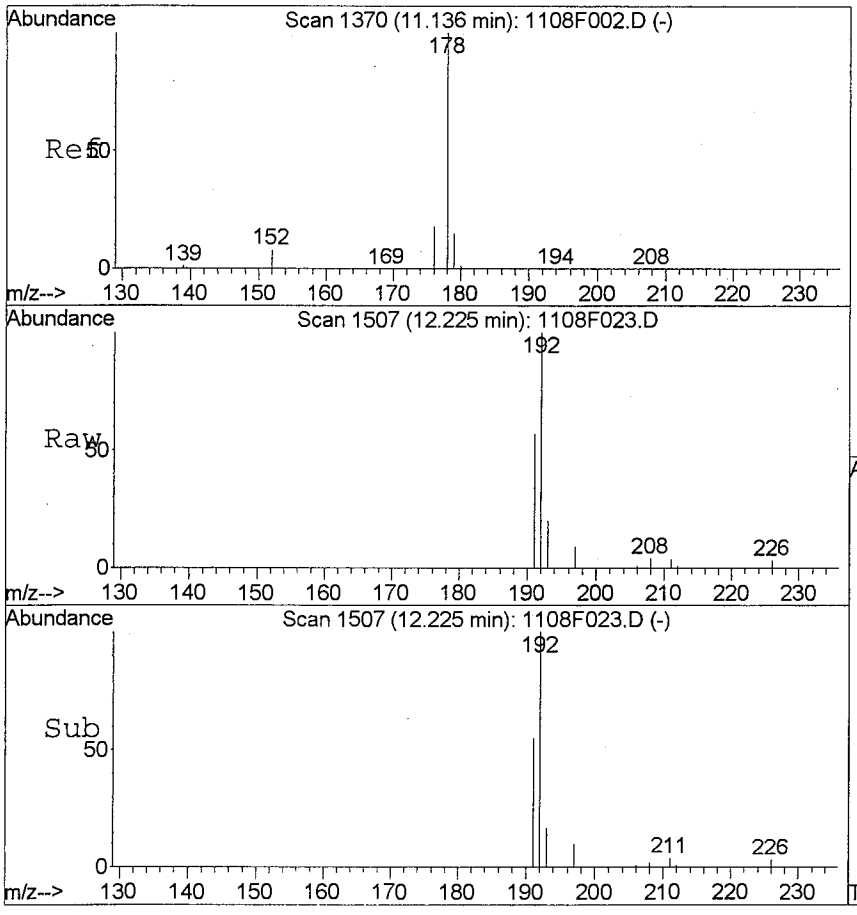


#27
C3-Dibenzothiophenes
Concen: 25499.56 ng/ml m
RT: 13.78 min Scan# 1758
Delta R.T. -0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:226 Resp: 9314699

Ion	Ratio	Lower	Upper
226	100		
211	60.0	27.1	87.1

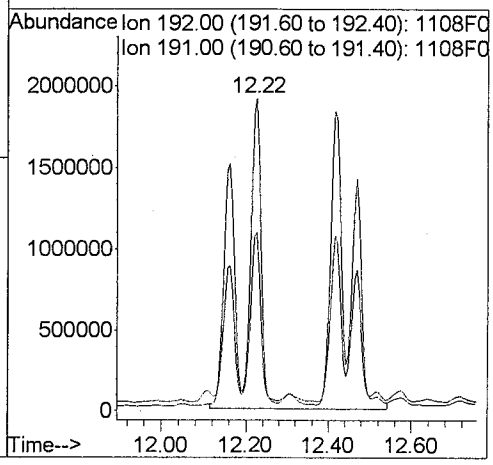


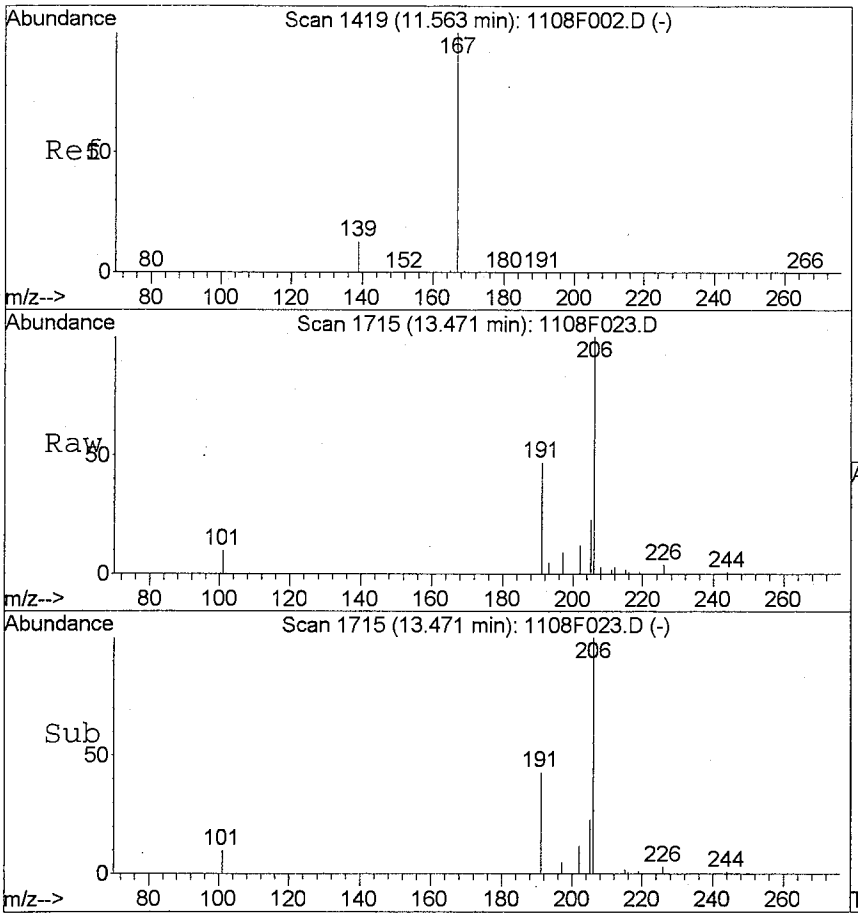


#32
C1-Phenanthrenes/Anthracenes
Concen: 31488.18 ng/ml m
RT: 12.22 min Scan# 1507
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:192 Resp:12082507

Ion	Ratio	Lower	Upper
192	100		
191	57.3	25.3	85.3

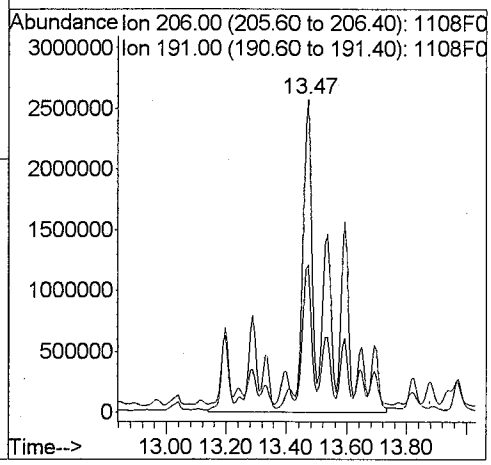


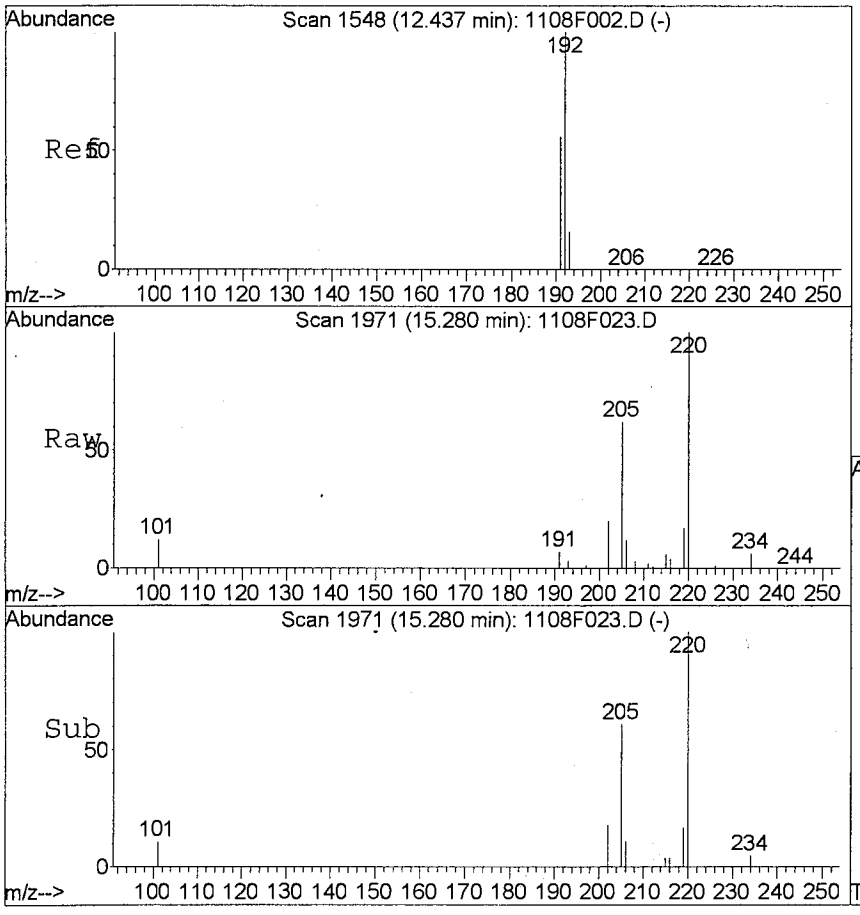


#33
C2-Phenanthrenes/Anthracenes
Concen: 43678.95 ng/ml m
RT: 13.47 min Scan# 1715
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:206 Resp:16760296

Ion	Ratio	Lower	Upper
206	100		
191	46.9	15.6	75.6

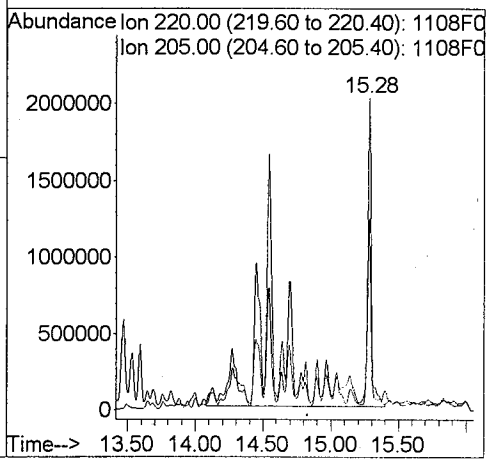


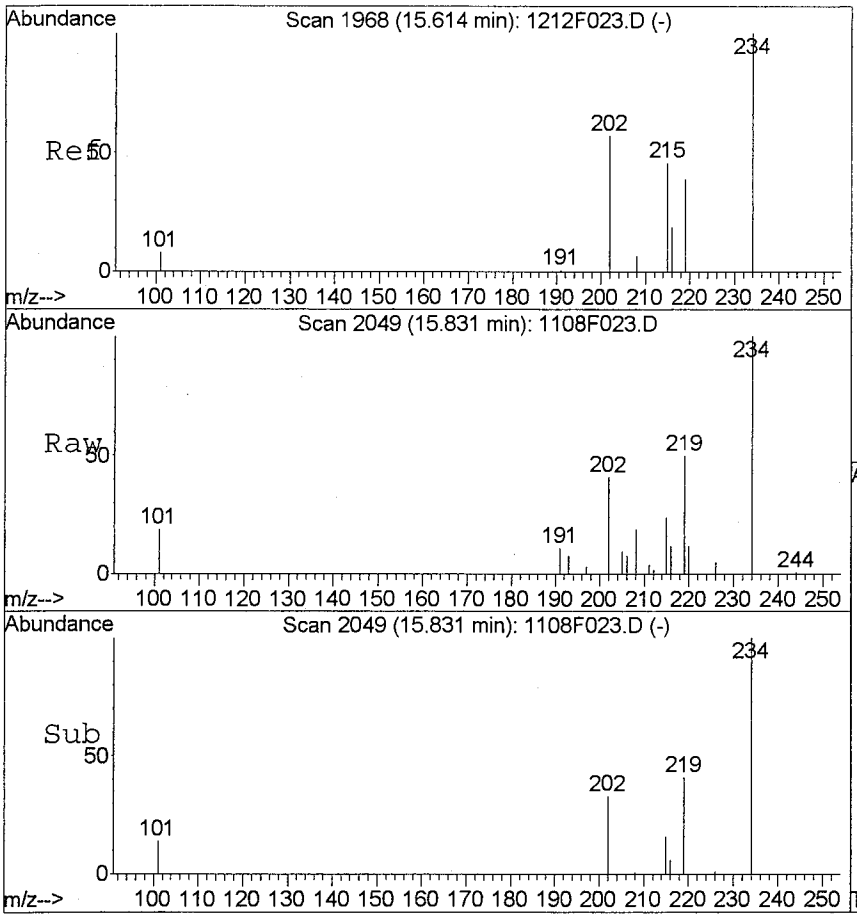


#34
C3-Phenanthrenes/Anthracenes
Concen: 47413.05 ng/ml m
RT: 15.28 min Scan# 1971
Delta R.T. 0.73 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:220 Resp:18193128

Ion	Ratio	Lower	Upper
220	100		
205	61.7	20.0	80.0

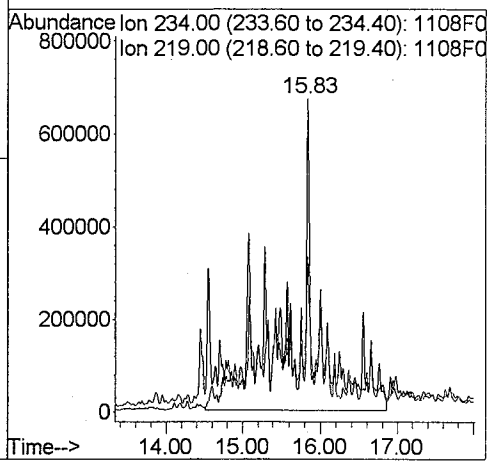


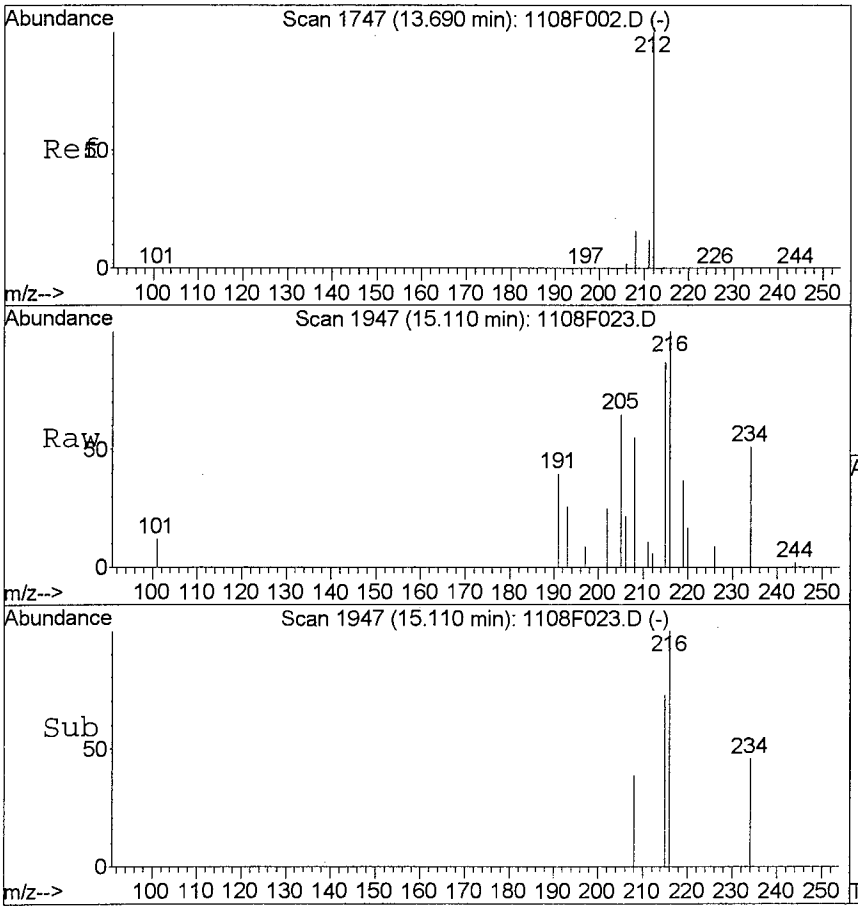


#35
C4-Phenanthrenes/Anthracenes
Concen: 32194.98 ng/ml m
RT: 15.83 min Scan# 2049
Delta R.T. 0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:234 Resp:12353718

Ion	Ratio	Lower	Upper
234	100		
219	49.7	17.7	77.7

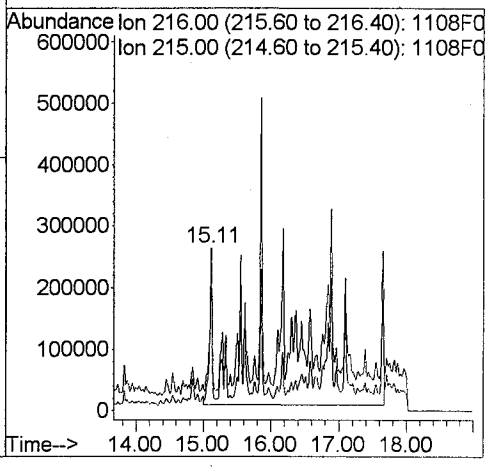


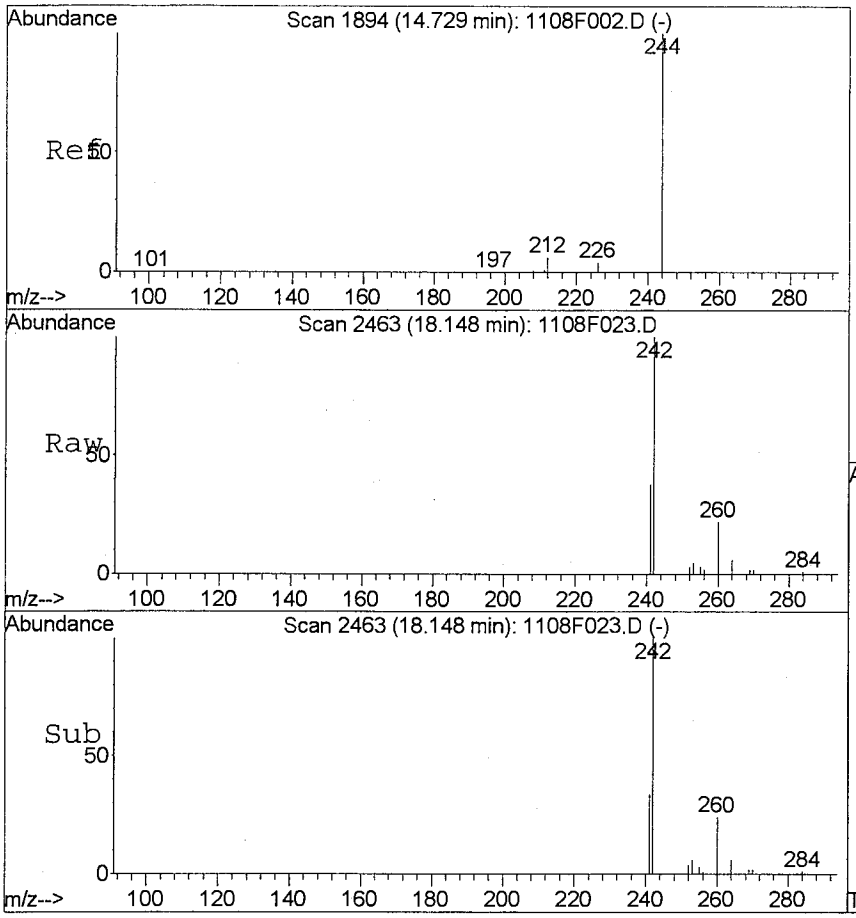


#40
C1-Fluoranthenes/Pyrenes
Concen: 20918.69 ng/ml m
RT: 15.11 min Scan# 1947
Delta R.T. -0.44 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:216 Resp: 7167351

Ion	Ratio	Lower	Upper
216	100		
215	87.5	54.8	114.8

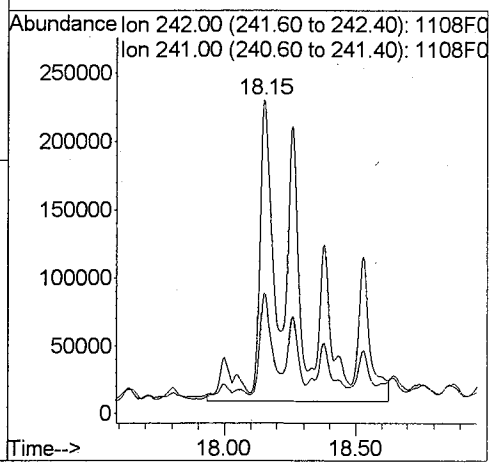


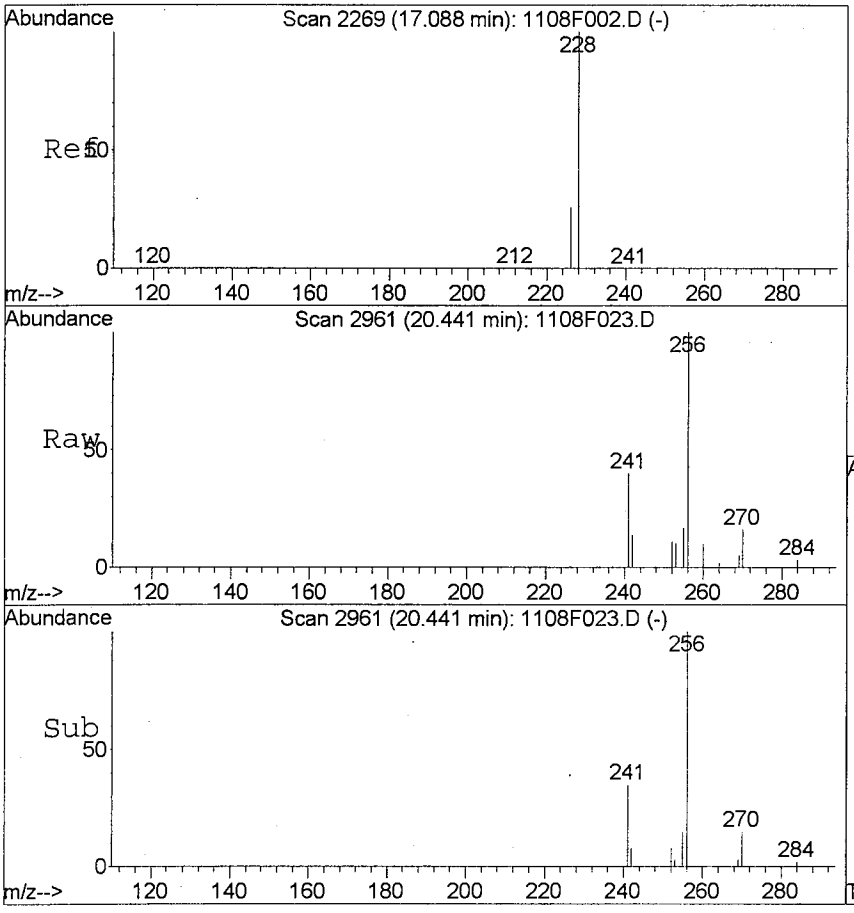


#44
C1-Chrysenes
Concen: 8150.00 ng/ml m
RT: 18.15 min Scan# 2463
Delta R.T. -0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:242 Resp: 2273417

Ion	Ratio	Lower	Upper
242	100		
241	38.5	0.1	60.1

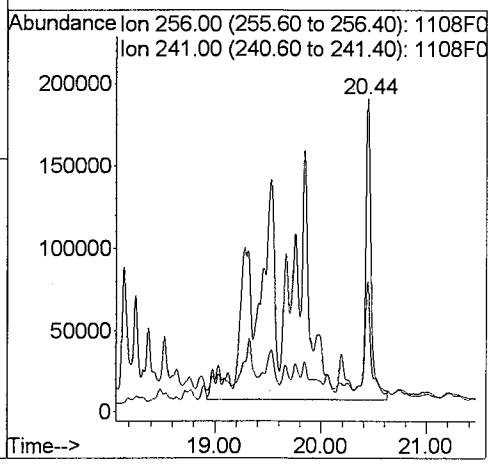


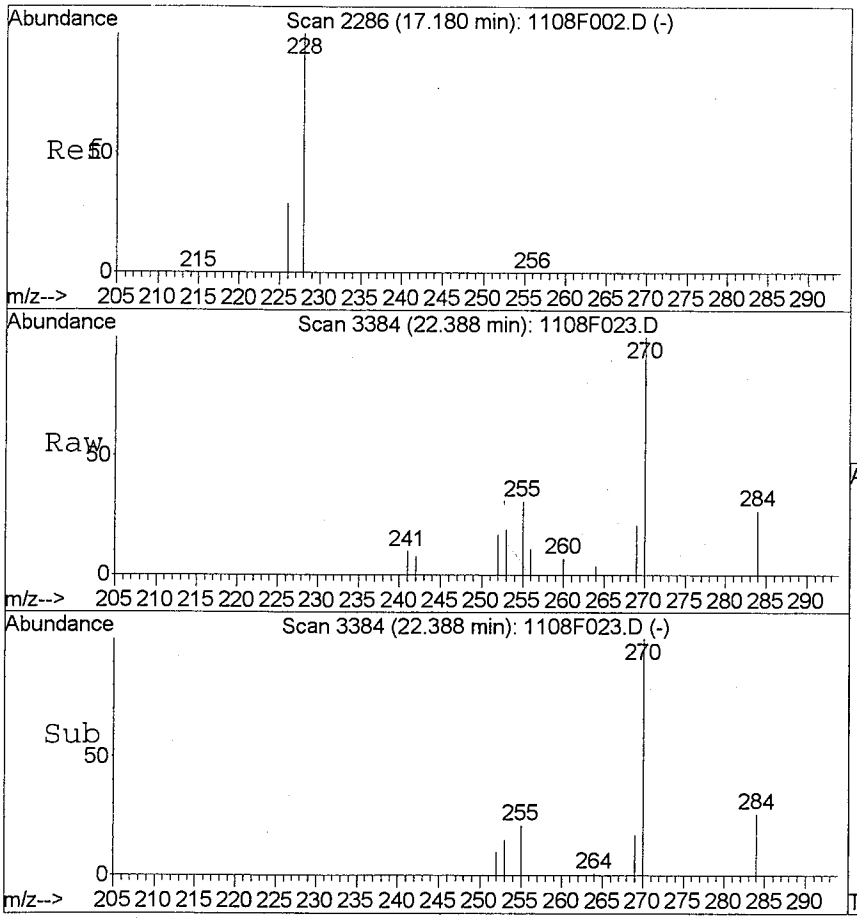


#45
C2-Chrysenes
Concen: 15553.02 ng/ml m
RT: 20.44 min Scan# 2961
Delta R.T. 0.92 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:256 Resp: 4338465

Ion	Ratio	Lower	Upper
256	100		
241	40.5	7.8	67.8

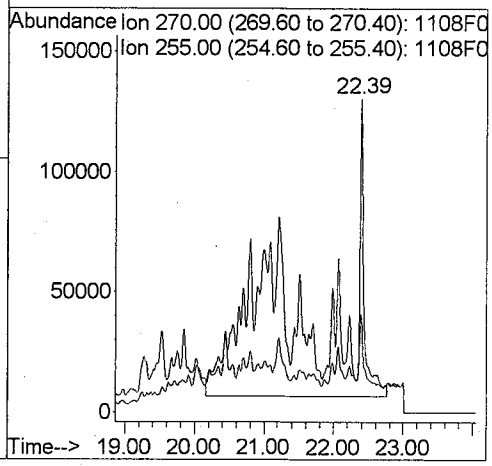


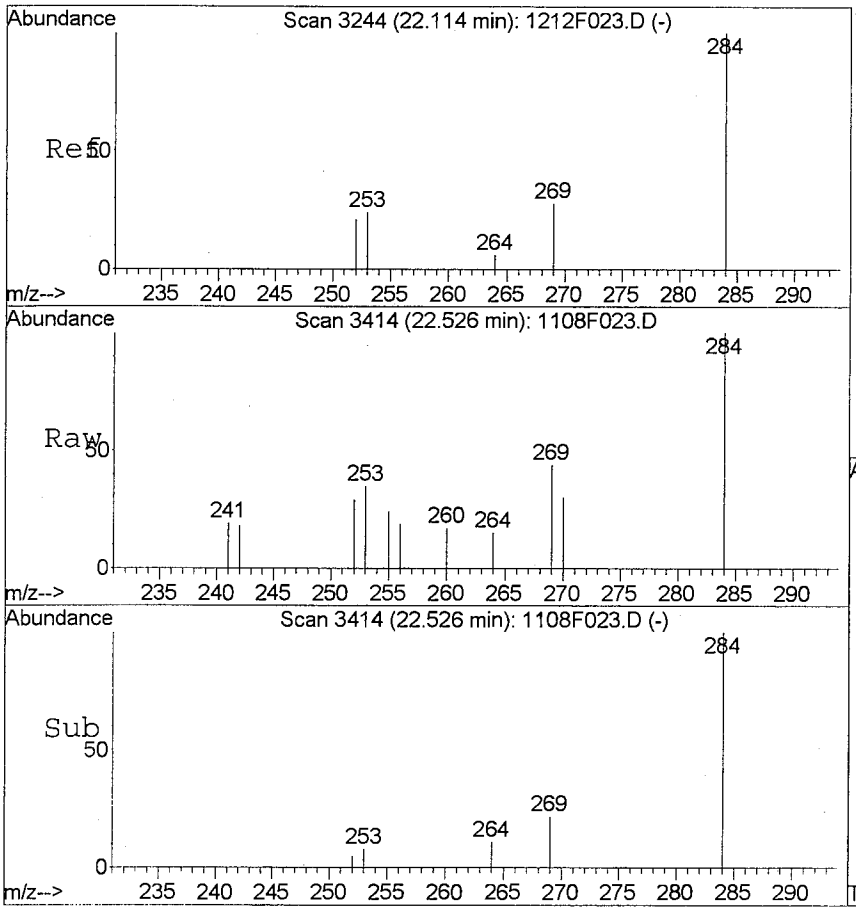


#46
C3-Chrysenes
Concen: 15478.43 ng/ml m
RT: 22.39 min Scan# 3384
Delta R.T. 1.17 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:270 Resp: 4317660

Ion	Ratio	Lower	Upper
270	100		
255	31.1	0.0	56.7

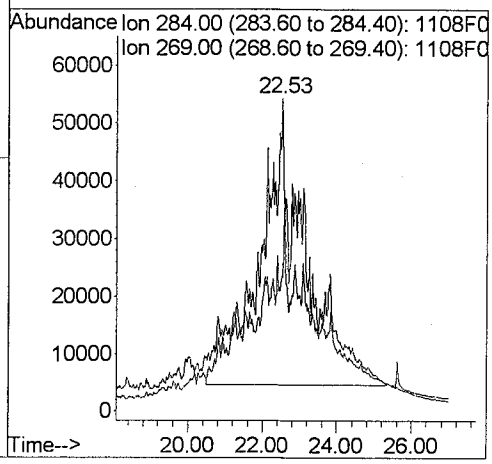




#47
C4-Chrysenes
Concen: 15088.58 ng/ml m
RT: 22.53 min Scan# 3414
Delta R.T. -0.00 min
Lab File: 1108F023.D
Acq: 8 Nov 2003 7:09 pm

Tgt Ion:284 Resp: 4208913

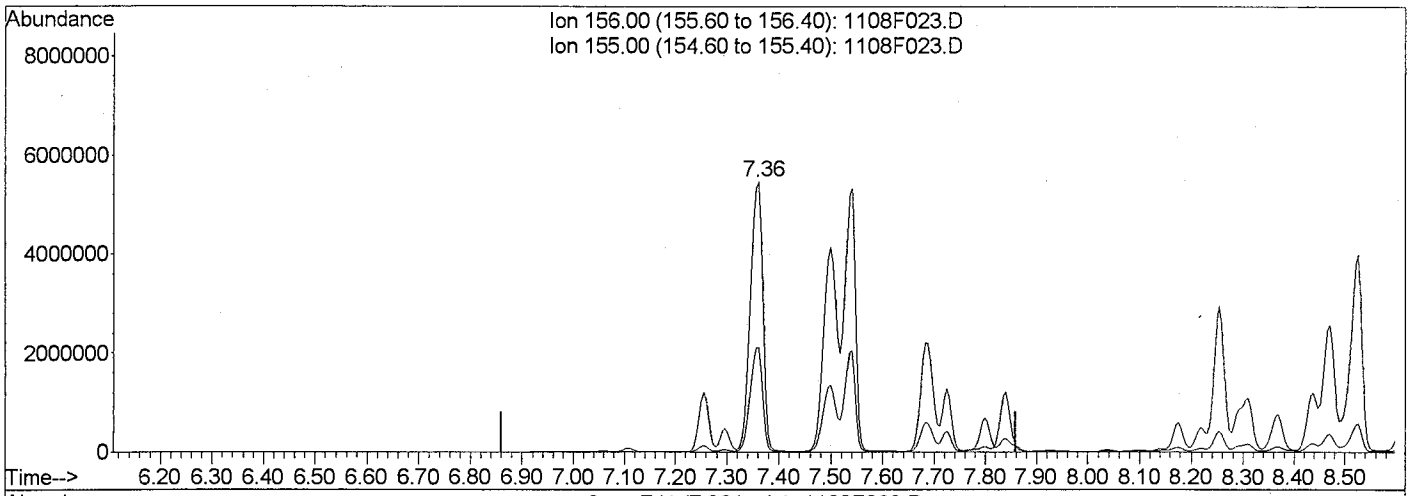
Ion	Ratio	Lower	Upper
284	100		
269	43.6	16.2	76.2

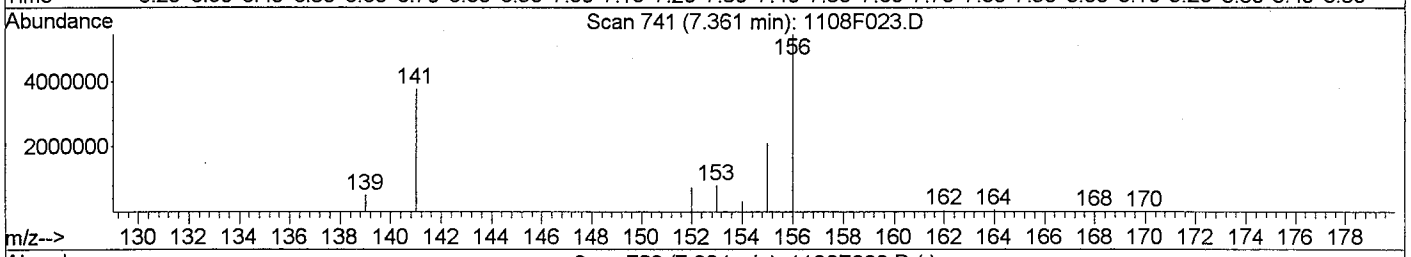


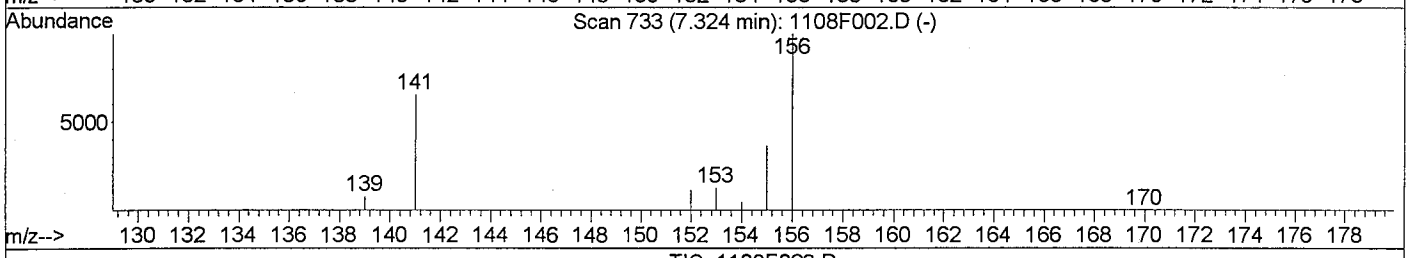
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:47 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(8) C2-Naphthalenes (L)

7.36min 110127.49ng/ml m

response 34373899

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	38.66
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

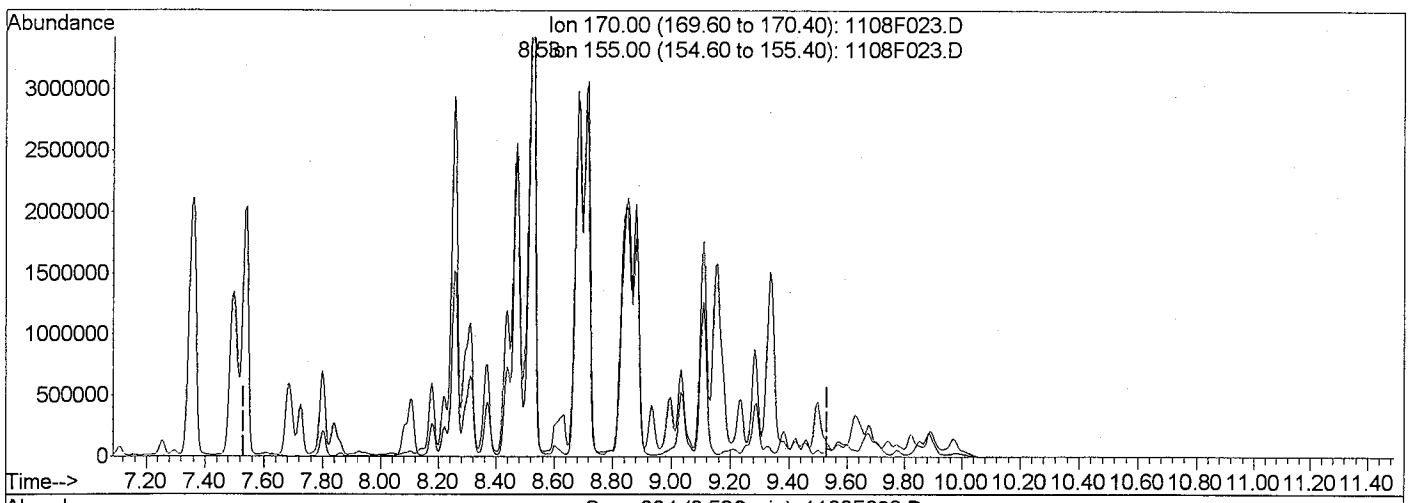
mt 11/11/03

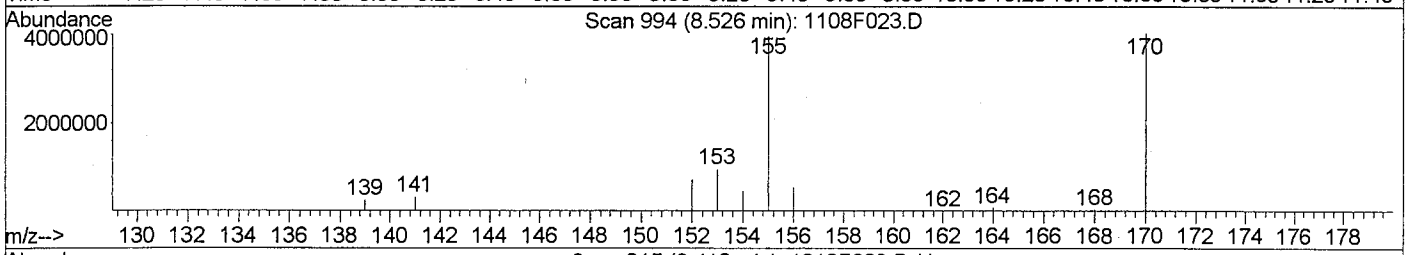
1108F023.D 1107ALK.M Mon Nov 10 16:49:55 2003

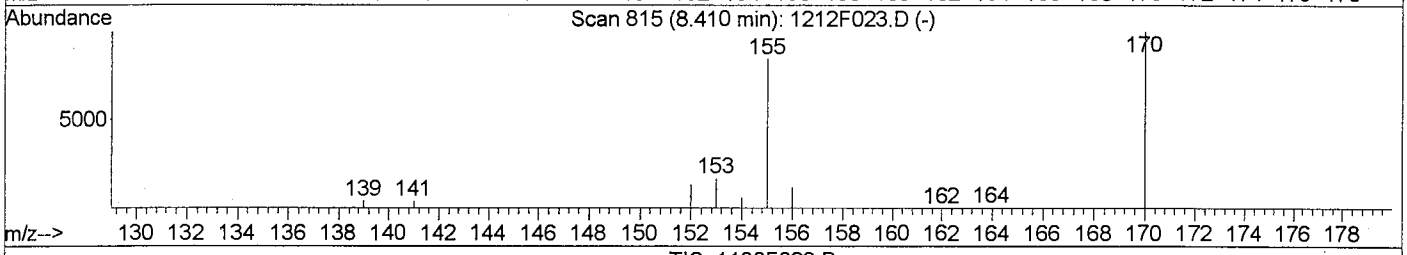
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:48 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(9) C3-Naphthalenes (L)

8.53min 118832.37ng/ml m

response 37090939

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	98.79
0.00	0.00	0.00
0.00	0.00	0.00

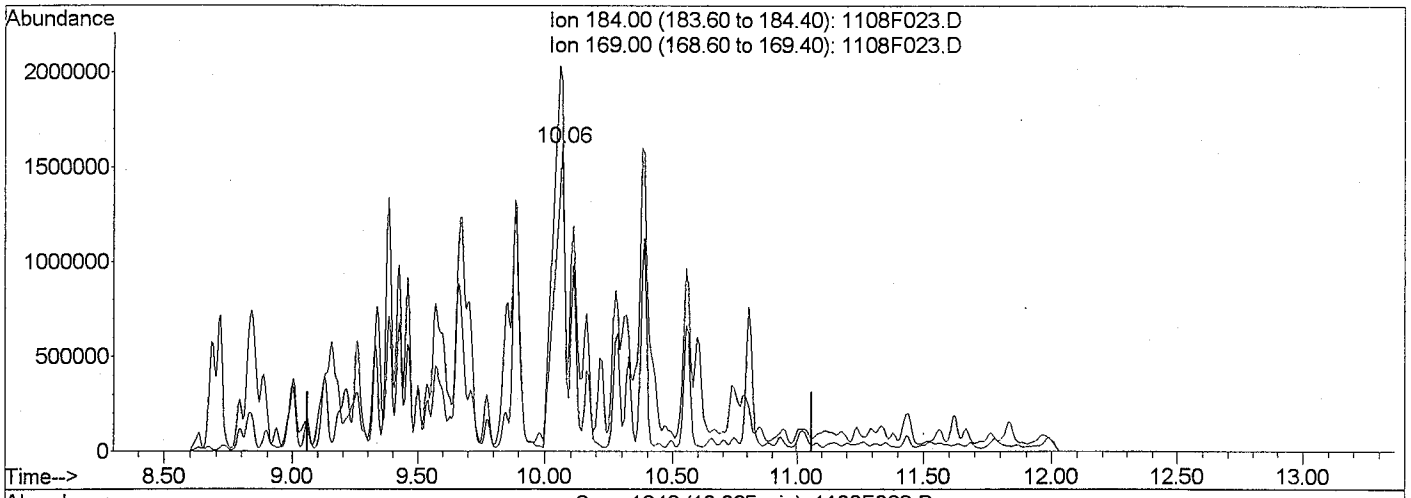
11/10/03 mt 11/10/03

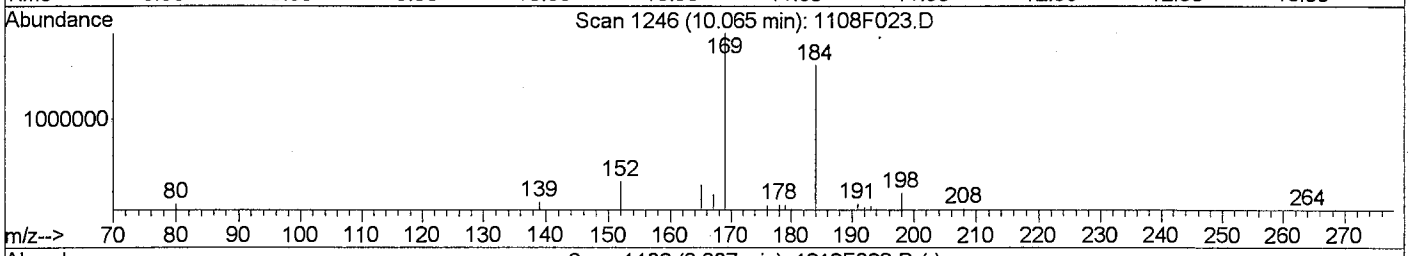
1108F023.D 1107ALK.M Mon Nov 10 16:50:52 2003

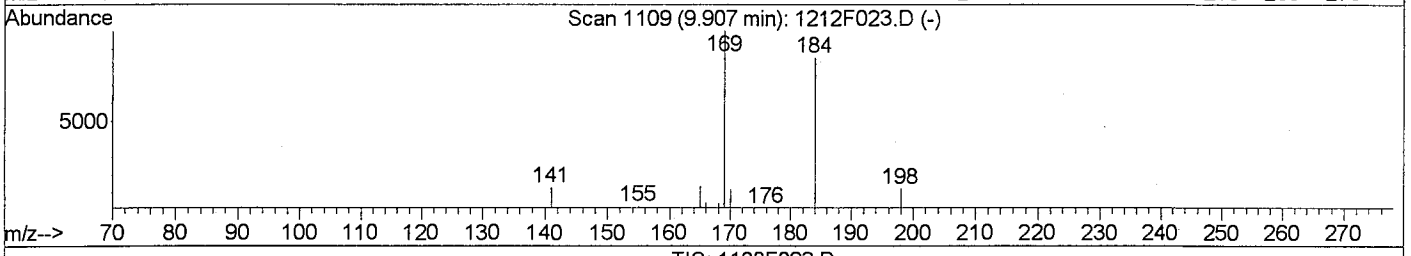
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:49 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(10) C4-Naphthalenes (L)

10.06min 99027.87ng/ml m

response 30909396

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	122.15
0.00	0.00	0.00
0.00	0.00	0.00

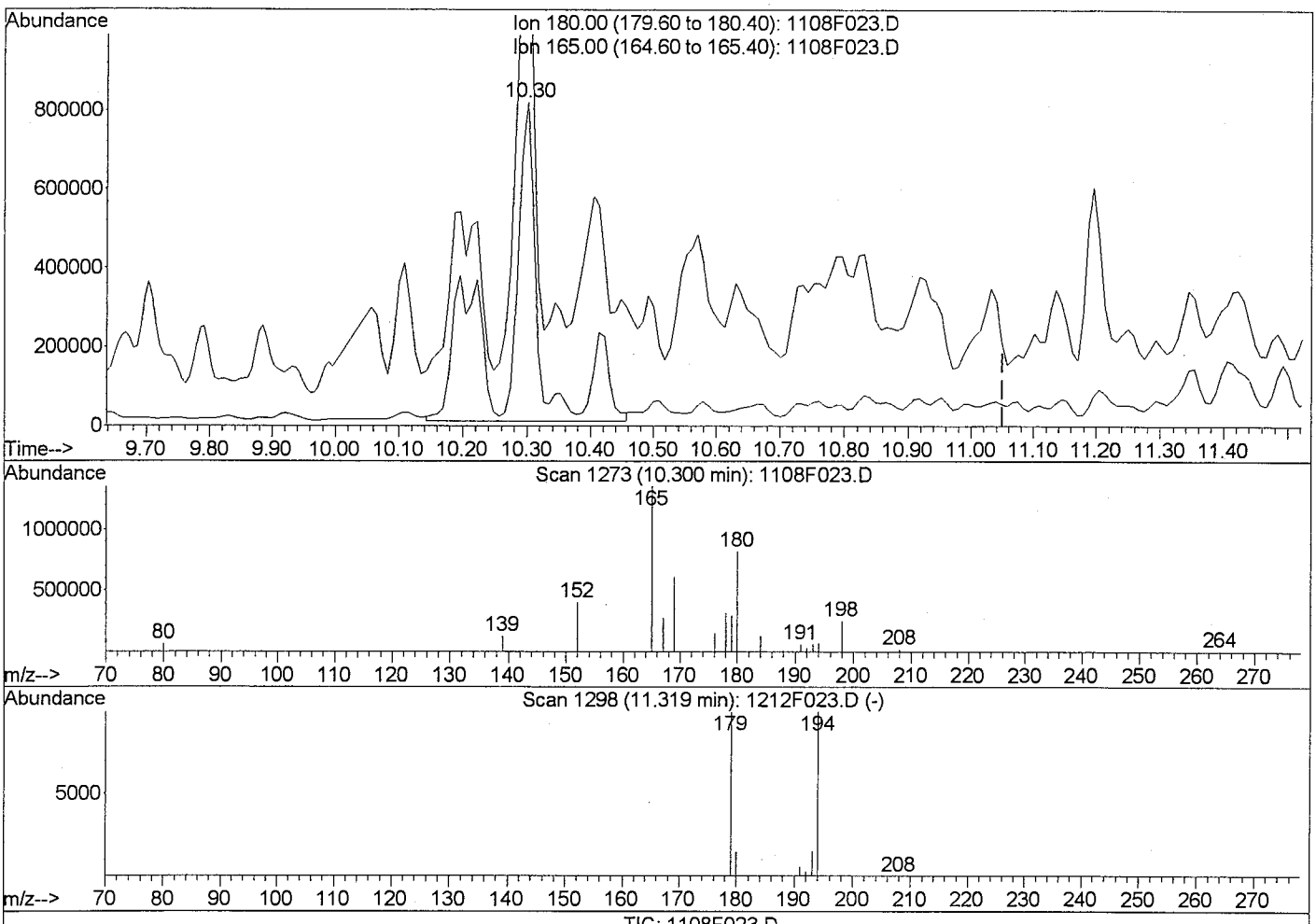
11/10/03
mt
11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:51:37 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:50 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



(18) C1-Fluorenes (L)

10.30min 8341.71ng/ml m

response 3044595

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	164.85
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

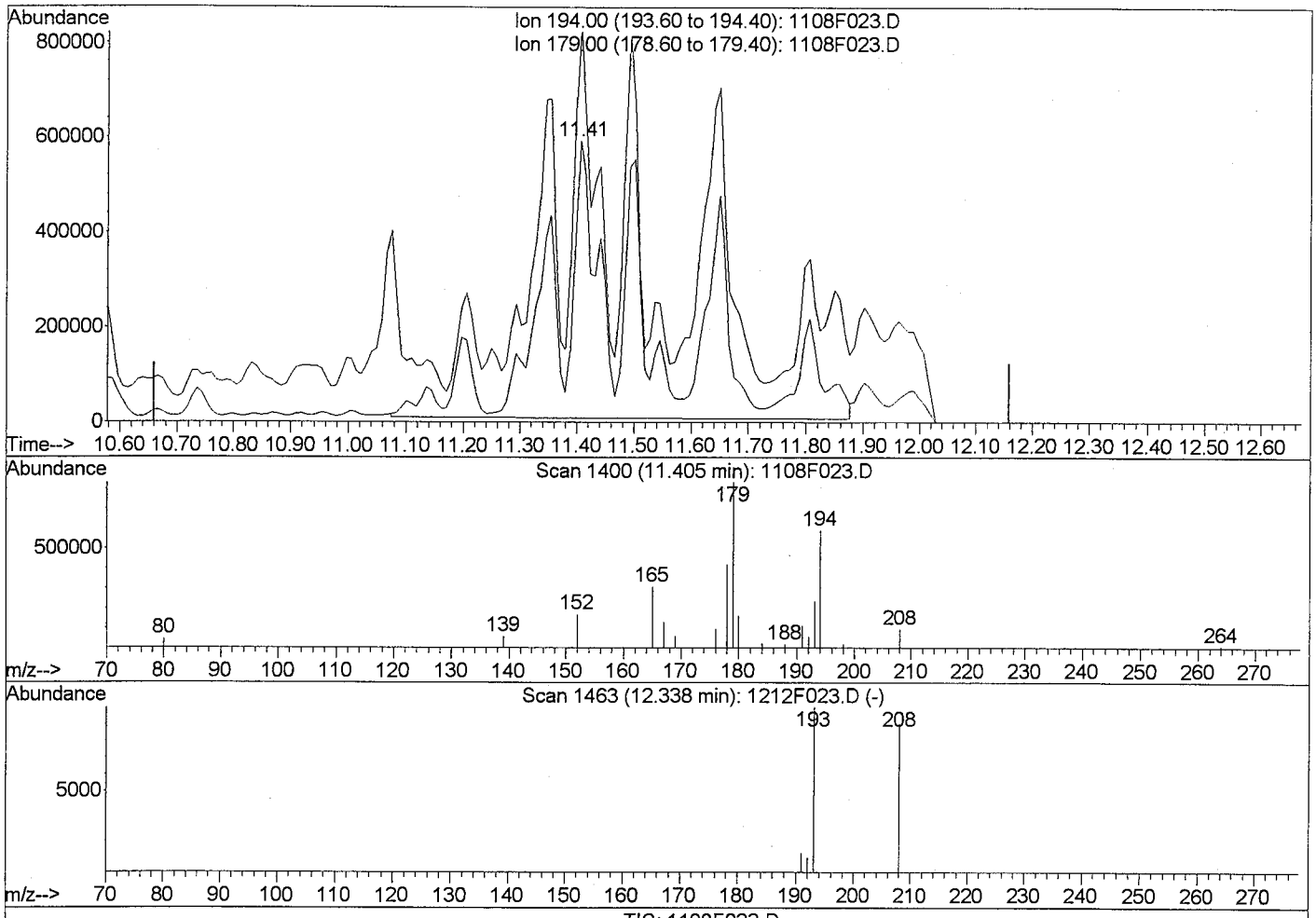
mnt 11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:52:41 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:52 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F023.D

(19) C2-Fluorenes (L)

11.41min 18186.12ng/ml m

response 6637654

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	140.58
0.00	0.00	0.00
0.00	0.00	0.00

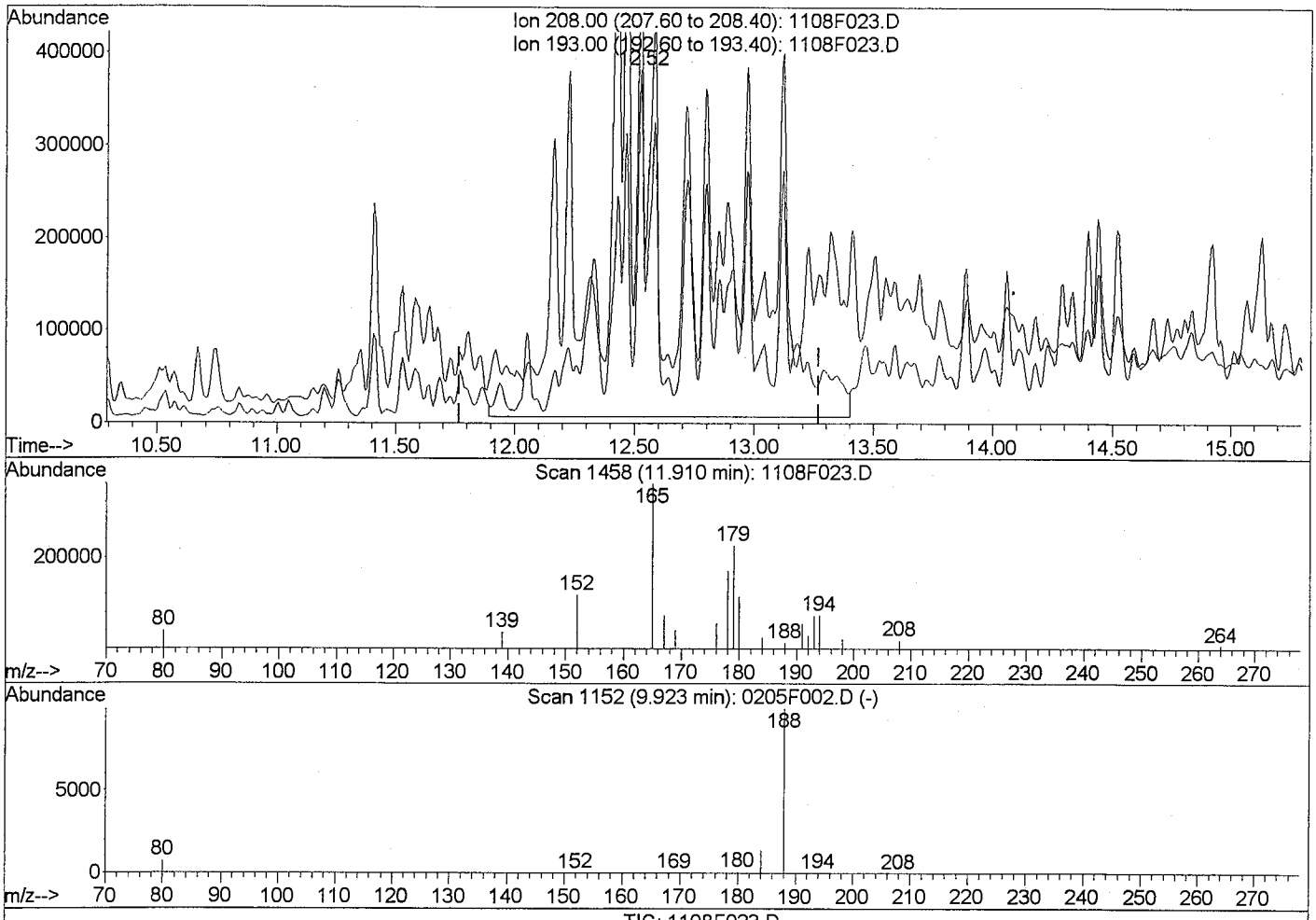
11/10/03 mnt 11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:55:20 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:53 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F023.D

(20) C3-Fluorenes (L)

12.52min 23892.71ng/ml m

response 8720474

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	131.03
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

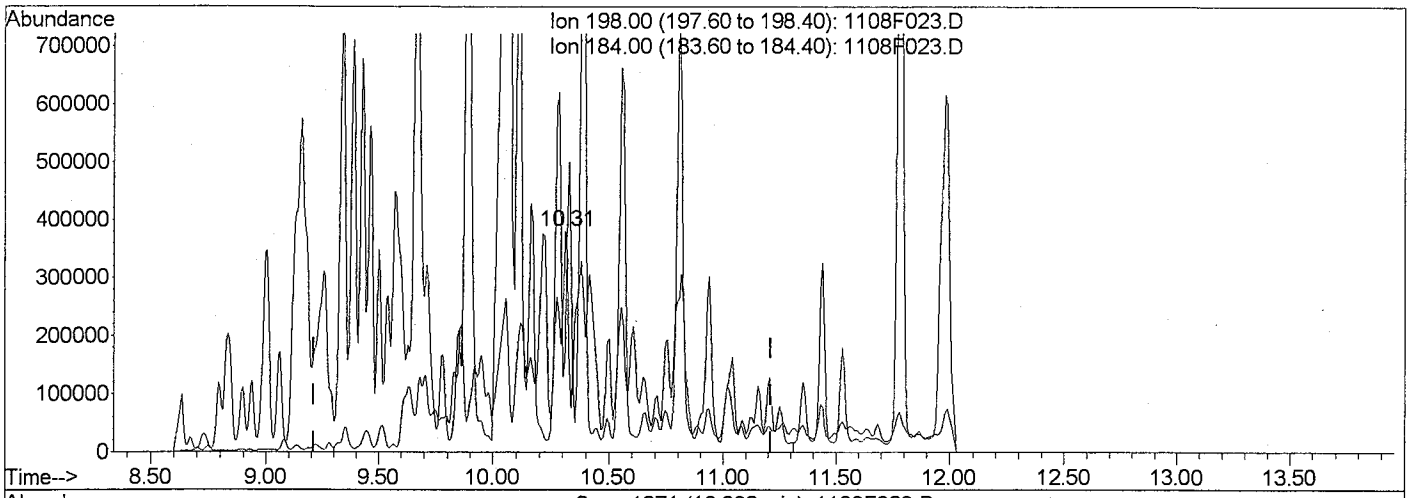
mt 11/11/03

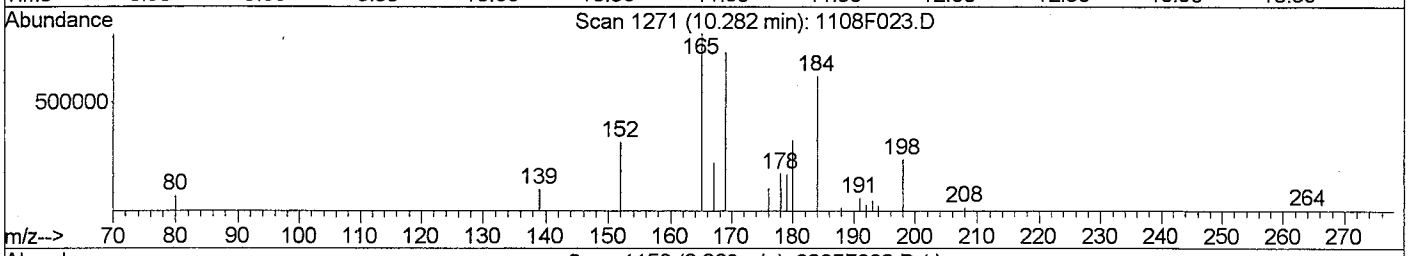
1108F023.D 1107ALK.M Mon Nov 10 16:56:05 2003

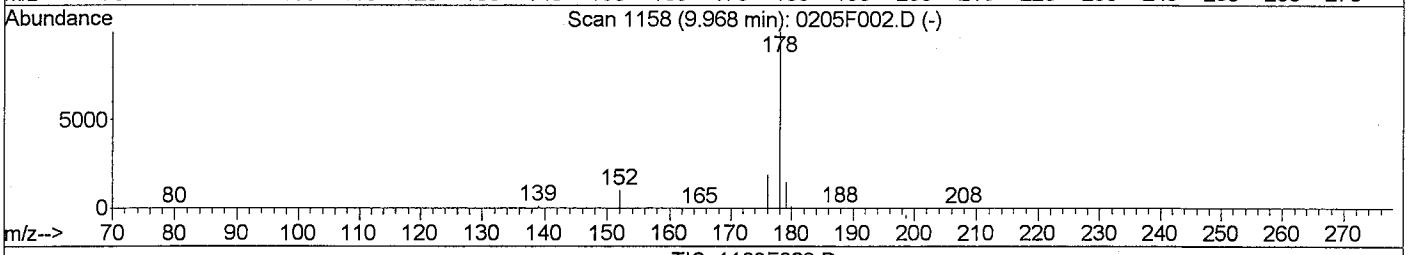
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:54 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(25) C1-Dibenzothiophenes (L)

10.31min 34009.48ng/ml m

response 12423275

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	42.59#
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

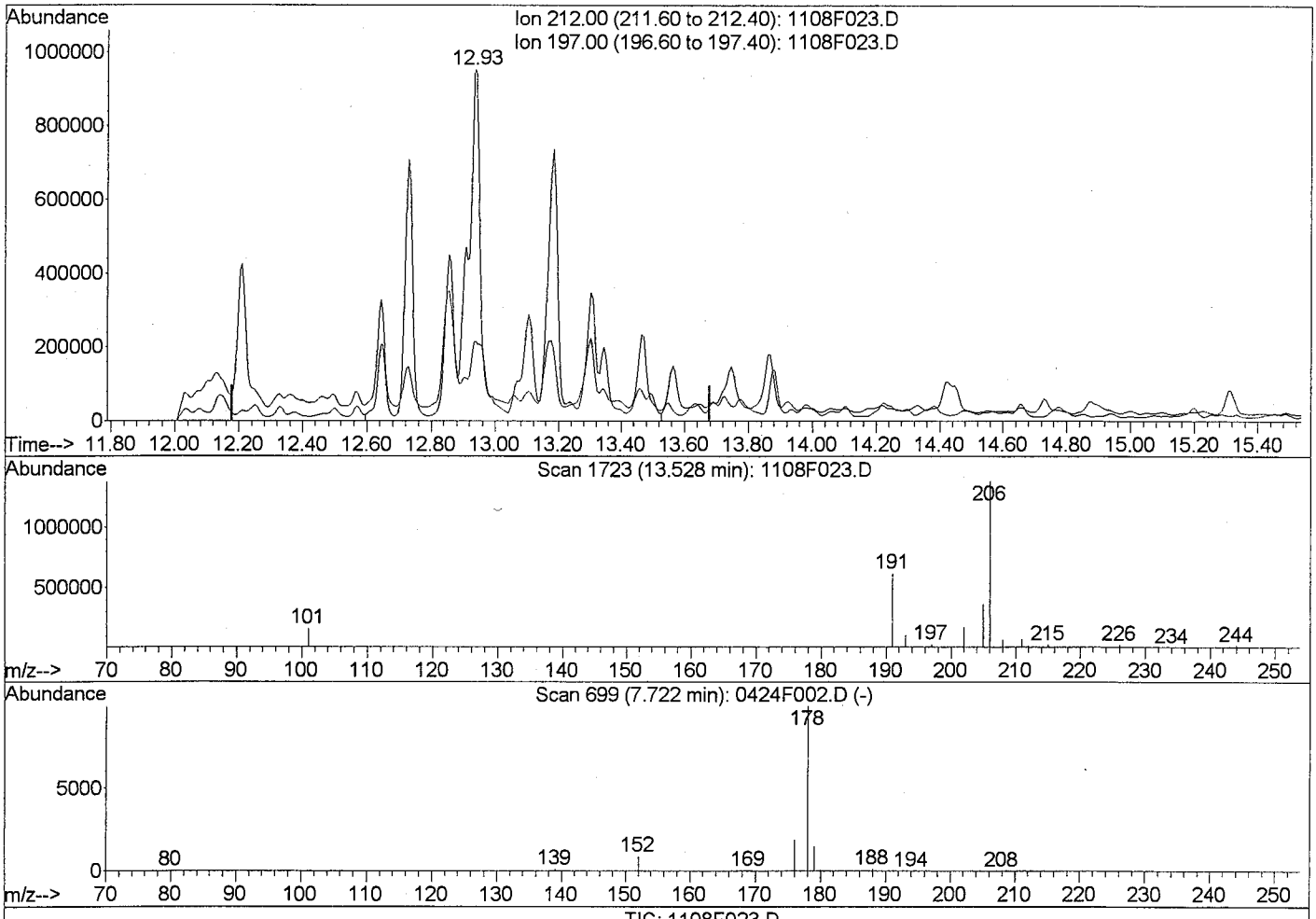
11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:56:44 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:54 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



(26) C2-Dibenzothiophenes (L)

12.93min 26783.53ng/ml m

response 9783716

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	22.50
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

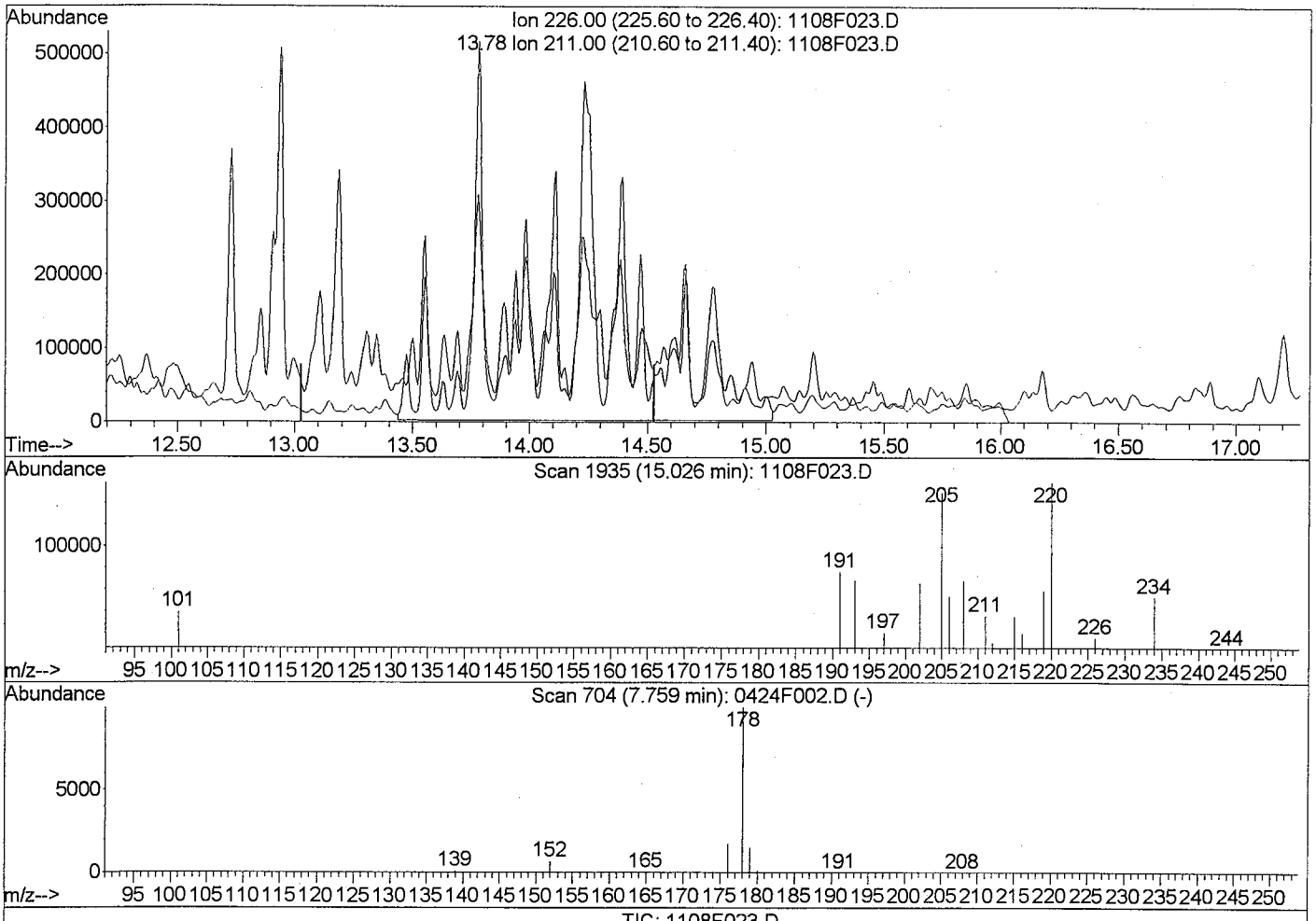
mt 11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:57:15 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:55 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration



TIC: 1108F023.D

(27) C3-Dibenzothiophenes (L)

13.78min 25499.56ng/ml m

response 9314699

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	59.99
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

mt 11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:57:43 2003

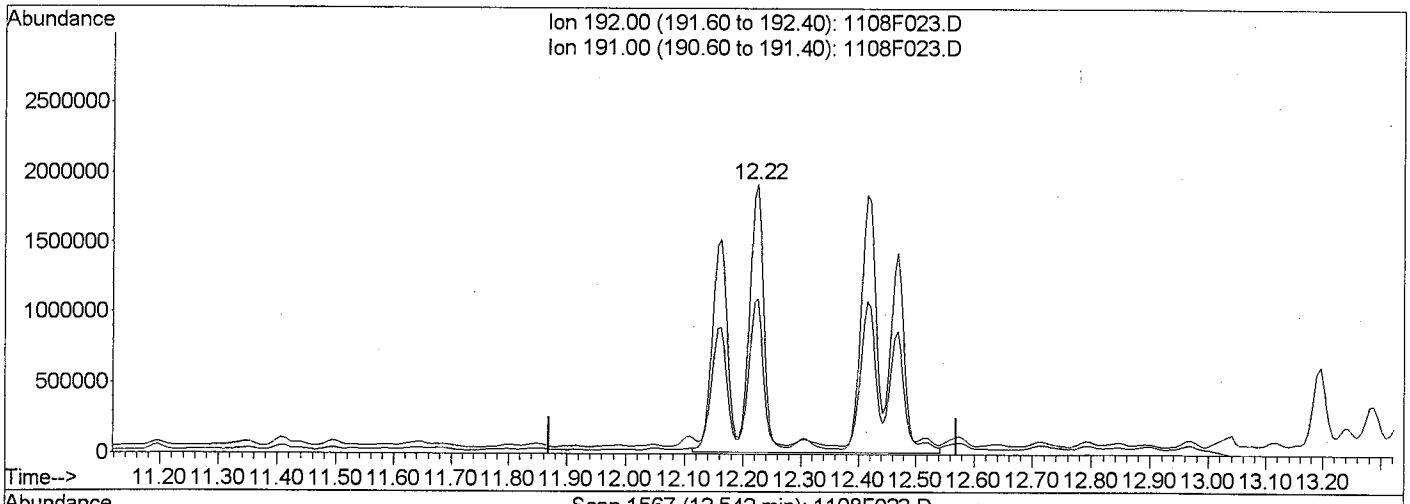
Quantitation Report (Qedit)

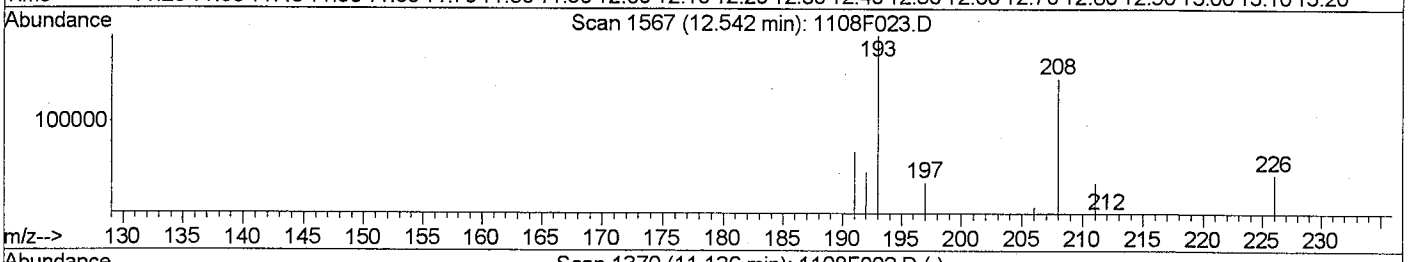
Data File : J:\MS11\DATA\110803\1108F023.D
Acq On : 8 Nov 2003 7:09 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:55 2003

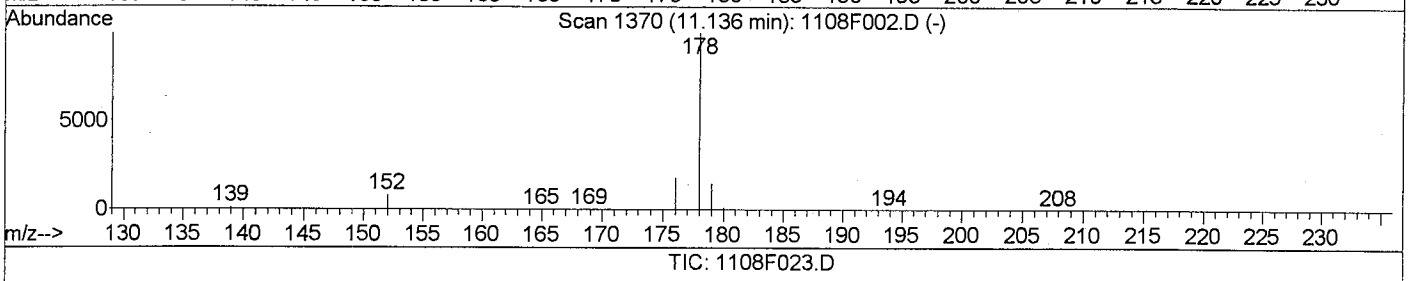
Vial: 20
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.22min 31488.18ng/ml m

response 12082507

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	57.32
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
mt
11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:58:04 2003

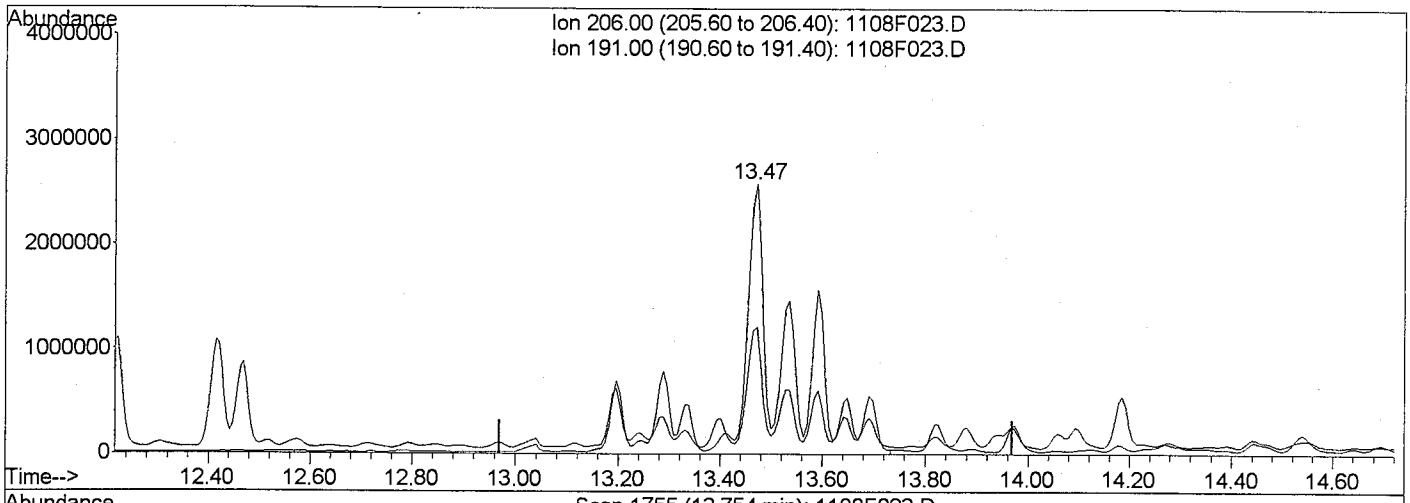
Quantitation Report (Qedit)

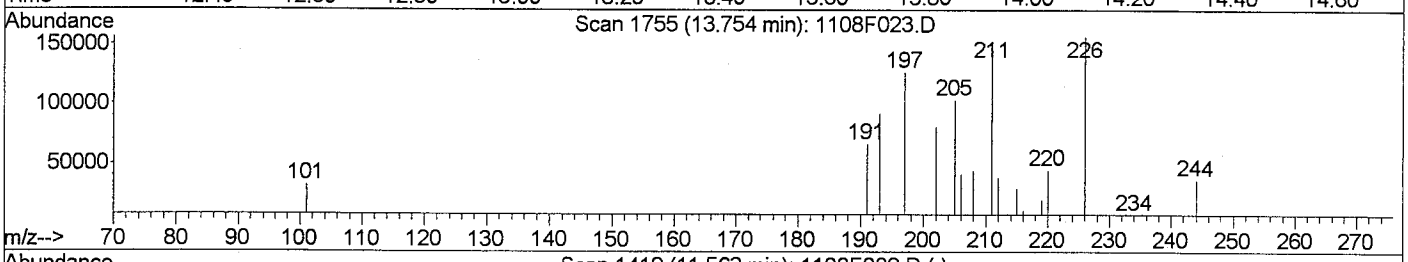
Data File : J:\MS11\DATA\110803\1108F023.D
Acq On : 8 Nov 2003 7:09 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:55 2003

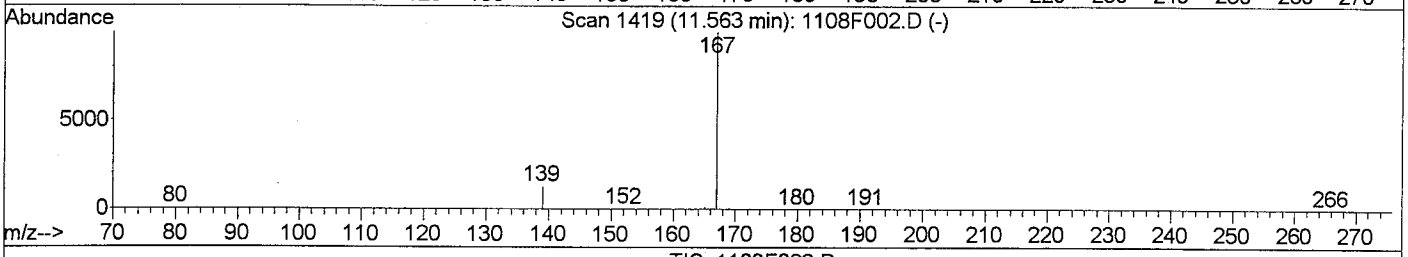
Vial: 20
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.47min 43678.95ng/ml m

response 16760296

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	46.94
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

mmt 11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:58:29 2003

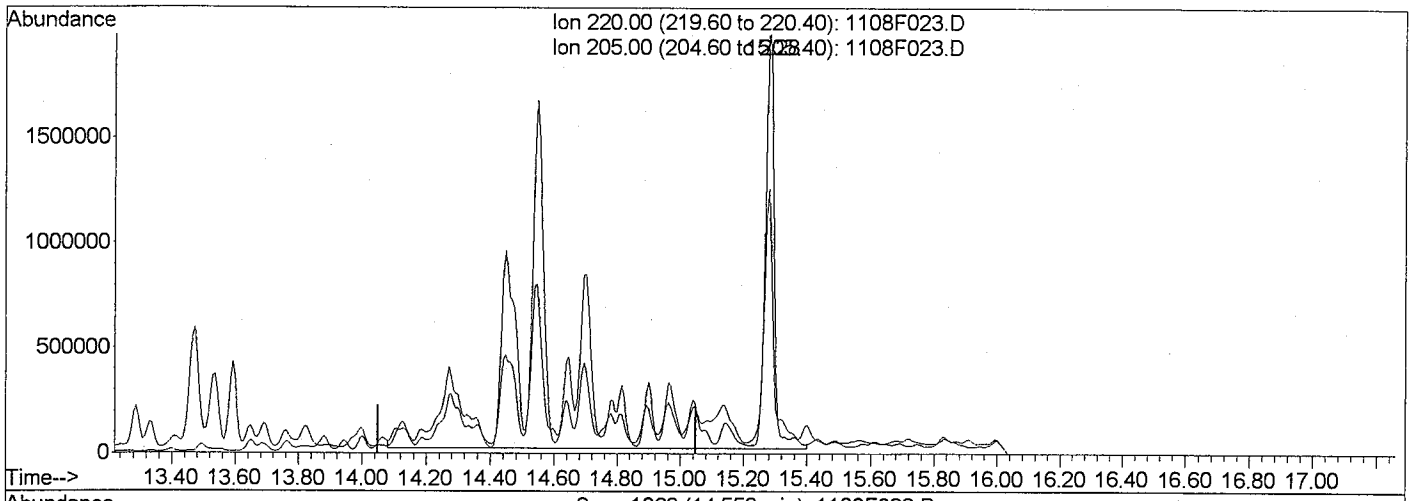
Quantitation Report (Qedit)

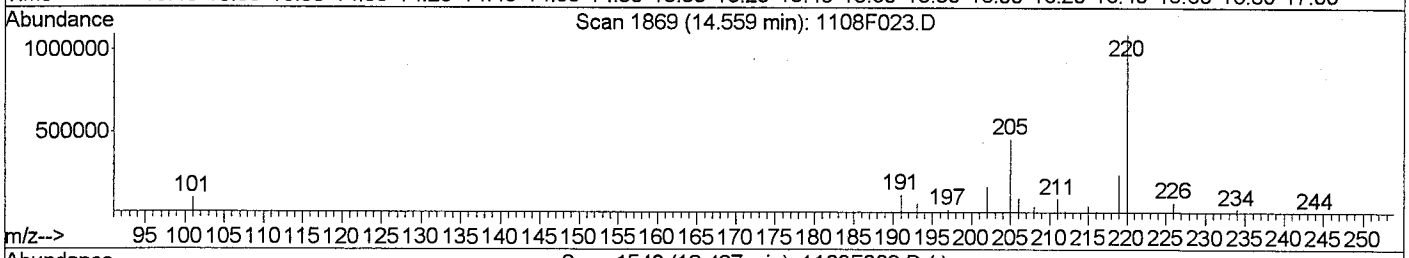
Data File : J:\MS11\DATA\110803\1108F023.D
Acq On : 8 Nov 2003 7:09 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:56 2003

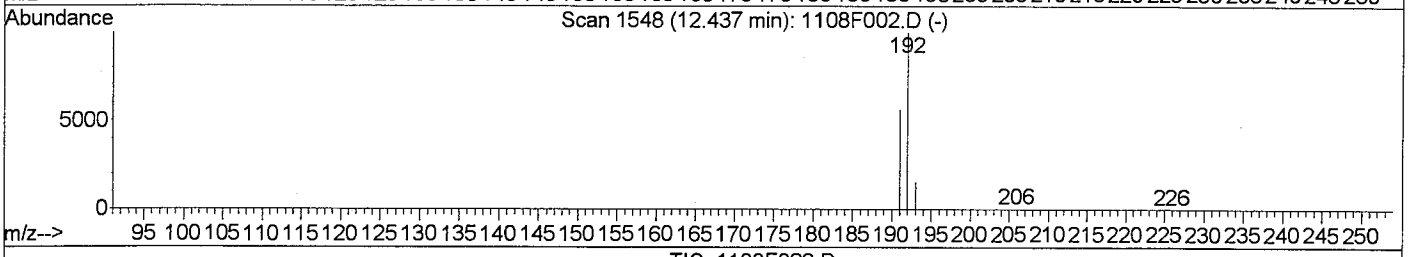
Vial: 20
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(34) C3-Phenanthrenes/Anthracenes (L)

15.28min 47413.05ng/ml m

response 18193128

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	61.68
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

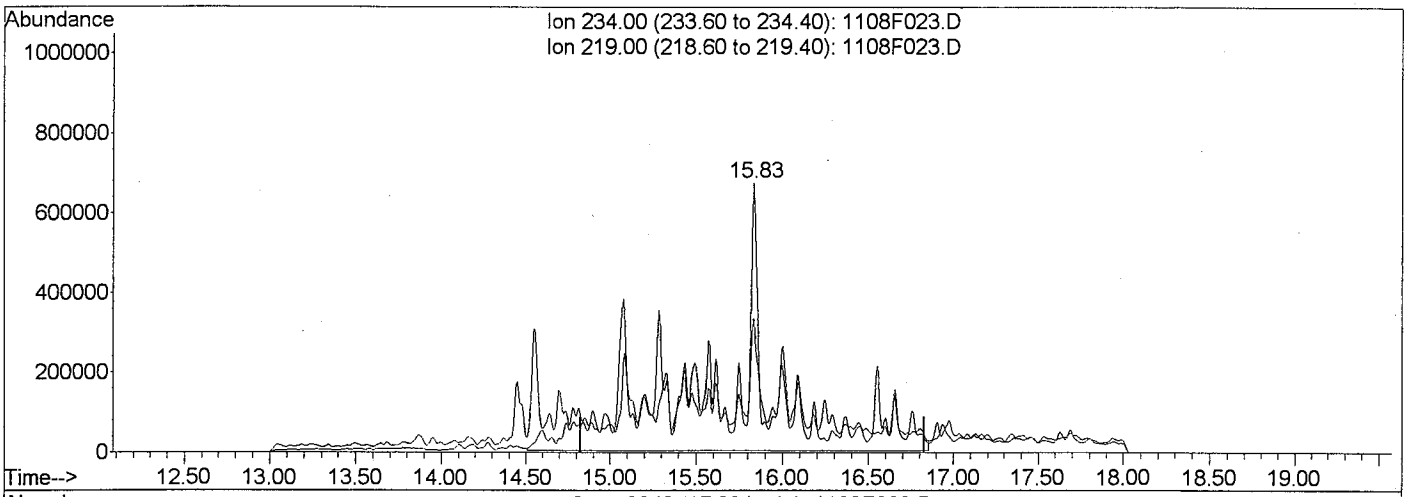
11/11/03

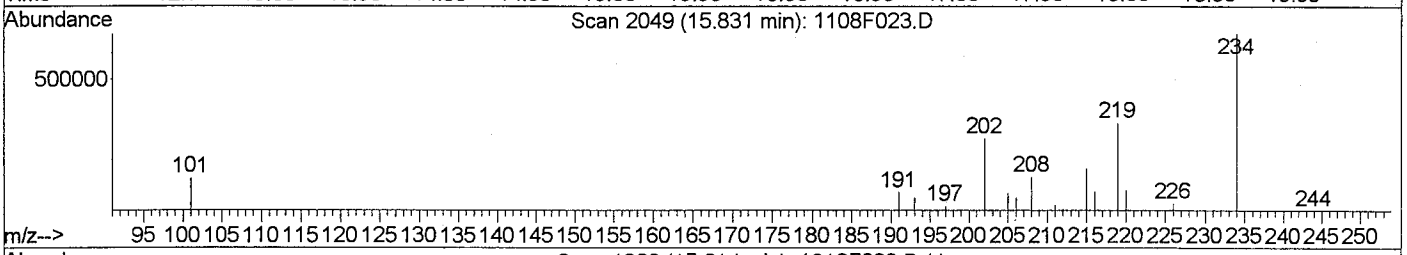
1108F023.D 1107ALK.M Mon Nov 10 16:58:55 2003

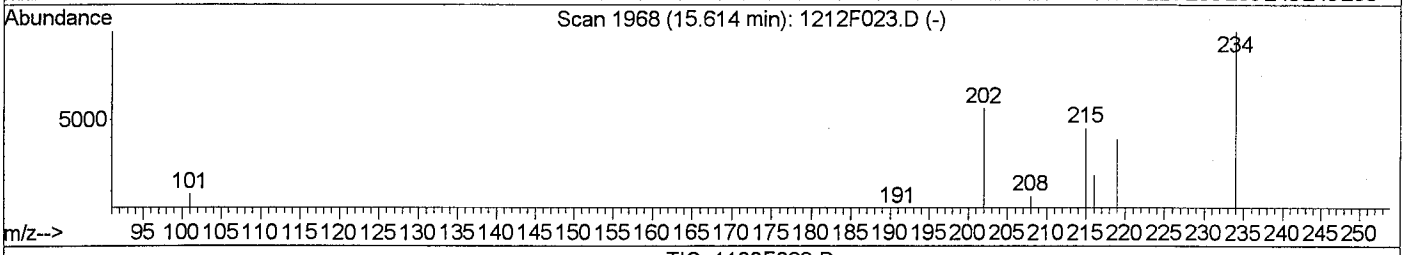
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:56 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.83min 32194.98ng/ml m

response 12353718

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	49.70
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

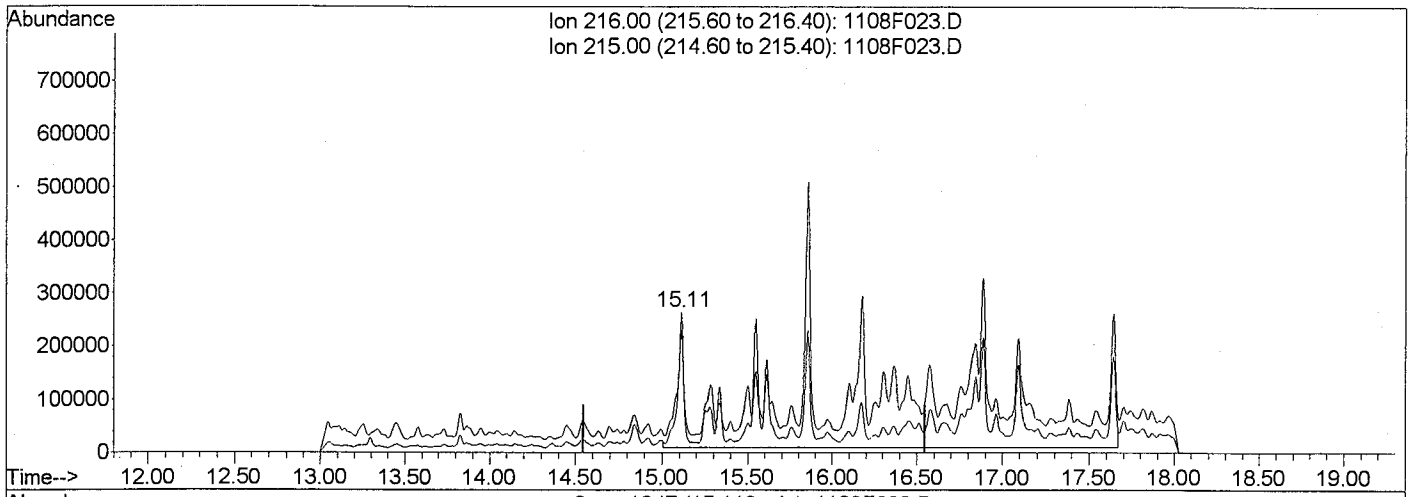
mt 11/11/03

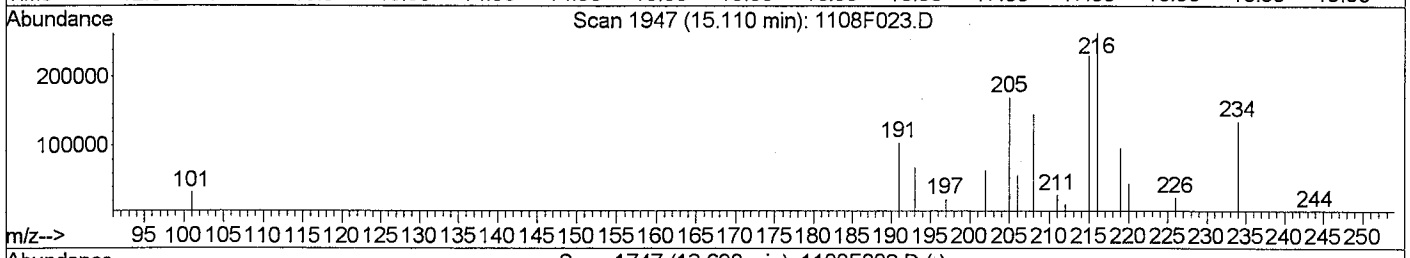
1108F023.D 1107ALK.M Mon Nov 10 16:59:07 2003

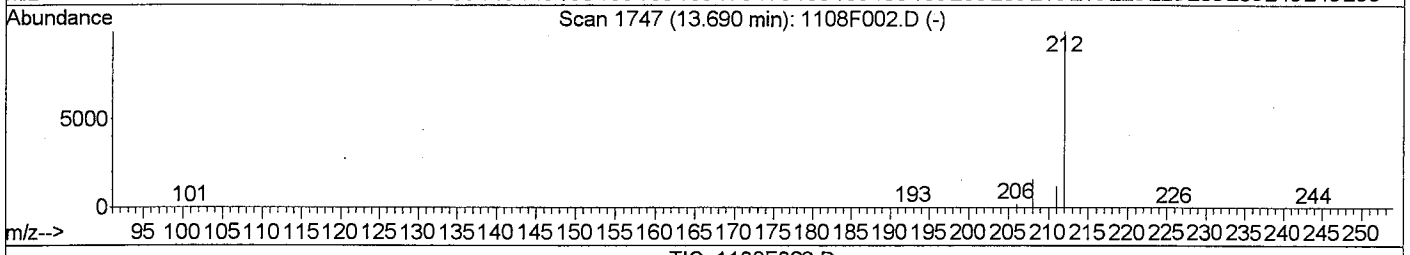
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.11min 20918.69ng/ml m

response 7167351

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	87.48
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03 mt 11/11/03

1108F023.D 1107ALK.M Mon Nov 10 16:59:34 2003

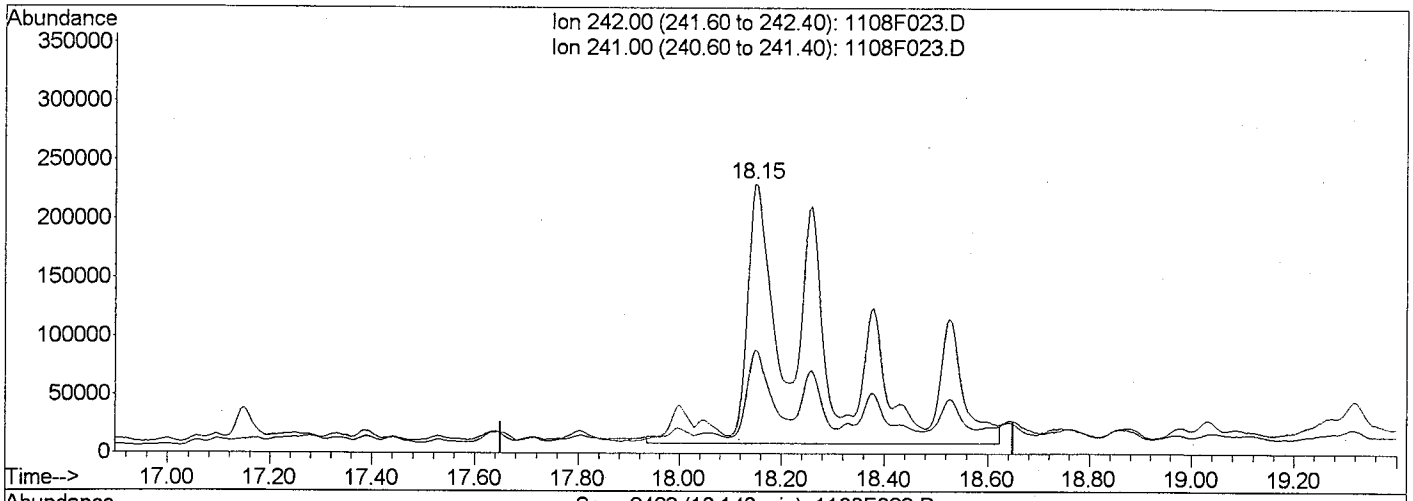
Quantitation Report (Qedit)

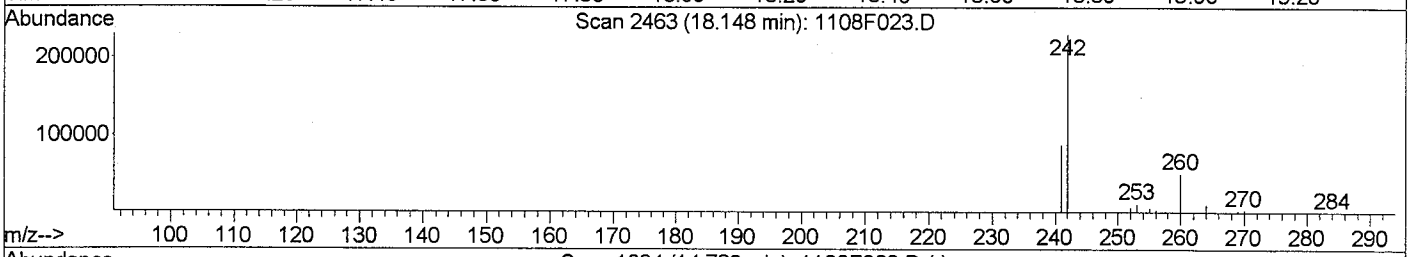
Data File : J:\MS11\DATA\110803\1108F023.D
Acq On : 8 Nov 2003 7:09 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:57 2003

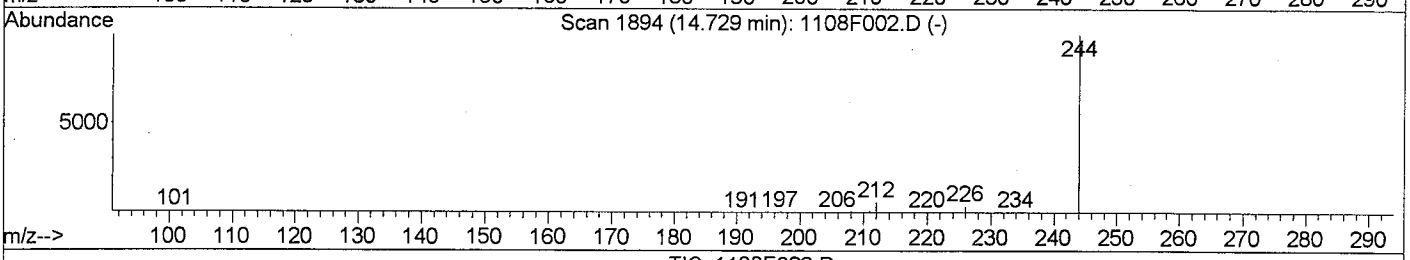
Vial: 20
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(44) C1-Chrysenes (L)

18.15min 8150.00ng/ml m

response 2273417

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	38.50
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03

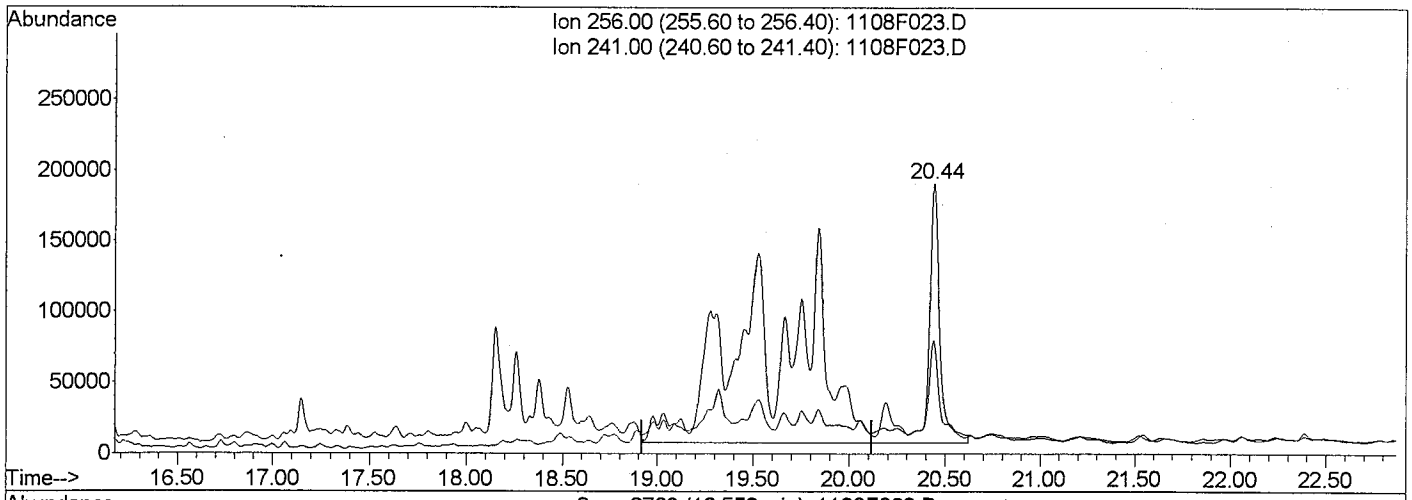
mt 11/11/03

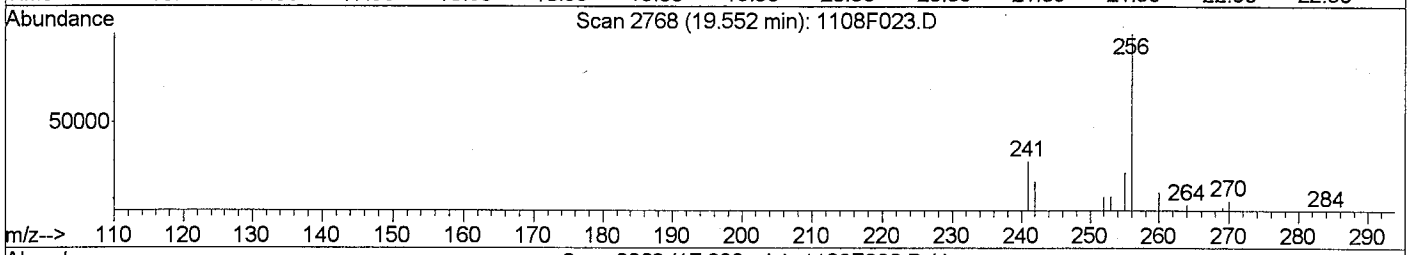
1108F023.D 1107ALK.M Mon Nov 10 16:59:57 2003

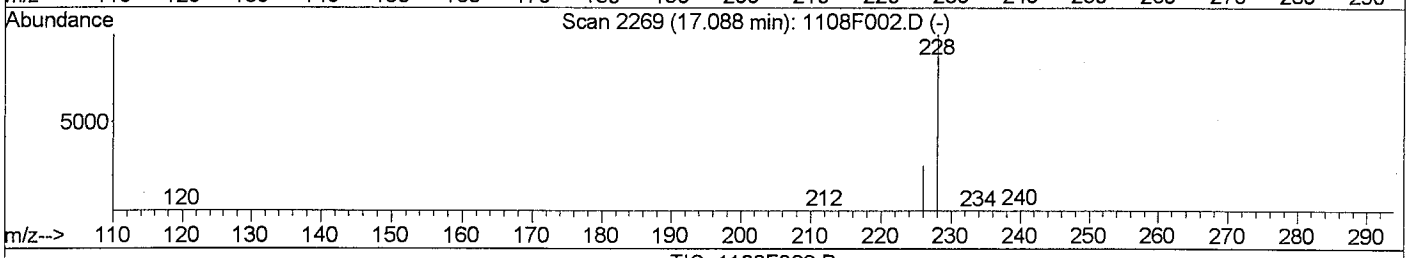
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(45) C2-Chrysenes (L)

20.44min 15553.02ng/ml m

response 4338465

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	40.45
0.00	0.00	0.00
0.00	0.00	0.00

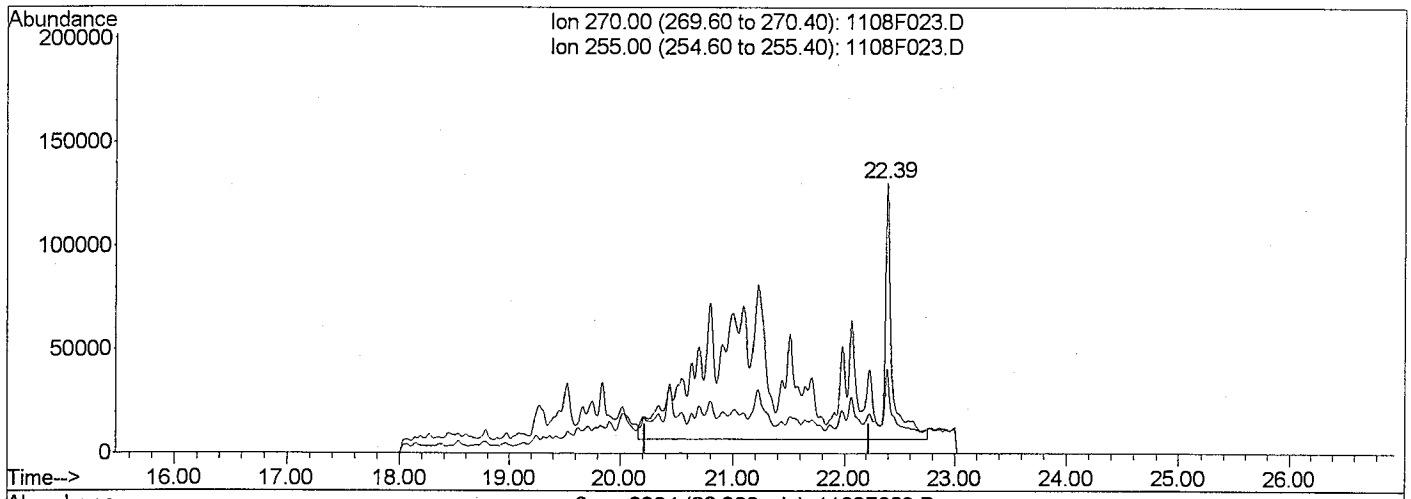
11/10/03
mt
11/11/03

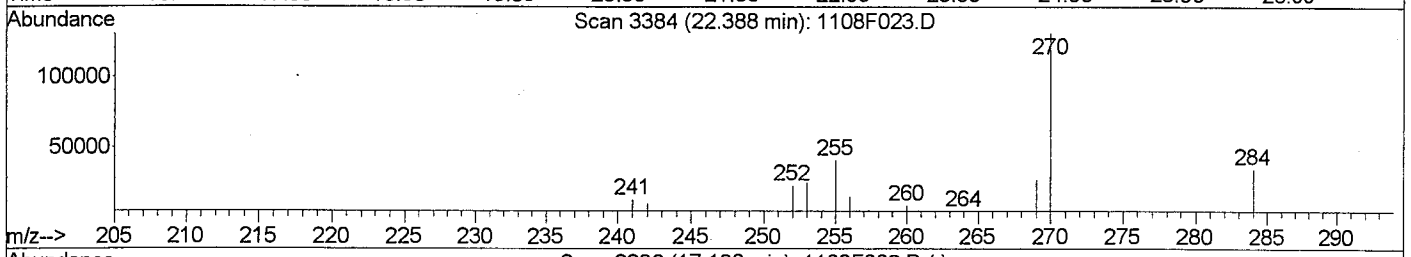
1108F023.D 1107ALK.M Mon Nov 10 17:00:37 2003

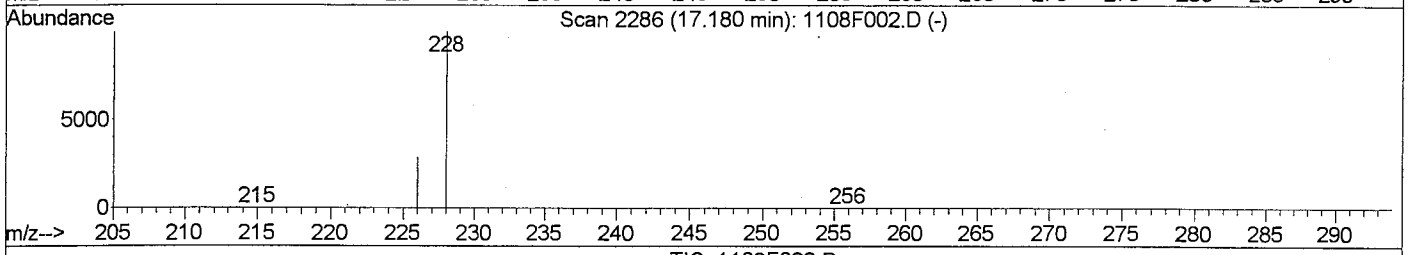
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110803\1108F023.D Vial: 20
Acq On : 8 Nov 2003 7:09 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(46) C3-Chrysenes (L)

22.39min 15478.43ng/ml m

response 4317660

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	31.12
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03

1108F023.D 1107ALK.M Mon Nov 10 17:00:53 2003

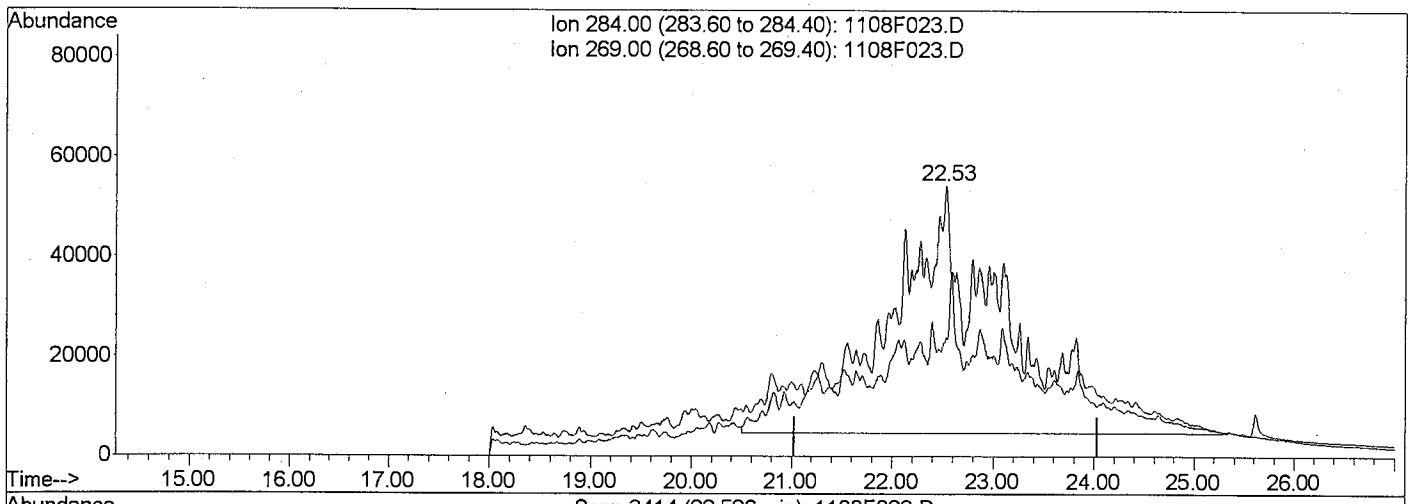
Quantitation Report (Qedit)

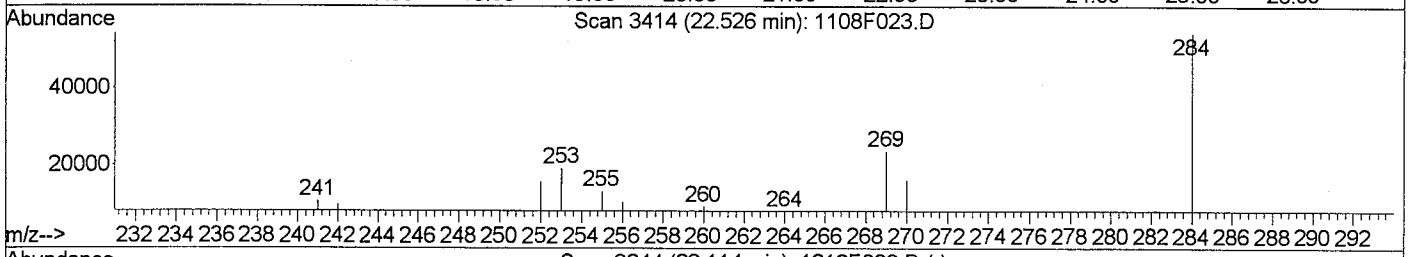
Data File : J:\MS11\DATA\110803\1108F023.D
Acq On : 8 Nov 2003 7:09 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 16:58 2003

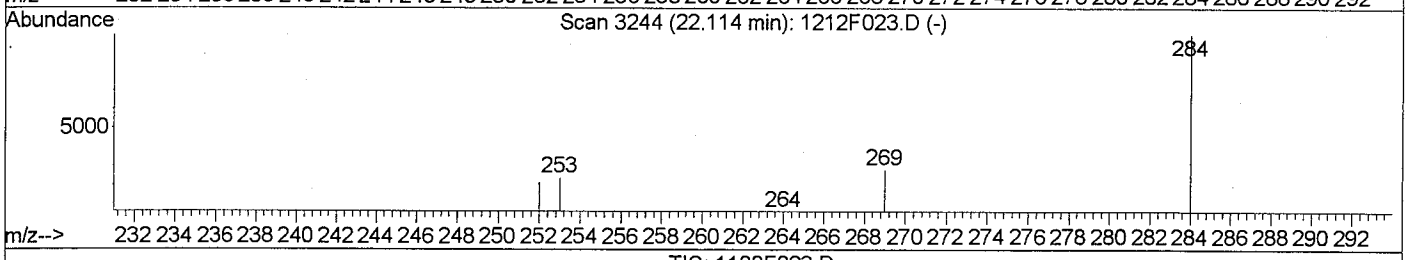
Vial: 20
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 16:08:03 2003
Response via : Multiple Level Calibration







TIC: 1108F023.D

(47) C4-Chrysenes (L)

22.53min 15088.58ng/ml m

response 4208913

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	43.57
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
mt
11/11/03

1108F023.D 1107ALK.M Mon Nov 10 17:01:17 2003

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308419
Date Analyzed: 11/10/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318161
Units: ng/ml

File ID: J:\MS11\DATA\111003\1110F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2000	0.01	1.13	1.15	2	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2100	0.01	0.668	0.710	6	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2100	0.01	0.626	0.664	6	NA	± 20 %	AverageRF
Biphenyl	2000	2100	0.01	0.810	0.870	7	NA	± 20 %	AverageRF
Acenaphthylene	2000	2200	0.01	1.93	2.10	9	NA	± 20 %	AverageRF
Dibenzofuran	2000	2100	0.01	1.59	1.70	7	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	0.01	1.19	1.24	4	NA	± 20 %	AverageRF
Fluorene	2000	2200	0.01	1.27	1.40	10	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2000	0.01	1.15	1.17	1	NA	± 20 %	AverageRF
Phenanthrene	2000	2000	0.01	1.21	1.22	1	NA	± 20 %	AverageRF
Anthracene	2000	2200	0.01	1.04	1.16	12	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.32	9	NA	± 20 %	AverageRF
Pyrene	2000	2200	0.01	1.31	1.41	8	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2100	0.01	0.995	1.04	5	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.10	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2300	0.01	1.34	1.51	13	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2100	0.01	1.69	1.79	6	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	0.01	1.50	1.57	4	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.20	6	NA	± 20 %	AverageRF
Perylene	2000	2100	0.01	1.27	1.36	7	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	2100	0.01	0.690	0.720	4	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2000	0.01	0.992	0.977	-2	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1800	0.01	1.14	1.05	-8	NA	± 20 %	AverageRF
Fluorene-d10	2000	2200	0.01	1.00	1.11	11	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2100	0.01	1.00	1.04	4	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2000	0.01	0.911	0.926	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Exception Report

Data File: J:\MS11\DATA\111003\1110F002.D
Lab ID: KWG0318161-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/10/2003 15:00
Date Quantitated: 11/10/2003 17:49
Batch ID: KWG0318161
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT

Primary Review: 11/11/03

Secondary Review: 11/12/3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-PAH	**Collect Date:**		**Receive Date:**	11/11/2003

Analysis Lot:	KWG0318161	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111003\1110F001.D	**Method ID:**	MJ138
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\111003\1110F002.D			**Instrument:**	MS11
Acqu Date:	11/10/2003 15:00	**Quant Date:**	11/10/2003 17:49	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318161-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.57	-0.01	136	261683	1,000.00	OK
2	Acenaphthene-d10	8.05	-0.01	164	135317	1,000.00	OK
3	Phenanthrene-d10	11.00	0.00	188	202057	1,000.00	OK
4	Chrysene-d12	17.12	-0.01	240	190256	1,000.00	OK
5	Perylene-d12	21.51	0.00	264	118159	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Biphenyl-d10	7.06			164	389150	2,030		34-115	NA
2	Fluorene-d10	9.00			176	299970	2,217		37-107	NA
2	2,4,6-Tribromophenol	9.61			330	24901	1,615		6-133	NA
3	Fluoranthene-d10	13.69			212	422036	2,087		18-137	NA
4	Terphenyl-d14	14.73			244	352478	2,033		18-153	NA

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.59			128	600835	2,031			
1	2-Methylnaphthalene	6.41			142	371707	2,127			
1	1-Methylnaphthalene	6.56			142	347529	2,122			
1	Biphenyl	7.09			154	455247	2,149			
1	2,6-Dimethylnaphthalene	7.32			156	321485	2,157			
1	C2-Naphthalenes				156	0				
1	C3-Naphthalenes				170	0				
1	C4-Naphthalenes				184	0				
2	Acenaphthylene	7.79			152	568557	2,181			
2	Acenaphthene	8.11			154	334990	2,085			
2	Dibenzofuran	8.40			168	459090	2,131			
2	2,3,5-Trimethylnaphthalene	8.82			170	301953	2,098			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111003\1110F002.D		**Instrument:** MS11
Acqu Date:	11/10/2003 15:00	**Quant Date:** 11/10/2003 17:49	**Vial:** 2
Run Type:	CCV		**Dilution:** 1.0
Lab ID:	KWG0318161-2		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	9.05			166	378586	2,199			
2	C1-Fluorenes				180	0				
2	C2-Fluorenes				194	0				
2	C3-Fluorenes				208	0				
2	Pentachlorophenol				266	0d				
3	Dibenzothiophene	10.78			184	473234	2,030			
3	C1-Dibenzothiophenes				198	0				
3	C2-Dibenzothiophenes				212	0				
3	C3-Dibenzothiophenes				226	0				
3	Phenanthrene	11.04			178	494348	2,019			
3	Anthracene	11.14			178	470546	2,249			
3	Carbazole	11.56			167	369233	2,233			
3	1-Methylphenanthrene	12.43			192	358233	2,155			
3	C1-Phenanthrenes/Anthracenes				192	0				
3	C2-Phenanthrenes/Anthracenes				206	0				
3	C3-Phenanthrenes/Anthracenes				220	0				
3	C4-Phenanthrenes/Anthracenes				234	0				
3	Fluoranthene	13.73			202	531913	2,182			
4	Pyrene	14.24			202	538332	2,165			
4	C1-Fluoranthenes/Pyrenes				216	0				
4	Benz(a)anthracene	17.09			228	396070	2,092			
4	Chrysene	17.18			228	420428	2,077			
4	C1-Chrysenes				242	0				
4	C2-Chrysenes				256	0				
4	C3-Chrysenes				270	0				
4	C4-Chrysenes				284	0				
5	Benzo(b)fluoranthene	20.10			252	355780	2,255			
5	Benzo(k)fluoranthene	20.17			252	422661m	2,112			
5	Benzo(e)pyrene	21.08			252	369854	2,088			
5	Benzo(a)pyrene	21.27			252	284166	2,118			
5	Perylene	21.60			252	321392	2,134			
5	Indeno(1,2,3-cd)pyrene	24.08			276	170160m	2,086			
5	Dibenz(a,h)anthracene	24.14			278	230833m	1,969			
5	Benzo(g,h,i)perylene	24.55			276	248496	1,838			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:50:46 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.57	136	261683	1000.00 ng/ml	0.00
11) Acenaphthene-d10	8.05	164	135317	1000.00 ng/ml	0.00
23) Phenanthrene-d10	11.00	188	202057	1000.00 ng/ml	0.00
38) Chrysene-d12	17.12	240	190256	1000.00 ng/ml	0.00
48) Perylene-d12	21.51	264	118159	1000.00 ng/ml	0.00
System Monitoring Compounds					
5) Biphenyl-d10	7.06	164	389150	2030.05 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 203.01%		
16) Fluorene-d10	9.00	176	299970	2216.52 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 221.65%		
21) 2,4,6 Tribromophenol	9.61	330	24901	1614.59 ng/ml	0.01
Spiked Amount 1000.000			Recovery = 161.46%		
37) Fluoranthene-d10	13.69	212	422036	2086.88 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 208.69%		
41) Terphenyl-d14	14.73	244	352478	2032.79 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 203.28%		
Target Compounds					Qvalue
2) Naphthalene	5.59	128	600835	2030.64 ng/ml	99
3) 2-Methylnaphthalene	6.41	142	371707	2127.39 ng/ml	100
4) 1-Methylnaphthalene	6.56	142	347529	2121.98 ng/ml	97
6) Biphenyl	7.09	154	455247	2148.83 ng/ml	100
7) 2,6-Dimethylnaphthalene	7.32	156	321485	2157.14 ng/ml	100
12) Acenaphthylene	7.79	152	568557	2180.76 ng/ml	100
13) Acenaphthene	8.11	154	334990	2084.79 ng/ml	100
14) Dibenzofuran	8.40	168	459090	2131.34 ng/ml	99
15) 2,3,5-Trimethylnaphthalene	8.82	170	301953	2097.80 ng/ml	96
17) Fluorene	9.05	166	378586	2199.46 ng/ml	99
24) Dibenzothiophene	10.78	184	473234	2029.94 ng/ml	100
28) Phenanthrene	11.04	178	494348	2018.67 ng/ml	100
29) Anthracene	11.14	178	470546	2249.12 ng/ml	100
30) Carbazole	11.56	167	369233	2232.81 ng/ml	99
31) 1-Methylphenanthrene	12.43	192	358233	2154.52 ng/ml	100
36) Fluoranthene	13.73	202	531913	2182.07 ng/ml	98
39) Pyrene	14.24	202	538332	2164.76 ng/ml	98
42) Benz(a)anthracene	17.09	228	396070	2091.94 ng/ml	100
43) Chrysene	17.18	228	420428	2076.60 ng/ml	100
49) Benzo(b)fluoranthene	20.10	252	355780	2255.39 ng/ml	100
50) Benzo(k)fluoranthene	20.17	252	422661m	2111.65 ng/ml	
51) Benzo(e)pyrene	21.08	252	369854	2088.21 ng/ml	99
52) Benzo(a)pyrene	21.27	252	284166	2117.83 ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:50:46 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

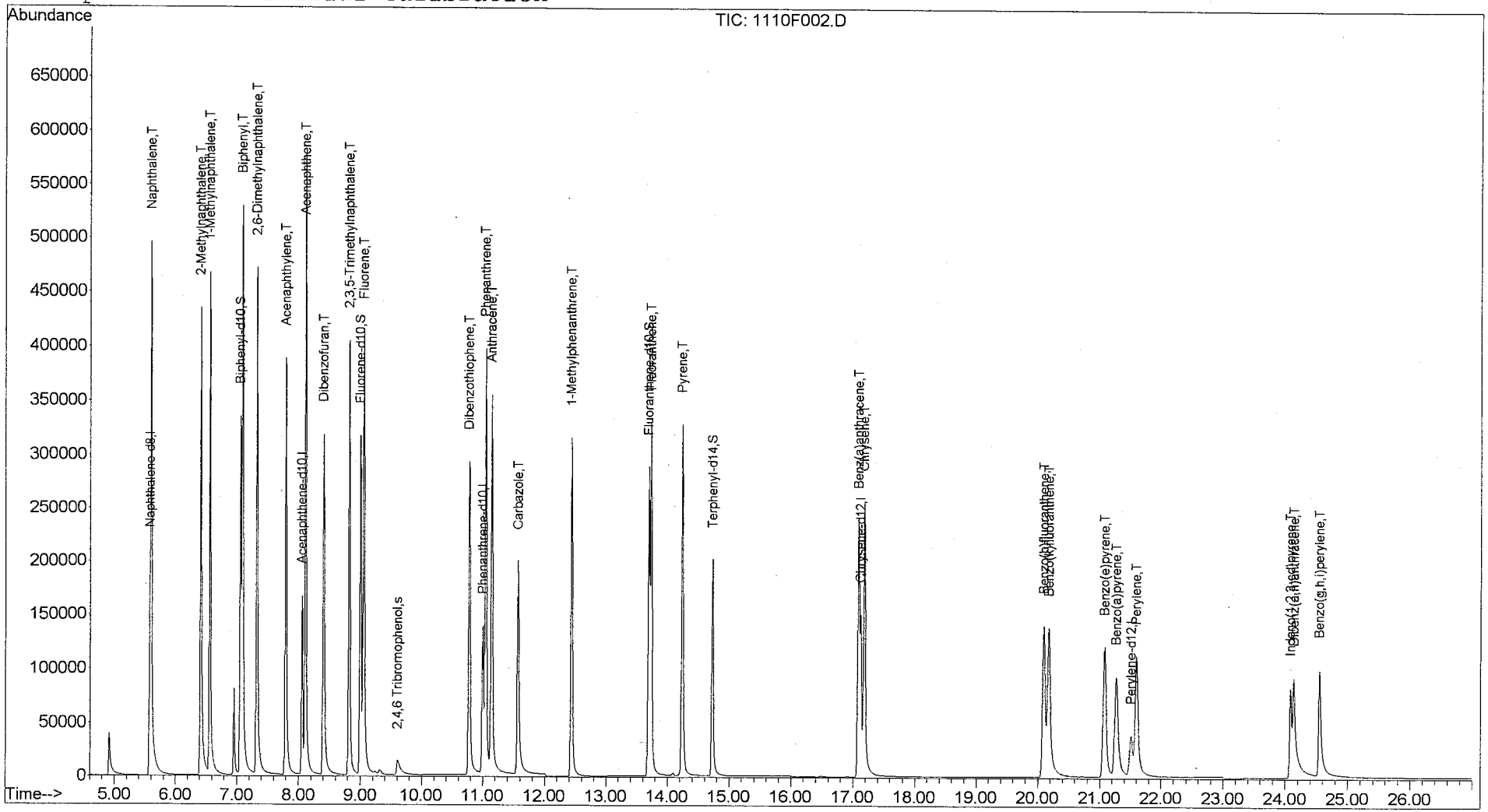
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.60	252	321392	2133.80	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.08	276	170160m	2086.13	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	230833m	1969.18	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	248496	1837.59	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:49 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:51:58 2003
Response via : Initial Calibration

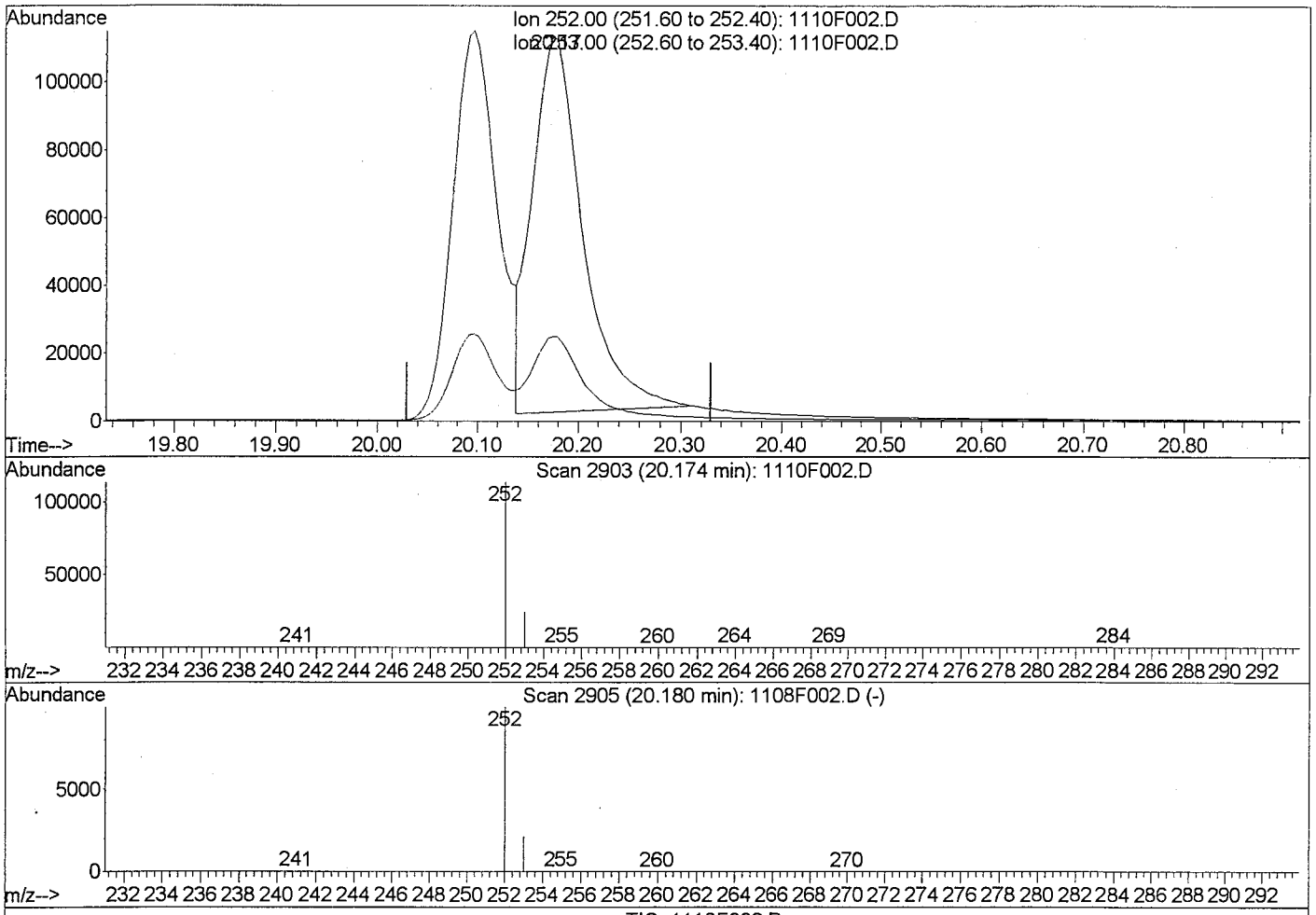


1109

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:48 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Multiple Level Calibration



TIC: 1110F002.D

(50) Benzo(k)fluoranthene (T)

20.17min 1925.75ng/ml

response 385452

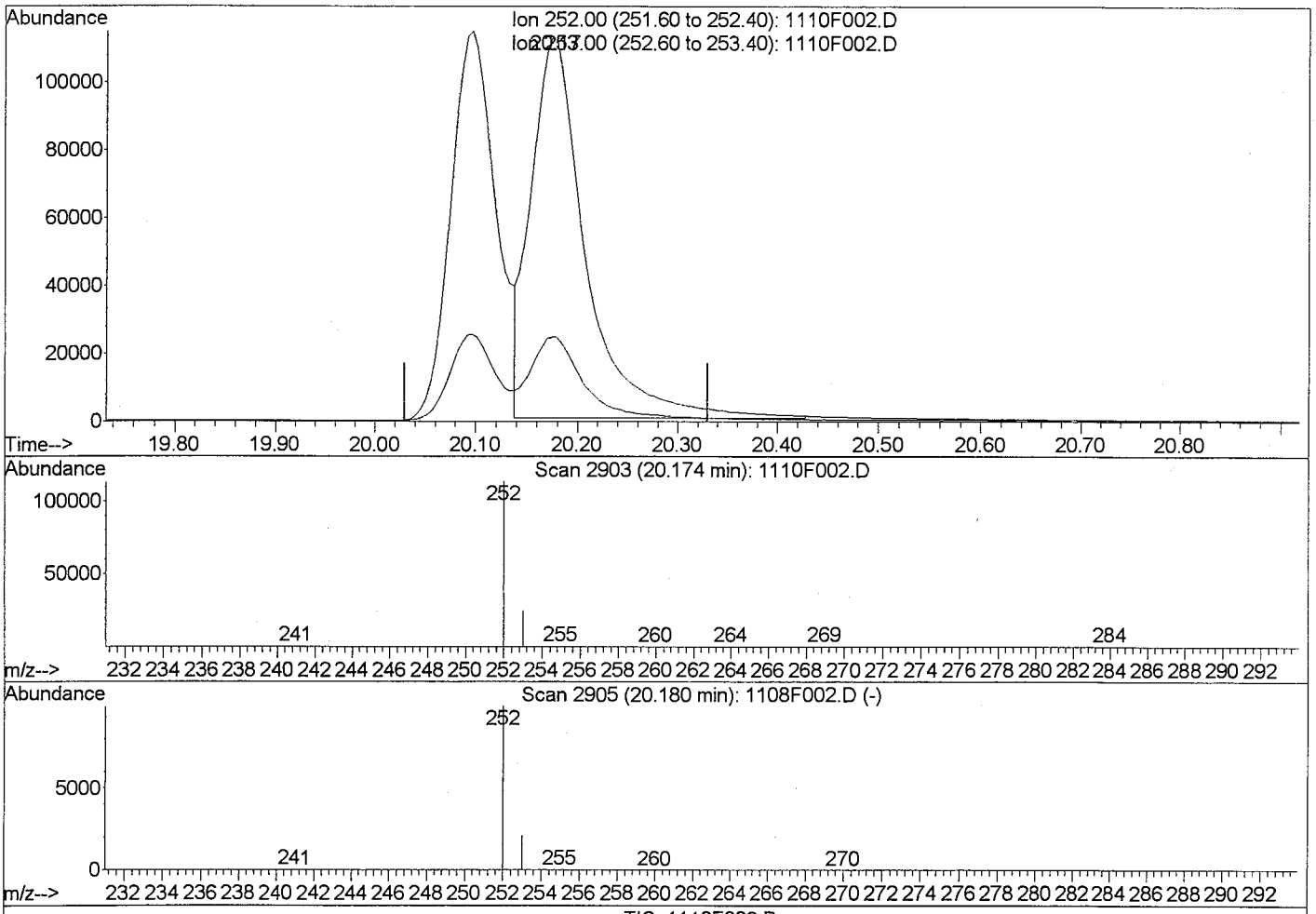
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.45
0.00	0.00	0.00
0.00	0.00	0.00

1110F002.D 1107ALK.M Mon Nov 10 17:51:16 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:48 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Multiple Level Calibration



TIC: 1110F002.D

(50) Benzo(k)fluoranthene (T)

20.17min 2111.65ng/ml m

response 422661

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.77
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/12/3

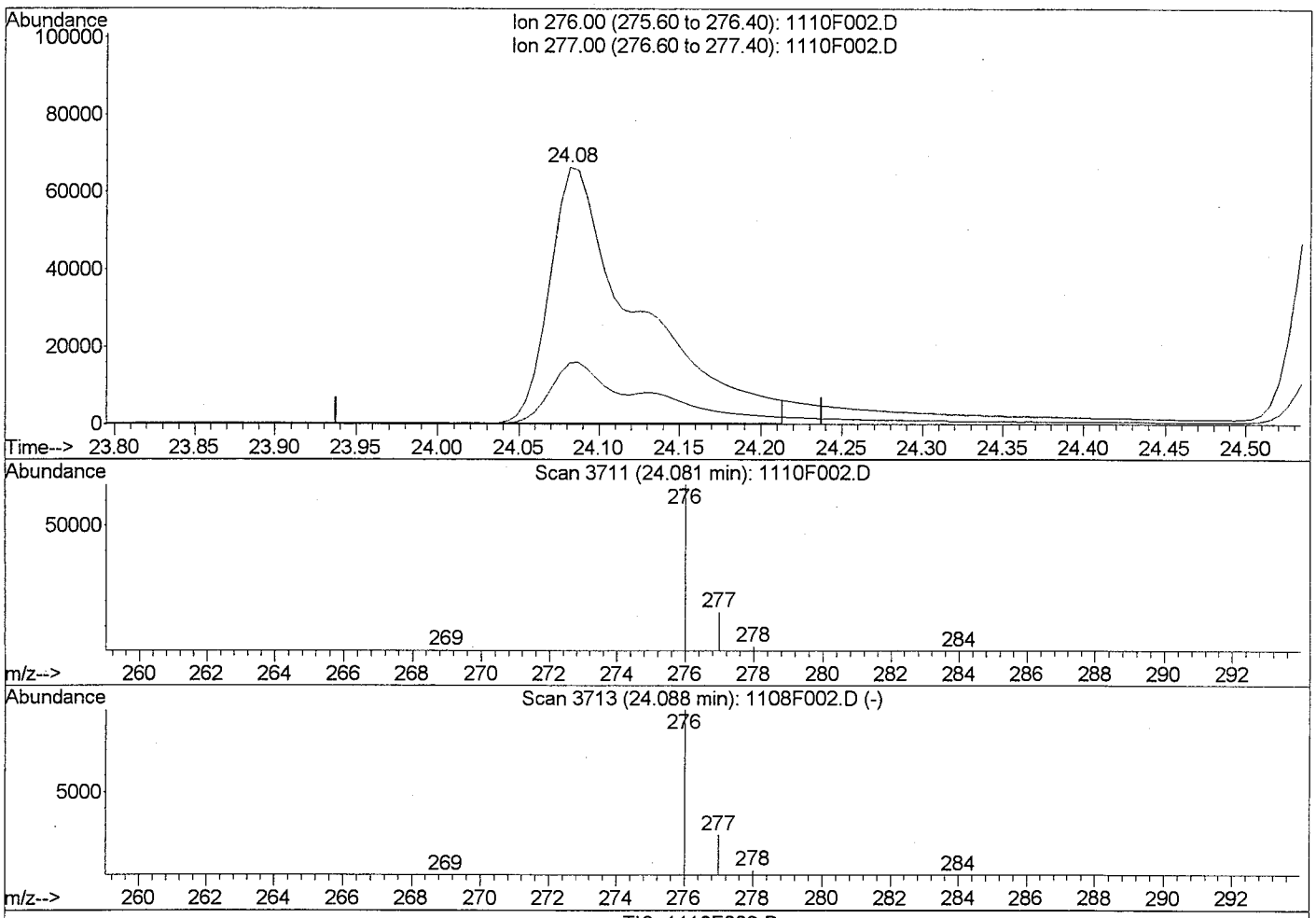
J 11/12/3

1110F002.D 1107ALK.M Mon Nov 10 17:51:24 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:48 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.08min 3101.46ng/ml

response 252978

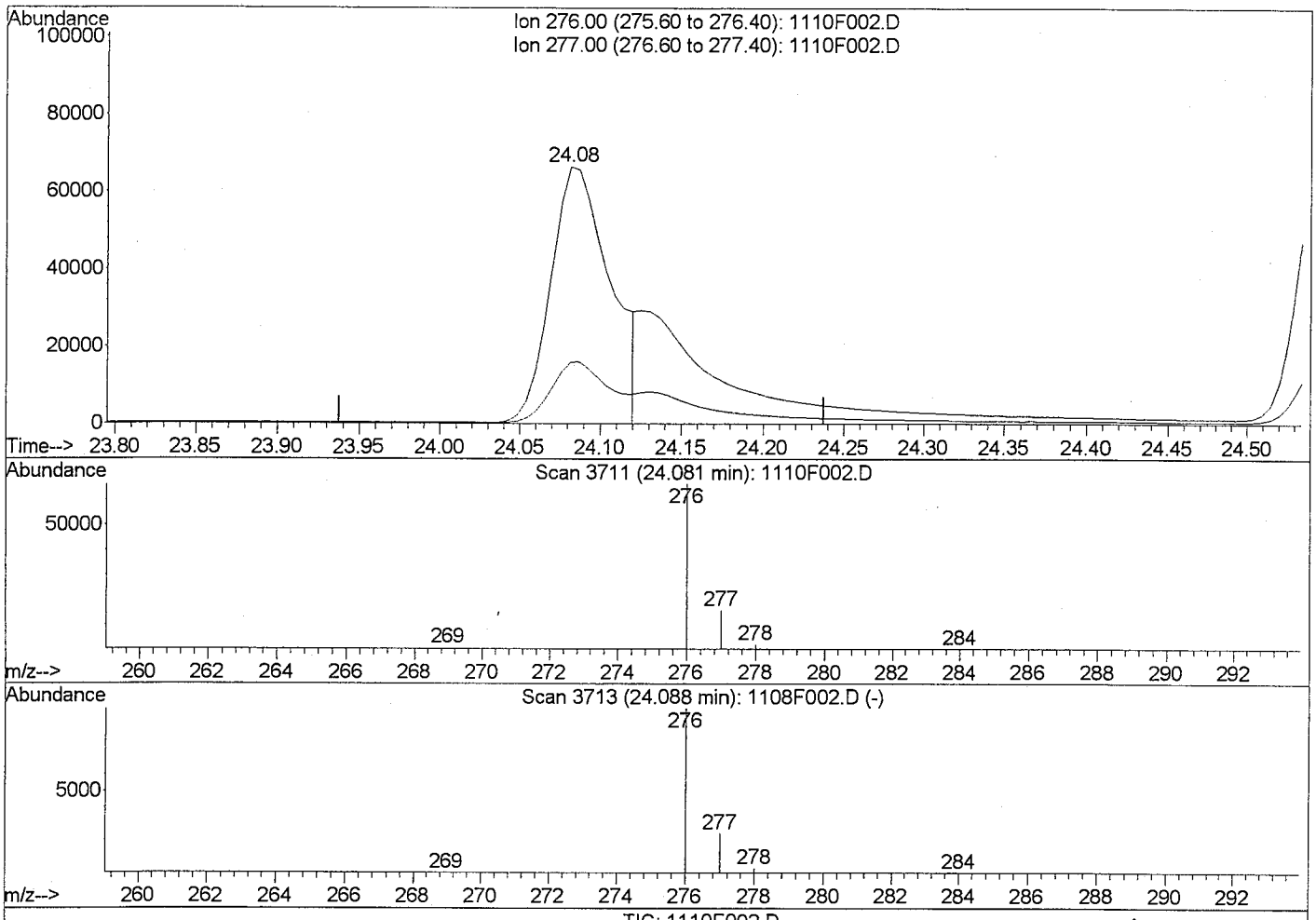
Ion	Exp%	Act%
276.00	100	100
277.00	24.00	23.48
0.00	0.00	0.00
0.00	0.00	0.00

1110F002.D 1107ALK.M Mon Nov 10 17:51:31 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:49 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Multiple Level Calibration



TIC: 1110F002.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.08min 2086.13ng/ml m

response 170160

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	23.77
0.00	0.00	0.00
0.00	0.00	0.00

over integrated 11/12/3

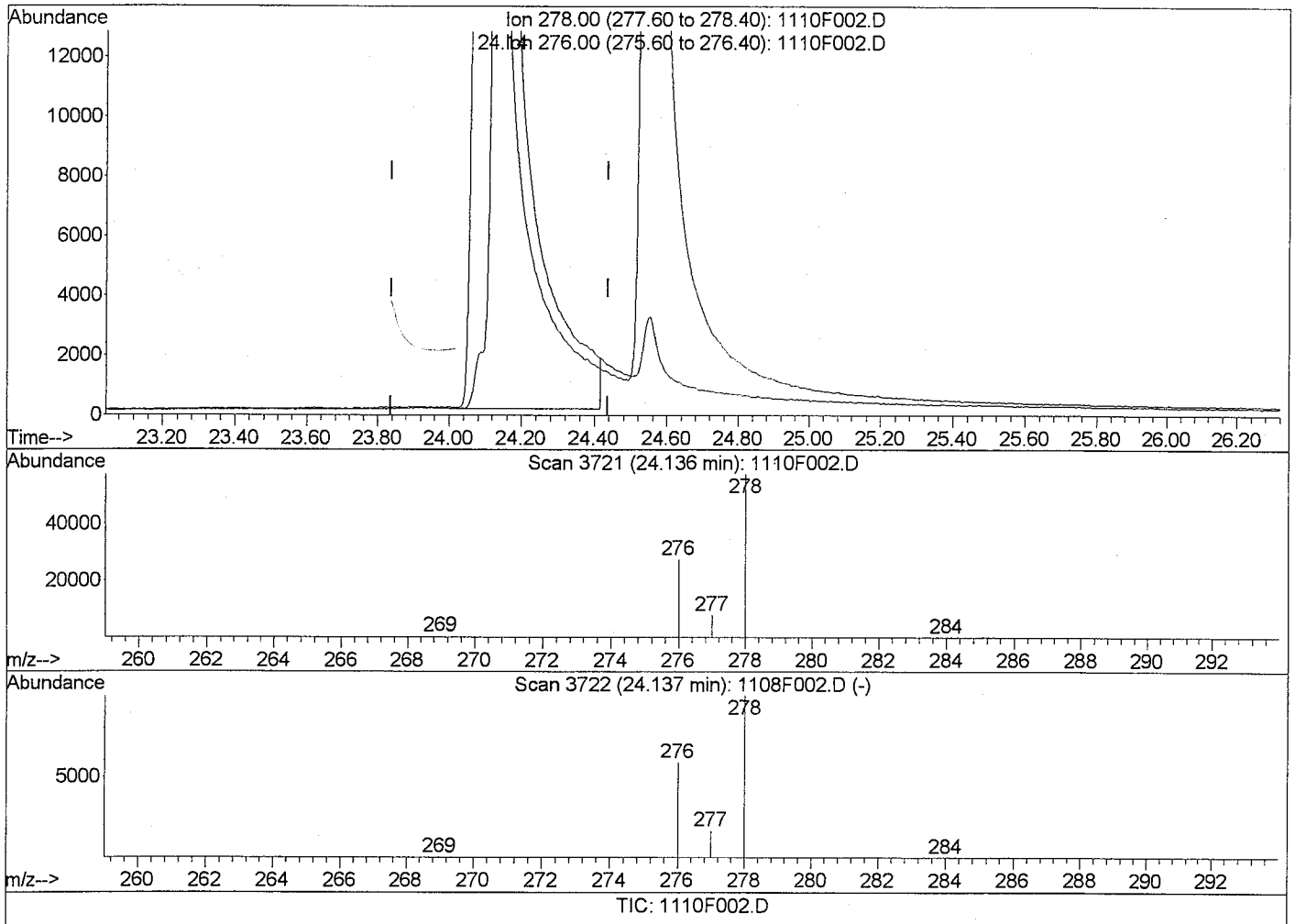
J 11/12/3

1110F002.D 1107ALK.M Mon Nov 10 17:51:35 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:49 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Multiple Level Calibration



TIC: 1110F002.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1891.55ng/ml

response 221733

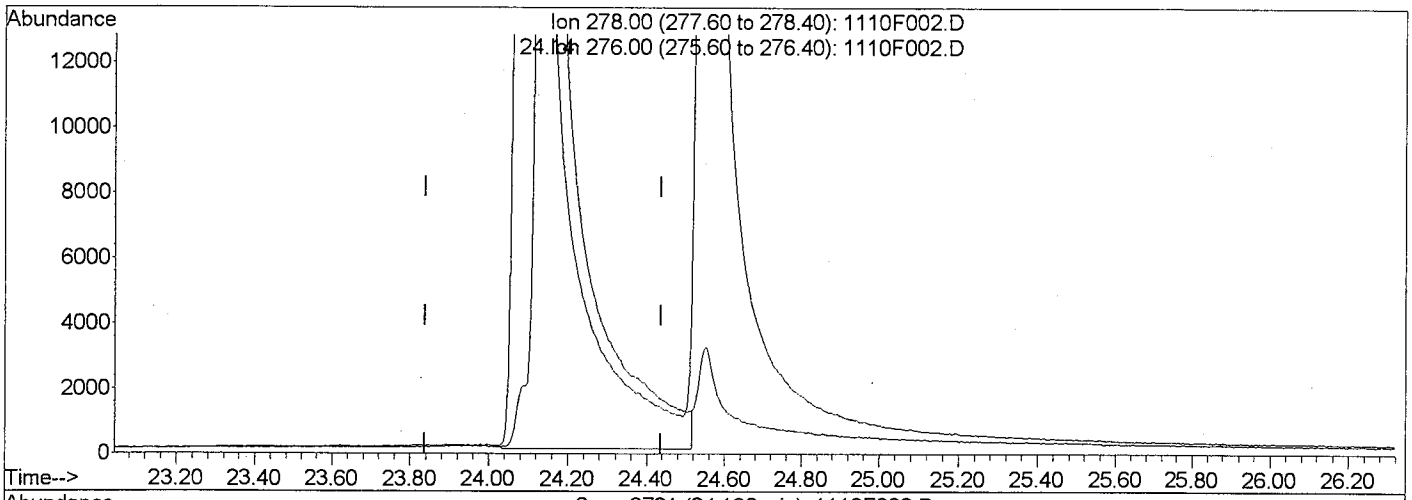
Ion	Exp%	Act%
278.00	100	100
276.00	59.00	47.61
0.00	0.00	0.00
0.00	0.00	0.00

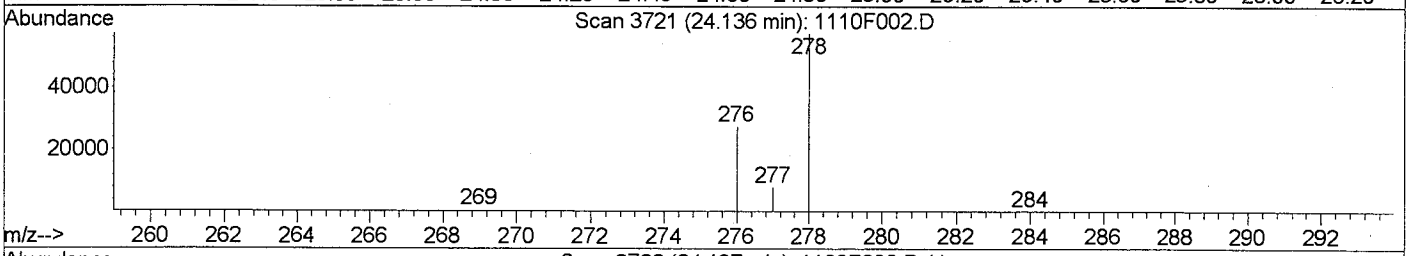
1110F002.D 1107ALK.M Mon Nov 10 17:51:43 2003

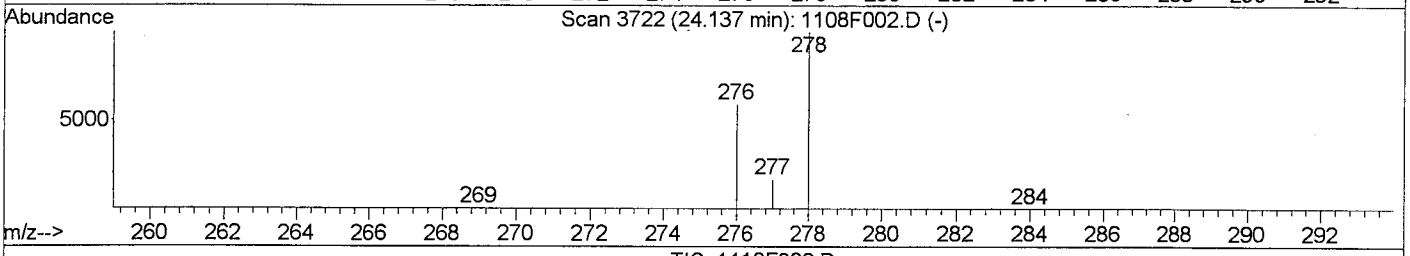
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111003\1110F002.D Vial: 2
Acq On : 10 Nov 2003 3:00 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 17:49 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 17:31:29 2003
Response via : Multiple Level Calibration







TIC: 1110F002.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1969.18ng/ml m

response 230833

Ion	Exp%	Act%
278.00	100	100
276.00	59.00	47.88
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/3

J 11/12/3

1110F002.D 1107ALK.M Mon Nov 10 17:51:47 2003

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0317378	**Prep Method:**	EPA 3520C	**Prep Date:**	10/29/03 00:00
Department:	SVM				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K2308419-001	SW-1	SIM-ALKH	WATER	1010ml	1ml
K2308419-002	SW-2	SIM-ALKH	WATER	1010ml	1ml
K2308419-003	SW-3	SIM-ALKH	WATER	1030ml	1ml
K2308419-004	SW-4	SIM-ALKH	WATER	1020ml	1ml
K2308419-005	SW-4-Dup	SIM-ALKH	WATER	1010ml	1ml
K2308419-006	SW-5	SIM-ALKH	WATER	1040ml	1ml
K2308419-008	SW-6	SIM-ALKH	WATER	1020ml	1ml
K2308419-009	SW-7	SIM-ALKH	WATER	1010ml	1ml
K2308419-010	SW-8	SIM-ALKH	WATER	1030ml	1ml
KWG0317378-1	Matrix Spike	SIM-ALKH	WATER	1020ml	1ml
KWG0317378-2	Duplicate Matrix Spike	SIM-ALKH	WATER	1020ml	1ml
KWG0317378-3	Lab Control Sample	SIM-ALKH	WATER	1000ml	1ml
KWG0317378-4	Method Blank	SIM-ALKH	WATER	1000ml	1ml

Lab Code	Parent Lab Code	Comments
KWG0317378-1	K2308419-004	
KWG0317378-2	K2308419-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308419-001	245658	SVMP3-20G	20uL			GRoettge
K2308419-002	245659	SVMP3-20G	20uL			GRoettge
K2308419-003	245664	SVMP3-20G	20uL			GRoettge
K2308419-004	245660	SVMP3-20G	20uL			GRoettge
K2308419-005	245662	SVMP3-20G	20uL			GRoettge
K2308419-006	245661	SVMP3-20G	20uL			GRoettge
K2308419-008	245663	SVMP3-20G	20uL			GRoettge
K2308419-009	245665	SVMP3-20G	20uL			GRoettge
K2308419-010	245666	SVMP3-20G	20uL			GRoettge
KWG0317378-1	245667	SVMP3-20G	20uL	SVMP3-20H	200uL	GRoettge
KWG0317378-2	245668	SVMP3-20G	20uL	SVMP3-20H	200uL	GRoettge
KWG0317378-3	245669	SVMP3-20G	20uL	SVMP3-20H	200uL	SKnapp
KWG0317378-4	245670	SVMP3-20G	20uL			SKnapp

Comments: I.S. SVM15-60C

Started By: RHolden Assisted By: _____ Training: Yes / No

Completed By: SKnapp Assisted By: _____ Yes / No

Reviewed By: [signature] Date: 11/5/3 Storage: AM11

Chain of Custody

Relinquished By: SKnapp Date: 11/4/03

Received By: [signature] Date: 11/7/3 Extracts Examined: Yes / No

Preparation Information

Group ID:	KWG0317378	**Prep Method:**	EPA 3520C	**Prep Date:**	10/29/03 00:00
Department:	SVM				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K2308419-001	SW-1		✓	SIM-ALKH	WATER	1010	>11	NA	1mL	20ul	
2	K2308419-002	SW-2		✓	SIM-ALKH	WATER	1010					
3	K2308419-003	SW-3		✓	SIM-ALKH	WATER	1030					
4	K2308419-004	SW-4		✓	SIM-ALKH	WATER	1020					
5	K2308419-005	SW-4-Dup		✓	SIM-ALKH	WATER	1010					
6	K2308419-006	SW-5		✓	SIM-ALKH	WATER	1040					
7	K2308419-008	SW-6		✓	SIM-ALKH	WATER	1020					
8	K2308419-009	SW-7		✓	SIM-ALKH	WATER	1010					
9	K2308419-010	SW-8		✓	SIM-ALKH	WATER	1030					
10	KWG0317378-1	Matrix Spike K8419-4 MS		✓	SIM-ALKH	WATER	1020					200ul
11	KWG0317378-2	Duplicate Matrix Spike K8419-4DMS		✓	SIM-ALKH	WATER	1020					
12 (D)	KWG0317378-3	Lab Control Sample			SIM-ALKH	WATER	1000					
13 (D)	KWG0317378-4	Method Blank			SIM-ALKH	WATER	1000					

Start: 6:20 pm/10-30-03/RHH Stop: 3:00 pm /10-31-03/RHH

Comments: (D) LCS & MB lost why taking down, Will set up new LCS & MB per 24 hr rule

Surrogate ID: SVMP3-20-C, 20ul, 100/50ppm XP: 2-1-04

Spike ID: SVMP3-20-H, 200ul, 25ppm XP: 1-Feb-04

Witness: Diana Hostetler 10/29/03 ① Slknapp 10/30/03

Started By: RHolden Assisted By:

Completed By: ~~RHolden~~ Slknapp Assisted By:

Appendix from EAT-3520

for Extracting Compounds in water by EPA Method 3520C

Procedure:

Note a) Any Acids or Bases used in this procedure must be checked for contamination prior to use. (See CAS SOP)

b) All anhydrous sodium sulfate (Na_2SO_4) used in this procedure must be thoroughly rinsed with methylene chloride (DCM).

Steps 1 - 5 MUST be done in a fume hood.

1. Thoroughly rinse continuous extractors and condensers with DCM.
2. Add approximately 600mls of DCM to the extractor body.
3. Using a graduated cylinder, measure out *volume* L of sample. If the entire contents of the bottle are to be extracted, mark the level of the sample on the outside of the bottle prior to adding contents to the Extractor.
4. Slowly add the contents of the sample to the extractor body, using caution not to allow water to enter into the boiling flask. (This can be done by tilting the extractor back, adding the water slowly down the back of the extractor, and slowly tilting the extractor forward to allow the DCM layer to flow into the boiling flask.) If necessary, add additional DI water to the extractor to ensure proper operation. Use 1 liter of DCM rinsed DI water for the MB and LCS.
5. Rinse graduated cylinder or sample bottle with 60mls of DCM and add to the extractor.
6. Add surrogate and matrix spikes. See chart. **(Witnessed by a trained analyst)**
7. Check the pH of the sample with narrow range pH paper and adjust to a pH of *primary pH* with 1:1 H_2SO_4[a] or 1:1 NaOH[a].
8. With heating mantles set on 4, cycle for 18-24 hours. Record start and end times.
9. If secondary pH extraction is required proceed else go to step 12.
10. When extracts are cooled sufficiently, attach a clean boiling flask with 300mls of DCM to the extractor, then adjust the pH of the sample with narrow range pH paper to *Secondary pH* with 1:1 H_2SO_4[a] or 1:1 NaOH[a].
11. With heating mantles set on 4, cycle for an additional 18-24 hours. Record start and end times.
12. When extracts are cooled sufficiently, decant extracts into pre-rinsed KD apparatus assembled with a TRS modified funnel (funnel set up with a small plug of DCM rinsed glass wool, then anhydrous Na_2SO_4[b]). **Always pour the primary extract first.** Apply vacuum to complete the transfer.
13. Concentrate the extracts on an S-Evap with the temperature set between 70-76°. Remove the KD when the solvent level is low enough to remove the collector. Extreme caution must be used to ensure that the sample does not concentrate too low or to dryness.
14. Based on sample analysis and compound list, determine cleanup direction to take. See chart.
15. If cleanup is performed, only half the original extract is retained. Therefore the extract must be concentrated to 1/2 the final volume to achieve the correct "calculated" final volume.
16. Concentrate the extracts to *<calculated final volume* ml. on the N-Evap under a **gentle** stream of nitrogen with the temperature not exceeding 35°. Extreme caution must be used to ensure that the sample does not concentrate too low or to dryness.
17. Bring extracts to *calculated final volume* ml. in DCM and place in a labeled, *color*, 2ml autosampler vial.
18. Do FID screening. (see CAS SOP) Evaluate screen data.
19. Complete all necessary paperwork. Turn extracts and paperwork over to MS analysts.

Test:	Volume	Surrogate/ Amount	Spike/ Amount	Primary pH	Secondary pH	Calculated Final Volume	Color	Cleanup
8270/625	1 Liter	AP/1ml	8270+Benzidine/ 1ml. each	<2	>11	1 ml.	clear	GPC if needed
8270-LL	1 Liter	AP/50µl	8270/50µl	<2	N/A	2 ml.	amber	GPC all
8270-TCLP	1 Liter	AP/1ml.	8270+Pyridine/ 1ml+.50µl	<2	>11	1 ml.	clear	GPC if needed
SIM-PHEN	1 Liter	AP/25µl	8270/50µl	<2	N/A	0.5 ml.	red	none
SIM-PAH / SIM-ALKH	1 Liter	AP/20µl	PAH/200µl	>11	N/A	1 ml.	green	If needed Silica Gel*
SIM-PAH-PCP	1 Liter	AP/20ul	8270/50ul	<2	N/A	1 ml.	green	GPC if needed
MISC.	_____	_____	_____	_____	_____	_____	_____	_____

**If carbazole is in the compound list do not silica gel, do GPC*

Additional Prep Information For EPA 3520

Service Request K8419 **Workgroup** KW6031737B

DCM Lot 43207 Acid Lot —NA— Base Lot 4385Y14501

Continuous Start$_1$ (Time/Date/Initial): 10:45 am / 10-29-03 / RKH

Continuous Stop$_1$ (Time/Date/Initial): 4:45 am / 10-30-03 / RKH

Continuous Start$_2$ (Time/Date/Initial): —NA—

Continuous Stop$_2$ (Time/Date/Initial): —NA—

Sulfate Lot # 43205333 Pipette Lot # 011503

S-Evap Temp 75°C N-evap Temp 32°C Hexane Lot # NA

Clean-up #1: — Initial/Date: _____

Clean-up #2: — Initial/Date: _____

Date Completed: 11/4/03 SK

Comments/Observations:

Bench Sheet Review Check List	
✓	Hold Times Met (if no, Reason: _____)
✓	Prep date, dept, method, product code correct in stealth
✓	Spike Information correct
✓	Weights/Volumes and units correct on raw and final bench sheets
✓	Sample IDs have been checked—Bottle numbers appended if required
✓	Names present for: Started by, Completed by, relinquished by, and witnessed by.
✓	Training has been circled
✓	Extract Storage recorded
✓	Additional Prep Sheet completely filled out (NA or line out Blanks)
✓	All clean-ups have been noted on additional prep sheet
✓	Signed service request with Form V, if applicable, has been attached

Injection Log

Directory: J:\MS11\DATA\110803

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1108F001.D	1.	DFTPP @ 50ug/mL | SVM15-97C		8 Nov 2003 06:0
2	2	1108F002.D	1.	SIM PAH ICV @ 2.0ug/mL | SVM15-97E		8 Nov 2003 06:2
3	3	1108F003.D	1.	IB		8 Nov 2003 07:0
4	1	1108F004.D	1.	KWG0317706-5 MB		8 Nov 2003 07:3
5	2	1108F005.D	1.	KWG0317378-4 MB		8 Nov 2003 08:1
6	3	1108F006.D	1.	K2308006-001		8 Nov 2003 08:4
7	4	1108F007.D	1.	K2308006-001MS		8 Nov 2003 09:2
8	5	1108F008.D	1.	KWG0317706-6 SRM		8 Nov 2003 10:0
9	6	1108F009.D	1.	KWG0317706-3 LCS		8 Nov 2003 10:3
10	7	1108F010.D	1.	KWG0317706-4 DLCS		8 Nov 2003 11:1
11	8	1108F011.D	1.	KWG0317378-3 LCS		8 Nov 2003 11:5
12	9	1108F012.D	1.	KWG0317378-1 K2308419-004MS		8 Nov 2003 12:2
13	10	1108F013.D	1.	KWG0317378-2 K2308419-004DMS		8 Nov 2003 13:0
14	11	1108F014.D	1.	K2308419-001 > rerun		8 Nov 2003 13:4
15	12	1108F015.D	1.	K2308419-002		8 Nov 2003 14:1
16	13	1108F016.D	1.	K2308419-003		8 Nov 2003 14:5
17	14	1108F017.D	1.	K2308419-004		8 Nov 2003 15:3
18	15	1108F018.D	1.	K2308419-005		8 Nov 2003 16:0
19	16	1108F019.D	1.	K2308419-006		8 Nov 2003 16:4
20	17	1108F020.D	1.	K2308419-008		8 Nov 2003 17:2
21	18	1108F021.D	1.	K2308419-009		8 Nov 2003 17:5
22	19	1108F022.D	1.	K2308419-010 > rerun		8 Nov 2003 18:3
23	20	1108F023.D	1.	SIM-ALKH CCV | SVM3-88E		8 Nov 2003 19:0

CAL 3082 11/10/03

MT 11/11/03

Injection Log

Directory: J:\MS11\DATA\111003

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1110F001.D	1.	DFTPP @ 50ug/mL | SVM15-97C		10 Nov 2003 14:4
2	2	1110F002.D	1.	SIM PAH ICV @ 2.0ug/mL | SVM15-97E		10 Nov 2003 15:0
3	1	1110F003.D	1.	IB		10 Nov 2003 15:3
4	2	1110F004.D	1.	KWG0317622-7 MB		10 Nov 2003 16:1
5	3	1110F005.D	1.	K2308419-001		10 Nov 2003 16:4
6	4	1110F006.D	1.	K2308419-010		10 Nov 2003 17:2
7	5	1110F007.D	1.	K2308382-002REX		10 Nov 2003 18:0
8	6	1110F008.D	1.	K2308382-004REX		10 Nov 2003 18:3

-sequence error - run stopped

AL 3082 11/11/3 jmg 11/12/3

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 2, 2003 Service Request No: K2308433

Katrina Leigh
ARCADIS
26451 Curtiss Wright Parkway, Suite 100
Cleveland, OH 44143

RE: Bloomington, IN / IN000072.0021

Dear Katrina:

Enclosed are the results of the sample(s) submitted to our laboratory on October 27, 2003. For your reference, these analyses have been assigned our service request number K2308433.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3316.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jeff Christian
Laboratory Director

JC/jeb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	ARCADIS	**Service Request No.:**	K2308433
Project:	Bloomington, IN	**Date Received:**	10/25/03
Sample Matrix:	Sediment/Porewater		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine sediment samples were received for analysis at Columbia Analytical Services on 10/25/03. The samples were received in good condition and consistent with the accompanying chain of custody form except as noted in the following paragraph. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Some breakage occurred during shipment to the laboratory for a number of containers. Sufficient numbers of containers arrived intact to allow all analyses to be performed except the Porewater Extraction for sample SED-5. A replacement sample for SED-5 was received 11/4/03.

General Comment Regarding the Characteristics of the Sample Matrix

The samples generally consisted of sand and gravel. High gravel content creates difficulties relative to precision for most analytical procedures. In general, the results are reasonably good, but some anomalies related to precision were observed. Refer to the comments listed under each analytical fraction for detail.

General Chemistry

No anomalies associated with the analysis of these samples were observed.

Porewater Metals

No anomalies associated with the analysis of these samples were observed.

Simultaneously Extracted Metals (SEM)

No anomalies associated with the analysis of these samples were observed.

Total Metals

The matrix spike recovery of Antimony for sample SED-4 was below the CAS control criterion. Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analyses. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. Since low recoveries result from a method defect and can be magnified by certain matrix components, no corrective action is appropriate other than using alternative procedures that specifically target Antimony. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control.

Approved by _____ **Date** 12/2/03

The Relative Percent Difference (RPD) for the replicate analysis of Arsenic, Cadmium, and Zinc in sample SED-4 was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

No other anomalies associated with the analysis of these samples were observed.

BTEX by EPA Method 8021

No anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C (w/Large Volume Injection, LVI)

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3091:Phenol, Benzyl Alcohol, 2-Methylphenol, N-Nitrosodi-n-propylaime, 4-Methylphenol, Nirtobenzene, Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, and 2,4-Dinitrotoluene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 10.5%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3102: 2-Fluorophenol, Benzyl Alcohol, 2-Methylphenol, N-Nitrosodi-n-propylamine, 4-Methylphenol, Nitrobenzene-d5, Nitrobenzene, 2,6-Dinitrotoluene, and 2,4-Dinitrotoluene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 9.0%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3116: Benzoic Acid, 2,6-Dinitrotoluene, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2-Methyl-4,6-dinitrophenol, Phenanthrene, Benzidine. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 7.3%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

Surrogate Exceptions:
The control criteria were exceeded for the following surrogates in samples SED-5, SED-6, and SED-8: Phenol-d6 and 2,4,6-Tribromophenol. Since the problem may indicate a potential bias in the analytical results, the samples were re-extracted and reanalyzed. Note the reanalysis was performed past the recommended hold time. The surrogates met control criteria for the reanalysis. Note the results for the field samples were comparable for both determinations, which indicates the problem with the initial analysis was restricted to the surrogate recovery. Both sets of results are reported. The data is flagged to indicate the problem.

Matrix Spike Recovery Exceptions:
The matrix spike recoveries of 2-Methylphenol and 2,4-Dimethylphenol for sample SED-4 were outside control criteria because of suspected matrix interference. A Matrix Spike Duplicate (MSD) was also analyzed, but produced similar results. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. The results of the original analysis are reported. No further corrective action was appropriate.

The matrix spike recovery of Bis(2-ethylhexyl) Phthalate for sample SED-4DMS was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. No further corrective action was appropriate.

Approved by _____ **Date** 12/5/03

Elevated Method Reporting Limits:
The reporting limits are elevated for all samples. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. Clean-up of the extract was performed within the scope of the method, but did not eliminate enough of the background components to prevent dilution. A semiquantitative screen was performed prior to final analysis. The results of the screening indicated the need to perform a dilution.

No other anomalies associated with the analysis of these samples were observed.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C (w/SIM)

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3082: Anthracene, Benzo(a)Pyrene, Indeno(1,2,3-cd)pyrene, and Dibenz(a,h)anthracene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 8.5%. The calibration meets the alternative evaluation criteria.

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recoveries of Fluoranthene and Pyrene for sample SED-4 are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The matrix spike recoveries of a number of analytes for sample SED-4DMS were outside the CAS control criteria as a result of the heterogeneous character of the sample. The Relative Percent Difference (RPD) for the replicate analysis supports this. Since the unspiked samples contain high analyte concentrations relative to the amount spiked, the variability between replicates was sufficient to bias the percent recoveries outside normal CAS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 12/2/03

Chain of Custody Documentation

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page 1 of 1

Project Number/Name IN000072.0021

Project Location BLOOMINGTON, IN

Laboratory COLUMBIA ANALYTICAL

Project Manager TIM BARBER

Sampler(s)/Affiliation ARCADIS

K2308433
~~K230411~~ 9

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Dissolved Metals USEPA 6000/7000/200.8	Total Metals USEPA 6000/7000/HARDNESS/200.8/245.1/245.2/1631E/200.7	Alkylated PAHs USEPA 8270C	Alkylated PAHs/SVOCs USEPA 8270C TOC 415.1 Total Metals 6000/7000/200.8	Porewater Extract. Dissolved Metals Hardness	Grain Size	AVS/SEM Allen, FD 1993	Remarks	Total
SW-1	L	10-22-03 1345		1	1	2						4 (FIELD)
SED-1	S	10-22-03 1355				2	2 CBL	1	1		Grain Size	6
SW-2	L	10-22-03 1435		1	1	2					✓	4
SED-2	S	10-22-03 1505				2	2	1	1		✓	6
											✓	
											✓	
											✓	
											✓	
											✓	
											✓	

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 20

Relinquished by: Katie Hoak	Organization: ARCADIS	Date 10/23/03	Time 1407	Seal Intact? Yes No N/A
Received by: [illegible]	Organization: CAS	Date 10/25/03	Time 0830	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date / /	Time _____	

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier FED EX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page 1 of 1

Project Number/Name IN000072.0021

Project Location BLOOMINGTON, IN

Laboratory COLUMBIA ANALYTICAL

Project Manager TIM BARBER

Sampler(s)/Affiliation ARCADIS

1C23054119
1C23084133

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: Dissolved Metals USEPA 6000/7000/200.8	Total Metals USEPA 6000/7000/200.8 Hardness SM2340/130.2	Alkylated PAHs USEPA 8270C	Alkylated PAHs USEPA 8270C TDC 3515.1 Total Metals 6000/7000/200.8	Pore Water Extract Dissolved Metals Hardness	Grain Size	Aus ISM All IN, FD (PA)	Remarks	Total
SW-3	L	10-22-03 1610		1	1	2						4
SED-3	S	10-22-03 1625					2	2	1	1		6
SW-4	L	10-22-03 1705		1	1	2						4
SW-4-MSMSD	L	10-22-03 1705		1	1	2						4
SED-4	S	10-22-03 1730					2	2	1	1		6
SED-4-MSMSD	S	10-22-03 1730					2			1		3
SW-EB	L	10-23-03 1405		1								1

Total No. of Bottles/ Containers 38

Sample Matrix: L = Liquid; S = Solid; A = Air

					Seal Intact?
Relinquished by: Kath Hood	Organization: ARCADIS	Date 10/23/03	Time 1514		
Received by: Jan Allen	Organization: CAS	Date 10/25/03	Time 0830		Yes No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____		Seal Intact?
Received by: _____	Organization: _____	Date / /	Time _____		Yes No N/A

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier FEDEX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page 1 of 1

Project Number/Name IN000072.0021

Project Location BLOOMINGTON, IN

Laboratory COLUMBIA ANALYTICAL

Project Manager TIM BARBER

Sampler(s)/Affiliation ARCADIS

1C23081119
1C2308433

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Dissolved Metals USEPA 6000/7000/300.8	Total Metals USEPA 6000/7000/300.8 Hardness SM2340/130.2	Alkylated PAHs USEPA 8270C	Alkylated PAHs/SVOCs USEPA 8270C TOC 415.1 Total Metals 6000/7000/300.8	Porewater Extract Dissolved Metals Hardness	Grain Size	Aviscem Allwud 1995	Remarks	Total
SW-4-DUP	L	10-22-03 1705		1	1	2						4
SED-4-DUP	S	10-22-03 1730				2	2		1			5
SW-5	L	10-23-03 845		1	1	2						4
SED-5	S	10-23-03 930				2	2	1	1			6

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 19

					Seal Intact?
Relinquished by: Katie Hoch	Organization: ARCADIS	Date 10/23/03	Time KKH		
Received by: [signature]	Organization: CAS	Date 10/23/03	Time 0830		Yes No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____		Seal Intact?
Received by: _____	Organization: _____	Date / /	Time _____		Yes No N/A

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier FED EX SPECIFY ☒ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name 10000072.0021

Project Location BLOOMINGTON, IN

Laboratory COLUMBIA ANALYTICAL

Project Manager TIM BARBER

Sampler(s)/Affiliation ARCADIS

K2308419

K2308433

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	TOTAL METALS USEPA 6000/7000/200.8 HARDNESS SM2340/130.2	ALKYLATED PAHS USEPA 8270C	ALKYLATED PAHS/SVOCS USEPA 8270 TOC 415.1 TOTAL METALS 6000/7000/200.8	GRAIN SIZE			Remarks	Total
SW-16	L	10-23-03 1025		1	2						3
SED-16 -7	S	10-23-03 1040				3	2				5
SW-7	L	10-23-03 1100		1	2						3
SED-7 -8	S	10-23-03 1110				3	2				5
SW-8	L	10-23-03 1120		1	2						3
SED-8 -9	S	10-23-03 1130				3	2				5

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 24

Relinquished by: [signature]	Organization: ARCADIS	Date 10/23/03	Time 1414	Seal Intact?	
Received by: [signature]	Organization: CAS	Date 10/25/03	Time 0830	Yes	No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A

Special Instructions/Remarks:

Delivery Method: ☐ In Person ☒ Common Carrier FED EX (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page 1 of 2

Project Number/Name IN000076.0021
Project Location BLOOMINGTON, IN
Laboratory COLUMBIA ANALYTICAL
Project Manager TIM BARBER
Sampler(s)/Affiliation ARCADIS

~~L2308449~~
L2308453

	Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: BTEX (USEPA 8021)						Remarks	Total
4	SW-1	L	10-22-03 1345		3							3
3	SW-2	L	10-22-03 1455		3							3
5	SW-3	L	10-22-03 1610		3							3
7	SW-4	L	10-22-03 1705		3							3
17	SW-4-DUP	L	10-22-03 1705		3							3
7	SW-4-MSMSD	L	10-22-03 1705		3						MS/MSD SAMPLE	3
9	SW-5	L	10-23-03 945		3							3
11	SW-6	L	10-23-03 1025		3							3
13	SW-7	L	10-23-03 1100		3							3
15	SW-8	L	10-23-03 1130		3							3
2	SED-1	S	10-22-03 1355		1							1
4	SED-2	S	10-22-03 1505		1							1
6	SED-3	S	10-22-03 1625		1							1
8	SED-4	S	10-22-03 1730		1							1
8	SED-4-DUP	S	10-22-03 1730		1							1
											Total No. of Bottles/ Containers	35

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Sample Matrix: L = Liquid; S = Solid; A = Air

					Seal Intact?
Relinquished by: Peter Hood	Organization: ARCADIS	Date 10/23/03	Time 1410		
Received by: Jean Blair	Organization: OA	Date 10/25/03	Time 0830		Yes No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____		Seal Intact?
Received by: _____	Organization: _____	Date / /	Time _____		Yes No N/A

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier FedEx (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Project Number/Name IN000075.0021

Project Location BLOOMINGTON, IN

Laboratory COLUMBIA ANALYTICAL

Project Manager TIM BARBER

Sampler(s)/Affiliation ARCADIS

K230 8433

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: BTEX (SW846 8021)						Remarks	Total
SED-4-MSMSD	S	10-22-03 1730		1						*MS/MSD SAMPLE	1
SED-5	S	10-23-03 950		1						FOR SED-4	1
Trip Blank	L	N/A		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 4

Relinquished by: Katie Wright	Organization: ARCADIS	Date 10/23/03	Time 1441	Seal Intact?	
Received by: Jean Clark	Organization: CAS	Date 10/25/03	Time 0830	Yes	No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes	No N/A

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex ☐ Lab Courier ☐ Other _____

SPECIFY SPECIFY

AG 05-12/01

13

Columbia Analytical Services INC.
An Employee-Owned Company

CHAIN OF CUSTODY

Sediment and Tissue Chemistry

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • FAX (360) 636-1068

SR#: K0308433-004

PAGE 1 OF 1 COC #

PROJECT NAME: CSXT Bloomington
PROJECT NUMBER: IN 72.
PROJECT MANAGER: S. Shard
COMPANY/ADDRESS: Arcadis
251 E. Ohio
PHONE # 317 231-6500 FAX # 317 231-6519
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ AVS ☐ SEM (metals list below) ☐ Water Soluble	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ GC/MS SIM (PAH) ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volitiles (8260)	Dioxins ☐ 1613 ☐ 8290	TPH ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparations (Instructions below)	Pore water			REMARKS
SED-5	11/3/03	1500	10	Sed	5																✓			

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REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 Day
____ Standard (10-15 working days)
____ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn
CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn
SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS:
Contact Tim Barker w/ Arcadis - Cleveland office regarding Turn Around, Invoice Info, Report Req. and deliverables

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature	Signature
Date/Time: 11/3/03 1650	Date/Time: 11/4/03 1105	Date/Time	Date/Time
Printed Name: Thomas Mueller	Printed Name: Black	Printed Name	Printed Name
Firm: ARCADIS	Firm: CAS	Firm	Firm

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

8433

Project/Client ARCADIS Work Order K23 ~~08419~~ FS

Cooler received on 10/25/03 and opened on 10/25/03 by AP

FX

1. Were custody seals on outside of cooler? If yes, how many and where? 5F — 0739, " " 0717, " " 0728, " " 0761 — (Y) N
2. Were seals intact and signature & date correct? (Y) N
3. Is the shipper's airbill available and filed? If no, record airbill number: 84350847 0739 Y N
4. COC #

Temperature of cooler(s) upon receipt:	8.7	9.4	10.0	7.1	7.9
Temperature Blank:	8.5	9.1	9.9	7.4	6.7

5. Were custody papers properly filled out (ink, signed, etc.)? (Y) N
6. Type of packing material present BURLAP, MESH
7. Did all bottles arrive in good condition (unbroken)? AP ~~(Y)~~ (N)
8. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (Y) N
9. Did all bottle labels and tags agree with custody papers? (Y) N
10. Were the correct types of bottles used for the tests indicated? (Y) N
11. Were all of the preserved bottles received at the lab with the appropriate pH? (Y) N
12. Were VOA vials checked for absence of air bubbles, and if present, noted below? (Y) N
13. Did the bottles originate from CAS/K or a branch laboratory? (Y) N
14. Are CWA Microbiology samples received with > ½ the 24 hr. hold time remaining from collection? ~~Y N~~
15. Was Cl2/Res negative? (Y) N

Explain any discrepancies: BROKEN: 1 8oz FOR SED-5 → CONTAINED ✓, 1 16oz FOR SED 5 → UNABLE TO CONTAIN, 1 32oz FOR SED-5* → CONTAINED ✓, 1 AMBER FOR SW-4-DUP. 1 4oz FOR SED-6 → UNABLE TO CONTAIN, 1 8oz FOR SED-6 → UNABLE TO CONTAIN, 1 4oz FOR SED 7, SED 8 → UNABLE

RESOLUTION: TO CONTAIN *Note: Leakage suspected; sample not used.

Samples that required preservation or received out of temperature: ALL SAMPLES OUT OF TEMP (See Case Narrative)

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

10/25/03

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client Arcadis Work Order K23 08433-006

Cooler received on 11-4-03 and opened on 11-4-03 by JHu

1.	Were custody seals on outside of cooler? If yes, how many and where?					Y	(N)
2.	Were seals intact and signature & date correct?					Y	(N)
3.	Is the shipper's airbill available and filed? If no, record airbill number: FX Attach.					(Y)	N
4.	COC #						
	Temperature of cooler(s) upon receipt:	0.0					
	Temperature Blank:	3.9					
5.	Were custody papers properly filled out (ink, signed, etc.)?					(Y)	N
6.	Type of packing material present	Ice, plastic					
7.	Did all bottles arrive in good condition (unbroken)?					(Y)	N
8.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?					(Y)	N
9.	Did all bottle labels and tags agree with custody papers?					(Y)	N
10.	Were the correct types of bottles used for the tests indicated?					(Y)	N
11.	Were all of the preserved bottles received at the lab with the appropriate pH?					~~Y~~	N
12.	Were VOA vials checked for absence of air bubbles, and if present, noted below?					~~Y~~	N
13.	Did the bottles originate from CAS/K or a branch laboratory?					(Y)	N
14.	Are CWA Microbiology samples received with > ½ the 24 hr. hold time remaining from collection?					Y	N
15.	Was Cl2/Res negative?					~~Y~~	N

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Total Solids

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: WET

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
SED-1	K2308433-001	10/22/2003	10/27/2003	10/31/2003	74.5	
SED-2	K2308433-002	10/22/2003	10/27/2003	10/31/2003	77.3	
SED-3	K2308433-003	10/22/2003	10/27/2003	10/31/2003	81.6	
SED-4	K2308433-004	10/22/2003	10/27/2003	10/31/2003	75.3	
SED-4-DUP	K2308433-005	10/22/2003	10/27/2003	10/31/2003	73.0	
SED-5	K2308433-006	10/23/2003	10/27/2003	10/31/2003	82.0	
SED-6	K2308433-007	10/23/2003	10/27/2003	10/31/2003	79.0	
SED-7	K2308433-008	10/23/2003	10/27/2003	10/31/2003	79.9	
SED-8	K2308433-009	10/23/2003	10/27/2003	10/31/2003	72.7	

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003
		Date Analyzed:	10/31/2003

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	WET
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
SED-4	K2308433-004	75.3	79.8	77.6	6	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

Group ID:	KWG0317529				
Analyst:	ACheatle			**Reviewed By:**	
Date Acquired:	10/31/2003 14:10	**Oven TempStart:**	105 DEG C		
Date Completed:	11/03/2003 10:21	**Oven TempEnd:**	103 DEG C	**Date Reviewed:**	11/5/03

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K2308208-001	Bark-1	MISC	0.98g	3.12g	2.58g	74.8		Air Dry and Wiley Milled
2	K2308208-003	Bark-2	MISC	0.97g	3.26g	2.88g	83.4		Air Dry and Wiley Milled
3	K2308208-004	Bark-3	MISC	0.97g	3.53g	3.21g	87.5		Air Dry and Wiley Milled
4	K2308208-005	Bark-4	MISC	0.98g	2.89g	2.66g	88.0		Air Dry and Wiley Milled
5	K2308208-007	Bark-5	MISC	0.97g	2.78g	2.64g	92.3		Air Dry and Wiley Milled
6	K2308208-008	Bark-6	MISC	0.97g	2.83g	2.72g	94.1		Air Dry and Wiley Milled
7	K2308208-009	Bark-7	MISC	0.98g	2.94g	2.73g	89.3		Air Dry and Wiley Milled
8	K2308208-011	Bark-8	MISC	0.97g	3.07g	2.88g	91.0		Air Dry and Wiley Milled
9	K2308208-013	Bark-9	MISC	0.97g	3.25g	3.03g	90.4		Air Dry and Wiley Milled
10	K2308208-015	Bark-10	MISC	0.97g	2.40g	2.27g	90.9		Air Dry and Wiley Milled
11	K2308208-017	Bark-11	MISC	0.97g	2.14g	2.04g	91.5		Air Dry and Wiley Milled
12	K2308208-019	Bark-12	MISC	0.96g	2.60g	2.44g	90.2		Air Dry and Wiley Milled
13	K2308361-001	1020-Ga	SOLID	0.97g	8.07g	6.44g	77.0		
14	K2308433-001	SED-1	SEDIMENT	0.96g	11.49g	8.80g	74.5		
15	K2308433-002	SED-2	SEDIMENT	0.95g	12.15g	9.61g	77.3		
16	K2308433-003	SED-3	SEDIMENT	0.96g	14.95g	12.37g	81.6		
17	K2308433-004	SED-4	SEDIMENT	0.96g	12.06g	9.32g	75.3		
18	K2308433-005	SED-4-DUP	SEDIMENT	0.97g	13.79g	10.33g	73.0		
19	K2308433-006	SED-5	SEDIMENT	0.97g	9.08g	7.62g	82.0		
20	K2308433-007	SED-6	SEDIMENT	0.97g	11.17g	9.03g	79.0		
21	K2308433-008	SED-7	SEDIMENT	0.96g	12.47g	10.16g	79.9		
22	K2308433-009	SED-8	SEDIMENT	0.96g	12.47g	9.33g	72.7		
23	K2308487-001	AN-10SD-A	SEDIMENT	0.96g	10.86g	10.09g	92.2		
24	K2308487-002	AN-11SD-A	SEDIMENT	0.96g	10.15g	9.21g	89.8		
25	K2308487-004	AN-11SD-B	SEDIMENT	0.97g	15.92g	13.93g	86.7		
26	K2308487-005	AN-11SD-C	SEDIMENT	0.96g	10.09g	9.44g	92.9		

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Group ID:	KWG0317529		
Analyst:	ACheatle	**Reviewed By:**	MAFH
Date Acquired:	10/31/2003 14:10	**Oven TempStart:**	105 DEG C
Date Completed:	11/03/2003 10:21	**Oven TempEnd:**	103 DEG C
		Date Reviewed:	11/5/03

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K2308487-006	AN-11SD-D	SEDIMENT	0.96g	10.70g	9.69g	89.6		
28	K2308487-007	AN-11SD-E	SEDIMENT	0.97g	9.83g	6.30g	60.2		
29	K2308487-008	AN-12SD-A	SEDIMENT	0.98g	12.95g	9.86g	74.2		
30	K2308487-009	AN-13SD-A	SEDIMENT	0.98g	15.70g	12.91g	81.0		
31	K2308487-010	AN-14SD-A	SEDIMENT	0.97g	8.52g	6.28g	70.3		
32	K2308487-011	AN-15SD-A	SEDIMENT	0.98g	14.16g	9.75g	66.5		
33	K2308487-012	AN-20SD-A	SEDIMENT	0.97g	9.98g	9.27g	92.1		
34	K2308487-013	AN-70SD-A	SEDIMENT	0.97g	10.31g	9.76g	94.1		
35	K2308487-014	AN-21SD-A	SEDIMENT	0.97g	11.02g	10.35g	93.3		
36	K2308487-015	AN-22SD-A	SEDIMENT	0.97g	10.61g	9.89g	92.5		
37	K2308487-016	AN-23SD-A	SEDIMENT	0.97g	15.48g	13.84g	88.7		
38	K2308487-017	AN-24SD-A	SEDIMENT	0.97g	13.93g	12.74g	90.8		
39	K2308487-018	AN-25SD-A	SEDIMENT	1.01g	6.24g	3.55g	48.6		
40	K2308487-020	AN-27SD-A	SEDIMENT	0.97g	11.36g	10.54g	92.1		
41	K2308487-021	AN-28SD-A	SEDIMENT	0.97g	7.92g	7.15g	88.9		
42	K2308487-022	AN-29SD-A	SEDIMENT	0.97g	9.24g	8.51g	91.2		
43	K2308487-023	AN-30SD-A	SEDIMENT	0.97g	10.99g	7.50g	65.2		
44	K2308487-024	AN-31SD-A	SEDIMENT	0.98g	10.22g	8.52g	81.6		
45	K2308487-025	AN-81SD-A	SEDIMENT	0.98g	9.38g	7.92g	82.6		
46	K2308487-026	AN-32SD-A	SEDIMENT	0.97g	14.22g	12.24g	85.1		
47	K2308487-027	AN-40SD-A	SEDIMENT	0.97g	13.60g	6.53g	44.0		
48	K2308487-029	AN-41SD-A	SEDIMENT	0.97g	11.50g	7.33g	60.4		
49	K2308487-031	BWE-9	SEDIMENT	0.97g	6.60g	2.24g	22.6		
50	K2308498-001	MW-16-20	SOIL	0.96g	11.31g	9.15g	79.1		
51	K2308498-002	MW-16-40	SOIL	0.96g	10.31g	8.41g	79.7		
52	K2308503-001	HL-MW-14S	SOIL	0.97g	10.29g	9.88g	95.6		
53	K2308507-001	EW-017-S-7-8	SOIL	0.96g	8.80g	7.45g	82.8		
54	K2308507-002	EW-020-S-4-5	SOIL	0.97g	7.65g	6.25g	79.0		
55	K2308507-003	EW-018-S-12-13	SOIL	0.96g	9.76g	8.49g	85.6		
56	K2308507-004	EW-016-S-4-5	SOIL	0.96g	9.30g	7.69g	80.7		
57	K2308507-005	EW-016-S-7-8	SOIL	0.96g	13.29g	11.26g	83.5		

Group ID:	KWG0317529		
Analyst:	ACheatle	**Reviewed By:**	
Date Acquired:	10/31/2003 14:10	**Oven TempStart:**	105 DEG C
Date Completed:	11/03/2003 10:21	**Oven TempEnd:**	103 DEG C
		Date Reviewed:	11/5/03

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
58	K2308507-006	EW-019-S-7-8	SOIL	0.97g	11.38g	9.70g	83.9		
59	K2308507-007	EW-015-S-7-8	SOIL	0.97g	11.21g	9.85g	86.7		
60	K2308507-008	DUP-10-28-03	SOIL	0.96g	10.29g	8.86g	84.7		
61	K2308522-001	Area 1 Pile 70	SEDIMENT	0.96g	17.44g	10.57g	58.3		
62	K2308522-002	Area 2 Bent 90	SEDIMENT	0.97g	11.68g	8.12g	66.8		
63	K2308535-001	EGB-A	SOIL	0.97g	14.17g	9.97g	68.2		
64	K2308535-002	EGB-B	SOIL	0.98g	10.39g	3.23g	23.9		
65	K2308535-003	EGB-C	SOIL	0.97g	11.25g	6.96g	58.3		
66	K2308535-004	FIC-A	SOIL	0.97g	14.25g	6.95g	45.0		
67	K2308535-005	FIC-B	SOIL	0.98g	12.13g	6.88g	52.9		
68	K2308535-006	FIC-C	SOIL	0.97g	10.46g	4.94g	41.8		
69	K2308535-007	DMC-A	SOIL	0.97g	10.08g	4.81g	42.2		
70	K2308535-008	DMC-B	SOIL	0.96g	6.22g	3.32g	44.9		
71	K2308535-009	DMC-C	SOIL	0.96g	11.44g	6.60g	53.8		
72	K2308535-010	MED-A	SOIL	0.96g	14.18g	9.30g	63.1		
73	K2308535-011	MED-B	SOIL	0.96g	10.07g	4.87g	42.9		
74	K2308535-012	MED-C	SOIL	0.97g	12.64g	5.57g	39.4		
75	K2308535-013	COL-A	SOIL	0.97g	17.77g	8.02g	42.0		
76	K2308535-014	COL-B	SOIL	0.97g	15.11g	7.18g	43.9		
77	K2308535-015	COL-C	SOIL	0.97g	13.59g	5.42g	35.3		
78	K2308556-001	63260	SEDIMENT	0.97g	8.83g	3.47g	31.8		
79	K2308556-002	63263	SEDIMENT	0.98g	9.29g	3.98g	36.1		
80	K2308556-003	63264	SEDIMENT	0.97g	10.56g	3.92g	30.8		
81	K2308556-004	63265	SEDIMENT	0.96g	12.01g	6.31g	48.4		
82	K2308556-006	63267	SEDIMENT	0.96g	11.46g	4.03g	29.2		
83	K2308556-007	63277	SEDIMENT	0.96g	13.59g	4.80g	30.4		
84	K2308556-008	63278	SEDIMENT	0.96g	9.85g	3.63g	30.0		
85	K2308556-010	63268	SEDIMENT	0.97g	10.49g	3.46g	26.2		
86	K2308556-011	63269	SEDIMENT	0.96g	13.24g	3.93g	24.2		
87	K2308556-012	63270	SEDIMENT	0.97g	9.98g	3.32g	26.1		
88	K2308556-013	63253	SEDIMENT	0.96g	11.62g	4.39g	32.2		

Group ID:	KWG0317529				
Analyst:	ACheatle			**Reviewed By:**	
Date Acquired:	10/31/2003 14:10	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	11/5/03
Date Completed:	11/03/2003 10:21	**Oven TempEnd:**	103 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
89	K2308556-014	63254	SEDIMENT	0.97g	9.51g	4.64g	43.0		
90	K2308556-015	63255	SEDIMENT	0.97g	12.11g	4.10g	28.1		
91	K2308556-016	63256	SEDIMENT	0.97g	10.10g	3.76g	30.6		
92	K2308556-017	63257	SEDIMENT	0.97g	9.68g	3.85g	33.1		
93	K2308556-018	63258	SEDIMENT	0.97g	10.39g	4.02g	32.4		
94	K2308556-019	63259	SEDIMENT	0.97g	14.65g	5.33g	31.9		
95	K2308556-020	63261	SEDIMENT	0.97g	13.47g	5.07g	32.8		
96	K2308556-022	63262	SEDIMENT	0.96g	15.22g	6.11g	36.1		
97	K2308556-023	63271	SEDIMENT	0.97g	12.04g	4.57g	32.5		
98	K2308556-024	63272	SEDIMENT	0.97g	13.05g	6.28g	44.0		
99	K2308556-025	63273	SEDIMENT	0.96g	12.33g	6.17g	45.8		
100	K2308556-026	63274	SEDIMENT	0.97g	11.90g	4.57g	32.9		
101	K2308556-027	63275	SEDIMENT	0.97g	14.18g	5.01g	30.6		
102	K2308556-028	63276	SEDIMENT	0.96g	12.05g	4.63g	33.1		
103	K2308563-001	102803JC01	SOIL	0.96g	9.05g	7.99g	86.9		
104	K2308563-002	102803JC02	SOIL	0.96g	7.53g	6.44g	83.4		
105	K2308563-003	102803JC03	SOIL	0.96g	10.33g	8.10g	76.2		
106	K2308582-001	RA-Area	SOIL	0.98g	7.74g	7.01g	89.2		
107	KWG0317529-1	Duplicate Client Sample	MISC	0.97g	3.13g	2.56g	73.6	K2308208-001	Air Dry and Wiley Milled
108	KWG0317529-10	Duplicate Client Sample	SEDIMENT	0.97g	16.51g	5.82g	31.2	K2308556-020	
109	KWG0317529-11	Duplicate Client Sample	SEDIMENT	0.96g	9.52g	8.83g	91.9	K2308487-001	
110	KWG0317529-12	Duplicate Client Sample	SEDIMENT	0.97g	12.95g	9.15g	68.3	K2308487-011	
111	KWG0317529-13	Duplicate Client Sample	SEDIMENT	0.98g	8.49g	7.63g	88.5	K2308487-021	
112	KWG0317529-14	Duplicate Client Sample	SOIL	0.96g	9.82g	7.98g	79.2	K2308498-001	
113	KWG0317529-15	Duplicate Client Sample	SEDIMENT	0.97g	12.01g	9.78g	79.8	K2308433-004	
114	KWG0317529-16	Duplicate Client Sample	SOIL	0.96g	8.83g	7.35g	81.2	K2308507-001	
115	KWG0317529-17	Duplicate Client Sample	SOIL	0.96g	6.69g	6.08g	89.4	K2308582-001	
116	KWG0317529-2	Duplicate Client Sample	MISC	0.97g	2.57g	2.38g	88.1	K2308208-013	Air Dry and Wiley Milled
117	KWG0317529-3	Duplicate Client Sample	SOIL	0.97g	8.59g	8.09g	93.4	K2308503-001	
118	KWG0317529-4	Duplicate Client Sample	SEDIMENT	0.97g	18.98g	11.46g	58.2	K2308522-001	
119	KWG0317529-5	Duplicate Client Sample	SOLID	0.96g	9.85g	8.04g	79.6	K2308361-001	

Group ID:	KWG0317529			**Reviewed By:**	
Analyst:	ACheatle				
Date Acquired:	10/31/2003 14:10	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	11/5/03
Date Completed:	11/03/2003 10:21	**Oven TempEnd:**	103 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
120	KWG0317529-6	Duplicate Client Sample	SOIL	0.97g	14.22g	10.01g	68.2	K2308535-001	
121	KWG0317529-7	Duplicate Client Sample	SOIL	0.97g	11.76g	7.64g	61.8	K2308535-010	
122	KWG0317529-8	Duplicate Client Sample	SEDIMENT	0.97g	9.69g	3.76g	32.0	K2308556-001	
123	KWG0317529-9	Duplicate Client Sample	SEDIMENT	0.97g	9.54g	3.20g	26.0	K2308556-010	

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22,23/03
Date Received: 10/27/03

Carbon, Total Organic

Prep Method: NONE
Analysis Method: PSEP
Test Notes:

Units: PERCENT
Basis: Dry

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SED-1	K2308433-001	0.05	1	NA	11/04/03	1.36	
SED-2	K2308433-002	0.05	1	NA	11/04/03	0.55	
SED-3	K2308433-003	0.05	1	NA	11/04/03	0.56	
SED-4	K2308433-004	0.05	1	NA	11/04/03	0.55	
SED-4-DUP	K2308433-005	0.05	1	NA	11/04/03	0.77	
SED-5	K2308433-006	0.05	1	NA	11/04/03	1.19	
SED-6	K2308433-007	0.05	1	NA	11/04/03	0.66	
SED-7	K2308433-008	0.05	1	NA	11/04/03	0.61	
SED-8	K2308433-009	0.05	1	NA	11/04/03	1.00	
Method Blank	K2308433-MB	0.05	1	NA	11/04/03	ND	

Approved By: _____ Date: 12/1/03

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Date Extracted: NA
Date Analyzed: 11/04/03

Duplicate Summary
Inorganic Parameters

Sample Name: SED-4
Lab Code: K2308433-004DUP
Test Notes:

Units: PERCENT
Basis: Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	NONE	PSEP	0.05	0.55	0.59	0.57	7	

Approved By: _____ Date: 12/1/03

DUP/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Date Extracted: NA
Date Analyzed: 11/04/03

Triplicate Summary
Inorganic Parameters

Sample Name: SED-4
Lab Code: K2308433-004TRP
Test Notes:

Units: PERCENT
Basis: Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Relative Standard Deviation	Result Notes
Carbon, Total Organic	NONE	PSEP	0.05	0.55	0.59	0.58	0.57	4	

Approved By: _____ Date: 12/1/03

DUP/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/03
Sample Matrix:	Sediment	**Date Received:**	10/27/03
		Date Extracted:	NA
		Date Analyzed:	11/04/03

Matrix Spike Summary
Inorganic Parameters

Sample Name:	SED-4							Units:	PERCENT
Lab Code:	K2308433-004MS							Basis:	Dry
Test Notes:									

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	NONE	PSEP	0.05	2.45	0.55	3.18	107	75-125	

Approved By: _____ Date: 12/1/03

MS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
LCS Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 11/04/03

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name: Lab Control Sample
Lab Code: K2308433-LCS
Test Notes:

Units: PERCENT
Basis: Dry

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	NONE	PSEP	0.57	0.61	107	85-115	

Approved By: _____ Date: 12/1/03

LCS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Collected: NA
Date Received: NA
Date Analyzed: 11/04/03

Carbon, Total Organic
PSEP
Units: PERCENT

CONTINUING CALIBRATION VERIFICATION (CCV)

	True Value	Measured Value	Percent Recovery
CCV 1 Result	20.0	20.5	103
CCV 2 Result	20.0	19.4	97
CCV 3 Result	20.0	19.9	100
CCV 4 Result	20.0	19.9	100
CCV 5 Result	20.0	19.6	98

CONTINUING CALIBRATION BLANK (CCB)

	MRL	Blank Value
CCB 1 Result	0.05	ND
CCB 2 Result	0.05	ND
CCB 3 Result	0.05	ND
CCB 4 Result	0.05	ND
CCB 5 Result	0.05	ND

Approved By: _____ Date: 12/1/03

COMBOQCD/042695

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : ARCADIS
Project Name : Bloomington, IN
Project Number : IN000072.0021
Sample Matrix : SEDIMENT

Service Request : K2308433
Date Collected : 10/22,23/03
Date Received : 10/27/03

Sulfide, Acid Volatile

Units : mg/Kg (ppm)
Basis : Dry

Analysis Method : Draft 12/91
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
SED-1	K2308433-001	0.7	1	11/01/03	1.0	
SED-2	K2308433-002	0.7	1	11/01/03	1.4	
SED-3	K2308433-003	0.7	1	11/01/03	3.9	
SED-4	K2308433-004	0.7	1	11/01/03	13.3	
SED-4-DUP	K2308433-005	0.7	1	11/01/03	18.5	
SED-5	K2308433-006	0.7	1	11/01/03	6.8	
Method Blank	K2308433-MB	0.7	1	11/01/03	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : ARCADIS
Project Name : Bloomington, IN
Project Number : IN000072.0021
Sample Matrix : SEDIMENT

Service Request : K2308433
Date Collected : 10/22/03
Date Received : 10/27/03
Date Extracted : NA
Date Analyzed : 11/01/03

Duplicate Summary
Inorganic Parameters

Sample Name : SED-4
Lab Code : K2308433-004DUP
Test Notes :

Units : mg/Kg (ppm)
Basis : Dry

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfide, Acid Volatile	Draft 12/91	0.7	13.3	13.3	13.3	<1	

Report By:MFirth

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : ARCADIS
Project Name : Bloomington, IN
Project Number : IN000072.0021
Sample Matrix : SEDIMENT

Service Request : K2308433
Date Collected : 10/22/03
Date Received : 10/27/03
Date Extracted : NA
Date Analyzed : 11/01/03

Matrix Spike Summary
Inorganic Parameters

Sample Name : SED-4
Lab Code : K2308433-004MS
Test Notes :

Units : mg/Kg (ppm)
Basis : Dry

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfide, Acid Volatile	Draft 12/91	70	1310	13.3	1480	112	60-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	ARCADIS	**Service Request :**	K2308433
Project Name :	Bloomington, IN	**Date Collected :**	NA
Project Number :	IN000072.0021	**Date Received :**	NA
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	11/01/03

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/Kg (ppm)
Lab Code :	K2308433-LCS	Basis :	Dry

Test Notes :

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfide, Acid Volatile	None	Draft 12/91	6.17	6.19	100	60-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : ARCADIS
Project : Bloomington, IN

Service Request : K2308433
Date Collected : NA
Date Received : NA

Sulfide, Acid Volatile
Draft 12/91
Units: mg/Kg (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	11/01/03	1.24	1.26	102
CCV2 Result	11/01/03	1.24	1.25	101
CCV3 Result	11/01/03	1.24	1.25	101
CCV4 Result	11/01/03	1.24	1.25	101

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	11/01/03	0.5	ND
CCB2 Result	11/01/03	0.5	ND
CCB3 Result	11/01/03	0.5	ND
CCB4 Result	11/01/03	0.5	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/03
Sample Matrix:	Sediment	**Date Received:**	10/27/03
		Date Analyzed:	11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-1
Lab Code: K2308433-001

Sand Fraction: Dry Weight (Grams)	81.2213
Sand Fraction: Weight Recovered (Grams)	81.1193
Sand Fraction: Percent Recovery	99.9

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	4.7955	5.75
Sand, Very Coarse	-1 to 0 Ø	15.8657	19.0
Sand, Coarse	0 to 1 Ø	34.8466	41.7
Sand, Medium	1 to 2 Ø	21.8688	26.2
Sand, Fine	2 to 3 Ø	3.3573	4.02
Sand, Very Fine	3 to 4 Ø	0.3759	0.45
Silt	4 to 8 Ø	0.7350	0.88
Clay	> 8 Ø	0.1950	0.23
	Total	82.0398	98.3

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Date Analyzed: 11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-2
Lab Code: K2308433-002

Sand Fraction: Dry Weight (Grams)	79.6969
Sand Fraction: Weight Recovered (Grams)	79.7007
Sand Fraction: Percent Recovery	100

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	32.3077	40.0
Sand, Very Coarse	-1 to 0 Ø	18.6694	23.1
Sand, Coarse	0 to 1 Ø	21.6841	26.8
Sand, Medium	1 to 2 Ø	6.6641	8.24
Sand, Fine	2 to 3 Ø	0.2740	0.34
Sand, Very Fine	3 to 4 Ø	0.0744	0.09
Silt	4 to 8 Ø	0.3750	0.46
Clay	> 8 Ø	0.1000	0.12
	Total	80.1487	99.1

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Date Analyzed: 11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-3
Lab Code: K2308433-003

Sand Fraction: Dry Weight (Grams)	85.0424
Sand Fraction: Weight Recovered (Grams)	84.9325
Sand Fraction: Percent Recovery	99.9

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	32.7384	39.1
Sand, Very Coarse	-1 to 0 Ø	21.2092	25.3
Sand, Coarse	0 to 1 Ø	22.5660	26.9
Sand, Medium	1 to 2 Ø	7.6138	9.08
Sand, Fine	2 to 3 Ø	0.7071	0.84
Sand, Very Fine	3 to 4 Ø	0.0831	0.10
Silt	4 to 8 Ø	0.2000	0.24
Clay	> 8 Ø	0.0550	0.07
	Total	85.1726	102

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/03
Sample Matrix:	Sediment	**Date Received:**	10/27/03
		Date Analyzed:	11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-4
Lab Code: K2308433-004

Sand Fraction: Dry Weight (Grams)	82.6937
Sand Fraction: Weight Recovered (Grams)	82.5460
Sand Fraction: Percent Recovery	99.8

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	14.7701	17.6
Sand, Very Coarse	-1 to 0 Ø	11.8246	14.1
Sand, Coarse	0 to 1 Ø	21.3187	25.4
Sand, Medium	1 to 2 Ø	25.9229	30.9
Sand, Fine	2 to 3 Ø	7.8813	9.40
Sand, Very Fine	3 to 4 Ø	0.8029	0.96
Silt	4 to 8 Ø	0.8350	1.00
Clay	> 8 Ø	0.1650	0.20
	Total	83.5205	99.6

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Date Analyzed: 11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-4
Lab Code: K2308433-004DUP

Sand Fraction: Dry Weight (Grams)	83.1918
Sand Fraction: Weight Recovered (Grams)	83.0684
Sand Fraction: Percent Recovery	99.9

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	15.5210	18.5
Sand, Very Coarse	-1 to 0 Ø	13.1862	15.8
Sand, Coarse	0 to 1 Ø	20.6453	24.7
Sand, Medium	1 to 2 Ø	25.0447	29.9
Sand, Fine	2 to 3 Ø	7.7056	9.21
Sand, Very Fine	3 to 4 Ø	0.9449	1.13
Silt	4 to 8 Ø	0.9100	1.09
Clay	> 8 Ø	0.1200	0.14
	Total	84.0777	100

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/03
Sample Matrix:	Sediment	**Date Received:**	10/27/03
		Date Analyzed:	11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-4
Lab Code: K2308433-004TRIP

Sand Fraction: Dry Weight (Grams)	82.6521
Sand Fraction: Weight Recovered (Grams)	82.4030
Sand Fraction: Percent Recovery	99.7

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	12.2729	14.6
Sand, Very Coarse	-1 to 0 Ø	13.2008	15.7
Sand, Coarse	0 to 1 Ø	22.2945	26.6
Sand, Medium	1 to 2 Ø	25.4114	30.3
Sand, Fine	2 to 3 Ø	8.2450	9.82
Sand, Very Fine	3 to 4 Ø	0.9383	1.12
Silt	4 to 8 Ø	1.0300	1.23
Clay	> 8 Ø	0.1100	0.13
	Total	83.5029	99.5

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/03
Sample Matrix:	Sediment	**Date Received:**	10/27/03
		Date Analyzed:	11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Sand Fraction: Dry Weight (Grams)	83.3772
Sand Fraction: Weight Recovered (Grams)	83.1564
Sand Fraction: Percent Recovery	99.7

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	9.9890	11.7
Sand, Very Coarse	-1 to 0 Ø	15.3948	18.1
Sand, Coarse	0 to 1 Ø	25.3674	29.8
Sand, Medium	1 to 2 Ø	25.6861	30.2
Sand, Fine	2 to 3 Ø	6.0454	7.10
Sand, Very Fine	3 to 4 Ø	0.6482	0.76
Silt	4 to 8 Ø	0.7750	0.91
Clay	> 8 Ø	0.1250	0.15
	Total	84.0309	98.7

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Date Analyzed: 11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-5
Lab Code: K2308433-006

Sand Fraction: Dry Weight (Grams)	86.7858
Sand Fraction: Weight Recovered (Grams)	86.4806
Sand Fraction: Percent Recovery	99.6

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	25.5619	29.2
Sand, Very Coarse	-1 to 0 Ø	15.4029	17.6
Sand, Coarse	0 to 1 Ø	21.7041	24.8
Sand, Medium	1 to 2 Ø	17.6916	20.2
Sand, Fine	2 to 3 Ø	5.2807	6.04
Sand, Very Fine	3 to 4 Ø	0.7790	0.89
Silt	4 to 8 Ø	2.2750	2.60
Clay	> 8 Ø	0.4000	0.46
	Total	89.0952	102

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/03
Sample Matrix:	Sediment	**Date Received:**	10/27/03
		Date Analyzed:	11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-6
Lab Code: K2308433-007

Sand Fraction: Dry Weight (Grams)	79.9672
Sand Fraction: Weight Recovered (Grams)	79.8852
Sand Fraction: Percent Recovery	99.9

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	15.9038	20.2
Sand, Very Coarse	-1 to 0 Ø	14.8817	18.9
Sand, Coarse	0 to 1 Ø	32.8560	41.8
Sand, Medium	1 to 2 Ø	15.7213	20.0
Sand, Fine	2 to 3 Ø	0.4897	0.62
Sand, Very Fine	3 to 4 Ø	0.0283	0.04
Silt	4 to 8 Ø	0.1750	0.22
Clay	> 8 Ø	0.0400	0.05
	Total	80.0958	102

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Date Analyzed: 11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-7
Lab Code: K2308433-008

Sand Fraction: Dry Weight (Grams)	83.5325
Sand Fraction: Weight Recovered (Grams)	83.4477
Sand Fraction: Percent Recovery	99.9

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	19.7220	23.8
Sand, Very Coarse	-1 to 0 Ø	18.2616	22.0
Sand, Coarse	0 to 1 Ø	35.0144	42.3
Sand, Medium	1 to 2 Ø	10.0781	12.2
Sand, Fine	2 to 3 Ø	0.3021	0.36
Sand, Very Fine	3 to 4 Ø	0.0624	0.08
Silt	4 to 8 Ø	0.1650	0.20
Clay	> 8 Ø	0.0650	0.08
	Total	83.6706	101

Approved By: _____ Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Date Analyzed: 11/20/03

Particle Size Determination
Puget Sound Estuary Program Protocol

Sample Name: SED-8
Lab Code: K2308433-009

Sand Fraction: Dry Weight (Grams)	54.8549
Sand Fraction: Weight Recovered (Grams)	54.6358
Sand Fraction: Percent Recovery	99.6

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel	<-1 Ø	0.6471	1.09
Sand, Very Coarse	-1 to 0 Ø	0.4579	0.77
Sand, Coarse	0 to 1 Ø	5.3306	8.98
Sand, Medium	1 to 2 Ø	30.2184	50.9
Sand, Fine	2 to 3 Ø	15.5463	26.2
Sand, Very Fine	3 to 4 Ø	2.3727	4.00
Silt	4 to 8 Ø	2.6650	4.49
Clay	> 8 Ø	0.9650	1.63
	Total	58.2030	98.1

Approved By: _____ Date: 11/26/03

Work Request #: Original (8433) 8514

Tier: III III

Date Analyzed: 11-4-03

Analyst: A Chatfield

Analysis: TOC / 5011

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no/NA
	a. Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/(NA)
	b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
	c. Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
	d. Are results for methods blanks all ND?	(yes)/no/NA
	e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
	f. Are all exceptions explained?	(yes)/no/NA
6.	Are all service requests that apply attached?	(yes)/no/NA
7.	Are all samples labelled correctly?	(yes)/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	(yes)/no/NA
9.	Are detection limits and units reported correctly?	(yes)/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	(yes)/no/NA
11.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS:

Final Approved by: [signature] Date: 11/7/03

DQREPORT

Columbia Analytical Services, Inc.

Analytical Batch
KA0323779

Service Request #: _____ Method: ASTM D4129-82 (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
CCV-1	10.3	2127.1	12.6	2114.5	20.5
CCB-1	50.0	10.5	12.6	-2.1	< 0.05
LCS	53.5	337.7	12.6	325.1	0.61
MB	50.0	15.2	12.6	2.6	< 0.05
8433-1	28.5	400.0	12.6	387.4	1.36
8433-2	35.0	203.6	12.6	191.0	0.55
8433-3	39.2	231.9	12.6	219.3	0.56
8433-4	41.9	243.8	12.6	231.2	0.55
8433-4d	39.2	245.5	12.6	232.9	0.59
8433-4t	43.5	265.9	12.6	253.3	0.58
8433-4ms	19.6	636.7	12.6	624.1	3.18
8433-5	45.8	365.7	12.6	353.1	0.77
CCV-2	10.4	2026.9	12.6	2014.3	19.4
CCB-2	50.0	16.2	12.6	3.6	< 0.05
8433-6	39.9	486.8	12.6	474.2	1.19
8433-7	41.8	289.5	12.6	276.9	0.66
8433-8	46.2	293.7	12.6	281.1	0.61
8433-9	37.2	382.9	12.6	370.3	1.00
8514-1	46.7	472.4	12.6	459.8	0.98
8514-2	46.2	431.7	12.6	419.1	0.91
8514-3	49.8	480.6	12.6	468.0	0.94
8514-4	43.8	482.2	12.6	469.6	1.07
8514-5	43.2	421.5	12.6	408.9	0.95
8514-6	46.3	490.1	12.6	477.5	1.03
CCV-3	10.6	2119.4	12.6	2106.8	19.9
CCB-3	50.0	14.3	12.6	1.7	< 0.05

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** $\frac{\text{(Net Reading)(µg 0.1)}}{\text{mg Sample Injected}}$

CCV : Urea ID#: TOCS/1-10- TV = 20.0%C

CCV 1 =103 CCV 2 =97 CCV 3 =100 CCV 4 =100 CCV 5 =98

LCS: ERA Cat#: 542 Lot#: 1109 ID#: TOCS/1-10- TV = 0.57%C REC%=107, 107

Comments :

8433-1MS=2.4 mg x 20/19.6=2.45 X=0.57 RSD=4 %REC=107

8514-20MS=8.0 mg x 20/27.3=5.86 X=1.45 RSD=3 %REC=100

Analyzed By: A Chuabay	Date: 11-4-03
Reveiwed By:	Date: 11/7/03

Columbia Analytical Services, Inc.

Service Request #: _____ Method: ASTM D4129-82 (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
8514-7	51.4	675.8	12.6	663.2	1.29
8514-10	46.0	645.7	12.6	633.1	1.38
8514-12	47.6	725.9	12.6	713.3	1.50
8514-14	49.3	653.3	12.6	640.7	1.30
8514-16	49.0	676.8	12.6	664.2	1.36
8514-18	48.8	797.1	12.6	784.5	1.61
8514-20	46.7	670.6	12.6	658.0	1.41
8514-20d	47.7	700.6	12.6	688.0	1.44
8514-20t	47.0	713.2	12.6	700.6	1.49
8514-20ms	27.3	2000.1	12.6	1987.5	7.28
CCV-4	10.8	2159.7	12.6	2147.1	19.9
CCB-4	50.0	19.6	12.6	7.0	< 0.05
LCS	50.6	319.6	12.6	307.0	0.61
MB	50.0	20.4	12.6	7.8	< 0.05
CCV-5	10.2	2014.0	12.6	2001.4	19.6
CCB-5	50.0	22.3	12.6	9.7	< 0.05

Analyzed By: A Chambers	Date: 11-4-03
Reveiwed By: [signature]	Date: 11/7/03

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	10.3	2127.1		10.7
CCB-1	50.0	10.5		16.8
LCS	53.5	337.7		10.4
MB	50.0	15.2		**AVG.**
8433-1	28.5	400.0	10-30-03 70*C 1200	12.6
8433-2	35.0	203.6	10-30-03 70*C 1200	
8433-3	39.2	231.9	10-30-03 70*C 1200	
8433-4	41.9	243.8	10-30-03 70*C 1200	
8433-4d	39.2	245.5	10-30-03 70*C 1200	
8433-4t	43.5	265.9	10-30-03--70*C 1200	
8433-4ms	19.6	636.7	10-30-03 70*C 1200	
8433-5	45.8	365.7		
CCV-2	10.4	2026.9		
CCB-2	50.0	16.2		
8433-6	39.9	486.8	10-30-03 70*C 1200	
8433-7	41.8	289.5	10-30-03 70*C 1200	
8433-8	46.2	293.7	10-30-03 70*C 1200	
8433-9	37.2	382.9	10-30-03 70*C 1200	
8514-1	46.7	472.4	10-30-03 70*C 1200	
8514-2	46.2	431.7	10-30-03 70*C 1200	
8514-3	49.8	480.6	10-30-03 70*C 1200	
8514-4	43.8	482.2	10-30-03 70*C 1200	
8514-5	43.2	421.5	10-30-03 70*C 1200	
8514-6	46.3	490.1	10-30-03 70*C 1200	
CCV-3	**10.6**	**2119.4**		
CCB-3	50.0	14.3		
8514-7	51.4	675.8	10-30-03 70*C 1200	
8514-10	46.0	645.7	10-30-03 70*C 1200	
8514-12	47.6	725.9	10-30-03 70*C 1200	
8514-14	49.3	653.3	10-30-03 70*C 1200	
8514-16	49.0	676.8	10-30-03 70*C 1200	
8514-18	48.8	797.1	10-30-03 70*C 1200	
8514-20	46.7	670.6	10-30-03 70*C 1200	
8514-20d	47.7	700.6	10-30-03 70*C 1200	
8514-20t	47.0	713.2	10-30-03 70*C 1200	
8514-20ms	27.3	2000.1	10-30-03 70*C 1200	
CCV-4	10.8	2159.7		
CCB-4	50.0	19.6		
LCS	50.6	319.6		
MB	50.0	20.4		
CCV-5	10.2	2014.0		
CCB-5	50.0	22.3		

MB 11/7/03 ~~11/6/03~~ MB

D Phenolics 11-5-03

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked
CCV-1	10.3	2127.1	
CCB-1	50.0	10.5	
LCS	53.5	337.7	
MB	50.0	15.2	
8433-1	28.5	400.0	10-30-03 70° 1200
-2	35.0	203.6	
-3	39.2	231.9	
-4	41.9	243.8 (0.55 0.54)	
-4d	39.2	245.5 (0.59)	
-4t	43.5	265.9 (0.58)	
-4MS	19.6	636.7	
-5	45.8	345.7	
CCV-2	10.4	2026.9	
CCB-2	50.0	16.2	
-6	39.9	486.8	
-7	41.8	289.5	
-8	46.2	293.7	
-9	37.2	382.9	
8514-1	46.7	472.4	
-2	46.2	431.7	
-3	49.8	480.6	
-4	43.8	482.2	
-5	43.2	421.5	
-6	46.2	490.1	
CCV-3	10.6	2119.4	
CCB-3	50.0	14.3	
-7	51.4	75.8	
-10	46.0	[illegible]	
-12	47.6	[illegible]	
-14	49.3	[illegible]	
-14	49.0	476.8	
-18	48.8	797.1	
-20	44.7 (1.41)	670.6	
-20d	47.7 (1.44)	700.6	
-20t	47.0 (1.49)	713.2	
-20MS	27.3	[illegible]	
CCV-4	10.8	[illegible]	
CCB-4	50.0		
[illegible]	50.6		
[illegible]	50.0		
[illegible]	10.2	[illegible]	
CCB-5	50.0	[illegible]	
CCV-5			
CCB-5			

Baseline	
10.7	
16.8	
10.4	
12.6	Avg

CCV-1 = 103 %

CCB-1 = <0.05 ①

LCS-1 = ~~107~~ ~~105~~ 107 ①

MB-1 = <0.05

8433-4MS = 2.7 mg x 20/19.6 = 2.75

%C = x = 0.57, RSD = 4, %REC = ~~108~~ 107 ①

CCV-2 = 97 %

CCB-2 = <0.05

CCV-3 = ~~99~~ 100 ①

CCB-3 = <0.05

8514-20 8mg x 20/27.3 = 5.86

x = 1.45, RSD = 3, %REC = 100

CCV-4 = ~~99~~ 100 ①

CCB-4 = <0.05

LCS-2 = ~~106~~ 107 ①

MB-2 = <0.05

CCV-5 = 98 %

CCB-5 = <0.05

M.T. ~~11/6~~ 11/7/03

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1				
CCB-1				
LCS				
MB				Avg
CCV-2				
CCB-2				
CCV-3				
CCB-3				
B514-7		675.8		
-10		645.7		
-12		725.9		
-14		653.3		
-16				
-18				
-20				
-20d				
-20+				
-20ms				
CCV-4		2159.7		
CCB-4		19.6		
LCS-2		319.6		
MB-2		20.4		
CCV-5		2014.0		
CCB-5		22.3		
CCV-5				
CCB-5				

hot ladle
Broke on
paperwork
but already
had put it in
computer
AC
11-5-03

M.O.
11/7/03

N Bradley 535-03

Work Request #: (8433)

Tier: III

Date Analyzed: 11/1/03

Analyst: EM

Analysis: AVS/SEM

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no/NA
	a. Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
	b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
	c. Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
	d. Are results for methods blanks all ND?	(yes)/no/NA
	e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
	f. Are all exceptions explained?	yes/no/(NA)
6.	Are all service requests that apply attached?	(yes)/no/NA
7.	Are all samples labelled correctly?	(yes)/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	(yes)/no/NA
9.	Are detection limits and units reported correctly?	(yes)/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	(yes)/no/NA
11.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS:

Carbonatum present in A Towers

Final Approved by: [signature] Date: 11/5/03

DQREPORT

Analytical Batch
KA0325238

Work Order #.: _____ Method: AVS

Analysis: Analysis for Acid Volatile Sulfide

	STD1	STD 2	STD 3	STD 4	STD 5	STD 6					(R) =	0.9992
Conc. (mg/L)	0.000	0.309	0.618	0.927	1.236	1.545					Slope =	0.7944
Absorbance	0.000	0.262	0.512	0.776	1.011	1.216					Y Int. =	0.0159

Date Prep'd	Sample #	Dil. Factor	Absorb. @ 670 nm	Conc. from Curve (mg/L)	Actual Conc. (mg/L)	Initial Wt./Vol. (g) / (ml)	Final Vol. (ml)	A Tower mg/L (solution)	B Tower mg/L (solution)	A & B mg/L - mg/kg as rec'd	% Solid	mg/kg Dry Wt.
11/1/03	ICV	1	1.139	1.4139	1.4139	50	50	1.41		1.41		
11/1/03	ICB	1	0.001	-0.0187	-0.0187	50	50	-0.02		<0.5		
11/1/03	CCV1	1	1.013	1.2553	1.2553	50	50	1.26		1.26		
11/1/03	CCB1	1	0.002	-0.0174	-0.0174	50	50	-0.02		<0.5		
11/1/03	MB	1	-0.001	-0.0212	-0.0212	50	50	-0.02	-0.02	<0.5		
11/1/03	LCS	1	1.002	1.2414	1.2414	10.020	50	6.19	-0.10	6.19		
11/1/03	8433-1	1	0.051	0.0442	0.0442	2.954	50	0.75	-0.34	0.75	74.5	1.0
11/1/03	8433-2	1	0.066	0.0631	0.0631	3.018	50	1.05	-0.33	1.05	77.3	1.4
11/1/03	8433-3	1	0.168	0.1915	0.1915	3.000	50	3.19	-0.33	3.19	81.6	3.9
11/1/03	8433-4	1	0.505	0.6158	0.6158	3.068	50	10.04	-0.37	10.04	75.3	13.3
11/1/03	8433-4D	1	0.498	0.6070	0.6070	3.030	50	10.02	-0.33	10.02	75.3	13.3
11/1/03	8433-4MS	100	0.570	0.6976	69.7597	3.139	50	1111.18	0.56	1111.74	75.3	1480
11/1/03	8433-4MSD	100	0.556	0.6800	67.9973	3.044	50	1116.91	-0.33	1116.91	75.3	1480
11/1/03	8433-5	1	0.666	0.8184	0.8184	3.028	50	13.51	-0.31	13.51	73.0	18.5
11/1/03	CCV2	1	1.008	1.2490	1.2490	50	50	1.25		1.25		
11/1/03	CCB2	1	-0.001	-0.0212	-0.0212	50	50	-0.02		<0.5		
11/1/03	8433-6	1	0.284	0.3376	0.3376	3.029	50	5.57	-0.35	5.57	82.0	6.8
11/1/03	CCV3	1	1.010	1.2515	1.2515	50	50	1.25		1.25		
11/1/03	CCB3	1	0.002	-0.0174	-0.0174	50	50	-0.02		<0.5		
11/1/03	CCV4	1	1.010	1.2515	1.2515	50	50	1.25		1.25		
11/1/03	CCB4	1	-0.002	-0.0225	-0.0225	50	50	-0.02		<0.5		
					#VALUE!							
					#VALUE!							
					#VALUE!							
					#VALUE!							

CCV =2ml*30.9mg/L/50ml = 1.24mg/L %REC = 102, 101, 101, 101 ✓ ICV =2.25ml*30.9mg/L/50ml = 1.39mg/L %REC = 101 ✓

LCS =2ml*30.9mg/L/10.020 = 6.17mg/L %REC = 100 ✓

8433-4MS =1ml*3090mg/L/(3.139g*0.753g) = 1310mg/kg %REC = 112 ✓

8433-4MSD =1ml*3090mg/L/(3.044g*0.753g) = 1350mg/kg %REC = 109 ✓

8433-4/4D X = 13.3mg/Kg RPD = <1 ✓

STD ID# S2/1-19-B CONC. = 3090mg/L

Distilled by:		Date Distilled:	11/1/03 1530
Analyzed By:		Date Analyzed:	11/1/03
Reviewed By:		Date Reviewed:	11/5/03

Work Order #.:

Method: AVS

Analysis: Analysis for Acid Volatile Sulfide

Prep Date : 11/1/03

	STD1	STD 2	STD 3	STD 4	STD 5	STD 6						
Conc. (mg/L)	0.000	0.309	0.618	0.927	1.236	1.545						
Absorbance	0.000	0.262	0.512	0.776	1.011	1.216						

Sample Name Lab Code	Initial Wt./Vol. (g) or (ml)	Dilution Factor	Abs of A tower @ 670 nm	Abs of B tower @ 670 nm	% Solids
ICV	50	1	1.139		
ICB	50	1	0.001		
CCV1	50	1	1.013		
CCB1	50	1	0.002		
MB	50	1	-0.001	0.001	
LCS	10.02	1	1.002	0.000	
8433-1	2.954	1	0.051	0.000	74.5
8433-2	3.018	1	0.066	0.000	77.3
8433-3	3	1	0.168	0.000	81.6
8433-4	3.068	1	0.505	-0.002	75.3
8433-4D	3.03	1	0.498	0.000	75.3
8433-4MS	3.139	100	0.570	0.044	75.3
8433-4MSD	3.044	100	0.556	0.000	75.3
8433-5	3.028	1	0.666	0.001	73.0
CCV2	50	1	1.008		
CCB2	50	1	-0.001		
8433-6	3.029	1	0.284	-0.001	82.0
CCV3	50	1	1.010		
CCB3	50	1	0.002		
CCV4	50	1	1.010		
CCB4	50	1	-0.002		
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Em 11/1/03

Sample Name Lab Code	Initial Wt./Vol. (g) or (ml)	Dilution Factor	Abs of A tower @ 670 nm	Abs of B tower @ 670 nm	% Solids
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		1			
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PW 11/5/03

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Draft, Aug. 1991

Work Order #.: _____ Method: Methylene Blue Colorimetric

Analysis: AVS/SEM

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol (g) or (ml)	Final Volume (ml)	mLs 50% HCl added	%HCl in Solution	% Solids	mg/kg Dry Wt.
11/1/03	MB	50	50				
	LCS	10.020					
	8433-1	2.954		sm rock, gravel, shell particles			
	-2	3.018					
	-3	3.000					
	-4	3.068		fine gravel, rock, shell			
	-4d	3.030		sm rock, gravel, ~~shell particulate~~ shell			
	-4ms	3.139					
	-4msd	3.044					
	-5	3.028					
	-6	3.029		fine gravel, rock, shell			

LCS 1 = % REC =

LCS 2 = % REC =

Spike = % REC =

Spike Dup. = % REC =

x =

STD ID# = RPD =

OEM 11/1/03

Prepared By:	EM	Date Prepared:	11/1/03 1530
Analyzes By:	EM	Date Analyzed:	11/1/03
Reviewed By:		Date Reviewed:	11/9/03

Page of

Work Request #: Original (8433)

Tier: III

Date Analyzed: 11/20/03

Analyst: ACheatley/RMcKee

Analysis: GSize

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no/NA
	a. Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/(NA)
	b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
	c. Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/(NA)
	d. Are results for methods blanks all ND?	(yes)/no/NA
	e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
	f. Are all exceptions explained?	(yes)/no/NA
6.	Are all service requests that apply attached?	(yes)/no/NA
7.	Are all samples labelled correctly?	(yes)/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	(yes)/no/NA
9.	Are detection limits and units reported correctly?	(yes)/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	(yes)/no/NA
11.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS:

Final Approved by: [signature] Date: 11/26/03

DQREPORT

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Analytical Batch
KA0324344

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-001

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-1
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation

	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	4.7955	5.7847
V.C. Sand, 1.00 mm (g)	18	15.8657	19.1384
C. Sand, 0.500 mm (g)	35	34.8466	42.0345
M. Sand, 0.250 mm (g)	60	21.8688	26.3797
F. Sand, 0.125 mm (g)	120	3.3573	4.0498
V.F. Sand, 0.0625 mm (g)	230	0.3759	0.4534
S/C <0.0625 mm (g)	Pan	0.0095	0.0115

Total (g) Recov'd	81.1193
Total (%) Recov'd	99.9

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	188.6426
Grams Beaker (Tare)	107.4213
GramsGravel/Sand	81.2213

I. Sample Preparation

Grams As Received Sample	100.6837
Percent (%) Solids	82.9
Grams Oven Dried Sample	83.4668

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	30.8176	30.7488
Grams of Tare	30.7959	30.7418
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0186	0.0039
Total Grams Sample X 50	0.9300	0.1950

Analyst: ACheatley/RMckee/LBrady AB/RM/AL Date: 11/20/03
Reviewed by: [signature] Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-002

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-2
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	32.3077	39.9848
V.C. Sand, 1.00 mm (g)	18	18.6694	23.1057
C. Sand, 0.500 mm (g)	35	21.6841	26.8368
M. Sand, 0.250 mm (g)	60	6.6641	8.2476
F. Sand, 0.125 mm (g)	120	0.2740	0.3391
V.F. Sand, 0.0625 mm (g)	230	0.0744	0.0921
S/C <0.0625 mm (g)	Pan	0.0270	0.0334

Total (g) Recov'd	79.7007
Total (%) Recov'd	100

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	191.4563
Grams Beaker (Tare)	111.7594
GramsGravel/Sand	79.6969

I. Sample Preparation

Grams As Received Sample	100.0810
Percent (%) Solids	80.8
Grams Oven Dried Sample	80.8654

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	29.3681	30.3204
Grams of Tare	29.3555	30.3153
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0095	0.0020
Total Grams Sample X 50	0.4750	0.1000

Analyst: ACheatley/RMckee/LBrady AB/KM/AC Date: 11/20/03
Reviewed by: [signature] Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-003

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-3
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	32.7384	39.4439
V.C. Sand, 1.00 mm (g)	18	21.2092	25.5533
C. Sand, 0.500 mm (g)	35	22.5660	27.1880
M. Sand, 0.250 mm (g)	60	7.6138	9.1733
F. Sand, 0.125 mm (g)	120	0.7071	0.8519
V.F. Sand, 0.0625 mm (g)	230	0.0831	0.1001
S/C <0.0625 mm (g)	Pan	0.0149	0.0180

Total (g) Recov'd	84.9325
Total (%) Recov'd	99.9

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	198.4527
Grams Beaker (Tare)	113.4103
GramsGravel/Sand	85.0424

I. Sample Preparation

Grams As Received Sample	100.9854
Percent (%) Solids	83.0
Grams Oven Dried Sample	83.8179

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	29.2292	29.4752
Grams of Tare	29.2210	29.4710
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0051	0.0011
Total Grams Sample X 50	0.2550	0.0550

Analyst: ACheatley/RMckee/LBrady Date: 11/20/03
Reviewed by: Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-004

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-4
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	14.7701	17.7100
V.C. Sand, 1.00 mm (g)	18	11.8246	14.1782
C. Sand, 0.500 mm (g)	35	21.3187	25.5620
M. Sand, 0.250 mm (g)	60	25.9229	31.0826
F. Sand, 0.125 mm (g)	120	7.8813	9.4500
V.F. Sand, 0.0625 mm (g)	230	0.8029	0.9627
S/C <0.0625 mm (g)	Pan	0.0255	0.0306

Total (g) Recov'd	82.5460
Total (%) Recov'd	99.8

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	189.0870
Grams Beaker (Tare)	106.3933
GramsGravel/Sand	82.6937

I. Sample Preparation

Grams As Received Sample	100.5832
Percent (%) Solids	83.4
Grams Oven Dried Sample	83.8864

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	31.1174	31.3973
Grams of Tare	31.0943	31.3909
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0200	0.0033
Total Grams Sample X 50	1.0000	0.1650

Analyst: ACheatley/RMckee/LBrady AB/RM/AC Date: 11/20/03
Reviewed by: MJS Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-004DUP

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-4
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	15.5210	18.6103
V.C. Sand, 1.00 mm (g)	18	13.1862	15.8108
C. Sand, 0.500 mm (g)	35	20.6453	24.7546
M. Sand, 0.250 mm (g)	60	25.0447	30.0296
F. Sand, 0.125 mm (g)	120	7.7056	9.2393
V.F. Sand, 0.0625 mm (g)	230	0.9449	1.1330
S/C <0.0625 mm (g)	Pan	0.0207	0.0248

Total (g) Recov'd	83.0684
Total (%) Recov'd	99.9

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	195.7939
Grams Beaker (Tare)	112.6021
GramsGravel/Sand	83.1918

I. Sample Preparation

Grams As Received Sample	100.3675
Percent (%) Solids	83.4
Grams Oven Dried Sample	83.7065

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	28.2736	31.2753
Grams of Tare	28.2499	31.2698
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0206	0.0024
Total Grams Sample X 50	1.0300	0.1200

Analyst: ACheatley/RMckee/LBrady AC/RM/LB Date: 11/20/03
Reviewed by: MAF Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-004TRIP

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-4
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	12.2729	14.7157
V.C. Sand, 1.00 mm (g)	18	13.2008	15.8283
C. Sand, 0.500 mm (g)	35	22.2945	26.7320
M. Sand, 0.250 mm (g)	60	25.4114	30.4693
F. Sand, 0.125 mm (g)	120	8.2450	9.8861
V.F. Sand, 0.0625 mm (g)	230	0.9383	1.1251
S/C <0.0625 mm (g)	Pan	0.0401	0.0481

Total (g) Recov'd	82.4030
Total (%) Recov'd	99.7

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	191.6507
Grams Beaker (Tare)	108.9986
GramsGravel/Sand	82.6521

I. Sample Preparation

Grams As Received Sample	100.6386
Percent (%) Solids	83.4
Grams Oven Dried Sample	83.9326

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	29.8727	29.9193
Grams of Tare	29.8468	29.9140
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0228	0.0022
Total Grams Sample X 50	1.1400	0.1100

Analyst: ACheatley/RMckee/LBrady Date: 11/20/03
Reviewed by: Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-005

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-4-DUP
Date Collected:	10/22/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation

	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	9.9890	11.8213
V.C. Sand, 1.00 mm (g)	18	15.3948	18.2187
C. Sand, 0.500 mm (g)	35	25.3674	30.0206
M. Sand, 0.250 mm (g)	60	25.6861	30.3978
F. Sand, 0.125 mm (g)	120	6.0454	7.1543
V.F. Sand, 0.0625 mm (g)	230	0.6482	0.7671
S/C <0.0625 mm (g)	Pan	0.0255	0.0302

Total (g) Recov'd	83.1564
Total (%) Recov'd	99.7

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	199.1532
Grams Beaker (Tare)	115.7760
GramsGravel/Sand	83.3772

I. Sample Preparation

Grams As Received Sample	100.7365
Percent (%) Solids	84.5
Grams Oven Dried Sample	85.1223

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	29.1379	28.6064
Grams of Tare	29.1168	28.6008
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0180	0.0025
Total Grams Sample X 50	0.9000	0.1250

Analyst: ACheatley/RMckee/LBrady RB/RM/AC Date: 11/20/03
Reviewed by: [signature] Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-006

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-5
Date Collected:	10/23/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	25.5619	29.8272
V.C. Sand, 1.00 mm (g)	18	15.4029	17.9730
C. Sand, 0.500 mm (g)	35	21.7041	25.3257
M. Sand, 0.250 mm (g)	60	17.6916	20.6436
F. Sand, 0.125 mm (g)	120	5.2807	6.1618
V.F. Sand, 0.0625 mm (g)	230	0.7790	0.9090
S/C <0.0625 mm (g)	Pan	0.0604	0.0705

Total (g) Recov'd	86.4806
Total (%) Recov'd	99.6

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	202.4125
Grams Beaker (Tare)	115.6267
GramsGravel/Sand	86.7858

I. Sample Preparation

Grams As Received Sample	102.0665
Percent (%) Solids	85.7
Grams Oven Dried Sample	87.4710

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	30.0831	31.2012
Grams of Tare	30.0265	31.1901
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0535	0.0080
Total Grams Sample X 50	2.6750	0.4000

Analyst: ACheatley/RMckee/LBrady Date: 11/20/03
Reviewed by: Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-007

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-6
Date Collected:	10/23/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	15.9038	20.2596
V.C. Sand, 1.00 mm (g)	18	14.8817	18.9576
C. Sand, 0.500 mm (g)	35	32.8560	41.8548
M. Sand, 0.250 mm (g)	60	15.7213	20.0271
F. Sand, 0.125 mm (g)	120	0.4897	0.6238
V.F. Sand, 0.0625 mm (g)	230	0.0283	0.0361
S/C <0.0625 mm (g)	Pan	0.0044	0.0056

Total (g) Recov'd	79.8852
Total (%) Recov'd	99.9

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	185.0705
Grams Beaker (Tare)	105.1033
GramsGravel/Sand	79.9672

I. Sample Preparation

Grams As Received Sample	100.1638
Percent (%) Solids	78.5
Grams Oven Dried Sample	78.6286

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	30.3840	29.6725
Grams of Tare	30.3766	29.6686
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0043	0.0008
Total Grams Sample X 50	0.2150	0.0400

Analyst: ACheatley/RMckee/LBrady AC/RM/AC Date: 11/20/03
Reviewed by: [signature] Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-008

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-7
Date Collected:	10/23/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	19.7220	23.8476
V.C. Sand, 1.00 mm (g)	18	18.2616	22.0817
C. Sand, 0.500 mm (g)	35	35.0144	42.3391
M. Sand, 0.250 mm (g)	60	10.0781	12.1863
F. Sand, 0.125 mm (g)	120	0.3021	0.3653
V.F. Sand, 0.0625 mm (g)	230	0.0624	0.0755
S/C <0.0625 mm (g)	Pan	0.0071	0.0086

Total (g) Recov'd	83.4477
Total (%) Recov'd	99.9

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	181.8283
Grams Beaker (Tare)	98.2958
GramsGravel/Sand	83.5325

I. Sample Preparation

Grams As Received Sample	100.1892
Percent (%) Solids	82.7
Grams Oven Dried Sample	82.8565

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	30.9904	29.2453
Grams of Tare	30.9827	29.2409
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0046	0.0013
Total Grams Sample X 50	0.2300	0.0650

Analyst: ACheatley/RMckee/LBrady Date: 11/20/03
Reviewed by: Date: 11/26/03

COLUMBIA ANALYTICAL SERVICES, INC.

1317 South 13th Avenue
Kelso, Wa 98626

Method: PSEP Particle Size
Puget Sound Protocol

Service Request #: K2308433
Sample #: K2308433-009

Client:	ARCADIS
Project:	Bloomington, IN/IN000072.0021
Sample Matrix:	Sediment

Sample Name:	SED-8
Date Collected:	10/23/03
Date Received:	10/27/03
Date Analyzed:	11/20/03

I. Sieving Operation	Sieve #	Weight (g)	As Rec'd (g)
Gravel 2.00 mm (g)	10	0.6471	0.8393
V.C. Sand, 1.00 mm (g)	18	0.4579	0.5939
C. Sand, 0.500 mm (g)	35	5.3306	6.9139
M. Sand, 0.250 mm (g)	60	30.2184	39.1938
F. Sand, 0.125 mm (g)	120	15.5463	20.1638
V.F. Sand, 0.0625 mm (g)	230	2.3727	3.0774
S/C <0.0625 mm (g)	Pan	0.0628	0.0815

Total (g) Recov'd	54.6358
Total (%) Recov'd	99.6

II. Dry Sieving of Gravel/Sand

Grams Gravel/Sand & Beaker	162.3377
Grams Beaker (Tare)	107.4828
GramsGravel/Sand	54.8549

I. Sample Preparation

Grams As Received Sample	76.9695
Percent (%) Solids	77.1
Grams Oven Dried Sample	59.3435

III. Determination of Silt/Clay Fraction

Temperature: 20 Time Start: 13:22 Time Finish: 15:24

	Silt/Clay Fraction	Clay Fraction
Total Volume of Sample (mls)	1000	1000
Amount of Dispersant	10	10
Volume of Aliquot (mls)	20	20
Grams Sample, Dispersant & Tare	30.1553	28.8572
Grams of Tare	30.0796	28.8348
Grams of Dispersant Correction	0.0031	0.0031
Grams of Sample	0.0726	0.0193
Total Grams Sample X 50	3.6300	0.9650

Analyst: ACheatley/RMckee/LBrady Date: 11/20/03
Reviewed by: Date: 11/26/03

	Sample Number	Weight As Received	Beaker Tare	Tare + Dry Sample	20 cm Tare	20 cm Tare + Dry Sample	10 cm Tare	10cm Tare + Dry Sample	Temp	Time Start	Time Finish
1	8433-1	100.6837	107.4213	188.6426	30.7959	30.8176	30.7418	30.7488	20°	1:27	3:24
2	-2	100.0810	111.7594	191.4563	29.3555	29.3681	30.3153	30.3204			
3	-3	100.9854	113.4103	198.4527	29.2210	29.2292	29.4710	29.4752			
4	-4	100.2 5832	106.3933	189.0870	31.0943	31.1174	31.3909	31.3973			
5	-4d	100.3675	112.6021	195.7939	28.2499	28.2736	31.2698	31.2753			
6	-4t	100.6386	108.9986	191.6507	29.8468	29.8727	29.9140	29.9193			
7	-5	100.7365	115.7760	199.1532	29.1168	29.1379	28.6008	28.6064			
8	-6	102.0665	115.6267	202.4125	30.0265	30.0831	31.1901	31.2012			
9	-7	100.1638	105.1033	185.0705	30.3766	30.3840	29.6686	29.6725			
10	-8	100.1892	98.2958	181.8283	30.9827	30.9904	29.2409	29.2453			
11	-9	76.9695	107.4828	162.3377	30.0796	30.1553	28.8348	28.8572			
12											
13											
14											
15											
16											
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26											
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28											
29											

M.D. 11/26/03

AE 11-20-03

	DRY SIEVE PSEP							
	8433-1	8433-2	8433-3	8433-4	8433-4d	8433-4t	8433-5	8433-6
10	4.7955	32.3077	32.7384	14.7701	15.5210	12.2729	10.9896	25.5619
18	15.8657	8.6694	21.2092	11.8246	13.1862	13.2008	15.3948	15.4029
35	34.8466	21.6841	22.5660	21.3187	20.6453	22.2945	25.3674	21.7041
60	21.8688	6.6641	7.6138	25.9229	25.0447	25.4114	25.6861	17.6916
120	3.3573	0.2740	0.7071	7.8813	7.7056	8.2450	6.0454	5.2807
230	0.3759	0.0744	0.0831	0.8028	0.9449	0.9383	0.6482	0.7790
Pan	0.0095	0.0270	0.0149	0.0255	0.0207	0.0401	0.0255	0.0604
	8433-7	8433-8	8433-9					
10	15.9038	19.7220	0.6471					
18	14.8817	18.2616	0.4579					
35	32.8560	35.0144	5.3306					
60	15.7213	10.0781	30.2184					
120	0.4897	0.3021	15.5463					
230	0.0283	0.0624	2.3727					
Pan	0.0044	0.0071	0.0628					
10								
18								
35								
60								
120								
230								
Pan								

AS 11/24/03

M.D. 11/26/03

AS 11/24/03

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request #: 8433 Method:

Analysis For: Grain Size

~~Particle~~ Wet Weight	Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
5.6001	8433 - 1	6.8481	1.2480	5.8914	4.6434	~~87.8~~ 82.9
5.4617	- 2	6.7252	1.2635	5.6783	4.4148	~~85.6~~ 80.8
10.2919	- 3	11.5341	1.2422	9.7811	8.5389	~~84.0~~ 83.0
4.7907	- 4	6.0351	1.2444	5.2412	3.9968	~~86.2~~ 83.4
7.8042	- 4d	9.0509	1.2467	7.6788	6.4321	~~81.1~~ 82.4
7.9827	- 4f	9.2294	1.2467	7.8243	6.5776	~~81.3~~ 82.4
6.0845	- 5	7.3559	1.2714	6.4148	5.1434	~~89.9~~ 84.5
6.5825	- 6	7.8574	1.2749	6.9149	5.6400	~~91.8~~ 85.7
7.2205	- 7	8.4839	1.2634	6.9314	5.6680	~~86.8~~ 78.5
2.6397	- 8	3.9054	1.2657	3.4498	2.1841	~~85.9~~ 82.7
8.8579	- 9	10.1335	1.2756	8.1072	6.8316	~~87.4~~ 77.1

Oven Temp : 104° Time In : 3:40 Time Out : 9:10

Comments:

8433-4 $\bar{x}$ = ~~81.9~~ 82.9 RPD = 1%

$\bar{x}$ = RPD =

$\bar{x}$ = RPD =

Analyst: AC	Date: 11-20-03
Reviewed By: [signature]	Date: 11/26/03

SEM-Metals

Simultaneously Extractable Metals

- Cover Page -

INORGANIC ANALYSIS DATA PACKAGE

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Sample No.	Lab Sample ID.
SED-1	K2308433-001
SED-2	K2308433-002
SED-3	K2308433-003
SED-4	K2308433-004
SED-4D	K2308433-004D
SED-4S	K2308433-004S
SED-4-DUP	K2308433-005
SED-5	K2308433-006
Method Blank	K2308433-MB

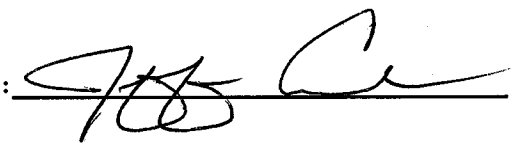
Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: 

Date: 11/26/03

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-1
Lab Code: K2308433-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.6		
Copper	6010B	0.9	1	11/01/03	11/25/03	6.3		
Lead	6010B	4.5	1	11/01/03	11/25/03	28.7		*
Mercury	7471A	0.04	4	11/19/03	11/20/03	0.04	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.4		
Zinc	6010B	0.5	1	11/01/03	11/25/03	54.9		

% Solids: 74.5

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-2
Lab Code: K2308433-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.6		
Copper	6010B	0.9	1	11/01/03	11/25/03	5.6		
Lead	6010B	4.3	1	11/01/03	11/25/03	158		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.2		
Zinc	6010B	0.4	1	11/01/03	11/25/03	50.8		

% Solids: 77.3

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-3
Lab Code: K2308433-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.5		
Copper	6010B	0.8	1	11/01/03	11/25/03	7.1		
Lead	6010B	4.1	1	11/01/03	11/25/03	39.0		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.8	1	11/01/03	11/25/03	5.4		
Zinc	6010B	0.4	1	11/01/03	11/25/03	326		

% Solids: 81.6

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-4
Lab Code: K2308433-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.7		
Copper	6010B	0.9	1	11/01/03	11/25/03	7.3		
Lead	6010B	4.3	1	11/01/03	11/25/03	36.4		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.0		
Zinc	6010B	0.4	1	11/01/03	11/25/03	59.3		

% Solids: 75.3

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.9		
Copper	6010B	0.9	1	11/01/03	11/25/03	9.0		
Lead	6010B	4.5	1	11/01/03	11/25/03	38.8		*
Mercury	7471A	0.04	4	11/19/03	11/20/03	0.04	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.4		
Zinc	6010B	0.5	1	11/01/03	11/25/03	63.1		

% Solids: 73.0

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-5
Lab Code: K2308433-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.8		
Copper	6010B	0.8	1	11/01/03	11/25/03	10.8		
Lead	6010B	4.0	1	11/01/03	11/25/03	36.1		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.08		
Nickel	6010B	0.8	1	11/01/03	11/25/03	5.2		
Zinc	6010B	0.4	1	11/01/03	11/25/03	73.3		

% Solids: 82.0

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected:
Date Received:
Units: MG/KG
Basis: Dry

Sample Name: Method Blank
Lab Code: K2308433-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.2	U	
Copper	6010B	0.7	1	11/01/03	11/25/03	0.7	U	
Lead	6010B	3.3	1	11/01/03	11/25/03	3.3	U	*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.7	1	11/01/03	11/25/03	0.7	U	
Zinc	6010B	0.3	1	11/01/03	11/25/03	0.3	U	

% Solids: 100.0

Comments:

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium	1250	1230	98	500	486	97	499	100	6010B
Copper	625	636	102	500	498	100	502	100	6010B
Lead	2500	2470	99	500	482	96	514	103	6010B
Mercury	5.0	5.30	106	5.0	5.19	104	5.35	107	7471A
Nickel	1250	1250	100	500	490	98	504	101	6010B
Zinc	1250	1230	98	500	485	97	499	100	6010B

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium				500	506	101	506	101	6010B
Copper				500	504	101	501	100	6010B
Lead				500	530	106	506	101	6010B
Mercury				5.0	5.12	102	5.10	102	7471A
Nickel				500	508	102	508	102	6010B
Zinc				500	503	101	507	101	6010B

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.45	109			7471A

Simultaneously Extractable Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Cadmium				5.0	5.78	116		
Copper				10	8.95	90		
Lead				50	46.9	94		
Mercury	0.20	0.17	84					
Nickel				20	21.3	106		
Zinc				10	10.3	102		

Simultaneously Extractable Metals
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C			Method
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U						6010B
Copper	20.0	U	20.0	U	20.0	U	20.0	U						6010B
Lead	100	U	100	U	100	U	100	U						6010B
Mercury	0.20	U	0.20	U	0.20	U	0.20	U						7471A
Nickel	20.0	U	20.0	U	20.0	U	20.0	U						6010B
Zinc	10.0	U	10.0	U	10.0	U	10.0	U						6010B

Simultaneously Extractable Metals
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Cadmium			5.0	U							6010B
Copper			20.0	U							6010B
Lead			100	U							6010B
Mercury			0.20	U	0.20	U					7471A
Nickel			20.0	U							6010B
Zinc			10.0	U							6010B

Simultaneously Extractable Metals
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: ARCADIS Service Request:K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA Iris ICP ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Cadmium		1000	1.9	860	86			
Copper		500	-0.6	459	92			
Lead		1000	-1.8	843	84			
Nickel		1000	0.4	835	83			
Zinc		1000	14.1	852	85			

Simultaneously Extractable Metals
- 5a -
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Units: mg/kg
Basis: Dry
% Solids: 75.3

Sample Name: SED-4S
Lab Code: K2308433-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Cadmium	60 - 130	47.6		0.7		54.8	86		6010B
Copper	60 - 130	33.4		7.3		27.4	95		6010B
Lead	60 - 130	132		36.4		110	87		6010B
Mercury	60 - 130	0.87		0.03	U	0.87	101		7471A
Nickel	60 - 130	51.0		5.0		54.8	84		6010B
Zinc	60 - 130	105		59.3		54.8	82		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Simultaneously Extractable Metals

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DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Units: mg/kg
Basis: Dry
% Solids: 75.3

Sample Name: SED-4D
Lab Code: K2308433-004D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Cadmium		0.7		1.0		38		6010B
Copper	30	7.3		6.2		17		6010B
Lead	30	36.4		21.3		52	*	6010B
Mercury		0.03	U	0.04	U			7471A
Nickel	30	5.0		4.6		9		6010B
Zinc	30	59.3		58.8		1		6010B

An empty field in the Control Limit column indicates the control limit is not applicabl

Simultaneously Extractable Metals

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LABORATORY CONTROL SAMPLE

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Aqueous LCS Source: Inorganic Ventures Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Cadmium	1250	1340	107					
Copper	625	679	108					
Lead	2500	2700	108					
Mercury	20.0	20.9	104					
Nickel	1250	1320	106					
Zinc	1250	1320	106					

Simultaneously Extractable Metals
- 9 -
ICP SERIAL DILUTIONS

Client: ARCADIS
Service Request: K2308433
Project No.: IN000072.0021
Units: ug/L
Project Name: Bloomington, IN

Sample Name: SED-4L
Lab Code: K2308433-004L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-	Q	Method
Cadmium	16.0		25.0	U			6010B
Copper	170		192		13		6010B
Lead	842		778		8		6010B
Nickel	116		117		1		6010B
Zinc	1370		1500		9		6010B

Simultaneously Extractable Metals
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Mercury	253.70	BD	0.20	0.20	7471A

Comments _____

Simultaneously Extractable Metals
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: TJA Iris ICP

GFAA ID #: AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Cadmium	226.50		5.0	5.0	6010B
Copper	324.75		20.0	20.0	6010B
Lead	220.35		100	100	6010B
Nickel	231.60		20.0	20.0	6010B
Zinc	206.20		10.0	10.0	6010B

Comments _____

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS
1/15/03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Cr
Aluminum	237.3	0.0000000	0.0000000	0.0009000	0.0000000	-0.0035000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0125000
Arsenic	189.0	0.0000000	0.0000000	-0.0001400	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	-0.0010000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	-0.0000230	0.0000000	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	-0.0002000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0003000	0.0000000	0.0000000	0.0000000	-0.0003600
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	-0.0009500	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	-0.0000780	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	-0.0005000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0001000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001220
Zinc	213.8	0.0000000	0.0000000	0.0000000	0.0000000	-0.0012000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS
1/15/03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mo	Ni	Ti	V	Co
Aluminum	237.3	0.0000000	0.0000000	0.0000000	0.0000000	-0.0019000
Antimony	206.8	-0.0280000	0.0000000	0.0002400	0.0000000	0.0004000
Arsenic	189.0	0.0010000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	-0.0004700	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0012000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000250	-0.0000120	0.0000600	0.0000000	-0.0000560
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	-0.0001700	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0015000	0.0000000	0.0000000
Copper	324.7	0.0003400	0.0000000	-0.0000070	-0.0017000	0.0000000
Iron	259.9	-0.0003000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0740000	0.0700000
Lead	220.3	-0.0016000	0.0004600	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.3000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0001200
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	-0.0006800	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0118000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	-0.0003000	0.0000000	0.0000000	-0.0001700	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0005500	-0.0060000	-0.0002500	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.0016000	0.0017000	0.0037000
Tin	189.9	0.0000000	0.0000000	-0.0019000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0002500	0.0000000	-0.0006400	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0056600	-0.0000600	0.0000000	0.0000000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS
1/15/03

Analyte	Wave-length (nm)	Mn	P	C
Aluminum	237.3	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000
Arsenic	189.0	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0003100	0.0000330	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000
Iron	259.9	-0.0004000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000
Silicon	251.6	-0.0040000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000
Thallium	190.8	-0.0005900	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000

Simultaneously Extractable Metals

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ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA Iris ICP

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Cadmium	5.00	20000.0	6010B
Copper	5.00	50000.0	6010B
Lead	5.00	200000.0	6010B
Nickel	5.00	100000.0	6010B
Zinc	15.00	100000.0	6010B

Comments:

Simultaneously Extractable Metals
- 13 -
PREPARATION LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Bloomington, IN

Method: P

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/01/03	AVS SEM	50	50
K2308433-MB	11/01/03	AVS SEM	3.00	100
K2308433-001	11/01/03	AVS SEM	2.95	100
K2308433-002	11/01/03	AVS SEM	3.02	100
K2308433-003	11/01/03	AVS SEM	3.00	100
K2308433-004	11/01/03	AVS SEM	3.07	100
K2308433-004D	11/01/03	AVS SEM	3.07	100
K2308433-005	11/01/03	AVS SEM	3.03	100
K2308433-004S	11/01/03	AVS SEM	3.03	100
K2308433-006	11/01/03	AVS SEM	3.03	100

Simultaneously Extractable Metals
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PREPARATION LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Bloomington, IN

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/19/03	AVS SEM	100	100
K2308433-MB	11/19/03	AVS SEM	3.00	100
K2308433-001	11/19/03	AVS SEM	2.95	100
K2308433-002	11/19/03	AVS SEM	3.02	100
K2308433-003	11/19/03	AVS SEM	3.00	100
K2308433-004	11/19/03	AVS SEM	3.07	100
K2308433-004D	11/19/03	AVS SEM	3.03	100
K2308433-005	11/19/03	AVS SEM	3.03	100
K2308433-004S	11/19/03	AVS SEM	3.07	100
K2308433-006	11/19/03	AVS SEM	3.03	100

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/20/03 End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	14:06																X									
STANDARD #1	1.00	14:07																X									
STANDARD #2	1.00	14:09																X									
STANDARD #3	1.00	14:11																X									
STANDARD #4	1.00	14:12																X									
STANDARD #5	1.00	14:14																X									
ICV	1.00	14:15																X									
ICB	1.00	14:17																X									
CCV1	1.00	14:19																X									
CCB1	1.00	14:20																X									
CRA	1.00	14:22																X									
ZZZZZZ	1.00	14:23																									
ZZZZZZ	1.00	14:25																									
ZZZZZZ	1.00	14:27																									
ZZZZZZ	1.00	14:28																									
ZZZZZZ	1.00	14:30																									
ZZZZZZ	1.00	14:31																									
ZZZZZZ	1.00	14:33																									
ZZZZZZ	1.00	14:35																									
ZZZZZZ	1.00	14:36																									
CCV2	1.00	14:38																X									
CCB2	1.00	14:40																X									
ZZZZZZ	1.00	14:41																									
ZZZZZZ	1.00	14:43																									
ZZZZZZ	1.00	14:44																									
ZZZZZZ	1.00	14:46																									
ZZZZZZ	1.00	14:48																									
ZZZZZZ	1.00	14:49																									
ZZZZZZ	1.00	14:51																									
ZZZZZZ	1.00	14:53																									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS
Service Request: K2308433
Project No.: IN000072.0021
Project Name: Bloomington, IN

Instrument ID Number: CETAC-1
Method: CV
Start Date: 11/20/03
End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	14:54																										
ZZZZZZ	1.00	14:56																										
CCV3	1.00	14:57																X										
CCB3	1.00	14:59																X										
ZZZZZZ	1.00	15:01																										
ZZZZZZ	1.00	15:02																										
K2308433-MB	4.00	15:04																X										
LCSW	4.00	15:05																X										
K2308433-001	4.00	15:07																X										
K2308433-002	4.00	15:09																X										
K2308433-003	4.00	15:10																X										
K2308433-004	4.00	15:12																X										
K2308433-004D	4.00	15:14																X										
K2308433-004S	4.00	15:15																X										
CCV4	1.00	15:17																X										
CCB4	1.00	15:18																X										
K2308433-005	4.00	15:20																X										
K2308433-006	4.00	15:22																X										
CCV5	1.00	15:23																X										
CCB5	1.00	15:25																X										

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA Iris ICP Method: P

Start Date: 11/25/03 End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN					
CAL-BLANK	1.00	11:13							X				X		X				X							X						
CAL-STDA	1.00	11:16							X				X		X				X							X						
CAL-STDB	1.00	11:18																														
ICV	1.00	11:22							X				X		X				X							X						
ZZZZZZ	1.00	11:24																														
ZZZZZZ	1.00	11:27																														
ICB	1.00	11:30							X				X		X				X							X						
CCVA1	1.00	11:32							X				X		X				X							X						
ZZZZZZ	1.00	11:38																														
CCB1	1.00	11:45							X				X		X				X							X						
CRI	1.00	11:49							X				X		X				X							X						
ICSA	1.00	11:56							X				X		X				X							X						
ICSAB	1.00	11:58							X				X		X				X							X						
ZZZZZZ	1.00	12:01																														
ZZZZZZ	1.00	12:03																														
ZZZZZZ	1.00	12:06																														
ZZZZZZ	1.00	12:10																														
ZZZZZZ	1.00	12:14																														
ZZZZZZ	1.00	12:17																														
ZZZZZZ	1.00	12:19																														
CCVA2	1.00	12:22							X				X		X				X							X						
ZZZZZZ	1.00	12:24																														
CCB2	1.00	12:26							X				X		X				X							X						
ZZZZZZ	1.00	12:29																														
ZZZZZZ	1.00	12:31																														
ZZZZZZ	5.00	12:34																														
K2308433-MB	1.00	12:40							X				X		X				X							X						
LCSW	1.00	12:43							X				X		X				X							X						
K2308433-001	1.00	12:48							X				X		X				X							X						
K2308433-004	1.00	12:54							X				X		X				X							X						

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA Iris ICP Method: P

Start Date: 11/25/03 End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308433-004S	1.00	12:59							X				X		X				X						X	
K2308433-004D	1.00	13:11							X				X		X				X						X	
K2308433-004L	5.00	13:15							X				X		X				X						X	
CCVA3	1.00	13:21							X				X		X				X						X	
ZZZZZZ	1.00	13:24																								
CCB3	1.00	13:27							X				X		X				X						X	
K2308433-002	1.00	13:47							X				X		X				X						X	
K2308433-003	1.00	13:50							X				X		X				X						X	
ZZZZZZ	1.00	13:55																								
K2308433-005	1.00	14:01							X				X		X				X						X	
K2308433-006	1.00	14:03							X				X		X				X						X	
CCVA4	1.00	14:08							X				X		X				X						X	
ZZZZZZ	1.00	14:11																								
CCB4	1.00	14:13							X				X		X				X						X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Draft, Aug. 1991

Work Order #.: _____ Method: Methylene Blue Colorimetric

Analysis: AVS/SEM

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol (g) or (ml)	Final Volume (ml)	mLs 50% HCl added	%HCl in Solution	% Solids	mg/kg Dry Wt.
11/1/03	MB	50	100 50				
	LCS	10.020					
	S433-1	2.954		sm rock, gravel, shell particles			
	-2	3.018					
	-3	3.000					
	-4	3.068		fine gravel, rock, shell			
	-4d	3.030		sm rock, gravel, ~~shell~~ particulate shell			
	-4ms	3.139					
	-4msd	3.044					
	-5	3.028					
	-6	3.029		fine gravel, rock, shell			

LCS 1 = % REC =

LCS 2 = % REC =

Spike = % REC =

Spike Dup. = % REC =

SEM F.V. 100ml. (10ml 1:1 HCl added during distillation)

x =

STD ID# = RPD =

OEM 11/1/03

Prepared By:	EM	Date Prepared:	11/1/03 1530
Analyzes By:	EM	Date Analyzed:	11/1/03
Reviewed By:		Date Reviewed:	11/5/03

Atomic Absorption Data Review Form

Element Hg ~~AA #~~ AB 11/20/03

Analytical Batch
Analysis Lot # KA0322716

Cal Std/CCV Source Hg 1-24-C

Service Request Numbers: AB 11/20/03

K9010, 8969, 9008, 8989, 8881, ~~9056~~, 8433SEM, 9076

	Yes	No	NA
1) Appropriate Standardization Completed	✓		
2) ICV within 10% of true value.	✓		
3) CCVs in Control	✓		
4) CCB's and/or ICB's below MRL	✓		
5) All reported results within calibration range	✓		
6) Calculations Correct	✓		

Comments :

Reviewed By: _____ Date: 11/24/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K9010, 8969, 9008, 8989, 8881, 9056,
Analysis For: Hg	8433SEM, 9076

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	5.30		106%
2	ICB	—	—	—	-0.05		<0.1
3	CCV1	—	—	—	5.19		104%
4	CCB1	—	—	—	-0.05		<0.1
5	CLA	—	—	—	0.17		0.17
6	PBW(LP031460 17)	20mLs	20mLs	—	-0.04		<0.1
7	LCSW	↓	↓	—	5.09		102%
8	K9010-01			—	-0.05		<0.1
9	-01D			—	-0.04		<0.1
10	-01S			—	0.98		0.98/98%
11	K8969-01			—	-0.03		<0.1
12	-02			—	-0.03		<0.1
13	K9008-03			—	-0.04		<0.1
14	-03D			—	-0.05		<0.1
15	CCV2	—	—	—	5.35		107%
16	CCB2	—	—	—	-0.05		<0.1
17	K9008-03S	20mLs	20mLs	—	0.96		0.96/96%
18	K8989-01			—	-0.05		<0.1
19	K8881-01			—	-0.04		<0.1
20	-02			—	-0.02		<0.1
21	K9076-01			—	-0.03		<0.1
22	-02			—	-0.03		<0.1
23	-03			—	-0.04		<0.1
24	-04			—	-0.03		<0.1
25	-05			—	-0.05		<0.1

Comments: Reporting Levels:
Waters - 0.2 µg/L
Soil - 0.02 mg/kg
TCLP - 1 µg/L

TIME STARTED:

Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/20/03	1 of 2

[HGFORM.XLW] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH: _____

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K9076-06	20mLs	20mLs	—	-0.05		<0.1
27	CCV3	—	—	—	5.12		102%
28	CCB3	—	—	—	-0.05		<0.1
29	K9076-07	20mLs	20mLs	—	-0.05		<0.1
30	H2SO4 Lot 43212	—	100	—	-0.01		<0.1
31	PB(8433 SEM)	50mLs	50mLs	1/4	0.05	<0.02	
32	LCS ↓	AB 11/20/03 ↓	AB 11/20/03 100 ↓		5.23	105%	
33	K8433-01	2.954	50mLs		0.17	0.02	
34	-02	3.018			0.14	0.02	
35	-03	3.000			0.09	<0.02	
36	-04	3.0168			0.10	<0.02	
37	-04D	3.030			0.09	<0.02	
38	-04S	3.030			5.04	0.067/102%	
39	CCV4	—	—	—	5.09		102%
40	CCB4	—	—	—	-0.05		<0.1
41	K8433-05	3.028	100mLs	1/4	0.12	0.02	
42	-06	3.029	↓	↓	0.47	0.06	
43	CCV5	—	—	—	5.45		109%
44	CCB5	—	—	—	-0.04		<0.1
45							
46			AB 11/20/03				
47							
48							
49							
50							

Comments: Reporting Levels:

Waters - 0.2 µg/L K8433-04S @ 0.166 mg/kg

Soil - 0.02 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/20/03	2 of 2

[Hgform.xlw] HG2.XLS

CETAC Hg Analysis Report - 03112003.DB - Thursday, November 20, 2003, 3:34:04 PM

Analyst ANGELA BAIRD
Date Started Thursday, November 20, 2003, 14:06:14
Worksheet Hg 11/20/03 RUN2
Comment KA0322716
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	20-Nov-2003, 14:06	0.00	26.50	1.00	61	46	38	34	
Standard #1	20-Nov-2003, 14:07	0.20	3.20	1.00	787	831	843	842	
Standard #2	20-Nov-2003, 14:09	0.50	4.35	1.00	1858	1993	2047	2033	
Standard #3	20-Nov-2003, 14:11	1.00	5.35	1.00	3475	3762	3883	3918	
Standard #4	20-Nov-2003, 14:12	5.00	5.30	1.00	16840	18192	18851	18923	
Standard #5	20-Nov-2003, 14:14	10.00	4.40	1.00	33046	35705	36413	36173	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	20-Nov-2003, 14:15	5.30	5.63	1.00	17424	18889	19526	19769	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	20-Nov-2003, 14:17	-0.05	3.35	1.00	27	23	20	13	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	20-Nov-2003, 14:19	5.19	5.20	1.00	17154	18561	19148	19199	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	20-Nov-2003, 14:20	-0.05	5.83	1.00	33	21	14	10	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	20-Nov-2003, 14:22	0.17	5.24	1.00	744	799	811	805	
PBW(KP0314617)	20-Nov-2003, 14:23	-0.04	5.11	1.00	47	35	27	38	
LCSW(KP0314617)	20-Nov-2003, 14:25	5.09	4.31	1.00	17070	18248	18704	18718	
K9010-01	20-Nov-2003, 14:27	-0.05	6.25	1.00	49	36	30	27	
K9010-01D	20-Nov-2003, 14:28	-0.04	6.16	1.00	60	48	40	41	
K9010-01S	20-Nov-2003, 14:30	0.98	4.95	1.00	3404	3677	3751	3778	
K8969-01	20-Nov-2003, 14:31	-0.03	14.50	1.00	113	115	99	86	
K8969-02	20-Nov-2003, 14:33	-0.03	4.54	1.00	80	86	80	73	
K9008-03	20-Nov-2003, 14:35	-0.04	4.55	1.00	49	36	32	40	
K9008-03D	20-Nov-2003, 14:36	-0.05	3.10	1.00	28	21	19	29	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	20-Nov-2003, 14:38	5.35	4.32	1.00	17905	19126	19634	19630	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	20-Nov-2003, 14:40	-0.05	3.31	1.00	16	7	2	4	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K9008-03S	20-Nov-2003, 14:41	0.96	6.09	1.00	3283	3587	3706	3731	
K8989-01	20-Nov-2003, 14:43	-0.05	11.20	1.00	60	29	21	23	
K8881-01	20-Nov-2003, 14:44	-0.04	6.95	1.00	59	48	39	35	
K8881-02	20-Nov-2003, 14:46	-0.02	13.70	1.00	140	134	121	124	
K9076-01	20-Nov-2003, 14:48	-0.03	5.51	1.00	83	71	67	75	
K9076-02	20-Nov-2003, 14:49	-0.03	8.14	1.00	104	98	86	91	
K9076-03	20-Nov-2003, 14:51	-0.04	10.60	1.00	63	40	32	26	
K9076-04	20-Nov-2003, 14:53	-0.03	10.90	1.00	97	86	76	69	
K9076-05	20-Nov-2003, 14:54	-0.05	4.92	1.00	18	28	19	7	
K9076-06	20-Nov-2003, 14:56	-0.05	8.33	1.00	40	30	15	9	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	20-Nov-2003, 14:57	5.12	5.66	1.00	16857	18258	18888	19146	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	20-Nov-2003, 14:59	-0.05	2.36	1.00	24	17	19	14	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K9076-07	20-Nov-2003, 15:01	-0.05	3.01	1.00	40	39	36	29	
H2SO4 LOT 43212	20-Nov-2003, 15:02	-0.01	11.30	1.00	146	153	157	150	
PB(8433 SEM)	20-Nov-2003, 15:04	0.05	4.72	1.00	371	386	392	386	
LCS(8433 SEM)	20-Nov-2003, 15:05	5.23	4.28	1.00	17527	18741	19195	19202	
K8433-01	20-Nov-2003, 15:07	0.17	3.92	1.00	763	800	814	812	
K8433-02	20-Nov-2003, 15:09	0.14	6.20	1.00	640	693	706	701	
K8433-03	20-Nov-2003, 15:10	0.09	5.18	1.00	473	504	505	505	
K8433-04	20-Nov-2003, 15:12	0.10	3.46	1.00	535	563	555	555	
K8433-04D	20-Nov-2003, 15:14	0.09	4.81	1.00	485	515	518	510	
K8433-04S	20-Nov-2003, 15:15	5.04	4.04	1.00	16926	18098	18464	18503	

CETAC Hg Analysis Report - 03112003.DB - Thursday, November 20, 2003, 3:34:05 PM

Analyst ANGELA BAIRD
Date Started Thursday, November 20, 2003, 15:17:17
Worksheet Hg 11/20/03 RUN2
Comment KA0322716
* All concentrations are dilution corrected.

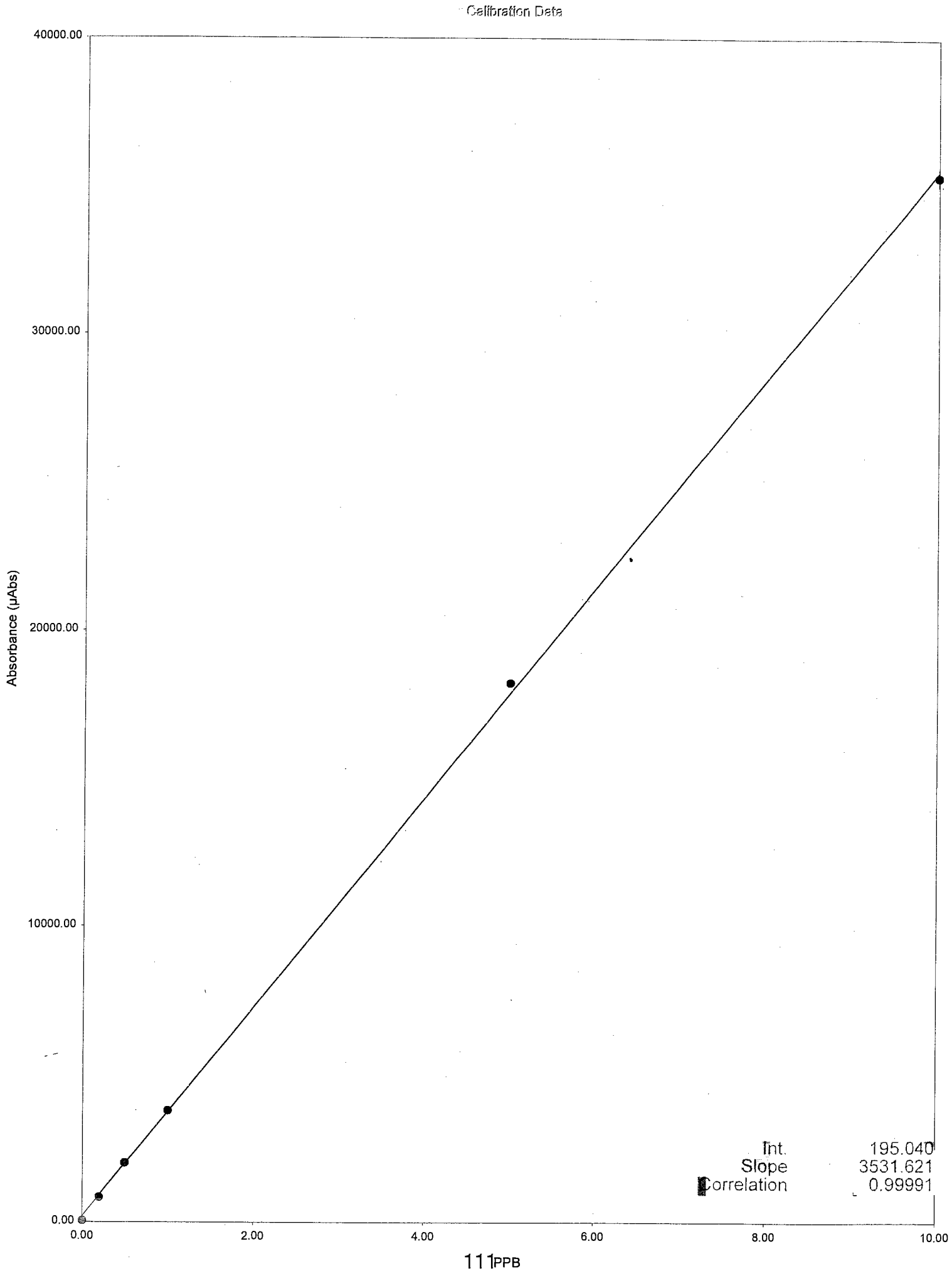
Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV4	20-Nov-2003, 15:17	5.09	4.31	1.00	17090	18229	18582	18851	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB4	20-Nov-2003, 15:18	-0.05	4.29	1.00	29	22	19	11	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8433-05	20-Nov-2003, 15:20	0.12	5.24	1.00	581	617	626	629	
K8433-06	20-Nov-2003, 15:22	0.47	5.43	1.00	1729	1862	1913	1927	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV5	20-Nov-2003, 15:23	5.45	4.80	1.00	18130	19499	20117	20065	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB5	20-Nov-2003, 15:25	-0.04	9.39	1.00	57	52	40	25	


Calibration Data
40000.00
30000.00
20000.00
10000.00
0.00
Absorbance (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
111PPB
Int. 195.040
Slope 3531.621
Correlation 0.99991

Extr/Prep Batch
KP0314617

Columbia Analytical Services
EPA METHOD 7470A

Extr/Prep Batch
KP0314618

Service Request Number(s): K9010, 8969, 9008, 8989, 8881, ~~9056~~ AB 11/20/03, 8433SEM, 9076

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PBW	20mLs	20mLs	PB (8433SEM)	5mLs	20mLs
LCSW (*)			LCS** ↓		
16 K9010-01			K8433-01		
↓ -01D			↓ -02		
↓ -01S*			-03		
18 K8969-01			-04		
18 ↓ -02			-04D		
44 K9008-03			-04S**		
↓ -03D			-05		
↓ -03S*			↓ -06		
K8989-01					
20 K8881-01					
↓ -02					
~~20~~ K9056-01					
AB 11/9/03 ↓ -02					
K9076-01	20mLs	20mLs			
↓ -02					
-03					
-04					
-05					
-06					
-07					
H2SO4 Lot 43212	—	—			
AB 11/9/03					
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

AB 11/9/03

Lot # of Reagents Used:
HNO3: Y23049
H2SO4: 42357
HCl: 42167
K2S2O8: T44H13
KMnO4: V25588
SnCl2: Y23648
NaCl: Y07624
NH2OH-HCL: Y06477

(*) **LCSS =**
LCSW = 0.1mLS
ERA CLP Soil Lot # 246
ICV Intermediate stock solution.
Other: Waterbath temp. 95
*** Source Standard:** Hg1-24-C 100ppb
**** Source Standard: ICV** Hg1-22-P 1000ppb

Comments: *0.2mLS Hg1-24-C 100ppb
**0.1mLS Hg1-24B 1000ppb

TIME STARTED:

Analyst: Angela Baird
Date: 11/19/03

[HGFORM.XLW] 7470

Service Request # K8433

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments

Primary Review by _____ Date 11/25/03

Secondary Review by _____ Date 11/26/03

Method: GALILEO Sample Name: Blank Operator:
Comment:
Run Time: 11/25/03 11:13 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}	313.042 {107}
Avg	.1898	.0111	.0222	-.0942	-.2601
Stddev	.0686	.0118	.0039	.0451	.0077
%RSD	36.14	106.1	17.66	47.85	2.971
#1	.1413	.0194	.0249	-.0623	-.2656
#2	.2383	.0028	.0194	-.1261	-.2546

Elem	B_2497	Cd2265	Ca3179	Ca3181	Cr2677
Line	249.773 {134}	226.502 {148}	317.933 {105}	318.128 {105}	267.716 {125}
Avg	.8560	.0284	-.0996	-.0830	-.0651
Stddev	.0469	.0382	.0196	.0078	.0078
%RSD	5.478	134.5	19.68	9.390	12.02
#1	.8892	.0554	-.0858	-.0885	-.0706
#2	.8229	.0014	-.1135	-.0775	-.0596

Elem	Co2286	Cu3247	Fe2599	Fe2714	Pb2203
Line	228.616 {147}	324.754 {103}	259.940 {129}	271.441 {124}	220.353 {152}
Avg	-.0679	-.0290	-.0402	.1060	.1219
Stddev	.0118	.0215	.0098	.0010	.0235
%RSD	17.33	74.05	24.37	.9367	19.27
#1	-.0596	-.0443	-.0471	.1053	.1385
#2	-.0762	-.0138	-.0332	.1067	.1053

Elem	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316
Line	202.582 {166}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	.1233	.0429	.3033	.0055	-.0997
Stddev	.0019	.0019	.0293	.0078	.0235
%RSD	1.575	4.524	9.672	141.4	23.58
#1	.1247	.0443	.3241	.0000	-.0831
#2	.1219	.0415	.2826	.0111	-.1164

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899
Line	766.490 { 44}	196.090 {171}	328.068 {102}	589.592 { 57}	189.989 {176}
Avg	-.8677	.0651	.0249	2.956	.0831
Stddev	.2606	.0255	.0039	.208	.0078
%RSD	30.03	39.13	15.75	7.043	9.442
#1	-.6834	.0471	.0221	3.104	.0776
#2	-1.052	.0831	.0277	2.809	.0887

Elem	V_3102	Zn2062	P_1782	Si2516	Ti3234
Line	310.230 {108}	206.200 {163}	178.287 {188}	251.612 {134}	323.452 {104}
Avg	.6309	.1385	.1621	.0886	.4178
Stddev	.0311	.0020	.0020	.0627	.0902
%RSD	4.924	1.429	1.223	70.70	21.58
#1	.6528	.1371	.1607	.1330	.3541
#2	.6089	.1399	.1635	.0443	.4816

Elem	Tl1908	Li6707	Sr3464
Line	190.864 {176}	670.784 { 50}	346.446 { 97}
Avg	-.0443	.2518	-.0996
Stddev	.0117	.0821	.0783
%RSD	26.50	32.60	78.59
#1	-.0526	.3098	-.0443
#2	-.0360	.1937	-.1550

11/25/03

Method: GALILEO Sample Name: STDA Operator:
Comment: ICP2-8-D
Run Time: 11/25/03 11:16 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	Be3130	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	313.042 {107}	249.773 {134}	226.502 {148}
Avg	2.988	2.611	903.4	49.43	79.39
Stddev	.035	.009	.5	.01	.69
%RSD	1.181	.3379	.0591	.0200	.8641
#1	3.012	2.605	903.8	49.42	78.91
#2	2.963	2.618	903.0	49.43	79.88

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}	259.940 {129}
Avg	6.906	32.03	48.86	14.09	100.0
Stddev	.004	.22	.27	.01	.4
%RSD	.0516	.6824	.5497	.0468	.3725
#1	6.903	31.87	48.67	14.09	99.75
#2	6.908	32.18	49.05	14.08	100.3

Elem	Pb2203	Mg2852	Mn2576	Mo2020	Ni2316
Line	220.353 {152}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	4.258	31.80	385.4	17.03	42.45
Stddev	.053	.18	1.5	.15	.26
%RSD	1.243	.5653	.3846	.8746	.6187
#1	4.221	31.93	384.4	16.93	42.27
#2	4.296	31.67	386.5	17.14	42.64

Elem	Se1960	Ag3280	Sn1899	V_3102	Zn2062
Line	196.090 {171}	328.068 {102}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	2.371	12.93	4.303	23.65	47.27
Stddev	.002	.05	.065	.04	.38
%RSD	.0825	.3684	1.503	.1541	.7961
#1	2.372	12.97	4.257	23.68	47.01
#2	2.370	12.90	4.348	23.63	47.54

Elem	Si2516	Ti3234	Tl1908
Line	251.612 {134}	323.452 {104}	190.864 {176}
Avg	11.35	26.95	1.932
Stddev	.04	.19	.012
%RSD	.3105	.7068	.6089
#1	11.38	26.82	1.923
#2	11.33	27.09	1.940

Method: GALILEO Sample Name: STDB Operator:
Comment: ICP2-13-C
Run Time: 11/25/03 11:18 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Ca3181	Fe2714	Mg2025
Line	237.312 {141}	233.527 {144}	318.128 {105}	271.441 {124}	202.582 {166}
Avg	19.41	734.8	47.08	222.1	56.10
Stddev	.08	.1	.22	2.2	.01
%RSD	.3931	.0198	.4615	.9932	.0098
#1	19.46	734.9	47.23	220.5	56.10
#2	19.36	734.7	46.92	223.6	56.09

Elem	K_7664	Na5895	P_1782	Li6707	Sr3464
Line	766.490 { 44}	589.592 { 57}	178.287 {188}	670.784 { 50}	346.446 { 97}
Avg	398.0	1448.	12.16	739.3	47.16
Stddev	1.7	1.	.07	2.6	.04
%RSD	.4185	.0355	.5967	.3482	.0906
#1	399.2	1448.	12.11	741.2	47.13
#2	396.8	1447.	12.22	737.5	47.19

Method: GALILEO Sample Name: ICV Operator: WM
Comment: KA0322904 ICP2-14-D
Run Time: 11/25/03 11:22 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.002	2.486	2.557	5.176	.1195	.0004	1.235
Stddev	.005	.000	.023	.022	.0001	.0004	.008
%RSD	.1008	.0158	.9038	.4298	.0819	103.7	.6639
#1	5.006	2.486	2.541	5.161	.1196	.0007	1.229
#2	4.999	2.486	2.574	5.192	.1195	.0001	1.240
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	5.000	2.500	2.500	5.000	.1250		1.250
Range	10.00%	10.00%	10.00%	10.00%	10.00%		10.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.41	.5039	1.237	.6359	2.502	2.475	12.53
Stddev	.10	.0005	.006	.0022	.004	.013	.03
%RSD	.7948	.0910	.4642	.3395	.1396	.5148	.2087
#1	12.34	.5036	1.233	.6343	2.505	2.484	12.54
#2	12.48	.5042	1.241	.6374	2.500	2.466	12.51
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.50	.5000	1.250	.6250	2.500	2.500	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.242	2.026	1.251	12.38	2.506	.6141	12.41
Stddev	.009	.009	.004	.02	.011	.0074	.07
%RSD	.7282	.4326	.3118	.1528	.4397	1.201	.5464
#1	1.236	2.019	1.248	12.36	2.514	.6089	12.46
#2	1.249	2.032	1.254	12.39	2.498	.6193	12.36
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	2.000	1.250	12.50	2.500	.6250	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090	1.276	1.230	.0528	.0248	2.064	2.567
Stddev	.0030	.003	.008	.0004	.0009	.001	.001
%RSD	33.46	.2603	.6860	.7707	3.680	.0354	.0373
#1	.0069	1.278	1.224	.0531	.0254	2.063	2.567
#2	.0111	1.273	1.236	.0526	.0242	2.064	2.566
Check ?	None	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value		1.250	1.250			2.000	2.500
Range		10.00%	10.00%			10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0001	.0177
Stddev	.0001	.0043
%RSD	123.6	24.50
#1	.0000	.0208
#2	.0001	.0147
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: ICV2 Operator: WM
Comment: KA0322904 ICP2-7-B
Run Time: 11/25/03 11:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0360	-.0091	-.0279	.0007	.0000	-.0231	.0015
Stddev	.0020	.0143	.0080	.0003	.0001	.0011	.0005
%RSD	5.449	157.5	28.60	38.36	551.2	4.593	31.65
#1	-.0373	.0010	-.0335	.0009	.0000	-.0224	.0019
#2	-.0346	-.0192	-.0222	.0005	.0000	-.0239	.0012
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.966	-.0017	.0005	.0011	24.85	-.0324	24.85
Stddev	.004	.0006	.0013	.0035	.11	.0014	.04
%RSD	.0914	38.80	274.2	320.7	.4440	4.376	.1461
#1	4.963	-.0021	.0014	.0035	24.77	-.0334	24.87
#2	4.969	-.0012	-.0005	-.0014	24.93	-.0314	24.82
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	5.000				25.00		25.00
Range	10.00%				10.00%		10.00

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0026	-.0017	.0014	-.0156	.0032	-.0002
Stddev	.0001	.0007	.0009	.0041	.0042	.0012	.0002
%RSD	16.27	26.49	52.47	292.3	27.24	37.68	102.5
#1	.0005	.0031	-.0011	.0043	-.0126	.0041	-.0003
#2	.0004	.0021	-.0023	-.0015	-.0186	.0024	.0000
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0016	.0103	.0076	.0087	.0027	-.0358
Stddev	.0007	.0032	.0000	.0049	.0008	.0002	.0049
%RSD	151.4	206.0	.2375	64.34	8.921	5.614	13.82
#1	-.0010	.0007	.0103	.0110	.0082	.0026	-.0393
#2	.0000	-.0038	.0103	.0041	.0093	.0028	-.0323
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	.0149
Stddev	.0001	.0004
%RSD	19.75	2.756
#1	.0003	.0152
#2	.0003	.0147
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: ICV3 Operator: WM
Comment: KA0322904 ICP2-7-D
Run Time: 11/25/03 11:27 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0150	-.0091	.0024	.0006	.0000	10.21	.0002
Stddev	.0061	.0038	.0095	.0001	.0000	.02	.0005
%RSD	40.47	42.07	391.3	10.10	16.27	.1486	197.2
#1	-.0107	-.0119	.0091	.0005	.0000	10.20	.0006
#2	-.0194	-.0064	-.0043	.0006	.0000	10.22	-.0001
Check ?	None	None	None	None	None	QC Pass	None
Value						10.00	
Range						10.00%	

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0001	.0010	.0131	.0088	.0014	.0048
Stddev	.0011	.0004	.0016	.0015	.0003	.0028	.0015
%RSD	15.71	483.0	166.8	11.64	3.975	205.1	32.14
#1	.0079	-.0002	.0021	.0142	.0090	.0034	.0059
#2	.0063	.0004	-.0002	.0120	.0085	-.0006	.0037
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0015	.0009	.0002	-.0198	-.0017	.0235
Stddev	.0001	.0016	.0020	.0008	.0136	.0000	.0022
%RSD	38.44	109.9	225.6	368.5	68.71	.0471	9.193
#1	.0002	.0026	-.0005	.0008	-.0294	-.0017	.0220
#2	.0004	.0003	.0023	-.0003	-.0102	-.0017	.0250
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.852	-.0019	.0009	4.647	4.524	-.0001	-.0049
Stddev	.028	.0014	.0007	.028	.015	.0006	.0069
%RSD	.5856	71.20	77.49	.5948	.3229	575.4	140.9
#1	4.832	-.0010	.0013	4.627	4.514	-.0005	.0000
#2	4.872	-.0029	.0004	4.666	4.535	.0003	-.0098
Check ?	QC Pass	None	None	QC Pass	QC Pass	None	None
Value	5.000			5.000	5.000		
Range	10.00%			10.00%	10.00%		

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	4.805	1.935
Stddev	.012	.003
%RSD	.2531	.1635
#1	4.814	1.937
#2	4.796	1.933
Check ?	QC Pass	QC Pass
Value	5.000	2.000
Range	10.00%	10.00%

Method: GALILEO Sample Name: ICB Operator: WM
Comment: KA0322904
Run Time: 11/25/03 11:30 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0310	-.0055	-.0142	-.0001	.0000	.0138	.0005
Stddev	.0020	.0001	.0064	.0003	.000	.0045	.0002
%RSD	6.590	1.381	45.34	200.9	1311.	32.39	46.29
#1	-.0296	-.0055	-.0187	.0001	.0001	.0170	.0003
#2	-.0324	-.0054	-.0096	-.0003	-.0001	.0107	.0007
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	-.0029	-.0011	.0010	-.0007	.0004	-.0124
Stddev	.0020	.0041	.0006	.0000	.0058	.0005	.0068
%RSD	58.24	140.6	58.32	3.752	847.5	127.5	54.91
#1	-.0047	.0000	-.0016	.0010	-.0048	.0008	-.0172
#2	-.0020	-.0059	-.0006	.0010	.0034	.0000	-.0076
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0117	L -.0325	.0041	.0001	.0007	.0010	-.0015
Stddev	.0099	.0263	.0012	.0000	.0030	.0000	.0357
%RSD	84.89	80.88	29.79	24.71	459.7	4.722	2449.
#1	-.0047	-.0139	.0050	.0001	-.0015	.0009	.0238
#2	-.0187	-.0510	.0033	.0001	.0028	.0010	-.0267
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	-.0017	.0002	.0079	-.0002	.0007	-.0061
Stddev	.0085	.0039	.0014	.0009	.0027	.0005	.0053
%RSD	471.6	229.8	624.0	11.79	1148.	76.82	87.63
#1	-.0042	.0011	-.0007	.0085	-.0022	.0003	-.0023
#2	.0078	-.0045	.0012	.0072	.0017	.0011	-.0098
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0004	-.0091	.0008	.0051
Stddev	.0025	.0013	.0109	.0003	.0126
%RSD	4064.	317.7	119.6	33.68	246.2
#1	.0018	-.0005	-.0014	.0010	.0141
#2	-.0017	.0014	-.0168	.0006	-.0038
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: GALILEO Sample Name: CCVA1 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 11:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4650	.4792	.4714	.4755	.4981	.4963	.4865
Stddev	.0146	.0087	.0191	.0017	.0014	.0010	.0032
%RSD	3.132	1.815	4.049	.3617	.2858	.1955	.6494
#1	.4575	.4734	.4964	.4735	.4973	.4971	.4833
#2	.4486	.4908	.4512	.4772	.4999	.4959	.4879
#3	.4806	.4808	.4642	.4766	.4985	.4972	.4902
#4	.4733	.4717	.4738	.4747	.4967	.4952	.4846
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4912	.4904	.4897	.4981	.4932	.4815	2.471
Stddev	.0101	.0028	.0010	.0029	.0013	.0092	.010
%RSD	2.058	.5723	.2015	.5752	.2570	1.907	.4207
#1	.4959	.4889	.4884	.4966	.4914	.4712	2.481
#2	.4974	.4907	.4907	.5005	.4940	.4770	2.473
#3	.4953	.4942	.4902	.5005	.4938	.4859	2.474
#4	.4761	.4878	.4894	.4948	.4938	.4919	2.457
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4855	.4914	.4900	5.018	.4756	.4918	.5111
Stddev	.0015	.0038	.0016	.018	.0089	.0017	.0044
%RSD	.3073	.7814	.3321	.3667	1.865	.3491	.8620
#1	.4864	.4860	.4886	5.007	.4625	.4926	.5143
#2	.4842	.4944	.4921	5.039	.4802	.4916	.5128
#3	.4843	.4915	.4904	5.029	.4780	.4896	.5046
#4	.4871	.4939	.4888	4.999	.4816	.4936	.5127
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4758	.4930	.4847	-.0051	.2473	.4955	.4725
Stddev	.0105	.0015	.0021	.0078	.0024	.0033	.0144
%RSD	2.199	.3121	.4426	151.0	.9609	.6709	3.037
#1	.4605	.4925	.4830	-.0086	.2492	.4954	.4575
#2	.4819	.4921	.4862	-.0057	.2443	.4987	.4909
#3	.4831	.4920	.4869	.0058	.2466	.4970	.4757
#4	.4777	.4952	.4827	-.0121	.2493	.4909	.4658
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA1 Run Time: 11/25/03 11:32

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0005	.0071
Stddev	.0006	.0063
%RSD	118.2	88.25
#1	.0013	.0113
#2	.0004	-.0016
#3	-.0001	.0122
#4	.0004	.0066
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: CCVB1 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 11:38 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.922	.0017	-.0205	2.459	.0012	-.0176	.0026
Stddev	.028	.0066	.0071	.010	.0001	.0011	.0003
%RSD	.5616	396.1	34.70	.4001	4.735	6.069	12.59
#1	4.920	.0076	-.0102	2.462	.0012	-.0177	.0028
#2	4.957	.0039	-.0249	2.472	.0012	-.0164	.0023
#3	4.890	.0029	-.0215	2.450	.0012	-.0189	.0030
#4	4.920	-.0077	-.0255	2.453	.0011	-.0173	.0023
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.06	.0028	.0009	.0018	24.76	-.0294	24.87
Stddev	.14	.0004	.0001	.0024	.04	.0068	.13
%RSD	.5733	14.41	11.94	137.6	.1753	23.10	.5221
#1	25.15	.0028	.0009	.0016	24.70	-.0230	25.04
#2	24.93	.0026	.0009	.0024	24.80	-.0390	24.89
#3	24.93	.0024	.0010	-.0014	24.74	-.0272	24.75
#4	25.21	.0033	.0008	.0045	24.79	-.0286	24.78
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0008	.0024	9.827	-.0035	.0011	9.965
Stddev	.0002	.0017	.0011	.070	.0115	.0018	.062
%RSD	9.164	207.8	44.93	.7126	332.2	155.4	.6239
#1	.0020	.0003	.0011	9.877	-.0006	-.0009	9.992
#2	.0024	.0026	.0019	9.887	-.0044	.0033	10.01
#3	.0021	.0017	.0034	9.806	-.0183	.0017	9.982
#4	.0024	-.0013	.0032	9.736	.0095	.0004	9.874
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	-.0022	.0032	2.530	.0133	.0033	-.0200
Stddev	.0052	.0042	.0005	.018	.0016	.0013	.0085
%RSD	76.93	190.5	13.91	.7302	12.01	39.21	42.54
#1	.0062	-.0071	.0034	2.542	.0130	.0039	-.0326
#2	.0052	-.0039	.0036	2.507	.0157	.0026	-.0148
#3	.0141	.0027	.0026	2.548	.0126	.0049	-.0148
#4	.0017	-.0005	.0034	2.524	.0121	.0020	-.0178
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Sample Name: CCVB1 Run Time: 11/25/03 11:38

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.4950	2.488
Stddev	.0028	.006
%RSD	.5576	.2576
#1	.4986	2.483
#2	.4953	2.492
#3	.4941	2.482
#4	.4920	2.496
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: GALILEO Sample Name: CCB1 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 11:45 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0303	-.0205	-.0133	-.0003	.0000	.0009	.0005
Stddev	.0092	.0156	.0092	.0003	.0000	.0004	.0007
%RSD	30.23	75.73	69.20	93.50	7.708	46.73	154.7
#1	-.0238	-.0315	-.0199	-.0001	.0000	.0011	.0000
#2	-.0368	-.0095	-.0068	-.0006	.0000	.0006	.0010
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0022	L -.0704	-.0014	.0015	.0015	-.0006	.0143
Stddev	.0077	.0663	.0001	.0007	.0011	.0003	.0165
%RSD	347.4	94.23	9.086	46.87	75.22	43.75	115.4
#1	-.0076	-.1173	-.0015	.0010	.0023	-.0008	.0259
#2	.0032	-.0235	-.0013	.0020	.0007	-.0004	.0026
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0083	-.0042	.0033	.0000	.0005	.0010	-.0011
Stddev	.0010	.0422	.0031	.0001	.0000	.0023	.0062
%RSD	11.68	1011.	94.22	285.3	.0386	222.3	560.9
#1	-.0076	.0256	.0055	.0000	.0005	.0027	.0033
#2	-.0090	-.0340	.0011	.0001	.0005	-.0006	-.0055
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0038	.0015	-.0041	.0050	.0002	-.0004	-.0035
Stddev	.0080	.0043	.0032	.0105	.0017	.0004	.0008
%RSD	211.7	282.9	78.27	209.9	719.2	90.73	23.06
#1	.0019	.0046	-.0063	-.0024	-.0010	-.0007	-.0029
#2	-.0095	-.0015	-.0018	.0124	.0015	-.0002	-.0040
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	.0007	-.0111	-.0002	.0048
Stddev	.0004	.0030	.0032	.0000	.0081
%RSD	28.23	406.2	28.37	3.365	167.2
#1	-.0012	-.0014	-.0089	-.0002	-.0009
#2	-.0018	.0028	-.0133	-.0002	.0106
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: GALILEO Sample Name: CRI Operator: WM
Comment: KA0322904 ICP2-14-B
Run Time: 11/25/03 11:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0517	.0419	.0937	.0048	.0048	.0022	.0058
Stddev	.0081	.0074	.0072	.0002	.0000	.0008	.0010
%RSD	15.63	17.77	7.680	4.546	.7447	34.63	17.82
#1	.0574	.0471	.0988	.0049	.0047	.0028	.0050
#2	.0460	.0366	.0886	.0046	.0048	.0017	.0065
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	.0500	.0500	.1000	.0050	.0050		.0050
Range	50.00%	50.00%	50.00%	50.00%	50.00%		50.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0464	.0035	.0118	.0090	.0226	.0469	.0170
Stddev	.0082	.0006	.0018	.0033	.0008	.0005	.0031
%RSD	17.73	16.72	14.97	37.31	3.398	.9912	18.32
#1	.0406	.0031	.0105	.0066	.0231	.0472	.0148
#2	.0523	.0040	.0130	.0113	.0220	.0465	.0192
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0050	.0100	.0100	.0200	.0500	.0200
Range	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.0103	.0213	1.989	.0745	.0084	.1174
Stddev	.0001	.0000	.0014	.004	.0223	.0014	.0013
%RSD	1.815	.0327	6.761	.2036	30.00	16.55	1.077
#1	.0052	.0103	.0203	1.986	.0587	.0094	.1183
#2	.0050	.0103	.0223	1.992	.0903	.0074	.1165
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0100	.0200	2.000	.1000	.0100	.1000
Range	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	.0102	.0103	-.0089	.0014	.0004	-.0022
Stddev	.0073	.0048	.0006	.0021	.0007	.0031	.0262
%RSD	302.6	47.04	6.006	23.02	50.56	743.2	1181.
#1	.0027	.0068	.0107	-.0104	.0019	-.0018	.0163
#2	-.0076	.0136	.0098	-.0075	.0009	.0026	-.0207
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.0100	.0100				
Range		50.00%	50.00%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	.0104
Stddev	.0002	.0010
%RSD	66.12	9.779
#1	.0005	.0111
#2	.0002	.0097
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: ICSA Operator: WM
Comment: KA0322904 ICP2-3-F
Run Time: 11/25/03 11:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	479.6	.0486	-.0892	-.0025	.0001	-.1721	.0019
Stddev	1.0	.0162	.0136	.0005	.0000	.0009	.0001
%RSD	.2034	33.35	15.30	18.12	58.16	.5274	7.328
#1	478.9	.0372	-.0795	-.0022	.0001	-.1727	.0018
#2	480.2	.0601	-.0988	-.0028	.0000	-.1714	.0020
Check ?	QC Pass	None	None	None	None	None	None
Value	500.0						
Range	20.00%						

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	486.0	-.0018	.0012	-.0006	174.5	-.0018	494.4
Stddev	1.0	.0005	.0007	.0007	.0	.0149	3.3
%RSD	.2052	26.95	59.57	109.7	.0013	825.1	.6651
#1	485.3	-.0015	.0007	-.0001	174.5	-.0124	492.1
#2	486.7	-.0022	.0017	-.0011	174.5	.0087	496.8
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	500.0				200.0		500.0
Range	20.00%				20.00%		20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	-.0081	.0004	.0102	-.0082	-.0016	.0302
Stddev	.0001	.0012	.0011	.0058	.0179	.0045	.0002
%RSD	1.560	14.42	259.4	56.50	217.9	272.6	.5972
#1	.0089	-.0073	.0012	.0143	.0044	-.0048	.0300
#2	.0087	-.0089	-.0003	.0061	-.0208	.0015	.0303
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0199	-.0020	.0141	-.0095	-.0019	.0147	-.1082
Stddev	.0073	.0003	.0003	.0094	.0024	.0016	.0063
%RSD	36.62	17.30	1.840	98.73	126.1	11.10	5.824
#1	-.0148	-.0022	.0143	-.0161	-.0002	.0135	-.1126
#2	-.0251	-.0017	.0139	-.0029	-.0037	.0159	-.1037
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0050	.0090
Stddev	.0010	.0043
%RSD	20.17	48.04
#1	.0057	.0121
#2	.0043	.0060
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: ICSAB Operator: WM
Comment: KA0322904 ICP2-10-E
Run Time: 11/25/03 11:58 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	490.4	1.024	-.0848	.4134	.4611	-.1741	.8601
Stddev	5.9	.025	.0095	.0045	.0005	.0040	.0094
%RSD	1.201	2.479	11.23	1.089	.1184	2.301	1.092
#1	486.2	1.006	-.0781	.4102	.4607	-.1769	.8534
#2	494.6	1.042	-.0916	.4166	.4615	-.1713	.8667
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	None	QC Pass
Value	500.0	1.000		.5000	.5000		1.000
Range	20.00%	20.00%		20.00%	20.00%		20.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	500.6	.4391	.4242	.4594	181.1	.8431	514.5
Stddev	1.1	.0039	.0028	.0008	1.0	.0035	11.8
%RSD	.2196	.8779	.6488	.1797	.5712	.4093	2.287
#1	499.8	.4364	.4223	.4600	180.4	.8406	506.2
#2	501.4	.4419	.4262	.4588	181.9	.8455	522.8
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	.5000	.5000	.5000	200.0	1.000	500.0
Range	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4472	-.0055	.8345	-.0138	.0006	.9531	.0045
Stddev	.0025	.0026	.0099	.0002	.0420	.0007	.0056
%RSD	.5689	47.12	1.190	1.201	7270.	.0784	122.7
#1	.4454	-.0073	.8275	-.0137	-.0291	.9525	.0006
#2	.4490	-.0036	.8415	-.0139	.0303	.9536	.0085
Check ?	QC Pass	None	QC Pass	None	None	QC Pass	None
Value	.5000		1.000			1.000	
Range	20.00%		20.00%			20.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0358	.4543	.8521	.0179	-.0070	.0159	-.1156
Stddev	.0034	.0010	.0097	.0335	.0004	.0033	.0136
%RSD	9.497	.2299	1.141	187.0	6.328	20.54	11.75
#1	-.0382	.4550	.8452	-.0058	-.0073	.0183	-.1252
#2	-.0334	.4536	.8590	.0416	-.0067	.0136	-.1060
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.5000	1.000				
Range		20.00%	20.00%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0051	.0088
Stddev	.0002	.0021
%RSD	4.697	23.72
#1	.0053	.0103
#2	.0050	.0073
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: PBW Operator: WM
Comment: KA0322904 K8433 POREWATER
Run Time: 11/25/03 12:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0251	-.0125	-.0116	-.0002	-.0001	-.0008	.0002
#1	.0402	-.0057	-.0159	-.0002	-.0001	-.0012	.0004
#2	.0101	-.0192	-.0074	-.0002	-.0001	-.0004	.0001

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0141	-.0009	.0012	-.0005	.0061	.0007	.0126
#1	.0105	-.0024	.0010	.0001	.0042	-.0042	.0104
#2	.0177	.0006	.0015	-.0011	.0081	.0056	.0148

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0012	-.0004	-.0003	.0057	-.0017	.0059
#1	.0004	-.0012	-.0011	-.0219	.0082	-.0037	.0084
#2	.0000	-.0013	.0003	.0213	.0032	.0002	.0035

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0005	.0010	-.0147	-.0017	.0020	.0081
#1	.0000	-.0002	.0012	-.0139	-.0015	.0007	.0059
#2	-.0007	.0012	.0007	-.0156	-.0018	.0033	.0104

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	.0034
#1	-.0001	.0012
#2	.0002	.0056

Method: GALILEO Sample Name: LCSW Operator: WM
Comment: KA0322904 K8433 POREWATER
Run Time: 11/25/03 12:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.032	.0098	-.0246	5.210	.1203	-.0022	.0010
#1	5.034	.0113	-.0252	5.134	.1199	-.0017	.0005
#2	5.029	.0083	-.0241	5.286	.1208	-.0028	.0016

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.52	.5137	1.263	.6334	2.556	.0033	12.85
#1	12.44	.5100	1.261	.6320	2.551	.0071	12.83
#2	12.60	.5175	1.265	.6349	2.562	-.0005	12.86

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.281	-.0022	1.269	12.69	-.0099	.6372	12.72
#1	1.282	-.0022	1.264	12.66	.0015	.6377	12.68
#2	1.279	-.0023	1.275	12.72	-.0212	.6366	12.75

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	1.307	1.266	.0618	-.0003	.0036	-.0024
#1	.0048	1.300	1.260	.0681	-.0012	.0029	-.0039
#2	-.0027	1.315	1.272	.0554	.0006	.0042	-.0009

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0002	.0043
#1	-.0004	.0096
#2	-.0001	-.0009

LCSW = 0.05 mls of QCP-CICV-1
MET 1-25-J diluted to 10 mls

11/25/03

Method: GALILEO Sample Name: K8433-10 Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:06 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0237	.0019	-.0187	.0107	.0000	.0039	-.0003
#1	.0359	.0058	-.0131	.0109	.0000	.0036	-.0002
#2	.0115	-.0019	-.0244	.0105	.0001	.0041	-.0003

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.61	-.0022	-.0001	.0017	.0044	-.0031	1.320
#1	11.53	-.0008	.0000	.0028	.0037	.0007	1.312
#2	11.69	-.0036	-.0001	.0005	.0050	-.0069	1.328

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1008	-.0013	.0015	.3451	.0000	.0010	3.543
#1	.1001	.0000	.0012	.3291	.0032	.0011	3.534
#2	.1015	-.0026	.0019	.3612	-.0031	.0009	3.552

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	.0015	.0028	-.0011	.3641	.0024	-.0191
#1	.0031	.0002	.0029	-.0064	.3615	-.0001	-.0265
#2	.0048	.0027	.0028	.0041	.3667	.0049	-.0117

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	.0404
#1	.0000	.0424
#2	.0008	.0384

Method: GALILEO Sample Name: K8433-1DD Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0093	-.0029	-.0173	.0099	-.0001	.0043	.0004
#1	-.0187	-.0029	-.0216	.0099	.0000	.0043	.0005
#2	.0000	-.0030	-.0131	.0099	-.0001	.0044	.0004

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.16	.0007	.0008	.0016	.0023	-.0045	1.247
#1	11.00	.0022	.0012	.0019	.0018	.0021	1.229
#2	11.32	-.0008	.0004	.0013	.0027	-.0111	1.265

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0958	-.0023	-.0008	.3271	.0038	.0007	3.394
#1	.0952	-.0010	-.0015	.3187	.0195	.0028	3.369
#2	.0964	-.0036	-.0001	.3355	-.0120	-.0015	3.419

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0016	.0028	-.0066	.3531	-.0006	-.0124
#1	.0055	-.0046	.0025	-.0012	.3476	-.0001	-.0250
#2	.0045	.0015	.0031	-.0121	.3586	-.0011	.0002

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	.0374
#1	.0003	.0387
#2	.0005	.0360

Method: GALILEO Sample Name: K8433-11 Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:14 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	-.0129	-.0125	.0089	.0000	.0038	.0008
#1	.0029	-.0201	-.0170	.0086	-.0001	.0032	.0003
#2	.0129	-.0058	-.0079	.0093	.0000	.0044	.0013

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.64	-.0003	.0009	.0021	.0039	-.0118	1.219
#1	10.53	-.0002	.0011	-.0005	.0037	-.0153	1.220
#2	10.74	-.0004	.0007	.0046	.0041	-.0083	1.218

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1117	-.0007	.0015	.4829	-.0063	.0009	3.003
#1	.1112	-.0005	.0022	.4944	-.0069	-.0072	3.002
#2	.1121	-.0010	.0008	.4714	-.0057	.0089	3.004

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0005	.0007	.0118	.3531	.0002	-.0109
#1	.0007	-.0024	.0003	-.0040	.3524	.0008	-.0072
#2	.0024	.0035	.0010	.0277	.3539	-.0003	-.0146

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0007	.0388
#1	.0008	.0399
#2	.0006	.0378

Analysis Report

Method: GALILEO Sample Name: K8433-12 Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:17 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0023	-.0111	.0108	.0000	.0027	.0003
#1	.0029	.0085	.0006	.0103	-.0001	.0025	.0007
#2	.0057	-.0039	-.0227	.0112	.0001	.0029	-.0001

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.73	-.0012	.0008	.0007	.0190	.0024	1.248
#1	11.54	-.0004	.0013	.0007	.0183	.0021	1.245
#2	11.92	-.0019	.0004	.0007	.0198	.0028	1.252

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3127	-.0024	.0004	.2754	.0000	-.0039	2.590
#1	.3099	-.0031	.0005	.2620	-.0120	-.0083	2.583
#2	.3155	-.0017	.0002	.2887	.0120	.0004	2.597

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0012	.0008	.0003	.3954	.0030	-.0017
#1	-.0010	.0032	.0003	-.0081	.3939	.0020	.0035
#2	.0048	-.0007	.0012	.0087	.3968	.0039	-.0069

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0006	.0421
#1	.0011	.0410
#2	.0002	.0431

Analysis Report

Method: GALILEO Sample Name: K8433-13 Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	-.0058	-.0125	.0248	.0000	.0079	.0002
#1	.0303	-.0029	.0000	.0246	.0000	.0083	.0000
#2	.0144	-.0087	-.0250	.0250	.0000	.0074	.0005

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.00	.0002	.0012	.0007	.0055	-.0073	1.434
#1	15.93	-.0004	.0010	.0046	.0058	-.0083	1.424
#2	16.08	.0007	.0015	-.0032	.0053	-.0062	1.444

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7183	-.0016	.0003	.6150	-.0095	.0013	2.575
#1	.7135	-.0020	.0006	.6292	-.0322	.0057	2.576
#2	.7231	-.0012	-.0001	.6008	.0133	-.0030	2.575

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	T11908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.0019	.0010	-.0109	.5774	.0008	-.0241
#1	.0138	.0014	.0004	-.0109	.5767	-.0001	-.0315
#2	-.0020	.0024	.0015	-.0109	.5781	.0018	-.0167

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0010	.0688
#1	.0007	.0711
#2	.0013	.0665

Analysis Report

Method: GALILEO Sample Name: CCVA2 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 12:22 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5038	.5078	.4869	.4766	.5030	.4998	.4994
Stddev	.0305	.0036	.0141	.0028	.0001	.0021	.0032
%RSD	6.054	.7035	2.891	.5927	.0263	.4180	.6384
#1	.4823	.5053	.4769	.4746	.5031	.4983	.4972
#2	.5254	.5103	.4968	.4785	.5029	.5013	.5017
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4942	.5006	.5023	.5019	.5014	.5142	2.517
Stddev	.0041	.0006	.0014	.0006	.0017	.0118	.011
%RSD	.8380	.1216	.2698	.1269	.3397	2.297	.4544
#1	.4972	.5002	.5032	.5015	.5002	.5058	2.509
#2	.4913	.5010	.5013	.5024	.5026	.5225	2.525
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5020	.4984	.5044	5.038	.5056	.4974	.5125
Stddev	.0016	.0063	.0010	.036	.0259	.0112	.0037
%RSD	.3251	1.272	.1988	.7140	5.120	2.258	.7293
#1	.5031	.4940	.5037	5.013	.5239	.5053	.5098
#2	.5008	.5029	.5051	5.064	.4873	.4894	.5151
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5054	.5067	.4992	-.0127	.2516	.5042	.4862
Stddev	.0054	.0050	.0062	.0073	.0050	.0011	.0199
%RSD	1.063	.9965	1.243	58.05	1.976	.2152	4.093
#1	.5016	.5031	.4948	-.0075	.2481	.5049	.5003
#2	.5092	.5103	.5036	-.0179	.2551	.5034	.4722
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	.0083
Stddev	.0003	.0010
%RSD	80.75	12.46
#1	.0002	.0090
#2	.0006	.0076
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: CCVB2 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 12:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.029	.0110	-.0229	2.488	.0012	-.0172	.0033
Stddev	.001	.0007	.0173	.011	.0000	.0007	.0005
%RSD	.0147	6.288	75.46	.4497	1.092	3.817	14.00
#1	5.029	.0115	-.0351	2.480	.0012	-.0168	.0036
#2	5.030	.0105	-.0107	2.496	.0012	-.0177	.0030
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.33	.0024	.0019	.0027	25.06	-.0383	25.27
Stddev	.12	.0010	.0009	.0026	.08	.0079	.04
%RSD	.4831	40.18	47.95	99.03	.3147	20.51	.1749
#1	25.25	.0017	.0012	.0045	25.01	-.0439	25.24
#2	25.42	.0031	.0025	.0008	25.12	-.0328	25.30
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0019	.0023	10.29	.0215	.0042	10.19
Stddev	.0000	.0001	.0008	.04	.0045	.0023	.03
%RSD	1.420	6.154	32.68	.3545	20.78	54.40	.3385
#1	.0022	.0020	.0018	10.27	.0183	.0026	10.17
#2	.0022	.0018	.0029	10.32	.0246	.0059	10.22
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097	-.0011	.0029	2.565	.0139	.0049	-.0326
Stddev	.0029	.0009	.0002	.016	.0013	.0015	.0042
%RSD	30.24	76.85	5.789	.6322	9.417	30.16	12.85
#1	.0117	-.0017	.0031	2.554	.0130	.0039	-.0296
#2	.0076	-.0005	.0028	2.577	.0148	.0060	-.0356
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5103	2.519
Stddev	.0008	.024
%RSD	.1643	.9518
#1	.5108	2.536
#2	.5097	2.502
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Analysis Report

Method: GALILEO Sample Name: CCB2 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 12:26 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101	-.0177	-.0045	.0002	.0000	.0004	.0002
Stddev	.0264	.0048	.0032	.0004	.0000	.0002	.0002
%RSD	262.4	26.92	70.74	245.4	479.9	46.10	99.92
#1	.0287	-.0143	-.0023	.0005	.0000	.0003	.0003
#2	-.0086	-.0211	-.0068	-.0001	.0000	.0006	.0000
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	L -.0998	.0004	.0007	.0009	.0011	.0024
Stddev	.0065	.0166	.0008	.0000	.0050	.0014	.0035
%RSD	112.2	16.68	204.2	3.105	563.9	135.9	148.4
#1	.0012	-.1115	-.0002	.0007	.0044	.0021	.0049
#2	.0105	-.0880	.0010	.0007	-.0026	.0000	-.0001
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0139	-.0138	.0037	.0000	-.0003	.0010	-.0024
Stddev	.0020	.0350	.0062	.0000	.0009	.0005	.0089
%RSD	14.16	253.4	166.3	26.21	282.9	48.79	379.0
#1	-.0153	.0109	-.0007	.0000	.0003	.0006	-.0087
#2	-.0125	-.0386	.0081	.0000	-.0010	.0013	.0040
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0095	-.0010	-.0025	.0043	.0013	.0009	-.0115
Stddev	.0000	.0057	.0003	.0080	.0002	.0001	.0041
%RSD	.0494	580.9	11.58	186.4	13.38	11.97	35.48
#1	-.0095	-.0050	-.0027	-.0014	.0015	.0010	-.0086
#2	-.0095	.0030	-.0023	.0100	.0012	.0008	-.0144
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.0022	-.0096	.0005	.0059
Stddev	.0010	.0012	.0052	.0000	.0058
%RSD	37.97	53.64	54.47	.5158	98.91
#1	-.0018	.0014	-.0133	.0005	.0018
#2	-.0032	.0030	-.0059	.0005	.0100
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: GALILEO Sample Name: K8433-14 Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:29 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144	.0058	-.0122	.0139	.0000	.0054	.0002
#1	.0000	.0125	-.0051	.0136	.0000	.0056	.0002
#2	.0287	-.0010	-.0193	.0142	.0000	.0052	.0001

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.54	-.0013	.0011	.0025	.0032	.0028	1.398
#1	12.40	-.0008	.0014	.0029	.0035	-.0083	1.400
#2	12.67	-.0017	.0008	.0021	.0030	.0139	1.396

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	-.0001	.0007	.5428	-.0063	-.0018	3.003
#1	.0016	.0007	.0004	.5509	-.0221	-.0004	3.016
#2	.0015	-.0008	.0010	.5348	.0095	-.0033	2.989

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	.0011	.0009	-.0020	.3219	.0007	-.0193
#1	.0007	.0013	.0007	-.0110	.3216	.0003	-.0133
#2	-.0024	.0010	.0011	.0069	.3223	.0011	-.0252

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	.0527
#1	.0005	.0525
#2	.0001	.0530

Method: GALILEO Sample Name: K8433-15 Operator: WM
Comment: KA0322904 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0038	-.0150	.0072	.0000	.0054	.0008
#1	.0100	-.0048	-.0204	.0069	.0000	.0053	.0009
#2	-.0086	.0124	-.0096	.0075	-.0001	.0055	.0006

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.72	-.0019	.0001	.0001	.0119	-.0069	1.087
#1	10.54	-.0018	.0011	-.0019	.0114	.0021	1.084
#2	10.90	-.0019	-.0008	.0021	.0123	-.0160	1.090

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0162	-.0011	.0010	.3472	-.0063	-.0011	3.752
#1	.0164	.0003	.0001	.3346	-.0006	.0007	3.749
#2	.0160	-.0025	.0019	.3599	-.0120	-.0028	3.754

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	-.0001	.0015	-.0020	.3602	.0008	-.0170
#1	.0038	.0002	.0017	-.0040	.3568	.0007	-.0103
#2	.0124	-.0005	.0012	.0000	.3637	.0009	-.0237

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	.0470
#1	.0004	.0515
#2	.0003	.0424

Method: GALILEO Sample Name: K8433-14L Operator: WM
Comment: KA0322904 1/5 X 1/10 DILUTION POREWATER
Run Time: 11/25/03 12:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0029	-.0120	-.0270	.0029	-.0001	.0009	.0006
#1	.0029	-.0125	-.0176	.0029	-.0001	.0016	.0005
#2	-.0086	-.0115	-.0363	.0030	-.0001	.0001	.0007

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.648	-.0018	.0002	.0015	.0031	-.0118	.2619
#1	2.644	.0000	.0008	.0017	.0036	-.0132	.2580
#2	2.653	-.0035	-.0005	.0013	.0026	-.0104	.2658

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0014	.0009	.1136	-.0101	-.0035	.6259
#1	.0003	-.0020	-.0001	.1229	-.0006	-.0065	.6304
#2	.0002	-.0008	.0020	.1043	-.0196	-.0004	.6215

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	-.0012	.0002	.0000	.0637	.0008	-.0185
#1	.0034	-.0010	.0006	.0035	.0607	.0005	-.0311
#2	.0010	-.0015	-.0002	-.0034	.0668	.0012	-.0059

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0002	.0124
#1	.0003	.0179
#2	.0001	.0070

Method: GALILEO Sample Name: PBW Operator: WM
Comment: KA0322904 K8433 SEM
Run Time: 11/25/03 12:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0182	-.0001	-.0184	.0002	.0000	.0037	-.0002
#1	.0125	-.0039	-.0118	-.0001	-.0001	.0052	-.0005
#2	.0239	.0038	-.0249	.0005	.0000	.0022	.0000

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0290	.0001	.0008	.0121	.5331	-.0202	.0086
#1	.0302	.0010	.0013	.0107	.5318	-.0299	.0106
#2	.0278	-.0007	.0002	.0135	.5343	-.0104	.0066

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	-.0024	.0123	.0099	-.0076	.0005	.0286
#1	.0046	-.0020	.0126	-.0022	-.0069	.0011	.0312
#2	.0049	-.0028	.0120	.0220	-.0082	.0000	.0261

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.0016	.0019	-.0040	.0467	-.0010	-.0311
#1	.0059	-.0039	.0026	.0029	.0477	-.0022	-.0252
#2	.0079	.0007	.0013	-.0110	.0458	.0001	-.0370

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	.0094
#1	.0002	.0108
#2	-.0002	.0079

Method: GALILEO Sample Name: LCSW Operator: WM
Comment: KA0322904 K8433 SEM
Run Time: 11/25/03 12:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.186	2.576	2.890	5.396	.1280	-.0004	1.338
#1	5.027	2.483	2.798	5.200	.1267	-.0005	1.295
#2	5.345	2.670	2.983	5.591	.1292	-.0004	1.382

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.16	.5317	1.311	.6785	2.638	2.695	13.54
#1	13.02	.5163	1.271	.6711	2.570	2.617	13.40
#2	13.30	.5470	1.352	.6859	2.706	2.774	13.67

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.325	-.0016	1.323	13.28	2.785	.6724	13.31
#1	1.284	-.0018	1.283	13.17	2.717	.6654	13.27
#2	1.366	-.0013	1.363	13.38	2.853	.6795	13.35

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	1.371	1.316	.0419	.0009	.0027	2.851
#1	.0021	1.357	1.273	.0479	.0023	.0019	2.754
#2	.0041	1.384	1.360	.0358	-.0005	.0036	2.948

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0005	.0083
#1	.0001	.0084
#2	.0009	.0081

LCSW = 0.05 mls of QCP-CICV-1, MET1-25-J
" " " -2, " -25-K
" " " -3, " -25-O
"

diluted to 10 mls

11/25/03

Method: GALILEO Sample Name: K8433-01 Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 12:48 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	30.23	.0511	-.0758	.4622	.0060	-.0331	.0131
#1	30.26	.0362	-.0619	.4609	.0059	-.0341	.0130
#2	30.21	.0659	-.0896	.4635	.0061	-.0320	.0131

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.2347	.0971	.1389	110.1	.6322	287.3
#1	>2000.	.2347	.0964	.1428	109.9	.6225	287.2
#2	>2000.	.2348	.0979	.1350	110.4	.6419	287.4

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.41	.0002	.1182	2.090	.0336	.0013	2.089
#1	10.40	-.0005	.1179	2.085	.0184	-.0013	2.092
#2	10.42	.0008	.1185	2.094	.0487	.0039	2.085

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0238	.1800	1.209	4.022	34.65	.2780	-.0923
#1	-.0243	.1817	1.203	4.009	34.59	.2774	-.0752
#2	-.0232	.1783	1.215	4.035	34.71	.2787	-.1093

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0497	1.736
#1	.0492	1.733
#2	.0502	1.740

Method: GALILEO Sample Name: K8433-04 Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 12:54 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.29	.0559	-.0688	.8088	.0063	-.0477	.0160
#1	28.29	.0531	-.0581	.8060	.0062	-.0479	.0151
#2	28.29	.0588	-.0795	.8116	.0064	-.0475	.0168

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.1905	.0846	.1695	117.4	.8419	236.6
#1	>2000.	.1919	.0839	.1653	116.7	.8391	236.7
#2	>2000.	.1891	.0852	.1738	118.1	.8447	236.5

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.824	-.0002	.1160	1.943	.0247	.0009	1.792
#1	9.838	.0012	.1171	1.950	.0247	-.0002	1.792
#2	9.810	-.0017	.1150	1.936	.0247	.0020	1.792

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0306	.1697	1.369	3.372	34.05	.3103	-.0821
#1	.0192	.1698	1.362	3.384	34.05	.3113	-.0880
#2	.0419	.1695	1.376	3.360	34.04	.3094	-.0762

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0450	1.541
#1	.0453	1.540
#2	.0447	1.541

Method: GALILEO Sample Name: K8433-04S Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 12:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.62	2.513	2.623	5.324	.1098	-.0594	1.086
#1	32.59	2.492	2.594	5.317	.1099	-.0583	1.083
#2	32.64	2.533	2.652	5.331	.1098	-.0604	1.090

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.6316	1.136	.7628	117.6	3.017	244.9
#1	>2000.	.6301	1.135	.7587	117.5	2.999	245.3
#2	>2000.	.6332	1.137	.7669	117.8	3.036	244.4

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.85	-.0030	1.165	13.30	2.512	.6094	12.97
#1	10.84	.0013	1.164	13.32	2.478	.6152	13.04
#2	10.87	-.0073	1.166	13.28	2.547	.6035	12.89

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254	1.329	2.386	3.297	33.28	.3126	2.153
#1	.0247	1.328	2.380	3.296	33.34	.3127	2.172
#2	.0261	1.330	2.393	3.297	33.23	.3124	2.135

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0438	1.505
#1	.0441	1.504
#2	.0435	1.505

Spike = 0.05 mls of CICC-1 MET1-25-J
" -2 " 25-K
" -3 " -25-C
"
"
diluted to 10 mls w/ 9.85 mls .X
K8433-04
m
11/25/03

Method: GALILEO Sample Name: K8433-04D Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 13:11 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.10	.0338	-.0628	.4245	.0058	-.0372	.0236
#1	26.17	.0409	-.0543	.4234	.0058	-.0370	.0238
#2	26.02	.0266	-.0712	.4256	.0057	-.0373	.0234

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.1624	.0588	.1425	103.4	.4920	206.4
#1	>2000.	.1635	.0585	.1423	103.0	.4819	207.4
#2	>2000.	.1614	.0592	.1427	103.9	.5021	205.4

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.384	-.0010	.1056	1.830	.0361	-.0072	1.783
#1	5.374	-.0022	.1054	1.853	.0298	-.0041	1.784
#2	5.394	.0002	.1059	1.806	.0424	-.0102	1.782

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0176	.1683	1.359	4.359	31.15	.2604	-.0818
#1	-.0126	.1712	1.353	4.354	31.17	.2585	-.0788
#2	-.0226	.1654	1.364	4.363	31.12	.2623	-.0847

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0398	1.408
#1	.0403	1.412
#2	.0393	1.405

Method: GALILEO Sample Name: K8433-04L Operator: WM
Comment: KA0322904 1/5 DILUITION SEM
Run Time: 11/25/03 13:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.855	.0100	-.0319	.1734	.0014	-.0094	.0045
#1	5.856	.0129	-.0300	.1737	.0014	-.0098	.0047
#2	5.854	.0071	-.0339	.1730	.0014	-.0089	.0043

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	484.8	.0397	.0189	.0385	25.43	.1556	46.09
#1	485.4	.0406	.0200	.0378	25.34	.1511	46.04
#2	484.2	.0388	.0179	.0392	25.53	.1601	46.14

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.137	-.0004	.0235	.4282	-.0170	-.0016	.3925
#1	2.133	.0002	.0235	.4460	-.0246	.0033	.3917
#2	2.141	-.0010	.0235	.4105	-.0094	-.0065	.3932

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.0362	.3004	.7091	6.553	.0697	-.0477
#1	.0015	.0360	.3006	.7065	6.570	.0712	-.0514
#2	.0081	.0363	.3003	.7117	6.536	.0682	-.0440

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0099	.3432
#1	.0101	.3451
#2	.0097	.3412

Method: GALILEO Sample Name: CCVA3 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 13:21 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5154	.5122	.4988	.4800	.5092	.5034	.5057
Stddev	.0060	.0054	.0075	.0023	.0010	.0017	.0046
%RSD	1.162	1.059	1.507	.4760	.1951	.3375	.9071
#1	.5112	.5084	.4935	.4784	.5085	.5046	.5024
#2	.5196	.5160	.5041	.4816	.5099	.5022	.5089
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4979	.5026	.5081	.5044	.5096	.5302	2.511
Stddev	.0020	.0030	.0024	.0049	.0008	.0215	.001
%RSD	.4023	.5983	.4753	.9659	.1577	4.057	.0469
#1	.4993	.5005	.5064	.5079	.5090	.5150	2.510
#2	.4965	.5047	.5098	.5010	.5101	.5454	2.512
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5034	.5018	.5084	5.067	.5145	.5049	.5066
Stddev	.0014	.0055	.0025	.010	.0008	.0103	.0002
%RSD	.2741	1.099	.4823	.2040	.1510	2.041	.0399
#1	.5044	.4979	.5067	5.075	.5140	.4976	.5064
#2	.5025	.5057	.5101	5.060	.5151	.5122	.5067
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5112	.5091	.5032	-.0101	.2561	.5050	.4811
Stddev	.0023	.0033	.0063	.0029	.0020	.0033	.0211
%RSD	.4528	.6404	1.243	28.55	.7933	.6503	4.379
#1	.5128	.5068	.4988	-.0080	.2547	.5074	.4960
#2	.5095	.5114	.5077	-.0121	.2576	.5027	.4662
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	.0060
Stddev	.0005	.0006
%RSD	146.3	10.76
#1	.0007	.0064
#2	.0000	.0055
Check ?	None	None
Value		
Range		

Method: GALILEO Sample Name: CCVB3 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 13:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.058	.0163	-.0251	2.486	.0012	-.0151	.0028
Stddev	.038	.0001	.0084	.011	.0001	.0008	.0005
%RSD	.7427	.4134	33.51	.4378	6.964	5.053	16.82
#1	5.031	.0163	-.0192	2.478	.0013	-.0157	.0031
#2	5.084	.0162	-.0311	2.493	.0012	-.0146	.0024
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.15	.0022	.0000	.0031	25.41	-.0314	25.10
Stddev	.11	.0004	.0001	.0024	.09	.0069	.02
%RSD	.4398	18.02	5086.	77.05	.3620	21.87	.0708
#1	25.07	.0025	-.0001	.0014	25.34	-.0362	25.09
#2	25.23	.0020	.0001	.0047	25.47	-.0265	25.12
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0013	.0027	10.15	-.0038	-.0017	10.05
Stddev	.0002	.0026	.0007	.05	.0098	.0062	.06
%RSD	9.729	194.4	26.44	.4578	260.1	353.4	.5557
#1	.0021	.0031	.0032	10.12	.0032	.0026	10.01
#2	.0024	-.0005	.0022	10.18	-.0107	-.0061	10.09
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	.0003	.0030	2.546	.0158	.0083	-.0237
Stddev	.0105	.0019	.0004	.008	.0007	.0018	.0126
%RSD	224.2	549.0	13.61	.3058	4.424	21.49	53.02
#1	-.0027	.0017	.0027	2.541	.0153	.0070	-.0326
#2	.0121	-.0010	.0033	2.552	.0163	.0095	-.0148
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5062	2.558
Stddev	.0001	.011
%RSD	.0114	.4253
#1	.5062	2.566
#2	.5062	2.551
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: GALILEO Sample Name: CCB3 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 13:27 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0144	-.0145	.0002	.0000	-.0018	.0002
Stddev	.0193	.0148	.0149	.0004	.000	.0008	.0001
%RSD	2669.	103.2	102.6	219.3	916.7	43.66	29.40
#1	-.0129	-.0249	-.0040	.0005	-.0001	-.0012	.0003
#2	.0144	-.0039	-.0250	-.0001	.0000	-.0023	.0002
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0176	-.0002	.0009	.0013	.0011	.0164
Stddev	.0026	.0332	.0012	.0001	.0019	.0007	.0054
%RSD	181.4	188.3	748.2	11.14	152.7	67.12	32.76
#1	-.0032	-.0411	-.0010	.0008	-.0001	.0016	.0202
#2	.0004	.0058	.0007	.0010	.0027	.0006	.0126
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0080	L -.0263	.0037	-.0001	-.0015	.0003	.0002
Stddev	.0231	.0035	.0037	.0000	.0007	.0014	.0079
%RSD	289.0	13.34	99.82	17.35	47.16	396.6	3866.
#1	-.0243	-.0287	.0011	-.0001	-.0010	-.0006	.0058
#2	.0083	-.0238	.0064	-.0001	-.0020	.0013	-.0054
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.0009	-.0019	.0050	-.0007	.0003	.0035
Stddev	.0107	.0031	.0000	.0070	.0017	.0001	.0098
%RSD	154.5	353.3	1.817	141.1	238.2	36.28	282.6
#1	-.0006	.0013	-.0019	.0100	-.0019	.0004	.0104
#2	.0145	-.0031	-.0019	.0000	.0005	.0002	-.0034
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	.0013	-.0193	.0005	.0013
Stddev	.0024	.0028	.0084	.0002	.0089
%RSD	123.1	223.9	43.60	46.73	672.9
#1	-.0002	-.0007	-.0133	.0006	-.0050
#2	-.0036	.0033	-.0252	.0003	.0076
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: GALILEO Sample Name: K8433-02 Operator: WM
Comment: KA0322904 ~~1/5 DILUTION~~ SEM
Run Time: 11/25/03 13:47 Type: Unk 11/25/03 Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.09	.0441	-.0604	.6947	.0071	-.0336	.0134
#1	23.03	.0432	-.0547	.6926	.0070	-.0329	.0138
#2	23.16	.0450	-.0660	.6968	.0071	-.0344	.0130

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.2150	.0877	.1312	108.4	3.685	229.9
#1	>2000.	.2152	.0868	.1291	108.2	3.669	229.7
#2	>2000.	.2148	.0886	.1334	108.6	3.700	230.0

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.617	-.0011	.1211	1.796	.0184	-.0065	1.599
#1	8.584	-.0002	.1203	1.788	.0197	-.0122	1.600
#2	8.651	-.0020	.1219	1.804	.0171	-.0009	1.599

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0222	.2118	1.185	2.682	26.36	.2592	-.0959
#1	-.0257	.2112	1.181	2.668	26.33	.2573	-.1108
#2	-.0188	.2124	1.189	2.695	26.38	.2612	-.0810

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0459	1.810
#1	.0459	1.808
#2	.0459	1.811

Method: GALILEO Sample Name: K8433-03 Operator: WM
Comment: KA0322904 ~~1/5 DILUTION~~ SEM
Run Time: 11/25/03 13:50 Type: Unk 11/25/03 Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.45	.0440	-.0711	.9891	.0075	-.0061	.0130
#1	27.46	.0435	-.0698	.9866	.0076	-.0066	.0131
#2	27.45	.0445	-.0725	.9917	.0075	-.0056	.0128

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.2591	.0894	.1732	118.9	.9550	298.7
#1	>2000.	.2586	.0884	.1778	118.5	.9505	298.6
#2	>2000.	.2596	.0904	.1686	119.3	.9595	298.8

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.241	-.0018	.1325	1.972	.0134	.0006	2.026
#1	9.227	-.0026	.1336	1.977	.0159	.0000	2.029
#2	9.255	-.0010	.1314	1.966	.0108	.0011	2.023

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0289	.1946	7.977	3.837	32.23	.2964	-.0875
#1	-.0229	.1956	7.958	3.834	32.15	.2940	-.1023
#2	-.0349	.1935	7.996	3.839	32.31	.2988	-.0726

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0620	2.391
#1	.0622	2.382
#2	.0618	2.401

Method: GALILEO Sample Name: 8950-01 Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 13:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.241	.0099	-.0112	.1248	.0001	.1901	.0014
#1	1.231	.0128	-.0215	.1245	.0001	.1908	.0018
#2	1.251	.0070	-.0010	.1250	.0001	.1895	.0011

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	172.8	.0013	.0019	.0197	4.930	-.0191	54.84
#1	172.5	.0016	.0028	.0210	4.902	-.0094	54.79
#2	173.1	.0011	.0010	.0185	4.957	-.0288	54.90

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.946	.0123	.0129	22.12	.0114	-.0027	100.3
#1	1.939	.0134	.0125	22.10	.0108	-.0046	100.1
#2	1.954	.0113	.0133	22.14	.0120	-.0009	100.5

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	.0073	.0640	1.954	89.31	.0073	-.0302
#1	-.0027	.0075	.0647	1.943	89.09	.0072	-.0206
#2	-.0127	.0070	.0633	1.965	89.53	.0075	-.0399

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0942	.5973
#1	.0948	.5924
#2	.0937	.6022

Method: GALILEO Sample Name: K8433-05 Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 14:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.48	.0174	-.0611	.6412	.0072	-.0184	.0191
#1	31.49	.0174	-.0657	.6400	.0070	-.0159	.0190
#2	31.47	.0175	-.0565	.6424	.0073	-.0209	.0191

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.2070	.0812	.1998	127.5	.8586	253.9
#1	>2000.	.2070	.0817	.2048	126.9	.8256	253.0
#2	>2000.	.2071	.0808	.1948	128.1	.8916	254.8

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.609	.0010	.1196	2.435	.0399	.0064	1.922
#1	8.597	-.0013	.1192	2.425	.0373	.0081	1.918
#2	8.622	.0033	.1200	2.445	.0424	.0048	1.925

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0191	.1666	1.395	3.822	36.71	.2806	-.0900
#1	-.0218	.1654	1.389	3.815	36.83	.2837	-.1018
#2	-.0163	.1678	1.401	3.830	36.58	.2776	-.0781

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0535	1.922
#1	.0539	1.915
#2	.0532	1.929

Method: GALILEO Sample Name: K8433-06 Operator: WM
Comment: KA0322904 SEM
Run Time: 11/25/03 14:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.26	.0481	-.0734	.7462	.0075	-.0373	.0190
#1	35.34	.0569	-.0837	.7438	.0076	-.0376	.0186
#2	35.19	.0394	-.0631	.7486	.0075	-.0371	.0193

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>2000.	.2059	.0812	.2677	117.3	.8977	193.3
#1	>2000.	.2060	.0812	.2684	117.1	.8951	194.5
#2	>2000.	.2057	.0813	.2670	117.5	.9002	192.2

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.758	.0003	.1284	2.569	.0197	.0022	1.946
#1	8.736	.0040	.1277	2.578	.0185	.0011	1.954
#2	8.779	-.0033	.1292	2.561	.0209	.0033	1.938

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	.1951	1.821	3.440	41.18	.2586	-.1017
#1	.0067	.1961	1.812	3.442	41.23	.2554	-.1003
#2	.0205	.1941	1.830	3.439	41.13	.2618	-.1030

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0485	1.641
#1	.0491	1.646
#2	.0480	1.636

Method: GALILEO Sample Name: CCVA4 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 14:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4968	.4962	.4989	.4789	.5074	.5002	.5063
Stddev	.0122	.0053	.0036	.0028	.0004	.0002	.0026
%RSD	2.457	1.074	.7190	.5761	.0700	.0387	.5232
#1	.5055	.4924	.4964	.4769	.5076	.5003	.5044
#2	.4882	.4999	.5015	.4808	.5071	.5000	.5082
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5036	.5005	.5071	.5012	.5052	.5063	2.496
Stddev	.0003	.0053	.0032	.0004	.0020	.0132	.011
%RSD	.0648	1.058	.6305	.0753	.4027	2.616	.4202
#1	.5034	.4968	.5049	.5015	.5037	.4970	2.489
#2	.5039	.5043	.5094	.5009	.5066	.5157	2.504
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5037	.5054	.5084	5.023	.4913	.5056	.5029
Stddev	.0021	.0002	.0030	.012	.0286	.0009	.0018
%RSD	.4210	.0405	.5906	.2388	5.826	.1742	.3591
#1	.5052	.5052	.5063	5.014	.5115	.5062	.5017
#2	.5022	.5055	.5105	5.031	.4710	.5050	.5042
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	T11908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5130	.5074	.5065	-.0089	.2578	.5030	.4975
Stddev	.0046	.0024	.0063	.0029	.0007	.0073	.0042
%RSD	.8993	.4660	1.239	32.21	.2800	1.456	.8493
#1	.5098	.5091	.5021	-.0069	.2583	.4978	.5005
#2	.5163	.5058	.5110	-.0109	.2573	.5081	.4945
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0006	.0029
Stddev	.0003	.0058
%RSD	44.66	200.1
#1	.0004	.0069
#2	.0007	-.0012
Check ?	None	None
Value		
Range		

Analysis Report

Method: GALILEO Sample Name: CCVB4 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 14:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.028	.0248	-.0161	2.472	.0011	-.0164	.0028
Stddev	.015	.0176	.0148	.023	.0001	.0001	.0007
%RSD	.3061	70.90	92.33	.9399	5.437	.8962	25.05
#1	5.039	.0124	-.0056	2.456	.0011	-.0165	.0023
#2	5.017	.0373	-.0266	2.489	.0012	-.0163	.0033
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.14	.0055	.0022	.0047	25.18	-.0296	25.23
Stddev	.05	.0031	.0011	.0014	.16	.0005	.02
%RSD	.1959	57.22	53.10	29.42	.6431	1.657	.0915
#1	25.10	.0077	.0014	.0057	25.06	-.0293	25.24
#2	25.17	.0033	.0030	.0037	25.29	-.0300	25.21
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	-.0004	.0022	10.22	-.0031	-.0020	10.10
Stddev	.0000	.0018	.0007	.07	.0054	.0018	.03
%RSD	.0002	424.4	31.01	.6365	170.3	94.12	.2729
#1	.0022	.0008	.0017	10.18	.0006	-.0033	10.12
#2	.0022	-.0017	.0026	10.27	-.0069	-.0007	10.08
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0033	-.0005	.0037	2.559	.0170	.0059	-.0385
Stddev	.0032	.0034	.0002	.002	.0027	.0019	.0021
%RSD	97.22	676.5	6.181	.0797	15.93	32.96	5.438
#1	-.0055	.0019	.0036	2.561	.0151	.0072	-.0371
#2	-.0010	-.0029	.0039	2.558	.0189	.0045	-.0400
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5093	2.536
Stddev	.0003	.009
%RSD	.0601	.3369
#1	.5095	2.542
#2	.5090	2.530
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: GALILEO Sample Name: CCB4 Operator: WM
Comment: KA0322904
Run Time: 11/25/03 14:13 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	-.0191	-.0080	.0001	-.0001	-.0015	.0006
Stddev	.0233	.0121	.0056	.0001	.0000	.0001	.0003
%RSD	652.2	63.47	70.72	79.49	.5926	7.838	56.60
#1	.0201	-.0277	-.0119	.0001	-.0001	-.0014	.0003
#2	-.0129	-.0105	-.0040	.0000	-.0001	-.0016	.0008
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	-.0440	-.0008	.0000	.0034	.0008	-.0002
Stddev	.0037	.0539	.0003	.0003	.0003	.0000	.0067
%RSD	122.5	122.5	41.95	2282.	8.107	2.484	2751.
#1	.0004	-.0821	-.0011	-.0002	.0036	.0008	.0045
#2	.0056	-.0059	-.0006	.0002	.0032	.0008	-.0050
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0094	-.0099	-.0048	.0000	.0002	-.0006	.0104
Stddev	.0083	.0262	.0016	.000	.0013	.0002	.0138
%RSD	88.89	263.8	32.15	11.98	518.9	32.74	133.0
#1	-.0035	-.0284	-.0059	.0000	.0012	-.0005	.0202
#2	-.0153	.0086	-.0037	.0000	-.0007	-.0008	.0006
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0044	-.0027	-.0056	.0043	-.0011	.0006	.0049
Stddev	.0018	.0017	.0014	.0051	.0009	.0002	.0061
%RSD	40.26	62.24	24.59	119.0	78.11	27.01	125.3
#1	-.0032	-.0015	-.0046	.0007	-.0005	.0005	.0006
#2	-.0057	-.0039	-.0066	.0079	-.0017	.0007	.0092
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0035	.0008	-.0037	.0006	.0044
Stddev	.0003	.0013	.0115	.0008	.0124
%RSD	10.10	159.7	311.4	145.1	282.3
#1	-.0037	-.0001	-.0118	.0012	.0132
#2	-.0032	.0018	.0044	.0000	-.0044
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Porewater - Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	10/27/03

Hardness as CaCO3

Prep Method:	NA	Units:	mg/L (ppm)
Analysis Method:	6010B/SM 2340B	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SED-1-Porewater	K2308433-010	4.0	10	NA	11/25/03	344	
SED-2-Porewater	K2308433-011	4.0	10	NA	11/25/03	316	
SED-3-Porewater	K2308433-012	4.0	10	NA	11/25/03	344	
SED-4-Porewater	K2308433-013	4.0	10	NA	11/25/03	459	
SED-4-Dup-Porewater	K2308433-014	4.0	10	NA	11/25/03	371	
SED-5-Porewater	K2308433-015	4.0	10	NA	11/25/03	312	
Method Blank	K2308433-MB	0.4	1	NA	11/25/03	ND	

Approved By: _____ Date: 11/26/03

1A/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Water

Service Request: K2308433
Date Collected: NA
Date Received: 10/27/03
Date Extracted: NA
Date Analyzed: 11/25/03

Duplicate Summary
Metals

Sample Name: SED-1-Porewater
Lab Code: K2308433-010D
Test Notes:

Units: mg/L (ppm)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Hardness as CaCO3	NA	6010B/SM 2340B	4.0	344	330	337	4	

Approved By: _____ Date: 11/26/03

DUP/052595

DISSOLVED METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Sample No.	Lab Sample ID.
SED-1-Porewater	K2308433-010 DISS
SED-2-Porewater	K2308433-011 DISS
SED-2-PorewaterD	K2308433-011D DISS
SED-2-PorewaterS	K2308433-011S DISS
SED-3-Porewater	K2308433-012 DISS
SED-4-Porewater	K2308433-013 DISS
SED-4-Dup-Porewater	K2308433-014 DISS
SED-5-Porewater	K2308433-015 DISS
SED-5-PorewaterD	K2308433-015D DISS
SED-5-PorewaterS	K2308433-015S DISS
Method Blank	K2308433-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Water Package

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Date: 11/26/03

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308433
Date Collected: NA
Date Received: 10/27/03
Units: µG/L
Basis: NA

Sample Name: SED-1-Porewater
Lab Code: K2308433-010 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.22		
Arsenic	200.8	0.5	1	11/7/03	11/24/03	1.6		
Barium	200.8	0.05	1	11/7/03	11/24/03	123		
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.18		
Chromium	200.8	0.2	1	11/7/03	11/24/03	0.5		
Lead	200.8	0.02	1	11/7/03	11/24/03	0.16		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	2.7		
Selenium	7740	2.0	1	11/7/03	11/25/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02		
Zinc	200.8	0.5	1	11/25/03	11/25/03	22.8		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	ARCADIS	Service Request:	K2308433
Project No.:	IN000072.0021	Date Collected:	NA
Project Name:	Bloomington, IN	Date Received:	10/27/03
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-2-Porewater Lab Code: K2308433-011 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.11		
Arsenic	200.8	0.5	1	11/7/03	11/24/03	1.9		
Barium	200.8	0.05	1	11/7/03	11/24/03	107		
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.09		
Chromium	200.8	0.2	1	11/7/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/7/03	11/24/03	0.08		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	3.1		
Selenium	7740	2.0	1	11/7/03	11/25/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/25/03	11/25/03	4.0		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	ARCADIS	Service Request:	K2308433
Project No.:	IN000072.0021	Date Collected:	NA
Project Name:	Bloomington, IN	Date Received:	10/27/03
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-3-Porewater Lab Code: K2308433-012 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.17		
Arsenic	200.8	0.5	1	11/7/03	11/24/03	2.7		
Barium	200.8	0.05	1	11/7/03	11/24/03	134		
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.14		
Chromium	200.8	0.2	1	11/7/03	11/24/03	0.4		
Lead	200.8	0.02	1	11/7/03	11/24/03	0.56		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	4.9		
Selenium	7740	2.0	1	11/7/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/25/03	11/25/03	4.1		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	ARCADIS	Service Request:	K2308433
Project No.:	IN000072.0021	Date Collected:	NA
Project Name:	Bloomington, IN	Date Received:	10/27/03
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-4-Porewater Lab Code: K2308433-013 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.09		
Arsenic	200.8	0.5	1	11/7/03	11/24/03	2.8		
Barium	200.8	0.05	1	11/7/03	11/24/03	299		
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.10		
Chromium	200.8	0.2	1	11/7/03	11/24/03	0.6		
Lead	200.8	0.02	1	11/7/03	11/24/03	0.04		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	5.1		
Selenium	7740	2.0	1	11/7/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/25/03	11/25/03	4.0		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	ARCADIS	Service Request:	K2308433
Project No.:	IN000072.0021	Date Collected:	NA
Project Name:	Bloomington, IN	Date Received:	10/27/03
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-4-Dup-Porewater Lab Code: K2308433-014 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.48		
Arsenic	200.8	0.5	1	11/7/03	11/24/03	1.7		
Barium	200.8	0.05	1	11/7/03	11/24/03	160		
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.11		
Chromium	200.8	0.2	1	11/7/03	11/24/03	1.7		
Lead	200.8	0.02	1	11/7/03	11/24/03	0.26		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	3.8		
Selenium	7740	2.0	1	11/7/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/25/03	11/25/03	5.5		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	ARCADIS	Service Request:	K2308433
Project No.:	IN000072.0021	Date Collected:	NA
Project Name:	Bloomington, IN	Date Received:	10/27/03
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-5-Porewater Lab Code: K2308433-015 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.32		
Arsenic	200.8	0.5	1	11/7/03	11/24/03	1.6		
Barium	200.8	0.05	1	11/7/03	11/24/03	87.1		
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.20		
Chromium	200.8	0.2	1	11/7/03	11/24/03	0.7		
Lead	200.8	0.02	1	11/7/03	11/24/03	0.71		
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	2.4		
Selenium	7740	2.0	1	11/7/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02		
Zinc	200.8	0.5	1	11/25/03	11/25/03	13.4		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308433
Date Collected: NA
Date Received: NA
Units: µG/L
Basis: NA

Sample Name: Method Blank
Lab Code: K2308433-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	11/7/03	11/24/03	0.05	U	
Arsenic	200.8	0.5	1	11/7/03	11/24/03	0.5	U	
Barium	200.8	0.05	1	11/7/03	11/24/03	0.05	U	
Beryllium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Cadmium	200.8	0.04	1	11/7/03	11/24/03	0.04	U	
Chromium	200.8	0.2	1	11/7/03	11/24/03	0.2	U	
Lead	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Mercury	7470A	0.2	1	11/13/03	11/14/03	0.2	U	
Nickel	200.8	0.2	1	11/7/03	11/24/03	0.2	U	
Selenium	7740	2.0	1	11/7/03	11/24/03	2.0	U	
Thallium	200.8	0.02	1	11/7/03	11/24/03	0.02	U	
Zinc	200.8	0.5	1	11/25/03	11/25/03	0.5	U	

% Solids: 0.0

Comments:

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	50.0	51.9	104	25.0	25.5	102	24.7	99	200.8
Arsenic	50.0	51.9	104	25.0	24.9	100	25.0	100	200.8
Barium	200	204	102	25.0	24.6	98	26.0	104	200.8
Beryllium	5.0	5.16	103	25.0	24.9	100	25.0	100	200.8
Cadmium	25.0	25.9	104	25.0	25.4	102	25.3	101	200.8
Chromium	20.0	20.2	101	25.0	25.0	100	25.0	100	200.8
Lead	50.0	49.2	98	25.0	24.8	99	26.3	105	200.8
Mercury	5.0	4.96	99	5.0	5.10	102	5.17	103	7470A
Nickel	50.0	50.5	101	25.0	24.8	99	25.0	100	200.8
Selenium	25.0	25.8	103	20.0	19.9	100	19.2	96	7740
Thallium	50.0	51.3	103	25.0	25.0	100	26.5	106	200.8
Zinc	25.0	25.5	102	25.0	25.0	100	25.0	100	200.8

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.1	100	25.3	101	200.8
Arsenic				25.0	25.4	102	25.4	102	200.8
Barium				25.0	26.0	104	26.7	107	200.8
Beryllium				25.0	25.1	100	25.5	102	200.8
Cadmium				25.0	25.3	101	25.4	102	200.8
Chromium				25.0	25.0	100	24.8	99	200.8
Lead				25.0	26.7	107	26.2	105	200.8
Mercury				5.0	5.07	101	5.21	104	7470A
Nickel				25.0	25.3	101	25.5	102	200.8
Selenium				20.0	19.2	96	19.4	97	7740
Thallium				25.0	26.8	107	26.7	107	200.8
Zinc				25.0	25.2	101	25.0	100	200.8

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.6	102			200.8
Arsenic				25.0	25.6	102			200.8
Barium				25.0	26.7	107			200.8
Beryllium				25.0	25.8	103			200.8
Cadmium				25.0	25.3	101			200.8
Chromium				25.0	24.9	100			200.8
Lead				25.0	27.0	108			200.8
Mercury				5.0	5.28	106	5.24	105	7470A
Nickel				25.0	25.8	103			200.8
Selenium				20.0	19.7	99			7740
Thallium				25.0	27.1	108			200.8

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.42	108			7470A

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Selenium	25.0	25.7	102	20.0	20.6	103	20.8	104	7740

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	Method
Selenium				20.0	21.4	107	21.7	109	7740

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Selenium				20.0	19.9	99	19.7	99	7740

DISSOLVED METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: CAS Mixed Solutions

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Selenium	25.0	24.7	99						7740

DISSOLVED METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05			0.0687	137
Arsenic				0.50			0.515	103
Barium				0.05			0.0555	111
Beryllium				0.02			0.0221	111
Cadmium				0.05			0.0501	100
Chromium				0.20			0.200	100
Lead				0.02			0.0150	75
Mercury	0.20	0.2	105					
Nickel				0.20	0.16	78		
Selenium	5.0	5.1	102					
Thallium				0.02			0.0179	89
Zinc				0.50	0.58	117		

DISSOLVED METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Selenium	5.0	5.5	110					

DISSOLVED METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Selenium	5.0	4.8	97					

DISSOLVED METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Antimony	0.05	U	0.05	U	0.05	U	0.05	U			200.8
Arsenic	0.5	U	0.5	U	0.5	U	0.5	U			200.8
Barium	0.05	U	0.05	U	0.05	U	0.05	U			200.8
Beryllium	0.02	U	0.02	U	0.02	U	0.02	U			200.8
Cadmium	0.04	U	0.04	U	0.04	U	0.04	U			200.8
Chromium	0.2	U	0.2	U	0.2	U	0.2	U			200.8
Lead	0.02	U	0.02	U	0.02	U	0.02	U			200.8
Mercury	0.2	U	0.2	U	0.2	U	0.2	U			7470A
Nickel	0.2	U	0.2	U	0.2	U	0.2	U			200.8
Selenium	2.0	U	2.0	U	2.0	U	2.0	U			7740
Thallium	0.02	U	0.02	U	0.02	U	0.02	U			200.8
Zinc	0.5	U	0.5	U	0.5	U	0.5	U			200.8

DISSOLVED METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Antimony			0.05	U	0.05	U					200.8
Arsenic			0.5	U	0.5	U					200.8
Barium			0.05	U	0.05	U					200.8
Beryllium			0.02	U	0.02	U					200.8
Cadmium			0.04	U	0.04	U					200.8
Chromium			0.2	U	0.2	U					200.8
Lead			0.02	U	0.02	U					200.8
Mercury			0.2	U	0.2	U	0.2	U			7470A
Nickel			0.2	U	0.2	U					200.8
Selenium			2.0	U	2.0	U					7740
Thallium			0.02	U	0.02	U					200.8
Zinc			0.5	U							200.8

DISSOLVED METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Mercury			0.2	U							7470A

DISSOLVED METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Selenium	2.0	U	2.0	U	2.0	U	2.0	U			7740

DISSOLVED METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Selenium			2.0	U							7740

DISSOLVED METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Selenium	2.0	U	2.0	U	2.0	U							7740

DISSOLVED METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308433
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SED-2-PorewaterS
Lab Code: K2308433-011S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	79 - 115	1.0		0.2	U	1.0	103		7470A

An empty field in the Control Limit column indicates the control limit is not applicable.

DISSOLVED METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308433
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SED-5-PorewaterS
Lab Code: K2308433-015S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	21.3		0.32		20.0	105		200.8
Arsenic	70 - 130	27.4		1.6		20.0	129		200.8
Barium		109		87.1		20.0	110		200.8
Beryllium	70 - 130	17.4		0.02	U	20.0	87		200.8
Cadmium	70 - 130	19.9		0.20		20.0	98		200.8
Chromium	70 - 130	22.1		0.7		20.0	107		200.8
Lead	70 - 130	16.5		0.71		20.0	79		200.8
Nickel	70 - 130	22.4		2.4		20.0	100		200.8
Selenium	40 - 119	13.7		2.0	U	20.0	69		7740
Thallium	70 - 130	17.5		0.02		20.0	87		200.8
Zinc	70 - 130	30.7		13.4		20.0	87		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

DISSOLVED METALS

- 6 -

DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308433
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SED-2-PorewaterD
Lab Code: K2308433-011D DISS

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.2	U	0.2	U			7470A

An empty field in the Control Limit column indicates the control limit is not applicable.

DISSOLVED METALS

- 6 -

DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: WATER

Service Request: K2308433
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: SED-5-PorewaterD
Lab Code: K2308433-015D DISS

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.32		0.31		1		200.8
Arsenic		1.6		1.6		2		200.8
Barium	20	87.1		87.1		0		200.8
Beryllium		0.02	U	0.02	U			200.8
Cadmium	20	0.20		0.20		0		200.8
Chromium		0.7		0.7		4		200.8
Lead	20	0.71		0.68		4		200.8
Nickel	20	2.4		2.5		4		200.8
Selenium		2.0	U	2.0	U			7740
Thallium		0.02		0.02		9		200.8
Zinc	20	13.4		13.4		0		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

DISSOLVED METALS

- 7 -

LABORATORY CONTROL SAMPLE

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Antimony	20.0	19.4	97					
Arsenic	20.0	20.8	104					
Barium	20.0	20.6	103					
Beryllium	20.0	19.5	98					
Cadmium	20.0	20.3	101					
Chromium	20.0	19.4	97					
Lead	20.0	20.8	104					
Mercury	5.00	5.14	103					
Nickel	20.0	20.1	101					
Selenium	20.0	15.8	79					
Thallium	20.0	21.4	107					
Zinc	20.0	20.3	102					

DISSOLVED METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Mercury	253.70	BD	0.2		7470A

Comments _____

DISSOLVED METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #: AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Zinc	66		0.5		200.8

Comments _____

DISSOLVED METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: PQ-S

GFAA ID #: AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Antimony	123		0.05		200.8
Arsenic	75		0.5		200.8
Barium	137		0.05		200.8
Beryllium	9		0.02		200.8
Cadmium	114		0.04		200.8
Chromium	52		0.2		200.8
Lead	208		0.02		200.8
Nickel	62		0.2		200.8
Thallium	205		0.02		200.8

Comments _____

DISSOLVED METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: Varian-6 (GFAA) AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Selenium	196.00	BZ	2.0		7740

Comments _____

DISSOLVED METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: Excell ICPMS

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Zinc	15.00	1000.0	200.8

Comments:

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: PQ-S

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	800.0	200.8
Arsenic	15.00	600.0	200.8
Barium	15.00	700.0	200.8
Beryllium	15.00	500.0	200.8
Cadmium	15.00	1000.0	200.8
Chromium	15.00	300.0	200.8
Lead	15.00	1000.0	200.8
Nickel	15.00	700.0	200.8
Thallium	15.00	700.0	200.8
Zinc	15.00	600.0	200.8

Comments:

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Bloomington, IN

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
CALIBRATION ZER	11/13/03	METHOD	100	100
ICV	11/13/03	METHOD	100	100
LCSW	11/13/03	METHOD	20	20
K2308433-MB	11/13/03	METHOD	20	20
K2308433-010	11/13/03	METHOD	20	20
K2308433-011	11/13/03	METHOD	20	20
K2308433-011D	11/13/03	METHOD	20	20
K2308433-011S	11/13/03	METHOD	20	20
K2308433-012	11/13/03	METHOD	20	20
K2308433-014	11/13/03	METHOD	20	20
K2308433-013	11/13/03	METHOD	20	20
K2308433-015	11/13/03	METHOD	20	20
STANDARD #1	11/13/03	METHOD	100	100
STANDARD #2	11/13/03	METHOD	100	100
STANDARD #3	11/13/03	METHOD	100	100
STANDARD #4	11/13/03	METHOD	100	100
STANDARD #5	11/13/03	METHOD	100	100

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project: Bloomington, IN

Method: F

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/7/03	CLFAA	50	50
K2308433-MB	11/7/03	CLFAA	50	50
K2308433-010	11/7/03	CLFAA	25	25
K2308433-011	11/7/03	CLFAA	25	25
K2308433-012	11/7/03	CLFAA	50	50
K2308433-014	11/7/03	CLFAA	50	50
K2308433-013	11/7/03	CLFAA	50	50
K2308433-015	11/7/03	CLFAA	50	50
K2308433-015D	11/7/03	CLFAA	50	50
K2308433-015S	11/7/03	CLFAA	50	50

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Bloomington, IN

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/7/03	CLFAA	25	25
K2308433-MB	11/7/03	CLFAA	25	25
K2308433-010	11/7/03	CLFAA	25	25
K2308433-011	11/7/03	CLFAA	25	25
K2308433-012	11/7/03	CLFAA	25	25
K2308433-014	11/7/03	CLFAA	25	25
K2308433-013	11/7/03	CLFAA	25	25
K2308433-015	11/7/03	CLFAA	25	25
K2308433-015D	11/7/03	CLFAA	25	25
K2308433-015S	11/7/03	CLFAA	25	25
LCSW	11/25/03	CLFAA	25	25
K2308433-MB	11/25/03	CLFAA	25	25
K2308433-010	11/25/03	CLFAA	25	25
K2308433-011	11/25/03	CLFAA	25	25
K2308433-012	11/25/03	CLFAA	25	25
K2308433-014	11/25/03	CLFAA	25	25
K2308433-013	11/25/03	CLFAA	25	25
K2308433-015	11/25/03	CLFAA	10	10
K2308433-015D	11/25/03	CLFAA	25	25
K2308433-015S	11/25/03	CLFAA	25	25

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1

Method: CV

Start Date: 11/14/03

End Date: 11/14/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	09:31																X								
STANDARD #1	1.00	09:32																X								
STANDARD #2	1.00	09:34																X								
STANDARD #3	1.00	09:35																X								
STANDARD #4	1.00	09:37																X								
STANDARD #5	1.00	09:39																X								
ICV	1.00	09:40																X								
ICB	1.00	09:42																X								
CCV1	1.00	09:44																X								
CCB1	1.00	09:45																X								
CRA	1.00	09:47																X								
ZZZZZZ	1.00	09:48																								
ZZZZZZ	1.00	09:50																								
ZZZZZZ	1.00	09:52																								
ZZZZZZ	1.00	09:53																								
ZZZZZZ	1.00	09:55																								
ZZZZZZ	1.00	09:56																								
ZZZZZZ	1.00	09:58																								
ZZZZZZ	1.00	10:00																								
ZZZZZZ	1.00	10:01																								
CCV2	1.00	10:03																X								
CCB2	1.00	10:04																X								
ZZZZZZ	1.00	10:06																								
ZZZZZZ	1.00	10:08																								
ZZZZZZ	1.00	10:09																								
ZZZZZZ	1.00	10:11																								
ZZZZZZ	1.00	10:13																								
ZZZZZZ	1.00	10:14																								
ZZZZZZ	1.00	10:16																								
ZZZZZZ	1.00	10:17																								

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/14/03 End Date: 11/14/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	10:19																												
ZZZZZZ	1.00	10:21																												
CCV3	1.00	10:22																X												
CCB3	1.00	10:24																X												
ZZZZZZ	1.00	10:25																												
ZZZZZZ	1.00	10:27																												
ZZZZZZ	1.00	10:29																												
ZZZZZZ	1.00	10:30																												
ZZZZZZ	1.00	10:32																												
ZZZZZZ	1.00	10:34																												
ZZZZZZ	1.00	10:35																												
ZZZZZZ	1.00	10:37																												
ZZZZZZ	1.00	10:39																												
ZZZZZZ	1.00	10:40																												
CCV4	1.00	10:42																X												
CCB4	1.00	10:43																X												
ZZZZZZ	1.00	10:45																												
ZZZZZZ	1.00	10:47																												
ZZZZZZ	1.00	10:48																												
ZZZZZZ	1.00	10:50																												
ZZZZZZ	1.00	10:51																												
ZZZZZZ	1.00	10:53																												
K2308433-MB	1.00	10:55																X												
LCSW	1.00	10:56																X												
K2308433-010	1.00	10:58																X												
K2308433-011	1.00	11:00																X												
CCV5	1.00	11:01																X												
CCB5	1.00	11:03																X												
K2308433-011D	1.00	11:05																X												
K2308433-011S	1.00	11:06																X												

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/14/03 End Date: 11/14/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308433-012	1.00	11:08																X								
K2308433-013	1.00	11:09																X								
K2308433-014	1.00	11:11																X								
K2308433-015	1.00	11:13																X								
ZZZZZZ	1.00	11:14																								
ZZZZZZ	1.00	11:16																								
ZZZZZZ	1.00	11:18																								
ZZZZZZ	1.00	11:19																								
CCV6	1.00	11:21																X								
CCB6	1.00	11:23																X								
ZZZZZZ	1.00	11:24																								
ZZZZZZ	1.00	11:26																								
ZZZZZZ	1.00	11:27																								
ZZZZZZ	1.00	11:29																								
ZZZZZZ	1.00	11:31																								
ZZZZZZ	1.00	11:32																								
ZZZZZZ	1.00	11:34																								
ZZZZZZ	1.00	11:36																								
ZZZZZZ	1.00	11:37																								
ZZZZZZ	1.00	11:39																								
CCV7	1.00	11:41																X								
CCB7	1.00	11:42																X								
ZZZZZZ	1.00	11:44																								
ZZZZZZ	1.00	11:46																								

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: PQ-S

Method: MS

Start Date: 11/24/03

End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	11:27			X	X	X	X	X		X				X				X				X		X	
CALIBRATION STANDARD	1.00	11:30			X	X	X	X	X		X				X				X				X		X	
ICV	1.00	11:33			X	X	X	X	X		X				X				X				X			
CCV1	1.00	11:36			X	X	X	X	X		X				X				X				X			
ICB	1.00	11:44			X	X	X	X	X		X				X				X				X			
CCB1	1.00	11:46			X	X	X	X	X		X				X				X				X			
CRA	1.00	11:49			X	X	X	X	X		X				X				X				X			
ZZZZZZ	1.00	11:52																								
ZZZZZZ	1.00	11:55																								
ZZZZZZ	1.00	11:58																								
ZZZZZZ	1.00	12:01																								
ZZZZZZ	1.00	12:04																								
ZZZZZZ	1.00	12:07																								
ZZZZZZ	1.00	12:13																								
ZZZZZZ	1.00	12:16																								
ZZZZZZ	1.00	12:19																								
CCV2	1.00	12:22			X	X	X	X	X		X				X				X				X			
ZZZZZZ	1.00	12:25																								
CCB2	1.00	12:28			X	X	X	X	X		X				X				X				X			
ZZZZZZ	1.00	12:32																								
ZZZZZZ	1.00	12:35																								
ZZZZZZ	1.00	12:37																								
ZZZZZZ	1.00	12:40																								
ZZZZZZ	1.00	12:43																								
ZZZZZZ	1.00	12:46																								
ZZZZZZ	1.00	12:49																								
ZZZZZZ	1.00	12:52																								
CCV3	1.00	12:55			X	X	X	X	X		X				X				X				X			
CCB3	1.00	13:01			X	X	X	X	X		X				X				X				X			
ZZZZZZ	1.00	13:07																								

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: PQ-S Method: MS

Start Date: 11/24/03 End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	13:10																												
ZZZZZZ	1.00	13:13																												
ZZZZZZ	1.00	13:20																												
ZZZZZZ	1.00	13:23																												
ZZZZZZ	1.00	13:26																												
K2308433-MB	1.00	13:29			X	X	X	X	X		X				X				X					X					
LCSW	1.00	13:32			X	X	X	X	X		X				X				X					X					
ZZZZZZ	1.00	13:35																												
CCV4	1.00	13:38			X	X	X	X	X		X				X				X					X					
CCB4	1.00	13:45			X	X	X	X	X		X				X				X					X					
K2308433-015	1.00	13:49			X	X	X	X	X		X				X				X					X					
K2308433-015D	1.00	13:52			X	X	X	X	X		X				X				X					X					
K2308433-015S	1.00	13:55			X	X	X	X	X		X				X				X					X					
ZK2308433-MB	1.00	14:06																												
K2308433-010	1.00	14:09			X	X	X	X	X		X				X				X					X					
K2308433-011	1.00	14:12			X	X	X	X	X		X				X				X					X					
K2308433-012	1.00	14:16			X	X	X	X	X		X				X				X					X					
K2308433-013	1.00	14:19			X	X	X	X	X		X				X				X					X					
K2308433-014	1.00	14:23			X	X	X	X	X		X				X				X					X					
CCV5	1.00	14:26			X	X	X	X	X		X				X				X					X					
CCB5	1.00	14:34			X	X	X	X	X		X				X				X					X					

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 11/25/03

End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	13:59																							X	
25 PPB STD. MS4-24-B	1.00	14:00																							X	
ICV	1.00	14:01																							X	
CCV1	1.00	14:03																							X	
ICB	1.00	14:04																							X	
CCB1	1.00	14:05																							X	
CRA	1.00	14:06																							X	
K2308433-MB	1.00	14:07																							X	
LCSW	1.00	14:08																							X	
K2308433-015	1.00	14:09																							X	
K2308433-015D	1.00	14:10																							X	
K2308433-015S	1.00	14:11																							X	
K2308433-010	1.00	14:13																							X	
K2308433-011	1.00	14:16																							X	
K2308433-012	1.00	14:17																							X	
K2308433-013	1.00	14:19																							X	
CCV2	1.00	14:20																							X	
CCB2	1.00	14:22																							X	
K2308433-014	1.00	14:23																							X	
ZZZZZZ	1.00	14:25																								
ZZZZZZ	1.00	14:26																								
ZZZZZZ	1.00	14:31																								
ZZZZZZ	1.00	14:33																								
ZZZZZZ	1.00	14:34																								
ZZZZZZ	1.00	14:35																								
ZZZZZZ	1.00	14:36																								
ZZZZZZ	1.00	14:37																								
ZZZZZZ	1.00	14:38																								
CCV3	1.00	14:40																							X	
CCB3	1.00	14:43																							X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 11/25/03

End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	14:45																										
ZZZZZZ	1.00	14:46																										
CCV4	1.00	14:47																								X		
CCB4	1.00	14:48																								X		

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

DISSOLVED METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 11/24/03 End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL ZERO	1.00	15:06																		X						
STANDARD 1	1.00	15:10																		X						
STANDARD 2	1.00	15:15																		X						
STANDARD 3	1.00	15:19																		X						
STANDARD 4	1.00	15:23																		X						
STANDARD 5	1.00	15:28																		X						
ICV	1.00	15:32																		X						
ICB	1.00	15:36																		X						
CRDL	1.00	15:41																		X						
CCV1	1.00	15:45																		X						
CCB1	1.00	15:49																		X						
ZZZZZZ	1.00	15:53																								
ZZZZZZ	1.00	15:58																								
ZZZZZZ	1.00	16:02																								
ZZZZZZ	1.00	16:06																								
ZZZZZZ	1.00	16:11																								
ZZZZZZ	1.00	16:15																								
ZZZZZZ	1.00	16:19																								
ZZZZZZ	1.00	16:24																								
ZZZZZZ	1.00	16:28																								
ZZZZZZ	1.00	16:32																								
CCV2	1.00	16:37																		X						
CCB2	1.00	16:41																		X						
ZZZZZZ	1.00	16:45																								
ZZZZZZ	1.00	16:49																								
ZZZZZZ	1.00	16:54																								
ZZZZZZ	1.00	16:58																								
ZZZZZZ	1.00	17:02																								
ZZZZZZ	1.00	17:07																								
ZZZZZZ	1.00	17:11																								

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DISSOLVED METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 11/24/03 End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	17:15																										
ZZZZZZ	1.00	17:20																										
ZZZZZZ	1.00	17:24																										
CCV3	1.00	17:29																		X								
CCB3	1.00	17:33																		X								
ZZZZZZ	1.00	17:37																										
ZZZZZZ	1.00	17:41																										
ZZZZZZ	1.00	17:46																										
ZZZZZZ	1.00	17:50																										
K2308433-MB	1.00	17:54																		X								
LCSW	1.00	17:59																		X								
K2308433-015 DISS	1.00	18:03																		X								
K2308433-015A DISS	1.00	18:07	73.0																	X								
K2308433-015D DISS	1.00	18:12																		X								
K2308433-015S DISS	1.00	18:16																		X								
CCV4	1.00	18:20																		X								
CCB4	1.00	18:24																		X								
K2308433-012 DISS	1.00	18:29																		X								
K2308433-013 DISS	1.00	18:33																		X								
K2308433-014 DISS	1.00	18:37																		X								
ZZZZZZ	1.00	18:42																										
ZZZZZZ	1.00	18:46																										
ZZZZZZ	1.00	18:50																										
ZZZZZZ	1.00	18:55																										
ZZZZZZ	1.00	18:59																										
ZZZZZZ	1.00	19:03																										
CCV5	1.00	19:08																		X								
CCB5	1.00	19:12																		X								

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DISSOLVED METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 11/25/03 End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL ZERO	1.00	07:21																		X						
STANDARD 1	1.00	07:26																		X						
STANDARD 2	1.00	07:30																		X						
STANDARD 3	1.00	07:34																		X						
STANDARD 4	1.00	07:39																		X						
STANDARD 5	1.00	07:43																		X						
ICV2	1.00	07:47																		X						
ICB2	1.00	07:52																		X						
CRDL2	1.00	07:56																		X						
CCV1	1.00	08:00																		X						
CCB1	1.00	08:05																		X						
ZZZZZZ	1.00	08:09																								
ZZZZZZ	1.00	08:13																								
ZZZZZZ	1.00	08:18																								
ZZZZZZ	1.00	08:22																								
ZZZZZZ	1.00	08:26																								
ZZZZZZ	1.00	08:31																								
ZZZZZZ	1.00	08:35																								
ZZZZZZ	1.00	08:39																								
ZZZZZZ	1.00	08:44																								
ZZZZZZ	1.00	08:48																								
CCV2	1.00	08:52																		X						
CCB2	1.00	08:56																		X						
ZZZZZZ	1.00	09:01																								
ZZZZZZ	1.00	09:05																								
ZZZZZZ	1.00	09:09																								
ZZZZZZ	1.00	09:14																								
ZZZZZZ	1.00	09:18																								
ZZZZZZ	1.00	09:22																								
ZZZZZZ	1.00	09:27																								

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DISSOLVED METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 11/25/03 End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	09:31																												
ZZZZZZ	1.00	09:36																												
ZZZZZZ	1.00	09:40																												
CCV3	1.00	09:44																			X									
CCB3	1.00	09:48																			X									
ZZZZZZ	1.00	09:53																												
ZZZZZZ	1.00	09:57																												
ZZZZZZ	1.00	10:02																												
ZZZZZZ	1.00	10:06																												
ZZZZZZ	1.00	10:10																												
ZZZZZZ	1.00	10:14																												
ZZZZZZ	1.00	10:19																												
ZZZZZZ	1.00	10:23																												
ZZZZZZ	1.00	10:30																												
CCV4	1.00	10:34																			X									
CCB4	1.00	10:39																			X									
ZK2308433-010	1.00	10:43																												
ZZZZZZ	1.00	10:48																												
ZZZZZZ	1.00	10:52																												
ICV3	1.00	10:56																			X									
ICB3	1.00	11:01																			X									
CRDL3	1.00	11:05																			X									
CCV5	1.00	11:09																			X									
CCB5	1.00	11:14																			X									
K2308433-011 DISS	1.00	11:18																			X									
K2308433-010 DISS	1.00	11:22																			X									
ZZZZZZ	1.00	11:27																												
ZZZZZZ	1.00	11:31																												
ZZZZZZ	1.00	11:35																												
CCV6	1.00	11:40																			X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

DISSOLVED METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Varian-6 (GFAA) Method: F

Start Date: 11/25/03 End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB6	1.00	11:44																		X						

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0314970

Service Request Number(s): K2308433

Method: (CLP) 3010A 3020A 3005A 3050B Other-_____

Analysis for: ICP (ICP-MS) GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBW			X	25	25	1% HNO3
LCSW						
K8433-10						
-11						
-12						
-13						
-14						
-15						
-15d						
-15s						
						AN
						11-7-03

Time Digestion Started: 3:00 pm

Lot # Acids Used: HNO3 MS3-81-E **HCl** _____ **H2O2** _____

LCSS (circle appropriate) **ERA CLP Soil Lot # 246** **EPA Lot # 0287** **Other:** _____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-12-Q, _____ mls. added
QCP CICV-2, MET1-12-R, _____ mls. added
QCP CICV-3, MET1-12-S, _____ mls. added
SS6, MET1-21-F, _____ mls. added

SPIKE INFO

SS1-MET1-26-R, _____ mls added
SS4-MET1-27-B, _____ mls added
SS5-MET1-26-S, _____ mls added
SS6-MET1-27-A, _____ mls added

TCLP Spike/LCSE

SS1 _____ mls. added
SS2 _____ mls. added

Additional spikes: 11-7-03 1.0 ml 200.8 Stock soln MS3-62-A & Ag soln MS3-90-C

Comments: AN 0.5 ml

Analyst Robert Nabbefeld **Date** 11-7-03

Reviewer _____ **Date** 11/10/03

metdig.xls
9/5/02

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315112

Service Request Number(s): K2308483 Request ZN

Method: (CLP) 3010A 3020A 3005A 3050B Other-

Analysis for: ICP (ICP-MS) GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBW			X	25	25	1X HNO3
LCSW						
K8433-10						
-11						
-12						
-13						
-14				10	10	
-15				25	25	
-15d						
-15s						
						RN 11-25-03

Time Digestion Started: 11:00 Am

Lot # Acids Used: HNO3 MS3-81-E HCl _____ H2O2 _____

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other:_____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-25-L, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-25-P, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO

SS1-MET1-26-R,_____mls added SS4-MET1-27-B,_____mls added

SS5-MET1-26-S,_____mls added

SS6-MET1-28-A,_____mls added

TCLP Spike/LCSE

SS1 _____mls. added

SS2 _____mls. added

Additional spikes: 0.5 ml of 2008 stock soln MS4-16-B & Ag soln MS3-90-C

Comments: _____

Analyst _____ Date 11-25-03

Reviewer _____ Date 11/25/03

metdig.xls
9/5/2002

Atomic Absorption Data Review Form

Element Se AA # 6

Analytical Batch
KA0319821
Analysis Lot # _____

Cal Std/CCV Source GFI-28-L

Service Request Numbers:

8419, 8433

	Yes	No	NA
1) Appropriate Standardization Completed	✓	___	___
2) ICV within 10% of true value.	✓	___	___
3) CCVs in Control	✓	___	___
4) CCB's and/or ICB's below MRL	✓	___	___
5) All reported results within calibration range	✓	___	___
6) Calculations Correct	✓	___	___

Comments :

Reviewed By: [signature] Date: 11/25/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
GFAA
ANALYTICAL WORKSHEET

Method: (Circle Method Used)	Service Request # :
7060A 7421 7740 7841	8419, 8433
200.9 Other: _____	
Element: As Pb Se Tl ____	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	PBW 8419	50	50		<1		<1
2	LCSW				17.94		90%
3	8419-1				<1		<1
4	4A				14.77		74%
5	4D				<1		<1
6	4S				13.92		13.9/70%
7	1				<1		<1
8	2				<1		<1
9	3				<1		<1
10	5				<1		<1
11	6				<1		<1
12	8				<1		<1
13	9				<1		<1
14	10				<1		<1
15	1 diss				<1		<1
16	2				<1		<1
17	3				<1		<1
18	4				<1		<1
19	4A				14.45		72%
20	4D				<1		<1
21	4S				13.73		13.7/68%
22	5				<1		<1
23	6				<1		<1
24	7				<1		<1
25	PBW 8433				<1		<1

Comments: 8419-4S @ 20 ug/l

Analyst	Date:	Page Number:
[signature]	11/25/03	1

[GFAADATA] GFAA1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
GFAA
ANALYTICAL WORKSHEET

Method: (Circle Method Used)	Service Request # :
7060A 7421 7740 7841	8433
200.9 Other: _____	
Element: As Pb Se Tl ___	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	LCSW	50	50		15.78		79%
27	8433 15				<1		<1
28	15A				14.55		73%
29	15D				<1		<1
30	15S				13.69		13.7
31	12				<1		<1
32	13				<1		<1
33	14				<1		<1
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							

Comments: 8433-15S @ 20 µg/L

Analyst	Date:	Page Number:
[signature]	11/25/03	2

[GFAADATA] GFAA2.XLS

Analyst C.J. Bruno
Date Started 2:57 PM 11/24/2003
Worksheet Se 11/24/03 PM V-6
Comment Varian 6
Methods Se

Varian 6
Columbia Analytical Services
1317 S. 13TH Ave.
Kelso, WA 98626

Method: Se (Furnace)

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
CAL ZERO	0.00	5.3	0.0029	0.0399	0.0030	0.0028	1/24/2003	06:30 PM
STANDARD 1	5.00	1.1	0.0213	0.0427	0.0215	0.0212	1/24/2003	10:50 PM
STANDARD 2	10.00	1.0	0.0464	0.0421	0.0468	0.0461	1/24/2003	15:10 PM
STANDARD 3	20.00	0.4	0.0944	0.0539	0.0947	0.0942	1/24/2003	19:30 PM
STANDARD 4	30.00	0.4	0.1457	0.0706	0.1453	0.1460	1/24/2003	23:50 PM
	QC Test: Correlation coefficient 0.9996 within 0.9950 limit							
STANDARD 5	40.00	0.9	0.1961	0.0688	0.1973	0.1949	1/24/2003	28:10 PM
	Curve Fit		= Linear Origin					
	Characteristic Conc		= 1.81 µg/L					
	r		= 0.9996					
	Calculated Conc		= 0.59 4.40 9.57 19.46 30.03					
	Residuals		= -0.59 0.60 0.43 0.54 -0.03					
	QC Test: ICV recovery 103.4%R - within limits							
~ICV	25.84	0.5	0.1254	0.0639	0.1249	0.1259	1/24/2003	32:30 PM
	QC Test: ICB Concentration 0.49 less than limit							
~ICB	0.49	17.7	0.0024	0.0433	0.0027	0.0021	1/24/2003	36:40 PM
	QC Test: CRDL recovery 101.8%R - within limits							
~CRDL	5.09	0.9	0.0247	0.0401	0.0248	0.0245	1/24/2003	41:02 PM
	QC Test: CCV recovery 99.6%R - within limits							
~CCV	19.91	0.2	0.0966	0.0486	0.0964	0.0968	1/24/2003	45:22 PM
	QC Test: CCB Concentration 0.21 less than limit							
~CCB	0.21	16.6	0.0010	0.0399	0.0011	0.0009	1/24/2003	49:32 PM
PBW 8419	0.28	>100	0.0014	0.0424	0.0028	-0.0001	1/24/2003	53:54 PM
LCSW	17.94	1.6	0.0870	0.0504	0.0861	0.0880	1/24/2003	58:12 PM
K8419-04	0.10	12.9	0.0005	0.0505	0.0005	0.0005	1/24/2003	02:30 PM
K8419-04A	14.77	1.2	0.0716	0.0660	0.0711	0.0722	1/24/2003	06:48 PM
K8419-04D	-0.06	>100	-0.0003	0.0560	0.0002	-0.0008	1/24/2003	11:06 PM
K8419-04S	13.92	1.9	0.0675	0.0634	0.0666	0.0684	1/24/2003	15:26 PM
K8419-01	-0.09	>100	-0.0004	0.0643	-0.0009	0.0000	1/24/2003	19:46 PM
K8419-02	-0.03	>100	-0.0002	0.0544	-0.0006	0.0003	1/24/2003	24:04 PM
K8419-03	-0.16	0.9	-0.0008	0.0473	-0.0008	-0.0008	1/24/2003	28:22 PM
K8419-05	-0.23	50.6	-0.0011	0.0534	-0.0007	-0.0015	1/24/2003	32:40 PM
	QC Test: CCV recovery 96.2%R - within limits							
~CCV	19.24	0.5	0.0933	0.0610	0.0936	0.0930	1/24/2003	37:00 PM
	QC Test: CCB Concentration -0.13 less than limit							
~CCB	-0.13	>100	-0.0006	0.0390	-0.0001	-0.0012	1/24/2003	41:12 PM
K8419-06	-0.21	>100	-0.0010	0.0548	-0.0002	-0.0018	1/24/2003	45:32 PM
K8419-08	-0.09	>100	-0.0005	0.0584	-0.0011	0.0002	1/24/2003	49:52 PM
K8419-09	-0.07	>100	-0.0003	0.0567	-0.0008	0.0001	1/24/2003	54:12 PM
K8419-10	-0.17	90.5	-0.0008	0.0608	-0.0013	-0.0003	1/24/2003	58:34 PM
K8419-01 DISS	-0.27	20.9	-0.0013	0.0487	-0.0015	-0.0011	1/24/2003	02:54 PM
K8419-02	0.04	>100	0.0002	0.0670	-0.0005	0.0009	1/24/2003	07:16 PM
K8419-03	-0.20	>100	-0.0010	0.0637	-0.0022	0.0002	1/24/2003	11:36 PM
K8419-04	-0.20	21.6	-0.0009	0.0613	-0.0011	-0.0008	1/24/2003	15:58 PM
K8419-04A	14.43	0.5	0.0700	0.0745	0.0703	0.0698	1/24/2003	20:20 PM

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
K8419-04D	-0.15	71.1	-0.0007	0.0513	-0.0011	-0.0004	1/24/2003	24:40 PM
	QC Test: CCV recovery 95.8%R - within limits							
~CCV	19.15	0.1	0.0929	0.0626	0.0930	0.0928	1/24/2003	29:02 PM
	QC Test: CCB Concentration 0.22 less than limit							
~CCB	0.22	52.7	0.0011	0.0572	0.0007	0.0015	1/24/2003	33:12 PM
K8419-04S	13.73	0.9	0.0666	0.0658	0.0670	0.0662	1/24/2003	37:34 PM
K8419-05	0.05	>100	0.0002	0.0615	0.0013	-0.0008	1/24/2003	41:52 PM
K8419-06	-0.16	52.9	-0.0008	0.0516	-0.0011	-0.0005	1/24/2003	46:12 PM
K8419-07	-0.22	86.9	-0.0011	0.0405	-0.0017	-0.0004	1/24/2003	50:32 PM
PBW 8433	-0.39	69.7	-0.0019	0.0406	-0.0009	-0.0028	1/24/2003	54:50 PM
LCSW	15.78	2.4	0.0765	0.0563	0.0778	0.0752	1/24/2003	59:10 PM
K8433-15	-0.34	77.6	-0.0016	0.0563	-0.0025	-0.0007	1/24/2003	03:28 PM
K8433-15A	14.55	1.2	0.0706	0.0537	0.0700	0.0712	1/24/2003	07:46 PM
K8433-15D	-0.26	41.4	-0.0013	0.0491	-0.0009	-0.0016	1/24/2003	12:04 PM
K8433-15S	13.69	0.1	0.0664	0.0557	0.0665	0.0663	1/24/2003	16:24 PM
	QC Test: CCV recovery 96.8%R - within limits							
~CCV	19.37	0.5	0.0940	0.0608	0.0943	0.0937	1/24/2003	20:44 PM
	QC Test: CCB Concentration -0.29 less than limit							
~CCB	-0.29	20.2	-0.0014	0.0464	-0.0012	-0.0016	1/24/2003	24:54 PM
K8433-12	-0.32	3.3	-0.0016	0.0729	-0.0016	-0.0015	1/24/2003	29:16 PM
K8433-13	-0.30	49.7	-0.0015	0.0577	-0.0020	-0.0009	1/24/2003	33:34 PM
K8433-14	-0.11	>100	-0.0006	0.0926	-0.0016	0.0005	1/24/2003	37:52 PM
	-0.53	26.4	-0.0026	0.0966	-0.0030	-0.0021	1/24/2003	42:12 PM
	-0.26	0.5	-0.0013	0.1000	-0.0013	-0.0013	1/24/2003	46:32 PM
	-0.29	71.6	-0.0014	0.0469	-0.0021	-0.0007	1/24/2003	50:52 PM
	-0.18	24.4	-0.0009	0.0492	-0.0010	-0.0007	1/24/2003	55:12 PM
	-0.24	51.7	-0.0012	0.0362	-0.0007	-0.0016	1/24/2003	59:32 PM
	QC Test: CRDL recovery 96.4%R - within limits							
~CRDL	4.82	1.2	0.0234	0.0549	0.0236	0.0232	1/24/2003	03:54 PM
	QC Test: CCV recovery 98.7%R - within limits							
~CCV	19.73	0.4	0.0957	0.0614	0.0955	0.0960	1/24/2003	08:14 PM
	QC Test: CCB Concentration -0.15 less than limit							
~CCB	-0.15	43.3	-0.0007	0.0492	-0.0009	-0.0005	1/24/2003	12:24 PM

Atomic Absorption Data Review Form

Element Se AA # 6

Analysis Lot # Analytical Batch KA0319604

Cal Std/CCV Source 6F1-28-M

Service Request Numbers:

9112, 9072, 8433

	Yes	No	NA
1) Appropriate Standardization Completed	✓		
2) ICV within 10% of true value.	✓		
3) CCVs in Control	✓		
4) CCB's and/or ICB's below MRL	✓		
5) All reported results within calibration range	✓		
6) Calculations Correct	✓		

Comments :

Reviewed By: JC Date: 11/25/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
GFAA
ANALYTICAL WORKSHEET

Method: (Circle Method Used)	Service Request # :
7060A 7421 (7740) 7841	9112, 9072
200.9 Other: _____	
Element: As Pb (Se) Tl ____	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	PBS 9112	—	100	—	<1	<1	
2	LCSS	1.00		1/50	3528	176 / 114%	
3	9112-1	0.973		1/2	1.47	<	
4	2	0.953			2.02	<1	
5	2A				22.08	100%	
6	20				1.37	<1	
7	25				39.87	8.4 / 100%	
8	3	0.943			1.90	<1	
9	4	0.929			1.91	<1	
10	5	0.951			1.30	<1	
11	6	0.919			<1	<1	
12	7	0.902			1.34	<1	
13	8	0.950			<1	<1	
14	9	0.919			1.54	<1	
15	20	0.953			1.12	<1	
16	PBS 9072	—	100		<1	<1	
17	LCSS	1.00		1/50	33.31	167 / 108%	
18	9072-1	0.889		1/5	4.42	2.4	
19	1A				13.16		
20	+20				22.34	R=0.9991	
21	+30				32.80	X=4.3	
22	9072-10				4.59	2.3	
23	+10				12.74	R=0.995	
24	+20				20.74	X=4.1	
25	+30				32.76		

Comments: 9112-25 @ 8.4 mg/kg

Analyst	Date:	Page Number:
[signature]	11/25/03	1

[GFAADATA] GFAA1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
GFAA
ANALYTICAL WORKSHEET

Method: (Circle Method Used)
7060A 7421 7740 7841
200.9 Other: _____
Element: As Pb Se Tl ____

Service Request # : 9072, 8433

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	9072-15	0.889	100	1/5	18.46	8.81 71%	
27	+10				27.81	R=0.994	
28	+20				37.72	X = 15.6	
29	+30	↓	↓	↓	5225		
30	8433 10	50	50	1	1.17		Rerun.
31	11				<1		<1
32	10	↓	↓	↓	<1		<1
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							

Comments: 9072-15 @ 9.0 mg/kg.

Analyst	Date:	Page Number:
[signature]	11/25/03	2

[GFAADATA] GFAA2.XLS

Analyst C.J. Bruno
Date Started 6:46 AM 11/25/2003
Worksheet Se 11/25/03 V-6
Comment Varian 6
Methods Se

Varian 6
Columbia Analytical Services
1317 S. 13TH Ave.
Kelso, WA 98626

Method: Se (Furnace)

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
CAL ZERO	0.00	70.2	0.0014	0.0698	0.0021	0.0007	1/25/2003	21:56 AM
STANDARD 1	5.00	4.1	0.0196	0.0571	0.0190	0.0202	1/25/2003	26:18 AM
STANDARD 2	10.00	1.1	0.0403	0.0527	0.0406	0.0400	1/25/2003	30:38 AM
STANDARD 3	20.00	3.2	0.0825	0.0708	0.0806	0.0843	1/25/2003	34:58 AM
STANDARD 4	30.00	0.8	0.1276	0.0576	0.1269	0.1284	1/25/2003	39:18 AM
	QC Test: Correlation coefficient 0.9997 within 0.9950 limit							
STANDARD 5	40.00	1.3	0.1702	0.0784	0.1686	0.1718	1/25/2003	43:38 AM
	Curve Fit	= Linear Origin						
	Characteristic Conc	= 2.08 µg/L						
	r	= 0.9997						
	Calculated Conc	= 0.34 4.64 9.53 19.51 30.19						
	Residuals	= -0.34 0.36 0.47 0.49 -0.19						
	QC Test: ICV recovery 102.6%R - within limits							
~ICV	25.65	0.2	0.1084	0.0668	0.1083	0.1086	1/25/2003	47:58 AM
	QC Test: ICB Concentration 0.67 less than limit							
~ICB	0.67	24.2	0.0028	0.0595	0.0033	0.0024	1/25/2003	52:10 AM
	QC Test: CRDL recovery 109.9%R - within limits							
~CRDL	5.50	1.4	0.0232	0.0578	0.0230	0.0235	1/25/2003	56:30 AM
	QC Test: CCV recovery 103.2%R - within limits							
~CCV	20.63	1.0	0.0872	0.0671	0.0878	0.0866	1/25/2003	00:52 AM
	QC Test: CCB Concentration 0.65 less than limit							
~CCB	0.65	19.7	0.0027	0.0511	0.0023	0.0031	1/25/2003	05:04 AM
PBS 9112	0.47	31.2	0.0020	0.0464	0.0024	0.0016	1/25/2003	09:24 AM
LCSS 1/50	35.28	0.4	0.1492	0.0716	0.1496	0.1487	1/25/2003	13:44 AM
K9112-01 1/2	1.47	29.6	0.0062	0.1460	0.0075	0.0049	1/25/2003	18:02 AM
K9112-02	2.02	25.0	0.0086	0.1402	0.0070	0.0101	1/25/2003	22:20 AM
K9112-02A	22.08	2.5	0.0933	0.1343	0.0917	0.0949	1/25/2003	26:40 AM
K9112-02D	1.37	45.7	0.0058	0.1582	0.0077	0.0039	1/25/2003	31:00 AM
K9112-02S	39.87	1.3	0.1686	0.1404	0.1670	0.1701	1/25/2003	35:20 AM
K9112-03	1.90	17.9	0.0081	0.1541	0.0091	0.0070	1/25/2003	39:38 AM
K9112-04	1.91	11.3	0.0081	0.1755	0.0087	0.0074	1/25/2003	44:00 AM
K9112-05	1.30	24.1	0.0055	0.1576	0.0064	0.0046	1/25/2003	48:18 AM
	QC Test: CCV recovery 104.0%R - within limits							
~CCV	20.80	0.6	0.0879	0.0774	0.0875	0.0883	1/25/2003	52:40 AM
	QC Test: CCB Concentration 0.95 less than limit							
~CCB	0.95	40.9	0.0040	0.0652	0.0052	0.0028	1/25/2003	56:52 AM
K9112-06	0.96	17.0	0.0041	0.1688	0.0036	0.0046	1/25/2003	01:12 AM
K9112-07	1.34	6.2	0.0057	0.2486	0.0054	0.0059	1/25/2003	05:32 AM
K9112-08	0.94	36.5	0.0040	0.1860	0.0050	0.0030	1/25/2003	09:54 AM
K9112-09	1.54	30.3	0.0065	0.1971	0.0051	0.0079	1/25/2003	14:14 AM
K9112-20	1.12	0.5	0.0047	0.1711	0.0047	0.0047	1/25/2003	18:36 AM
PBS 9072	0.70	15.3	0.0029	0.0594	0.0026	0.0033	1/25/2003	22:58 AM
LCSS 1/50	33.31	1.1	0.1408	0.0675	0.1398	0.1419	1/25/2003	27:20 AM
K9072-01 1/5	4.42	7.9	0.0187	0.1764	0.0197	0.0176	1/25/2003	31:42 AM
K9072-01A	13.16	1.1	0.0556	0.1997	0.0552	0.0561	1/25/2003	36:04 AM

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
K9072-01AA	22.34	3.7	0.0944	0.1797	0.0920	0.0969	11/25/2003	40:24 AM
	QC Test: CCV recovery 106.9%R - within limits							
~CCV	21.38	0.1	0.0904	0.0609	0.0904	0.0904	11/25/2003	44:46 AM
	QC Test: CCB Concentration 1.02 less than limit							
~CCB	1.02	7.3	0.0043	0.0543	0.0045	0.0041	11/25/2003	48:58 AM
K9072-01AAA	32.80	1.3	0.1387	0.1804	0.1374	0.1399	11/25/2003	53:18 AM
K9072-01D	4.59	3.2	0.0194	0.1826	0.0198	0.0190	11/25/2003	57:40 AM
K9072-01DA	12.74	2.5	0.0539	0.1984	0.0529	0.0548	11/25/2003	02:00 AM
K9072-01DAA	20.74	12.0	0.0877	0.1699	0.0802	0.0951	11/25/2003	06:20 AM
K9072-01DAAA	32.76	3.0	0.1385	0.1822	0.1355	0.1414	11/25/2003	10:38 AM
K9072-01S	18.46	1.0	0.0780	0.1528	0.0775	0.0786	11/25/2003	14:58 AM
K9072-01SA	27.81	3.4	0.1176	0.1787	0.1147	0.1204	11/25/2003	19:18 AM
K9072-01SAA	37.72	1.9	0.1595	0.1708	0.1574	0.1615	11/25/2003	23:36 AM
	DF = 2.00							
K9072-01SAAA	52.25	0.2	0.1104	0.1415	0.1103	0.1106	11/25/2003	30:34 AM
	QC Test: CCV recovery 108.5%R - within limits							
~CCV	21.70	0.3	0.0917	0.0753	0.0919	0.0915	11/25/2003	34:54 AM
	QC Test: CCB Concentration 1.97 less than limit							
~CCB	1.97	33.6	0.0083	0.0535	0.0103	0.0063	11/25/2003	39:06 AM
K8433-10	1.17	35.9	0.0050	0.0919	0.0062	0.0037	11/25/2003	43:28 AM
CAL ZERO	0.00	>100	-0.0002	0.0647	0.0006	-0.0010	11/25/2003	48:16 AM
RESLOPE	20.00	0.4	0.0846	0.0602	0.0844	0.0849	11/25/2003	52:38 AM
	Curve Fit = Linear Origin							
	Characteristic Conc = 2.03 µg/L							
	r = 0.9997							
	Calculated Conc = -0.05 4.53 9.30 19.03 29.44							
	Residuals = 0.05 0.47 0.70 0.97 0.56							
	QC Test: ICV recovery 99.0%R - within limits							
~ICV	24.74	0.9	0.1073	0.0764	0.1080	0.1065	11/25/2003	56:58 AM
	QC Test: ICB Concentration 0.16 less than limit							
~ICB	0.16	96.4	0.0007	0.0715	0.0011	0.0002	11/25/2003	01:08 AM
	QC Test: CRDL recovery 96.8%R - within limits							
~CRDL	4.84	0.6	0.0210	0.0631	0.0209	0.0211	11/25/2003	05:30 AM
	QC Test: CCV recovery 99.3%R - within limits							
~CCV	19.86	1.8	0.0861	0.0832	0.0871	0.0850	11/25/2003	09:50 AM
	QC Test: CCB Concentration 0.22 less than limit							
~CCB	0.22	>100	0.0009	0.0623	0.0020	-0.0001	11/25/2003	14:02 AM
K8433-11	0.02	>100	0.0001	0.0784	0.0009	-0.0007	11/25/2003	18:24 AM
K8433-10	-0.12	43.0	-0.0005	0.0939	-0.0007	-0.0004	11/25/2003	22:44 AM
	-0.16	>100	-0.0007	0.0490	0.0002	-0.0016	11/25/2003	27:04 AM
	-0.25	68.5	-0.0011	0.0589	-0.0006	-0.0016	11/25/2003	31:22 AM
	QC Test: CRDL recovery 98.1%R - within limits							
~CRDL	4.91	9.1	0.0213	0.0660	0.0199	0.0226	11/25/2003	35:44 AM
	QC Test: CCV recovery 98.4%R - within limits							
~CCV	19.68	1.1	0.0853	0.0662	0.0847	0.0859	11/25/2003	40:06 AM
	QC Test: CCB Concentration 0.07 less than limit							
~CCB	0.07	>100	0.0003	0.0619	0.0008	-0.0002	11/25/2003	44:18 AM

Atomic Absorption Data Review Form

Element Hg

~~AA #~~ KB 11/14/03

Analytical Batch
KA0322708

Analysis Lot # _____

Cal Std/CCV Source HG1-23 Y

Service Request Numbers:

K8880, 8419, 8433, 8805, 8757, 8809, 8800, 8825, 8862, 8892

	Yes	No	NA
1) Appropriate Standardization Completed	✓	___	___
2) ICV within 10% of true value.	✓	___	___
3) CCVs in Control	✓	___	___
4) CCB's and/or ICB's below MRL	✓	___	___
5) All reported results within calibration range	✓	___	___
6) Calculations Correct	✓	___	___

Comments : Pore Waters

Reviewed By: _____ Date: 11/14/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A (245.1)	Service Request # : K8880, 8419, 8433, 8865, 8757, 8809, 8860, 8825, 8862, 8892
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	4.96		99.1
2	ICB	—	—	—	0.01		<0.1
3	CCV1	—	—	—	~~5.01~~ 5.10		102.1
4	CCB1	—	—	—	0.01		<0.1
5	CRA	—	—	—	0.21		0.21
6	PBW (IP03146000)	100mLs	100mLs	—	0.01		<0.1
7	LCSW	↓	↓	—	5.12		102.1
8	K8880-01	50mLs	↓	—	0.05		<0.1
9	-01D	↓	↓	—	0.05		<0.1
10	-01S	↓	↓	—	0.87		~~0.80~~ 0.87 87%
11	PBW (IP03146007)	20mLs	20mLs	—	0.01		<0.1
12	LCSW	↓	↓	—	5.03		101.1
13	K8419-01-Total	↓	↓	—	0.01		<0.1
14	-02	↓	↓	—	0.01		<0.1
15	CCV2	—	—	—	5.17		103%
16	CCB2	—	—	—	0.01		<0.1
17	K8419-03-Total	20mLs	20mLs	—	0.01		<0.1
18	-04	↓	↓	—	0.01		<0.1
19	-04D	↓	↓	—	0.02		<0.1
20	-04S	↓	↓	—	0.98		0.98 98%
21	-05	↓	↓	—	0.01		<0.1
22	-06	↓	↓	—	0.01		<0.1
23	-08	↓	↓	—	0.02		<0.1
24	-09	↓	↓	—	0.02		<0.1
25	-10	↓	↓	—	0.03		<0.1

Comments: Reporting Levels:

Waters - 0.2 µg/L	TIME STARTED:
Soil - 0.02 mg/kg	
TCLP - 1 µg/L	
Water Spike Level : 1.0 µg/L	
Soil Spike Level : 5.0 µg/L =	**mg/kg**
TCLP Spike Level : 5.0 µg/L	

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	1 of 4

[HGFORM.XLW] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K8419-01DISS	20mLS	20mLS	—	0.02		<0.1
27	CCV3	—	—	—	5.07		101.1
28	CCB3	—	—	—	0.01		<0.1
29	K8419-02DISS	20mLS	20mLS	—	0.01		<0.1
30	" 03	"	"	—	0.01		<0.1
31	" 04	"	"	—	0.01		<0.1
32	" 05	"	"	—	0.01		<0.1
33	" 06	"	"	—	0.01		<0.1
34	" 07	"	"	—	0.01		<0.1
35	K8862-01	"	"	—	0.01		<0.1
36	" 01D	"	"	—	0.01		<0.1
37	" 01S	"	"	—	0.98		0.98/98%
38	K8892-01	"	"	—	0.01		<0.1
39	CCV4	—	—	—	5.21		104.1
40	CCB4	—	—	—	0.01		<0.1
41	K8892-01D	20mLS	20mLS	—	0.01		<0.1
42	" 01S	"	"	—	1.01		1.01/101%
43	K8881-01	"	"	—	0.02		<0.1
44	" 01D	"	"	—	0.01		<0.1
45	" 01S	"	"	—	1.05		1.05/105%
46	" 02	"	"	—	0.02		<0.1
47	PBW(ICP03146008)	"	"	—	0.02		<0.1
48	LCSW	"	"	—	5.14		103%
49	K8433-10	"	"	—	0.01		<0.1
50	" 11	"	"	—	0.01		<0.1

Comments: Reporting Levels:

Waters - 0.2 µg/L

Soil - 0.02 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	20f4

[Hgform.xlw] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	CCV5	—	—	—	5.28		106%
52	CCB5	—	—	—	0.00		<0.1
53	K8433-11D	20mLs	20mLs	—	0.02		<0.1
54	-11S			—	1.03		1.03/103%
55	-12			—	0.02		<0.1
56	-13			—	0.02		<0.1
57	-14			—	0.01		<0.1
58	-15			—	0.02		<0.1
59	K8865-01			—	0.03		<0.1
60	-01D			—	0.03		<0.1
61	-01S			—	0.99		0.99/99%
62	-02			—	0.02		<0.1
63	CCV6	—	—	—	5.24		105%
64	CCB6	—	—	—	0.01		<0.1
65	K8757-01	20mLs	20mLs	—	0.02		<0.1
66	K8809-04			—	0.02		<0.1
67	-05			—	0.02		<0.1
68	-06			—	0.02		<0.1
69	K8860-01			—	0.01		<0.1
70	-01D			—	0.02		<0.1
71	-01S			—	1.03		1.03/103%
72	-05			—	0.02		<0.1
73	K8825-01			—	0.16		0.16
74	-02			—	0.02		<0.1
75	CCV7	—	—	—	5.42		108%

Comments: Reporting Levels:

Waters - 0.2 µg/L
Soil - 0.02 mg/kg
TCLP - 1 µg/L
Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	30f4

[HGFORM.XLW] HG3.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51 ~~76~~	CCB7	—	—	—	0.01		<0.1
52 ~~77~~	K8099-02	20mLS	20mLS	—	0.03		<0.1
53 ~~78~~	CCV8						
54 ~~79~~	CCB8	—	—	—			
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							

AB 11/14/03

AB 11/14/03

Comments: Reporting Levels:

Waters - 0.2 µg/L

Soil - 0.02 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/14/03	4 of 4

[HGFORM.XLW] HG3.XLS

CETAC Hg Analysis Report - 03111400.DB - Friday, November 14, 2003, 11:48:35 AM

Analyst ANGELA BAIRD
Date Started Friday, November 14, 2003, 09:31:10
Worksheet Hg 11/14/03 RUN1
Comment KA0322708
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	14-Nov-2003, 09:31	0.00	9.53	1.00	37	35	31	30	
Standard #1	14-Nov-2003, 09:32	0.20	4.34	1.00	750	792	820	826	
Standard #2	14-Nov-2003, 09:34	0.50	3.22	1.00	1948	2056	2090	2084	
Standard #3	14-Nov-2003, 09:35	1.00	3.26	1.00	3896	4095	4192	4162	
Standard #4	14-Nov-2003, 09:37	5.00	5.30	1.00	17711	18905	19671	19981	
Standard #5	14-Nov-2003, 09:39	10.00	3.07	1.00	37898	39851	40638	40263	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	14-Nov-2003, 09:40	4.96	2.61	1.00	18798	19543	19857	19901	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	14-Nov-2003, 09:42	0.01	21.10	1.00	23	18	11	9	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	14-Nov-2003, 09:44	5.10	2.97	1.00	19205	20153	20487	20443	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	14-Nov-2003, 09:45	0.01	34.80	1.00	14	8	5	-4	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	14-Nov-2003, 09:47	0.21	2.05	1.00	784	821	818	809	
PBW(KP0314606)	14-Nov-2003, 09:48	0.01	10.00	1.00	41	46	34	36	
LCSW(KP0314606)	14-Nov-2003, 09:50	5.12	2.92	1.00	19308	20215	20576	20532	
K8880-01	14-Nov-2003, 09:52	0.05	3.89	1.00	179	177	164	168	
K8880-01D	14-Nov-2003, 09:53	0.05	3.00	1.00	197	194	188	183	
K8880-01S	14-Nov-2003, 09:55	0.87	2.62	1.00	3283	3423	3480	3465	
PBW(KP0314607)	14-Nov-2003, 09:56	0.01	36.10	1.00	44	35	21	9	
LCSW(KP0314607)	14-Nov-2003, 09:58	5.03	3.64	1.00	18754	19801	20302	20264	
K8419-01T	14-Nov-2003, 10:00	0.01	16.40	1.00	14	19	11	8	
K8419-02T	14-Nov-2003, 10:01	0.01	12.00	1.00	35	31	22	29	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	14-Nov-2003, 10:03	5.17	3.00	1.00	19450	20462	20807	20649	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	14-Nov-2003, 10:04	0.01	34.40	1.00	14	8	-1	-1	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8419-03T	14-Nov-2003, 10:06	0.01	8.73	1.00	44	43	36	34	
K8419-04T	14-Nov-2003, 10:08	0.01	28.50	1.00	44	36	30	13	
K8419-04DT	14-Nov-2003, 10:09	0.02	8.46	1.00	69	57	56	56	
K8419-04ST	14-Nov-2003, 10:11	0.98	3.66	1.00	3631	3833	3937	3924	
K8419-05T	14-Nov-2003, 10:13	0.01	9.06	1.00	50	42	40	37	
K8419-06T	14-Nov-2003, 10:14	0.01	17.60	1.00	52	38	34	29	
K8419-08T	14-Nov-2003, 10:16	0.02	12.80	1.00	75	69	57	54	
K8419-09T	14-Nov-2003, 10:17	0.02	15.90	1.00	74	55	57	45	
K8419-10T	14-Nov-2003, 10:19	0.03	1.67	1.00	87	84	85	84	
K8419-01D	14-Nov-2003, 10:21	0.02	8.03	1.00	53	48	48	40	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	14-Nov-2003, 10:22	5.07	4.49	1.00	18693	19974	20589	20607	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	14-Nov-2003, 10:24	0.01	39.60	1.00	26	13	2	4	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8419-02D	14-Nov-2003, 10:25	0.01	11.80	1.00	47	36	36	32	
K8419-03D	14-Nov-2003, 10:27	0.01	23.30	1.00	50	38	29	23	
K8419-04D	14-Nov-2003, 10:29	0.01	4.44	1.00	30	29	29	26	
K8419-05D	14-Nov-2003, 10:30	0.01	30.90	1.00	39	27	12	15	
K8419-06D	14-Nov-2003, 10:32	0.01	18.70	1.00	56	47	35	32	
K8419-07D	14-Nov-2003, 10:34	0.01	26.30	1.00	38	33	21	13	
K8862-01	14-Nov-2003, 10:35	0.01	29.00	1.00	43	35	17	18	
K8862-01D	14-Nov-2003, 10:37	0.01	12.70	1.00	45	49	37	33	
K8862-01S	14-Nov-2003, 10:39	0.98	3.14	1.00	3679	3855	3942	3932	
K8892-01	14-Nov-2003, 10:40	0.01	15.60	1.00	18	20	13	9	

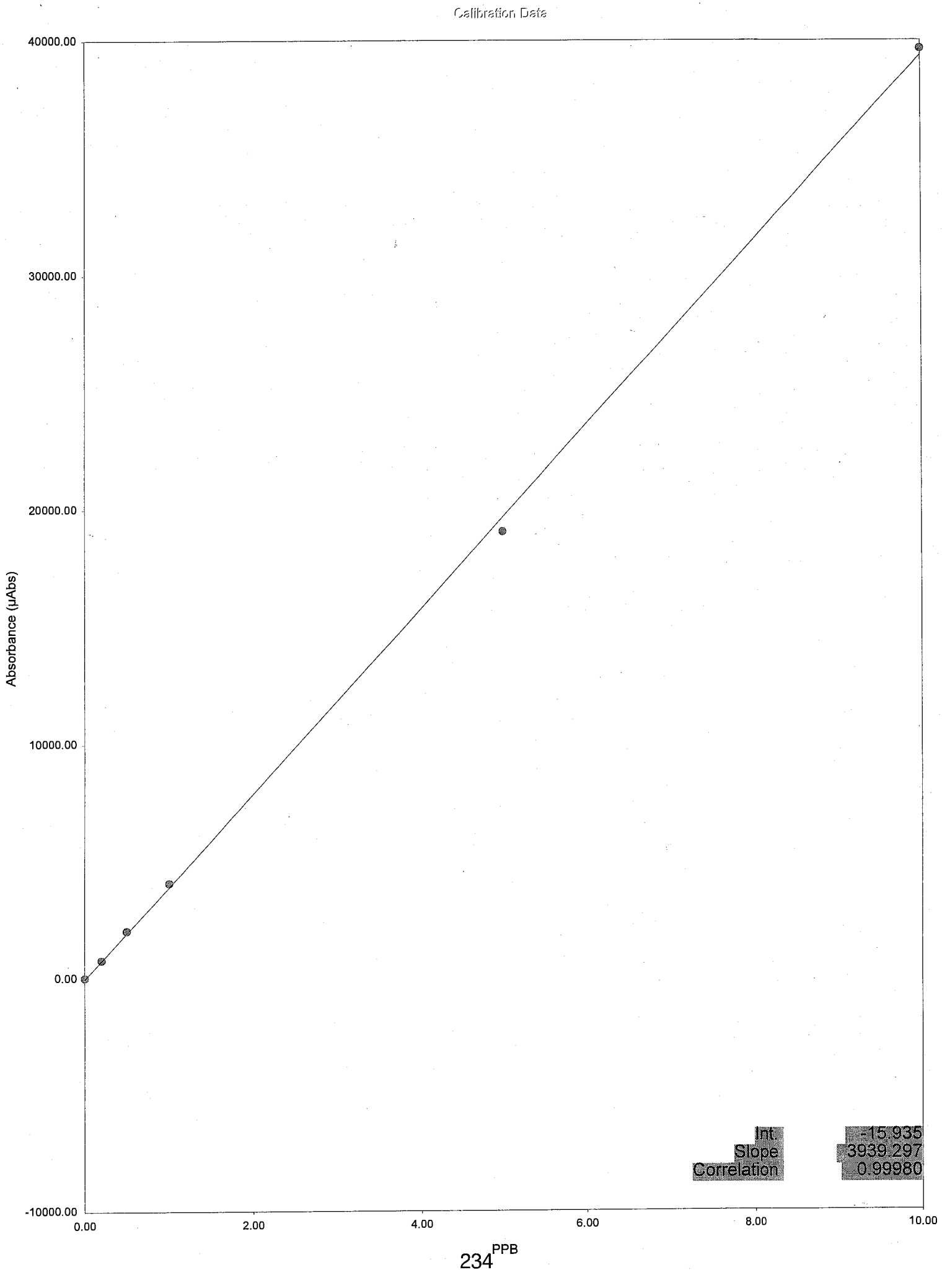
Analyst ANGELA BAIRD
Date Started Friday, November 14, 2003, 10:42:12
Worksheet Hg 11/14/03 RUN1
Comment KA0322708
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV4	14-Nov-2003, 10:42	5.21	3.47	1.00	19489	20570	21043	20945	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCB4	14-Nov-2003, 10:43	0.01	24.60	1.00	27	29	12	13	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
K8892-01D	14-Nov-2003, 10:45	0.01	17.80	1.00	41	33	31	21	
K8892-01S	14-Nov-2003, 10:47	1.01	3.25	1.00	3797	3986	4080	4065	
K8881-01	14-Nov-2003, 10:48	0.02	7.24	1.00	46	44	37	46	
K8881-01D	14-Nov-2003, 10:50	0.01	51.60	1.00	24	19	2	-4	
K8881-01S	14-Nov-2003, 10:51	1.05	2.80	1.00	3935	4114	4190	4166	
K8881-02	14-Nov-2003, 10:53	0.02	6.86	1.00	79	74	66	69	
PBW(KP0314608)	14-Nov-2003, 10:55	0.02	20.00	1.00	62	54	40	35	
LCSW(KP0314608)	14-Nov-2003, 10:56	5.14	3.26	1.00	19286	20298	20716	20647	
K8433-10	14-Nov-2003, 10:58	0.01	20.40	1.00	31	21	16	14	
K8433-11	14-Nov-2003, 11:00	0.01	32.20	1.00	22	13	2	8	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCV5	14-Nov-2003, 11:01	5.28	3.24	1.00	19827	20805	21284	21224	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCB5	14-Nov-2003, 11:03	0.00	17.20	1.00	2	6	5	-2	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
K8433-11D	14-Nov-2003, 11:05	0.02	11.20	1.00	53	39	43	39	
K8433-11S	14-Nov-2003, 11:06	1.03	3.09	1.00	3843	4038	4117	4097	
K8433-12	14-Nov-2003, 11:08	0.02	9.25	1.00	64	60	54	49	
K8433-13	14-Nov-2003, 11:09	0.02	12.10	1.00	59	49	47	40	
K8433-14	14-Nov-2003, 11:11	0.01	17.90	1.00	52	47	29	37	
K8433-15	14-Nov-2003, 11:13	0.02	15.20	1.00	80	65	52	56	
K8865-01	14-Nov-2003, 11:14	0.03	14.80	1.00	96	94	74	67	
K8865-01D	14-Nov-2003, 11:16	0.03	13.80	1.00	98	93	82	67	
K8865-01S	14-Nov-2003, 11:18	0.99	3.06	1.00	3712	3905	3972	3957	
K8865-02	14-Nov-2003, 11:19	0.02	5.84	1.00	67	61	56	61	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCV6	14-Nov-2003, 11:21	5.24	3.31	1.00	19649	20736	21154	21025	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCB6	14-Nov-2003, 11:23	0.01	11.40	1.00	40	33	30	28	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
K8757-01	14-Nov-2003, 11:24	0.02	8.28	1.00	59	58	53	46	
K8809-04	14-Nov-2003, 11:26	0.02	2.78	1.00	82	81	79	85	
K8809-05	14-Nov-2003, 11:27	0.02	6.79	1.00	78	77	71	65	
K8809-06	14-Nov-2003, 11:29	0.02	12.70	1.00	86	80	68	61	
K8860-01	14-Nov-2003, 11:31	0.01	17.10	1.00	51	45	35	30	
K8860-01D	14-Nov-2003, 11:32	0.02	15.20	1.00	67	59	46	46	
K8860-01S	14-Nov-2003, 11:34	1.03	4.06	1.00	3809	4070	4157	4159	
K8860-05	14-Nov-2003, 11:36	0.02	18.10	1.00	68	52	44	41	
K8825-01	14-Nov-2003, 11:37	0.16	0.85	1.00	604	612	614	604	
K8825-02	14-Nov-2003, 11:39	0.02	7.25	1.00	76	75	67	63	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCV7	14-Nov-2003, 11:41	5.42	3.22	1.00	20341	21416	21842	21746	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
CCB7	14-Nov-2003, 11:42	0.01	30.40	1.00	26	19	8	6	
Sample ID	**Analysis Time**	**Conc (PPB)**	**%RSD**	**Dilution**	**Readings**				**Flags**
K8699-02	14-Nov-2003, 11:44	0.03	4.81	1.00	111	106	104	97	

CETAC Hg Analysis Report - 03111400.DB - Friday, November 14, 2003, 11:48:36 AM

Analyst ANGELA BAIRD
Date Started Friday, November 14, 2003, 11:46:03
Worksheet Hg 11/14/03 RUN1
Comment KA0322708
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV8	14-Nov-2003, 11:46	5.50	2.86	1.00	20763	21775	22127	22008	Q


Calibration Data
40000.00
30000.00
20000.00
10000.00
0.00
-10000.00
Absorbance (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
234 PPB
Int.
Slope
Correlation
-15.935
3939.297
0.99980

Columbia Analytical Services
EPA METHOD 245.1

Extr/Prep Batch
KP0314606

Service Request Number(s): K8880

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PBW	100mls	100mls			
LCSW@	↓	↓			
K8880-01	50mls				
↓ -01D	↓				
↓ -01S	↓	↓			
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

LAB 11/13/03

Lot # of Reagents Used:

HNO3:Y23049 **K2S2O8: T44H13** **NaCl :Y07624**

H2SO4: 42357 **KMnO4:V25588** **NH2OH-HCL: Y06477**

HCl: 42167 **SnCl2:Y23648**

LCSS = **ERA CLP Soil Lot # 246** **Other:** Waterbath temp. 95°

@ **LCSW=0.5mls** **ICV Intermediate stock solution.**

*** Source Standard:** Hg1-23-Y 100ppb

**** Source Standard: ICV** Hg1-22-P 1000ppb **TIME STARTED:**

Comments: *10ml Hg1-23-Y 100ppb

Analyst: Angela Baird **Date:** 11/13/03

[HGFORM.XLW] 254.1

Extr/Prep Batch
KP0314607

Columbia Analytical Services
EPA METHOD 7470A

Extr/Prep Batch
KP0314608

Service Request Number(s): K8419, 8433, 8865, 8757, 8809, 8860, 8825, 8862, 8892

Sample	Initial Volume	Final Volume
PBW	20mls.	20mls
LCSW Ⓐ		
K8419-01 Total		
-02		
-03		
-04		
-04D		
-04S*		
-05		
-06		
-08		
-09		
-10		
K8419-01 DISS		
-02		
-03		
-04		
-05		
-06		
-07		
K8862-01		
-01D		
-01S*		
K8892-01		
-01D		
-01S*		
K8881-01		
-01D		
-01S*		
-02		
LB 11/13/03		

Sample	Initial Volume	Final Volume
PBW	20mls.	20mls
LCSW Ⓐ		
K8433-10		
-11		
-11D		
-11S*		
-12		
-13		
-14		
-15		
K8865-01		
-01D		
-01S*		
-02		
K8757-01		
K8809-04		
-05		
-06		
K8860-01		
-01D		
-01S*		
-05		
K8825-01		
-02		
LB 11/13/03		
Std. 0.2	0.2 *	100
Std. 0.5	0.5 *	100
Std. 1.0	1.0 *	100
Std. 5.0	5.0 *	100
Std. 10.0	10.0 *	100
ICV	0.5 **	100

18 20 18 1

10 20

Lot # of Reagents Used:
HNO3:Y23049
H2SO4: 42357
HCl:42167
K2S2O8: T44H13
KMnO4:V25588
SnCl2:Y23648
NaCl :Y07624
NH2OH-HCL: Y06477

Ⓐ **LCSS =**
LCSW=0.1mls
ERA CLP Soil Lot # 246
ICV Intermediate stock solution.
Other: Waterbath temp. 95°
* **Source Standard:** HG1-23-Y 100ppb
** **Source Standard: ICV** HG1-22-P 1000ppb

TIME STARTED:

Comments: *0.2 mls HG1-23-Y 100ppb

Analyst: Angela Baird

Date: 11/13/03

[HGFORM.XLW] 7470

Service Request # K2308433 (Pore Waters)__
Calibration _____112403A_____
QC in calibration__112403A_____
QC Service Request # K2308433_____
PQS - Sample Position Method Blank # 34____
PQS – Sample Position LCSW _____# 35_

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	~~X~~	X (1)	
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control			X
15. Serial dilution run			X
16. Post spike in control			X

11/redos

Comments: Report Se/GFAA. Report Cd-114.

~~MB = 0.6 ppb Zn Samples Are 20X.~~

(1) Zn > MRL, see redigests for Zn values.

Primary Review by _____ Date 11/24/03
Secondary Review by JSC Date 11/24/03
R:\icp\misc\data review forms\icpms review form

PLASMAQUAD INSTRUMENT LOG

PQ-S Ser # 971114

Date: 11/24/97 Operator: B

Pressures

(i) Pumping state Anal(3):

(ii) Operate state

Expn (2): 1.4×10^{0} Inter(1): 1.0×10^{-4} Anal(3): 2.4×10^{-6}

Ion lens settings

EXTR: 1.96 L1: 7.54 L3: 5.47

COLL: 5.60 L2: 5.50 L4: 16.1 Pole Bias: 3.40

SX300 quadrupole

Max mass >280 amu? . Y / N

ICP generator parameters at normal forward power (~~1.5~~ 1350 W)

Refl.pwr: < 5 Plate current: N.A. Grid Current:

PA ~~Voltage~~:

PA Fillament:

Multiplier high voltage settings

HT1 (ext. dyn. range only): 0.00 HT2: 2.0 V

Scans on performance monitoring solution

Full range?: Y / N Low mass?: Y / N High mass?: Y / N

Water/Gas

Water Temp: 6°C Water Level: Full

11/24/97

Gas flows

Neb: 0.950 Aux: 1.2 Cool: 14.0 Neb back pressure:

Other comments: (Changes to instrument/faults noted/service work carried out etc.):

25ppb In 288 1.0 x 10^6

Integrals for : 25 ppb Tuning Standard 1

Peak	Li 6	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
CPS	8794295	1498099	1948352	1401419	1143723	509712	815517	762519

Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 09:54:55
Last sample started at : **********

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	59924	0.0	1.0000
Magnesium	Mg	24	0.0	77934	0.0	1.0000
Cobalt	Co	59	0.0	56057	0.0	1.0000
Indium	In	115	0.0	45749	0.0	1.0000
Lead	Pb	208	0.0	20389	0.0	1.0000
Bismuth	Bi	209	0.0	32621	0.0	1.0000
Uranium	U	238	0.0	30501	0.0	1.0000

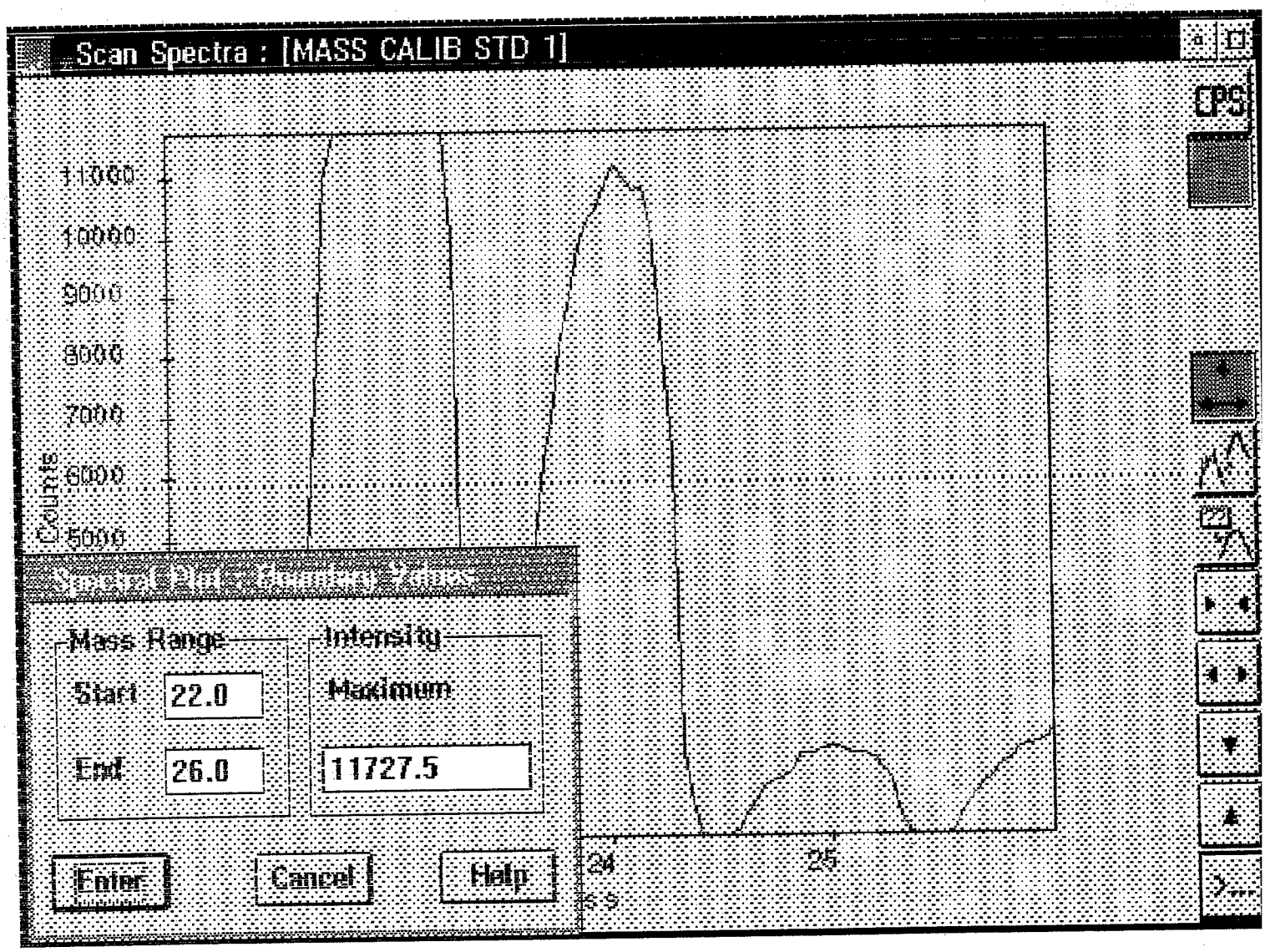
PQ-S #971114 Operator: Greg Jasper KA0322612

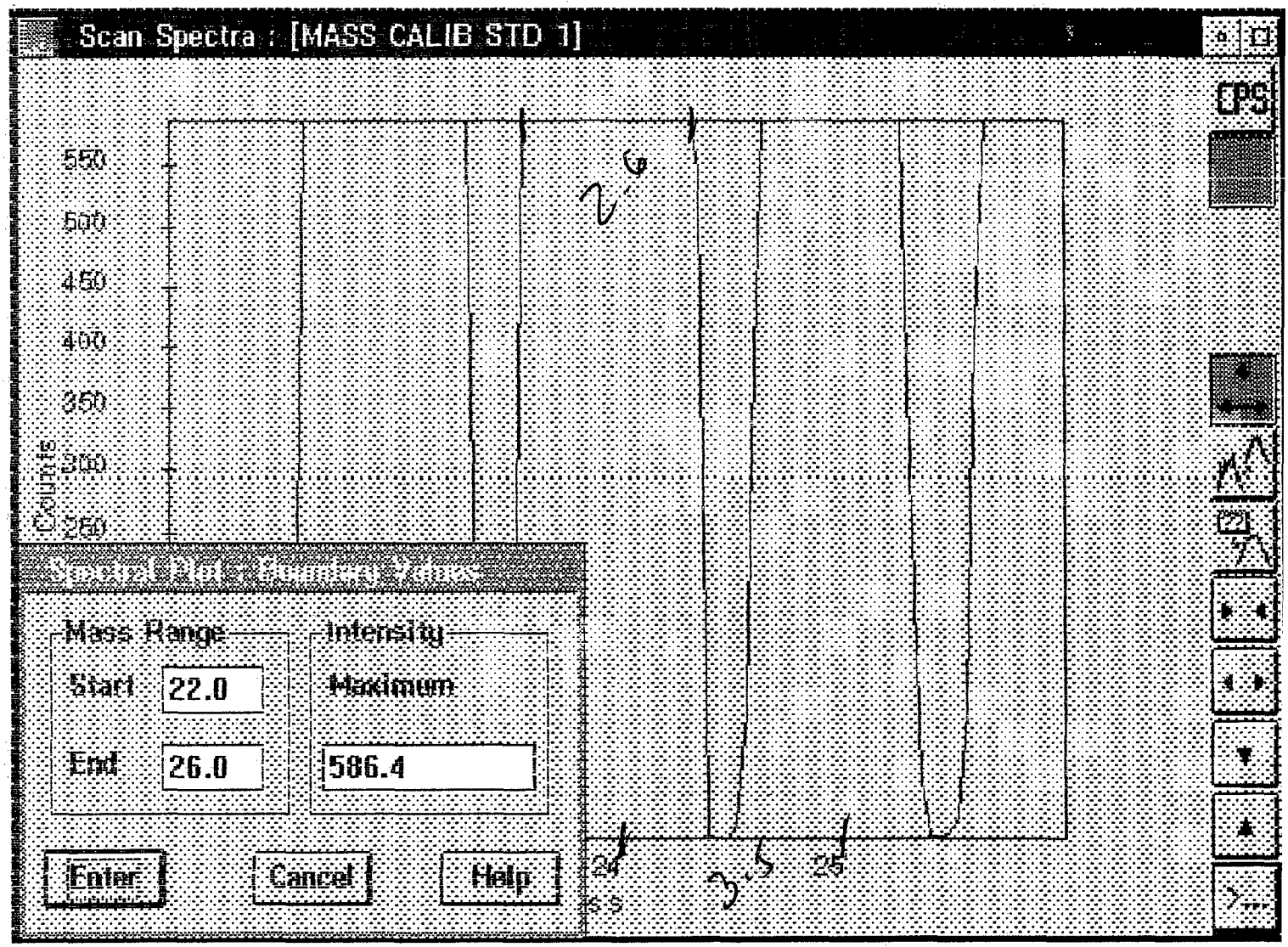
Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Mon Nov 24 2003 09:54:55
Last repeat started at : Mon Nov 24 2003 09:54:55
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth	Uranium
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Peak Height
11/24/02



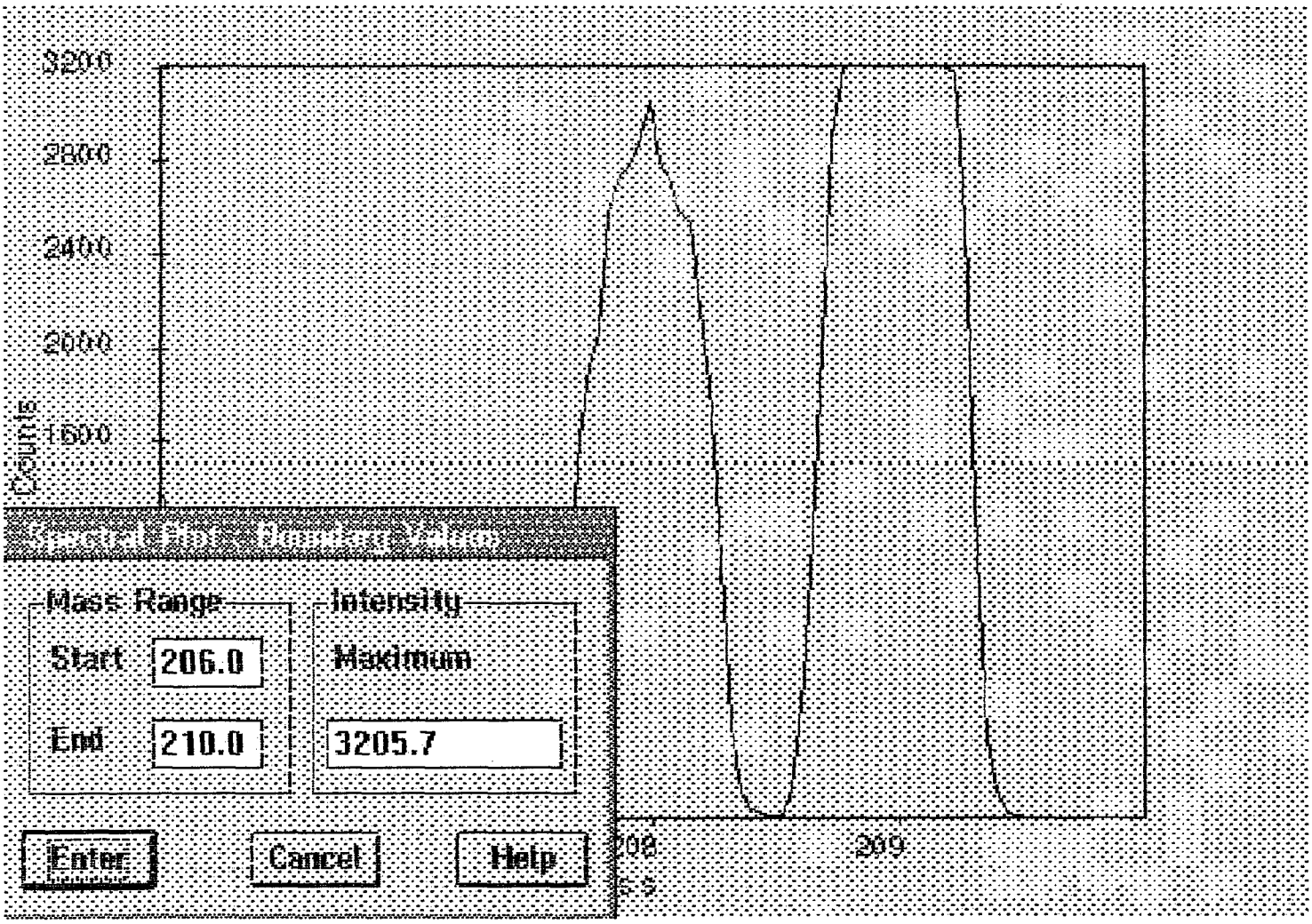


ESD peak Height

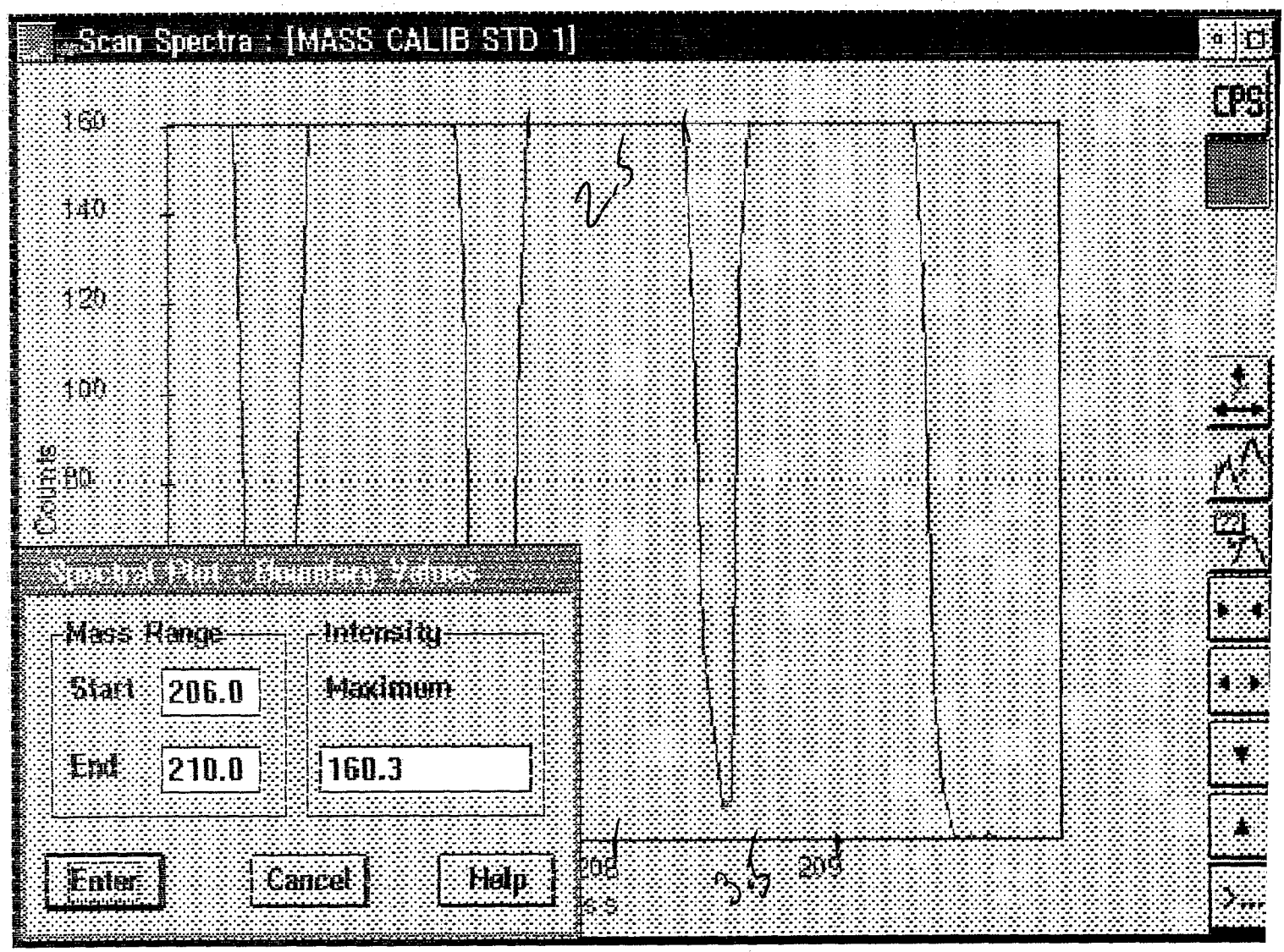
11/24/03

RES = 2.6 / 3.5 = 0.74

Peak Height
11/24/03



11/24/03
590 PEAK HEIGHT
RES: 2.5 - 0.71
3Δ



Multi-Element Calibration Mon Nov 24 2003
Calibration graph coefficients for selected isotopes.
Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 10:02:19
Last sample started at : Mon Nov 24 2003 10:02:57

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	59822	0.0	1.0000
Magnesium	Mg	24	0.0	77928	0.0	1.0000
Cobalt	Co	59	0.0	56044	0.0	1.0000
Indium	In	115	0.0	45679	0.0	1.0000
Lead	Pb	208	0.0	20020	0.0	1.0000
Bismuth	Bi	209	0.0	32640	0.0	1.0000

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Mon Nov 24 2003 10:02:19
Last repeat started at : Mon Nov 24 2003 10:02:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : Short Term Stability
First repeat started at : Mon Nov 24 2003 10:02:57
Last repeat started at : Mon Nov 24 2003 10:04:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.29	25.09	24.89	24.94	25.53	24.99
Run 2	25.25	25.00	24.80	24.88	25.07	24.92
Run 3	25.33	25.10	24.81	24.85	25.04	24.65
Run 4	25.28	25.04	24.63	24.45	24.58	24.65
Run 5	25.27	25.24	24.82	23.72	23.38	23.85
Mean	25.29	25.10	24.79	24.57	24.72	24.61
Std Dev	0.0327	0.0912	0.0936	0.5130	0.8213	0.4505
%SD	0.1293	0.3634	0.3776	2.088	3.322	1.830

Multi-Element Concentrations Mon Nov 24 2003

Concentration summary for samples.

User Name : MANAGER
Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC

Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 10:02:19
Last sample started at : Mon Nov 24 2003 10:02:57
Interference Equations : DEFAULT

Concentration units : ppb

Text

Sample Name		25 ppb Tuning Standa rd	Short Term Stability
Dilution Factor		1.0000	1.0000
Element	**Isotope**	**Concentration**	**Concentration**
Lithium	Li 6	**********	**********
Beryllium	Be 9	25.00	25.29
Magnesium	Mg 24	25.00	25.10
Cobalt	Co 59	25.00	24.79
Indium	In 115	25.00	24.57
Lead	Pb 208	25.00	24.72
Bismuth	Bi 209	25.00	24.61

Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : 112403A
User Name : GREG
Analysis procedure : EPA Method 200.8
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 11:27:36
Last sample started at : **********
Internal standards : Li 6 Ga 71 In 115 Lu 1 (interpolating)
Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Analytical Batch KA0322613

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	394.5	58092	0.0	1.0000
Chromium	Cr	52	6915	42523	0.0	1.0000
Chromium	Cr	53	690.6	4863	0.0	1.0000
Nickel	Ni	60	5455	11459	0.0	1.0000
Nickel	Ni	61	37971	594.1	0.0	1.0000
Nickel	Ni	62	2703	1636	0.0	1.0000
Zinc	Zn	66	731.0	6567	0.0	1.0000
Zinc	Zn	67	177.5	1118	0.0	1.0000
Zinc	Zn	68	602.8	4593	0.0	1.0000
Arsenic	As	75	-56.97	4134	0.0	1.0000
Selenium	Se	77	113.1	396.6	0.0	1.0000
Selenium	Se	78	13327	1248	0.0	1.0000
Selenium	Se	82	59.76	484.1	0.0	1.0000
Molybdenum	Mo	95	218.1	4046	0.0	1.0000
Molybdenum	Mo	97	131.1	2481	0.0	1.0000
Molybdenum	Mo	98	295.9	6254	0.0	1.0000
Cadmium	Cd	111	644.7	3482	0.0	1.0000
Cadmium	Cd	112	678.0	6646	0.0	1.0000
Cadmium	Cd	114	955.4	8053	0.0	1.0000
Antimony	Sb	121	101.6	7115	0.0	1.0000
Antimony	Sb	123	102.6	5286	0.0	1.0000
Barium	Ba	135	39.43	2224	0.0	1.0000
Barium	Ba	137	56.22	3838	0.0	1.0000
Barium	Ba	138	224.9	24628	0.0	1.0000
Thallium	Tl	203	92.69	10309	0.0	1.0000
Thallium	Tl	205	136.0	24508	0.0	1.0000
Lead	Pb	206	112.3	8766	0.0	1.0000
Lead	Pb	207	100.6	6719	0.0	1.0000
Lead	Pb	208	398.2	32195	0.0	1.0000

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Calibration Blank
First repeat started at : Mon Nov 24 2003 11:27:36
Last repeat started at : Mon Nov 24 2003 11:29:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	-0.0005	0.0068	-0.0008	0.0012	-1.514	0.0182	0.0033
Run 2	0.0003	-0.0087	0.0156	-0.0052	1.121	0.0582	-0.0020
Run 3	0.0002	0.0018	-0.0148	0.0040	0.3935	-0.0764	-0.0012
Mean	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Std Dev	0.0004	0.0079	0.0152	0.0047	1.361	0.0691	0.0029
%SD	195340	589100	1870400	456720	10346000	3159900	167160

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0072	0.0048	0.0041	0.0040	0.1778	0.0225
Run 2	-0.0003	0.0005	0.0016	0.0155	-0.0454	0.0168
Run 3	0.0075	-0.0053	-0.0057	-0.0195	-0.1324	-0.0393
Mean	0.0000	-0.0000	0.0000	0.0000	0.0	0.0000
Std Dev	0.0073	0.0050	0.0051	0.0178	0.1600	0.0342
%SD	5373200	5994600	4354100	903210	0.0	1309100

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0012	-0.0063	0.0053	-0.0043	-0.0014	0.0035
Run 2	0.0093	-0.0001	-0.0035	0.0020	-0.0026	-0.0034
Run 3	-0.0081	0.0064	-0.0017	0.0023	0.0040	-0.0002
Mean	0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000
Std Dev	0.0088	0.0063	0.0046	0.0037	0.0035	0.0035
%SD	9420300	306710	189260	280160	188880	190590

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0027	-0.0049	0.0049	0.0085	0.0004	0.0014
Run 2	0.0012	0.0043	-0.0084	-0.0046	-0.0006	-0.0002
Run 3	0.0014	0.0006	0.0035	-0.0039	0.0002	-0.0012
Mean	-0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000
Std Dev	0.0023	0.0046	0.0073	0.0073	0.0005	0.0013
%SD	358890	534360	2026300	46161000	30433	120020

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0007	0.0007	0.0036	0.0013
Run 2	-0.0001	0.0009	-0.0011	0.0006
Run 3	-0.0007	-0.0016	-0.0025	-0.0019
Mean	0.0000	0.0000	0.0000	0.0000
Std Dev	0.0007	0.0013	0.0032	0.0016
%SD	50952	38567	566330	97177

Internal Standard Drift; % relative to mean of first sample =

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.75	99.48	100.2	99.84
Run 2	99.33	100.3	98.88	101.3
Run 3	100.9	100.2	101.0	98.90
Mean	100.00	100.00	100.00	100.00
Std Dev	0.8286	0.4505	1.048	1.191

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Calibration Standard
First repeat started at : Mon Nov 24 2003 11:30:37
Last repeat started at : Mon Nov 24 2003 11:32:14
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.66	24.84	24.91	24.92	26.60	24.57	24.67
Run 2	25.36	25.30	24.85	24.96	24.24	25.00	25.11
Run 3	24.97	24.86	25.25	25.12	24.16	25.42	25.21
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.3531	0.2567	0.2160	0.1084	1.383	0.4262	0.2884
%SD	1.413	1.027	0.8639	0.4336	5.531	1.705	1.154

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.42	24.74	24.90	24.48	24.68	24.78
Run 2	25.24	25.15	24.86	25.22	25.10	25.06
Run 3	25.33	25.11	25.25	25.30	25.22	25.16
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.5000	0.2264	0.2141	0.4521	0.2842	0.1970
%SD	2.000	0.9054	0.8565	1.808	1.137	0.7882

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.64	23.82	24.31	25.17	25.01	24.94
Run 2	25.64	25.40	25.60	24.96	24.85	25.11
Run 3	24.72	25.78	25.09	24.87	25.14	24.95
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.5554	1.042	0.6487	0.1547	0.1441	0.0949
%SD	2.222	4.168	2.595	0.6187	0.5762	0.3797

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.93	24.64	24.81	24.81	24.87	24.18
Run 2	24.78	24.91	25.68	25.59	24.99	24.67
Run 3	25.29	25.45	24.52	24.60	25.13	26.15
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.2628	0.4154	0.6024	0.5225	0.1307	1.030
%SD	1.051	1.661	2.410	2.090	0.5227	4.119

Element	Thallium	Lead	Lead	Lead

ms4-23.E

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	24.48	25.07	25.95	25.21
Run 2	25.62	24.99	24.90	25.11
Run 3	24.89	24.93	24.15	24.68
Mean	25.00	25.00	25.00	25.00
Std Dev	0.5775	0.0701	0.9084	0.2798
%SD	2.310	0.2806	3.634	1.119

MS4-23_E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.8	101.0	99.49	96.29
Run 2	101.2	100.5	100.2	97.24
Run 3	102.2	99.62	100.8	97.83
Mean	102.1	100.4	100.2	97.12
Std Dev	0.8117	0.7105	0.6449	0.7761

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #1
First repeat started at : Mon Nov 24 2003 11:33:25
Last repeat started at : Mon Nov 24 2003 11:35:03
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	5.198	20.21	19.98	49.60	40.11	49.88	51.73
Run 2	5.157	20.10	20.75	50.69	44.28	51.46	52.22
Run 3	5.113	20.25	20.15	50.30	46.05	50.09	51.47
Mean	5.156	20.19	20.29	50.20	43.48	50.48	51.80
Std Dev	0.0424	0.0759	0.4045	0.5518	3.047	0.8585	0.3827
%SD	0.8220	0.3761	1.993	1.099	7.008	1.701	0.7387

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	57.97	55.48	51.48	52.18	52.91	52.35
Run 2	58.13	56.38	52.48	52.36	53.55	52.69
Run 3	56.94	54.99	51.58	52.09	52.36	52.24
Mean	57.68	55.62	51.85	52.21	52.94	52.43
Std Dev	0.6449	0.7056	0.5491	0.1341	0.5920	0.2342
%SD	1.118	1.269	1.059	0.2569	1.118	0.4467

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	51.07	48.44	50.40	25.86	25.96	25.74
Run 2	49.93	50.94	54.84	26.11	26.19	26.24
Run 3	51.71	49.55	53.78	25.62	25.65	25.77
Mean	50.90	49.64	53.00	25.86	25.93	25.92
Std Dev	0.8982	1.253	2.320	0.2453	0.2676	0.2779
%SD	1.764	2.525	4.377	0.9484	1.032	1.072

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	50.20	51.56	201.3	202.5	196.5	51.01
Run 2	52.66	53.56	202.0	201.6	201.0	50.35
Run 3	53.07	50.61	198.7	206.7	205.8	52.48
Mean	51.97	51.91	200.7	203.6	201.1	51.28
Std Dev	1.549	1.507	1.747	2.724	4.616	1.087
%SD	2.981	2.902	0.8705	1.338	2.295	2.119

Element	Thallium	Lead	Lead	Lead
	[illegible]	[illegible]	[illegible]	[illegible]

ICV 5-21-F

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	52.07	45.99	51.05	49.11
Run 2	49.44	46.41	51.36	48.96
Run 3	52.35	47.53	51.92	49.48
Mean	51.29	46.64	51.44	49.18
Std Dev	1.605	0.7931	0.4442	0.2648
%SD	3.130	1.700	0.8635	0.5383

NS4-21-F

Internal Standard Drift; % relative to mean of first sample #

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.76	98.79	99.28	98.34
Run 2	100.9	97.76	98.57	99.12
Run 3	100.7	98.52	98.90	95.63
Mean	100.5	98.36	98.92	97.69
Std Dev	0.6225	0.5358	0.3532	1.831

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #2
First repeat started at : Mon Nov 24 2003 11:36:47
Last repeat started at : Mon Nov 24 2003 11:38:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.81	25.25	25.52	24.99	23.11	25.03	24.82
Run 2	24.80	24.99	25.02	24.91	16.73	24.77	24.61
Run 3	25.22	24.75	24.73	25.25	26.35	24.54	25.30
Mean	24.94	25.00	25.09	25.05	22.06	24.78	24.91
Std Dev	0.2386	0.2478	0.3976	0.1805	4.894	0.2461	0.3540
%SD	0.9565	0.9913	1.584	0.7207	22.18	0.9929	1.421

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.81	24.41	25.04	24.35	25.07	24.96
Run 2	24.60	24.92	24.73	24.83	24.83	24.50
Run 3	24.68	24.83	24.91	25.20	25.04	24.95
Mean	24.69	24.72	24.90	24.79	24.98	24.80
Std Dev	0.1055	0.2707	0.1558	0.4274	0.1307	0.2603
%SD	0.4272	1.095	0.6257	1.724	0.5232	1.049

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	26.60	25.74	24.96	25.14	25.36	25.59
Run 2	24.34	24.88	25.60	25.02	24.65	25.15
Run 3	26.54	24.64	24.76	25.62	25.40	25.51
Mean	25.82	25.09	25.11	25.26	25.13	25.42
Std Dev	1.288	0.5759	0.4384	0.3198	0.4199	0.2335
%SD	4.988	2.295	1.746	1.266	1.670	0.9185

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.38	25.25	25.09	24.76	25.23	25.47
Run 2	24.61	26.16	24.75	24.44	24.84	25.09
Run 3	24.86	25.20	25.03	24.62	25.03	24.93
Mean	24.61	25.54	24.96	24.61	25.03	25.16
Std Dev	0.2424	0.5428	0.1826	0.1608	0.1983	0.2747
%SD	0.9849	2.125	0.7318	0.6533	0.7919	1.092

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	24.72	24.61	24.64	24.65
Run 2	25.18	25.28	25.09	24.96
Run 3	24.99	24.38	24.84	24.82
Mean	24.96	24.76	24.86	24.81
Std Dev	0.2338	0.4687	0.2264	0.1541
%SD	0.9368	1.893	0.9107	0.6214

CCV
ns4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.3	98.61	97.71	98.88
Run 2	100.8	99.40	99.14	98.14
Run 3	101.9	99.22	96.56	95.54
Mean	101.0	99.08	97.80	97.52
Std Dev	0.8160	0.4150	1.293	1.754

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #3
First repeat started at : Mon Nov 24 2003 11:44:09
Last repeat started at : Mon Nov 24 2003 11:45:48
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0043	-0.0103	-0.0302	0.0076	0.6222	0.0326	-0.0121
Run 2	0.0020	-0.0057	-0.0249	-0.0258	1.904	0.1324	0.0088
Run 3	0.0027	-0.0072	-0.0289	-0.0185	2.823	0.0040	0.0026
Mean	0.0030	-0.0077	-0.0280	-0.0122	1.783	0.0564	-0.0003
Std Dev	0.0012	0.0024	0.0028	0.0176	1.105	0.0674	0.0107
%SD	39.11	30.62	9.912	143.6	61.99	119.6	4163

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1127	-0.0036	-0.0068	-0.0103	0.2550	-0.0458
Run 2	0.1341	-0.0016	-0.0049	-0.0244	0.3330	-0.0379
Run 3	0.0270	-0.0168	-0.0068	0.0090	0.0727	-0.0175
Mean	0.0913	-0.0073	-0.0062	-0.0086	0.2202	-0.0337
Std Dev	0.0567	0.0083	0.0011	0.0167	0.1336	0.0146
%SD	62.07	112.8	17.63	195.1	60.65	43.24

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0202	0.0321	0.0234	0.0039	0.0107	0.0006
Run 2	-0.0030	0.0121	0.0228	0.0053	0.0073	0.0057
Run 3	0.0185	0.0264	0.0175	0.0171	0.0095	0.0033
Mean	0.0119	0.0235	0.0213	0.0087	0.0092	0.0032
Std Dev	0.0130	0.0103	0.0032	0.0072	0.0017	0.0025
%SD	108.9	43.87	15.26	82.74	18.72	78.07

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0451	0.0301	0.0119	0.0017	-0.0013	-0.0016
Run 2	0.0304	0.0351	0.0136	-0.0083	-0.0011	-0.0011
Run 3	0.0335	0.0229	0.0085	0.0022	-0.0013	-0.0039
Mean	0.0363	0.0294	0.0113	-0.0015	-0.0012	-0.0022
Std Dev	0.0077	0.0061	0.0026	0.0059	0.0001	0.0015
%SD	21.24	20.89	22.84	403.3	9.264	66.94

Element	Thallium	Lead	Lead	Lead
	[illegible]	[illegible]	[illegible]	[illegible]

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0001	0.0011	0.0014	0.0000
Run 2	0.0003	-0.0039	-0.0011	-0.0017
Run 3	0.0009	0.0002	0.0002	0.0013
Mean	0.0004	-0.0009	0.0002	-0.0001
Std Dev	0.0005	0.0027	0.0012	0.0015
%SD	131.8	310.8	689.0	1106



Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.1	99.42	99.81	97.08
Run 2	100.9	99.31	99.09	94.95
Run 3	101.2	99.61	96.67	95.67
Mean	100.8	99.45	98.53	95.90
Std Dev	0.5343	0.1512	1.648	1.082

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #4
First repeat started at : Mon Nov 24 2003 11:46:51
Last repeat started at : Mon Nov 24 2003 11:48:29
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0022	-0.0039	-0.0528	-0.0121	1.337	0.0131	0.0010
Run 2	0.0036	-0.0109	-0.0465	-0.0154	0.3069	-0.0228	0.0066
Run 3	0.0021	-0.0109	-0.0366	-0.0015	2.586	0.0592	-0.0035
Mean	0.0026	-0.0086	-0.0453	-0.0097	1.410	0.0165	0.0013
Std Dev	0.0008	0.0040	0.0082	0.0073	1.141	0.0411	0.0051
%SD	32.41	46.77	18.12	74.88	80.95	248.9	375.4

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0188	-0.0028	0.0035	-0.0291	-0.0917	-0.0105
Run 2	0.0440	0.0239	-0.0065	-0.0213	0.0661	-0.0431
Run 3	0.0330	0.0153	-0.0086	0.0237	-0.3139	-0.0090
Mean	0.0319	0.0121	-0.0039	-0.0089	-0.1132	-0.0208
Std Dev	0.0126	0.0136	0.0065	0.0285	0.1909	0.0193
%SD	39.61	112.6	167.1	320.4	168.7	92.37

CLB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0176	0.0145	0.0119	0.0102	0.0096	0.0025
Run 2	0.0066	0.0340	0.0027	0.0069	0.0029	-0.0022
Run 3	0.0092	0.0154	0.0173	0.0052	0.0082	0.0046
Mean	0.0112	0.0213	0.0107	0.0075	0.0069	0.0016
Std Dev	0.0058	0.0110	0.0074	0.0025	0.0035	0.0035
%SD	51.68	51.47	69.49	34.15	50.72	213.0

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0291	0.0271	-0.0002	0.0002	-0.0002	-0.0014
Run 2	0.0307	0.0193	0.0159	0.0033	-0.0004	-0.0028
Run 3	0.0195	0.0107	-0.0028	0.0034	-0.0024	-0.0016
Mean	0.0264	0.0190	0.0043	0.0023	-0.0010	-0.0019
Std Dev	0.0061	0.0082	0.0101	0.0018	0.0012	0.0007
%SD	23.06	43.12	236.0	79.23	120.1	37.89

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0004	-0.0012	-0.0011	-0.0018
Run 2	0.0007	-0.0016	-0.0013	0.0012
Run 3	-0.0008	0.0004	0.0023	-0.0003
Mean	-0.0002	-0.0008	-0.0000	-0.0003
Std Dev	0.0008	0.0011	0.0020	0.0015
%SD	435.7	136.6	4503	491.3

CLB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.9	99.75	98.66	98.71
Run 2	101.3	100.5	100.2	96.74
Run 3	101.9	100.7	98.81	96.82
Mean	101.7	100.3	99.21	97.42
Std Dev	0.3443	0.4802	0.8260	1.118

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #5
First repeat started at : Mon Nov 24 2003 11:49:34
Last repeat started at : Mon Nov 24 2003 11:51:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0213	0.2006	0.1922	0.1589	2.201	0.2086	0.4520
Run 2	0.0222	0.1969	0.1665	0.1681	0.5003	0.1743	0.4316
Run 3	0.0229	0.2029	0.1650	0.1626	10.21	0.0864	0.4590
Mean	0.0221	0.2001	0.1746	0.1632	4.303	0.1564	0.4475
Std Dev	0.0008	0.0031	0.0153	0.0046	5.183	0.0630	0.0143
%SD	3.657	1.530	8.748	2.843	120.5	40.28	3.186

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4198	0.4566	0.5015	1.068	1.369	0.9948
Run 2	0.4210	0.3879	0.5478	1.020	0.9680	1.092
Run 3	0.4487	0.4121	0.4960	1.105	1.158	1.040
Mean	0.4298	0.4189	0.5151	1.065	1.165	1.042
Std Dev	0.0164	0.0348	0.0285	0.0428	0.2008	0.0485
%SD	3.806	8.310	5.529	4.022	17.24	4.655

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0707	0.0683	0.0403	0.0533	0.0499	0.0448
Run 2	0.0630	0.0644	0.0751	0.0604	0.0541	0.0576
Run 3	0.0618	0.0759	0.0558	0.0526	0.0513	0.0479
Mean	0.0652	0.0695	0.0571	0.0554	0.0518	0.0501
Std Dev	0.0048	0.0058	0.0174	0.0043	0.0021	0.0067
%SD	7.365	8.385	30.51	7.795	4.060	13.38

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0645	0.0650	0.0451	0.0451	0.0488	0.0179
Run 2	0.0515	0.0791	0.0559	0.0636	0.0405	0.0163
Run 3	0.0551	0.0620	0.0461	0.0578	0.0477	0.0141
Mean	0.0570	0.0687	0.0490	0.0555	0.0457	0.0161
Std Dev	0.0067	0.0091	0.0059	0.0094	0.0045	0.0019
%SD	11.82	13.24	12.12	17.01	9.865	11.69

Element	Thallium	Lead	Lead	Lead
	Tl 205	Pb 206	Pb 207	Pb 208

water CRA ms4-23-C

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0172	0.0132	0.0213	0.0163
Run 2	0.0196	0.0133	0.0153	0.0166
Run 3	0.0168	0.0123	0.0141	0.0120
Mean	0.0179	0.0129	0.0169	0.0150
Std Dev	0.0015	0.0006	0.0038	0.0025
%SD	8.662	4.408	22.60	17.03

water CRA ws4-23-c

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.5	100.1	100.6	97.24
Run 2	102.0	100.8	97.22	93.05
Run 3	102.2	100.1	98.49	96.86
Mean	101.9	100.4	98.78	95.72
Std Dev	0.3661	0.4185	1.719	2.316

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #6
First repeat started at : Mon Nov 24 2003 11:52:14
Last repeat started at : Mon Nov 24 2003 11:53:52
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0468	0.3852	0.3691	0.3783	3.465	0.3379	0.9898
Run 2	0.0448	0.3911	0.4087	0.4022	3.386	0.2731	1.063
Run 3	0.0449	0.4232	0.4081	0.4145	16.38	0.4016	0.9992
Mean	0.0455	0.3999	0.3953	0.3984	7.745	0.3375	1.017
Std Dev	0.0011	0.0204	0.0227	0.0184	7.481	0.0643	0.0396
%SD	2.465	5.113	5.746	4.616	96.60	19.04	3.889

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.9030	0.9229	0.9555	2.086	1.784	1.963
Run 2	1.068	0.9856	1.062	2.096	2.585	2.143
Run 3	0.8662	0.9767	1.043	2.052	2.401	2.094
Mean	0.9458	0.9617	1.020	2.078	2.257	2.067
Std Dev	0.1076	0.0339	0.0570	0.0232	0.4195	0.0929
%SD	11.38	3.528	5.585	1.117	18.59	4.496

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1063	0.1009	0.1081	0.1228	0.1129	0.0939
Run 2	0.1222	0.1259	0.1018	0.1000	0.1126	0.1037
Run 3	0.0863	0.1022	0.1172	0.1160	0.1104	0.1075
Mean	0.1050	0.1097	0.1090	0.1129	0.1120	0.1017
Std Dev	0.0180	0.0141	0.0078	0.0117	0.0014	0.0070
%SD	17.15	12.82	7.116	10.35	1.227	6.918

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1202	0.1124	0.0840	0.1114	0.0990	0.0398
Run 2	0.1189	0.1158	0.1041	0.0902	0.1008	0.0355
Run 3	0.1120	0.1108	0.1222	0.1035	0.1043	0.0359
Mean	0.1170	0.1130	0.1034	0.1017	0.1014	0.0371
Std Dev	0.0044	0.0026	0.0191	0.0107	0.0027	0.0024
%SD	3.751	2.269	18.48	10.51	2.654	6.359

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0442	0.0388	0.0384	0.0366
Run 2	0.0396	0.0307	0.0344	0.0370
Run 3	0.0366	0.0368	0.0352	0.0352
Mean	0.0402	0.0354	0.0360	0.0363
Std Dev	0.0038	0.0042	0.0021	0.0010
%SD	9.529	11.95	5.819	2.662

SOIC CRA ws4.23-D

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.5	101.7	100.3	94.14
Run 2	101.8	99.79	98.03	95.45
Run 3	102.8	100.3	97.16	93.91
Mean	102.4	100.6	98.48	94.50
Std Dev	0.5111	0.9752	1.591	0.8317

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #7
First repeat started at : Mon Nov 24 2003 11:55:40
Last repeat started at : Mon Nov 24 2003 11:57:17
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0010	0.0311	-0.0302	-0.0599	6.885	-0.0469	0.2418
Run 2	-0.0004	0.0253	-0.0572	-0.0338	10.64	0.0465	0.2409
Run 3	0.0006	0.0507	-0.0589	-0.0556	-1.554	-0.1036	0.2242
Mean	0.0004	0.0357	-0.0488	-0.0498	5.325	-0.0347	0.2357
Std Dev	0.0007	0.0133	0.0161	0.0140	6.247	0.0758	0.0099
%SD	172.7	37.28	33.05	28.07	117.3	218.7	4.196

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2469	0.2373	-0.0089	-0.0171	0.0762	-0.0339
Run 2	0.2443	0.1944	-0.0014	-0.0211	-0.1466	-0.0253
Run 3	0.2097	0.2004	0.0066	-0.0187	0.1327	0.0026
Mean	0.2336	0.2107	-0.0012	-0.0190	0.0208	-0.0188
Std Dev	0.0208	0.0232	0.0078	0.0020	0.1476	0.0191
%SD	8.901	11.02	628.3	10.79	711.5	101.3

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0016	0.0182	-0.0026	0.0023	0.0024	-0.0025
Run 2	0.0087	0.0071	0.0007	0.0152	0.0058	-0.0016
Run 3	0.0052	0.0103	-0.0028	0.0049	0.0064	-0.0013
Mean	0.0041	0.0119	-0.0016	0.0075	0.0048	-0.0018
Std Dev	0.0053	0.0057	0.0020	0.0068	0.0021	0.0006
%SD	128.4	48.32	127.4	91.76	44.18	34.02

8/19 METHOD BLANK

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0058	0.0015	-0.0001	0.0011	-0.0031	-0.0023
Run 2	0.0032	0.0031	-0.0029	-0.0052	-0.0051	-0.0035
Run 3	0.0048	0.0046	-0.0026	-0.0011	-0.0034	-0.0031
Mean	0.0046	0.0030	-0.0019	-0.0017	-0.0039	-0.0030
Std Dev	0.0013	0.0016	0.0015	0.0032	0.0011	0.0006
%SD	28.30	51.48	82.01	184.5	27.60	20.74

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0016	-0.0050	-0.0029	-0.0057
Run 2	-0.0025	-0.0036	-0.0062	-0.0043
Run 3	-0.0018	-0.0056	-0.0046	-0.0040
Mean	-0.0020	-0.0047	-0.0045	-0.0047
Std Dev	0.0005	0.0010	0.0016	0.0009
%SD	24.14	21.82	36.13	19.24

$419 method

Internal Standard Drift% relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.0	101.6	99.97	94.70
Run 2	104.0	103.1	100.4	94.88
Run 3	104.2	101.9	98.83	93.06
Mean	104.1	102.2	99.74	94.21
Std Dev	0.1340	0.7540	0.8178	1.003

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #8
First repeat started at : Mon Nov 24 2003 11:58:49
Last repeat started at : Mon Nov 24 2003 12:00:28
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0017	0.5754	9.749	20.60	288.1	1.905	5.421
Run 2	0.0030	0.5962	9.251	21.38	275.1	1.955	5.457
Run 3	0.0047	0.5936	9.092	18.91	277.0	2.005	5.350
Mean	0.0032	0.5884	9.364	20.29	280.0	1.955	5.409
Std Dev	0.0015	0.0113	0.3427	1.261	7.017	0.0501	0.0545
%SD	48.37	1.926	3.659	6.216	2.506	2.565	1.008

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.239	7.403	1.349	3.700	8.842	2.579
Run 2	8.861	7.763	1.386	4.109	9.460	2.807
Run 3	9.143	7.457	1.432	4.036	8.556	2.915
Mean	9.081	7.541	1.389	3.948	8.952	2.767
Std Dev	0.1967	0.1938	0.0415	0.2182	0.4618	0.1718
%SD	2.166	2.570	2.989	5.525	5.158	6.209

8419-4 TOTAL

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.417	3.573	3.543	0.1719	0.1333	0.1212
Run 2	3.720	3.407	3.756	0.1650	0.1396	0.1176
Run 3	3.850	3.480	3.639	0.1728	0.1284	0.1319
Mean	3.662	3.486	3.646	0.1699	0.1338	0.1235
Std Dev	0.2221	0.0832	0.1065	0.0043	0.0056	0.0075
%SD	6.064	2.387	2.922	2.506	4.197	6.041

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3031	0.2972	84.49	85.17	88.00	0.0238
Run 2	0.3038	0.2991	87.26	86.26	86.06	0.0199
Run 3	0.2911	0.3067	89.60	86.23	86.17	0.0212
Mean	0.2993	0.3010	87.12	85.89	86.75	0.0216
Std Dev	0.0072	0.0050	2.561	0.6164	1.088	0.0020
%SD	2.389	1.667	2.939	0.7177	1.254	9.163

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0188	0.3353	0.3642	0.3607
Run 2	0.0201	0.3027	0.3485	0.3523
Run 3	0.0195	0.3516	0.3357	0.3525
Mean	0.0195	0.3298	0.3495	0.3551
Std Dev	0.0006	0.0249	0.0142	0.0048
%SD	3.258	7.556	4.074	1.354

8419-4 tom

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.2	74.29	74.96	82.25
Run 2	98.96	73.02	75.09	83.37
Run 3	100.2	74.57	75.36	80.88
Mean	99.77	73.96	75.13	82.17
Std Dev	0.7078	0.8217	0.2033	1.247

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #9
First repeat started at : Mon Nov 24 2003 12:01:32
Last repeat started at : Mon Nov 24 2003 12:03:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0037	0.7799	9.031	19.98	263.6	1.861	5.520
Run 2	0.0033	0.7706	8.913	20.42	275.8	2.187	5.402
Run 3	0.0029	0.7868	9.240	20.80	263.3	2.121	5.502
Mean	0.0033	0.7791	9.061	20.40	267.5	2.056	5.475
Std Dev	0.0004	0.0081	0.1652	0.4110	7.119	0.1723	0.0634
%SD	12.95	1.039	1.823	2.015	2.661	8.379	1.158

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.305	7.701	1.399	4.340	9.092	3.069
Run 2	9.263	7.619	1.414	4.102	8.290	2.797
Run 3	9.006	7.565	1.445	4.034	8.316	2.938
Mean	9.191	7.628	1.419	4.159	8.566	2.935
Std Dev	0.1618	0.0685	0.0233	0.1609	0.4555	0.1363
%SD	1.760	0.8979	1.643	3.870	5.318	4.645

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.479	3.833	3.769	0.1730	0.1332	0.1368
Run 2	3.673	3.718	3.498	0.1708	0.1367	0.1183
Run 3	3.308	3.652	3.465	0.1674	0.1121	0.1181
Mean	3.487	3.734	3.578	0.1704	0.1273	0.1244
Std Dev	0.1826	0.0913	0.1670	0.0028	0.0133	0.0107
%SD	5.237	2.445	4.669	1.648	10.47	8.607

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2798	0.2959	86.81	85.94	89.37	0.0165
Run 2	0.2879	0.3055	86.16	88.76	88.20	0.0206
Run 3	0.2663	0.2950	84.35	82.51	81.10	0.0143
Mean	0.2780	0.2988	85.78	85.74	86.22	0.0171
Std Dev	0.0109	0.0058	1.274	3.131	4.476	0.0032
%SD	3.933	1.943	1.485	3.652	5.191	18.64

Element	Thallium	Lead	Lead	Lead
				Pb 208

8419-4D-P
10 ppb

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0192	0.3334	0.3214	0.3500
Run 2	0.0169	0.3310	0.3500	0.3387
Run 3	0.0208	0.3529	0.4133	0.4323
Mean	0.0190	0.3391	0.3615	0.3737
Std Dev	0.0019	0.0120	0.0470	0.0511
%SD	10.19	3.537	13.01	13.68

8419-40 P
TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.54	73.48	73.98	83.28
Run 2	100.2	74.21	76.76	81.59
Run 3	100.8	74.64	78.07	80.22
Mean	100.2	74.11	76.27	81.70
Std Dev	0.6396	0.5849	2.089	1.531

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #10
First repeat started at : Mon Nov 24 2003 12:04:25
Last repeat started at : Mon Nov 24 2003 12:06:02
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	17.31	21.33	29.76	40.35	280.0	21.13	25.59
Run 2	16.88	21.31	30.21	41.32	296.1	20.86	25.45
Run 3	17.01	21.16	29.59	39.22	283.5	20.49	24.54
Mean	17.07	21.27	29.86	40.30	286.5	20.82	25.19
Std Dev	0.2192	0.0955	0.3172	1.049	8.479	0.3210	0.5702
%SD	1.284	0.4489	1.063	2.602	2.959	1.542	2.263

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	29.96	27.45	26.08	27.20	32.15	25.75
Run 2	29.33	27.52	26.02	27.38	31.51	25.35
Run 3	28.41	26.62	25.44	26.23	30.40	25.35
Mean	29.23	27.20	25.84	26.94	31.36	25.49
Std Dev	0.7794	0.5024	0.3549	0.6158	0.8846	0.2312
%SD	2.666	1.847	1.373	2.286	2.821	0.9073

$419-450K
ppbc

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.06	24.38	24.86	19.06	18.80	19.02
Run 2	26.96	27.47	27.93	19.61	19.54	19.54
Run 3	28.10	27.74	27.36	20.08	19.89	19.69
Mean	26.71	26.53	26.72	19.58	19.41	19.42
Std Dev	1.536	1.866	1.633	0.5094	0.5548	0.3502
%SD	5.753	7.033	6.110	2.601	2.858	1.803

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.18	20.61	104.3	101.3	102.0	16.87
Run 2	20.71	21.48	107.3	107.6	107.2	15.61
Run 3	20.66	21.82	110.9	112.7	106.6	17.32
Mean	20.85	21.30	107.5	107.2	105.3	16.60
Std Dev	0.2860	0.6276	3.311	5.736	2.881	0.8859
%SD	1.372	2.946	3.081	5.351	2.737	5.337

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	16.21	15.37	15.52	15.53
Run 2	16.35	15.37	15.43	16.02
Run 3	17.18	16.10	17.04	16.39
Mean	16.58	15.61	16.00	15.98
Std Dev	0.5254	0.4212	0.9043	0.4323
%SD	3.169	2.698	5.653	2.706

8449-45PK TOTAL

Internal Standard Drift; % relative to mean of first sample =

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.18	71.11	76.32	79.49
Run 2	99.56	71.63	74.42	77.85
Run 3	100.1	74.11	72.36	76.51
Mean	99.63	72.28	74.37	77.95
Std Dev	0.4885	1.602	1.979	1.491

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #11
First repeat started at : Mon Nov 24 2003 12:07:18
Last repeat started at : Mon Nov 24 2003 12:08:57
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	20.79	20.02	20.40	19.99	29.90	19.93	21.23
Run 2	20.52	19.63	19.90	19.76	32.90	19.53	21.09
Run 3	20.36	19.98	20.26	20.27	27.95	19.68	21.09
Mean	20.56	19.88	20.19	20.00	30.25	19.71	21.13
Std Dev	0.2176	0.2191	0.2568	0.2563	2.495	0.2011	0.0837
%SD	1.058	1.102	1.272	1.281	8.247	1.020	0.3960

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.83	20.76	20.73	20.79	22.63	21.44
Run 2	21.44	20.78	20.59	20.90	22.33	20.84
Run 3	21.54	21.22	20.70	20.93	22.12	21.09
Mean	21.60	20.92	20.67	20.87	22.36	21.12
Std Dev	0.2003	0.2625	0.0744	0.0698	0.2574	0.2998
%SD	0.9274	1.254	0.3599	0.3346	1.151	1.420

8/19
LSW

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	19.44	19.22	19.44	20.56	20.59	20.49
Run 2	18.93	18.43	18.53	20.36	20.35	20.57
Run 3	19.80	20.24	20.62	20.93	20.91	20.62
Mean	19.39	19.30	19.53	20.62	20.62	20.56
Std Dev	0.4360	0.9032	1.047	0.2868	0.2816	0.0663
%SD	2.248	4.680	5.360	1.391	1.366	0.3227

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	20.19	21.04	20.88	20.78	20.54	21.43
Run 2	20.39	19.94	20.91	20.72	20.73	20.92
Run 3	20.27	21.27	20.29	20.87	21.24	22.52
Mean	20.28	20.75	20.70	20.79	20.84	21.63
Std Dev	0.1015	0.7125	0.3468	0.0776	0.3589	0.8196
%SD	0.5002	3.433	1.676	0.3732	1.722	3.790

Element	Thallium	Lead	Lead	Lead
	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	21.98	21.79	21.22	21.58
Run 2	21.86	20.94	21.05	20.90
Run 3	21.42	20.89	21.89	21.60
Mean	21.75	21.21	21.38	21.36
Std Dev	0.2906	0.5067	0.4466	0.3984
%SD	1.336	2.389	2.088	1.865

4419 csw

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.0	98.65	93.47	84.20
Run 2	102.8	98.61	94.88	86.63
Run 3	101.9	98.10	93.06	83.43
Mean	102.6	98.45	93.80	84.75
Std Dev	0.5655	0.3033	0.9574	1.668

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #12
First repeat started at : Mon Nov 24 2003 12:13:20
Last repeat started at : Mon Nov 24 2003 12:14:56
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0074	0.6462	8.758	21.88	259.5	1.618	5.629
Run 2	0.0056	0.6602	8.974	21.01	271.5	1.950	5.780
Run 3	0.0072	0.7011	9.373	20.10	266.4	1.814	5.759
Mean	0.0067	0.6692	9.035	20.99	265.8	1.794	5.723
Std Dev	0.0010	0.0285	0.3124	0.8889	6.028	0.1670	0.0816
%SD	14.48	4.262	3.458	4.234	2.267	9.311	1.425

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.295	7.784	1.373	4.341	7.818	2.897
Run 2	8.783	7.630	1.424	4.129	7.528	2.810
Run 3	9.275	7.812	1.466	4.172	7.820	3.057
Mean	9.118	7.742	1.421	4.214	7.722	2.921
Std Dev	0.2900	0.0981	0.0466	0.1118	0.1680	0.1252
%SD	3.181	1.267	3.277	2.654	2.175	4.285

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.538	3.532	3.544	0.1655	0.1243	0.1292
Run 2	3.686	3.970	3.670	0.1762	0.1311	0.1286
Run 3	3.731	3.620	3.488	0.1720	0.1319	0.1143
Mean	3.652	3.707	3.567	0.1712	0.1291	0.1240
Std Dev	0.1014	0.2314	0.0933	0.0054	0.0042	0.0084
%SD	2.775	6.240	2.617	3.135	3.226	6.758

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3064	0.3393	87.16	85.30	82.65	0.0100
Run 2	0.3040	0.3170	84.97	86.28	88.86	0.0195
Run 3	0.2881	0.3393	86.34	84.68	82.70	0.0151
Mean	0.2995	0.3319	86.16	85.42	84.74	0.0149
Std Dev	0.0100	0.0129	1.107	0.8088	3.570	0.0048
%SD	3.323	3.881	1.285	0.9469	4.213	32.13

Element	Thallium	Lead	Lead	Lead

8419-5 TOTAL

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0167	0.2886	0.3107	0.2939
Run 2	0.0183	0.2882	0.2875	0.2906
Run 3	0.0211	0.2524	0.3370	0.2884
Mean	0.0187	0.2764	0.3118	0.2910
Std Dev	0.0022	0.0208	0.0248	0.0028
%SD	11.95	7.525	7.942	0.9512

8419-5 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.8	74.29	76.28	80.19
Run 2	101.1	74.77	73.15	80.52
Run 3	101.4	74.33	76.01	80.96
Mean	101.1	74.46	75.15	80.56
Std Dev	0.2786	0.2680	1.733	0.3836

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #13
First repeat started at : Mon Nov 24 2003 12:16:08
Last repeat started at : Mon Nov 24 2003 12:17:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0043	0.5891	9.476	21.21	281.3	1.696	5.930
Run 2	0.0034	0.5585	9.275	21.38	256.8	1.614	5.638
Run 3	0.0046	0.5910	9.472	20.42	265.7	1.705	5.693
Mean	0.0041	0.5796	9.408	21.00	267.9	1.672	5.754
Std Dev	0.0006	0.0182	0.1147	0.5143	12.40	0.0497	0.1552
%SD	14.44	3.144	1.219	2.449	4.628	2.974	2.697

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.285	7.664	1.432	4.462	7.608	3.156
Run 2	9.209	7.679	1.448	4.388	7.692	3.139
Run 3	8.960	7.697	1.342	4.522	6.800	2.970
Mean	9.151	7.680	1.407	4.457	7.367	3.088
Std Dev	0.1697	0.0164	0.0571	0.0673	0.4924	0.1029
%SD	1.855	0.2139	4.056	1.510	6.684	3.331

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.267	3.290	3.447	0.1868	0.1365	0.1232
Run 2	3.404	3.606	3.326	0.1907	0.1469	0.1384
Run 3	3.641	3.595	3.460	0.1845	0.1264	0.1309
Mean	3.438	3.497	3.411	0.1873	0.1366	0.1309
Std Dev	0.1888	0.1795	0.0742	0.0032	0.0103	0.0076
%SD	5.493	5.133	2.175	1.684	7.509	5.798

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2649	0.2771	86.84	85.89	85.77	0.0211
Run 2	0.3095	0.2791	88.06	86.92	86.98	0.0236
Run 3	0.2788	0.2779	86.07	86.02	84.80	0.0169
Mean	0.2844	0.2780	86.99	86.28	85.85	0.0205
Std Dev	0.0228	0.0010	0.9997	0.5604	1.091	0.0034
%SD	8.032	0.3554	1.149	0.6496	1.271	16.49

Element	Thallium	Lead	Lead	Lead

8419.6

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0176	0.2241	0.2576	0.2362
Run 2	0.0152	0.1946	0.2169	0.2149
Run 3	0.0181	0.1945	0.2232	0.2047
Mean	0.0170	0.2044	0.2326	0.2186
Std Dev	0.0015	0.0171	0.0219	0.0161
%SD	9.053	8.355	9.435	7.346

#419-6 tonic

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.8	73.28	76.24	72.38
Run 2	100.3	73.83	73.66	78.47
Run 3	101.7	75.03	76.05	77.67
Mean	101.3	74.05	75.32	76.17
Std Dev	0.8523	0.8928	1.437	3.306

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #14
First repeat started at : Mon Nov 24 2003 12:19:06
Last repeat started at : Mon Nov 24 2003 12:20:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0037	0.5743	8.925	20.41	268.4	1.904	4.433
Run 2	0.0052	0.5658	8.519	21.39	255.3	1.657	4.246
Run 3	0.0024	0.5653	8.658	18.80	276.8	1.777	4.190
Mean	0.0038	0.5685	8.701	20.20	266.8	1.779	4.290
Std Dev	0.0014	0.0050	0.2065	1.307	10.84	0.1234	0.1273
%SD	37.38	0.8874	2.374	6.473	4.064	6.935	2.968

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.366	6.552	1.426	4.332	7.681	2.992
Run 2	7.580	6.523	1.403	4.163	7.045	2.820
Run 3	7.628	6.317	1.357	4.264	6.677	2.955
Mean	7.858	6.464	1.395	4.253	7.134	2.923
Std Dev	0.4408	0.1281	0.0352	0.0848	0.5084	0.0903
%SD	5.610	1.982	2.525	1.994	7.126	3.088

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.467	3.251	3.368	0.1822	0.1202	0.1276
Run 2	3.368	3.253	3.244	0.1597	0.1222	0.1212
Run 3	3.435	3.316	3.436	0.1528	0.1140	0.1061
Mean	3.423	3.273	3.350	0.1649	0.1188	0.1183
Std Dev	0.0504	0.0368	0.0973	0.0154	0.0043	0.0110
%SD	1.472	1.123	2.905	9.319	3.585	9.328

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3065	0.2976	89.34	88.18	90.35	0.0155
Run 2	0.2691	0.3068	87.96	88.55	89.44	0.0164
Run 3	0.2814	0.3095	88.30	90.05	91.03	0.0130
Mean	0.2856	0.3046	88.53	88.93	90.27	0.0150
Std Dev	0.0190	0.0062	0.7203	0.9909	0.7995	0.0018
%SD	6.666	2.051	0.8136	1.114	0.8856	11.77

Element	Thallium	Lead	Lead	Lead

8419-1 Total

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0165	0.2803	0.2980	0.2779
Run 2	0.0142	0.2681	0.3046	0.2812
Run 3	0.0240	0.2570	0.2758	0.2804
Mean	0.0183	0.2685	0.2928	0.2798
Std Dev	0.0051	0.0117	0.0151	0.0017
%SD	28.17	4.347	5.158	0.6173

8419-1 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.9	71.12	72.71	77.27
Run 2	101.0	73.76	75.29	76.91
Run 3	99.59	73.62	75.56	78.32
Mean	100.5	72.84	74.52	77.50
Std Dev	0.8021	1.485	1.570	0.7354

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #15
First repeat started at : Mon Nov 24 2003 12:22:01
Last repeat started at : Mon Nov 24 2003 12:23:39
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.11	25.25	25.68	25.35	35.20	25.15	25.10
Run 2	24.71	24.65	25.19	25.20	38.40	25.17	25.15
Run 3	25.27	24.98	25.40	25.19	40.09	24.71	24.97
Mean	25.03	24.96	25.42	25.25	37.90	25.01	25.08
Std Dev	0.2887	0.2989	0.2477	0.0879	2.483	0.2606	0.0893
%SD	1.153	1.197	0.9744	0.3481	6.551	1.042	0.3562

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.69	25.01	25.10	24.98	24.99	25.29
Run 2	25.13	24.70	24.95	25.05	25.29	25.30
Run 3	25.64	25.00	25.02	25.24	24.73	25.63
Mean	25.49	24.91	25.02	25.09	25.00	25.41
Std Dev	0.3105	0.1744	0.0776	0.1351	0.2816	0.1936
%SD	1.218	0.7002	0.3100	0.5385	1.126	0.7619

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.46	24.05	25,04	25.10	25.11	24.99
Run 2	24.45	23.03	24.63	24.96	24.91	25.17
Run 3	24.91	23.99	26.37	25.29	24.86	25.65
Mean	24.94	23.69	25.35	25.11	24.96	25.27
Std Dev	0.5049	0.5727	0.9092	0.1650	0.1315	0.3403
%SD	2.025	2.417	3.587	0.6569	0.5269	1.347

CCV 11-24-03

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.94	24.88	25.05	26.41	25.92	26.40
Run 2	24.51	25.29	25.49	25.60	25.43	26.02
Run 3	24.76	23.90	24.74	25.94	25.07	28.10
Mean	24.73	24.69	25.10	25.98	25.47	26.84
Std Dev	0.2137	0.7144	0.3744	0.4083	0.4292	1.104
%SD	0.8641	2.894	1.492	1.571	1.685	4.114

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	26.20	26.48	25.66	26.06
Run 2	26.72	24.85	26.57	25.74
Run 3	26.72	25.47	25.74	27.15
Mean	26.55	25.60	25.99	26.32
Std Dev	0.3021	0.8202	0.5008	0.7354
%SD	1.138	3.204	1.927	2.794

CLV 4-23-6

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.2	101.1	97.63	87.25
Run 2	104.3	100.3	97.51	88.65
Run 3	104.4	100.2	95.18	85.33
Mean	104.3	100.5	96.77	87.07
Std Dev	0.1125	0.5011	1.382	1.668

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #16
First repeat started at : Mon Nov 24 2003 12:25:26
Last repeat started at : Mon Nov 24 2003 12:27:05
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	9.691	60.06	92.96	98.58	63.91	88.37	30.58
Run 2	9.246	64.15	98.36	101.6	52.28	105.4	34.37
Run 3	0.0922	1.353	2.079	2.412	-5.214	2.532	1.103
Mean	6.343	41.85	64.47	67.54	36.99	65.43	22.02
Std Dev	5.418	35.13	54.10	56.43	37.01	55.13	18.21
%SD	85.41	83.95	83.91	83.54	100.0	84.26	82.71

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	44.79	38.14	156.6	180.6	5472	233.6
Run 2	56.28	35.76	199.6	180.7	6389	236.1
Run 3	1.718	1.077	2.378	0.576	47.15	1.389
Mean	34.26	24.99	119.5	121.0	3969	157.0
Std Dev	28.77	20.74	103.7	103.4	3428	134.8
%SD	83.95	83.01	86.77	85.47	86.35	85.84

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	344.3	285.3	295.1	554.3	317.7	362.5
Run 2	240.6	277.3	238.1	654.5	338.6	425.4
Run 3	0.4117	0.5915	0.4214	0.9175	0.5131	0.5399
Mean	195.1	187.7	177.9	403.3	218.9	262.8
Std Dev	176.4	162.1	156.3	352.0	189.5	229.3
%SD	90.41	86.36	87.87	87.29	86.53	87.25

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	428.1	478.8	181.6	101.2	56.77	108.1
Run 2	323.9	337.5	142.5	99.60	76.90	115.9
Run 3	0.3317	0.4109	0.0769	0.1090	0.0716	0.0825
Mean	250.8	272.3	108.1	66.97	44.58	74.70
Std Dev	223.0	245.8	95.54	57.91	39.84	64.74
%SD	88.94	90.28	88.41	86.47	89.36	86.67

Element	Thallium	Lead	Lead	Lead
				DL .000

Sample tube in rinse solution no I.S.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	100.0	182.6	162.8	160.5
Run 2	81.86	131.5	187.4	157.8
Run 3	0.0648	0.0886	0.1713	0.1206
Mean	60.65	104.7	116.8	106.1
Std Dev	53.25	94.16	101.8	91.81
%SD	87.80	89.91	87.11	86.51

11/24/83

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	0.1496	0.8393	0.0314	0.0146
Run 2	0.1466	0.9462	0.0296	0.0139
Run 3	12.36	16.40	17.16	16.31
Mean	4.218	6.062	5.741	5.448
Std Dev	7.049	8.954	9.891	9.411

Internal Standard Drift outside drift window.
Failed isotopes = Li 6Ga 71In 115Lu 175
Specified action is to continue with procedure.

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #17
First repeat started at : Mon Nov 24 2003 12:28:07
Last repeat started at : Mon Nov 24 2003 12:29:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0040	0.0006	0.0963	-0.0897	8.037	-0.1640	0.0071
Run 2	0.0039	0.0023	0.0675	-0.1086	7.669	-0.0846	-0.0074
Run 3	0.0053	-0.0029	0.0607	-0.0768	12.51	-0.0403	0.0159
Mean	0.0044	0.0000	0.0749	-0.0917	9.405	-0.0963	0.0052
Std Dev	0.0008	0.0026	0.0189	0.0160	2.694	0.0627	0.0118
%SD	17.78	32162	25.25	17.49	28.65	65.05	226.2

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0483	0.0039	0.0246	0.0112	-0.0032	0.0637
Run 2	0.0597	0.0002	0.0324	0.0109	0.1066	0.0977
Run 3	0.1090	0.0056	0.0283	0.0074	0.2467	0.0899
Mean	0.0723	0.0032	0.0284	0.0098	0.1167	0.0838
Std Dev	0.0322	0.0028	0.0039	0.0021	0.1253	0.0179
%SD	44.55	86.45	13.66	21.43	107.3	21.31

CLB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0353	0.0454	0.0234	0.0177	0.0149	0.0059
Run 2	0.0435	0.0146	0.0206	0.0288	0.0118	0.0079
Run 3	0.0193	0.0277	0.0171	0.0300	0.0198	0.0088
Mean	0.0327	0.0292	0.0204	0.0255	0.0155	0.0075
Std Dev	0.0123	0.0155	0.0032	0.0068	0.0040	0.0015
%SD	37.55	52.90	15.50	26.61	25.93	19.80

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0394	0.0326	0.0037	0.0045	-0.0005	0.0015
Run 2	0.0213	0.0199	0.0061	0.0106	0.0005	0.0026
Run 3	0.0248	0.0228	-0.0007	0.0010	0.0005	0.0013
Mean	0.0285	0.0251	0.0030	0.0054	0.0002	0.0018
Std Dev	0.0096	0.0067	0.0035	0.0049	0.0006	0.0007
%SD	33.62	26.54	114.6	90.94	375.3	40.89

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0034	0.0042	0.0062	0.0034
Run 2	0.0008	0.0001	0.0029	0.0046
Run 3	0.0021	-0.0034	-0.0017	0.0001
Mean	0.0021	0.0003	0.0025	0.0027
Std Dev	0.0013	0.0038	0.0040	0.0023
%SD	60.21	1213	160.4	87.20

CCB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.6	99.49	97.56	85.16
Run 2	102.8	100.4	98.11	88.94
Run 3	103.0	99.65	96.42	89.42
Mean	102.8	99.85	97.36	87.84
Std Dev	0.1681	0.4944	0.8613	2.329

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #18
First repeat started at : Mon Nov 24 2003 12:32:03
Last repeat started at : Mon Nov 24 2003 12:33:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0027	0.4486	9.324	23.71	278.3	1.645	3.920
Run 2	0.0042	0.4745	8.688	22.10	287.7	1.543	3.844
Run 3	0.0031	0.4753	8.990	21.86	264.8	1.772	3.945
Mean	0.0034	0.4661	9.001	22.56	276.9	1.653	3.903
Std Dev	0.0008	0.0152	0.3184	1.004	11.46	0.1148	0.0524
%SD	23.25	3.258	3.537	4.452	4.140	6.942	1.344

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	7.899	5.885	1.310	4.056	6.999	2.735
Run 2	8.092	5.958	1.318	4.183	7.076	2.888
Run 3	7.568	5.872	1.312	4.213	7.429	2.800
Mean	7.853	5.905	1.313	4.151	7.168	2.808
Std Dev	0.2651	0.0464	0.0045	0.0831	0.2297	0.0766
%SD	3.375	0.7860	0.3402	2.001	3.205	2.729

8419-2 ppb

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.112	3.018	3.166	0.1490	0.1111	0.1019
Run 2	3.173	3.139	3.194	0.1677	0.1220	0.1139
Run 3	3.204	2.950	3.197	0.1597	0.1121	0.1041
Mean	3.163	3.036	3.186	0.1588	0.1151	0.1066
Std Dev	0.0468	0.0955	0.0170	0.0094	0.0061	0.0064
%SD	1.478	3.146	0.5327	5.927	5.263	5.968

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2985	0.2905	82.64	85.06	86.67	0.0253
Run 2	0.3015	0.2710	87.48	87.46	85.89	0.0212
Run 3	0.2808	0.2568	83.07	84.38	82.87	0.0251
Mean	0.2936	0.2728	84.40	85.63	85.14	0.0239
Std Dev	0.0112	0.0169	2.678	1.620	2.007	0.0023
%SD	3.808	6.212	3.173	1.892	2.358	9.772

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0248	0.1903	0.1716	0.1887
Run 2	0.0181	0.1494	0.1944	0.1688
Run 3	0.0202	0.1656	0.1690	0.1675
Mean	0.0210	0.1684	0.1784	0.1750
Std Dev	0.0034	0.0206	0.0140	0.0119
%SD	16.09	12.21	7.846	6.778

8419-2
TOPC

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.3	74.01	77.20	75.31
Run 2	101.9	74.26	74.32	78.03
Run 3	102.4	74.68	78.30	74.93
Mean	102.2	74.32	76.61	76.09
Std Dev	0.2943	0.3387	2.053	1.692

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #19
First repeat started at : Mon Nov 24 2003 12:35:14
Last repeat started at : Mon Nov 24 2003 12:36:51
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0050	0.7109	9.323	21.48	275.0	1.924	4.829
Run 2	0.0043	0.7175	9.875	24.75	287.0	1.657	4.763
Run 3	0.0049	0.6828	9.500	23.42	269.4	1.719	4.716
Mean	0.0047	0.7037	9.566	23.22	277.1	1.767	4.769
Std Dev	0.0004	0.0184	0.2820	1.640	9.004	0.1398	0.0569
%SD	8.017	2.619	2.948	7.065	3.249	7.914	1.194

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.409	6.979	1.496	4.553	7.506	3.117
Run 2	8.524	7.093	1.527	4.426	7.281	3.099
Run 3	8.588	6.619	1.547	4.493	7.366	3.299
Mean	8.507	6.897	1.523	4.491	7.384	3.172
Std Dev	0.0910	0.2473	0.0256	0.0637	0.1136	0.1107
%SD	1.070	3.586	1.684	1.418	1.538	3.490

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.423	3.293	3.478	0.1788	0.1245	0.1295
Run 2	3.705	3.373	3.661	0.1911	0.1377	0.1304
Run 3	3.510	3.386	3.291	0.1862	0.1255	0.1158
Mean	3.546	3.350	3.477	0.1854	0.1293	0.1252
Std Dev	0.1443	0.0504	0.1851	0.0062	0.0073	0.0082
%SD	4.069	1.505	5.323	3.344	5.675	6.562

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3132	0.2911	85.12	88.13	83.62	0.0238
Run 2	0.2725	0.2834	88.07	91.71	89.28	0.0248
Run 3	0.2854	0.2906	86.87	87.82	86.42	0.0182
Mean	0.2904	0.2884	86.69	89.22	86.44	0.0223
Std Dev	0.0208	0.0043	1.482	2.165	2.833	0.0036
%SD	7.175	1.493	1.710	2.427	3.277	16.11

Element	Thallium	Lead	Lead	Lead

419-3 Total

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0178	0.3902	0.3916	0.4127
Run 2	0.0179	0.3637	0.4031	0.4015
Run 3	0.0170	0.3793	0.4024	0.3970
Mean	0.0176	0.3777	0.3990	0.4037
Std Dev	0.0005	0.0133	0.0064	0.0081
%SD	2.886	3.526	1.612	2.002

8419-3 total

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.1	72.40	77.84	74.31
Run 2	101.9	72.18	72.77	74.70
Run 3	101.3	72.80	75.02	77.14
Mean	101.5	72.46	75.21	75.39
Std Dev	0.4088	0.3120	2.537	1.533

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #20
First repeat started at : Mon Nov 24 2003 12:37:55
Last repeat started at : Mon Nov 24 2003 12:39:32
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0093	0.7798	9.944	22.27	274.9	2.129	10.61
Run 2	0.0110	0.8027	9.670	24.28	268.7	2.021	10.78
Run 3	0.0091	0.7851	9.355	24.14	296.5	2.041	10.86
Mean	0.0098	0.7892	9.656	23.56	280.0	2.064	10.75
Std Dev	0.0011	0.0120	0.2949	1.120	14.58	0.0576	0.1288
%SD	10.72	1.519	3.054	4.754	5.209	2.792	1.198

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	13.42	12.43	1.529	4.773	7.236	3.212
Run 2	13.86	12.63	1.553	4.887	7.754	3.215
Run 3	13.58	12.90	1.545	4.804	7.206	3.141
Mean	13.62	12.65	1.543	4.821	7.399	3.189
Std Dev	0.2245	0.2377	0.0126	0.0590	0.3082	0.0417
%SD	1.648	1.879	0.8151	1.223	4.165	1.306

8419-8 TOSC

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.216	3.403	3.502	0.2022	0.1570	0.1598
Run 2	3.306	3.231	3.192	0.1966	0.1668	0.1561
Run 3	3.146	3.352	3.329	0.2018	0.1569	0.1629
Mean	3.223	3.329	3.341	0.2002	0.1603	0.1596
Std Dev	0.0803	0.0883	0.1556	0.0031	0.0057	0.0034
%SD	2.491	2.652	4.658	1.563	3.558	2.135

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2730	0.2961	88.71	90.79	93.87	0.0160
Run 2	0.2801	0.2616	87.95	88.14	87.06	0.0133
Run 3	0.2709	0.2921	89.16	90.93	90.93	0.0176
Mean	0.2747	0.2833	88.61	89.95	90.62	0.0156
Std Dev	0.0048	0.0188	0.6090	1.573	3.413	0.0022
%SD	1.750	6.651	0.6873	1.748	3.766	13.82

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0204	0.9898	1.055	1.044
Run 2	0.0135	0.9923	1.084	1.060
Run 3	0.0157	1.029	1.033	1.030
Mean	0.0165	1.004	1.057	1.045
Std Dev	0.0035	0.0217	0.0257	0.0154
%SD	21.19	2.167	2.428	1.476

8419-8 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.9	72.03	73.80	71.32
Run 2	100.0	70.35	75.87	76.02
Run 3	101.0	71.07	74.41	75.70
Mean	100.6	71.15	74.69	74.35
Std Dev	0.5181	0.8398	1.063	2.624

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #21
First repeat started at : Mon Nov 24 2003 12:40:35
Last repeat started at : Mon Nov 24 2003 12:42:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0031	0.5590	9.012	22.90	291.1	1.758	4.775
Run 2	0.0025	0.5663	9.005	20.89	276.0	1.651	4.788
Run 3	0.0029	0.5756	9.143	20.86	277.3	1.646	4.756
Mean	0.0028	0.5670	9.053	21.55	281.5	1.685	4.773
Std Dev	0.0003	0.0083	0.0775	1.170	8.387	0.0633	0.0162
%SD	10.75	1.466	0.8565	5.428	2.980	3.753	0.3401

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.479	6.820	1.450	4.709	6.953	3.208
Run 2	8.100	6.688	1.508	4.426	6.411	3.196
Run 3	8.436	6.771	1.406	4.638	6.007	3.125
Mean	8.338	6.760	1.455	4.591	6.457	3.176
Std Dev	0.2071	0.0669	0.0511	0.1470	0.4747	0.0450
%SD	2.484	0.9890	3.514	3.202	7.352	1.415

8419-9 for rec

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.324	3.535	3.385	0.1703	0.1386	0.1338
Run 2	3.396	3.295	3.480	0.1690	0.1193	0.1293
Run 3	3.623	3.477	3.569	0.1752	0.1333	0.1308
Mean	3.447	3.436	3.478	0.1715	0.1304	0.1313
Std Dev	0.1559	0.1257	0.0917	0.0033	0.0100	0.0023
%SD	4.523	3.658	2.637	1.901	7.663	1.773

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2495	0.2889	87.83	90.07	88.55	0.0205
Run 2	0.2610	0.2925	83.62	82.92	85.45	0.0156
Run 3	0.2724	0.2582	87.35	85.57	86.52	0.0228
Mean	0.2609	0.2799	86.27	86.19	86.84	0.0196
Std Dev	0.0115	0.0189	2.309	3.616	1.575	0.0037
%SD	4.398	6.742	2.676	4.195	1.814	18.87

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0158	0.1464	0.1797	0.1629
Run 2	0.0149	0.1498	0.1902	0.1695
Run 3	0.0190	0.1492	0.1613	0.1609
Mean	0.0166	0.1485	0.1771	0.1644
Std Dev	0.0021	0.0018	0.0146	0.0045
%SD	12.87	1.219	8.266	2.722

SM19-9 TOTAL

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.0	71.73	74.32	74.00
Run 2	101.3	73.18	76.52	75.98
Run 3	101.1	73.56	73.39	76.70
Mean	101.1	72.82	74.74	75.56
Std Dev	0.1786	0.9662	1.610	1.398

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #22
First repeat started at : Mon Nov 24 2003 12:43:37
Last repeat started at : Mon Nov 24 2003 12:45:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0145	0.8872	9.188	21.39	262.0	1.838	12.45
Run 2	0.0174	0.8812	9.349	22.10	256.8	2.213	12.54
Run 3	0.0157	0.8766	8.643	21.24	258.1	2.093	12.23
Mean	0.0159	0.8817	9.060	21.58	259.0	2.048	12.41
Std Dev	0.0015	0.0053	0.3697	0.4592	2.729	0.1914	0.1591
%SD	9.362	0.6013	4.080	2.128	1.054	9.349	1.282

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	14.92	14.38	1.555	4.805	6.365	3.088
Run 2	14.47	14.35	1.625	4.602	5.835	3.104
Run 3	15.39	14.35	1.551	4.833	5.843	3.128
Mean	14.93	14.36	1.577	4.747	6.014	3.107
Std Dev	0.4645	0.0145	0.0415	0.1261	0.3040	0.0204
%SD	3.112	0.1011	2.632	2.656	5.054	0.6574

8/19-10 Tonic

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.156	3.161	3.257	0.2350	0.1832	0.1922
Run 2	3.313	3.005	3.141	0.2259	0.1980	0.1855
Run 3	3.365	3.475	3.243	0.2325	0.1977	0.2018
Mean	3.278	3.214	3.214	0.2311	0.1930	0.1932
Std Dev	0.1087	0.2396	0.0631	0.0047	0.0084	0.0082
%SD	3.316	7.455	1.965	2.035	4.378	4.240

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2889	0.2996	88.09	87.68	91.13	0.0189
Run 2	0.2991	0.3324	89.47	87.09	86.26	0.0159
Run 3	0.2945	0.3087	89.43	88.49	88.15	0.0183
Mean	0.2941	0.3135	89.00	87.75	88.51	0.0177
Std Dev	0.0051	0.0169	0.7835	0.7002	2.453	0.0016
%SD	1.734	5.402	0.8803	0.7979	2.771	8.778

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0197	2.124	2.351	2.282
Run 2	0.0170	2.283	2.285	2.296
Run 3	0.0249	2.208	2.413	2.310
Mean	0.0205	2.205	2.349	2.296
Std Dev	0.0040	0.0793	0.0636	0.0143
%SD	19.61	3.597	2.708	0.6214

8419-10 tom

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.2	73.14	74.25	78.31
Run 2	100.4	73.15	76.09	77.18
Run 3	101.8	73.31	73.06	76.89
Mean	100.8	73.20	74.47	77.46
Std Dev	0.8828	0.0971	1.524	0.7474

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #23
First repeat started at : Mon Nov 24 2003 12:46:45
Last repeat started at : Mon Nov 24 2003 12:48:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0030	0.5967	8.872	22.27	263.6	2.125	7.185
Run 2	0.0018	0.6018	8.447	21.76	247.3	1.921	7.052
Run 3	0.0008	0.5845	8.832	23.45	285.3	2.170	7.264
Mean	0.0019	0.5943	8.717	22.49	265.4	2.072	7.167
Std Dev	0.0011	0.0089	0.2348	0.8671	19.09	0.1328	0.1069
%SD	56.86	1.503	2.694	3.855	7.191	6.409	1.491

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	10.68	9.178	1.369	4.359	5.301	2.947
Run 2	10.10	9.198	1.368	4.185	5.194	2.971
Run 3	10.75	9.472	1.316	4.390	5.294	2.913
Mean	10.51	9.283	1.351	4.311	5.263	2.944
Std Dev	0.3575	0.1642	0.0300	0.1106	0.0601	0.0290
%SD	3.401	1.769	2.222	2.566	1.141	0.9863

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.222	3.328	3.136	0.2153	0.1410	0.1504
Run 2	3.157	3.151	3.189	0.1878	0.1384	0.1291
Run 3	3.302	3.438	3.646	0.2051	0.1490	0.1450
Mean	3.227	3.305	3.324	0.2027	0.1428	0.1415
Std Dev	0.0729	0.1450	0.2803	0.0139	0.0055	0.0111
%SD	2.260	4.386	8.432	6.865	3.848	7.828

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2995	0.3083	87.43	86.79	85.02	0.0158
Run 2	0.2396	0.2623	88.90	86.06	86.38	0.0159
Run 3	0.2886	0.3098	87.23	85.97	91.31	0.0120
Mean	0.2759	0.2935	87.85	86.28	87.57	0.0145
Std Dev	0.0319	0.0270	0.9131	0.4508	3.307	0.0022
%SD	11.57	9.191	1.039	0.5225	3.777	15.08

Element	Thallium	Lead	Lead

8419-1 DISS.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0135	0.0898	0.1049	0.1018
Run 2	0.0174	0.1049	0.1416	0.1194
Run 3	0.0171	0.1018	0.0939	0.1107
Mean	0.0160	0.0989	0.1134	0.1107
Std Dev	0.0022	0.0080	0.0250	0.0088
%SD	13.58	8.097	22.03	7.958

4419-1
DBS-

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.8	73.15	73.37	75.34
Run 2	100.5	73.88	76.49	75.11
Run 3	101.9	72.76	73.44	72.43
Mean	101.1	73.26	74.43	74.30
Std Dev	0.7624	0.5694	1.782	1.617

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #24
First repeat started at : Mon Nov 24 2003 12:49:28
Last repeat started at : Mon Nov 24 2003 12:51:05
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0005	0.6170	8.567	21.54	274.8	1.747	5.537
Run 2	0.0005	0.5924	8.509	21.62	270.9	1.993	5.553
Run 3	0.0002	0.5886	9.274	23.41	264.3	1.664	5.583
Mean	0.0004	0.5993	8.783	22.19	270.0	1.801	5.558
Std Dev	0.0001	0.0154	0.4259	1.058	5.324	0.1711	0.0235
%SD	38.45	2.574	4.849	4.770	1.972	9.501	0.4222

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.487	7.728	1.313	4.522	5.602	2.974
Run 2	9.237	7.562	1.385	4.358	5.220	2.915
Run 3	8.848	7.635	1.449	4.048	5.014	2.895
Mean	9.191	7.641	1.382	4.309	5.279	2.928
Std Dev	0.3219	0.0835	0.0678	0.2406	0.2982	0.0409
%SD	3.502	1.093	4.907	5.584	5.650	1.398

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.472	3.484	3.446	0.1976	0.1425	0.1446
Run 2	3.170	3.303	3.285	0.1916	0.1477	0.1354
Run 3	3.238	3.084	3.503	0.1865	0.1246	0.1372
Mean	3.293	3.290	3.411	0.1919	0.1383	0.1391
Std Dev	0.1588	0.2001	0.1131	0.0056	0.0121	0.0049
%SD	4.821	6.080	3.316	2.900	8.762	3.501

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3160	0.3096	91.02	89.46	88.45	0.0140
Run 2	0.2819	0.2530	85.86	88.58	89.75	0.0081
Run 3	0.2753	0.2702	84.36	83.29	84.06	0.0084
Mean	0.2911	0.2776	87.08	87.11	87.42	0.0101
Std Dev	0.0218	0.0290	3.495	3.340	2.984	0.0033
%SD	7.498	10.46	4.014	3.834	3.414	32.81

Element	Thallium	Lead	Lead	Lead
				Pb 208

8419.2
DISS

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0154	0.1195	0.1254	0.1202
Run 2	0.0174	0.1101	0.1420	0.1252
Run 3	0.0167	0.1163	0.1104	0.1170
Mean	0.0165	0.1153	0.1259	0.1208
Std Dev	0.0010	0.0048	0.0158	0.0041
%SD	6.038	4.135	12.56	3.407

8419-2 Diss.

Internal Standard Drift, % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.4	72.14	70.74	73.76
Run 2	101.3	72.55	73.02	77.46
Run 3	102.0	74.27	74.84	77.67
Mean	101.6	72.98	72.86	76.30
Std Dev	0.3860	1.130	2.055	2.199

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #25
First repeat started at : Mon Nov 24 2003 12:52:17
Last repeat started at : Mon Nov 24 2003 12:53:54
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0013	0.5363	9.858	22.99	278.8	1.896	6.309
Run 2	0.0009	0.5451	9.242	24.18	276.0	1.784	6.252
Run 3	0.0024	0.5461	10.37	22.56	279.6	1.903	6.535
Mean	0.0015	0.5425	9.822	23.24	278.2	1.861	6.365
Std Dev	0.0008	0.0054	0.5637	0.8422	1.875	0.0668	0.1496
%SD	52.68	0.9945	5.739	3.623	0.6740	3.588	2.351

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.624	8.350	1.445	4.809	5.422	3.213
Run 2	9.983	8.210	1.506	4.348	4.751	3.116
Run 3	9.905	8.600	1.506	4.421	4.737	3.059
Mean	9.838	8.387	1.486	4.526	4.970	3.129
Std Dev	0.1888	0.1978	0.0355	0.2479	0.3913	0.0776
%SD	1.919	2.359	2.387	5.477	7.873	2.481

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.435	3.728	3.486	0.2070	0.1521	0.1508
Run 2	3.613	3.560	3.698	0.2041	0.1489	0.1328
Run 3	3.298	3.790	3.571	0.1917	0.1431	0.1123
Mean	3.449	3.693	3.585	0.2009	0.1480	0.1319
Std Dev	0.1578	0.1191	0.1063	0.0081	0.0045	0.0193
%SD	4.577	3.224	2.966	4.031	3.049	14.61

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3346	0.3002	89.49	90.08	88.71	0.0185
Run 2	0.2801	0.3037	88.27	86.19	90.28	0.0166
Run 3	0.2938	0.3184	81.33	83.86	87.03	0.0186
Mean	0.3028	0.3074	86.36	86.71	88.67	0.0179
Std Dev	0.0283	0.0097	4.405	3.142	1.622	0.0011
%SD	9.352	3.141	5.100	3.623	1.829	6.205

Element	Thallium	Lead	Lead	Lead
			Pb 207	Pb 208

8419-3 DISS

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0191	0.1182	0.1207	0.1214
Run 2	0.0158	0.1156	0.1259	0.1194
Run 3	0.0163	0.1122	0.1201	0.1164
Mean	0.0171	0.1153	0.1223	0.1191
Std Dev	0.0018	0.0030	0.0032	0.0025
%SD	10.49	2.592	2.592	2.106

4/19-3 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.73	70.91	71.58	76.28
Run 2	100.8	73.34	72.76	72.85
Run 3	101.0	71.47	76.18	70.73
Mean	100.5	71.91	73.51	73.29
Std Dev	0.7017	1.276	2.391	2.796

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #26
First repeat started at : Mon Nov 24 2003 12:55:06
Last repeat started at : Mon Nov 24 2003 12:56:42
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.33	25.00	25.32	25.44	33.54	25.47	24.97
Run 2	24.71	25.18	25.26	25.35	26.97	25.20	25.63
Run 3	25.32	24.69	25.38	25.63	39.54	25.34	25.48
Mean	25.12	24.96	25.32	25.47	33.35	25.34	25.36
Std Dev	0.3535	0.2472	0.0578	0.1390	6.286	0.1324	0.3438
%SD	1.407	0.9905	0.2282	0.5457	18.85	0.5224	1.356

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.73	25.44	25.52	25.79	23.77	26.51
Run 2	25.53	25.69	25.69	26.32	24.12	26.36
Run 3	25.68	25.25	25.06	25.76	23.78	26.01
Mean	25.65	25.46	25.42	25.96	23.89	26.29
Std Dev	0.1045	0.2208	0.3307	0.3127	0.1979	0.2558
%SD	0.4073	0.8672	1.301	1.204	0.8282	0.9730

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.59	25.17	24.28	25.26	25.31	25.48
Run 2	24.89	25.10	24.55	24.74	24.89	25.12
Run 3	23.78	24.12	24.13	25.09	25.22	25.27
Mean	24.42	24.80	24.32	25.03	25.14	25.29
Std Dev	0.5769	0.5881	0.2131	0.2611	0.2165	0.1828
%SD	2.362	2.371	0.8762	1.043	0.8611	0.7227

CLV 11-24-03

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.85	24.19	25.56	26.57	25.97	27.09
Run 2	24.70	25.68	26.65	26.18	25.98	26.94
Run 3	24.80	25.34	26.35	25.25	26.01	27.41
Mean	24.78	25.07	26.19	26.00	25.99	27.15
Std Dev	0.0761	0.7795	0.5651	0.6775	0.0196	0.2355
%SD	0.3070	3.109	2.158	2.606	0.0753	0.8674

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	26.80	26.95	27.34	27.10
Run 2	26.38	26.71	26.50	26.95
Run 3	27.13	25.69	26.16	26.01
Mean	26.77	26.45	26.67	26.69
Std Dev	0.3721	0.6648	0.6082	0.5903
%SD	1.390	2.513	2.281	2.212

CCV 54-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.3	100.9	96.69	81.61
Run 2	104.0	98.20	96.91	83.26
Run 3	104.2	99.03	93.53	81.18
Mean	104.2	99.38	95.71	82.02
Std Dev	0.1132	1.394	1.889	1.100

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #27
First repeat started at : Mon Nov 24 2003 13:01:48
Last repeat started at : Mon Nov 24 2003 13:03:28
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0026	0.0015	0.1301	-0.1181	16.50	-0.0188	0.0225
Run 2	0.0030	-0.0174	0.1350	-0.1213	21.91	-0.1857	0.0200
Run 3	0.0025	-0.0042	0.1025	-0.0965	10.88	-0.0647	0.0226
Mean	0.0027	-0.0067	0.1226	-0.1120	16.43	-0.0898	0.0217
Std Dev	0.0003	0.0097	0.0175	0.0135	5.517	0.0862	0.0015
%SD	10.73	144.0	14.30	12.02	33.58	96.03	6.845

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0454	0.0040	0.0315	-0.0005	-1.811	0.0825
Run 2	0.0777	0.0078	0.0208	0.0499	-1.777	0.0935
Run 3	0.0767	0.0198	0.0294	0.0518	-1.725	0.1231
Mean	0.0666	0.0105	0.0272	0.0338	-1.771	0.0997
Std Dev	0.0184	0.0082	0.0057	0.0297	0.0434	0.0210
%SD	27.59	77.85	20.86	87.85	2.452	21.04

LB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0312	0.0297	0.0242	0.0417	0.0296	0.0221
Run 2	0.0280	0.0317	0.0229	0.0456	0.0205	0.0218
Run 3	0.0216	0.0194	0.0076	0.0347	0.0242	0.0190
Mean	0.0269	0.0270	0.0182	0.0407	0.0248	0.0210
Std Dev	0.0049	0.0066	0.0093	0.0055	0.0046	0.0017
%SD	18.10	24.63	50.80	13.51	18.47	8.040

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0198	0.0339	0.0089	0.0060	0.0000	0.0053
Run 2	0.0206	0.0241	-0.0028	0.0070	-0.0007	0.0034
Run 3	0.0169	0.0209	0.0101	0.0007	-0.0006	0.0047
Mean	0.0191	0.0263	0.0054	0.0046	-0.0004	0.0045
Std Dev	0.0020	0.0068	0.0072	0.0034	0.0004	0.0009
%SD	10.34	25.74	132.5	74.03	90.31	20.90

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0059	0.0068	-0.0016	0.0041
Run 2	0.0037	0.0059	-0.0060	0.0018
Run 3	0.0035	0.0053	0.0055	0.0051
Mean	0.0044	0.0060	-0.0007	0.0037
Std Dev	0.0013	0.0008	0.0058	0.0017
%SD	29.40	12.62	834.6	46.25

NB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.4	96.97	94.17	82.59
Run 2	103.0	97.03	92.75	83.15
Run 3	104.6	97.40	94.67	83.82
Mean	103.0	97.13	93.86	83.19
Std Dev	1.583	0.2320	0.9940	0.6149

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #28
First repeat started at : Mon Nov 24 2003 13:07:38
Last repeat started at : Mon Nov 24 2003 13:09:16
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0027	0.5205	8.671	22.78	269.0	1.700	6.583
Run 2	0.0013	0.5052	9.540	24.45	290.1	1.945	6.401
Run 3	0.0026	0.5055	8.609	20.67	261.6	1.821	6.616
Mean	0.0022	0.5104	8.940	22.64	273.6	1.822	6.533
Std Dev	0.0008	0.0087	0.5207	1.895	14.79	0.1224	0.1155
%SD	36.06	1.711	5.824	8.372	5.406	6.716	1.768

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.874	8.478	1.446	4.304	5.292	3.027
Run 2	10.17	8.450	1.433	4.467	5.271	3.005
Run 3	10.16	8.578	1.447	4.331	5.092	3.140
Mean	10.07	8.502	1.442	4.367	5.219	3.057
Std Dev	0.1677	0.0673	0.0079	0.0873	0.1097	0.0723
%SD	1.666	0.7911	0.5483	1.999	2.103	2.365

8419-4 Diss.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.614	3.519	3.696	0.2001	0.1404	0.1359
Run 2	3.789	3.513	3.523	0.1998	0.1455	0.1347
Run 3	3.584	3.610	3.419	0.1860	0.1268	0.1285
Mean	3.662	3.547	3.546	0.1953	0.1376	0.1330
Std Dev	0.1106	0.0541	0.1401	0.0081	0.0096	0.0040
%SD	3.021	1.524	3.952	4.125	7.012	2.971

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3214	0.3166	87.34	87.80	88.43	0.0203
Run 2	0.2738	0.2553	87.81	87.41	85.65	0.0177
Run 3	0.2781	0.2952	82.91	86.15	83.76	0.0199
Mean	0.2911	0.2890	86.02	87.12	85.95	0.0193
Std Dev	0.0263	0.0311	2.706	0.8599	2.353	0.0014
%SD	9.046	10.77	3.146	0.9871	2.737	7.431

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0236	0.1160	0.1374	0.1255
Run 2	0.0227	0.1117	0.1248	0.1261
Run 3	0.0188	0.0909	0.1063	0.1116
Mean	0.0217	0.1062	0.1229	0.1211
Std Dev	0.0026	0.0134	0.0157	0.0082
%SD	11.82	12.63	12.75	6.788

4419-4 DSS.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.1	72.70	71.56	73.41
Run 2	101.5	72.49	73.80	72.14
Run 3	102.2	73.21	74.61	78.45
Mean	101.6	72.80	73.32	74.67
Std Dev	0.5365	0.3693	1.578	3.339

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #29
First repeat started at : Mon Nov 24 2003 13:10:37
Last repeat started at : Mon Nov 24 2003 13:12:15
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0013	0.6036	9.331	23.28	283.2	1.936	6.060
Run 2	0.0011	0.6085	9.495	23.26	291.4	1.937	6.317
Run 3	0.0023	0.6403	8.610	23.74	290.1	1.974	6.281
Mean	0.0016	0.6175	9.145	23.43	288.2	1.949	6.219
Std Dev	0.0006	0.0199	0.4709	0.2729	4.400	0.0218	0.1395
%SD	40.11	3.229	5.149	1.165	1.526	1.119	2.243

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.256	8.017	1.408	4.526	4.767	3.111
Run 2	9.673	8.372	1.424	4.779	5.552	3.260
Run 3	9.488	8.371	1.438	4.614	5.245	3.152
Mean	9.473	8.253	1.423	4.640	5.188	3.174
Std Dev	0.2090	0.2046	0.0148	0.1284	0.3959	0.0772
%SD	2.206	2.479	1.043	2.767	7.632	2.433

8419-4DUP
D.S.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.027	3.833	3.483	0.1867	0.1448	0.1413
Run 2	3.792	3.919	3.408	0.2022	0.1311	0.1418
Run 3	3.530	3.829	3.731	0.2083	0.1501	0.1445
Mean	3.783	3.860	3.541	0.1991	0.1420	0.1425
Std Dev	0.2484	0.0509	0.1686	0.0111	0.0098	0.0017
%SD	6.567	1.318	4.763	5.593	6.932	1.223

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3061	0.3304	89.58	88.10	87.97	0.0165
Run 2	0.2902	0.2696	87.52	84.68	86.71	0.0160
Run 3	0.2925	0.2492	88.03	89.28	89.74	0.0197
Mean	0.2963	0.2830	88.38	87.35	88.14	0.0174
Std Dev	0.0085	0.0423	1.074	2.386	1.525	0.0020
%SD	2.885	14.93	1.215	2.731	1.730	11.65

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0184	0.1058	0.1127	0.1122
Run 2	0.0206	0.0914	0.1169	0.0994
Run 3	0.0193	0.0998	0.1363	0.1153
Mean	0.0194	0.0990	0.1220	0.1090
Std Dev	0.0011	0.0073	0.0126	0.0084
%SD	5.626	7.337	10.31	7.733

8419-4D8 DISS-

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.4	73.37	71.66	73.13
Run 2	101.1	70.55	72.18	75.83
Run 3	101.7	71.18	72.15	71.93
Mean	101.7	71.70	72.00	73.63
Std Dev	0.6415	1.482	0.2903	1.996

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #30
First repeat started at : Mon Nov 24 2003 13:13:28
Last repeat started at : Mon Nov 24 2003 13:15:06
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	17.36	20.92	29.66	41.43	302.0	20.98	25.68
Run 2	17.11	21.85	30.08	40.80	296.0	21.30	26.24
Run 3	17.45	21.07	29.85	41.86	312.8	21.00	25.75
Mean	17.31	21.28	29.87	41.36	303.6	21.09	25.89
Std Dev	0.1787	0.5009	0.2078	0.5337	8.467	0.1779	0.3057
%SD	1.033	2.354	0.6958	1.290	2.789	0.8436	1.181

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	30.07	27.99	26.77	27.53	29.15	26.22
Run 2	30.39	28.38	26.99	27.68	29.09	27.00
Run 3	29.45	27.91	26.33	28.29	29.02	26.33
Mean	29.97	28.09	26.69	27.83	29.09	26.51
Std Dev	0.4791	0.2517	0.3349	0.4006	0.0672	0.4250
%SD	1.599	0.8960	1.255	1.439	0.2311	1.603

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	27.42	26.34	26.68	19.80	19.73	19.72
Run 2	26.36	27.32	28.64	20.25	19.98	20.12
Run 3	26.87	27.17	27.31	20.20	20.08	20.47
Mean	26.88	26.95	27.54	20.09	19.93	20.10
Std Dev	0.5309	0.5276	1.000	0.2454	0.1821	0.3733
%SD	1.975	1.958	3.631	1.222	0.9138	1.857

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	22.75	21.70	108.7	111.0	109.5	17.59
Run 2	21.74	22.84	110.3	111.3	115.3	17.32
Run 3	22.34	23.31	115.3	113.4	114.2	16.77
Mean	22.28	22.62	111.4	111.9	113.0	17.22
Std Dev	0.5092	0.8269	3.420	1.318	3.063	0.4193
%SD	2.286	3.656	3.070	1.178	2.710	2.434

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

$419.45 DISS.

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	17.68	15.34	16.87	16.10
Run 2	17.76	15.85	15.77	15.64
Run 3	17.04	15.38	15.84	15.67
Mean	17.49	15.52	16.16	15.81
Std Dev	0.3959	0.2828	0.6151	0.2560
%SD	2.263	1.821	3.806	1.620

8419-450 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.34	69.39	70.15	69.45
Run 2	98.82	69.20	68.89	70.33
Run 3	98.55	68.91	67.08	68.02
Mean	98.57	69.17	68.71	69.27
Std Dev	0.2409	0.2457	1.540	1.164

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #31
First repeat started at : Mon Nov 24 2003 13:20:06
Last repeat started at : Mon Nov 24 2003 13:21:43
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0009	0.5233	8.943	22.86	281.8	2.376	5.932
Run 2	0.0026	0.5554	9.040	23.57	297.1	2.461	6.204
Run 3	0.0018	0.5450	8.975	22.80	281.7	2.272	6.140
Mean	0.0018	0.5412	8.986	23.08	286.8	2.370	6.092
Std Dev	0.0008	0.0164	0.0496	0.4271	8.858	0.0946	0.1423
%SD	46.63	3.033	0.5516	1.851	3.088	3.991	2.335

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.459	8.121	1.423	4.678	4.653	3.201
Run 2	9.732	8.284	1.436	4.681	4.398	3.111
Run 3	9.407	8.241	1.487	4.487	4.370	3.348
Mean	9.533	8.215	1.449	4.615	4.474	3.220
Std Dev	0.1744	0.0846	0.0338	0.1111	0.1559	0.1200
%SD	1.829	1.030	2.330	2.407	3.485	3.728

8/19.5 Diss.

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.440	3.534	3.553	0.2016	0.1545	0.1642
Run 2	3.737	3.680	3.280	0.2075	0.1565	0.1442
Run 3	3.586	3.561	3.539	0.2007	0.1365	0.1359
Mean	3.588	3.592	3.457	0.2033	0.1492	0.1481
Std Dev	0.1487	0.0774	0.1534	0.0037	0.0110	0.0146
%SD	4.144	2.155	4.438	1.810	7.399	9.828

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2769	0.2543	90.46	90.41	90.37	0.0199
Run 2	0.2828	0.3450	87.48	88.25	86.66	0.0286
Run 3	0.3026	0.2870	88.81	86.60	86.54	0.0135
Mean	0.2874	0.2955	88.92	88.42	87.86	0.0207
Std Dev	0.0135	0.0459	1.490	1.907	2.178	0.0076
%SD	4.685	15.54	1.676	2.157	2.479	36.56

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0230	0.0988	0.1013	0.1032
Run 2	0.0220	0.0980	0.0936	0.0947
Run 3	0.0221	0.1028	0.0947	0.0956
Mean	0.0224	0.0998	0.0965	0.0978
Std Dev	0.0006	0.0026	0.0042	0.0047
%SD	2.604	2.570	4.321	4.778

$4195 BSS.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.3	72.18	71.53	73.49
Run 2	101.8	72.21	72.39	71.01
Run 3	102.8	72.01	72.74	73.89
Mean	102.3	72.13	72.22	72.80
Std Dev	0.4871	0.1079	0.6263	1.563

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #32
First repeat started at : Mon Nov 24 2003 13:23:09
Last repeat started at : Mon Nov 24 2003 13:24:48
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0017	0.6127	9.567	23.81	279.6	1.945	6.746
Run 2	0.0017	0.6021	9.612	22.08	271.5	2.109	6.475
Run 3	0.0013	0.6181	9.287	21.38	270.1	2.045	6.767
Mean	0.0015	0.6110	9.488	22.42	273.7	2.033	6.663
Std Dev	0.0002	0.0081	0.1761	1.251	5.123	0.0827	0.1626
%SD	15.77	1.331	1.856	5.577	1.871	4.070	2.441

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.701	8.868	1.439	4.799	4.808	3.191
Run 2	9.829	8.502	1.479	4.520	4.006	3.229
Run 3	10.28	8.778	1.315	4.961	4.589	3.188
Mean	9.937	8.716	1.411	4.760	4.468	3.202
Std Dev	0.3045	0.1904	0.0856	0.2228	0.4149	0.0230
%SD	3.065	2.184	6.069	4.680	9.287	0.7188

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.436	3.624	3.490	0.2065	0.1583	0.1510
Run 2	3.349	3.251	3.353	0.2098	0.1564	0.1354
Run 3	3.514	3.376	3.539	0.1975	0.1480	0.1370
Mean	3.433	3.417	3.461	0.2046	0.1542	0.1411
Std Dev	0.0825	0.1899	0.0963	0.0064	0.0055	0.0086
%SD	2.403	5.557	2.782	3.116	3.555	6.092

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2764	0.2923	86.79	86.02	84.33	0.0153
Run 2	0.2746	0.2691	86.25	89.56	88.76	0.0102
Run 3	0.2729	0.2714	87.13	84.59	84.68	0.0160
Mean	0.2747	0.2776	86.72	86.72	85.92	0.0138
Std Dev	0.0018	0.0128	0.4446	2.561	2.465	0.0032
%SD	0.6445	4.605	0.5126	2.953	2.868	22.82

Element	Thallium	Lead	Lead	Lead
			Pb 207	Pb 208

8419-6 DISS

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0180	0.1037	0.1341	0.1176
Run 2	0.0182	0.0925	0.1065	0.1053
Run 3	0.0171	0.1060	0.1202	0.1162
Mean	0.0178	0.1007	0.1203	0.1130
Std Dev	0.0006	0.0072	0.0138	0.0068
%SD	3.125	7.175	11.48	5.978

8419-6 DISS

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	70.82	73.89	73.28
Run 2	101.6	73.33	73.13	71.81
Run 3	101.2	71.38	74.32	71.33
Mean	101.5	71.85	73.78	72.14
Std Dev	0.2556	1.319	0.6023	1.014

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #33
First repeat started at : Mon Nov 24 2003 13:26:03
Last repeat started at : Mon Nov 24 2003 13:27:40
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0006	0.1002	0.7176	-0.0655	22.44	0.0798	3.053
Run 2	-0.0004	0.0833	0.4709	-0.0255	20.80	0.1005	3.022
Run 3	0.0008	0.0841	0.3548	-0.0628	19.92	-0.0167	2.922
Mean	0.0003	0.0892	0.5145	-0.0513	21.05	0.0545	2.999
Std Dev	0.0006	0.0095	0.1853	0.0223	1.280	0.0626	0.0683
%SD	195.8	10.68	36.01	43.59	6.082	114.8	2.276

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.876	2.931	0.1118	0.0901	-2.150	0.4052
Run 2	2.852	2.811	0.0607	0.0689	-2.452	0.2421
Run 3	2.677	2.925	0.0426	0.0593	-2.399	0.1703
Mean	2.802	2.889	0.0717	0.0727	-2.334	0.2725
Std Dev	0.1085	0.0677	0.0359	0.0157	0.1611	0.1204
%SD	3.874	2.342	50.01	21.65	6.901	44.17

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0992	0.0873	0.0541	0.0333	0.0285	0.0196
Run 2	0.0481	0.0496	0.0459	0.0503	0.0243	0.0204
Run 3	0.0401	0.0427	0.0306	0.0418	0.0290	0.0231
Mean	0.0624	0.0599	0.0435	0.0418	0.0273	0.0211
Std Dev	0.0321	0.0240	0.0119	0.0085	0.0025	0.0018
%SD	51.36	40.11	27.44	20.24	9.346	8.771

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0028	0.0025	0.0900	0.0999	0.0922	0.0043
Run 2	0.0048	-0.0023	0.0685	0.0724	0.0719	0.0015
Run 3	0.0122	-0.0039	0.0763	0.0795	0.0785	0.0023
Mean	0.0066	-0.0012	0.0783	0.0840	0.0809	0.0027
Std Dev	0.0049	0.0033	0.0109	0.0143	0.0104	0.0014
%SD	74.92	267.6	13.90	17.01	12.81	54.10

Element	Thallium	Lead	Lead	Lead

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0056	0.0172	0.0241	0.0201
Run 2	0.0063	0.0130	0.0215	0.0143
Run 3	0.0016	0.0079	0.0191	0.0146
Mean	0.0045	0.0127	0.0216	0.0163
Std Dev	0.0025	0.0046	0.0025	0.0032
%SD	56.72	36.40	11.61	19.85

8419-7 Diss.

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	106.8	103.8	96.75	82.20
Run 2	105.1	103.5	97.94	79.68
Run 3	104.3	102.5	96.00	81.37
Mean	105.4	103.3	96.89	81.08
Std Dev	1.247	0.6921	0.9778	1.284

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #34
First repeat started at : Mon Nov 24 2003 13:29:49
Last repeat started at : Mon Nov 24 2003 13:31:26
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	-0.0010	0.1422	0.2469	-0.1281	17.02	0.0229	0.9437
Run 2	-0.0014	0.1394	0.2409	-0.1313	11.13	-0.0634	0.9203
Run 3	-0.0004	0.1443	0.2122	-0.1154	13.97	-0.0029	0.9508
Mean	-0.0009	0.1420	0.2333	-0.1249	14.04	-0.0145	0.9416
Std Dev	0.0005	0.0025	0.0186	0.0084	2.948	0.0443	0.0203
%SD	49.74	1.742	7.960	6.727	21.00	305.8	2.159

SRL review JG 11/24/03

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.8832	0.9377	0.0332	0.0687	-2.079	0.1549
Run 2	0.8712	0.8543	0.0425	0.0434	-2.184	0.1481
Run 3	0.9570	0.8731	0.0352	0.0635	-2.031	0.1605
Mean	0.9038	0.8884	0.0369	0.0585	-2.098	0.1545
Std Dev	0.0465	0.0438	0.0049	0.0134	0.0783	0.0062
%SD	5.141	4.927	13.21	22.82	3.731	4.020

8433 Method Blank

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0266	0.0167	0.0131	0.0329	0.0206	0.0215
Run 2	0.0328	0.0296	0.0049	0.0388	0.0209	0.0225
Run 3	0.0218	0.0103	0.0162	0.0468	0.0261	0.0152
Mean	0.0271	0.0189	0.0114	0.0395	0.0225	0.0197
Std Dev	0.0055	0.0098	0.0058	0.0069	0.0031	0.0039
%SD	20.48	52.13	51.15	17.60	13.65	20.00

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0062	-0.0024	0.0085	-0.0039	-0.0025	0.0005
Run 2	-0.0003	-0.0024	0.0054	-0.0012	-0.0006	-0.0013
Run 3	-0.0046	-0.0050	0.0021	0.0022	-0.0021	-0.0023
Mean	0.0004	-0.0033	0.0053	-0.0010	-0.0017	-0.0010
Std Dev	0.0054	0.0015	0.0032	0.0030	0.0010	0.0014
%SD	1250	45.41	60.44	315.9	59.84	141.5

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0009	-0.0046	-0.0026	-0.0031
Run 2	-0.0014	-0.0038	-0.0032	-0.0039
Run 3	-0.0020	-0.0025	-0.0052	-0.0049
Mean	-0.0014	-0.0036	-0.0037	-0.0040
Std Dev	0.0005	0.0011	0.0014	0.0009
%SD	37.36	30.12	38.00	23.03

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.7	94.89	90.97	78.31
Run 2	101.6	95.25	90.76	78.32
Run 3	101.4	95.27	90.76	81.51
Mean	101.6	95.14	90.83	79.38
Std Dev	0.1492	0.2136	0.1198	1.842

FQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #35
First repeat started at : Mon Nov 24 2003 13:32:37
Last repeat started at : Mon Nov 24 2003 13:34:15
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	19.62	19.28	19.39	20.01	35.86	20.29	21.58
Run 2	19.49	19.19	19.79	20.04	39.60	19.73	21.89
Run 3	19.36	19.73	19.63	20.28	37.61	20.32	21.81
Mean	19.49	19.40	19.60	20.11	37.69	20.11	21.76
Std Dev	0.1258	0.2903	0.1989	0.1460	1.868	0.3330	0.1620
%SD	0.6457	1.496	1.014	0.7262	4.957	1.656	0.7447

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.63	21.39	20.79	20.93	19.35	21.42
Run 2	21.27	21.75	20.83	21.38	19.29	21.22
Run 3	21.25	21.71	20.63	21.54	19.71	21.41
Mean	21.38	21.62	20.75	21.28	19.45	21.35
Std Dev	0.2132	0.1970	0.1064	0.3170	0.2251	0.1109
%SD	0.9973	0.9114	0.5128	1.489	1.157	0.5197

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	19.01	18.17	18.39	20.30	20.72	20.71
Run 2	19.97	18.38	18.80	20.16	20.00	20.24
Run 3	19.57	18.77	18.72	19.82	19.58	19.82
Mean	19.51	18.44	18.64	20.09	20.10	20.26
Std Dev	0.4814	0.3053	0.2135	0.2461	0.5745	0.4472
%SD	2.467	1.655	1.145	1.225	2.858	2.207

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	19.30	19.23	20.66	20.67	20.17	20.84
Run 2	20.14	19.45	20.06	20.51	20.84	22.20
Run 3	19.11	19.66	20.29	20.64	19.67	21.77
Mean	19.52	19.45	20.34	20.61	20.23	21.60
Std Dev	0.5483	0.2183	0.3034	0.0853	0.5831	0.6936
%SD	2.809	1.123	1.492	0.4139	2.883	3.211

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

4433 CSW

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	21.33	21.42	20.44	20.51
Run 2	21.88	21.22	20.80	20.86
Run 3	20.98	20.46	20.62	20.96
Mean	21.40	21.03	20.62	20.78
Std Dev	0.4529	0.5060	0.1756	0.2383
%SD	2.117	2.406	0.8516	1.147

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LCSW

Internal Standard Drift: % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.2	92.15	86.98	75.71
Run 2	101.1	91.38	88.62	75.19
Run 3	100.8	90.24	89.63	75.10
Mean	100.7	91.26	88.41	75.33
Std Dev	0.4520	0.9620	1.334	0.3315

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #36
First repeat started at : Mon Nov 24 2003 13:35:25
Last repeat started at : Mon Nov 24 2003 13:37:03
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0067	0.0185	0.1263	-0.1226	12.07	-0.1124	0.0107
Run 2	0.0040	0.0158	0.1388	-0.1118	11.81	-0.0711	0.0179
Run 3	0.0038	0.0085	0.0993	-0.1146	19.00	-0.1304	0.0218
Mean	0.0048	0.0143	0.1215	-0.1164	14.30	-0.1046	0.0168
Std Dev	0.0016	0.0051	0.0202	0.0056	4.075	0.0304	0.0056
%SD	33.87	35.99	16.65	4.789	28.51	29.06	33.33

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0876	0.0118	0.0303	0.1071	-2.367	0.1422
Run 2	0.1142	0.0130	0.0149	0.0695	-2.389	0.0859
Run 3	0.0735	-0.0083	0.0145	0.0461	-2.217	0.0544
Mean	0.0918	0.0055	0.0199	0.0742	-2.324	0.0942
Std Dev	0.0207	0.0120	0.0090	0.0308	0.0937	0.0445
%SD	22.55	217.8	45.13	41.42	4.030	47.29

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2376	0.2516	0.2896	0.0356	0.0197	0.0209
Run 2	0.1329	0.1138	0.0972	0.0340	0.0182	0.0191
Run 3	0.0516	0.0613	0.0660	0.0346	0.0172	0.0295
Mean	0.1407	0.1422	0.1509	0.0347	0.0184	0.0232
Std Dev	0.0932	0.0983	0.1211	0.0008	0.0012	0.0056
%SD	66.26	69.14	80.23	2.377	6.760	24.17

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1326	0.1122	0.0165	0.0096	0.0007	0.0082
Run 2	0.0489	0.0542	0.0074	0.0077	0.0010	0.0003
Run 3	0.0217	0.0245	0.0125	0.0100	0.0015	0.0091
Mean	0.0678	0.0636	0.0121	0.0091	0.0011	0.0059
Std Dev	0.0578	0.0446	0.0046	0.0012	0.0004	0.0048
%SD	85.31	70.08	37.68	13.25	35.10	82.26

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0068	0.0008	0.0018	0.0015
Run 2	0.0071	0.0053	0.0024	0.0031
Run 3	0.0086	0.0067	0.0071	0.0070
Mean	0.0075	0.0043	0.0045	0.0039
Std Dev	0.0009	0.0031	0.0023	0.0028
%SD	12.60	72.99	51.59	72.69

11/27/03

Internal Standard Drift: % relative to mean of first sample #

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	97.54	93.61	82.03
Run 2	103.9	97.55	95.99	80.16
Run 3	103.6	98.86	94.37	77.78
Mean	103.0	97.98	94.66	79.99
Std Dev	1.225	0.7589	1.215	2.130

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #37
First repeat started at : Mon Nov 24 2003 13:38:40
Last repeat started at : Mon Nov 24 2003 13:40:16
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.99	24.64	24.82	25.56	29.90	25.61	25.42
Run 2	25.18	24.86	24.60	25.63	34.76	25.05	25.81
Run 3	25.27	24.82	25.56	25.68	38.21	25.91	25.95
Mean	25.48	24.77	24.99	25.62	34.29	25.52	25.73
Std Dev	0.4411	0.1208	0.5003	0.0580	4.172	0.4328	0.2747
%SD	1.731	0.4878	2.002	0.2262	12.17	1.695	1.068

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.76	25.47	25.23	25.97	23.65	25.95
Run 2	25.66	25.95	25.57	26.09	24.04	26.41
Run 3	25.72	25.64	25.36	26.07	24.12	26.13
Mean	25.72	25.68	25.39	26.04	23.93	26.16
Std Dev	0.0511	0.2420	0.1712	0.0684	0.2501	0.2332
%SD	0.1987	0.9422	0.6741	0.2628	1.045	0.8912

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.03	24.41	24.42	25.47	25.33	25.04
Run 2	24.55	24.91	23.91	25.38	25.08	25.40
Run 3	24.67	23.63	23.14	25.09	25.01	25.83
Mean	24.42	24.32	23.82	25.31	25.14	25.42
Std Dev	0.3376	0.6434	0.6454	0.2009	0.1729	0.3927
%SD	1.383	2.646	2.709	0.7938	0.6876	1.545

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.87	25.54	26.32	26.49	25.98	26.58
Run 2	25.23	25.56	26.05	26.77	26.01	26.08
Run 3	24.00	24.78	26.39	26.83	26.25	27.01
Mean	24.70	25.29	26.25	26.70	26.08	26.56
Std Dev	0.6297	0.4429	0.1809	0.1853	0.1519	0.4650
%SD	2.549	1.751	0.6890	0.6942	0.5825	1.751

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	27.04	25.81	26.26	26.36
Run 2	26.60	26.66	25.96	26.11
Run 3	26.36	26.66	25.19	26.05
Mean	26.66	26.38	25.80	26.18
Std Dev	0.3485	0.4945	0.5510	0.1637
%SD	1.307	1.874	2.135	0.6254

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.5	98.15	93.58	80.98
Run 2	104.2	97.44	93.91	83.14
Run 3	104.8	97.49	92.85	80.64
Mean	104.2	97.69	93.45	81.59
Std Dev	0.6461	0.3953	0.5438	1.356

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #38
First repeat started at : Mon Nov 24 2003 13:45:52
Last repeat started at : Mon Nov 24 2003 13:47:29
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0021	0.0039	0.0184	-0.1296	13.31	0.0470	0.0243
Run 2	0.0030	-0.0074	0.0408	-0.0965	14.43	-0.0243	0.0265
Run 3	0.0032	0.0001	0.0255	-0.1037	10.74	0.1201	0.0161
Mean	0.0028	-0.0011	0.0282	-0.1099	12.82	0.0476	0.0223
Std Dev	0.0006	0.0058	0.0115	0.0174	1.894	0.0722	0.0055
%SD	22.65	507.3	40.59	15.83	14.77	151.6	24.56

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0319	-0.0061	-0.0006	0.0483	-2.131	0.0269
Run 2	0.0799	-0.0117	-0.0092	0.0704	-1.799	0.0167
Run 3	0.0416	-0.0009	0.0238	0.0136	-2.051	0.0760
Mean	0.0511	-0.0062	0.0046	0.0441	-1.993	0.0399
Std Dev	0.0254	0.0054	0.0171	0.0286	0.1734	0.0317
%SD	49.60	87.35	369.3	64.90	8.700	79.64

CCB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0360	0.0356	0.0245	0.0462	0.0292	0.0241
Run 2	0.0414	0.0207	0.0155	0.0452	0.0272	0.0242
Run 3	0.0128	0.0376	0.0275	0.0440	0.0216	0.0211
Mean	0.0301	0.0313	0.0225	0.0451	0.0260	0.0231
Std Dev	0.0152	0.0093	0.0062	0.0011	0.0039	0.0018
%SD	50.65	29.56	27.64	2.425	15.20	7.689

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0228	0.0179	0.0240	-0.0016	0.0012	0.0008
Run 2	0.0126	0.0163	0.0162	0.0102	-0.0011	0.0051
Run 3	0.0155	0.0178	0.0153	0.0037	-0.0011	0.0028
Mean	0.0170	0.0173	0.0185	0.0041	-0.0003	0.0029
Std Dev	0.0053	0.0009	0.0048	0.0060	0.0013	0.0022
%SD	30.96	5.080	25.96	145.2	386.3	74.91

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0013	-0.0001	0.0080	0.0032
Run 2	0.0033	0.0009	0.0045	0.0023
Run 3	0.0014	0.0040	0.0065	0.0021
Mean	0.0020	0.0016	0.0063	0.0025
Std Dev	0.0011	0.0022	0.0017	0.0006
%SD	55.30	134.3	27.52	24.77

CCB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.4	99.65	93.15	82.44
Run 2	104.0	98.37	93.93	83.58
Run 3	104.8	100.1	93.75	80.16
Mean	104.4	99.38	93.61	82.06
Std Dev	0.4277	0.8978	0.4069	1.739

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #39
First repeat started at : Mon Nov 24 2003 13:49:05
Last repeat started at : Mon Nov 24 2003 13:50:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0089	0.6809	7.944	22.57	284.8	2.177	17.10
Run 2	0.0073	0.7109	8.438	21.52	268.9	2.368	17.07
Run 3	0.0071	0.7349	7.682	26.12	308.1	2.638	17.28
Mean	0.0078	0.7089	8.021	23.40	287.3	2.394	17.15
Std Dev	0.0010	0.0271	0.3836	2.408	19.74	0.2317	0.1112
%SD	13.10	3.820	4.783	10.29	6.871	9.677	0.6482

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	18.71	18.91	1.578	3.622	5.104	2.742
Run 2	19.15	19.21	1.534	3.935	5.243	2.859
Run 3	18.80	19.10	1.653	4.233	5.942	3.159
Mean	18.89	19.07	1.588	3.930	5.430	2.920
Std Dev	0.2304	0.1524	0.0599	0.3056	0.4491	0.2150
%SD	1.220	0.7989	3.772	7.776	8.271	7.365

8433-15

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.047	3.086	3.157	0.2657	0.2080	0.2054
Run 2	3.245	3.394	2.962	0.2639	0.2048	0.1901
Run 3	3.102	3.148	2.919	0.2735	0.2098	0.2050
Mean	3.131	3.209	3.013	0.2677	0.2075	0.2002
Std Dev	0.1022	0.1628	0.1271	0.0051	0.0025	0.0087
%SD	3.264	5.072	4.218	1.913	1.207	4.345

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3490	0.3364	88.88	87.78	87.28	0.0190
Run 2	0.3325	0.2959	86.49	85.50	86.36	0.0165
Run 3	0.2974	0.3177	84.56	88.15	85.35	0.0234
Mean	0.3263	0.3167	86.65	87.14	86.33	0.0196
Std Dev	0.0264	0.0203	2.164	1.433	0.9684	0.0035
%SD	8.077	6.396	2.497	1.644	1.122	17.75

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0295	0.6943	0.7507	0.7500
Run 2	0.0258	0.6584	0.7140	0.7086
Run 3	0.0145	0.6302	0.6803	0.6742
Mean	0.0232	0.6610	0.7150	0.7109
Std Dev	0.0078	0.0322	0.0352	0.0379
%SD	33.63	4.865	4.921	5.334

8433-15

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.3	72.86	72.33	73.81
Run 2	101.0	72.36	72.49	72.03
Run 3	100.1	70.75	72.69	71.78
Mean	100.4	71.99	72.51	72.54
Std Dev	0.4829	1.102	0.1802	1.110

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #40
First repeat started at : Mon Nov 24 2003 13:52:48
Last repeat started at : Mon Nov 24 2003 13:54:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0066	0.6967	8.567	24.64	317.6	2.296	16.79
Run 2	0.0087	0.6871	8.650	23.75	301.3	2.565	16.75
Run 3	0.0070	0.6620	8.180	23.70	295.6	2.632	16.35
Mean	0.0074	0.6819	8.466	24.03	304.8	2.498	16.63
Std Dev	0.0011	0.0179	0.2506	0.5279	11.42	0.1780	0.2416
%SD	14.60	2.630	2.960	2.196	3.745	7.126	1.452

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	18.84	18.45	1.666	4.030	5.617	3.046
Run 2	18.78	18.46	1.599	4.037	5.477	2.904
Run 3	18.23	18.07	1.635	3.783	4.687	2.904
Mean	18.62	18.33	1.633	3.950	5.260	2.951
Std Dev	0.3377	0.2178	0.0335	0.1448	0.5014	0.0824
%SD	1.814	1.188	2.051	3.666	9.532	2.790

8433-1500

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.983	2.893	3.195	0.2753	0.2029	0.1905
Run 2	3.173	3.012	3.074	0.2828	0.2235	0.2194
Run 3	2.932	2.925	3.060	0.2475	0.1972	0.1916
Mean	3.030	2.943	3.109	0.2685	0.2079	0.2005
Std Dev	0.1267	0.0618	0.0744	0.0186	0.0138	0.0164
%SD	4.184	2.099	2.392	6.925	6.644	8.162

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3234	0.2958	83.94	87.57	87.94	0.0192
Run 2	0.3276	0.3277	90.76	89.17	90.36	0.0189
Run 3	0.2826	0.3174	81.36	84.45	84.96	0.0264
Mean	0.3112	0.3136	85.35	87.07	87.76	0.0215
Std Dev	0.0249	0.0163	4.855	2.400	2.703	0.0043
%SD	7.989	5.199	5.688	2.756	3.080	19.92

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0195	0.6595	0.7481	0.6763
Run 2	0.0210	0.6591	0.7160	0.6750
Run 3	0.0229	0.6518	0.6517	0.6964
Mean	0.0211	0.6568	0.7052	0.6825
Std Dev	0.0017	0.0044	0.0491	0.0120
%SD	8.216	0.6638	6.963	1.762

8433-1504

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.9	70.70	73.56	73.37
Run 2	100.6	71.96	70.39	71.05
Run 3	100.9	73.04	76.40	72.09
Mean	100.8	71.90	73.45	72.17
Std Dev	0.1319	1.172	3.008	1.163

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #41
First repeat started at : Mon Nov 24 2003 13:55:30
Last repeat started at : Mon Nov 24 2003 13:57:07
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	17.45	22.05	29.83	44.37	303.6	22.24	36.41
Run 2	17.30	21.91	29.27	43.80	291.1	22.28	36.70
Run 3	17.52	22.35	29.86	43.05	318.8	22.58	35.95
Mean	17.42	22.10	29.65	43.74	304.5	22.37	36.35
Std Dev	0.1128	0.2228	0.3307	0.6623	13.89	0.1822	0.3806
%SD	0.6473	1.008	1.115	1.514	4.560	0.8146	1.047

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	38.89	37.90	27.39	27.89	29.50	26.86
Run 2	38.85	38.30	27.42	27.80	29.81	26.83
Run 3	38.95	37.91	27.38	27.62	29.21	26.75
Mean	38.89	38.03	27.39	27.77	29.51	26.82
Std Dev	0.0481	0.2273	0.0231	0.1369	0.2999	0.0586
%SD	0.1236	0.5977	0.0843	0.4931	1.016	0.2186

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	26.33	26.66	26.95	19.89	19.66	19.95
Run 2	27.43	26.54	25.34	19.95	20.08	19.71
Run 3	26.92	27.37	28.04	20.59	20.18	20.07
Mean	26.89	26.86	26.77	20.14	19.97	19.91
Std Dev	0.5456	0.4498	1.361	0.3867	0.2793	0.1819
%SD	2.029	1.675	5.082	1.920	1.398	0.9136

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	20.16	21.47	108.4	106.0	105.8	16.81
Run 2	21.54	21.01	103.9	112.3	110.7	17.06
Run 3	21.23	21.43	110.5	109.9	108.3	18.22
Mean	20.98	21.30	107.6	109.4	108.3	17.36
Std Dev	0.7275	0.2541	3.379	3.192	2.436	0.7516
%SD	3.468	1.193	3.139	2.917	2.250	4.329

Element	Thallium	Lead	Lead	Lead

8433-1558

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	16.96	16.09	16.13	16.04
Run 2	18.00	16.72	16.39	16.71
Run 3	17.40	17.14	16.57	16.67
Mean	17.45	16.65	16.36	16.47
Std Dev	0.5202	0.5306	0.2234	0.3785
%SD	2.981	3.187	1.365	2.298

8433-1550K

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.97	68.45	70.83	69.97
Run 2	99.68	68.34	70.94	69.41
Run 3	99.67	68.96	69.59	68.89
Mean	99.78	68.58	70.45	69.42
Std Dev	0.1711	0.3342	0.7519	0.5400

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #42
First repeat started at : Mon Nov 24 2003 14:06:37
Last repeat started at : Mon Nov 24 2003 14:08:14
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0019	0.1005	0.2642	-0.0978	20.74	0.0036	0.6443
Run 2	0.0012	0.1200	0.3867	-0.1365	18.02	0.0209	0.6110
Run 3	0.0012	0.1116	0.4595	-0.1470	5.379	-0.0684	0.6498
Mean	0.0014	0.1107	0.3701	-0.1271	14.71	-0.0146	0.6350
Std Dev	0.0004	0.0097	0.0987	0.0259	8.196	0.0473	0.0210
%SD	30.30	8.799	26.66	20.38	55.71	323.3	3.305

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.5918	0.6103	0.0382	0.0373	-1.334	0.1379
Run 2	0.5937	0.5875	0.0108	0.0838	-1.247	0.0942
Run 3	0.6860	0.5918	0.0028	0.0709	-1.180	0.0622
Mean	0.6238	0.5966	0.0173	0.0640	-1.254	0.0981
Std Dev	0.0539	0.0121	0.0186	0.0240	0.0771	0.0380
%SD	8.636	2.026	107.6	37.48	6.150	38.72

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0242	0.0297	0.0178	0.0434	0.0190	0.0245
Run 2	0.0228	0.0191	0.0158	0.0386	0.0193	0.0211
Run 3	0.0255	0.0201	0.0263	0.0521	0.0182	0.0155
Mean	0.0242	0.0230	0.0200	0.0447	0.0188	0.0204
Std Dev	0.0014	0.0058	0.0056	0.0068	0.0005	0.0046
%SD	5.676	25.45	28.04	15.27	2.882	22.47

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0049	0.0031	-0.0001	0.0094	-0.0006	-0.0014
Run 2	0.0065	-0.0016	0.0081	0.0075	0.0004	-0.0005
Run 3	0.0045	0.0047	0.0178	0.0061	0.0011	0.0016
Mean	0.0053	0.0021	0.0086	0.0076	0.0003	-0.0001
Std Dev	0.0011	0.0033	0.0090	0.0017	0.0008	0.0015
%SD	20.29	160.8	104.4	21.65	255.7	1663

Element	Thallium	Lead	Lead	Lead

#433 METHOD BLANK

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	-0.0011	0.0012	-0.0078	-0.0028
Run 2	-0.0010	0.0020	-0.0019	-0.0018
Run 3	-0.0011	-0.0029	-0.0009	-0.0015
Mean	-0.0011	0.0001	-0.0035	-0.0020
Std Dev	0.0001	0.0026	0.0037	0.0007
%SD	5.370	2269	105.6	32.37

8433 method BLANK

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.3	99.55	97.32	79.51
Run 2	103.7	99.32	93.94	77.46
Run 3	103.9	99.06	94.76	81.32
Mean	103.9	99.31	95.34	79.43
Std Dev	0.2932	0.2449	1.763	1.933

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #43
First repeat started at : Mon Nov 24 2003 14:09:50
Last repeat started at : Mon Nov 24 2003 14:11:28
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0016	0.4955	6.916	25.36	314.8	2.561	26.86
Run 2	0.0031	0.5021	6.629	25.77	291.7	2.748	27.38
Run 3	0.0015	0.5006	6.974	25.28	314.6	2.711	27.05
Mean	0.0020	0.4994	6.840	25.47	307.0	2.673	27.10
Std Dev	0.0009	0.0034	0.1849	0.2642	13.28	0.0991	0.2627
%SD	42.92	0.6880	2.704	1.037	4.327	3.707	0.9694

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	29.26	29.42	1.552	3.999	5.768	2.615
Run 2	28.30	29.59	1.595	3.736	5.279	2.634
Run 3	28.57	29.73	1.603	3.861	5.342	2.592
Mean	28.71	29.58	1.583	3.865	5.463	2.613
Std Dev	0.4932	0.1553	0.0278	0.1316	0.2657	0.0206
%SD	1.718	0.5251	1.757	3.405	4.863	0.7901

8433.10

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.805	2.736	2.695	0.2374	0.1981	0.1826
Run 2	2.812	2.554	2.707	0.2298	0.1760	0.1638
Run 3	2.860	2.651	2.751	0.2556	0.1873	0.1772
Mean	2.826	2.647	2.717	0.2410	0.1871	0.1746
Std Dev	0.0301	0.0907	0.0297	0.0132	0.0111	0.0097
%SD	1.064	3.428	1.094	5.486	5.919	5.542

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2378	0.2200	123.2	126.0	124.1	0.0185
Run 2	0.2148	0.2201	122.0	118.2	124.4	0.0180
Run 3	0.2286	0.2119	124.5	123.4	117.5	0.0190
Mean	0.2271	0.2173	123.2	122.5	122.0	0.0185
Std Dev	0.0116	0.0047	1.277	3.973	3.873	0.0005
%SD	5.111	2.176	1.036	3.243	3.175	2.841

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0220	0.1552	0.1555	0.1575
Run 2	0.0173	0.1647	0.1716	0.1731
Run 3	0.0218	0.1451	0.1684	0.1455
Mean	0.0204	0.1550	0.1651	0.1587
Std Dev	0.0027	0.0098	0.0085	0.0138
%SD	13.03	6.332	5.171	8.717

$433.10

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.83	70.74	74.00	73.14
Run 2	100.7	71.19	74.82	71.30
Run 3	98.82	71.21	74.40	73.75
Mean	99.77	71.05	74.41	72.73
Std Dev	0.9236	0.2667	0.4106	1.274

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #44
First repeat started at : Mon Nov 24 2003 14:12:42
Last repeat started at : Mon Nov 24 2003 14:14:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0016	0.5713	6.169	23.61	284.8	2.860	4.667
Run 2	0.0004	0.5970	6.299	22.78	279.9	3.084	4.929
Run 3	0.0009	0.5605	6.628	22.52	268.4	3.288	4.677
Mean	0.0010	0.5763	6.365	22.97	277.7	3.077	4.757
Std Dev	0.0006	0.0188	0.2365	0.5703	8.393	0.2138	0.1483
%SD	59.49	3.258	3.715	2.483	3.022	6.948	3.117

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	8.610	7.547	1.895	3.498	4.583	2.615
Run 2	8.431	7.462	1.860	3.690	5.117	2.635
Run 3	8.496	7.394	1.859	3.651	4.501	2.672
Mean	8.512	7.468	1.871	3.613	4.734	2.641
Std Dev	0.0905	0.0768	0.0206	0.1013	0.3348	0.0288
%SD	1.063	1.028	1.099	2.804	7.072	1.092

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.561	3.728	3.576	0.1473	0.0914	0.0759
Run 2	3.763	3.770	3.642	0.1406	0.0856	0.0908
Run 3	3.861	3.832	3.511	0.1309	0.0847	0.0888
Mean	3.729	3.777	3.576	0.1396	0.0872	0.0852
Std Dev	0.1527	0.0520	0.0654	0.0083	0.0036	0.0081
%SD	4.095	1.376	1.830	5.924	4.144	9.455

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0933	0.1013	103.4	105.3	104.0	0.0072
Run 2	0.1009	0.1215	103.6	107.8	109.7	0.0046
Run 3	0.1006	0.1129	101.1	108.1	101.9	0.0017
Mean	0.0982	0.1119	102.7	107.1	105.2	0.0045
Std Dev	0.0043	0.0101	1.398	1.506	4.065	0.0028
%SD	4.387	9.068	1.361	1.406	3.864	61.41

Element	Thallium	Lead	Lead	Lead

4433-11

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0101	0.0777	0.0869	0.0872
Run 2	0.0076	0.0765	0.0873	0.0802
Run 3	0.0081	0.0677	0.0858	0.0775
Mean	0.0086	0.0740	0.0867	0.0816
Std Dev	0.0013	0.0055	0.0008	0.0050
%SD	15.26	7.369	0.8769	6.164

8433-11

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.7	74.33	78.58	70.88
Run 2	102.4	72.44	75.24	74.09
Run 3	101.8	73.59	77.27	72.54
Mean	102.6	73.46	77.03	72.50
Std Dev	0.9439	0.9517	1.683	1.603

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #45
First repeat started at : Mon Nov 24 2003 14:16:11
Last repeat started at : Mon Nov 24 2003 14:17:50
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0019	0.4364	6.232	29.29	353.6	4.855	5.332
Run 2	0.0014	0.4398	5.783	29.78	326.8	4.630	5.313
Run 3	0.0009	0.4507	5.711	27.66	336.3	5.139	5.366
Mean	0.0014	0.4423	5.909	28.91	338.9	4.875	5.337
Std Dev	0.0005	0.0075	0.2822	1.110	13.56	0.2549	0.0269
%SD	37.38	1.690	4.777	3.840	4.002	5.228	0.5036

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.966	8.349	2.676	3.569	4.659	2.480
Run 2	10.13	8.398	2.707	3.710	4.720	2.502
Run 3	10.48	8.845	2.770	3.701	4.511	2.549
Mean	10.19	8.531	2.718	3.660	4.630	2.510
Std Dev	0.2646	0.2736	0.0478	0.0790	0.1077	0.0356
%SD	2.596	3.207	1.757	2.157	2.326	1.419

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.669	5.660	5.391	0.1937	0.1445	0.1522
Run 2	5.490	5.492	5.164	0.2240	0.1328	0.1403
Run 3	5.538	5.314	5.453	0.1841	0.1491	0.1386
Mean	5.566	5.489	5.336	0.2006	0.1421	0.1437
Std Dev	0.0924	0.1733	0.1520	0.0208	0.0084	0.0074
%SD	1.661	3.157	2.848	10.39	5.901	5.181

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1527	0.1845	132.7	135.0	131.8	0.0073
Run 2	0.1527	0.1590	129.3	134.1	134.6	0.0128
Run 3	0.1748	0.1737	131.7	132.3	132.3	0.0141
Mean	0.1601	0.1724	131.2	133.8	132.9	0.0114
Std Dev	0.0128	0.0128	1.703	1.372	1.507	0.0036
%SD	7.978	7.421	1.298	1.025	1.133	31.89

Element	Thallium	Lead	Lead	Lead

8433.12

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0122	0.5221	0.5782	0.5619
Run 2	0.0129	0.4971	0.5689	0.5615
Run 3	0.0130	0.5253	0.5311	0.5405
Mean	0.0127	0.5148	0.5594	0.5546
Std Dev	0.0004	0.0155	0.0250	0.0123
%SD	3.354	3.002	4.463	2.211

4433-12

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.73	68.25	68.01	70.69
Run 2	98.04	67.56	68.90	69.86
Run 3	97.58	66.67	69.29	67.20
Mean	98.12	67.49	68.73	69.25
Std Dev	0.5806	0.7904	0.6541	1.826

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #46
First repeat started at : Mon Nov 24 2003 14:19:44
Last repeat started at : Mon Nov 24 2003 14:21:22
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0013	0.5706	5.289	36.74	418.0	5.317	5.090
Run 2	0.0012	0.5897	5.275	35.79	430.4	5.071	5.053
Run 3	0.0013	0.5717	5.126	36.42	416.0	5.023	5.067
Mean	0.0012	0.5773	5.230	36.31	421.5	5.137	5.070
Std Dev	0.0001	0.0107	0.0901	0.4840	7.815	0.1579	0.0183
%SD	4.536	1.858	1.724	1.333	1.854	3.073	0.3604

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	15.16	12.74	2.824	4.180	4.697	2.514
Run 2	15.87	13.09	2.788	4.318	4.974	2.434
Run 3	15.16	12.65	2.752	4.216	4.478	2.344
Mean	15.40	12.82	2.788	4.238	4.716	2.431
Std Dev	0.4103	0.2310	0.0358	0.0717	0.2487	0.0852
%SD	2.664	1.801	1.282	1.693	5.273	3.506

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.680	2.628	2.642	0.1704	0.1374	0.1024
Run 2	2.584	2.346	2.313	0.1516	0.1237	0.1025
Run 3	2.564	2.519	2.475	0.1566	0.1155	0.1014
Mean	2.609	2.497	2.477	0.1595	0.1255	0.1021
Std Dev	0.0620	0.1422	0.1644	0.0097	0.0111	0.0006
%SD	2.378	5.696	6.637	6.101	8.824	0.5960

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.1002	0.0859	303.0	303.8	307.3	0.0054
Run 2	0.1146	0.1066	291.0	290.9	294.6	0.0033
Run 3	0.1017	0.0859	301.8	302.3	289.1	0.0050
Mean	0.1055	0.0928	298.6	299.0	297.0	0.0046
Std Dev	0.0079	0.0119	6.574	7.069	9.302	0.0011
%SD	7.493	12.84	2.202	2.365	3.132	23.65

Element	Thallium	Lead	Lead	Lead

8433-13

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0049	0.0404	0.0538	0.0411
Run 2	0.0020	0.0472	0.0398	0.0455
Run 3	0.0029	0.0390	0.0482	0.0375
Mean	0.0033	0.0422	0.0473	0.0414
Std Dev	0.0015	0.0044	0.0070	0.0040
%SD	45.58	10.38	14.85	9.705

8433-B

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.04	66.75	66.52	66.01
Run 2	98.08	66.33	69.61	67.53
Run 3	98.27	67.21	69.59	69.72
Mean	98.13	66.76	68.57	67.75
Std Dev	0.1231	0.4414	1.780	1.864

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #47
First repeat started at : Mon Nov 24 2003 14:23:05
Last repeat started at : Mon Nov 24 2003 14:24:43
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0016	1.620	6.838	27.45	342.8	3.735	6.439
Run 2	0.0020	1.674	7.005	29.84	346.1	3.916	6.646
Run 3	0.0007	1.642	6.689	27.41	354.3	3.820	6.249
Mean	0.0015	1.645	6.844	28.23	347.7	3.824	6.445
Std Dev	0.0007	0.0269	0.1581	1.392	5.914	0.0907	0.1984
%SD	46.15	1.637	2.310	4.931	1.701	2.371	3.079

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	11.89	10.58	1.764	3.495	4.871	2.588
Run 2	12.21	10.40	1.691	3.569	5.308	2.620
Run 3	12.25	10.69	1.775	3.653	5.738	2.747
Mean	12.12	10.56	1.743	3.572	5.306	2.652
Std Dev	0.1987	0.1475	0.0458	0.0792	0.4337	0.0841
%SD	1.640	1.397	2.630	2.216	8.174	3.171

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.531	2.581	2.499	0.1678	0.1174	0.1031
Run 2	2.460	2.543	2.626	0.1615	0.1275	0.1056
Run 3	2.540	2.686	2.506	0.1617	0.1250	0.1070
Mean	2.510	2.604	2.544	0.1637	0.1233	0.1052
Std Dev	0.0442	0.0739	0.0717	0.0036	0.0053	0.0020
%SD	1.760	2.838	2.817	2.205	4.273	1.875

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4518	0.5078	157.2	156.8	160.7	0.0126
Run 2	0.5045	0.4830	162.5	160.9	163.2	0.0200
Run 3	0.5105	0.4544	158.0	163.9	154.6	0.0186
Mean	0.4889	0.4817	159.2	160.5	159.5	0.0171
Std Dev	0.0323	0.0267	2.852	3.575	4.455	0.0039
%SD	6.603	5.552	1.791	2.227	2.793	22.99

Element	Thallium	Lead	Lead	Lead

8433-14

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0168	0.2594	0.2682	0.2711
Run 2	0.0204	0.2378	0.2290	0.2533
Run 3	0.0218	0.2364	0.2616	0.2567
Mean	0.0197	0.2446	0.2529	0.2604
Std Dev	0.0026	0.0129	0.0210	0.0094
%SD	13.01	5.281	8.285	3.628

8433-14

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.4	70.85	72.96	69.07
Run 2	100.7	70.70	73.24	72.21
Run 3	101.0	70.85	73.56	69.76
Mean	101.0	70.80	73.25	70.34
Std Dev	0.3418	0.0891	0.2958	1.648

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #48
First repeat started at : Mon Nov 24 2003 14:26:10
Last repeat started at : Mon Nov 24 2003 14:27:47
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.38	24.87	24.94	25.68	41.77	25.85	25.91
Run 2	26.22	24.80	25.28	25.89	42.67	25.88	25.60
Run 3	25.80	25.02	25.15	25.81	44.24	25.72	25.89
Mean	25.80	24.90	25.12	25.79	42.89	25.82	25.80
Std Dev	0.4160	0.1157	0.1719	0.1058	1.251	0.0849	0.1752
%SD	1.612	0.4646	0.6840	0.4102	2.917	0.3288	0.6789

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.39	25.85	25.54	26.16	24.79	26.01
Run 2	25.84	25.62	25.55	26.07	24.50	26.46
Run 3	25.98	25.41	25.79	26.64	25.02	26.80
Mean	25.74	25.63	25.63	26.29	24.77	26.42
Std Dev	0.3106	0.2193	0.1424	0.3034	0.2633	0.3971
%SD	1.207	0.8556	0.5559	1.154	1.063	1.503

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.66	24.51	23.01	24.94	25.15	24.85
Run 2	23.54	23.93	24.33	25.56	25.48	25.64
Run 3	24.45	25.24	23.67	25.46	25.80	25.50
Mean	23.88	24.56	23.67	25.32	25.47	25.33
Std Dev	0.4964	0.6576	0.6582	0.3350	0.3253	0.4253
%SD	2.078	2.677	2.781	1.323	1.277	1.679

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.86	24.95	27.23	26.60	26.10	27.25
Run 2	25.00	26.44	26.77	26.18	26.31	27.54
Run 3	25.72	25.31	26.31	27.35	27.03	27.12
Mean	24.86	25.57	26.77	26.71	26.48	27.31
Std Dev	0.9389	0.7800	0.4603	0.5943	0.4865	0.2151
%SD	3.777	3.051	1.719	2.225	1.837	0.7878

Element	Thallium	Lead	Lead	Lead

CLV 11-24-03

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	27.82	27.03	27.47	27.90
Run 2	27.38	26.95	26.65	26.78
Run 3	26.15	26.14	27.53	26.41
Mean	27.12	26.71	27.22	27.03
Std Dev	0.8653	0.4912	0.4895	0.7758
%SD	3.191	1.839	1.798	2.870

(LV ns4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	104.2	99.30	95.51	78.10
Run 2	105.2	98.48	91.79	78.08
Run 3	104.0	96.74	90.54	77.47
Mean	104.5	98.17	92.61	77.88
Std Dev	0.6170	1.306	2.587	0.3580

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403A
Analysis procedure : EPA Method 200.8
Sample name : Sample #49
First repeat started at : Mon Nov 24 2003 14:34:07
Last repeat started at : Mon Nov 24 2003 14:35:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Zinc
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Zn 66
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0019	0.0043	0.0603	-0.0737	17.08	0.1375	0.0204
Run 2	0.0019	-0.0021	0.0348	-0.0993	18.94	-0.0235	0.0374
Run 3	0.0029	0.0187	0.0687	-0.0828	20.28	0.0982	0.0144
Mean	0.0022	0.0070	0.0546	-0.0852	18.77	0.0707	0.0241
Std Dev	0.0006	0.0107	0.0177	0.0130	1.607	0.0839	0.0119
%SD	28.02	152.6	32.38	15.24	8.563	118.6	49.38

Element	Zinc	Zinc	Arsenic	Selenium	Selenium	Selenium
Isotope	Zn 67	Zn 68	As 75	Se 77	Se 78	Se 82
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0886	0.0164	0.0157	0.0361	-1.571	0.0572
Run 2	0.0387	0.0322	0.0184	0.0639	-1.385	0.0954
Run 3	-0.0110	0.0311	0.0080	0.0764	-1.493	0.0728
Mean	0.0388	0.0266	0.0140	0.0588	-1.483	0.0751
Std Dev	0.0498	0.0088	0.0053	0.0206	0.0931	0.0192
%SD	128.4	33.09	38.15	35.09	6.276	25.58

CCB

Element	Molybdenum	Molybdenum	Molybdenum	Cadmium	Cadmium	Cadmium
Isotope	Mo 95	Mo 97	Mo 98	Cd 111	Cd 112	Cd 114
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0246	0.0424	0.0304	0.0421	0.0221	0.0253
Run 2	0.0553	0.0464	0.0301	0.0490	0.0283	0.0280
Run 3	0.0512	0.0435	0.0196	0.0537	0.0228	0.0298
Mean	0.0437	0.0441	0.0267	0.0483	0.0244	0.0277
Std Dev	0.0167	0.0021	0.0061	0.0058	0.0034	0.0023
%SD	38.20	4.726	23.02	12.11	13.83	8.197

Element	Antimony	Antimony	Barium	Barium	Barium	Thallium
Isotope	Sb 121	Sb 123	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0249	0.0180	0.0115	0.0086	-0.0003	0.0017
Run 2	0.0165	0.0154	0.0090	0.0053	0.0017	0.0000
Run 3	0.0131	0.0126	0.0089	0.0191	0.0034	0.0007
Mean	0.0182	0.0153	0.0098	0.0110	0.0016	0.0008
Std Dev	0.0061	0.0027	0.0014	0.0072	0.0019	0.0009
%SD	33.43	17.89	14.58	65.80	117.3	106.2

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0052	0.0032	0.0105	0.0057
Run 2	0.0032	0.0047	0.0068	0.0044
Run 3	0.0045	0.0038	0.0056	0.0045
Mean	0.0043	0.0039	0.0076	0.0048
Std Dev	0.0010	0.0007	0.0026	0.0008
%SD	23.51	18.42	33.43	15.55

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.2	97.02	91.85	77.76
Run 2	102.1	97.57	93.13	82.94
Run 3	102.3	98.26	89.44	77.00
Mean	102.5	97.62	91.48	79.23
Std Dev	0.5858	0.6193	1.876	3.229

Service Request # K2308433 (Redigest waters for Zn PORE)
Calibration 11-25-03 D
QC in calibration 11-25-03D
QC Service Request # K2308433

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control	✓		
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL			✓
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			✓

Comments:

Primary Review by SC Date 11/25/03
Secondary Review by [signature] Date 11/25/03
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution
1	Calibration Blank	Blank	0 kg	0 ml	1.00
2	25 ppb Std. MS4-24-B	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS4-23-A	Unknown	0 kg	0 ml	1.00
4	CCV1 MS4-24-B	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA WATER MS4-23-C	Unknown	0 kg	0 ml	1.00
8	PBW K8433	Unknown	0 kg	0 ml	1.00
9	LCSW K8433	Unknown	0 kg	0 ml	1.00
10	K8433-15	Unknown	0 kg	0 ml	1.00
11	K8433-15D	Unknown	0 kg	0 ml	1.00
12	K8433-15S	Unknown	0 kg	0 ml	1.00
13	K8433-10	Unknown	0 kg	0 ml	1.00
14	K8433-11	Unknown	0 kg	0 ml	1.00
15	K8433-12	Unknown	0 kg	0 ml	1.00
16	K8433-13	Unknown	0 kg	0 ml	1.00
17	CCV2 MS4-24-B	Unknown	0 kg	0 ml	1.00
18	CCB2	Unknown	0 kg	0 ml	1.00
19	K8433-14	Unknown	0 kg	0 ml	1.00
20	PBW K9060	Unknown	0 kg	0 ml	1.00
21	LCSW K9060	Unknown	0 kg	0 ml	1.00
22	K9060-03	Unknown	0 kg	0 ml	1.00
23	K9060-03D	Unknown	0 kg	0 ml	1.00
24	K9060-03S	Unknown	0 kg	0 ml	1.00
25	K9060-01	Unknown	0 kg	0 ml	1.00
26	K9060-02	Unknown	0 kg	0 ml	1.00
27	K9060-04	Unknown	0 kg	0 ml	1.00
28	K9060-05	Unknown	0 kg	0 ml	1.00
29	CCV3 MS4-24-B	Unknown	0 kg	0 ml	1.00
30	CCB3	Unknown	0 kg	0 ml	1.00
31	K9060-01 1/10	Unknown	0 kg	0 ml	1.00
32	K9060-02 1/10	Unknown	0 kg	0 ml	1.00
33	CCV4 MS4-24-B	Unknown	0 kg	0 ml	1.00
34	CCB4	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	jchan	7:06:54 11/25/03

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:06:54 11/25/03
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-616.00
Lens1	3.10
Lens2	-158.50
Lens3	-130.00
Pole Bias	1.00
Sampling Depth	407.00
Horizontal	-19.00
Vertical	70.00
Cool	13.00
Auxiliary	0.71
Nebuliser	0.83
Forward power	1,290.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-30.80
Focus	19.80

ExCell Mass Calibration **Date: 11/25/03**

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1582	0.714	0.076	TRUE
23.985	5961	0.612	-0.123	FALSE
26.982	6715	0.612	-0.082	TRUE
51.94	13064	0.663	-0.011	TRUE
53.949	13578	0.714	-0.017	TRUE
55.935	14085	0.714	-0.018	TRUE
56.935	14338	0.765	-0.009	FALSE
57.934	14592	0.714	-0.006	TRUE
58.933	14839	0.714	0.025	TRUE
59.931	15099	0.714	0.004	TRUE
61.928	15606	0.714	0.014	TRUE
75.92	19181	0.713	-0.005	TRUE
77.919	19694	0.662	-0.017	TRUE
114.904	29126	0.662	0.009	TRUE
128.905	32701	0.662	0.004	TRUE
131.905	33468	0.662	-0.001	TRUE
134.906	34229	0.713	0.018	TRUE
135.906	34489	0.713	0	TRUE
136.906	34742	0.662	0.009	TRUE
137.906	35002	0.662	-0.009	TRUE
139.905	35509	0.662	0.004	TRUE
141.908	36016	0.662	0.021	TRUE
202.972	51610	0.713	0.008	TRUE
204.972	52123	0.662	-0.001	TRUE
205.974	52383	0.662	-0.016	TRUE
206.976	52637	0.713	-0.01	TRUE
207.977	52890	0.662	0	TRUE
208.98	53144	0.713	0.01	TRUE
238.051	60573	0.661	-0.007	TRUE

Excluded In Calib | Excluded In Results | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	6Bkg	7Li	9Be	59Co	115In	208Pb
	Stability 11/25/03	11/25/03 7:34:14 A	(P)0.500	(P)12559.519	(P)3171.685	(P)20320.456	(P)30552.305	(P)13724.092
2	Stability 11/25/03	11/25/03 7:35:16 A	(P)0.667	(P)12266.932	(P)3159.016	(P)19449.242	(P)29071.390	(P)13075.986
3	Stability 11/25/03	11/25/03 7:36:19 A	(P)0.833	(P)12342.831	(P)3109.672	(P)19286.021	(P)28660.055	(P)13046.456
4	Stability 11/25/03	11/25/03 7:37:21 A	(P)0.167	(P)12892.983	(P)3263.539	(P)20223.147	(P)29811.241	(P)13458.672
5	Stability 11/25/03	11/25/03 7:38:24 A	(P)0.167	(P)12337.494	(P)3117.007	(P)19428.548	(P)28797.165	(P)13139.374
	Mean of Stability 11/	11/25/03 7:33:38 A	(P)0.467	(P)12479.952	(P)3164.184	(P)19741.483	(P)29378.431	(P)13288.916
	SD of Stability 11/25/0		(P)0.298	(P)255.636	(P)61.546	(P)489.384	(P)792.703	(P)293.549
	%RSD of Stability 11		(P)63.888	(P)2.048	(P)1.945	(P)2.479	(P)2.698	(P)2.209

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 11/25/03	11/25/03 7:34:14 A	(P)23160.927	(P)0.000	(P)22538.774
2	Stability 11/25/03	11/25/03 7:35:16 A	(P)22193.397	(P)0.000	(P)21512.196
3	Stability 11/25/03	11/25/03 7:36:19 A	(P)21851.701	(P)0.000	(P)21457.783
4	Stability 11/25/03	11/25/03 7:37:21 A	(P)22495.033	(P)0.000	(P)22238.808
5	Stability 11/25/03	11/25/03 7:38:24 A	(P)21877.243	(P)0.167	(P)21853.045
	Mean of Stability 11/	11/25/03 7:33:38 A	(P)22315.660	(P)0.033	(P)21920.121
	SD of Stability 11/25/0		(P)540.617	(P)0.075	(P)466.088
	%RSD of Stability 11		(P)2.423	(P)223.607	(P)2.126

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Analytical Batch KA0322966

Sample Name: / **TimeStamp**		**Calibration Blank** 11/25/03 13:59			**Mean**	**SD**	**%RSD**
Zinc	66	0.0027	-0.0023	-0.0004	**0**	0.0026	0
Zinc	67	-0.0287	0.0357	-0.007	**0**	0.0328	0
Zinc	68	0.0062	-0.0078	0.0016	**0**	0.0071	0

11/25/03

Internal Standard Factors:

Scandium	45	1.014	0.996	0.99	**1.014**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**25 ppb Std. MS4-24-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:00**					
Zinc	66	25.33	24.98	24.69	**25**	0.3217	1.287
Zinc	67	25.22	25.15	24.63	**25**	0.3215	1.286
Zinc	68	25.13	25.16	24.71	**25**	0.2541	1.017

Internal Standard Factors:

Scandium	45	0.967	0.971	0.956	**0.967**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**ICV MS4-23-A**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:01**					
Zinc	66	25.71	25.62	25.29	**25.54**	0.2217	0.8681
Zinc	67	30.73	30.72	30.25	**30.57**	0.2729	0.8929
Zinc	68	29.7	29.77	29.13	**29.53**	0.3517	1.191

Internal Standard Factors:

Scandium	45	0.946	0.96	0.92	**0.946**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**CCV1 MS4-24-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:03**					
Zinc	66	25.26	25.03	24.7	**25**	0.2816	1.127
Zinc	67	24.79	24.84	24.34	**24.66**	0.2777	1.126
Zinc	68	25.3	25.17	24.87	**25.12**	0.2214	0.8817

Internal Standard Factors:

Scandium	45	0.946	0.951	0.933	**0.946** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**ICB**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:04**					
Zinc	66	-0.0155	-0.0159	-0.0232	**-0.0182**	0.0044	23.91
Zinc	67	0.0051	0.0467	0.0437	**0.0319**	0.0232	72.78
Zinc	68	-0.027	-0.0101	-0.0149	**-0.0173**	0.0087	50.08

Internal Standard Factors:

Scandium	45	0.949	0.959	0.955	**0.949** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**CCB1**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:05**					
Zinc	66	-0.0244	-0.0238	-0.0356	**-0.0279**	0.0066	23.76
Zinc	67	0.0249	-0.0116	-0.0091	**0.0014**	0.0204	1462
Zinc	68	-0.0257	0.0025	-0.0142	**-0.0124**	0.0142	114

Internal Standard Factors:

Scandium	45	0.947	0.942	0.938	**0.947** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-25-03D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322966

Sample Name:		**CRA WATER MS4-23-C**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:06**					
Zinc	66	0.5838	0.5978	0.5702	**0.5839**	0.0138	2.368
Zinc	67	0.6011	0.5645	0.5106	**0.5588**	0.0455	8.144
Zinc	68	0.5813	0.6083	0.568	**0.5859**	0.0205	3.5

Internal Standard Factors:

Scandium	45	0.943	0.944	0.94	**0.943**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**PBW K8433**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:07**					
Zinc	66	0.1674	0.1711	0.1919	**0.1768**	0.0132	7.489
Zinc	67	0.1388	0.1619	0.2022	**0.1676**	0.0321	19.14
Zinc	68	0.1897	0.1445	0.1544	**0.1629**	0.0238	14.59

Internal Standard Factors:

Scandium	45	0.953	0.948	0.948	**0.953**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**LCSW K8433**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:08**					
Zinc	66	20.41	20.2	20.26	**20.29**	0.109	0.5372
Zinc	67	20.09	20.41	20.06	**20.19**	0.194	0.961
Zinc	68	20.4	20.39	20.35	**20.38**	0.0301	0.1475

Internal Standard Factors:

Scandium	45	0.983	0.976	0.972	**0.983**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-15**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:09**					
Zinc	66	13.64	13.39	13.3	**13.44**	0.1759	1.308
Zinc	67	16.69	16.49	16.77	**16.65**	0.1454	0.8732
Zinc	68	16.6	16.5	16.29	**16.46**	0.1576	0.9571

Internal Standard Factors:

Scandium	45	0.971	0.972	0.987	**0.971**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-15D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:10**					
Zinc	66	13.52	13.52	13.24	**13.43**	0.1589	1.183
Zinc	67	16.88	16.51	16.11	**16.5**	0.3854	2.336
Zinc	68	16.55	16.23	16.23	**16.34**	0.1849	1.132

Internal Standard Factors:

Scandium	45	0.987	1.006	0.996	**0.987** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-25-03D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322966

Sample Name:		**K8433-15S**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:11**					
Zinc	66	30.79	30.57	30.76	**30.71**	0.1199	0.3903
Zinc	67	34.25	33.53	34.22	**34**	0.4107	1.208
Zinc	68	34.27	33.52	34.02	**33.94**	0.379	1.117

Internal Standard Factors:

Scandium	45	1.045	1.04	1.052	**1.045** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-10**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:13**					
Zinc	66	22.99	22.51	22.9	**22.8**	0.2556	1.121
Zinc	67	26.7	26.18	27.11	**26.66**	0.4661	1.748
Zinc	68	27.14	26.36	26.83	**26.78**	0.3927	1.466

Internal Standard Factors:

Scandium	45	0.991	0.986	1.001	**0.991**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-11**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:16**					
Zinc	66	4.041	3.967	4.047	**4.019**	0.045	1.121
Zinc	67	9.102	9.178	9.252	**9.178**	0.0752	0.8199
Zinc	68	8.334	8.206	8.376	**8.305**	0.0885	1.065

Internal Standard Factors:

Scandium	45	1.028	1.026	1.038	**1.028** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-12**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:17**					
Zinc	66	4.19	4.067	3.963	**4.073**	0.1139	2.795
Zinc	67	10.23	10.16	9.786	**10.06**	0.2372	2.359
Zinc	68	9.131	8.954	8.976	**9.021**	0.0964	1.069

Internal Standard Factors:

Scandium	45	1.019	1.02	1.011	**1.019** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-13**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:19**					
Zinc	66	4.001	4.007	3.929	**3.979**	0.0431	1.083
Zinc	67	17.99	17.56	17.81	**17.79**	0.2155	1.212
Zinc	68	15.09	15.09	15.15	**15.11**	0.0341	0.2255

Internal Standard Factors:

Scandium	45	1.021	1.026	1.023	**1.021**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**CCV2 MS4-24-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:20**					
Zinc	66	25.31	24.88	24.93	**25.04**	0.2373	0.9475
Zinc	67	25.58	24.89	24.96	**25.15**	0.3802	1.512
Zinc	68	25.37	25.32	25.23	**25.31**	0.0695	0.2745

Internal Standard Factors:

Scandium	45	1.019	1.022	1.022	**1.019**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**CCB2**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:22**					
Zinc	66	0.0024	-0.0144	-0.0192	**-0.0104**	0.0113	109
Zinc	67	0.0559	0.0553	0.0723	**0.0612**	0.0097	15.82
Zinc	68	0.0032	0.0066	0.0301	**0.0133**	0.0147	110.6

Internal Standard Factors:

Scandium	45	1.009	1.02	1.018	**1.009**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K8433-14**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:23**					
Zinc	66	5.44	5.502	5.457	**5.467**	0.0322	0.5898
Zinc	67	13.62	13.31	12.98	**13.31**	0.3226	2.425
Zinc	68	12	11.99	11.85	**11.95**	0.084	0.7033

Internal Standard Factors:

Scandium	45	1.068	1.07	1.068	**1.068**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**PBW K9060**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:25**					
Zinc	66	-0.0186	-0.0091	-0.0124	**-0.0134**	0.0048	36.11
Zinc	67	0.0158	-0.0205	0.0189	**0.0047**	0.0219	467
Zinc	68	0.0127	0.0099	0.021	**0.0145**	0.0058	39.86

Internal Standard Factors:

Scandium	45	1.038	1.047	1.054	**1.038** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**LCSW K9060**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:26**					
Zinc	66	21.03	20.99	20.91	**20.98**	0.0601	0.2863
Zinc	67	20.84	20.83	20.64	**20.77**	0.1141	0.5491
Zinc	68	21.23	20.87	20.95	**21.02**	0.1905	0.9064

Internal Standard Factors:

Scandium	45	1.057	1.062	1.058	**1.057** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-03**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:31**					
Zinc	66	629.8	634	626.6	**630.1**	3.743	0.5941
Zinc	67	545.9	546.7	549.7	**547.4**	2.005	0.3663
Zinc	68	615	582.2	584.6	**593.9**	18.26	3.074

Internal Standard Factors:

Scandium	45	1.024	1.013	1.005	**1.024** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-03D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:33**					
Zinc	66	636.7	643.6	632.2	**637.5**	5.733	0.8992
Zinc	67	551.6	559.4	549.8	**553.6**	5.131	0.9268
Zinc	68	615	597.7	590.8	**601.2**	12.5	2.079

Internal Standard Factors:

Scandium	45	1.023	1.028	1.009	**1.023**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-03S**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:34**					
Zinc	66	664	665.9	657.6	**662.5**	4.376	0.6606
Zinc	67	583.8	579.5	581.2	**581.5**	2.202	0.3787
Zinc	68	654.9	616.5	621.8	**631.1**	20.83	3.301

Internal Standard Factors:

Scandium	45	1.068	1.06	1.053	**1.068**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-01**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:35**					
Zinc	66	986.5	972.7	975.4	**978.2**	7.319	0.7482
Zinc	67	838.8	839.8	840.6	**839.8**	0.9072	0.108
Zinc	68	942.6	941.9	941	**941.9**	0.7999	0.0849

See 1/a Dilution SC 11/25/03

Internal Standard Factors:

Scandium	45	1.041	1.025	1.028	**1.041**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-02**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:36**					
Zinc	66	2741	2726	2696	**2721**	22.92	0.8424
Zinc	67	2323	2314	2307	**2314**	8.008	0.346
Zinc	68	2607	2606	2609	**2607**	1.32	0.0506

SEP
1/10 Dilution
SC
11/25/03

Internal Standard Factors:

Scandium	45	1.024	1.009	1.006	**1.024** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-04**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:37**					
Zinc	66	220.2	214.7	212.4	**215.8**	3.989	1.849
Zinc	67	197.5	191.6	190.3	**193.1**	3.841	1.989
Zinc	68	211.5	210.2	205.9	**209.2**	2.938	1.404

Internal Standard Factors:

Scandium	45	1.042	1.04	1.036	**1.042**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**K9060-05**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:38**					
Zinc	66	307.3	310.9	313.5	**310.6**	3.147	1.013
Zinc	67	273.8	280.2	278.7	**277.6**	3.356	1.209
Zinc	68	295.7	296.6	302.1	**298.1**	3.436	1.153

Internal Standard Factors:

Scandium	45	1.041	1.038	1.044	**1.041**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**CCV3 MS4-24-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:40**					
Zinc	66	25.4	25.14	25.17	**25.24**	0.1421	0.563
Zinc	67	25.33	24.97	24.93	**25.08**	0.2162	0.8622
Zinc	68	25.47	25.38	24.86	**25.24**	0.3299	1.307

Internal Standard Factors:

Scandium	45	1.035	1.023	1.026	**1.035**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-25-03D | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322966**

Sample Name:		**CCB3**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/25/03 14:43**					
Zinc	66	0.0534	0.0562	0.0373	**0.0489**	0.0102	20.82
Zinc	67	0.0958	0.098	0.0702	**0.088**	0.0155	17.57
Zinc	68	0.0623	0.0633	0.0521	**0.0592**	0.0062	10.41

Internal Standard Factors:

Scandium	45	1.037	1.029	1.023	**1.037** n/a		n/a

Metals

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Sample No.	Lab Sample ID.
SED-1	K2308433-001
SED-2	K2308433-002
SED-3	K2308433-003
SED-4	K2308433-004
SED-4D	K2308433-004D
SED-4S	K2308433-004S
SED-4-DUP	K2308433-005
SED-5	K2308433-006
SED-6	K2308433-007
SED-7	K2308433-008
SED-8	K2308433-009
Method Blank	K2308433-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Sediment Package

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Date: 11/26/03

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-1
Lab Code: K2308433-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	11/11/03	11/20/03	0.44		N
Arsenic	200.8	0.6	5	11/11/03	11/24/03	9.7		*
Barium	200.8	0.06	5	11/11/03	11/24/03	38.6		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.70		
Cadmium	200.8	0.06	5	11/11/03	11/24/03	0.84		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	44.1		
Lead	200.8	0.06	5	11/11/03	11/24/03	27.3		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.12		
Nickel	200.8	0.2	5	11/11/03	11/24/03	27.3		
Selenium	200.8	1.1	5	11/11/03	11/24/03	1.1	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.6	5	11/11/03	11/24/03	99.8		*

% Solids: 74.5

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-2
Lab Code: K2308433-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	11/11/03	11/20/03	0.46		N
Arsenic	200.8	0.5	5	11/11/03	11/24/03	13.3		*
Barium	200.8	0.05	5	11/11/03	11/24/03	43.8		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.45		
Cadmium	200.8	0.05	5	11/11/03	11/24/03	0.88		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	39.4		
Lead	200.8	0.05	5	11/11/03	11/24/03	25.9		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.08		
Nickel	200.8	0.2	5	11/11/03	11/24/03	17.3		
Selenium	200.8	1.1	5	11/11/03	11/24/03	1.1	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.5	5	11/11/03	11/24/03	79.4		*

% Solids: 77.3

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-3
Lab Code: K2308433-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	11/11/03	11/20/03	0.64		N
Arsenic	200.8	0.6	5	11/11/03	11/24/03	15.6		*
Barium	200.8	0.06	5	11/11/03	11/24/03	78.1		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.56		
Cadmium	200.8	0.06	5	11/11/03	11/24/03	0.80		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	44.6		
Lead	200.8	0.06	5	11/11/03	11/24/03	33.8		
Mercury	7471A	0.01	1	11/17/03	11/18/03	0.04		
Nickel	200.8	0.2	5	11/11/03	11/24/03	21.3		
Selenium	200.8	1.2	5	11/11/03	11/24/03	1.2	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.6	5	11/11/03	11/24/03	86.8		*

% Solids: 81.6

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-4
Lab Code: K2308433-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	11/11/03	11/20/03	0.42		N
Arsenic	200.8	0.6	5	11/11/03	11/24/03	6.9		*
Barium	200.8	0.06	5	11/11/03	11/24/03	44.8		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.47		
Cadmium	200.8	0.06	5	11/11/03	11/24/03	0.99		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	30.6		
Lead	200.8	0.06	5	11/11/03	11/24/03	38.4		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.23		
Nickel	200.8	0.2	5	11/11/03	11/24/03	16.0		
Selenium	200.8	1.1	5	11/11/03	11/24/03	1.1	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.06		
Zinc	200.8	0.6	5	11/11/03	11/24/03	112		*

% Solids: 75.3

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	11/11/03	11/20/03	0.55		N
Arsenic	200.8	0.6	5	11/11/03	11/24/03	8.1		*
Barium	200.8	0.06	5	11/11/03	11/24/03	45.4		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.48		
Cadmium	200.8	0.06	5	11/11/03	11/24/03	1.26		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	28.1		
Lead	200.8	0.06	5	11/11/03	11/24/03	32.2		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.24		
Nickel	200.8	0.2	5	11/11/03	11/24/03	16.8		
Selenium	200.8	1.1	5	11/11/03	11/24/03	1.1	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.6	5	11/11/03	11/24/03	98.0		*

% Solids: 73.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-5
Lab Code: K2308433-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	11/11/03	11/20/03	0.83		N
Arsenic	200.8	0.6	5	11/11/03	11/24/03	13.4		*
Barium	200.8	0.06	5	11/11/03	11/24/03	38.5		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.49		
Cadmium	200.8	0.06	5	11/11/03	11/24/03	0.71		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	34.9		
Lead	200.8	0.06	5	11/11/03	11/24/03	33.5		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.14		
Nickel	200.8	0.2	5	11/11/03	11/24/03	17.1		
Selenium	200.8	1.2	5	11/11/03	11/24/03	1.2	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.6	5	11/11/03	11/24/03	81.3		*

% Solids: 82.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-6
Lab Code: K2308433-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	11/11/03	11/20/03	0.41		N
Arsenic	200.8	0.5	5	11/11/03	11/24/03	14.1		*
Barium	200.8	0.05	5	11/11/03	11/24/03	132		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.63		
Cadmium	200.8	0.05	5	11/11/03	11/24/03	0.81		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	26.5		
Lead	200.8	0.05	5	11/11/03	11/24/03	199		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.05		
Nickel	200.8	0.2	5	11/11/03	11/24/03	22.1		
Selenium	200.8	1.1	5	11/11/03	11/24/03	1.1	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.5	5	11/11/03	11/24/03	79.4		*

% Solids: 79.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-7
Lab Code: K2308433-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	11/11/03	11/20/03	0.42		N
Arsenic	200.8	0.5	5	11/11/03	11/24/03	8.9		*
Barium	200.8	0.05	5	11/11/03	11/24/03	68.6		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.35		
Cadmium	200.8	0.05	5	11/11/03	11/24/03	0.72		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	28.0		
Lead	200.8	0.05	5	11/11/03	11/24/03	26.0		
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.45		
Nickel	200.8	0.2	5	11/11/03	11/24/03	13.4		
Selenium	200.8	1.0	5	11/11/03	11/24/03	1.0	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.5	5	11/11/03	11/24/03	68.8		*

% Solids: 79.9

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-8
Lab Code: K2308433-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	11/11/03	11/20/03	0.31		N
Arsenic	200.8	0.6	5	11/11/03	11/24/03	5.2		*
Barium	200.8	0.06	5	11/11/03	11/24/03	33.0		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.27		
Cadmium	200.8	0.06	5	11/11/03	11/24/03	0.90		*
Chromium	200.8	0.2	5	11/11/03	11/24/03	22.6		
Lead	200.8	0.06	5	11/11/03	11/24/03	55.0		
Mercury	7471A	0.01	1	11/17/03	11/18/03	0.32		
Nickel	200.8	0.2	5	11/11/03	11/24/03	10.0		
Selenium	200.8	1.1	5	11/11/03	11/24/03	1.1	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.05		
Zinc	200.8	0.6	5	11/11/03	11/24/03	74.6		*

% Solids: 72.7

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected:
Date Received:
Units: MG/KG
Basis: Dry

Sample Name: Method Blank
Lab Code: K2308433-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	11/11/03	11/20/03	0.05	U	N
Arsenic	200.8	0.5	5	11/11/03	11/24/03	0.5	U	*
Barium	200.8	0.05	5	11/11/03	11/24/03	0.19		
Beryllium	200.8	0.02	5	11/11/03	11/24/03	0.02	U	
Cadmium	200.8	0.05	5	11/11/03	11/24/03	0.05	U	*
Chromium	200.8	0.2	5	11/11/03	11/24/03	0.2	U	
Lead	200.8	0.05	5	11/11/03	11/24/03	0.05	U	
Mercury	7471A	0.02	1	11/17/03	11/18/03	0.02	U	
Nickel	200.8	0.2	5	11/11/03	11/24/03	0.2	U	
Selenium	200.8	1.0	5	11/11/03	11/24/03	1.0	U	
Thallium	200.8	0.02	5	11/11/03	11/24/03	0.02	U	
Zinc	200.8	0.5	5	11/11/03	11/24/03	0.5	U	*

% Solids: 100.0

Comments:

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	25.7	103	25.0	26.2	105	26.2	105	200.8
Arsenic	50.0	51.4	103	25.0	25.2	101	24.9	100	200.8
Barium	200	204	102	25.0	25.5	102	25.3	101	200.8
Beryllium	5.0	5.18	104	25.0	24.9	100	26.0	104	200.8
Cadmium	25.0	25.8	103	25.0	25.0	100	24.5	98	200.8
Chromium	20.0	20.2	101	25.0	25.4	102	25.3	101	200.8
Lead	50.0	50.0	100	25.0	26.6	106	25.3	101	200.8
Mercury	5.0	5.00	100	5.0	5.03	101	5.13	103	7471A
Nickel	50.0	49.8	100	25.0	25.3	101	25.0	100	200.8
Selenium	50.0	52.7	105	25.0	25.3	101	24.9	100	200.8
Thallium	50.0	49.7	99	25.0	25.9	104	25.4	102	200.8
Zinc	50.0	52.4	105	25.0	25.8	103	25.3	101	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.6	102	26.5	106	200.8
Arsenic				25.0	24.9	100			200.8
Barium				25.0	25.4	102			200.8
Beryllium				25.0	24.4	98			200.8
Cadmium				25.0	24.9	100			200.8
Chromium				25.0	24.6	98			200.8
Lead				25.0	25.7	103			200.8
Mercury				5.0	5.05	101	5.05	101	7471A
Nickel				25.0	24.6	98			200.8
Selenium				25.0	25.2	101			200.8
Thallium				25.0	25.2	101			200.8
Zinc				25.0	25.4	102			200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.3	101	25.3	101	200.8
Mercury				5.0	5.00	100	4.99	100	7471A

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: CAS Mixed Solutions

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	24.9	100			200.8

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.10	0.10	102		
Arsenic				1.0	1.00	100		
Barium				0.10	0.11	111		
Beryllium				0.04	0.05	114		
Cadmium				0.10	0.10	98		
Chromium				0.40	0.42	104		
Lead				0.04	0.04	91		
Mercury	0.20	0.16	79					
Nickel				0.40	0.38	96		
Selenium				2.0	2.04	102		
Thallium				0.04	0.04	104		
Zinc				1.0	0.97	97		

METALS
- 3 -
BLANKS

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Antimony	0.10	U	0.10	U	0.10	U	0.10	U					200.8
Arsenic	1.0	U	1.0	U	1.0	U	1.0	U					200.8
Barium	0.10	U	0.10	U	0.10	U	0.10	U					200.8
Beryllium	0.04	U	0.04	U	0.04	U	0.04	U					200.8
Cadmium	0.10	U	0.10	U	0.10	U	0.10	U					200.8
Chromium	0.4	U	0.4	U	0.4	U	0.4	U					200.8
Lead	0.10	U	0.10	U	0.10	U	0.10	U					200.8
Mercury	0.20	U	0.20	U	0.20	U	0.20	U					7471A
Nickel	0.4	U	0.4	U	0.4	U	0.4	U					200.8
Selenium	2.0	U	2.0	U	2.0	U	2.0	U					200.8
Thallium	0.04	U	0.04	U	0.04	U	0.04	U					200.8
Zinc	1.0	U	1.0	U	1.0	U	1.0	U					200.8

METALS
-3-
BLANKS

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Antimony			0.10	U	0.10	U	0.10	U					200.8
Mercury			0.20	U	0.20	U	0.20	U					7471A

METALS
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Antimony			0.10	U									200.8

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Service Request: K2308433
Project No.: IN000072.0021
Units: mg/kg
Project Name: Bloomington, IN
Basis: Dry
Matrix: SEDIMENT
% Solids: 75.3

Sample Name: SED-4S
Lab Code: K2308433-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	73.8		0.42		111	66	N	200.8
Arsenic	70 - 130	116		6.9		111	98		200.8
Barium	70 - 130	504		44.8		443	104		200.8
Beryllium	70 - 130	11.4		0.47		11.1	98		200.8
Cadmium	70 - 130	12.0		0.99		11.1	99		200.8
Chromium	70 - 130	68.5		30.6		44.3	86		200.8
Lead	70 - 130	139		38.4		111	91		200.8
Mercury	55 - 137	0.65		0.23		0.47	89		7471A
Nickel	70 - 130	117		16.0		111	91		200.8
Selenium	70 - 130	105		1.1	U	111	95		200.8
Thallium	70 - 130	104		0.06		111	94		200.8
Zinc	70 - 130	238		112		111	114		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Units: mg/kg
Basis: Dry
% Solids: 75.3

Sample Name: SED-4D
Lab Code: K2308433-004D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	30	0.42		0.42		0		200.8
Arsenic	30	6.9		13.6		66	*	200.8
Barium	30	44.8		45.8		2		200.8
Beryllium	30	0.47		0.52		9		200.8
Cadmium	30	0.99		1.69		52	*	200.8
Chromium	30	30.6		30.7		0		200.8
Lead	30	38.4		46.7		20		200.8
Mercury	30	0.23		0.17		29		7471A
Nickel	30	16.0		18.0		12		200.8
Selenium		1.1	U	1.1	U			200.8
Thallium		0.06		0.06		7		200.8
Zinc	30	112		192		53	*	200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

- 7 -

LABORATORY CONTROL SAMPLE

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source: ERA Lot #246

Analyte	Aqueous mg/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C Limits		%R
Antimony				32.6	29.5	0.0500	68.1	90
Arsenic				187	209	139	235	112
Barium				172	195	132	212	113
Beryllium				45.7	50.2	36.0	55.6	110
Cadmium				67.9	77.4	52.0	83.6	114
Chromium				144	148	115	173	103
Lead				125	141	95.2	155	113
Mercury				1.49	1.32	0.662	2.02	89
Nickel				78.0	79.8	61.1	94.9	102
Selenium				154	182	114	194	118
Thallium				84.5	96.8	48.4	121	115
Zinc				283	331	219	347	117

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Mercury	253.70	BD	0.20		7471A

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #: AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Antimony	123		0.10		200.8

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: PQ-S

GFAA ID #: AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Arsenic	75		1.0		200.8
Barium	137		0.10		200.8
Beryllium	9		0.04		200.8
Cadmium	111		0.10		200.8
Chromium	52		0.4		200.8
Lead	208		0.10		200.8
Nickel	62		0.4		200.8
Selenium	82		2.0		200.8
Thallium	205		0.04		200.8
Zinc	66		1.0		200.8

Comments _____

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: Excell ICPMS

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	1000.0	200.8

Comments:

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: PQ-S

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.00	600.0	200.8
Barium	15.00	700.0	200.8
Beryllium	15.00	500.0	200.8
Cadmium	15.00	1000.0	200.8
Chromium	15.00	300.0	200.8
Lead	15.00	1000.0	200.8
Nickel	15.00	700.0	200.8
Selenium	15.00	600.0	200.8
Thallium	15.00	700.0	200.8
Zinc	15.00	600.0	200.8

Comments:

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Bloomington, IN

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
CALIBRATION ZER	11/17/03	METHOD	100	100
ICV	11/17/03	METHOD	100	100
LCSS	11/17/03	METHOD	0.552	100
K2308433-MB	11/17/03	METHOD	1.00	100
K2308433-001	11/17/03	METHOD	1.35	100
K2308433-002	11/17/03	METHOD	1.34	100
K2308433-003	11/17/03	METHOD	1.68	100
K2308433-004	11/17/03	METHOD	1.37	100
K2308433-004D	11/17/03	METHOD	1.51	100
K2308433-005	11/17/03	METHOD	1.55	100
K2308433-004S	11/17/03	METHOD	1.40	100
K2308433-006	11/17/03	METHOD	1.33	100
K2308433-007	11/17/03	METHOD	1.38	100
K2308433-008	11/17/03	METHOD	1.42	100
K2308433-009	11/17/03	METHOD	1.97	100
STANDARD #1	11/17/03	METHOD	100	100
STANDARD #2	11/17/03	METHOD	100	100
STANDARD #3	11/17/03	METHOD	100	100
STANDARD #4	11/17/03	METHOD	100	100
STANDARD #5	11/17/03	METHOD	100	100

METALS
- 13 -
PREPARATION LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project: Bloomington, IN

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSS	11/11/03	EPA 3050B	1.00	100
K2308433-MB	11/11/03	EPA 3050B	1.00	100
K2308433-001	11/11/03	EPA 3050B	1.22	100
K2308433-002	11/11/03	EPA 3050B	1.20	100
K2308433-003	11/11/03	EPA 3050B	1.00	100
K2308433-004	11/11/03	EPA 3050B	1.20	100
K2308433-004D	11/11/03	EPA 3050B	1.20	100
K2308433-005	11/11/03	EPA 3050B	1.21	100
K2308433-004S	11/11/03	EPA 3050B	1.20	100
K2308433-006	11/11/03	EPA 3050B	1.01	100
K2308433-007	11/11/03	EPA 3050B	1.21	100
K2308433-008	11/11/03	EPA 3050B	1.22	100
K2308433-009	11/11/03	EPA 3050B	1.21	100

LCSS	11/11/03	EPA 3050B	1.00	100
K2308433-MB	11/11/03	EPA 3050B	1.00	100
K2308433-001	11/11/03	EPA 3050B	1.21	100
K2308433-002	11/11/03	EPA 3050B	1.22	100
K2308433-003	11/11/03	EPA 3050B	1.01	100
K2308433-004	11/11/03	EPA 3050B	1.20	100
K2308433-004D	11/11/03	EPA 3050B	1.20	100
K2308433-005	11/11/03	EPA 3050B	1.20	100
K2308433-004S	11/11/03	EPA 3050B	1.20	100
K2308433-006	11/11/03	EPA 3050B	1.00	100
K2308433-007	11/11/03	EPA 3050B	1.20	100
K2308433-008	11/11/03	EPA 3050B	1.22	100
K2308433-009	11/11/03	EPA 3050B	1.23	100

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1

Method: CV

Start Date: 11/18/03

End Date: 11/18/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	11:28																X									
STANDARD #1	1.00	11:29																X									
STANDARD #2	1.00	11:31																X									
STANDARD #3	1.00	11:32																X									
STANDARD #4	1.00	11:34																X									
STANDARD #5	1.00	11:36																X									
ICV	1.00	11:37																X									
ICB	1.00	11:39																X									
CCV1	1.00	11:40																X									
CCB1	1.00	11:42																X									
CRA	1.00	11:44																X									
K2308433-MB	1.00	11:45																X									
LCSS	1.00	11:47																X									
ZZZZZZ	1.00	11:48																									
ZZZZZZ	1.00	11:50																									
ZZZZZZ	1.00	11:52																									
ZZZZZZ	1.00	11:53																									
ZZZZZZ	1.00	11:55																									
ZZZZZZ	1.00	11:57																									
K2308433-001	1.00	11:58																X									
CCV2	1.00	12:00																X									
CCB2	1.00	12:01																X									
K2308433-002	1.00	12:03																X									
K2308433-003	1.00	12:05																X									
K2308433-004	1.00	12:06																X									
K2308433-004D	1.00	12:08																X									
K2308433-004S	1.00	12:09																X									
K2308433-005	1.00	12:11																X									
K2308433-006	1.00	12:13																X									
K2308433-007	1.00	12:14																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/18/03 End Date: 11/18/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308433-008	1.00	12:16																X									
K2308433-009	1.00	12:18																X									
CCV3	1.00	12:19																X									
CCB3	1.00	12:21																X									
ZZZZZZ	1.00	12:22																									
ZZZZZZ	1.00	12:24																									
ZZZZZZ	1.00	12:26																									
ZZZZZZ	1.00	12:27																									
ZZZZZZ	1.00	12:29																									
ZZZZZZ	1.00	12:30																									
ZZZZZZ	1.00	12:32																									
ZZZZZZ	1.00	12:34																									
ZZZZZZ	1.00	12:35																									
ZZZZZZ	1.00	12:37																									
CCV4	1.00	12:39																X									
CCB4	1.00	12:40																X									
ZZZZZZ	1.00	12:42																									
ZZZZZZ	1.00	12:43																									
CCV5	1.00	12:45																X									
CCB5	1.00	12:47																X									
ZZZZZZ	1.00	13:01																									
ZZZZZZ	1.00	13:02																									
CCV6	1.00	13:04																X									
CCB6	1.00	13:05																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 11/20/03

End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	12:27			X																						
25 PPB STD.	1.00	12:29			X																						
ICV	1.00	12:30			X																						
CCV1	1.00	12:31			X																						
ICB	1.00	12:36			X																						
CCB1	1.00	12:37			X																						
CRA	1.00	12:39			X																						
ZZZZZZ	1.00	12:41																									
ZZZZZZ	1.00	12:42																									
ZZZZZZ	1.00	12:43																									
ZZZZZZ	1.00	12:45																									
ZZZZZZ	1.00	12:46																									
ZZZZZZ	1.00	12:48																									
ZZZZZZ	1.00	12:49																									
ZZZZZZ	1.00	12:50																									
ZZZZZZ	1.00	12:52																									
CCV2	1.00	12:53			X																						
CCB2	1.00	12:57			X																						
ZZZZZZ	1.00	12:59																									
ZZZZZZ	1.00	13:00																									
ZZZZZZ	1.00	13:01																									
ZZZZZZ	1.00	13:02																									
ZZZZZZ	1.00	13:05																									
ZZZZZZ	1.00	13:06																									
ZZZZZZ	1.00	13:07																									
ZZZZZZ	1.00	13:09																									
ZZZZZZ	1.00	13:10																									
ZZZZZZ	1.00	13:11																									
CCV3	1.00	13:12			X																						
CCB3	1.00	13:13			X																						

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METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 11/20/03

End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	13:15																										
ZZZZZZ	1.00	13:17																										
ZZZZZZ	1.00	13:19																										
ZZZZZZ	1.00	13:21																										
ZZZZZZ	1.00	13:22																										
ZZZZZZ	1.00	13:25																										
ZZZZZZ	1.00	13:26																										
ZZZZZZ	1.00	13:31																										
ZZZZZZ	1.00	13:32																										
ZZZZZZ	1.00	13:34																										
CCV4	1.00	13:36			X																							
CCB4	1.00	13:38			X																							
ZZZZZZ	1.00	13:40																										
ZZZZZZ	1.00	13:41																										
ZZZZZZ	1.00	13:48																										
ZZZZZZ	1.00	13:50																										
ZZZZZZ	1.00	13:51																										
ZZZZZZ	1.00	13:52																										
ZZZZZZ	1.00	13:54																										
ZZZZZZ	1.00	13:59																										
ZZZZZZ	1.00	14:01																										
ZZZZZZ	1.00	14:02																										
CCV5	1.00	14:04			X																							
CCB5	1.00	14:07			X																							
K2308433-MB	5.00	14:09			X																							
K2308433-004	5.00	14:11			X																							
K2308433-004D	5.00	14:12			X																							
K2308433-004S	5.00	14:14			X																							
LCSS	20.00	14:15			X																							
K2308433-001	5.00	14:17			X																							

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 11/20/03

End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308433-002	5.00	14:18			X																									
K2308433-003	5.00	14:19			X																									
K2308433-005	5.00	14:20			X																									
K2308433-006	5.00	14:21			X																									
CCV6	1.00	14:25			X																									
CCB6	1.00	14:26			X																									
K2308433-007	5.00	14:28			X																									
K2308433-008	5.00	14:29			X																									
K2308433-009	5.00	14:31			X																									
CCV7	1.00	14:33			X																									
CCB7	1.00	14:36			X																									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: PQ-S

Method: MS

Start Date: 11/24/03

End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	14:48				X	X	X	X		X				X				X		X			X		X	
CALIBRATION STANDARD	1.00	14:50				X	X	X	X		X				X				X		X			X		X	
ICV	1.00	14:54				X	X	X	X		X				X				X		X			X		X	
CCV1	1.00	14:57				X	X	X	X		X				X				X		X			X		X	
ICB	1.00	15:02				X	X	X	X		X				X				X		X			X		X	
CCB1	1.00	15:06				X	X	X	X		X				X				X		X			X		X	
CRA	1.00	15:09				X	X	X	X		X				X				X		X			X		X	
K2308433-MB	5.00	15:28				X	X	X	X		X				X				X		X			X		X	
LCSS	20.00	15:31				X	X	X	X		X				X				X					X		X	
K2308433-004	5.00	15:34				X	X	X	X		X				X				X		X			X		X	
K2308433-004D	5.00	15:38				X	X	X	X		X				X				X		X			X		X	
K2308433-004S	25.00	15:42				X	X	X	X		X				X				X		X			X		X	
LCSS	100.00	15:45																			X						
K2308433-001	5.00	15:48				X	X	X	X		X				X				X		X			X		X	
K2308433-002	5.00	15:51				X	X	X	X		X				X				X		X			X		X	
K2308433-003	5.00	15:54				X	X	X	X		X				X				X		X			X		X	
CCV2	1.00	15:57				X	X	X	X		X				X				X		X			X		X	
CCB2	1.00	16:01				X	X	X	X		X				X				X		X			X		X	
K2308433-005	5.00	16:06				X	X	X	X		X				X				X		X			X		X	
K2308433-006	5.00	16:09				X	X	X	X		X				X				X		X			X		X	
K2308433-007	5.00	16:12				X	X	X	X		X				X				X		X			X		X	
K2308433-008	5.00	16:15				X	X	X	X		X				X				X		X			X		X	
K2308433-009	5.00	16:17				X	X	X	X		X				X				X		X			X		X	
ZZZZZZ	1.00	16:21																									
ZZZZZZ	1.00	16:29																									
ZZZZZZ	1.00	16:34																									
ZZZZZZ	1.00	16:38																									
CCV3	1.00	16:42				X	X	X	X		X				X				X		X			X		X	
CCB3	1.00	16:47				X	X	X	X		X				X				X		X			X		X	
ZZZZZZ	1.00	16:51																									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: PQ-S

Method: MS

Start Date: 11/24/03

End Date: 11/24/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	16:54																									
ZZZZZZ	1.00	16:58																									
ZZZZZZ	1.00	17:01																									
ZZZZZZ	1.00	17:06																									
ZZZZZZ	1.00	17:09																									
ZZZZZZ	1.00	17:13																									
ZZZZZZ	1.00	17:16																									
CCV4	1.00	17:23				X	X	X	X		X				X				X		X			X		X	
CCB4	1.00	17:26				X	X	X	X		X				X				X		X			X		X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315052

Service Request Number(s): K2308433

Method: CLP 3010A 3020A 3005A (3050B) Other-

Analysis for: ICP (ICP-MS) GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBS			X		100	10% HNO_3
LCSS	1.00					
K8433-1	1.22					
-2	1.20					
-3	1.00					
-4	1.20					
-4d	1.20					
-4s	1.20					
-5	1.21					
-6	1.01					
-7	1.21					
-8	1.22					
-9	1.21					
						BN 11-11-03

Time Digestion Started: 9:35 am

Lot # Acids Used: HNO3 Y23049 HCl _____ H2O2 42331331

LCSS (circle appropriate) ~~ERA CLP Soil Lot # 246~~ **EPA Lot # 0287** **Other:** _____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-12-Q, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-12-S, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO

SS1-MET1-26-R, 2.0 mls added SS4-MET1-27-B, _____ mls added

SS5-MET1-26-S, 1.0 mls added

SS6-MET1-28-A, 1.0 mls added

TCLP Spike/LCSE

SS1 _____ mls. added

SS2 _____ mls. added

Additional spikes: _____

Comments: _____

Analyst [signature] **Date** 11-11-03

Reviewer [signature] **Date** 11/12/03

metdig.xls
9/5/2002

METALS SPIKE FORM

Service Request # K2308433
Q.C. Sample # K8433-4

Initials /Date: RW 11-11-03

Circle type of digest: GFAA ICP FAA (ICP-MS) Other:_____
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of 1000ppm Std.	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
	HNO3	50.0	1000ml	JT BAKER	X40023	-	-		
	Al	*100	1000ml	MET1-26-P	-	9/1/2004	200		
	Ag	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Ba	*100	1000ml	MET1-26-P	-	9/1/2004	200		
	Be	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Cd	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Co	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Cr	*100	1000ml	MET1-26-P	-	9/1/2004	20		
SS1-MET1-26-R	Cu	*100	1000ml	MET1-26-P	-	9/1/2004	25		Expires: 7/1/04
	Fe	*100	1000ml	MET1-26-P	-	9/1/2004	100		
	Pb	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Mn	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Ni	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Sb	50	1000ml	MET1-22-G	-	7/1/2004	50		
	V	*100	1000ml	MET1-26-P	-	9/1/2004	50	2.0	
	Zn	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	HNO3	25.0	500ml	JT BAKER	X40023	-	-		
	As	2.0	500ml	MET1-21-I	-	1/1/2005	4		
SS4-MET1-27-B	Cd	2.0	500ml	MET1-17-D	-	9/30/2004	4		
	Pb	2.0	500ml	MET1-10-H	-	4/1/2004	4		Expires: 3/1/04
	Se	2.0	500ml	MET1-19-C	-	10/31/2004	4		
	Tl	2.0	500ml	MET1-19-F	-	10/1/2004	4		
	Cu	2.0	500ml	MET1-17-E	-	3/1/2004	4		
	HNO3	25.0	500ml	JT BAKER	X40023	-	-		
SS5-MET1-26-S	As	50.0	500ml	MET1-21-I	-	1/1/2005	100		Expires:10/31/04
	Se	50.0	500ml	MET1-19-C	-	10/30/2004	100	1.0	
	Tl	50.0	500ml	MET1-19-F	-	10/30/2004	100		
	HNO3	25	500ml	JT BAKER	X40023	-	-		
SS6-MET1-28-A	B	50	500ml	MET1-17-A	-	9/30/2004	100		Expires: 09/30/04
	Mo	50	500ml	MET1-19-A	-	10/31/2004	100	1.0	
GFLCSW	HNO3	2.0	200ml	JT BAKER	X40023	-	-		
(MET1-25-Q)	As, Pb, Se, Tl	1.0	200ml	QCP-CICV-3	S-MEB119011	1/1/2004	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		Expires: 01/01/04
	Cu	0.5	200ml	MET1-17-E	-	3/1/2004	2.5		
QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	IV	R-MEB93119	1/1/2004	2500		
(MET1-12-Q)	Al, Ba	no dilution	-	IV	R-MEB93119	1/1/2004	1000		
	Fe	no dilution	-	IV	R-MEB93119	1/1/2004	500		Expires: 01/01/04
	Co, Mn, Ni, V, Zn	no dilution	-	IV	R-MEB93119	1/1/2004	250		
	Cu, Ag	no dilution	-	IV	R-MEB93119	1/1/2004	125		
	Cr	no dilution	-	IV	R-MEB93119	1/1/2004	100		
	Be	no dilution	-	IV	R-MEB93119	1/1/2004	25		
QCP-CICV-2 (MET1-12-M)	Sb	no dilution	-	IV	T-MEB119095	8/1/2004	500		Expires: 8/01/04
QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	IV	S-MEB119011	1/104	500		Expires: 01/01/04
(MET1-12-S)	Cd	no dilution	-	IV	S-MEB119011	1/104	250		

* Denotes Custom Mix CAS-CAL-14

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315053

Service Request Number(s): K2308433

Method: CLP 3010A 3020A 3005A (3050B) Other-

Analysis for: (ICP) ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBS			X		100	10% HNO3/5% HCl
LCSS	1.00					
K8433-1	1.21					
-2	1.22					
-3	1.01					
-4	1.20					
-4d	1.20					
-4s	1.20					
-5	1.20					
-6	1.00					
-7	1.20					
-8	1.22					
-9	1.23					
						RW 11-11-03

Time Digestion Started: 9:35 Am

Lot # Acids Used: HNO3 Y23049 HCl 42167 H2O2 42331331

LCSS (circle appropriate) (ERA CLP Soil Lot # 246) EPA Lot # 0287 Other:

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-12-Q, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-12-S, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO

SS1-MET1-26-R, 2.0 mls added SS4-MET1-27-B, _____ mls added

SS5-MET1-26-S, 1.0 mls added

SS6-MET1-28-A, 1.0 mls added

TCLP Spike/LCSE

SS1 _____ mls. added

SS2 _____ mls. added

Additional spikes: _____

Comments: _____

Analyst Robert Washington Date 11-11-03

Reviewer GMA Date 11/12/03

metdig.xls
9/5/2002

METALS SPIKE FORM

Service Request # K2308433
Q.C. Sample # K8433-4

Initials /Date: RW 11-11-03

Circle type of digest: GFAA (ICP) FAA ICP-MS Other:_____
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of 1000ppm Std.	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-26-R	HNO3	50.0	1000ml	JT BAKER	X40023	-	-		
	Al	*100	1000ml	MET1-26-P	-	9/1/2004	200		
	Ag	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Ba	*100	1000ml	MET1-26-P	-	9/1/2004	200		
	Be	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Cd	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Co	*100	1000ml	MET1-26-P	-	9/1/2004	50		Expires: 7/1/04
	Cr	*100	1000ml	MET1-26-P	-	9/1/2004	20		
	Cu	*100	1000ml	MET1-26-P	-	9/1/2004	25		
	Fe	*100	1000ml	MET1-26-P	-	9/1/2004	100		
	Pb	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Mn	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Ni	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Sb	50	1000ml	MET1-22-G	-	7/1/2004	50		
	V	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Zn	*100	1000ml	MET1-26-P	-	9/1/2004	50	2.0	
SS4-MET1-27-B	HNO3	25.0	500ml	JT BAKER	X40023	-	-		
	As	2.0	500ml	MET1-21-I	-	1/1/2005	4		
	Cd	2.0	500ml	MET1-17-D	-	9/30/2004	4		
	Pb	2.0	500ml	MET1-10-H	-	4/1/2004	4		Expires: 3/1/04
	Se	2.0	500ml	MET1-19-C	-	10/31/2004	4		
	Tl	2.0	500ml	MET1-19-F	-	10/1/2004	4		
	Cu	2.0	500ml	MET1-17-E	-	3/1/2004	4		
SS5-MET1-26-S	HNO3	25.0	500ml	JT BAKER	X40023	-	-		
	As	50.0	500ml	MET1-21-I	-	1/1/2005	100		Expires:10/31/04
	Se	50.0	500ml	MET1-19-C	-	10/30/2004	100		
	Tl	50.0	500ml	MET1-19-F	-	10/30/2004	100	1.0	
SS6-MET1-28-A	HNO3	25	500ml	JT BAKER	X40023	-	-		
	B	50	500ml	MET1-17-A	-	9/30/2004	100	1.0	Expires: 09/30/04
	Mo	50	500ml	MET1-19-A	-	10/31/2004	100		
GFLCSW (MET1-25-Q)	HNO3	2.0	200ml	JT BAKER	X40023	-	-		
	As, Pb, Se, Tl	1.0	200ml	QCP-CICV-3	S-MEB119011	1/1/2004	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		Expires: 01/01/04
	Cu	0.5	200ml	MET1-17-E	-	3/1/2004	2.5		
QCP-CICV-1 (MET1-12-Q)	Ca, Mg, Na, K	no dilution	-	IV	R-MEB93119	1/1/2004	2500		
	Al, Ba	no dilution	-	IV	R-MEB93119	1/1/2004	1000		
	Fe	no dilution	-	IV	R-MEB93119	1/1/2004	500		Expires: 01/01/04
	Co, Mn, Ni, V, Zn	no dilution	-	IV	R-MEB93119	1/1/2004	250		
	Cu, Ag	no dilution	-	IV	R-MEB93119	1/1/2004	125		
	Cr	no dilution	-	IV	R-MEB93119	1/1/2004	100		
	Be	no dilution	-	IV	R-MEB93119	1/1/2004	25		
QCP-CICV-2 (MET1-12-M)	Sb	no dilution	-	IV	T-MEB119095	8/1/2004	500		Expires: 8/01/04
QCP-CICV-3 (MET1-12-S)	As, Pb, Se, Tl	no dilution	-	IV	S-MEB119011	1/104	500		Expires: 01/01/04
	Cd	no dilution	-	IV	S-MEB119011	1/104	250		

* Denotes Custom Mix CAS-CAL-14

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date

Atomic Absorption Data Review Form

Element Hg AA # ___

Analytical Batch
KA0322712

Analysis Lot # _____

Cal Std/CCV Source Hg1.23Z

Service Request Numbers:

K8827, 8433, 8926, 8940, 8974, 8957

	Yes	No	NA
1) Appropriate Standardization Completed	✓	___	___
2) ICV within 10% of true value.	✓	___	___
3) CCVs in Control	✓	___	___
4) CCB's and/or ICB's below MRL	✓	___	___
5) All reported results within calibration range	✓	___	___
6) Calculations Correct	✓	___	___

Comments : Total Sediments

Reviewed By: _____ Date: 11/19/03

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH: _____

Method: (Circle One) 7470A (7471A) 245.1	Service Request # : K8827, 8433, 8926, 8940, 8974, 8957
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	5.00		100%
2	ICB	—	—	—	0.05		<0.2
3	CCV1	—	—	—	5.03		101%
4	CCB1	—	—	—	0.05		<0.2
5	CRA	—	—	—	0.16		<0.2
6	PBS (KP031461B)	—	100mLs	—	0.05	<0.02	
7	LSS ↓	0.552	↓	—	7.26	1.32 / 89%	
8	K8827-01	1.006	↓	—	1.01	0.10	
9	-01D	1.017	↓	—	1.00	0.10	
10	-01S	1.015	↓	—	5.96	0.59 / 100%	
11	-02	1.065	↓	—	3.58	0.34	
12	-04	1.237	↓	—	2.10	0.17	
13	↓ -06	1.183	↓	—	0.29	0.02	
14	K8433-01	1.003	↓	—	1.22	0.12	
15	CCV2	—	—	—	5.13		103%
16	CCB2	—	—	—	0.04		<0.2
17	K8433-02	1.037	100mLs	—	0.84	0.08	
18	-03	1.369	↓	—	0.55	0.04	
19	-04	1.029	↓	—	2.34	0.23	
20	-04D	1.138	↓	—	1.92	0.17	
21	-04S	1.055	↓	—	6.84	0.65 / 89%	
22	-05	1.134	↓	—	2.70	0.24	
23	-06	1.089	↓	—	1.54	0.14	
24	-07	1.093	↓	—	0.54	0.05	
25	↓ -08	1.131	↓	—	5.07	0.45	

Comments: Reporting Levels:

Waters - 0.2 µg/L K8827-01S @ 0.49 mg/kg TIME STARTED:

Soil - 0.02 mg/kg K8433-04S @ 0.47 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/18/03	1 of 2

[HGFORM.XLW] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH: _____

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
		DATA					
26	K8433-09	1.435	100mLS	—	4.58	0.32	
27	CCV3	—	—	—	5.05		101%
28	CCB3	—	—	—	-0.05		<0.2
29	K8926-03	1.012	100mLS	—	0.04	<0.02	
30	K8940-03	1.023	↓	—	0.76	0.07	
31	-03D	1.013		—	0.76	0.08	
32	-03S	1.021		—	4.70	0.46/86%	
33	-06	1.062		—	0.86	0.08	
34	-09	1.049		—	0.76	0.07	
35	K8974-01	1.073		—	0.10	<0.02	
36	-01D	1.078		—	0.28	0.03	
37	-01S	1.165		—	5.30	0.45/105%	
38	K8957-01	0.497	↓	—	0.14	0.03	
39	CCV4	—	—	—	5.05		101%
40	CCB4	—	—	—	0.05		<0.2
41	K8957-01D	0.505	100mLS	—	0.15	0.03	
42	-01S	0.496	↓	—	3.13	0.63/59%	
43	CCV5	—	—	—	5.00		100%
44	CCB5	—	—	—	-0.05		<0.2
45	K8940-03S	1.021	100mLS	1/2	2.45		
46	K8957-01S	0.496	↓	1/2	2.40	0.97/93%	
47	CCV6	—	—	—	4.99		100%
48	CCB6	—	—	—	0.04		<0.2
49							
50							

AB 11/18/03

Comments: Reporting Levels:

Waters - 0.2 µg/L	K8940-03S @ 0.49 mg/kg
Soil - 0.02 mg/kg	K8974-01S @ 0.43 mg/kg
TCLP - 1 µg/L	K8957-01S @ 1.01 mg/kg

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	11/18/03	20f2

[Hgform.xlw] HG2.XLS

CETAC Hg Analysis Report - 03111801.DB - Tuesday, November 18, 2003, 1:06:50 PM

Analyst ANGELA BAIRD
Date Started Tuesday, November 18, 2003, 11:28:02
Worksheet Hg 11/18/03 RUN2
Comment KA0322712
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	18-Nov-2003, 11:28	0.00	3.02	1.00	43	44	43	46	
Standard #1	18-Nov-2003, 11:29	0.20	4.40	1.00	767	818	843	844	
Standard #2	18-Nov-2003, 11:31	0.50	3.01	1.00	1927	2025	2056	2053	
Standard #3	18-Nov-2003, 11:32	1.00	3.52	1.00	3823	4045	4118	4126	
Standard #4	18-Nov-2003, 11:34	5.00	3.90	1.00	18678	19911	20313	20307	
Standard #5	18-Nov-2003, 11:36	10.00	4.14	1.00	35462	37679	38751	38792	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	18-Nov-2003, 11:37	5.00	4.11	1.00	18019	19144	19674	19665	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	18-Nov-2003, 11:39	-0.05	5.94	1.00	21	11	26	37	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	18-Nov-2003, 11:40	5.03	5.06	1.00	17832	19322	19895	19840	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	18-Nov-2003, 11:42	-0.05	3.33	1.00	36	33	25	25	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	18-Nov-2003, 11:44	0.16	4.16	1.00	764	815	812	811	
PBS(KP0314613)	18-Nov-2003, 11:45	-0.05	5.91	1.00	38	23	18	13	
LCSS(KP0314613)	18-Nov-2003, 11:47	7.26	2.86	1.00	26529	27841	28300	28017	
K8827-01	18-Nov-2003, 11:48	1.01	3.45	1.00	3823	4038	4105	4095	
K8827-01D	18-Nov-2003, 11:50	1.00	1.52	1.00	3900	3987	4029	4013	
K8827-01S	18-Nov-2003, 11:52	5.96	4.76	1.00	21242	22724	23428	23594	
K8827-02	18-Nov-2003, 11:53	3.58	5.07	1.00	12756	13754	14179	14238	
K8827-04	18-Nov-2003, 11:55	2.10	3.82	1.00	7692	8161	8347	8317	
K8827-06	18-Nov-2003, 11:57	0.29	3.47	1.00	1235	1292	1316	1312	
K8433-01	18-Nov-2003, 11:58	1.22	2.63	1.00	4640	4826	4899	4895	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	18-Nov-2003, 12:00	5.13	4.73	1.00	18269	19686	20215	20209	

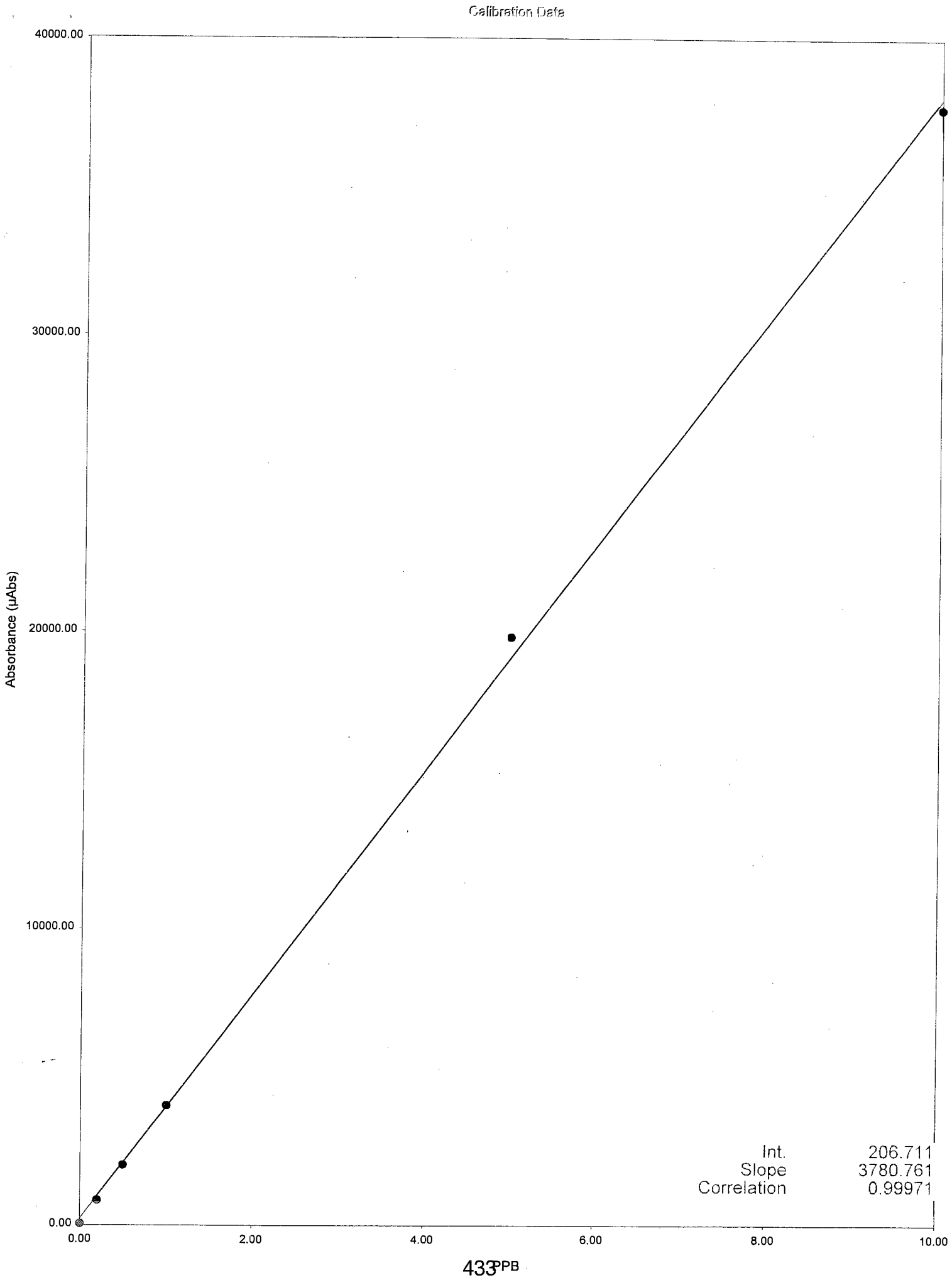
Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	18-Nov-2003, 12:01	-0.04	1.71	1.00	50	48	50	44	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8433-02	18-Nov-2003, 12:03	0.84	3.04	1.00	3232	3396	3446	3421	
K8433-03	18-Nov-2003, 12:05	0.55	3.18	1.00	2187	2299	2321	2329	
K8433-04	18-Nov-2003, 12:06	2.34	2.49	1.00	8740	9120	9245	9134	
K8433-04D	18-Nov-2003, 12:08	1.92	3.61	1.00	7078	7471	7651	7612	
K8433-04S	18-Nov-2003, 12:09	6.84	3.11	1.00	24865	26257	26628	26443	
K8433-05	18-Nov-2003, 12:11	2.70	7.41	1.00	9327	10527	10934	10920	
K8433-06	18-Nov-2003, 12:13	1.54	3.83	1.00	5720	6062	6192	6196	
K8433-07	18-Nov-2003, 12:14	0.54	7.32	1.00	2018	2260	2339	2322	
K8433-08	18-Nov-2003, 12:16	5.07	6.02	1.00	17701	19439	20167	20119	
K8433-09	18-Nov-2003, 12:18	4.58	2.54	1.00	16881	17577	17867	17735	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	18-Nov-2003, 12:19	5.05	3.93	1.00	18234	19334	19749	19890	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	18-Nov-2003, 12:21	-0.05	4.31	1.00	31	26	26	13	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K8926-03	18-Nov-2003, 12:22	0.04	9.89	1.00	335	353	366	367	
K8940-03	18-Nov-2003, 12:24	0.76	2.80	1.00	2973	3124	3151	3118	
K8940-03D	18-Nov-2003, 12:26	0.76	5.40	1.00	2854	3098	3186	3176	
K8940-03S	18-Nov-2003, 12:27	4.70	3.19	1.00	18458	18382	17759	17257	
K8940-06	18-Nov-2003, 12:29	0.86	6.73	1.00	3136	3486	3601	3592	
K8940-09	18-Nov-2003, 12:30	0.76	4.76	1.00	2890	3075	3170	3190	
K8974-01	18-Nov-2003, 12:32	0.10	5.37	1.00	561	602	604	601	
K8974-01D	18-Nov-2003, 12:34	0.28	4.53	1.00	1188	1265	1297	1278	
K8974-01S	18-Nov-2003, 12:35	5.30	3.57	1.00	19224	20239	20725	20756	
K8957-01	18-Nov-2003, 12:37	0.14	7.25	1.00	691	733	768	775	


Calibration Data
40000.00
30000.00
20000.00
10000.00
0.00
Absorbance (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
433PPB
Int. 206.711
Slope 3780.761
Correlation 0.99971

Columbia Analytical Services
EPA METHOD 7471A

Extr/Prep Batch
KP0314613

Service Request Number(s): K8827, 8433, 8926, 8940, 8974, 8957

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
PBS	—	—	—	100 mLs
LCSS	—	—	0.552	
K8827-01	1.464	68.7	1.006	
-01D	1.480		1.017	
-01S*	1.478		1.015	
-02	1.545	68.9	1.065	
-04	1.846	67.0	1.237	
-06	1.846	64.1	1.183	
K8433-01	1.346	74.5	1.003	
-02	1.341	77.3	1.037	
-03	1.678	81.6	1.369	
-04	1.367	75.3	1.029	
-04D	1.511		1.138	
-04S*	1.401		1.055	
-05	1.553	73.0	1.134	
-06	1.328	82.0	1.089	
-07	1.384	79.0	1.093	
-08	1.416	79.9	1.131	
-09	1.974	72.7	1.435	
K8926-03	3.955	25.6	1.012	
K8940-03	7.521	13.6	1.023	
-03D	7.449		1.013	
-03S*	7.507		1.021	
-06	7.129	14.9	1.062	
-09	7.442	14.1	1.049	
Std. 0.2	0.2 * mL			100
Std. 0.5	0.5 * mL			100
Std. 1.0	1.0 * mL			100
Std. 5.0	5.0 * mL			100
Std. 10.0	10.0 * mL			100
ICV	0.5 ** mL			100

Lot # of Reagents Used:
HNO3:Y23049
H2SO4: 42357
HCL: 42167
LCSS =
LCSW=
K2S2O8: T44H13
KMnO4:V25588
SnCl2:Y23648
NaCl :Y07624
NH2OH-HCL: Y06477
ERA CLP Soil Lot # 246
ICV Intermediate stock solution.
Other: Waterbath temp 95
*** Source Standard:** Hg 1-23-2 1000ppb
**** Source Standard: ICV** Hg 1-22-P 1000ppb
TIME STARTED:

Comments: *0.5mls Hg 1-23-X 1000ppb

Analyst: Angela Baird
Date: 11/17/03

[HGFORM.XLW] 7471

Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s) :

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
K8974-01	1.310	81.9	1.073	100mls
-01D	1.316	↓	1.078	↓
-01S	1.422	↓	1.165	↓
K8957-01	5.024	9.89	0.497	↓
-01D	5.103	↓	0.505	↓
-01S	5.014	↓	0.496	↓
Std. 0.2	0.2 * mL			100
Std. 0.5	0.5 * mL			100
Std. 1.0	1.0 * mL			100
Std. 5.0	5.0 * mL			100
Std. 10.0	10.0 * mL			100
ICV	0.5 ** mL			100

AB 11/17/03

05 ↓

Lot # of Reagents Used:

HNO3:Y23049
H2SO4: 42357
HCL: 42167
LCSS =
LCSW=

K2S2O8: T44H13
KMnO4:V25588
SnCl2:Y23648

NaCl :Y07624
NH2OH-HCL: Y06477

ERA CLP Soil Lot # 246
ICV Intermediate stock solution.

Other: _____

*** Source Standard:** _____

**** Source Standard: ICV** _____

TIME STARTED:

Comments: _____

Analyst: Angela Baird

Date: 11/17/03

[HGFORM.XLW] 7471

Service Request # K2308433 (Sediments)__
Calibration _____112403B_____
QC in calibration__112403B_____
QC Service Request # K2308433_____
PQS - Sample Position Method Blank # 6____
PQS – Sample Position LCSW _____# 7_

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X	X	
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control			X
15. Serial dilution run			X
16. Post spike in control			X

Comments: High RPD for Zn, As, Cd. Non-homogenous sample.

Primary Review by _____ Date 11/24/03
Secondary Review by _____ Date 11/25/03
R:\icp\misc\data review forms\icpms review form

PLASMAQUAD INSTRUMENT LOG

PQ-S Ser# 971114

Date: 11/24/97

Operator: B 2

Pressures

(i) Pumping state

(ii) Operate state

Anal(3):

Expn (2): 1.4x10⁰ Inter(1): 1.0x10⁻⁴ Anal(3): 2.4x10⁻⁶

Ion lens settings

EXTR: 1.96 L1: 7.54 L3: 5.15

COLL: 5.60 L2: 5.50 L4: 16.1 Pole Bias: 3.40

SX300 quadrupole

Max mass >280 amu? Y / N

ICP generator parameters at normal forward power (~~45~~ 1350 W)

Refl.pwr: <5 Plate current: N.A. Grid Current:

PA Voltage:

PA Fillament:

Multiplier high voltage settings

HT1 (ext. dyn. range only): 0.00 HT2: 2.0 V

Scans on performance monitoring solution

Full range?: Y / N Low mass?: Y / N High mass?: Y / N

Water/Gas

Water Temp: 60C Water Level: FULL

11/24/97

Gas flows

Neb: 0.950 Aux: 1.2 Cool: 14.0 Neb back pressure:

Other comments: (Changes to instrument/faults noted/service work carried out etc.):

25ab IL → 4310 x10⁶

Integrals for : 25 ppb Tuning Standard 1

Peak	Li 6	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
CPS	8794295	1498099	1948352	1401419	1143723	509712	815517	762519

Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 09:54:55
Last sample started at : **********

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	59924	0.0	1.0000
Magnesium	Mg	24	0.0	77934	0.0	1.0000
Cobalt	Co	59	0.0	56057	0.0	1.0000
Indium	In	115	0.0	45749	0.0	1.0000
Lead	Pb	208	0.0	20389	0.0	1.0000
Bismuth	Bi	209	0.0	32621	0.0	1.0000
Uranium	U	238	0.0	30501	0.0	1.0000

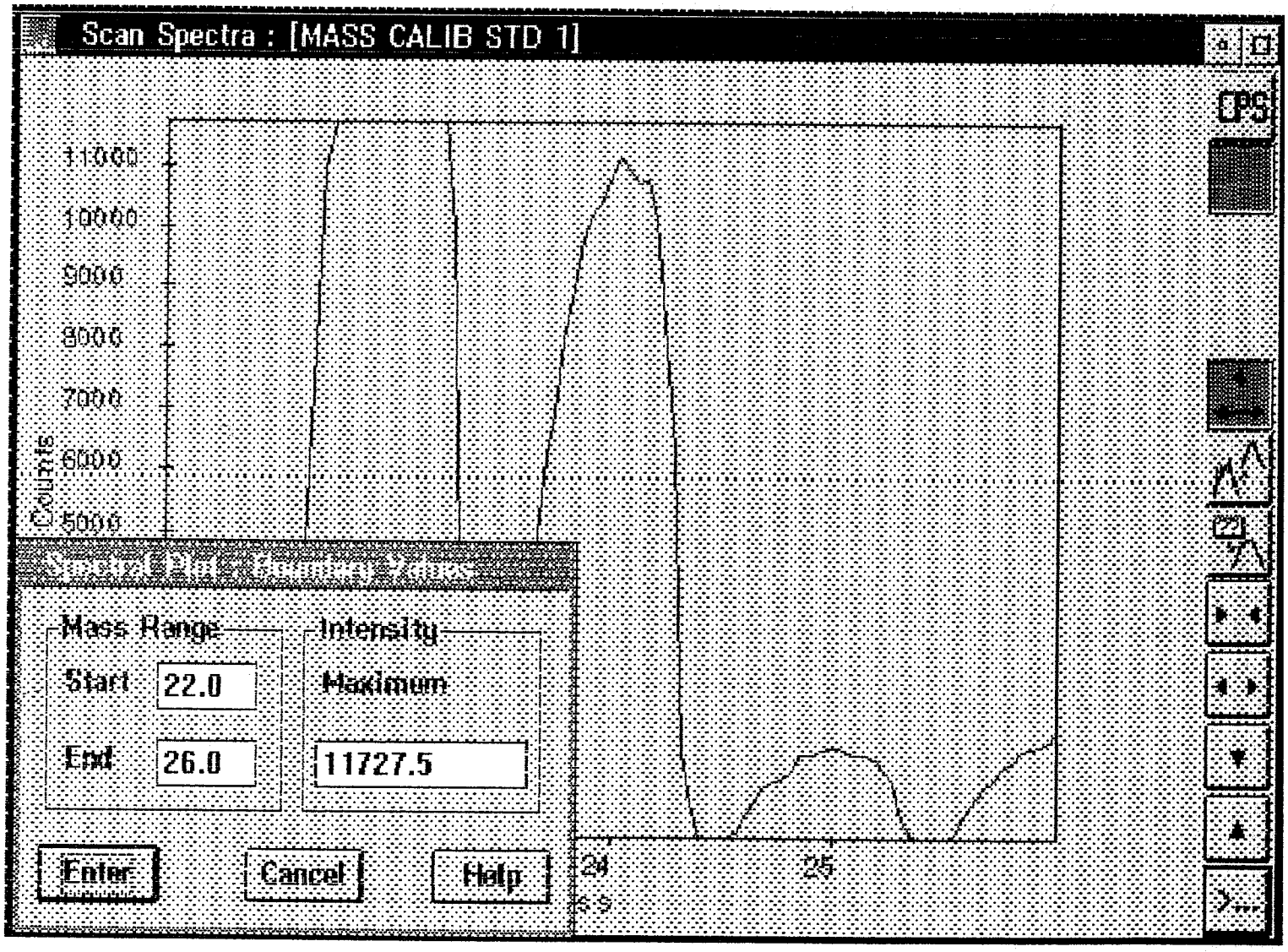
PQ-S #971114 Operator: Greg Jasper KA0322612

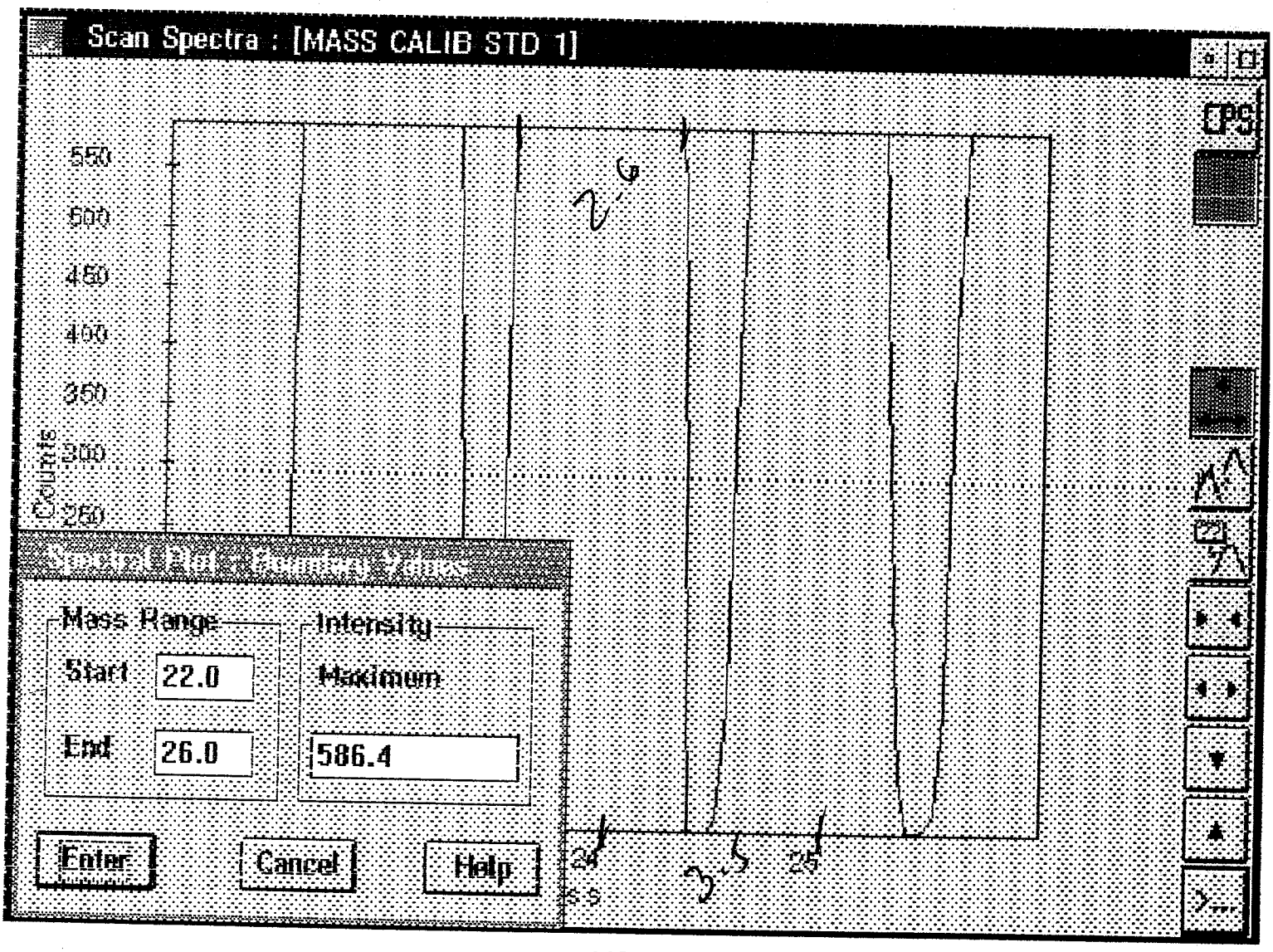
Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Mon Nov 24 2003 09:54:55
Last repeat started at : Mon Nov 24 2003 09:54:55
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

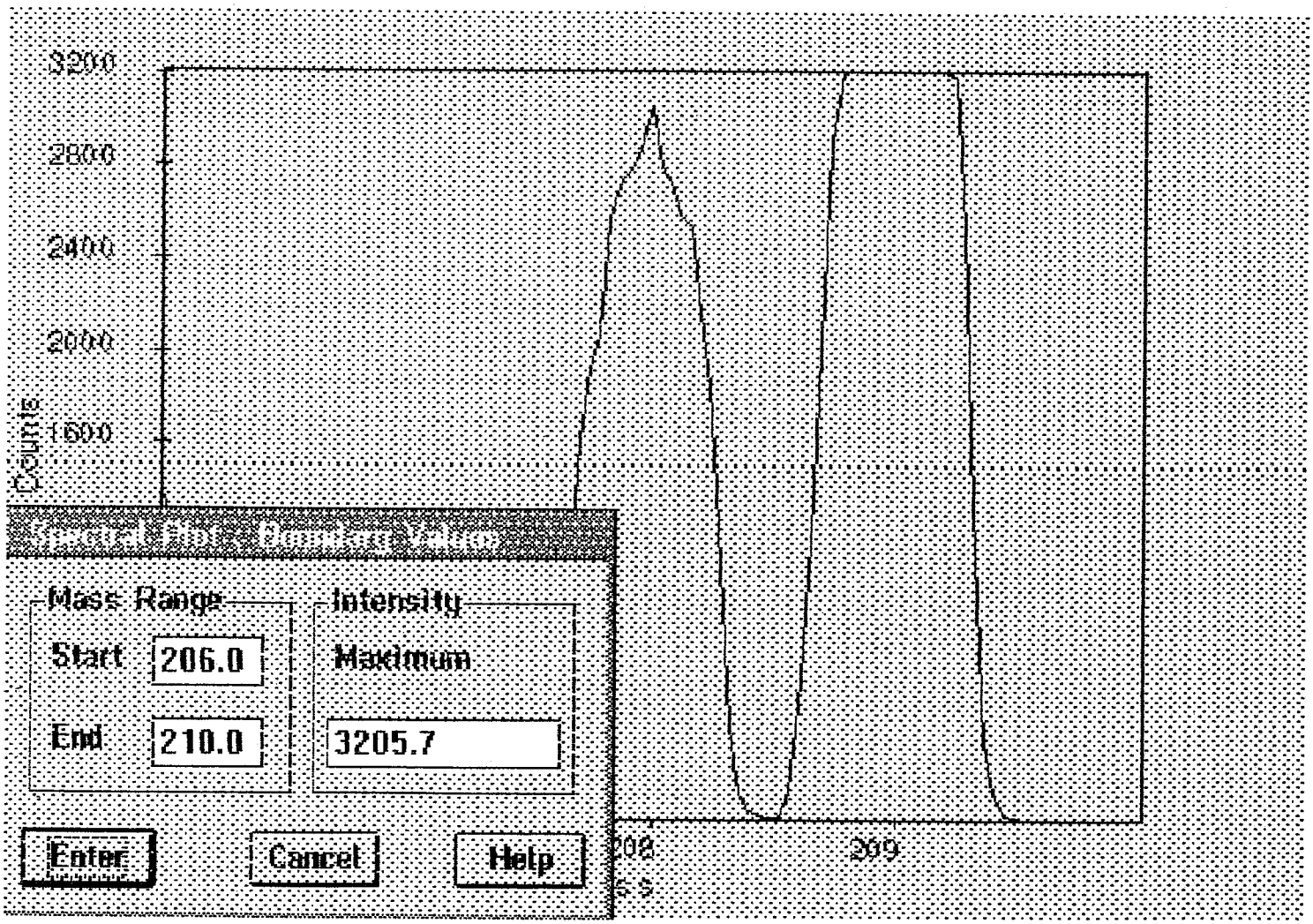
Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth	Uranium
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Peak Height
11/24/03

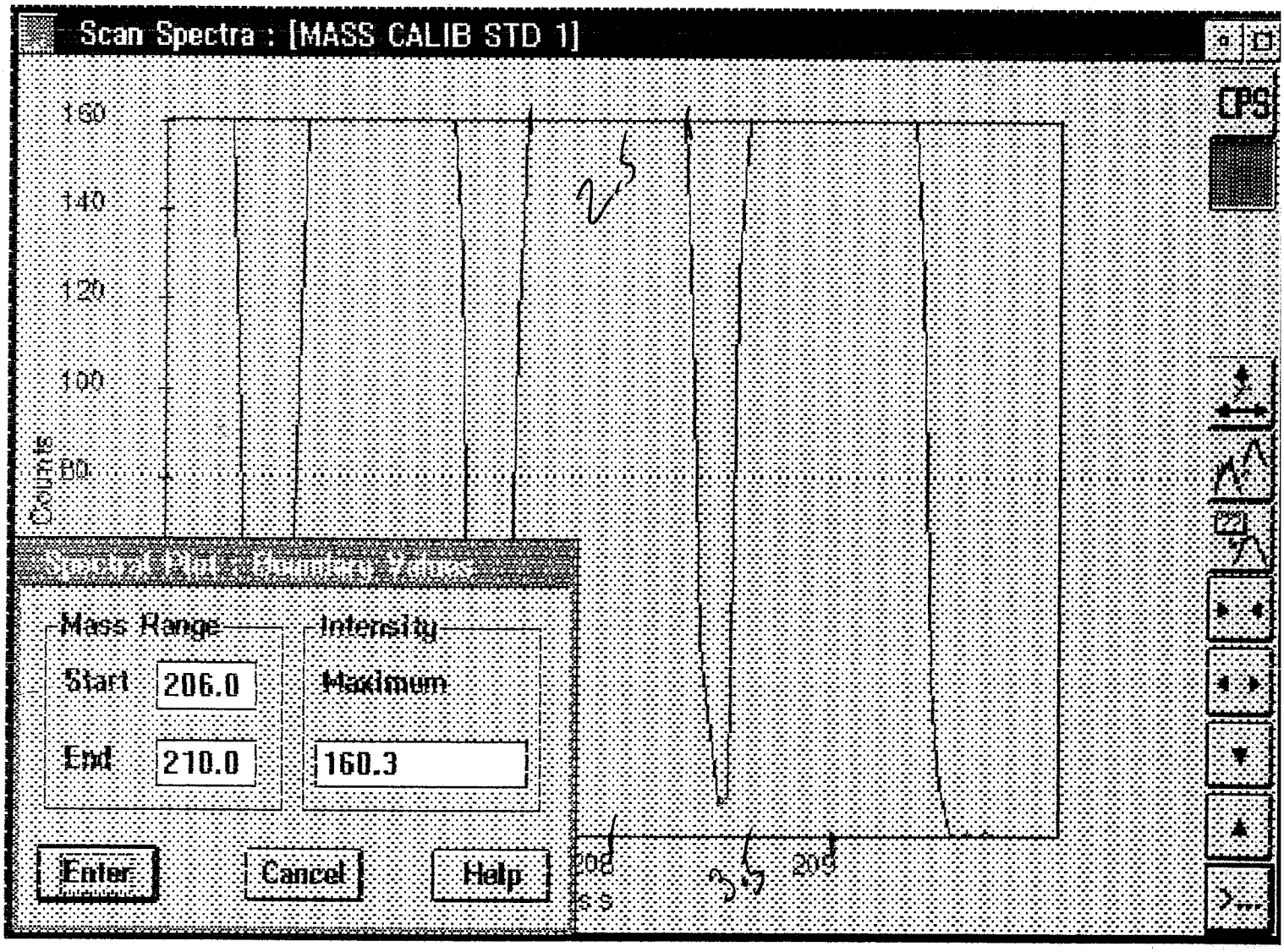



Scan Spectra : [MASS CALIB STD 1]
550
500
450
400
350
300
250
Counts
CPS
Mass Range
Start 22.0
End 26.0
Intensity
Maximum
586.4
Enter
Cancel
Help
24
25
m/z

Peak Height
11/24/03



11/24/03
590 PEAK H1/16H
RES = 2.5/3.5 = 0.71



Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 10:02:19
Last sample started at : Mon Nov 24 2003 10:02:57

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	59822	0.0	1.0000
Magnesium	Mg	24	0.0	77928	0.0	1.0000
Cobalt	Co	59	0.0	56044	0.0	1.0000
Indium	In	115	0.0	45679	0.0	1.0000
Lead	Pb	208	0.0	20020	0.0	1.0000
Bismuth	Bi	209	0.0	32640	0.0	1.0000

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Mon Nov 24 2003 10:02:19
Last repeat started at : Mon Nov 24 2003 10:02:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0

PQ-S #971114 Operator: Greg Jasper KA0322613

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : Short Term Stability
First repeat started at : Mon Nov 24 2003 10:02:57
Last repeat started at : Mon Nov 24 2003 10:04:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.29	25.09	24.89	24.94	25.53	24.99
Run 2	25.25	25.00	24.80	24.88	25.07	24.92
Run 3	25.33	25.10	24.81	24.85	25.04	24.65
Run 4	25.28	25.04	24.63	24.45	24.58	24.65
Run 5	25.27	25.24	24.82	23.72	23.38	23.85
Mean	25.29	25.10	24.79	24.57	24.72	24.61
Std Dev	0.0327	0.0912	0.0936	0.5130	0.8213	0.4505
%SD	0.1293	0.3634	0.3776	2.088	3.322	1.830

Multi-Element Concentrations Mon Nov 24 2003

Concentration summary for samples.

User Name : MANAGER
Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC

Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 10:02:19
Last sample started at : Mon Nov 24 2003 10:02:57
Interference Equations : DEFAULT

Concentration units : ppb

Text
Sample Name 25 ppb Tuning Standa Short Term Stability
rd
Dilution Factor 1.0000 1.0000

Element	Isotope	Concentration	Concentration
Lithium	Li 6	**********	**********
Beryllium	Be 9	25.00	25.29
Magnesium	Mg 24	25.00	25.10
Cobalt	Co 59	25.00	24.79
Indium	In 115	25.00	24.57
Lead	Pb 208	25.00	24.72
Bismuth	Bi 209	25.00	24.61

Multi-Element Calibration Mon Nov 24 2003

Calibration graph coefficients for selected isotopes.

Experiment name : 112403B
User Name : GREG
Analysis procedure : EPA Method 200.8/6020
Introduction method : DEFAULT
First sample started at : Mon Nov 24 2003 14:48:01
Last sample started at : **********
Internal standards : Li 6 Ga 71 In 115 Lu 175 (Interpolating)
Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Analytical Batch
KA0322614

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	405.2	61167	0.0	1.0000
Chromium	Cr	52	6951	41556	0.0	1.0000
Chromium	Cr	53	635.4	4815	0.0	1.0000
Nickel	Ni	60	4461	11557	0.0	1.0000
Nickel	Ni	61	51230	337.2	0.0	1.0000
Nickel	Ni	62	2771	1654	0.0	1.0000
Copper	Cu	63	2207	29484	0.0	1.0000
Copper	Cu	65	706.4	13475	0.0	1.0000
Zinc	Zn	66	879.6	6509	0.0	1.0000
Zinc	Zn	67	200.3	1124	0.0	1.0000
Zinc	Zn	68	660.2	4552	0.0	1.0000
Arsenic	As	75	-78.57	4080	0.0	1.0000
Selenium	Se	77	136.6	395.1	0.0	1.0000
Selenium	Se	78	11614	1249	0.0	1.0000
Selenium	Se	82	73.26	486.4	0.0	1.0000
Molybdenum	Mo	95	296.9	3554	0.0	1.0000
Molybdenum	Mo	97	149.9	2215	0.0	1.0000
Molybdenum	Mo	98	357.1	5569	0.0	1.0000
Cadmium	Cd	111	755.1	3269	0.0	1.0000
Cadmium	Cd	112	800.1	6185	0.0	1.0000
Cadmium	Cd	114	1099	7535	0.0	1.0000
Barium	Ba	135	42.42	2021	0.0	1.0000
Barium	Ba	137	64.06	3445	0.0	1.0000
Barium	Ba	138	217.9	22487	0.0	1.0000
Thallium	Tl	203	62.18	8597	0.0	1.0000
Thallium	Tl	205	123.1	20633	0.0	1.0000
Lead	Pb	206	104.6	7160	0.0	1.0000
Lead	Pb	207	100.6	5482	0.0	1.0000
Lead	Pb	208	381.9	26313	0.0	1.0000

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Calibration Blank
First repeat started at : Mon Nov 24 2003 14:48:01
Last repeat started at : Mon Nov 24 2003 14:49:39
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0002	0.0048	0.0081	0.0004	7.098	0.0033	-0.0006
Run 2	0.0009	-0.0032	-0.0071	-0.0080	-6.054	-0.0823	0.0067
Run 3	-0.0011	-0.0015	-0.0010	0.0076	-1.043	0.0789	-0.0060
Mean	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Std Dev	0.0010	0.0042	0.0076	0.0078	6.638	0.0807	0.0064
%SD	76625	416240	990830	549980	84682000	6298300	231060

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0005	-0.0015	0.0119	-0.0075	0.0048	-0.0108
Run 2	-0.0013	0.0082	-0.0164	-0.0097	-0.0109	0.0145
Run 3	0.0008	-0.0067	0.0045	0.0171	0.0060	-0.0037
Mean	0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000
Std Dev	0.0011	0.0075	0.0147	0.0149	0.0094	0.0130
%SD	839620	479500	745630	23834000	393250	539070

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0596	0.0088	-0.0070	-0.0036	-0.0062	0.0030
Run 2	-0.1612	-0.0166	-0.0053	-0.0062	0.0055	0.0007
Run 3	0.1016	0.0078	0.0123	0.0098	0.0007	-0.0037
Mean	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Std Dev	0.1412	0.0144	0.0107	0.0086	0.0059	0.0034
%SD	13505000	621070	2456800	443430	606210	152200

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0052	0.0036	0.0038	0.0019	0.0005	-0.0007
Run 2	-0.0053	-0.0049	-0.0078	0.0046	0.0000	0.0002
Run 3	0.0001	0.0013	0.0040	-0.0065	-0.0006	0.0005
Mean	0.0000	0.0000	0.0000	-0.0000	0.0000	-0.0000
Std Dev	0.0053	0.0044	0.0068	0.0058	0.0005	0.0007
%SD	220450	459590	668500	1662800	31577	617530

Element	Thallium	Lead	Lead	Lead

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0017	-0.0023	0.0052	0.0000
Run 2	-0.0007	0.0013	-0.0034	-0.0005
Run 3	-0.0010	0.0010	-0.0018	0.0005
Mean	0.0000	0.0000	-0.0000	0.0000
Std Dev	0.0015	0.0020	0.0046	0.0005
%SD	97948	65642	1184200	101850

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.36	99.72	100.3	100.7
Run 2	100.9	100.9	99.40	101.4
Run 3	99.78	99.40	100.3	97.93
Mean	100.00	100.00	100.00	100.00
Std Dev	0.7699	0.7732	0.5211	1.825

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Calibration Standard
First repeat started at : Mon Nov 24 2003 14:50:34
Last repeat started at : Mon Nov 24 2003 14:52:13
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.19	24.78	25.09	25.01	28.42	24.87	25.08
Run 2	24.83	25.26	24.77	25.34	24.40	25.01	25.37
Run 3	24.98	24.96	25.14	24.65	22.18	25.12	24.55
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.1765	0.2394	0.2000	0.3417	3.163	0.1269	0.4129
%SD	0.7058	0.9576	0.8002	1.367	12.65	0.5077	1.652

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.07	24.55	24.67	24.57	24.76	24.43
Run 2	25.13	25.58	25.37	25.32	25.18	25.55
Run 3	24.80	24.86	24.96	25.10	25.06	25.02
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.1717	0.5278	0.3522	0.3870	0.2175	0.5599
%SD	0.6866	2.111	1.409	1.548	0.8700	2.240

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.22	24.59	25.09	25.67	24.78	24.86
Run 2	25.51	25.21	24.96	23.89	24.62	24.84
Run 3	25.27	25.20	24.95	25.44	25.60	25.30
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.6818	0.3561	0.0819	0.9668	0.5265	0.2598
%SD	2.727	1.424	0.3275	3.867	2.106	1.039

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.82	24.95	25.50	25.79	25.13	24.94
Run 2	24.91	24.57	25.16	24.51	24.12	24.83
Run 3	25.27	25.48	24.34	24.70	25.75	25.22
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.2407	0.4595	0.5969	0.6899	0.8264	0.2035
%SD	0.9628	1.838	2.388	2.760	3.305	0.8138

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

MS4-23-E

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	24.86	24.17	25.62	25.29
Run 2	24.17	24.53	23.89	23.82
Run 3	25.97	26.30	25.49	25.89
Mean	25.00	25.00	25.00	25.00
Std Dev	0.9115	1.141	0.9652	1.068
%SD	3.646	4.562	3.861	4.272

ms4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	100.9	98.55	99.59
Run 2	99.53	98.62	99.99	102.9
Run 3	101.0	100.3	97.62	99.25
Mean	100.7	99.95	98.72	100.6
Std Dev	1.073	1.195	1.194	2.027

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #1
First repeat started at : Mon Nov 24 2003 14:54:59
Last repeat started at : Mon Nov 24 2003 14:56:36
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	5.205	20.44	20.26	50.47	70.14	50.26	25.25
Run 2	5.283	20.03	19.92	50.23	71.86	49.09	25.24
Run 3	5.055	20.16	19.71	50.38	68.42	50.06	25.34
Mean	5.181	20.21	19.96	50.36	70.14	49.80	25.28
Std Dev	0.1156	0.2104	0.2778	0.1200	1.722	0.6287	0.0560
%SD	2.232	1.041	1.391	0.2382	2.456	1.262	0.2214

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.15	51.63	56.36	55.53	51.13	52.78
Run 2	25.53	53.00	58.48	56.77	51.76	53.57
Run 3	25.33	52.53	58.19	55.83	51.26	53.01
Mean	25.33	52.39	57.68	56.05	51.38	53.12
Std Dev	0.1913	0.6949	1.152	0.6470	0.3308	0.4057
%SD	0.7553	1.326	1.998	1.154	0.6439	0.7637

ICV
ns4-21-F

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	52.48	52.55	52.57	53.35	53.14	25.62
Run 2	53.15	52.92	50.77	50.07	50.79	25.82
Run 3	52.95	52.66	49.34	50.88	52.89	25.94
Mean	52.86	52.71	50.89	51.43	52.28	25.79
Std Dev	0.3444	0.1862	1.619	1.712	1.291	0.1639
%SD	0.6515	0.3532	3.181	3.329	2.470	0.6356

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.68	25.86	206.5	206.9	198.7	51.32
Run 2	25.98	25.87	198.1	202.5	195.7	50.51
Run 3	25.99	25.90	205.5	203.2	189.0	48.35
Mean	25.88	25.88	203.4	204.2	194.5	50.06
Std Dev	0.1744	0.0243	4.579	2.380	4.938	1.536
%SD	0.6737	0.0938	2.251	1.165	2.539	3.068

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	50.64	48.34	54.25	50.85
Run 2	49.48	47.08	51.90	50.05
Run 3	49.00	46.05	53.52	49.11
Mean	49.70	47.16	53.22	50.00
Std Dev	0.8411	1.144	1.201	0.8748
%SD	1.692	2.425	2.257	1.750

ICV
WS4-21-F

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.5	97.69	97.32	99.29
Run 2	99.64	97.88	97.91	100.2
Run 3	101.9	98.47	95.75	98.05
Mean	100.7	98.01	96.99	99.17
Std Dev	1.126	0.4045	1.116	1.062

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #2
First repeat started at : Mon Nov 24 2003 14:57:48
Last repeat started at : Mon Nov 24 2003 14:59:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.70	25.31	24.78	25.13	23.52	25.13	25.72
Run 2	24.82	25.10	24.89	25.21	23.82	24.99	25.31
Run 3	25.14	25.70	24.99	25.99	39.43	25.78	25.91
Mean	24.88	25.37	24.88	25.44	28.93	25.30	25.65
Std Dev	0.2311	0.3028	0.1055	0.4775	9.100	0.4215	0.3035
%SD	0.9287	1.194	0.4241	1.877	31.46	1.666	1.183

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.33	25.52	25.45	25.25	25.11	25.47
Run 2	25.37	25.66	24.36	25.11	25.17	25.60
Run 3	25.82	26.18	25.90	25.68	25.39	25.54
Mean	25.50	25.79	25.24	25.35	25.22	25.54
Std Dev	0.2710	0.3479	0.7887	0.2984	0.1488	0.0685
%SD	1.062	1.349	3.125	1.177	0.5901	0.2682

CV ms4-23-t

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.05	25.45	25.81	25.05	24.55	25.17
Run 2	25.28	25.22	25.39	25.76	25.24	24.74
Run 3	25.17	25.25	26.49	25.65	25.36	25.06
Mean	25.17	25.31	25.90	25.49	25.05	24.99
Std Dev	0.1160	0.1261	0.5528	0.3813	0.4364	0.2219
%SD	0.4609	0.4983	2.135	1.496	1.742	0.8878

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.33	25.32	25.41	24.58	25.05	25.55
Run 2	25.62	25.15	24.80	25.69	25.46	25.39
Run 3	25.31	24.78	24.83	26.23	24.87	26.79
Mean	25.42	25.08	25.01	25.50	25.12	25.91
Std Dev	0.1723	0.2762	0.3441	0.8414	0.3026	0.7660
%SD	0.6780	1.101	1.375	3.299	1.204	2.956

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	25.26	26.03	26.02	26.52
Run 2	26.38	25.82	25.53	25.73
Run 3	26.01	27.87	26.63	27.69
Mean	25.88	26.57	26.06	26.65
Std Dev	0.5704	1.126	0.5480	0.9882
%SD	2.204	4.239	2.103	3.708

CLV ms4-23-E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.5	97.75	97.25	97.20
Run 2	101.2	97.60	98.02	99.28
Run 3	101.2	97.14	96.18	88.96
Mean	101.3	97.49	97.15	95.15
Std Dev	0.1660	0.3175	0.9234	5.455

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #3
First repeat started at : Mon Nov 24 2003 15:02:19
Last repeat started at : Mon Nov 24 2003 15:03:57
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0052	-0.0203	0.0059	0.0040	-21.27	-0.0094	0.0101
Run 2	0.0063	-0.0198	0.0006	-0.0232	-19.70	0.0593	0.0031
Run 3	0.0047	-0.0144	0.0063	0.0100	-6.689	0.0929	0.0013
Mean	0.0054	-0.0182	0.0043	-0.0031	-15.89	0.0476	0.0048
Std Dev	0.0008	0.0033	0.0032	0.0177	8.005	0.0521	0.0047
%SD	14.72	18.07	75.19	576.8	50.39	109.4	96.49

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0025	-0.0155	0.0501	0.0007	0.0155	-0.0418
Run 2	0.0091	-0.0055	0.0173	0.0136	0.0044	-0.0337
Run 3	0.0103	-0.0144	0.0366	0.0057	0.0110	-0.0211
Mean	0.0056	-0.0118	0.0347	0.0067	0.0103	-0.0322
Std Dev	0.0071	0.0055	0.0164	0.0065	0.0056	0.0104
%SD	125.8	46.21	47.44	97.05	54.33	32.37

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.5619	-0.0125	0.0789	0.0816	0.0648	0.0118
Run 2	-0.4203	-0.0441	0.0768	0.0630	0.0425	0.0023
Run 3	-0.5336	-0.0068	0.0398	0.0527	0.0423	-0.0083
Mean	-0.5053	-0.0211	0.0652	0.0658	0.0499	0.0020
Std Dev	0.0750	0.0201	0.0220	0.0146	0.0129	0.0100
%SD	14.84	95.12	33.73	22.20	25.87	514.7

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0093	0.0094	0.0125	-0.0050	-0.0012	0.0046
Run 2	0.0025	0.0015	-0.0035	0.0052	0.0005	0.0000
Run 3	0.0012	-0.0010	0.0037	-0.0016	-0.0011	0.0054
Mean	0.0043	0.0033	0.0042	-0.0004	-0.0006	0.0033
Std Dev	0.0043	0.0054	0.0080	0.0052	0.0009	0.0029
%SD	100.7	164.8	190.1	1220	154.3	87.19

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

ICB

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0013	-0.0016	-0.0023	0.0010
Run 2	0.0018	0.0028	-0.0003	0.0018
Run 3	0.0010	0.0014	-0.0011	-0.0002
Mean	0.0014	0.0009	-0.0013	0.0009
Std Dev	0.0004	0.0022	0.0010	0.0010
%SD	32.72	256.8	82.30	114.6

ICB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.1	100.3	98.71	104.5
Run 2	99.97	99.60	98.87	104.6
Run 3	100.3	100.5	99.38	103.5
Mean	100.1	100.2	98.99	104.2
Std Dev	0.1558	0.4915	0.3515	0.5829

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #4
First repeat started at : Mon Nov 24 2003 15:06:12
Last repeat started at : Mon Nov 24 2003 15:07:50
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0041	-0.0085	-0.0020	-0.0116	-14.15	0.1560	0.0072
Run 2	0.0034	-0.0088	0.0086	-0.0224	-10.58	0.0618	0.0063
Run 3	0.0028	-0.0106	-0.0165	-0.0237	-5.515	-0.0776	0.0022
Mean	0.0034	-0.0093	-0.0033	-0.0192	-10.08	0.0468	0.0052
Std Dev	0.0007	0.0011	0.0126	0.0066	4.341	0.1175	0.0027
%SD	20.05	12.00	378.7	34.58	43.05	251.2	50.83

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0064	-0.0139	0.0330	0.0010	-0.0086	0.0111
Run 2	-0.0002	-0.0013	0.0261	-0.0092	0.0008	-0.0056
Run 3	-0.0030	0.0184	0.0499	0.0033	-0.0023	-0.0186
Mean	-0.0032	0.0011	0.0363	-0.0016	-0.0034	-0.0044
Std Dev	0.0031	0.0162	0.0123	0.0066	0.0047	0.0149
%SD	97.02	1520	33.75	404.5	141.1	341.1

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.5251	-0.0304	0.0058	0.0271	0.0237	0.0041
Run 2	-0.4042	-0.0114	0.0198	0.0132	0.0176	-0.0086
Run 3	-0.4297	-0.0346	-0.0054	0.0244	0.0256	-0.0045
Mean	-0.4530	-0.0254	0.0067	0.0215	0.0223	-0.0030
Std Dev	0.0638	0.0123	0.0126	0.0073	0.0041	0.0065
%SD	14.08	48.53	187.6	34.09	18.57	215.9

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0089	-0.0044	0.0101	-0.0065	-0.0008	0.0023
Run 2	-0.0049	-0.0057	0.0021	0.0060	-0.0005	0.0009
Run 3	0.0014	-0.0034	-0.0036	-0.0025	-0.0018	0.0011
Mean	0.0018	-0.0045	0.0029	-0.0010	-0.0010	0.0014
Std Dev	0.0069	0.0011	0.0069	0.0063	0.0007	0.0008
%SD	389.0	24.51	239.8	645.8	66.29	55.33

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0007	-0.0031	-0.0002	-0.0017
Run 2	0.0003	-0.0000	0.0054	0.0033
Run 3	0.0006	0.0038	0.0036	0.0029
Mean	0.0005	0.0002	0.0030	0.0015
Std Dev	0.0002	0.0035	0.0028	0.0028
%SD	33.94	1719	96.27	194.6

CLB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.0	99.72	97.99	100.9
Run 2	100.9	100.5	100.9	102.2
Run 3	101.2	100.3	100.0	103.3
Mean	100.7	100.2	99.64	102.1
Std Dev	0.5946	0.4067	1.495	1.216

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #5
First repeat started at : Mon Nov 24 2003 15:09:43
Last repeat started at : Mon Nov 24 2003 15:11:20
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0466	0.4269	0.4770	0.3851	4.584	0.3575	0.1915
Run 2	0.0459	0.4071	0.5234	0.4168	-3.424	0.3708	0.1868
Run 3	0.0445	0.4150	0.5822	0.3750	-18.21	0.4176	0.2039
Mean	0.0456	0.4163	0.5275	0.3923	-5.684	0.3820	0.1941
Std Dev	0.0011	0.0100	0.0527	0.0218	11.56	0.0316	0.0089
%SD	2.389	2.404	9.991	5.552	203.4	8.262	4.568

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.2003	0.9955	0.8693	0.9762	1.002	2.141
Run 2	0.1869	0.9930	0.9356	0.9079	1.007	2.145
Run 3	0.1842	0.9223	0.9190	0.9728	0.9959	2.143
Mean	0.1905	0.9703	0.9080	0.9523	1.002	2.143
Std Dev	0.0086	0.0415	0.0345	0.0385	0.0058	0.0023
%SD	4.531	4.279	3.798	4.040	0.5756	0.1066

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.732	2.073	0.1222	0.1325	0.1112	0.1019
Run 2	1.751	2.000	0.1150	0.1255	0.0907	0.1064
Run 3	1.704	2.039	0.0995	0.0605	0.1159	0.0844
Mean	1.729	2.037	0.1122	0.1062	0.1059	0.0975
Std Dev	0.0233	0.0362	0.0116	0.0397	0.0134	0.0116
%SD	1.350	1.775	10.36	37.43	12.65	11.94

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0926	0.0993	0.1141	0.1173	0.0870	0.0354
Run 2	0.0930	0.0988	0.0764	0.1216	0.0946	0.0458
Run 3	0.0933	0.0956	0.1141	0.0938	0.1020	0.0375
Mean	0.0929	0.0979	0.1016	0.1109	0.0945	0.0396
Std Dev	0.0003	0.0020	0.0218	0.0149	0.0075	0.0055
%SD	0.3718	2.042	21.42	13.47	7.885	13.93

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Soil CRA ws4.23.D

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0455	0.0340	0.0399	0.0396
Run 2	0.0377	0.0364	0.0302	0.0355
Run 3	0.0417	0.0358	0.0270	0.0337
Mean	0.0416	0.0354	0.0324	0.0363
Std Dev	0.0039	0.0013	0.0067	0.0031
%SD	9.411	3.649	20.84	8.423

SOIL CRA ws3-23-D

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	98.33	99.09	94.48
Run 2	100.7	99.94	98.17	101.3
Run 3	101.3	100.2	99.99	102.4
Mean	101.2	99.50	99.08	99.38
Std Dev	0.4498	1.027	0.9058	4.282

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #6
First repeat started at : Mon Nov 24 2003 15:28:41
Last repeat started at : Mon Nov 24 2003 15:30:20
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0011	0.1506	0.1386	0.3632	23.34	0.2361	-0.0195
Run 2	0.0008	0.1557	0.1462	0.2231	-1.202	0.1635	-0.0214
Run 3	0.0005	0.1578	0.1281	0.1630	17.51	0.0778	-0.0231
Mean	0.0008	0.1547	0.1376	0.2498	13.22	0.1591	-0.0213
Std Dev	0.0003	0.0037	0.0091	0.1027	12.82	0.0793	0.0018
%SD	41.27	2.381	6.587	41.12	97.02	49.81	8.461

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0013	0.1971	0.2657	0.2336	0.0138	-0.0022
Run 2	-0.0087	0.2433	0.1772	0.2282	0.0015	0.0082
Run 3	-0.0150	0.2421	0.2301	0.2363	0.0173	-0.0285
Mean	-0.0083	0.2275	0.2244	0.2327	0.0109	-0.0075
Std Dev	0.0068	0.0264	0.0445	0.0041	0.0083	0.0189
%SD	81.83	11.58	19.84	1.774	76.67	251.5

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.4555	0.0214	0.0334	0.0475	0.0292	0.0158
Run 2	-0.1559	0.0085	0.0170	0.0396	0.0355	0.0237
Run 3	-0.3640	0.0279	0.0213	0.0223	0.0262	0.0039
Mean	-0.3252	0.0193	0.0239	0.0365	0.0303	0.0145
Std Dev	0.1536	0.0099	0.0085	0.0129	0.0048	0.0100
%SD	47.23	51.18	35.65	35.28	15.70	68.75

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3158	0.1885	0.3586	0.4084	0.3797	0.0059
Run 2	0.3195	0.1796	0.3380	0.3549	0.3797	0.0031
Run 3	0.3078	0.1708	0.4046	0.3818	0.3641	-0.0008
Mean	0.3143	0.1796	0.3671	0.3817	0.3745	0.0027
Std Dev	0.0060	0.0089	0.0341	0.0267	0.0090	0.0033
%SD	1.909	4.938	9.301	7.006	2.400	122.2

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

8433 METHOD BLANK

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0006	0.0119	0.0174	0.0141
Run 2	-0.0023	0.0079	0.0110	0.0103
Run 3	-0.0003	0.0152	0.0115	0.0143
Mean	-0.0007	0.0117	0.0133	0.0129
Std Dev	0.0015	0.0037	0.0035	0.0022
%SD	222.1	31.34	26.58	17.19

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.9	103.2	99.37	92.08
Run 2	103.0	102.9	99.49	93.68
Run 3	103.6	103.1	101.9	95.72
Mean	103.2	103.1	100.3	93.82
Std Dev	0.4009	0.1365	1.424	1.825

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #7
First repeat started at : Mon Nov 24 2003 15:31:30
Last repeat started at : Mon Nov 24 2003 15:33:06
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.47	73.82	73.17	39.87	71.51	40.54	46.81
Run 2	25.03	74.47	72.93	39.24	60.56	39.38	45.71
Run 3	24.81	73.75	71.93	39.24	54.80	39.85	46.54
Mean	25.11	74.01	72.68	39.45	62.29	39.92	46.35
Std Dev	0.3355	0.3991	0.6585	0.3648	8.490	0.5846	0.5767
%SD	1.336	0.5392	0.9061	0.9247	13.63	1.464	1.244

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	46.20	166.1	152.7	161.4	105.3	99.49
Run 2	46.02	165.2	151.9	161.0	103.6	100.6
Run 3	45.90	165.4	154.2	162.5	104.2	101.3
Mean	46.04	165.6	152.9	161.6	104.3	100.4
Std Dev	0.1487	0.4826	1.150	0.7607	0.8470	0.9084
%SD	0.3229	0.2915	0.7520	0.4706	0.8118	0.9043

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Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	100.5	98.98	25.58	25.79	25.49	39.18
Run 2	100.5	99.76	25.84	25.15	25.89	38.98
Run 3	101.4	98.48	25.25	24.61	24.35	38.00
Mean	100.8	99.07	25.55	25.19	25.24	38.72
Std Dev	0.5468	0.6439	0.2923	0.5933	0.8020	0.6304
%SD	0.5425	0.6499	1.144	2.356	3.177	1.628

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	40.16	39.88	96.74	96.49	96.45	44.41
Run 2	39.79	39.47	96.56	97.62	97.90	48.68
Run 3	39.85	39.08	98.42	98.36	96.70	47.57
Mean	39.93	39.48	97.24	97.49	97.01	46.88
Std Dev	0.1957	0.4036	1.027	0.9422	0.7737	2.217
%SD	0.4901	1.022	1.056	0.9665	0.7975	4.729

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	45.51	66.37	71.79	68.01
Run 2	51.27	68.66	77.74	73.31
Run 3	48.42	70.13	72.97	70.31
Mean	48.40	68.39	74.16	70.54
Std Dev	2.877	1.892	3.150	2.659
%SD	5.945	2.767	4.248	3.769

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.99	97.64	94.33	93.73
Run 2	100.8	98.16	94.26	91.72
Run 3	101.0	97.53	96.55	92.03
Mean	100.6	97.78	95.04	92.49
Std Dev	0.5499	0.3368	1.302	1.086

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 1124038
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #8
First repeat started at : Mon Nov 24 2003 15:34:41
Last repeat started at : Mon Nov 24 2003 15:36:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.8534	56.30	54.50	83.39	1150	28.55	18.41
Run 2	0.8572	54.79	55.32	79.13	1181	29.41	18.51
Run 3	0.8512	54.72	54.66	81.99	1191	28.77	18.47
Mean	0.8539	55.27	54.83	81.50	1174	28.91	18.47
Std Dev	0.0030	0.8947	0.4368	2.168	21.56	0.4489	0.0499
%SD	0.3557	1.619	0.7966	2.660	1.836	1.553	0.2702

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.38	202.3	179.1	197.3	12.29	1.946
Run 2	21.48	202.2	182.1	198.0	12.35	2.057
Run 3	21.40	204.3	180.4	197.7	12.50	1.947
Mean	21.42	202.9	180.5	197.7	12.38	1.983
Std Dev	0.0518	1.184	1.517	0.3718	0.1097	0.0639
%SD	0.2420	0.5834	0.8407	0.1881	0.8859	3.220

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	7.082	0.8577	3.375	3.478	3.676	1.822
Run 2	6.687	0.7736	3.595	2.835	2.953	1.783
Run 3	6.631	0.7908	3.316	3.149	3.301	1.769
Mean	6.800	0.8074	3.429	3.154	3.310	1.791
Std Dev	0.2457	0.0445	0.1472	0.3215	0.3616	0.0275
%SD	3.613	5.507	4.293	10.19	10.92	1.532

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.229	1.854	79.74	82.15	79.81	0.1361
Run 2	2.240	1.850	81.89	80.11	78.11	0.0968
Run 3	2.216	1.883	79.44	80.74	76.89	0.0971
Mean	2.228	1.862	80.36	81.00	78.27	0.1100
Std Dev	0.0118	0.0177	1.340	1.041	1.464	0.0226
%SD	0.5303	0.9506	1.668	1.285	1.871	20.53

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.1220	68.05	72.04	72.13
Run 2	0.0964	66.85	67.54	67.21
Run 3	0.1000	63.04	70.96	68.68
Mean	0.1061	65.98	70.18	69.34
Std Dev	0.0138	2.615	2.346	2.527
%SD	13.04	3.963	3.343	3.645

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.29	73.16	71.32	67.50
Run 2	97.91	73.78	71.50	67.85
Run 3	98.42	73.71	71.56	68.60
Mean	98.21	73.55	71.46	67.98
Std Dev	0.2618	0.3394	0.1249	0.5638

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #9
First repeat started at : Mon Nov 24 2003 15:38:09
Last repeat started at : Mon Nov 24 2003 15:39:45
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.9309	54.67	53.73	73.58	1003	32.52	23.49
Run 2	0.9450	56.61	57.15	73.63	1002	33.19	23.72
Run 3	0.9238	55.10	54.74	68.11	970.5	31.99	23.22
Mean	0.9332	55.46	55.21	71.78	991.7	32.57	23.48
Std Dev	0.0108	1.019	1.757	3.175	18.39	0.6039	0.2523
%SD	1.157	1.838	3.183	4.423	1.854	1.854	1.075

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.62	342.1	301.7	337.7	24.27	1.980
Run 2	26.10	349.9	311.5	346.1	24.67	2.138
Run 3	25.87	348.4	303.0	335.1	24.81	2.055
Mean	25.86	346.8	305.4	339.6	24.58	2.058
Std Dev	0.2368	4.132	5.325	5.764	0.2813	0.0790
%SD	0.9155	1.191	1.744	1.697	1.144	3.841

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.727	0.8502	5.277	5.174	5.012	3.063
Run 2	6.030	0.8751	4.778	5.336	4.890	3.058
Run 3	5.883	0.8003	4.802	5.111	4.861	3.063
Mean	5.880	0.8418	4.953	5.207	4.921	3.062
Std Dev	0.1514	0.0381	0.2814	0.1159	0.0804	0.0028
%SD	2.575	4.525	5.682	2.226	1.633	0.0907

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.551	3.152	83.89	83.02	84.67	0.1112
Run 2	3.563	3.097	83.71	82.94	81.02	0.1250
Run 3	3.555	3.162	83.05	82.39	82.43	0.1088
Mean	3.556	3.137	83.55	82.78	82.71	0.1150
Std Dev	0.0061	0.0349	0.4424	0.3434	1.840	0.0087
%SD	0.1724	1.113	0.5295	0.4148	2.225	7.580

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8433-4D4B 16

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.1228	84.03	87.17	85.75
Run 2	0.1082	86.38	89.01	87.49
Run 3	0.1096	81.58	80.39	79.99
Mean	0.1135	84.00	85.53	84.41
Std Dev	0.0080	2.400	4.542	3.924
%SD	7.065	2.857	5.311	4.648

8433-4 DUP
115

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.19	78.49	73.81	67.40
Run 2	99.26	77.12	75.38	71.34
Run 3	98.78	78.20	76.12	70.60
Mean	99.08	77.94	75.10	69.78
Std Dev	0.2577	0.7210	1.178	2.091

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 1124038
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #10
First repeat started at : Mon Nov 24 2003 15:42:56
Last repeat started at : Mon Nov 24 2003 15:44:35
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	4.101	24.69	25.02	50.80	252.5	42.28	23.13
Run 2	4.123	24.78	24.26	50.74	222.8	42.22	23.22
Run 3	4.128	24.79	24.74	51.11	242.4	42.19	23.17
Mean	4.118	24.75	24.68	50.88	239.2	42.23	23.18
Std Dev	0.0145	0.0556	0.3853	0.2000	15.09	0.0472	0.0457
%SD	0.3518	0.2247	1.561	0.3930	6.308	0.1118	0.1972

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.69	85.36	84.70	88.63	41.70	39.03
Run 2	23.71	86.46	84.60	88.31	42.37	39.28
Run 3	23.61	86.05	85.37	87.59	42.01	38.90
Mean	23.67	85.96	84.89	88.18	42.02	39.07
Std Dev	0.0518	0.5572	0.4157	0.5346	0.3316	0.1925
%SD	0.2190	0.6482	0.4897	0.6063	0.7890	0.4926

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	39.89	38.10	39.69	40.72	39.49	4.275
Run 2	40.23	38.30	41.04	39.57	38.63	4.324
Run 3	39.37	37.85	42.11	42.04	39.19	4.396
Mean	39.83	38.08	40.95	40.78	39.10	4.332
Std Dev	0.4322	0.2237	1.216	1.237	0.4382	0.0607
%SD	1.085	0.5873	2.969	3.034	1.121	1.400

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.315	4.262	190.0	180.3	182.4	38.57
Run 2	4.374	4.326	183.4	185.3	185.8	36.31
Run 3	4.342	4.397	186.5	181.4	184.5	36.77
Mean	4.344	4.328	186.6	182.3	184.2	37.22
Std Dev	0.0296	0.0679	3.297	2.624	1.734	1.194
%SD	0.6812	1.568	1.767	1.439	0.9415	3.209

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	39.07	46.55	52.15	50.75
Run 2	36.24	45.95	50.01	48.13
Run 3	37.64	50.13	53.20	51.63
Mean	37.65	47.54	51.78	50.17
Std Dev	1.416	2.260	1.624	1.819
%SD	3.760	4.753	3.136	3.625

8433-450F
15 AB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	103.4	94.46	97.06	91.40
Run 2	102.6	94.64	97.54	95.87
Run 3	103.3	95.67	96.98	90.71
Mean	103.1	94.92	97.19	92.66
Std Dev	0.4326	0.6523	0.3018	2.798

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #11
First repeat started at : Mon Nov 24 2003 15:45:57
Last repeat started at : Mon Nov 24 2003 15:47:36
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	5.099	15.45	15.32	8.284	3.264	8.276	9.797
Run 2	5.231	15.37	15.45	8.340	9.126	8.320	9.999
Run 3	5.060	15.38	15.01	8.204	-3.109	8.094	9.843
Mean	5.130	15.40	15.26	8.276	3.094	8.230	9.880
Std Dev	0.0897	0.0463	0.2247	0.0684	6.119	0.1201	0.1060
%SD	1.749	0.3008	1.472	0.8268	197.8	1.459	1.073

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	9.811	32.06	29.98	31.53	20.27	18.72
Run 2	9.846	32.42	29.68	32.08	20.28	18.41
Run 3	9.751	32.59	30.09	31.91	20.37	18.76
Mean	9.803	32.36	29.91	31.84	20.31	18.63
Std Dev	0.0479	0.2718	0.2120	0.2809	0.0554	0.1917
%SD	0.4883	0.8400	0.7087	0.8821	0.2728	1.029

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	18.80	18.29	5.591	5.419	5.452	7.445
Run 2	18.63	18.26	5.214	5.101	5.356	7.270
Run 3	18.42	18.11	4.694	4.772	5.485	7.291
Mean	18.62	18.22	5.166	5.097	5.431	7.335
Std Dev	0.1937	0.0993	0.4506	0.3239	0.0671	0.0954
%SD	1.040	0.5450	8.722	6.353	1.236	1.300

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	7.869	7.681	19.42	19.91	19.72	8.430
Run 2	7.464	7.439	19.74	18.97	19.11	9.231
Run 3	7.553	7.407	18.60	18.38	18.25	8.349
Mean	7.629	7.509	19.26	19.09	19.03	8.670
Std Dev	0.2128	0.1497	0.5860	0.7689	0.7405	0.4874
%SD	2.790	1.994	3.043	4.028	3.892	5.622

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	8.758	13.23	14.93	14.41
Run 2	8.888	12.63	13.79	13.99
Run 3	8.204	12.01	13.31	12.78
Mean	8.617	12.62	14.01	13.73
Std Dev	0.3629	0.6100	0.8339	0.8442
%SD	4.212	4.833	5.952	6.150

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	101.6	102.9	99.14	100.0
Run 2	101.7	102.9	102.1	99.86
Run 3	101.2	102.6	103.7	107.8
Mean	101.5	102.8	101.6	102.6
Std Dev	0.2637	0.1751	2.301	4.553

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #12
First repeat started at : Mon Nov 24 2003 15:48:57
Last repeat started at : Mon Nov 24 2003 15:50:36
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	1.255	78.65	78.75	76.46	726.8	49.89	22.20
Run 2	1.291	80.13	78.96	80.38	727.7	49.28	22.50
Run 3	1.278	81.47	79.56	81.07	721.4	49.66	22.60
Mean	1.275	80.08	79.09	79.30	725.3	49.61	22.43
Std Dev	0.0186	1.407	0.4192	2.485	3.406	0.3065	0.2038
%SD	1.461	1.757	0.5300	3.134	0.4697	0.6178	0.9087

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.71	180.6	165.3	172.8	17.27	2.310
Run 2	24.33	180.8	164.8	177.3	17.72	2.234
Run 3	24.37	182.6	169.1	176.0	17.76	2.143
Mean	24.14	181.3	166.4	175.3	17.58	2.229
Std Dev	0.3728	1.096	2.367	2.304	0.2705	0.0834
%SD	1.544	0.6042	1.423	1.314	1.538	3.742

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.507	0.8442	3.919	4.269	3.975	1.517
Run 2	4.559	0.7246	4.115	4.382	3.957	1.525
Run 3	4.462	0.7997	4.053	4.209	3.915	1.526
Mean	4.510	0.7895	4.029	4.286	3.949	1.523
Std Dev	0.0484	0.0605	0.1002	0.0879	0.0306	0.0053
%SD	1.074	7.657	2.486	2.050	0.7758	0.3512

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.004	1.515	70.62	70.01	66.36	0.0994
Run 2	2.028	1.542	68.64	70.54	69.70	0.0775
Run 3	2.076	1.609	69.94	69.76	72.16	0.0652
Mean	2.036	1.555	69.73	70.10	69.40	0.0807
Std Dev	0.0370	0.0484	1.006	0.3989	2.910	0.0173
%SD	1.819	3.111	1.442	0.5690	4.193	21.45

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

8433-1 IB

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0926	48.82	49.68	49.41
Run 2	0.0777	49.48	52.13	50.56
Run 3	0.0823	48.37	47.33	48.84
Mean	0.0842	48.89	49.72	49.60
Std Dev	0.0076	0.5579	2.401	0.8783
%SD	9.043	1.141	4.830	1.771

8433-1
1/5

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.56	82.23	76.11	73.63
Run 2	98.87	81.10	75.71	73.52
Run 3	99.16	80.75	75.17	77.00
Mean	99.20	81.36	75.66	74.71
Std Dev	0.3462	0.7719	0.4756	1.979

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #13
First repeat started at : Mon Nov 24 2003 15:51:49
Last repeat started at : Mon Nov 24 2003 15:53:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.8396	73.23	71.14	77.74	982.6	32.74	21.13
Run 2	0.8352	73.73	71.53	74.75	1004	31.84	21.08
Run 3	0.8372	72.06	72.59	73.37	971.9	31.45	21.11
Mean	0.8374	73.01	71.75	75.28	986.1	32.01	21.11
Std Dev	0.0022	0.8576	0.7543	2.236	16.29	0.6653	0.0232
%SD	0.2617	1.175	1.051	2.970	1.652	2.078	0.1100

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.83	149.5	135.7	142.4	24.95	1.908
Run 2	23.75	146.6	137.8	143.5	24.45	1.965
Run 3	23.34	146.0	135.0	143.4	24.54	1.846
Mean	23.64	147.4	136.2	143.1	24.64	1.906
Std Dev	0.2660	1.904	1.417	0.6129	0.2642	0.0598
%SD	1.125	1.292	1.041	0.4283	1.072	3.135

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.634	0.7964	4.966	4.630	4.404	1.629
Run 2	5.624	0.8342	4.813	4.897	4.637	1.641
Run 3	5.723	0.7944	4.531	4.603	4.385	1.649
Mean	5.661	0.8083	4.770	4.710	4.475	1.640
Std Dev	0.0546	0.0224	0.2205	0.1626	0.1399	0.0099
%SD	0.9646	2.774	4.622	3.453	3.127	0.6039

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.336	1.860	83.37	81.79	80.54	0.1022
Run 2	2.395	1.839	78.84	81.07	83.56	0.0995
Run 3	2.358	1.832	81.04	81.11	84.18	0.0832
Mean	2.363	1.844	81.08	81.32	82.76	0.0950
Std Dev	0.0299	0.0148	2.264	0.4031	1.948	0.0103
%SD	1.266	0.8021	2.792	0.4957	2.354	10.80

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

4433-2
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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206,	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0879	47.31	49.70	48.13
Run 2	0.1035	46.63	50.92	48.56
Run 3	0.0883	46.51	49.07	47.58
Mean	0.0932	46.82	49.90	48.09
Std Dev	0.0089	0.4313	0.9437	0.4876
%SD	9.568	0.9213	1.891	1.014

4433.2
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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.53	75.69	74.70	70.15
Run 2	98.92	76.38	73.72	71.26
Run 3	98.00	76.53	73.37	75.33
Mean	98.48	76.20	73.93	72.24
Std Dev	0.4610	0.4466	0.6933	2.728

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #14
First repeat started at : Mon Nov 24 2003 15:54:43
Last repeat started at : Mon Nov 24 2003 15:56:20
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.8949	71.72	71.02	74.97	914.5	34.71	70.14
Run 2	0.9047	73.88	71.82	72.35	917.9	35.24	71.09
Run 3	0.9174	72.71	71.98	77.33	945.7	34.56	70.38
Mean	0.9057	72.77	71.61	74.88	926.0	34.84	70.53
Std Dev	0.0113	1.079	0.5147	2.487	17.12	0.3584	0.4982
%SD	1.246	1.482	0.7188	3.321	1.848	1.029	0.7063

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	72.17	141.8	130.9	139.3	25.49	1.859
Run 2	72.49	141.4	130.5	140.8	25.43	1.927
Run 3	72.21	141.9	132.2	140.2	25.51	1.879
Mean	72.29	141.7	131.2	140.1	25.48	1.888
Std Dev	0.1765	0.2821	0.8434	0.7373	0.0414	0.0349
%SD	0.2442	0.1990	0.6428	0.5261	0.1626	1.848

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.267	0.7835	4.887	4.907	4.824	1.308
Run 2	5.095	0.7834	5.166	4.560	5.044	1.300
Run 3	4.745	0.7925	4.921	4.719	4.856	1.296
Mean	5.036	0.7864	4.992	4.729	4.908	1.301
Std Dev	0.2657	0.0052	0.1524	0.1735	0.1190	0.0059
%SD	5.276	0.6631	3.052	3.668	2.424	0.4560

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.660	1.335	123.6	127.4	132.0	0.0819
Run 2	1.678	1.346	127.8	127.8	127.4	0.0998
Run 3	1.675	1.285	125.4	127.5	123.8	0.0782
Mean	1.671	1.322	125.6	127.5	127.8	0.0866
Std Dev	0.0094	0.0325	2.138	0.2202	4.106	0.0116
%SD	0.5611	2.456	1.702	0.1727	3.214	13.33

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0931	55.24	57.21	53.77
Run 2	0.0890	52.22	56.56	56.25
Run 3	0.0833	52.72	54.62	55.27
Mean	0.0885	53.39	56.13	55.10
Std Dev	0.0049	1.619	1.347	1.250
%SD	5.577	3.033	2.401	2.268

8433.3

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.53	77.25	75.84	72.99
Run 2	99.81	77.87	76.11	74.28
Run 3	99.31	77.54	75.84	70.09
Mean	99.55	77.55	75.93	72.46
Std Dev	0.2523	0.3086	0.1538	2.147

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #15
First repeat started at : Mon Nov 24 2003 15:57:48
Last repeat started at : Mon Nov 24 2003 15:59:26
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.93	25.43	24.47	25.33	42.02	24.94	25.16
Run 2	25.95	25.39	25.03	25.38	37.74	25.31	25.46
Run 3	26.19	25.01	24.61	25.14	53.66	24.81	25.59
Mean	26.02	25.28	24.70	25.29	44.47	25.02	25.40
Std Dev	0.1473	0.2321	0.2924	0.1254	8.236	0.2595	0.2205
%SD	0.5660	0.9183	1.184	0.4958	18.52	1.037	0.8680

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.18	25.28	24.17	25.12	24.83	25.65
Run 2	25.47	25.42	25.09	25.45	24.98	25.40
Run 3	25.65	25.13	25.45	25.46	24.95	25.69
Mean	25.43	25.28	24.90	25.34	24.92	25.58
Std Dev	0.2363	0.1492	0.6588	0.1908	0.0818	0.1590
%SD	0.9290	0.5902	2.646	0.7527	0.3282	0.6214

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.81	24.66	26.10	23.29	23.22	23.95
Run 2	24.69	24.96	23.42	25.01	25.42	24.55
Run 3	24.77	25.18	25.52	25.83	26.65	24.97
Mean	24.76	24.93	25.02	24.71	25.10	24.49
Std Dev	0.0638	0.2612	1.412	1.298	1.737	0.5123
%SD	0.2575	1.048	5.644	5.252	6.922	2.092

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.84	24.01	24.92	24.45	24.38	25.39
Run 2	24.71	24.87	25.09	24.64	25.26	24.25
Run 3	25.96	25.77	25.56	26.88	25.21	26.68
Mean	24.84	24.89	25.19	25.32	24.95	25.44
Std Dev	1.064	0.8806	0.3289	1.355	0.4956	1.212
%SD	4.284	3.538	1.305	5.349	1.986	4.763

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

CLV
ns4-23-E

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	25.91	25.71	25.02	25.13
Run 2	24.53	25.55	25.27	25.56
Run 3	25.68	24.89	25.33	25.28
Mean	25.37	25.39	25.21	25.32
Std Dev	0.7403	0.4341	0.1631	0.2193
%SD	2.918	1.710	0.6469	0.8660

CLV
NS4-23E

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.4	104.0	106.7	99.94
Run 2	102.6	103.8	102.6	97.55
Run 3	102.7	103.6	97.75	92.31
Mean	102.6	103.8	102.3	96.60
Std Dev	0.1184	0.2022	4.471	3.899

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #16
First repeat started at : Mon Nov 24 2003 16:01:20
Last repeat started at : Mon Nov 24 2003 16:02:58
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0068	-0.0200	-0.0539	-0.0394	4.246	-0.1702	-0.0159
Run 2	0.0059	-0.0172	-0.0428	-0.0369	-5.569	-0.1999	-0.0148
Run 3	0.0041	-0.0058	-0.0408	-0.0577	-15.42	-0.0900	-0.0144
Mean	0.0056	-0.0144	-0.0458	-0.0446	-5.581	-0.1534	-0.0150
Std Dev	0.0014	0.0075	0.0070	0.0114	9.833	0.0569	0.0008
%SD	24.59	52.39	15.37	25.44	176.2	37.07	5.155

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0012	0.0139	0.0305	0.0077	-0.0018	0.0089
Run 2	0.0000	-0.0025	0.0474	0.0101	-0.0114	0.0261
Run 3	0.0020	0.0012	0.0842	0.0185	-0.0064	0.0223
Mean	0.0003	0.0042	0.0540	0.0121	-0.0065	0.0191
Std Dev	0.0016	0.0086	0.0274	0.0057	0.0048	0.0090
%SD	597.8	203.3	50.80	46.88	73.30	47.45

CCB

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.8998	-0.0321	0.0962	0.1039	0.1003	-0.0042
Run 2	-0.7287	-0.0232	0.0590	0.0637	0.0590	-0.0049
Run 3	-0.6092	-0.0182	0.0182	0.0450	0.0389	-0.0030
Mean	-0.7459	-0.0245	0.0578	0.0709	0.0661	-0.0041
Std Dev	0.1460	0.0070	0.0390	0.0301	0.0313	0.0009
%SD	19.58	28.75	67.55	42.46	47.34	23.26

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0004	-0.0002	0.0036	-0.0016	-0.0013	0.0015
Run 2	0.0045	-0.0042	0.0064	-0.0059	0.0009	-0.0004
Run 3	0.0027	-0.0032	0.0201	0.0022	-0.0021	0.0004
Mean	0.0023	-0.0025	0.0100	-0.0018	-0.0008	0.0005
Std Dev	0.0025	0.0021	0.0088	0.0040	0.0016	0.0010
%SD	110.5	82.24	87.72	229.3	190.7	198.6

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0016	0.0001	0.0085	0.0026
Run 2	0.0011	-0.0011	0.0036	-0.0006
Run 3	0.0005	-0.0007	0.0008	-0.0021
Mean	0.0011	-0.0006	0.0043	-0.0000
Std Dev	0.0005	0.0006	0.0039	0.0024
%SD	50.61	102.0	90.11	8341

CB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	102.1	103.5	102.3	98.59
Run 2	101.8	104.0	101.9	101.0
Run 3	102.5	103.4	102.9	104.1
Mean	102.1	103.6	102.4	101.2
Std Dev	0.3646	0.3223	0.5339	2.763

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #17
First repeat started at : Mon Nov 24 2003 16:06:20
Last repeat started at : Mon Nov 24 2003 16:07:58
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.8437	50.43	49.92	79.72	1163	30.60	20.57
Run 2	0.8532	49.65	49.49	76.19	1106	29.51	20.21
Run 3	0.8495	49.04	49.55	78.24	1062	28.98	19.94
Mean	0.8488	49.71	49.65	78.05	1110	29.69	20.24
Std Dev	0.0048	0.6984	0.2344	1.771	51.05	0.8251	0.3205
%SD	0.5657	1.405	0.4721	2.270	4.599	2.778	1.584

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	23.45	175.6	158.9	172.0	14.64	1.847
Run 2	23.40	174.5	156.4	169.0	14.21	1.763
Run 3	22.74	169.1	152.4	168.8	14.29	1.786
Mean	23.20	173.1	155.9	169.9	14.38	1.799
Std Dev	0.3936	3.492	3.267	1.838	0.2252	0.0438
%SD	1.697	2.018	2.096	1.081	1.566	2.436

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.944	0.6073	3.041	3.092	2.862	2.212
Run 2	5.932	0.6642	3.161	2.981	3.107	2.221
Run 3	5.882	0.5918	3.065	3.122	2.964	2.255
Mean	5.919	0.6211	3.089	3.065	2.977	2.229
Std Dev	0.0330	0.0381	0.0632	0.0739	0.1231	0.0225
%SD	0.5576	6.137	2.047	2.411	4.133	1.011

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.660	2.250	79.93	80.31	78.78	0.0942
Run 2	2.541	2.205	81.76	81.00	76.68	0.0885
Run 3	2.621	2.242	79.93	79.11	78.61	0.0842
Mean	2.608	2.232	80.54	80.14	78.02	0.0890
Std Dev	0.0606	0.0243	1.059	0.9548	1.166	0.0050
%SD	2.323	1.087	1.315	1.191	1.494	5.664

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0820	53.52	54.23	53.48
Run 2	0.0828	56.21	58.49	57.45
Run 3	0.1050	59.08	58.19	59.80
Mean	0.0899	56.27	56.97	56.91
Std Dev	0.0130	2.782	2.377	3.193
%SD	14.51	4.945	4.171	5.611

8433-5

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.34	73.74	72.58	67.85
Run 2	99.24	75.12	73.30	65.78
Run 3	99.53	75.68	72.26	68.53
Mean	99.37	74.84	72.71	67.39
Std Dev	0.1448	1.001	0.5294	1.429

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #18
First repeat started at : Mon Nov 24 2003 16:09:08
Last repeat started at : Mon Nov 24 2003 16:10:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.8079	57.04	56.75	52.62	635.5	27.70	16.57
Run 2	0.7962	58.80	58.03	56.43	625.6	28.93	17.11
Run 3	0.8037	57.51	57.41	53.86	626.3	28.21	16.41
Mean	0.8026	57.78	57.40	54.30	629.2	28.28	16.70
Std Dev	0.0059	0.9088	0.6399	1.947	5.536	0.6167	0.3666
%SD	0.7378	1.573	1.115	3.585	0.8799	2.181	2.196

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	18.05	134.4	124.2	131.5	22.12	1.552
Run 2	18.58	136.5	126.7	133.3	22.63	1.597
Run 3	17.98	133.3	123.0	127.5	22.03	1.560
Mean	18.20	134.7	124.6	130.8	22.26	1.570
Std Dev	0.3308	1.629	1.924	2.947	0.3268	0.0242
%SD	1.817	1.209	1.544	2.253	1.468	1.544

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	3.415	0.6216	4.775	4.598	4.450	1.200
Run 2	4.035	0.6846	4.673	4.530	4.480	1.155
Run 3	3.241	0.7144	4.855	4.587	4.805	1.176
Mean	3.564	0.6735	4.768	4.571	4.578	1.177
Std Dev	0.4176	0.0474	0.0913	0.0367	0.1972	0.0227
%SD	11.72	7.035	1.915	0.8021	4.308	1.927

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.587	1.232	64.41	63.31	64.80	0.0761
Run 2	1.564	1.196	63.47	64.61	63.75	0.0822
Run 3	1.519	1.221	63.86	63.30	60.68	0.0929
Mean	1.557	1.216	63.92	63.74	63.08	0.0838
Std Dev	0.0341	0.0184	0.4722	0.7522	2.140	0.0085
%SD	2.192	1.514	0.7389	1.180	3.393	10.18

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0868	53.91	57.91	54.26
Run 2	0.0797	56.36	59.39	55.69
Run 3	0.0830	52.37	56.88	56.39
Mean	0.0832	54.21	58.06	55.44
Std Dev	0.0036	2.015	1.258	1.086
%SD	4.290	3.717	2.167	1.959

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.1	82.48	76.55	70.63
Run 2	99.71	79.21	78.20	72.33
Run 3	99.81	82.77	77.58	70.10
Mean	99.86	81.49	77.44	71.02
Std Dev	0.1796	1.976	0.8354	1.165

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #19
First repeat started at : Mon Nov 24 2003 16:12:14
Last repeat started at : Mon Nov 24 2003 16:13:50
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	1.179	50.17	49.88	95.35	1196	41.35	18.82
Run 2	1.231	51.05	52.23	90.23	1186	42.63	19.34
Run 3	1.195	50.86	49.73	87.25	1122	42.91	18.56
Mean	1.202	50.69	50.61	90.94	1168	42.30	18.91
Std Dev	0.0267	0.4631	1.398	4.101	40.38	0.8355	0.3997
%SD	2.219	0.9136	2.762	4.509	3.457	1.975	2.114

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.82	151.0	148.1	151.2	27.07	2.256
Run 2	22.16	153.4	151.2	154.1	27.09	2.263
Run 3	21.68	151.0	147.9	152.4	26.84	2.434
Mean	21.89	151.8	149.1	152.6	27.00	2.318
Std Dev	0.2484	1.429	1.808	1.461	0.1412	0.1009
%SD	1.135	0.9414	1.213	0.9574	0.5230	4.354

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.578	0.8795	5.004	5.530	5.366	1.524
Run 2	5.765	0.8807	5.229	5.270	5.481	1.599
Run 3	5.731	1.020	5.313	4.918	5.280	1.529
Mean	5.692	0.9267	5.182	5.239	5.375	1.551
Std Dev	0.0995	0.0807	0.1597	0.3074	0.1010	0.0418
%SD	1.748	8.704	3.082	5.868	1.878	2.695

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.969	1.599	249.7	258.8	241.2	0.0959
Run 2	2.013	1.595	241.1	242.6	255.3	0.0869
Run 3	2.029	1.600	242.9	252.8	253.6	0.0994
Mean	2.004	1.598	244.6	251.4	250.1	0.0941
Std Dev	0.0311	0.0026	4.557	8.160	7.698	0.0064
%SD	1.551	0.1618	1.863	3.246	3.078	6.847

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0917	353.6	393.5	371.2
Run 2	0.0981	398.1	382.3	396.1
Run 3	0.0906	360.4	380.7	376.2
Mean	0.0935	370.7	385.5	381.2
Std Dev	0.0041	23.95	6.980	13.18
%SD	4.353	6.461	1.811	3.458

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	96.87	73.12	68.30	62.41
Run 2	97.24	72.62	67.75	61.44
Run 3	97.07	73.35	68.11	61.03
Mean	97.06	73.03	68.05	61.63
Std Dev	0.1855	0.3721	0.2801	0.7040

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #20
First repeat started at : Mon Nov 24 2003 16:15:04
Last repeat started at : Mon Nov 24 2003 16:16:42
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.6832	54.93	53.90	85.98	1373	26.54	19.22
Run 2	0.6872	54.08	52.22	87.91	1377	25.77	19.19
Run 3	0.6980	54.97	54.51	83.44	1371	26.27	19.14
Mean	0.6895	54.66	53.54	85.77	1374	26.19	19.18
Std Dev	0.0076	0.5029	1.187	2.240	3.252	0.3890	0.0417
%SD	1.108	0.9200	2.216	2.612	0.2367	1.485	0.2176

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	22.65	134.4	124.3	132.2	17.51	1.793
Run 2	22.40	132.7	123.0	130.9	17.45	1.799
Run 3	22.62	135.3	125.6	131.6	17.34	1.732
Mean	22.56	134.1	124.3	131.5	17.43	1.775
Std Dev	0.1411	1.322	1.271	0.6424	0.0856	0.0372
%SD	0.6254	0.9861	1.022	0.4884	0.4910	2.097

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	6.635	0.8334	3.986	3.818	3.620	1.390
Run 2	6.195	0.5881	4.195	3.885	3.708	1.453
Run 3	6.605	0.6770	3.629	3.582	3.494	1.344
Mean	6.479	0.6995	3.937	3.762	3.607	1.396
Std Dev	0.2457	0.1242	0.2863	0.1589	0.1077	0.0548
%SD	3.793	17.76	7.273	4.224	2.985	3.923

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Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.811	1.417	127.9	131.7	129.1	0.0848
Run 2	1.853	1.497	132.8	138.2	137.3	0.0872
Run 3	1.814	1.430	130.6	131.6	131.4	0.0933
Mean	1.826	1.448	130.4	133.8	132.6	0.0885
Std Dev	0.0237	0.0430	2.458	3.793	4.230	0.0044
%SD	1.296	2.966	1.885	2.834	3.189	4.965

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0779	46.07	48.97	47.65
Run 2	0.0931	49.26	51.41	52.62
Run 3	0.0947	51.02	53.47	51.79
Mean	0.0886	48.78	51.29	50.69
Std Dev	0.0093	2.512	2.253	2.663
%SD	10.47	5.148	4.392	5.253

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	96.75	68.75	69.00	66.18
Run 2	96.87	69.60	65.99	61.21
Run 3	96.60	68.70	68.67	62.29
Mean	96.74	69.02	67.89	63.23
Std Dev	0.1326	0.5034	1.654	2.615

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #21
First repeat started at : Mon Nov 24 2003 16:17:57
Last repeat started at : Mon Nov 24 2003 16:19:36
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.4630	39.03	39.11	60.75	823.5	17.99	18.05
Run 2	0.4711	40.17	38.54	55.33	823.9	17.42	18.14
Run 3	0.4725	39.94	39.51	56.89	873.6	17.50	17.79
Mean	0.4689	39.71	39.05	57.66	840.3	17.64	17.99
Std Dev	0.0051	0.5976	0.4908	2.793	28.82	0.3096	0.1831
%SD	1.098	1.505	1.257	4.844	3.430	1.755	1.018

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	20.46	133.3	118.3	128.5	9.137	1.825
Run 2	20.25	133.4	118.5	127.9	9.319	1.773
Run 3	19.78	126.9	115.7	125.5	8.834	1.655
Mean	20.17	131.2	117.5	127.3	9.097	1.751
Std Dev	0.3484	3.718	1.558	1.599	0.2451	0.0876
%SD	1.728	2.833	1.326	1.257	2.694	5.002

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.009	0.9554	2.490	2.280	2.367	1.627
Run 2	5.061	1.006	2.344	2.258	2.379	1.539
Run 3	4.519	0.9671	2.304	2.354	2.424	1.587
Mean	4.863	0.9762	2.379	2.297	2.390	1.584
Std Dev	0.2988	0.0265	0.0982	0.0500	0.0297	0.0441
%SD	6.145	2.717	4.128	2.177	1.244	2.782

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.932	1.653	57.28	58.34	58.14	0.0878
Run 2	1.909	1.627	56.39	57.35	57.98	0.0850
Run 3	1.889	1.608	57.56	58.42	57.57	0.0950
Mean	1.910	1.630	57.07	58.04	57.90	0.0893
Std Dev	0.0216	0.0228	0.6083	0.5924	0.2934	0.0052
%SD	1.130	1.398	1.066	1.021	0.5067	5.813

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0887	96.11	95.44	98.54
Run 2	0.0839	92.92	99.17	93.92
Run 3	0.0951	91.28	97.06	97.77
Mean	0.0892	93.44	97.22	96.74
Std Dev	0.0056	2.455	1.871	2.477
%SD	6.317	2.627	1.924	2.561

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.32	76.18	73.01	68.79
Run 2	100.3	76.17	76.30	70.57
Run 3	99.93	78.64	73.12	66.98
Mean	99.84	77.00	74.14	68.78
Std Dev	0.4754	1.420	1.866	1.793

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 1124038
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #22
First repeat started at : Mon Nov 24 2003 16:21:27
Last repeat started at : Mon Nov 24 2003 16:23:04
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0007	0.2804	10.43	2.048	27.47	3.537	0.2805
Run 2	0.0004	0.2788	9.751	1.792	45.17	3.336	0.2761
Run 3	-0.0007	0.2891	9.687	1.730	9.249	3.108	0.2647
Mean	0.0001	0.2828	9.955	1.857	27.29	3.327	0.2738
Std Dev	0.0008	0.0055	0.4098	0.1685	17.96	0.2145	0.0081
%SD	521.0	1.957	4.117	9.078	65.80	6.446	2.976

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.9210	1.418	1.703	0.5732	0.0640	0.8180
Run 2	0.8774	1.312	1.574	0.5923	0.0468	0.8529
Run 3	0.8404	1.309	1.407	0.6022	0.0577	0.8595
Mean	0.8796	1.346	1.561	0.5892	0.0562	0.8435
Std Dev	0.0403	0.0618	0.1483	0.0148	0.0087	0.0223
%SD	4.585	4.594	9.498	2.509	15.56	2.643

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.212	0.0898	221.2	217.0	222.5	0.7327
Run 2	3.831	0.0877	216.9	221.5	221.3	0.6742
Run 3	2.826	0.0954	247.1	236.1	228.6	0.6397
Mean	3.623	0.0910	228.4	224.9	224.1	0.6822
Std Dev	0.7159	0.0040	16.31	10.01	3.898	0.0470
%SD	19.76	4.391	7.140	4.452	1.739	6.890

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4070	0.4846	0.0172	0.0207	0.0135	0.0429
Run 2	0.3783	0.4434	0.0199	0.0087	0.0189	0.0415
Run 3	0.3625	0.4452	0.0224	0.0220	0.0114	0.0365
Mean	0.3826	0.4578	0.0198	0.0171	0.0146	0.0403
Std Dev	0.0226	0.0233	0.0026	0.0073	0.0039	0.0034
%SD	5.895	5.091	13.00	42.81	26.40	8.363

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

ICS-A
MS4-9.D

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0396	0.3546	0.4387	0.3899
Run 2	0.0338	0.3240	0.3136	0.3155
Run 3	0.0405	0.2914	0.3412	0.3049
Mean	0.0380	0.3233	0.3645	0.3368
Std Dev	0.0037	0.0316	0.0657	0.0463
%SD	9.693	9.776	18.02	13.76

IS-A
NS4-9-D

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	95.45	78.19	77.47	74.89
Run 2	95.25	78.46	79.80	76.91
Run 3	89.50	70.47	64.64	74.02
Mean	93.40	75.71	73.97	75.27
Std Dev	3.381	4.535	8.166	1.486

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #23
First repeat started at : Mon Nov 24 2003 16:29:14
Last repeat started at : Mon Nov 24 2003 16:30:51
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0002	20.36	29.90	21.39	45.82	22.94	19.52
Run 2	0.0005	20.53	30.04	21.52	40.87	22.90	19.31
Run 3	0.0017	20.30	29.88	21.32	35.55	22.50	19.61
Mean	0.0008	20.40	29.94	21.41	40.75	22.78	19.48
Std Dev	0.0008	0.1182	0.0847	0.0992	5.137	0.2429	0.1565
%SD	101.8	0.5796	0.2830	0.4634	12.61	1.066	0.8037

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	20.29	22.41	19.55	20.80	22.99	0.8362
Run 2	19.97	22.39	20.40	21.18	22.69	0.8981
Run 3	20.30	22.45	19.55	20.76	22.64	0.9149
Mean	20.18	22.42	19.83	20.91	22.77	0.8831
Std Dev	0.1875	0.0333	0.4912	0.2310	0.1894	0.0414
%SD	0.9292	0.1485	2.477	1.105	0.8317	4.690

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.303	0.1046	235.0	222.8	226.7	21.34
Run 2	3.770	0.1142	234.1	230.2	243.0	22.20
Run 3	4.039	0.0661	228.7	223.5	232.9	21.92
Mean	4.037	0.0950	232.6	225.5	234.2	21.82
Std Dev	0.2662	0.0254	3.410	4.132	8.205	0.4411
%SD	6.594	26.77	1.466	1.832	3.503	2.021

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	21.19	21.42	0.0076	0.0161	0.0111	0.0336
Run 2	21.86	21.92	0.0142	0.0227	0.0110	0.0291
Run 3	21.37	21.75	0.0221	0.0228	0.0095	0.0283
Mean	21.47	21.70	0.0146	0.0205	0.0105	0.0303
Std Dev	0.3502	0.2572	0.0073	0.0039	0.0009	0.0028
%SD	1.631	1.185	49.77	18.76	8.229	9.294

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0307	0.2145	0.2411	0.2413
Run 2	0.0262	0.2144	0.2375	0.2340
Run 3	0.0233	0.1782	0.2210	0.2067
Mean	0.0267	0.2024	0.2332	0.2273
Std Dev	0.0037	0.0209	0.0107	0.0183
%SD	13.89	10.34	4.588	8.035

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	94.36	75.78	77.28	75.96
Run 2	93.52	76.41	74.99	74.90
Run 3	93.95	75.39	75.29	73.52
Mean	93.94	75.86	75.85	74.79
Std Dev	0.4168	0.5104	1.248	1.221

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #24
First repeat started at : Mon Nov 24 2003 16:34:39
Last repeat started at : Mon Nov 24 2003 16:36:16
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	-0.0003	0.1258	0.2840	0.0751	2.509	-0.0708	0.0080
Run 2	-0.0008	0.1326	0.2293	0.0635	3.004	-0.0790	0.0060
Run 3	-0.0017	0.1327	0.1921	0.0385	12.39	-0.1196	0.0036
Mean	-0.0009	0.1304	0.2351	0.0590	5.968	-0.0898	0.0058
Std Dev	0.0007	0.0040	0.0462	0.0187	5.567	0.0261	0.0022
%SD	79.39	3.046	19.66	31.73	93.29	29.10	37.59

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0316	0.5642	0.5037	0.5723	0.0125	-0.0074
Run 2	0.0322	0.5972	0.4737	0.5630	0.0086	0.0013
Run 3	0.0173	0.5648	0.5253	0.5778	0.0105	0.0064
Mean	0.0270	0.5754	0.5009	0.5711	0.0105	0.0001
Std Dev	0.0085	0.0189	0.0259	0.0075	0.0020	0.0070
%SD	31.27	3.278	5.173	1.306	18.66	7865

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.093	-0.0054	0.1697	0.2096	0.1762	0.0006
Run 2	0.6760	0.0003	0.1003	0.1356	0.1563	-0.0042
Run 3	0.8521	0.0034	0.1062	0.1102	0.1073	0.0001
Mean	0.8737	-0.0006	0.1254	0.1518	0.1466	-0.0012
Std Dev	0.2093	0.0045	0.0385	0.0516	0.0355	0.0027
%SD	23.95	808.2	30.70	34.00	24.20	230.0

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3061	0.1560	0.3160	0.3186	0.3031	0.0109
Run 2	0.2793	0.1577	0.3500	0.3155	0.3166	0.0142
Run 3	0.2866	0.1616	0.3316	0.3508	0.3272	0.0098
Mean	0.2906	0.1584	0.3325	0.3283	0.3156	0.0116
Std Dev	0.0139	0.0029	0.0170	0.0196	0.0121	0.0023
%SD	4.770	1.835	5.116	5.962	3.825	19.83

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0070	0.0085	0.0052	0.0060
Run 2	0.0059	0.0069	0.0103	0.0094
Run 3	0.0040	0.0031	0.0078	0.0071
Mean	0.0057	0.0061	0.0078	0.0075
Std Dev	0.0015	0.0028	0.0026	0.0017
%SD	26.76	45.57	32.91	22.95

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.86	94.67	93.52	89.41
Run 2	100.2	96.72	95.48	86.67
Run 3	100.3	96.72	93.23	88.94
Mean	100.1	96.03	94.08	88.34
Std Dev	0.2242	1.185	1.223	1.466

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #25
First repeat started at : Mon Nov 24 2003 16:38:03
Last repeat started at : Mon Nov 24 2003 16:39:42
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	19.81	73.02	72.08	38.08	108.0	38.45	43.55
Run 2	20.19	73.61	71.86	37.94	97.81	38.12	43.40
Run 3	19.83	72.64	71.95	37.60	91.16	37.63	43.03
Mean	19.94	73.09	71.96	37.87	98.99	38.07	43.33
Std Dev	0.2171	0.4870	0.1122	0.2491	8.484	0.4108	0.2675
%SD	1.088	0.6663	0.1559	0.6577	8.570	1.079	0.6174

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	43.30	105.6	103.5	104.8	84.76	62.50
Run 2	43.66	105.7	102.6	104.4	85.02	62.59
Run 3	42.94	106.8	102.8	105.3	84.91	63.25
Mean	43.30	106.1	103.0	104.8	84.90	62.78
Std Dev	0.3627	0.6456	0.5027	0.4540	0.1304	0.4068
%SD	0.8376	0.6087	0.4882	0.4330	0.1536	0.6480

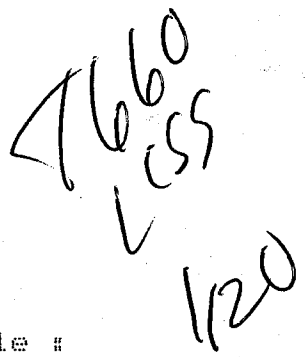
Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	63.40	61.46	25.39	24.45	25.94	28.20
Run 2	62.22	61.76	26.64	27.40	25.57	28.95
Run 3	63.20	62.15	25.34	25.26	25.30	28.06
Mean	62.94	61.79	25.79	25.70	25.60	28.40
Std Dev	0.6315	0.3500	0.7378	1.524	0.3216	0.4799
%SD	1.003	0.5665	2.861	5.928	1.256	1.690

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	28.87	28.62	106.8	110.1	105.4	48.57
Run 2	29.96	28.94	106.4	110.8	111.0	48.61
Run 3	29.16	29.12	103.1	111.0	109.9	47.36
Mean	29.33	28.89	105.4	110.6	108.8	48.18
Std Dev	0.5651	0.2519	2.037	0.4728	2.980	0.7108
%SD	1.927	0.8718	1.931	0.4274	2.740	1.475

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	47.87	58.78	68.73	66.43
Run 2	46.67	62.25	68.79	65.17
Run 3	47.48	61.05	68.53	65.63
Mean	47.34	60.69	68.68	65.74
Std Dev	0.6126	1.762	0.1386	0.6386
%SD	1.294	2.903	0.2017	0.9713



Internal Standard Drift; % relative to mean of first sample #

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.33	90.58	85.43	77.05
Run 2	99.47	91.92	84.21	74.87
Run 3	100.3	91.95	86.36	78.97
Mean	99.68	91.48	85.33	76.96
Std Dev	0.4999	0.7844	1.076	2.051

FQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #26
First repeat started at : Mon Nov 24 2003 16:42:34
Last repeat started at : Mon Nov 24 2003 16:44:10
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.33	24.55	24.10	24.59	38.22	24.54	25.23
Run 2	24.84	24.72	24.50	24.81	31.92	24.91	25.21
Run 3	24.03	24.60	24.48	25.03	39.32	24.47	25.33
Mean	24.40	24.62	24.36	24.81	36.48	24.64	25.26
Std Dev	0.4129	0.0885	0.2249	0.2221	3.993	0.2407	0.0684
%SD	1.692	0.3593	0.9232	0.8950	10.94	0.9767	0.2707

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.52	25.35	24.34	25.60	24.93	25.85
Run 2	25.16	25.39	24.56	25.34	24.78	25.45
Run 3	25.33	25.52	25.54	25.17	24.92	25.41
Mean	25.33	25.42	24.81	25.37	24.88	25.57
Std Dev	0.1787	0.0868	0.6374	0.2170	0.0874	0.2459
%SD	0.7054	0.3416	2.569	0.8554	0.3515	0.9618

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.48	25.51	25.20	23.58	24.85	25.23
Run 2	24.92	24.99	25.26	24.27	24.72	24.45
Run 3	24.93	25.09	24.91	24.34	25.48	24.94
Mean	25.11	25.20	25.12	24.06	25.02	24.88
Std Dev	0.3193	0.2757	0.1869	0.4223	0.4066	0.3937
%SD	1.272	1.094	0.7439	1.755	1.625	1.583

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.46	25.02	25.42	26.40	25.51	25.59
Run 2	25.01	24.58	25.56	24.91	25.20	24.84
Run 3	24.83	25.17	24.48	24.96	24.44	25.97
Mean	25.10	24.92	25.16	25.42	25.05	25.46
Std Dev	0.3226	0.3050	0.5856	0.8503	0.5535	0.5730
%SD	1.285	1.224	2.328	3.345	2.209	2.250

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	25.77	25.46	25.31	25.36
Run 2	24.04	25.47	25.75	25.96
Run 3	25.68	26.14	25.17	25.88
Mean	25.16	25.69	25.41	25.73
Std Dev	0.9748	0.3925	0.3004	0.3240
%SD	3.874	1.528	1.182	1.259

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.8	97.97	95.73	96.36
Run 2	100.2	98.82	98.37	96.61
Run 3	101.3	98.44	96.91	92.49
Mean	100.8	98.41	97.00	95.15
Std Dev	0.5314	0.4242	1.321	2.308

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #27
First repeat started at : Mon Nov 24 2003 16:47:53
Last repeat started at : Mon Nov 24 2003 16:49:31
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0056	-0.0095	-0.0353	-0.0781	-6.851	-0.2571	-0.0052
Run 2	0.0051	-0.0058	-0.0349	-0.0659	-4.580	-0.2382	-0.0107
Run 3	0.0060	-0.0058	-0.0162	-0.0558	-11.85	-0.3093	-0.0090
Mean	0.0055	-0.0070	-0.0288	-0.0666	-7.760	-0.2682	-0.0083
Std Dev	0.0005	0.0022	0.0109	0.0112	3.718	0.0368	0.0028
%SD	8.509	30.75	38.00	16.81	47.92	13.73	34.28

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0059	-0.0030	0.0513	0.0015	-0.0107	0.0292
Run 2	-0.0037	0.0073	0.0208	-0.0157	-0.0104	0.0124
Run 3	-0.0041	0.0075	0.0552	0.0065	-0.0157	0.0065
Mean	-0.0006	0.0039	0.0424	-0.0026	-0.0123	0.0160
Std Dev	0.0057	0.0060	0.0189	0.0117	0.0030	0.0118
%SD	891.7	153.9	44.48	456.3	24.12	73.39

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.5691	-0.0284	0.0242	0.0756	0.0257	-0.0134
Run 2	-0.5570	-0.0477	0.0230	0.0392	0.0209	-0.0113
Run 3	-0.5943	-0.0619	0.0245	0.0364	0.0351	-0.0079
Mean	-0.5735	-0.0460	0.0239	0.0504	0.0272	-0.0109
Std Dev	0.0190	0.0168	0.0008	0.0219	0.0072	0.0028
%SD	3.317	36.55	3.433	43.45	26.56	25.49

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Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0041	0.0009	-0.0017	0.0006	-0.0003	0.0029
Run 2	0.0002	-0.0166	0.0131	0.0014	0.0015	0.0009
Run 3	0.0009	-0.0033	-0.0034	-0.0057	-0.0015	0.0004
Mean	-0.0010	-0.0063	0.0027	-0.0012	-0.0001	0.0014
Std Dev	0.0027	0.0092	0.0090	0.0039	0.0015	0.0013
%SD	276.6	144.5	335.8	318.2	1398	91.84

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0019	0.0042	0.0007	0.0024
Run 2	0.0020	0.0011	-0.0044	-0.0013
Run 3	-0.0005	0.0013	0.0002	-0.0003
Mean	0.0011	0.0022	-0.0012	0.0003
Std Dev	0.0014	0.0017	0.0029	0.0019
%SD	121.6	78.34	245.6	714.8

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.76	99.81	98.20	98.95
Run 2	101.1	100.5	99.69	97.09
Run 3	100.1	100.4	100.00	98.93
Mean	100.3	100.2	99.30	98.32
Std Dev	0.7187	0.3779	0.9633	1.066

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #28
First repeat started at : Mon Nov 24 2003 16:51:30
Last repeat started at : Mon Nov 24 2003 16:53:07
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.2180	25.20	24.81	9.848	82.01	24.58	99.12
Run 2	0.2144	24.86	24.69	10.28	79.63	24.19	97.86
Run 3	0.2190	24.75	24.52	9.871	75.18	24.67	98.46
Mean	0.2171	24.94	24.67	10.000	78.94	24.48	98.48
Std Dev	0.0024	0.2327	0.1464	0.2442	3.471	0.2566	0.6256
%SD	1.121	0.9333	0.5935	2.442	4.398	1.048	0.6353

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	99.84	122.4	110.1	116.7	3.611	0.7885
Run 2	99.43	120.3	108.8	116.1	3.634	0.8302
Run 3	99.28	121.1	108.9	115.7	3.636	0.7760
Mean	99.52	121.3	109.3	116.2	3.627	0.7982
Std Dev	0.2891	1.027	0.7116	0.4687	0.0135	0.0284
%SD	0.2905	0.8472	0.6513	0.4034	0.3734	3.553

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.659	0.2239	0.7837	0.7884	0.7046	0.2629
Run 2	1.478	0.2380	0.6695	0.6724	0.6948	0.2702
Run 3	1.407	0.2269	0.6908	0.6416	0.7079	0.2516
Mean	1.514	0.2296	0.7147	0.7008	0.7024	0.2616
Std Dev	0.1297	0.0074	0.0607	0.0774	0.0068	0.0094
%SD	8.563	3.223	8.499	11.04	0.9659	3.585

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4856	0.3688	96.65	99.93	96.07	0.2420
Run 2	0.5031	0.3712	99.58	104.8	96.99	0.2154
Run 3	0.4697	0.3548	96.69	95.91	98.45	0.2562
Mean	0.4861	0.3650	97.64	100.2	97.17	0.2379
Std Dev	0.0167	0.0089	1.681	4.428	1.199	0.0207
%SD	3.437	2.438	1.722	4.420	1.234	8.710

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.2456	46.52	49.24	49.71
Run 2	0.2423	47.00	51.27	49.36
Run 3	0.2301	45.57	51.04	49.61
Mean	0.2393	46.36	50.52	49.56
Std Dev	0.0081	0.7277	1.107	0.1823
%SD	3.399	1.570	2.192	0.3677

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.92	90.85	83.20	71.68
Run 2	99.62	92.18	84.08	73.14
Run 3	99.97	92.62	84.44	73.57
Mean	99.84	91.88	83.90	72.80
Std Dev	0.1937	0.9213	0.6375	0.9909

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #29
First repeat started at : Mon Nov 24 2003 16:54:29
Last repeat started at : Mon Nov 24 2003 16:56:07
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.1831	19.11	18.91	9.131	98.62	21.66	65.01
Run 2	0.1957	19.49	19.37	9.686	106.5	23.35	66.46
Run 3	0.1929	19.44	19.19	9.519	91.90	20.79	65.98
Mean	0.1906	19.35	19.16	9.445	99.00	21.93	65.82
Std Dev	0.0066	0.2053	0.2314	0.2848	7.302	1.300	0.7386
%SD	3.484	1.061	1.208	3.016	7.375	5.928	1.122

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	66.62	84.66	76.54	80.79	3.800	0.7443
Run 2	66.77	86.00	78.27	82.26	3.823	0.7073
Run 3	66.54	85.97	78.35	82.57	3.868	0.7527
Mean	66.64	85.54	77.72	81.87	3.831	0.7348
Std Dev	0.1152	0.7648	1.027	0.9468	0.0344	0.0242
%SD	0.1729	0.8941	1.321	1.156	0.8976	3.291

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	1.639	0.2398	0.5171	0.4898	0.4914	0.1762
Run 2	1.596	0.2187	0.4920	0.4677	0.4904	0.1803
Run 3	1.887	0.2594	0.5310	0.5352	0.4806	0.1913
Mean	1.708	0.2393	0.5134	0.4975	0.4875	0.1826
Std Dev	0.1569	0.0203	0.0197	0.0344	0.0060	0.0078
%SD	9.187	8.504	3.846	6.916	1.227	4.294

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3857	0.2541	79.98	79.05	77.21	0.2220
Run 2	0.4064	0.2705	79.94	77.21	76.98	0.2169
Run 3	0.4025	0.2932	79.24	77.32	77.55	0.1886
Mean	0.3982	0.2726	79.72	77.86	77.25	0.2092
Std Dev	0.0110	0.0196	0.4165	1.034	0.2857	0.0180
%SD	2.754	7.201	0.5225	1.328	0.3699	8.591

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.2091	31.85	36.18	35.12
Run 2	0.2241	31.55	35.06	33.67
Run 3	0.1807	30.17	32.23	31.75
Mean	0.2046	31.19	34.49	33.51
Std Dev	0.0220	0.8964	2.034	1.691
%SD	10.77	2.874	5.898	5.047

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.99	92.48	85.11	68.63
Run 2	99.60	91.62	84.63	67.59
Run 3	99.09	91.19	83.09	75.22
Mean	99.56	91.76	84.28	70.48
Std Dev	0.4503	0.6546	1.054	4.141

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #30
First repeat started at : Mon Nov 24 2003 16:58:39
Last repeat started at : Mon Nov 24 2003 17:00:17
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0510	5.350	5.284	2.146	17.83	4.320	22.28
Run 2	0.0503	5.315	5.246	2.109	11.08	4.568	22.26
Run 3	0.0542	5.158	5.156	2.137	18.90	4.464	22.12
Mean	0.0518	5.274	5.229	2.131	15.93	4.451	22.22
Std Dev	0.0021	0.1025	0.0658	0.0194	4.239	0.1247	0.0890
%SD	3.984	1.943	1.258	0.9102	26.60	2.802	0.4004

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	22.53	29.34	26.04	27.97	0.7588	0.2114
Run 2	22.41	29.07	26.23	27.95	0.7678	0.1752
Run 3	22.60	28.90	26.14	28.24	0.7856	0.1646
Mean	22.51	29.11	26.14	28.05	0.7707	0.1837
Std Dev	0.0961	0.2197	0.0951	0.1611	0.0137	0.0245
%SD	0.4269	0.7549	0.3638	0.5742	1.773	13.34

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.5904	0.0442	0.1266	0.1166	0.1318	0.0447
Run 2	0.5093	0.0525	0.1146	0.1608	0.1523	0.0474
Run 3	0.5851	0.1041	0.1287	0.1382	0.1191	0.0595
Mean	0.5616	0.0669	0.1233	0.1386	0.1344	0.0505
Std Dev	0.0454	0.0325	0.0076	0.0221	0.0167	0.0079
%SD	8.081	48.54	6.162	15.97	12.46	15.59

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0943	0.0646	18.47	18.63	17.76	0.0452
Run 2	0.1068	0.0859	17.70	18.35	18.35	0.0354
Run 3	0.0930	0.0654	17.72	18.79	18.05	0.0397
Mean	0.0981	0.0720	17.96	18.59	18.05	0.0401
Std Dev	0.0076	0.0121	0.4382	0.2203	0.2960	0.0049
%SD	7.777	16.75	2.440	1.185	1.639	12.20

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0443	8.934	10.14	9.660
Run 2	0.0444	8.699	9.860	9.527
Run 3	0.0410	8.912	10.04	9.677
Mean	0.0432	8.848	10.01	9.621
Std Dev	0.0020	0.1300	0.1428	0.0824
%SD	4.588	1.469	1.426	0.8567

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Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.8	96.23	94.14	86.67
Run 2	100.8	97.10	90.30	88.77
Run 3	99.89	96.99	95.38	86.50
Mean	100.5	96.77	93.27	87.31
Std Dev	0.5361	0.4727	2.647	1.261

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 1124038
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #31
First repeat started at : Mon Nov 24 2003 17:01:28
Last repeat started at : Mon Nov 24 2003 17:03:05
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	43.27	71.81	71.90	55.26	141.3	68.09	140.4
Run 2	43.66	74.18	72.48	55.62	146.7	68.96	141.6
Run 3	42.34	73.73	72.78	55.05	142.7	67.85	140.3
Mean	43.09	73.24	72.39	55.31	143.6	68.30	140.8
Std Dev	0.6763	1.255	0.4449	0.2874	2.765	0.5821	0.7310
%SD	1.570	1.714	0.6146	0.5197	1.926	0.8522	0.5192

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	141.0	159.6	147.8	153.1	50.56	44.62
Run 2	142.7	162.2	150.9	155.3	51.33	46.08
Run 3	142.8	160.7	151.0	156.9	51.66	45.33
Mean	142.2	160.8	149.9	155.1	51.18	45.34
Std Dev	0.9771	1.295	1.818	1.901	0.5637	0.7335
%SD	0.6873	0.8055	1.213	1.226	1.101	1.618

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	45.78	44.33	53.52	54.29	54.12	47.33
Run 2	47.24	45.18	56.39	53.41	56.85	47.58
Run 3	46.41	44.69	54.41	53.26	54.23	46.77
Mean	46.47	44.73	54.77	53.66	55.06	47.23
Std Dev	0.7309	0.4271	1.466	0.5542	1.543	0.4192
%SD	1.573	0.9548	2.677	1.033	2.802	0.8877

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	47.27	46.92	148.2	155.4	152.8	54.40
Run 2	48.15	48.43	154.1	157.3	157.6	56.72
Run 3	46.80	47.01	151.0	156.5	159.1	54.76
Mean	47.41	47.46	151.1	156.4	156.5	55.29
Std Dev	0.6813	0.8474	2.956	0.9717	3.296	1.247
%SD	1.437	1.786	1.956	0.6212	2.106	2.256

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	56.56	101.1	107.1	103.3
Run 2	57.22	104.3	104.1	105.6
Run 3	58.48	99.72	108.0	103.7
Mean	57.42	101.7	106.4	104.2
Std Dev	0.9728	2.325	2.049	1.226
%SD	1.694	2.286	1.926	1.177

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	97.07	88.62	79.62	69.68
Run 2	95.48	87.30	79.16	71.30
Run 3	97.08	87.64	82.35	71.88
Mean	96.54	87.86	80.38	70.96
Std Dev	0.9172	0.6847	1.726	1.139

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #32
First repeat started at : Mon Nov 24 2003 17:06:03
Last repeat started at : Mon Nov 24 2003 17:07:39
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	4.047	21.01	20.46	41.36	58.25	43.08	37.98
Run 2	4.146	20.73	20.37	40.55	62.41	43.05	37.99
Run 3	4.111	20.73	20.42	41.72	78.35	43.60	38.37
Mean	4.102	20.82	20.42	41.21	66.34	43.24	38.11
Std Dev	0.0501	0.1620	0.0459	0.6026	10.61	0.3070	0.2232
%SD	1.221	0.7778	0.2250	1.462	16.00	0.7099	0.5856

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	38.13	65.29	66.33	67.20	40.25	41.60
Run 2	37.65	64.74	65.82	66.87	40.00	40.69
Run 3	38.75	65.64	67.10	67.24	40.12	41.97
Mean	38.18	65.22	66.42	67.10	40.13	41.42
Std Dev	0.5490	0.4495	0.6487	0.2038	0.1244	0.6581
%SD	1.438	0.6892	0.9767	0.3037	0.3100	1.589

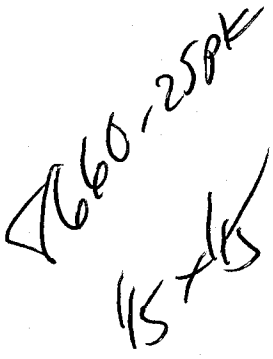
Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	41.54	40.86	39.07	37.69	41.34	4.118
Run 2	40.76	39.89	37.74	36.88	37.53	4.084
Run 3	42.12	40.97	37.69	37.85	37.59	4.175
Mean	41.47	40.57	38.17	37.48	38.82	4.126
Std Dev	0.6852	0.5946	0.7848	0.5193	2.181	0.0461
%SD	1.652	1.465	2.056	1.386	5.617	1.117

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.181	4.168	187.4	188.1	185.6	41.46
Run 2	4.143	4.156	185.3	189.2	186.1	46.64
Run 3	4.152	4.160	191.0	190.8	186.1	43.18
Mean	4.159	4.161	187.9	189.4	185.9	43.76
Std Dev	0.0200	0.0064	2.889	1.313	0.2811	2.635
%SD	0.4802	0.1531	1.538	0.6933	0.1512	6.022

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	42.15	49.71	55.28	52.66
Run 2	44.15	50.28	56.69	53.18
Run 3	43.71	52.72	56.21	54.71
Mean	43.33	50.90	56.06	53.52
Std Dev	1.051	1.599	0.7166	1.066
%SD	2.425	3.142	1.278	1.991



Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.94	94.54	92.49	86.20
Run 2	99.36	96.32	94.89	85.02
Run 3	100.3	93.83	91.07	81.45
Mean	99.86	94.89	92.82	84.22
Std Dev	0.4595	1.285	1.932	2.474

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 1124033B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #33
First repeat started at : Mon Nov 24 2003 17:09:19
Last repeat started at : Mon Nov 24 2003 17:10:57
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	6.696	49.45	35.01	70.47	52.01	75.16	25.20
Run 2	6.789	53.54	36.42	76.30	8.025	80.97	24.66
Run 3	6.584	54.38	34.26	81.29	54.77	83.88	25.49
Mean	6.690	52.45	35.23	76.02	38.27	80.00	25.12
Std Dev	0.1029	2.636	1.095	5.419	26.23	4.438	0.4241
%SD	1.537	5.025	3.108	7.128	68.54	5.548	1.688

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	22.17	28.18	41.30	24.69	164.6	218.1
Run 2	21.98	27.70	36.39	28.84	157.3	200.3
Run 3	24.02	30.14	38.53	27.87	162.4	210.7
Mean	22.72	28.67	38.74	27.13	161.5	209.7
Std Dev	1.125	1.294	2.457	2.163	3.781	8.936
%SD	4.951	4.513	6.343	7.976	2.342	4.262

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	5392	83.35	311.9	557.2	557.8	706.0
Run 2	5019	81.30	343.1	329.9	287.5	652.4
Run 3	5239	96.36	296.7	331.6	260.1	704.0
Mean	5217	87.00	383.9	406.2	368.5	687.5
Std Dev	187.7	8.165	113.3	130.7	164.5	30.37
%SD	3.599	9.385	29.50	32.18	44.66	4.418

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	403.4	449.5	165.1	128.6	57.42	152.8
Run 2	392.1	449.9	100.7	96.91	67.66	123.2
Run 3	401.0	459.1	105.7	87.64	70.43	81.95
Mean	398.8	452.8	123.8	104.4	65.17	119.3
Std Dev	5.975	5.425	35.81	21.49	6.851	35.57
%SD	1.498	1.198	28.92	20.59	10.51	29.81

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

11/24/03

Rinse Solution

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	174.0	101.9	143.7	113.7
Run 2	109.3	132.9	170.8	141.1
Run 3	71.40	147.6	119.8	131.4
Mean	118.2	127.5	144.8	128.8
Std Dev	51.87	23.84	25.52	13.92
%SD	43.87	18.70	17.63	10.81

11/24/03

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	0.2074	0.9336	0.0297	0.0203
Run 2	0.1885	0.9536	0.0318	0.0193
Run 3	0.1817	0.9290	0.0302	0.0185
Mean	0.1925	0.9387	0.0306	0.0193
Std Dev	0.0133	0.0131	0.0011	0.0009

Internal Standard Drift outside drift window.
Failed isotopes = Li 6Ga 71In 115Lu 175
Specified action is to continue with procedure.

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #34
First repeat started at : Mon Nov 24 2003 17:13:18
Last repeat started at : Mon Nov 24 2003 17:14:55
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.5545	56.58	56.63	17.41	69.13	52.56	36.36
Run 2	0.5621	54.92	55.09	17.20	45.55	49.78	35.56
Run 3	0.5601	56.45	55.84	17.30	54.07	53.49	35.77
Mean	0.5589	55.98	55.85	17.30	56.25	51.94	35.89
Std Dev	0.0039	0.9215	0.7689	0.1013	11.94	1.929	0.4148
%SD	0.7024	1.646	1.377	0.5854	21.23	3.714	1.156

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	38.77	87.92	86.51	84.10	5.164	1.681
Run 2	38.14	86.83	86.30	81.42	5.089	1.574
Run 3	37.95	87.96	87.18	82.82	5.139	1.594
Mean	38.29	87.57	86.66	82.78	5.131	1.616
Std Dev	0.4316	0.6411	0.4580	1.344	0.0382	0.0571
%SD	1.127	0.7321	0.5285	1.624	0.7453	3.532

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.9995	0.5622	3.523	3.430	3.628	0.2054
Run 2	0.5639	0.4653	3.558	3.708	3.701	0.2013
Run 3	0.7956	0.4624	3.798	3.430	3.772	0.1968
Mean	0.7863	0.4966	3.626	3.523	3.700	0.2012
Std Dev	0.2179	0.0568	0.1496	0.1607	0.0722	0.0043
%SD	27.72	11.43	4.126	4.561	1.951	2.140

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Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4557	0.2605	240.1	238.6	242.8	0.5094
Run 2	0.4805	0.2686	242.5	242.1	237.4	0.5401
Run 3	0.4544	0.2713	239.1	246.7	242.0	0.4863
Mean	0.4635	0.2668	240.5	242.5	240.8	0.5119
Std Dev	0.0148	0.0057	1.761	4.052	2.930	0.0270
%SD	3.183	2.120	0.7319	1.671	1.217	5.280

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.5267	18.05	18.09	17.94
Run 2	0.4981	16.70	18.36	17.49
Run 3	0.5299	15.96	18.86	17.71
Mean	0.5182	16.90	18.44	17.71
Std Dev	0.0175	1.061	0.3894	0.2275
%SD	3.377	6.278	2.112	1.284

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.5	95.81	80.15	68.70
Run 2	99.83	98.45	78.08	67.98
Run 3	99.74	96.67	79.97	70.80
Mean	100.0	96.98	79.40	69.16
Std Dev	0.4266	1.347	1.147	1.465

FQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #35
First repeat started at : Mon Nov 24 2003 17:16:32
Last repeat started at : Mon Nov 24 2003 17:18:10
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.1202	9.026	8.640	31.79	529.4	12.81	3.362
Run 2	0.1162	9.071	8.826	28.17	526.5	12.64	3.305
Run 3	0.1189	9.259	8.885	28.74	503.8	12.06	3.395
Mean	0.1184	9.119	8.784	29.57	519.9	12.50	3.354
Std Dev	0.0020	0.1233	0.1277	1.948	14.01	0.3909	0.0453
%SD	1.722	1.352	1.454	6.588	2.695	3.126	1.351

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	5.168	15.75	15.87	14.47	6.304	0.8519
Run 2	5.118	15.39	16.32	14.32	6.194	0.8202
Run 3	5.153	15.94	15.78	14.63	6.238	0.8505
Mean	5.146	15.69	15.99	14.47	6.245	0.8408
Std Dev	0.0257	0.2783	0.2897	0.1516	0.0554	0.0179
%SD	0.4993	1.773	1.812	1.047	0.8865	2.129

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.191	0.2543	0.4761	0.4585	0.5108	0.1026
Run 2	4.016	0.1750	0.4579	0.5064	0.4772	0.0883
Run 3	4.048	0.1498	0.4950	0.5279	0.5340	0.1064
Mean	4.085	0.1930	0.4763	0.4976	0.5074	0.0991
Std Dev	0.0933	0.0546	0.0185	0.0355	0.0285	0.0095
%SD	2.283	28.27	3.894	7.138	5.624	9.625

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.3297	0.1914	25.05	25.85	25.96	0.1197
Run 2	0.3154	0.1821	24.97	25.46	25.25	0.1054
Run 3	0.3436	0.2037	24.98	26.67	25.46	0.1115
Mean	0.3296	0.1924	25.00	25.99	25.56	0.1122
Std Dev	0.0141	0.0109	0.0474	0.6164	0.3673	0.0071
%SD	4.276	5.638	0.1894	2.371	1.437	6.370

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

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Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.1138	1.287	1.343	1.376
Run 2	0.1077	1.316	1.332	1.377
Run 3	0.1191	1.413	1.446	1.406
Mean	0.1135	1.339	1.373	1.386
Std Dev	0.0057	0.0658	0.0631	0.0171
%SD	5.022	4.918	4.591	1.235

8660-4
115

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	98.76	80.50	80.50	71.88
Run 2	99.97	81.65	80.56	71.19
Run 3	100.7	80.88	78.82	71.01
Mean	99.82	81.01	79.96	71.36
Std Dev	0.9994	0.5880	0.9888	0.4562

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #36
First repeat started at : Mon Nov 24 2003 17:23:20
Last repeat started at : Mon Nov 24 2003 17:24:59
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.91	25.30	24.63	24.94	36.93	24.35	25.46
Run 2	25.32	24.78	24.78	24.92	25.89	24.36	25.20
Run 3	24.75	25.06	24.41	25.10	38.02	24.67	25.65
Mean	24.99	25.05	24.61	24.99	33.61	24.46	25.44
Std Dev	0.2959	0.2603	0.1858	0.0976	6.709	0.1820	0.2295
%SD	1.184	1.039	0.7550	0.3907	19.96	0.7439	0.9023

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.40	25.51	24.85	25.47	24.96	25.47
Run 2	25.23	25.54	24.85	25.30	25.07	25.51
Run 3	25.39	25.55	25.06	25.72	25.21	25.54
Mean	25.34	25.53	24.92	25.50	25.08	25.51
Std Dev	0.0957	0.0215	0.1215	0.2157	0.1252	0.0351
%SD	0.3778	0.0842	0.4877	0.8459	0.4992	0.1375

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.47	25.19	25.08	23.89	23.86	24.26
Run 2	25.26	25.02	26.32	25.11	24.14	24.76
Run 3	25.65	25.85	24.22	23.17	23.88	24.77
Mean	25.46	25.35	25.20	24.05	23.96	24.60
Std Dev	0.1922	0.4336	1.055	0.9769	0.1525	0.2934
%SD	0.7549	1.710	4.187	4.061	0.6363	1.193

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.40	24.81	24.16	25.16	25.23	25.15
Run 2	24.73	24.72	25.26	25.75	24.91	25.49
Run 3	25.01	25.42	26.10	25.72	25.43	26.08
Mean	24.71	24.98	25.17	25.54	25.19	25.57
Std Dev	0.3038	0.3779	0.9701	0.3318	0.2611	0.4716
%SD	1.229	1.513	3.854	1.299	1.036	1.844

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 204	Pb 207	Pb 208

CCV 11-24-03

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	25.20	25.27	24.72	25.41
Run 2	25.51	26.43	25.88	26.48
Run 3	26.00	26.03	27.51	26.94
Mean	25.57	25.91	26.04	26.28
Std Dev	0.4014	0.5937	1.406	0.7863
%SD	1.570	2.291	5.398	2.992

CLV WS84-23-E 9/11/2002

Internal Standard Drift; % relative to mean of first sample =

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	100.4	98.60	100.6	96.08
Run 2	100.4	99.31	99.02	94.10
Run 3	100.9	98.03	94.46	91.63
Mean	100.6	98.65	98.03	93.94
Std Dev	0.2778	0.6433	3.192	2.230

PQ-S #971114 Operator: Greg Jasper KA0322614

Multi-Element Concentrations Mon Nov 24 2003

Experiment name : 112403B
Analysis procedure : EPA Method 200.8/6020
Sample name : Sample #37
First repeat started at : Mon Nov 24 2003 17:26:43
Last repeat started at : Mon Nov 24 2003 17:28:23
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Chromium	Chromium	Nickel	Nickel	Nickel	Copper
Isotope	Be 9	Cr 52	Cr 53	Ni 60	Ni 61	Ni 62	Cu 63
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	0.0079	0.0021	-0.0519	-0.0298	-12.63	-0.3121	-0.0202
Run 2	0.0061	0.0040	-0.0539	-0.0289	-2.726	-0.2521	-0.0177
Run 3	0.0056	-0.0009	-0.0557	-0.0387	-18.31	-0.2338	-0.0174
Mean	0.0066	0.0017	-0.0539	-0.0325	-11.22	-0.2660	-0.0184
Std Dev	0.0012	0.0024	0.0019	0.0054	7.885	0.0409	0.0015
%SD	18.71	140.4	3.544	16.75	70.28	15.39	8.348

Element	Copper	Zinc	Zinc	Zinc	Arsenic	Selenium
Isotope	Cu 65	Zn 66	Zn 67	Zn 68	As 75	Se 77
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0073	0.0189	0.0409	0.0049	-0.0135	0.0704
Run 2	0.0022	0.0071	0.0013	0.0037	-0.0254	0.0220
Run 3	-0.0030	0.0074	0.0490	0.0078	-0.0064	0.0003
Mean	-0.0027	0.0111	0.0304	0.0054	-0.0151	0.0309
Std Dev	0.0047	0.0068	0.0255	0.0021	0.0096	0.0359
%SD	175.7	60.79	83.90	38.91	63.44	116.0

Element	Selenium	Selenium	Molybdenum	Molybdenum	Molybdenum	Cadmium
Isotope	Se 78	Se 82	Mo 95	Mo 97	Mo 98	Cd 111
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.4659	-0.0102	0.1078	0.1448	0.1238	-0.0013
Run 2	-0.4777	-0.0651	0.0587	0.0621	0.0542	-0.0094
Run 3	-0.5771	-0.0368	0.0430	0.0545	0.0457	-0.0071
Mean	-0.5069	-0.0374	0.0698	0.0871	0.0746	-0.0059
Std Dev	0.0611	0.0275	0.0338	0.0501	0.0429	0.0042
%SD	12.05	73.47	48.37	57.54	57.48	69.94

Element	Cadmium	Cadmium	Barium	Barium	Barium	Thallium
Isotope	Cd 112	Cd 114	Ba 135	Ba 137	Ba 138	Tl 203
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0009	-0.0069	0.0118	0.0024	0.0010	0.0033
Run 2	-0.0011	-0.0083	0.0072	-0.0012	-0.0006	0.0008
Run 3	-0.0004	-0.0081	0.0054	-0.0074	0.0023	-0.0003
Mean	-0.0002	-0.0078	0.0081	-0.0021	0.0009	0.0013
Std Dev	0.0010	0.0008	0.0033	0.0050	0.0015	0.0018
%SD	560.9	9.776	40.92	241.8	161.3	146.1

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208

Element	Thallium	Lead	Lead	Lead
Isotope	Tl 205	Pb 206	Pb 207	Pb 208
Detector	PC	PC	PC	PC
Detector	PC	PC	PC	PC
Run 1	0.0024	0.0010	0.0014	0.0023
Run 2	0.0032	0.0037	0.0018	0.0007
Run 3	0.0021	0.0000	0.0040	0.0021
Mean	0.0025	0.0016	0.0024	0.0017
Std Dev	0.0005	0.0019	0.0014	0.0009
%SD	20.92	124.3	57.54	51.32

(CB

Internal Standard Drift; % relative to mean of first sample :

Element	Lithium	Gallium	Indium	Lutetium
Isotope	Li 6	Ga 71	In 115	Lu 175
Detector	PC	PC	PC	PC
Run 1	99.96	99.73	98.02	98.29
Run 2	101.2	99.62	98.32	99.07
Run 3	100.5	100.8	100.5	99.02
Mean	100.5	100.1	98.94	98.79
Std Dev	0.6052	0.6786	1.351	0.4369

Service Request # K2308433 (HEI Digest)
Calibration 11-20-03B
QC in calibration 11-20-03B
QC Service Request # K2308433

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control	✓		
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL			✓
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			✓

Comments:

Primary Review by SC Date 11/20/03
Secondary Review by [signature] Date 11/20/03
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution
1	Calibration Blank	Blank	0 kg	0 ml	1.00
2	25 ppb Std. MS4-22-D	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS4-20-A	Unknown	0 kg	0 ml	1.00
4	CCV1 MS4-22-D	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA SOIL MS4-15-A	Unknown	0 kg	0 ml	1.00
8	PBS K8660 1/5	Unknown	0 kg	0 ml	1.00
9	K8660-02 1/5	Unknown	0 kg	0 ml	1.00
10	K8660-02D 1/5	Unknown	0 kg	0 ml	1.00
11	K8660-02S 1/5	Unknown	0 kg	0 ml	1.00
12	LCSS K8660 1/20	Unknown	0 kg	0 ml	1.00
13	K8660-01 1/5	Unknown	0 kg	0 ml	1.00
14	K8660-03 1/5	Unknown	0 kg	0 ml	1.00
15	K8660-04 1/5	Unknown	0 kg	0 ml	1.00
16	PBS K8829 1/5	Unknown	0 kg	0 ml	1.00
17	CCV2 MS4-22-D	Unknown	0 kg	0 ml	1.00
18	CCB2	Unknown	0 kg	0 ml	1.00
19	K8829-01 1/5	Unknown	0 kg	0 ml	1.00
20	K8829-01D 1/5	Unknown	0 kg	0 ml	1.00
21	K8829-01S 1/5	Unknown	0 kg	0 ml	1.00
22	LCSS K8829 1/20	Unknown	0 kg	0 ml	1.00
23	K8829-02 1/5	Unknown	0 kg	0 ml	1.00
24	K8829-03 1/5	Unknown	0 kg	0 ml	1.00
25	K8829-04 1/5	Unknown	0 kg	0 ml	1.00
26	PBS K8974 1/5	Unknown	0 kg	0 ml	1.00
27	K8974-01 1/5	Unknown	0 kg	0 ml	1.00
28	K8974-01D 1/5	Unknown	0 kg	0 ml	1.00
29	CCV3 MS4-22-D	Unknown	0 kg	0 ml	1.00
30	CCB3	Unknown	0 kg	0 ml	1.00
31	K8974-01S 1/5	Unknown	0 kg	0 ml	1.00
32	LCSS K8974 1/20	Unknown	0 kg	0 ml	1.00
33	PBS K9013 1/5	Unknown	0 kg	0 ml	1.00
34	K9013-01 1/5	Unknown	0 kg	0 ml	1.00
35	K9013-01D 1/5	Unknown	0 kg	0 ml	1.00
36	K9013-01S 1/5	Unknown	0 kg	0 ml	1.00
37	LCSS K9013 1/20	Unknown	0 kg	0 ml	1.00
38	PBS K8896 1/5	Unknown	0 kg	0 ml	1.00
39	K8896-01 1/5	Unknown	0 kg	0 ml	1.00
40	K8896-01D 1/5	Unknown	0 kg	0 ml	1.00
41	CCV4 MS4-22-D	Unknown	0 kg	0 ml	1.00
42	CCB4	Unknown	0 kg	0 ml	1.00
43	K8896-01S 1/5	Unknown	0 kg	0 ml	1.00
44	LCSS K8896 1/20	Unknown	0 kg	0 ml	1.00
45	PBS K8827 1/5	Unknown	0 kg	0 ml	1.00
46	K8827-01 1/5	Unknown	0 kg	0 ml	1.00
47	K8827-01D 1/5	Unknown	0 kg	0 ml	1.00
48	K8827-01S 1/5	Unknown	0 kg	0 ml	1.00
49	LCSS K8827 1/20	Unknown	0 kg	0 ml	1.00

50	K8827-02 1/5	Unknown	0 kg	0 ml	1.00
51	K8827-04 1/5	Unknown	0 kg	0 ml	1.00
52	K8827-06 1/5	Unknown	0 kg	0 ml	1.00
53	CCV5 MS4-22-D	Unknown	0 kg	0 ml	1.00
54	CCB5	Unknown	0 kg	0 ml	1.00
55	PBS K8433 1/5	Unknown	0 kg	0 ml	1.00
56	K8433-04 1/5	Unknown	0 kg	0 ml	1.00
57	K8433-04D 1/5	Unknown	0 kg	0 ml	1.00
58	K8433-04S 1/5	Unknown	0 kg	0 ml	1.00
59	LCSS K8433 1/20	Unknown	0 kg	0 ml	1.00
60	K8433-01 1/5	Unknown	0 kg	0 ml	1.00
61	K8433-02 1/5	Unknown	0 kg	0 ml	1.00
62	K8433-03 1/5	Unknown	0 kg	0 ml	1.00
63	K8433-05 1/5	Unknown	0 kg	0 ml	1.00
64	K8433-06 1/5	Unknown	0 kg	0 ml	1.00
65	CCV6 MS4-22-D	Unknown	0 kg	0 ml	1.00
66	CCB6	Unknown	0 kg	0 ml	1.00
67	K8433-07 1/5	Unknown	0 kg	0 ml	1.00
68	K8433-08 1/5	Unknown	0 kg	0 ml	1.00
69	K8433-09 1/5	Unknown	0 kg	0 ml	1.00
70	CCV7 MS4-22-D	Unknown	0 kg	0 ml	1.00
71	CCB7	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	jchan	7:13:05 11/20/03

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:13:05 11/20/03
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-616.00
Lens1	3.10
Lens2	-158.50
Lens3	-130.00
Pole Bias	1.00
Sampling Depth	407.00
Horizontal	-19.00
Vertical	70.00
Cool	13.00
Auxiliary	0.72
Nebuliser	0.84
Forward power	1,290.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-30.80
Focus	19.80

ExCell Mass Calibration **Date: 11/20/03**

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1579	0.816	-0.087	TRUE
23.985	5943	0.612	0.065	TRUE
26.982	6703	0.663	0.05	TRUE
43.956	11019	0.714	0.002	TRUE
51.94	13053	0.765	-0.007	TRUE
53.949	13567	0.714	-0.001	TRUE
55.935	14074	0.714	0.001	TRUE
58.933	14841	0.713	0.01	TRUE
59.931	15088	0.713	-0.02	TRUE
75.92	19176	0.662	0.014	TRUE
114.904	29121	0.662	-0.01	TRUE
137.906	34997	0.662	-0.007	TRUE
139.905	35504	0.662	-0.022	TRUE
202.972	51631	0.61	-0.001	TRUE
204.972	52138	0.61	-0.019	TRUE
205.974	52398	0.61	-0.005	TRUE
207.977	52918	0.61	0.026	TRUE
208.98	53171	0.661	0.011	TRUE
238.051	60607	0.559	0.001	TRUE

Excluded in Calib | Excluded in Results | Multi Element | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	[illegible]	7Li	9Be	59Co	115In	208Pb
1	Stability 11/20/03	11/20/03 7:25:03 A	(P)0.667	(P)15026.899	(P)4035.570	(P)21503.518	(P)29966.572	(P)12507.475
2	Stability 11/20/03	11/20/03 7:26:06 A	(P)0.500	(P)14788.151	(P)3959.382	(P)21067.039	(P)29524.315	(P)12404.553
3	Stability 11/20/03	11/20/03 7:27:08 A	(P)0.333	(P)14686.712	(P)3881.861	(P)20698.161	(P)28925.436	(P)12230.569
4	Stability 11/20/03	11/20/03 7:28:11 A	(P)0.500	(P)15803.236	(P)4069.913	(P)22163.024	(P)30487.336	(P)12638.591
5	Stability 11/20/03	11/20/03 7:29:14 A	(P)0.000	(P)15285.841	(P)3993.558	(P)21209.743	(P)29468.699	(P)12301.297
	Mean of Stability 11/	11/20/03 7:24:26 A	(P)0.400	(P)15118.168	(P)3988.057	(P)21328.297	(P)29674.472	(P)12416.497
	SD of Stability 11/20/0		(P)0.253	(P)447.445	(P)72.609	(P)549.284	(P)585.665	(P)162.470
	%RSD of Stability 11		(P)63.191	(P)2.960	(P)1.821	(P)2.575	(P)1.974	(P)1.308

Run	Label	TimeStamp	209Bi	[illegible]	238U
1	Stability 11/20/03	11/20/03 7:25:03 A	(P)21029.302	(P)0.333	(P)20283.725
2	Stability 11/20/03	11/20/03 7:26:06 A	(P)20806.309	(P)0.000	(P)20081.944
3	Stability 11/20/03	11/20/03 7:27:08 A	(P)20323.281	(P)0.000	(P)19727.613
4	Stability 11/20/03	11/20/03 7:28:11 A	(P)21148.479	(P)0.000	(P)20215.628
5	Stability 11/20/03	11/20/03 7:29:14 A	(P)20648.749	(P)0.000	(P)19929.727
	Mean of Stability 11/	11/20/03 7:24:26 A	(P)20791.224	(P)0.067	(P)20047.727
	SD of Stability 11/20/0		(P)325.503	(P)0.149	(P)224.418
	%RSD of Stability 11		(P)1.566	(P)223.607	(P)1.119

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Analytical Batch KA0322877

Sample Name: / **TimeStamp**		**Calibration Blank** 11/20/03 12:27			**Mean**	**SD**	**%RSD**
Antimony	121	0.0006	0.0003	-0.0009	**0**	0.0008	0
Antimony	123	-0.0009	0.0017	-0.0008	**0**	0.0015	0
Silver	107	0.0003	0	-0.0003	**0**	0.0003	0
Silver	109	0	0.0002	-0.0002	**0**	0.0002	0

11/20/03

Internal Standard Factors:

Indium	115	1.007	1.004	0.989	**1.007**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**25 ppb Std. MS4-22-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:29**					
Antimony	121	24.92	25.66	24.42	**25**	0.6224	2.49
Antimony	123	24.85	25.56	24.59	**25**	0.4999	2
Silver	107	25.17	25.28	24.55	**25**	0.3929	1.572
Silver	109	25.19	25.11	24.69	**25**	0.27	1.08

Internal Standard Factors:

Indium	115	1.05	1.06	1.04	**1.05**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**ICV MS4-20-A**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:30**					
Antimony	121	25.41	26.26	26.27	**25.98**	0.4955	1.907
Antimony	123	24.58	26.33	26.16	**25.69**	0.9669	3.763
Silver	107	12.08	12.17	12.22	**12.16**	0.071	0.584
Silver	109	12.26	12.26	12.19	**12.24**	0.0415	0.3394

Internal Standard Factors:

Indium	115	1.073	1.08	1.08	**1.073**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**CCV1 MS4-22-D** **11/20/03 12:31**			**Mean**	**SD**	**%RSD**
Antimony	121	24.84	26.62	26.32	**25.92**	0.9542	3.681
Antimony	123	25.4	26.84	26.37	**26.2**	0.7363	2.81
Silver	107	24.07	25.23	24.66	**24.65**	0.5804	2.355
Silver	109	24.67	24.79	24.68	**24.71**	0.0641	0.2594

Internal Standard Factors:

Indium	115	1.119	1.14	1.132	**1.119**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**ICB**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:36**					
Antimony	121	0.0147	0.012	0.013	**0.0132**	0.0014	10.33
Antimony	123	0.0115	0.0081	0.0127	**0.0107**	0.0024	22.4
Silver	107	-0.0002	0.0006	-0.0003	**0**	0.0005	2782
Silver	109	0.0004	0.0019	0.0008	**0.0011**	0.0008	74.8

Internal Standard Factors:

Indium	115	1.157	1.156	1.151	**1.157**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCB1**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:37**					
Antimony	121	0.01	0.01	0.0118	**0.0106**	0.001	9.625
Antimony	123	0.0049	0.0095	0.0084	**0.0076**	0.0024	32.16
Silver	107	-0.0004	-0.0009	-0.0001	**-0.0004**	0.0004	90.15
Silver	109	0.0016	0.0004	0.0011	**0.001**	0.0006	57.62

Internal Standard Factors:

Indium	115	1.139	1.158	1.141	**1.139**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**CRA SOIL MS4-15-A** **11/20/03 12:39**			**Mean**	**SD**	**%RSD**
Antimony	121	0.1052	0.1007	0.111	**0.1056**	0.0052	4.876
Antimony	123	0.1024	0.0948	0.1074	**0.1015**	0.0063	6.239
Silver	107	0.0362	0.0325	0.0388	**0.0358**	0.0031	8.739
Silver	109	0.0385	0.0348	0.0389	**0.0374**	0.0023	6.042

Internal Standard Factors:

Indium	115	1.149	1.117	1.124	**1.149**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**PBS K8660 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:41**					
Antimony	121	-0.0038	-0.0035	-0.0056	**-0.0043**	0.0011	26.77
Antimony	123	-0.0064	-0.0079	-0.0072	**-0.0072**	0.0007	10.35
Silver	107	0.0031	0.0031	0.0031	**0.0031**	0	0.4143
Silver	109	0.004	0.0033	0.0027	**0.0033**	0.0006	19.35

Internal Standard Factors:

Indium	115	1.133	1.124	1.082	**1.133**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8660-02 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:42**					
Antimony	121	0.8271	0.8475	0.8357	**0.8368**	0.0102	1.22
Antimony	123	0.8011	0.851	0.8526	**0.8349**	0.0293	3.508
Silver	107	0.0541	0.0571	0.0579	**0.0564**	0.002	3.587
Silver	109	0.0548	0.0577	0.0578	**0.0568**	0.0017	2.993

Internal Standard Factors:

Indium	115	1.266	1.255	1.254	**1.266**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8660-02D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:43**					
Antimony	121	0.827	0.8372	0.8424	**0.8355**	0.0079	0.9423
Antimony	123	0.836	0.8205	0.8291	**0.8286**	0.0078	0.9366
Silver	107	0.0593	0.0525	0.0594	**0.0571**	0.004	6.933
Silver	109	0.059	0.0546	0.0543	**0.056**	0.0027	4.762

Internal Standard Factors:

Indium	115	1.281	1.226	1.24	**1.281**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8660-02S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:45**					
Antimony	121	83.89	86.72	86.17	**85.59**	1.498	1.75
Antimony	123	85.55	87.86	86.94	**86.78**	1.16	1.337
Silver	107	5.775	5.694	5.73	**5.733**	0.0406	0.709
Silver	109	5.894	5.841	5.842	**5.859**	0.0303	0.5174

Internal Standard Factors:

Indium	115	1.364	1.332	1.325	**1.364**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**LCSS K8660 1/20** **11/20/03 12:46**			**Mean**	**SD**	**%RSD**
Antimony	121	19.26	18.41	18.28	**18.65**	0.5305	2.845
Antimony	123	18.86	18.56	18.13	**18.52**	0.3698	1.997
Silver	107	40.3	40.97	40.29	**40.52**	0.3861	0.9529
Silver	109	41.4	41.78	41.53	**41.57**	0.1925	0.4631

Internal Standard Factors:

Indium	115	1.283	1.262	1.222	**1.283**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8660-01 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:48**					
Antimony	121	0.4963	0.4996	0.4708	**0.4889**	0.0158	3.232
Antimony	123	0.4974	0.4664	0.4369	**0.4669**	0.0303	6.487
Silver	107	0.0955	0.0922	0.0878	**0.0919**	0.0038	4.164
Silver	109	0.0864	0.0889	0.0915	**0.089**	0.0025	2.816

Internal Standard Factors:

Indium	115	1.349	1.326	1.29	**1.349** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8660-03 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:49**					
Antimony	121	0.0791	0.0727	0.0744	**0.0754**	0.0033	4.424
Antimony	123	0.0915	0.0912	0.0866	**0.0898**	0.0028	3.1
Silver	107	0.0158	0.0163	0.0174	**0.0165**	0.0008	5.014
Silver	109	0.0175	0.0176	0.0179	**0.0177**	0.0002	1.036

Internal Standard Factors:

Indium	115	1.36	1.298	1.283	**1.36**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8660-04 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:50**					
Antimony	121	0.2068	0.1801	0.198	**0.195**	0.0136	6.969
Antimony	123	0.2101	0.2017	0.1959	**0.2026**	0.0071	3.504
Silver	107	0.0386	0.0354	0.0398	**0.038**	0.0023	6.003
Silver	109	0.0361	0.0321	0.0336	**0.034**	0.002	5.95

Internal Standard Factors:

Indium	115	1.382	1.342	1.33	**1.382** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**PBS K8829 1/5** **11/20/03 12:52**			**Mean**	**SD**	**%RSD**
Antimony	121	0.0277	0.0318	0.0274	**0.029**	0.0025	8.535
Antimony	123	0.026	0.0305	0.0327	**0.0297**	0.0034	11.5
Silver	107	0.0016	0.0018	0.0005	**0.0013**	0.0007	51.85
Silver	109	0.0025	0.0029	0.0033	**0.0029**	0.0004	13.19

Internal Standard Factors:

Indium	115	1.209	1.231	1.192	**1.209** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**CCV2 MS4-22-D 11/20/03 12:53**			**Mean**	**SD**	**%RSD**
Antimony	121	25.78	24.34	26.71	**25.61**	1.192	4.654
Antimony	123	26.47	25.21	26.87	**26.19**	0.8683	3.316
Silver	107	23.89	23.08	23.91	**23.63**	0.4731	2.002
Silver	109	24.4	24.02	24.18	**24.2**	0.1902	0.7862

Internal Standard Factors:

Indium	115	1.245	1.215	1.247	**1.245** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCB2**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:57**					
Antimony	121	0.0142	0.0128	0.0097	**0.0123**	0.0023	19.1
Antimony	123	0.01	0.0177	0.0107	**0.0128**	0.0043	33.24
Silver	107	0.0004	0	-0.0001	**0.0001**	0.0003	273.3
Silver	109	0.0018	0.0007	0.001	**0.0012**	0.0005	45.7

Internal Standard Factors:

Indium	115	1.195	1.174	1.164	**1.195**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8829-01 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 12:59**					
Antimony	121	0.0485	0.0427	0.0475	**0.0462**	0.0031	6.671
Antimony	123	0.0545	0.0563	0.0504	**0.0538**	0.003	5.602
Silver	107	0.009	0.0091	0.0094	**0.0092**	0.0002	2.248
Silver	109	0.0112	0.0108	0.0129	**0.0116**	0.0011	9.465

Internal Standard Factors:

Indium	115	1.297	1.261	1.254	**1.297**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8829-01D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:00**					
Antimony	121	0.0469	0.0437	0.0478	**0.0461**	0.0022	4.74
Antimony	123	0.0477	0.0494	0.051	**0.0493**	0.0017	3.382
Silver	107	0.0104	0.0101	0.0077	**0.0094**	0.0015	15.55
Silver	109	0.0136	0.0117	0.0129	**0.0127**	0.001	7.823

Internal Standard Factors:

Indium	115	1.33	1.246	1.224	**1.33**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8829-01S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:01**					
Antimony	121	101.5	101.5	101.6	**101.5**	0.0751	0.074
Antimony	123	107.7	100.2	103.1	**103.7**	3.794	3.659
Silver	107	15.76	14.89	15.07	**15.24**	0.455	2.985
Silver	109	15.98	15.26	15.27	**15.5**	0.4128	2.662

Internal Standard Factors:

Indium	115	1.337	1.262	1.259	**1.337**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**LCSS K8829 1/20** **11/20/03 13:02**			**Mean**	**SD**	**%RSD**
Antimony	121	15.79	16.18	16.07	**16.01**	0.1998	1.248
Antimony	123	16.62	16.27	15.91	**16.26**	0.3531	2.171
Silver	107	41.11	40.66	40.27	**40.68**	0.4206	1.034
Silver	109	42.36	41.54	41.25	**41.72**	0.5744	1.377

Internal Standard Factors:

Indium	115	1.251	1.223	1.209	**1.251**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8829-02 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:05**					
Antimony	121	0.0651	0.0622	0.0578	**0.0617**	0.0036	5.904
Antimony	123	0.0609	0.0713	0.061	**0.0644**	0.006	9.301
Silver	107	0.0175	0.0175	0.0183	**0.0178**	0.0004	2.333
Silver	109	0.0162	0.018	0.0177	**0.0173**	0.001	5.793

Internal Standard Factors:

Indium	115	1.323	1.313	1.308	**1.323**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8829-03 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:06**					
Antimony	121	0.049	0.0573	0.0583	**0.0549**	0.0051	9.354
Antimony	123	0.065	0.0561	0.0606	**0.0605**	0.0045	7.362
Silver	107	0.0123	0.0163	0.0151	**0.0145**	0.0021	14.15
Silver	109	0.0141	0.0121	0.0155	**0.0139**	0.0017	12.33

Internal Standard Factors:

Indium	115	1.363	1.31	1.315	**1.363**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name:		**K8829-04 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:07**					
Antimony	121	0.2566	0.2672	0.2656	**0.2631**	0.0057	2.161
Antimony	123	0.2766	0.2464	0.2729	**0.2653**	0.0165	6.221
Silver	107	0.0219	0.0234	0.0247	**0.0233**	0.0014	5.946
Silver	109	0.0257	0.027	0.0248	**0.0258**	0.0011	4.422

Internal Standard Factors:

Indium	115	1.429	1.386	1.42	**1.429**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**PBS K8974 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:09**					
Antimony	121	0.0071	0.0053	0.0059	**0.0061**	0.0009	14.48
Antimony	123	0.0141	0.0089	0.011	**0.0113**	0.0026	22.73
Silver	107	0.0003	-0.0004	0	**0**	0.0004	1873
Silver	109	0.0009	0.0021	0.0013	**0.0015**	0.0006	42.1

Internal Standard Factors:

Indium	115	1.341	1.267	1.274	**1.341**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8974-01 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:10**					
Antimony	121	0.0842	0.0873	0.084	**0.0851**	0.0019	2.194
Antimony	123	0.091	0.0937	0.0986	**0.0944**	0.0039	4.103
Silver	107	0.0235	0.0286	0.0265	**0.0262**	0.0026	9.856
Silver	109	0.026	0.0258	0.0264	**0.0261**	0.0003	1.135

Internal Standard Factors:

Indium	115	1.376	1.376	1.352	**1.376**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8974-01D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:11**					
Antimony	121	0.0697	0.0769	0.0712	**0.0726**	0.0038	5.223
Antimony	123	0.0888	0.0874	0.0827	**0.0863**	0.0032	3.754
Silver	107	0.0347	0.0336	0.0309	**0.033**	0.002	5.948
Silver	109	0.0367	0.0355	0.0352	**0.0358**	0.0008	2.227

Internal Standard Factors:

Indium	115	1.406	1.365	1.35	**1.406**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCV3 MS4-22-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:12**					
Antimony	121	26.26	25.63	25.4	**25.76**	0.447	1.735
Antimony	123	25.66	25.59	25.5	**25.58**	0.0827	0.3233
Silver	107	23.18	23.14	23.27	**23.2**	0.066	0.2844
Silver	109	23.66	23.78	23.83	**23.76**	0.0894	0.3762

Internal Standard Factors:

Indium	115	1.242	1.215	1.196	**1.242** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name:		**CCB3**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:13**					
Antimony	121	0.0568	0.0457	0.0321	**0.0449**	0.0124	27.62
Antimony	123	0.0694	0.0441	0.0396	**0.051**	0.016	31.43
Silver	107	0.0056	0.0014	0.002	**0.003**	0.0023	76.87
Silver	109	0.0065	0.0048	0.0034	**0.0049**	0.0016	31.93

Internal Standard Factors:

Indium	115	1.257	1.252	1.249	**1.257** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8974-01S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:15**					
Antimony	121	52.29	51.39	51.62	**51.77**	0.4687	0.9053
Antimony	123	50.97	51.38	52	**51.45**	0.5166	1.004
Silver	107	17.59	17.73	17.97	**17.76**	0.1916	1.079
Silver	109	18.15	18.13	18.25	**18.18**	0.0635	0.3492

Internal Standard Factors:

Indium	115	1.403	1.371	1.368	**1.403**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name:		**LCSS K8974 1/20**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:17**					
Antimony	121	15.28	14.26	14.62	**14.72**	0.5184	3.522
Antimony	123	15.32	14.83	14.94	**15.03**	0.258	1.717
Silver	107	41.47	40.65	41.69	**41.27**	0.55	1.333
Silver	109	42.31	42.15	42.69	**42.38**	0.2744	0.6474

Internal Standard Factors:

Indium	115	1.307	1.267	1.254	**1.307**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**PBS K9013 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:19**					
Antimony	121	0.0224	0.0258	0.0262	**0.0248**	0.0021	8.428
Antimony	123	0.0277	0.034	0.0267	**0.0295**	0.0039	13.32
Silver	107	0.0065	0.0057	0.0038	**0.0054**	0.0014	25.86
Silver	109	0.0074	0.0062	0.0056	**0.0064**	0.0009	14.42

Internal Standard Factors:

Indium	115	1.303	1.314	1.281	**1.303**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name: / **TimeStamp**		**K9013-01 1/5** **11/20/03 13:21**			**Mean**	**SD**	**%RSD**
Antimony	121	0.0967	0.0915	0.0984	**0.0955**	0.0036	3.783
Antimony	123	0.1129	0.106	0.112	**0.1103**	0.0038	3.422
Silver	107	0.0746	0.0727	0.0741	**0.0738**	0.001	1.337
Silver	109	0.0689	0.0762	0.0746	**0.0733**	0.0038	5.223

Internal Standard Factors:

Indium	115	1.452	1.412	1.389	**1.452**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K9013-01D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:22**					
Antimony	121	0.0847	0.0928	0.0953	**0.0909**	0.0056	6.103
Antimony	123	0.0997	0.0978	0.1009	**0.0995**	0.0016	1.563
Silver	107	0.0676	0.0677	0.0709	**0.0687**	0.0019	2.751
Silver	109	0.0607	0.0636	0.0624	**0.0622**	0.0014	2.281

Internal Standard Factors:

Indium	115	1.365	1.371	1.351	**1.365**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K9013-01S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:25**					
Antimony	121	51.48	52.6	52.07	**52.05**	0.5651	1.086
Antimony	123	49.29	53.58	51.36	**51.41**	2.146	4.174
Silver	107	17.22	17.66	17.47	**17.45**	0.2222	1.273
Silver	109	17.57	17.78	17.66	**17.67**	0.105	0.5941

Internal Standard Factors:

Indium	115	1.331	1.312	1.27	**1.331**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**LCSS K9013 1/20**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:26**					
Antimony	121	14.43	13.88	14.01	**14.1**	0.291	2.063
Antimony	123	14.83	14.02	13.72	**14.19**	0.5712	4.025
Silver	107	42.18	40.18	39.46	**40.61**	1.408	3.468
Silver	109	43.1	41.1	40.67	**41.62**	1.297	3.116

Internal Standard Factors:

Indium	115	1.325	1.247	1.228	**1.325** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name:		**PBS K8896 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:31**					
Antimony	121	0.0102	0.0073	0.0041	**0.0072**	0.003	42.28
Antimony	123	0.014	0.0197	0.0177	**0.0171**	0.0029	17.14
Silver	107	0.0001	0.0004	0.0004	**0.0003**	0.0002	58.66
Silver	109	0.0014	0.0012	0.0026	**0.0017**	0.0008	46.96

Internal Standard Factors:

Indium	115	1.331	1.387	1.343	**1.331**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name:		K8896-01 1/5			Mean	SD	%RSD
TimeStamp		11/20/03 13:32					
Antimony	121	0.0667	0.0603	0.0648	**0.064**	0.0033	5.177
Antimony	123	0.0664	0.0685	0.0742	**0.0697**	0.004	5.769
Silver	107	0.0264	0.0288	0.0317	**0.029**	0.0026	9.03
Silver	109	0.0261	0.0252	0.027	**0.0261**	0.0009	3.433

Internal Standard Factors:

Indium	115	1.402	1.342	1.383	**1.402**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8896-01D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:34**					
Antimony	121	0.062	0.0556	0.054	**0.0572**	0.0042	7.345
Antimony	123	0.0715	0.0644	0.0587	**0.0649**	0.0064	9.882
Silver	107	0.0528	0.0555	0.0567	**0.055**	0.002	3.618
Silver	109	0.0471	0.0473	0.0506	**0.0483**	0.002	4.055

Internal Standard Factors:

Indium	115	1.398	1.386	1.373	**1.398**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**CCV4 MS4-22-D** **11/20/03 13:36**			**Mean**	**SD**	**%RSD**
Antimony	121	26.26	26.3	25.9	**26.15**	0.2203	0.8424
Antimony	123	26.66	26.86	25.99	**26.5**	0.4557	1.72
Silver	107	24.22	24.42	23.28	**23.97**	0.6059	2.527
Silver	109	24.49	24.61	23.77	**24.29**	0.4507	1.856

Internal Standard Factors:

Indium	115	1.306	1.304	1.244	**1.306**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCB4**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:38**					
Antimony	121	0.0253	0.0197	0.0238	**0.0229**	0.0029	12.53
Antimony	123	0.0319	0.0291	0.0226	**0.0279**	0.0048	17.15
Silver	107	0.0015	0.0006	0.0004	**0.0008**	0.0006	69.42
Silver	109	0.0028	0.0012	0.0018	**0.0019**	0.0008	41.1

Internal Standard Factors:

Indium	115	1.375	1.339	1.321	**1.375** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8896-01S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:40**					
Antimony	121	74.48	76.98	75.99	**75.82**	1.257	1.658
Antimony	123	80.16	77.46	77.26	**78.3**	1.62	2.069
Silver	107	24.03	23.18	23.48	**23.56**	0.4271	1.813
Silver	109	24.51	23.53	23.84	**23.96**	0.4992	2.083

Internal Standard Factors:

Indium	115	1.412	1.354	1.343	**1.412** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**LCSS K8896 1/20** **11/20/03 13:41**			**Mean**	**SD**	**%RSD**
Antimony	121	9.185	8.14	8.846	**8.724**	0.533	6.11
Antimony	123	9.149	8.287	8.992	**8.809**	0.459	5.21
Silver	107	41.95	40.87	41.32	**41.38**	0.5413	1.308
Silver	109	41.57	42.09	42.21	**41.96**	0.3434	0.8184

Internal Standard Factors:

Indium	115	1.327	1.282	1.272	**1.327** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**PBS K8827 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:48**					
Antimony	121	0.0009	0.0015	0.0029	**0.0018**	0.001	59.21
Antimony	123	0.0067	0.0099	0.0052	**0.0073**	0.0024	33.26
Silver	107	0.0001	-0.0001	0.0001	**0**	0.0001	208.9
Silver	109	0.0014	0.0003	0.0007	**0.0008**	0.0006	70.39

Internal Standard Factors:

Indium	115	1.32	1.323	1.294	**1.32** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8827-01 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:50**					
Antimony	121	0.6269	0.6474	0.6278	**0.634**	0.0116	1.822
Antimony	123	0.6019	0.6531	0.6279	**0.6276**	0.0256	4.082
Silver	107	0.1742	0.1884	0.1844	**0.1823**	0.0073	4.014
Silver	109	0.1221	0.121	0.1315	**0.1249**	0.0058	4.619

Internal Standard Factors:

Indium	115	1.363	1.365	1.346	**1.363** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8827-01D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:51**					
Antimony	121	0.8057	0.7701	0.768	**0.7812**	0.0212	2.715
Antimony	123	0.8151	0.7888	0.7747	**0.7929**	0.0205	2.585
Silver	107	0.3364	0.3367	0.3276	**0.3336**	0.0051	1.543
Silver	109	0.2684	0.2643	0.2578	**0.2635**	0.0054	2.041

Internal Standard Factors:

Indium	115	1.399	1.346	1.327	**1.399** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8827-01S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:52**					
Antimony	121	70.97	70.9	71.24	**71.04**	0.1799	0.2532
Antimony	123	69.94	71.2	69.46	**70.2**	0.8948	1.275
Silver	107	17.72	18.68	17.88	**18.09**	0.5122	2.831
Silver	109	18.52	19	18.31	**18.61**	0.3499	1.88

Internal Standard Factors:

Indium	115	1.303	1.328	1.29	**1.303**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**LCSS K8827 1/20** **11/20/03 13:54**			**Mean**	**SD**	**%RSD**
Antimony	121	12.06	12.2	12.22	**12.16**	0.0854	0.7024
Antimony	123	12.44	12.17	12.07	**12.23**	0.1917	1.568
Silver	107	40.94	39.25	39.37	**39.85**	0.947	2.376
Silver	109	41.36	40.62	40.57	**40.85**	0.4437	1.086

Internal Standard Factors:

Indium	115	1.278	1.25	1.232	**1.278**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8827-02 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 13:59**					
Antimony	121	0.7407	0.7744	0.7492	**0.7548**	0.0175	2.317
Antimony	123	0.7658	0.7872	0.7293	**0.7608**	0.0293	3.851
Silver	107	0.2402	0.24	0.2304	**0.2369**	0.0056	2.372
Silver	109	0.1615	0.1654	0.1621	**0.163**	0.0021	1.287

Internal Standard Factors:

Indium	115	1.418	1.414	1.378	**1.418**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8827-04 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:01**					
Antimony	121	0.6413	0.6124	0.6171	**0.6236**	0.0155	2.489
Antimony	123	0.6149	0.6195	0.586	**0.6068**	0.0182	2.994
Silver	107	0.2137	0.2134	0.2085	**0.2119**	0.0029	1.387
Silver	109	0.1437	0.1439	0.1353	**0.141**	0.0049	3.476

Internal Standard Factors:

Indium	115	1.38	1.351	1.338	**1.38**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8827-06 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:02**					
Antimony	121	0.2708	0.285	0.2776	**0.2778**	0.0071	2.553
Antimony	123	0.279	0.2877	0.2739	**0.2802**	0.007	2.489
Silver	107	0.3333	0.3377	0.3218	**0.331**	0.0082	2.473
Silver	109	0.2201	0.2204	0.2257	**0.2221**	0.0032	1.43

Internal Standard Factors:

Indium	115	1.384	1.394	1.376	**1.384**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCV5 MS4-22-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:04**					
Antimony	121	24.86	25.04	25.09	**25**	0.1229	0.4915
Antimony	123	25.5	25.44	24.93	**25.29**	0.3151	1.246
Silver	107	24.1	23.94	23.65	**23.9**	0.2287	0.9568
Silver	109	24.32	24.44	24.28	**24.35**	0.0797	0.3273

Internal Standard Factors:

Indium	115	1.23	1.221	1.205	**1.23**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCB5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:07**					
Antimony	121	0.02	0.0228	0.0226	**0.0218**	0.0015	7.072
Antimony	123	0.0247	0.0294	0.019	**0.0244**	0.0052	21.31
Silver	107	0.0006	0.0005	0.0003	**0.0005**	0.0002	41.78
Silver	109	0.0022	0.0022	0.0013	**0.0019**	0.0005	25.67

Internal Standard Factors:

Indium	115	1.264	1.297	1.272	**1.264**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**PBS K8433 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:09**					
Antimony	121	0.02	0.0252	0.0214	**0.0222**	0.0027	12.23
Antimony	123	0.0243	0.0224	0.02	**0.0222**	0.0022	9.819
Silver	107	0.0032	0.0027	0.0028	**0.0029**	0.0002	8.348
Silver	109	0.0045	0.0033	0.0037	**0.0038**	0.0006	15.24

Internal Standard Factors:

Indium	115	1.273	1.269	1.255	**1.273**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-04 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:11**					
Antimony	121	0.7286	0.7509	0.7588	**0.7461**	0.0157	2.097
Antimony	123	0.7542	0.7363	0.7636	**0.7514**	0.0139	1.847
Silver	107	0.3483	0.3466	0.3456	**0.3468**	0.0014	0.3942
Silver	109	0.3288	0.3302	0.3357	**0.3316**	0.0037	1.102

Internal Standard Factors:

Indium	115	1.55	1.507	1.514	**1.55**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-04D 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:12**					
Antimony	121	0.7386	0.7635	0.7413	**0.7478**	0.0137	1.829
Antimony	123	0.7513	0.7576	0.7472	**0.752**	0.0052	0.6965
Silver	107	0.3507	0.3396	0.3405	**0.3436**	0.0062	1.802
Silver	109	0.3338	0.3265	0.3316	**0.3306**	0.0038	1.138

Internal Standard Factors:

Indium	115	1.514	1.488	1.448	**1.514**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-04S 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:14**					
Antimony	121	134	132.8	132.5	**133.1**	0.7853	0.5901
Antimony	123	132	134.9	133.1	**133.4**	1.483	1.112
Silver	107	15.49	15.96	15.78	**15.74**	0.2379	1.511
Silver	109	15.72	16.16	16.05	**15.98**	0.2256	1.412

Internal Standard Factors:

Indium	115	1.456	1.452	1.426	**1.456**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name: / **TimeStamp**		**LCSS K8433 1/20** **11/20/03 14:15**			**Mean**	**SD**	**%RSD**
Antimony	121	15.23	14.41	14.77	**14.8**	0.4074	2.752
Antimony	123	15.02	14.8	14.41	**14.75**	0.3087	2.093
Silver	107	42.46	43.34	40.97	**42.26**	1.201	2.842
Silver	109	43.05	44.27	42.51	**43.28**	0.9038	2.088

Internal Standard Factors:

Indium	115	1.292	1.3	1.258	**1.292** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-01 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:17**					
Antimony	121	0.7853	0.7944	0.7811	**0.7869**	0.0068	0.8679
Antimony	123	0.783	0.7912	0.7774	**0.7838**	0.0069	0.8848
Silver	107	0.182	0.1847	0.1831	**0.1833**	0.0013	0.7285
Silver	109	0.1697	0.1668	0.1715	**0.1693**	0.0023	1.378

Internal Standard Factors:

Indium	115	1.442	1.412	1.394	**1.442** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-02 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:18**					
Antimony	121	0.8338	0.8749	0.8365	**0.8484**	0.023	2.71
Antimony	123	0.8616	0.855	0.8614	**0.8593**	0.0037	0.4354
Silver	107	0.1806	0.1685	0.1709	**0.1733**	0.0064	3.681
Silver	109	0.1425	0.1358	0.139	**0.1391**	0.0034	2.411

Internal Standard Factors:

Indium	115	1.424	1.386	1.37	**1.424**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-03 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:19**					
Antimony	121	1.126	1.091	1.061	**1.093**	0.0324	2.965
Antimony	123	1.061	1.048	1.056	**1.055**	0.0066	0.6293
Silver	107	0.1999	0.1949	0.194	**0.1962**	0.0032	1.616
Silver	109	0.1701	0.1748	0.1816	**0.1755**	0.0058	3.296

Internal Standard Factors:

Indium	115	1.431	1.392	1.382	**1.431**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-05 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:20**					
Antimony	121	0.9826	0.9771	0.9795	**0.9797**	0.0027	0.2772
Antimony	123	0.9308	0.9701	0.9782	**0.9597**	0.0254	2.644
Silver	107	0.2048	0.2184	0.2154	**0.2128**	0.0072	3.365
Silver	109	0.1868	0.1829	0.188	**0.1859**	0.0026	1.421

Internal Standard Factors:

Indium	115	1.387	1.372	1.368	**1.387**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-06 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:21**					
Antimony	121	1.395	1.376	1.318	**1.363**	0.0398	2.922
Antimony	123	1.429	1.354	1.3	**1.361**	0.0646	4.749
Silver	107	0.2522	0.2386	0.2383	**0.243**	0.008	3.273
Silver	109	0.2085	0.2096	0.2074	**0.2085**	0.0011	0.5386

Internal Standard Factors:

Indium	115	1.455	1.395	1.37	**1.455**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCV6 MS4-22-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:25**					
Antimony	121	24.06	24.01	25.71	**24.59**	0.9665	3.93
Antimony	123	24.93	24.99	26.08	**25.33**	0.6477	2.557
Silver	107	24.06	23.85	23.85	**23.92**	0.1199	0.5011
Silver	109	24.69	24.44	24.22	**24.45**	0.2333	0.9542

Internal Standard Factors:

Indium	115	1.247	1.218	1.201	**1.247** n/a		n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCB6**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:26**					
Antimony	121	0.0357	0.0293	0.0275	**0.0308**	0.0043	14.03
Antimony	123	0.0448	0.0319	0.0343	**0.037**	0.0068	18.48
Silver	107	0.0016	0.0018	0.0006	**0.0013**	0.0006	47.99
Silver	109	0.0017	0.001	0.0016	**0.0014**	0.0004	25.05

Internal Standard Factors:

Indium	115	1.299	1.242	1.266	**1.299**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 11-20-03B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0322877

Sample Name:		**K8433-07 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:28**					
Antimony	121	0.7789	0.7756	0.7866	**0.7804**	0.0057	0.7273
Antimony	123	0.7879	0.7577	0.763	**0.7695**	0.0162	2.098
Silver	107	0.176	0.1781	0.1789	**0.1776**	0.0015	0.834
Silver	109	0.1462	0.1562	0.1582	**0.1535**	0.0065	4.209

Internal Standard Factors:

Indium	115	1.403	1.364	1.365	**1.403**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-08 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:29**					
Antimony	121	0.8401	0.8219	0.8383	**0.8334**	0.0101	1.205
Antimony	123	0.8258	0.7992	0.8099	**0.8116**	0.0134	1.649
Silver	107	0.155	0.1624	0.1554	**0.1576**	0.0042	2.655
Silver	109	0.132	0.1368	0.1324	**0.1337**	0.0026	1.974

Internal Standard Factors:

Indium	115	1.427	1.387	1.37	**1.427**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**K8433-09 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:31**					
Antimony	121	0.5758	0.5614	0.5489	**0.562**	0.0134	2.39
Antimony	123	0.5966	0.5561	0.5316	**0.5614**	0.0328	5.846
Silver	107	0.3587	0.3344	0.3385	**0.3439**	0.013	3.782
Silver	109	0.3349	0.3195	0.3337	**0.3294**	0.0086	2.601

Internal Standard Factors:

Indium	115	1.431	1.382	1.354	**1.431**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCV7 MS4-22-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:33**					
Antimony	121	25.63	25.03	25.8	**25.49**	0.4066	1.595
Antimony	123	24.35	24.46	25.78	**24.86**	0.7946	3.196
Silver	107	22.73	23.25	23.84	**23.27**	0.5545	2.383
Silver	109	23.67	24.06	24.22	**23.98**	0.281	1.172

Internal Standard Factors:

Indium	115	1.181	1.173	1.179	**1.181**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 11-20-03B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0322877**

Sample Name:		**CCB7**			**Mean**	**SD**	**%RSD**
TimeStamp		**11/20/03 14:36**					
Antimony	121	0.0086	0.0112	0.0092	**0.0097**	0.0013	13.86
Antimony	123	0.017	0.013	0.0163	**0.0154**	0.0021	13.66
Silver	107	0.0001	0.0004	0.0002	**0.0002**	0.0002	80.81
Silver	109	0.0005	0.0003	0.0002	**0.0003**	0.0002	45.61

Internal Standard Factors:

Indium	115	1.299	1.242	1.283	**1.299** n/a		n/a

BTEX
Method 8021

Organic Analysis:
BTEX

Summary Package

Sample and QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Cover Page - Organic Analysis Data Package
BTEX

Sample Name	Lab Code	Date Collected	Date Received
SED-1	K2308433-001	10/22/2003	10/27/2003
SED-2	K2308433-002	10/22/2003	10/27/2003
SED-3	K2308433-003	10/22/2003	10/27/2003
SED-4	K2308433-004	10/22/2003	10/27/2003
SED-4-DUP	K2308433-005	10/22/2003	10/27/2003
SED-5	K2308433-006	10/23/2003	10/27/2003
SED-4MS	KWG0317284-1	10/22/2003	10/27/2003
SED-4DMS	KWG0317284-2	10/22/2003	10/27/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: christina Quinn

Name: CHRISTINA QUINN

Date: 11803

Title: SCIENTIST

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-1	**Units:**	mg/Kg
Lab Code:	K2308433-001	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.066	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	69	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-2	**Units:**	mg/Kg
Lab Code:	K2308433-002	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.064	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	70	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-3	**Units:**	mg/Kg
Lab Code:	K2308433-003	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.061	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	72	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-4	**Units:**	mg/Kg
Lab Code:	K2308433-004	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.066	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	72	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-4-DUP	**Units:**	mg/Kg
Lab Code:	K2308433-005	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.069	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	75	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-5	**Units:**	mg/Kg
Lab Code:	K2308433-006	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.061	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	79	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

BTEX

Sample Name: Method Blank
Lab Code: KWG0317284-4

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: mg/Kg
Basis: Dry

Level: Med

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.050	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	82	37-130	10/28/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
BTEX

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: PERCENT
Level: Med

Sample Name	Lab Code	Sur1
SED-1	K2308433-001	69
SED-2	K2308433-002	70
SED-3	K2308433-003	72
SED-4	K2308433-004	72
SED-4-DUP	K2308433-005	75
SED-5	K2308433-006	79
Method Blank	KWG0317284-4	82
SED-4MS	KWG0317284-1	80
SED-4DMS	KWG0317284-2	75
Lab Control Sample	KWG0317284-3	87

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene	37-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Analyzed:**	10/28/2003
		Time Analyzed:	14:12

Internal Standard Area and RT Summary
BTEX

File ID:	J:\GC06B\DATA\102803\1028F002.D	**Lab Code:**	KWG0317374-1
Instrument ID:	GC06B	**Analysis Lot:**	KWG0317374
Analysis Method:	8021B	**Column :**	DB-VRX

		a,a,a-Trifluorotoluene	
		Area	**RT**
	Results ==>	516,521	4.82
	Upper Limit ==>	1,033,042	4.97
	Lower Limit ==>	258,261	4.67
	ICAL Result ==>	491,716	5.02
Associated Analyses			
Lab Control Sample	KWG0317284-3	518,304	4.85
SED-4MS	KWG0317284-1	518,351	4.84
SED-4DMS	KWG0317284-2	545,076	4.85
Method Blank	KWG0317284-4	544,782	4.84
SED-1	K2308433-001	544,893	4.85
SED-2	K2308433-002	547,729	4.84
SED-3	K2308433-003	547,502	4.84
SED-4	K2308433-004	543,904	4.84
SED-4-DUP	K2308433-005	517,138	4.83
SED-5	K2308433-006	513,460	4.83

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003
Time Analyzed: 14:12

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F002.D\1028R002.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-1
Analysis Lot: KWG0317374
Column : DB-624

		a,a,a-Trifluorotoluene	
		Area	RT
	Results ==>	4,282,762	3.79
	Upper Limit ==>	8,565,524	3.94
	Lower Limit ==>	2,141,381	3.64
	ICAL Result ==>	8,211,624	3.93
Associated Analyses			
Lab Control Sample	KWG0317284-3	4,390,760	3.81
SED-4MS	KWG0317284-1	4,381,909	3.81
SED-4DMS	KWG0317284-2	4,594,437	3.81
Method Blank	KWG0317284-4	4,627,626	3.80
SED-1	K2308433-001	4,574,062	3.81
SED-2	K2308433-002	4,625,843	3.80
SED-3	K2308433-003	4,632,752	3.81
SED-4	K2308433-004	4,623,317	3.80
SED-4-DUP	K2308433-005	4,423,967	3.79
SED-5	K2308433-006	4,413,206	3.79

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Sediment	**Date Analyzed:**	10/28/2003

Matrix Spike/Duplicate Matrix Spike Summary
BTEX

Sample Name:	SED-4	**Units:**	mg/Kg
Lab Code:	K2308433-004	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B	**Extraction Lot:**	KWG0317284

Analyte Name	Sample Result	SED-4MS KWG0317284-1 Matrix Spike			SED-4DMS KWG0317284-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Benzene	ND	1.16	1.30	89	1.09	1.30	84	46-121	6	40
Toluene	ND	1.13	1.30	86	1.06	1.30	81	43-128	6	40
Ethylbenzene	ND	1.16	1.30	89	1.09	1.30	83	43-134	7	40
m,p-Xylenes	ND	2.32	2.61	89	2.18	2.61	84	42-134	6	40
o-Xylene	ND	1.13	1.30	87	1.06	1.30	81	38-130	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Sediment	**Date Analyzed:**	10/28/2003

Lab Control Spike Summary
BTEX

Extraction Method:	EPA 5035/5030B	**Units:**	mg/Kg
Analysis Method:	8021B	**Basis:**	Dry
		Level:	Med
		Extraction Lot:	KWG0317284

	Lab Control Sample KWG0317284-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Benzene	0.959	1.00	96	63-124
Toluene	0.939	1.00	94	57-124
Ethylbenzene	0.971	1.00	97	57-128
m,p-Xylenes	1.94	2.00	97	50-135
o-Xylene	0.953	1.00	95	48-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	10/28/2003
Sample Matrix:	Sediment	**Date Analyzed:**	10/28/2003
		Time Analyzed:	17:12

Method Blank Summary
BTEX

Sample Name:	Method Blank	**File ID:**	J:\GC06B\DATA\102803\1028F007.D
Lab Code:	KWG0317284-4	**Instrument ID:**	GC06B
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B	**Extraction Lot:**	KWG0317284

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317284-3	J:\GC06B\DATA\102803\1028F003.D	10/28/03	15:05
SED-4MS	KWG0317284-1	J:\GC06B\DATA\102803\1028F004.D	10/28/03	15:37
SED-4DMS	KWG0317284-2	J:\GC06B\DATA\102803\1028F005.D	10/28/03	16:08
SED-1	K2308433-001	J:\GC06B\DATA\102803\1028F008.D	10/28/03	17:44
SED-2	K2308433-002	J:\GC06B\DATA\102803\1028F009.D	10/28/03	18:16
SED-3	K2308433-003	J:\GC06B\DATA\102803\1028F010.D	10/28/03	18:47
SED-4	K2308433-004	J:\GC06B\DATA\102803\1028F011.D	10/28/03	19:19
SED-4-DUP	K2308433-005	J:\GC06B\DATA\102803\1028F012.D	10/28/03	19:51
SED-5	K2308433-006	J:\GC06B\DATA\102803\1028F013.D	10/28/03	20:23

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/28/2003
Date Analyzed: 10/28/2003
Time Analyzed: 15:05

Lab Control Sample Summary
BTEX

Sample Name: Lab Control Sample
Lab Code: KWG0317284-3

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

File ID: J:\GC06B\DATA\102803\1028F003.D
Instrument ID: GC06B

Level: Med
Extraction Lot: KWG0317284

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SED-4MS	KWG0317284-1	J:\GC06B\DATA\102803\1028F004.D	10/28/03	15:37
SED-4DMS	KWG0317284-2	J:\GC06B\DATA\102803\1028F005.D	10/28/03	16:08
Method Blank	KWG0317284-4	J:\GC06B\DATA\102803\1028F007.D	10/28/03	17:12
SED-1	K2308433-001	J:\GC06B\DATA\102803\1028F008.D	10/28/03	17:44
SED-2	K2308433-002	J:\GC06B\DATA\102803\1028F009.D	10/28/03	18:16
SED-3	K2308433-003	J:\GC06B\DATA\102803\1028F010.D	10/28/03	18:47
SED-4	K2308433-004	J:\GC06B\DATA\102803\1028F011.D	10/28/03	19:19
SED-4-DUP	K2308433-005	J:\GC06B\DATA\102803\1028F012.D	10/28/03	19:51
SED-5	K2308433-006	J:\GC06B\DATA\102803\1028F013.D	10/28/03	20:23

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D\0625R003.D
B	J:\GC06B\DATA\062503\0625F004.D\0625R004.D
C	J:\GC06B\DATA\062503\0625F005.D\0625R005.D
D	J:\GC06B\DATA\062503\0625F006.D\0625R006.D
E	J:\GC06B\DATA\062503\0625F007.D\0625R007.D
F	J:\GC06B\DATA\062503\0625F008.D\0625R008.D
G	J:\GC06B\DATA\062503\0625F009.D\0625R009.D
H	J:\GC06B\DATA\062503\0625F010.D\0625R010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.14	B	0.50	2.48	C	1.0	2.52	D	5.0	2.67	E	20	3.28
	F	50	2.54	G	100	2.61	H	200	2.47						
Toluene				B	0.50	2.47	C	1.0	2.53	D	5.0	2.62	E	20	3.15
	F	50	2.44	G	100	2.50	H	200	2.33						
Ethylbenzene				B	0.50	2.14	C	1.0	2.18	D	5.0	2.31	E	20	2.78
	F	50	2.16	G	100	2.21	H	200	2.05						
m,p-Xylenes				B	1.0	2.39	C	2.0	2.49	D	10	2.65	E	40	3.15
	F	100	2.39	G	200	2.40	H	400	2.14						
o-Xylene	A	0.40	2.40	B	0.50	2.55	C	1.0	2.75	D	5.0	2.34	E	20	2.78
	F	50	2.14	G	100	2.19	H	200	2.02						
Bromofluorobenzene				B	25	2.32	C	40	2.14	D	50	2.19	E	100	2.75
	F	150	2.07												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	12.3		≤ 20	2.59		0.01
Toluene	MS	AverageRF	% RSD	10.4		≤ 20	2.58		0.01
Ethylbenzene	MS	AverageRF	% RSD	10.7		≤ 20	2.26		0.01
m,p-Xylenes	MS	AverageRF	% RSD	12.6		≤ 20	2.52		0.01
o-Xylene	MS	AverageRF	% RSD	11.8		≤ 20	2.40		0.01
Bromofluorobenzene	SURR	AverageRF	% RSD	11.9		≤ 20	2.29		

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003
Date Analyzed: 06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration ID: CAL2726
Units: ug/L

File ID: J:\GC06B\DATA\062503\0625F012.D\0625R012.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	18	2.59	2.38	-8	NA	± 15 %	AverageRF
Toluene	20	18	2.58	2.36	-8	NA	± 15 %	AverageRF
Ethylbenzene	20	18	2.26	2.07	-9	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	2.52	2.53	0	NA	± 15 %	AverageRF
o-Xylene	20	19	2.40	2.27	-5	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Level ID	File ID	Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D	E	J:\GC06B\DATA\062503\0625F007.D
B	J:\GC06B\DATA\062503\0625F004.D	F	J:\GC06B\DATA\062503\0625F008.D
C	J:\GC06B\DATA\062503\0625F005.D	G	J:\GC06B\DATA\062503\0625F009.D
D	J:\GC06B\DATA\062503\0625F006.D	H	J:\GC06B\DATA\062503\0625F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.59	B	0.50	2.54	C	1.0	2.59	D	5.0	2.78	E	20	3.43
	F	50	2.68	G	100	2.79	H	200	2.70						
Toluene				B	0.50	2.30	C	1.0	2.29	D	5.0	2.50	E	20	3.20
	F	50	2.53	G	100	2.65	H	200	2.54						
Ethylbenzene	A	0.40	1.74	B	0.50	2.09	C	1.0	2.04	D	5.0	2.31	E	20	2.98
	F	50	2.35	G	100	2.45	H	200	2.36						
m,p-Xylenes				B	1.0	2.13	C	2.0	2.32	D	10	2.57	E	40	3.28
	F	100	2.60	G	200	2.74	H	400	2.66						
o-Xylene				B	0.50	1.73	C	1.0	1.95	D	5.0	2.18	E	20	2.82
	F	50	2.26	G	100	2.37	H	200	2.29						
Bromofluorobenzene				B	25	2.42	C	40	2.25	D	50	2.28	E	100	3.03
	F	150	2.38												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	10.3		≤ 20	2.76		0.01
Toluene	MS	AverageRF	% RSD	11.9		≤ 20	2.57		0.01
Ethylbenzene	MS	AverageRF	% RSD	15.8		≤ 20	2.29		0.01
m,p-Xylenes	MS	AverageRF	% RSD	13.8		≤ 20	2.62		0.01
o-Xylene	MS	AverageRF	% RSD	15.4		≤ 20	2.23		0.01
Bromofluorobenzene	SURR	AverageRF	% RSD	12.9		≤ 20	2.47		

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003
Date Analyzed: 06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration ID: CAL2726
Units: ug/L

File ID: J:\GC06B\DATA\062503\0625F012.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	2.76	2.57	-7	NA	± 15 %	AverageRF
Toluene	20	18	2.57	2.35	-9	NA	± 15 %	AverageRF
Ethylbenzene	20	19	2.29	2.14	-7	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	2.23	2.16	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F002.D\1028R002.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	21	0.01	2.59	2.70	4	NA	± 15 %	AverageRF
Toluene	20	21	0.01	2.58	2.64	3	NA	± 15 %	AverageRF
Ethylbenzene	20	21	0.01	2.26	2.37	5	NA	± 15 %	AverageRF
m,p-Xylenes	40	42	0.01	2.52	2.67	6	NA	± 15 %	AverageRF
o-Xylene	20	19	0.01	2.40	2.33	-3	NA	± 15 %	AverageRF
Bromofluorobenzene	100	96		2.29	2.21	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F002.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.76	2.83	2	NA	± 15 %	AverageRF
Toluene	20	21	0.01	2.57	2.66	3	NA	± 15 %	AverageRF
Ethylbenzene	20	22	0.01	2.29	2.46	8	NA	± 15 %	AverageRF
m,p-Xylenes	40	41	0.01	2.62	2.70	3	NA	± 15 %	AverageRF
o-Xylene	20	21	0.01	2.23	2.32	4	NA	± 15 %	AverageRF
Bromofluorobenzene	100	93		2.47	2.30	-7	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D\1028R015.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.59	2.52	-3	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.58	2.42	-6	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.26	2.16	-5	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.52	2.42	-4	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.11	-12	NA	± 15 %	AverageRF
Bromofluorobenzene	100	90		2.29	2.06	-10	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.76	2.59	-6	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.57	2.40	-7	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.29	2.21	-3	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	0.01	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	0.01	2.23	2.10	-6	NA	± 15 %	AverageRF
Bromofluorobenzene	100	88		2.47	2.16	-12	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Analysis Run Log
BTEX

Analysis Method: 8021B

Analysis Lot: KWG0317374
Instrument ID: GC06B
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1028F001.D	Instrument Blank	KWG0317374-5	10/28/2003	13:40		10/28/2003	13:56
1028F002.D	Continuing Calibration Verification	KWG0317374-1	10/28/2003	14:12		10/28/2003	14:28
1028F003.D	Lab Control Sample	KWG0317284-3	10/28/2003	15:05		10/28/2003	15:21
1028F004.D	SED-4MS	KWG0317284-1	10/28/2003	15:37		10/28/2003	15:53
1028F005.D	SED-4DMS	KWG0317284-2	10/28/2003	16:08		10/28/2003	16:24
1028F006.D	Instrument Blank	KWG0317374-6	10/28/2003	16:40		10/28/2003	16:56
1028F007.D	Method Blank	KWG0317284-4	10/28/2003	17:12		10/28/2003	17:28
1028F008.D	SED-1	K2308433-001	10/28/2003	17:44		10/28/2003	18:00
1028F009.D	SED-2	K2308433-002	10/28/2003	18:16		10/28/2003	18:32
1028F010.D	SED-3	K2308433-003	10/28/2003	18:47		10/28/2003	19:03
1028F011.D	SED-4	K2308433-004	10/28/2003	19:19		10/28/2003	19:35
1028F012.D	SED-4-DUP	K2308433-005	10/28/2003	19:51		10/28/2003	20:07
1028F013.D	SED-5	K2308433-006	10/28/2003	20:23		10/28/2003	20:39
1028F014.D	Instrument Blank	KWG0317374-7	10/28/2003	20:54		10/28/2003	21:10
1028F015.D	Continuing Calibration Verification	KWG0317374-2	10/28/2003	21:26		10/28/2003	21:42
1028F016.D	ZZZZZZ	ZZZZZZ	10/28/2003	21:58		10/28/2003	22:14
1028F017.D	ZZZZZZ	ZZZZZZ	10/28/2003	22:30		10/28/2003	22:46
1028F018.D	ZZZZZZ	ZZZZZZ	10/28/2003	23:01		10/28/2003	23:17
1028F019.D	Instrument Blank	KWG0317374-8	10/28/2003	23:33		10/28/2003	23:49
1028F020.D	ZZZZZZ	ZZZZZZ	10/29/2003	00:04		10/29/2003	00:20
1028F021.D	ZZZZZZ	ZZZZZZ	10/29/2003	00:36		10/29/2003	00:52
1028F022.D	ZZZZZZ	ZZZZZZ	10/29/2003	01:08		10/29/2003	01:24
1028F023.D	ZZZZZZ	ZZZZZZ	10/29/2003	01:40		10/29/2003	01:56
1028F024.D	ZZZZZZ	ZZZZZZ	10/29/2003	02:11		10/29/2003	02:27
1028F025.D	ZZZZZZ	ZZZZZZ	10/29/2003	02:43		10/29/2003	02:59
1028F026.D	ZZZZZZ	ZZZZZZ	10/29/2003	03:15		10/29/2003	03:31
1028F027.D	Instrument Blank	KWG0317374-9	10/29/2003	03:47		10/29/2003	04:03
1028F028.D	Continuing Calibration Verification	KWG0317374-3	10/29/2003	04:18		10/29/2003	04:34
1028F029.D	ZZZZZZ	ZZZZZZ	10/29/2003	04:50		10/29/2003	05:06
1028F030.D	ZZZZZZ	ZZZZZZ	10/29/2003	05:22		10/29/2003	05:38
1028F031.D	ZZZZZZ	ZZZZZZ	10/29/2003	05:54		10/29/2003	06:10
1028F032.D	ZZZZZZ	ZZZZZZ	10/29/2003	06:25		10/29/2003	06:41
1028F033.D	Instrument Blank	KWG0317374-10	10/29/2003	06:57		10/29/2003	07:13
1028F034.D	Continuing Calibration Verification	KWG0317374-4	10/29/2003	07:29		10/29/2003	07:45

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/28/2003

Extraction Prep Log
BTEX

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Extraction Lot: KWG0317284
Level: Med

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	MeOH Volume	MeOH Aliquot	Final Volume	% Solids	Note
SED-1	K2308433-001	10/22/03	10/27/03	10.22g	10ml	1ml	50ml	74.5	
SED-2	K2308433-002	10/22/03	10/27/03	10.19g	10ml	1ml	50ml	77.3	
SED-3	K2308433-003	10/22/03	10/27/03	10.12g	10ml	1ml	50ml	81.6	
SED-4	K2308433-004	10/22/03	10/27/03	10.20g	10ml	1ml	50ml	75.3	
SED-4-DUP	K2308433-005	10/22/03	10/27/03	10.01g	10ml	1ml	50ml	73.0	
SED-5	K2308433-006	10/23/03	10/27/03	10.04g	10ml	1ml	50ml	82.0	
Method Blank	KWG0317284-4	NA	NA	10g	10ml	1ml	50ml	NA	
SED-4MS	KWG0317284-1	10/22/03	10/27/03	10.18g	10ml	1ml	50ml	75.3	
SED-4DMS	KWG0317284-2	10/22/03	10/27/03	10.18g	10ml	1ml	50ml	75.3	
Lab Control Sample	KWG0317284-3	NA	NA	10g	10ml	1ml	50ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
BTEX

Validation Package

Organic Analysis:
BTEX

Validation Package

QC Reports

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
BTEX

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: PERCENT
Level: Med

Sample Name	Lab Code	Sur1
SED-1	K2308433-001	69
SED-2	K2308433-002	70
SED-3	K2308433-003	72
SED-4	K2308433-004	72
SED-4-DUP	K2308433-005	75
SED-5	K2308433-006	79
Method Blank	KWG0317284-4	82
SED-4MS	KWG0317284-1	80
SED-4DMS	KWG0317284-2	75
Lab Control Sample	KWG0317284-3	87

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene	37-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003
Time Analyzed: 14:12

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F002.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-1
Analysis Lot: KWG0317374
Column : DB-VRX

		a,a,a-Trifluorotoluene	
		Area	RT
	Results ==>	516,521	4.82
	Upper Limit ==>	1,033,042	4.97
	Lower Limit ==>	258,261	4.67
	ICAL Result ==>	491,716	5.02
Associated Analyses			
Lab Control Sample	KWG0317284-3	518,304	4.85
SED-4MS	KWG0317284-1	518,351	4.84
SED-4DMS	KWG0317284-2	545,076	4.85
Method Blank	KWG0317284-4	544,782	4.84
SED-1	K2308433-001	544,893	4.85
SED-2	K2308433-002	547,729	4.84
SED-3	K2308433-003	547,502	4.84
SED-4	K2308433-004	543,904	4.84
SED-4-DUP	K2308433-005	517,138	4.83
SED-5	K2308433-006	513,460	4.83

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003
Time Analyzed: 14:12

Internal Standard Area and RT Summary
BTEX

File ID: J:\GC06B\DATA\102803\1028F002.D\1028R002.D
Instrument ID: GC06B
Analysis Method: 8021B

Lab Code: KWG0317374-1
Analysis Lot: KWG0317374
Column : DB-624

		a,a,a-Trifluorotoluene	
		Area	RT
	Results ==>	4,282,762	3.79
	Upper Limit ==>	8,565,524	3.94
	Lower Limit ==>	2,141,381	3.64
	ICAL Result ==>	8,211,624	3.93
Associated Analyses			
Lab Control Sample	KWG0317284-3	4,390,760	3.81
SED-4MS	KWG0317284-1	4,381,909	3.81
SED-4DMS	KWG0317284-2	4,594,437	3.81
Method Blank	KWG0317284-4	4,627,626	3.80
SED-1	K2308433-001	4,574,062	3.81
SED-2	K2308433-002	4,625,843	3.80
SED-3	K2308433-003	4,632,752	3.81
SED-4	K2308433-004	4,623,317	3.80
SED-4-DUP	K2308433-005	4,423,967	3.79
SED-5	K2308433-006	4,413,206	3.79

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/28/2003
Date Analyzed: 10/28/2003

Matrix Spike/Duplicate Matrix Spike Summary
BTEX

Sample Name: SED-4
Lab Code: K2308433-004

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: mg/Kg
Basis: Dry

Level: Med
Extraction Lot: KWG0317284

Analyte Name	Sample Result	SED-4MS KWG0317284-1 Matrix Spike			SED-4DMS KWG0317284-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Benzene	ND	1.16	1.30	89	1.09	1.30	84	46-121	6	40
Toluene	ND	1.13	1.30	86	1.06	1.30	81	43-128	6	40
Ethylbenzene	ND	1.16	1.30	89	1.09	1.30	83	43-134	7	40
m,p-Xylenes	ND	2.32	2.61	89	2.18	2.61	84	42-134	6	40
o-Xylene	ND	1.13	1.30	87	1.06	1.30	81	38-130	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/28/2003
Date Analyzed: 10/28/2003

Lab Control Spike Summary
BTEX

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: mg/Kg
Basis: Dry
Level: Med
Extraction Lot: KWG0317284

	Lab Control Sample KWG0317284-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Benzene	0.959	1.00	96	63-124
Toluene	0.939	1.00	94	57-124
Ethylbenzene	0.971	1.00	97	57-128
m,p-Xylenes	1.94	2.00	97	50-135
o-Xylene	0.953	1.00	95	48-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/28/2003
Date Analyzed: 10/28/2003
Time Analyzed: 17:12

Method Blank Summary
BTEX

Sample Name: Method Blank
Lab Code: KWG0317284-4

File ID: J:\GC06B\DATA\102803\1028F007.D
Instrument ID: GC06B

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Level: Med
Extraction Lot: KWG0317284

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317284-3	J:\GC06B\DATA\102803\1028F003.D	10/28/03	15:05
SED-4MS	KWG0317284-1	J:\GC06B\DATA\102803\1028F004.D	10/28/03	15:37
SED-4DMS	KWG0317284-2	J:\GC06B\DATA\102803\1028F005.D	10/28/03	16:08
SED-1	K2308433-001	J:\GC06B\DATA\102803\1028F008.D	10/28/03	17:44
SED-2	K2308433-002	J:\GC06B\DATA\102803\1028F009.D	10/28/03	18:16
SED-3	K2308433-003	J:\GC06B\DATA\102803\1028F010.D	10/28/03	18:47
SED-4	K2308433-004	J:\GC06B\DATA\102803\1028F011.D	10/28/03	19:19
SED-4-DUP	K2308433-005	J:\GC06B\DATA\102803\1028F012.D	10/28/03	19:51
SED-5	K2308433-006	J:\GC06B\DATA\102803\1028F013.D	10/28/03	20:23

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/28/2003
Date Analyzed: 10/28/2003
Time Analyzed: 15:05

Lab Control Sample Summary
BTEX

Sample Name: Lab Control Sample
Lab Code: KWG0317284-3

File ID: J:\GC06B\DATA\102803\1028F003.D
Instrument ID: GC06B

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Level: Med
Extraction Lot: KWG0317284

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SED-4MS	KWG0317284-1	J:\GC06B\DATA\102803\1028F004.D	10/28/03	15:37
SED-4DMS	KWG0317284-2	J:\GC06B\DATA\102803\1028F005.D	10/28/03	16:08
Method Blank	KWG0317284-4	J:\GC06B\DATA\102803\1028F007.D	10/28/03	17:12
SED-1	K2308433-001	J:\GC06B\DATA\102803\1028F008.D	10/28/03	17:44
SED-2	K2308433-002	J:\GC06B\DATA\102803\1028F009.D	10/28/03	18:16
SED-3	K2308433-003	J:\GC06B\DATA\102803\1028F010.D	10/28/03	18:47
SED-4	K2308433-004	J:\GC06B\DATA\102803\1028F011.D	10/28/03	19:19
SED-4-DUP	K2308433-005	J:\GC06B\DATA\102803\1028F012.D	10/28/03	19:51
SED-5	K2308433-006	J:\GC06B\DATA\102803\1028F013.D	10/28/03	20:23

Organic Analysis:
BTEX

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-1	**Units:**	mg/Kg
Lab Code:	K2308433-001	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.066	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	69	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F008.D
Lab ID: K2308433-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 17:44
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F008.D\1028R008.D
Lab ID: K2308433-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 17:44
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/30/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	K2308433
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245209	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1144
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F008.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F008.D\1028R008.D			**Vial:**	165
Acqu Date:	10/28/2003 17:44	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308433-001				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.85	+0.03	3.81	+0.02	544893	4574062	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2		Rpt
1	Bromofluorobenzene	8.43	+0.02	7.34	+0.03	887429	7237562	32.96	34.49		69OK
							%Recovery =	66OK	69OK	Limits = 37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U
1	Toluene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U
1	Ethylbenzene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.023U	0.023U	0.023U
1	o-Xylene			0	0	0.0000	0.0000	0.013U	0.013U	0.013U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.22 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	74.5 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F008.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F008.D\1028R008.D\data.gc
Acq On : 28 Oct 2003 05:44 pm Operator: tf
Sample : k2308433-001 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:10 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.85	3.81	544893	4574062	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.32	1101682	8999140	97.446	97.828
3)	S	Bromofluorobenze	8.43	7.34	887429	7237562	32.964	34.490
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

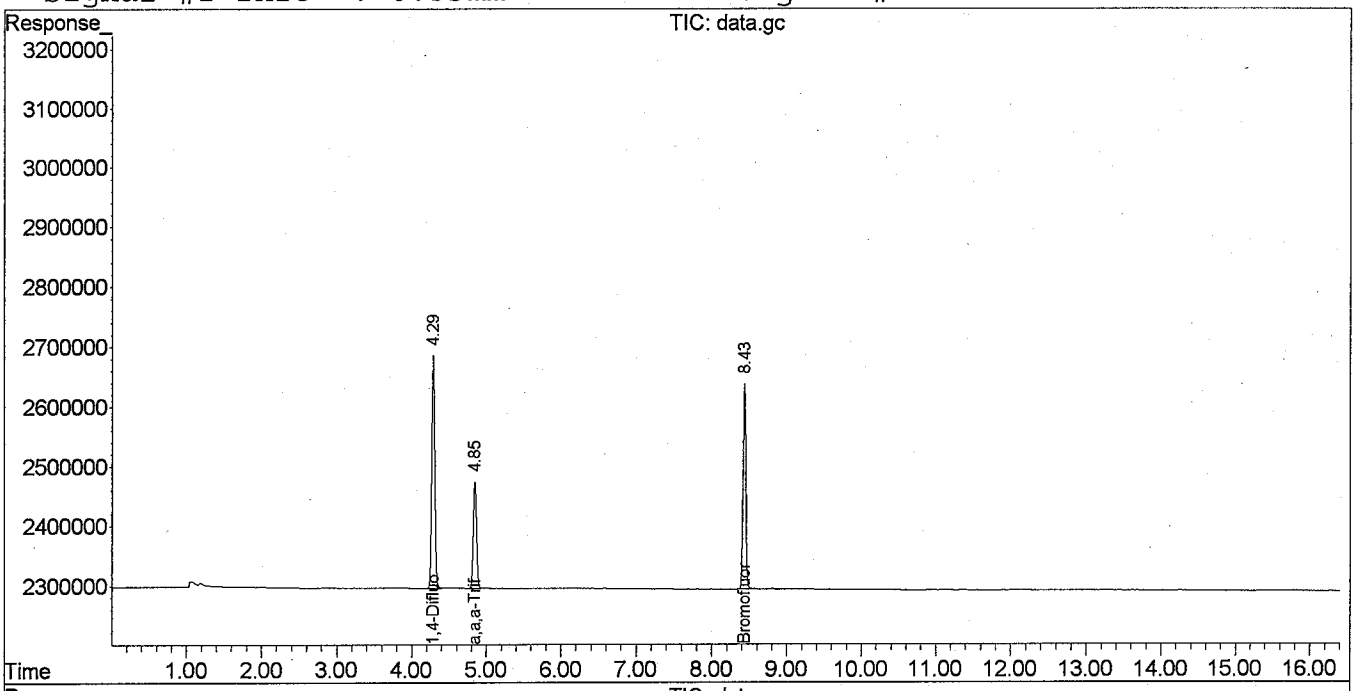
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

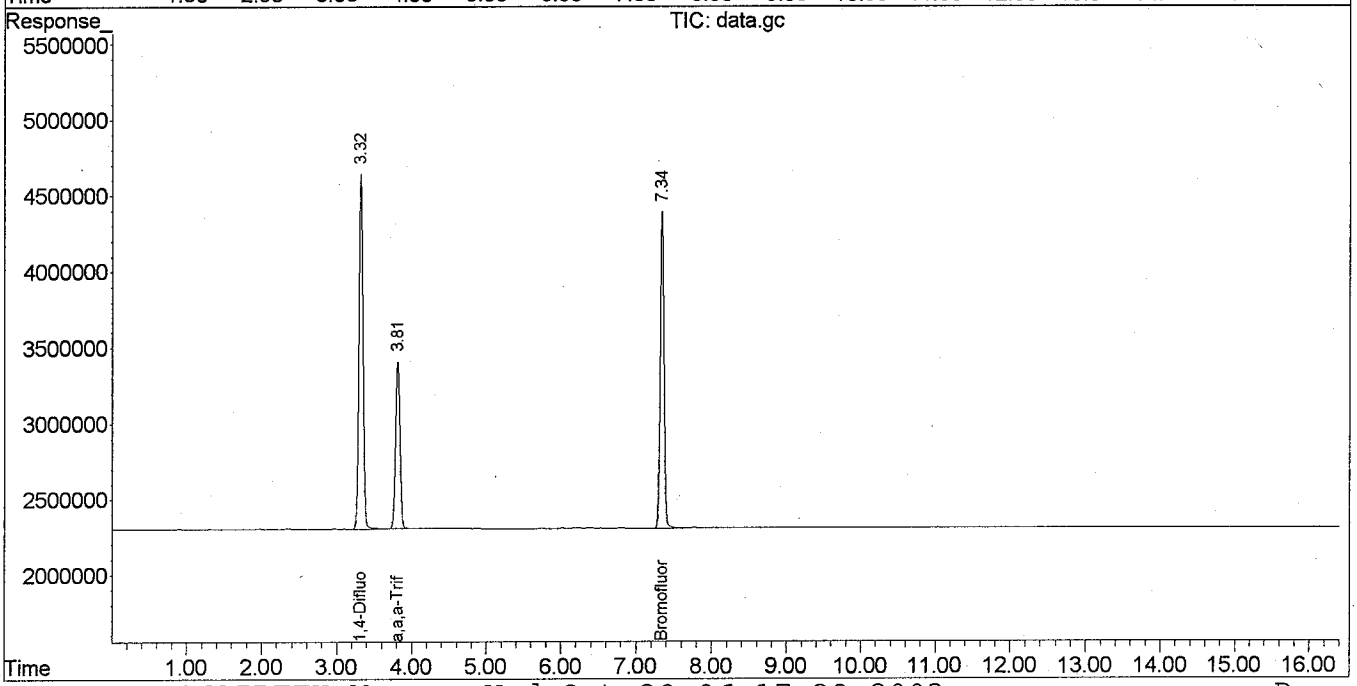
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F008.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F008.D\1028R008.D\data.gc
Acq On : 28 Oct 2003 05:44 pm Operator: tf
Sample : k2308433-001 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-2	**Units:**	mg/Kg
Lab Code:	K2308433-002	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.064	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	70	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F009.D
Lab ID: K2308433-002
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 18:16
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F009.D\1028R009.D
Lab ID: K2308433-002
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 18:16
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	K2308433
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245210	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1144
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F009.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F009.D\1028R009.D			**Vial:**	165
Acqu Date:	10/28/2003 18:16	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308433-002				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.84 +0.02	3.80 +0.01	547729	4625843	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Bromofluorobenzene	8.43 +0.02	7.34 +0.03	910099	7473373	33.63	35.22			70OK
					%Recovery =	67OK	70OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	Toluene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	Ethylbenzene			0	0	0.0000	0.0000	0.010U	0.010U	0.010U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.022U	0.022U	0.022U
1	o-Xylene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.19 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	77.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F009.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F009.D\1028R009.D\data.gc
Acq On : 28 Oct 2003 06:16 pm Operator: tf
Sample : k2308433-002 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:14 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.84	3.80	547729	4625843	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.28	3.31	1094260	9018241	96.289	96.939
3)	S	Bromofluorobenze	8.43	7.34	910099	7473373	33.631	35.215
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

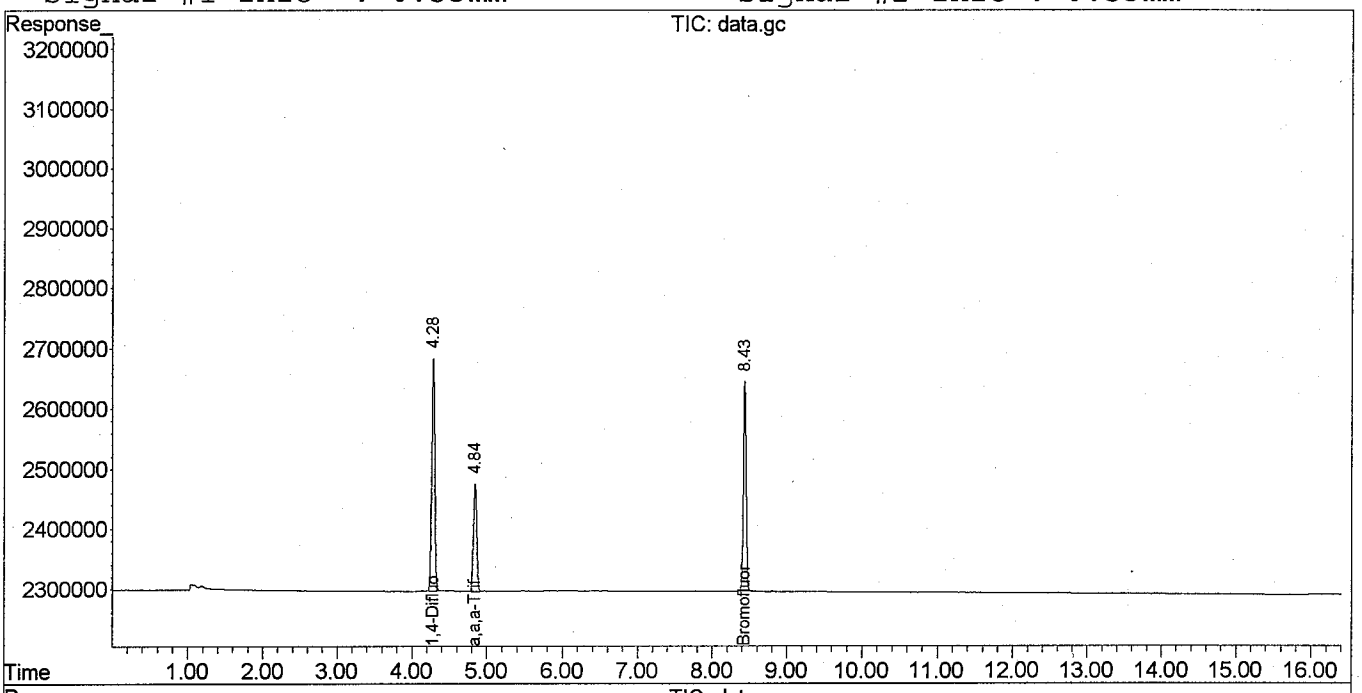
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

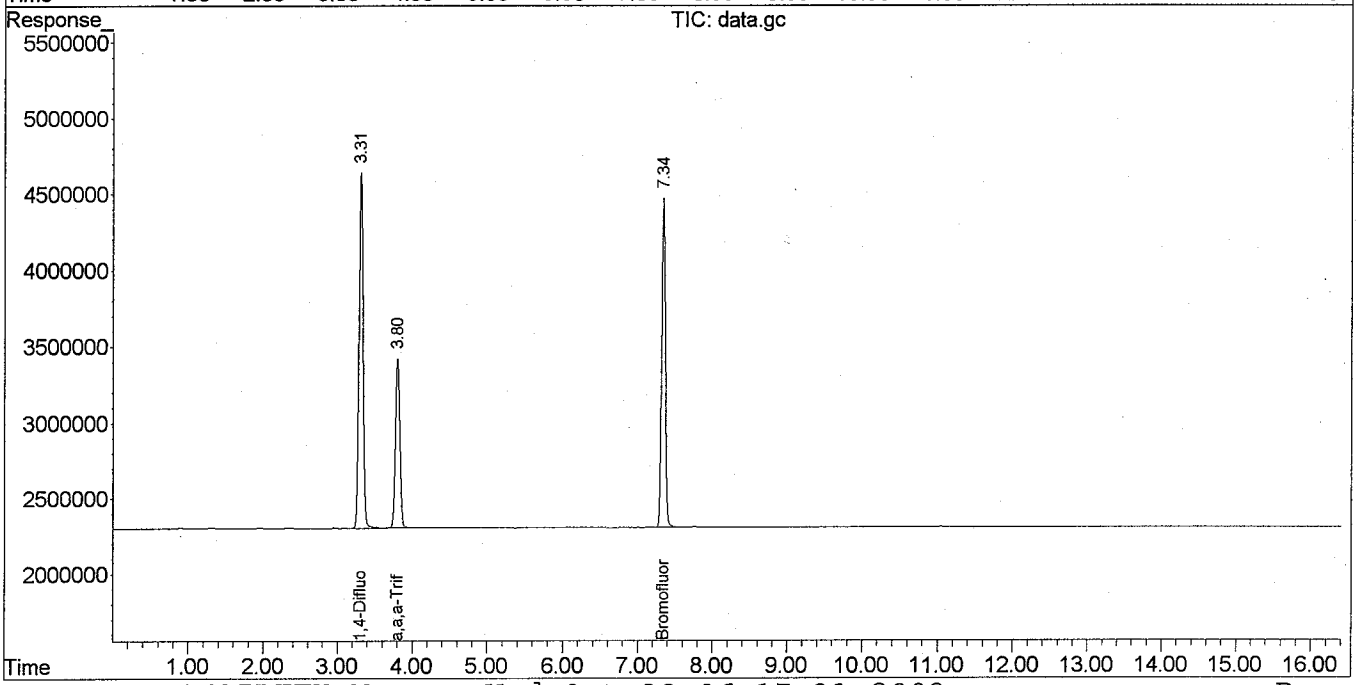
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F009.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F009.D\1028R009.D\data.gc
Acq On : 28 Oct 2003 06:16 pm Operator: tf
Sample : k2308433-002 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-3	**Units:**	mg/Kg
Lab Code:	K2308433-003	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.061	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	72	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F010.D
Lab ID: K2308433-003
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 18:47
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F010.D\1028R010.D
Lab ID: K2308433-003
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 18:47
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	K2308433
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245211	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1144
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F010.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F010.D\1028R010.D			**Vial:**	165
Acqu Date:	10/28/2003 18:47	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308433-003				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.84	+0.02	3.81	+0.02	547502	4632752	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Bromofluorobenzene	8.43	+0.02	7.34	+0.03	932116	7636597	34.46	35.93			72OK
							%Recovery =	69OK	72OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	Toluene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	Ethylbenzene			0	0	0.0000	0.0000	0.0095U	0.0095U	0.0095U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.021U	0.021U	0.021U
1	o-Xylene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.12 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	81.6 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F010.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F010.D\1028R010.D\data.gc
Acq On : 28 Oct 2003 06:47 pm Operator: tf
Sample : k2308433-003 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:16 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.84	3.81	547502	4632752	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.31	1098218	9005854	96.677	96.661
3)	S	Bromofluorobenze	8.43	7.34	932116	7636597	34.459	35.930
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

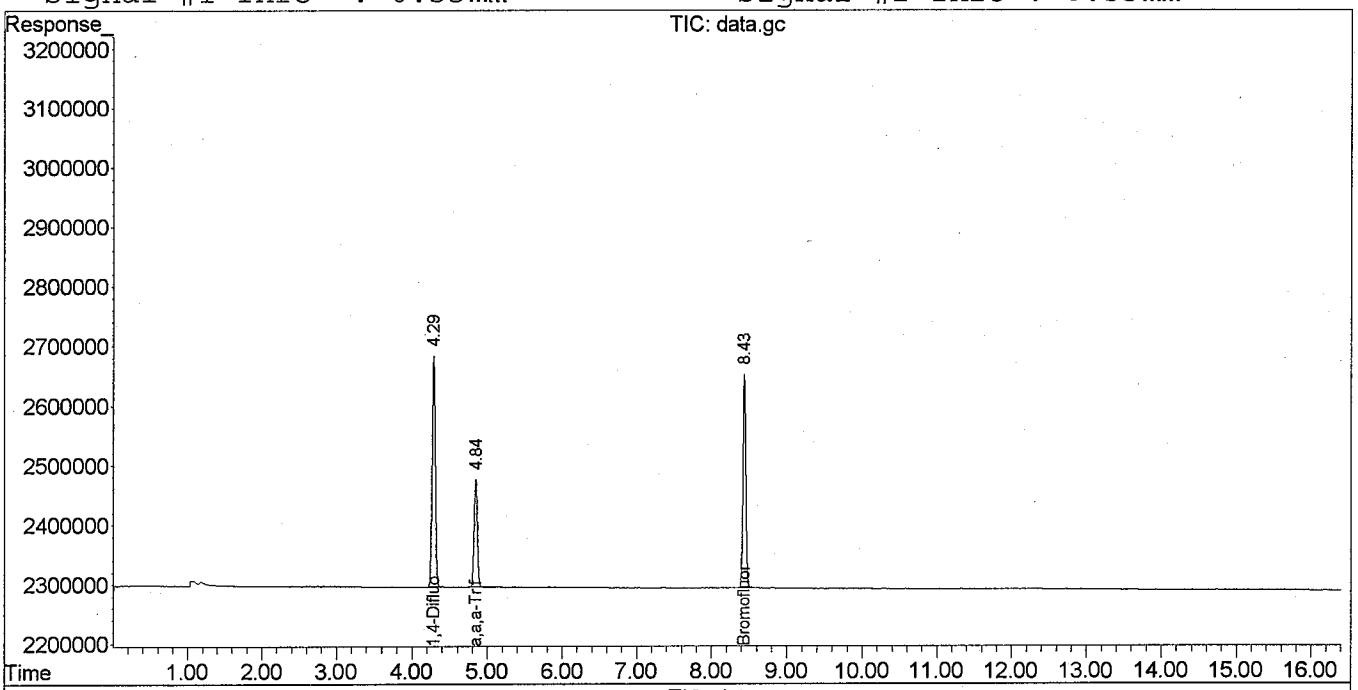
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

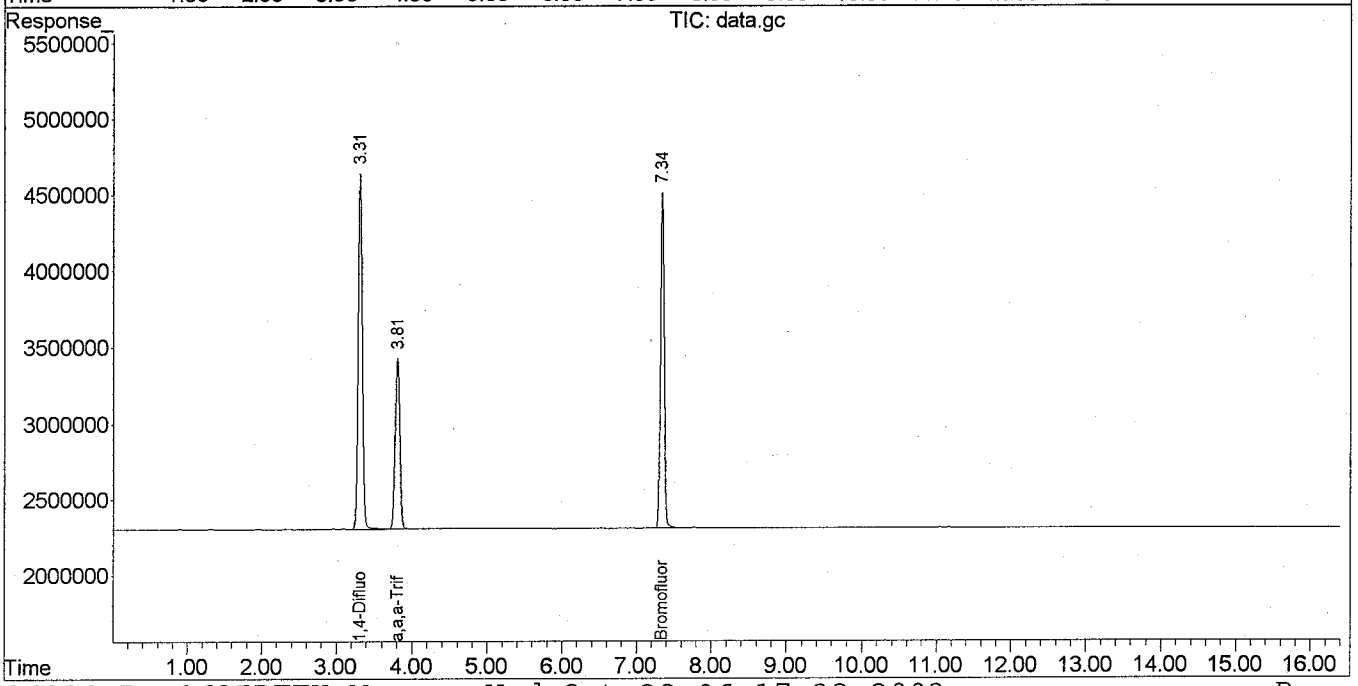
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F010.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F010.D\1028R010.D\data.gc
Acq On : 28 Oct 2003 06:47 pm Operator: tf
Sample : k2308433-003 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

BTEX

Sample Name: SED-4
Lab Code: K2308433-004

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: mg/Kg
Basis: Dry

Level: Med

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.066	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	72	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F011.D
Lab ID: K2308433-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 19:19
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F011.D\1028R011.D
Lab ID: K2308433-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 19:19
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	K2308433
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245212	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1144
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F011.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F011.D\1028R011.D			**Vial:**	165
Acqu Date:	10/28/2003 19:19	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308433-004				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.84 +0.02	3.80 +0.01	543904	4623317	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Bromofluorobenzene	8.43 +0.02	7.34 +0.03	939430	7658141	34.96	36.11			72OK
				%Recovery =		70OK	72OK	**Limits =**	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U
1	Toluene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	Ethylbenzene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.023U	0.023U	0.023U
1	o-Xylene			0	0	0.0000	0.0000	0.013U	0.013U	0.013U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.20 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	75.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F011.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F011.D\1028R011.D\data.gc
Acq On : 28 Oct 2003 07:19 pm Operator: tf
Sample : k2308433-004 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:18 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.84	3.80	543904	4623317	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.28	3.31	1087361	9002348	96.355	96.821
3)	S	Bromofluorobenze	8.43	7.34	939430	7658141	34.959	36.105
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

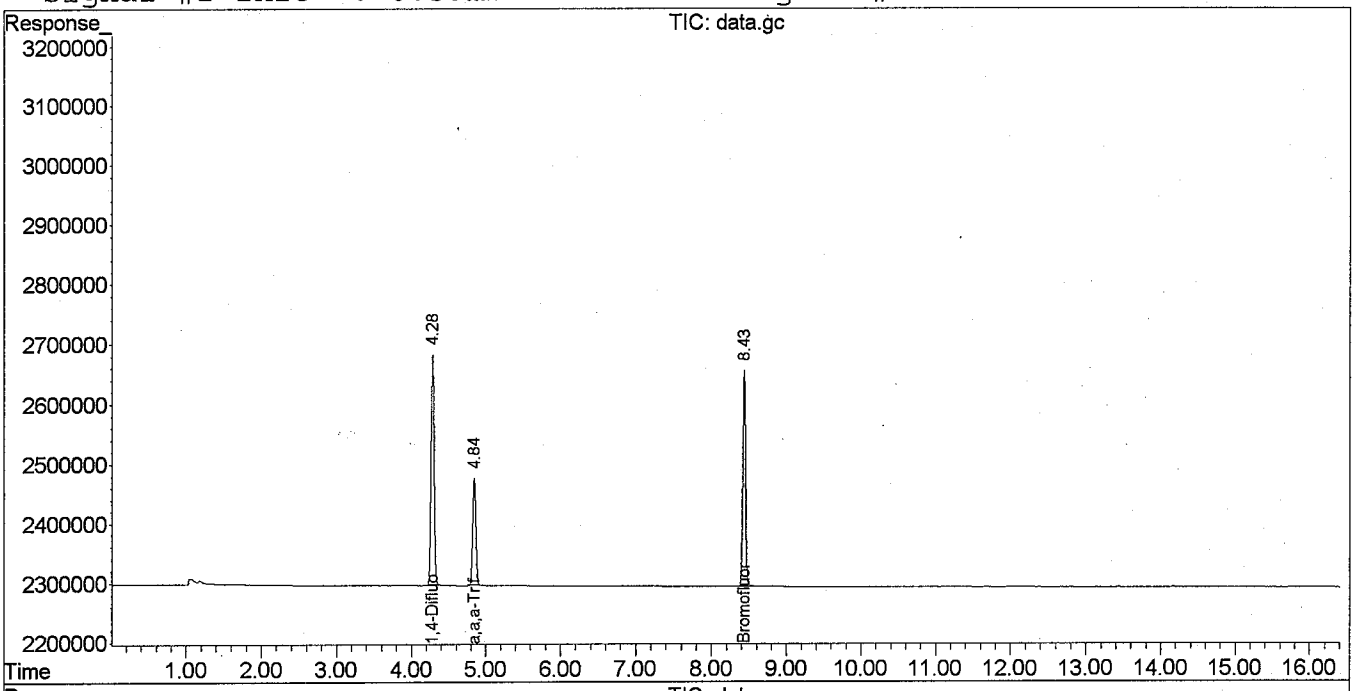
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

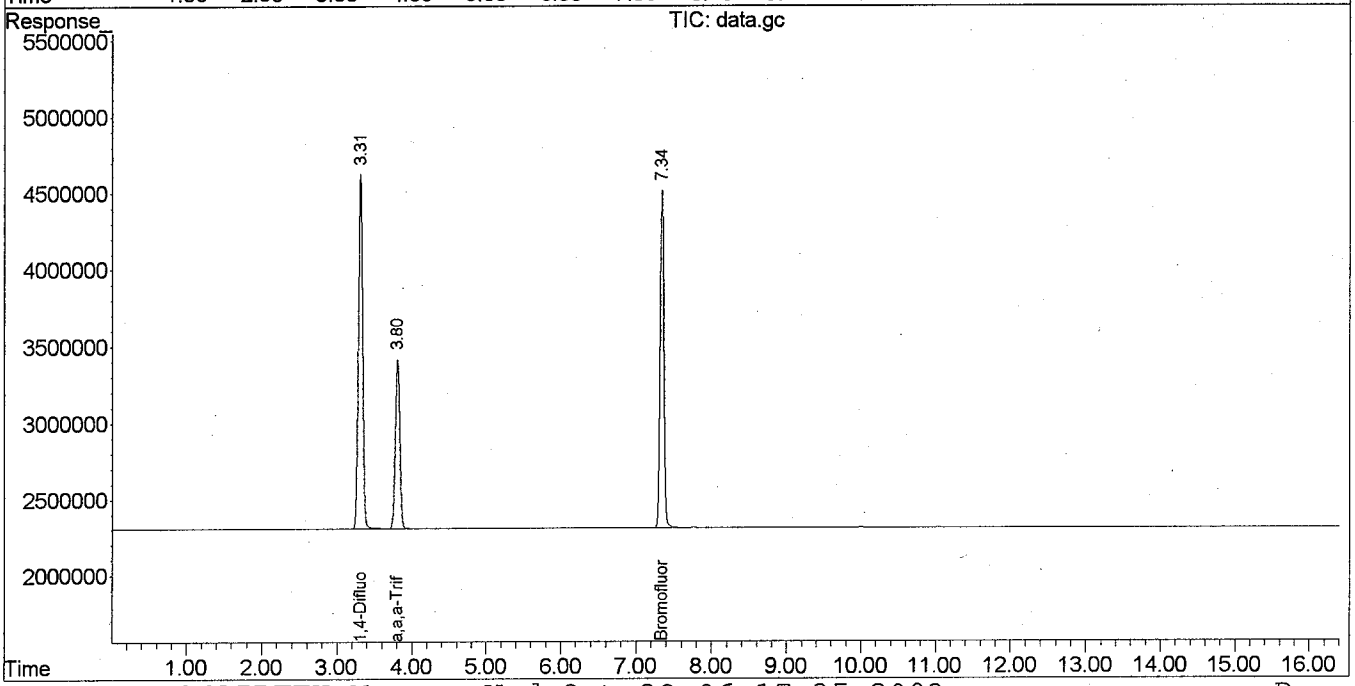
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F011.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F011.D\1028R011.D\data.gc
Acq On : 28 Oct 2003 07:19 pm Operator: tf
Sample : k2308433-004 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-4-DUP	**Units:**	mg/Kg
Lab Code:	K2308433-005	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.069	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	75	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F012.D
Lab ID: K2308433-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 19:51
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/3/03

Secondary Review: 11/3/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F012.D\1028R012.D
Lab ID: K2308433-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 19:51
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	K2308433
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245213	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1144
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F012.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F012.D\1028R012.D			**Vial:**	165
Acqu Date:	10/28/2003 19:51	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308433-005				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.83	+0.01	3.79	517138	4423967	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Bromofluorobenzene	8.41	7.32	+0.01	925518	7610341	36.22	37.50			75OK
						%Recovery =	72OK	75OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U
1	Toluene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U
1	Ethylbenzene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.024U	0.024U	0.024U
1	o-Xylene			0	0	0.0000	0.0000	0.013U	0.013U	0.013U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.01 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	73.0 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F012.D\1028R012.D\data.gc
Acq On : 28 Oct 2003 07:51 pm Operator: tf
Sample : k2308433-005 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:21 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.83	3.79	517138	4423967	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.27	3.30	1071713	8932117	99.883	100.394
3)	S	Bromofluorobenze	8.41	7.32	925518	7610341	36.224	37.497
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

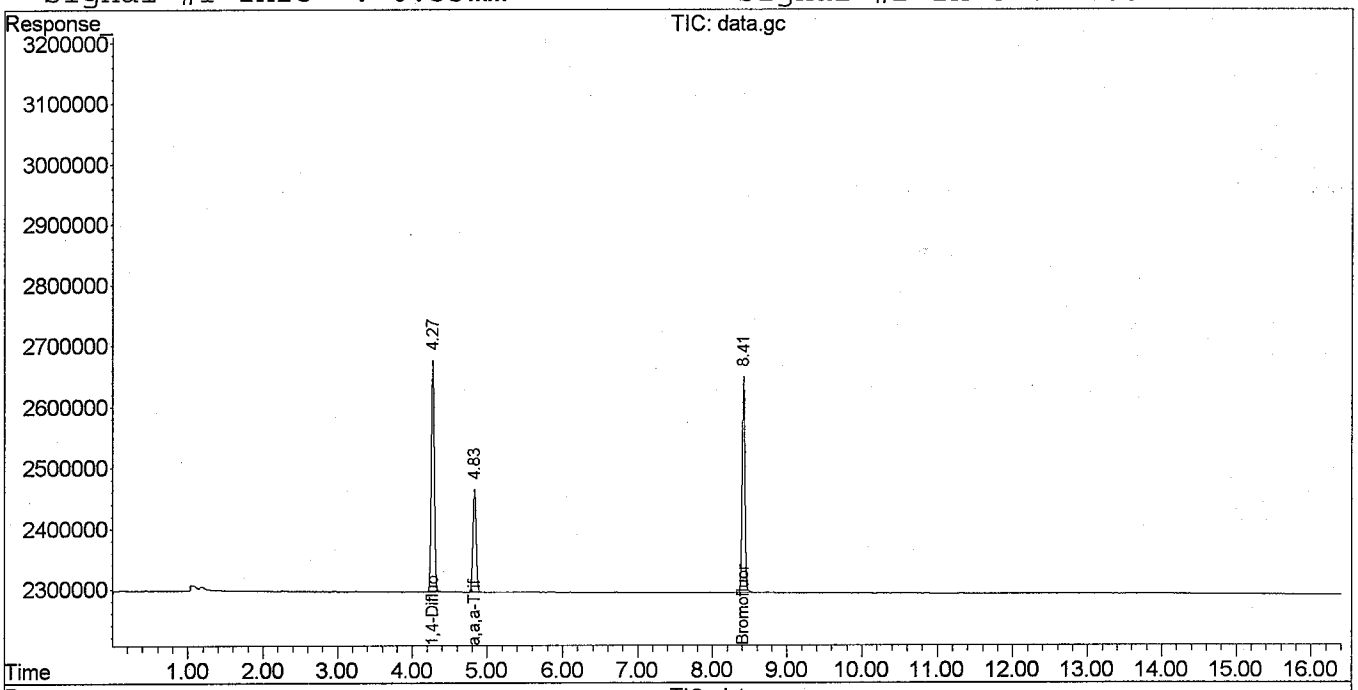
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

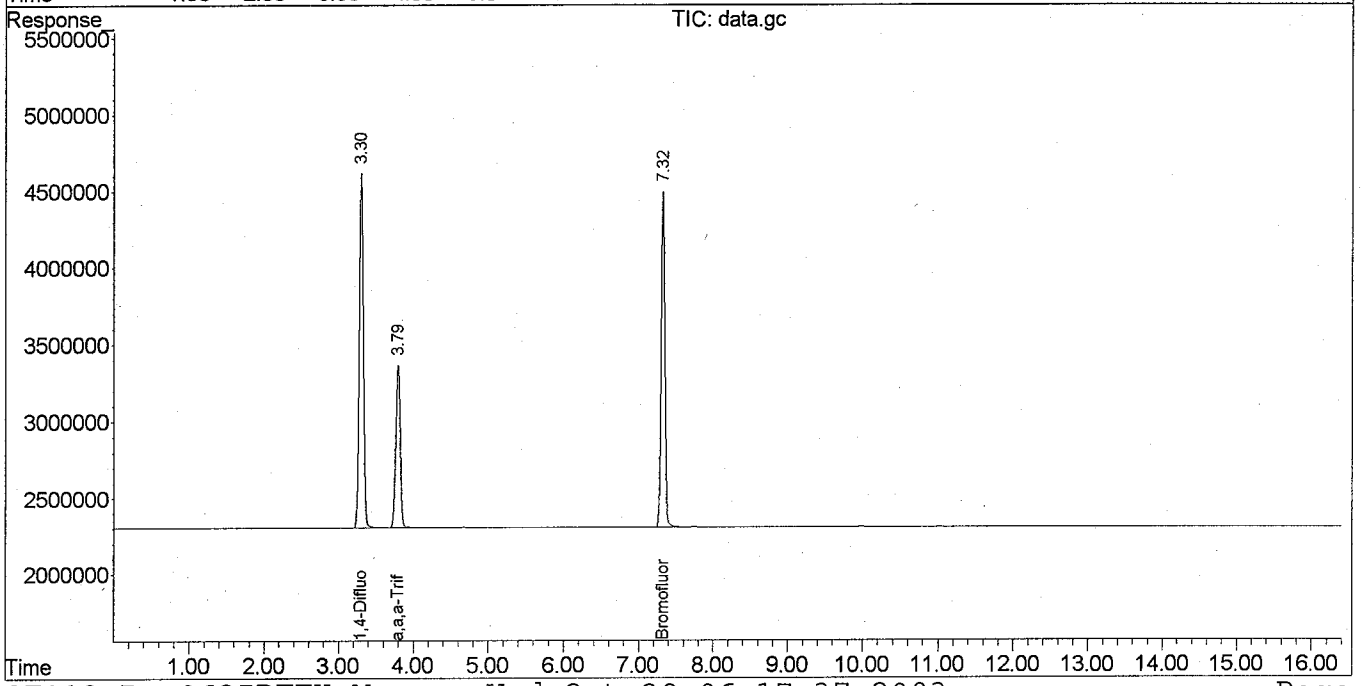
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F012.D\1028R012.D\data.gc
Acq On : 28 Oct 2003 07:51 pm Operator: tf
Sample : k2308433-005 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-5	**Units:**	mg/Kg
Lab Code:	K2308433-006	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.061	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.13	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	79	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F013.D
Lab ID: K2308433-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 20:23
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F013.D\1028R013.D
Lab ID: K2308433-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/28/2003 20:23
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	K2308433
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245214	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:	BTEX	**Report List ID:**	LJ1144
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Report List	

Data File #1:	J:\GC06B\DATA\102803\1028F013.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F013.D\1028R013.D			**Vial:**	165
Acqu Date:	10/28/2003 20:23	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K2308433-006				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.83	+0.01	3.79	513460	4413206	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Bromofluorobenzene	8.42	+0.01	7.32	+0.01	960288	7951862	37.85	39.28			79OK
						%Recovery =		76OK	79OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.011U	0.011U	0.011U
1	Toluene			0	0	0.0000	0.0000	0.010U	0.010U	0.010U
1	Ethylbenzene			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.021U	0.021U	0.021U
1	o-Xylene			0	0	0.0000	0.0000	0.012U	0.012U	0.012U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.04 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	82.0 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F013.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F013.D\1028R013.D\data.gc
Acq On : 28 Oct 2003 08:23 pm Operator: tf
Sample : k2308433-006 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:23 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.83	3.79	513460	4413206	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.27	3.30	1072665	8942005	100.688	100.750
3)	S	Bromofluorobenze	8.42	7.32	960288	7951862	37.854	39.275
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

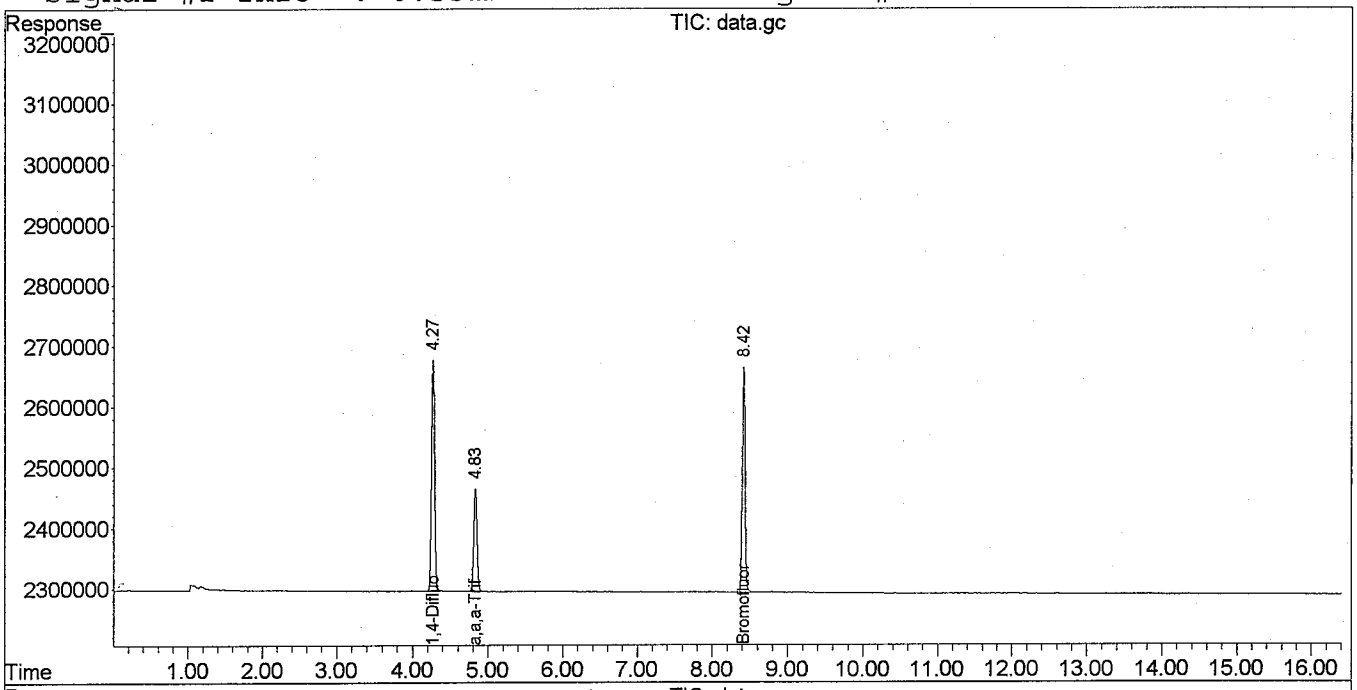
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

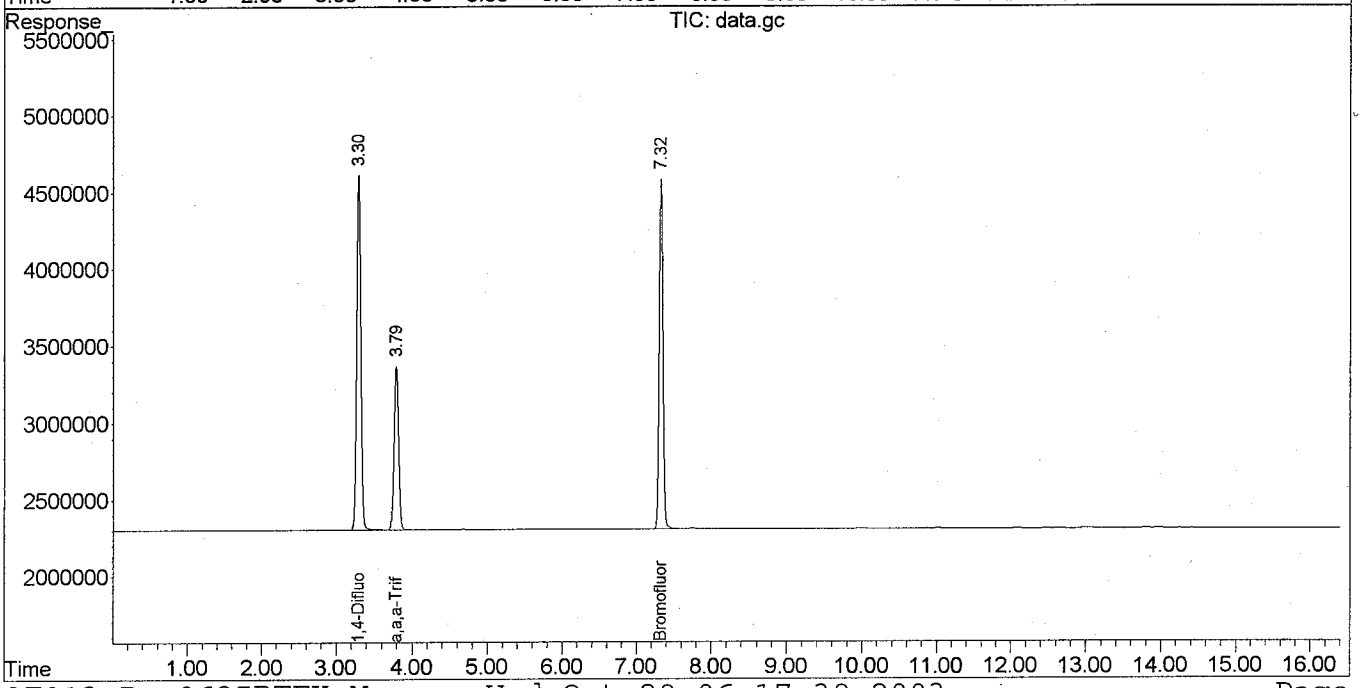
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F013.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F013.D\1028R013.D\data.gc
Acq On : 28 Oct 2003 08:23 pm Operator: tf
Sample : k2308433-006 Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

BTEX

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG0317284-4	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.050	1	10/28/03	10/28/03	KWG0317284	
Toluene	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	ND	U	0.10	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	82	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F007.D
Lab ID: KWG0317284-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 10/28/2003 17:12
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F007.D\1028R007.D
Lab ID: KWG0317284-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 10/28/2003 17:12
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/28/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245218	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ204
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F007.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F007.D\1028R007.D			**Vial:**	165
Acqu Date:	10/28/2003 17:12	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317284-4				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.84	+0.02	3.80	+0.01	544782	4627626	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.28	+0.01	3.31	+0.02	1088422	8966905	96.29	96.35			96OK
							%Recovery =	96OK	96OK	Limits =	50-150	
1	Bromofluorobenzene	8.43	+0.02	7.33	+0.02	1063560	8730044	39.51	41.12			82OK
							%Recovery =	79OK	82OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene			0	0	0.0000	0.0000	0.0084U	0.0084U	0.0084U
1	Toluene			0	0	0.0000	0.0000	0.0082U	0.0082U	0.0082U
1	Ethylbenzene			0	0	0.0000	0.0000	0.0077U	0.0077U	0.0077U
1	m,p-Xylenes			0	0	0.0000	0.0000	0.017U	0.017U	0.017U
1	o-Xylene			0	0	0.0000	0.0000	0.0092U	0.0092U	0.0092U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F007.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F007.D\1028R007.D\data.gc
Acq On : 28 Oct 2003 05:12 pm Operator: tf
Sample : kwg0317284-4mb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:07 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.84	3.80	544782	4627626	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.28	3.31	1088422	8966905	96.293	96.350
3)	S	Bromofluorobenze	8.43	7.33	1063560	8730044	39.514	41.121
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

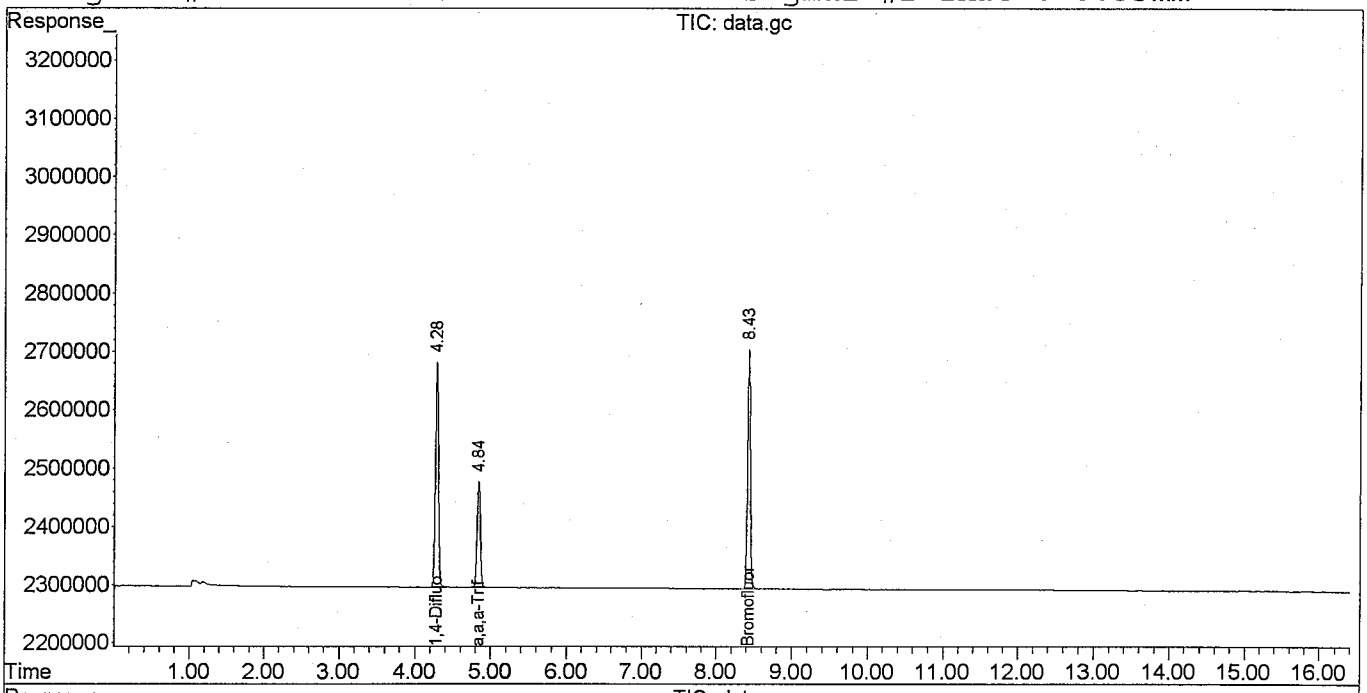
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

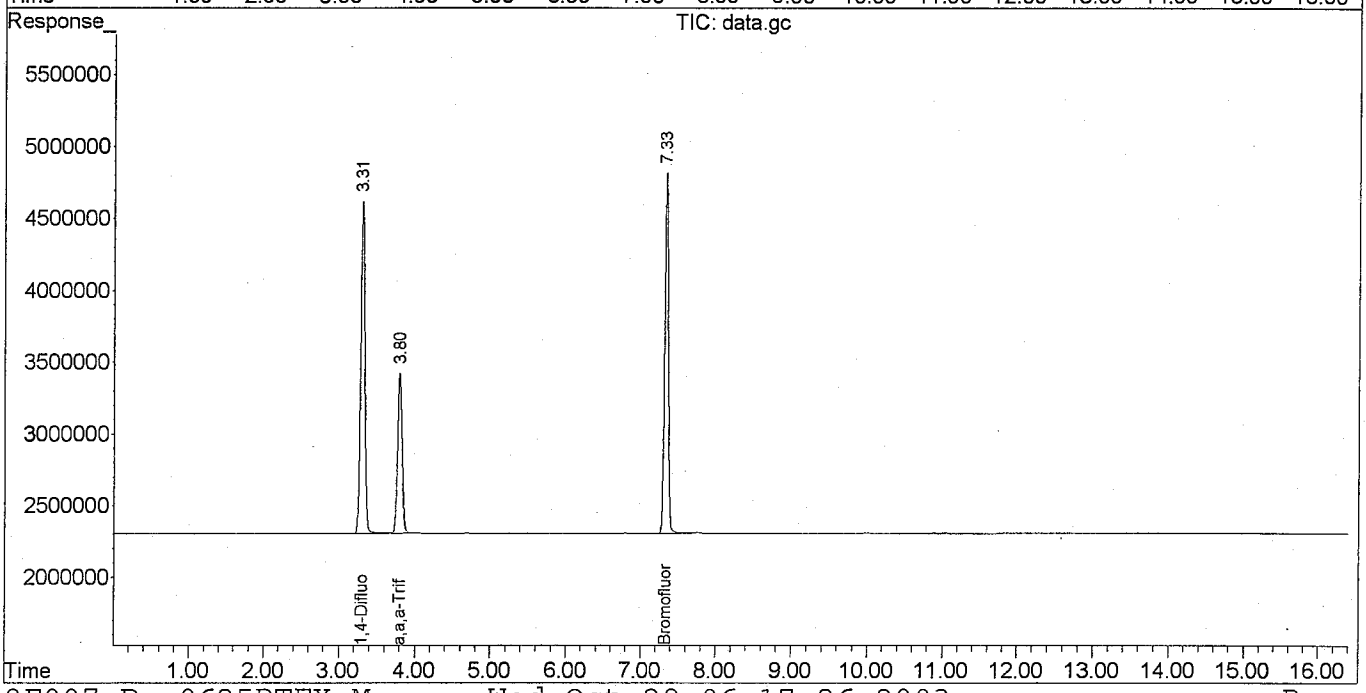
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F007.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F007.D\1028R007.D\data.gc
Acq On : 28 Oct 2003 05:12 pm Operator: tf
Sample : kwg0317284-4mb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-4MS	**Units:**	mg/Kg
Lab Code:	KWG0317284-1	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**1.16**		0.066	1	10/28/03	10/28/03	KWG0317284	
Toluene	**1.13**		0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	**1.16**		0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	**2.32**		0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	**1.13**		0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	80	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F004.D
Lab ID: KWG0317284-1 -- K2308433-004MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 10/28/2003 15:37
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature] 10/30/03

Secondary Review: [signature] 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F004.D\1028R004.D
Lab ID: KWG0317284-1 -- K2308433-004MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 10/28/2003 15:37
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature] 10/29/03

Secondary Review: [signature] 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/28/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245215	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F004.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F004.D\1028R004.D			**Vial:**	165
Acqu Date:	10/28/2003 15:37	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317284-1 -- K2308433-004MS				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.84	+0.02	3.81	+0.02	518351	4381909	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.29	+0.02	3.31	+0.02	1091040	9017199	101.45	102.32			102OK
							%Recovery =	101OK	102OK	Limits =	50-150	
1	Bromofluorobenzene	8.43	+0.02	7.34	+0.03	982131	8051907	38.35	40.05			80OK
							%Recovery =	77OK	80OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene	4.04	+0.02	2.96	+0.02	490219	4026630	17.10	17.75	1.12	1.16	**1.16**
1	Toluene	5.90	+0.02	4.68	+0.02	454911	3903970	17.05	17.28	1.11	1.13	**1.13**
1	Ethylbenzene	7.46	+0.02	6.23	+0.03	423155	3486808	17.83	17.59	1.16	1.15	**1.16**
1	m,p-Xylenes	7.67	+0.02	6.36	+0.02	933739	7858081	34.44	35.62	2.25	2.32	**2.32**
1	o-Xylene	8.05	+0.02	6.77	+0.02	401515	3402497	17.38	16.20	1.13	1.06	**1.13**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.18 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	75.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F004.D\1028R004.D\data.gc
Acq On : 28 Oct 2003 03:37 pm Operator: tf
Sample : k2308433-004ms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:01 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.84	3.81	518351	4381909	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.31	1091040	9017199	101.447	102.323
3)	S	Bromofluorobenze	8.43	7.34	982131	8051907	38.349	40.053
		Target Compounds						
4)	T	Benzene	4.04	2.96	490219	4026630	17.104	17.747
5)	T	Toluene	5.90	4.68	454911	3903970	17.048	17.278
6)	T	Ethylbenzene	7.46	6.23	423155	3486808	17.834	17.593
7)	T	m,p-Xylenes	7.67	6.36	933739	7858081	34.442	35.619
8)	T	o-Xylene	8.05	6.77	401515	3402497	17.382	16.196

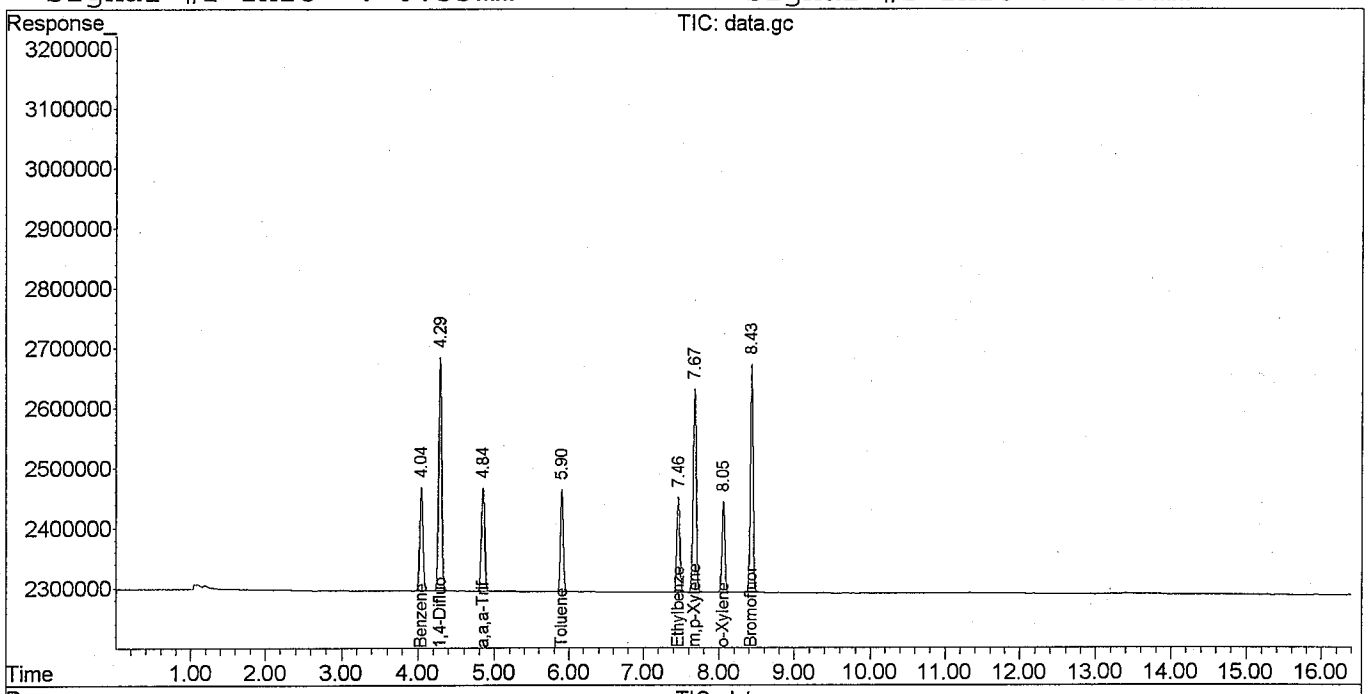
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

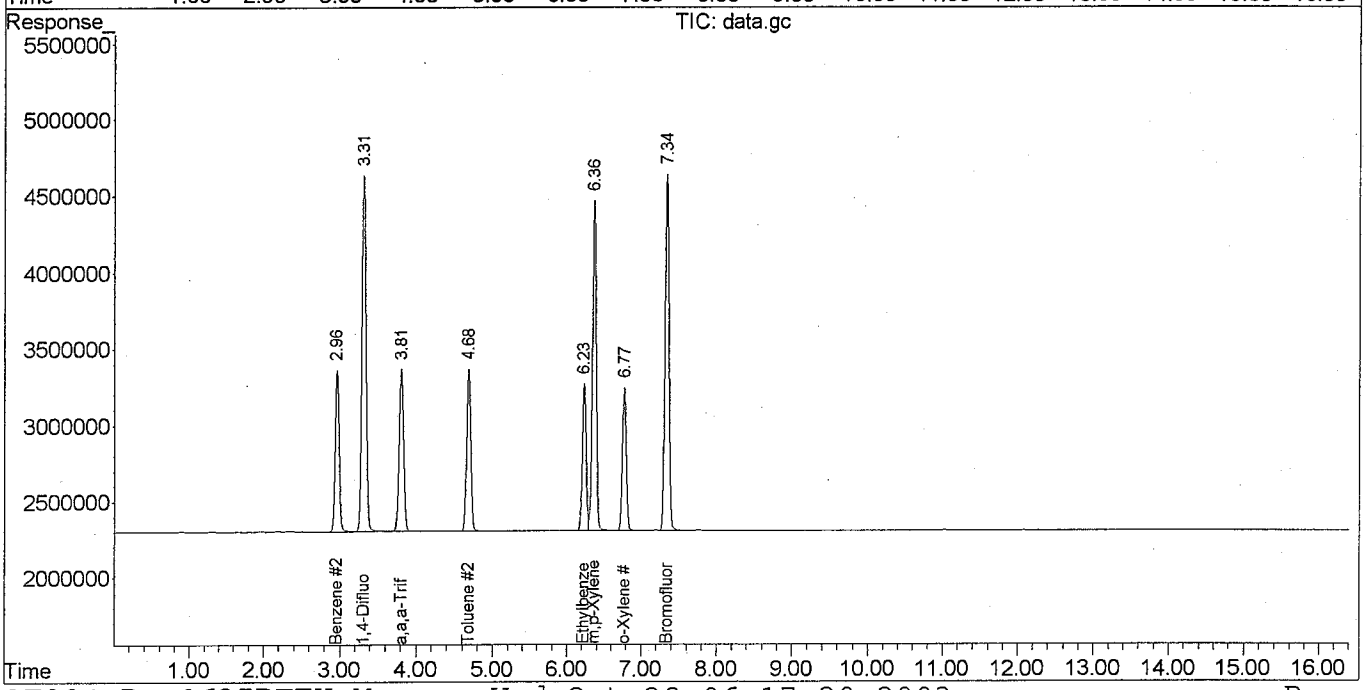
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F004.D\1028R004.D\data.gc
Acq On : 28 Oct 2003 03:37 pm Operator: tf
Sample : k2308433-004ms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

BTEX

Sample Name:	SED-4DMS	**Units:**	mg/Kg
Lab Code:	KWG0317284-2	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	8021B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**1.09**		0.066	1	10/28/03	10/28/03	KWG0317284	
Toluene	**1.06**		0.14	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	**1.09**		0.14	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	**2.18**		0.14	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	**1.06**		0.14	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	75	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F005.D
Lab ID: KWG0317284-2 -- K2308433-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 10/28/2003 16:08
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F005.D\1028R005.D
Lab ID: KWG0317284-2 -- K2308433-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 10/28/2003 16:08
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/29/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/28/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245216	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F005.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F005.D\1028R005.D			**Vial:**	165
Acqu Date:	10/28/2003 16:08	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317284-2 -- K2308433-004DMS				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.85 +0.03	3.81 +0.02	545076	4594437	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.29 +0.02	3.32 +0.03	1100742	9055127	97.33	98.00			98OK
				%Recovery =		97OK	98OK	Limits =	50-150	
1	Bromofluorobenzene	8.43 +0.02	7.34 +0.03	967421	7918482	35.92	37.57			75OK
				%Recovery =		72OK	75OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene	4.05 +0.03	2.96 +0.02	484606	3989571	16.08	16.77	1.05	1.09	**1.09**
1	Toluene	5.91 +0.03	4.69 +0.03	449618	3856539	16.02	16.28	1.05	1.06	**1.06**
1	Ethylbenzene	7.46 +0.02	6.24 +0.04	416444	3435940	16.69	16.53	1.09	1.08	**1.09**
1	m,p-Xylenes	7.68 +0.03	6.37 +0.03	929802	7741959	32.62	33.47	2.13	2.18	**2.18**
1	o-Xylene	8.05 +0.02	6.78 +0.03	393668	3354883	16.21	15.23	1.06	0.993	**1.06**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.18 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	75.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F005.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F005.D\1028R005.D\data.gc
Acq On : 28 Oct 2003 04:08 pm Operator: tf
Sample : k2308433-004dms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:03 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.85	3.81	545076	4594437	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.32	1100742	9055127	97.331	98.001
3)	S	Bromofluorobenze	8.43	7.34	967421	7918482	35.923	37.567
		Target Compounds						
4)	T	Benzene	4.05	2.96	484606	3989571	16.079	16.770
5)	T	Toluene	5.91	4.69	449618	3856539	16.024	16.278
6)	T	Ethylbenzene	7.46	6.24	416444	3435940	16.690	16.534
7)	T	m,p-Xylenes	7.68	6.37	929802	7741959	32.615	33.470
8)	T	o-Xylene	8.05	6.78	393668	3354883	16.207	15.231

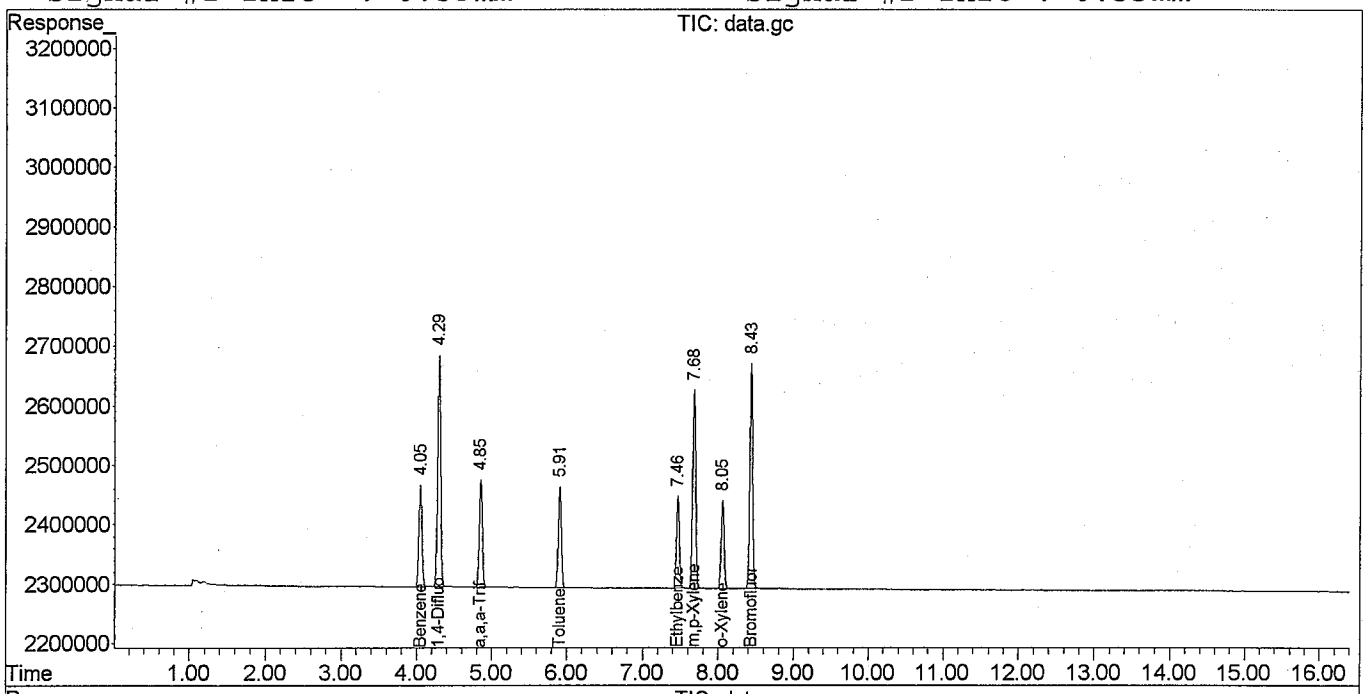
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

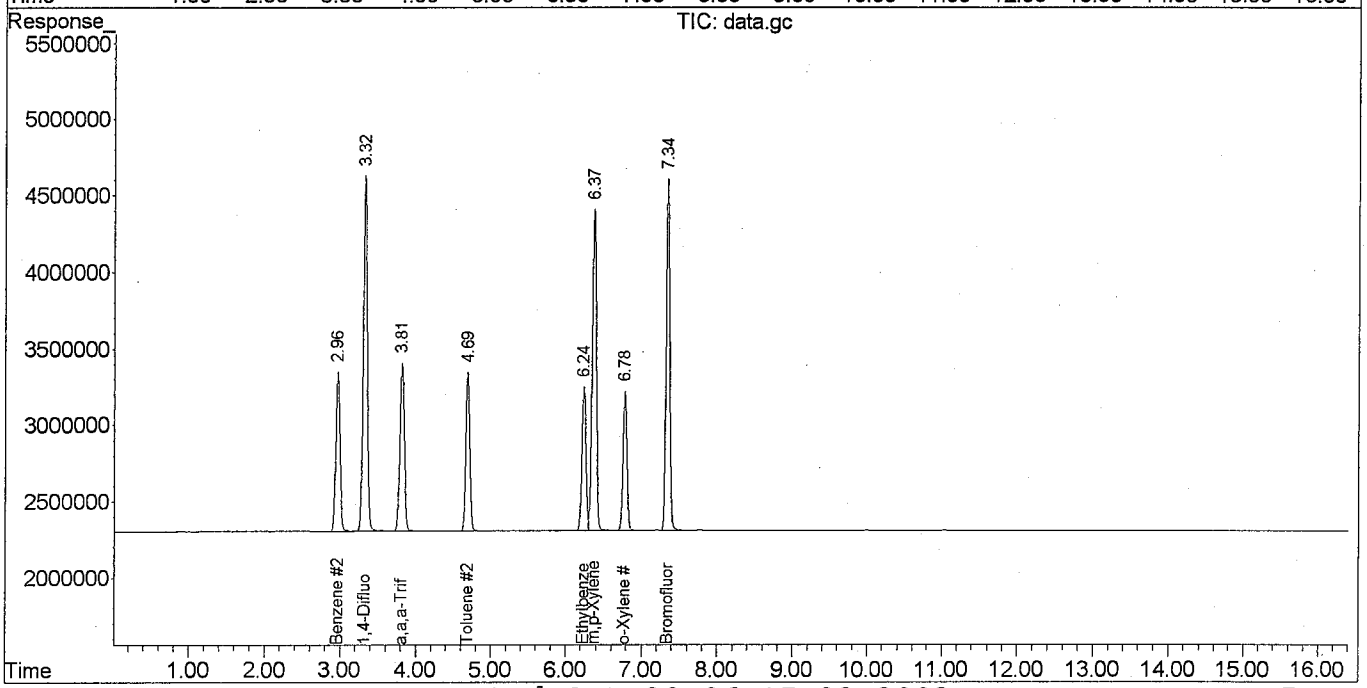
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F005.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F005.D\1028R005.D\data.gc
Acq On : 28 Oct 2003 04:08 pm Operator: tf
Sample : k2308433-004dms Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

BTEX

Sample Name: Lab Control Sample
Lab Code: KWG0317284-3

Extraction Method: EPA 5035/5030B
Analysis Method: 8021B

Units: mg/Kg
Basis: Dry
Level: Med

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**0.959**		0.050	1	10/28/03	10/28/03	KWG0317284	
Toluene	**0.939**		0.10	1	10/28/03	10/28/03	KWG0317284	
Ethylbenzene	**0.971**		0.10	1	10/28/03	10/28/03	KWG0317284	
m,p-Xylenes	**1.94**		0.10	1	10/28/03	10/28/03	KWG0317284	
o-Xylene	**0.953**		0.10	1	10/28/03	10/28/03	KWG0317284	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	87	37-130	10/28/03	Acceptable

Comments:

Exception Report

Data File: J:\GC06B\DATA\102803\1028F003.D
Lab ID: KWG0317284-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 10/28/2003 15:05
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: J:\GC06B\DATA\102803\1028F003.D\1028R003.D
Lab ID: KWG0317284-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 10/28/2003 15:05
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: Galindez

Secondary Review: gw 10/31/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/28/2003

Analysis Lot:	KWG0317374	**Prep Lot:**	KWG0317284	**Report Group:**	
Analysis Method:	8021B	**Prep Method:**	EPA 5035/5030B		
Prep Ref:	245217	**Prep Date:**	10/28/2003		

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:	J:\GC06B\DATA\102803\1028F007.D	**Method ID:**	MJ204
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F003.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F003.D\1028R003.D			**Vial:**	165
Acqu Date:	10/28/2003 15:05	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317284-3				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.85 +0.03	3.81 +0.02	518304	4390760	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.29 +0.02	3.31 +0.02	1091291	8947701	101.48	101.33			101OK
					%Recovery =	101OK	101OK	Limits =	50-150	
1	Bromofluorobenzene	8.43 +0.02	7.34 +0.03	1069443	8744726	41.76	43.41			87OK
					%Recovery =	84OK	87OK	Limits =	37-130	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene	4.04 +0.02	2.96 +0.02	533563	4360939	18.62	19.18	0.931	0.959	**0.959**
1	Toluene	5.91 +0.03	4.69 +0.03	496890	4253118	18.62	18.79	0.931	0.939	**0.939**
1	Ethylbenzene	7.46 +0.02	6.23 +0.03	460947	3798527	19.43	19.13	0.971	0.956	**0.971**
1	m,p-Xylenes	7.68 +0.03	6.37 +0.03	1025442	8584964	37.83	38.84	1.89	1.94	**1.94**
1	o-Xylene	8.05 +0.02	6.78 +0.03	440056	3729911	19.05	17.72	0.953	0.886	**0.953**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10 ml
Prep Final Vol:	50 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1 ml
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F003.D\1028R003.D\data.gc
Acq On : 28 Oct 2003 03:05 pm Operator: tf
Sample : kwg0317284-3lcs Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:13:59 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.85	3.81	518304	4390760	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.31	1091291	8947701	101.479	101.330
3)	S	Bromofluorobenze	8.43	7.34	1069443	8744726	41.762	43.412
		Target Compounds						
4)	T	Benzene	4.04	2.96	533563	4360939	18.618	19.181
5)	T	Toluene	5.91	4.69	496890	4253118	18.623	18.785
6)	T	Ethylbenzene	7.46	6.23	460947	3798527	19.428	19.127
7)	T	m,p-Xylenes	7.68	6.37	1025442	8584964	37.828	38.836
8)	T	o-Xylene	8.05	6.78	440056	3729911	19.053	17.719

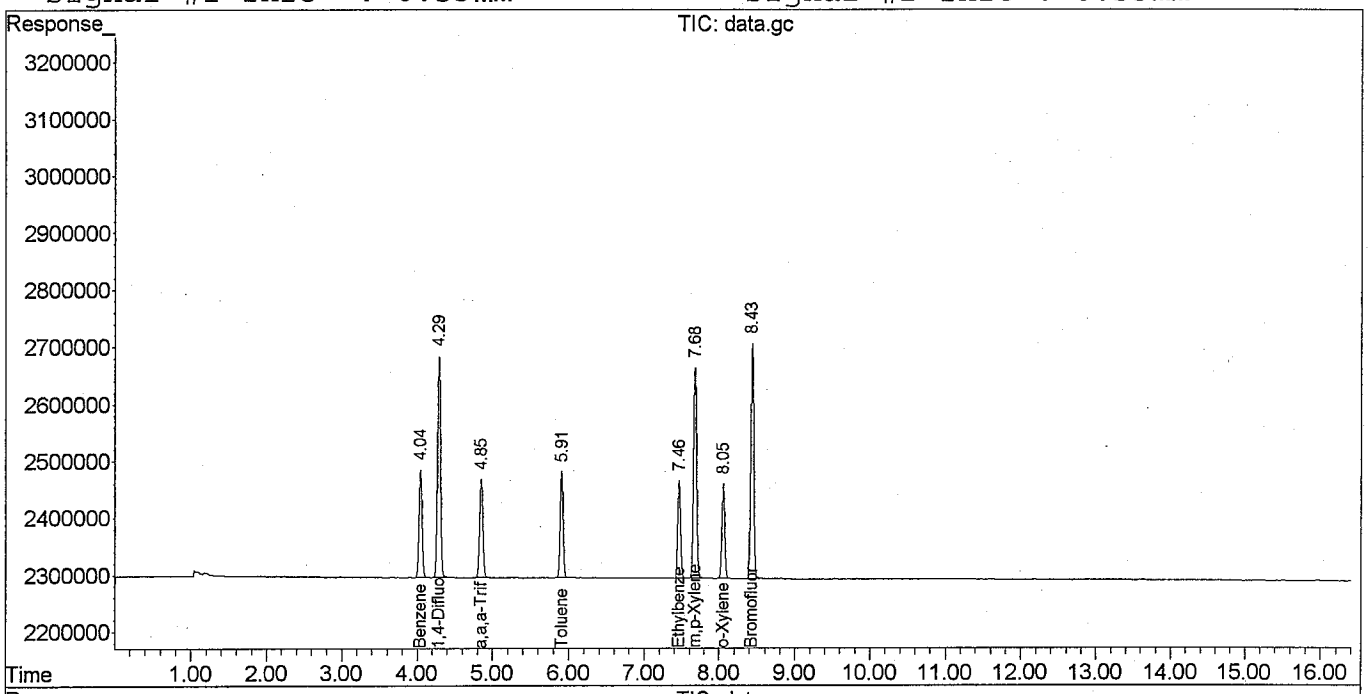
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

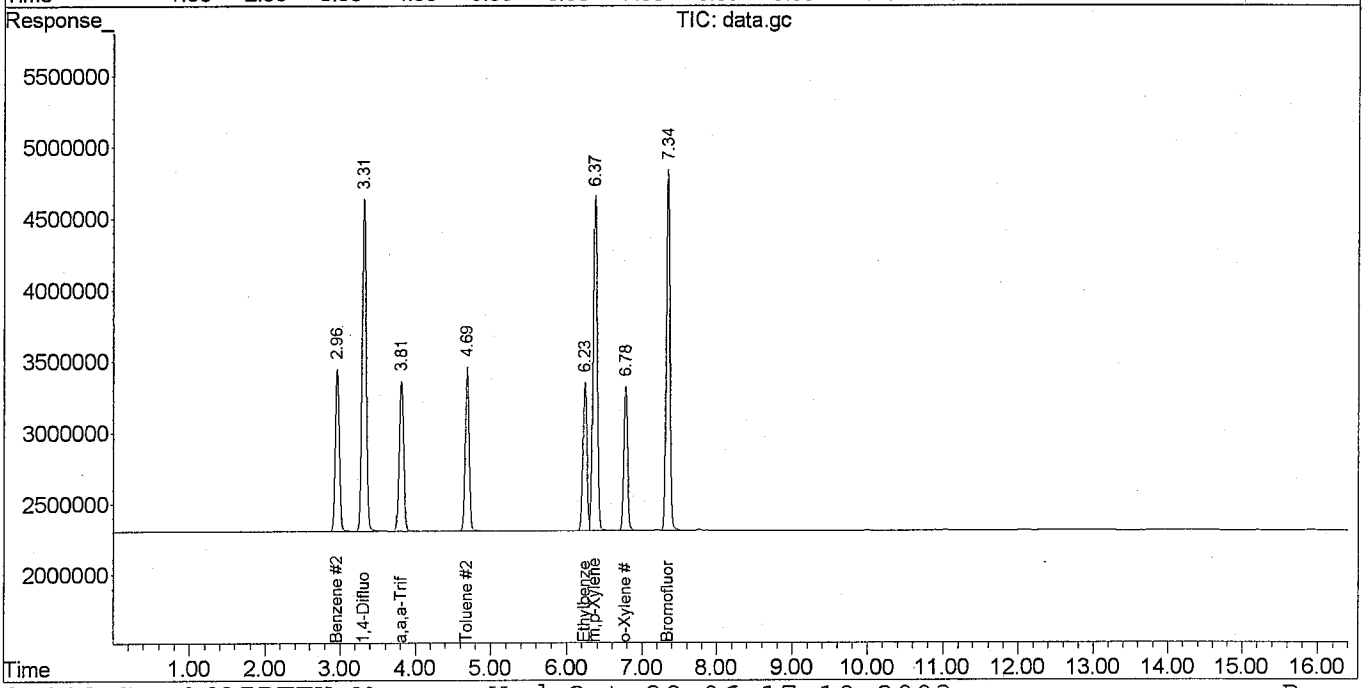
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F003.D\1028R003.D\data.gc
Acq On : 28 Oct 2003 03:05 pm Operator: tf
Sample : kwg0317284-3lcs Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Organic Analysis:
BTEX

Validation Package

Standards Data

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Level ID	File ID	Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D\0625R003.D	E	J:\GC06B\DATA\062503\0625F007.D\0625R007.D
B	J:\GC06B\DATA\062503\0625F004.D\0625R004.D	F	J:\GC06B\DATA\062503\0625F008.D\0625R008.D
C	J:\GC06B\DATA\062503\0625F005.D\0625R005.D	G	J:\GC06B\DATA\062503\0625F009.D\0625R009.D
D	J:\GC06B\DATA\062503\0625F006.D\0625R006.D	H	J:\GC06B\DATA\062503\0625F010.D\0625R010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.14	B	0.50	2.48	C	1.0	2.52	D	5.0	2.67	E	20	3.28
	F	50	2.54	G	100	2.61	H	200	2.47						
Toluene				B	0.50	2.47	C	1.0	2.53	D	5.0	2.62	E	20	3.15
	F	50	2.44	G	100	2.50	H	200	2.33						
Ethylbenzene				B	0.50	2.14	C	1.0	2.18	D	5.0	2.31	E	20	2.78
	F	50	2.16	G	100	2.21	H	200	2.05						
m,p-Xylenes				B	1.0	2.39	C	2.0	2.49	D	10	2.65	E	40	3.15
	F	100	2.39	G	200	2.40	H	400	2.14						
o-Xylene	A	0.40	2.40	B	0.50	2.55	C	1.0	2.75	D	5.0	2.34	E	20	2.78
	F	50	2.14	G	100	2.19	H	200	2.02						
Bromofluorobenzene				B	25	2.32	C	40	2.14	D	50	2.19	E	100	2.75
	F	150	2.07												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	12.3		≤ 20	2.59		0.01
Toluene	MS	AverageRF	% RSD	10.4		≤ 20	2.58		0.01
Ethylbenzene	MS	AverageRF	% RSD	10.7		≤ 20	2.26		0.01
m,p-Xylenes	MS	AverageRF	% RSD	12.6		≤ 20	2.52		0.01
o-Xylene	MS	AverageRF	% RSD	11.8		≤ 20	2.40		0.01
Bromofluorobenzene	SURR	AverageRF	% RSD	11.9		≤ 20	2.29		

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003
Date Analyzed: 06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration ID: CAL2726
Units: ug/L

File ID: J:\GC06B\DATA\062503\0625F012.D\0625R012.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	18	2.59	2.38	-8	NA	± 15 %	AverageRF
Toluene	20	18	2.58	2.36	-8	NA	± 15 %	AverageRF
Ethylbenzene	20	18	2.26	2.07	-9	NA	± 15 %	AverageRF
m,p-Xylenes	40	40	2.52	2.53	0	NA	± 15 %	AverageRF
o-Xylene	20	19	2.40	2.27	-5	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Level ID	File ID	Level ID	File ID
A	J:\GC06B\DATA\062503\0625F003.D	E	J:\GC06B\DATA\062503\0625F007.D
B	J:\GC06B\DATA\062503\0625F004.D	F	J:\GC06B\DATA\062503\0625F008.D
C	J:\GC06B\DATA\062503\0625F005.D	G	J:\GC06B\DATA\062503\0625F009.D
D	J:\GC06B\DATA\062503\0625F006.D	H	J:\GC06B\DATA\062503\0625F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.40	2.59	B	0.50	2.54	C	1.0	2.59	D	5.0	2.78	E	20	3.43
	F	50	2.68	G	100	2.79	H	200	2.70						
Toluene				B	0.50	2.30	C	1.0	2.29	D	5.0	2.50	E	20	3.20
	F	50	2.53	G	100	2.65	H	200	2.54						
Ethylbenzene	A	0.40	1.74	B	0.50	2.09	C	1.0	2.04	D	5.0	2.31	E	20	2.98
	F	50	2.35	G	100	2.45	H	200	2.36						
m,p-Xylenes				B	1.0	2.13	C	2.0	2.32	D	10	2.57	E	40	3.28
	F	100	2.60	G	200	2.74	H	400	2.66						
o-Xylene				B	0.50	1.73	C	1.0	1.95	D	5.0	2.18	E	20	2.82
	F	50	2.26	G	100	2.37	H	200	2.29						
Bromofluorobenzene				B	25	2.42	C	40	2.25	D	50	2.28	E	100	3.03
	F	150	2.38												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003

Initial Calibration Summary
BTEX

Calibration ID: CAL2726
Instrument ID: GC06B

Column: DB-VRX

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Benzene	MS	AverageRF	% RSD	10.3		≤ 20	2.76		0.01
Toluene	MS	AverageRF	% RSD	11.9		≤ 20	2.57		0.01
Ethylbenzene	MS	AverageRF	% RSD	15.8		≤ 20	2.29		0.01
m,p-Xylenes	MS	AverageRF	% RSD	13.8		≤ 20	2.62		0.01
o-Xylene	MS	AverageRF	% RSD	15.4		≤ 20	2.23		0.01
Bromofluorobenzene	SURR	AverageRF	% RSD	12.9		≤ 20	2.47		

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 06/25/2003
Date Analyzed: 06/25/2003

Second Source Calibration Verification
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration ID: CAL2726
Units: ug/L

File ID: J:\GC06B\DATA\062503\0625F012.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	2.76	2.57	-7	NA	± 15 %	AverageRF
Toluene	20	18	2.57	2.35	-9	NA	± 15 %	AverageRF
Ethylbenzene	20	19	2.29	2.14	-7	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	2.23	2.16	-3	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

DATA ANALYSIS PARAMETERS

Method Name: J:\GC06B\METHODS\0625BTEX.M

Percent Report Settings

Sort By: Signal

Output Destination
Screen: No
Printer: No
File: No

Integration Events: Meth Default

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
Screen: No
Printer: Yes
File: No

Generate Report During Run Method: Yes

CAL-~~2669~~ 2726
Calibration Last Updated: Wed Jun 25 15:11:43 2003

Reference Window: 2.00 Minutes
Non-Reference Window: 1.00 Minutes
Correlation Window: 0.10 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

1) a,a,a-Trifluorotoluene (ISTD)

Ret. Time 5.02 min., Extract & Integrate from 4.87 to 5.17 min.

Lvl	ID	Conc (ug/L)	Response
1		50.000	624075
2		50.000	585621
3		50.000	622262
4		50.000	635099
5		50.000	491716
6		50.000	619415
7		50.000	611566
8		50.000	617124
w_cc		50.000	-1
s_cc		50.000	-1
ws_c		50.000	-1
9		50.000	547868
10		50.000	549463

ISTD conc: 50.000 ug/L
Curve Fit: Avg. RF

---

2) 1,4-Difluorobenzene ( )
Ret. Time 4.46 min., Extract & Integrate from 4.31 to 4.61 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	288714
3		40.000	487376
4		50.000	610726
5		100.000	1238044
6		150.000	1860958
7		not used for this compound	
8		not used for this compound	
w_cc		100.000	-1
s_cc		not used for this compound	
ws_c		100.000	-1
9		not used for this compound	
10		50.000	539464

Curve Fit: Linear

---

3) Bromofluorobenzene ( )
Ret. Time 8.61 min., Extract & Integrate from 8.47 to 8.75 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	707425
3		40.000	1119678
4		50.000	1446365
5		100.000	2975551
6		150.000	4429040
7		not used for this compound	
8		not used for this compound	
w_cc		not used for this compound	
s_cc		50.000	-1
ws_c		100.000	-1
9		not used for this compound	
10		not used for this compound	

Curve Fit: Avg. RF

---

4) Benzene

Ret. Time 4.22 min., Extract & Integrate from ( ) 4.07 to 4.37 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	12951
2		0.500	14899
3		1.000	32260
4		5.000	176263
5		20.000	675119
6		50.000	1659647
7		100.000	3418337
8		200.000	6676838
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

---

5) Toluene

Ret. Time 6.08 min., Extract & Integrate from ( ) 5.94 to 6.22 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	13478
3		1.000	28497
4		5.000	159031
5		20.000	630057
6		50.000	1564197
7		100.000	3240439
8		200.000	6279842
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		not used for this compound	
10		50.000	-1

Curve Fit: Avg. RF

---

6) Ethylbenzene

Ret. Time 7.64 min., Extract & Integrate from ( ) 7.50 to 7.78 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	8686
2		0.500	12240
3		1.000	25444
4		5.000	146396
5		20.000	585982
6		50.000	1453256
7		100.000	2994342

11/6/25/03

8	200.000	5818870
w_cc	20.000	-1
s_cc	20.000	-1
ws_c	100.000	-1
9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

---

7) m,p-Xylenes ( )

Ret. Time 7.85 min., Extract & Integrate from 7.71 to 7.99 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		1.000	24992
3		2.000	57729
4		10.000	326201
5		40.000	1289801
6		100.000	3216954
7		200.000	6714657
8		400.000	13151828
w_cc		40.000	-1
s_cc		40.000	-1
ws_c		200.000	-1
9		not used for this compound	
10		not used for this compound	

Curve Fit: Avg. RF

---

8) o-Xylene ( )

Ret. Time 8.23 min., Extract & Integrate from 8.09 to 8.37 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	10114
3		1.000	24263
4		5.000	138657
5		20.000	554704
6		50.000	1397221
7		100.000	2898404
8		200.000	5656098
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

---

9) Signal #2 ( )

Ret. Time 0.00 min., Extract & Integrate from 0.00 to 0.00 min.

Lvl	ID	Conc ( )	Response
1		not used for this compound	

11/6/03

2	not used for this compound	
3	not used for this compound	
4	not used for this compound	
5	not used for this compound	
6	not used for this compound	
7	not used for this compound	
8	not used for this compound	
w_cc	not used for this compound	
s_cc	not used for this compound	
ws_c	not used for this compound	
9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

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10) a,a,a-Trifluorotoluene #2 (ISTD)
Ret. Time 3.93 min., Extract & Integrate from 3.78 to 4.08 min.

Lvl	ID	Conc (ug/L)	Response
1		50.000	10036198
2		50.000	9543141
3		50.000	10219304
4		50.000	10303214
5		50.000	8211624
6		50.000	10320586
7		50.000	9918435
8		50.000	9794175
w_cc		50.000	-1
s_cc		50.000	-1
ws_c		50.000	-1
9		50.000	8854112
10		50.000	9249953

ISTD conc: 50.000 ug/L
Curve Fit: Avg. RF

---

11) 1,4-Difluorobenzene #2 ( )
Ret. Time 3.43 min., Extract & Integrate from 3.28 to 3.58 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	4530615
3		40.000	7774325
4		50.000	9774453
5		100.000	19965916
6		150.000	29813813
7		not used for this compound	
8		not used for this compound	
w_cc		100.000	-1
s_cc		not used for this compound	
ws_c		100.000	-1
9		not used for this compound	
10		not used for this compound	

11/26/03

Curve Fit: Avg. RF

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12) Bromofluorobenzene #2 ( )
Ret. Time 7.48 min., Extract & Integrate from 7.34 to 7.62 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		25.000	11092868
3		40.000	17457308
4		50.000	22558443
5		100.000	45213817
6		150.000	63989124
7		not used for this compound	
8		not used for this compound	
w_cc		not used for this compound	
s_cc		50.000	-1
ws_c		100.000	-1
9		not used for this compound	
10		not used for this compound	

Curve Fit: Avg. RF

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13) Benzene #2 ( )
Ret. Time 3.07 min., Extract & Integrate from 2.92 to 3.22 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	172185
2		0.500	236800
3		1.000	515480
4		5.000	2753134
5		20.000	10762100
6		50.000	26167541
7		100.000	51773274
8		200.000	96758587
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

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14) Toluene #2 ( )
Ret. Time 4.82 min., Extract & Integrate from 4.68 to 4.96 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	235292
3		1.000	517593
4		5.000	2696439
5		20.000	10358855
6		50.000	25202171
7		100.000	49652398
8		200.000	91435586
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1

12/25/03

9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

---

15) Ethylbenzene #2 ( )
Ret. Time 6.37 min., Extract & Integrate from 6.23 to 6.51 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		0.500	204291
3		1.000	446426
4		5.000	2377488
5		20.000	9132048
6		50.000	22263267
7		100.000	43897650
8		200.000	80231634
w_cc		20.000	-1
s_cc		20.000	-1
ws_c		100.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

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16) m,p-Xylenes #2 ( )
Ret. Time 6.51 min., Extract & Integrate from 6.37 to 6.65 min.

Lvl	ID	Conc (ug/L)	Response
1		not used for this compound	
2		1.000	456856
3		2.000	1019446
4		10.000	5464117
5		40.000	20701957
6		100.000	49315024
7		200.000	95194502
8		400.000	167833595
w_cc		40.000	-1
s_cc		40.000	-1
ws_c		200.000	-1
9		25.000	-1
10		50.000	-1

Curve Fit: Avg. RF

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17) o-Xylene #2 ( )
Ret. Time 6.92 min., Extract & Integrate from 6.78 to 7.06 min.

Lvl	ID	Conc (ug/L)	Response
1		0.400	192695
2		0.500	243628
3		1.000	562991
4		5.000	2411992
5		20.000	9141729

6	50.000	22038198
7	100.000	43472574
8	200.000	79082953
w_cc	20.000	-1
s_cc	20.000	-1
ws_c	100.000	-1
9	25.000	-1
10	50.000	-1

Curve Fit: Avg. RF

END OF DATA ANALYSIS PARAMETERS

Wed Jun 25 15:15:21 2003

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F001.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F001.D\0625R001.D\data.gc
Acq On : 25 Jun 2003 09:23 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:29 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.93	617501	10003176	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.43	10104	192802	0.855	1.049
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

6/26/03

6/26/03

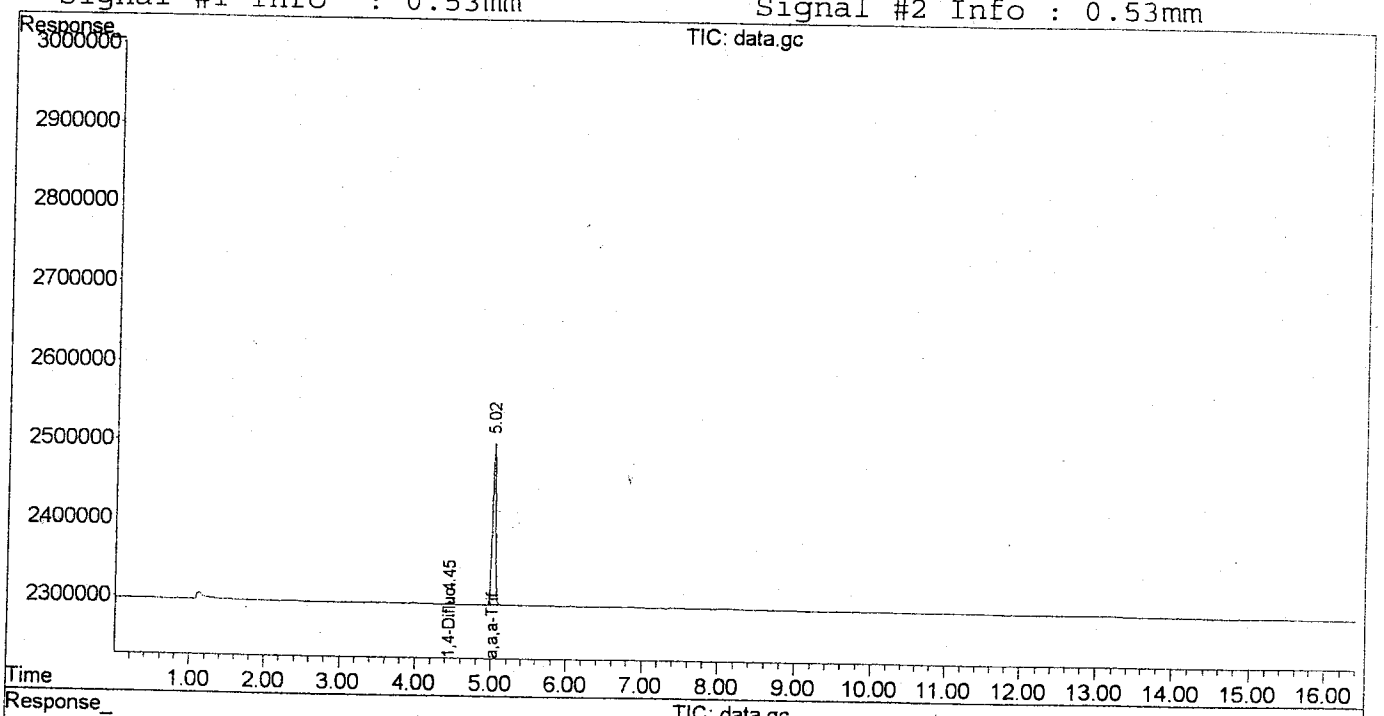
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

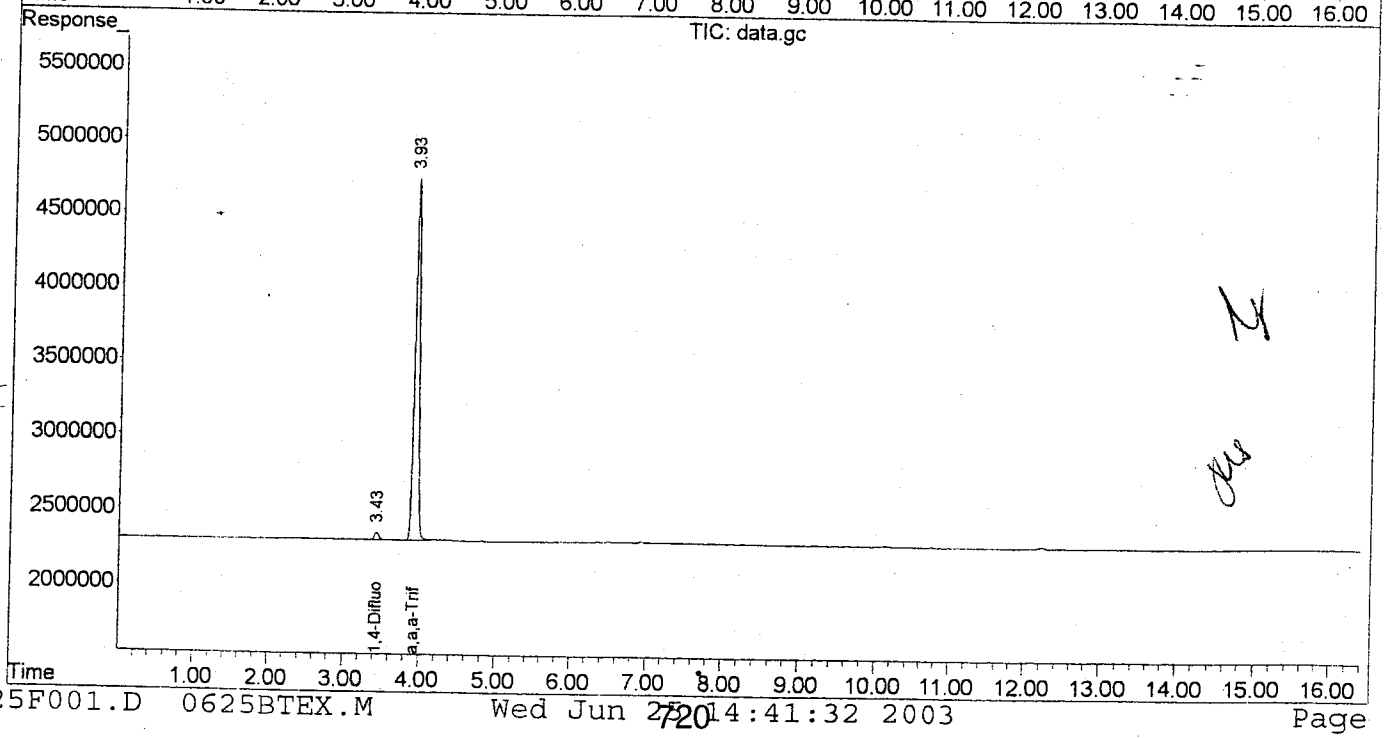
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F001.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F001.D\0625R001.D\data.gc
Acq On : 25 Jun 2003 09:23 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F002.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F002.D\0625R002.D\data.gc
Acq On : 25 Jun 2003 09:55 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:34 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	468105	7579346	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.43	16640	261227	1.858	1.876
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	0.00	0.00	0	0	N.D.	N.D.
6)	T	Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
7)	T	m,p-Xylenes	0.00	0.00	0	0	N.D.	N.D.
8)	T	o-Xylene	0.00	0.00	0	0	N.D.	N.D.

6/26/03

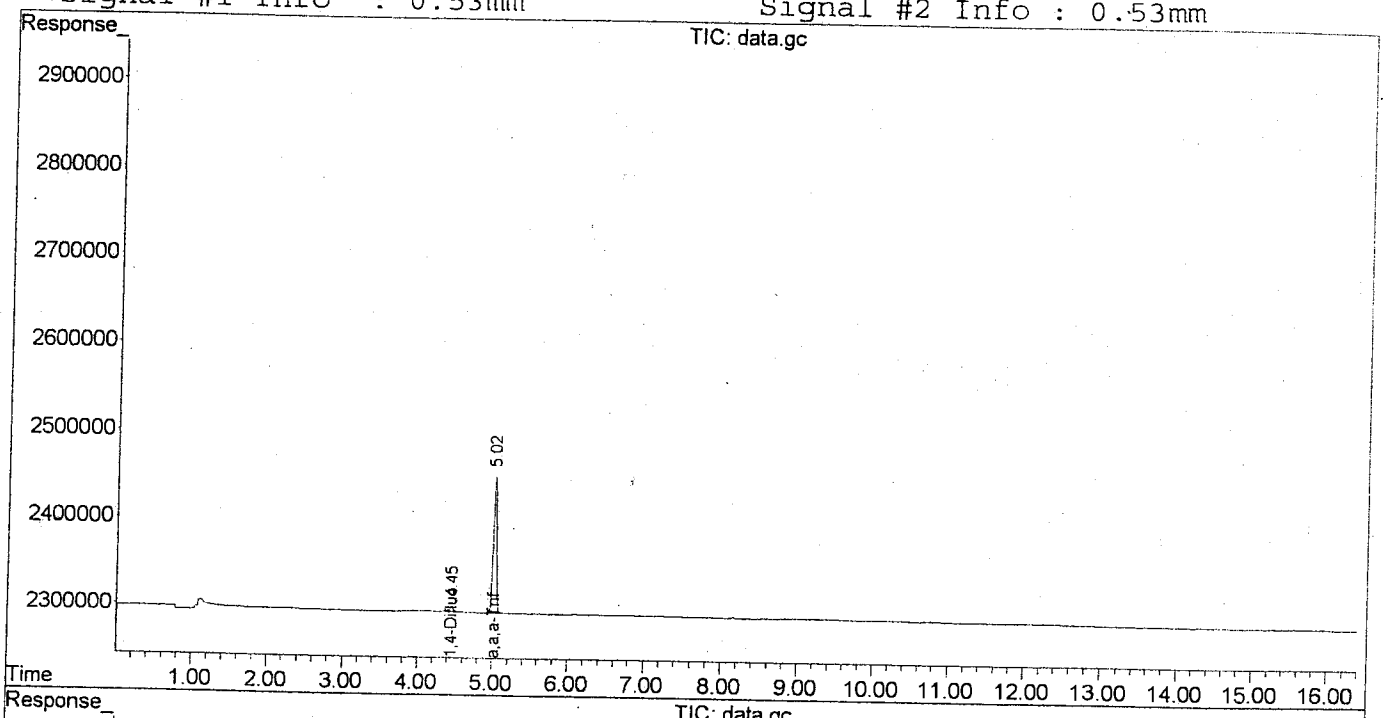
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

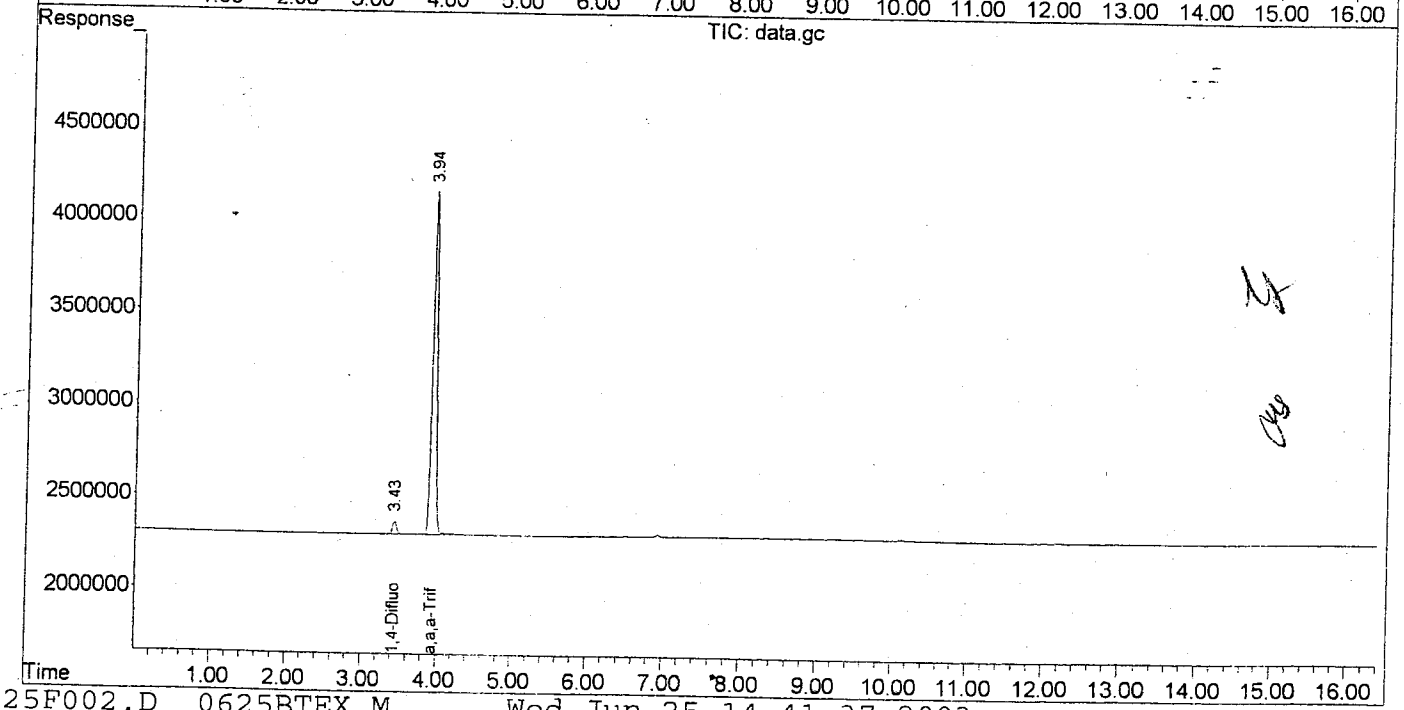
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F002.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F002.D\0625R002.D\data.gc
Acq On : 25 Jun 2003 09:55 am Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:38 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	624075	10036198	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	0.00	3.44	0	86381	N.D.	0.469 #
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	4.21	3.08	12951	172185	0.401m	0.364
5)	T	Toluene	6.09	4.82	8746	168570	0.225	0.369 #
6)	T	Ethylbenzene	7.64	6.37	8686	143713	0.264m	0.364 #
7)	T	m,p-Xylenes	7.85	6.50	18283	327019	0.948	0.737m
8)	T	o-Xylene	8.23	6.92	8343	192695	0.314	0.473 #

Correct Analytes

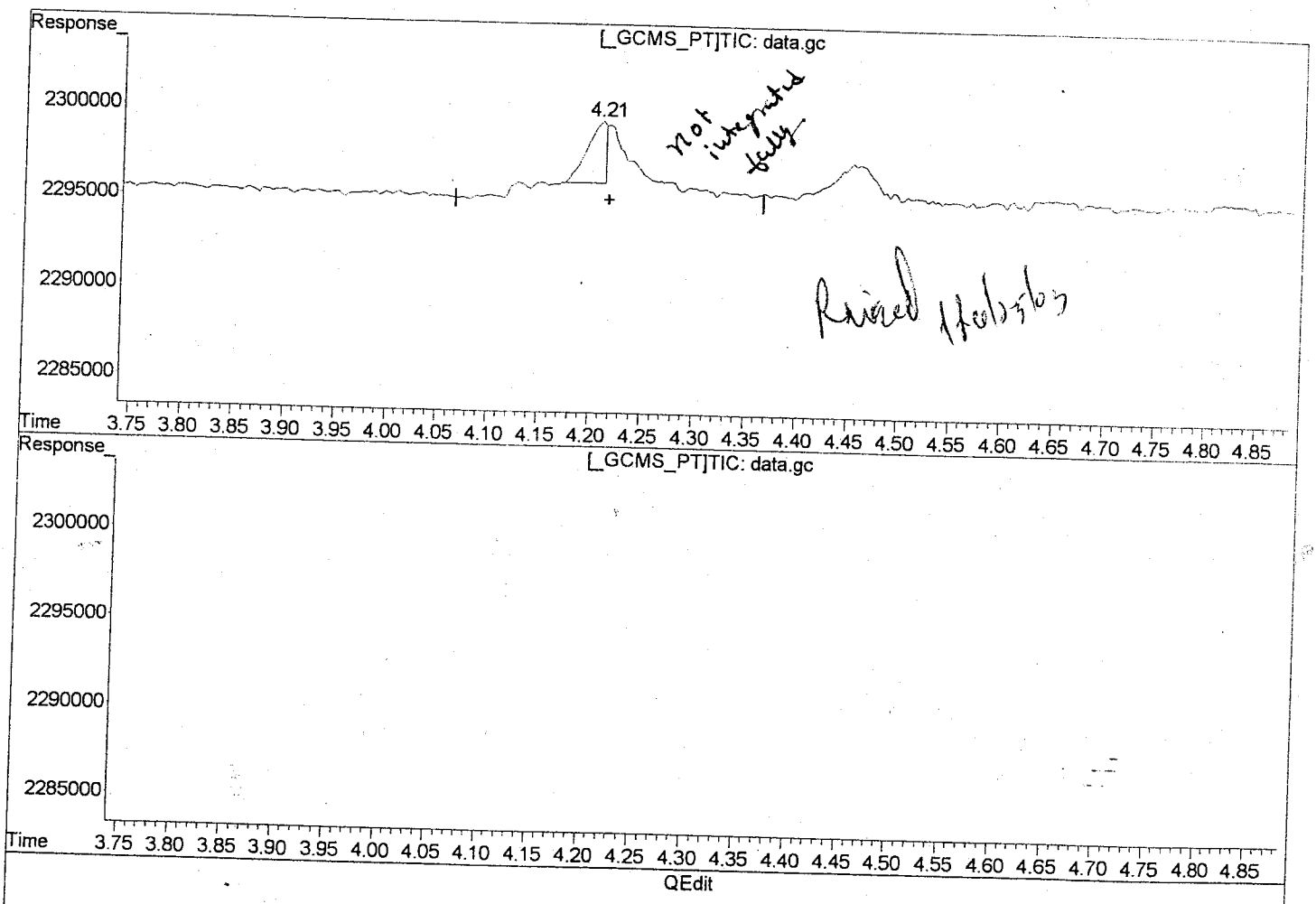
JW 6/26/03

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(4) Benzene (T)

4.21min 0.145ug/L

response 4681

(4) Benzene #2 (T)

3.08min 0.364ug/L

response 172185

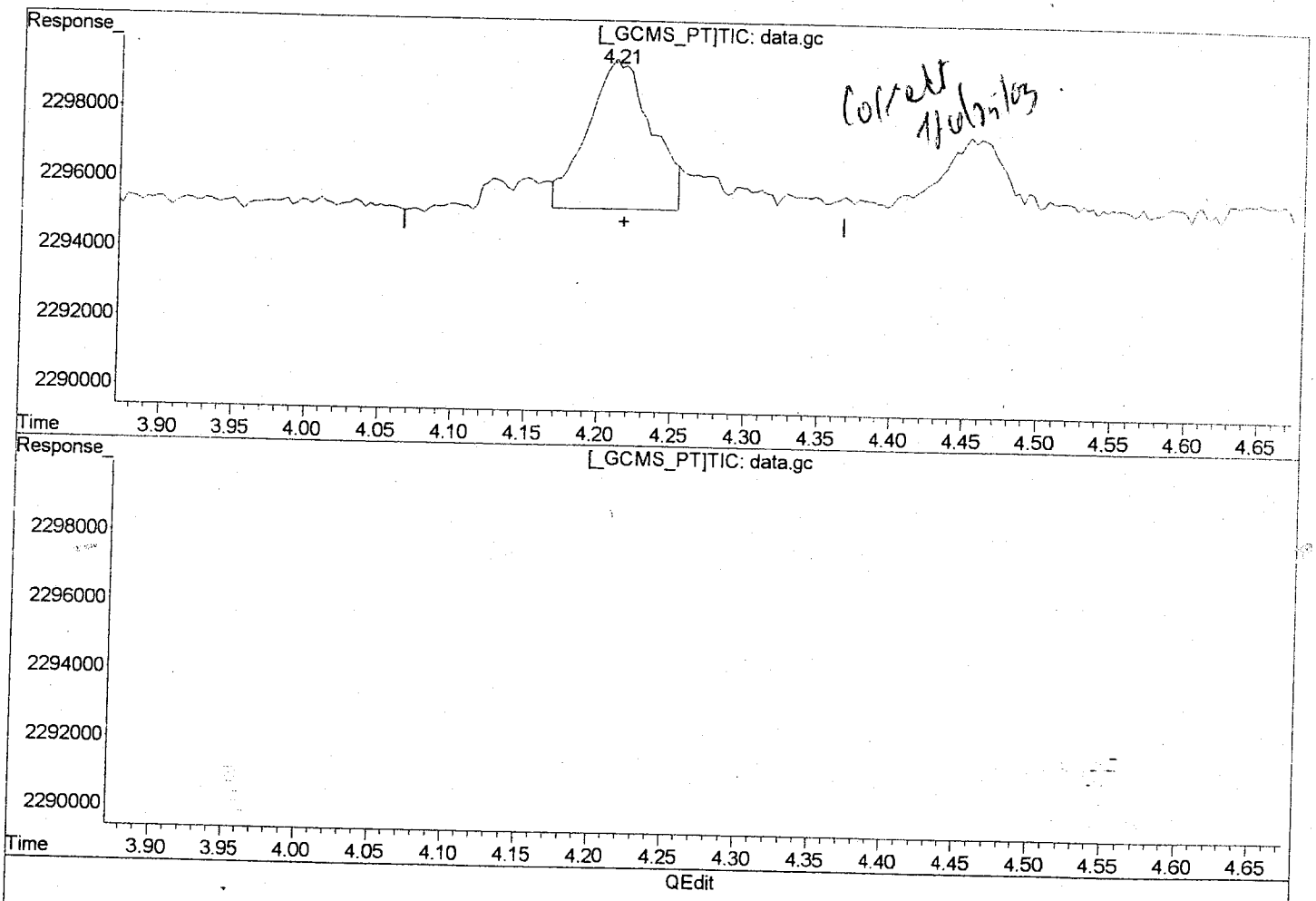
AP 6/26/03

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(4) Benzene (T)

4.21min 0.401ug/L m

response 12951

(4) Benzene #2 (T)

3.08min 0.364ug/L

response 172185

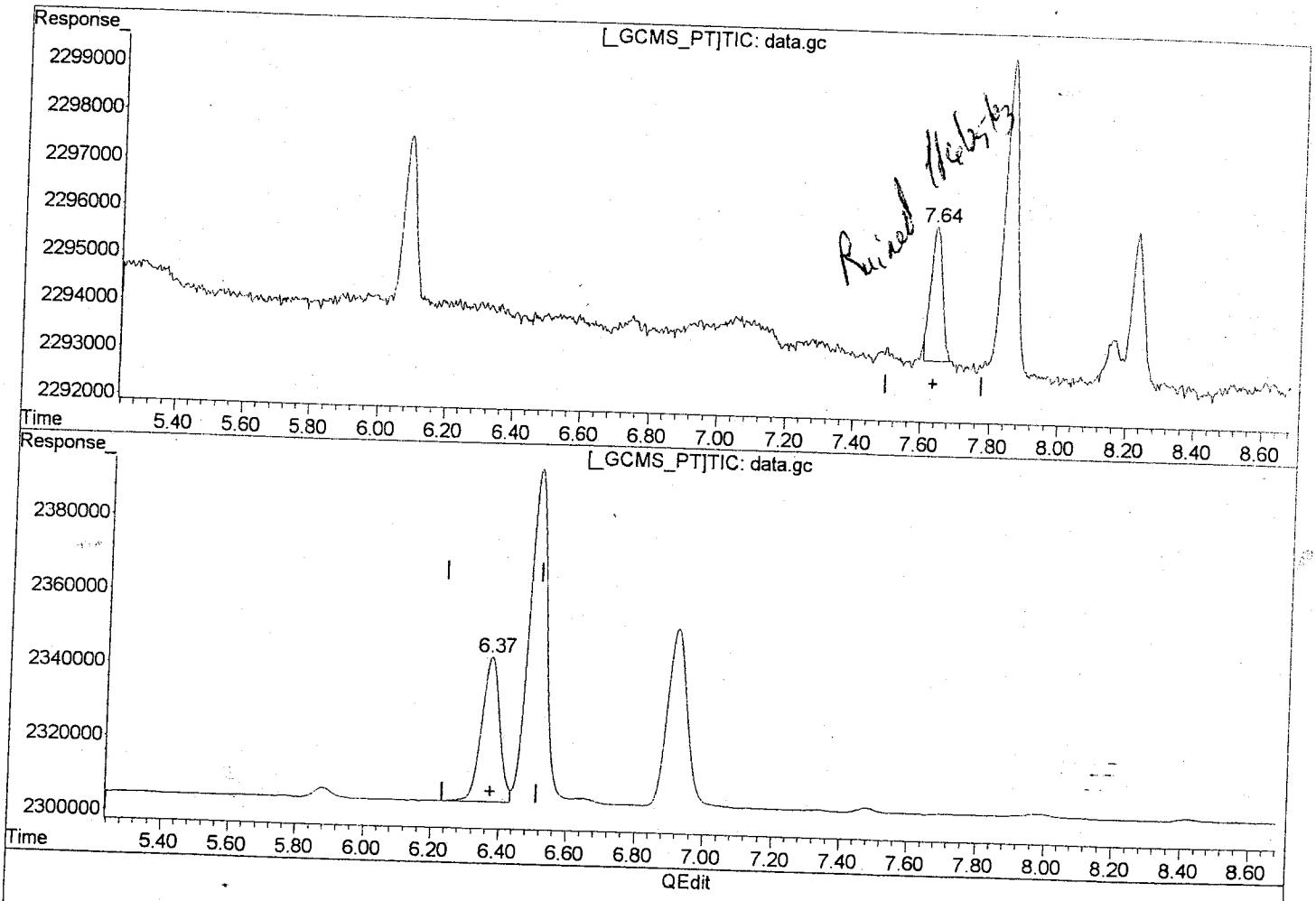
JS 6/26/03

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.64min 0.207ug/L

response 7071

(6) Ethylbenzene #2 (T)

6.37min 0.364ug/L

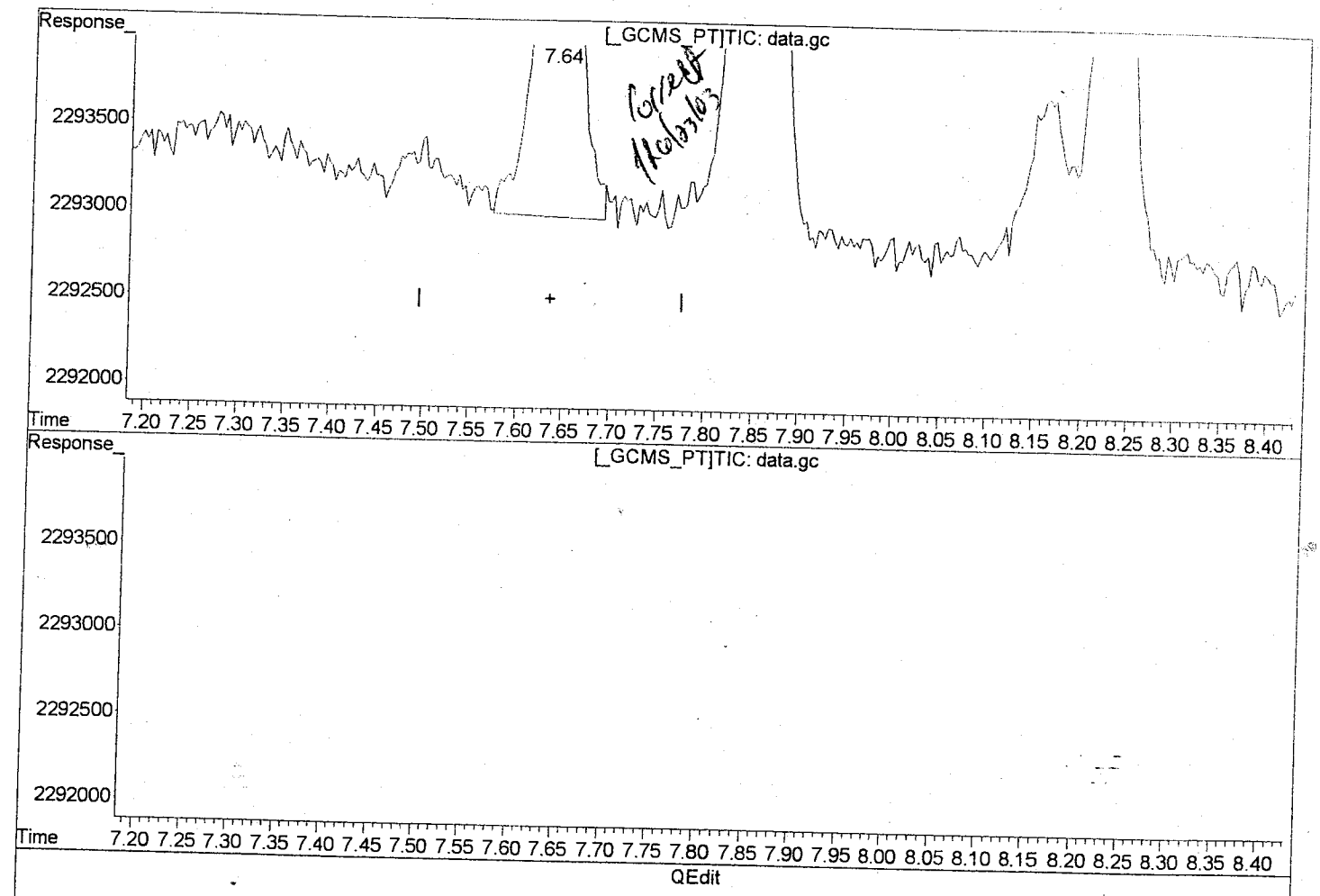
response 143713

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.64min 0.264ug/L m

response 8686

(6) Ethylbenzene #2 (T)

6.37min 0.364ug/L

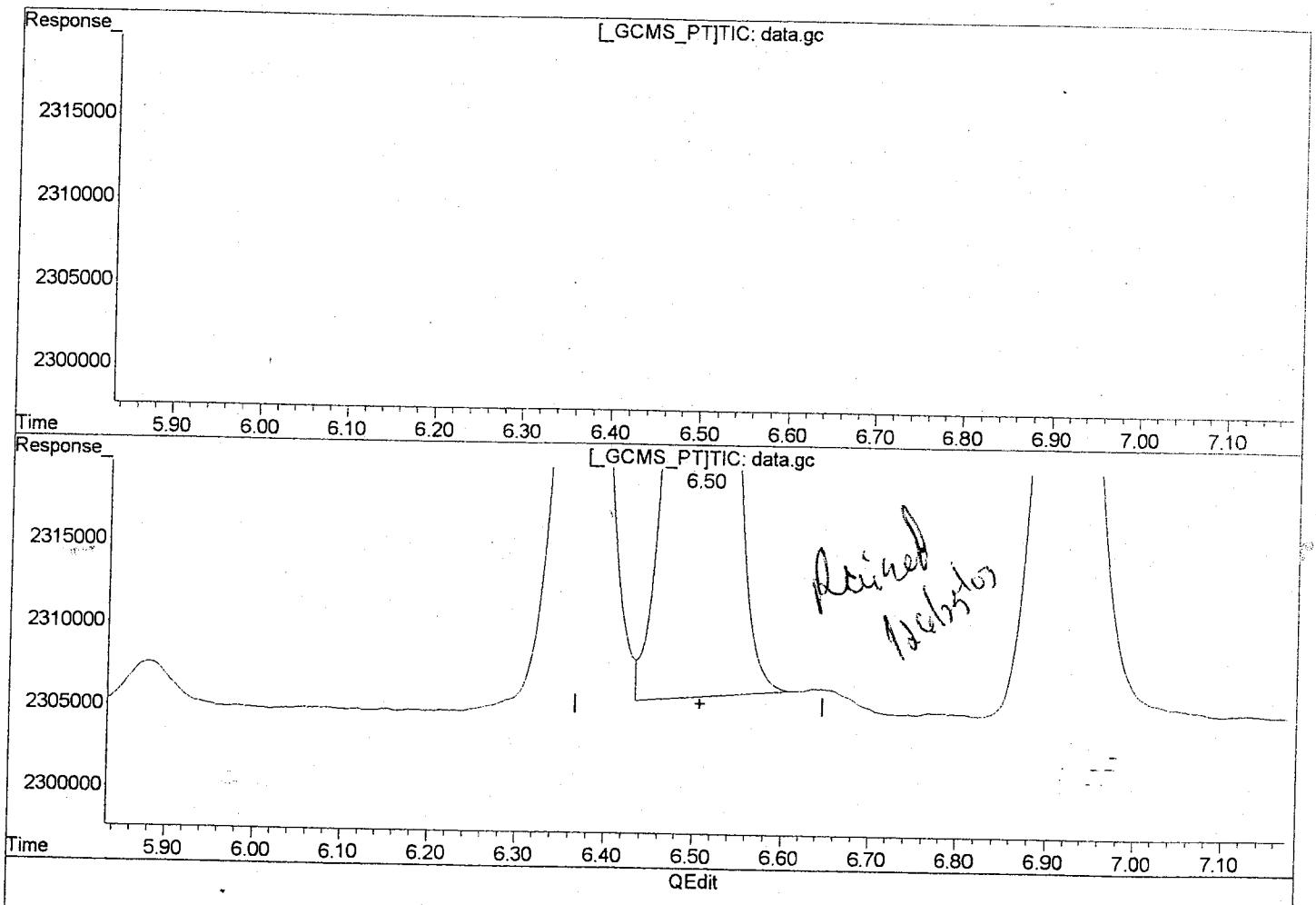
response 143713

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(7) m,p-Xylenes (T)

7.85min 0.948ug/L

response 18283

(7) m,p-Xylenes #2 (T)

6.50min 0.712ug/L

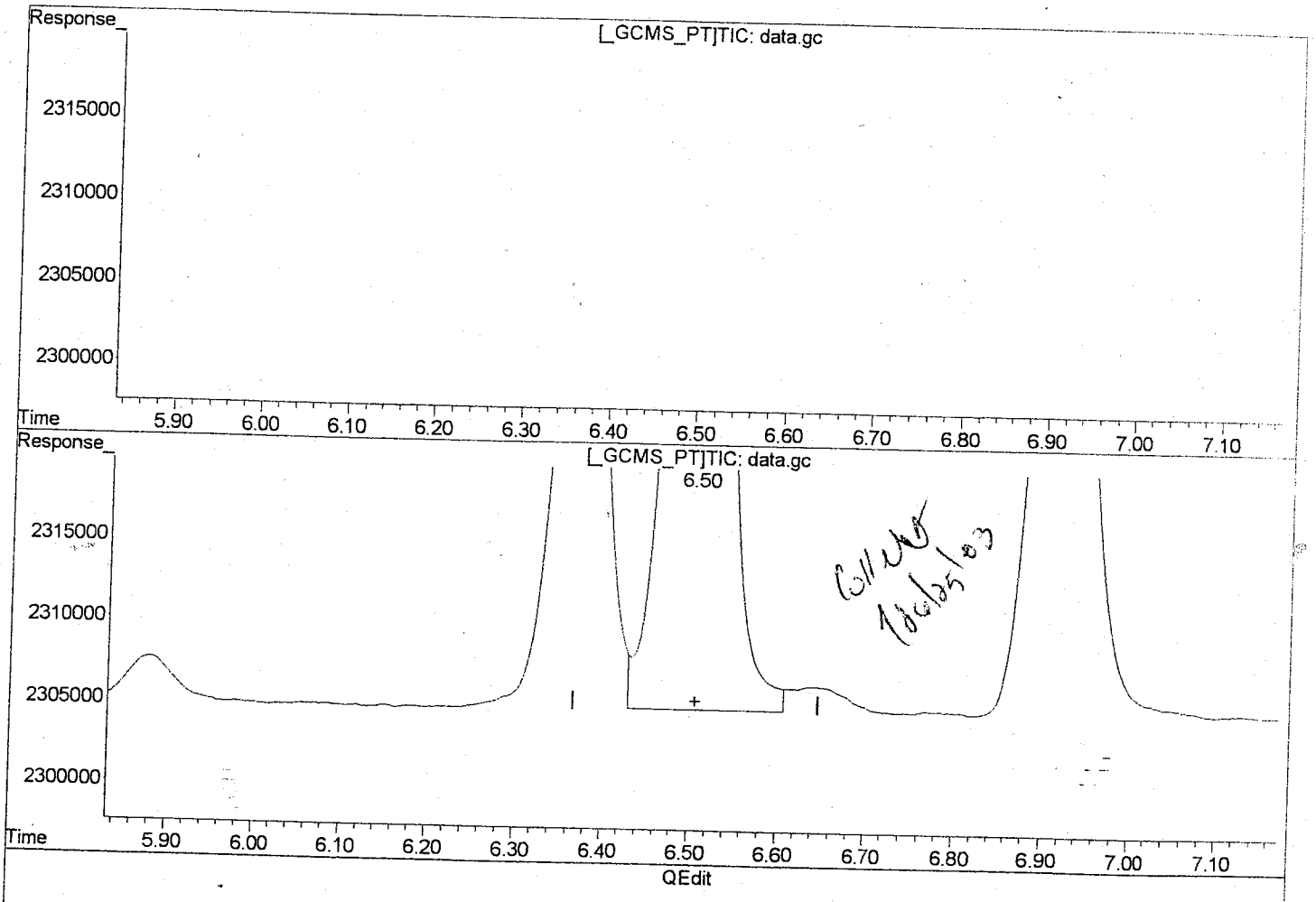
response 315884

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



(7) m,p-Xylenes (T)

7.85min 0.948ug/L

response 18283

(7) m,p-Xylenes #2 (T)

6.50min 0.737ug/L m

response 327019

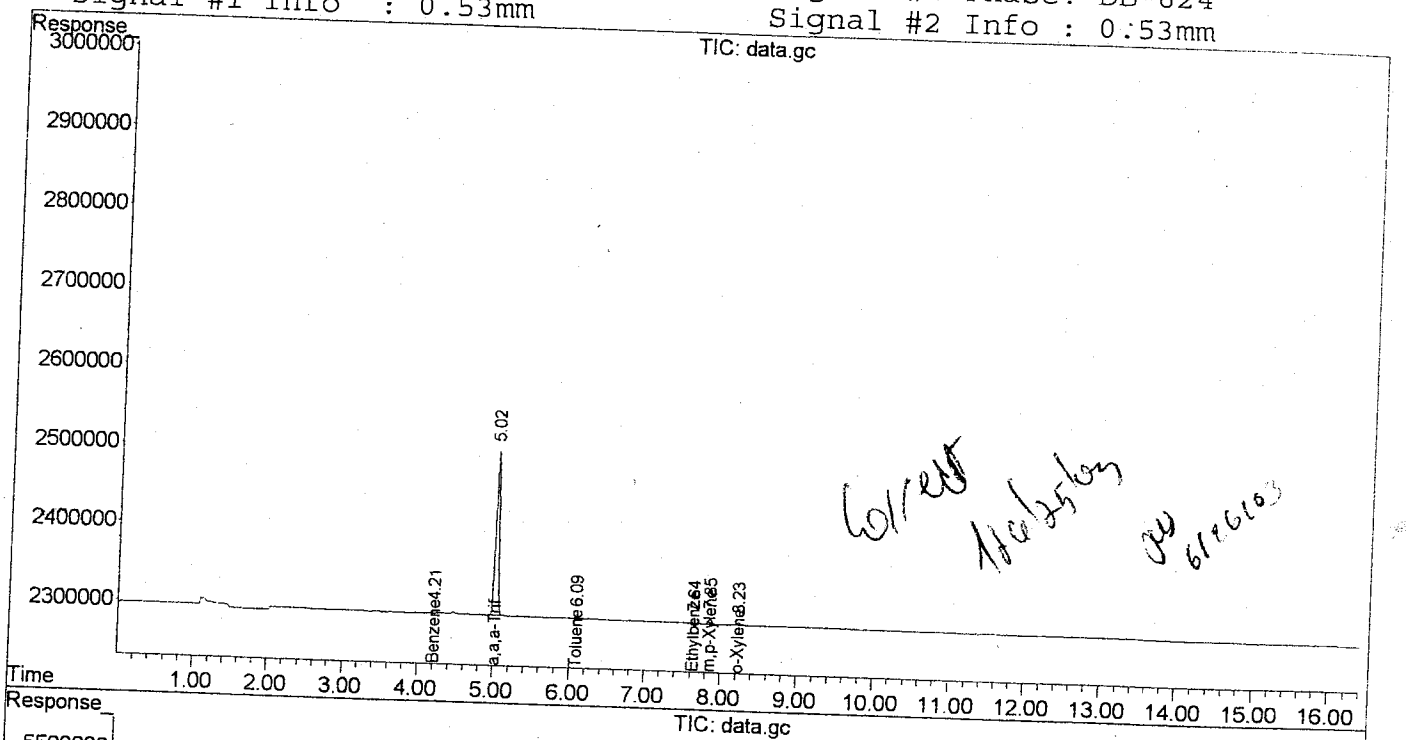
(+) = Expected Retention Time

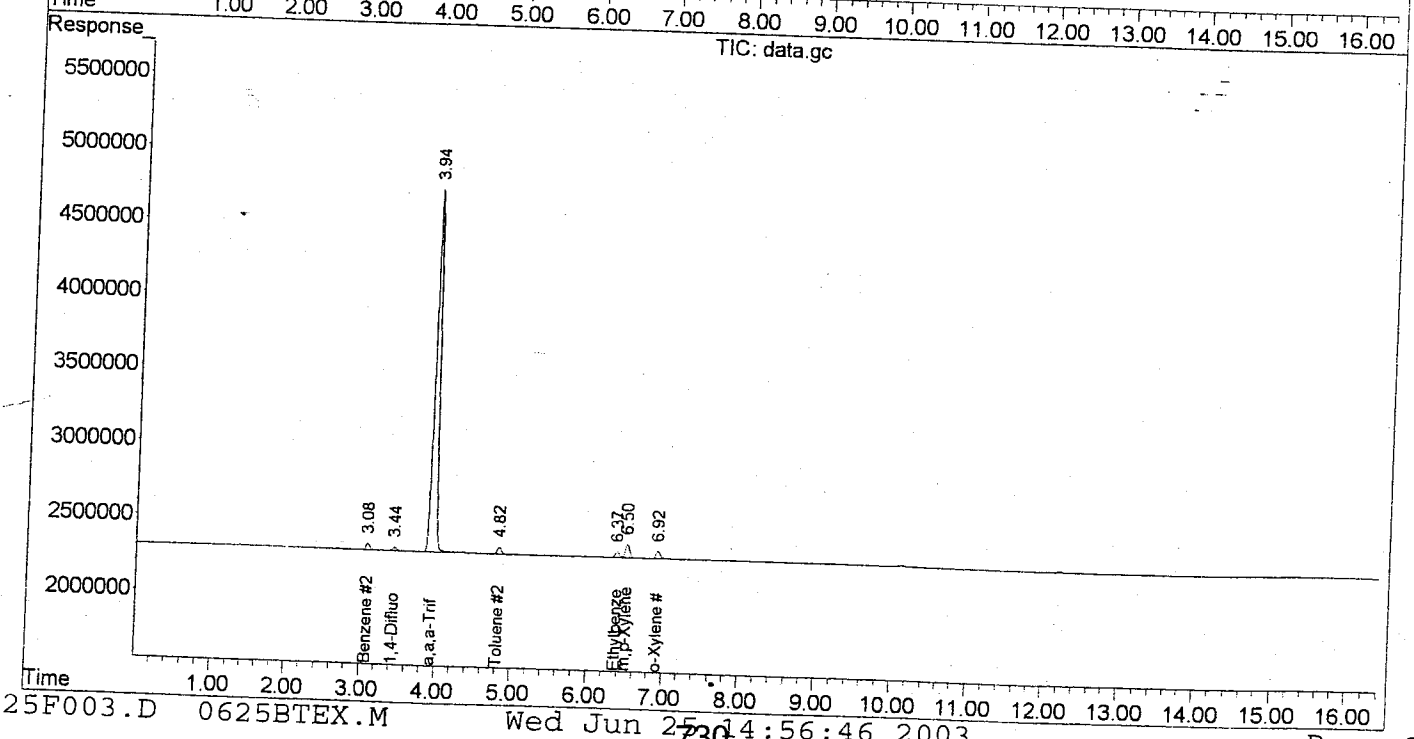
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:57 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm



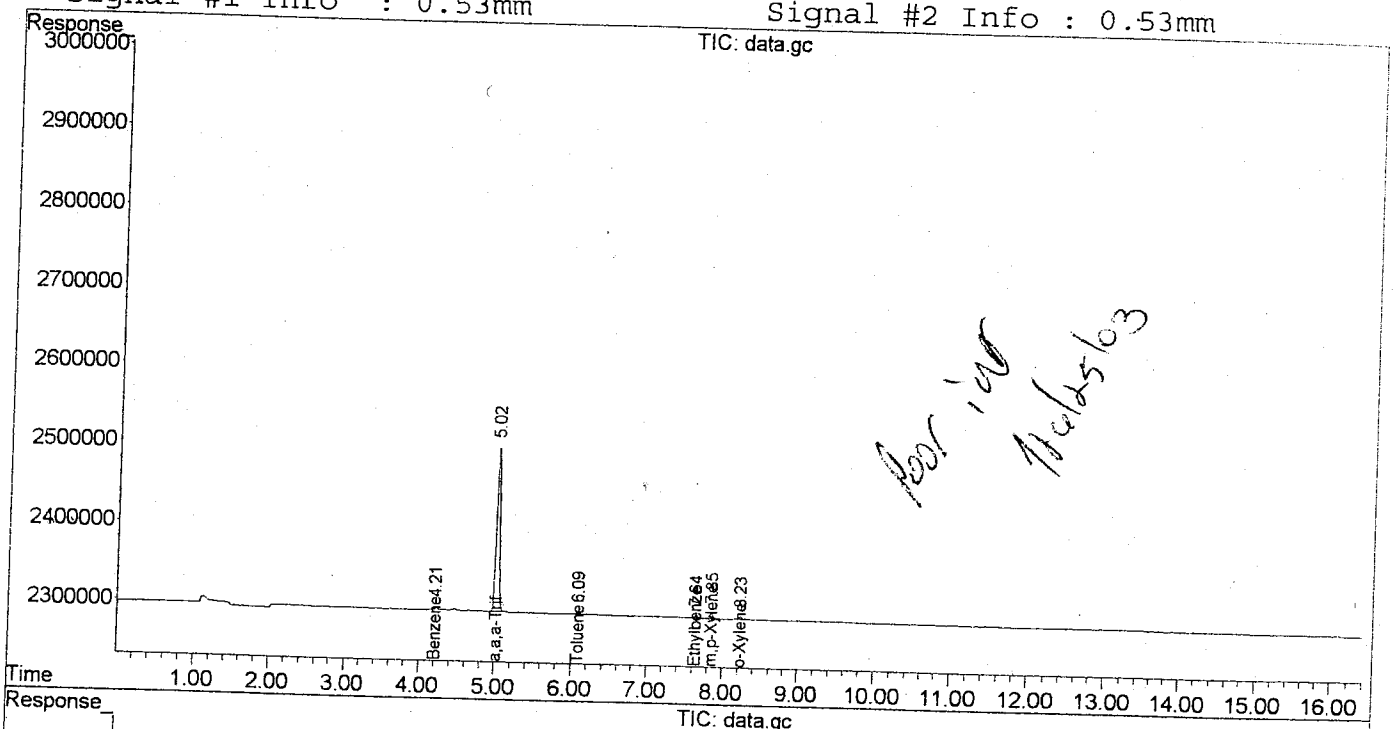


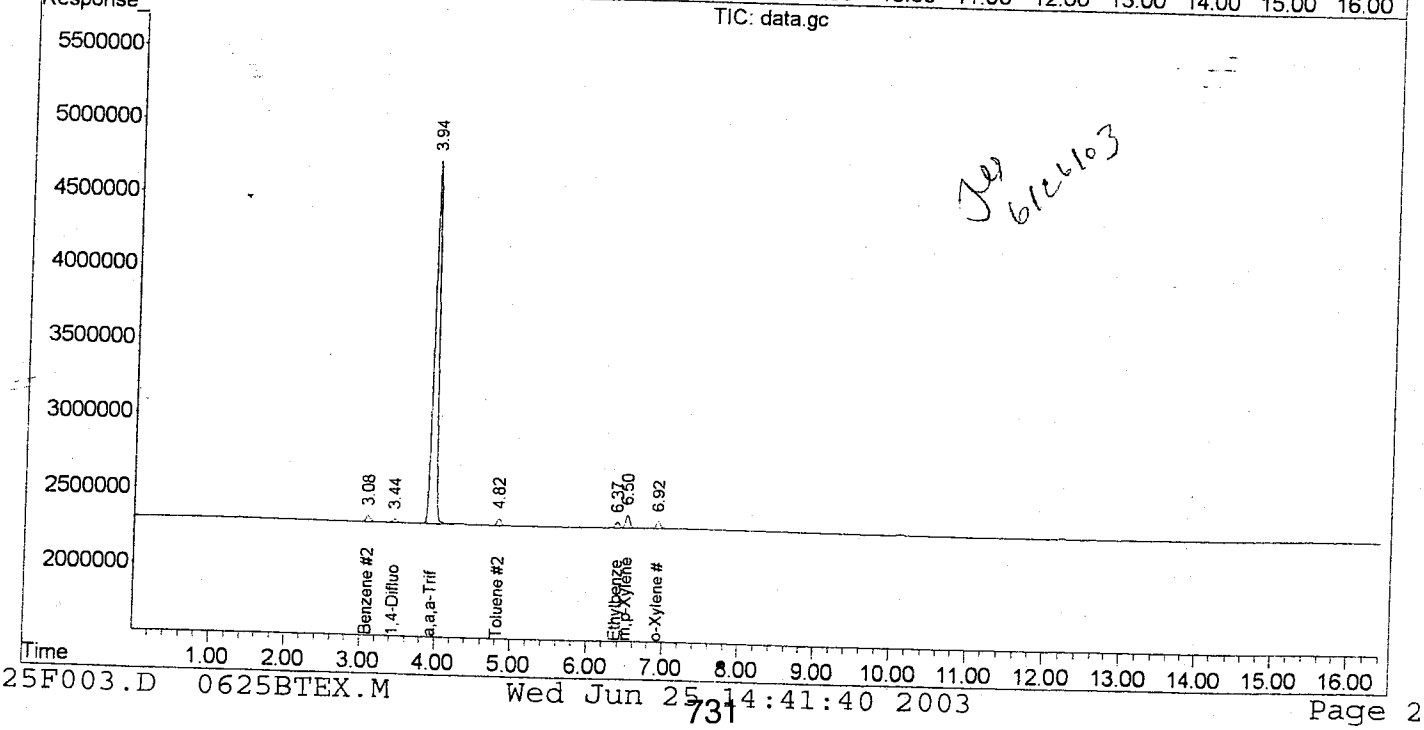
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F003.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F003.D\0625R003.D\data.gc
Acq On : 25 Jun 2003 10:27 am Operator: JW
Sample : hcv2-26m 0.4ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:41 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	a,a,a-Trifluorot	5.02	3.94	585621	9543141	50.000	50.000	
		System Monitoring Compounds							
2)	S	1,4-Difluorobenz	4.46	3.44	288714	4530615	25.774	25.843	
3)	S	Bromofluorobenze	8.60	7.47	707425	11092868	27.225	27.813	
		Target Compounds							
4)	T	Benzene	4.21	3.08	14899	236800	0.491m	0.526	
5)	T	Toluene	6.08	4.82	13478	235292	0.410	0.541	#
6)	T	Ethylbenzene	7.63	6.37	12240	204291	0.419m	0.544	#
7)	T	m,p-Xylenes	7.84	6.50	24992	456856	1.211	1.083	
8)	T	o-Xylene	8.22	6.91	10114	243628	0.403	0.629	#

Collect
1/0 6/26/03

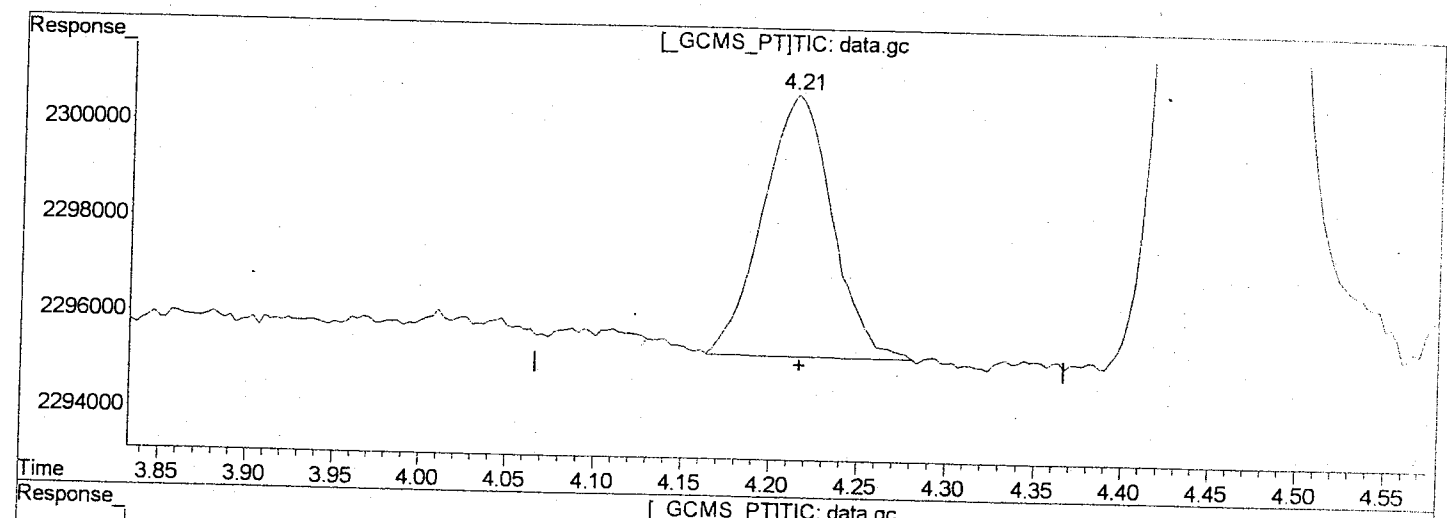
JW 6/26/03

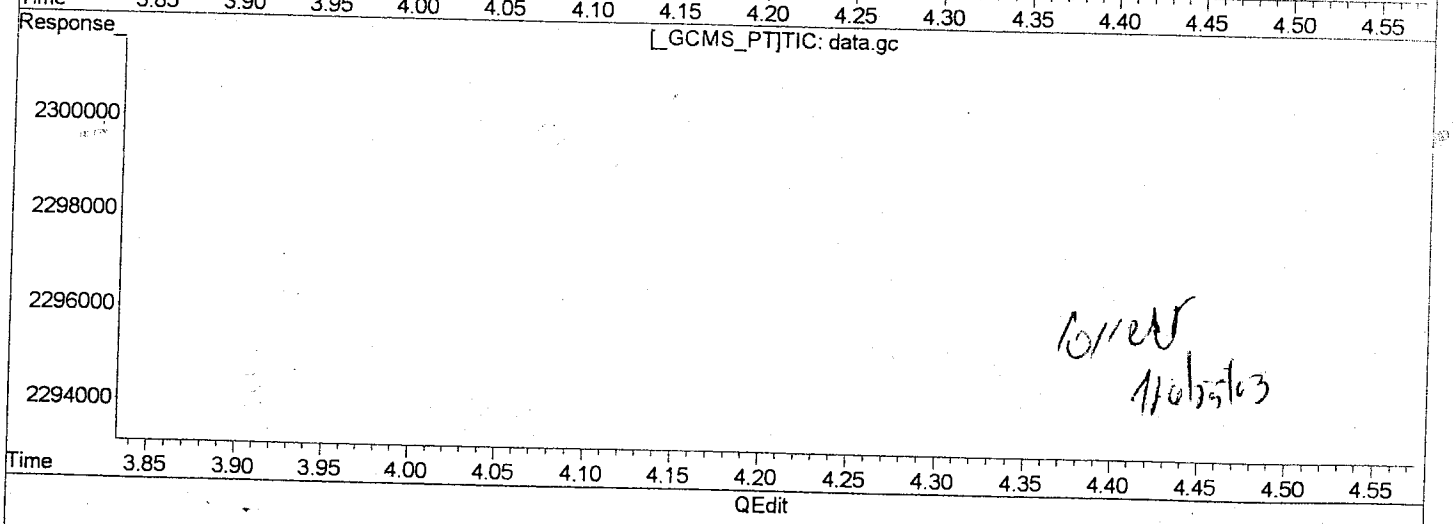
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration





(4) Benzene (T)

4.21min 0.491ug/L m

response 14899

(4) Benzene #2 (T)

3.08min 0.526ug/L

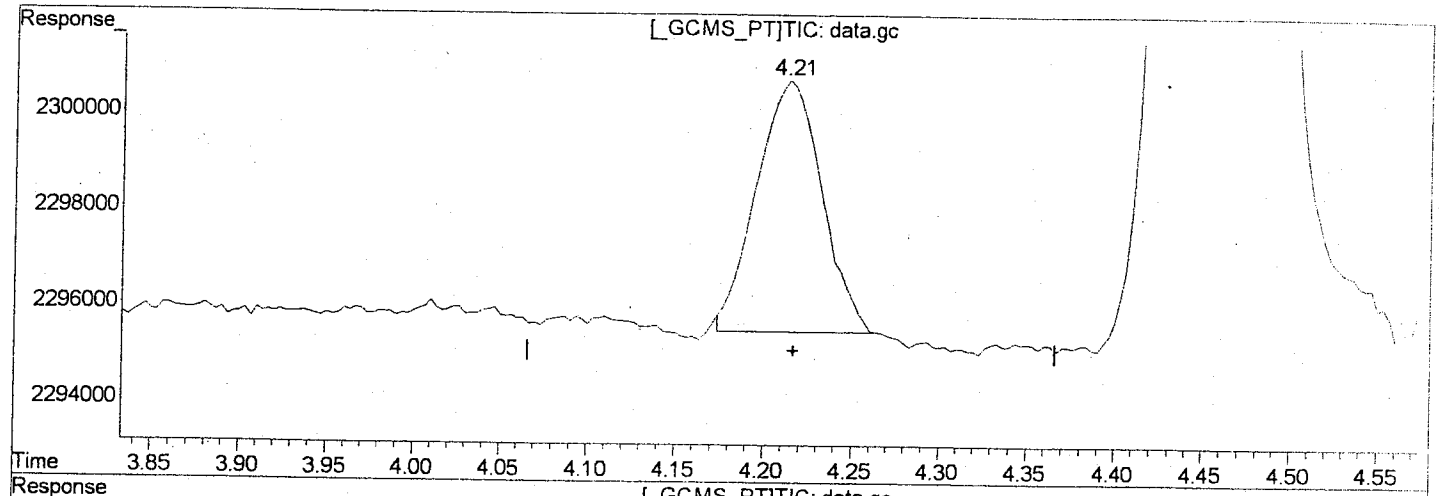
response 236800

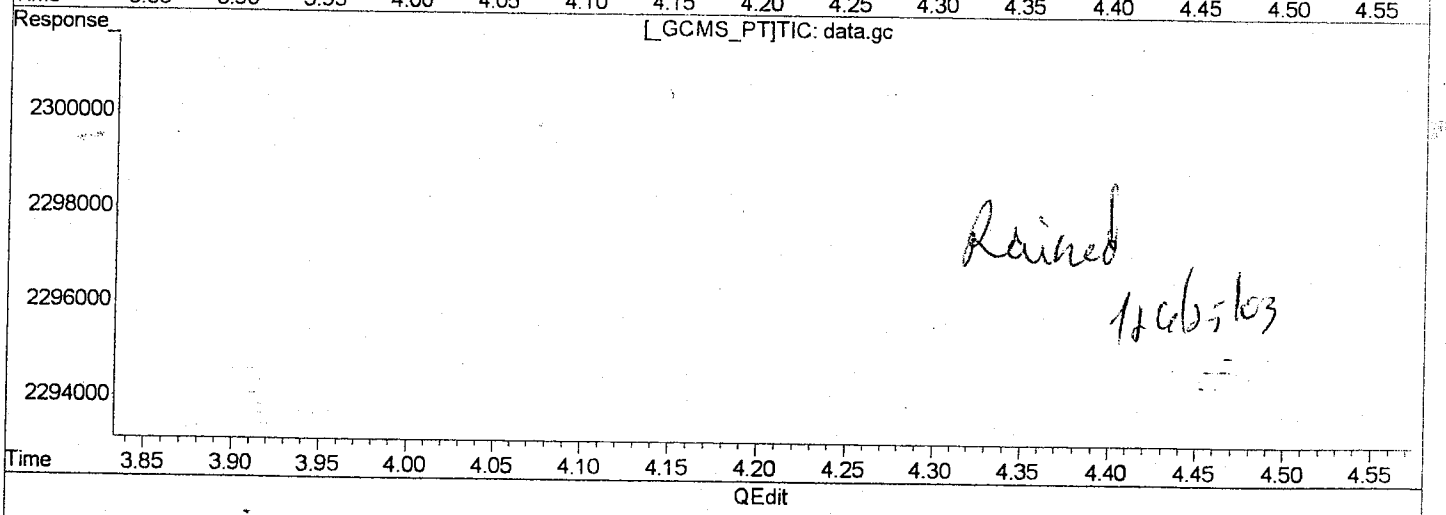
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration





Rained
1/26/03

(4) Benzene (T)

4.21min 0.442ug/L

response 13422

(4) Benzene #2 (T)

3.08min 0.526ug/L

response 236800

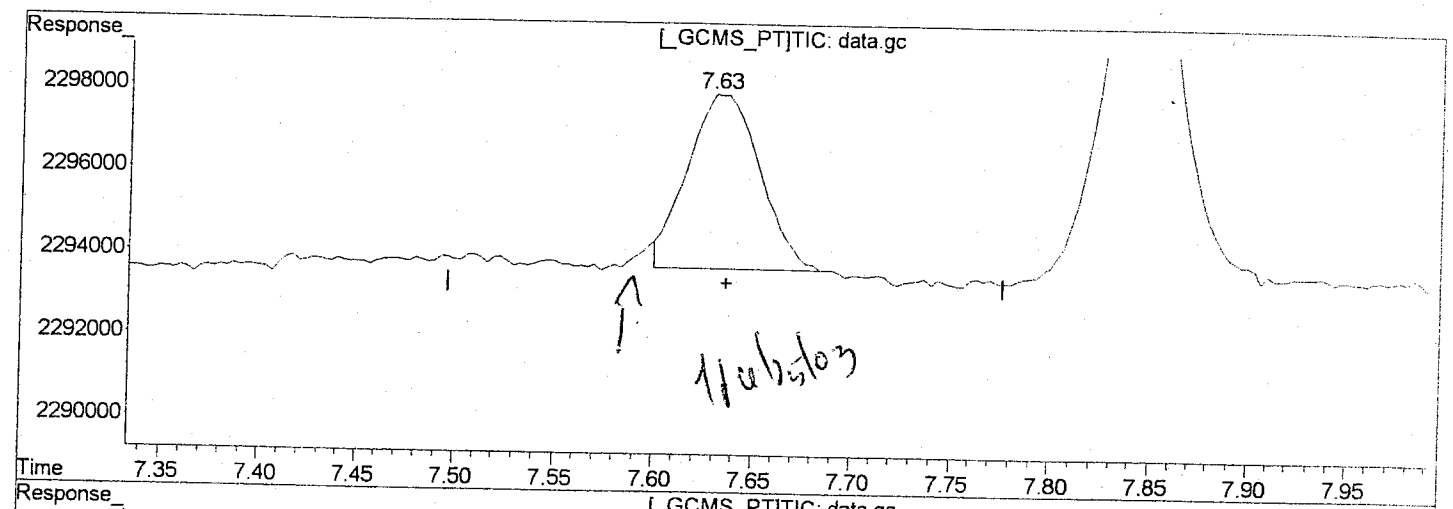
JW 6/26/03

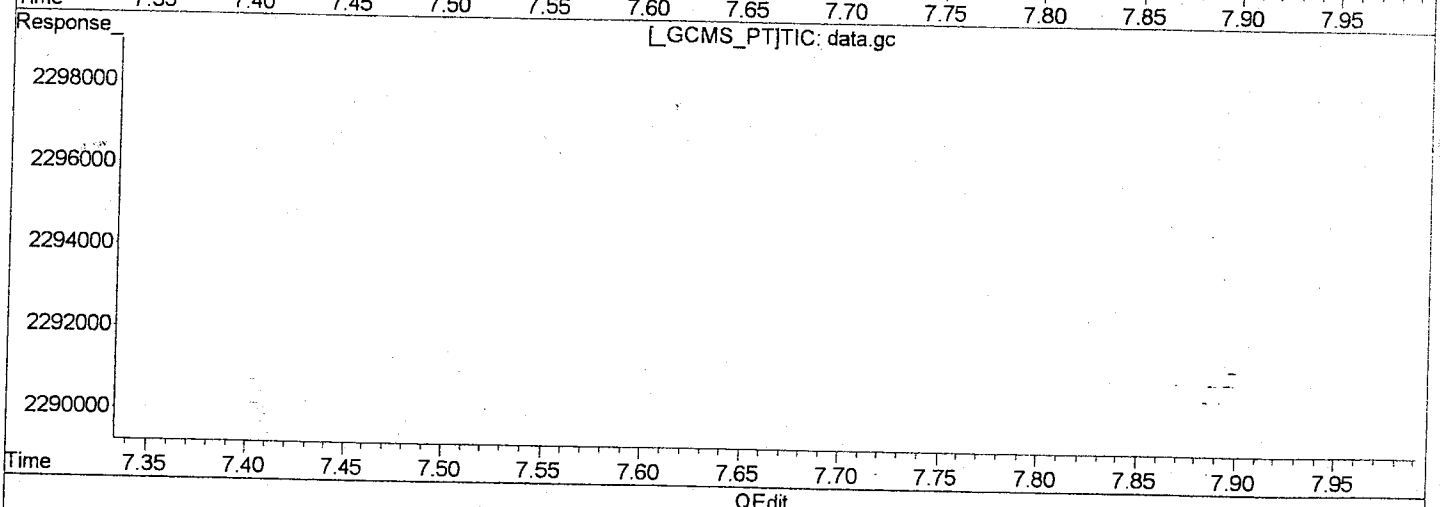
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration





QEdit

(6) Ethylbenzene (T)

7.63min 0.359ug/L

response 10654

(6) Ethylbenzene #2 (T)

6.37min 0.544ug/L

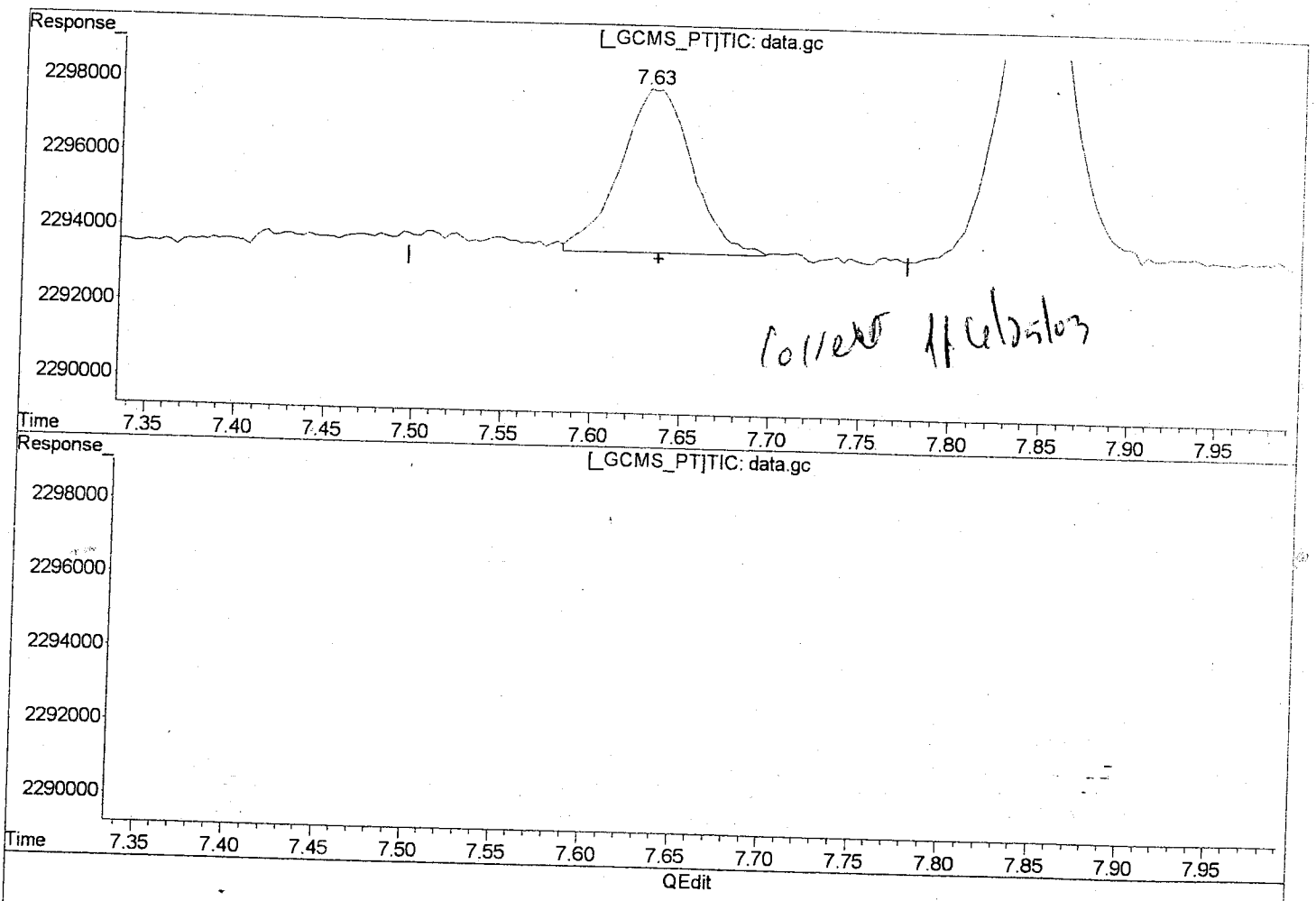
response 204291

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration



collect 11 calibrators

(6) Ethylbenzene (T)

7.63min 0.419ug/L m

response 12240

PW 6/26/03

(6) Ethylbenzene #2 (T)

6.37min 0.544ug/L

response 204291

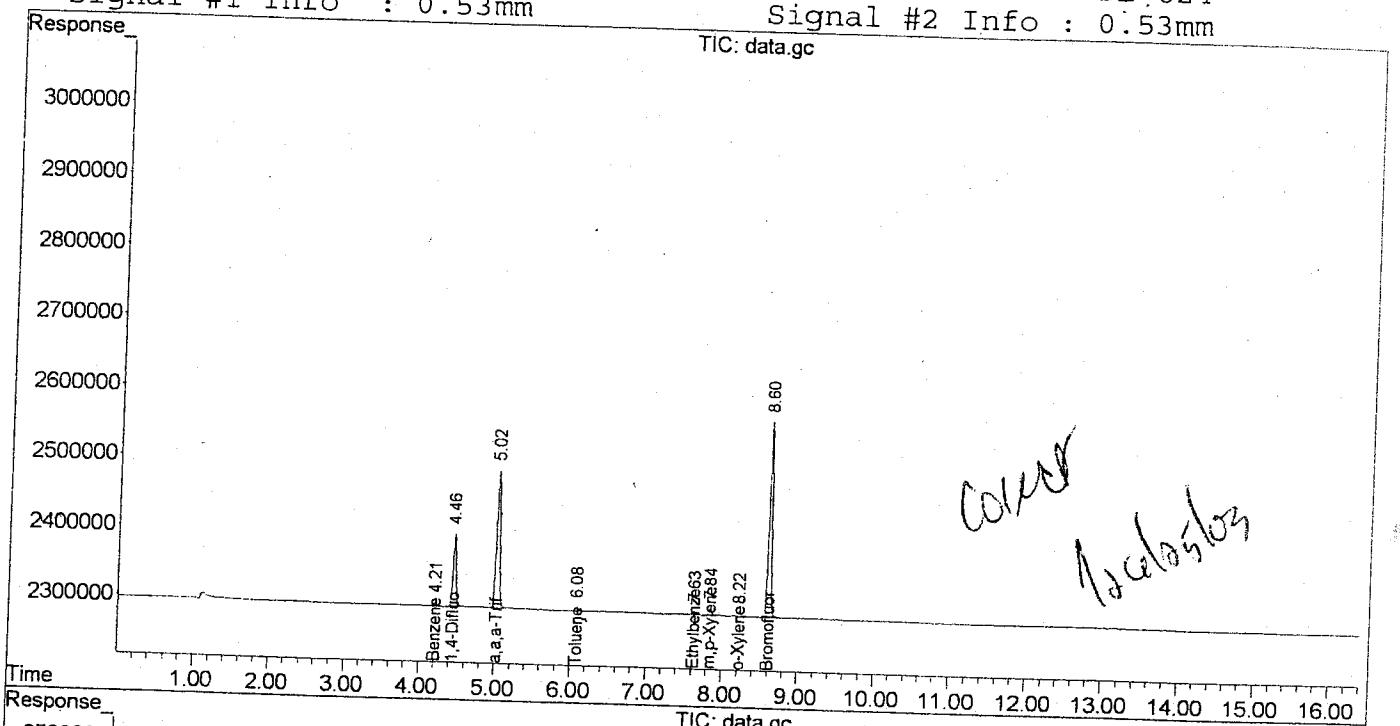
(+) = Expected Retention Time

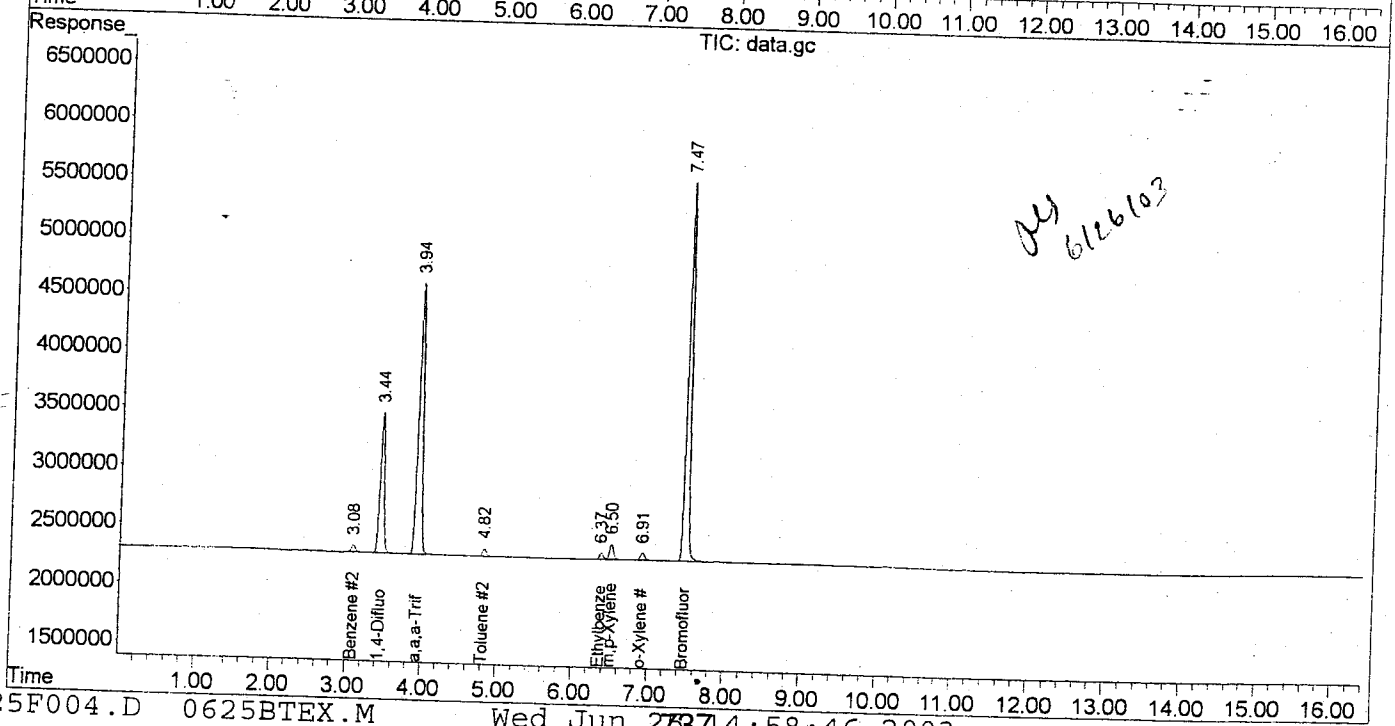
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:59 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm



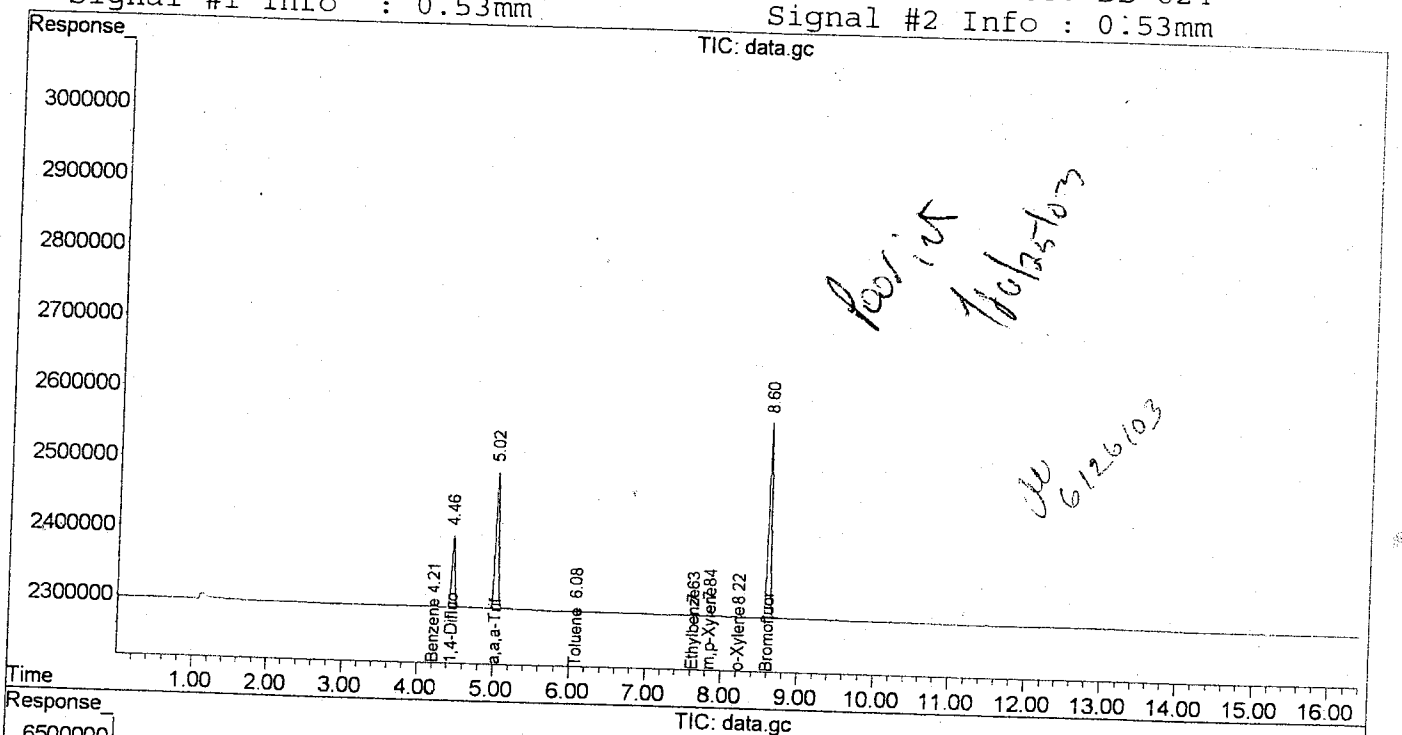


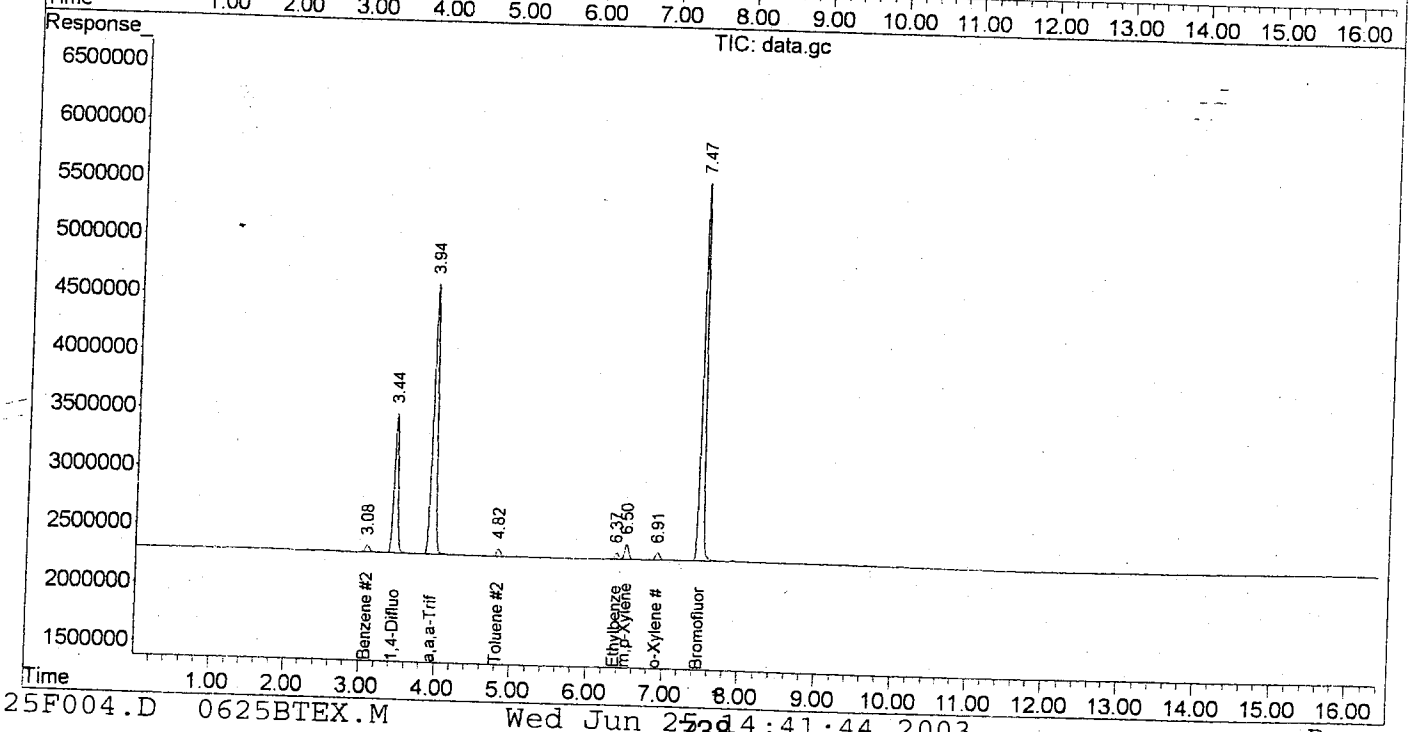
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F004.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F004.D\0625R004.D\data.gc
Acq On : 25 Jun 2003 10:58 am Operator: JW
Sample : hcv2-26n 0.5ppb/25ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F005.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F005.D\0625R005.D\data.gc
Acq On : 25 Jun 2003 11:30 am Operator: JW
Sample : hcv2-26o 1ppb/40ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	a,a,a-Trifluorot	5.02	3.94	622262	10219304	50.000	50.000	
		System Monitoring Compounds							
2)	S	1,4-Difluorobenz	4.45	3.44	487376	7774325	40.947	41.411	
3)	S	Bromofluorobenze	8.60	7.47	1119678	17457308	40.553	40.874	
		Target Compounds							
4)	T	Benzene	4.21	3.08	32260	515480	1.000	1.069	
5)	T	Toluene	6.08	4.82	28497	517593	0.878	1.112	#
6)	T	Ethylbenzene	7.63	6.37	25444	446426	0.862	1.110	#
7)	T	m,p-Xylenes	7.84	6.50	57729	1019446	2.197	2.256	
8)	T	o-Xylene	8.22	6.91	24263	562991	0.898	1.358	#

6/26/03

6/26/03

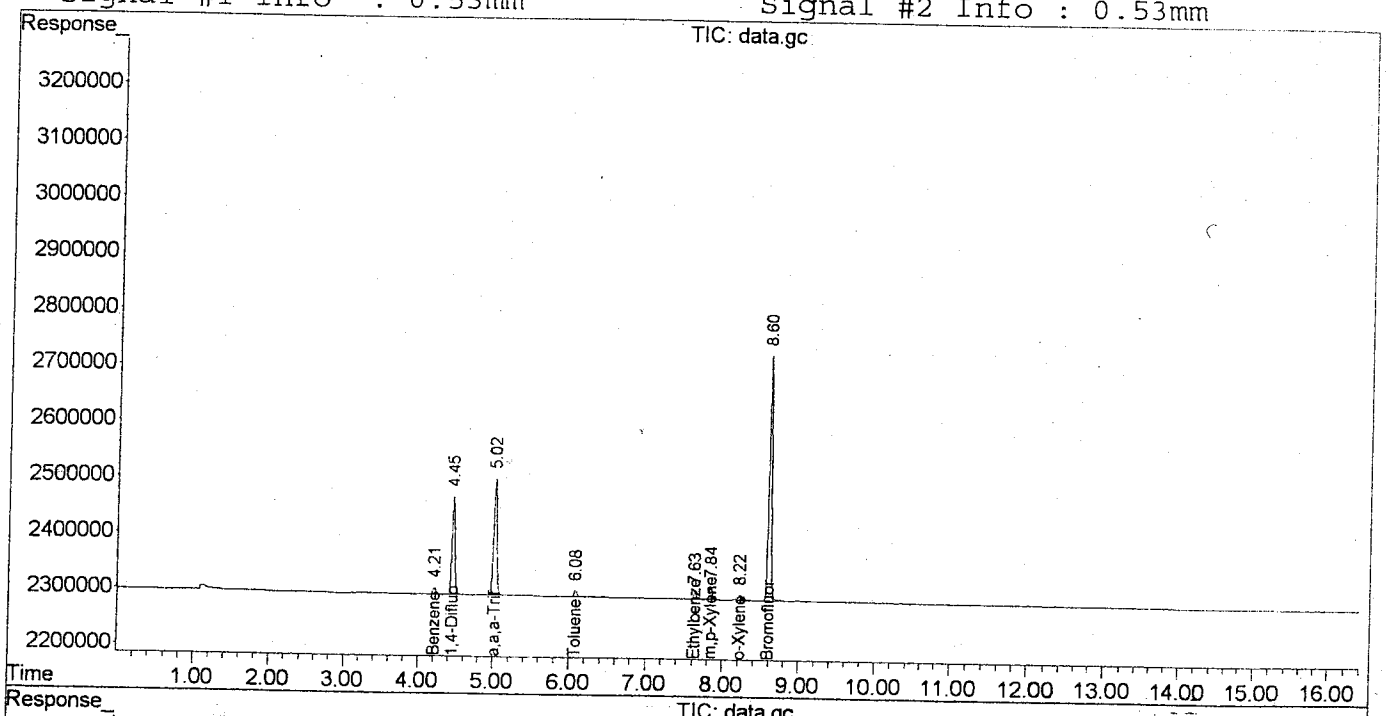
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

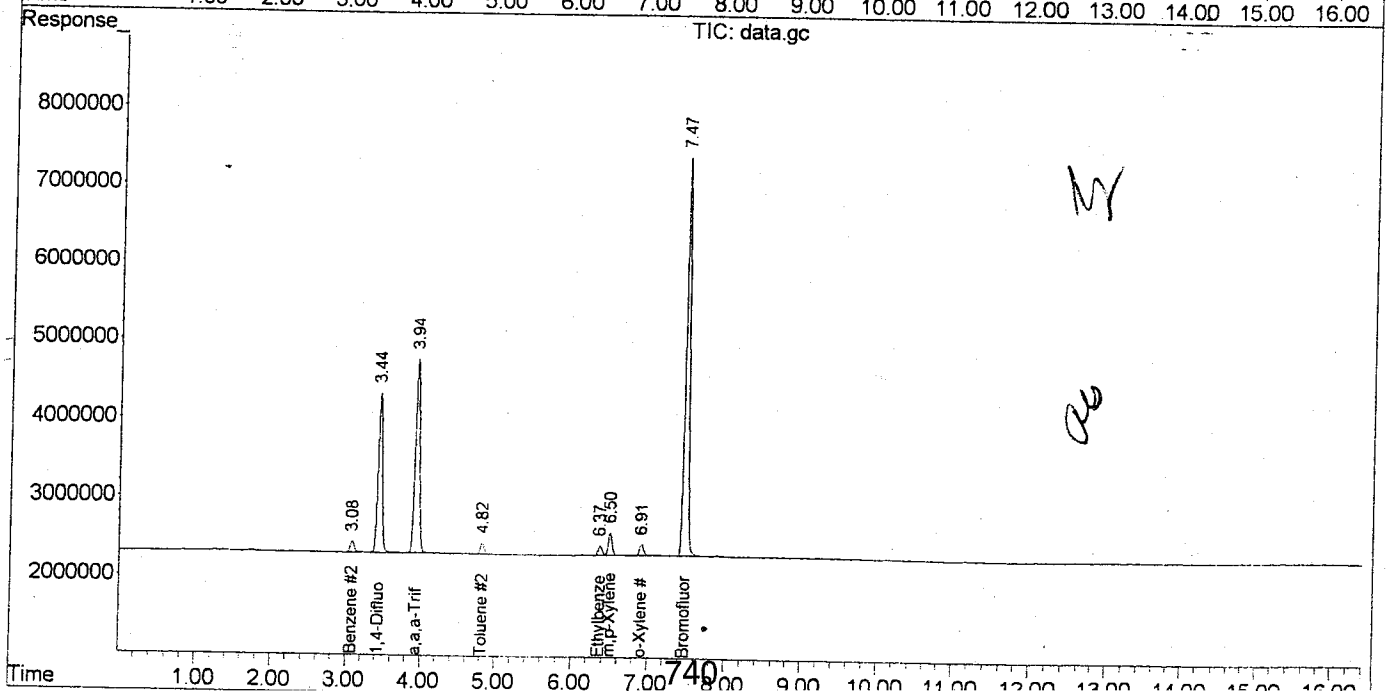
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F005.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F005.D\0625R005.D\data.gc
Acq On : 25 Jun 2003 11:30 am Operator: JW
Sample : hcv2-26o 1ppb/40ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F006.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F006.D\0625R006.D\data.gc
Acq On : 25 Jun 2003 12:02 pm Operator: JW
Sample : hcv2-26p 5ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:49 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.94	635099	10303214	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.46	3.45	610726	9774453	50.273	51.641
3)	S	Bromofluorobenze	8.61	7.48	1446365	22558443	51.327	52.388
		Target Compounds						
4)	T	Benzene	4.22	3.09	176263	2753134	5.349	5.664
5)	T	Toluene	6.09	4.83	159031	2696439	5.082	5.744
6)	T	Ethylbenzene	7.64	6.37	146396	2377488	5.068	5.861
7)	T	m,p-Xylenes	7.85	6.51	326201	5464117	10.474	11.995
8)	T	o-Xylene	8.23	6.92	138657	2411992	4.987	5.771

11/13/03

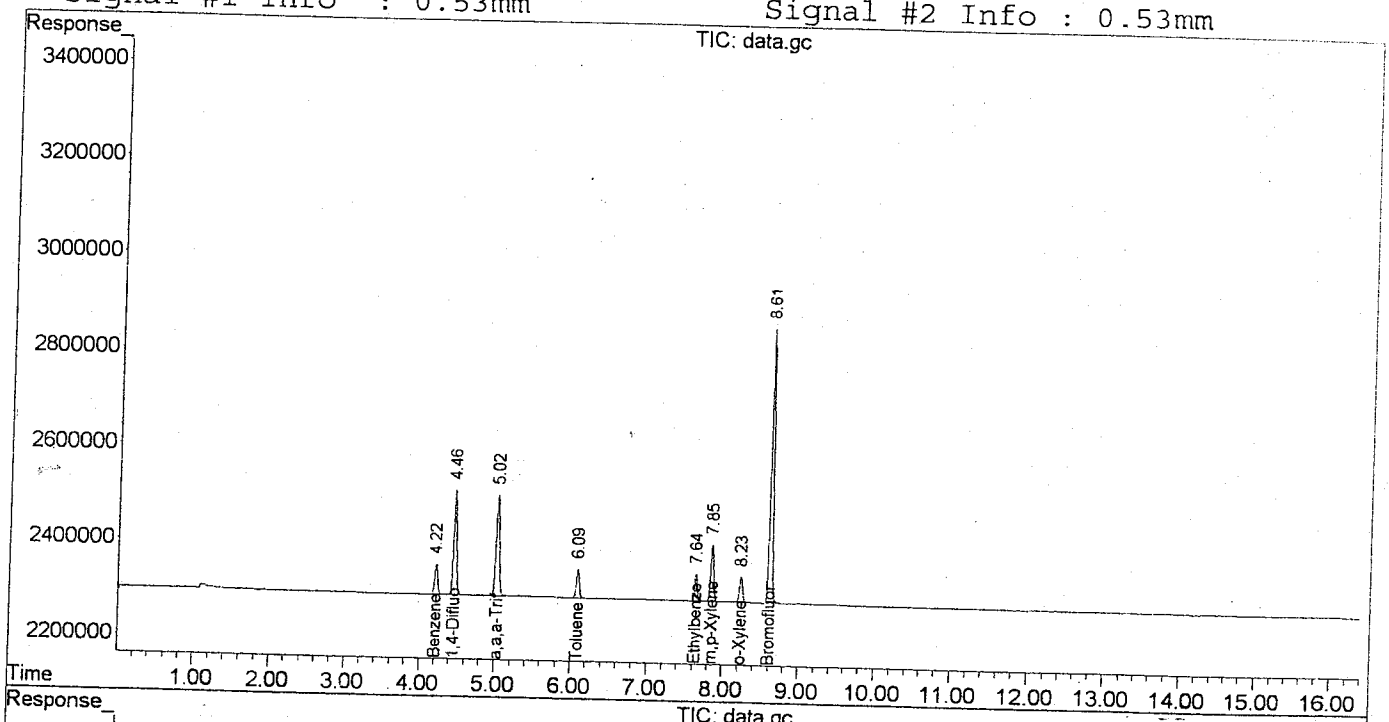
6/26/03

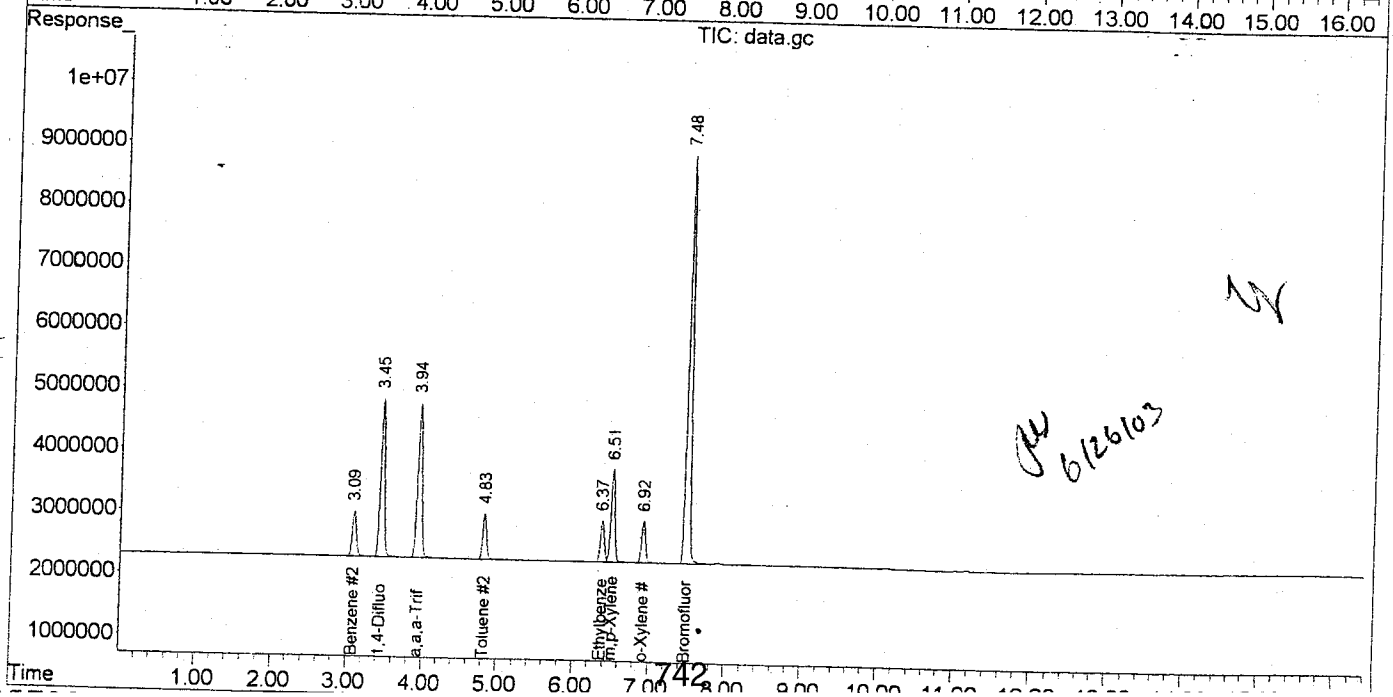
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F006.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F006.D\0625R006.D\data.gc
Acq On : 25 Jun 2003 12:02 pm Operator: JW
Sample : hcv2-26p 5ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





JW 6/26/03

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F007.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F007.D\0625R007.D\data.gc
Acq On : 25 Jun 2003 12:34 pm Operator: JW
Sample : hcv2-26q 20ppb/100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:53 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.02	3.93	491716	8211624	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.46	3.44	1238044	19965916	131.629	132.353
3)	S	Bromofluorobenze	8.60	7.47	2975551	45213817	136.383	131.745
		Target Compounds						
4)	T	Benzene	4.21	3.08	675119	10762100	26.461	27.781
5)	T	Toluene	6.08	4.81	630057	10358855	26.262	27.688
6)	T	Ethylbenzene	7.63	6.36	585982	9132048	26.386	28.246
7)	T	m,p-Xylenes	7.84	6.49	1289801	20701957	51.964	57.022
8)	T	o-Xylene	8.22	6.90	554704	9141729	25.730	27.442

11/6/25-03

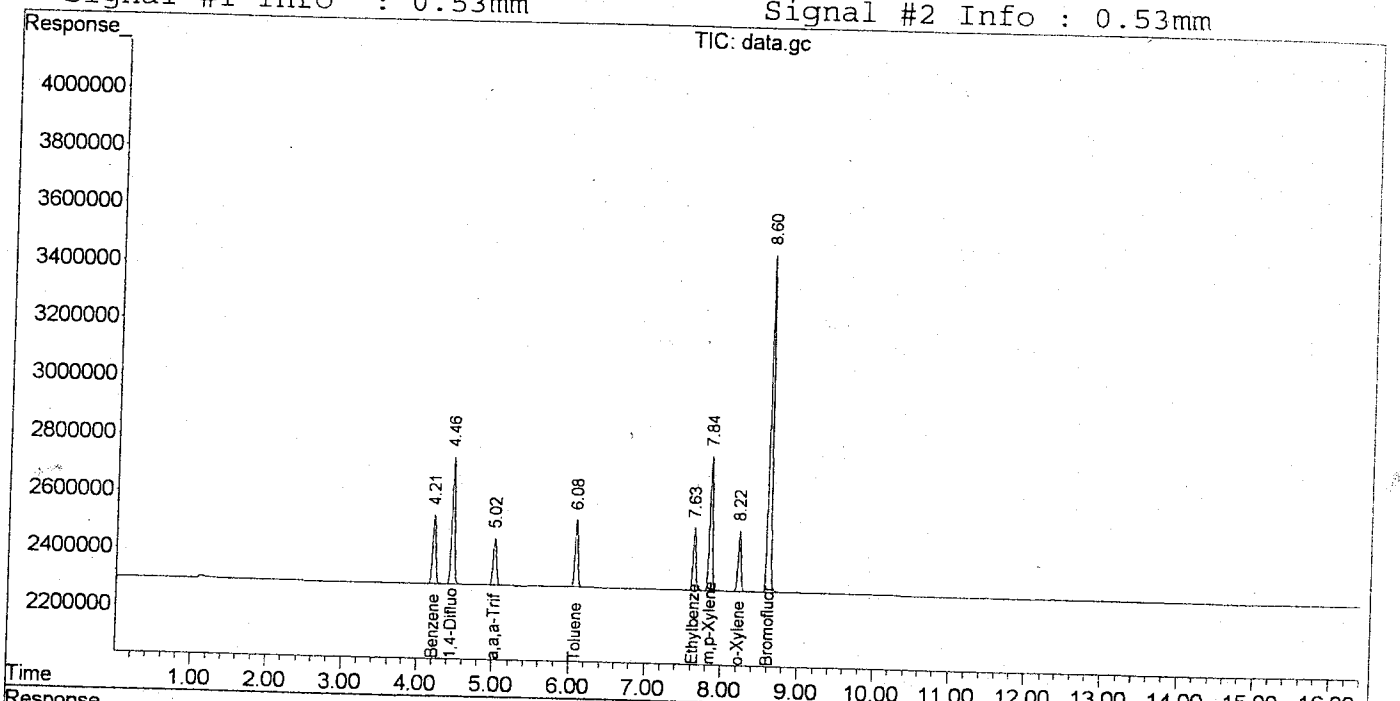
JW 6/26/03

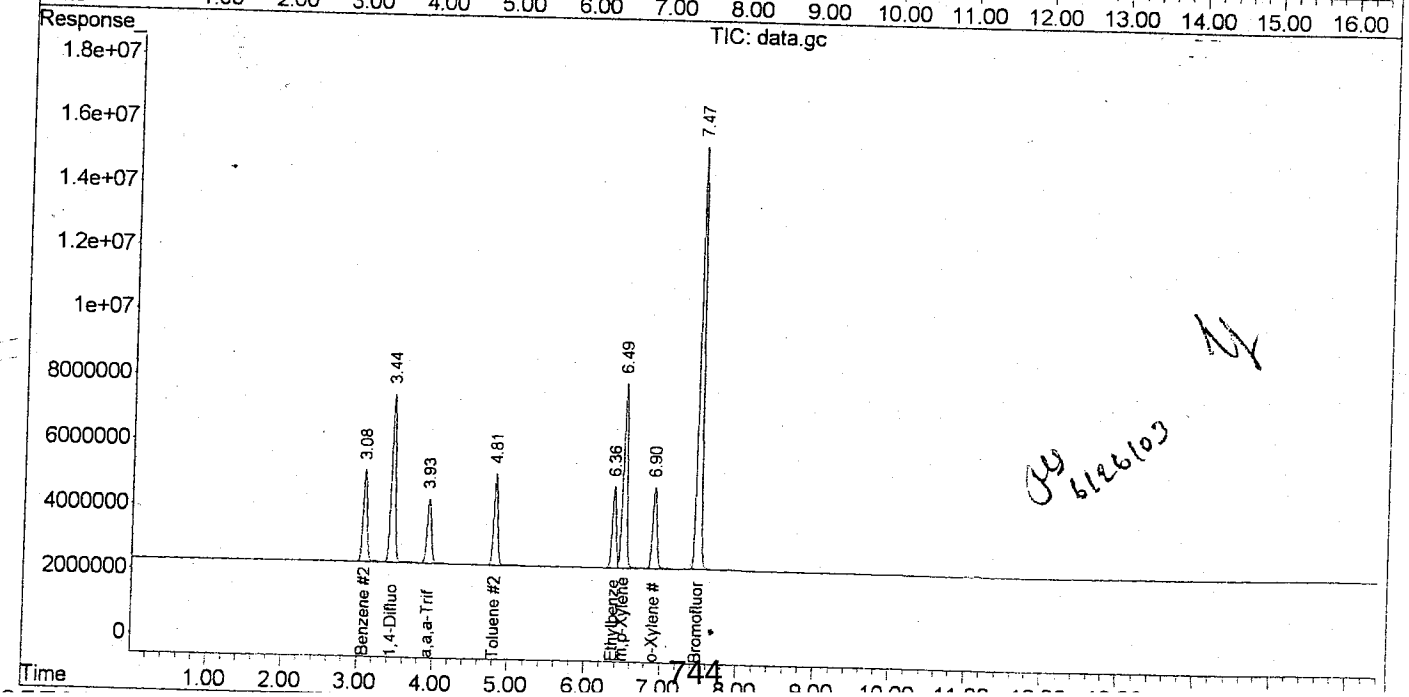
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F007.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F007.D\0625R007.D\data.gc
Acq On : 25 Jun 2003 12:34 pm Operator: JW
Sample : hcv2-26q 20ppb/100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





JW 6/26/03

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F008.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F008.D\0625R008.D\data.gc
Acq On : 25 Jun 2003 01:06 pm Operator: JW
Sample : hcv2-26r 50ppb/150ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:41:57 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

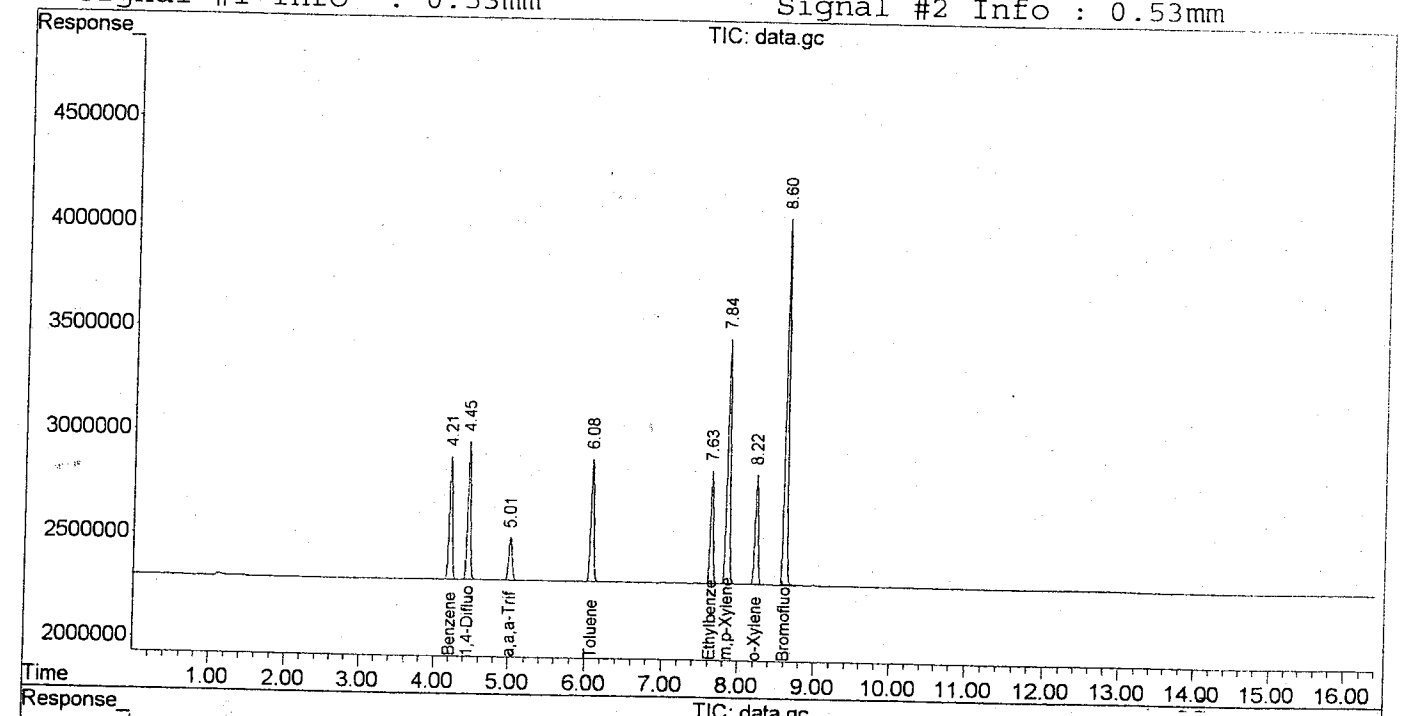
		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	619415	10320586	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.44	1860958	29813813	157.067	157.249
3)	S	Bromofluorobenze	8.60	7.46	4429040	63989124	161.152	148.353
		Target Compounds						
4)	T	Benzene	4.21	3.08	1659647	26167541	51.638	53.746
5)	T	Toluene	6.08	4.81	1564197	25202171	51.819	53.598
6)	T	Ethylbenzene	7.63	6.36	1453256	22263267	51.991	54.790
7)	T	m,p-Xylenes	7.84	6.50	3216954	49315024	102.522	108.078
8)	T	o-Xylene	8.22	6.90	1397221	22038198	51.440	52.636

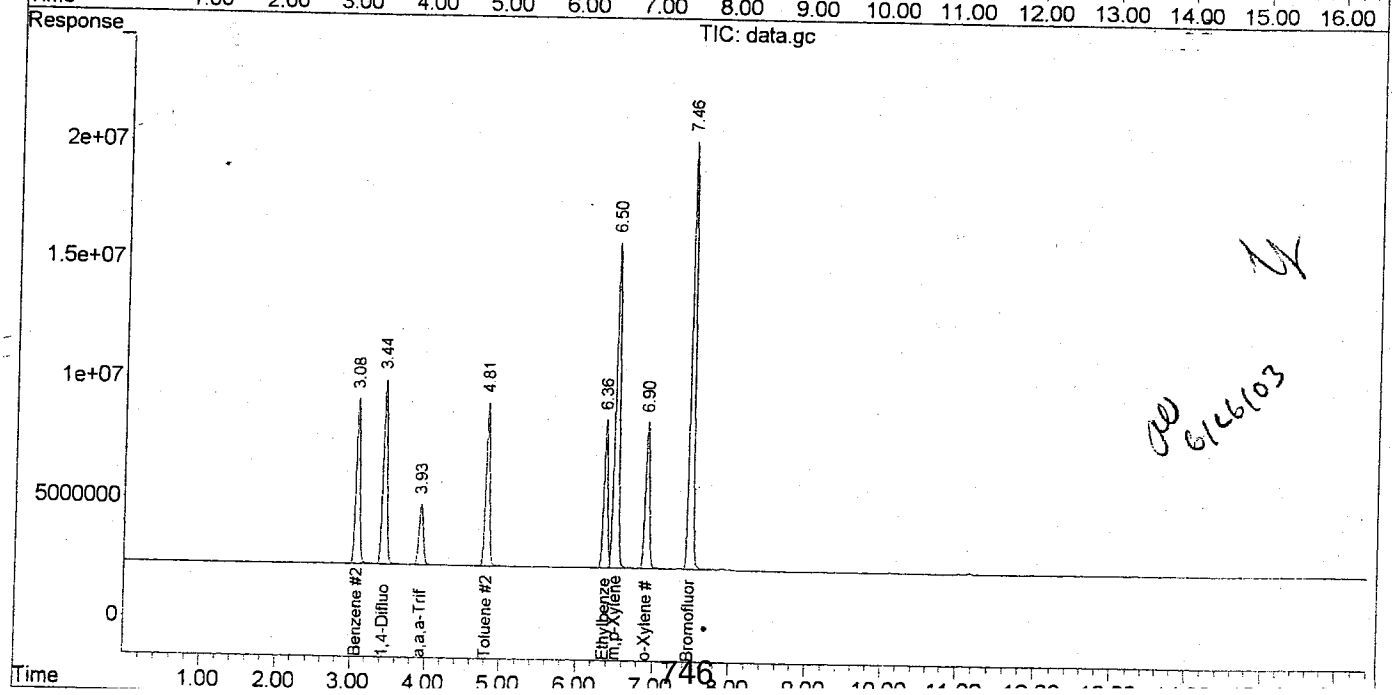
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F008.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F008.D\0625R008.D\data.gc
Acq On : 25 Jun 2003 01:06 pm Operator: JW
Sample : hcv2-26r 50ppb/150ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F009.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F009.D\0625R009.D\data.gc
Acq On : 25 Jun 2003 01:38 pm Operator: JW
Sample : hcv2-26s 100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42:01 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	611566	9918435	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	0.00	0.00	0	0	N.D.	N.D.
3)	S	Bromofluorobenze	8.60	0.00	33461	0	1.233	N.D. #
		Target Compounds						
4)	T	Benzene	4.20	3.07	3418337	51773274	107.723	110.649
5)	T	Toluene	6.07	4.81	3240439	49652398	108.796	109.878
6)	T	Ethylbenzene	7.63	6.36	2994342	43897650	108.548	112.413
7)	T	m,p-Xylenes	7.84	6.49	6714657	95194502	216.324	217.086
8)	T	o-Xylene	8.22	6.90	2898404	43472574	108.067	108.041

7/1/03

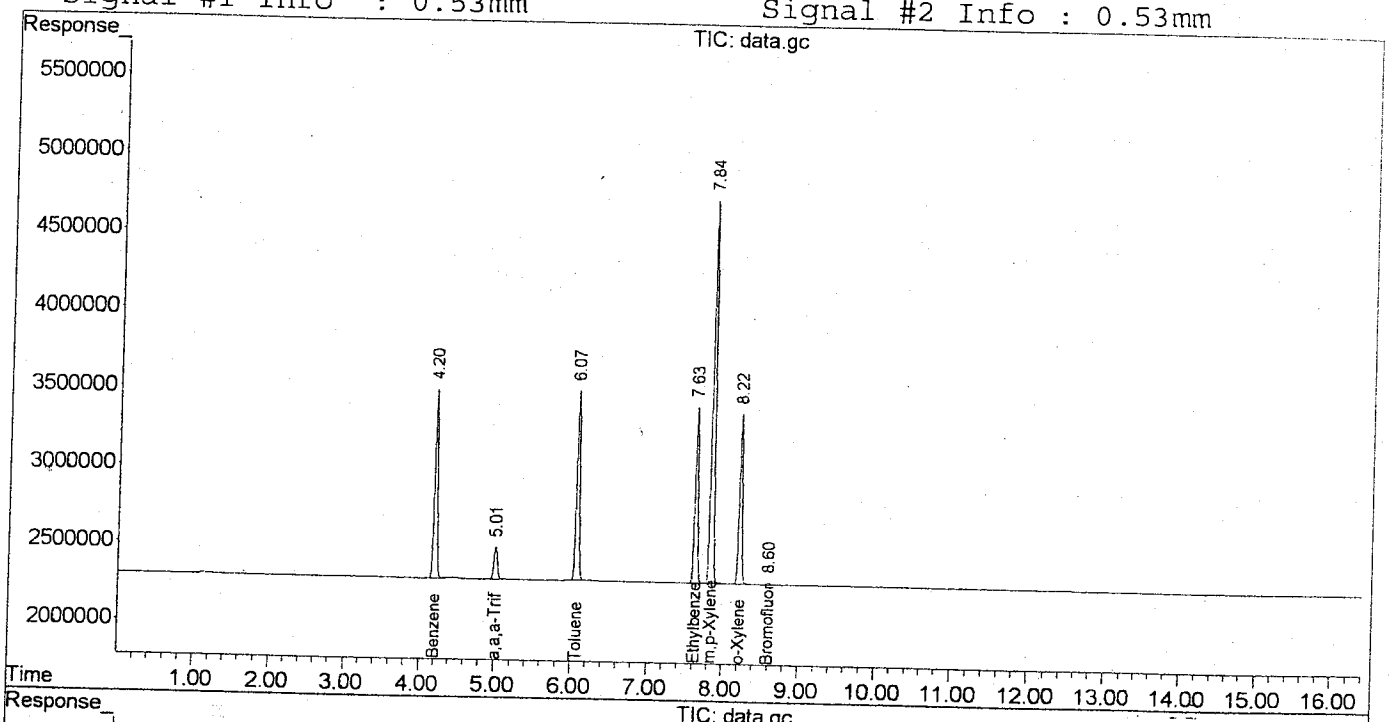
JW 6/26/03

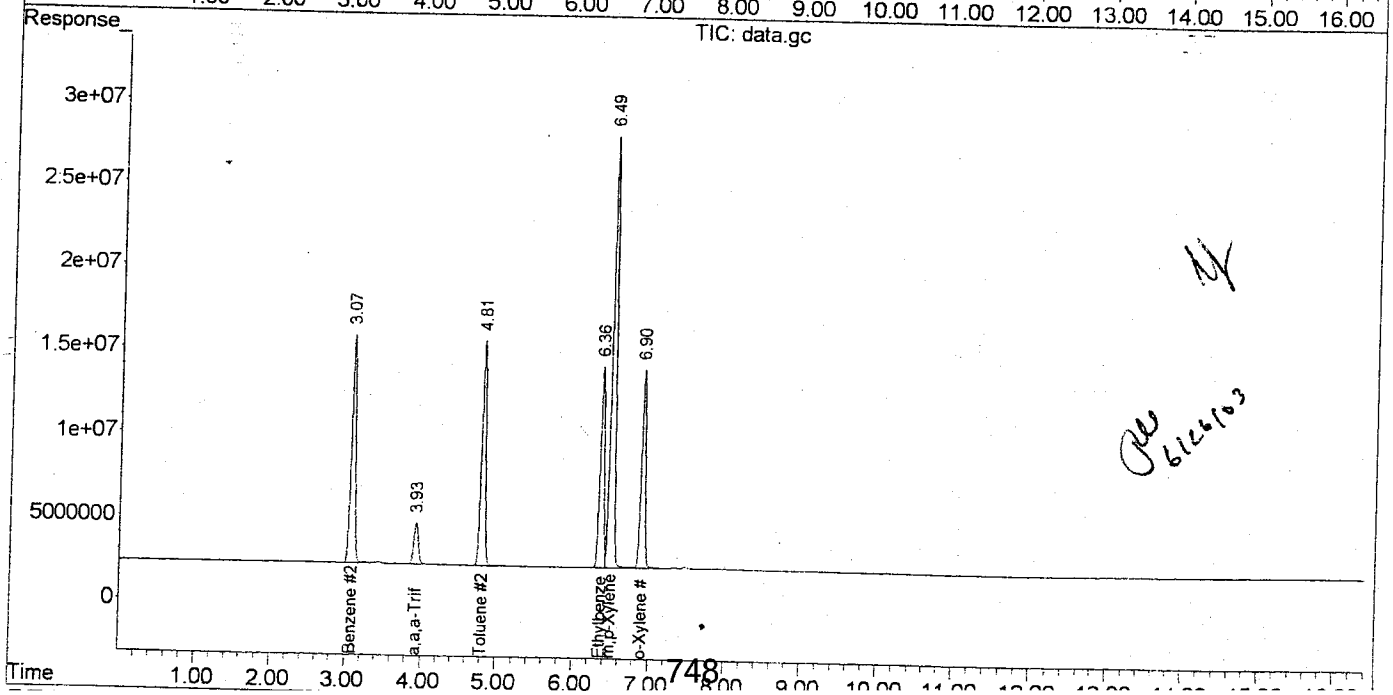
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F009.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F009.D\0625R009.D\data.gc
Acq On : 25 Jun 2003 01:38 pm Operator: JW
Sample : hcv2-26s 100ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





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Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F010.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F010.D\0625R010.D\data.gc
Acq On : 25 Jun 2003 02:10 pm Operator: JW
Sample : hcv2-26t 200ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:42:05 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	617124	9794175	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	0.00	0.00	0	0	N.D.	N.D.
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	4.20	3.07	6676838	96758587	208.513	209.414
5)	T	Toluene	6.07	4.81	6279842	91435586	209.001	204.908
6)	T	Ethylbenzene	7.63	6.36	5818870	80231634	209.081	208.064
7)	T	m,p-Xylenes	7.84	6.49	13151828	167.8E6	419.543	387.592
8)	T	o-Xylene	8.22	6.90	5656098	79082953	208.979	199.035

JW 6/26/03

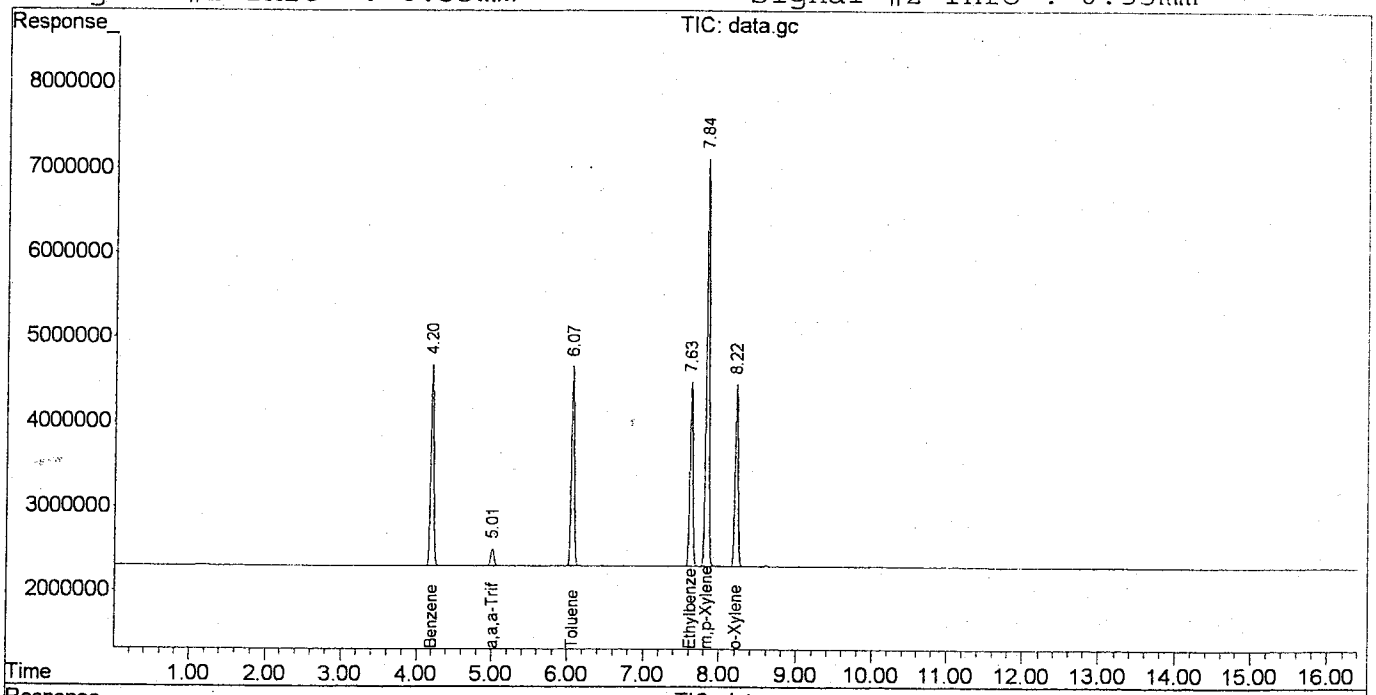
JW 6/26/03

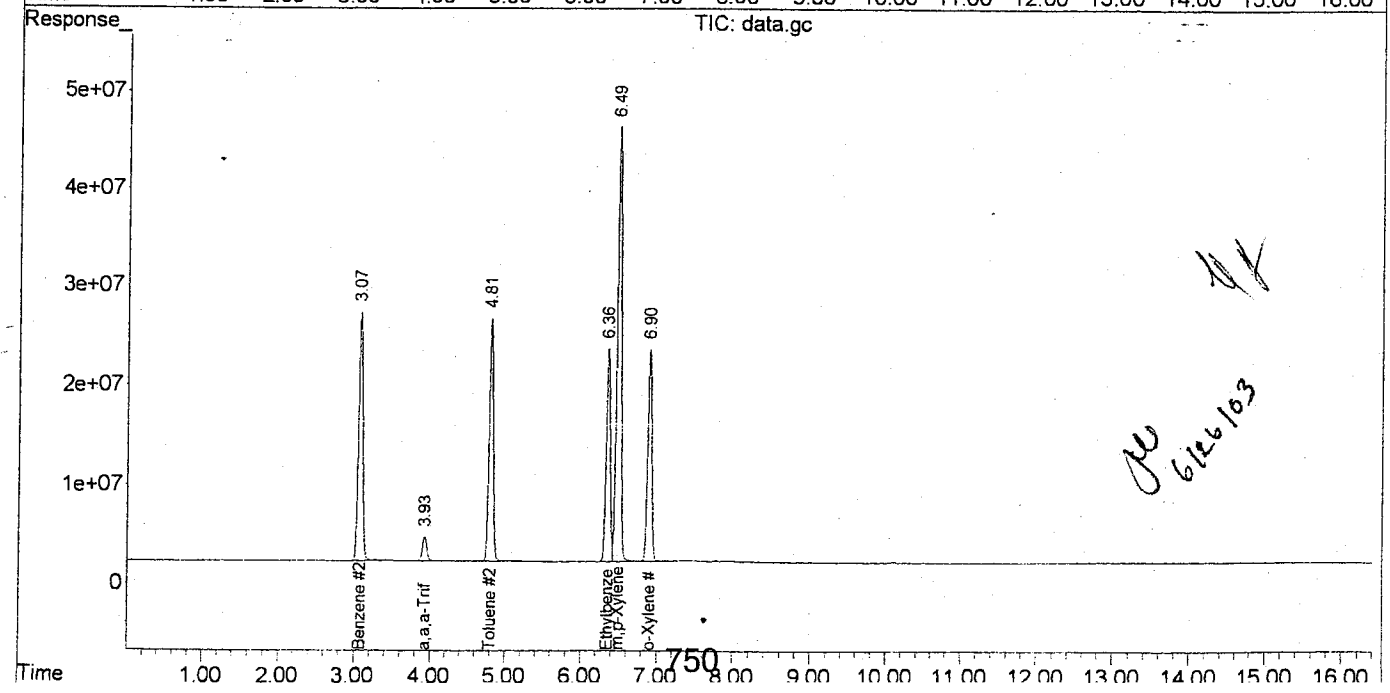
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F010.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F010.D\0625R010.D\data.gc
Acq On : 25 Jun 2003 02:10 pm Operator: JW
Sample : hcv2-26t 200ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 14:43 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2669
Last Update : Wed Jun 25 09:28:31 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





AK
JW 6/26/03

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F011.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F011.D\0625R011.D\data.gc
Acq On : 25 Jun 2003 02:43 pm Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44:14 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	5.01	3.93	607185	8559548	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.45	3.43	12061	181692	2.792	1.055 #
3)	S	Bromofluorobenze	0.00	0.00	0	0	N.D.	N.D.
		Target Compounds						
4)	T	Benzene	0.00	0.00	0	0	N.D.	N.D.
5)	T	Toluene	6.07	4.81	3883	101103	0.124	0.229 #
6)	T	Ethylbenzene	7.63	6.36	6958	116350	0.250	0.301
7)	T	m,p-Xylenes	7.84	6.49	17454	296903	0.550	0.689 #
8)	T	o-Xylene	8.22	6.91	8358	203873	0.309	0.497 #

7/6/26/03

JW 6/26/03

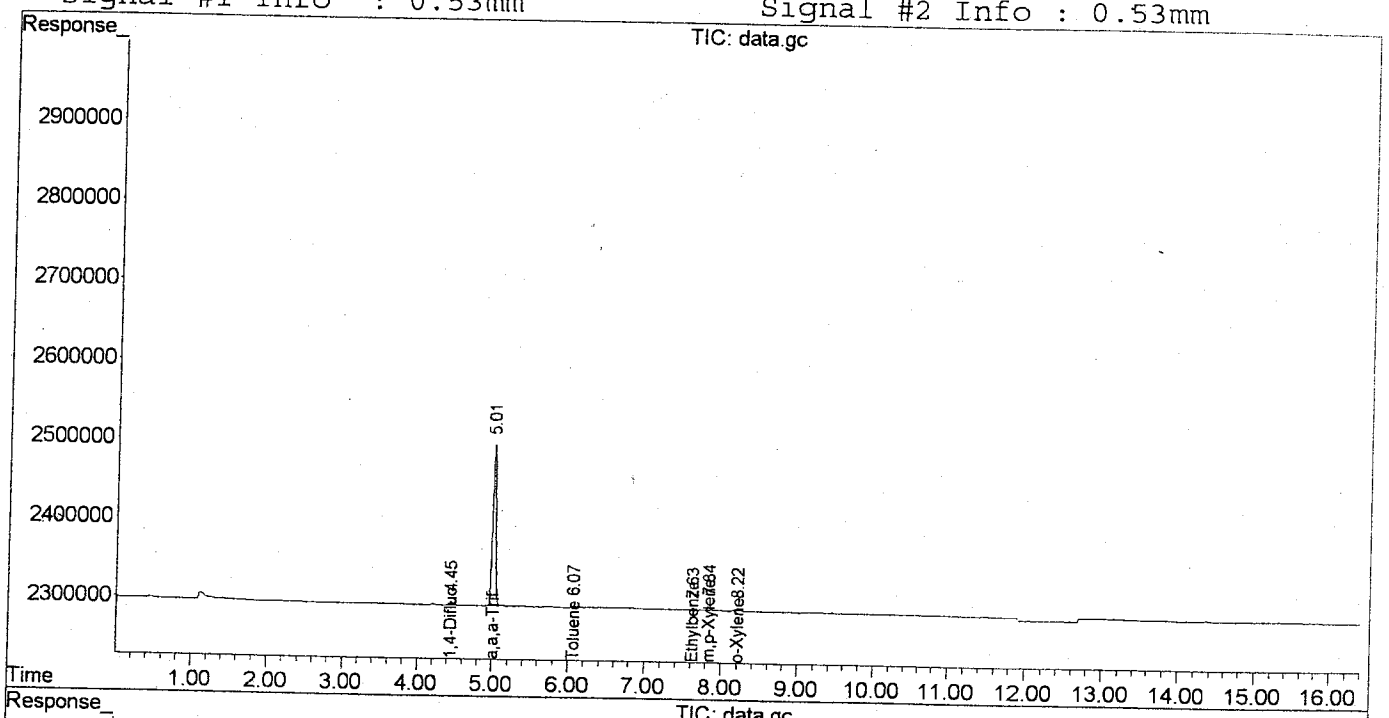
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

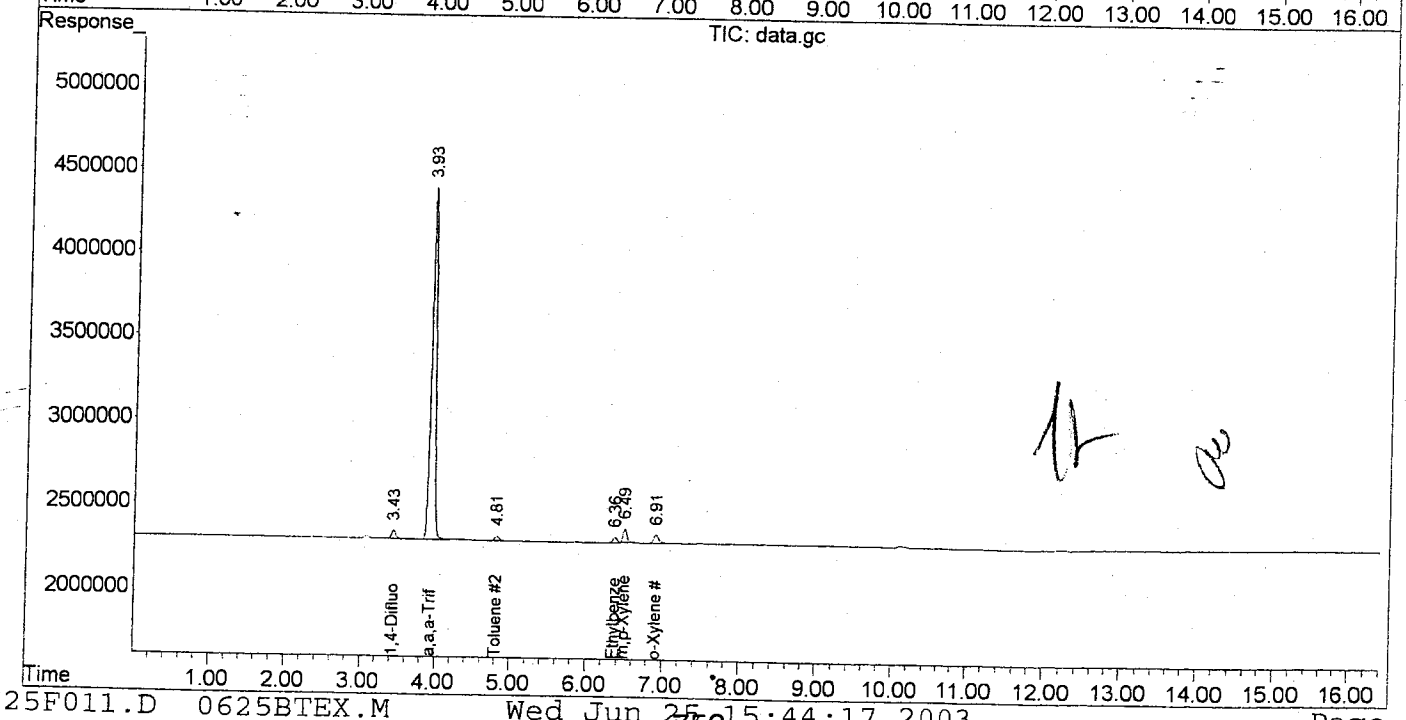
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F011.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F011.D\0625R011.D\data.gc
Acq On : 25 Jun 2003 02:43 pm Operator: JW
Sample : ib Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:43:14 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.97	3.89	576978	8851755	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.42	3.39	548933	8139200	45.816	45.721
3)	S	Bromofluorobenze	8.55	7.41f	1323536	20749878	46.429	51.096
		Target Compounds						
4)	T	Benzene	4.17	3.04	592520	8410375	18.573	18.350
5)	T	Toluene	6.03	4.76	542745	8370137	18.273	18.338
6)	T	Ethylbenzene	7.58	6.31	493519	7311556	18.686	18.262m
7)	T	m,p-Xylenes	7.80	6.44	1129168	17914558	37.418	40.199
8)	T	o-Xylene	8.17	6.85	498253	8036709	19.379	18.938

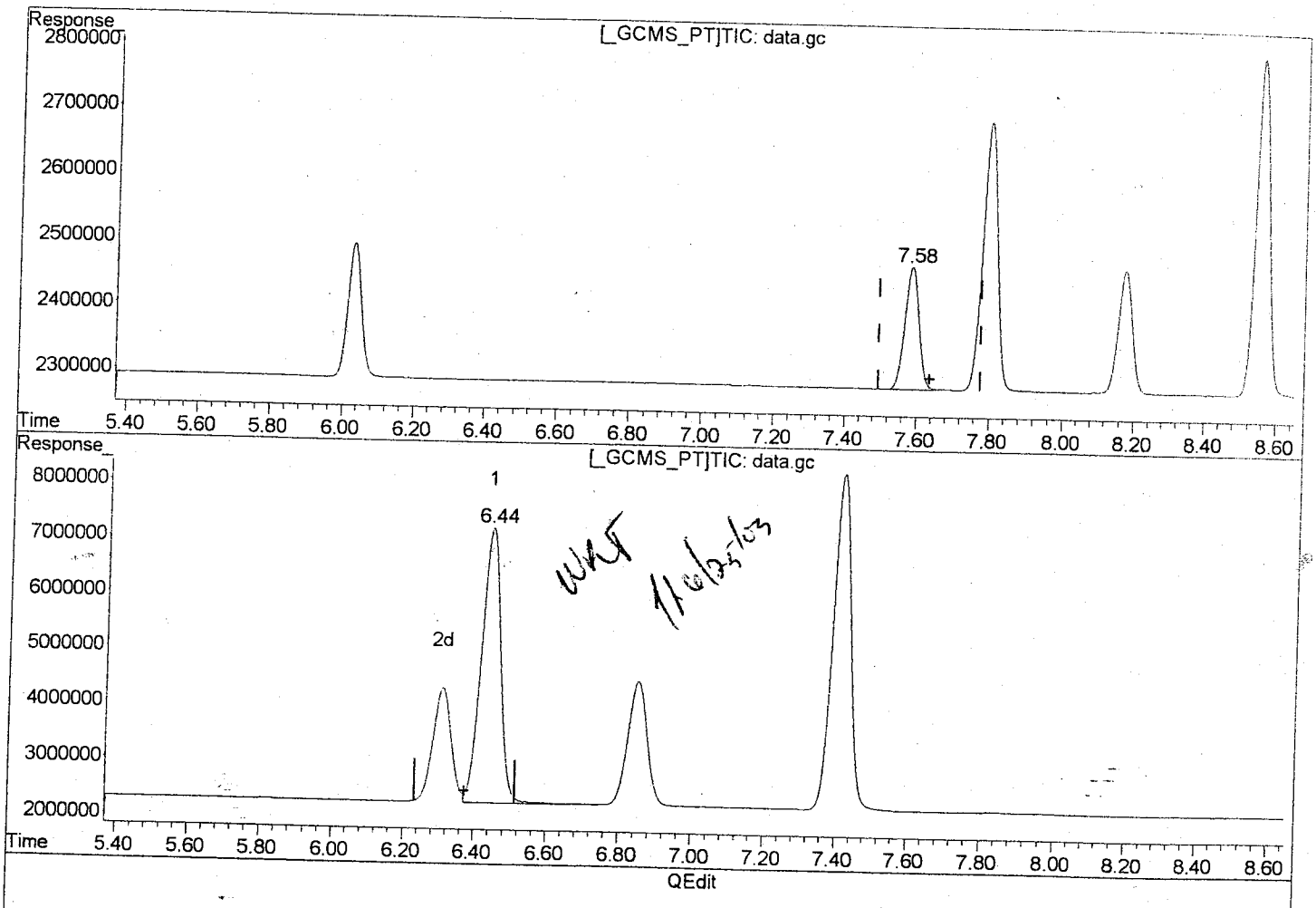
correct.
1/06/03
JW 6/26/03

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.58min 18.686ug/L

response 493519

(6) Ethylbenzene #2 (T)

6.44min 44.745ug/L

response 17914558

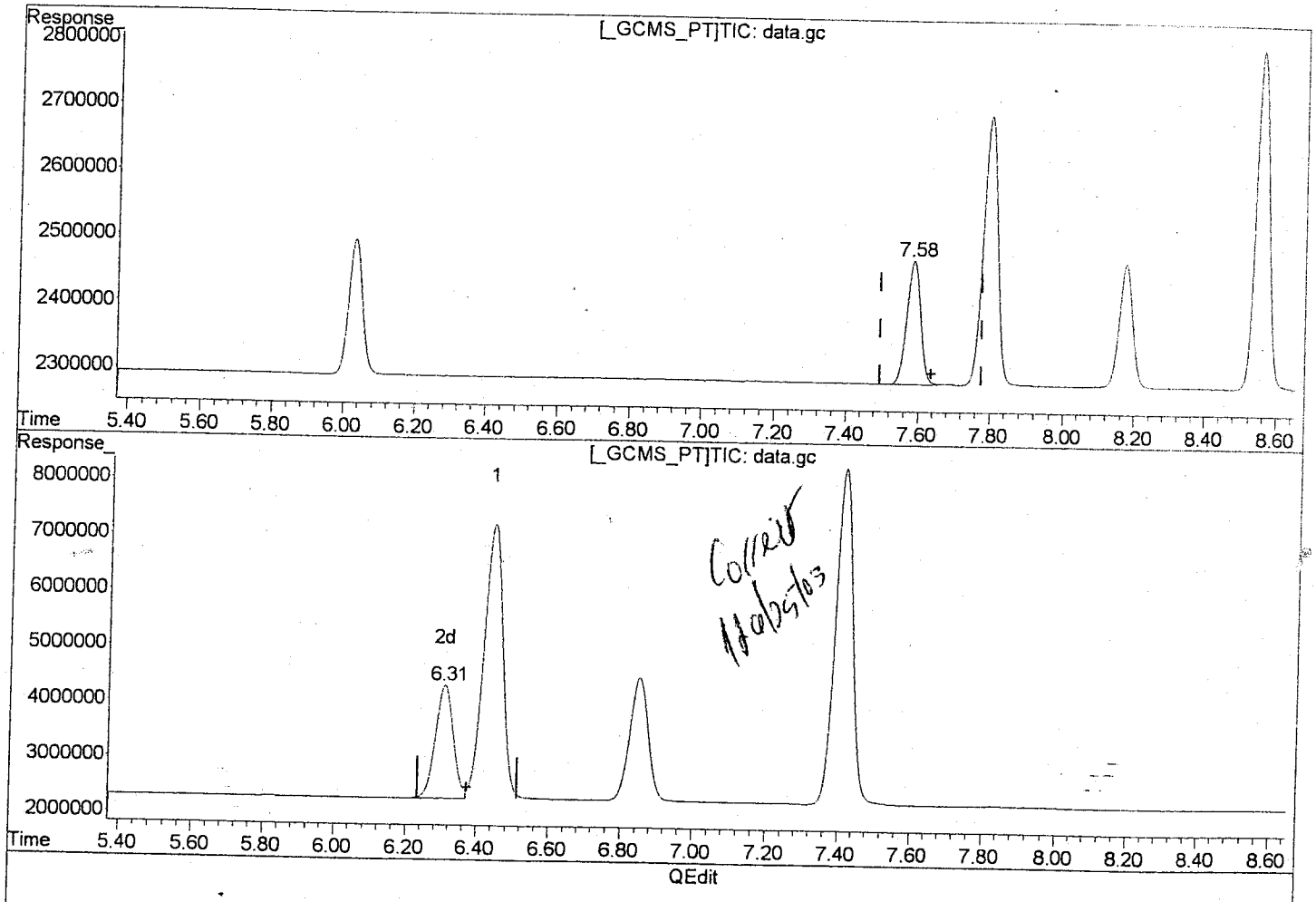
(+) = Expected Retention Time

0625F012.D 0625BTEX.M Wed Jun 25 15:44:30 2003

Quantitation Report (Qedit)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44 2003 Quant Results File: 0625BTEX.RES

Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration



(6) Ethylbenzene (T)

7.58min 18.686ug/L

response 493519

JW 6/26/03

(6) Ethylbenzene #2 (T)

6.31min 18.262ug/L m

response 7311556

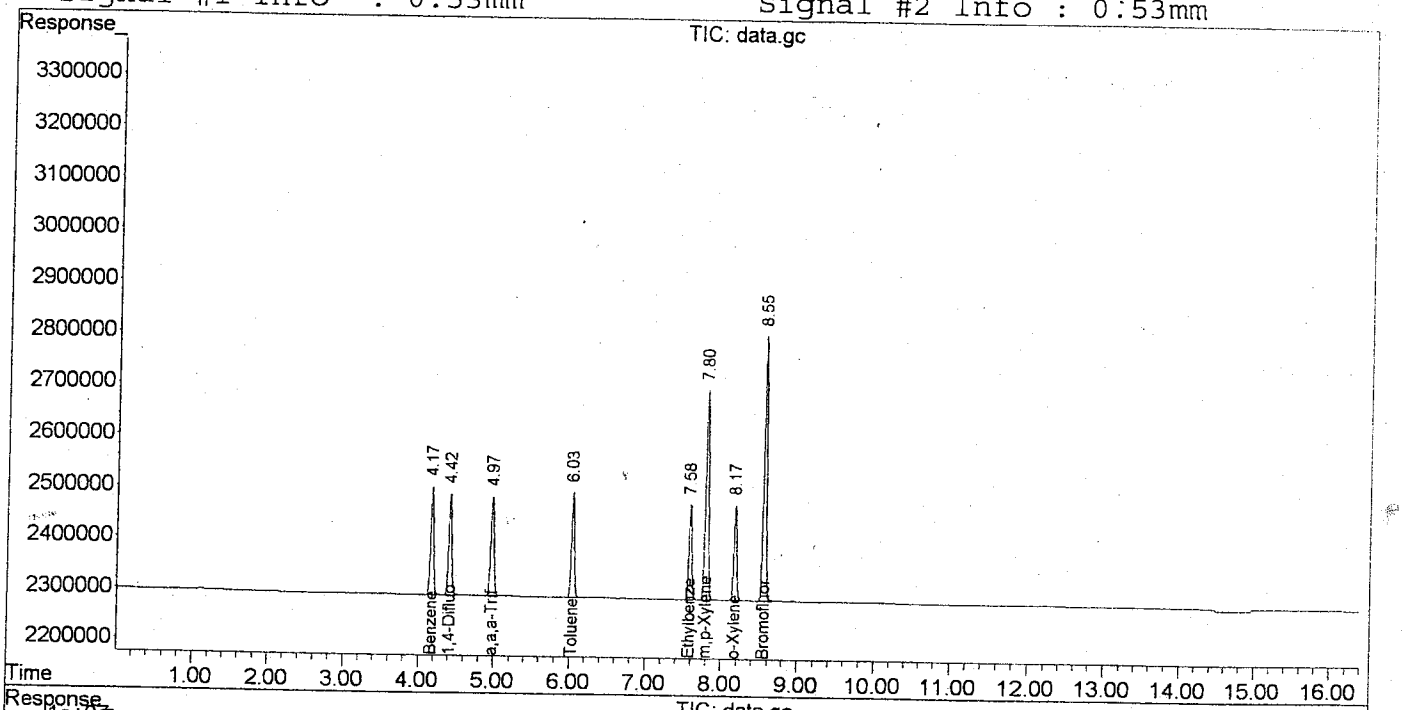
(+) = Expected Retention Time

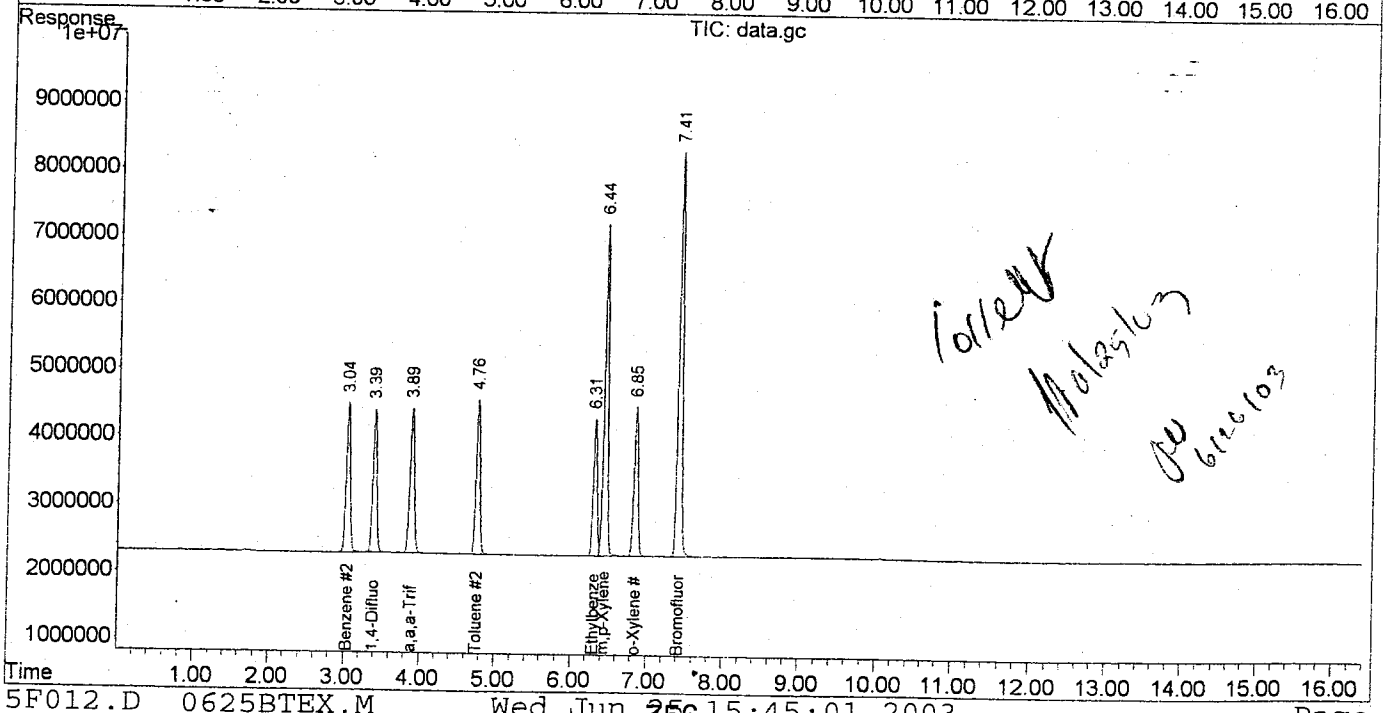
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:45 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm



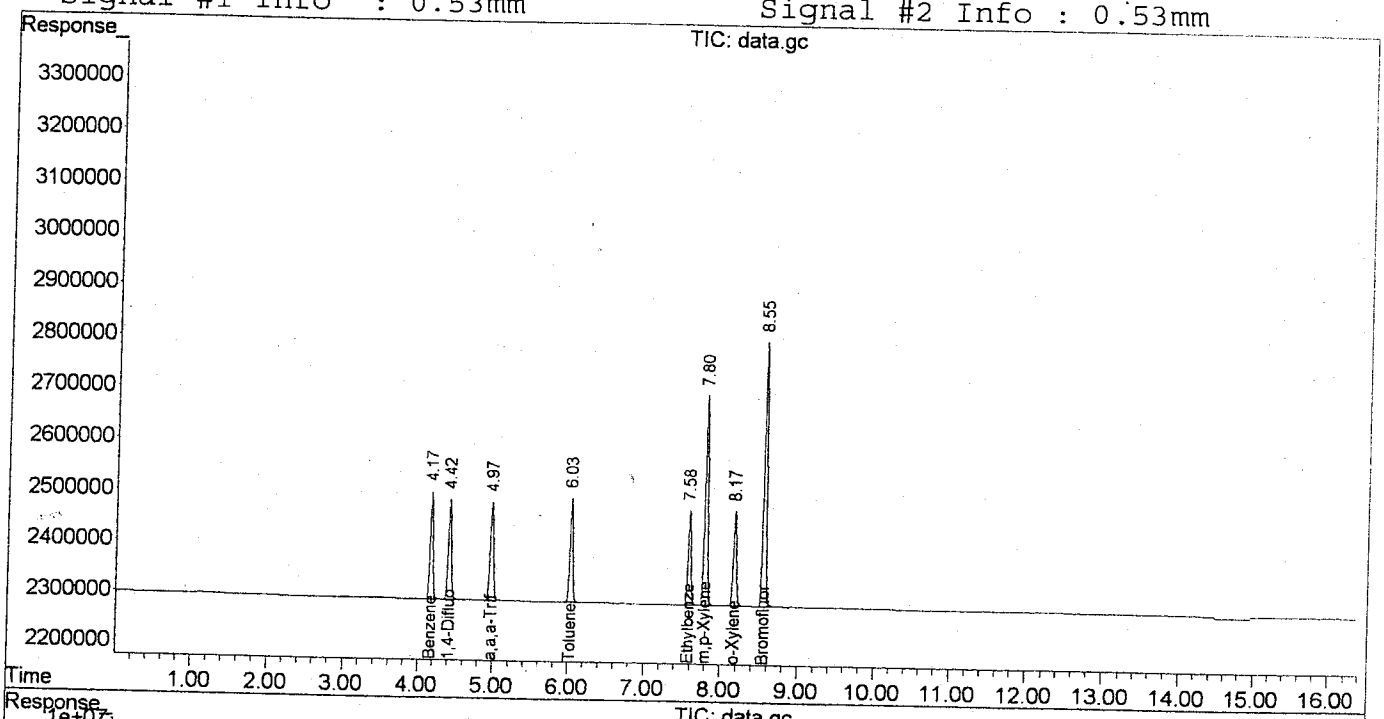


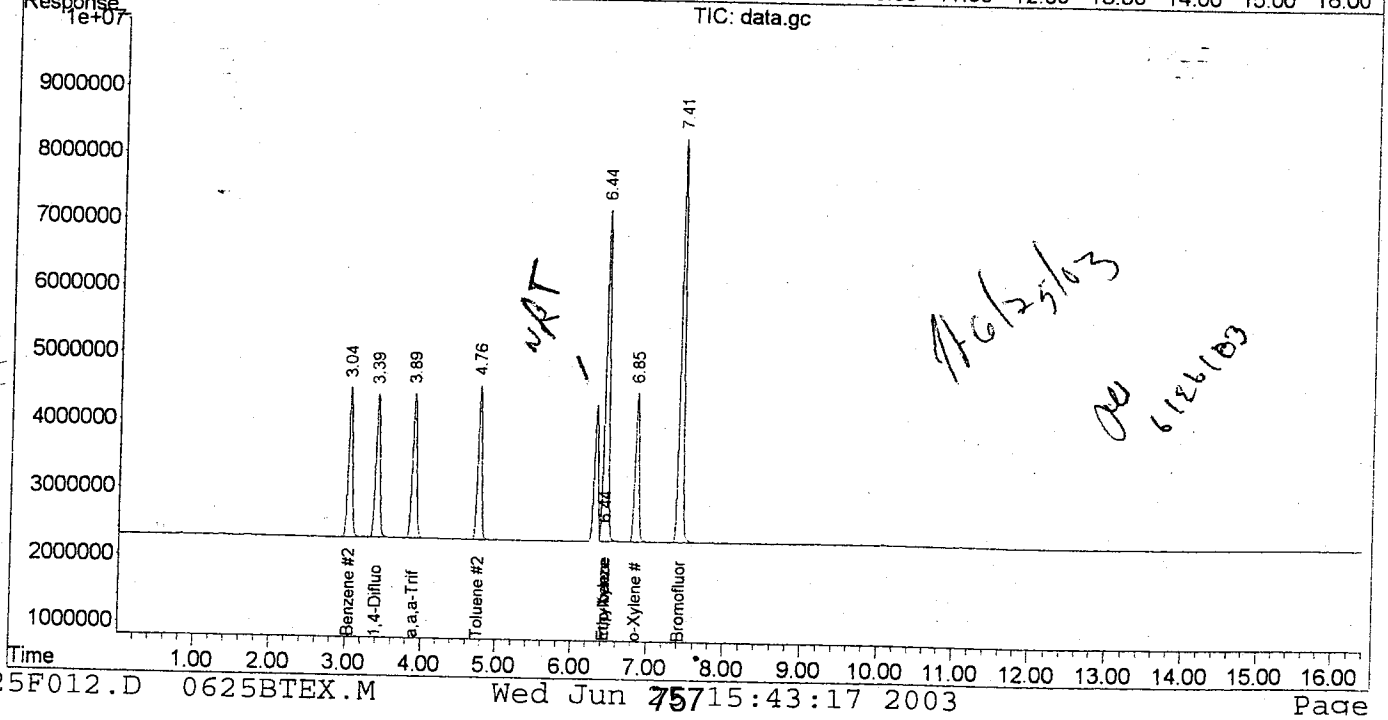
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\062503\0625F012.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\062503\0625F012.D\0625R012.D\data.gc
Acq On : 25 Jun 2003 03:15 pm Operator: JW
Sample : hcv2-26u 20ppb/50ppb Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jun 25 15:44 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-
Last Update : Wed Jun 25 15:11:43 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





6/25/03

6/26/03

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\071103\0711F031.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\071103\0711F031.D\0711R031.D\data.gc
Acq On : 12 Jul 2003 00:55 am Operator: JW
Sample : btex@50ppb nelac Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jul 14 08:21:47 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Wed Jul 09 08:10:08 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.85	3.80	615988	7967916	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.29	3.31	1176003	14999510	92.015	93.605
3)	S	Bromofluorobenze	8.44f	0.00	18504	0	0.608	N.D. #
		Target Compounds						
4)	T	Benzene	4.05	2.95	1712213	21004711	50.271	50.911
5)	T	Toluene	5.91	4.68	1632779	20450523	51.491	49.774
6)	T	Ethylbenzene	7.47	6.23	1440718	18064855	51.094	50.125
7)	T	m,p-Xylenes	7.68	6.36	3271257	40008772	101.537	99.734
8)	T	o-Xylene	8.06	6.77	1415320	17777810	51.560	46.538

JW
7/14/03

MG

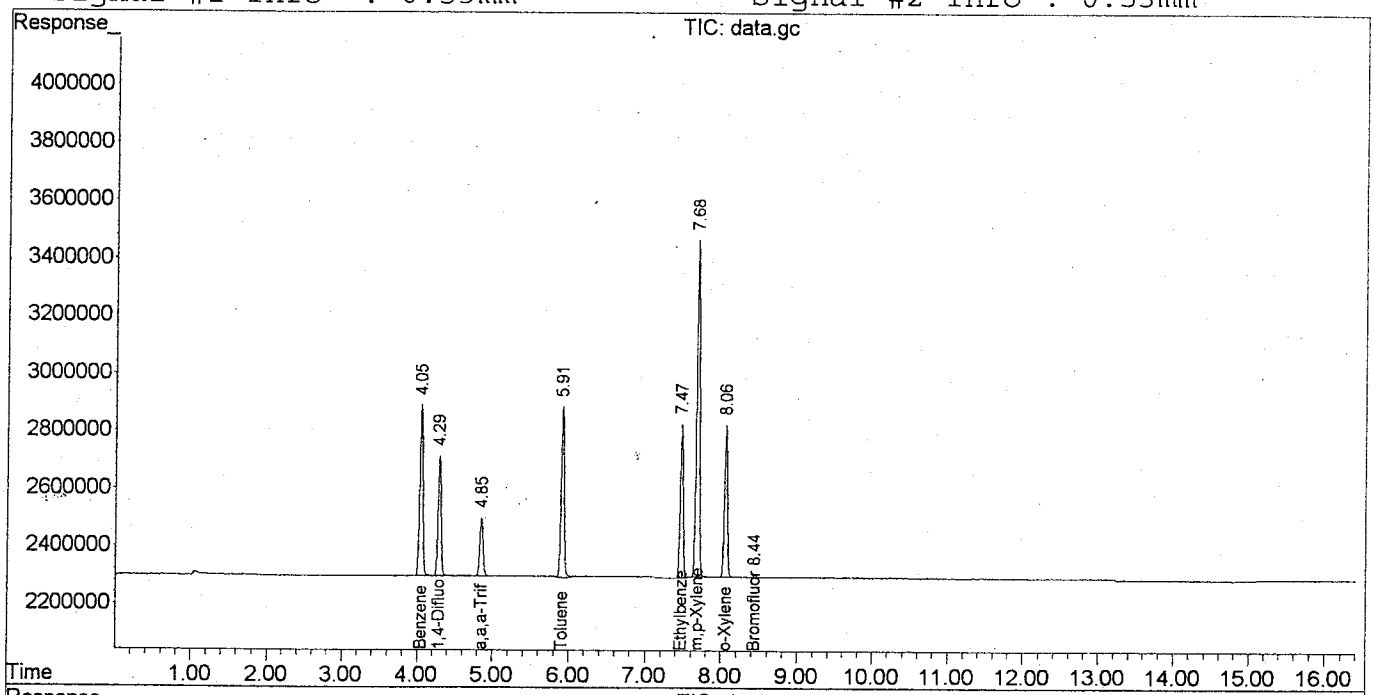
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

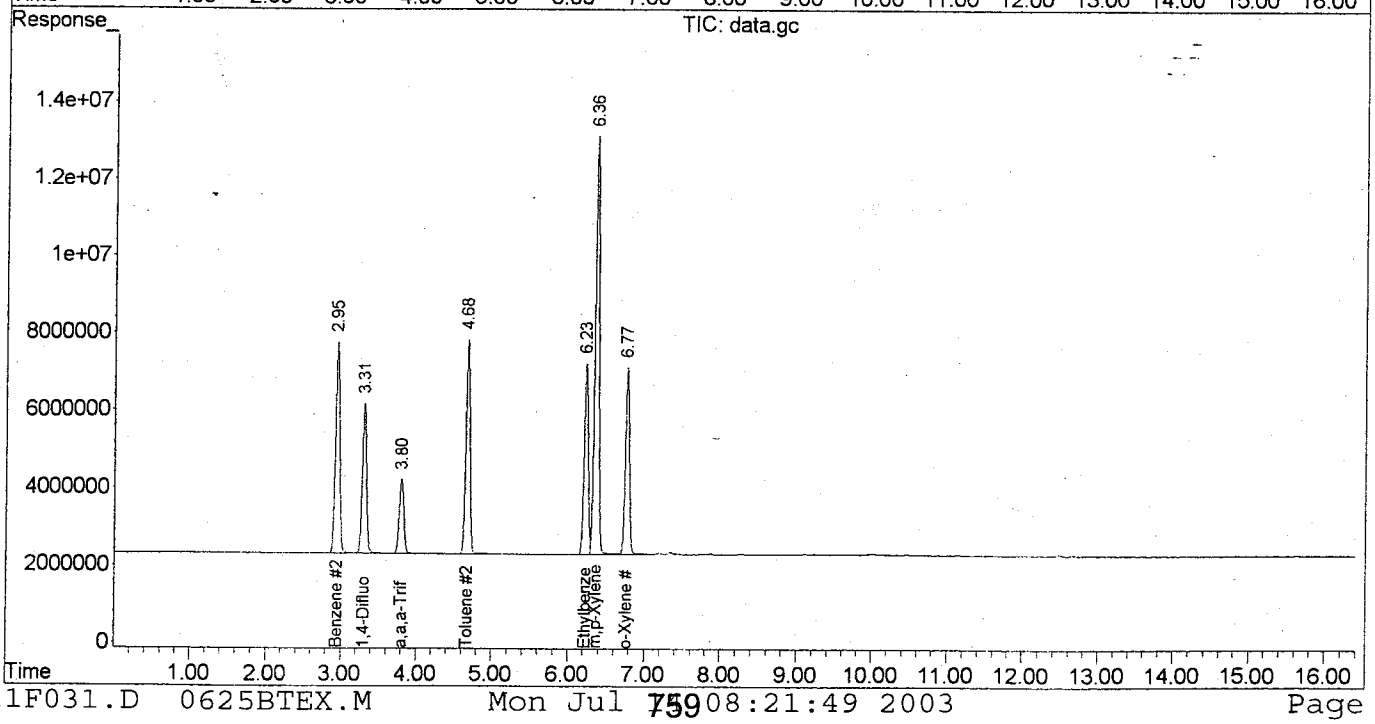
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\071103\0711F031.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\071103\0711F031.D\0711R031.D\data.gc
Acq On : 12 Jul 2003 00:55 am Operator: JW
Sample : btex@50ppb nelac Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Jul 14 8:23 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Wed Jul 09 08:10:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F002.D\1028R002.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	21	0.01	2.59	2.70	4	NA	± 15 %	AverageRF
Toluene	20	21	0.01	2.58	2.64	3	NA	± 15 %	AverageRF
Ethylbenzene	20	21	0.01	2.26	2.37	5	NA	± 15 %	AverageRF
m,p-Xylenes	40	42	0.01	2.52	2.67	6	NA	± 15 %	AverageRF
o-Xylene	20	19	0.01	2.40	2.33	-3	NA	± 15 %	AverageRF
Bromofluorobenzene	100	96		2.29	2.21	-4	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F002.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	20	0.01	2.76	2.83	2	NA	± 15 %	AverageRF
Toluene	20	21	0.01	2.57	2.66	3	NA	± 15 %	AverageRF
Ethylbenzene	20	22	0.01	2.29	2.46	8	NA	± 15 %	AverageRF
m,p-Xylenes	40	41	0.01	2.62	2.70	3	NA	± 15 %	AverageRF
o-Xylene	20	21	0.01	2.23	2.32	4	NA	± 15 %	AverageRF
Bromofluorobenzene	100	93		2.47	2.30	-7	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC06B\DATA\102803\1028F002.D
Lab ID: KWG0317374-1
RunType: CCV
Matrix: SOIL

Date Acquired: 10/28/2003 14:12
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.20	NA	0.15	NA

Primary Review: [signature]

Secondary Review: [signature] 10/30/03

Exception Report

Data File: J:\GC06B\DATA\102803\1028F002.D\1028R002.D
Lab ID: KWG0317374-1
RunType: CCV
Matrix: SOIL

Date Acquired: 10/28/2003 14:12
Date Quantitated: 10/29/2003 06:11
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 10/30/03

Secondary Review: 10/30/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/29/2003

Analysis Lot:	KWG0317374	**Prep Lot:**		**Report Group:**	
Analysis Method:	8021B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ204
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F002.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F002.D\1028R002.D			**Vial:**	165
Acqu Date:	10/28/2003 14:12	**Quant Date:**	10/29/2003 06:11	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317374-1				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82* -0.20	3.79 -0.14	516521	4282762	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.27	3.29	1091430	8699867	101.84	101.01			NA
				%Recovery =		NA	NA	Limits =	50-150	
1	Bromofluorobenzene	8.41	7.31	2376232	18895517	93.11	96.17			NA
				%Recovery =		NA	NA	Limits =	37-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene	4.02	2.94	584703	4621124	20.47	20.84			
1	Toluene	5.88	4.66	549752	4530992	20.68	20.52			
1	Ethylbenzene	7.44	6.20	508843	4052445	21.52	20.92			
1	m,p-Xylenes	7.65	6.34	1117536	9160141	41.37	42.48			
1	o-Xylene	8.03	6.75	478433	3985540	20.79	19.41			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F002.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F002.D\1028R002.D\data.gc
Acq On : 28 Oct 2003 02:12 pm Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:13:57 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.79	516521	4282762	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.27	3.29	1091430	8699867	101.842	101.008
3)	S	Bromofluorobenze	8.41	7.31	2376232	18895517	93.114	96.169
		Target Compounds						
4)	T	Benzene	4.02	2.94	584703	4621124	20.473	20.838
5)	T	Toluene	5.88	4.66	549752	4530992	20.676	20.517
6)	T	Ethylbenzene	7.44	6.20	508843	4052445	21.521	20.920
7)	T	m,p-Xylenes	7.65	6.34	1117536	9160141	41.367	42.483
8)	T	o-Xylene	8.03	6.75	478433	3985540	20.786	19.411

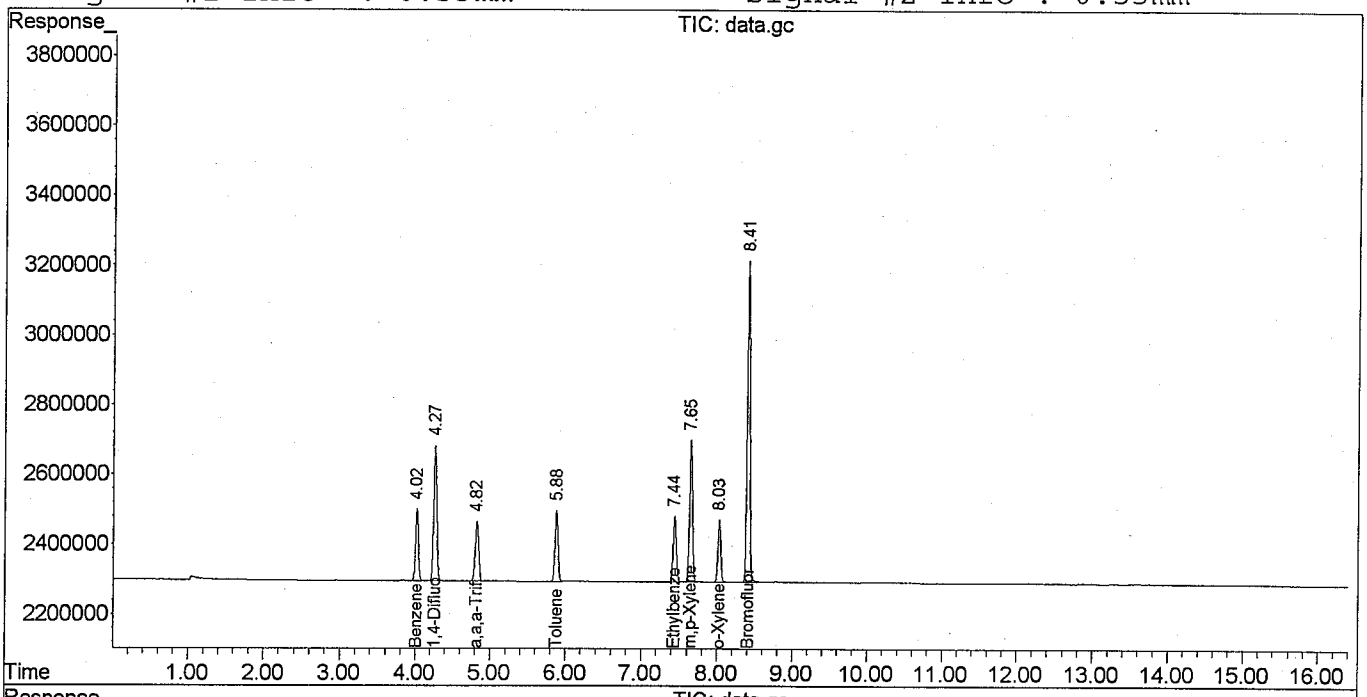
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

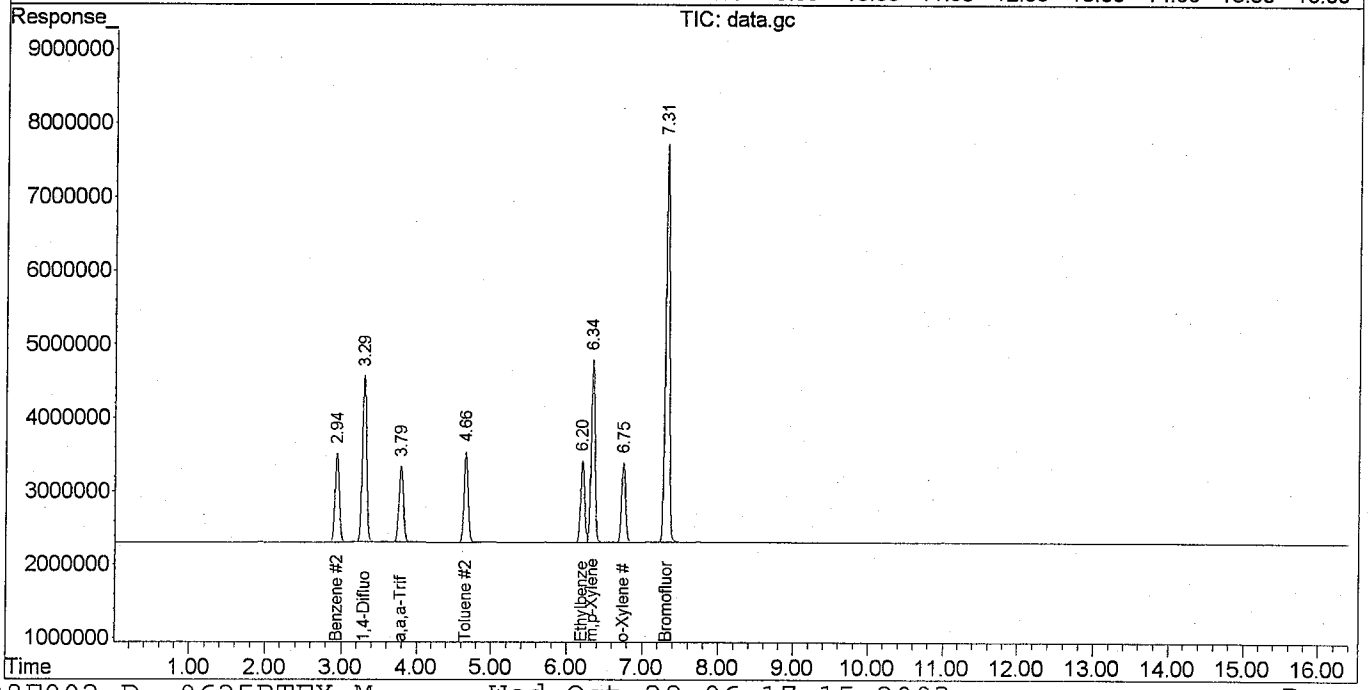
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F002.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F002.D\1028R002.D\data.gc
Acq On : 28 Oct 2003 02:12 pm Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:11 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D\1028R015.D

Column ID: DB-624

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.59	2.52	-3	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.58	2.42	-6	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.26	2.16	-5	NA	± 15 %	AverageRF
m,p-Xylenes	40	39	0.01	2.52	2.42	-4	NA	± 15 %	AverageRF
o-Xylene	20	18	0.01	2.40	2.11	-12	NA	± 15 %	AverageRF
Bromofluorobenzene	100	90		2.29	2.06	-10	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 10/28/2003

Continuing Calibration Verification Summary
BTEX

Calibration Type: Internal Standard
Analysis Method: 8021B

Calibration Date: 06/25/2003
Calibration ID: CAL2726
Analysis Lot: KWG0317374
Units: ug/L

File ID: J:\GC06B\DATA\102803\1028F015.D

Column ID: DB-VRX

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Benzene	20	19	0.01	2.76	2.59	-6	NA	± 15 %	AverageRF
Toluene	20	19	0.01	2.57	2.40	-7	NA	± 15 %	AverageRF
Ethylbenzene	20	19	0.01	2.29	2.21	-3	NA	± 15 %	AverageRF
m,p-Xylenes	40	37	0.01	2.62	2.45	-6	NA	± 15 %	AverageRF
o-Xylene	20	19	0.01	2.23	2.10	-6	NA	± 15 %	AverageRF
Bromofluorobenzene	100	88		2.47	2.16	-12	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC06B\DATA\102803\1028F015.D
Lab ID: KWG0317374-2
RunType: CCV
Matrix: SOIL

Date Acquired: 10/28/2003 21:26
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.20	NA	0.15	NA

Primary Review: [signature]

Secondary Review: [signature]

Exception Report

Data File: J:\GC06B\DATA\102803\1028F015.D\1028R015.D
Lab ID: KWG0317374-2
RunType: CCV
Matrix: SOIL

Date Acquired: 10/28/2003 21:26
Date Quantitated: 10/29/2003 06:12
Batch ID: KWG0317374
Analysis Method: 8021B
MethodJoinID: MJ201

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Retention Time	a,a,a-Trifluorotoluene	-0.16	NA	0.15	NA

Primary Review: 10/29/03

Secondary Review: 10/29/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8021-BTEX	**Collect Date:**		**Receive Date:**	10/29/2003

Analysis Lot:	KWG0317374	**Prep Lot:**		**Report Group:**	
Analysis Method:	8021B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC06B\METHODS\0625BTEX.M	**Calibration ID:**	CAL2726
Title:			
MB Ref:		**Method ID:**	MJ204
		Quant based on Method	

Data File #1:	J:\GC06B\DATA\102803\1028F015.D			**Instrument:**	GC06B
Data File #2:	J:\GC06B\DATA\102803\1028F015.D\1028R015.D			**Vial:**	165
Acqu Date:	10/28/2003 21:26	**Quant Date:**	10/29/2003 06:12	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG0317374-2				
Signal #1:	DB-VRX	**Signal #2:**	DB-624		

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	a,a,a-Trifluorotoluene	4.82* -0.20	3.77* -0.16	528215	4566861	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	1,4-Difluorobenzene	4.26	3.28	1056429	8946080	96.39	97.41			NA
				%Recovery =		NA	NA	Limits =	50-150	
1	Bromofluorobenzene	8.40	7.31	2286663	18852316	87.62	89.98			NA
				%Recovery =		NA	NA	Limits =	37-130	

Target Compounds

Final Conc. Units:

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/Kg #1	mg/Kg #2	Rpt
1	Benzene	4.01	2.92	546663	4594520	18.72	19.43			
1	Toluene	5.88	4.65	506228	4429457	18.62	18.81			
1	Ethylbenzene	7.43	6.20	467157	3939882	19.32	19.07			
1	m,p-Xylenes	7.65	6.33	1033649	8857098	37.42	38.52			
1	o-Xylene	8.02	6.74	443681	3859480	18.85	17.63			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F015.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F015.D\1028R015.D\data.gc
Acq On : 28 Oct 2003 09:26 pm Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 06:14:28 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Initial Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	a,a,a-Trifluorot	4.82	3.77	528215	4566861	50.000	50.000
		System Monitoring Compounds						
2)	S	1,4-Difluorobenz	4.26	3.28	1056429	8946080	96.394	97.405
3)	S	Bromofluorobenze	8.40	7.31	2286663	18852316	87.620	89.981
		Target Compounds						
4)	T	Benzene	4.01	2.92	546663	4594520	18.717	19.430
5)	T	Toluene	5.88	4.65	506228	4429457	18.617	18.810
6)	T	Ethylbenzene	7.43	6.20	467157	3939882	19.321	19.074
7)	T	m,p-Xylenes	7.65	6.33	1033649	8857098	37.415	38.522
8)	T	o-Xylene	8.02	6.74	443681	3859480	18.849	17.627

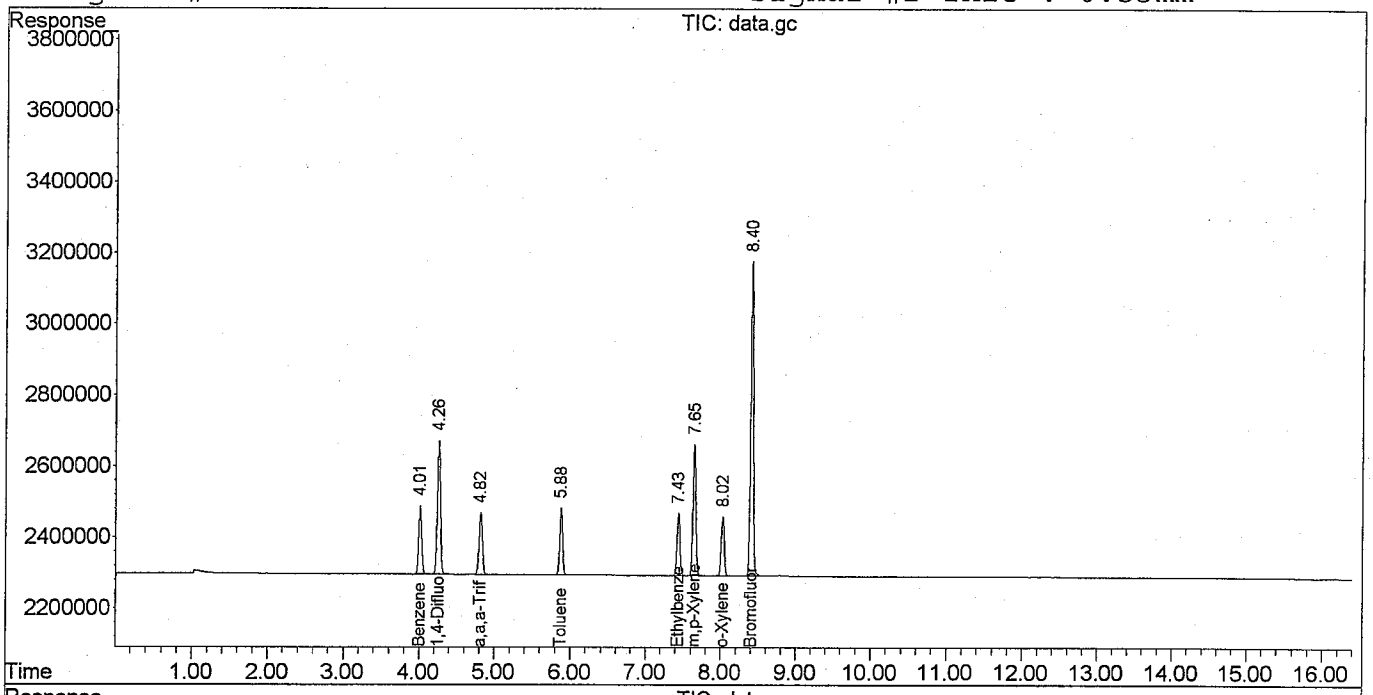
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

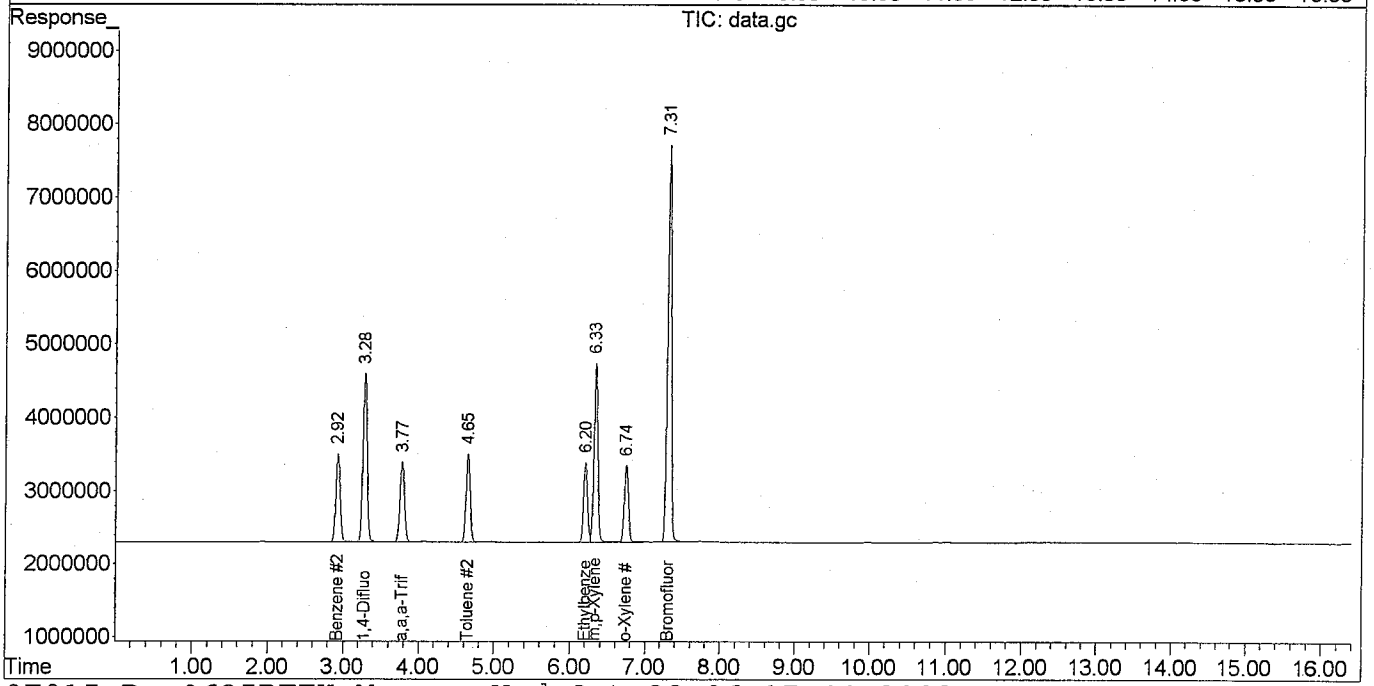
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC06B\DATA\102803\1028F015.D\data.gc Vial: 165
Signal #2 : J:\GC06B\DATA\102803\1028F015.D\1028R015.D\data.gc
Acq On : 28 Oct 2003 09:26 pm Operator: tf
Sample : btex@20ppbhcv2-36m Inst : GC06B
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 29 6:12 2003 Quant Results File: 0625BTEX.RES

Quant Method : J:\GC06B\METHODS\0625BTEX.M (RTE Integrator)
Title : CAL-2726
Last Update : Tue Oct 28 13:32:14 2003
Response via : Multiple Level Calibration
DataAcq Meth : TPH1.MTH

Volume Inj. : 5ml
Signal #1 Phase : DB-VRX Signal #2 Phase: DB-624
Signal #1 Info : 0.53mm Signal #2 Info : 0.53mm





Organic Analysis:
BTEX

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0317284	**Prep Method:**	EPA 5035/5030B	**Prep Date:**	10/28/03 00:00
Department:	PHC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	MeOH Vol.	MeOH Aliq.	Final Vol.	Solids
K2308433-001	SED-1	8021-BTEX	SEDIMENT	10.22g	10ml	1ml	50ml	
K2308433-002	SED-2	8021-BTEX	SEDIMENT	10.19g	10ml	1ml	50ml	
K2308433-003	SED-3	8021-BTEX	SEDIMENT	10.12g	10ml	1ml	50ml	
K2308433-004	SED-4	8021-BTEX	SEDIMENT	10.20g	10ml	1ml	50ml	
K2308433-005	SED-4-DUP	8021-BTEX	SEDIMENT	10.01g	10ml	1ml	50ml	
K2308433-006	SED-5	8021-BTEX	SEDIMENT	10.04g	10ml	1ml	50ml	
KWG0317284-1	Matrix Spike	8021-BTEX	SEDIMENT	10.18g	10ml	1ml	50ml	
KWG0317284-2	Duplicate Matrix Spike	8021-BTEX	SEDIMENT	10.18g	10ml	1ml	50ml	
KWG0317284-3	Lab Control Sample	8021-BTEX	SEDIMENT	10g	10ml	1ml	50ml	
KWG0317284-4	Method Blank	8021-BTEX	SEDIMENT	10g	10ml	1ml	50ml	

Lab Code	Parent Lab Code	Comments
KWG0317284-1	K2308433-004	
KWG0317284-2	K2308433-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308433-001	245209	HCV2-34A@250PP	100uL			
K2308433-002	245210	HCV2-34A@250PP	100uL			
K2308433-003	245211	HCV2-34A@250PP	100uL			
K2308433-004	245212	HCV2-34A@250PP	100uL			
K2308433-005	245213	HCV2-34A@250PP	100uL			
K2308433-006	245214	HCV2-34A@250PP	100uL			
KWG0317284-1	245215	HCV2-34A@250PP	100uL	HCV2-36L@100P	100uL	
KWG0317284-2	245216	HCV2-34A@250PP	100uL	HCV2-36L@100P	100uL	
KWG0317284-3	245217	HCV2-34A@250PP	100uL	HCV2-36L@100P	100uL	
KWG0317284-4	245218	HCV2-34A@250PP	100uL			

Comments:

Started By: TFillmor Assisted By: / Training: Yes (No)

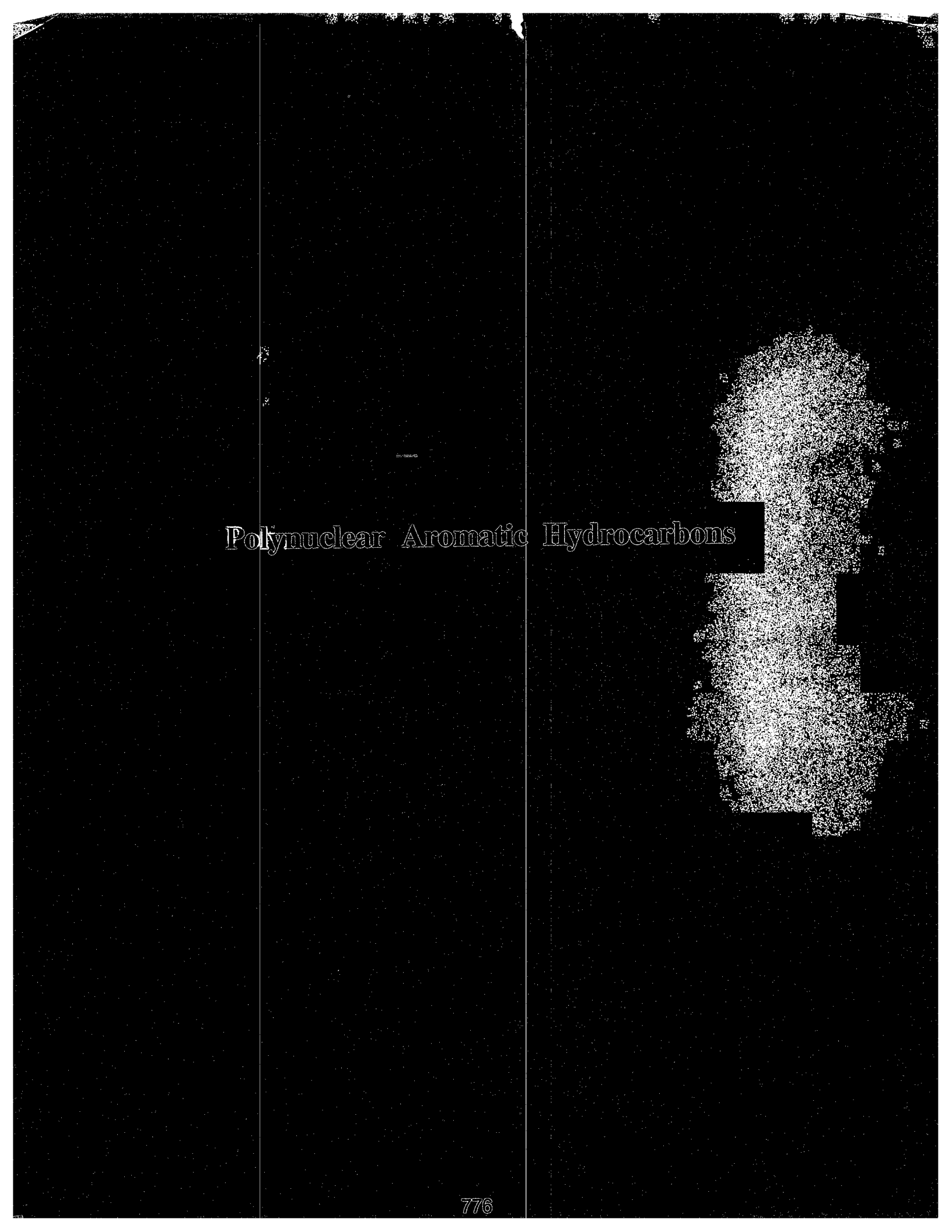
Completed By: TFillmor Assisted By: / Yes (No)

Reviewed By: 9 Date: 10/31/03 Storage: /

Chain of Custody

Relinquished By: Date: 10/28/03

Received By: Date: / Extracts Examined: (Yes) No


Polynuclear Aromatic Hydrocarbons

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Summary Package

Sample and QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
SED-1	K2308433-001	10/22/2003	10/27/2003
SED-2	K2308433-002	10/22/2003	10/27/2003
SED-3	K2308433-003	10/22/2003	10/27/2003
SED-4	K2308433-004	10/22/2003	10/27/2003
SED-4-DUP	K2308433-005	10/22/2003	10/27/2003
SED-5	K2308433-006	10/23/2003	10/27/2003
SED-6	K2308433-007	10/23/2003	10/27/2003
SED-7	K2308433-008	10/23/2003	10/27/2003
SED-8	K2308433-009	10/23/2003	10/27/2003
SED-4MS	KWG0317778-1	10/22/2003	10/27/2003
SED-4DMS	KWG0317778-2	10/22/2003	10/27/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Carl Degner

Date: 12/1/03 Title: SVM Supervisor

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED-1	**Units:**	ug/Kg
Lab Code:	K2308433-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**39**		4.8	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**16**		4.8	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**18**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**37**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**57**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**37**		4.8	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**7.4**		4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**57**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**43**		4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**68**		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**82**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**59**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**64**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**51**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**47**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**22**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**130**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**58**		4.8	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**880**		4.8	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**220**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**470**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**350**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**210**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**130**		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**2600**	D	48	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1600**	D	48	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**1200**	E	4.8	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**950**	D	48	10	11/05/03	11/20/03	KWG0317778	
Chrysene	**1000**	D	48	10	11/05/03	11/20/03	KWG0317778	
C1-Chrysenes	**900**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**400**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**240**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**320**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**690**	D	48	10	11/05/03	11/20/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-1
Lab Code: K2308433-001

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**740**	D	48	10	11/05/03	11/20/03	KWG0317778	
Benzo(e)pyrene	**560**	D	48	10	11/05/03	11/20/03	KWG0317778	
Benzo(a)pyrene	**880**	D	48	10	11/05/03	11/20/03	KWG0317778	
Perylene	**430**		4.8	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**610**	D	48	10	11/05/03	11/20/03	KWG0317778	
Dibenz(a,h)anthracene	**200**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**890**		4.8	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	27-110	11/19/03	Acceptable
Fluoranthene-d10	90	34-122	11/19/03	Acceptable
Terphenyl-d14	96	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-2
Lab Code: K2308433-002

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**58**		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**47**		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**42**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**46**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**24**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**9.7**		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**13**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**19**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**79**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**110**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**110**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**20**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**10**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**14**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**29**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**15**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**21**		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**470**		4.9	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**64**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**100**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**51**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**33**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**22**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**640**		4.9	1	11/05/03	11/19/03	KWG0317778	
Pyrene	**500**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**190**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**240**		4.9	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**310**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**140**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**72**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**51**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**56**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**300**		4.9	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-2
Lab Code: K2308433-002

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**250**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**220**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**290**		4.9	1	11/05/03	11/19/03	KWG0317778	
Perylene	**69**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**320**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**43**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**190**		4.9	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	27-110	11/19/03	Acceptable
Fluoranthene-d10	85	34-122	11/19/03	Acceptable
Terphenyl-d14	92	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED-3	**Units:**	ug/Kg
Lab Code:	K2308433-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**29**		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**6.0**		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**6.9**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**10**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**15**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**8.3**		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**11**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**39**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**74**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**110**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**25**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**15**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**16**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**66**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**5.6**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**16**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**20**		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**1200**	D	49	10	11/05/03	11/20/03	KWG0317778	
Anthracene	**250**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**210**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**73**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**36**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**24**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1700**	D	49	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1200**	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**340**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**500**		4.9	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**570**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**200**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**74**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**33**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**500**		4.9	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-3
Lab Code: K2308433-003

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**380**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**320**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**490**		4.9	1	11/05/03	11/19/03	KWG0317778	
Perylene	**120**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**510**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**70**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**280**		4.9	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	27-110	11/19/03	Acceptable
Fluoranthene-d10	92	34-122	11/19/03	Acceptable
Terphenyl-d14	96	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4
Lab Code: K2308433-004

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**11**		5.0	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**8.3**		5.0	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**9.1**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**19**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**25**		5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**16**		5.0	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**21**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**17**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**53**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**45**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**21**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**20**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**29**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**33**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**11**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**29**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**32**		5.0	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**650**		5.0	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**130**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**210**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**120**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**69**		5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**39**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1400**	D	50	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1200**	D	50	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**480**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**620**		5.0	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**770**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**320**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**120**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**63**		5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**21**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**720**		5.0	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4
Lab Code: K2308433-004

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**570**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**490**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**720**		5.0	1	11/05/03	11/19/03	KWG0317778	
Perylene	**160**		5.0	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**720**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**89**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**410**		5.0	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	27-110	11/19/03	Acceptable
Fluoranthene-d10	90	34-122	11/19/03	Acceptable
Terphenyl-d14	97	50-132	11/19/03	Acceptable

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**		4.8	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**9.7**		4.8	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**11**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**23**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**30**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**20**		4.8	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**25**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**30**		4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**75**		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**68**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**28**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**26**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**26**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**46**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**14**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**34**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**37**		4.8	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**880**		4.8	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**150**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**260**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**140**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**81**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**54**		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1700**	D	48	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1500**	D	48	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**590**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**750**		4.8	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**900**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**380**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**160**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**120**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**47**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**850**		4.8	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**690**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**570**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**870**		4.8	1	11/05/03	11/19/03	KWG0317778	
Perylene	**200**		4.8	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**840**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**110**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**480**		4.8	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	27-110	11/19/03	Acceptable
Fluoranthene-d10	89	34-122	11/19/03	Acceptable
Terphenyl-d14	99	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-5
Lab Code: K2308433-006

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**10**		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**20**		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**30**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**85**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**71**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**28**		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**8.3**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**21**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**18**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**77**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**81**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**67**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**41**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**28**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**54**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**14**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**40**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**32**		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**920**		4.9	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**230**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**390**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**160**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**71**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**33**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1700**	D	49	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1500**	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**620**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**790**		4.9	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**960**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**380**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**120**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**61**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**21**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**820**		4.9	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-5
Lab Code: K2308433-006

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**710**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**550**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**850**		4.9	1	11/05/03	11/19/03	KWG0317778	
Perylene	**200**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**870**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**120**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**470**		4.9	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	70	27-110	11/19/03	Acceptable
Fluoranthene-d10	91	34-122	11/19/03	Acceptable
Terphenyl-d14	100	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-6
Lab Code: K2308433-007

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**10**		4.7	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**13**		4.7	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**8.8**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**17**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**18**		4.7	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**9.8**		4.7	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.7	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**9.3**		4.7	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**18**		4.7	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**28**		4.7	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**37**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**13**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**10**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**16**		4.7	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**30**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**6.2**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**15**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**20**		4.7	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**650**		4.7	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**86**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**140**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**63**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**41**		4.7	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**28**		4.7	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1100**	D	47	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**960**	D	47	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**300**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**410**		4.7	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**550**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**190**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**84**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**48**		4.7	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**22**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**510**		4.7	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-6
Lab Code: K2308433-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**420**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**340**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**480**		4.7	1	11/05/03	11/19/03	KWG0317778	
Perylene	**110**		4.7	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**540**		4.7	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**69**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**300**		4.7	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	27-110	11/19/03	Acceptable
Fluoranthene-d10	85	34-122	11/19/03	Acceptable
Terphenyl-d14	97	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-7
Lab Code: K2308433-008

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**21**		4.6	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**9.3**		4.6	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**7.3**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**13**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**17**		4.6	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**10**		4.6	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.6	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**12**		4.6	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**29**		4.6	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**50**		4.6	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**52**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**16**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**14**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**22**		4.6	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**32**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**8.0**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**20**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**28**		4.6	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**650**		4.6	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**120**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**150**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**72**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**47**		4.6	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**29**		4.6	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1000**	D	46	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**860**	D	46	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**350**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**450**		4.6	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**550**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**210**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**96**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**60**		4.6	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**26**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**540**		4.6	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-7
Lab Code: K2308433-008

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**430**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**360**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**500**		4.6	1	11/05/03	11/19/03	KWG0317778	
Perylene	**120**		4.6	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**470**		4.6	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**64**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**270**		4.6	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	67	27-110	11/19/03	Acceptable
Fluoranthene-d10	90	34-122	11/19/03	Acceptable
Terphenyl-d14	108	50-132	11/19/03	Acceptable

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-8
Lab Code: K2308433-009

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	20		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	15		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	14		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	26		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	34		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	22		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	7.1		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	29		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	64		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	100		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	150		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	41		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	40		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	51		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	120		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	15		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	52		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	55		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	2600	D	49	10	11/05/03	11/20/03	KWG0317778	
Anthracene	380		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	600		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	270		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	140		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	78		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	5900	D	49	10	11/05/03	11/20/03	KWG0317778	
Pyrene	4400	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	1300	E	4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	1800	D	49	10	11/05/03	11/20/03	KWG0317778	
Chrysene	2500	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Chrysenes	850		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	280		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	130		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	49		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	2300	D	49	10	11/05/03	11/20/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-8
Lab Code: K2308433-009

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**2200**	D	49	10	11/05/03	11/20/03	KWG0317778	
Benzo(e)pyrene	**1600**	D	49	10	11/05/03	11/20/03	KWG0317778	
Benzo(a)pyrene	**2200**	D	49	10	11/05/03	11/20/03	KWG0317778	
Perylene	**510**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**2000**	D	49	10	11/05/03	11/20/03	KWG0317778	
Dibenz(a,h)anthracene	**270**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**1200**	D	49	10	11/05/03	11/20/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	77	27-110	11/19/03	Acceptable
Fluoranthene-d10	91	34-122	11/19/03	Acceptable
Terphenyl-d14	97	50-132	11/19/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317778-5

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Fluorene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Anthracene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Chrysene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317778-5

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Perylene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	27-110	11/19/03	Acceptable
Fluoranthene-d10	73	34-122	11/19/03	Acceptable
Terphenyl-d14	122	50-132	11/19/03	Acceptable

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED-1	K2308433-001	75	90	96
SED-2	K2308433-002	66	85	92
SED-3	K2308433-003	71	92	96
SED-4	K2308433-004	75	90	97
SED-4-DUP	K2308433-005	65	89	99
SED-5	K2308433-006	70	91	100
SED-6	K2308433-007	64	85	97
SED-7	K2308433-008	67	90	108
SED-8	K2308433-009	77	91	97
Method Blank	KWG0317778-5	64	73	122
SED-4MS	KWG0317778-1	80	87	92
SED-4DMS	KWG0317778-2	76	87	93
Lab Control Sample	KWG0317778-3	72	75	91
Duplicate Lab Control Sample	KWG0317778-4	76	81	95

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	27-110
Sur2 = Fluoranthene-d10	34-122
Sur3 = Terphenyl-d14	50-132

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003
Time Analyzed: 11:36

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111903\1119F008.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318851-2
Analysis Lot: KWG0318851

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	225,768	5.53	117,412	8.00	168,471	10.93
	Upper Limit ==>	451,536	6.03	234,824	8.50	336,942	11.43
	Lower Limit ==>	112,884	5.03	58,706	7.50	84,236	10.43
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
Method Blank	KWG0317778-5	214,525	5.53	106,189	8.00	142,248	10.93
Lab Control Sample	KWG0317778-3	234,781	5.53	118,555	8.00	166,979	10.93
Duplicate Lab Control Sample	KWG0317778-4	230,255	5.53	119,456	8.00	168,651	10.93
SED-4MS	KWG0317778-1	203,128	5.53	105,086	8.00	158,587	10.93
SED-4DMS	KWG0317778-2	231,957	5.53	121,666	8.00	183,137	10.93
SED-1	K2308433-001	225,713	5.53	120,841	8.00	182,651	10.93
SED-2	K2308433-002	228,841	5.53	115,391	8.00	159,274	10.93
SED-3	K2308433-003	273,552	5.53	142,432	8.00	211,605	10.93
SED-4	K2308433-004	264,184	5.53	139,936	8.00	210,940	10.93
SED-4-DUP	K2308433-005	271,899	5.53	144,032	8.00	211,052	10.93
SED-5	K2308433-006	235,969	5.53	125,353	8.00	185,430	10.93
SED-6	K2308433-007	256,437	5.53	134,500	8.00	194,000	10.93
SED-7	K2308433-008	257,757	5.53	137,372	8.01	203,318	10.94
SED-8	K2308433-009	277,492	5.53	145,728	8.01	218,493	10.94

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003
Time Analyzed: 11:36

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111903\1119F008.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318851-2
Analysis Lot: KWG0318851

		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT
	Results ==>	145,342	17.04	77,295	21.36
	Upper Limit ==>	290,684	17.54	154,590	21.86
	Lower Limit ==>	72,671	16.54	38,648	20.86
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
Method Blank	KWG0317778-5	93,682	17.05	41,811	21.36
Lab Control Sample	KWG0317778-3	143,859	17.05	73,794	21.36
Duplicate Lab Control Sample	KWG0317778-4	150,040	17.05	72,439	21.36
SED-4MS	KWG0317778-1	172,935	17.05	118,471	21.38
SED-4DMS	KWG0317778-2	185,560	17.06	130,192	21.38
SED-1	K2308433-001	193,989	17.06	148,341	21.39
SED-2	K2308433-002	161,186	17.05	110,411	21.38
SED-3	K2308433-003	219,239	17.06	148,017	21.39
SED-4	K2308433-004	212,311	17.06	139,477	21.39
SED-4-DUP	K2308433-005	208,410	17.06	129,270	21.40
SED-5	K2308433-006	182,833	17.06	119,053	21.39
SED-6	K2308433-007	188,856	17.06	118,580	21.40
SED-7	K2308433-008	186,828	17.06	105,190	21.40
SED-8	K2308433-009	227,449	17.07	137,097	21.41

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003
Time Analyzed: 05:47

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112003\1120F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318915-2
Analysis Lot: KWG0318915

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	253,624	5.53	132,414	8.00	198,017	10.93
	Upper Limit ==>	507,248	6.03	264,828	8.50	396,034	11.43
	Lower Limit ==>	126,812	5.03	66,207	7.50	99,009	10.43
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
SED-1DL	K2308433-001	250,607	5.53	134,291	8.01	203,829	10.94
SED-3DL	K2308433-003	255,747	5.54	132,289	8.01	185,116	10.94
SED-4DL	K2308433-004	228,738	5.54	117,353	8.01	161,535	10.94
SED-4-DUPDL	K2308433-005	236,643	5.54	119,862	8.01	162,462	10.93
SED-5DL	K2308433-006	218,733	5.54	112,887	8.01	149,490	10.94
SED-6DL	K2308433-007	228,002	5.54	115,492	8.01	149,045	10.94
SED-7DL	K2308433-008	228,853	5.54	117,273	8.01	157,960	10.94
SED-8DL	K2308433-009	252,077	5.54	135,001	8.01	188,564	10.94

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003
Time Analyzed: 05:47

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112003\1120F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318915-2
Analysis Lot: KWG0318915

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	181,741	17.06	111,133	21.40
	Upper Limit ==>	363,482	17.56	222,266	21.90
	Lower Limit ==>	90,871	16.56	55,567	20.90
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
SED-1DL	K2308433-001	279,421	17.06	206,607	21.40
SED-3DL	K2308433-003	178,610	17.06	105,824	21.41
SED-4DL	K2308433-004	157,597	17.06	92,435	21.41
SED-4-DUPDL	K2308433-005	140,449	17.06	79,432	21.41
SED-5DL	K2308433-006	129,112	17.07	77,404	21.41
SED-6DL	K2308433-007	129,201	17.06	74,133	21.41
SED-7DL	K2308433-008	141,584	17.06	83,112	21.41
SED-8DL	K2308433-009	187,403	17.06	104,198	21.41

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003
Date Analyzed: 11/19/2003

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4
Lab Code: K2308433-004

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low
Extraction Lot: KWG0317778

Analyte Name	Sample Result	SED-4MS KWG0317778-1 Matrix Spike Result	Expected	%Rec	SED-4DMS KWG0317778-2 Duplicate Matrix Spike Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene	11	154	249	57	166	247	63	22-101	8	40
2-Methylnaphthalene	8.3	169	249	65	176	247	68	27-106	4	40
1-Methylnaphthalene	9.1	181	249	69	183	247	70	33-99	1	40
Biphenyl	ND	180	249	72	180	247	73	28-107	0	40
Acenaphthylene	21	222	249	81	211	247	77	36-113	5	40
Dibenzofuran	17	222	249	83	289	247	110	33-110	26	40
Acenaphthene	53	276	249	90	357	247	123 *	32-114	25	40
Fluorene	45	283	249	96	385	247	138 *	39-118	30	40
Dibenzothiophene	33	240	249	83	303	247	109	70-130	23	40
Phenanthrene	650	909	249	104	2340E	247	685 *	29-130	88 *	40
Anthracene	130	356	249	91	528	247	162 *	38-133	39	40
Fluoranthene	1400	1810E	249	149 #	4030E	247	1051 #	30-143	76 *	40
Pyrene	1200	1500E	249	136 #	3090E	247	782 #	28-143	69 *	40
Benz(a)anthracene	620	876	249	102	1660E	247	420 *	24-149	62 *	40
Chrysene	770	1030E	249	106	1950E	247	479 *	38-133	62 *	40
Benzo(b)fluoranthene	720	950	249	94	1930E	247	493 *	26-144	68 *	40
Benzo(k)fluoranthene	570	855	249	113	1470E	247	363 *	29-136	53 *	40
Benzo(e)pyrene	490	729	249	97	1310E	247	333 *	37-130	57 *	40
Benzo(a)pyrene	720	998E	249	111	1970E	247	505 *	30-146	65 *	40
Perylene	160	364	249	82	608	247	181 *	10-152	50 *	40
Indeno(1,2,3-cd)pyrene	720	874	249	62	1880E	247	470 *	24-147	73 *	40
Dibenz(a,h)anthracene	89	301	249	85	478	247	157 *	33-136	45 *	40
Benzo(g,h,i)perylene	410	701	249	117	1330E	247	374 *	23-142	62 *	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003
Date Analyzed: 11/19/2003

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0317778

	Lab Control Sample KWG0317778-3 Lab Control Spike			Duplicate Lab Control Sample KWG0317778-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	176	250	70	180	250	72	43-102	2	40
2-Methylnaphthalene	185	250	74	191	250	76	44-105	3	40
1-Methylnaphthalene	189	250	76	195	250	78	44-108	3	40
Biphenyl	183	250	73	189	250	76	49-105	3	40
Acenaphthylene	189	250	76	192	250	77	51-107	2	40
Dibenzofuran	189	250	76	193	250	77	50-106	2	40
Acenaphthene	190	250	76	193	250	77	50-105	1	40
Fluorene	198	250	79	203	250	81	54-108	3	40
Dibenzothiophene	124	250	50	172	250	69	10-121	32	40
Phenanthrene	196	250	79	204	250	82	58-106	4	40
Anthracene	210	250	84	217	250	87	61-113	4	40
Fluoranthene	211	250	84	218	250	87	63-117	3	40
Pyrene	225	250	90	227	250	91	59-121	1	40
Benz(a)anthracene	196	250	79	195	250	78	57-120	1	40
Chrysene	214	250	85	210	250	84	64-116	2	40
Benzo(b)fluoranthene	228	250	91	227	250	91	58-126	1	40
Benzo(k)fluoranthene	248	250	99	251	250	101	61-122	1	40
Benzo(e)pyrene	223	250	89	225	250	90	61-121	1	40
Benzo(a)pyrene	211	250	84	214	250	86	58-128	1	40
Perylene	201	250	81	208	250	83	61-119	3	40
Indeno(1,2,3-cd)pyrene	180	250	72	155	250	62	46-133	15	40
Dibenz(a,h)anthracene	187	250	75	165	250	66	50-128	13	40
Benzo(g,h,i)perylene	204	250	81	180	250	72	52-125	12	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
SRM Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA
Date Extracted: 11/5/2003
Date Analyzed: 11/20/2003

Standard Reference Material
Polynuclear Aromatic Hydrocarbons

Sample Name: Standard Reference Material
Lab Code: KWG0317778-6
Test Notes:

Units: ug/Kg (ppb)
Basis: Dry

Analyte	Prep Method	Analysis Method	True Value	Result	CAS Advisory Limits	Result Notes
Phenanthrene	EPA 3541	SIM	5270 ± 220	3500	2520-8240	
Anthracene	EPA 3541	SIM	1770 ± 330	730	720-3150	
Fluoranthene	EPA 3541	SIM	8920 ± 320	6300	4300-13900	
Pyrene	EPA 3541	SIM	9700 ± 420	4900	4640-15200	
Benz(a)anthracene	EPA 3541	SIM	4720 ± 110	2300	2310-7250	*
Chrysene	EPA 3541	SIM	5900 ± 370	3000	2770-9410	
Benzo(b)fluoranthene	EPA 3541	SIM	3870 ± 420	1900	1720-6440	
Benzo(k)fluoranthene	EPA 3541	SIM	4390 ± 640	2000	1880-7550	
Benzo(a)pyrene	EPA 3541	SIM	4300 ± 130	1900	2090-6650	*
Indeno(1,2,3-cd)pyrene	EPA 3541	SIM	2780 ± 100	1700	1340-4320	
Dibenz(a,h)anthracene	EPA 3541	SIM	424 ± 69	250	178-740	
Benzo(g,h,i)perylene	EPA 3541	SIM	2840 ± 100	1100	1370-4410	*

Approved By: _____ Date: 11/26/03

LCS (44)/091898p

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003
Date Analyzed: 11/19/2003
Time Analyzed: 12:49

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317778-5

File ID: J:\MS11\DATA\111903\1119F031.D
Instrument ID: MS11

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low
Extraction Lot: KWG0317778

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317778-3	J:\MS11\DATA\111903\1119F032.D	11/19/03	13:25
Duplicate Lab Control Sample	KWG0317778-4	J:\MS11\DATA\111903\1119F033.D	11/19/03	14:01
SED-4MS	KWG0317778-1	J:\MS11\DATA\111903\1119F034.D	11/19/03	14:37
SED-4DMS	KWG0317778-2	J:\MS11\DATA\111903\1119F035.D	11/19/03	15:13
SED-1	K2308433-001	J:\MS11\DATA\111903\1119F037.D	11/19/03	16:26
SED-2	K2308433-002	J:\MS11\DATA\111903\1119F038.D	11/19/03	17:02
SED-3	K2308433-003	J:\MS11\DATA\111903\1119F039.D	11/19/03	17:38
SED-4	K2308433-004	J:\MS11\DATA\111903\1119F040.D	11/19/03	18:14
SED-4-DUP	K2308433-005	J:\MS11\DATA\111903\1119F041.D	11/19/03	18:50
SED-5	K2308433-006	J:\MS11\DATA\111903\1119F042.D	11/19/03	19:26
SED-6	K2308433-007	J:\MS11\DATA\111903\1119F043.D	11/19/03	20:02
SED-7	K2308433-008	J:\MS11\DATA\111903\1119F044.D	11/19/03	20:38
SED-8	K2308433-009	J:\MS11\DATA\111903\1119F045.D	11/19/03	21:15
SED-1	K2308433-001	J:\MS11\DATA\112003\1120F005.D	11/20/03	07:35
SED-3	K2308433-003	J:\MS11\DATA\112003\1120F006.D	11/20/03	08:11
SED-4	K2308433-004	J:\MS11\DATA\112003\1120F007.D	11/20/03	08:47
SED-4-DUP	K2308433-005	J:\MS11\DATA\112003\1120F008.D	11/20/03	09:24
SED-5	K2308433-006	J:\MS11\DATA\112003\1120F009.D	11/20/03	10:01
SED-6	K2308433-007	J:\MS11\DATA\112003\1120F010.D	11/20/03	10:37
SED-7	K2308433-008	J:\MS11\DATA\112003\1120F011.D	11/20/03	11:14
SED-8	K2308433-009	J:\MS11\DATA\112003\1120F012.D	11/20/03	11:50

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Lab Control Sample/Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0317778-3	**Lab Code:**	KWG0317778-4
File ID:	J:\MS11\DATA\111903\1119F032.D	**File ID:**	J:\MS11\DATA\111903\1119F033.D
Instrument ID:	MS11	**Instrument ID:**	MS11
Date Extracted:	11/05/2003	**Date Extracted:**	11/05/2003
Date Analyzed:	11/19/2003	**Date Analyzed:**	11/19/2003
Time Analyzed:	13:25	**Time Analyzed:**	14:01

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0317778

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0317778-5	J:\MS11\DATA\111903\1119F031.D	11/19/03	12:49
SED-4MS	KWG0317778-1	J:\MS11\DATA\111903\1119F034.D	11/19/03	14:37
SED-4DMS	KWG0317778-2	J:\MS11\DATA\111903\1119F035.D	11/19/03	15:13
SED-1	K2308433-001	J:\MS11\DATA\111903\1119F037.D	11/19/03	16:26
SED-2	K2308433-002	J:\MS11\DATA\111903\1119F038.D	11/19/03	17:02
SED-3	K2308433-003	J:\MS11\DATA\111903\1119F039.D	11/19/03	17:38
SED-4	K2308433-004	J:\MS11\DATA\111903\1119F040.D	11/19/03	18:14
SED-4-DUP	K2308433-005	J:\MS11\DATA\111903\1119F041.D	11/19/03	18:50
SED-5	K2308433-006	J:\MS11\DATA\111903\1119F042.D	11/19/03	19:26
SED-6	K2308433-007	J:\MS11\DATA\111903\1119F043.D	11/19/03	20:02
SED-7	K2308433-008	J:\MS11\DATA\111903\1119F044.D	11/19/03	20:38
SED-8	K2308433-009	J:\MS11\DATA\111903\1119F045.D	11/19/03	21:15
SED-1	K2308433-001	J:\MS11\DATA\112003\1120F005.D	11/20/03	07:35
SED-3	K2308433-003	J:\MS11\DATA\112003\1120F006.D	11/20/03	08:11
SED-4	K2308433-004	J:\MS11\DATA\112003\1120F007.D	11/20/03	08:47
SED-4-DUP	K2308433-005	J:\MS11\DATA\112003\1120F008.D	11/20/03	09:24
SED-5	K2308433-006	J:\MS11\DATA\112003\1120F009.D	11/20/03	10:01
SED-6	K2308433-007	J:\MS11\DATA\112003\1120F010.D	11/20/03	10:37
SED-7	K2308433-008	J:\MS11\DATA\112003\1120F011.D	11/20/03	11:14
SED-8	K2308433-009	J:\MS11\DATA\112003\1120F012.D	11/20/03	11:50

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003
Time Analyzed: 10:01

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111903\1119F005.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318851

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	50.2	577728	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	50.5	580928	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	51.3	590272	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	61.5	1150464	PASS
199	198	5	9	7.1	81456	PASS
275	198	10	60	32.3	372096	PASS
365	442	1	50	2.4	44912	PASS
441	443	0	100	72.5	277696	PASS
442	442	100	100	100.0	1871360	PASS
443	442	15	24	20.5	382912	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318851-2	J:\MS11\DATA\111903\1119F008.D	11/19/2003	11:36	
Method Blank	KWG0317778-5	J:\MS11\DATA\111903\1119F031.D	11/19/2003	12:49	
Lab Control Sample	KWG0317778-3	J:\MS11\DATA\111903\1119F032.D	11/19/2003	13:25	
Duplicate Lab Control Sample	KWG0317778-4	J:\MS11\DATA\111903\1119F033.D	11/19/2003	14:01	
SED-4MS	KWG0317778-1	J:\MS11\DATA\111903\1119F034.D	11/19/2003	14:37	
SED-4DMS	KWG0317778-2	J:\MS11\DATA\111903\1119F035.D	11/19/2003	15:13	
SED-1	K2308433-001	J:\MS11\DATA\111903\1119F037.D	11/19/2003	16:26	
SED-2	K2308433-002	J:\MS11\DATA\111903\1119F038.D	11/19/2003	17:02	
SED-3	K2308433-003	J:\MS11\DATA\111903\1119F039.D	11/19/2003	17:38	
SED-4	K2308433-004	J:\MS11\DATA\111903\1119F040.D	11/19/2003	18:14	
SED-4-DUP	K2308433-005	J:\MS11\DATA\111903\1119F041.D	11/19/2003	18:50	
SED-5	K2308433-006	J:\MS11\DATA\111903\1119F042.D	11/19/2003	19:26	
SED-6	K2308433-007	J:\MS11\DATA\111903\1119F043.D	11/19/2003	20:02	
SED-7	K2308433-008	J:\MS11\DATA\111903\1119F044.D	11/19/2003	20:38	
SED-8	K2308433-009	J:\MS11\DATA\111903\1119F045.D	11/19/2003	21:15	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003
Time Analyzed: 05:26

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112003\1120F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318915

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	48.8	492096	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	48.6	490624	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	50.5	509312	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	61.7	1008896	PASS
199	198	5	9	6.8	68800	PASS
275	198	10	60	31.6	319232	PASS
365	442	1	50	2.3	38312	PASS
441	443	0	100	71.6	233984	PASS
442	442	100	100	100.0	1635328	PASS
443	442	15	24	20.0	326784	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318915-2	J:\MS11\DATA\112003\1120F002.D	11/20/2003	05:47	
SED-1	K2308433-001	J:\MS11\DATA\112003\1120F005.D	11/20/2003	07:35	
SED-3	K2308433-003	J:\MS11\DATA\112003\1120F006.D	11/20/2003	08:11	
SED-4	K2308433-004	J:\MS11\DATA\112003\1120F007.D	11/20/2003	08:47	
SED-4-DUP	K2308433-005	J:\MS11\DATA\112003\1120F008.D	11/20/2003	09:24	
SED-5	K2308433-006	J:\MS11\DATA\112003\1120F009.D	11/20/2003	10:01	
SED-6	K2308433-007	J:\MS11\DATA\112003\1120F010.D	11/20/2003	10:37	
SED-7	K2308433-008	J:\MS11\DATA\112003\1120F011.D	11/20/2003	11:14	
SED-8	K2308433-009	J:\MS11\DATA\112003\1120F012.D	11/20/2003	11:50	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\110703\1107F010.D	F	J:\MS11\DATA\110703\1107F015.D
B	J:\MS11\DATA\110703\1107F011.D	G	J:\MS11\DATA\110703\1107F016.D
C	J:\MS11\DATA\110703\1107F012.D	H	J:\MS11\DATA\110703\1107F017.D
D	J:\MS11\DATA\110703\1107F013.D	I	J:\MS11\DATA\110703\1107F018.D
E	J:\MS11\DATA\110703\1107F014.D	J	J:\MS11\DATA\110703\1107F019.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
2-Methylnaphthalene	A	10	0.592	B	20	0.617	C	40	0.597	D	100	0.643	E	500	0.653
	F	1000	0.688	G	2000	0.717	H	5000	0.719	I	8000	0.734	J	10000	0.716
1-Methylnaphthalene	A	10	0.538	B	20	0.612	C	40	0.534	D	100	0.601	E	500	0.623
	F	1000	0.650	G	2000	0.676	H	5000	0.674	I	8000	0.684	J	10000	0.667
C2-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C3-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C4-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
Biphenyl	A	10	0.744	B	20	0.715	C	40	0.720	D	100	0.787	E	500	0.805
	F	1000	0.845	G	2000	0.875	H	5000	0.873	I	8000	0.880	J	10000	0.852
Acenaphthylene	A	10	1.83	B	20	1.82	C	40	1.71	D	100	1.79	E	500	1.84
	F	1000	1.97	G	2000	2.06	H	5000	2.05	I	8000	2.12	J	10000	2.07
Dibenzofuran	A	10	1.44	B	20	1.49	C	40	1.45	D	100	1.54	E	500	1.53
	F	1000	1.62	G	2000	1.70	H	5000	1.70	I	8000	1.75	J	10000	1.70
Acenaphthene	A	10	1.14	B	20	1.09	C	40	1.07	D	100	1.18	E	500	1.17
	F	1000	1.23	G	2000	1.25	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluorene	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C1-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C2-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C3-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibenzothiophene	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C1-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C2-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C3-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
Phenanthrene	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Anthracene	A	10	0.828	B	20	0.870	C	40	0.887	D	100	0.919	E	500	0.962
	F	1000	1.11	G	2000	1.18	H	5000	1.19	I	8000	1.22	J	10000	1.19
C1-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C2-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C3-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C4-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluoranthene	A	10	1.03	B	20	1.06	C	40	1.05	D	100	1.15	E	500	1.14
	F	1000	1.31	G	2000	1.36	H	5000	1.32	I	8000	1.35	J	10000	1.29
Pyrene	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
C1-Fluoranthenes/Pyrenes	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
Benz(a)anthracene	A	10	1.06	B	20	0.923	C	40	0.887	D	100	1.01	E	500	0.976
	F	1000	0.962	G	2000	1.01	H	5000	1.03	I	8000	1.07	J	10000	1.04
Chrysene	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C1-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C2-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
C3-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C4-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
Benzo(b)fluoranthene	A	10	1.19	B	20	1.15	C	40	1.14	D	100	1.20	E	500	1.30
	F	1000	1.38	G	2000	1.45	H	5000	1.48	I	8000	1.54	J	10000	1.52
Benzo(k)fluoranthene	A	10	1.56	B	20	1.35	C	40	1.41	D	100	1.70	E	500	1.74
	F	1000	1.80	G	2000	1.89	H	5000	1.85	I	8000	1.82	J	10000	1.84
Benzo(e)pyrene	A	10	1.40	B	20	1.41	C	40	1.39	D	100	1.48	E	500	1.50
	F	1000	1.54	G	2000	1.59	H	5000	1.55	I	8000	1.56	J	10000	1.57
Benzo(a)pyrene	A	10	0.993	B	20	0.923	C	40	1.01	D	100	0.938	E	500	1.03
	F	1000	1.15	G	2000	1.25	H	5000	1.32	I	8000	1.37	J	10000	1.36
Perylene	A	10	1.09	B	20	1.19	C	40	1.09	D	100	1.13	E	500	1.21
	F	1000	1.32	G	2000	1.40	H	5000	1.42	I	8000	1.45	J	10000	1.45
Indeno(1,2,3-cd)pyrene	A	10	0.693	B	20	0.554	C	40	0.589	D	100	0.554	E	500	0.599
	F	1000	0.677	G	2000	0.720	H	5000	0.797	I	8000	0.872	J	10000	0.848
Dibenz(a,h)anthracene	A	10	0.737	B	20	0.798	C	40	0.841	D	100	0.918	E	500	0.947
	F	1000	1.05	G	2000	1.08	H	5000	1.15	I	8000	1.21	J	10000	1.19
Benzo(g,h,i)perylene	A	10	1.35	B	20	1.01	C	40	1.01	D	100	1.06	E	500	1.04
	F	1000	1.17	G	2000	1.16	H	5000	1.19	I	8000	1.23	J	10000	1.21
Fluorene-d10							C	40	0.872	D	100	0.932	E	500	0.945
	F	1000	1.01	G	2000	1.05	H	5000	1.05	I	8000	1.09	J	10000	1.05
Fluoranthene-d10				B	20	0.932	C	40	0.836	D	100	0.957	E	500	0.930
	F	1000	1.05	G	2000	1.09	H	5000	1.07	I	8000	1.10	J	10000	1.05
Terphenyl-d14	A	10	1.01	B	20	0.919	C	40	0.836	D	100	0.911	E	500	0.898
	F	1000	0.918	G	2000	0.935	H	5000	0.889	I	8000	0.900	J	10000	0.896

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	1.8		≤ 15	1.13		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	8.1		≤ 15	0.668		0.01
1-Methylnaphthalene	MS	AverageRF	% RSD	8.8		≤ 15	0.626		0.01
C2-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C3-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C4-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
Biphenyl	MS	AverageRF	% RSD	8.0		≤ 15	0.810		0.01
Acenaphthylene	MS	AverageRF	% RSD	7.5		≤ 15	1.93		0.01
Dibenzofuran	MS	AverageRF	% RSD	7.3		≤ 15	1.59		0.01
Acenaphthene	MS	AverageRF	% RSD	5.6		≤ 15	1.19		0.01
Fluorene	MS	AverageRF	% RSD	10.7		≤ 15	1.27		0.01
C1-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C2-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C3-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
Dibenzothiophene	MS	AverageRF	% RSD	7.8		≤ 15	1.15		0.01
C1-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C2-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C3-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
Phenanthrene	MS	AverageRF	% RSD	4.5		≤ 15	1.21		0.01
Anthracene	MS	AverageRF	% RSD	15.1	*	≤ 15	1.04		0.01
C1-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C2-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C3-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C4-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
Fluoranthene	MS	AverageRF	% RSD	11.0		≤ 15	1.21		0.01
Pyrene	MS	AverageRF	% RSD	4.9		≤ 15	1.31		0.01
C1-Fluoranthenes/Pyrenes	TRG	AverageRF	% RSD	4.9		≤ 15	1.31		
Benz(a)anthracene	MS	AverageRF	% RSD	5.8		≤ 15	0.995		0.01
Chrysene	MS	AverageRF	% RSD	3.8		≤ 15	1.06		0.01
C1-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C2-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C3-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C4-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
Benzo(b)fluoranthene	MS	AverageRF	% RSD	11.8		≤ 15	1.34		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	11.3		≤ 15	1.69		0.01
Benzo(e)pyrene	MS	AverageRF	% RSD	5.1		≤ 15	1.50		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	15.7	*	≤ 15	1.14		0.01
Perylene	MS	AverageRF	% RSD	11.7		≤ 15	1.27		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	17.1	*	≤ 15	0.690		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	17.0	*	≤ 15	0.992		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	9.6		≤ 15	1.14		0.01
Fluorene-d10	SURR	AverageRF	% RSD	7.5		≤ 15	1.00		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Fluoranthene-d10	SURR	AverageRF	% RSD	9.1		≤ 15	1.00		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.8		≤ 15	0.911		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003
Date Analyzed: 11/07/2003

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL3082
Units: ng/ml

File ID: J:\MS11\DATA\110703\1107F023.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	1.13	1.17	4	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.668	0.720	8	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.626	0.677	8	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.810	0.887	10	NA	± 20 %	AverageRF
Acenaphthylene	2000	2100	1.93	2.07	7	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	1.59	1.72	8	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	1.19	1.26	6	NA	± 20 %	AverageRF
Fluorene	2000	2200	1.27	1.40	10	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	1.15	1.20	4	NA	± 20 %	AverageRF
Phenanthrene	2000	2000	1.21	1.24	2	NA	± 20 %	AverageRF
Anthracene	2000	2200	1.04	1.14	10	NA	± 20 %	AverageRF
Fluoranthene	2000	2100	1.21	1.29	7	NA	± 20 %	AverageRF
Pyrene	2000	2100	1.31	1.37	4	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2000	0.995	0.975	-2	NA	± 20 %	AverageRF
Chrysene	2000	2100	1.06	1.11	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2100	1.34	1.41	6	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2200	1.69	1.89	11	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	1.50	1.58	5	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	1.14	1.20	6	NA	± 20 %	AverageRF
Perylene	2000	2200	1.27	1.39	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1800	0.690	0.636	-8	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2000	0.992	1.00	1	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	2000	1.14	1.14	0	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318851
Units: ng/ml

File ID: J:\MS11\DATA\111903\1119F008.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	0.01	1.13	1.19	5	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.01	0.668	0.732	10	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.01	0.626	0.700	12	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.01	0.810	0.882	9	NA	± 20 %	AverageRF
Acenaphthylene	2000	2200	0.01	1.93	2.12	10	NA	± 20 %	AverageRF
Dibenzofuran	2000	2100	0.01	1.59	1.69	6	NA	± 20 %	AverageRF
Acenaphthene	2000	2200	0.01	1.19	1.30	10	NA	± 20 %	AverageRF
Fluorene	2000	2200	0.01	1.27	1.42	12	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	0.01	1.15	1.23	6	NA	± 20 %	AverageRF
Phenanthrene	2000	2100	0.01	1.21	1.27	5	NA	± 20 %	AverageRF
Anthracene	2000	2300	0.01	1.04	1.18	14	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.33	10	NA	± 20 %	AverageRF
Pyrene	2000	2300	0.01	1.31	1.52	17	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2000	0.01	0.995	1.01	1	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.12	5	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2400	0.01	1.34	1.58	18	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2200	0.01	1.69	1.90	12	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2300	0.01	1.50	1.69	13	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.21	7	NA	± 20 %	AverageRF
Perylene	2000	2200	0.01	1.27	1.39	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1700	0.01	0.690	0.595	-14	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	1800	0.01	0.992	0.907	-9	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1800	0.01	1.14	1.04	-9	NA	± 20 %	AverageRF
Fluorene-d10	2000	2200	0.01	1.00	1.09	9	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2000	0.01	1.00	1.01	1	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2100	0.01	0.911	0.957	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318915
Units: ng/ml

File ID: J:\MS11\DATA\112003\1120F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	0.01	1.13	1.19	5	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.01	0.668	0.745	12	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.01	0.626	0.701	12	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.01	0.810	0.902	11	NA	± 20 %	AverageRF
Acenaphthylene	2000	2300	0.01	1.93	2.18	13	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	0.01	1.59	1.75	10	NA	± 20 %	AverageRF
Acenaphthene	2000	2200	0.01	1.19	1.30	10	NA	± 20 %	AverageRF
Fluorene	2000	2300	0.01	1.27	1.45	14	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	0.01	1.15	1.22	6	NA	± 20 %	AverageRF
Phenanthrene	2000	2100	0.01	1.21	1.27	5	NA	± 20 %	AverageRF
Anthracene	2000	2400	0.01	1.04	1.22	18	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.35	12	NA	± 20 %	AverageRF
Pyrene	2000	2300	0.01	1.31	1.50	14	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2200	0.01	0.995	1.10	11	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.14	7	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2200	0.01	1.34	1.49	12	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	1800	0.01	1.69	1.55	-8	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	1900	0.01	1.50	1.41	-6	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.21	7	NA	± 20 %	AverageRF
Perylene	2000	2100	0.01	1.27	1.36	7	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	2400	0.01	0.690	0.820	19	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2100	0.01	0.992	1.02	3	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1700	0.01	1.14	0.972	-15	NA	± 20 %	AverageRF
Fluorene-d10	2000	2200	0.01	1.00	1.10	10	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2100	0.01	1.00	1.04	3	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2100	0.01	0.911	0.960	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM

Analysis Lot: KWG0318851
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1119F005.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318851-1	11/19/2003	10:01		11/19/2003	10:14
1119F008.D	Continuing Calibration Verification	KWG0318851-2	11/19/2003	11:36		11/19/2003	12:03
1119F031.D	Method Blank	KWG0317778-5	11/19/2003	12:49		11/19/2003	13:16
1119F032.D	Lab Control Sample	KWG0317778-3	11/19/2003	13:25		11/19/2003	13:52
1119F033.D	Duplicate Lab Control Sample	KWG0317778-4	11/19/2003	14:01		11/19/2003	14:28
1119F034.D	SED-4MS	KWG0317778-1	11/19/2003	14:37		11/19/2003	15:04
1119F035.D	SED-4DMS	KWG0317778-2	11/19/2003	15:13		11/19/2003	15:40
1119F036.D	ZZZZZZ	ZZZZZZ	11/19/2003	15:49		11/19/2003	16:16
1119F037.D	SED-1	K2308433-001	11/19/2003	16:26		11/19/2003	16:53
1119F038.D	SED-2	K2308433-002	11/19/2003	17:02		11/19/2003	17:29
1119F039.D	SED-3	K2308433-003	11/19/2003	17:38		11/19/2003	18:05
1119F040.D	SED-4	K2308433-004	11/19/2003	18:14		11/19/2003	18:41
1119F041.D	SED-4-DUP	K2308433-005	11/19/2003	18:50		11/19/2003	19:17
1119F042.D	SED-5	K2308433-006	11/19/2003	19:26		11/19/2003	19:53
1119F043.D	SED-6	K2308433-007	11/19/2003	20:02		11/19/2003	20:29
1119F044.D	SED-7	K2308433-008	11/19/2003	20:38		11/19/2003	21:05
1119F045.D	SED-8	K2308433-009	11/19/2003	21:15		11/19/2003	21:42

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM

Analysis Lot: KWG0318915
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1120F001.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318915-1	11/20/2003	05:26		11/20/2003	05:39
1120F002.D	Continuing Calibration Verification	KWG0318915-2	11/20/2003	05:47		11/20/2003	06:14
1120F004.D	Instrument Blank	KWG0318915-3	11/20/2003	06:59		11/20/2003	07:26
1120F005.D	SED-1	K2308433-001	11/20/2003	07:35		11/20/2003	08:02
1120F006.D	SED-3	K2308433-003	11/20/2003	08:11		11/20/2003	08:38
1120F007.D	SED-4	K2308433-004	11/20/2003	08:47		11/20/2003	09:14
1120F008.D	SED-4-DUP	K2308433-005	11/20/2003	09:24		11/20/2003	09:51
1120F009.D	SED-5	K2308433-006	11/20/2003	10:01		11/20/2003	10:28
1120F010.D	SED-6	K2308433-007	11/20/2003	10:37		11/20/2003	11:04
1120F011.D	SED-7	K2308433-008	11/20/2003	11:14		11/20/2003	11:41
1120F012.D	SED-8	K2308433-009	11/20/2003	11:50		11/20/2003	12:17
1120F013.D	ZZZZZZ	ZZZZZZ	11/20/2003	12:26		11/20/2003	12:53

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Extraction Lot: KWG0317778
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SED-1DL	K2308433-001	10/22/03	10/27/03	28.0g	2ml	74.5	
SED-1	K2308433-001	10/22/03	10/27/03	28.0g	2ml	74.5	
SED-2	K2308433-002	10/22/03	10/27/03	26.9g	2ml	77.3	
SED-3DL	K2308433-003	10/22/03	10/27/03	25.1g	2ml	81.6	
SED-3	K2308433-003	10/22/03	10/27/03	25.1g	2ml	81.6	
SED-4DL	K2308433-004	10/22/03	10/27/03	26.8g	2ml	75.3	
SED-4	K2308433-004	10/22/03	10/27/03	26.8g	2ml	75.3	
SED-4-DUPDL	K2308433-005	10/22/03	10/27/03	28.6g	2ml	73.0	
SED-4-DUP	K2308433-005	10/22/03	10/27/03	28.6g	2ml	73.0	
SED-5DL	K2308433-006	10/23/03	10/27/03	25.0g	2ml	82.0	
SED-5	K2308433-006	10/23/03	10/27/03	25.0g	2ml	82.0	
SED-6DL	K2308433-007	10/23/03	10/27/03	27.3g	2ml	79.0	
SED-6	K2308433-007	10/23/03	10/27/03	27.3g	2ml	79.0	
SED-7DL	K2308433-008	10/23/03	10/27/03	27.3g	2ml	79.9	
SED-7	K2308433-008	10/23/03	10/27/03	27.3g	2ml	79.9	
SED-8DL	K2308433-009	10/23/03	10/27/03	28.6g	2ml	72.7	
SED-8	K2308433-009	10/23/03	10/27/03	28.6g	2ml	72.7	
Method Blank	KWG0317778-5	NA	NA	28.6g	2ml	NA	
SED-4MS	KWG0317778-1	10/22/03	10/27/03	26.7g	2ml	75.3	
SED-4DMS	KWG0317778-2	10/22/03	10/27/03	26.9g	2ml	75.3	
Lab Control Sample	KWG0317778-3	NA	NA	20.0g	2ml	NA	
Duplicate Lab Control Sample	KWG0317778-4	NA	NA	20.0g	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

QC Reports

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED-1	K2308433-001	75	90	96
SED-2	K2308433-002	66	85	92
SED-3	K2308433-003	71	92	96
SED-4	K2308433-004	75	90	97
SED-4-DUP	K2308433-005	65	89	99
SED-5	K2308433-006	70	91	100
SED-6	K2308433-007	64	85	97
SED-7	K2308433-008	67	90	108
SED-8	K2308433-009	77	91	97
Method Blank	KWG0317778-5	64	73	122
SED-4MS	KWG0317778-1	80	87	92
SED-4DMS	KWG0317778-2	76	87	93
Lab Control Sample	KWG0317778-3	72	75	91
Duplicate Lab Control Sample	KWG0317778-4	76	81	95

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	27-110
Sur2 = Fluoranthene-d10	34-122
Sur3 = Terphenyl-d14	50-132

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003
Time Analyzed: 11:36

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111903\1119F008.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318851-2
Analysis Lot: KWG0318851

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	225,768	5.53	117,412	8.00	168,471	10.93
	Upper Limit ==>	451,536	6.03	234,824	8.50	336,942	11.43
	Lower Limit ==>	112,884	5.03	58,706	7.50	84,236	10.43
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
Method Blank	KWG0317778-5	214,525	5.53	106,189	8.00	142,248	10.93
Lab Control Sample	KWG0317778-3	234,781	5.53	118,555	8.00	166,979	10.93
Duplicate Lab Control Sample	KWG0317778-4	230,255	5.53	119,456	8.00	168,651	10.93
SED-4MS	KWG0317778-1	203,128	5.53	105,086	8.00	158,587	10.93
SED-4DMS	KWG0317778-2	231,957	5.53	121,666	8.00	183,137	10.93
SED-1	K2308433-001	225,713	5.53	120,841	8.00	182,651	10.93
SED-2	K2308433-002	228,841	5.53	115,391	8.00	159,274	10.93
SED-3	K2308433-003	273,552	5.53	142,432	8.00	211,605	10.93
SED-4	K2308433-004	264,184	5.53	139,936	8.00	210,940	10.93
SED-4-DUP	K2308433-005	271,899	5.53	144,032	8.00	211,052	10.93
SED-5	K2308433-006	235,969	5.53	125,353	8.00	185,430	10.93
SED-6	K2308433-007	256,437	5.53	134,500	8.00	194,000	10.93
SED-7	K2308433-008	257,757	5.53	137,372	8.01	203,318	10.94
SED-8	K2308433-009	277,492	5.53	145,728	8.01	218,493	10.94

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003
Time Analyzed: 11:36

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111903\1119F008.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318851-2
Analysis Lot: KWG0318851

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	145,342	17.04	77,295	21.36
	Upper Limit ==>	290,684	17.54	154,590	21.86
	Lower Limit ==>	72,671	16.54	38,648	20.86
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
Method Blank	KWG0317778-5	93,682	17.05	41,811	21.36
Lab Control Sample	KWG0317778-3	143,859	17.05	73,794	21.36
Duplicate Lab Control Sample	KWG0317778-4	150,040	17.05	72,439	21.36
SED-4MS	KWG0317778-1	172,935	17.05	118,471	21.38
SED-4DMS	KWG0317778-2	185,560	17.06	130,192	21.38
SED-1	K2308433-001	193,989	17.06	148,341	21.39
SED-2	K2308433-002	161,186	17.05	110,411	21.38
SED-3	K2308433-003	219,239	17.06	148,017	21.39
SED-4	K2308433-004	212,311	17.06	139,477	21.39
SED-4-DUP	K2308433-005	208,410	17.06	129,270	21.40
SED-5	K2308433-006	182,833	17.06	119,053	21.39
SED-6	K2308433-007	188,856	17.06	118,580	21.40
SED-7	K2308433-008	186,828	17.06	105,190	21.40
SED-8	K2308433-009	227,449	17.07	137,097	21.41

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003
Time Analyzed: 05:47

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112003\1120F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318915-2
Analysis Lot: KWG0318915

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	253,624	5.53	132,414	8.00	198,017	10.93
	Upper Limit ==>	507,248	6.03	264,828	8.50	396,034	11.43
	Lower Limit ==>	126,812	5.03	66,207	7.50	99,009	10.43
	ICAL Result ==>	278,033	5.58	143,768	8.06	205,570	11.00
Associated Analyses							
SED-1DL	K2308433-001	250,607	5.53	134,291	8.01	203,829	10.94
SED-3DL	K2308433-003	255,747	5.54	132,289	8.01	185,116	10.94
SED-4DL	K2308433-004	228,738	5.54	117,353	8.01	161,535	10.94
SED-4-DUPDL	K2308433-005	236,643	5.54	119,862	8.01	162,462	10.93
SED-5DL	K2308433-006	218,733	5.54	112,887	8.01	149,490	10.94
SED-6DL	K2308433-007	228,002	5.54	115,492	8.01	149,045	10.94
SED-7DL	K2308433-008	228,853	5.54	117,273	8.01	157,960	10.94
SED-8DL	K2308433-009	252,077	5.54	135,001	8.01	188,564	10.94

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003
Time Analyzed: 05:47

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112003\1120F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0318915-2
Analysis Lot: KWG0318915

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	181,741	17.06	111,133	21.40
	Upper Limit ==>	363,482	17.56	222,266	21.90
	Lower Limit ==>	90,871	16.56	55,567	20.90
	ICAL Result ==>	199,135	17.13	120,438	21.52
Associated Analyses					
SED-1DL	K2308433-001	279,421	17.06	206,607	21.40
SED-3DL	K2308433-003	178,610	17.06	105,824	21.41
SED-4DL	K2308433-004	157,597	17.06	92,435	21.41
SED-4-DUPDL	K2308433-005	140,449	17.06	79,432	21.41
SED-5DL	K2308433-006	129,112	17.07	77,404	21.41
SED-6DL	K2308433-007	129,201	17.06	74,133	21.41
SED-7DL	K2308433-008	141,584	17.06	83,112	21.41
SED-8DL	K2308433-009	187,403	17.06	104,198	21.41

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003
Date Analyzed: 11/19/2003

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4
Lab Code: K2308433-004

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low
Extraction Lot: KWG0317778

Analyte Name	Sample Result	SED-4MS KWG0317778-1 Matrix Spike Result	Expected	%Rec	SED-4DMS KWG0317778-2 Duplicate Matrix Spike Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene	11	154	249	57	166	247	63	22-101	8	40
2-Methylnaphthalene	8.3	169	249	65	176	247	68	27-106	4	40
1-Methylnaphthalene	9.1	181	249	69	183	247	70	33-99	1	40
Biphenyl	ND	180	249	72	180	247	73	28-107	0	40
Acenaphthylene	21	222	249	81	211	247	77	36-113	5	40
Dibenzofuran	17	222	249	83	289	247	110	33-110	26	40
Acenaphthene	53	276	249	90	357	247	123 *	32-114	25	40
Fluorene	45	283	249	96	385	247	138 *	39-118	30	40
Dibenzothiophene	33	240	249	83	303	247	109	70-130	23	40
Phenanthrene	650	909	249	104	2340E	247	685 *	29-130	88 *	40
Anthracene	130	356	249	91	528	247	162 *	38-133	39	40
Fluoranthene	1400	1810E	249	149 #	4030E	247	1051 #	30-143	76 *	40
Pyrene	1200	1500E	249	136 #	3090E	247	782 #	28-143	69 *	40
Benz(a)anthracene	620	876	249	102	1660E	247	420 *	24-149	62 *	40
Chrysene	770	1030E	249	106	1950E	247	479 *	38-133	62 *	40
Benzo(b)fluoranthene	720	950	249	94	1930E	247	493 *	26-144	68 *	40
Benzo(k)fluoranthene	570	855	249	113	1470E	247	363 *	29-136	53 *	40
Benzo(e)pyrene	490	729	249	97	1310E	247	333 *	37-130	57 *	40
Benzo(a)pyrene	720	998E	249	111	1970E	247	505 *	30-146	65 *	40
Perylene	160	364	249	82	608	247	181 *	10-152	50 *	40
Indeno(1,2,3-cd)pyrene	720	874	249	62	1880E	247	470 *	24-147	73 *	40
Dibenz(a,h)anthracene	89	301	249	85	478	247	157 *	33-136	45 *	40
Benzo(g,h,i)perylene	410	701	249	117	1330E	247	374 *	23-142	62 *	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003
Date Analyzed: 11/19/2003

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0317778

	Lab Control Sample KWG0317778-3 Lab Control Spike			Duplicate Lab Control Sample KWG0317778-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	176	250	70	180	250	72	43-102	2	40
2-Methylnaphthalene	185	250	74	191	250	76	44-105	3	40
1-Methylnaphthalene	189	250	76	195	250	78	44-108	3	40
Biphenyl	183	250	73	189	250	76	49-105	3	40
Acenaphthylene	189	250	76	192	250	77	51-107	2	40
Dibenzofuran	189	250	76	193	250	77	50-106	2	40
Acenaphthene	190	250	76	193	250	77	50-105	1	40
Fluorene	198	250	79	203	250	81	54-108	3	40
Dibenzothiophene	124	250	50	172	250	69	10-121	32	40
Phenanthrene	196	250	79	204	250	82	58-106	4	40
Anthracene	210	250	84	217	250	87	61-113	4	40
Fluoranthene	211	250	84	218	250	87	63-117	3	40
Pyrene	225	250	90	227	250	91	59-121	1	40
Benz(a)anthracene	196	250	79	195	250	78	57-120	1	40
Chrysene	214	250	85	210	250	84	64-116	2	40
Benzo(b)fluoranthene	228	250	91	227	250	91	58-126	1	40
Benzo(k)fluoranthene	248	250	99	251	250	101	61-122	1	40
Benzo(e)pyrene	223	250	89	225	250	90	61-121	1	40
Benzo(a)pyrene	211	250	84	214	250	86	58-128	1	40
Perylene	201	250	81	208	250	83	61-119	3	40
Indeno(1,2,3-cd)pyrene	180	250	72	155	250	62	46-133	15	40
Dibenz(a,h)anthracene	187	250	75	165	250	66	50-128	13	40
Benzo(g,h,i)perylene	204	250	81	180	250	72	52-125	12	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
SRM Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA
Date Extracted: 11/5/2003
Date Analyzed: 11/20/2003

Standard Reference Material
Polynuclear Aromatic Hydrocarbons

Sample Name: Standard Reference Material
Lab Code: KWG0317778-6
Test Notes:

Units: ug/Kg (ppb)
Basis: Dry

Analyte	Prep Method	Analysis Method	True Value	Result	CAS Advisory Limits	Result Notes
Phenanthrene	EPA 3541	SIM	5270 ± 220	3500	2520-8240	
Anthracene	EPA 3541	SIM	1770 ± 330	730	720-3150	
Fluoranthene	EPA 3541	SIM	8920 ± 320	6300	4300-13900	
Pyrene	EPA 3541	SIM	9700 ± 420	4900	4640-15200	
Benz(a)anthracene	EPA 3541	SIM	4720 ± 110	2300	2310-7250	*
Chrysene	EPA 3541	SIM	5900 ± 370	3000	2770-9410	
Benzo(b)fluoranthene	EPA 3541	SIM	3870 ± 420	1900	1720-6440	
Benzo(k)fluoranthene	EPA 3541	SIM	4390 ± 640	2000	1880-7550	
Benzo(a)pyrene	EPA 3541	SIM	4300 ± 130	1900	2090-6650	*
Indeno(1,2,3-cd)pyrene	EPA 3541	SIM	2780 ± 100	1700	1340-4320	
Dibenz(a,h)anthracene	EPA 3541	SIM	424 ± 69	250	178-740	
Benzo(g,h,i)perylene	EPA 3541	SIM	2840 ± 100	1100	1370-4410	*

Approved By: _____ Date: 11/26/03

LCS (44)/091898p

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/05/2003
Date Analyzed: 11/19/2003
Time Analyzed: 12:49

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317778-5

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

File ID: J:\MS11\DATA\111903\1119F031.D
Instrument ID: MS11

Level: Low
Extraction Lot: KWG0317778

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317778-3	J:\MS11\DATA\111903\1119F032.D	11/19/03	13:25
Duplicate Lab Control Sample	KWG0317778-4	J:\MS11\DATA\111903\1119F033.D	11/19/03	14:01
SED-4MS	KWG0317778-1	J:\MS11\DATA\111903\1119F034.D	11/19/03	14:37
SED-4DMS	KWG0317778-2	J:\MS11\DATA\111903\1119F035.D	11/19/03	15:13
SED-1	K2308433-001	J:\MS11\DATA\111903\1119F037.D	11/19/03	16:26
SED-2	K2308433-002	J:\MS11\DATA\111903\1119F038.D	11/19/03	17:02
SED-3	K2308433-003	J:\MS11\DATA\111903\1119F039.D	11/19/03	17:38
SED-4	K2308433-004	J:\MS11\DATA\111903\1119F040.D	11/19/03	18:14
SED-4-DUP	K2308433-005	J:\MS11\DATA\111903\1119F041.D	11/19/03	18:50
SED-5	K2308433-006	J:\MS11\DATA\111903\1119F042.D	11/19/03	19:26
SED-6	K2308433-007	J:\MS11\DATA\111903\1119F043.D	11/19/03	20:02
SED-7	K2308433-008	J:\MS11\DATA\111903\1119F044.D	11/19/03	20:38
SED-8	K2308433-009	J:\MS11\DATA\111903\1119F045.D	11/19/03	21:15
SED-1	K2308433-001	J:\MS11\DATA\112003\1120F005.D	11/20/03	07:35
SED-3	K2308433-003	J:\MS11\DATA\112003\1120F006.D	11/20/03	08:11
SED-4	K2308433-004	J:\MS11\DATA\112003\1120F007.D	11/20/03	08:47
SED-4-DUP	K2308433-005	J:\MS11\DATA\112003\1120F008.D	11/20/03	09:24
SED-5	K2308433-006	J:\MS11\DATA\112003\1120F009.D	11/20/03	10:01
SED-6	K2308433-007	J:\MS11\DATA\112003\1120F010.D	11/20/03	10:37
SED-7	K2308433-008	J:\MS11\DATA\112003\1120F011.D	11/20/03	11:14
SED-8	K2308433-009	J:\MS11\DATA\112003\1120F012.D	11/20/03	11:50

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Lab Control Sample/Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0317778-3	**Lab Code:**	KWG0317778-4
File ID:	J:\MS11\DATA\111903\1119F032.D	**File ID:**	J:\MS11\DATA\111903\1119F033.D
Instrument ID:	MS11	**Instrument ID:**	MS11
Date Extracted:	11/05/2003	**Date Extracted:**	11/05/2003
Date Analyzed:	11/19/2003	**Date Analyzed:**	11/19/2003
Time Analyzed:	13:25	**Time Analyzed:**	14:01

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0317778

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0317778-5	J:\MS11\DATA\111903\1119F031.D	11/19/03	12:49
SED-4MS	KWG0317778-1	J:\MS11\DATA\111903\1119F034.D	11/19/03	14:37
SED-4DMS	KWG0317778-2	J:\MS11\DATA\111903\1119F035.D	11/19/03	15:13
SED-1	K2308433-001	J:\MS11\DATA\111903\1119F037.D	11/19/03	16:26
SED-2	K2308433-002	J:\MS11\DATA\111903\1119F038.D	11/19/03	17:02
SED-3	K2308433-003	J:\MS11\DATA\111903\1119F039.D	11/19/03	17:38
SED-4	K2308433-004	J:\MS11\DATA\111903\1119F040.D	11/19/03	18:14
SED-4-DUP	K2308433-005	J:\MS11\DATA\111903\1119F041.D	11/19/03	18:50
SED-5	K2308433-006	J:\MS11\DATA\111903\1119F042.D	11/19/03	19:26
SED-6	K2308433-007	J:\MS11\DATA\111903\1119F043.D	11/19/03	20:02
SED-7	K2308433-008	J:\MS11\DATA\111903\1119F044.D	11/19/03	20:38
SED-8	K2308433-009	J:\MS11\DATA\111903\1119F045.D	11/19/03	21:15
SED-1	K2308433-001	J:\MS11\DATA\112003\1120F005.D	11/20/03	07:35
SED-3	K2308433-003	J:\MS11\DATA\112003\1120F006.D	11/20/03	08:11
SED-4	K2308433-004	J:\MS11\DATA\112003\1120F007.D	11/20/03	08:47
SED-4-DUP	K2308433-005	J:\MS11\DATA\112003\1120F008.D	11/20/03	09:24
SED-5	K2308433-006	J:\MS11\DATA\112003\1120F009.D	11/20/03	10:01
SED-6	K2308433-007	J:\MS11\DATA\112003\1120F010.D	11/20/03	10:37
SED-7	K2308433-008	J:\MS11\DATA\112003\1120F011.D	11/20/03	11:14
SED-8	K2308433-009	J:\MS11\DATA\112003\1120F012.D	11/20/03	11:50

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-1
Lab Code: K2308433-001

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	39		4.8	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	16		4.8	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	18		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	37		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	57		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	37		4.8	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	7.4		4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	57		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	43		4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	68		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluorene	82		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	59		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	64		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	51		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	47		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	22		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	130		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	58		4.8	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	880		4.8	1	11/05/03	11/19/03	KWG0317778	
Anthracene	220		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	470		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	350		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	210		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	130		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	2600	D	48	10	11/05/03	11/20/03	KWG0317778	
Pyrene	1600	D	48	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	1200	E	4.8	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	950	D	48	10	11/05/03	11/20/03	KWG0317778	
Chrysene	1000	D	48	10	11/05/03	11/20/03	KWG0317778	
C1-Chrysenes	900		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	400		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	240		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	320		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	690	D	48	10	11/05/03	11/20/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-1
Lab Code: K2308433-001

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**740**	D	48	10	11/05/03	11/20/03	KWG0317778	
Benzo(e)pyrene	**560**	D	48	10	11/05/03	11/20/03	KWG0317778	
Benzo(a)pyrene	**880**	D	48	10	11/05/03	11/20/03	KWG0317778	
Perylene	**430**		4.8	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**610**	D	48	10	11/05/03	11/20/03	KWG0317778	
Dibenz(a,h)anthracene	**200**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**890**		4.8	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	27-110	11/19/03	Acceptable
Fluoranthene-d10	90	34-122	11/19/03	Acceptable
Terphenyl-d14	96	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F037.D
Lab ID: K2308433-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 16:26
Date Quantitated: 11/20/2003 14:45
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Fluoranthene-d10	13.62	NA	NA	NA
	C2-Dibenzothiophenes	13.62	NA	NA	"
Above Highest ICAL Level	Pyrene	22738.67	NA	10000	see Dil
	Benzo(e)pyrene	11056.03	NA	10000	"
	Indeno(1,2,3-cd)pyrene	17059.39	NA	10000	"
	Benzo(b)fluoranthene	14451.06	NA	10000	"

Primary Review: 11/24/13

Secondary Review: 11/24/13

Exception Report

Data File: J:\MS11\DATA\111903\1119F037.D
Lab ID: K2308433-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 16:26
Date Quantitated: 11/20/2003 14:45
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Fluoranthene	28000.77	NA	10000	see DF
	Benzo(k)fluoranthene	12580.46	NA	10000	
	Chrysene	16400.27	NA	10000	
	Benzo(a)pyrene	19126.48	NA	10000	
	Benz(a)anthracene	16177.80	NA	10000	
	C1-Fluoranthenes/Pyrenes	12865.13	NA	10000	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247859	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F037.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 16:26	**Quant Date:**	11/24/2003 10:23	**Vial:**	8
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	225713	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	120841	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	182651	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	193989	1,000.00	OK
5	Perylene-d12	21.39	0.03	264	148341	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	90570	749.40	75	27-110	OK	
3	Fluoranthene-d10	13.62c	0.00	0.00	212	165065	902.93	90	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	170451	964.10	96	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	102967	403.45	39		
1	2-Methylnaphthalene	6.36	-0.01	0.00	142	25304	167.90	16		
1	1-Methylnaphthalene	6.51		0.00	142	26352	186.54	18		
1	Biphenyl	7.03		0.00	154	14044	76.85	7.4		
1	C2-Naphthalenes	7.41	?	?	156	98823m	387.22	37		
1	C3-Naphthalenes	8.43	?	?	170	151470m	593.50	57		
1	C4-Naphthalenes	9.79	?	?	184	97578m	382.34	37		
2	Acenaphthylene	7.73		0.00	152	138338	594.17	57		
2	Acenaphthene	8.05		0.00	154	101787	709.35	68		
2	Dibenzofuran	8.34		0.00	168	86096	447.59	43		
2	Fluorene	8.99		0.00	166	131784	857.34	82		
2	C1-Fluorenes	10.13	?	?	180	93955m	611.24	59		
2	C2-Fluorenes	11.40	?	?	194	103375m	672.52	64		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F037.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 16:26	**Quant Date:**	11/24/2003 10:23	**Vial:**	8
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-001			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.75	?	?	208	82297m	535.39	51		
3	Dibenzothiophene	10.71		0.00	184	104020	493.60	47		
3	C1-Dibenzothiophenes	10.72	?	?	198	47539m	225.58	22		
3	C2-Dibenzothiophenes	13.62c	?	?	212	286344m	1,359	130		
3	C3-Dibenzothiophenes	13.68	?	?	226	127507m	605.05	58		
3	Phenanthrene	10.97		0.00	178	2028628	9,164	880		
3	Anthracene	11.07		0.00	178	429585	2,272	220		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	1088401m	4,917	470		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	799864m	3,613	350		
3	C3-Phenanthrenes/Anthracenes	14.44	?	?	220	484768m	2,190	210		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	293094m	1,324	130		
3	Fluoranthene	13.67	0.02	0.00	202	6170069	28,001	2700	E	NR
4	Pyrene	14.17	0.01	0.00	202	5765601	22,739	2200	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	3262074m	12,865	1200	E	
4	Benz(a)anthracene	17.02	0.01	0.00	228	3123063	16,178	1600	E	NR
4	Chrysene	17.12	0.02	0.00	228	3385539	16,400	1600	E	NR
4	C1-Chrysenes	18.05	?	?	242	1930576m	9,352	900		
4	C2-Chrysenes	19.38	?	?	256	855824m	4,146	400		
4	C3-Chrysenes	20.95	?	?	270	508653m	2,464	240		
4	C4-Chrysenes	23.71	?	?	284	690709m	3,346	320		
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	2861899	14,451	1400	E	NR
5	Benzo(k)fluoranthene	20.07	0.02	0.00	252	3161266m	12,580	1200	E	NR
5	Benzo(e)pyrene	20.97	0.04	0.00	252	2458382	11,056	1100	E	NR
5	Benzo(a)pyrene	21.16	0.04	0.00	252	3221887	19,126	1800	E	NR
5	Perylene	21.48	0.03	0.00	252	854605	4,520	430		
5	Indeno(1,2,3-cd)pyrene	24.02	0.02	0.00	276	1746927	17,059	1600	E	NR
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	306065m	2,080	200		
5	Benzo(g,h,i)perylene	24.48	0.02	0.00	276	1576318	9,285	890		

Prep Amount:	28.0 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	74.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:00 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	225713	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	120841	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	182651	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	193989	1000.00	ng/ml	0.01
48) Perylene-d12	21.39	264	148341	1000.00	ng/ml	0.03
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	89094	538.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	53.88%		
16) Fluorene-d10	8.94	176	90570	749.40	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	74.94%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.62	212	165065	902.93	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	90.29%		
41) Terphenyl-d14	14.66	244	170451	964.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	96.41%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	102967	403.45	ng/ml	100
3) 2-Methylnaphthalene	6.36	142	25304	167.90	ng/ml	99
4) 1-Methylnaphthalene	6.51	142	26352	186.54	ng/ml	100
6) Biphenyl	7.03	154	14044	76.85	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.27	156	18709	145.54	ng/ml	99
8) C2-Naphthalenes	7.41	156	98823m	387.22	ng/ml	
9) C3-Naphthalenes	8.43	170	151470m	593.50	ng/ml	
10) C4-Naphthalenes	9.79	184	97578m	382.34	ng/ml	
12) Acenaphthylene	7.73	152	138338	594.17	ng/ml	99
13) Acenaphthene	8.05	154	101787	709.35	ng/ml	99
14) Dibenzofuran	8.34	168	86096	447.59	ng/ml	94
15) 2,3,5-Trimethylnaphthalene	8.76	170	12581	97.88	ng/ml	99
17) Fluorene	8.99	166	131784	857.34	ng/ml	99
18) C1-Fluorenes	10.13	180	93955m	611.24	ng/ml	
19) C2-Fluorenes	11.40	194	103375m	672.52	ng/ml	
20) C3-Fluorenes	14.02	208	~~396~~635m	~~2580~~.36	ng/ml	see manual JL 11/24/03
24) Dibenzothiophene	10.71	184	104020	493.60	ng/ml	99
25) C1-Dibenzothiophenes	10.72	198	47539m	225.58	ng/ml	
26) C2-Dibenzothiophenes	13.62	212	286344m	1358.77	ng/ml	
27) C3-Dibenzothiophenes	13.68	226	127507m	605.05	ng/ml	
28) Phenanthrene	10.97	178	2028628	9164.05	ng/ml	99
29) Anthracene	11.07	178	429585	2271.50	ng/ml	100
30) Carbazole	11.50	167	2506	16.76	ng/ml	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:00 2003 Quant Results File: 1107ALK.RES

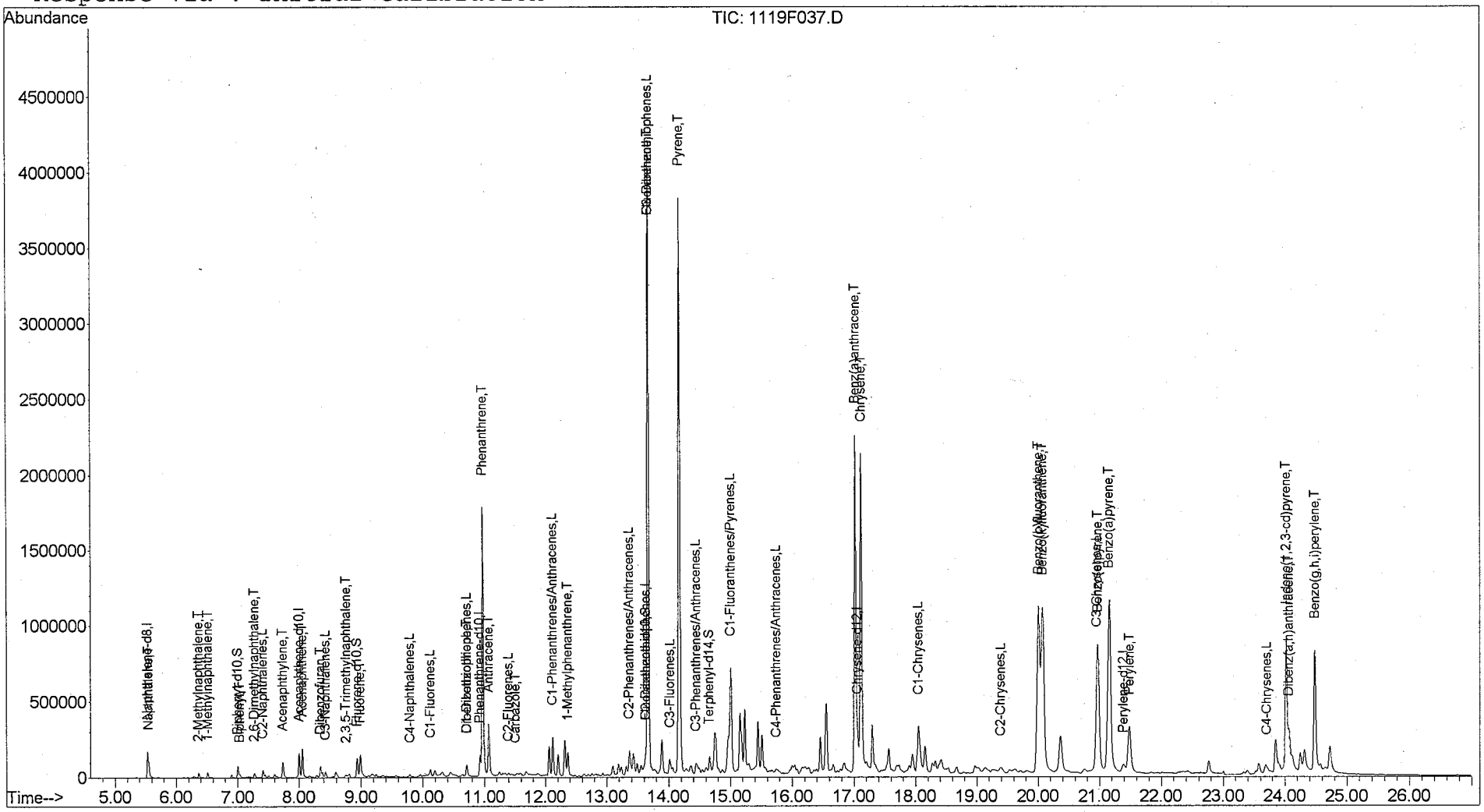
Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

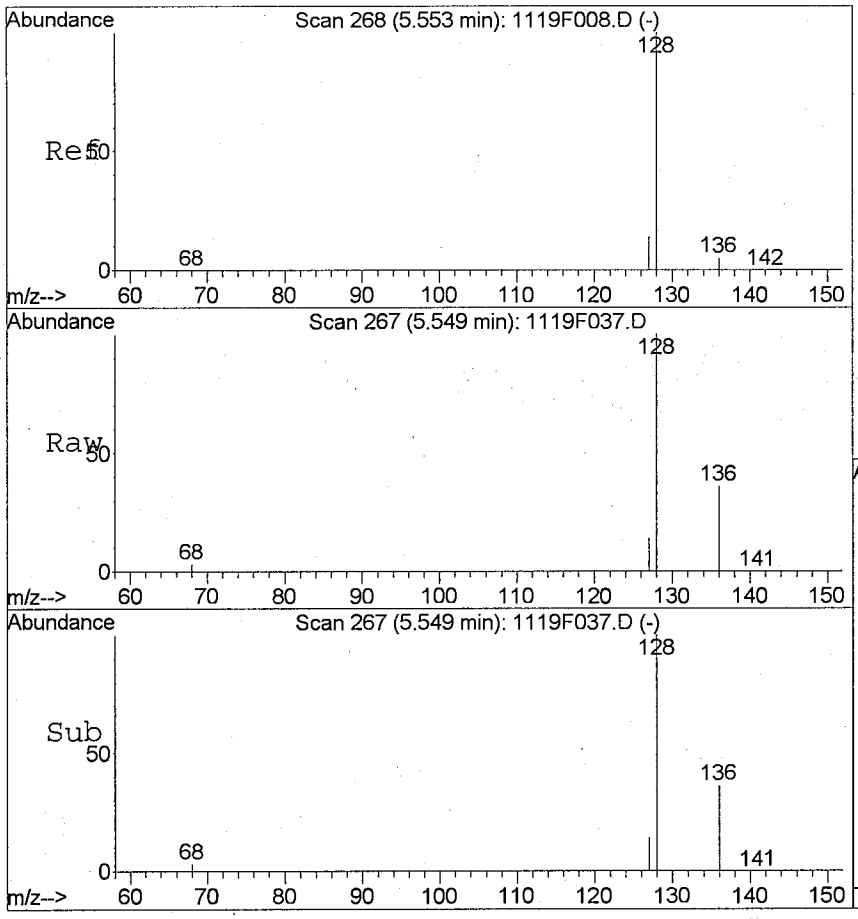
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.36	192	153677	1022.46	ng/ml	98
32)	C1-Phenanthrenes/Anthracen	12.12	192	1088401m	4916.70	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	799864m	3613.27	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.44	220	484768m	2189.87	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	293094m	1324.01	ng/ml	
36)	Fluoranthene	13.67	202	6170069	28000.77	ng/ml	98
39)	Pyrene	14.17	202	5765601	22738.67	ng/ml	95
40)	C1-Fluoranthenes/Pyrenes	15.01	216	3262074m	12865.13	ng/ml	
42)	Benz(a)anthracene	17.02	228	3123063	16177.80	ng/ml	88
43)	Chrysene	17.12	228	3385539	16400.27	ng/ml	98
44)	C1-Chrysenes	18.05	242	1930576m	9352.12	ng/ml	
45)	C2-Chrysenes	19.38	256	855824m	4145.79	ng/ml	
46)	C3-Chrysenes	20.95	270	508653m	2464.02	ng/ml	
47)	C4-Chrysenes	23.71	284	690709m	3345.94	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	2861899	14451.06	ng/ml	99
50)	Benzo(k)fluoranthene	20.07	252	3161266m	12580.46	ng/ml	
51)	Benzo(e)pyrene	20.97	252	2458382	11056.03	ng/ml	100
52)	Benzo(a)pyrene	21.16	252	3221887	19126.48	ng/ml	100
53)	Perylene	21.48	252	854605	4519.50	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.02	276	1746927	17059.39	ng/ml	95
55)	Dibenz(a,h)anthracene	24.07	278	306065m	2079.73	ng/ml	
56)	Benzo(g,h,i)perylene	24.48	276	1576318	9284.91	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:45 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

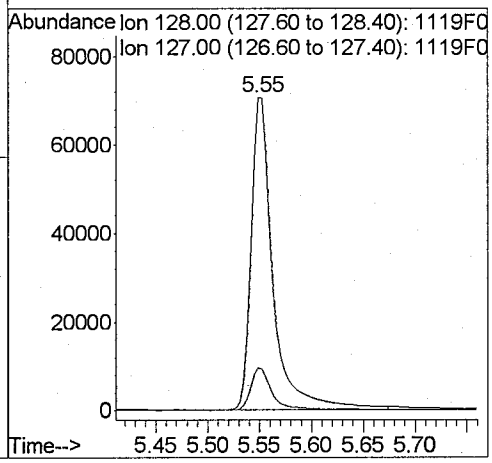


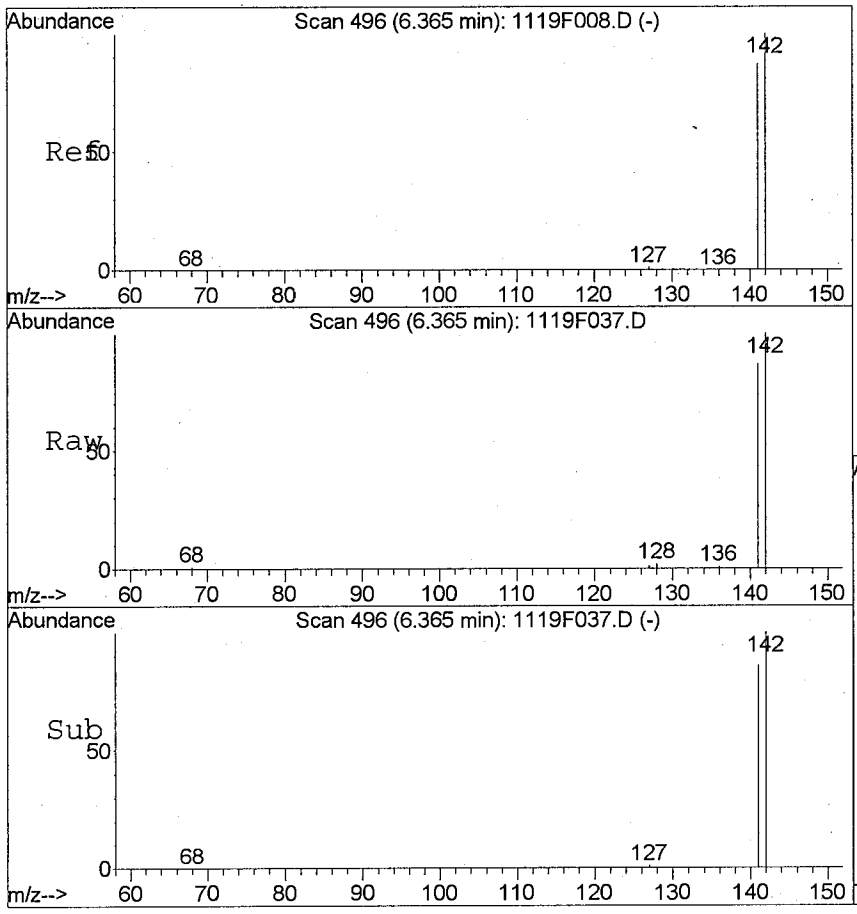


#2
Naphthalene
Concen: 403.45 ng/ml
RT: 5.55 min Scan# 267
Delta R.T. -0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:128 Resp: 102967

Ion	Ratio	Lower	Upper
128	100		
127	13.6	0.0	43.8

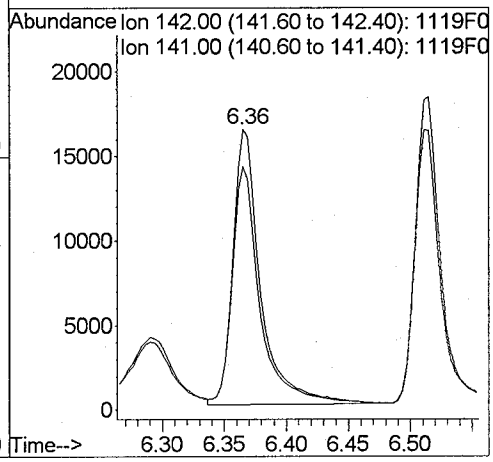


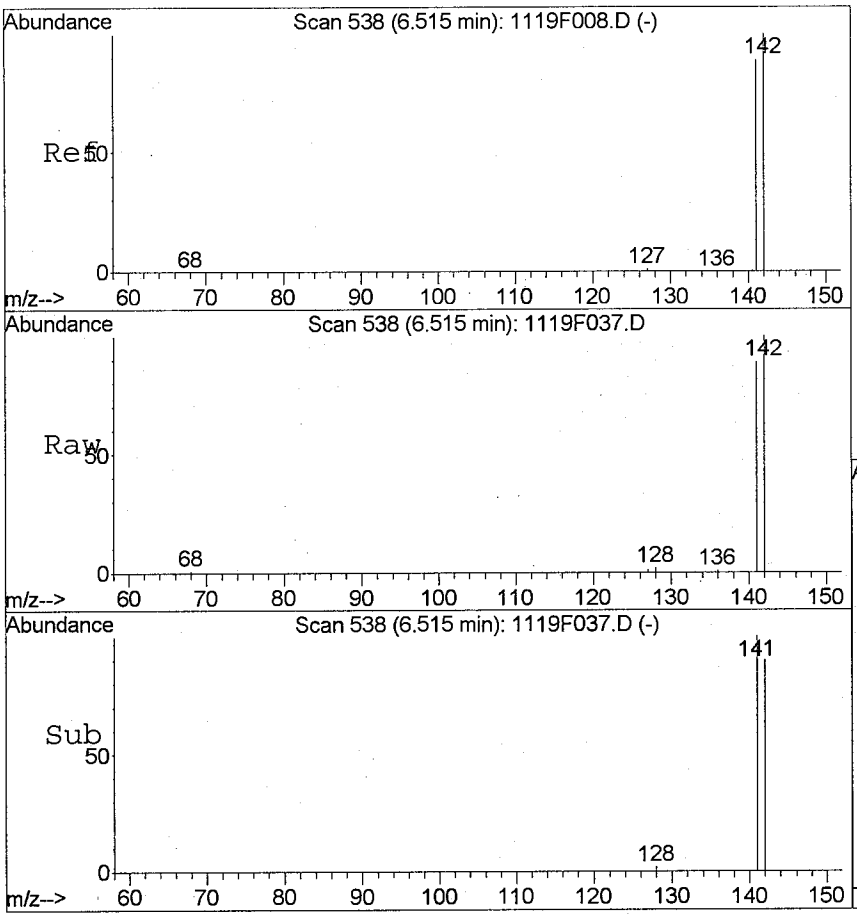


#3
2-Methylnaphthalene
Concen: 167.90 ng/ml
RT: 6.36 min Scan# 496
Delta R.T. -0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:142 Resp: 25304

Ion	Ratio	Lower	Upper
142	100		
141	86.2	57.2	117.2

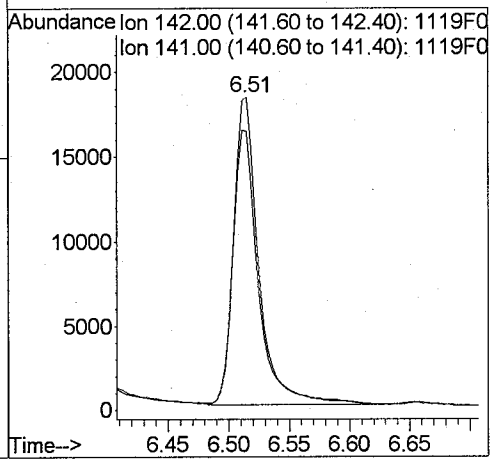


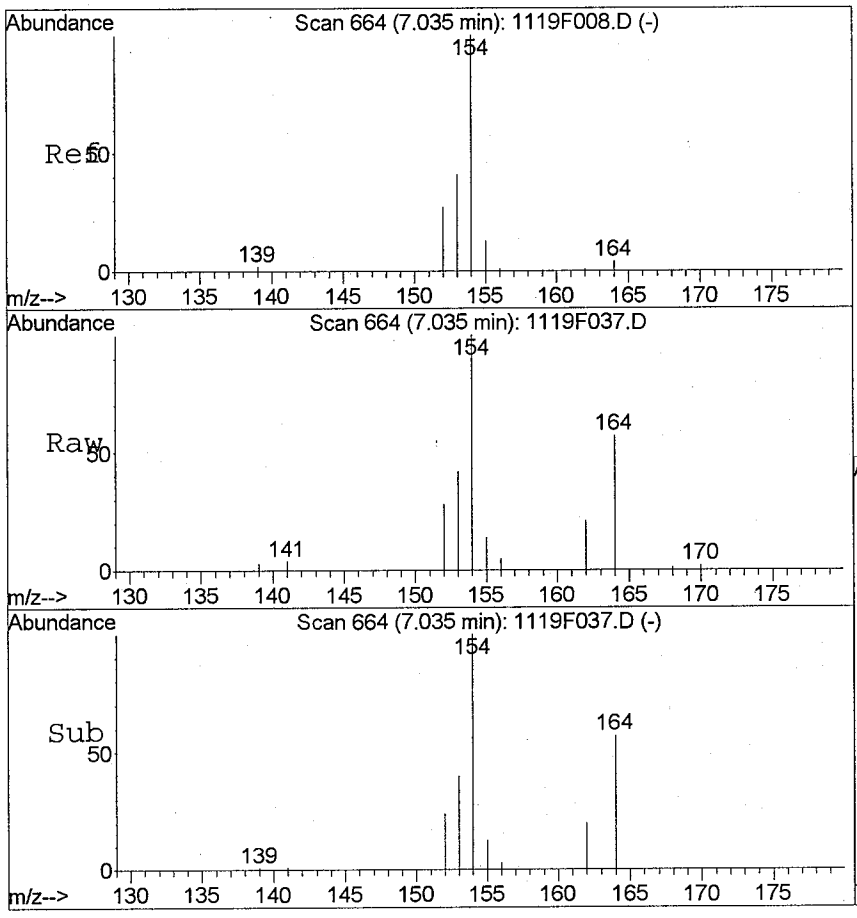


#4
1-Methylnaphthalene
Concen: 186.54 ng/ml
RT: 6.51 min Scan# 538
Delta R.T. -0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:142 Resp: 26352

Ion	Ratio	Lower	Upper
142	100		
141	88.8	58.5	118.5

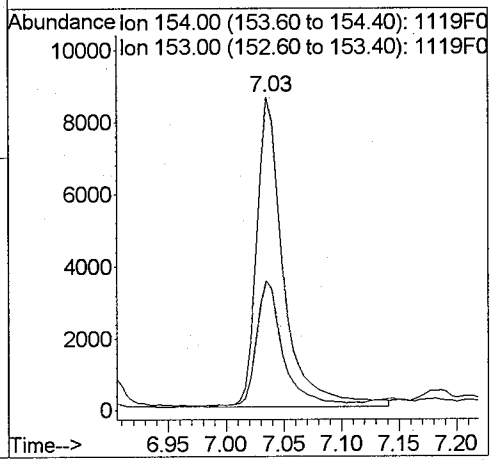


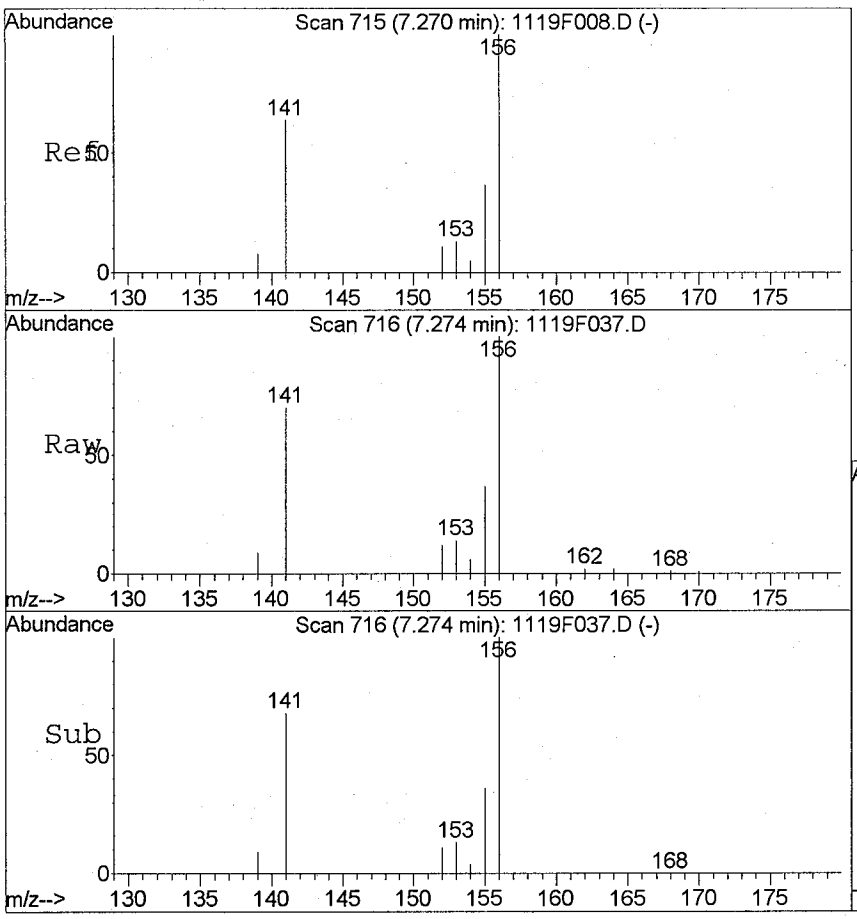


#6
Biphenyl
Concen: 76.85 ng/ml
RT: 7.03 min Scan# 664
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:154 Resp: 14044

Ion	Ratio	Lower	Upper
154	100		
153	40.4	11.3	71.3

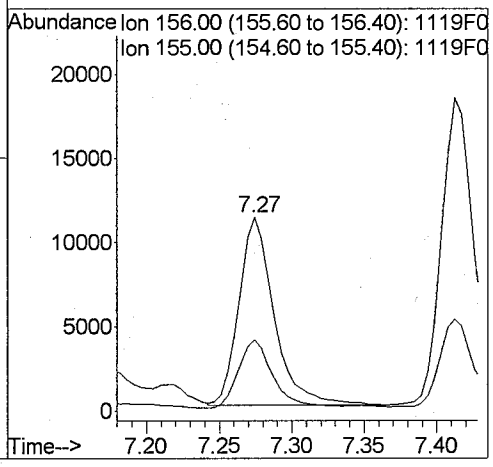


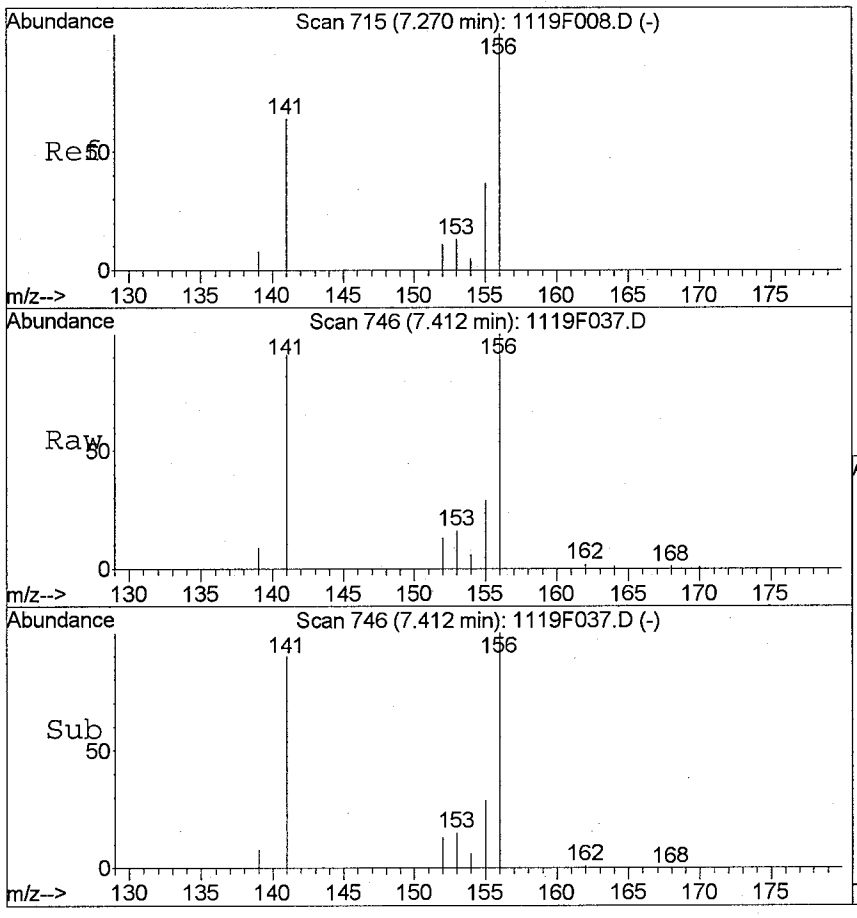


#7
2,6-Dimethylnaphthalene
Concen: 145.54 ng/ml
RT: 7.27 min Scan# 716
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:156 Resp: 18709

Ion	Ratio	Lower	Upper
156	100		
155	36.2	6.9	66.9

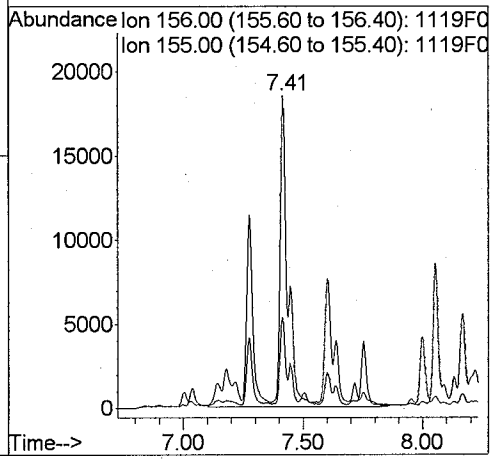


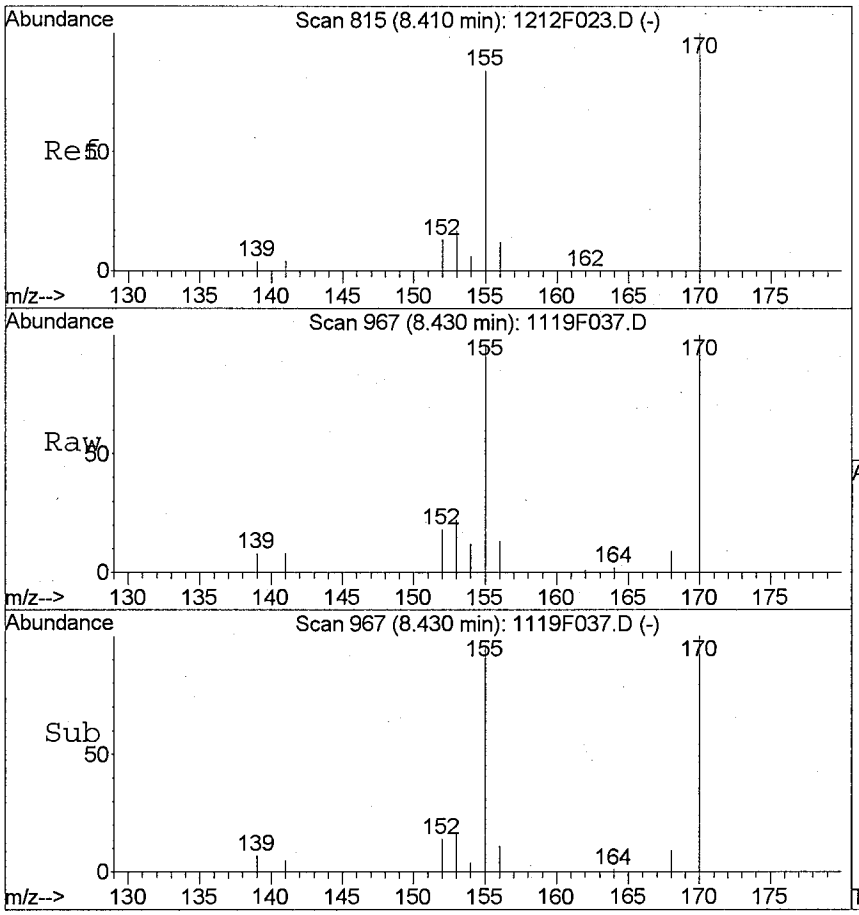


#8
C2-Naphthalenes
Concen: 387.22 ng/ml m
RT: 7.41 min Scan# 746
Delta R.T. 0.05 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:156 Resp: 98823

Ion	Ratio	Lower	Upper
156	100		
155	29.3	8.3	68.3

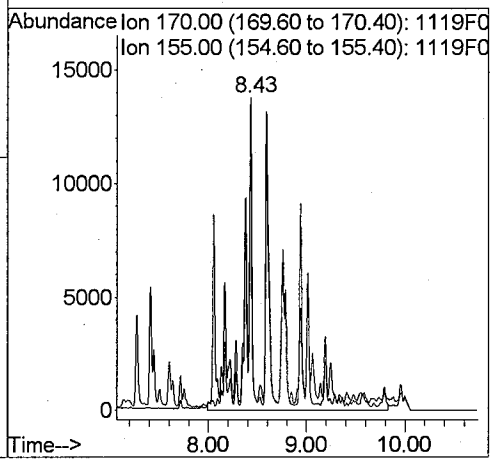


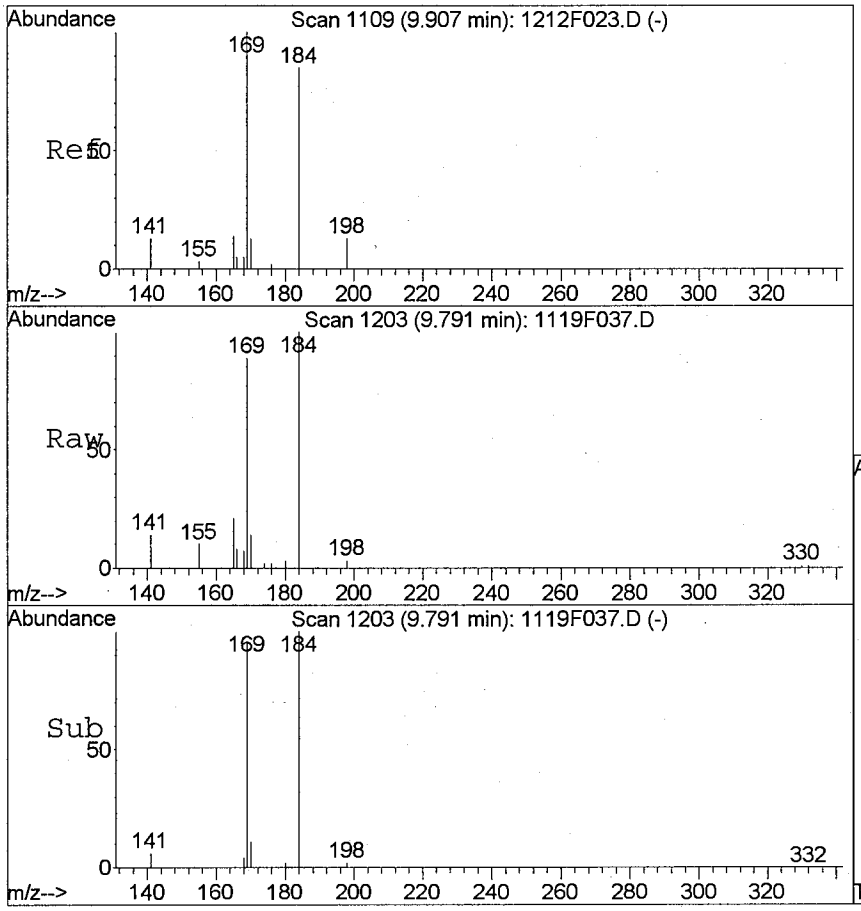


#9
C3-Naphthalenes
Concen: 593.50 ng/ml m
RT: 8.43 min Scan# 967
Delta R.T. -0.10 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:170 Resp: 151470

Ion	Ratio	Lower	Upper
170	100		
155	96.4	56.9	116.9

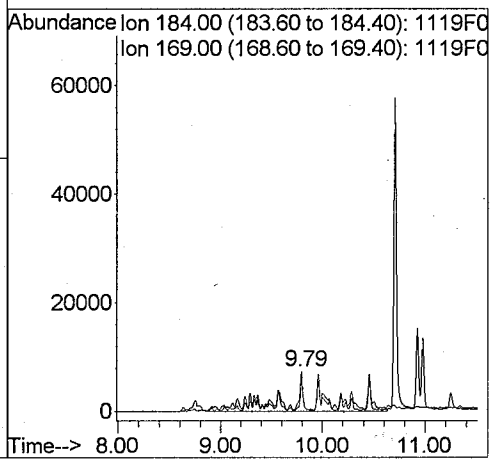


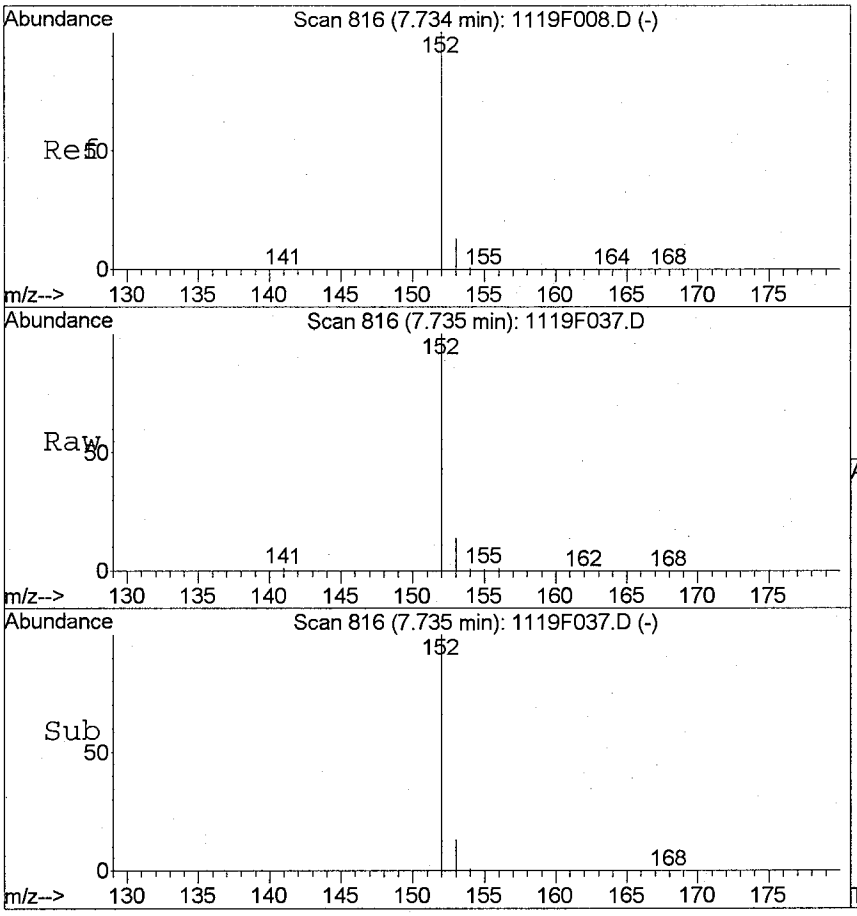


#10
C4-Naphthalenes
Concen: 382.34 ng/ml m
RT: 9.79 min Scan# 1203
Delta R.T. -0.27 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:184 Resp: 97578

Ion	Ratio	Lower	Upper
184	100		
169	88.9	89.7	149.7#

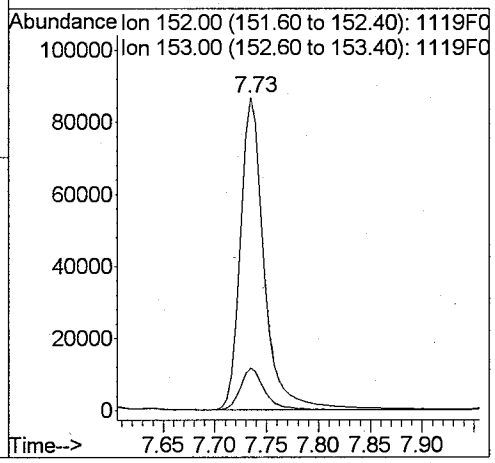


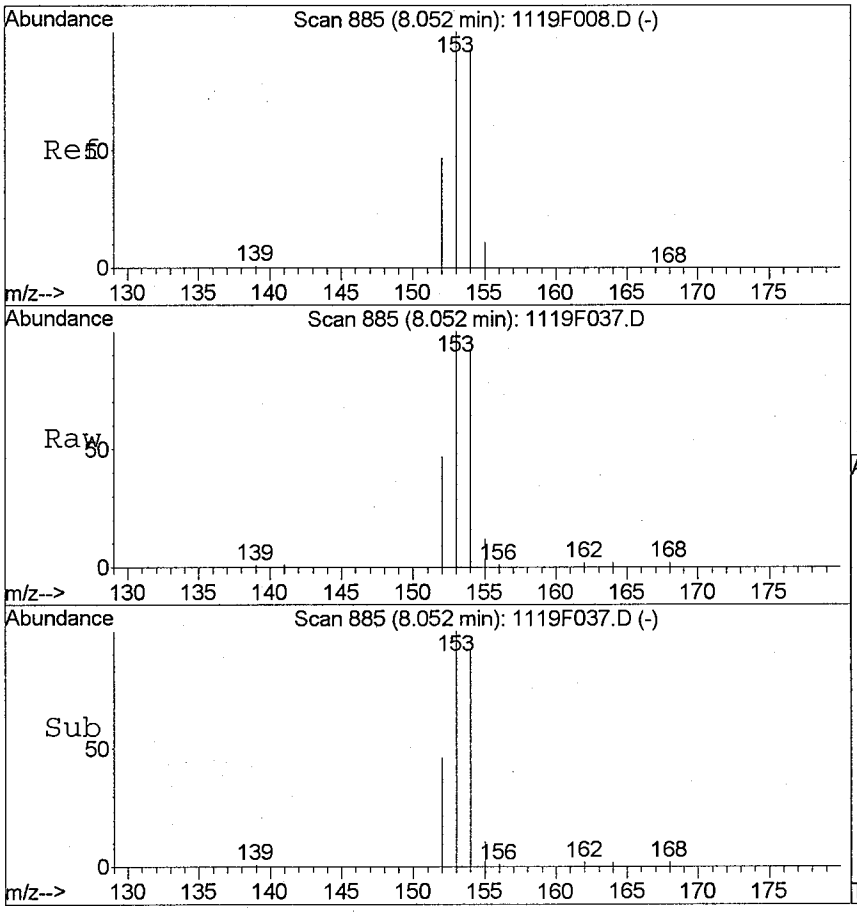


#12
Acenaphthylene
Concen: 594.17 ng/ml
RT: 7.73 min Scan# 816
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:152 Resp: 138338

Ion	Ratio	Lower	Upper
152	100		
153	13.4	0.0	43.1

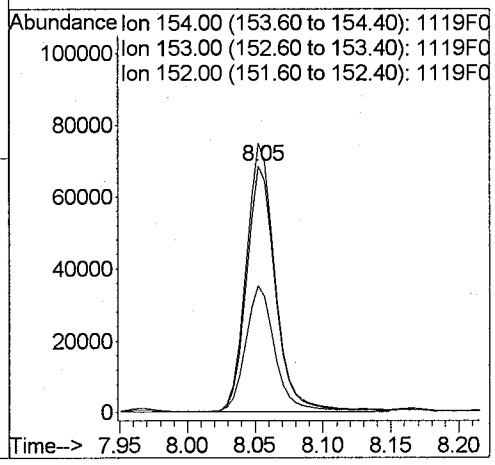


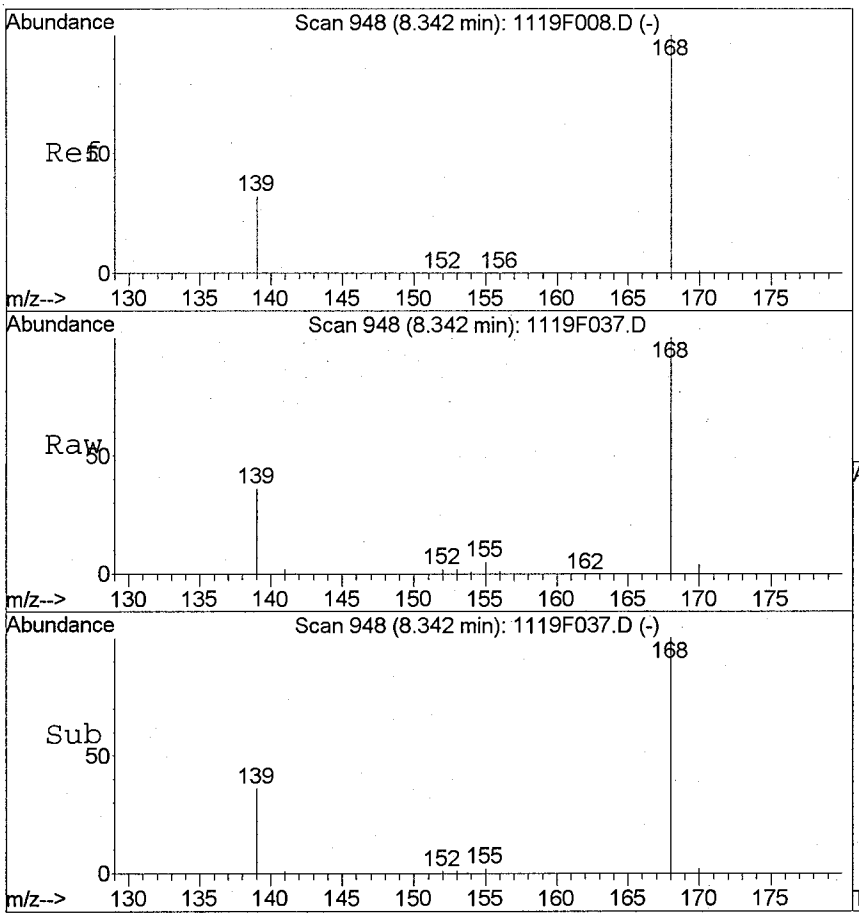


#13
Acenaphthene
Concen: 709.35 ng/ml
RT: 8.05 min Scan# 885
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:154 Resp: 101787

Ion	Ratio	Lower	Upper
154	100		
153	109.3	78.4	138.4
152	50.9	20.4	80.4

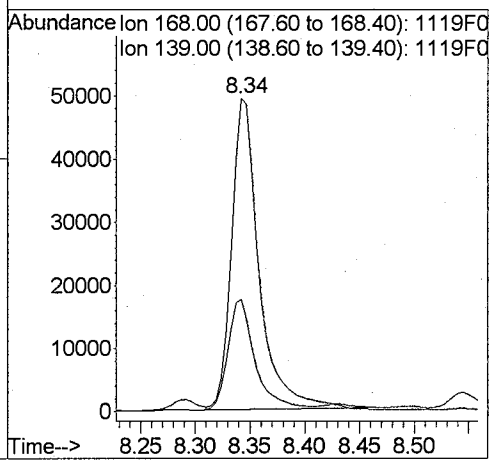


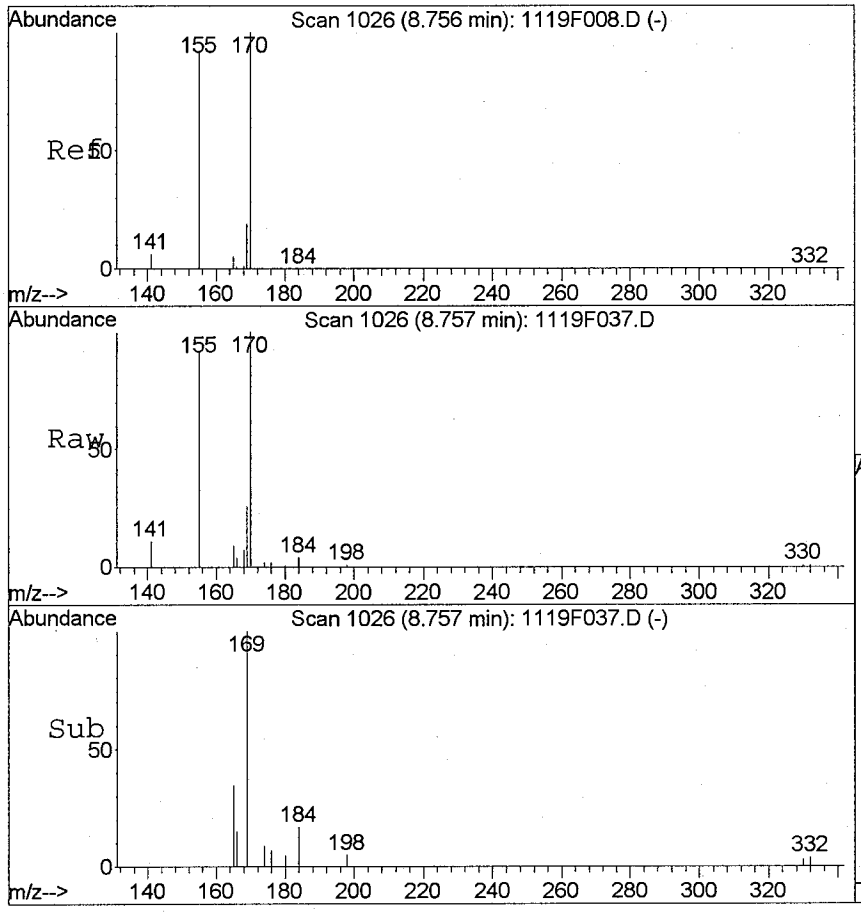


#14
Dibenzofuran
Concen: 447.59 ng/ml
RT: 8.34 min Scan# 948
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:168 Resp: 86096

Ion	Ratio	Lower	Upper
168	100		
139	35.8	2.4	62.4

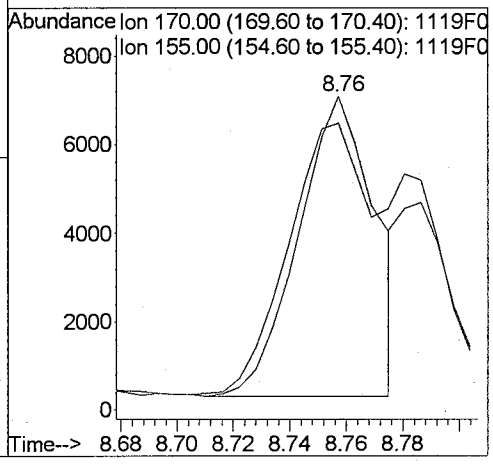


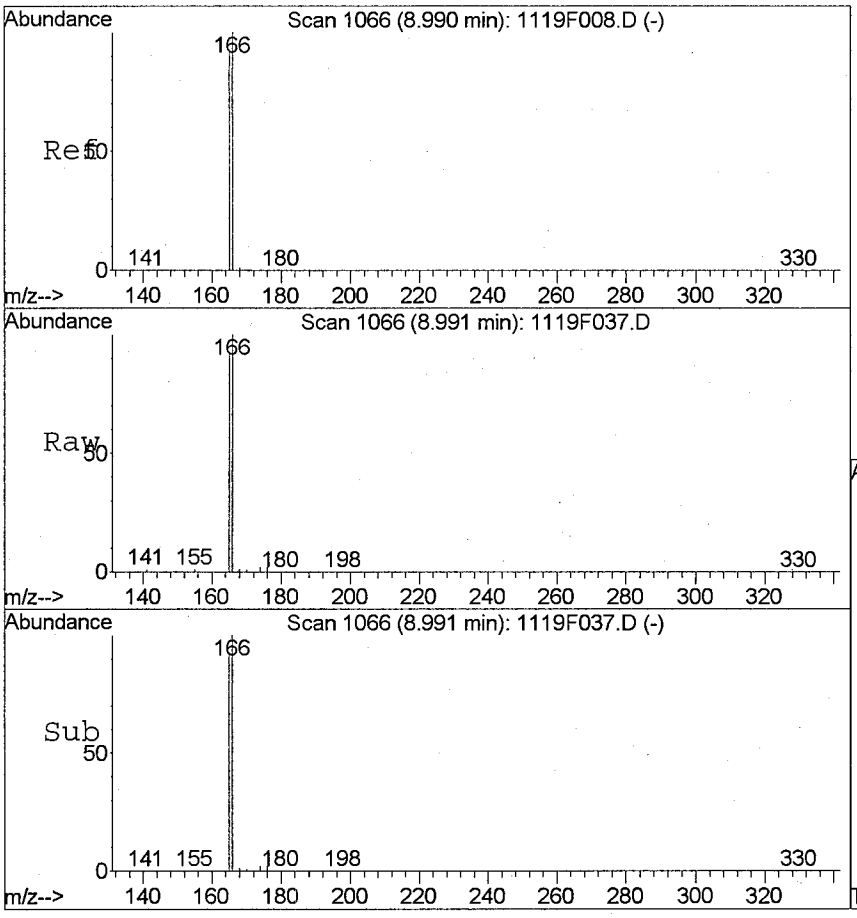


#15
2,3,5-Trimethylnaphthalene
Concen: 97.88 ng/ml
RT: 8.76 min Scan# 1026
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:170 Resp: 12581

Ion	Ratio	Lower	Upper
170	100		
155	90.1	61.5	121.5

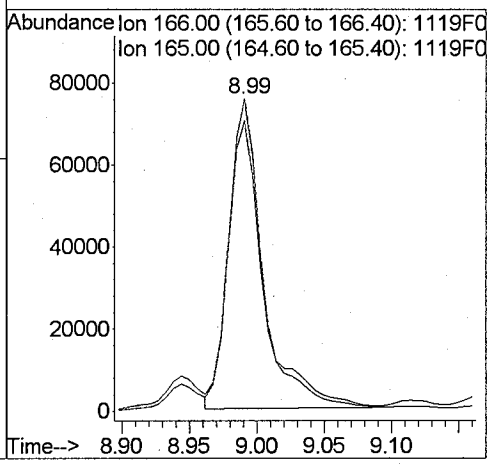


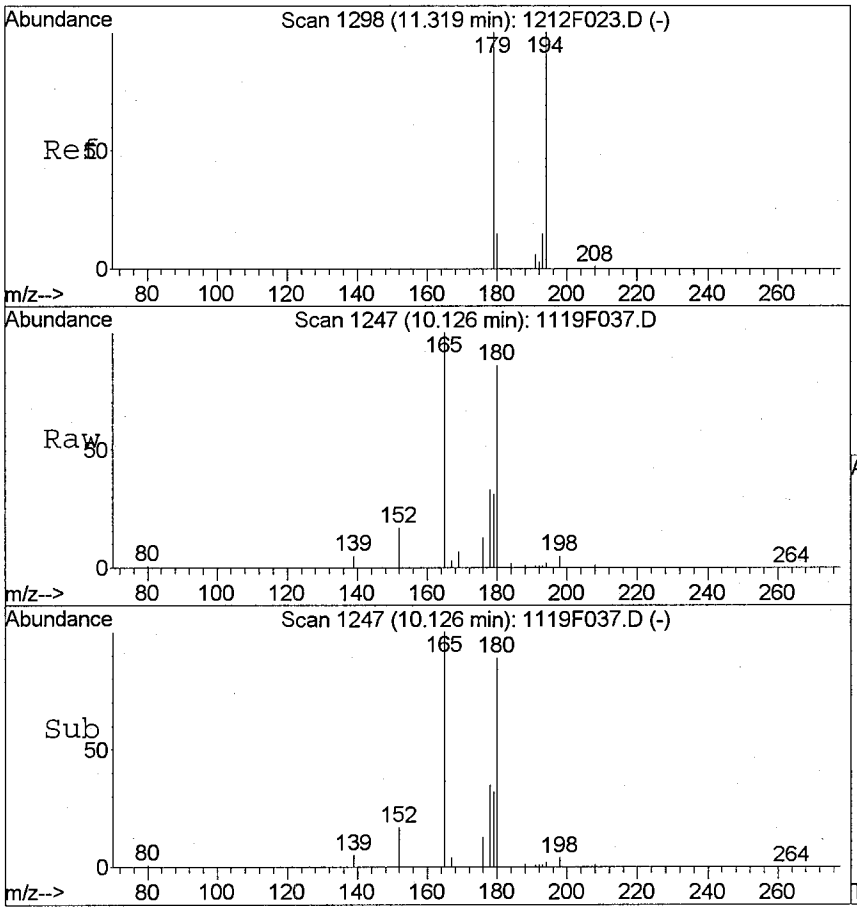


#17
Fluorene
Concen: 857.34 ng/ml
RT: 8.99 min Scan# 1066
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:166 Resp: 131784

Ion	Ratio	Lower	Upper
166	100		
165	92.2	62.9	122.9

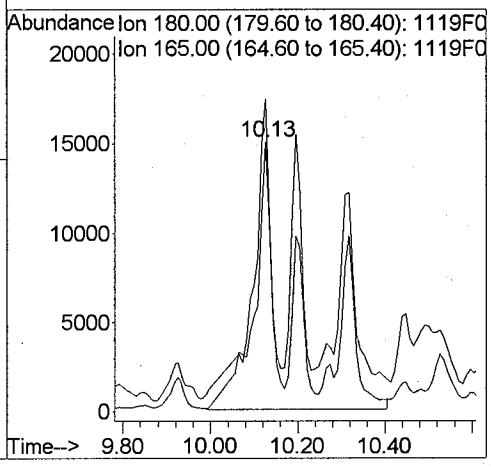


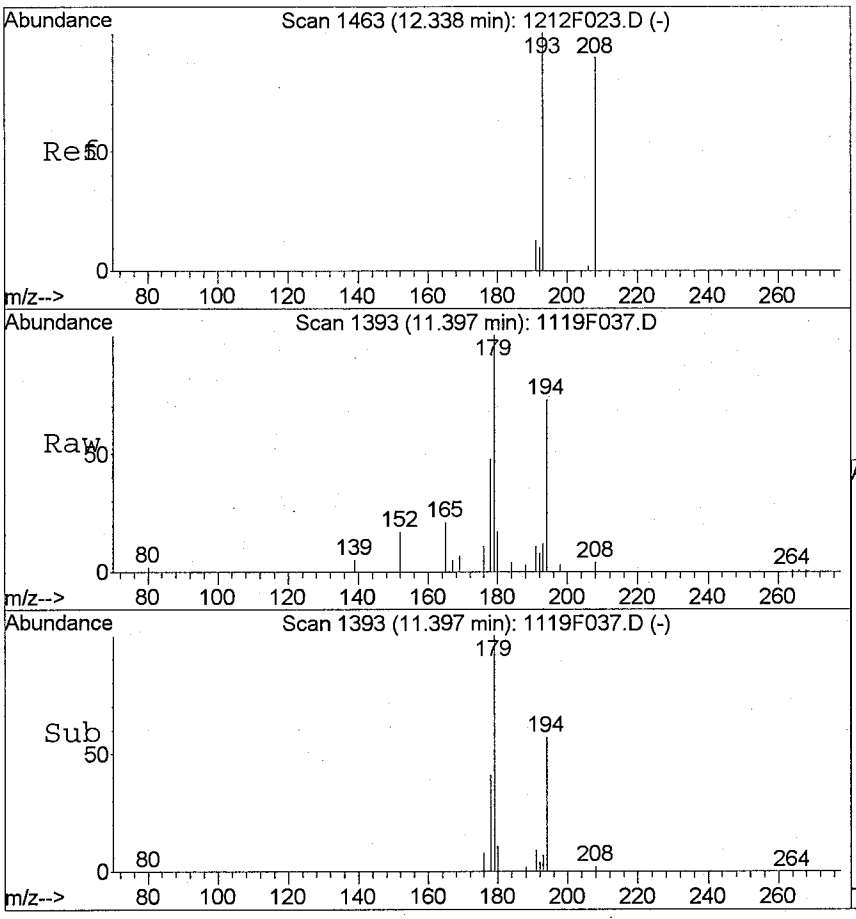


#18
C1-Fluorenes
Concen: 611.24 ng/ml m
RT: 10.13 min Scan# 1247
Delta R.T. -0.17 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:180 Resp: 93955

Ion	Ratio	Lower	Upper
180	100		
165	116.0	148.7	208.7#

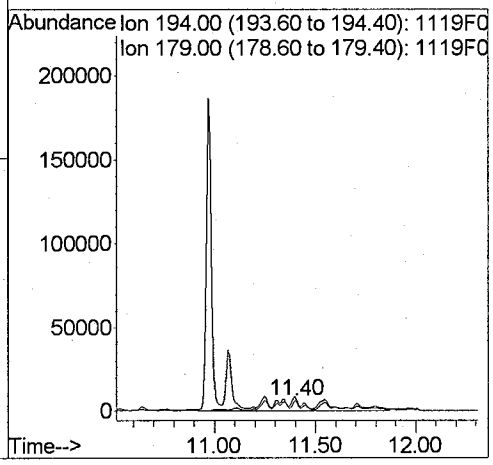


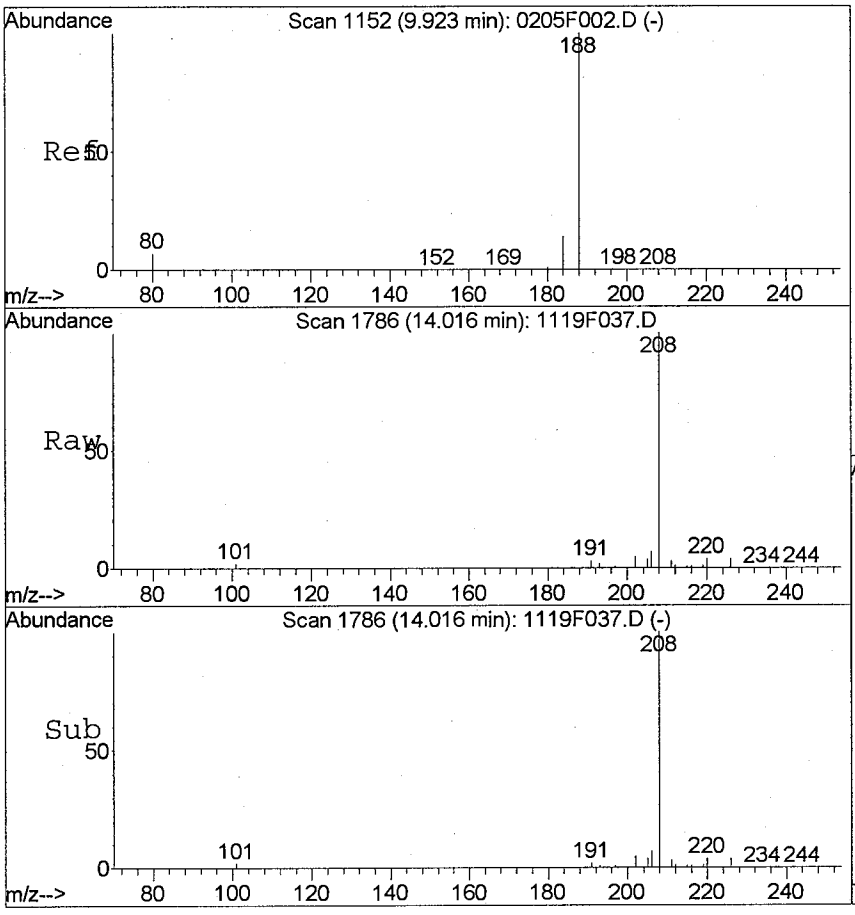


#19
C2-Fluorenes
Concen: 672.52 ng/ml m
RT: 11.40 min Scan# 1393
Delta R.T. -0.01 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:194 Resp: 103375

Ion	Ratio	Lower	Upper
194	100		
179	137.3	107.0	167.0

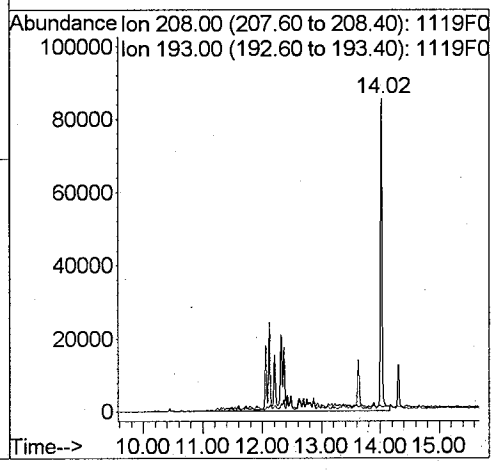


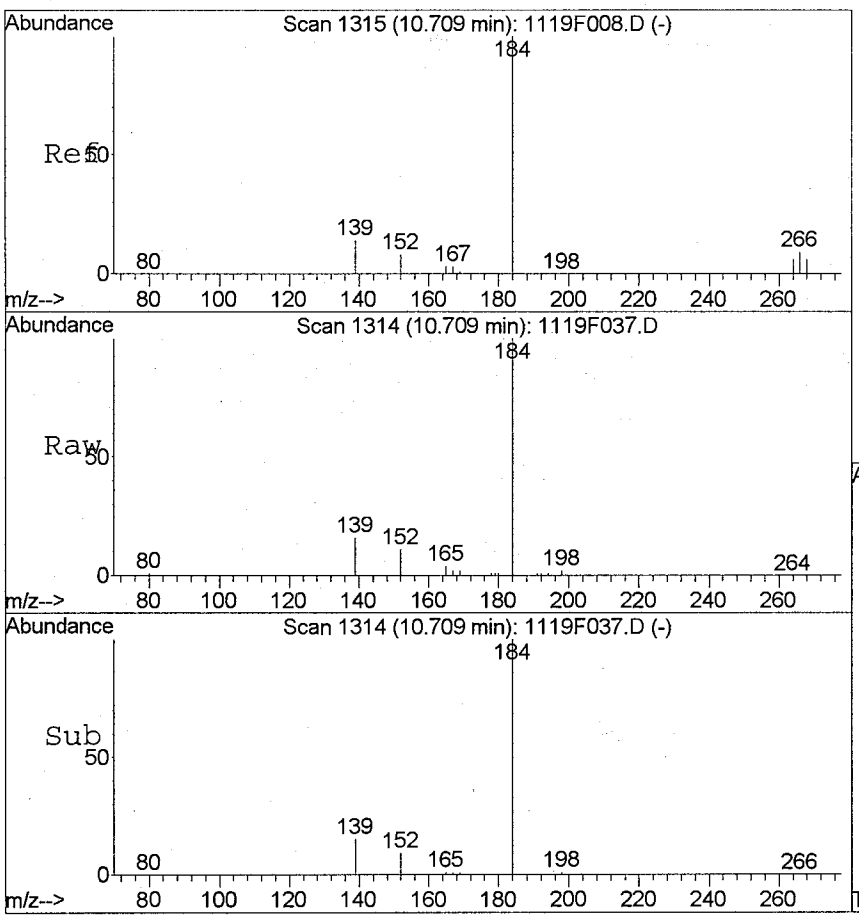


#20
C3-Fluorenes
Concen: 2580.36 ng/ml m
RT: 14.02 min Scan# 1786
Delta R.T. 1.50 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:208 Resp: 396635

Ion	Ratio	Lower	Upper
208	100		
193	1.7	92.0	152.0#

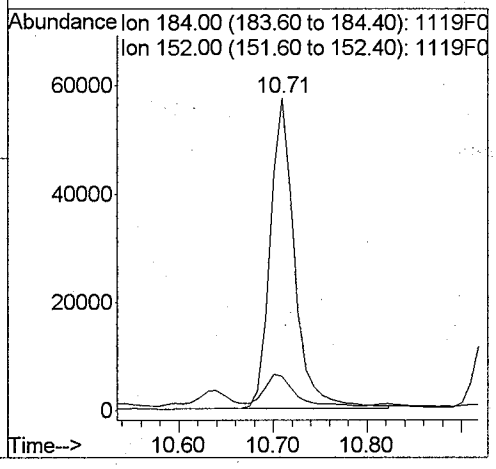


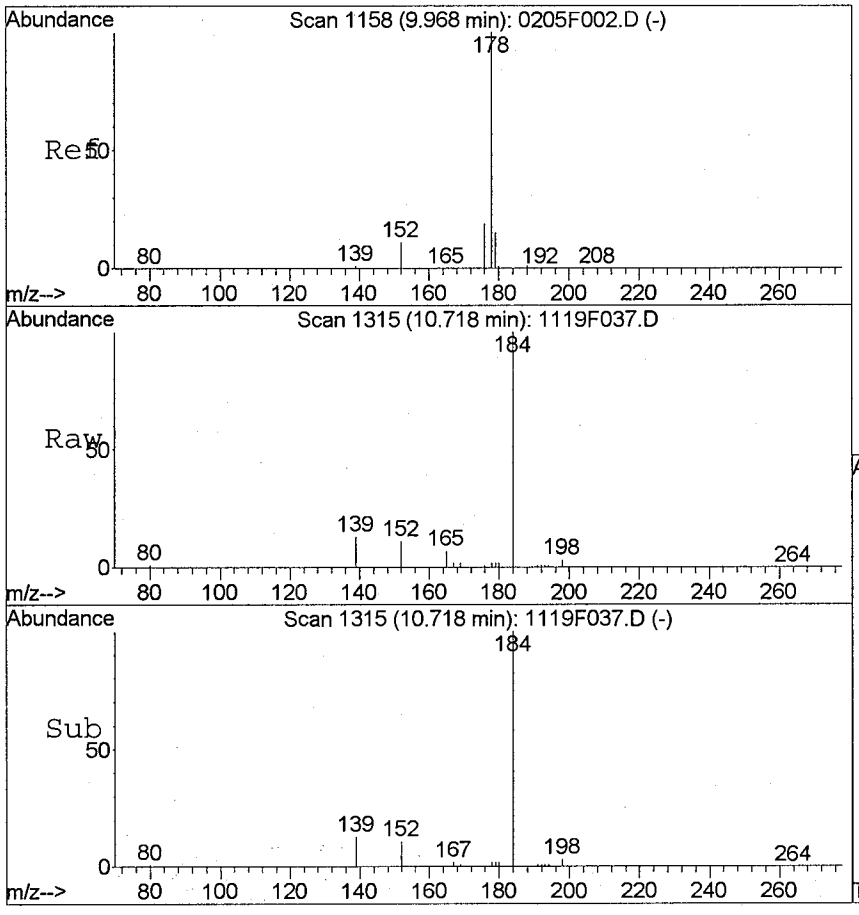


#24
Dibenzothiophene
Concen: 493.60 ng/ml
RT: 10.71 min Scan# 1314
Delta R.T. -0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:184 Resp: 104020

Ion	Ratio	Lower	Upper
184	100		
152	8.8	0.0	38.4

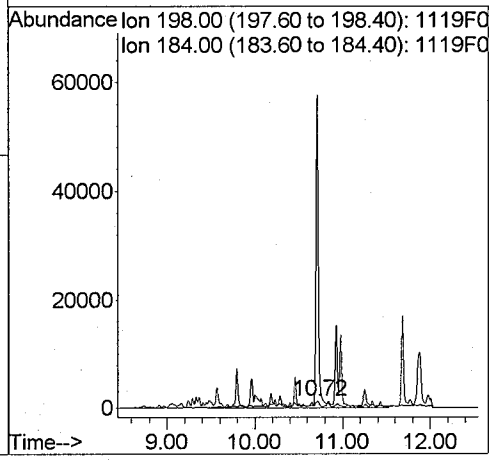


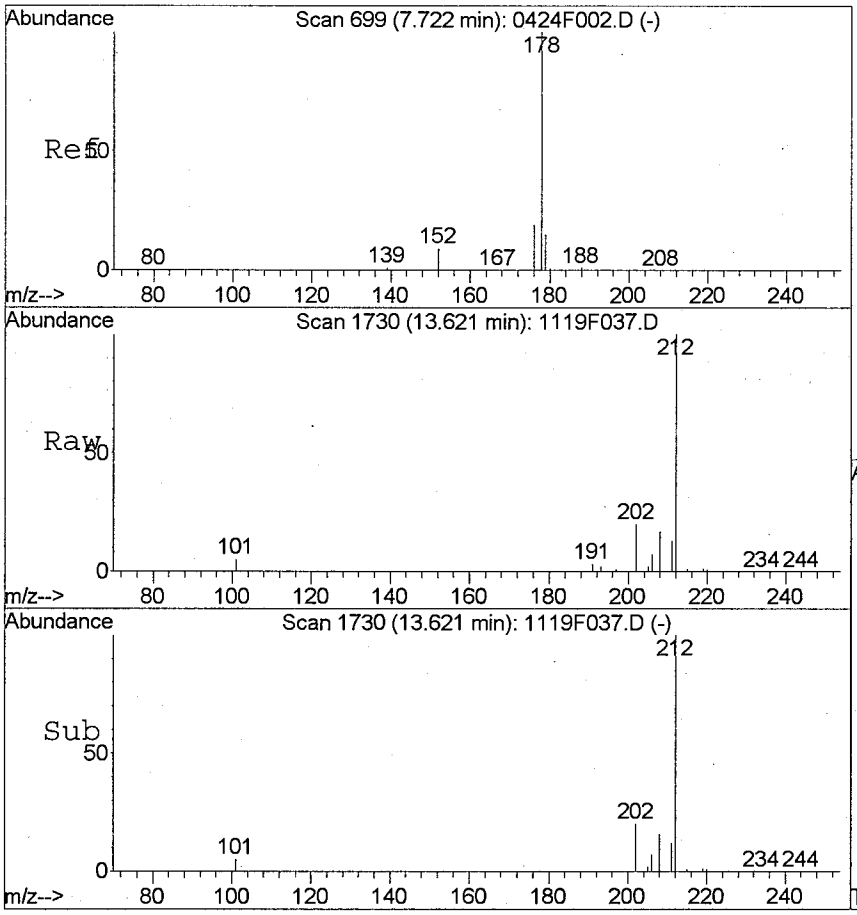


#25
C1-Dibenzothiophenes
Concen: 225.58 ng/ml m
RT: 10.72 min Scan# 1315
Delta R.T. 0.51 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:198 Resp: 47539

Ion	Ratio	Lower	Upper
198	100		
184	2913.3	74.1	134.1#

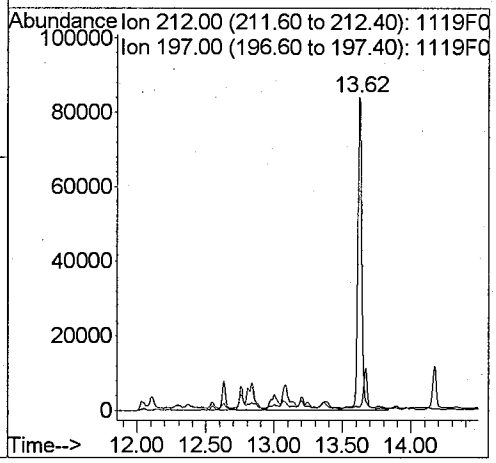


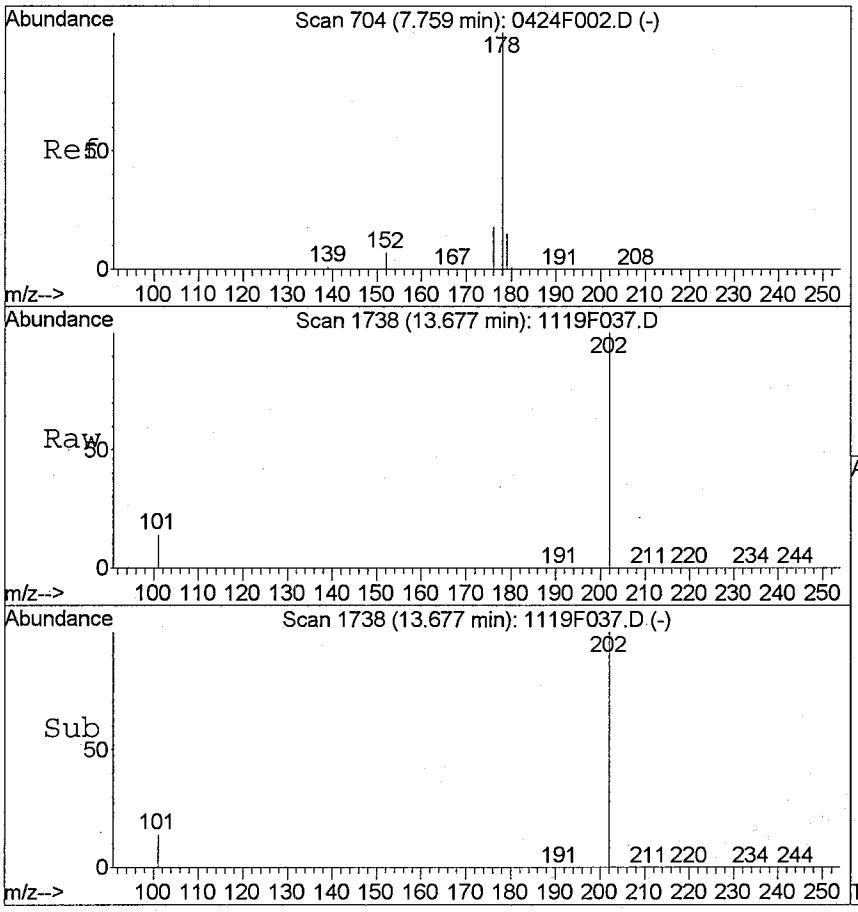


#26
C2-Dibenzothiophenes
Concen: 1358.77 ng/ml m
RT: 13.62 min Scan# 1730
Delta R.T. 0.69 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:212 Resp: 286344

Ion	Ratio	Lower	Upper
212	100		
197	1.3	0.0	53.8

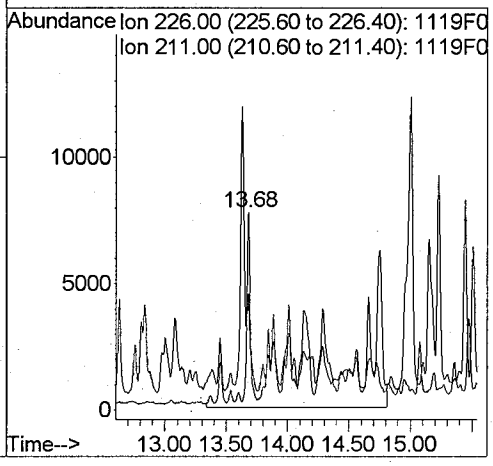


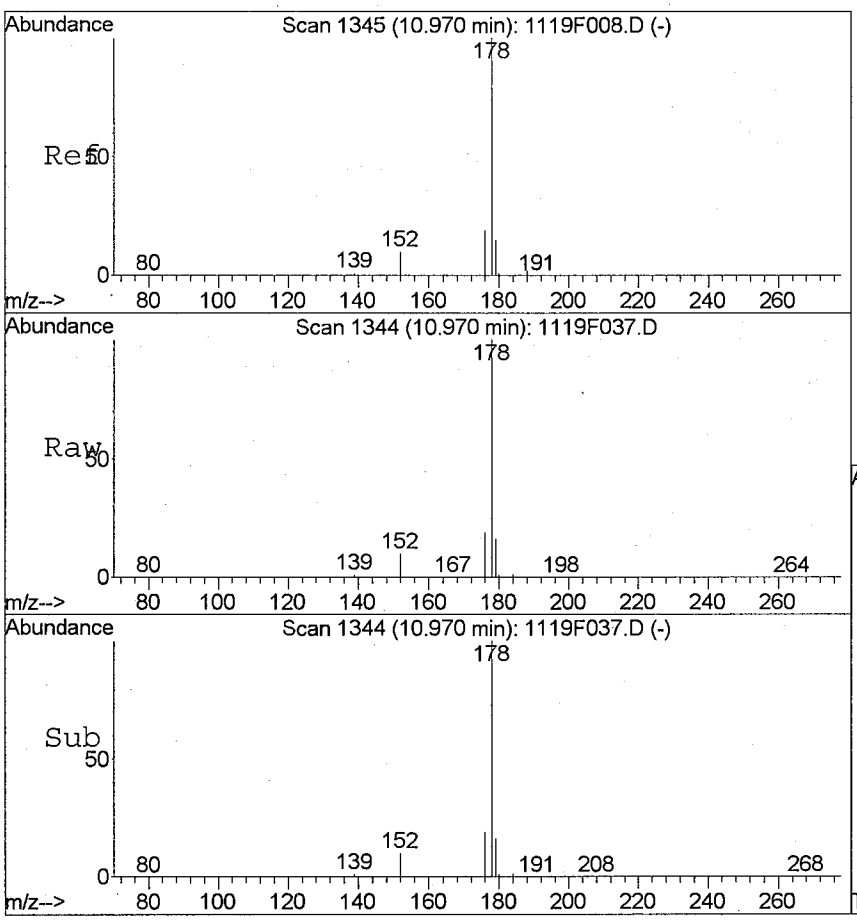


#27
C3-Dibenzothiophenes
Concen: 605.05 ng/ml m
RT: 13.68 min Scan# 1738
Delta R.T. -0.10 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:226 Resp: 127507

Ion	Ratio	Lower	Upper
226	100		
211	58.8	27.1	87.1

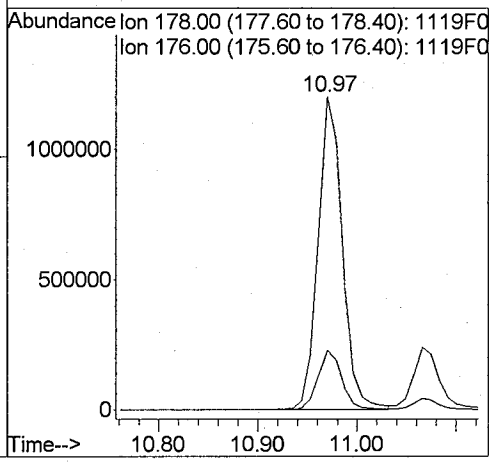


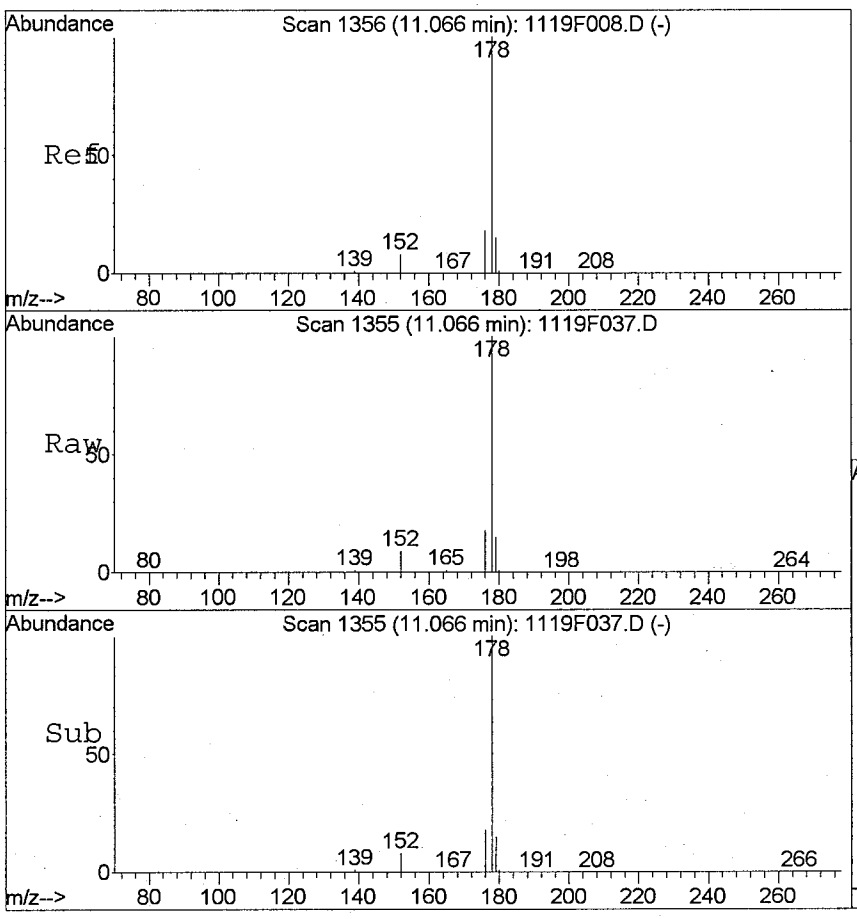


#28
Phenanthrene
Concen: 9164.05 ng/ml
RT: 10.97 min Scan# 1344
Delta R.T. -0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:178 Resp: 2028628

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.6

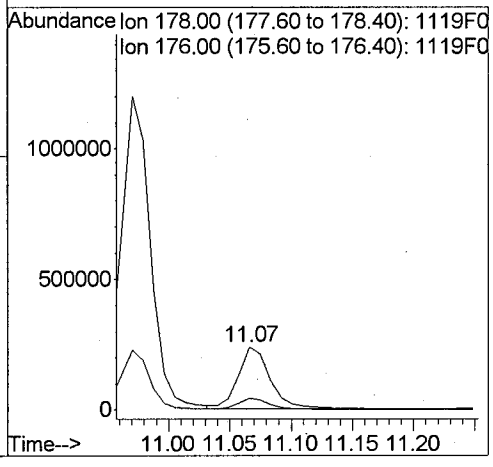


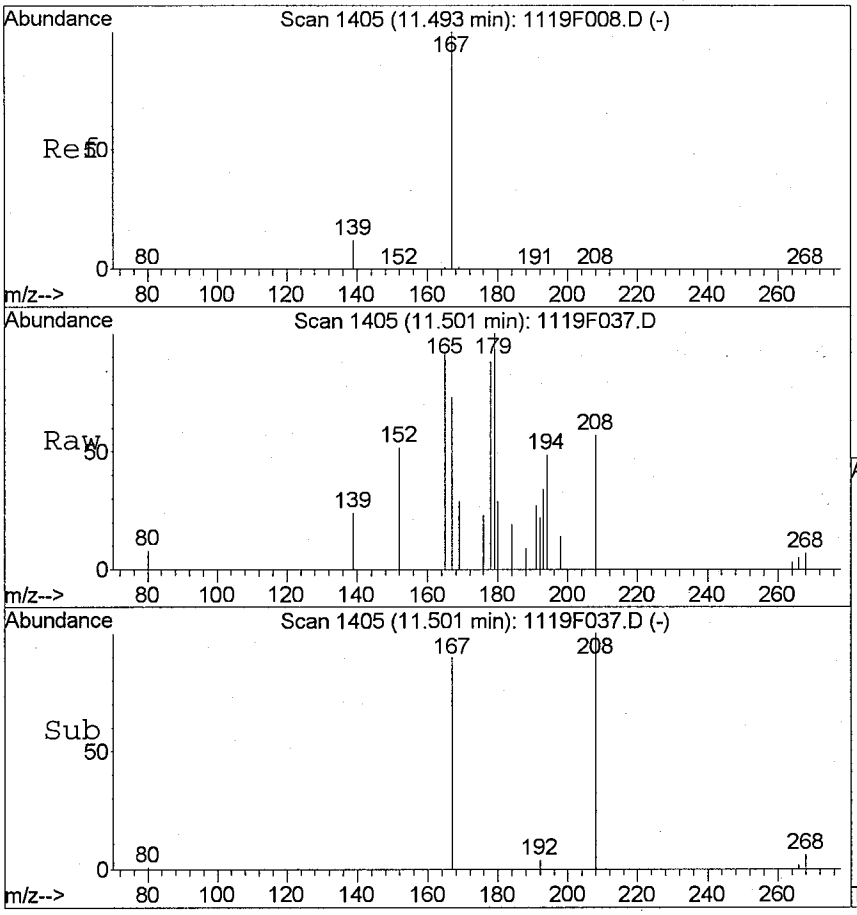


#29
Anthracene
Concen: 2271.50 ng/ml
RT: 11.07 min Scan# 1355
Delta R.T. -0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:178 Resp: 429585

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	48.2

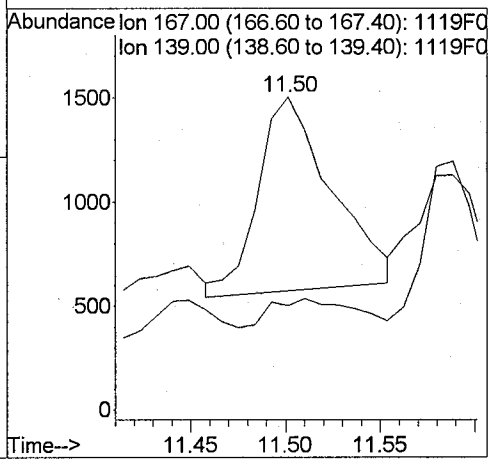


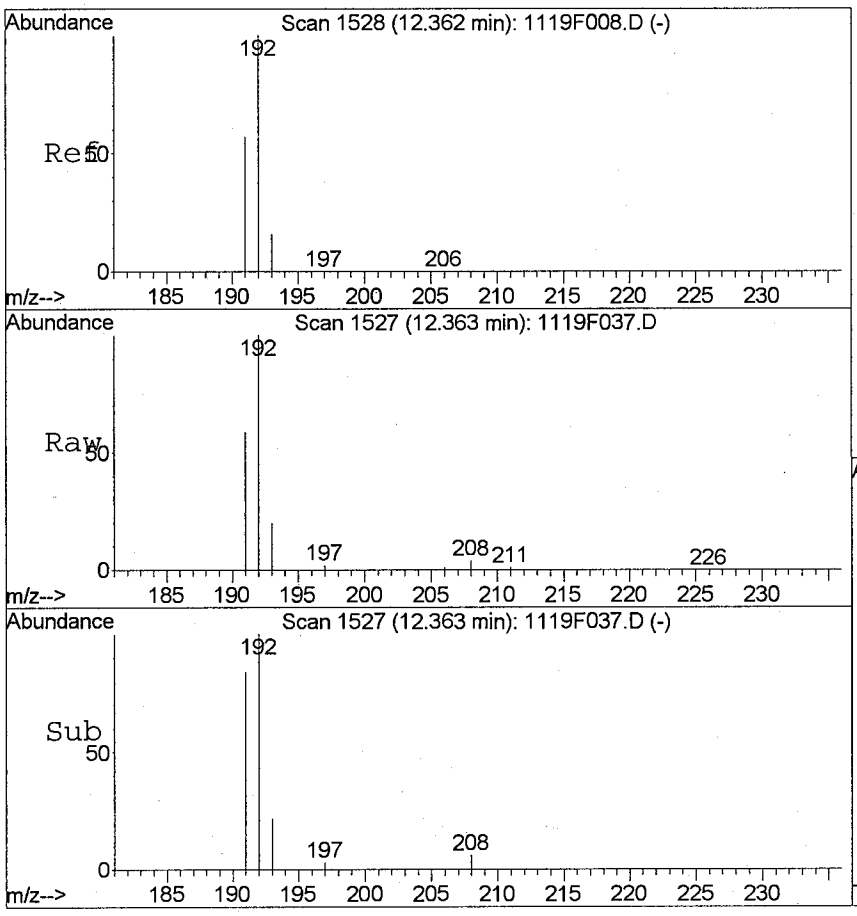


#30
Carbazole
Concen: 16.76 ng/ml
RT: 11.50 min Scan# 1405
Delta R.T. 0.01 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:167 Resp: 2506

Ion	Ratio	Lower	Upper
167	100		
139	8.1	0.0	42.5

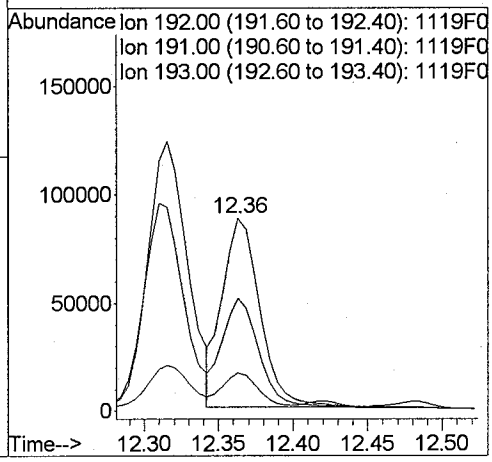


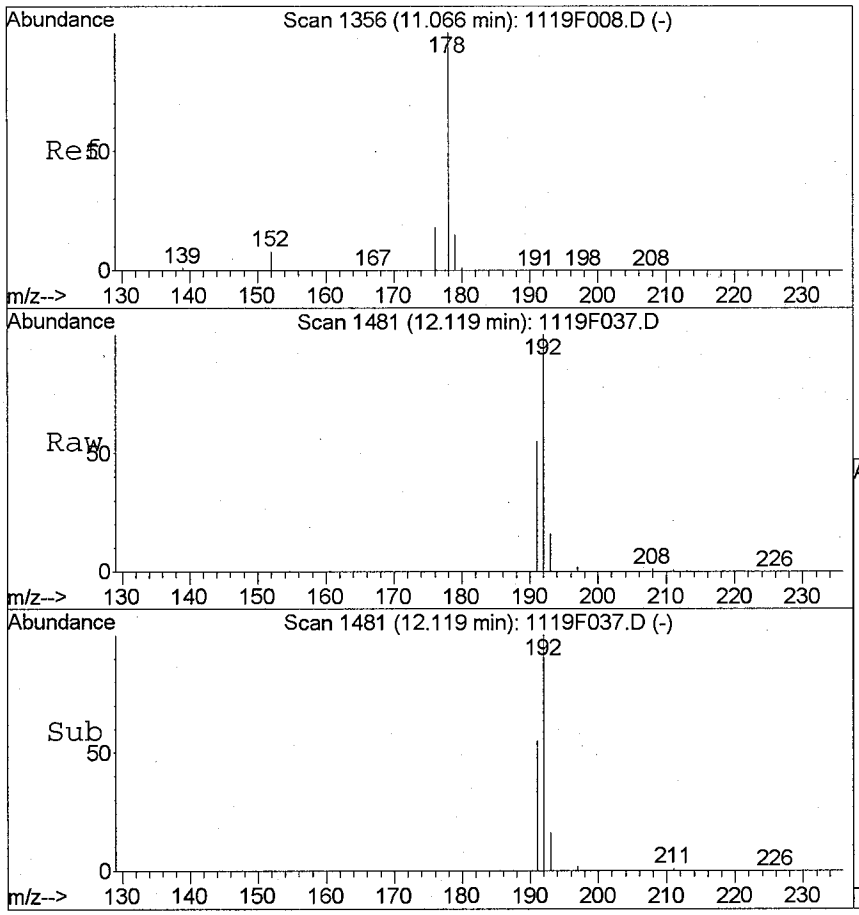


#31
1-Methylphenanthrene
Concen: 1022.46 ng/ml
RT: 12.36 min Scan# 1527
Delta R.T. 0.00 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:192 Resp: 153677

Ion	Ratio	Lower	Upper
192	100		
191	58.3	27.5	87.5
193	17.3	0.0	45.6

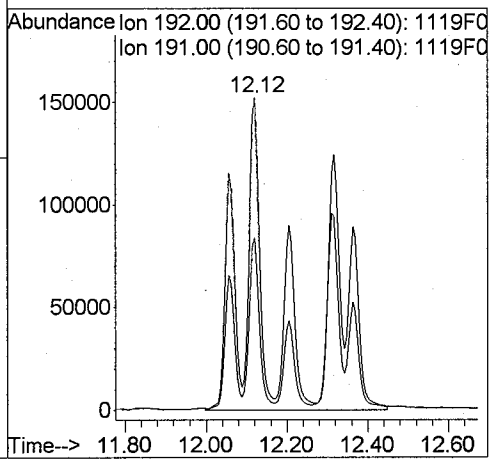


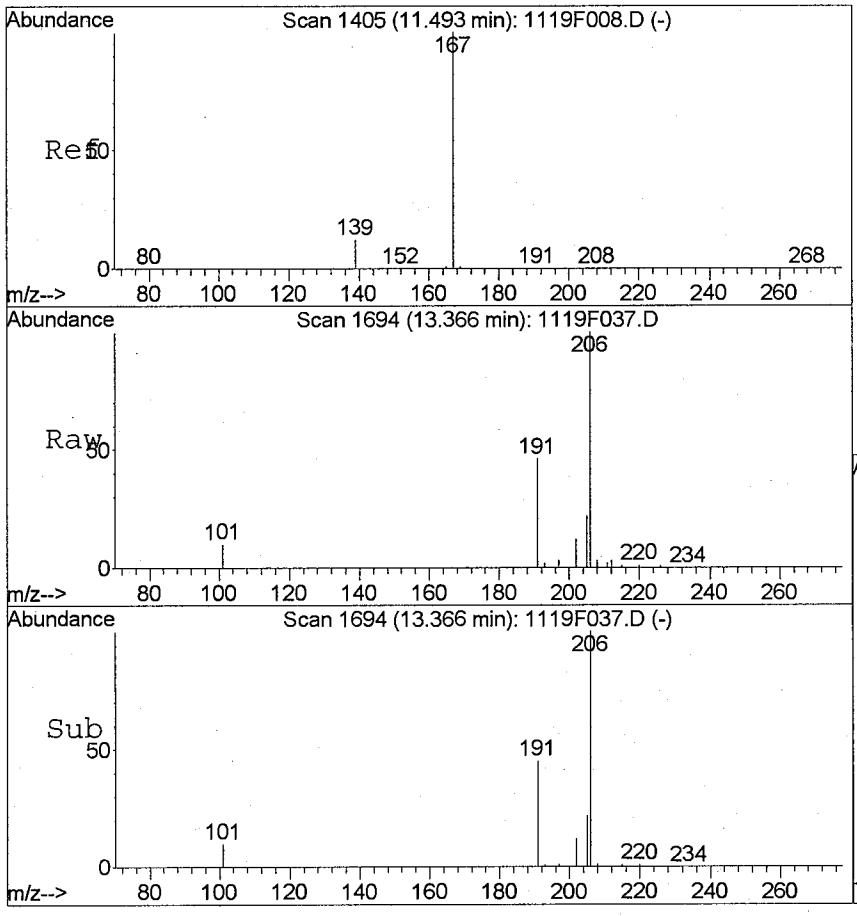


#32
C1-Phenanthrenes/Anthracenes
Concen: 4916.70 ng/ml m
RT: 12.12 min Scan# 1481
Delta R.T. -0.10 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:192 Resp: 1088401

Ion	Ratio	Lower	Upper
192	100		
191	55.1	25.3	85.3

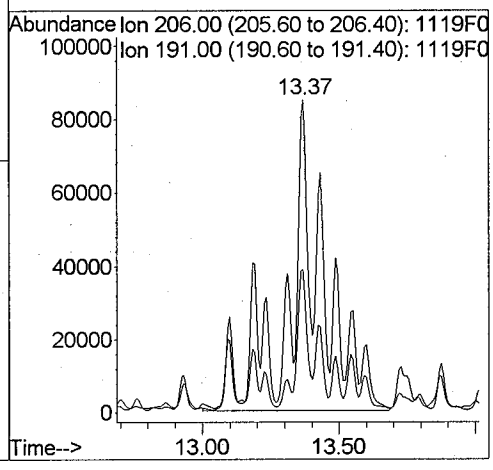


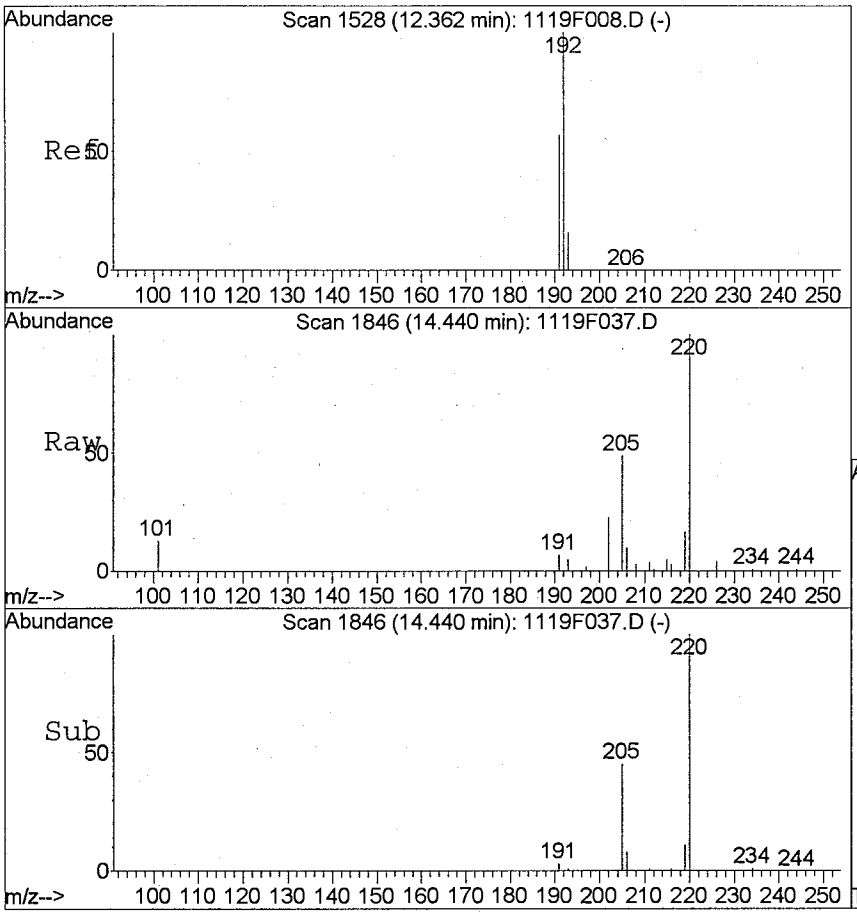


#33
C2-Phenanthrenes/Anthracenes
Concen: 3613.27 ng/ml m
RT: 13.37 min Scan# 1694
Delta R.T. -0.10 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:206 Resp: 799864

Ion	Ratio	Lower	Upper
206	100		
191	45.9	15.6	75.6

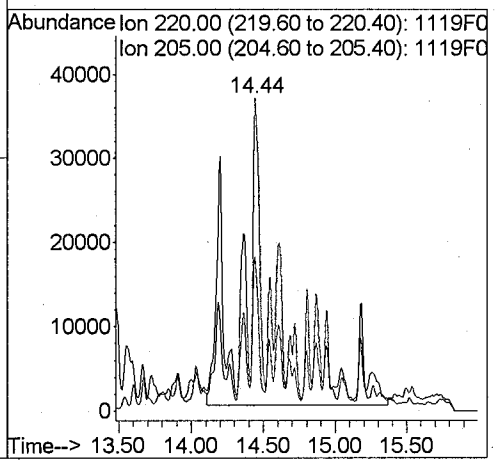


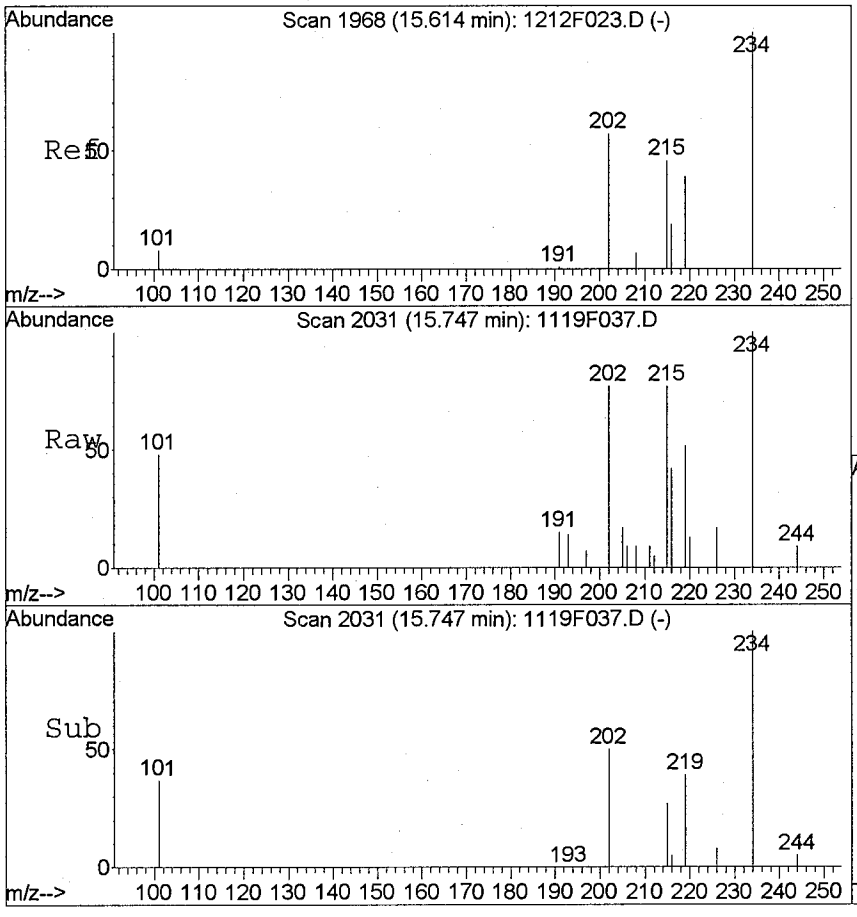


#34
C3-Phenanthrenes/Anthracenes
Concen: 2189.87 ng/ml m
RT: 14.44 min Scan# 1846
Delta R.T. -0.11 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:220 Resp: 484768

Ion	Ratio	Lower	Upper
220	100		
205	49.0	20.0	80.0

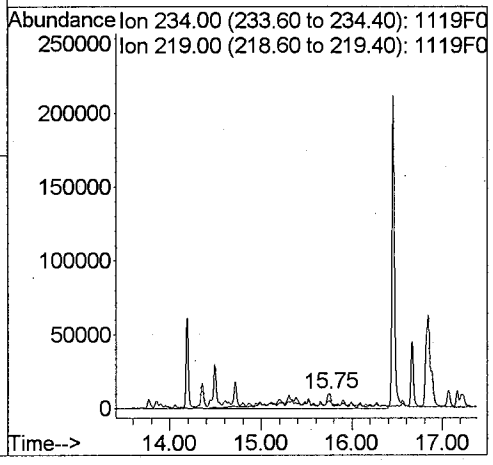


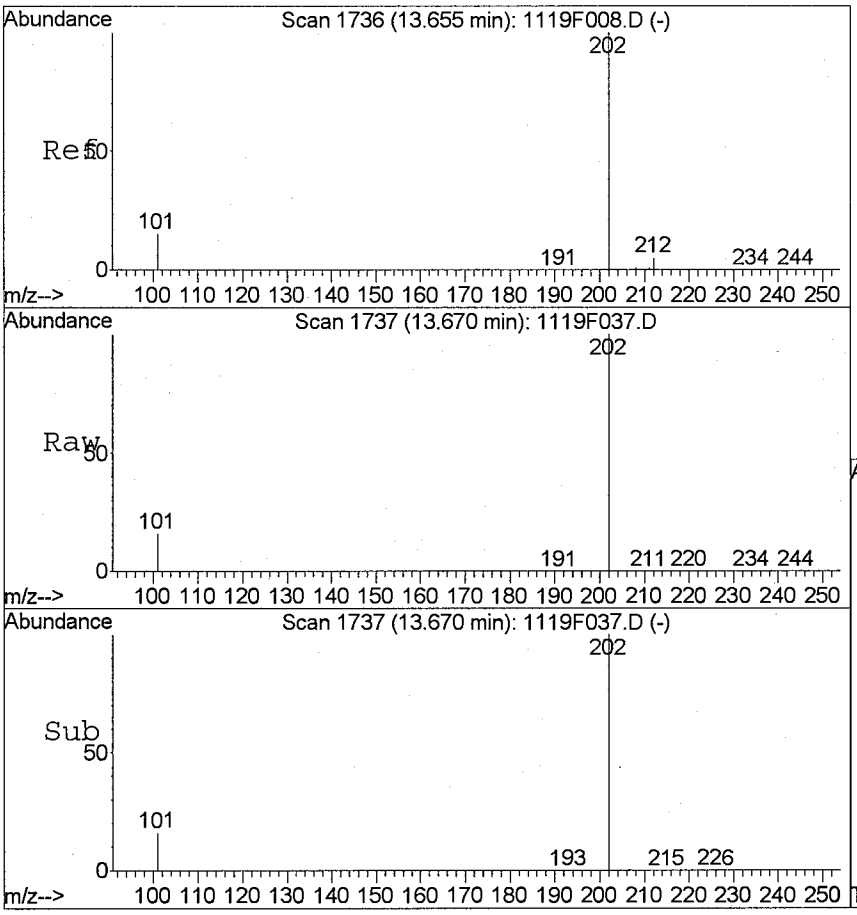


#35
C4-Phenanthrenes/Anthracenes
Concen: 1324.01 ng/ml m
RT: 15.75 min Scan# 2031
Delta R.T. -0.08 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:234 Resp: 293094

Ion	Ratio	Lower	Upper
234	100		
219	52.5	17.7	77.7

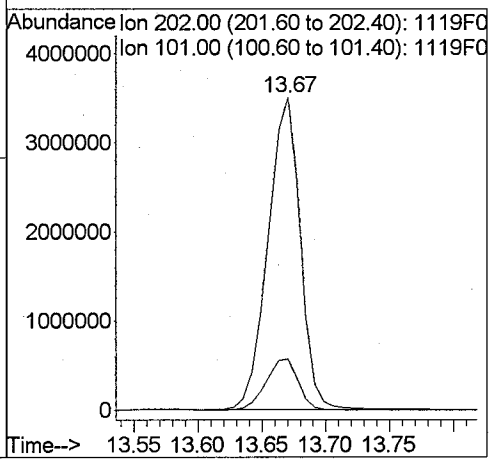


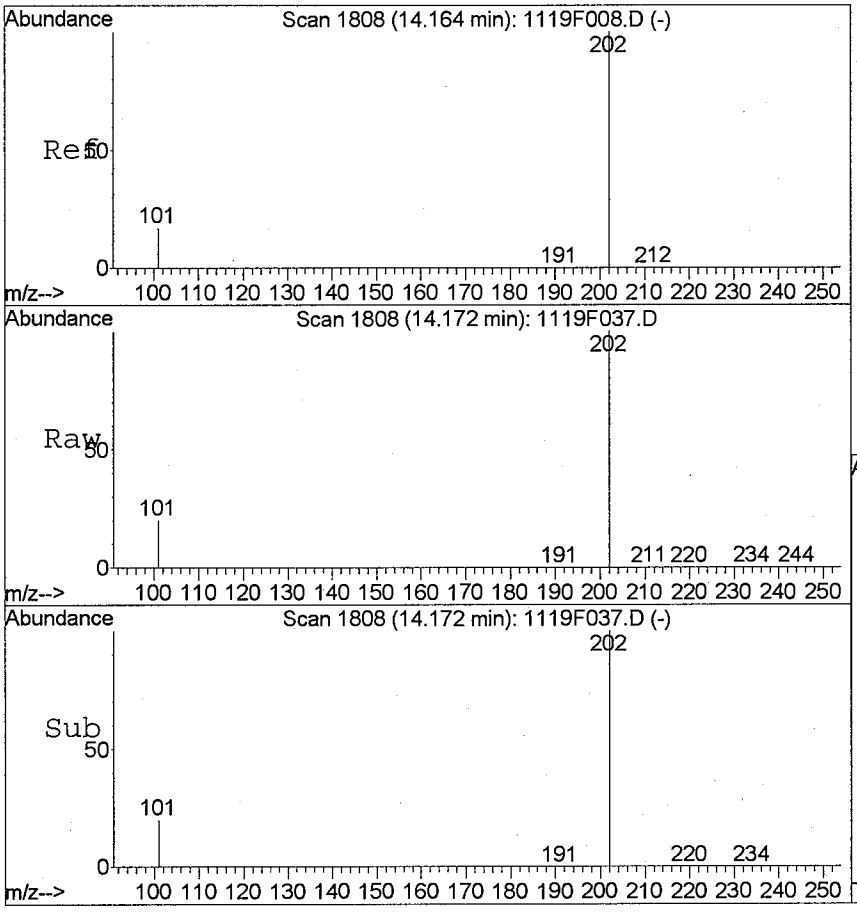


#36
Fluoranthene
Concen: 28000.77 ng/ml
RT: 13.67 min Scan# 1737
Delta R.T. 0.02 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:202 Resp: 6170069

Ion	Ratio	Lower	Upper
202	100		
101	16.4	0.0	45.5

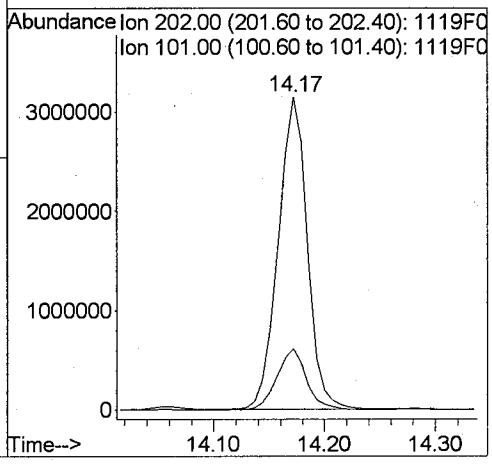


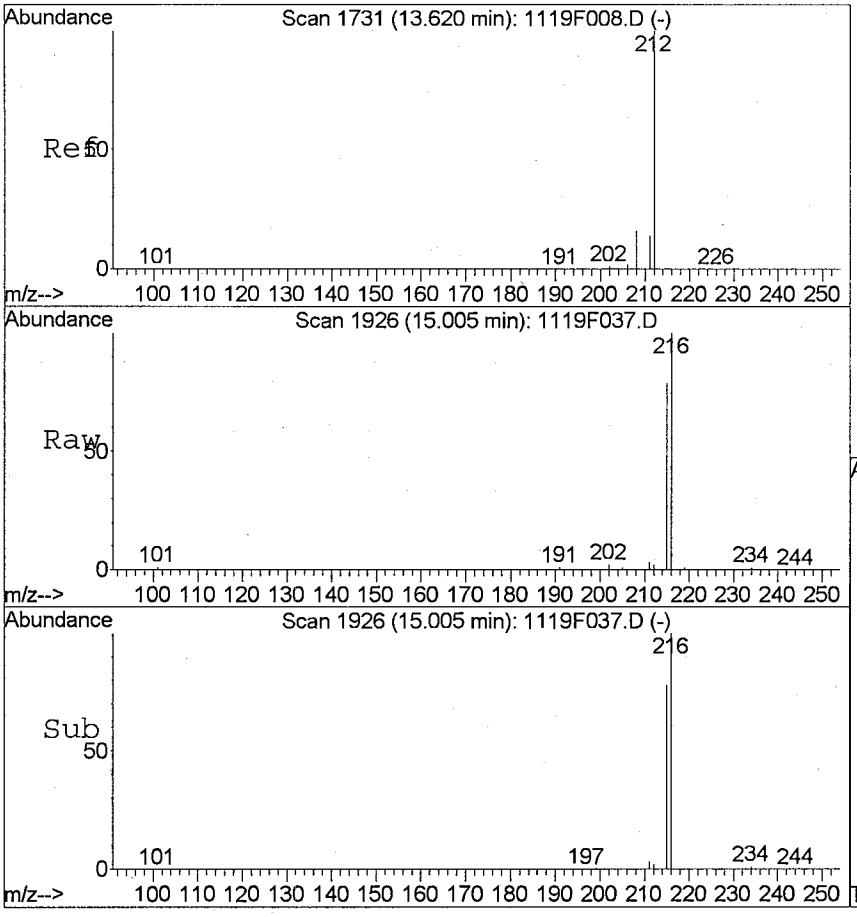


#39
Pyrene
Concen: 22738.67 ng/ml
RT: 14.17 min Scan# 1808
Delta R.T. 0.01 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:202 Resp: 5765601

Ion	Ratio	Lower	Upper
202	100		
101	19.7	0.0	47.4

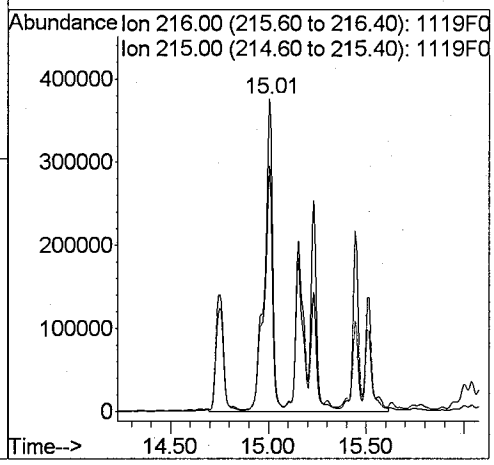


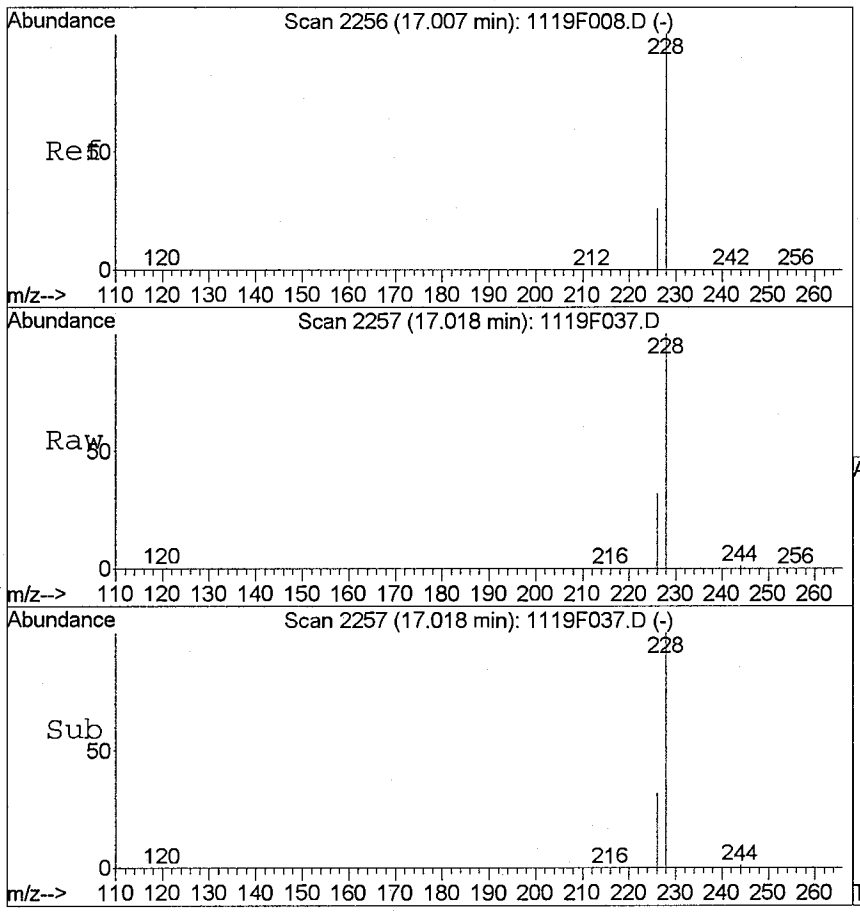


#40
C1-Fluoranthenes/Pyrenes
Concen: 12865.13 ng/ml m
RT: 15.01 min Scan# 1926
Delta R.T. -0.54 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:216 Resp: 3262074

Ion	Ratio	Lower	Upper
216	100		
215	78.7	54.8	114.8

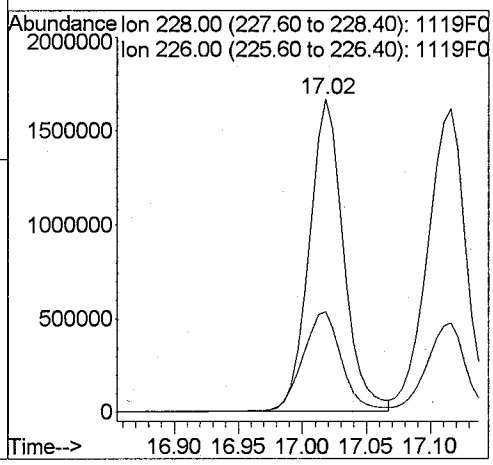


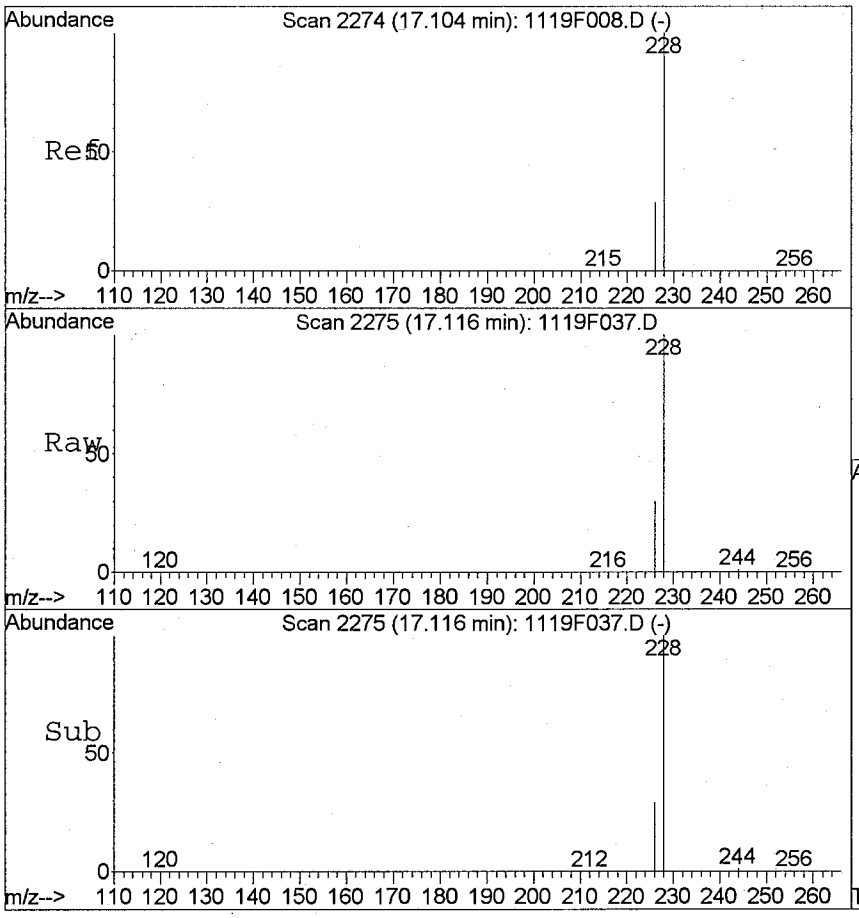


#42
Benz(a)anthracene
Concen: 16177.80 ng/ml
RT: 17.02 min Scan# 2257
Delta R.T. 0.01 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:228 Resp: 3123063

Ion	Ratio	Lower	Upper
228	100		
226	32.1	0.0	55.8

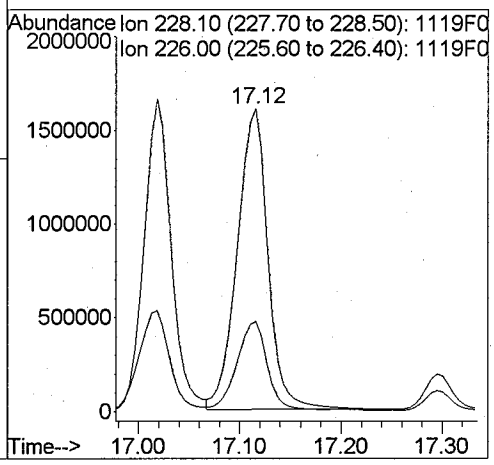


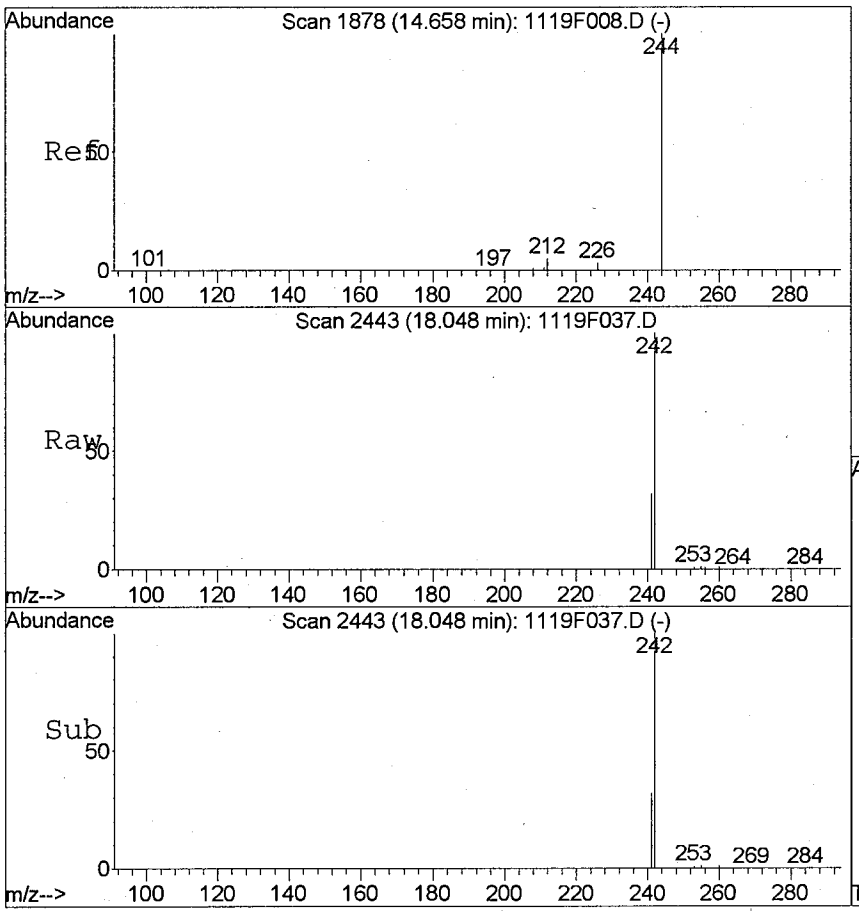


#43
Chrysene
Concen: 16400.27 ng/ml
RT: 17.12 min Scan# 2275
Delta R.T. 0.01 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:228 Resp: 3385539

Ion	Ratio	Lower	Upper
228	100		
226	29.4	0.0	58.5

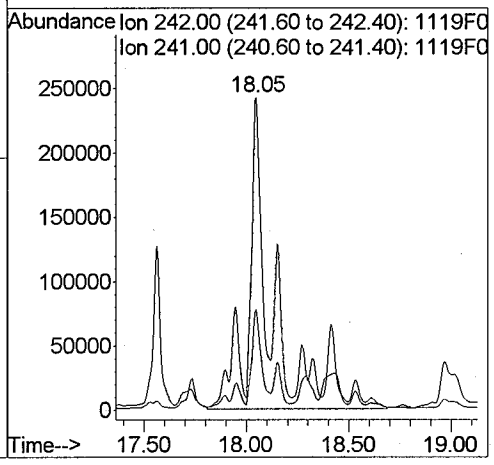


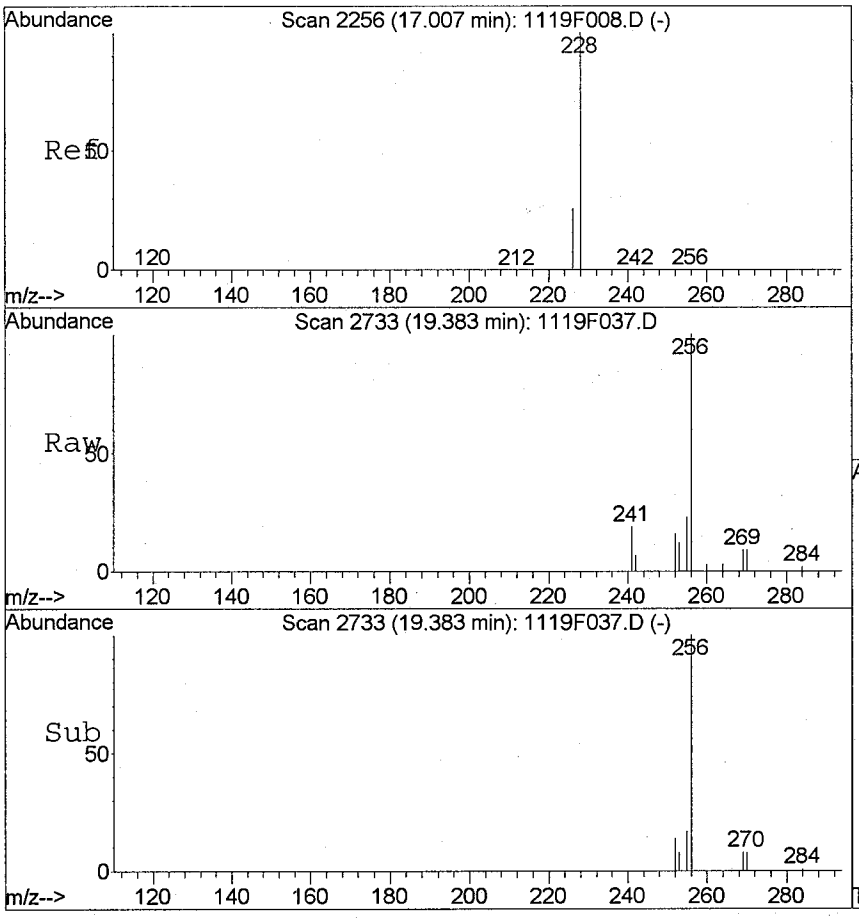


#44
C1-Chrysenes
Concen: 9352.12 ng/ml m
RT: 18.05 min Scan# 2443
Delta R.T. -0.10 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:242 Resp: 1930576

Ion	Ratio	Lower	Upper
242	100		
241	32.1	0.1	60.1

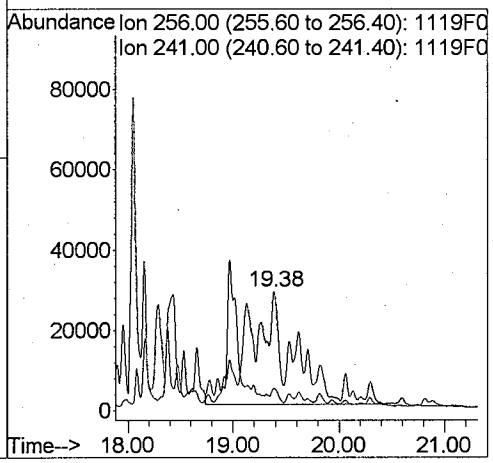


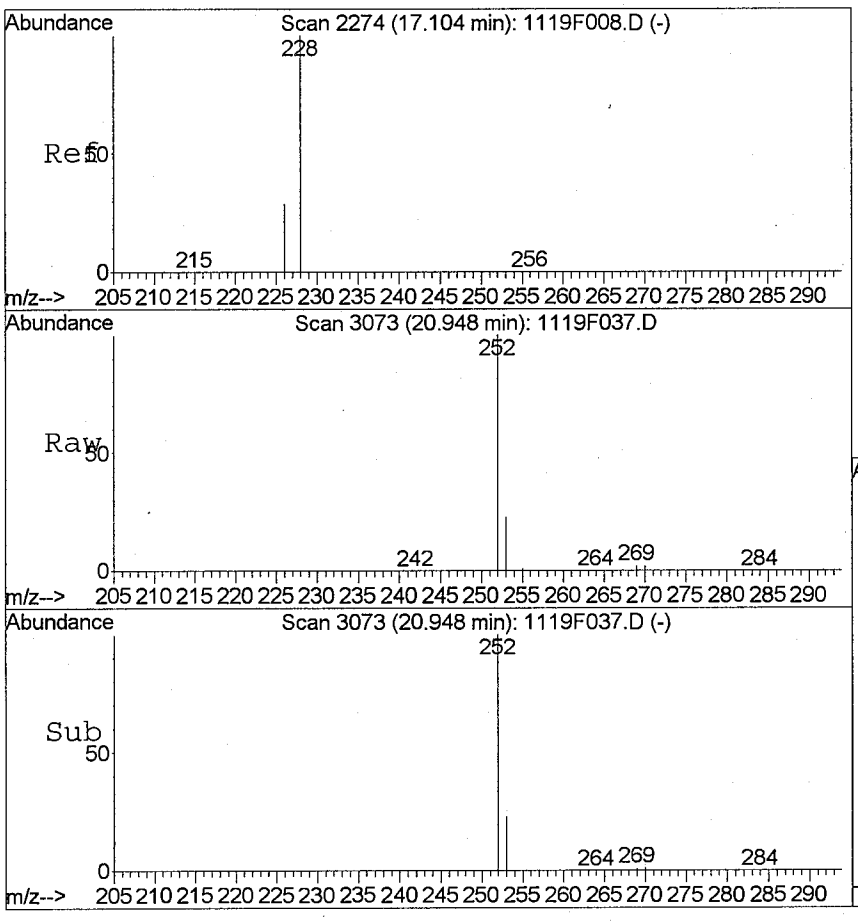


#45
C2-Chrysenes
Concen: 4145.79 ng/ml m
RT: 19.38 min Scan# 2733
Delta R.T. -0.14 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:256 Resp: 855824

Ion	Ratio	Lower	Upper
256	100		
241	18.7	7.8	67.8

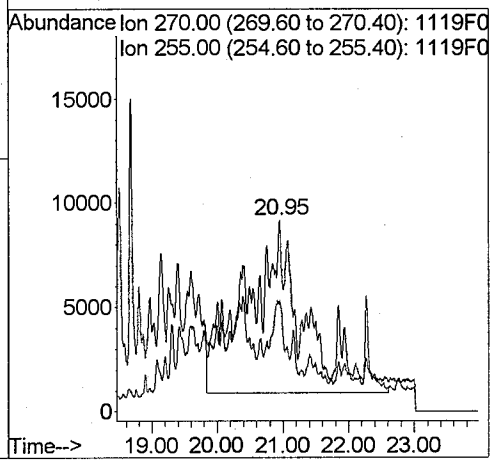


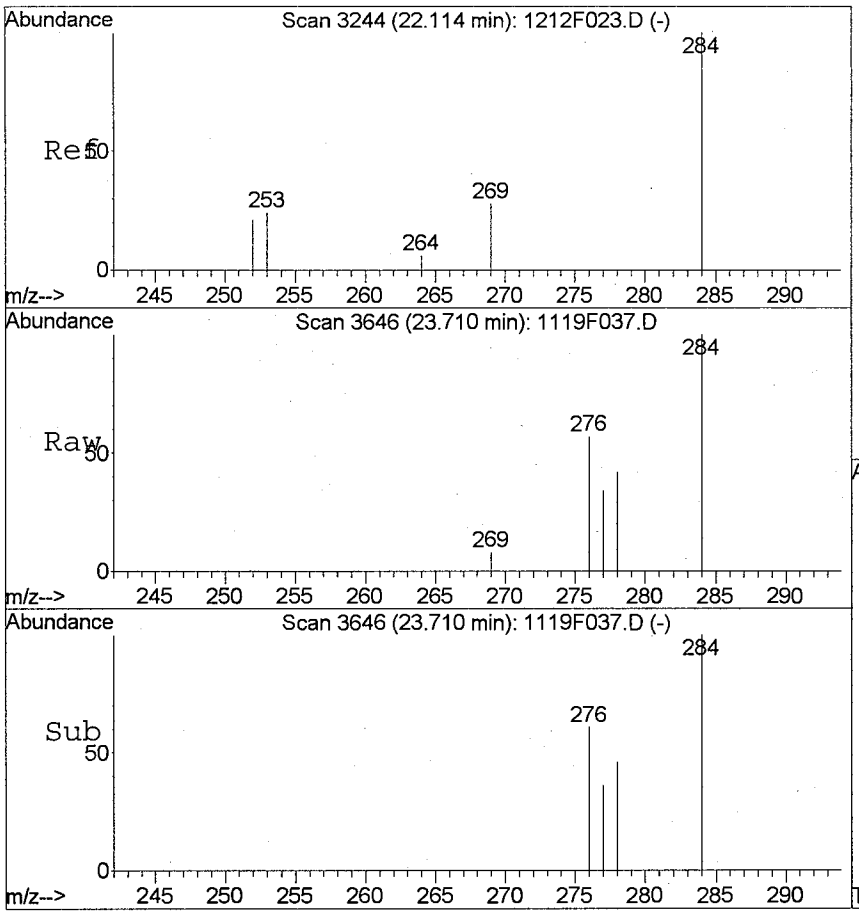


#46
C3-Chrysenes
Concen: 2464.02 ng/ml m
RT: 20.95 min Scan# 3073
Delta R.T. -0.27 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:270 Resp: 508653

Ion	Ratio	Lower	Upper
270	100		
255	56.3	0.0	56.7

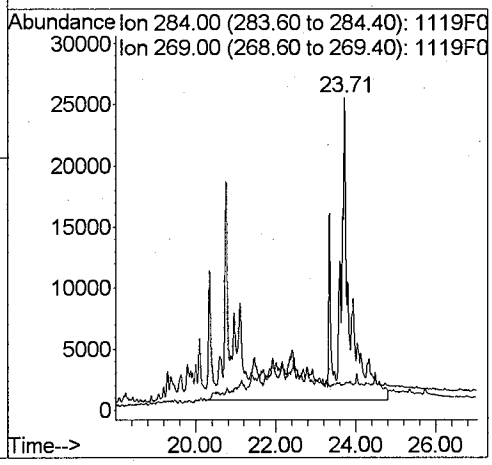


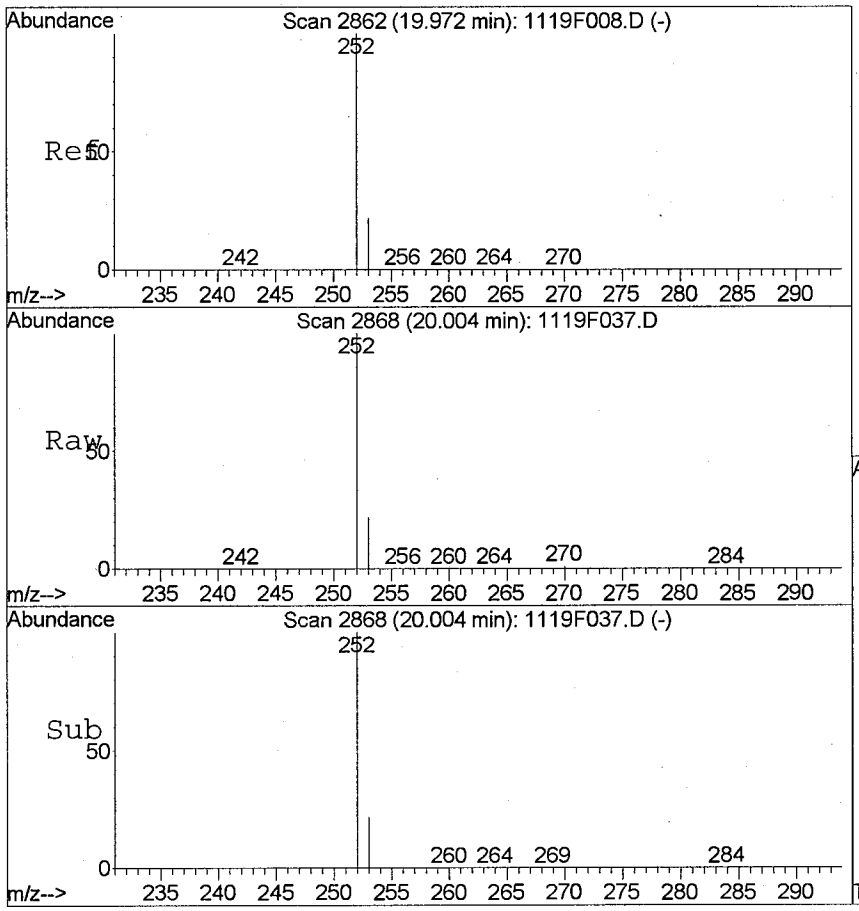


#47
C4-Chrysenes
Concen: 3345.94 ng/ml m
RT: 23.71 min Scan# 3646
Delta R.T. 1.18 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:284 Resp: 690709

Ion	Ratio	Lower	Upper
284	100		
269	8.2	16.2	76.2#

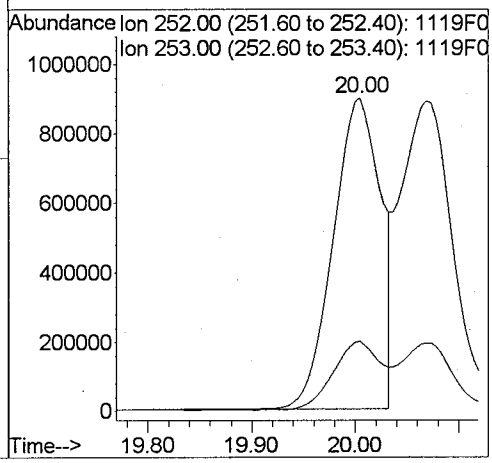


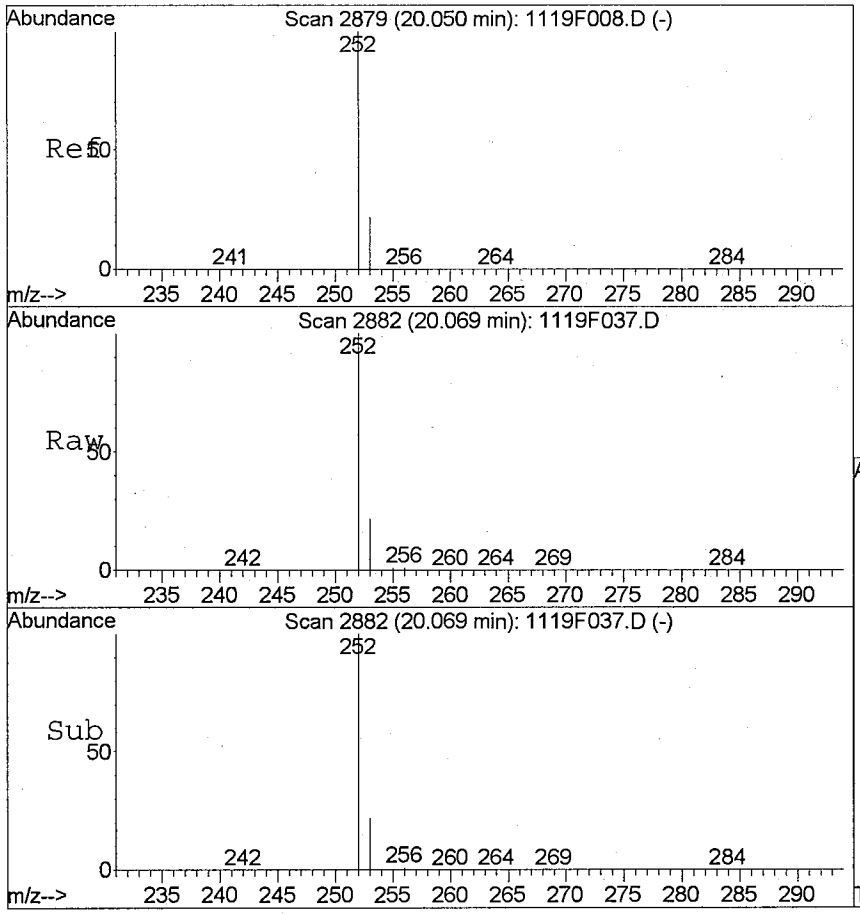


#49
Benzo(b)fluoranthene
Concen: 14451.06 ng/ml
RT: 20.00 min Scan# 2868
Delta R.T. 0.03 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:252 Resp: 2861899

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.8

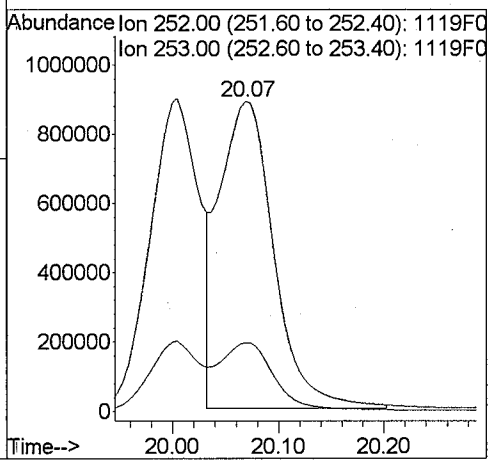


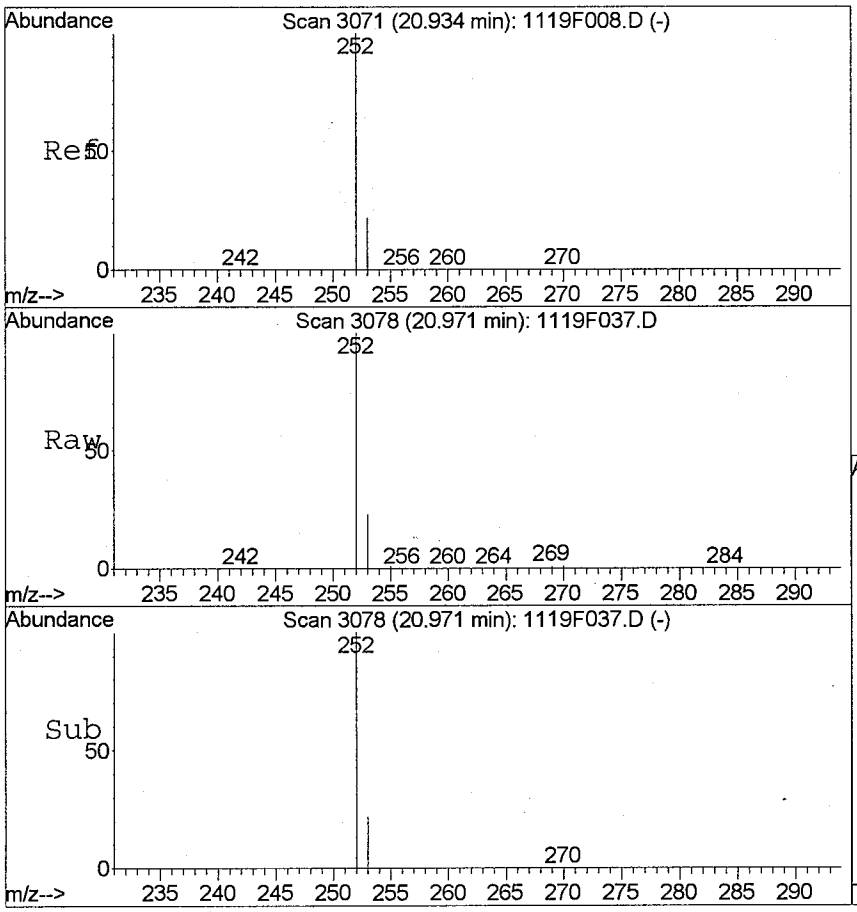


#50
Benzo(k)fluoranthene
Concen: 12580.46 ng/ml m
RT: 20.07 min Scan# 2882
Delta R.T. 0.02 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:252 Resp: 3161266

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.2

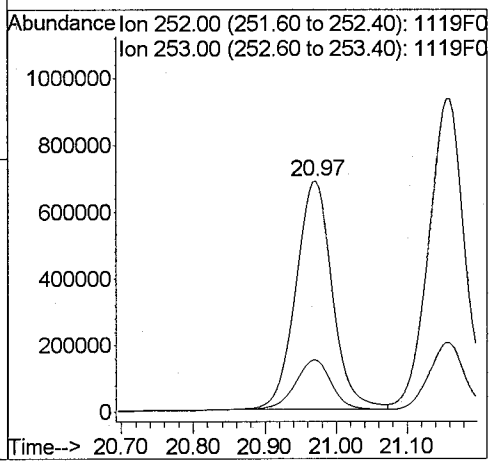


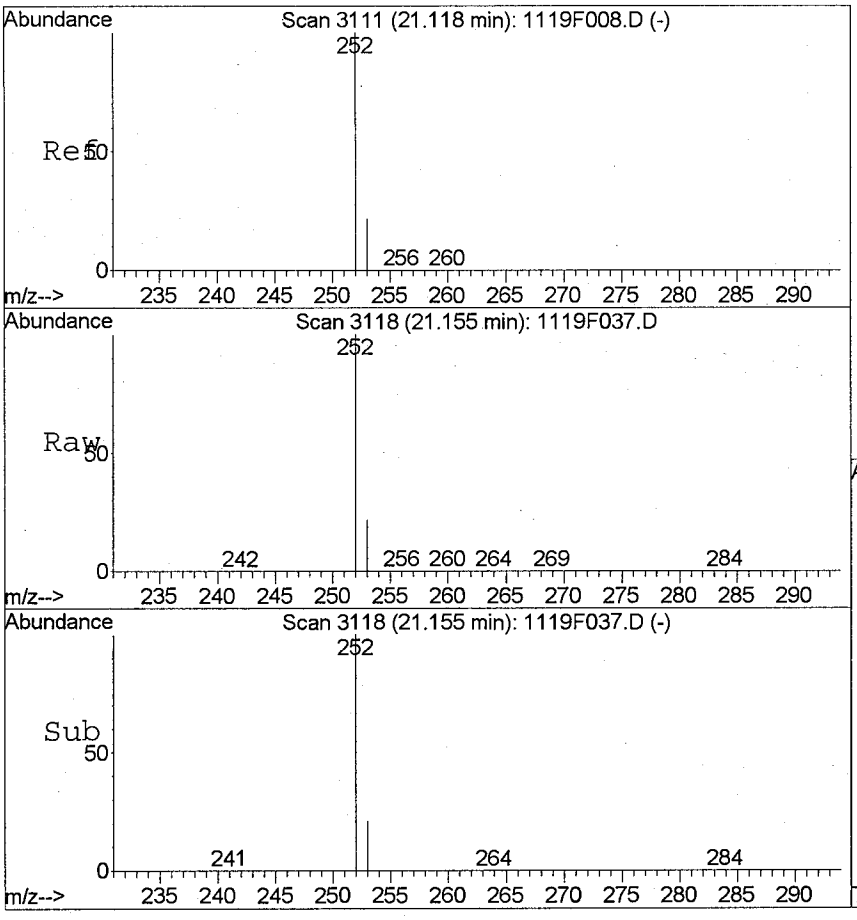


#51
Benzo(e)pyrene
Concen: 11056.03 ng/ml
RT: 20.97 min Scan# 3078
Delta R.T. 0.04 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:252 Resp: 2458382

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.8

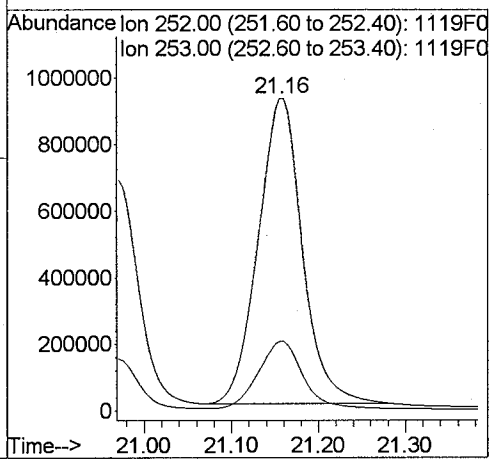


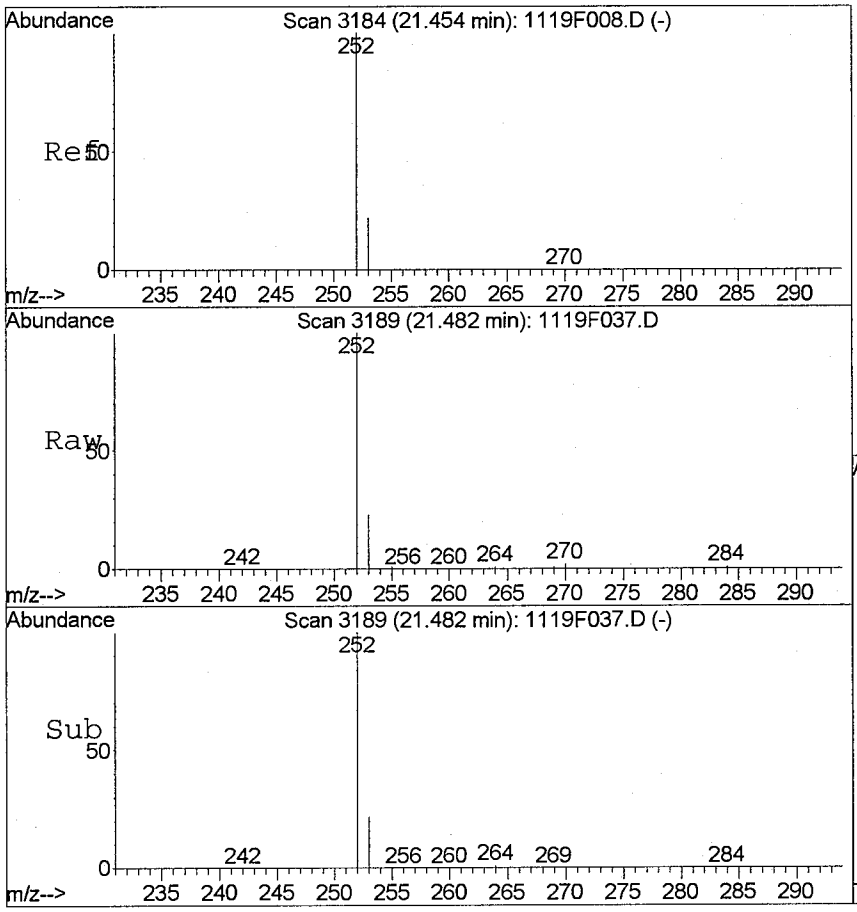


#52
Benzo(a)pyrene
Concen: 19126.48 ng/ml
RT: 21.16 min Scan# 3118
Delta R.T. 0.04 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:252 Resp: 3221887

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.9

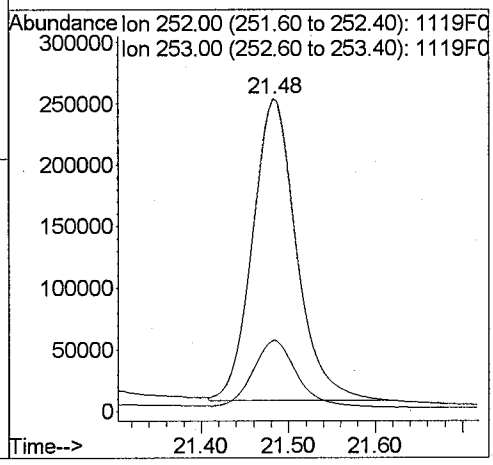


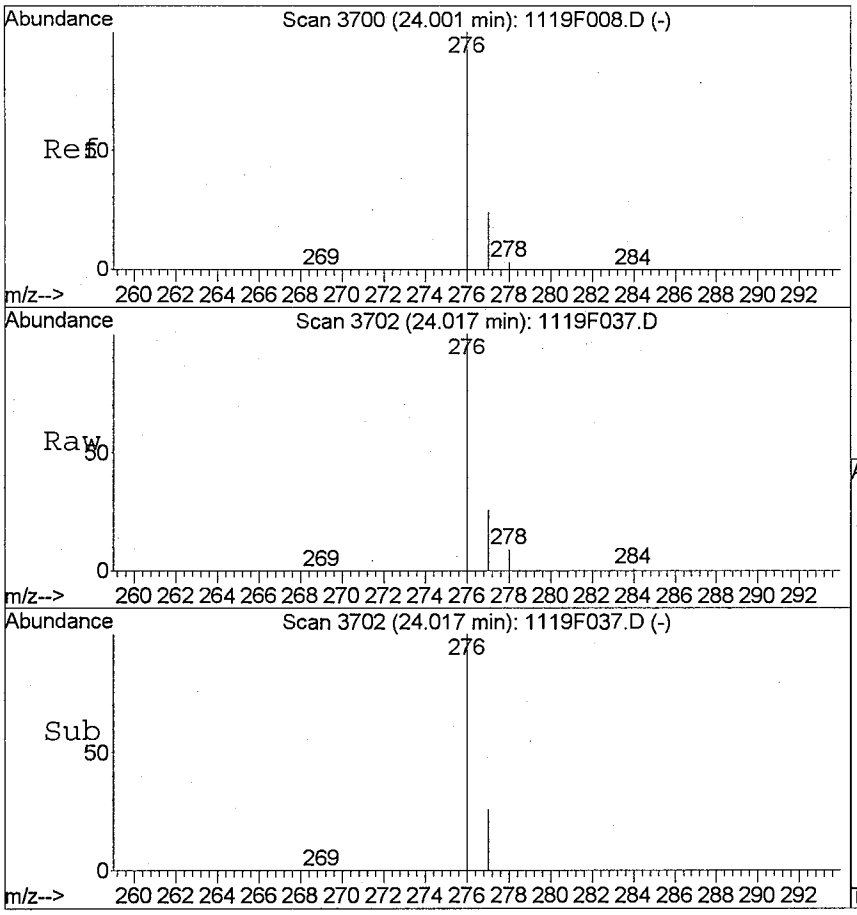


#53
Perylene
Concen: 4519.50 ng/ml
RT: 21.48 min Scan# 3189
Delta R.T. 0.03 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:252 Resp: 854605

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.6

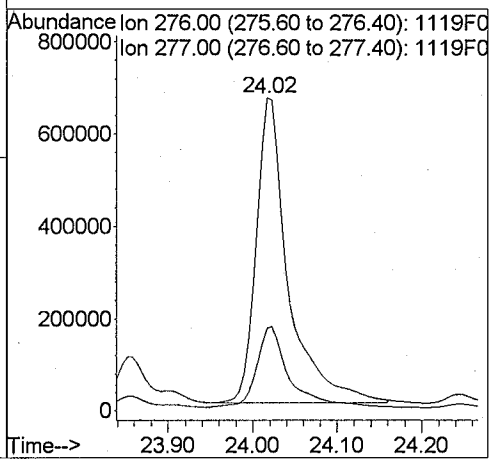


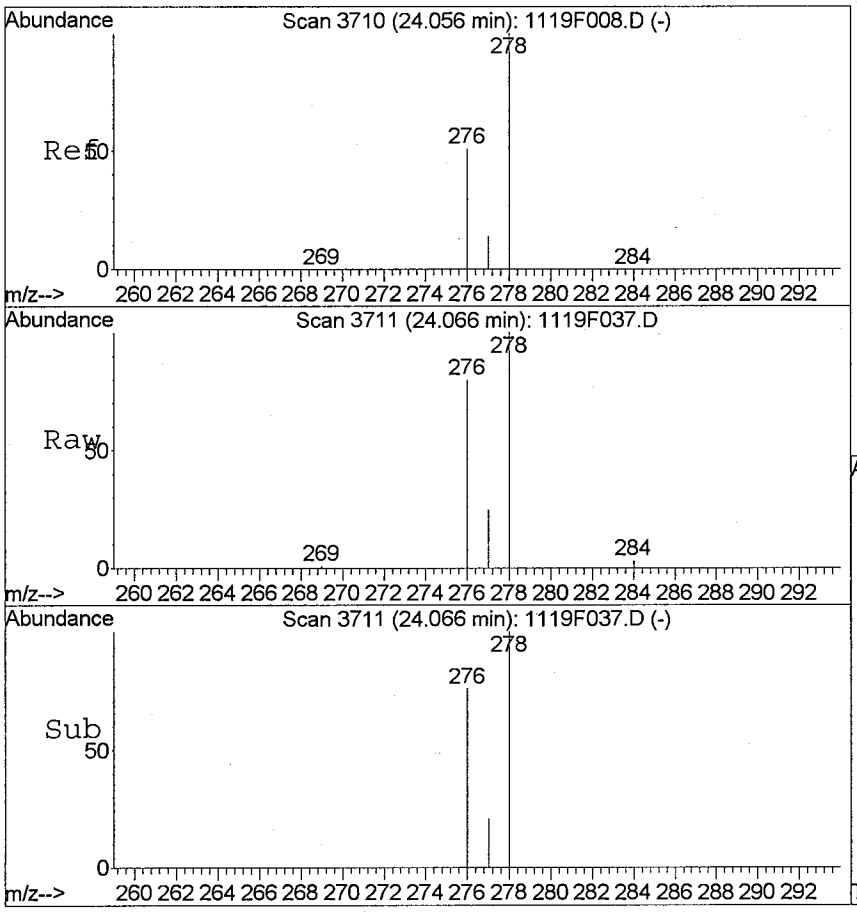


#54
Indeno(1,2,3-cd)pyrene
Concen: 17059.39 ng/ml
RT: 24.02 min Scan# 3702
Delta R.T. 0.02 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:276 Resp: 1746927

Ion	Ratio	Lower	Upper
276	100		
277	25.9	0.0	53.6

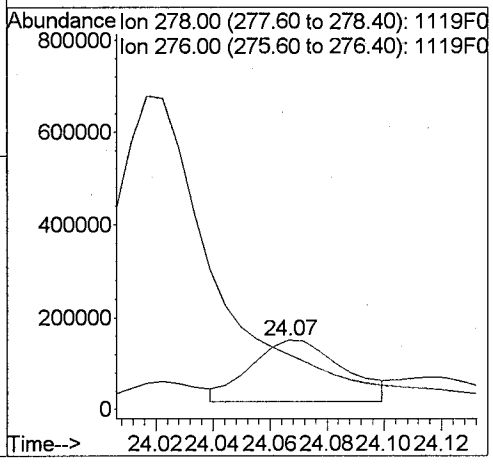


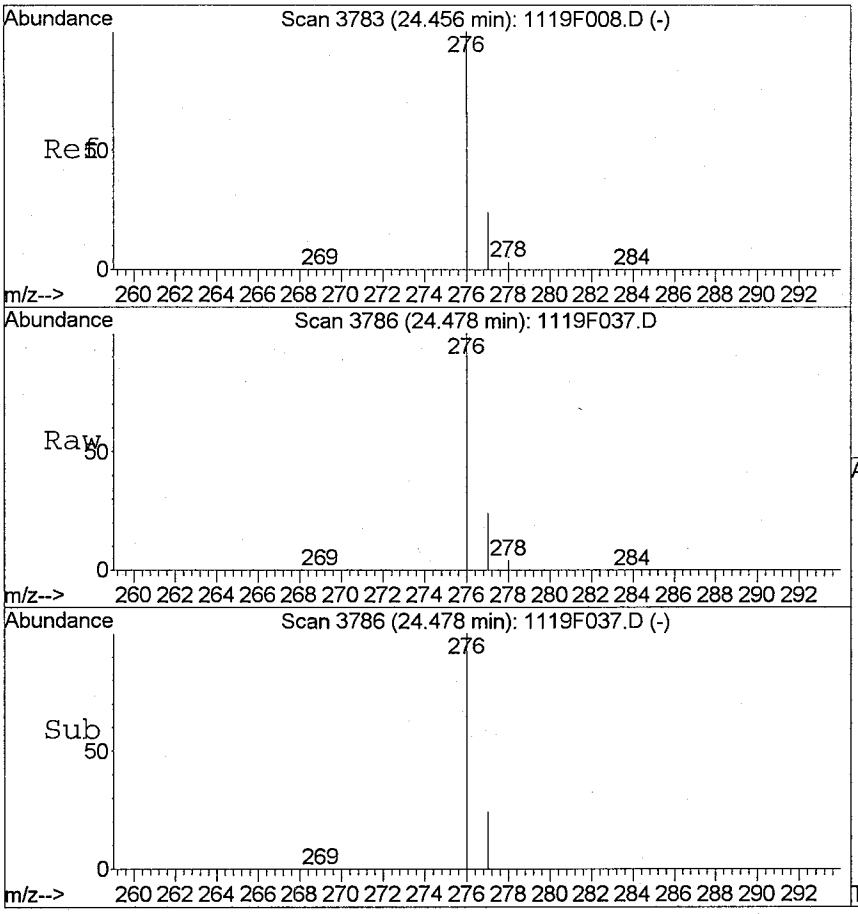


#55
Dibenz(a,h)anthracene
Concen: 2079.73 ng/ml m
RT: 24.07 min Scan# 3711
Delta R.T. 0.01 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:278 Resp: 306065

Ion	Ratio	Lower	Upper
278	100		
276	80.4	21.1	81.1

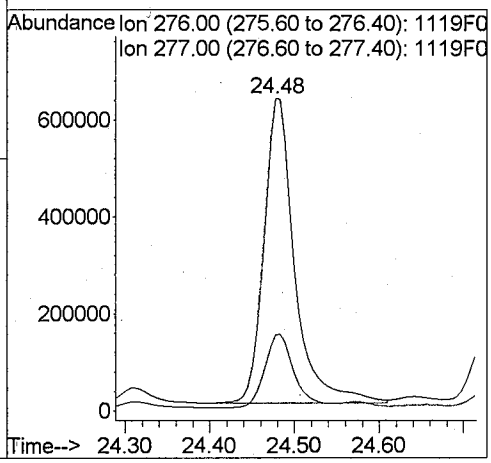




#56
Benzo(g,h,i)perylene
Concen: 9284.91 ng/ml
RT: 24.48 min Scan# 3786
Delta R.T. 0.02 min
Lab File: 1119F037.D
Acq: 19 Nov 2003 4:26 pm

Tgt Ion:276 Resp: 1576318

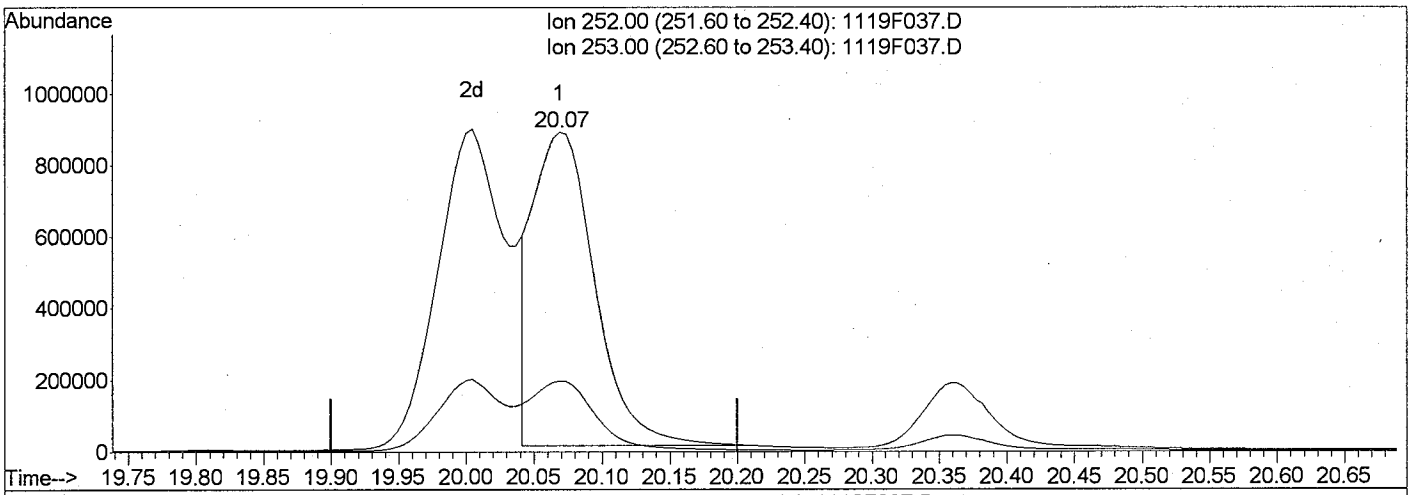
Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.6

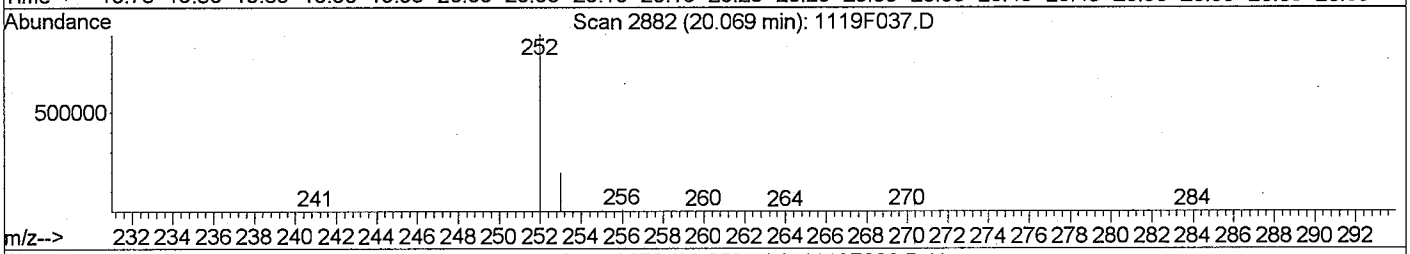


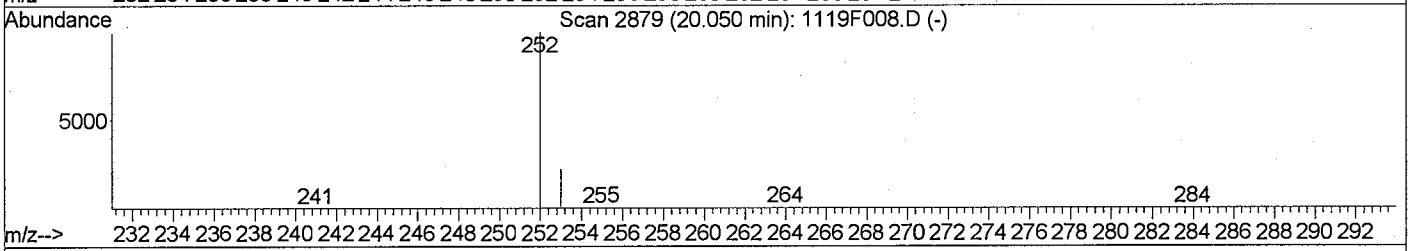
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(50) Benzo(k)fluoranthene (T)

20.07min 10999.52ng/ml

response 2764003

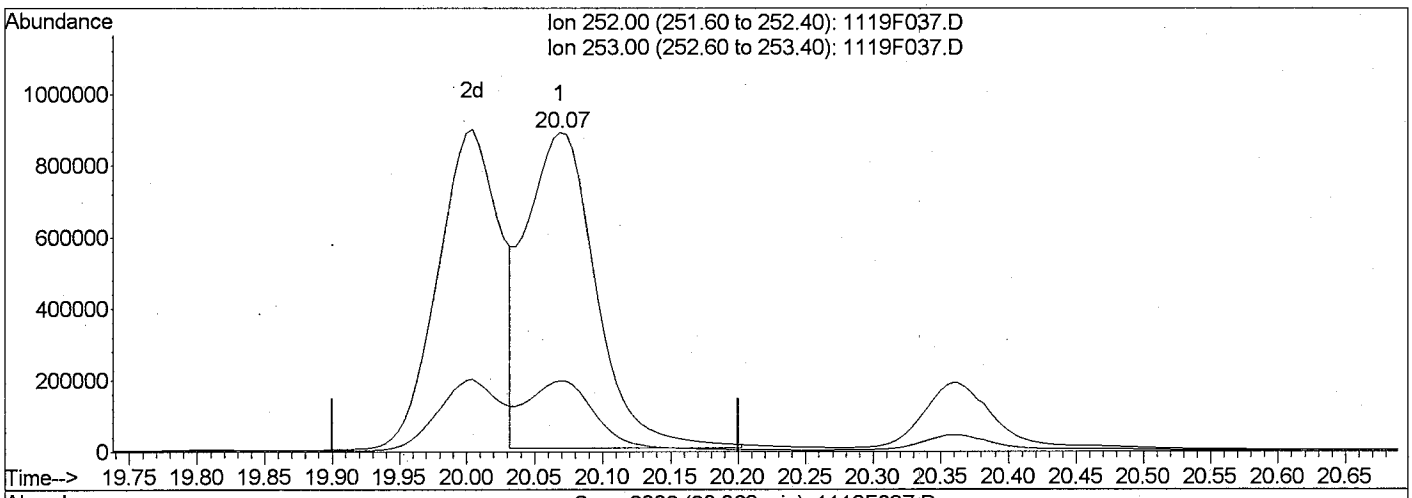
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.97
0.00	0.00	0.00
0.00	0.00	0.00

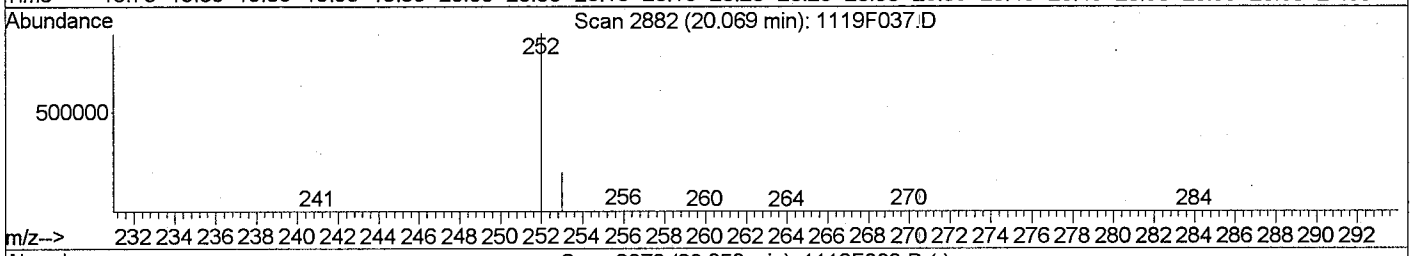
1119F037.D 1107ALK.M Thu Nov 20 14:17:04 2003

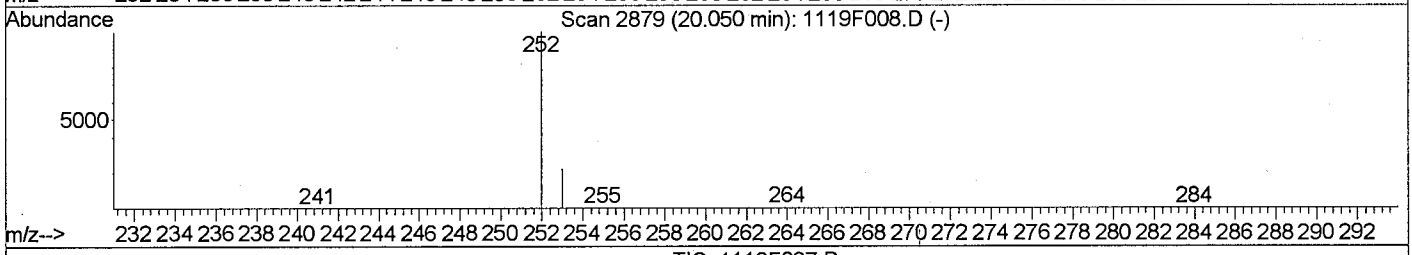
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(50) Benzo(k)fluoranthene (T)

20.07min 12580.46ng/ml m

response 3161266

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.12
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/24/13

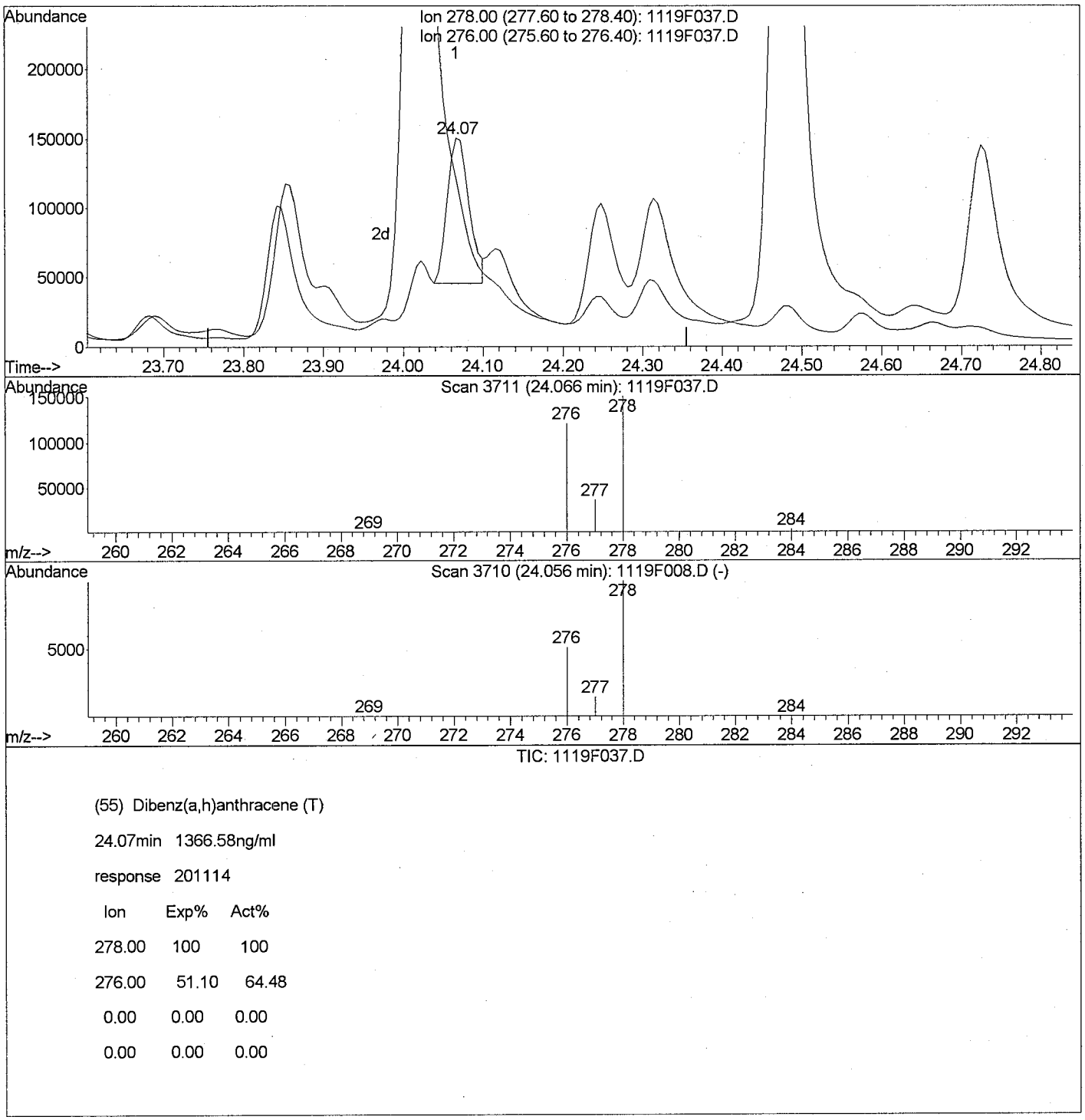
11/24/13

1119F037.D 1107ALK.M Thu Nov 20 14:17:10 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.07min 1366.58ng/ml

response 201114

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	64.48
0.00	0.00	0.00
0.00	0.00	0.00

1119F037.D 1107ALK.M Thu Nov 20 14:17:16 2003

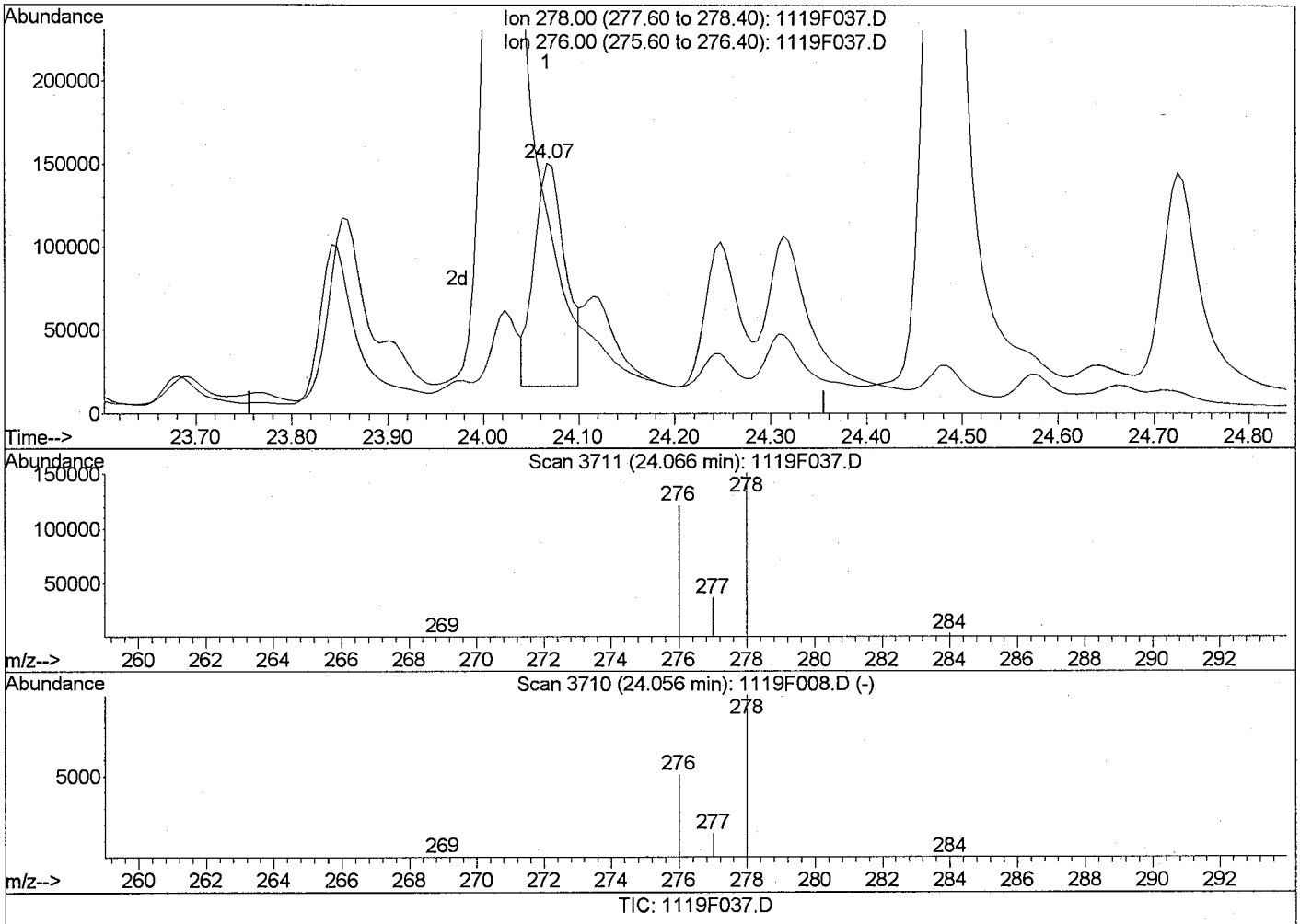
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D
Acq On : 19 Nov 2003 4:26 pm
Sample : K2308433-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:17 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F037.D

(55) Dibenz(a,h)anthracene (T)

24.07min 2079.73ng/ml m

response 306065

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	80.44
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/24/03

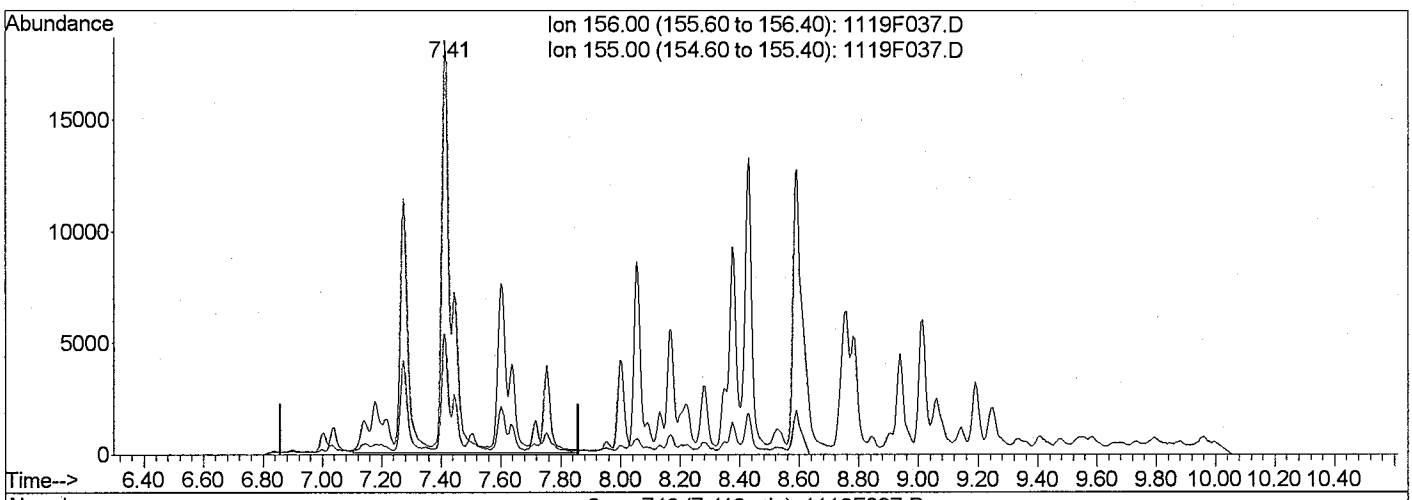
Q 11/24/03

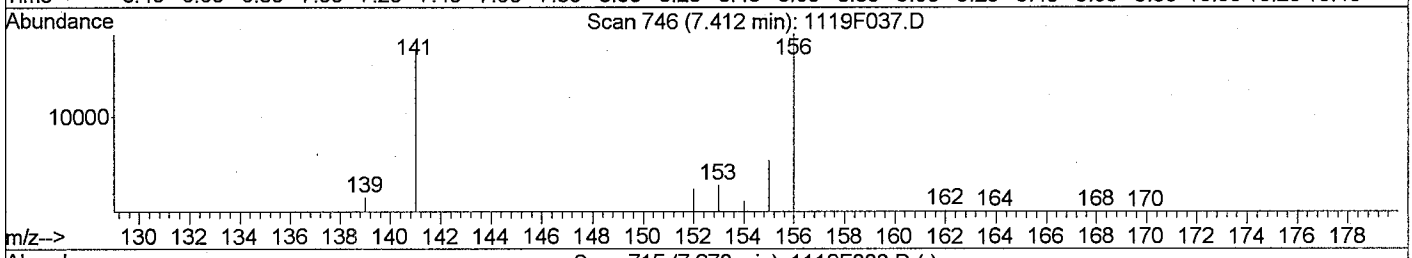
1119F037.D 1107ALK.M Thu Nov 20 14:17:22 2003

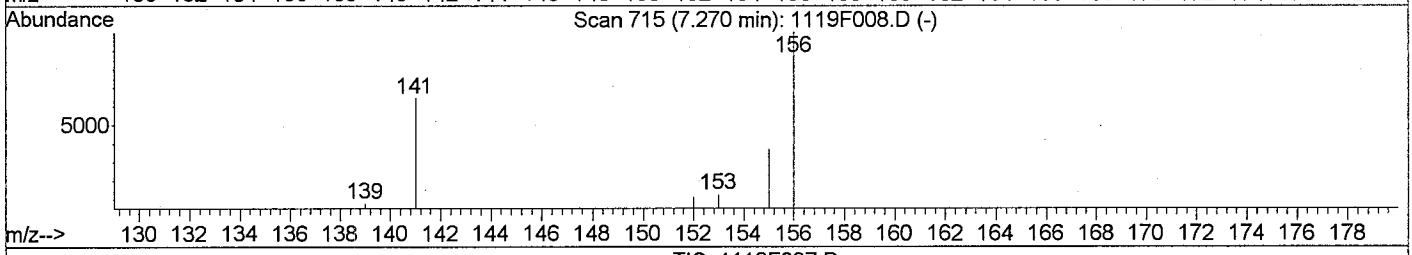
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:38 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(8) C2-Naphthalenes (L)

7.41min 387.22ng/ml m

response 98823

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	29.26
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

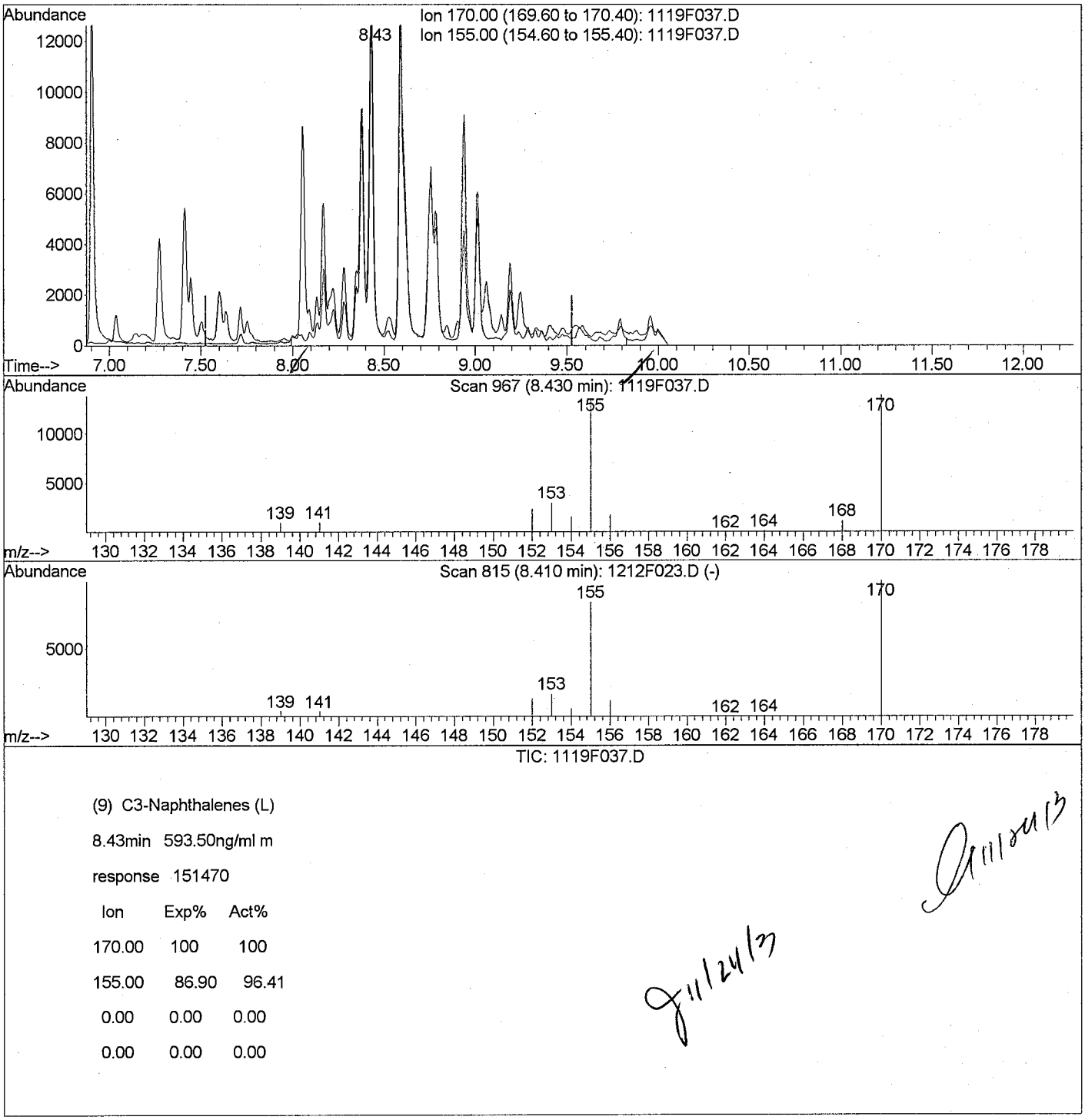
11/21/13

1119F037.D 1107ALK.M Thu Nov 20 14:38:31 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F037.D

(9) C3-Naphthalenes (L)

8.43min 593.50ng/ml m

response 151470

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	96.41
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

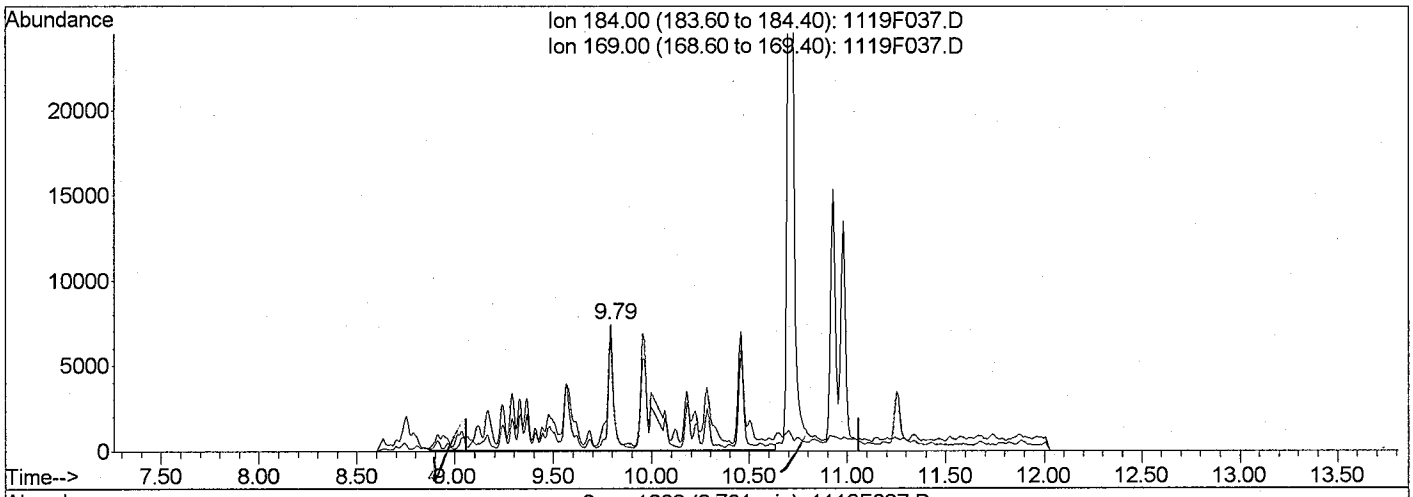
11/24/03

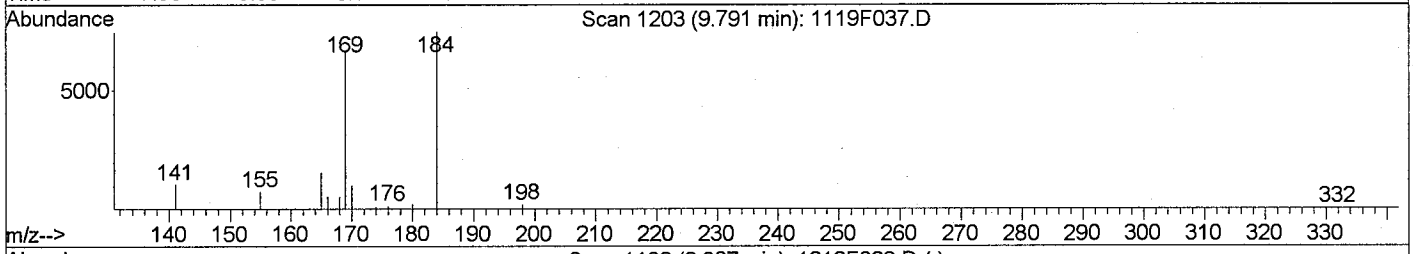
1119F037.D 1107ALK.M Thu Nov 20 14:38:50 2003

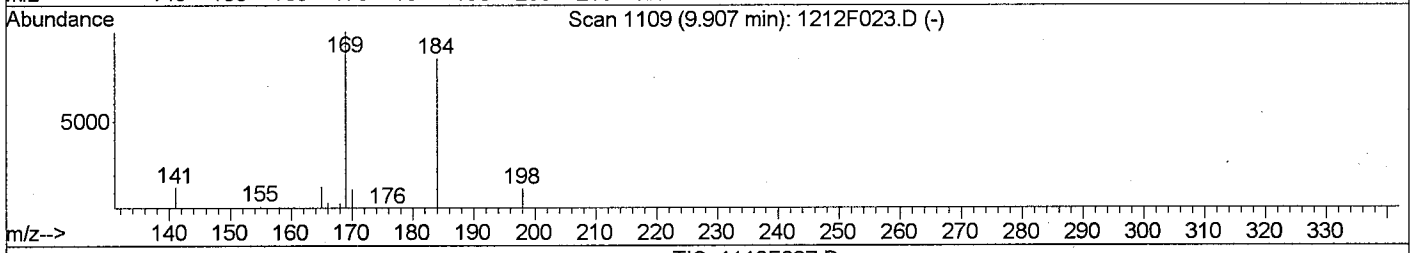
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(10) C4-Naphthalenes (L)

9.79min 382.34ng/ml m

response 97578

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	88.90#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

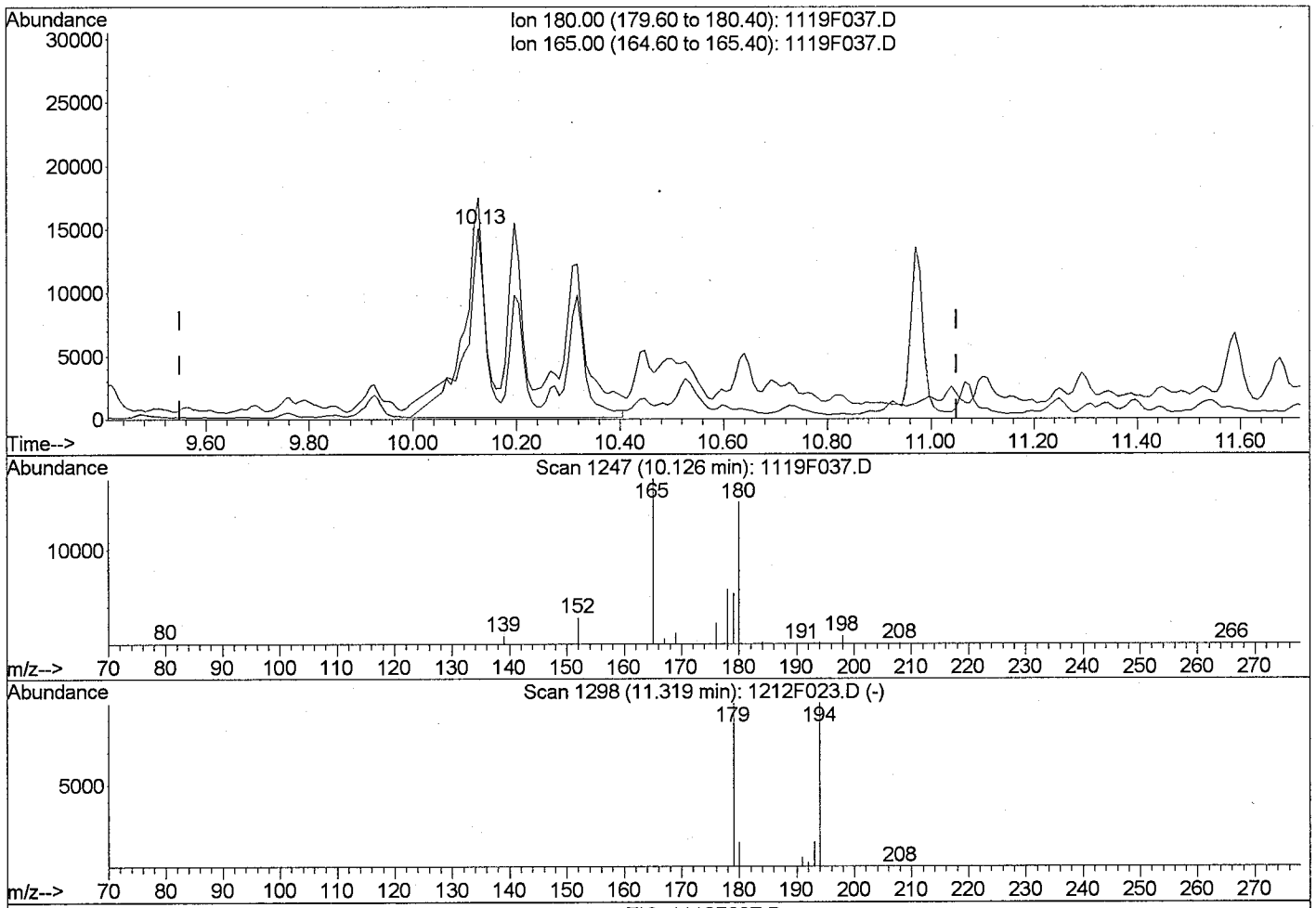
11/24/03

1119F037.D 1107ALK.M Thu Nov 20 14:39:27 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F037.D

(18) C1-Fluorenes (L)

10.13min 611.24ng/ml m

response 93955

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	116.01#
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

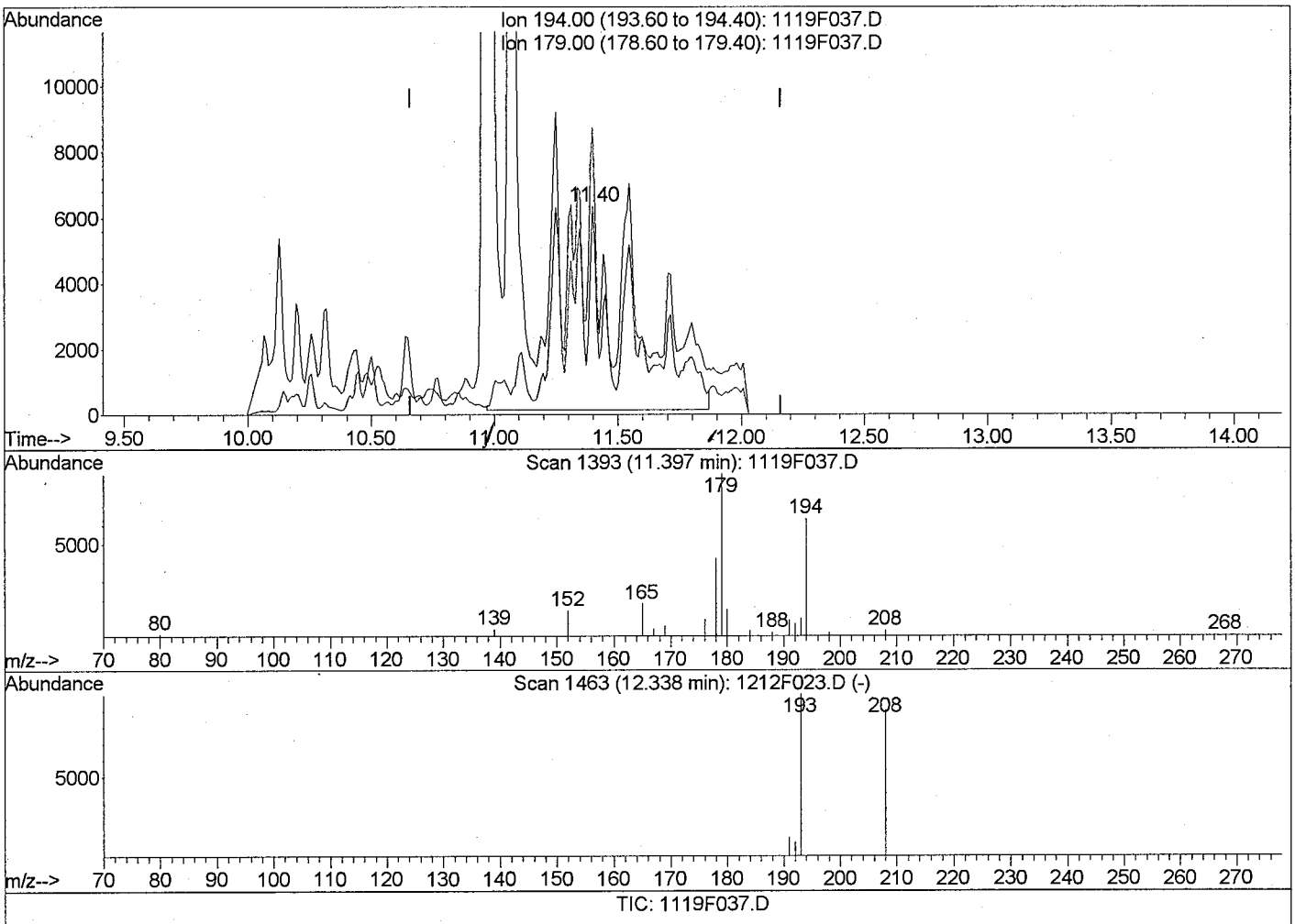
11/21/13

1119F037.D 1107ALK.M Thu Nov 20 14:39:35 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F037.D

(19) C2-Fluorenes (L)

11.40min 672.52ng/ml m

response 103375

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	137.31
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

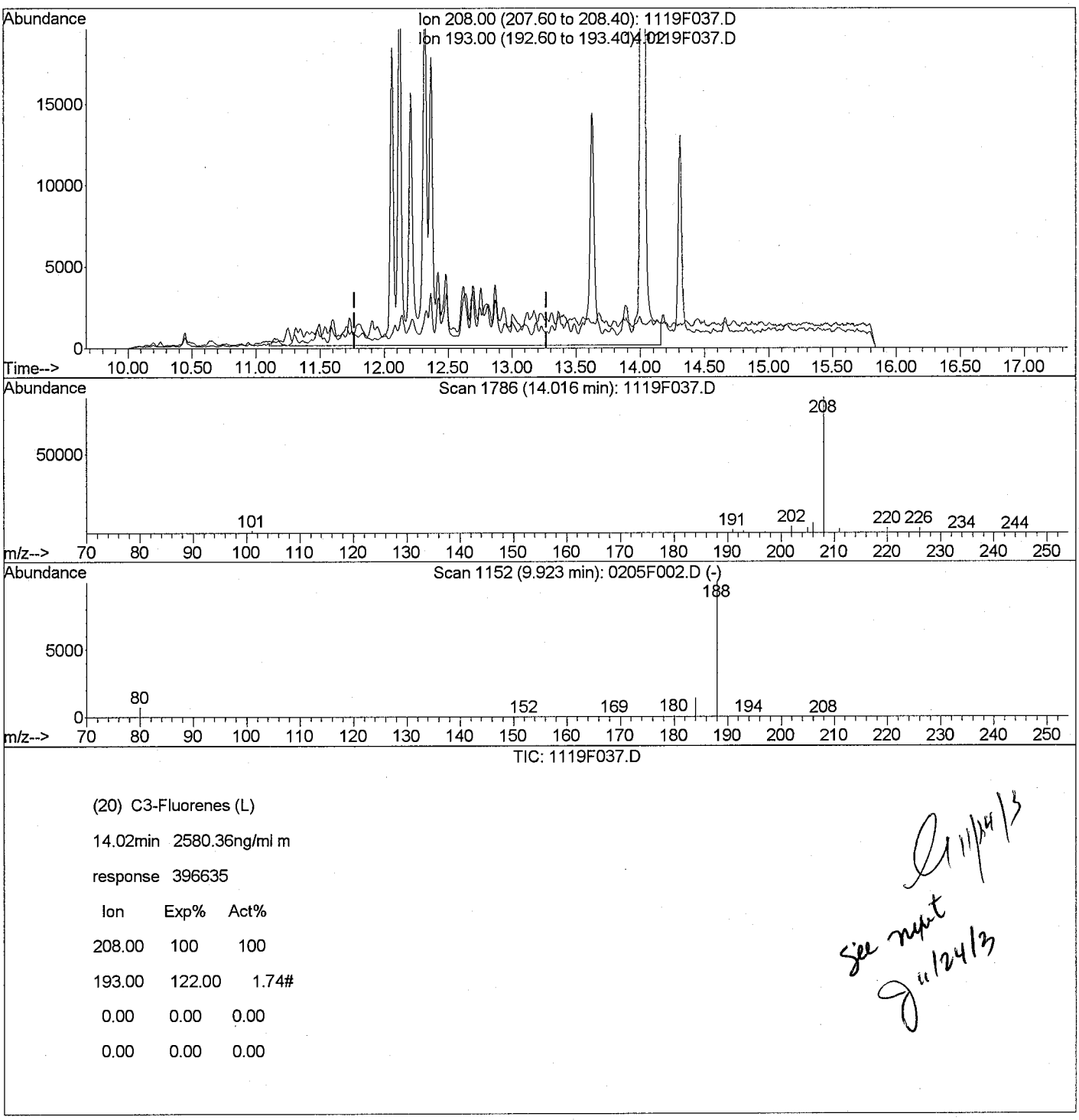
11/24/13

1119F037.D 1107ALK.M Thu Nov 20 14:39:54 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(20) C3-Fluorenes (L)

14.02min 2580.36ng/ml m

response 396635

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	1.74#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

see mgt

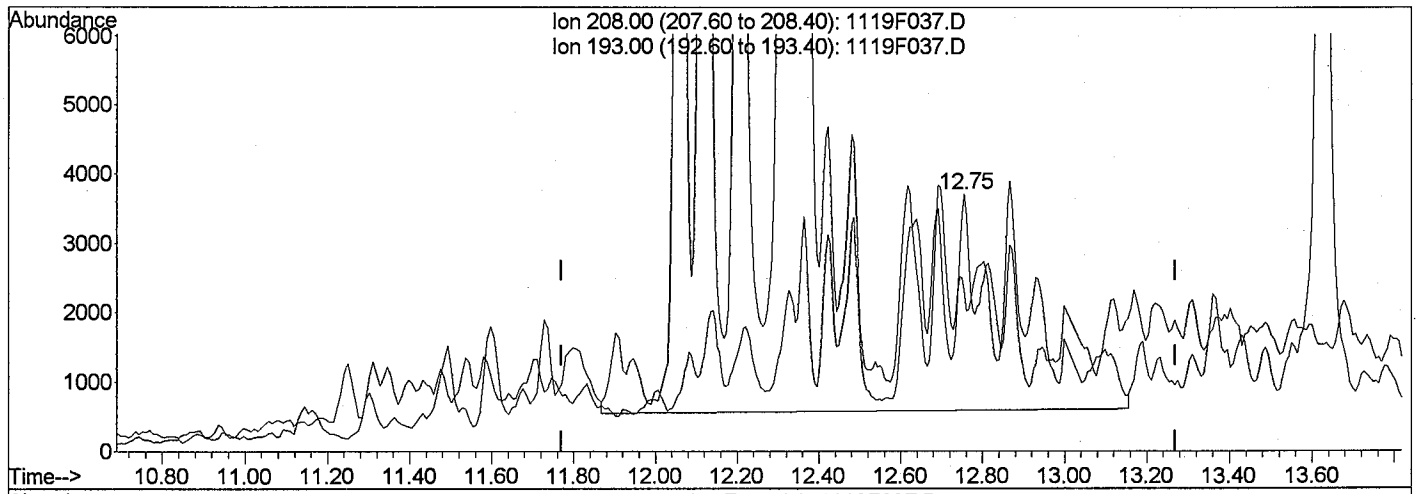
11/24/13

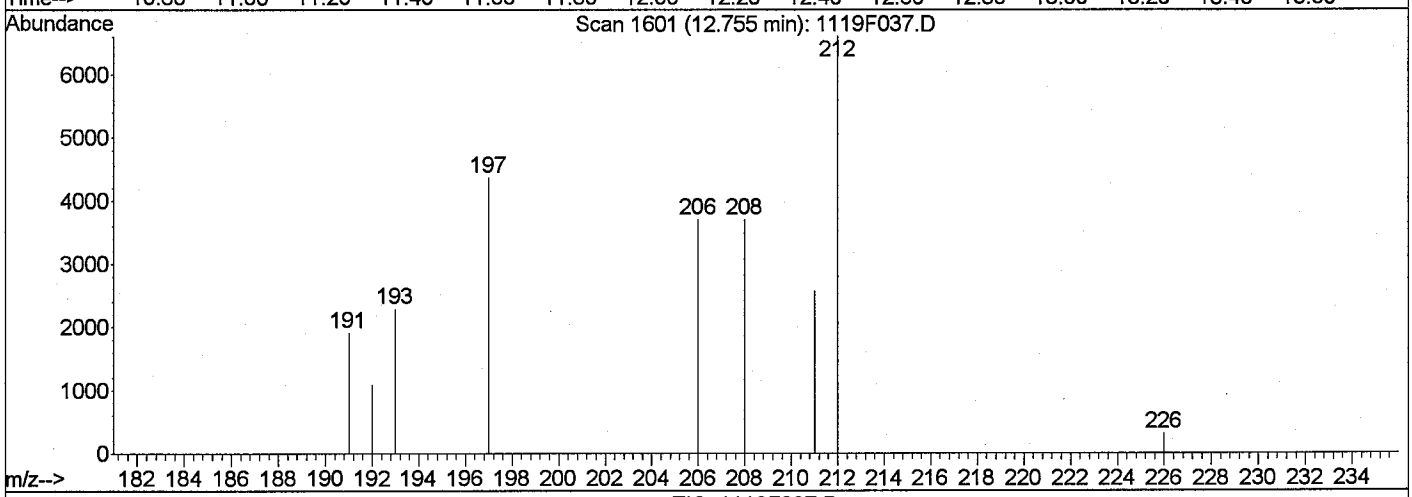
1119F037.D 1107ALK.M Thu Nov 20 14:40:22 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 16:26 Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 10:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration





TIC: 1119F037.D

(20) C3-Fluorenes (L)

12.75min 535.39ng/ml m

response 82297

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	62.03#
0.00	0.00	0.00
0.00	0.00	0.00

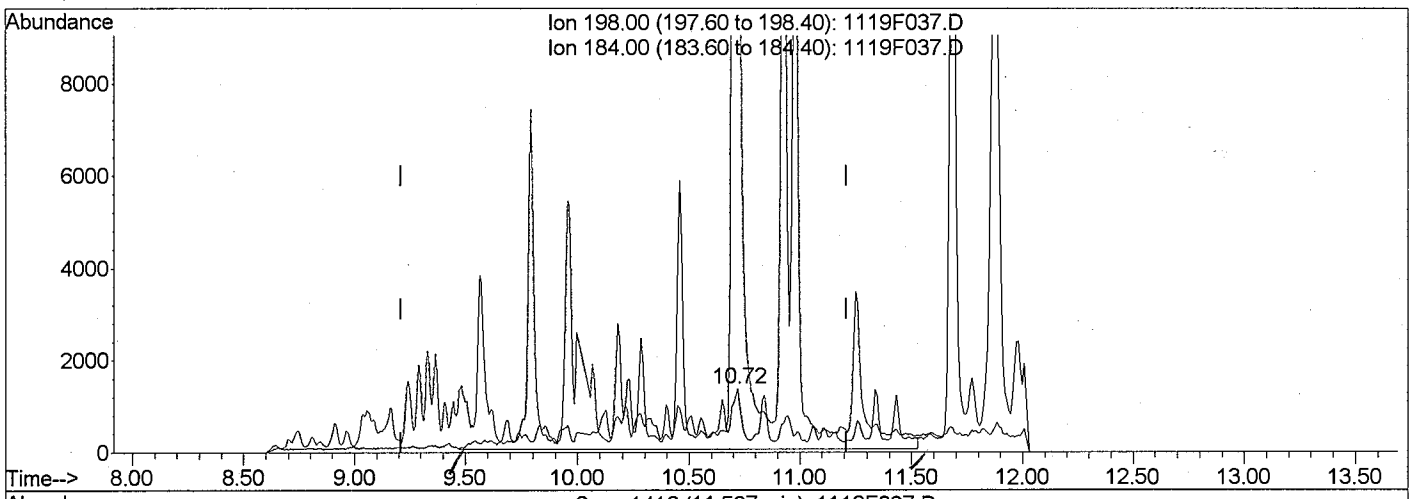
11/24/3. omanting

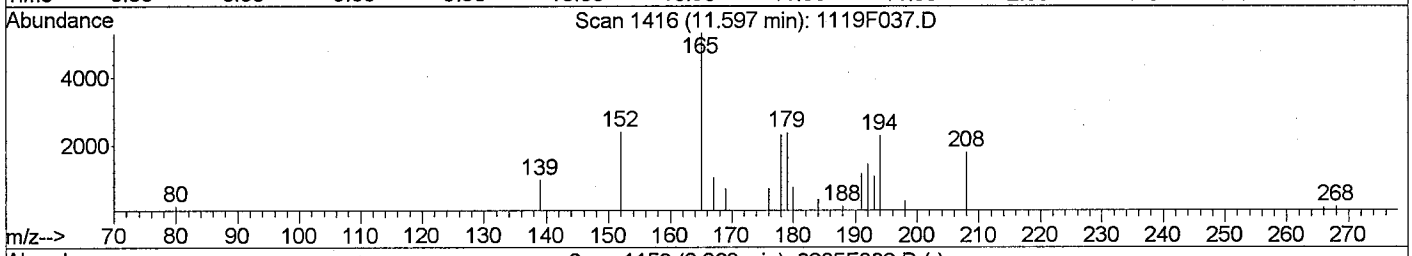
1119F037.D 1107ALK.M Mon Nov 24 10:23:23 2003

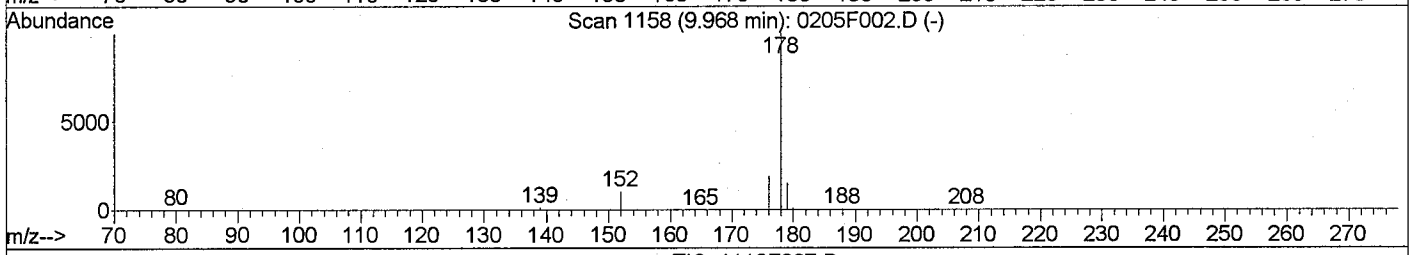
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(25) C1-Dibenzothiophenes (L)

10.72min 225.58ng/ml m

response 47539

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	2913.29#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

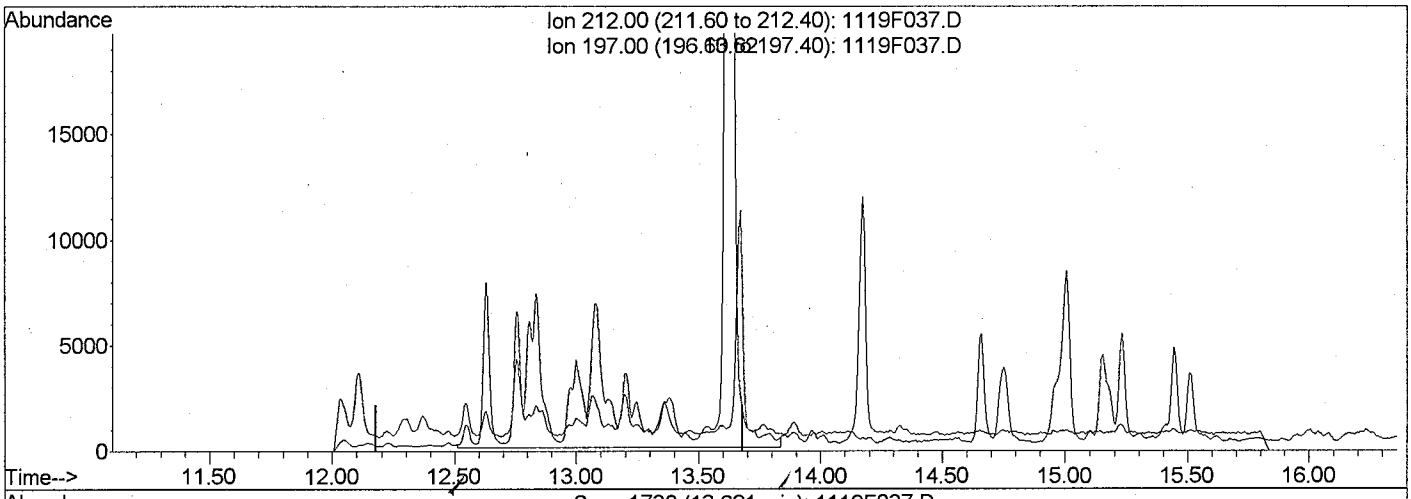
11/24/03

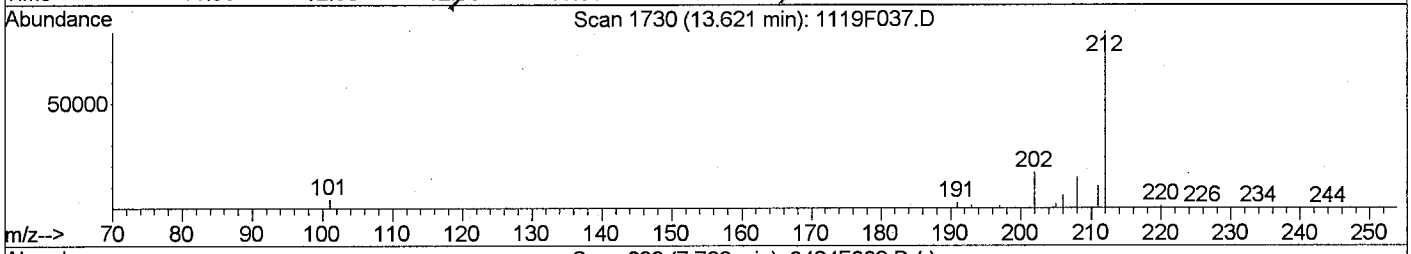
1119F037.D 1107ALK.M Thu Nov 20 14:40:52 2003

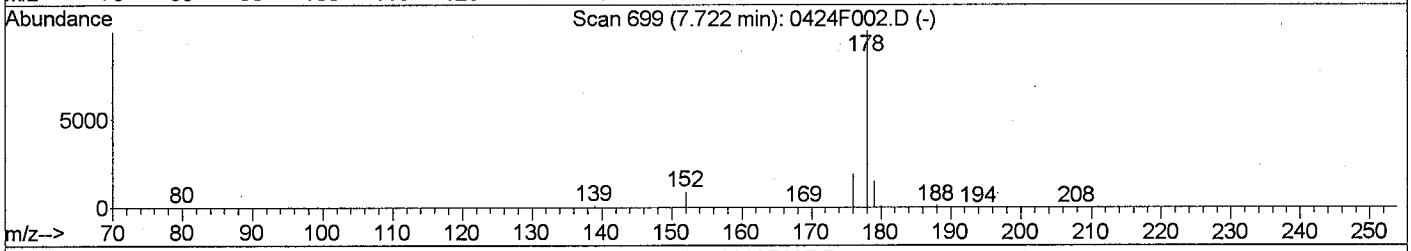
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(26) C2-Dibenzothiophenes (L)

13.62min 1358.77ng/ml m

response 286344

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	1.34
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

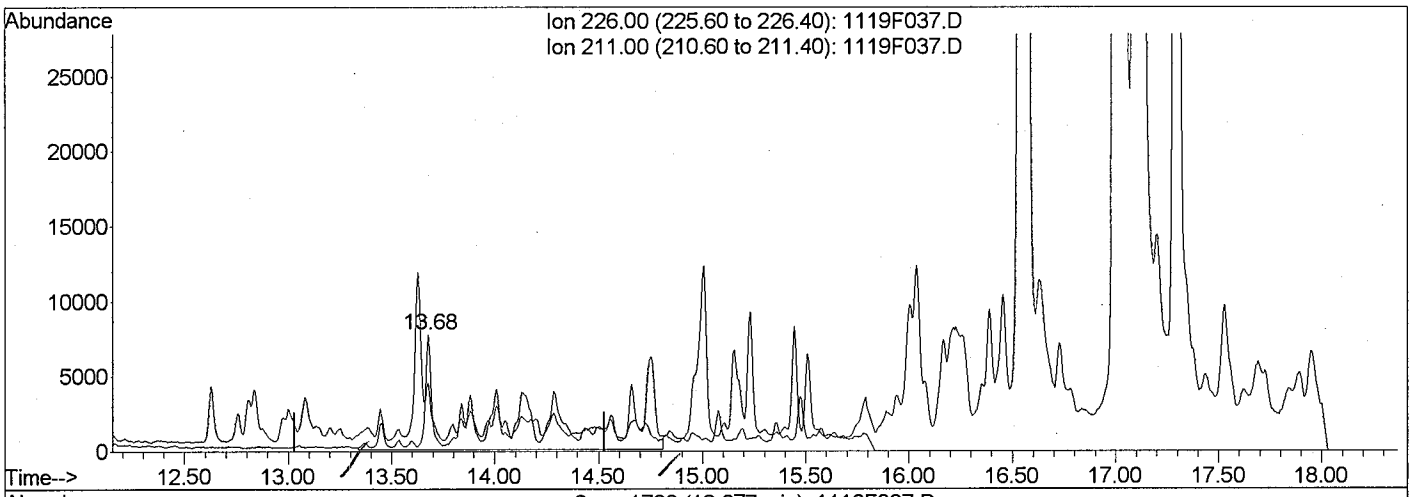
11/24/13

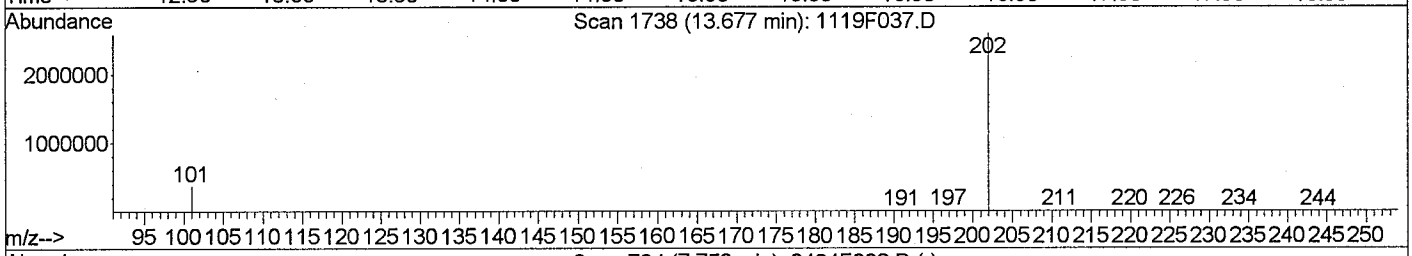
1119F037.D 1107ALK.M Thu Nov 20 14:41:13 2003

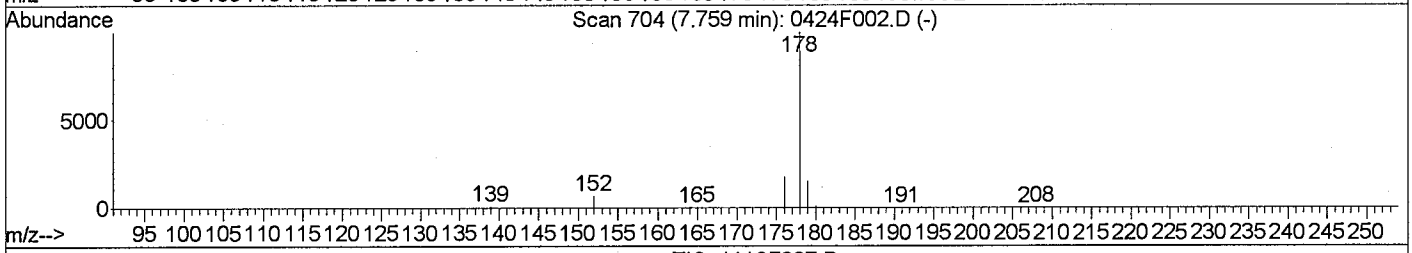
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(27) C3-Dibenzothiophenes (L)

13.68min 605.05ng/ml m

response 127507

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	58.83
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

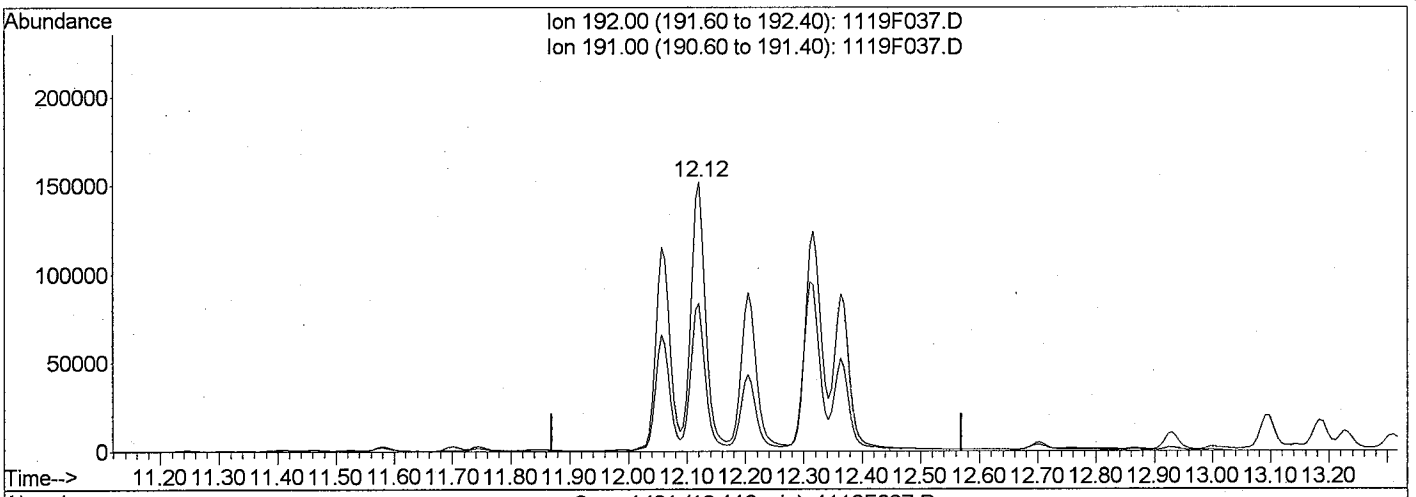
11/24/13

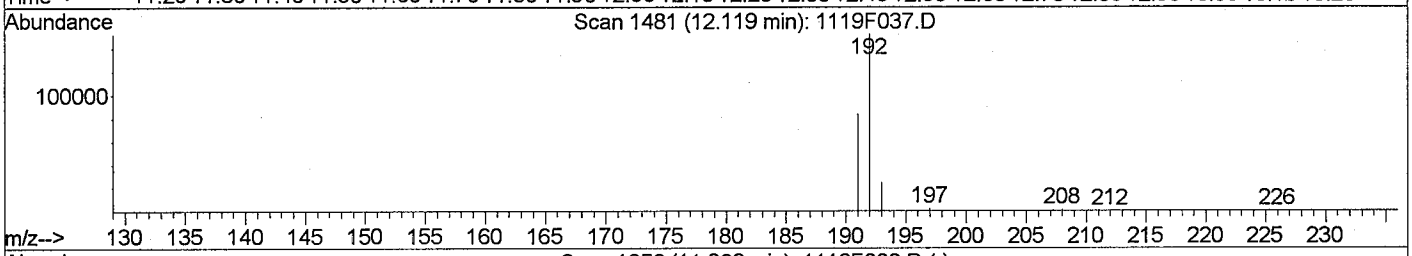
1119F037.D 1107ALK.M Thu Nov 20 14:41:45 2003

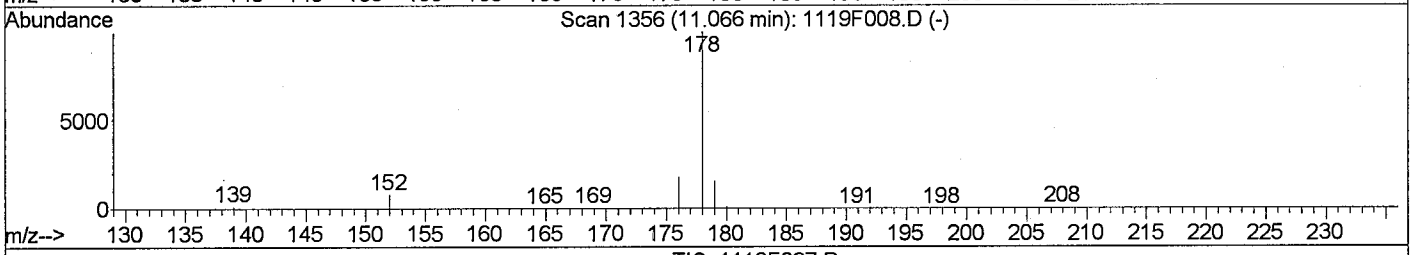
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 4916.70ng/ml m

response 1088401

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	55.09
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

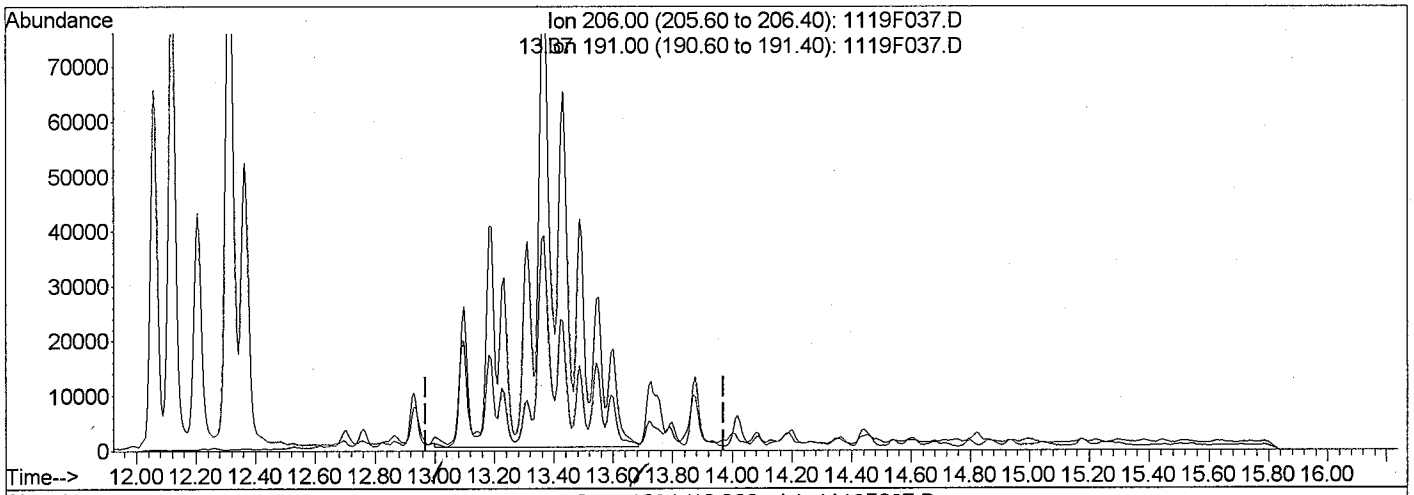
11/24/13

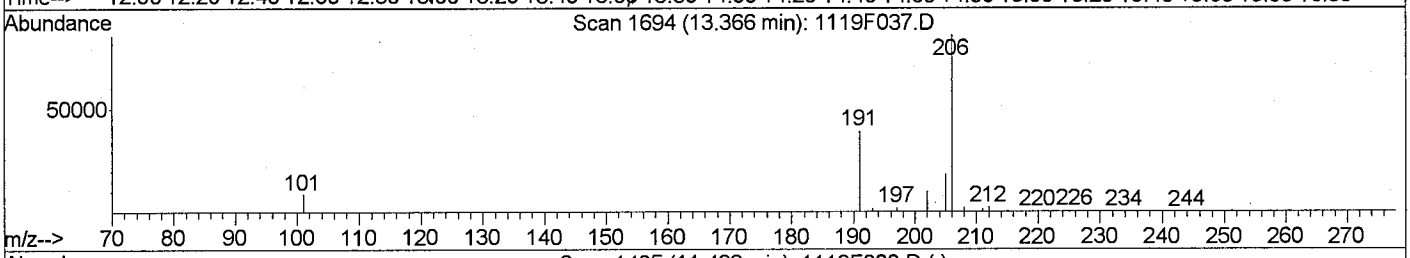
1119F037.D 1107ALK.M Thu Nov 20 14:41:51 2003

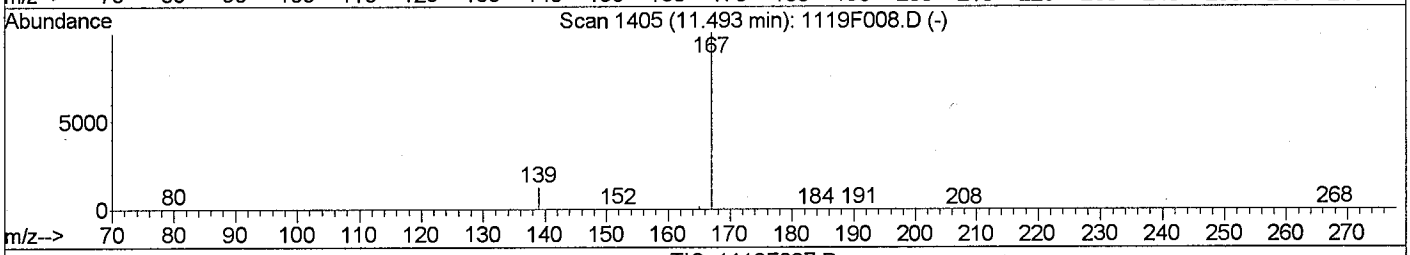
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 3613.27ng/ml m

response 799864

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	45.92
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

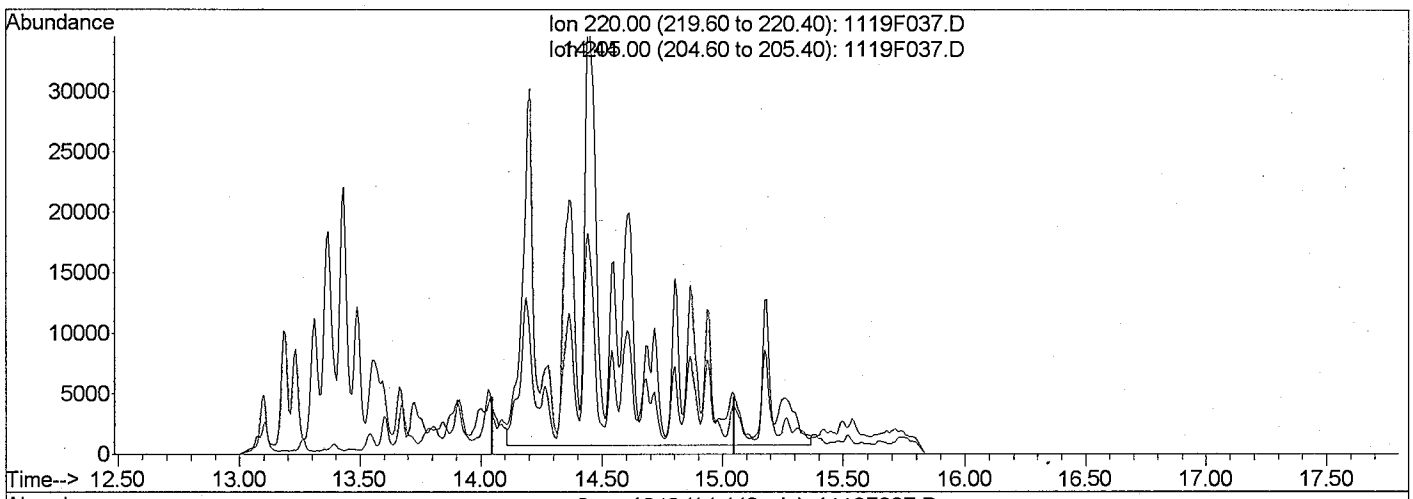
11/24/13

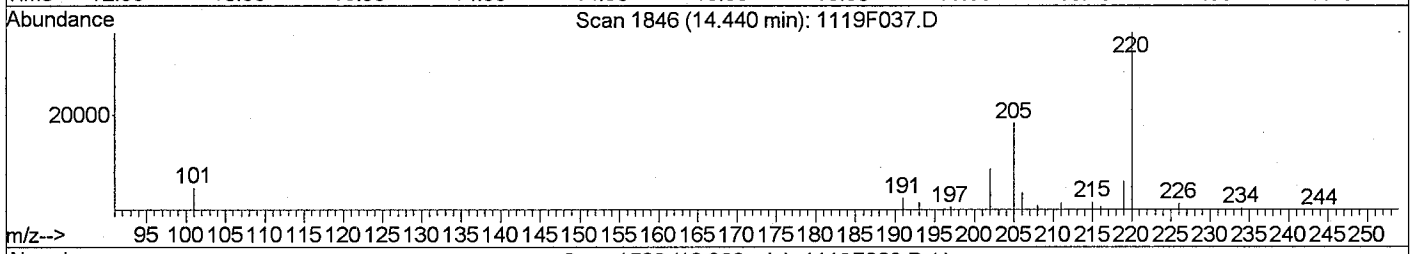
1119F037.D 1107ALK.M Thu Nov 20 14:42:10 2003

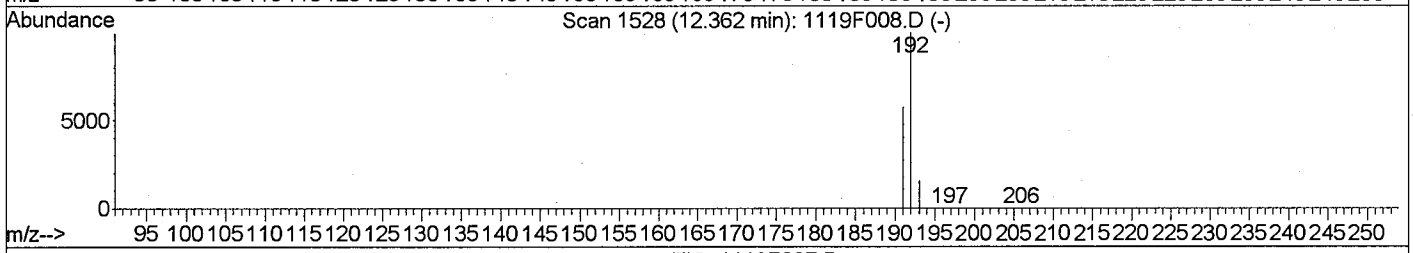
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.44min 2189.87ng/ml m

response 484768

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	49.01
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

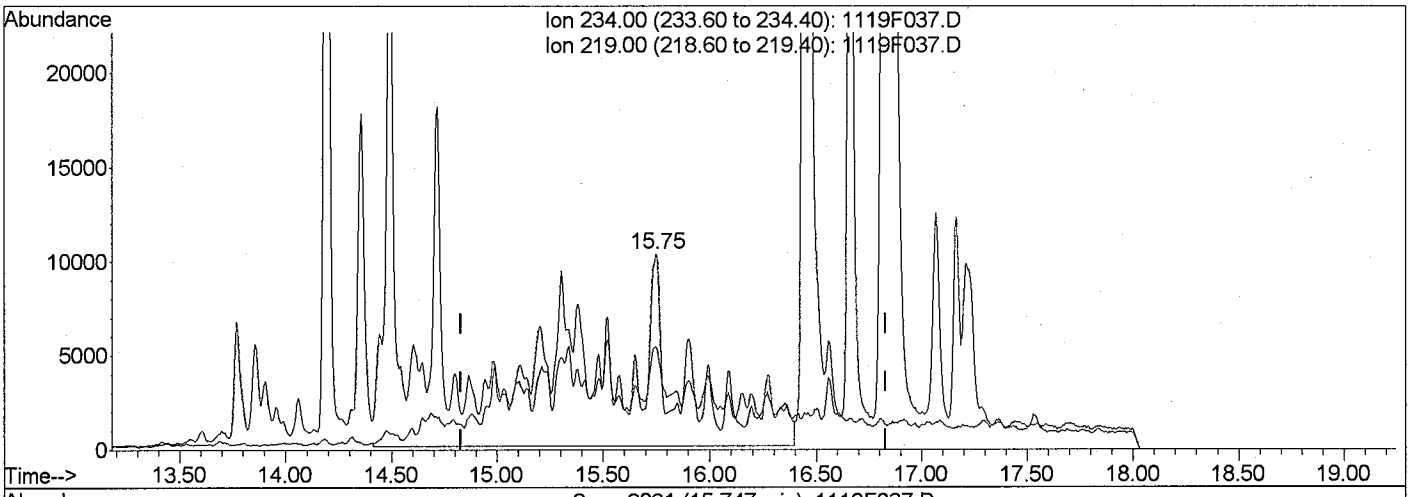
11/24/3

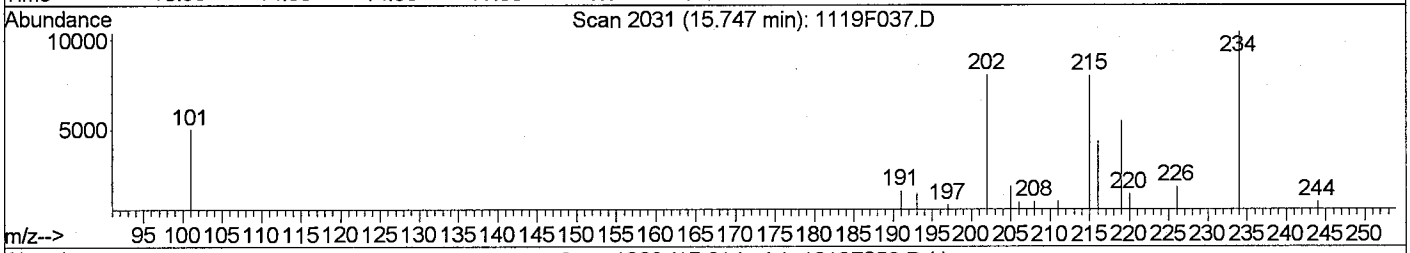
1119F037.D 1107ALK.M Thu Nov 20 14:42:29 2003

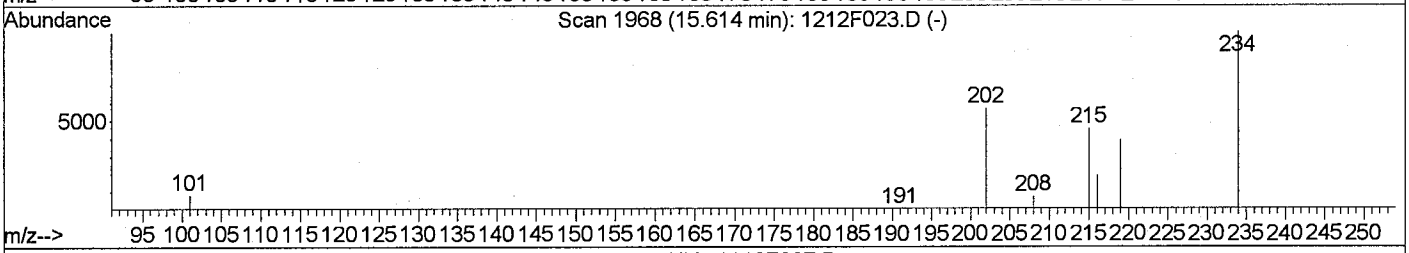
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 1324.01ng/ml m

response 293094

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	52.47
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

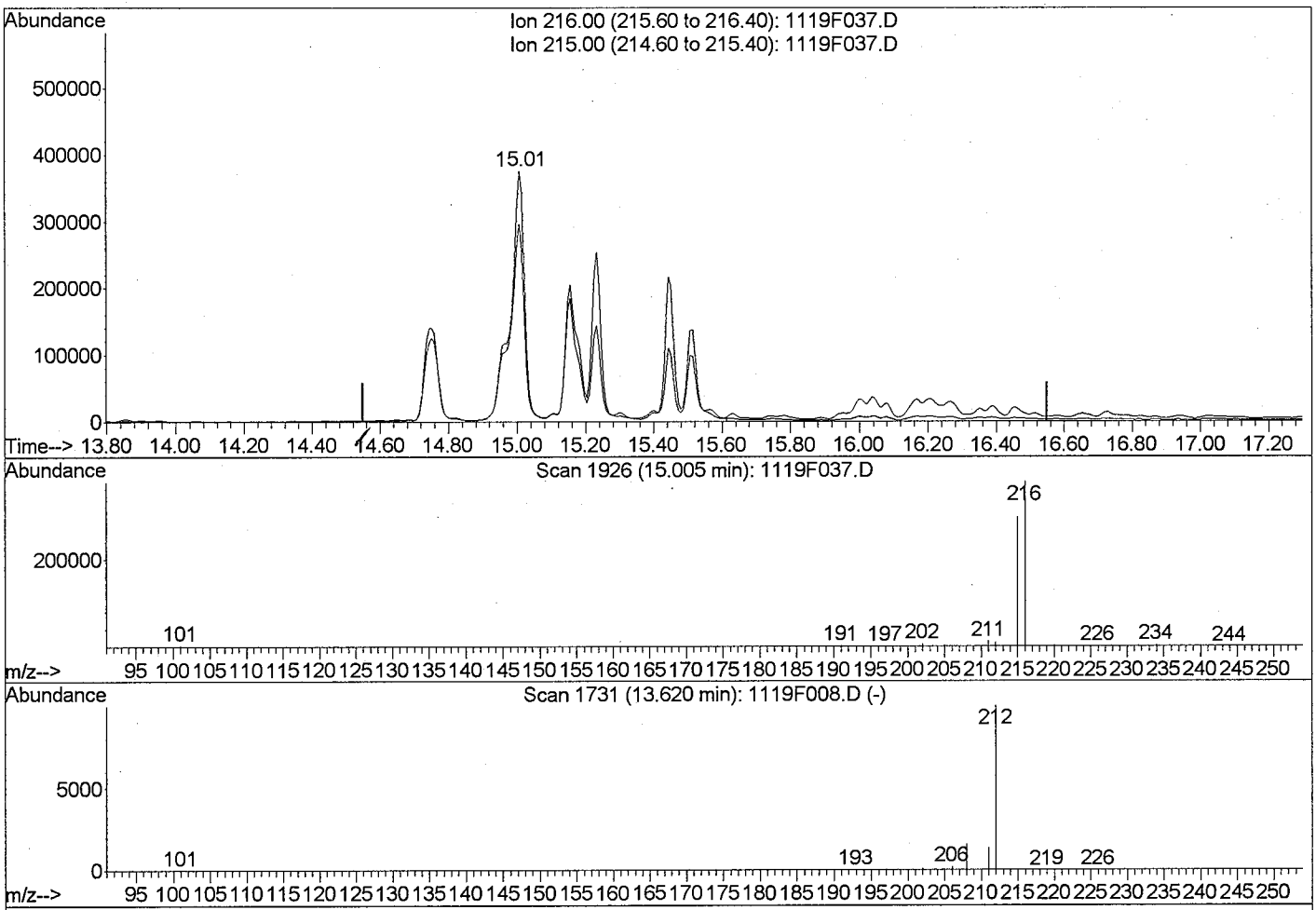
11/24/13

1119F037.D 1107ALK.M Thu Nov 20 14:42:56 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F037.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 12865.13ng/ml m

response 3262074

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	78.69
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

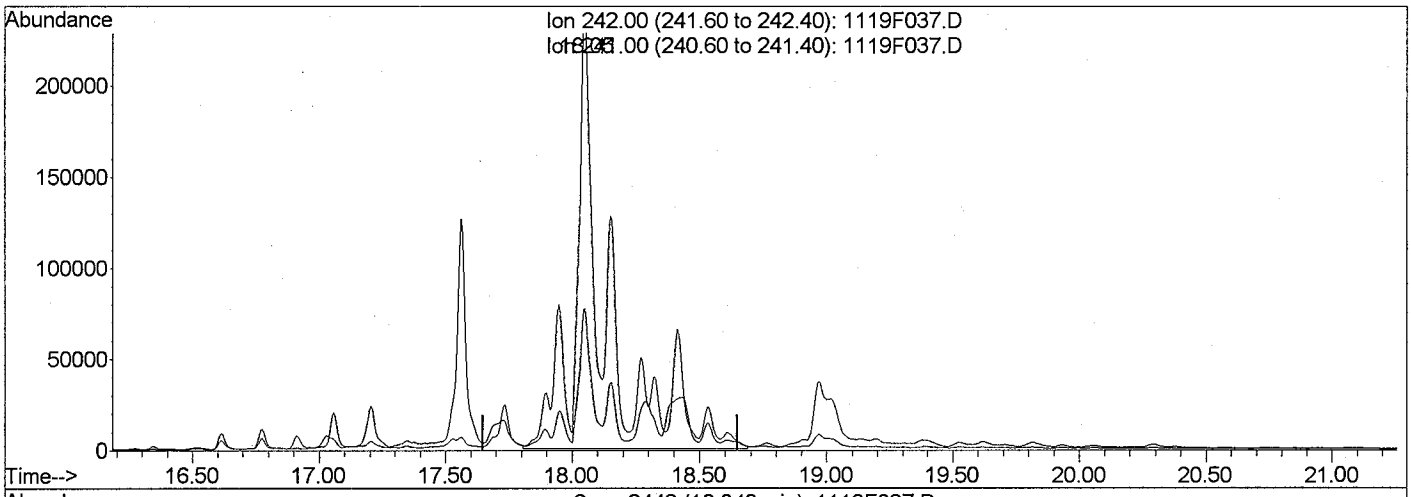
11/24/13

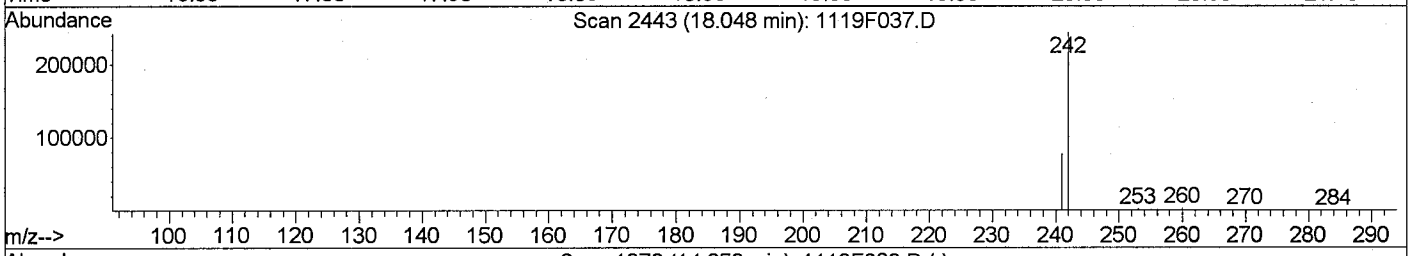
1119F037.D 1107ALK.M Thu Nov 20 14:43:09 2003

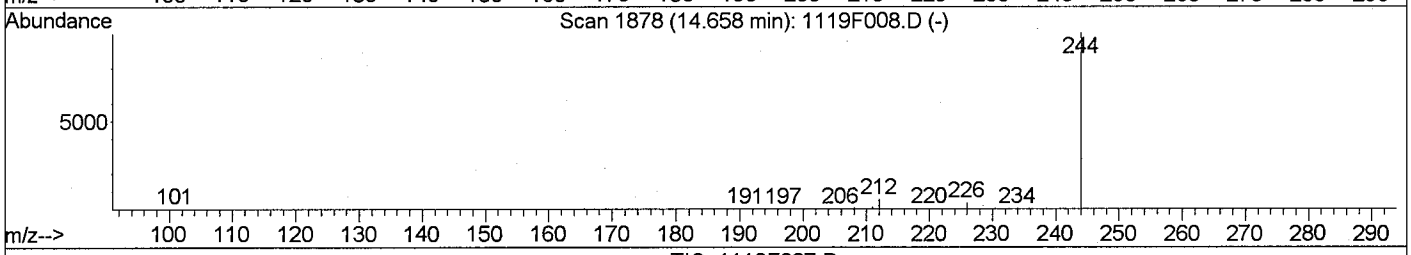
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:43 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(44) C1-Chrysenes (L)

18.05min 9352.12ng/ml m

response 1930576

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	32.07
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

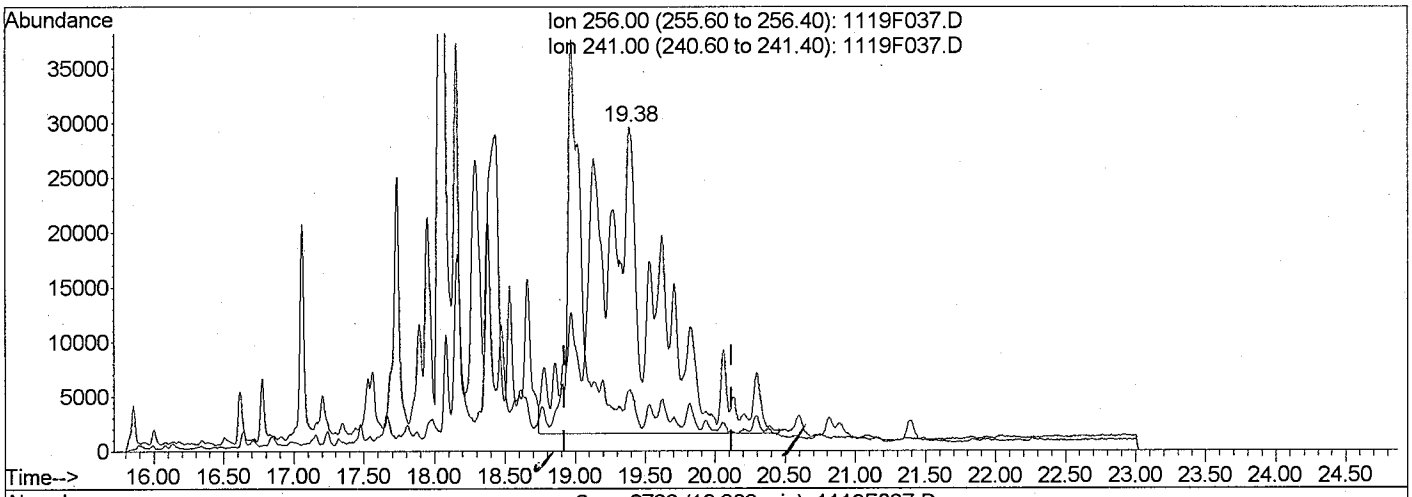
11/24/13

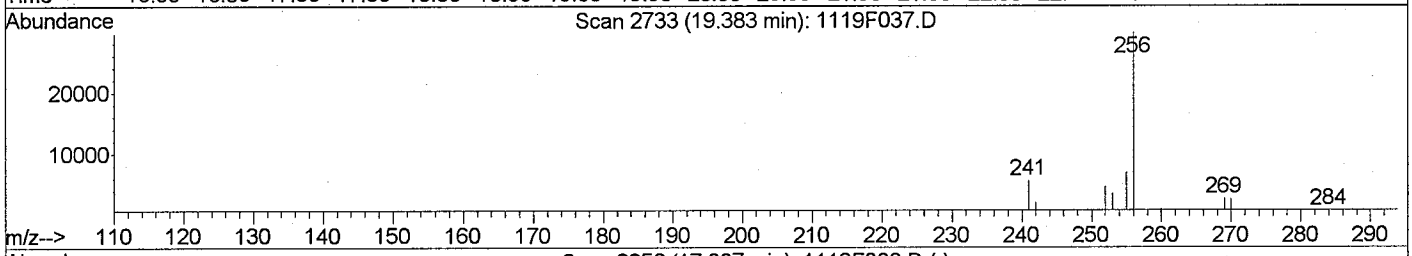
1119F037.D 1107ALK.M Thu Nov 20 14:43:26 2003

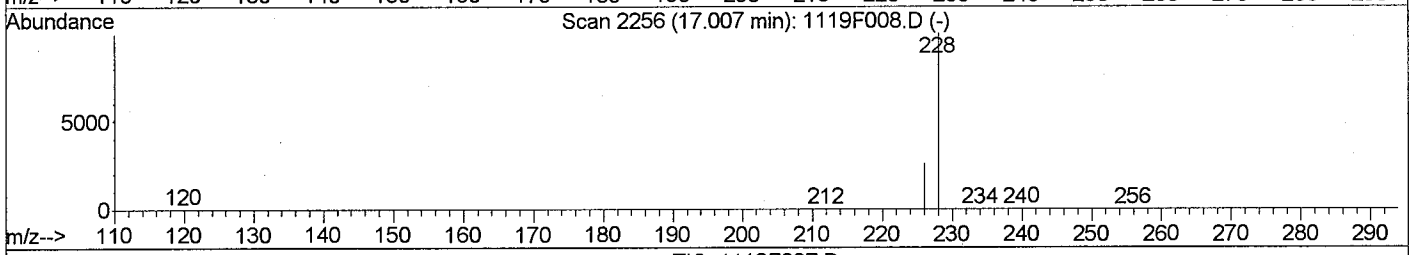
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:44 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(45) C2-Chrysenes (L)

19.38min 4145.79ng/ml m

response 855824

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	18.72
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

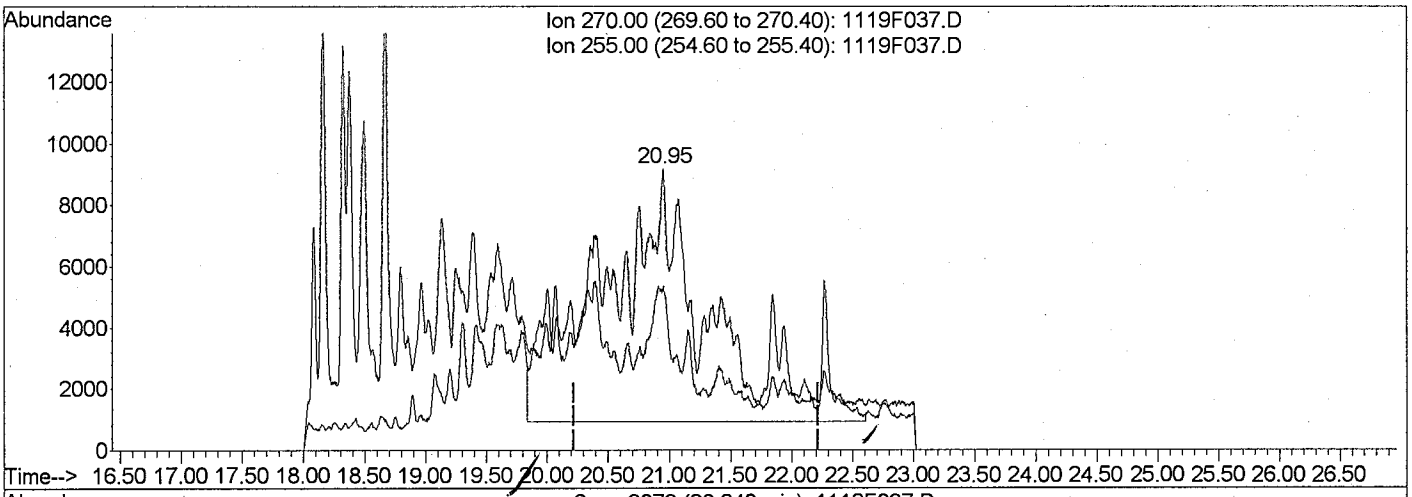
11/24/13

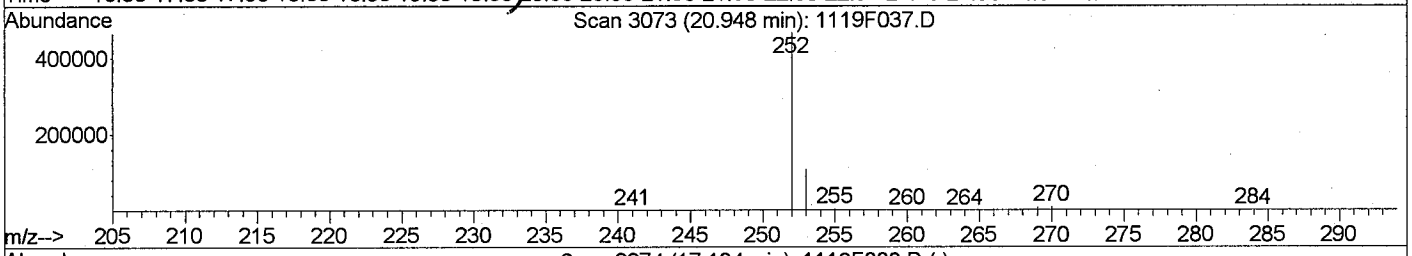
1119F037.D 1107ALK.M Thu Nov 20 14:43:53 2003

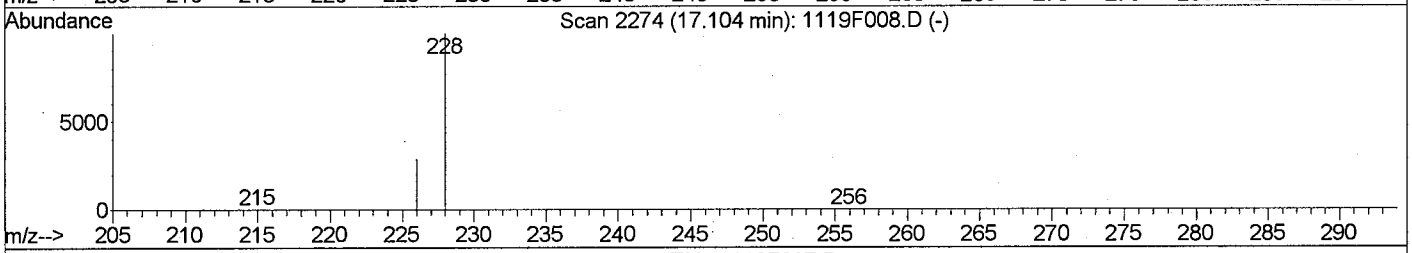
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:44 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(46) C3-Chrysenes (L)

20.95min 2464.02ng/ml m

response 508653

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	56.25
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

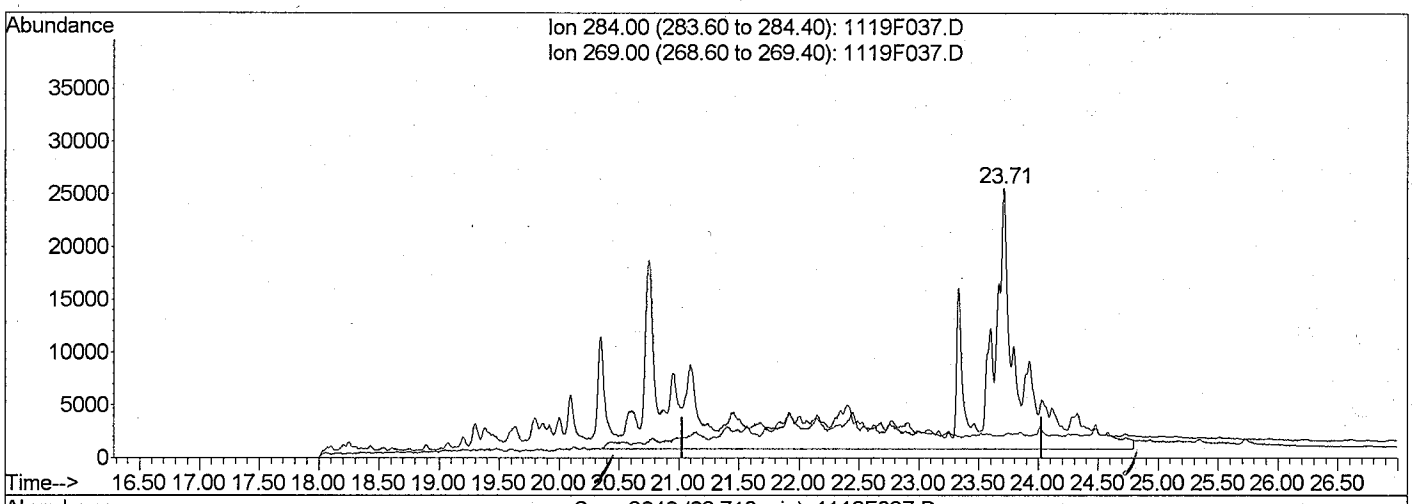
11/24/03

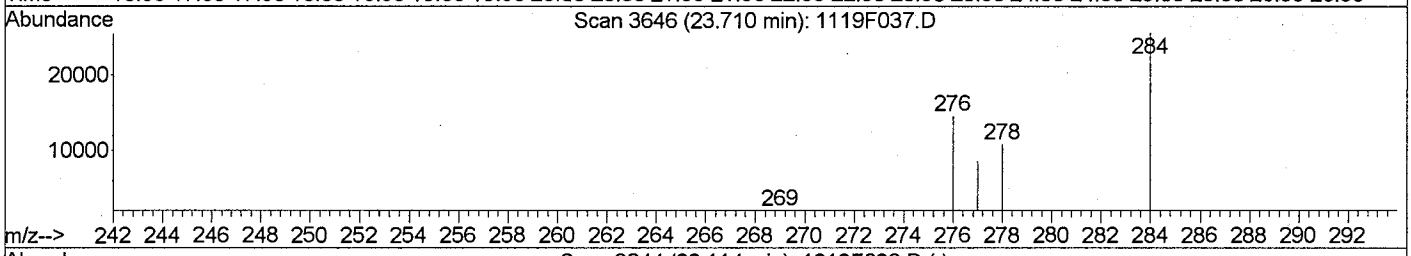
1119F037.D 1107ALK.M Thu Nov 20 14:44:11 2003

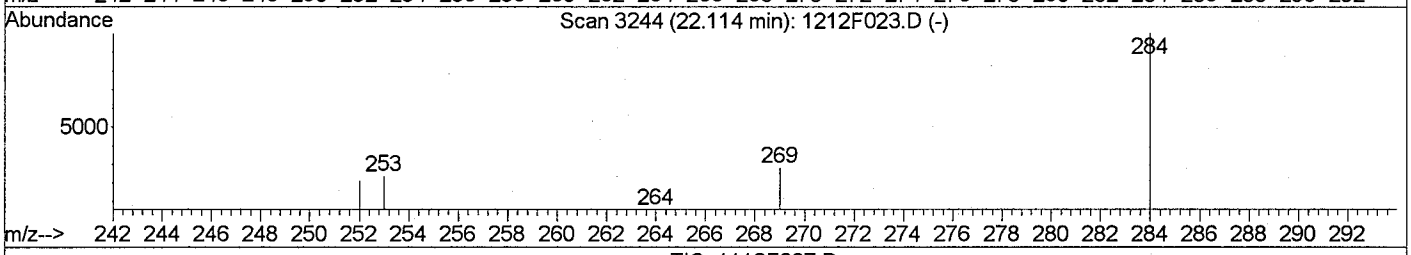
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F037.D Vial: 8
Acq On : 19 Nov 2003 4:26 pm Operator: LWeiskopf
Sample : K2308433-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:45 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F037.D

(47) C4-Chrysenes (L)

23.71min 3345.94ng/ml m

response 690709

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	8.17#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03 11/24/03

1119F037.D 1107ALK.M Thu Nov 20 14:44:37 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F005.D
Lab ID: K2308433-001
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 07:35
Date Quantitated: 11/24/2003 09:15
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/24/03

Secondary Review: 11.26.3

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247859	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F005.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 07:35	**Quant Date:**	11/24/2003 09:15	**Vial:**	2
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	250607	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	134291	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	203829	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	279421	1,000.00	OK
5	Perylene-d12	21.40	0.00	264	206607	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.00	0.00	176	9001	67.02	67	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	16497	80.86	81	34-122	OK	NR
4	Terphenyl-d14	14.67	0.01	0.00	244	16415	64.46	64	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	11093	39.15	38	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	2365	14.13	14	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	2569	16.38	16	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	1359	6.70	6.4	JD	NR
1	C2-Naphthalenes				156	0		34	U	NR
1	C3-Naphthalenes				170	0		34	U	NR
1	C4-Naphthalenes				184	0		34	U	NR
2	Acenaphthylene	7.74		0.00	152	13642	52.73	51	D	NR
2	Acenaphthene	8.06	0.01	0.00	154	10781	67.61	65	D	NR
2	Dibenzofuran	8.35	0.01	0.00	168	8604	40.25	39	JD	NR
2	Fluorene	9.00	0.01	0.00	166	12686	74.26	71	D	NR
2	C1-Fluorenes				180	0		34	U	NR
2	C2-Fluorenes				194	0		34	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F005.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 07:35	**Quant Date:**	11/24/2003 09:15	**Vial:**	2
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-001			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		34	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	10256	43.61	42	JD	NR
3	C1-Dibenzothiophenes				198	0		34	U	NR
3	C2-Dibenzothiophenes				212	0		34	U	NR
3	C3-Dibenzothiophenes				226	0		34	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	208944	845.81	810	D	NR
3	Anthracene	11.08		0.00	178	41213	195.28	190	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		34	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		34	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		34	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		34	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	668229	2,717	2600	D	
4	Pyrene	14.17		0.00	202	619635	1,697	1600	D	
4	C1-Fluoranthenes/Pyrenes				216	0		34	U	NR
4	Benz(a)anthracene	17.02		0.00	228	275712	991.55	950	D	
4	Chrysene	17.12		0.00	228	320908	1,079	1000	D	
4	C1-Chrysenes				242	0		34	U	NR
4	C2-Chrysenes				256	0		34	U	NR
4	C3-Chrysenes				270	0		34	U	NR
4	C4-Chrysenes				284	0		34	U	NR
5	Benzo(b)fluoranthene	20.00		0.00	252	198696	720.36	690	D	
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	269573**m**	770.24	740	D	
5	Benzo(e)pyrene	20.98	0.01	0.00	252	181784	586.98	560	D	
5	Benzo(a)pyrene	21.16		0.00	252	216012	920.70	880	D	
5	Perylene	21.50		0.00	252	58073	220.50	210	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	90548	634.87	610	D	
5	Dibenz(a,h)anthracene	24.08		0.00	278	17006**m**	82.97	80	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	84507	357.39	340	D	NR

Prep Amount:	28.0 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	74.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:21 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	250607	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	134291	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	203829	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	279421	1000.00	ng/ml	0.00
48) Perylene-d12	21.40	264	206607	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	8846	48.19	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	4.82%		
16) Fluorene-d10	8.94	176	9001	67.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	6.70%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	16497	80.86	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.09%		
41) Terphenyl-d14	14.67	244	16415	64.46	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	6.45%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	11093	39.15	ng/ml	98
3) 2-Methylnaphthalene	6.38	142	2365	14.13	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	2569	16.38	ng/ml	95
6) Biphenyl	7.05	154	1359	6.70	ng/ml	90
7) 2,6-Dimethylnaphthalene	7.28	156	1769	12.39	ng/ml	91
12) Acenaphthylene	7.74	152	13642	52.73	ng/ml	99
13) Acenaphthene	8.06	154	10781	67.61	ng/ml	98
14) Dibenzofuran	8.35	168	8604	40.25	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.76	170	1356m	9.49	ng/ml	
17) Fluorene	9.00	166	12686	74.26	ng/ml	98
24) Dibenzothiophene	10.72	184	10256	43.61	ng/ml	98
28) Phenanthrene	10.98	178	208944	845.81	ng/ml	100
29) Anthracene	11.08	178	41213	195.28	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	15850	94.50	ng/ml	97
36) Fluoranthene	13.67	202	668229	2717.45	ng/ml	98
39) Pyrene	14.17	202	619635	1696.58	ng/ml	97
42) Benz(a)anthracene	17.02	228	275712	991.55	ng/ml	88
43) Chrysene	17.12	228	320908	1079.25	ng/ml	99
49) Benzo(b)fluoranthene	20.00	252	198696	720.36	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	269573m	770.24	ng/ml	
51) Benzo(e)pyrene	20.98	252	181784	586.98	ng/ml	99
52) Benzo(a)pyrene	21.16	252	216012	920.70	ng/ml	100
53) Perylene	21.50	252	58073	220.50	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:21 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

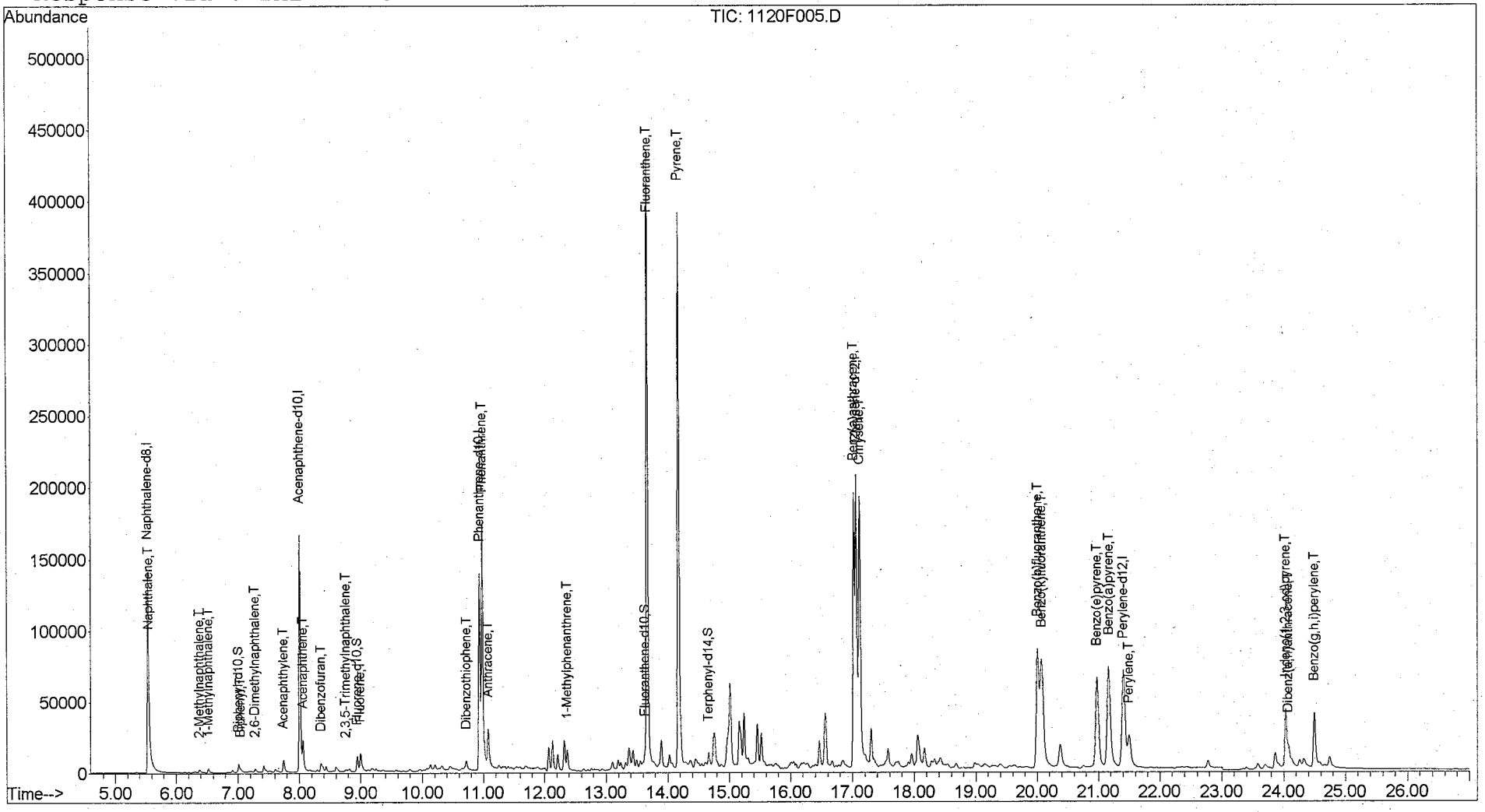
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54)	Indeno(1,2,3-cd)pyrene	24.03	276	90548	634.87	ng/ml	95
55)	Dibenz(a,h)anthracene	24.08	278	17006m	82.97	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	84507	357.39	ng/ml	100

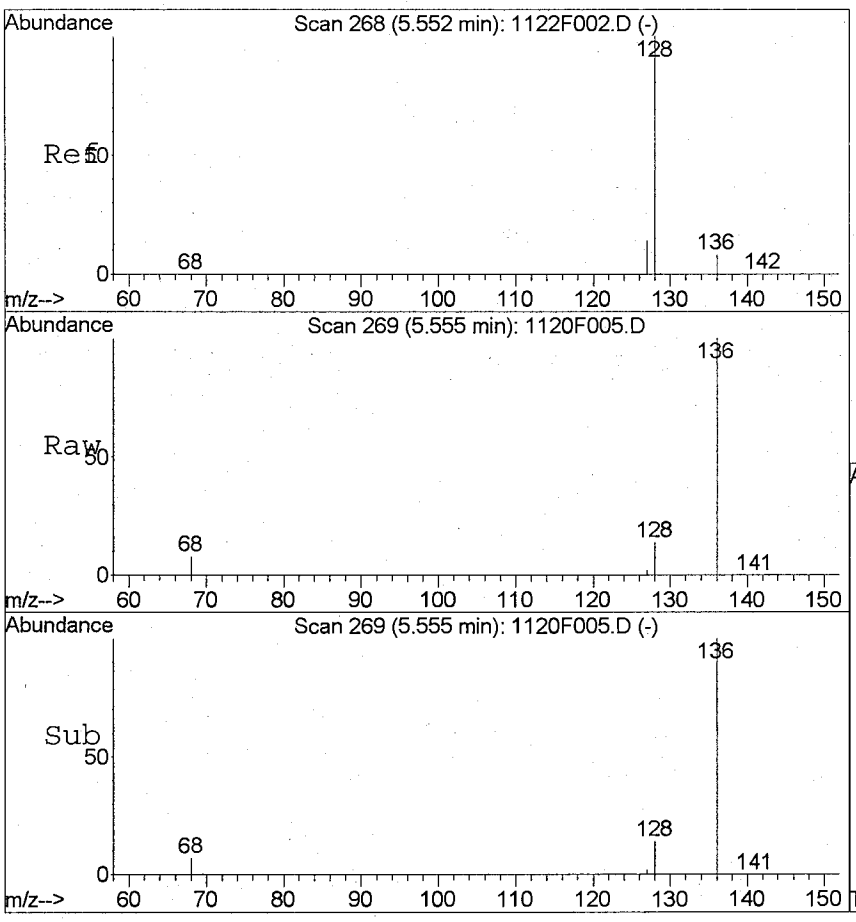
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:15 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration

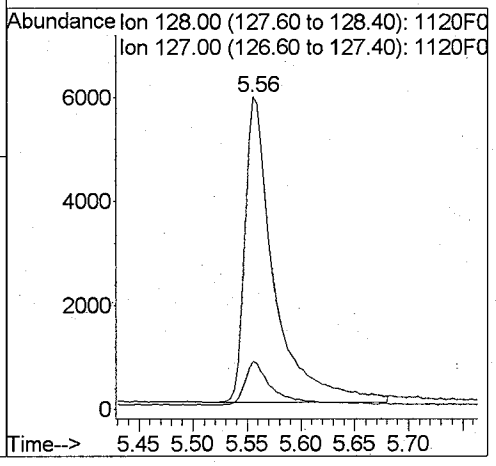


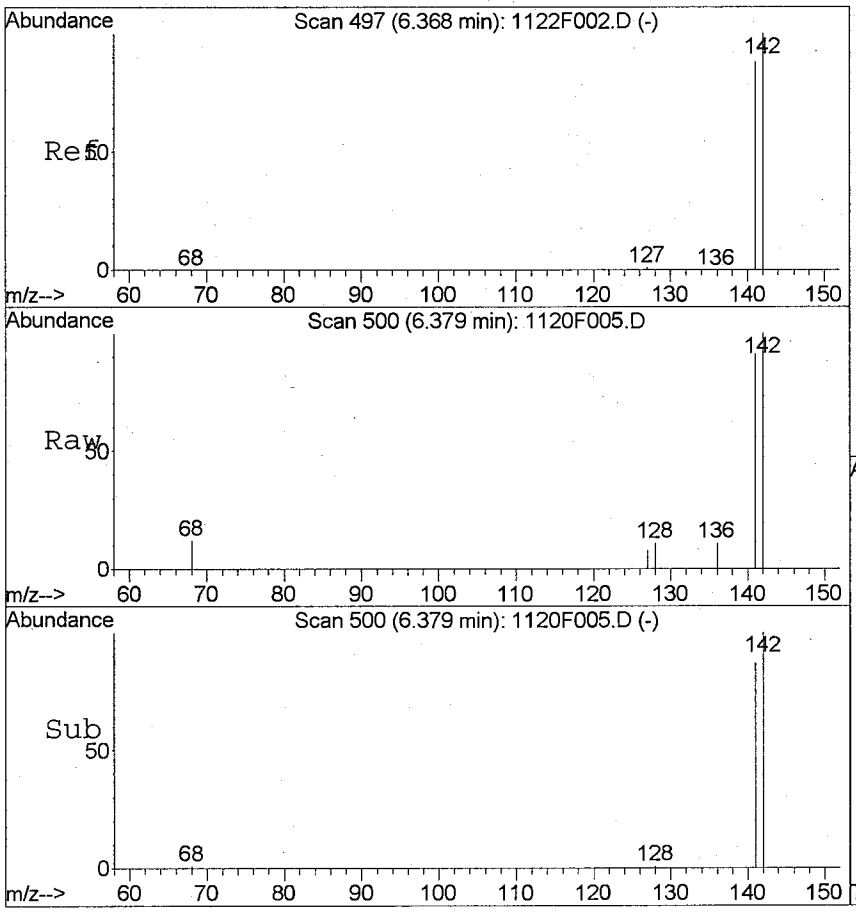


#2
Naphthalene
Concen: 39.15 ng/ml
RT: 5.56 min Scan# 269
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:128 Resp: 11093

Ion	Ratio	Lower	Upper
128	100		
127	14.2	0.0	43.6

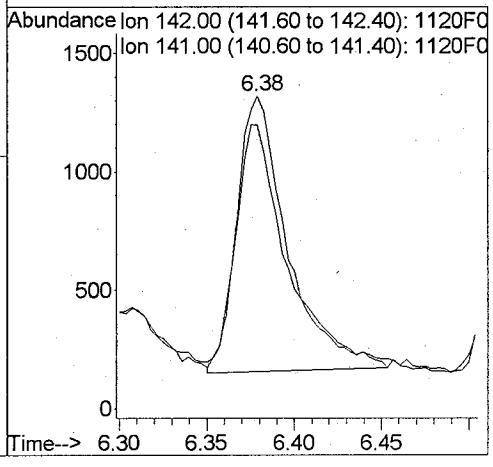


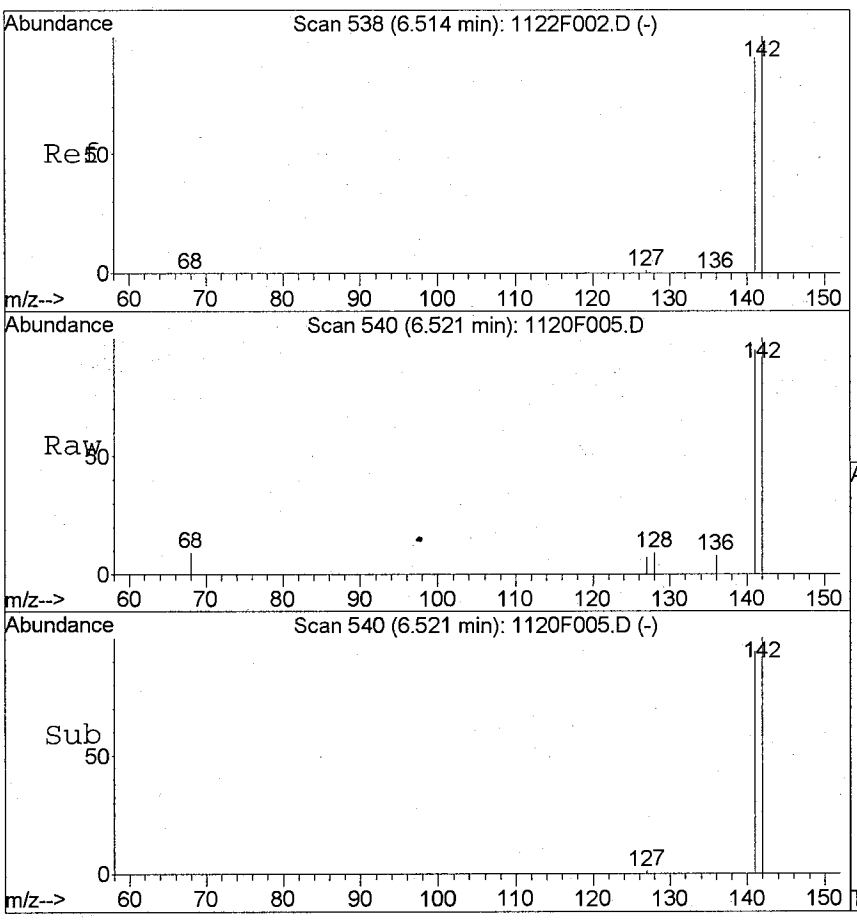


#3
2-Methylnaphthalene
Concen: 14.13 ng/ml
RT: 6.38 min Scan# 500
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:142 Resp: 2365

Ion	Ratio	Lower	Upper
142	100		
141	87.2	58.1	118.1

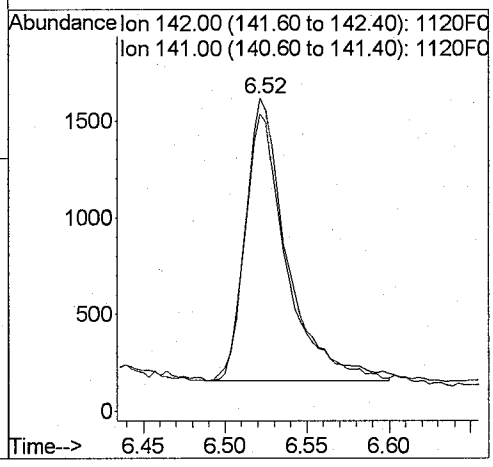


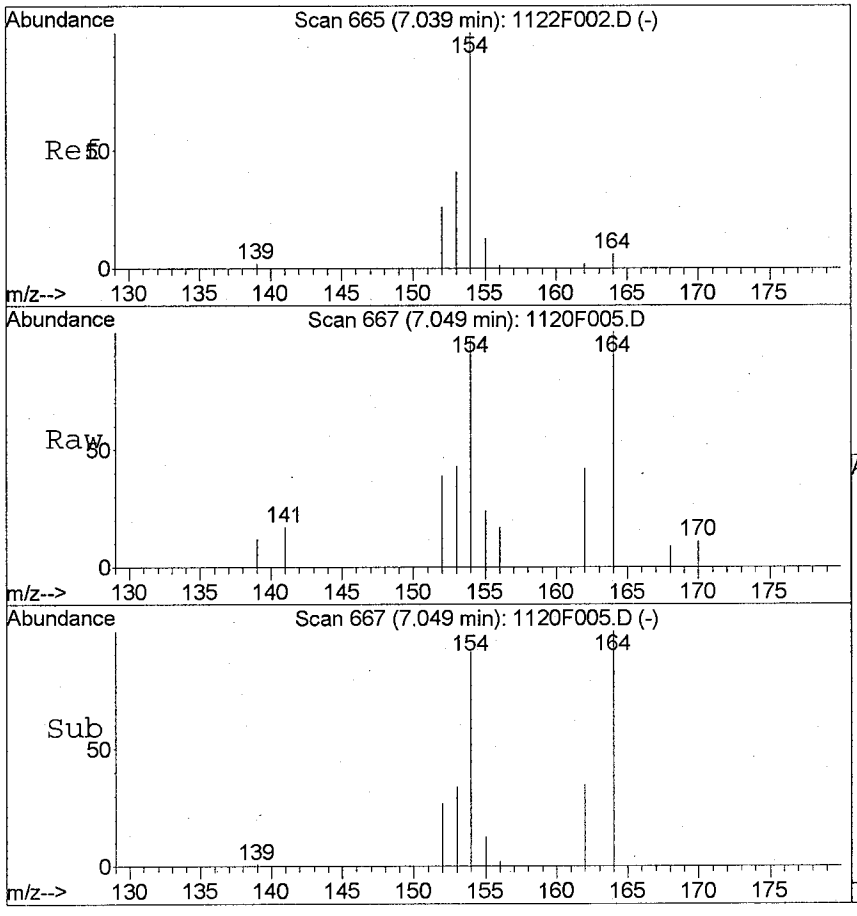


#4
1-Methylnaphthalene
Concen: 16.38 ng/ml
RT: 6.52 min Scan# 540
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:142 Resp: 2569

Ion	Ratio	Lower	Upper
142	100		
141	94.4	59.3	119.3

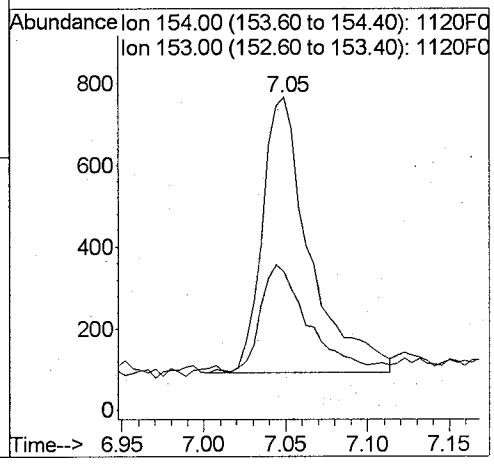


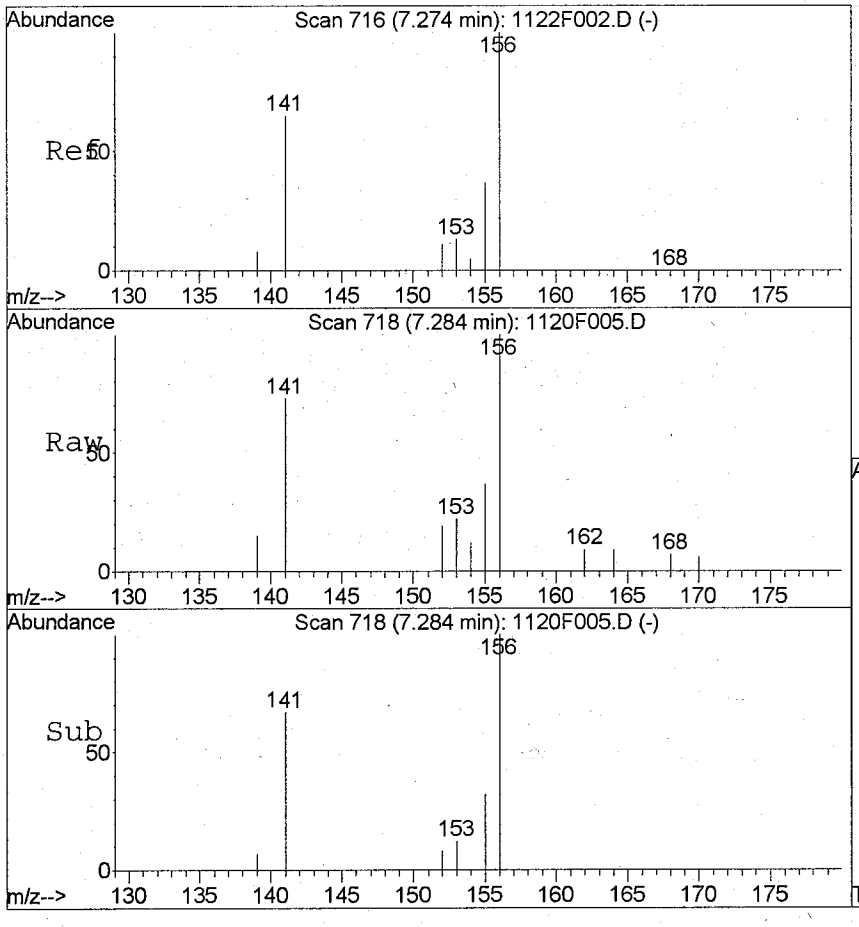


#6
Biphenyl
Concen: 6.70 ng/ml
RT: 7.05 min Scan# 667
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:154 Resp: 1359

Ion	Ratio	Lower	Upper
154	100		
153	35.0	11.3	71.3

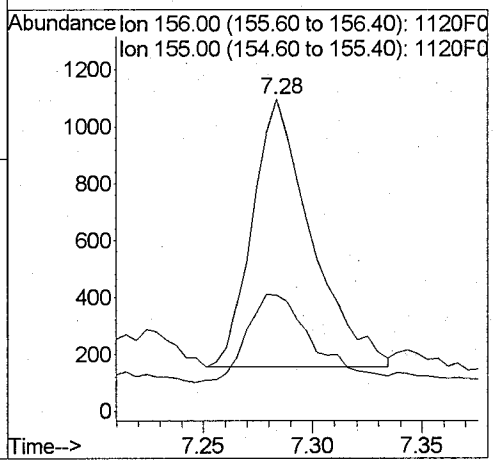


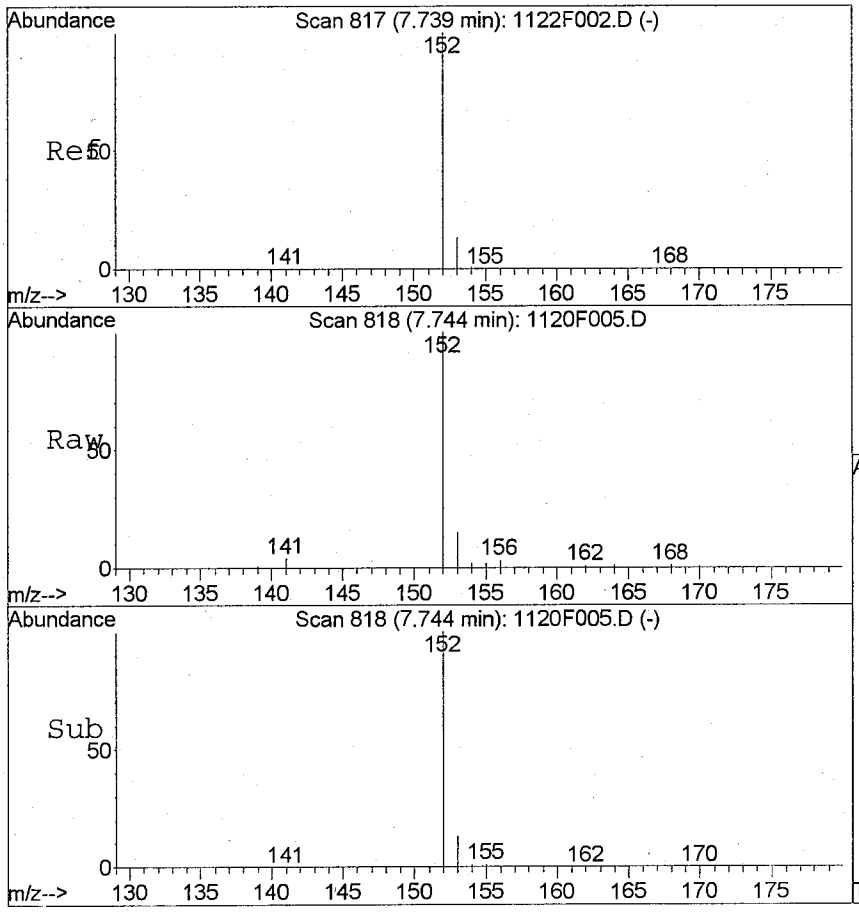


#7
2,6-Dimethylnaphthalene
Concen: 12.39 ng/ml
RT: 7.28 min Scan# 718
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:156 Resp: 1769

Ion	Ratio	Lower	Upper
156	100		
155	31.7	7.1	67.1

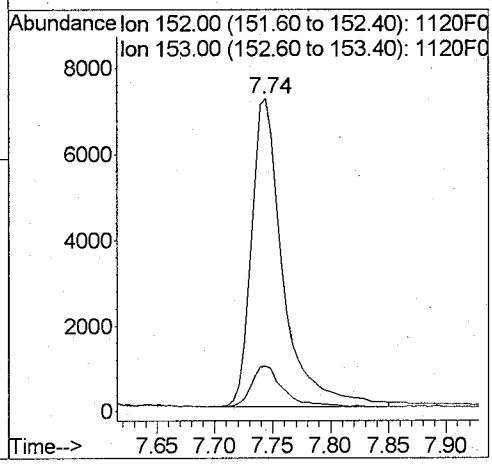


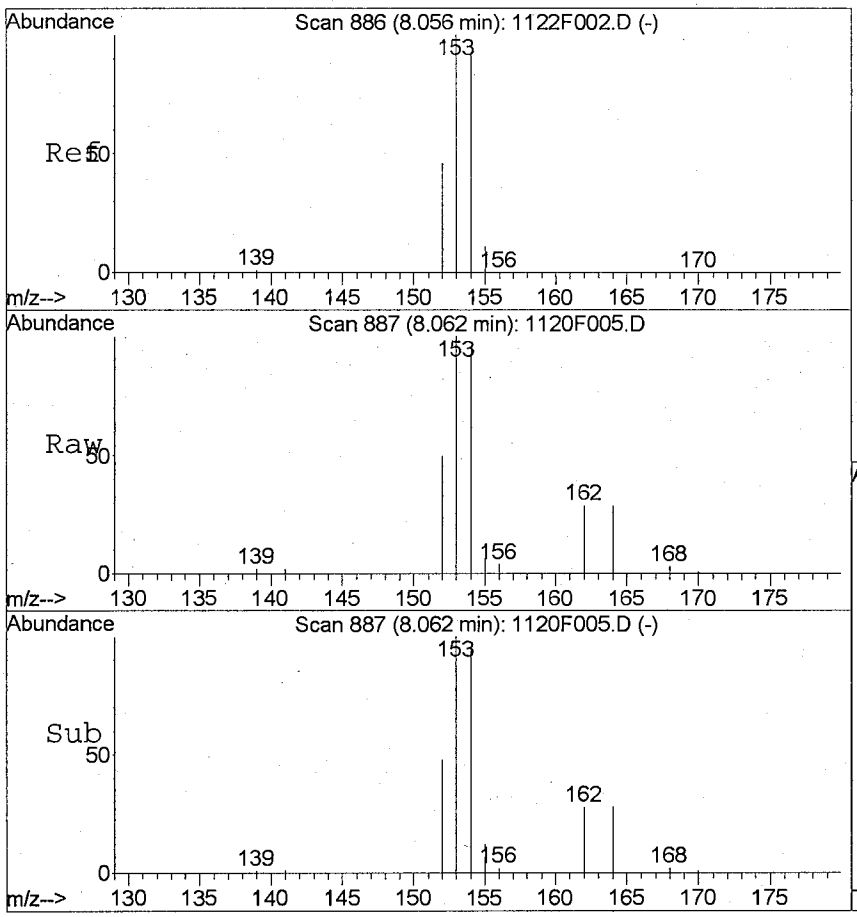


#12
Acenaphthylene
Concen: 52.73 ng/ml
RT: 7.74 min Scan# 818
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:152 Resp: 13642

Ion	Ratio	Lower	Upper
152	100		
153	13.3	0.0	43.0

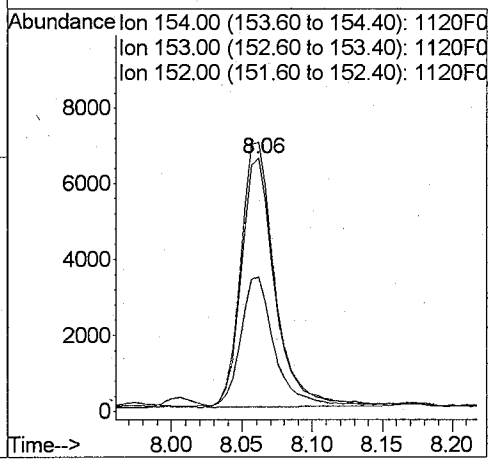


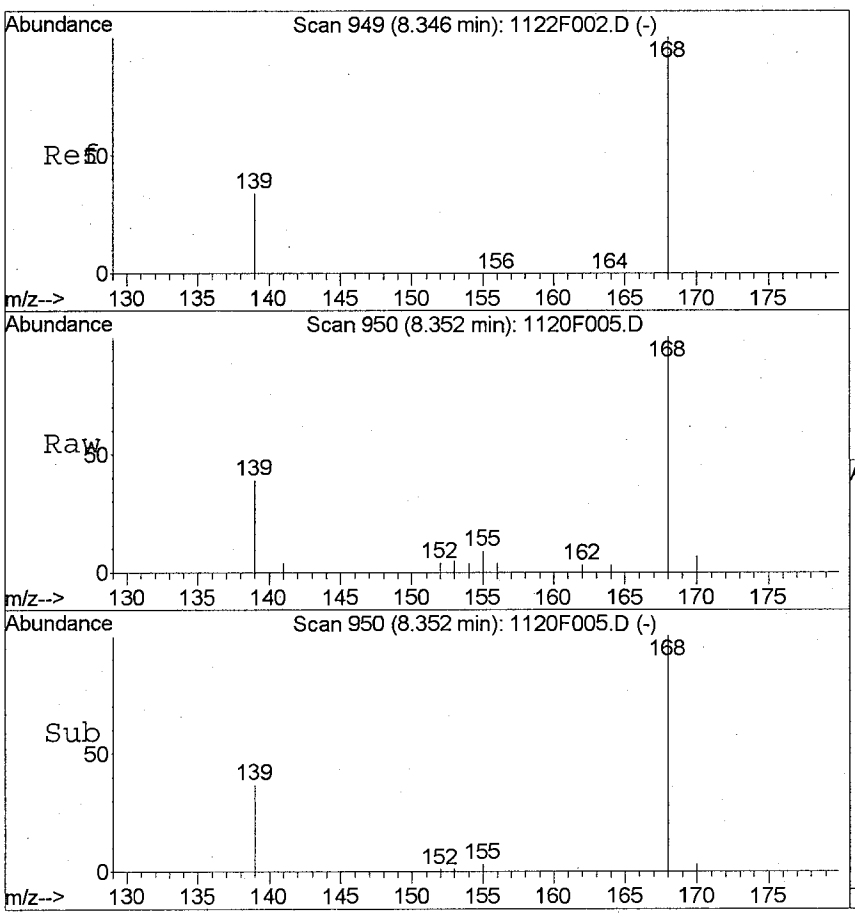


#13
Acenaphthene
Concen: 67.61 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:154 Resp: 10781

Ion	Ratio	Lower	Upper
154	100		
153	107.1	79.2	139.2
152	51.7	21.3	81.3

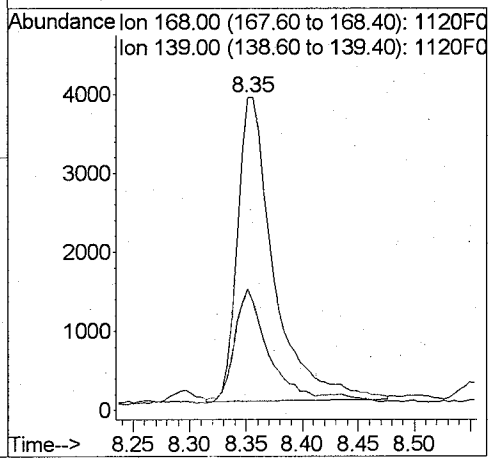


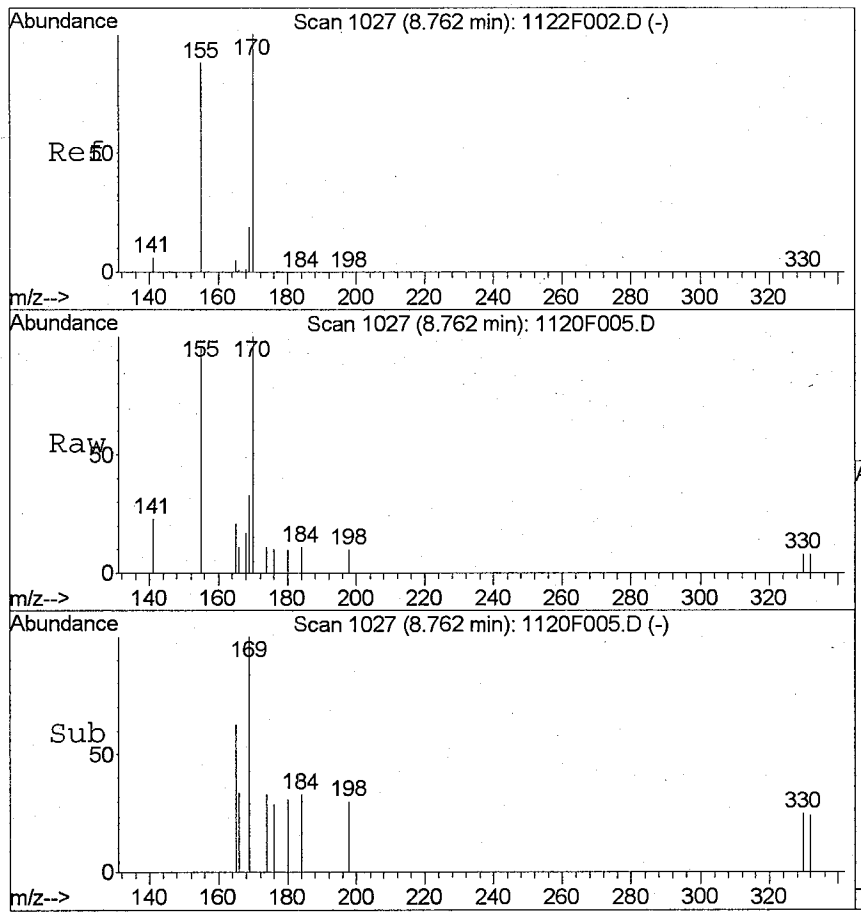


#14
Dibenzofuran
Concen: 40.25 ng/ml
RT: 8.35 min Scan# 950
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:168 Resp: 8604

Ion	Ratio	Lower	Upper
168	100		
139	37.7	5.4	65.4

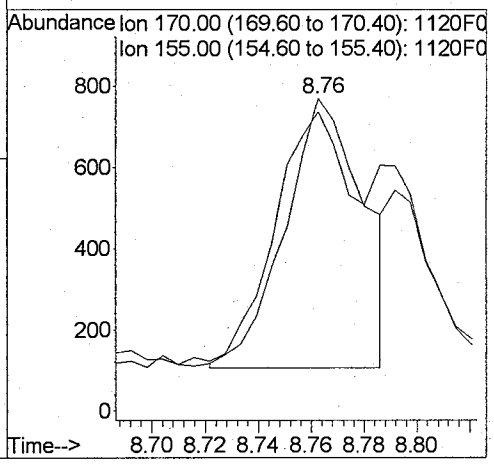


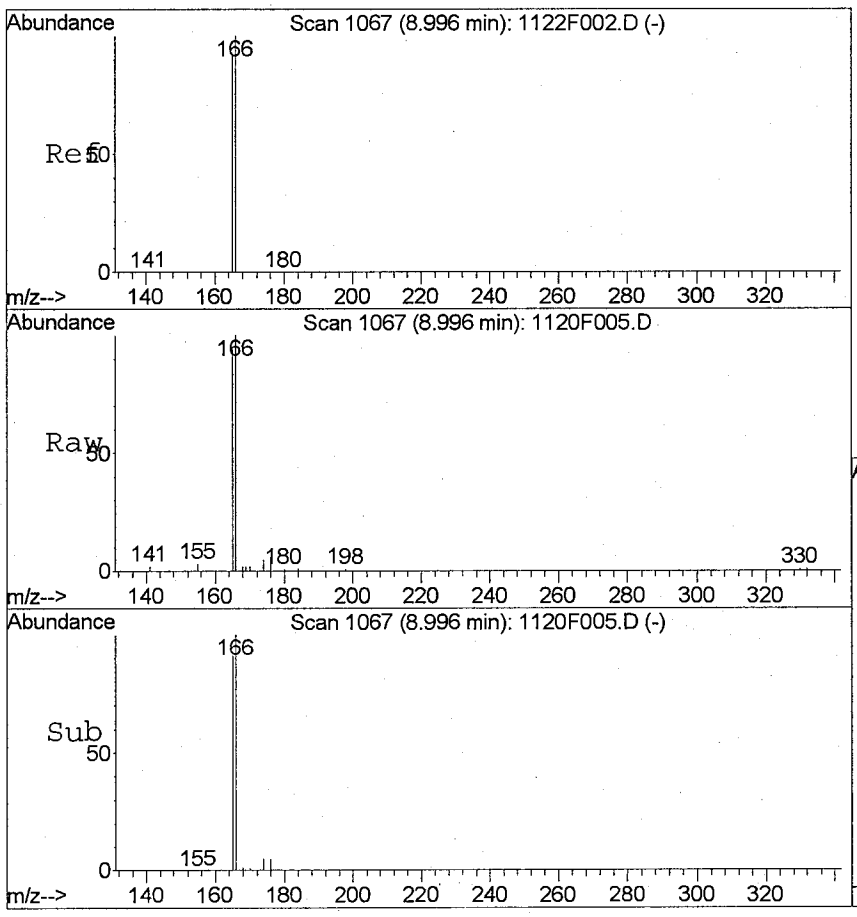


#15
2,3,5-Trimethylnaphthalene
Concen: 9.49 ng/ml m
RT: 8.76 min Scan# 1027
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:170 Resp: 1356

Ion	Ratio	Lower	Upper
170	100		
155	95.7	55.5	115.5

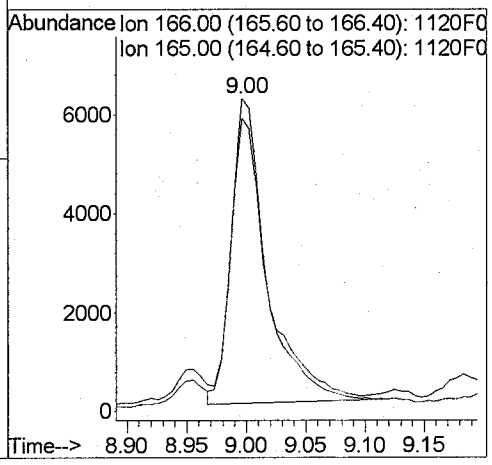


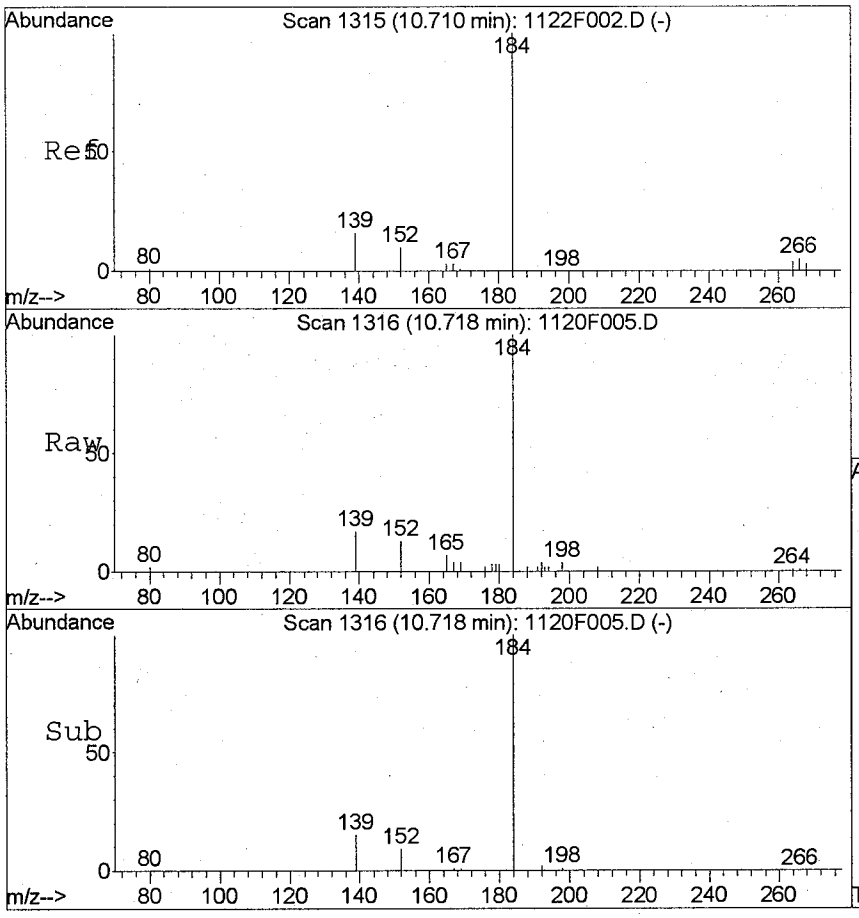


#17
Fluorene
Concen: 74.26 ng/ml
RT: 9.00 min Scan# 1067
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:166 Resp: 12686

Ion	Ratio	Lower	Upper
166	100		
165	91.0	63.3	123.3

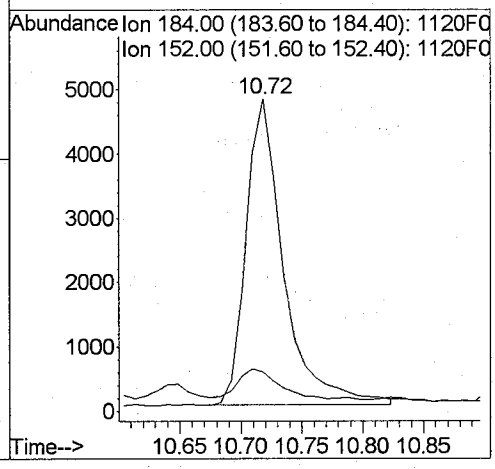


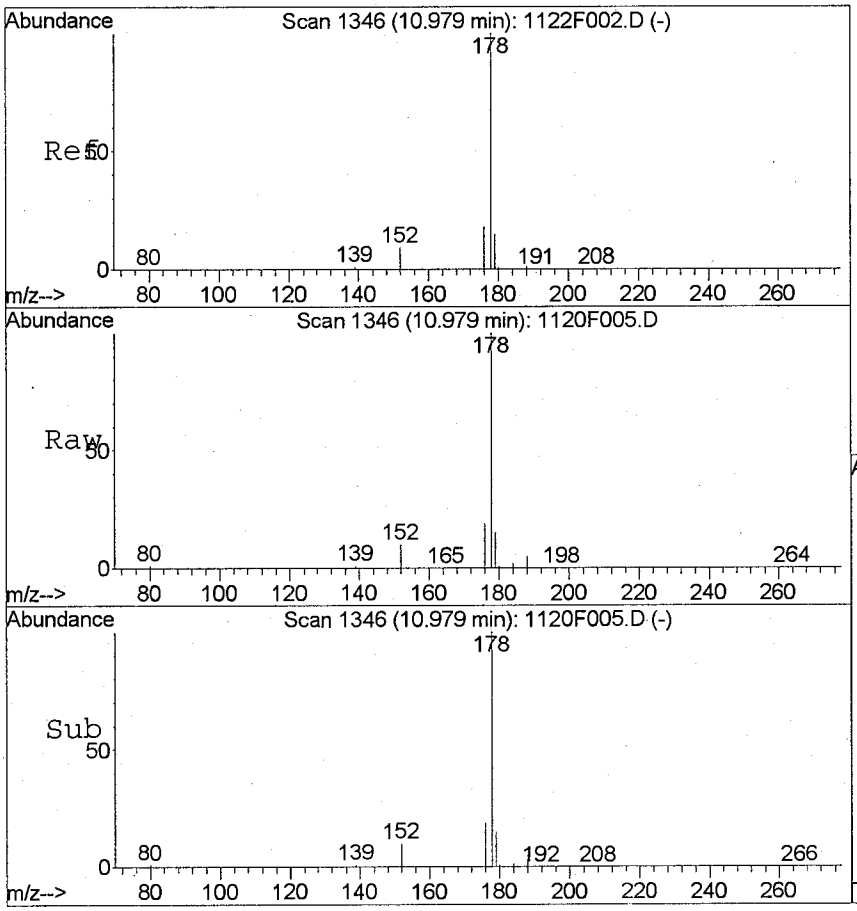


#24
Dibenzothiophene
Concen: 43.61 ng/ml
RT: 10.72 min Scan# 1316
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:184 Resp: 10256

Ion	Ratio	Lower	Upper
184	100		
152	8.2	0.0	39.0

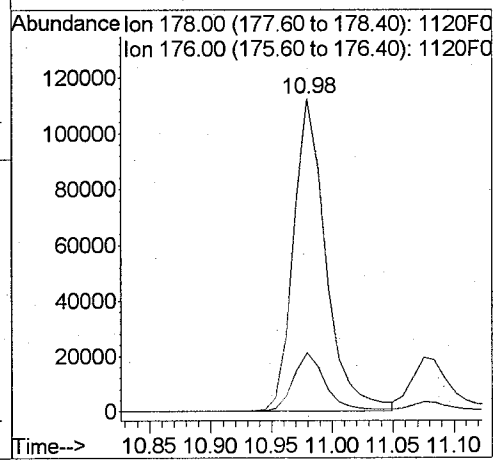


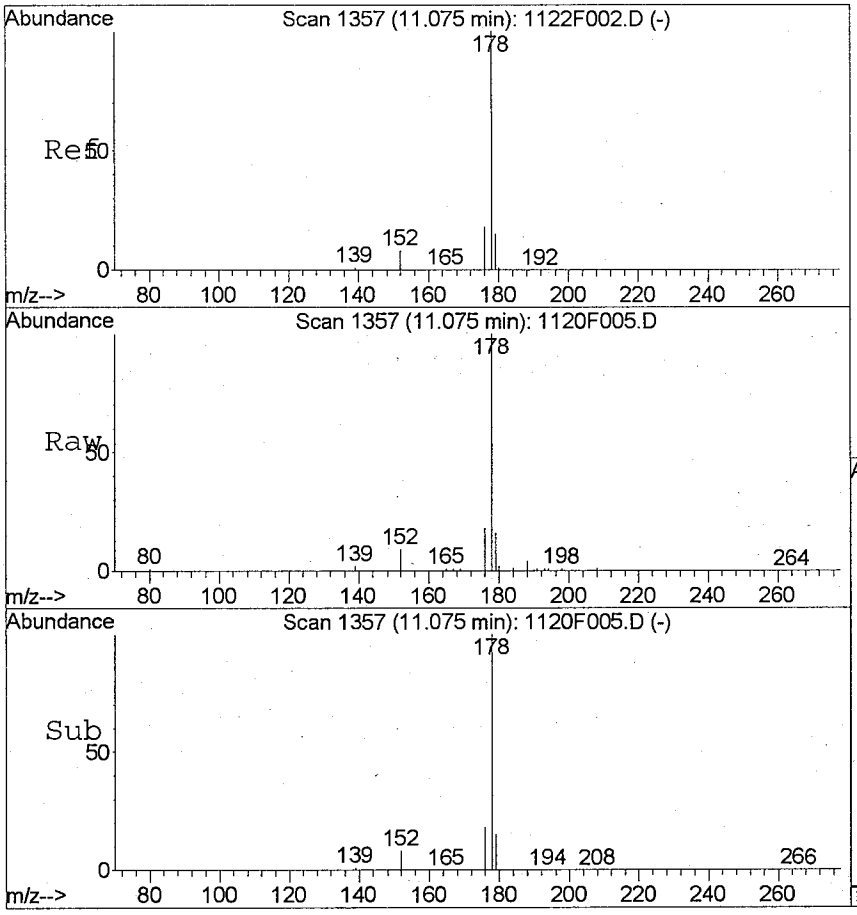


#28
Phenanthrene
Concen: 845.81 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:178 Resp: 208944

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	49.0

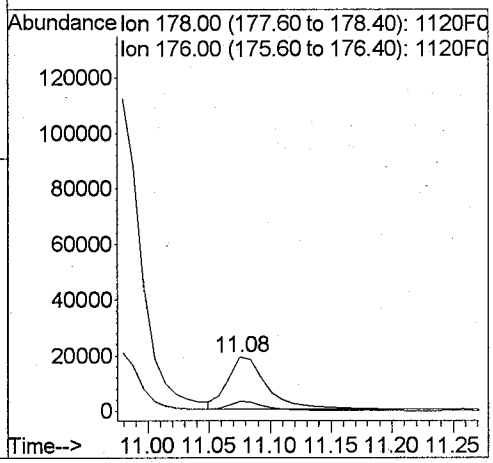


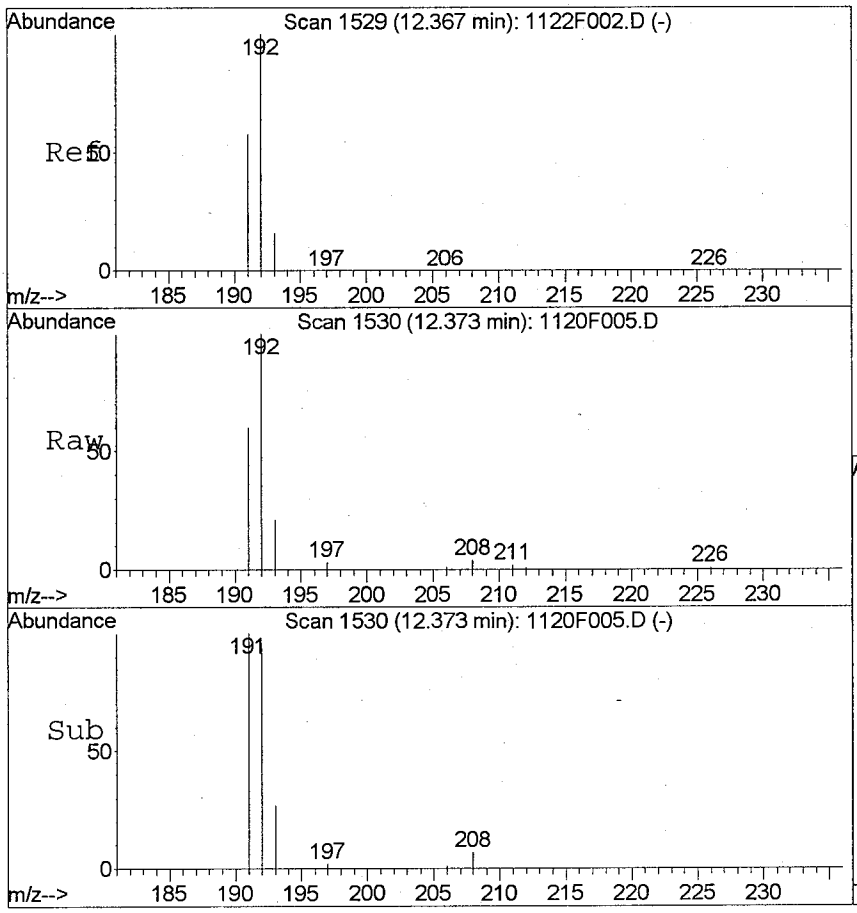


#29
Anthracene
Concen: 195.28 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:178 Resp: 41213

Ion	Ratio	Lower	Upper
178	100		
176	17.6	0.0	47.8

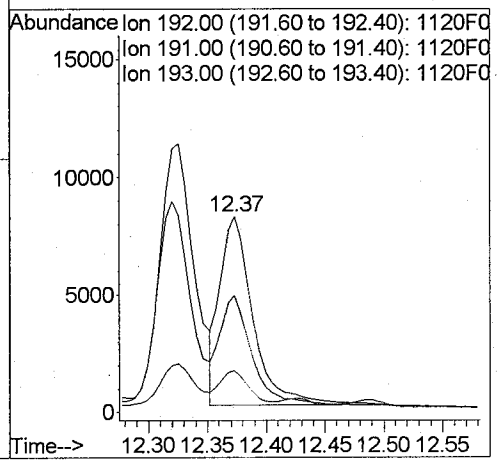


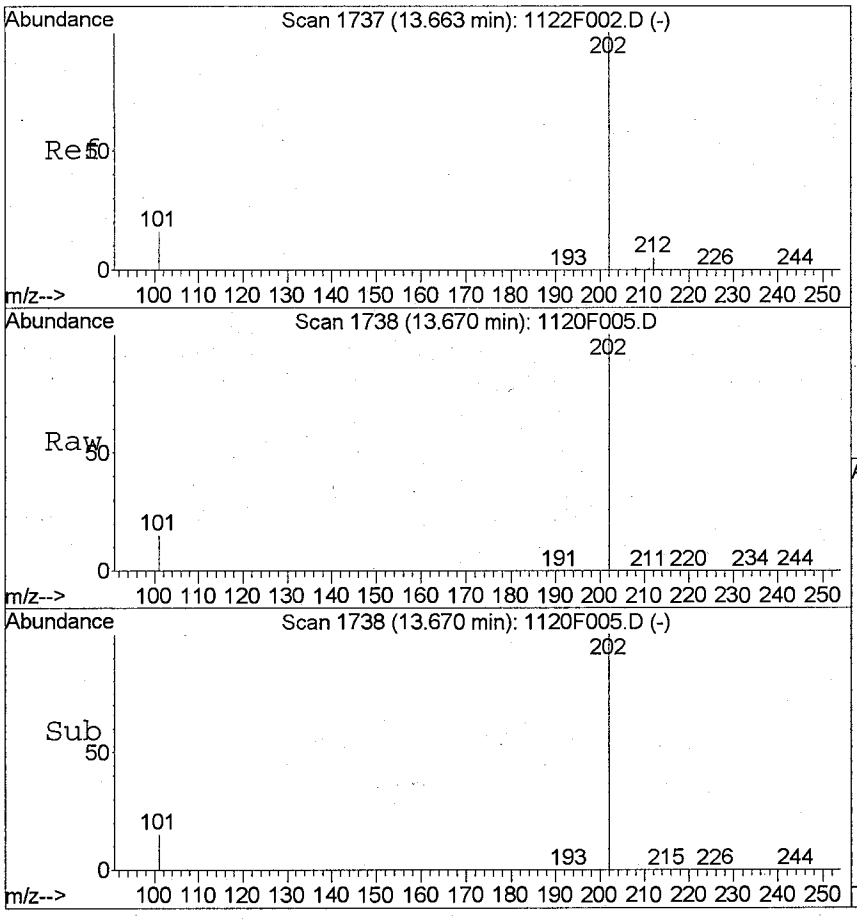


#31
1-Methylphenanthrene
Concen: 94.50 ng/ml
RT: 12.37 min Scan# 1530
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:192 Resp: 15850

Ion	Ratio	Lower	Upper
192	100		
191	58.4	27.0	87.0
193	18.4	0.0	45.8

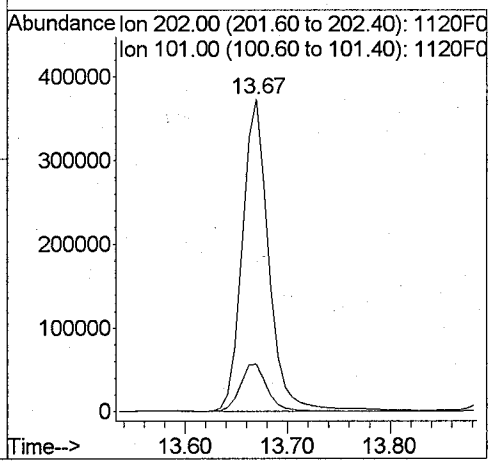


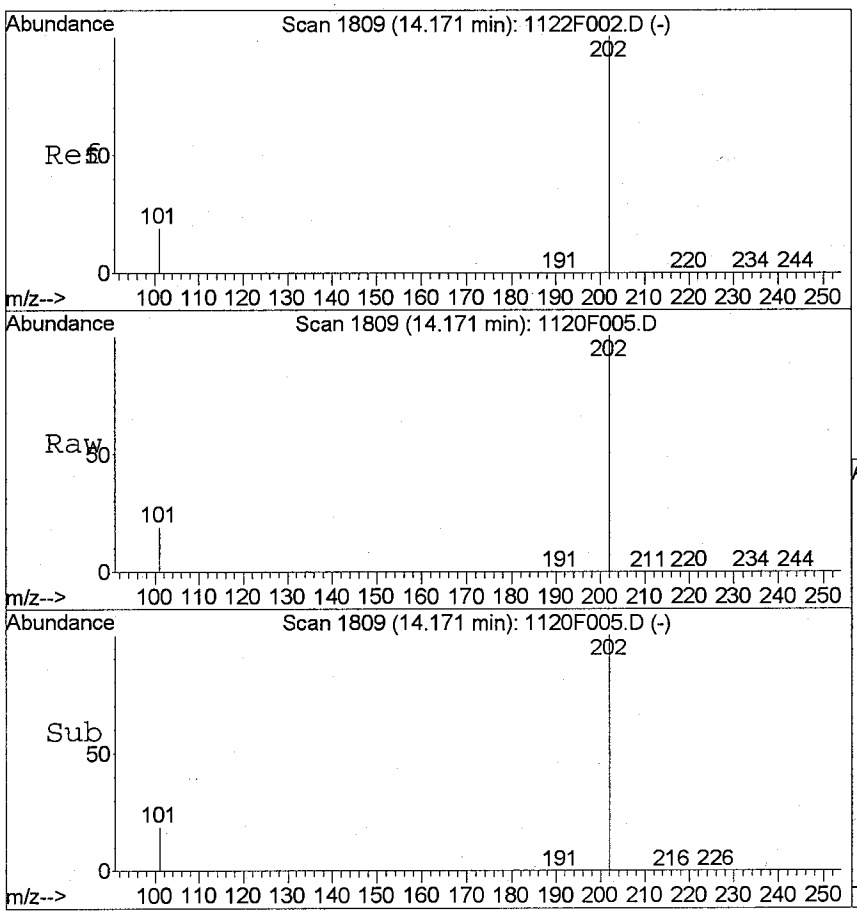


#36
Fluoranthene
Concen: 2717.45 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:202 Resp: 668229

Ion	Ratio	Lower	Upper
202	100		
101	15.1	0.0	46.1

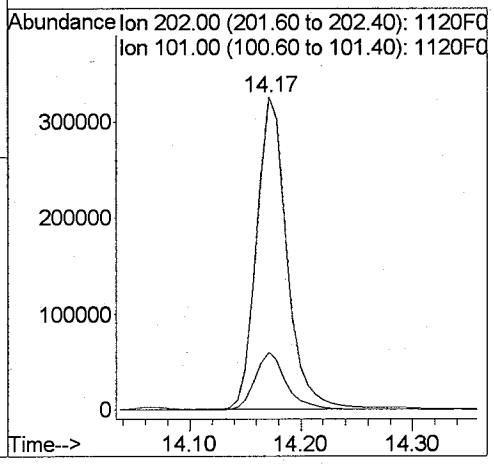


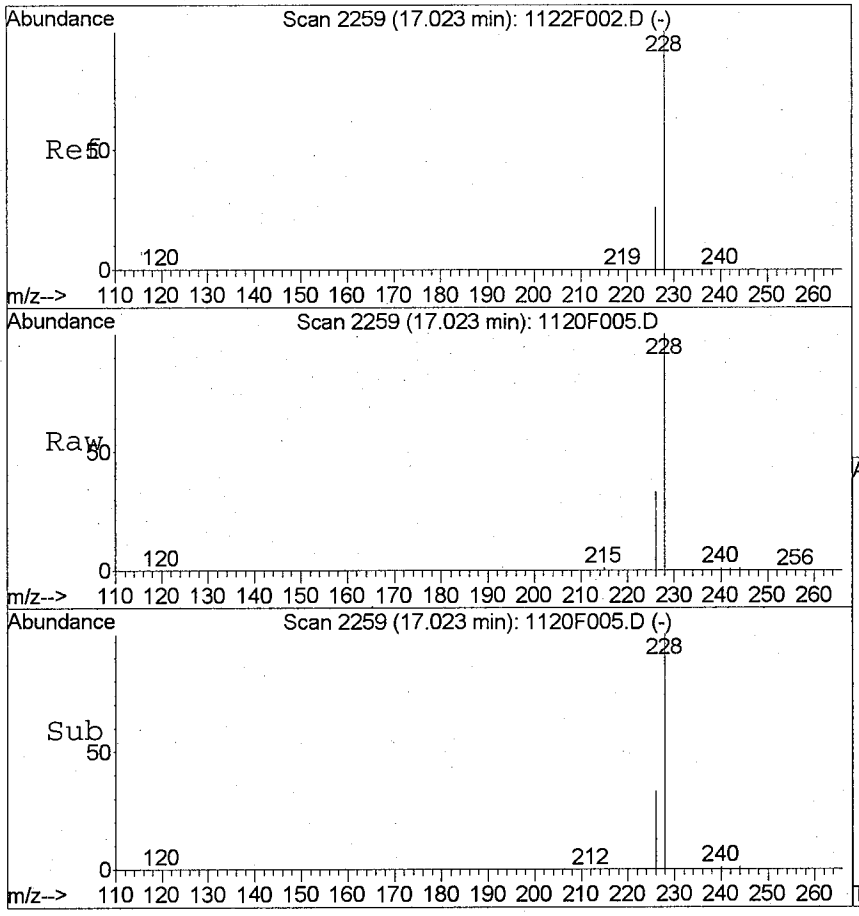


#39
Pyrene
Concen: 1696.58 ng/ml
RT: 14.17 min Scan# 1809
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:202 Resp: 619635

Ion	Ratio	Lower	Upper
202	100		
101	18.6	0.0	47.3

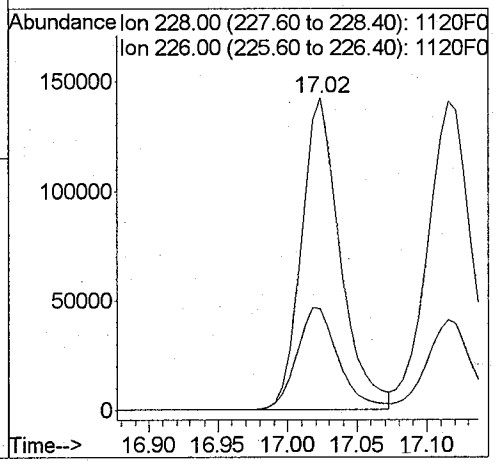


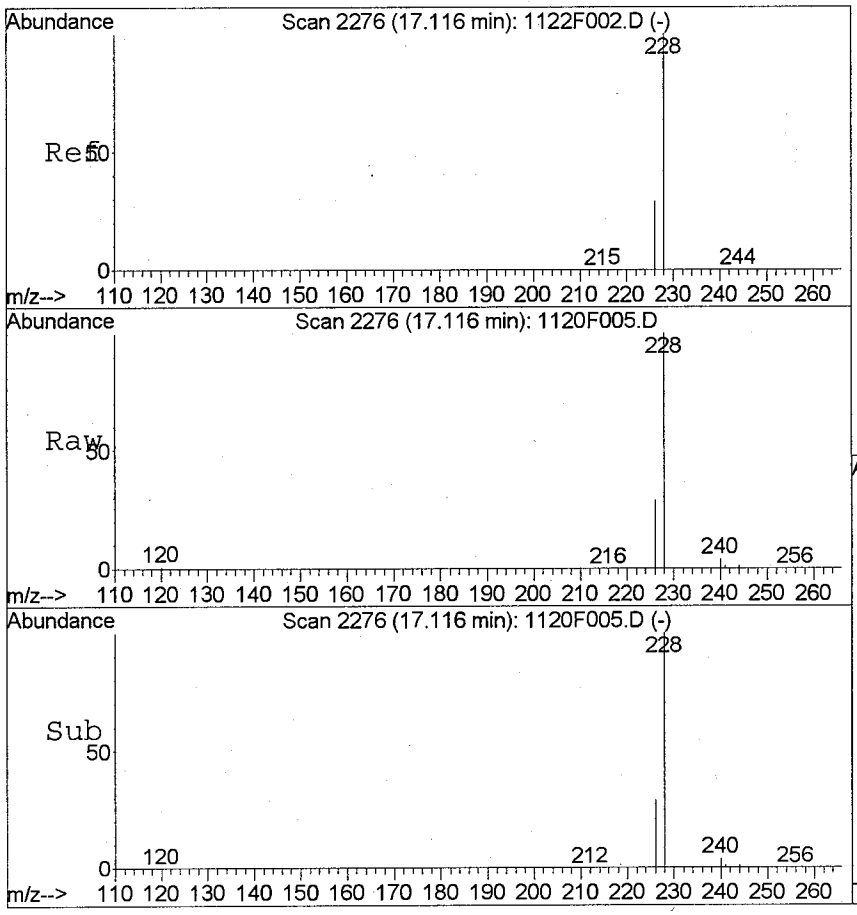


#42
Benz(a)anthracene
Concen: 991.55 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:228 Resp: 275712

Ion	Ratio	Lower	Upper
228	100		
226	32.5	0.0	56.3

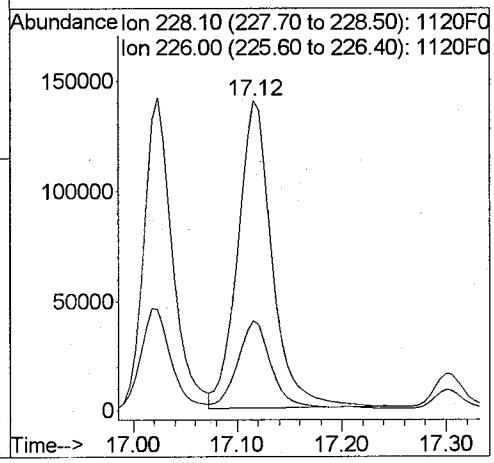


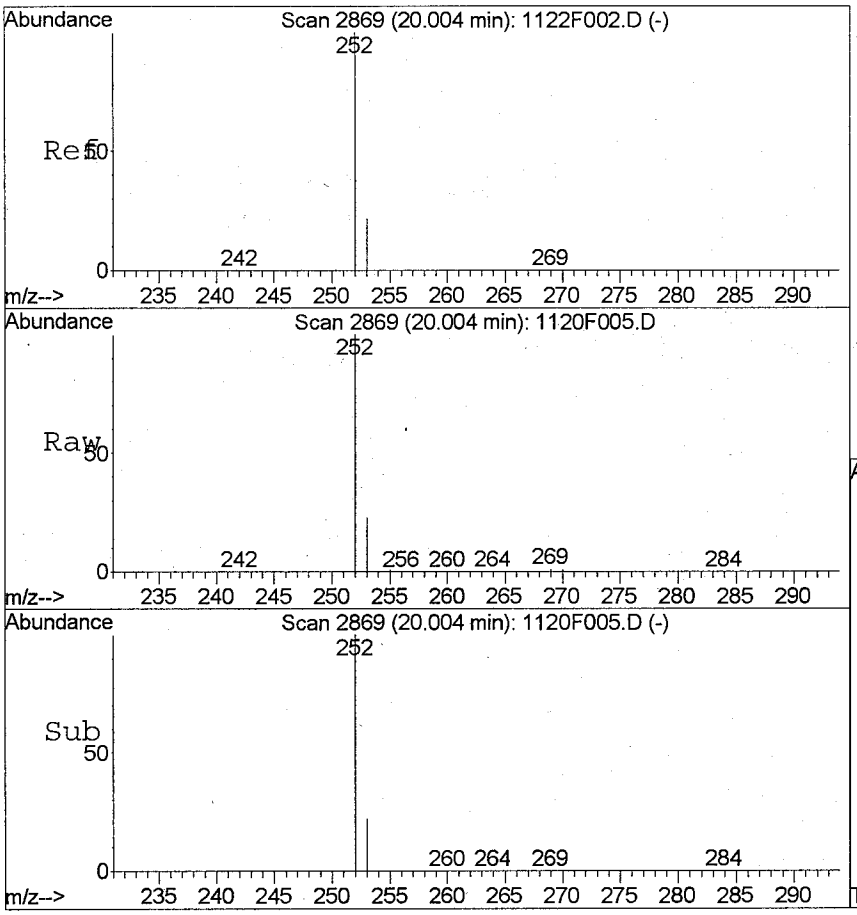


#43
Chrysene
Concen: 1079.25 ng/ml
RT: 17.12 min Scan# 2276
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:228 Resp: 320908

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	58.3

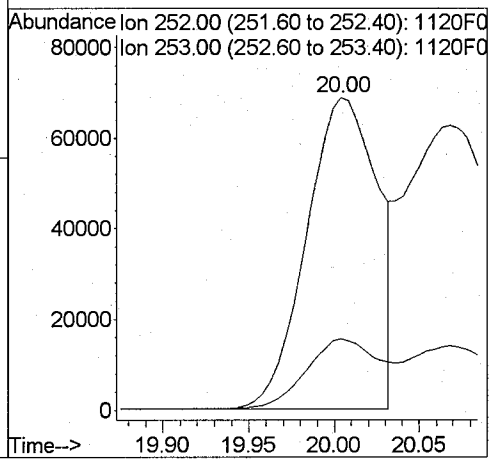


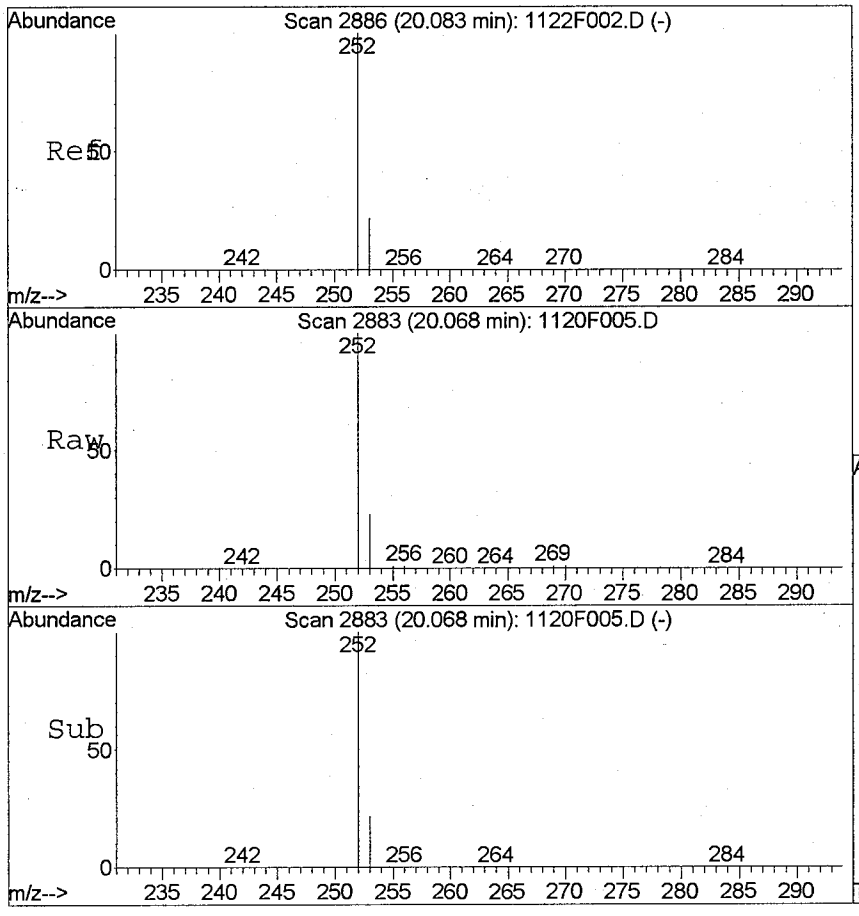


#49
Benzo(b)fluoranthene
Concen: 720.36 ng/ml
RT: 20.00 min Scan# 2869
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:252 Resp: 198696

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.9

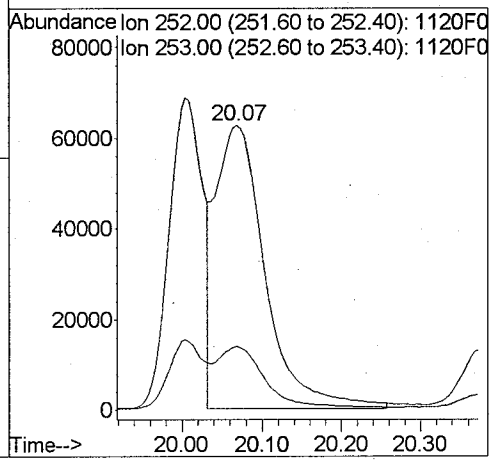


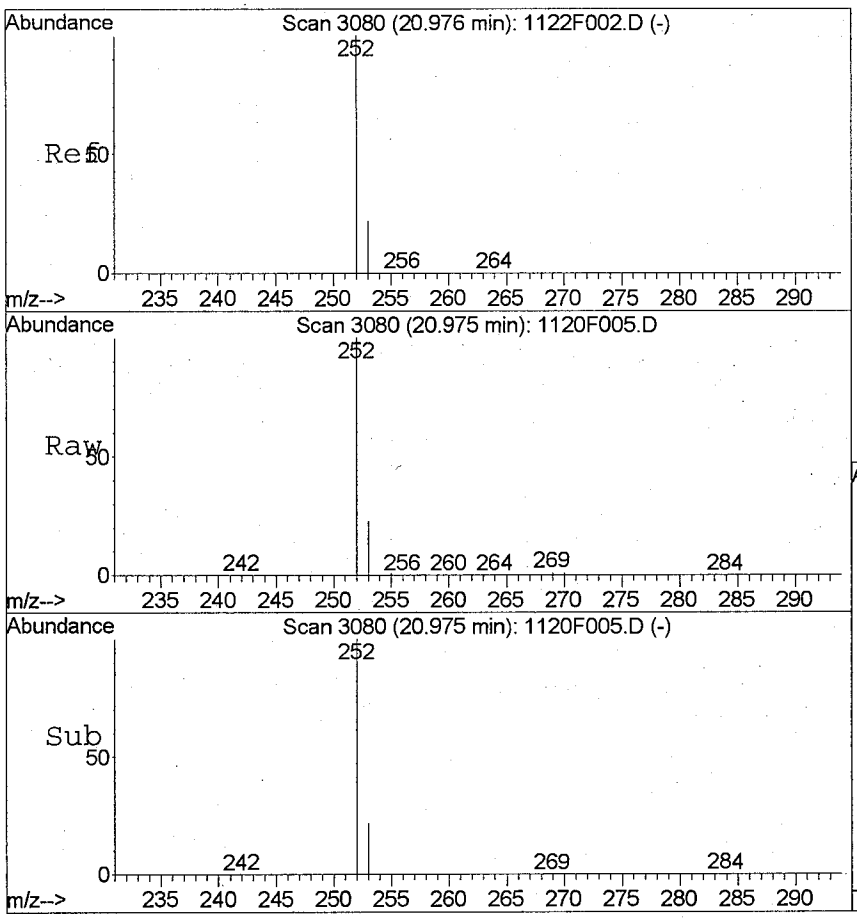


#50
Benzo(k)fluoranthene
Concen: 770.24 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. -0.01 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:252 Resp: 269573

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	52.0

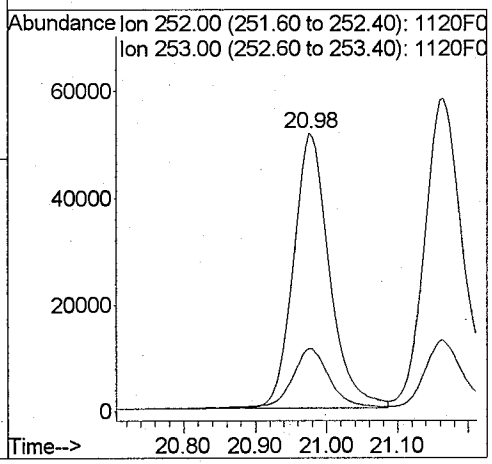


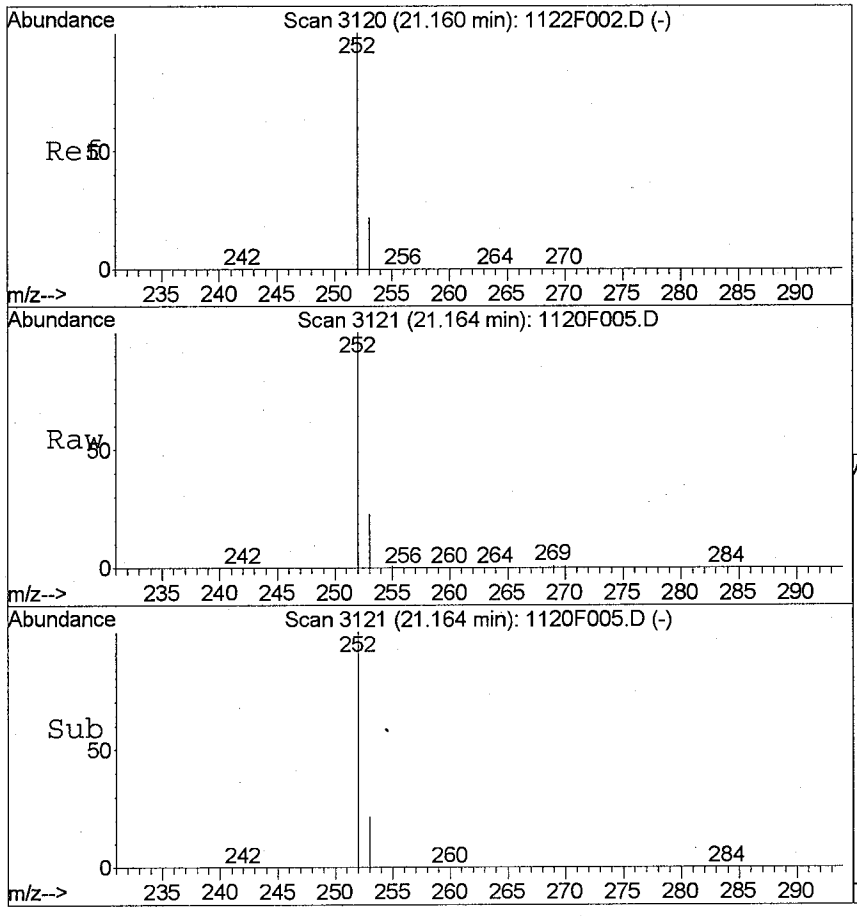


#51
Benzo(e)pyrene
Concen: 586.98 ng/ml
RT: 20.98 min Scan# 3080
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:252 Resp: 181784

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.9

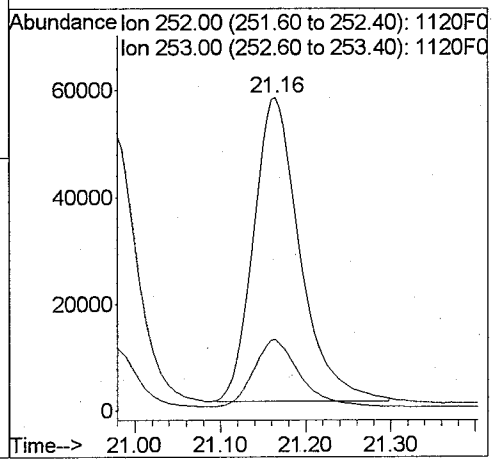


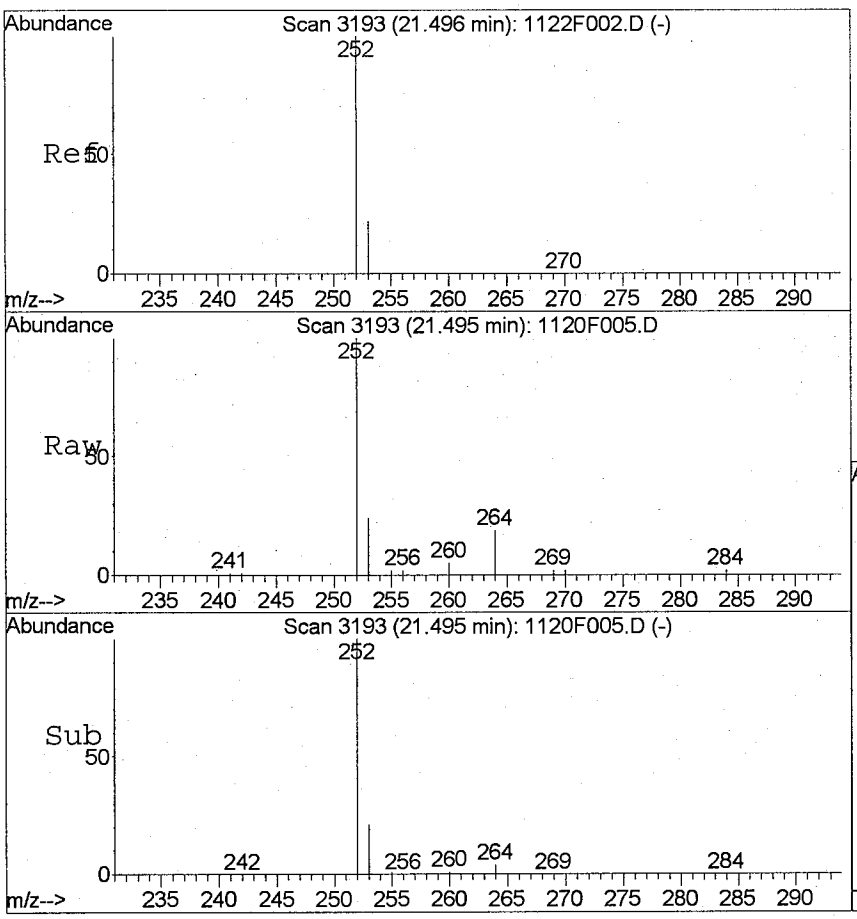


#52
Benzo(a)pyrene
Concen: 920.70 ng/ml
RT: 21.16 min Scan# 3121
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:252 Resp: 216012

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.9

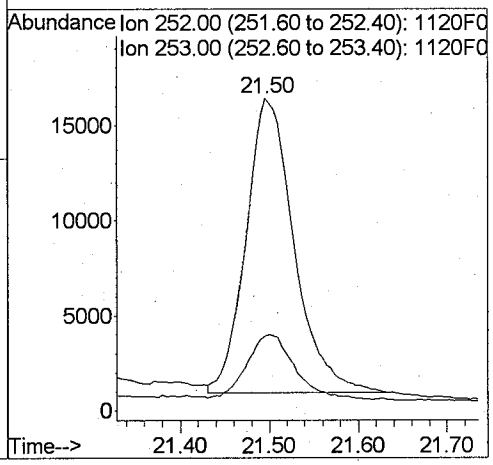


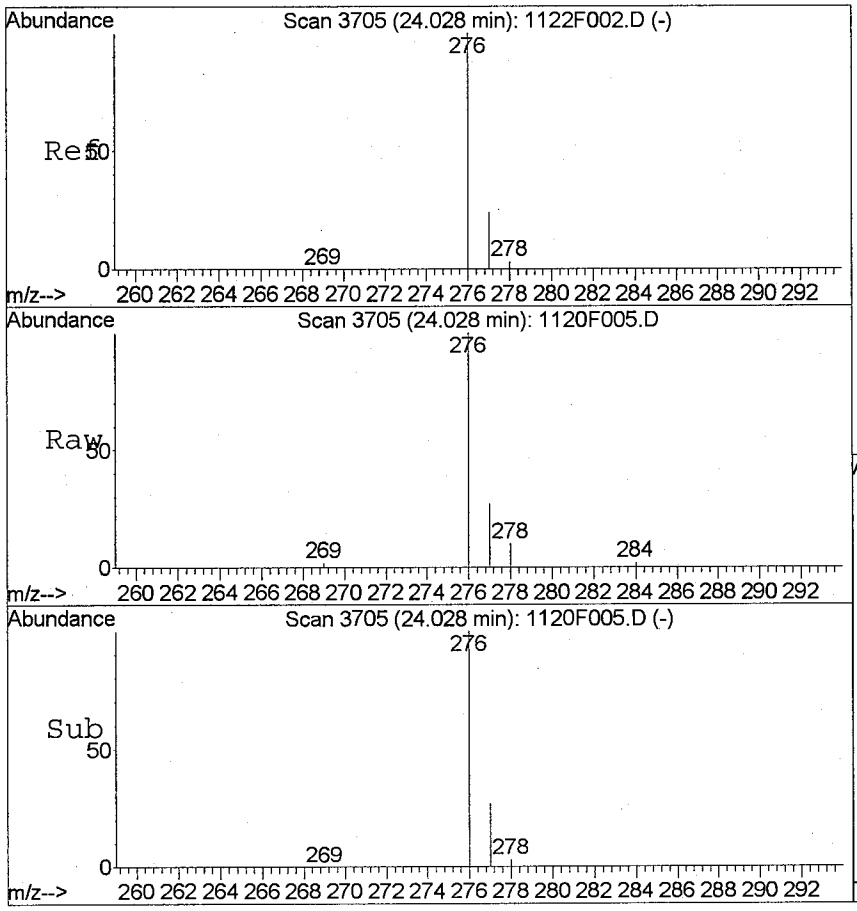


#53
Perylene
Concen: 220.50 ng/ml
RT: 21.50 min Scan# 3193
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:252 Resp: 58073

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.6

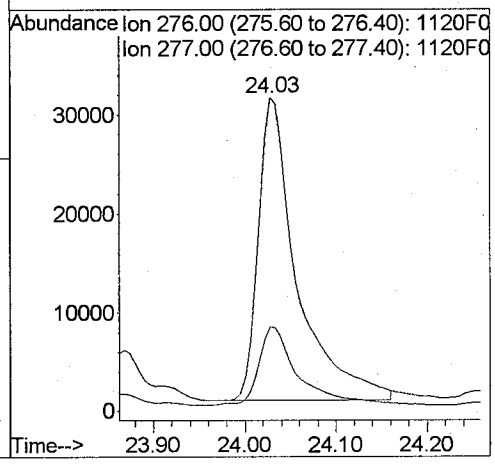


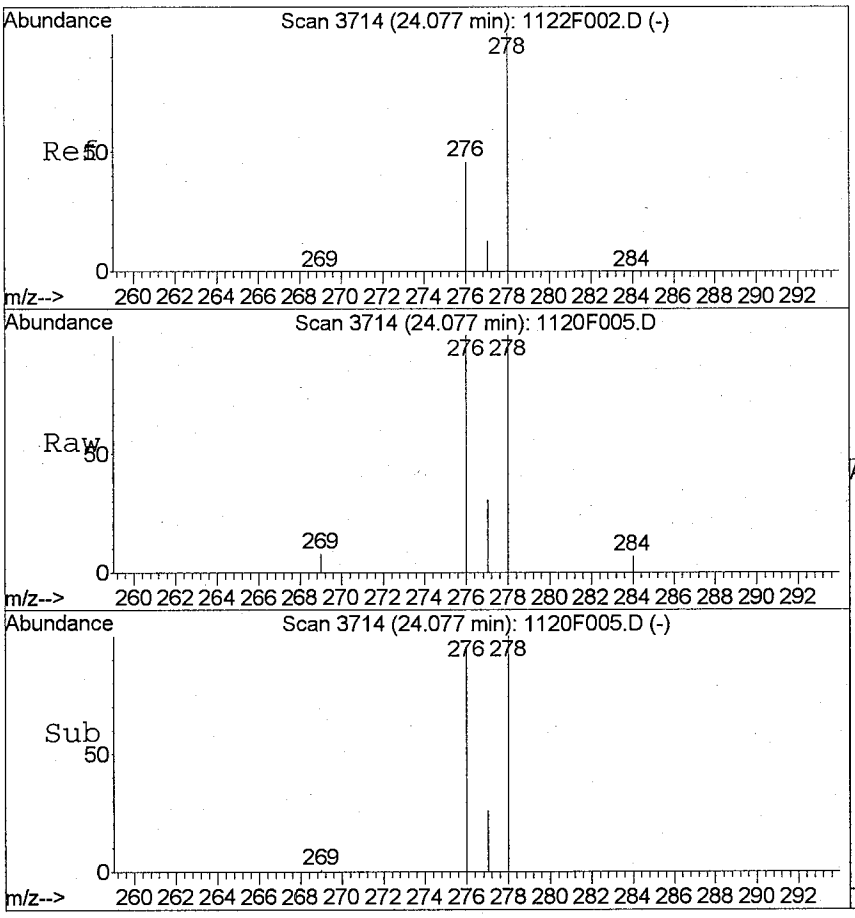


#54
Indeno(1,2,3-cd)pyrene
Concen: 634.87 ng/ml
RT: 24.03 min Scan# 3705
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:276 Resp: 90548

Ion	Ratio	Lower	Upper
276	100		
277	26.1	0.0	53.8

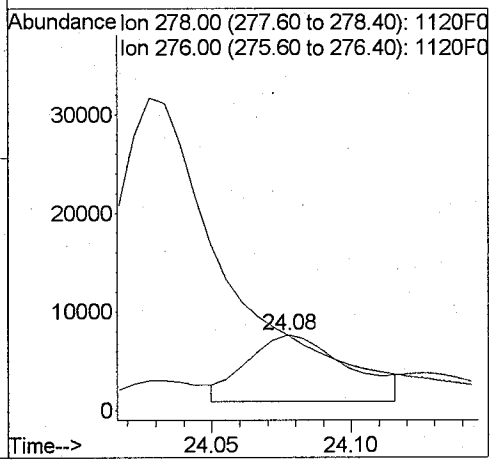


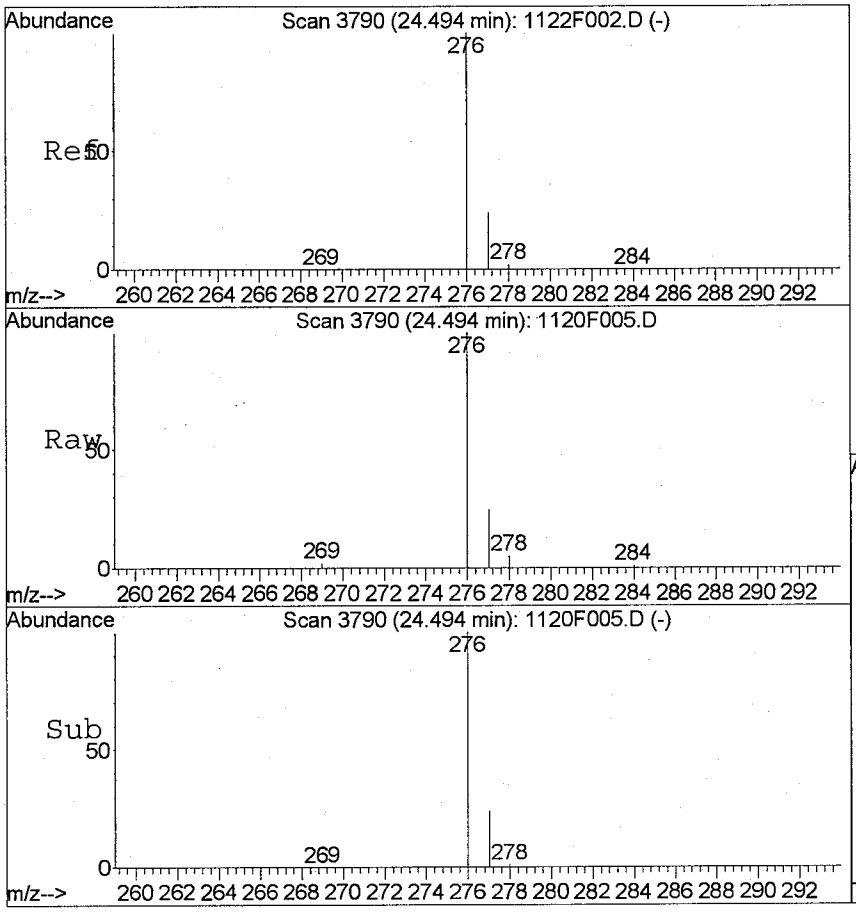


#55
Dibenz(a,h)anthracene
Concen: 82.97 ng/ml m
RT: 24.08 min Scan# 3714
Delta R.T. -0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:278 Resp: 17006

Ion	Ratio	Lower	Upper
278	100		
276	99.6	5.3	65.3#

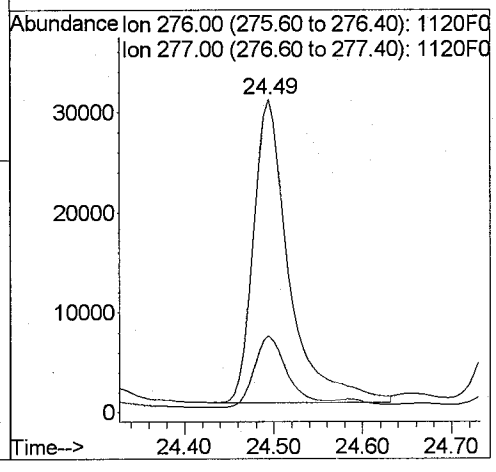




#56
Benzo(g,h,i)perylene
Concen: 357.39 ng/ml
RT: 24.49 min Scan# 3790
Delta R.T. 0.00 min
Lab File: 1120F005.D
Acq: 20 Nov 2003 7:35 am

Tgt Ion:276 Resp: 84507

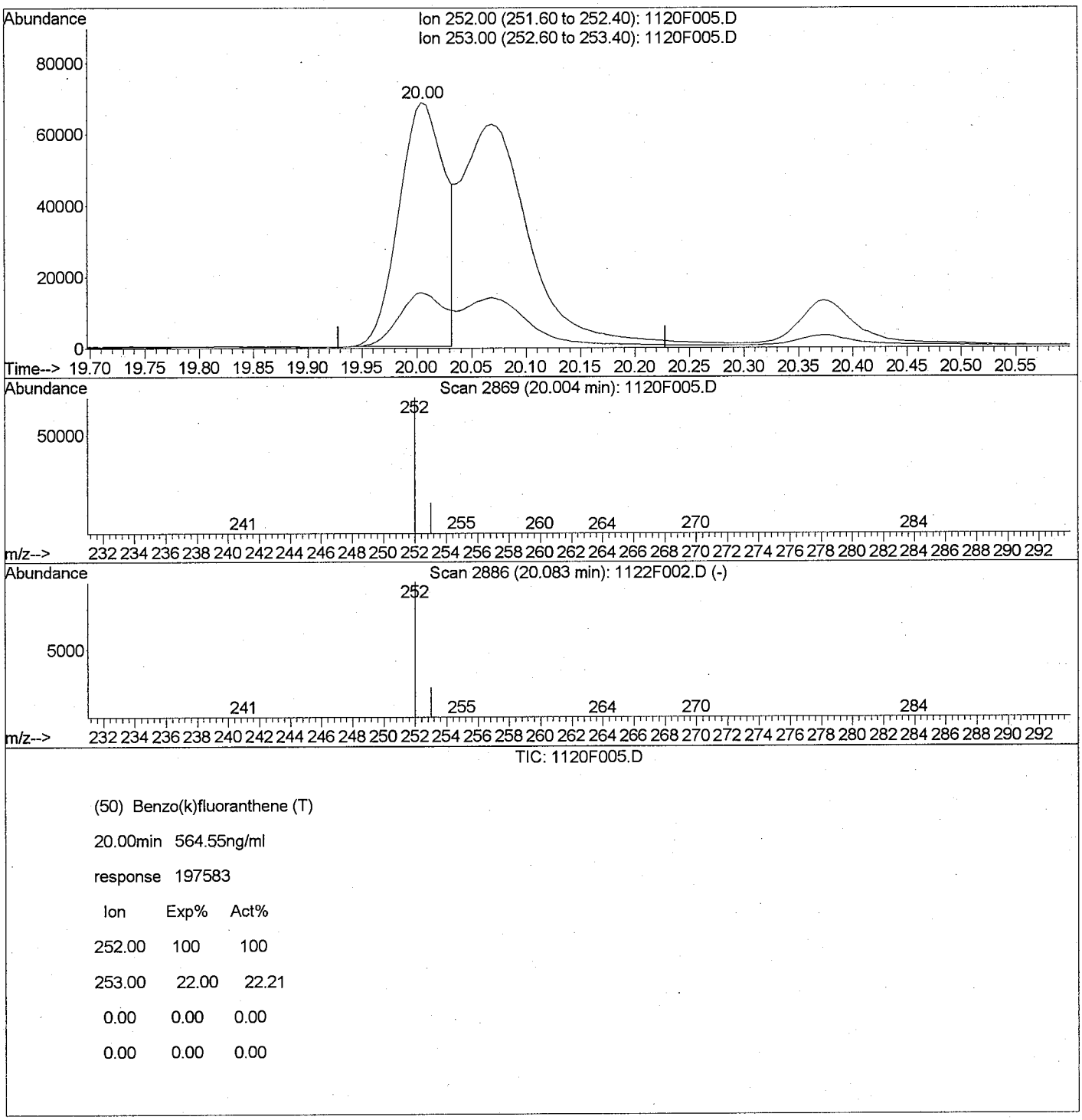
Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.5



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.00min 564.55ng/ml

response 197583

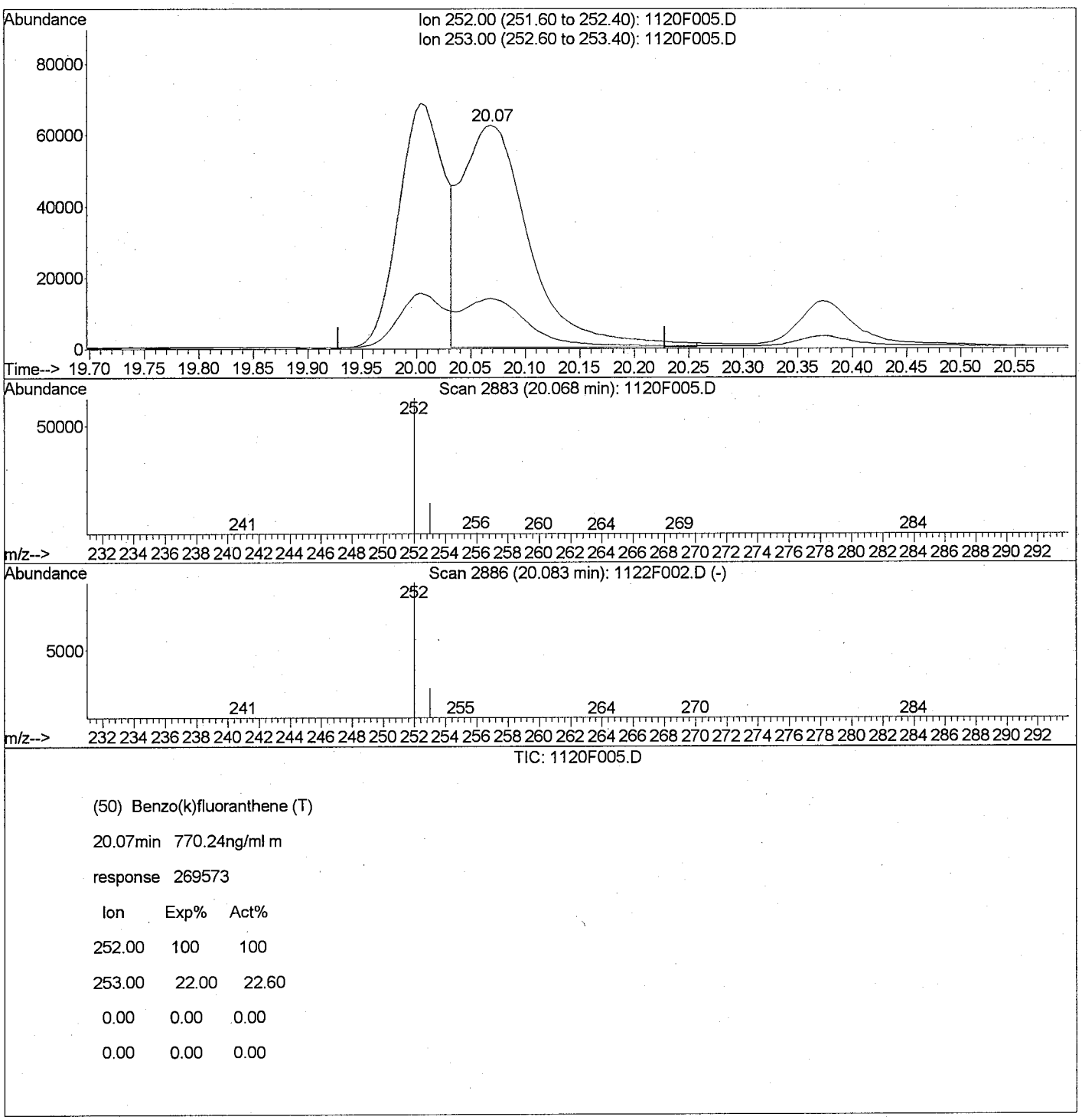
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.21
0.00	0.00	0.00
0.00	0.00	0.00

1120F005.D 1107ALK.M Mon Nov 24 09:14:52 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.07min 770.24ng/ml m

response 269573

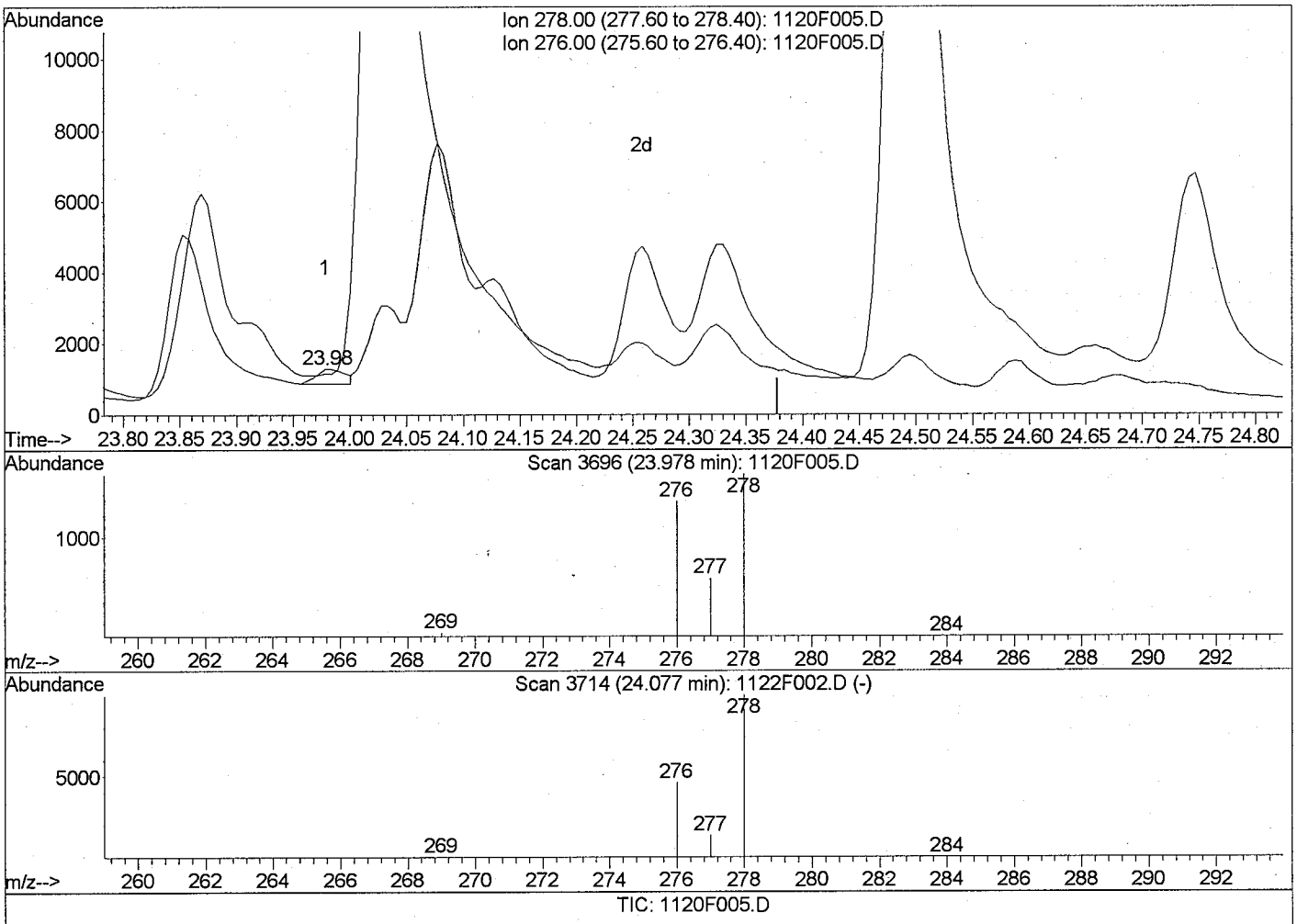
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.60
0.00	0.00	0.00
0.00	0.00	0.00

1120F005.D 1107ALK.M Mon Nov 24 09:15:00 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F005.D

(55) Dibenz(a,h)anthracene (T)

23.98min 3.58ng/ml

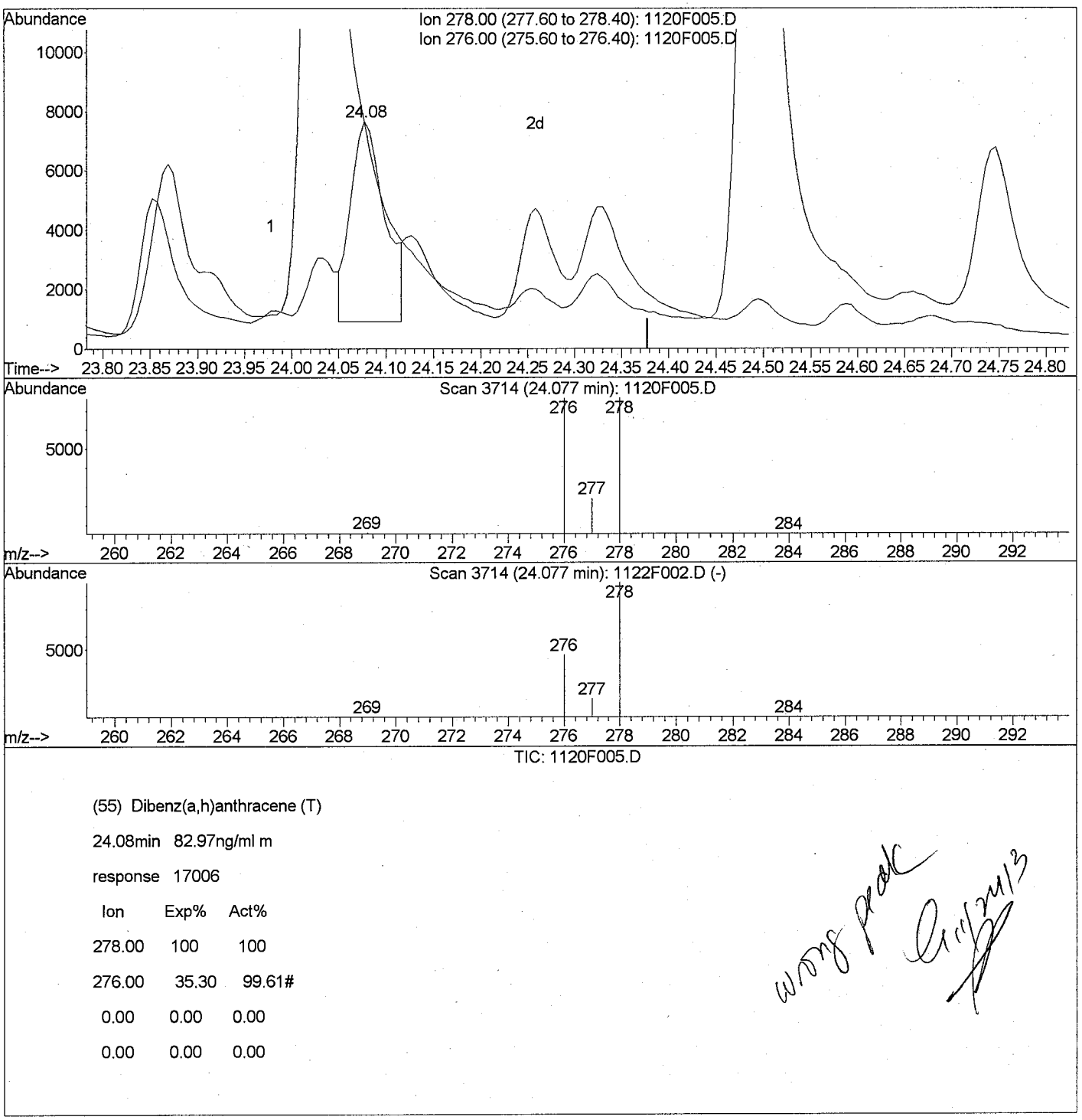
response 733

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	10.95
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F005.D Vial: 2
Acq On : 20 Nov 2003 7:35 am Operator: LWeiskopf
Sample : K2308433-001DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:15 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F005.D

(55) Dibenz(a,h)anthracene (T)

24.08min 82.97ng/ml m

response 17006

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	99.61#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/21/13

1120F005.D 1107ALK.M Mon Nov 24 09:15:15 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-2
Lab Code: K2308433-002

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**58**		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**47**		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**42**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**46**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**24**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**9.7**		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**13**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**19**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**79**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**110**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**110**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**20**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**10**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**14**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**29**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**15**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**21**		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**470**		4.9	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**64**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**100**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**51**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**33**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**22**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**640**		4.9	1	11/05/03	11/19/03	KWG0317778	
Pyrene	**500**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**190**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**240**		4.9	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**310**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**140**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**72**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**51**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**56**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**300**		4.9	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-2
Lab Code: K2308433-002

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**250**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**220**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**290**		4.9	1	11/05/03	11/19/03	KWG0317778	
Perylene	**69**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**320**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**43**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**190**		4.9	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	27-110	11/19/03	Acceptable
Fluoranthene-d10	85	34-122	11/19/03	Acceptable
Terphenyl-d14	92	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F038.D
Lab ID: K2308433-002
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 17:02
Date Quantitated: 11/21/2003 11:21
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Printed: 11/21/2003 13:53:53
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247860	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F038.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 17:02	**Quant Date:**	11/21/2003 11:21	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	228841	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	115391	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	159274	1,000.00	OK
4	Chrysene-d12	17.05	0.01	240	161186	1,000.00	OK
5	Perylene-d12	21.38	0.02	264	110411	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	76163	659.96	66	27-110	OK	
3	Fluoranthene-d10	13.62	0.00	0.00	212	135100	847.48	85	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	135754	924.11	92	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	155978	602.81	58		
1	2-Methylnaphthalene	6.37		0.00	142	74125	485.12	47		
1	1-Methylnaphthalene	6.51		0.00	142	63012	439.96	42		
1	Biphenyl	7.04	0.01	0.00	154	25186	135.94	13		
1	C2-Naphthalenes	7.42	?	?	156	124572m	481.44	46		
1	C3-Naphthalenes	8.94	?	?	170	64945m	250.99	24		
1	C4-Naphthalenes	9.79	?	?	184	26028m	100.59	9.7		
2	Acenaphthylene	7.74	0.01	0.00	152	44635	200.77	19		
2	Acenaphthene	8.06	0.01	0.00	154	162189	1,184	110		
2	Dibenzofuran	8.35	0.01	0.00	168	151817	826.52	79		
2	Fluorene	8.99		0.00	166	165674m	1,129	110		
2	C1-Fluorenes	10.13	?	?	180	30833m	210.06	20		
2	C2-Fluorenes	11.40	?	?	194	15747m	107.28	10		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F038.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 17:02	**Quant Date:**	11/21/2003 11:21	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-002			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	21752**m**	148.19	14		
3	Dibenzothiophene	10.71		0.00	184	56251	306.10	29		
3	C1-Dibenzothiophenes	10.21	?	?	198	9307**m**	50.65	4.9	J	
3	C2-Dibenzothiophenes	12.63	?	?	212	28235**m**	153.65	15		
3	C3-Dibenzothiophenes	14.66	?	?	226	39654**m**	215.79	21		
3	Phenanthrene	10.97		0.00	178	942906	4,885	470		
3	Anthracene	11.07		0.00	178	110044	667.28	64		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	203034**m**	1,052	100		
3	C2-Phenanthrenes/Anthracenes	13.36	?	?	206	101882**m**	527.79	51		
3	C3-Phenanthrenes/Anthracenes	14.44	?	?	220	66053**m**	342.18	33		
3	C4-Phenanthrenes/Anthracenes	15.74	?	?	234	44591**m**	231.00	22		
3	Fluoranthene	13.66	0.01	0.00	202	1270417	6,612	640		
4	Pyrene	14.16		0.00	202	1093394	5,190	500		
4	C1-Fluoranthenes/Pyrenes	15.00	?	?	216	425090**m**	2,018	190		
4	Benz(a)anthracene	17.01		0.00	228	398914	2,487	240		
4	Chrysene	17.11	0.01	0.00	228	550832	3,211	310		
4	C1-Chrysenes	18.04	?	?	242	250848**m**	1,462	140		
4	C2-Chrysenes	19.14	?	?	256	128322**m**	748.12	72		
4	C3-Chrysenes	22.27	?	?	270	91648**m**	534.31	51		
4	C4-Chrysenes	23.71	?	?	284	99535**m**	580.29	56		
5	Benzo(b)fluoranthene	19.99	0.02	0.00	252	461426	3,130	300		
5	Benzo(k)fluoranthene	20.05		0.00	252	488563**m**	2,612	250		
5	Benzo(e)pyrene	20.95	0.02	0.00	252	372560	2,251	220		
5	Benzo(a)pyrene	21.14	0.02	0.00	252	379009	3,023	290		
5	Perylene	21.47	0.02	0.00	252	101619	722.02	69		
5	Indeno(1,2,3-cd)pyrene	24.02	0.02	0.00	276	253624	3,328	320		
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	48564**m**	443.36	43		
5	Benzo(g,h,i)perylene	24.48	0.02	0.00	276	252308	1,997	190		

Prep Amount:	26.9 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	77.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:06 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	228841	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	115391	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	159274	1000.00	ng/ml	0.00
38) Chrysene-d12	17.05	240	161186	1000.00	ng/ml	0.00
48) Perylene-d12	21.38	264	110411	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	69783	416.28	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	41.63%		
16) Fluorene-d10	8.94	176	76163	659.96	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	66.00%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.62	212	135100	847.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	84.75%		
41) Terphenyl-d14	14.66	244	135754	924.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	92.41%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	155978	602.81	ng/ml	100
3) 2-Methylnaphthalene	6.37	142	74125	485.12	ng/ml	98
4) 1-Methylnaphthalene	6.51	142	63012	439.96	ng/ml	99
6) Biphenyl	7.04	154	25186	135.94	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.27	156	29867	229.17	ng/ml	99
8) C2-Naphthalenes	7.42	156	124572m	481.44	ng/ml	
9) C3-Naphthalenes	8.94	170	64945m	250.99	ng/ml	
10) C4-Naphthalenes	9.79	184	26028m	100.59	ng/ml	
12) Acenaphthylene	7.74	152	44635	200.77	ng/ml	100
13) Acenaphthene	8.06	154	162189	1183.68	ng/ml	99
14) Dibenzofuran	8.35	168	151817	826.52	ng/ml	99
15) 2,3,5-Trimethylnaphthalene	8.76	170	5624	45.82	ng/ml	100
17) Fluorene	8.99	166	165674m	1128.72	ng/ml	
18) C1-Fluorenes	10.13	180	30833m	210.06	ng/ml	
19) C2-Fluorenes	11.40	194	15747m	107.28	ng/ml	
20) C3-Fluorenes	12.76	208	21752m	148.19	ng/ml	
24) Dibenzothiophene	10.71	184	56251	306.10	ng/ml	98
25) C1-Dibenzothiophenes	10.21	198	9307m	50.65	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	28235m	153.65	ng/ml	
27) C3-Dibenzothiophenes	14.66	226	39654m	215.79	ng/ml	
28) Phenanthrene	10.97	178	942906	4884.62	ng/ml	100
29) Anthracene	11.07	178	110044	667.28	ng/ml	99
30) Carbazole	11.50	167	2439	18.71	ng/ml	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:06 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

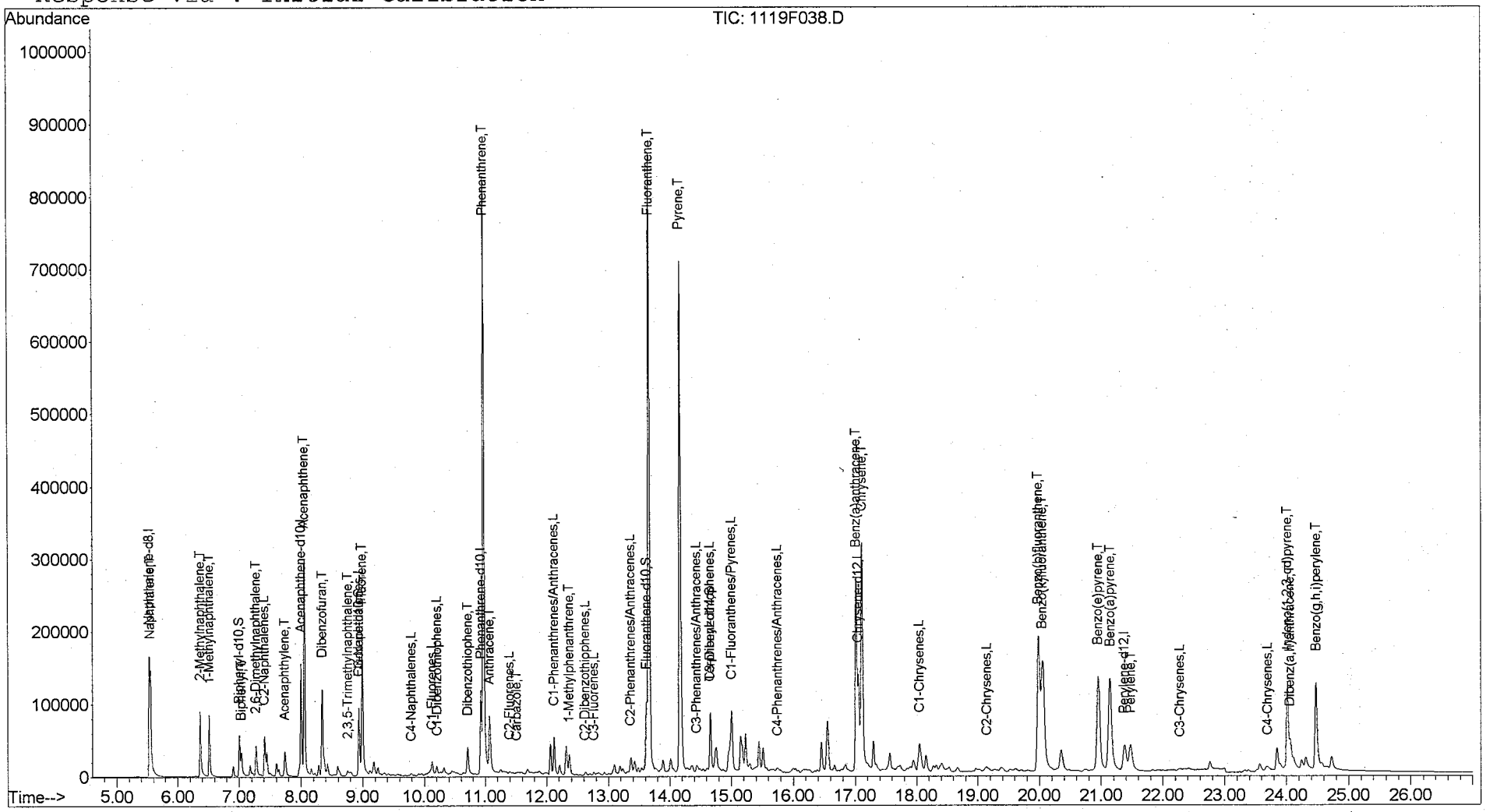
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	30779	234.84	ng/ml	98
32)	C1-Phenanthrenes/Anthracen	12.12	192	203034m	1051.79	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.36	206	101882m	527.79	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.44	220	66053m	342.18	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.74	234	44591m	231.00	ng/ml	
36)	Fluoranthene	13.66	202	1270417	6611.55	ng/ml	100
39)	Pyrene	14.16	202	1093394	5189.76	ng/ml	97
40)	C1-Fluoranthenes/Pyrenes	15.00	216	425090m	2017.67	ng/ml	
42)	Benz(a)anthracene	17.01	228	398914	2486.95	ng/ml	93
43)	Chrysene	17.11	228	550832	3211.38	ng/ml	99
44)	C1-Chrysenes	18.04	242	250848m	1462.46	ng/ml	
45)	C2-Chrysenes	19.14	256	128322m	748.12	ng/ml	
46)	C3-Chrysenes	22.27	270	91648m	534.31	ng/ml	
47)	C4-Chrysenes	23.71	284	99535m	580.29	ng/ml	
49)	Benzo(b)fluoranthene	19.99	252	461426	3130.38	ng/ml	100
50)	Benzo(k)fluoranthene	20.05	252	488563m	2612.19	ng/ml	
51)	Benzo(e)pyrene	20.95	252	372560	2251.10	ng/ml	100
52)	Benzo(a)pyrene	21.14	252	379009	3022.90	ng/ml	99
53)	Perylene	21.47	252	101619	722.02	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.02	276	253624	3327.58	ng/ml	94
55)	Dibenz(a,h)anthracene	24.07	278	48564m	443.36	ng/ml	
56)	Benzo(g,h,i)perylene	24.48	276	252308	1996.70	ng/ml	100

(#) = qualifier out of range (m) = manual integration

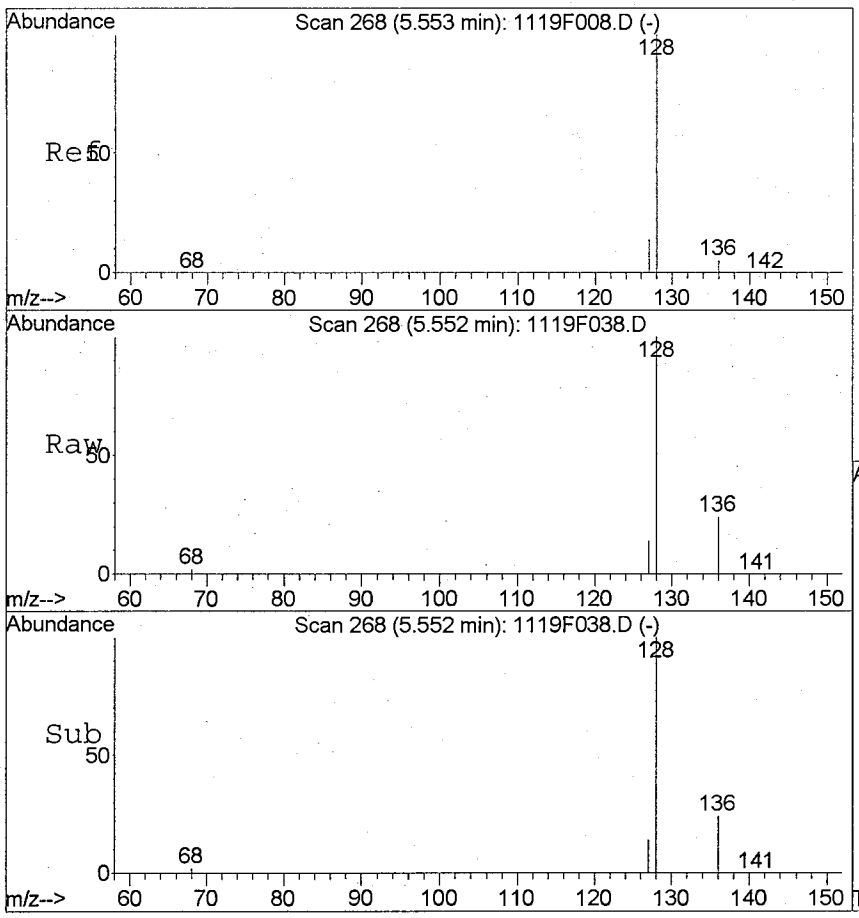
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:21 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



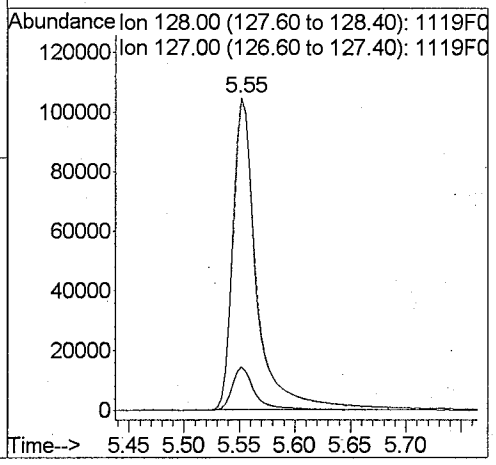
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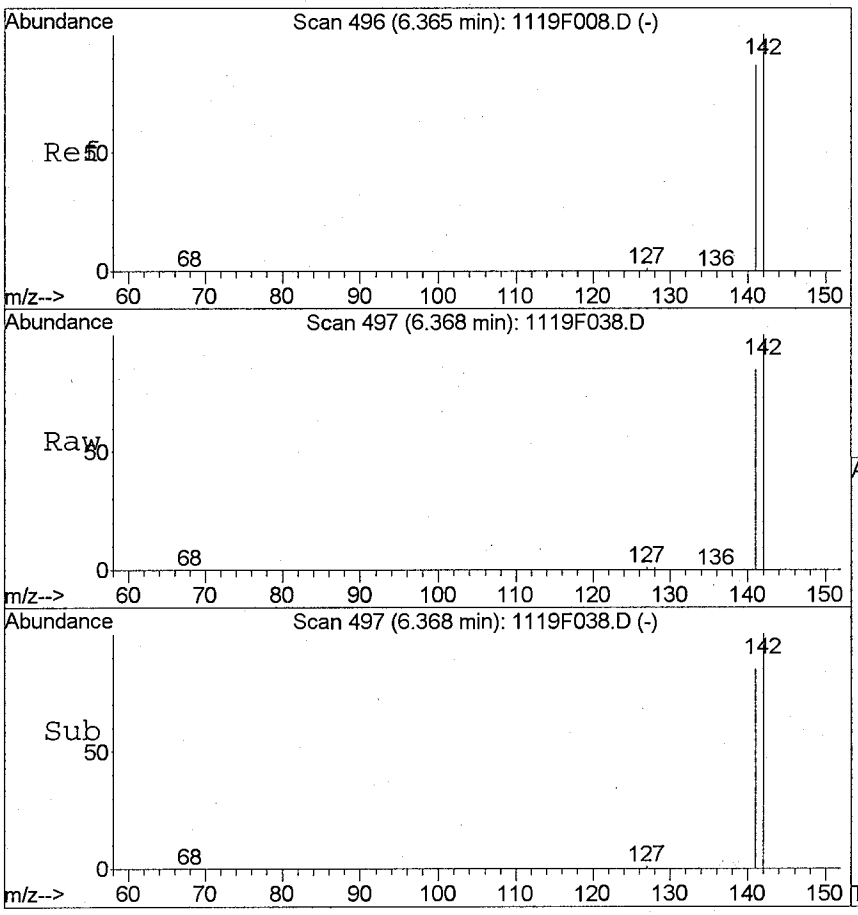


#2
Naphthalene
Concen: 602.81 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. -0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:128 Resp: 155978

Ion	Ratio	Lower	Upper
128	100		
127	13.8	0.0	43.8

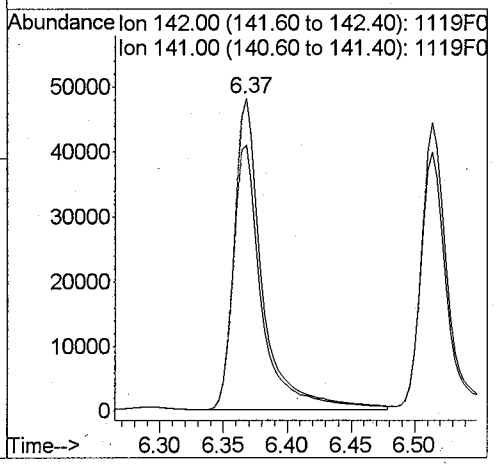


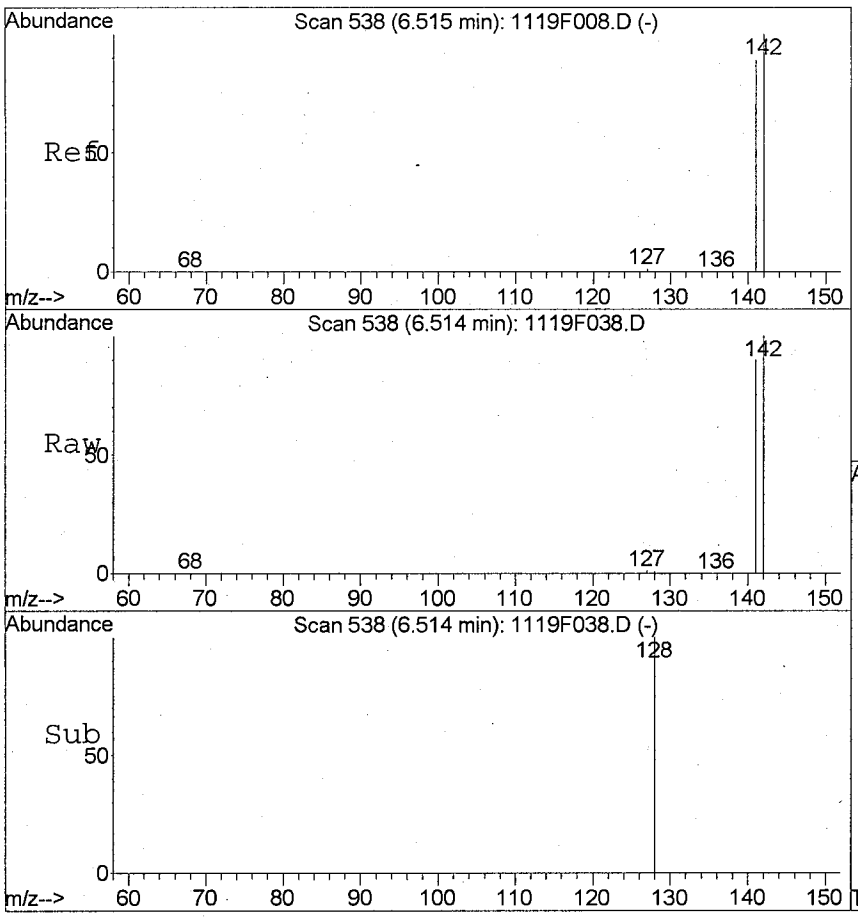


#3
2-Methylnaphthalene
Concen: 485.12 ng/ml
RT: 6.37 min Scan# 497
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:142 Resp: 74125

Ion	Ratio	Lower	Upper
142	100		
141	84.9	57.2	117.2

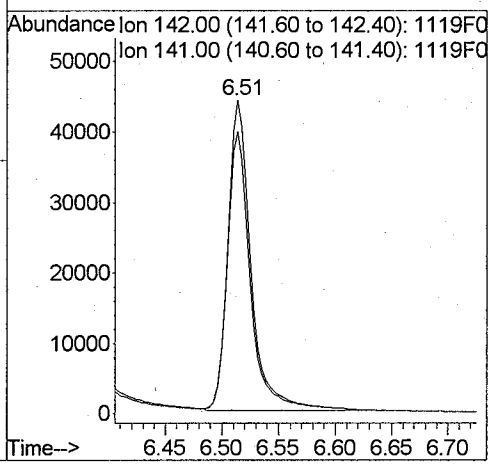


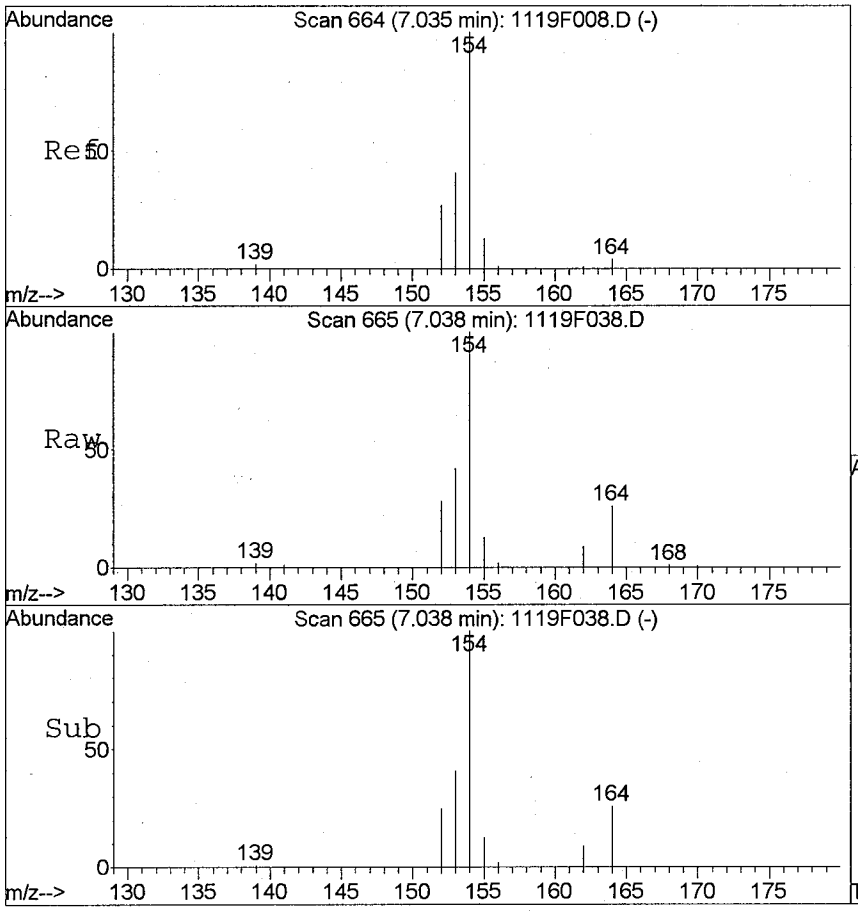


#4
1-Methylnaphthalene
Concen: 439.96 ng/ml
RT: 6.51 min Scan# 538
Delta R.T. -0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:142 Resp: 63012

Ion	Ratio	Lower	Upper
142	100		
141	89.7	58.5	118.5

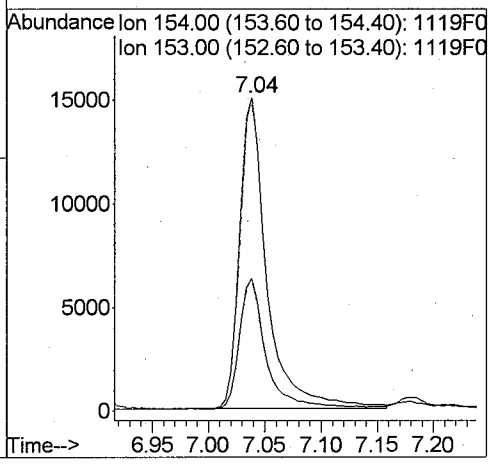


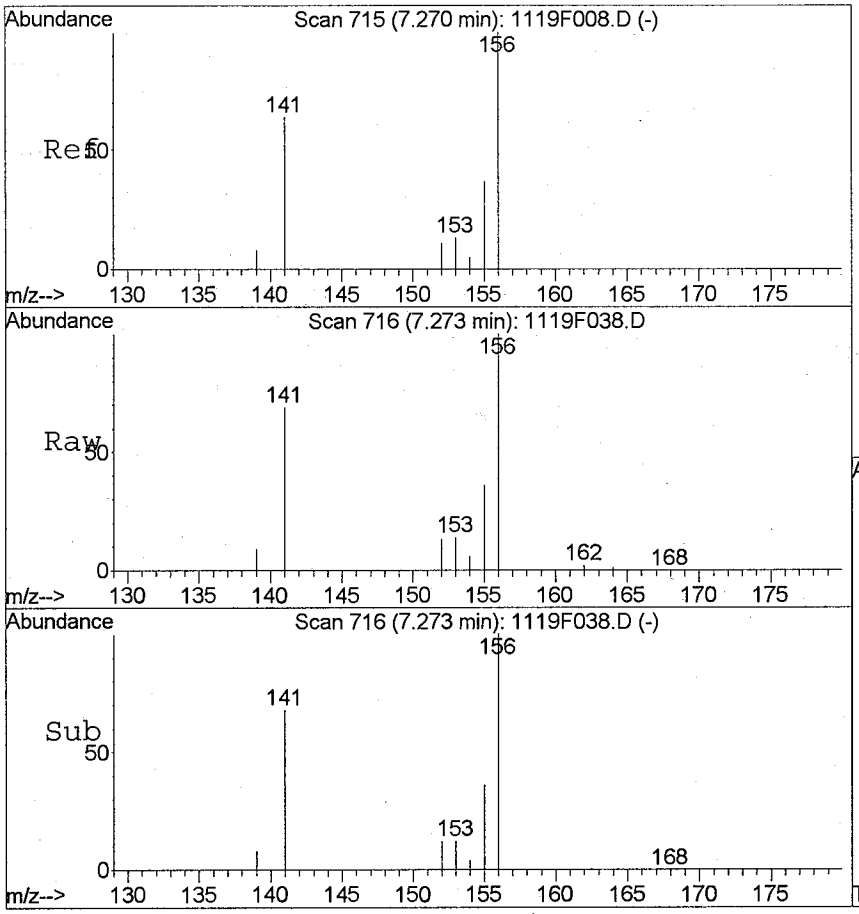


#6
Biphenyl
Concen: 135.94 ng/ml
RT: 7.04 min Scan# 665
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:154 Resp: 25186

Ion	Ratio	Lower	Upper
154	100		
153	41.9	11.3	71.3

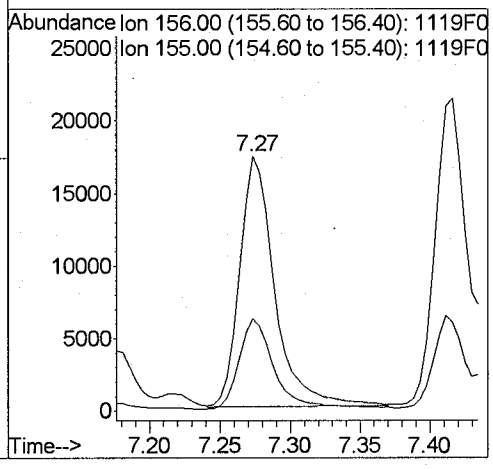


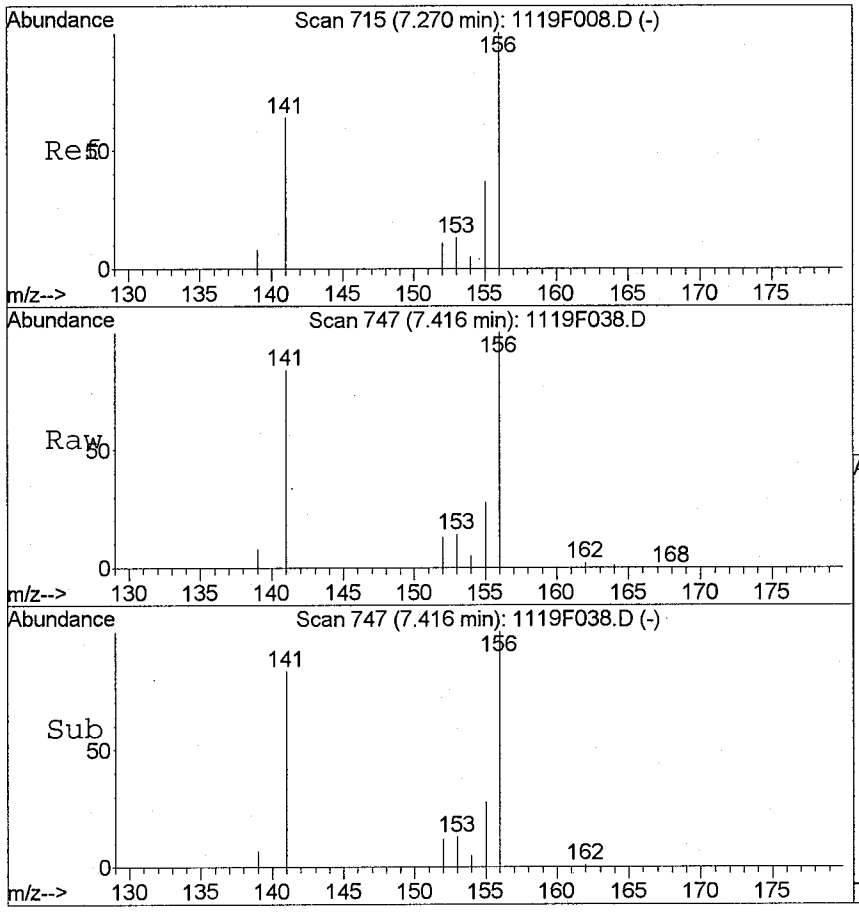


#7
2,6-Dimethylnaphthalene
Concen: 229.17 ng/ml
RT: 7.27 min Scan# 716
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:156 Resp: 29867

Ion	Ratio	Lower	Upper
156	100		
155	36.1	6.9	66.9

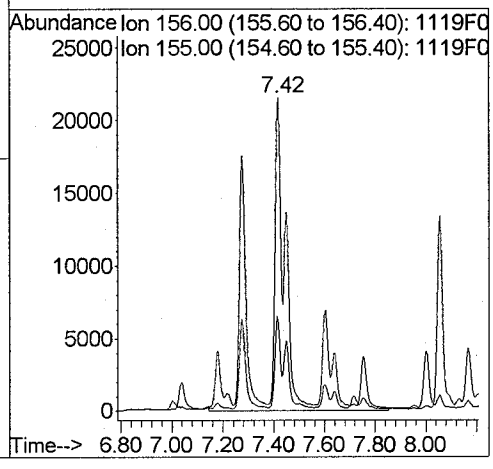


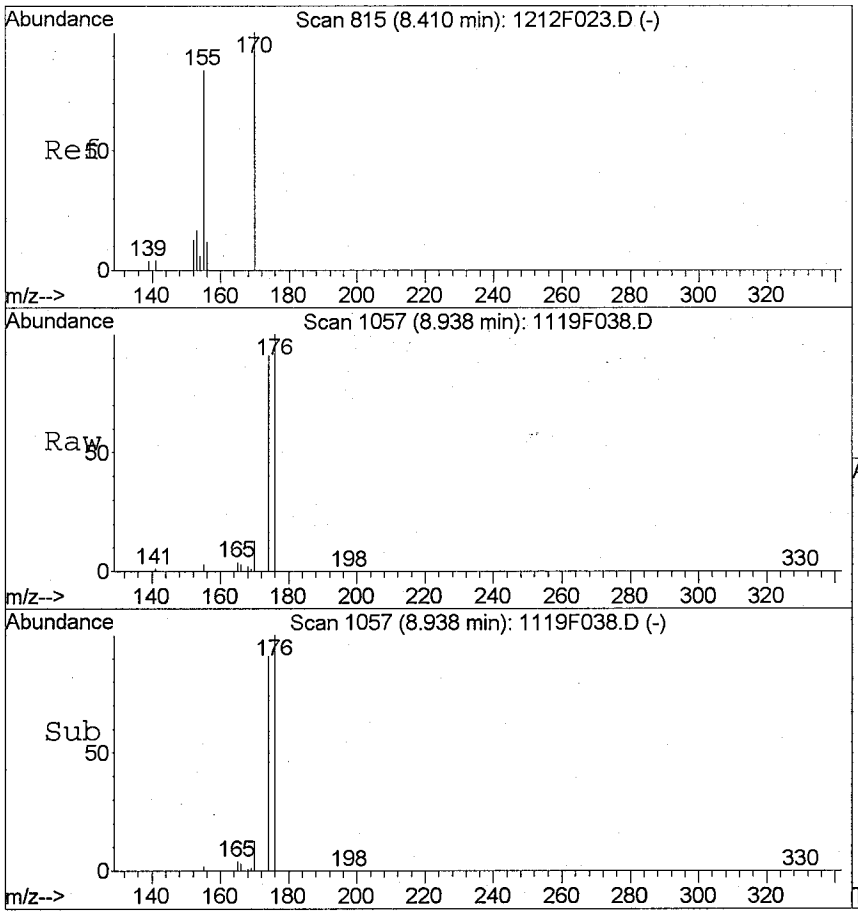


#8
C2-Naphthalenes
Concen: 481.44 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:156 Resp: 124572

Ion	Ratio	Lower	Upper
156	100		
155	28.4	8.3	68.3

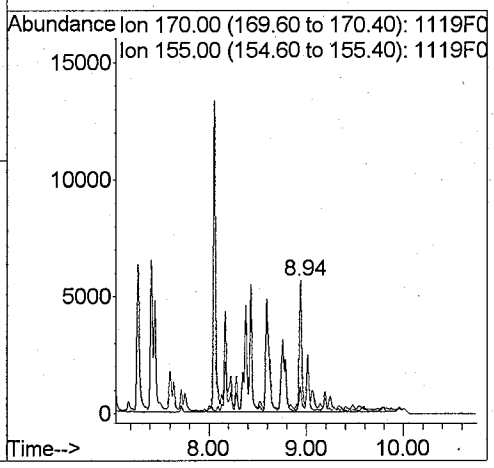


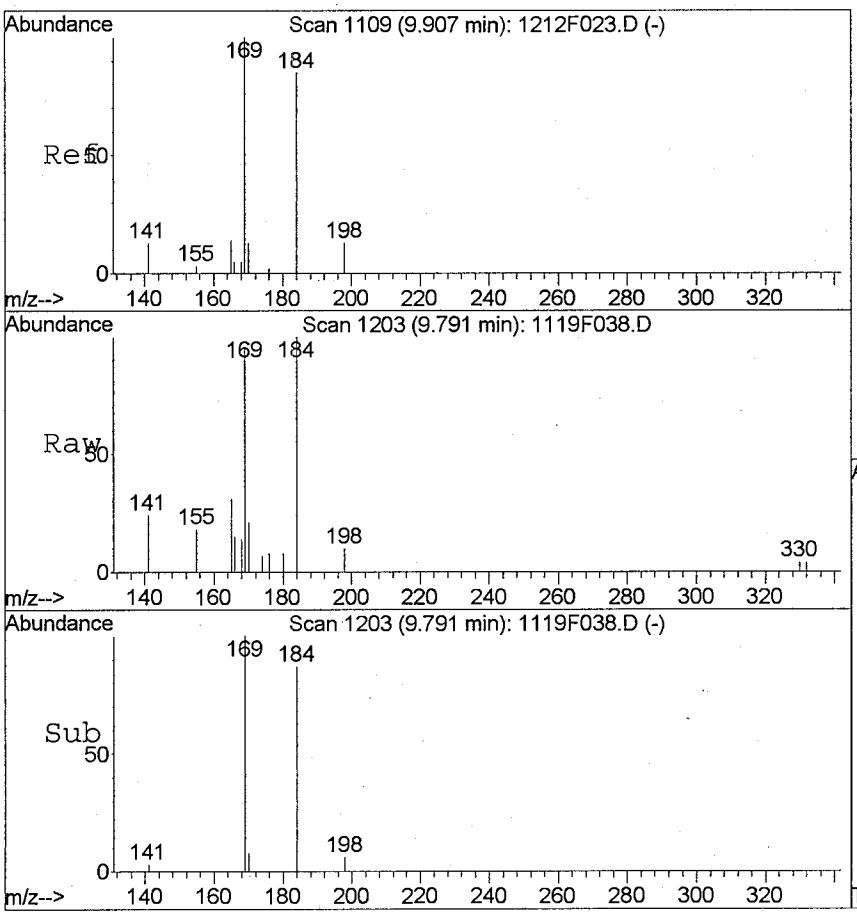


#9
C3-Naphthalenes
Concen: 250.99 ng/ml m
RT: 8.94 min Scan# 1057
Delta R.T. 0.41 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:170 Resp: 64945

Ion	Ratio	Lower	Upper
170	100		
155	20.6	56.9	116.9#

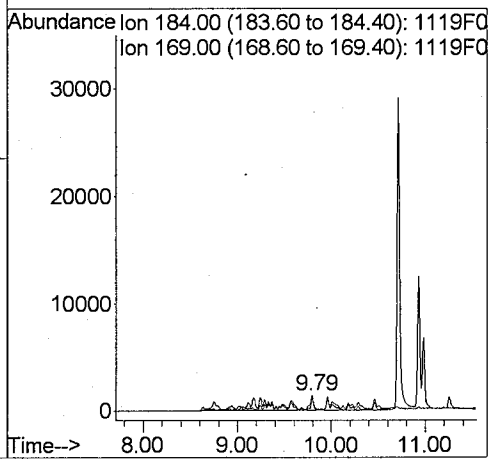


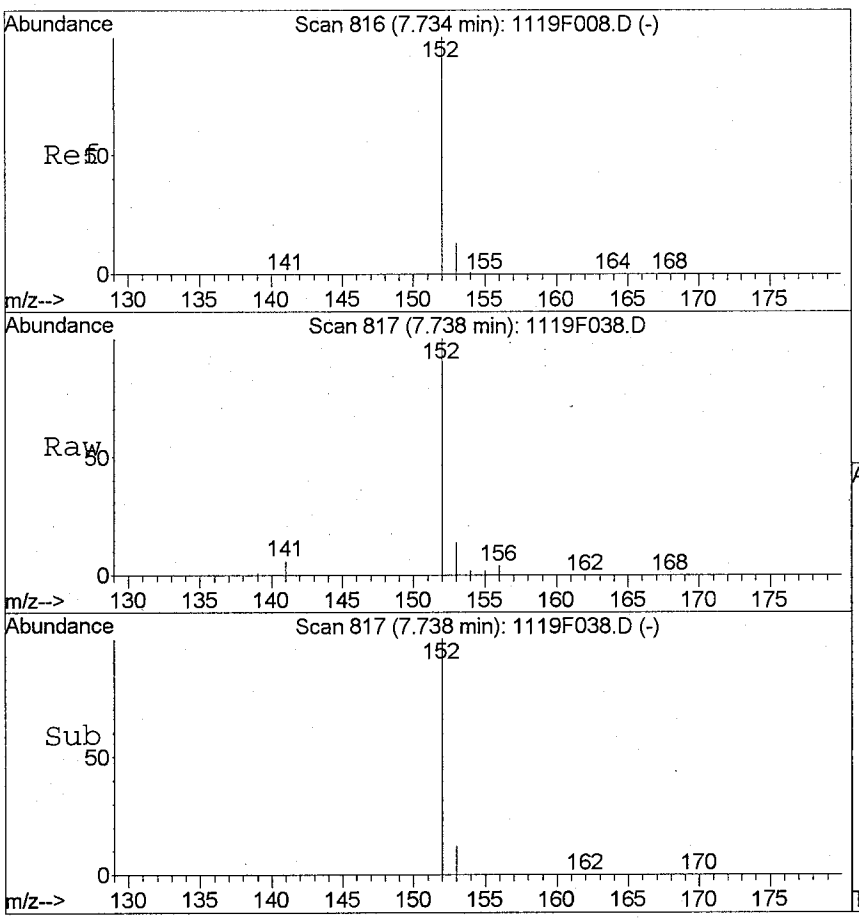


#10
C4-Naphthalenes
Concen: 100.59 ng/ml m
RT: 9.79 min Scan# 1203
Delta R.T. -0.27 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:184 Resp: 26028

Ion	Ratio	Lower	Upper
184	100		
169	95.4	89.7	149.7

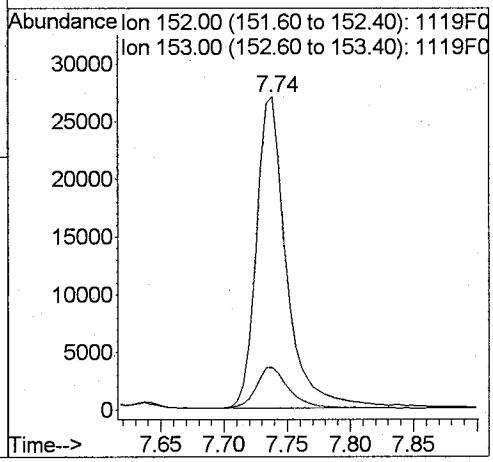


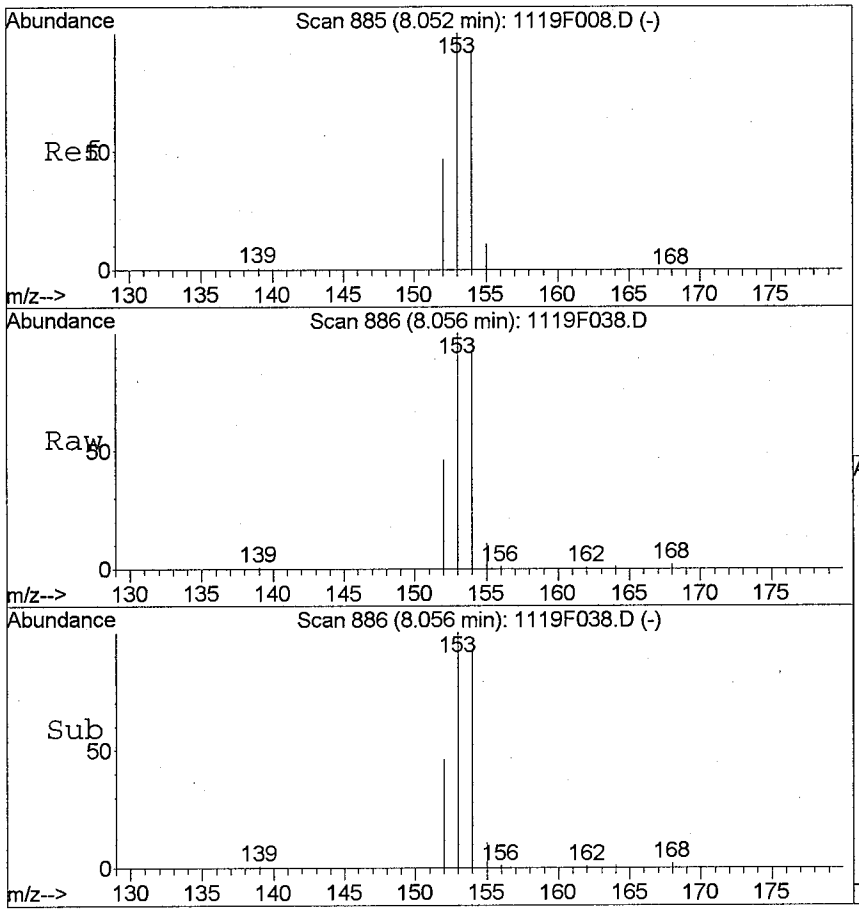


#12
Acenaphthylene
Concen: 200.77 ng/ml
RT: 7.74 min Scan# 817
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:152 Resp: 44635

Ion	Ratio	Lower	Upper
152	100		
153	13.2	0.0	43.1

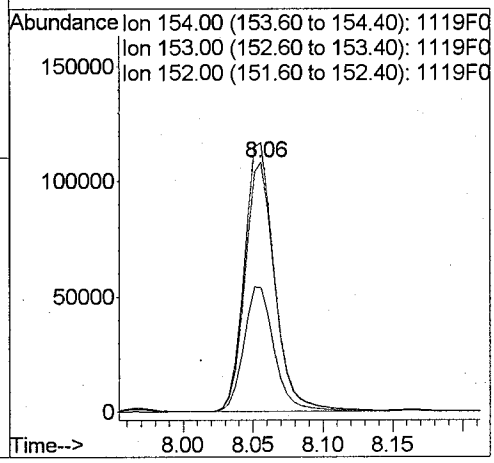


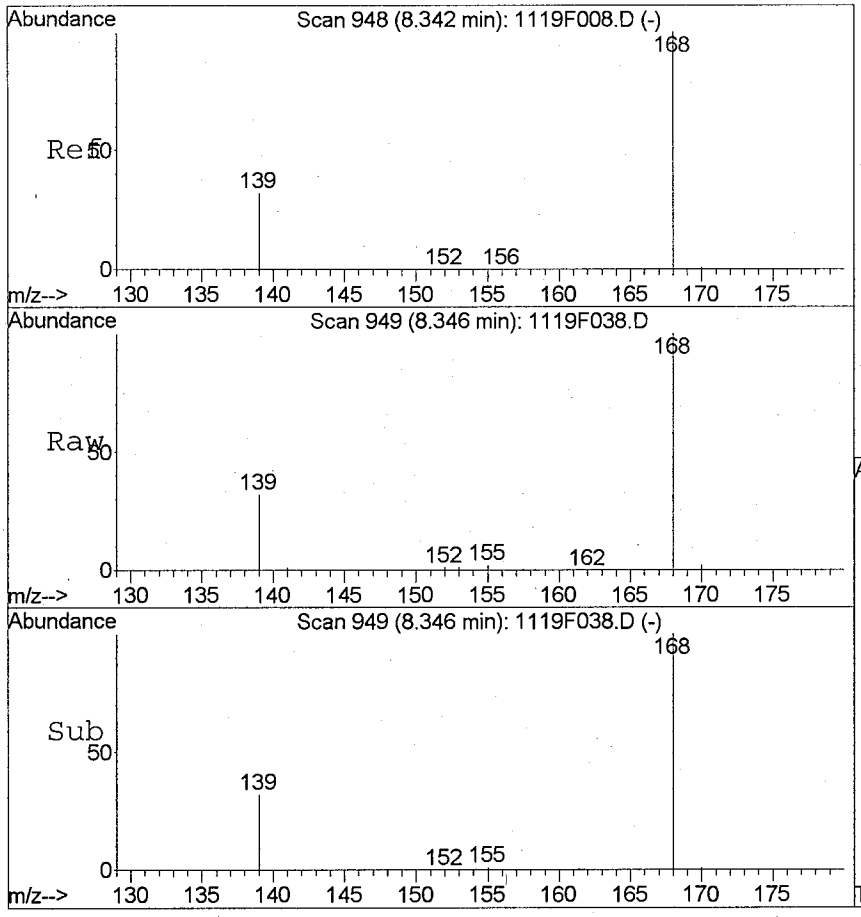


#13
Acenaphthene
Concen: 1183.68 ng/ml
RT: 8.06 min Scan# 886
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:154 Resp: 162189

Ion	Ratio	Lower	Upper
154	100		
153	107.8	78.4	138.4
152	49.6	20.4	80.4

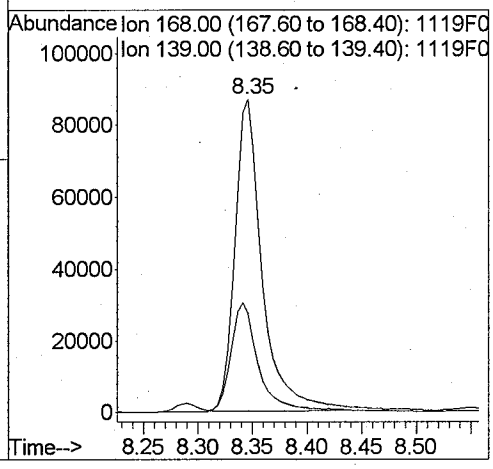


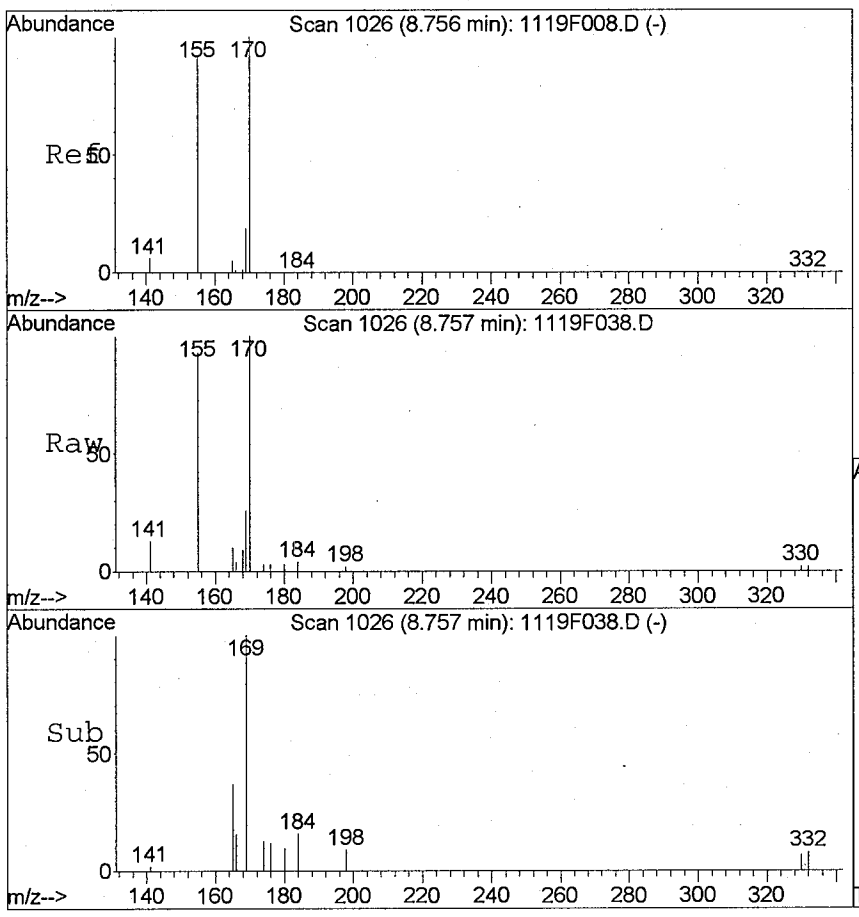


#14
Dibenzofuran
Concen: 826.52 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:168 Resp: 151817

Ion	Ratio	Lower	Upper
168	100		
139	31.6	2.4	62.4

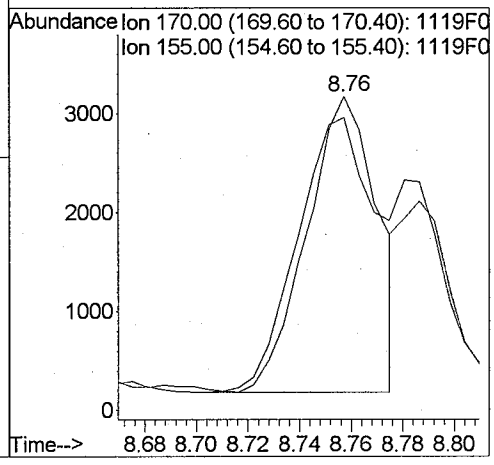


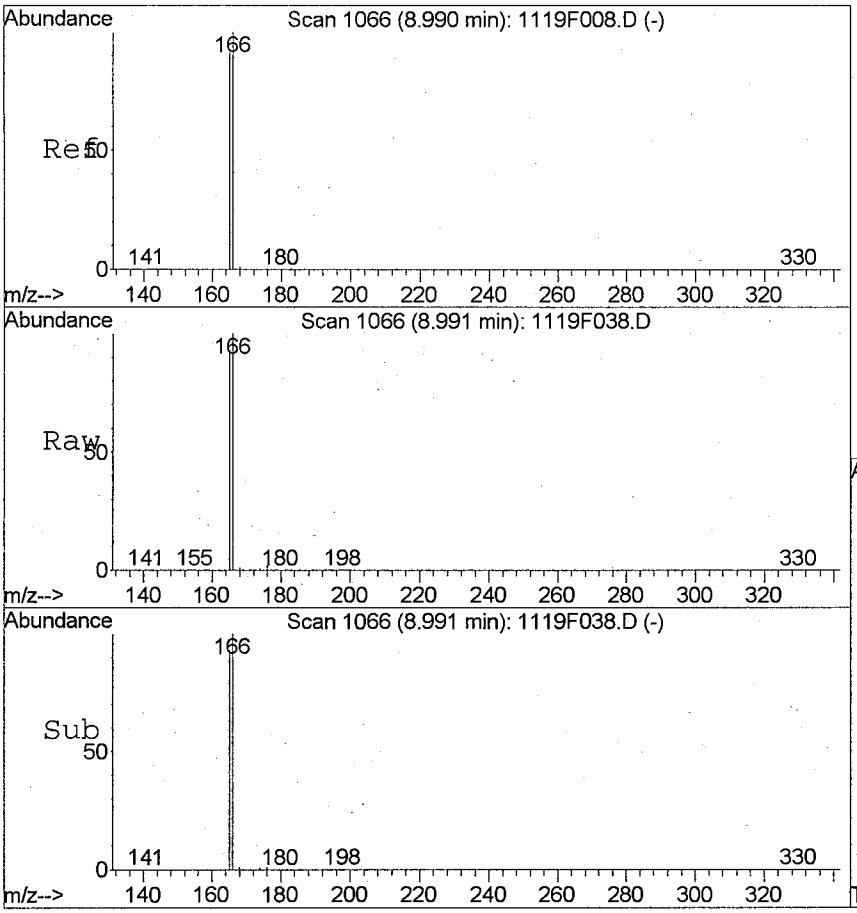


#15
2,3,5-Trimethylnaphthalene
Concen: 45.82 ng/ml
RT: 8.76 min Scan# 1026
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:170 Resp: 5624

Ion	Ratio	Lower	Upper
170	100		
155	92.0	61.5	121.5

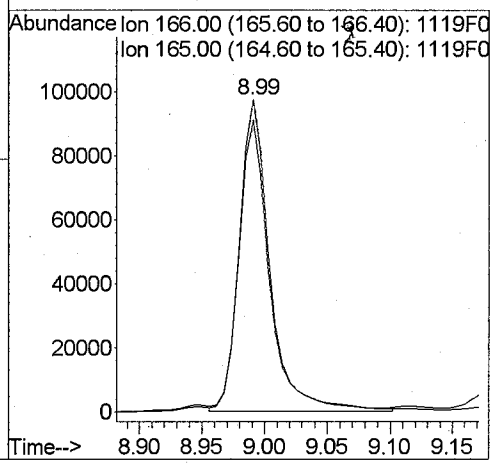


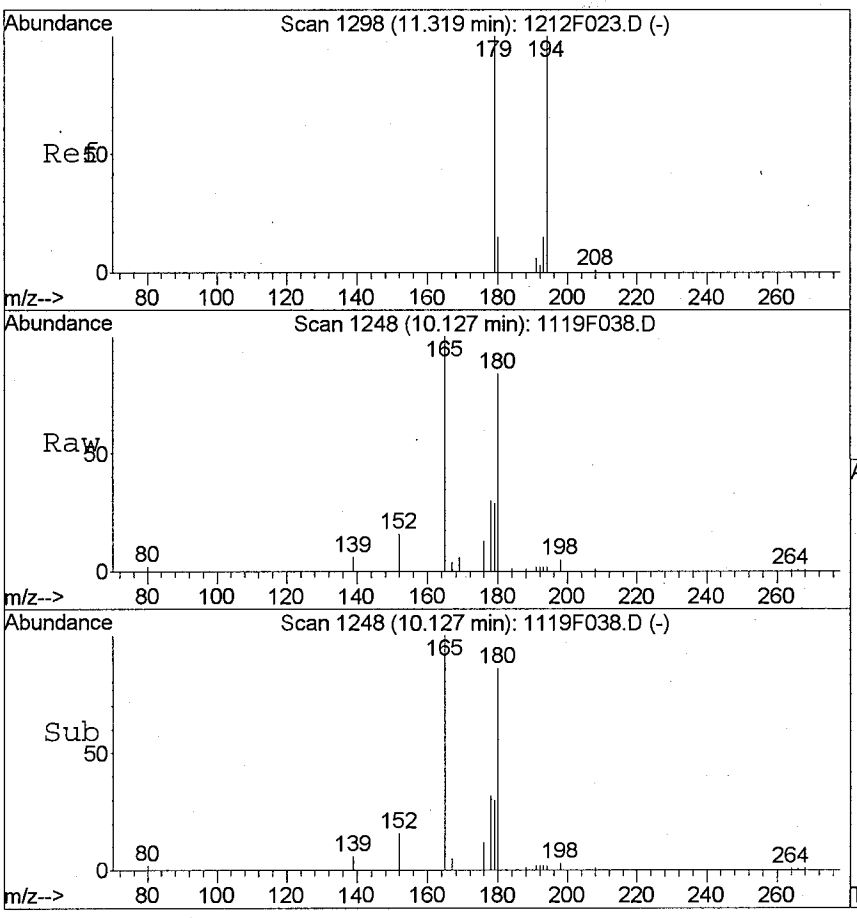


#17
Fluorene
Concen: 1128.72 ng/ml m
RT: 8.99 min Scan# 1066
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:166 Resp: 165674

Ion	Ratio	Lower	Upper
166	100		
165	93.4	62.9	122.9

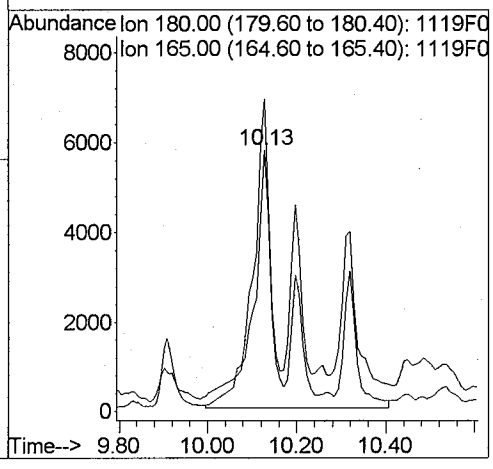


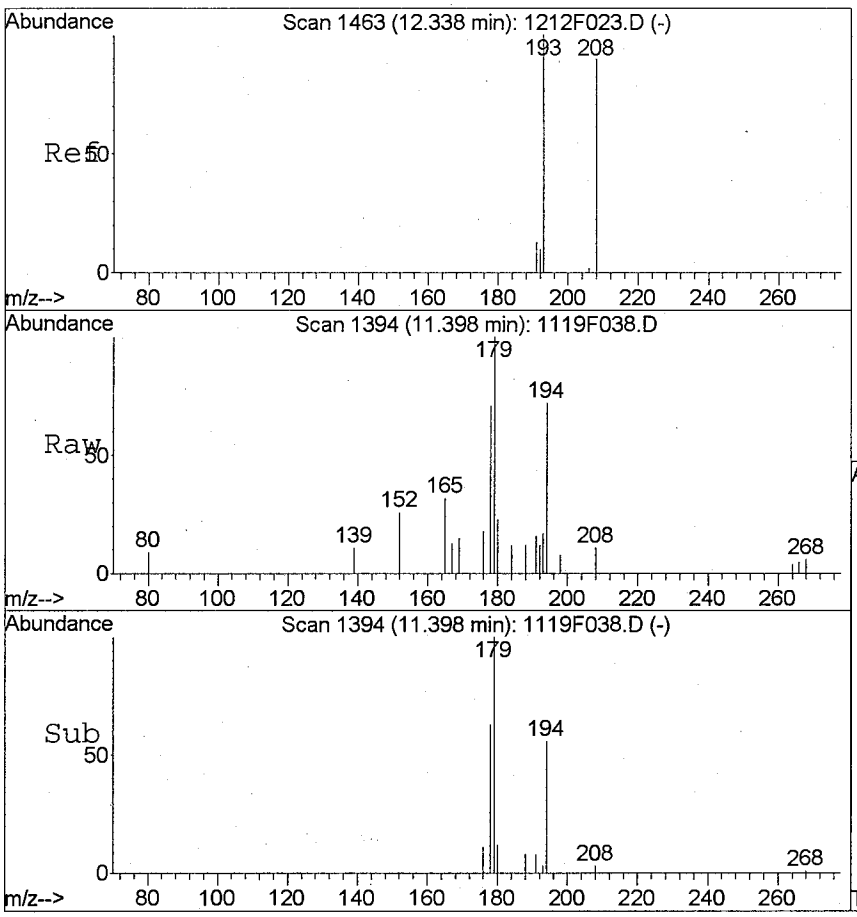


#18
C1-Fluorenes
Concen: 210.06 ng/ml m
RT: 10.13 min Scan# 1248
Delta R.T. -0.17 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:180 Resp: 30833

Ion	Ratio	Lower	Upper
180	100		
165	119.6	148.7	208.7#

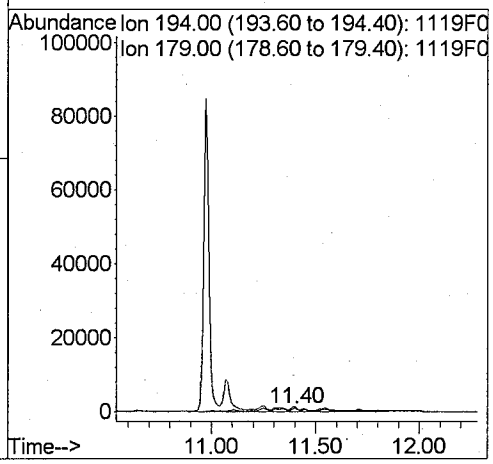


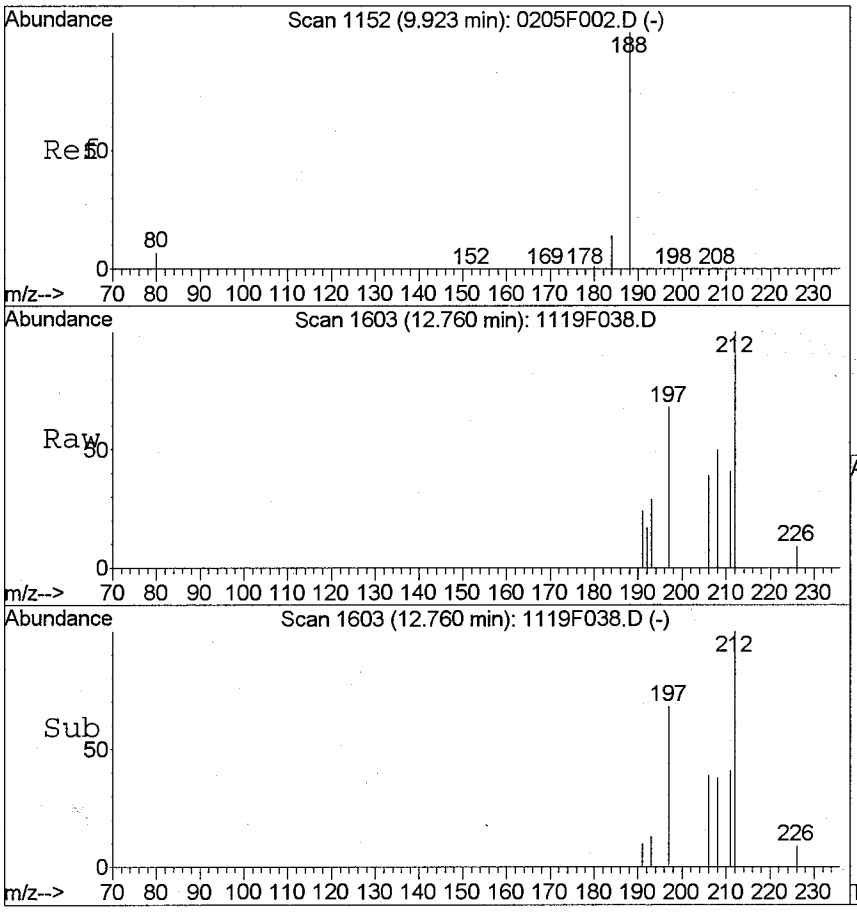


#19
C2-Fluorenes
Concen: 107.28 ng/ml m
RT: 11.40 min Scan# 1394
Delta R.T. -0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:194 Resp: 15747

Ion	Ratio	Lower	Upper
194	100		
179	138.2	107.0	167.0

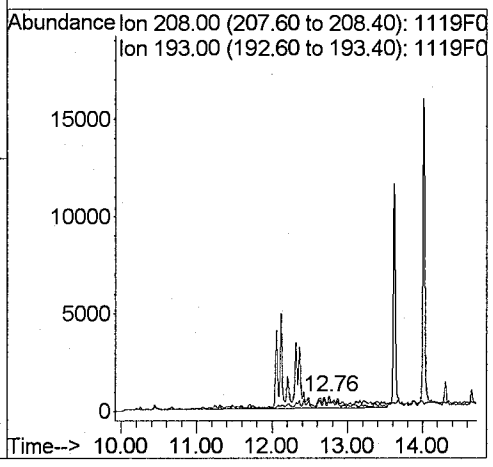


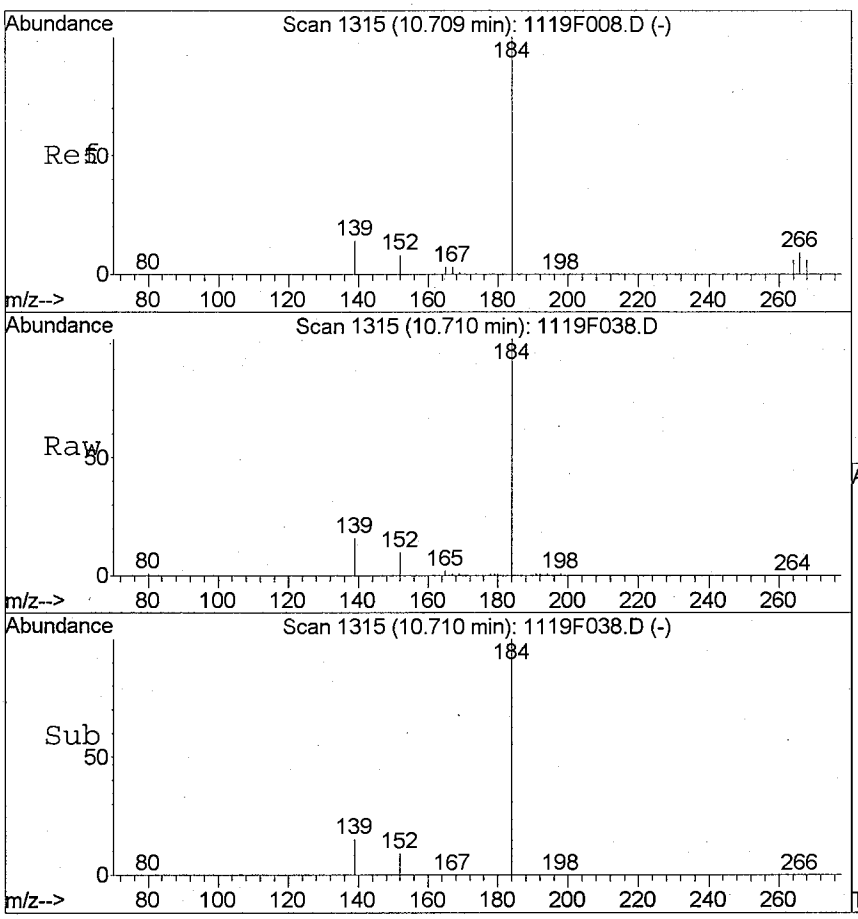


#20
C3-Fluorenes
Concen: 148.19 ng/ml m
RT: 12.76 min Scan# 1603
Delta R.T. 0.24 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:208 Resp: 21752

Ion	Ratio	Lower	Upper
208	100		
193	57.6	92.0	152.0#

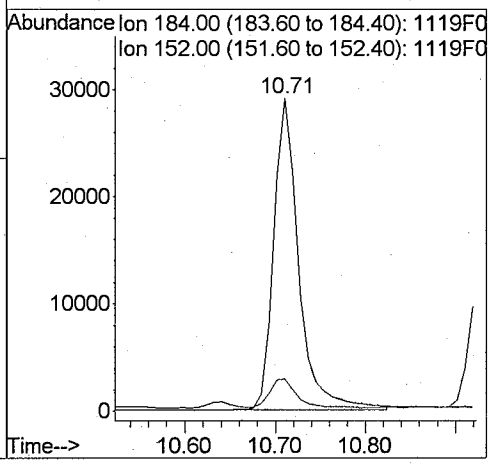


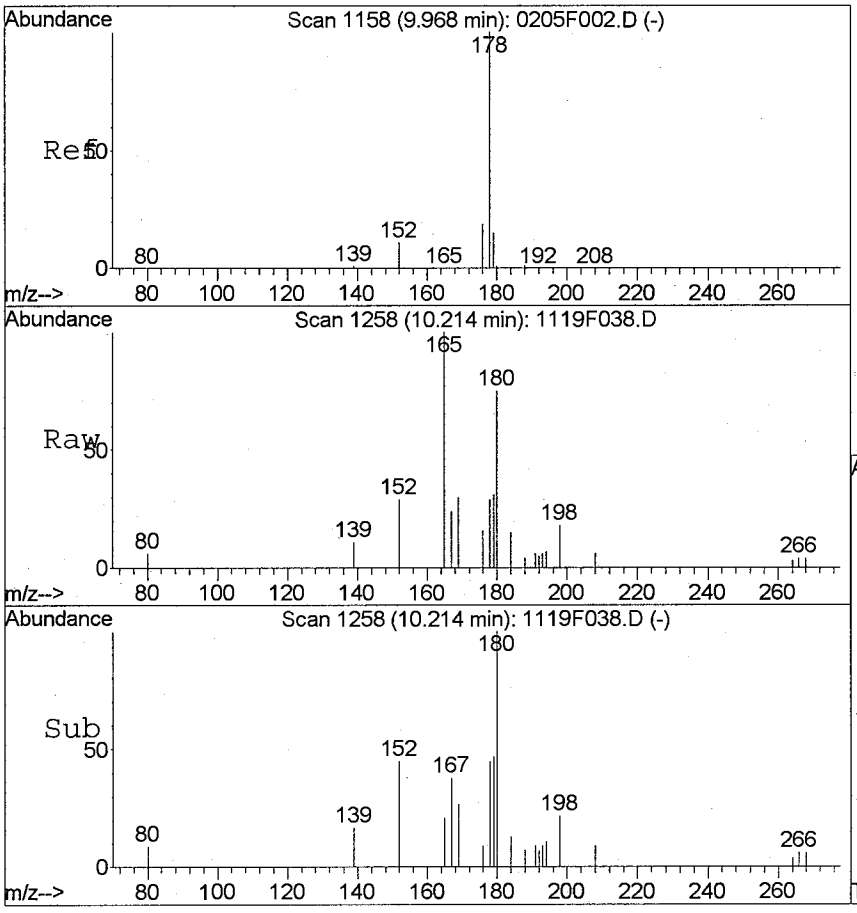


#24
Dibenzothiophene
Concen: 306.10 ng/ml
RT: 10.71 min Scan# 1315
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:184 Resp: 56251

Ion	Ratio	Lower	Upper
184	100		
152	9.1	0.0	38.4

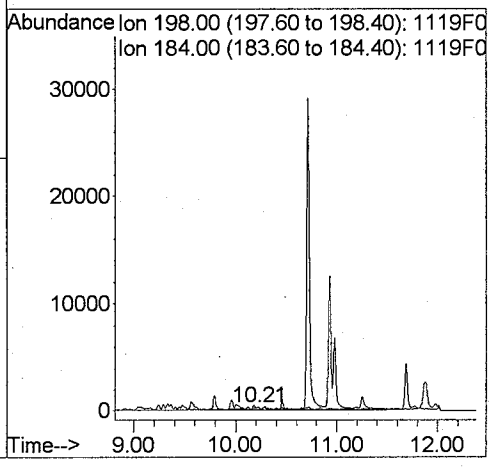


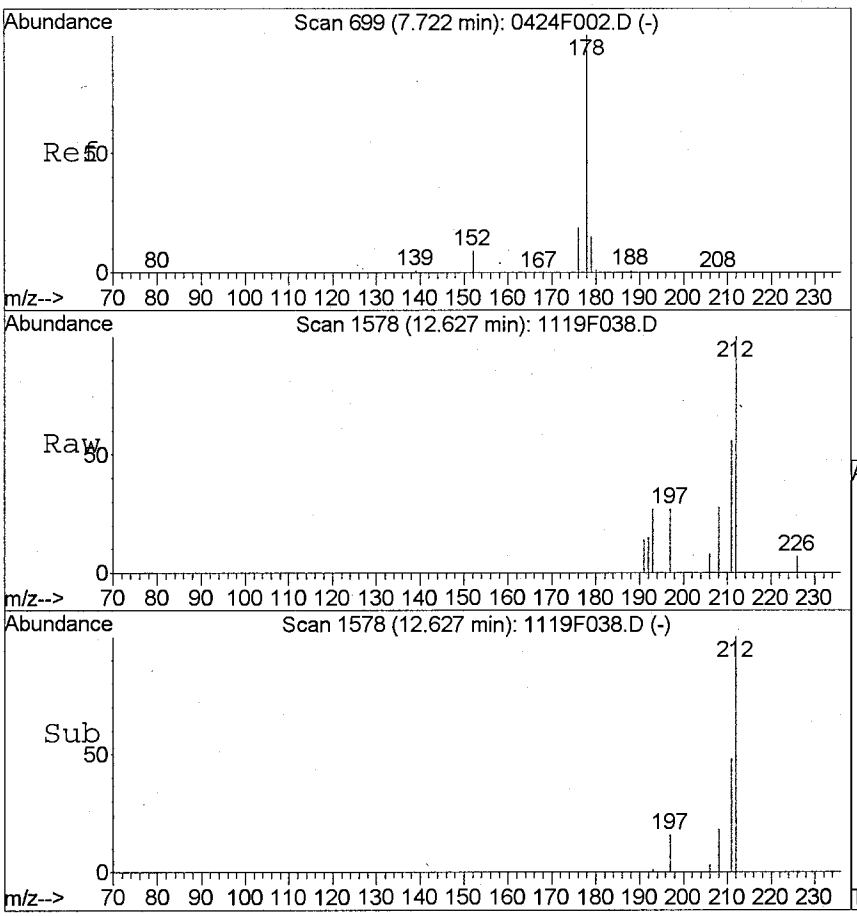


#25
C1-Dibenzothiophenes
Concen: 50.65 ng/ml m
RT: 10.21 min Scan# 1258
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:198 Resp: 9307

Ion	Ratio	Lower	Upper
198	100		
184	80.6	74.1	134.1

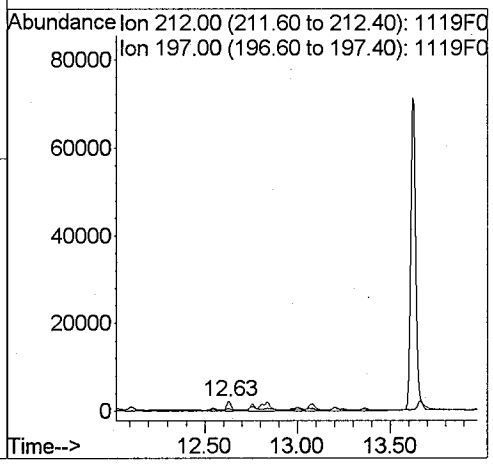


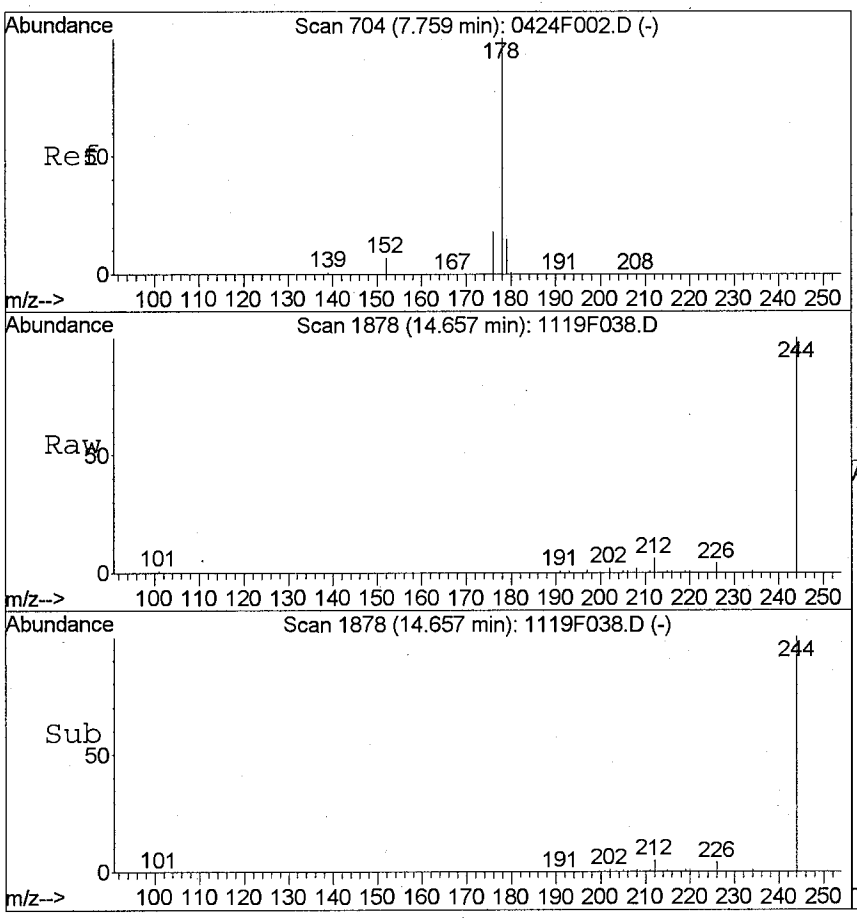


#26
C2-Dibenzothiophenes
Concen: 153.65 ng/ml m
RT: 12.63 min Scan# 1578
Delta R.T. -0.30 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:212 Resp: 28235

Ion	Ratio	Lower	Upper
212	100		
197	26.9	0.0	53.8

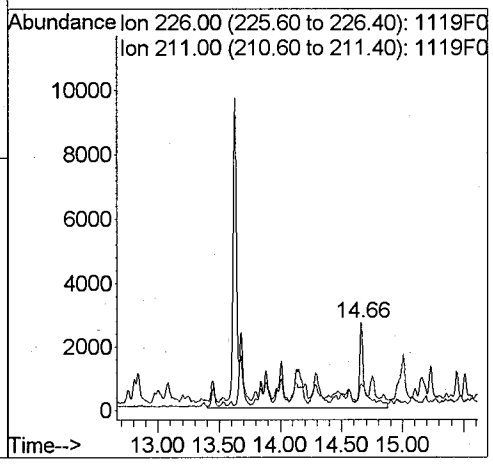


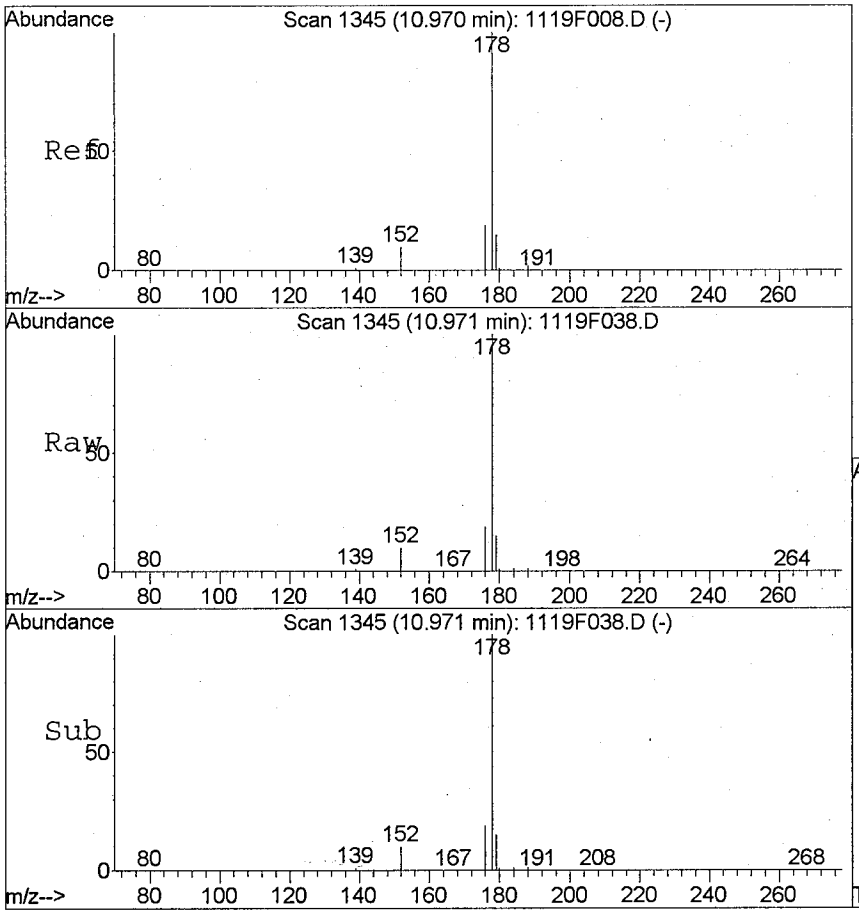


#27
C3-Dibenzothiophenes
Concen: 215.79 ng/ml m
RT: 14.66 min Scan# 1878
Delta R.T. 0.88 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:226 Resp: 39654

Ion	Ratio	Lower	Upper
226	100		
211	30.1	27.1	87.1

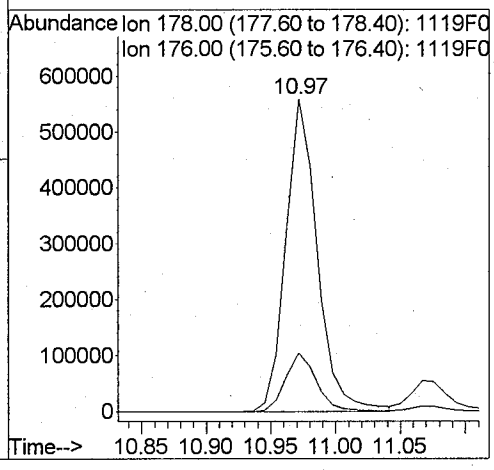


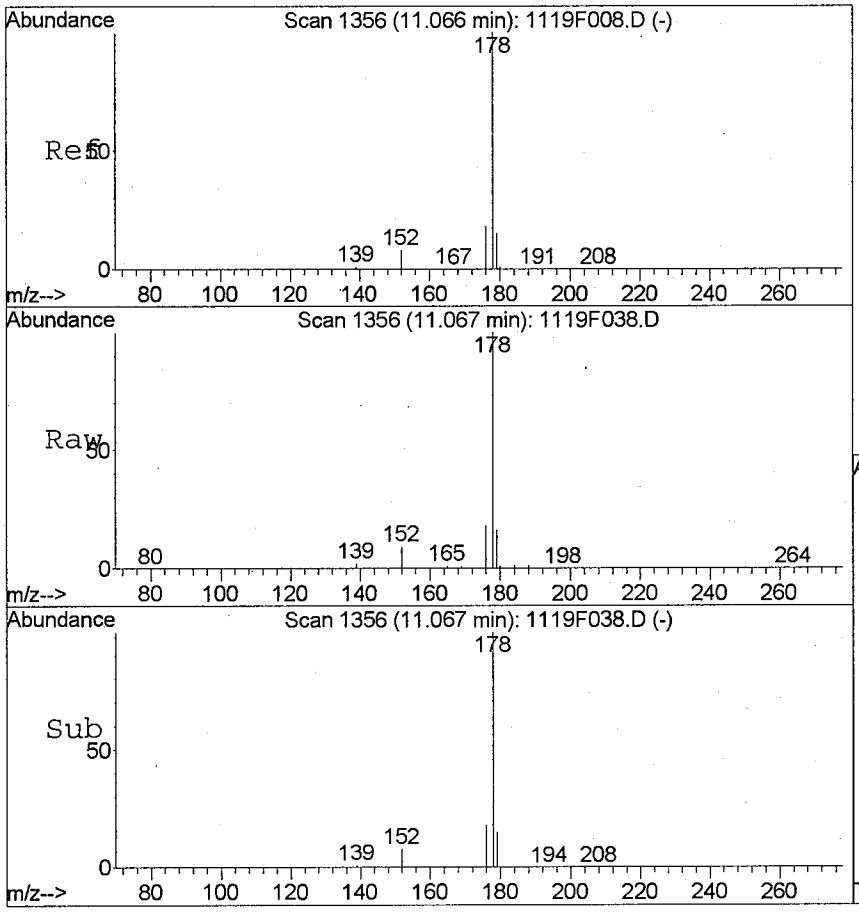


#28
Phenanthrene
Concen: 4884.62 ng/ml
RT: 10.97 min Scan# 1345
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:178 Resp: 942906

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	48.6

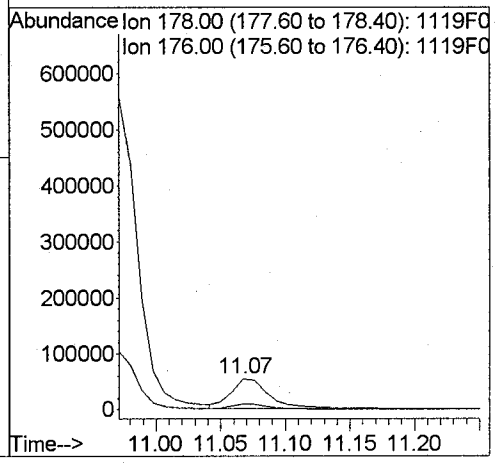


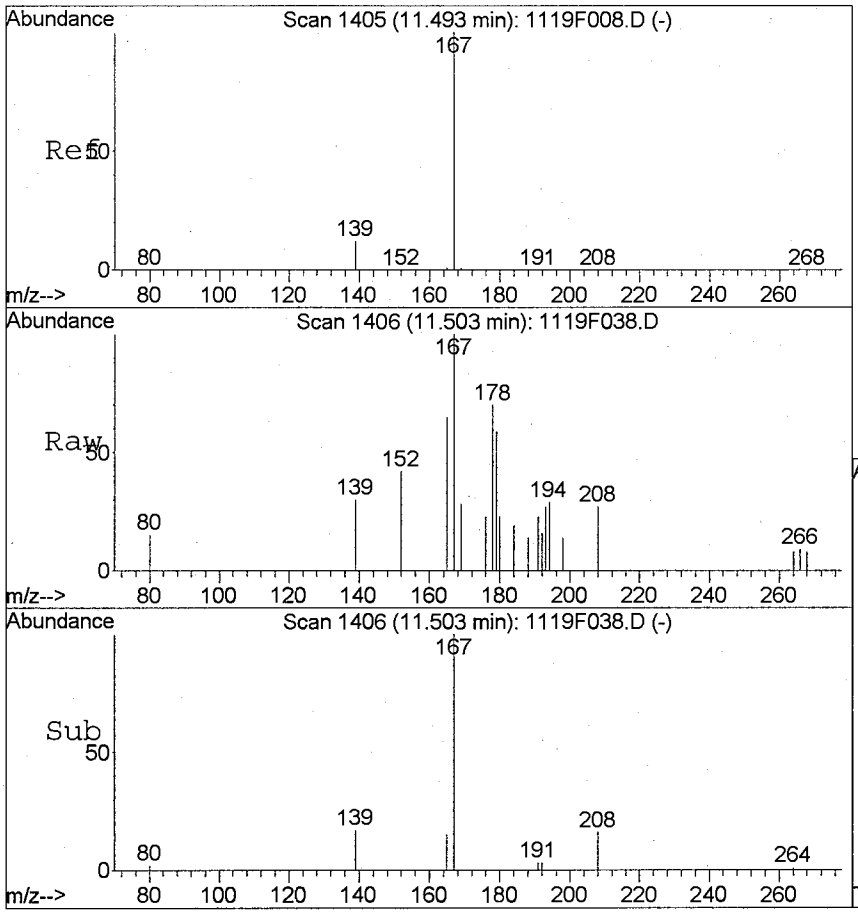


#29
Anthracene
Concen: 667.28 ng/ml
RT: 11.07 min Scan# 1356
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:178 Resp: 110044

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	48.2

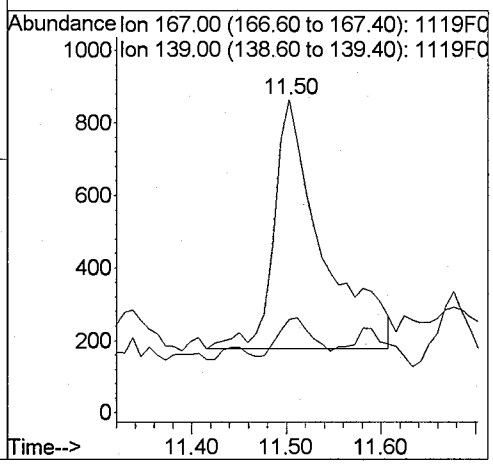


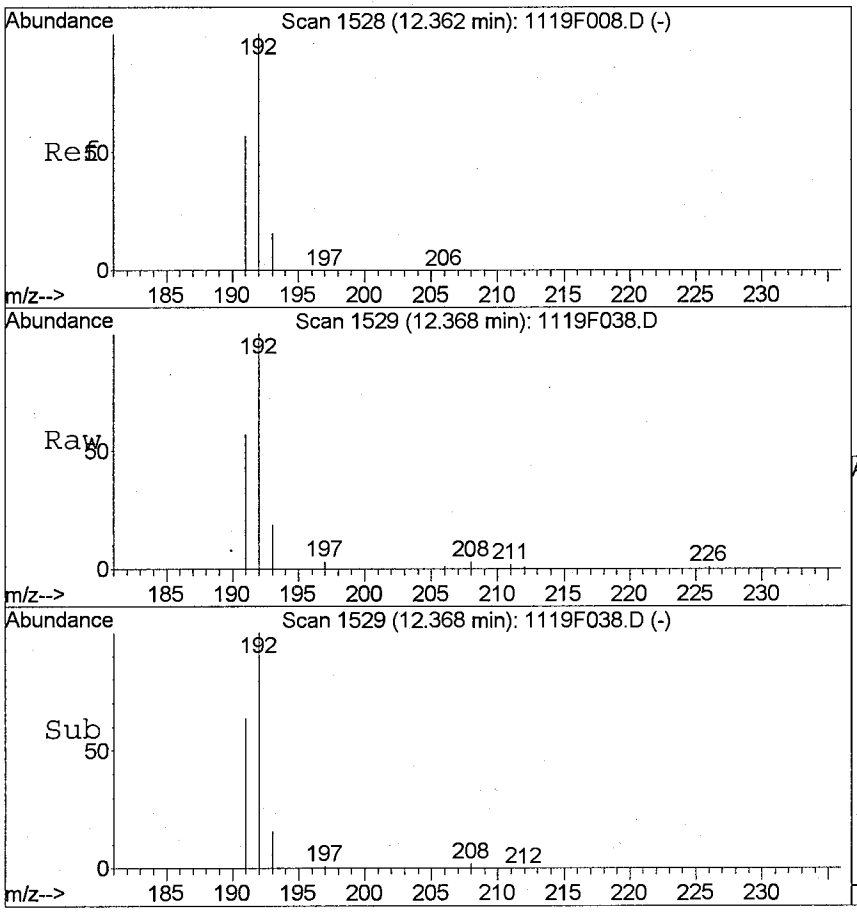


#30
Carbazole
Concen: 18.71 ng/ml
RT: 11.50 min Scan# 1406
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:167 Resp: 2439

Ion	Ratio	Lower	Upper
167	100		
139	15.8	0.0	42.5

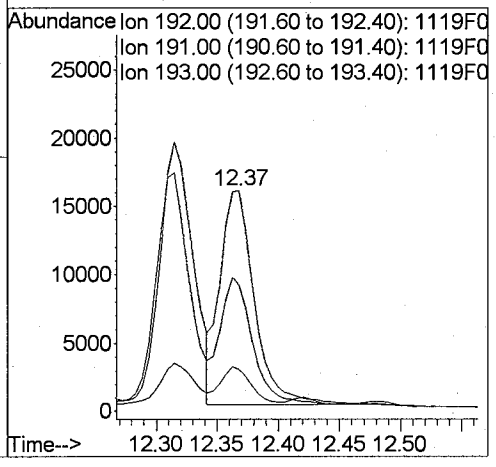


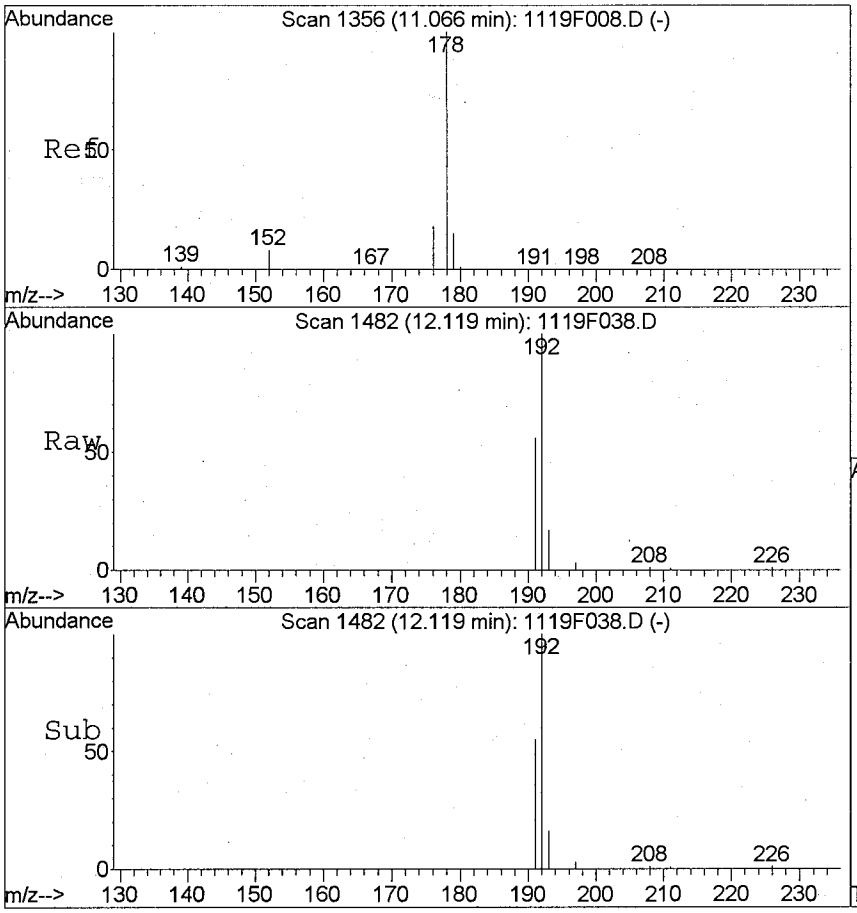


#31
1-Methylphenanthrene
Concen: 234.84 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:192 Resp: 30779

Ion	Ratio	Lower	Upper
192	100		
191	56.0	27.5	87.5
193	15.5	0.0	45.6

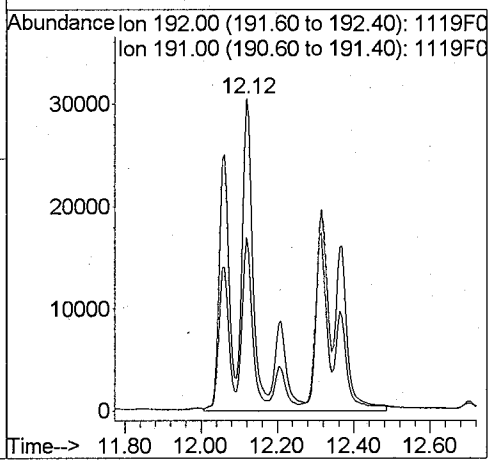


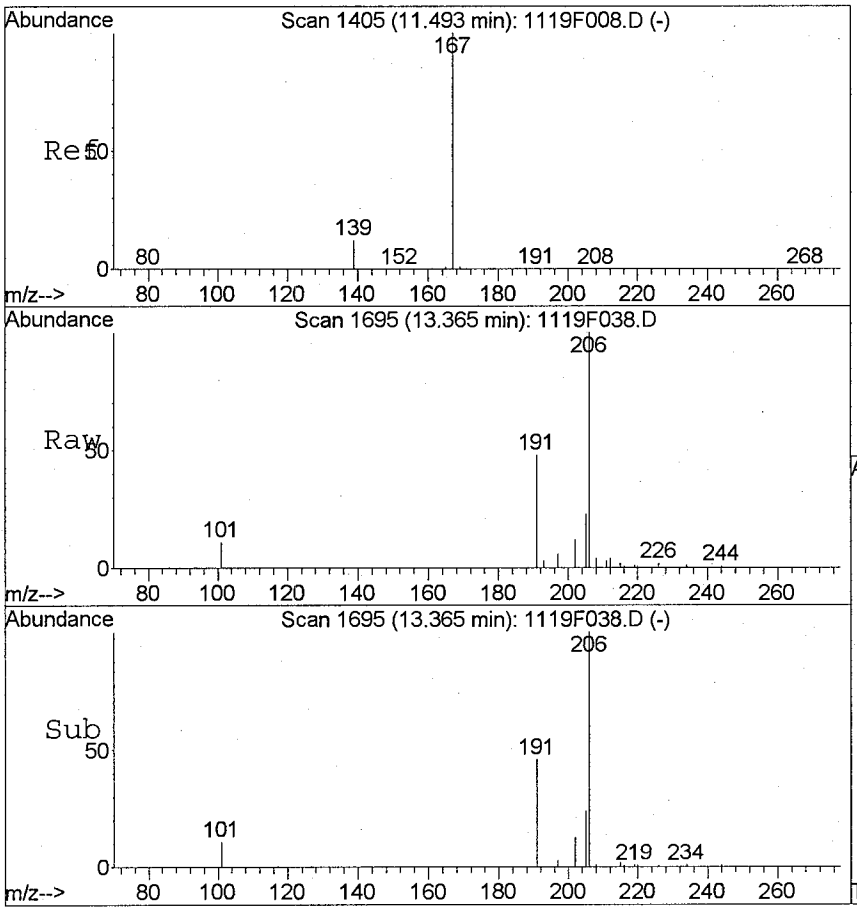


#32
C1-Phenanthrenes/Anthracenes
Concen: 1051.79 ng/ml m
RT: 12.12 min Scan# 1482
Delta R.T. -0.10 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:192 Resp: 203034

Ion	Ratio	Lower	Upper
192	100		
191	55.8	25.3	85.3

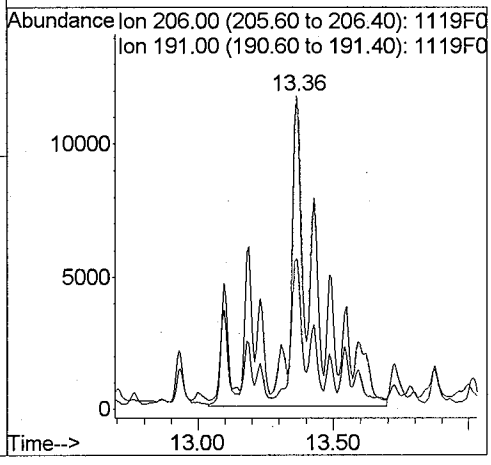


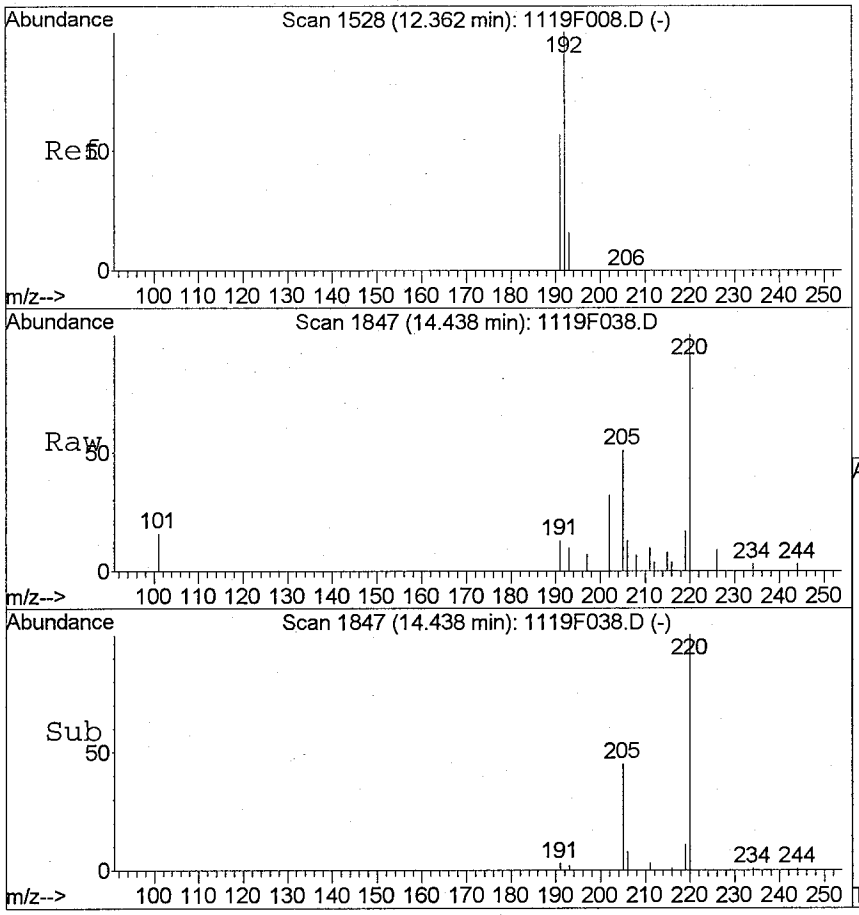


#33
C2-Phenanthrenes/Anthracenes
Concen: 527.79 ng/ml m
RT: 13.36 min Scan# 1695
Delta R.T. -0.11 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:206 Resp: 101882

Ion	Ratio	Lower	Upper
206	100		
191	48.2	15.6	75.6

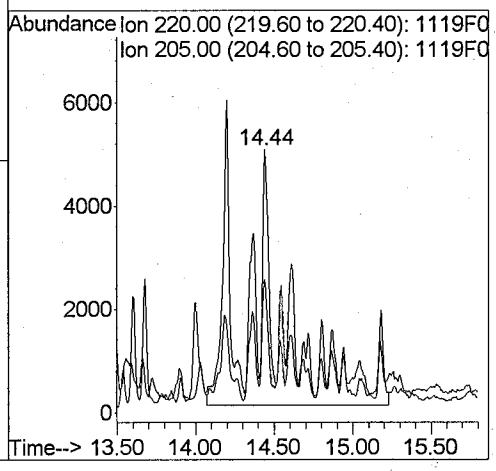


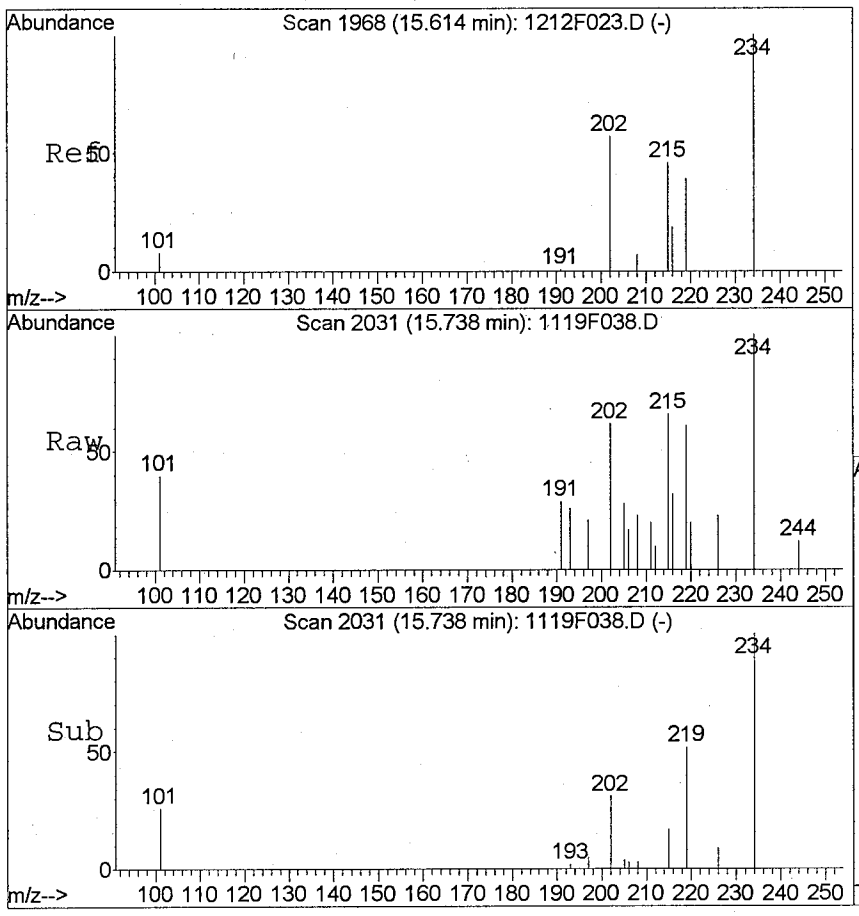


#34
C3-Phenanthrenes/Anthracenes
Concen: 342.18 ng/ml m
RT: 14.44 min Scan# 1847
Delta R.T. -0.11 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:220 Resp: 66053

Ion	Ratio	Lower	Upper
220	100		
205	50.7	20.0	80.0

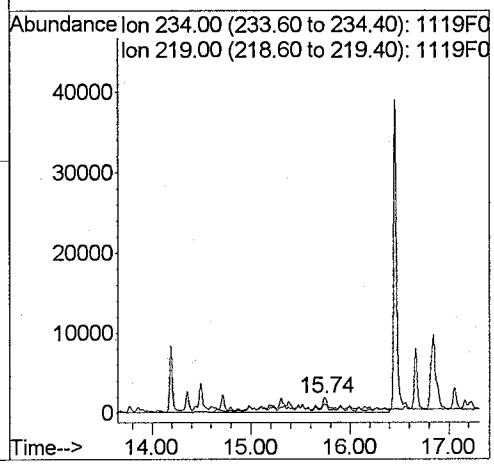


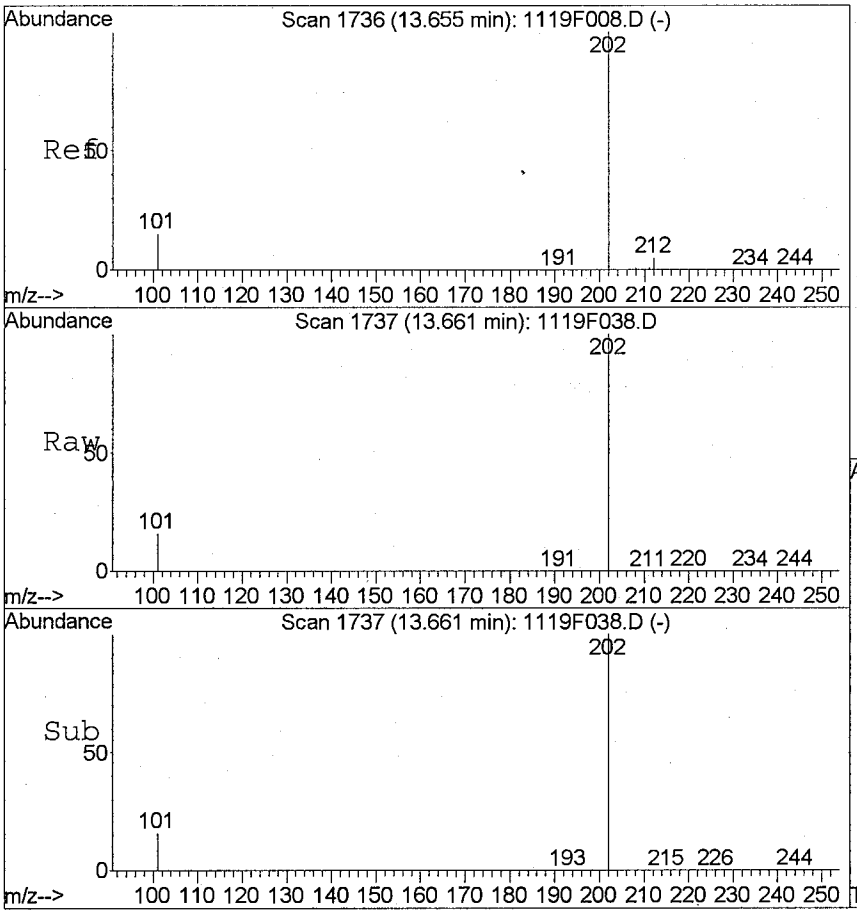


#35
C4-Phenanthrenes/Anthracenes
Concen: 231.00 ng/ml m
RT: 15.74 min Scan# 2031
Delta R.T. -0.09 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:234 Resp: 44591

Ion	Ratio	Lower	Upper
234	100		
219	61.4	17.7	77.7

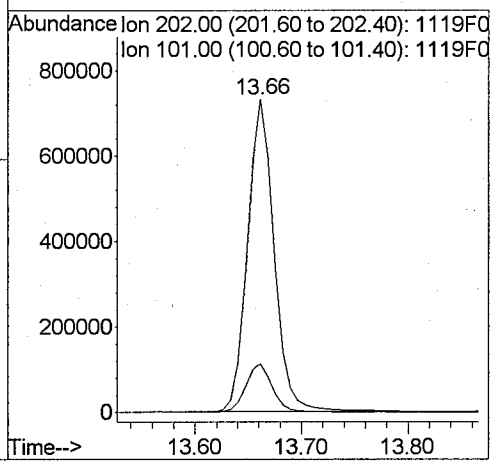


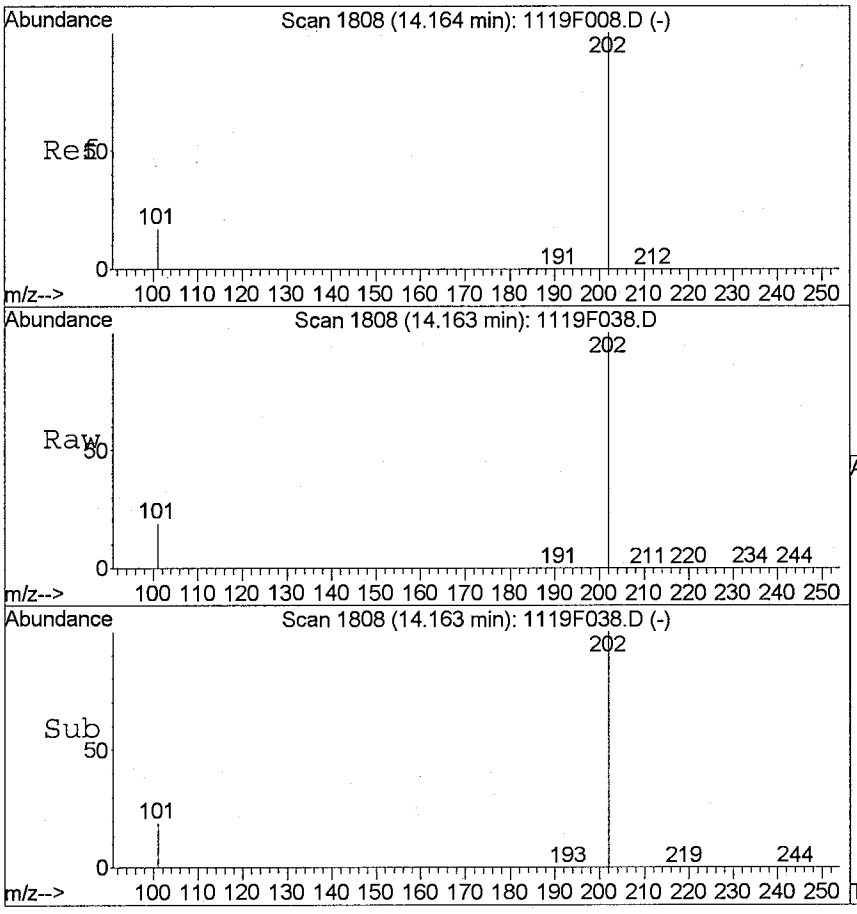


#36
Fluoranthene
Concen: 6611.55 ng/ml
RT: 13.66 min Scan# 1737
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:202 Resp: 1270417

Ion	Ratio	Lower	Upper
202	100		
101	15.5	0.0	45.5

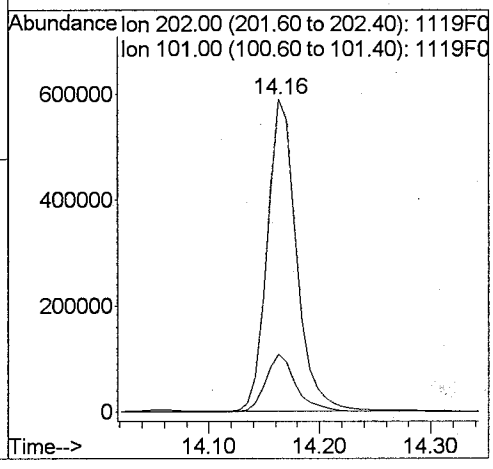


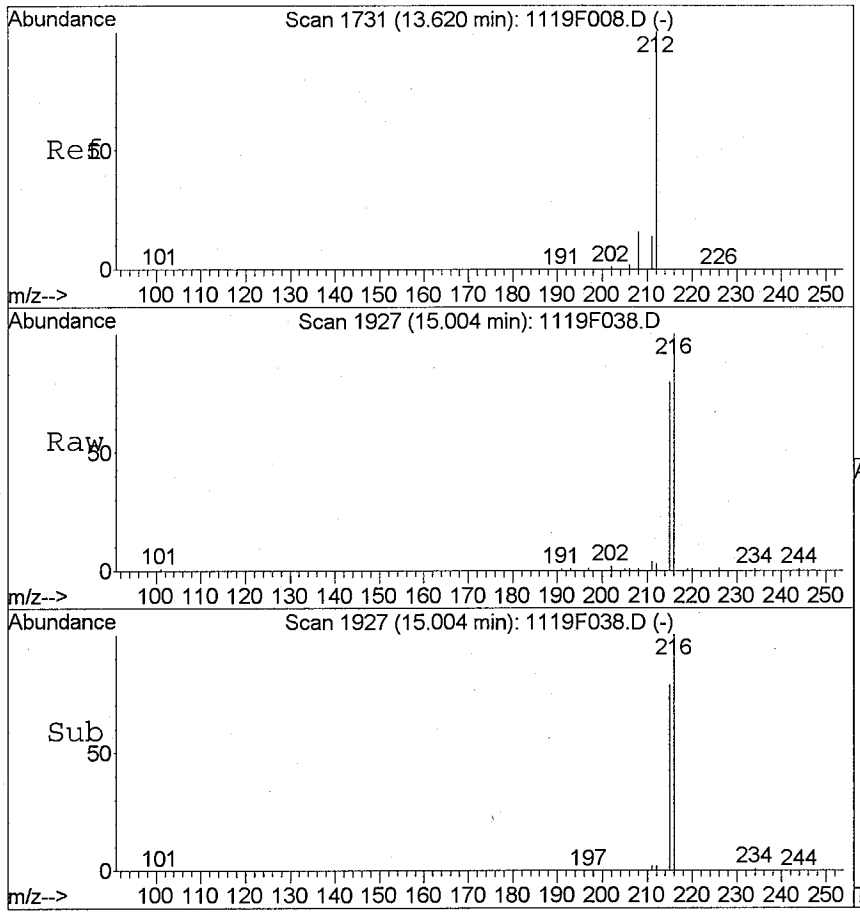


#39
Pyrene
Concen: 5189.76 ng/ml
RT: 14.16 min Scan# 1808
Delta R.T. -0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:202 Resp: 1093394

Ion	Ratio	Lower	Upper
202	100		
101	18.5	0.0	47.4

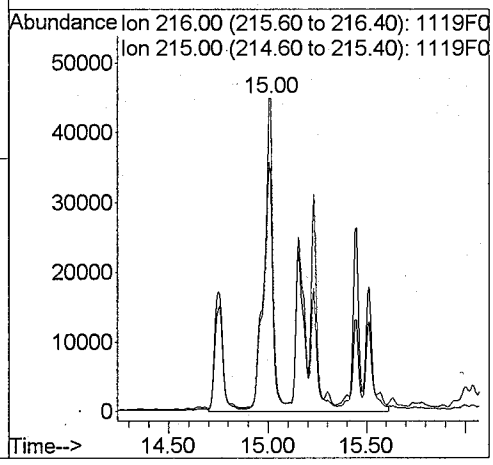


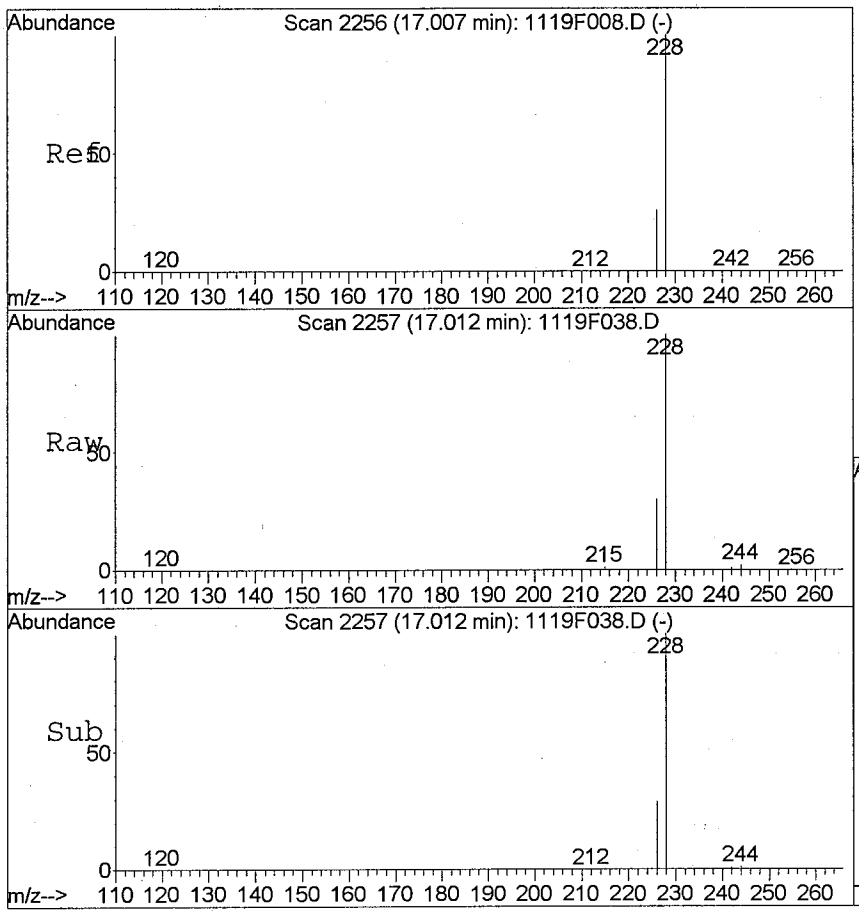


#40
C1-Fluoranthenes/Pyrenes
Concen: 2017.67 ng/ml m
RT: 15.00 min Scan# 1927
Delta R.T. -0.55 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:216 Resp: 425090

Ion	Ratio	Lower	Upper
216	100		
215	79.7	54.8	114.8

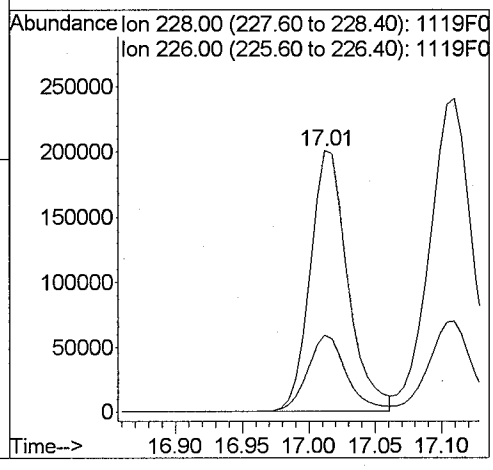


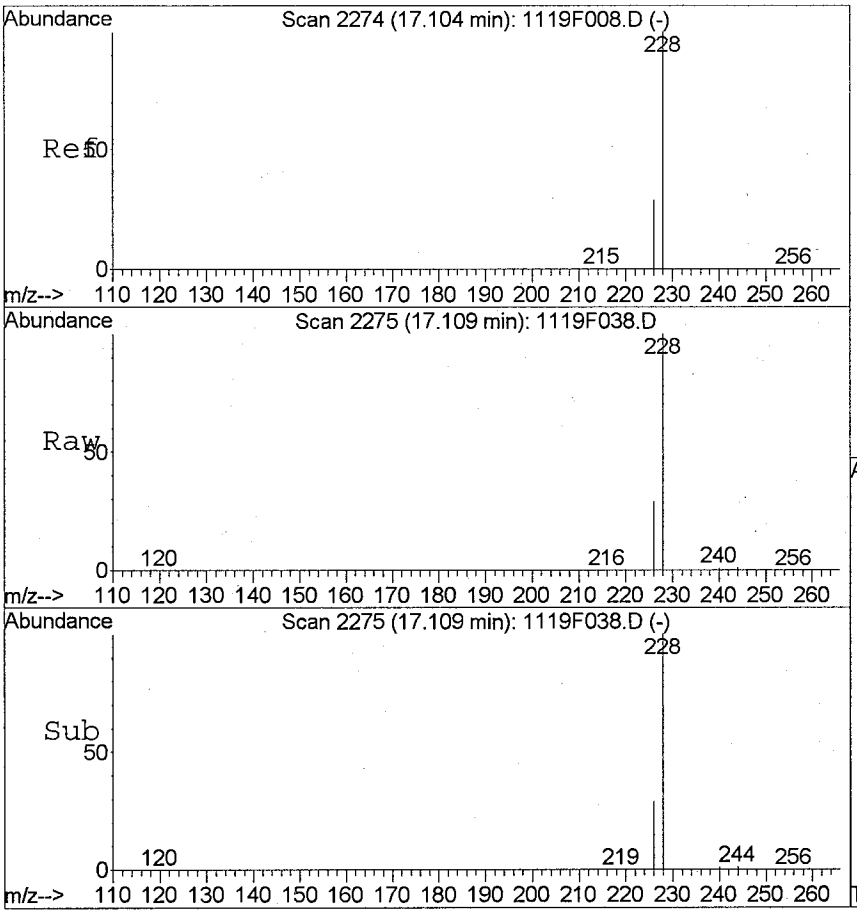


#42
Benz(a)anthracene
Concen: 2486.95 ng/ml
RT: 17.01 min Scan# 2257
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:228 Resp: 398914

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	55.8

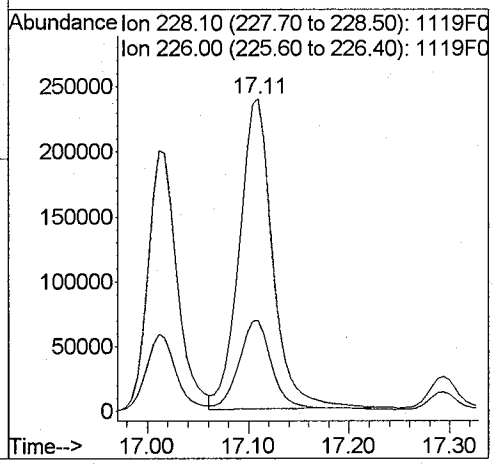


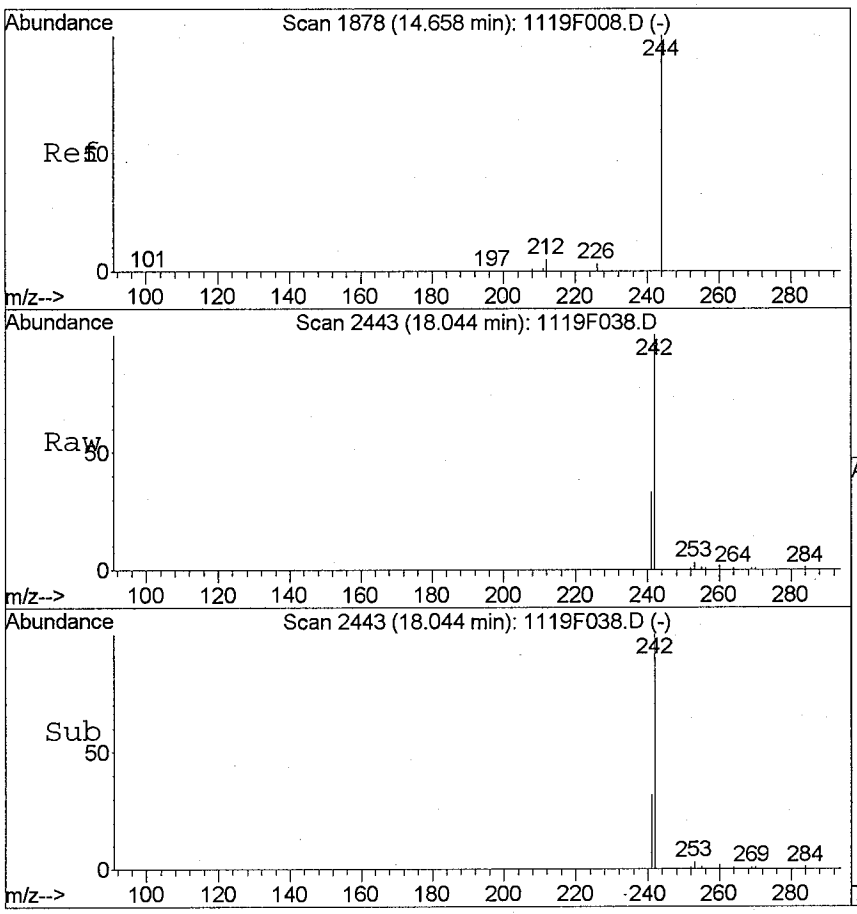


#43
Chrysene
Concen: 3211.38 ng/ml
RT: 17.11 min Scan# 2275
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:228 Resp: 550832

Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	58.5

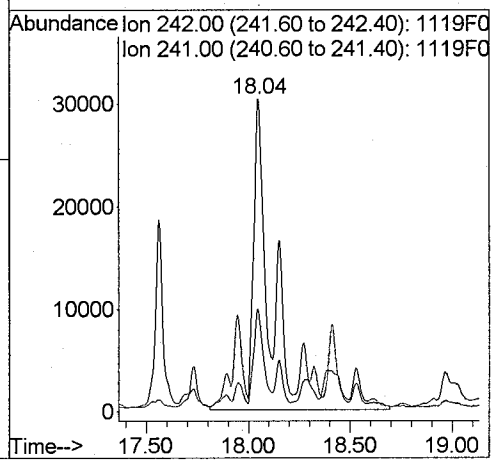


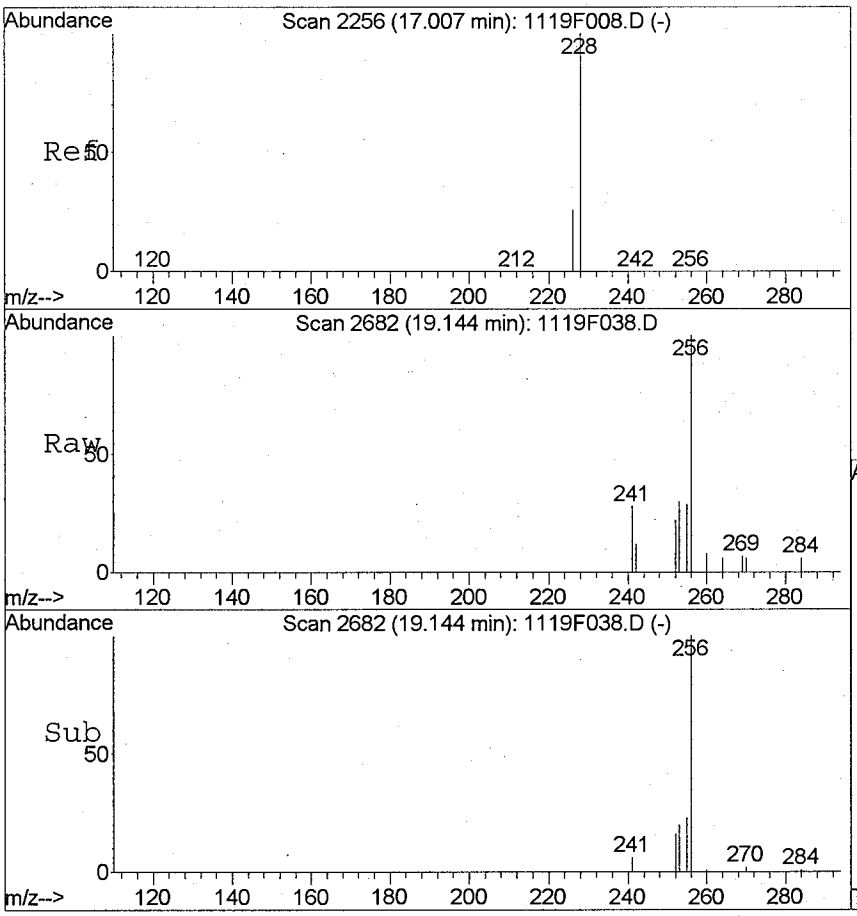


#44
C1-Chrysenes
Concen: 1462.46 ng/ml m
RT: 18.04 min Scan# 2443
Delta R.T. -0.11 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:242 Resp: 250848

Ion	Ratio	Lower	Upper
242	100		
241	33.1	0.1	60.1

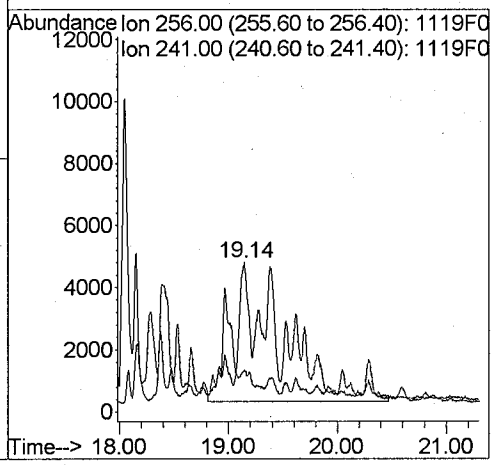


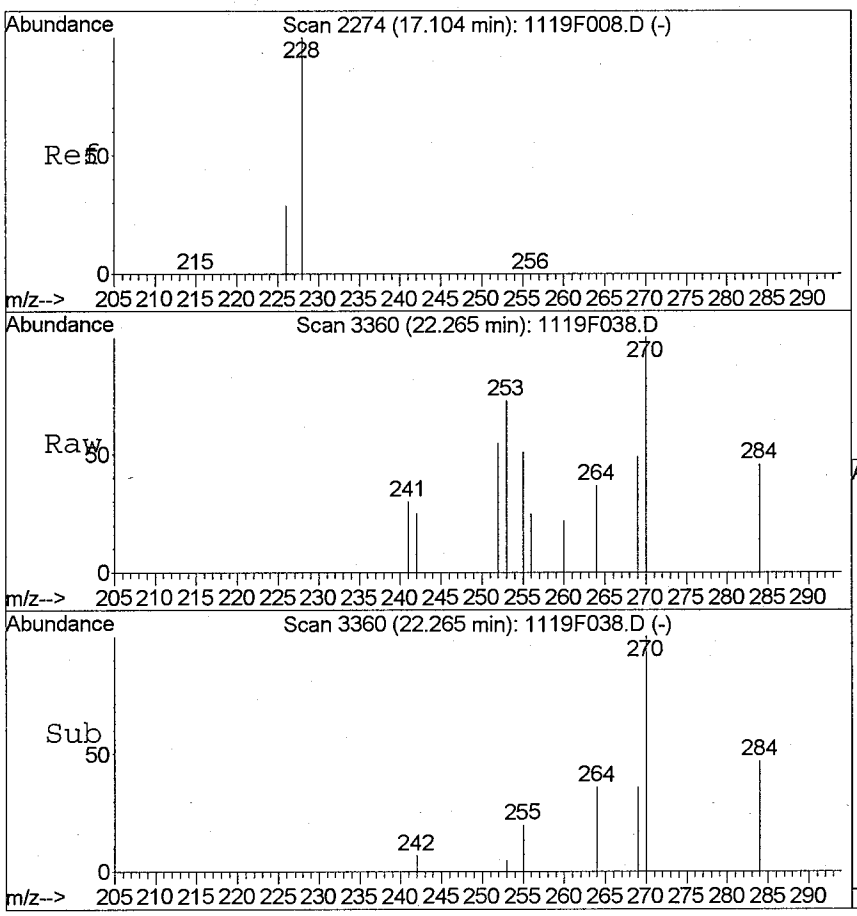


#45
C2-Chrysenes
Concen: 748.12 ng/ml m
RT: 19.14 min Scan# 2682
Delta R.T. -0.38 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:256 Resp: 128322

Ion	Ratio	Lower	Upper
256	100		
241	28.3	7.8	67.8

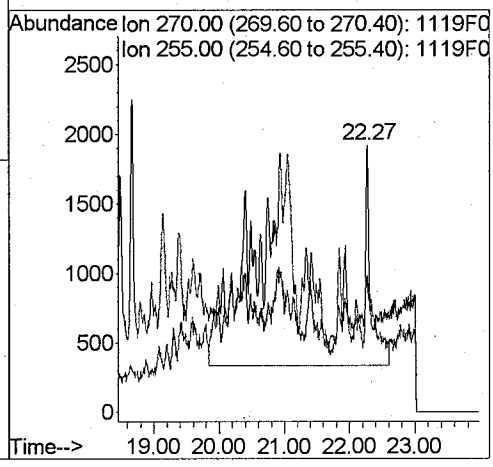


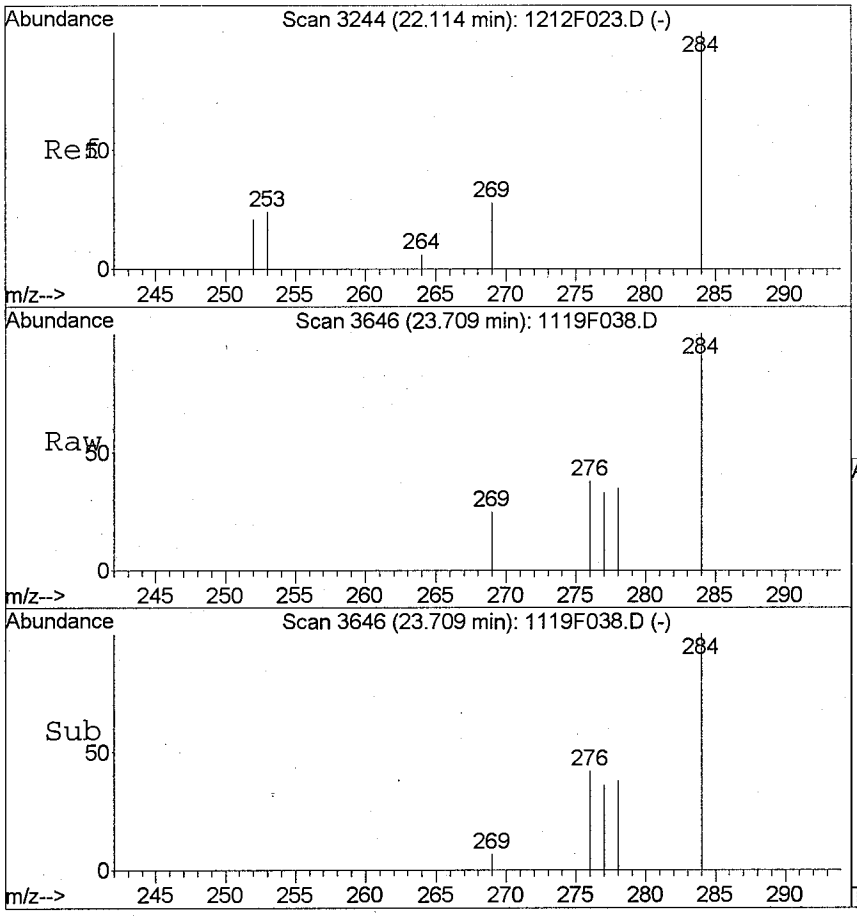


#46
C3-Chrysenes
Concen: 534.31 ng/ml m
RT: 22.27 min Scan# 3360
Delta R.T. 1.05 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:270 Resp: 91648

Ion	Ratio	Lower	Upper
270	100		
255	51.3	0.0	56.7

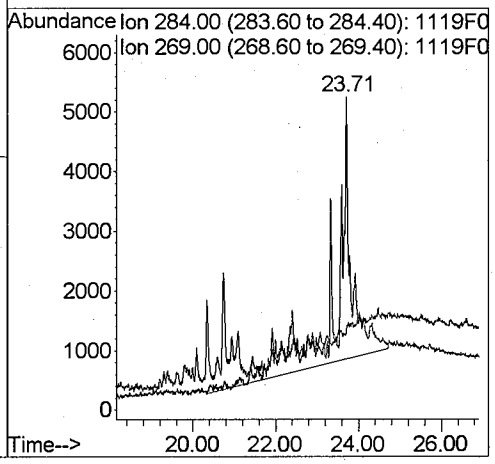


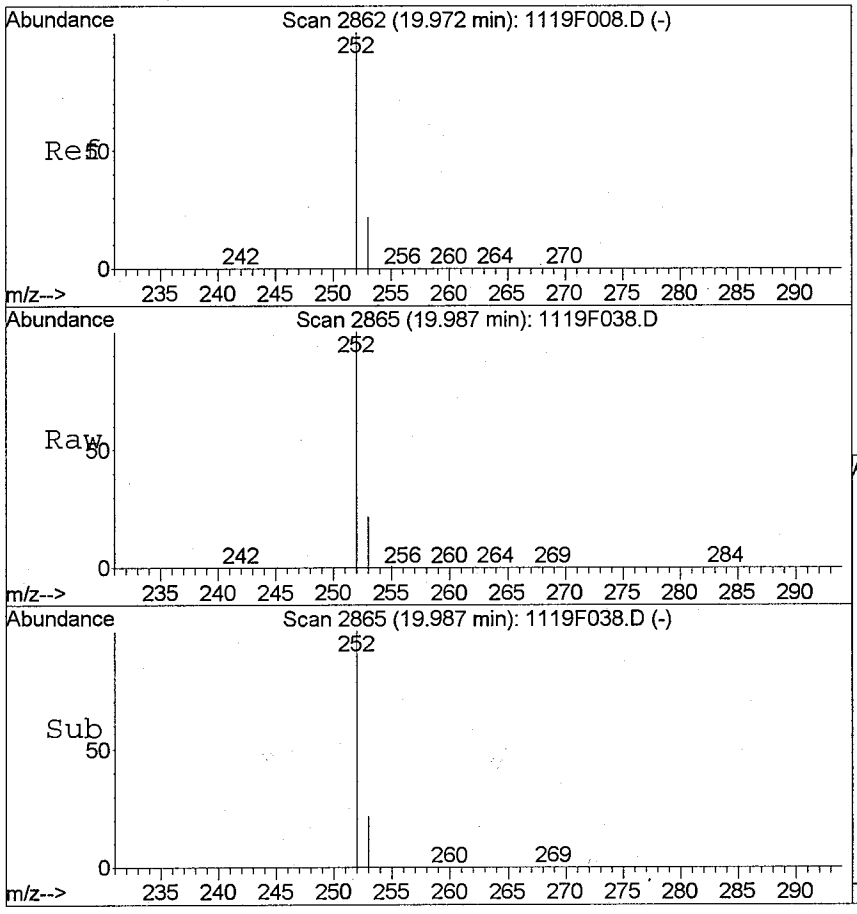


#47
C4-Chrysenes
Concen: 580.29 ng/ml m
RT: 23.71 min Scan# 3646
Delta R.T. 1.18 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:284 Resp: 99535

Ion	Ratio	Lower	Upper
284	100		
269	25.1	16.2	76.2

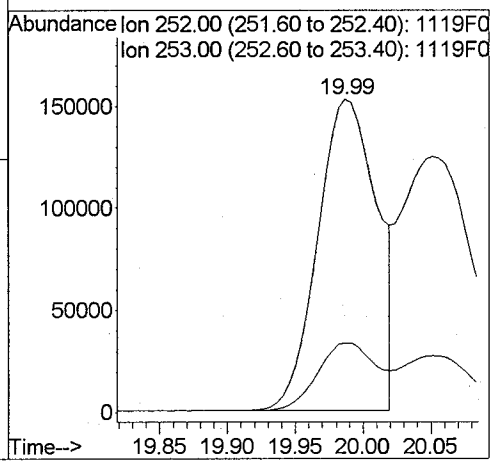


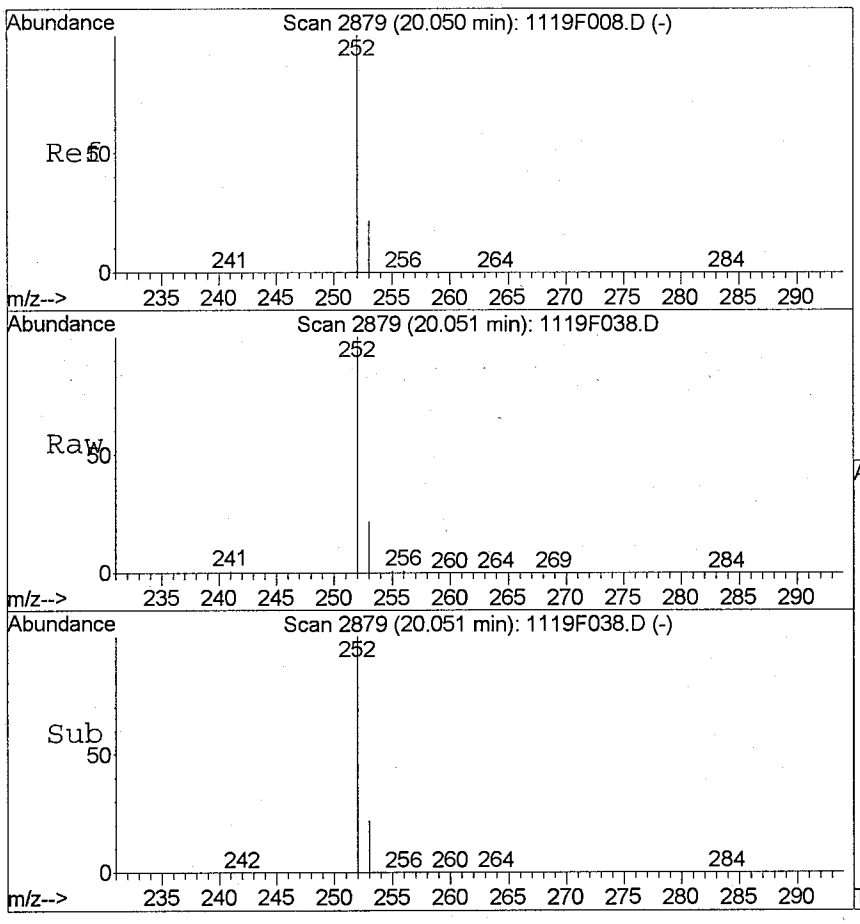


#49
Benzo(b)fluoranthene
Concen: 3130.38 ng/ml
RT: 19.99 min Scan# 2865
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:252 Resp: 461426

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.8

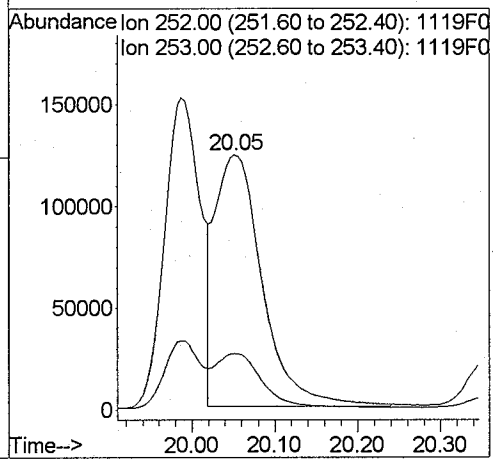


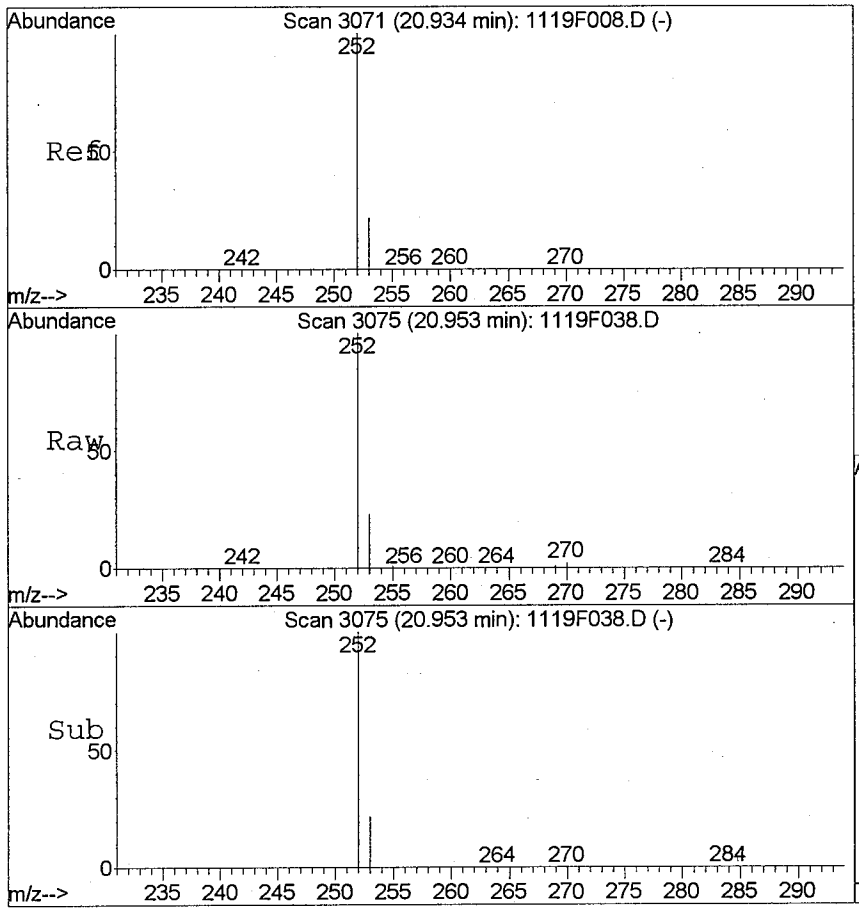


#50
Benzo(k)fluoranthene
Concen: 2612.19 ng/ml m
RT: 20.05 min Scan# 2879
Delta R.T. 0.00 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:252 Resp: 488563

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	52.2

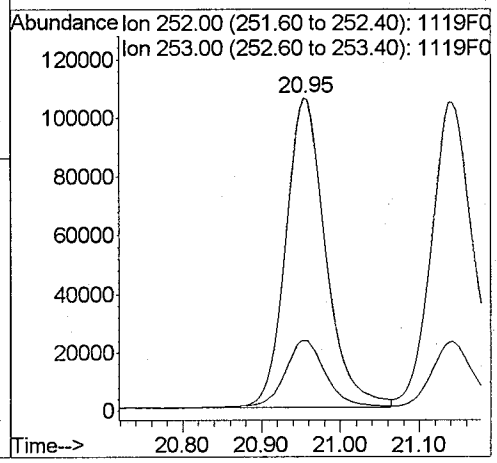


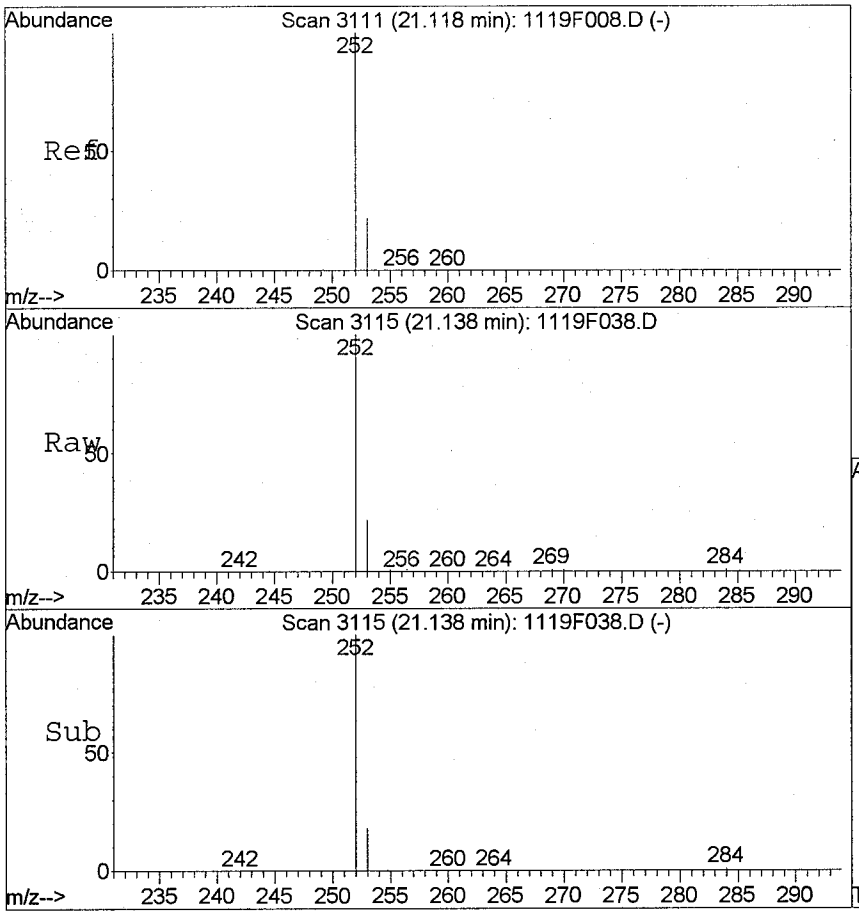


#51
Benzo(e)pyrene
Concen: 2251.10 ng/ml
RT: 20.95 min Scan# 3075
Delta R.T. 0.02 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:252 Resp: 372560

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.8

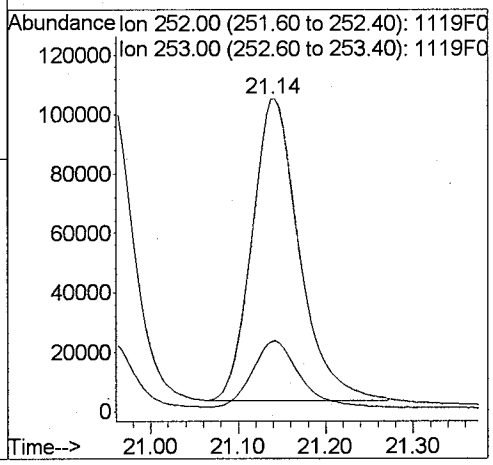


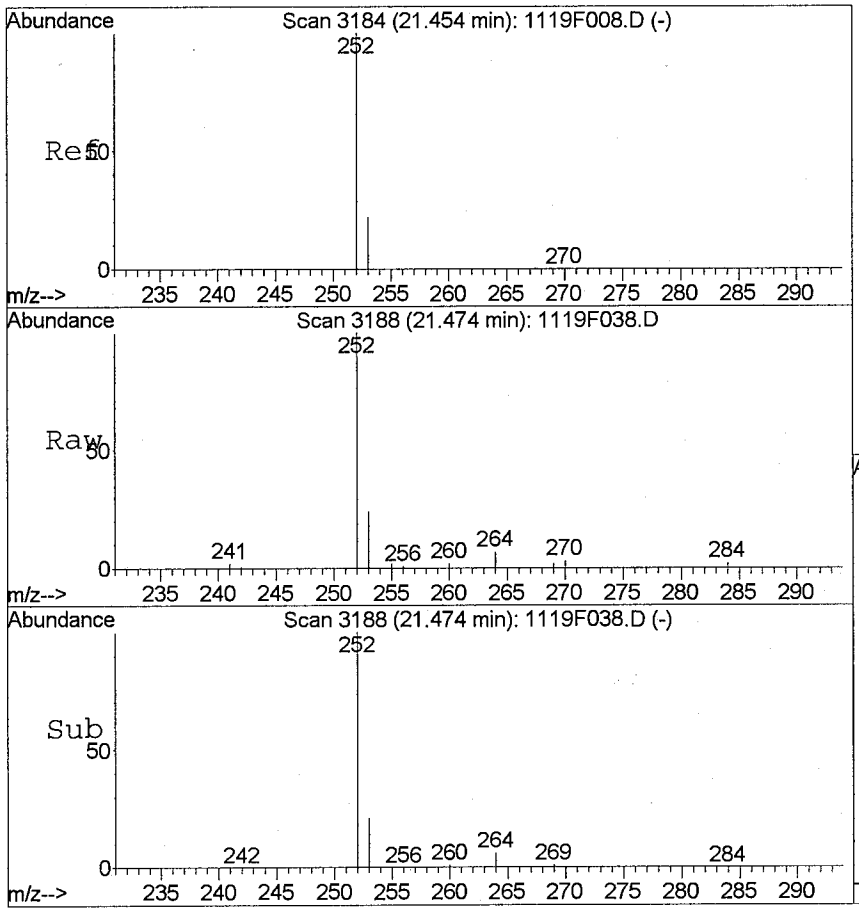


#52
Benzo(a)pyrene
Concen: 3022.90 ng/ml
RT: 21.14 min Scan# 3115
Delta R.T. 0.02 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:252 Resp: 379009

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.9

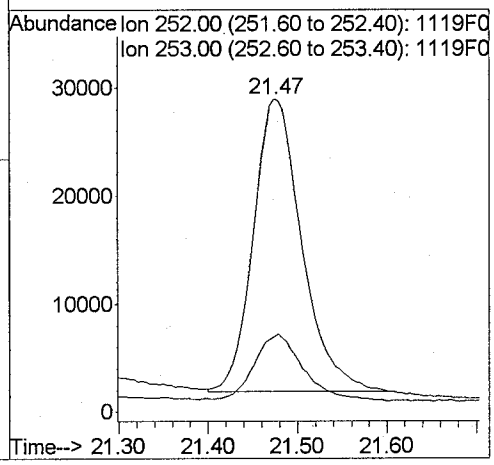


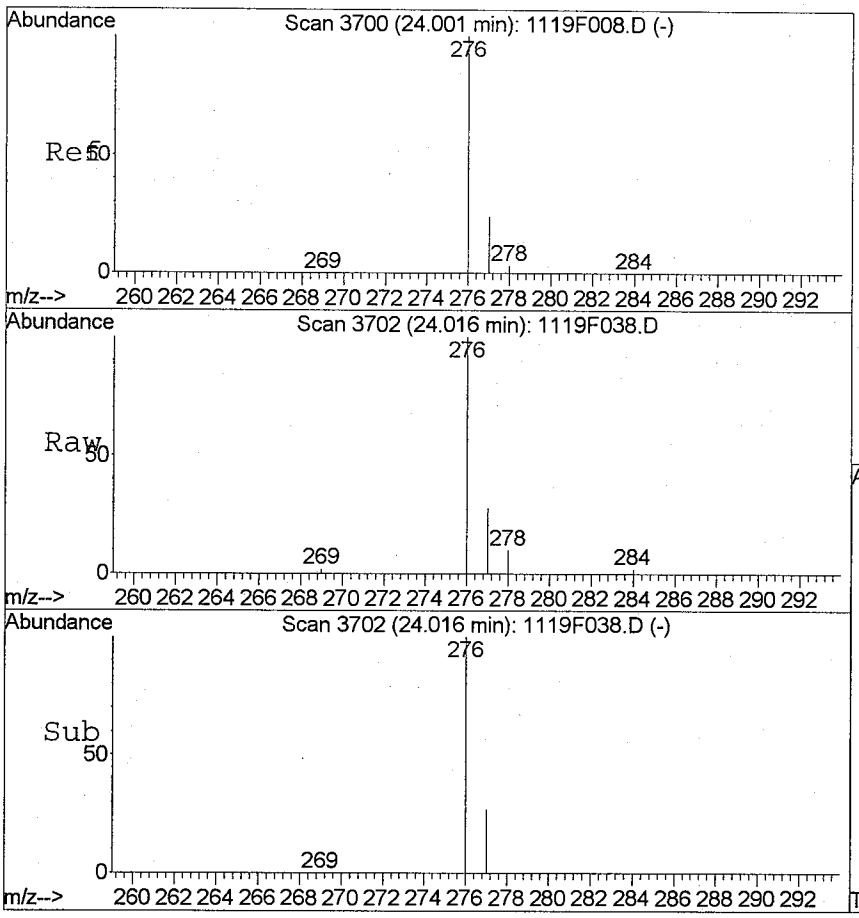


#53
Perylene
Concen: 722.02 ng/ml
RT: 21.47 min Scan# 3188
Delta R.T. 0.02 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:252 Resp: 101619

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.6

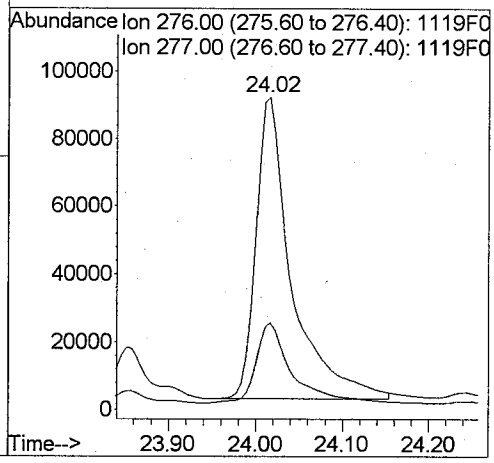


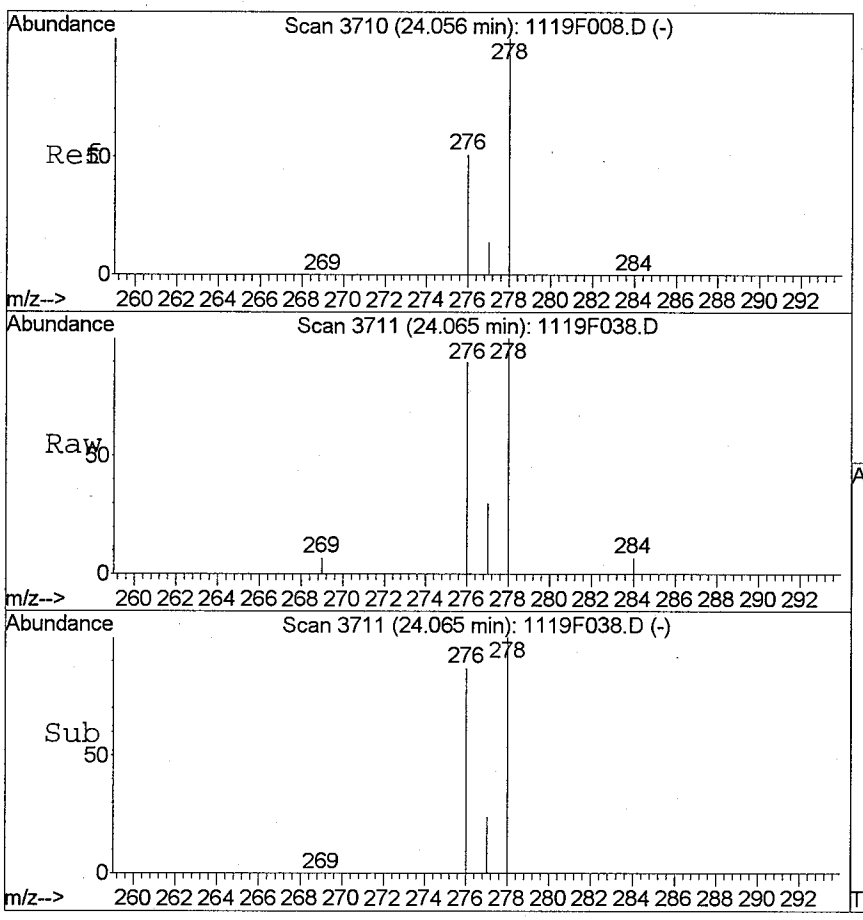


#54
Indeno(1,2,3-cd)pyrene
Concen: 3327.58 ng/ml
RT: 24.02 min Scan# 3702
Delta R.T. 0.02 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:276 Resp: 253624

Ion	Ratio	Lower	Upper
276	100		
277	26.6	0.0	53.6

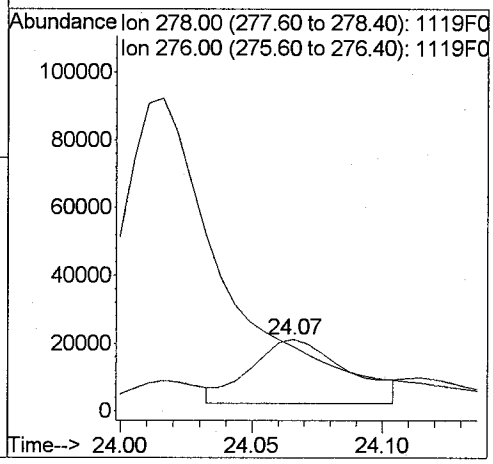


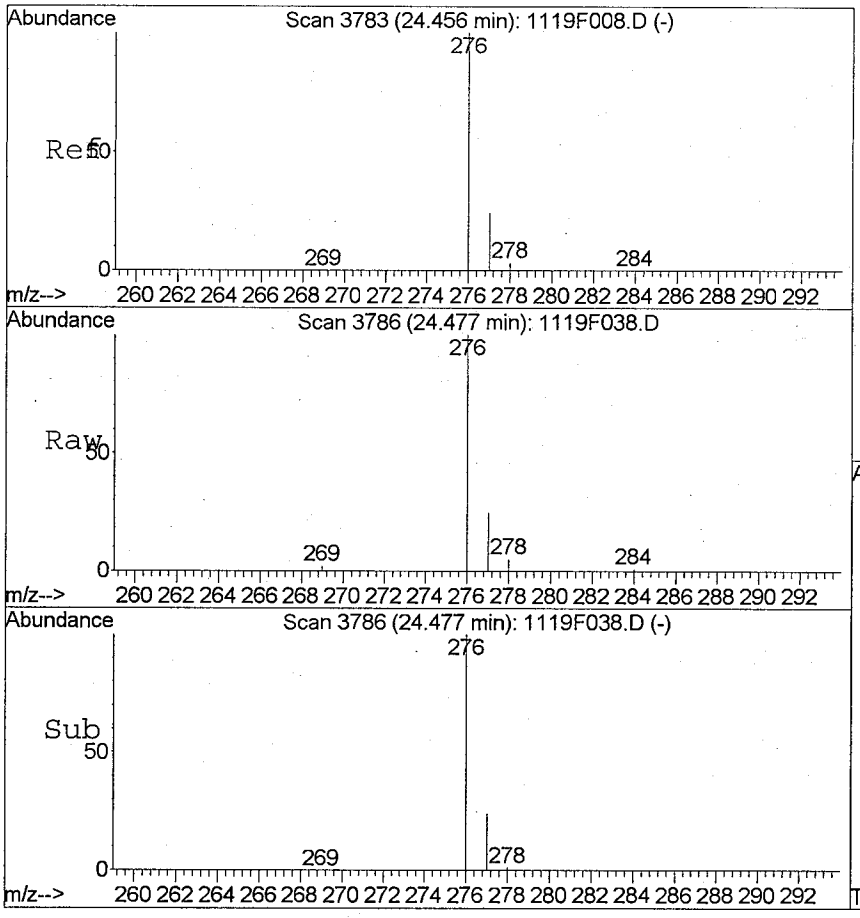


#55
Dibenz(a,h)anthracene
Concen: 443.36 ng/ml m
RT: 24.07 min Scan# 3711
Delta R.T. 0.01 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:278 Resp: 48564

Ion	Ratio	Lower	Upper
278	100		
276	90.3	21.1	81.1#

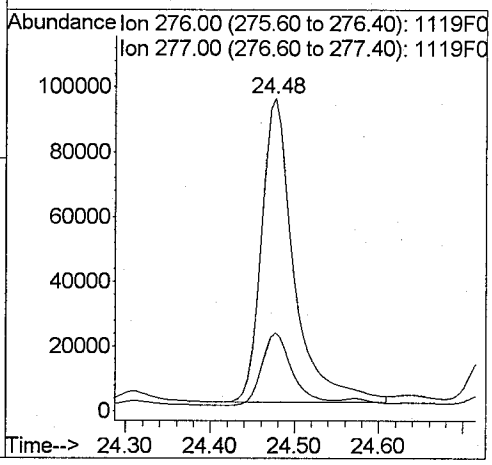




#56
Benzo(g,h,i)perylene
Concen: 1996.70 ng/ml
RT: 24.48 min Scan# 3786
Delta R.T. 0.02 min
Lab File: 1119F038.D
Acq: 19 Nov 2003 5:02 pm

Tgt Ion:276 Resp: 252308

Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	53.6

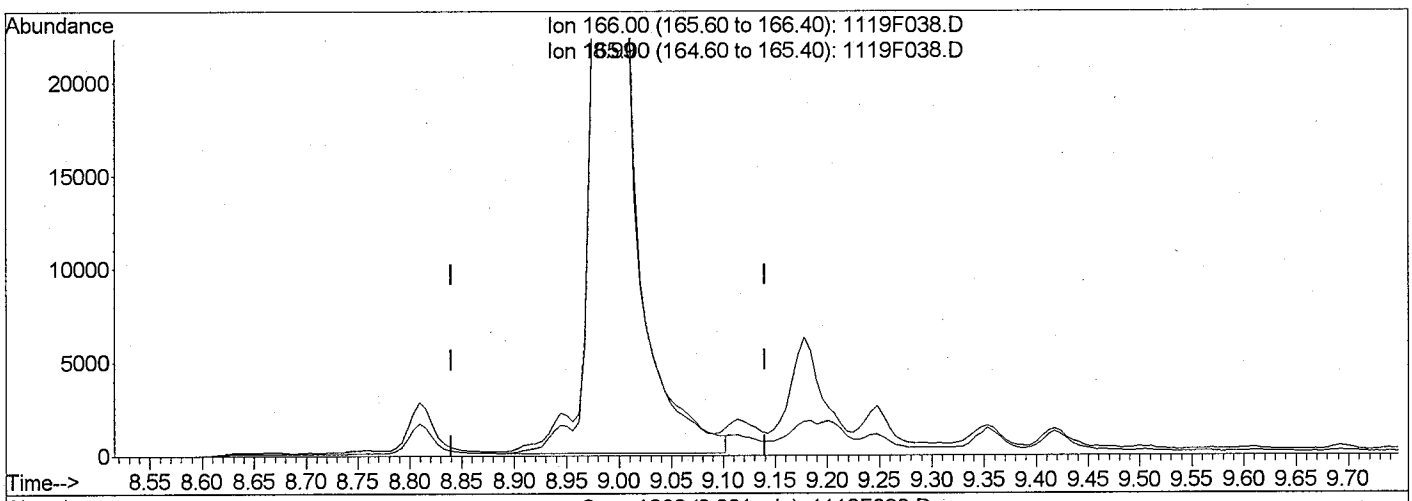


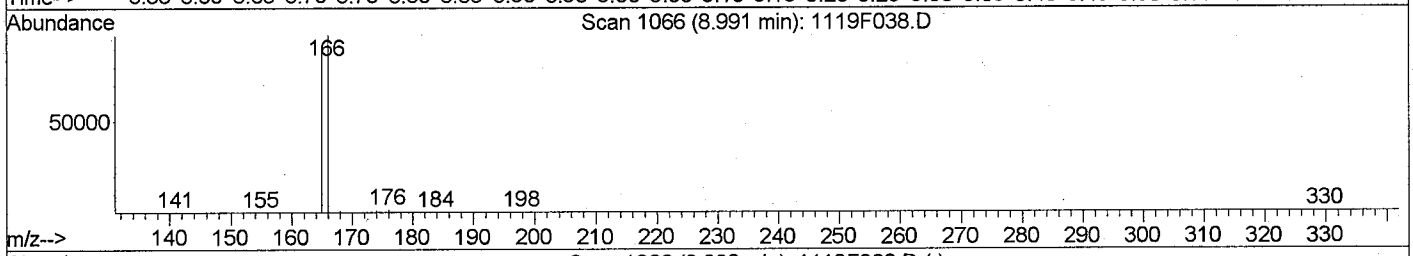
Quantitation Report (Qedit)

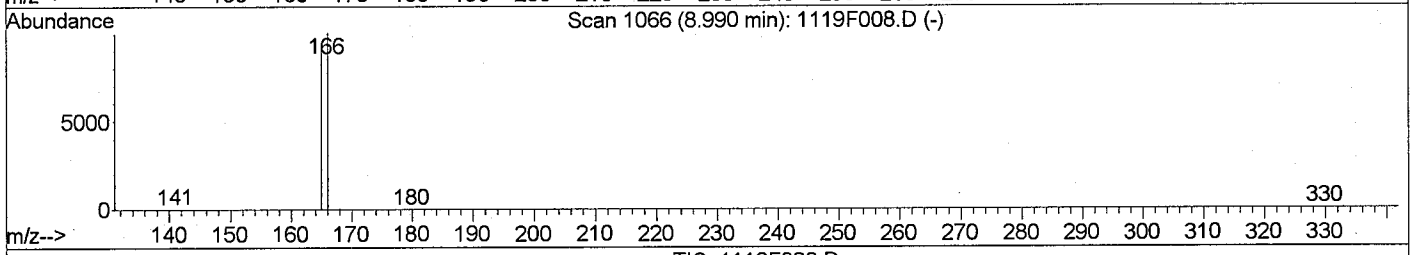
Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(17) Fluorene (T)

8.99min 1149.14ng/ml

response 168671

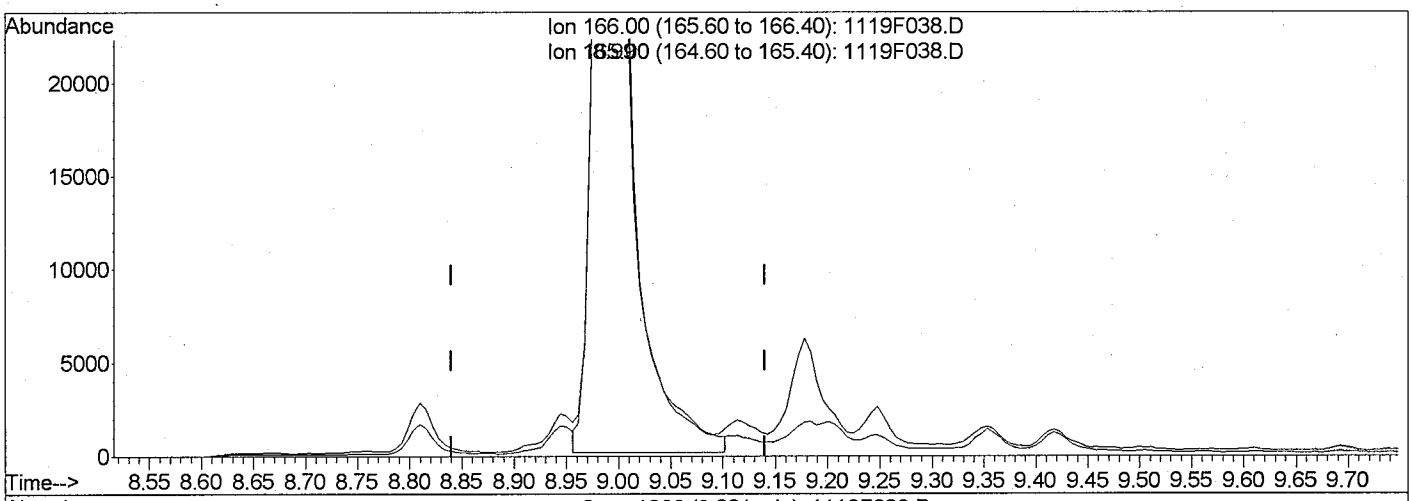
Ion	Exp%	Act%
166.00	100	100
165.00	92.90	93.24
0.00	0.00	0.00
0.00	0.00	0.00

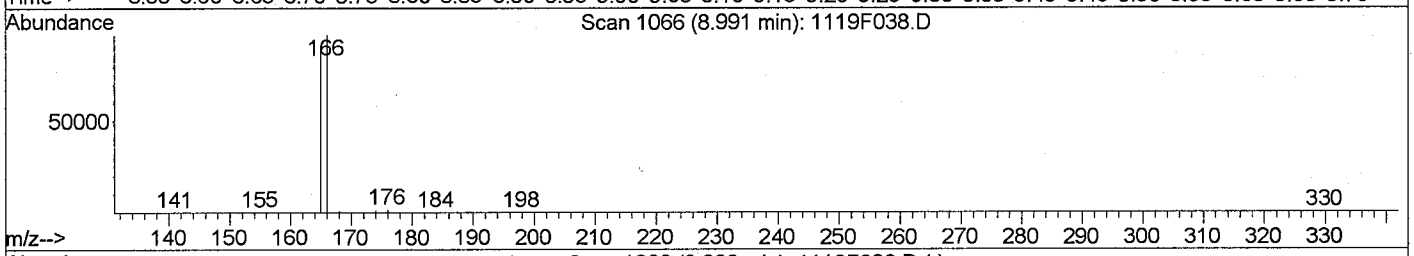
1119F038.D 1107ALK.M Thu Nov 20 14:17:38 2003

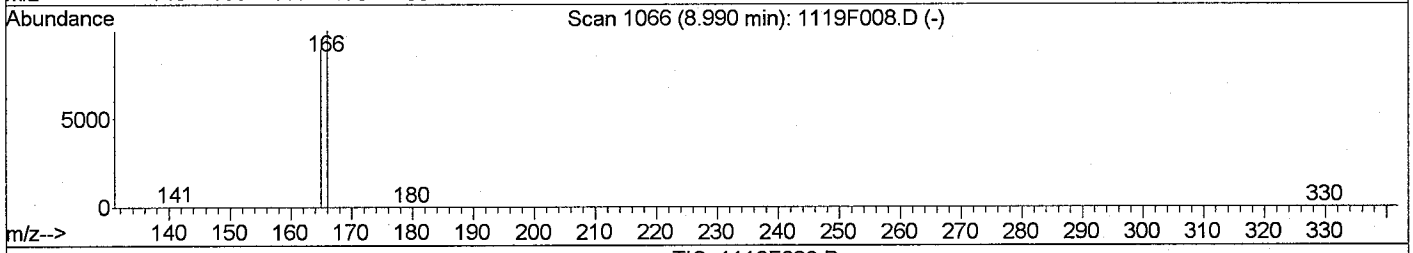
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(17) Fluorene (T)

8.99min 1128.72ng/ml m

response 165674

Ion	Exp%	Act%
166.00	100	100
165.00	92.90	93.36
0.00	0.00	0.00
0.00	0.00	0.00

over integrated 11/24/03

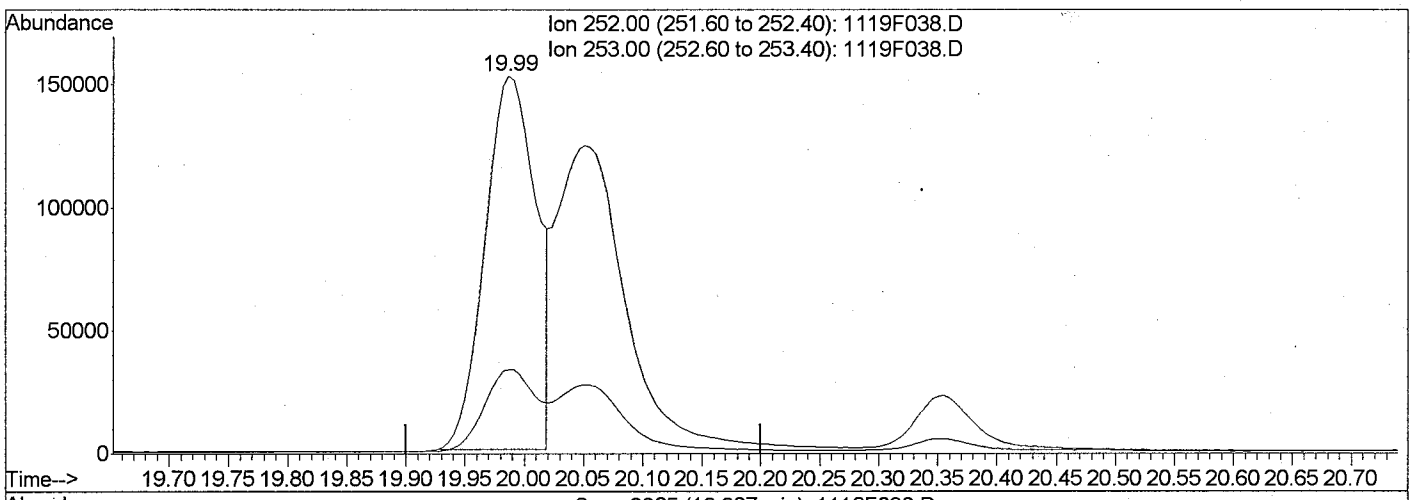
11/24/03

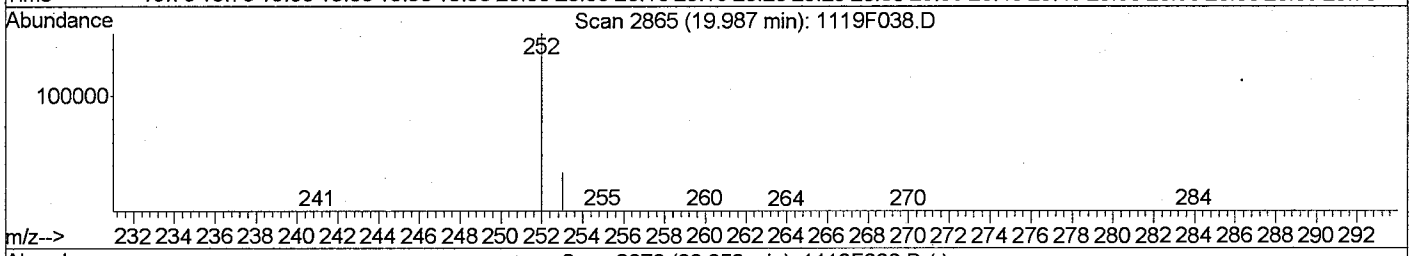
1119F038.D 1107ALK.M Thu Nov 20 14:17:43 2003

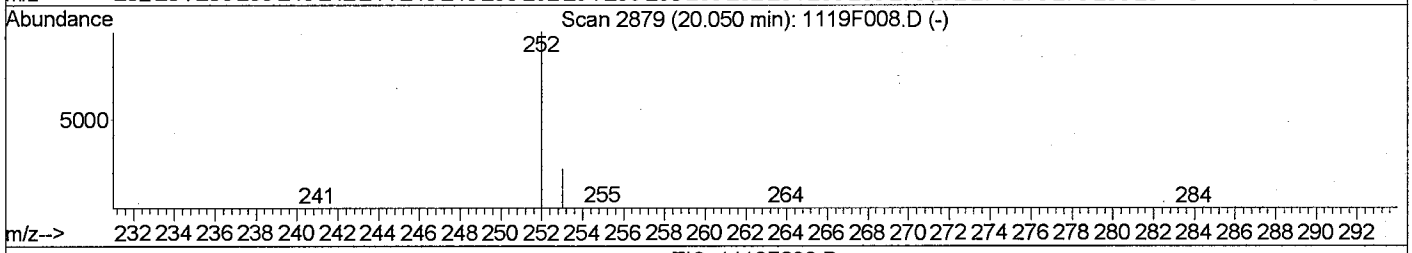
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(50) Benzo(k)fluoranthene (T)

19.99min 2438.79ng/ml

response 456132

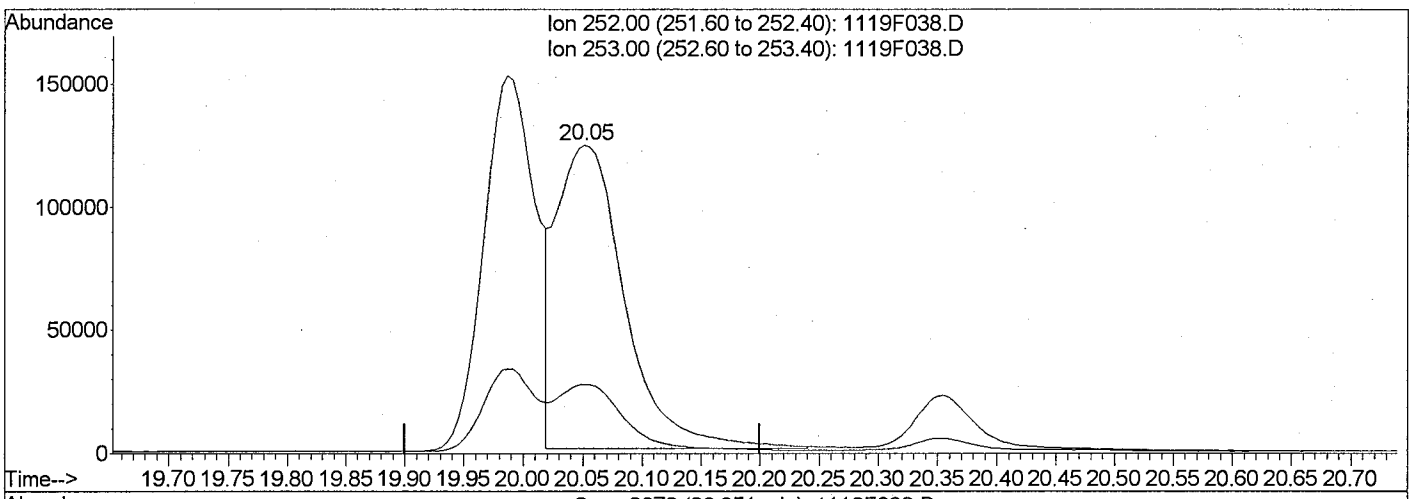
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.74
0.00	0.00	0.00
0.00	0.00	0.00

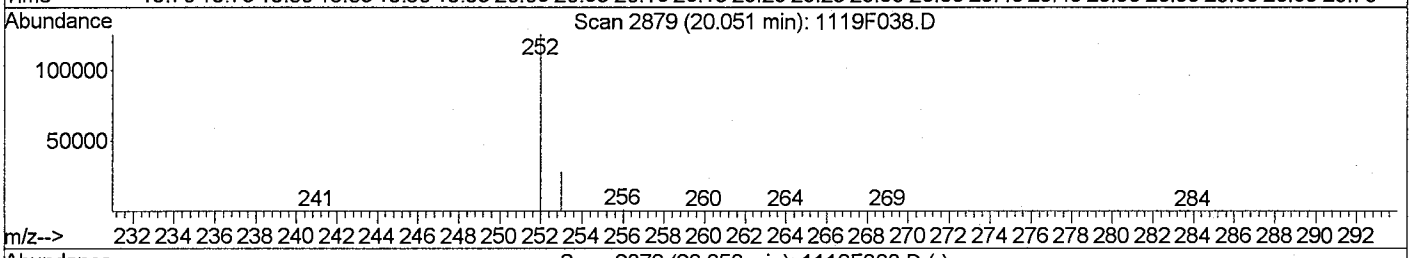
1119F038.D 1107ALK.M Thu Nov 20 14:17:59 2003

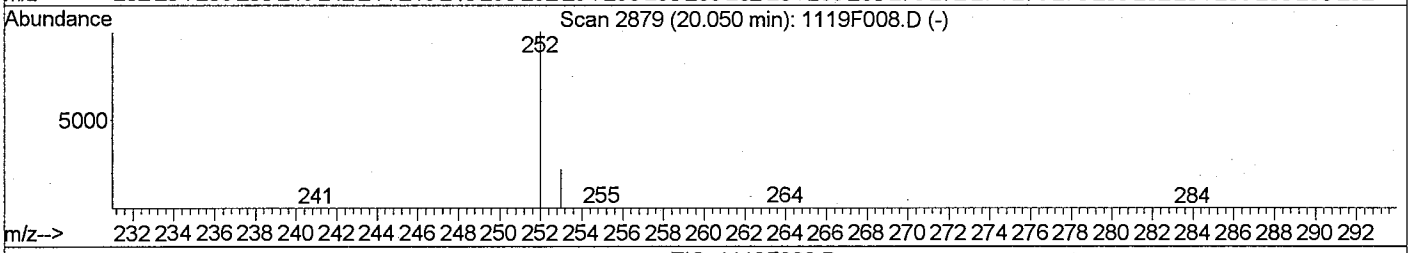
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(50) Benzo(k)fluoranthene (T)

20.05min 2612.19ng/ml m

response 488563

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.33
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

wrong peak

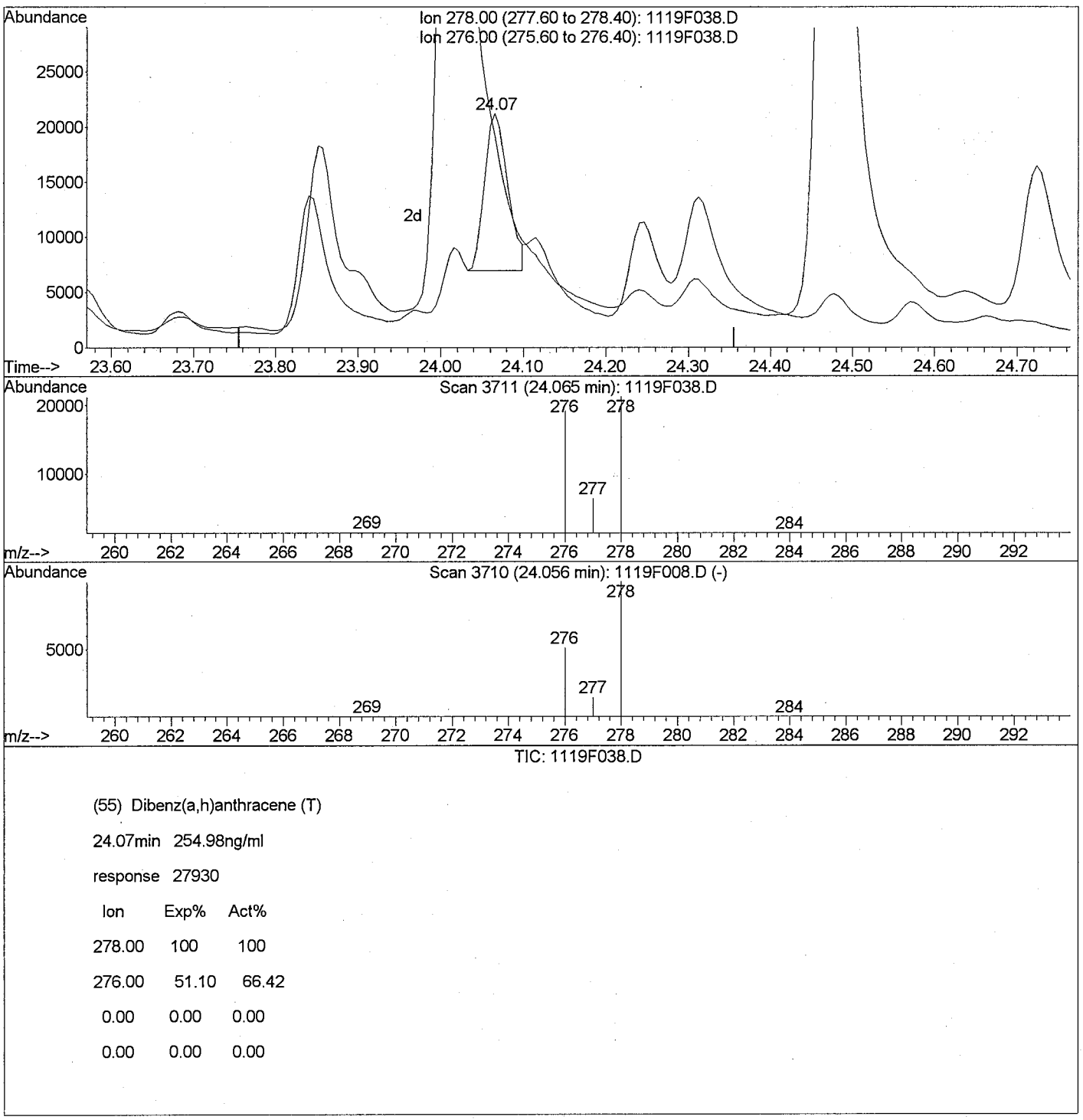
11/24/13

1119F038.D 1107ALK.M Thu Nov 20 14:18:05 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(55) Dibenz(a,h)anthracene (T)

24.07min 254.98ng/ml

response 27930

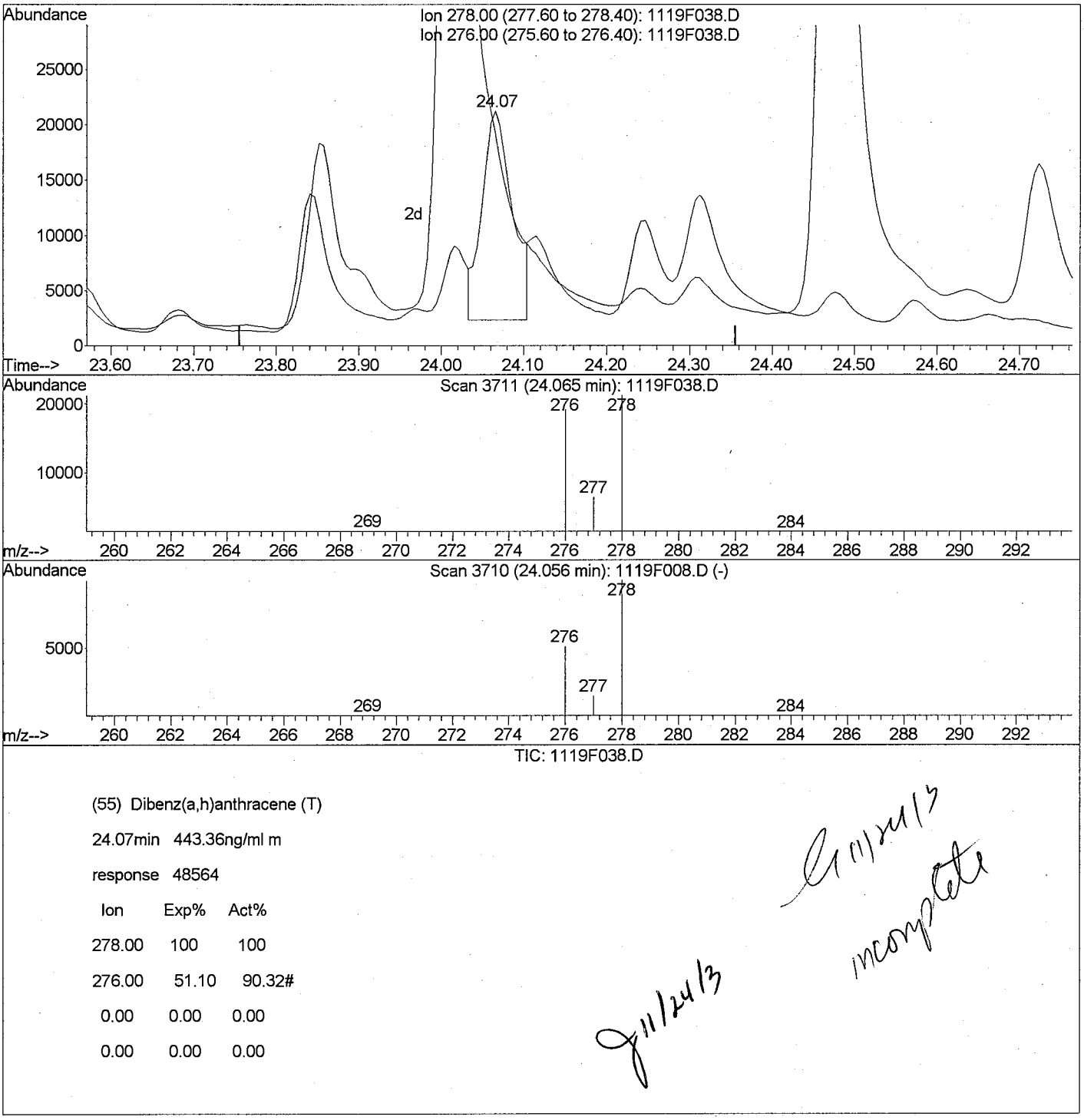
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	66.42
0.00	0.00	0.00
0.00	0.00	0.00

1119F038.D 1107ALK.M Thu Nov 20 14:18:11 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(55) Dibenz(a,h)anthracene (T)

24.07min 443.36ng/ml m

response 48564

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	90.32#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

incomplete

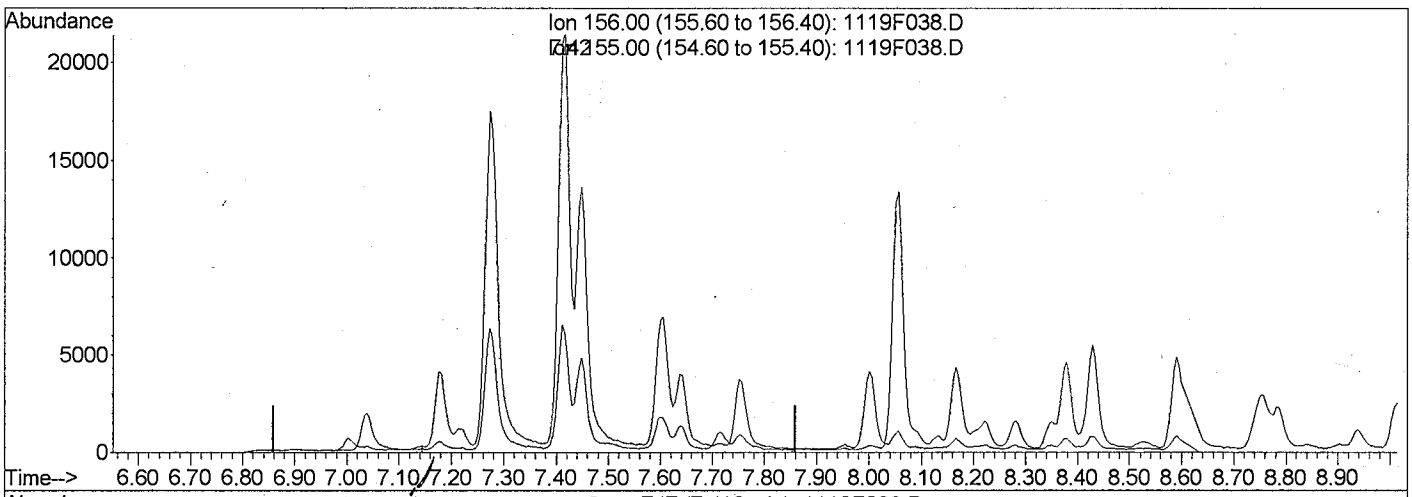
11/24/13

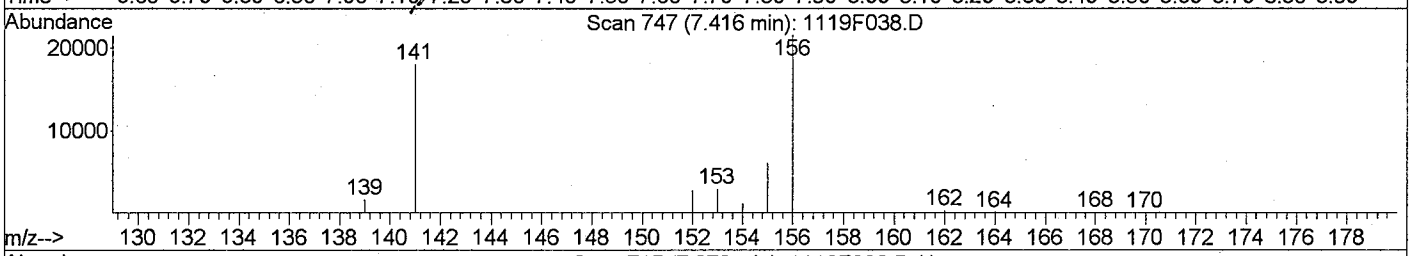
1119F038.D 1107ALK.M Thu Nov 20 14:18:15 2003

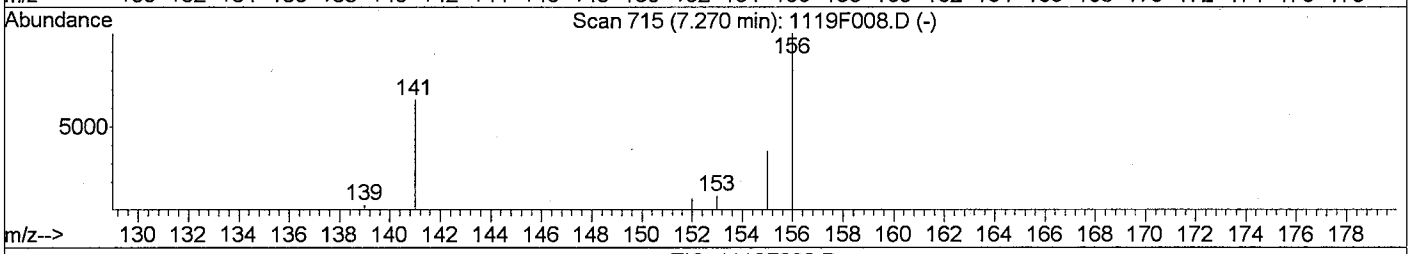
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(8) C2-Naphthalenes (L)

7.42min 481.44ng/ml m

response 124572

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	28.37
0.00	0.00	0.00
0.00	0.00	0.00

11/21/03

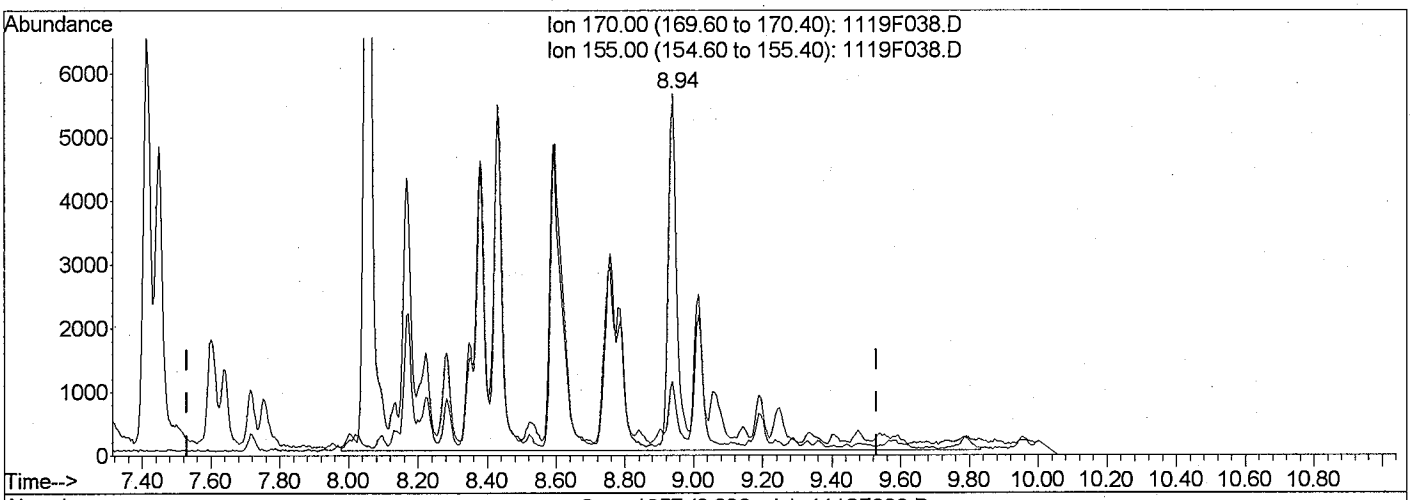
11/21/03

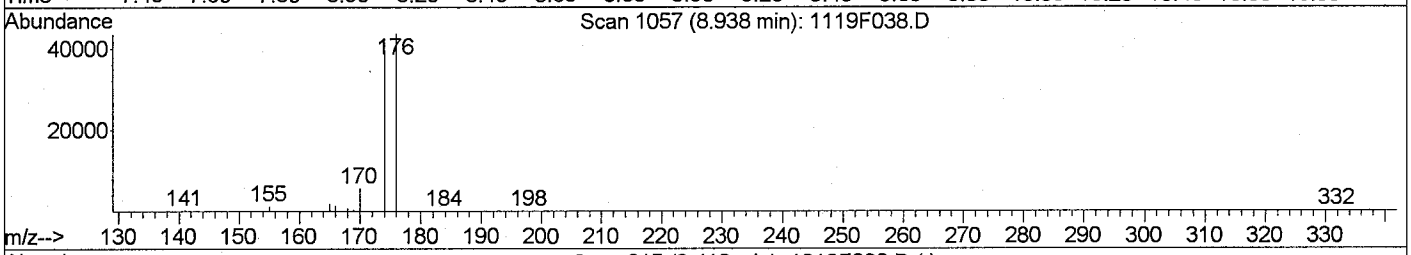
1119F038.D 1107ALK.M Fri Nov 21 11:14:59 2003

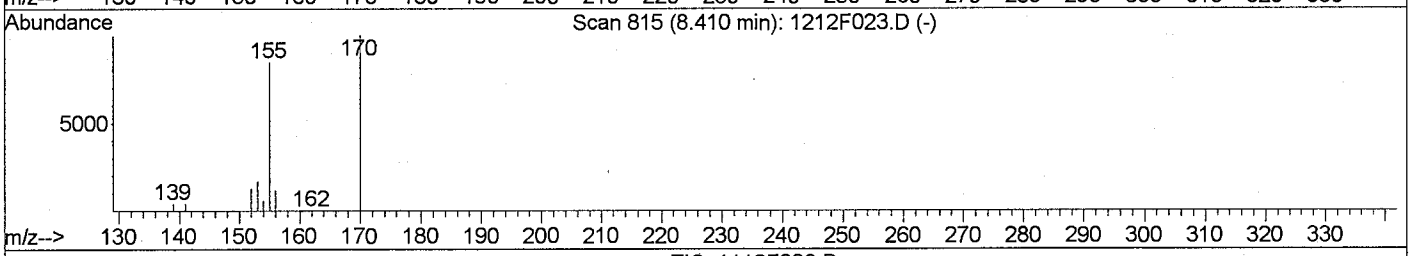
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:15 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(9) C3-Naphthalenes (L)

8.94min 250.99ng/ml m

response 64945

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	20.57#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

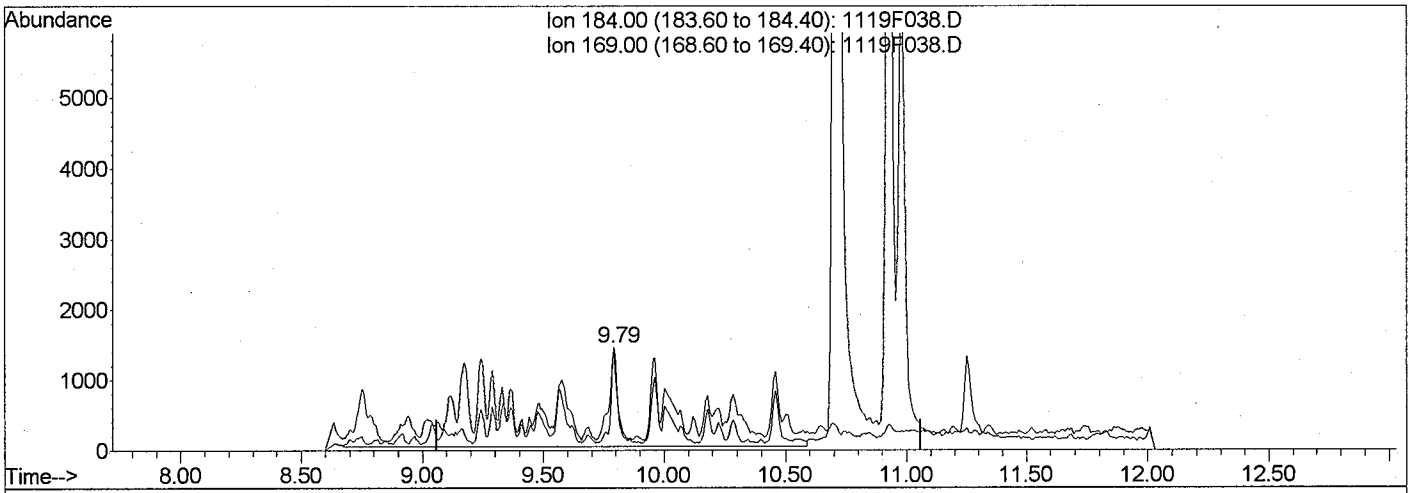
11/24/13

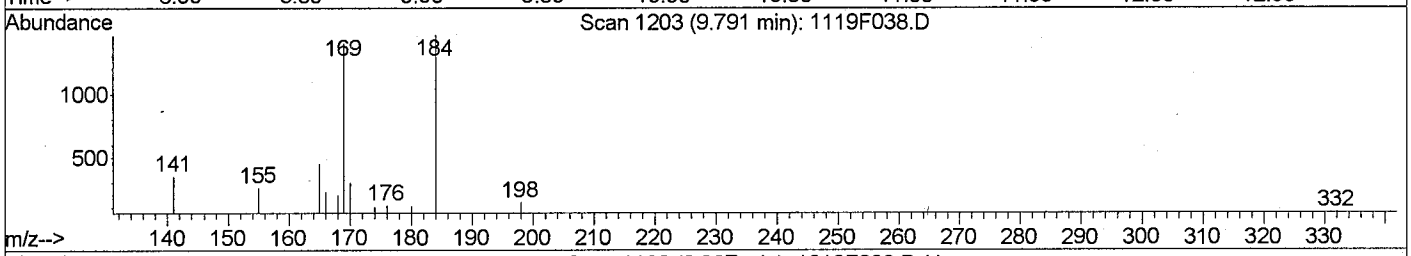
1119F038.D 1107ALK.M Fri Nov 21 11:15:21 2003

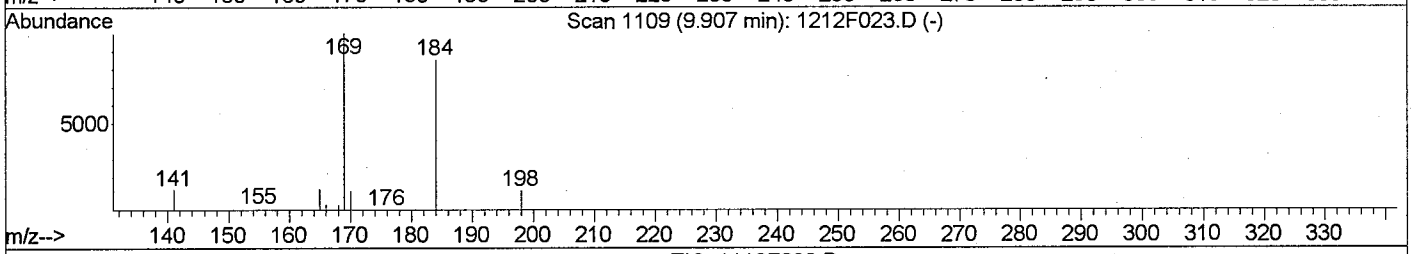
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:15 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(10) C4-Naphthalenes (L)

9.79min 100.59ng/ml m

response 26028

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	95.43
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

11/24/3

1119F038.D 1107ALK.M Fri Nov 21 11:15:45 2003

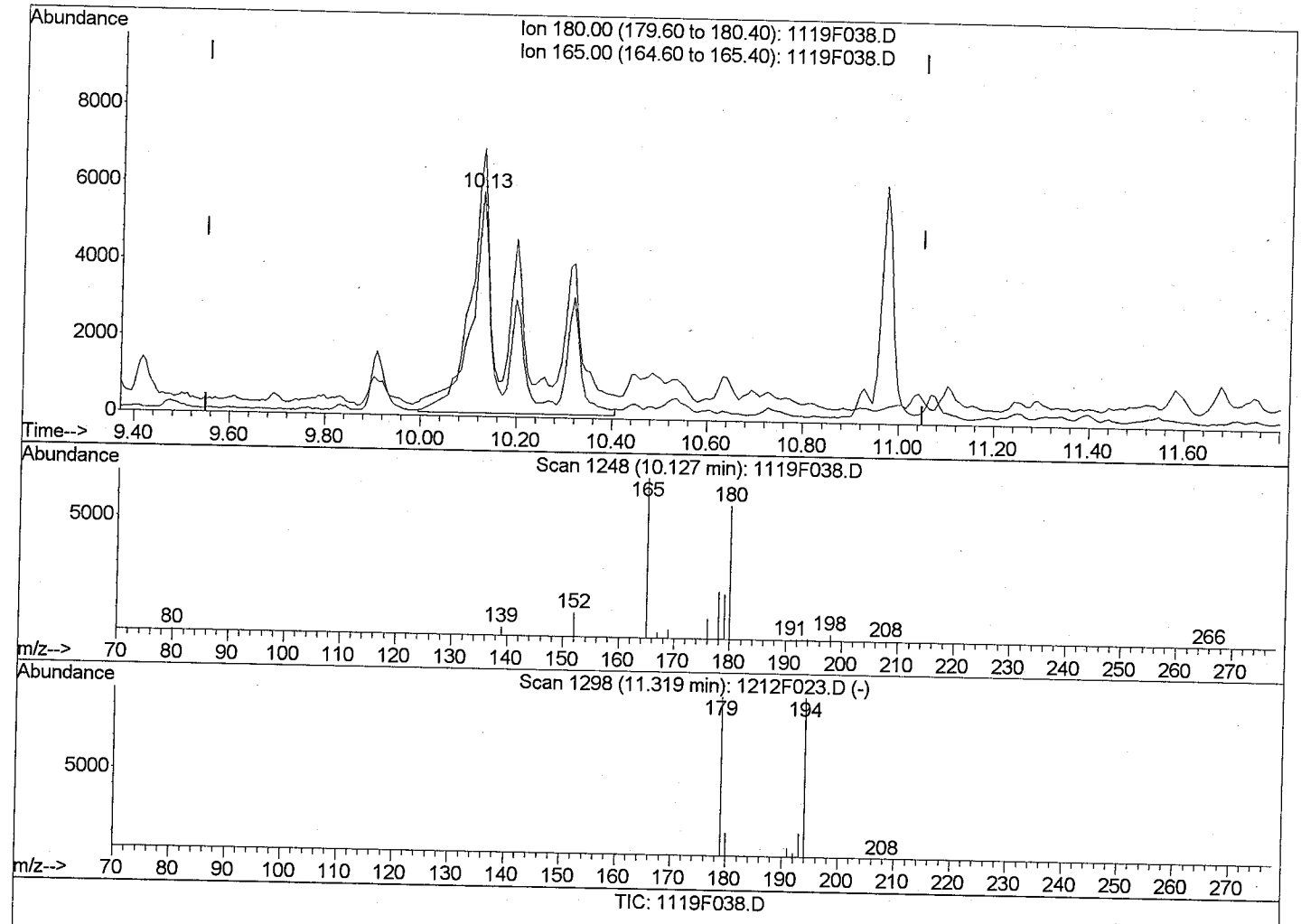
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:15 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(18) C1-Fluorenes (L)

10.13min 210.06ng/ml m

response 30833

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	119.57#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

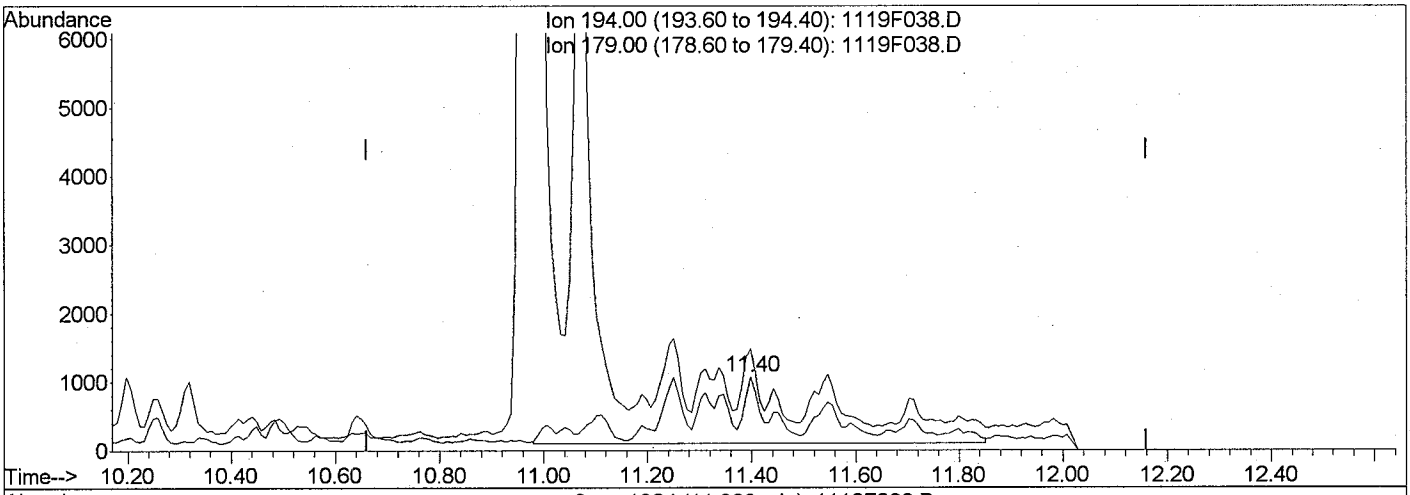
11/24/13

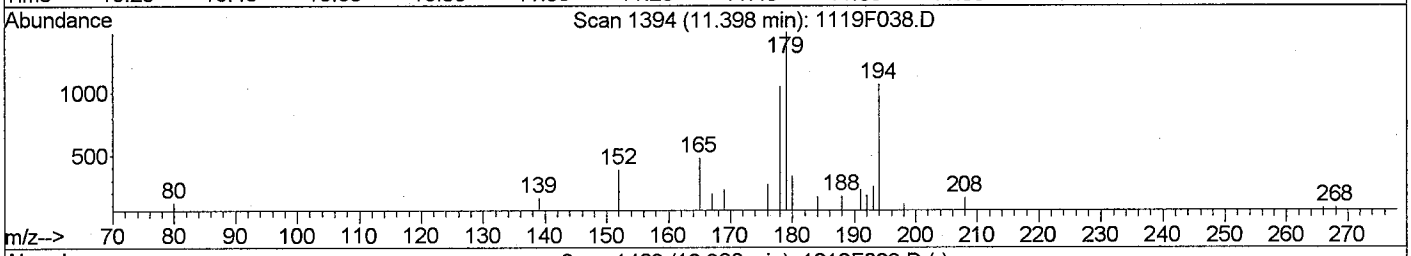
1119F038.D 1107ALK.M Fri Nov 21 11:15:57 2003

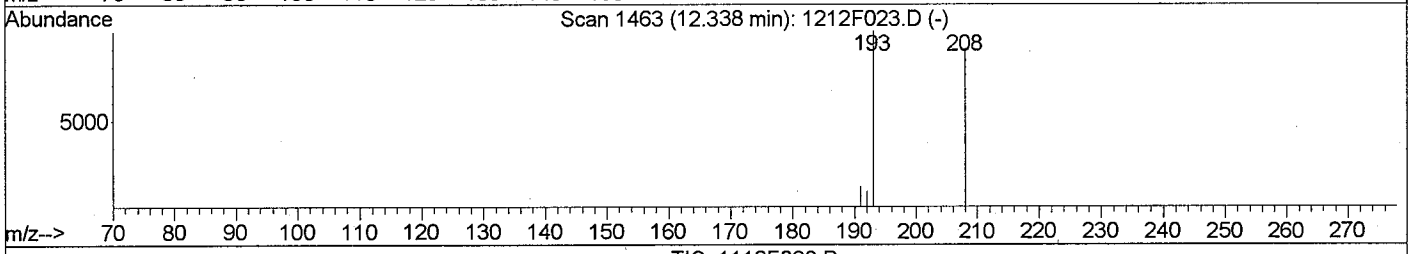
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(19) C2-Fluorenes (L)

11.40min 107.28ng/ml m

response 15747

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	138.25
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

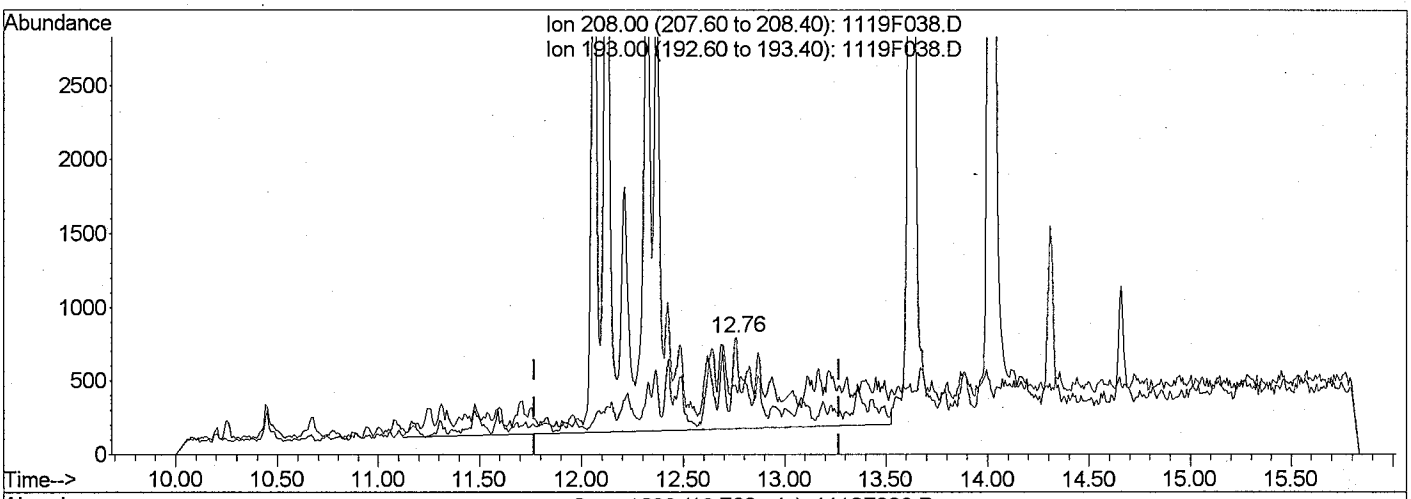
11/24/13

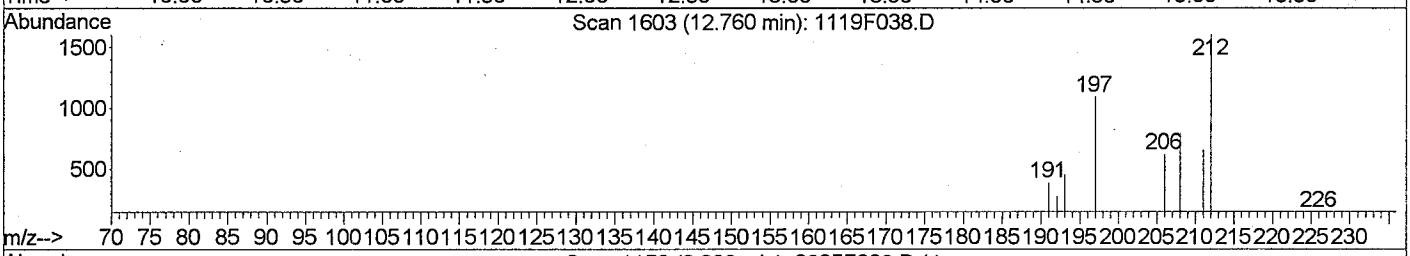
1119F038.D 1107ALK.M Fri Nov 21 11:16:11 2003

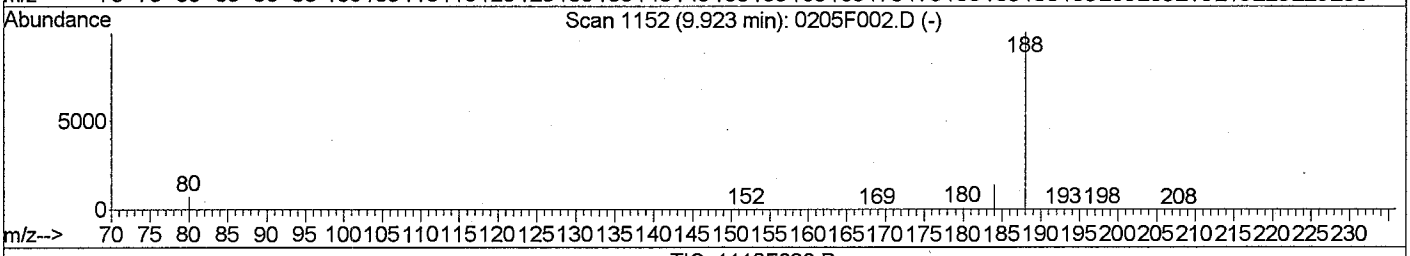
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(20) C3-Fluorenes (L)

12.76min 148.19ng/ml m

response 21752

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	57.56#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

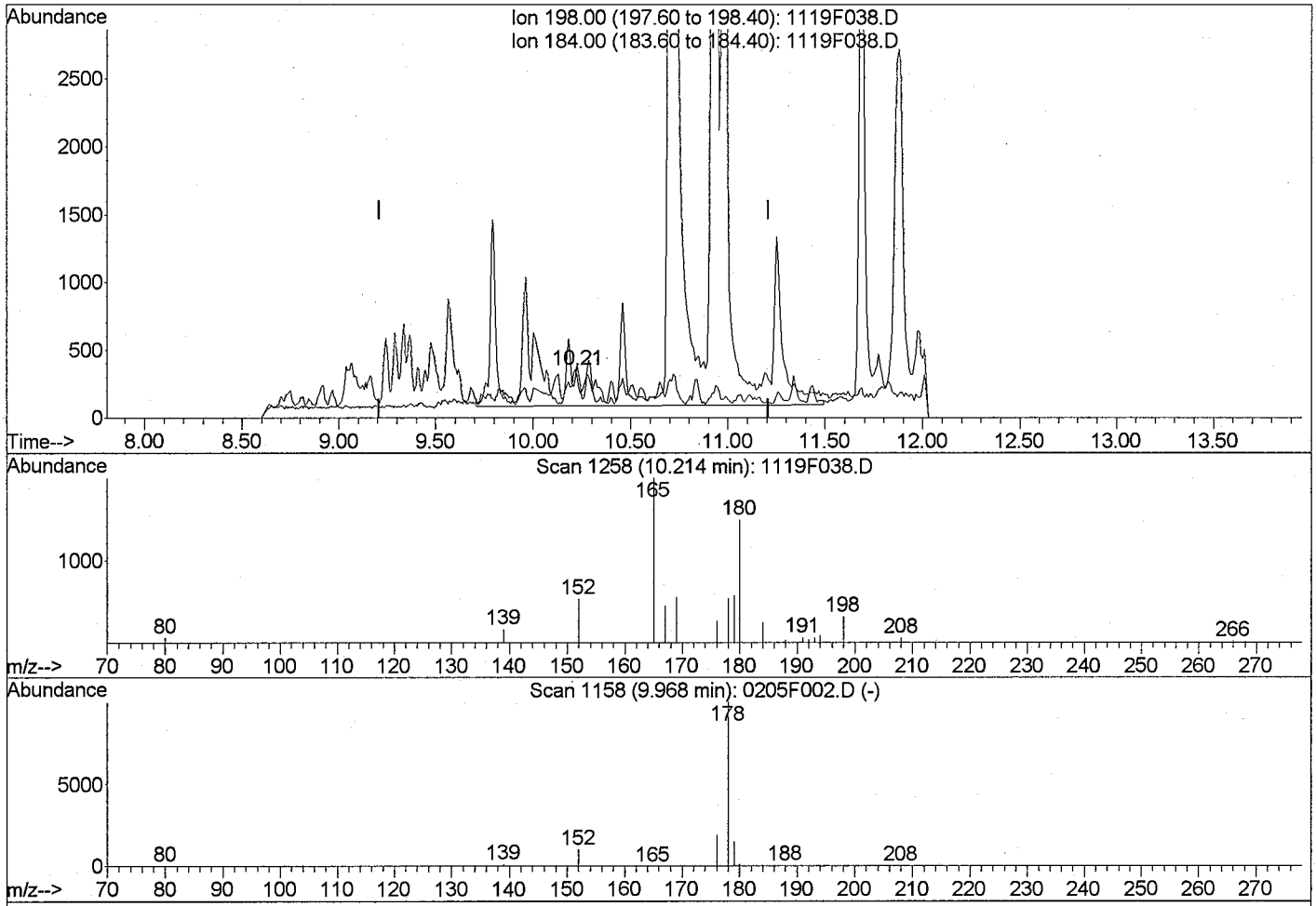
11/24/13

1119F038.D 1107ALK.M Fri Nov 21 11:16:31 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(25) C1-Dibenzothiophenes (L)

10.21min 50.65ng/ml m

response 9307

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	80.62
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

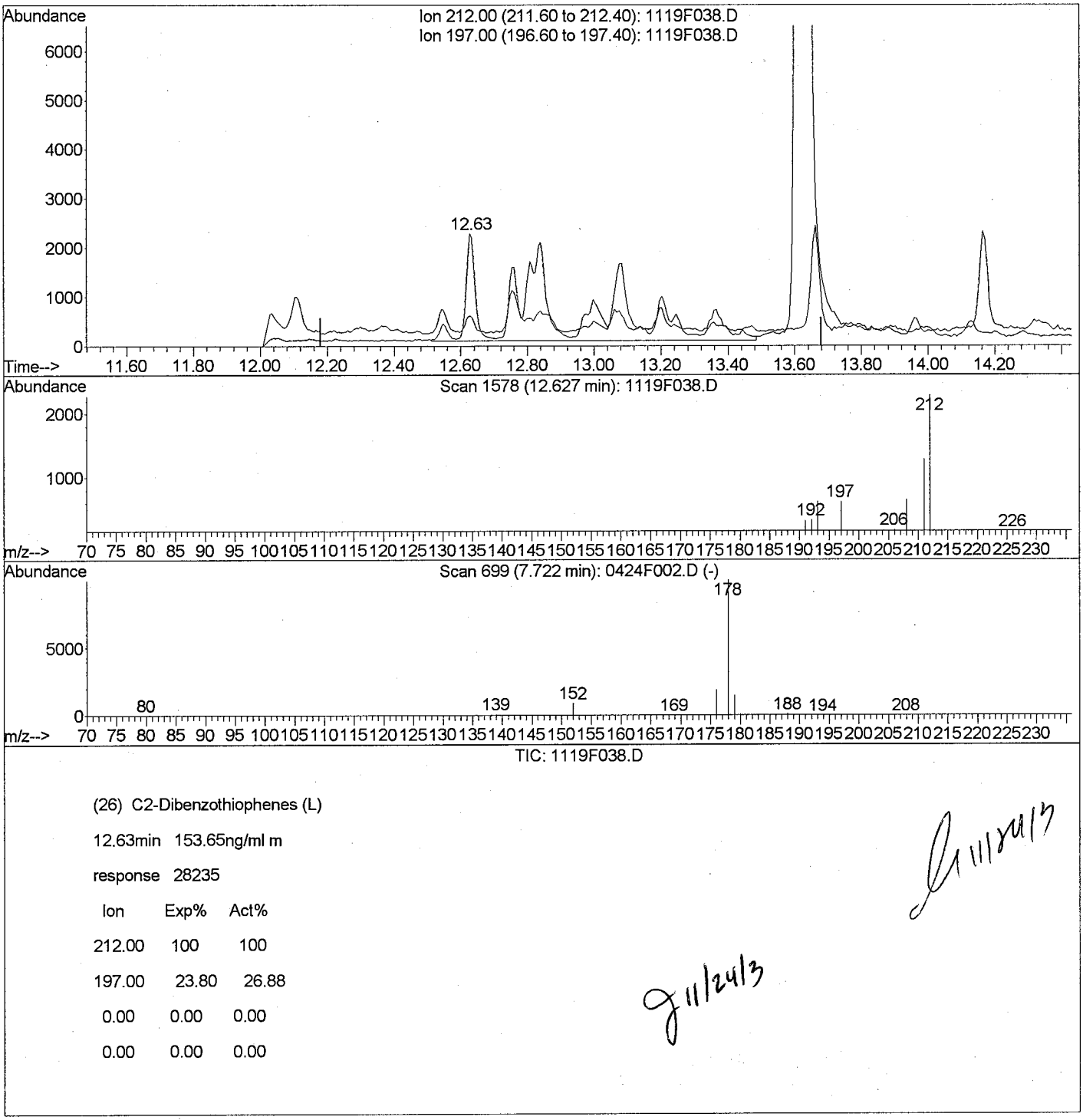
11/24/13

1119F038.D 1107ALK.M Fri Nov 21 11:16:50 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(26) C2-Dibenzothiophenes (L)

12.63min 153.65ng/ml m

response 28235

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	26.88
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

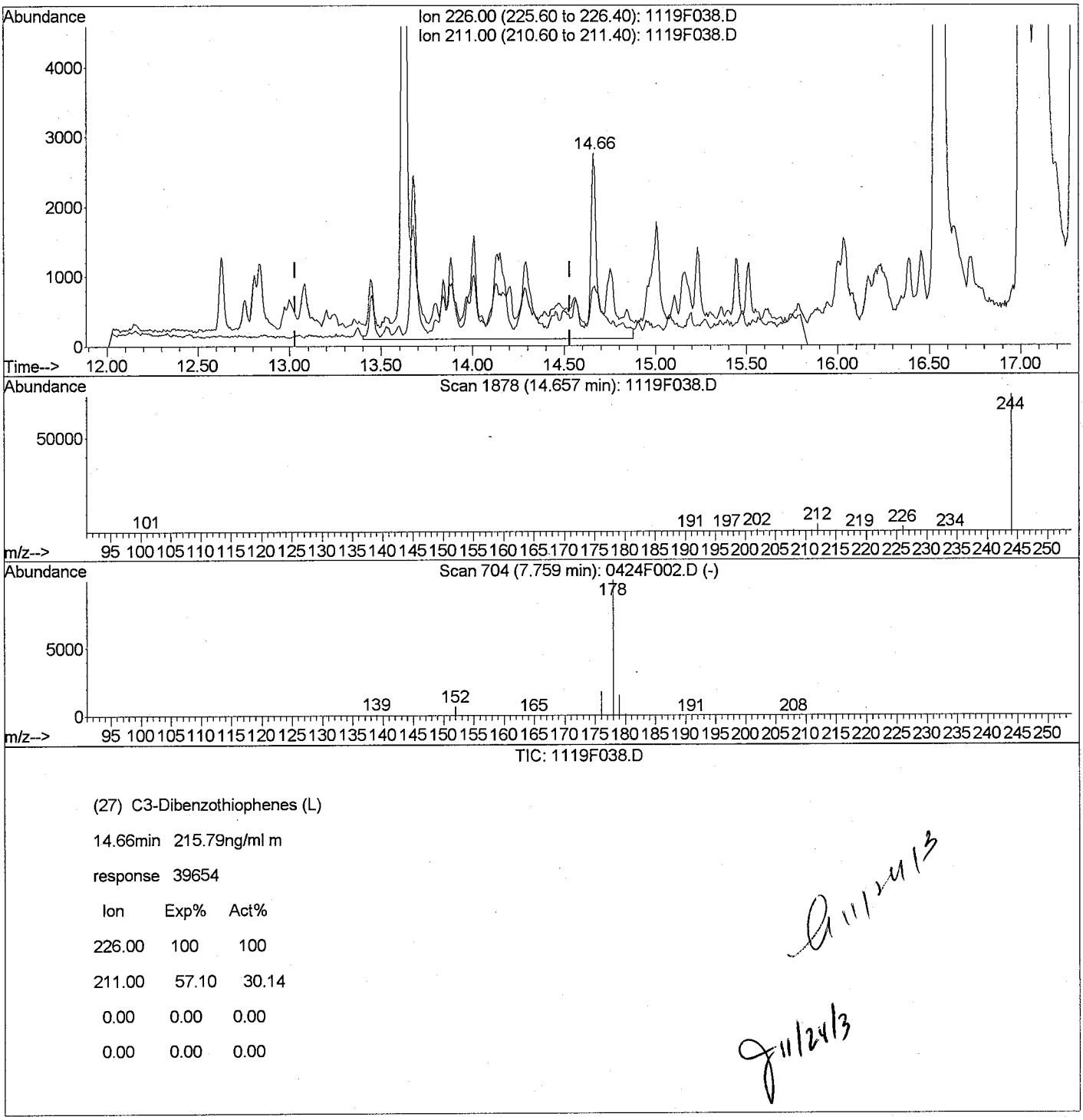
1119F038.D 1107ALK.M Fri Nov 21 11:17:13 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:17 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(27) C3-Dibenzothiophenes (L)

14.66min 215.79ng/ml m

response 39654

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	30.14
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

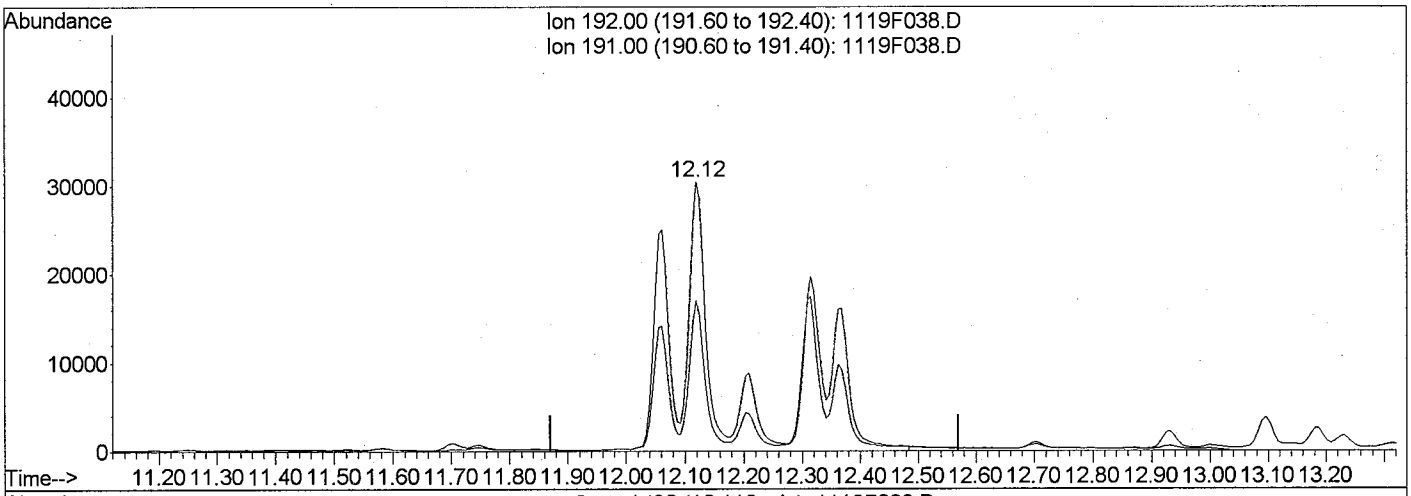
11/24/13

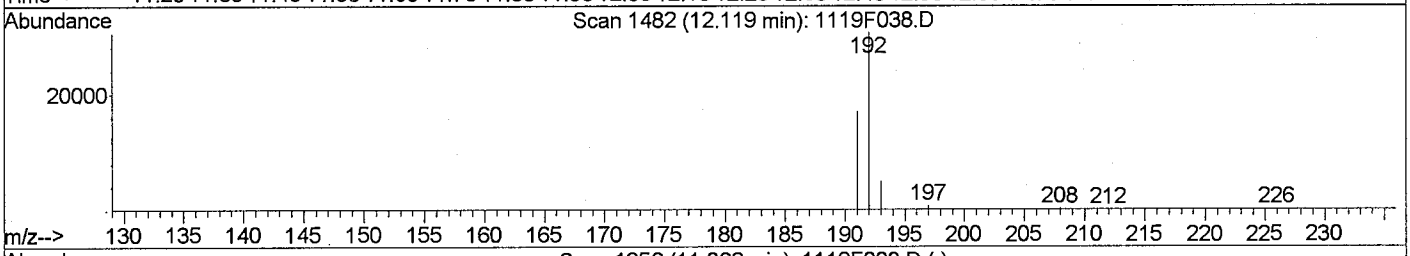
1119F038.D 1107ALK.M Fri Nov 21 11:17:31 2003

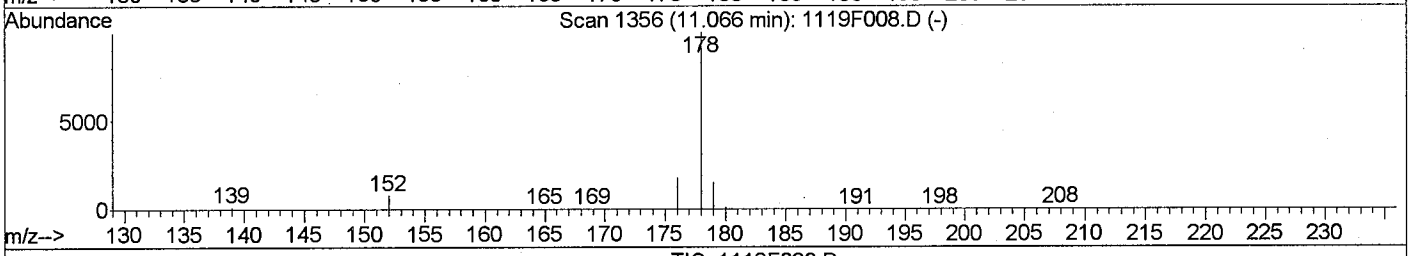
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 1051.79ng/ml m

response 203034

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	55.81
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

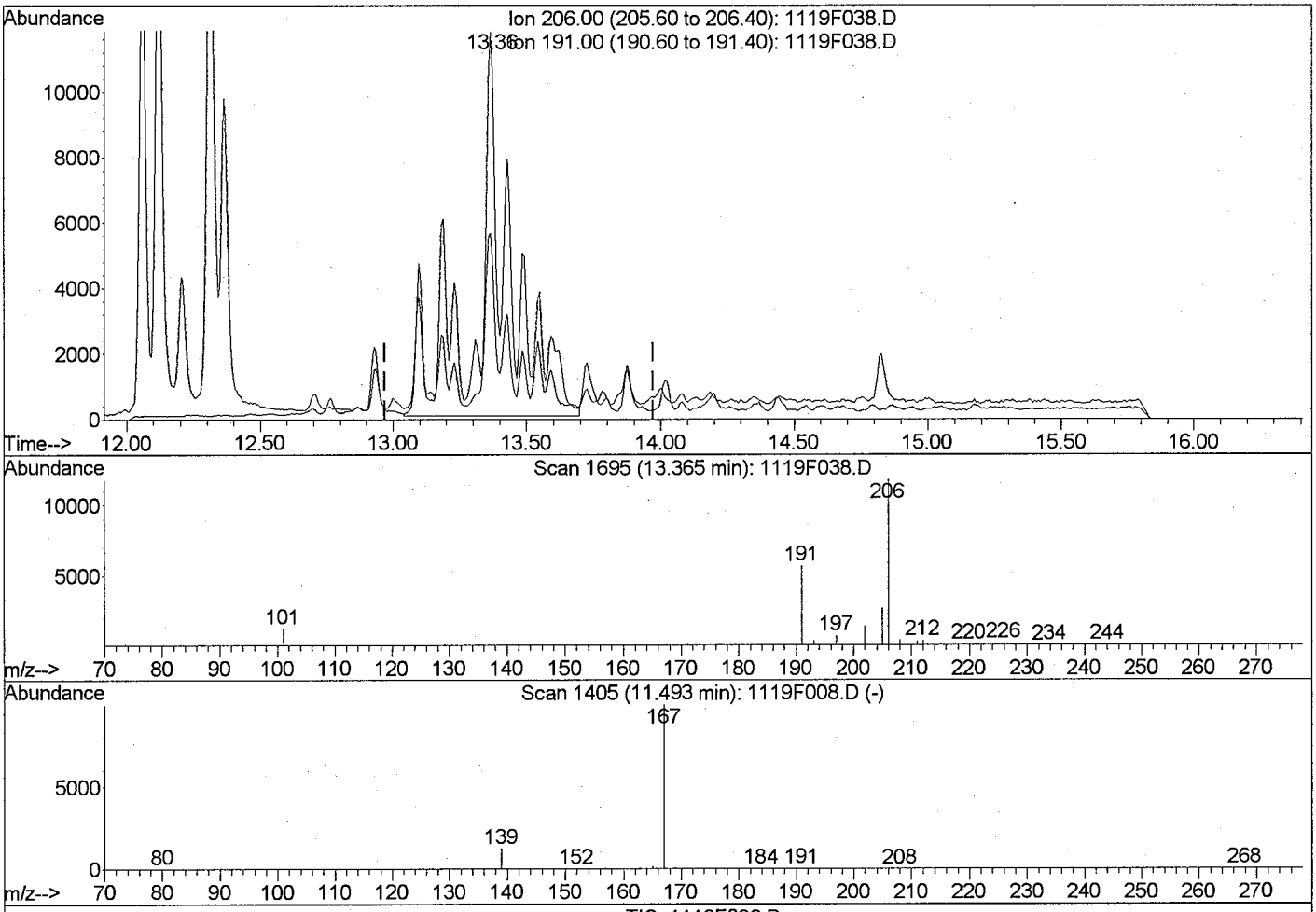
11/24/13

1119F038.D 1107ALK.M Fri Nov 21 11:17:39 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.36min 527.79ng/ml m

response 101882

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	48.19
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

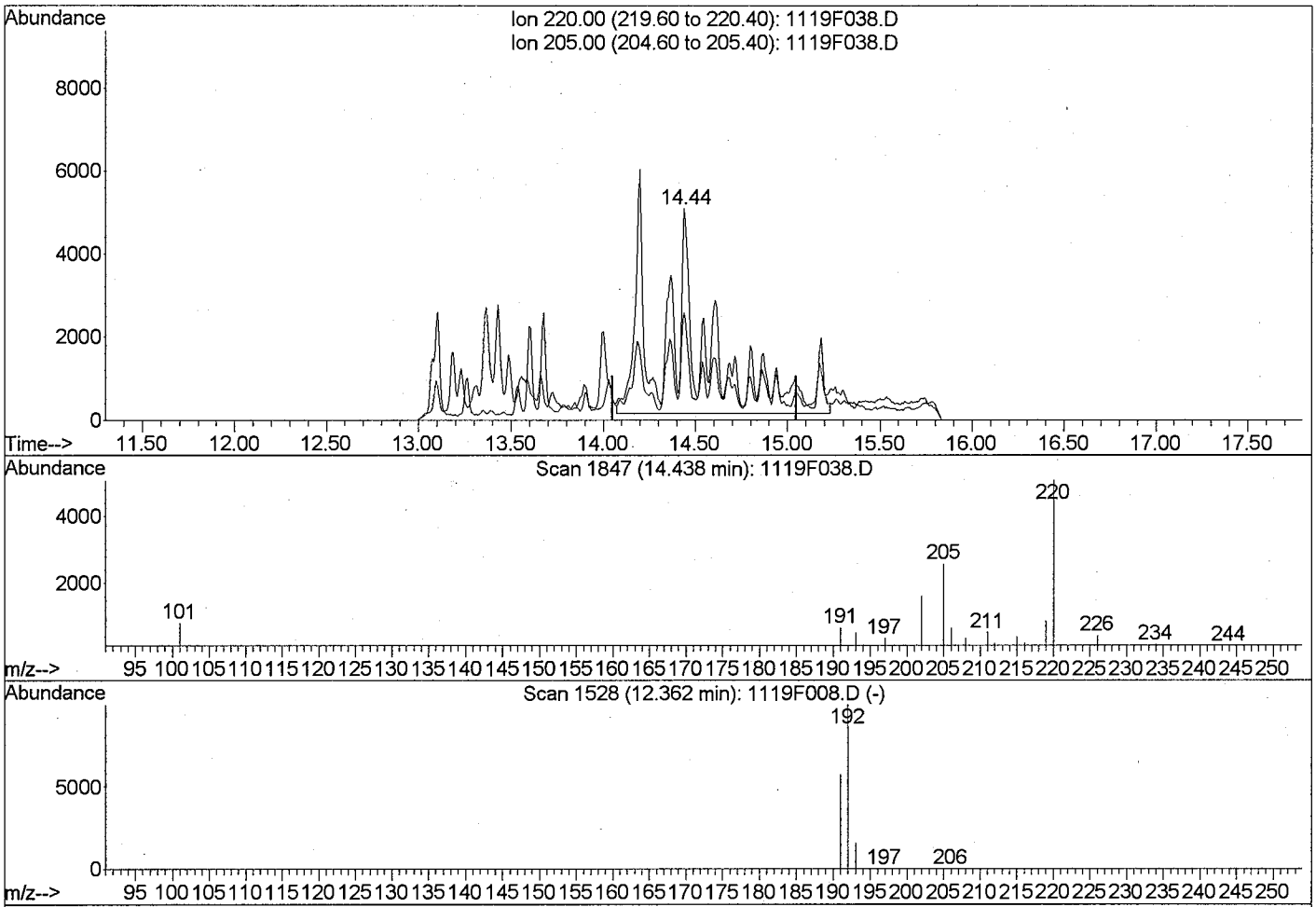
11/24/13

1119F038.D 1107ALK.M Fri Nov 21 11:17:56 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.44min 342.18ng/ml m

response 66053

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	50.67
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

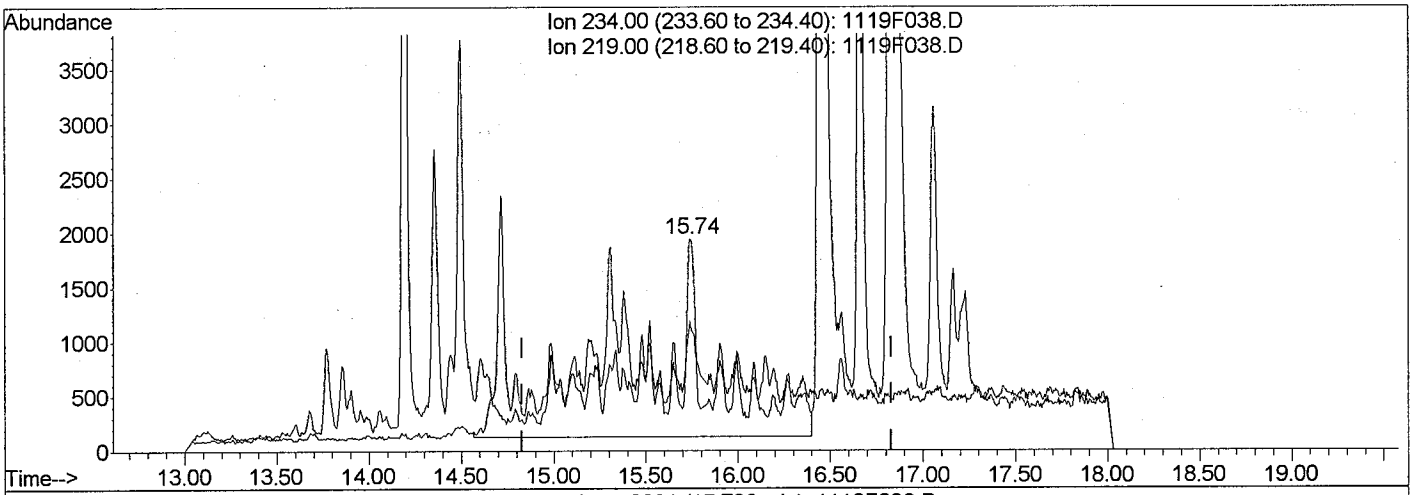
1119F038.D 1107ALK.M Fri Nov 21 11:18:11 2003

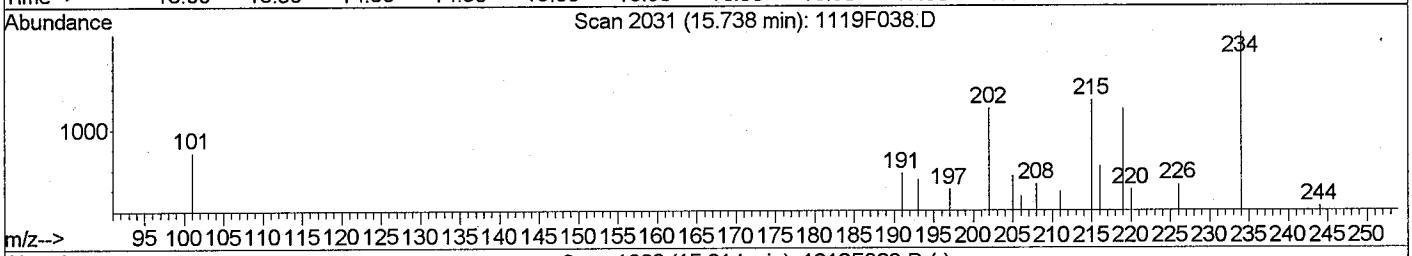
Quantitation Report (Qedit)

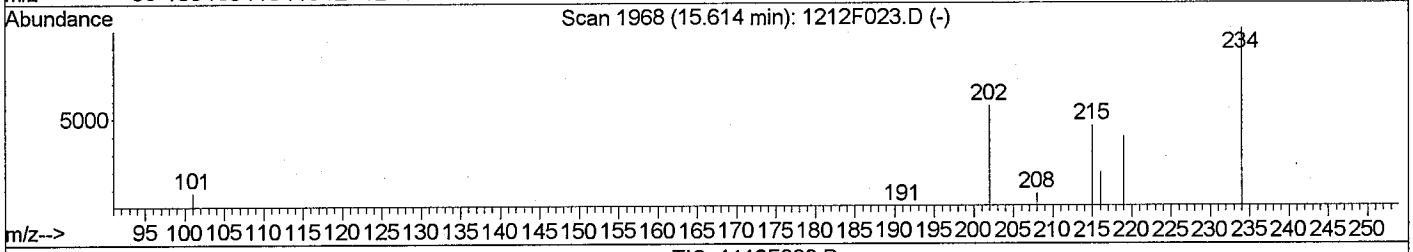
Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:19 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.74min 231.00ng/ml m

response 44591

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	61.43
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

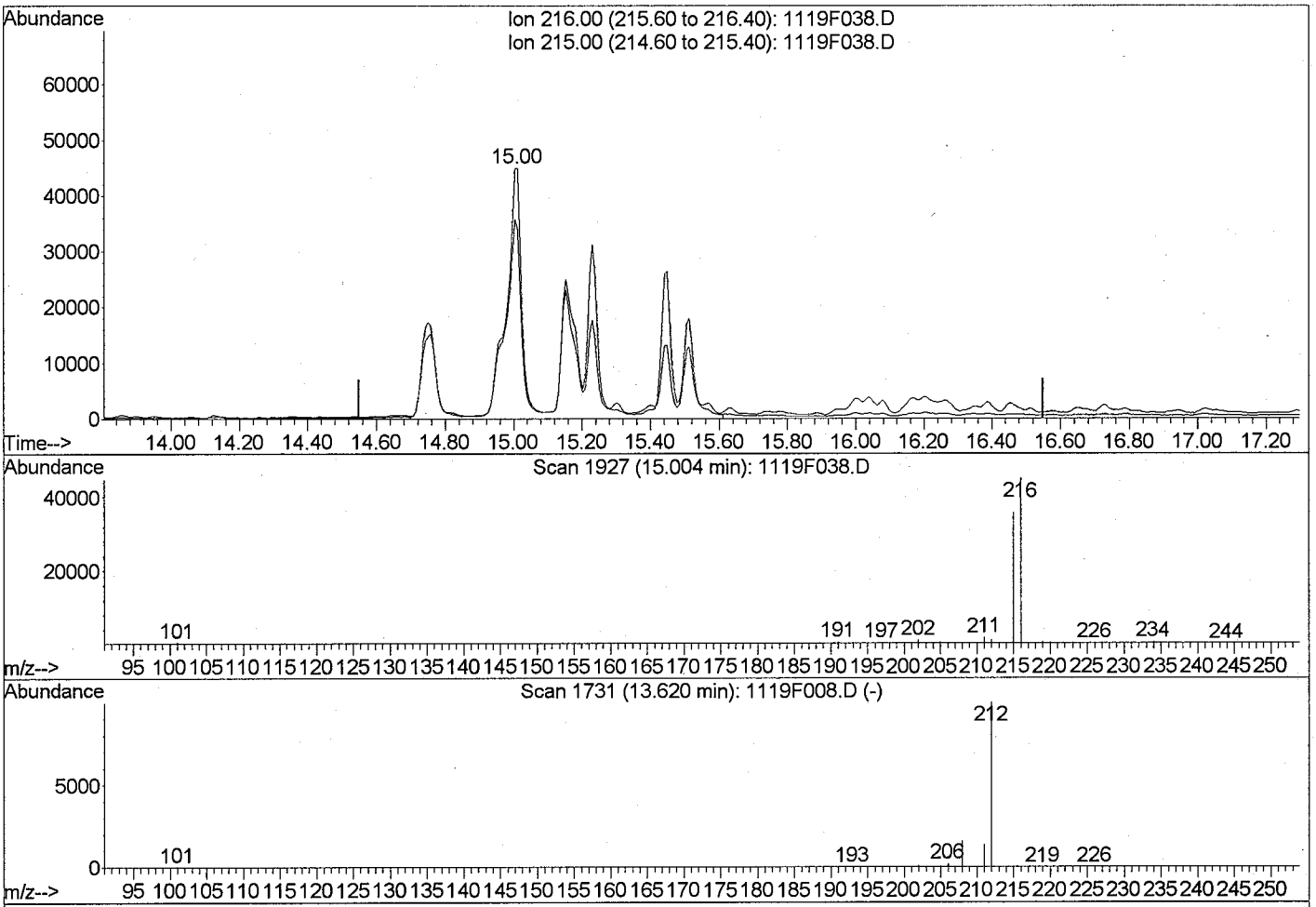
11/24/03

1119F038.D 1107ALK.M Fri Nov 21 11:19:47 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.00min 2017.67ng/ml m

response 425090

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	79.66
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13 11/24/13

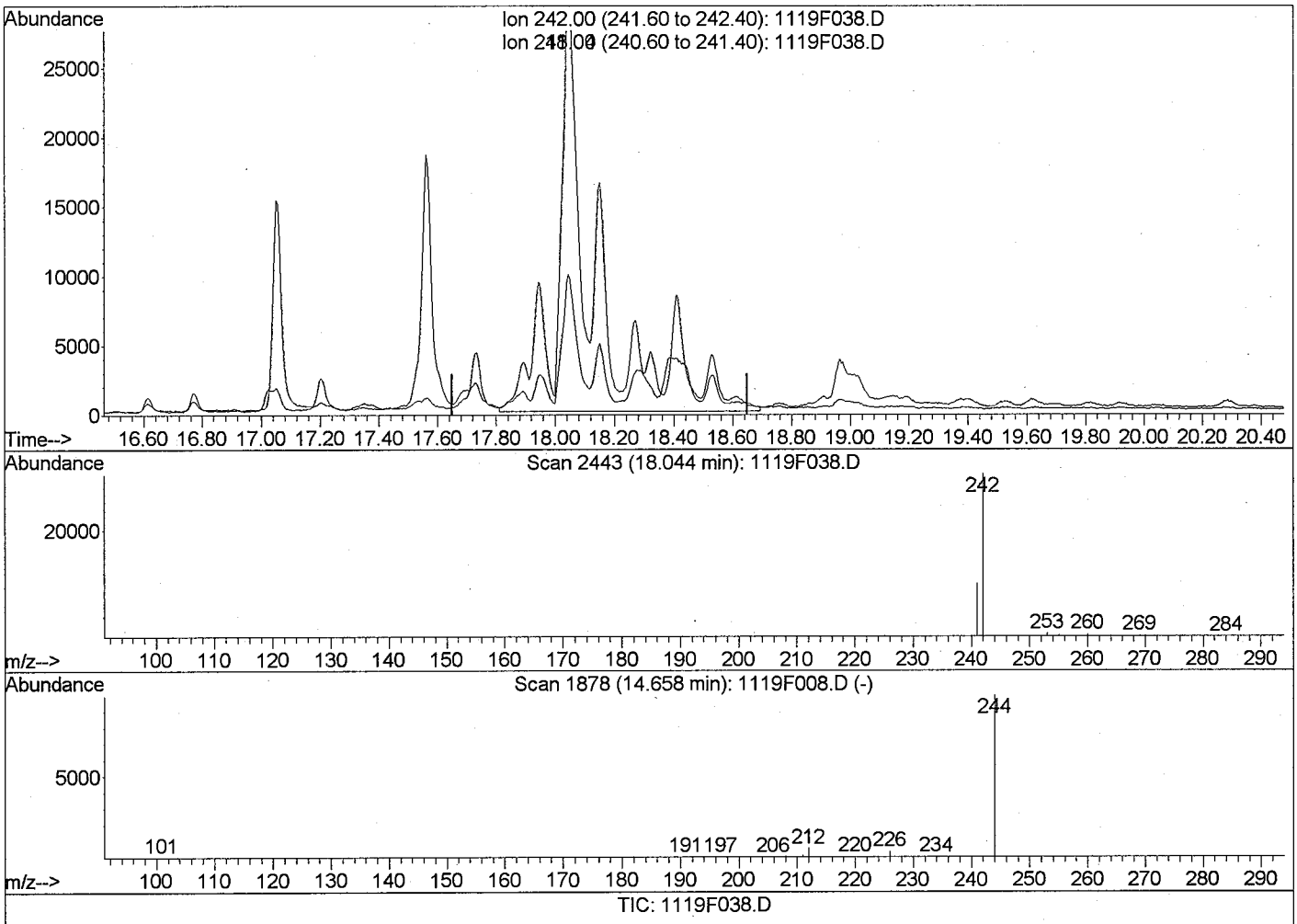
1119F038.D 1107ALK.M Fri Nov 21 11:20:01 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:20 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(44) C1-Chrysenes (L)

18.04min 1462.46ng/ml m

response 250848

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	33.08
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

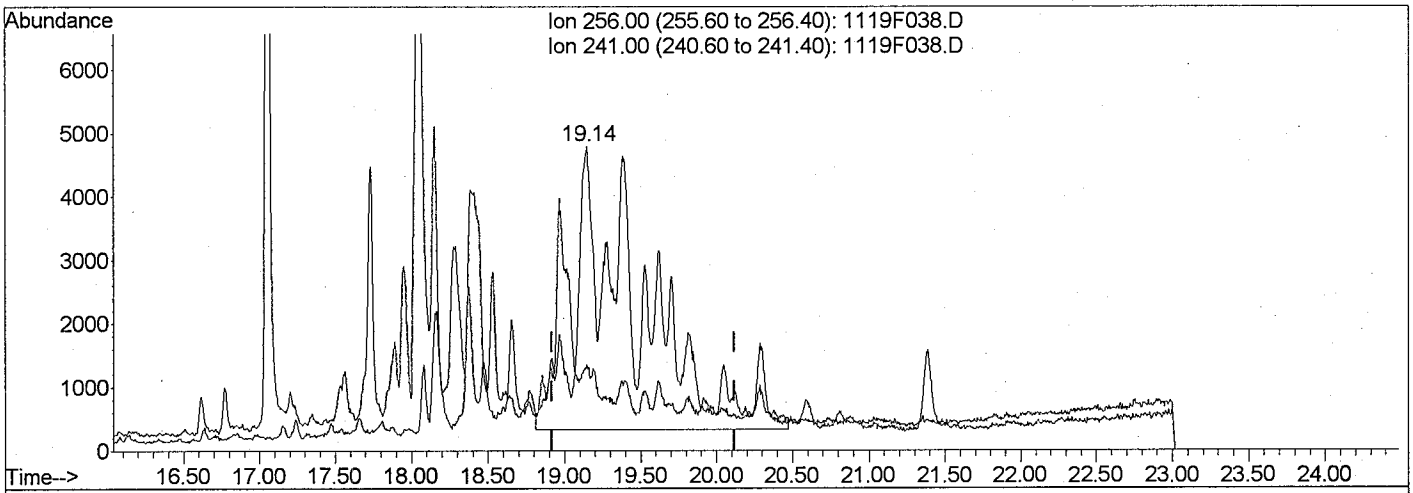
11/24/13

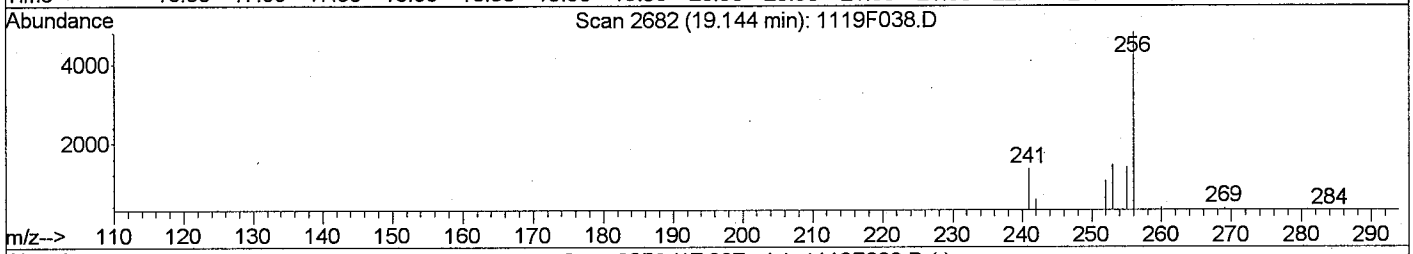
1119F038.D 1107ALK.M Fri Nov 21 11:20:18 2003

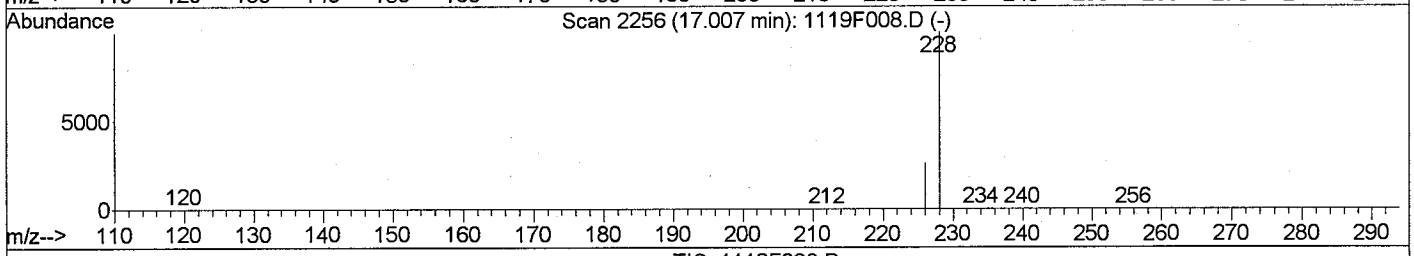
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D Vial: 9
Acq On : 19 Nov 2003 5:02 pm Operator: LWeiskopf
Sample : K2308433-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F038.D

(45) C2-Chrysenes (L)

19.14min 748.12ng/ml m

response 128322

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	28.27
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

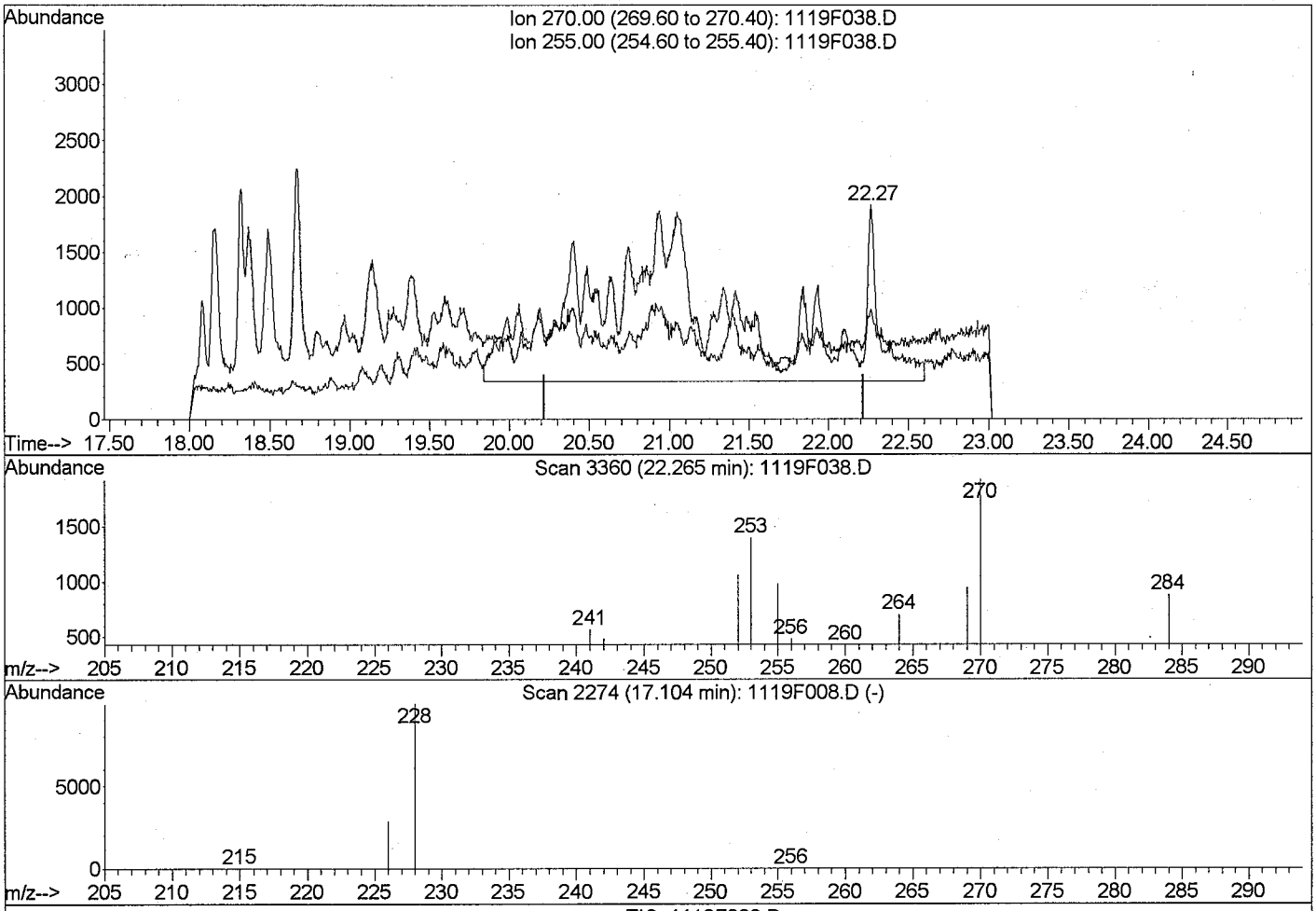
1119F038.D 1107ALK.M Fri Nov 21 11:20:45 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:21 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(46) C3-Chrysenes (L)

22.27min 534.31ng/ml m

response 91648

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	51.30
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

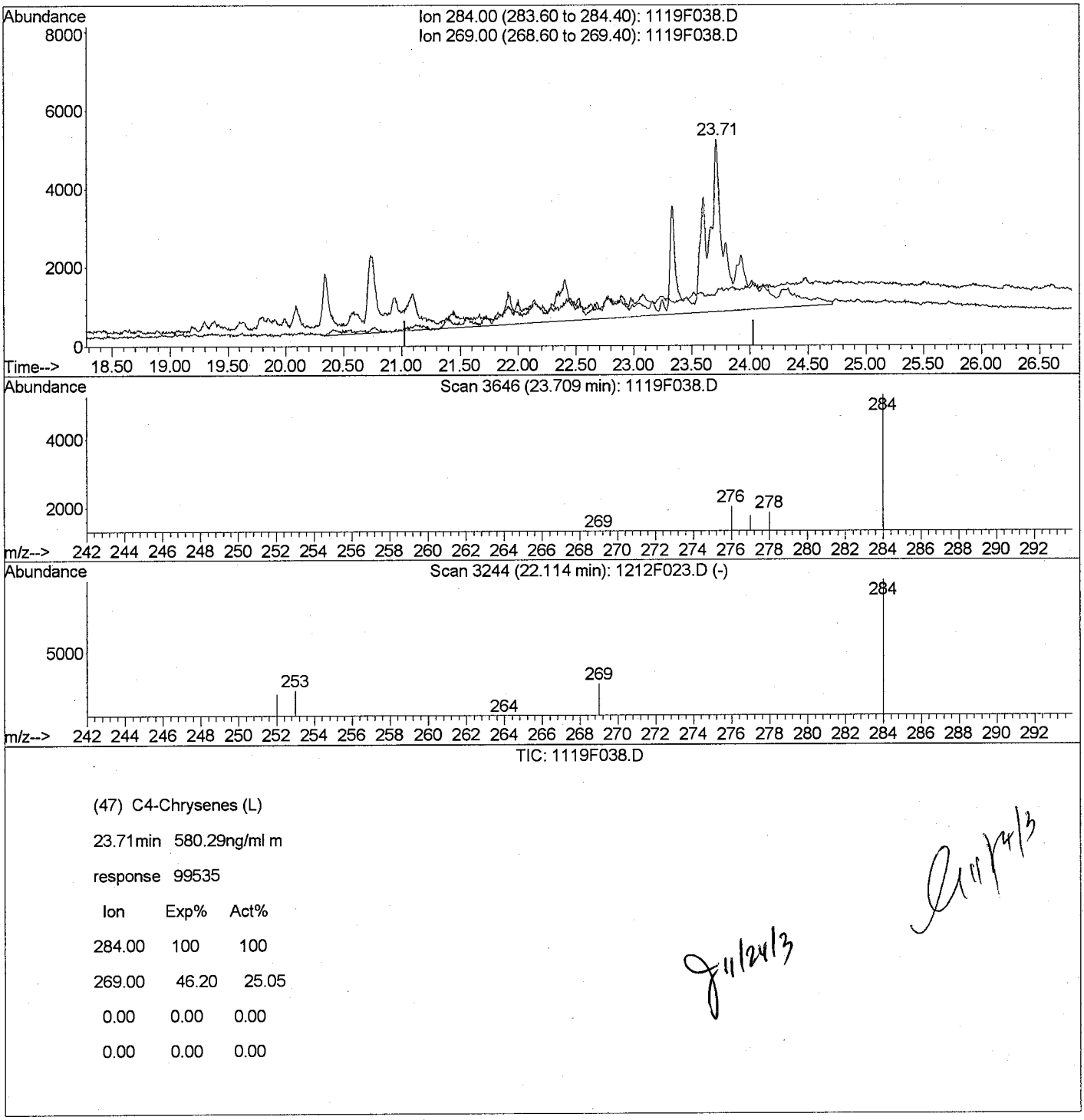
1119F038.D 1107ALK.M Fri Nov 21 11:21:04 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F038.D
Acq On : 19 Nov 2003 5:02 pm
Sample : K2308433-002
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 11:21 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F038.D

(47) C4-Chrysenes (L)

23.71min 580.29ng/ml m

response 99535

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	25.05
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F038.D 1107ALK.M Fri Nov 21 11:21:21 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-3
Lab Code: K2308433-003

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**29**		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**6.0**		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**6.9**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**10**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**15**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**8.3**		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**11**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**39**		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**74**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**110**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**25**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**15**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**16**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**66**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**5.6**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**16**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**20**		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**1200**	D	49	10	11/05/03	11/20/03	KWG0317778	
Anthracene	**250**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**210**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**73**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**36**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**24**		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1700**	D	49	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1200**	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**340**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**500**		4.9	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**570**		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**200**		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**74**		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**33**		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**500**		4.9	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-3
Lab Code: K2308433-003

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**380**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**320**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**490**		4.9	1	11/05/03	11/19/03	KWG0317778	
Perylene	**120**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**510**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**70**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**280**		4.9	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	27-110	11/19/03	Acceptable
Fluoranthene-d10	92	34-122	11/19/03	Acceptable
Terphenyl-d14	96	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F039.D
Lab ID: K2308433-003
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 17:38
Date Quantitated: 11/21/2003 12:06
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	11890.36	NA	10000	See DI
	Fluoranthene	17750.23	NA	10000	"
	Phenanthrene	13271.40	NA	10000	"

Primary Review: 11/24/13
Secondary Review: 11/24/13

Printed: 11/21/2003 13:53:57
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247861	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F039.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 17:38	**Quant Date:**	11/24/2003 11:11	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	273552	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	142432	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	211605	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	219239	1,000.00	OK
5	Perylene-d12	21.39	0.03	264	148017	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	100492	705.46	71	27-110	OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	194912	920.31	92	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	191959	960.70	96	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	91819	296.86	29		
1	2-Methylnaphthalene	6.37		0.00	142	11309	61.92	6.0		
1	1-Methylnaphthalene	6.51		0.00	142	12096	70.65	6.9		
1	Biphenyl	7.04	0.01	0.00	154	7657	34.57	3.4	J	
1	C2-Naphthalenes	7.42	?	?	156	32480**m**	105.01	10		
1	C3-Naphthalenes	8.94	?	?	170	46516**m**	150.39	15		
1	C4-Naphthalenes	9.79	?	?	184	26416**m**	85.40	8.3		
2	Acenaphthylene	7.73		0.00	152	30105	109.70	11		
2	Acenaphthene	8.05		0.00	154	128206	758.03	74		
2	Dibenzofuran	8.35	0.01	0.00	168	90343	398.47	39		
2	Fluorene	8.99		0.00	166	196156	1,083	110		
2	C1-Fluorenes	10.13	?	?	180	46902**m**	258.87	25		
2	C2-Fluorenes	11.25	?	?	194	28197**m**	155.63	15		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F039.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 17:38	**Quant Date:**	11/24/2003 11:11	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-003			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	30596**m**	168.87	16		
3	Dibenzothiophene	10.71		0.00	184	164270	672.84	66		
3	C1-Dibenzothiophenes	10.46	?	?	198	13937**m**	57.09	5.6		
3	C2-Dibenzothiophenes	12.63	?	?	212	38787**m**	158.87	16		
3	C3-Dibenzothiophenes	14.66	?	?	226	49045**m**	200.89	20		
3	Phenanthrene	10.98	0.01	0.00	178	3403579	13,271	1300	E	NR
3	Anthracene	11.08	0.01	0.00	178	568186	2,593	250		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	554593**m**	2,163	210		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	192966**m**	752.42	73		
3	C3-Phenanthrenes/Anthracenes	14.44	?	?	220	95563**m**	372.62	36		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	63039**m**	245.80	24		
3	Fluoranthene	13.67	0.02	0.00	202	4531354	17,750	1700	E	NR
4	Pyrene	14.17	0.01	0.00	202	3407340	11,890	1200	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	1006160**m**	3,511	340		
4	Benz(a)anthracene	17.02	0.01	0.00	228	1126160	5,162	500		
4	Chrysene	17.11	0.01	0.00	228	1367966	5,864	570		
4	C1-Chrysenes	18.05	?	?	242	487326**m**	2,089	200		
4	C2-Chrysenes	19.39	?	?	256	177688**m**	761.62	74		
4	C3-Chrysenes	20.94	?	?	270	78382**m**	335.97	33		
4	C4-Chrysenes				284	0		3.1	U	
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	1017465	5,149	500		
5	Benzo(k)fluoranthene	20.06	0.01	0.00	252	980879**m**	3,912	380		
5	Benzo(e)pyrene	20.96	0.03	0.00	252	728394	3,283	320		
5	Benzo(a)pyrene	21.15	0.03	0.00	252	837475	4,982	490		
5	Perylene	21.48	0.03	0.00	252	227041	1,203	120		
5	Indeno(1,2,3-cd)pyrene	24.02	0.02	0.00	276	530956	5,196	510		
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	105892**m**	721.12	70		
5	Benzo(g,h,i)perylene	24.48	0.02	0.00	276	492880	2,910	280		

Prep Amount: 25.1 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: 81.6 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:12 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	273552	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	142432	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	211605	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	219239	1000.00	ng/ml	0.01
48) Perylene-d12	21.39	264	148017	1000.00	ng/ml	0.03
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	94610	472.13	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	47.21%		
16) Fluorene-d10	8.94	176	100492	705.46	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	70.55%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	194912	920.31	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	92.03%		
41) Terphenyl-d14	14.66	244	191959	960.70	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	96.07%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	91819	296.86	ng/ml	98
3) 2-Methylnaphthalene	6.37	142	11309	61.92	ng/ml	96
4) 1-Methylnaphthalene	6.51	142	12096	70.65	ng/ml	96
6) Biphenyl	7.04	154	7657	34.57	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.27	156	6121	39.29	ng/ml	94
8) C2-Naphthalenes	7.42	156	32480m	105.01	ng/ml	
9) C3-Naphthalenes	8.94	170	46516m	150.39	ng/ml	
10) C4-Naphthalenes	9.79	184	26416m	85.40	ng/ml	
12) Acenaphthylene	7.73	152	30105	109.70	ng/ml	100
13) Acenaphthene	8.05	154	128206	758.03	ng/ml	99
14) Dibenzofuran	8.35	168	90343	398.47	ng/ml	99
15) 2,3,5-Trimethylnaphthalene	8.76	170	3932m	25.95	ng/ml	
17) Fluorene	8.99	166	196156	1082.68	ng/ml	100
18) C1-Fluorenes	10.13	180	46902m	258.87	ng/ml	
19) C2-Fluorenes	11.25	194	28197m	155.63	ng/ml	
20) C3-Fluorenes	12.76	208	~~53565m~~	~~295.65~~	ng/ml	See manual J 11/24/03
24) Dibenzothiophene	10.71	184	164270	672.84	ng/ml	99
25) C1-Dibenzothiophenes	10.46	198	13937m	57.09	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	38787m	158.87	ng/ml	
27) C3-Dibenzothiophenes	14.66	226	49045m	200.89	ng/ml	
28) Phenanthrene	10.98	178	3403579	13271.40	ng/ml	99
29) Anthracene	11.08	178	568186	2593.28	ng/ml	99
30) Carbazole	11.51	167	2466	14.24	ng/ml	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:12 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

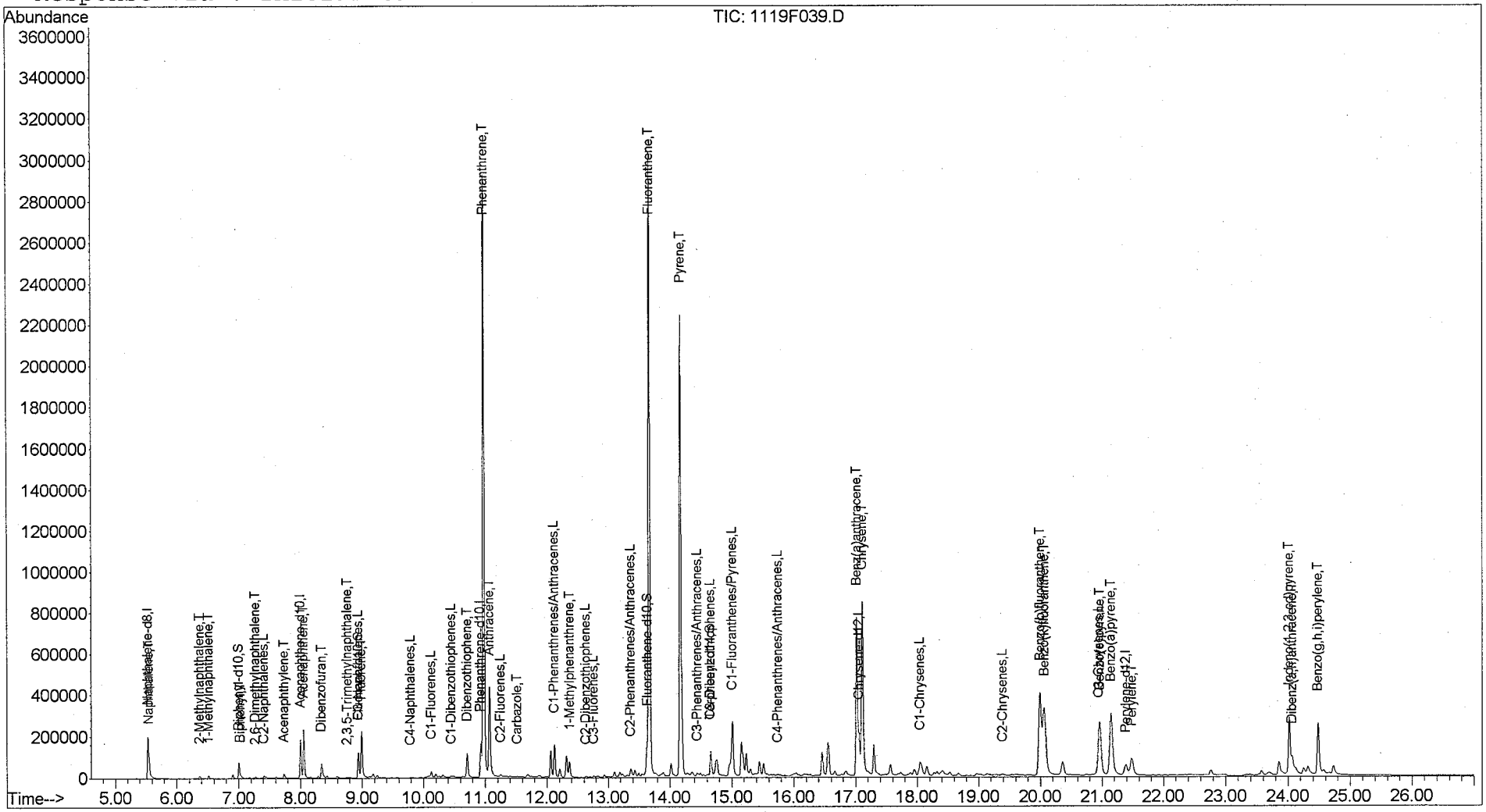
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	79957	459.19	ng/ml	99
32)	C1-Phenanthrenes/Anthracen	12.12	192	554593m	2162.50	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	192966m	752.42	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.44	220	95563m	372.62	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	63039m	245.80	ng/ml	
36)	Fluoranthene	13.67	202	4531354	17750.23	ng/ml	100
39)	Pyrene	14.17	202	3407340	11890.36	ng/ml	97
40)	C1-Fluoranthenes/Pyrenes	15.01	216	1006160m	3511.13	ng/ml	
42)	Benz(a)anthracene	17.02	228	1126160	5161.76	ng/ml	98
43)	Chrysene	17.11	228	1367966	5863.51	ng/ml	99
44)	C1-Chrysenes	18.05	242	487326m	2088.82	ng/ml	
45)	C2-Chrysenes	19.39	256	177688m	761.62	ng/ml	
46)	C3-Chrysenes	20.94	270	78382m	335.97	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	1017465	5148.90	ng/ml	99
50)	Benzo(k)fluoranthene	20.06	252	980879m	3912.01	ng/ml	
51)	Benzo(e)pyrene	20.96	252	728394	3282.96	ng/ml	100
52)	Benzo(a)pyrene	21.15	252	837475	4982.49	ng/ml	100
53)	Perylene	21.48	252	227041	1203.31	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.02	276	530956	5196.33	ng/ml	92
55)	Dibenz(a,h)anthracene	24.07	278	105892m	721.12	ng/ml	
56)	Benzo(g,h,i)perylene	24.48	276	492880	2909.54	ng/ml	100

(#) = qualifier out of range (m) = manual integration

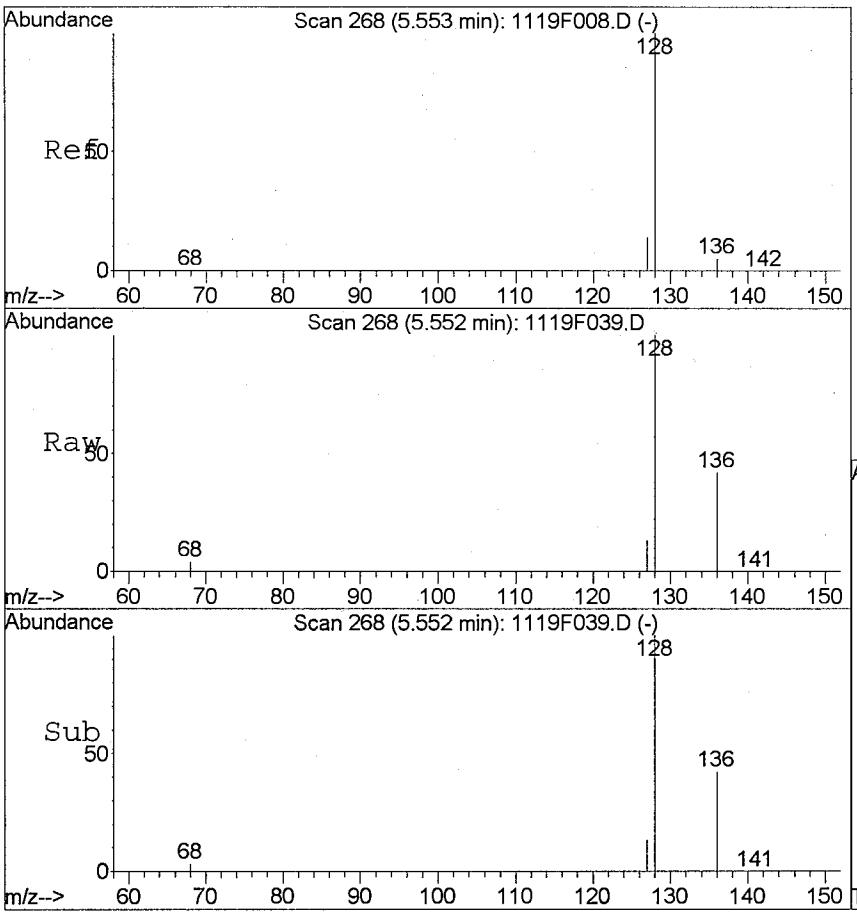
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:06 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



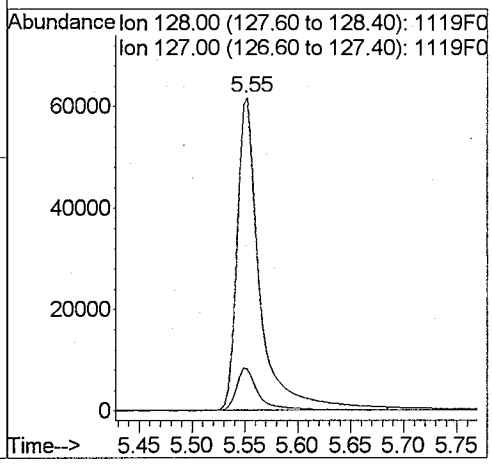
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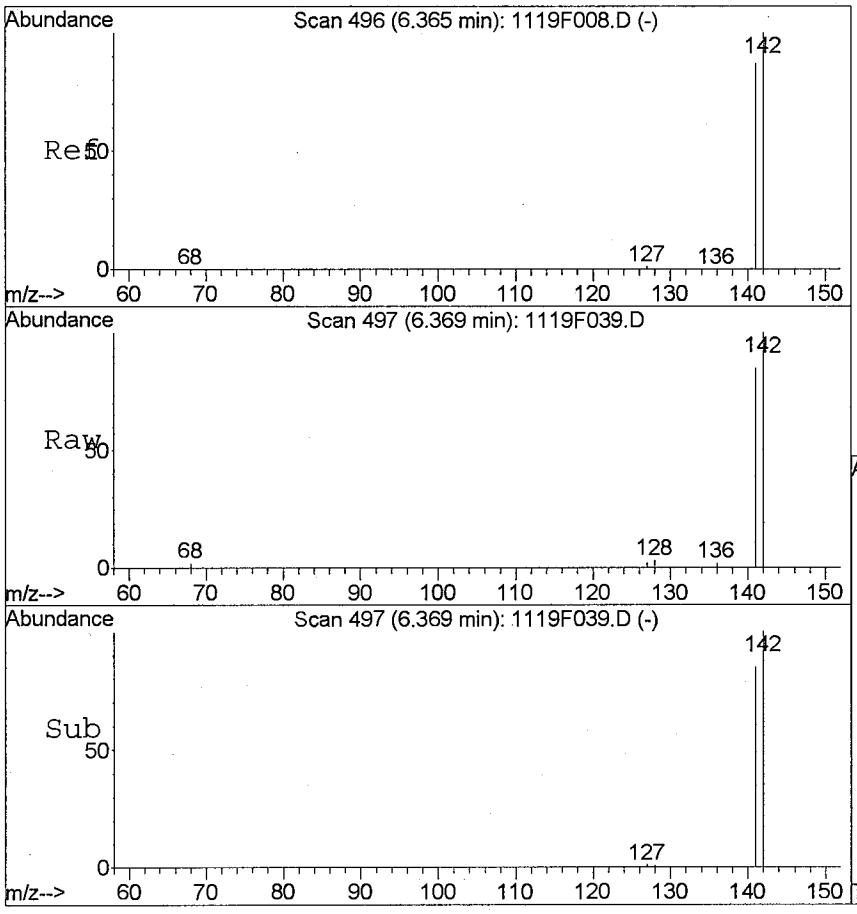


#2
Naphthalene
Concen: 296.86 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. -0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:128 Resp: 91819

Ion	Ratio	Lower	Upper
128	100		
127	13.2	0.0	43.8

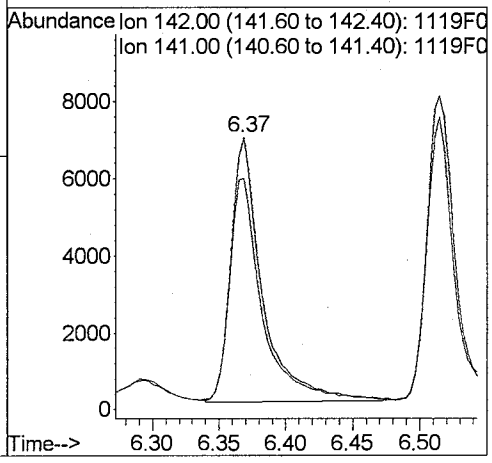


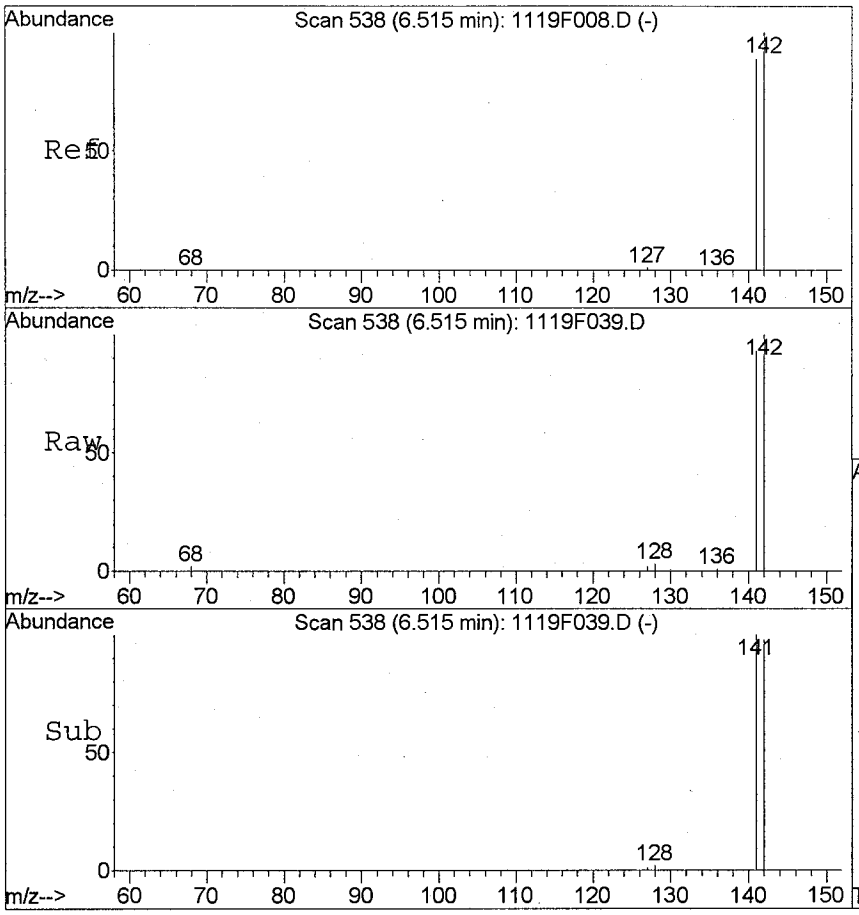


#3
2-Methylnaphthalene
Concen: 61.92 ng/ml
RT: 6.37 min Scan# 497
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:142 Resp: 11309

Ion	Ratio	Lower	Upper
142	100		
141	83.9	57.2	117.2

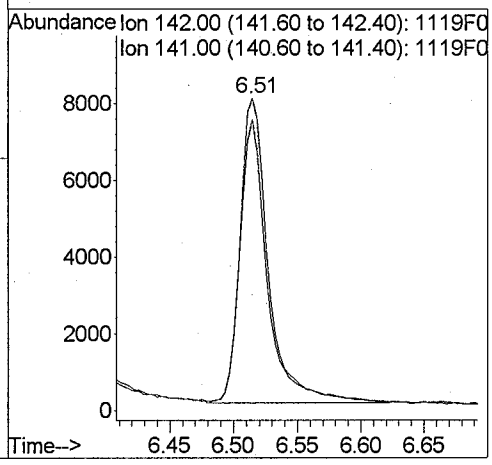


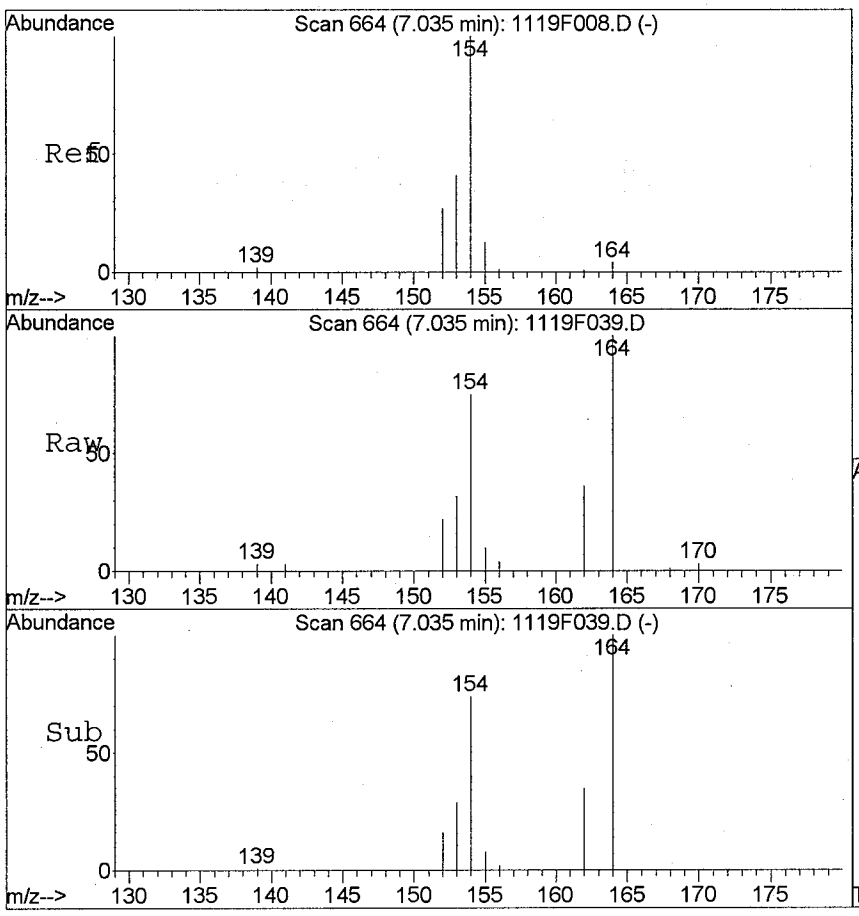


#4
1-Methylnaphthalene
Concen: 70.65 ng/ml
RT: 6.51 min Scan# 538
Delta R.T. -0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:142 Resp: 12096

Ion	Ratio	Lower	Upper
142	100		
141	92.6	58.5	118.5

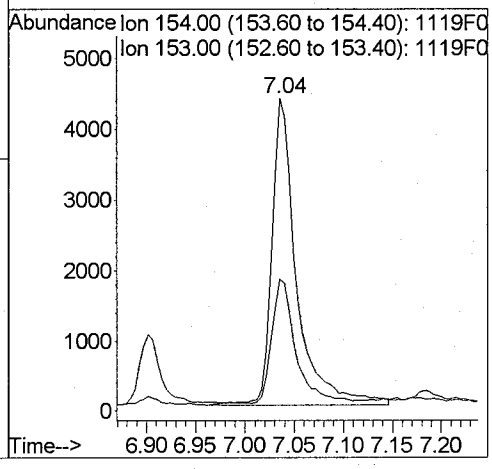


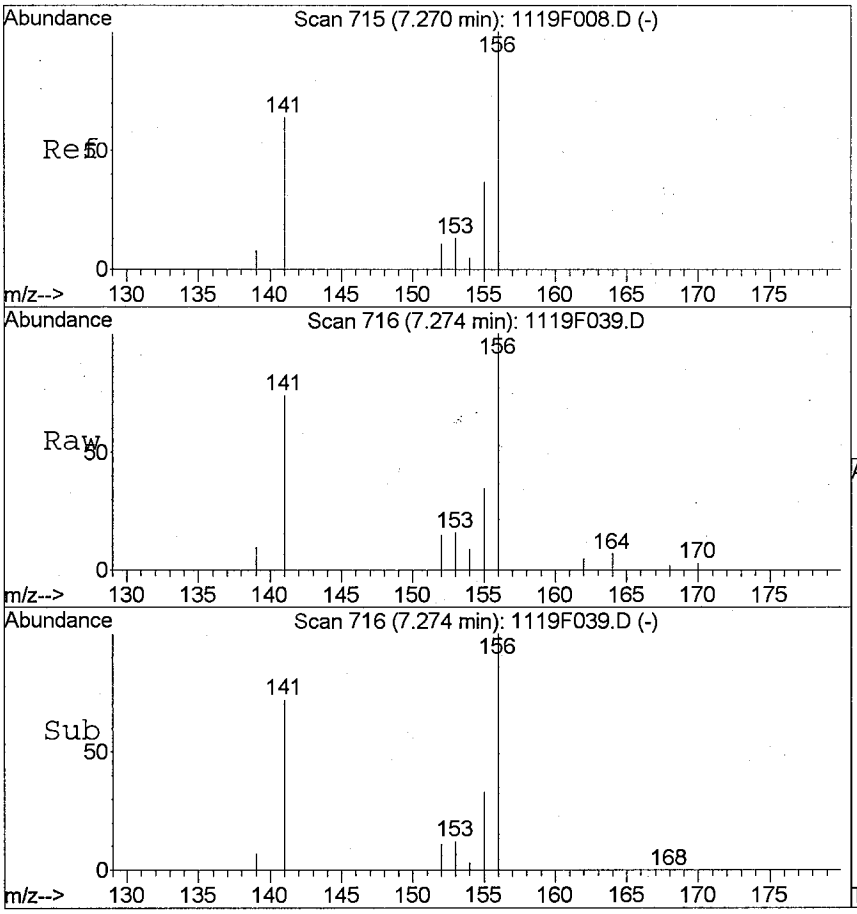


#6
Biphenyl
Concen: 34.57 ng/ml
RT: 7.04 min Scan# 664
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:154 Resp: 7657

Ion	Ratio	Lower	Upper
154	100		
153	40.1	11.3	71.3

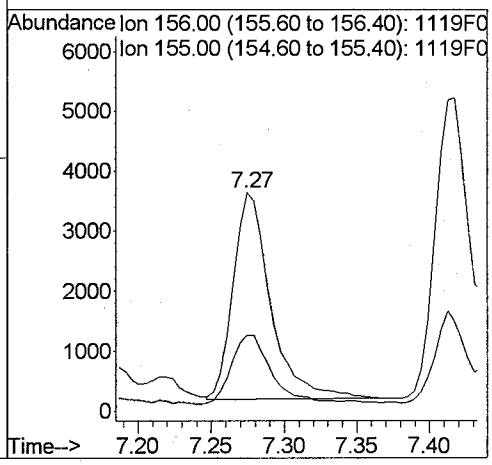


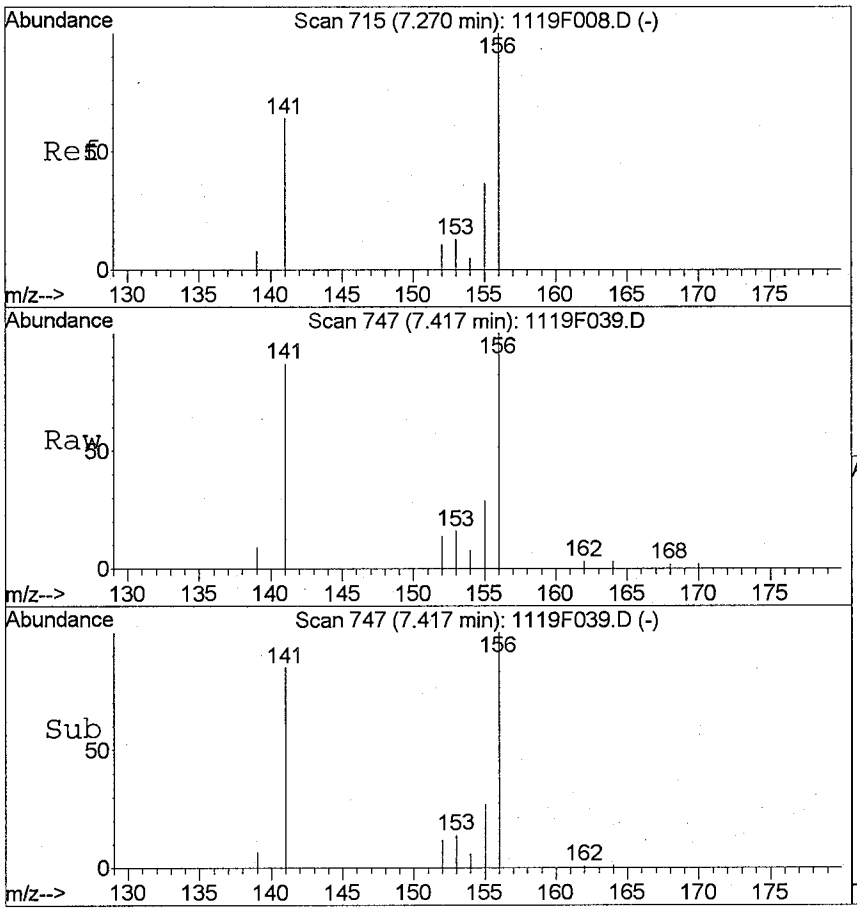


#7
2,6-Dimethylnaphthalene
Concen: 39.29 ng/ml
RT: 7.27 min Scan# 716
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:156 Resp: 6121

Ion	Ratio	Lower	Upper
156	100		
155	33.1	6.9	66.9

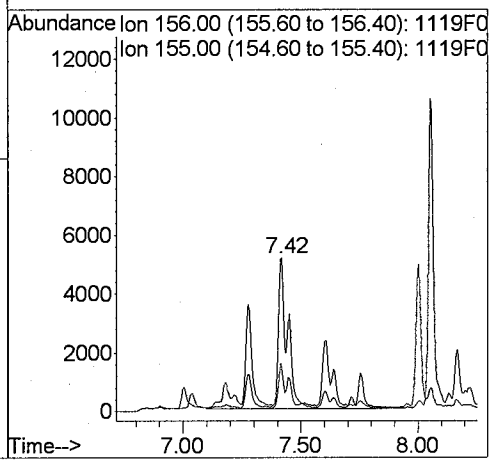


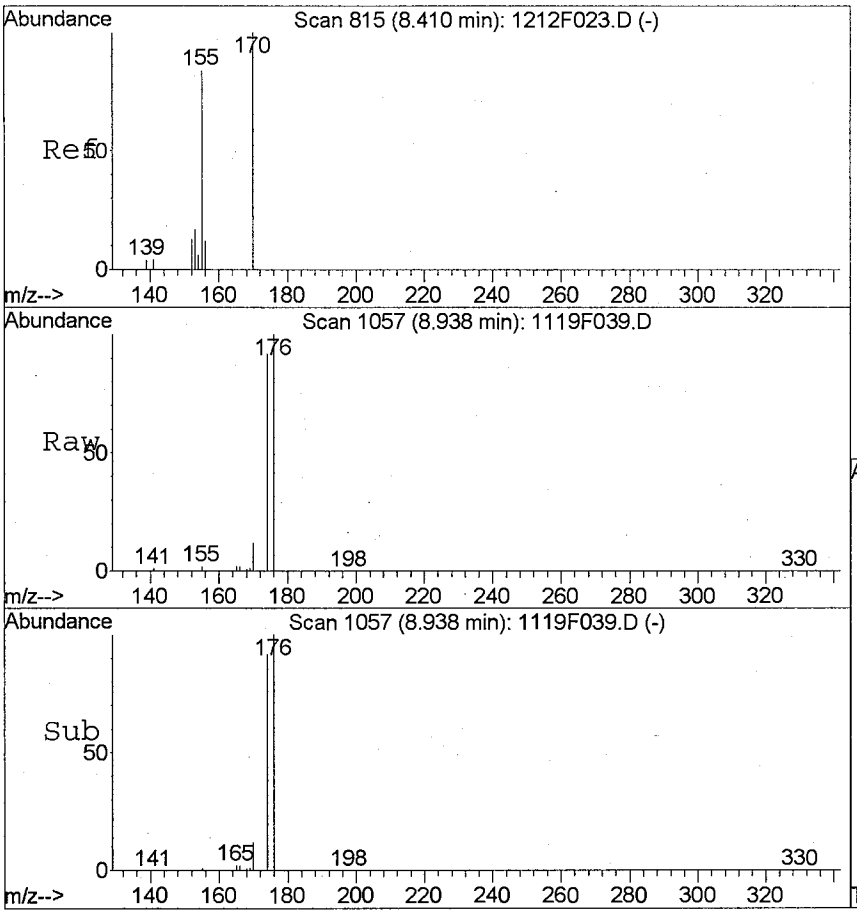


#8
C2-Naphthalenes
Concen: 105.01 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:156 Resp: 32480

Ion	Ratio	Lower	Upper
156	100		
155	28.6	8.3	68.3

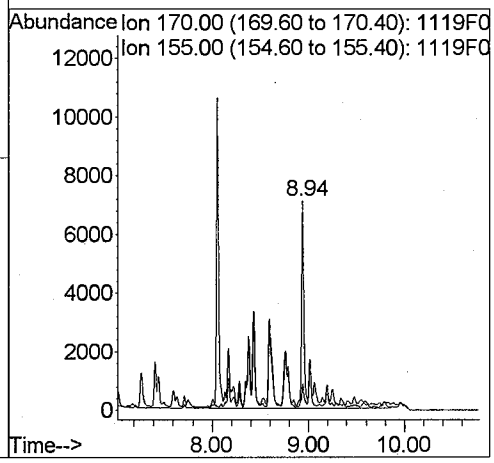


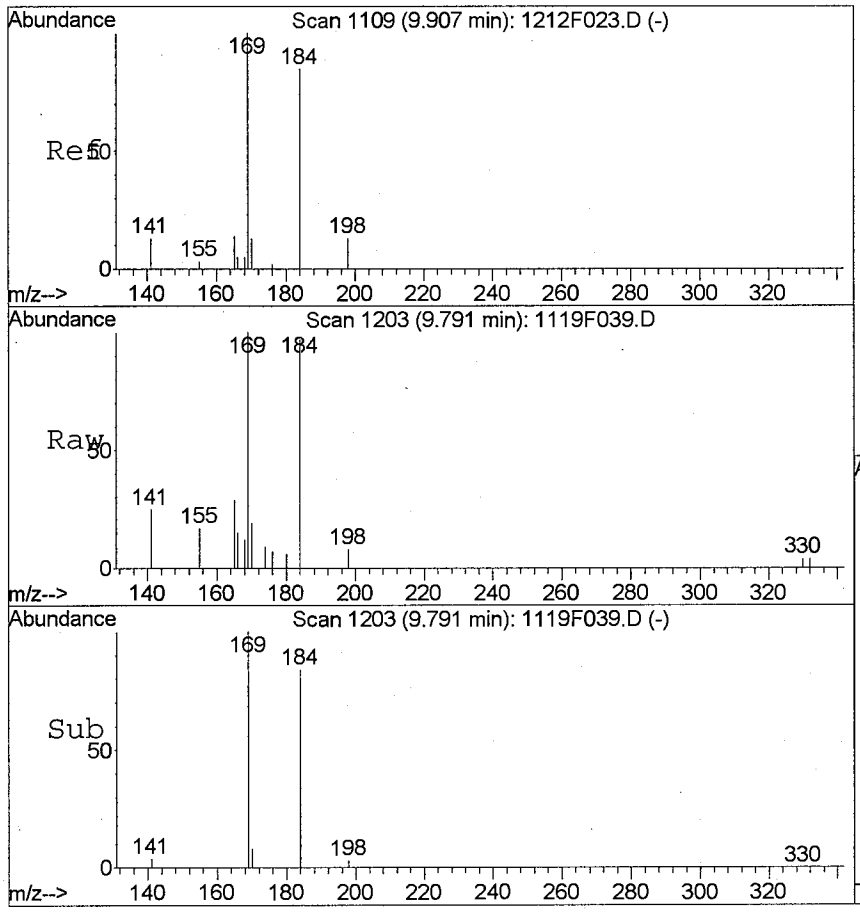


#9
C3-Naphthalenes
Concen: 150.39 ng/ml m
RT: 8.94 min Scan# 1057
Delta R.T. 0.41 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:170 Resp: 46516

Ion	Ratio	Lower	Upper
170	100		
155	12.5	56.9	116.9#

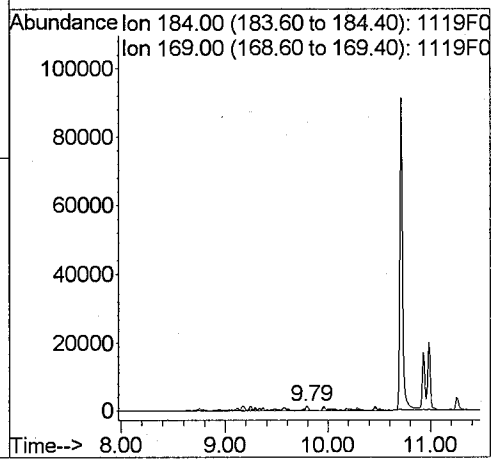


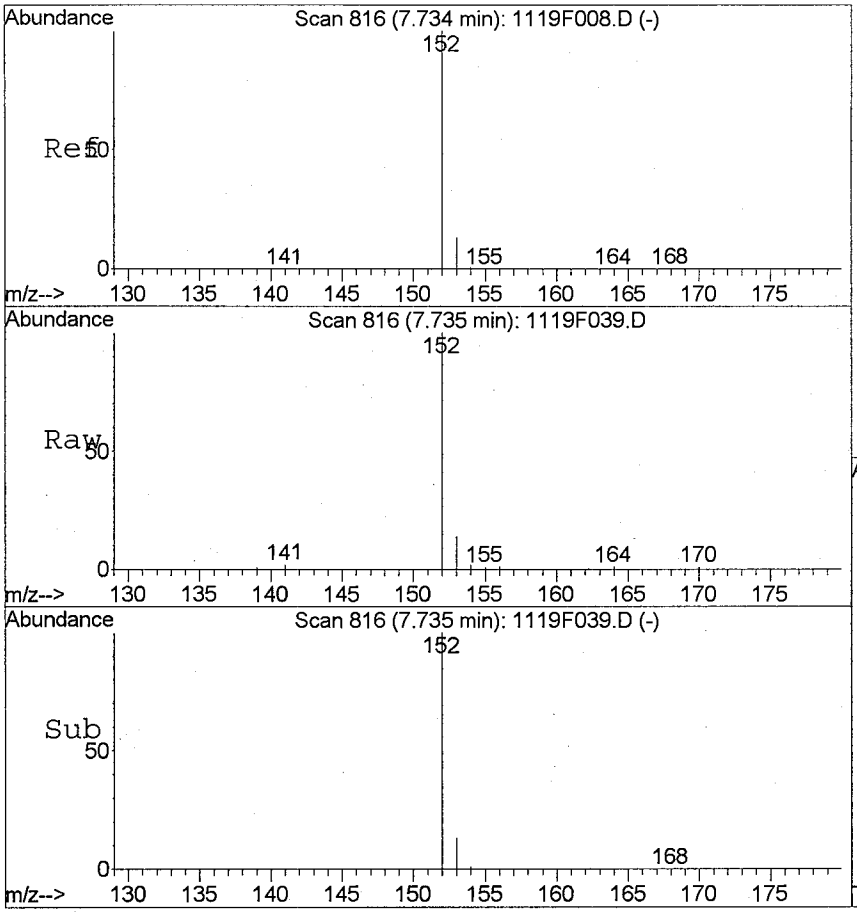


#10
C4-Naphthalenes
Concen: 85.40 ng/ml m
RT: 9.79 min Scan# 1203
Delta R.T. -0.27 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:184 Resp: 26416

Ion	Ratio	Lower	Upper
184	100		
169	102.8	89.7	149.7

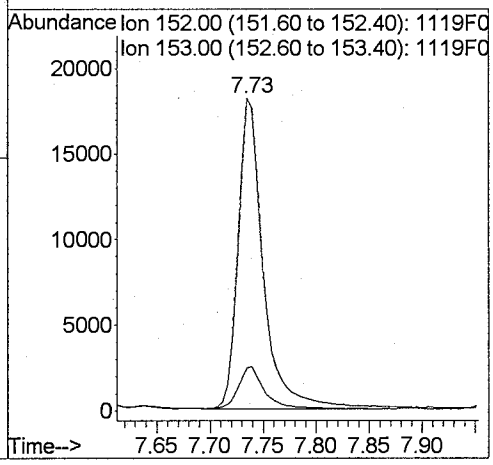


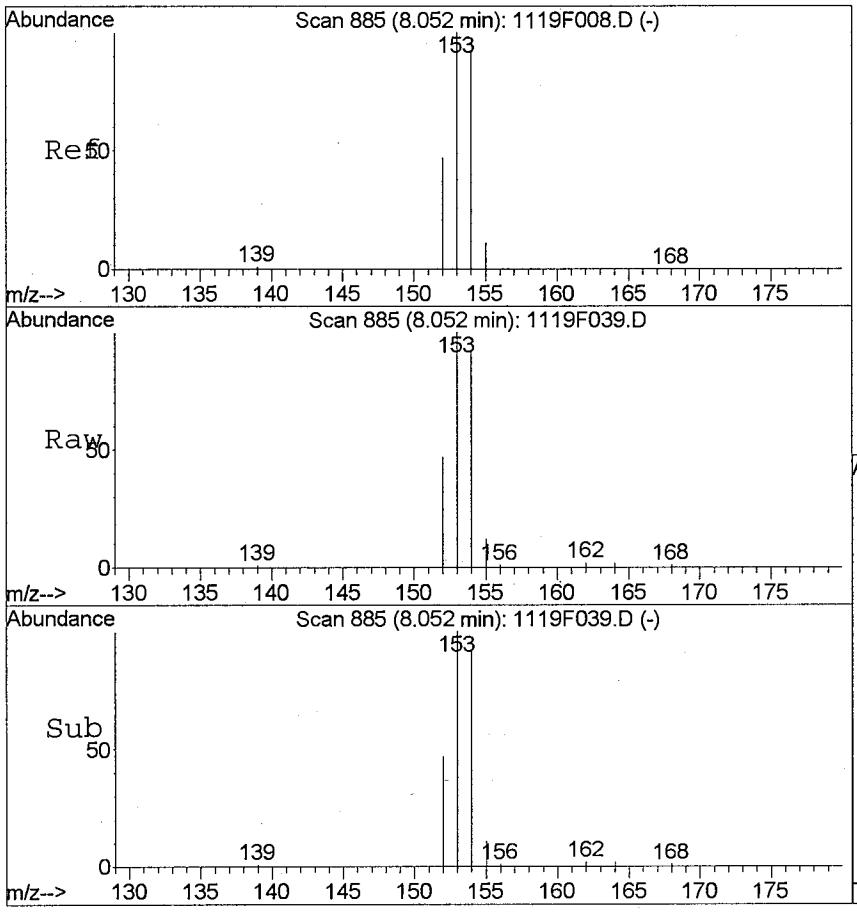


#12
Acenaphthylene
Concen: 109.70 ng/ml
RT: 7.73 min Scan# 816
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:152 Resp: 30105

Ion	Ratio	Lower	Upper
152	100		
153	13.0	0.0	43.1

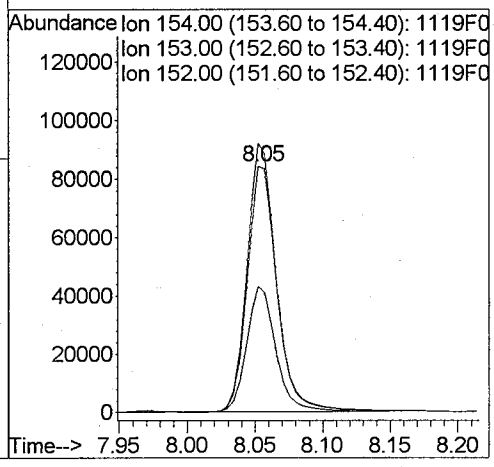


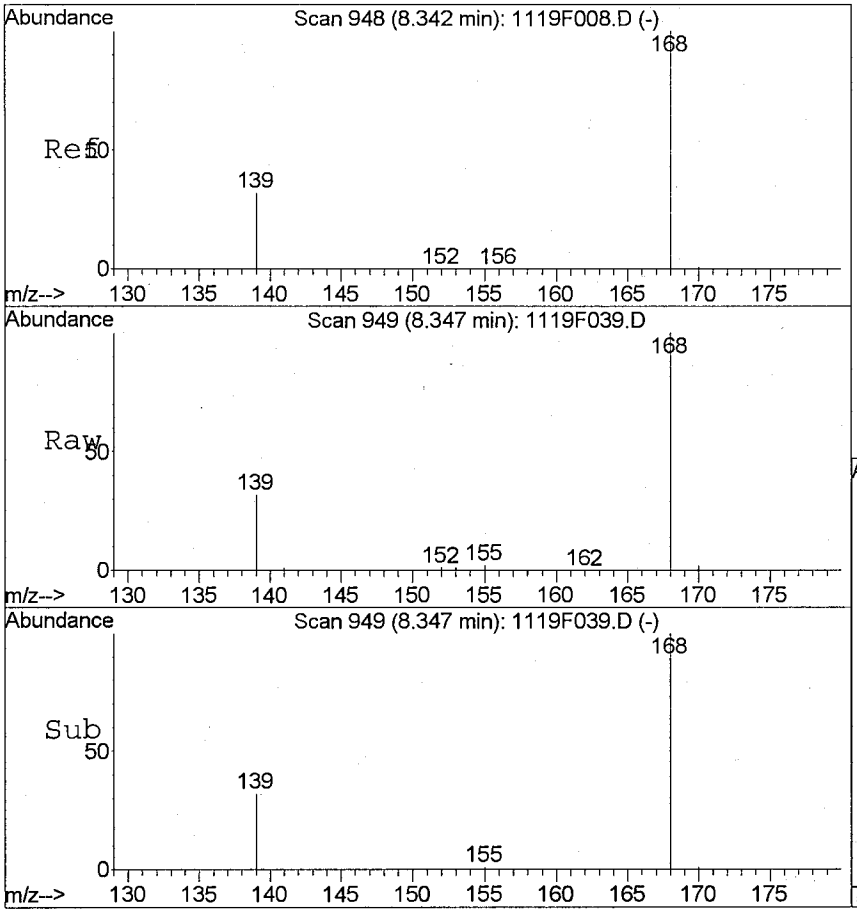


#13
Acenaphthene
Concen: 758.03 ng/ml
RT: 8.05 min Scan# 885
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:154 Resp: 128206

Ion	Ratio	Lower	Upper
154	100		
153	109.4	78.4	138.4
152	51.1	20.4	80.4

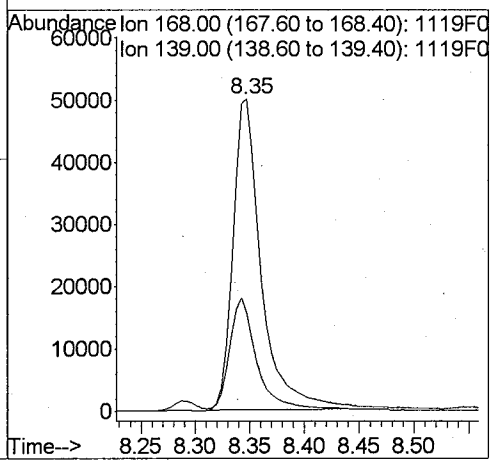


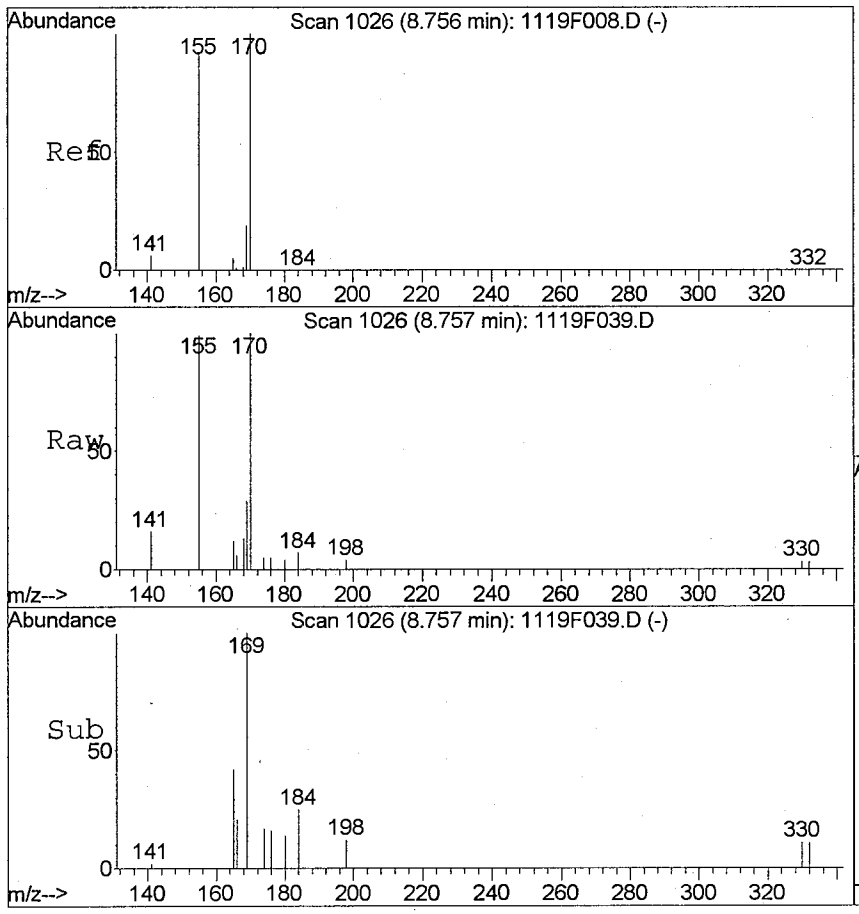


#14
Dibenzofuran
Concen: 398.47 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:168 Resp: 90343

Ion	Ratio	Lower	Upper
168	100		
139	31.6	2.4	62.4

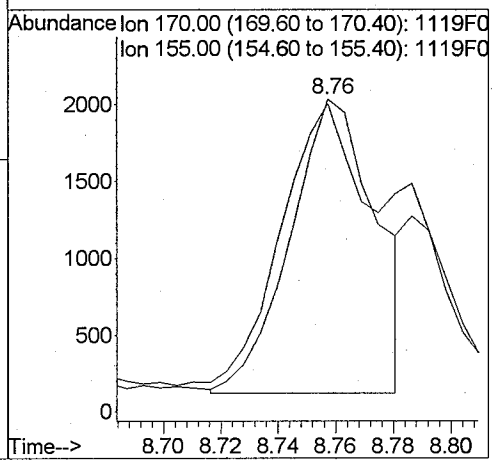


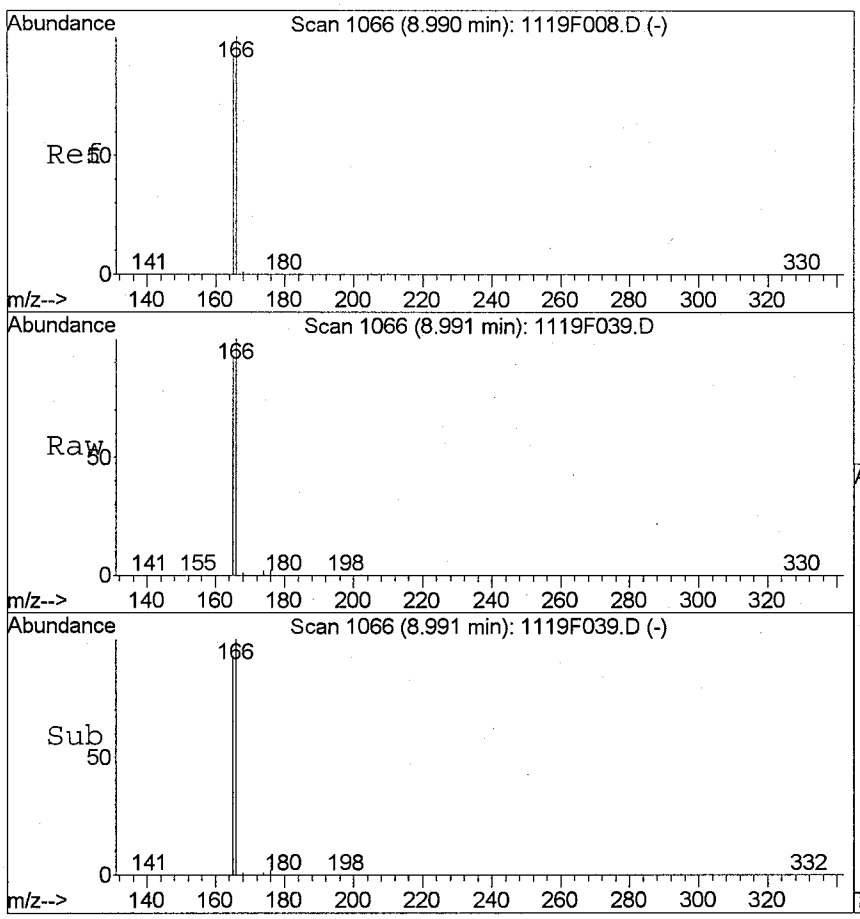


#15
2,3,5-Trimethylnaphthalene
Concen: 25.95 ng/ml m
RT: 8.76 min Scan# 1026
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:170 Resp: 3932

Ion	Ratio	Lower	Upper
170	100		
155	98.6	61.5	121.5

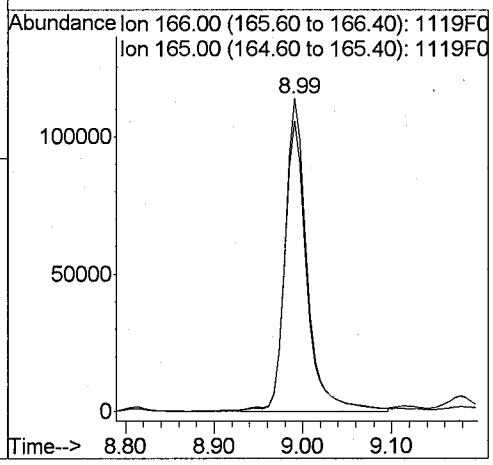


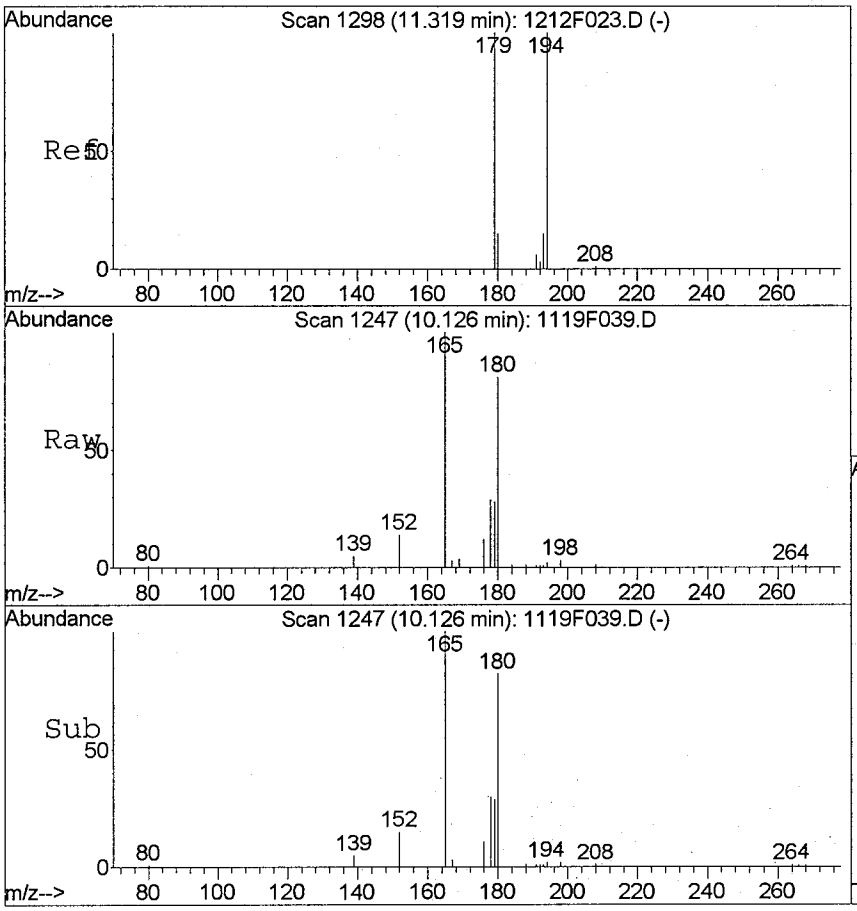


#17
Fluorene
Concen: 1082.68 ng/ml
RT: 8.99 min Scan# 1066
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:166 Resp: 196156

Ion	Ratio	Lower	Upper
166	100		
165	92.7	62.9	122.9

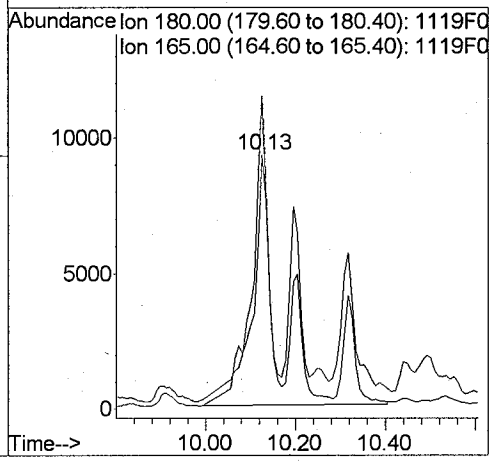


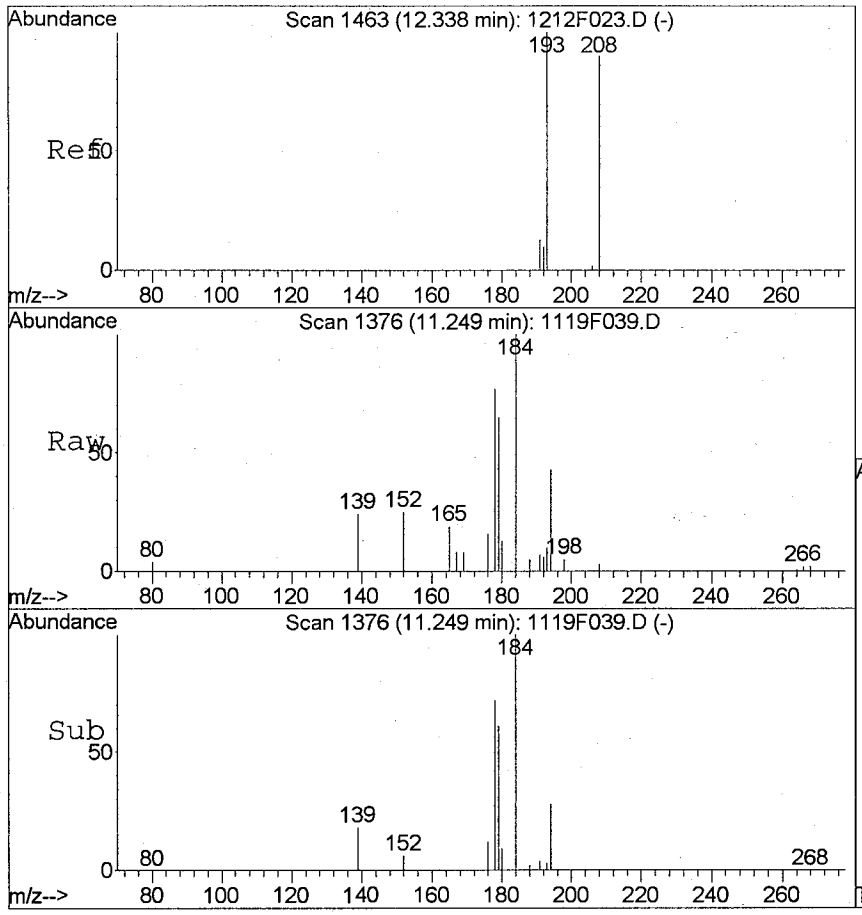


#18
C1-Fluorenes
Concen: 258.87 ng/ml m
RT: 10.13 min Scan# 1247
Delta R.T. -0.17 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:180 Resp: 46902

Ion	Ratio	Lower	Upper
180	100		
165	123.3	148.7	208.7#

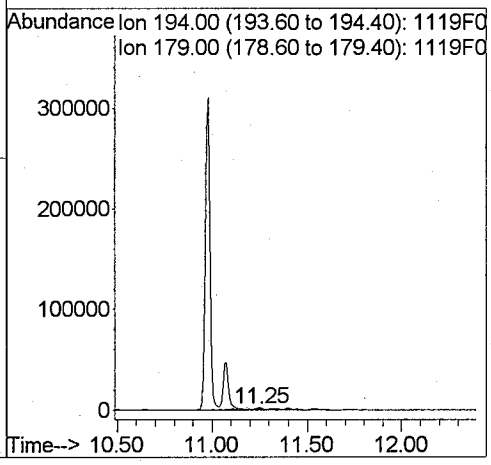


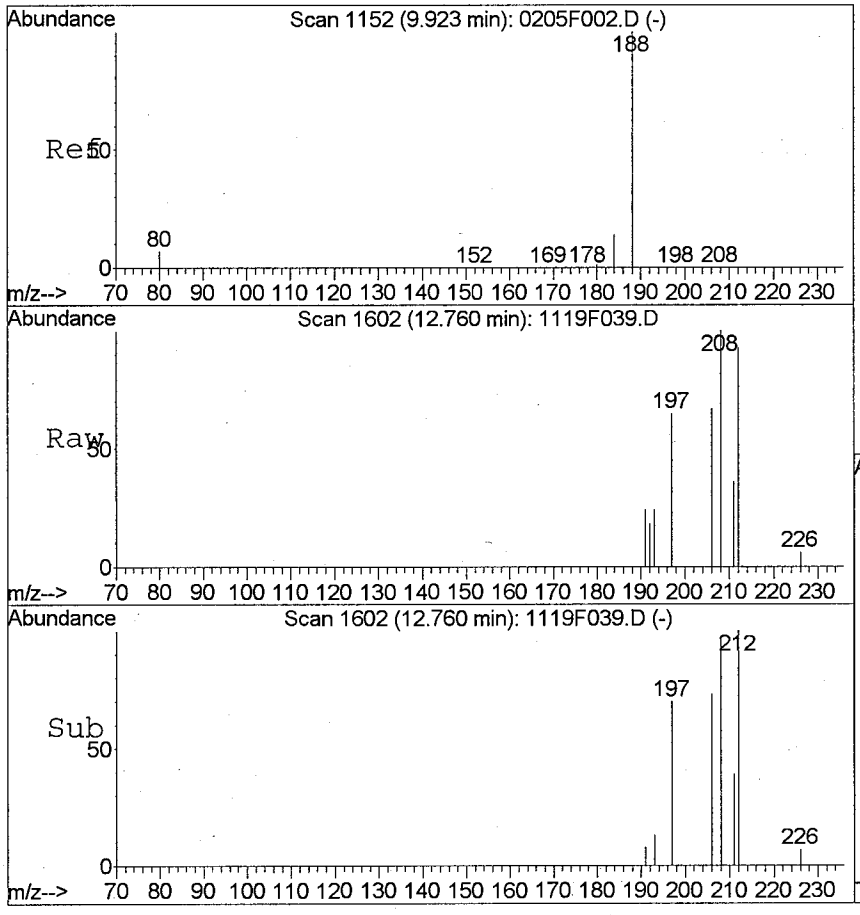


#19
C2-Fluorenes
Concen: 155.63 ng/ml m
RT: 11.25 min Scan# 1376
Delta R.T. -0.16 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:194 Resp: 28197

Ion	Ratio	Lower	Upper
194	100		
179	152.8	107.0	167.0

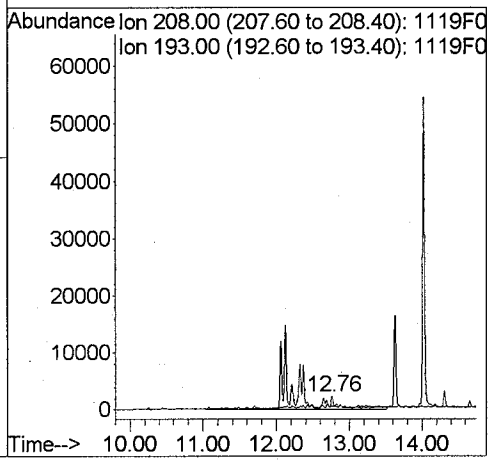


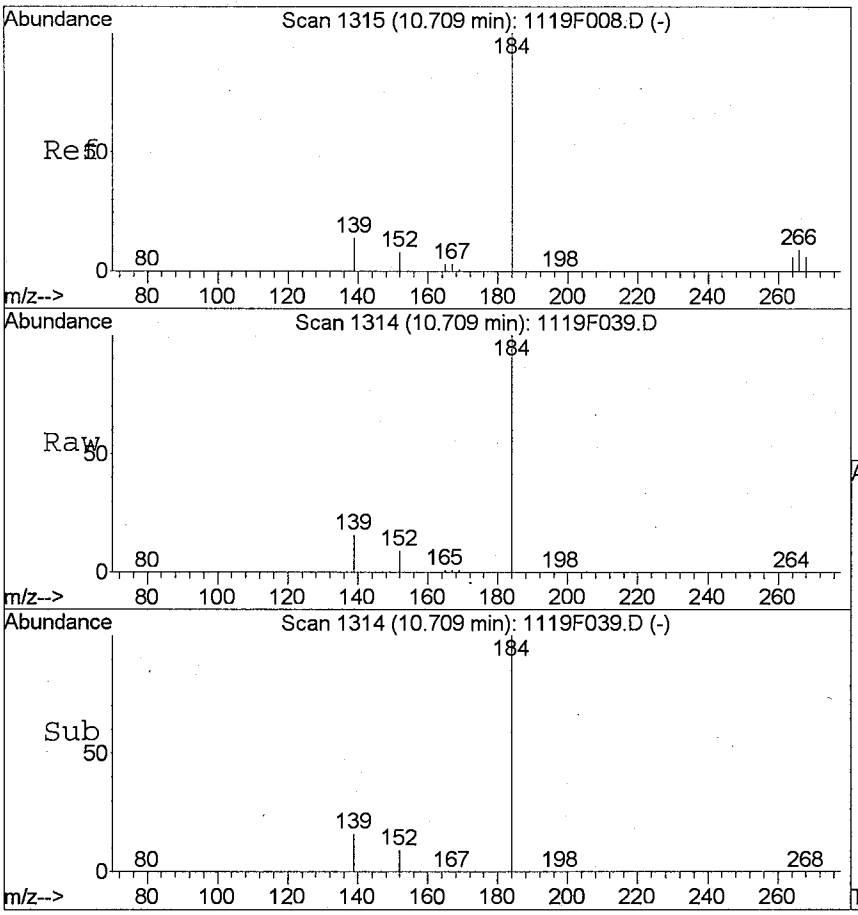


#20
C3-Fluorenes
Concen: 295.65 ng/ml m
RT: 12.76 min Scan# 1602
Delta R.T. 0.24 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:208 Resp: 53565

Ion	Ratio	Lower	Upper
208	100		
193	24.0	92.0	152.0#

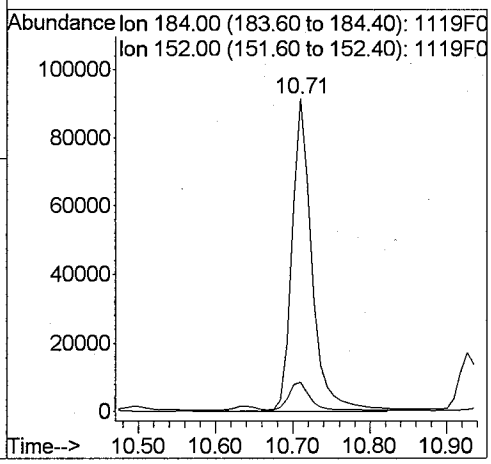


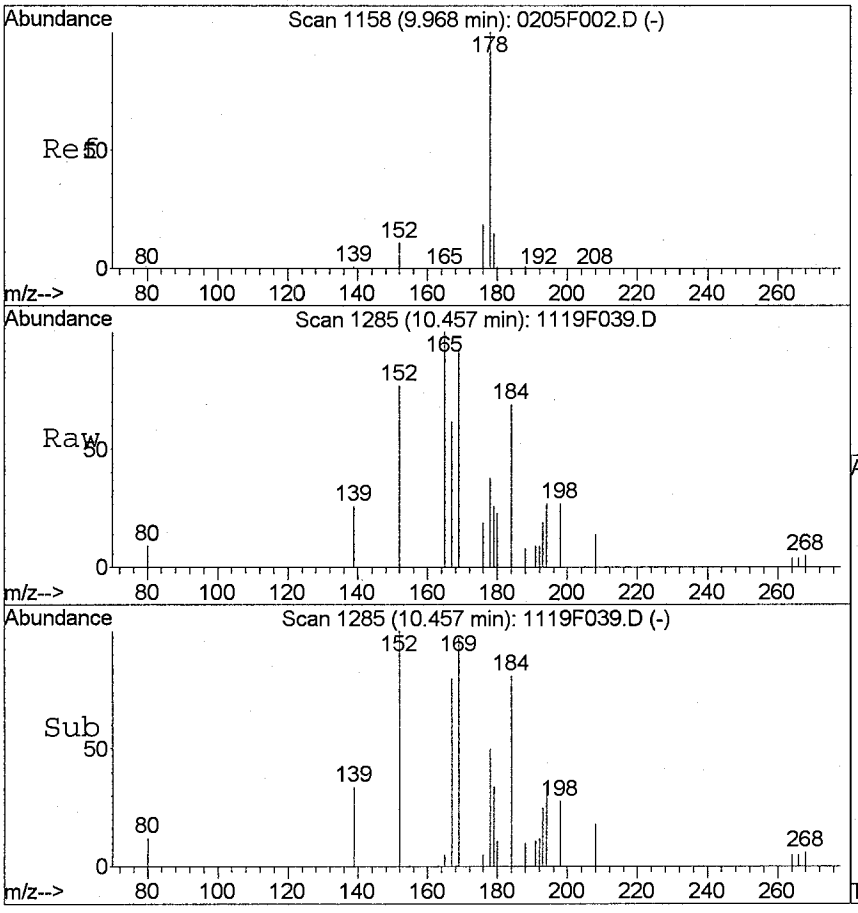


#24
Dibenzothiophene
Concen: 672.84 ng/ml
RT: 10.71 min Scan# 1314
Delta R.T. 0.00 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:184 Resp: 164270

Ion	Ratio	Lower	Upper
184	100		
152	8.9	0.0	38.4

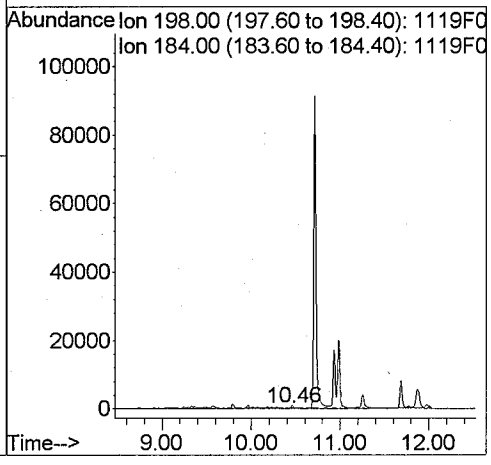


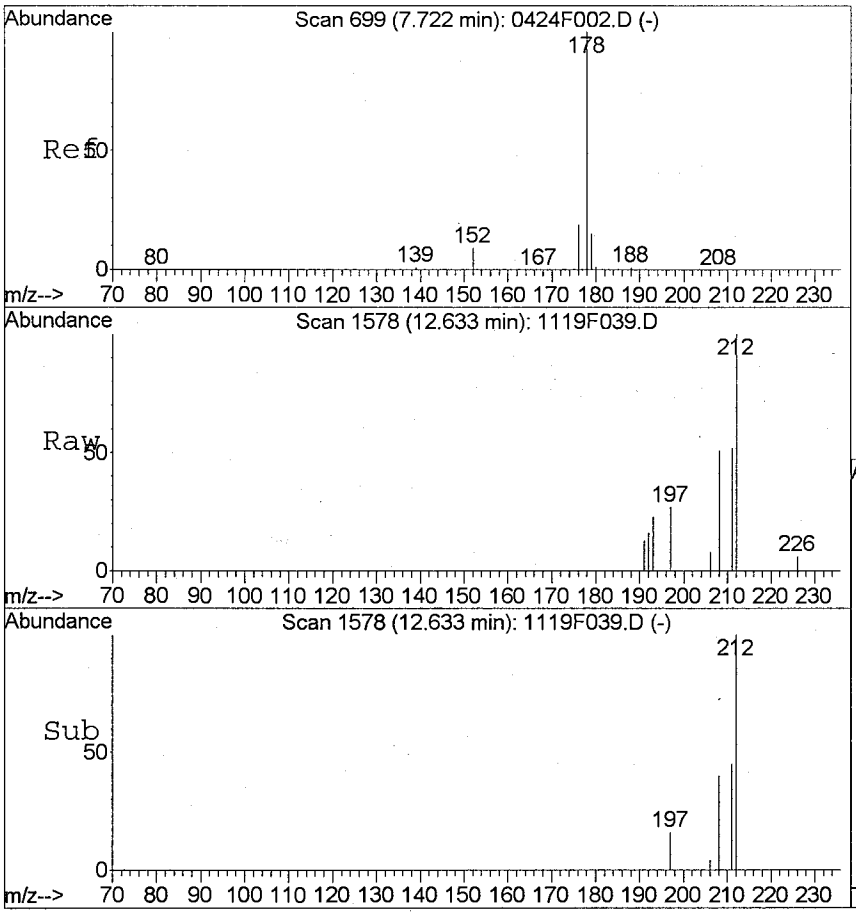


#25
C1-Dibenzothiophenes
Concen: 57.09 ng/ml m
RT: 10.46 min Scan# 1285
Delta R.T. 0.25 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:198 Resp: 13937

Ion	Ratio	Lower	Upper
198	100		
184	254.1	74.1	134.1#

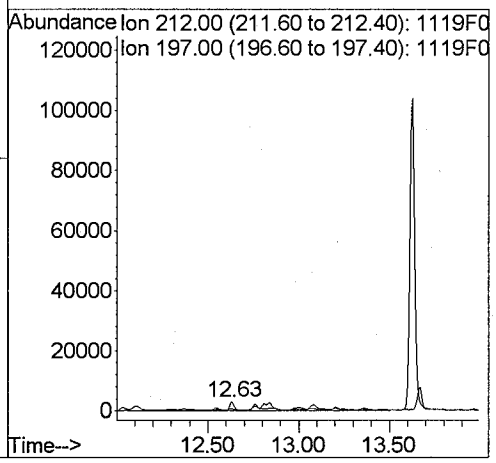


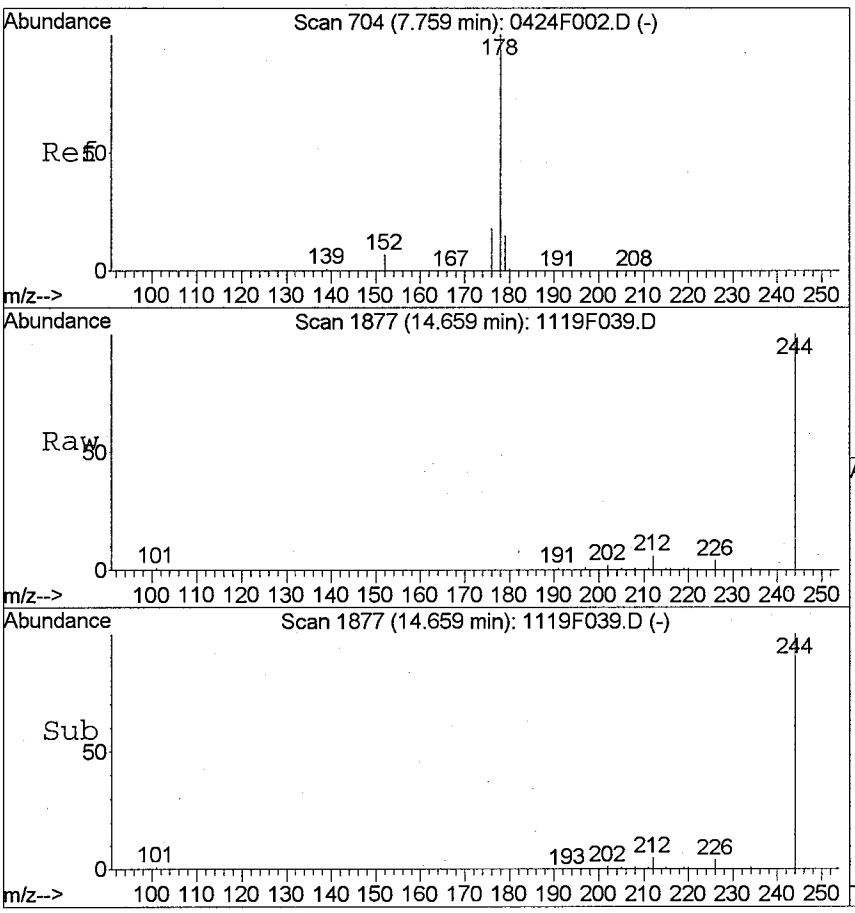


#26
C2-Dibenzothiophenes
Concen: 158.87 ng/ml m
RT: 12.63 min Scan# 1578
Delta R.T. -0.30 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:212 Resp: 38787

Ion	Ratio	Lower	Upper
212	100		
197	26.6	0.0	53.8

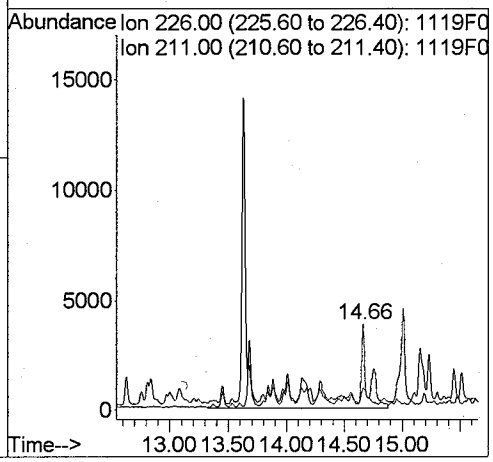


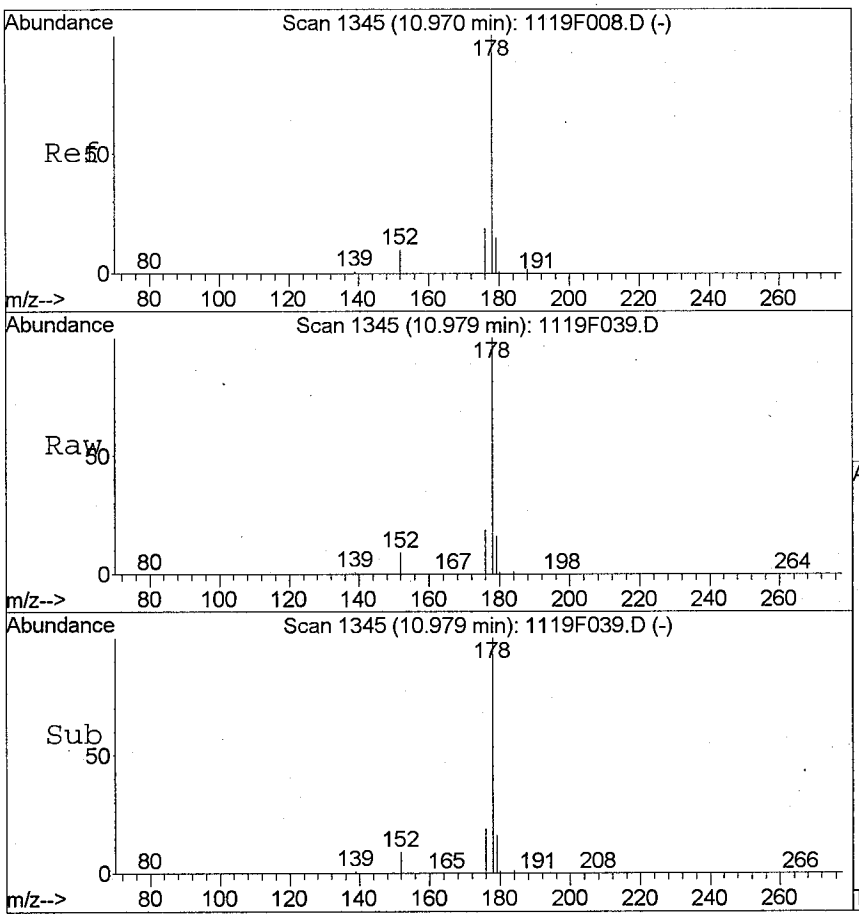


#27
C3-Dibenzothiophenes
Concen: 200.89 ng/ml m
RT: 14.66 min Scan# 1877
Delta R.T. 0.88 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:226 Resp: 49045

Ion	Ratio	Lower	Upper
226	100		
211	26.5	27.1	87.1#

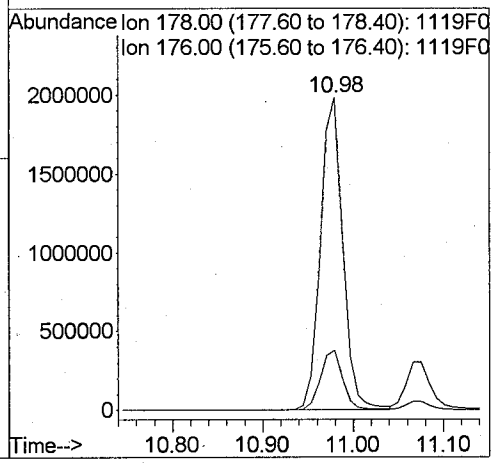


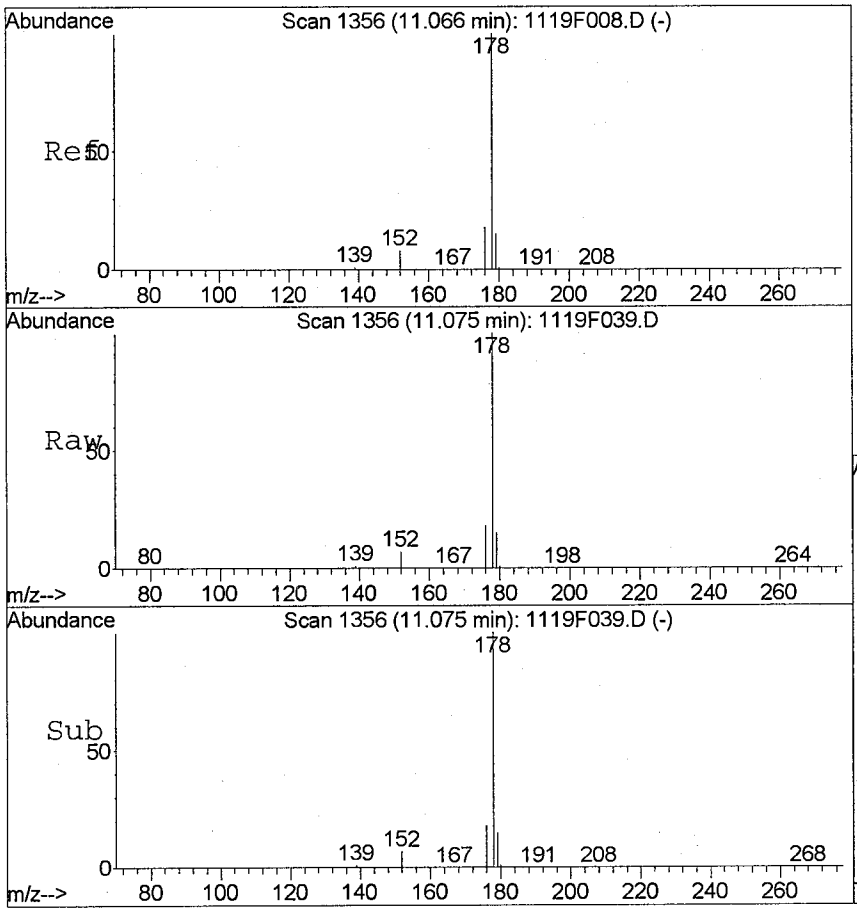


#28
Phenanthrene
Concen: 13271.40 ng/ml
RT: 10.98 min Scan# 1345
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:178 Resp: 3403579

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	48.6

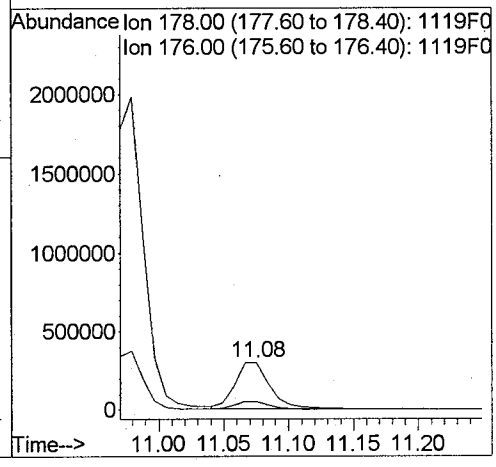


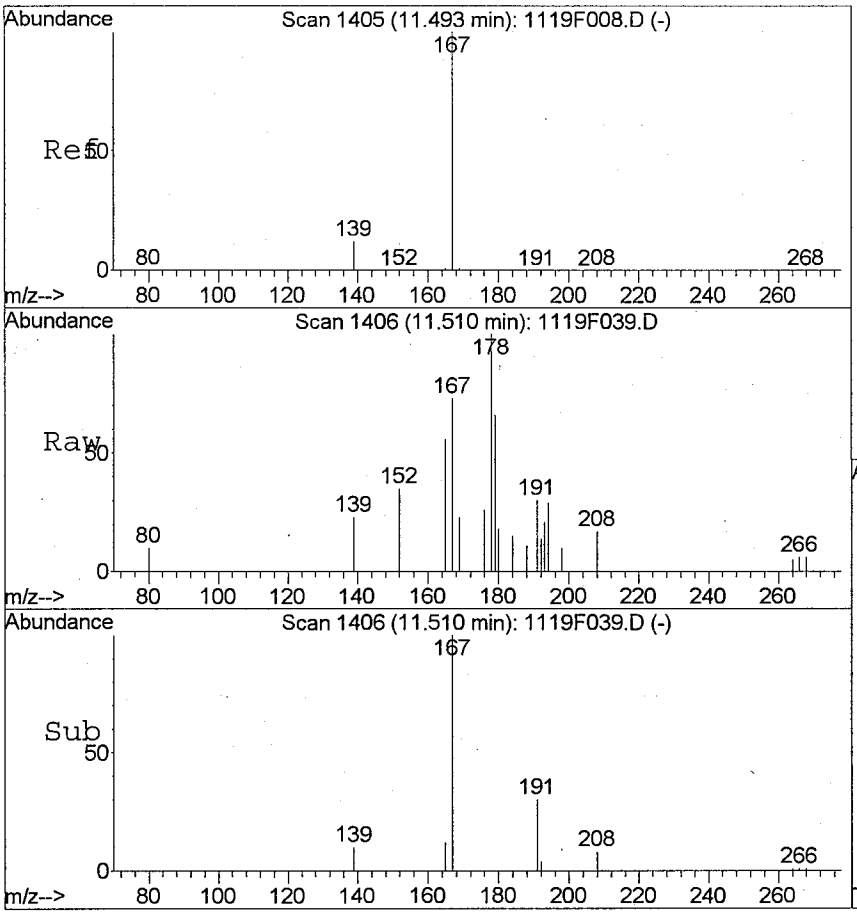


#29
Anthracene
Concen: 2593.28 ng/ml
RT: 11.08 min Scan# 1356
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:178 Resp: 568186

Ion	Ratio	Lower	Upper
178	100		
176	17.8	0.0	48.2

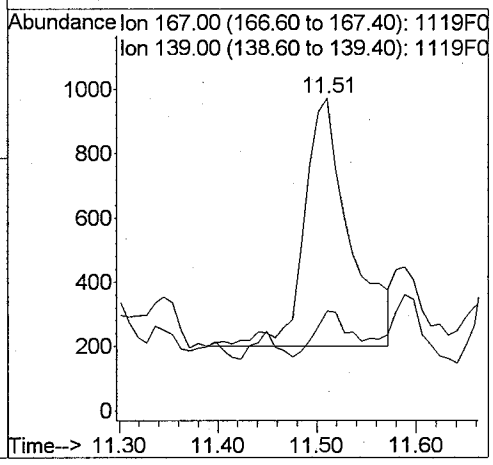


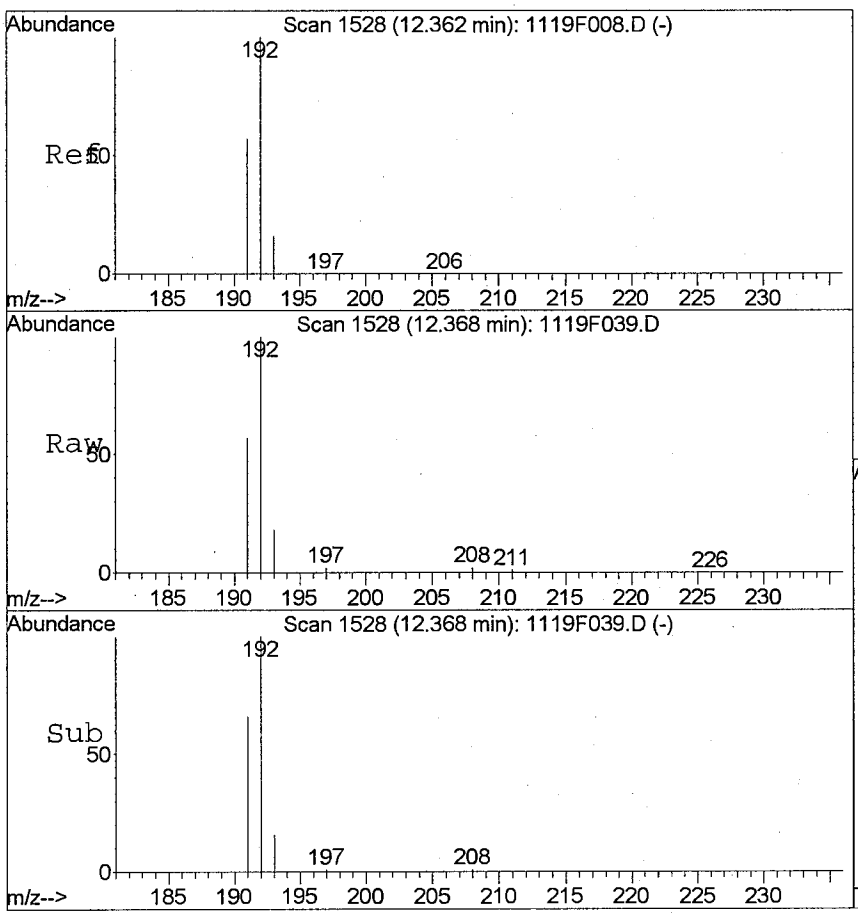


#30
Carbazole
Concen: 14.24 ng/ml
RT: 11.51 min Scan# 1406
Delta R.T. 0.02 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:167 Resp: 2466

Ion	Ratio	Lower	Upper
167	100		
139	14.5	0.0	42.5

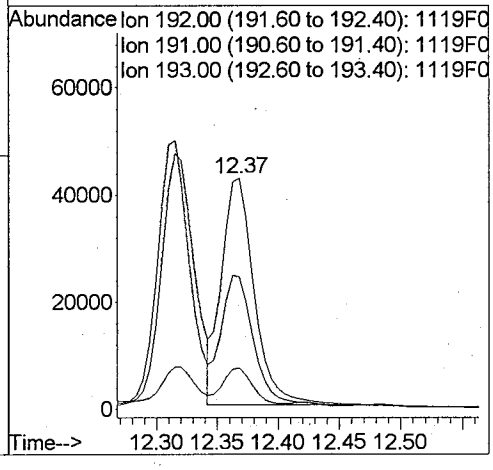


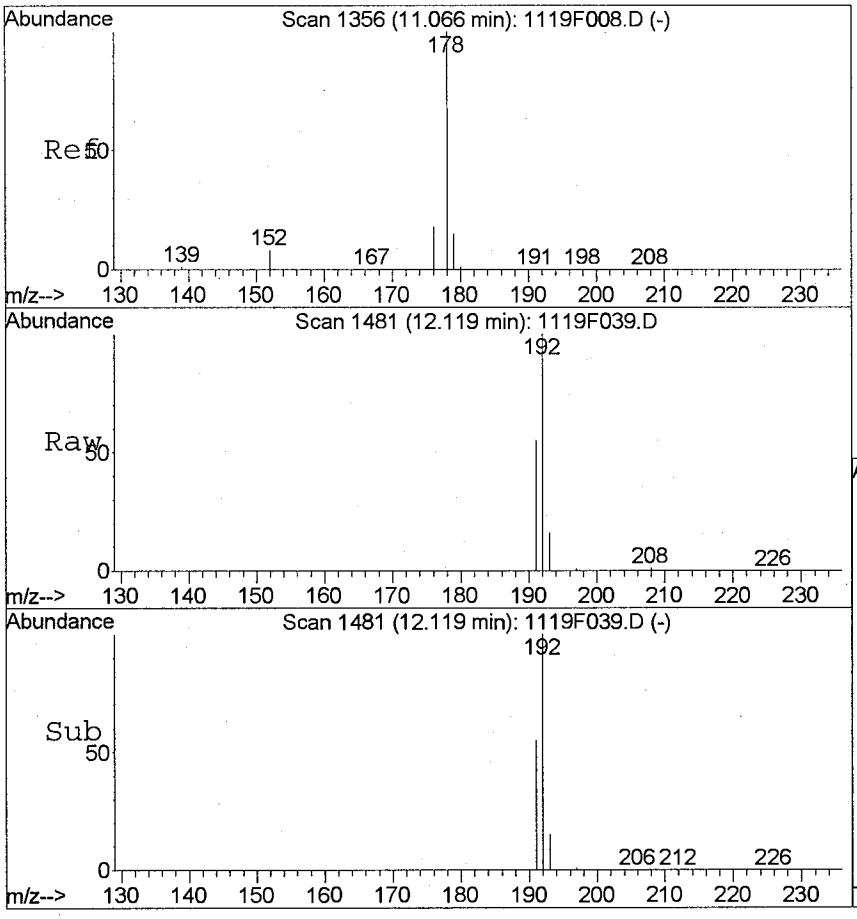


#31
1-Methylphenanthrene
Concen: 459.19 ng/ml
RT: 12.37 min Scan# 1528
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:192 Resp: 79957

Ion	Ratio	Lower	Upper
192	100		
191	56.8	27.5	87.5
193	16.2	0.0	45.6

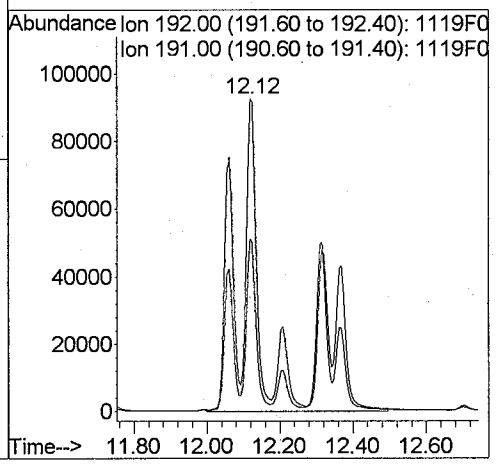


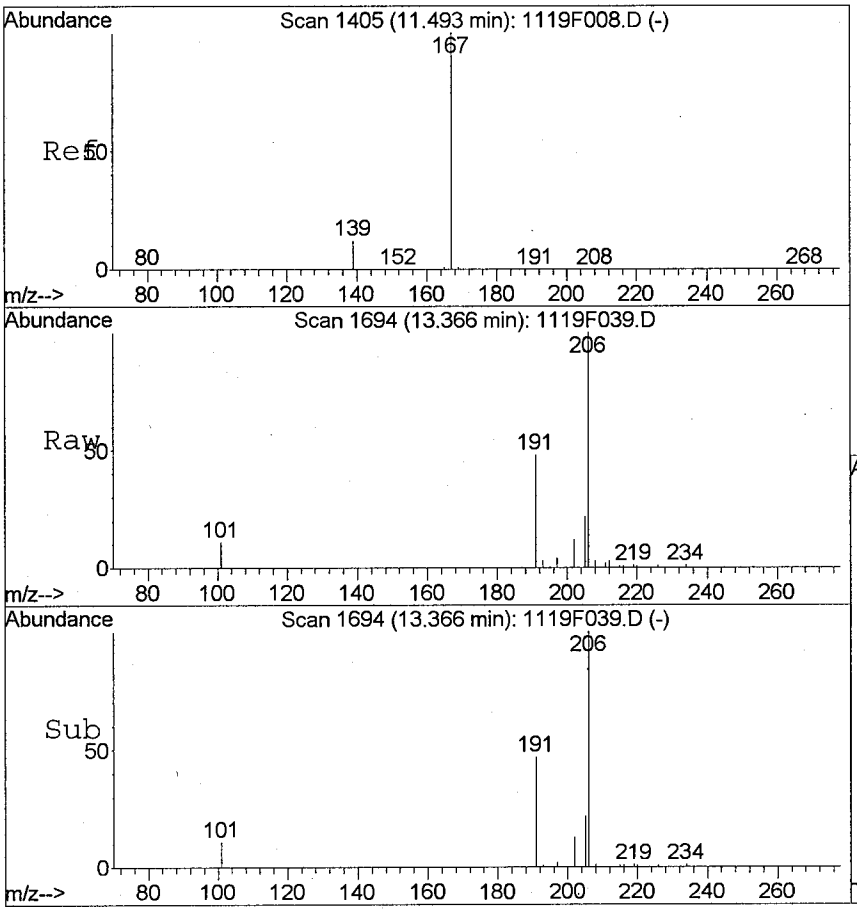


#32
C1-Phenanthrenes/Anthracenes
Concen: 2162.50 ng/ml m
RT: 12.12 min Scan# 1481
Delta R.T. -0.10 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:192 Resp: 554593

Ion	Ratio	Lower	Upper
192	100		
191	55.3	25.3	85.3

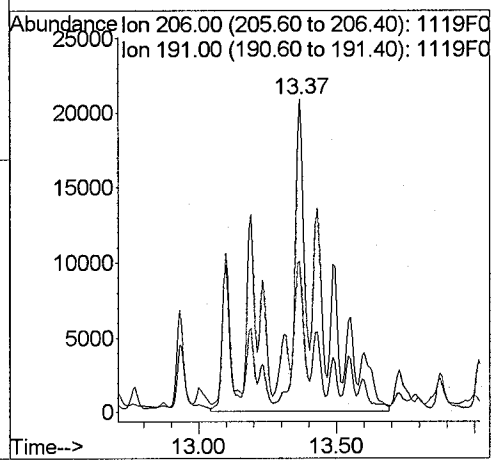


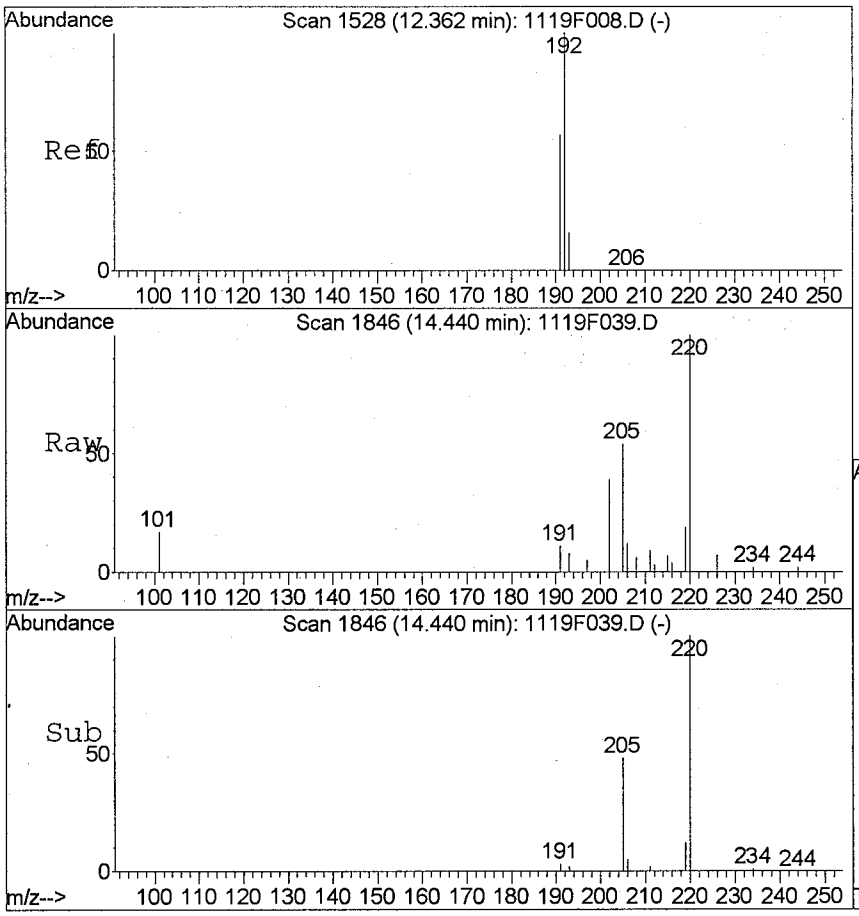


#33
C2-Phenanthrenes/Anthracenes
Concen: 752.42 ng/ml m
RT: 13.37 min Scan# 1694
Delta R.T. -0.10 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:206 Resp: 192966

Ion	Ratio	Lower	Upper
206	100		
191	48.3	15.6	75.6

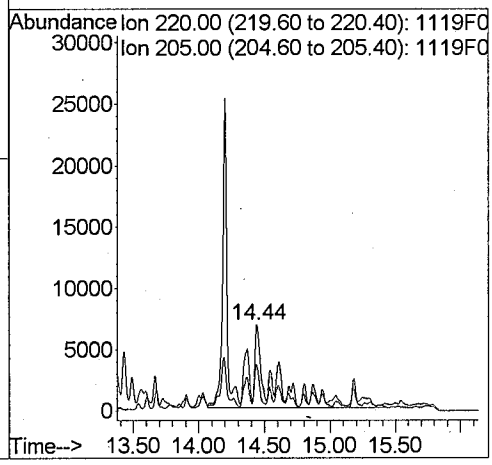


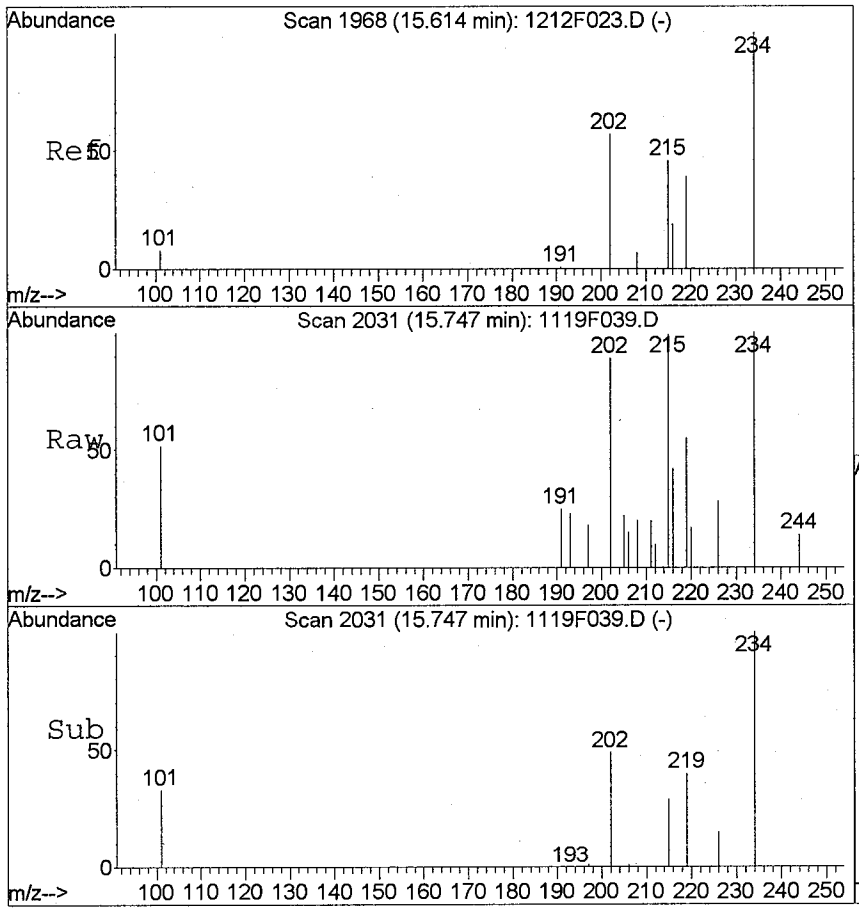


#34
C3-Phenanthrenes/Anthracenes
Concen: 372.62 ng/ml m
RT: 14.44 min Scan# 1846
Delta R.T. -0.11 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:220 Resp: 95563

Ion	Ratio	Lower	Upper
220	100		
205	54.1	20.0	80.0

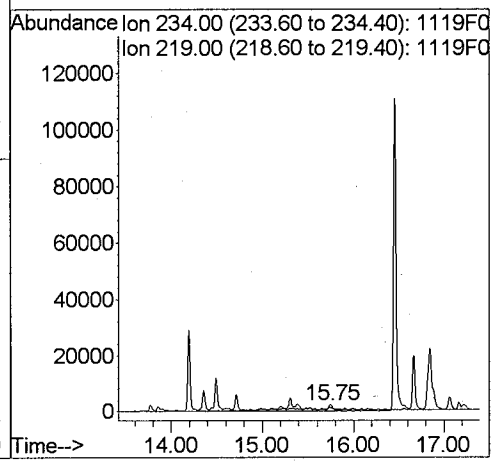


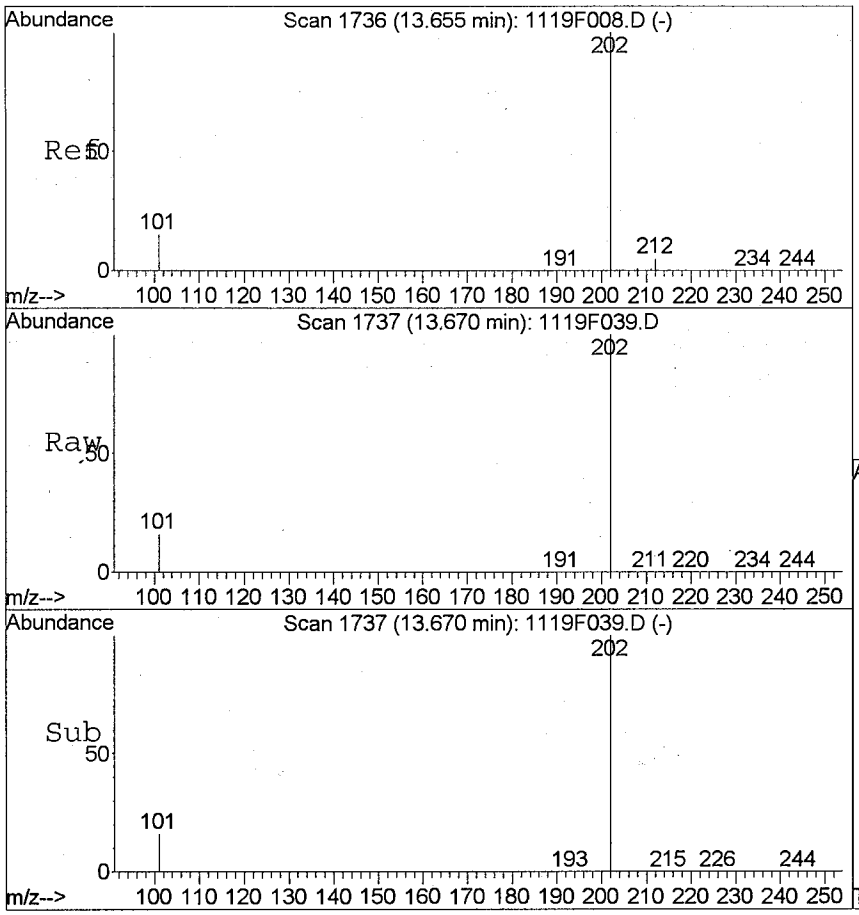


#35
C4-Phenanthrenes/Anthracenes
Concen: 245.80 ng/ml m
RT: 15.75 min Scan# 2031
Delta R.T. -0.08 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:234 Resp: 63039

Ion	Ratio	Lower	Upper
234	100		
219	55.3	17.7	77.7

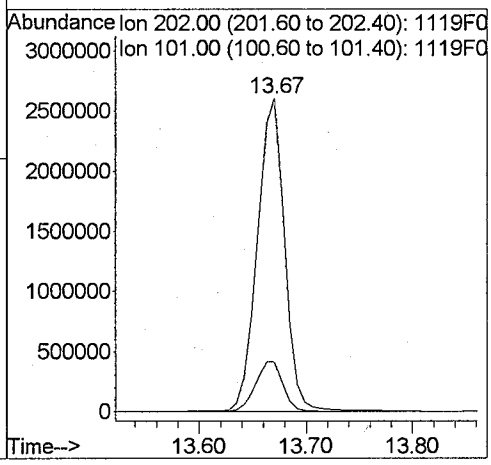


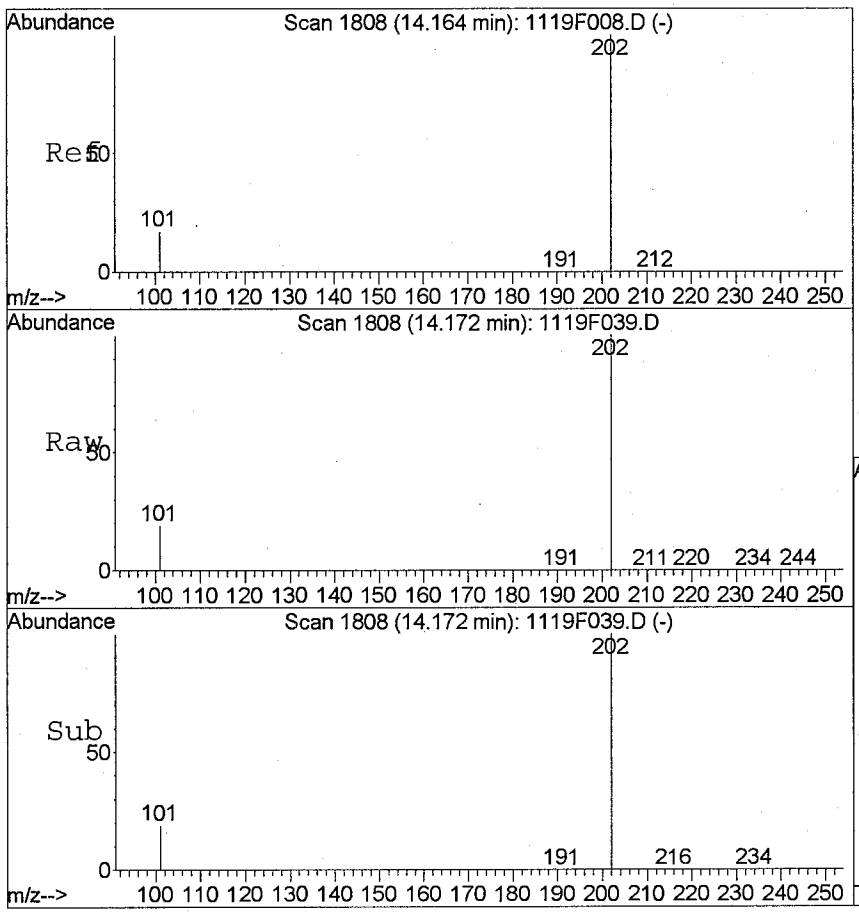


#36
Fluoranthene
Concen: 17750.23 ng/ml
RT: 13.67 min Scan# 1737
Delta R.T. 0.02 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:202 Resp: 4531354

Ion	Ratio	Lower	Upper
202	100		
101	15.7	0.0	45.5

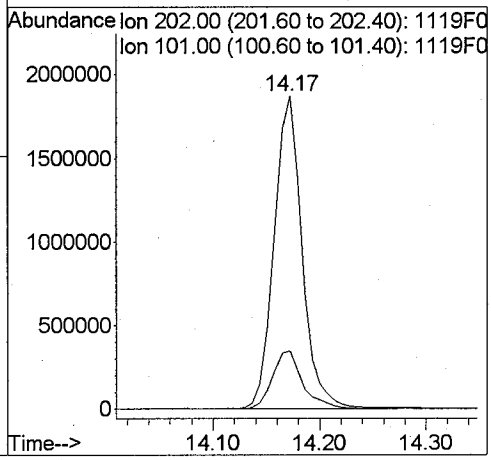


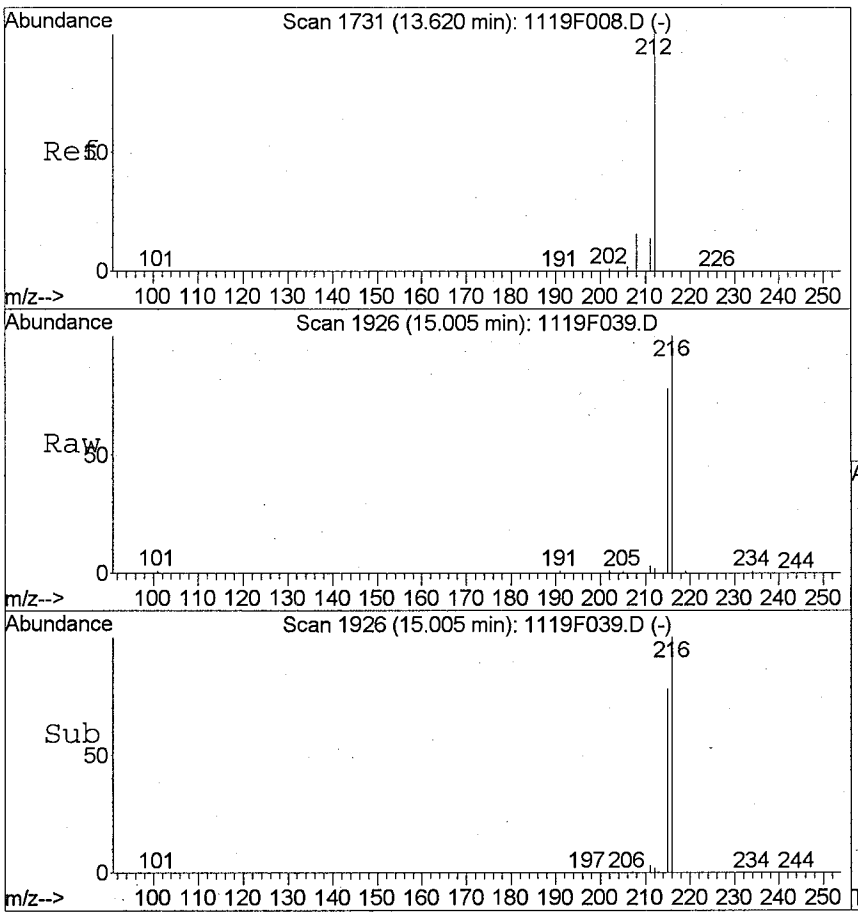


#39
Pyrene
Concen: 11890.36 ng/ml
RT: 14.17 min Scan# 1808
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:202 Resp: 3407340

Ion	Ratio	Lower	Upper
202	100		
101	18.6	0.0	47.4

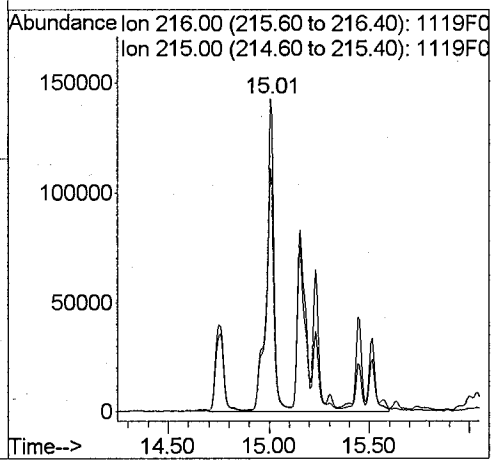


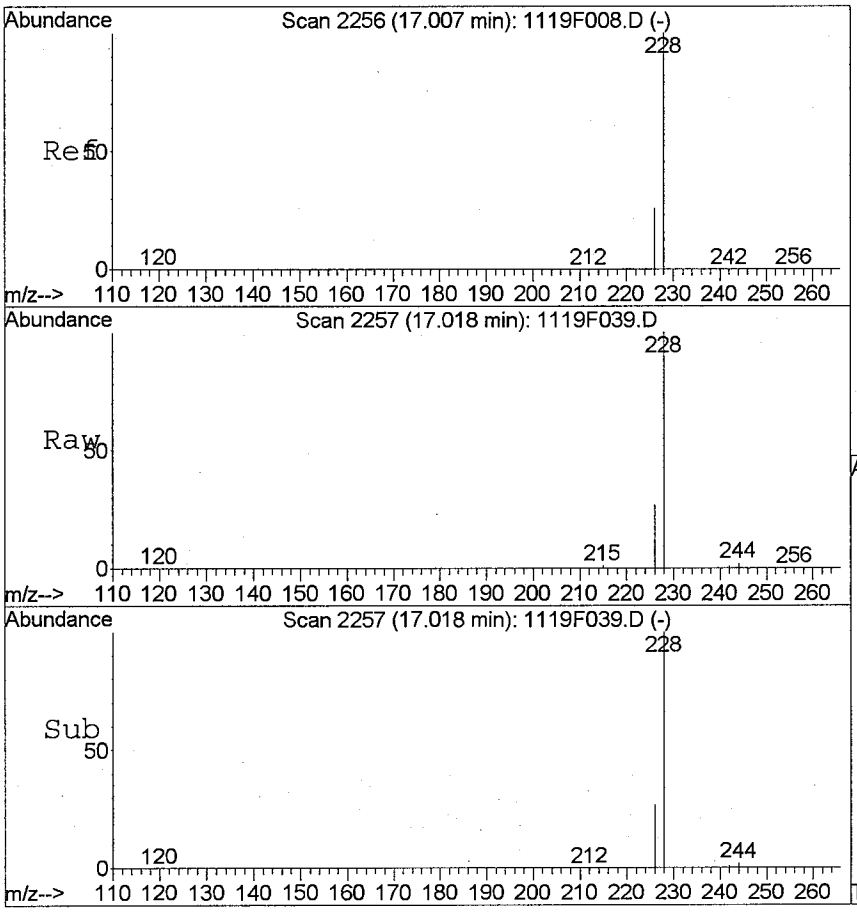


#40
C1-Fluoranthenes/Pyrenes
Concen: 3511.13 ng/ml m
RT: 15.01 min Scan# 1926
Delta R.T. -0.54 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:216 Resp: 1006160

Ion	Ratio	Lower	Upper
216	100		
215	77.8	54.8	114.8

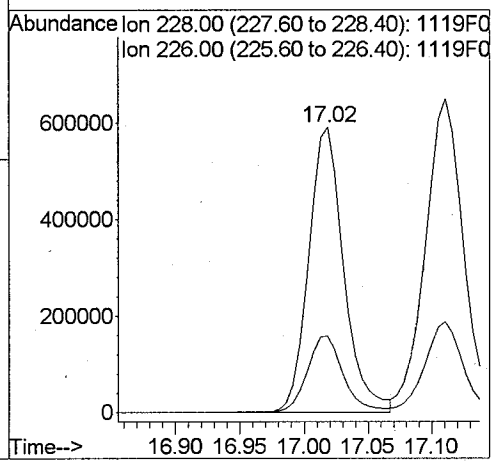


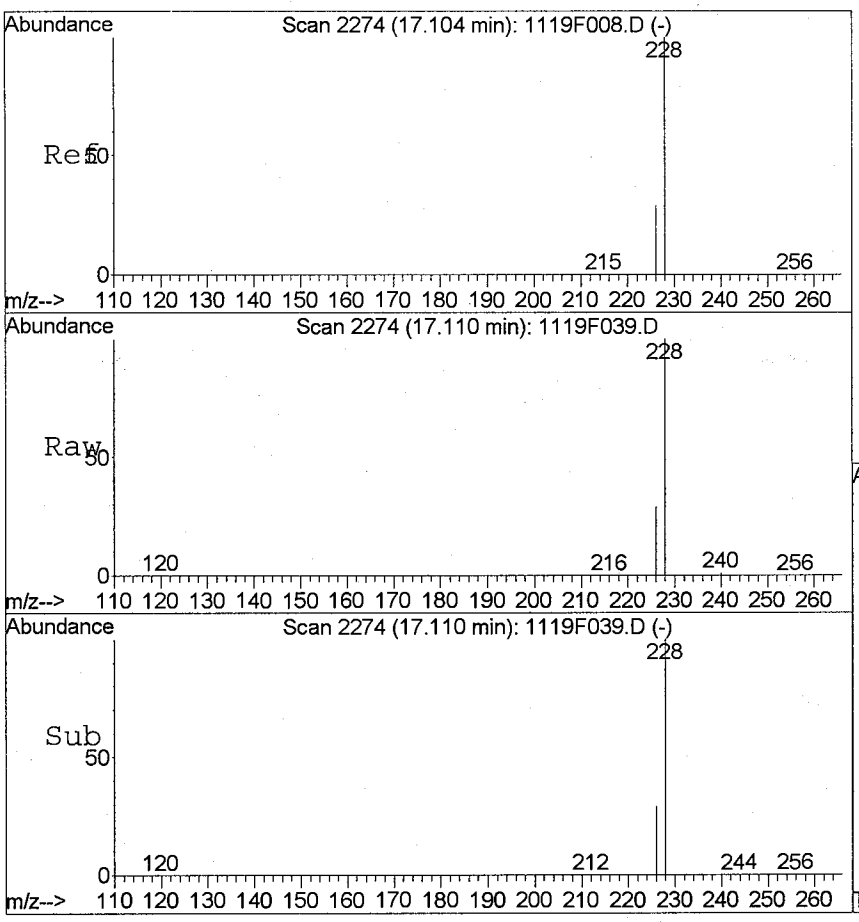


#42
Benz(a)anthracene
Concen: 5161.76 ng/ml
RT: 17.02 min Scan# 2257
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:228 Resp: 1126160

Ion	Ratio	Lower	Upper
228	100		
226	26.8	0.0	55.8

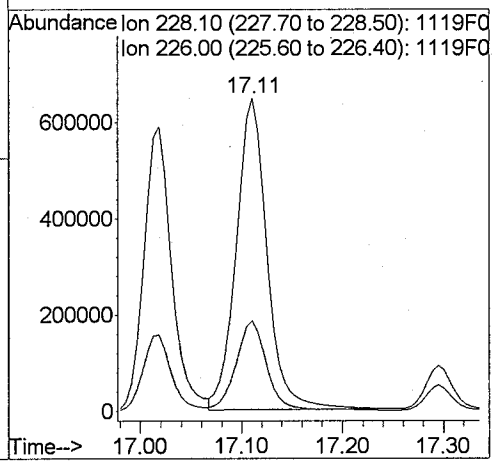


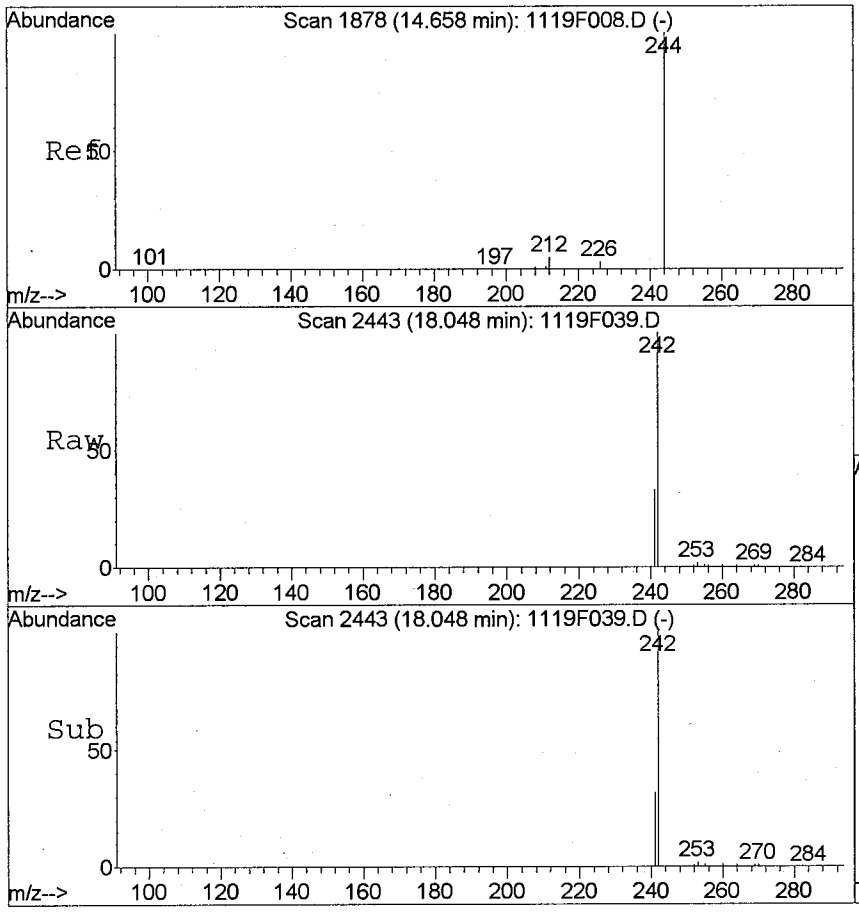


#43
Chrysene
Concen: 5863.51 ng/ml
RT: 17.11 min Scan# 2274
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:228 Resp: 1367966

Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	58.5

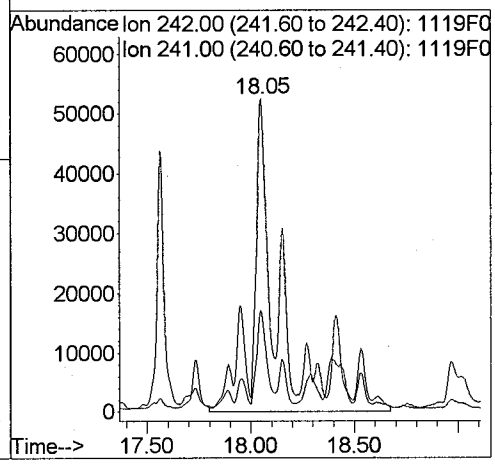


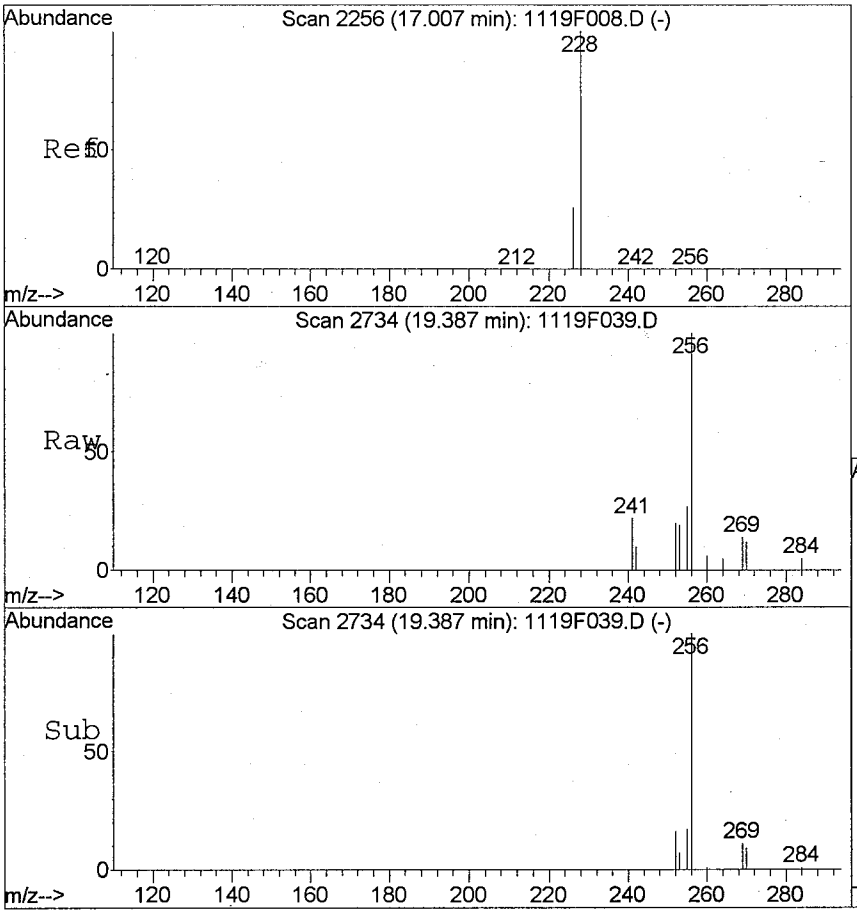


#44
C1-Chrysenes
Concen: 2088.82 ng/ml m
RT: 18.05 min Scan# 2443
Delta R.T. -0.10 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:242 Resp: 487326

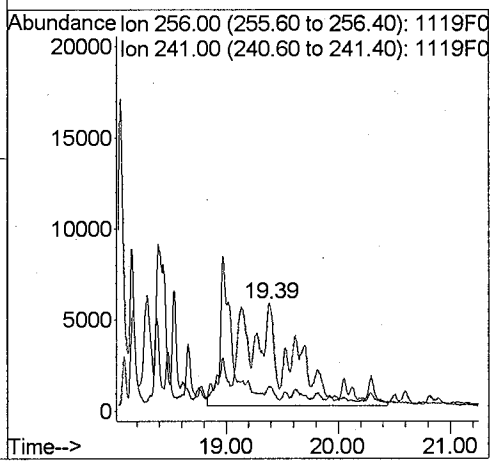
Ion	Ratio	Lower	Upper
242	100		
241	32.6	0.1	60.1

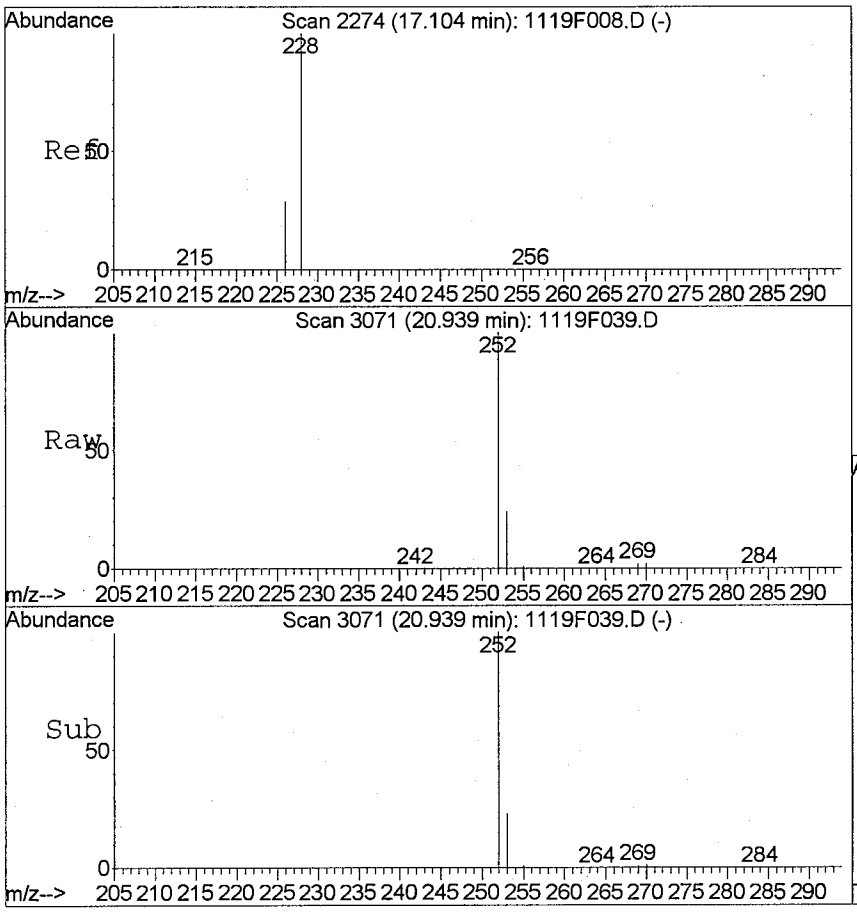




#45
C2-Chrysenes
Concen: 761.62 ng/ml m
RT: 19.39 min Scan# 2734
Delta R.T. -0.13 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

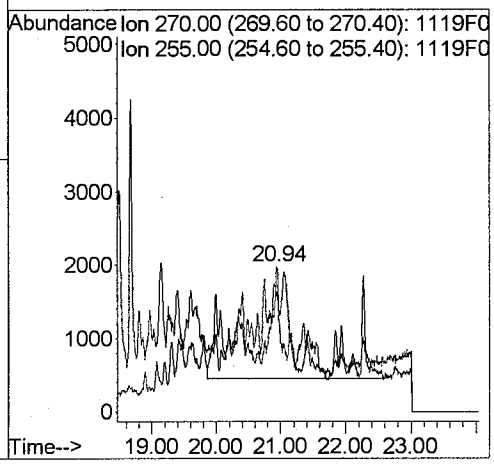
Tgt Ion:256	Resp:	177688	
Ion	Ratio	Lower	Upper
256	100		
241	22.2	7.8	67.8

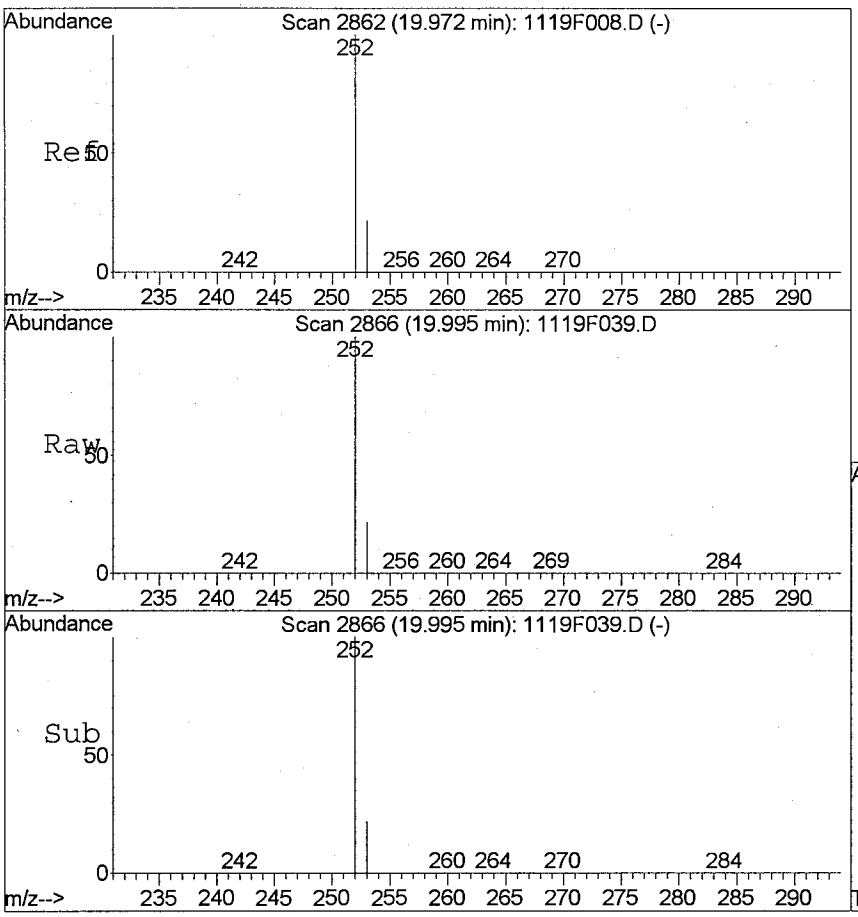




#46
C3-Chrysenes
Concen: 335.97 ng/ml m
RT: 20.94 min Scan# 3071
Delta R.T. -0.28 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:270	Resp:	78382	
Ion	Ratio	Lower	Upper
270	100		
255	80.4	0.0	56.7#

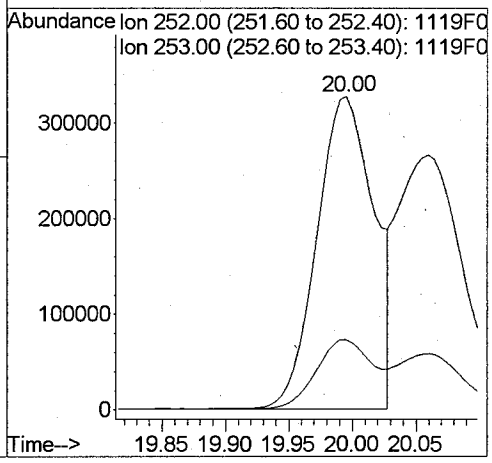


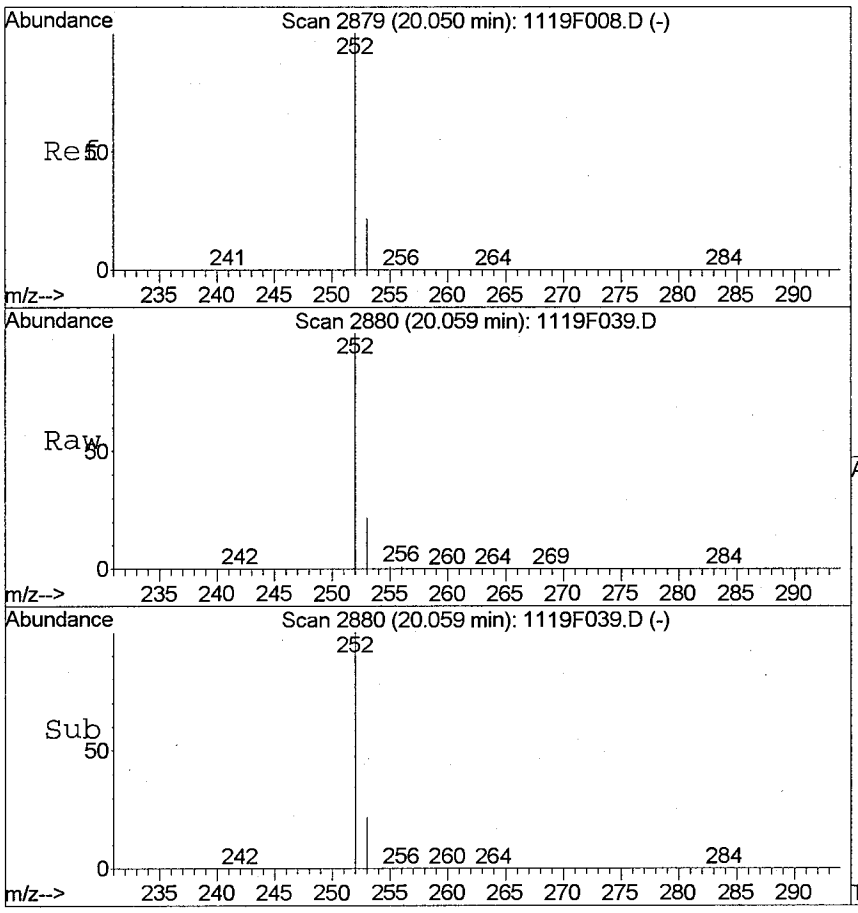


#49
Benzo(b)fluoranthene
Concen: 5148.90 ng/ml
RT: 20.00 min Scan# 2866
Delta R.T. 0.02 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:252 Resp: 1017465

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.8

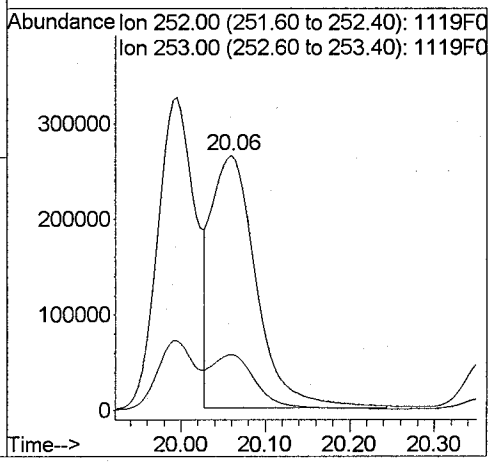


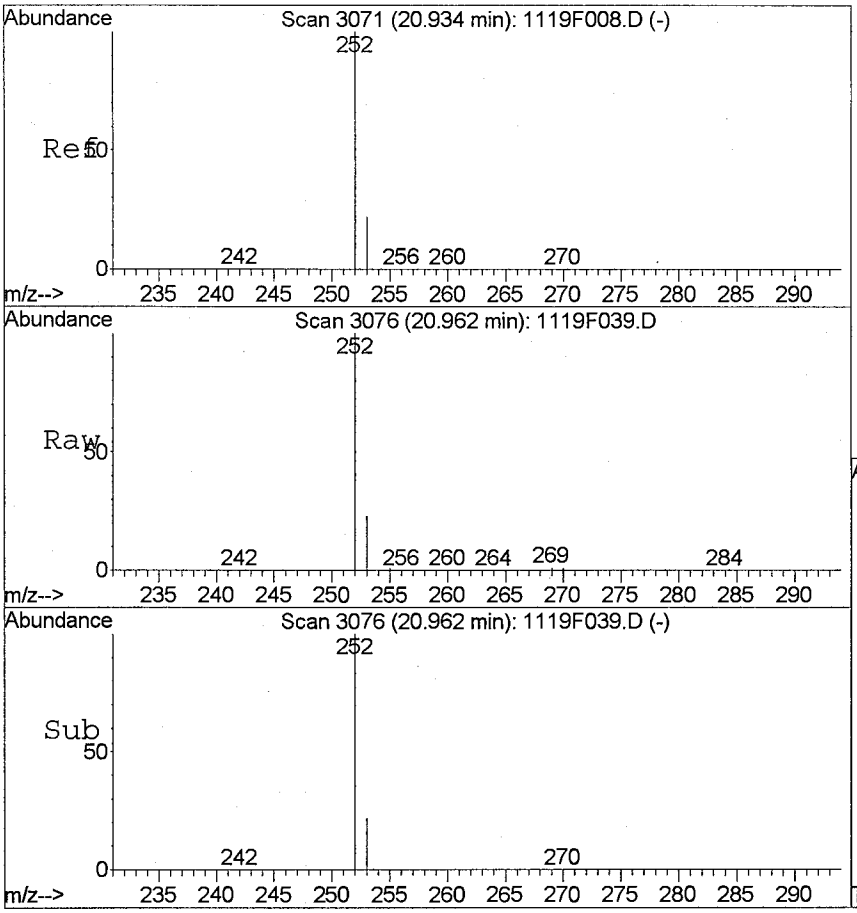


#50
Benzo(k)fluoranthene
Concen: 3912.01 ng/ml m
RT: 20.06 min Scan# 2880
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:252 Resp: 980879

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.2

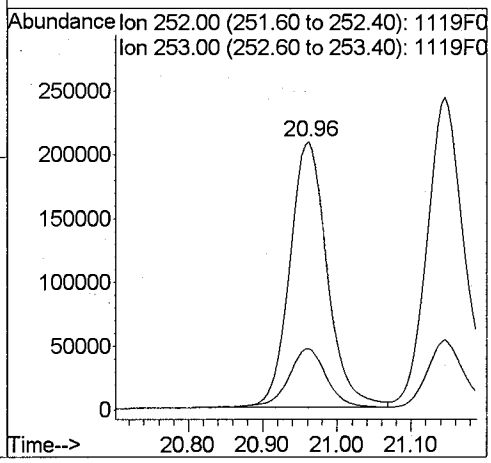


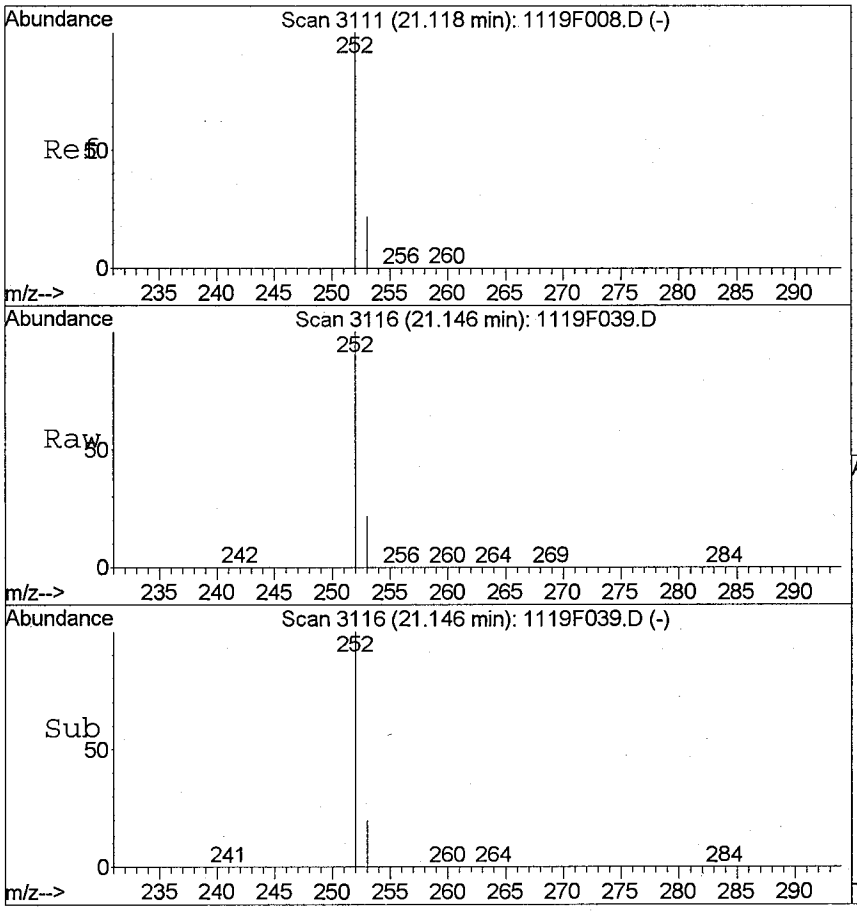


#51
Benzo(e)pyrene
Concen: 3282.96 ng/ml
RT: 20.96 min Scan# 3076
Delta R.T. 0.03 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:252 Resp: 728394

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.8

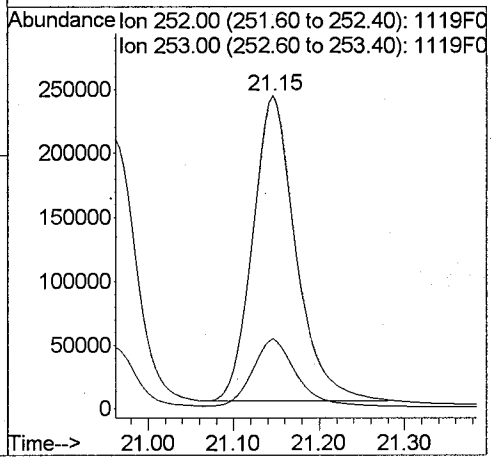


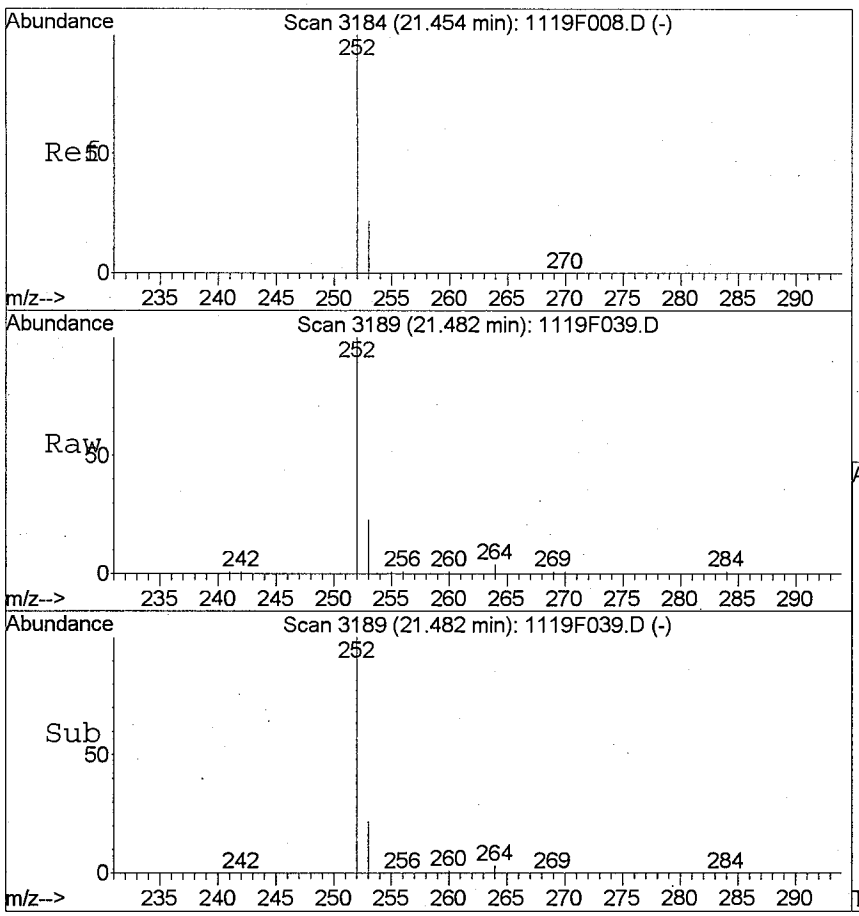


#52
Benzo(a)pyrene
Concen: 4982.49 ng/ml
RT: 21.15 min Scan# 3116
Delta R.T. 0.03 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:252 Resp: 837475

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9

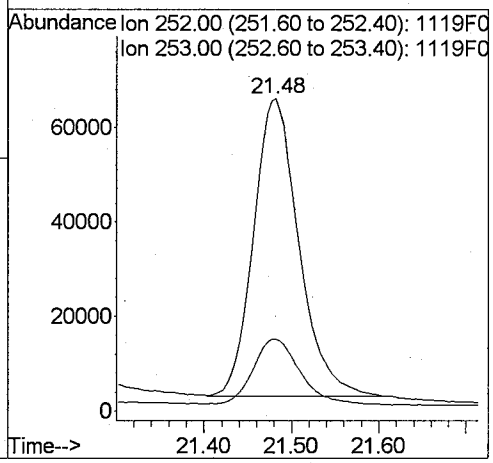


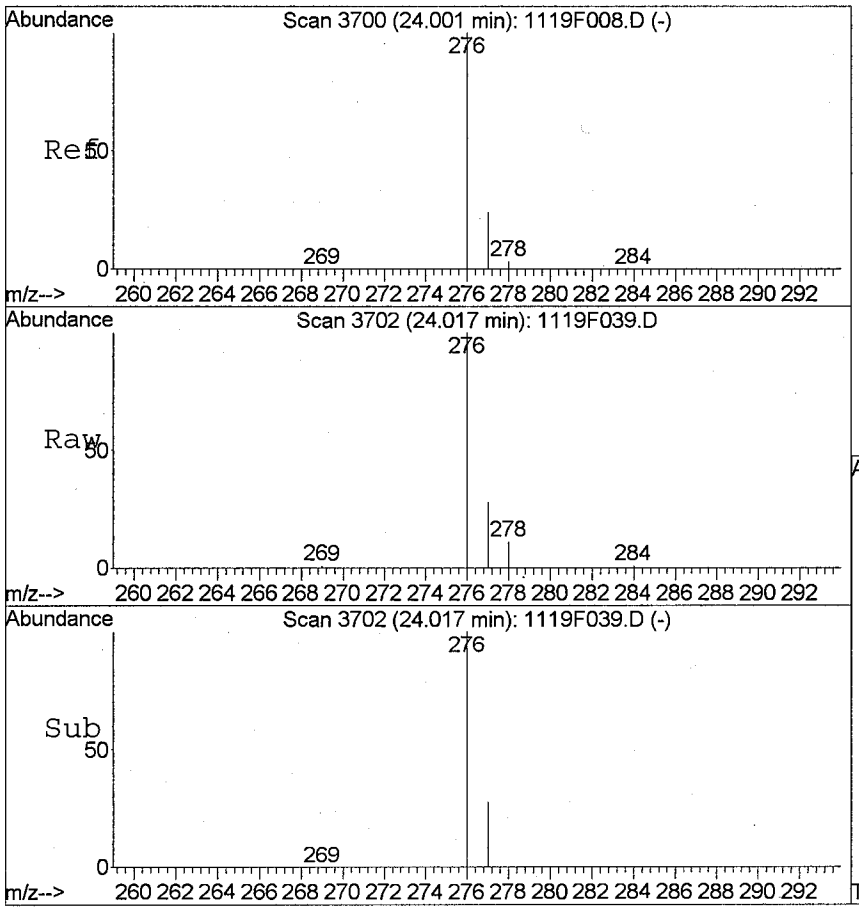


#53
Perylene
Concen: 1203.31 ng/ml
RT: 21.48 min Scan# 3189
Delta R.T. 0.03 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:252 Resp: 227041

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.6

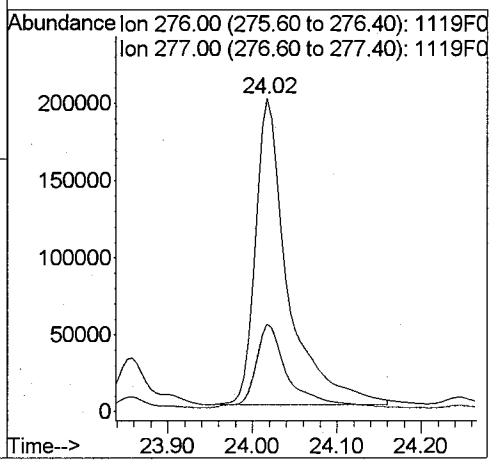


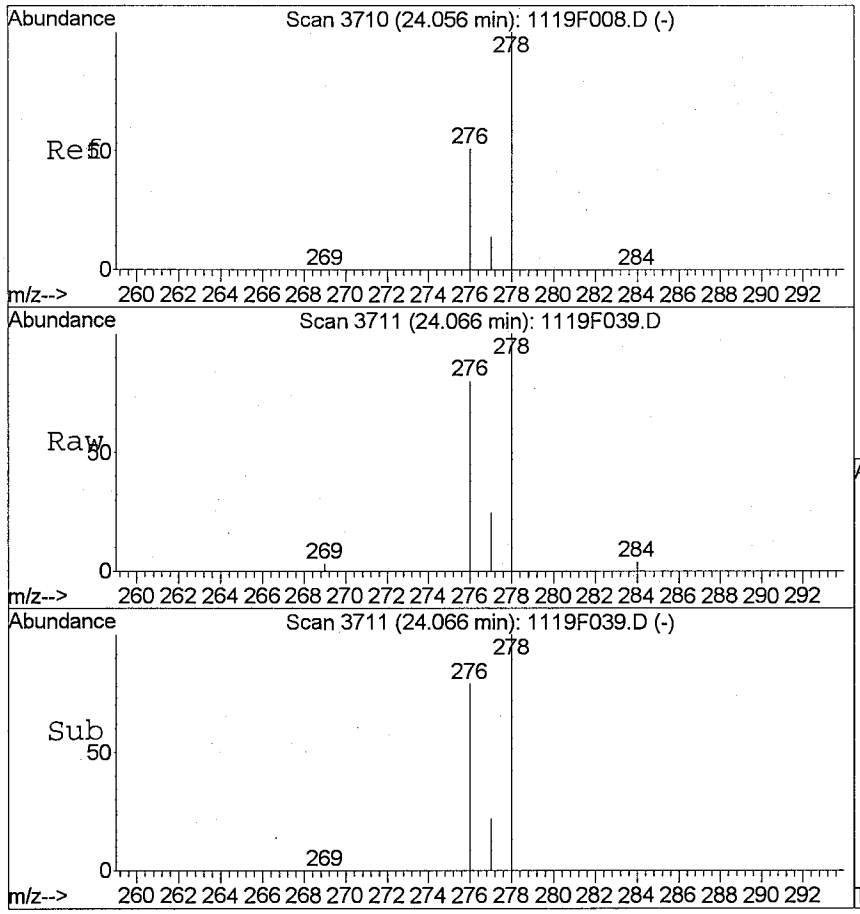


#54
Indeno(1,2,3-cd)pyrene
Concen: 5196.33 ng/ml
RT: 24.02 min Scan# 3702
Delta R.T. 0.02 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:276 Resp: 530956

Ion	Ratio	Lower	Upper
276	100		
277	27.5	0.0	53.6

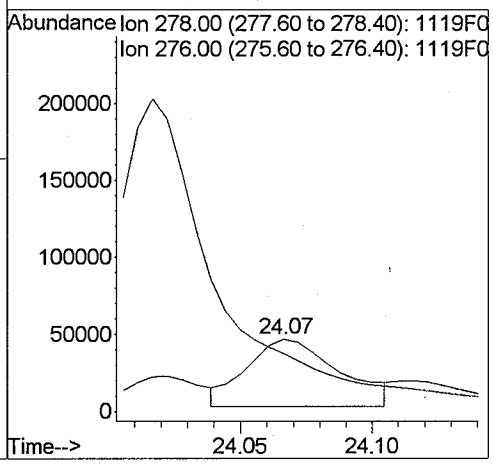


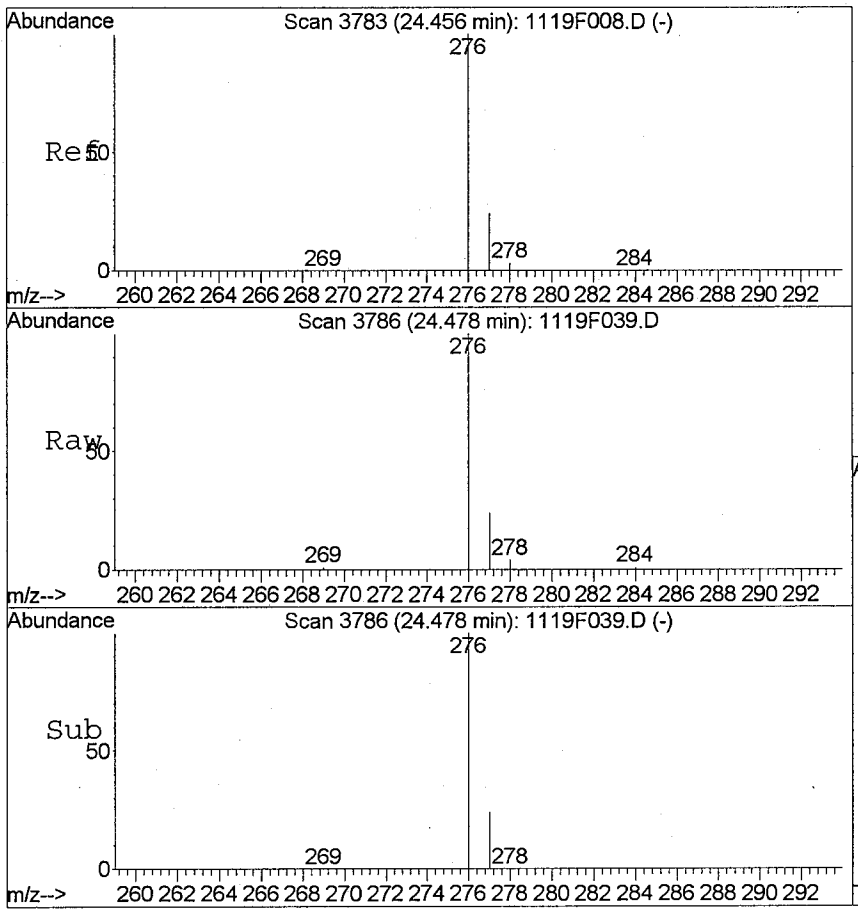


#55
Dibenz(a,h)anthracene
Concen: 721.12 ng/ml m
RT: 24.07 min Scan# 3711
Delta R.T. 0.01 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:278 Resp: 105892

Ion	Ratio	Lower	Upper
278	100		
276	80.4	21.1	81.1

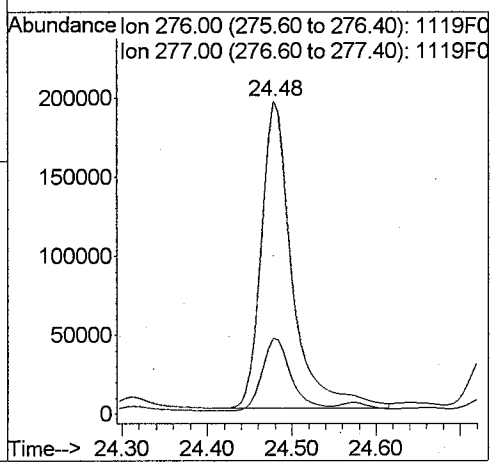




#56
Benzo(g,h,i)perylene
Concen: 2909.54 ng/ml
RT: 24.48 min Scan# 3786
Delta R.T. 0.02 min
Lab File: 1119F039.D
Acq: 19 Nov 2003 5:38 pm

Tgt Ion:276 Resp: 492880

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.6

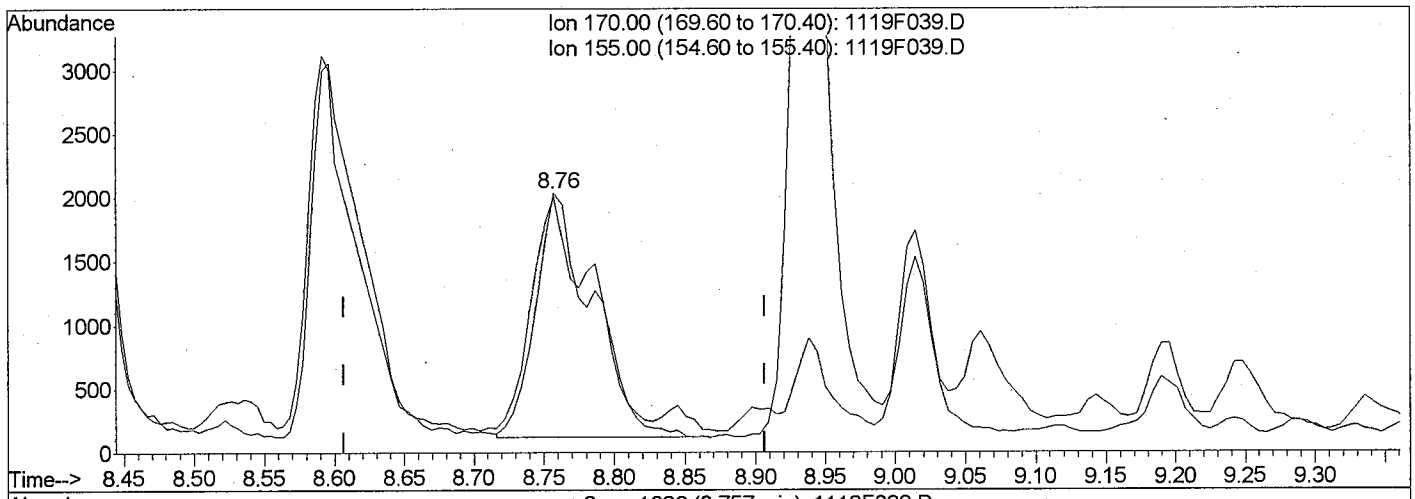


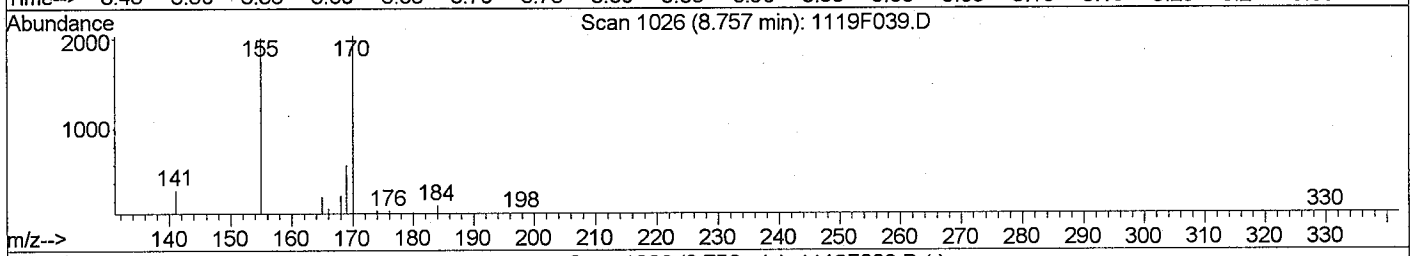
Quantitation Report (Qedit)

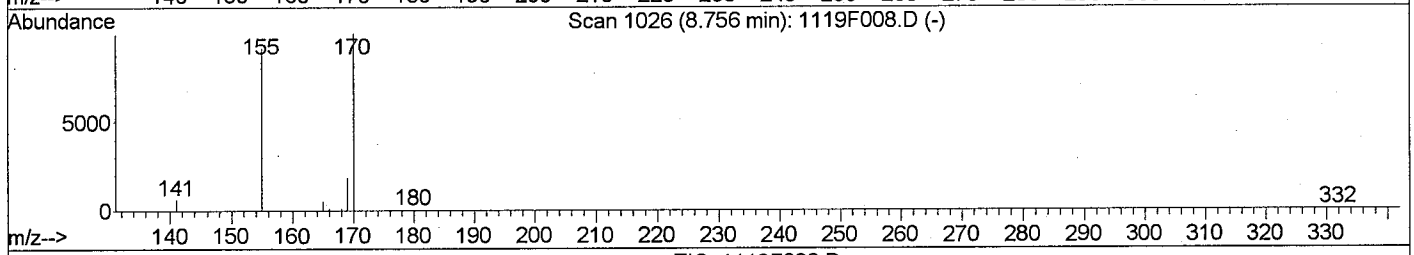
Data File : J:\MS11\DATA\111903\1119F039.D
Acq On : 19 Nov 2003 5:38 pm
Sample : K2308433-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 35.67ng/ml

response 5404

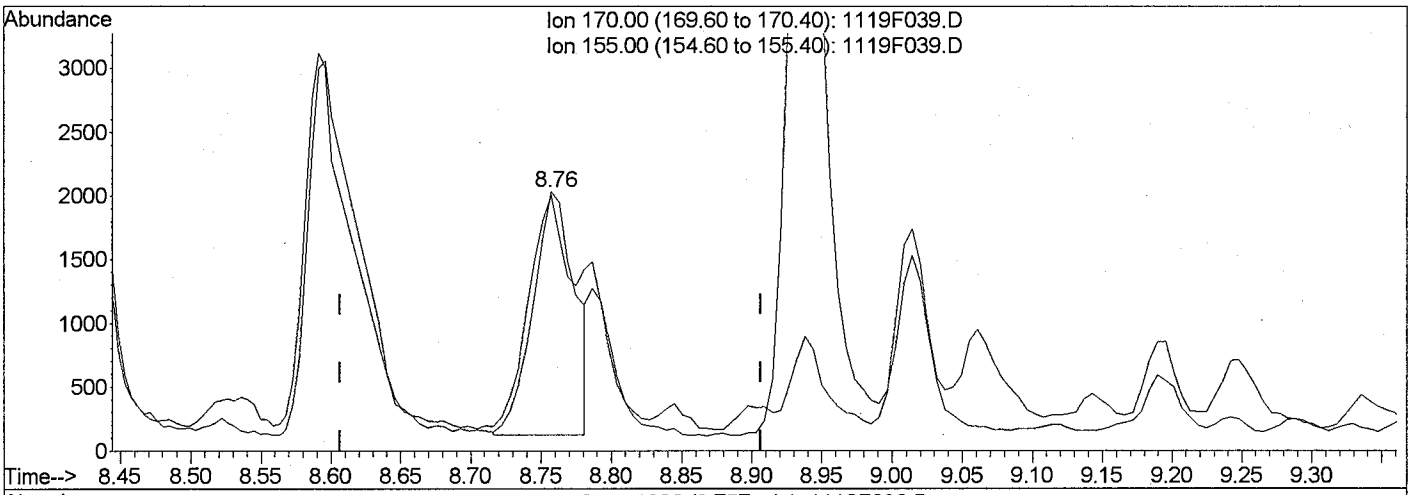
Ion	Exp%	Act%
170.00	100	100
155.00	91.50	94.73
0.00	0.00	0.00
0.00	0.00	0.00

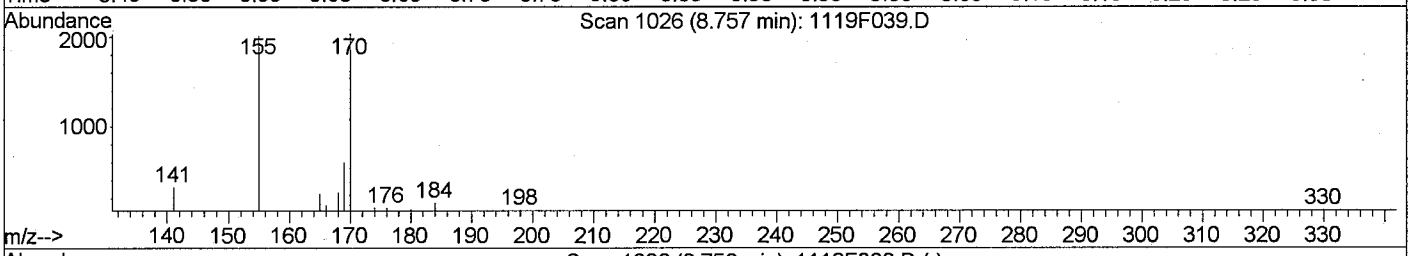
1119F039.D 1107ALK.M Thu Nov 20 14:18:31 2003

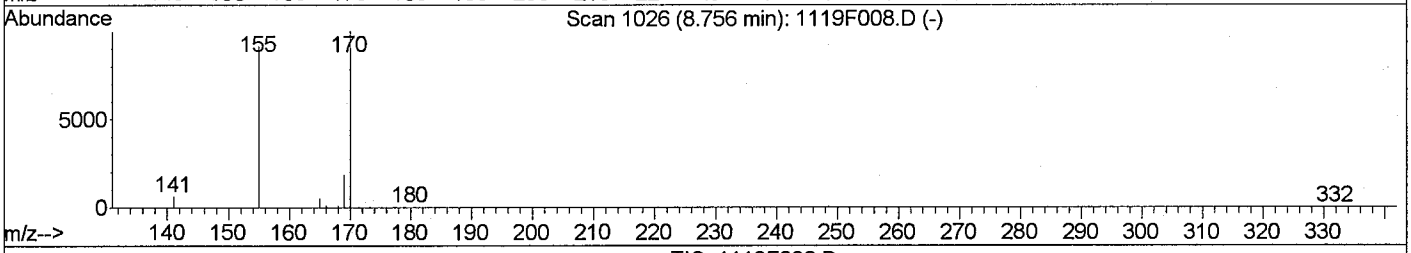
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 25.95ng/ml m

response 3932

Ion	Exp%	Act%
170.00	100	100
155.00	91.50	98.58
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

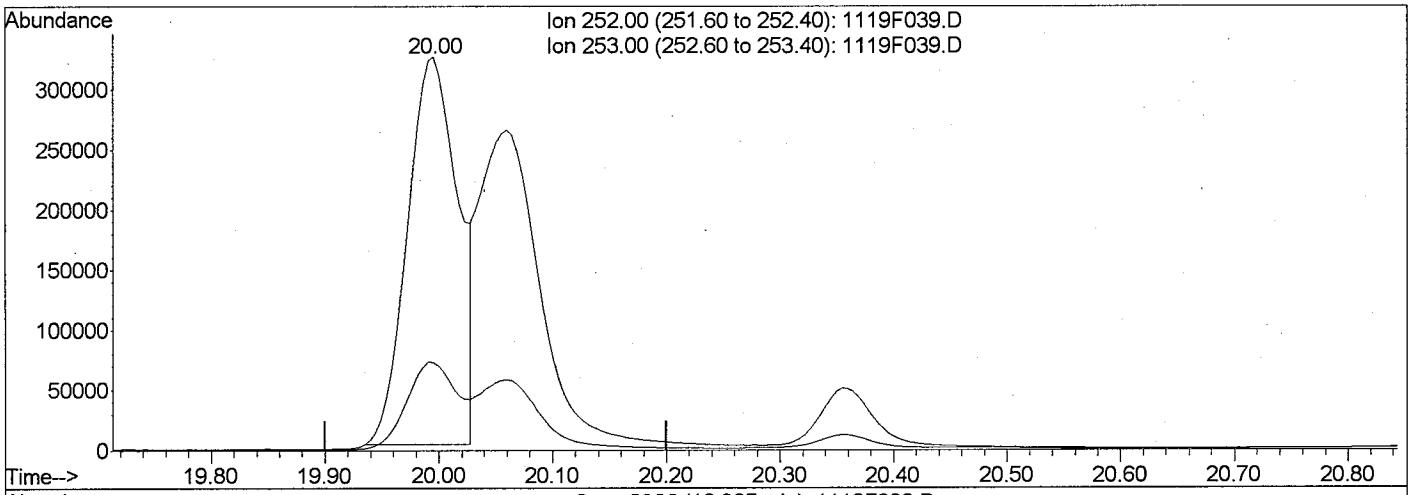
11/24/03
over integrated

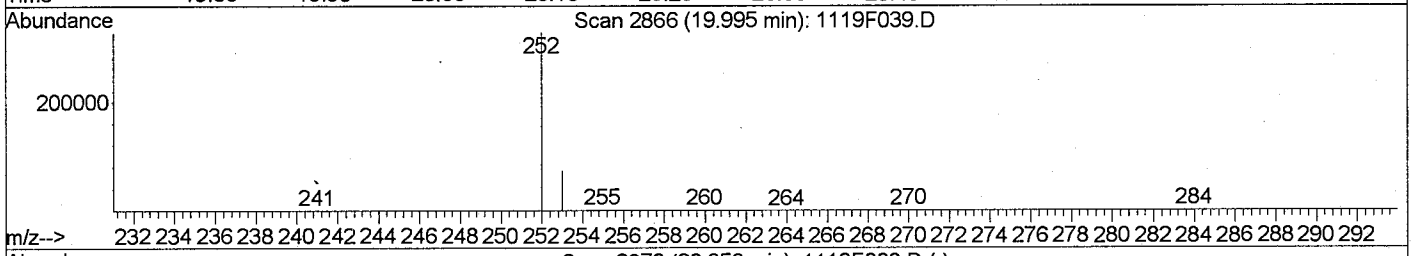
1119F039.D 1107ALK.M Thu Nov 20 14:18:36 2003

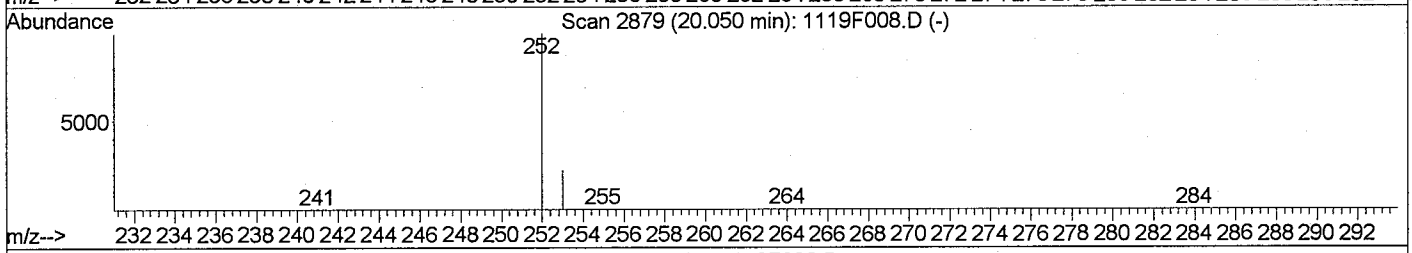
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(50) Benzo(k)fluoranthene (T)

20.00min 3960.60ng/ml

response 993060

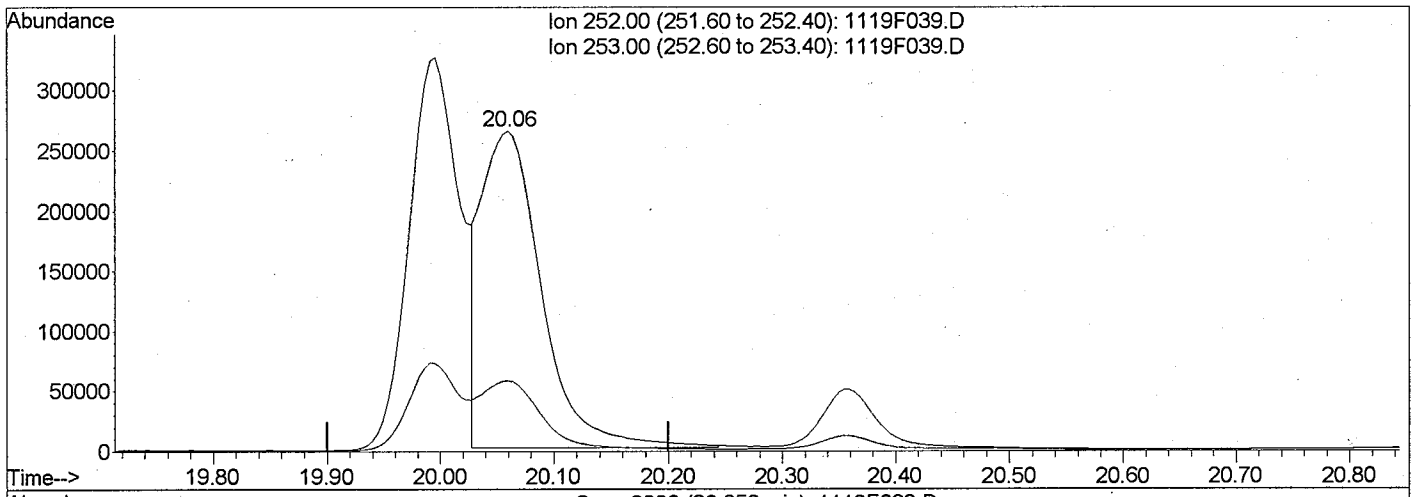
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.16
0.00	0.00	0.00
0.00	0.00	0.00

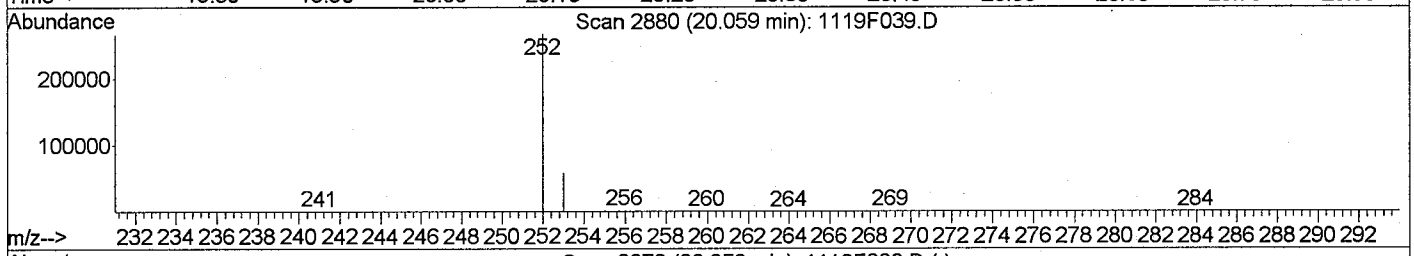
1119F039.D 1107ALK.M Thu Nov 20 14:18:52 2003

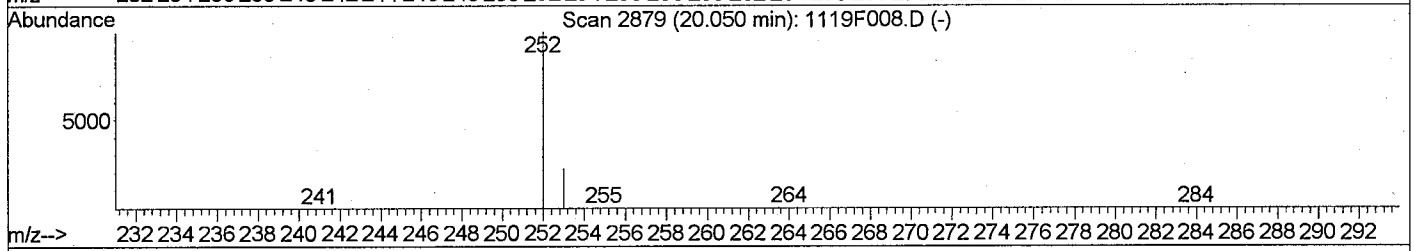
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(50) Benzo(k)fluoranthene (T)

20.06min 3912.01ng/ml m

response 980879

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.09
0.00	0.00	0.00
0.00	0.00	0.00

J 11/24/3

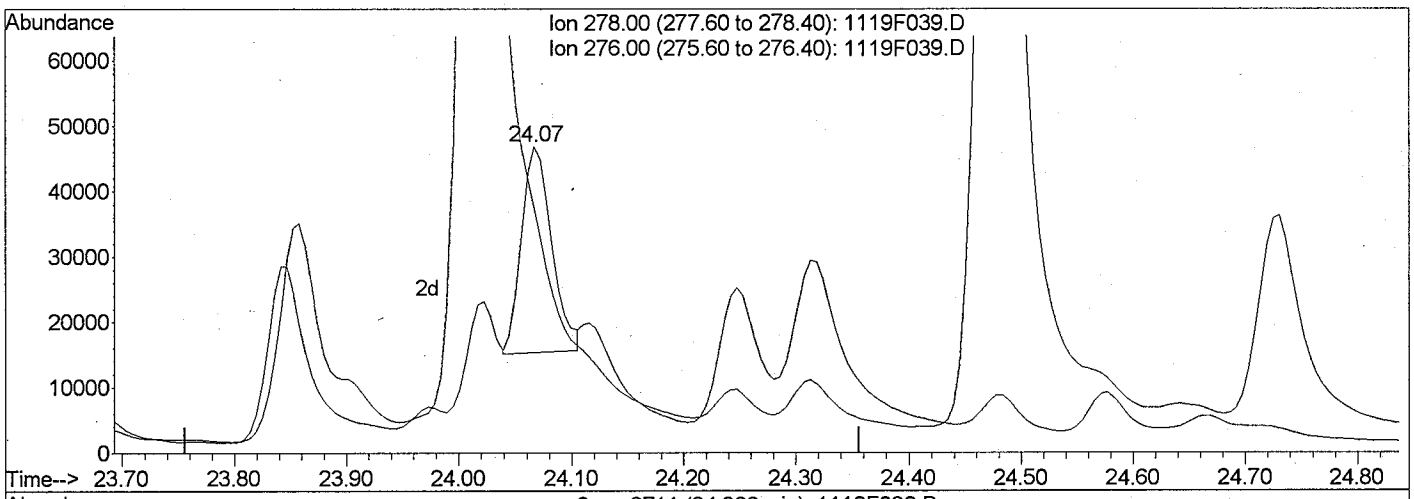
worst peak 11/24/3

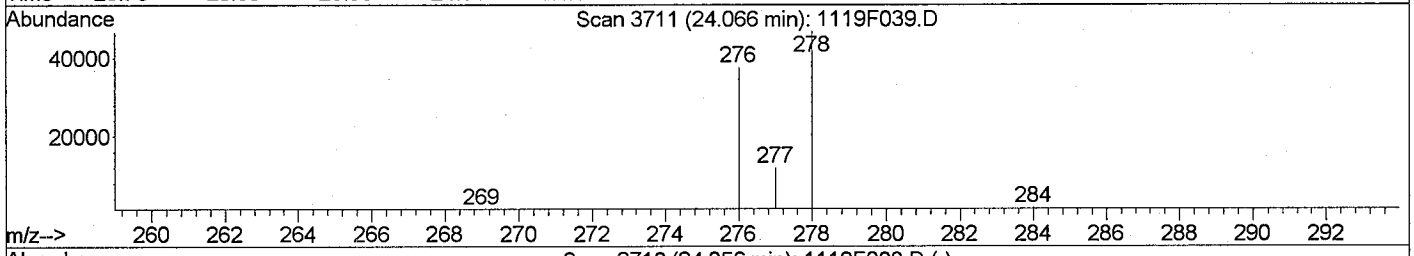
1119F039.D 1107ALK.M Thu Nov 20 14:18:57 2003

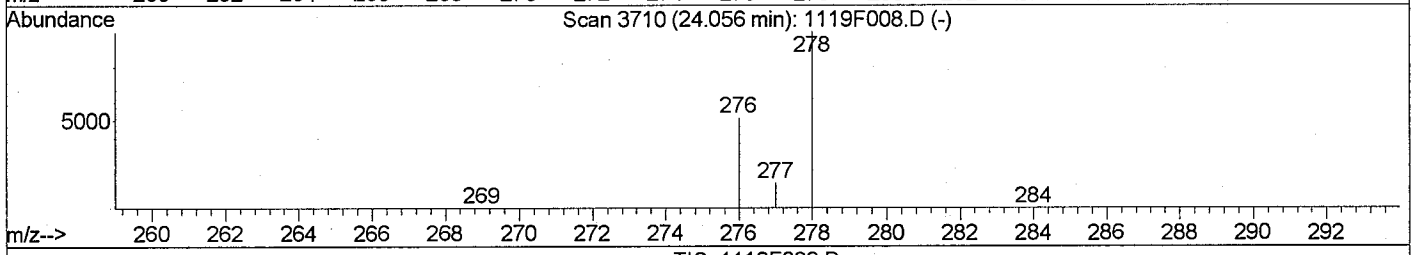
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(55) Dibenz(a,h)anthracene (T)

24.07min 401.97ng/ml

response 59027

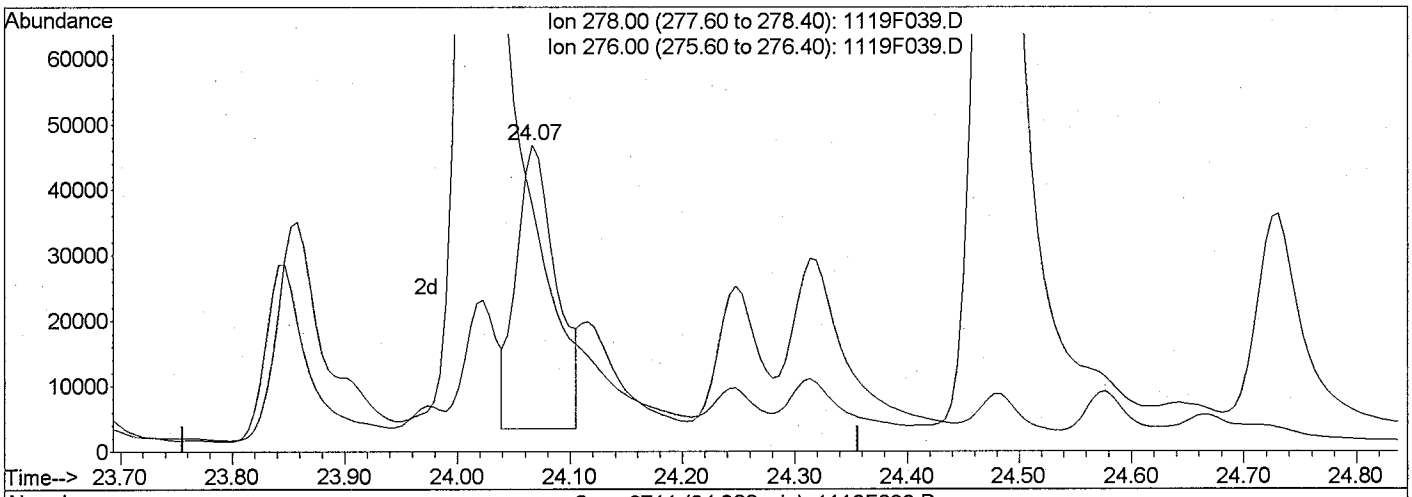
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	67.86
0.00	0.00	0.00
0.00	0.00	0.00

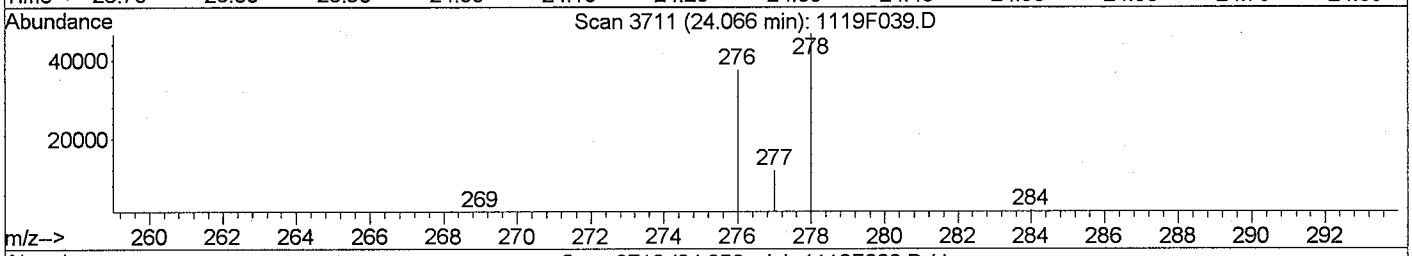
1119F039.D 1107ALK.M Thu Nov 20 14:19:02 2003

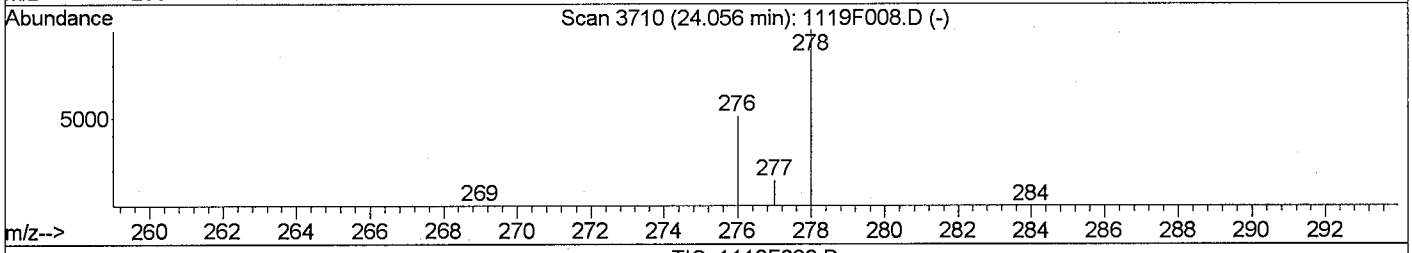
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(55) Dibenz(a,h)anthracene (T)

24.07min 721.12ng/ml m

response 105892

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	80.36
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

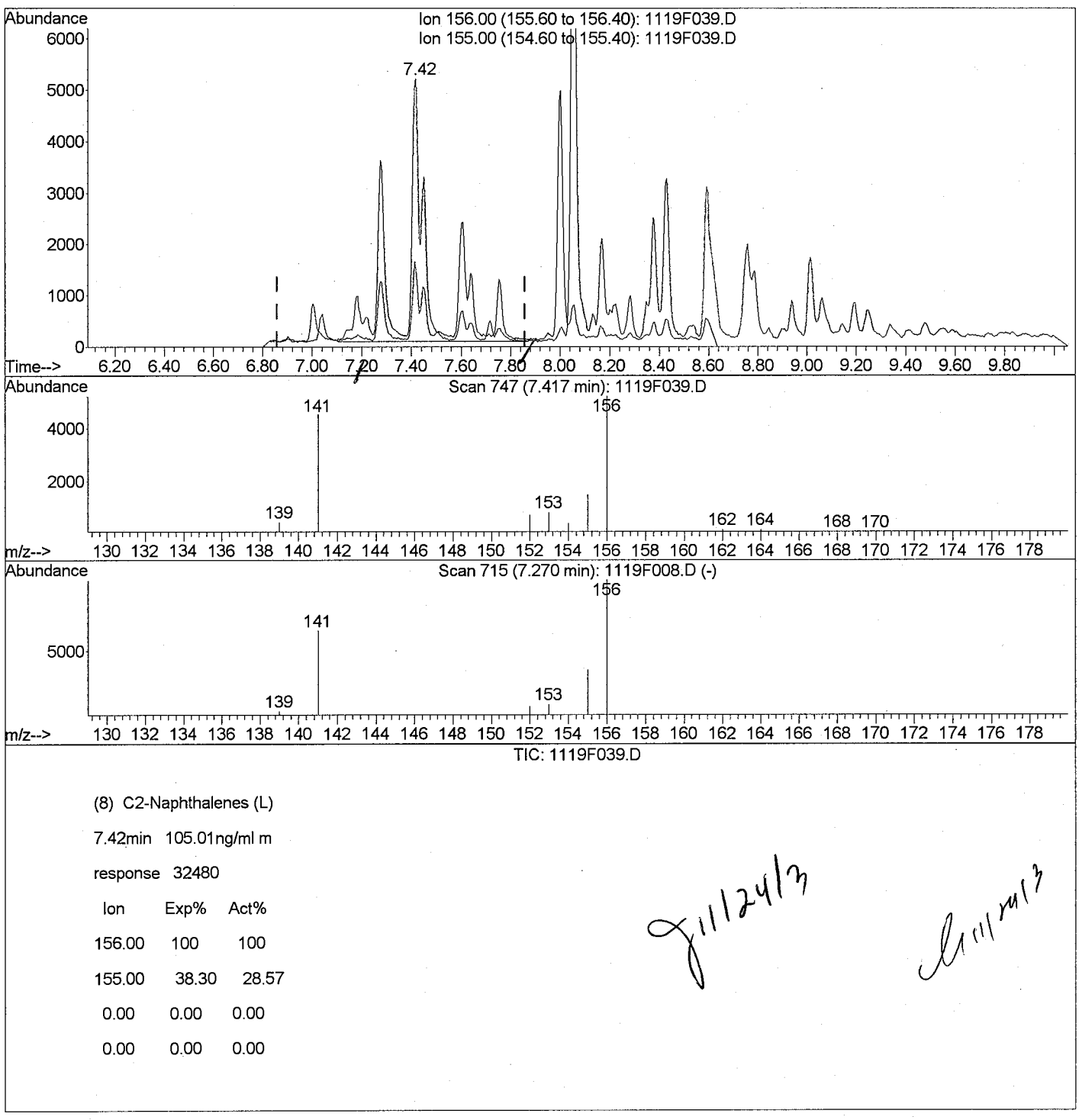
incomplete 11/24/13

1119F039.D 1107ALK.M Thu Nov 20 14:19:08 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(8) C2-Naphthalenes (L)

7.42min 105.01ng/ml m

response 32480

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	28.57
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

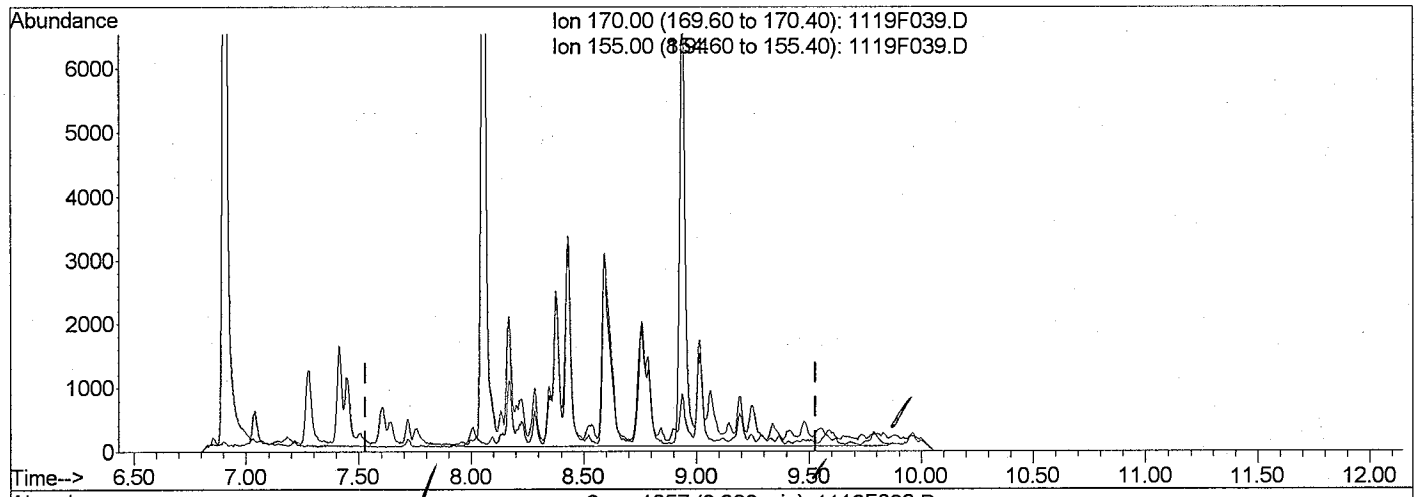
11/21/03

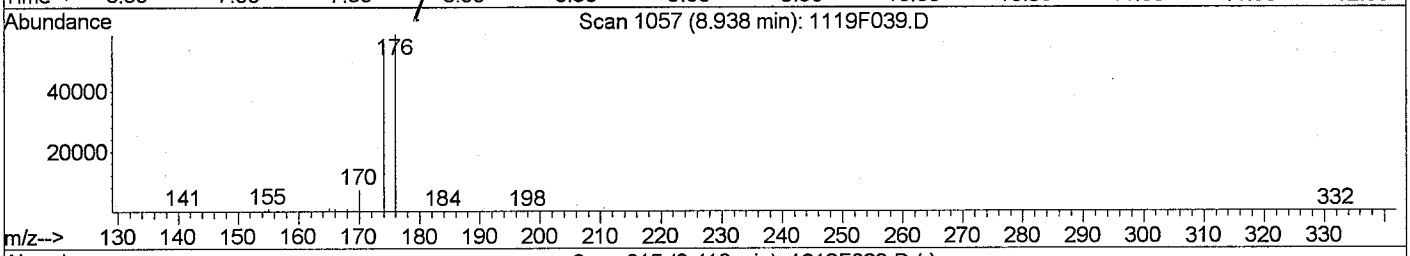
1119F039.D 1107ALK.M Fri Nov 21 12:00:48 2003

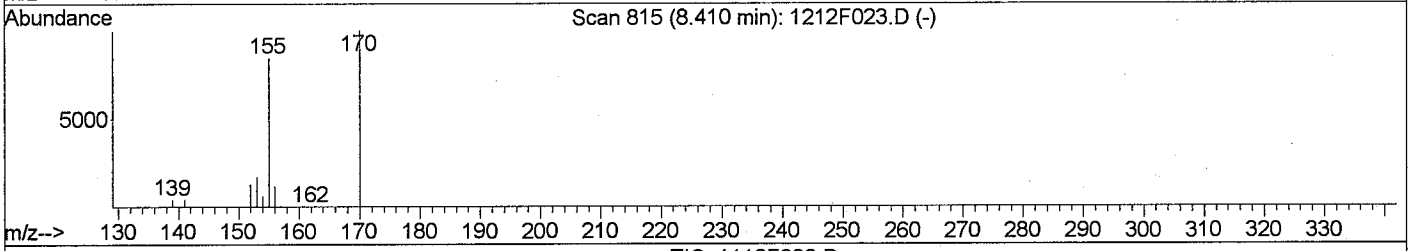
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:01 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(9) C3-Naphthalenes (L)

8.94min 150.39ng/ml m

response 46516

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	12.54#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

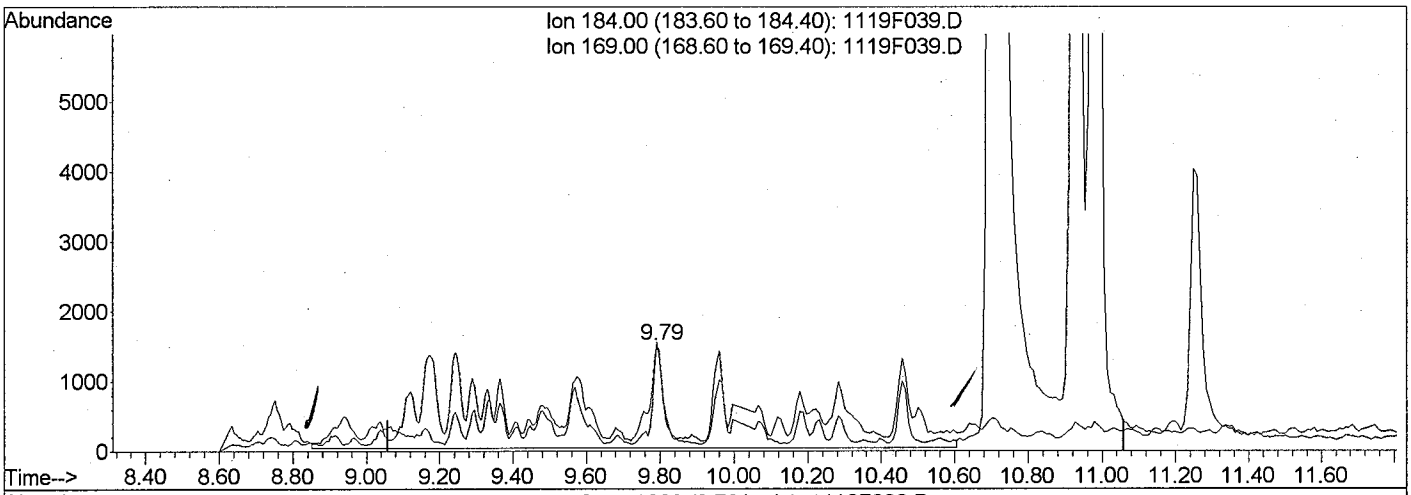
ng/ml

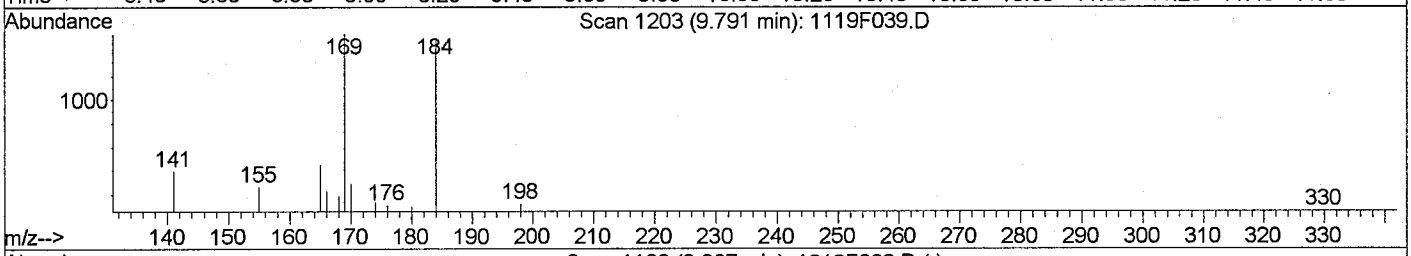
1119F039.D 1107ALK.M Fri Nov 21 12:01:10 2003

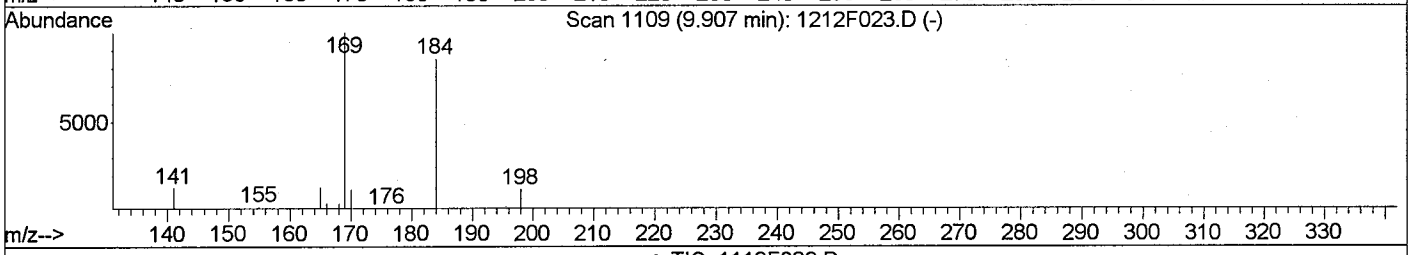
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:01 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(10) C4-Naphthalenes (L)

9.79min 85.40ng/ml m

response 26416

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	102.83
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/21/03

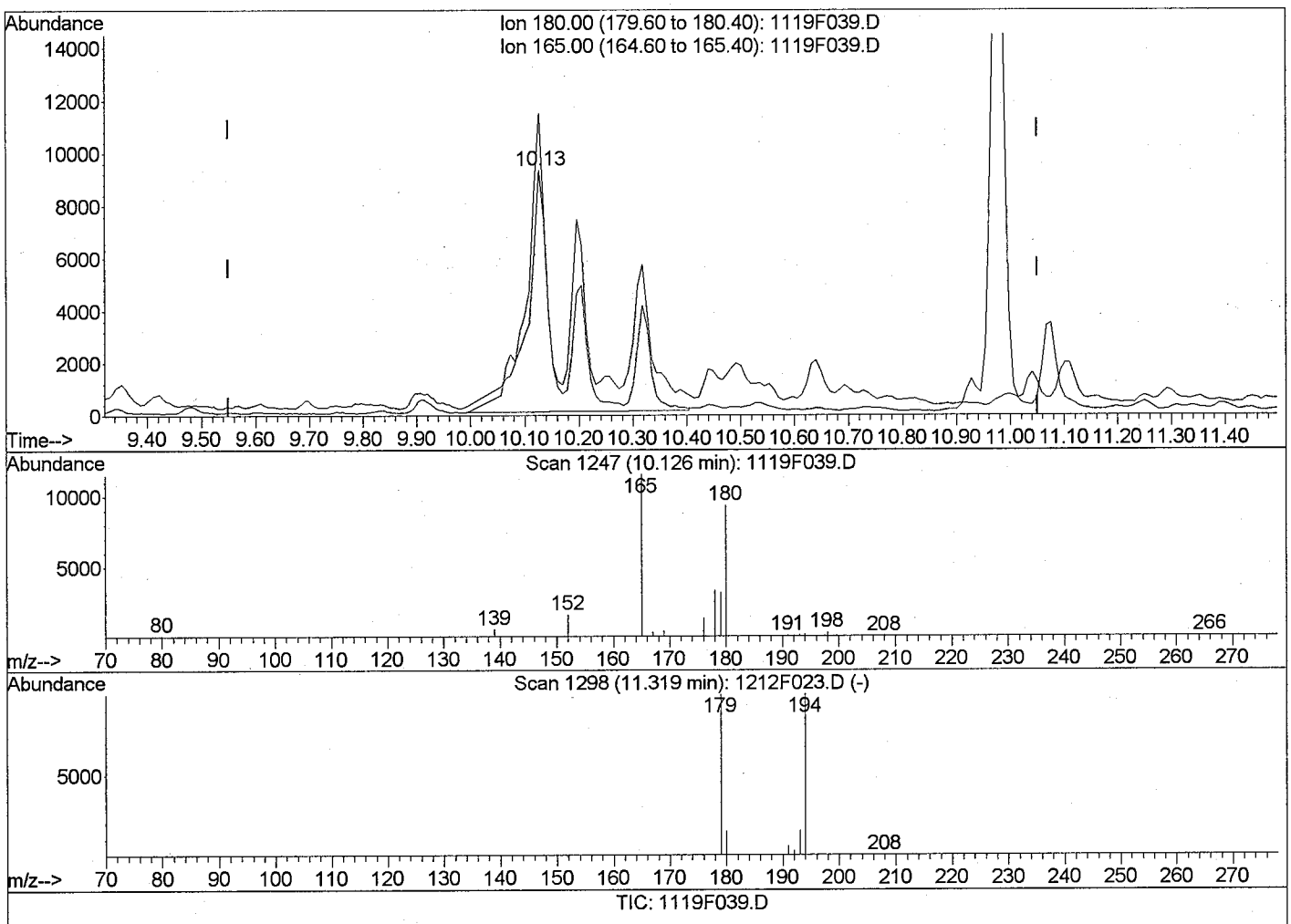
1119F039.D 1107ALK.M Fri Nov 21 12:01:26 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D
Acq On : 19 Nov 2003 5:38 pm
Sample : K2308433-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:01 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F039.D

(18) C1-Fluorenes (L)

10.13min 258.87ng/ml m

response 46902

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	123.33#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

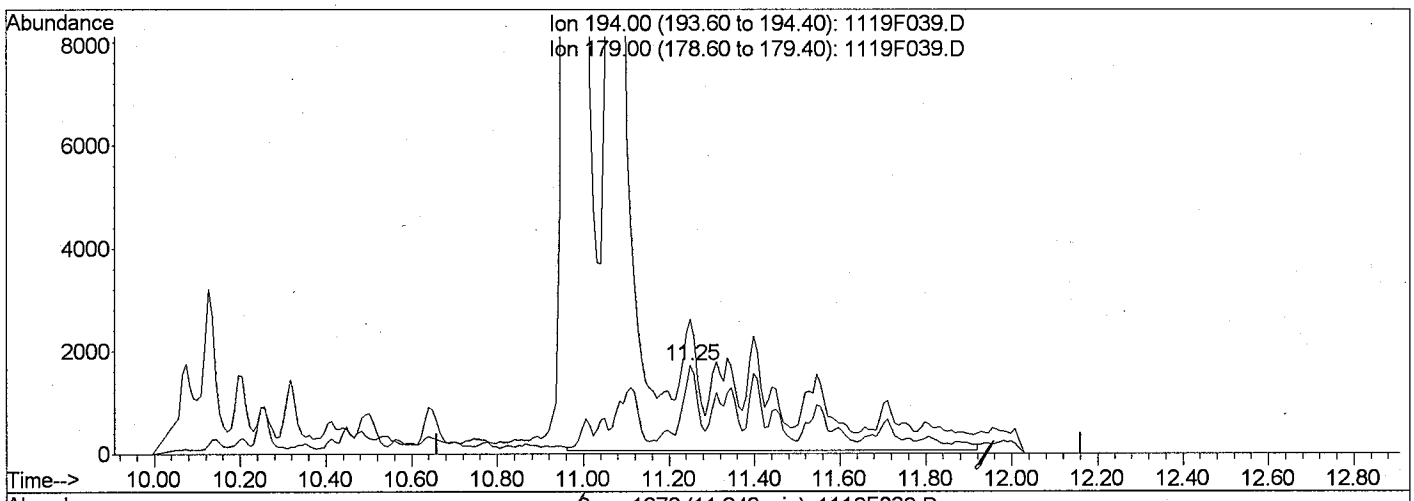
11/24/13

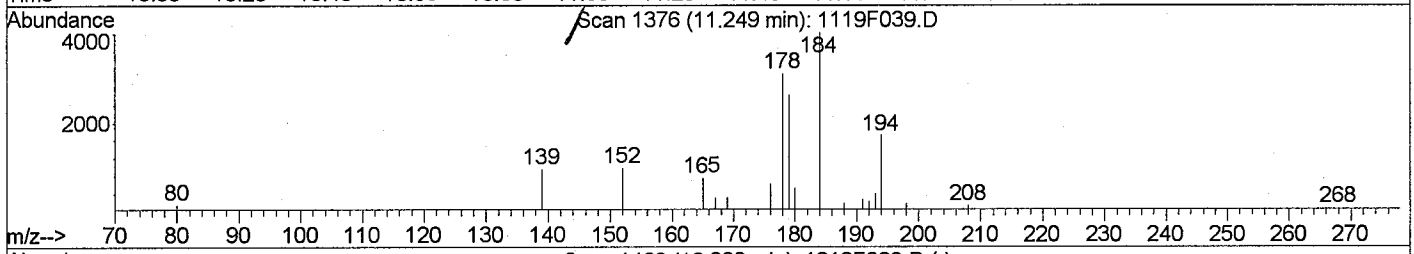
1119F039.D 1107ALK.M Fri Nov 21 12:01:34 2003

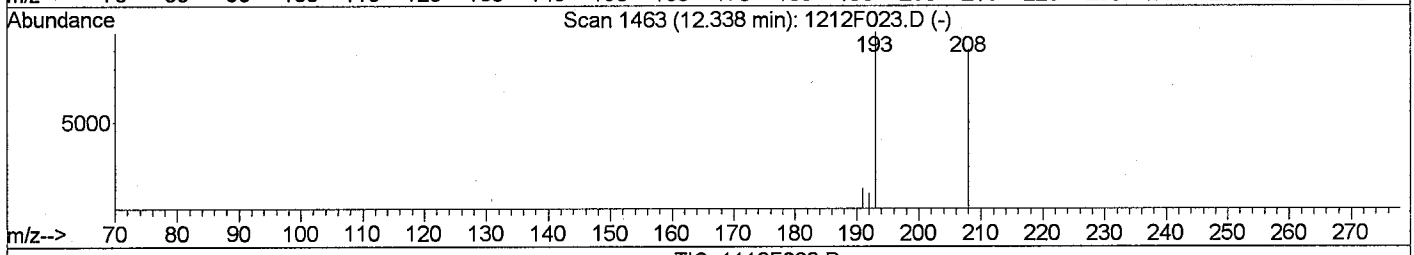
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:01 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(19) C2-Fluorenes (L)

11.25min 155.63ng/ml m

response 28197

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	152.79
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

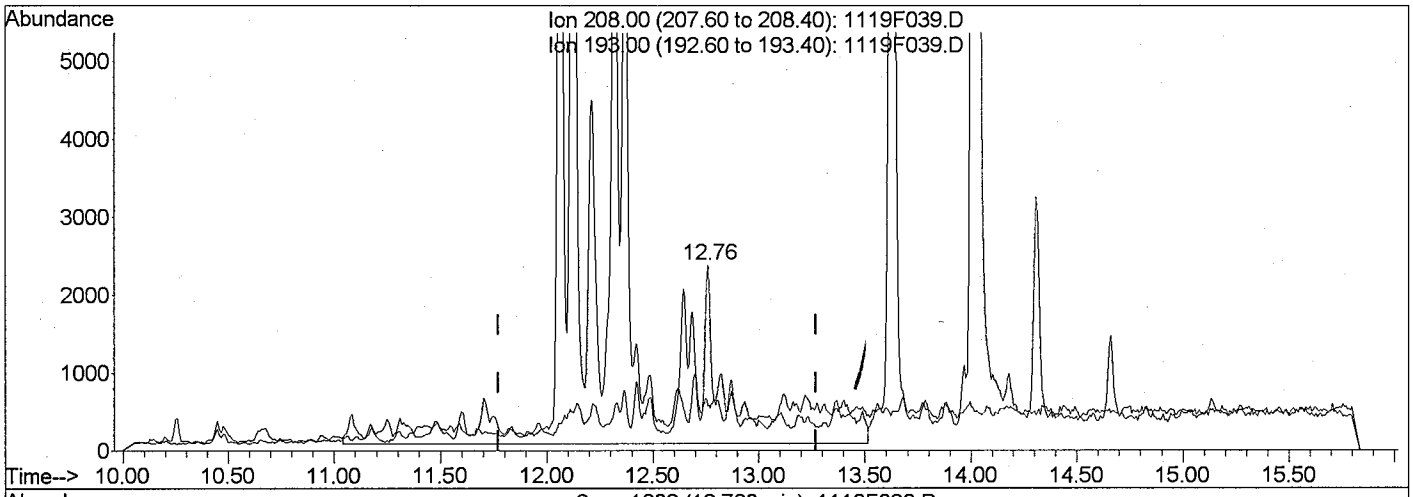
11/24/13

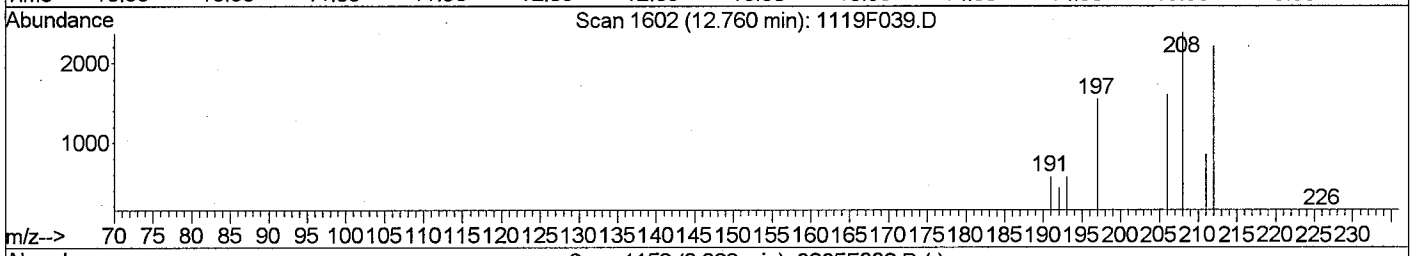
1119F039.D 1107ALK.M Fri Nov 21 12:01:47 2003

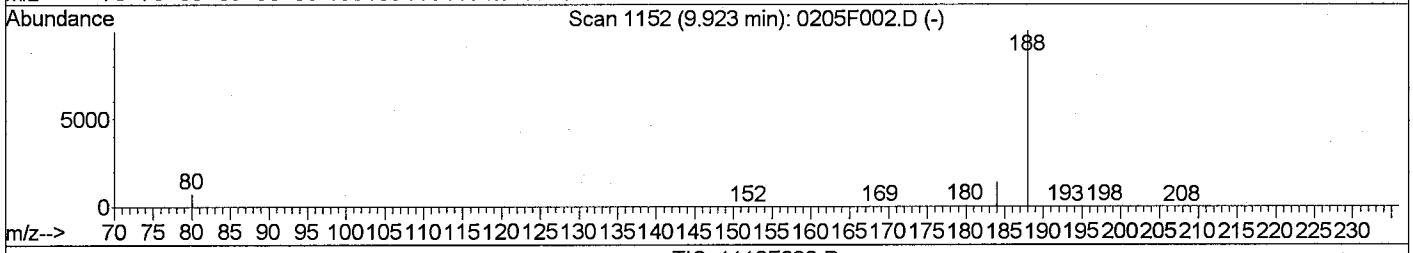
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:02 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(20) C3-Fluorenes (L)

12.76min 295.65ng/ml m

response 53565

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	23.99#
0.00	0.00	0.00
0.00	0.00	0.00

pm integ
see rpt format
J 11/24/03

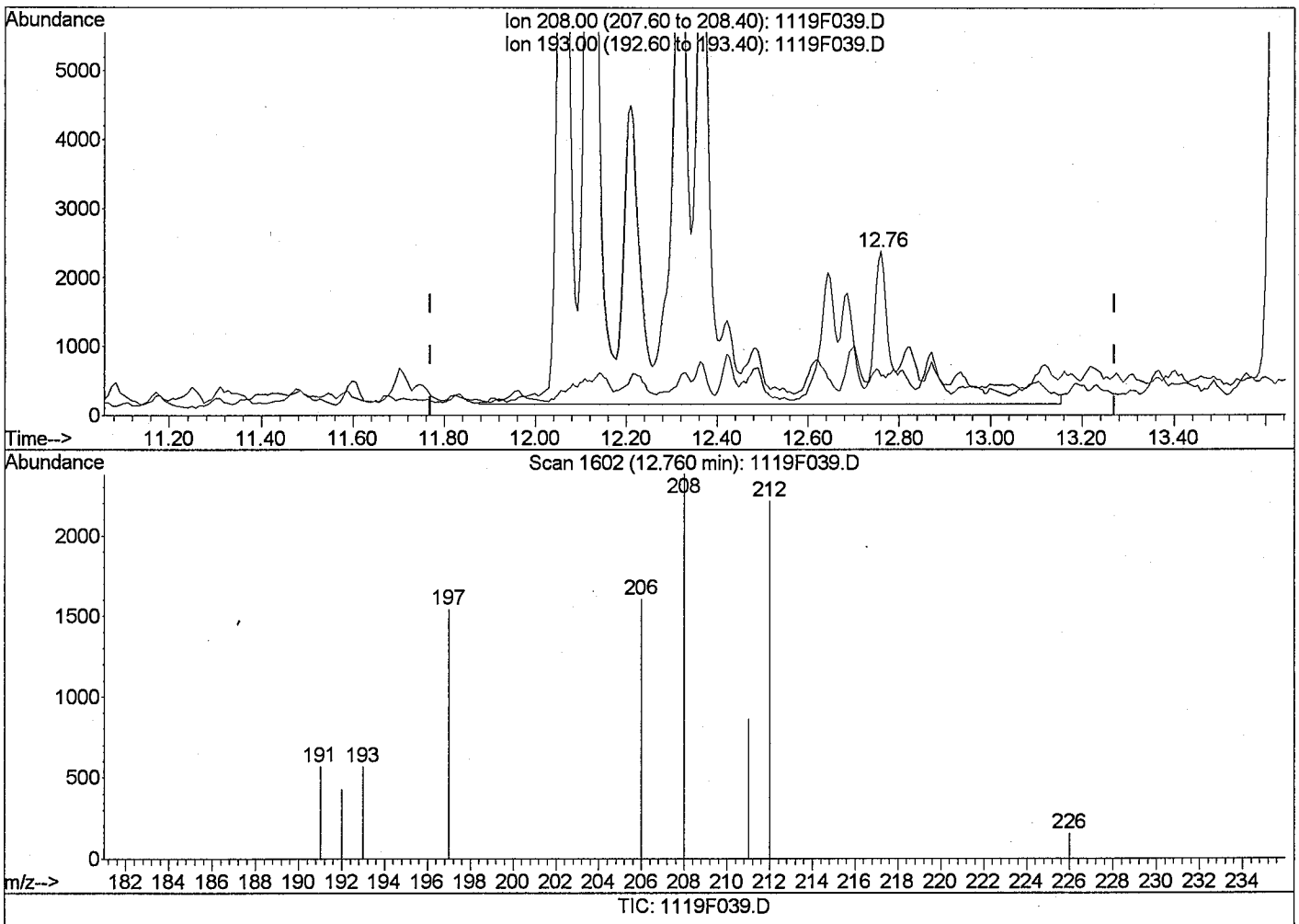
11/24/03

1119F039.D 1107ALK.M Fri Nov 21 12:02:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 17:38 Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 11:11 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1119F039.D

(20) C3-Fluorenes (L)

12.76min 168.87ng/ml m

response 30596

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	23.99#
0.00	0.00	0.00
0.00	0.00	0.00

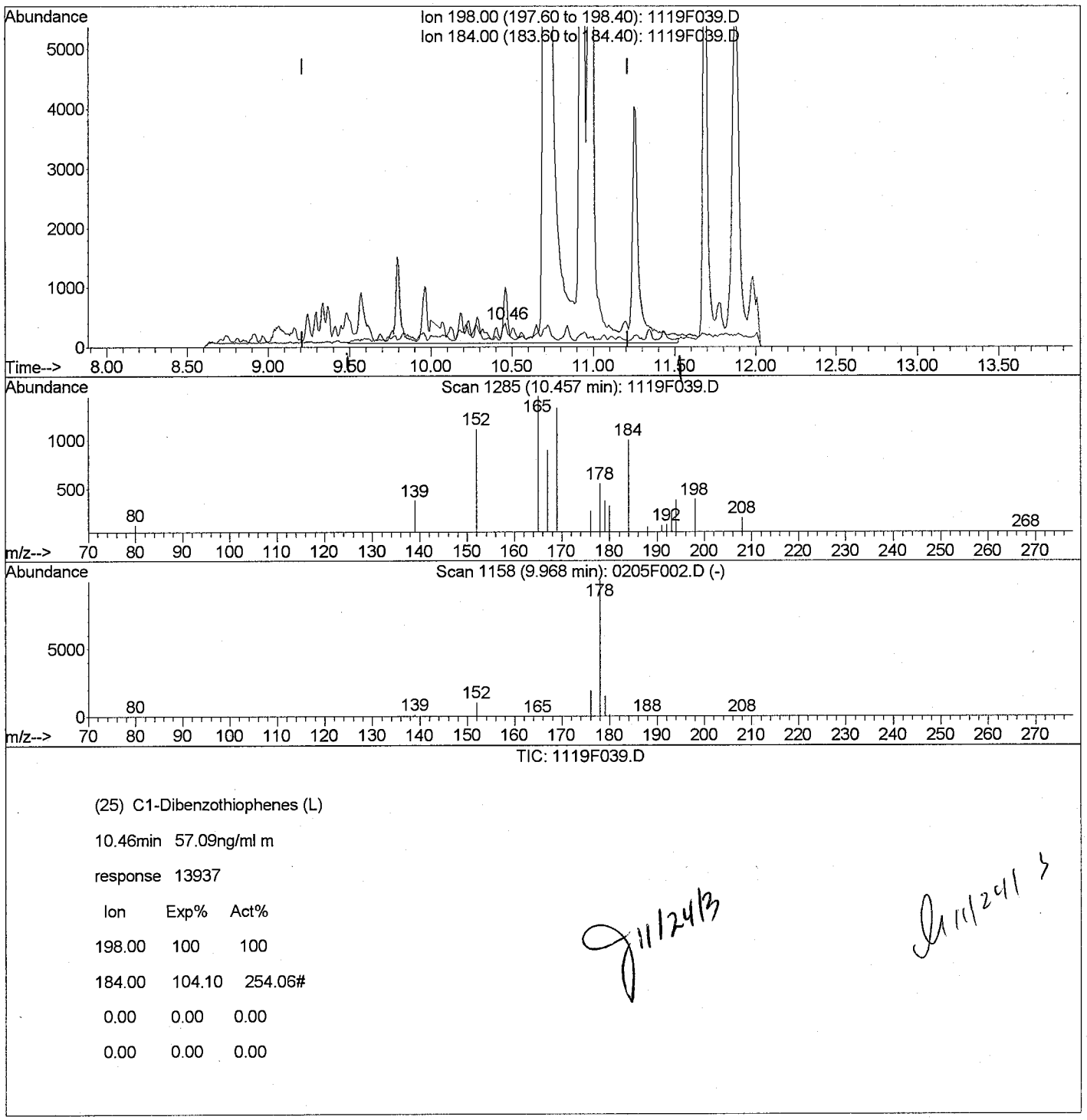
jl 11/24/03

1119F039.D 1107ALK.M Mon Nov 24 11:12:05 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:03 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F039.D

(25) C1-Dibenzothiophenes (L)

10.46min 57.09ng/ml m

response 13937

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	254.06#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

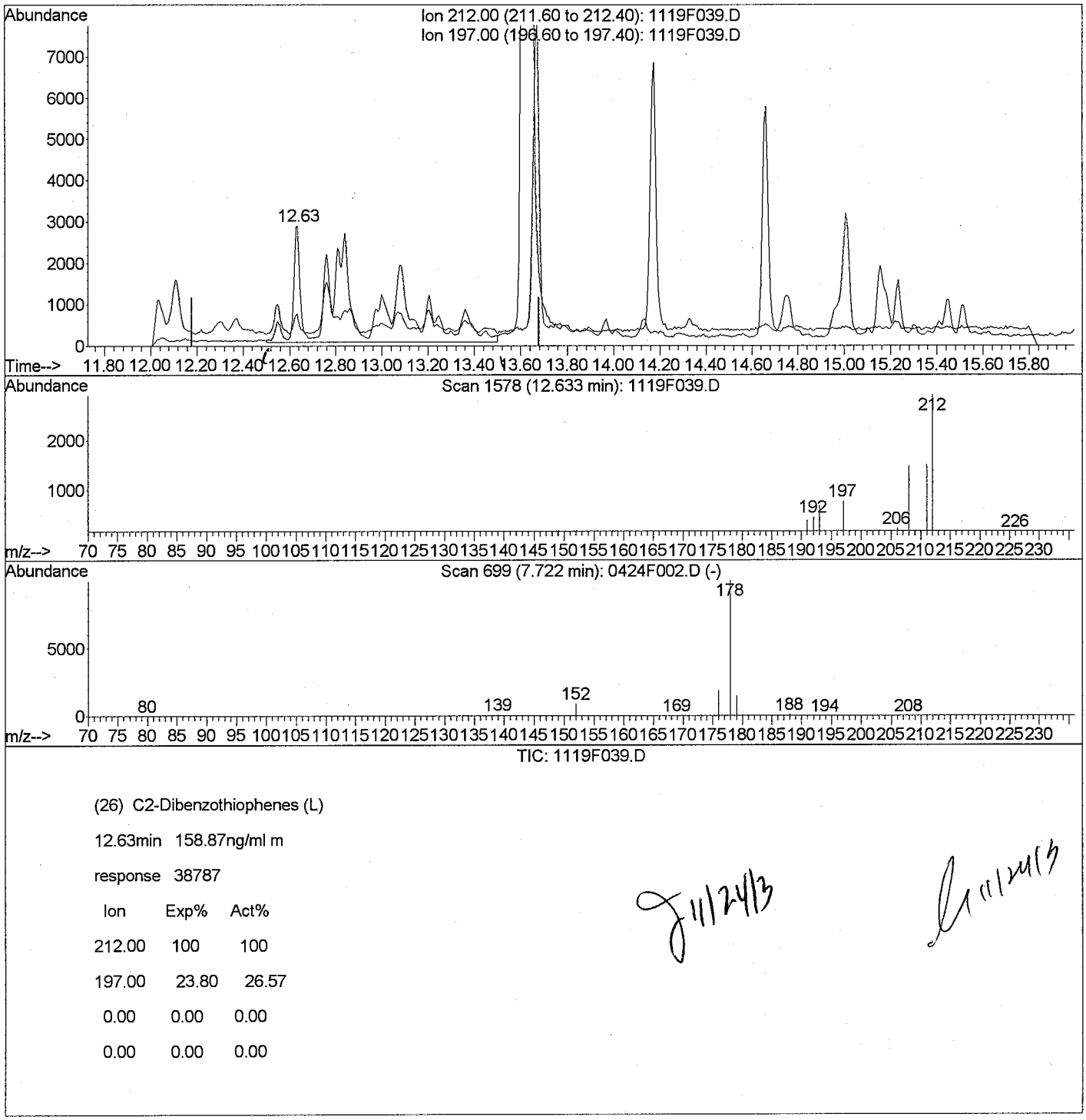
11/24/03

1119F039.D 1107ALK.M Fri Nov 21 12:03:21 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:03 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F039.D

(26) C2-Dibenzothiophenes (L)

12.63min 158.87ng/ml m

response 38787

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	26.57
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

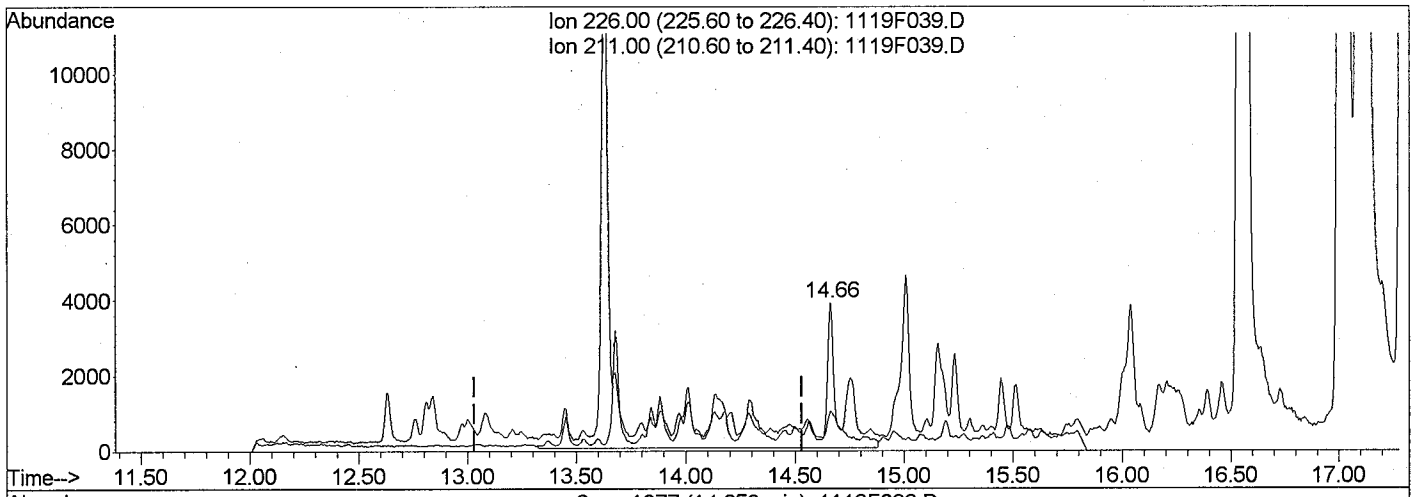
11/24/13

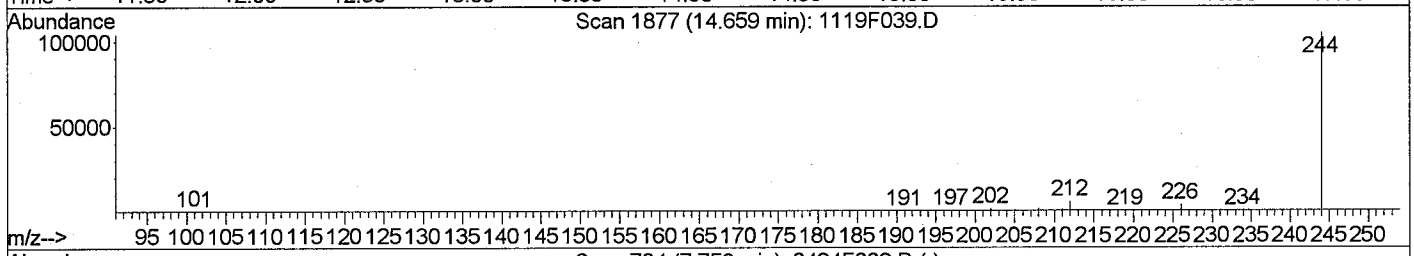
1119F039.D 1107ALK.M Fri Nov 21 12:03:36 2003

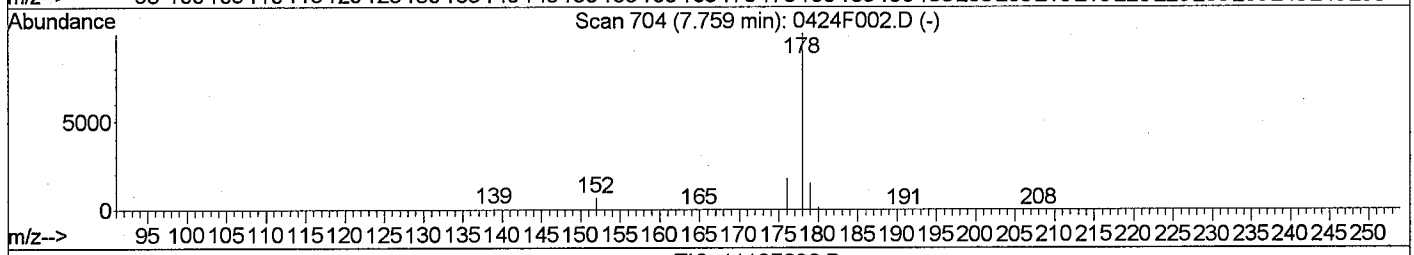
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:03 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(27) C3-Dibenzothiophenes (L)

14.66min 200.89ng/ml m

response 49045

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	26.49#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

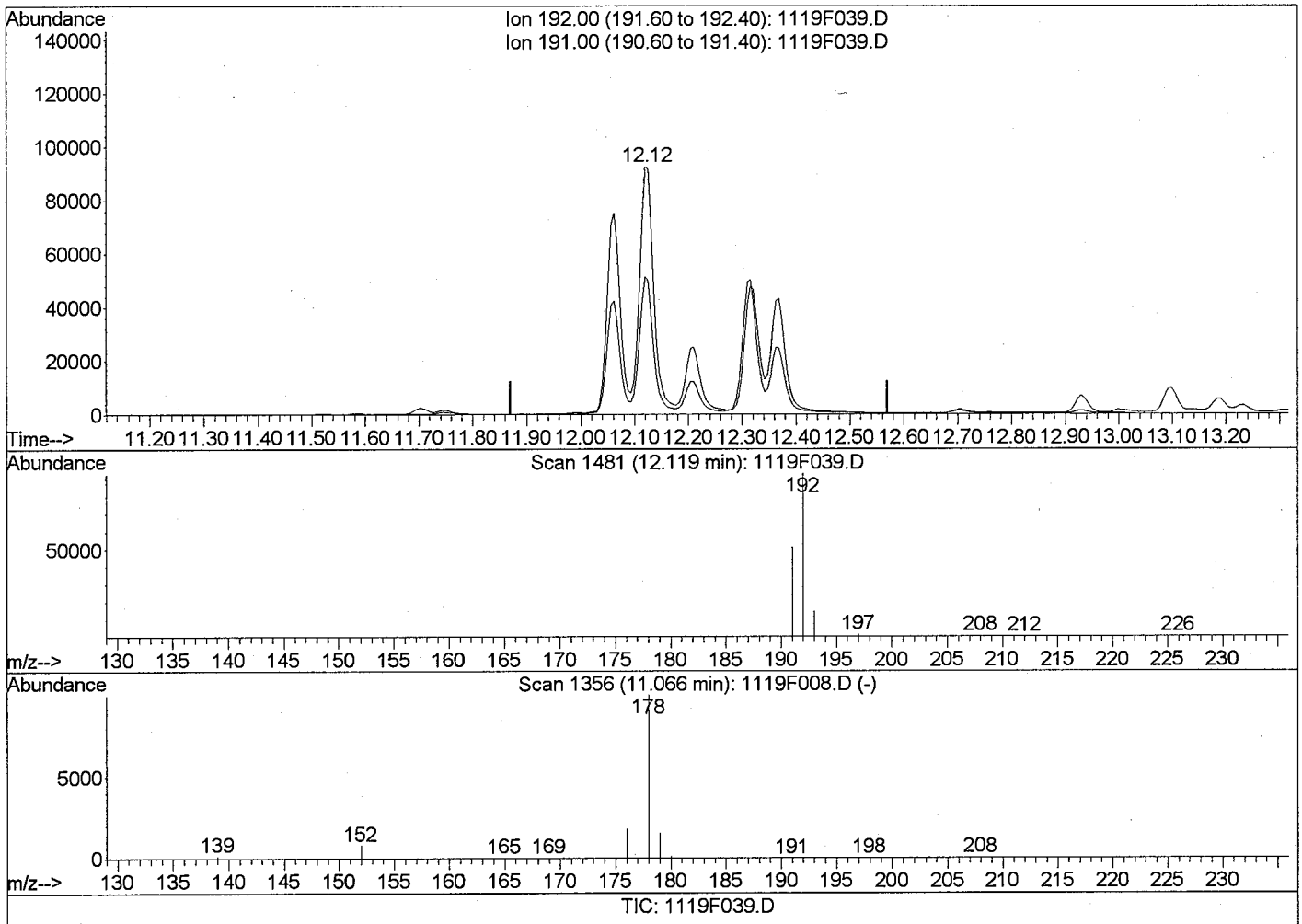
11/24/13

1119F039.D 1107ALK.M Fri Nov 21 12:04:02 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:04 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F039.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 2162.50ng/ml m

response 554593

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	55.35
0.00	0.00	0.00
0.00	0.00	0.00

JC 11/24/13

JC 11/24/13

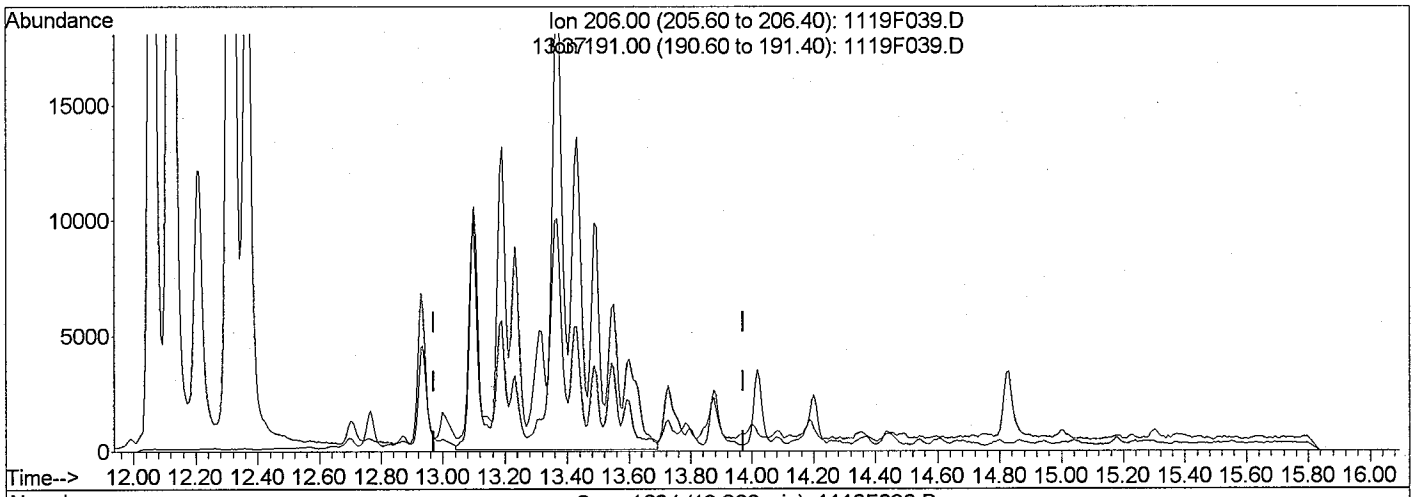
1119F039.D 1107ALK.M Fri Nov 21 12:04:07 2003

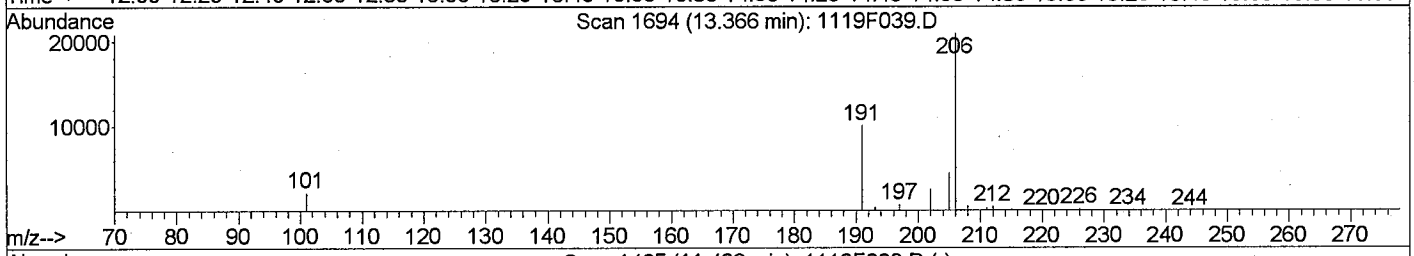
Quantitation Report (Qedit)

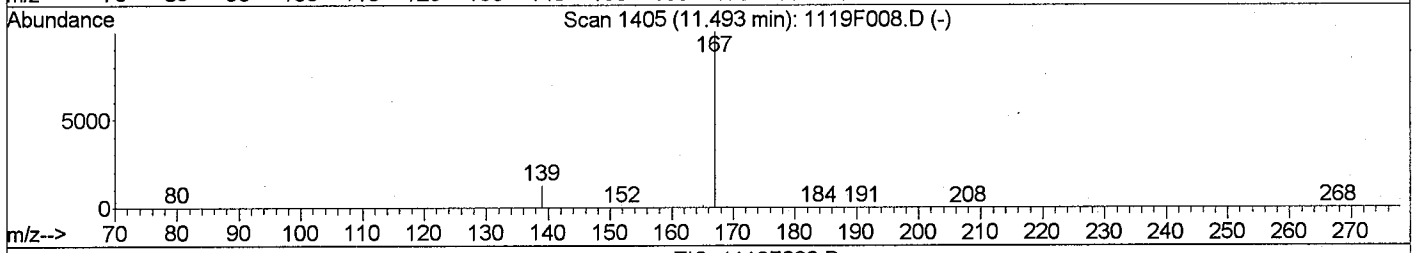
Data File : J:\MS11\DATA\111903\1119F039.D
Acq On : 19 Nov 2003 5:38 pm
Sample : K2308433-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:04 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 752.42ng/ml m

response 192966

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	48.25
0.00	0.00	0.00
0.00	0.00	0.00

J 11/24/03

J 11/24/03

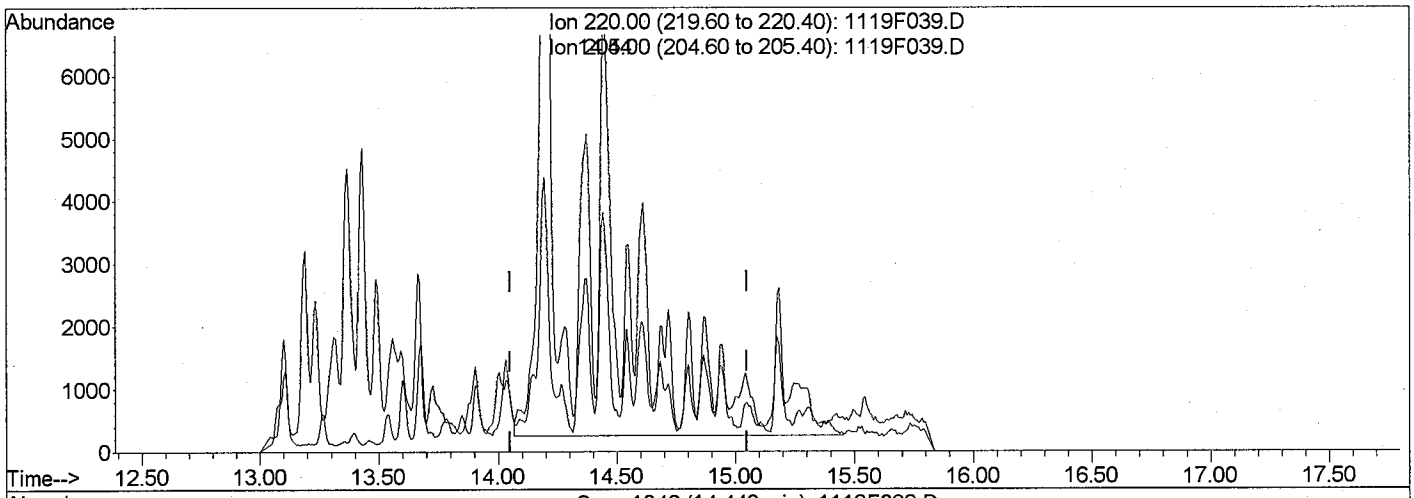
1119F039.D 1107ALK.M Fri Nov 21 12:04:23 2003

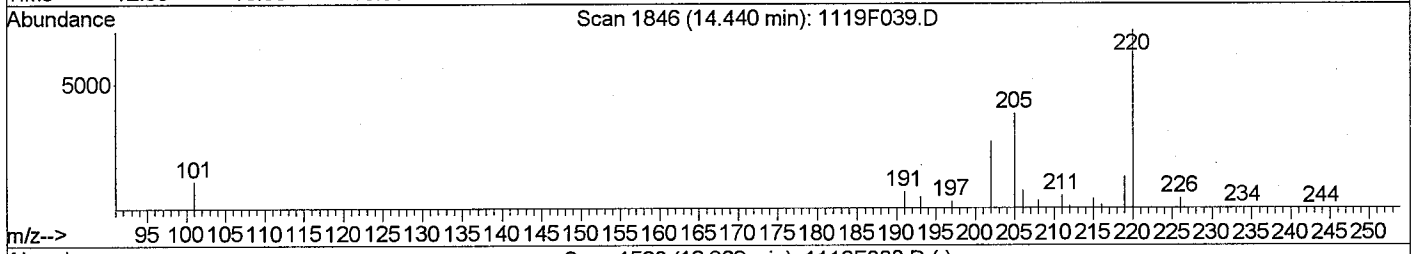
Quantitation Report (Qedit)

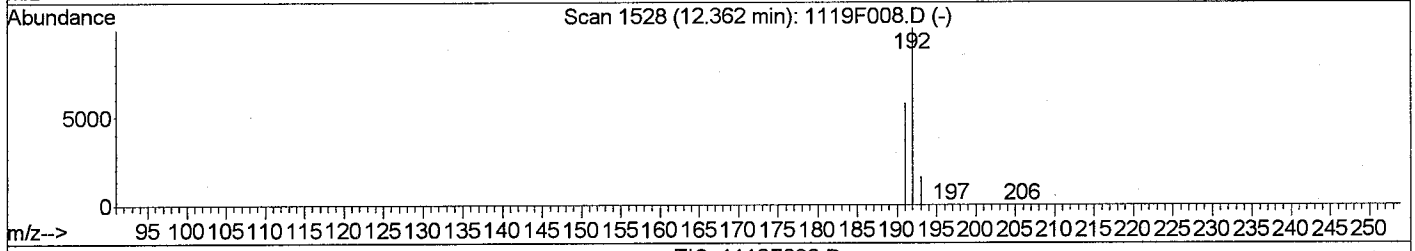
Data File : J:\MS11\DATA\111903\1119F039.D
Acq On : 19 Nov 2003 5:38 pm
Sample : K2308433-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:04 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.44min 372.62ng/ml m

response 95563

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	54.12
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

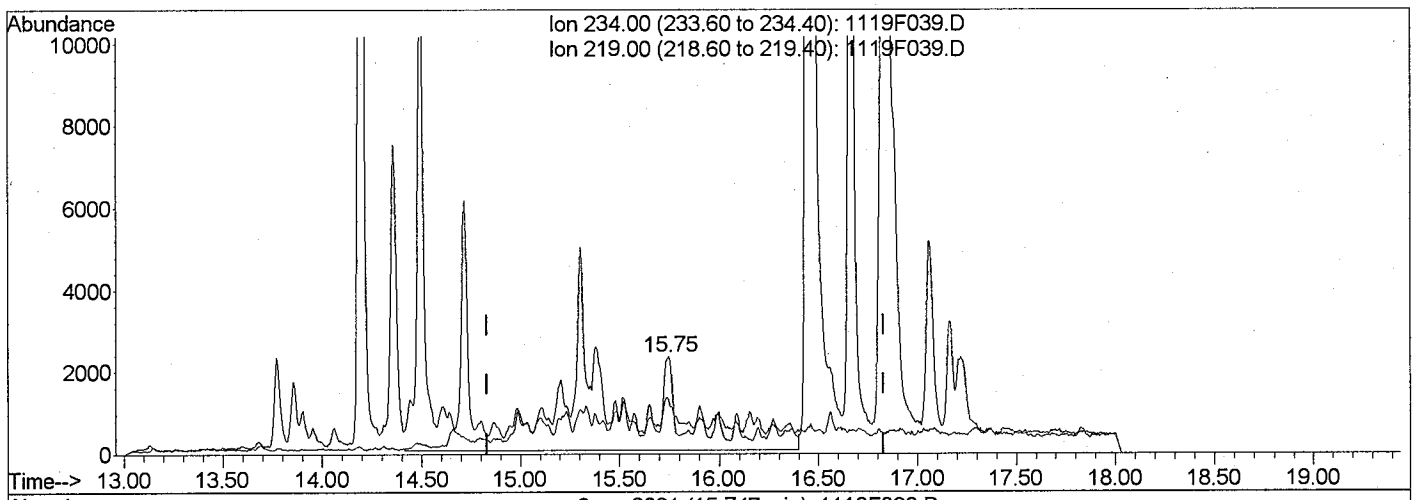
1119F039.D 1107ALK.M Fri Nov 21 12:04:37 2003

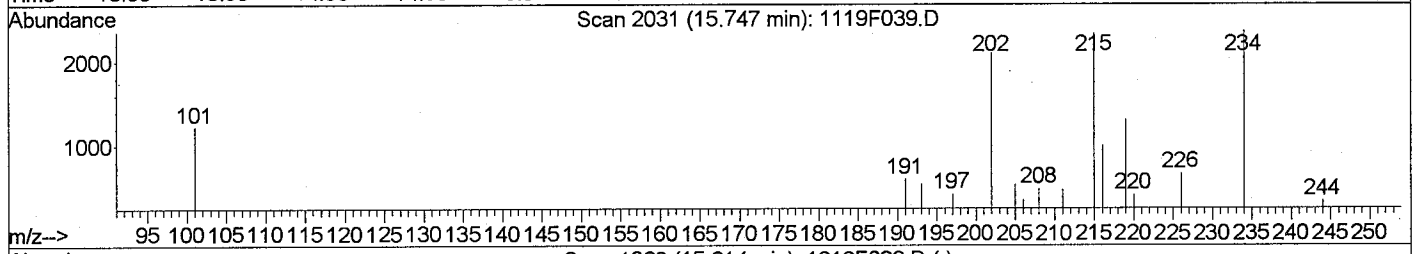
Quantitation Report (Qedit)

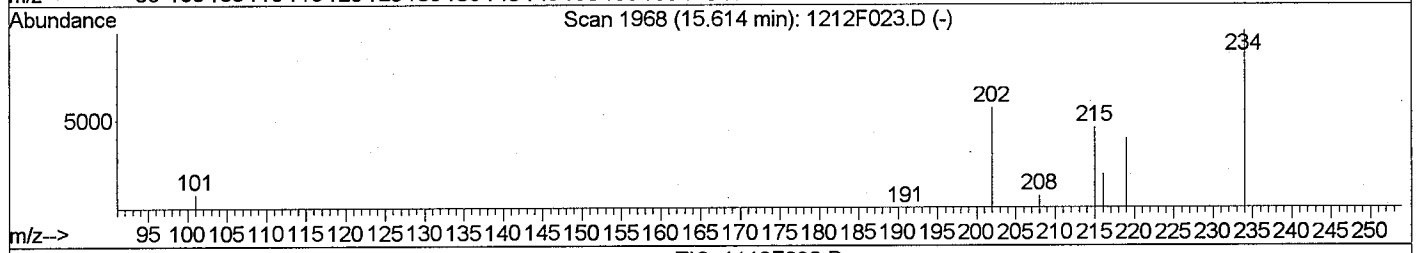
Data File : J:\MS11\DATA\111903\1119F039.D
Acq On : 19 Nov 2003 5:38 pm
Sample : K2308433-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:04 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 245.80ng/ml m

response 63039

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	55.31
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

11/24/3

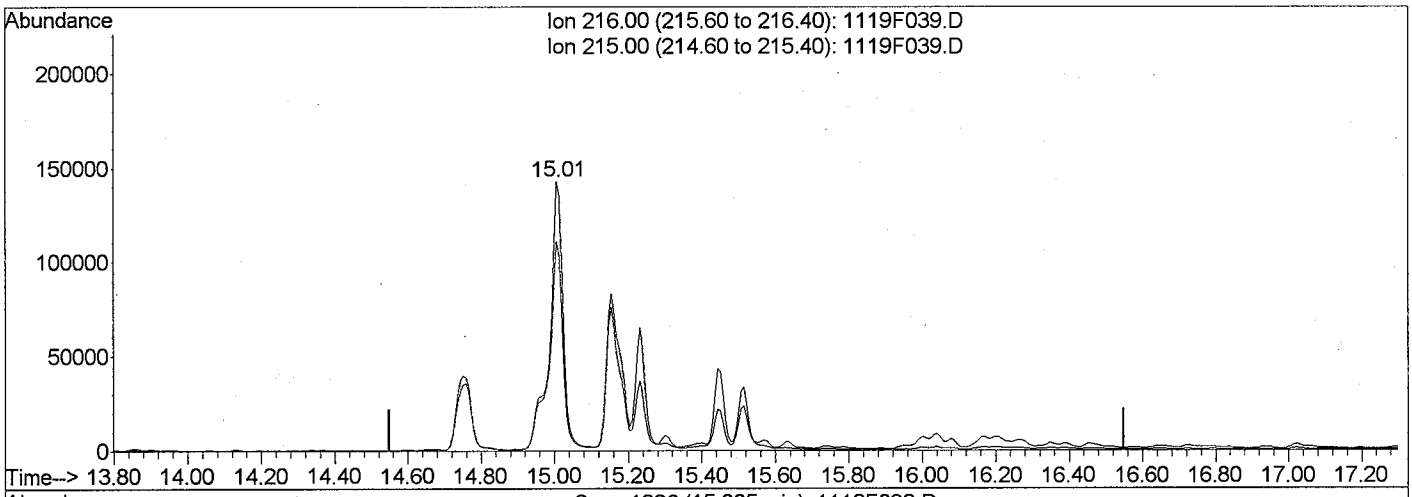
1119F039.D 1107ALK.M Fri Nov 21 12:04:48 2003

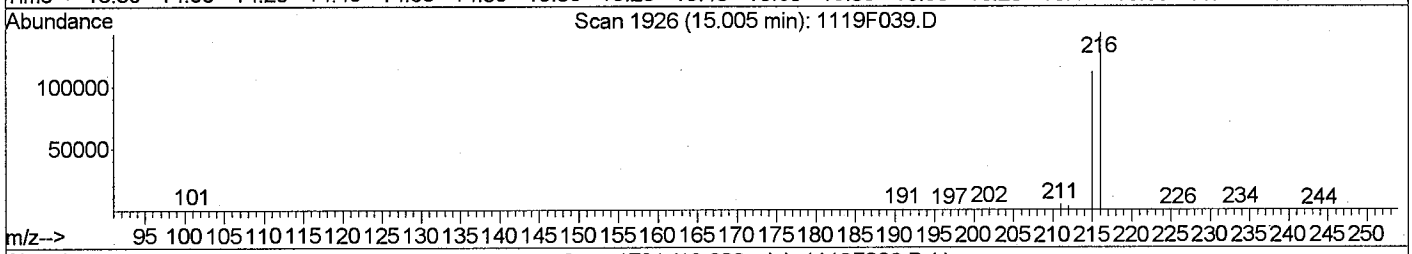
Quantitation Report (Qedit)

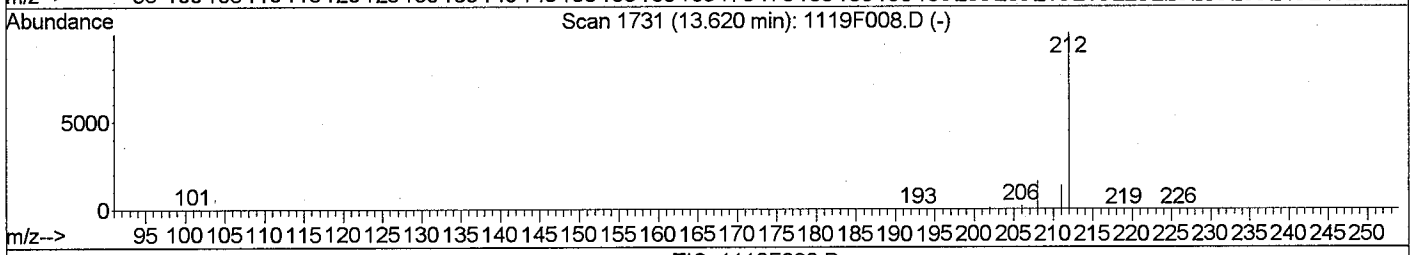
Data File : J:\MS11\DATA\111903\1119F039.D
Acq On : 19 Nov 2003 5:38 pm
Sample : K2308433-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:04 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 3511.13ng/ml m

response 1006160

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	77.84
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

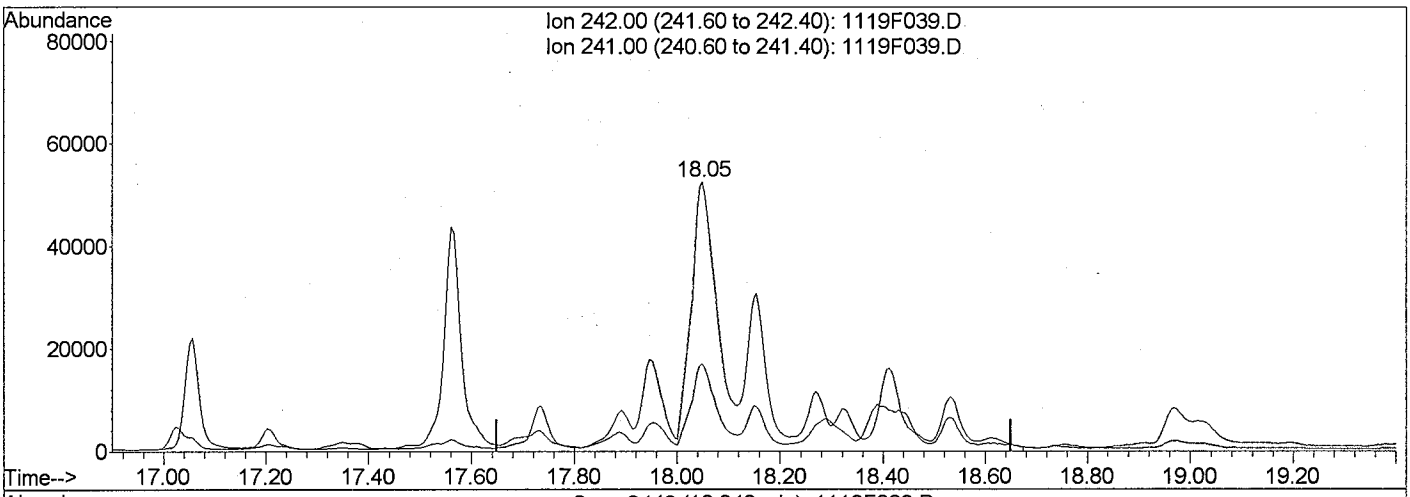
11/24/13

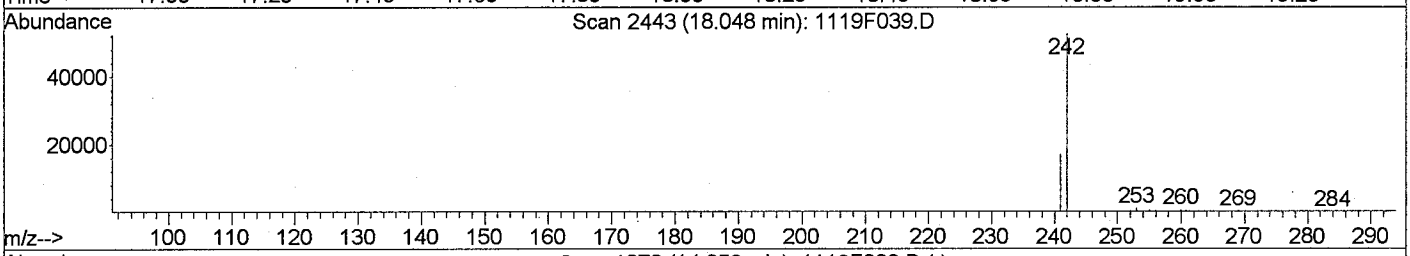
1119F039.D 1107ALK.M Fri Nov 21 12:04:57 2003

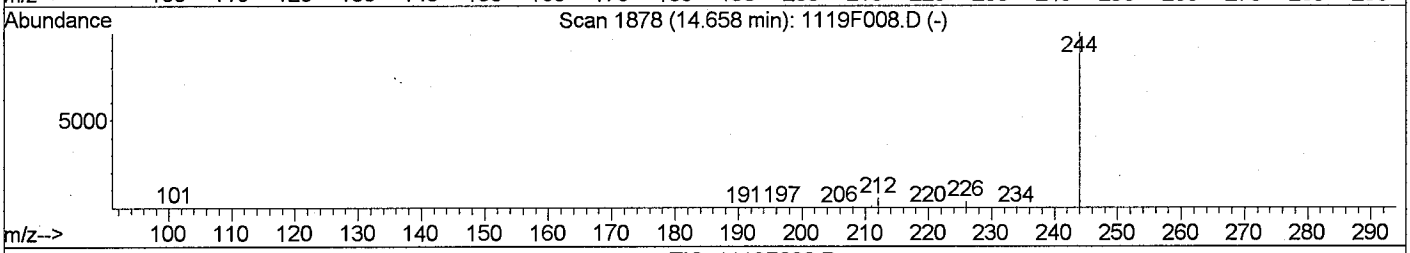
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:05 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(44) C1-Chrysenes (L)

18.05min 2088.82ng/ml m

response 487326

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	32.62
0.00	0.00	0.00
0.00	0.00	0.00

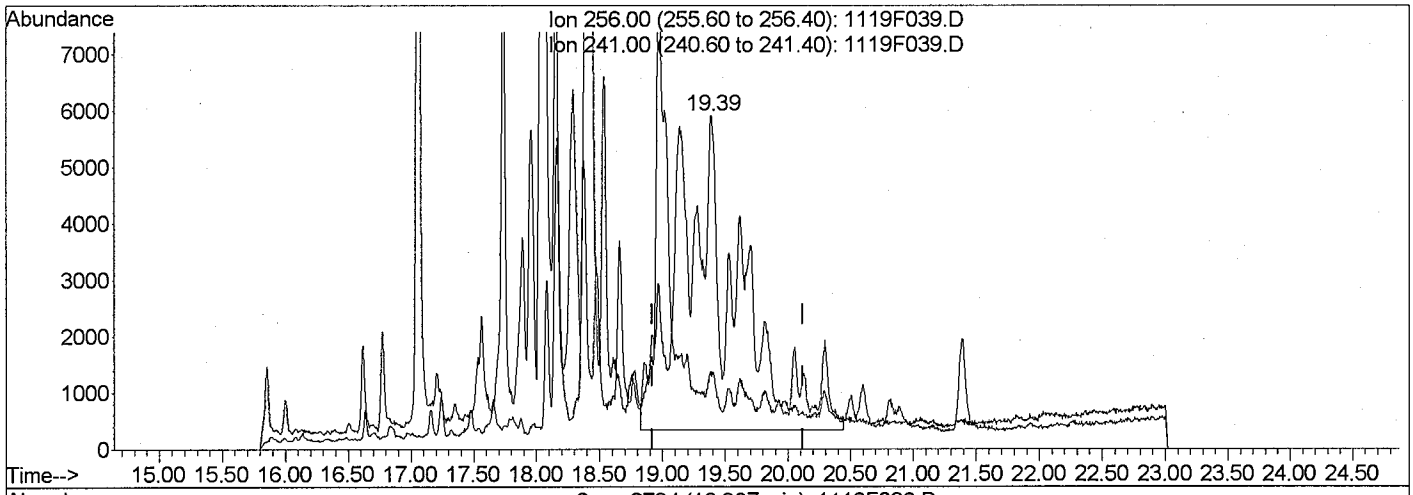
See next integration reintegrated ok J 11/24/13 J 11/24/13 J 11/24/13

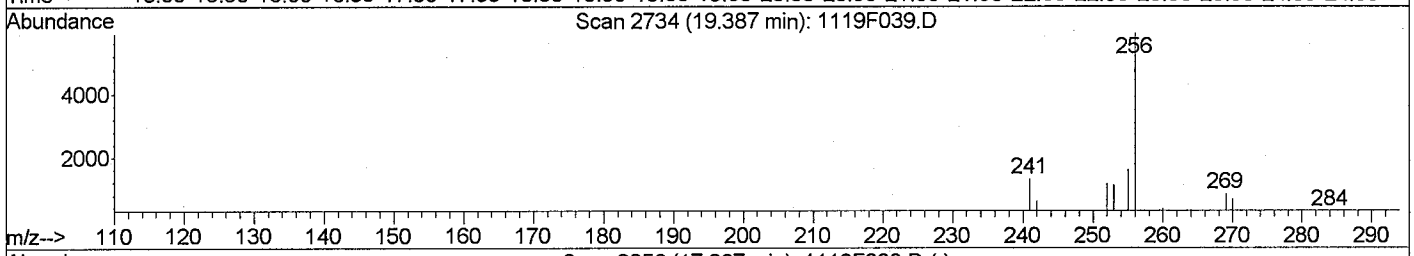
1119F039.D 1107ALK.M Fri Nov 21 12:05:13 2003

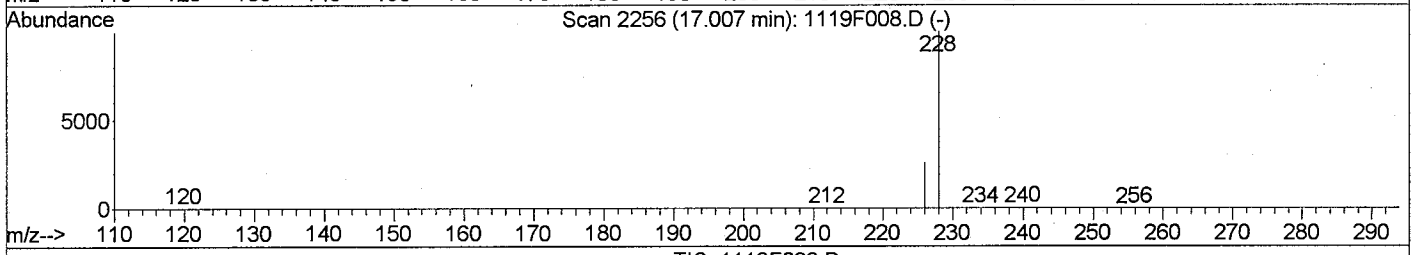
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:05 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(45) C2-Chrysenes (L)

19.39min 761.62ng/ml m

response 177688

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	22.16
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

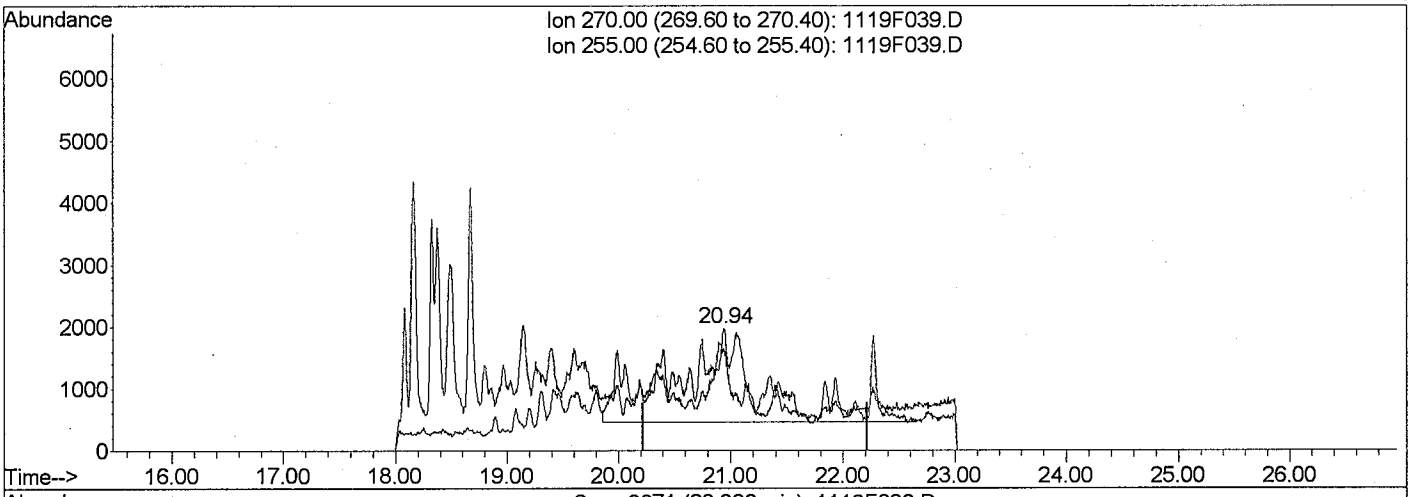
11/24/3

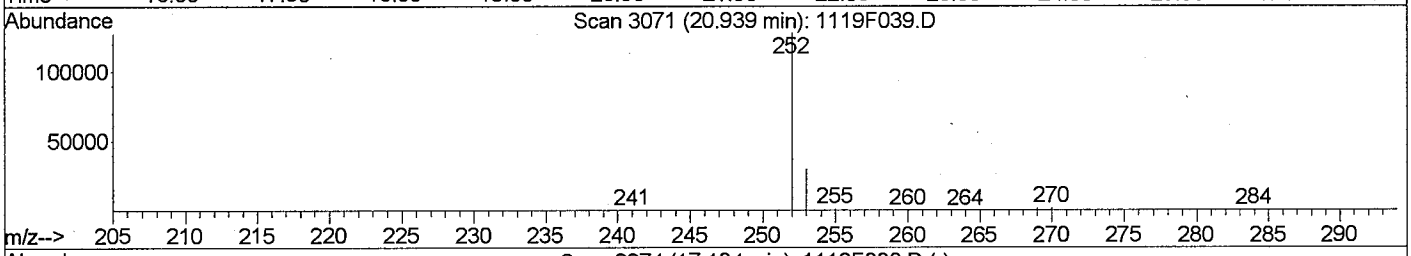
1119F039.D 1107ALK.M Fri Nov 21 12:05:41 2003

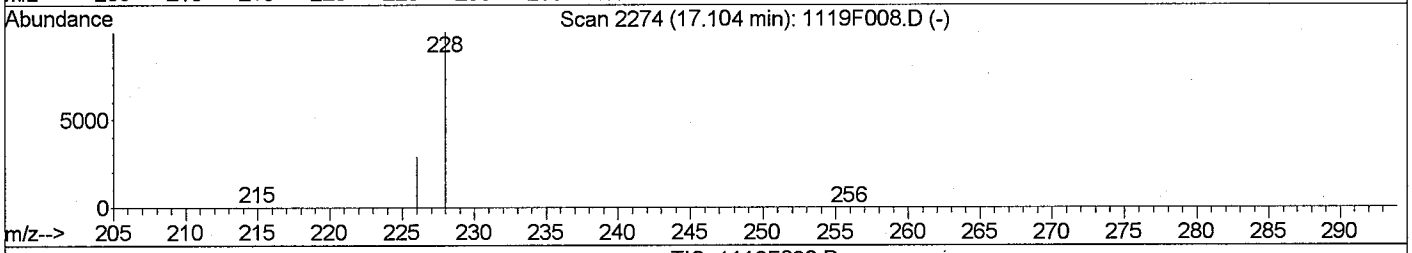
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F039.D Vial: 10
Acq On : 19 Nov 2003 5:38 pm Operator: LWeiskopf
Sample : K2308433-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:06 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F039.D

(46) C3-Chrysenes (L)

20.94min 335.97ng/ml m

response 78382

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	80.36#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F039.D 1107ALK.M Fri Nov 21 12:06:05 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F006.D
Lab ID: K2308433-003
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 08:11
Date Quantitated: 11/24/2003 09:16
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/24/03

Secondary Review: 11-24-03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247861	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F006.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 08:11	**Quant Date:**	11/24/2003 09:16	**Vial:**	3
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	255747	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	132289	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	185116	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	178610	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	105824	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	8439	63.78	64	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	15469	83.49	83	34-122	OK	NR
4	Terphenyl-d14	14.67	0.01	0.00	244	14701	90.31	90	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	8585	29.69	29	JD	NR
1	2-Methylnaphthalene	6.37		0.00	142	948	5.55	5.4	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	1029	6.43	6.3	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	663	3.20	3.1	JD	NR
1	C2-Naphthalenes				156	0		31	U	NR
1	C3-Naphthalenes				170	0		31	U	NR
1	C4-Naphthalenes				184	0		31	U	NR
2	Acenaphthylene	7.74		0.00	152	2885	11.32	11	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	11341	72.20	71	D	NR
2	Dibenzofuran	8.36	0.02	0.00	168	7679	36.47	36	JD	NR
2	Fluorene	9.00	0.01	0.00	166	15502	92.12	90	D	NR
2	C1-Fluorenes				180	0		31	U	NR
2	C2-Fluorenes				194	0		31	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F006.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 08:11	**Quant Date:**	11/24/2003 09:16	**Vial:**	3
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-003			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		31	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	12932	60.55	59	D	NR
3	C1-Dibenzothiophenes				198	0		31	U	NR
3	C2-Dibenzothiophenes				212	0		31	U	NR
3	C3-Dibenzothiophenes				226	0		31	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	281367	1,254	1200	D	
3	Anthracene	11.08		0.00	178	44783	233.64	230	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		31	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		31	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		31	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		31	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	386832	1,732	1700	D	
4	Pyrene	14.17		0.00	202	286445	1,227	1200	D	
4	C1-Fluoranthenes/Pyrenes				216	0		31	U	NR
4	Benz(a)anthracene	17.02		0.00	228	72915	410.23	400	D	NR
4	Chrysene	17.12		0.00	228	99619	524.13	510	D	NR
4	C1-Chrysenes				242	0		31	U	NR
4	C2-Chrysenes				256	0		31	U	NR
4	C3-Chrysenes				270	0		31	U	NR
4	C4-Chrysenes				284	0		31	U	NR
5	Benzo(b)fluoranthene	20.00		0.00	252	54978	389.15	380	D	NR
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	69773**m**	389.22	380	D	NR
5	Benzo(e)pyrene	20.98	0.01	0.00	252	44343	279.55	270	D	NR
5	Benzo(a)pyrene	21.16		0.00	252	44879	373.46	360	D	NR
5	Perylene	21.51	0.01	0.00	252	13287	98.50	96	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	26362	360.86	350	D	NR
5	Dibenz(a,h)anthracene	24.08		0.00	278	5378**m**	51.23	50	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	25874	213.64	210	D	NR

Prep Amount:	25.1 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	81.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F006.D Vial: 3
Acq On : 20 Nov 2003 8:11 am Operator: LWeiskopf
Sample : K2308433-003DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:24 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	255747	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	132289	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	185116	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	178610	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	105824	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	8132	43.41	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	4.34%		
16) Fluorene-d10	8.95	176	8439	63.78	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	6.38%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	15469	83.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.35%		
41) Terphenyl-d14	14.67	244	14701	90.31	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.03%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	8585	29.69	ng/ml	99
3) 2-Methylnaphthalene	6.37	142	948	5.55	ng/ml	91
4) 1-Methylnaphthalene	6.52	142	1029	6.43	ng/ml	98
6) Biphenyl	7.05	154	663	3.20	ng/ml	96
7) 2,6-Dimethylnaphthalene	7.28	156	479	3.29	ng/ml	80
12) Acenaphthylene	7.74	152	2885	11.32	ng/ml	97
13) Acenaphthene	8.06	154	11341	72.20	ng/ml	99
14) Dibenzofuran	8.36	168	7679	36.47	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.77	170	465	3.30	ng/ml	99
17) Fluorene	9.00	166	15502	92.12	ng/ml	100
24) Dibenzothiophene	10.72	184	12932	60.55	ng/ml	100
28) Phenanthrene	10.98	178	281367	1254.11	ng/ml	99
29) Anthracene	11.08	178	44783	233.64	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	6087	39.96	ng/ml	98
36) Fluoranthene	13.67	202	386832	1732.13	ng/ml	98
39) Pyrene	14.17	202	286445	1226.97	ng/ml	98
42) Benz(a)anthracene	17.02	228	72915	410.23	ng/ml	99
43) Chrysene	17.12	228	99619	524.13	ng/ml	100
49) Benzo(b)fluoranthene	20.00	252	54978	389.15	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	69773m	389.22	ng/ml	
51) Benzo(e)pyrene	20.98	252	44343	279.55	ng/ml	100
52) Benzo(a)pyrene	21.16	252	44879	373.46	ng/ml	100
53) Perylene	21.51	252	13287	98.50	ng/ml	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F006.D Vial: 3
Acq On : 20 Nov 2003 8:11 am Operator: LWeiskopf
Sample : K2308433-003DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:24 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

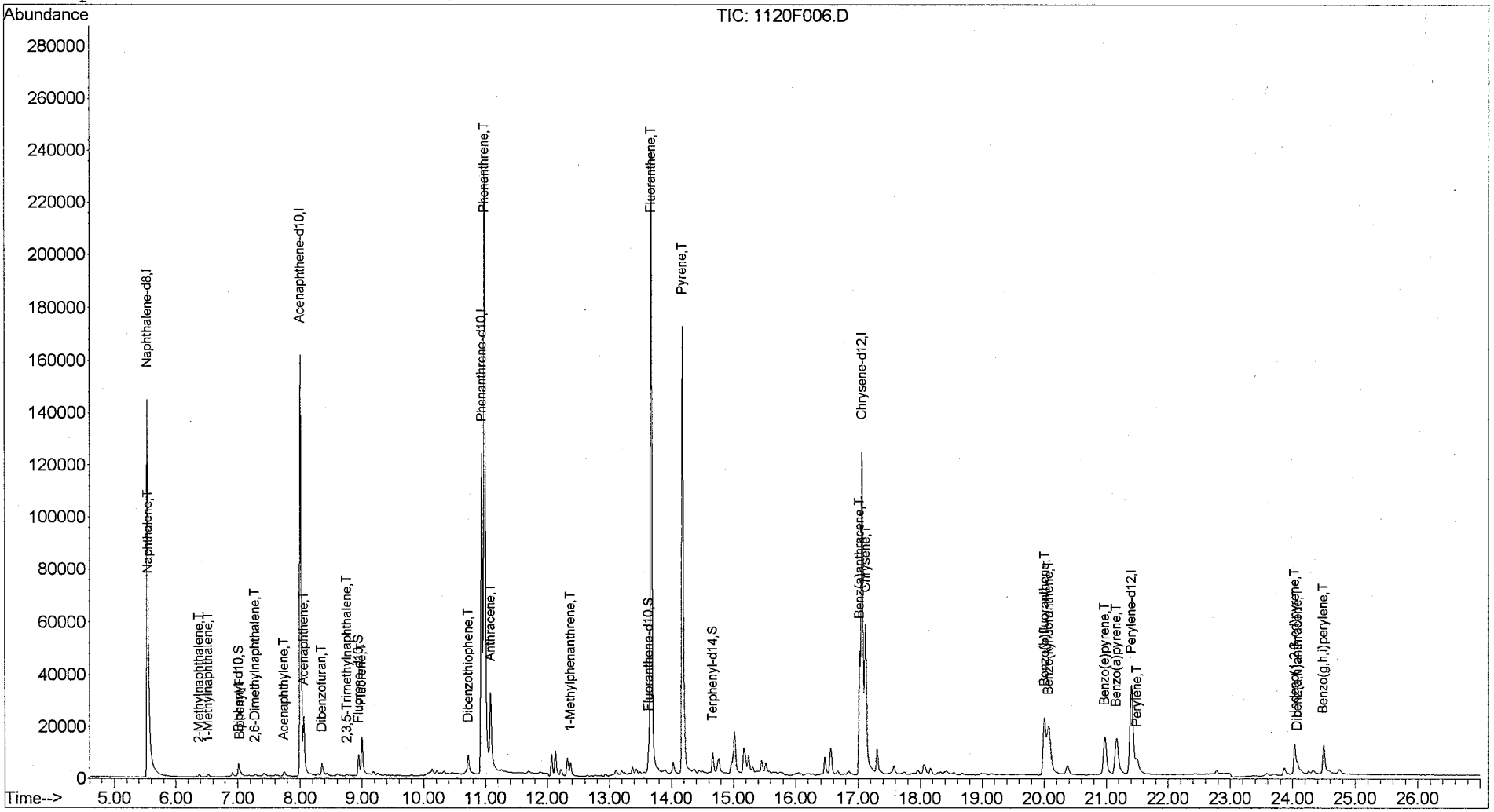
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54) Indeno(1,2,3-cd)pyrene	24.03	276	26362	360.86	ng/ml	92
55) Dibenz(a,h)anthracene	24.08	278	5378m	51.23	ng/ml	
56) Benzo(g,h,i)perylene	24.49	276	25874	213.64	ng/ml	100

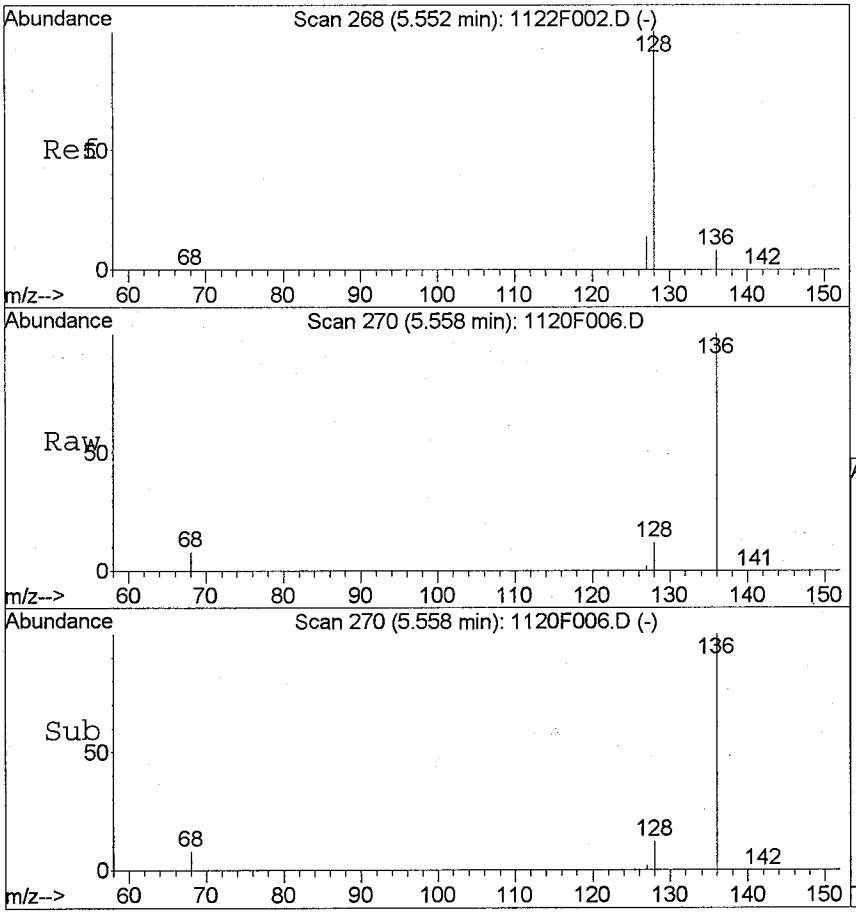
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F006.D Vial: 3
Acq On : 20 Nov 2003 8:11 am Operator: LWeiskopf
Sample : K2308433-003DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:16 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration

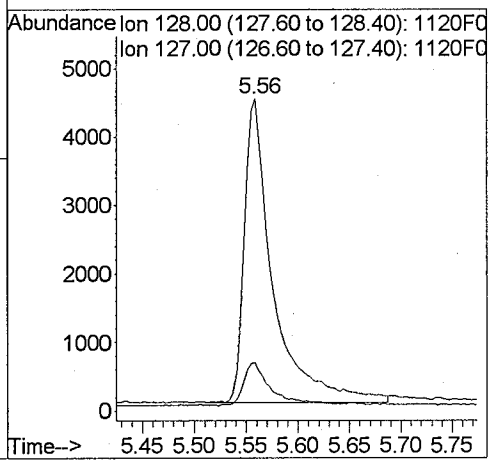


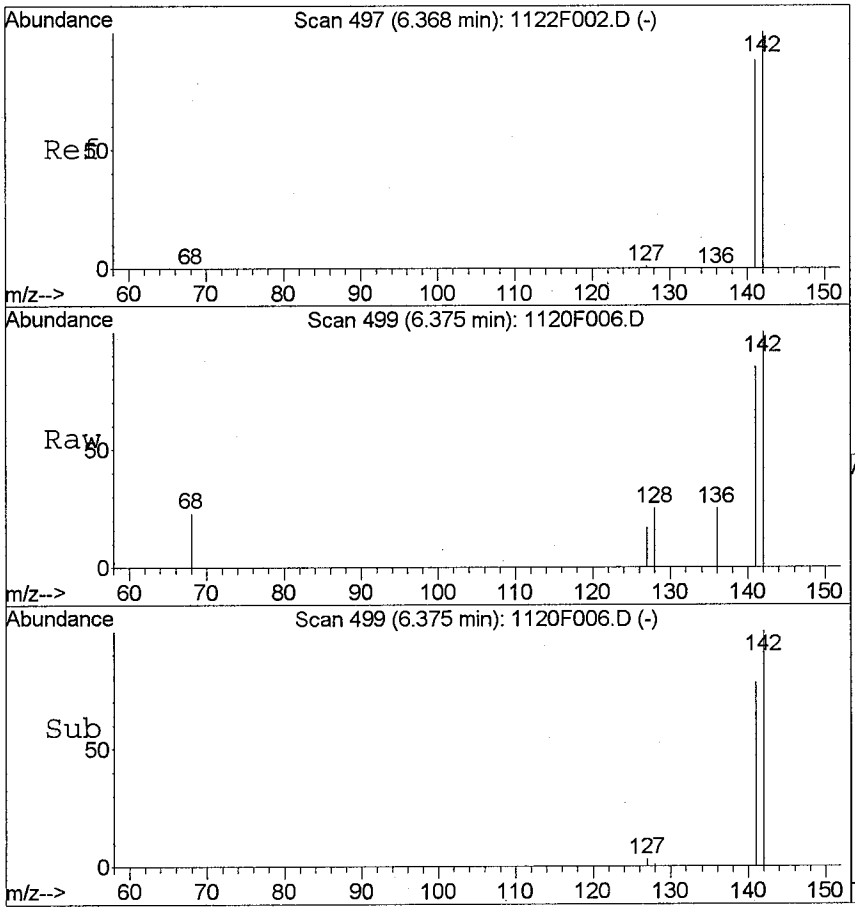


#2
Naphthalene
Concen: 29.69 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:128 Resp: 8585

Ion	Ratio	Lower	Upper
128	100		
127	14.0	0.0	43.6

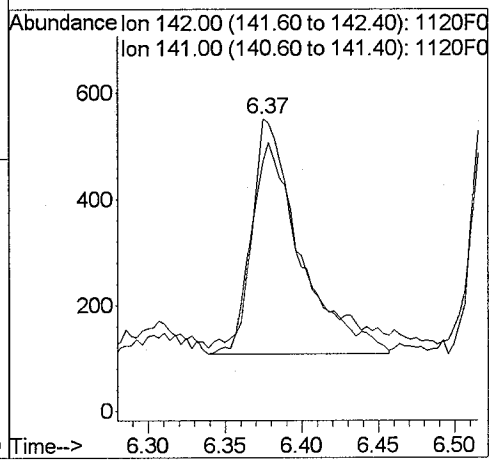


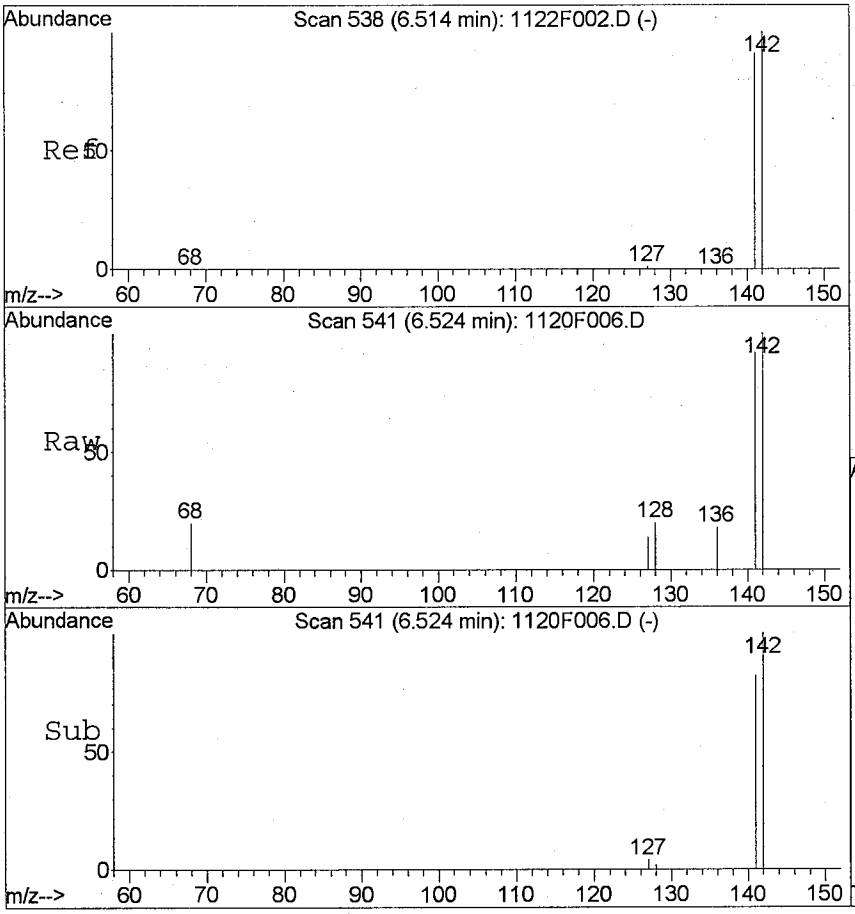


#3
2-Methylnaphthalene
Concen: 5.55 ng/ml
RT: 6.37 min Scan# 499
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:142 Resp: 948

Ion	Ratio	Lower	Upper
142	100		
141	79.5	58.1	118.1

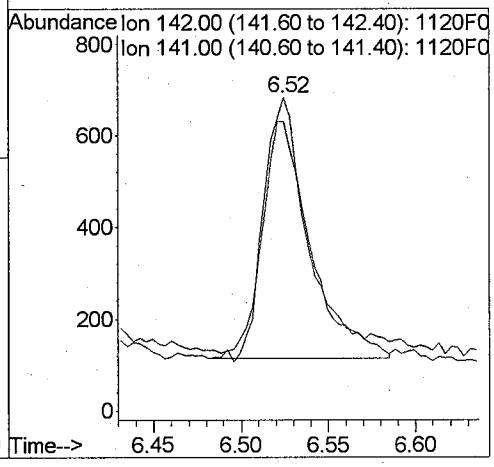


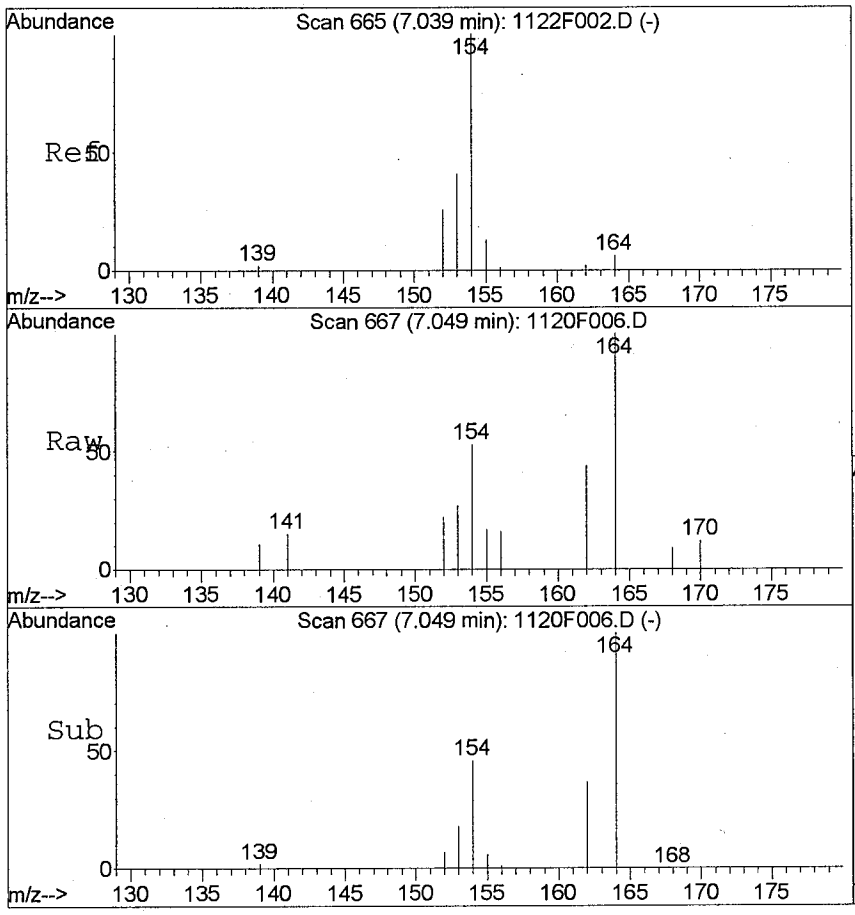


#4
1-Methylnaphthalene
Concen: 6.43 ng/ml
RT: 6.52 min Scan# 541
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:142 Resp: 1029

Ion	Ratio	Lower	Upper
142	100		
141	87.5	59.3	119.3

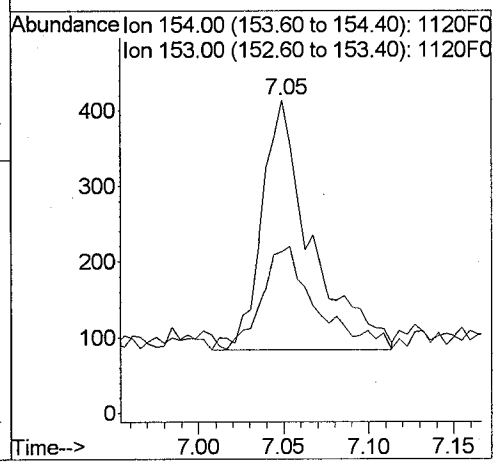


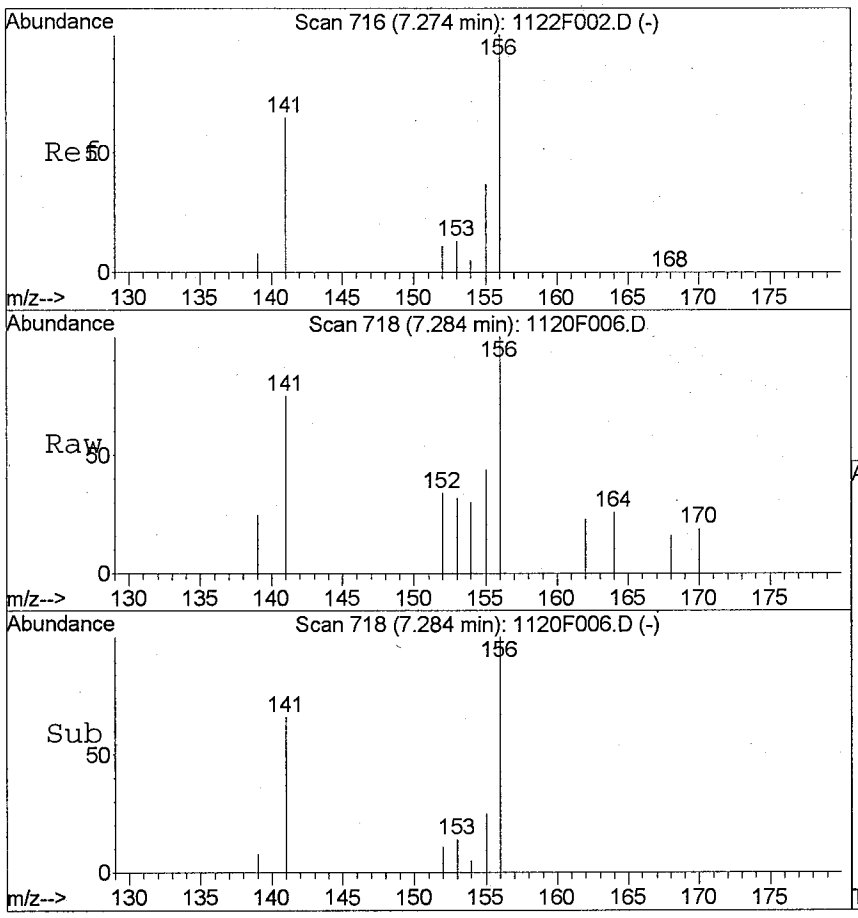


#6
Biphenyl
Concen: 3.20 ng/ml
RT: 7.05 min Scan# 667
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:154 Resp: 663

Ion	Ratio	Lower	Upper
154	100		
153	38.8	11.3	71.3

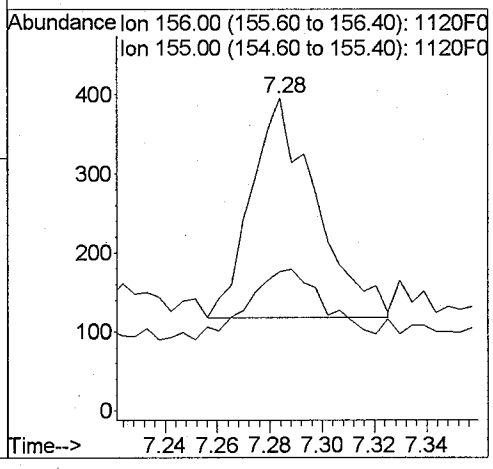


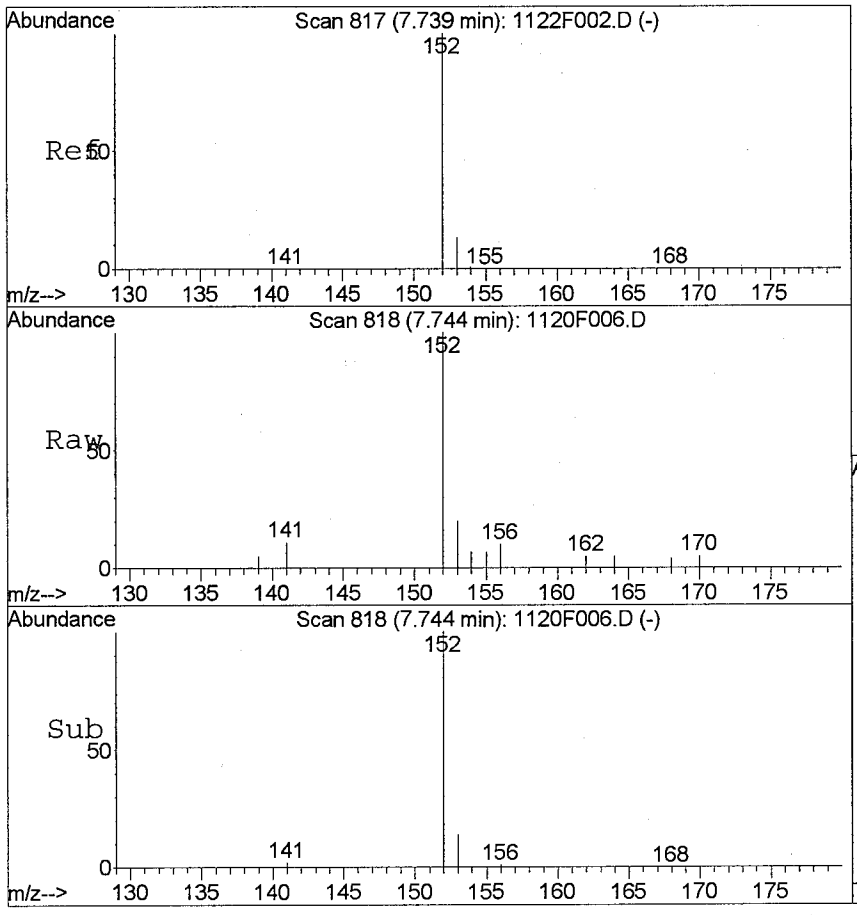


#7
2,6-Dimethylnaphthalene
Concen: 3.29 ng/ml
RT: 7.28 min Scan# 718
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:156 Resp: 479

Ion	Ratio	Lower	Upper
156	100		
155	25.2	7.1	67.1

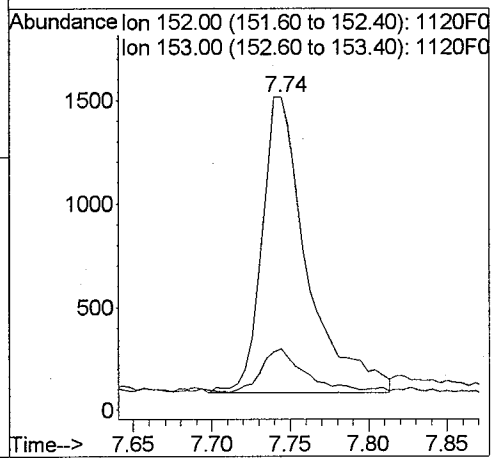


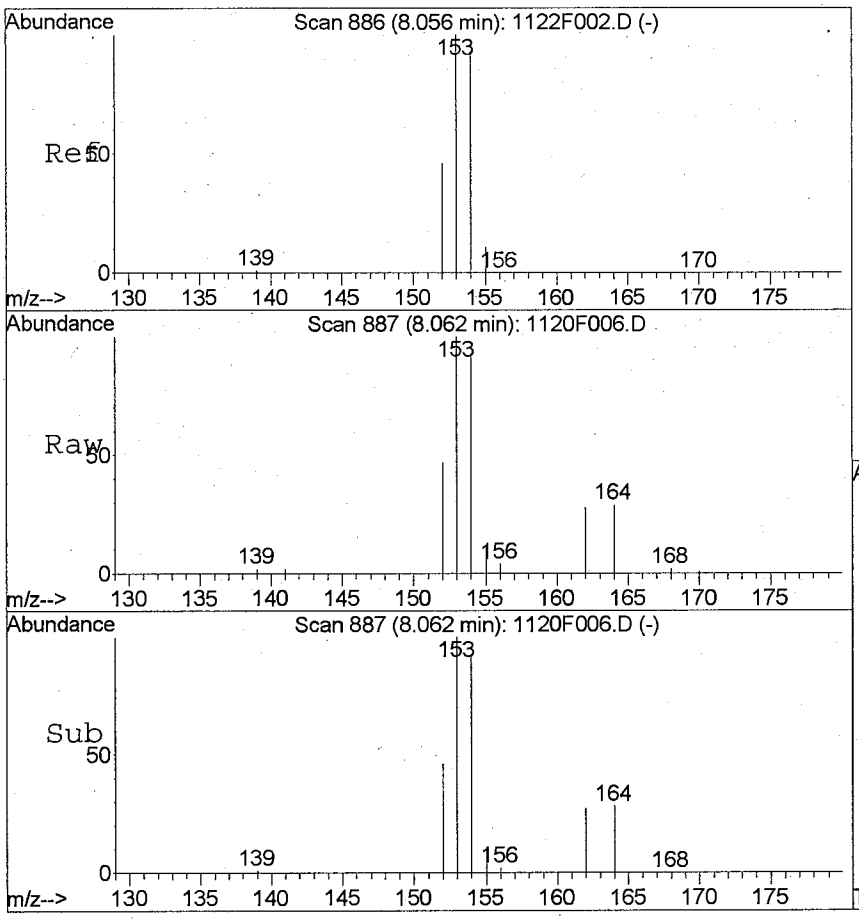


#12
Acenaphthylene
Concen: 11.32 ng/ml
RT: 7.74 min Scan# 818
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:152 Resp: 2885

Ion	Ratio	Lower	Upper
152	100		
153	14.3	0.0	43.0

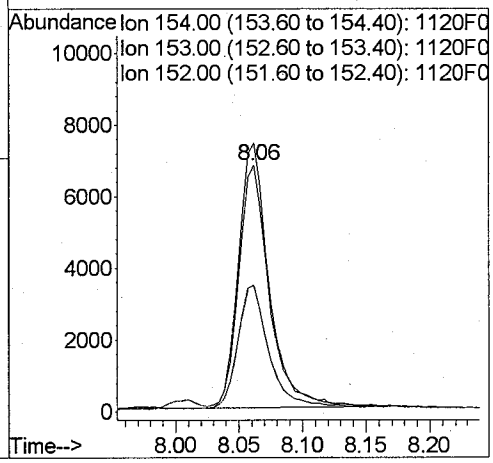


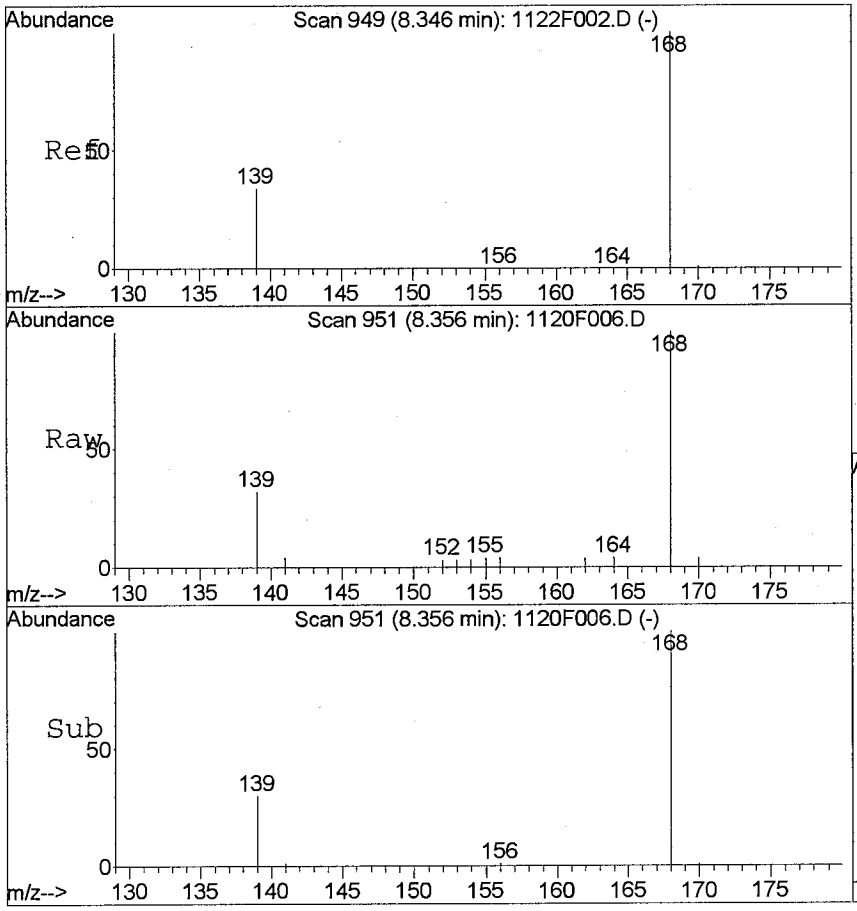


#13
Acenaphthene
Concen: 72.20 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:154 Resp: 11341

Ion	Ratio	Lower	Upper
154	100		
153	109.7	79.2	139.2
152	50.6	21.3	81.3

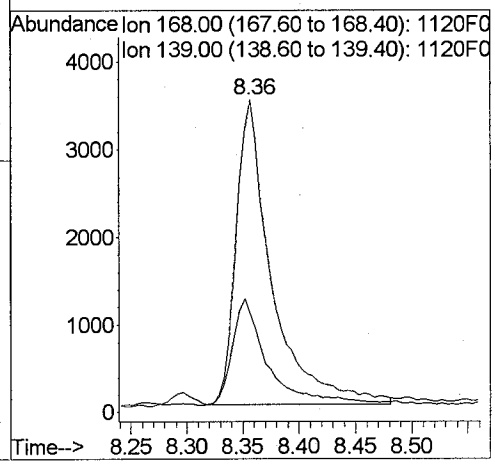


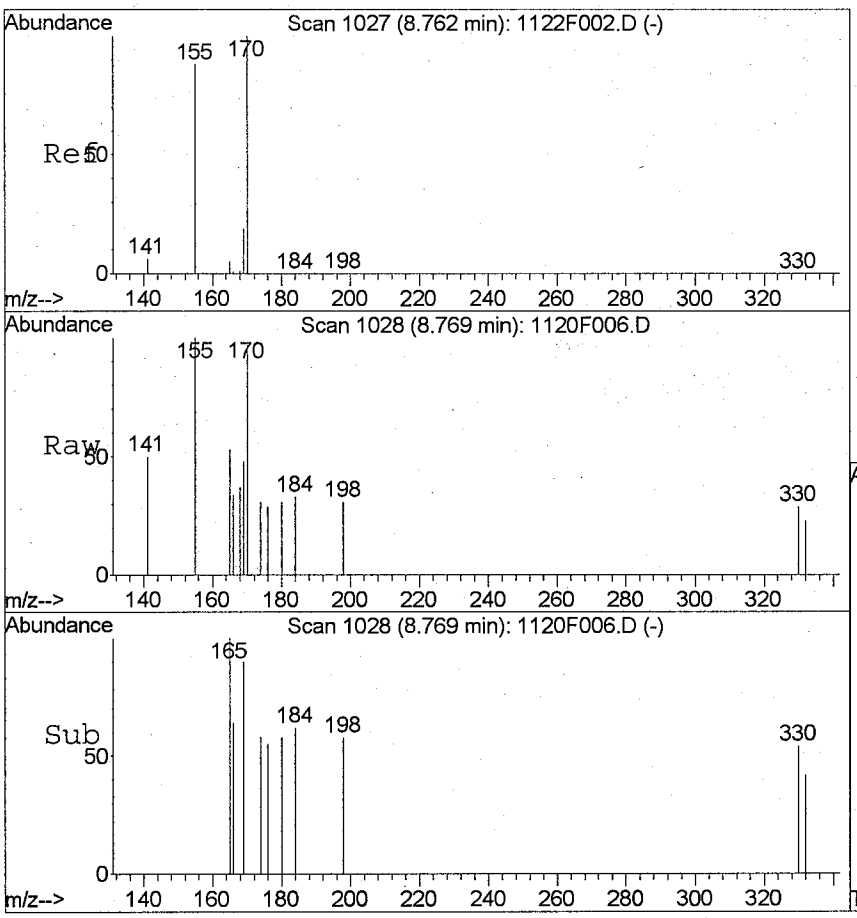


#14
Dibenzofuran
Concen: 36.47 ng/ml
RT: 8.36 min Scan# 951
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:168 Resp: 7679

Ion	Ratio	Lower	Upper
168	100		
139	29.7	5.4	65.4

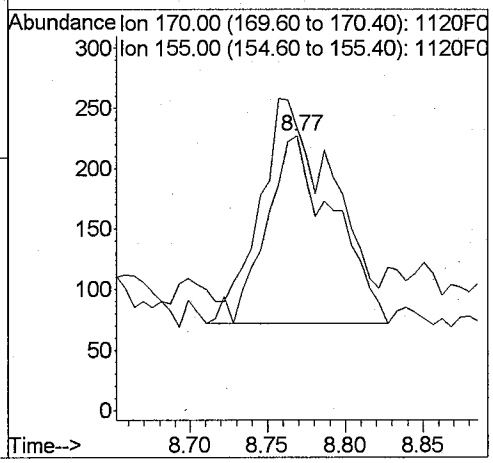


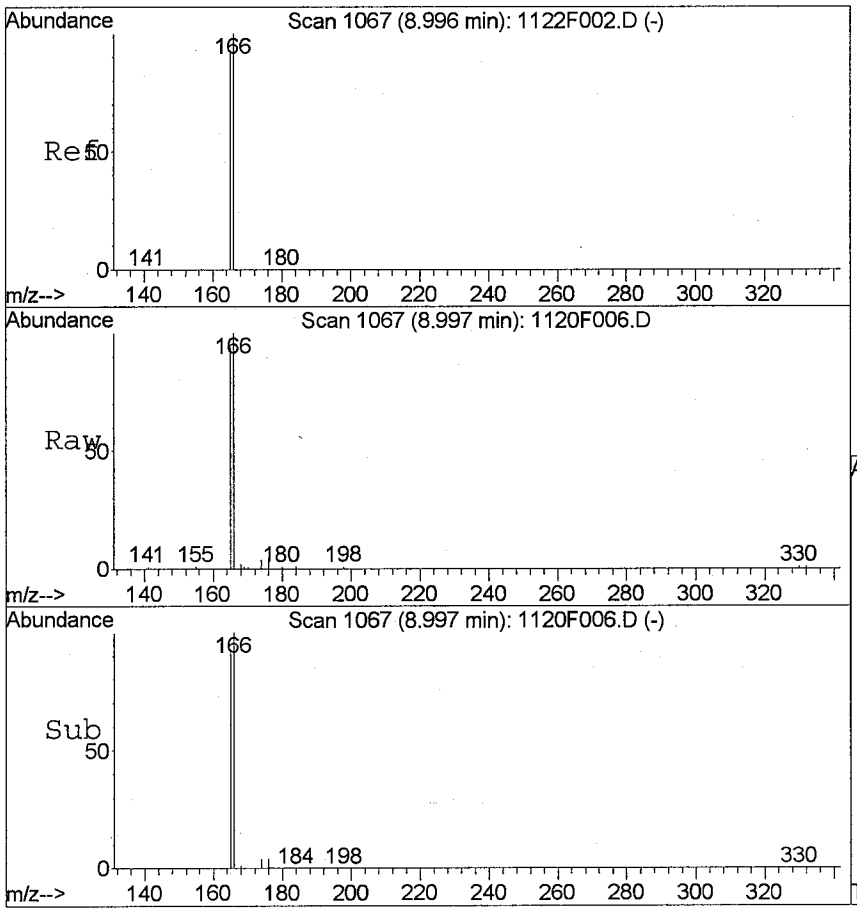


#15
2,3,5-Trimethylnaphthalene
Concen: 3.30 ng/ml
RT: 8.77 min Scan# 1028
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:170 Resp: 465

Ion	Ratio	Lower	Upper
170	100		
155	86.5	55.5	115.5

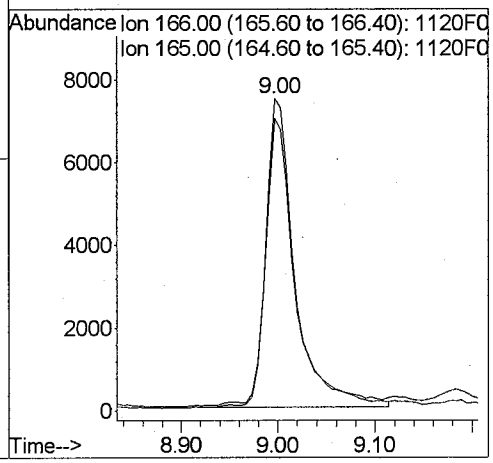


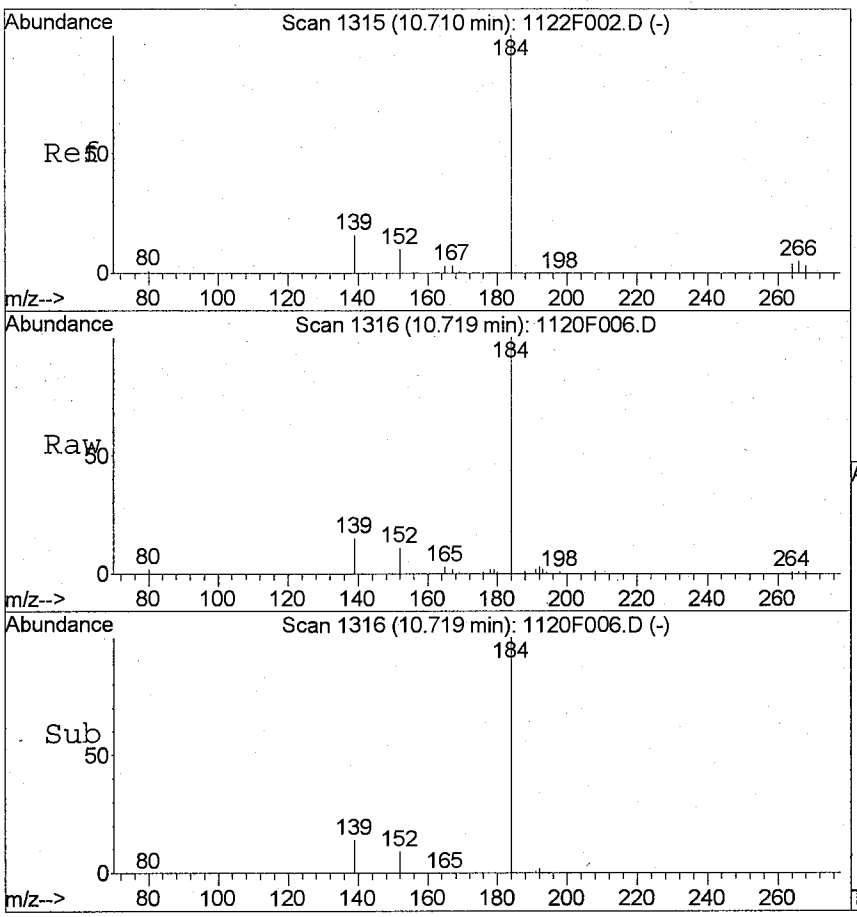


#17
Fluorene
Concen: 92.12 ng/ml
RT: 9.00 min Scan# 1067
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:166 Resp: 15502

Ion	Ratio	Lower	Upper
166	100		
165	92.9	63.3	123.3

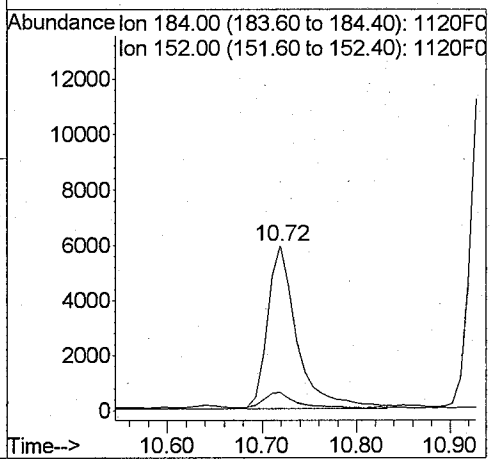


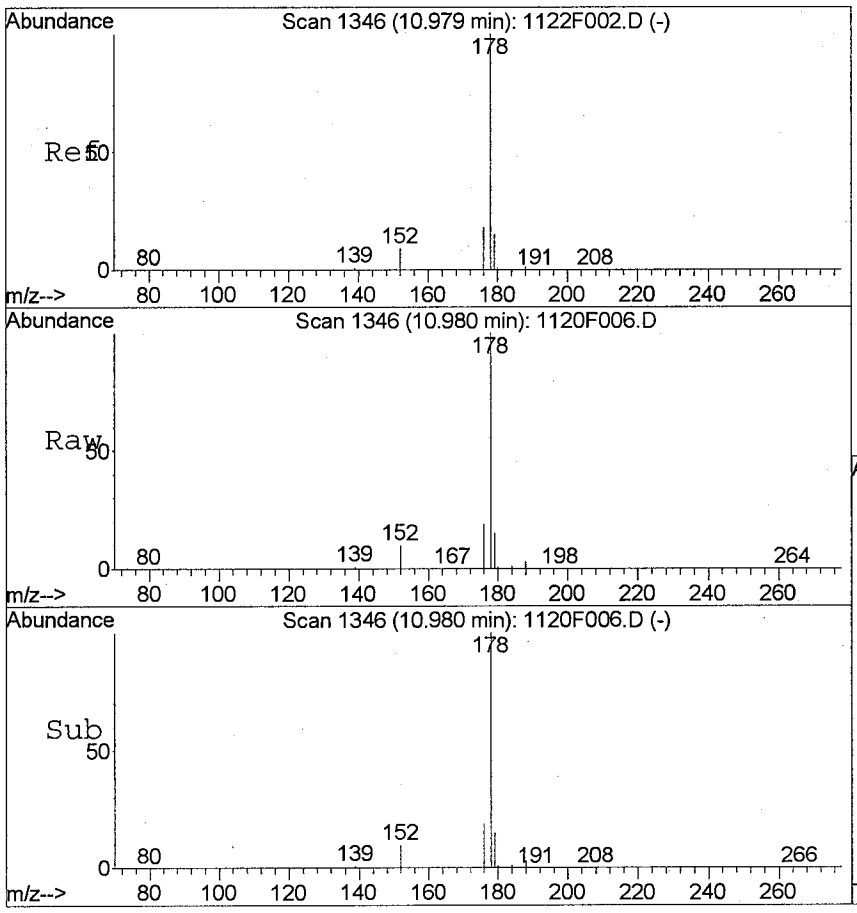


#24
Dibenzothiophene
Concen: 60.55 ng/ml
RT: 10.72 min Scan# 1316
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:184 Resp: 12932

Ion	Ratio	Lower	Upper
184	100		
152	9.0	0.0	39.0

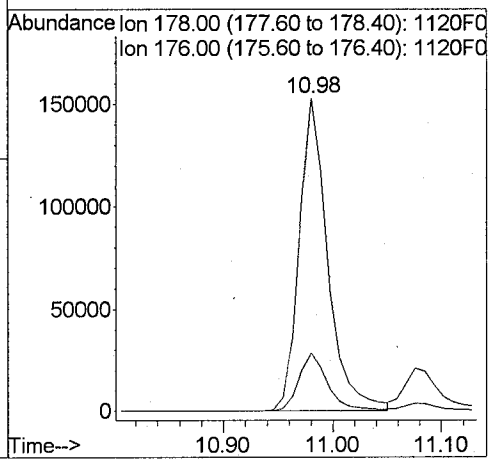


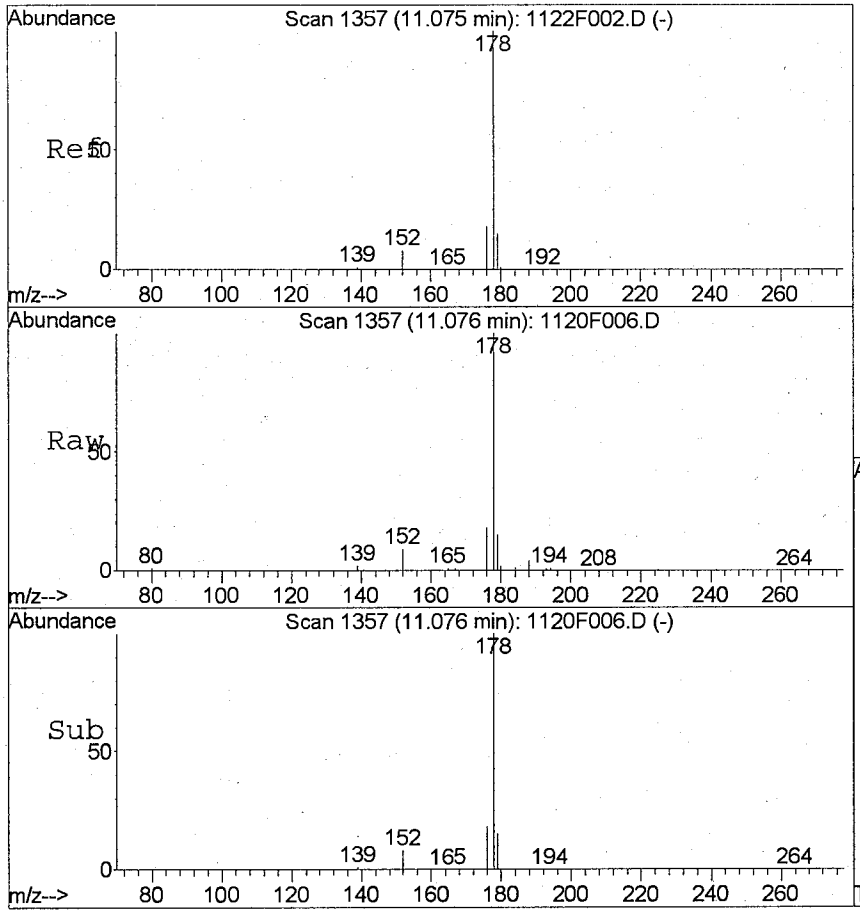


#28
Phenanthrene
Concen: 1254.11 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:178 Resp: 281367

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	49.0

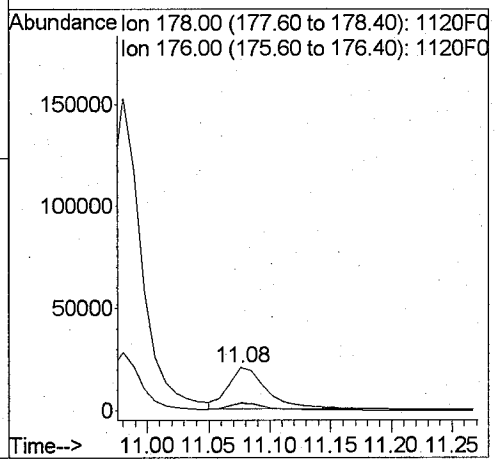


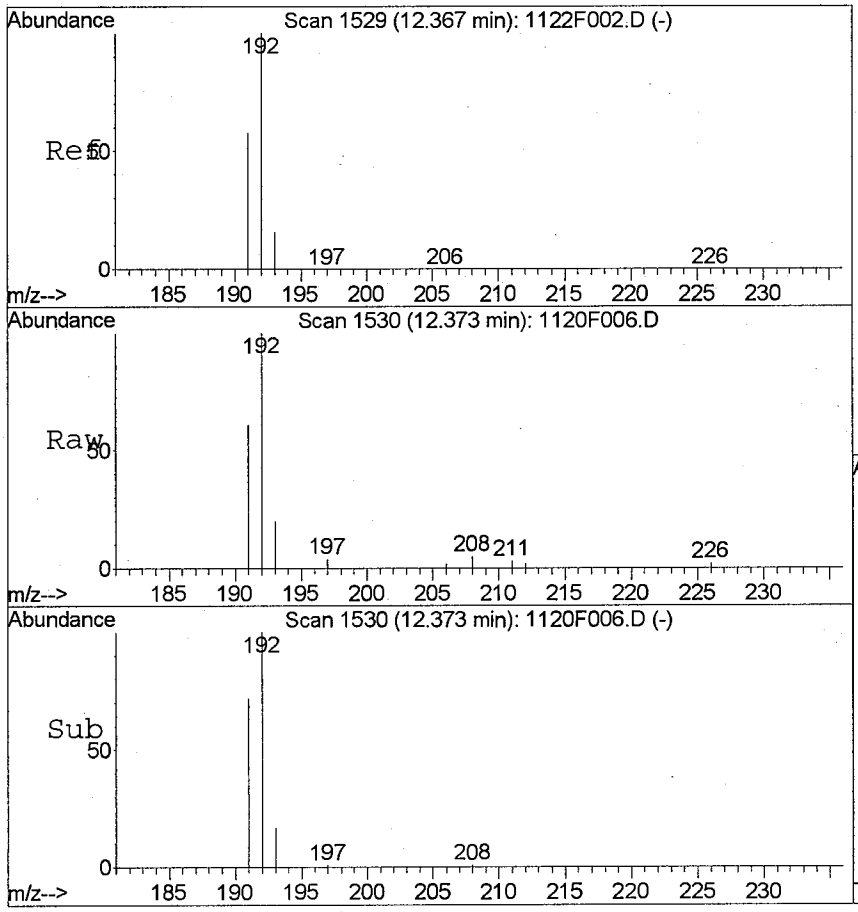


#29
Anthracene
Concen: 233.64 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. -0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:178 Resp: 44783

Ion	Ratio	Lower	Upper
178	100		
176	17.8	0.0	47.8

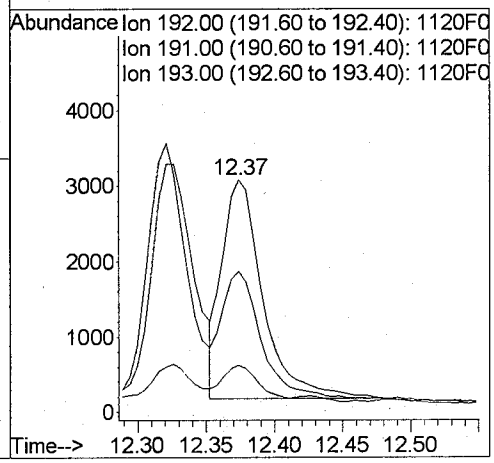


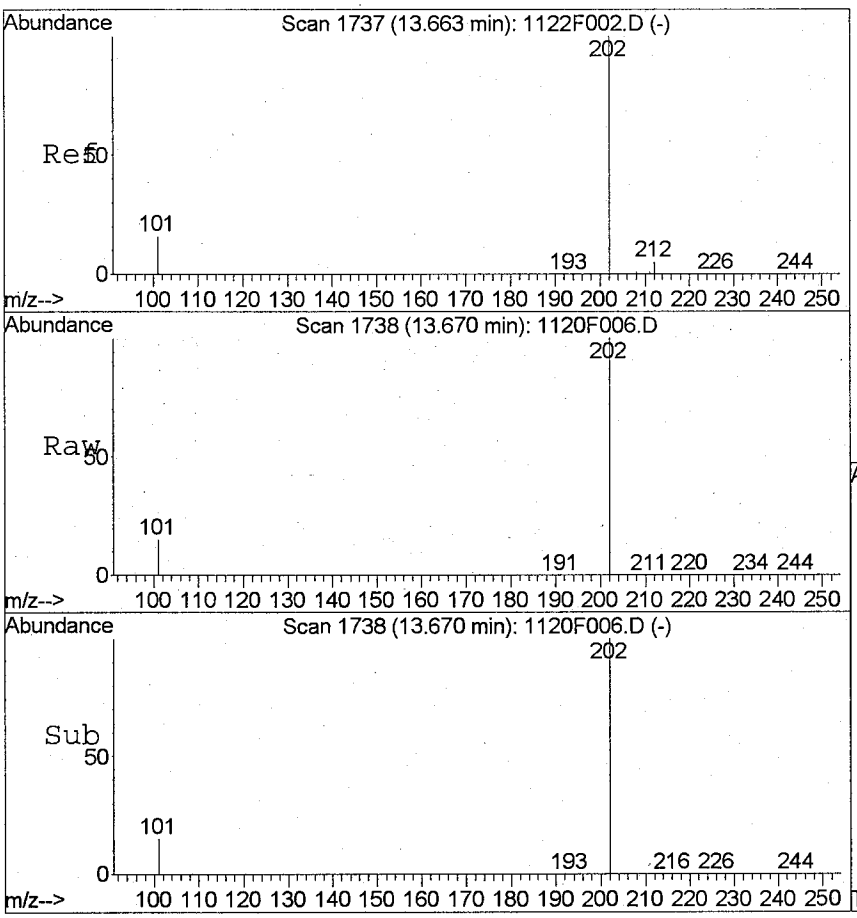


#31
1-Methylphenanthrene
Concen: 39.96 ng/ml
RT: 12.37 min Scan# 1530
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:192 Resp: 6087

Ion	Ratio	Lower	Upper
192	100		
191	58.4	27.0	87.0
193	15.9	0.0	45.8

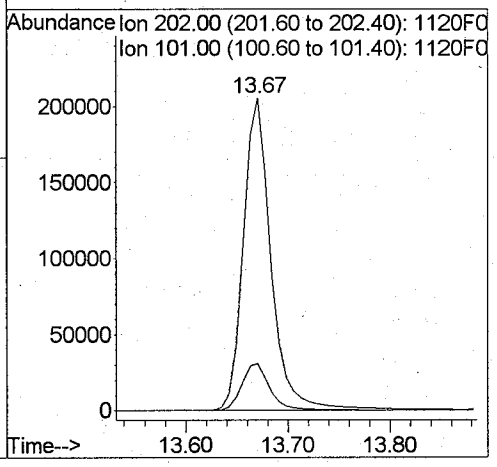


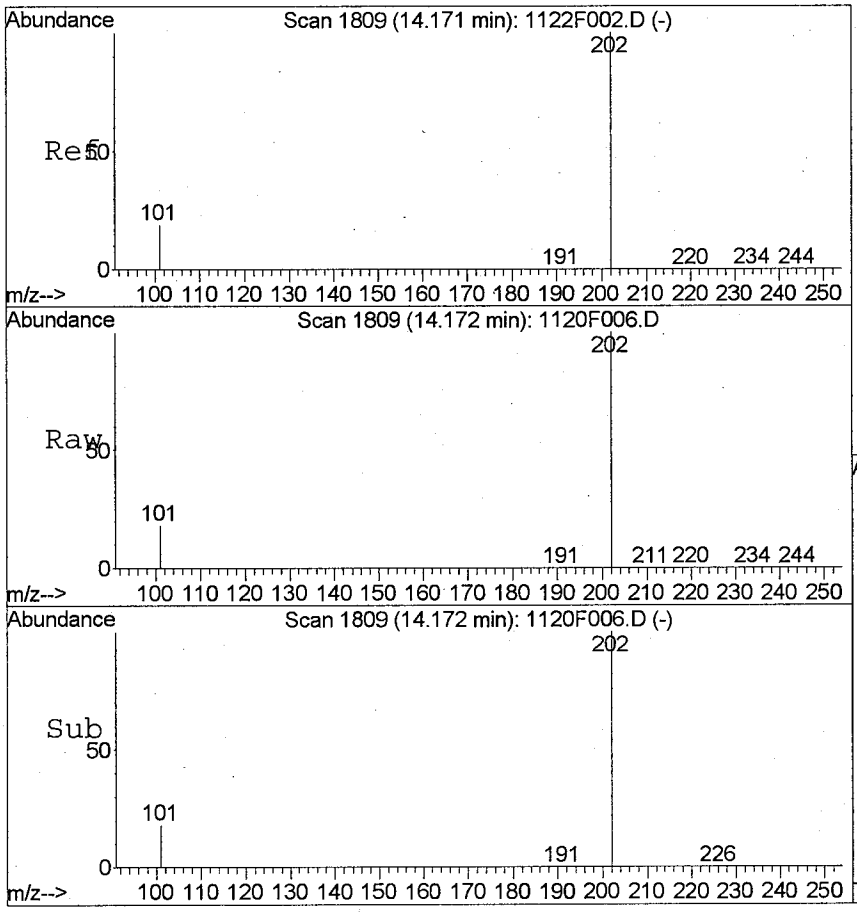


#36
Fluoranthene
Concen: 1732.13 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:202 Resp: 386832

Ion	Ratio	Lower	Upper
202	100		
101	15.1	0.0	46.1

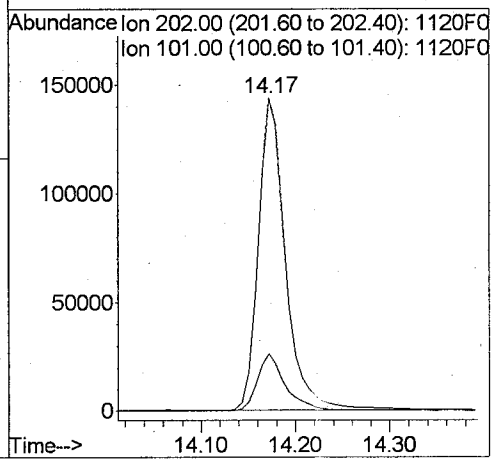


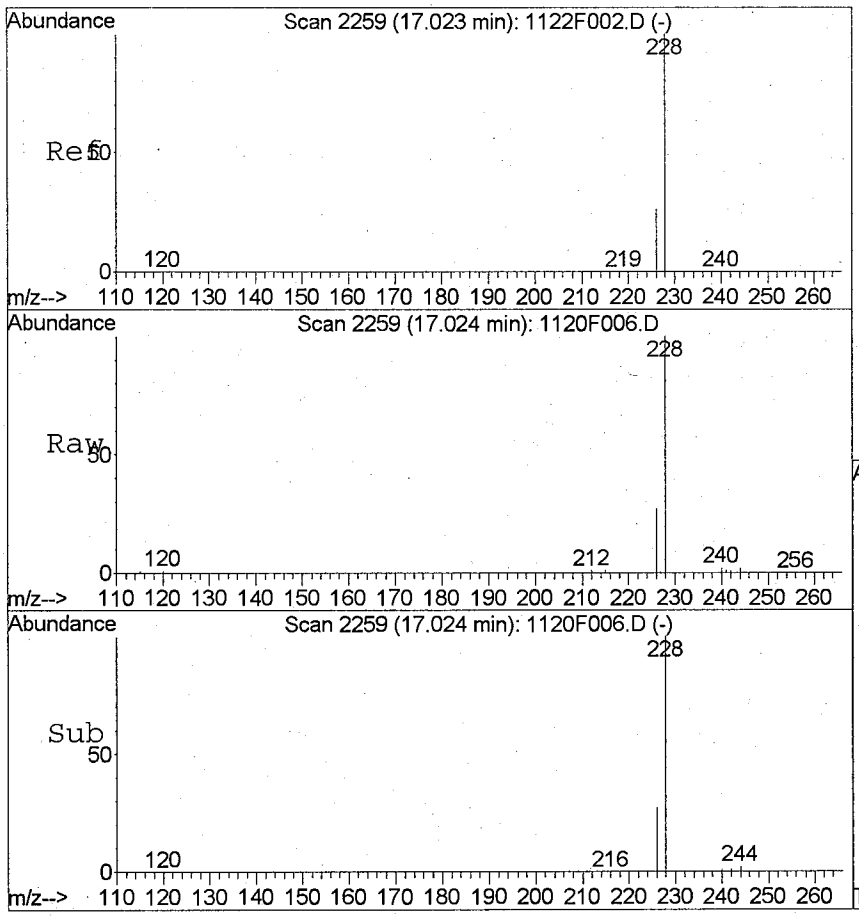


#39
Pyrene
Concen: 1226.97 ng/ml
RT: 14.17 min Scan# 1809
Delta R.T. 0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:202 Resp: 286445

Ion	Ratio	Lower	Upper
202	100		
101	18.3	0.0	47.3

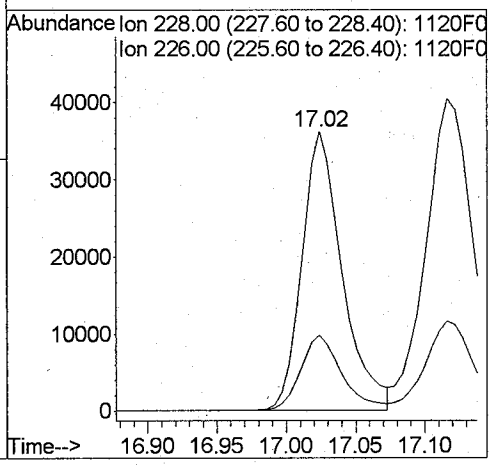


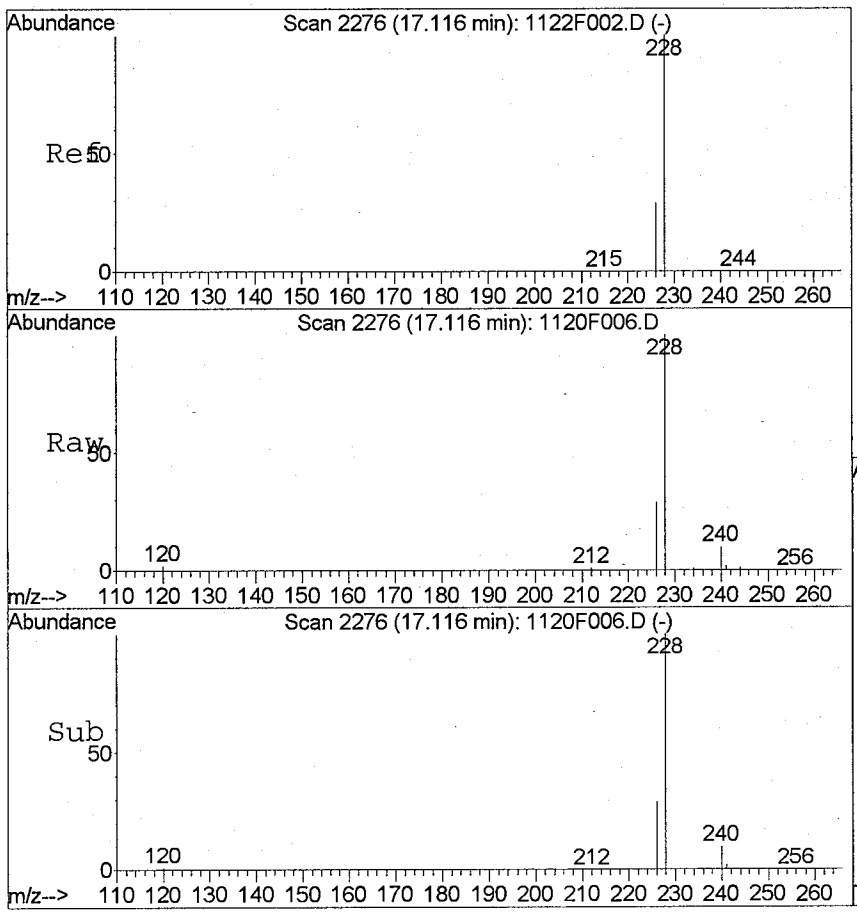


#42
Benz(a)anthracene
Concen: 410.23 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:228 Resp: 72915

Ion	Ratio	Lower	Upper
228	100		
226	26.8	0.0	56.3

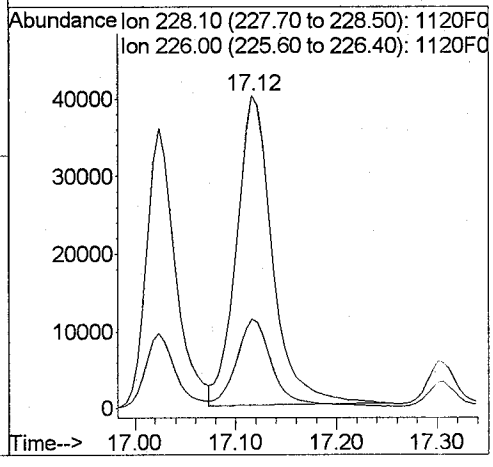


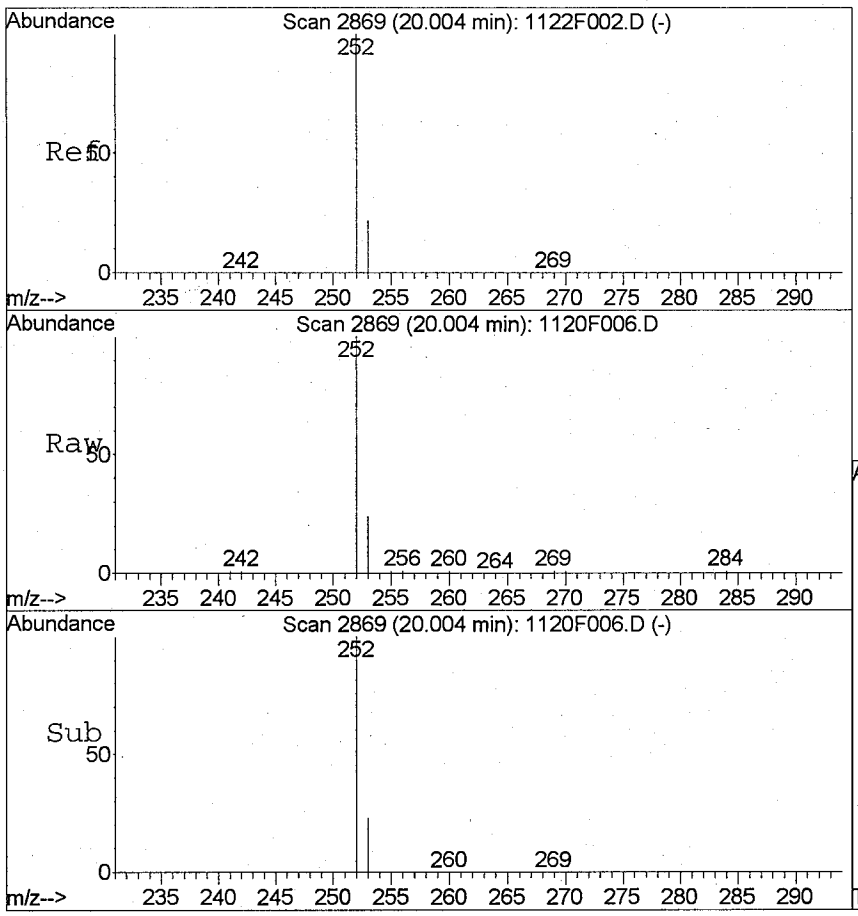


#43
Chrysene
Concen: 524.13 ng/ml
RT: 17.12 min Scan# 2276
Delta R.T. -0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:228 Resp: 99619

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.3

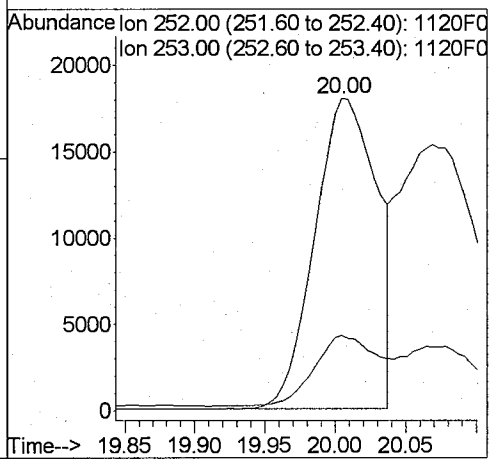


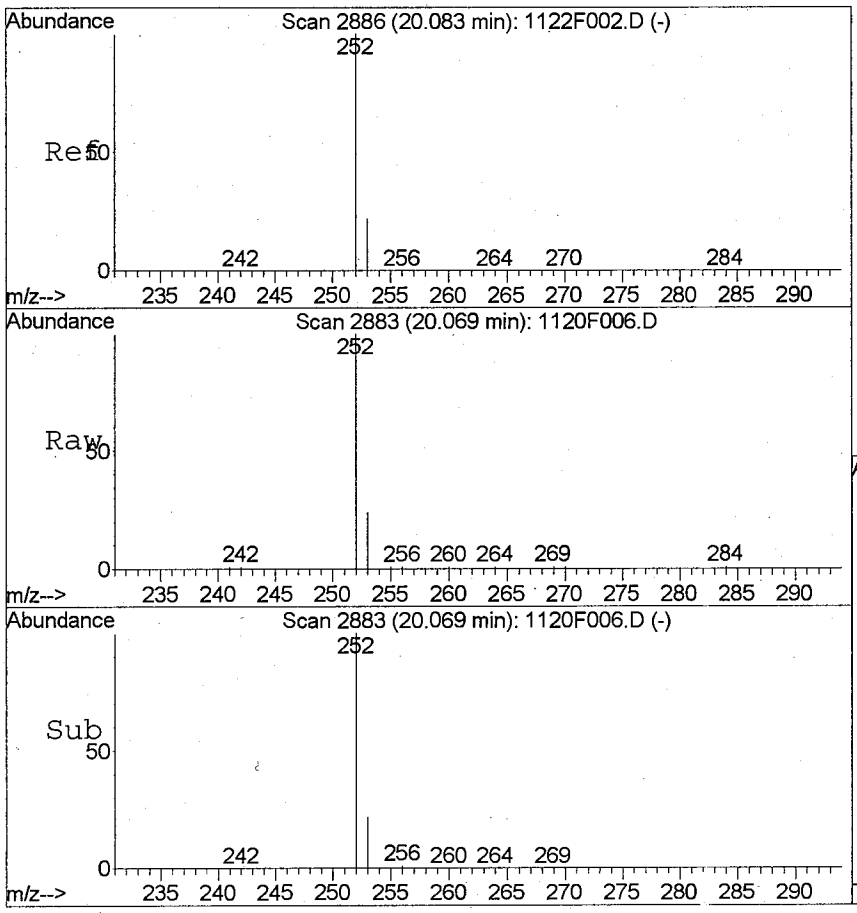


#49
Benzo(b)fluoranthene
Concen: 389.15 ng/ml
RT: 20.00 min Scan# 2869
Delta R.T. 0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:252 Resp: 54978

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	51.9

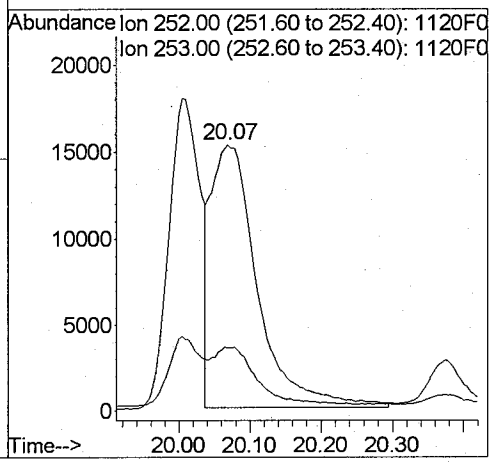


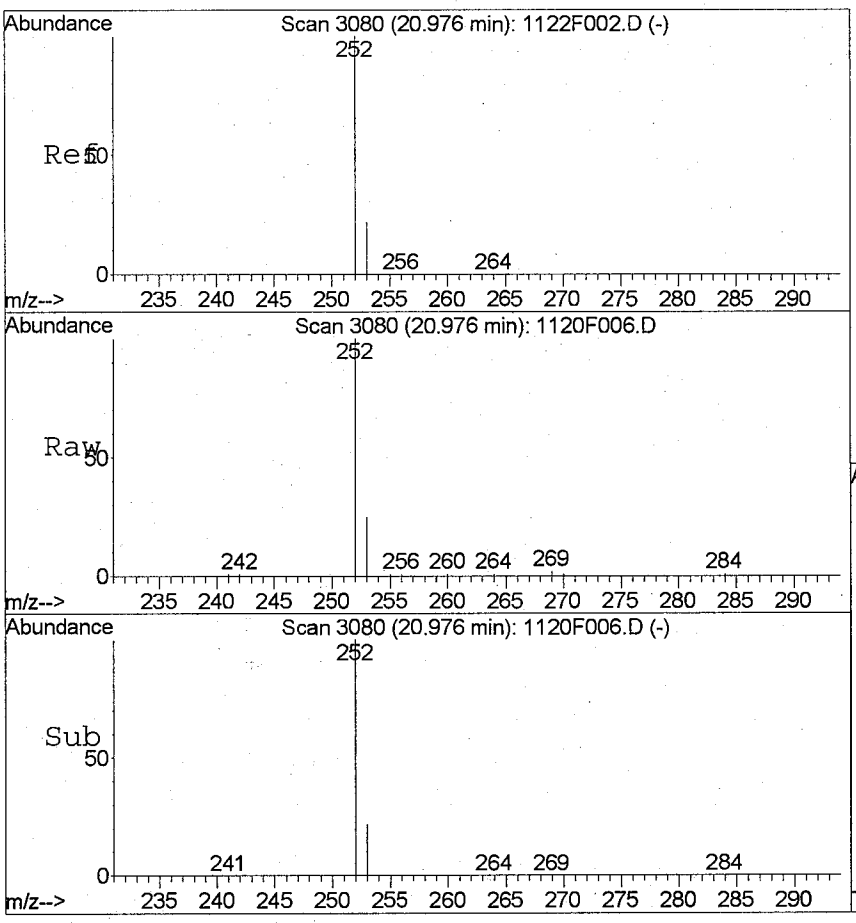


#50
Benzo(k)fluoranthene
Concen: 389.22 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. -0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:252 Resp: 69773

Ion	Ratio	Lower	Upper
252	100		
253	23.9	0.0	52.0

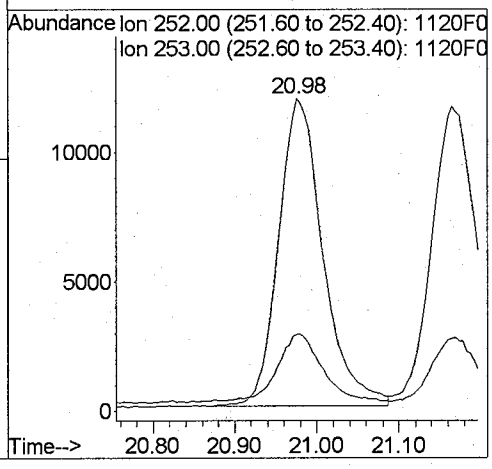


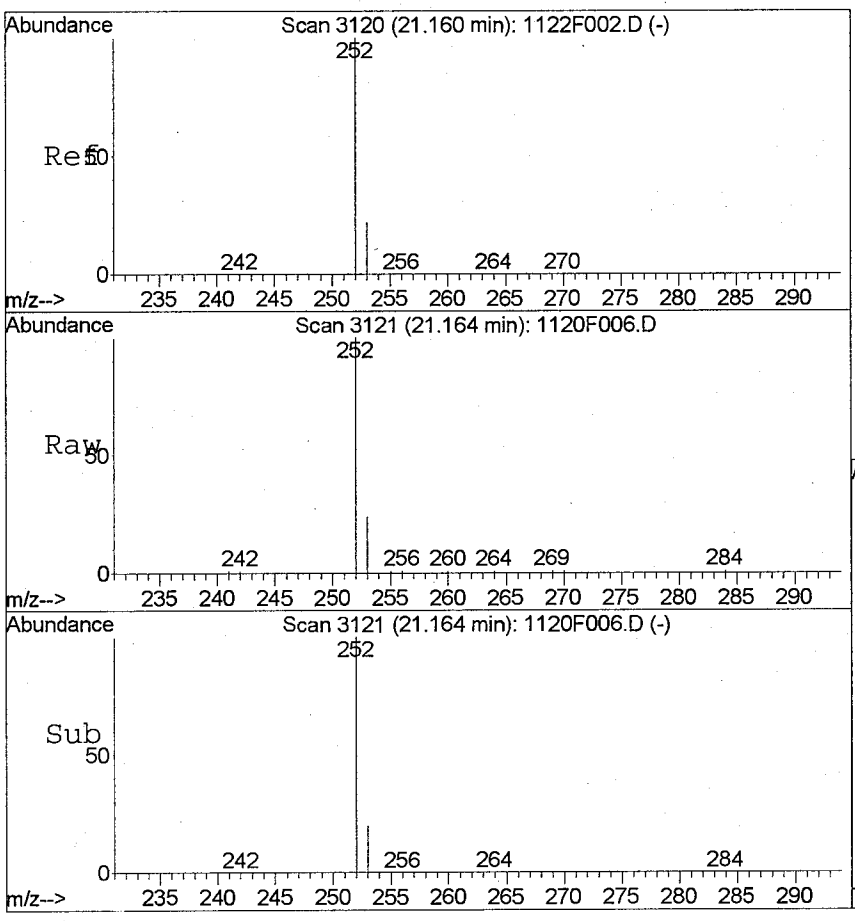


#51
Benzo(e)pyrene
Concen: 279.55 ng/ml
RT: 20.98 min Scan# 3080
Delta R.T. 0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:252 Resp: 44343

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

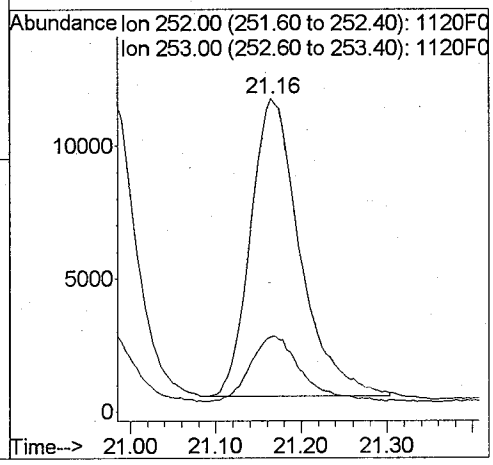


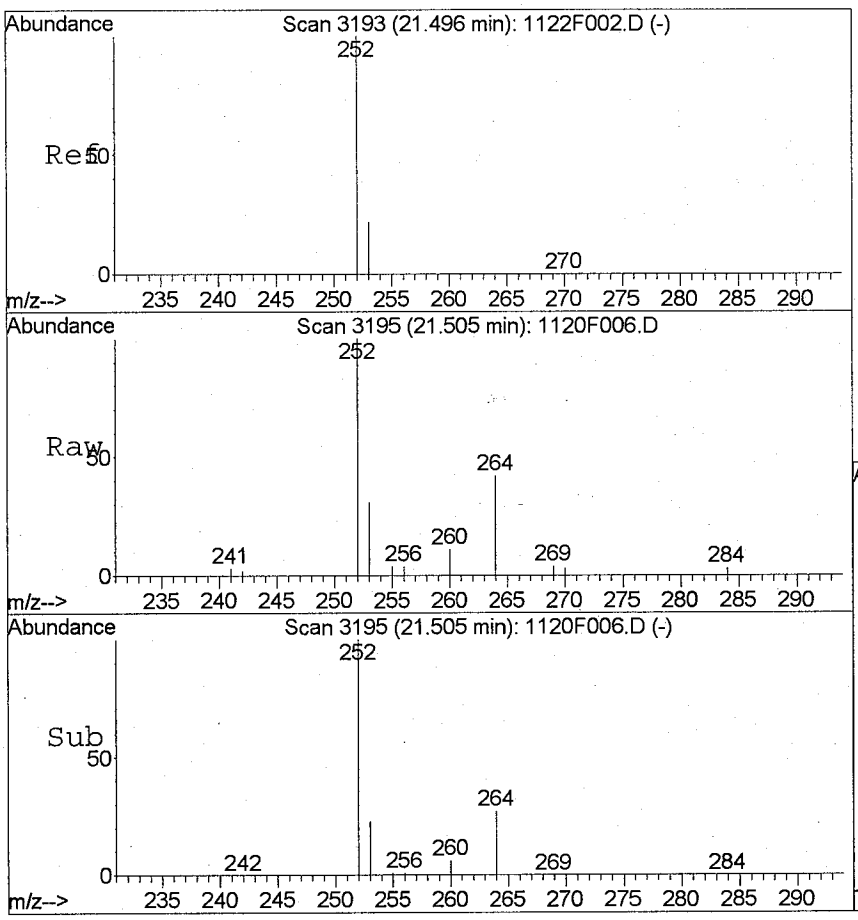


#52
Benzo(a)pyrene
Concen: 373.46 ng/ml
RT: 21.16 min Scan# 3121
Delta R.T. 0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:252 Resp: 44879

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

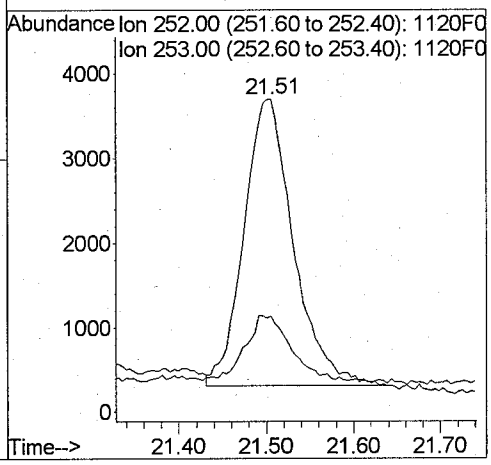


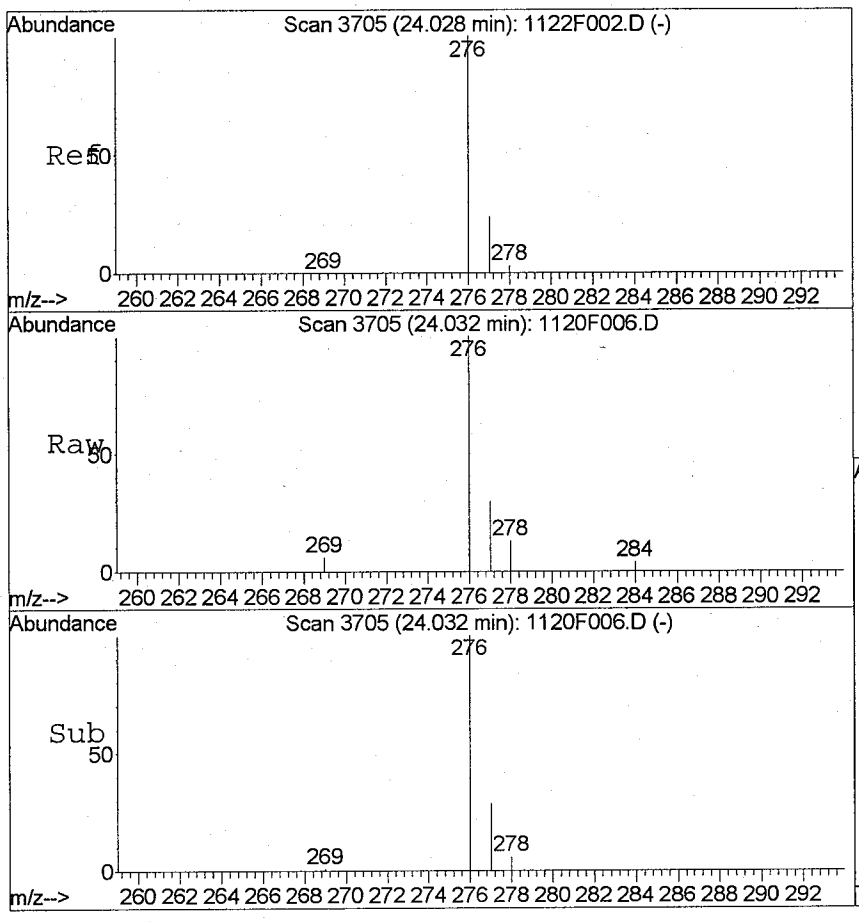


#53
Perylene
Concen: 98.50 ng/ml
RT: 21.51 min Scan# 3195
Delta R.T. 0.01 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:252 Resp: 13287

Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	51.6

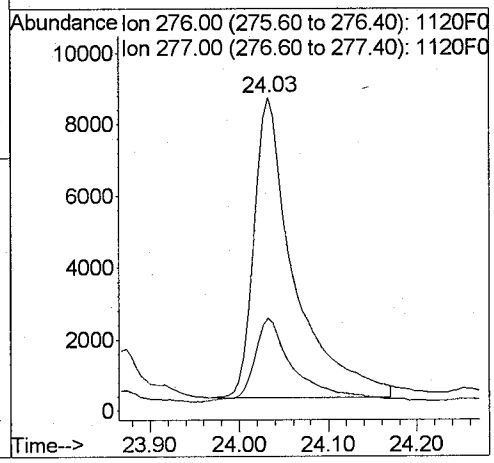


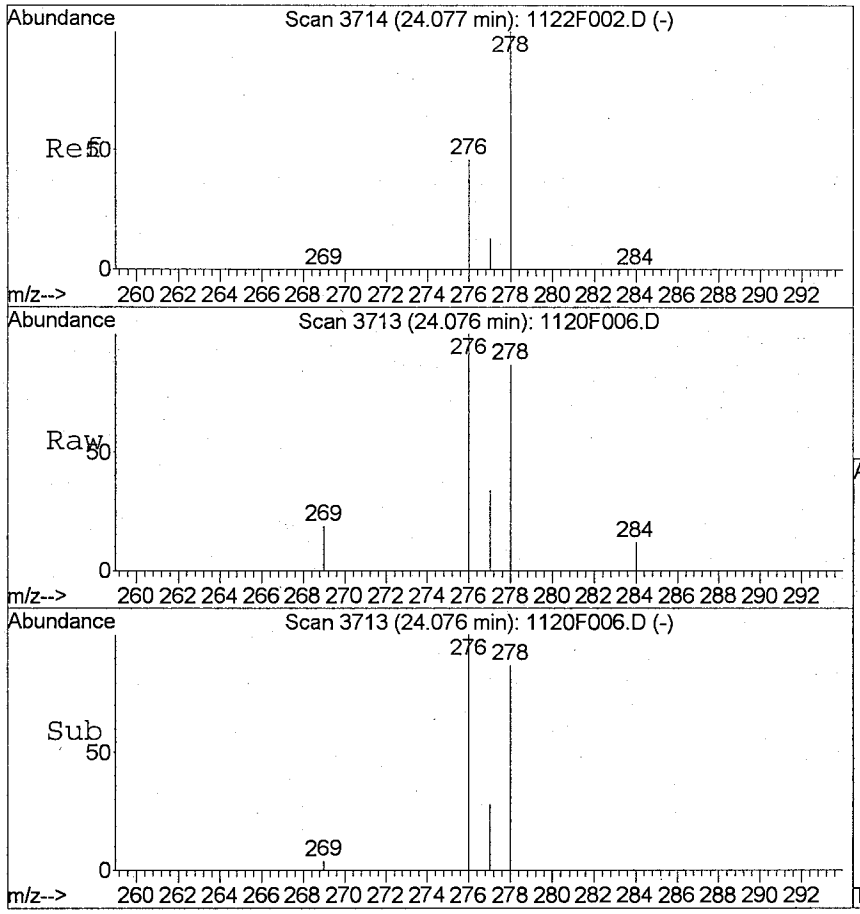


#54
Indeno(1,2,3-cd)pyrene
Concen: 360.86 ng/ml
RT: 24.03 min Scan# 3705
Delta R.T. 0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:276 Resp: 26362

Ion	Ratio	Lower	Upper
276	100		
277	27.6	0.0	53.8

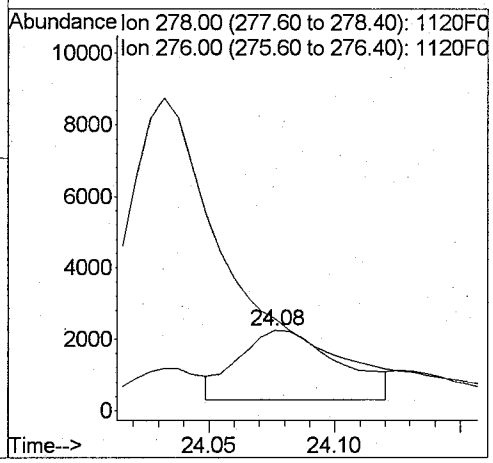


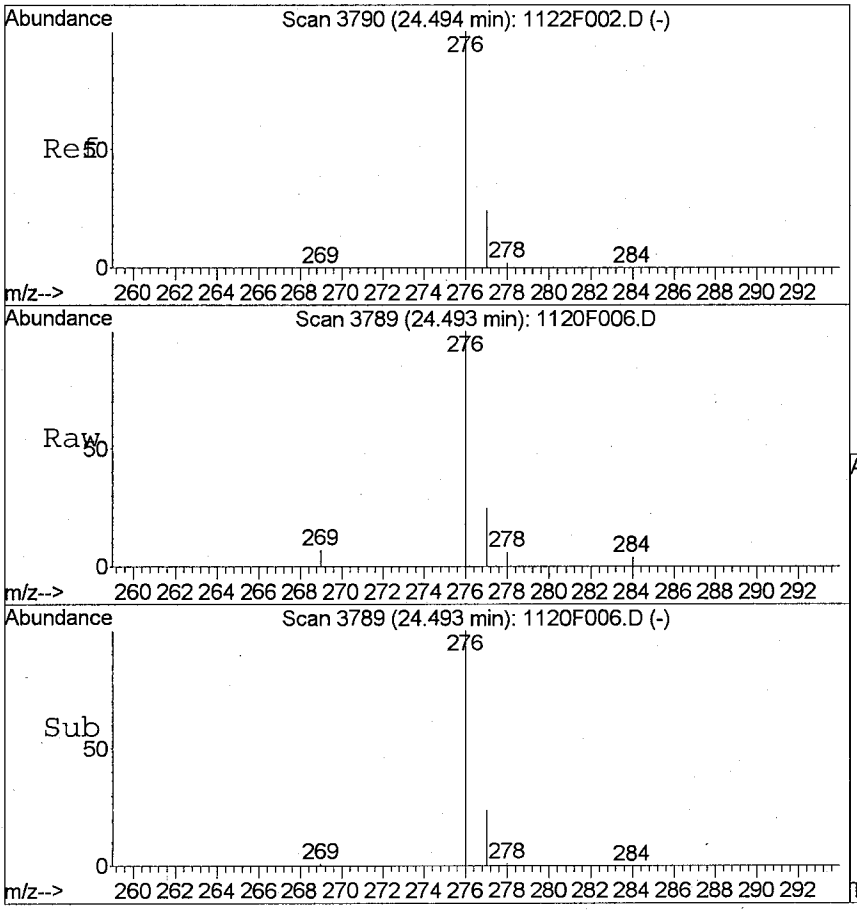


#55
Dibenz(a,h)anthracene
Concen: 51.23 ng/ml m
RT: 24.08 min Scan# 3713
Delta R.T. -0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:278 Resp: 5378

Ion	Ratio	Lower	Upper
278	100		
276	114.6	5.3	65.3#

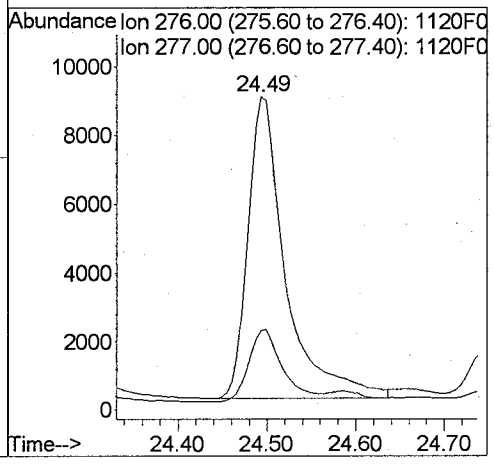




#56
Benzo(g,h,i)perylene
Concen: 213.64 ng/ml
RT: 24.49 min Scan# 3789
Delta R.T. 0.00 min
Lab File: 1120F006.D
Acq: 20 Nov 2003 8:11 am

Tgt Ion:276 Resp: 25874

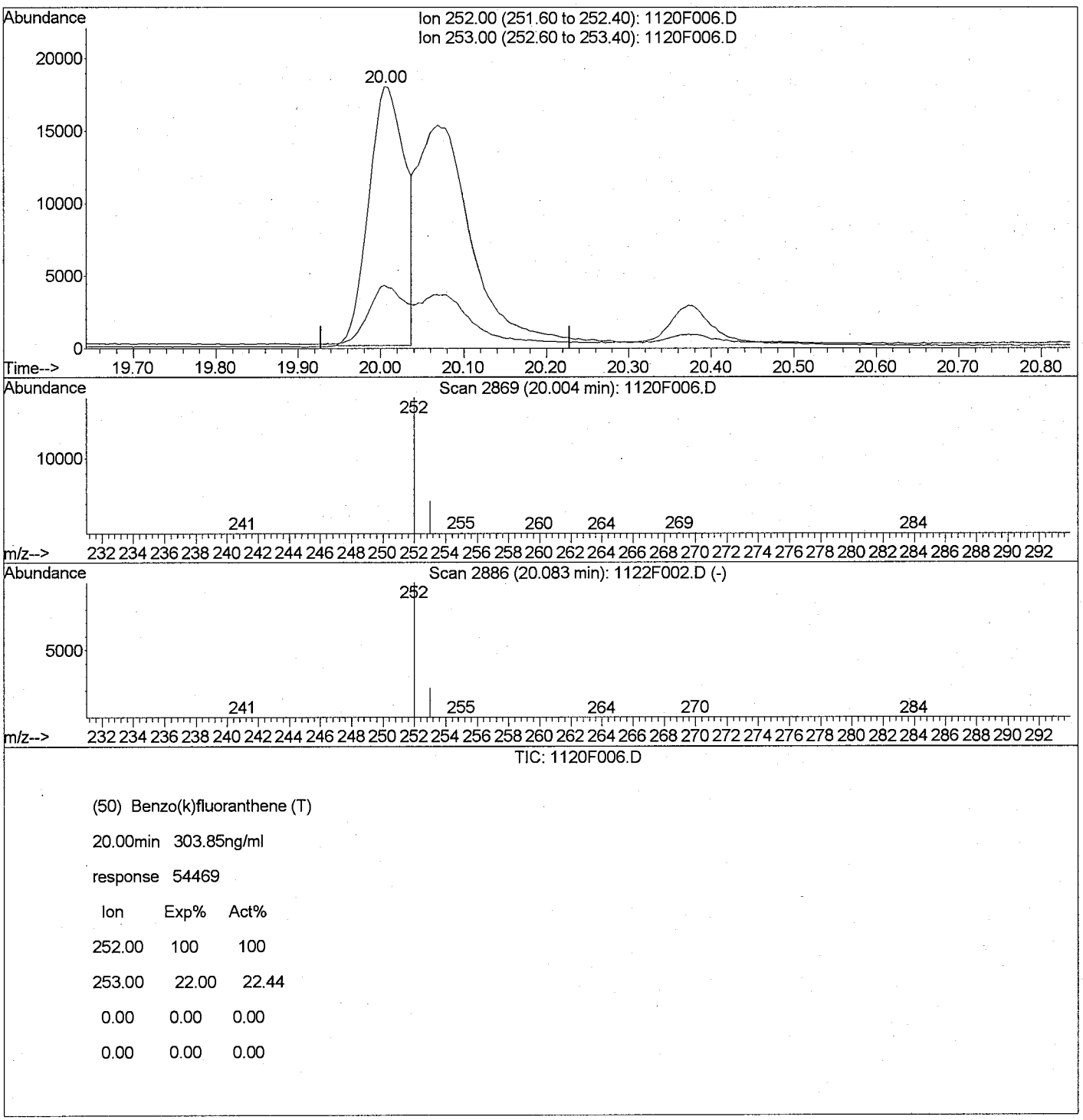
Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.5



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F006.D Vial: 3
Acq On : 20 Nov 2003 8:11 am Operator: LWeiskopf
Sample : K2308433-003DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F006.D

(50) Benzo(k)fluoranthene (T)

20.00min 303.85ng/ml

response 54469

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.44
0.00	0.00	0.00
0.00	0.00	0.00

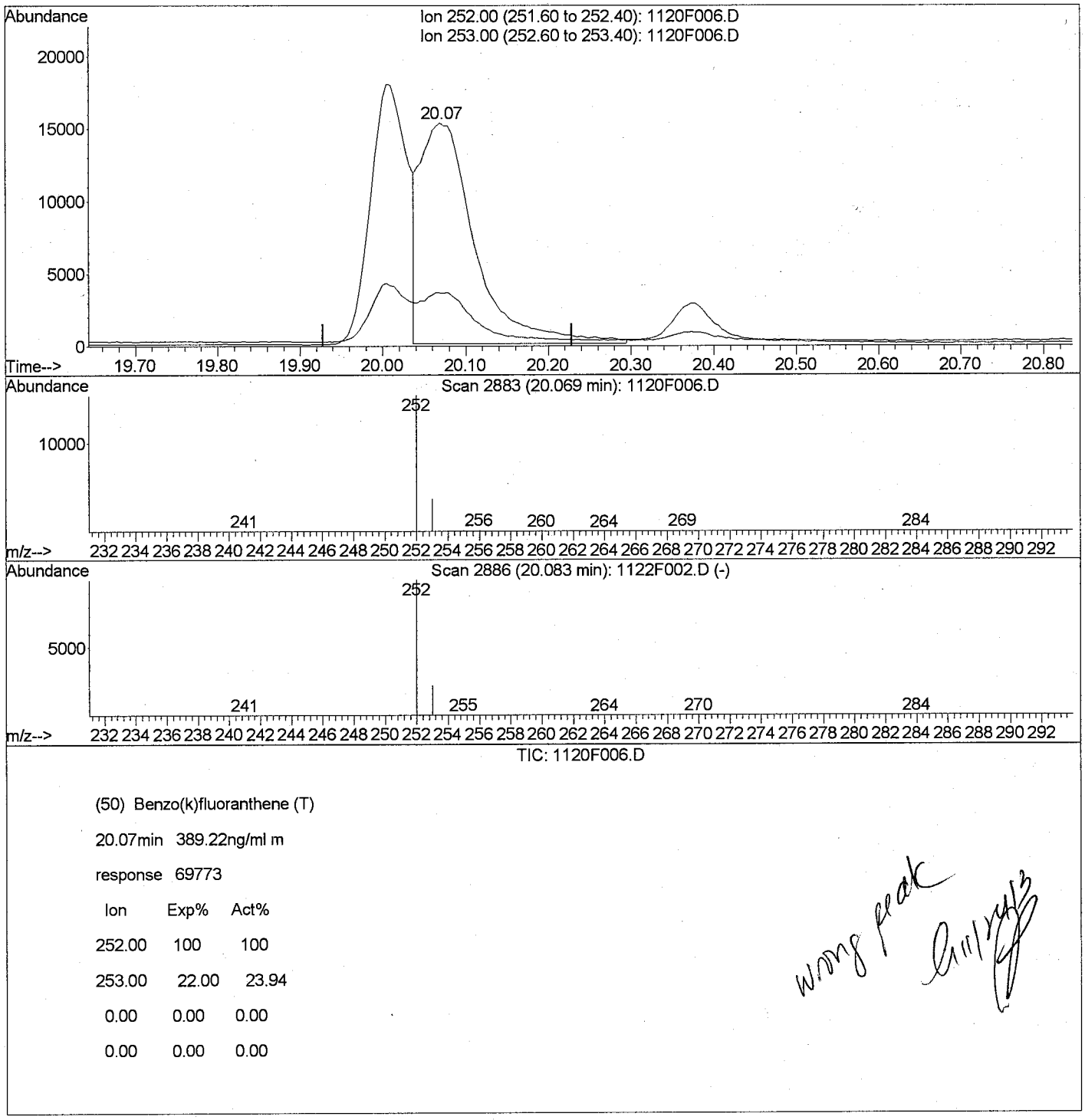
1120F006.D 1107ALK.M Mon Nov 24 09:16:28 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F006.D
Acq On : 20 Nov 2003 8:11 am
Sample : K2308433-003DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:16 2003

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F006.D

(50) Benzo(k)fluoranthene (T)

20.07min 389.22ng/ml m

response 69773

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	23.94
0.00	0.00	0.00
0.00	0.00	0.00

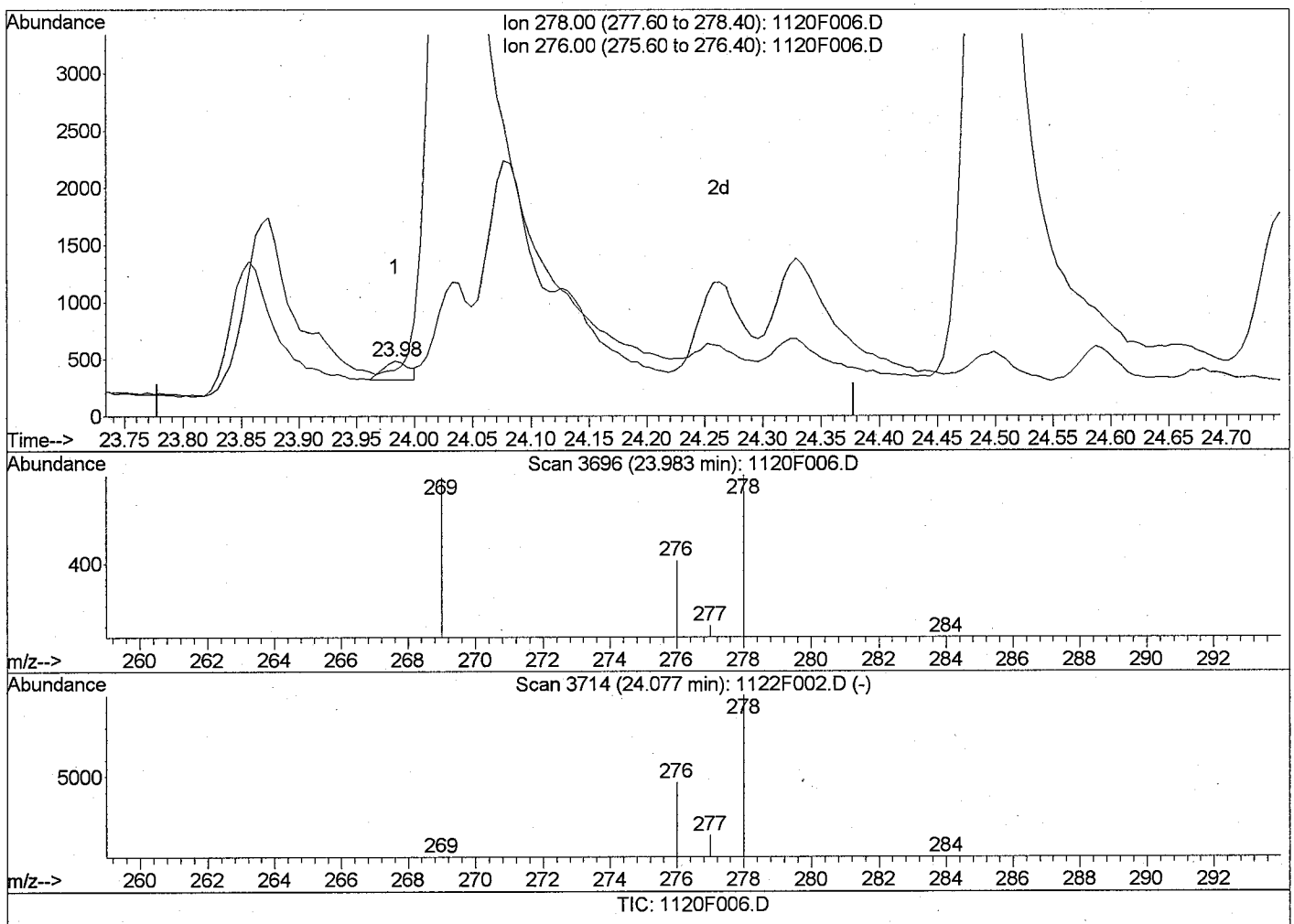
wrong peak

1120F006.D 1107ALK.M Mon Nov 24 09:16:34 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F006.D Vial: 3
Acq On : 20 Nov 2003 8:11 am Operator: LWeiskopf
Sample : K2308433-003DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F006.D

(55) Dibenz(a,h)anthracene (T)

23.98min 2.46ng/ml

response 258

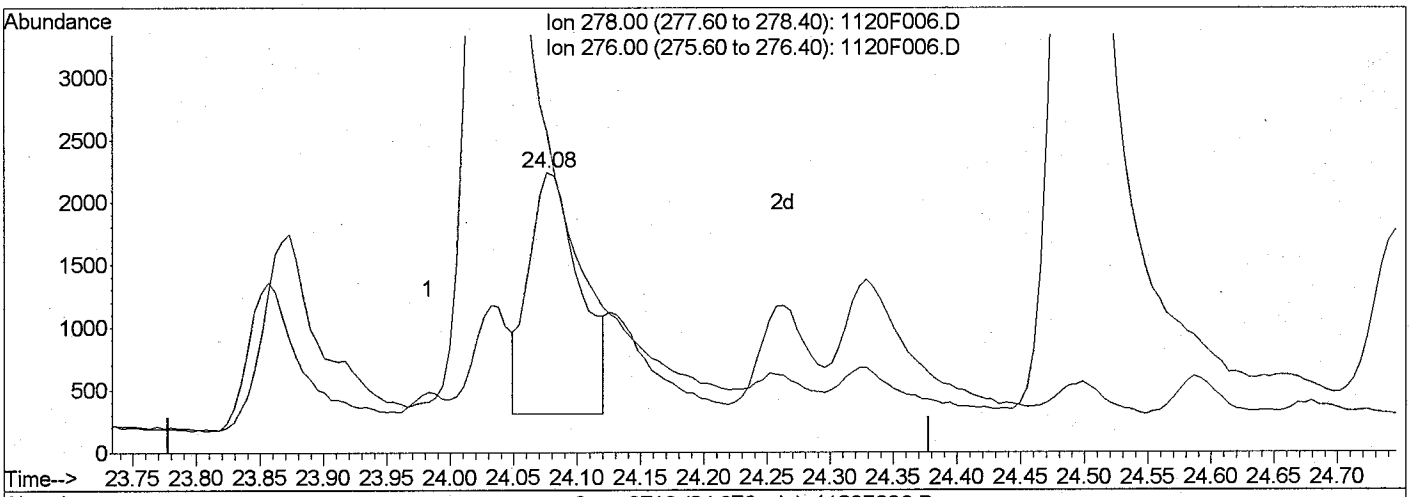
Ion	Exp%	Act%
278.00	100	100
276.00	35.30	8.59
0.00	0.00	0.00
0.00	0.00	0.00

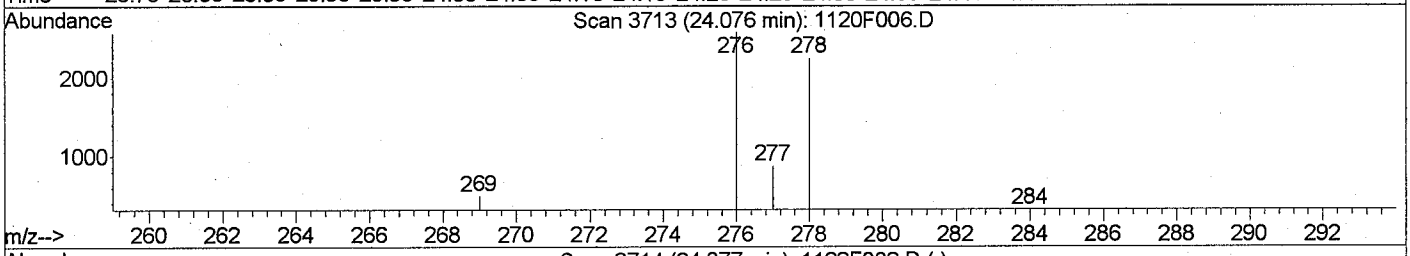
1120F006.D 1107ALK.M Mon Nov 24 09:16:41 2003

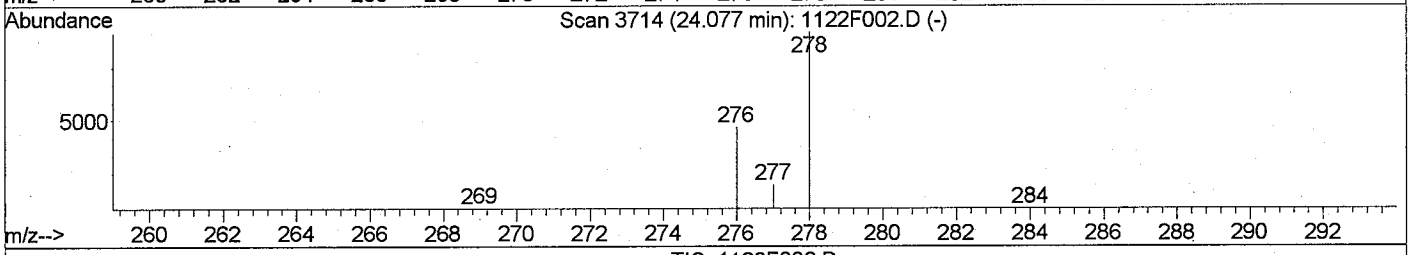
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F006.D Vial: 3
Acq On : 20 Nov 2003 8:11 am Operator: LWeiskopf
Sample : K2308433-003DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F006.D

(55) Dibenz(a,h)anthracene (T)

24.08min 51.23ng/ml m

response 5378

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	114.59#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/24/03

1120F006.D 1107ALK.M Mon Nov 24 09:16:46 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4
Lab Code: K2308433-004

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**11**		5.0	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**8.3**		5.0	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**9.1**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**19**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**25**		5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**16**		5.0	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**21**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**17**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**53**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**45**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**21**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**20**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**29**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**33**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**11**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**29**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**32**		5.0	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**650**		5.0	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**130**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**210**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**120**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**69**		5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**39**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1400**	D	50	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1200**	D	50	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**480**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**620**		5.0	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**770**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**320**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**120**		5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**63**		5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**21**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**720**		5.0	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4
Lab Code: K2308433-004

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**570**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**490**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**720**		5.0	1	11/05/03	11/19/03	KWG0317778	
Perylene	**160**		5.0	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**720**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**89**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**410**		5.0	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	27-110	11/19/03	Acceptable
Fluoranthene-d10	90	34-122	11/19/03	Acceptable
Terphenyl-d14	97	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F040.D
Lab ID: K2308433-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 18:14
Date Quantitated: 11/21/2003 12:13
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	12485.66	NA	10000	See DI
	Fluoranthene	15782.12	NA	10000	1

Primary Review: 11/24/3

Secondary Review: 11/24/3

Printed: 11/21/2003 13:54:02
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247862	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F040.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 18:14	**Quant Date:**	11/21/2003 12:13	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-004			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	264184	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	139936	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	210940	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	212311	1,000.00	OK
5	Perylene-d12	21.39	0.03	264	139477	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	104533	746.91	75	27-110	OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	189527	897.70	90	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	187498	969.00	97	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	32415	108.52	11		
1	2-Methylnaphthalene	6.37		0.00	142	14849	84.18	8.3		
1	1-Methylnaphthalene	6.52	0.01	0.00	142	15249	92.23	9.1		
1	Biphenyl	7.04	0.01	0.00	154	6815	31.86	3.2	J	
1	C2-Naphthalenes	7.42	?	?	156	56091**m**	187.78	19		
1	C3-Naphthalenes	8.94	?	?	170	76699**m**	256.77	25		
1	C4-Naphthalenes	10.46	?	?	184	49123**m**	164.45	16		
2	Acenaphthylene	7.74	0.01	0.00	152	57753	214.21	21		
2	Acenaphthene	8.06	0.01	0.00	154	88110	530.25	53		
2	Dibenzofuran	8.35	0.01	0.00	168	37744	169.44	17		
2	Fluorene	8.99		0.00	166	80436	451.88	45		
2	C1-Fluorenes	10.13	?	?	180	38213**m**	214.68	21		
2	C2-Fluorenes	11.40	?	?	194	36706**m**	206.21	20		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F040.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 18:14	**Quant Date:**	11/21/2003 12:13	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-004			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.75	?	?	208	52584**m**	295.41	29		
3	Dibenzothiophene	10.71		0.00	184	80875	332.30	33		
3	C1-Dibenzothiophenes	10.72	?	?	198	28014**m**	115.11	11		
3	C2-Dibenzothiophenes	12.63	?	?	212	71068**m**	292.01	29		
3	C3-Dibenzothiophenes	13.68	?	?	226	78033**m**	320.63	32		
3	Phenanthrene	10.97		0.00	178	1678815	6,567	650		
3	Anthracene	11.08	0.01	0.00	178	283511	1,298	130		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	539619**m**	2,111	210		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	303046**m**	1,185	120		
3	C3-Phenanthrenes/Anthracenes	14.45	?	?	220	177063**m**	692.59	69		
3	C4-Phenanthrenes/Anthracenes	15.74	?	?	234	100347**m**	392.51	39		
3	Fluoranthene	13.67	0.02	0.00	202	4016263	15,782	1600	E	NR
4	Pyrene	14.17	0.01	0.00	202	3464865	12,486	1200	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	1335741**m**	4,813	480		
4	Benz(a)anthracene	17.02	0.01	0.00	228	1325480	6,274	620		
4	Chrysene	17.11	0.01	0.00	228	1756652	7,775	770		
4	C1-Chrysenes	18.05	?	?	242	726764**m**	3,217	320		
4	C2-Chrysenes	19.39	?	?	256	282841**m**	1,252	120		
4	C3-Chrysenes	20.94	?	?	270	142569**m**	631.03	63		
4	C4-Chrysenes	22.40	?	?	284	47563**m**	210.52	21		
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	1344511	7,221	720		
5	Benzo(k)fluoranthene	20.06	0.01	0.00	252	1366638**m**	5,784	570		
5	Benzo(e)pyrene	20.96	0.03	0.00	252	1029609	4,925	490		
5	Benzo(a)pyrene	21.15	0.03	0.00	252	1152818	7,279	720		
5	Perylene	21.48	0.03	0.00	252	288669	1,624	160		
5	Indeno(1,2,3-cd)pyrene	24.02	0.02	0.00	276	700104	7,271	720		
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	124420**m**	899.17	89		
5	Benzo(g,h,i)perylene	24.48	0.02	0.00	276	658571	4,126	410		

Prep Amount:	26.8 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	75.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:18 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	264184	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	139936	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	210940	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	212311	1000.00	ng/ml	0.01
48) Perylene-d12	21.39	264	139477	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	99489	514.08	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	51.41%		
16) Fluorene-d10	8.94	176	104533	746.91	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	74.69%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	189527	897.70	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	89.77%		
41) Terphenyl-d14	14.66	244	187498	969.00	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	96.90%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	32415	108.52	ng/ml	100
3) 2-Methylnaphthalene	6.37	142	14849	84.18	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	15249	92.23	ng/ml	99
6) Biphenyl	7.04	154	6815	31.86	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.27	156	10057	66.84	ng/ml	99
8) C2-Naphthalenes	7.42	156	56091m	187.78	ng/ml	
9) C3-Naphthalenes	8.94	170	76699m	256.77	ng/ml	
10) C4-Naphthalenes	10.46	184	49123m	164.45	ng/ml	
12) Acenaphthylene	7.74	152	57753	214.21	ng/ml	99
13) Acenaphthene	8.06	154	88110	530.25	ng/ml	100
14) Dibenzofuran	8.35	168	37744	169.44	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.76	170	7061	47.44	ng/ml	91
17) Fluorene	8.99	166	80436	451.88	ng/ml	99
18) C1-Fluorenes	10.13	180	38213m	214.68	ng/ml	
19) C2-Fluorenes	11.40	194	36706m	206.21	ng/ml	
20) C3-Fluorenes	12.75	208	52584m	295.41	ng/ml	
24) Dibenzothiophene	10.71	184	80875	332.30	ng/ml	97
25) C1-Dibenzothiophenes	10.72	198	28014m	115.11	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	71068m	292.01	ng/ml	
27) C3-Dibenzothiophenes	13.68	226	78033m	320.63	ng/ml	
28) Phenanthrene	10.97	178	1678815	6566.75	ng/ml	98
29) Anthracene	11.08	178	283511	1298.06	ng/ml	99
30) Carbazole	11.50	167	2249	13.03	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:18 2003 Quant Results File: 1107ALK.RES

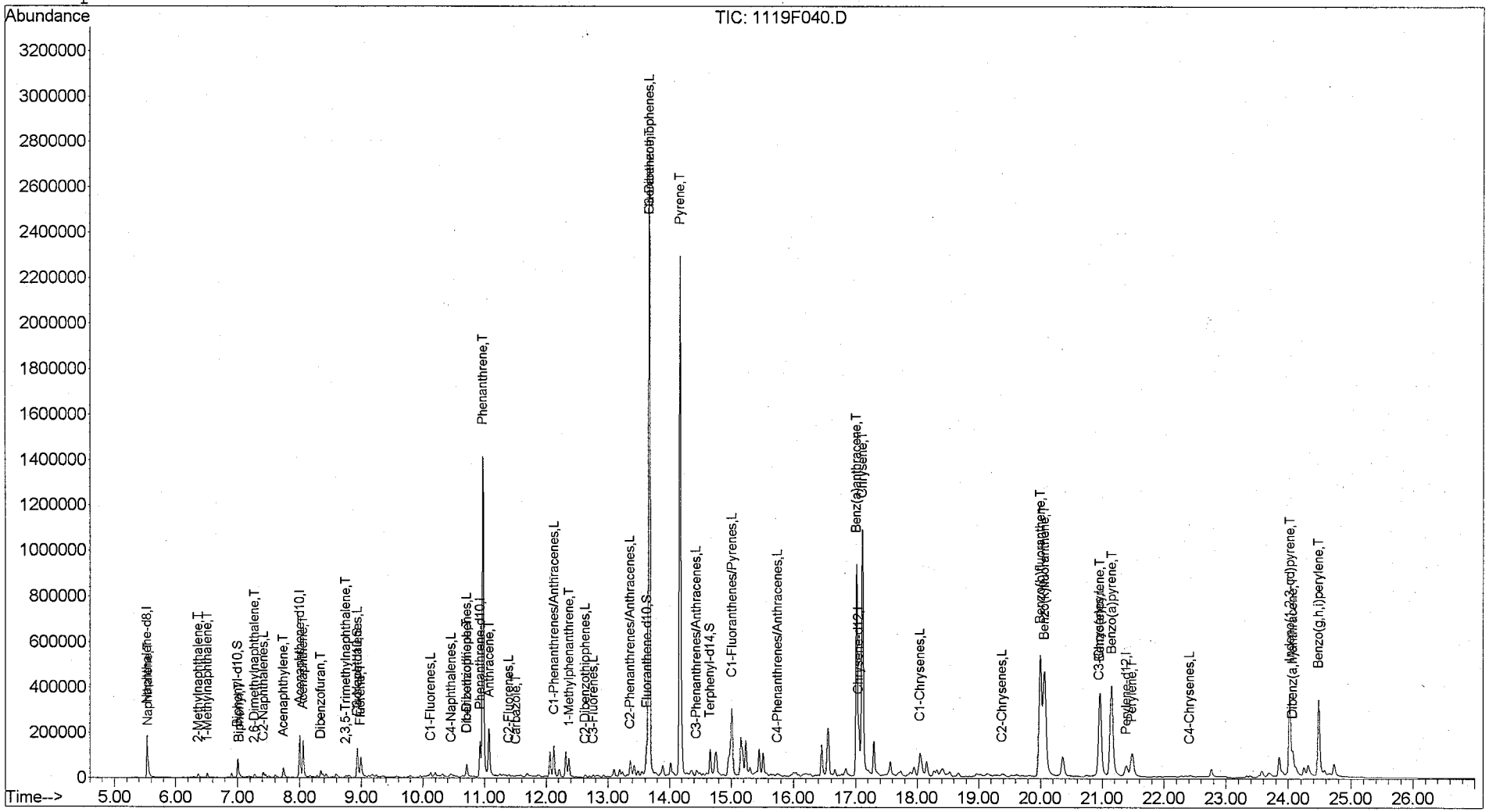
Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

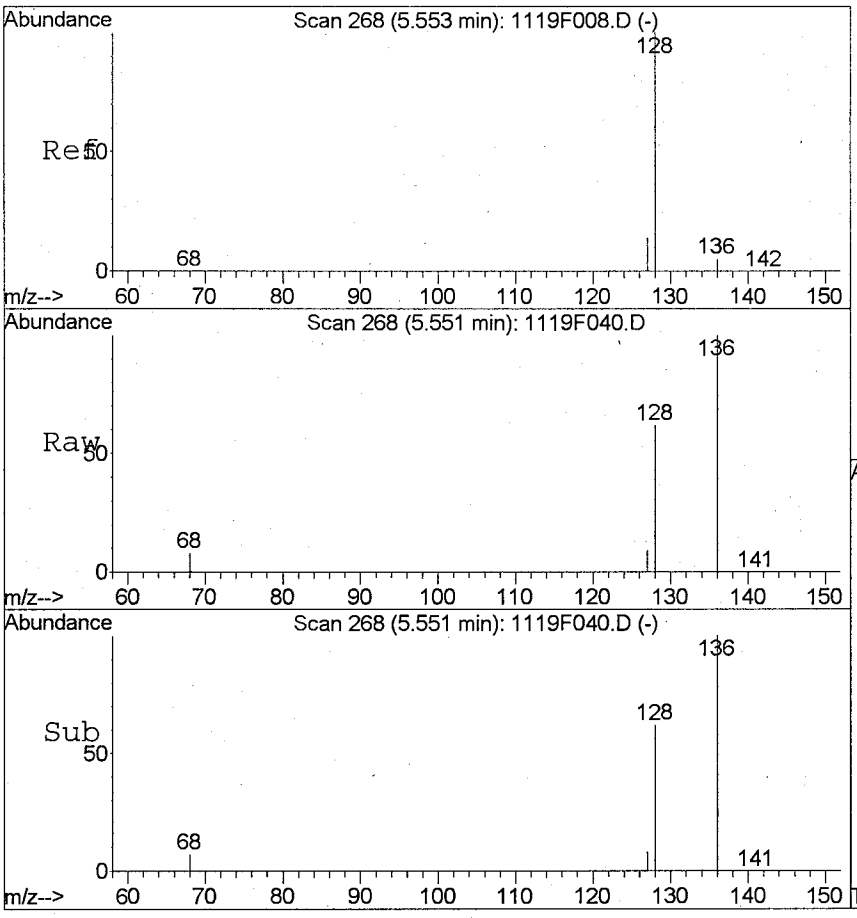
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	89372	514.87	ng/ml	99
32)	C1-Phenanthrenes/Anthracen	12.12	192	539619m	2110.74	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	303046m	1185.38	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.45	220	177063m	692.59	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.74	234	100347m	392.51	ng/ml	
36)	Fluoranthene	13.67	202	4016263	15782.12	ng/ml	100
39)	Pyrene	14.17	202	3464865	12485.66	ng/ml	97
40)	C1-Fluoranthenes/Pyrenes	15.01	216	1335741m	4813.35	ng/ml	
42)	Benz(a)anthracene	17.02	228	1325480	6273.60	ng/ml	94
43)	Chrysene	17.11	228	1756652	7775.23	ng/ml	99
44)	C1-Chrysenes	18.05	242	726764m	3216.78	ng/ml	
45)	C2-Chrysenes	19.39	256	282841m	1251.90	ng/ml	
46)	C3-Chrysenes	20.94	270	142569m	631.03	ng/ml	
47)	C4-Chrysenes	22.40	284	47563m	210.52	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	1344511	7220.52	ng/ml	100
50)	Benzo(k)fluoranthene	20.06	252	1366638m	5784.26	ng/ml	
51)	Benzo(e)pyrene	20.96	252	1029609	4924.71	ng/ml	100
52)	Benzo(a)pyrene	21.15	252	1152818	7278.54	ng/ml	100
53)	Perylene	21.48	252	288669	1623.62	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.02	276	700104	7271.26	ng/ml	93
55)	Dibenz(a,h)anthracene	24.07	278	124420m	899.17	ng/ml	
56)	Benzo(g,h,i)perylene	24.48	276	658571	4125.67	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:13 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

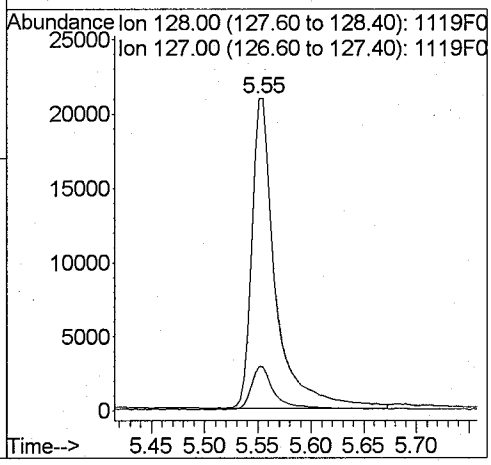


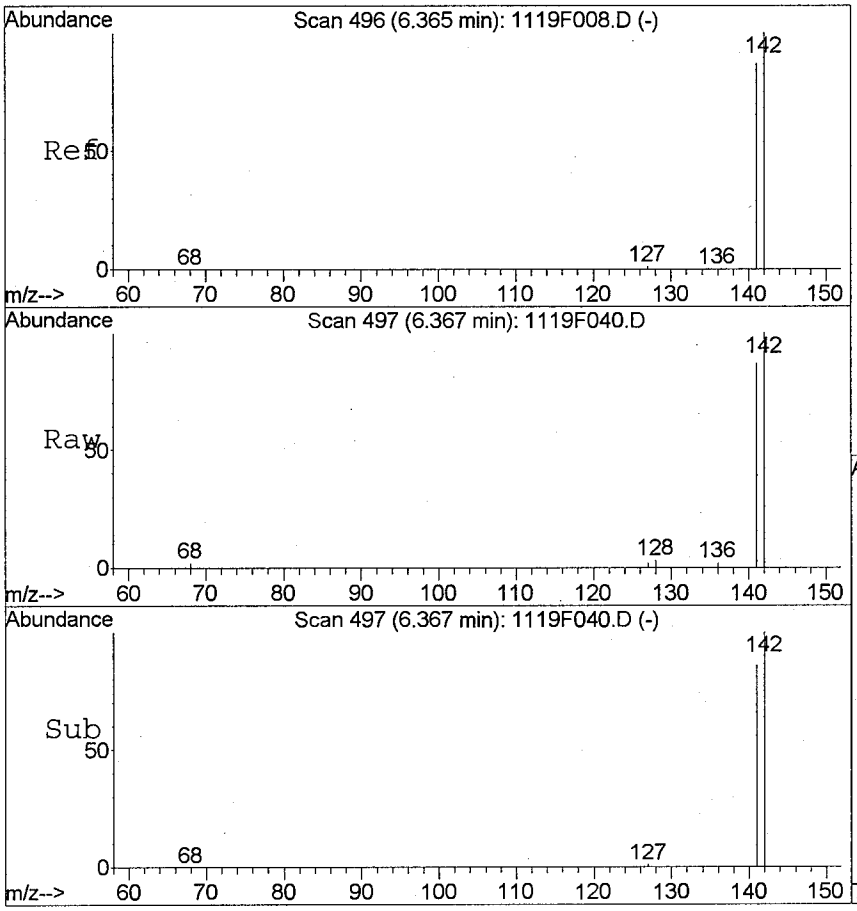


#2
Naphthalene
Concen: 108.52 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. -0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:128 Resp: 32415

Ion	Ratio	Lower	Upper
128	100		
127	13.7	0.0	43.8

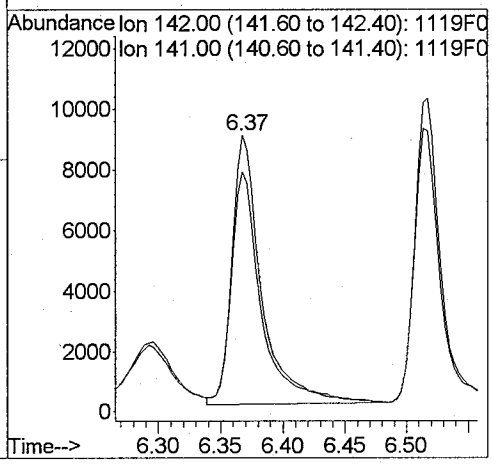


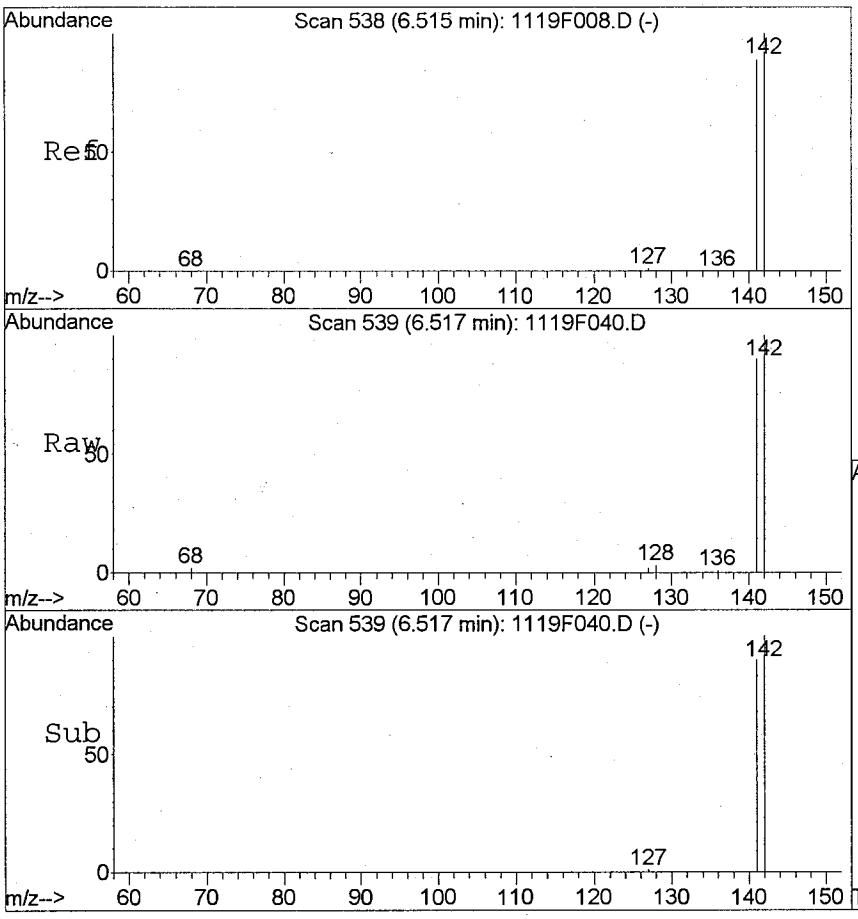


#3
2-Methylnaphthalene
Concen: 84.18 ng/ml
RT: 6.37 min Scan# 497
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:142 Resp: 14849

Ion	Ratio	Lower	Upper
142	100		
141	86.4	57.2	117.2

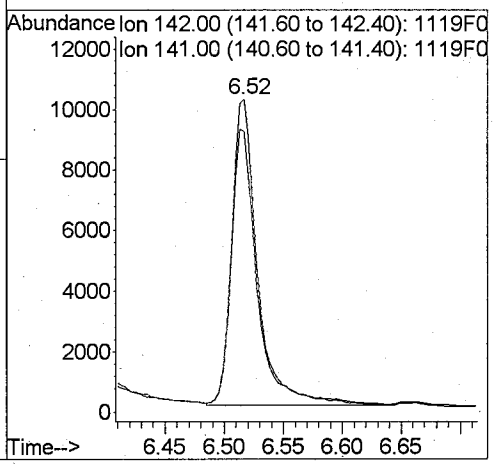


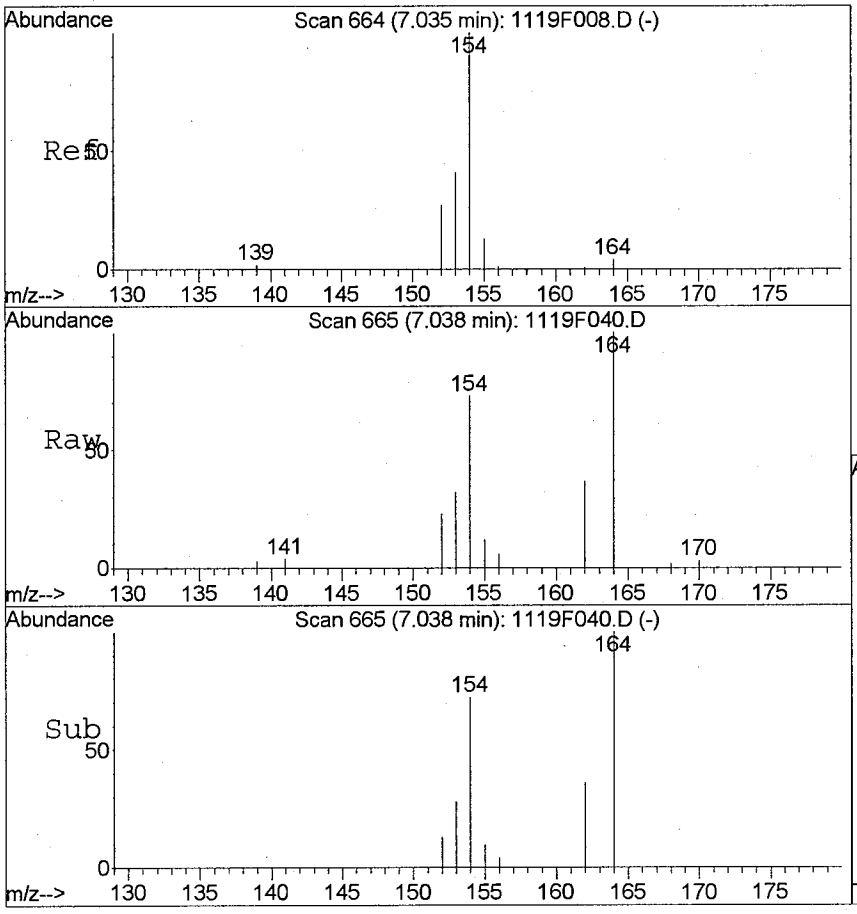


#4
1-Methylnaphthalene
Concen: 92.23 ng/ml
RT: 6.52 min Scan# 539
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:142 Resp: 15249

Ion	Ratio	Lower	Upper
142	100		
141	89.3	58.5	118.5

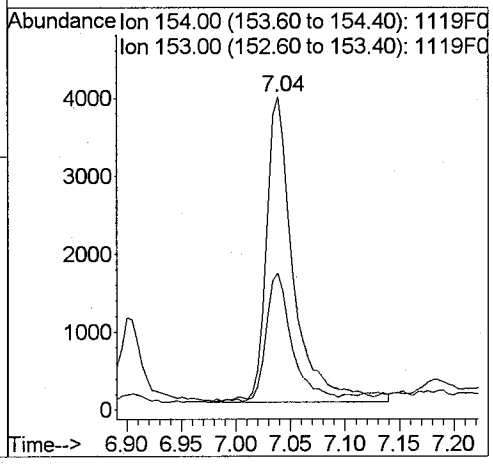


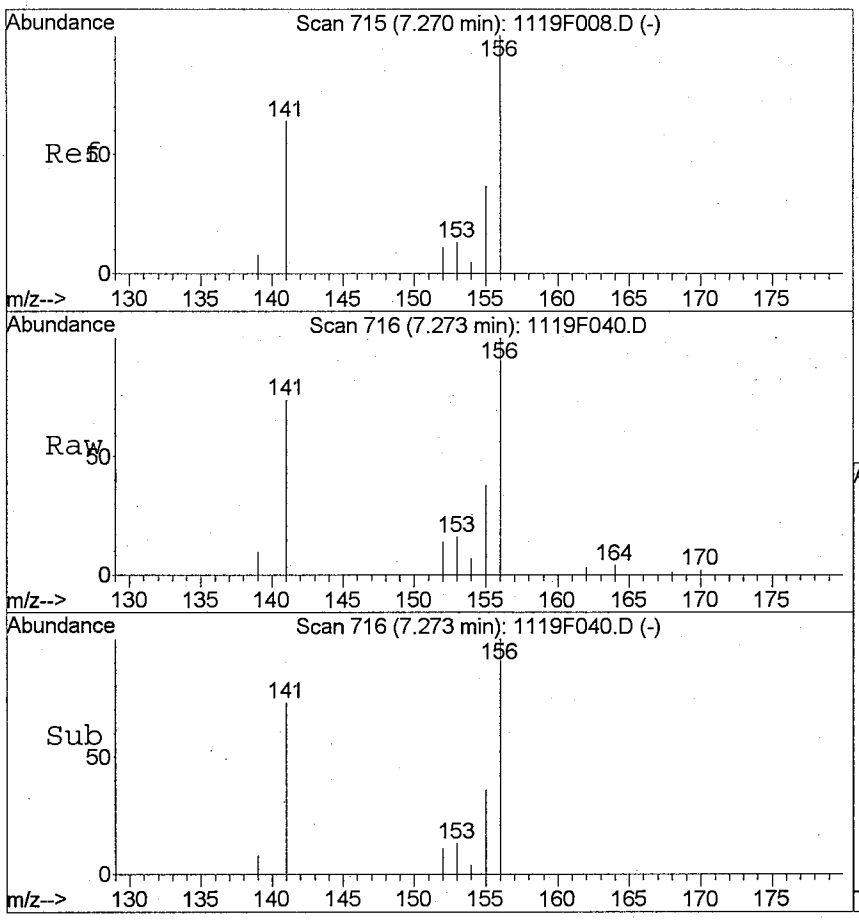


#6
Biphenyl
Concen: 31.86 ng/ml
RT: 7.04 min Scan# 665
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:154 Resp: 6815

Ion	Ratio	Lower	Upper
154	100		
153	41.5	11.3	71.3

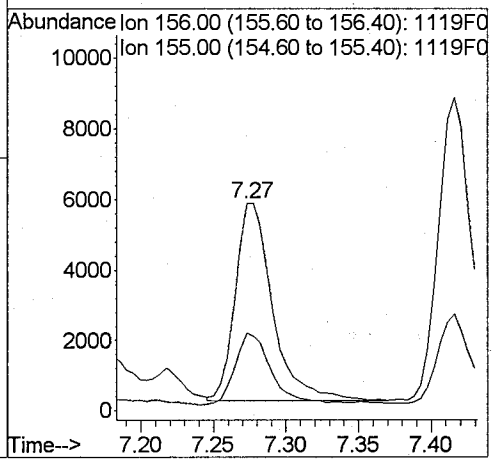


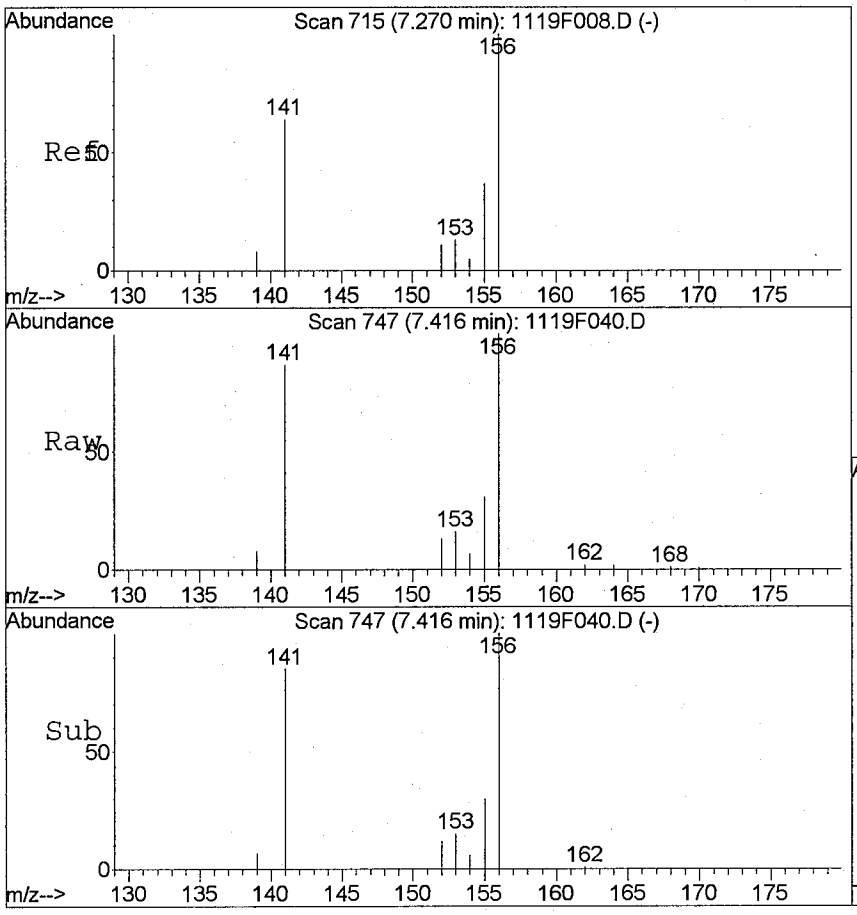


#7
2,6-Dimethylnaphthalene
Concen: 66.84 ng/ml
RT: 7.27 min Scan# 716
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:156 Resp: 10057

Ion	Ratio	Lower	Upper
156	100		
155	36.2	6.9	66.9

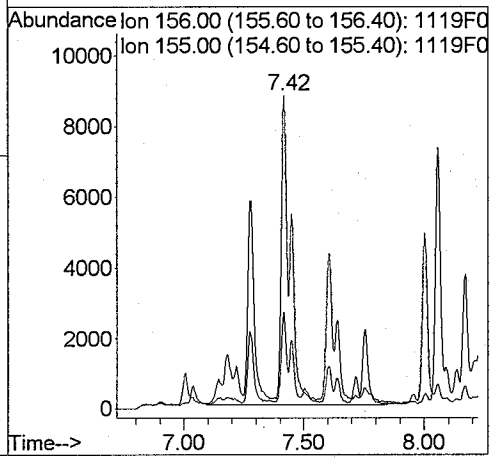


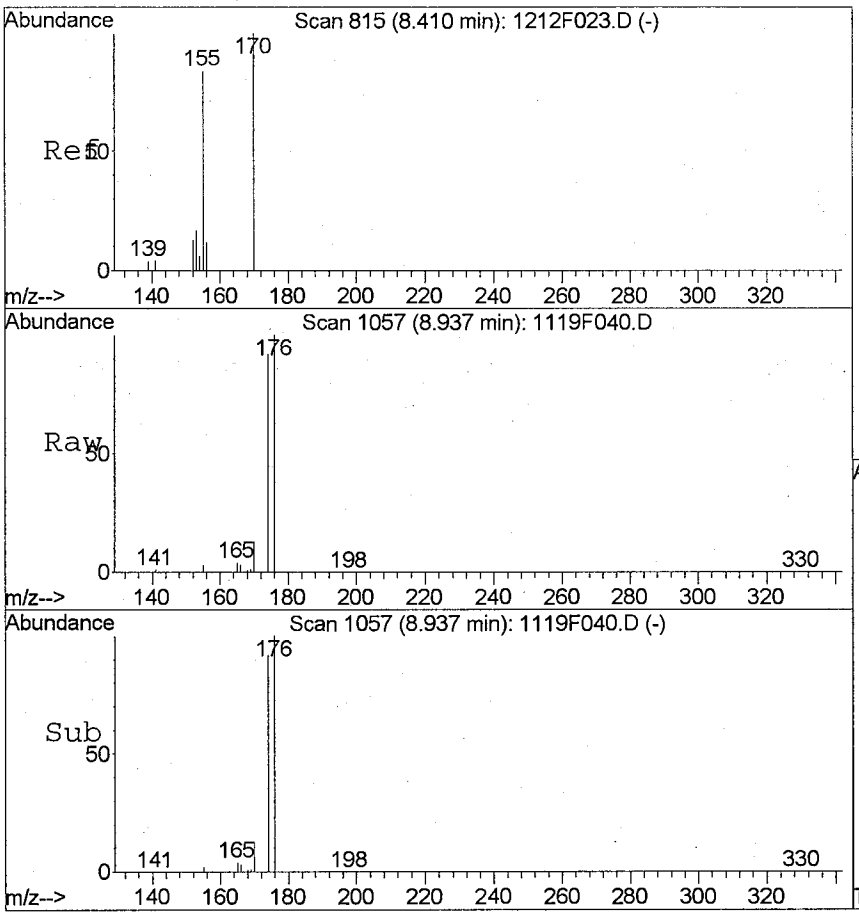


#8
C2-Naphthalenes
Concen: 187.78 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:156 Resp: 56091

Ion	Ratio	Lower	Upper
156	100		
155	30.9	8.3	68.3

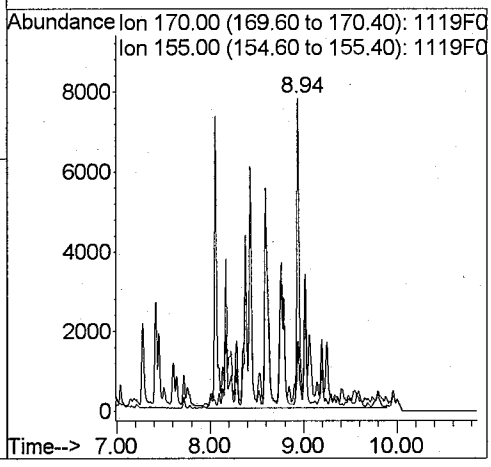


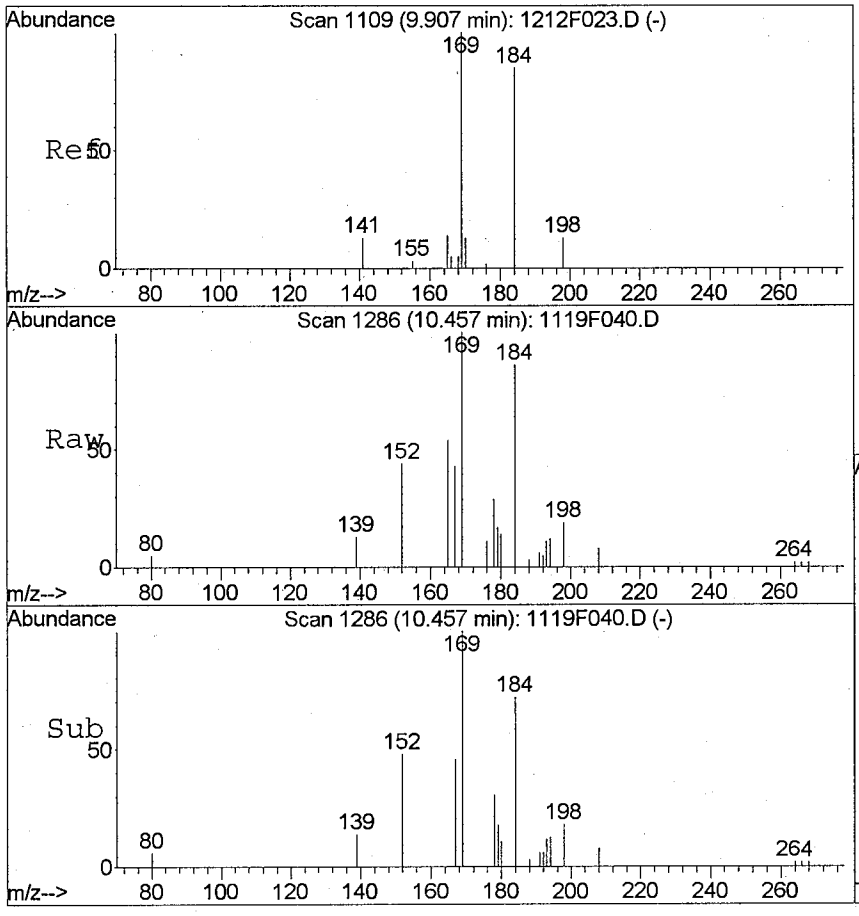


#9
C3-Naphthalenes
Concen: 256.77 ng/ml m
RT: 8.94 min Scan# 1057
Delta R.T. 0.41 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:170 Resp: 76699

Ion	Ratio	Lower	Upper
170	100		
155	22.4	56.9	116.9#

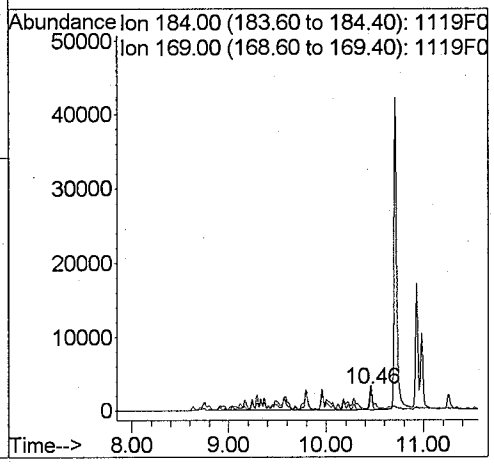


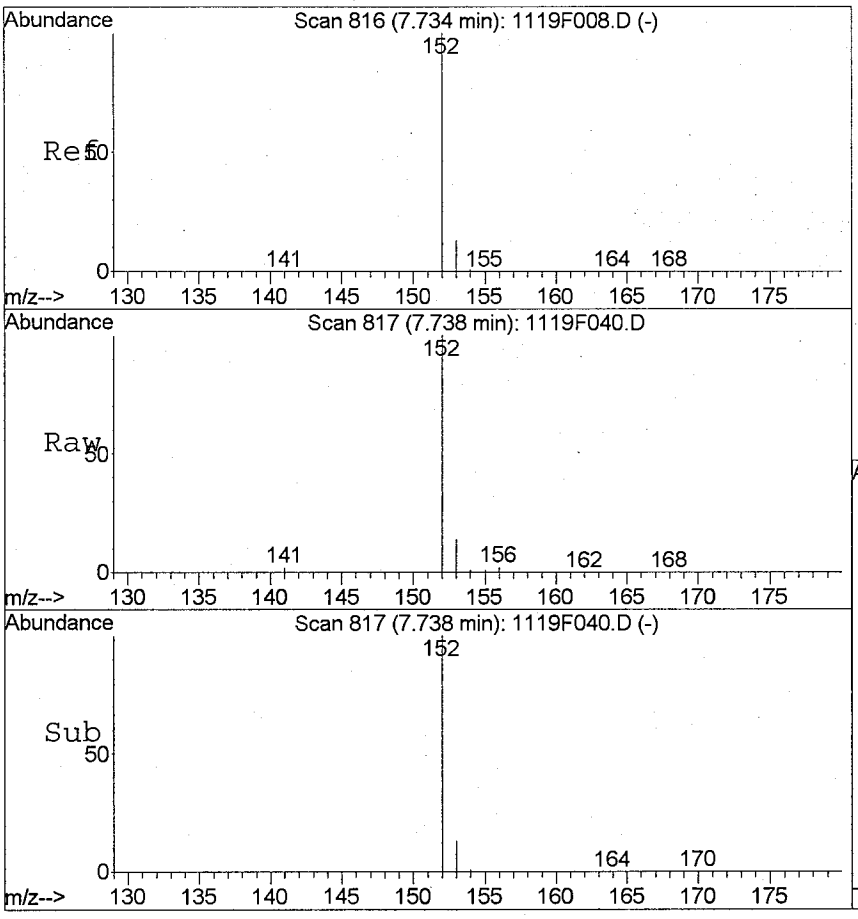


#10
C4-Naphthalenes
Concen: 164.45 ng/ml m
RT: 10.46 min Scan# 1286
Delta R.T. 0.40 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:184 Resp: 49123

Ion	Ratio	Lower	Upper
184	100		
169	116.8	89.7	149.7

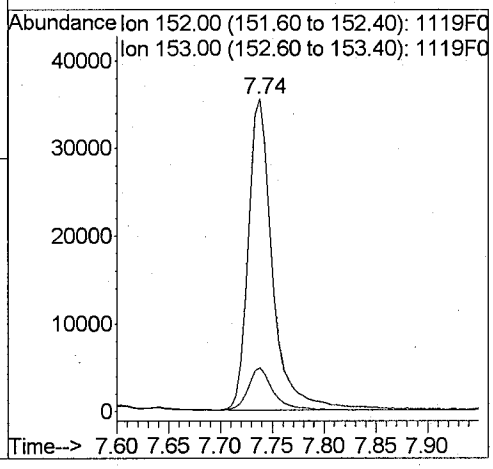


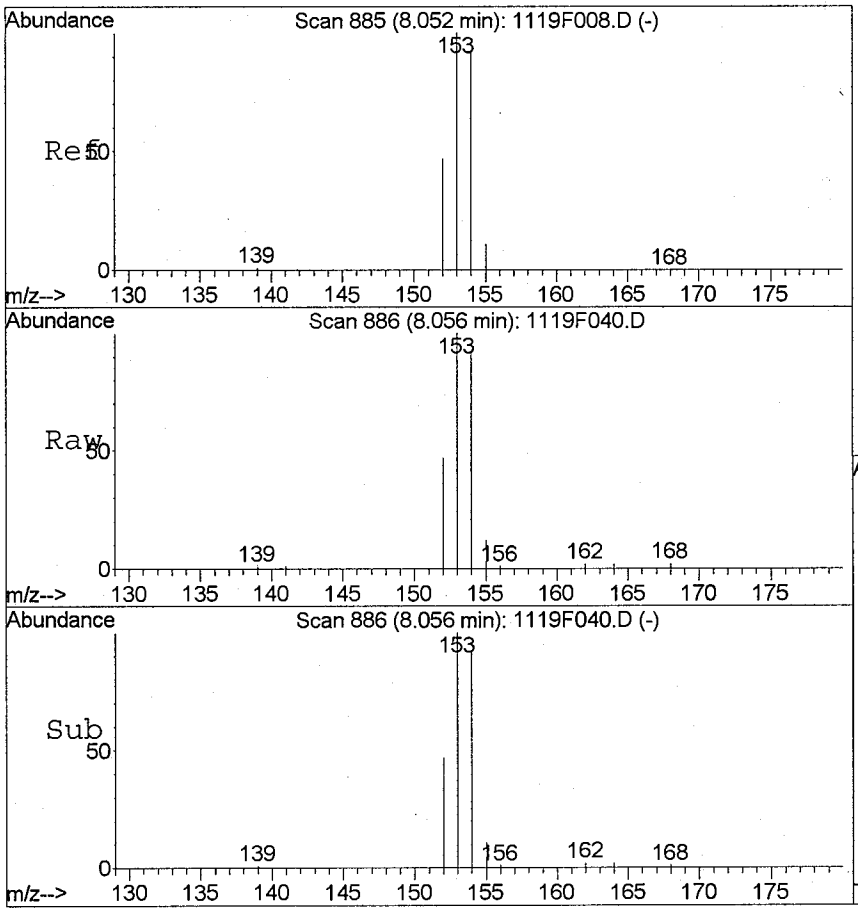


#12
Acenaphthylene
Concen: 214.21 ng/ml
RT: 7.74 min Scan# 817
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:152 Resp: 57753

Ion	Ratio	Lower	Upper
152	100		
153	13.6	0.0	43.1

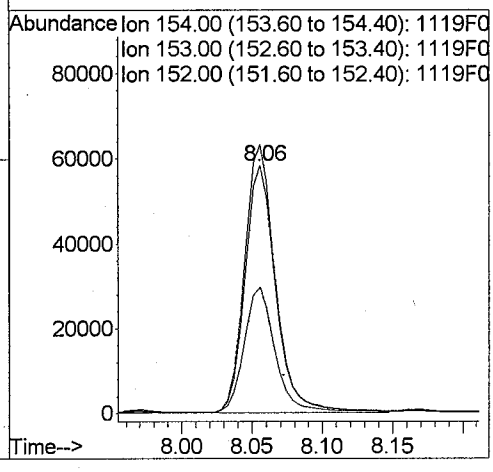


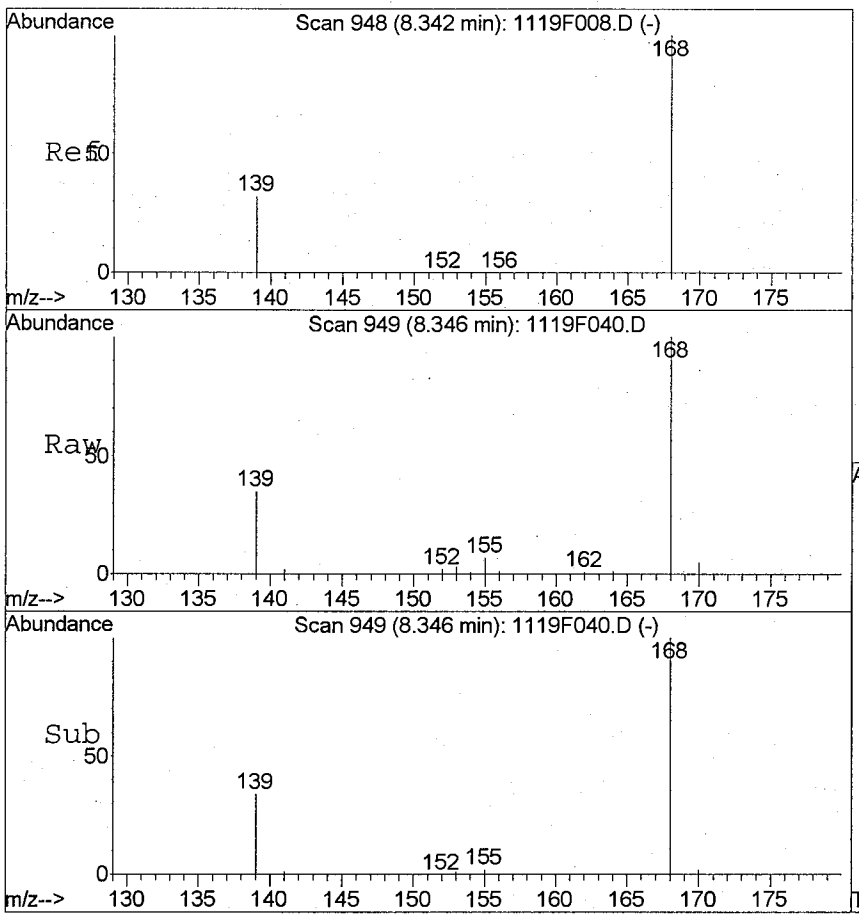


#13
Acenaphthene
Concen: 530.25 ng/ml
RT: 8.06 min Scan# 886
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:154 Resp: 88110

Ion	Ratio	Lower	Upper
154	100		
153	108.7	78.4	138.4
152	50.7	20.4	80.4

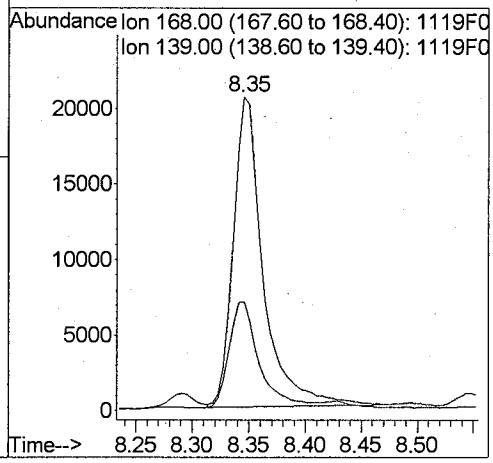


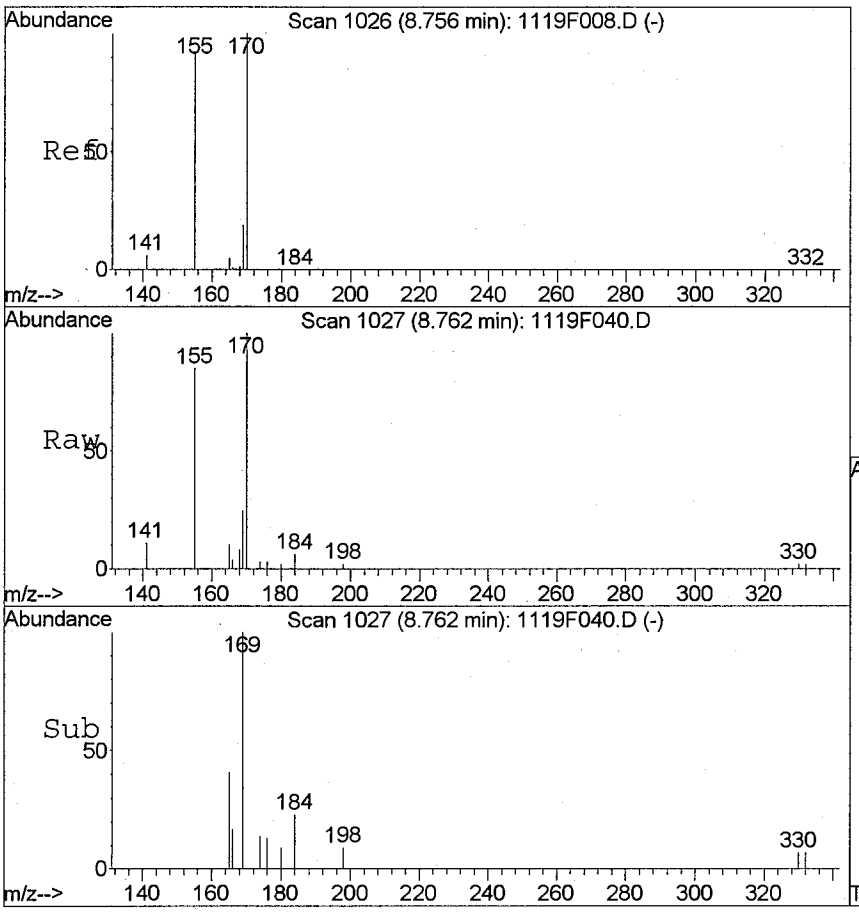


#14
Dibenzofuran
Concen: 169.44 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:168 Resp: 37744

Ion	Ratio	Lower	Upper
168	100		
139	34.4	2.4	62.4

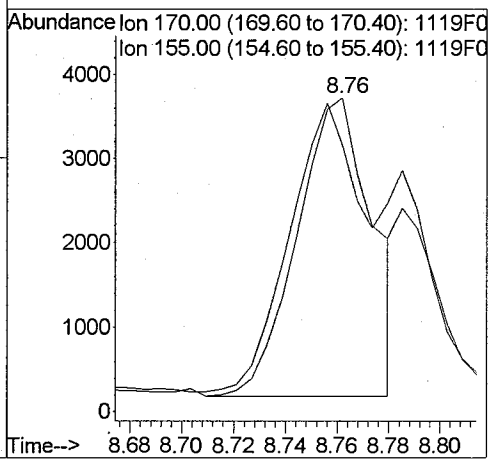


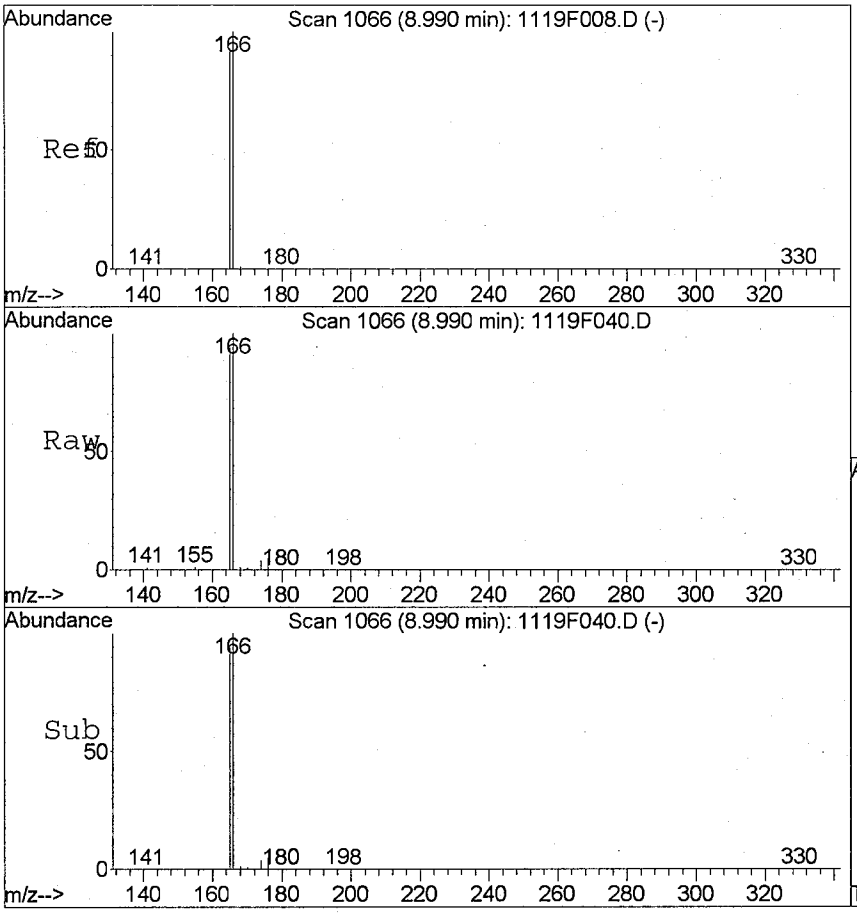


#15
2,3,5-Trimethylnaphthalene
Concen: 47.44 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:170 Resp: 7061

Ion	Ratio	Lower	Upper
170	100		
155	82.6	61.5	121.5

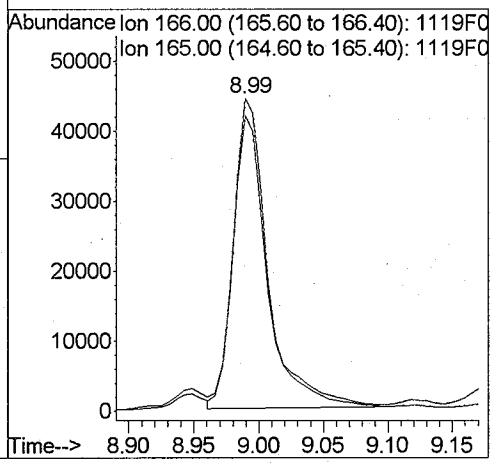


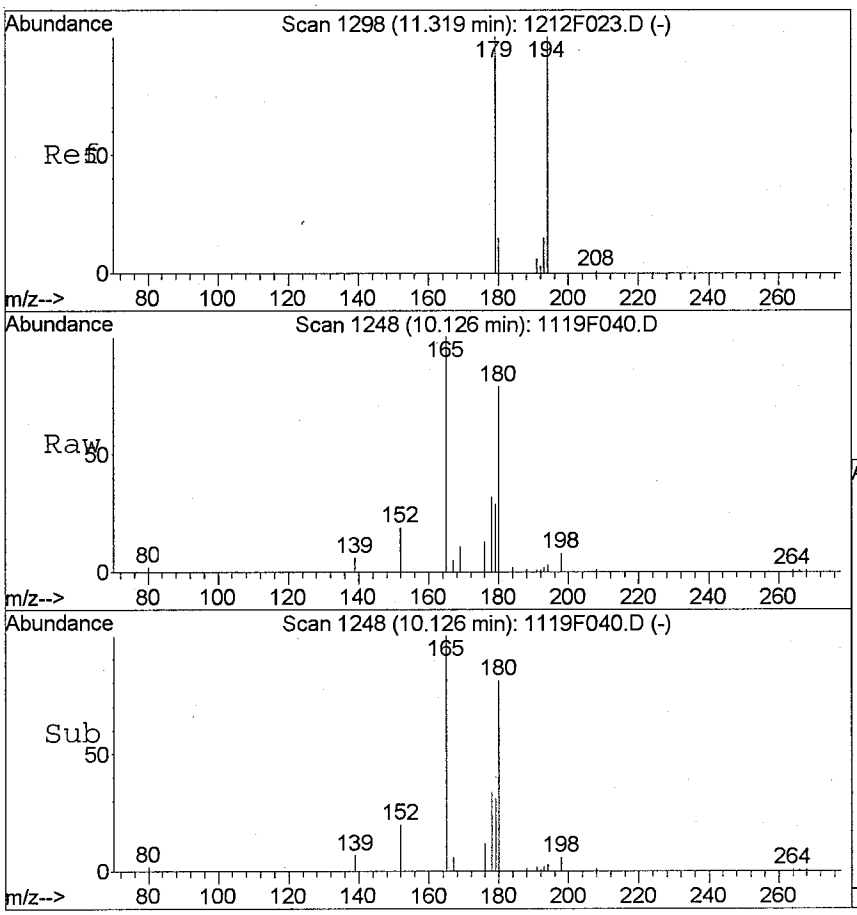


#17
Fluorene
Concen: 451.88 ng/ml
RT: 8.99 min Scan# 1066
Delta R.T. -0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:166 Resp: 80436

Ion	Ratio	Lower	Upper
166	100		
165	93.6	62.9	122.9

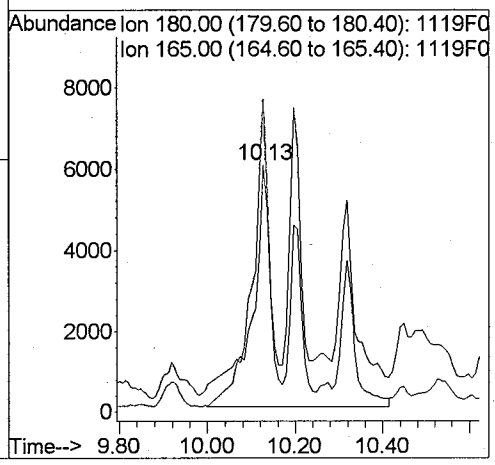


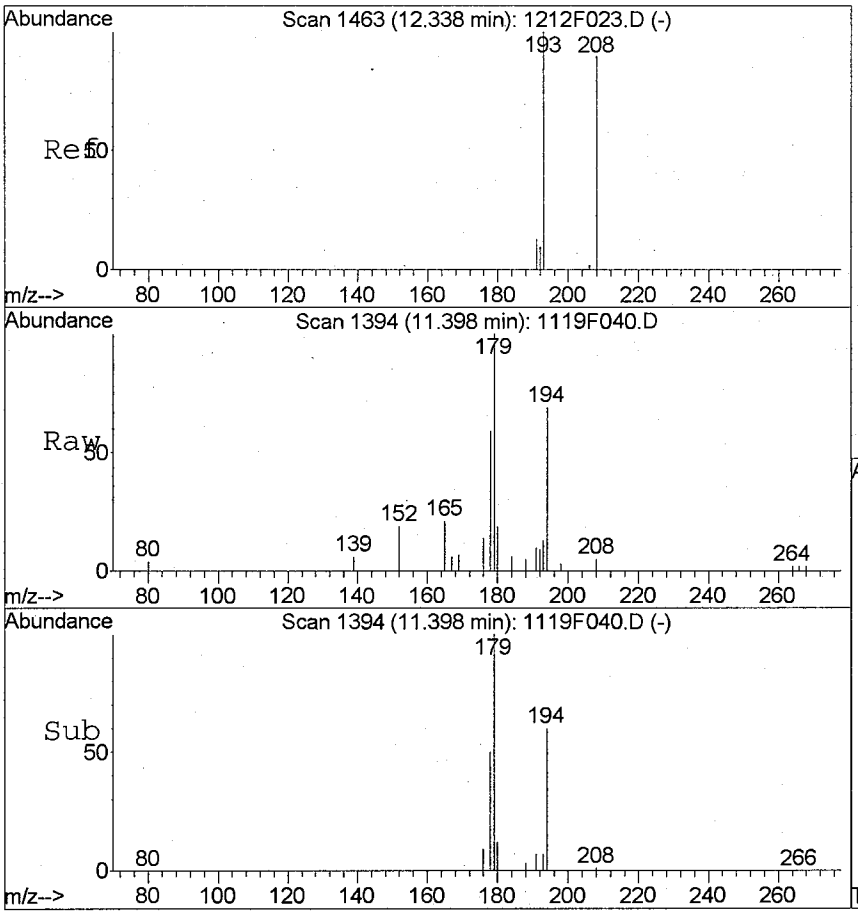


#18
C1-Fluorenes
Concen: 214.68 ng/ml m
RT: 10.13 min Scan# 1248
Delta R.T. -0.17 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:180 Resp: 38213

Ion	Ratio	Lower	Upper
180	100		
165	126.7	148.7	208.7#

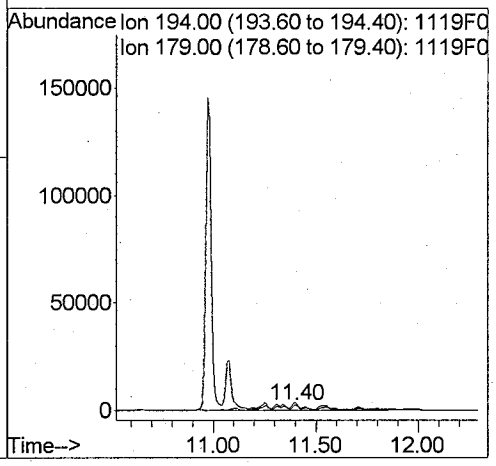


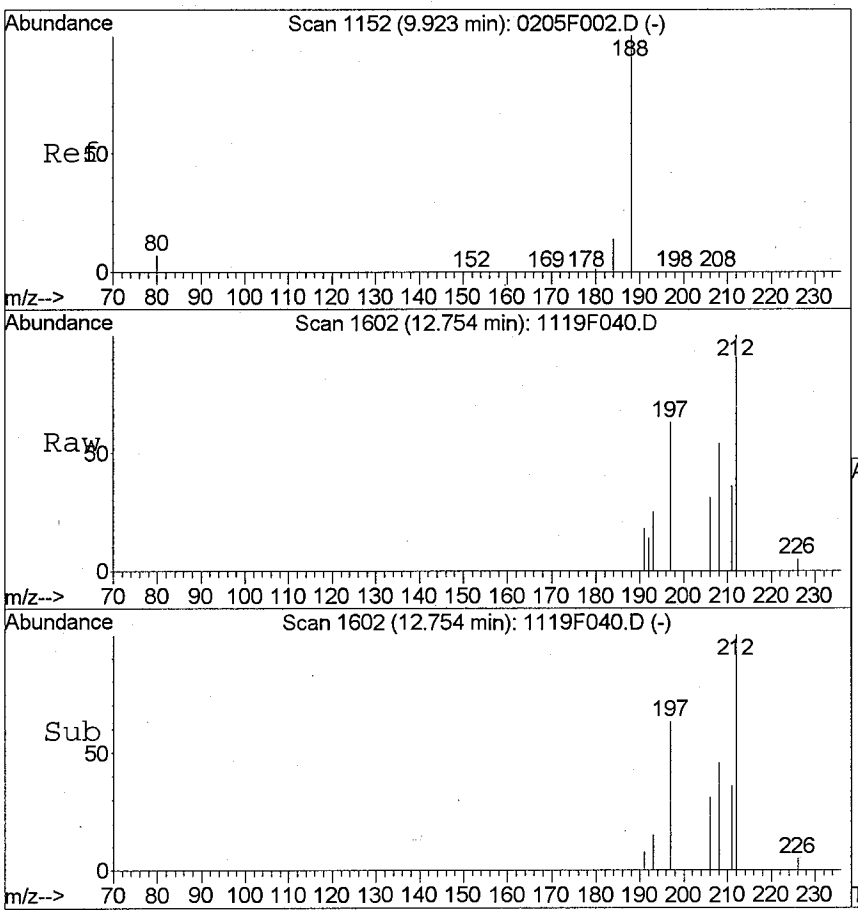


#19
C2-Fluorenes
Concen: 206.21 ng/ml m
RT: 11.40 min Scan# 1394
Delta R.T. -0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:194 Resp: 36706

Ion	Ratio	Lower	Upper
194	100		
179	144.6	107.0	167.0

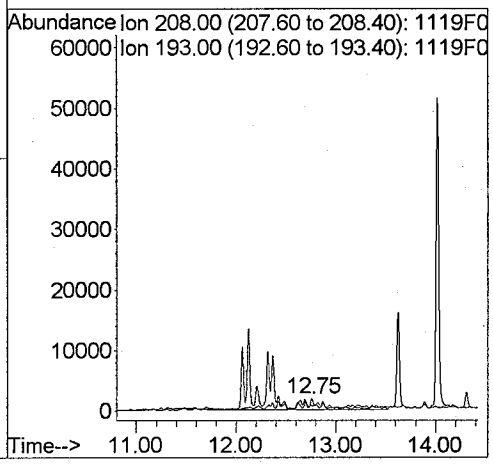


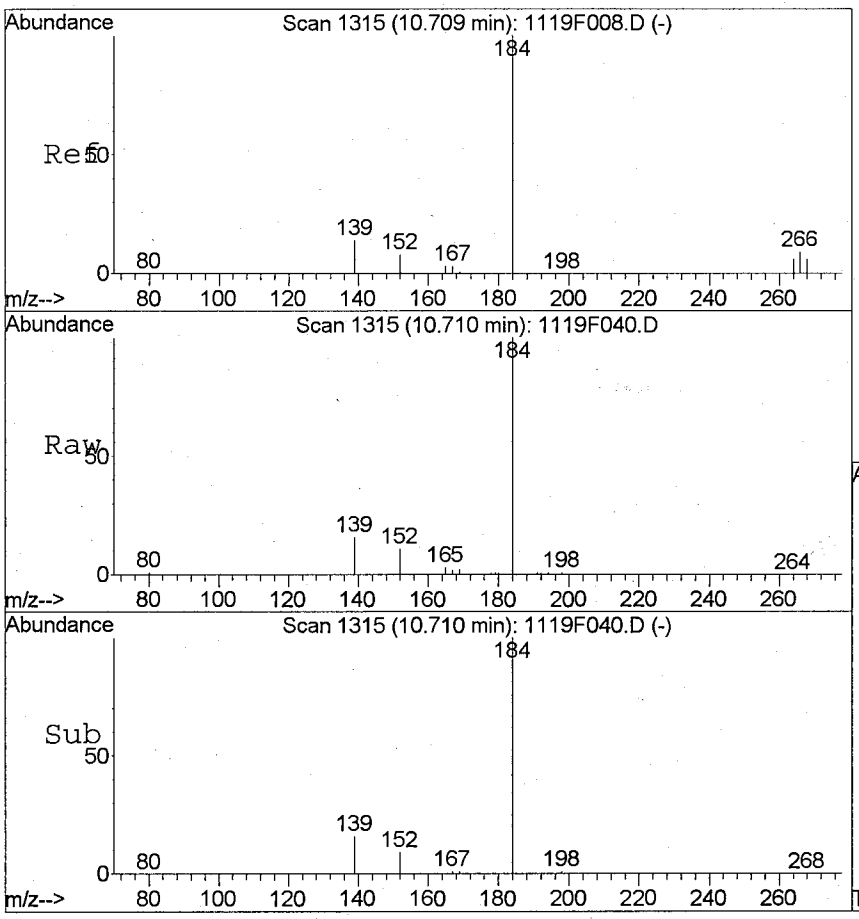


#20
C3-Fluorenes
Concen: 295.41 ng/ml m
RT: 12.75 min Scan# 1602
Delta R.T. 0.23 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:208 Resp: 52584

Ion	Ratio	Lower	Upper
208	100		
193	45.8	92.0	152.0#

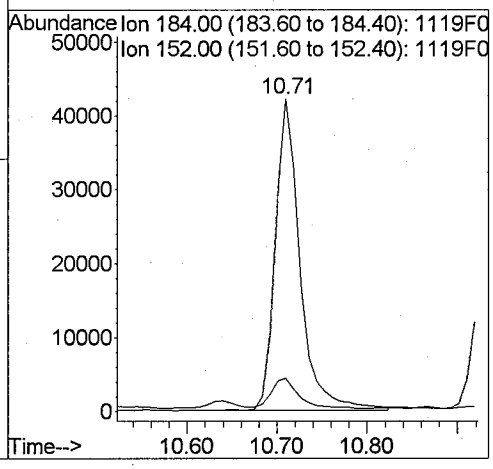


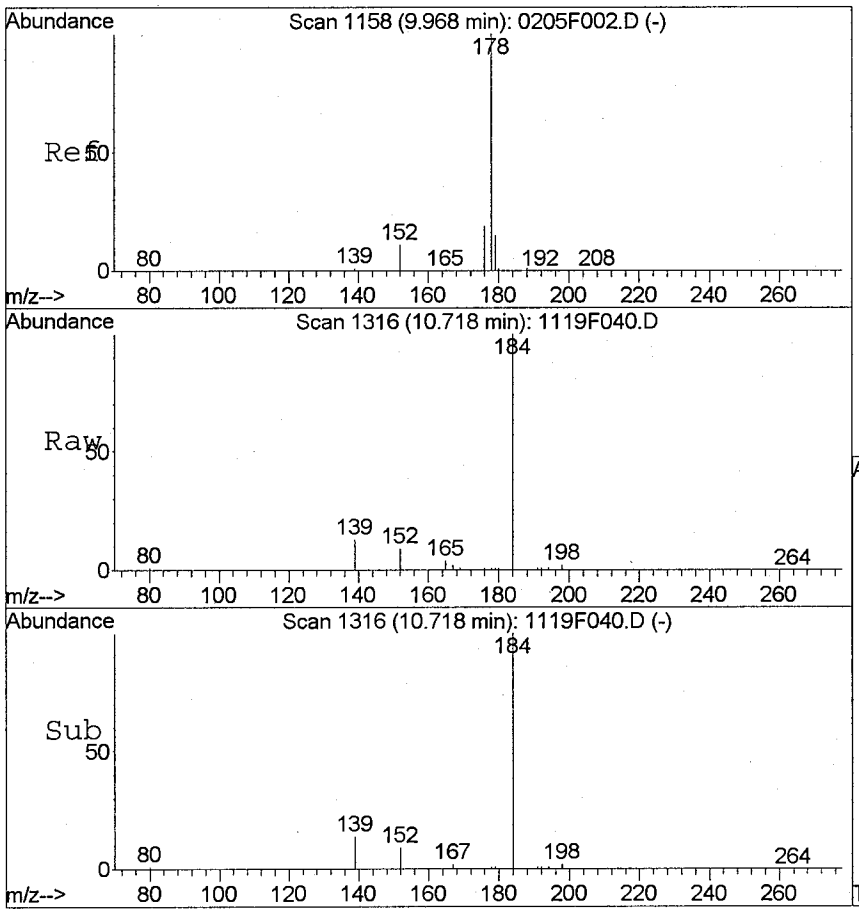


#24
Dibenzothiophene
Concen: 332.30 ng/ml
RT: 10.71 min Scan# 1315
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:184 Resp: 80875

Ion	Ratio	Lower	Upper
184	100		
152	9.5	0.0	38.4

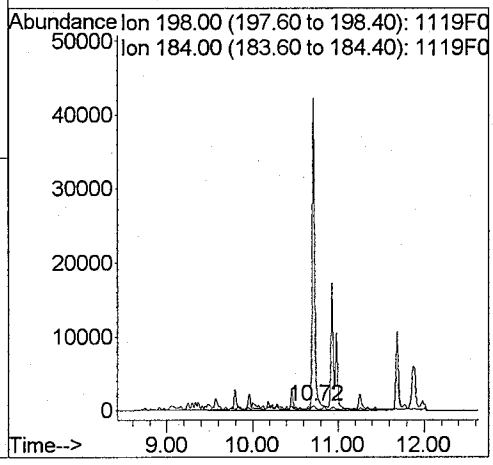


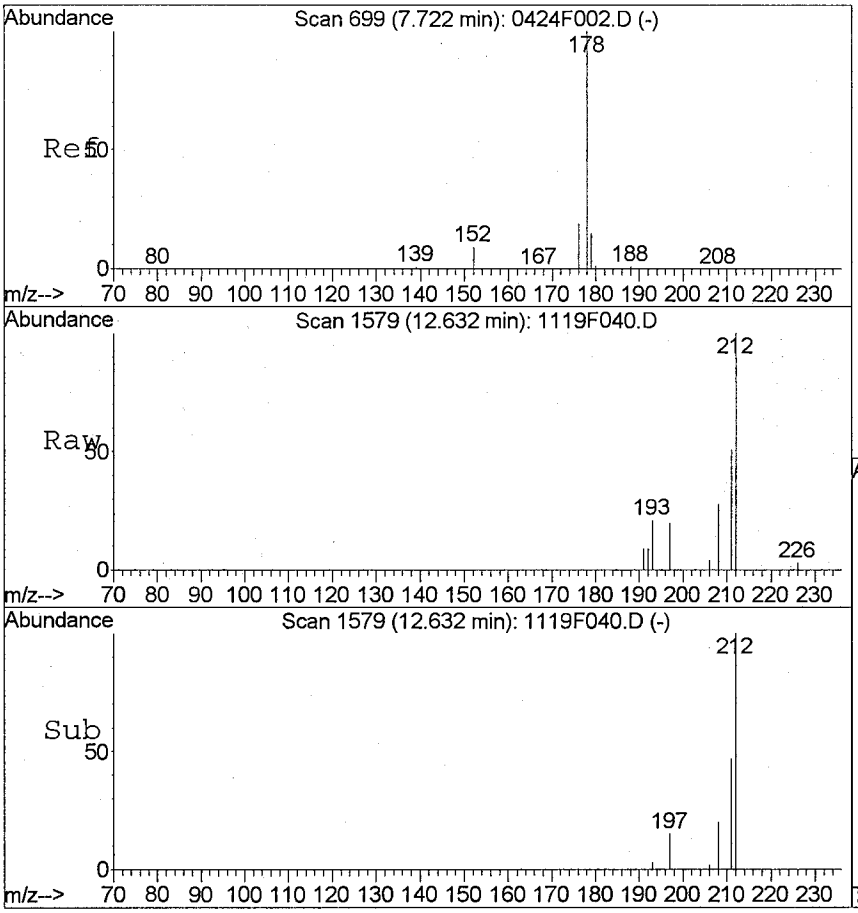


#25
C1-Dibenzothiophenes
Concen: 115.11 ng/ml m
RT: 10.72 min Scan# 1316
Delta R.T. 0.51 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:198 Resp: 28014

Ion	Ratio	Lower	Upper
198	100		
184	4856.4	74.1	134.1#

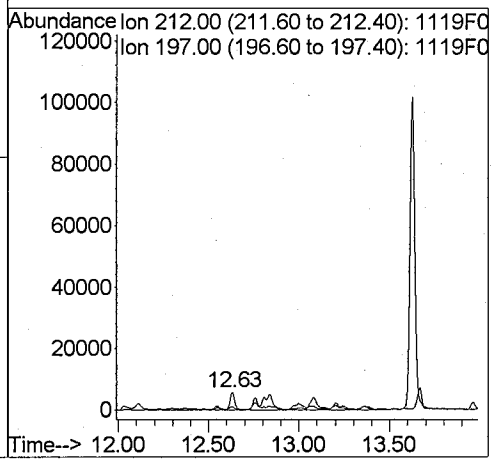


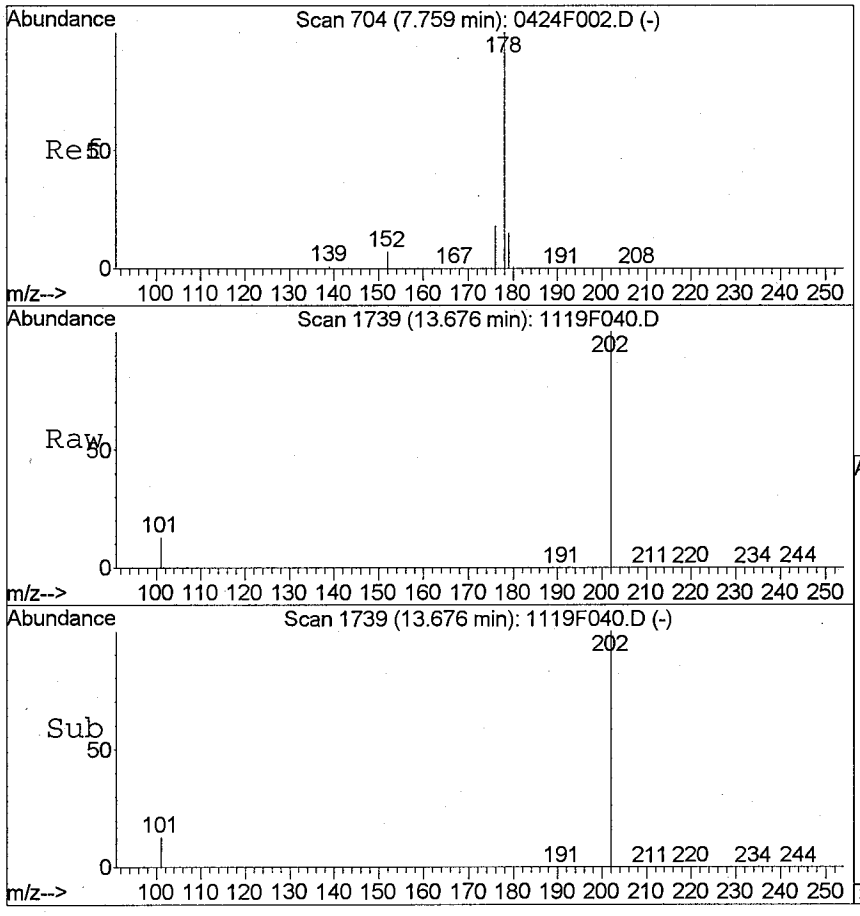


#26
C2-Dibenzothiophenes
Concen: 292.01 ng/ml m
RT: 12.63 min Scan# 1579
Delta R.T. -0.30 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:212 Resp: 71068

Ion	Ratio	Lower	Upper
212	100		
197	20.2	0.0	53.8

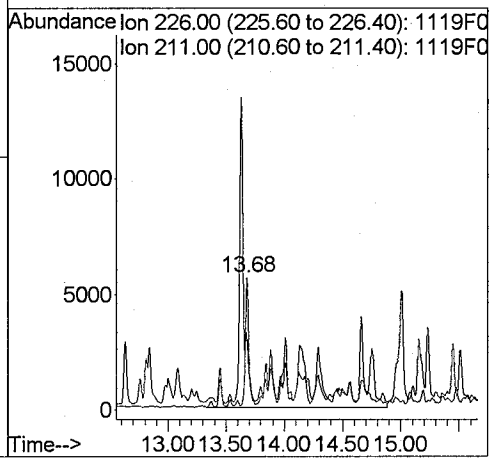


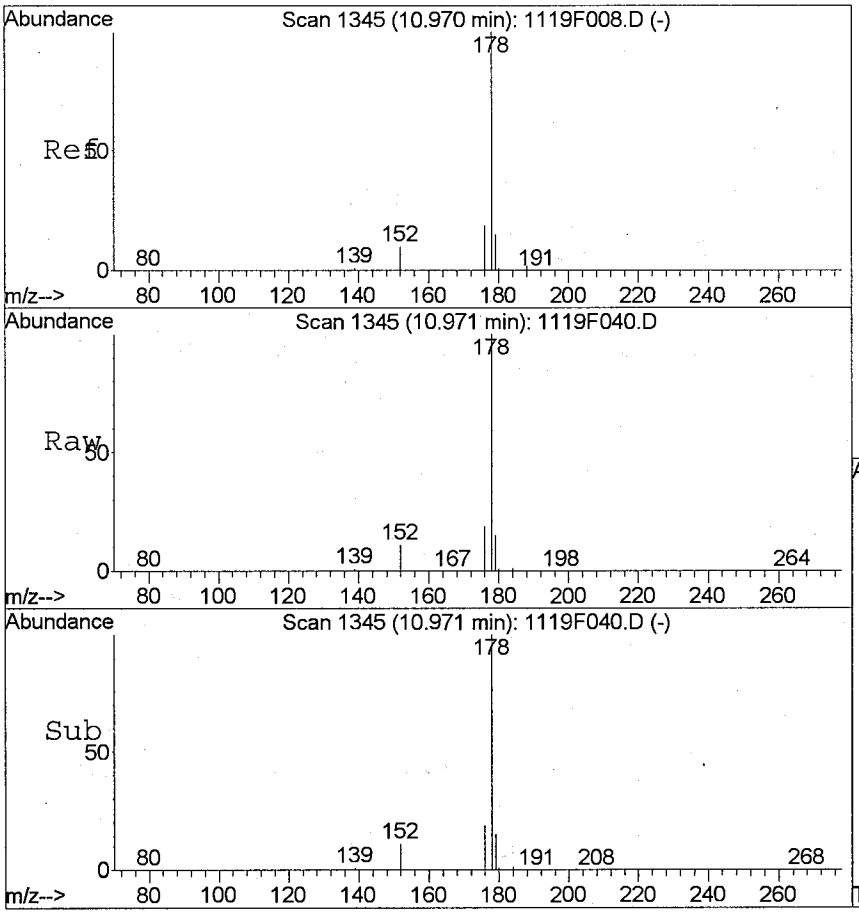


#27
C3-Dibenzothiophenes
Concen: 320.63 ng/ml m
RT: 13.68 min Scan# 1739
Delta R.T. -0.10 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:226 Resp: 78033

Ion	Ratio	Lower	Upper
226	100		
211	59.5	27.1	87.1

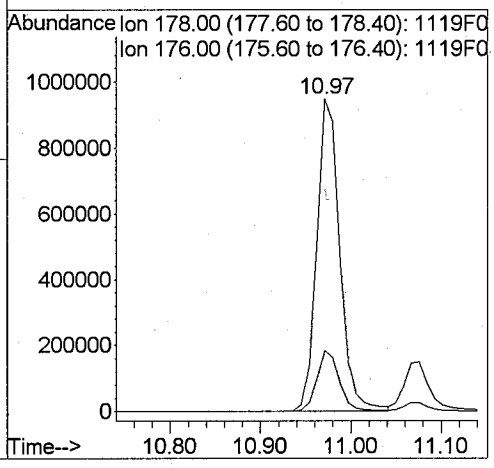


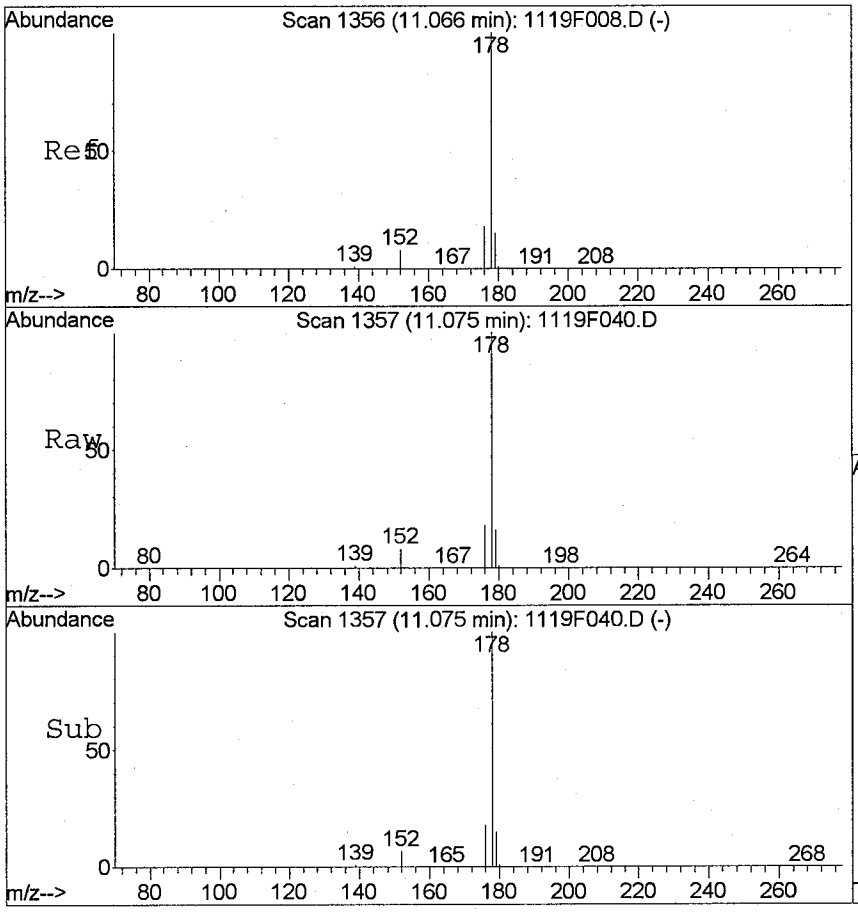


#28
Phenanthrene
Concen: 6566.75 ng/ml
RT: 10.97 min Scan# 1345
Delta R.T. 0.00 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:178 Resp: 1678815

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	48.6

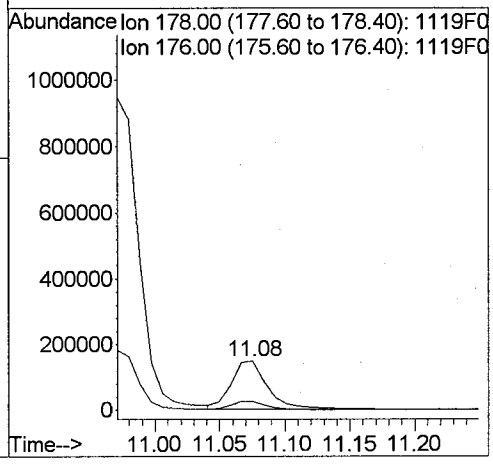


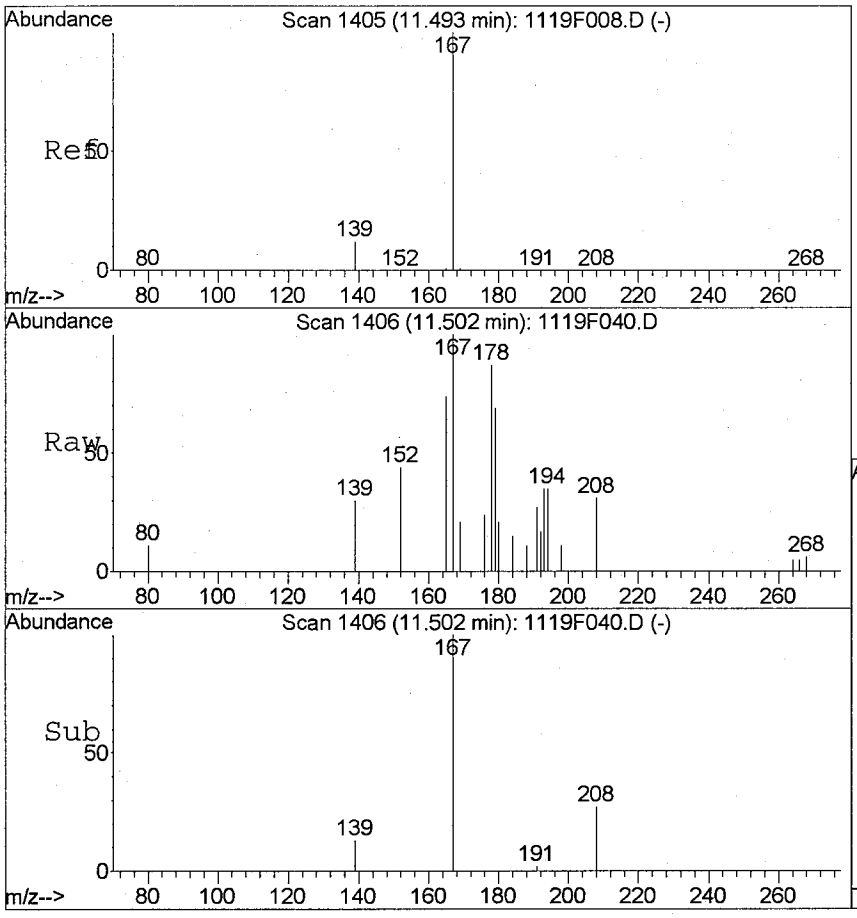


#29
Anthracene
Concen: 1298.06 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:178 Resp: 283511

Ion	Ratio	Lower	Upper
178	100		
176	17.7	0.0	48.2

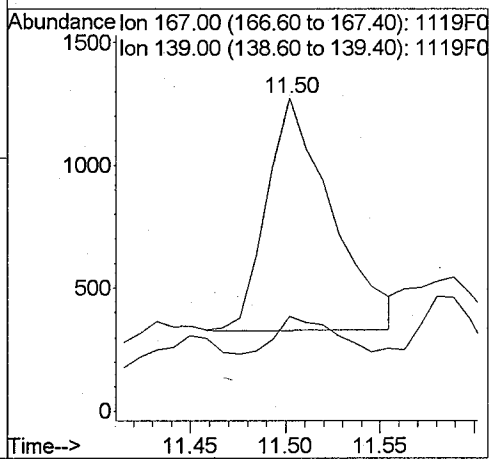


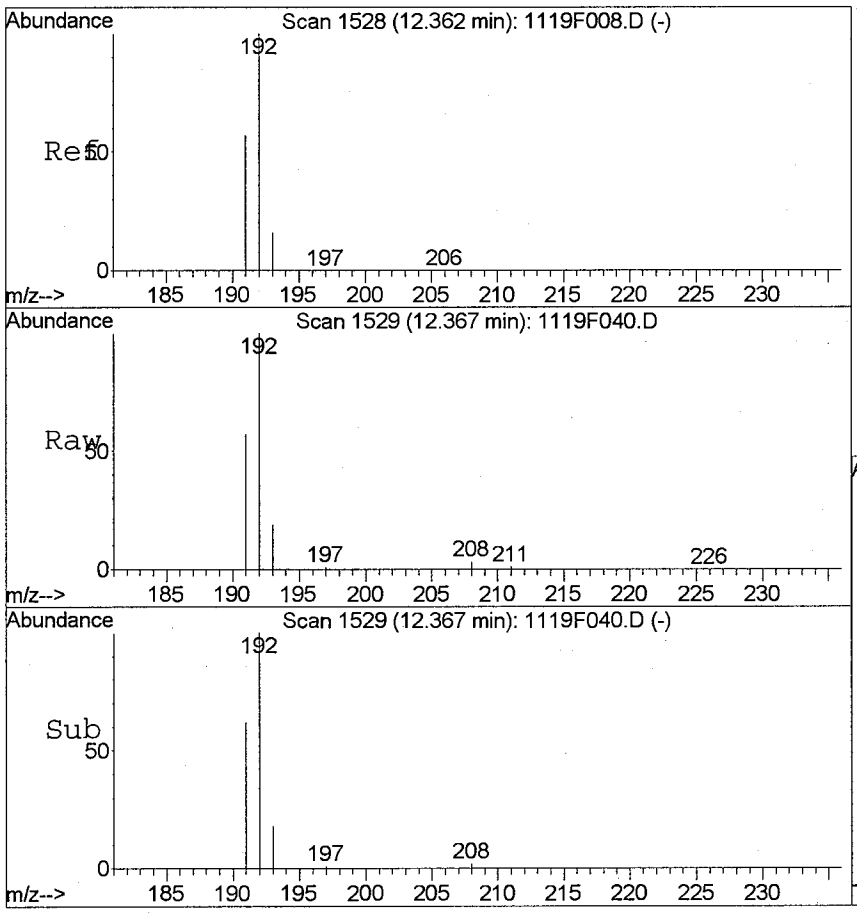


#30
Carbazole
Concen: 13.03 ng/ml
RT: 11.50 min Scan# 1406
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:167 Resp: 2249

Ion	Ratio	Lower	Upper
167	100		
139	13.6	0.0	42.5

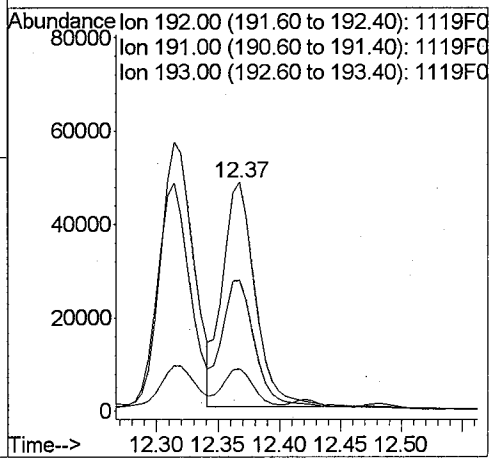


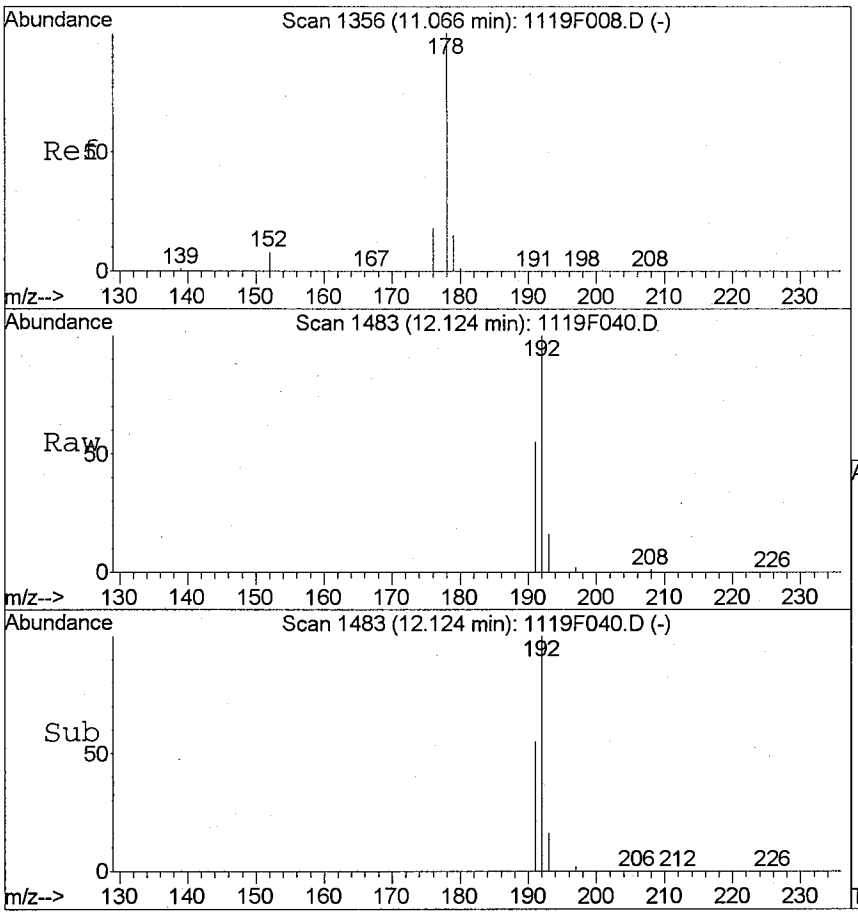


#31
1-Methylphenanthrene
Concen: 514.87 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:192 Resp: 89372

Ion	Ratio	Lower	Upper
192	100		
191	56.6	27.5	87.5
193	16.1	0.0	45.6

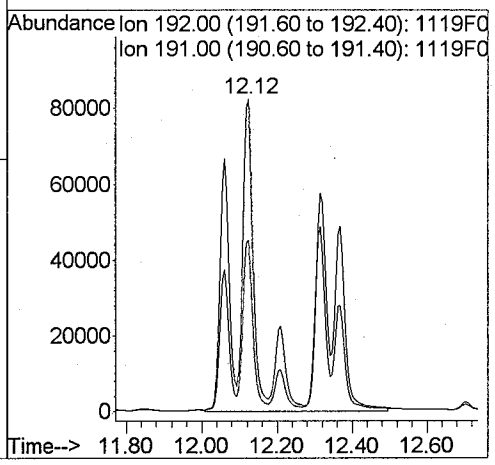


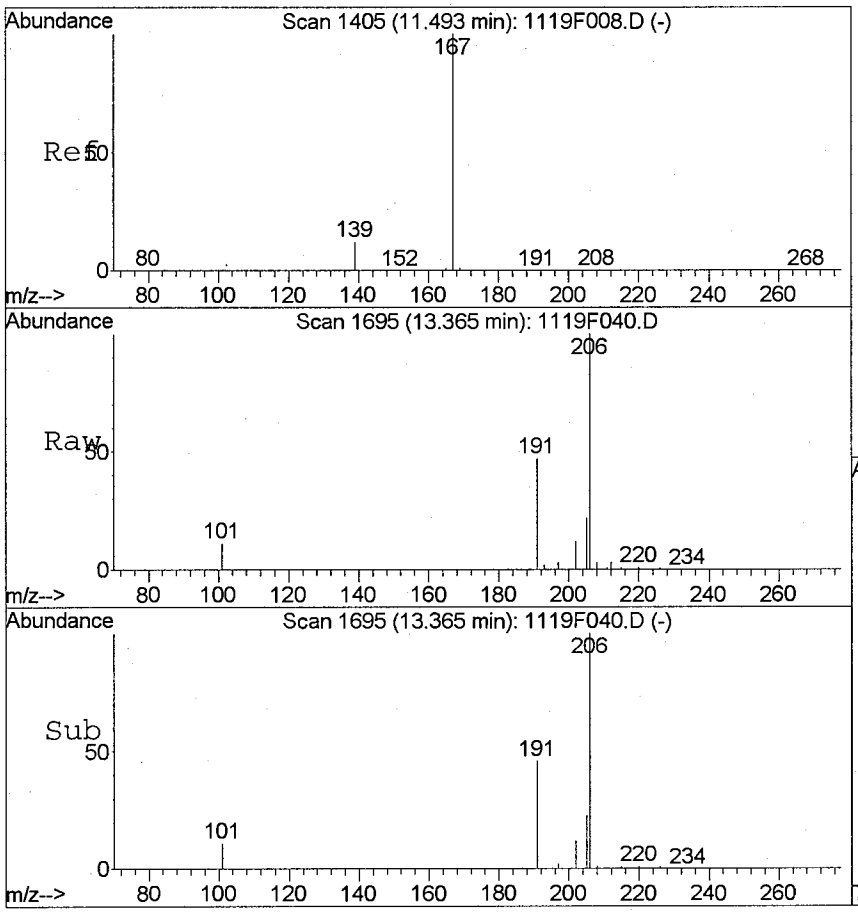


#32
C1-Phenanthrenes/Anthracenes
Concen: 2110.74 ng/ml m
RT: 12.12 min Scan# 1483
Delta R.T. -0.10 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:192 Resp: 539619

Ion	Ratio	Lower	Upper
192	100		
191	54.9	25.3	85.3

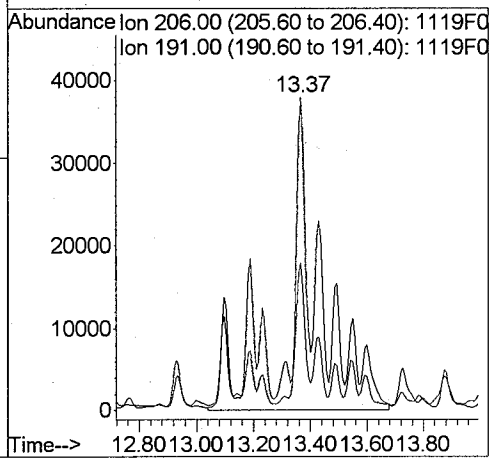


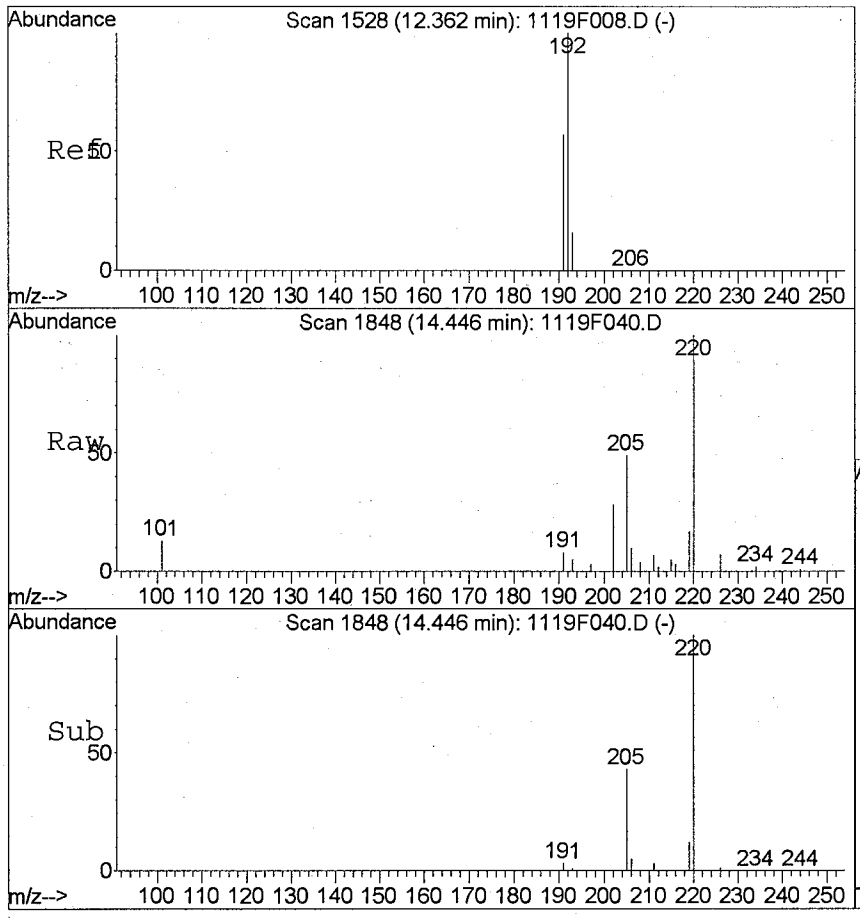


#33
C2-Phenanthrenes/Anthracenes
Concen: 1185.38 ng/ml m
RT: 13.37 min Scan# 1695
Delta R.T. -0.10 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:206 Resp: 303046

Ion	Ratio	Lower	Upper
206	100		
191	47.2	15.6	75.6

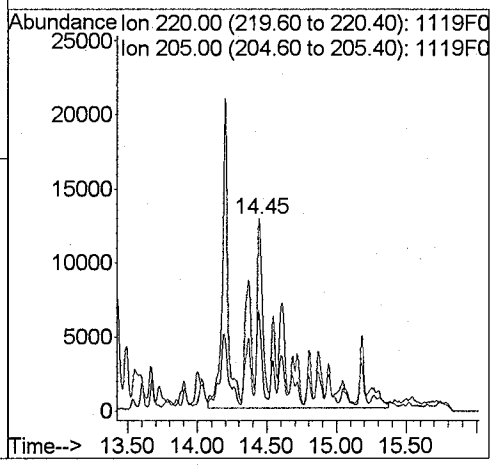


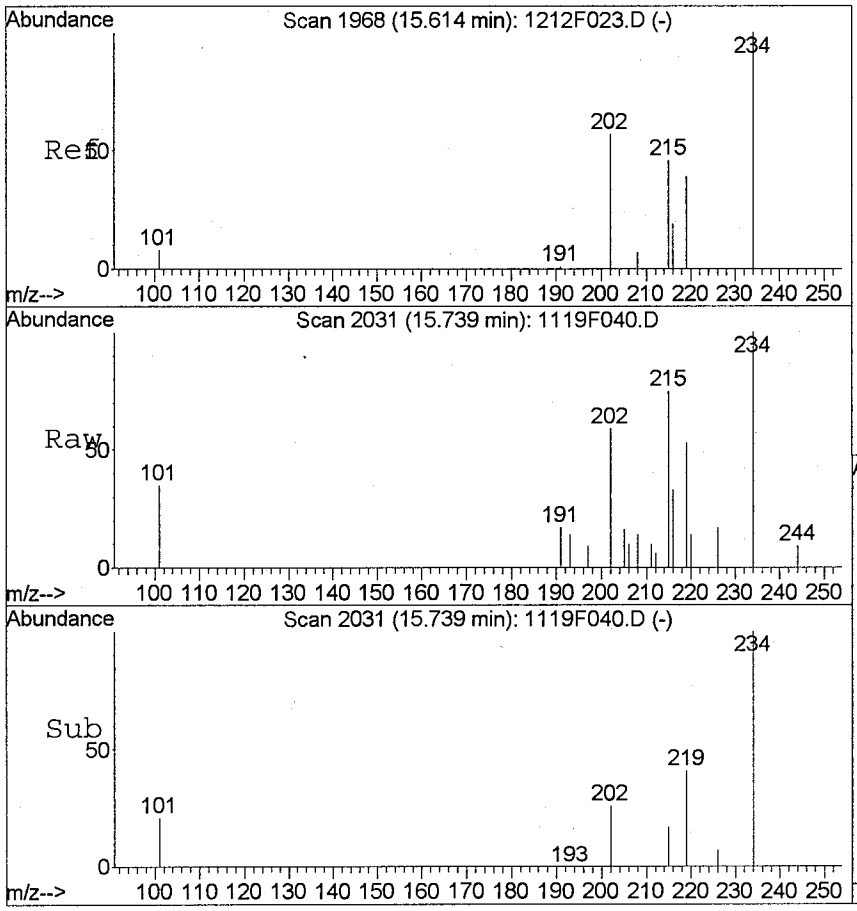


#34
C3-Phenanthrenes/Anthracenes
Concen: 692.59 ng/ml m
RT: 14.45 min Scan# 1848
Delta R.T. -0.10 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:220 Resp: 177063

Ion	Ratio	Lower	Upper
220	100		
205	49.1	20.0	80.0

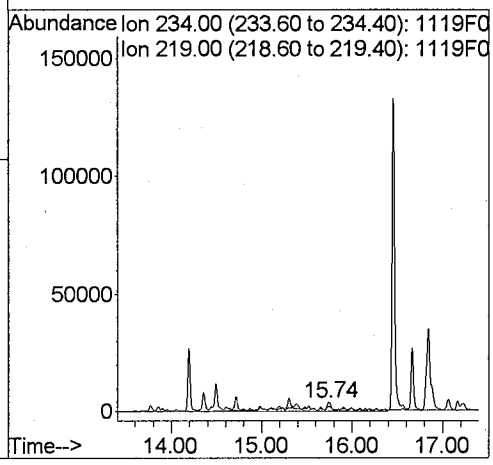


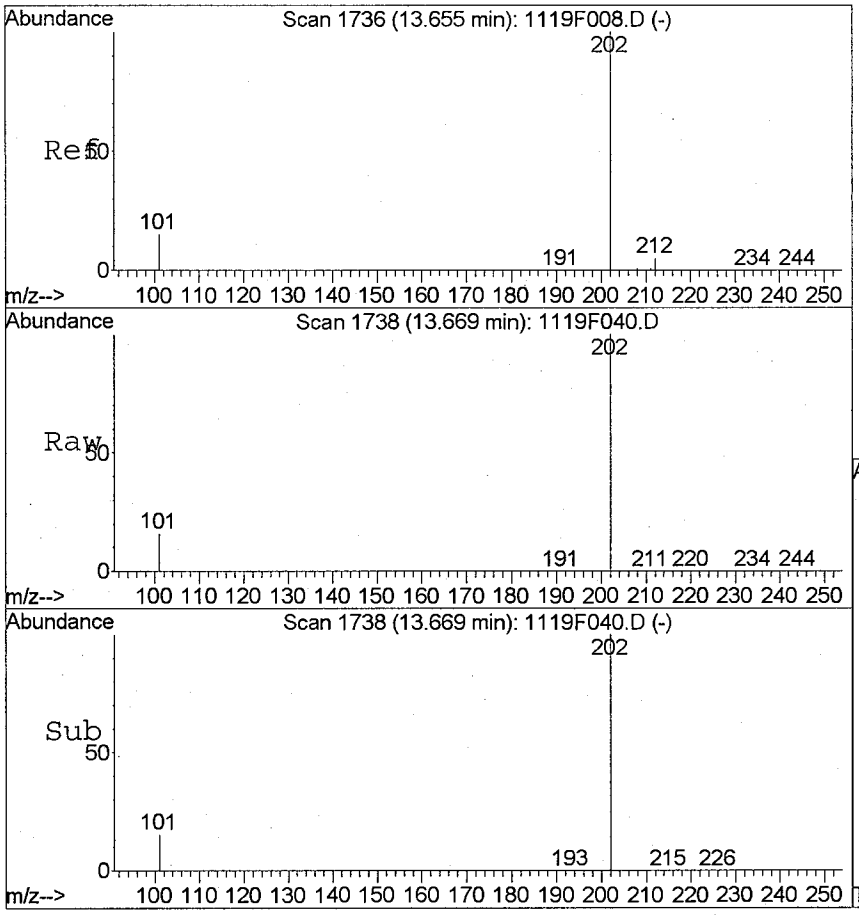


#35
C4-Phenanthrenes/Anthracenes
Concen: 392.51 ng/ml m
RT: 15.74 min Scan# 2031
Delta R.T. -0.09 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:234 Resp: 100347

Ion	Ratio	Lower	Upper
234	100		
219	52.7	17.7	77.7

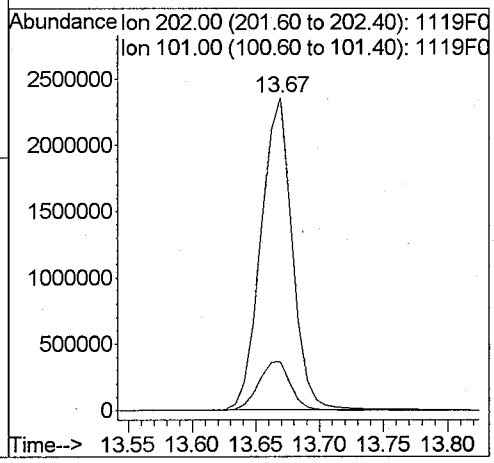


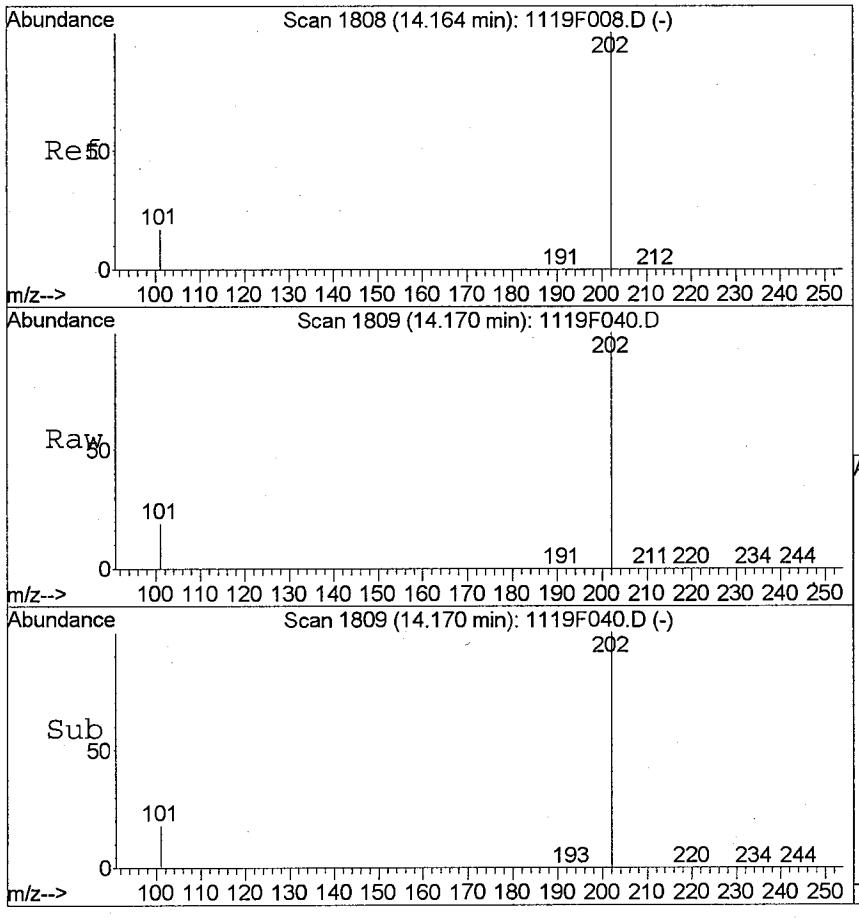


#36
Fluoranthene
Concen: 15782.12 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:202 Resp: 4016263

Ion	Ratio	Lower	Upper
202	100		
101	15.5	0.0	45.5

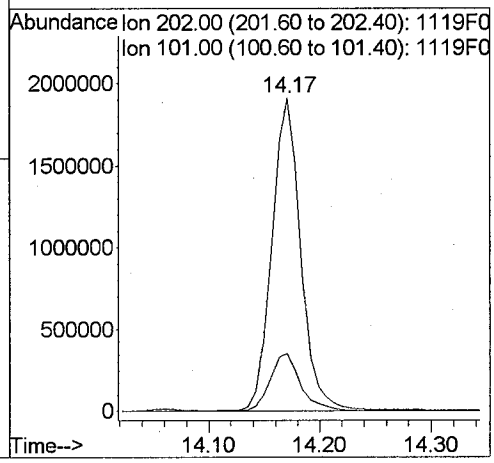


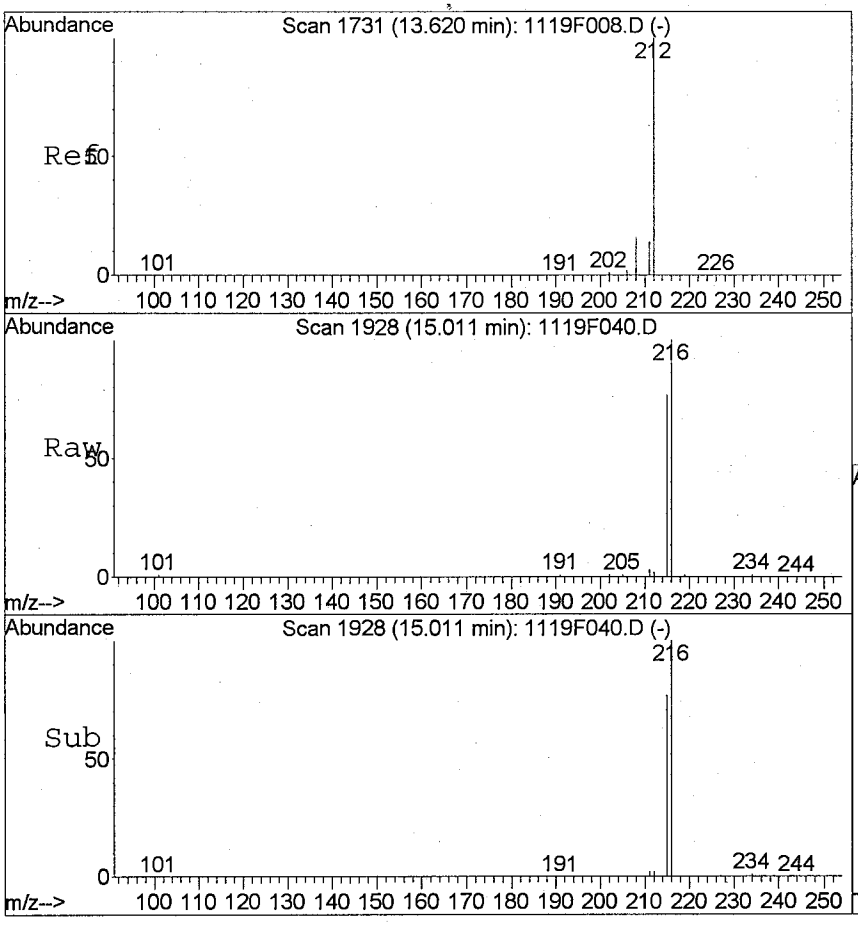


#39
Pyrene
Concen: 12485.66 ng/ml
RT: 14.17 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:202 Resp: 3464865

Ion	Ratio	Lower	Upper
202	100		
101	18.5	0.0	47.4

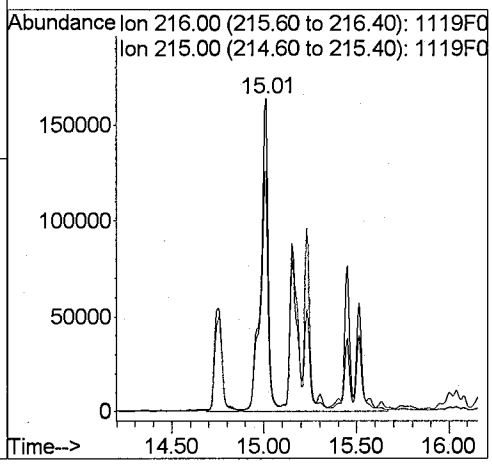


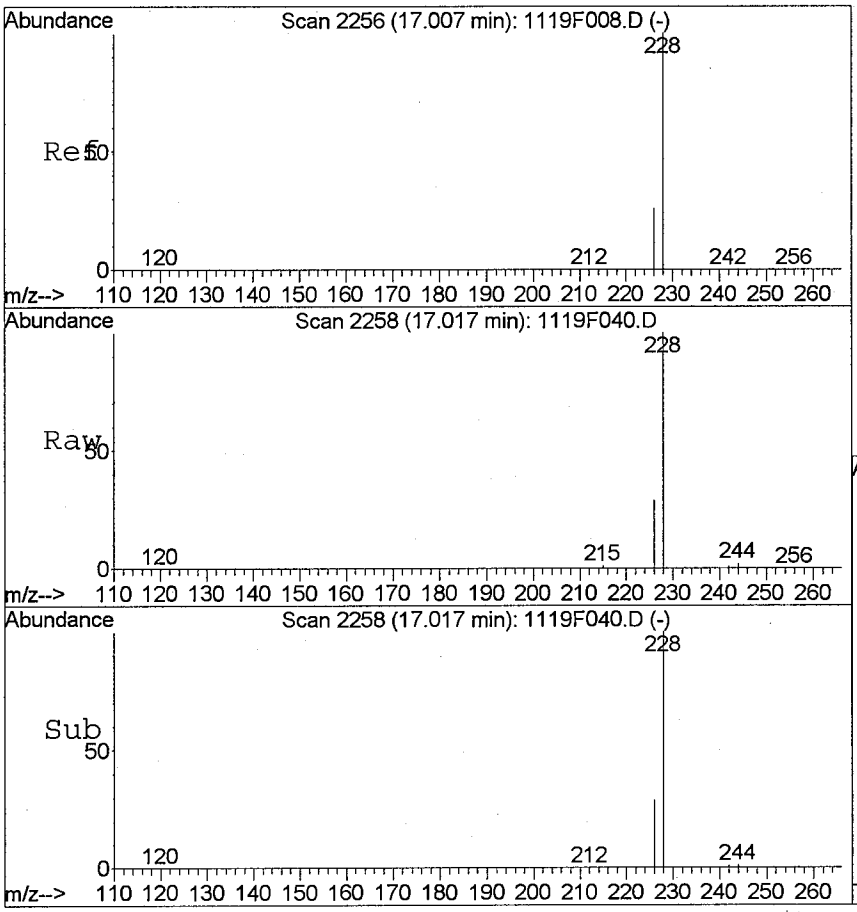


#40
C1-Fluoranthenes/Pyrenes
Concen: 4813.35 ng/ml m
RT: 15.01 min Scan# 1928
Delta R.T. -0.54 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:216 Resp: 1335741

Ion	Ratio	Lower	Upper
216	100		
215	76.9	54.8	114.8

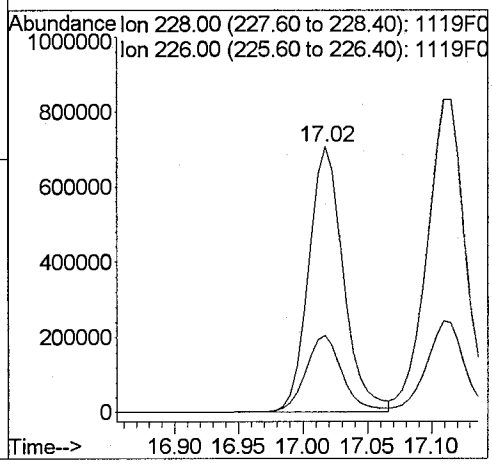


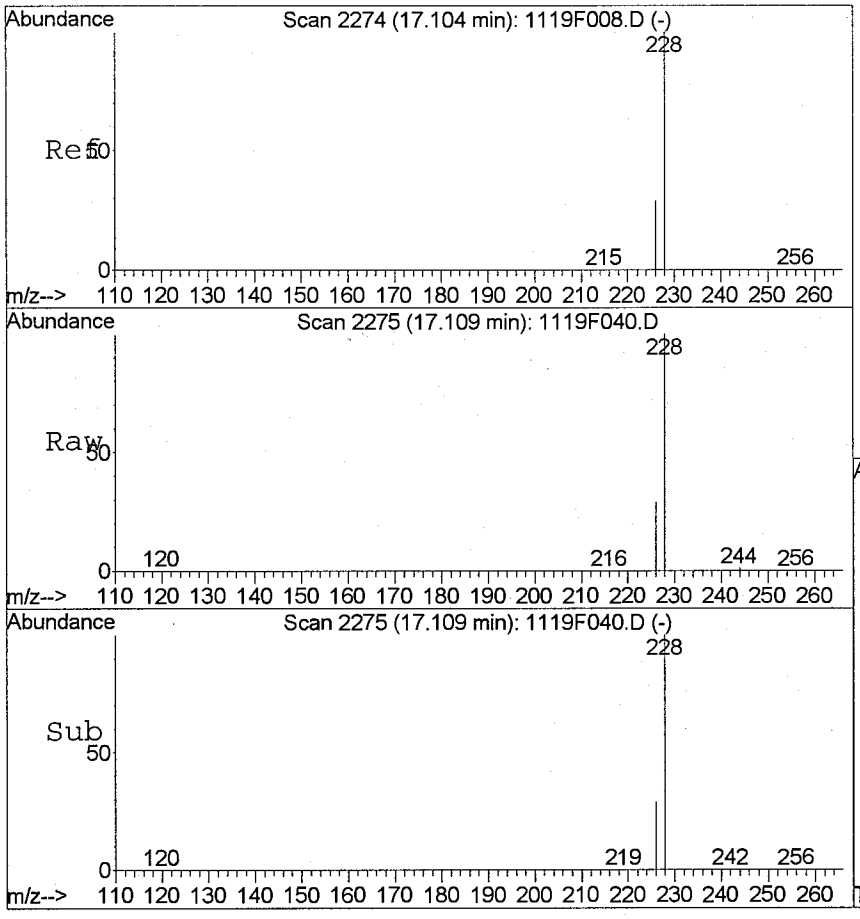


#42
Benz(a)anthracene
Concen: 6273.60 ng/ml
RT: 17.02 min Scan# 2258
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:228 Resp: 1325480

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	55.8

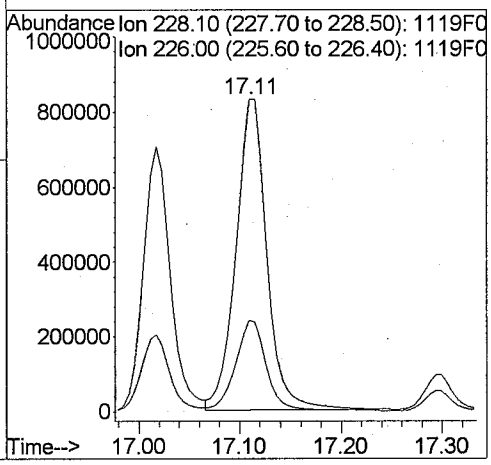


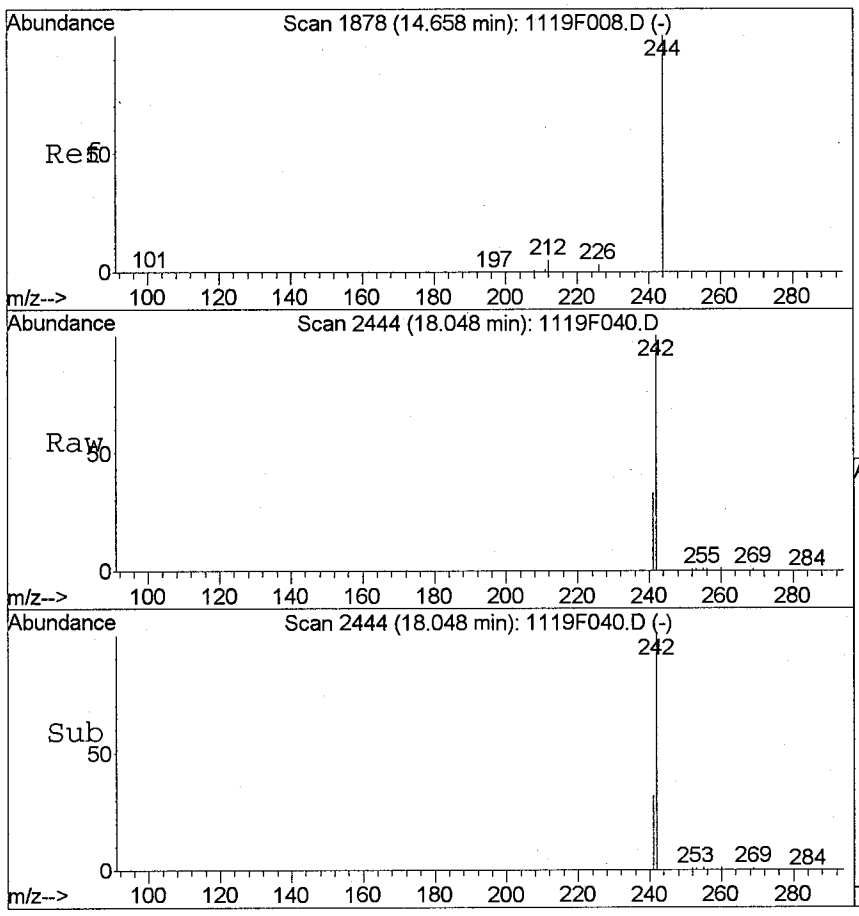


#43
Chrysene
Concen: 7775.23 ng/ml
RT: 17.11 min Scan# 2275
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:228 Resp: 1756652

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	58.5

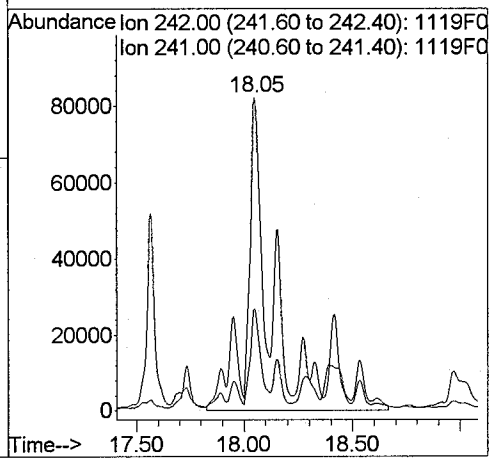


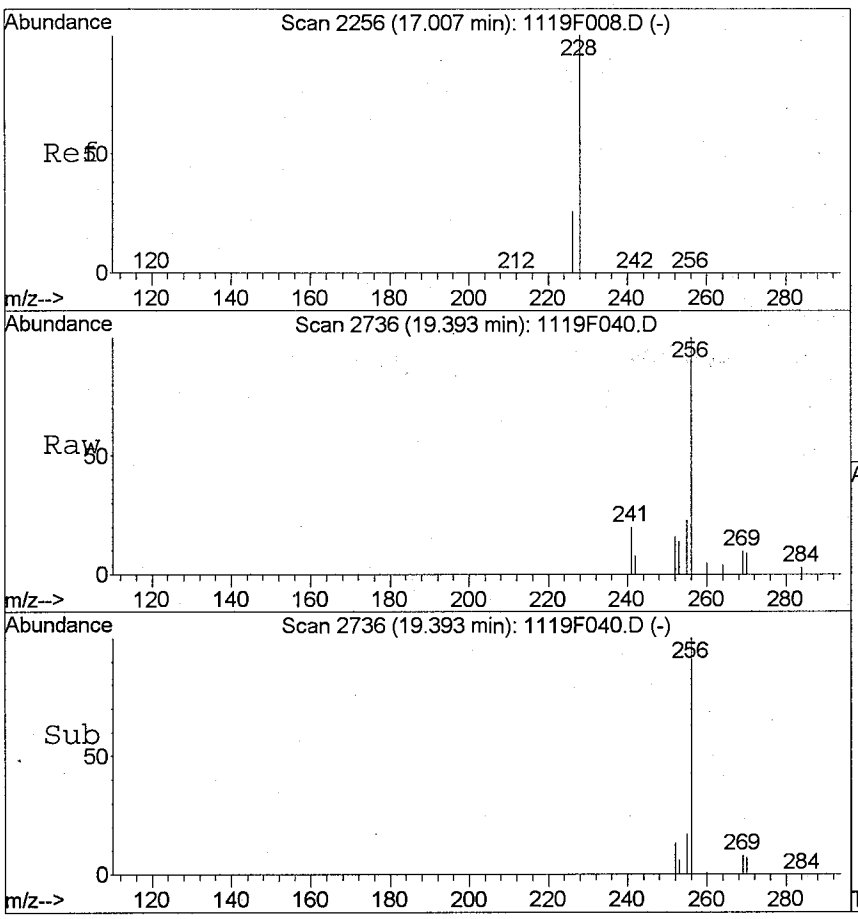


#44
C1-Chrysenes
Concen: 3216.78 ng/ml m
RT: 18.05 min Scan# 2444
Delta R.T. -0.10 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:242 Resp: 726764

Ion	Ratio	Lower	Upper
242	100		
241	32.7	0.1	60.1

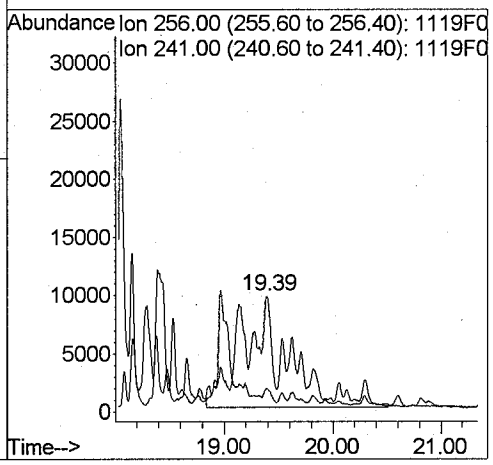


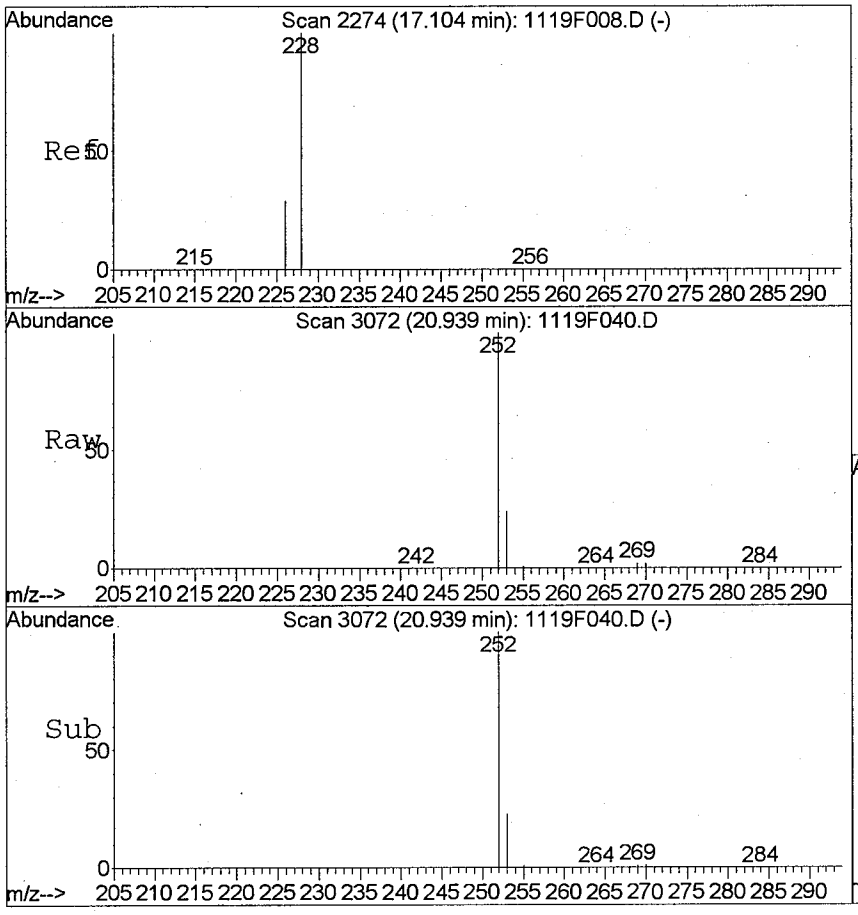


#45
C2-Chrysenes
Concen: 1251.90 ng/ml m
RT: 19.39 min Scan# 2736
Delta R.T. -0.13 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:256 Resp: 282841

Ion	Ratio	Lower	Upper
256	100		
241	20.4	7.8	67.8

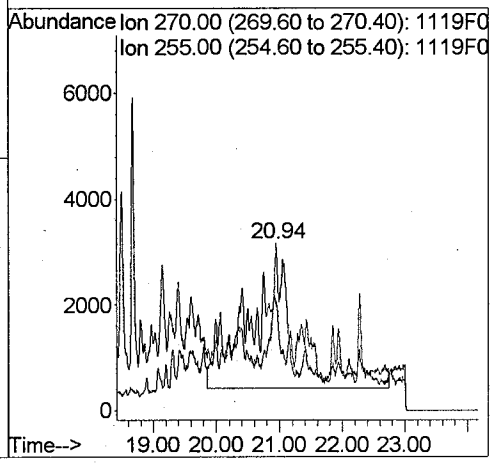


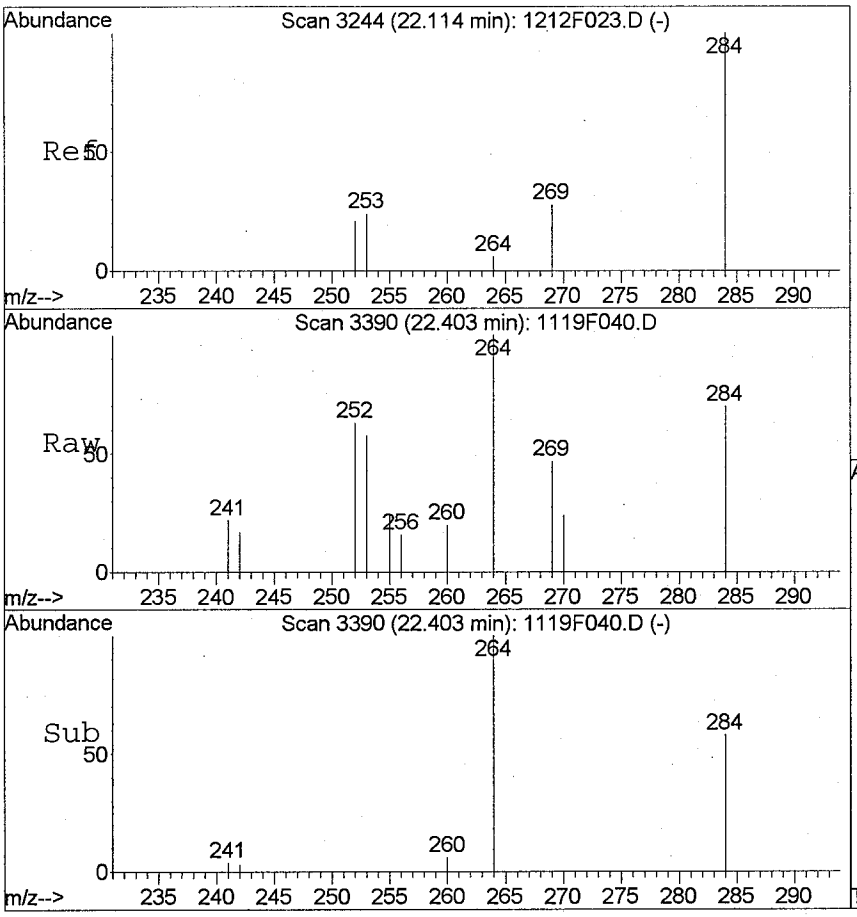


#46
C3-Chrysenes
Concen: 631.03 ng/ml m
RT: 20.94 min Scan# 3072
Delta R.T. -0.28 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:270 Resp: 142569

Ion	Ratio	Lower	Upper
270	100		
255	66.1	0.0	56.7#

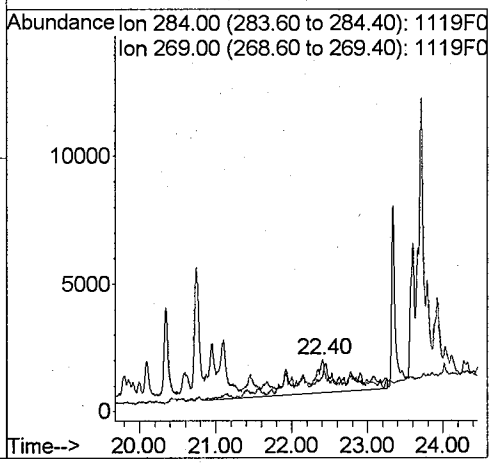


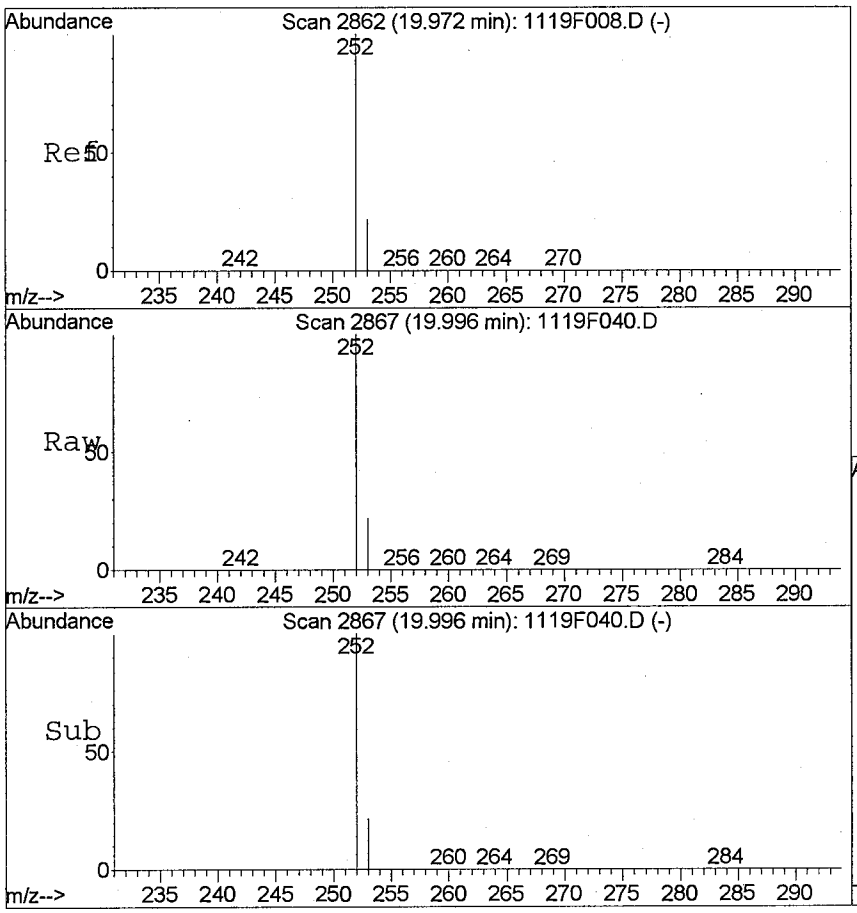


#47
C4-Chrysenes
Concen: 210.52 ng/ml m
RT: 22.40 min Scan# 3390
Delta R.T. -0.13 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:284 Resp: 47563

Ion	Ratio	Lower	Upper
284	100		
269	67.1	16.2	76.2

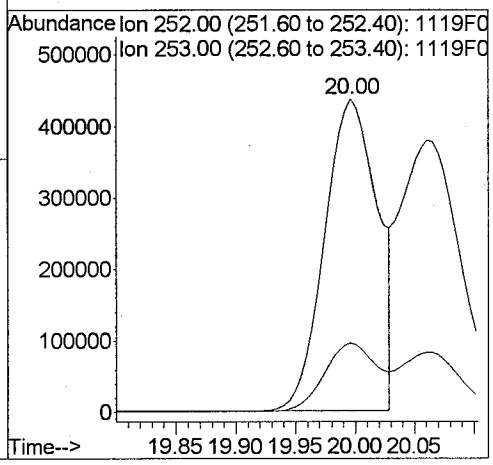


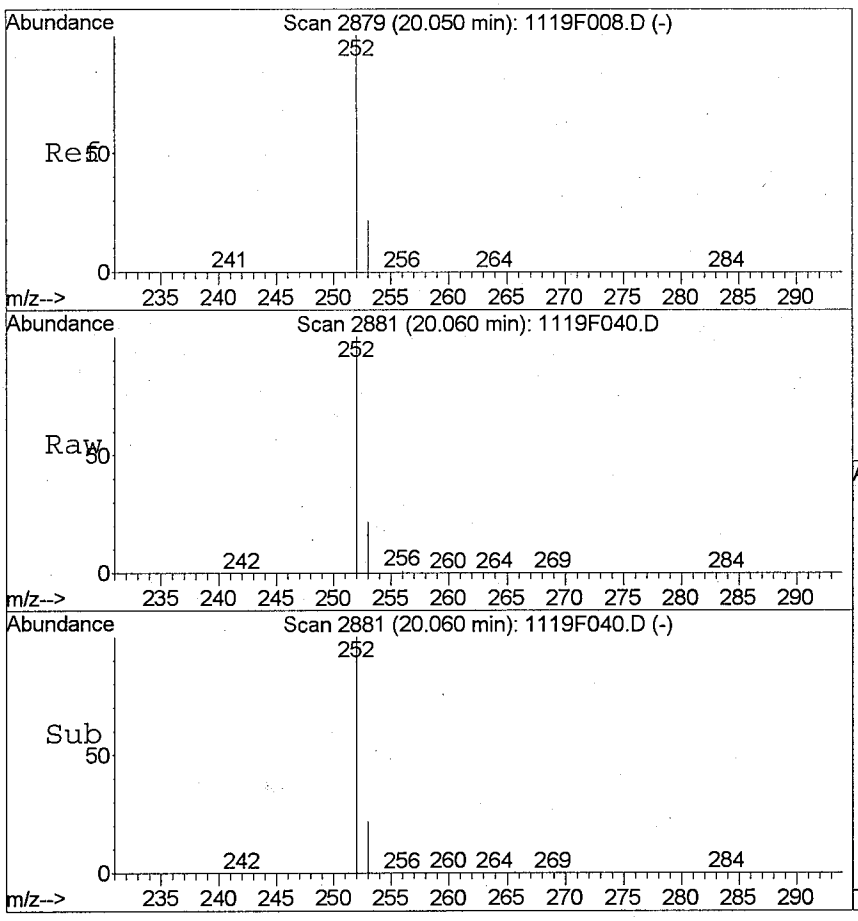


#49
Benzo(b)fluoranthene
Concen: 7220.52 ng/ml
RT: 20.00 min Scan# 2867
Delta R.T. 0.02 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:252 Resp: 1344511

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.8

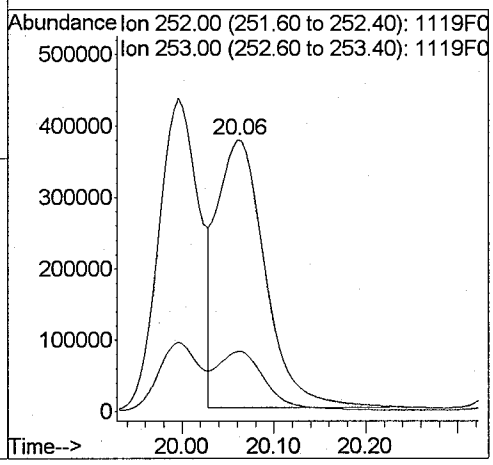


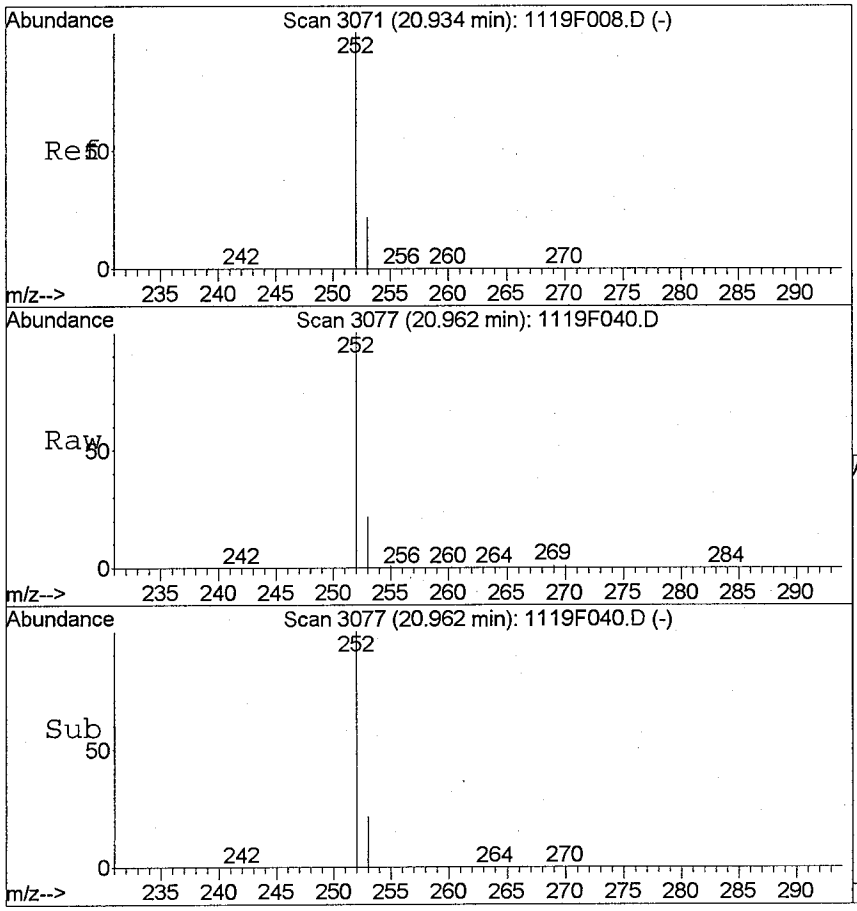


#50
Benzo(k)fluoranthene
Concen: 5784.26 ng/ml m
RT: 20.06 min Scan# 2881
Delta R.T. 0.01 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:252 Resp: 1366638

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.2

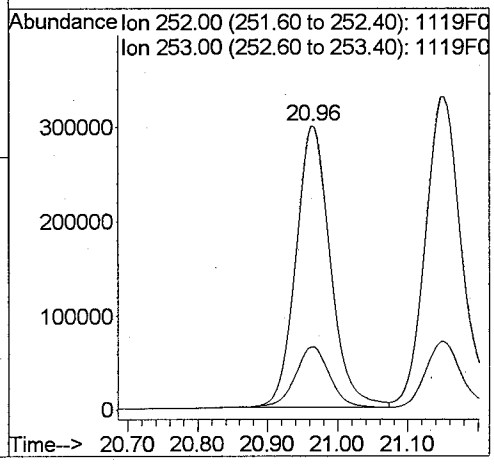


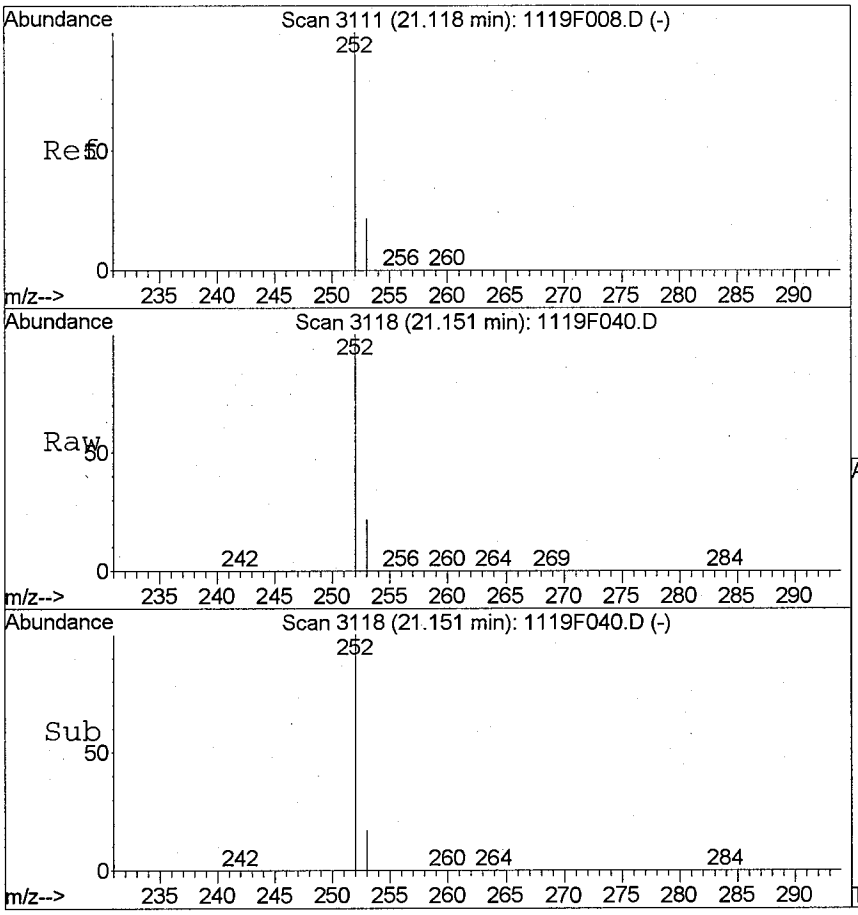


#51
Benzo(e)pyrene
Concen: 4924.71 ng/ml
RT: 20.96 min Scan# 3077
Delta R.T. 0.03 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:252 Resp: 1029609

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.8

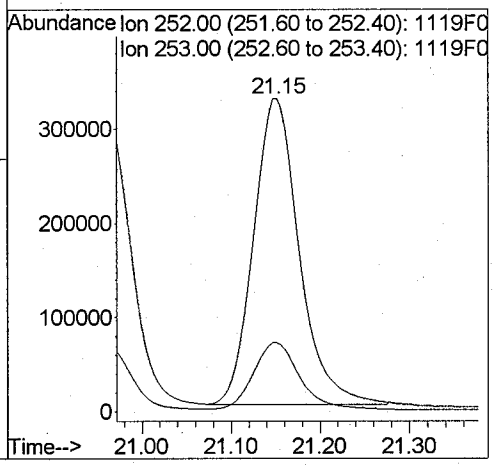


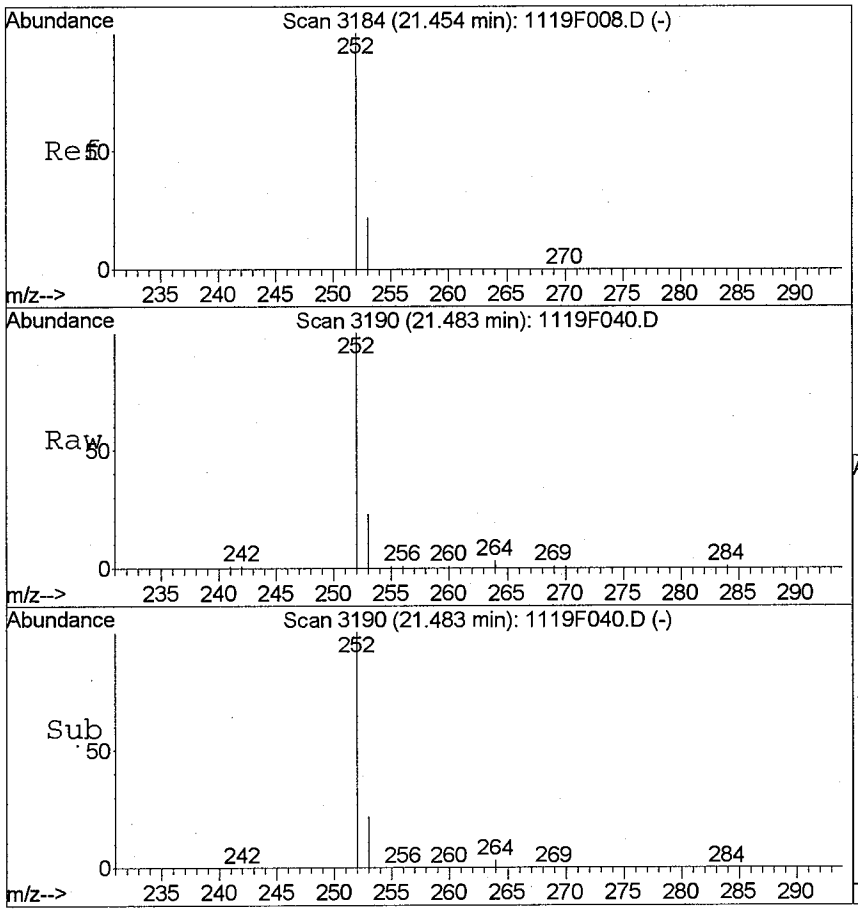


#52
Benzo(a)pyrene
Concen: 7278.54 ng/ml
RT: 21.15 min Scan# 3118
Delta R.T. 0.03 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:252 Resp: 1152818

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

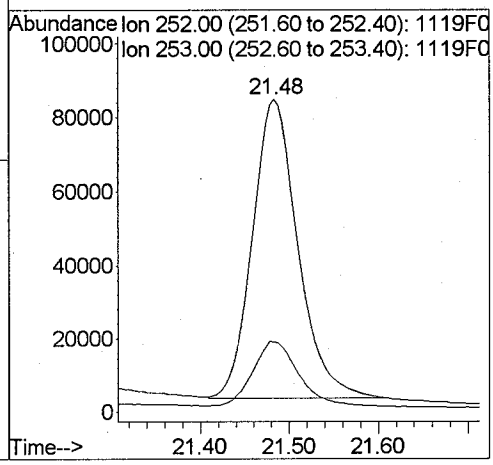


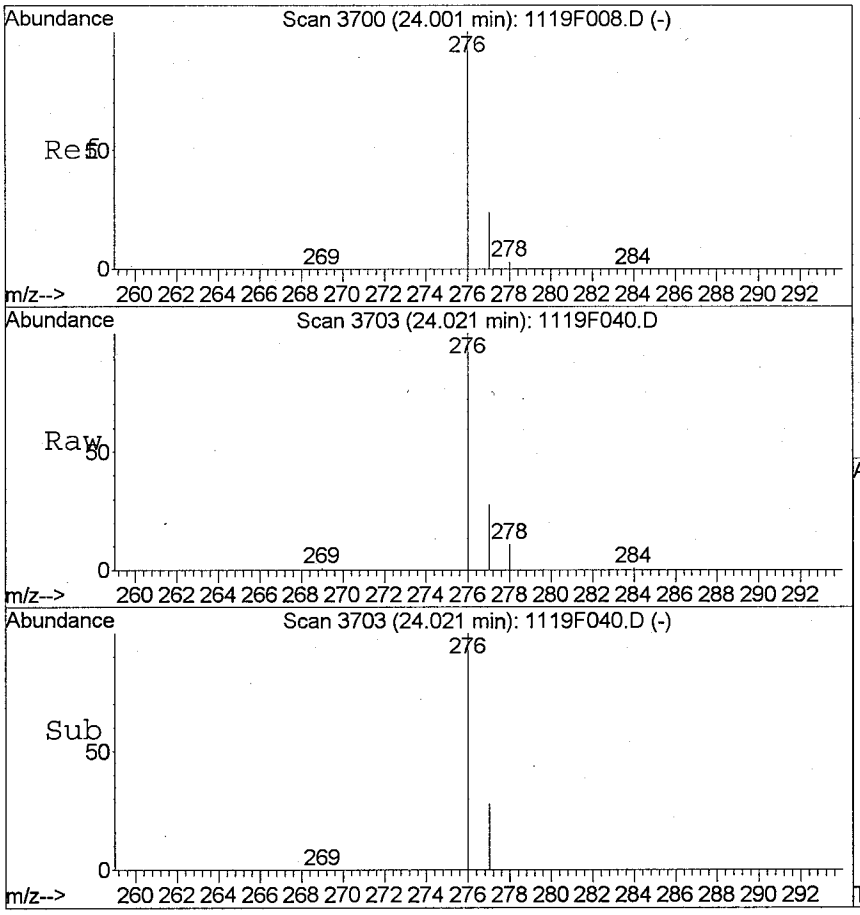


#53
Perylene
Concen: 1623.62 ng/ml
RT: 21.48 min Scan# 3190
Delta R.T. 0.03 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:252 Resp: 288669

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.6

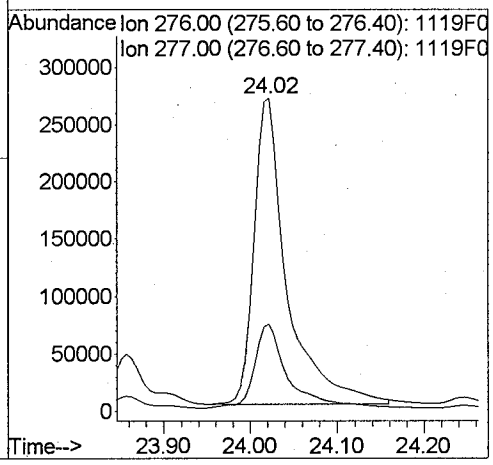


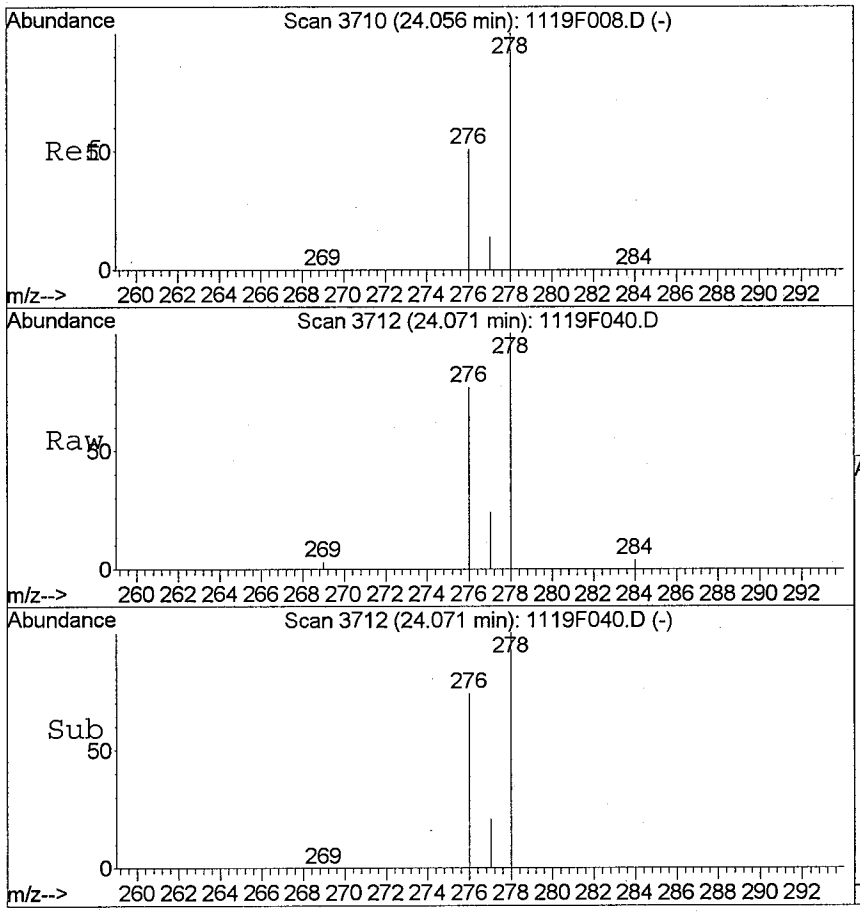


#54
Indeno(1,2,3-cd)pyrene
Concen: 7271.26 ng/ml
RT: 24.02 min Scan# 3703
Delta R.T. 0.02 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:276 Resp: 700104

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.6

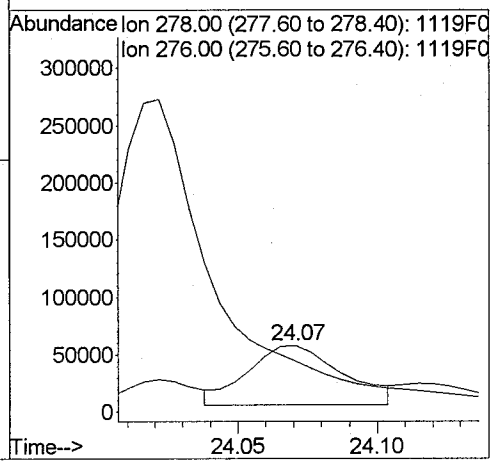


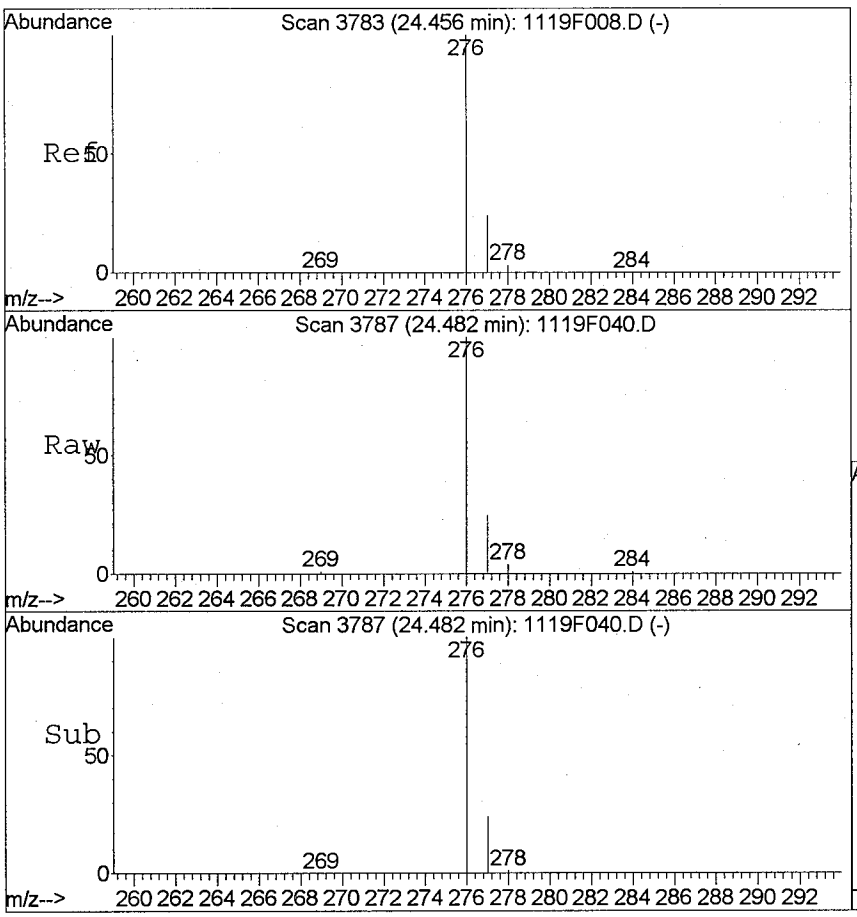


#55
Dibenz(a,h)anthracene
Concen: 899.17 ng/ml m
RT: 24.07 min Scan# 3712
Delta R.T. 0.02 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:278 Resp: 124420

Ion	Ratio	Lower	Upper
278	100		
276	76.7	21.1	81.1

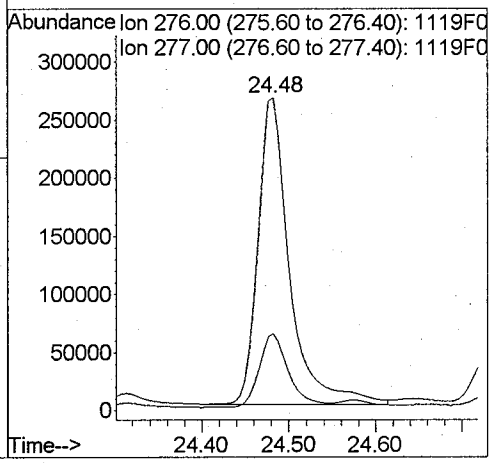




#56
Benzo(g,h,i)perylene
Concen: 4125.67 ng/ml
RT: 24.48 min Scan# 3787
Delta R.T. 0.03 min
Lab File: 1119F040.D
Acq: 19 Nov 2003 6:14 pm

Tgt Ion:276 Resp: 658571

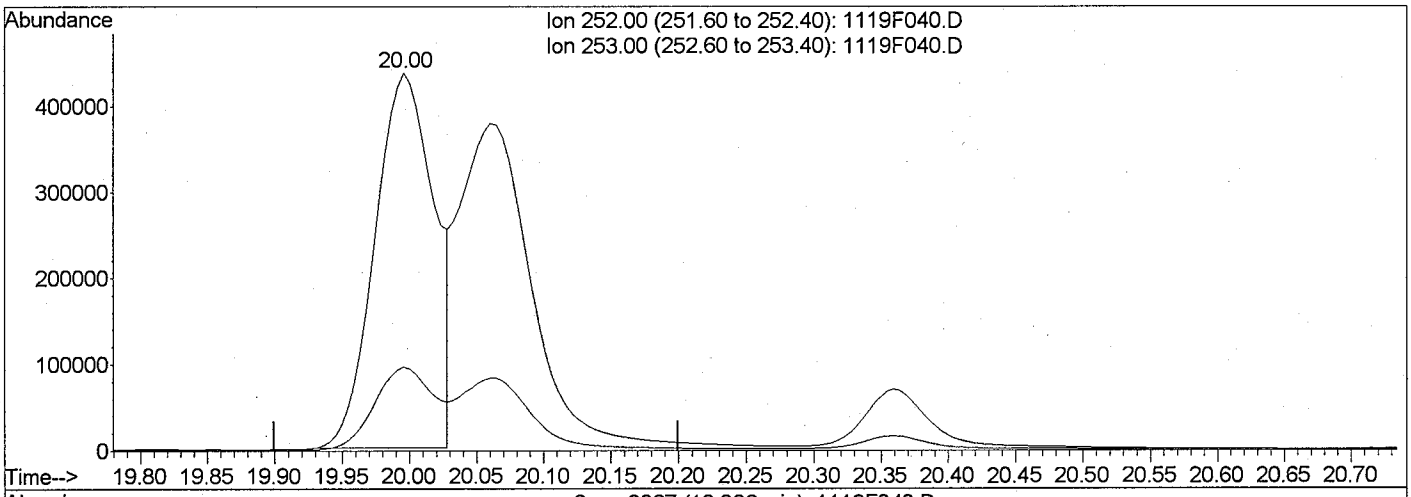
Ion	Ratio	Lower	Upper
276	100		
277	24.0	0.0	53.6

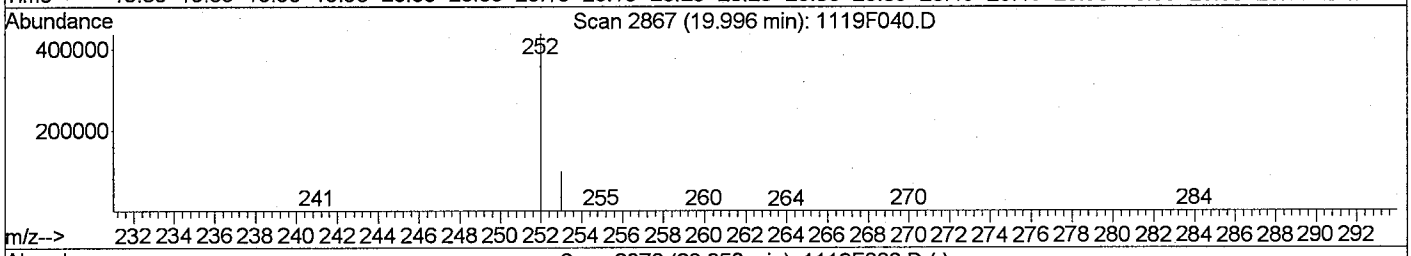


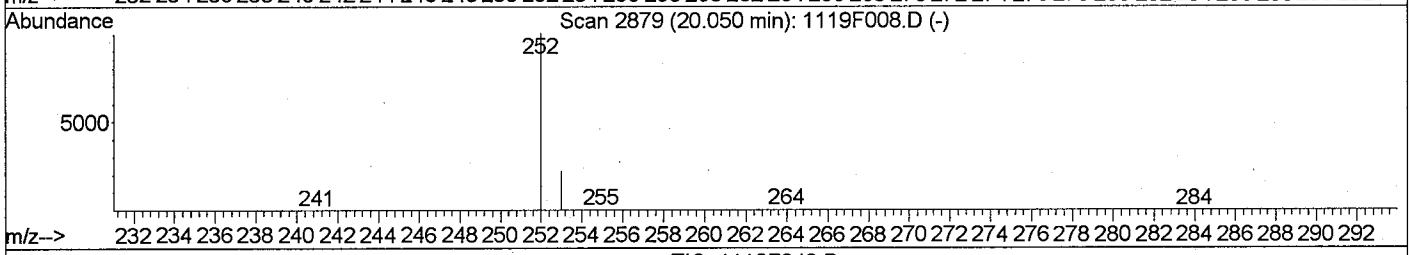
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(50) Benzo(k)fluoranthene (T)

20.00min 5631.46ng/ml

response 1330537

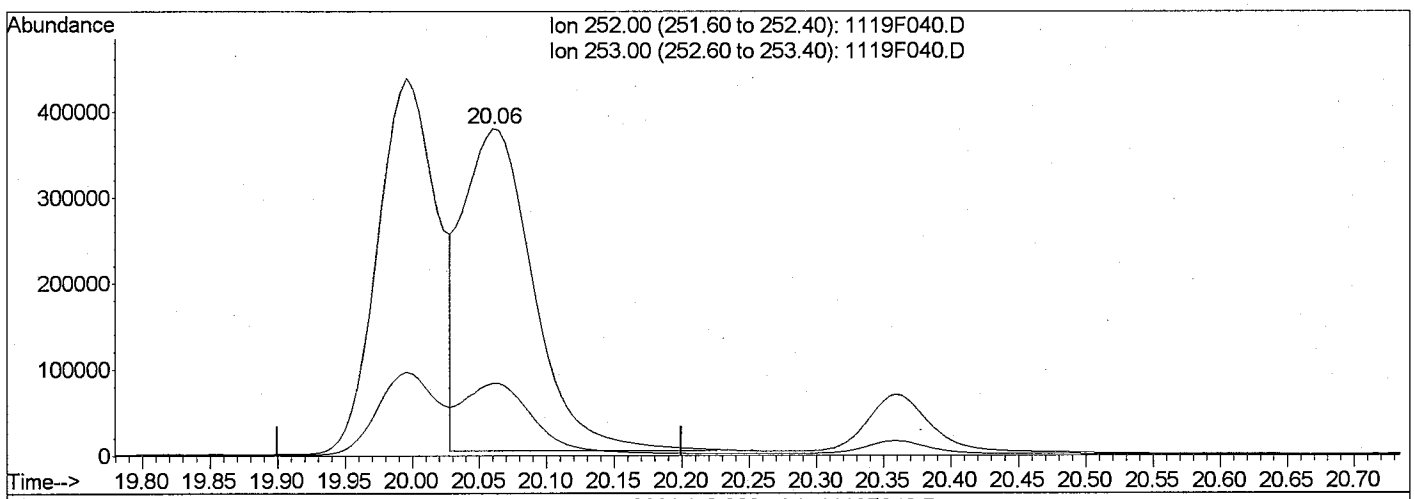
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.97
0.00	0.00	0.00
0.00	0.00	0.00

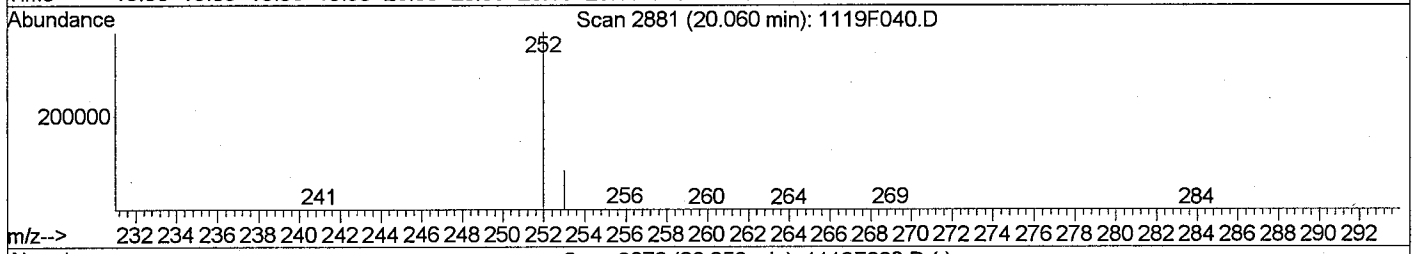
1119F040.D 1107ALK.M Thu Nov 20 14:19:36 2003

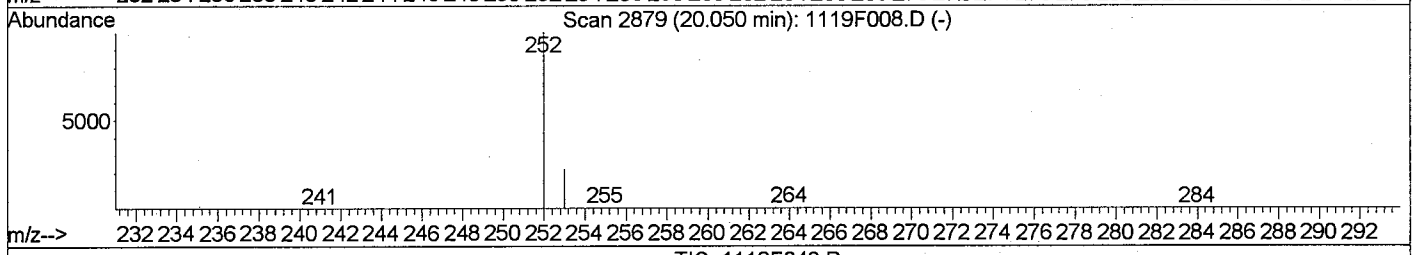
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(50) Benzo(k)fluoranthene (T)

20.06min 5784.26ng/ml m

response 1366638

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.14
0.00	0.00	0.00
0.00	0.00	0.00

J 11/24/13

wrong peak

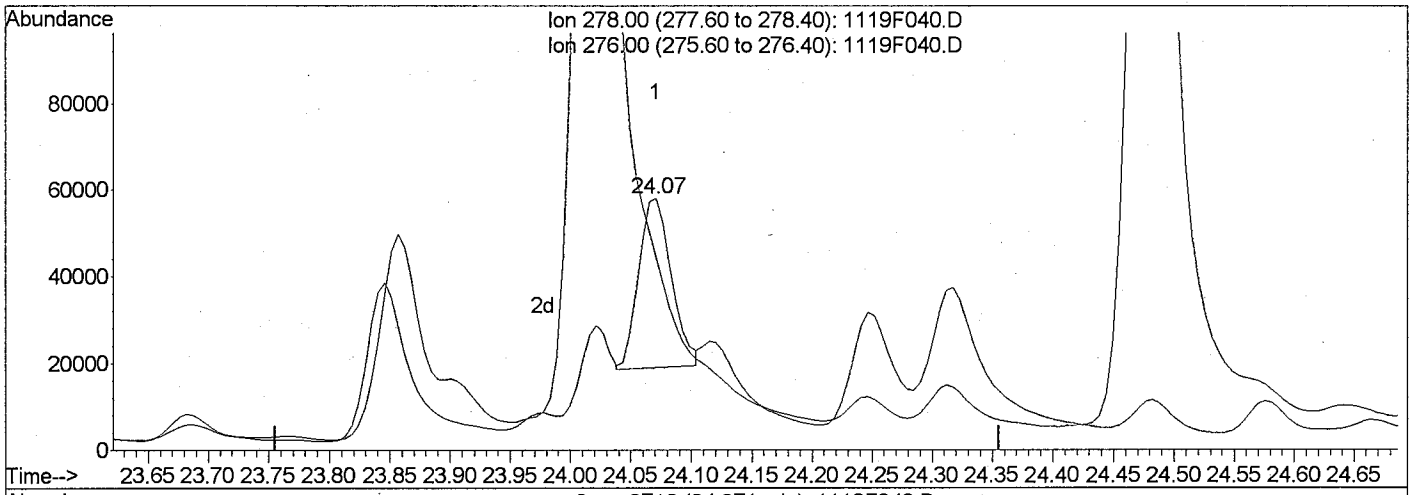
11/24/13

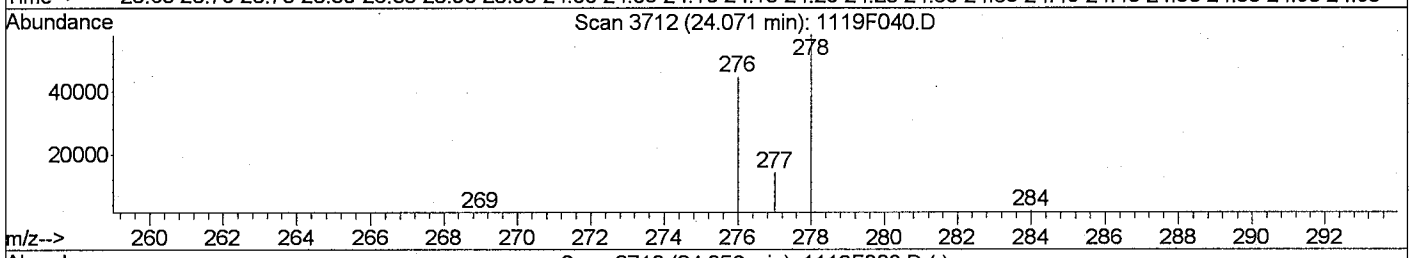
1119F040.D 1107ALK.M Thu Nov 20 14:19:42 2003

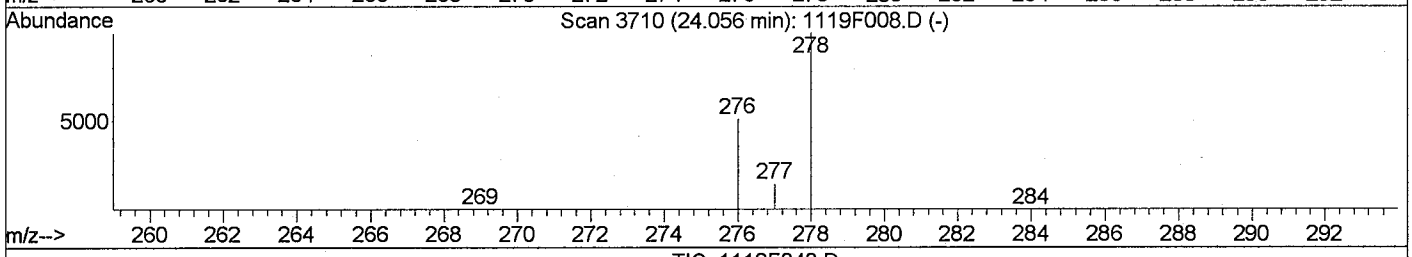
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(55) Dibenz(a,h)anthracene (T)

24.07min 528.97ng/ml

response 73194

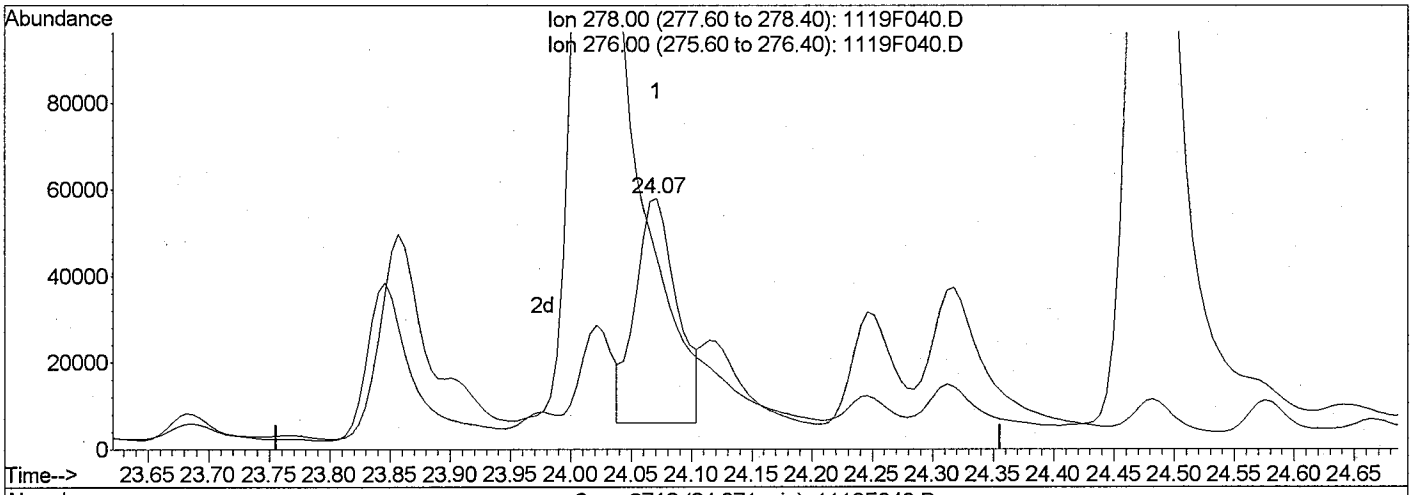
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	60.74
0.00	0.00	0.00
0.00	0.00	0.00

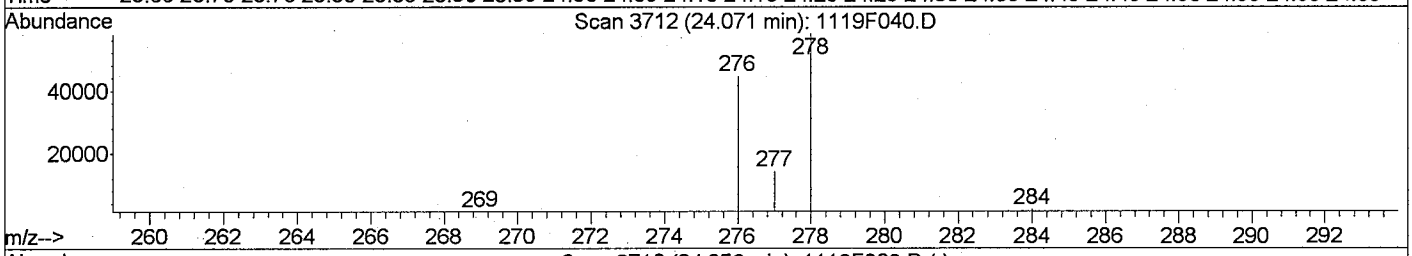
1119F040.D 1107ALK.M Thu Nov 20 14:19:47 2003

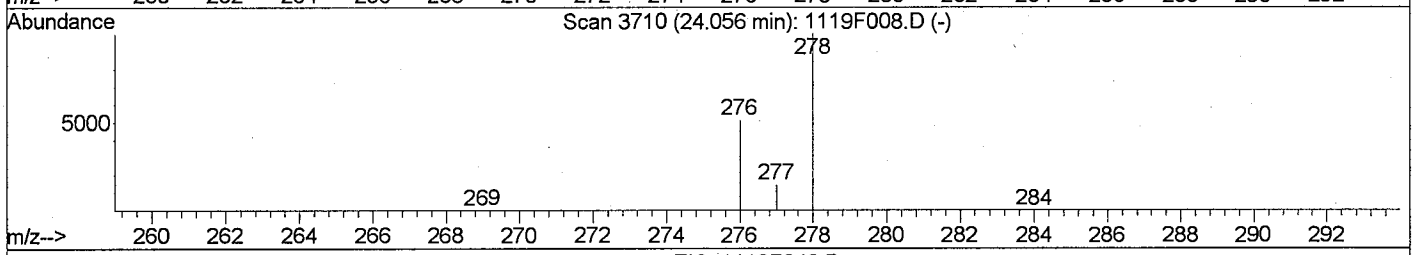
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(55) Dibenz(a,h)anthracene (T)

24.07min 899.17ng/ml m

response 124420

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	76.65
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

incomplete

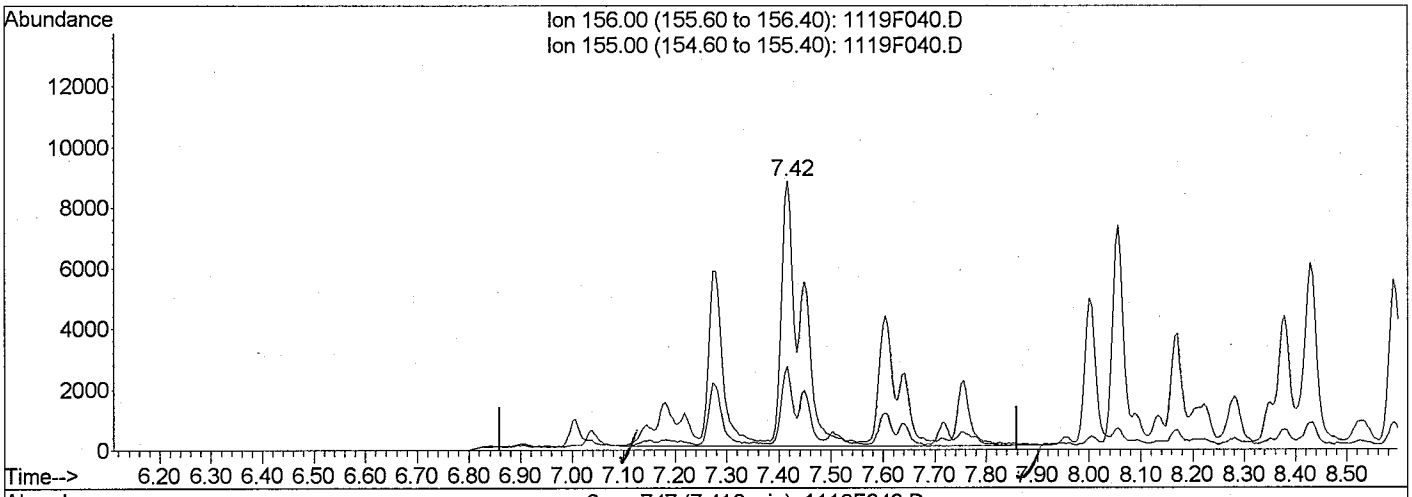
11/24/13

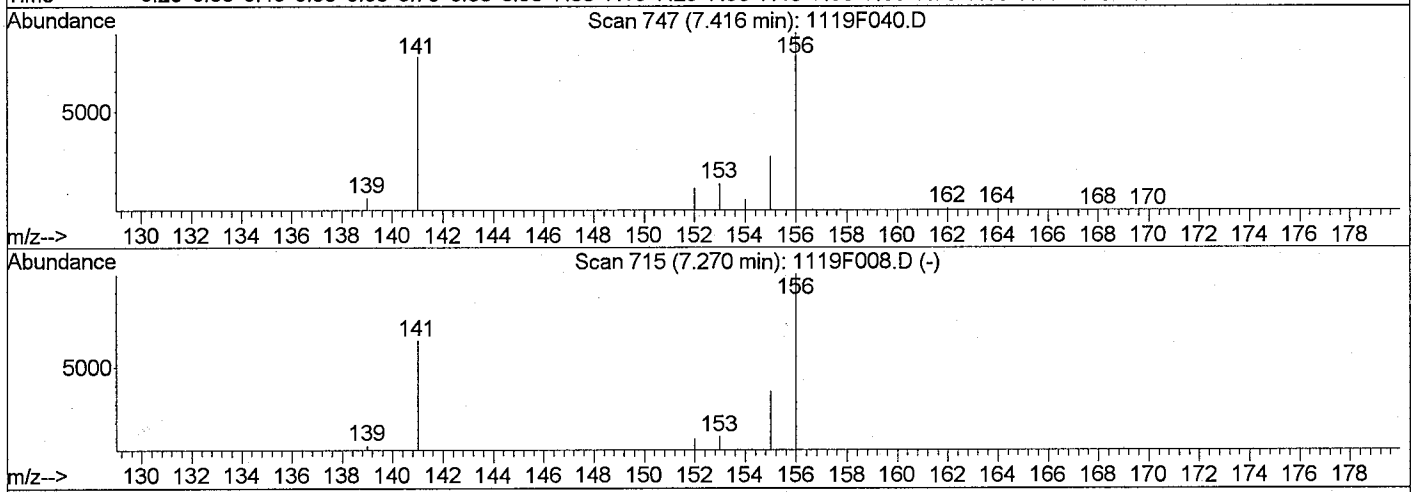
1119F040.D 1107ALK.M Thu Nov 20 14:19:53 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:08 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration





TIC: 1119F040.D

(8) C2-Naphthalenes (L)

7.42min 187.78ng/ml m

response 56091

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	30.93
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

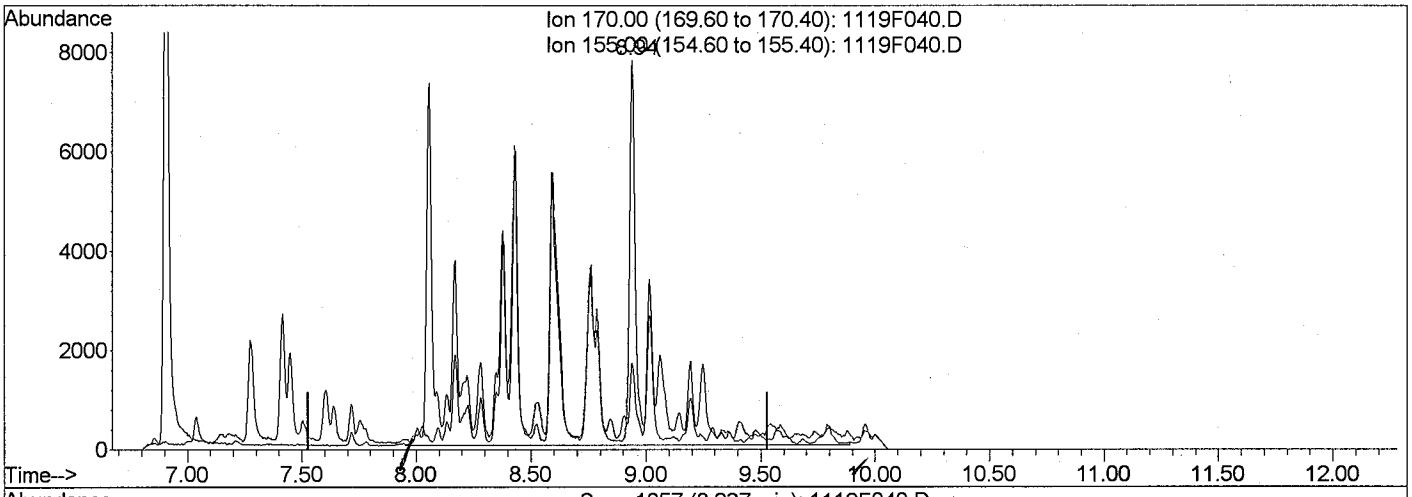
11/24/13

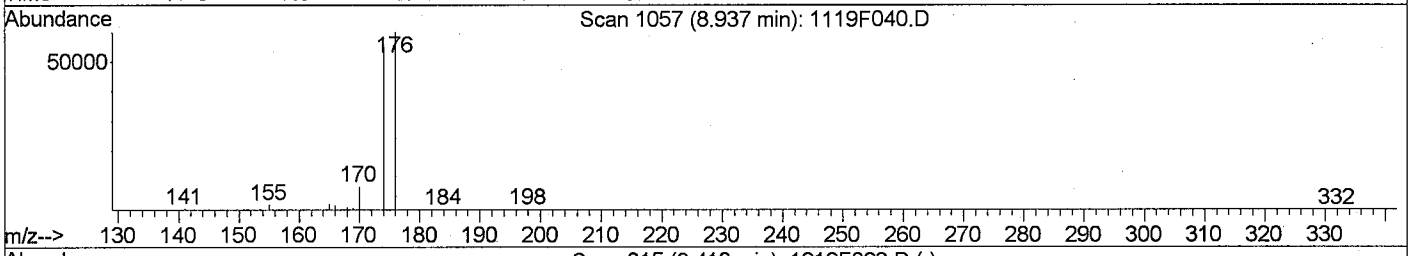
1119F040.D 1107ALK.M Fri Nov 21 12:08:17 2003

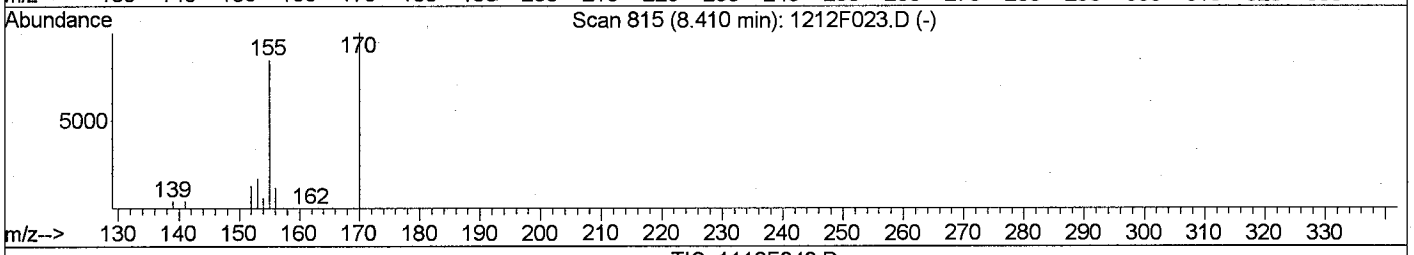
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:08 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(9) C3-Naphthalenes (L)

8.94min 256.77ng/ml m

response 76699

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	22.42#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

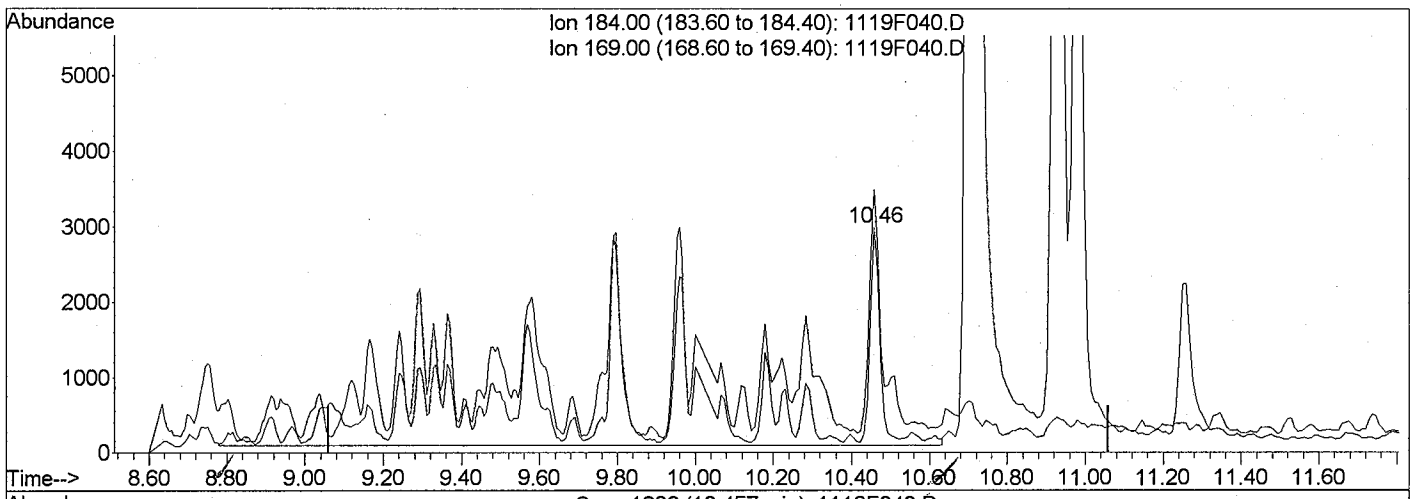
11/24/13

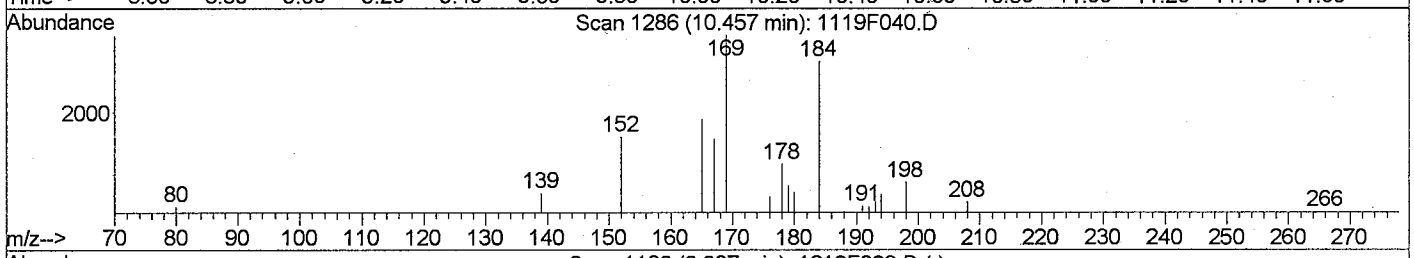
1119F040.D 1107ALK.M Fri Nov 21 12:08:43 2003

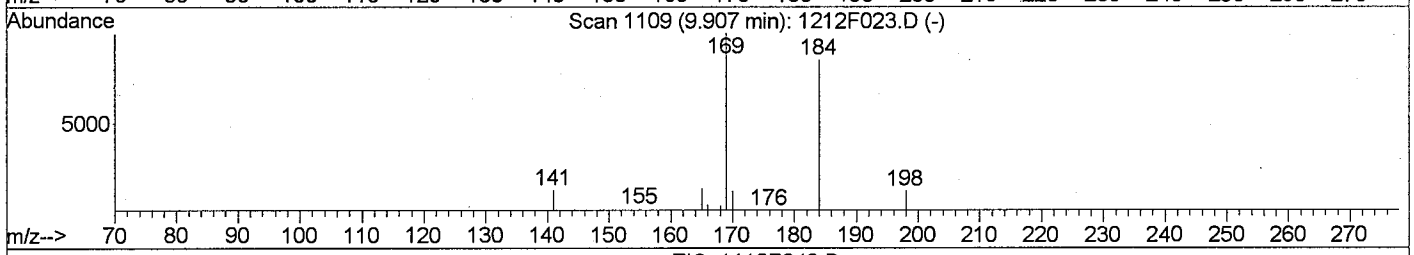
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(10) C4-Naphthalenes (L)

10.46min 164.45ng/ml m

response 49123

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	116.81
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

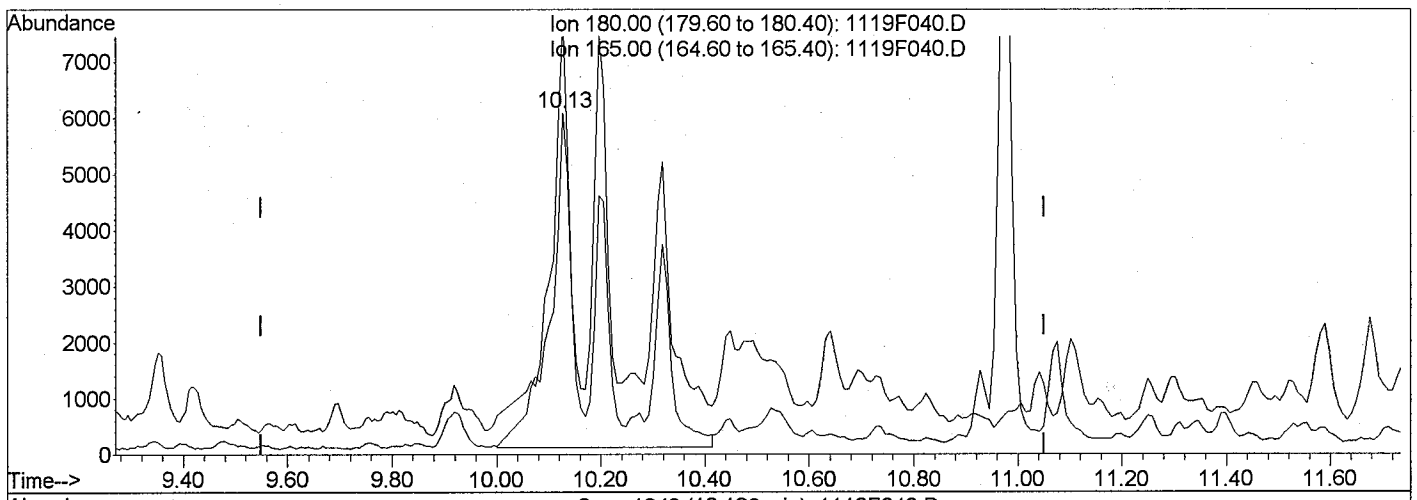
11/24/13

1119F040.D 1107ALK.M Fri Nov 21 12:09:04 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(18) C1-Fluorenes (L)

10.13min 214.68ng/ml m

response 38213

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	126.73#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

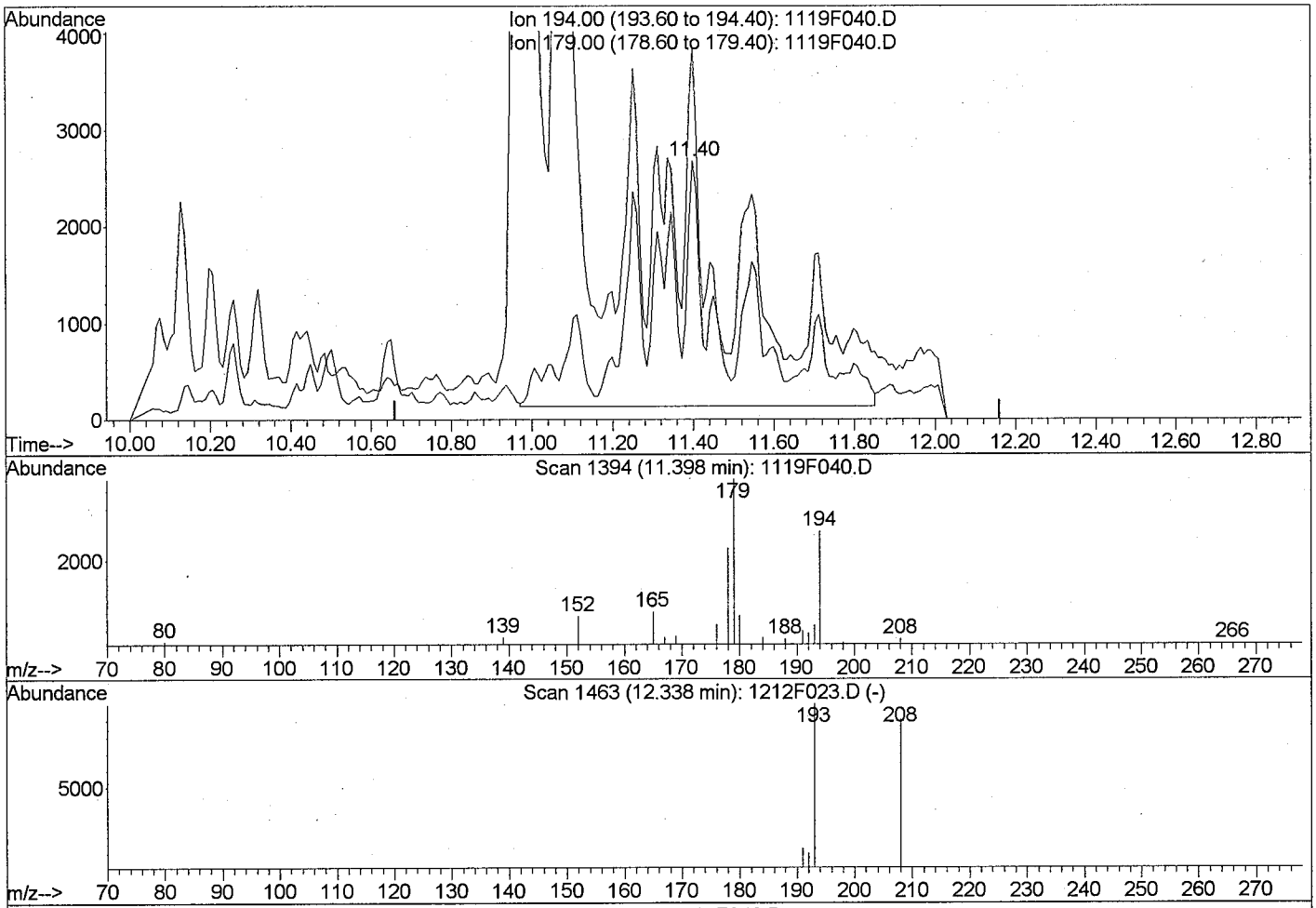
1119F040.D 1107ALK.M Fri Nov 21 12:09:12 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D
Acq On : 19 Nov 2003 6:14 pm
Sample : K2308433-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:09 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(19) C2-Fluorenes (L)

11.40min 206.21ng/ml m

response 36706

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	144.59
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

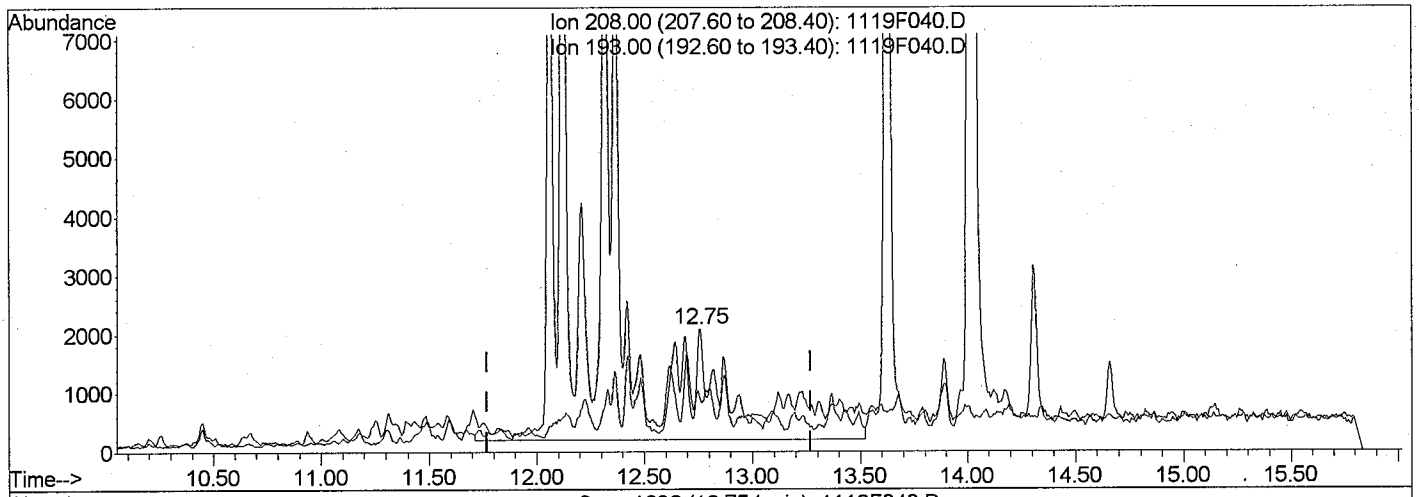
1119F040.D 1107ALK.M Fri Nov 21 12:09:29 2003

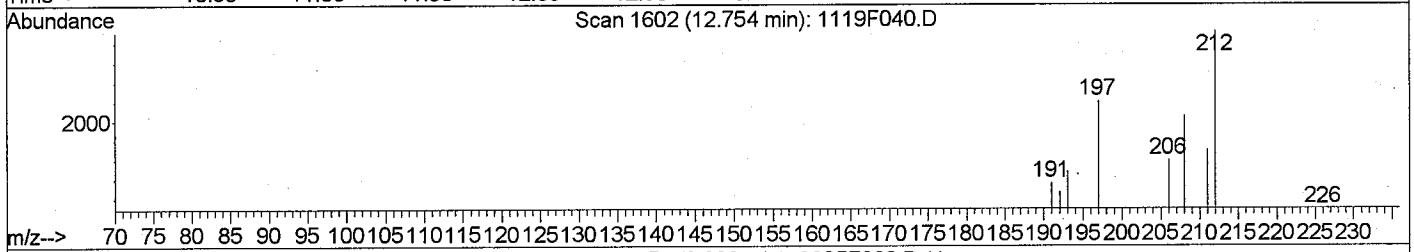
Quantitation Report (Qedit)

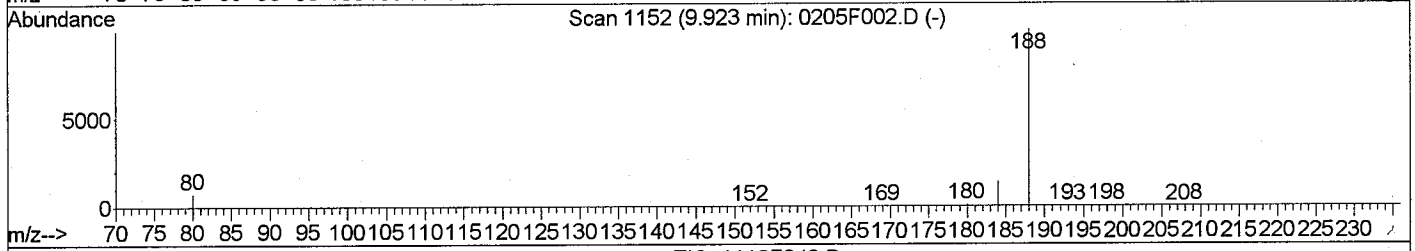
Data File : J:\MS11\DATA\111903\1119F040.D
Acq On : 19 Nov 2003 6:14 pm
Sample : K2308433-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:09 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(20) C3-Fluorenes (L)

12.75min 295.41ng/ml m

response 52584

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	45.77#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

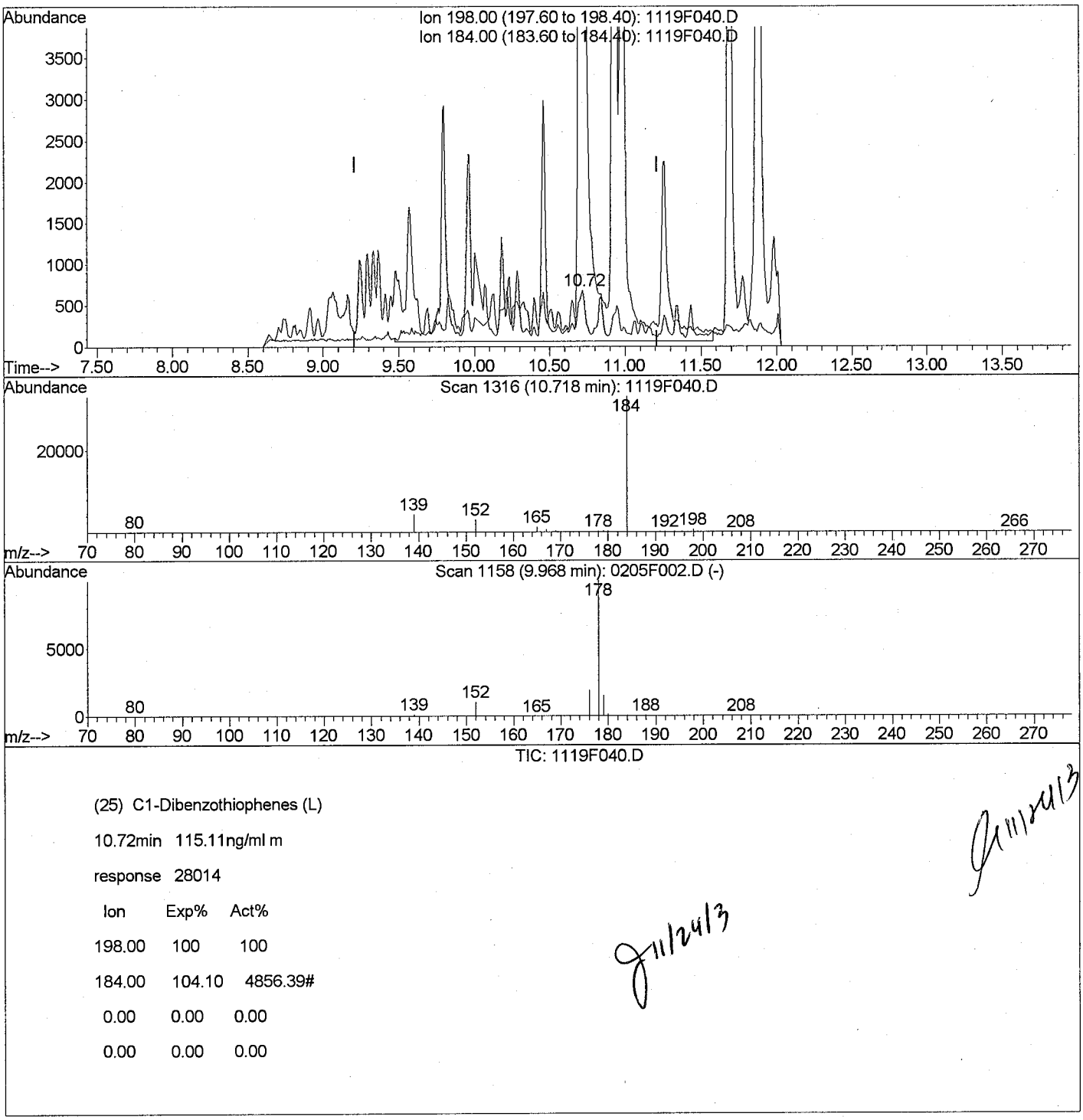
1119F040.D 1107ALK.M Fri Nov 21 12:09:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D
Acq On : 19 Nov 2003 6:14 pm
Sample : K2308433-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:10 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(25) C1-Dibenzothiophenes (L)

10.72min 115.11ng/ml m

response 28014

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	4856.39#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

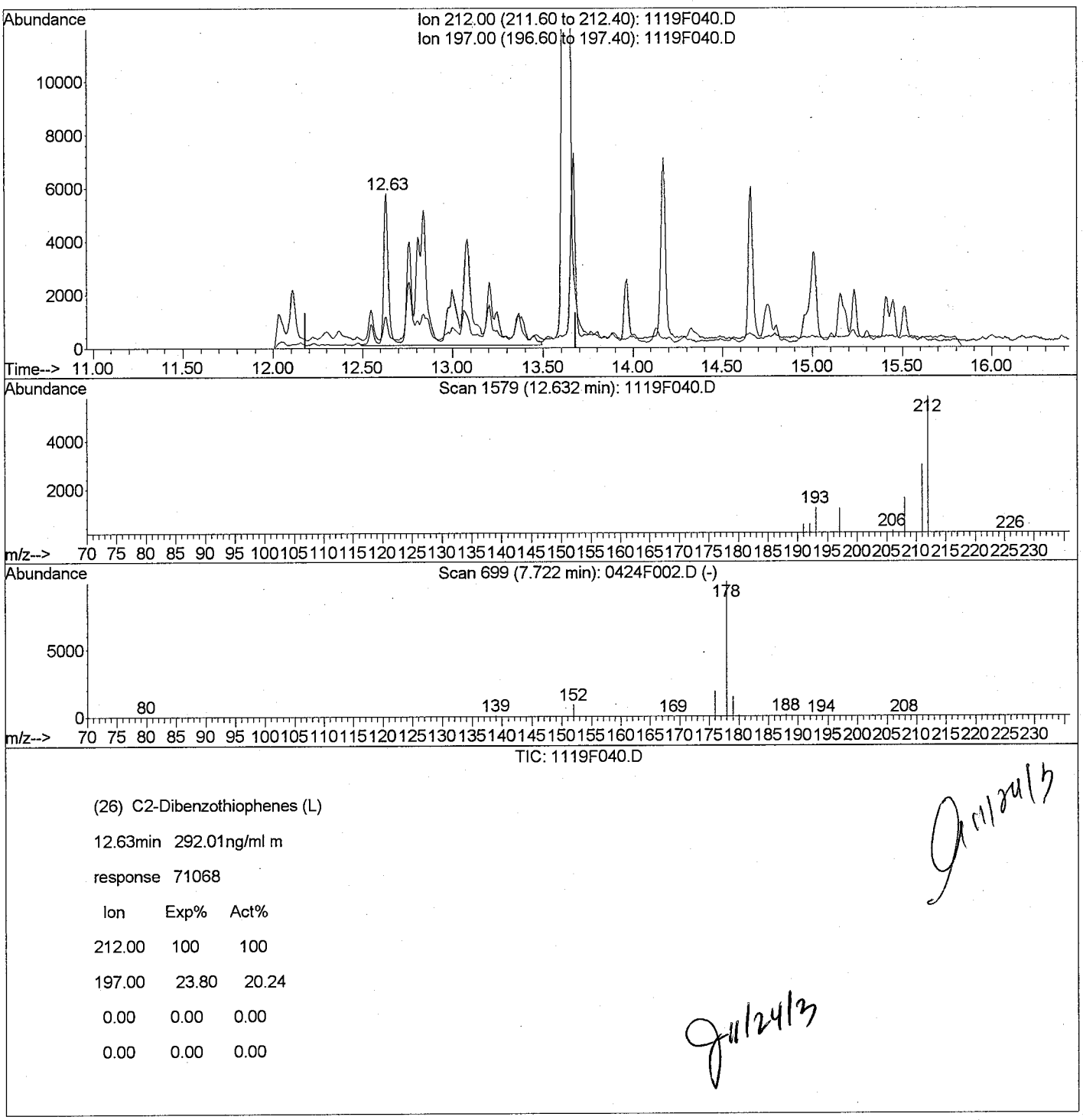
1119F040.D 1107ALK.M Fri Nov 21 12:10:08 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D
Acq On : 19 Nov 2003 6:14 pm
Sample : K2308433-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:10 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(26) C2-Dibenzothiophenes (L)

12.63min 292.01ng/ml m

response 71068

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	20.24
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

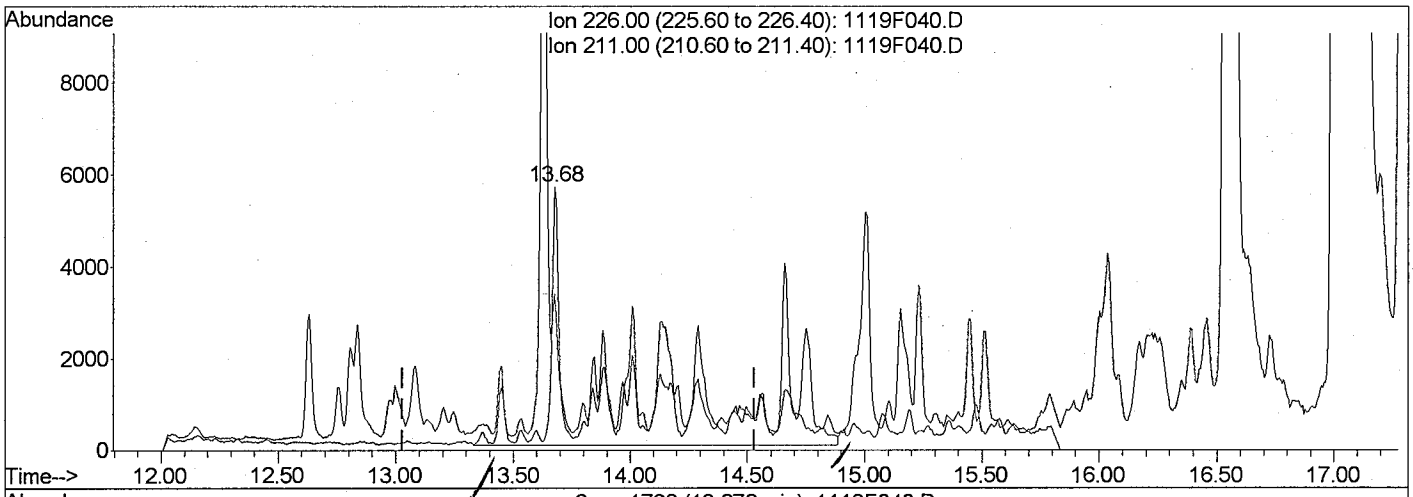
11/24/3

1119F040.D 1107ALK.M Fri Nov 21 12:10:23 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:10 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(27) C3-Dibenzothiophenes (L)

13.68min 320.63ng/ml m

response 78033

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	59.52
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

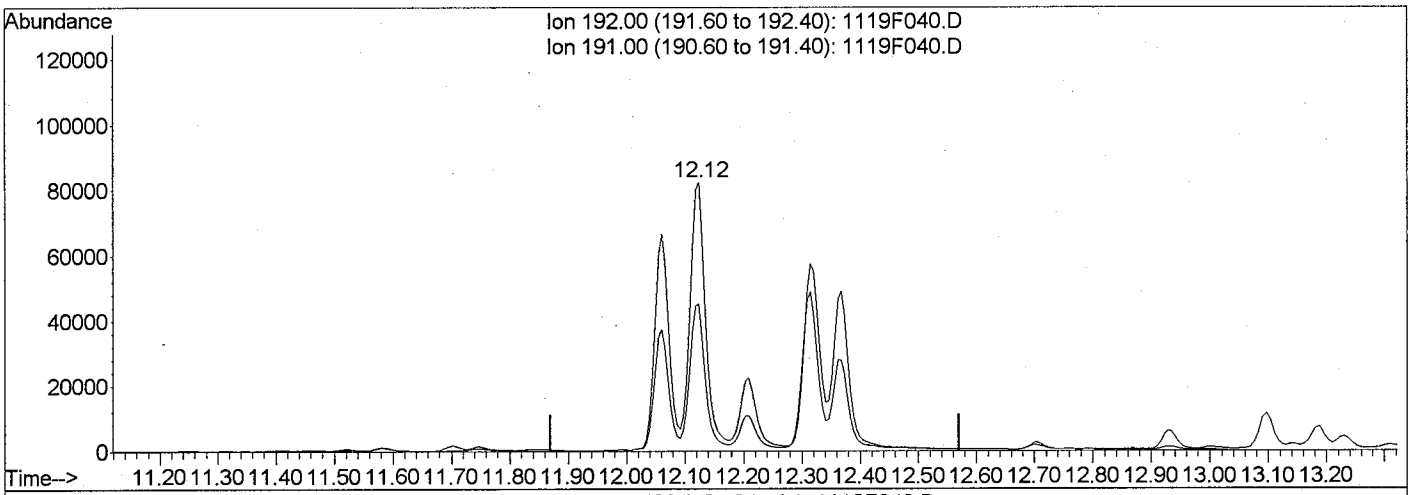
11/24/13

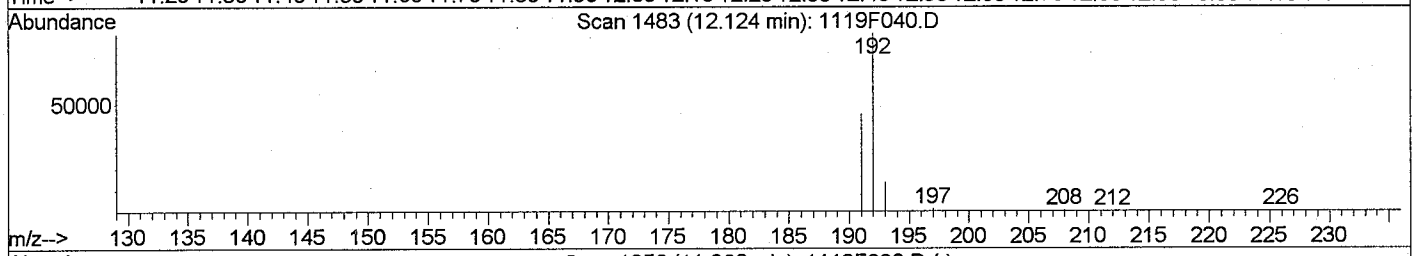
1119F040.D 1107ALK.M Fri Nov 21 12:10:46 2003

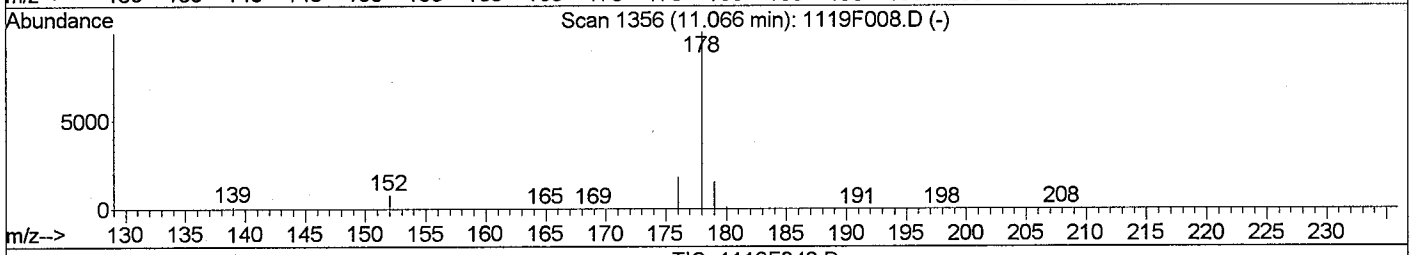
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:10 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 2110.74ng/ml m

response 539619

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	54.92
0.00	0.00	0.00
0.00	0.00	0.00

JJ 11/24/13

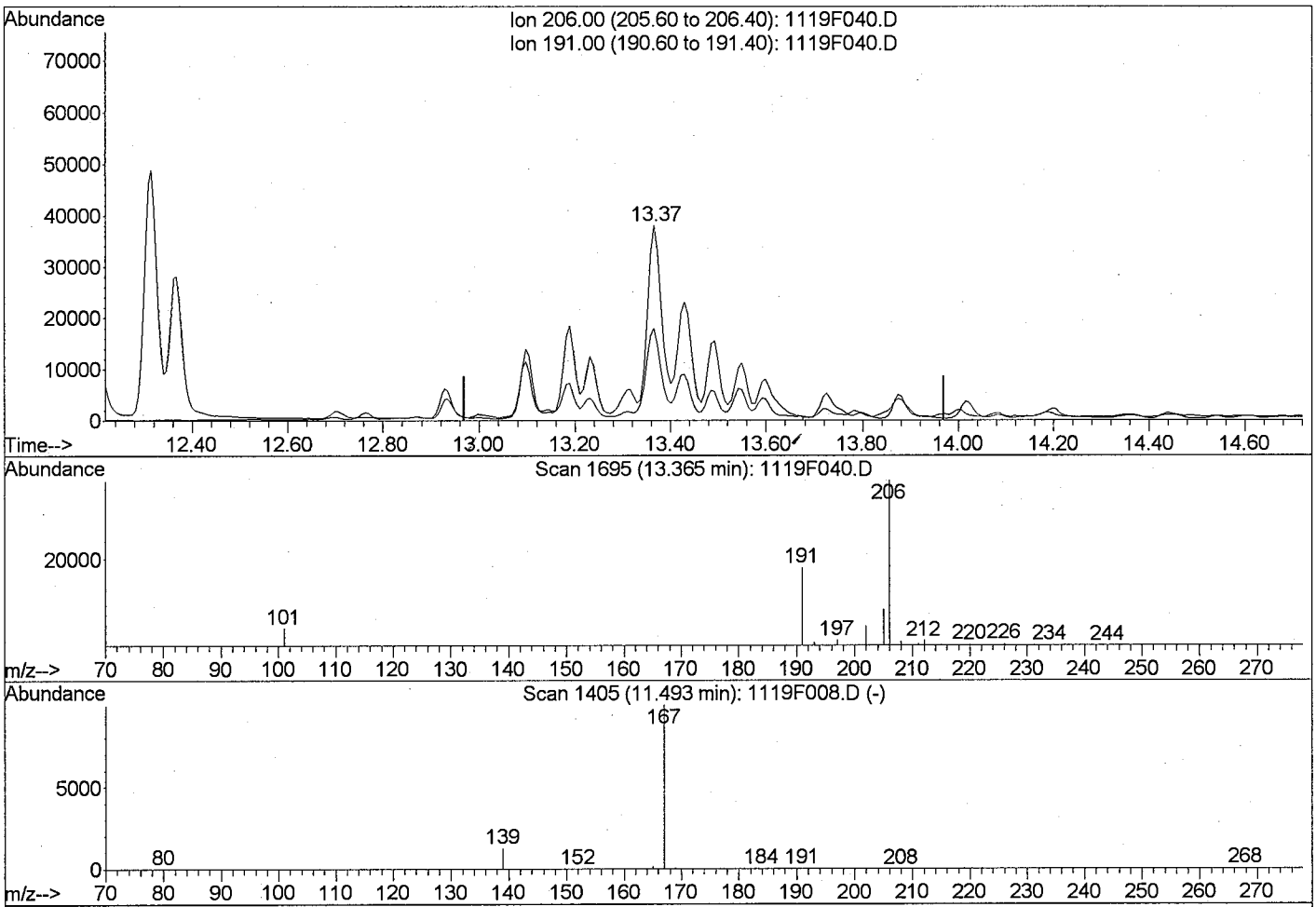
JJ 11/24/13

1119F040.D 1107ALK.M Fri Nov 21 12:10:51 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:11 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 1185.38ng/ml m

response 303046

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	47.22
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

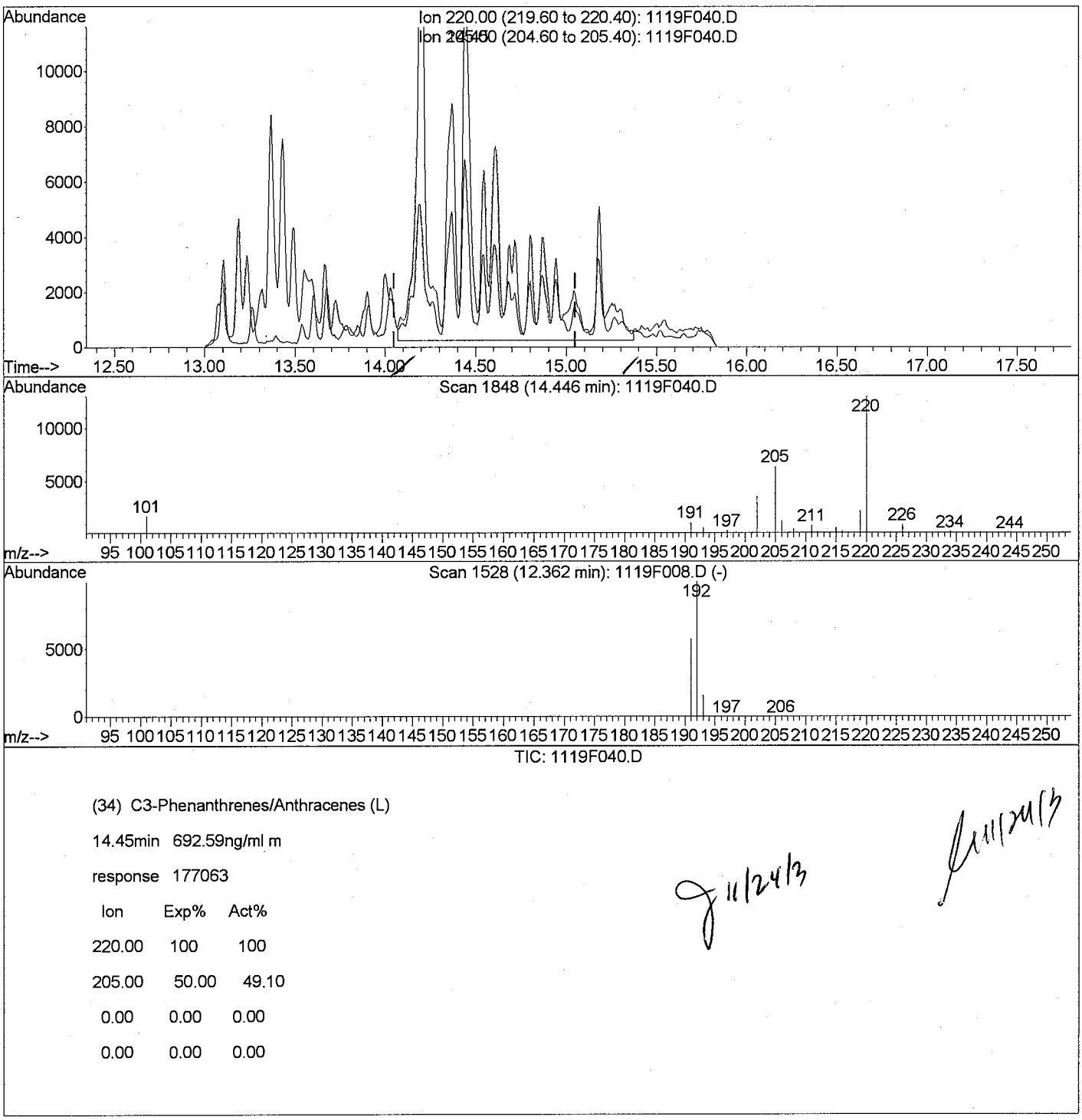
11/24/03

1119F040.D 1107ALK.M Fri Nov 21 12:11:05 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:11 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.45min 692.59ng/ml m

response 177063

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	49.10
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

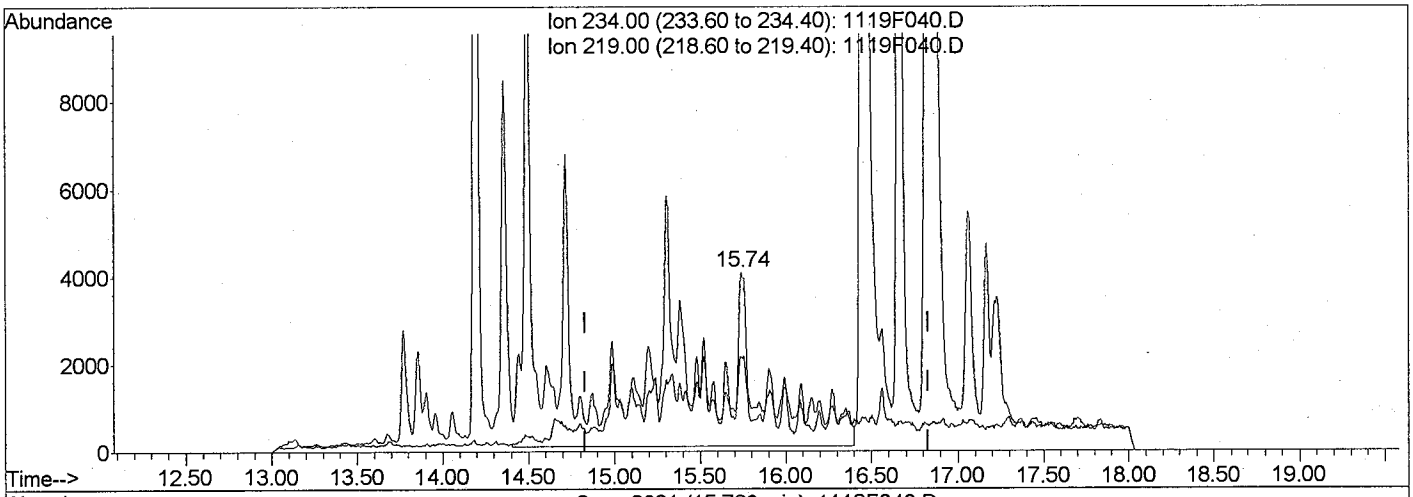
1119F040.D 1107ALK.M Fri Nov 21 12:11:25 2003

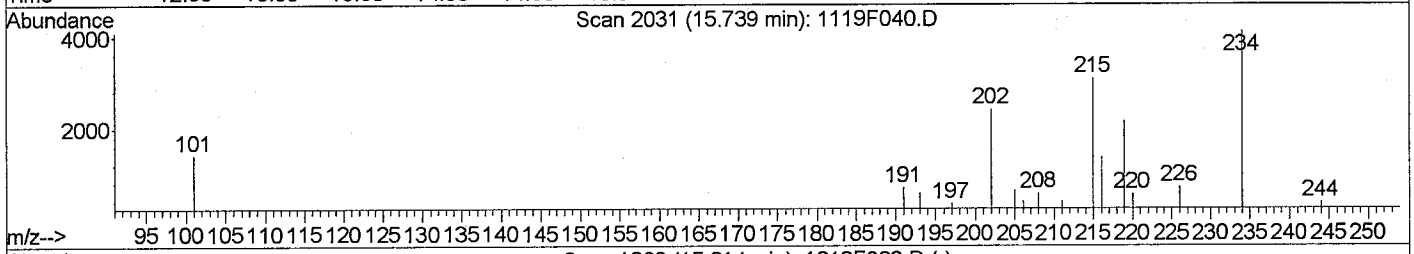
Quantitation Report (Qedit)

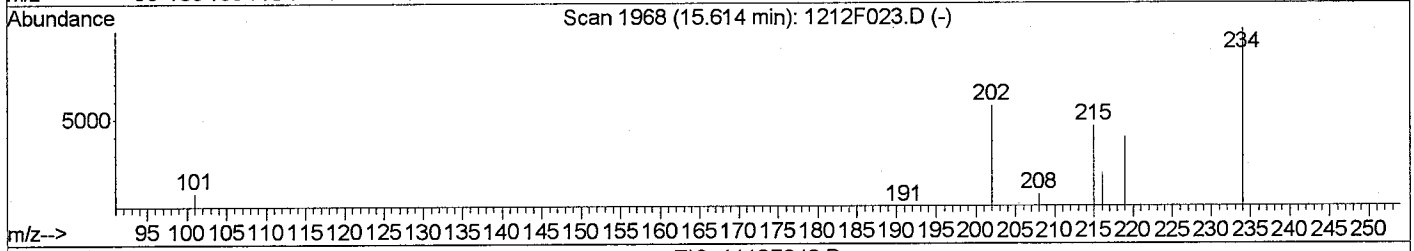
Data File : J:\MS11\DATA\111903\1119F040.D
Acq On : 19 Nov 2003 6:14 pm
Sample : K2308433-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:11 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.74min 392.51ng/ml m

response 100347

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	52.70
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

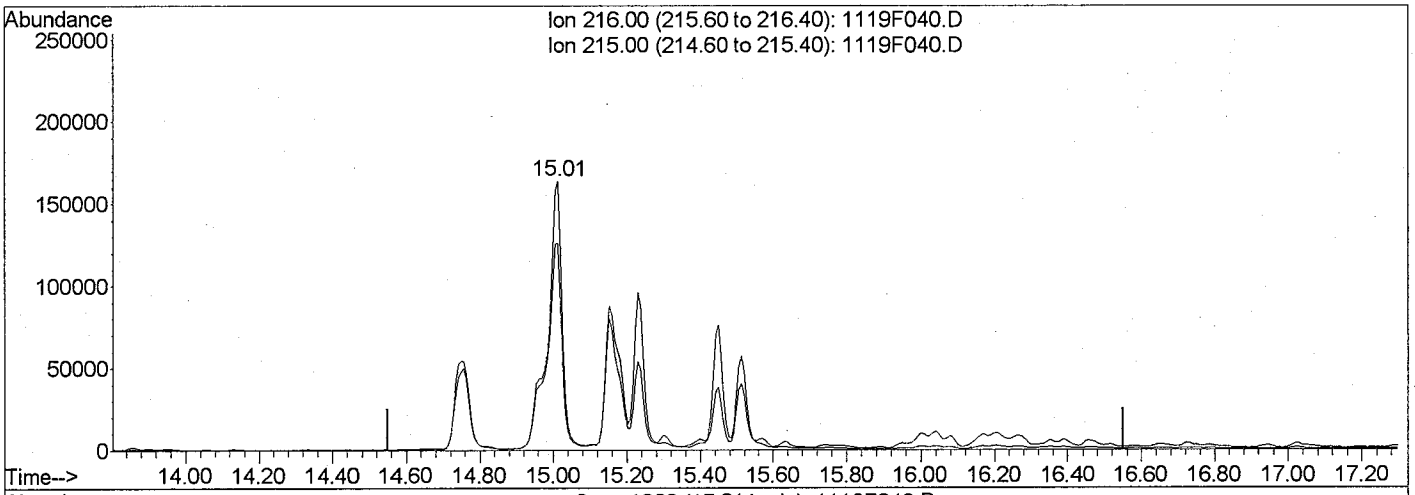
11/21/13

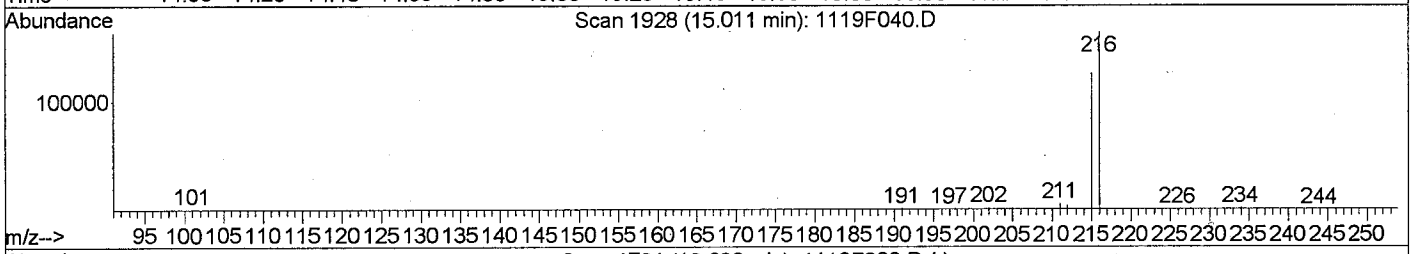
1119F040.D 1107ALK.M Fri Nov 21 12:11:39 2003

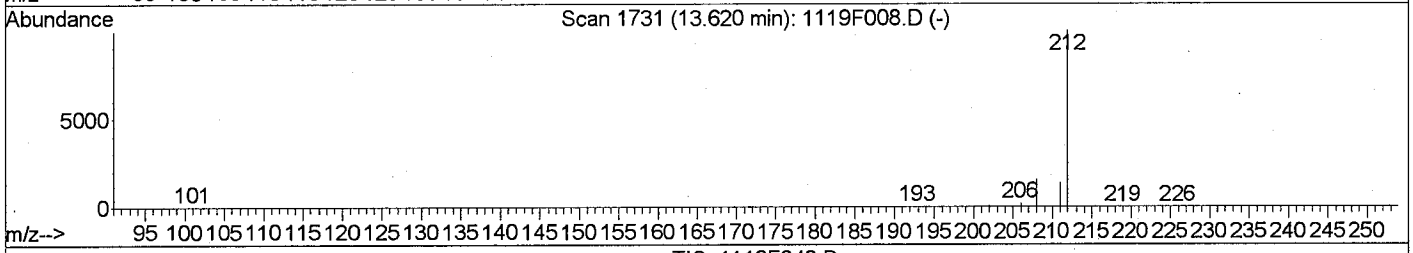
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:11 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 4813.35ng/ml m

response 1335741

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	76.86
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

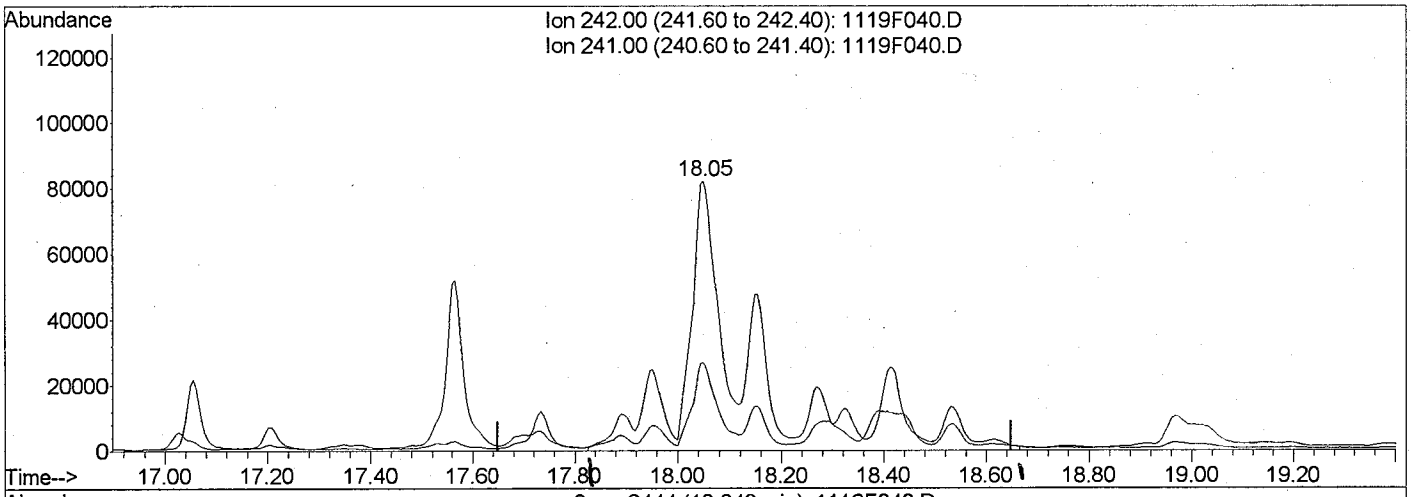
11/24/13

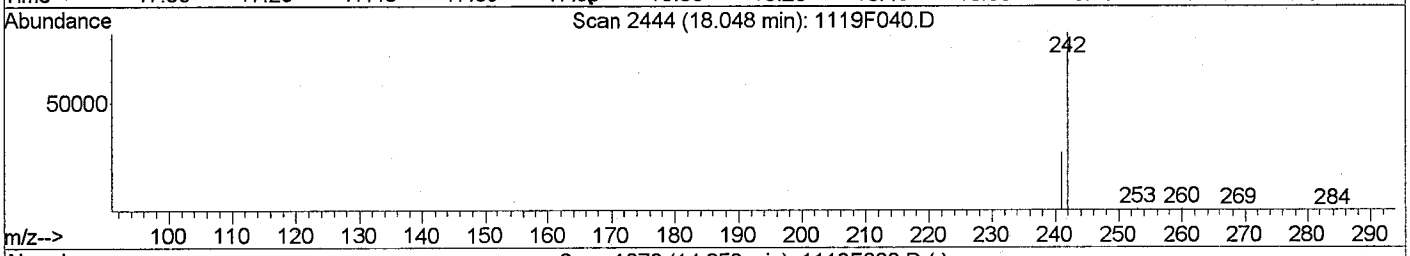
1119F040.D 1107ALK.M Fri Nov 21 12:11:44 2003

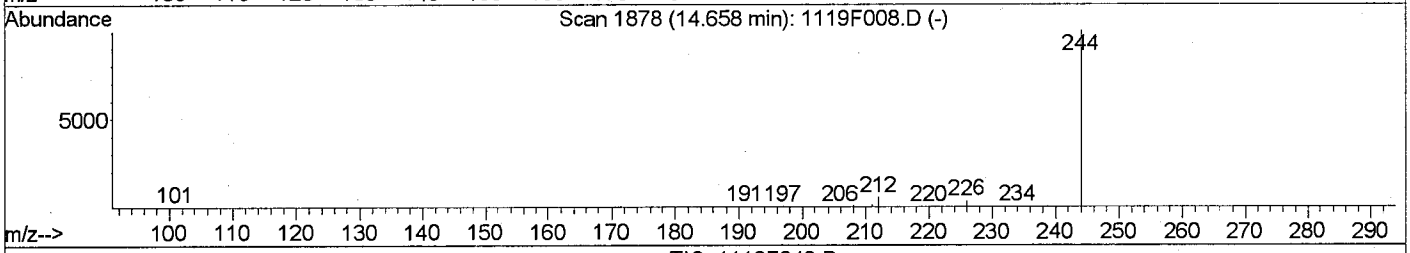
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:11 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(44) C1-Chrysenes (L)

18.05min 3216.78ng/ml m

response 726764

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	32.75
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

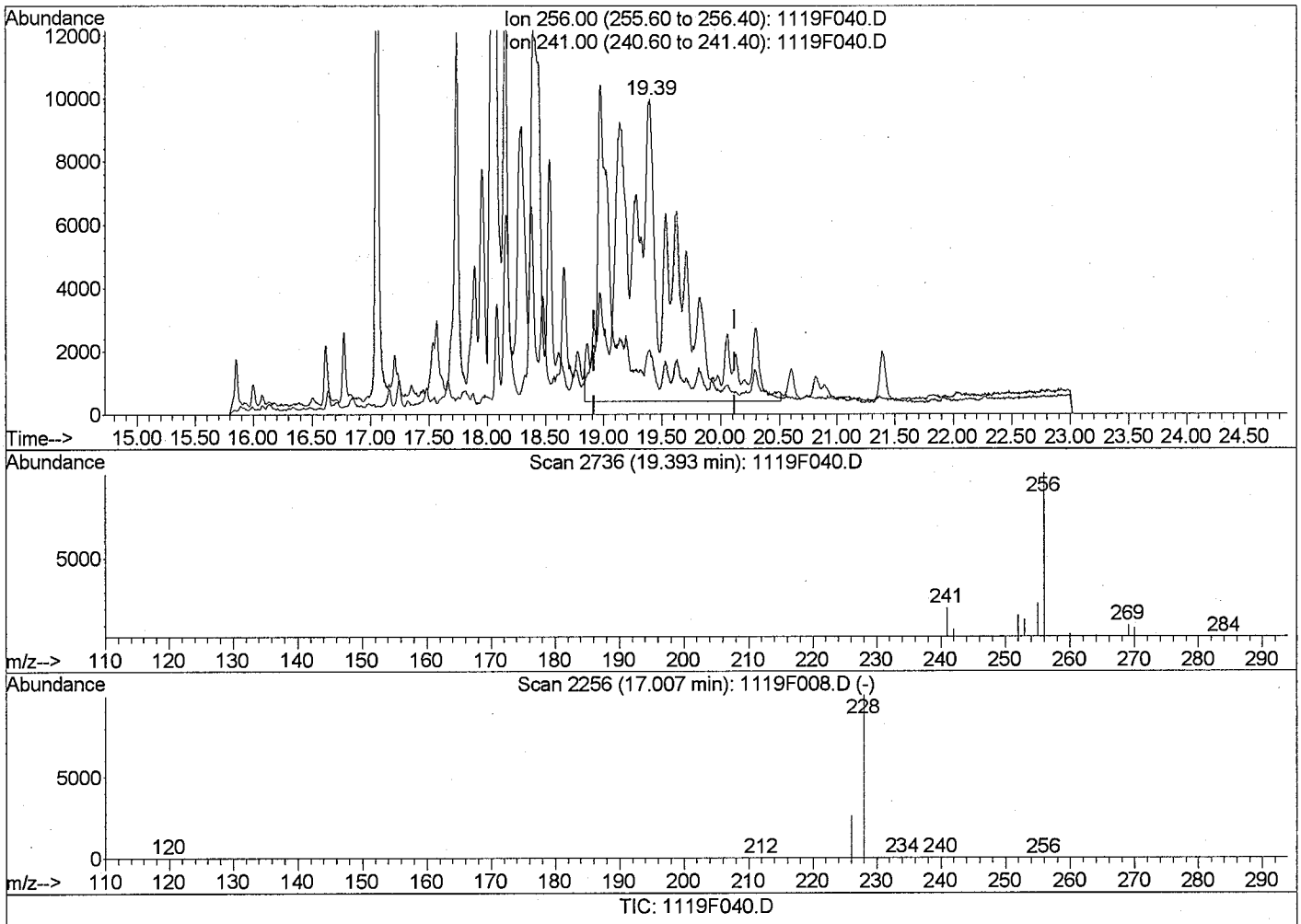
11/24/03

1119F040.D 1107ALK.M Fri Nov 21 12:12:00 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F040.D

(45) C2-Chrysenes (L)

19.39min 1251.90ng/ml m

response 282841

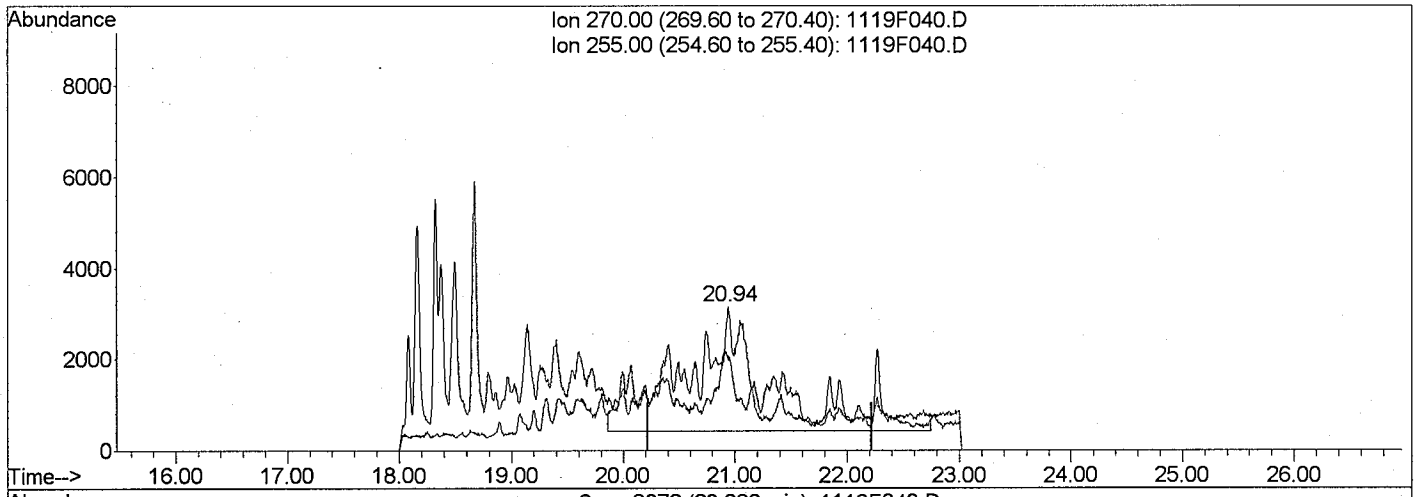
Ion	Exp%	Act%
256.00	100	100
241.00	37.80	20.40
0.00	0.00	0.00
0.00	0.00	0.00

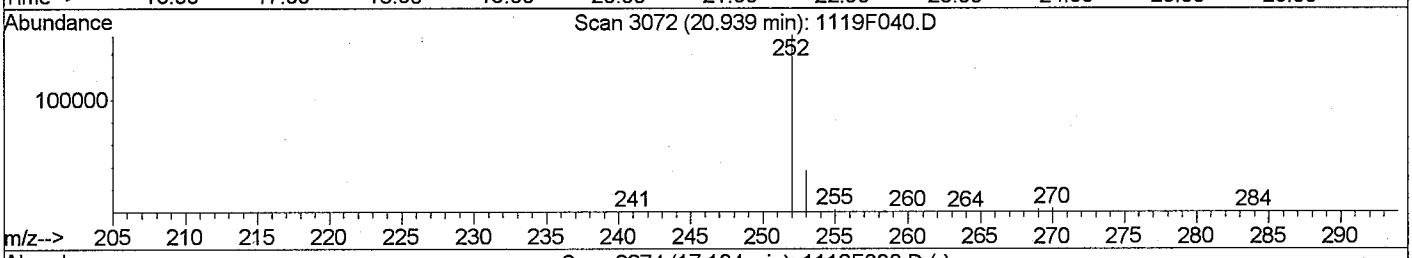
1119F040.D 1107ALK.M Fri Nov 21 12:12:30 2003

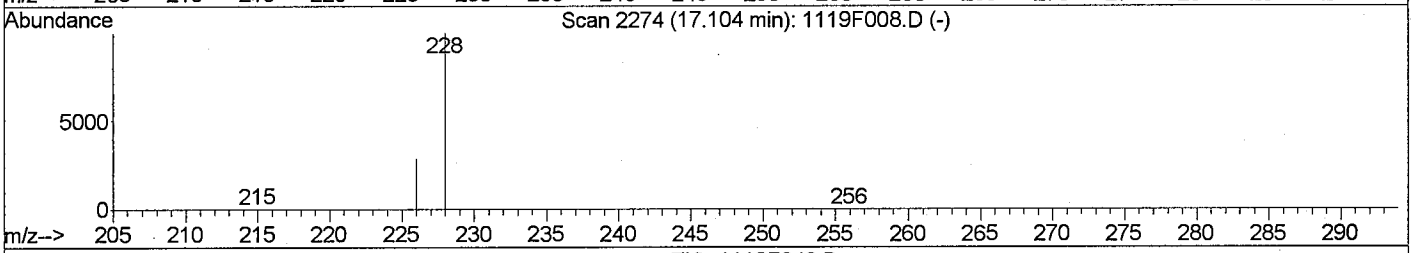
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F040.D Vial: 11
Acq On : 19 Nov 2003 6:14 pm Operator: LWeiskopf
Sample : K2308433-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(46) C3-Chrysenes (L)

20.94min 631.03ng/ml m

response 142569

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	66.05#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

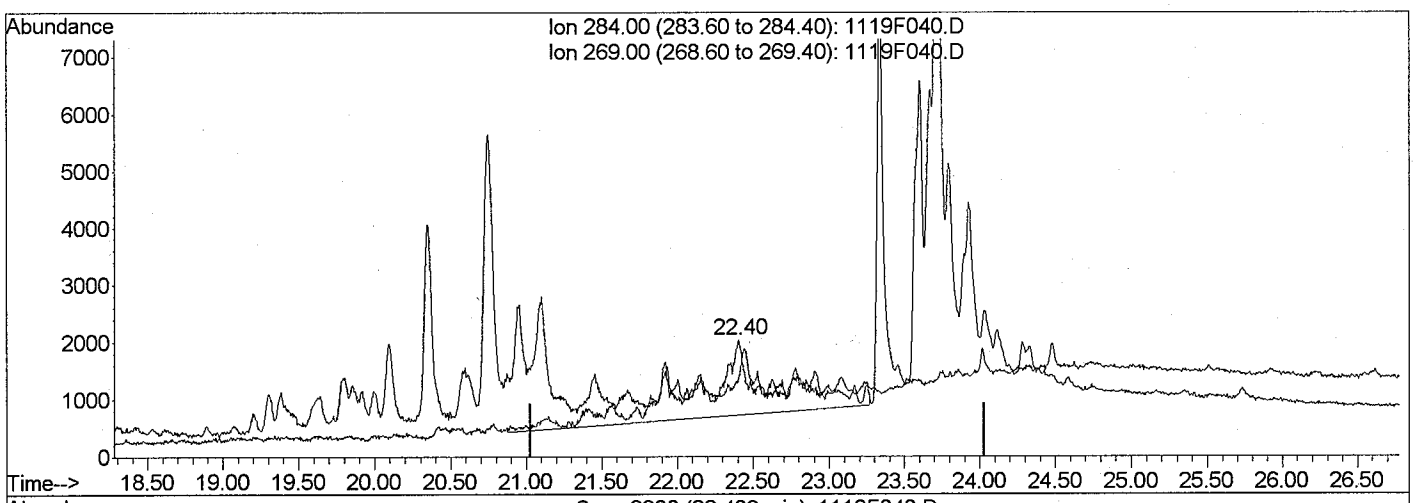
1119F040.D 1107ALK.M Fri Nov 21 12:12:54 2003

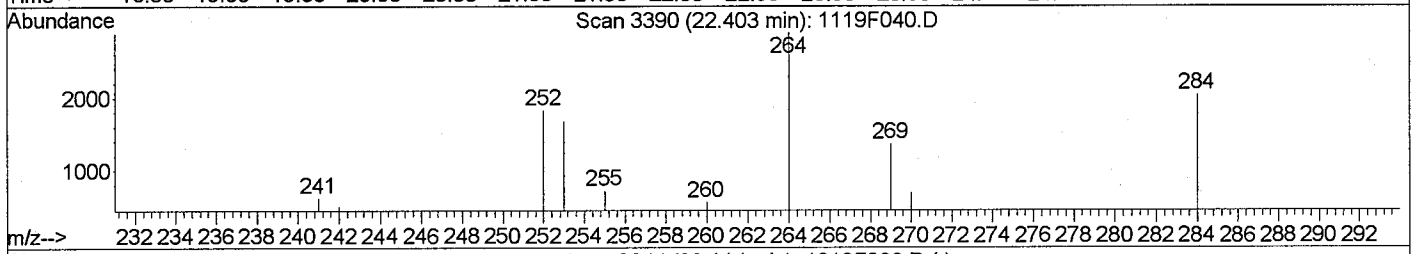
Quantitation Report (Qedit)

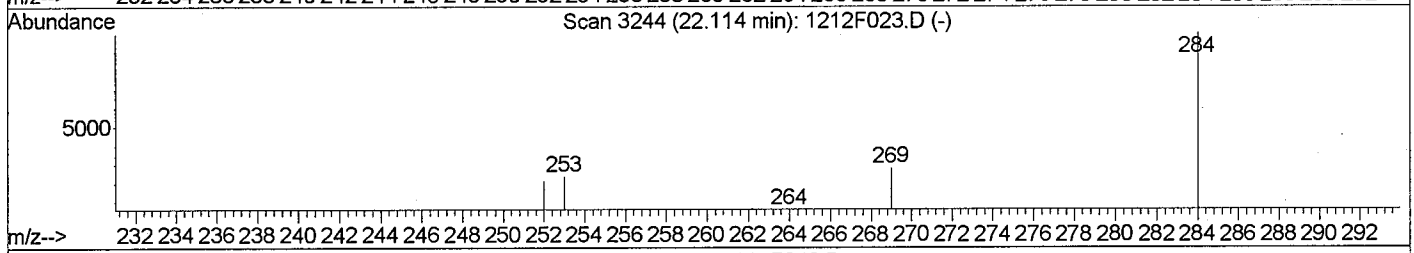
Data File : J:\MS11\DATA\111903\1119F040.D
Acq On : 19 Nov 2003 6:14 pm
Sample : K2308433-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:13 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F040.D

(47) C4-Chrysenes (L)

22.40min 210.52ng/ml m

response 47563

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	67.06
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

1119F040.D 1107ALK.M Fri Nov 21 12:13:06 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F007.D
Lab ID: K2308433-004
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 08:47
Date Quantitated: 11/24/2003 09:17
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/24/3

Secondary Review: 11.24.3

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247862	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F007.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 08:47	**Quant Date:**	11/24/2003 09:17	**Vial:**	4
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-004			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	228738	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	117353	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	161535	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	157597	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	92435	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	7615	64.88	65	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	12384	76.60	77	34-122	OK	NR
4	Terphenyl-d14	14.66	0.00	0.00	244	11753	81.83	82	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	2701	10.44	10	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	1068	6.99	6.9	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	1124	7.85	7.8	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	486	2.62	2.6	JD	NR
1	C2-Naphthalenes				156	0		34	U	NR
1	C3-Naphthalenes				170	0		34	U	NR
1	C4-Naphthalenes				184	0		34	U	NR
2	Acenaphthylene	7.74		0.00	152	4317	19.09	19	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	7015	50.34	50	JD	NR
2	Dibenzofuran	8.35	0.01	0.00	168	2708	14.50	14	JD	NR
2	Fluorene	9.00	0.01	0.00	166	5688	38.10	38	JD	NR
2	C1-Fluorenes				180	0		34	U	NR
2	C2-Fluorenes				194	0		34	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F007.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 08:47	**Quant Date:**	11/24/2003 09:17	**Vial:**	4
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-004			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		34	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	5885	31.58	31	JD	NR
3	C1-Dibenzothiophenes				198	0		34	U	NR
3	C2-Dibenzothiophenes				212	0		34	U	NR
3	C3-Dibenzothiophenes				226	0		34	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	120443	615.21	610	D	NR
3	Anthracene	11.08		0.00	178	20118	120.28	120	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		34	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		34	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		34	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		34	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	283154	1,453	1400	D	
4	Pyrene	14.18	0.01	0.00	202	241206	1,171	1200	D	
4	C1-Fluoranthenes/Pyrenes				216	0		34	U	NR
4	Benz(a)anthracene	17.02		0.00	228	81557	520.03	520	D	NR
4	Chrysene	17.12		0.00	228	120839	720.54	710	D	NR
4	C1-Chrysenes				242	0		34	U	NR
4	C2-Chrysenes				256	0		34	U	NR
4	C3-Chrysenes				270	0		34	U	NR
4	C4-Chrysenes				284	0		34	U	NR
5	Benzo(b)fluoranthene	20.01	0.01	0.00	252	75852	614.66	610	D	NR
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	92807**m**	592.71	590	D	NR
5	Benzo(e)pyrene	20.98	0.01	0.00	252	62941	454.26	450	D	NR
5	Benzo(a)pyrene	21.17	0.01	0.00	252	61872	589.45	580	D	NR
5	Perylene	21.50		0.00	252	17084	144.99	140	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	36648	574.33	570	D	NR
5	Dibenz(a,h)anthracene	24.08		0.00	278	6837**m**	74.56	74	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	37549	354.94	350	D	NR

Prep Amount:	26.8 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	75.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F007.D Vial: 4
Acq On : 20 Nov 2003 8:47 am Operator: LWeiskopf
Sample : K2308433-004DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:27 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	228738	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	117353	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	161535	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	157597	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	92435	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	7565	45.15	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	4.51%		
16) Fluorene-d10	8.95	176	7615	64.88	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	6.49%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	12384	76.60	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.66%		
41) Terphenyl-d14	14.66	244	11753	81.83	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.18%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	2701	10.44	ng/ml	97
3) 2-Methylnaphthalene	6.38	142	1068	6.99	ng/ml	90
4) 1-Methylnaphthalene	6.52	142	1124	7.85	ng/ml	98
6) Biphenyl	7.05	154	486	2.62	ng/ml	95
7) 2,6-Dimethylnaphthalene	7.29	156	629	4.83	ng/ml	86
12) Acenaphthylene	7.74	152	4317	19.09	ng/ml	99
13) Acenaphthene	8.06	154	7015	50.34	ng/ml	99
14) Dibenzofuran	8.35	168	2708	14.50	ng/ml	98
15) 2,3,5-Trimethylnaphthalene	8.76	170	750	6.01	ng/ml	78
17) Fluorene	9.00	166	5688	38.10	ng/ml	100
24) Dibenzothiophene	10.72	184	5885	31.58	ng/ml	98
28) Phenanthrene	10.98	178	120443	615.21	ng/ml	99
29) Anthracene	11.08	178	20118	120.28	ng/ml	99
31) 1-Methylphenanthrene	12.37	192	6015	45.25	ng/ml	96
36) Fluoranthene	13.67	202	283154	1452.97	ng/ml	98
39) Pyrene	14.18	202	241206	1170.95	ng/ml	100
42) Benz(a)anthracene	17.02	228	81557	520.03	ng/ml	96
43) Chrysene	17.12	228	120839	720.54	ng/ml	100
49) Benzo(b)fluoranthene	20.01	252	75852	614.66	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	92807m	592.71	ng/ml	
51) Benzo(e)pyrene	20.98	252	62941	454.26	ng/ml	100
52) Benzo(a)pyrene	21.17	252	61872	589.45	ng/ml	99
53) Perylene	21.50	252	17084	144.99	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F007.D Vial: 4
Acq On : 20 Nov 2003 8:47 am Operator: LWeiskopf
Sample : K2308433-004DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:27 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

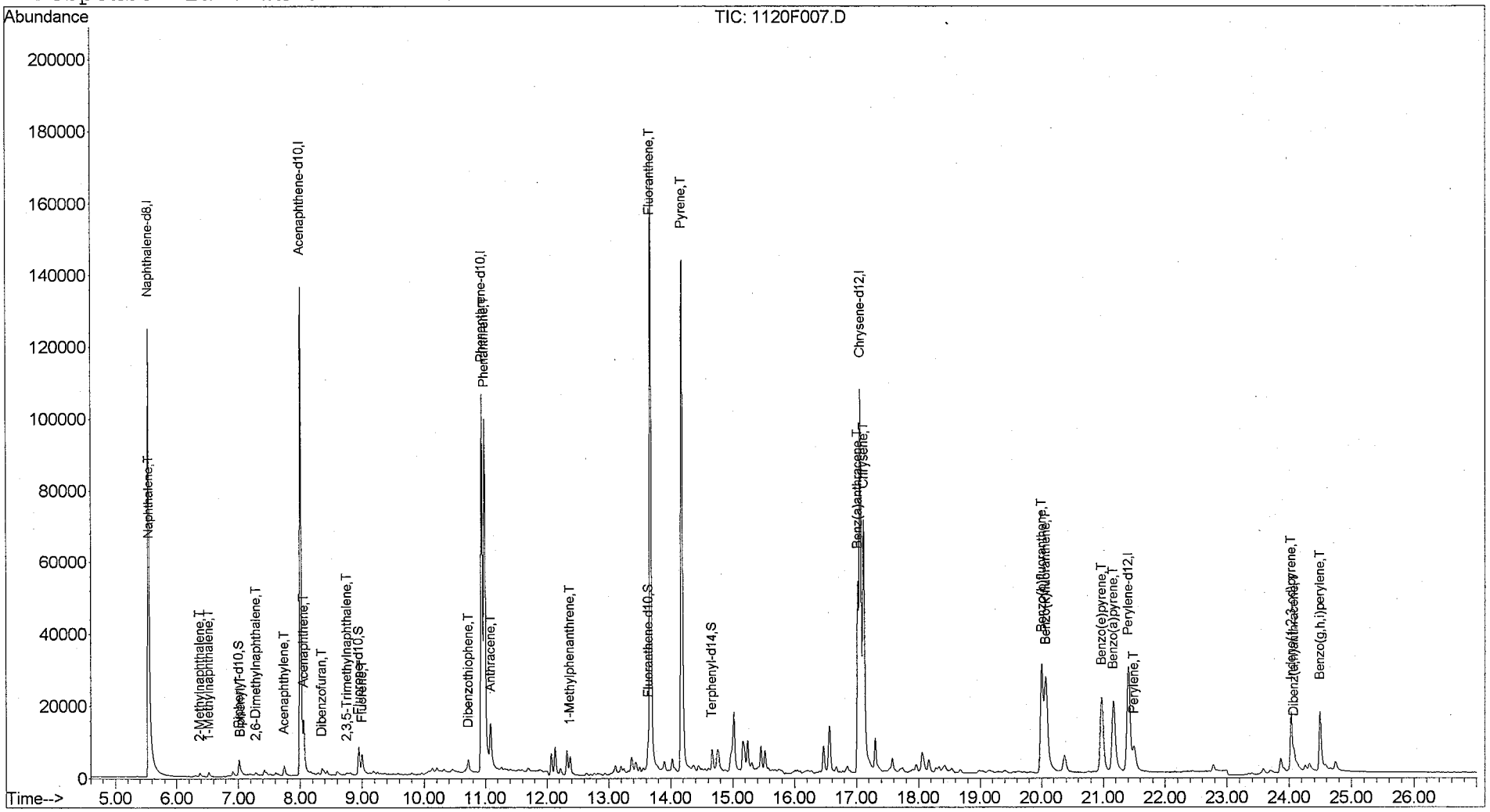
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54) Indeno(1,2,3-cd)pyrene	24.03	276	36648	574.33	ng/ml	93
55) Dibenz(a,h)anthracene	24.08	278	6837m	74.56	ng/ml	
56) Benzo(g,h,i)perylene	24.49	276	37549	354.94	ng/ml	99

(#) = qualifier out of range (m) = manual integration

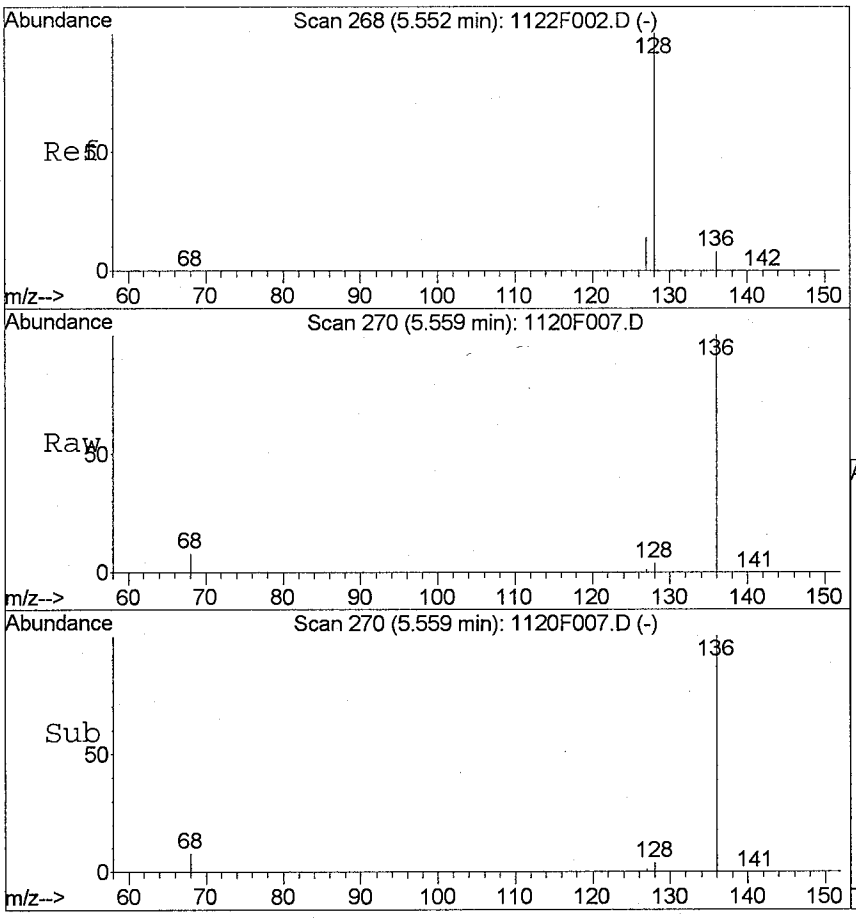
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F007.D Vial: 4
Acq On : 20 Nov 2003 8:47 am Operator: LWeiskopf
Sample : K2308433-004DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:17 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



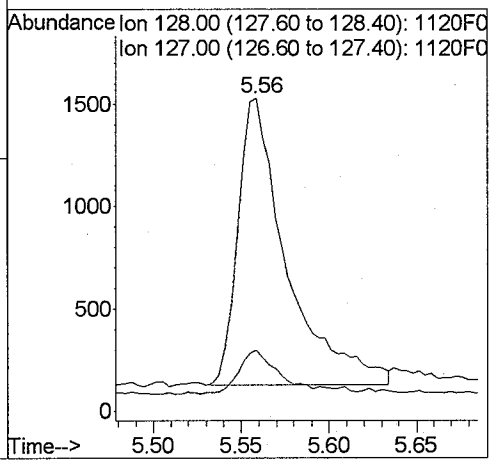
1103

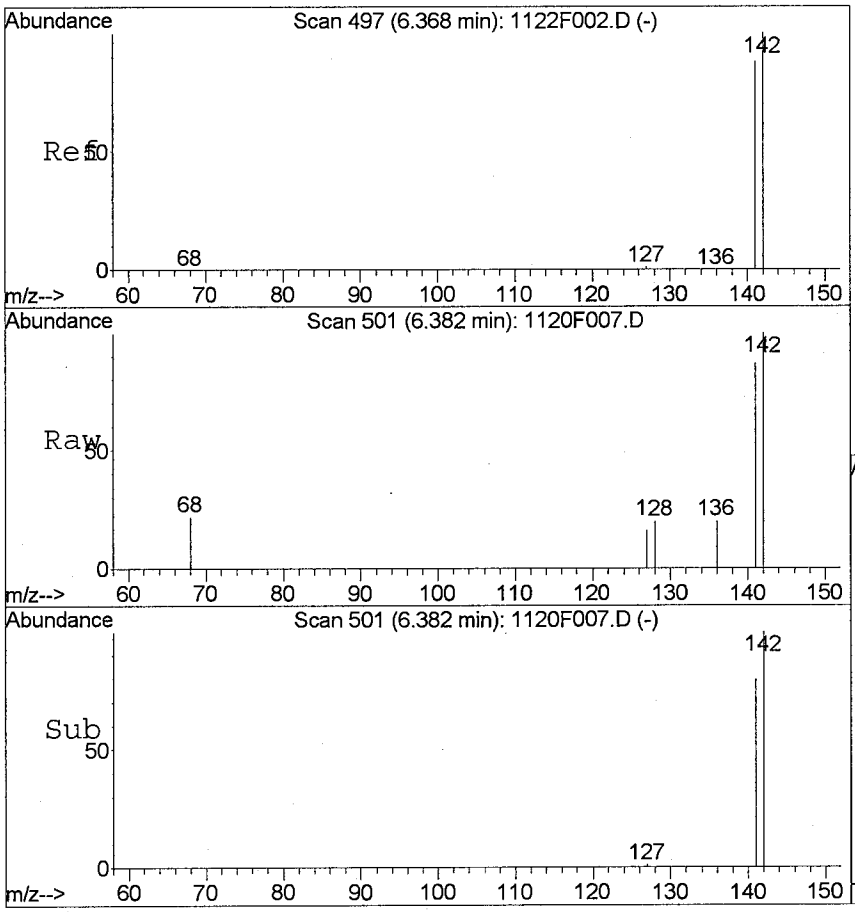


#2
Naphthalene
Concen: 10.44 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:128 Resp: 2701

Ion	Ratio	Lower	Upper
128	100		
127	14.8	0.0	43.6

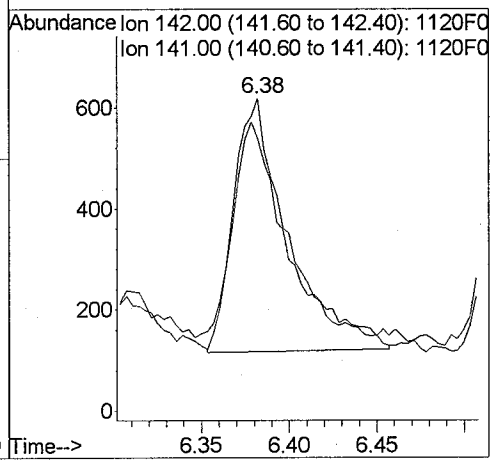


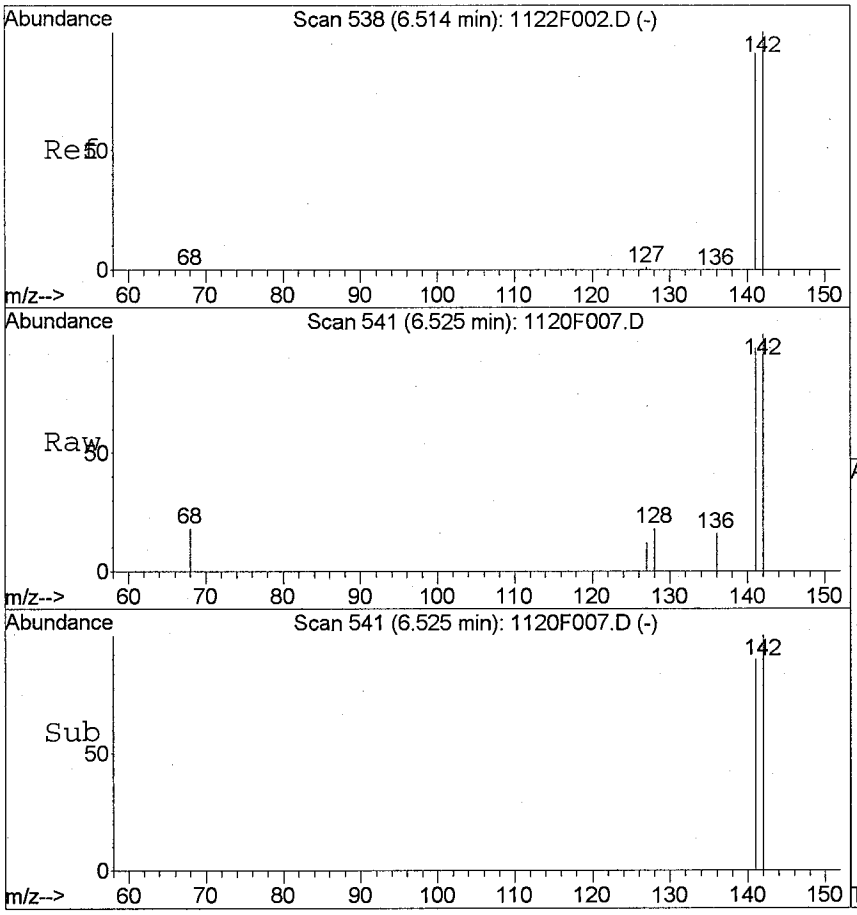


#3
2-Methylnaphthalene
Concen: 6.99 ng/ml
RT: 6.38 min Scan# 501
Delta R.T. 0.02 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:142 Resp: 1068

Ion	Ratio	Lower	Upper
142	100		
141	78.8	58.1	118.1

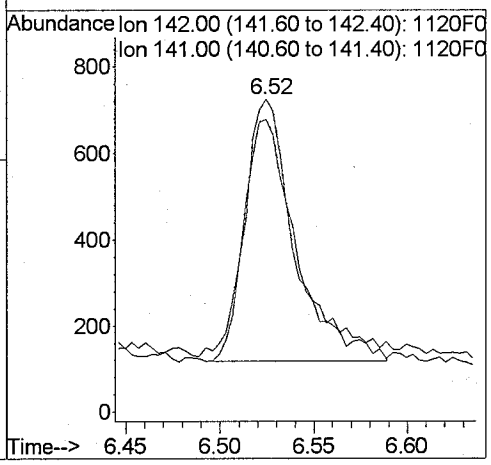


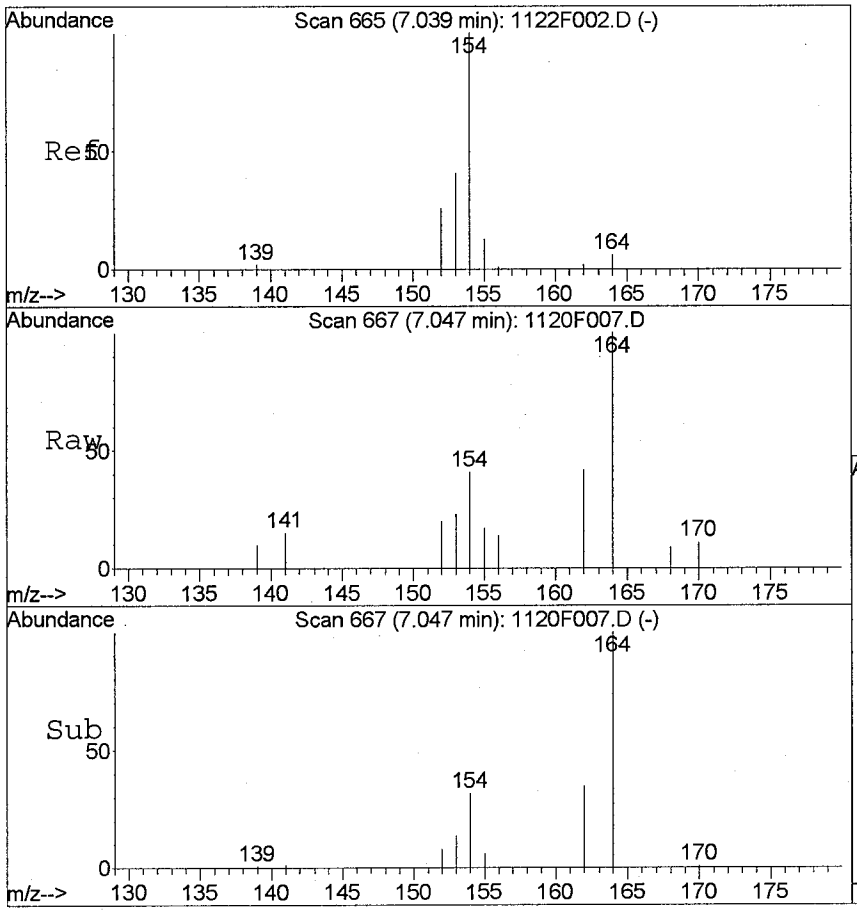


#4
1-Methylnaphthalene
Concen: 7.85 ng/ml
RT: 6.52 min Scan# 541
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:142 Resp: 1124

Ion	Ratio	Lower	Upper
142	100		
141	87.0	59.3	119.3

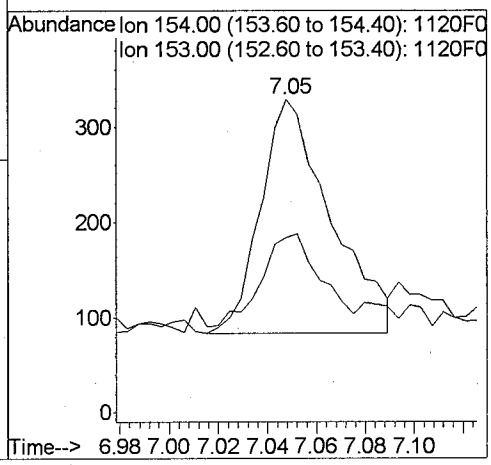


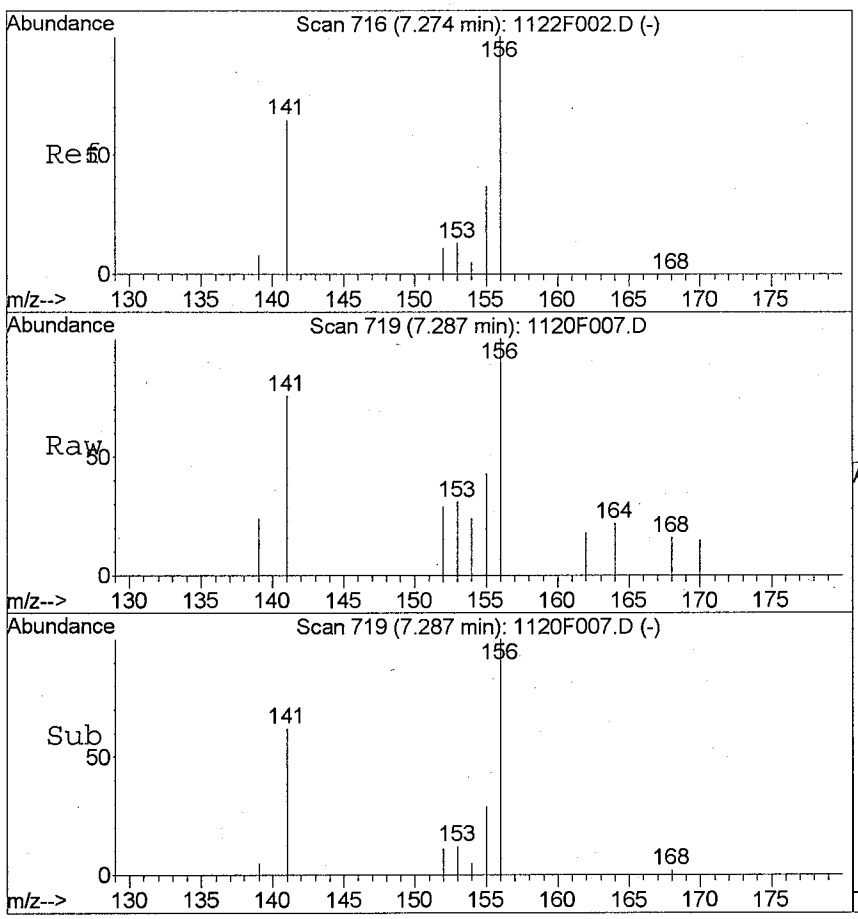


#6
Biphenyl
Concen: 2.62 ng/ml
RT: 7.05 min Scan# 667
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:154 Resp: 486

Ion	Ratio	Lower	Upper
154	100		
153	38.0	11.3	71.3

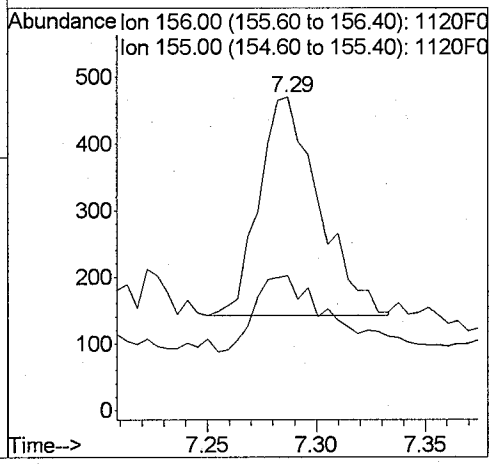


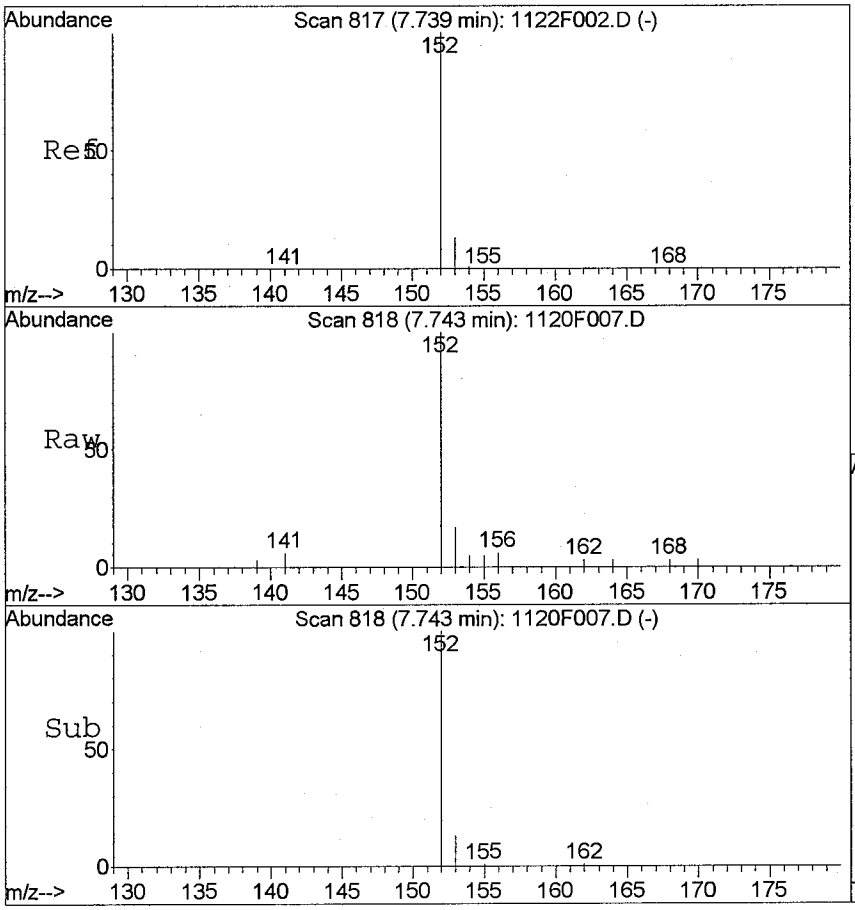


#7
2,6-Dimethylnaphthalene
Concen: 4.83 ng/ml
RT: 7.29 min Scan# 719
Delta R.T. 0.02 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:156 Resp: 629

Ion	Ratio	Lower	Upper
156	100		
155	29.0	7.1	67.1

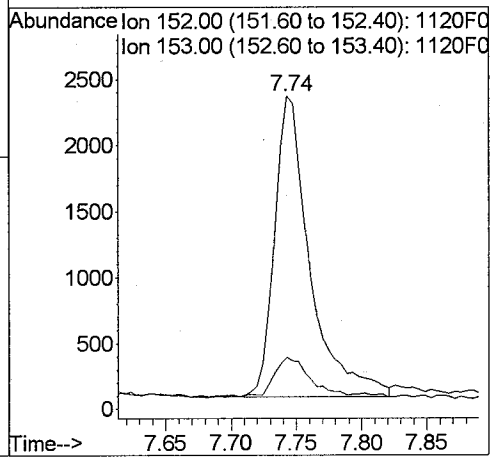


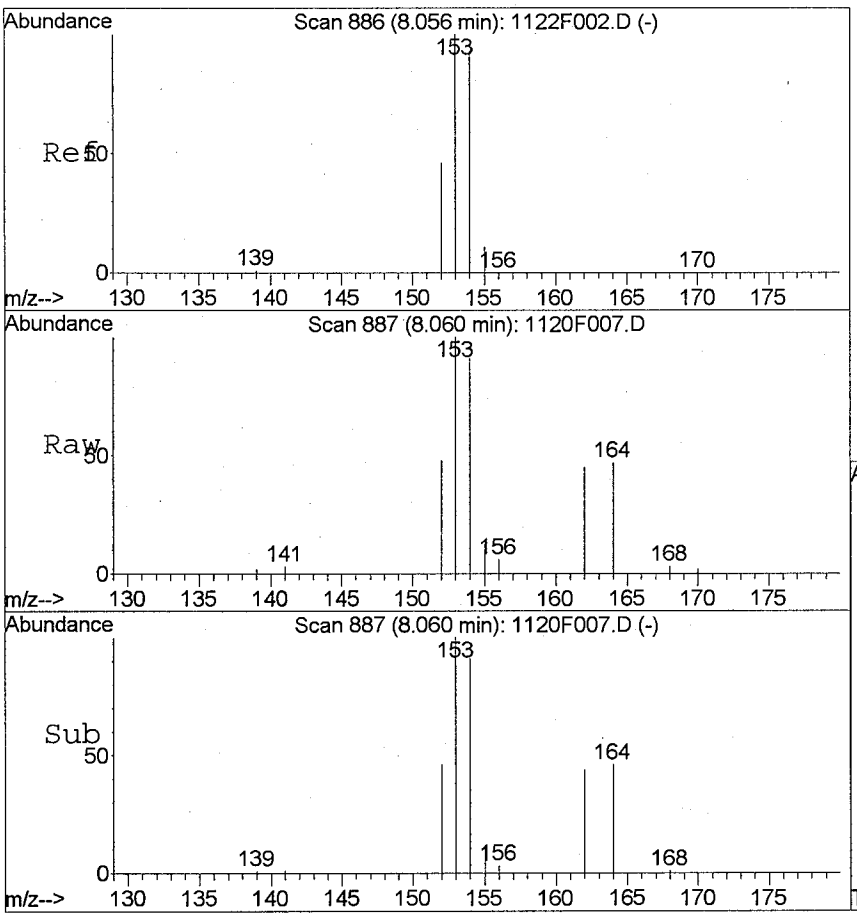


#12
Acenaphthylene
Concen: 19.09 ng/ml
RT: 7.74 min Scan# 818
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:152 Resp: 4317

Ion	Ratio	Lower	Upper
152	100		
153	13.6	0.0	43.0

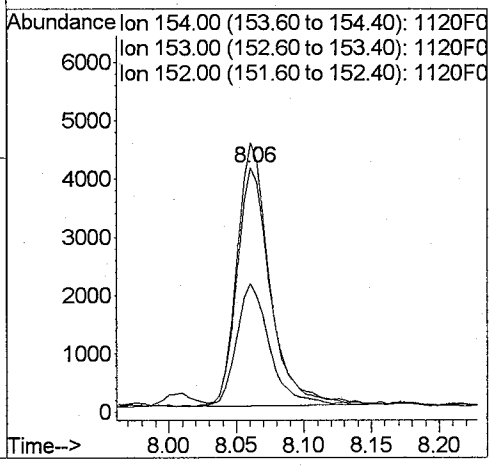


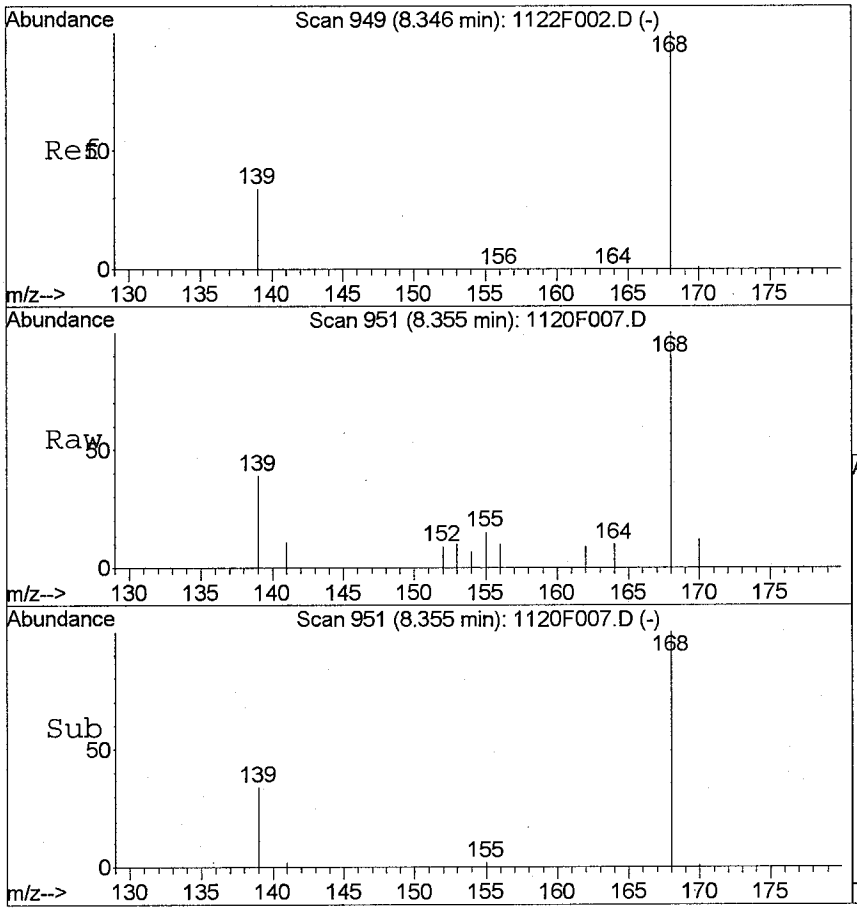


#13
Acenaphthene
Concen: 50.34 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:154 Resp: 7015

Ion	Ratio	Lower	Upper
154	100		
153	110.9	79.2	139.2
152	51.4	21.3	81.3

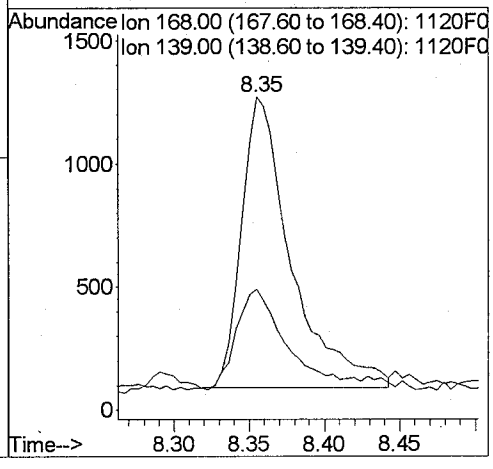


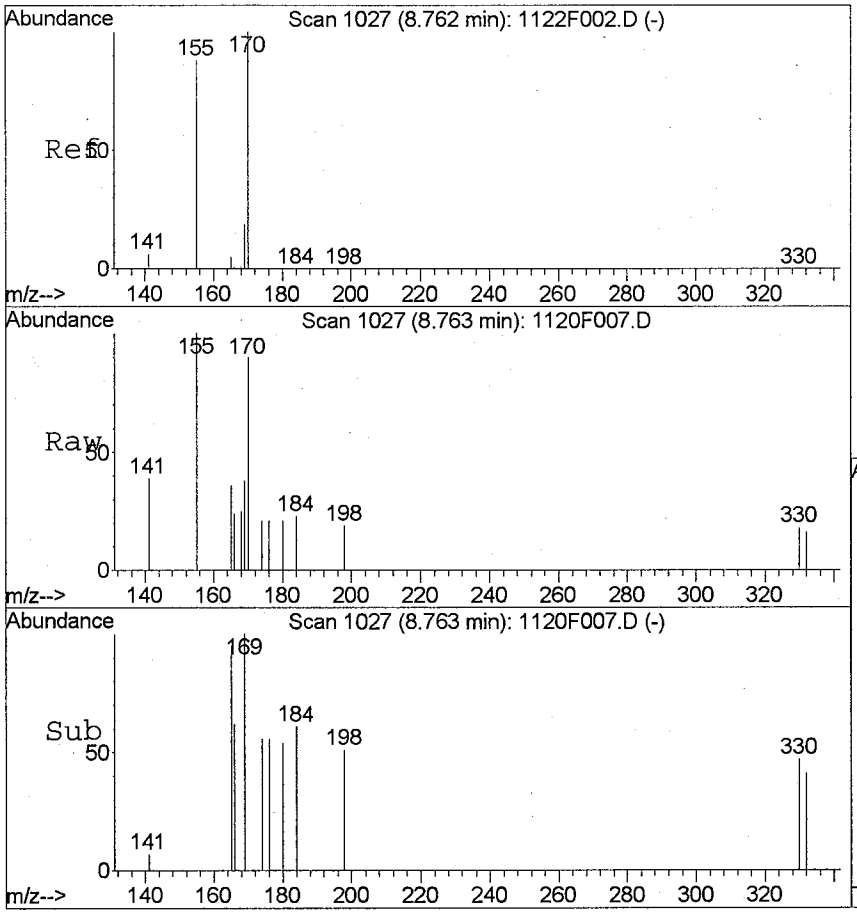


#14
Dibenzofuran
Concen: 14.50 ng/ml
RT: 8.35 min Scan# 951
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:168 Resp: 2708

Ion	Ratio	Lower	Upper
168	100		
139	34.5	5.4	65.4

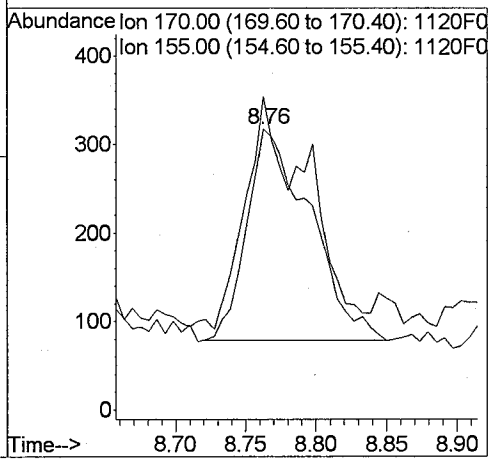


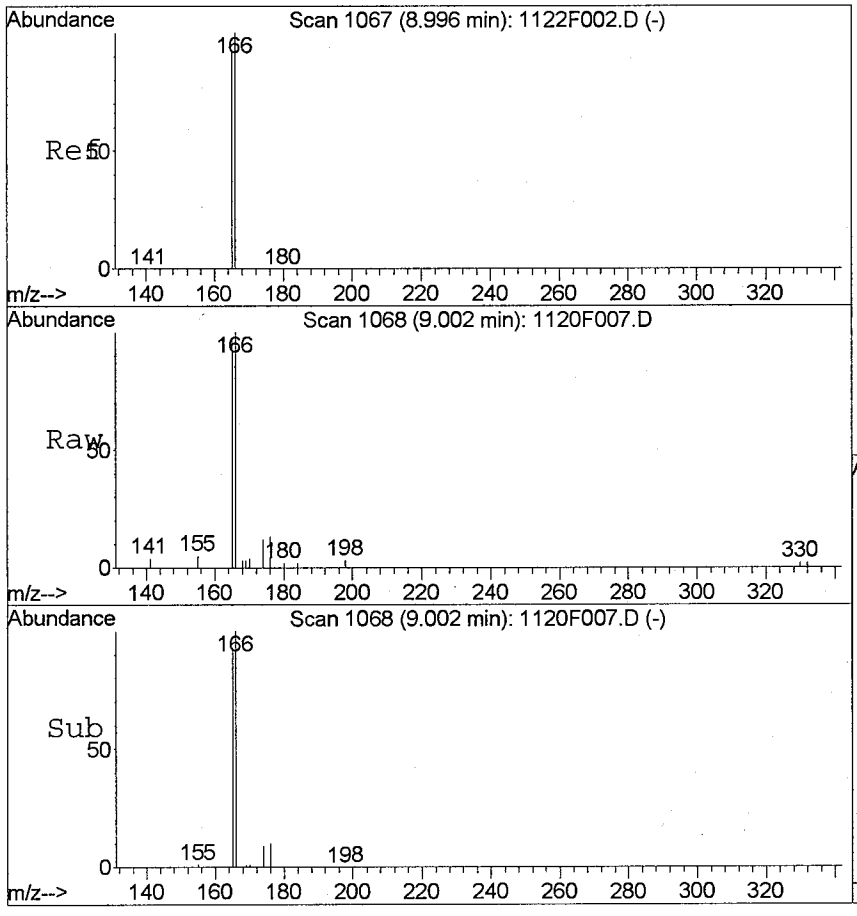


#15
2,3,5-Trimethylnaphthalene
Concen: 6.01 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. -0.00 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:170 Resp: 750

Ion	Ratio	Lower	Upper
170	100		
155	105.4	55.5	115.5

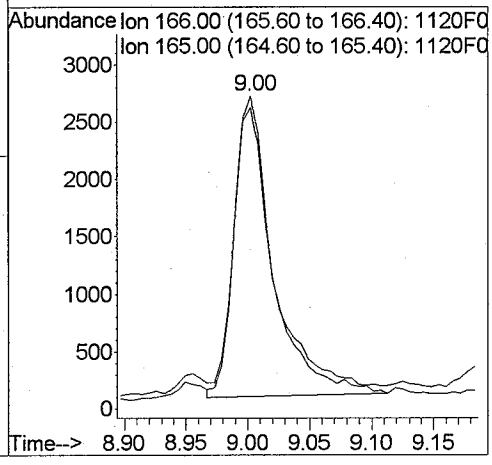


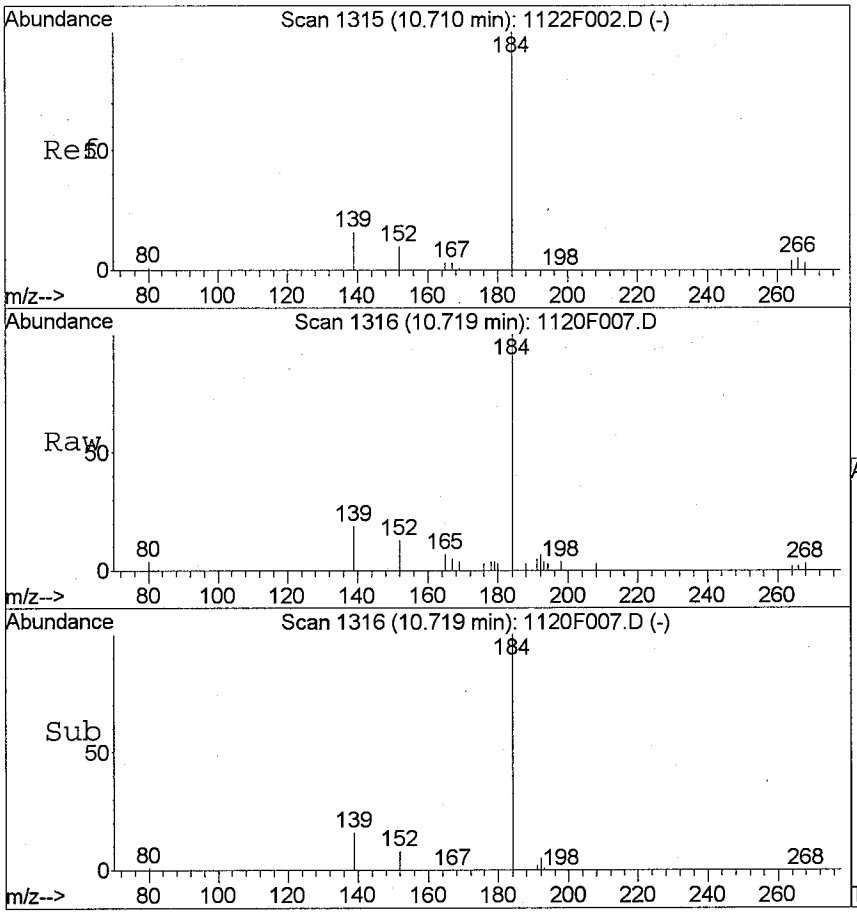


#17
Fluorene
Concen: 38.10 ng/ml
RT: 9.00 min Scan# 1068
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:166 Resp: 5688

Ion	Ratio	Lower	Upper
166	100		
165	93.4	63.3	123.3

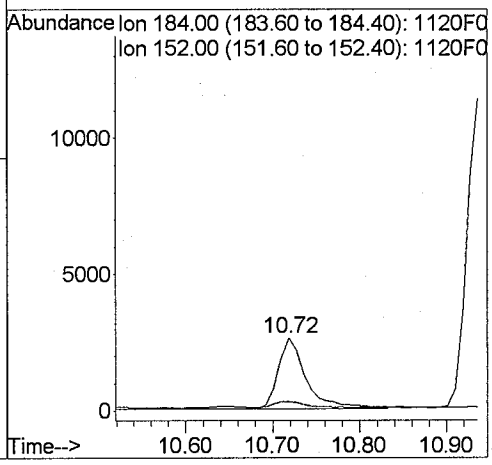


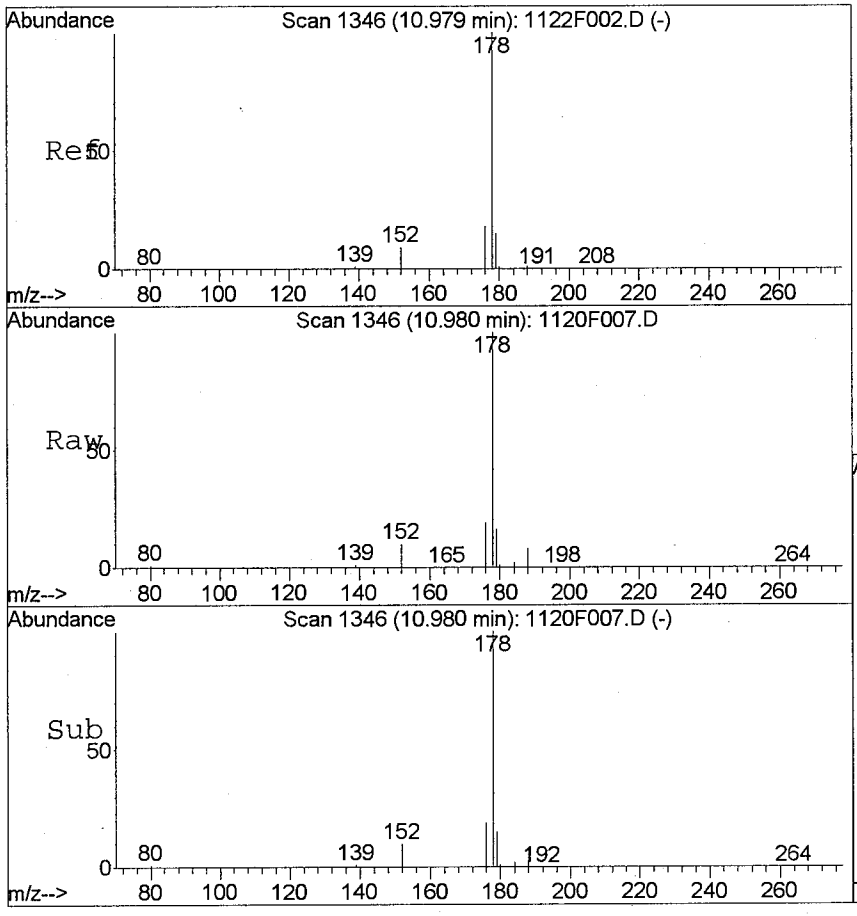


#24
Dibenzothiophene
Concen: 31.58 ng/ml
RT: 10.72 min Scan# 1316
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:184 Resp: 5885

Ion	Ratio	Lower	Upper
184	100		
152	8.4	0.0	39.0

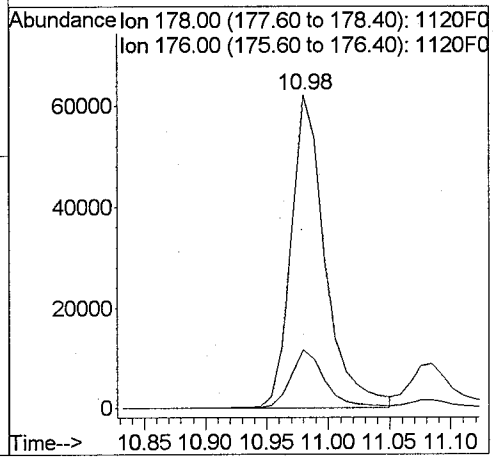


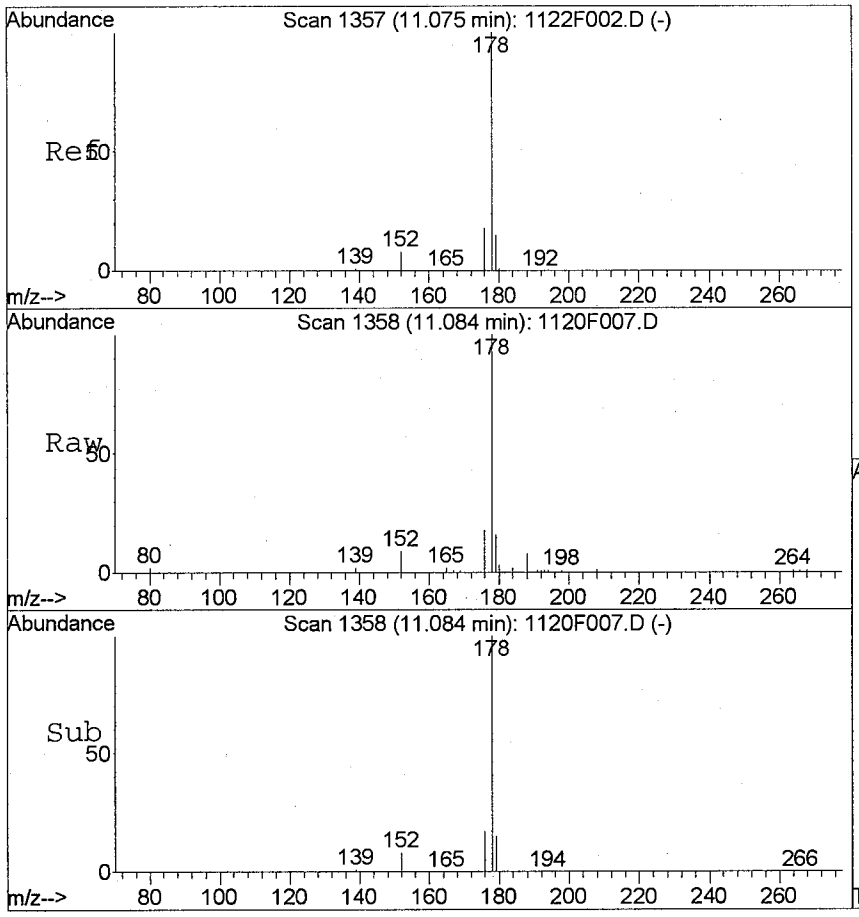


#28
Phenanthrene
Concen: 615.21 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:178 Resp: 120443

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	49.0

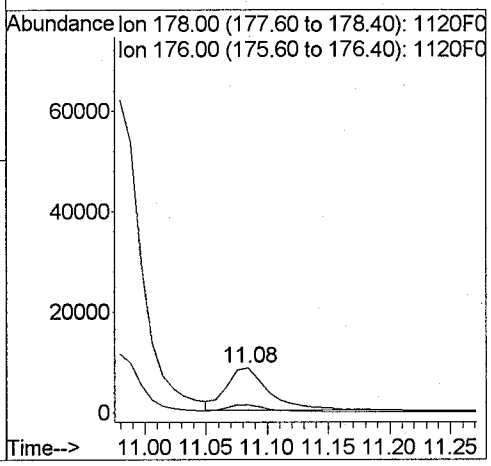


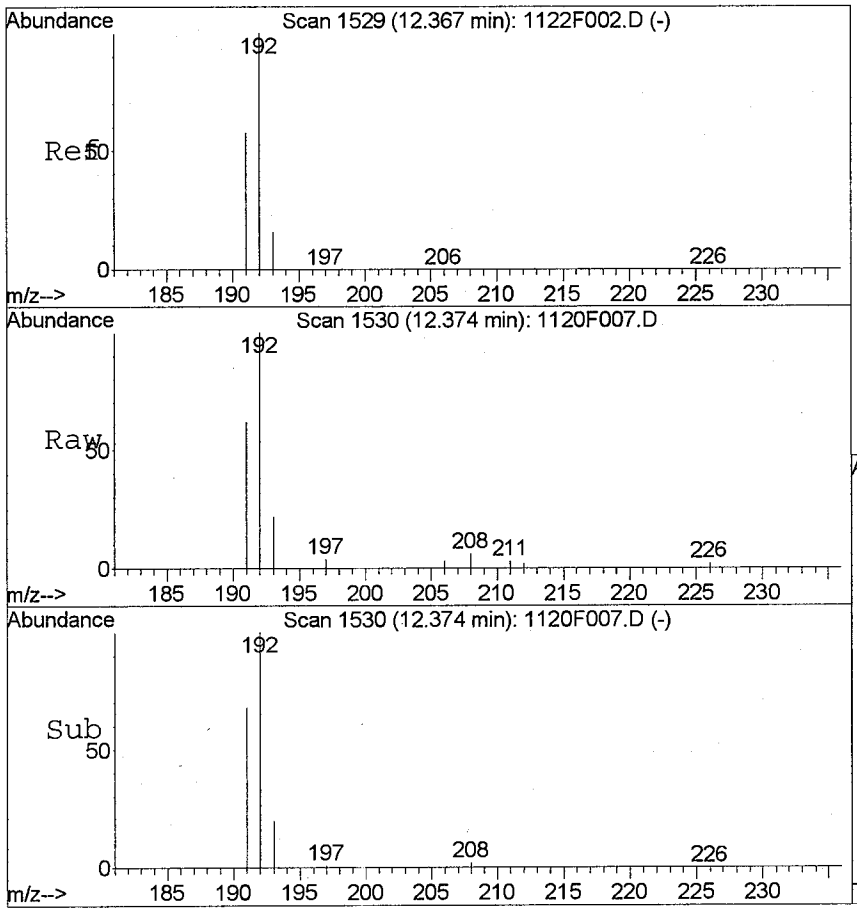


#29
Anthracene
Concen: 120.28 ng/ml
RT: 11.08 min Scan# 1358
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:178 Resp: 20118

Ion	Ratio	Lower	Upper
178	100		
176	17.2	0.0	47.8

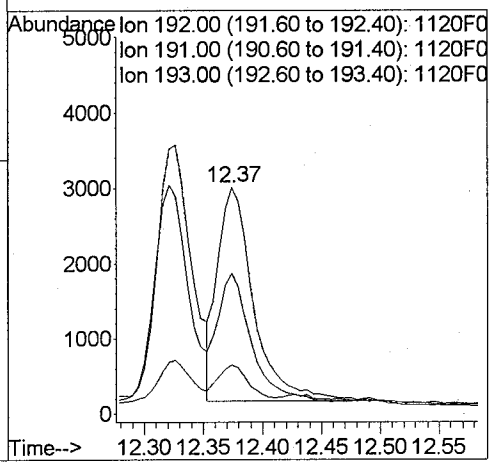


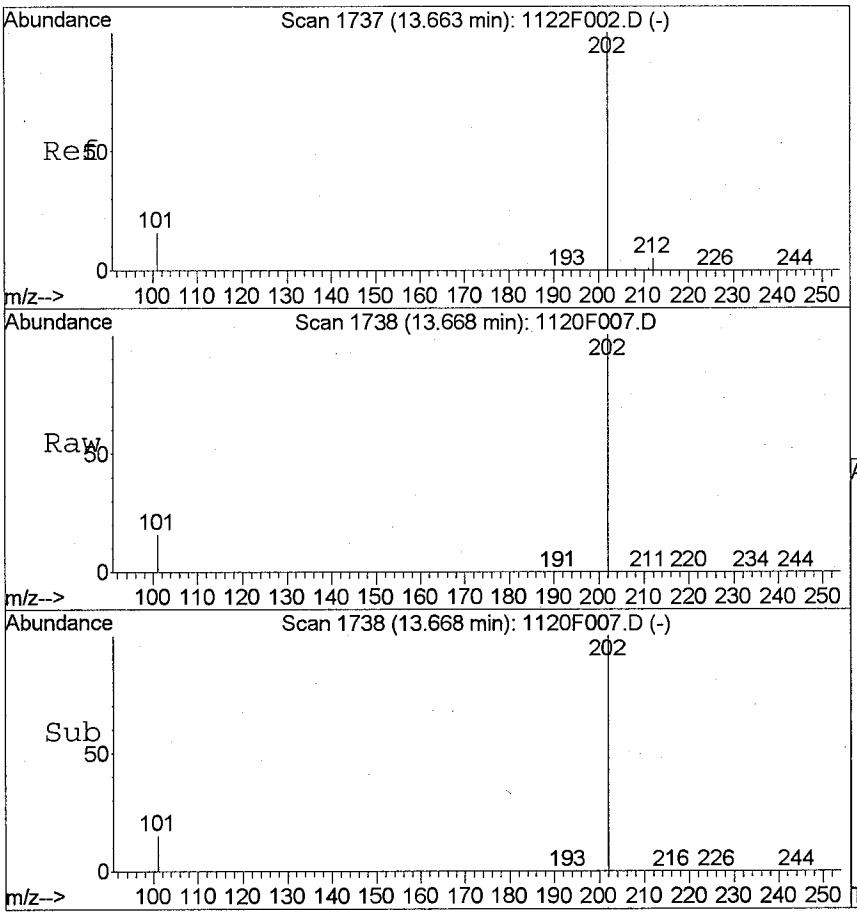


#31
1-Methylphenanthrene
Concen: 45.25 ng/ml
RT: 12.37 min Scan# 1530
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:192 Resp: 6015

Ion	Ratio	Lower	Upper
192	100		
191	60.2	27.0	87.0
193	18.0	0.0	45.8

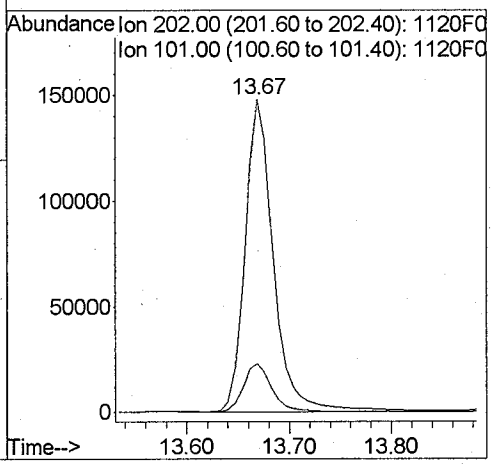


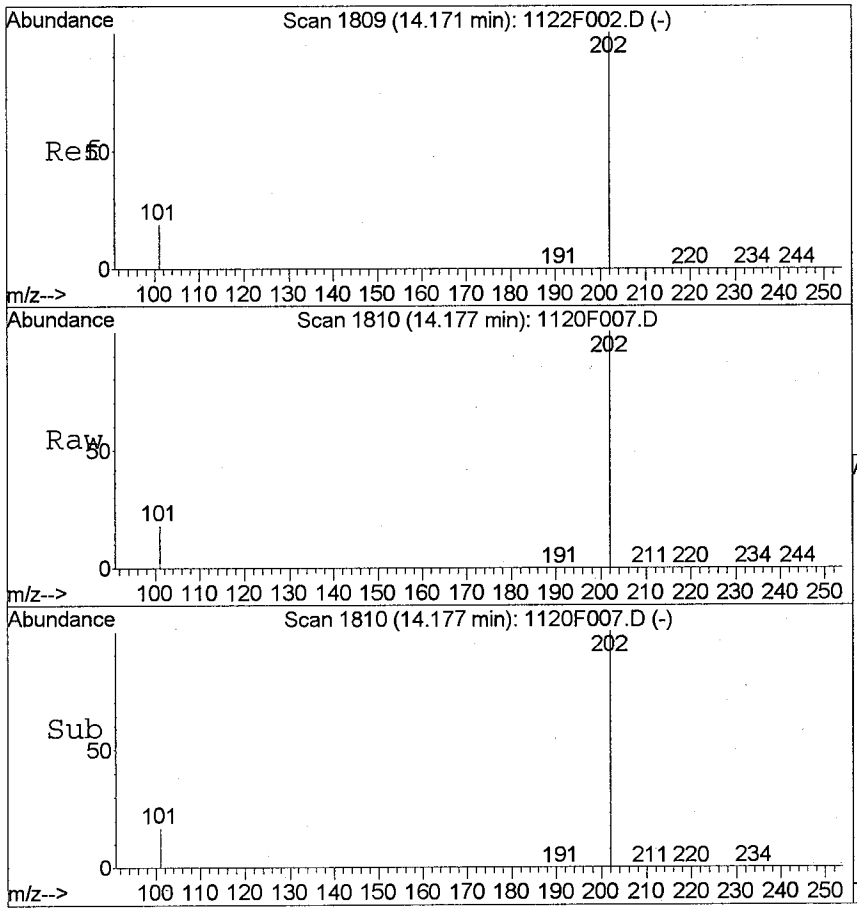


#36
Fluoranthene
Concen: 1452.97 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:202 Resp: 283154

Ion	Ratio	Lower	Upper
202	100		
101	15.4	0.0	46.1

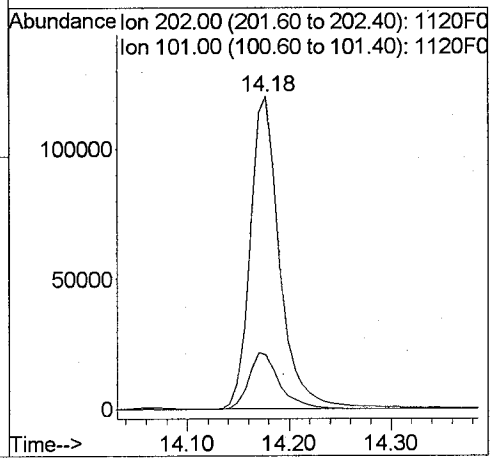


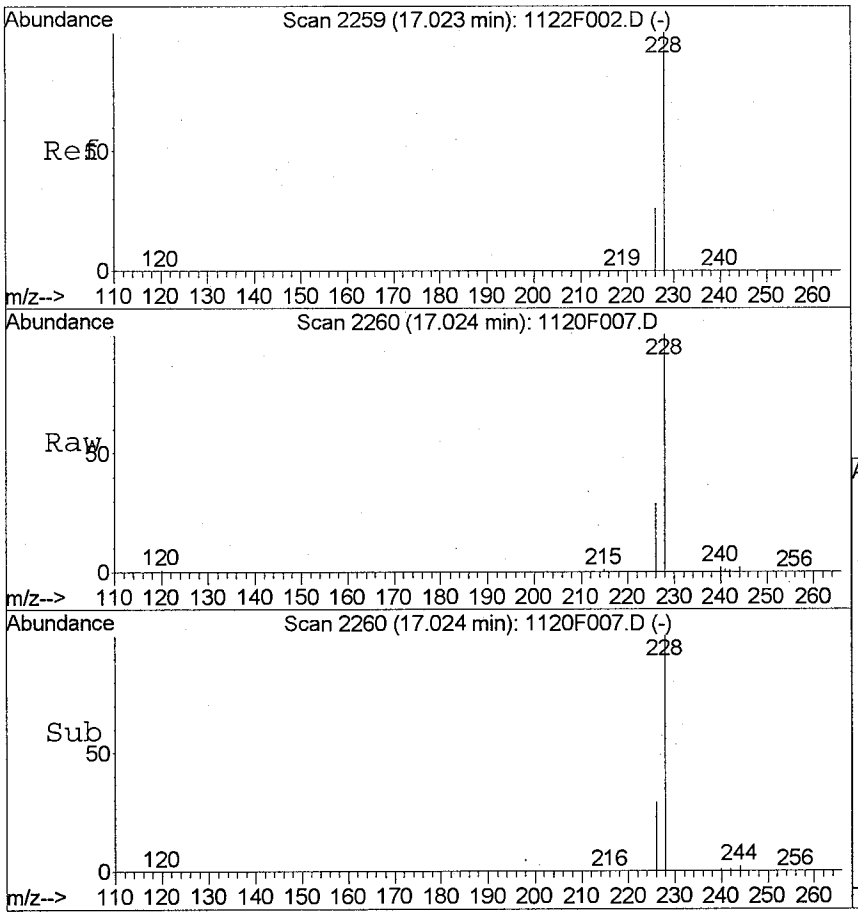


#39
Pyrene
Concen: 1170.95 ng/ml
RT: 14.18 min Scan# 1810
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:202 Resp: 241206

Ion	Ratio	Lower	Upper
202	100		
101	17.5	0.0	47.3

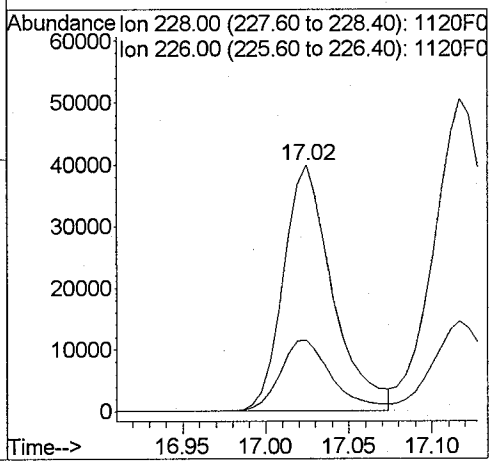


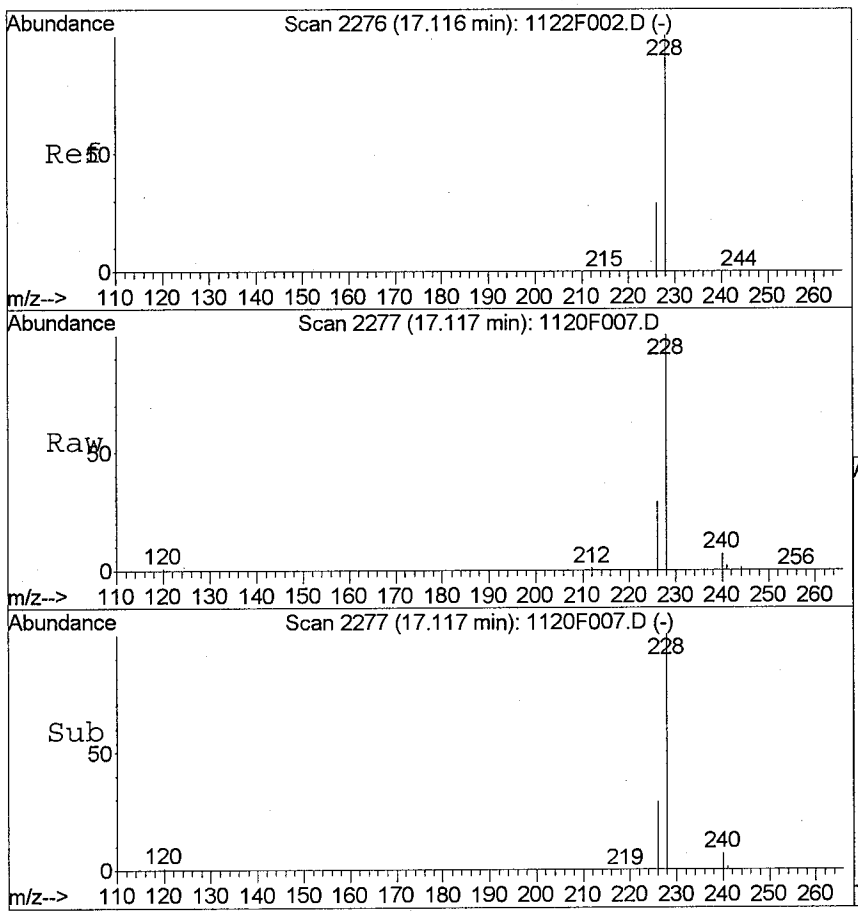


#42
Benz(a)anthracene
Concen: 520.03 ng/ml
RT: 17.02 min Scan# 2260
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:228 Resp: 81557

Ion	Ratio	Lower	Upper
228	100		
226	28.4	0.0	56.3

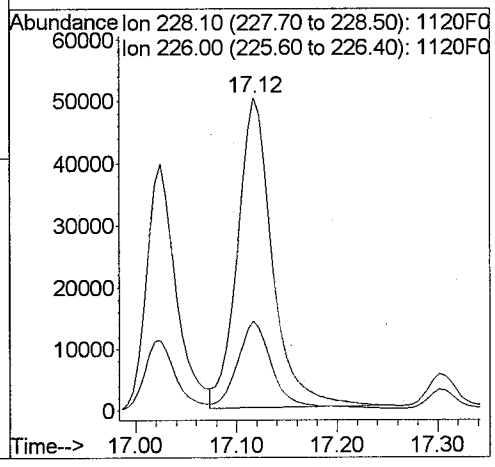


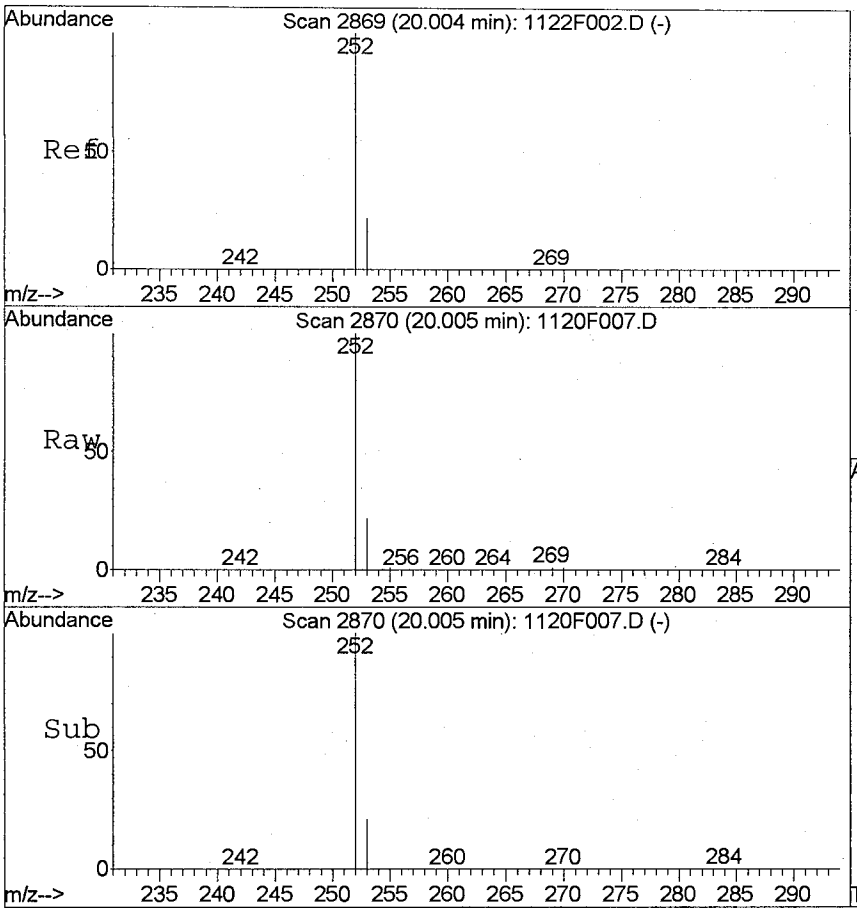


#43
Chrysene
Concen: 720.54 ng/ml
RT: 17.12 min Scan# 2277
Delta R.T. 0.00 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:228 Resp: 120839

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	58.3

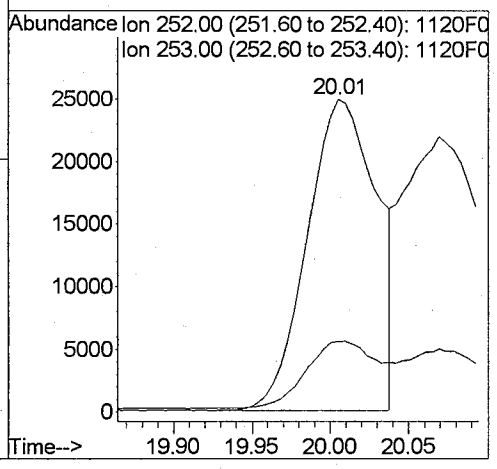


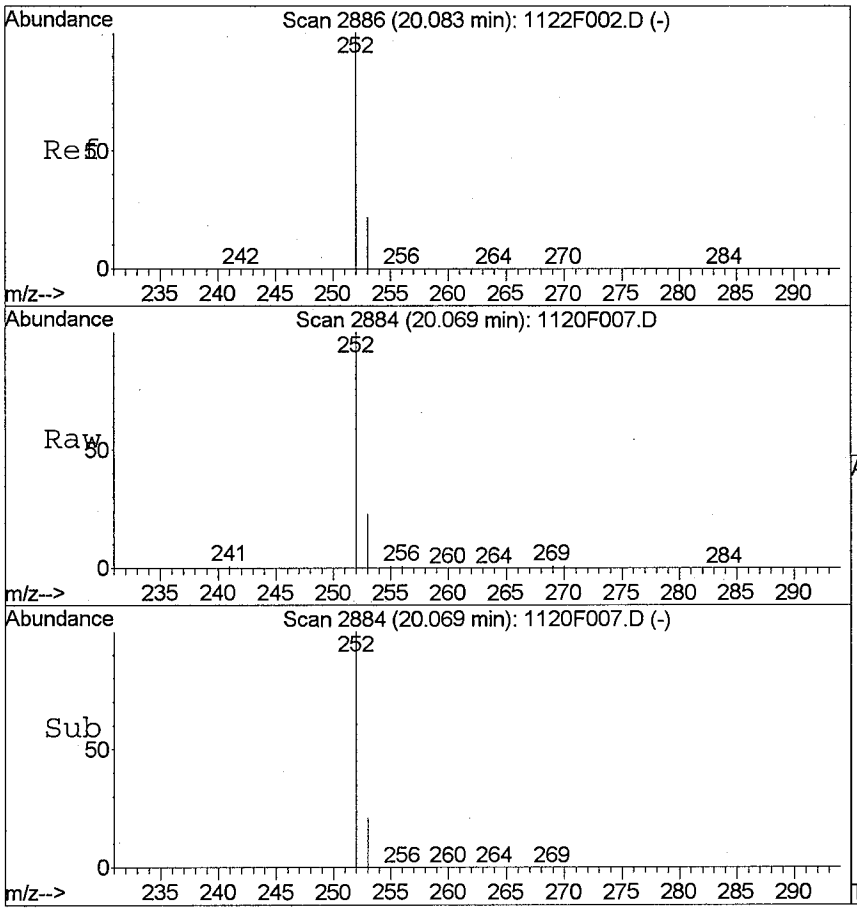


#49
Benzo(b)fluoranthene
Concen: 614.66 ng/ml
RT: 20.01 min Scan# 2870
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:252 Resp: 75852

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.9

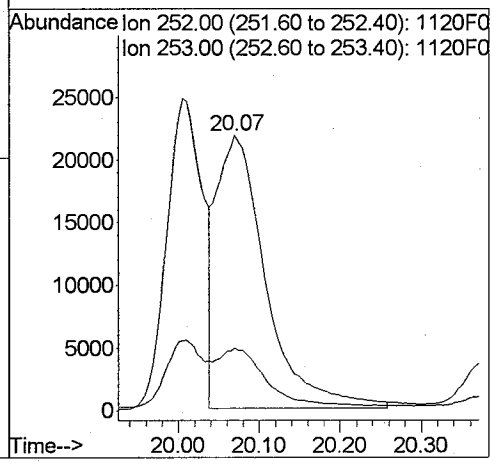


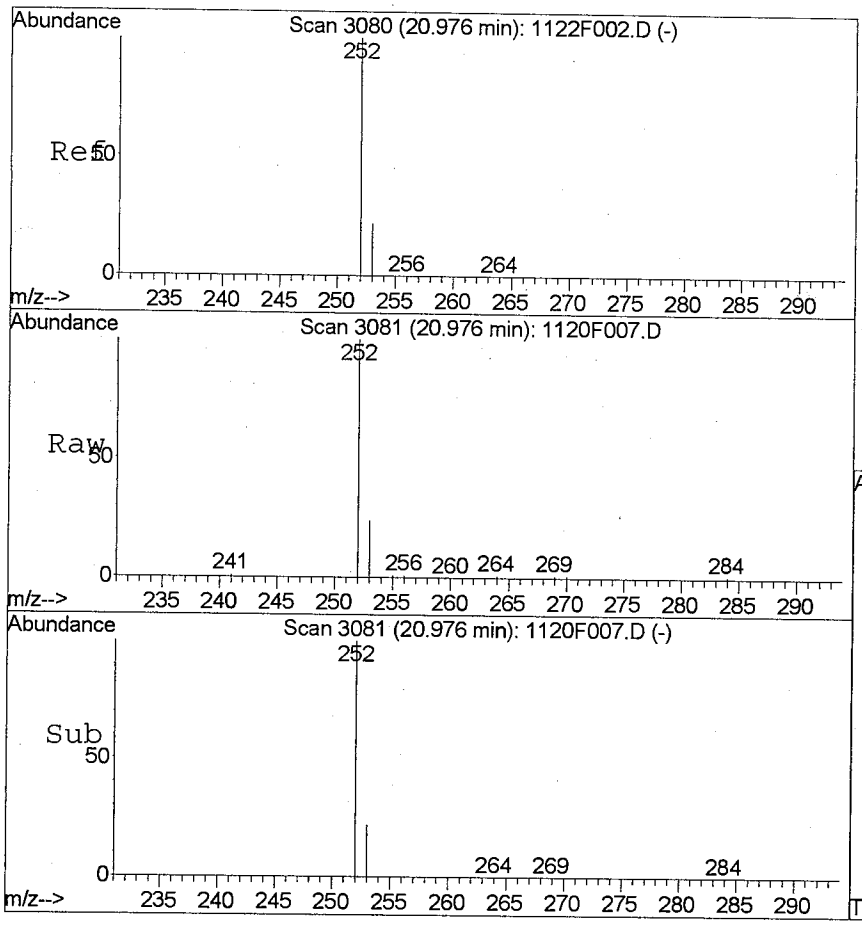


#50
Benzo(k)fluoranthene
Concen: 592.71 ng/ml m
RT: 20.07 min Scan# 2884
Delta R.T. -0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:252 Resp: 92807

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.0

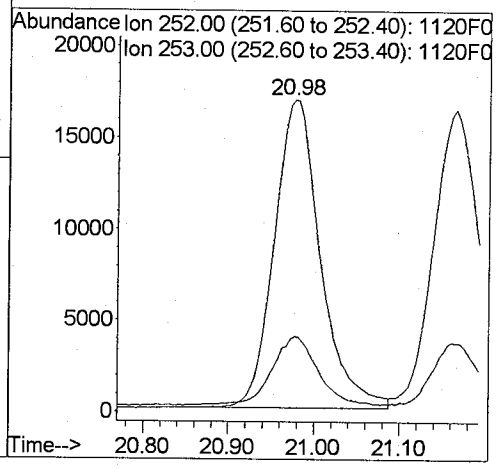


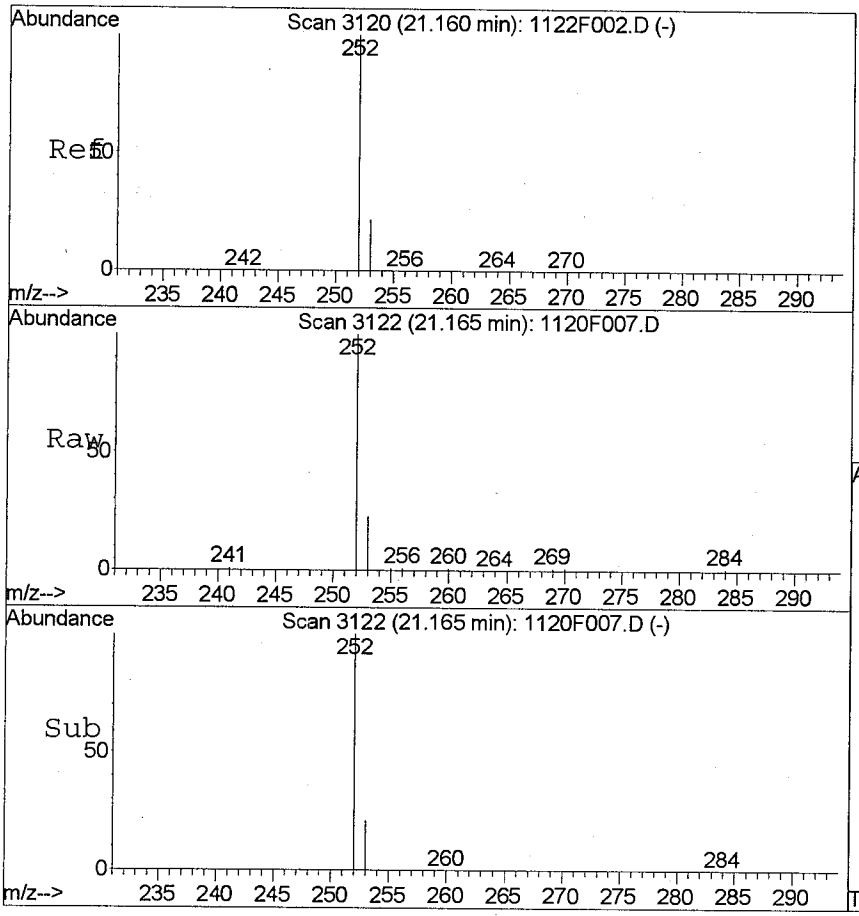


#51
Benzo(e)pyrene
Concen: 454.26 ng/ml
RT: 20.98 min Scan# 3081
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:252 Resp: 62941

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9

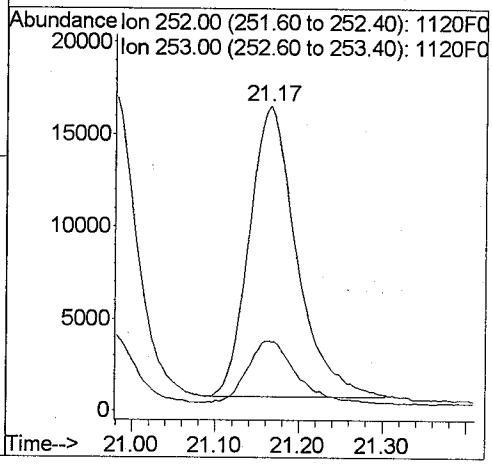


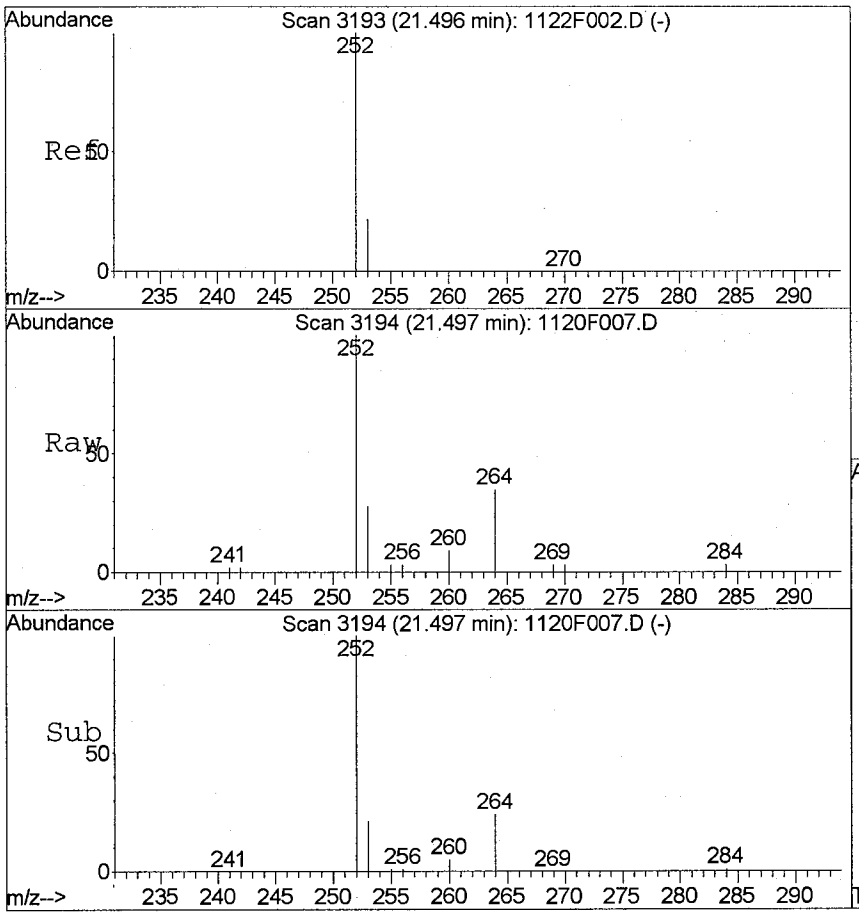


#52
Benzo(a)pyrene
Concen: 589.45 ng/ml
RT: 21.17 min Scan# 3122
Delta R.T. 0.01 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:252 Resp: 61872

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.9

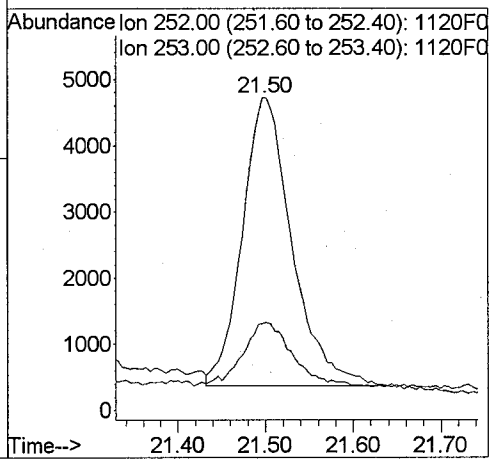


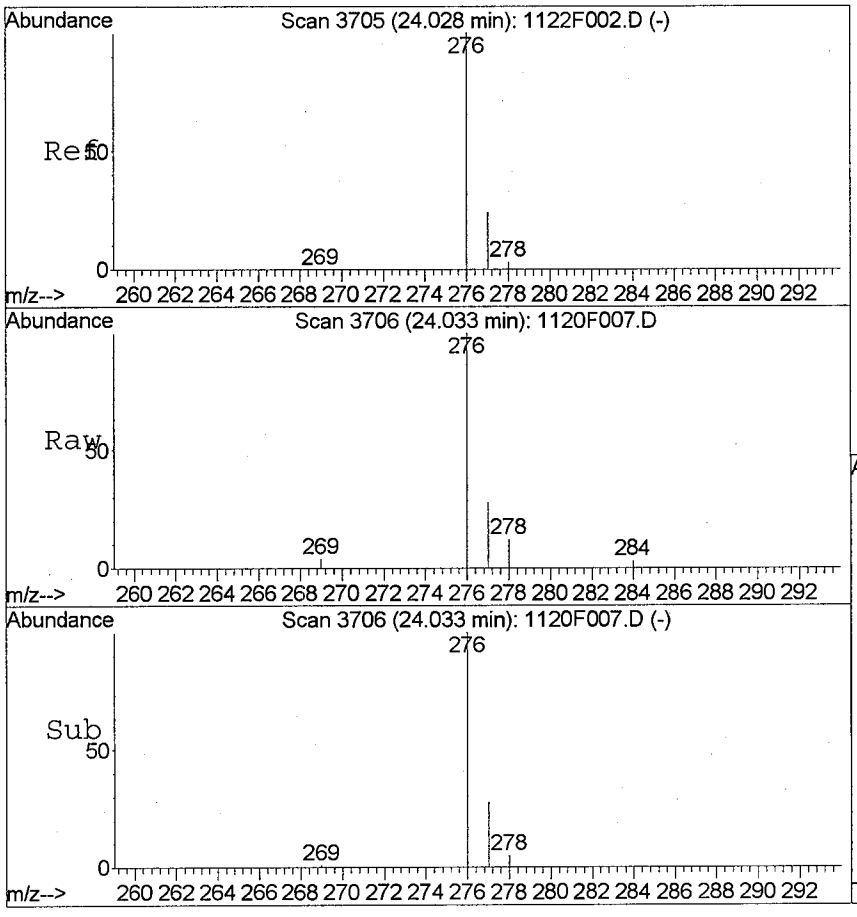


#53
Perylene
Concen: 144.99 ng/ml
RT: 21.50 min Scan# 3194
Delta R.T. 0.00 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:252 Resp: 17084

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.6

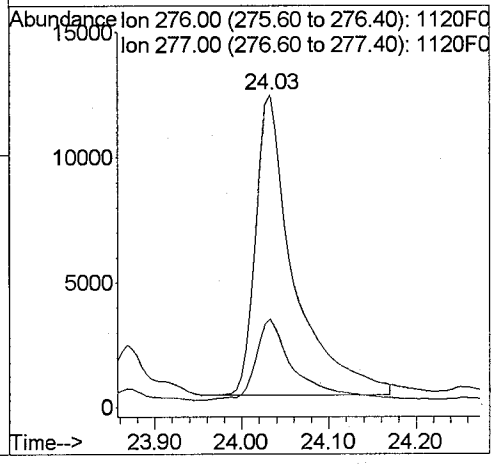


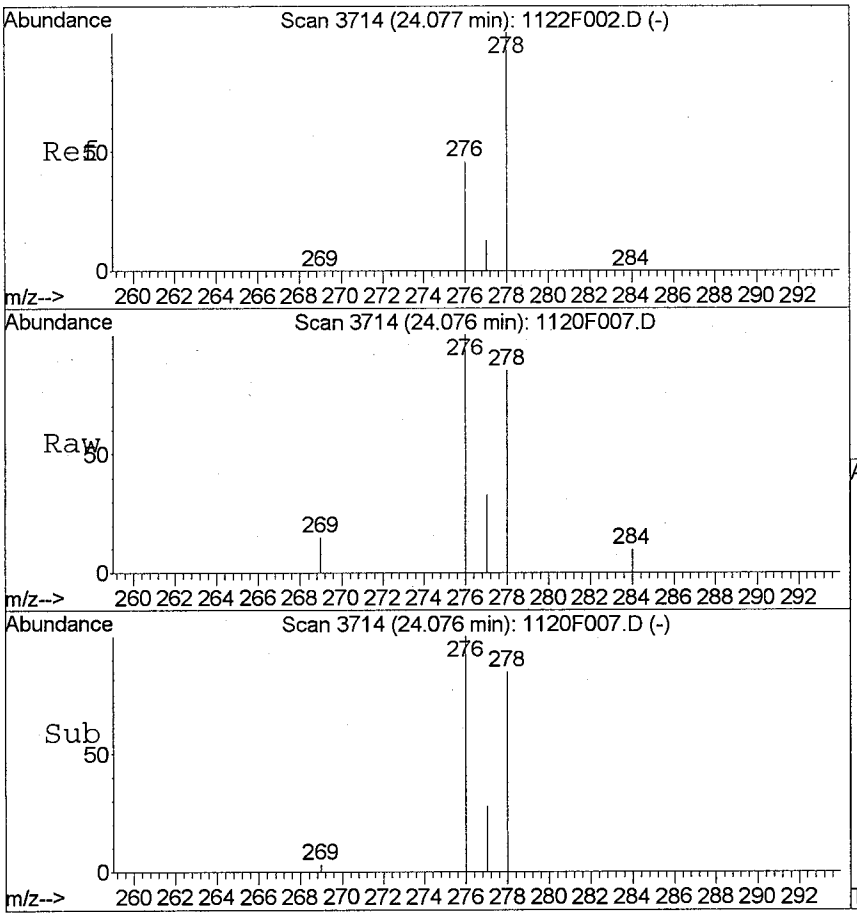


#54
Indeno(1,2,3-cd)pyrene
Concen: 574.33 ng/ml
RT: 24.03 min Scan# 3706
Delta R.T. 0.00 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:276 Resp: 36648

Ion	Ratio	Lower	Upper
276	100		
277	27.1	0.0	53.8

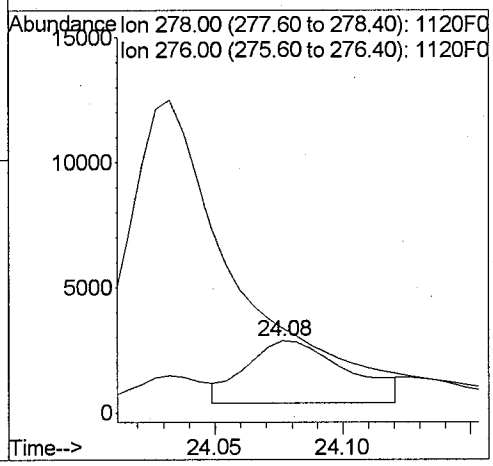


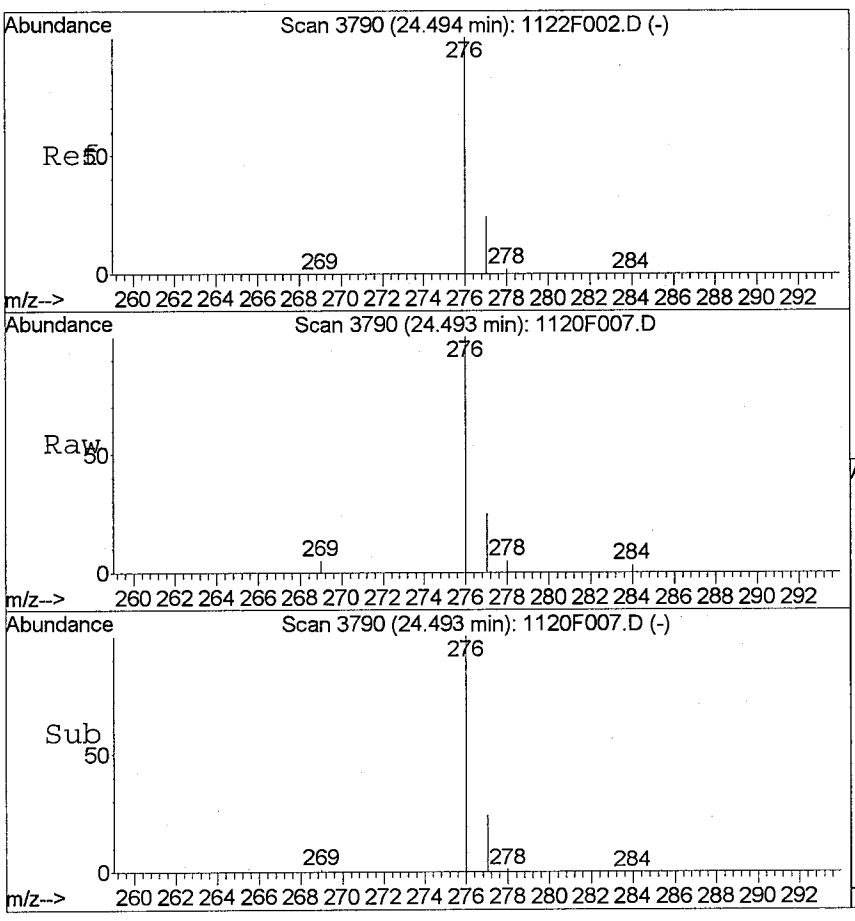


#55
Dibenz(a,h)anthracene
Concen: 74.56 ng/ml m
RT: 24.08 min Scan# 3714
Delta R.T. -0.00 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:278 Resp: 6837

Ion	Ratio	Lower	Upper
278	100		
276	117.5	5.3	65.3#

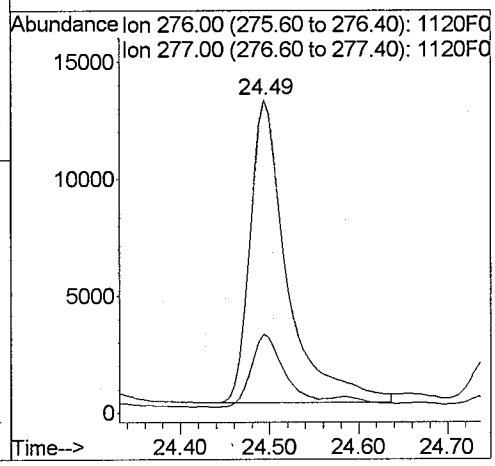




#56
Benzo(g,h,i)perylene
Concen: 354.94 ng/ml
RT: 24.49 min Scan# 3790
Delta R.T. 0.00 min
Lab File: 1120F007.D
Acq: 20 Nov 2003 8:47 am

Tgt Ion:276 Resp: 37549

Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	53.5

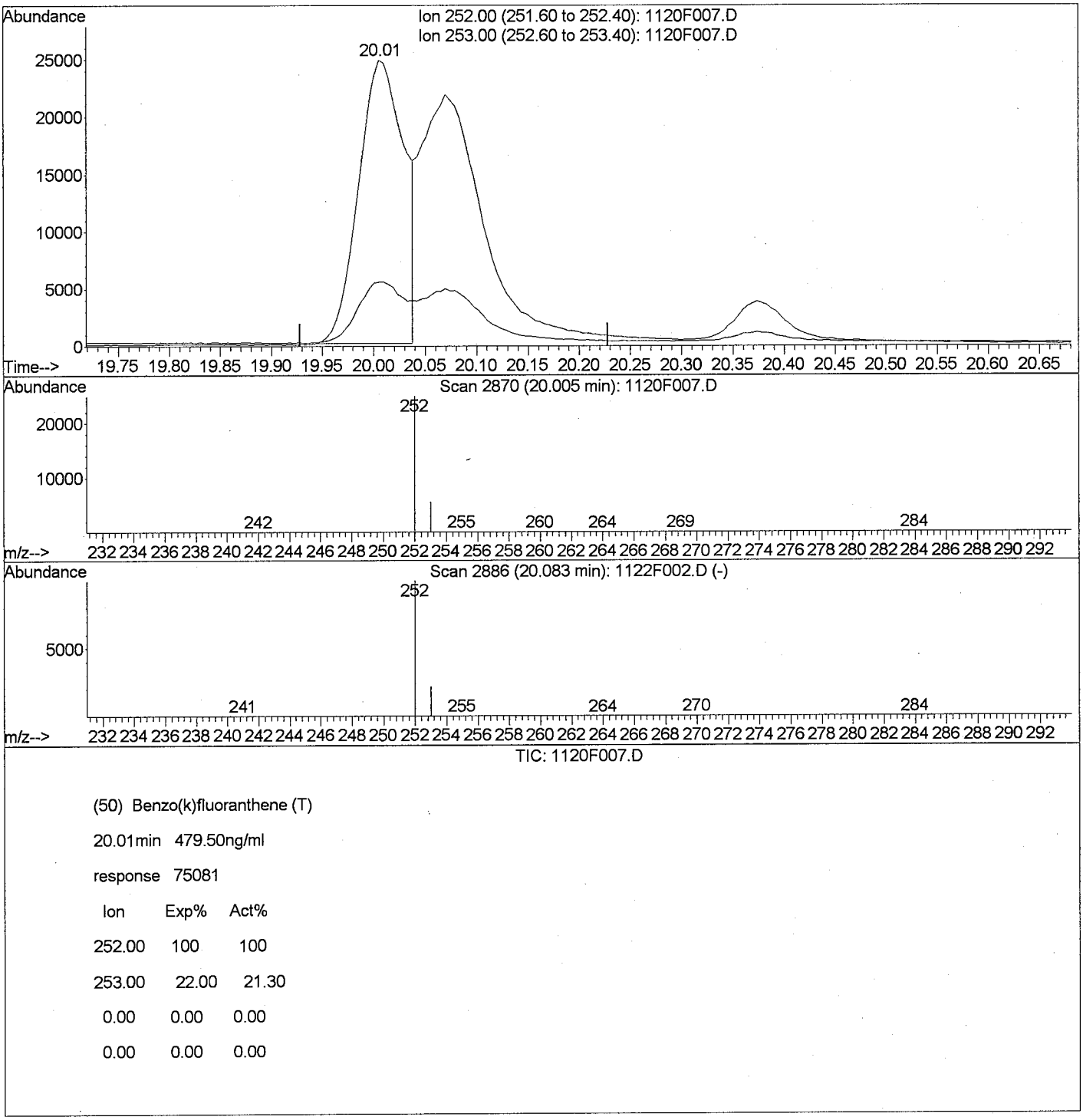


Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F007.D
Acq On : 20 Nov 2003 8:47 am
Sample : K2308433-004DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:17 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F007.D

(50) Benzo(k)fluoranthene (T)

20.01min 479.50ng/ml

response 75081

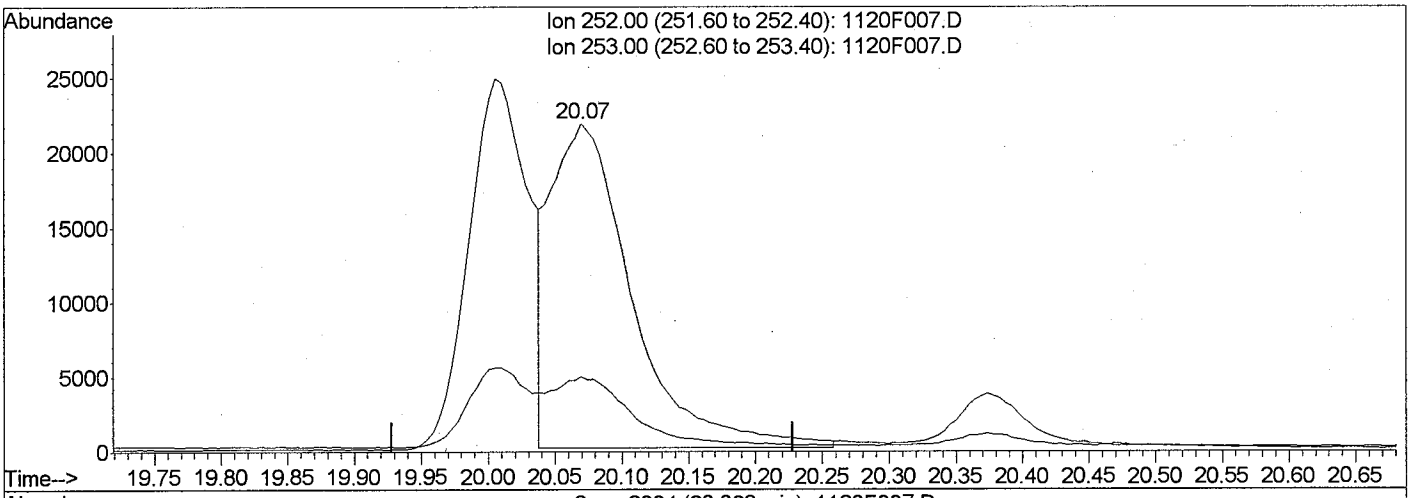
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.30
0.00	0.00	0.00
0.00	0.00	0.00

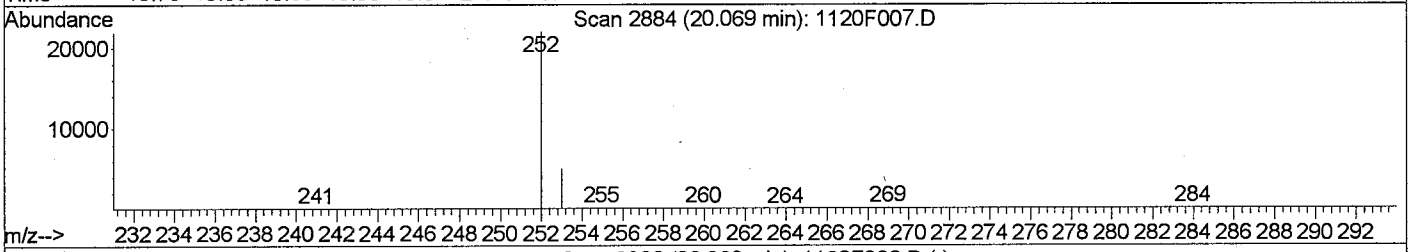
1120F007.D 1107ALK.M Mon Nov 24 09:17:15 2003

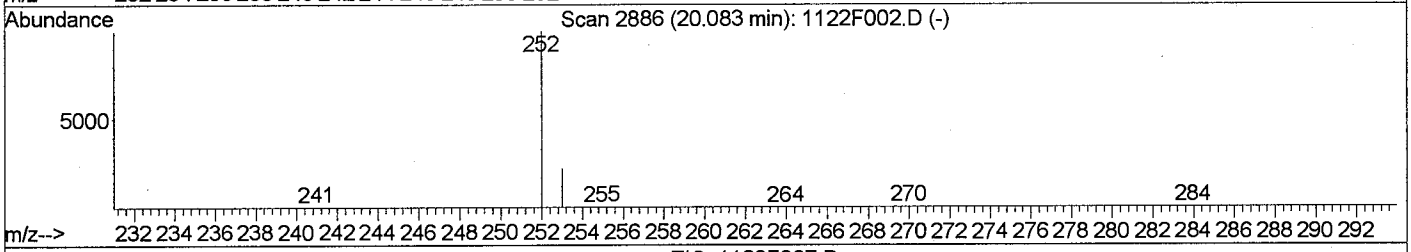
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F007.D Vial: 4
Acq On : 20 Nov 2003 8:47 am Operator: LWeiskopf
Sample : K2308433-004DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F007.D

(50) Benzo(k)fluoranthene (T)

20.07min 592.71ng/ml m

response 92807

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.82
0.00	0.00	0.00
0.00	0.00	0.00

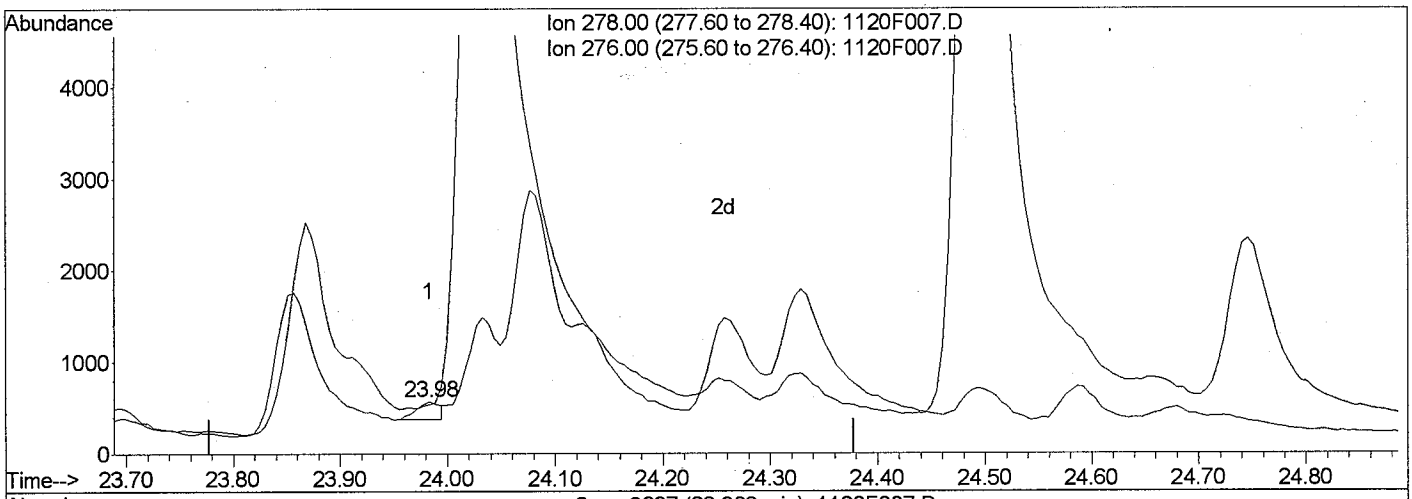
wrong peak 11/21/13

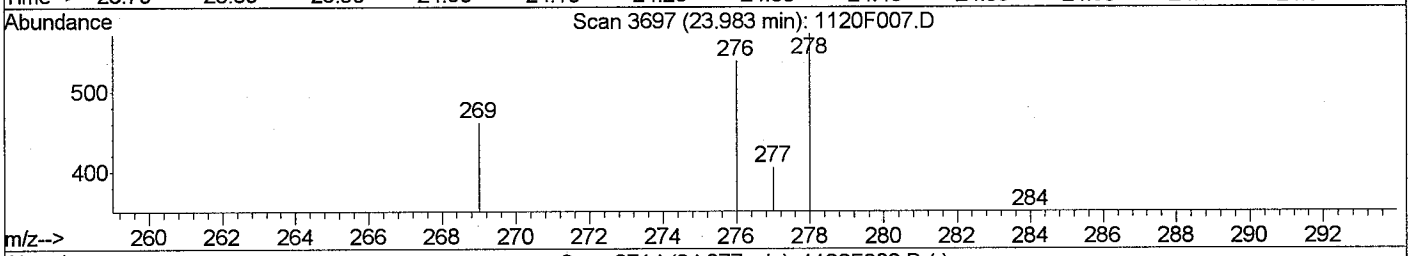
1120F007.D 1107ALK.M Mon Nov 24 09:17:21 2003

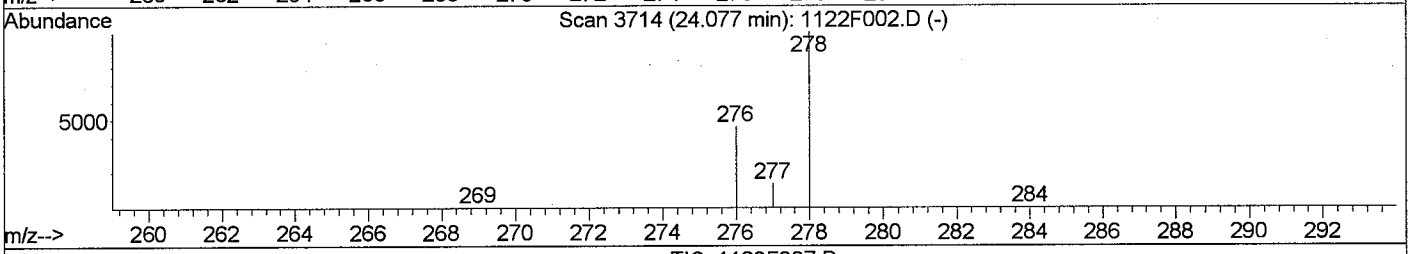
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F007.D Vial: 4
Acq On : 20 Nov 2003 8:47 am Operator: LWeiskopf
Sample : K2308433-004DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F007.D

(55) Dibenz(a,h)anthracene (T)

23.98min 3.16ng/ml

response 290

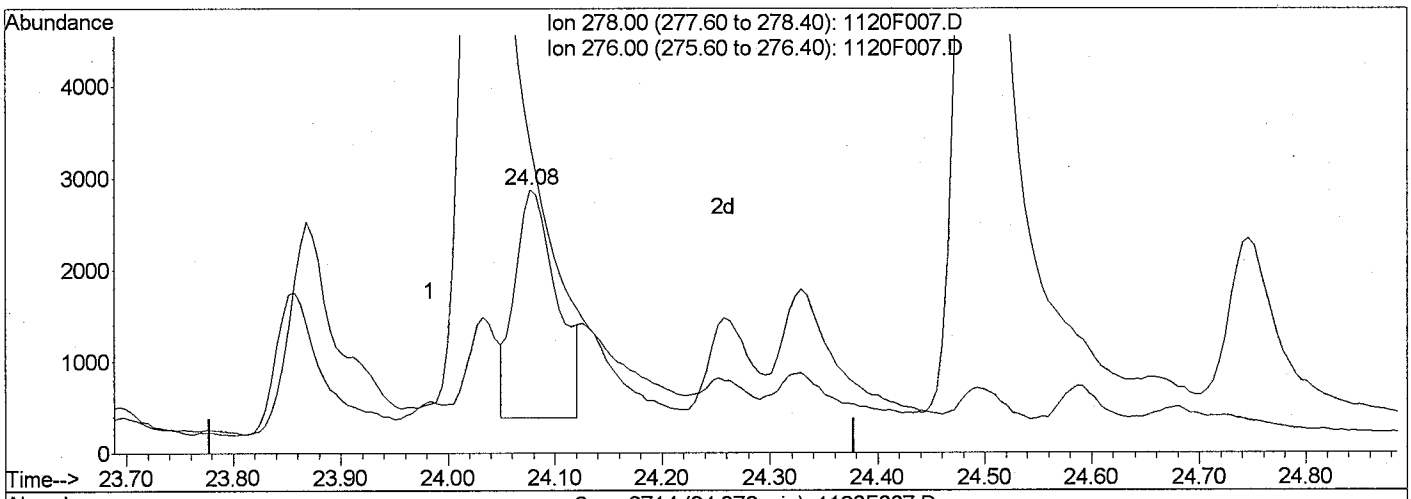
Ion	Exp%	Act%
278.00	100	100
276.00	35.30	26.56
0.00	0.00	0.00
0.00	0.00	0.00

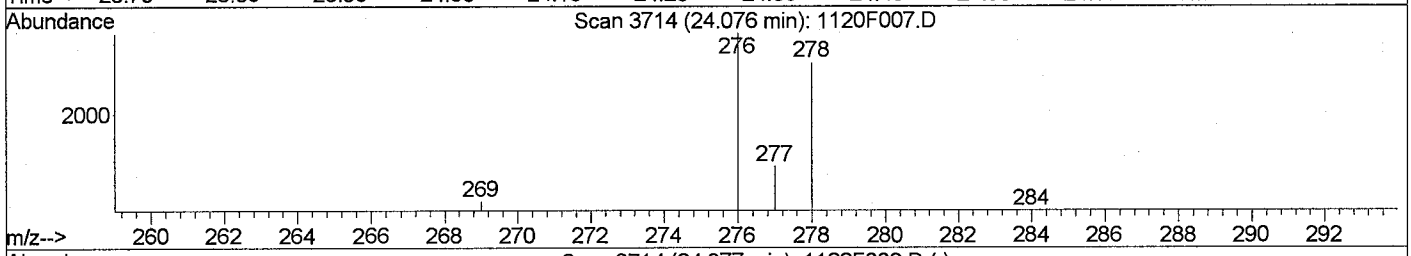
1120F007.D 1107ALK.M Mon Nov 24 09:17:27 2003

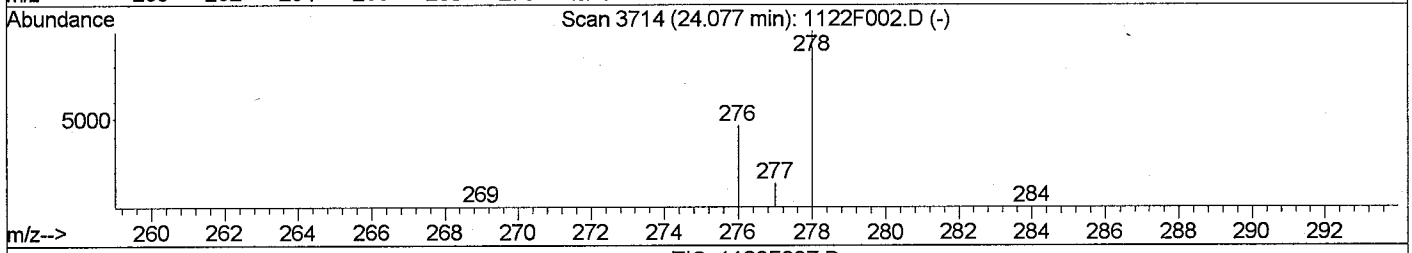
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F007.D Vial: 4
Acq On : 20 Nov 2003 8:47 am Operator: LWeiskopf
Sample : K2308433-004DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F007.D

(55) Dibenz(a,h)anthracene (T)

24.08min 74.56ng/ml m

response 6837

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	117.49#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/24/03

1107F007.D 1107ALK.M Mon Nov 24 09:17:32 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**		4.8	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**9.7**		4.8	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**11**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**23**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**30**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**20**		4.8	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**25**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**30**		4.8	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**75**		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**68**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**28**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**26**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**26**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**46**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**14**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**34**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**37**		4.8	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**880**		4.8	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**150**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**260**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**140**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**81**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**54**		4.8	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1700**	D	48	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**1500**	D	48	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**590**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**750**		4.8	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**900**		4.8	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**380**		4.8	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**160**		4.8	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**120**		4.8	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**47**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**850**		4.8	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**690**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**570**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**870**		4.8	1	11/05/03	11/19/03	KWG0317778	
Perylene	**200**		4.8	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**840**		4.8	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**110**		4.8	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**480**		4.8	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	27-110	11/19/03	Acceptable
Fluoranthene-d10	89	34-122	11/19/03	Acceptable
Terphenyl-d14	99	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F041.D
Lab ID: K2308433-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 18:50
Date Quantitated: 11/21/2003 12:19
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	15784.56	NA	10000	See DF
	Fluoranthene	19825.18	NA	10000	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Printed: 11/21/2003 13:54:07
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247863	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F041.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 18:50	**Quant Date:**	11/24/2003 11:45	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-005			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	271899	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	144032	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	211052	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	208410	1,000.00	OK
5	Perylene-d12	21.40	0.04	264	129270	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	94132	653.47	65	27-110	OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	188582	892.75	89	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	188188	990.77	99	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	55021	178.97	17		
1	2-Methylnaphthalene	6.37		0.00	142	18345	101.05	9.7		
1	1-Methylnaphthalene	6.52	0.01	0.00	142	19811	116.42	11		
1	Biphenyl	7.04	0.01	0.00	154	9427	42.82	4.1	J	
1	C2-Naphthalenes	7.42	?	?	156	74732m	243.08	23		
1	C3-Naphthalenes	8.43	?	?	170	97362m	316.69	30		
1	C4-Naphthalenes	9.79	?	?	184	62859m	204.46	20		
2	Acenaphthylene	7.74	0.01	0.00	152	72406	260.92	25		
2	Acenaphthene	8.06	0.01	0.00	154	133772	782.15	75		
2	Dibenzofuran	8.35	0.01	0.00	168	72553	316.45	30		
2	Fluorene	8.99		0.00	166	130959	714.79	68		
2	C1-Fluorenes	10.13	?	?	180	53187m	290.30	28		
2	C2-Fluorenes	11.40	?	?	194	49139m	268.21	26		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F041.D		**Instrument:** MS11
Acqu Date:	11/19/2003 18:50	**Quant Date:** 11/24/2003 11:45	**Vial:** 12
Run Type:	SMPL		**Dilution:** 1.0
Lab ID:	K2308433-005		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	50283m	274.45	26		
3	Dibenzothiophene	10.71		0.00	184	117964	484.44	46		
3	C1-Dibenzothiophenes	10.21	?	?	198	34625m	142.19	14		
3	C2-Dibenzothiophenes	12.63	?	?	212	86868m	356.74	34		
3	C3-Dibenzothiophenes	13.68	?	?	226	94042m	386.20	37		
3	Phenanthrene	10.98	0.01	0.00	178	2357377	9,216	880		
3	Anthracene	11.08	0.01	0.00	178	338576	1,549	150		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	700386m	2,738	260		
3	C2-Phenanthrenes/Anthracenes	13.36	?	?	206	386702m	1,512	140		
3	C3-Phenanthrenes/Anthracenes	14.45	?	?	220	216730m	847.30	81		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	143721m	561.87	54		
3	Fluoranthene	13.67	0.02	0.00	202	5047829	19,825	1900	E	NR
4	Pyrene	14.18	0.02	0.00	202	4299851	15,785	1500	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	1665270m	6,113	590		
4	Benz(a)anthracene	17.02	0.01	0.00	228	1623787	7,829	750		
4	Chrysene	17.11	0.01	0.00	228	2072875	9,347	900		
4	C1-Chrysenes	18.05	?	?	242	868661m	3,917	380		
4	C2-Chrysenes	19.39	?	?	256	360916m	1,627	160		
4	C3-Chrysenes	20.95	?	?	270	275424m	1,242	120		
4	C4-Chrysenes	22.41	?	?	284	109464m	493.57	47		
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	1532209	8,878	850		
5	Benzo(k)fluoranthene	20.07	0.02	0.00	252	1570449m	7,172	690		
5	Benzo(e)pyrene	20.98	0.05	0.00	252	1161512	5,994	570		
5	Benzo(a)pyrene	21.16	0.04	0.00	252	1334881	9,093	870		
5	Perylene	21.49	0.04	0.00	252	338205	2,052	200		
5	Indeno(1,2,3-cd)pyrene	24.03	0.03	0.00	276	784266	8,789	840		
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	146550m	1,143	110		
5	Benzo(g,h,i)perylene	24.49	0.03	0.00	276	739846	5,001	480		

Prep Amount: 28.6 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: 73.0 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:24 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	271899	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	144032	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	211052	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	208410	1000.00	ng/ml	0.02
48) Perylene-d12	21.40	264	129270	1000.00	ng/ml	0.04
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	75144	377.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	37.73%		
16) Fluorene-d10	8.94	176	94132	653.47	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	65.35%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	188582	892.75	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	89.28%		
41) Terphenyl-d14	14.66	244	188188	990.77	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	99.08%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	55021	178.97	ng/ml	100
3) 2-Methylnaphthalene	6.37	142	18345	101.05	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	19811	116.42	ng/ml	98
6) Biphenyl	7.04	154	9427	42.82	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.28	156	12757	82.38	ng/ml	95
8) C2-Naphthalenes	7.42	156	74732m	243.08	ng/ml	
9) C3-Naphthalenes	8.43	170	97362m	316.69	ng/ml	
10) C4-Naphthalenes	9.79	184	62859m	204.46	ng/ml	
12) Acenaphthylene	7.74	152	72406	260.92	ng/ml	99
13) Acenaphthene	8.06	154	133772	782.15	ng/ml	100
14) Dibenzofuran	8.35	168	72553	316.45	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.76	170	8389m	54.76	ng/ml	
17) Fluorene	8.99	166	130959	714.79	ng/ml	99
18) C1-Fluorenes	10.13	180	53187m	290.30	ng/ml	
19) C2-Fluorenes	11.40	194	49139m	268.21	ng/ml	
20) C3-Fluorenes	12.76	208	~~90753m~~	~~495.34~~	~~ng/ml~~	
24) Dibenzothiophene	10.71	184	117964	484.44	ng/ml	98
25) C1-Dibenzothiophenes	10.21	198	34625m	142.19	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	86868m	356.74	ng/ml	
27) C3-Dibenzothiophenes	13.68	226	94042m	386.20	ng/ml	
28) Phenanthrene	10.98	178	2357377	9216.08	ng/ml	100
29) Anthracene	11.08	178	338576	1549.36	ng/ml	99
30) Carbazole	11.51	167	3554	20.58	ng/ml	96

See manual JJ 1/26/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:24 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

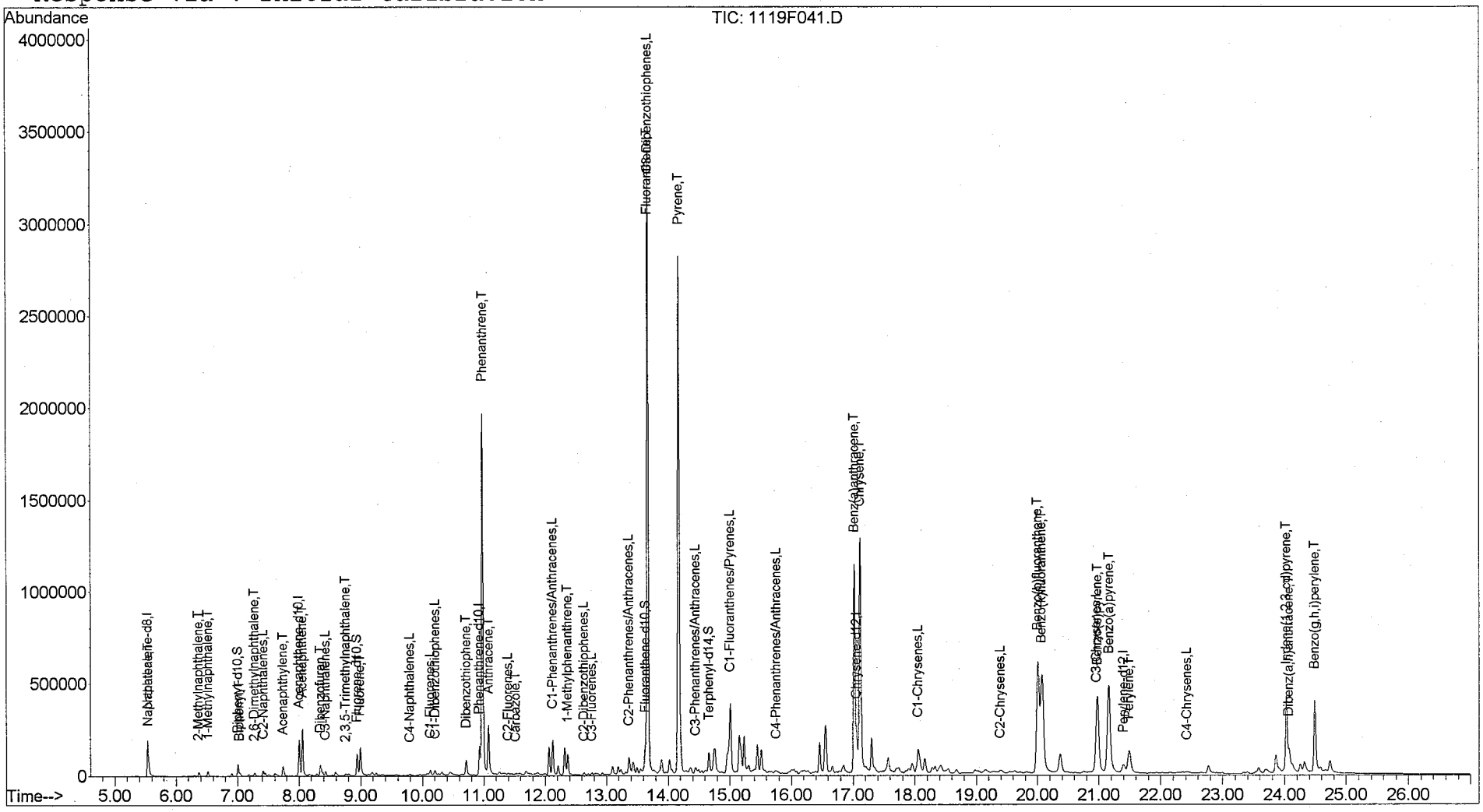
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	111847	644.01	ng/ml	99
32)	C1-Phenanthrenes/Anthracen	12.12	192	700386m	2738.14	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.36	206	386702m	1511.80	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.45	220	216730m	847.30	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	143721m	561.87	ng/ml	
36)	Fluoranthene	13.67	202	5047829	19825.18	ng/ml	97
39)	Pyrene	14.18	202	4299851	15784.56	ng/ml	99
40)	C1-Fluoranthenes/Pyrenes	15.01	216	1665270m	6113.13	ng/ml	
42)	Benz(a)anthracene	17.02	228	1623787	7829.36	ng/ml	92
43)	Chrysene	17.11	228	2072875	9346.63	ng/ml	99
44)	C1-Chrysenes	18.05	242	868661m	3916.81	ng/ml	
45)	C2-Chrysenes	19.39	256	360916m	1627.38	ng/ml	
46)	C3-Chrysenes	20.95	270	275424m	1241.89	ng/ml	
47)	C4-Chrysenes	22.41	284	109464m	493.57	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	1532209	8878.24	ng/ml	99
50)	Benzo(k)fluoranthene	20.07	252	1570449m	7171.71	ng/ml	
51)	Benzo(e)pyrene	20.98	252	1161512	5994.28	ng/ml	100
52)	Benzo(a)pyrene	21.16	252	1334881	9093.49	ng/ml	100
53)	Perylene	21.49	252	338205	2052.43	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.03	276	784266	8788.52	ng/ml	93
55)	Dibenz(a,h)anthracene	24.07	278	146550m	1142.73	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	739846	5000.79	ng/ml	100

(#) = qualifier out of range (m) = manual integration

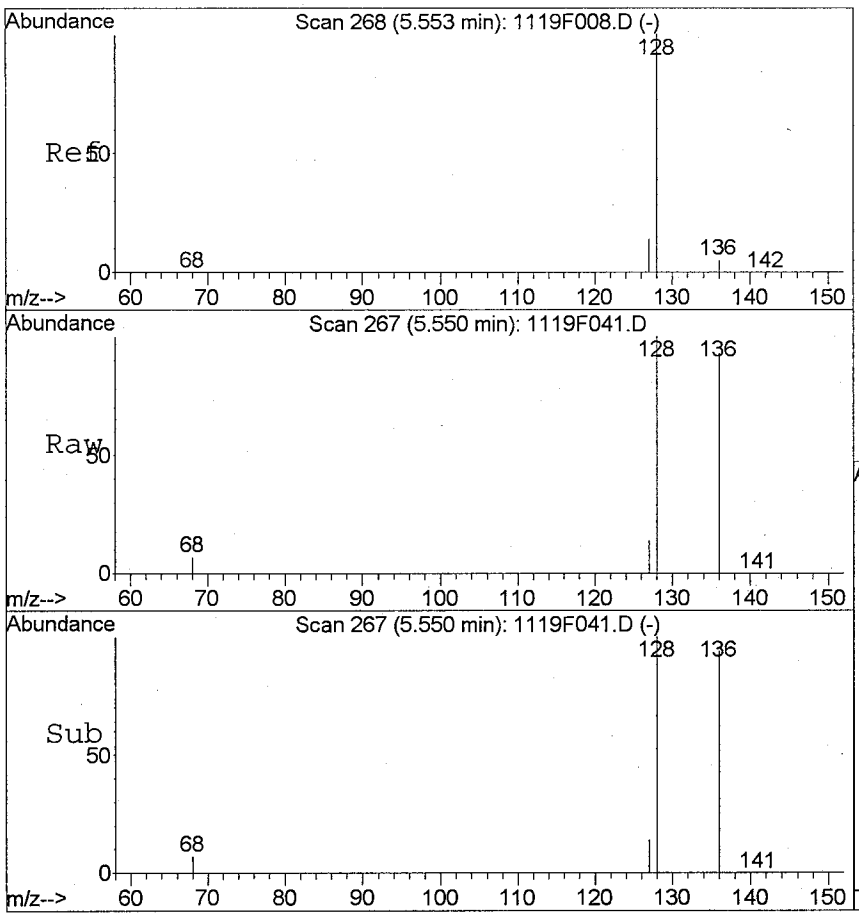
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:19 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



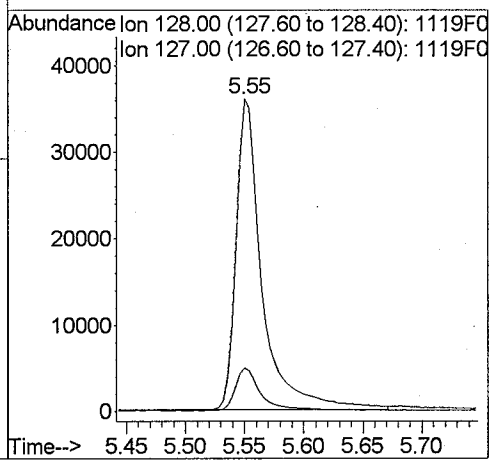
1128

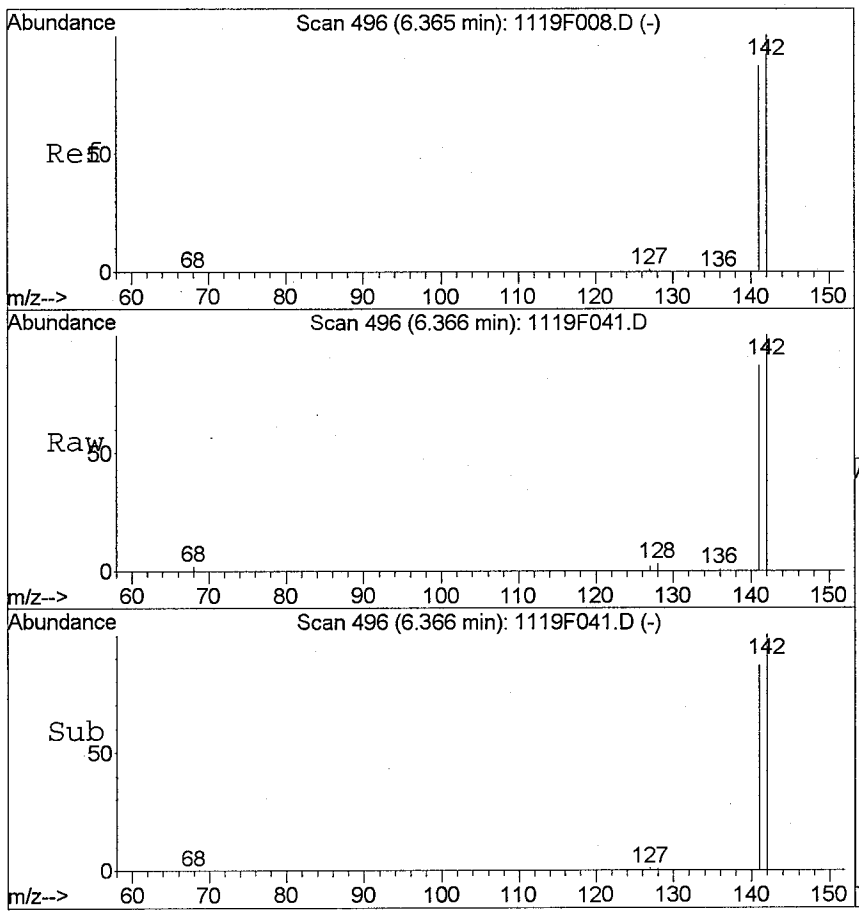


#2
Naphthalene
Concen: 178.97 ng/ml
RT: 5.55 min Scan# 267
Delta R.T. -0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:128 Resp: 55021

Ion	Ratio	Lower	Upper
128	100		
127	13.7	0.0	43.8

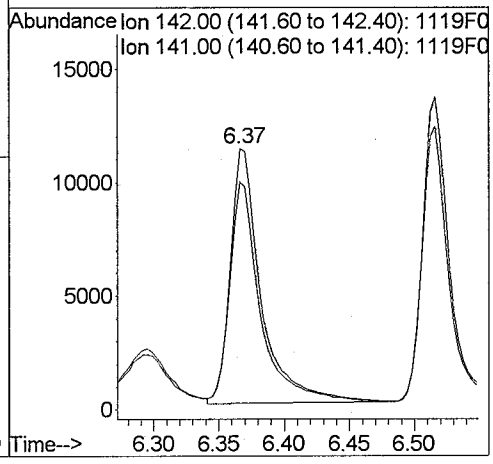


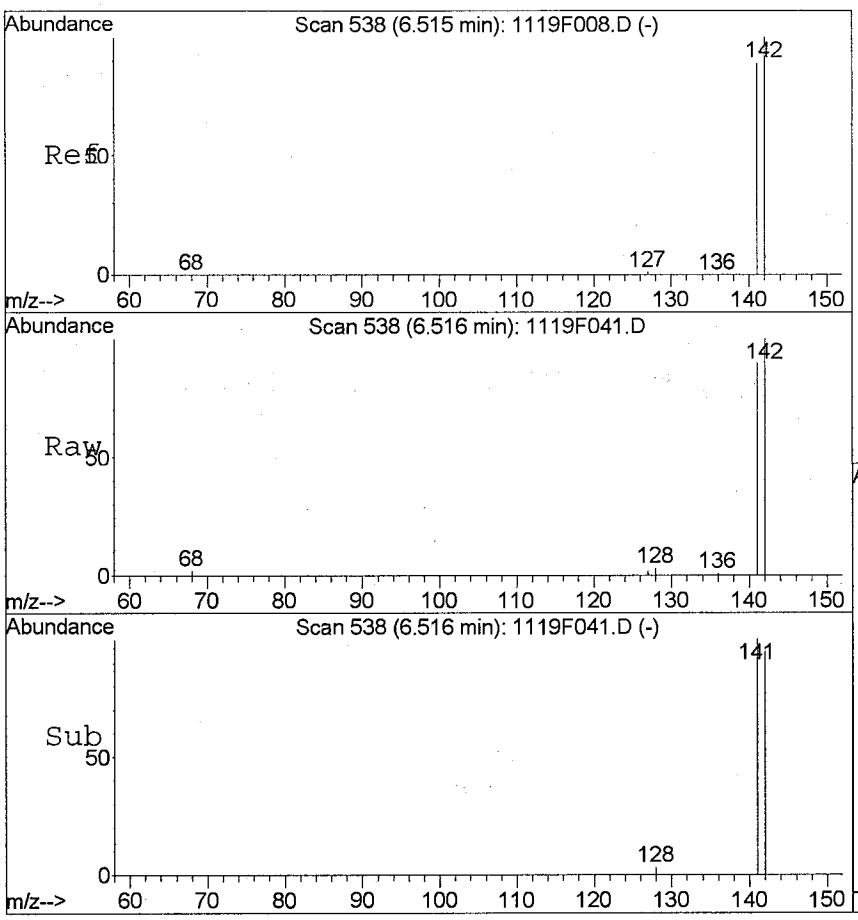


#3
2-Methylnaphthalene
Concen: 101.05 ng/ml
RT: 6.37 min Scan# 496
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:142 Resp: 18345

Ion	Ratio	Lower	Upper
142	100		
141	86.6	57.2	117.2

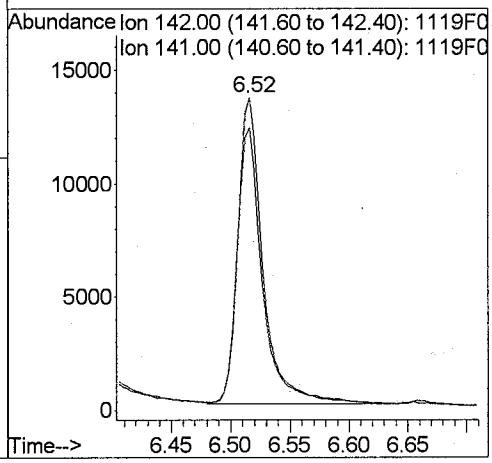


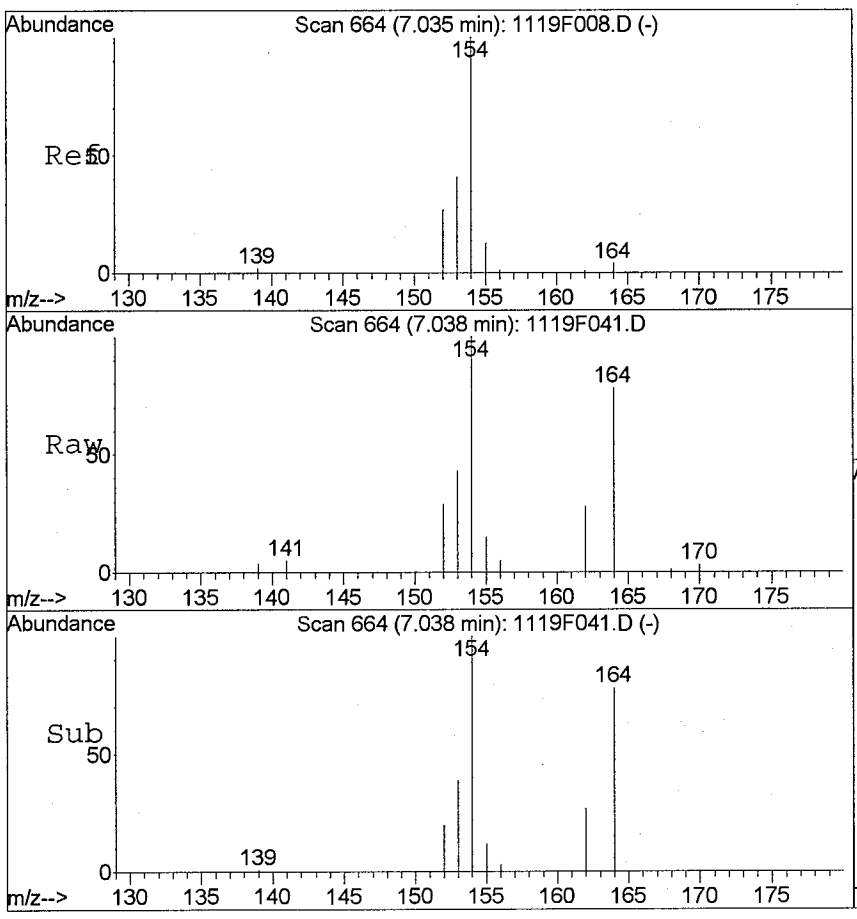


#4
1-Methylnaphthalene
Concen: 116.42 ng/ml
RT: 6.52 min Scan# 538
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:142 Resp: 19811

Ion	Ratio	Lower	Upper
142	100		
141	90.0	58.5	118.5

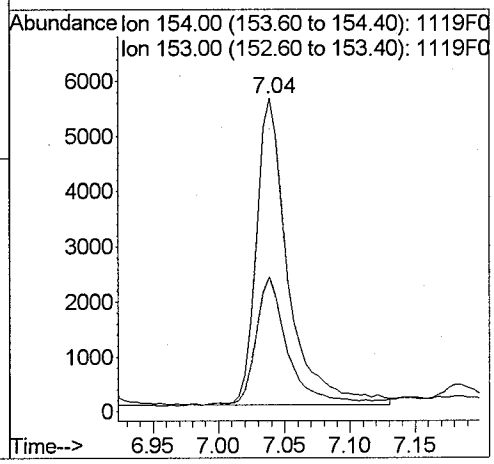


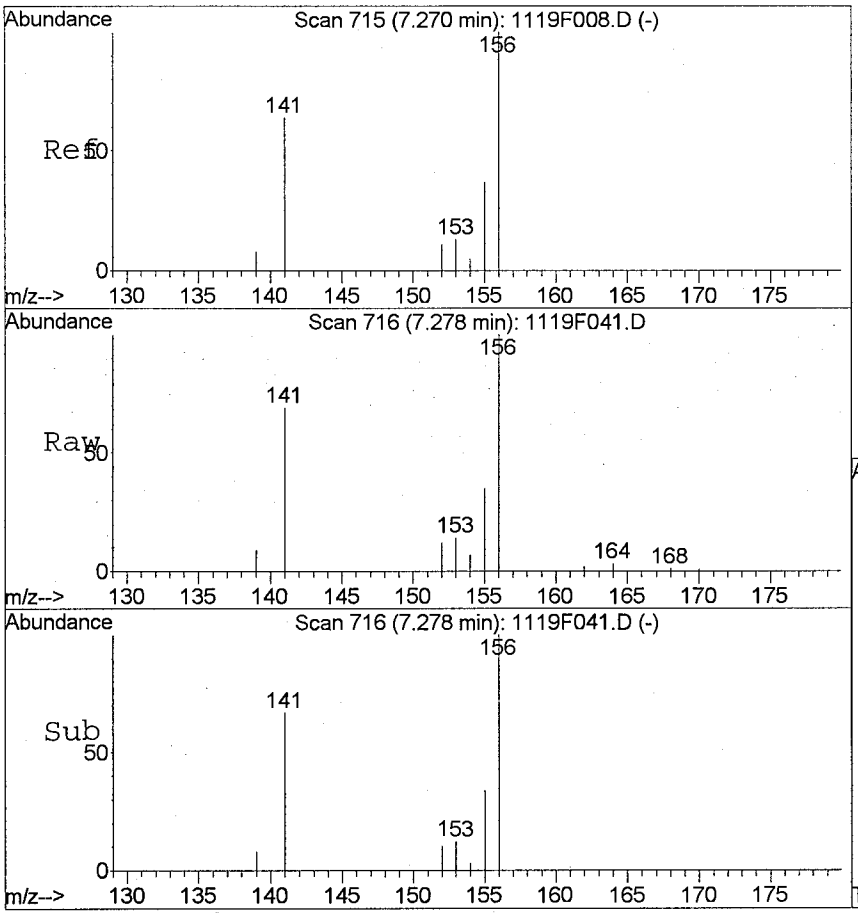


#6
Biphenyl
Concen: 42.82 ng/ml
RT: 7.04 min Scan# 664
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:154 Resp: 9427

Ion	Ratio	Lower	Upper
154	100		
153	41.5	11.3	71.3

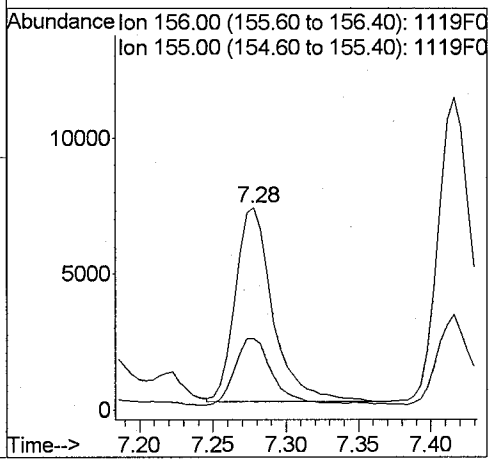


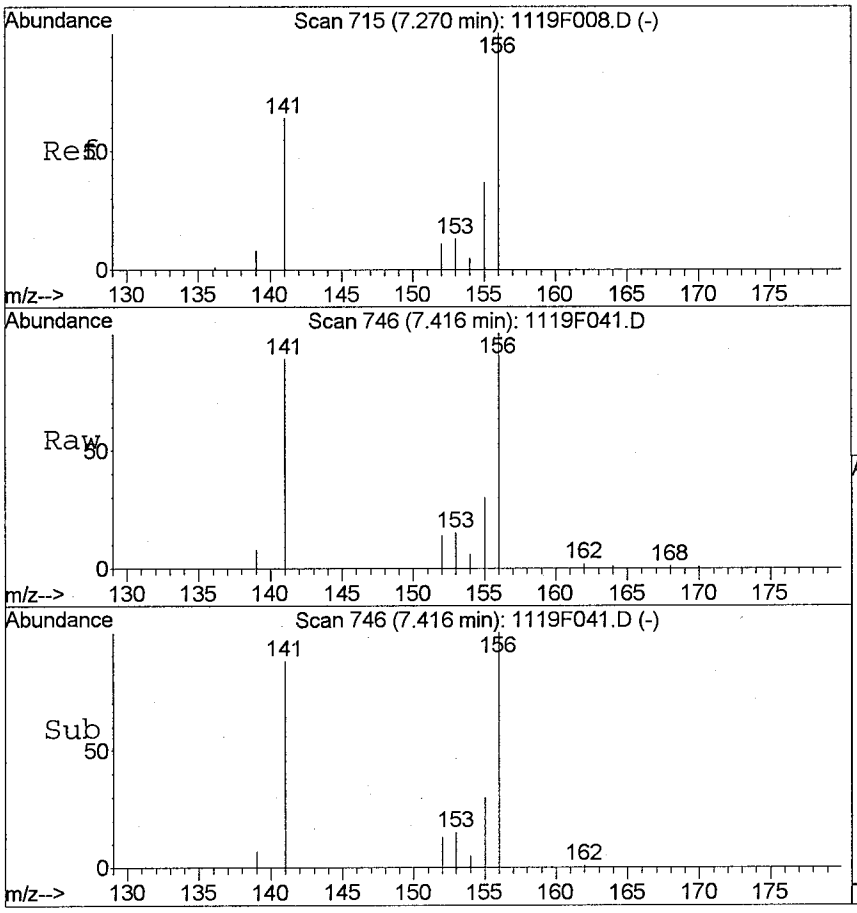


#7
2,6-Dimethylnaphthalene
Concen: 82.38 ng/ml
RT: 7.28 min Scan# 716
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:156 Resp: 12757

Ion	Ratio	Lower	Upper
156	100		
155	34.0	6.9	66.9

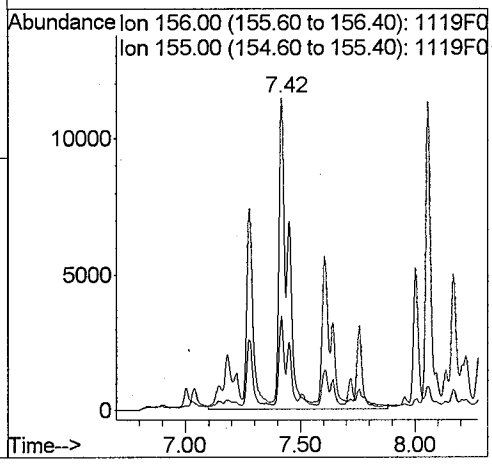


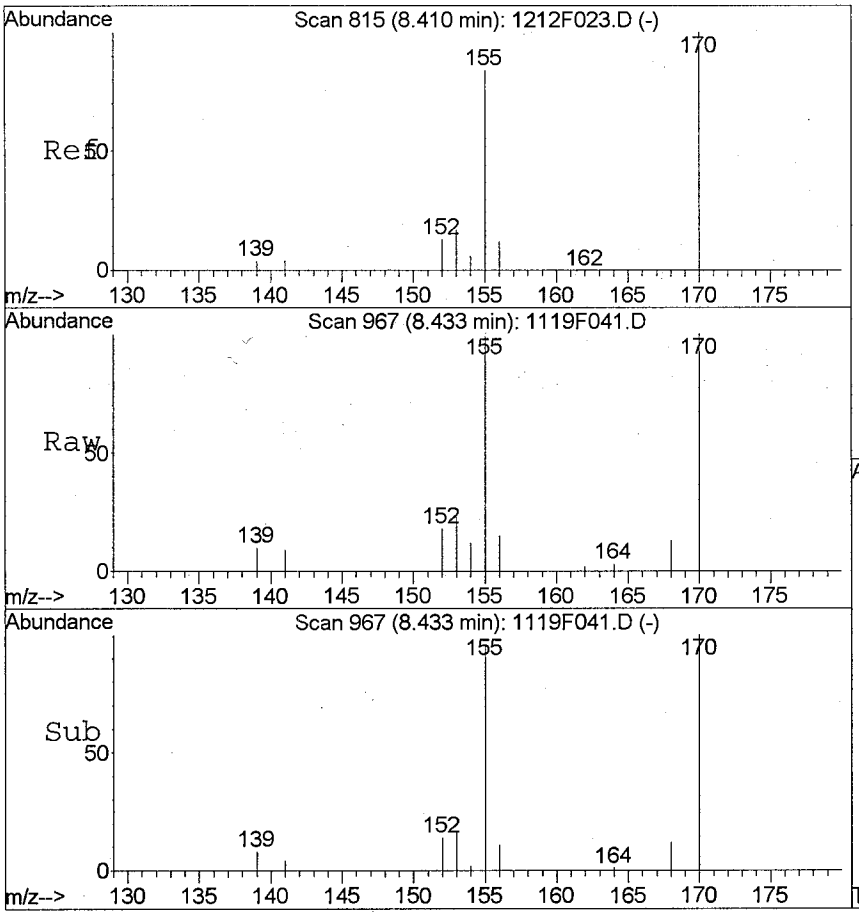


#8
C2-Naphthalenes
Concen: 243.08 ng/ml m
RT: 7.42 min Scan# 746
Delta R.T. 0.06 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:156 Resp: 74732

Ion	Ratio	Lower	Upper
156	100		
155	30.4	8.3	68.3

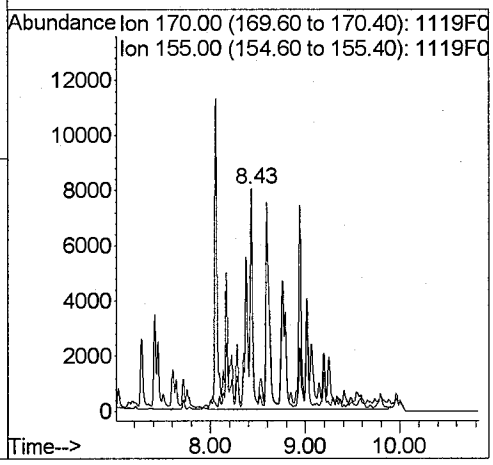


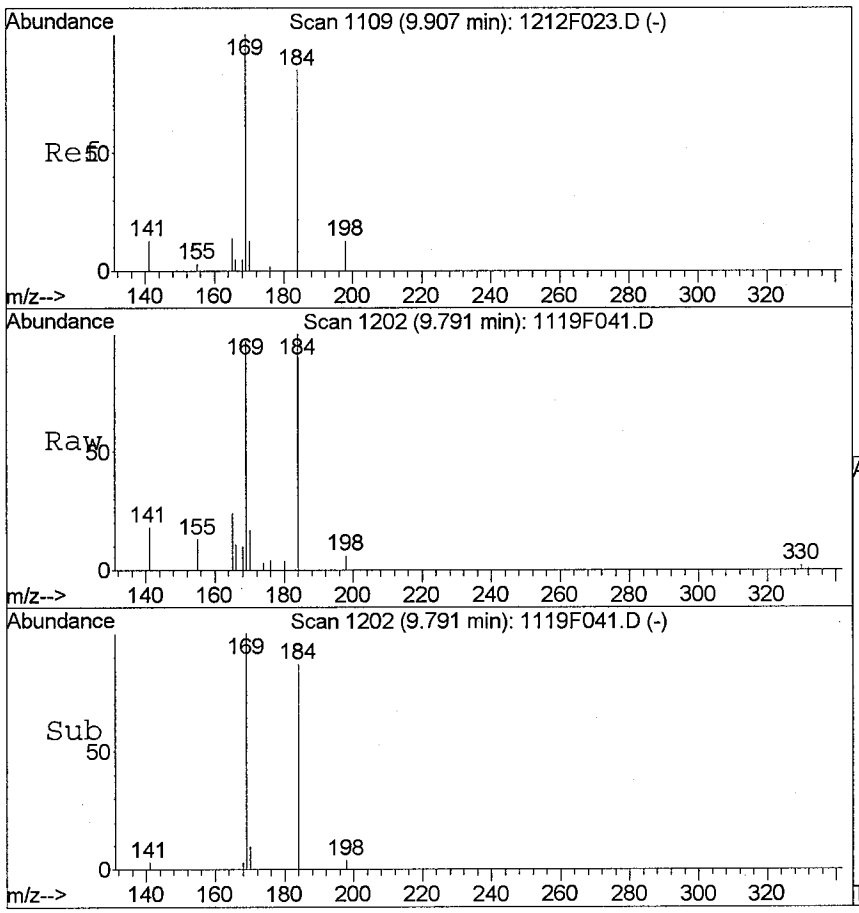


#9
C3-Naphthalenes
Concen: 316.69 ng/ml m
RT: 8.43 min Scan# 967
Delta R.T. -0.10 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:170 Resp: 97362

Ion	Ratio	Lower	Upper
170	100		
155	98.6	56.9	116.9

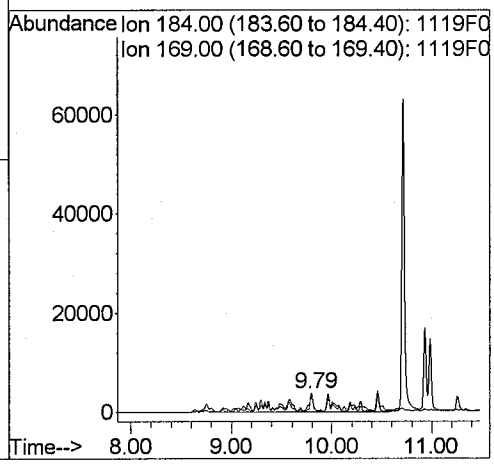


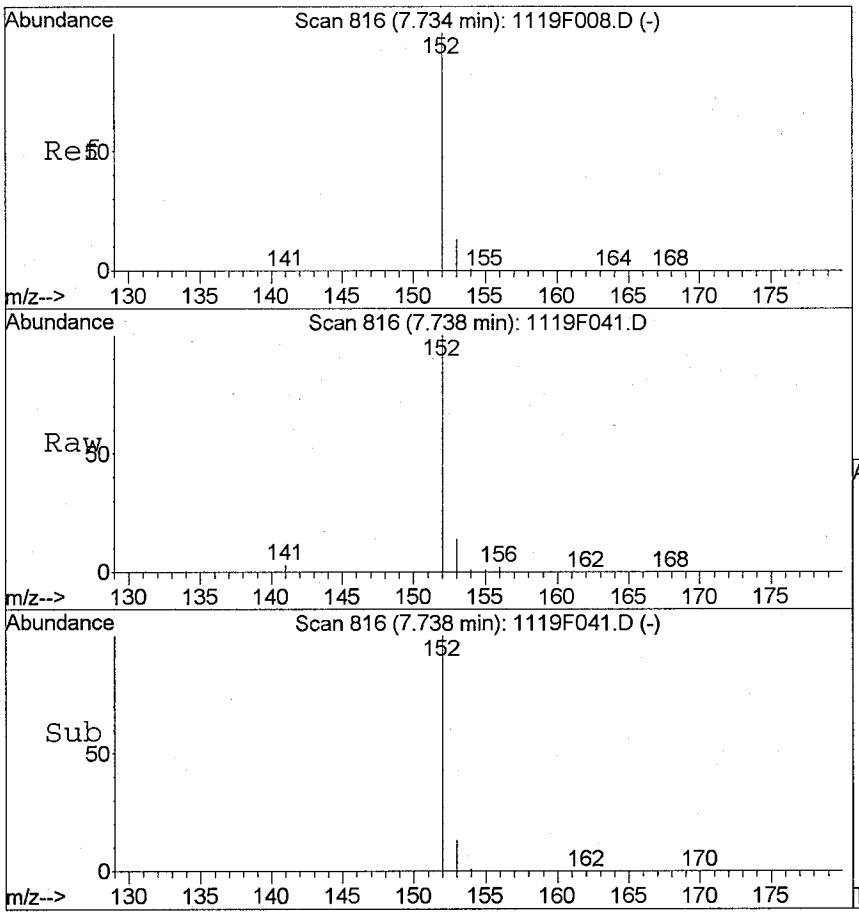


#10
C4-Naphthalenes
Concen: 204.46 ng/ml m
RT: 9.79 min Scan# 1202
Delta R.T. -0.27 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:184 Resp: 62859

Ion	Ratio	Lower	Upper
184	100		
169	97.3	89.7	149.7

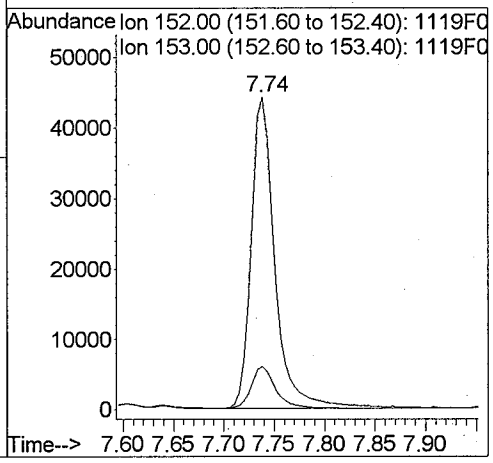


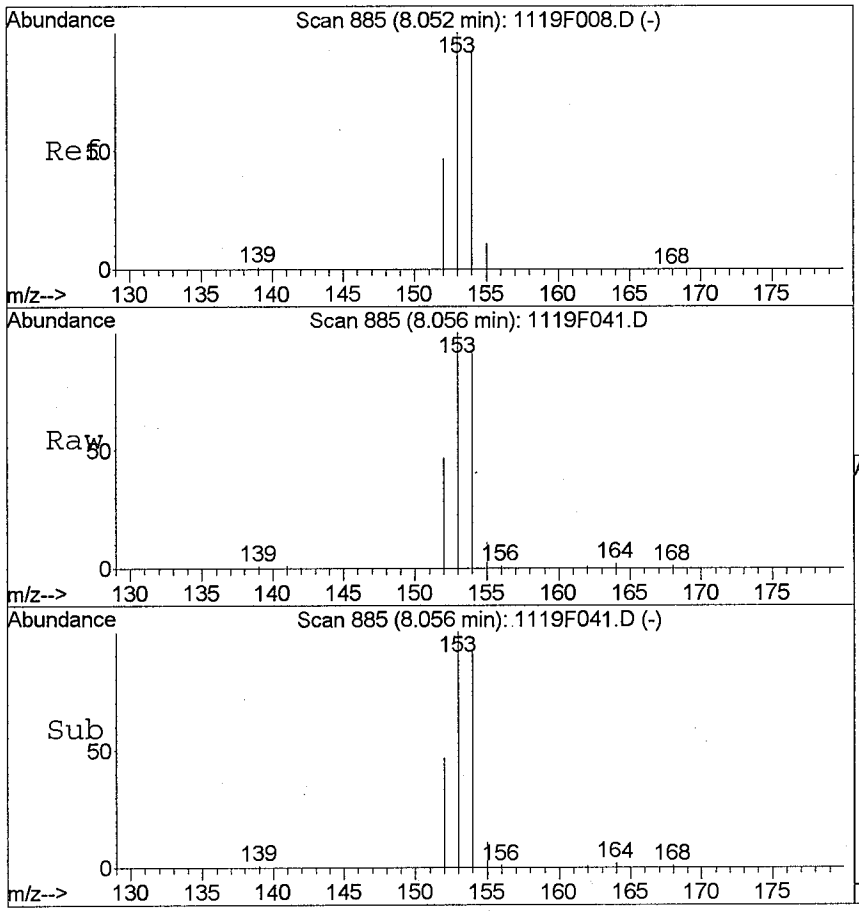


#12
Acenaphthylene
Concen: 260.92 ng/ml
RT: 7.74 min Scan# 816
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:152 Resp: 72406

Ion	Ratio	Lower	Upper
152	100		
153	13.5	0.0	43.1

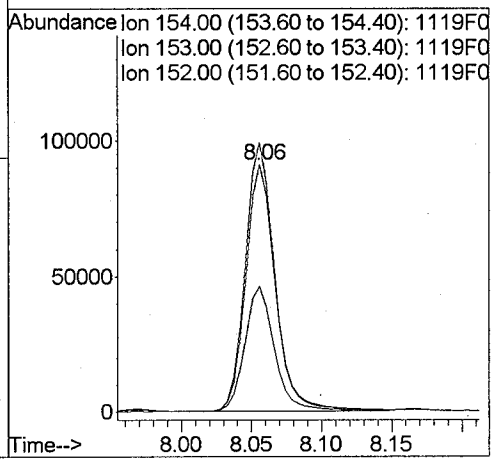


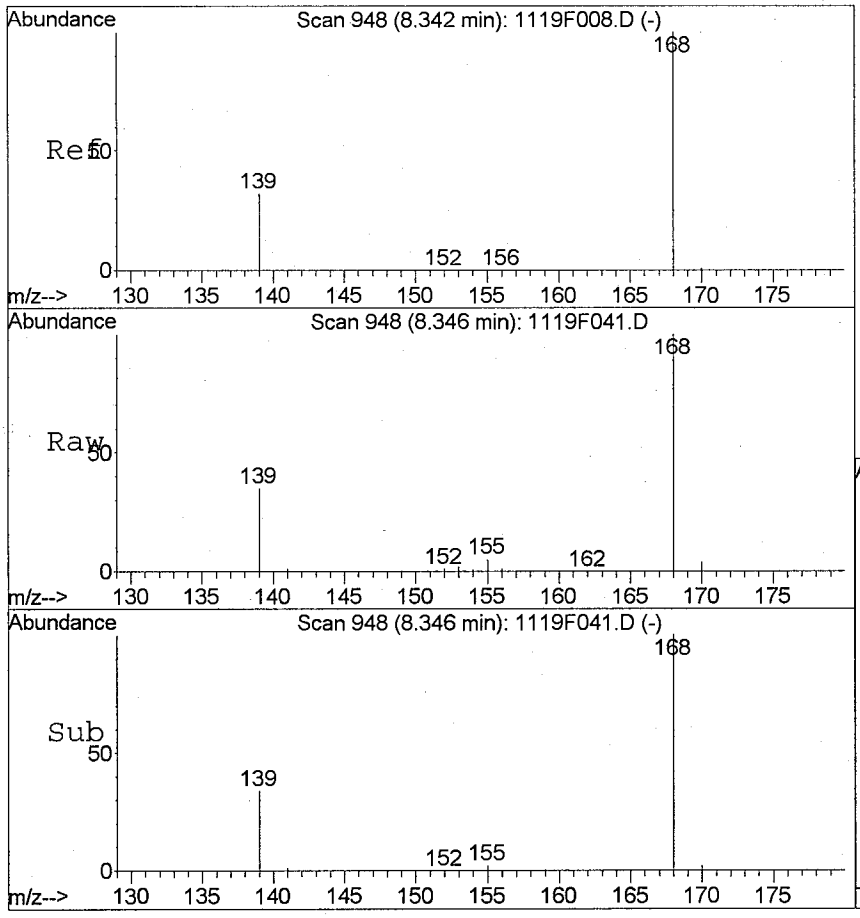


#13
Acenaphthene
Concen: 782.15 ng/ml
RT: 8.06 min Scan# 885
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:154 Resp: 133772

Ion	Ratio	Lower	Upper
154	100		
153	108.9	78.4	138.4
152	50.7	20.4	80.4

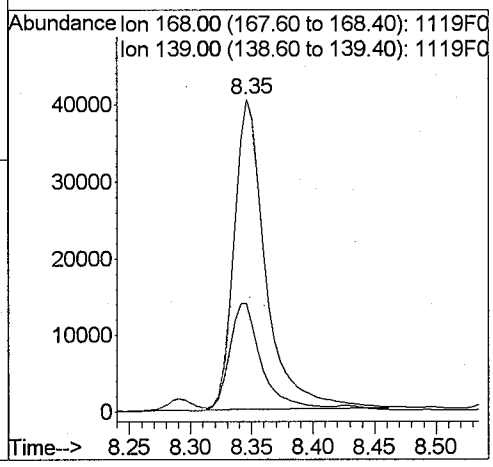


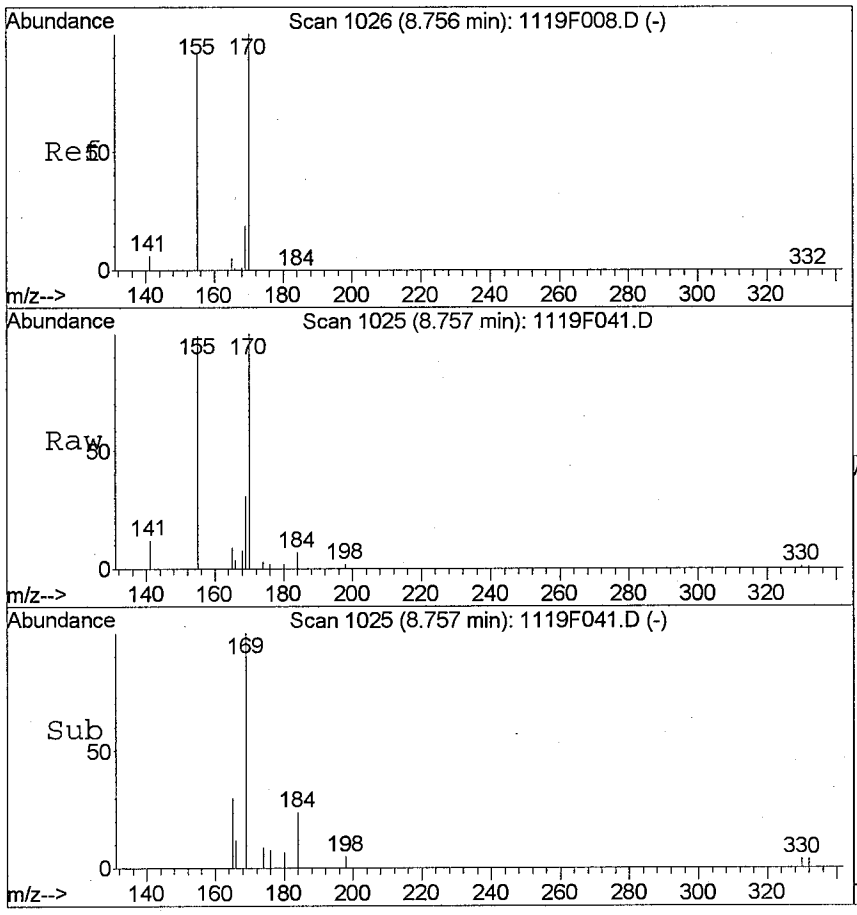


#14
Dibenzofuran
Concen: 316.45 ng/ml
RT: 8.35 min Scan# 948
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:168 Resp: 72553

Ion	Ratio	Lower	Upper
168	100		
139	34.4	2.4	62.4

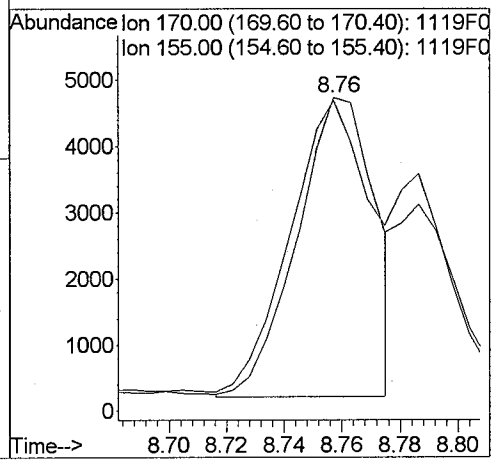


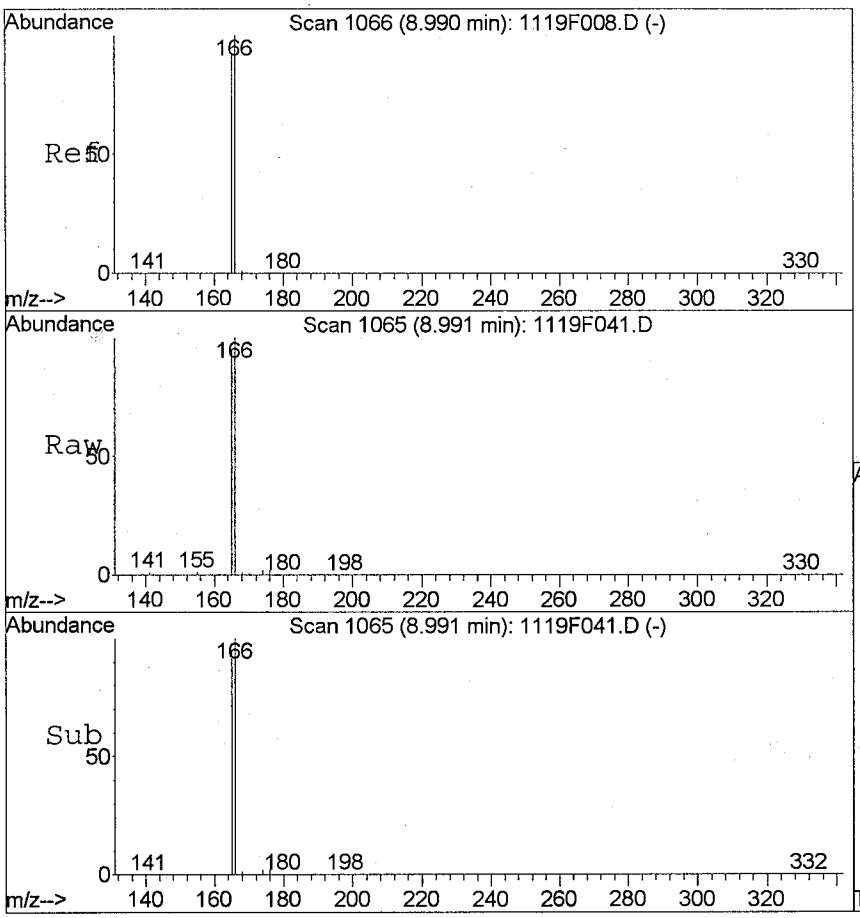


#15
2,3,5-Trimethylnaphthalene
Concen: 54.76 ng/ml m
RT: 8.76 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:170 Resp: 8389

Ion	Ratio	Lower	Upper
170	100		
155	99.0	61.5	121.5

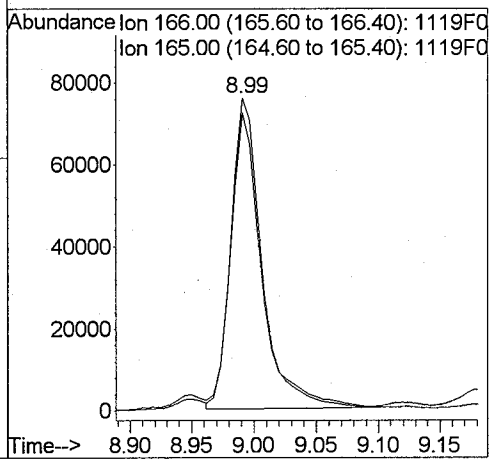


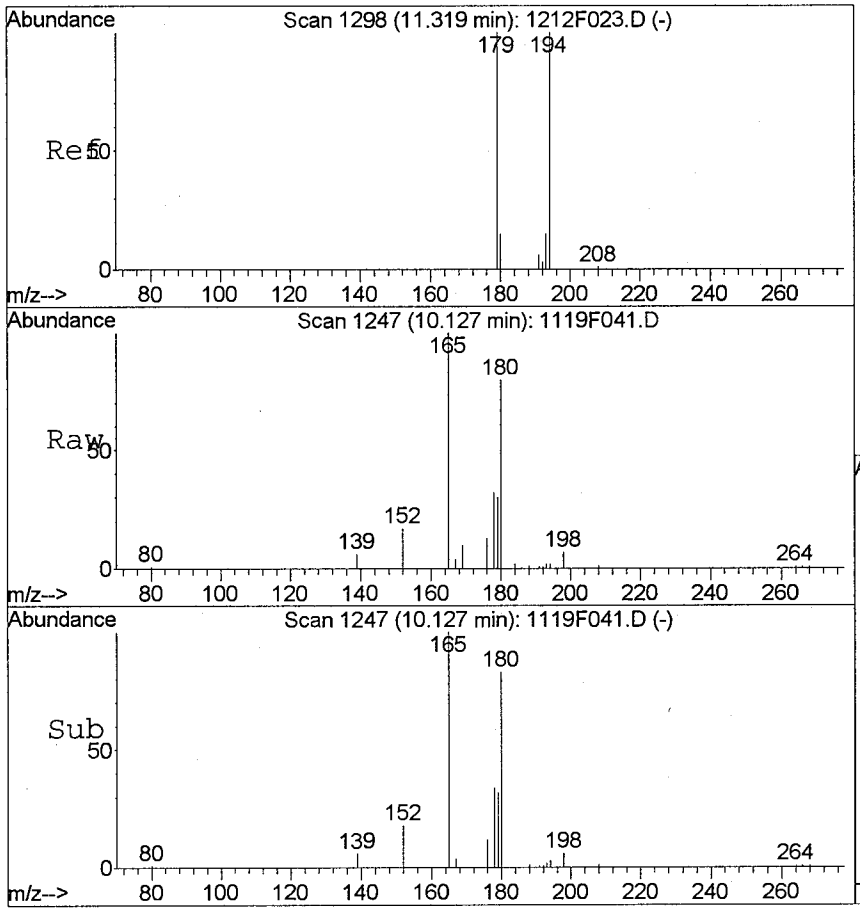


#17
Fluorene
Concen: 714.79 ng/ml
RT: 8.99 min Scan# 1065
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:166 Resp: 130959

Ion	Ratio	Lower	Upper
166	100		
165	94.2	62.9	122.9

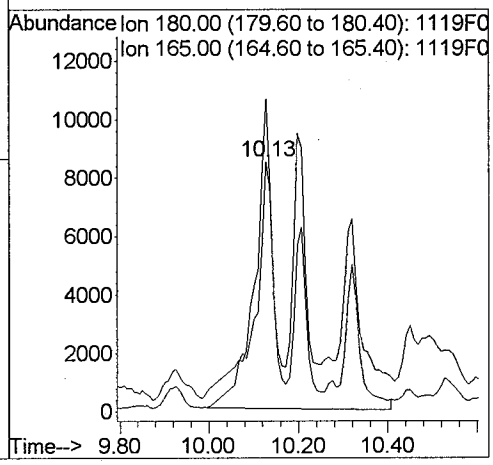


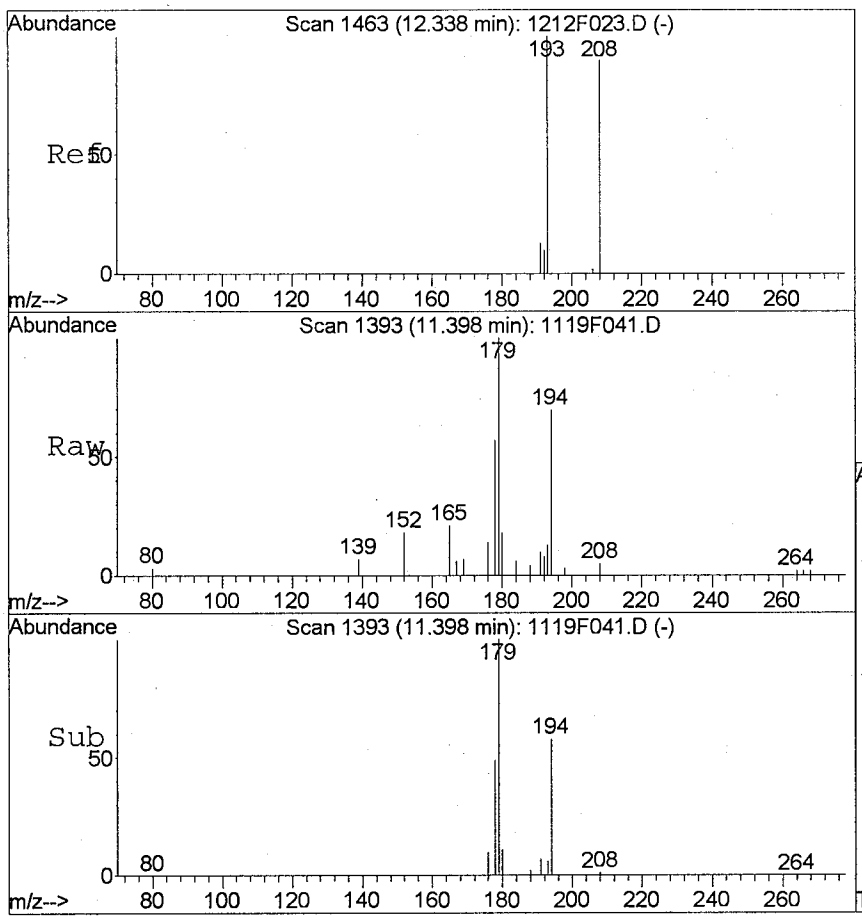


#18
C1-Fluorenes
Concen: 290.30 ng/ml m
RT: 10.13 min Scan# 1247
Delta R.T. -0.17 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:180 Resp: 53187

Ion	Ratio	Lower	Upper
180	100		
165	125.1	148.7	208.7#

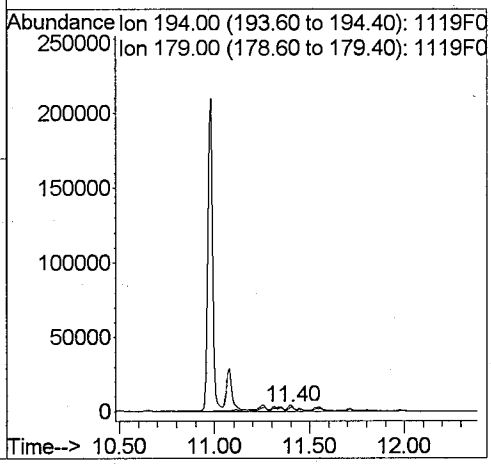


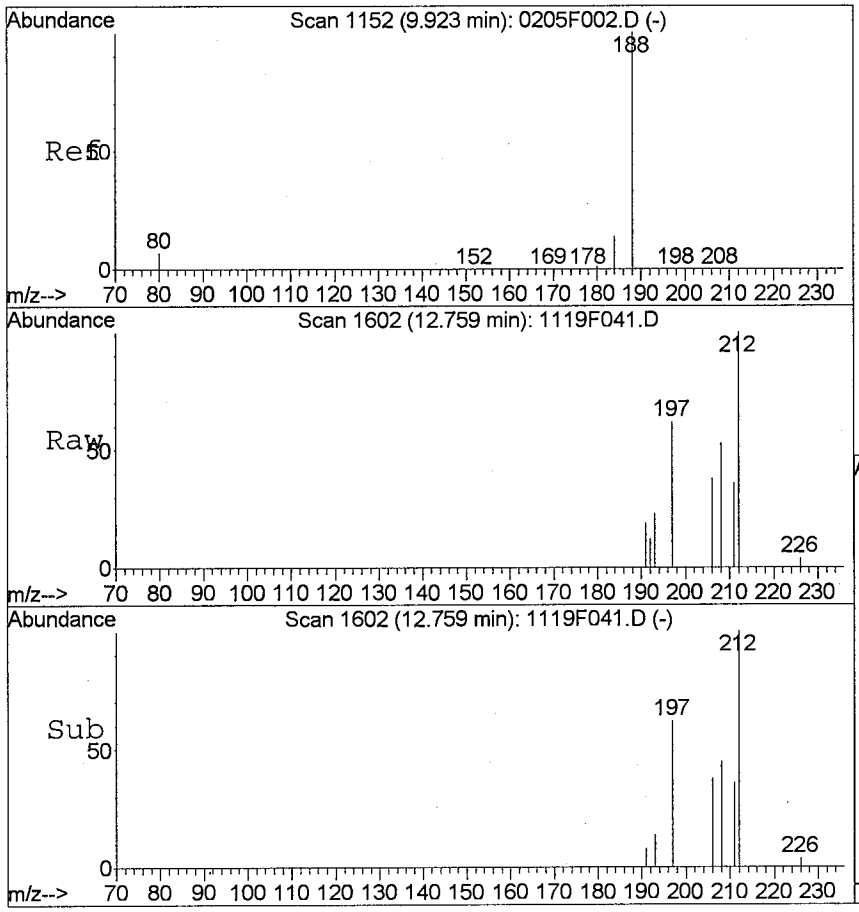


#19
C2-Fluorenes
Concen: 268.21 ng/ml m
RT: 11.40 min Scan# 1393
Delta R.T. -0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:194 Resp: 49139

Ion	Ratio	Lower	Upper
194	100		
179	142.8	107.0	167.0

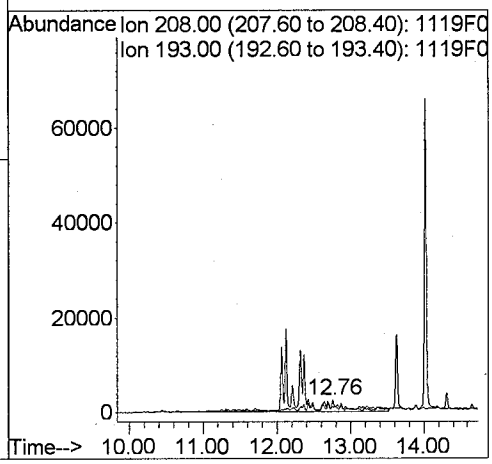


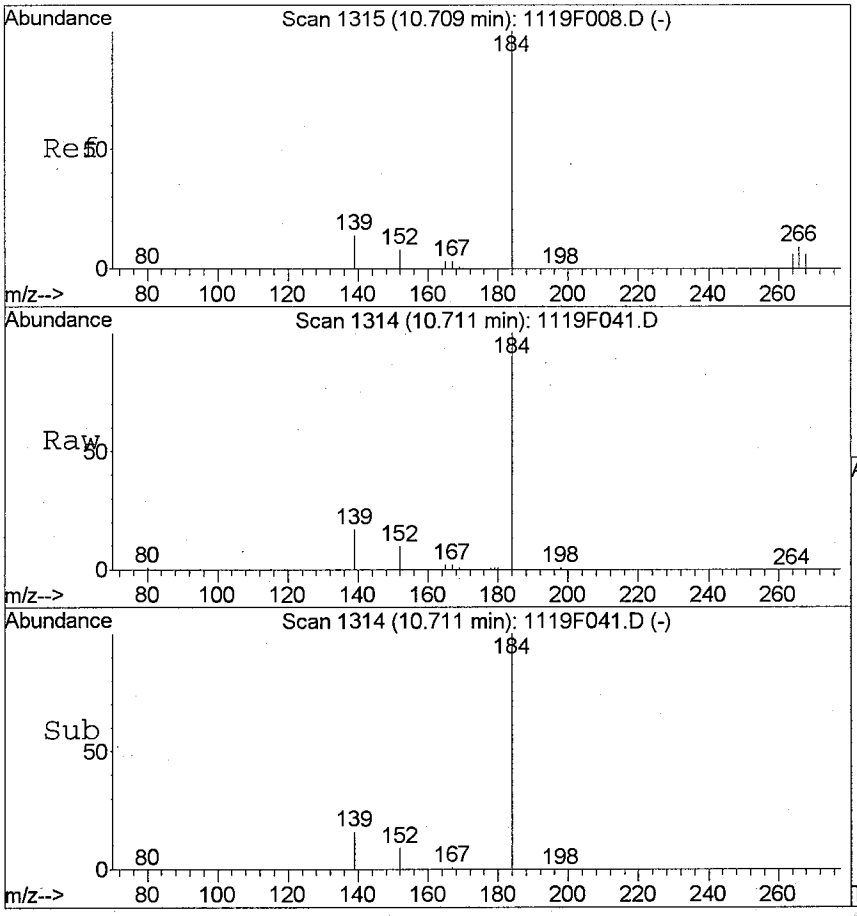


#20
C3-Fluorenes
Concen: 495.34 ng/ml m
RT: 12.76 min Scan# 1602
Delta R.T. 0.24 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:208 Resp: 90753

Ion	Ratio	Lower	Upper
208	100		
193	43.7	92.0	152.0#

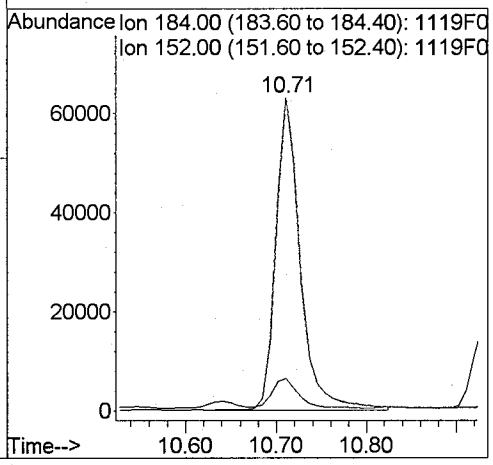


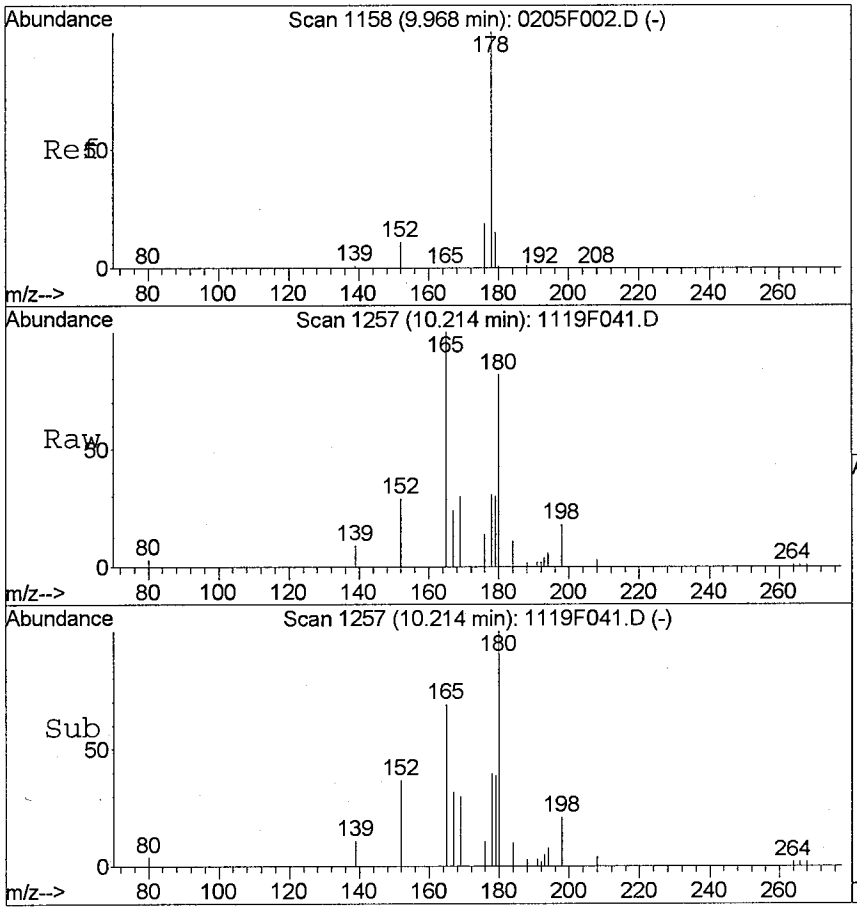


#24
Dibenzothiophene
Concen: 484.44 ng/ml
RT: 10.71 min Scan# 1314
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:184 Resp: 117964

Ion	Ratio	Lower	Upper
184	100		
152	9.0	0.0	38.4

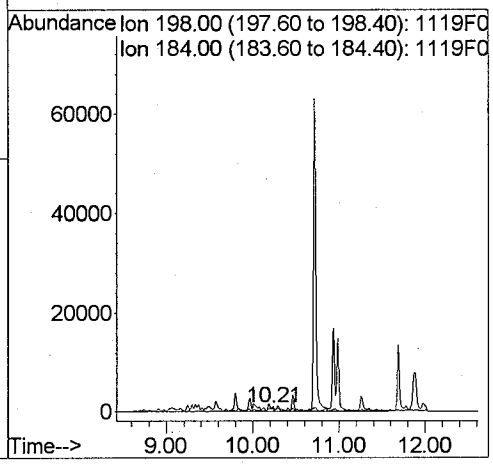


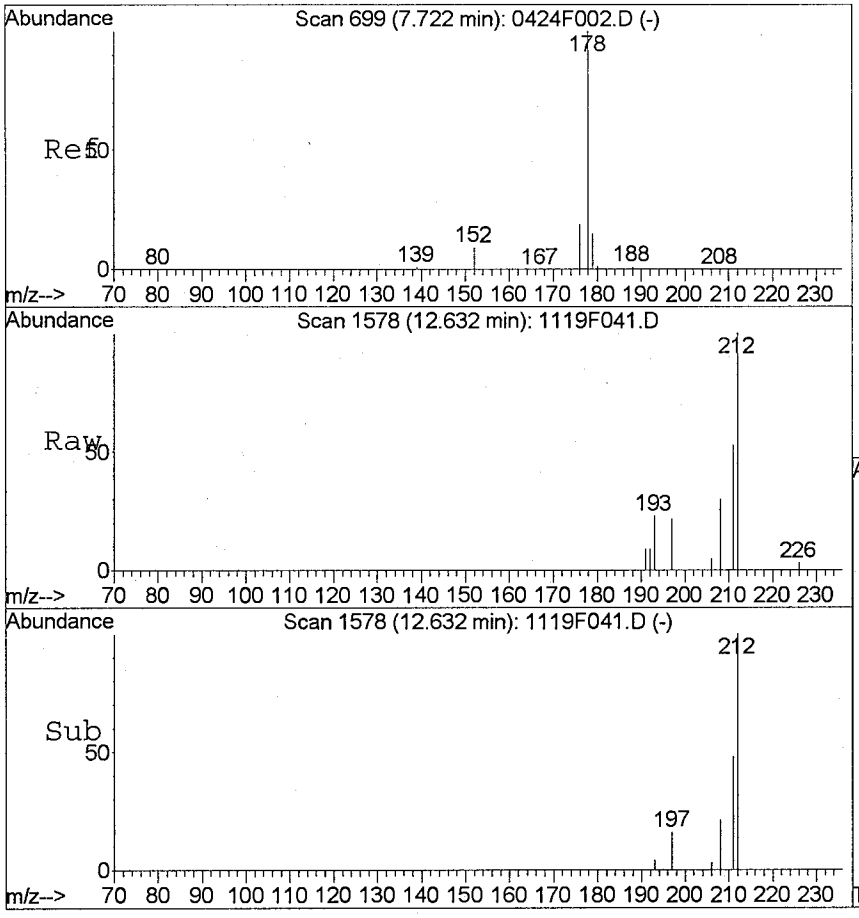


#25
C1-Dibenzothiophenes
Concen: 142.19 ng/ml m
RT: 10.21 min Scan# 1257
Delta R.T. 0.00 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:198 Resp: 34625

Ion	Ratio	Lower	Upper
198	100		
184	60.9	74.1	134.1#

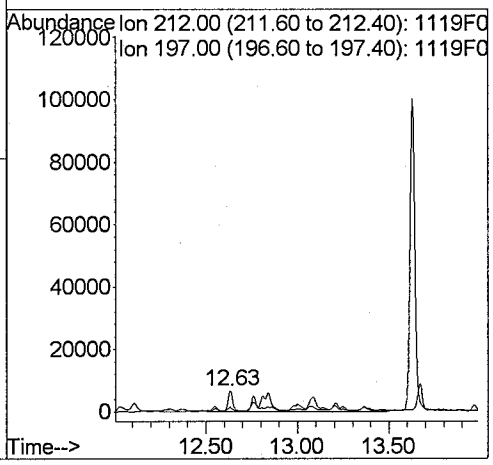


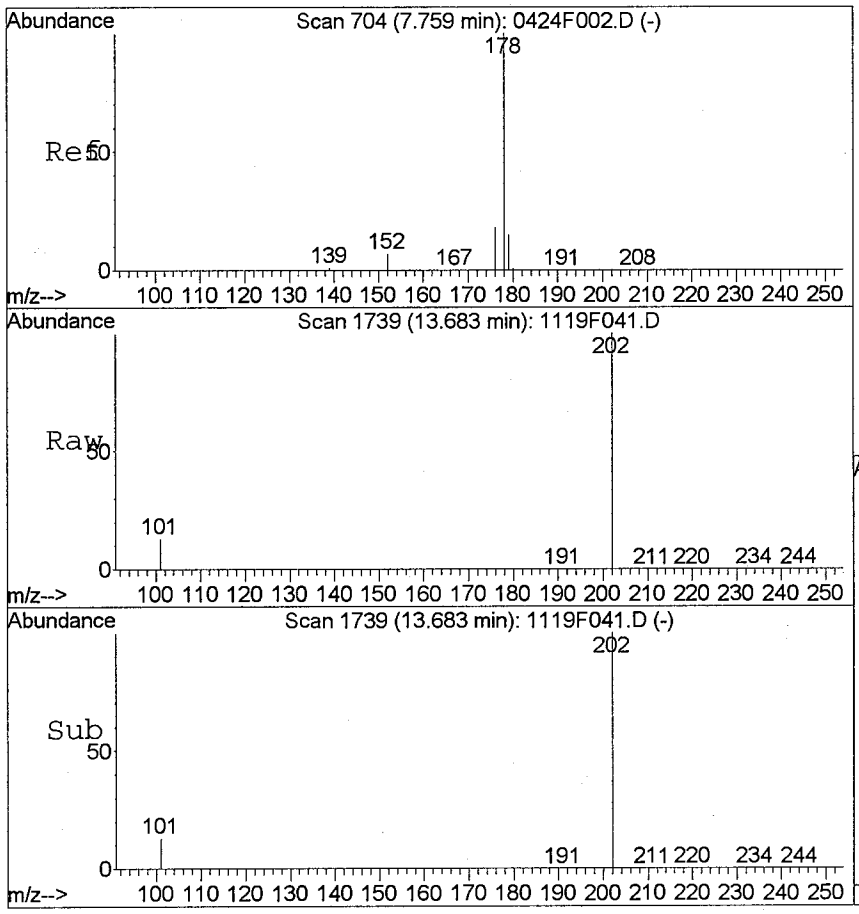


#26
C2-Dibenzothiophenes
Concen: 356.74 ng/ml m
RT: 12.63 min Scan# 1578
Delta R.T. -0.30 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:212 Resp: 86868

Ion	Ratio	Lower	Upper
212	100		
197	22.3	0.0	53.8

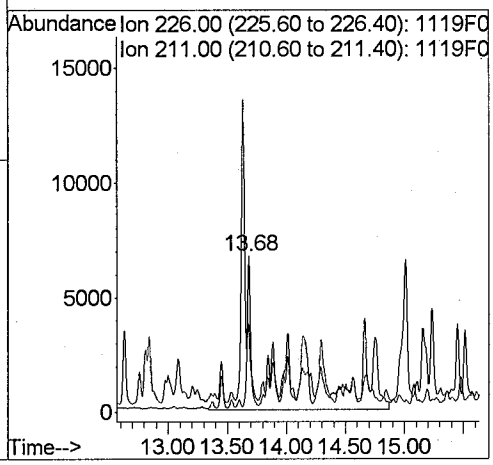


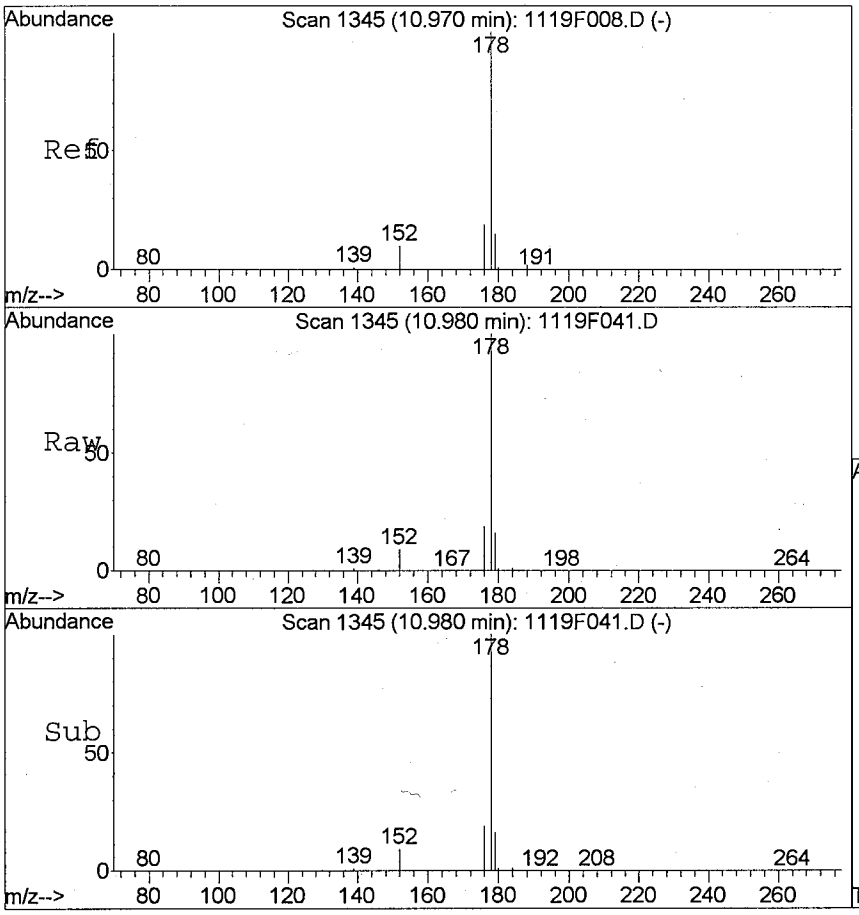


#27
C3-Dibenzothiophenes
Concen: 386.20 ng/ml m
RT: 13.68 min Scan# 1739
Delta R.T. -0.10 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:226 Resp: 94042

Ion	Ratio	Lower	Upper
226	100		
211	54.6	27.1	87.1

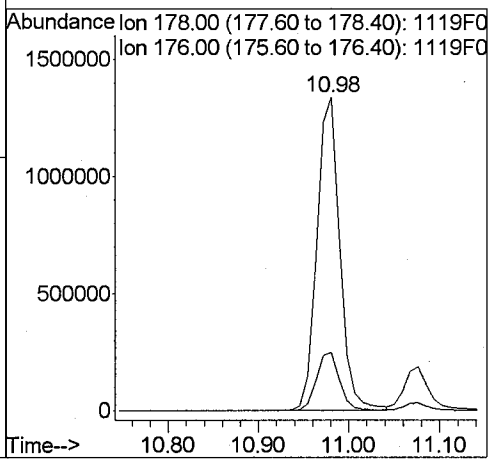


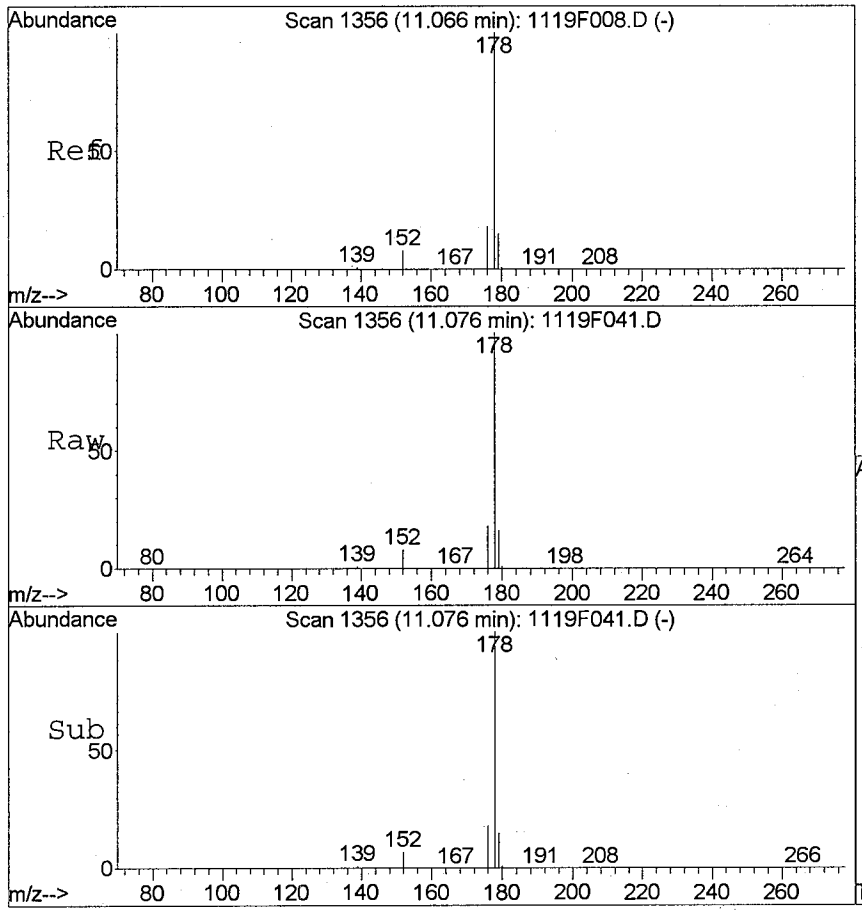


#28
Phenanthrene
Concen: 9216.08 ng/ml
RT: 10.98 min Scan# 1345
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:178 Resp: 2357377

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	48.6

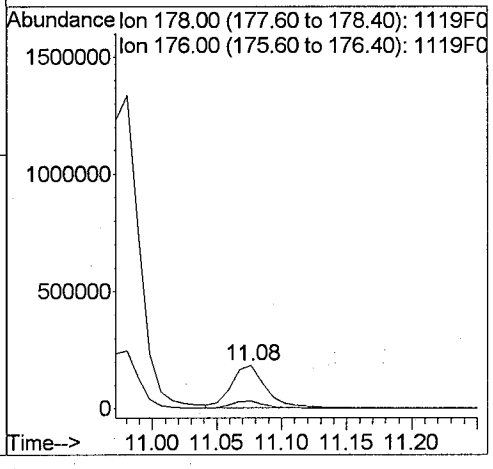


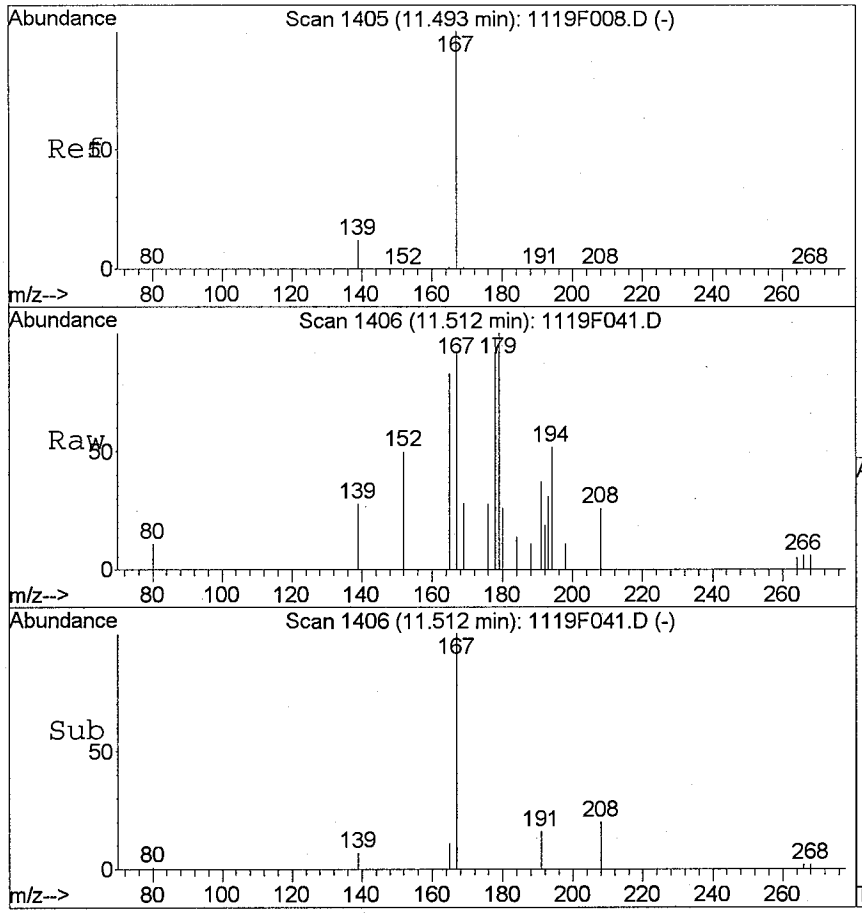


#29
Anthracene
Concen: 1549.36 ng/ml
RT: 11.08 min Scan# 1356
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:178 Resp: 338576

Ion	Ratio	Lower	Upper
178	100		
176	17.9	0.0	48.2

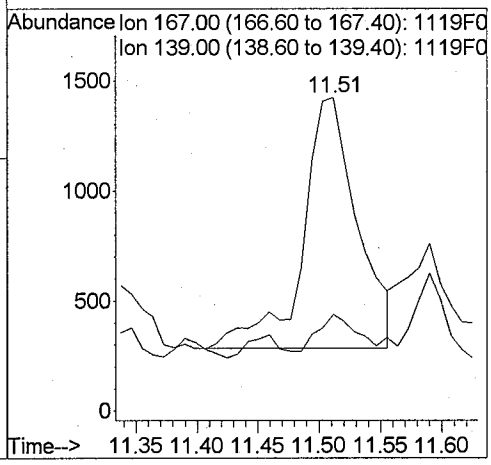


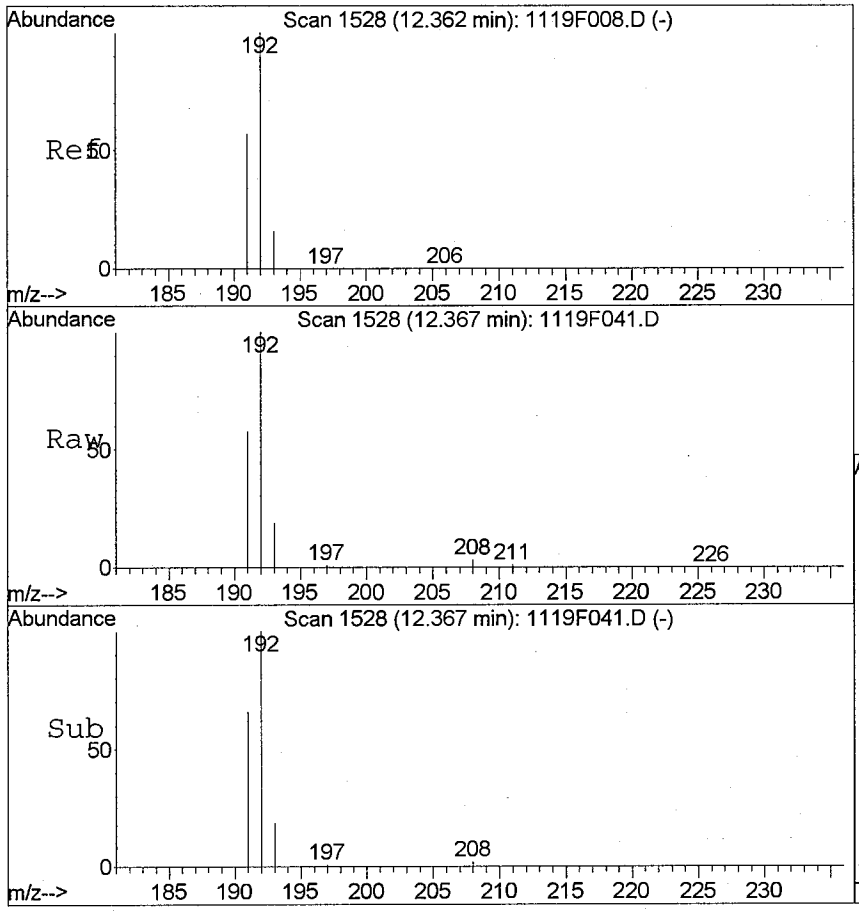


#30
Carbazole
Concen: 20.58 ng/ml
RT: 11.51 min Scan# 1406
Delta R.T. 0.02 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:167 Resp: 3554

Ion	Ratio	Lower	Upper
167	100		
139	14.0	0.0	42.5

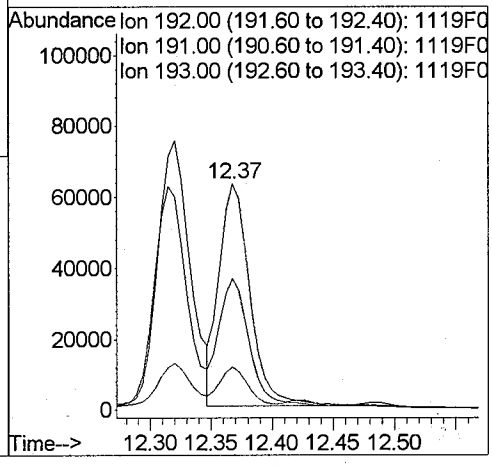


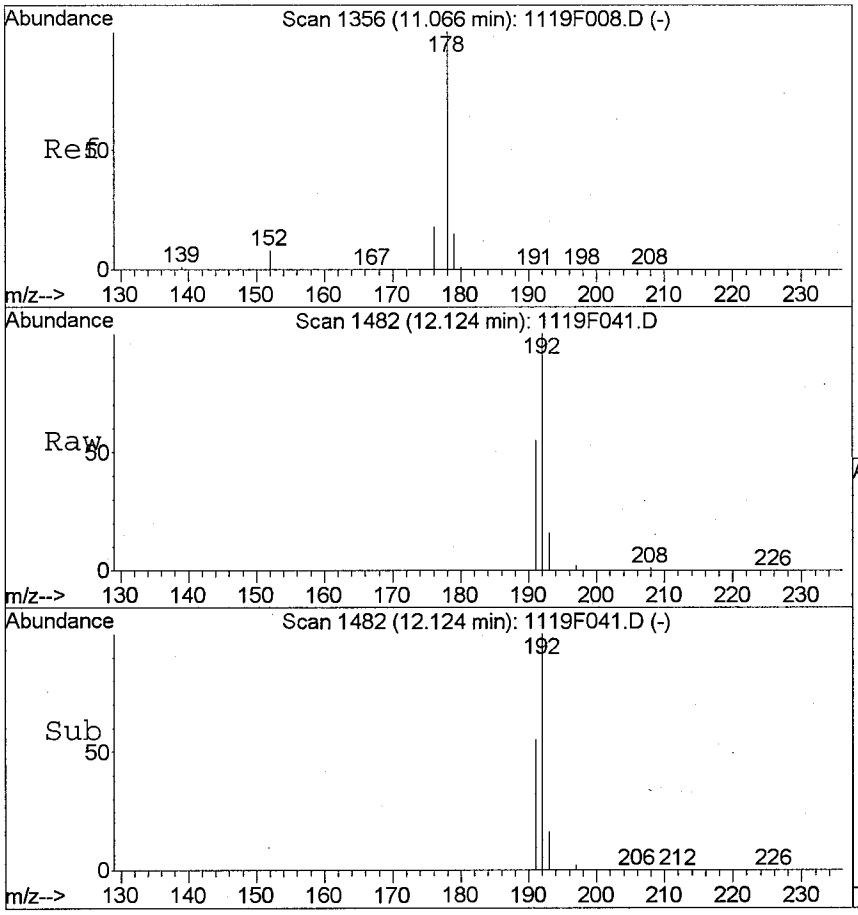


#31
1-Methylphenanthrene
Concen: 644.01 ng/ml
RT: 12.37 min Scan# 1528
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:192 Resp: 111847

Ion	Ratio	Lower	Upper
192	100		
191	57.8	27.5	87.5
193	16.9	0.0	45.6

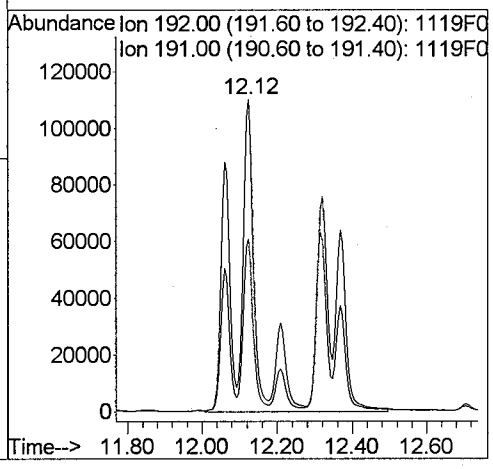


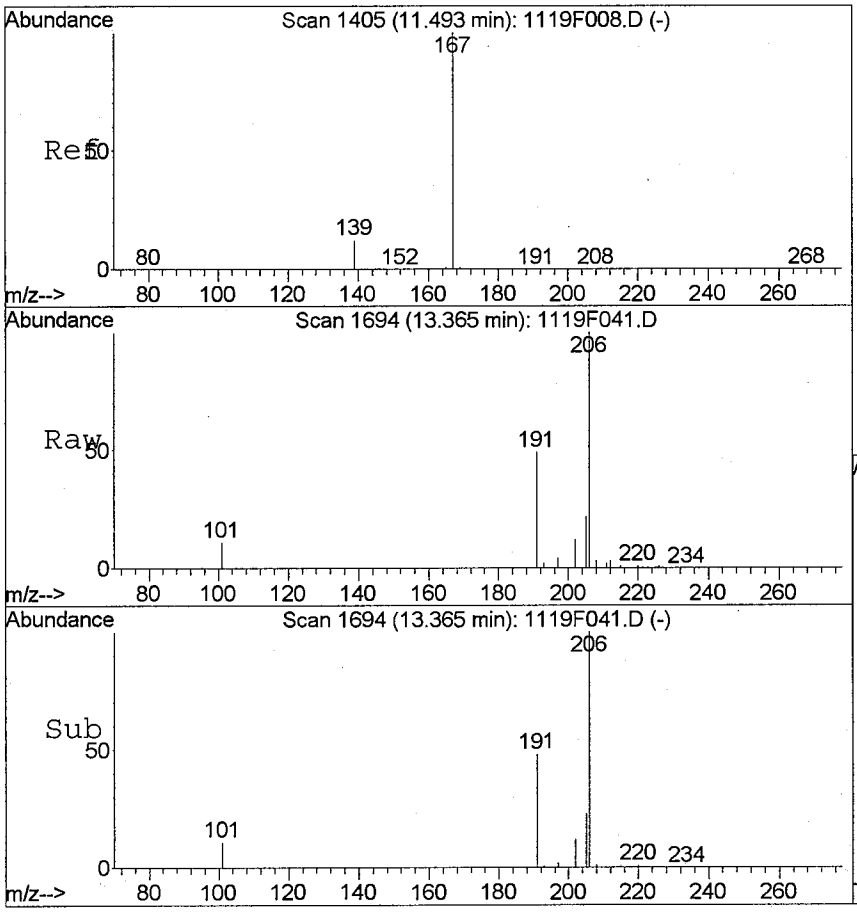


#32
C1-Phenanthrenes/Anthracenes
Concen: 2738.14 ng/ml m
RT: 12.12 min Scan# 1482
Delta R.T. -0.10 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:192 Resp: 700386

Ion	Ratio	Lower	Upper
192	100		
191	55.1	25.3	85.3

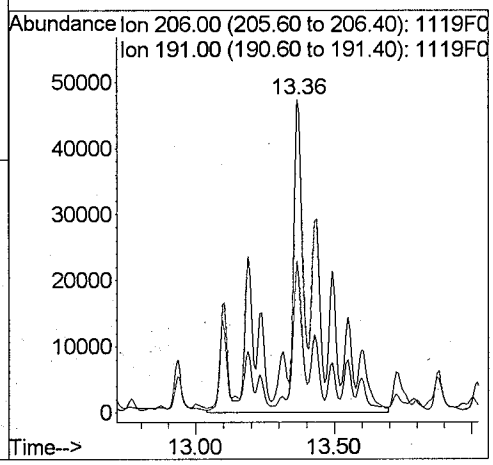


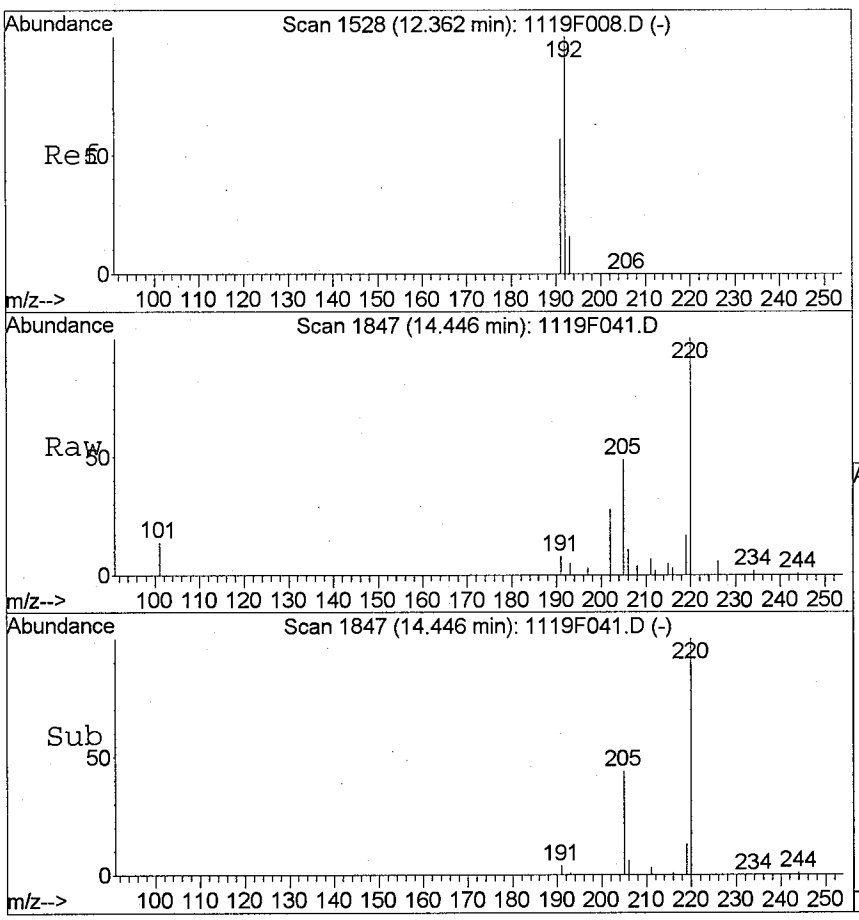


#33
C2-Phenanthrenes/Anthracenes
Concen: 1511.80 ng/ml m
RT: 13.36 min Scan# 1694
Delta R.T. -0.11 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:206 Resp: 386702

Ion	Ratio	Lower	Upper
206	100		
191	48.6	15.6	75.6

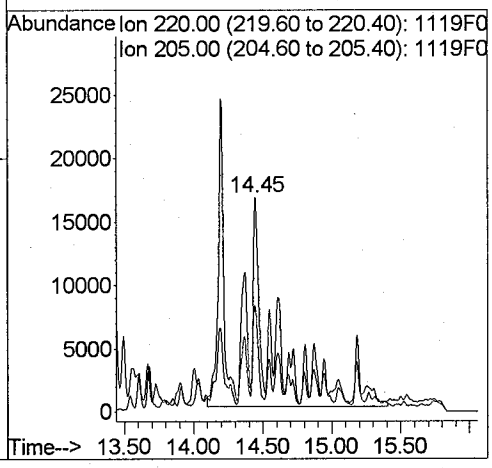


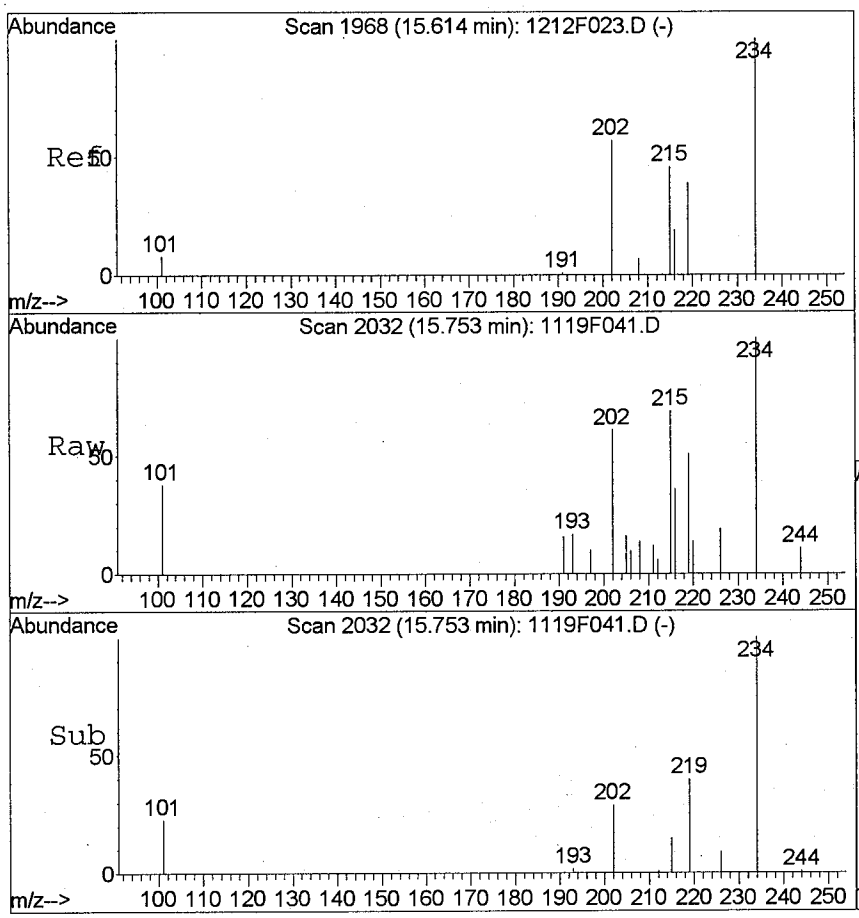


#34
C3-Phenanthrenes/Anthracenes
Concen: 847.30 ng/ml m
RT: 14.45 min Scan# 1847
Delta R.T. -0.10 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:220 Resp: 216730

Ion	Ratio	Lower	Upper
220	100		
205	49.4	20.0	80.0

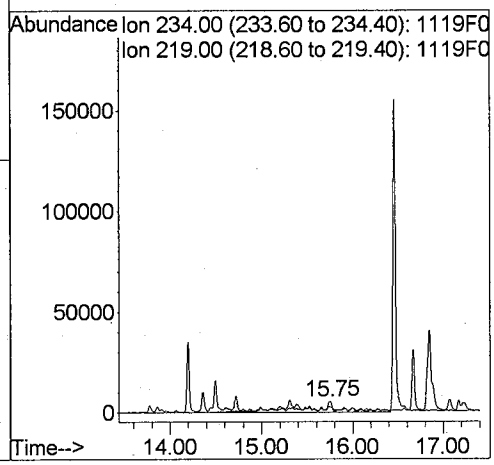


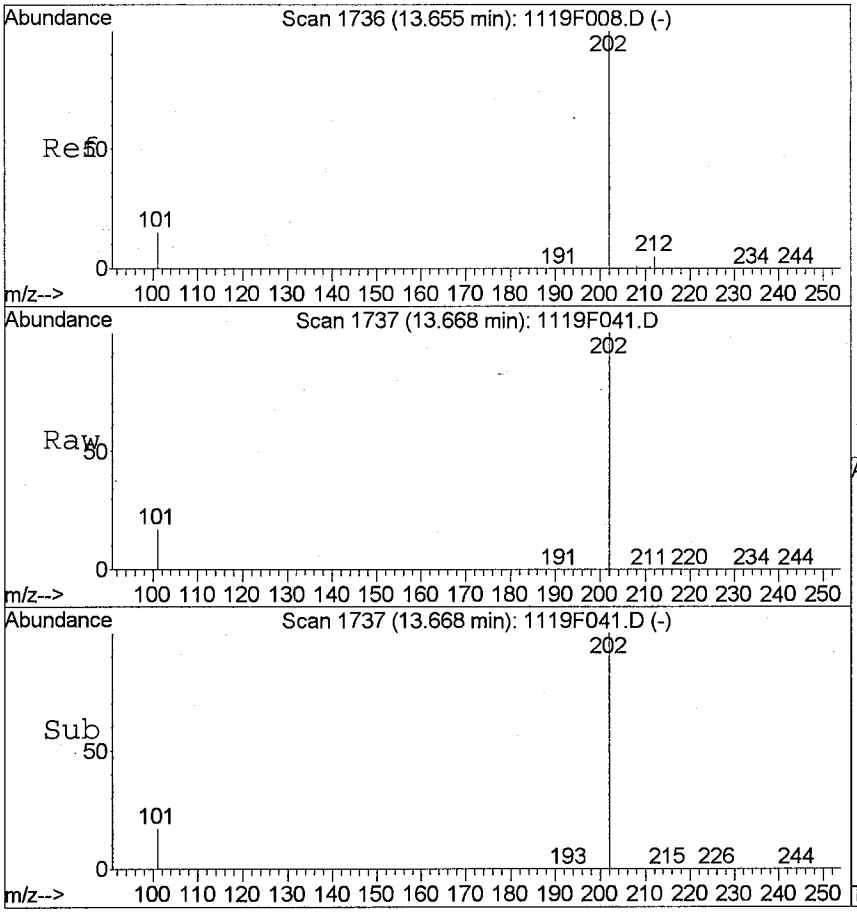


#35
C4-Phenanthrenes/Anthracenes
Concen: 561.87 ng/ml m
RT: 15.75 min Scan# 2032
Delta R.T. -0.08 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:234 Resp: 143721

Ion	Ratio	Lower	Upper
234	100		
219	51.4	17.7	77.7

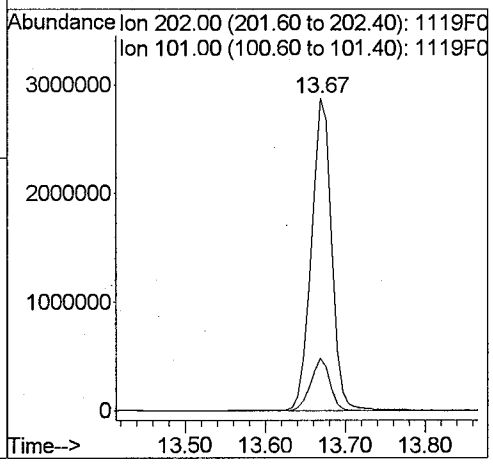


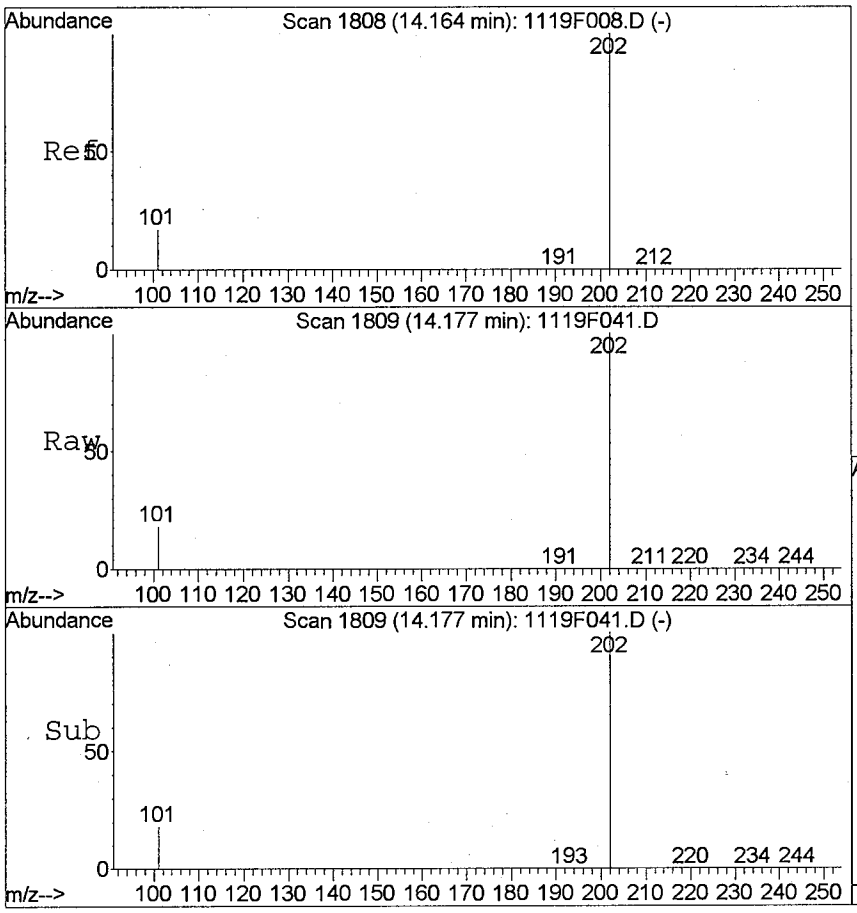


#36
Fluoranthene
Concen: 19825.18 ng/ml
RT: 13.67 min Scan# 1737
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:202 Resp: 5047829

Ion	Ratio	Lower	Upper
202	100		
101	16.7	0.0	45.5

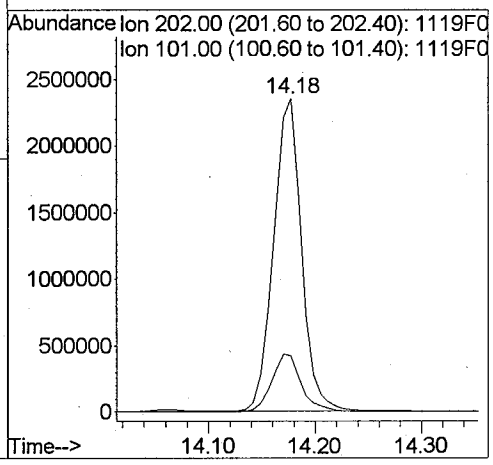


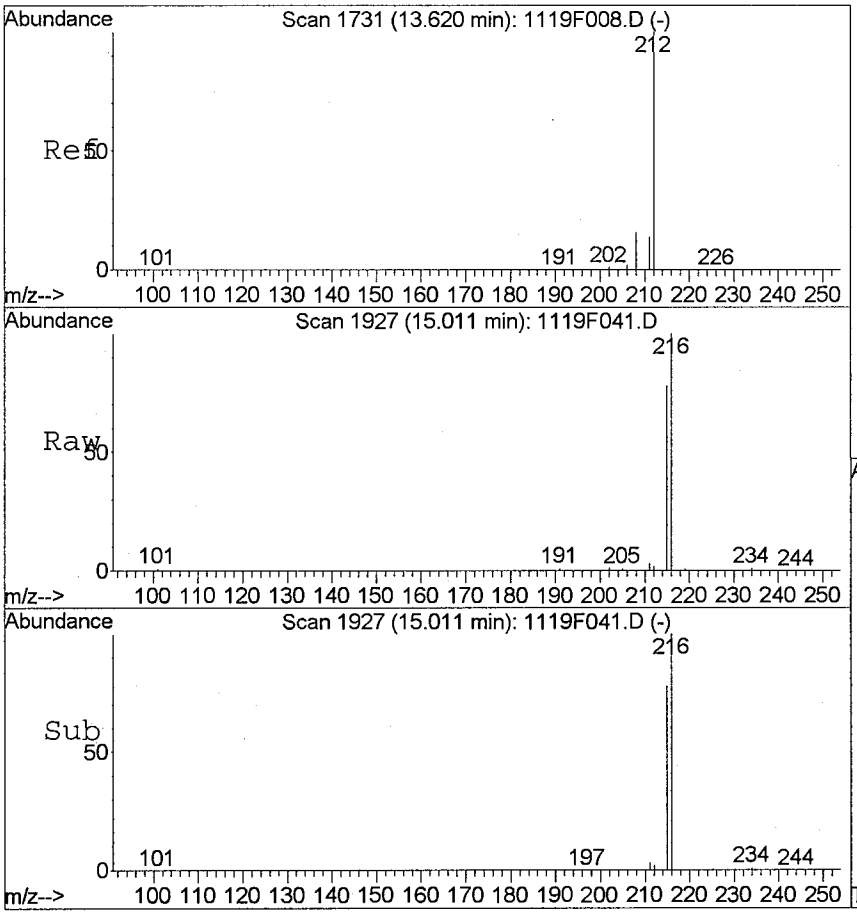


#39
Pyrene
Concen: 15784.56 ng/ml
RT: 14.18 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:202 Resp: 4299851

Ion	Ratio	Lower	Upper
202	100		
101	18.0	0.0	47.4

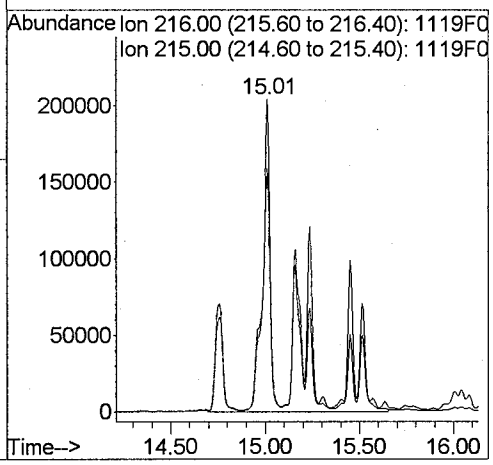


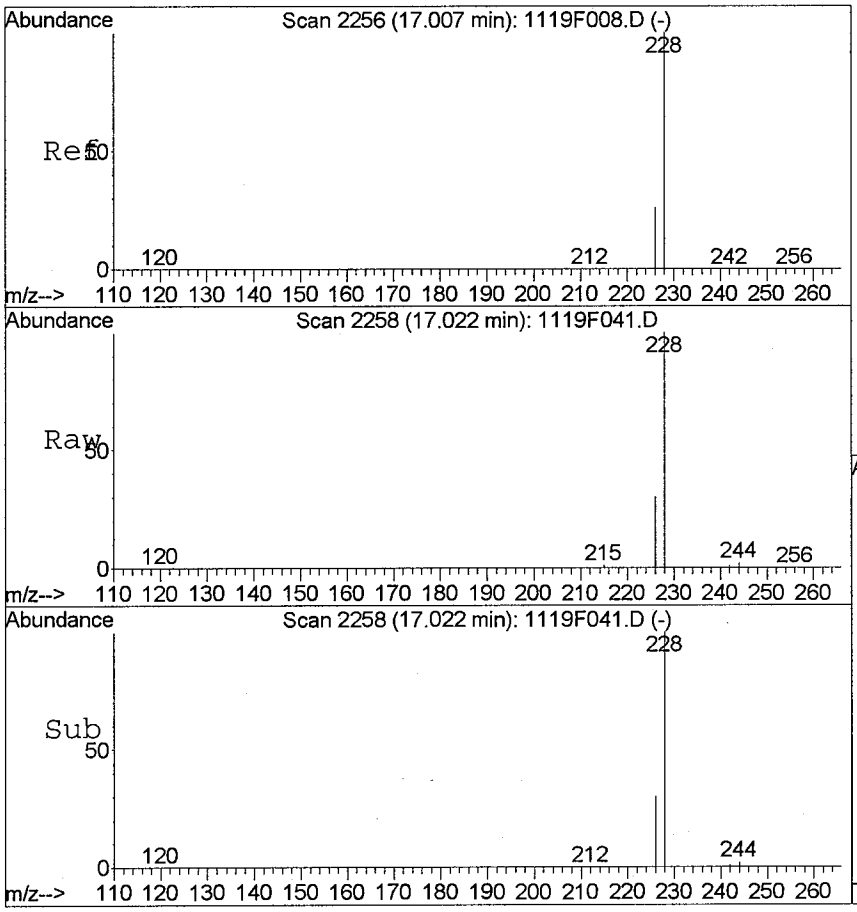


#40
C1-Fluoranthenes/Pyrenes
Concen: 6113.13 ng/ml m
RT: 15.01 min Scan# 1927
Delta R.T. -0.54 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:216 Resp: 1665270

Ion	Ratio	Lower	Upper
216	100		
215	77.8	54.8	114.8

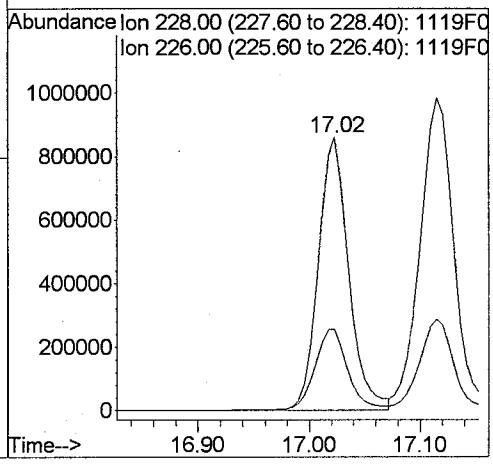


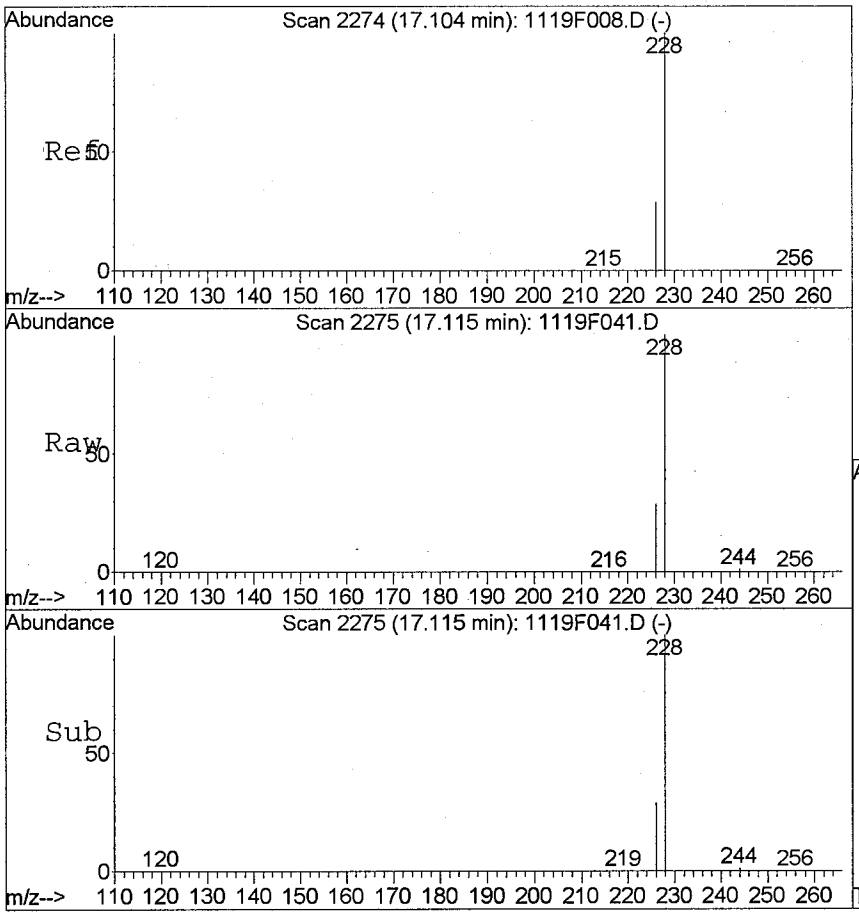


#42
Benz(a)anthracene
Concen: 7829.36 ng/ml
RT: 17.02 min Scan# 2258
Delta R.T. 0.02 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:228 Resp: 1623787

Ion	Ratio	Lower	Upper
228	100		
226	29.6	0.0	55.8

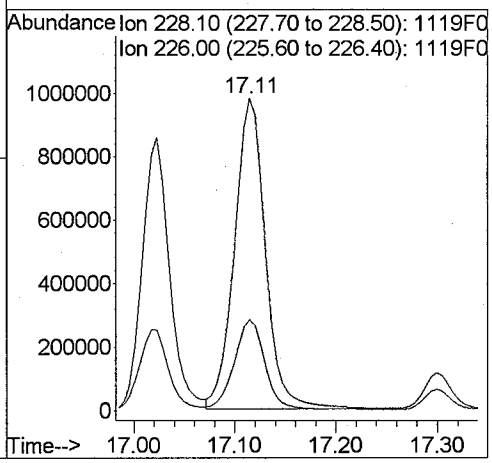


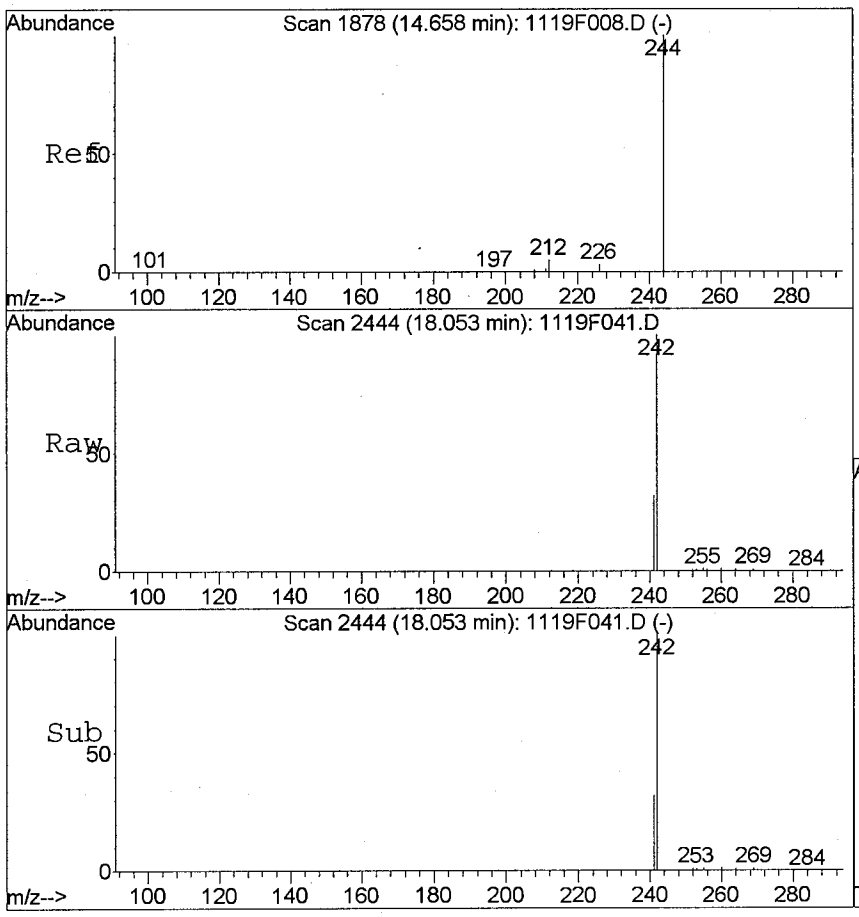


#43
Chrysene
Concen: 9346.63 ng/ml
RT: 17.11 min Scan# 2275
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:228 Resp: 2072875

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	58.5

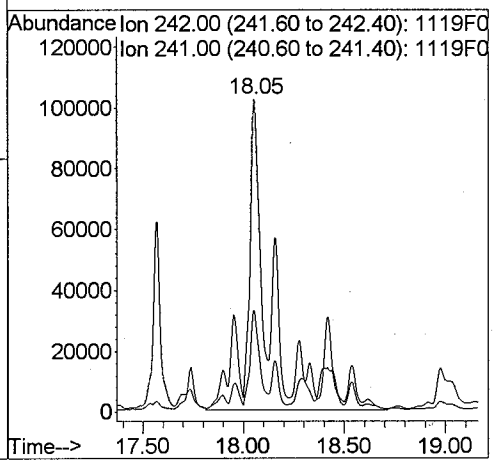


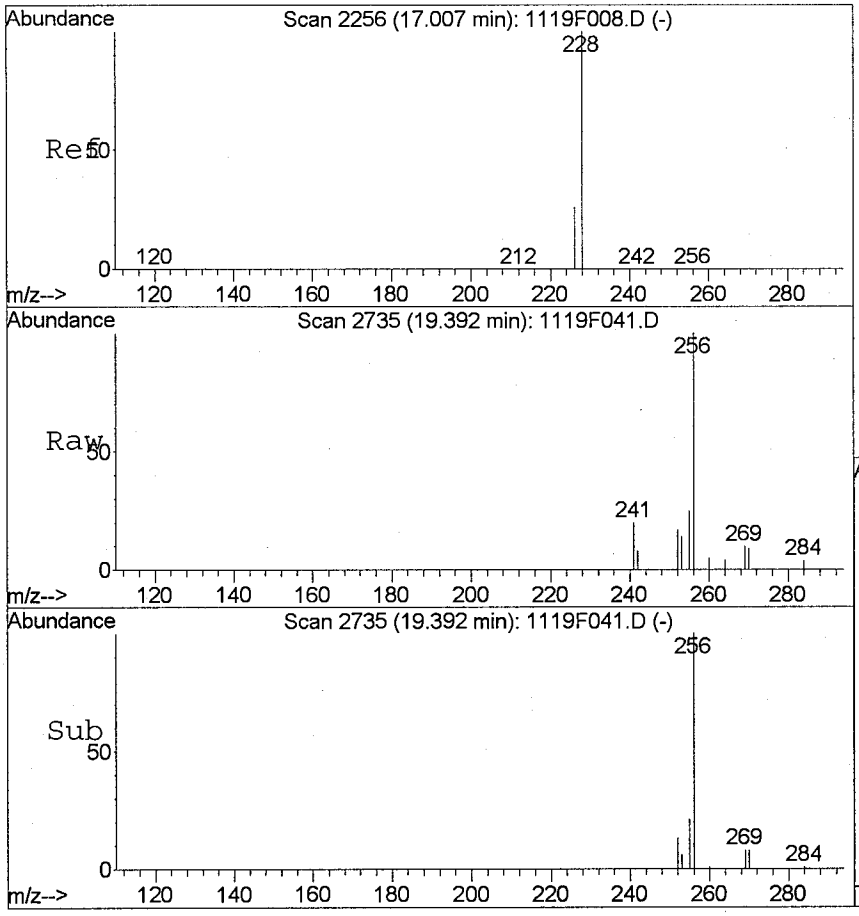


#44
C1-Chrysenes
Concen: 3916.81 ng/ml m
RT: 18.05 min Scan# 2444
Delta R.T. -0.10 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:242 Resp: 868661

Ion	Ratio	Lower	Upper
242	100		
241	32.4	0.1	60.1

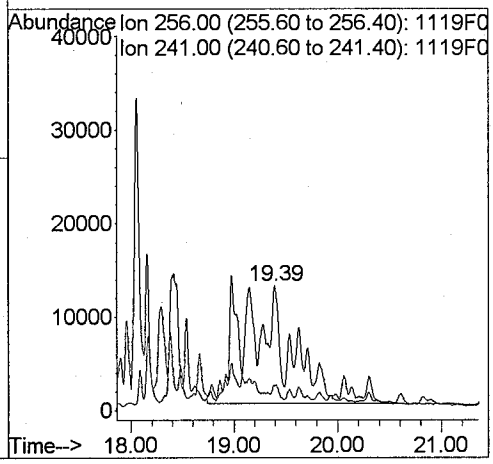


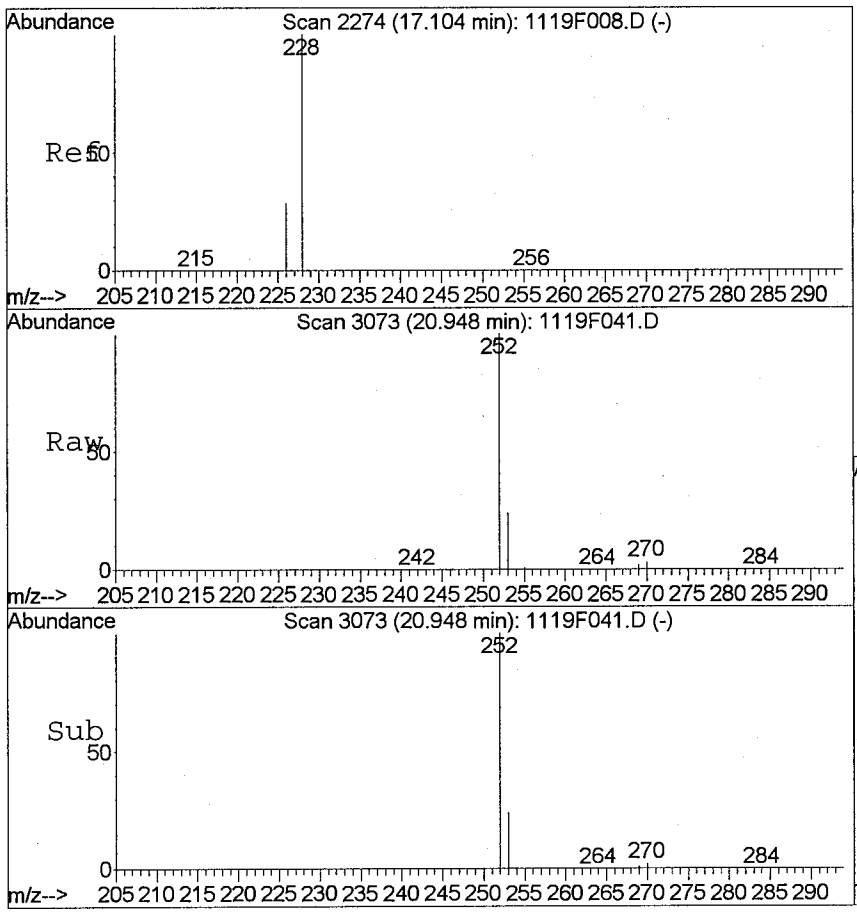


#45
C2-Chrysenes
Concen: 1627.38 ng/ml m
RT: 19.39 min Scan# 2735
Delta R.T. -0.13 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:256 Resp: 360916

Ion	Ratio	Lower	Upper
256	100		
241	20.1	7.8	67.8

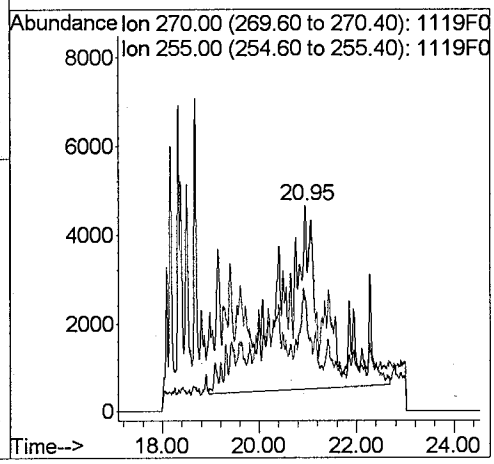


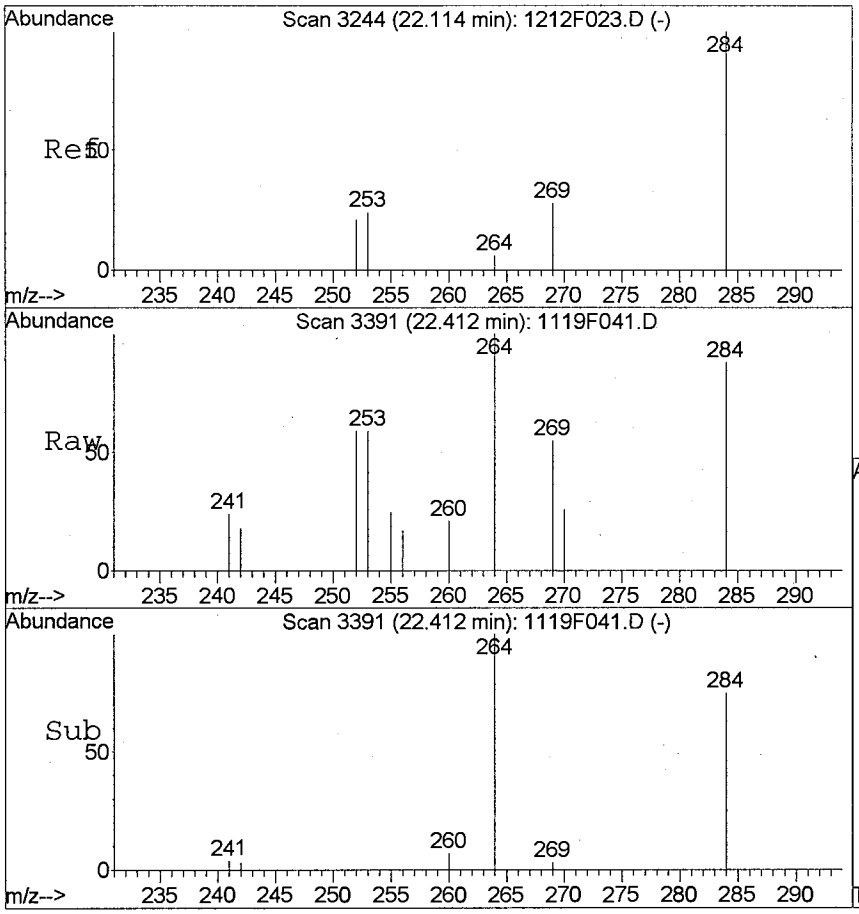


#46
C3-Chrysenes
Concen: 1241.89 ng/ml m
RT: 20.95 min Scan# 3073
Delta R.T. -0.27 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:270 Resp: 275424

Ion	Ratio	Lower	Upper
270	100		
255	54.5	0.0	56.7

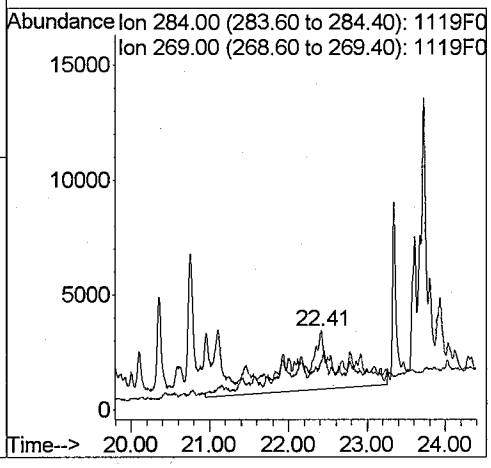


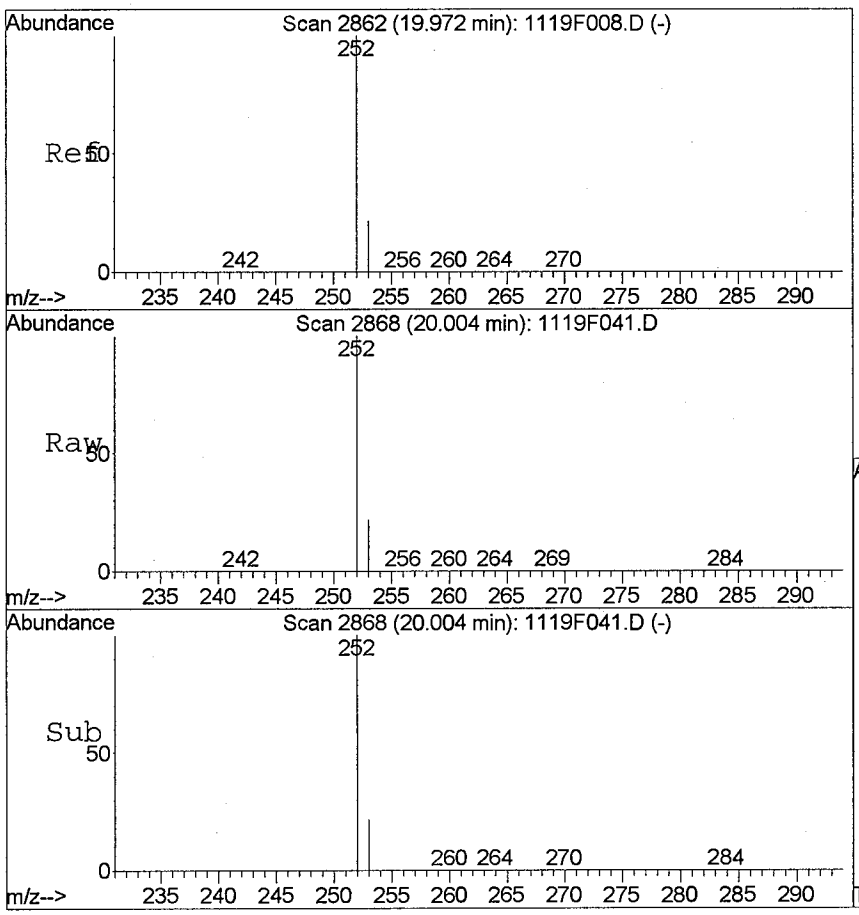


#47
C4-Chrysenes
Concen: 493.57 ng/ml m
RT: 22.41 min Scan# 3391
Delta R.T. -0.12 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:284 Resp: 109464

Ion	Ratio	Lower	Upper
284	100		
269	62.8	16.2	76.2

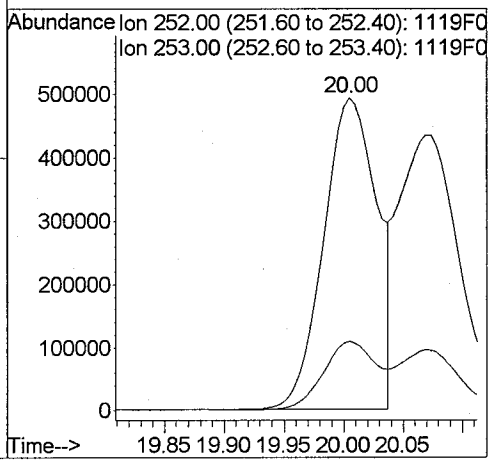


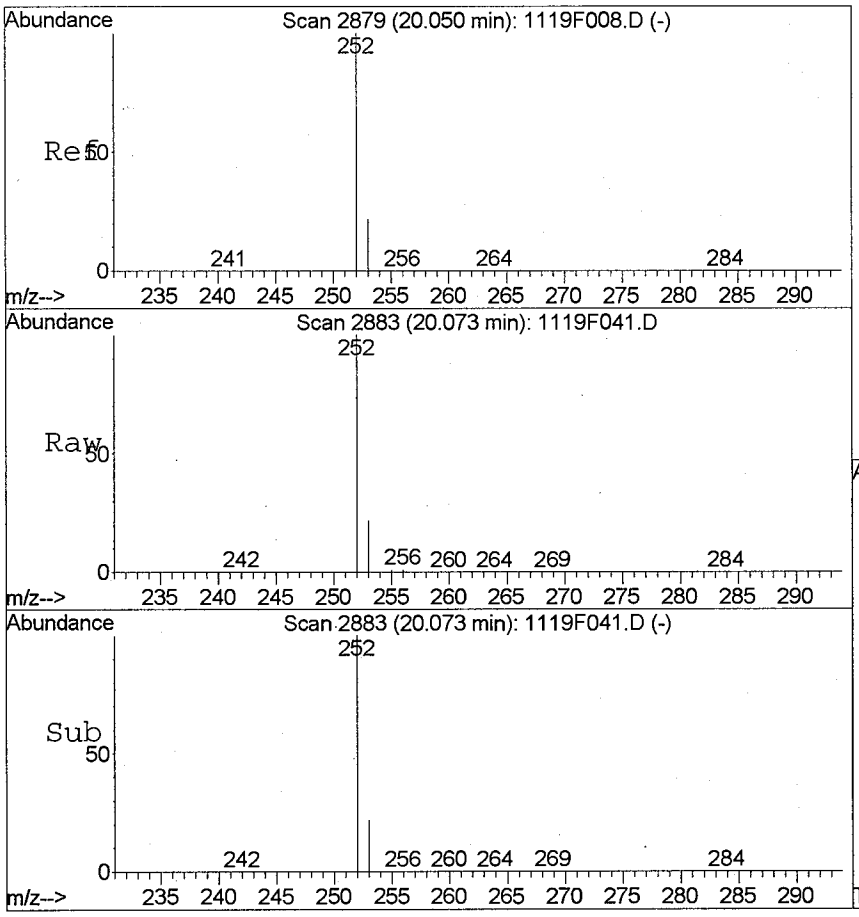


#49
Benzo(b)fluoranthene
Concen: 8878.24 ng/ml
RT: 20.00 min Scan# 2868
Delta R.T. 0.03 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:252 Resp: 1532209

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.8

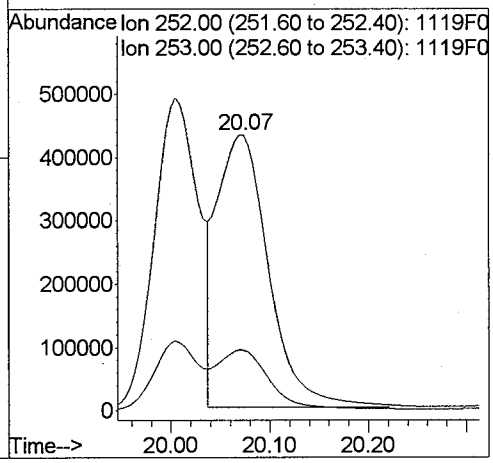


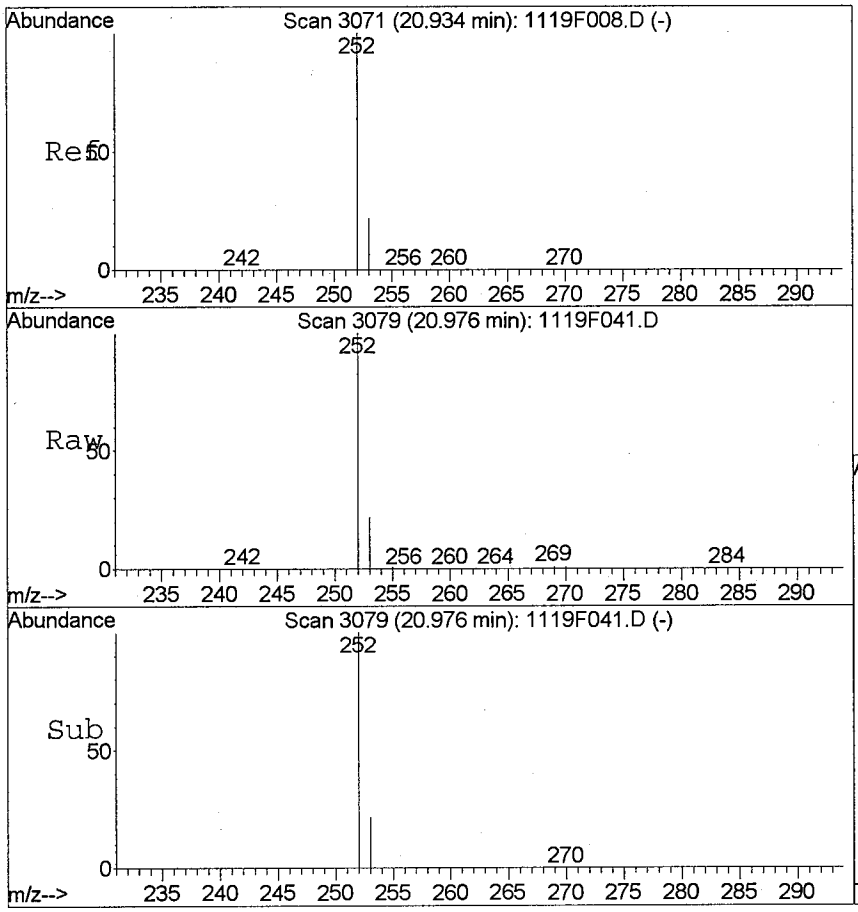


#50
Benzo(k)fluoranthene
Concen: 7171.71 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. 0.02 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:252 Resp: 1570449

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	52.2

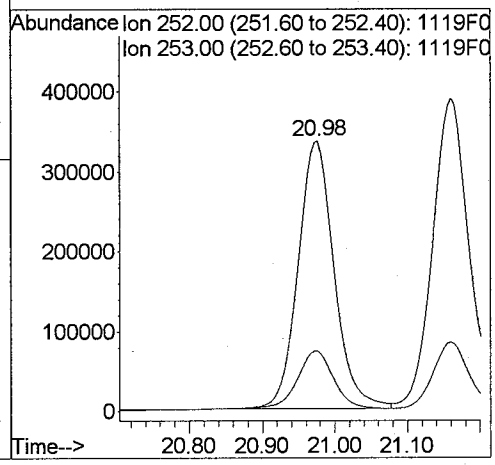


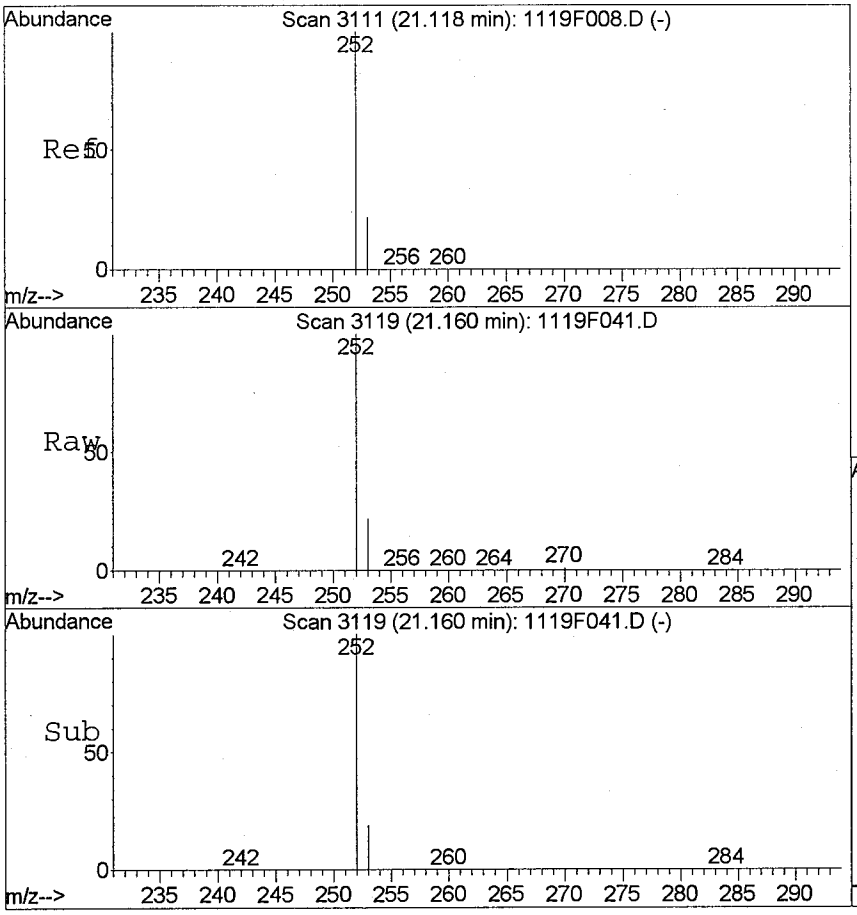


#51
Benzo(e)pyrene
Concen: 5994.28 ng/ml
RT: 20.98 min Scan# 3079
Delta R.T. 0.04 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:252 Resp: 1161512

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.8

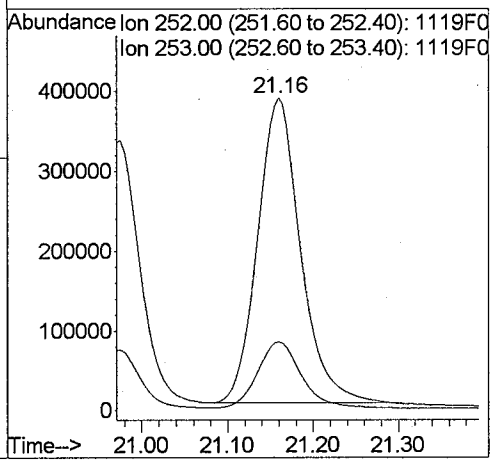


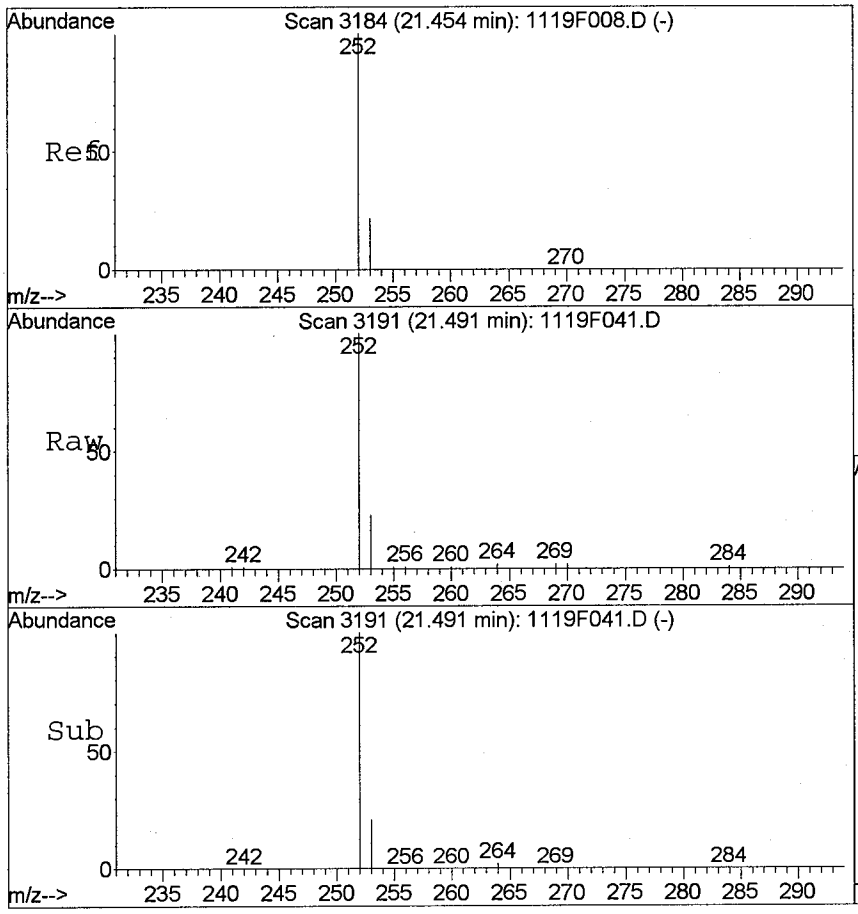


#52
Benzo(a)pyrene
Concen: 9093.49 ng/ml
RT: 21.16 min Scan# 3119
Delta R.T. 0.04 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:252 Resp: 1334881

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

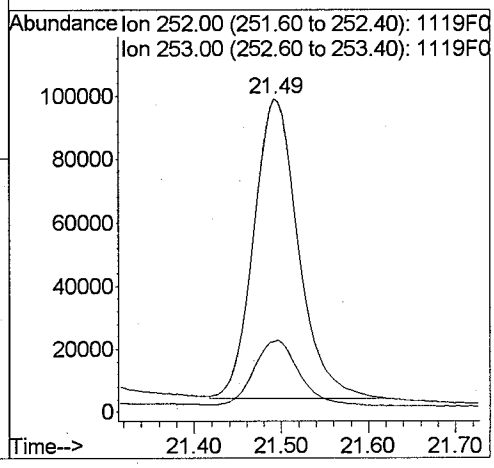


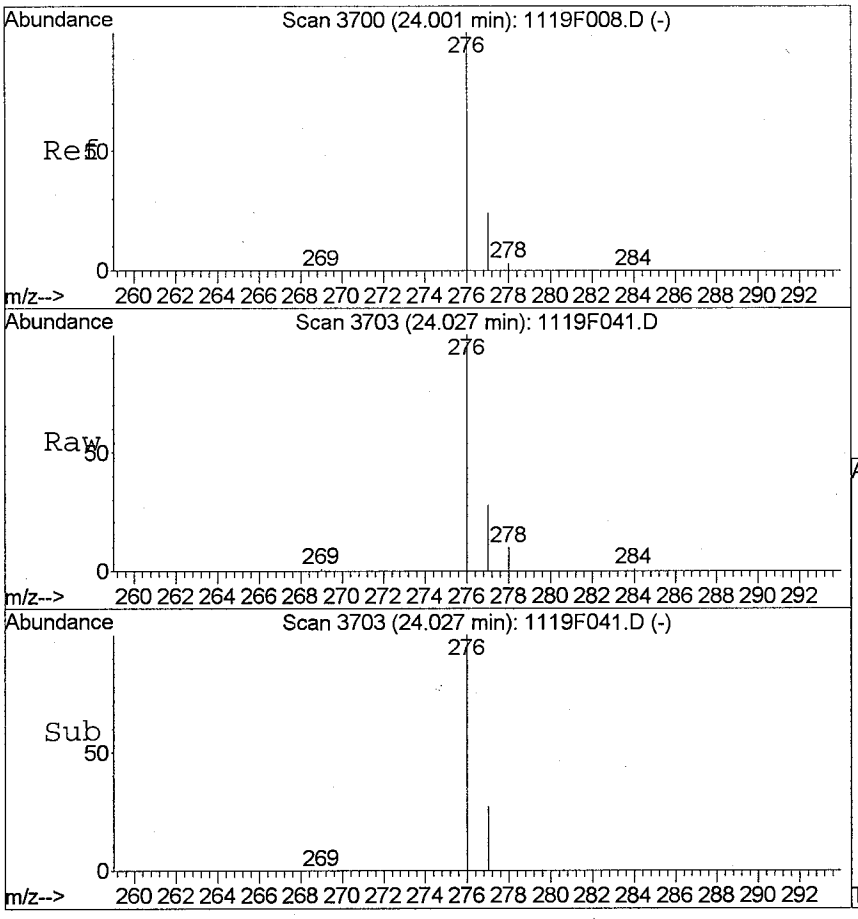


#53
Perylene
Concen: 2052.43 ng/ml
RT: 21.49 min Scan# 3191
Delta R.T. 0.04 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:252 Resp: 338205

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.6

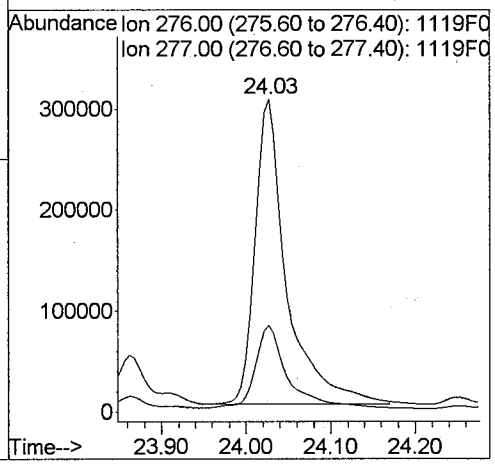


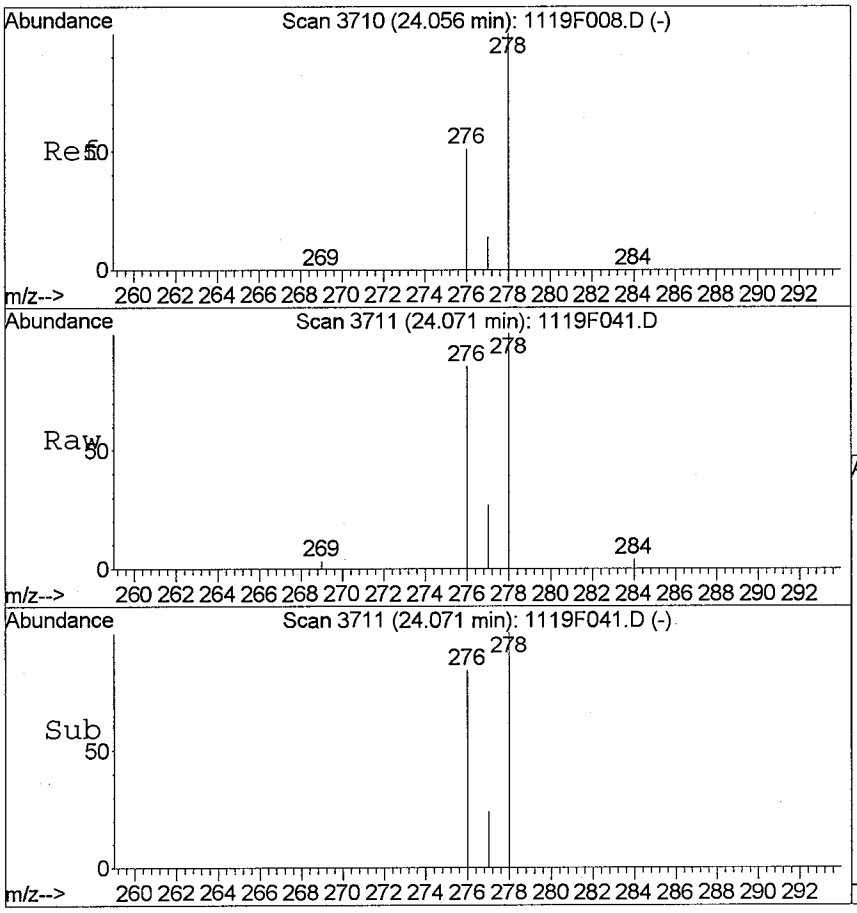


#54
Indeno(1,2,3-cd)pyrene
Concen: 8788.52 ng/ml
RT: 24.03 min Scan# 3703
Delta R.T. 0.03 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:276 Resp: 784266

Ion	Ratio	Lower	Upper
276	100		
277	26.9	0.0	53.6

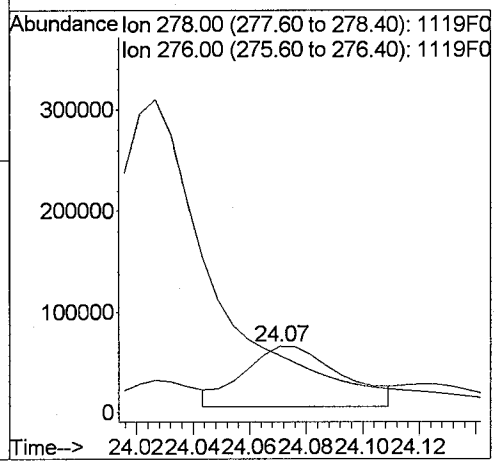


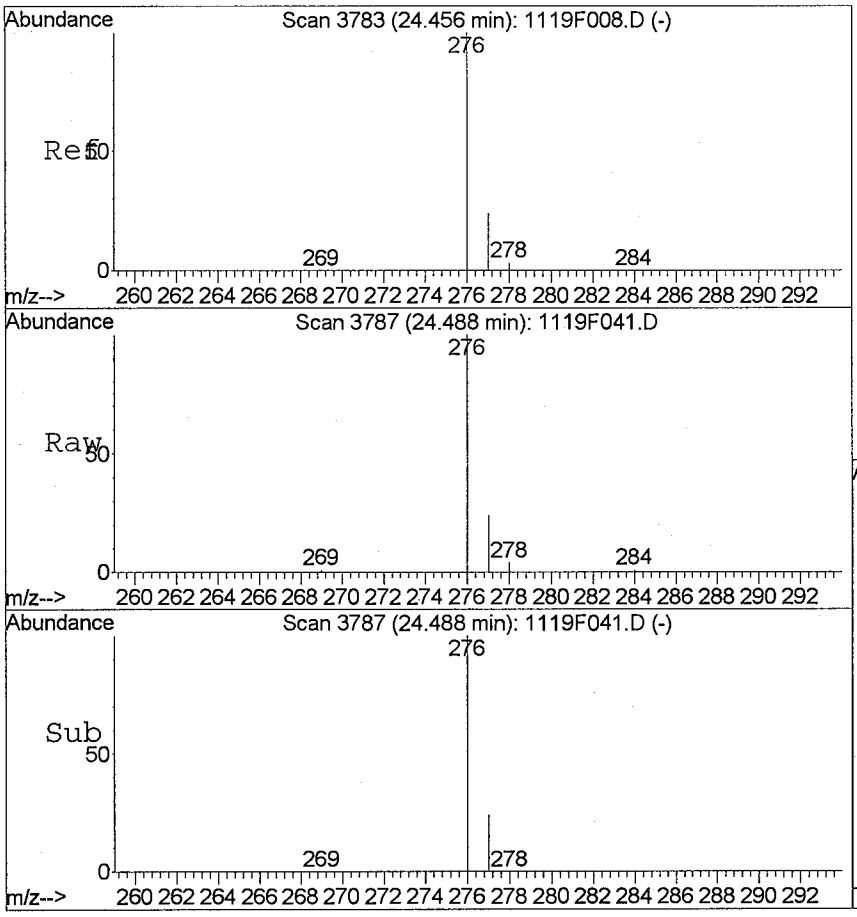


#55
Dibenz(a,h)anthracene
Concen: 1142.73 ng/ml m
RT: 24.07 min Scan# 3711
Delta R.T. 0.01 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:278 Resp: 146550

Ion	Ratio	Lower	Upper
278	100		
276	86.3	21.1	81.1#

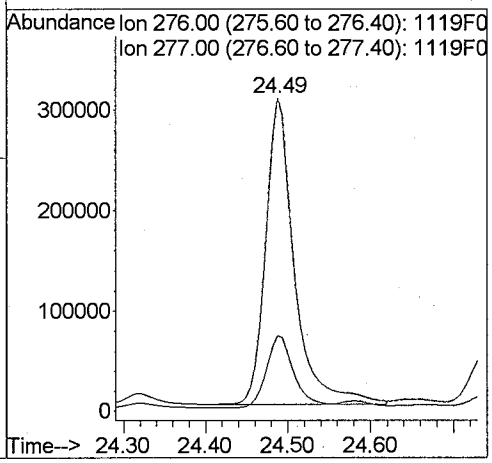




#56
Benzo(g,h,i)perylene
Concen: 5000.79 ng/ml
RT: 24.49 min Scan# 3787
Delta R.T. 0.03 min
Lab File: 1119F041.D
Acq: 19 Nov 2003 6:50 pm

Tgt Ion:276 Resp: 739846

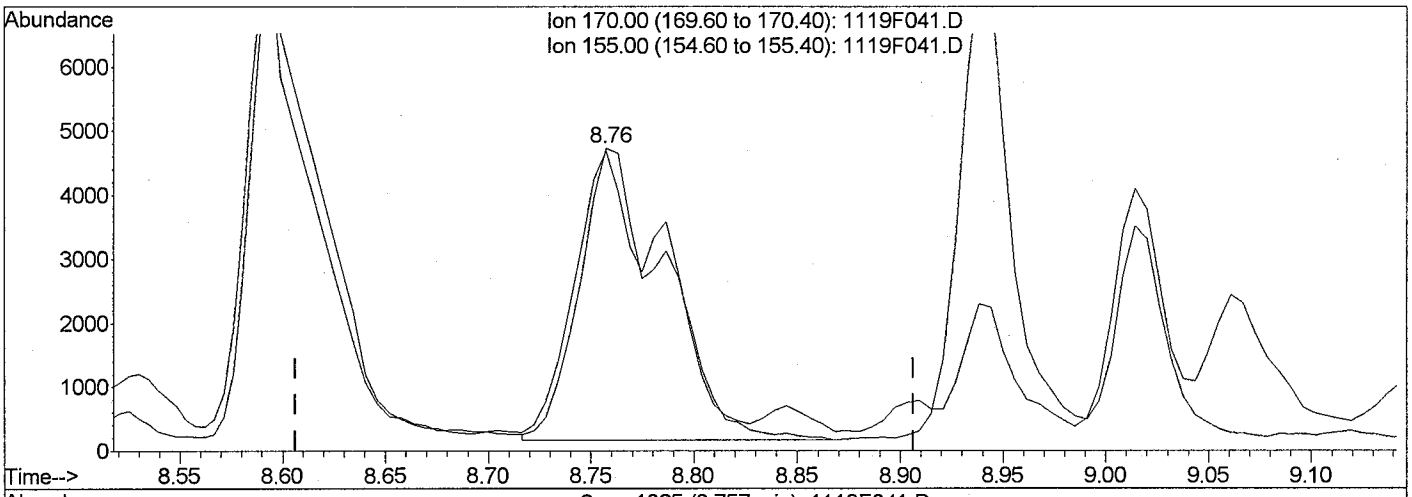
Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.6

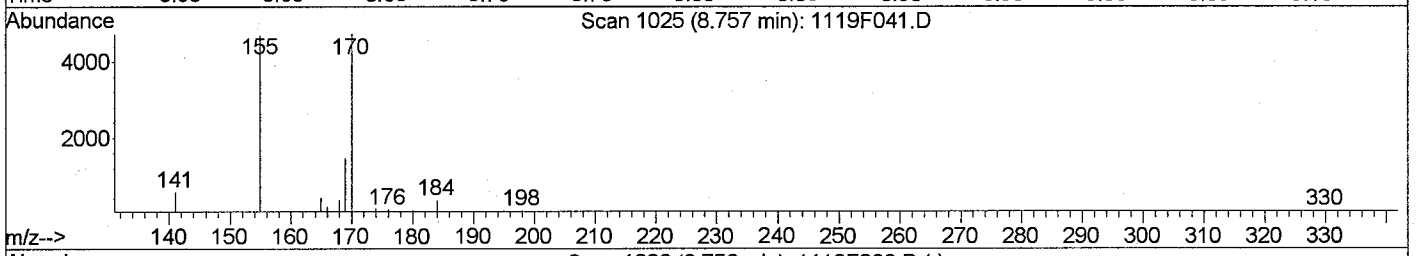


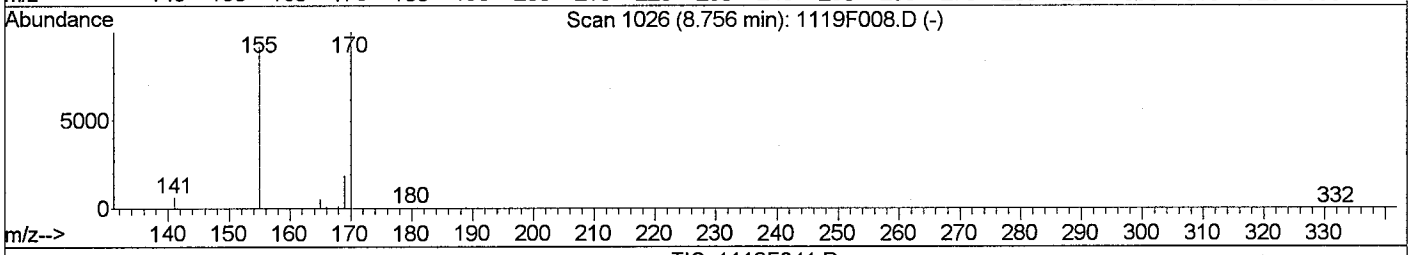
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 85.77ng/ml

response 13141

Ion	Exp%	Act%
170.00	100	100
155.00	91.50	96.21
0.00	0.00	0.00
0.00	0.00	0.00

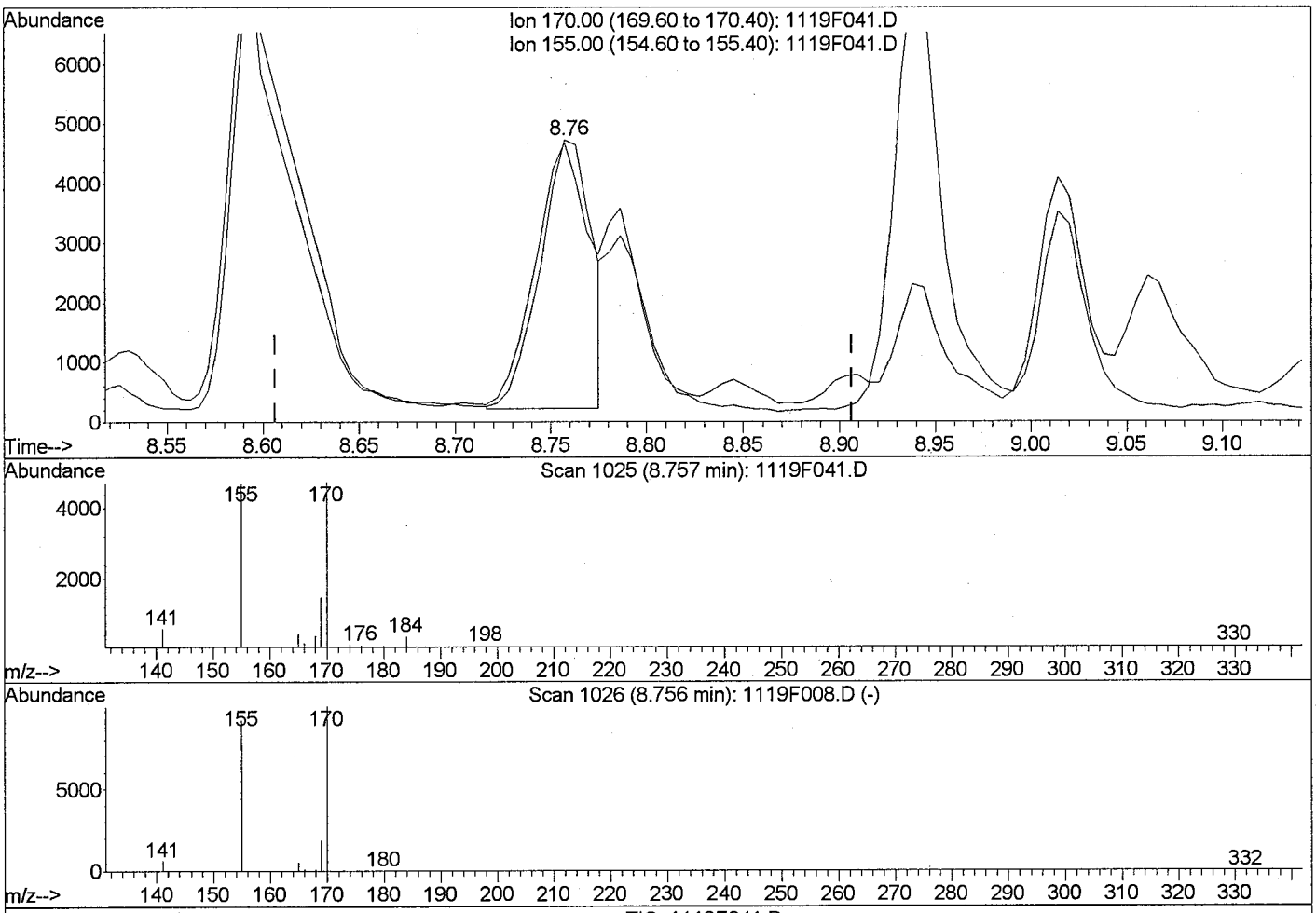
1119F041.D 1107ALK.M Thu Nov 20 14:20:09 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D
Acq On : 19 Nov 2003 6:50 pm
Sample : K2308433-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:20 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F041.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 54.76ng/ml m

response 8389

Ion	Exp%	Act%
170.00	100	100
155.00	91.50	99.03
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

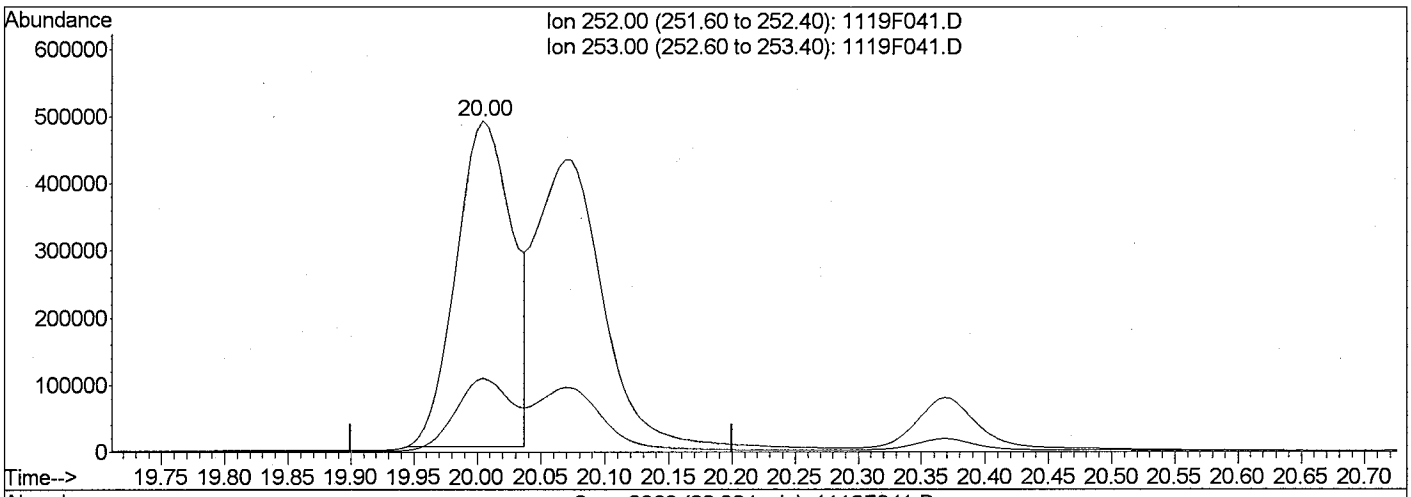
over integrated 11/24/13

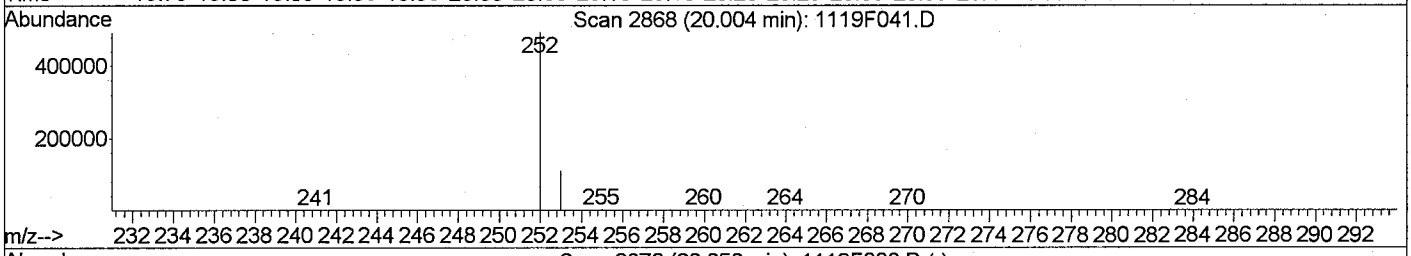
1119F041.D 1107ALK.M Thu Nov 20 14:20:14 2003

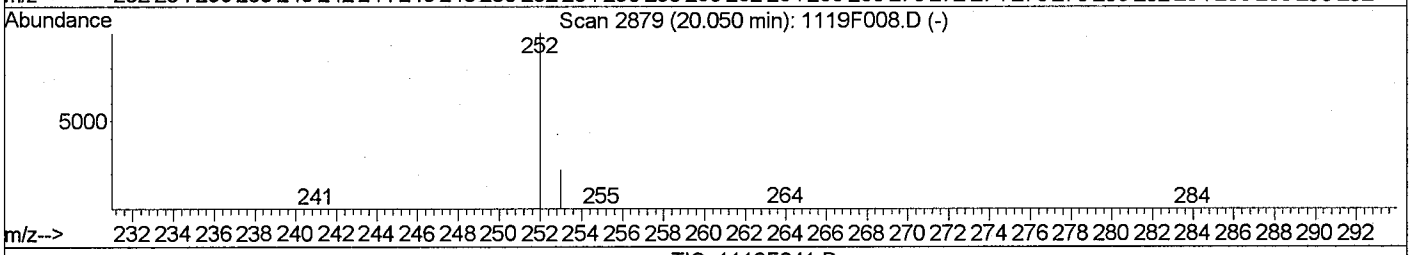
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(50) Benzo(k)fluoranthene (T)

20.00min 6828.22ng/ml

response 1495232

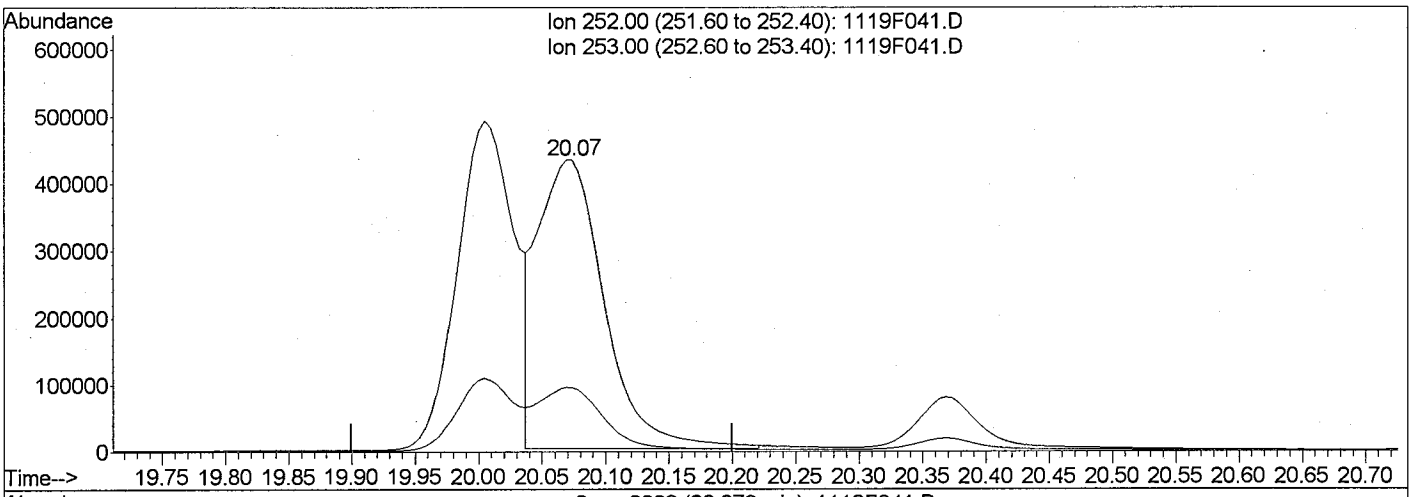
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.15
0.00	0.00	0.00
0.00	0.00	0.00

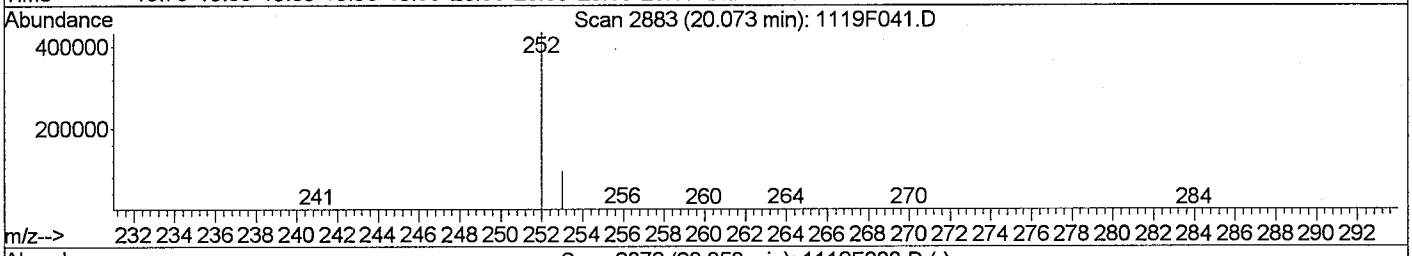
1119F041.D 1107ALK.M Thu Nov 20 14:20:29 2003

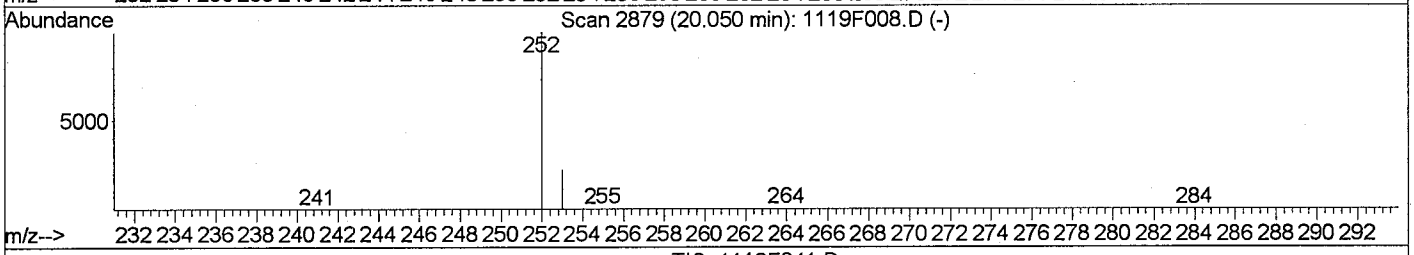
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(50) Benzo(k)fluoranthene (T)

20.07min 7171.71ng/ml m

response 1570449

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.04
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

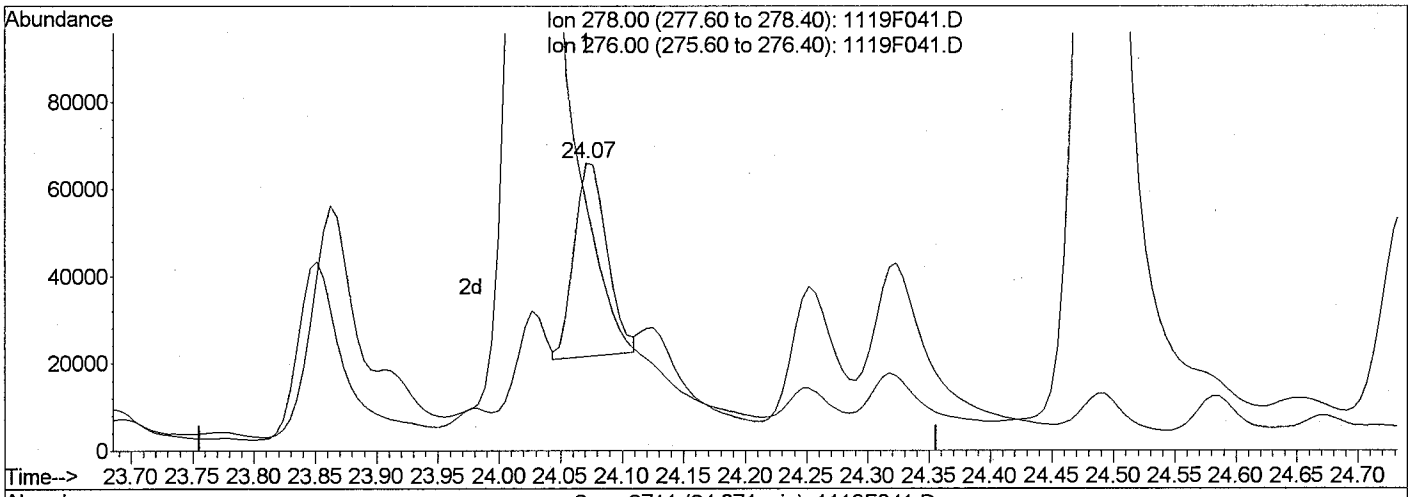
wrong peak 11/24/3

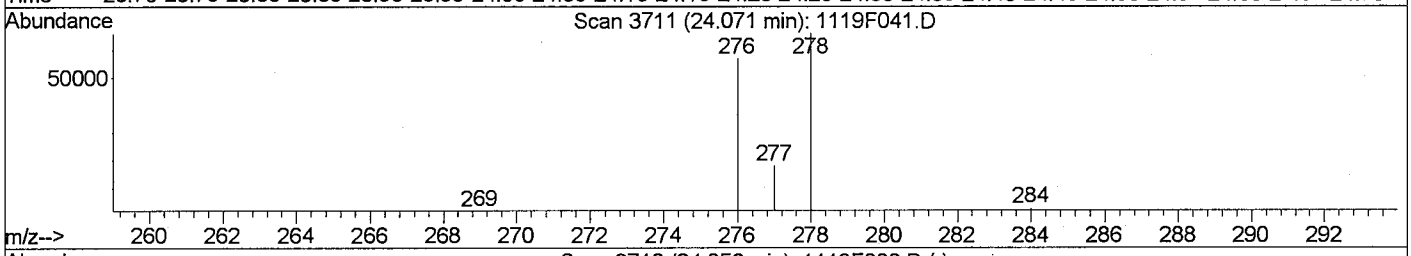
1119F041.D 1107ALK.M Thu Nov 20 14:20:34 2003

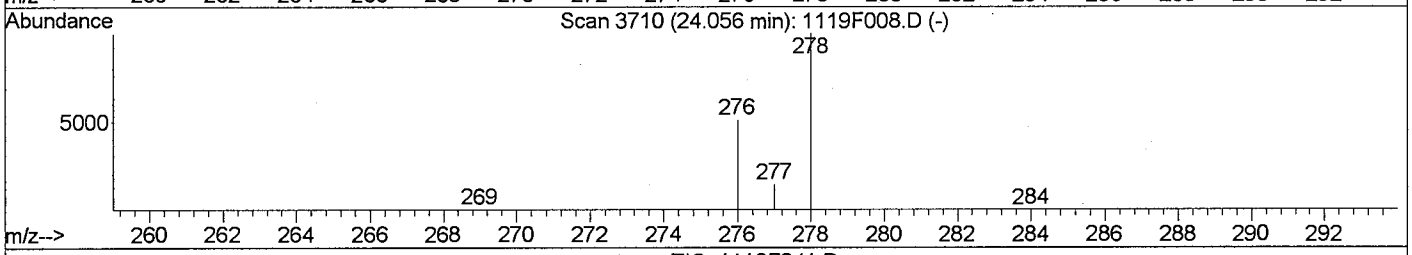
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(55) Dibenz(a,h)anthracene (T)

24.07min 645.80ng/ml

response 82821

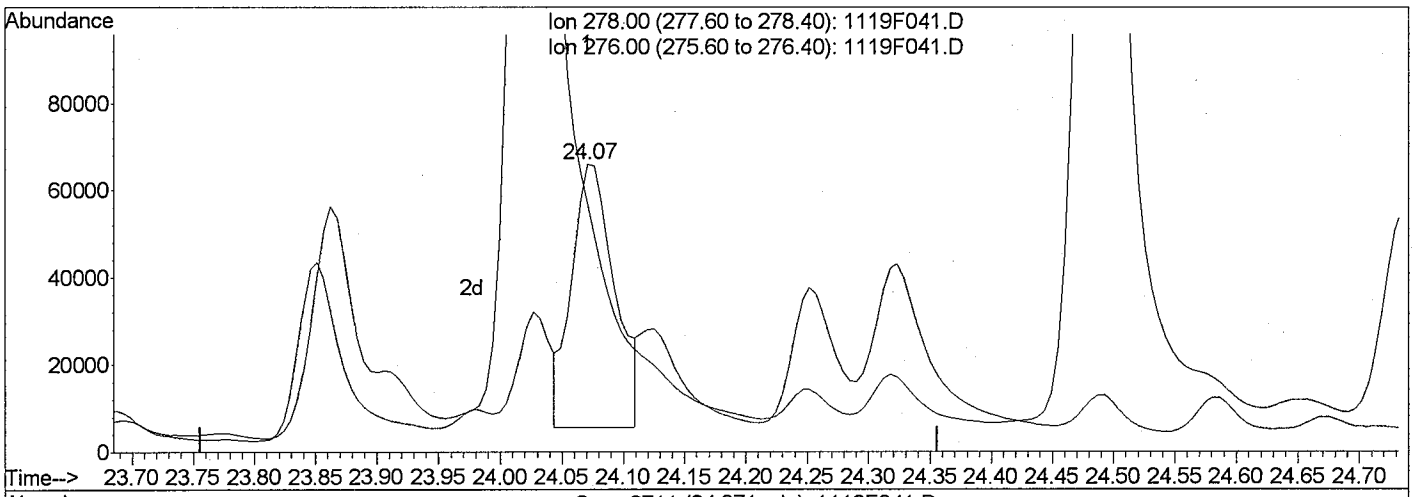
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	77.11
0.00	0.00	0.00
0.00	0.00	0.00

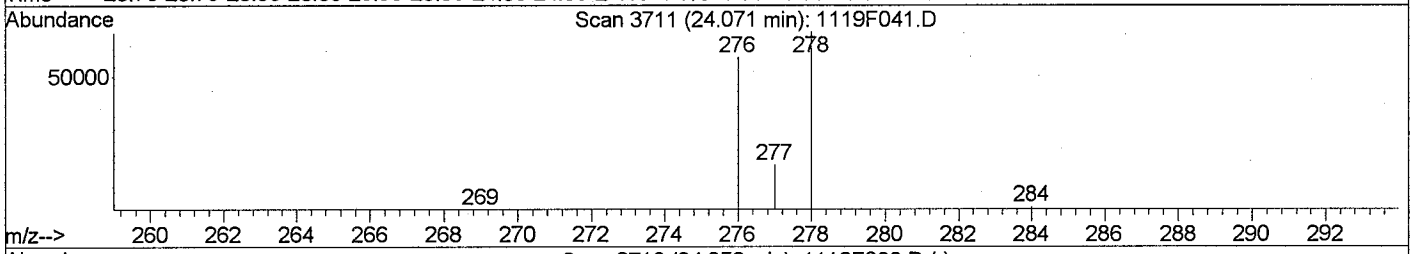
1119F041.D 1107ALK.M Thu Nov 20 14:20:39 2003

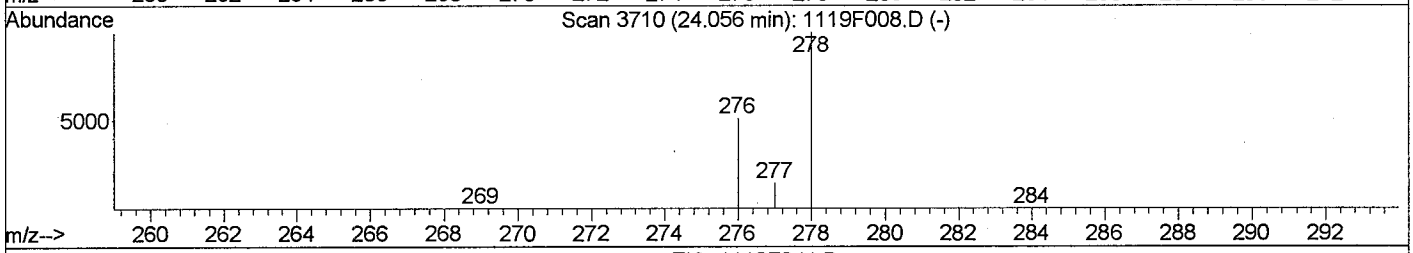
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(55) Dibenz(a,h)anthracene (T)

24.07min 1142.73ng/ml m

response 146550

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	86.30#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

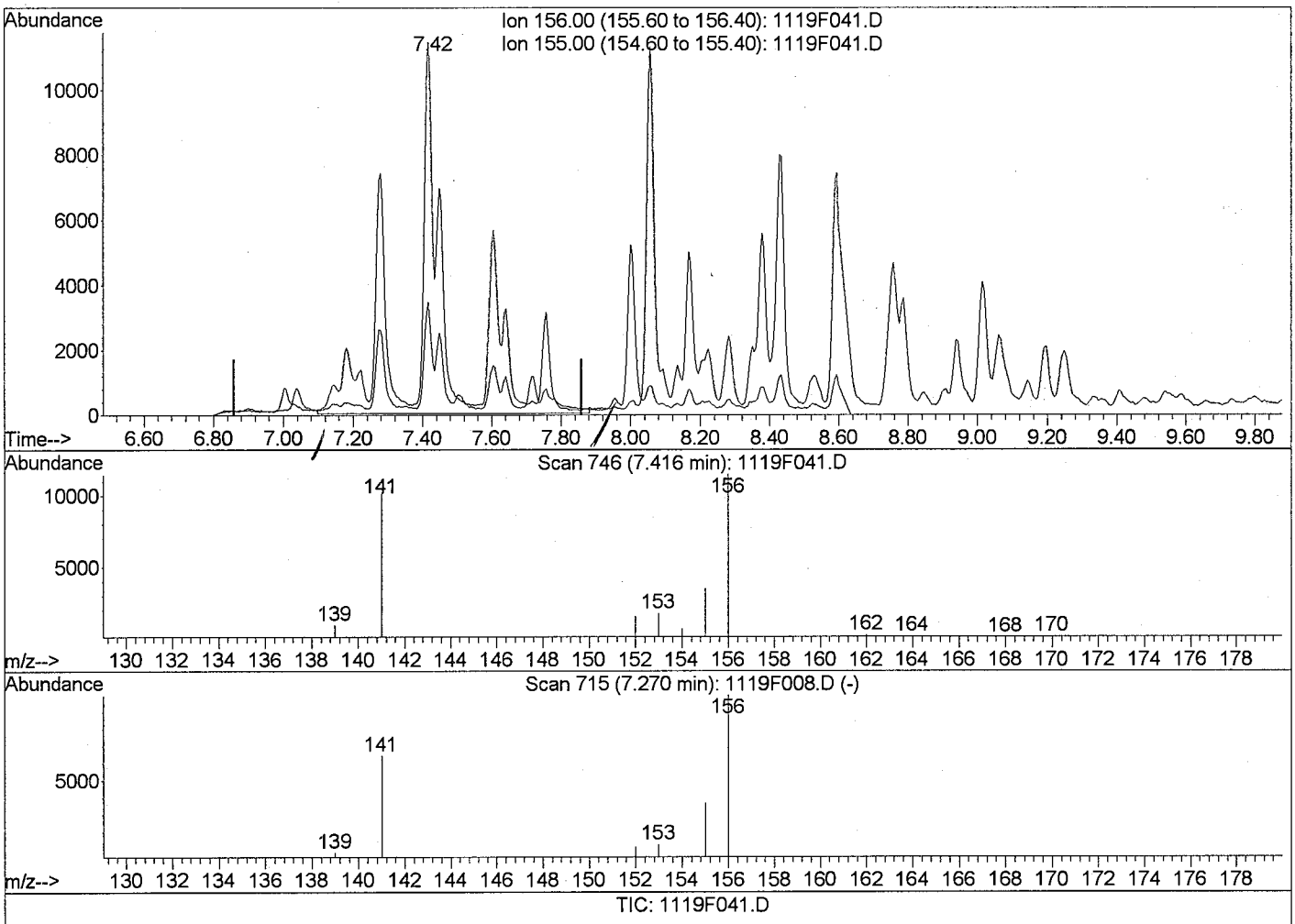
11/24/13
incomplete

1119F041.D 1107ALK.M Thu Nov 20 14:20:45 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F041.D

(8) C2-Naphthalenes (L)

7.42min 243.08ng/ml m

response 74732

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	30.42
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

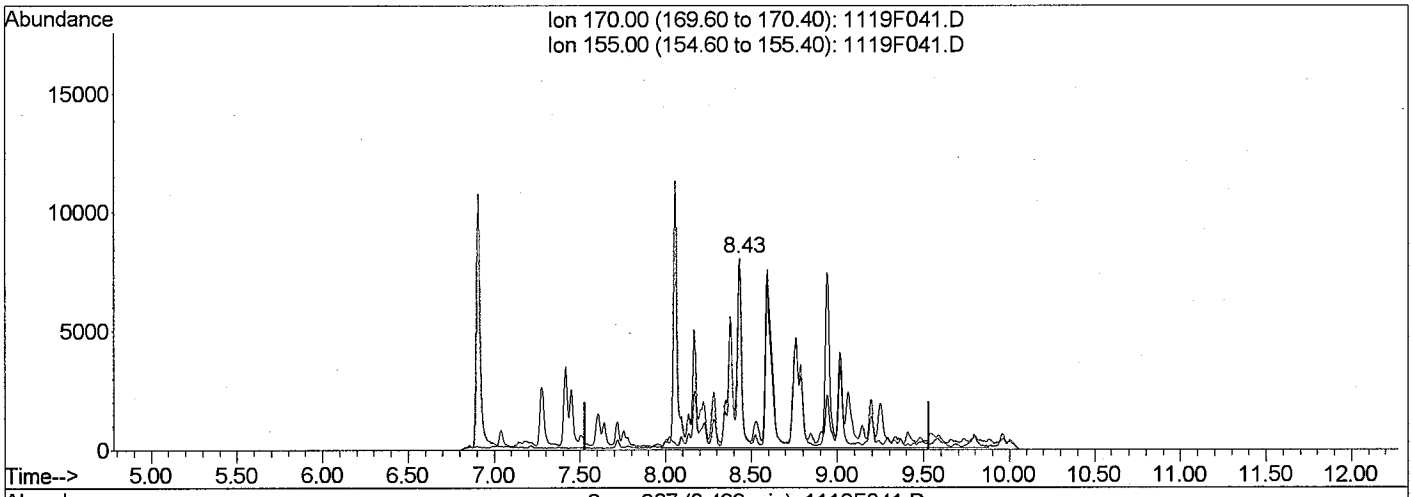
11/24/03

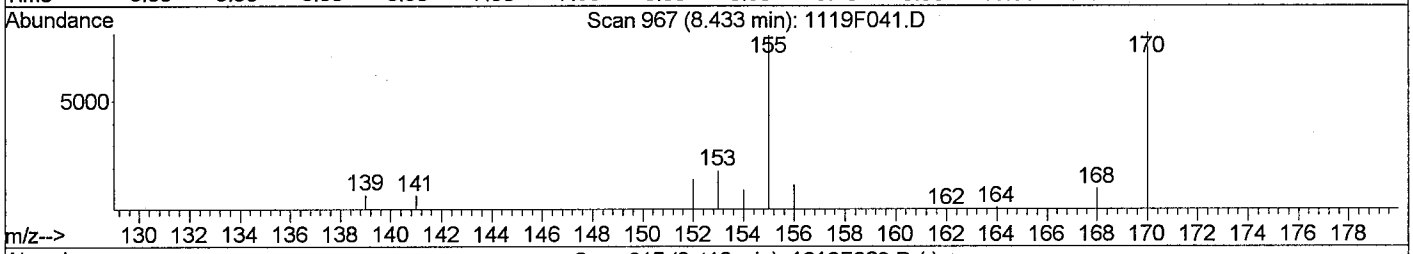
1119F041.D 1107ALK.M Fri Nov 21 12:14:06 2003

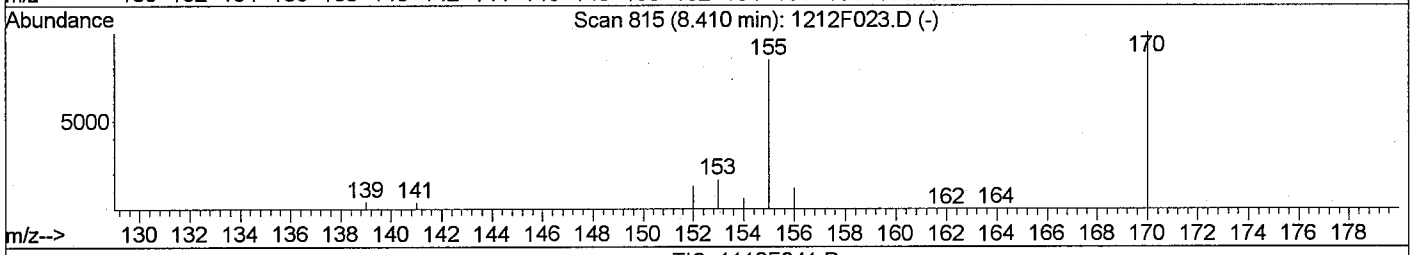
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(9) C3-Naphthalenes (L)

8.43min 316.69ng/ml m

response 97362

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	98.60
0.00	0.00	0.00
0.00	0.00	0.00

11/21/03

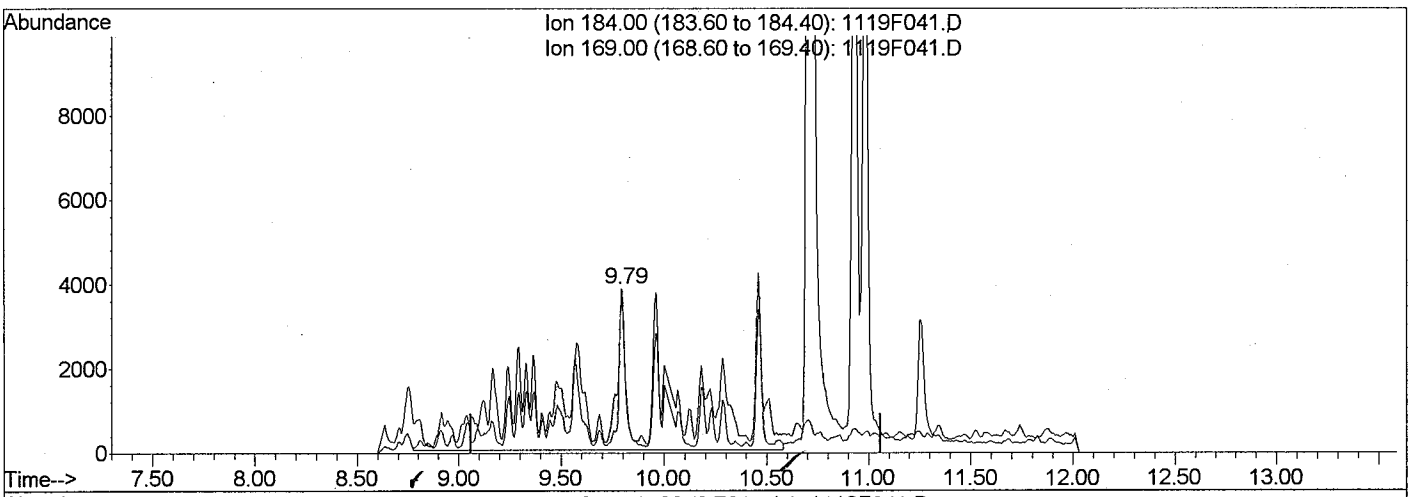
11/21/03

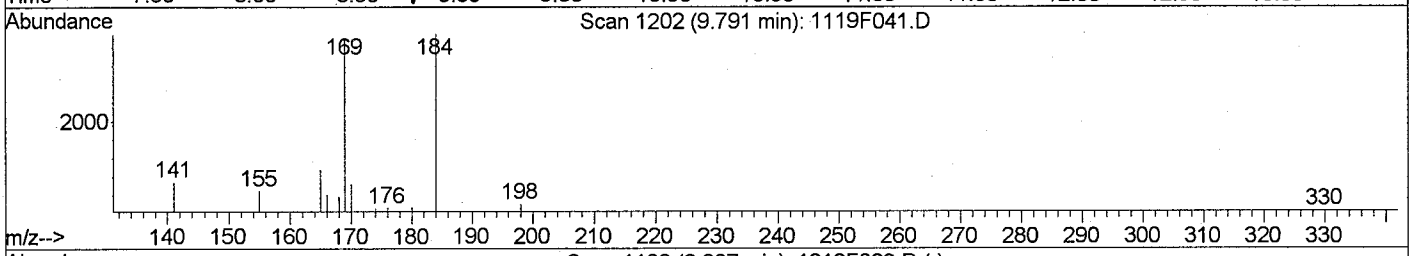
1119F041.D 1107ALK.M Fri Nov 21 12:14:29 2003

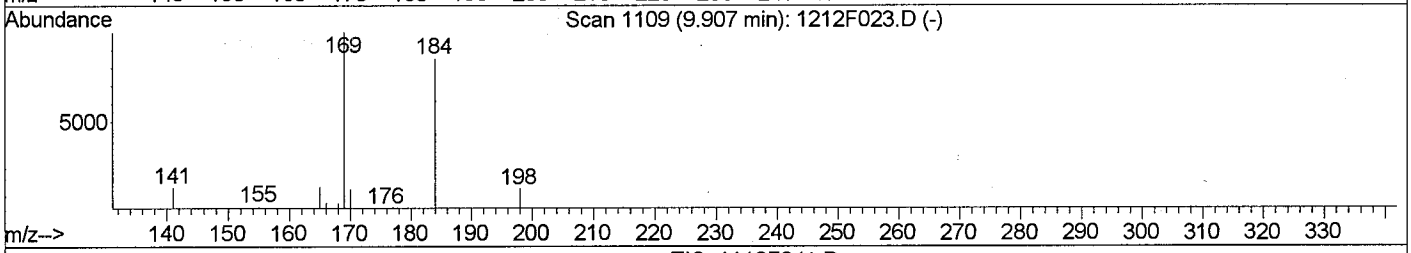
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(10) C4-Naphthalenes (L)

9.79min 204.46ng/ml m

response 62859

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	97.33
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

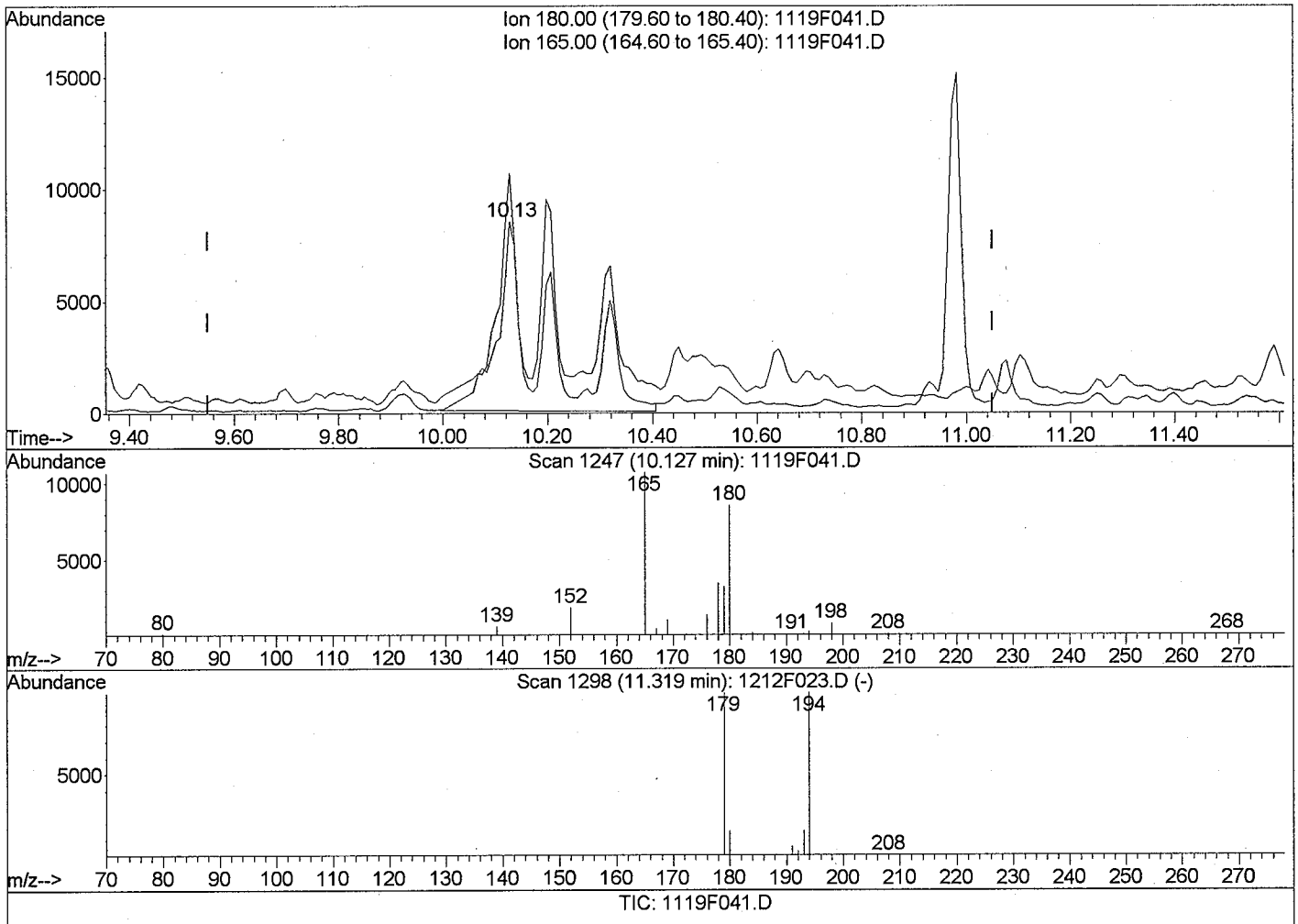
1119F041.D 1107ALK.M Fri Nov 21 12:14:46 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D
Acq On : 19 Nov 2003 6:50 pm
Sample : K2308433-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:14 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F041.D

(18) C1-Fluorenes (L)

10.13min 290.30ng/ml m

response 53187

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	125.08#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

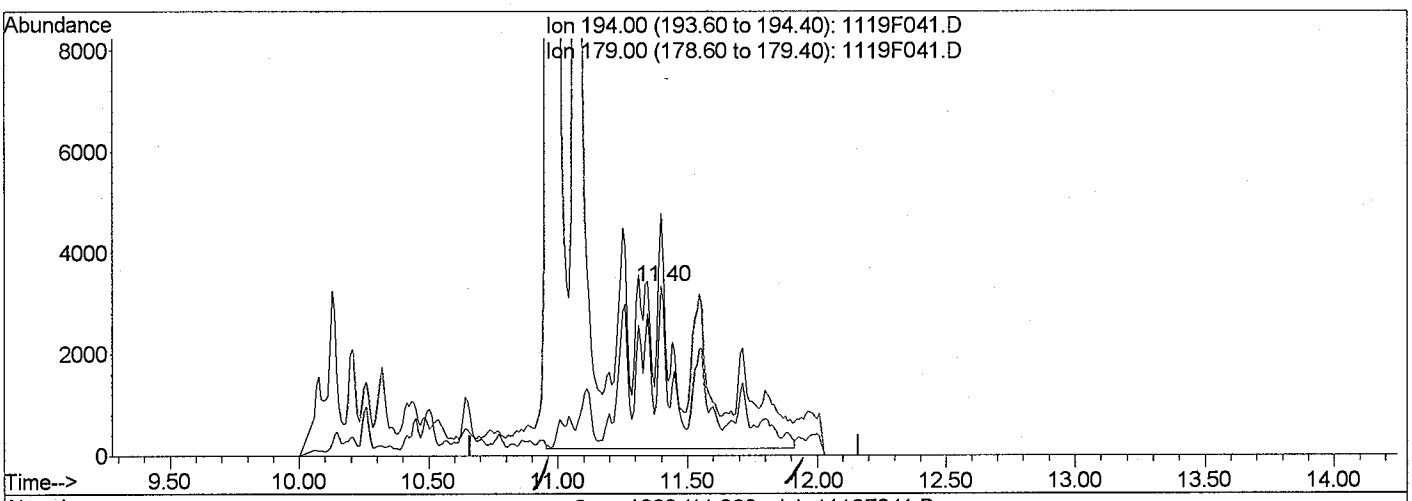
1119F041.D 1107ALK.M Fri Nov 21 12:14:56 2003

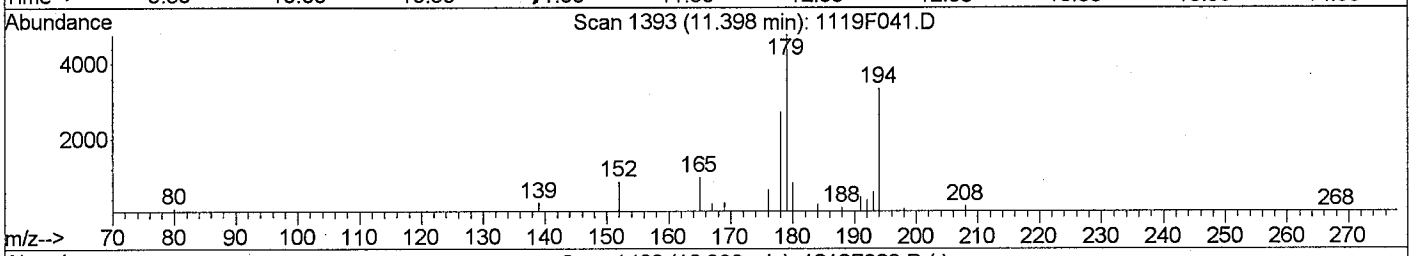
Quantitation Report (Qedit)

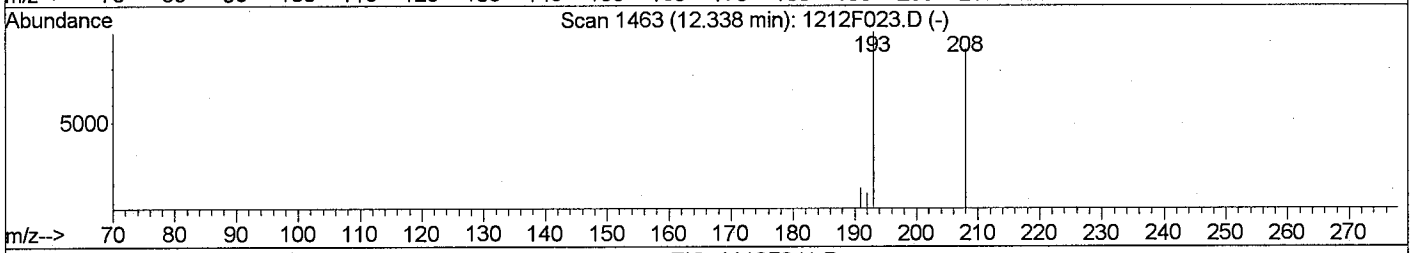
Data File : J:\MS11\DATA\111903\1119F041.D
Acq On : 19 Nov 2003 6:50 pm
Sample : K2308433-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:15 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(19) C2-Fluorenes (L)

11.40min 268.21ng/ml m

response 49139

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	142.80
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

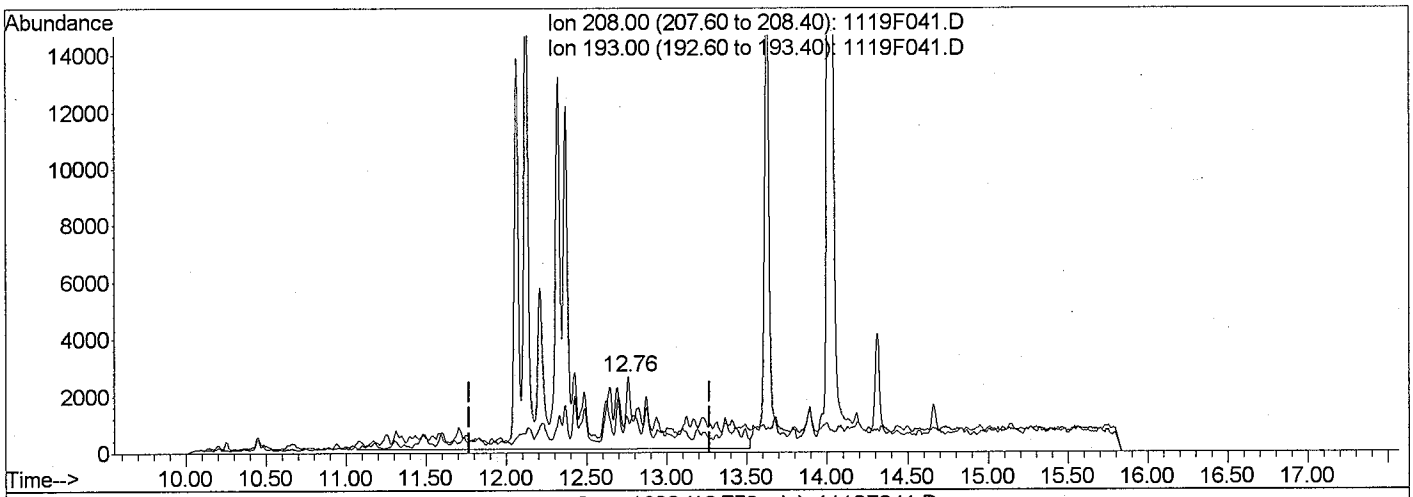
1119F041.D 1107ALK.M Fri Nov 21 12:15:11 2003

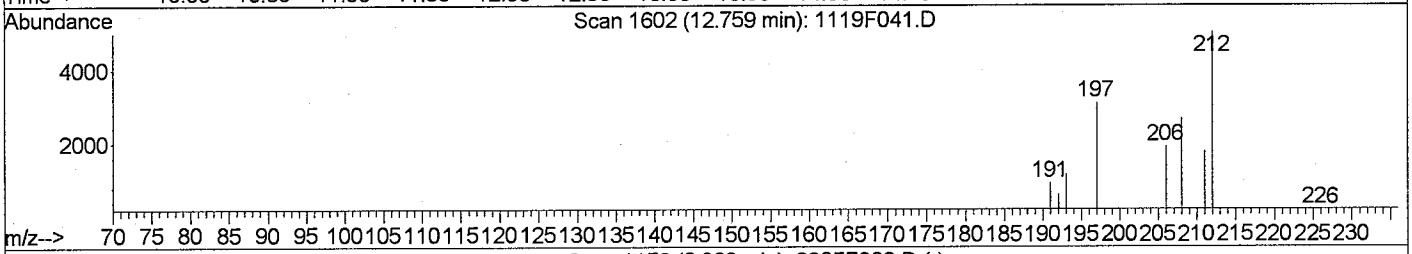
Quantitation Report (Qedit)

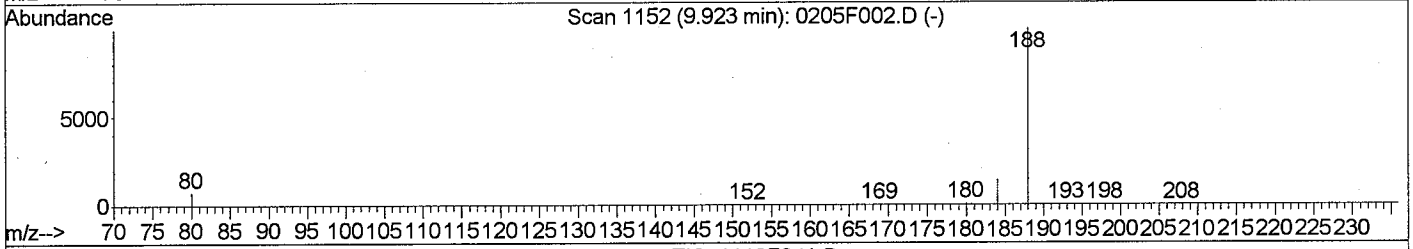
Data File : J:\MS11\DATA\111903\1119F041.D
Acq On : 19 Nov 2003 6:50 pm
Sample : K2308433-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:15 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(20) C3-Fluorenes (L)

12.76min 495.34ng/ml m

response 90753

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	43.75#
0.00	0.00	0.00
0.00	0.00	0.00

over integrated - see next print
J 11/24/13

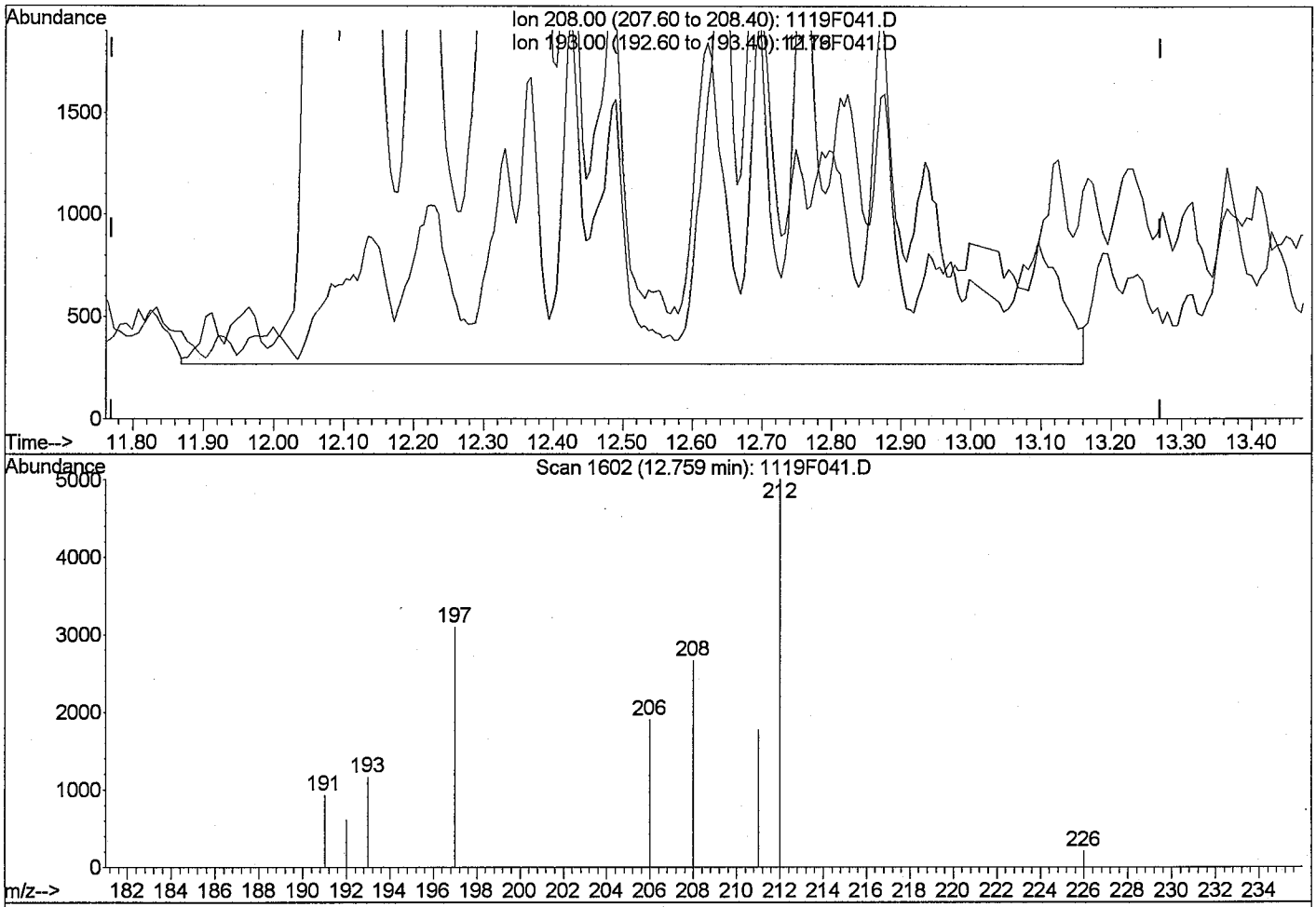
11/24/13

1119F041.D 1107ALK.M Fri Nov 21 12:15:38 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 18:50 Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 11:45 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(20) C3-Fluorenes (L)

12.76min 274.45ng/ml m

response 50283

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	43.75#
0.00	0.00	0.00
0.00	0.00	0.00

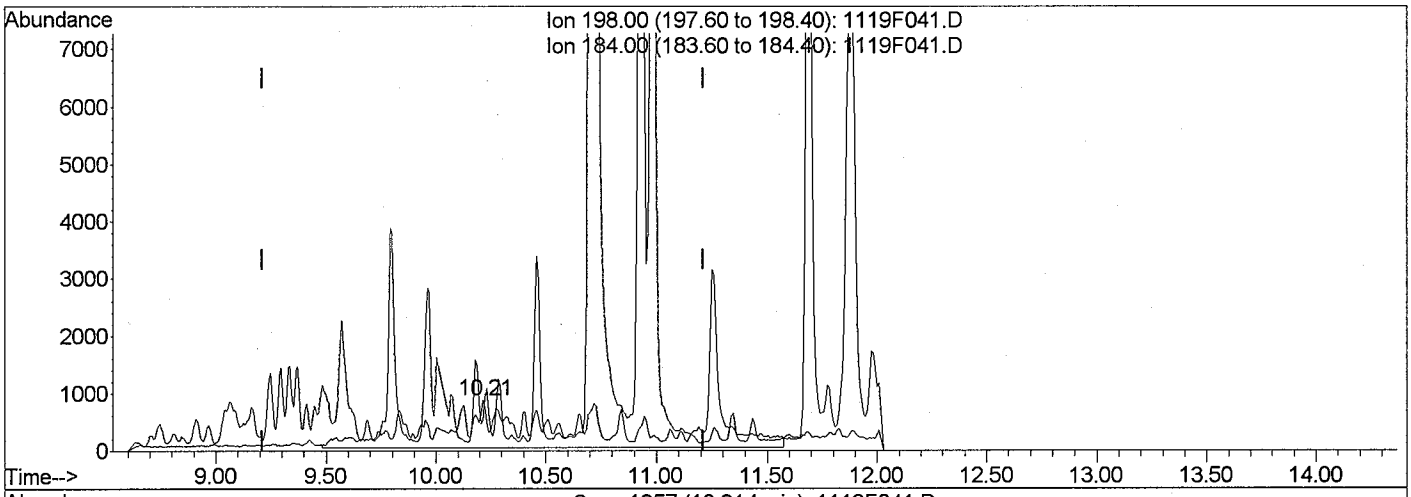
11/24/03

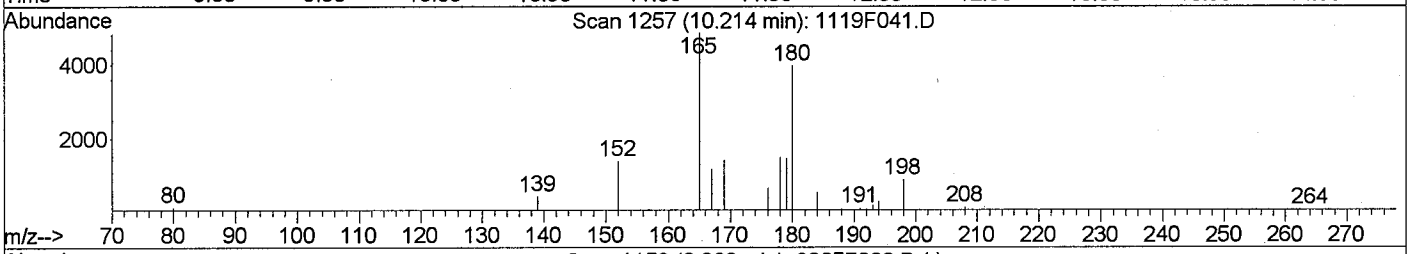
1119F041.D 1107ALK.M Mon Nov 24 11:46:07 2003

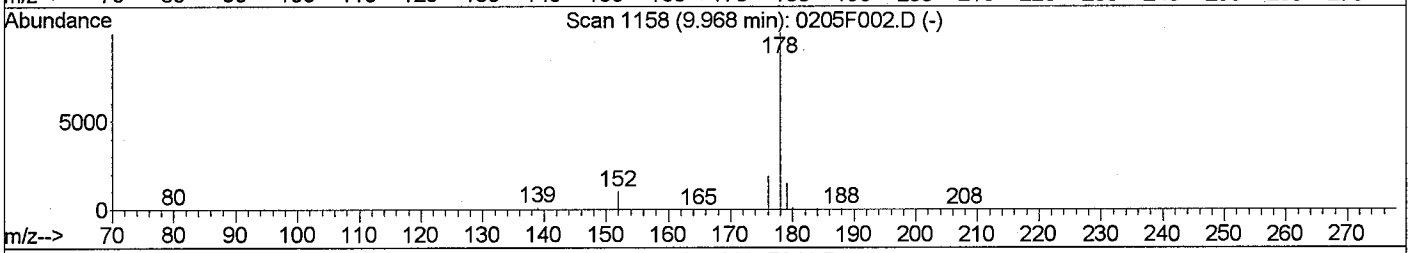
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:15 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(25) C1-Dibenzothiophenes (L)

10.21min 142.19ng/ml m

response 34625

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	60.90#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

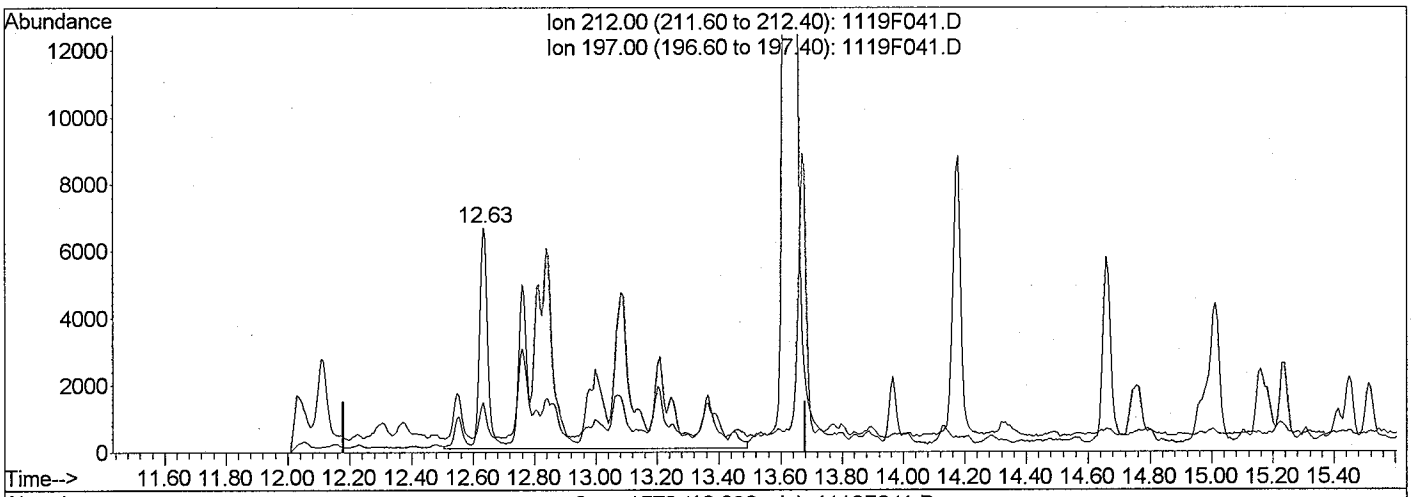
11/24/13

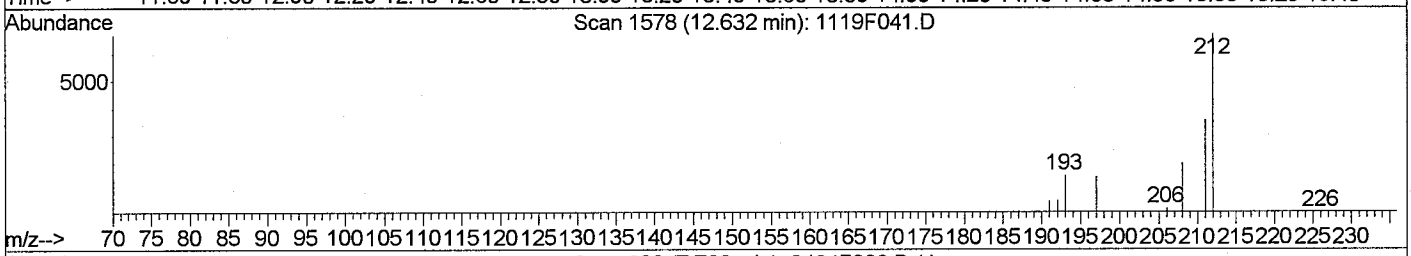
1119F041.D 1107ALK.M Fri Nov 21 12:15:56 2003

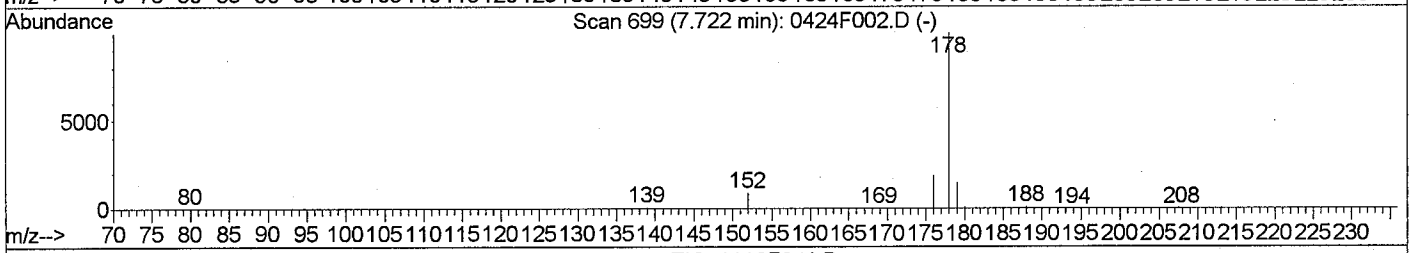
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(26) C2-Dibenzothiophenes (L)

12.63min 356.74ng/ml m

response 86868

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	22.27
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

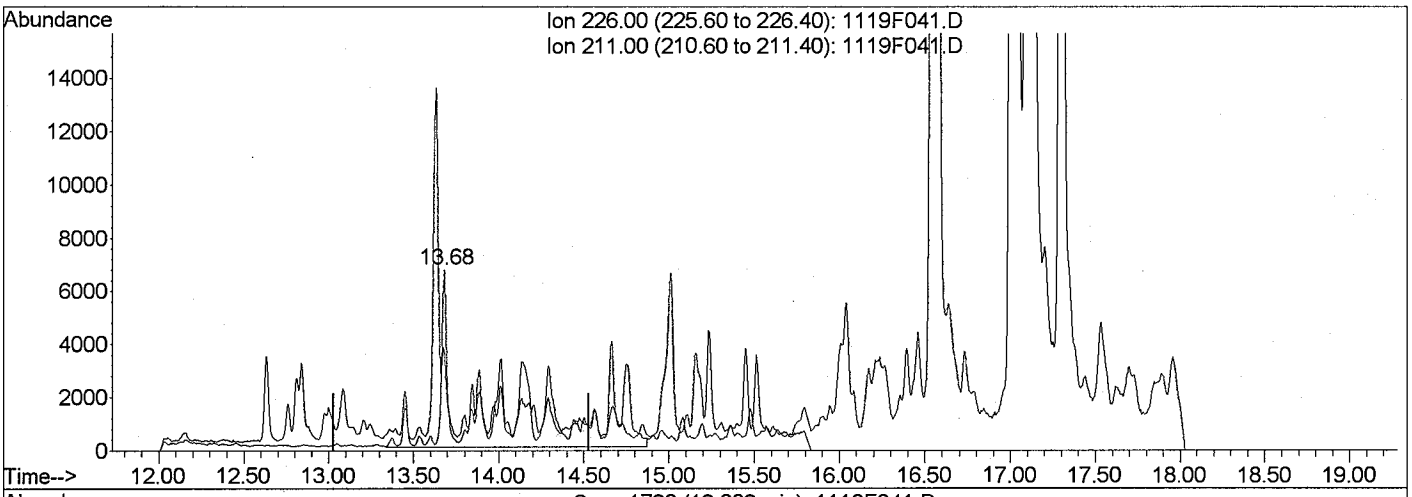
11/21/13

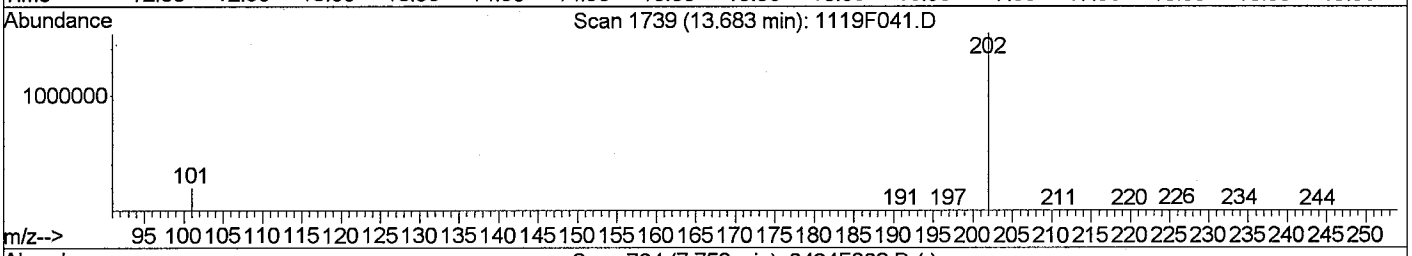
1119F041.D 1107ALK.M Fri Nov 21 12:16:26 2003

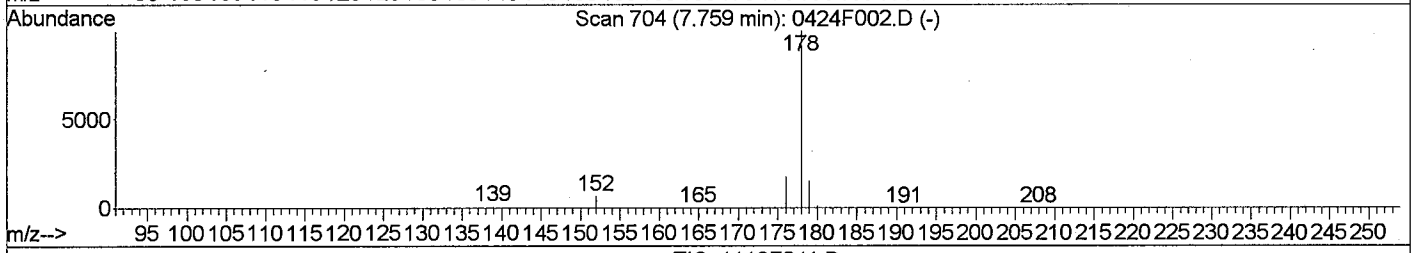
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(27) C3-Dibenzothiophenes (L)

13.68min 386.20ng/ml m

response 94042

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	54.60
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

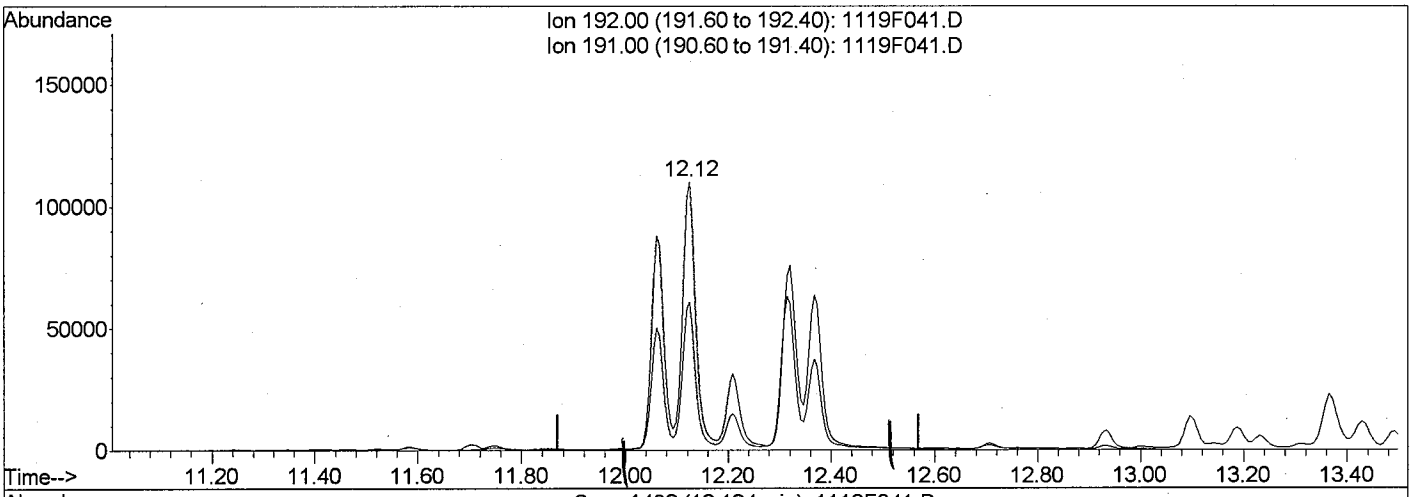
11/24/13

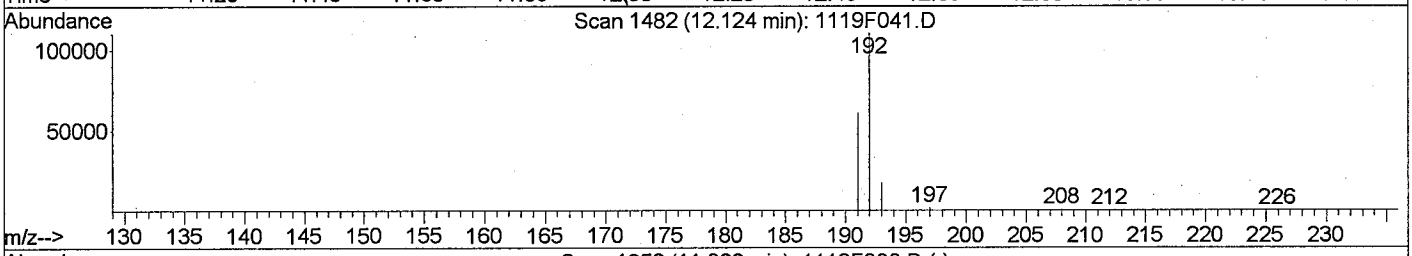
1119F041.D 1107ALK.M Fri Nov 21 12:16:50 2003

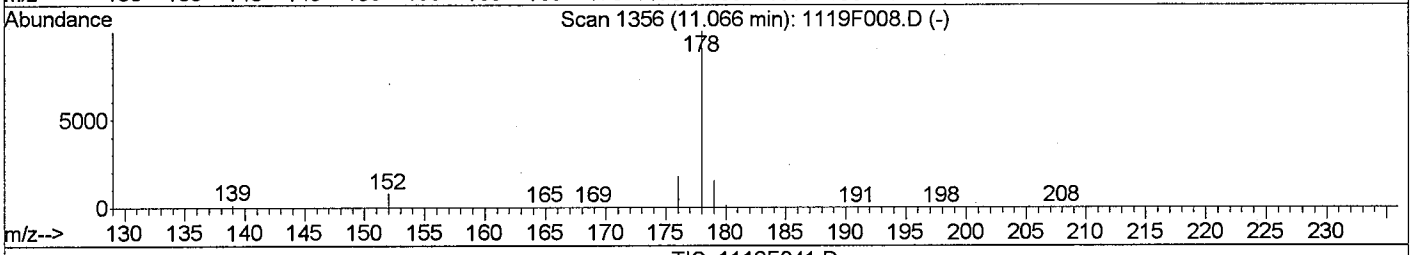
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:16 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 2738.14ng/ml m

response 700386

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	55.15
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

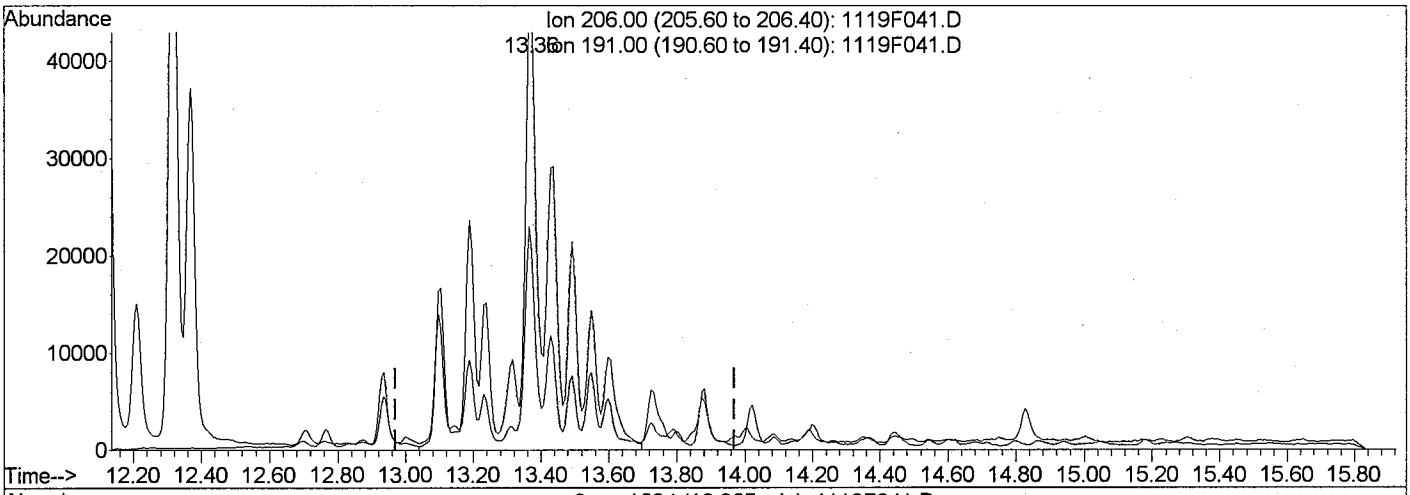
11/24/13

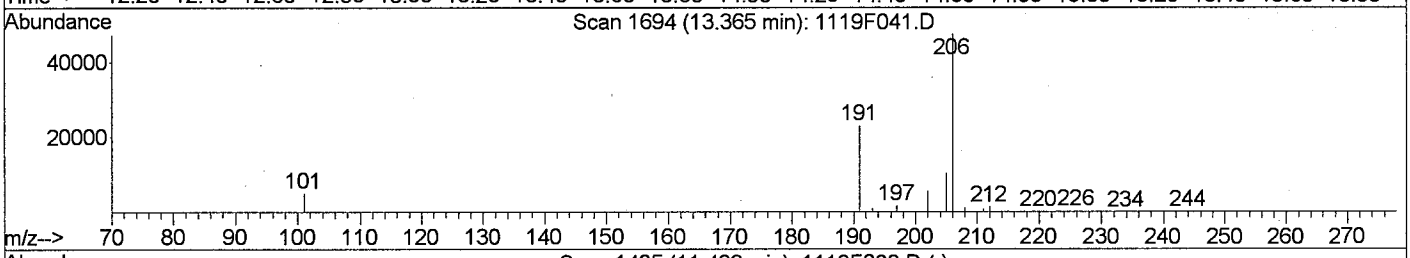
1119F041.D 1107ALK.M Fri Nov 21 12:16:57 2003

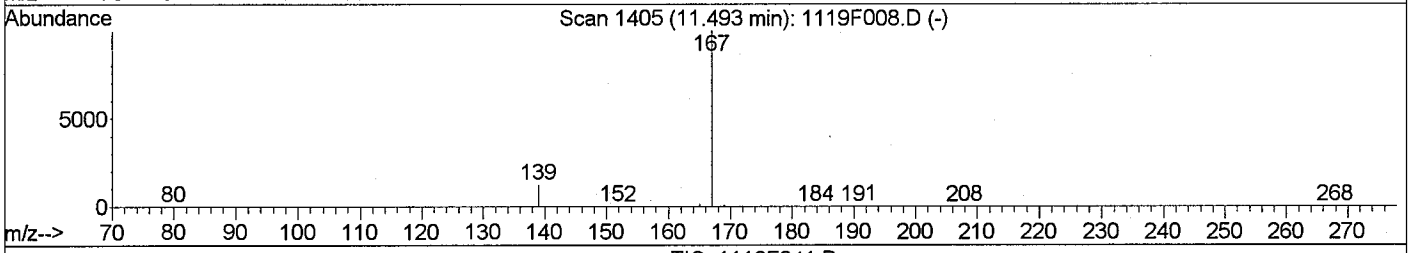
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.36min 1511.80ng/ml m

response 386702

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	48.59
0.00	0.00	0.00
0.00	0.00	0.00

JJ 11/24/13

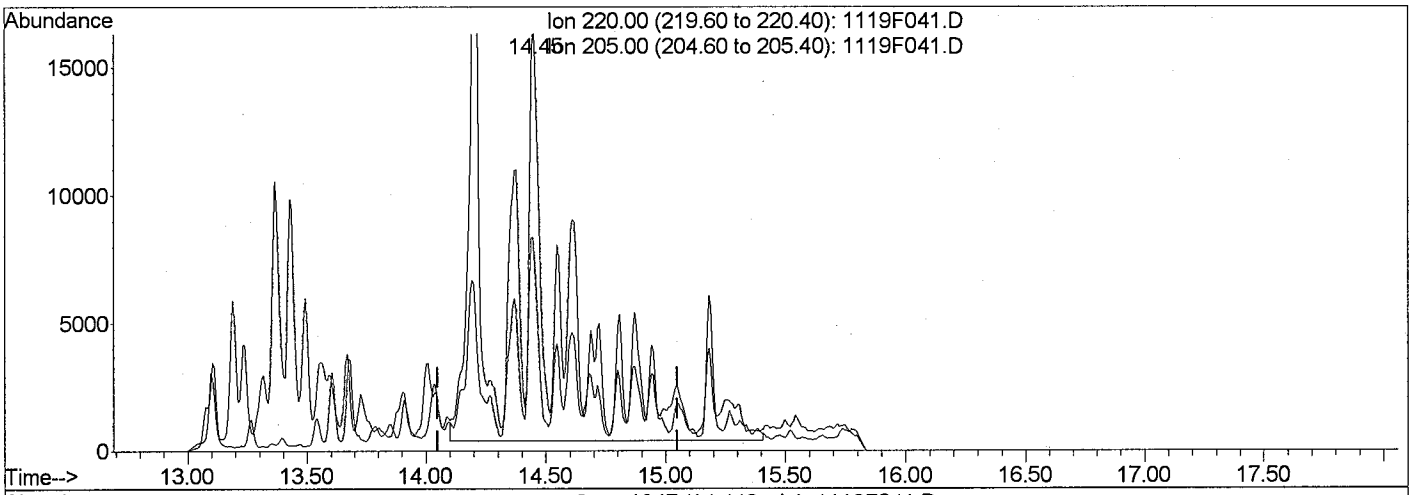
JJ 11/24/13

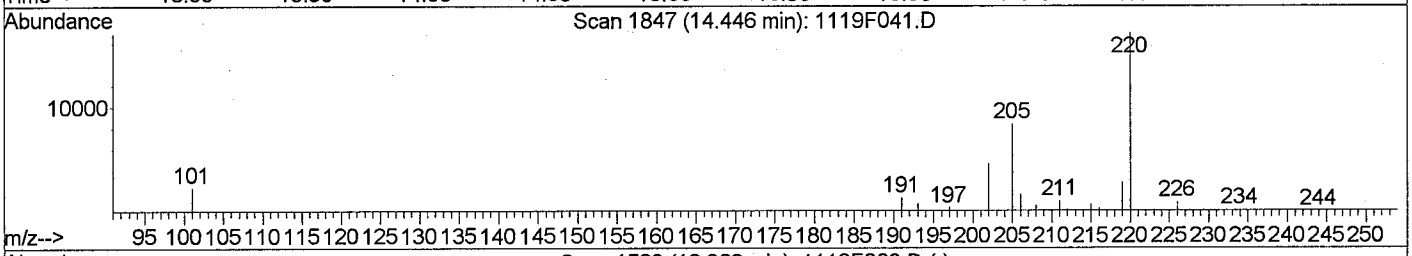
1119F041.D 1107ALK.M Fri Nov 21 12:17:12 2003

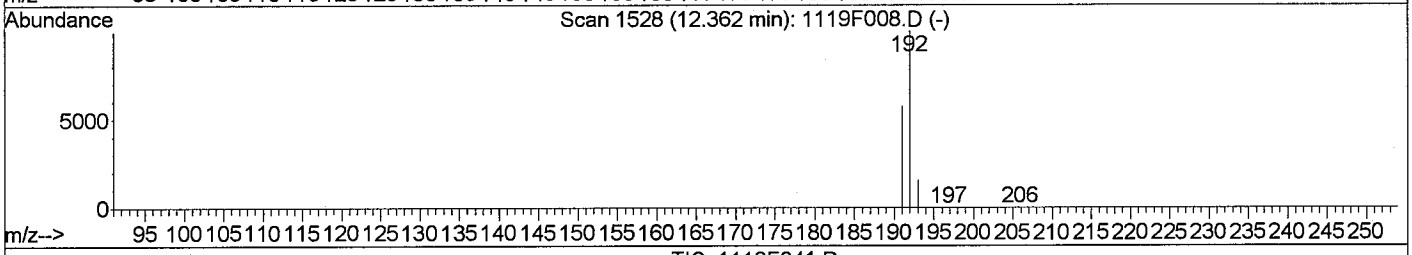
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.45min 847.30ng/ml m

response 216730

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	49.36
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

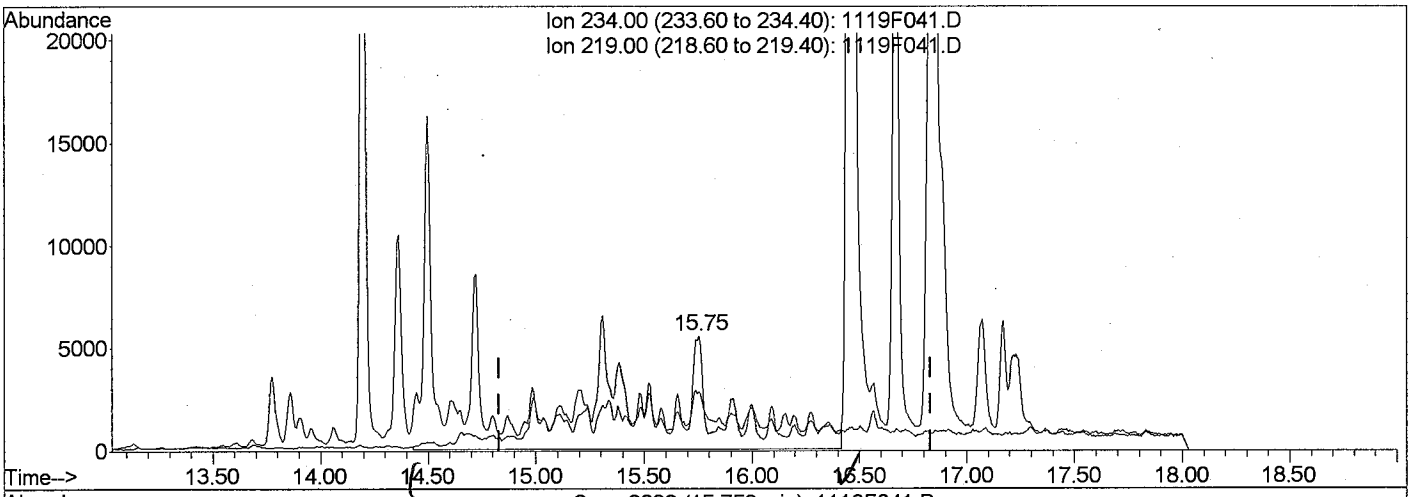
11/24/13

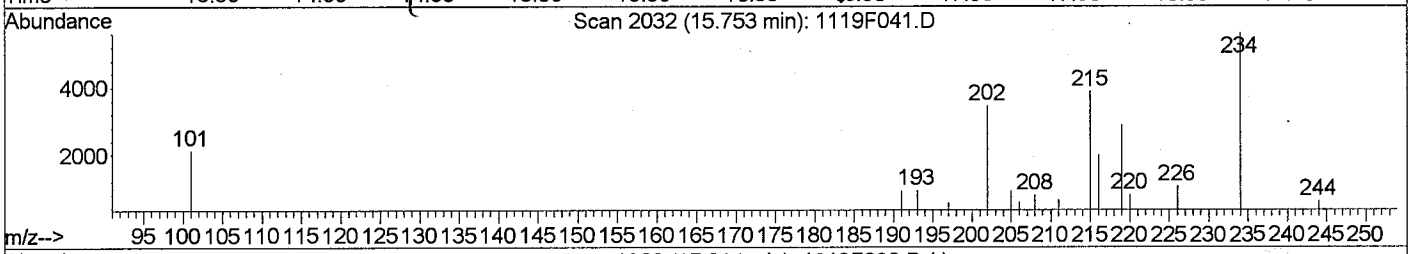
1119F041.D 1107ALK.M Fri Nov 21 12:17:28 2003

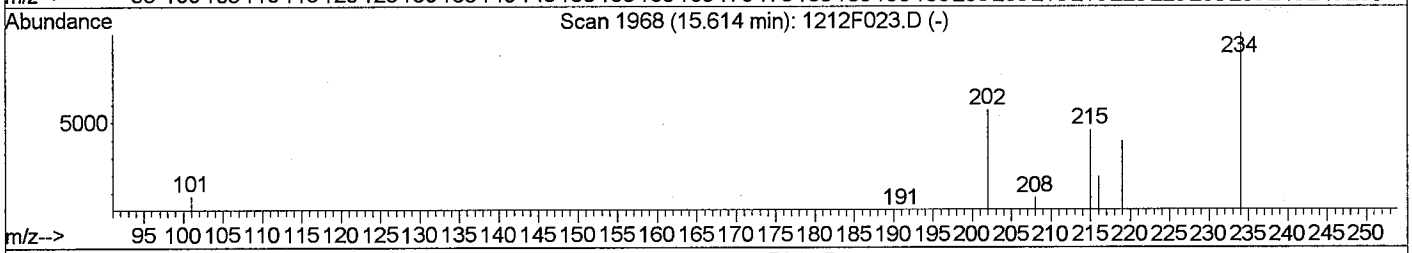
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 561.87ng/ml m

response 143721

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	51.41
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

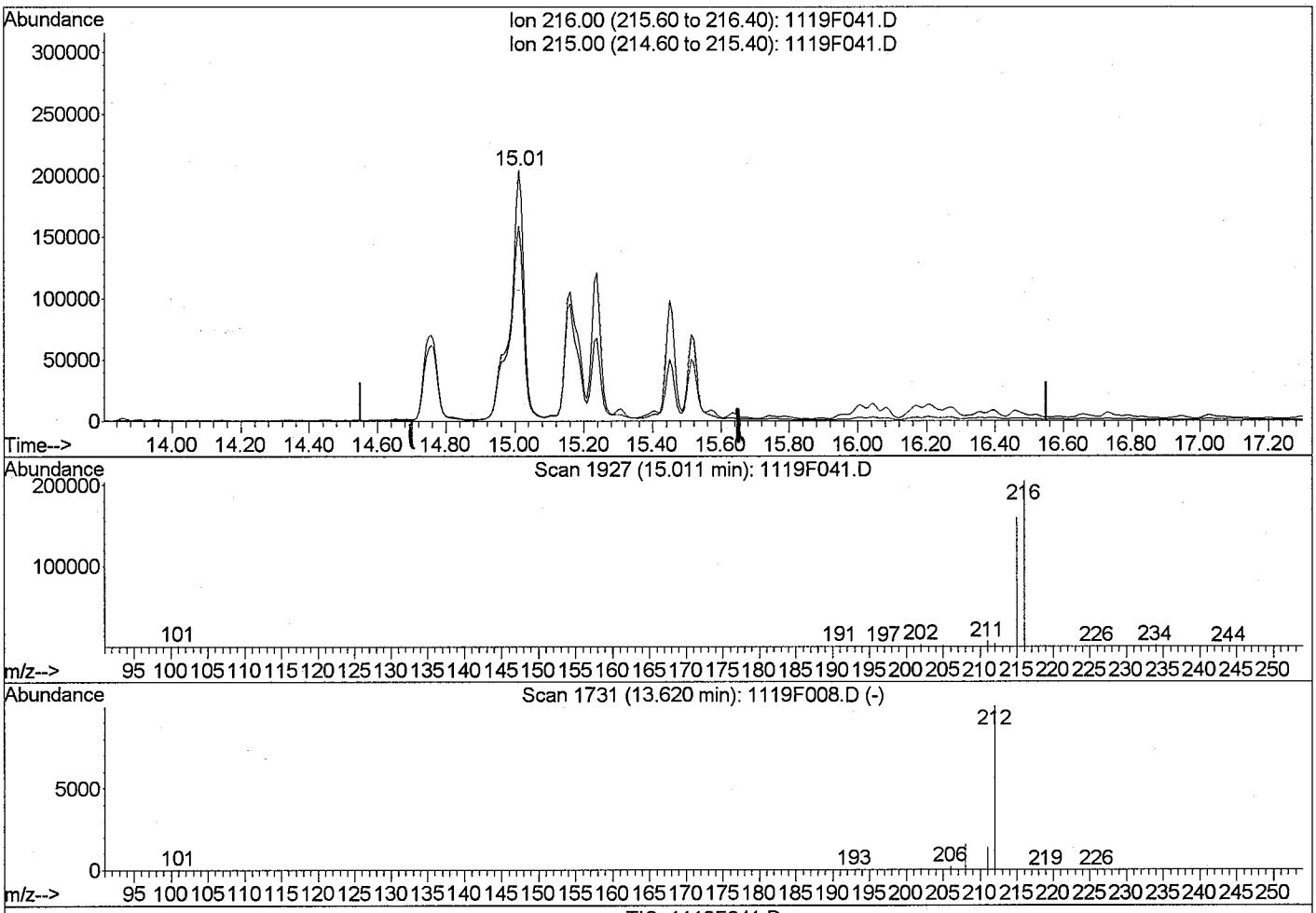
11/24/13

1119F041.D 1107ALK.M Fri Nov 21 12:17:47 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F041.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 6113.13ng/ml m

response 1665270

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	77.83
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

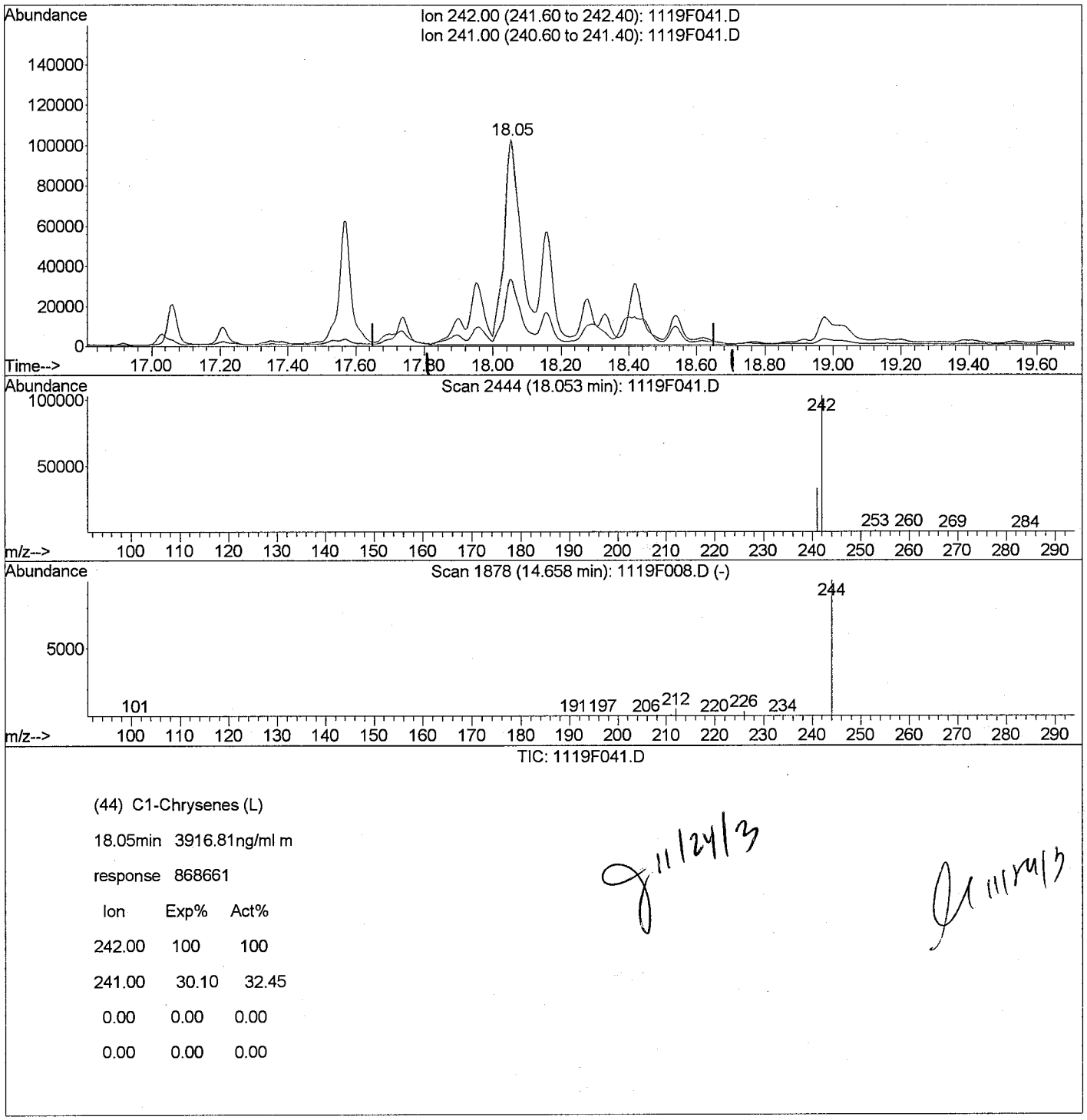
11/24/13

1119F041.D 1107ALK.M Fri Nov 21 12:17:52 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F041.D

(44) C1-Chrysenes (L)

18.05min 3916.81ng/ml m

response 868661

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	32.45
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

11/24/3

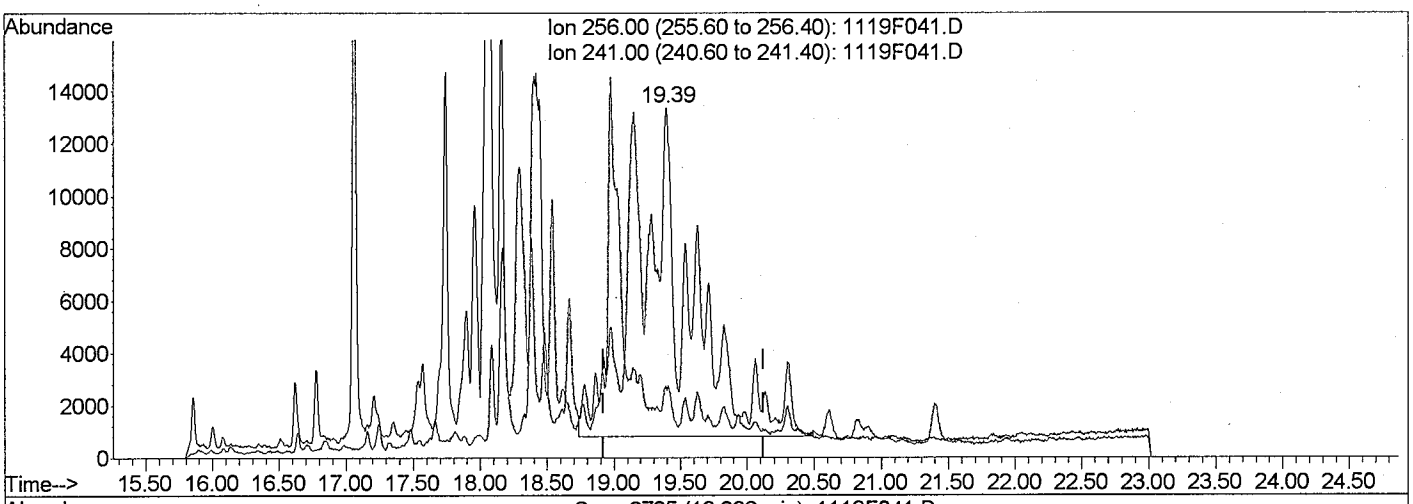
1119F041.D 1107ALK.M Fri Nov 21 12:18:27 2003

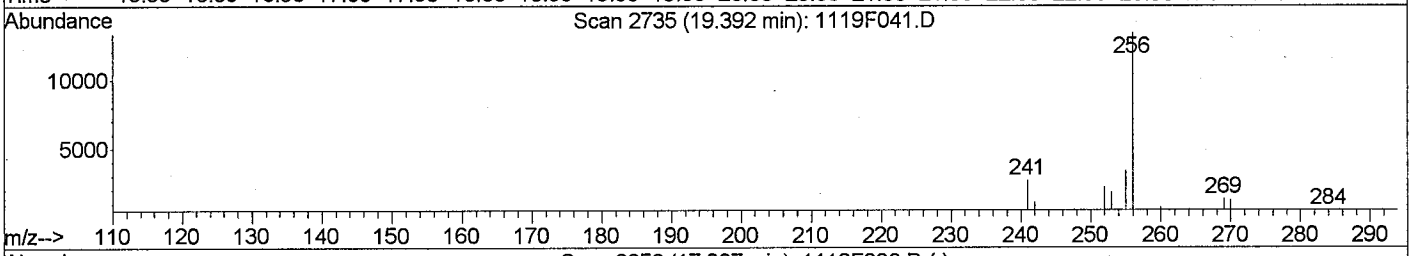
Quantitation Report (Qedit)

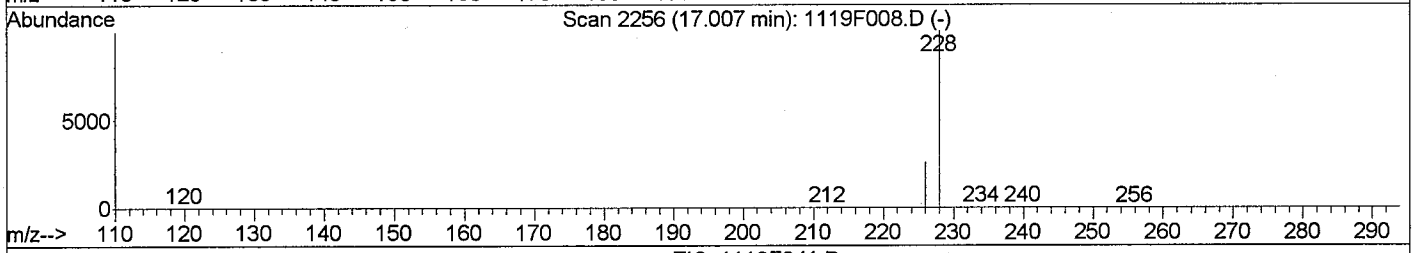
Data File : J:\MS11\DATA\111903\1119F041.D
Acq On : 19 Nov 2003 6:50 pm
Sample : K2308433-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:18 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(45) C2-Chrysenes (L)

19.39min 1627.38ng/ml m

response 360916

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	20.14
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

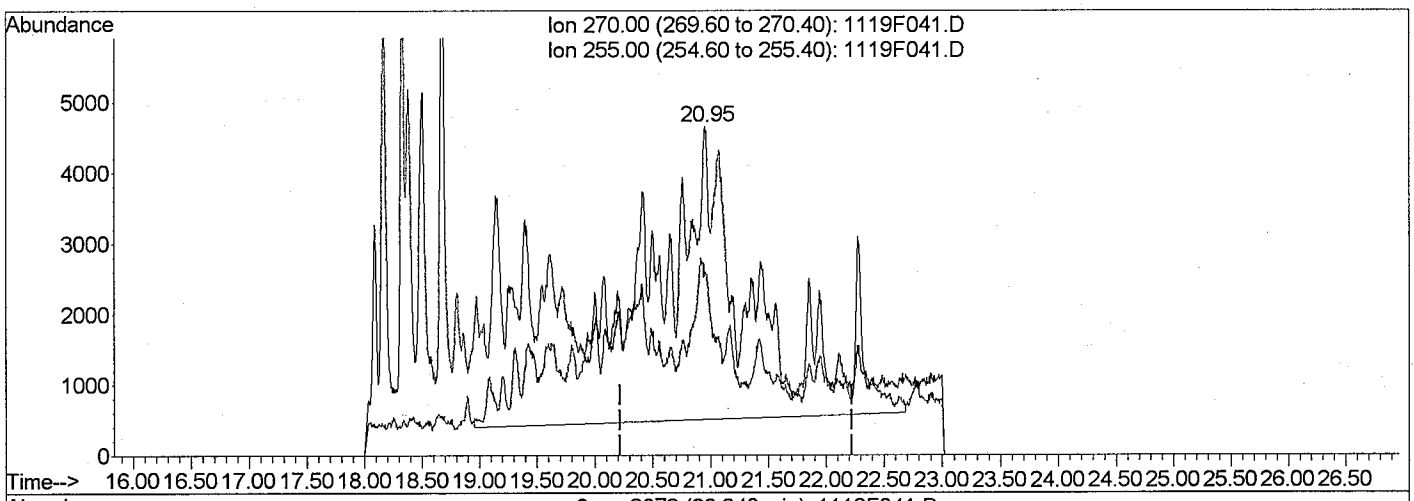
12/8/13

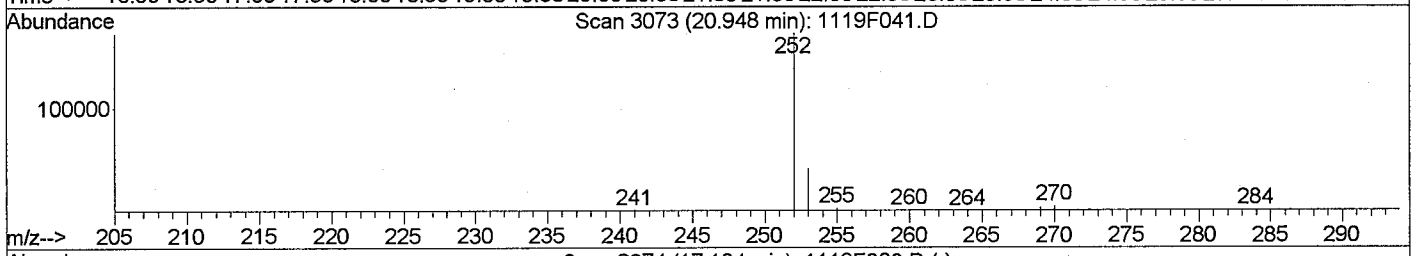
1119F041.D 1107ALK.M Fri Nov 21 12:18:54 2003

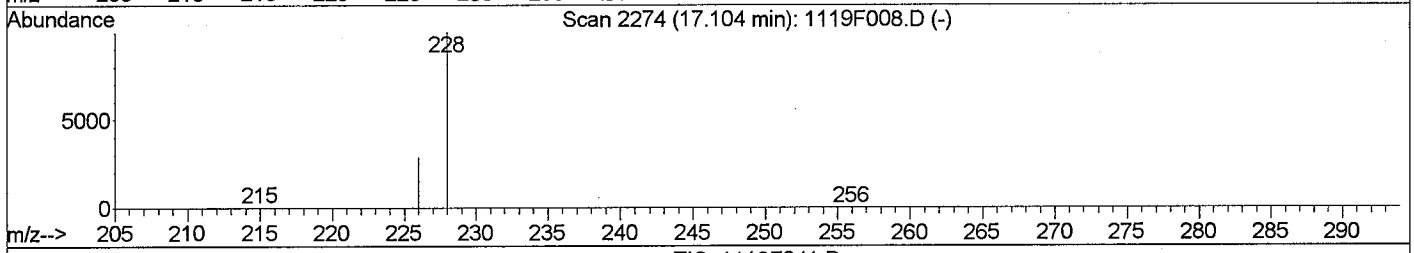
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(46) C3-Chrysenes (L)

20.95min 1241.89ng/ml m

response 275424

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	54.52
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

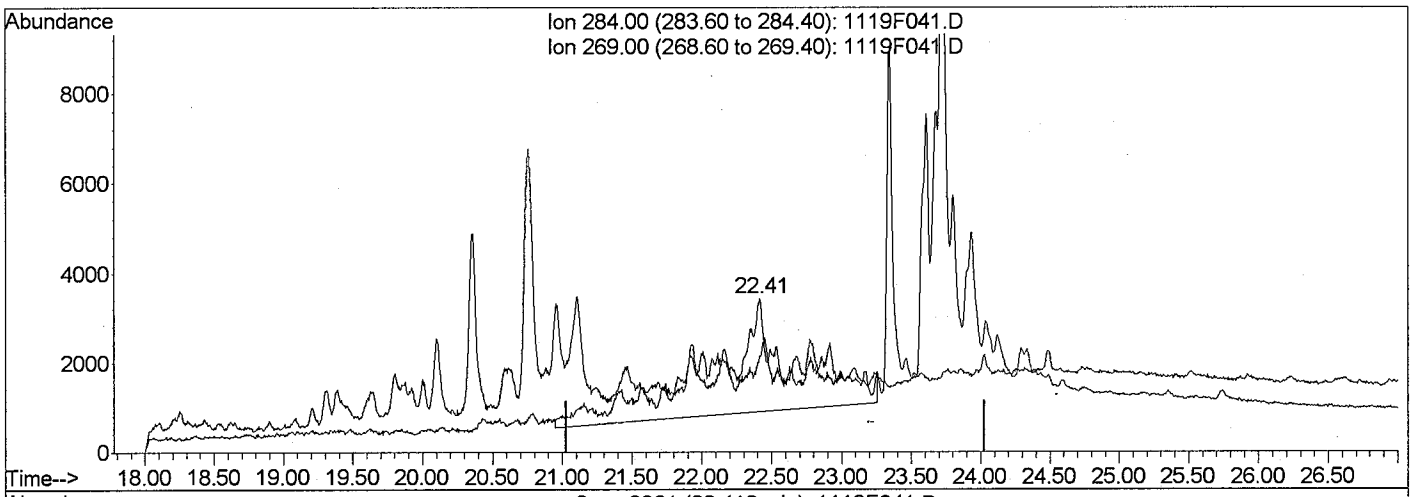
11/24/13

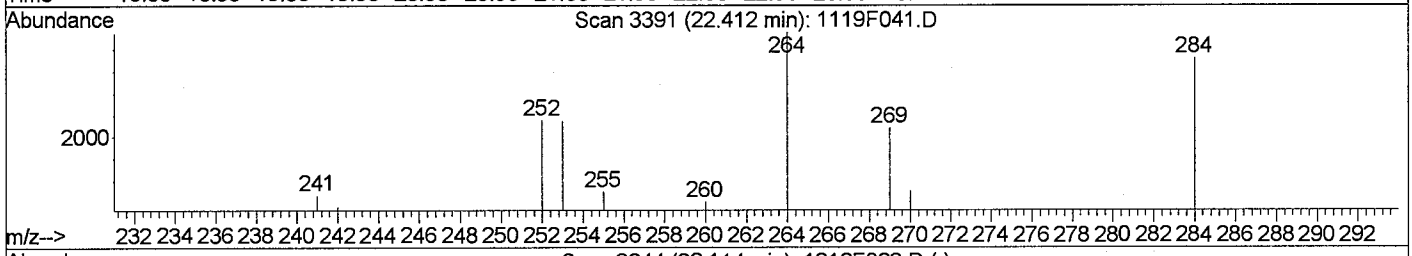
1119F041.D 1107ALK.M Fri Nov 21 12:19:13 2003

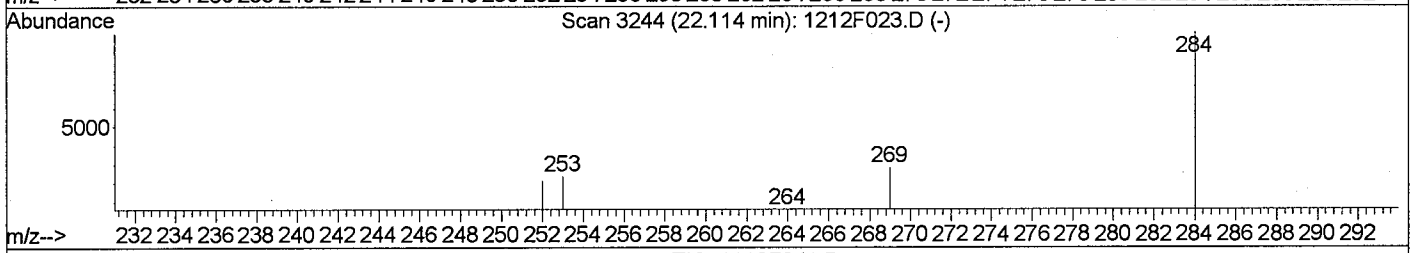
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F041.D Vial: 12
Acq On : 19 Nov 2003 6:50 pm Operator: LWeiskopf
Sample : K2308433-005 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F041.D

(47) C4-Chrysenes (L)

22.41min 493.57ng/ml m

response 109464

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	62.83
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

1119F041.D 1107ALK.M Fri Nov 21 12:19:21 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F008.D
Lab ID: K2308433-005
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 09:24
Date Quantitated: 11/24/2003 09:18
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/24/13

Secondary Review: 11.24.3

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247863	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F008.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 09:24	**Quant Date:**	11/24/2003 09:18	**Vial:**	5
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-005			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	236643	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	119862	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	162462	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	140449	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	79432	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	6382	53.24	53	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	12038	74.03	74	34-122	OK	NR
4	Terphenyl-d14	14.67	0.01	0.00	244	11267	88.02	88	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	4682	17.50	17	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	1339	8.47	8.1	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	1458	9.84	9.4	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	740	3.86	3.7	JD	NR
1	C2-Naphthalenes				156	0		35	U	NR
1	C3-Naphthalenes				170	0		35	U	NR
1	C4-Naphthalenes				184	0		35	U	NR
2	Acenaphthylene	7.75	0.01	0.00	152	5498	23.81	23	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	10708	75.23	72	D	NR
2	Dibenzofuran	8.36	0.02	0.00	168	5152	27.00	26	JD	NR
2	Fluorene	9.00	0.01	0.00	166	8898	58.36	56	D	NR
2	C1-Fluorenes				180	0		35	U	NR
2	C2-Fluorenes				194	0		35	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F008.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 09:24	**Quant Date:**	11/24/2003 09:18	**Vial:**	5
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-005			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		35	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	8079	43.10	41	JD	NR
3	C1-Dibenzothiophenes				198	0		35	U	NR
3	C2-Dibenzothiophenes				212	0		35	U	NR
3	C3-Dibenzothiophenes				226	0		35	U	NR
3	Phenanthrene	10.99	0.02	0.00	178	170152	864.16	830	D	NR
3	Anthracene	11.08		0.00	178	22994	136.69	130	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		35	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		35	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		35	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		35	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	349296	1,782	1700	D	
4	Pyrene	14.18	0.01	0.00	202	295624	1,610	1500	D	
4	C1-Fluoranthenes/Pyrenes				216	0		35	U	NR
4	Benz(a)anthracene	17.02		0.00	228	93290	667.47	640	D	NR
4	Chrysene	17.12		0.00	228	131799	881.85	840	D	NR
4	C1-Chrysenes				242	0		35	U	NR
4	C2-Chrysenes				256	0		35	U	NR
4	C3-Chrysenes				270	0		35	U	NR
4	C4-Chrysenes				284	0		35	U	NR
5	Benzo(b)fluoranthene	20.01	0.01	0.00	252	78681	741.96	710	D	NR
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	104440**m**	776.19	740	D	NR
5	Benzo(e)pyrene	20.98	0.01	0.00	252	68346	574.02	550	D	NR
5	Benzo(a)pyrene	21.17	0.01	0.00	252	69995	775.99	740	D	NR
5	Perylene	21.51	0.01	0.00	252	19253	190.15	180	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	39594	722.08	690	D	NR
5	Dibenz(a,h)anthracene	24.08		0.00	278	6923**m**	87.85	84	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	41105	452.16	430	D	NR

Prep Amount:	28.6 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	73.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F008.D Vial: 5
Acq On : 20 Nov 2003 9:24 am Operator: LWeiskopf
Sample : K2308433-005DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:30 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	236643	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	119862	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	162462	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	140449	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	79432	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	5805	33.49	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	3.35%		
16) Fluorene-d10	8.95	176	6382	53.24	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	5.32%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	12038	74.03	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.40%		
41) Terphenyl-d14	14.67	244	11267	88.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.80%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	4682	17.50	ng/ml	98
3) 2-Methylnaphthalene	6.38	142	1339	8.47	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	1458	9.84	ng/ml	95
6) Biphenyl	7.05	154	740	3.86	ng/ml	92
7) 2,6-Dimethylnaphthalene	7.29	156	797	5.91	ng/ml	93
12) Acenaphthylene	7.75	152	5498	23.81	ng/ml	98
13) Acenaphthene	8.06	154	10708	75.23	ng/ml	98
14) Dibenzofuran	8.36	168	5152	27.00	ng/ml	98
15) 2,3,5-Trimethylnaphthalene	8.77	170	623m	4.89	ng/ml	
17) Fluorene	9.00	166	8898	58.36	ng/ml	98
24) Dibenzothiophene	10.72	184	8079	43.10	ng/ml	99
28) Phenanthrene	10.99	178	170152	864.16	ng/ml	99
29) Anthracene	11.08	178	22994	136.69	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	7685	57.48	ng/ml	99
36) Fluoranthene	13.67	202	349296	1782.15	ng/ml	98
39) Pyrene	14.18	202	295624	1610.34	ng/ml	100
42) Benz(a)anthracene	17.02	228	93290	667.47	ng/ml	91
43) Chrysene	17.12	228	131799	881.85	ng/ml	100
49) Benzo(b)fluoranthene	20.01	252	78681	741.96	ng/ml	100
50) Benzo(k)fluoranthene	20.07	252	104440m	776.19	ng/ml	
51) Benzo(e)pyrene	20.98	252	68346	574.02	ng/ml	99
52) Benzo(a)pyrene	21.17	252	69995	775.99	ng/ml	98
53) Perylene	21.51	252	19253	190.15	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F008.D Vial: 5
Acq On : 20 Nov 2003 9:24 am Operator: LWeiskopf
Sample : K2308433-005DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:30 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

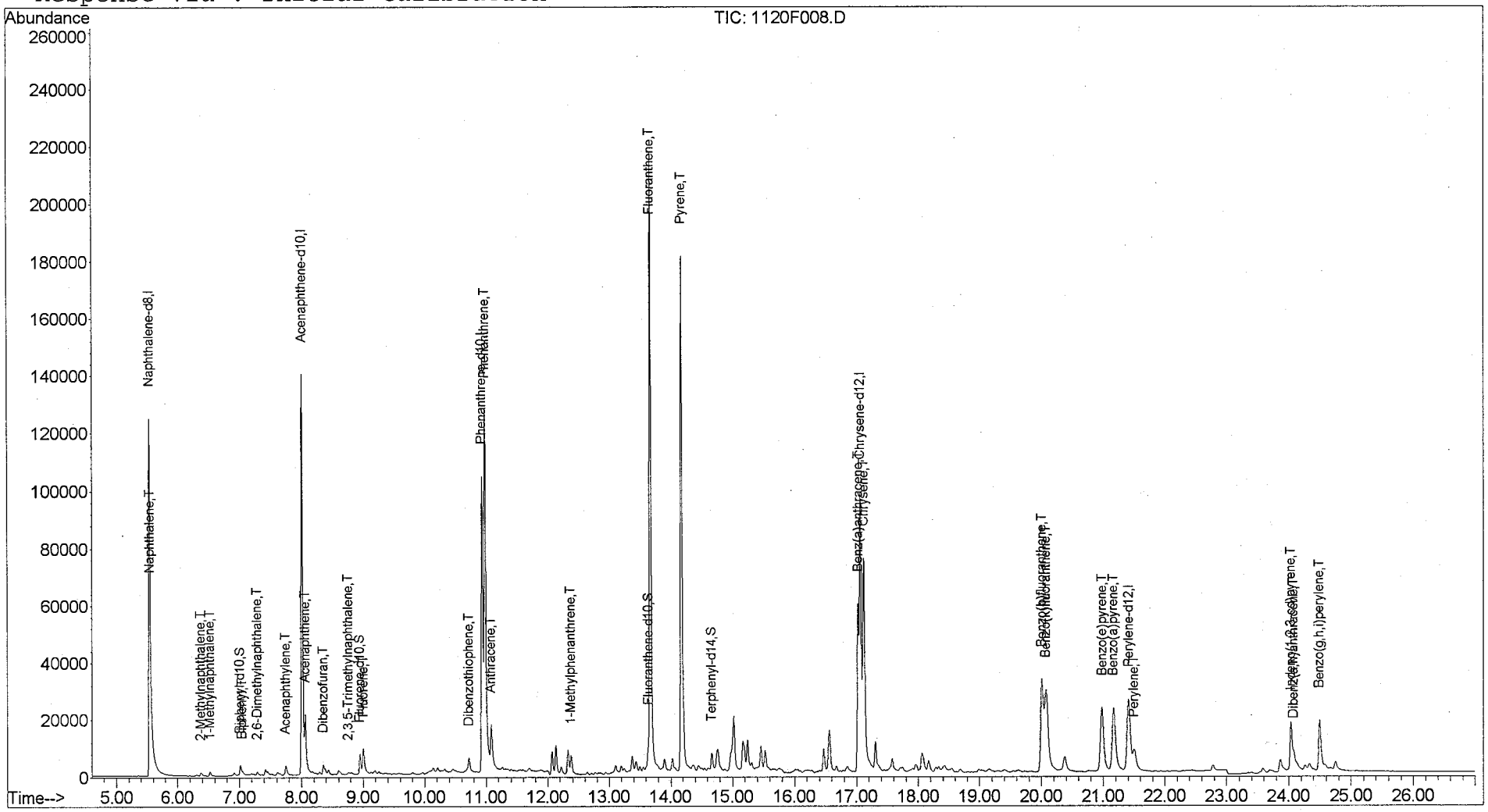
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54)	Indeno(1,2,3-cd)pyrene	24.03	276	39594	722.08	ng/ml	93
55)	Dibenz(a,h)anthracene	24.08	278	6923m	87.85	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	41105	452.16	ng/ml	100

(#) = qualifier out of range (m) = manual integration

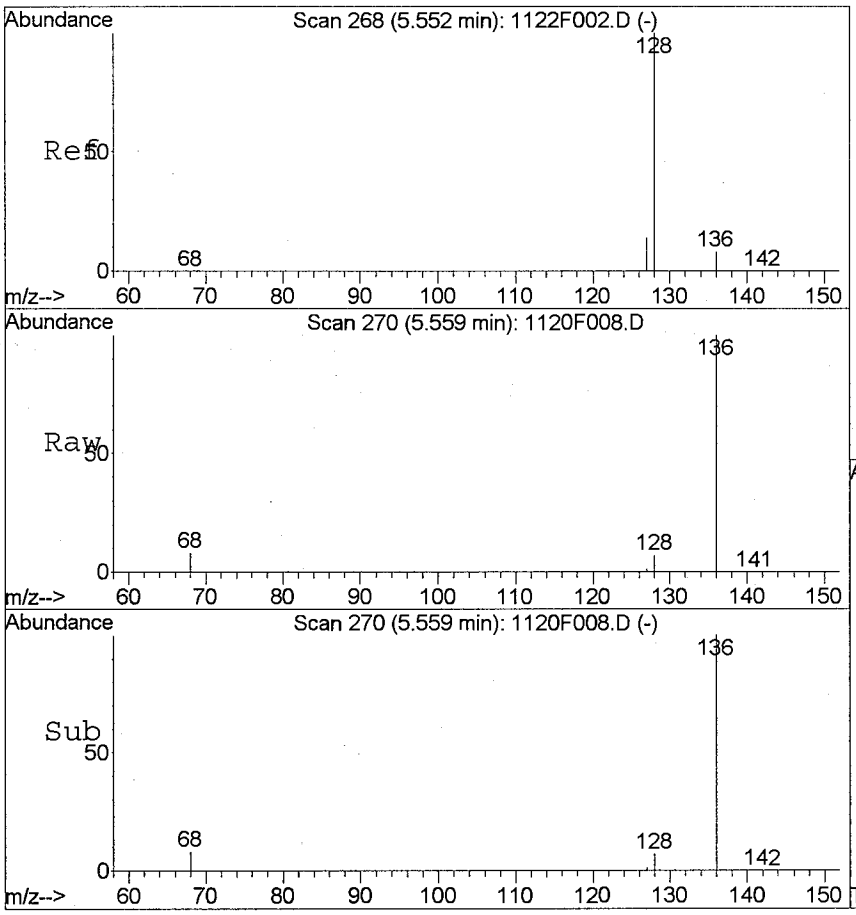
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F008.D Vial: 5
Acq On : 20 Nov 2003 9:24 am Operator: LWeiskopf
Sample : K2308433-005DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



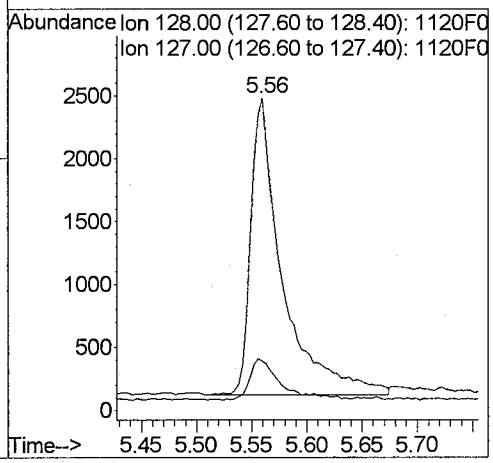
1182

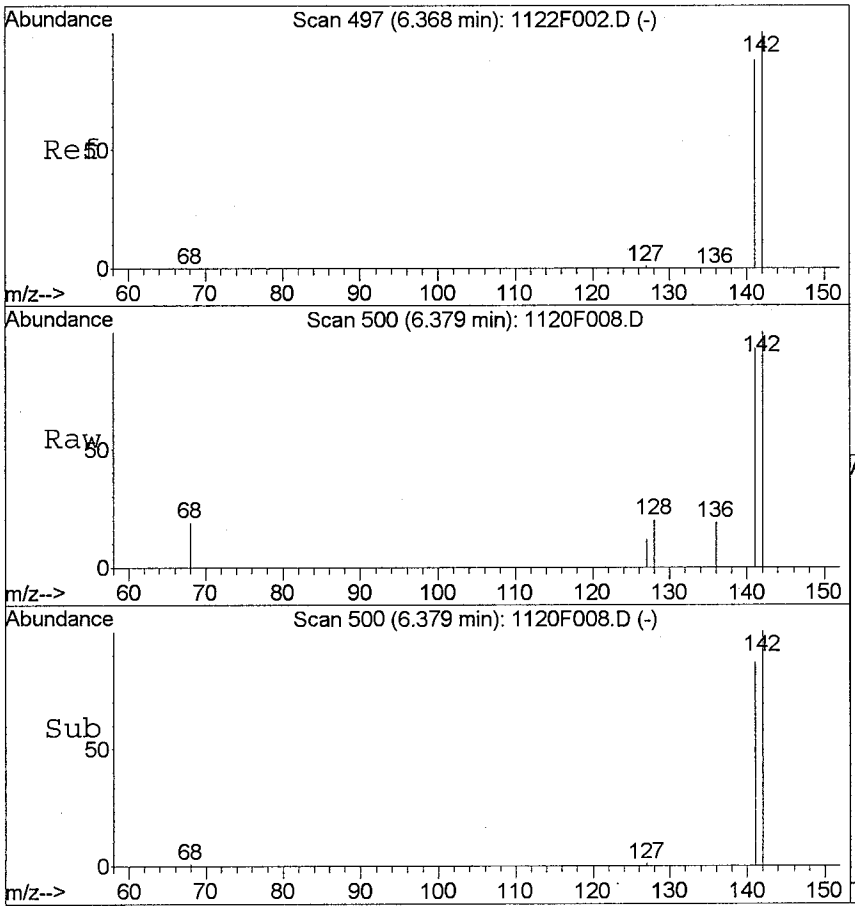


#2
Naphthalene
Concen: 17.50 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:128 Resp: 4682

Ion	Ratio	Lower	Upper
128	100		
127	13.0	0.0	43.6

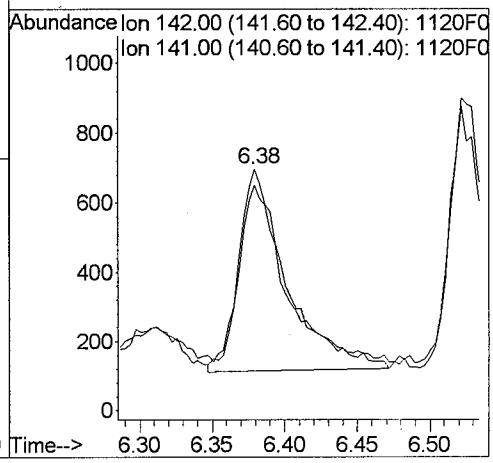


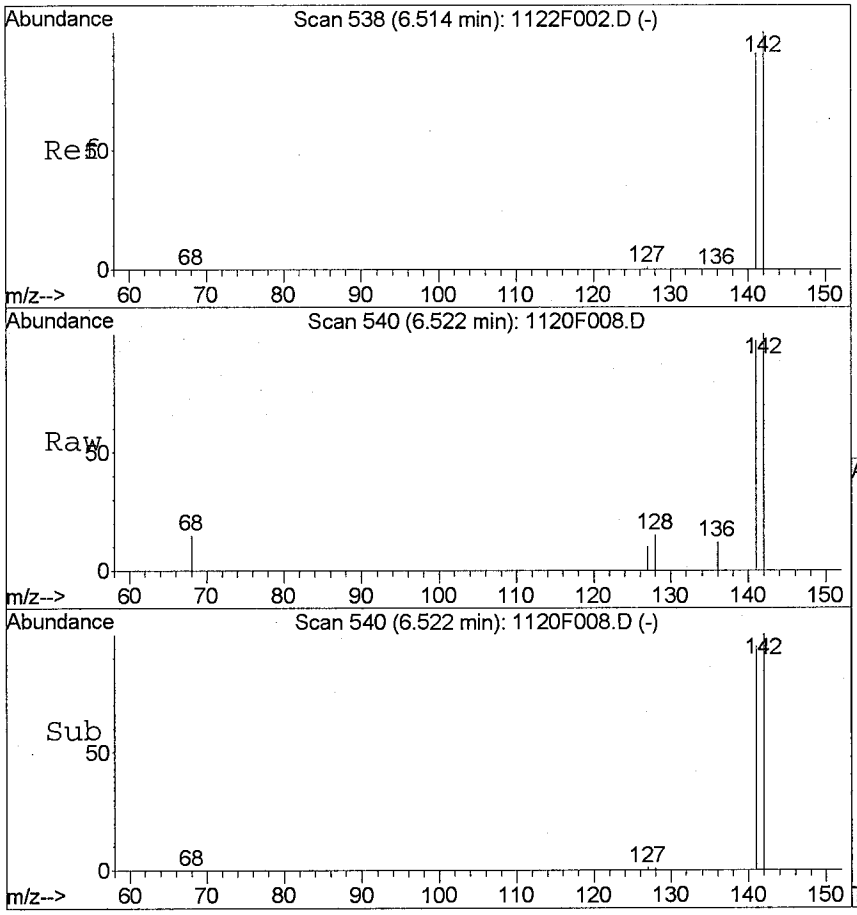


#3
2-Methylnaphthalene
Concen: 8.47 ng/ml
RT: 6.38 min Scan# 500
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:142 Resp: 1339

Ion	Ratio	Lower	Upper
142	100		
141	88.7	58.1	118.1

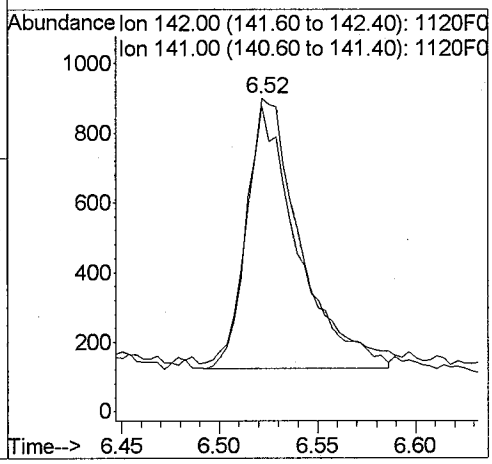


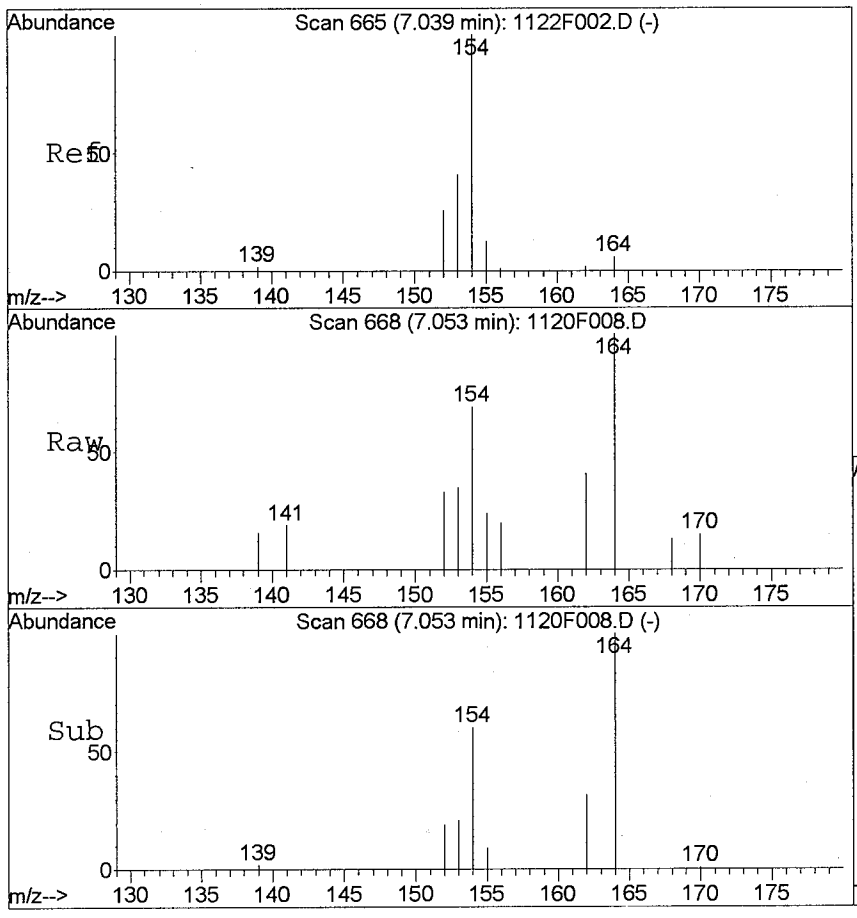


#4
1-Methylnaphthalene
Concen: 9.84 ng/ml
RT: 6.52 min Scan# 540
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:142 Resp: 1458

Ion	Ratio	Lower	Upper
142	100		
141	94.5	59.3	119.3

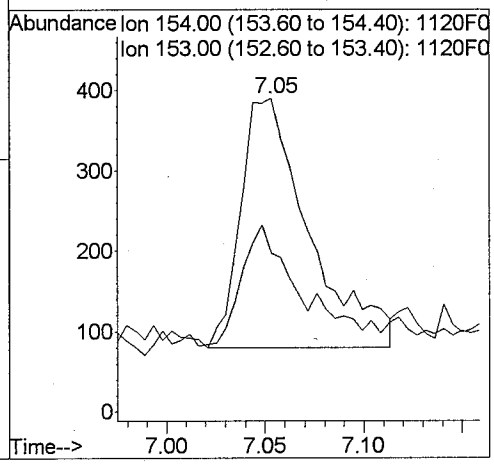


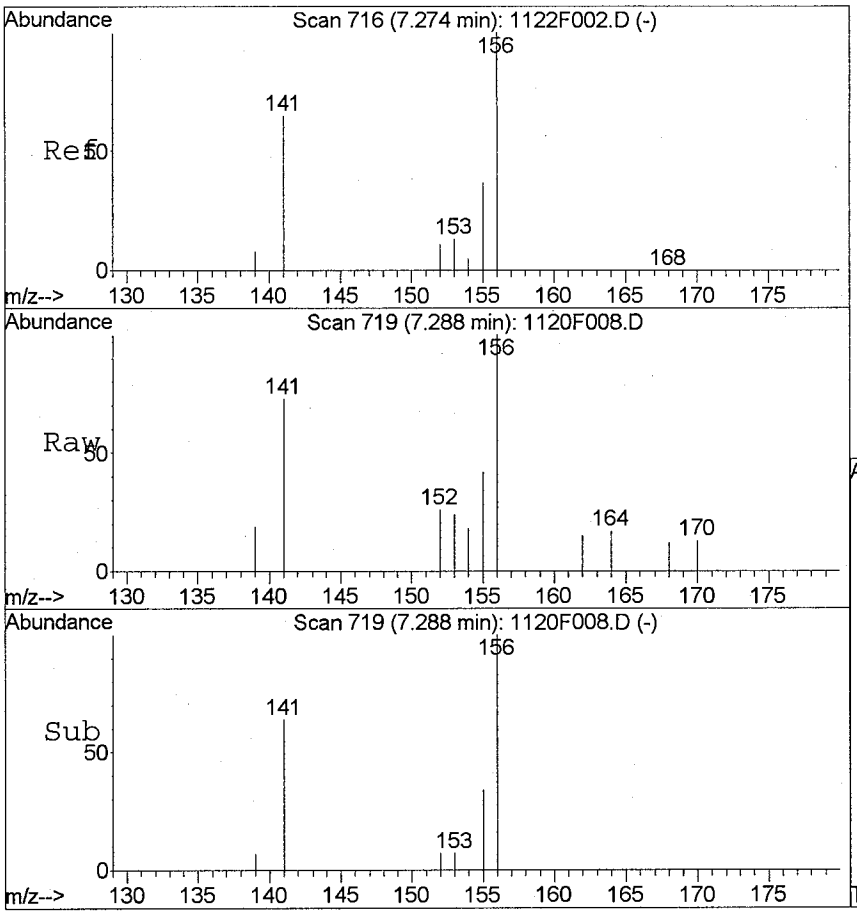


#6
Biphenyl
Concen: 3.86 ng/ml
RT: 7.05 min Scan# 668
Delta R.T. 0.02 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:154 Resp: 740

Ion	Ratio	Lower	Upper
154	100		
153	36.5	11.3	71.3

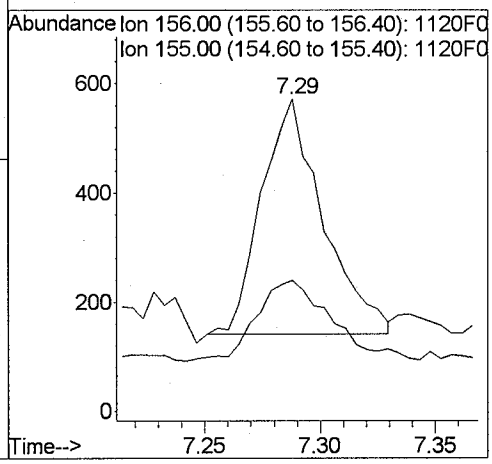


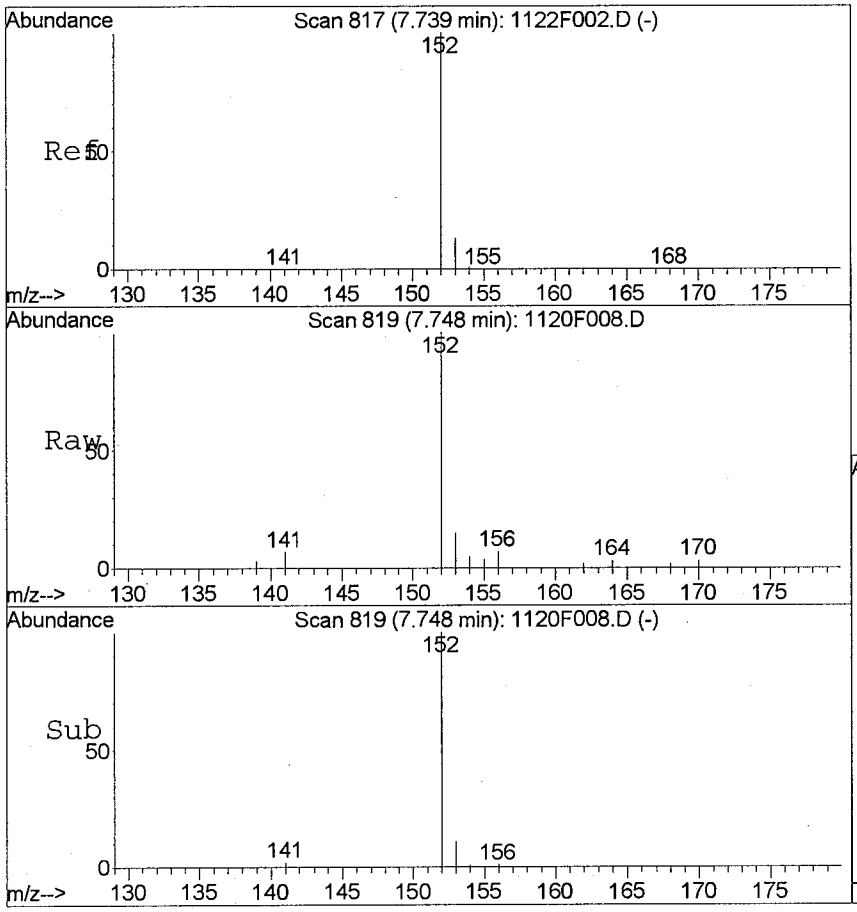


#7
2,6-Dimethylnaphthalene
Concen: 5.91 ng/ml
RT: 7.29 min Scan# 719
Delta R.T. 0.02 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:156 Resp: 797

Ion	Ratio	Lower	Upper
156	100		
155	32.7	7.1	67.1

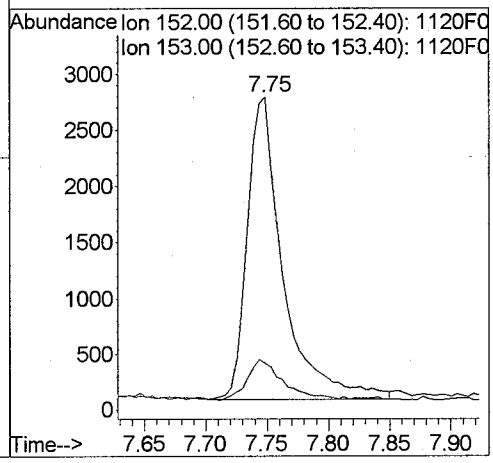


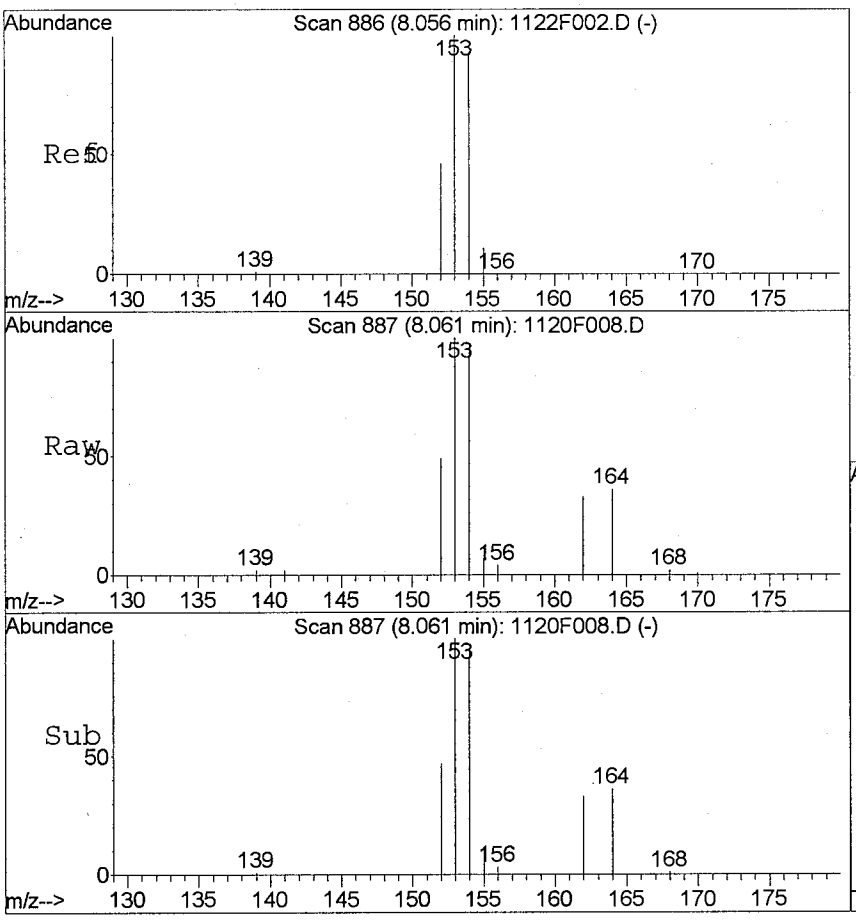


#12
Acenaphthylene
Concen: 23.81 ng/ml
RT: 7.75 min Scan# 819
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:152 Resp: 5498

Ion	Ratio	Lower	Upper
152	100		
153	12.1	0.0	43.0

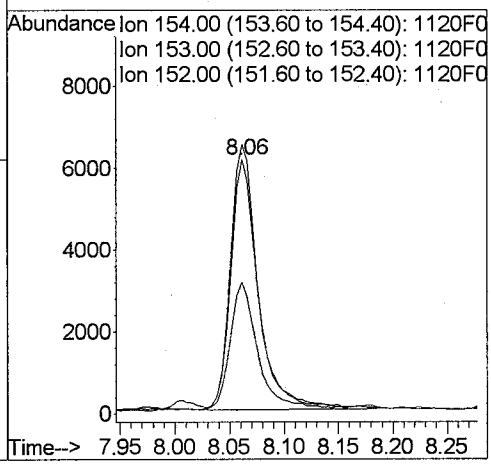


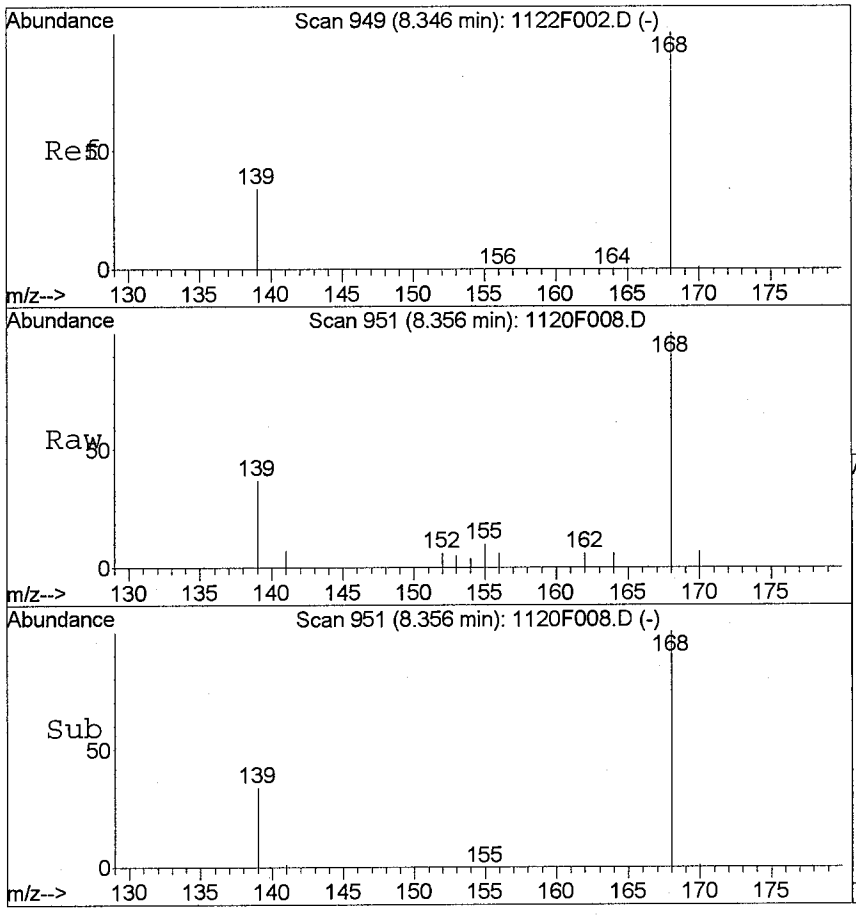


#13
Acenaphthene
Concen: 75.23 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:154 Resp: 10708

Ion	Ratio	Lower	Upper
154	100		
153	106.1	79.2	139.2
152	50.5	21.3	81.3

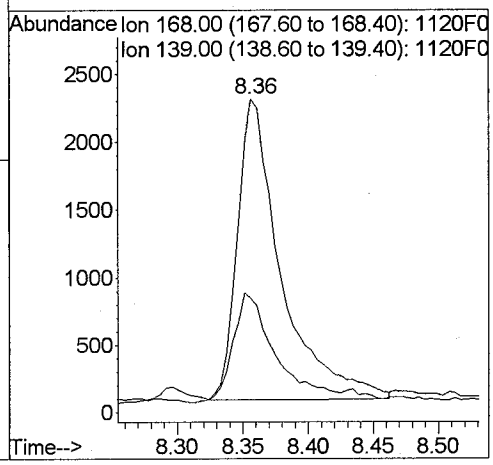


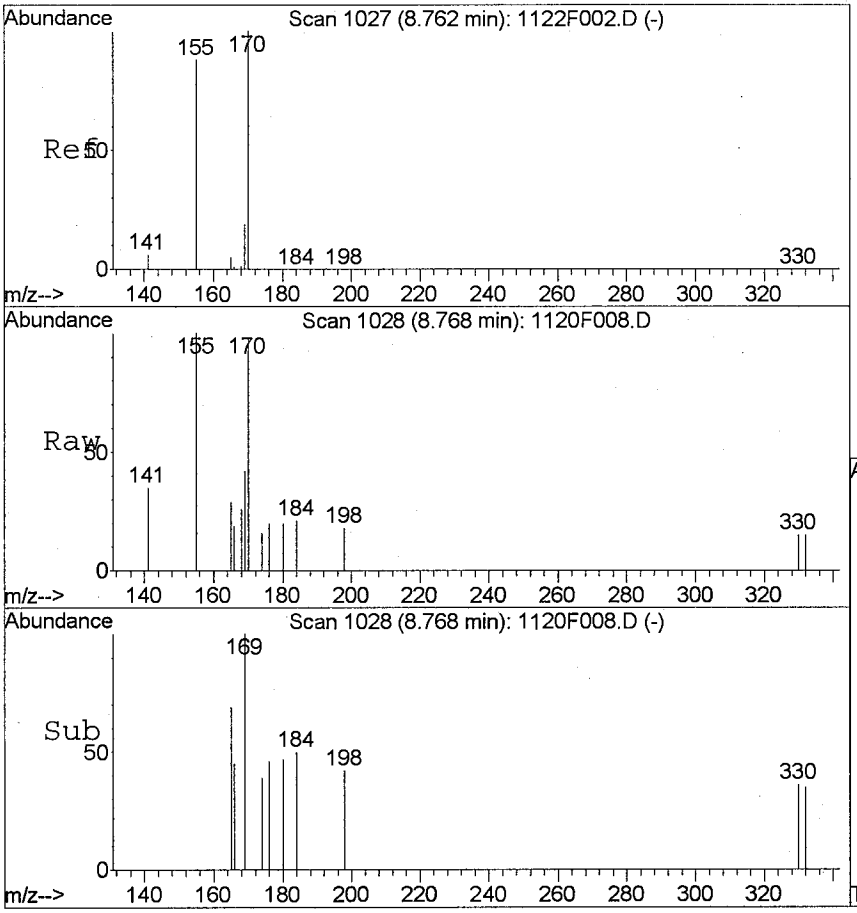


#14
Dibenzofuran
Concen: 27.00 ng/ml
RT: 8.36 min Scan# 951
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:168 Resp: 5152

Ion	Ratio	Lower	Upper
168	100		
139	34.0	5.4	65.4

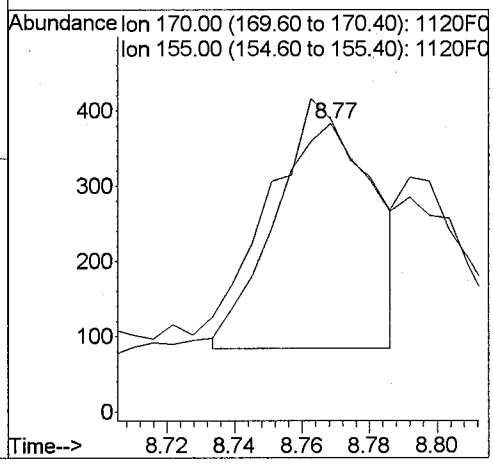


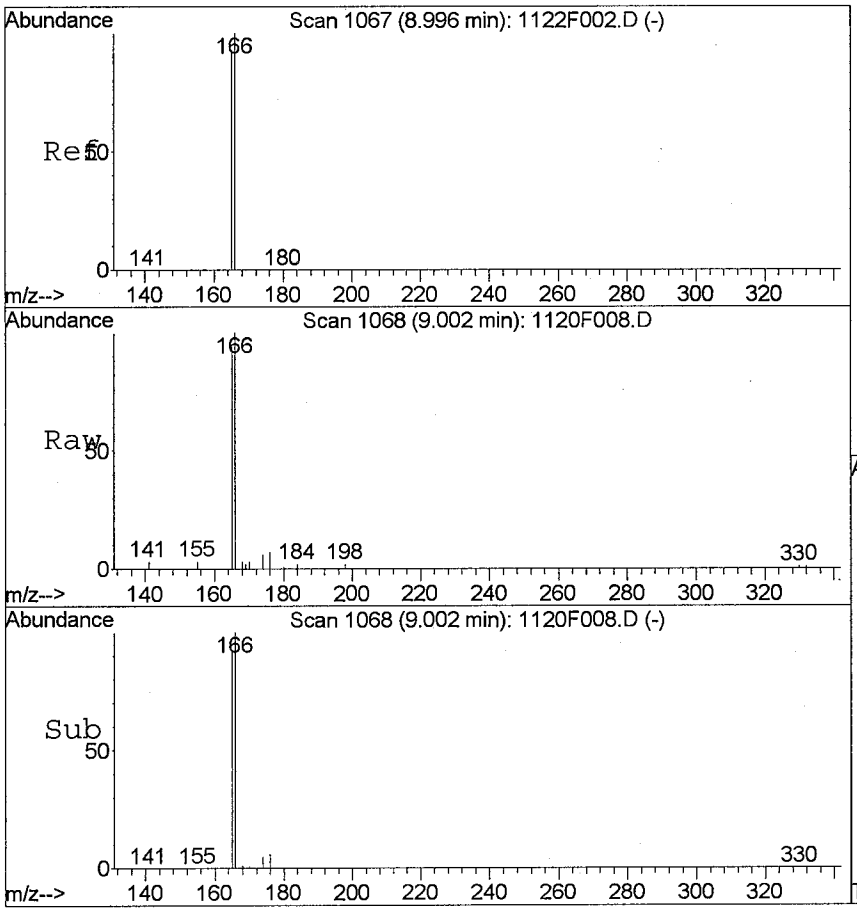


#15
2,3,5-Trimethylnaphthalene
Concen: 4.89 ng/ml m
RT: 8.77 min Scan# 1028
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:170 Resp: 623

Ion	Ratio	Lower	Upper
170	100		
155	101.6	55.5	115.5

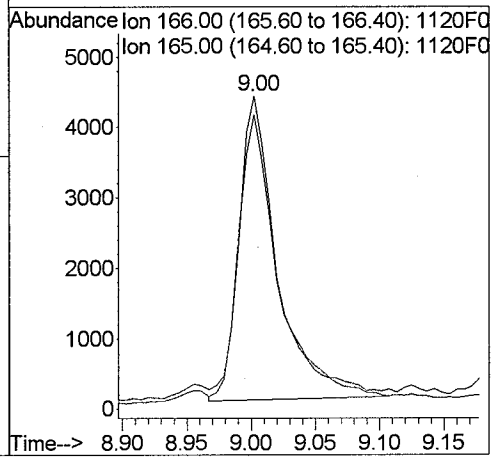


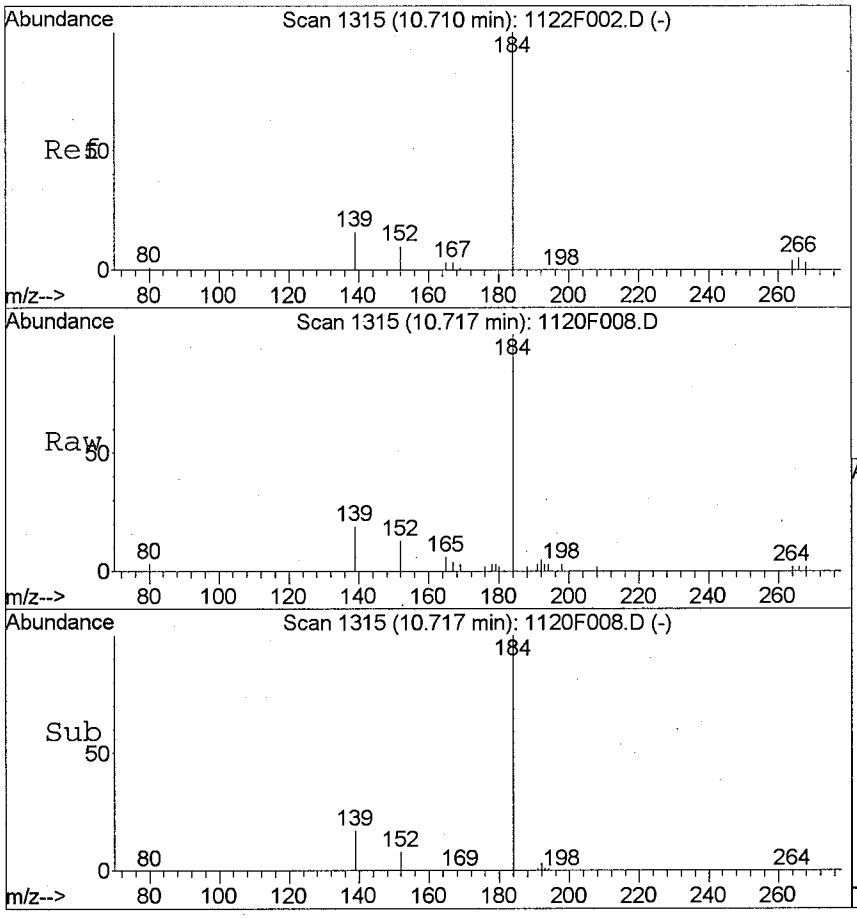


#17
Fluorene
Concen: 58.36 ng/ml
RT: 9.00 min Scan# 1068
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:166 Resp: 8898

Ion	Ratio	Lower	Upper
166	100		
165	91.5	63.3	123.3

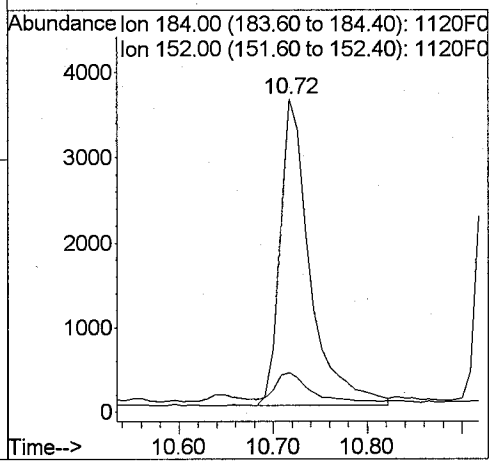


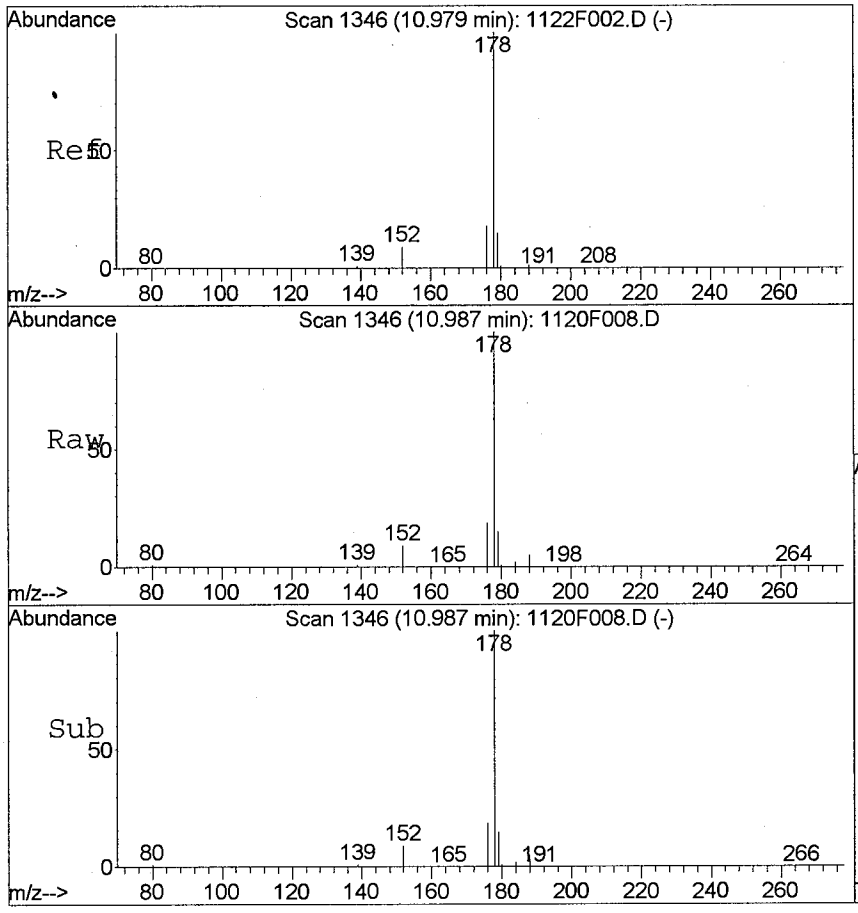


#24
Dibenzothiophene
Concen: 43.10 ng/ml
RT: 10.72 min Scan# 1315
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:184 Resp: 8079

Ion	Ratio	Lower	Upper
184	100		
152	9.3	0.0	39.0

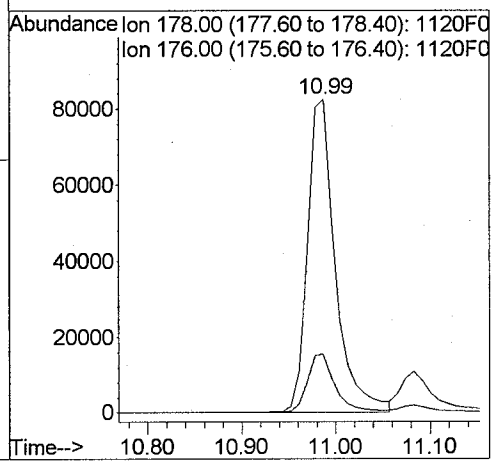


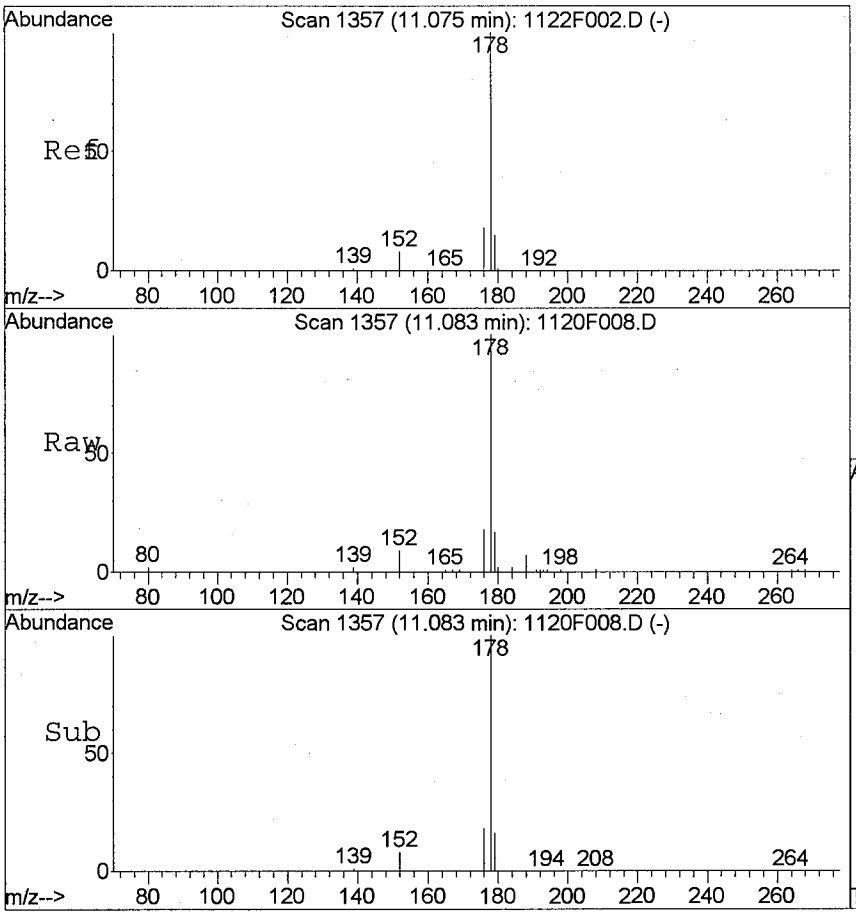


#28
Phenanthrene
Concen: 864.16 ng/ml
RT: 10.99 min Scan# 1346
Delta R.T. 0.02 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:178 Resp: 170152

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	49.0

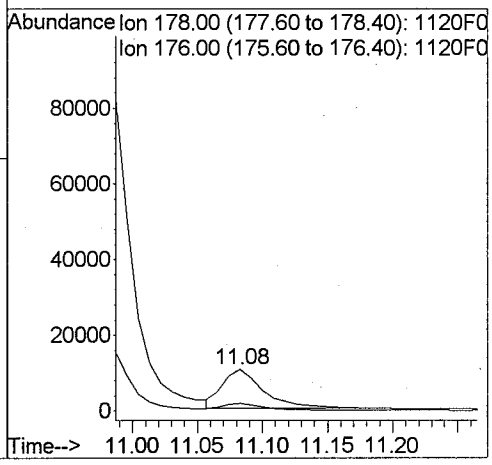


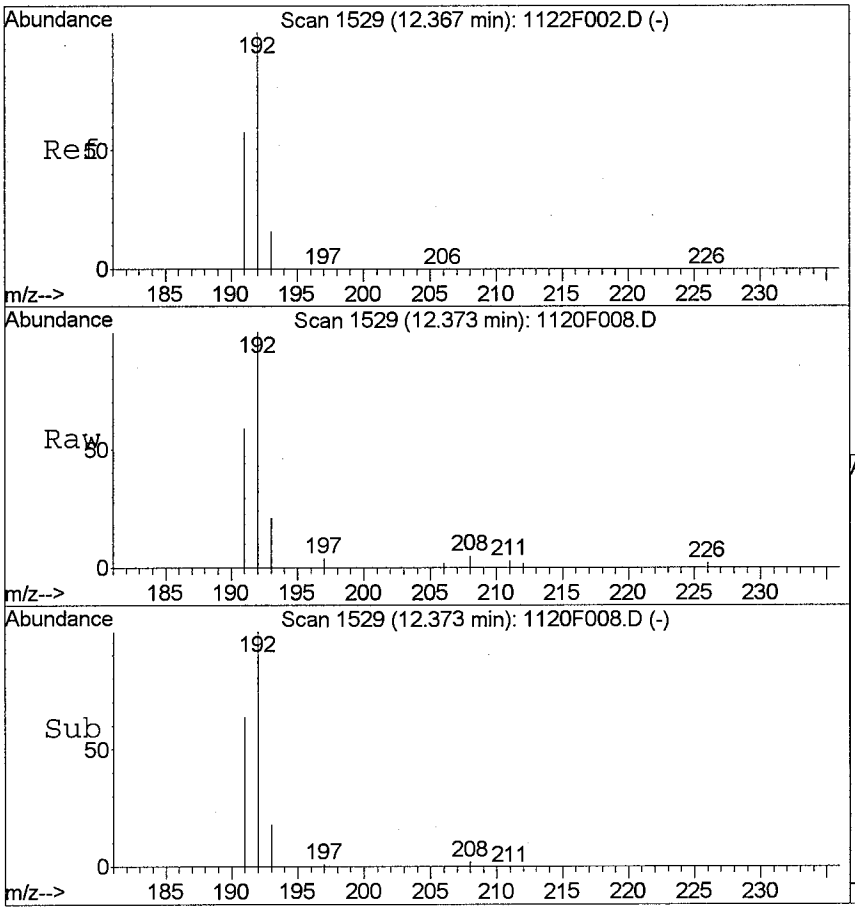


#29
Anthracene
Concen:, 136.69 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:178 Resp: 22994

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	47.8

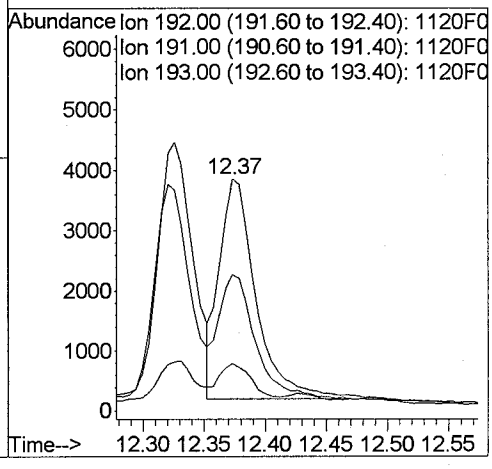


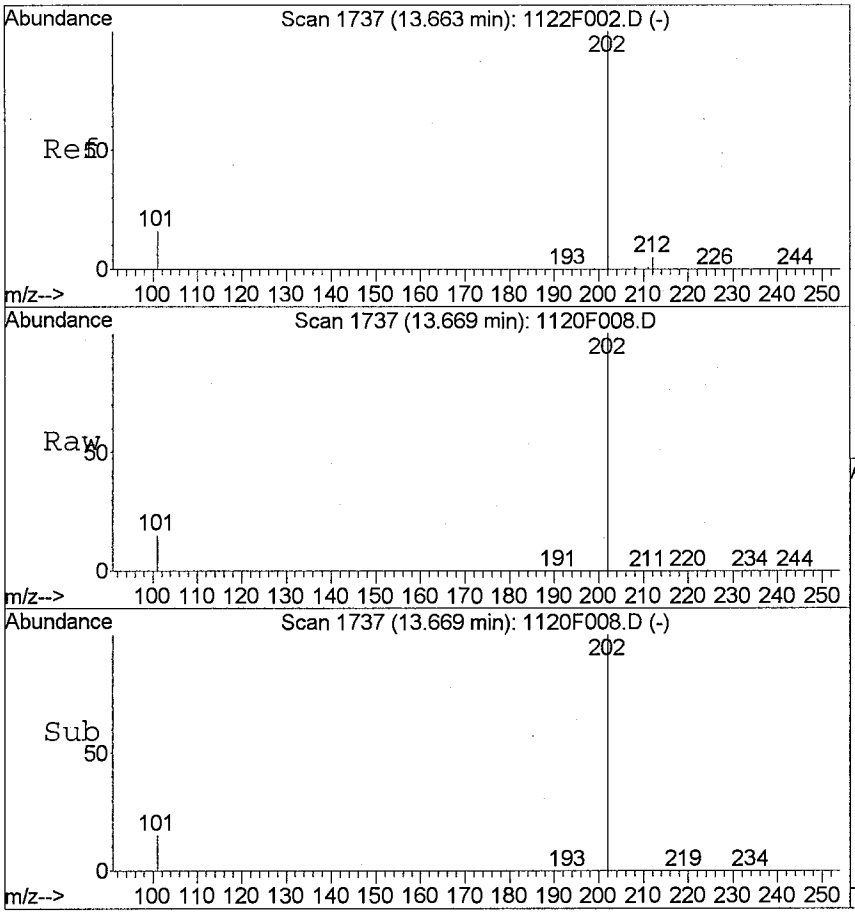


#31
1-Methylphenanthrene
Concen: 57.48 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:192 Resp: 7685

Ion	Ratio	Lower	Upper
192	100		
191	57.3	27.0	87.0
193	16.3	0.0	45.8

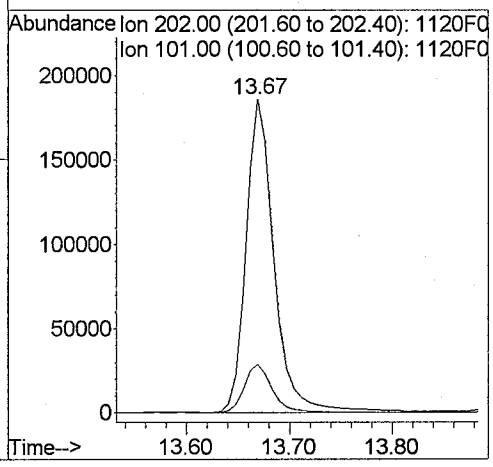


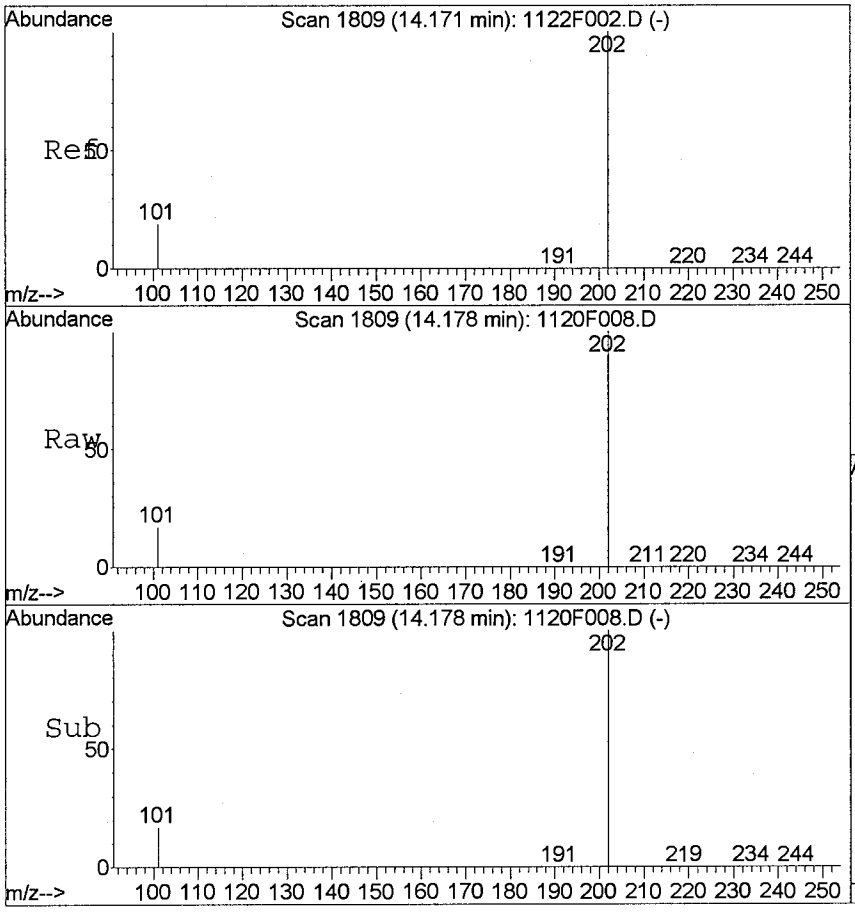


#36
Fluoranthene
Concen: 1782.15 ng/ml
RT: 13.67 min Scan# 1737
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:202 Resp: 349296

Ion	Ratio	Lower	Upper
202	100		
101	15.4	0.0	46.1

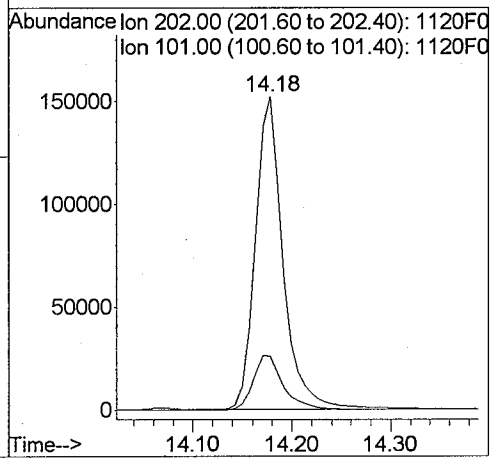


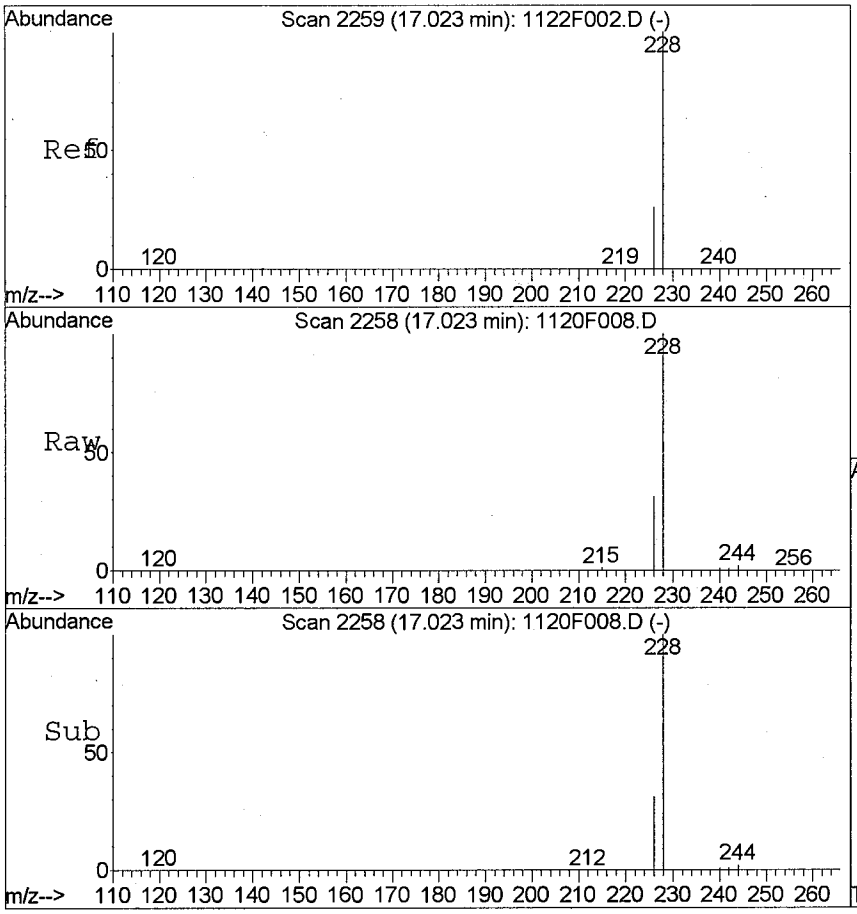


#39
Pyrene
Concen: 1610.34 ng/ml
RT: 14.18 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:202 Resp: 295624

Ion	Ratio	Lower	Upper
202	100		
101	17.2	0.0	47.3

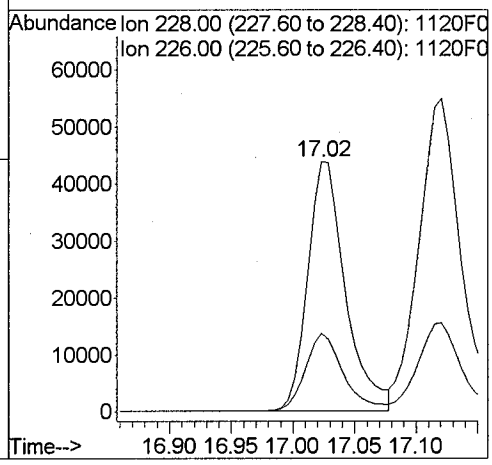


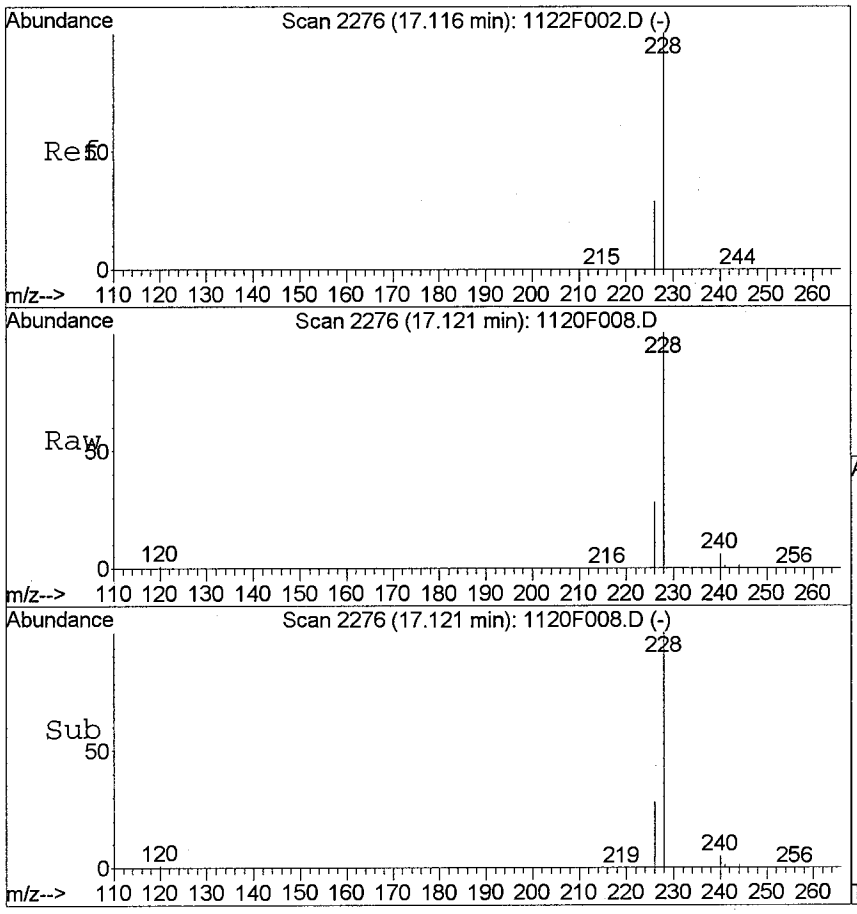


#42
Benz(a)anthracene
Concen: 667.47 ng/ml
RT: 17.02 min Scan# 2258
Delta R.T. 0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:228 Resp: 93290

Ion	Ratio	Lower	Upper
228	100		
226	31.2	0.0	56.3

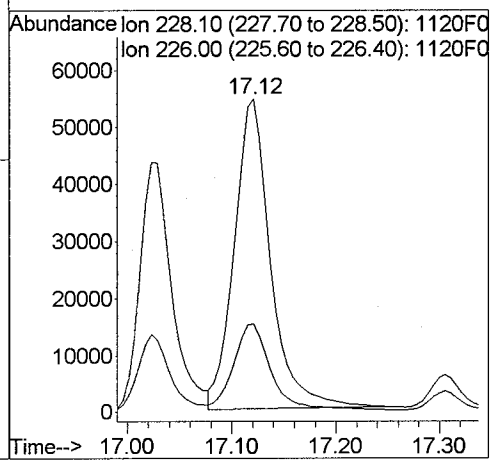


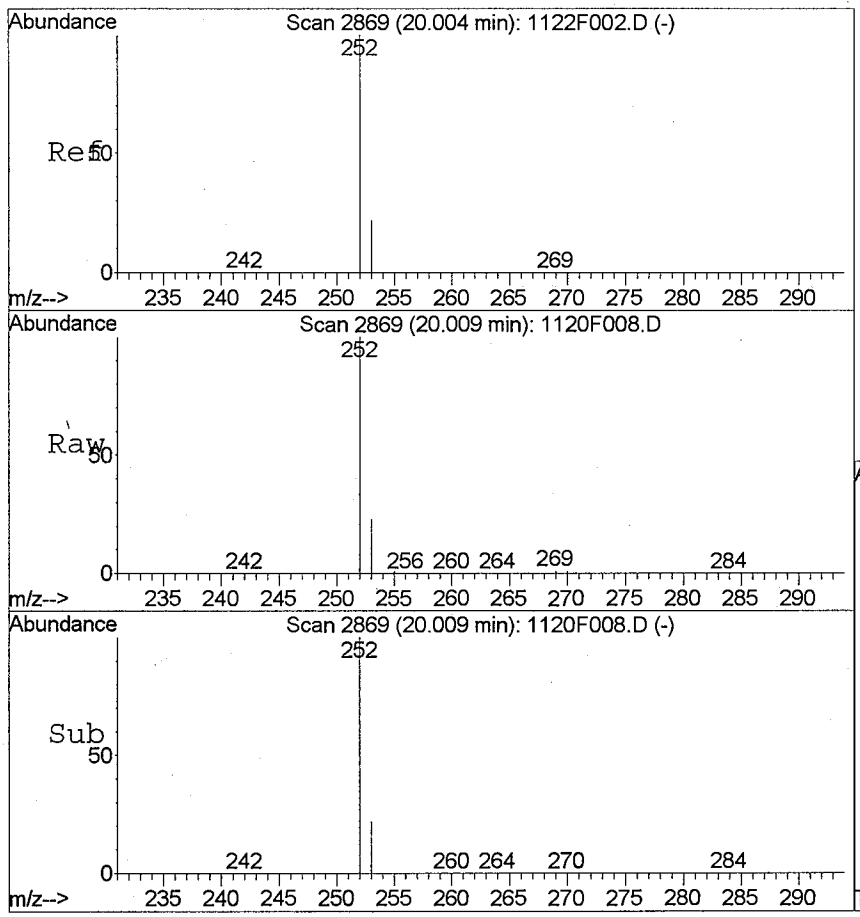


#43
Chrysene
Concen: 881.85 ng/ml
RT: 17.12 min Scan# 2276
Delta R.T. 0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:228 Resp: 131799

Ion	Ratio	Lower	Upper
228	100		
226	28.2	0.0	58.3

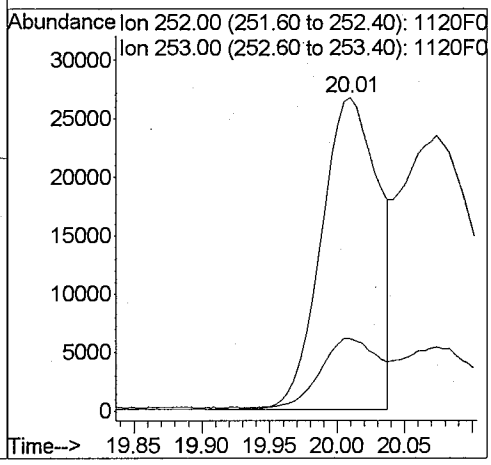


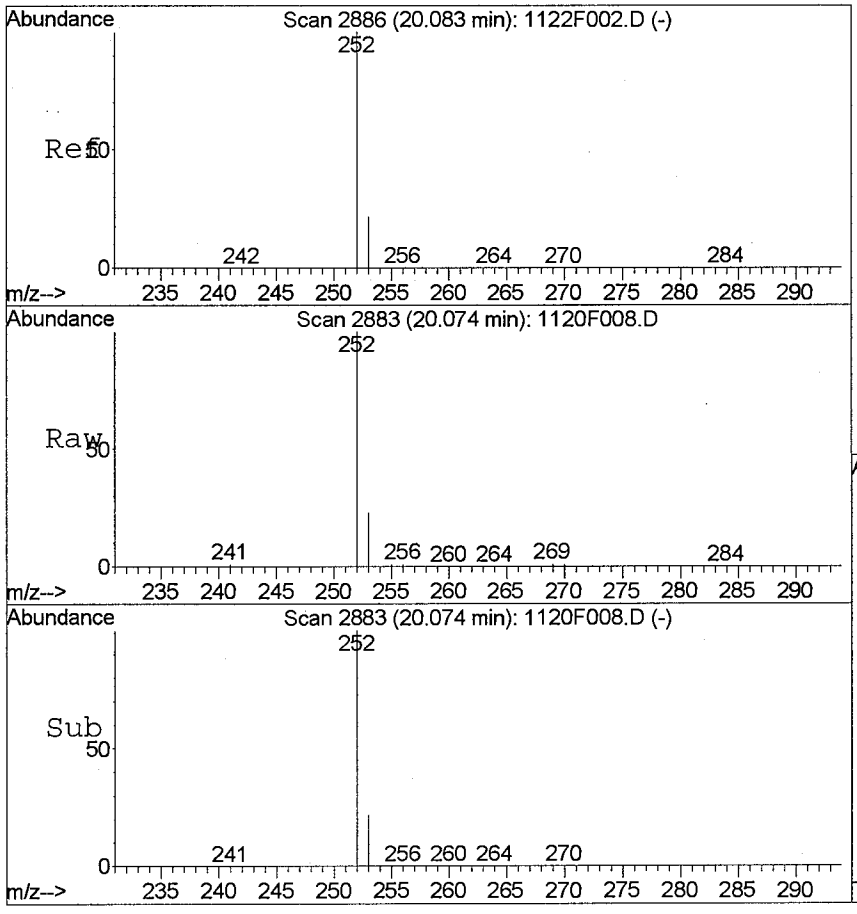


#49
Benzo(b)fluoranthene
Concen: 741.96 ng/ml
RT: 20.01 min Scan# 2869
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:252 Resp: 78681

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9

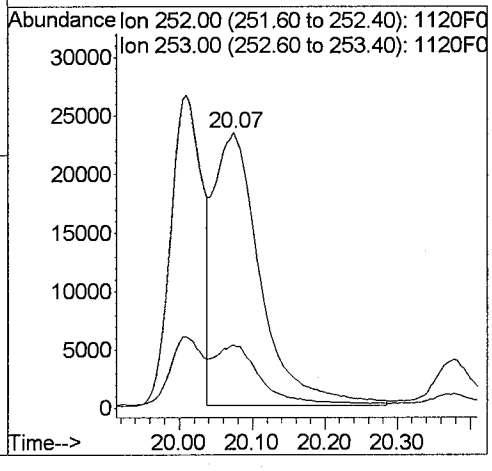


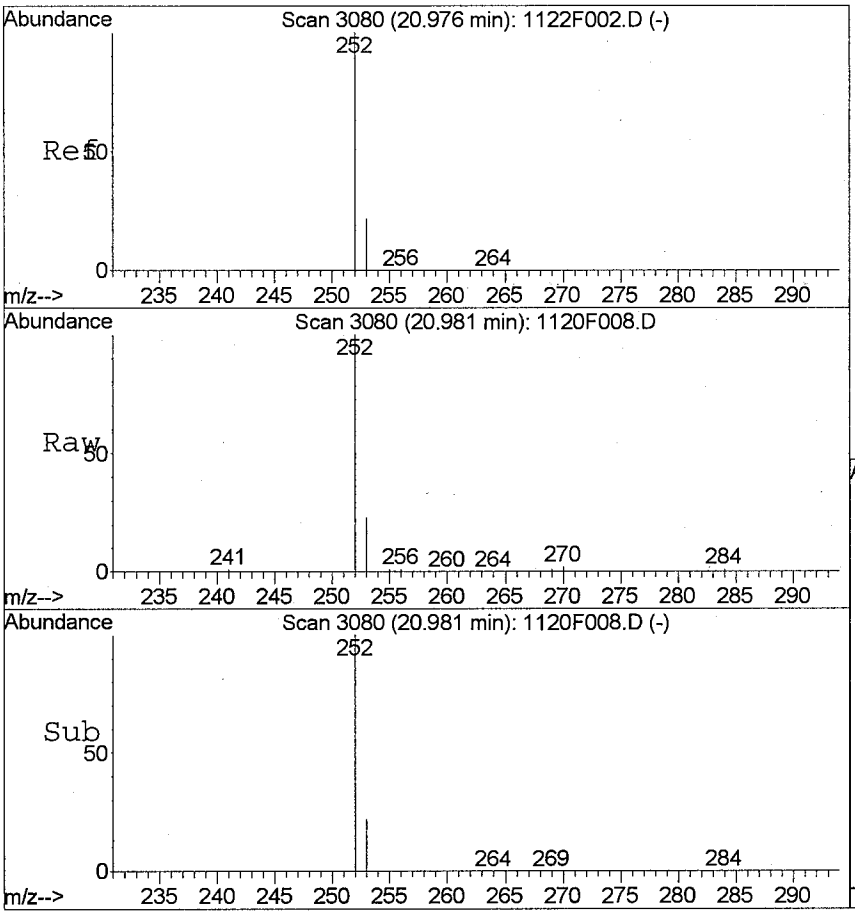


#50
Benzo(k)fluoranthene
Concen: 776.19 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. -0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:252 Resp: 104440

Ion	Ratio	Lower	Upper
252	100		
253	23.1	0.0	52.0

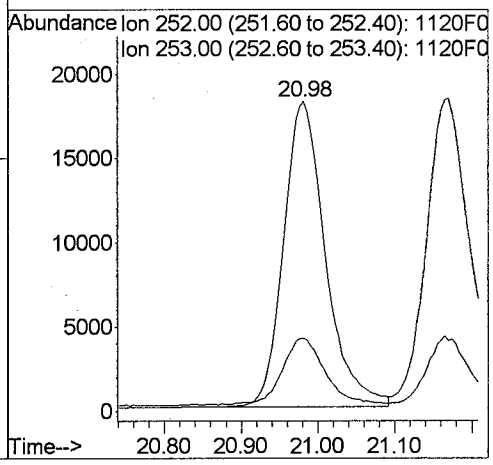


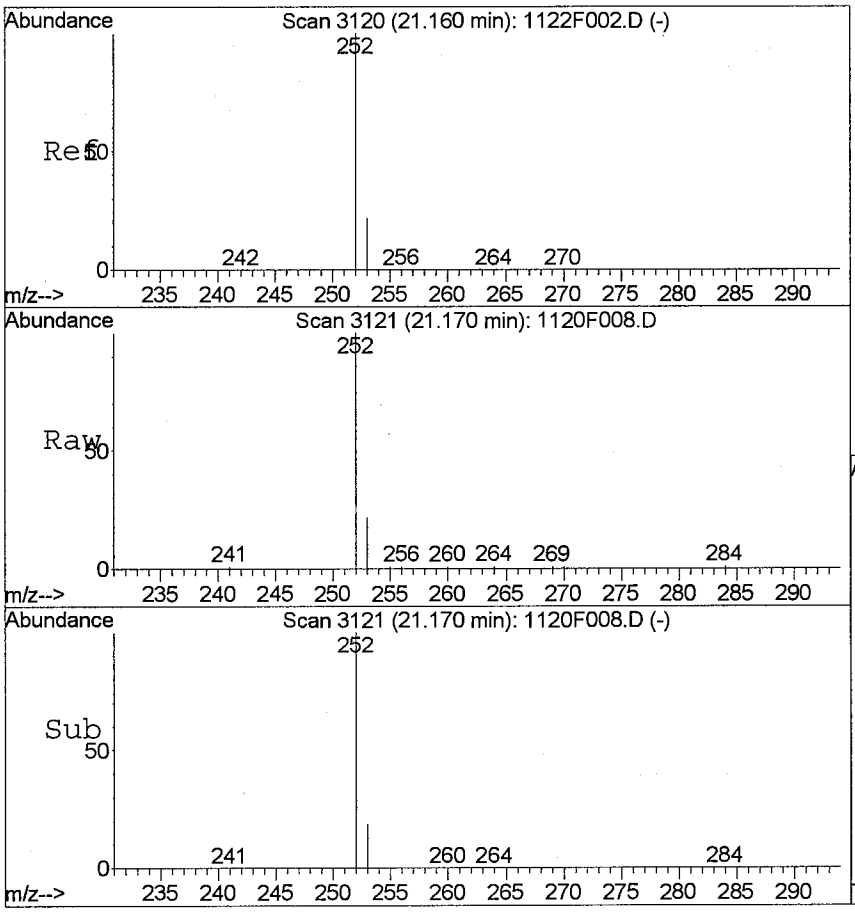


#51
Benzo(e)pyrene
Concen: 574.02 ng/ml
RT: 20.98 min Scan# 3080
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:252 Resp: 68346

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.9

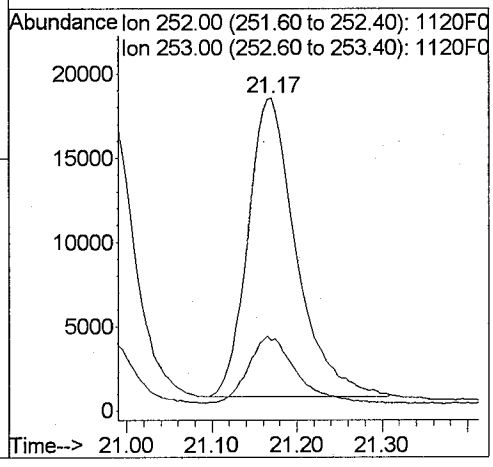


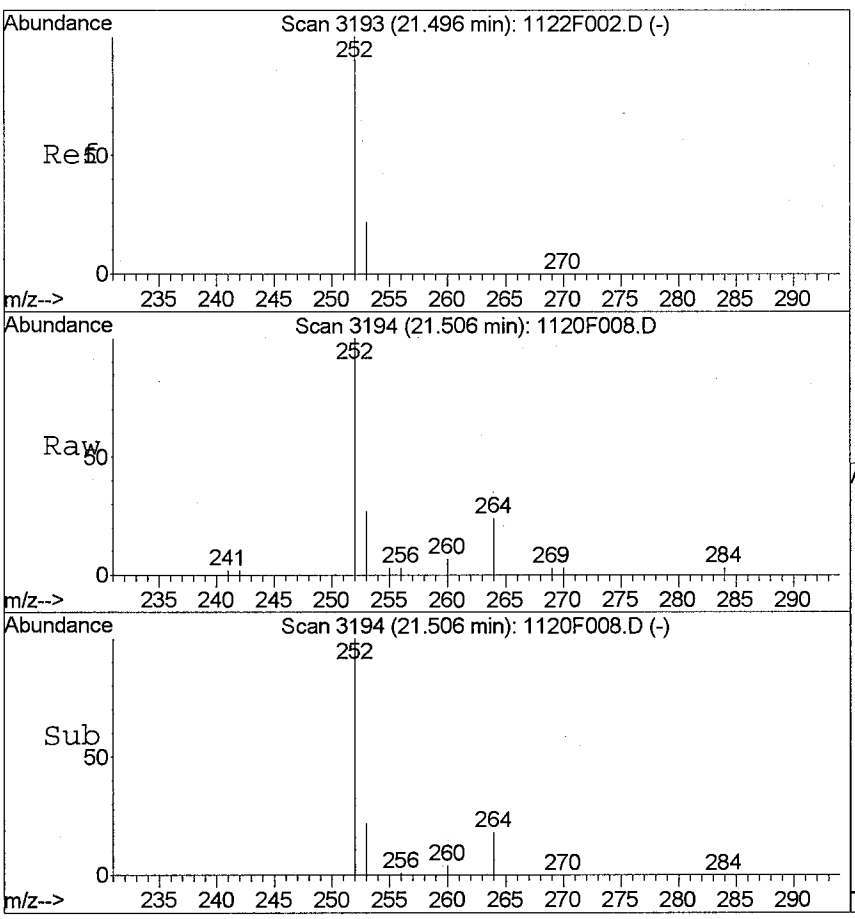


#52
Benzo(a)pyrene
Concen: 775.99 ng/ml
RT: 21.17 min Scan# 3121
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:252 Resp: 69995

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.9

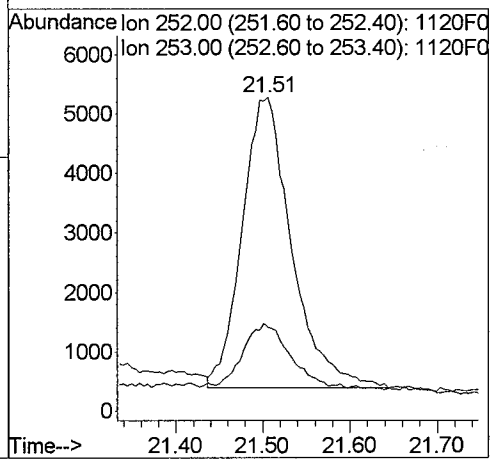


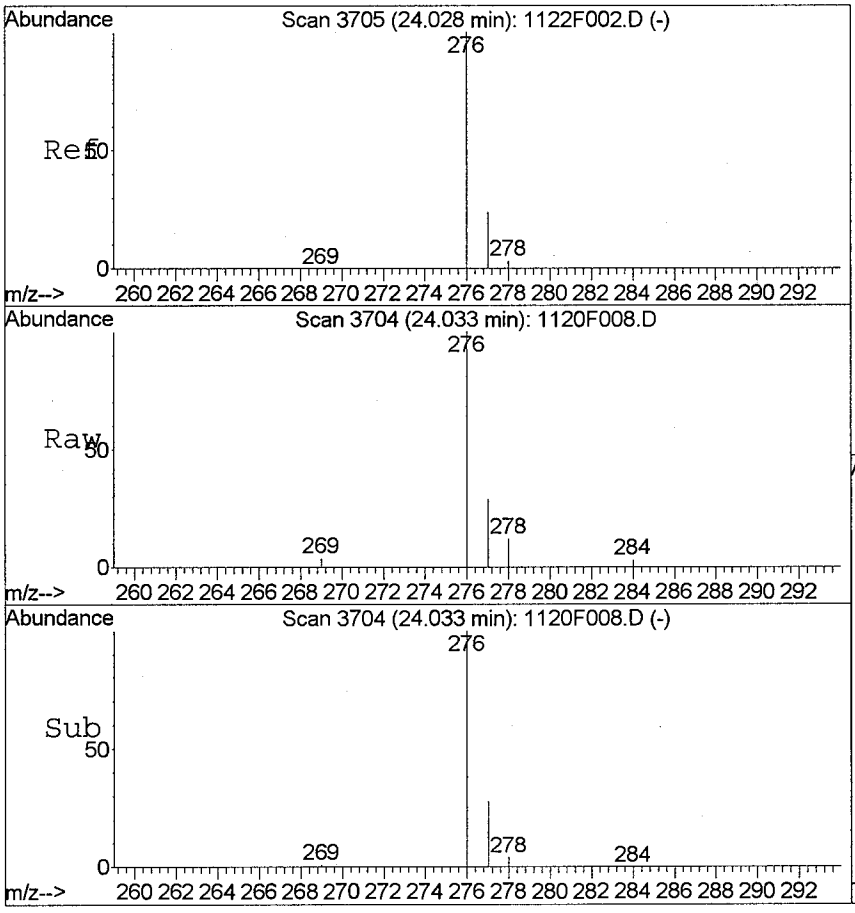


#53
Perylene
Concen: 190.15 ng/ml
RT: 21.51 min Scan# 3194
Delta R.T. 0.01 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:252 Resp: 19253

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.6

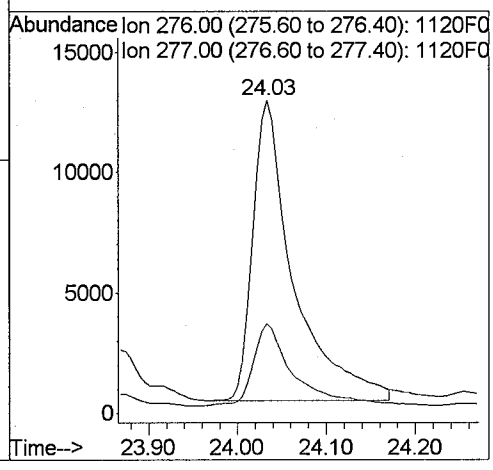


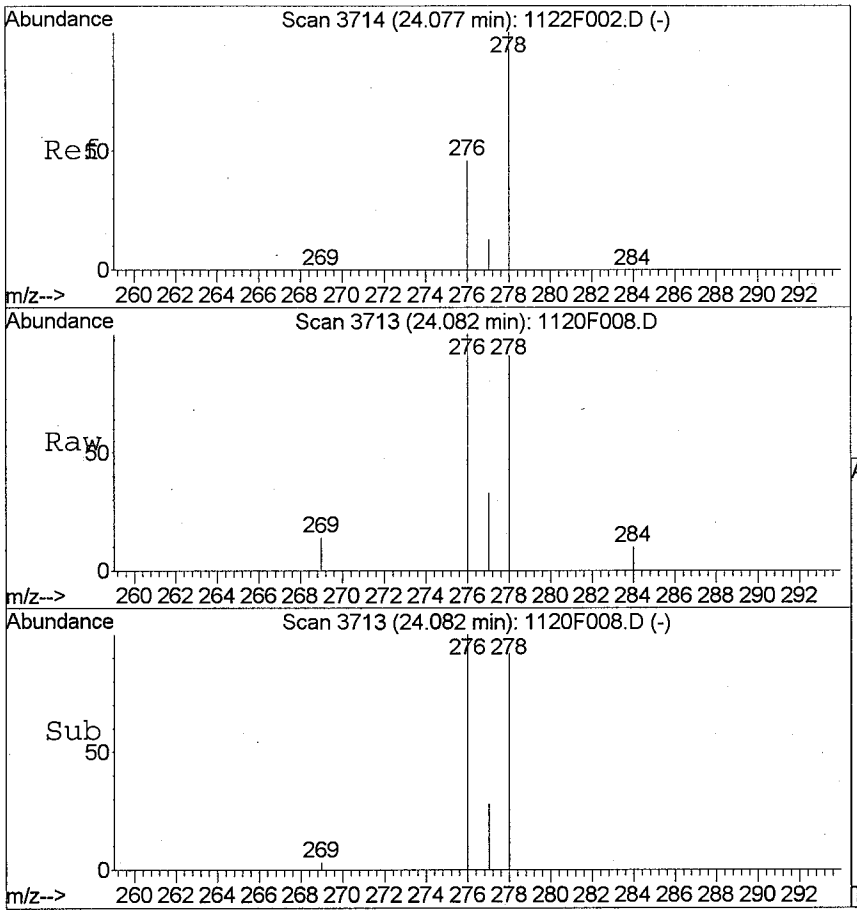


#54
Indeno(1,2,3-cd)pyrene
Concen: 722.08 ng/ml
RT: 24.03 min Scan# 3704
Delta R.T. 0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:276 Resp: 39594

Ion	Ratio	Lower	Upper
276	100		
277	27.1	0.0	53.8

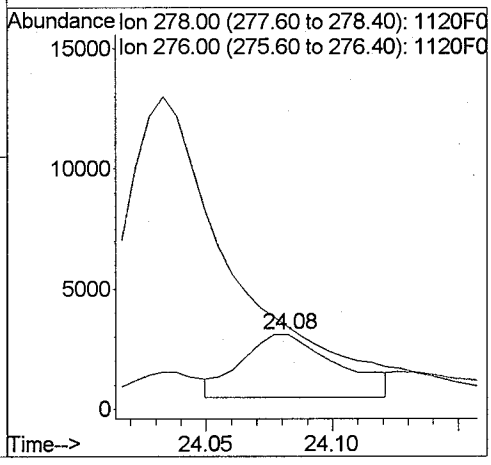


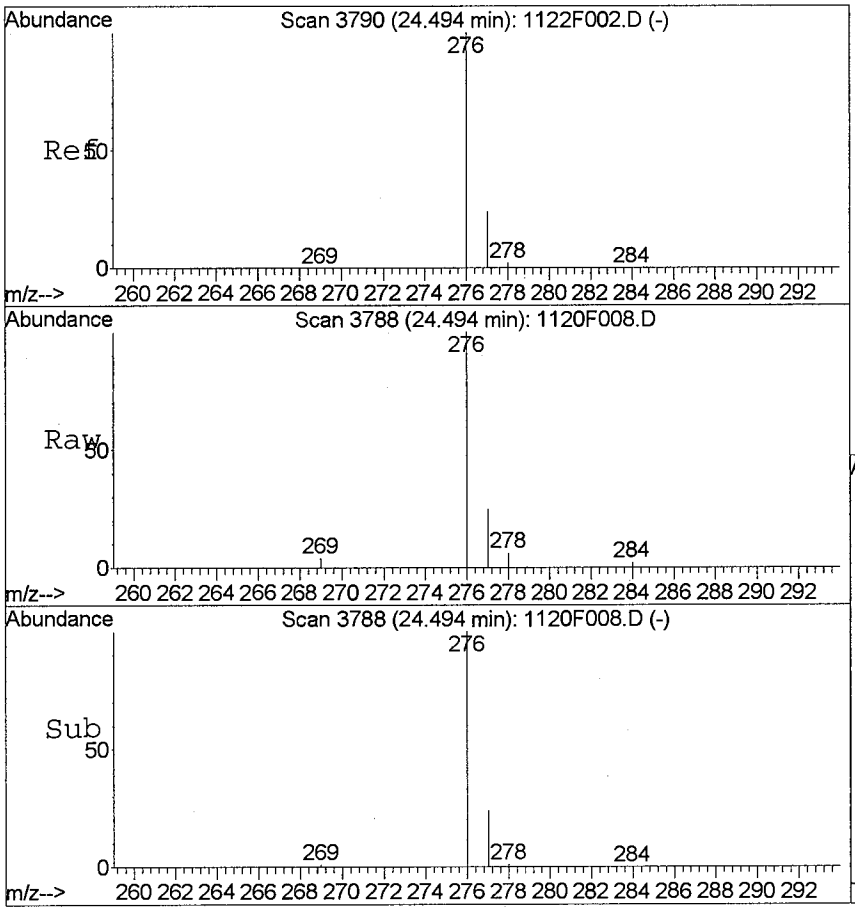


#55
Dibenz(a,h)anthracene
Concen: 87.85 ng/ml m
RT: 24.08 min Scan# 3713
Delta R.T. 0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:278 Resp: 6923

Ion	Ratio	Lower	Upper
278	100		
276	109.9	5.3	65.3#

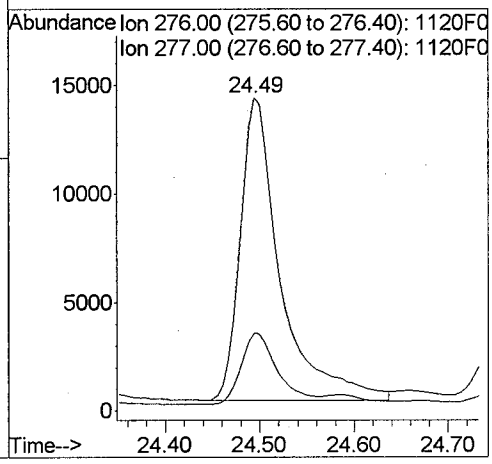




#56
Benzo(g,h,i)perylene
Concen: 452.16 ng/ml
RT: 24.49 min Scan# 3788
Delta R.T. 0.00 min
Lab File: 1120F008.D
Acq: 20 Nov 2003 9:24 am

Tgt Ion:276 Resp: 41105

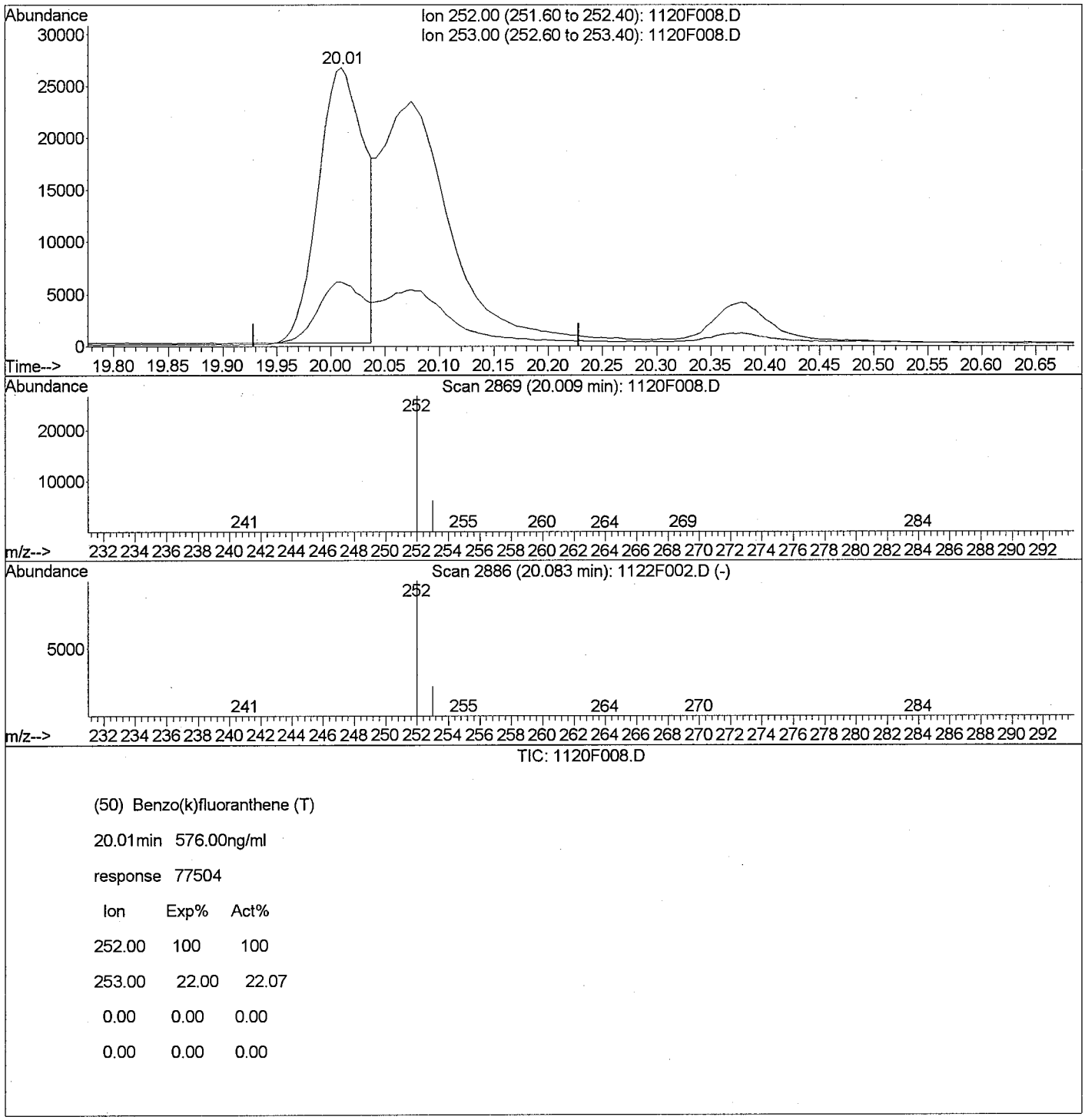
Ion	Ratio	Lower	Upper
276	100		
277	23.5	0.0	53.5



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F008.D Vial: 5
Acq On : 20 Nov 2003 9:24 am Operator: LWeiskopf
Sample : K2308433-005DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:17 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F008.D

(50) Benzo(k)fluoranthene (T)

20.01min 576.00ng/ml

response 77504

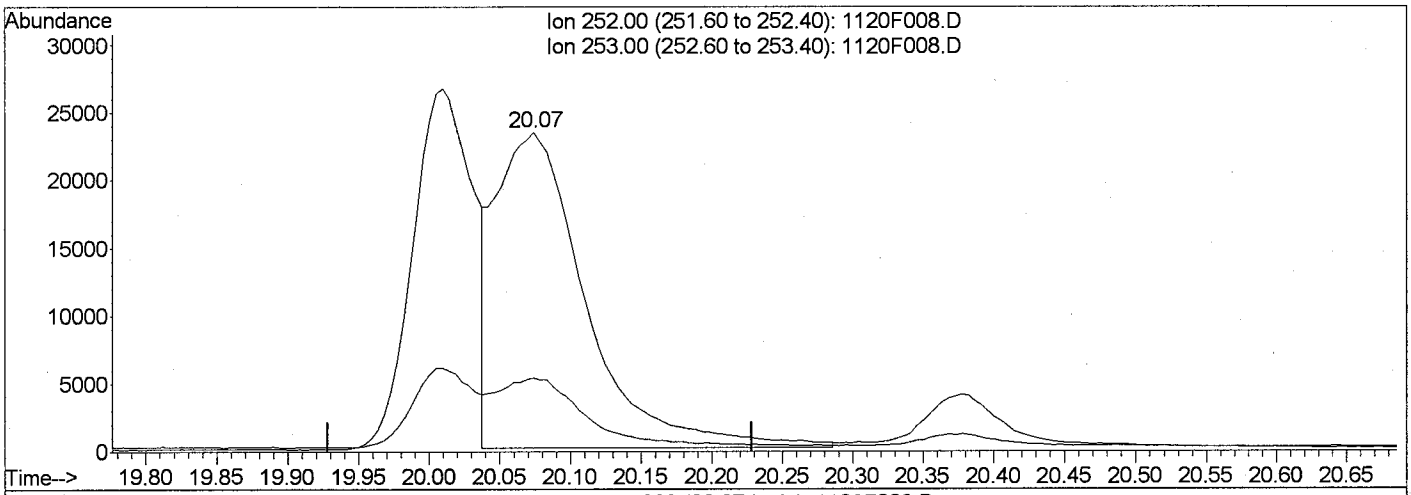
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.07
0.00	0.00	0.00
0.00	0.00	0.00

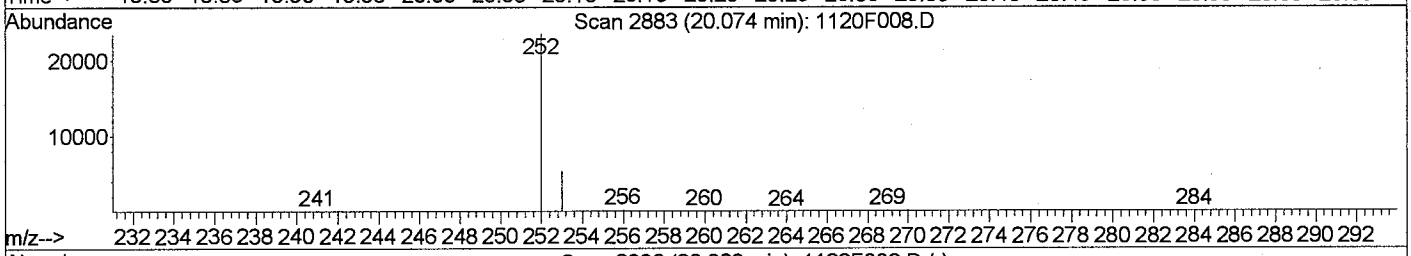
1120F008.D 1107ALK.M Mon Nov 24 09:18:03 2003

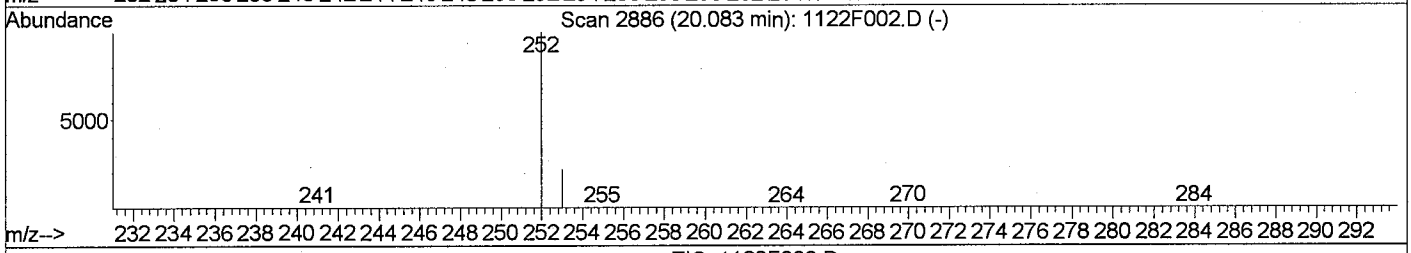
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F008.D Vial: 5
Acq On : 20 Nov 2003 9:24 am Operator: LWeiskopf
Sample : K2308433-005DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F008.D

(50) Benzo(k)fluoranthene (T)

20.07min 776.19ng/ml m

response 104440

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	23.09
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/21/13

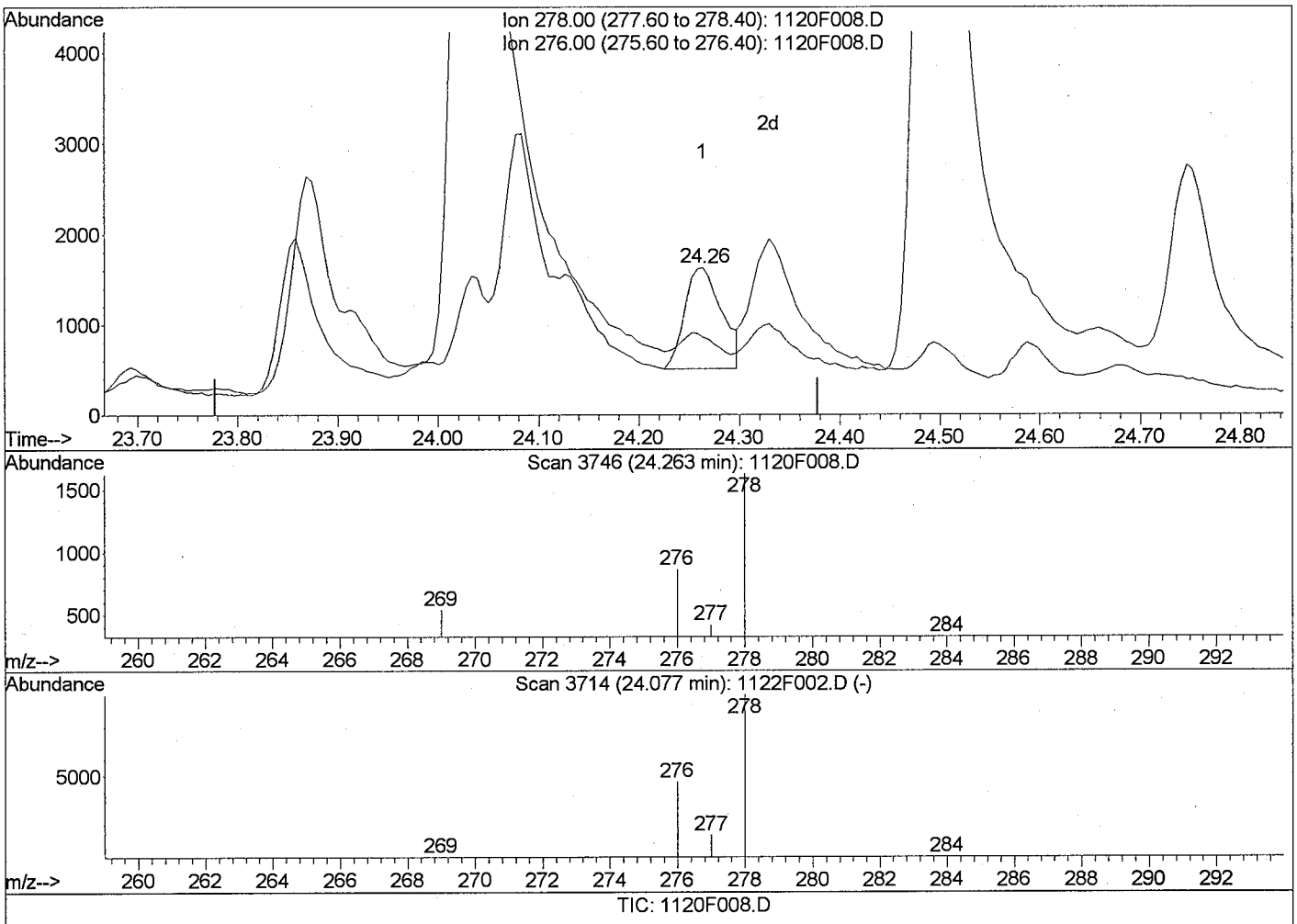
1120F008.D 1107ALK.M Mon Nov 24 09:18:10 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F008.D
Acq On : 20 Nov 2003 9:24 am
Sample : K2308433-005DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F008.D

(55) Dibenz(a,h)anthracene (T)

24.26min 36.37ng/ml

response 2866

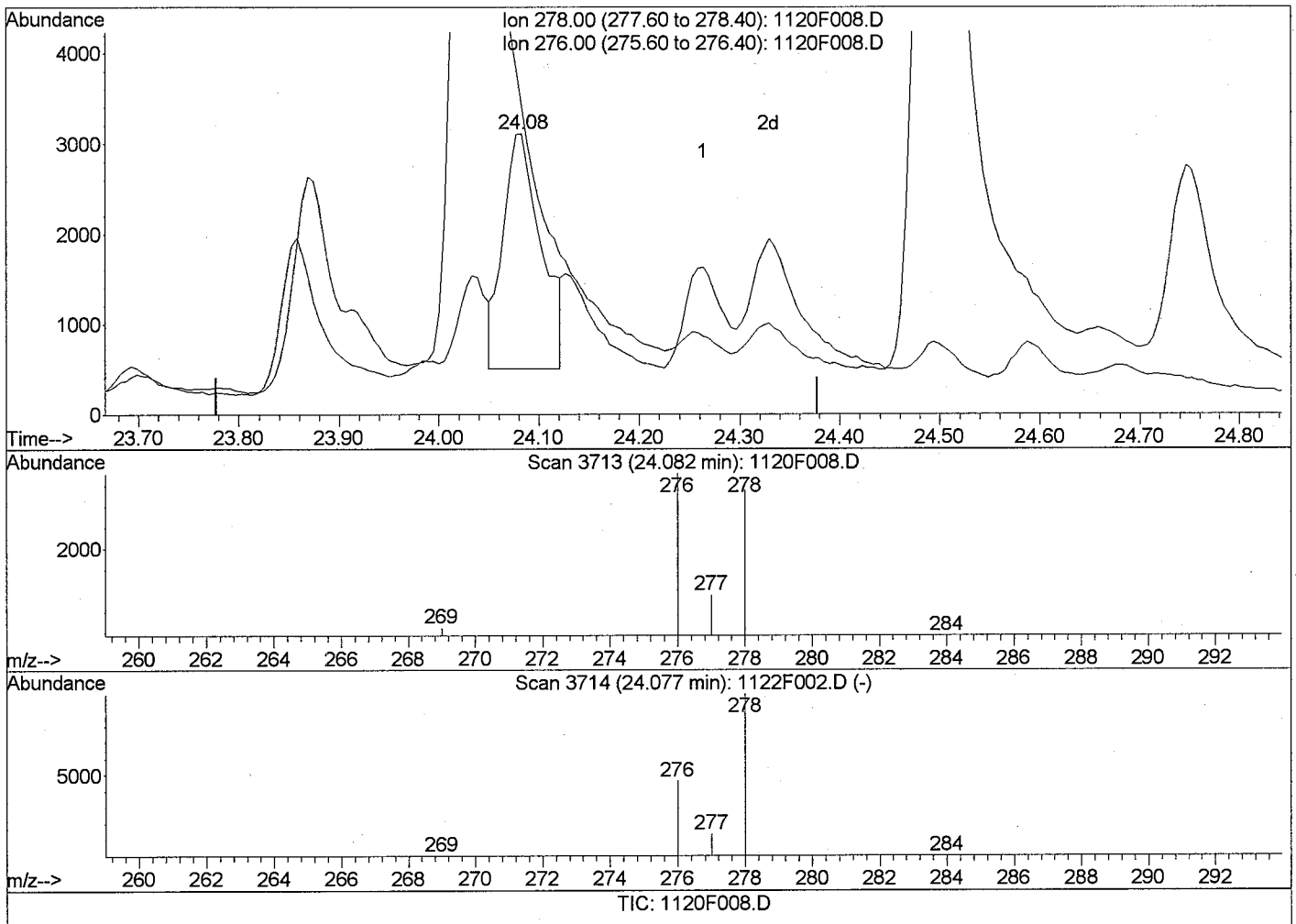
Ion	Exp%	Act%
278.00	100	100
276.00	35.30	16.16
0.00	0.00	0.00
0.00	0.00	0.00

1120F008.D 1107ALK.M Mon Nov 24 09:18:15 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F008.D Vial: 5
Acq On : 20 Nov 2003 9:24 am Operator: LWeiskopf
Sample : K2308433-005DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F008.D

(55) Dibenz(a,h)anthracene (T)

24.08min 87.85ng/ml m

response 6923

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	109.93#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak

1120F008.D 1107ALK.M Mon Nov 24 09:18:24 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-5
Lab Code: K2308433-006

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	10		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	20		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	30		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	85		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	71		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	28		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	8.3		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	21		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	18		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	77		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	81		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	67		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	41		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	28		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	54		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	14		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	40		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	32		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	920		4.9	1	11/05/03	11/19/03	KWG0317778	
Anthracene	230		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	390		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	160		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	71		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	33		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	1700	D	49	10	11/05/03	11/20/03	KWG0317778	
Pyrene	1500	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	620		4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	790		4.9	1	11/05/03	11/19/03	KWG0317778	
Chrysene	960		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	380		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	120		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	61		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	21		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	820		4.9	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-5
Lab Code: K2308433-006

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**710**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**550**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**850**		4.9	1	11/05/03	11/19/03	KWG0317778	
Perylene	**200**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**870**		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**120**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**470**		4.9	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	70	27-110	11/19/03	Acceptable
Fluoranthene-d10	91	34-122	11/19/03	Acceptable
Terphenyl-d14	100	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F042.D
Lab ID: K2308433-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 19:26
Date Quantitated: 11/21/2003 12:26
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	15399.25	NA	10000	See Dil
	Fluoranthene	19397.82	NA	10000	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Printed: 11/21/2003 13:54:12
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247864	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F042.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 19:26	**Quant Date:**	11/24/2003 12:04	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	235969	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	125353	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	185430	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	182833	1,000.00	OK
5	Perylene-d12	21.39	0.03	264	119053	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	88145	703.09	70	27-110	OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	169630	913.99	91	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	166880	1,001	100	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	28547	106.99	10		
1	2-Methylnaphthalene	6.37		0.00	142	32086	203.65	20		
1	1-Methylnaphthalene	6.52	0.01	0.00	142	45906	310.84	30		
1	Biphenyl	7.04	0.01	0.00	154	16169	84.64	8.3		
1	C2-Naphthalenes	7.42	?	?	156	231339m	867.06	85		
1	C3-Naphthalenes	8.43	?	?	170	193191m	724.08	71		
1	C4-Naphthalenes	9.80	?	?	184	77578m	290.76	28		
2	Acenaphthylene	7.74	0.01	0.00	152	51726	214.17	21		
2	Acenaphthene	8.06	0.01	0.00	154	117373	788.53	77		
2	Dibenzofuran	8.35	0.01	0.00	168	37218	186.52	18		
2	Fluorene	8.99		0.00	166	131654	825.66	81		
2	C1-Fluorenes	10.13	?	?	180	108970m	683.40	67		
2	C2-Fluorenes	11.41	?	?	194	67169m	421.25	41		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F042.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 19:26	**Quant Date:**	11/24/2003 12:04	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	46565**m**	292.03	28		
3	Dibenzothiophene	10.71		0.00	184	119451	558.33	54		
3	C1-Dibenzothiophenes	9.83	?	?	198	30567**m**	142.87	14		
3	C2-Dibenzothiophenes	12.63	?	?	212	88163**m**	412.08	40		
3	C3-Dibenzothiophenes	13.68	?	?	226	69492**m**	324.81	32		
3	Phenanthrene	10.98	0.01	0.00	178	2125690	9,459	920		
3	Anthracene	11.07		0.00	178	454412	2,367	230		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	886990**m**	3,947	390		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	365170**m**	1,625	160		
3	C3-Phenanthrenes/Anthracenes	14.45	?	?	220	163583**m**	727.89	71		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	75228**m**	334.74	33		
3	Fluoranthene	13.67	0.02	0.00	202	4339413	19,398	1900	E	NR
4	Pyrene	14.17	0.01	0.00	202	3680075	15,399	1500	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	1523537**m**	6,375	620		
4	Benz(a)anthracene	17.02	0.01	0.00	228	1482127	8,146	790		
4	Chrysene	17.12	0.02	0.00	228	1923033	9,884	960		
4	C1-Chrysenes	18.05	?	?	242	753192**m**	3,871	380		
4	C2-Chrysenes	19.39	?	?	256	242898**m**	1,248	120		
4	C3-Chrysenes	20.95	?	?	270	121289**m**	623.40	61		
4	C4-Chrysenes	22.40	?	?	284	42616**m**	219.04	21		
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	1342412	8,446	820		
5	Benzo(k)fluoranthene	20.07	0.02	0.00	252	1471998**m**	7,299	710		
5	Benzo(e)pyrene	20.97	0.04	0.00	252	1011806	5,670	550		
5	Benzo(a)pyrene	21.15	0.03	0.00	252	1176927	8,706	850		
5	Perylene	21.49	0.04	0.00	252	309748	2,041	200		
5	Indeno(1,2,3-cd)pyrene	24.02	0.02	0.00	276	735841	8,954	870		
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	147654**m**	1,250	120		
5	Benzo(g,h,i)perylene	24.49	0.03	0.00	276	660332	4,846	470		

Prep Amount: 25.0 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: 82.0 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:30 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	235969	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	125353	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	185430	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	182833	1000.00	ng/ml	0.02
48) Perylene-d12	21.39	264	119053	1000.00	ng/ml	0.03
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	71806	415.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 41.54%			
16) Fluorene-d10	8.94	176	88145	703.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 70.31%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.63	212	169630	913.99	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 91.40%			
41) Terphenyl-d14	14.66	244	166880	1001.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 100.15%			
Target Compounds						Qvalue
2) Naphthalene	5.55	128	28547	106.99	ng/ml	99
3) 2-Methylnaphthalene	6.37	142	32086	203.65	ng/ml	98
4) 1-Methylnaphthalene	6.52	142	45906	310.84	ng/ml	98
6) Biphenyl	7.04	154	16169	84.64	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.27	156	42086	313.17	ng/ml	99
8) C2-Naphthalenes	7.42	156	231339m	867.06	ng/ml	
9) C3-Naphthalenes	8.43	170	193191m	724.08	ng/ml	
10) C4-Naphthalenes	9.80	184	77578m	290.76	ng/ml	
12) Acenaphthylene	7.74	152	51726	214.17	ng/ml	98
13) Acenaphthene	8.06	154	117373	788.53	ng/ml	100
14) Dibenzofuran	8.35	168	37218	186.52	ng/ml	94
15) 2,3,5-Trimethylnaphthalene	8.76	170	18323	137.42	ng/ml	98
17) Fluorene	8.99	166	131654	825.66	ng/ml	99
18) C1-Fluorenes	10.13	180	108970m	683.40	ng/ml	
19) C2-Fluorenes	11.41	194	67169m	421.25	ng/ml	
20) C3-Fluorenes	12.76	208	~~81050m~~	~~508.30~~	~~ng/ml~~	
24) Dibenzothiophene	10.71	184	119451	558.33	ng/ml	95
25) C1-Dibenzothiophenes	9.83	198	30567m	142.87	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	88163m	412.08	ng/ml	
27) C3-Dibenzothiophenes	13.68	226	69492m	324.81	ng/ml	
28) Phenanthrene	10.98	178	2125690	9458.60	ng/ml	99
29) Anthracene	11.07	178	454412	2366.76	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	146092	957.42	ng/ml	100

See manual 11/24/13

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:30 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
32)	C1-Phenanthrenes/Anthracen	12.12	192	886990m	3946.80	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	365170m	1624.88	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.45	220	163583m	727.89	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	75228m	334.74	ng/ml	
36)	Fluoranthene	13.67	202	4339413	19397.82	ng/ml	98
39)	Pyrene	14.17	202	3680075	15399.25	ng/ml	95
40)	C1-Fluoranthenes/Pyrenes	15.01	216	1523537m	6375.23	ng/ml	
42)	Benz(a)anthracene	17.02	228	1482127	8146.04	ng/ml	96
43)	Chrysene	17.12	228	1923033	9883.99	ng/ml	99
44)	C1-Chrysenes	18.05	242	753192m	3871.25	ng/ml	
45)	C2-Chrysenes	19.39	256	242898m	1248.45	ng/ml	
46)	C3-Chrysenes	20.95	270	~~164183m~~	~~843.87~~	~~ng/ml~~	see manual J 11/24/3
47)	C4-Chrysenes	22.40	284	42616m	219.04	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	1342412	8446.02	ng/ml	99
50)	Benzo(k)fluoranthene	20.07	252	1471998m	7299.00	ng/ml	
51)	Benzo(e)pyrene	20.97	252	1011806	5669.80	ng/ml	100
52)	Benzo(a)pyrene	21.15	252	1176927	8705.53	ng/ml	100
53)	Perylene	21.49	252	309748	2041.05	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.02	276	735841	8953.52	ng/ml	93
55)	Dibenz(a,h)anthracene	24.07	278	147654m	1250.14	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	660332	4846.37	ng/ml	99

(#) = qualifier out of range (m) = manual integration

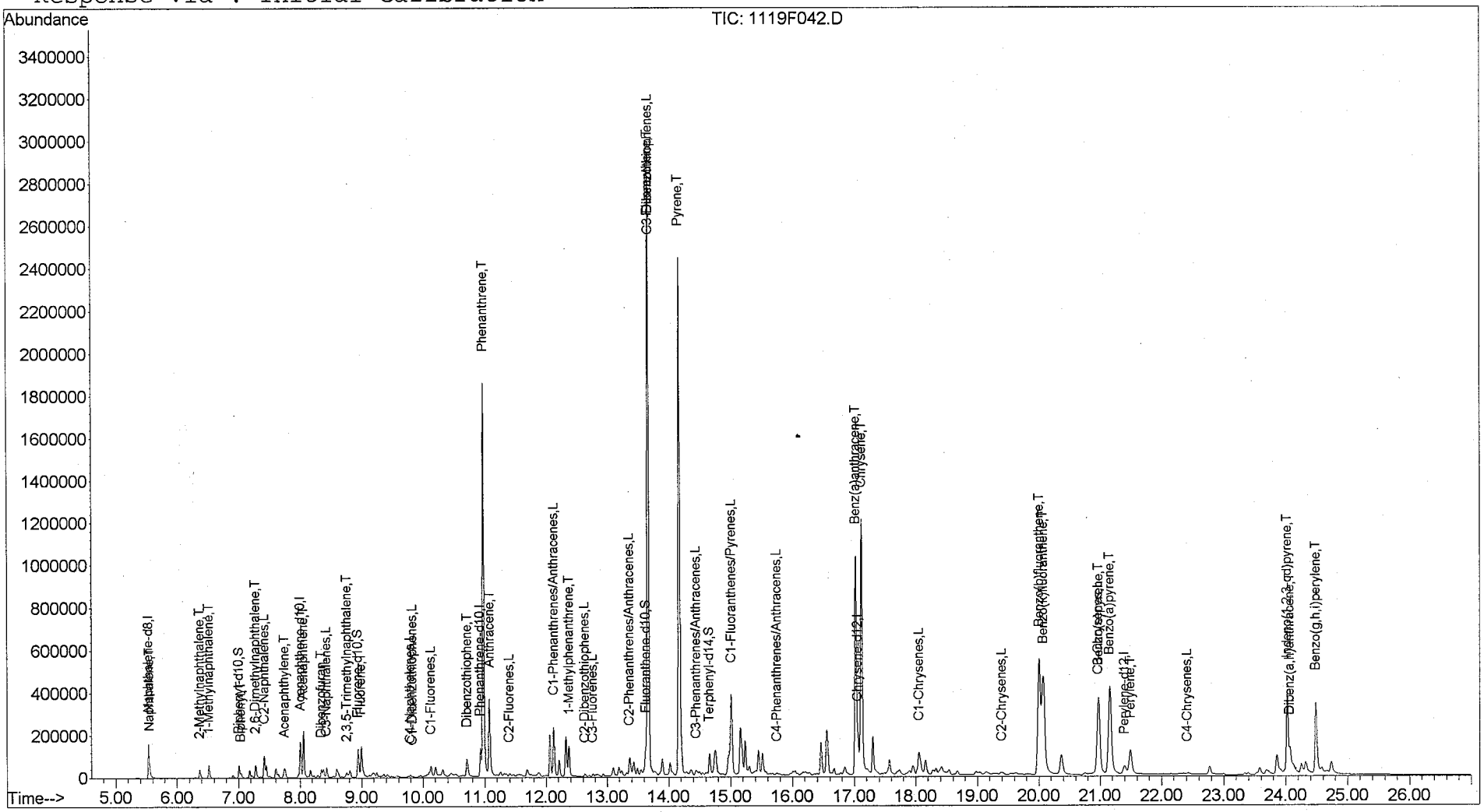
Quantitation Report (QT Reviewed)

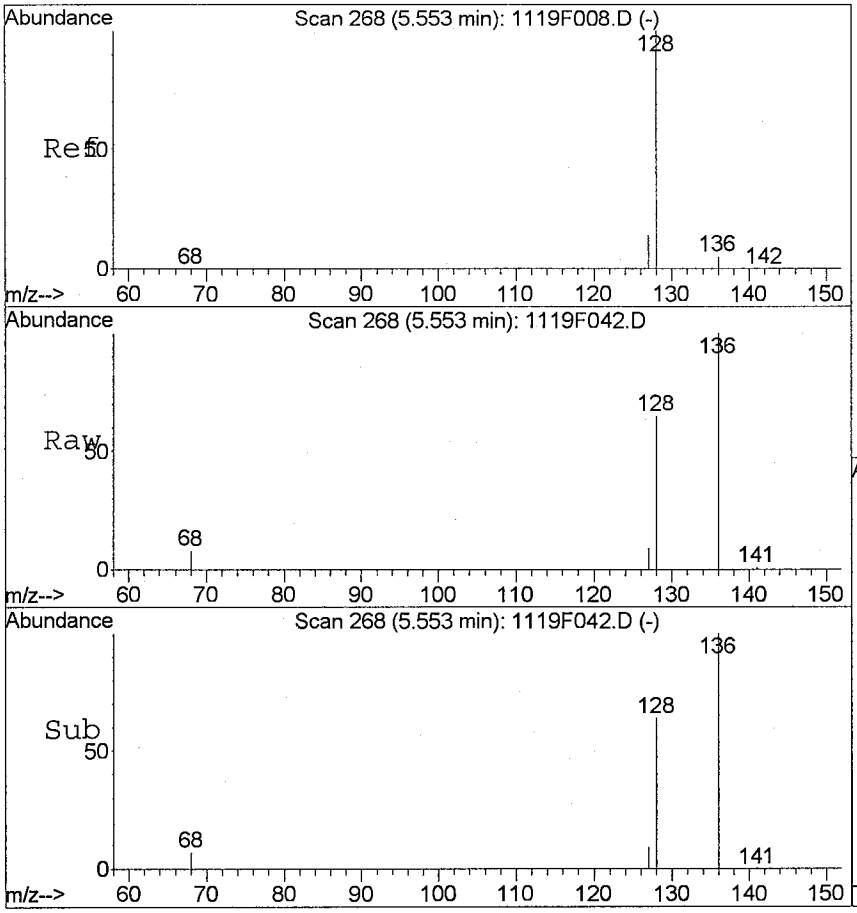
Data File : J:\MS11\DATA\111903\1119F042.D
Acq On : 19 Nov 2003 7:26 pm
Sample : K2308433-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:26 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

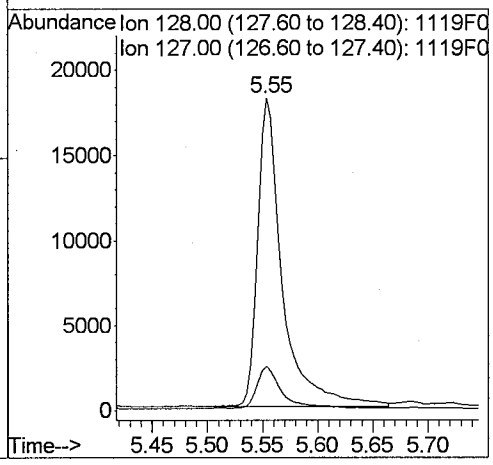


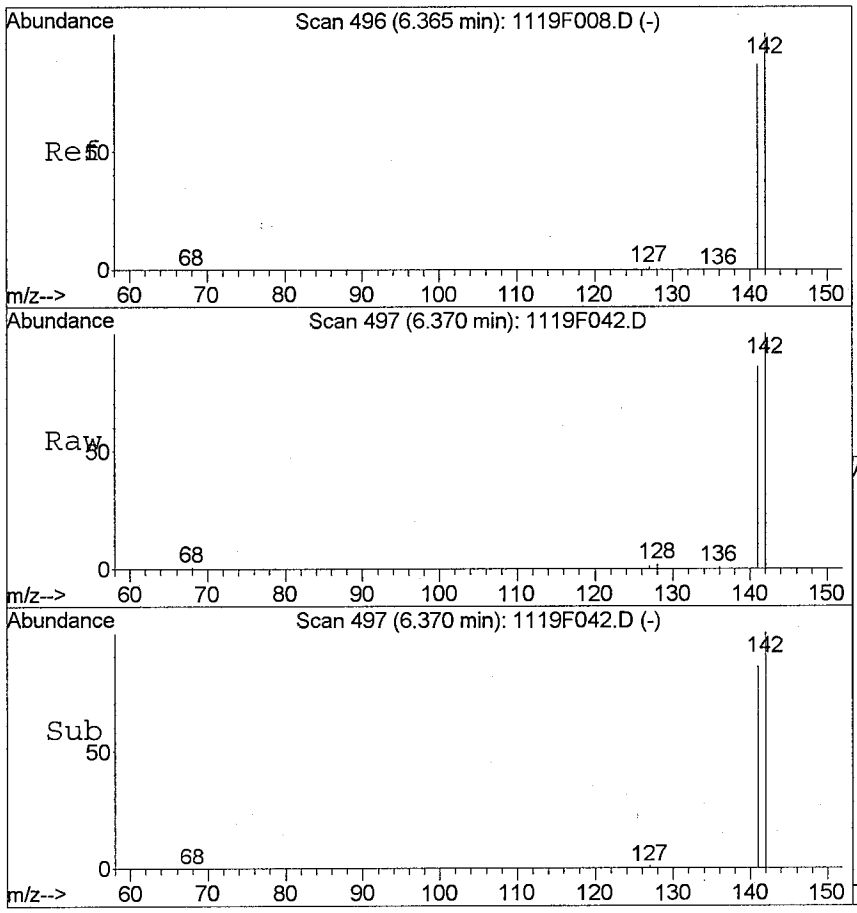


#2
Naphthalene
Concen: 106.99 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:128 Resp: 28547

Ion	Ratio	Lower	Upper
128	100		
127	13.5	0.0	43.8

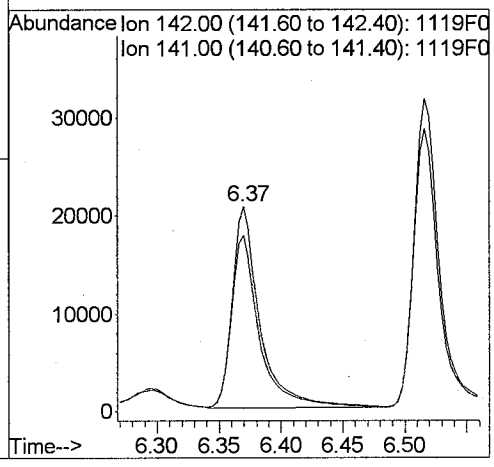


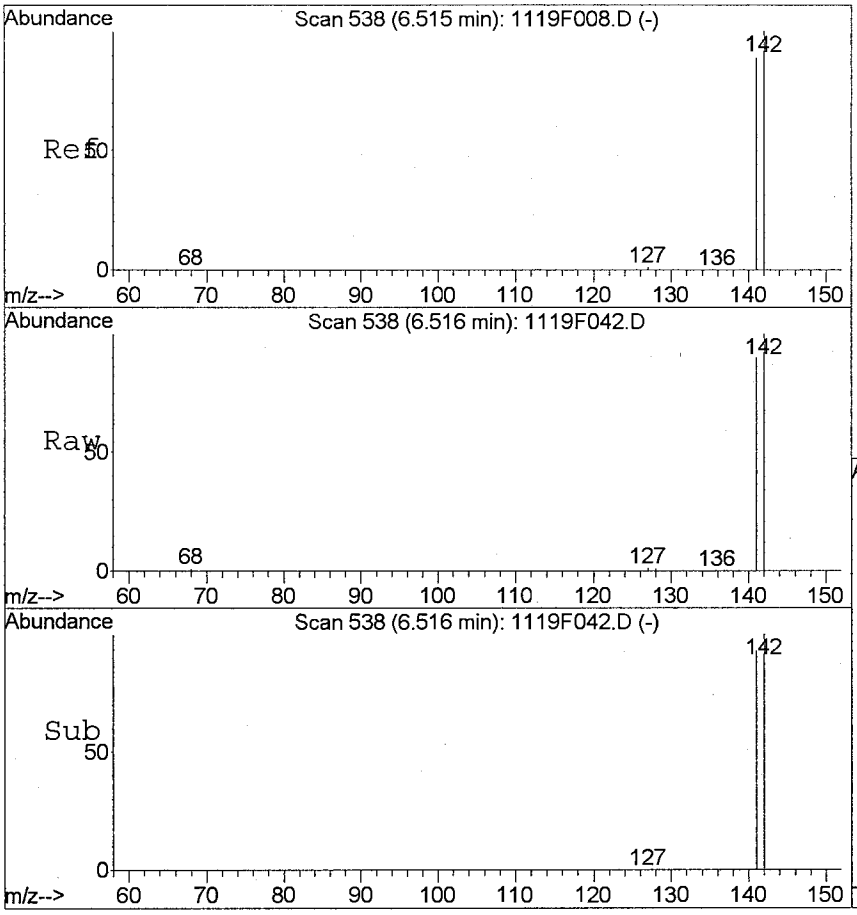


#3
2-Methylnaphthalene
Concen: 203.65 ng/ml
RT: 6.37 min Scan# 497
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:142 Resp: 32086

Ion	Ratio	Lower	Upper
142	100		
141	85.6	57.2	117.2

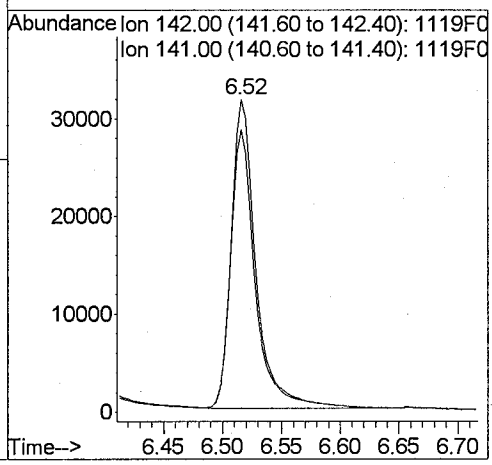


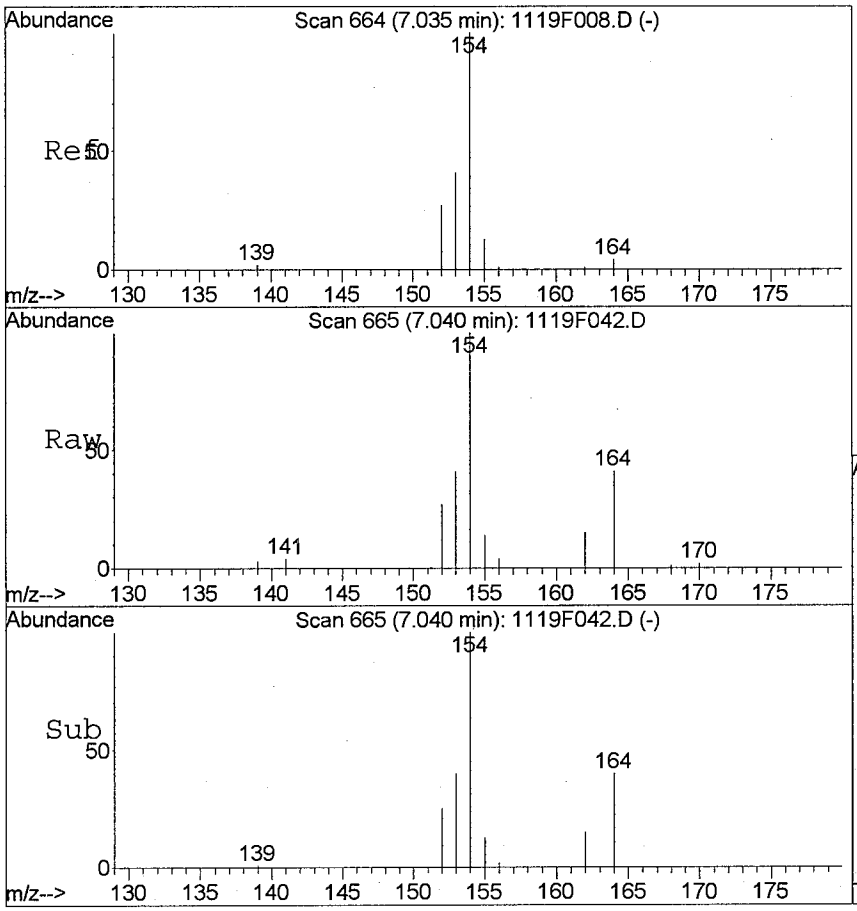


#4
1-Methylnaphthalene
Concen: 310.84 ng/ml
RT: 6.52 min Scan# 538
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:142 Resp: 45906

Ion	Ratio	Lower	Upper
142	100		
141	90.0	58.5	118.5

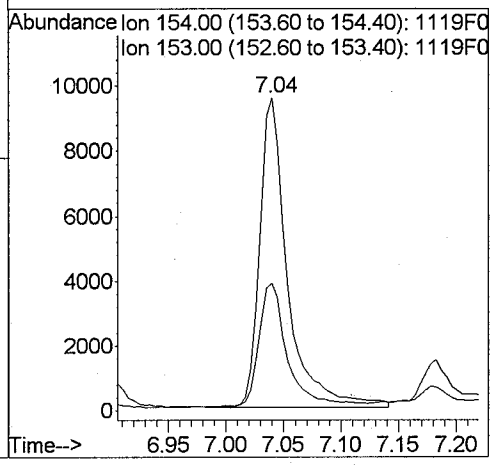


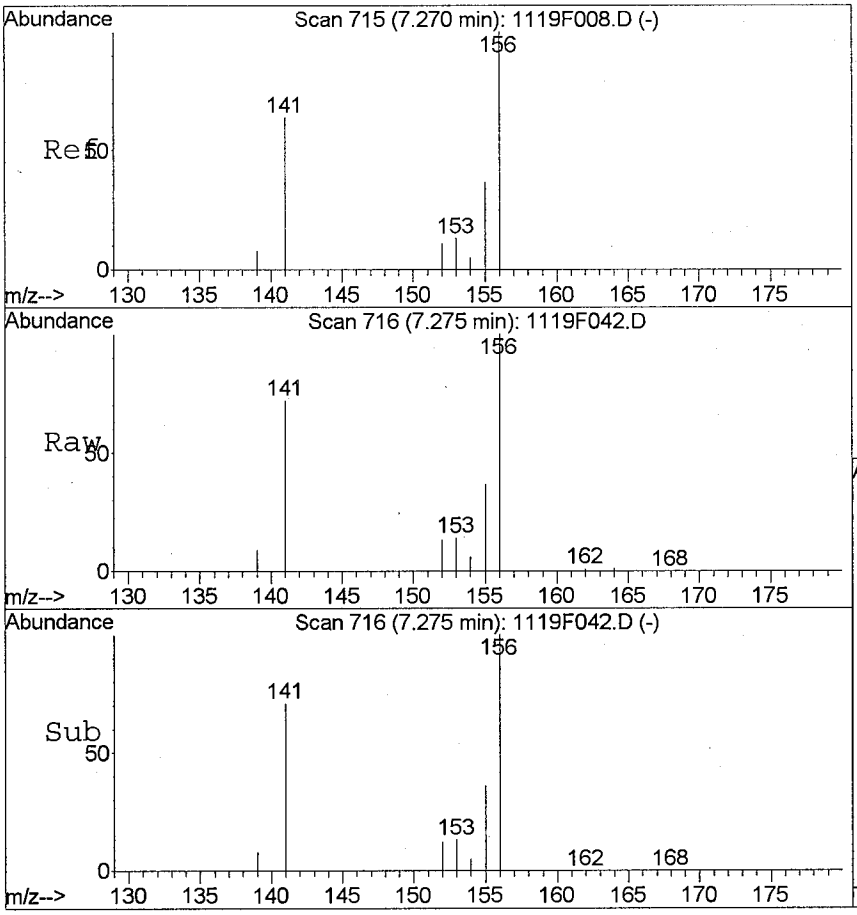


#6
Biphenyl
Concen: 84.64 ng/ml
RT: 7.04 min Scan# 665
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:154 Resp: 16169

Ion	Ratio	Lower	Upper
154	100		
153	39.8	11.3	71.3

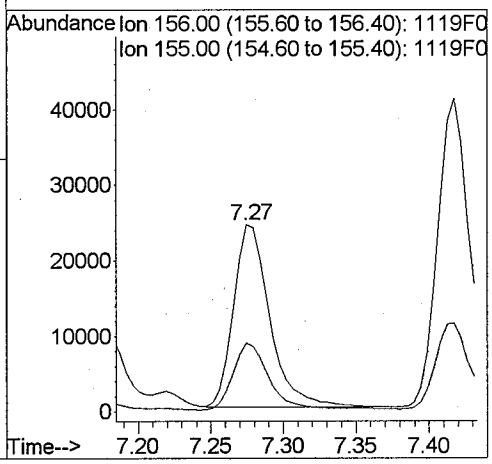


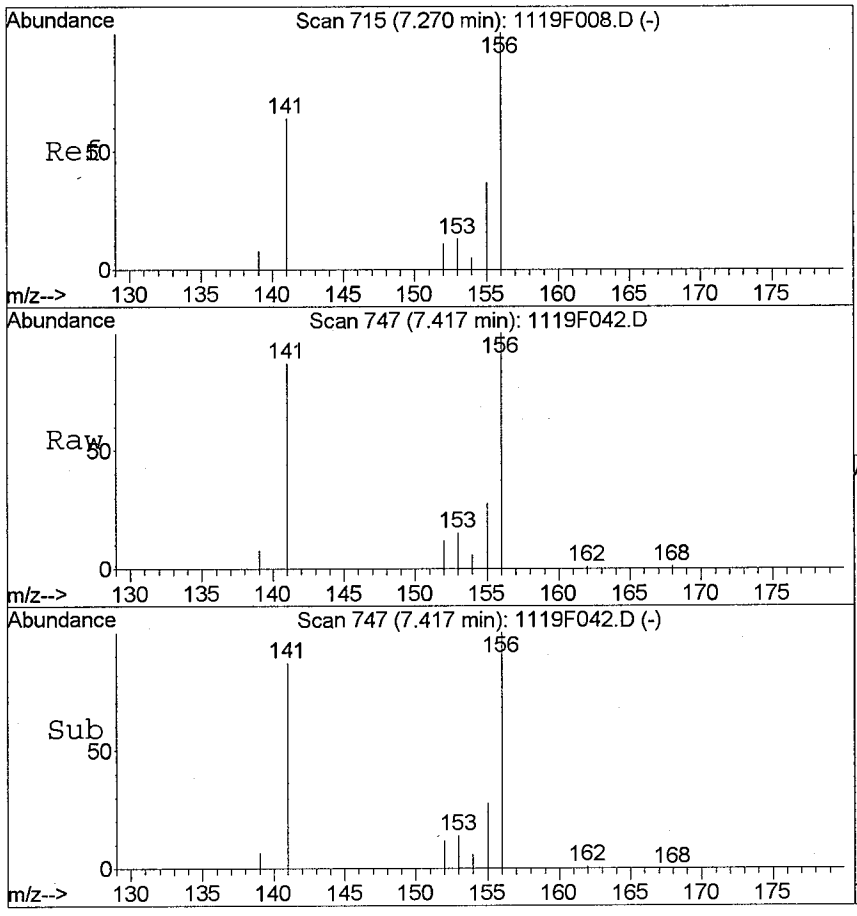


#7
2,6-Dimethylnaphthalene
Concen: 313.17 ng/ml
RT: 7.27 min Scan# 716
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:156 Resp: 42086

Ion	Ratio	Lower	Upper
156	100		
155	36.6	6.9	66.9

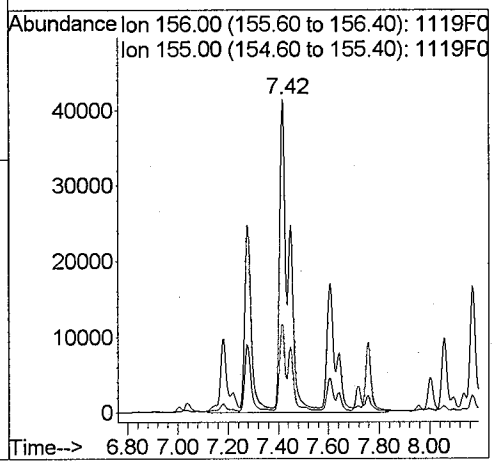


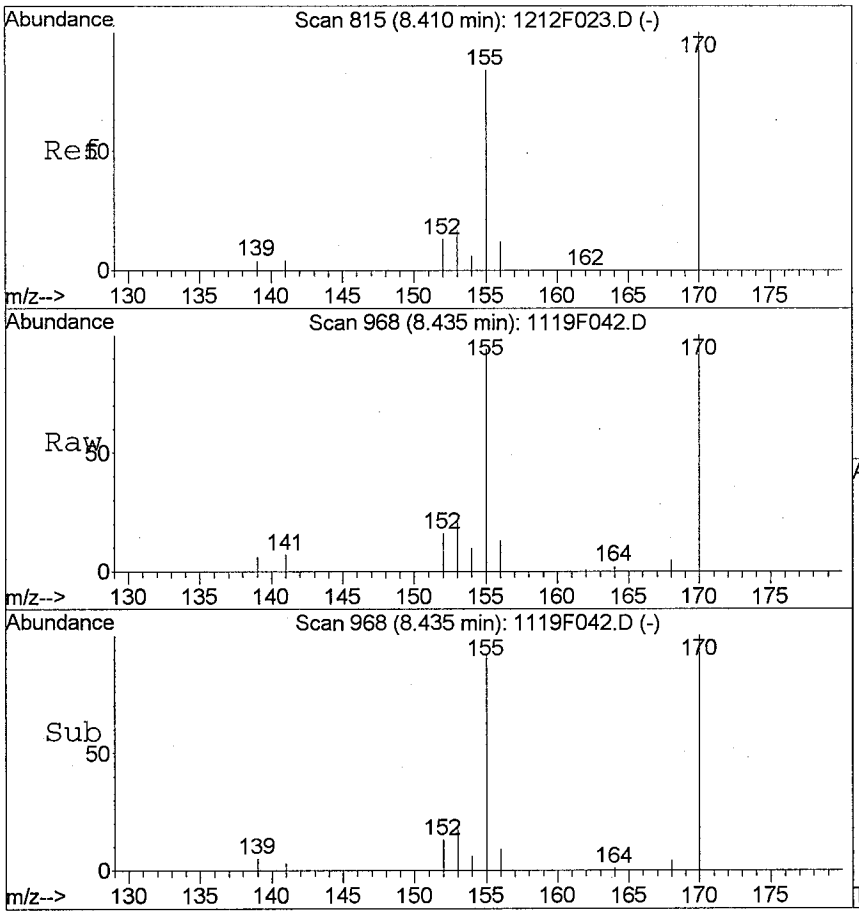


#8
C2-Naphthalenes
Concen: 867.06 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:156 Resp: 231339

Ion	Ratio	Lower	Upper
156	100		
155	28.3	8.3	68.3

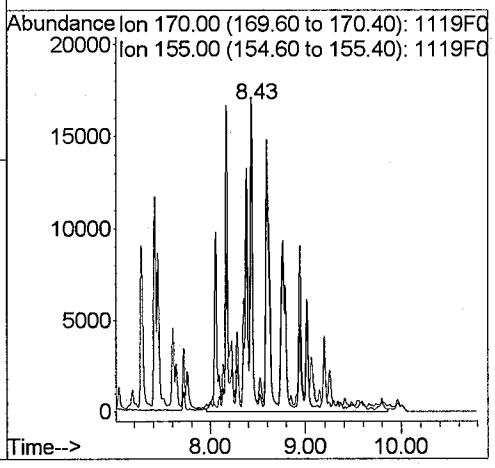


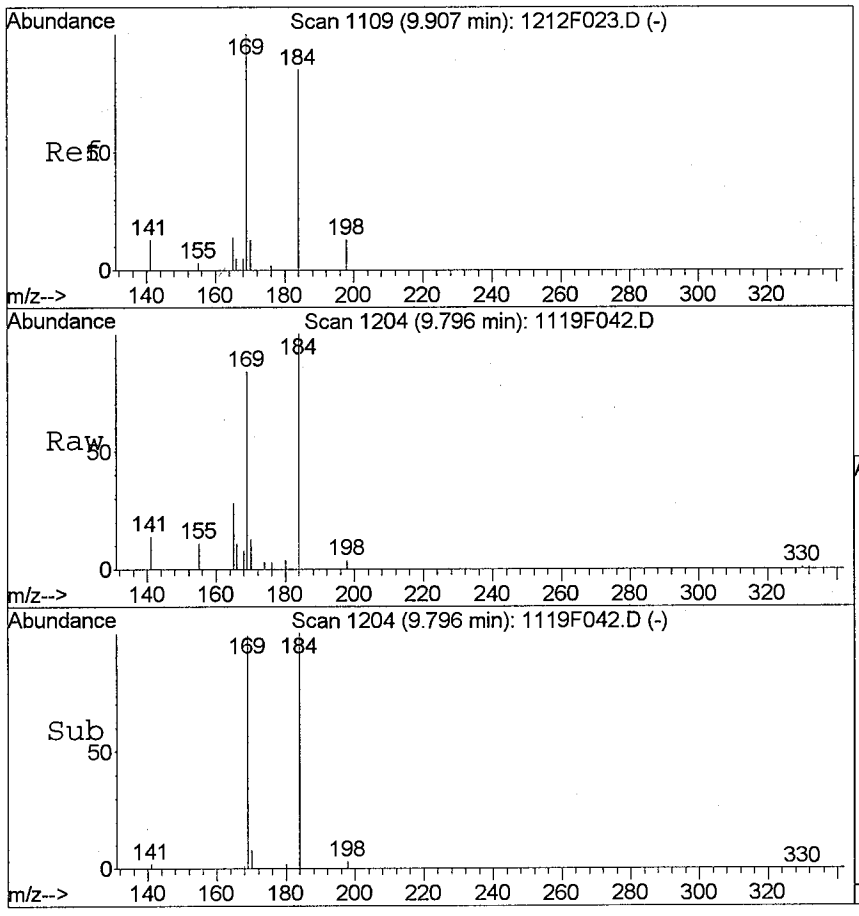


#9
C3-Naphthalenes
Concen: 724.08 ng/ml m
RT: 8.43 min Scan# 968
Delta R.T. -0.10 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:170 Resp: 193191

Ion	Ratio	Lower	Upper
170	100		
155	93.7	56.9	116.9

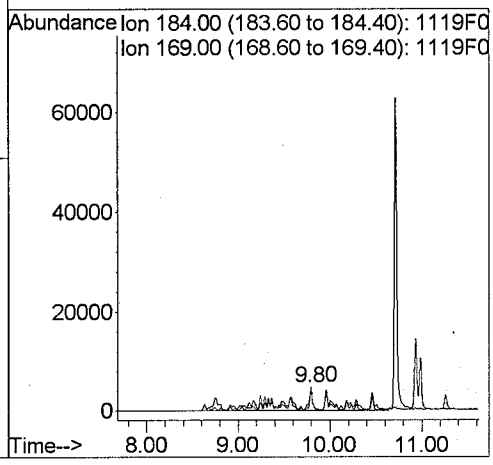


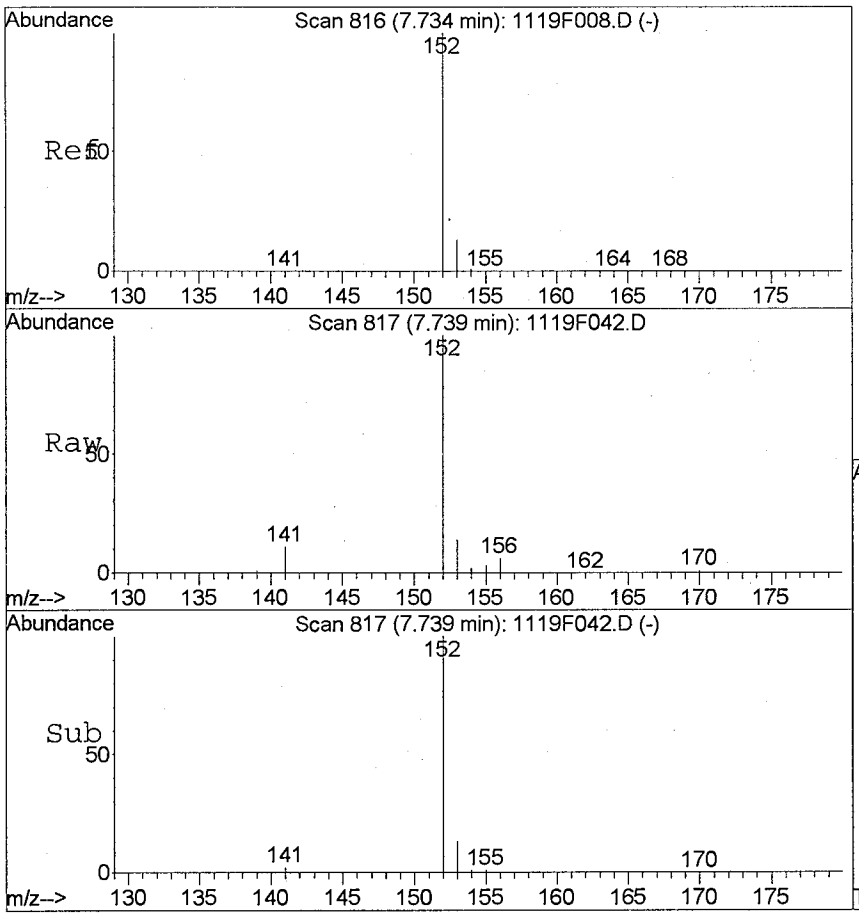


#10
C4-Naphthalenes
Concen: 290.76 ng/ml m
RT: 9.80 min Scan# 1204
Delta R.T. -0.26 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:184 Resp: 77578

Ion	Ratio	Lower	Upper
184	100		
169	83.7	89.7	149.7#

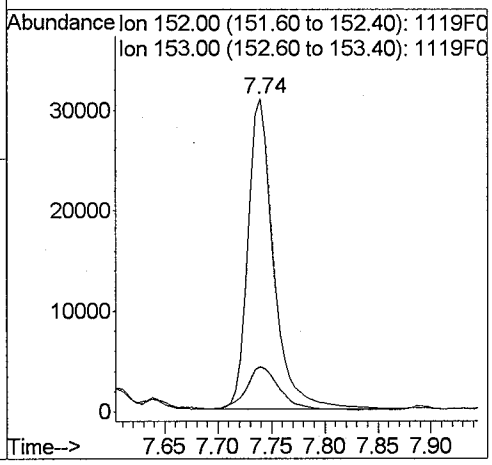


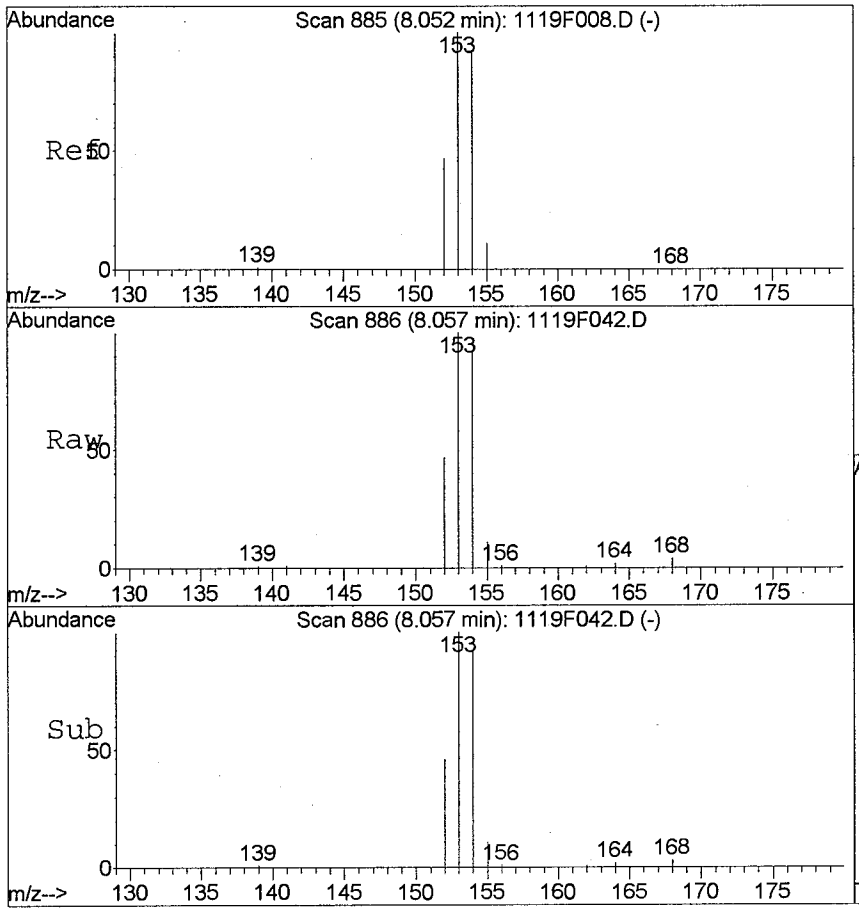


#12
Acenaphthylene
Concen: 214.17 ng/ml
RT: 7.74 min Scan# 817
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:152 Resp: 51726

Ion	Ratio	Lower	Upper
152	100		
153	13.8	0.0	43.1

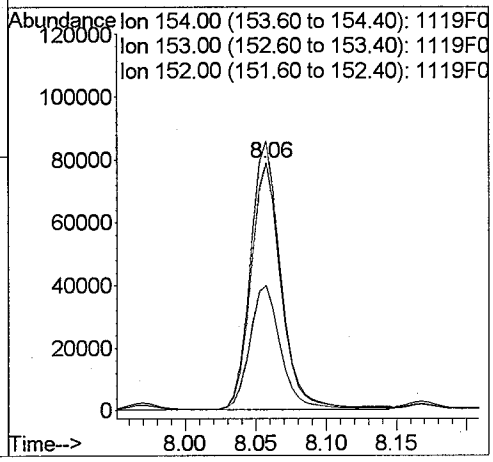


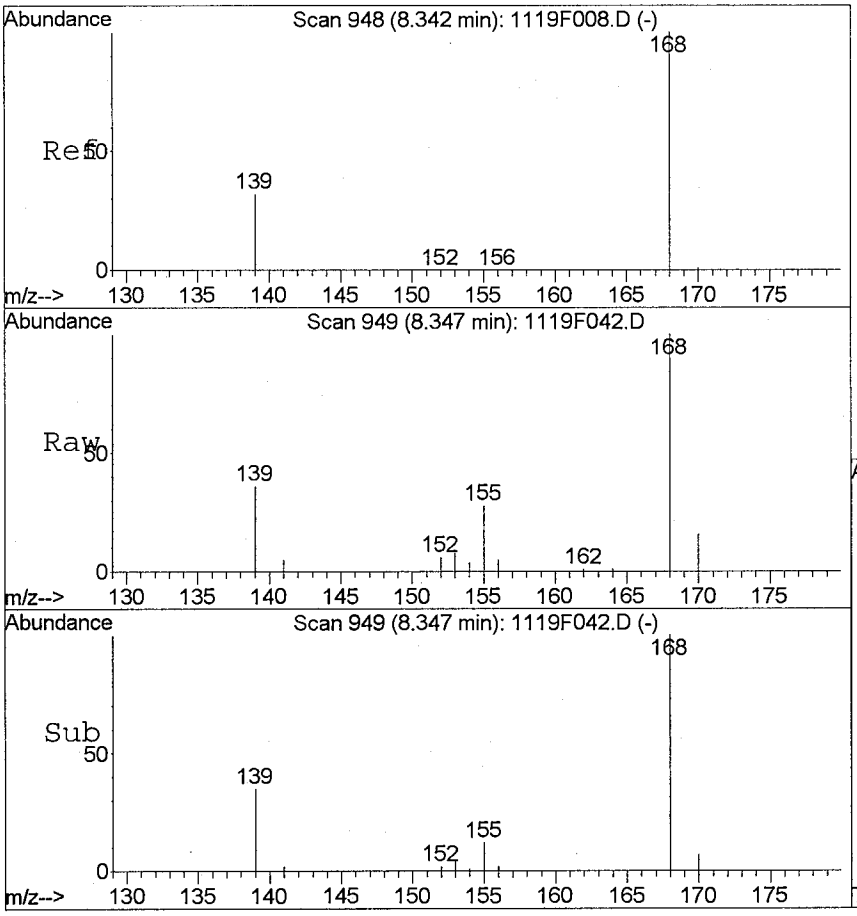


#13
Acenaphthene
Concen: 788.53 ng/ml
RT: 8.06 min Scan# 886
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:154 Resp: 117373

Ion	Ratio	Lower	Upper
154	100		
153	108.6	78.4	138.4
152	50.2	20.4	80.4

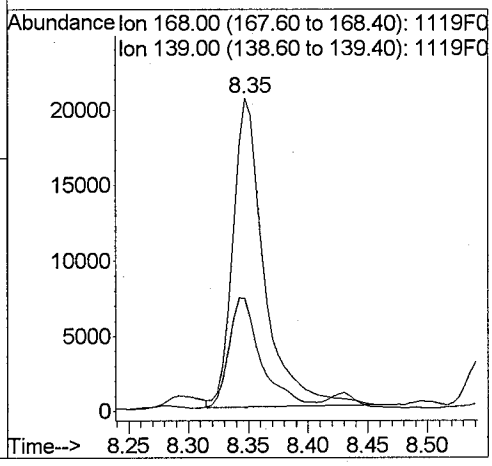


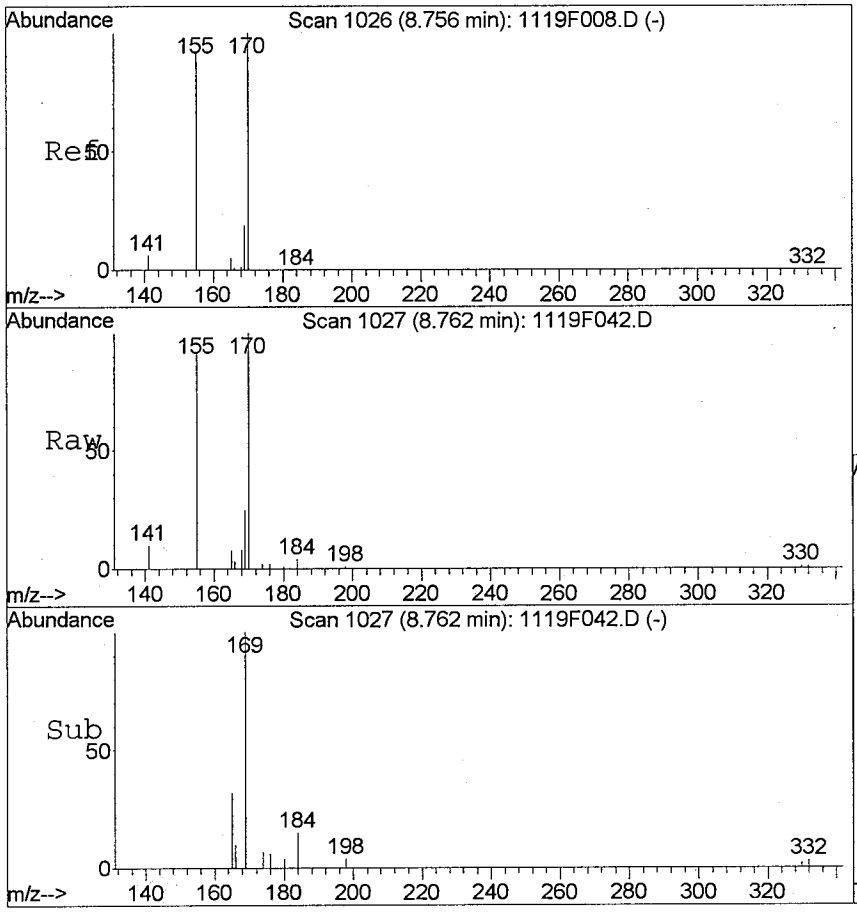


#14
Dibenzofuran
Concen: 186.52 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:168 Resp: 37218

Ion	Ratio	Lower	Upper
168	100		
139	35.7	2.4	62.4

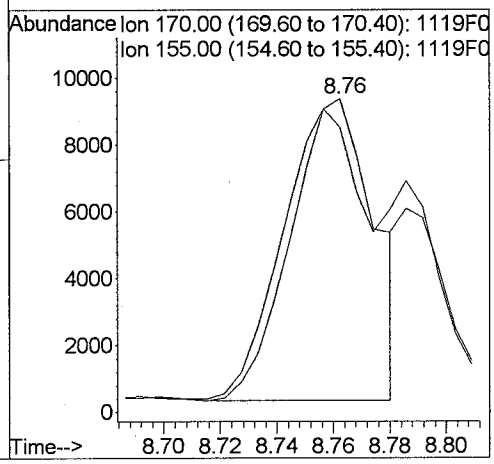


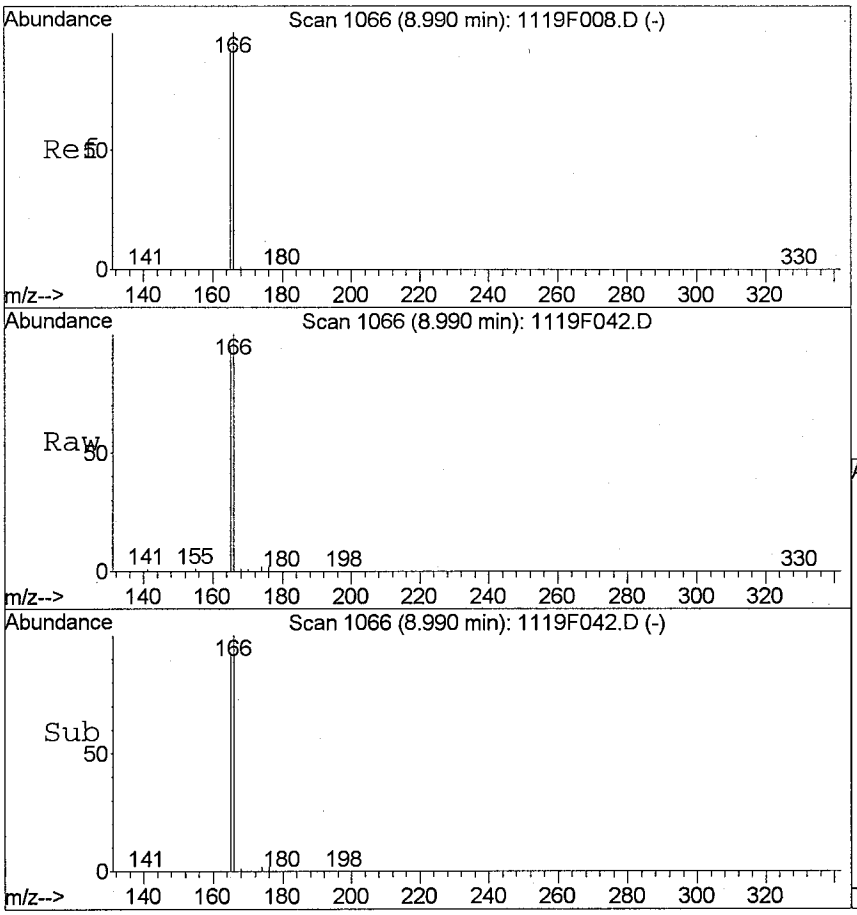


#15
2,3,5-Trimethylnaphthalene
Concen: 137.42 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:170 Resp: 18323

Ion	Ratio	Lower	Upper
170	100		
155	89.9	61.5	121.5

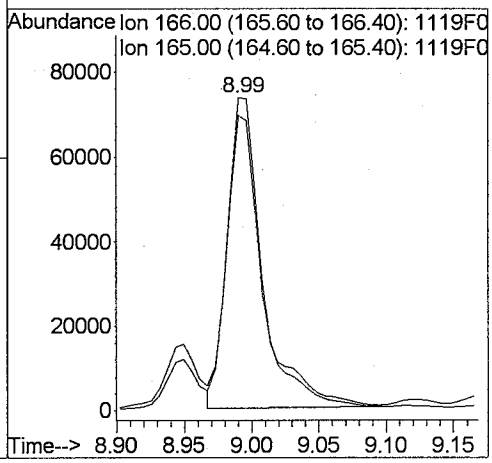


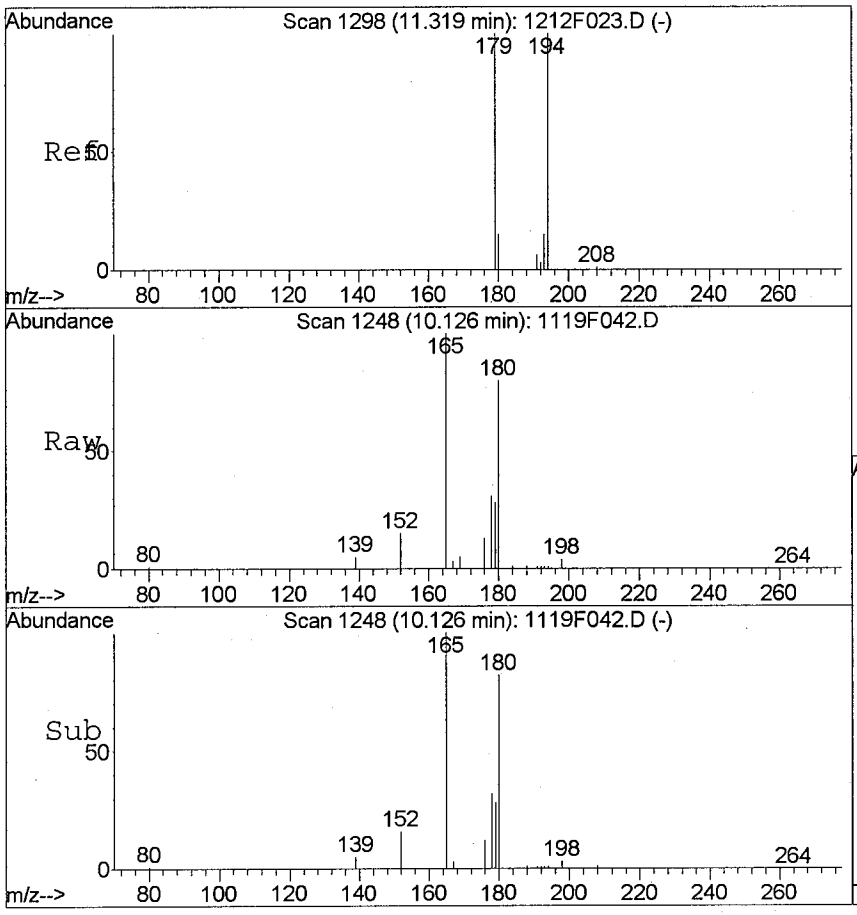


#17
Fluorene
Concen: 825.66 ng/ml
RT: 8.99 min Scan# 1066
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:166 Resp: 131654

Ion	Ratio	Lower	Upper
166	100		
165	93.6	62.9	122.9

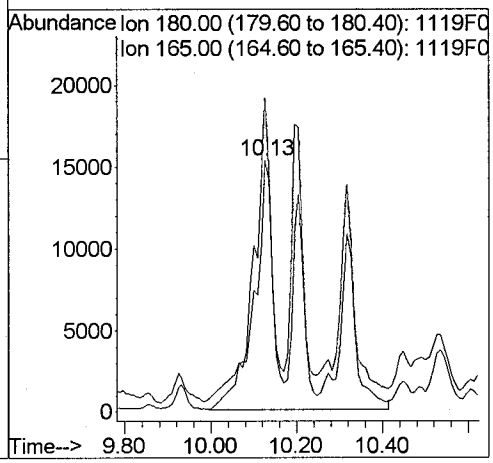


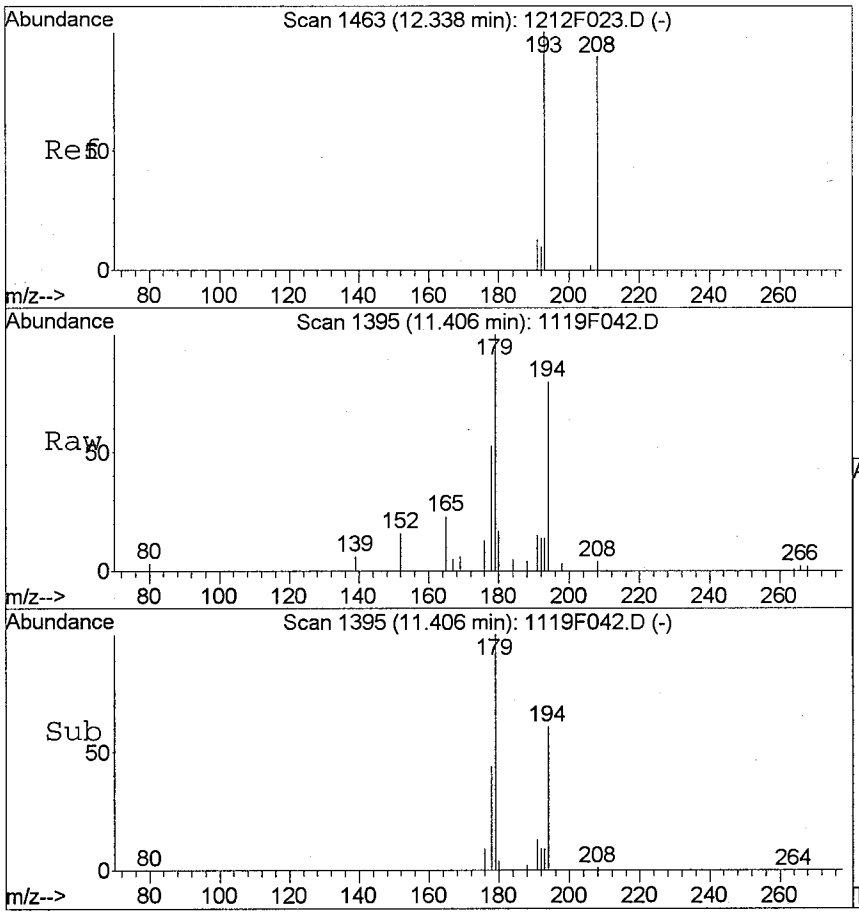


#18
C1-Fluorenes
Concen: 683.40 ng/ml m
RT: 10.13 min Scan# 1248
Delta R.T. -0.17 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:180 Resp: 108970

Ion	Ratio	Lower	Upper
180	100		
165	124.7	148.7	208.7#

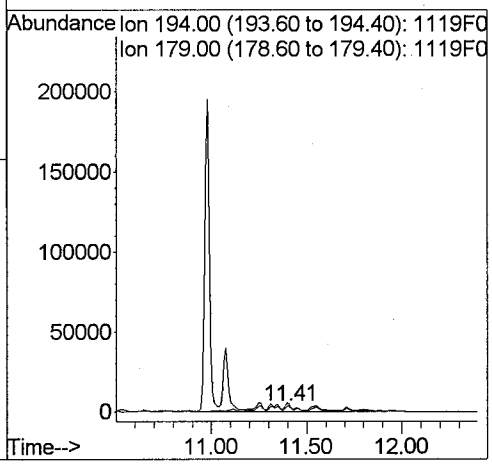


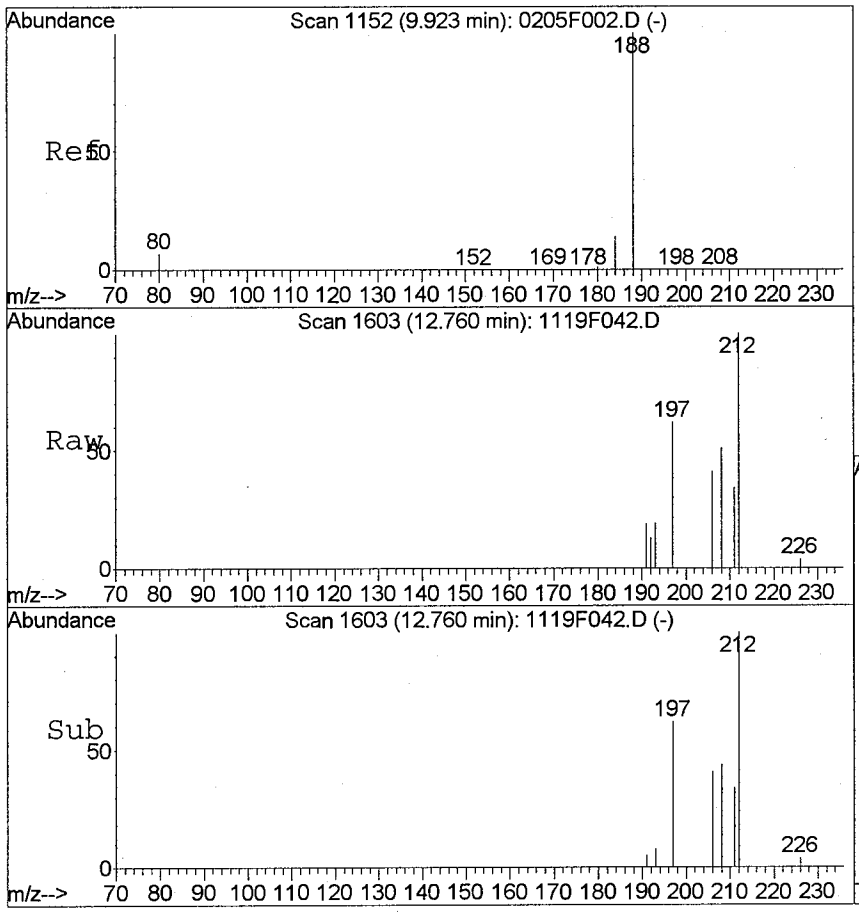


#19
C2-Fluorenes
Concen: 421.25 ng/ml m
RT: 11.41 min Scan# 1395
Delta R.T. -0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:194 Resp: 67169

Ion	Ratio	Lower	Upper
194	100		
179	125.6	107.0	167.0

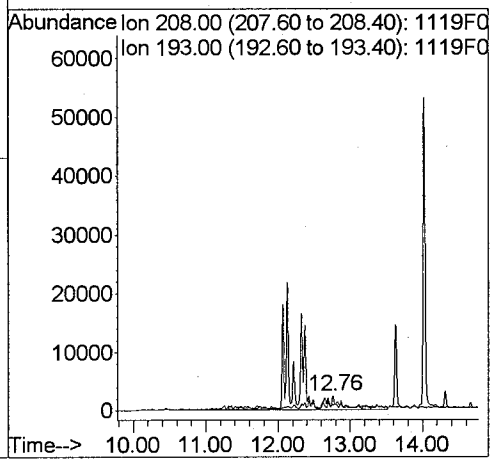


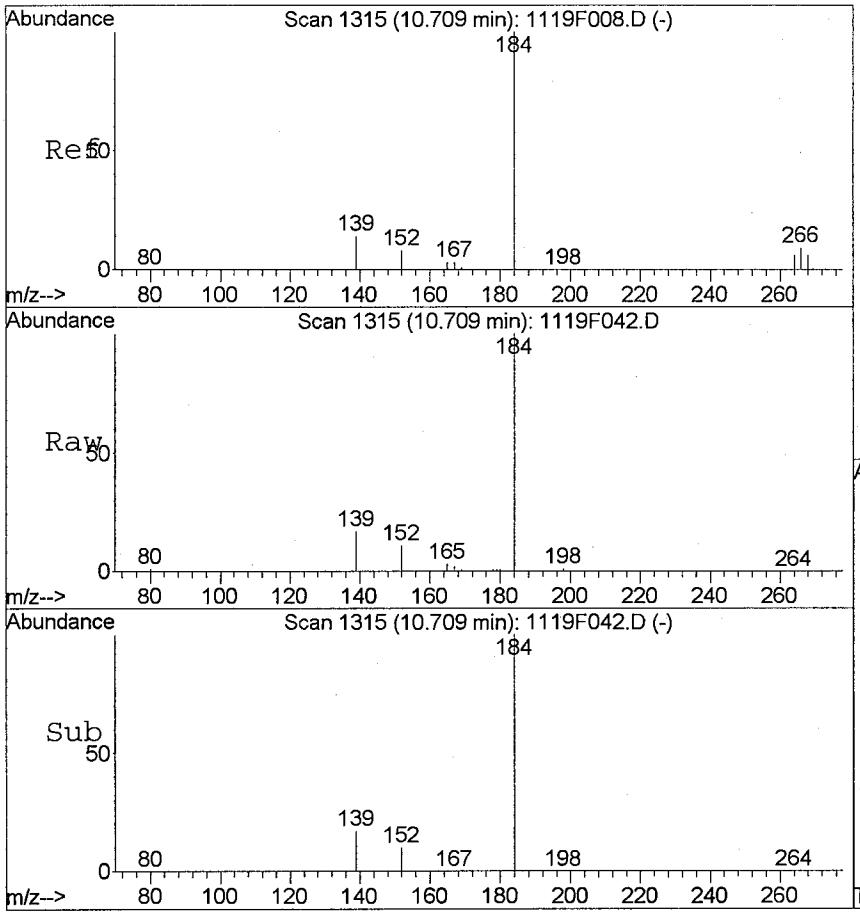


#20
C3-Fluorenes
Concen: 508.30 ng/ml m
RT: 12.76 min Scan# 1603
Delta R.T. 0.24 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:208 Resp: 81050

Ion	Ratio	Lower	Upper
208	100		
193	36.4	92.0	152.0#

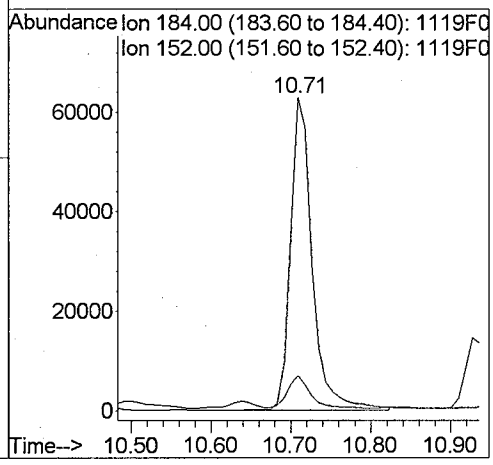


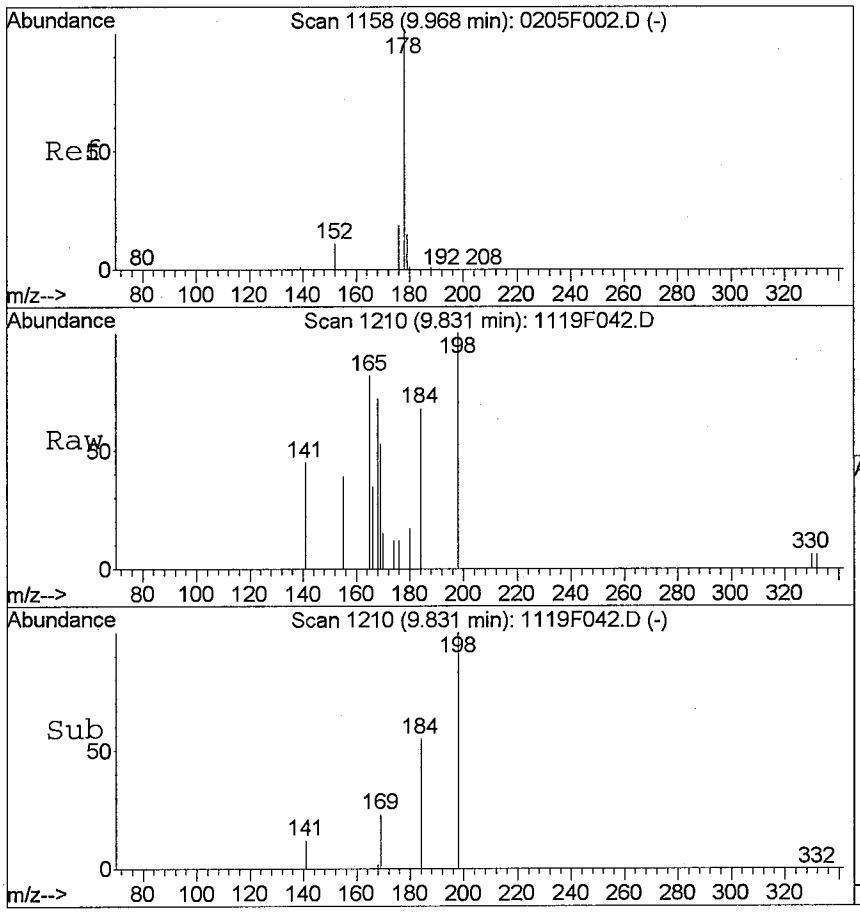


#24
Dibenzothiophene
Concen: 558.33 ng/ml
RT: 10.71 min Scan# 1315
Delta R.T. 0.00 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:184 Resp: 119451

Ion	Ratio	Lower	Upper
184	100		
152	10.3	0.0	38.4

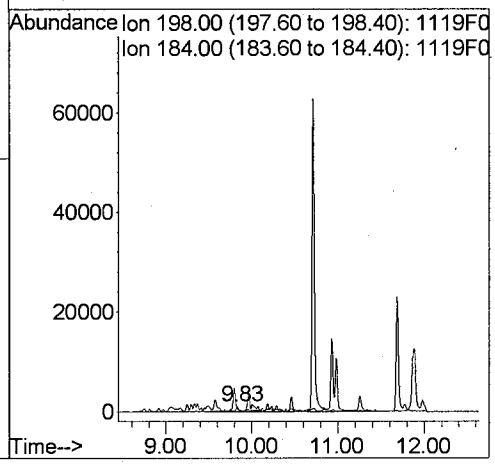


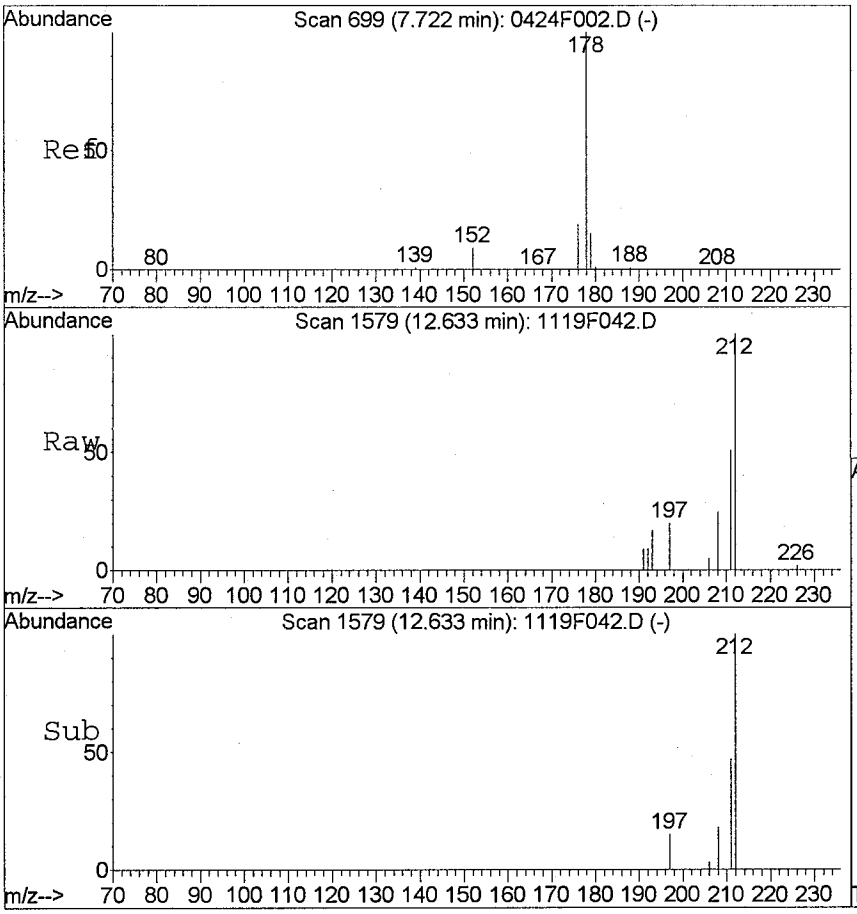


#25
C1-Dibenzothiophenes
Concen: 142.87 ng/ml m
RT: 9.83 min Scan# 1210
Delta R.T. -0.38 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:198 Resp: 30567

Ion	Ratio	Lower	Upper
198	100		
184	67.7	74.1	134.1#

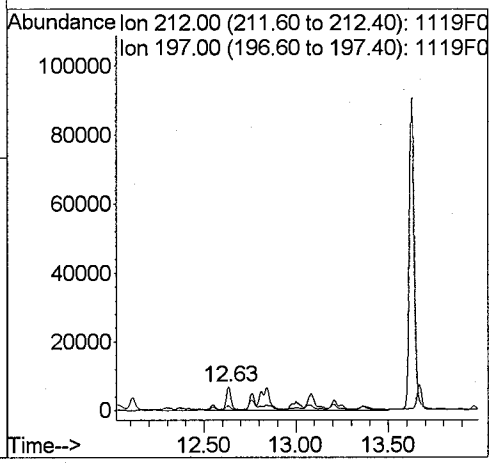


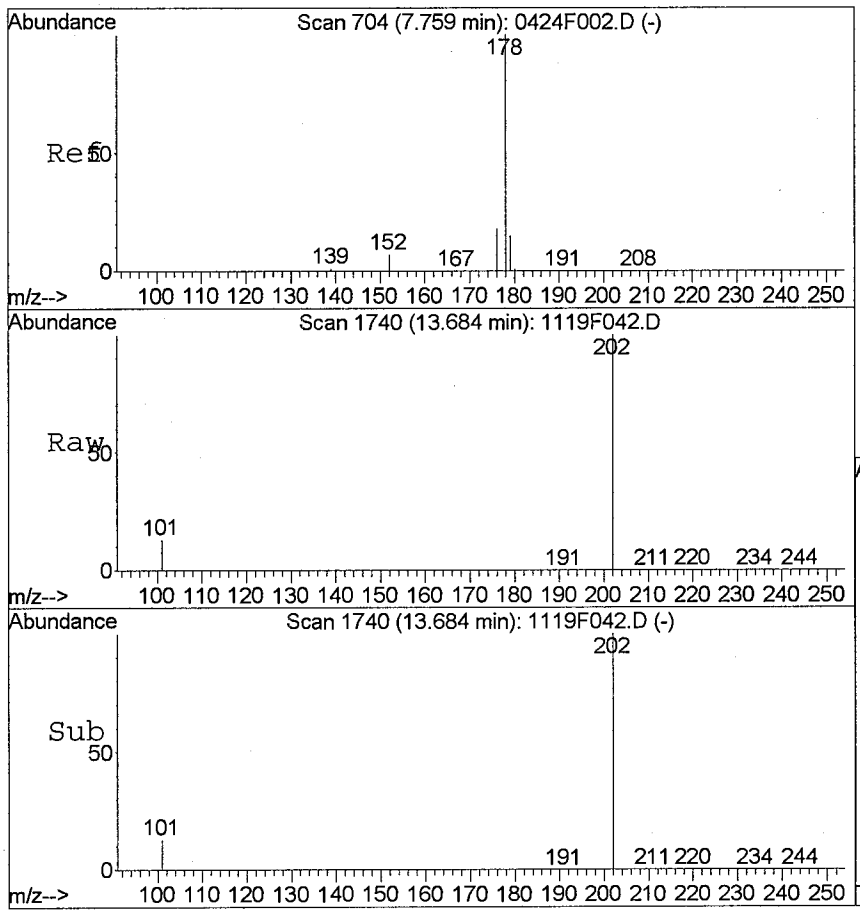


#26
C2-Dibenzothiophenes
Concen: 412.08 ng/ml m
RT: 12.63 min Scan# 1579
Delta R.T. -0.30 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:212 Resp: 88163

Ion	Ratio	Lower	Upper
212	100		
197	19.7	0.0	53.8

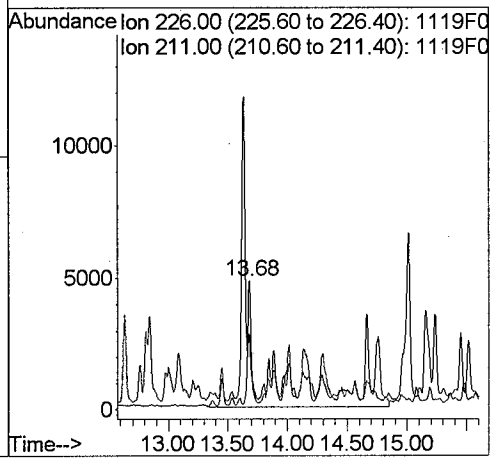


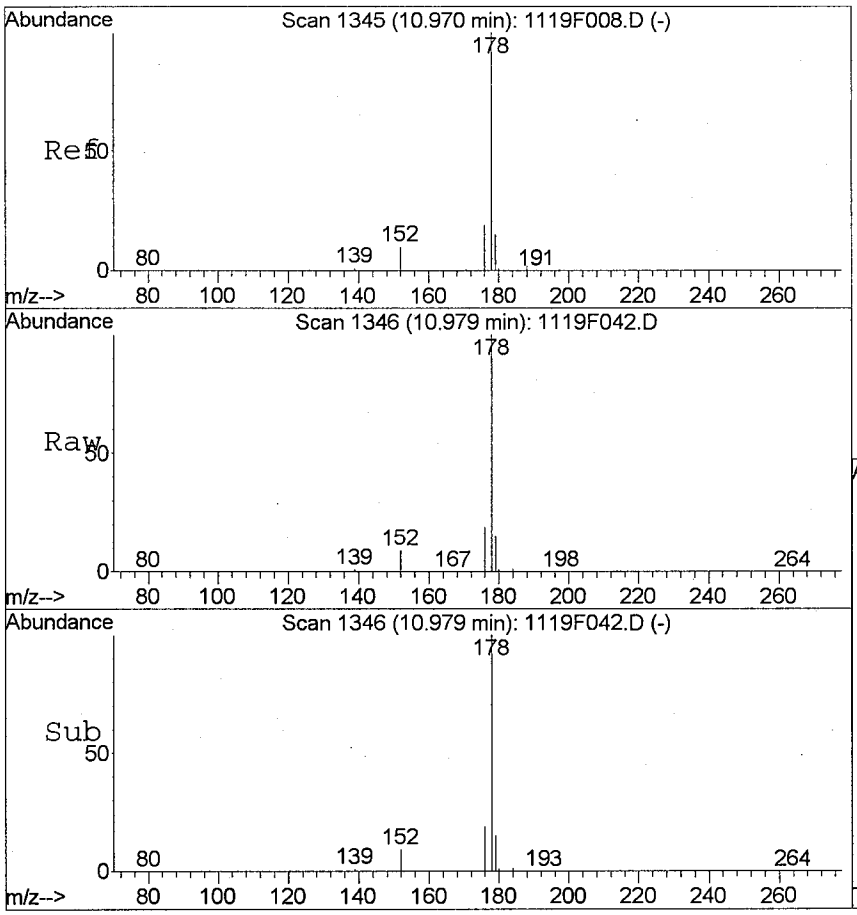


#27
C3-Dibenzothiophenes
Concen: 324.81 ng/ml m
RT: 13.68 min Scan# 1740
Delta R.T. -0.10 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:226 Resp: 69492

Ion	Ratio	Lower	Upper
226	100		
211	57.8	27.1	87.1

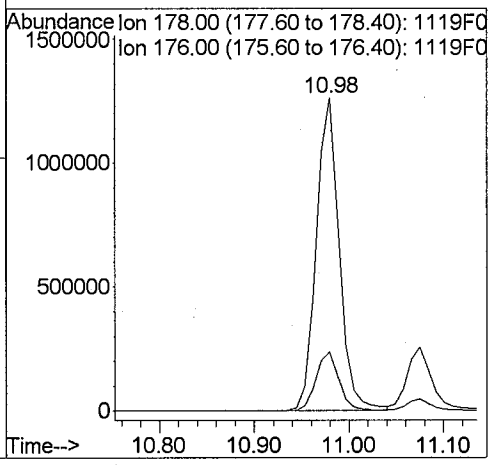


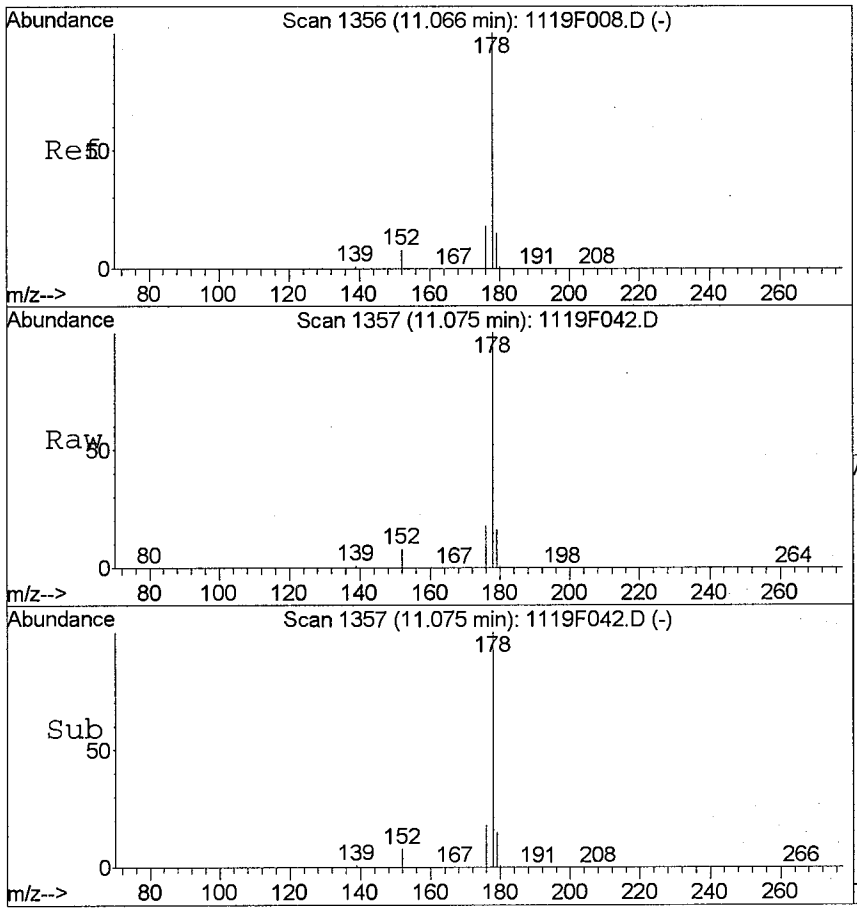


#28
Phenanthrene
Concen: 9458.60 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:178 Resp: 2125690

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.6

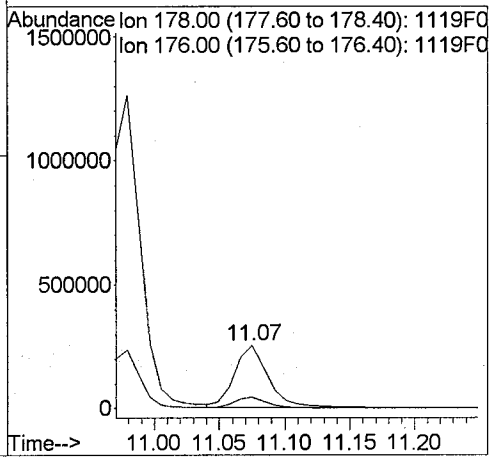


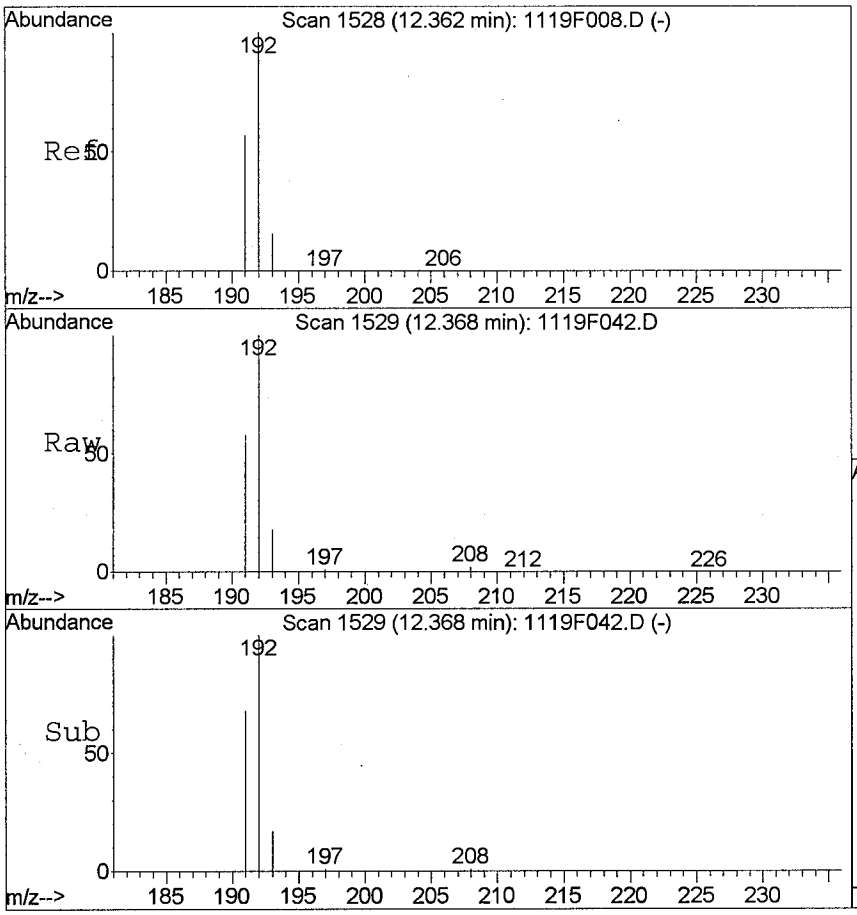


#29
Anthracene
Concen: 2366.76 ng/ml
RT: 11.07 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:178 Resp: 454412

Ion	Ratio	Lower	Upper
178	100		
176	18.1	0.0	48.2

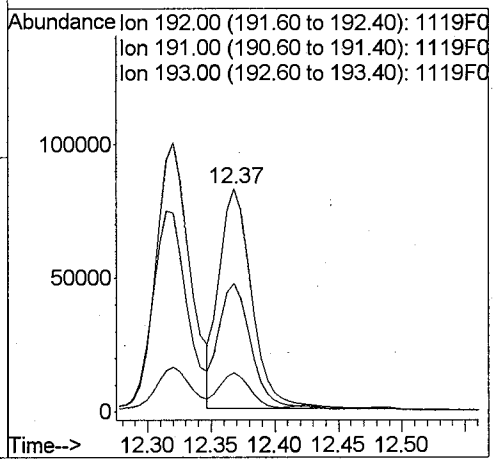


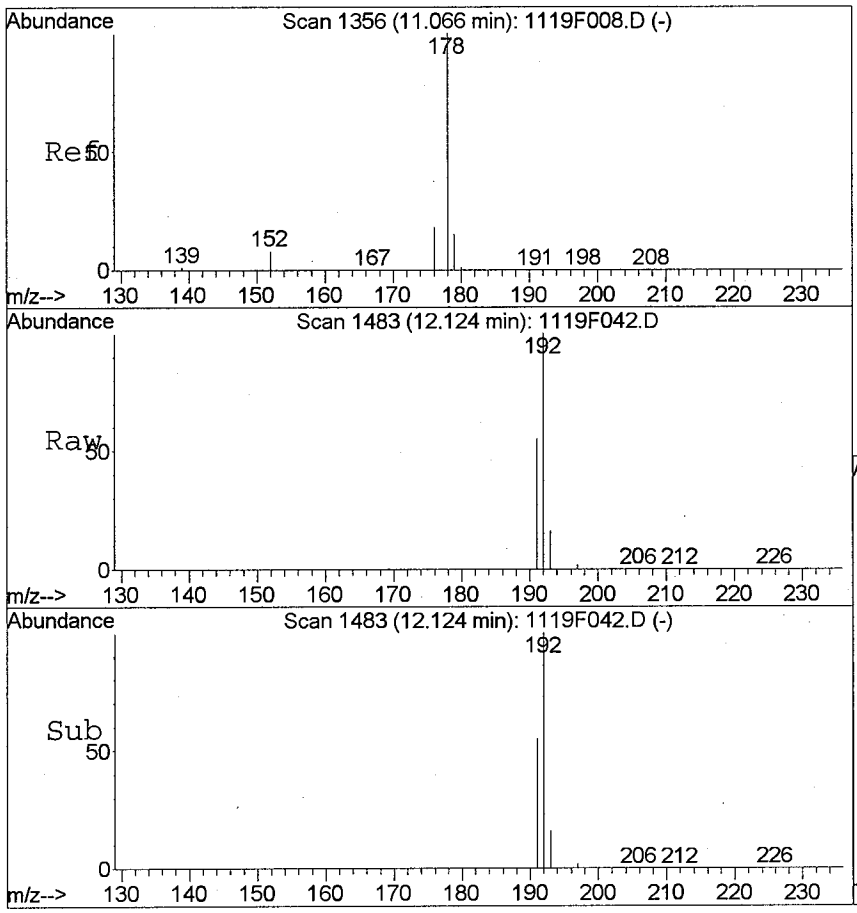


#31
1-Methylphenanthrene
Concen: 957.42 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:192 Resp: 146092

Ion	Ratio	Lower	Upper
192	100		
191	57.1	27.5	87.5
193	15.6	0.0	45.6

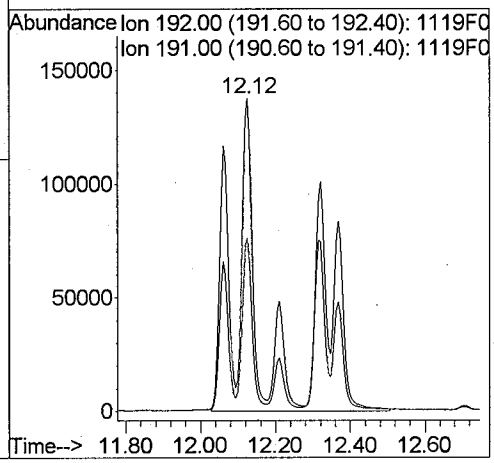


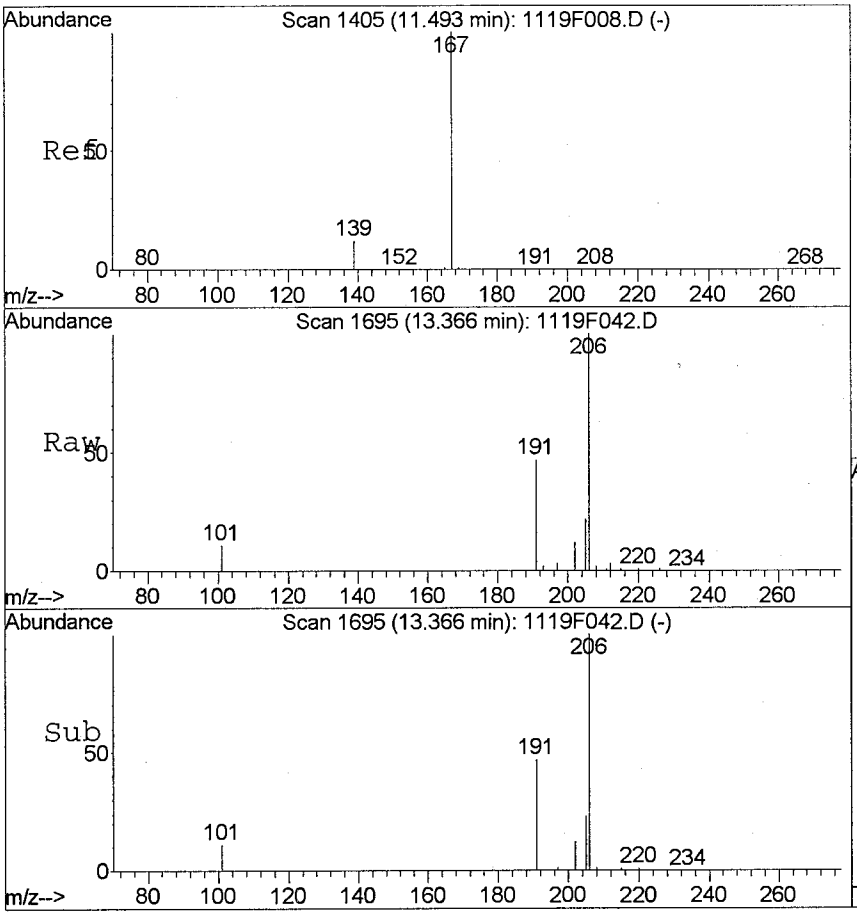


#32
C1-Phenanthrenes/Anthracenes
Concen: 3946.80 ng/ml m
RT: 12.12 min Scan# 1483
Delta R.T. -0.10 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:192 Resp: 886990

Ion	Ratio	Lower	Upper
192	100		
191	55.2	25.3	85.3

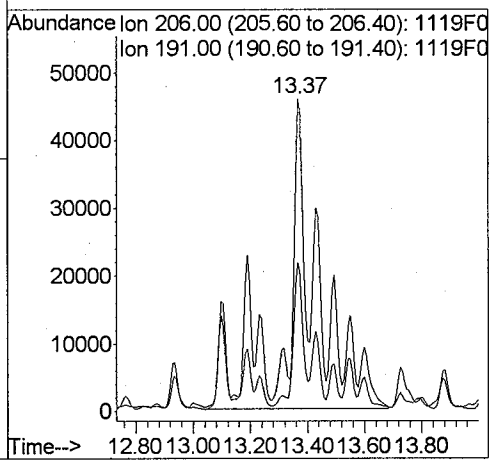


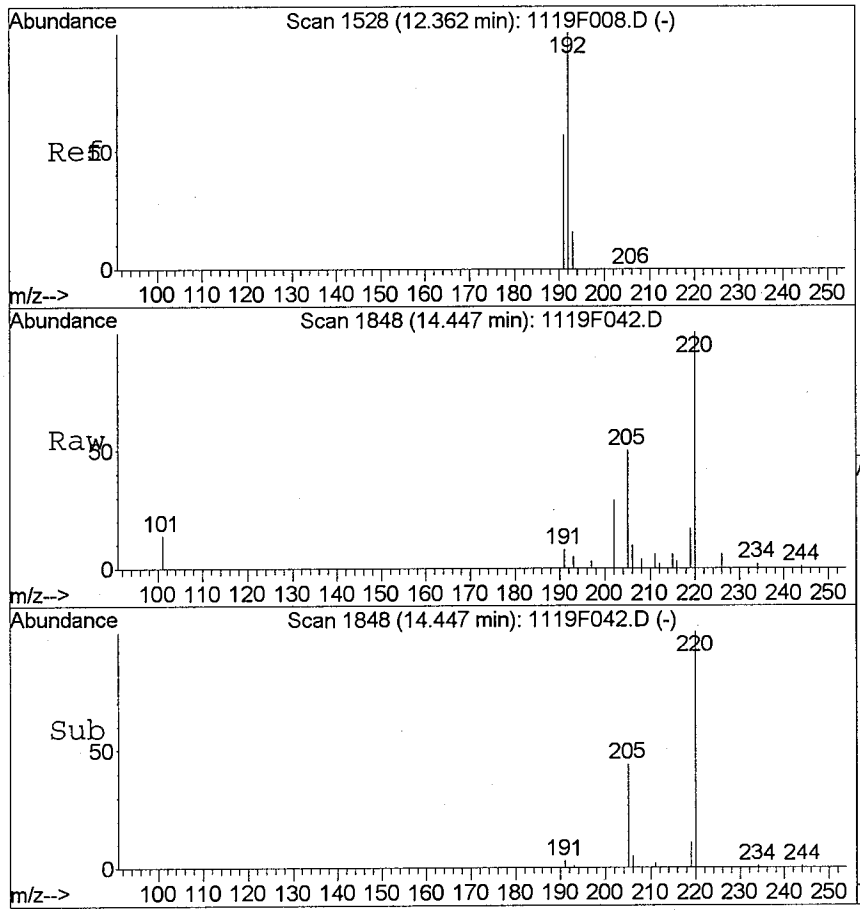


#33
C2-Phenanthrenes/Anthracenes
Concen: 1624.88 ng/ml m
RT: 13.37 min Scan# 1695
Delta R.T. -0.10 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:206 Resp: 365170

Ion	Ratio	Lower	Upper
206	100		
191	47.5	15.6	75.6

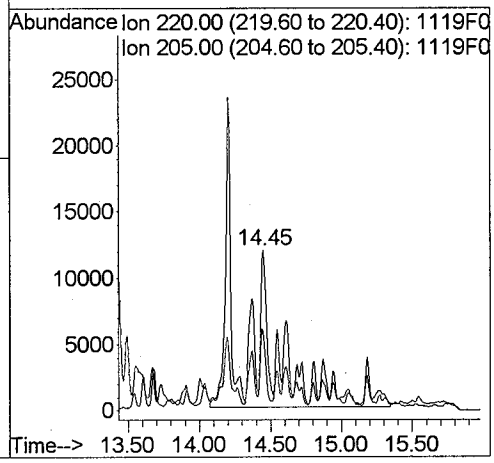


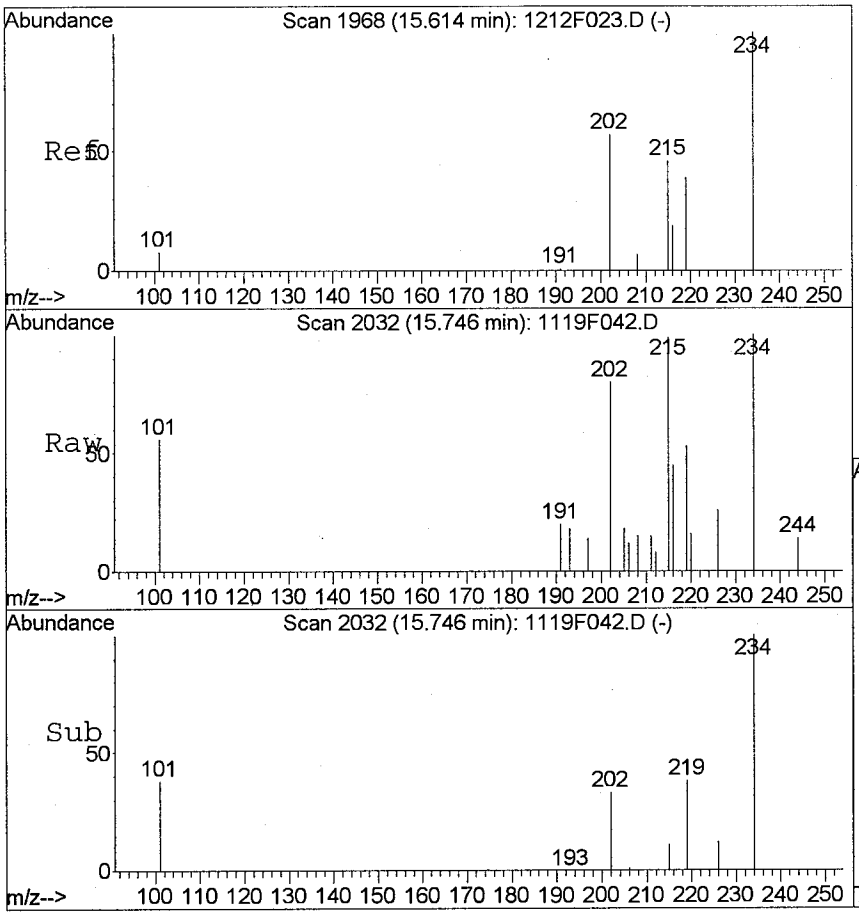


#34
C3-Phenanthrenes/Anthracenes
Concen: 727.89 ng/ml m
RT: 14.45 min Scan# 1848
Delta R.T. -0.10 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:220 Resp: 163583

Ion	Ratio	Lower	Upper
220	100		
205	50.0	20.0	80.0

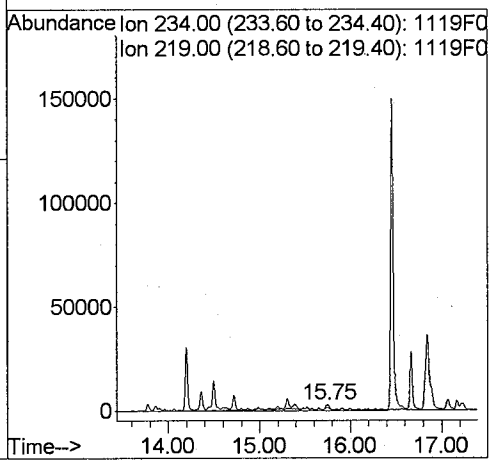


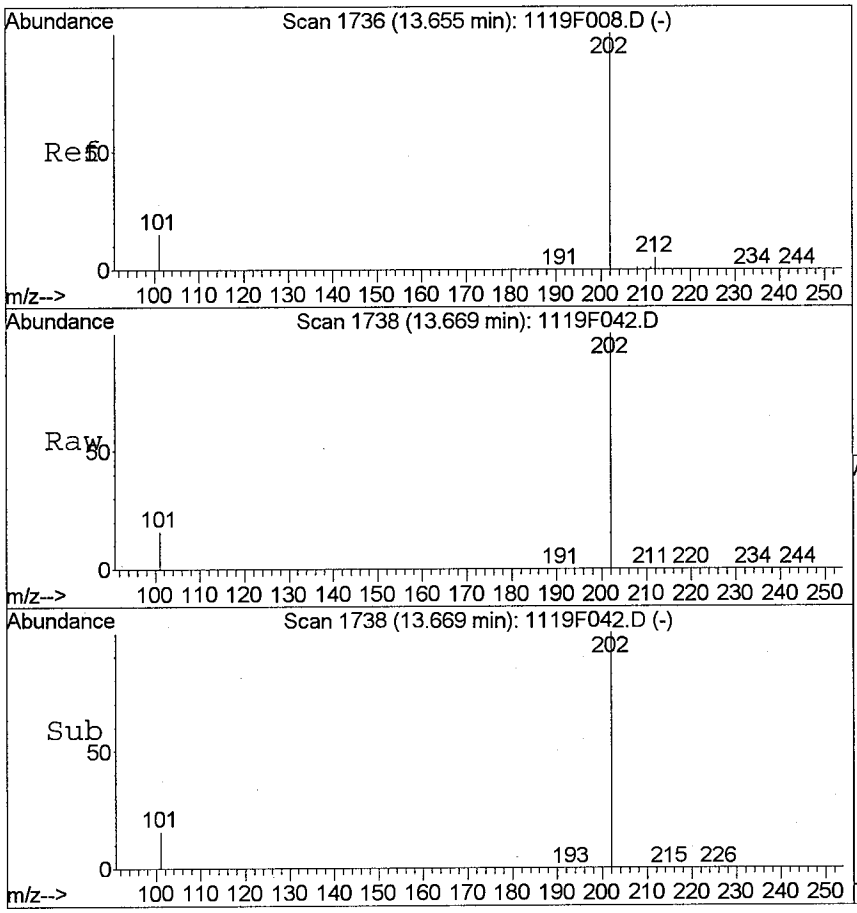


#35
C4-Phenanthrenes/Anthracenes
Concen: 334.74 ng/ml m
RT: 15.75 min Scan# 2032
Delta R.T. -0.08 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:234 Resp: 75228

Ion	Ratio	Lower	Upper
234	100		
219	52.8	17.7	77.7

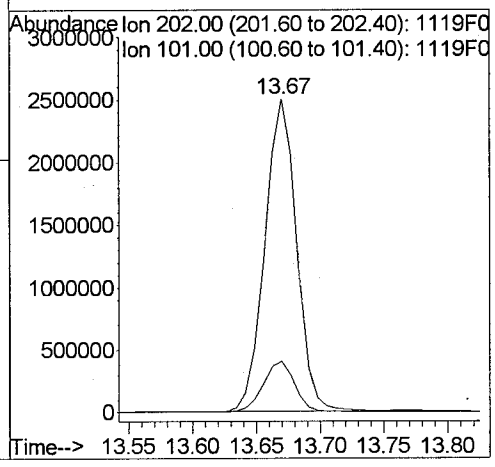


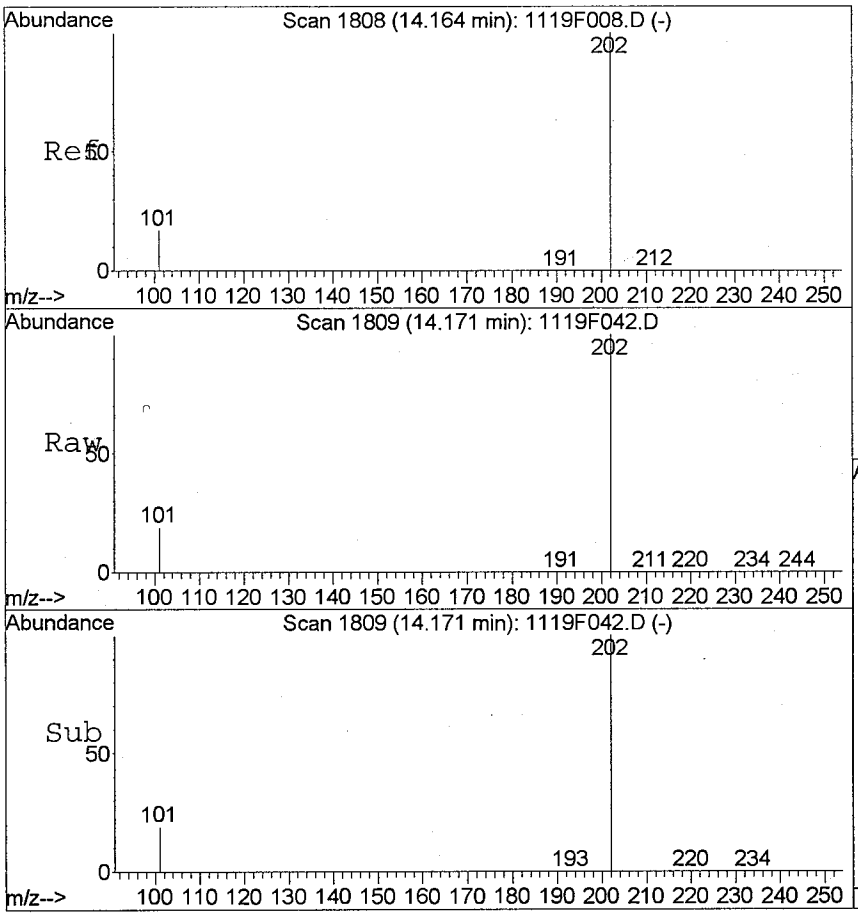


#36
Fluoranthene
Concen: 19397.82 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:202 Resp: 4339413

Ion	Ratio	Lower	Upper
202	100		
101	16.3	0.0	45.5

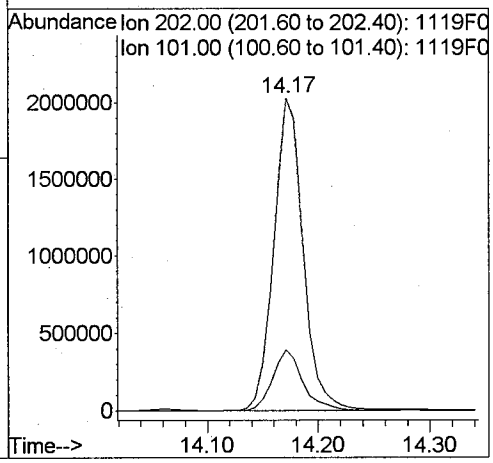


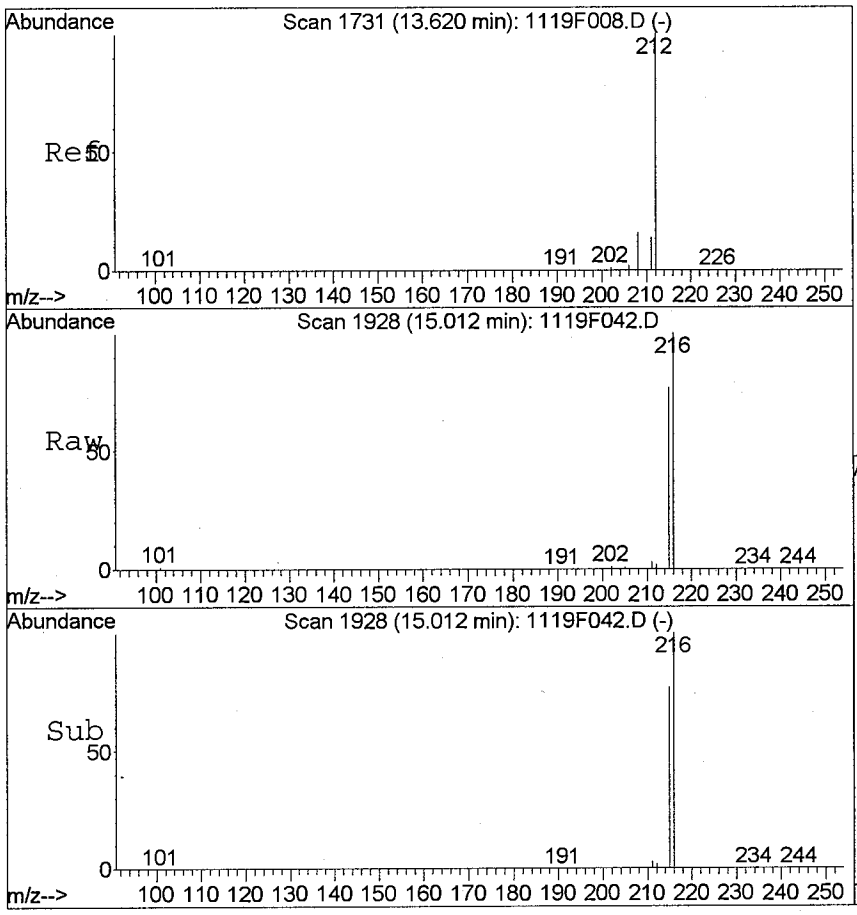


#39
Pyrene
Concen: 15399.25 ng/ml
RT: 14.17 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:202 Resp: 3680075

Ion	Ratio	Lower	Upper
202	100		
101	19.4	0.0	47.4

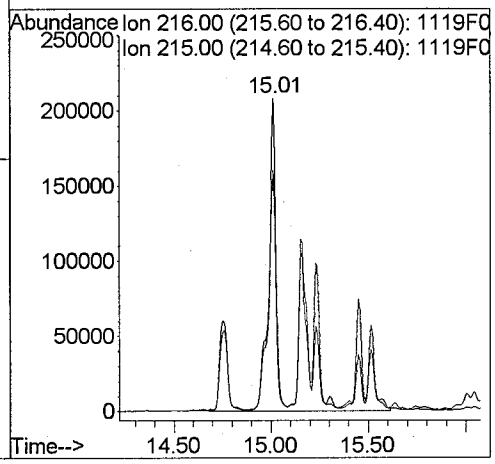


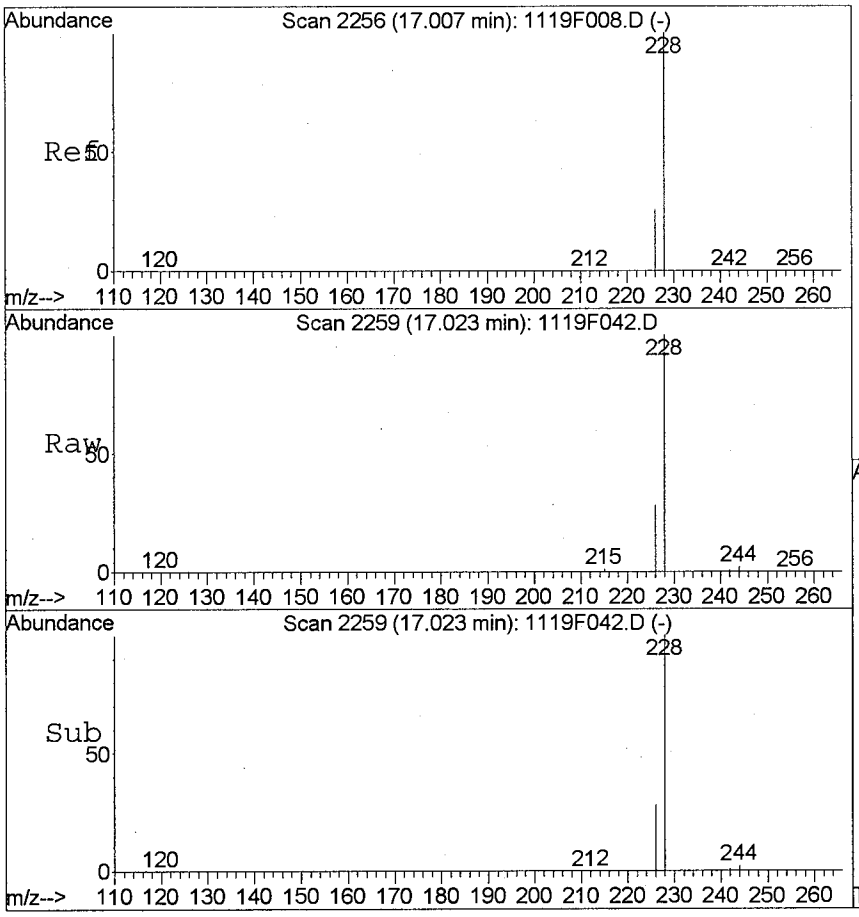


#40
C1-Fluoranthenes/Pyrenes
Concen: 6375.23 ng/ml m
RT: 15.01 min Scan# 1928
Delta R.T. -0.54 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:216 Resp: 1523537

Ion	Ratio	Lower	Upper
216	100		
215	77.2	54.8	114.8

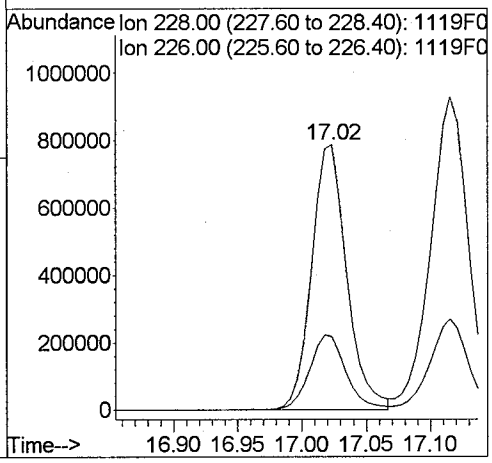


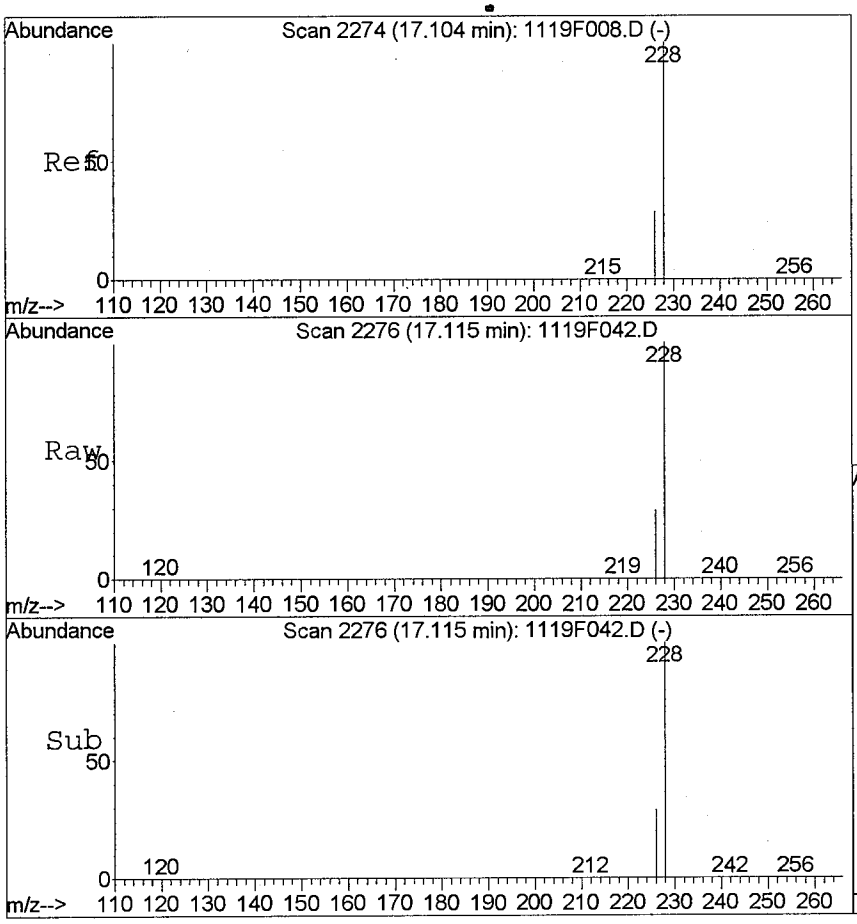


#42
Benz(a)anthracene
Concen: 8146.04 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.02 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:228 Resp: 1482127

Ion	Ratio	Lower	Upper
228	100		
226	27.7	0.0	55.8

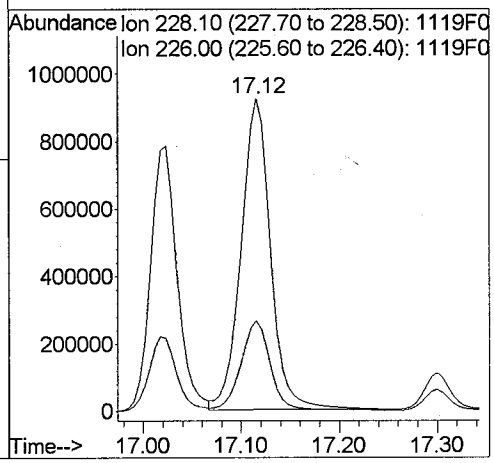


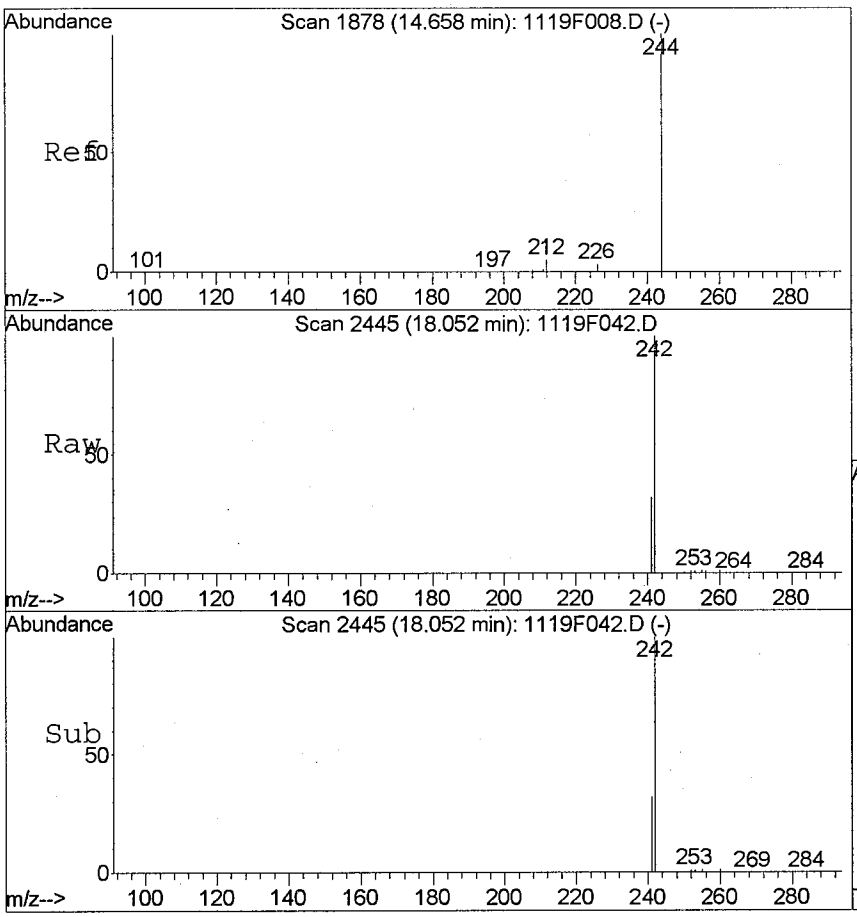


#43
Chrysene
Concen: 9883.99 ng/ml
RT: 17.12 min Scan# 2276
Delta R.T. 0.01 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:228 Resp: 1923033

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	58.5

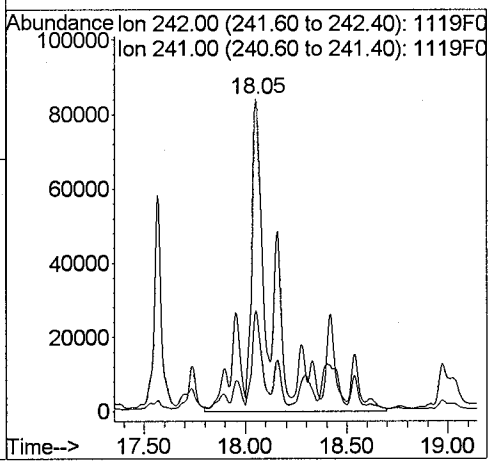


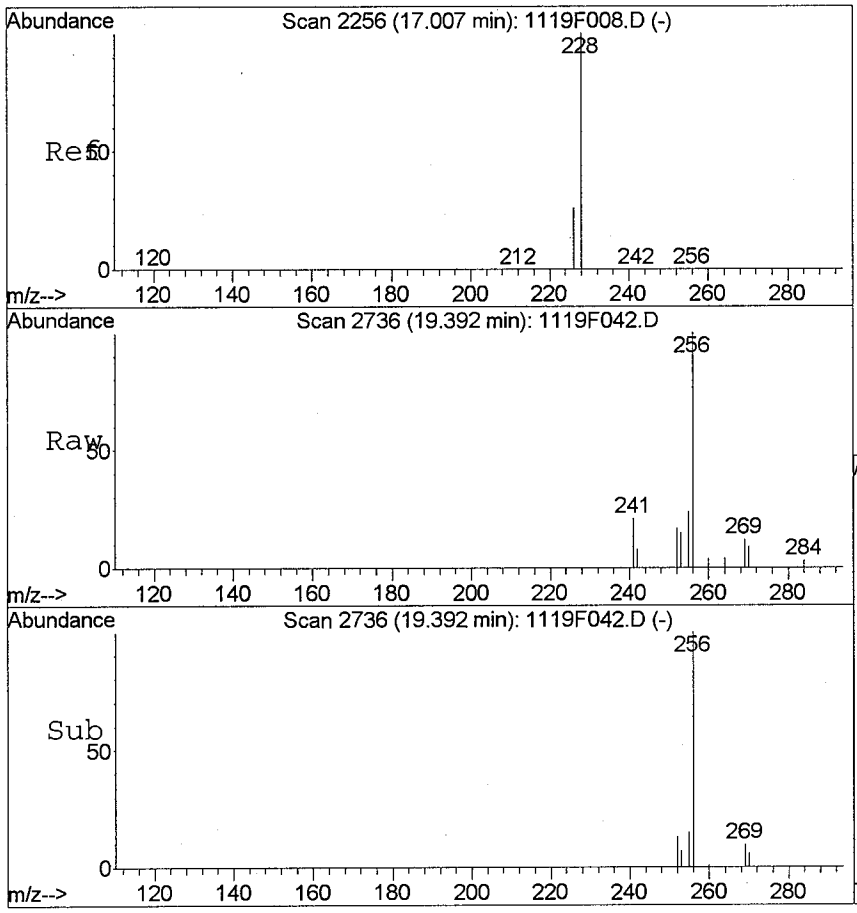


#44
C1-Chrysenes
Concen: 3871.25 ng/ml m
RT: 18.05 min Scan# 2445
Delta R.T. -0.10 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:242 Resp: 753192

Ion	Ratio	Lower	Upper
242	100		
241	32.3	0.1	60.1

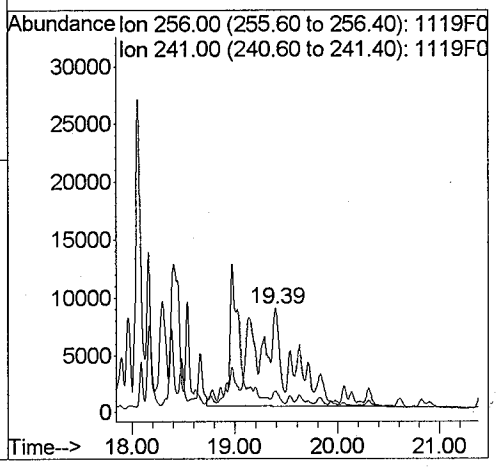


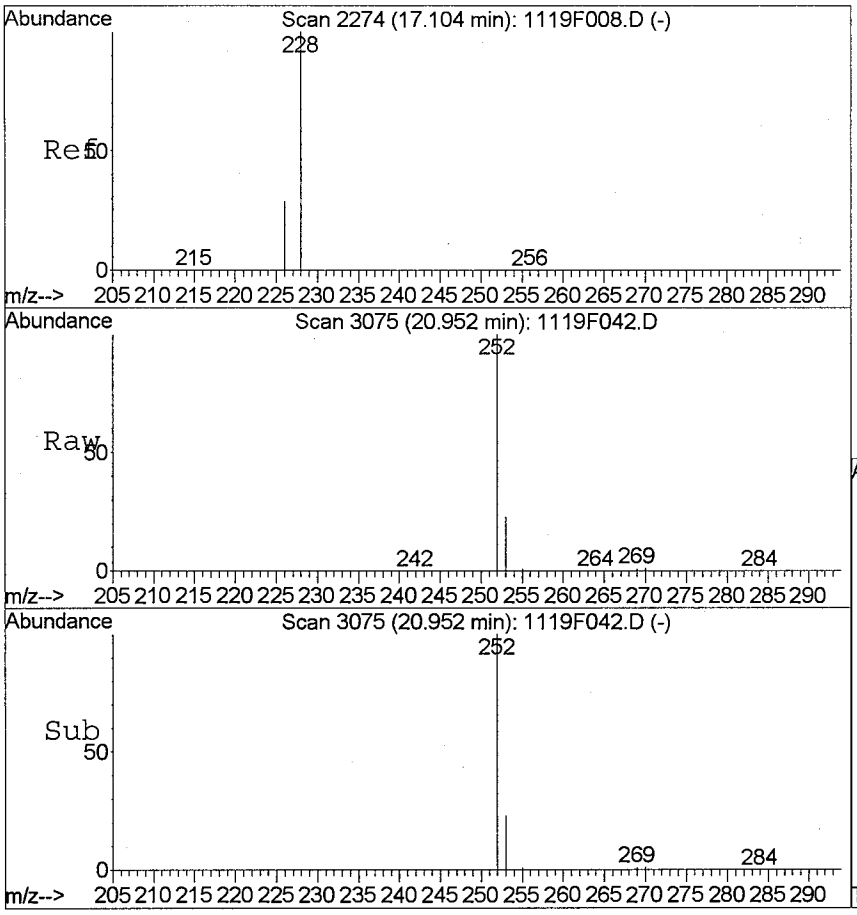


#45
C2-Chrysenes
Concen: 1248.45 ng/ml m
RT: 19.39 min Scan# 2736
Delta R.T. -0.13 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:256 Resp: 242898

Ion	Ratio	Lower	Upper
256	100		
241	20.8	7.8	67.8

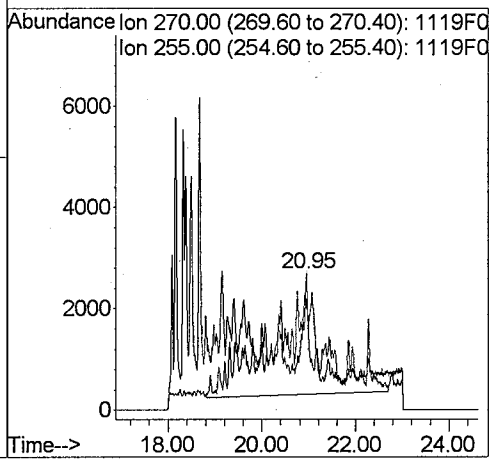


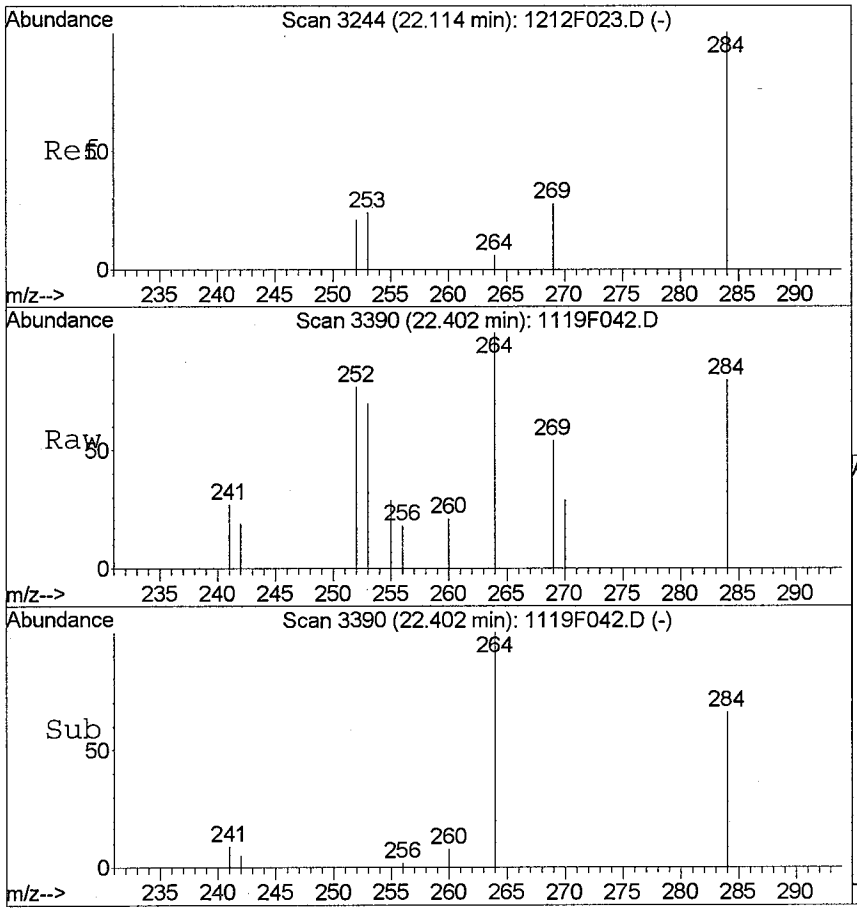


#46
C3-Chrysenes
Concen: 843.87 ng/ml m
RT: 20.95 min Scan# 3075
Delta R.T. -0.27 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:270 Resp: 164183

Ion	Ratio	Lower	Upper
270	100		
255	74.6	0.0	56.7#

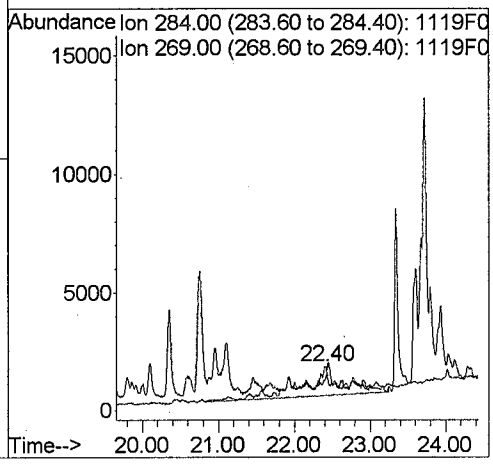


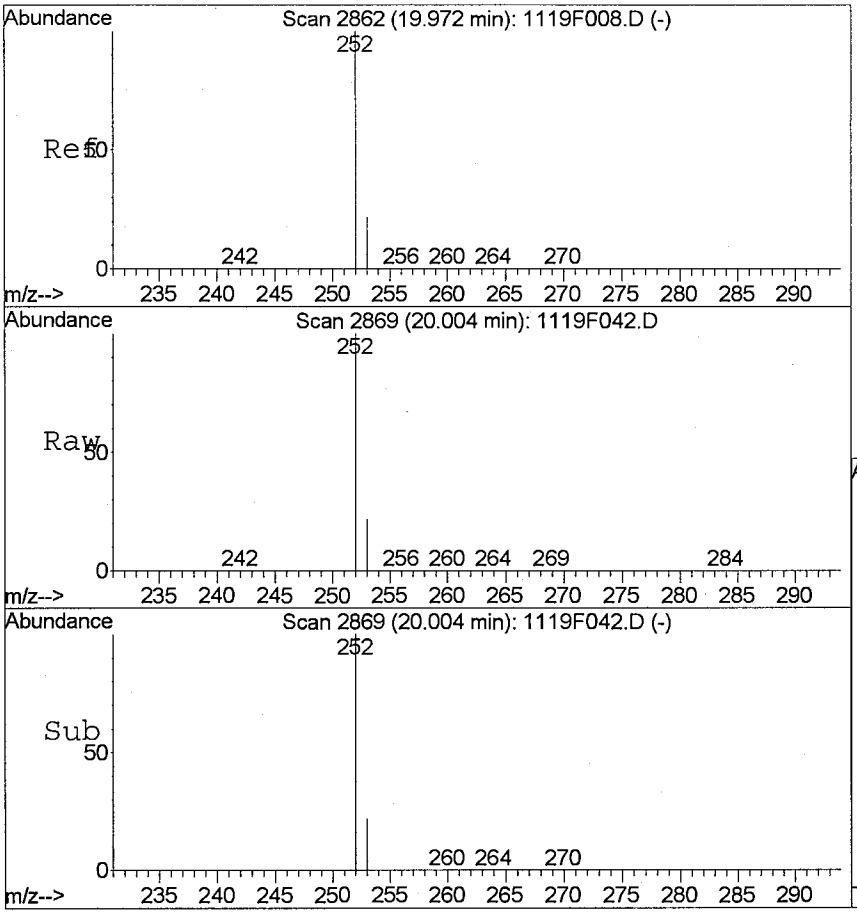


#47
C4-Chrysenes
Concen: 219.04 ng/ml m
RT: 22.40 min Scan# 3390
Delta R.T. -0.13 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:284 Resp: 42616

Ion	Ratio	Lower	Upper
284	100		
269	68.1	16.2	76.2

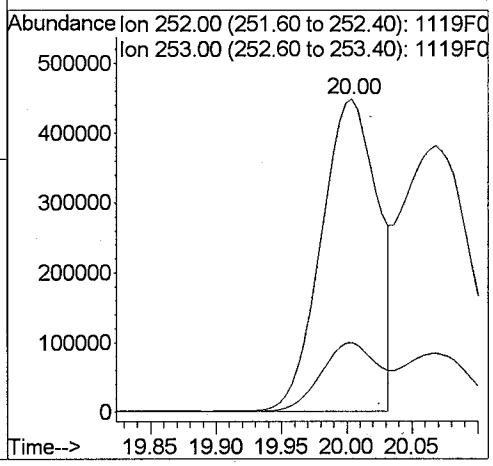


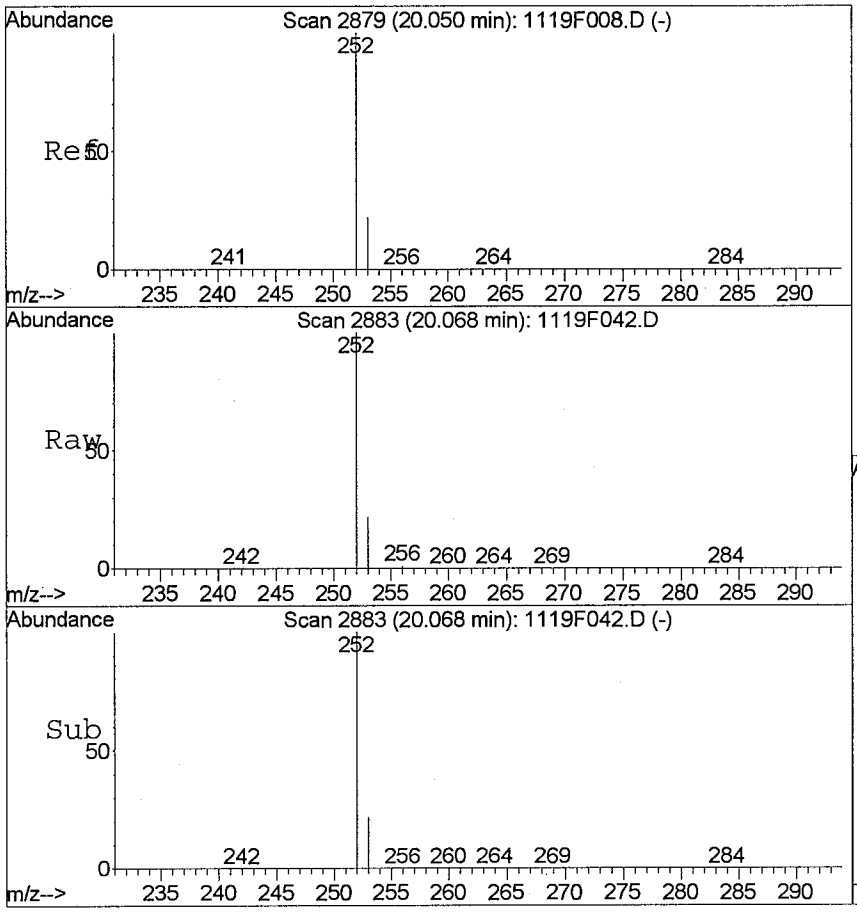


#49
Benzo(b)fluoranthene
Concen: 8446.02 ng/ml
RT: 20.00 min Scan# 2869
Delta R.T. 0.03 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:252 Resp: 1342412

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.8

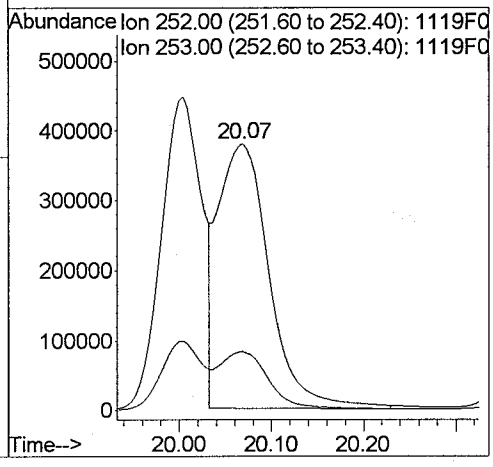


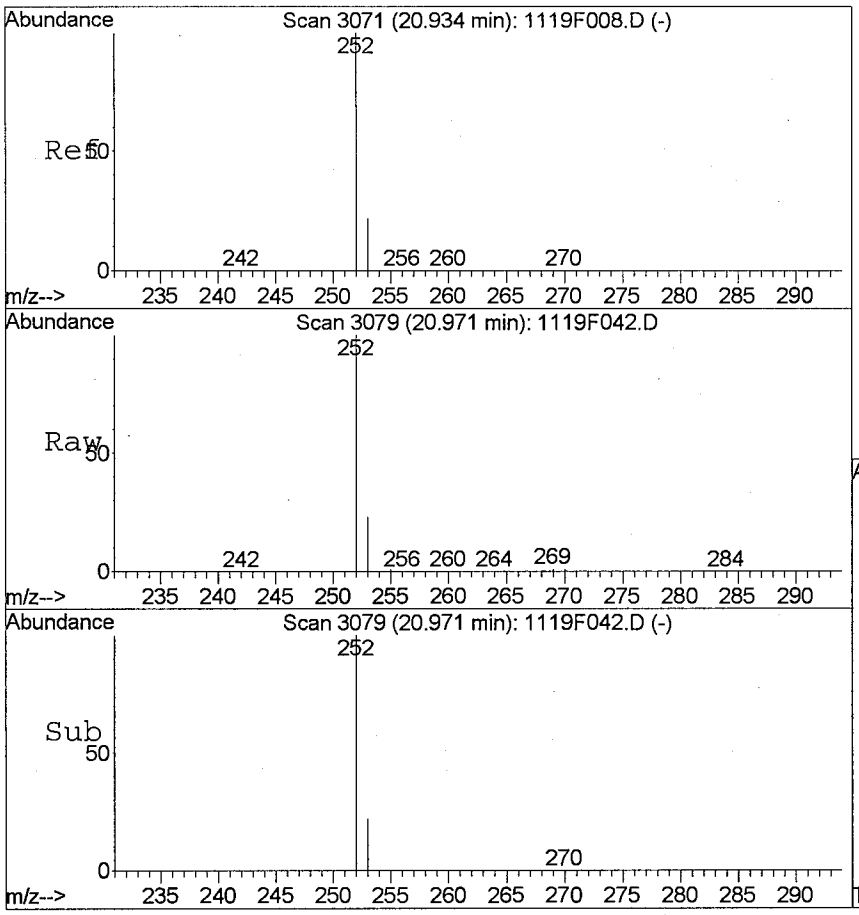


#50
Benzo(k)fluoranthene
Concen: 7299.00 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. 0.02 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:252 Resp: 1471998

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.2

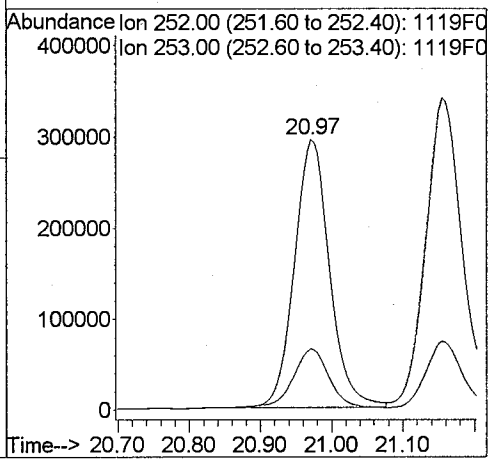


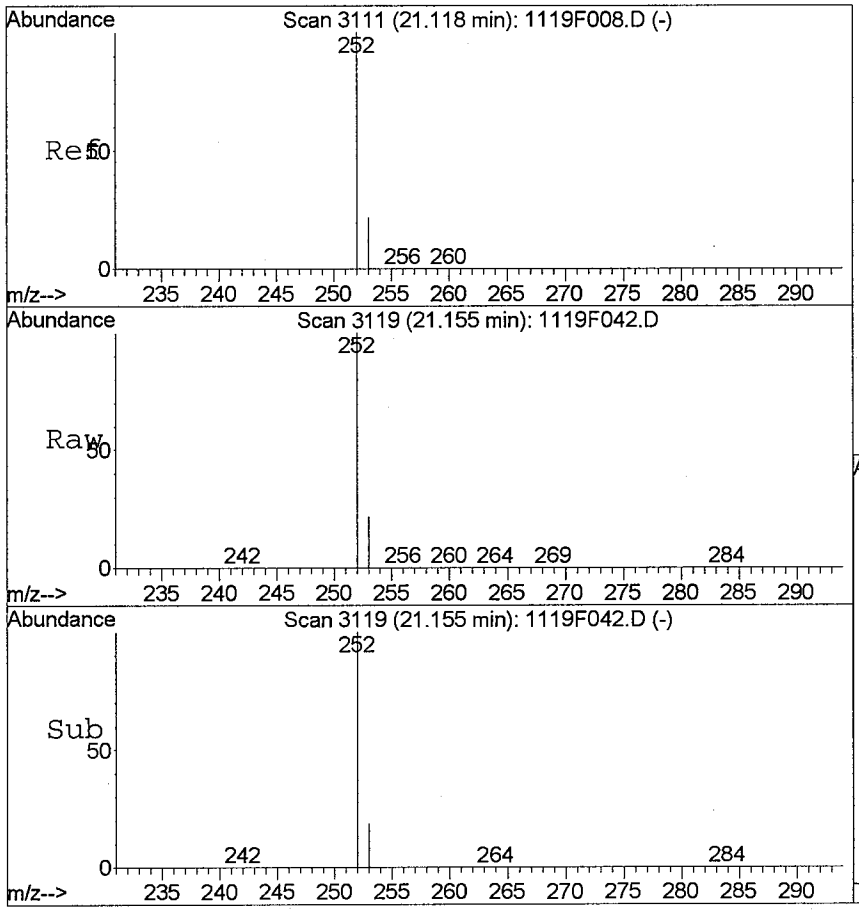


#51
Benzo(e)pyrene
Concen: 5669.80 ng/ml
RT: 20.97 min Scan# 3079
Delta R.T. 0.04 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:252 Resp: 1011806

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.8

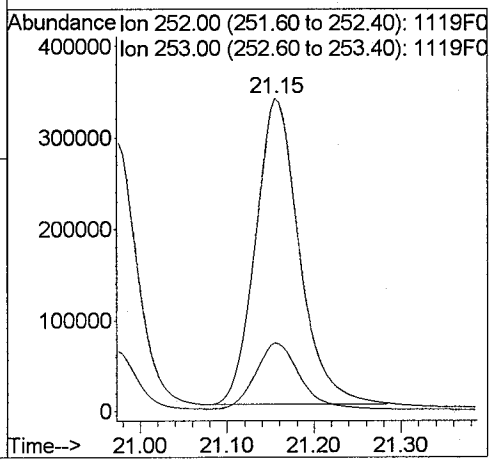


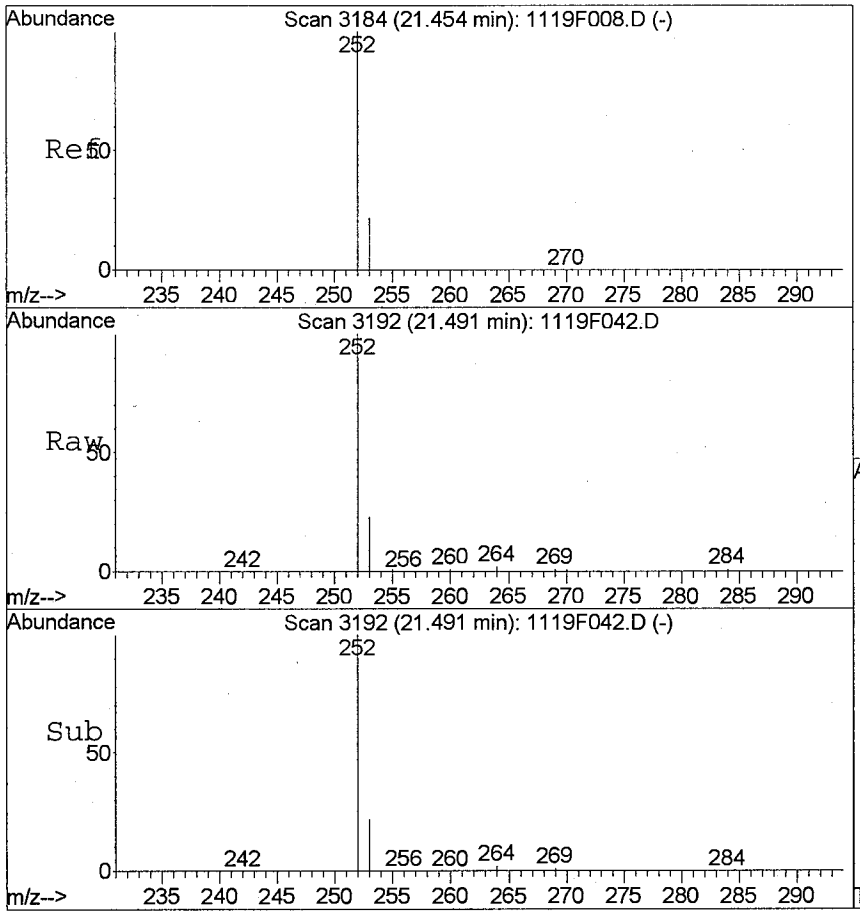


#52
Benzo(a)pyrene
Concen: 8705.53 ng/ml
RT: 21.15 min Scan# 3119
Delta R.T. 0.04 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:252 Resp: 1176927

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

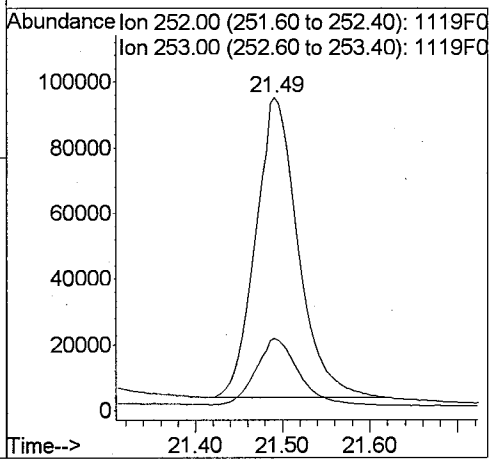


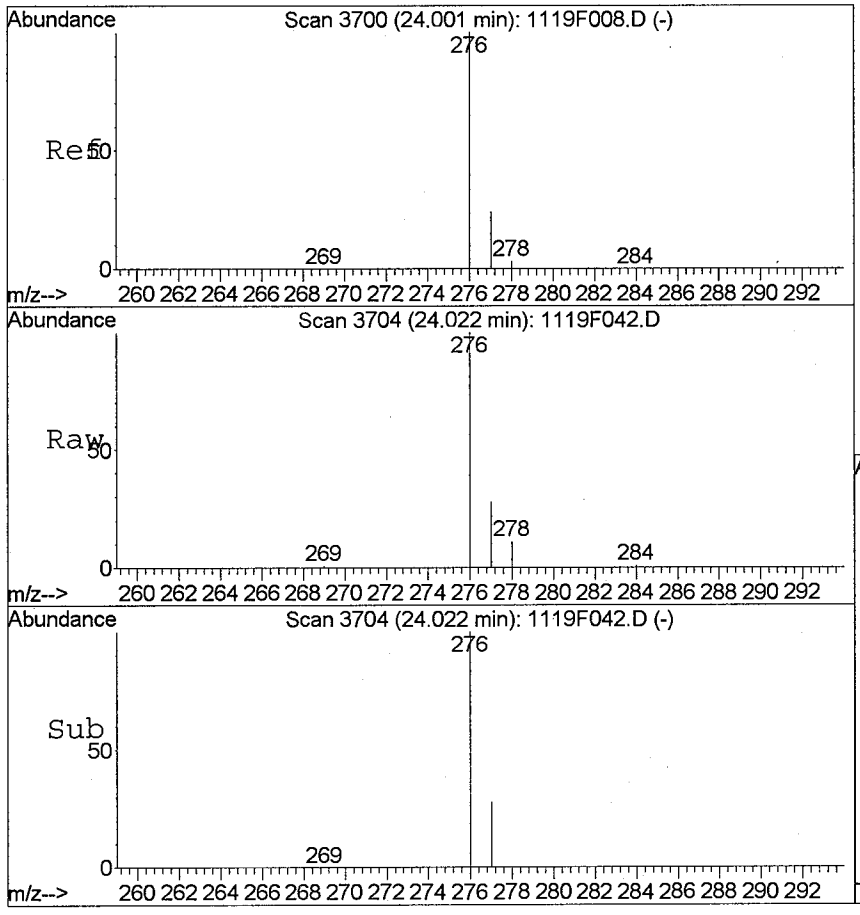


#53
Perylene
Concen: 2041.05 ng/ml
RT: 21.49 min Scan# 3192
Delta R.T. 0.04 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:252 Resp: 309748

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.6

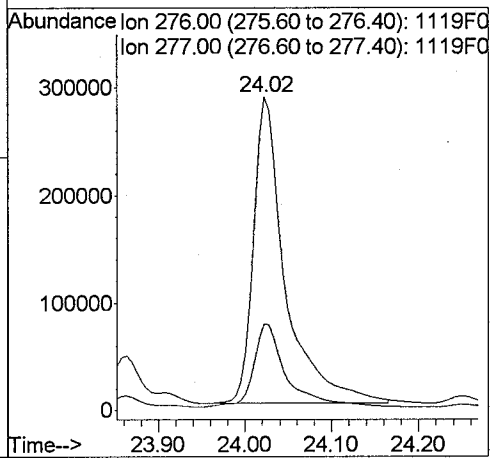


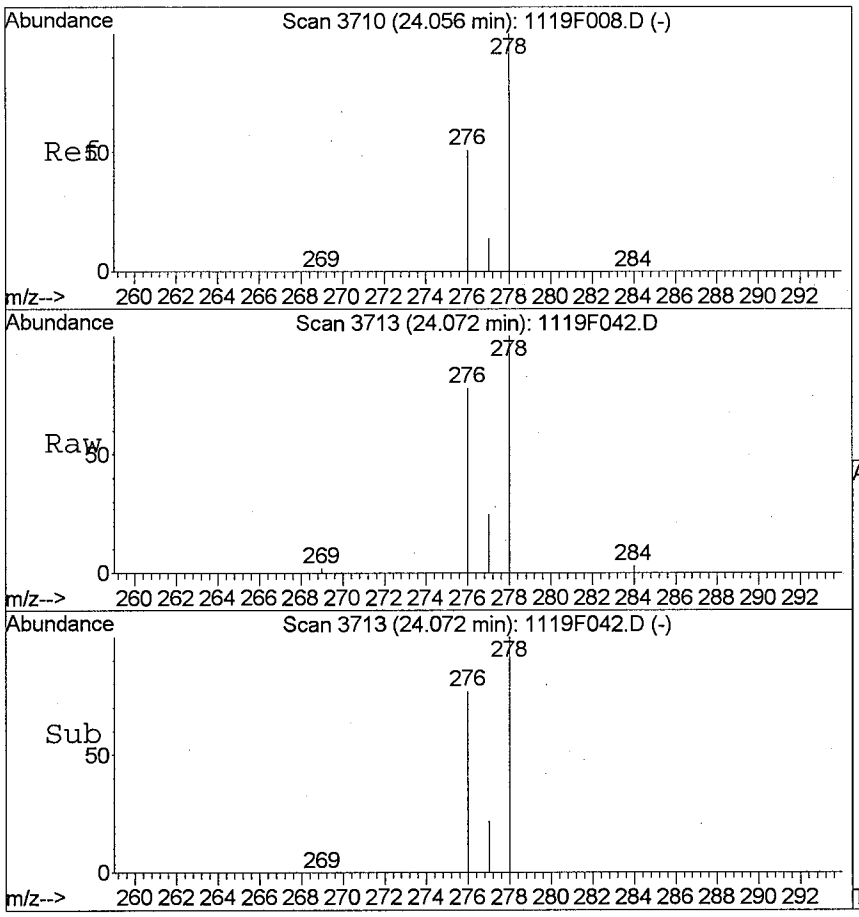


#54
Indeno(1,2,3-cd)pyrene
Concen: 8953.52 ng/ml
RT: 24.02 min Scan# 3704
Delta R.T. 0.02 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:276 Resp: 735841

Ion	Ratio	Lower	Upper
276	100		
277	27.1	0.0	53.6

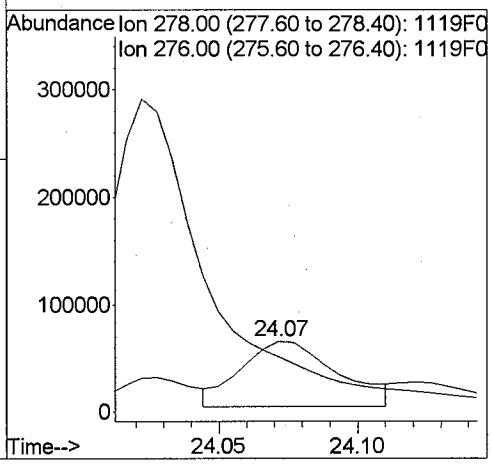


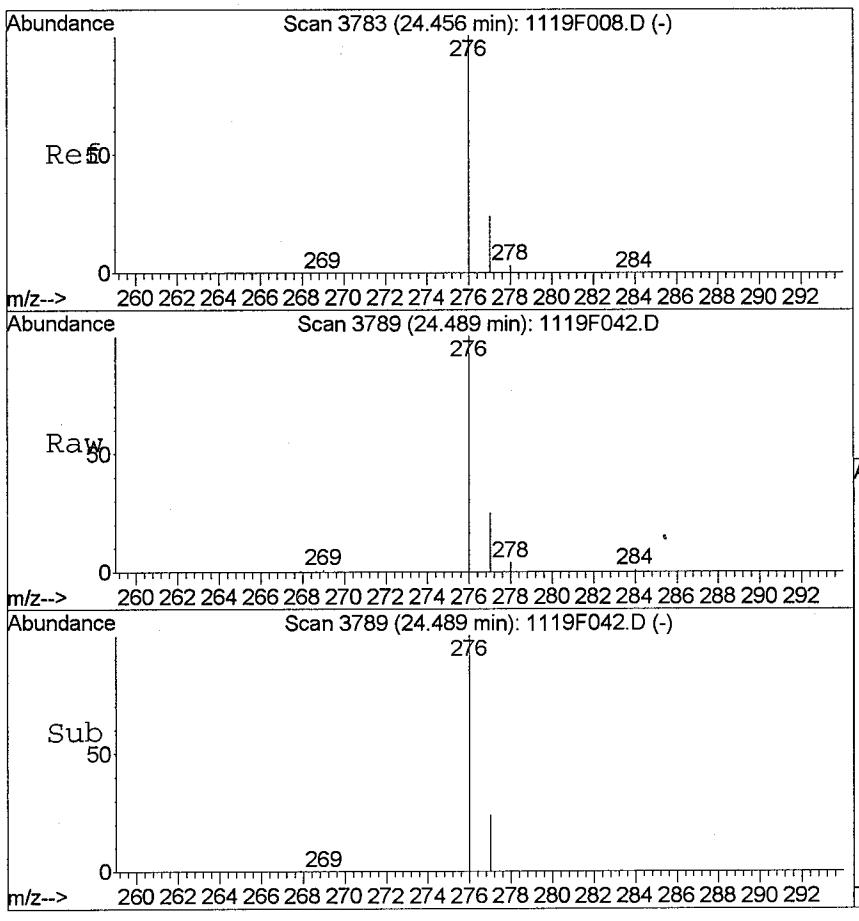


#55
Dibenz(a,h)anthracene
Concen: 1250.14 ng/ml m
RT: 24.07 min Scan# 3713
Delta R.T. 0.02 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:278 Resp: 147654

Ion	Ratio	Lower	Upper
278	100		
276	78.2	21.1	81.1

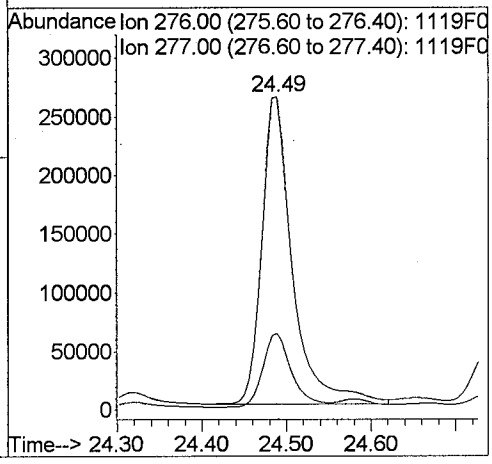




#56
Benzo(g,h,i)perylene
Concen: 4846.37 ng/ml
RT: 24.49 min Scan# 3789
Delta R.T. 0.03 min
Lab File: 1119F042.D
Acq: 19 Nov 2003 7:26 pm

Tgt Ion:276 Resp: 660332

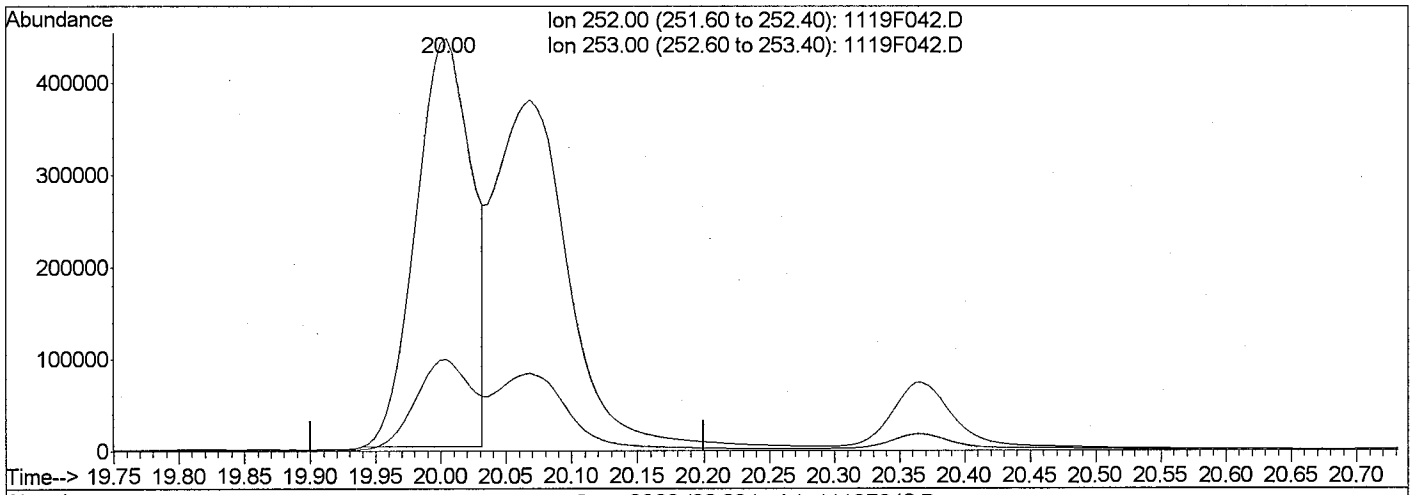
Ion	Ratio	Lower	Upper
276	100		
277	24.1	0.0	53.6

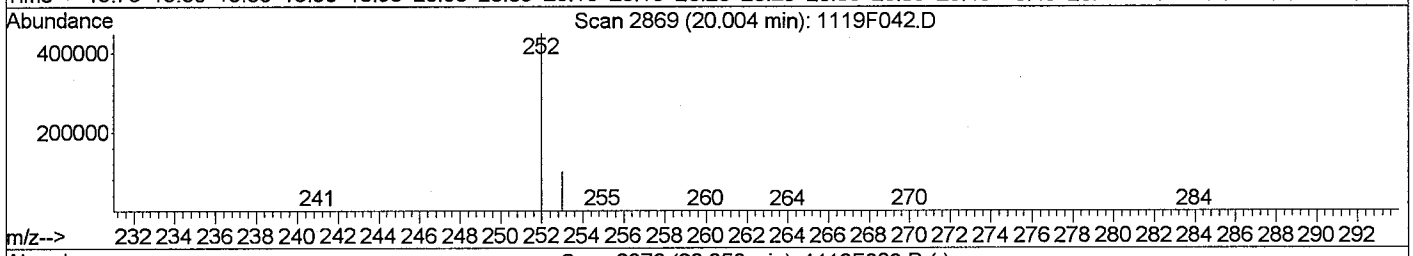


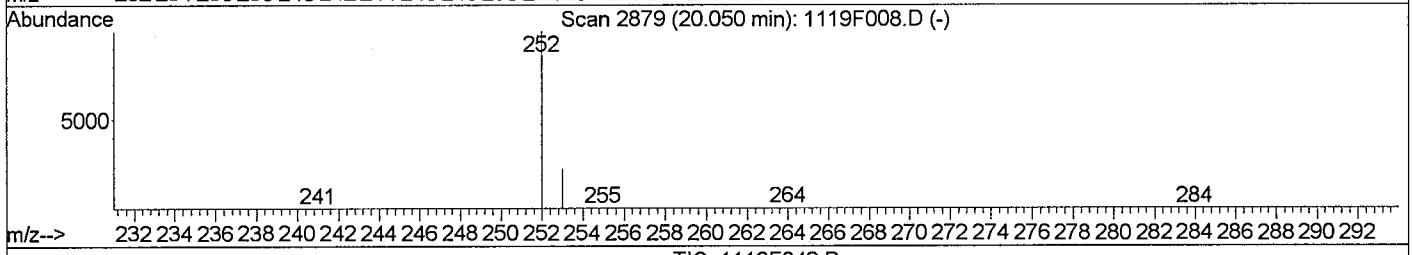
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(50) Benzo(k)fluoranthene (T)

20.00min 6561.27ng/ml

response 1323219

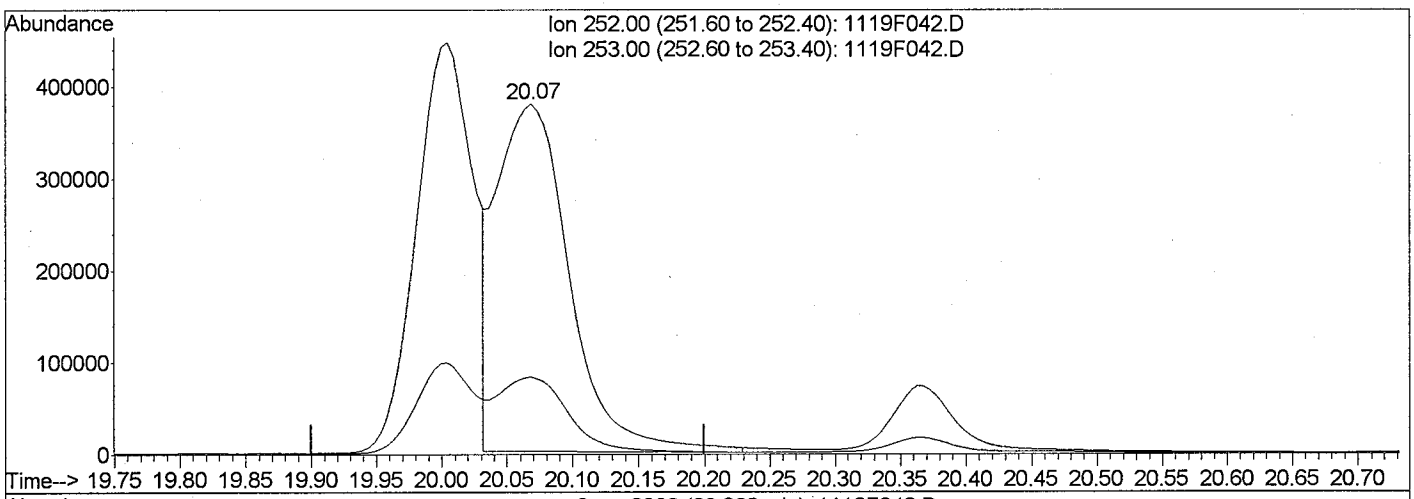
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.14
0.00	0.00	0.00
0.00	0.00	0.00

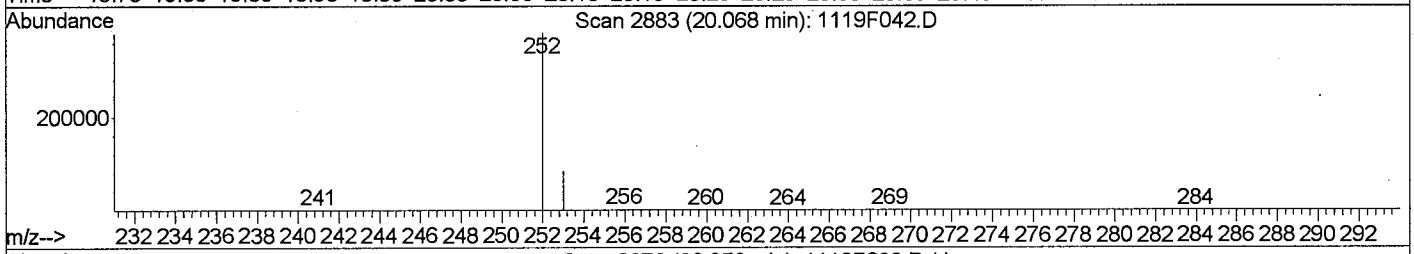
1119F042.D 1107ALK.M Thu Nov 20 14:21:15 2003

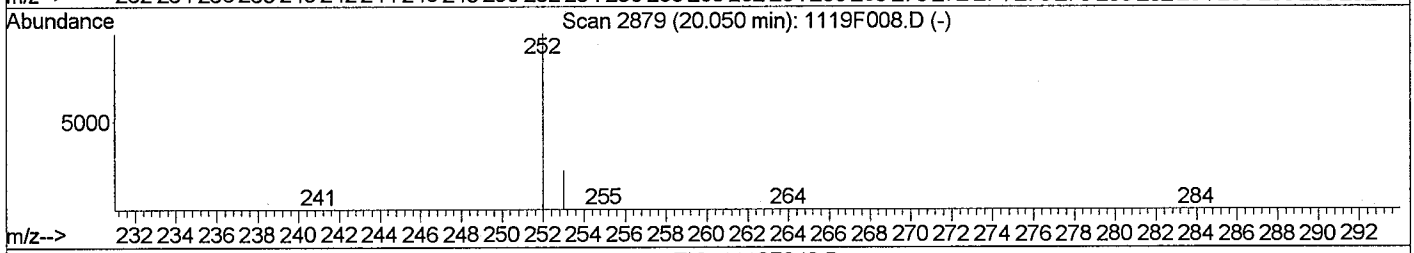
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(50) Benzo(k)fluoranthene (T)

20.07min 7299.00ng/ml m

response 1471998

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.17
0.00	0.00	0.00
0.00	0.00	0.00

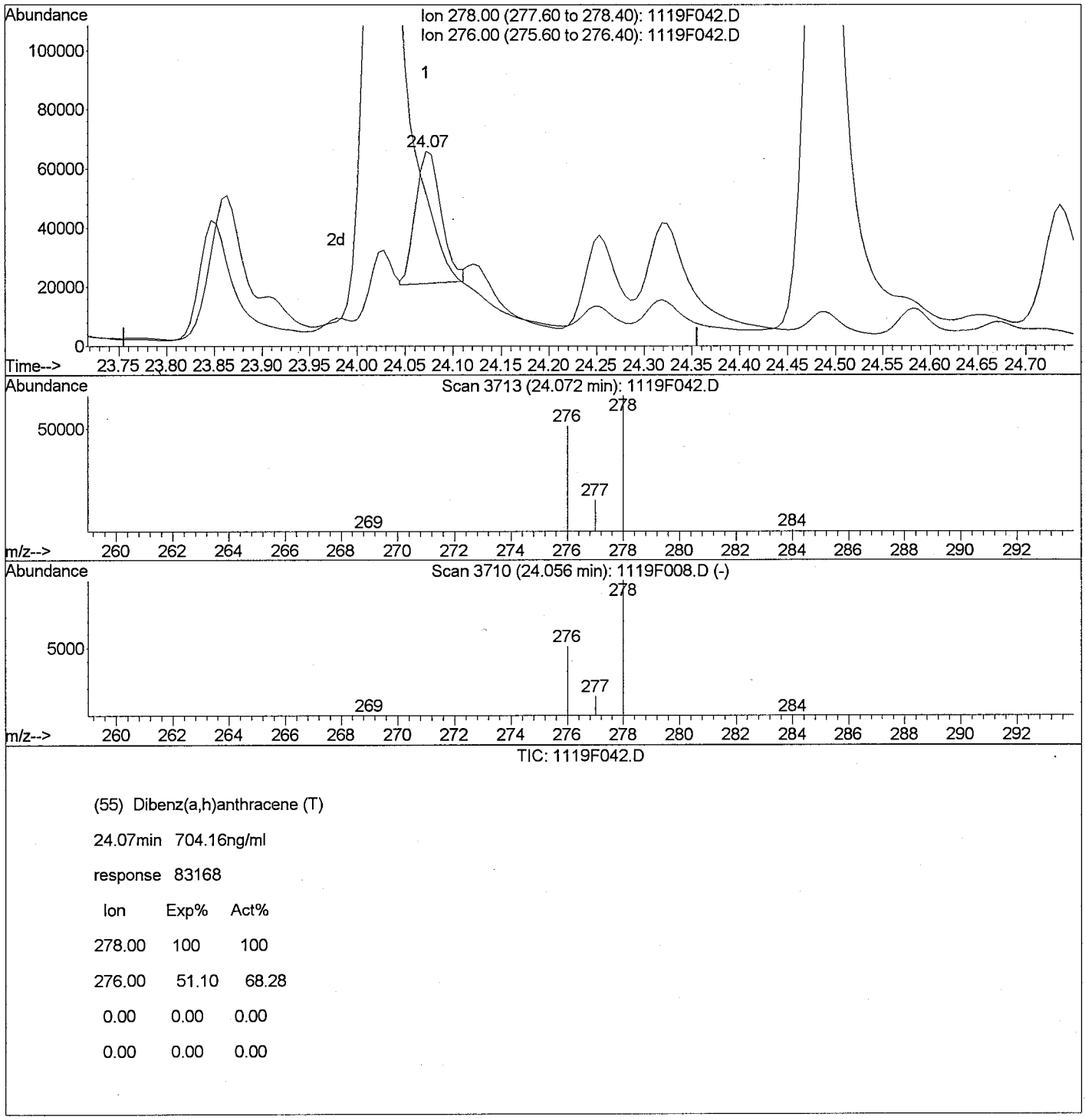
11/24/13 wrong peak 11/24/13

1119F042.D 1107ALK.M Thu Nov 20 14:21:20 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(55) Dibenz(a,h)anthracene (T)

24.07min 704.16ng/ml

response 83168

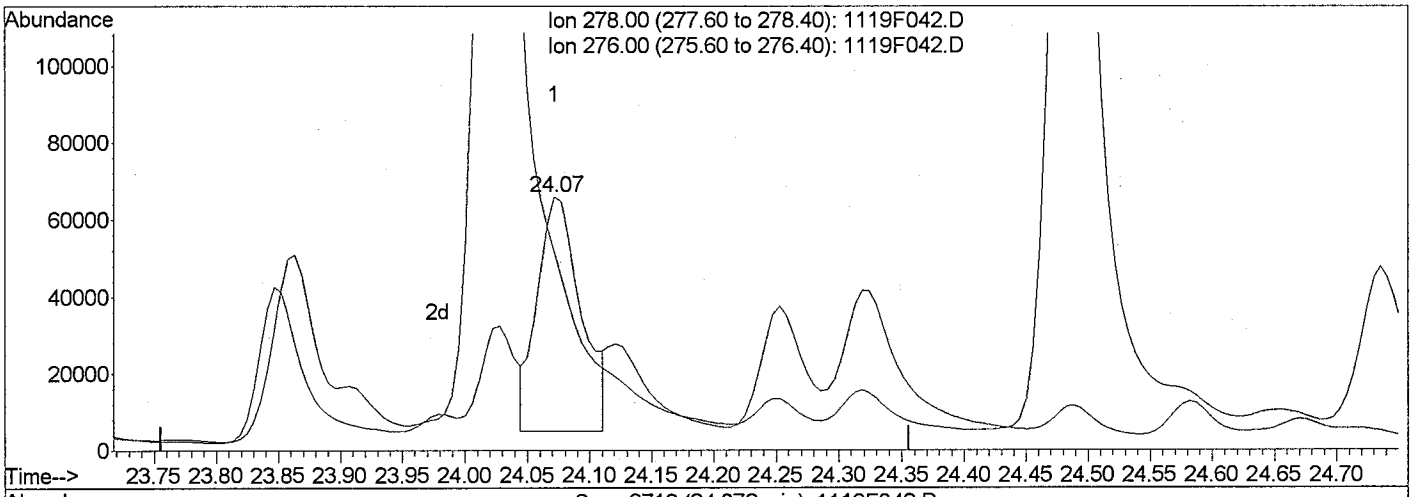
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	68.28
0.00	0.00	0.00
0.00	0.00	0.00

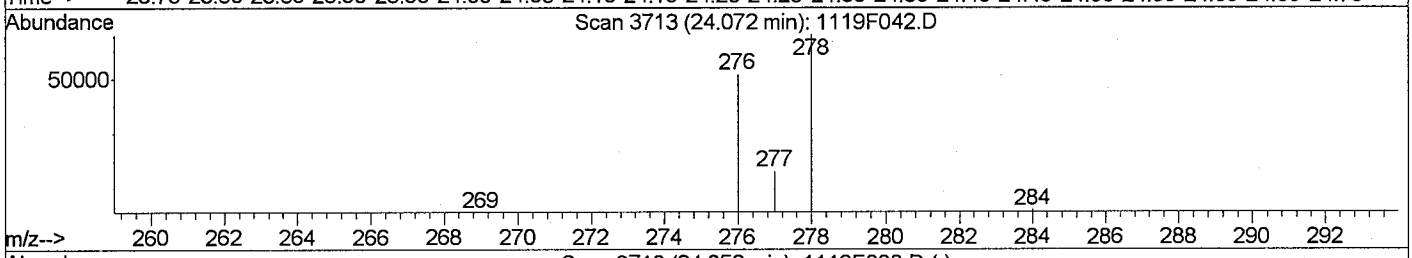
1119F042.D 1107ALK.M Thu Nov 20 14:21:26 2003

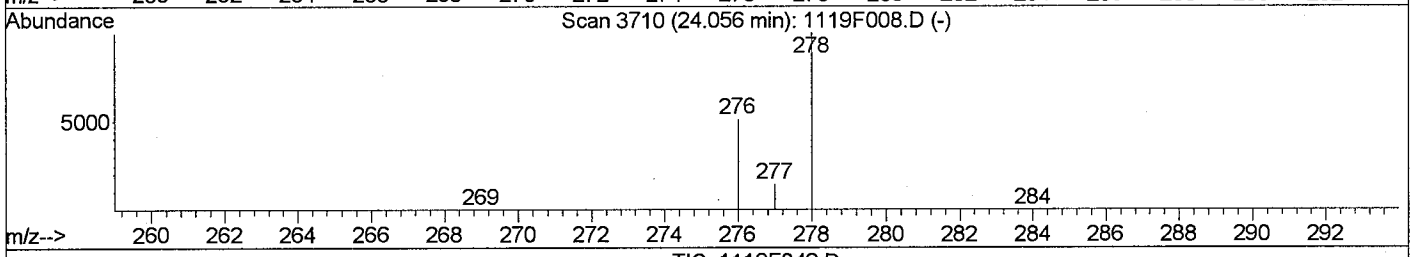
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(55) Dibenz(a,h)anthracene (T)

24.07min 1250.14ng/ml m

response 147654

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	78.17
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

Quant incomplete

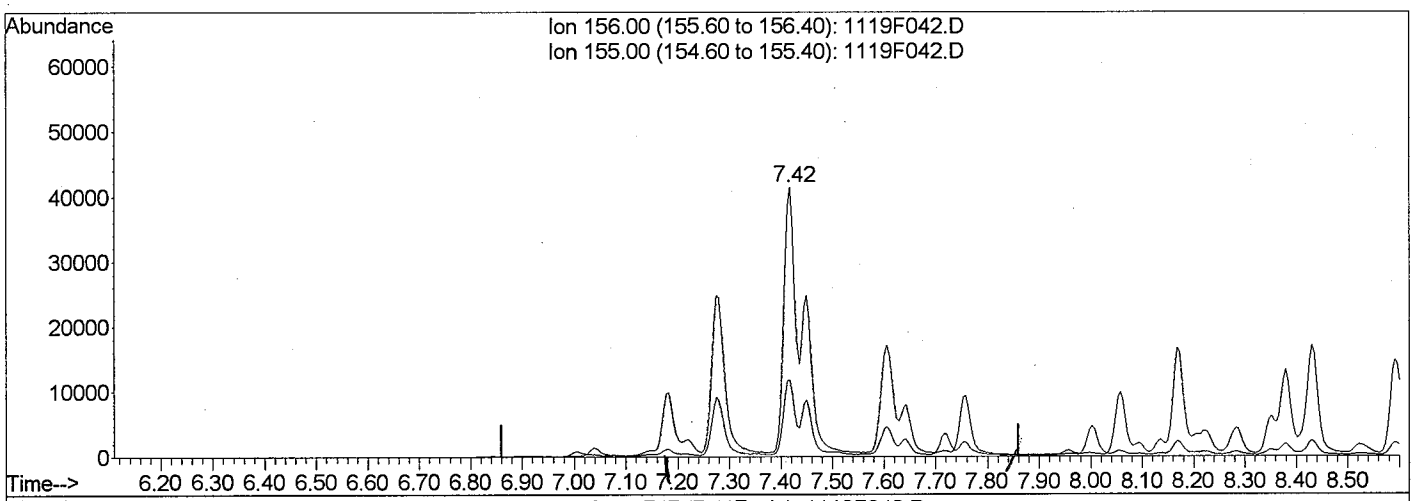
1119F042.D 1107ALK.M Thu Nov 20 14:21:31 2003

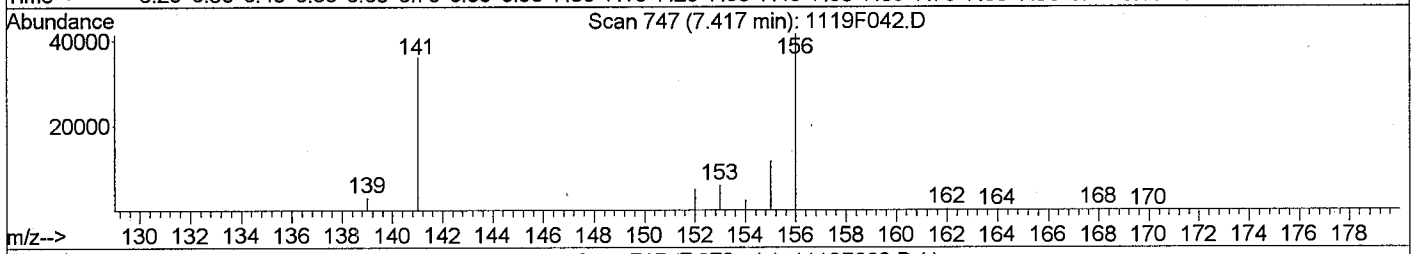
Quantitation Report (Qedit)

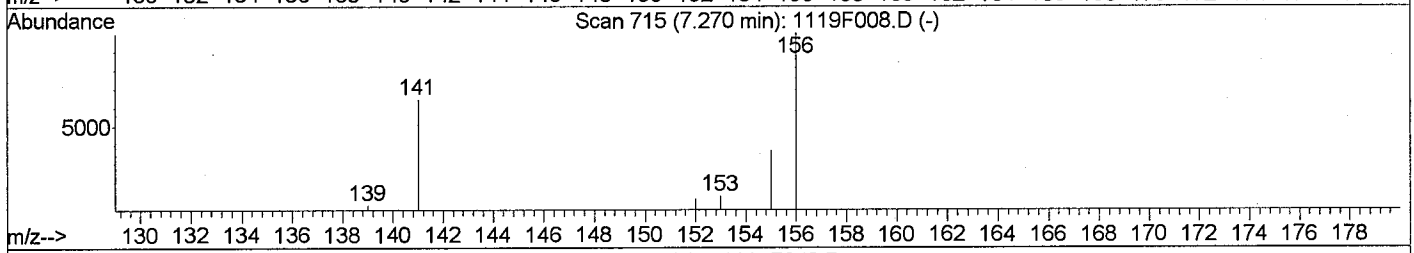
Data File : J:\MS11\DATA\111903\1119F042.D
Acq On : 19 Nov 2003 7:26 pm
Sample : K2308433-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:21 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(8) C2-Naphthalenes (L)

7.42min 867.06ng/ml m

response 231339

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	28.31
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

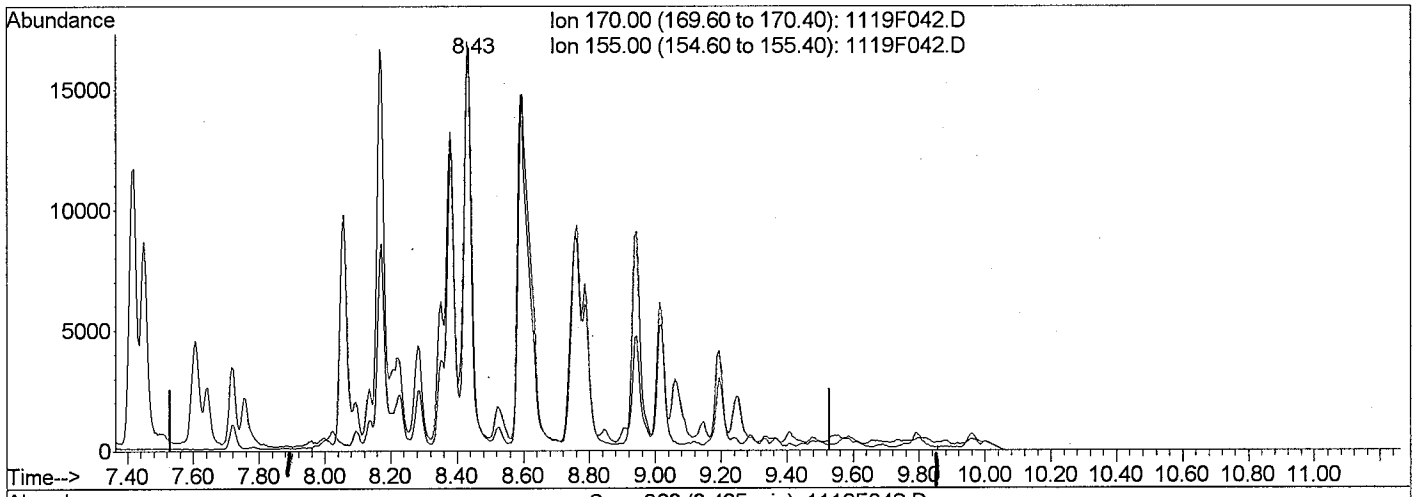
11/24/03

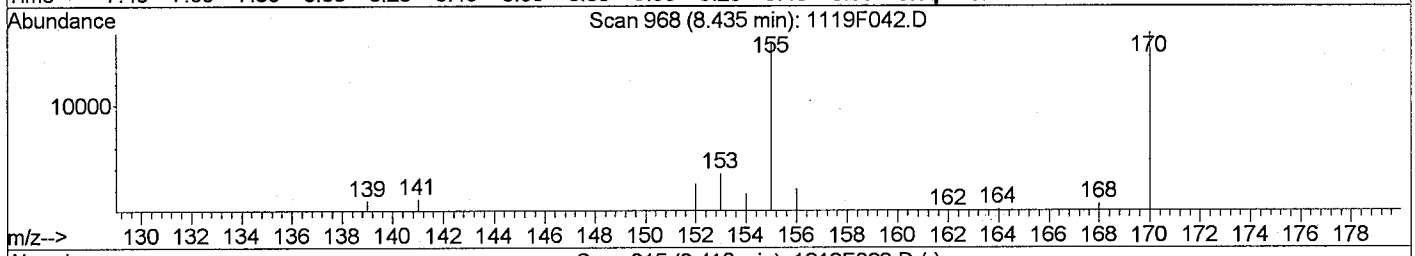
1119F042.D 1107ALK.M Fri Nov 21 12:21:23 2003

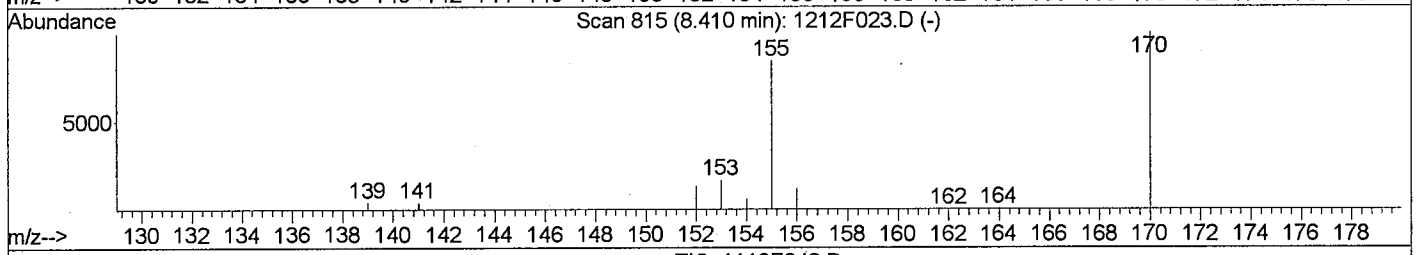
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(9) C3-Naphthalenes (L)

8.43min 724.08ng/ml m

response 193191

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	93.70
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

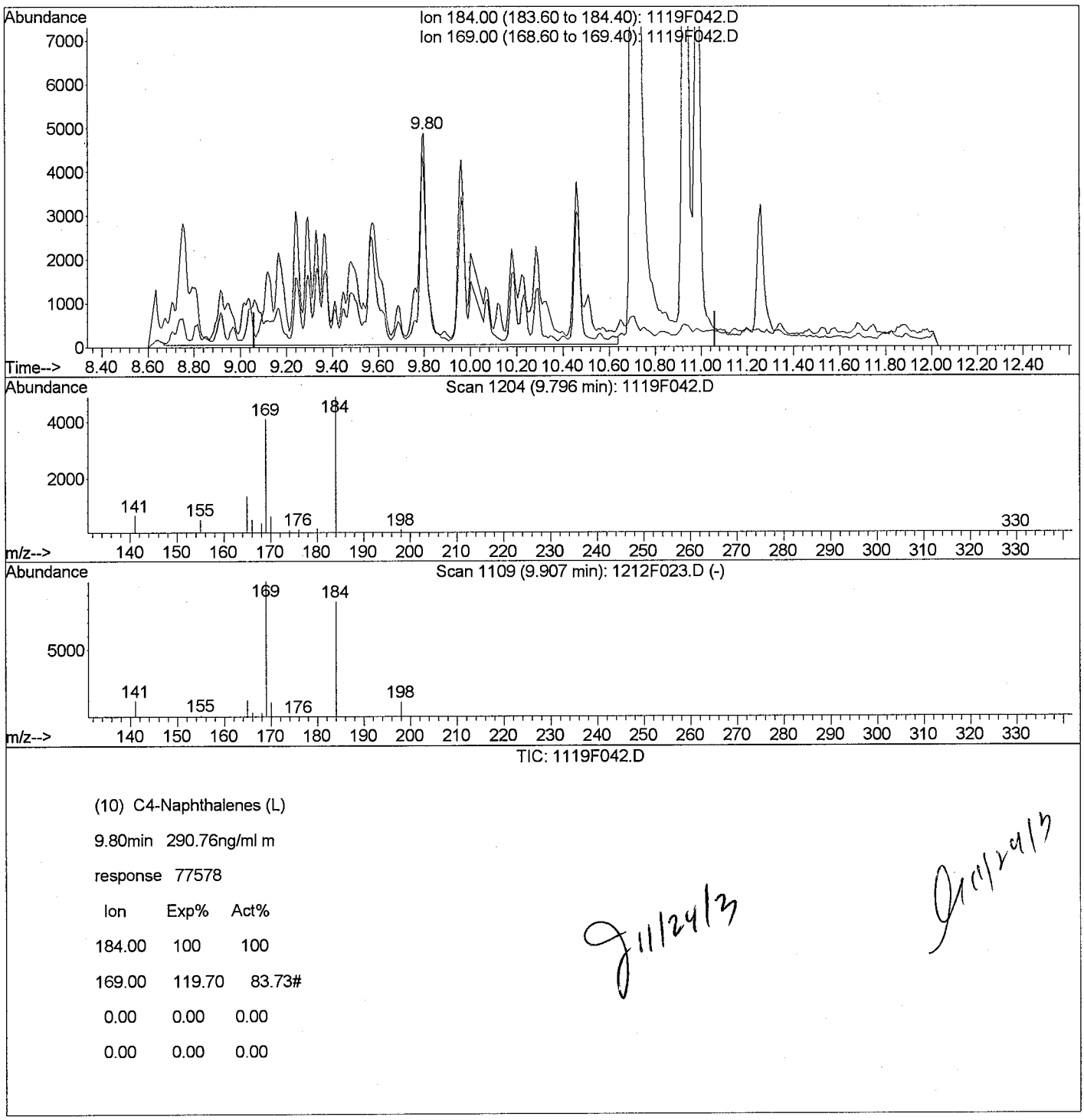
1119F042.D 1107ALK.M Fri Nov 21 12:21:36 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D
Acq On : 19 Nov 2003 7:26 pm
Sample : K2308433-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:21 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(10) C4-Naphthalenes (L)

9.80min 290.76ng/ml m

response 77578

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	83.73#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

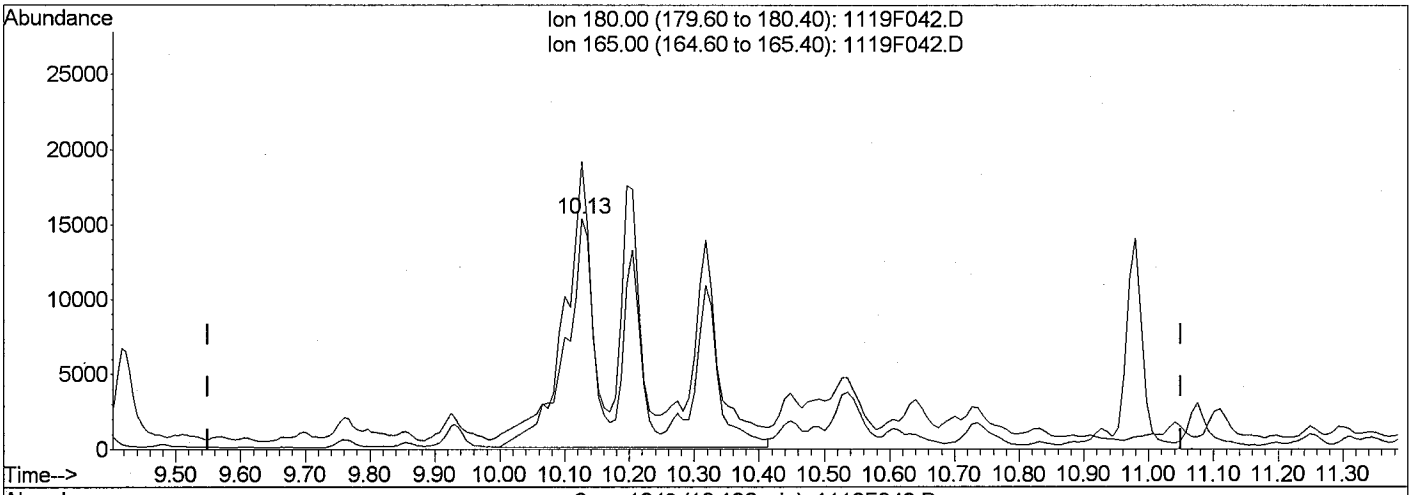
11/24/03

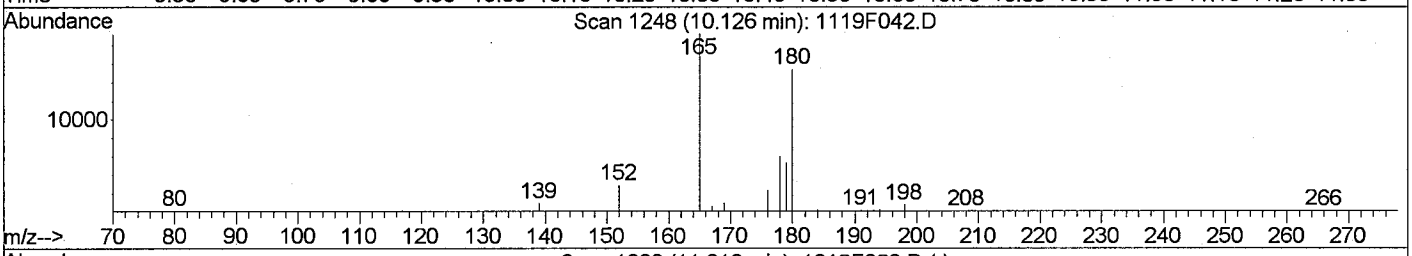
1119F042.D 1107ALK.M Fri Nov 21 12:22:01 2003

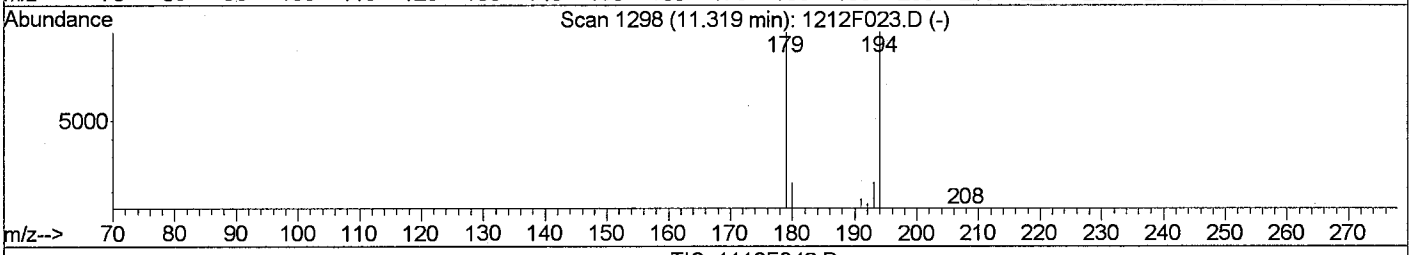
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(18) C1-Fluorenes (L)

10.13min 683.40ng/ml m

response 108970

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	124.71#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

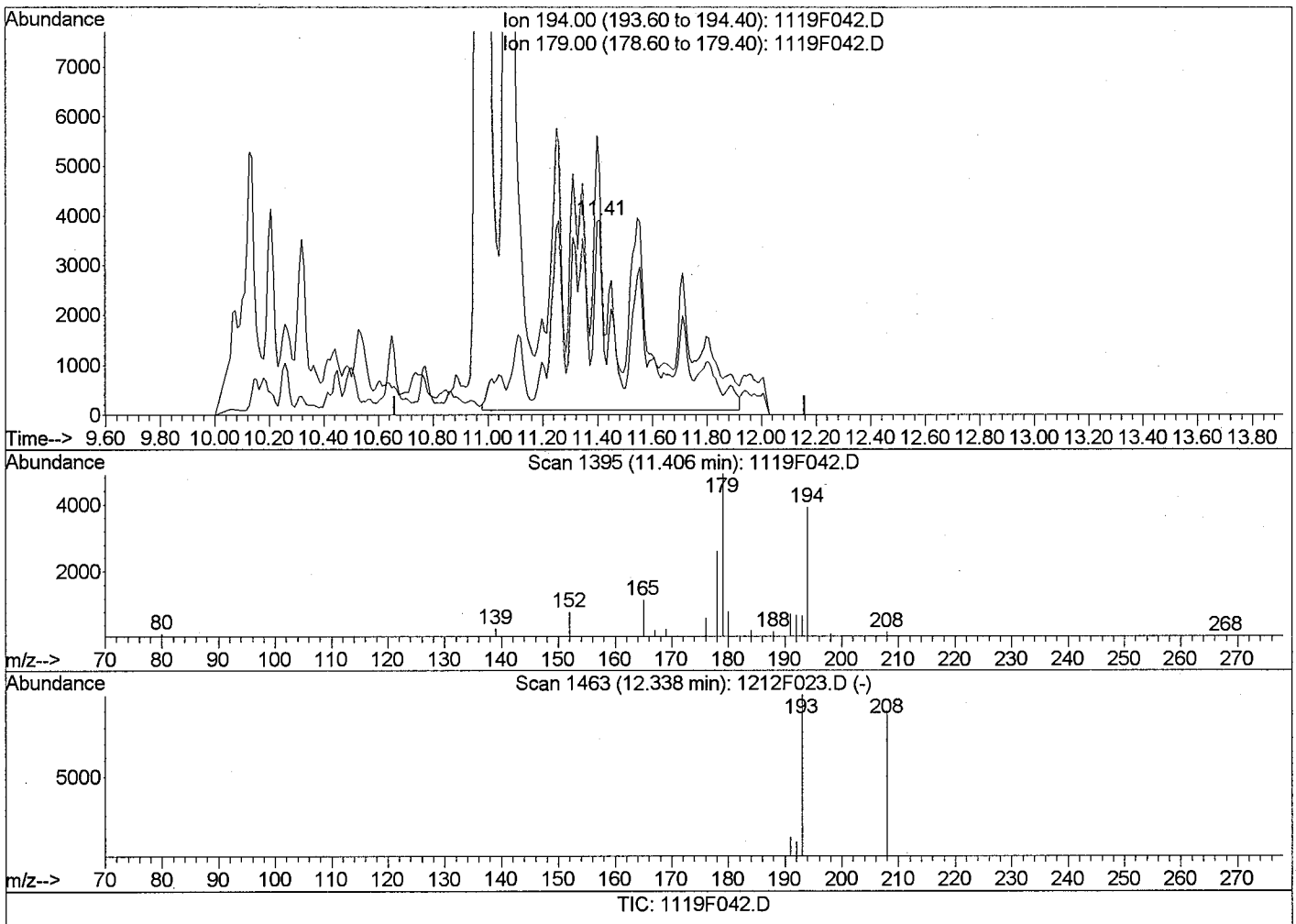
11/24/03

1119F042.D 1107ALK.M Fri Nov 21 12:22:08 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(19) C2-Fluorenes (L)

11.41min 421.25ng/ml m

response 67169

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	125.56
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

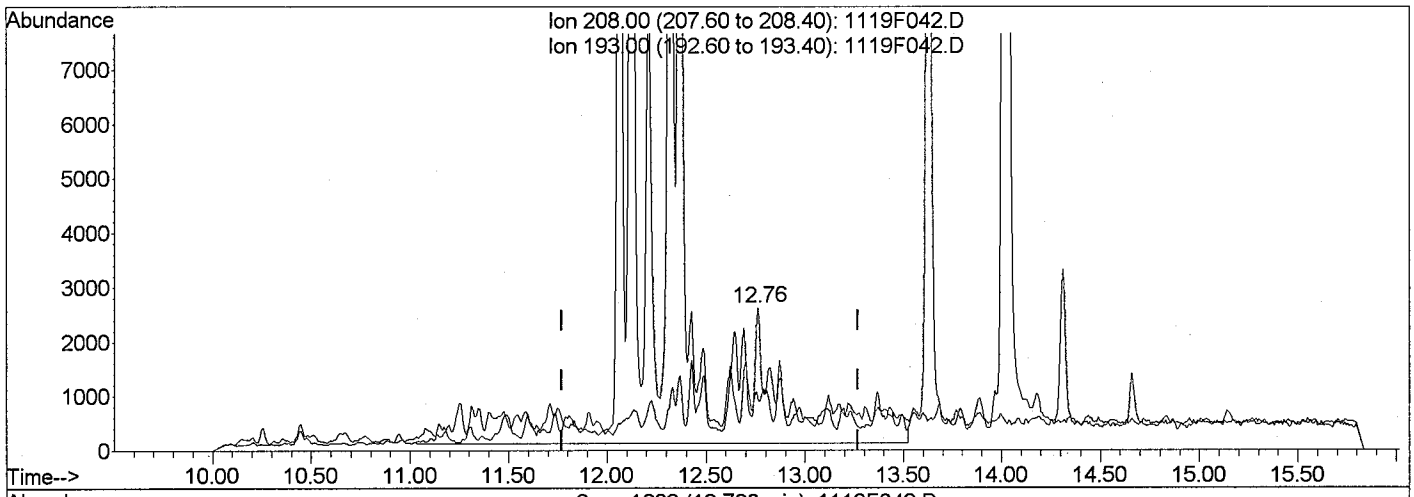
11/21/03

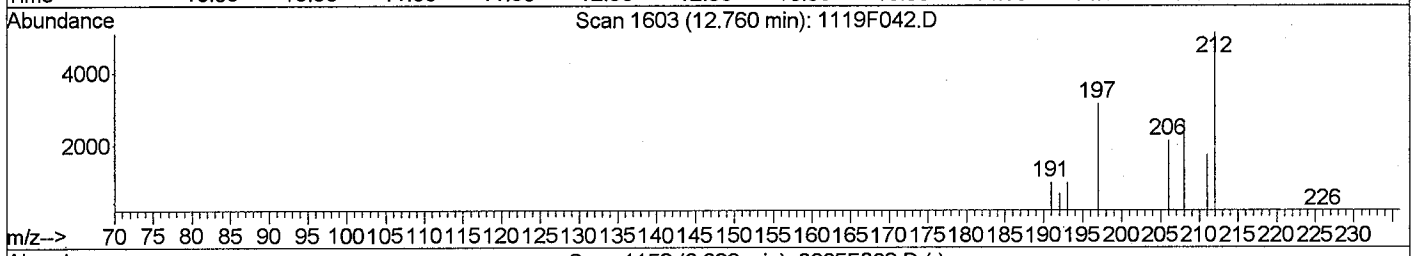
1119F042.D 1107ALK.M Fri Nov 21 12:22:42 2003

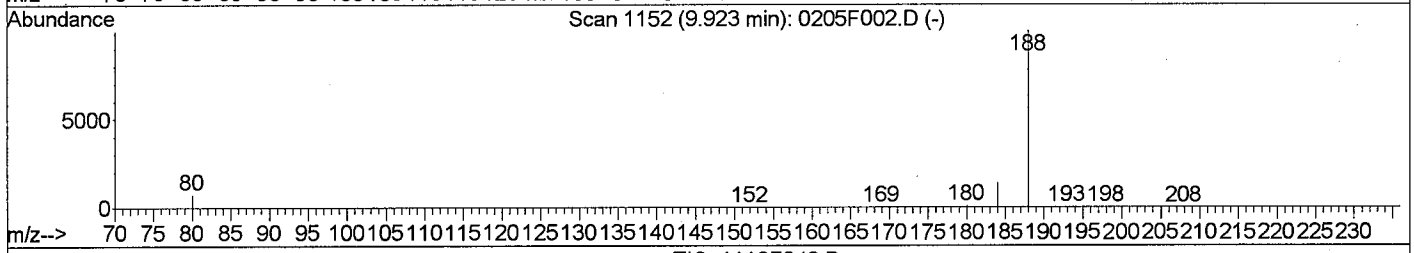
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(20) C3-Fluorenes (L)

12.76min 508.30ng/ml m

response 81050

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	36.41#
0.00	0.00	0.00
0.00	0.00	0.00

Over integrated
See report print
J 11/24/13

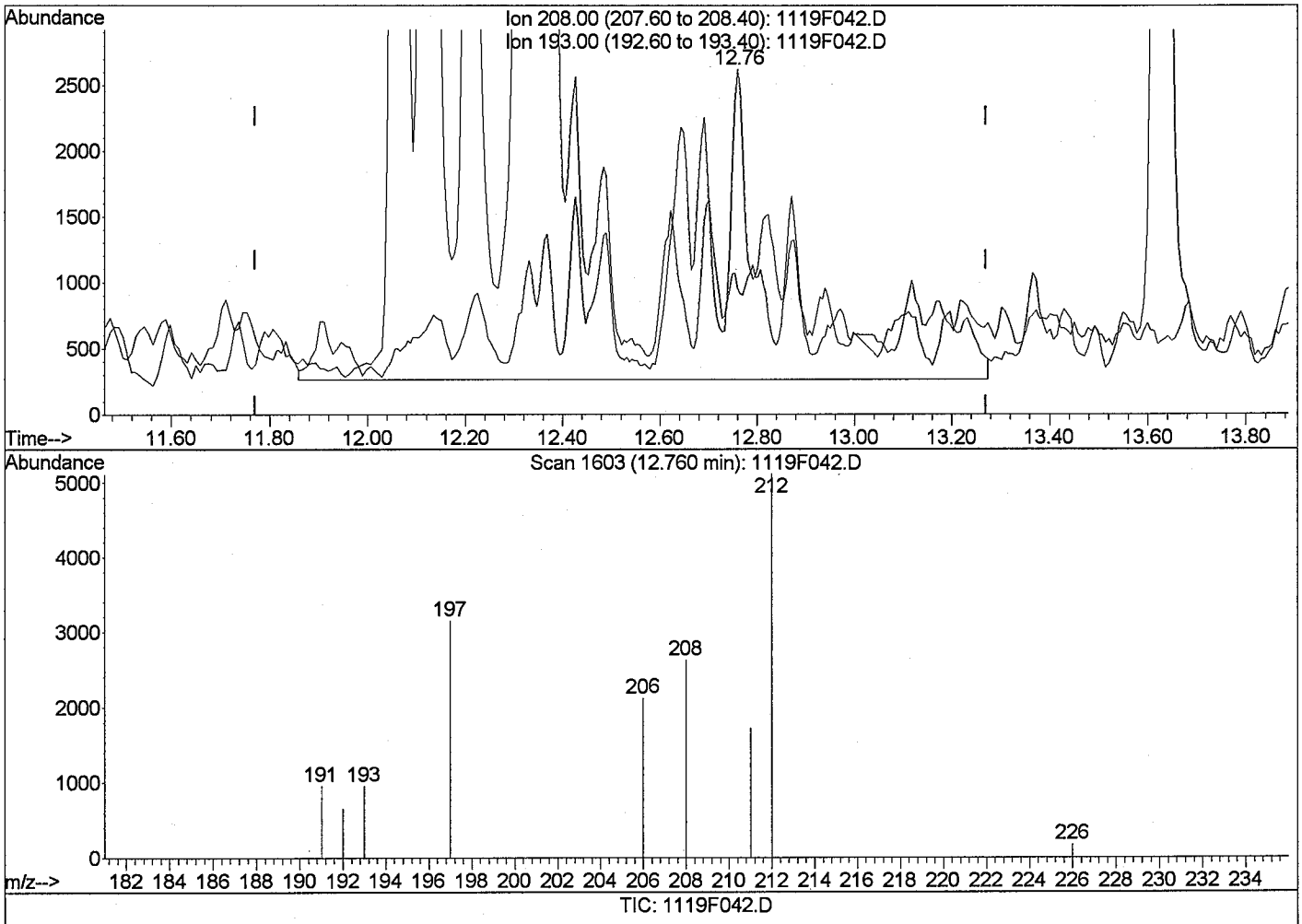
J 11/24/13

1119F042.D 1107ALK.M Fri Nov 21 12:23:01 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 19:26 Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 11:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(20) C3-Fluorenes (L)

12.76min 292.03ng/ml m

response 46565

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	36.41#
0.00	0.00	0.00
0.00	0.00	0.00

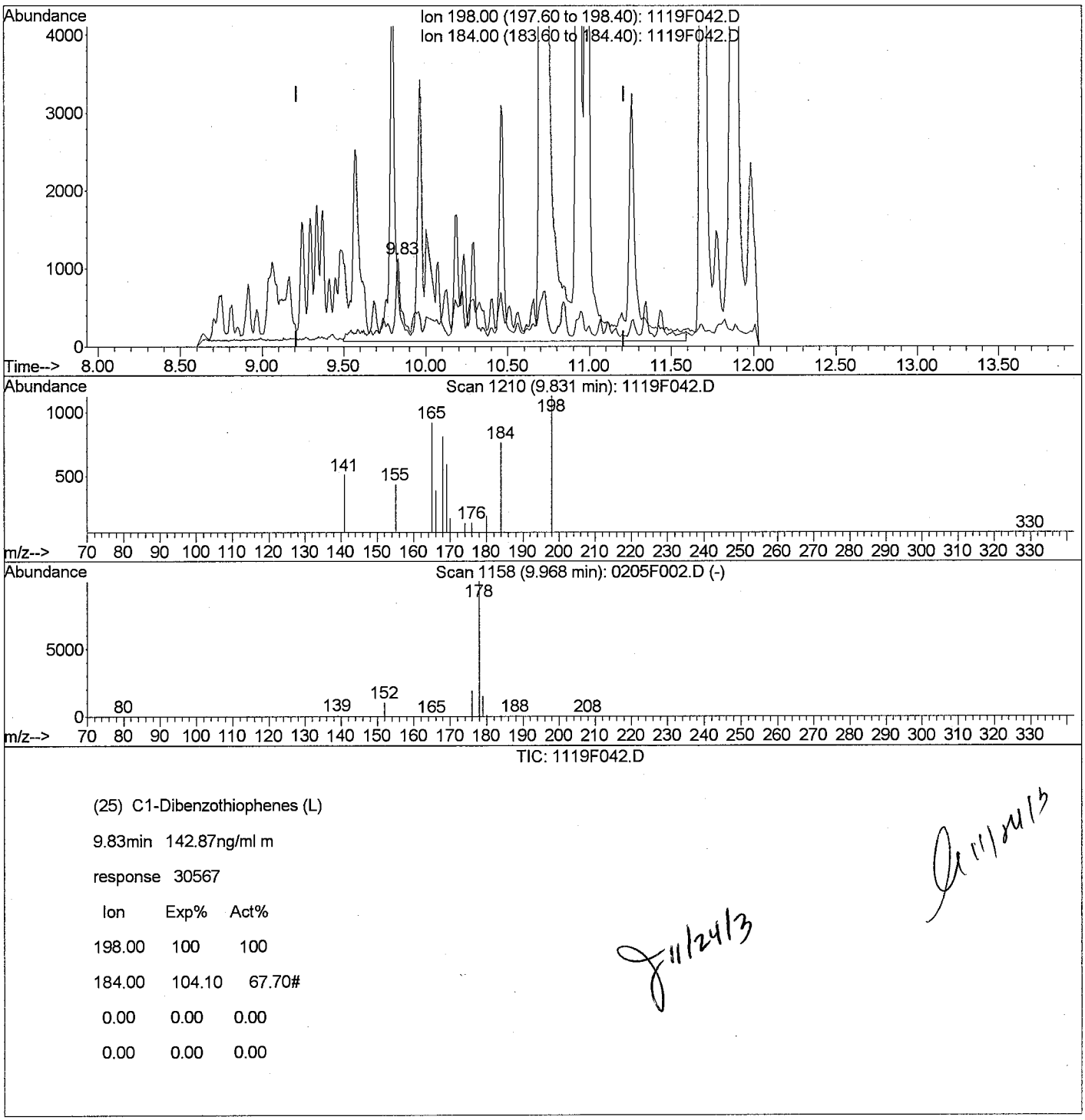
11/24/03

1119F042.D 1107ALK.M Mon Nov 24 11:58:25 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(25) C1-Dibenzothiophenes (L)

9.83min 142.87ng/ml m

response 30567

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	67.70#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

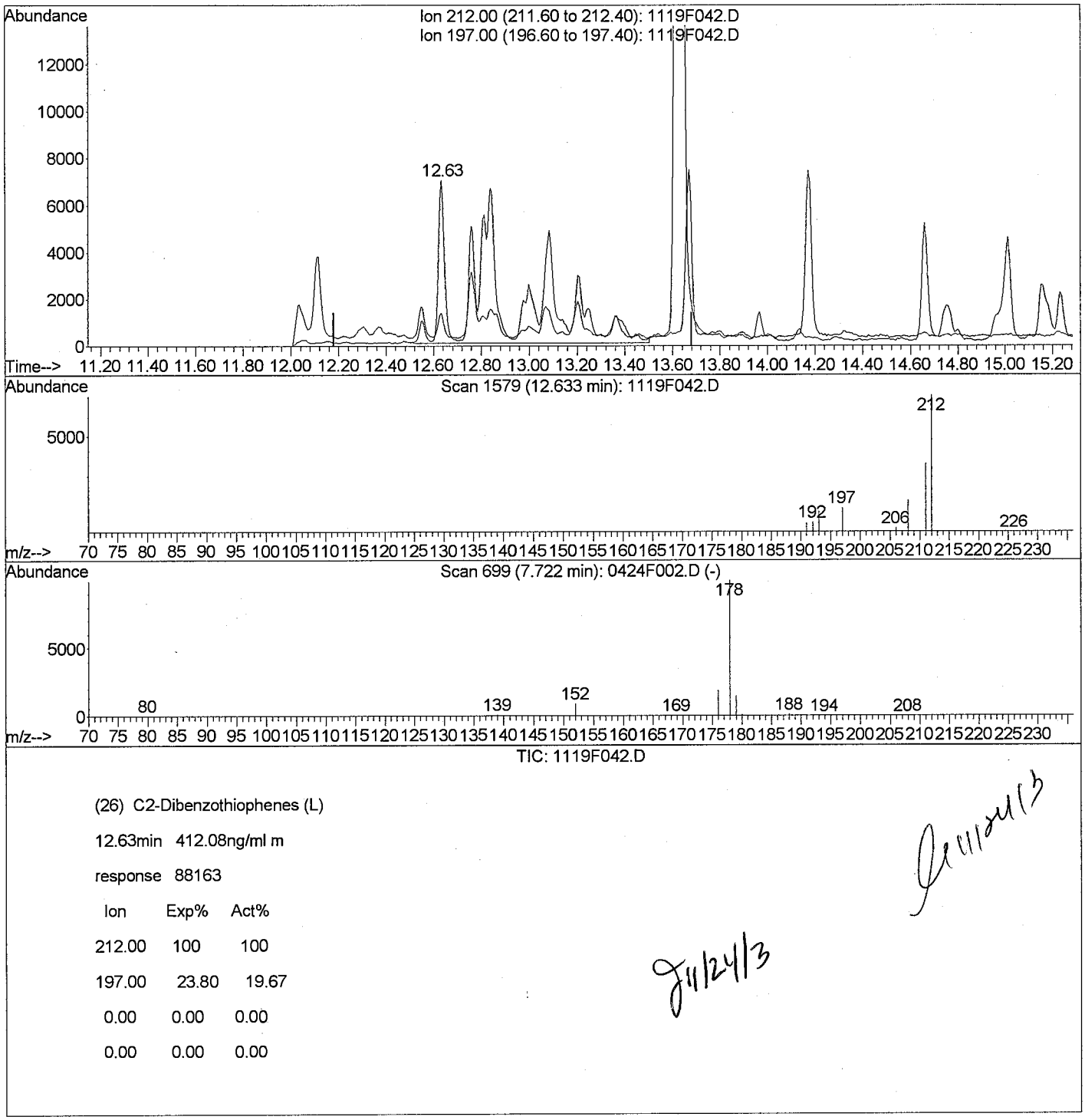
11/24/13

1119F042.D 1107ALK.M Fri Nov 21 12:23:19 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(26) C2-Dibenzothiophenes (L)

12.63min 412.08ng/ml m

response 88163

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	19.67
0.00	0.00	0.00
0.00	0.00	0.00

J 11/24/13

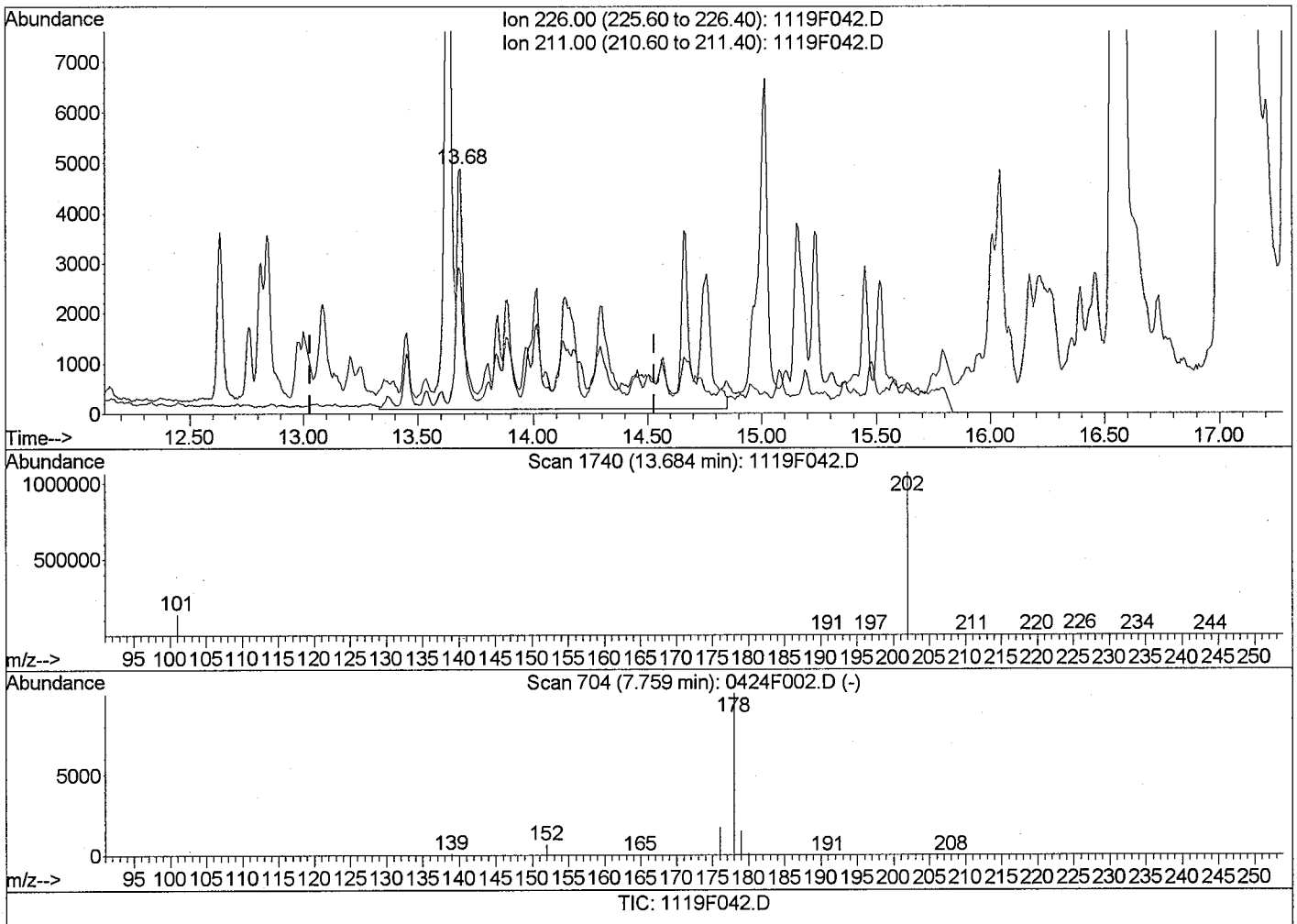
J 11/24/13

1119F042.D 1107ALK.M Fri Nov 21 12:23:39 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(27) C3-Dibenzothiophenes (L)

13.68min 324.81ng/ml m

response 69492

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	57.76
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

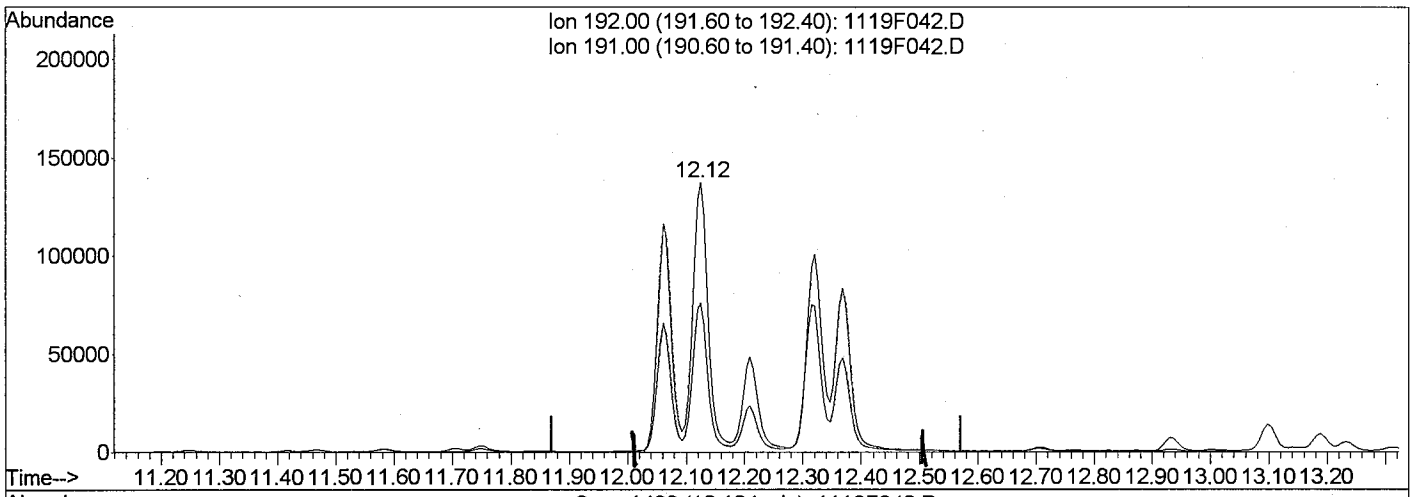
11/24/13

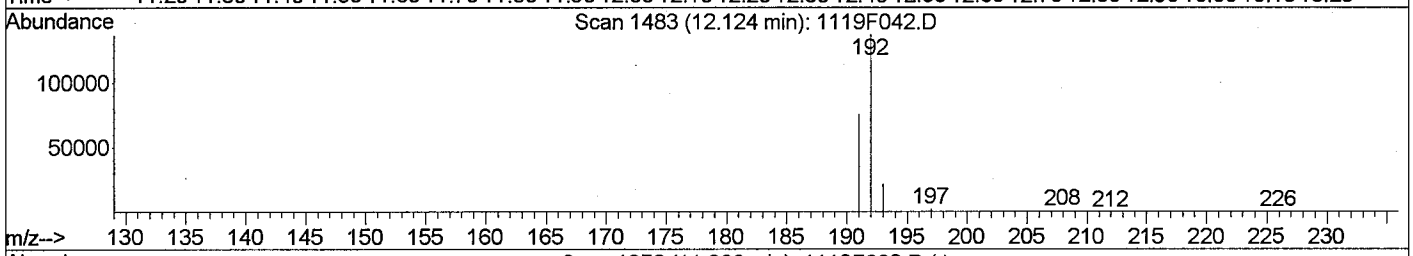
1119F042.D 1107ALK.M Fri Nov 21 12:23:58 2003

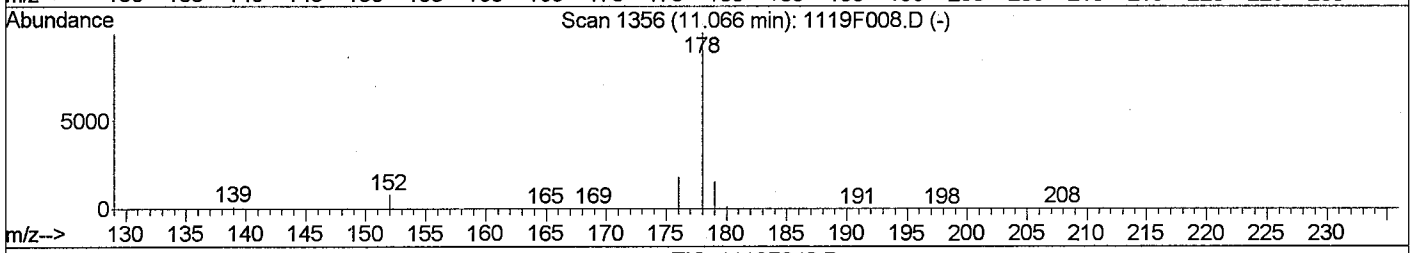
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 3946.80ng/ml m

response 886990

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	55.20
0.00	0.00	0.00
0.00	0.00	0.00

JJ 11/24/13

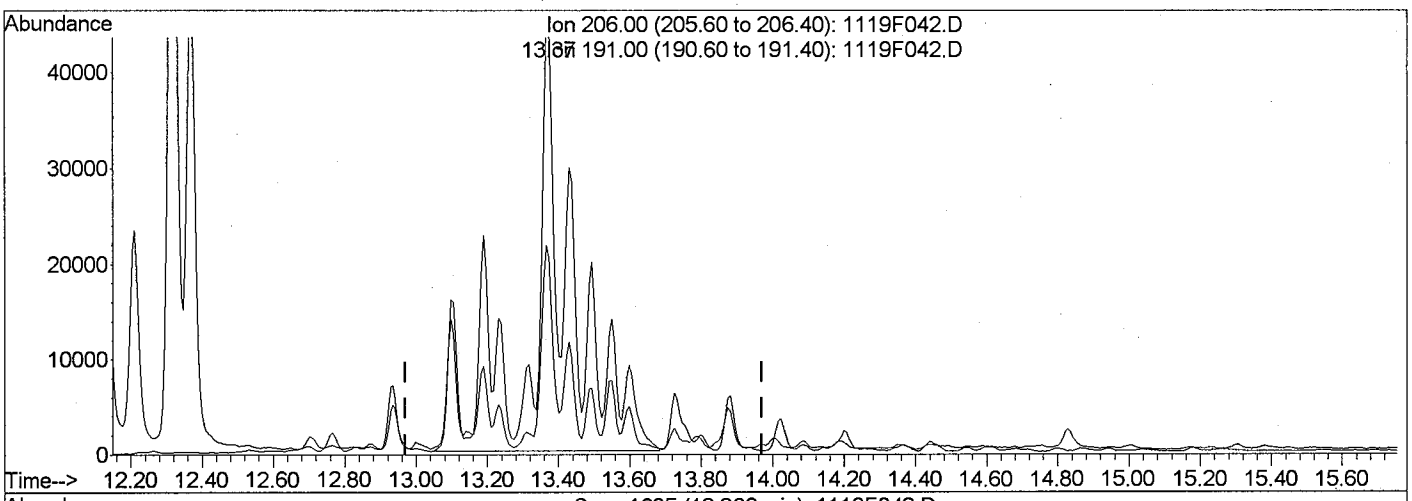
JJ 11/24/13

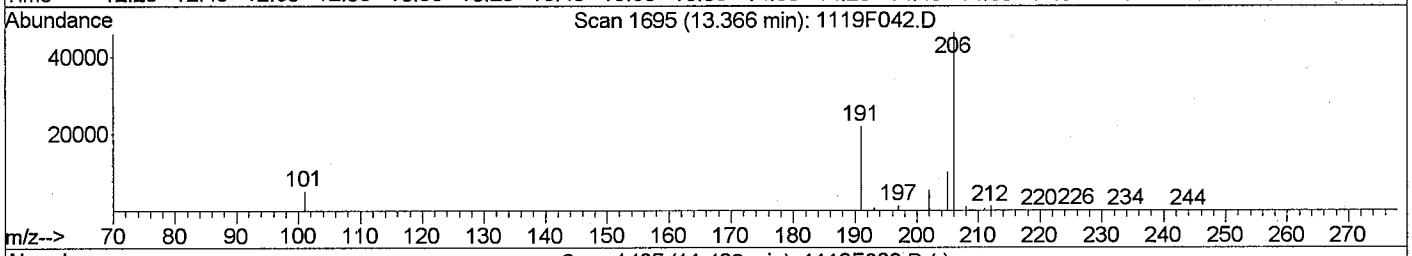
1119F042.D 1107ALK.M Fri Nov 21 12:24:03 2003

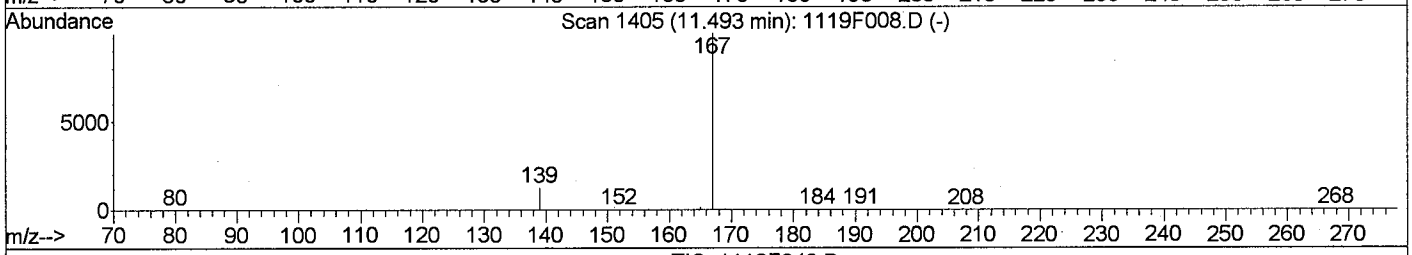
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 1624.88ng/ml m

response 365170

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	47.48
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

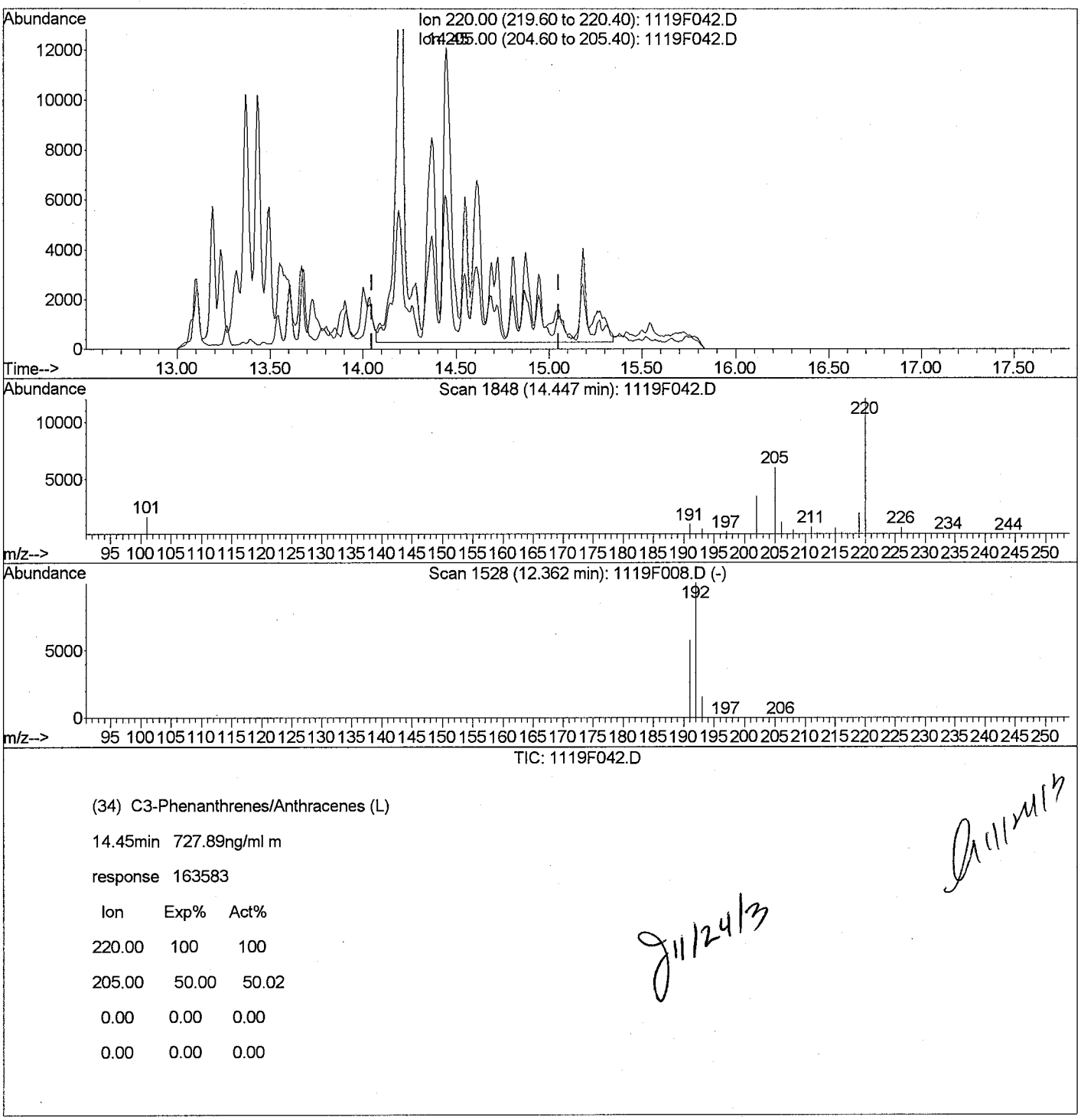
11/21/13

1119F042.D 1107ALK.M Fri Nov 21 12:24:32 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:25 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.45min 727.89ng/ml m

response 163583

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	50.02
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

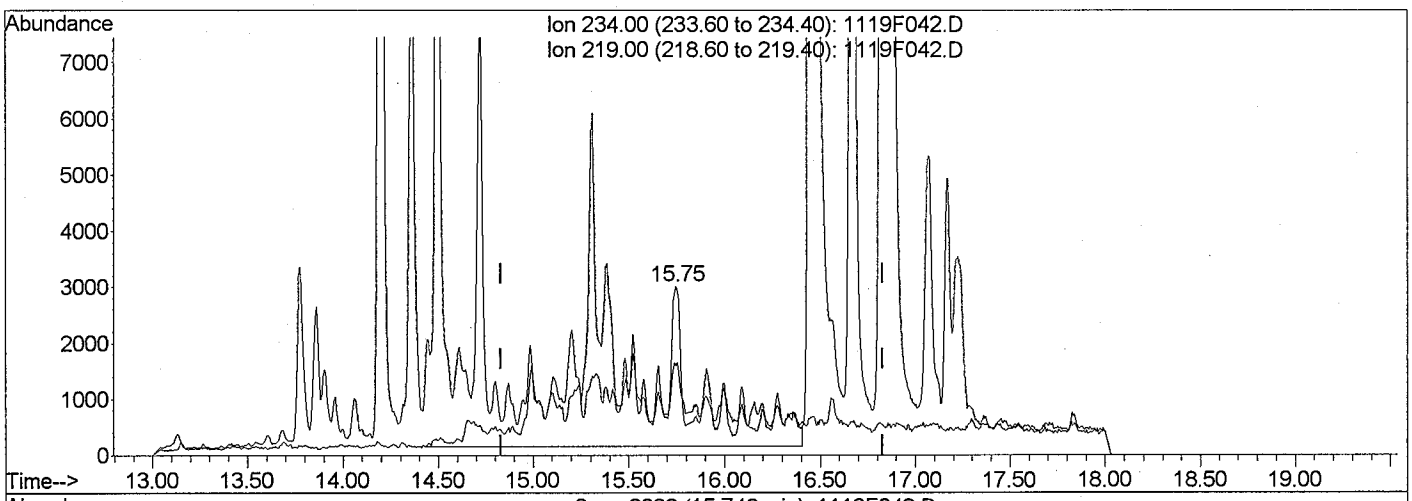
11/21/13

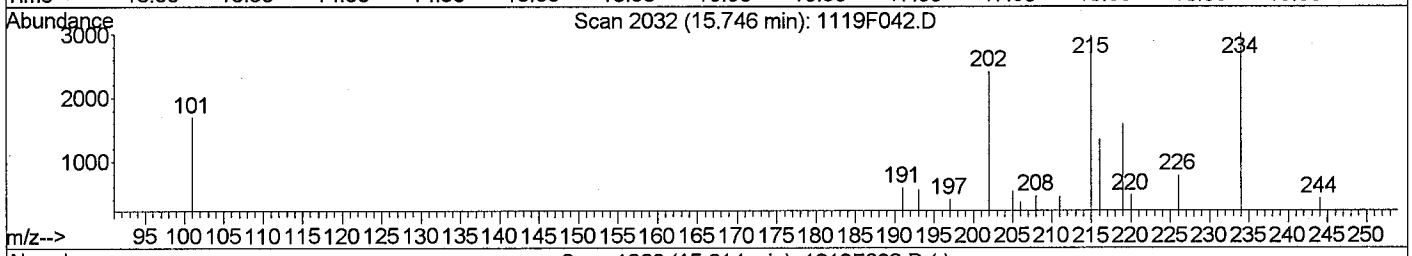
1119F042.D 1107ALK.M Fri Nov 21 12:25:06 2003

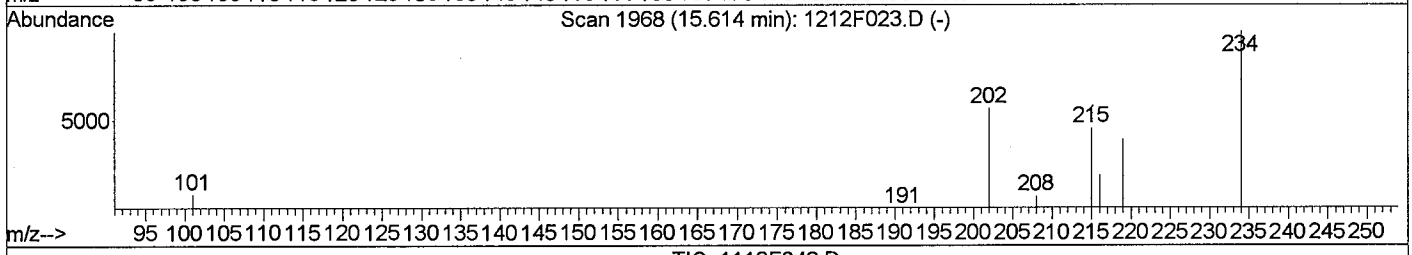
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:25 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 334.74ng/ml m

response 75228

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	52.82
0.00	0.00	0.00
0.00	0.00	0.00

J 11/24/03

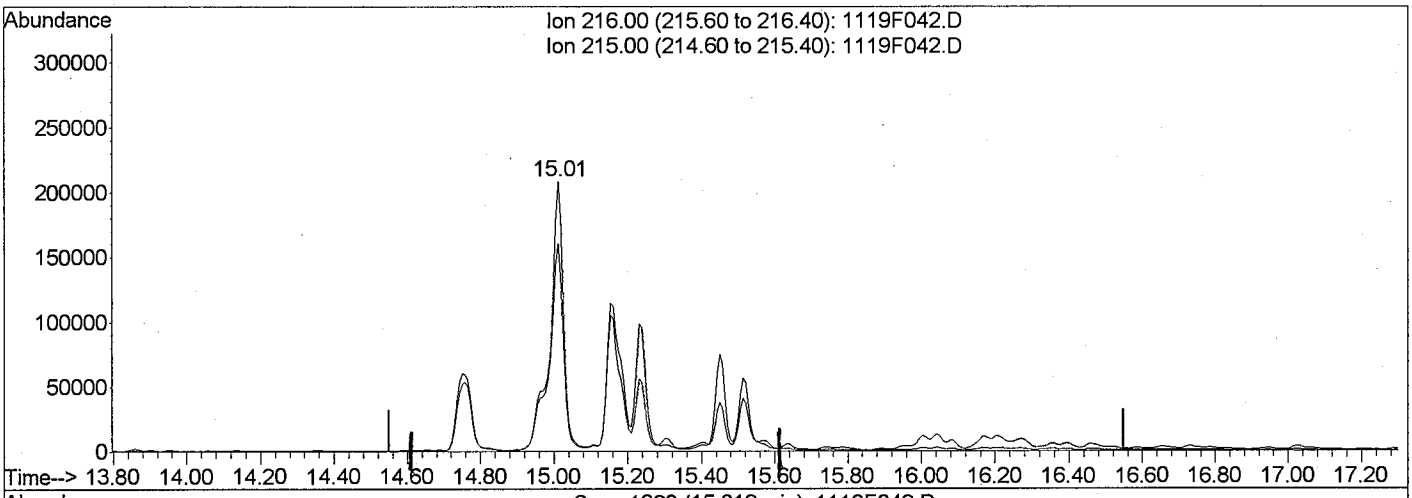
11/24/03

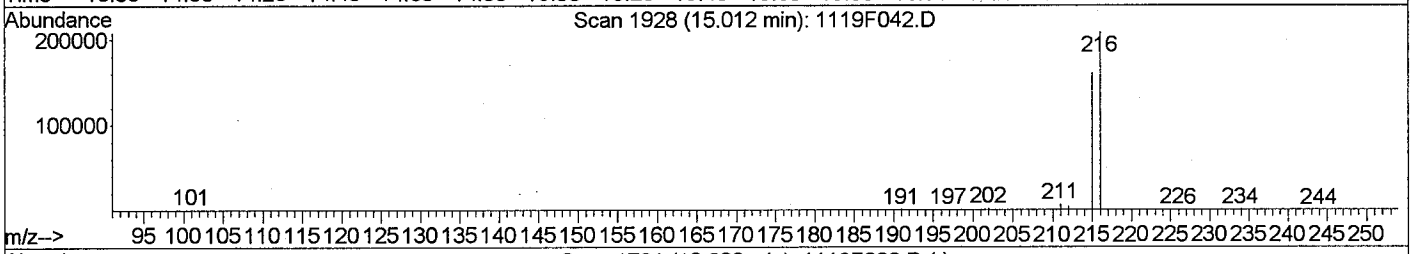
1119F042.D 1107ALK.M Fri Nov 21 12:25:25 2003

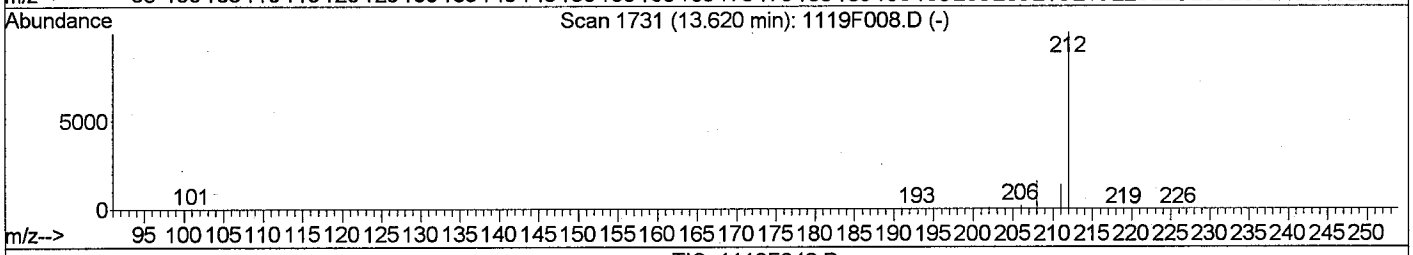
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:25 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 6375.23ng/ml m

response 1523537

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	77.19
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

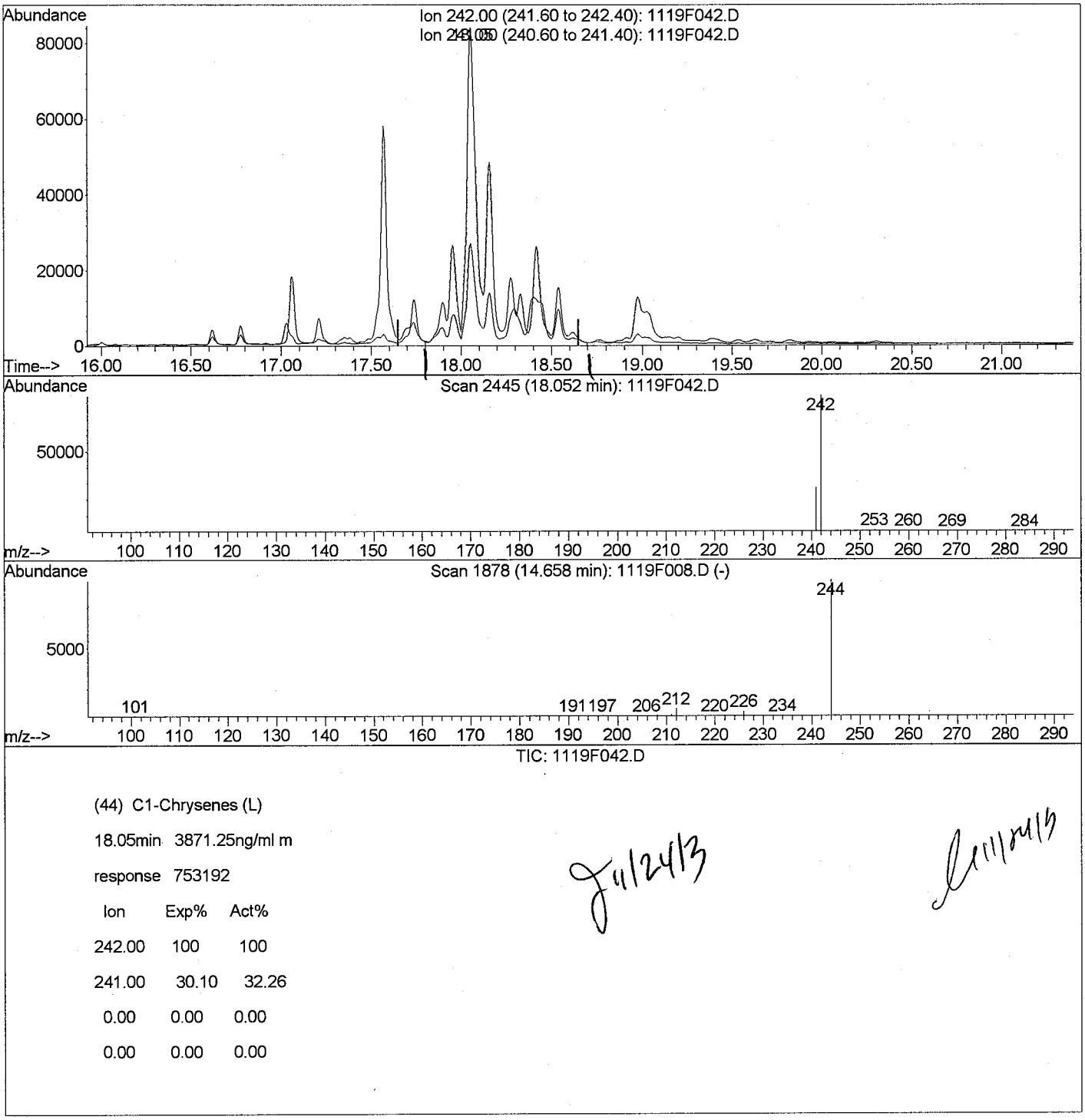
11/24/13

1119F042.D 1107ALK.M Fri Nov 21 12:25:33 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:25 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(44) C1-Chrysenes (L)

18.05min 3871.25ng/ml m

response 753192

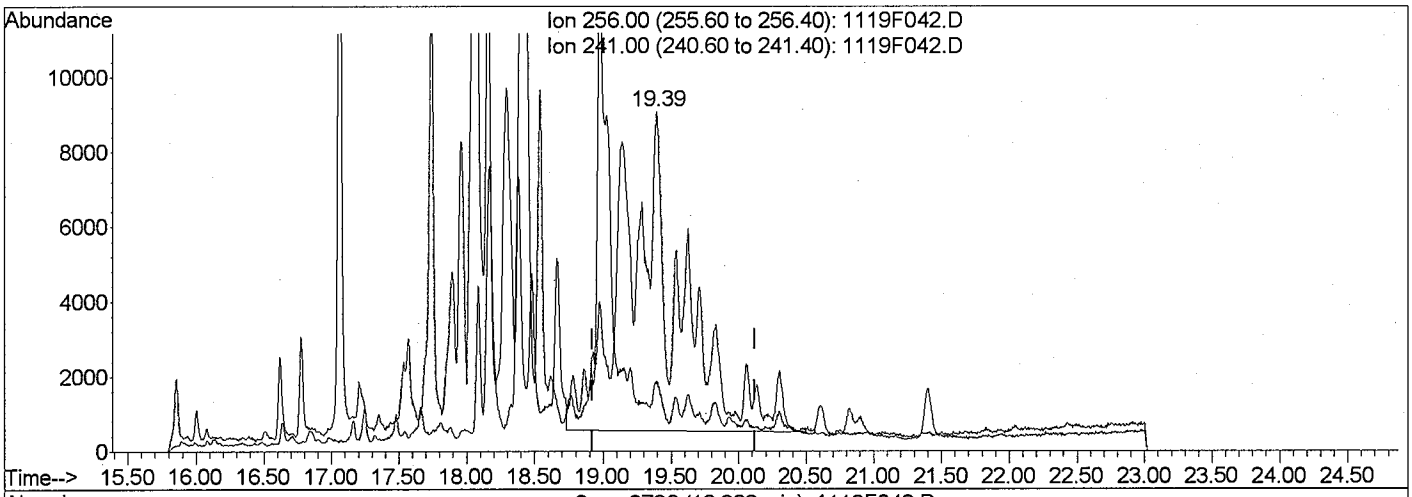
Ion	Exp%	Act%
242.00	100	100
241.00	30.10	32.26
0.00	0.00	0.00
0.00	0.00	0.00

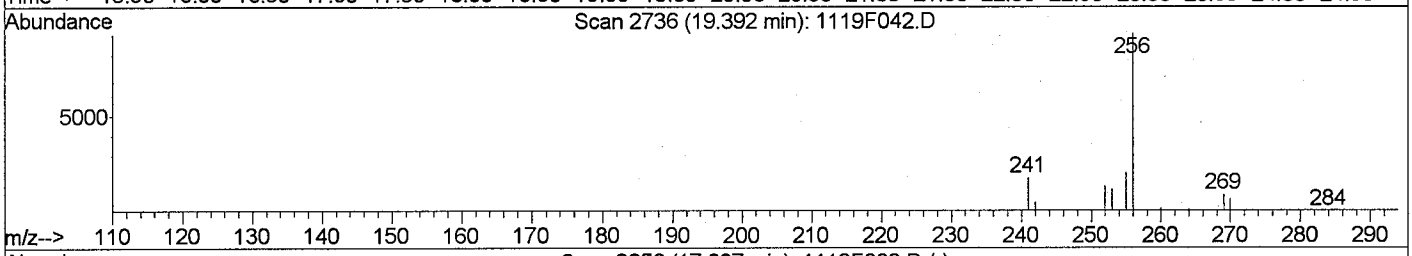
1119F042.D 1107ALK.M Fri Nov 21 12:25:47 2003

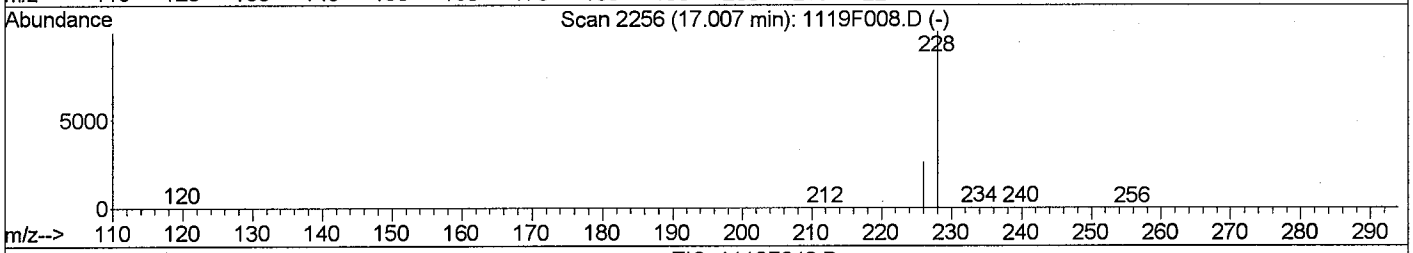
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:26 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(45) C2-Chrysenes (L)

19.39min 1248.45ng/ml m

response 242898

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	20.77
0.00	0.00	0.00
0.00	0.00	0.00

JL 11/24/13

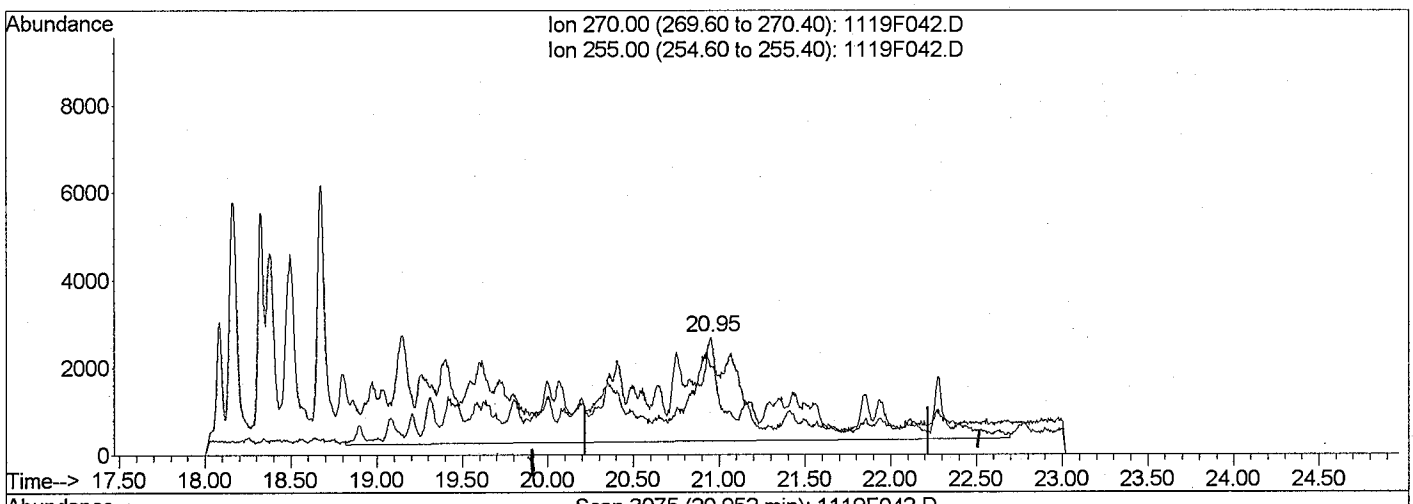
JL 11/24/13

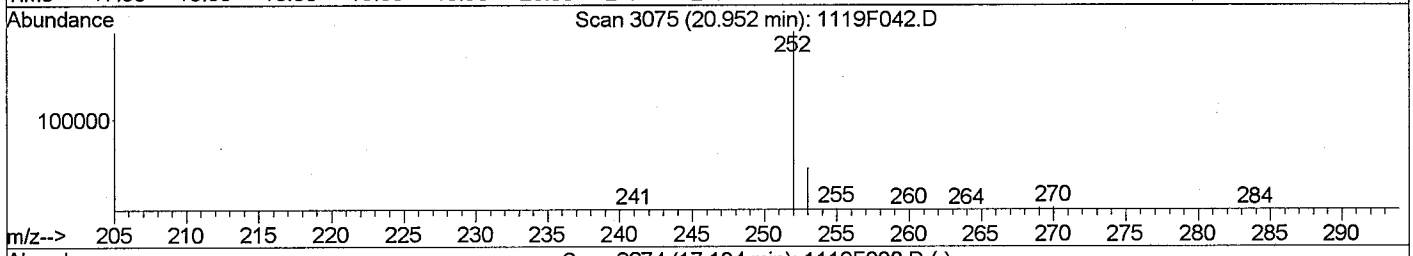
1119F042.D 1107ALK.M Fri Nov 21 12:26:06 2003

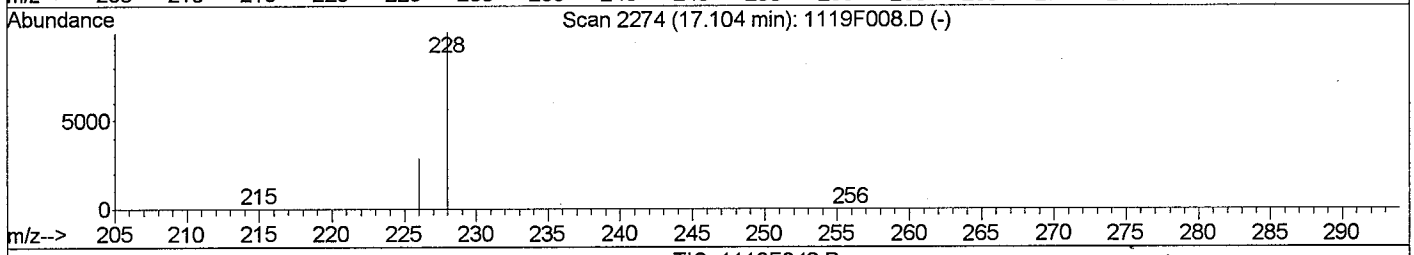
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:26 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(46) C3-Chrysenes (L)

20.95min 843.87ng/ml m

response 164183

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	74.62#
0.00	0.00	0.00
0.00	0.00	0.00

Over integ - see next print
J 11/24/3

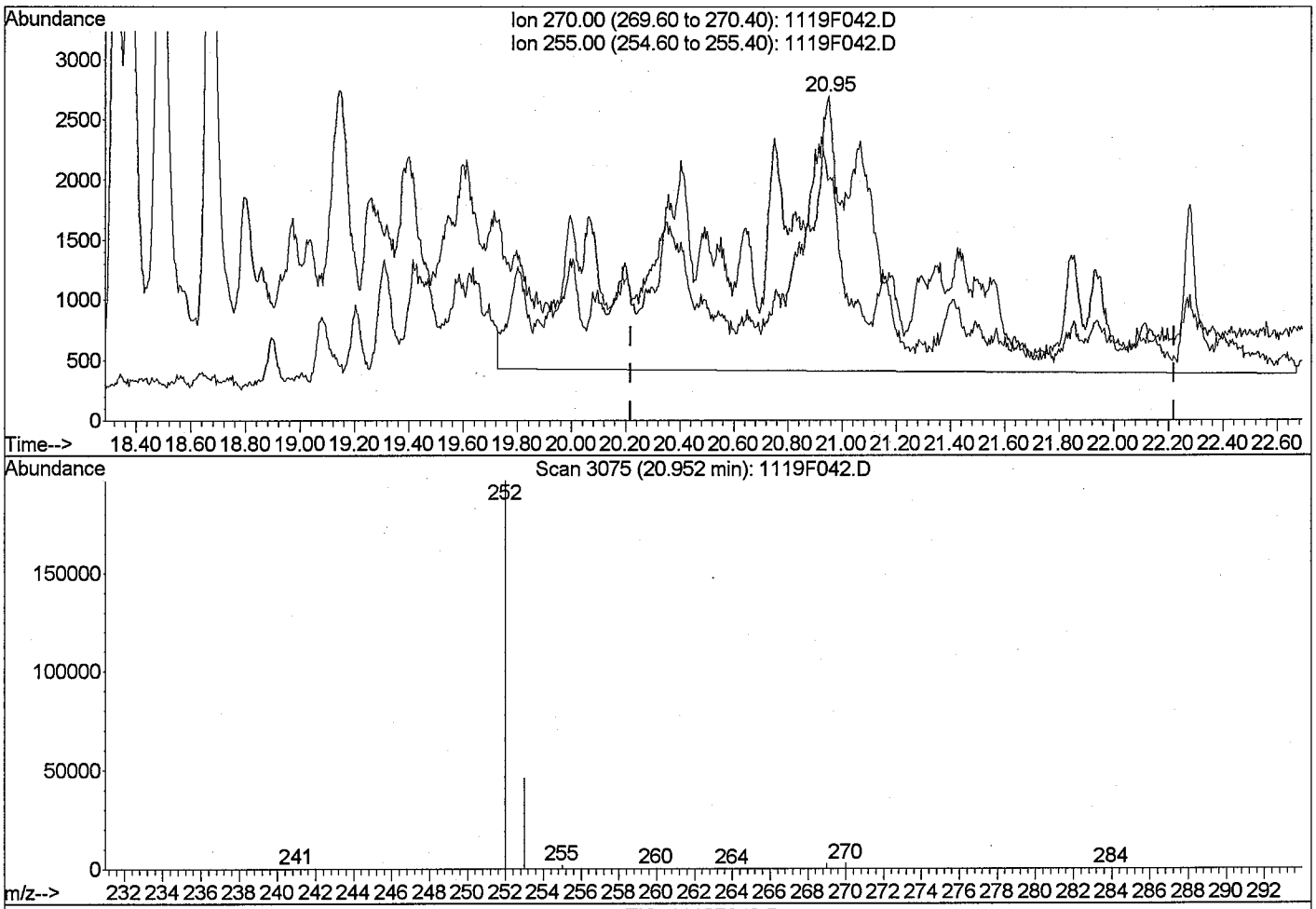
11/24/3

1119F042.D 1107ALK.M Fri Nov 21 12:26:21 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 19:26 Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:04 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1119F042.D

(46) C3-Chrysenes (L)

20.95min 623.40ng/ml m

response 121289

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	74.62#
0.00	0.00	0.00
0.00	0.00	0.00

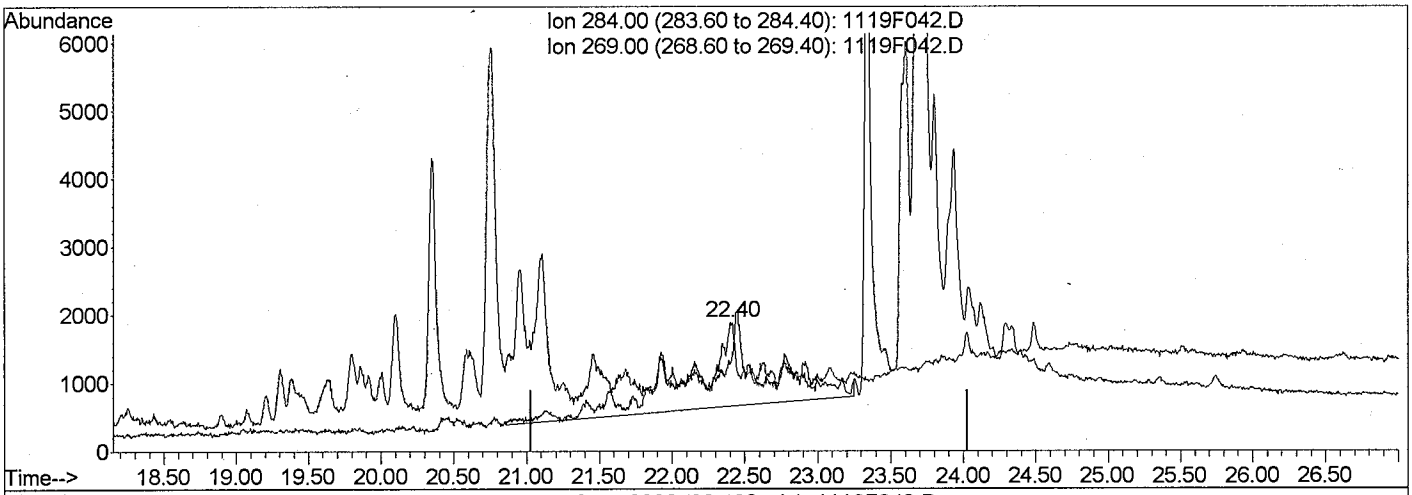
JW 11/24/03

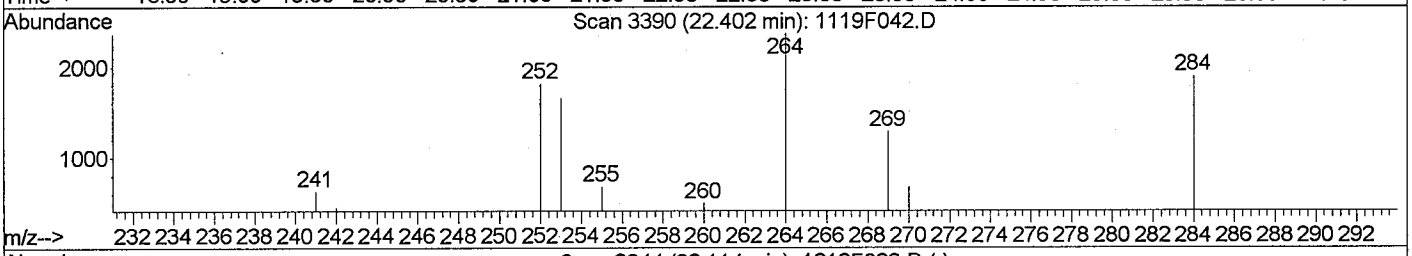
1119F042.D 1107ALK.M Mon Nov 24 12:04:35 2003

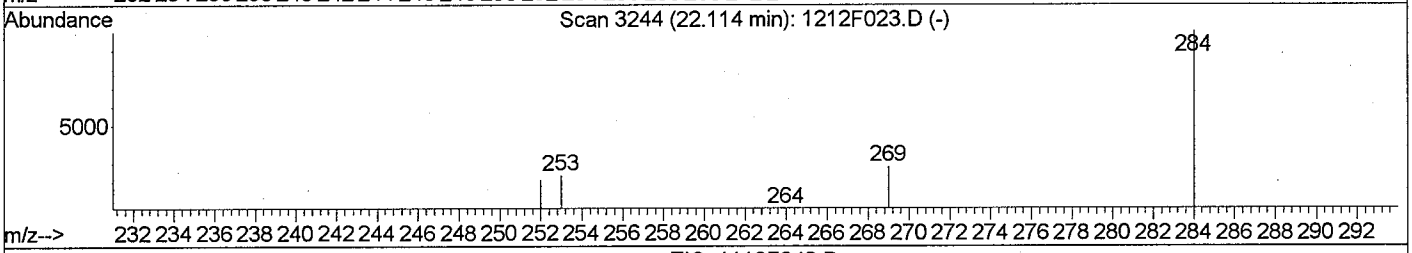
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F042.D Vial: 13
Acq On : 19 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : K2308433-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:26 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F042.D

(47) C4-Chrysenes (L)

22.40min 219.04ng/ml m

response 42616

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	68.15
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/21/13

1119F042.D 1107ALK.M Fri Nov 21 12:26:29 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F009.D
Lab ID: K2308433-006
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 10:01
Date Quantitated: 11/24/2003 09:19
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/24/03

Secondary Review: 11.29.3

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247864	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F009.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 10:01	**Quant Date:**	11/24/2003 09:19	**Vial:**	6
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	218733	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	112887	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	149490	1,000.00	OK
4	Chrysene-d12	17.07	0.01	240	129112	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	77404	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	6791	60.15	60	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	11341	75.80	76	34-122	OK	NR
4	Terphenyl-d14	14.67	0.01	0.00	244	10663	90.62	91	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	2647	10.70	10	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	2520	17.25	17	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	3729	27.24	27	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	1224	6.91	6.7	JD	NR
1	C2-Naphthalenes				156	0		31	U	NR
1	C3-Naphthalenes				170	0		31	U	NR
1	C4-Naphthalenes				184	0		31	U	NR
2	Acenaphthylene	7.74		0.00	152	3994	18.36	18	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	9721	72.52	71	D	NR
2	Dibenzofuran	8.36	0.02	0.00	168	2817	15.68	15	JD	NR
2	Fluorene	9.00	0.01	0.00	166	9435	65.71	64	D	NR
2	C1-Fluorenes				180	0		31	U	NR
2	C2-Fluorenes				194	0		31	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F009.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 10:01	**Quant Date:**	11/24/2003 09:19	**Vial:**	6
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		31	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	8697	50.42	49	D	NR
3	C1-Dibenzothiophenes				198	0		31	U	NR
3	C2-Dibenzothiophenes				212	0		31	U	NR
3	C3-Dibenzothiophenes				226	0		31	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	157327	868.36	850	D	NR
3	Anthracene	11.08		0.00	178	30969	200.08	200	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		31	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		31	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		31	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		31	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	316641	1,756	1700	D	
4	Pyrene	14.18	0.01	0.00	202	265112	1,571	1500	D	
4	C1-Fluoranthenes/Pyrenes				216	0		31	U	NR
4	Benz(a)anthracene	17.03	0.01	0.00	228	86698	674.77	660	D	NR
4	Chrysene	17.12		0.00	228	126496	920.68	900	D	NR
4	C1-Chrysenes				242	0		31	U	NR
4	C2-Chrysenes				256	0		31	U	NR
4	C3-Chrysenes				270	0		31	U	NR
4	C4-Chrysenes				284	0		31	U	NR
5	Benzo(b)fluoranthene	20.01	0.01	0.00	252	77610	751.04	730	D	NR
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	101240**m**	772.12	750	D	NR
5	Benzo(e)pyrene	20.99	0.02	0.00	252	63848	550.29	540	D	NR
5	Benzo(a)pyrene	21.17	0.01	0.00	252	64956	739.00	720	D	NR
5	Perylene	21.50		0.00	252	17732	179.71	180	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	36612	685.19	670	D	NR
5	Dibenz(a,h)anthracene	24.08		0.00	278	6588**m**	85.79	84	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	37172	419.61	410	D	NR

Prep Amount:	25.0 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	82.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F009.D Vial: 6
Acq On : 20 Nov 2003 10:01 am Operator: LWeiskopf
Sample : K2308433-006DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:33 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	218733	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	112887	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	149490	1000.00	ng/ml	0.00
38) Chrysene-d12	17.07	240	129112	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	77404	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	5818	36.31	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	3.63%		
16) Fluorene-d10	8.95	176	6791	60.15	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	6.01%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	11341	75.80	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.58%		
41) Terphenyl-d14	14.67	244	10663	90.62	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.06%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	2647	10.70	ng/ml	99
3) 2-Methylnaphthalene	6.38	142	2520	17.25	ng/ml	94
4) 1-Methylnaphthalene	6.52	142	3729	27.24	ng/ml	98
6) Biphenyl	7.05	154	1224	6.91	ng/ml	94
7) 2,6-Dimethylnaphthalene	7.28	156	3265	26.21	ng/ml	96
12) Acenaphthylene	7.74	152	3994	18.36	ng/ml	94
13) Acenaphthene	8.06	154	9721	72.52	ng/ml	99
14) Dibenzofuran	8.36	168	2817	15.68	ng/ml	91
15) 2,3,5-Trimethylnaphthalene	8.76	170	1351	11.25	ng/ml	85
17) Fluorene	9.00	166	9435	65.71	ng/ml	99
24) Dibenzothiophene	10.72	184	8697	50.42	ng/ml	99
28) Phenanthrene	10.98	178	157327	868.36	ng/ml	100
29) Anthracene	11.08	178	30969	200.08	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	10429	84.78	ng/ml	96
36) Fluoranthene	13.67	202	316641	1755.73	ng/ml	99
39) Pyrene	14.18	202	265112	1570.94	ng/ml	100
42) Benz(a)anthracene	17.03	228	86698	674.77	ng/ml	98
43) Chrysene	17.12	228	126496	920.68	ng/ml	99
49) Benzo(b)fluoranthene	20.01	252	77610	751.04	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	101240m	772.12	ng/ml	
51) Benzo(e)pyrene	20.99	252	63848	550.29	ng/ml	100
52) Benzo(a)pyrene	21.17	252	64956	739.00	ng/ml	99
53) Perylene	21.50	252	17732	179.71	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F009.D Vial: 6
Acq On : 20 Nov 2003 10:01 am Operator: LWeiskopf
Sample : K2308433-006DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:33 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

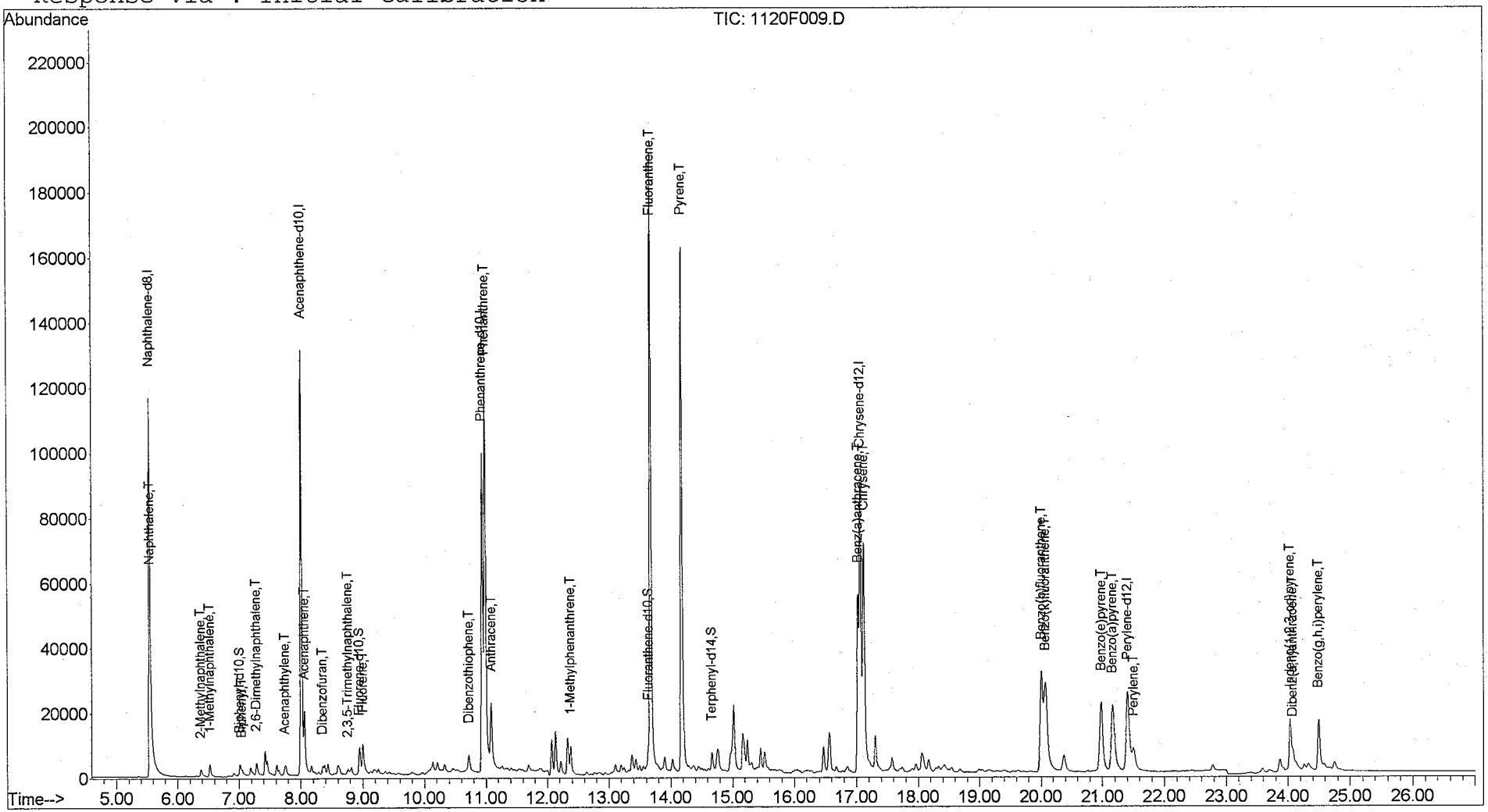
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54)	Indeno(1,2,3-cd)pyrene	24.03	276	36612	685.19	ng/ml	91
55)	Dibenz(a,h)anthracene	24.08	278	6588m	85.79	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	37172	419.61	ng/ml	100

(#) = qualifier out of range (m) = manual integration

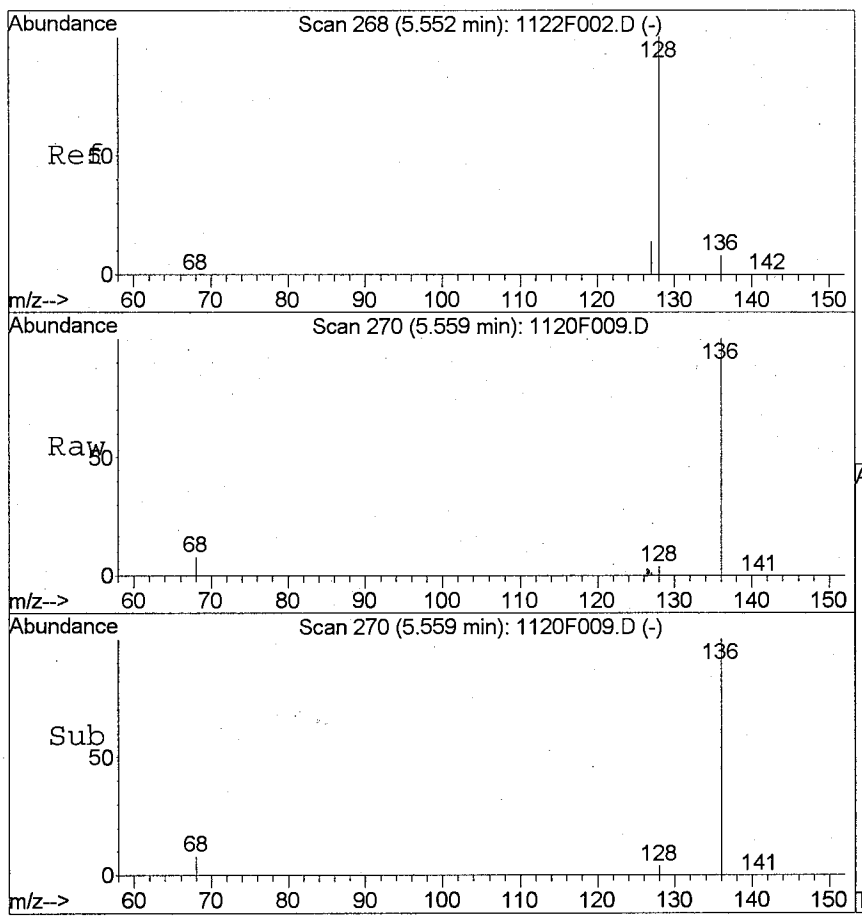
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F009.D Vial: 6
Acq On : 20 Nov 2003 10:01 am Operator: LWeiskopf
Sample : K2308433-006DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



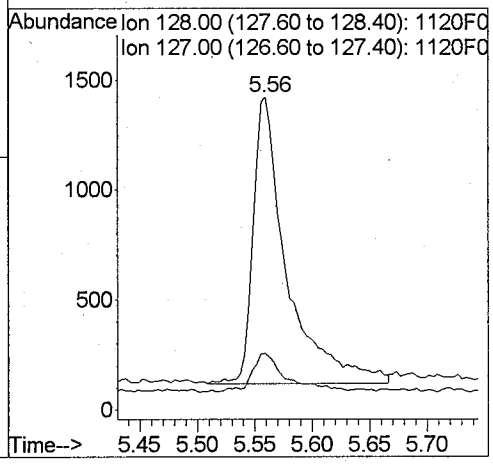
1259

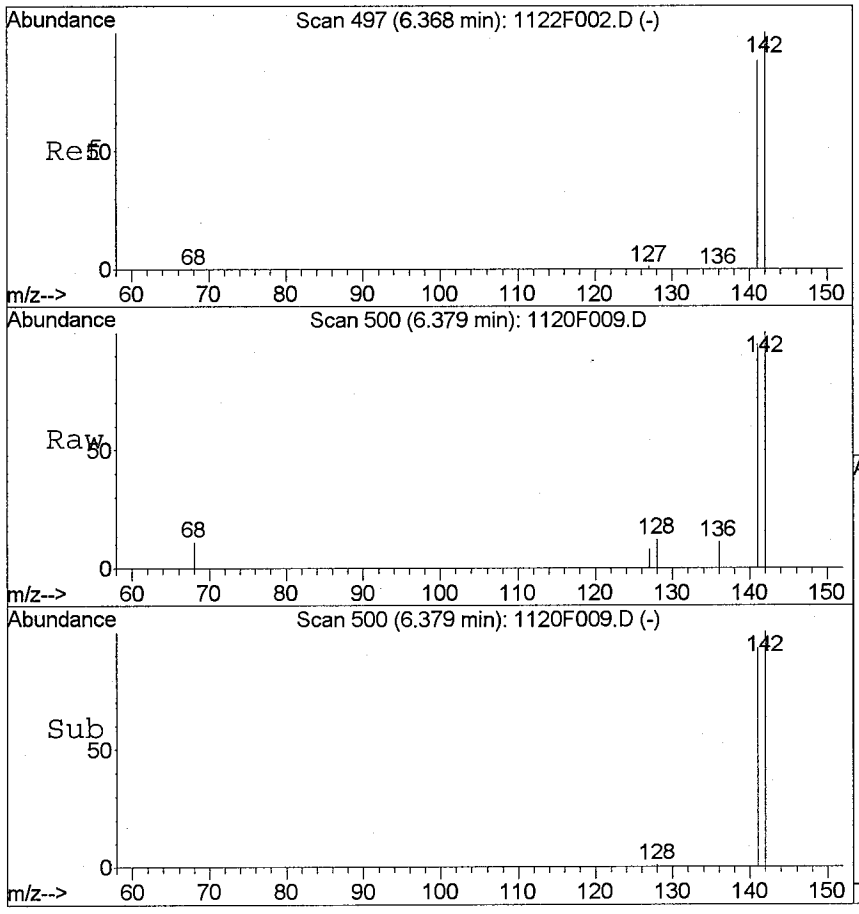


#2
Naphthalene
Concen: 10.70 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:128 Resp: 2647

Ion	Ratio	Lower	Upper
128	100		
127	13.1	0.0	43.6

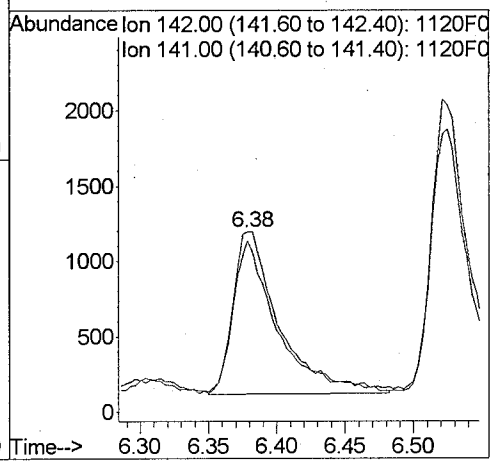


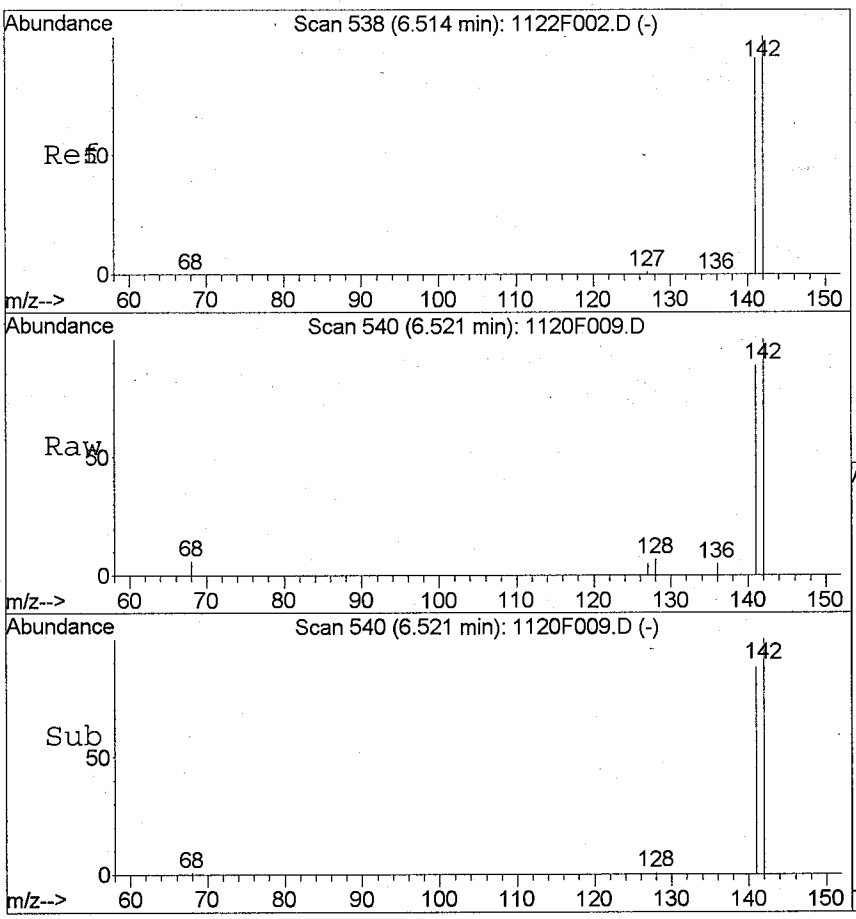


#3
2-Methylnaphthalene
Concen: 17.25 ng/ml
RT: 6.38 min Scan# 500
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:142 Resp: 2520

Ion	Ratio	Lower	Upper
142	100		
141	93.3	58.1	118.1

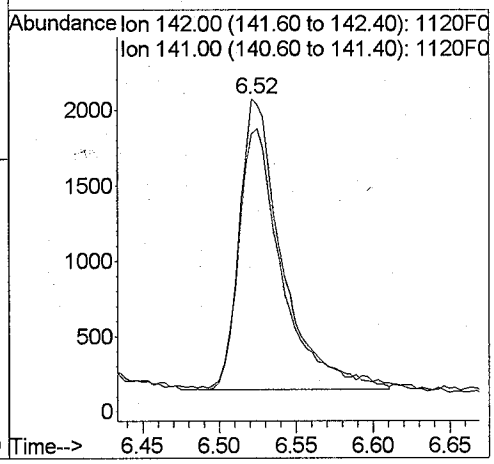


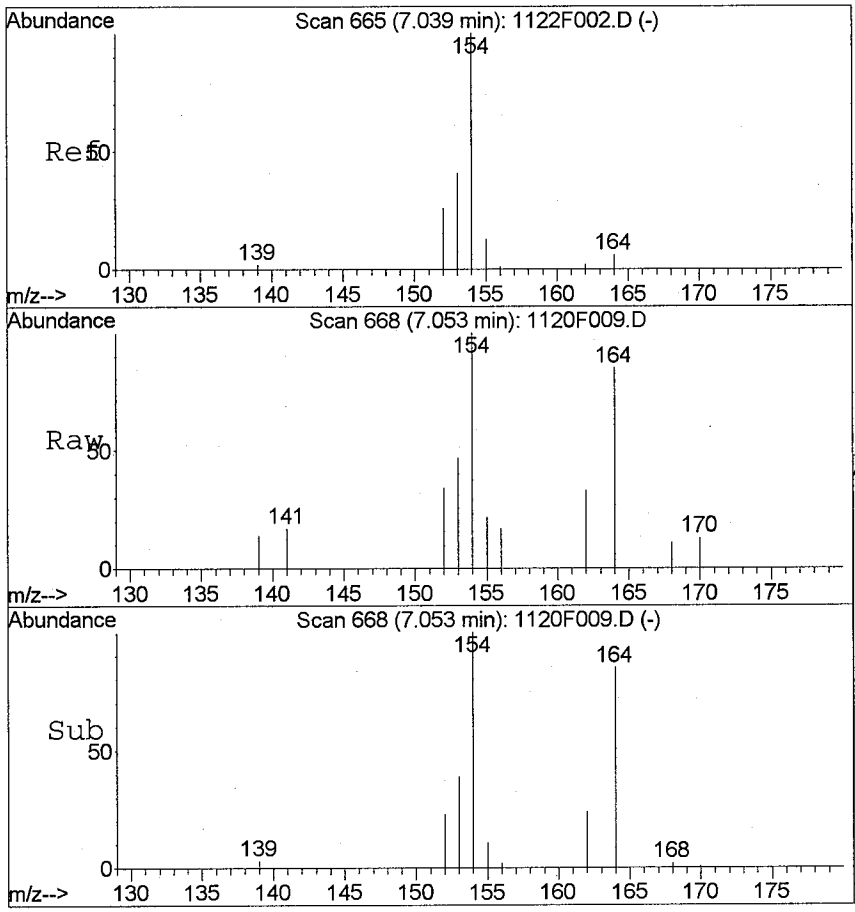


#4
1-Methylnaphthalene
Concen: 27.24 ng/ml
RT: 6.52 min Scan# 540
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:142 Resp: 3729

Ion	Ratio	Lower	Upper
142	100		
141	87.6	59.3	119.3

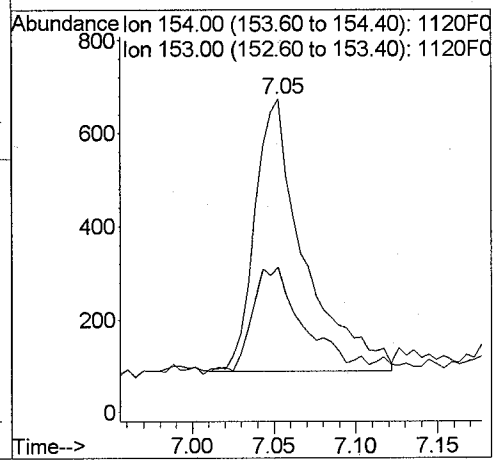


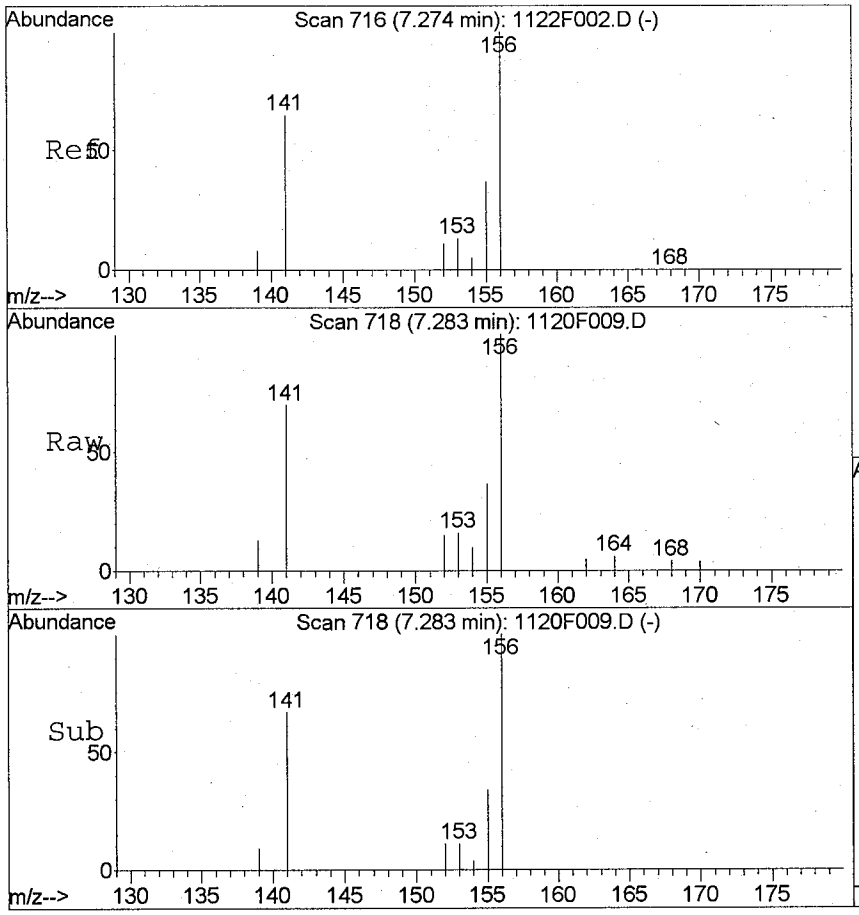


#6
Biphenyl
Concen: 6.91 ng/ml
RT: 7.05 min Scan# 668
Delta R.T. 0.02 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:154 Resp: 1224

Ion	Ratio	Lower	Upper
154	100		
153	37.3	11.3	71.3

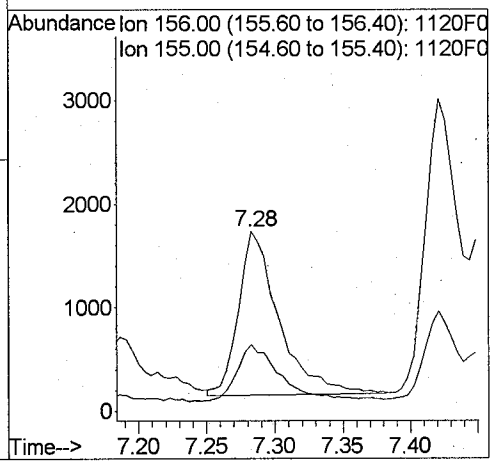


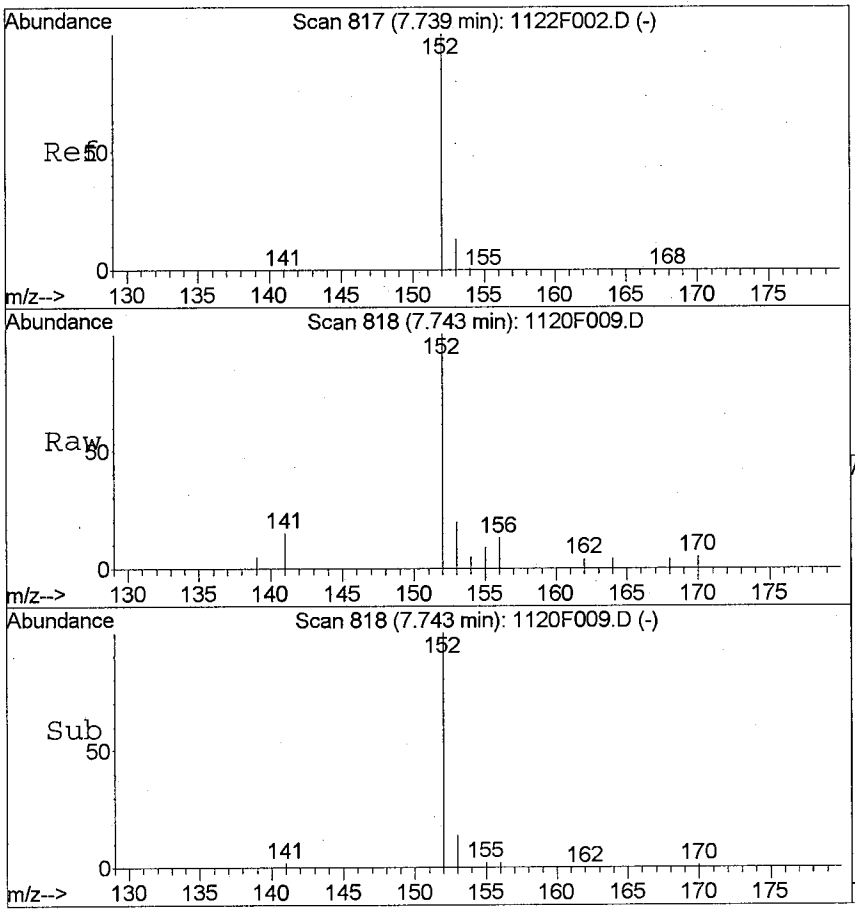


#7
2,6-Dimethylnaphthalene
Concen: 26.21 ng/ml
RT: 7.28 min Scan# 718
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:156 Resp: 3265

Ion	Ratio	Lower	Upper
156	100		
155	34.8	7.1	67.1

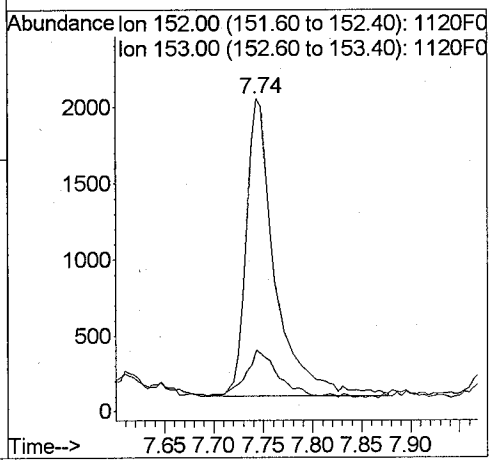


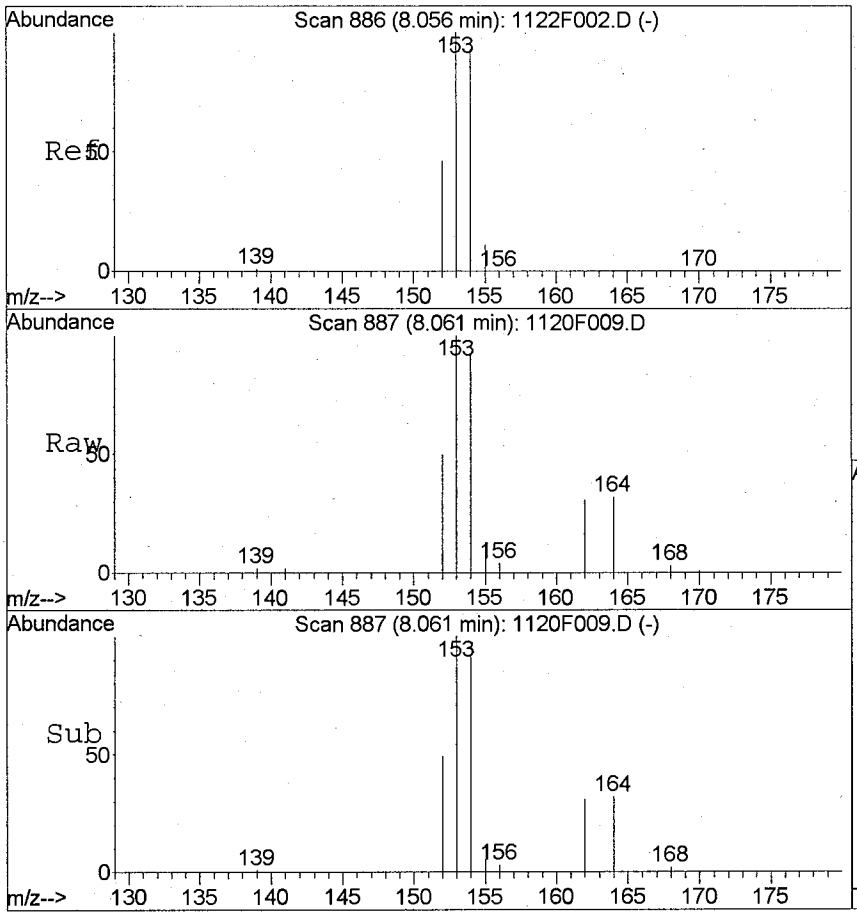


#12
Acenaphthylene
Concen: 18.36 ng/ml
RT: 7.74 min Scan# 818
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:152 Resp: 3994

Ion	Ratio	Lower	Upper
152	100		
153	15.5	0.0	43.0

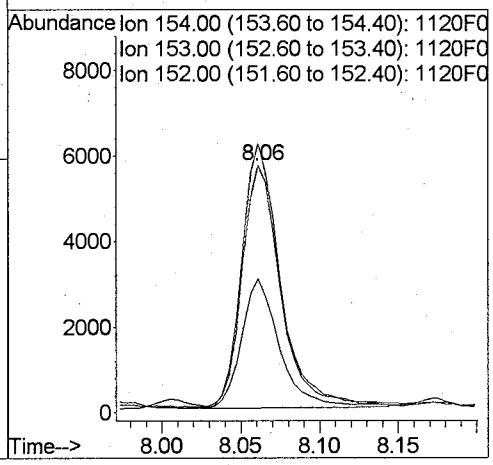


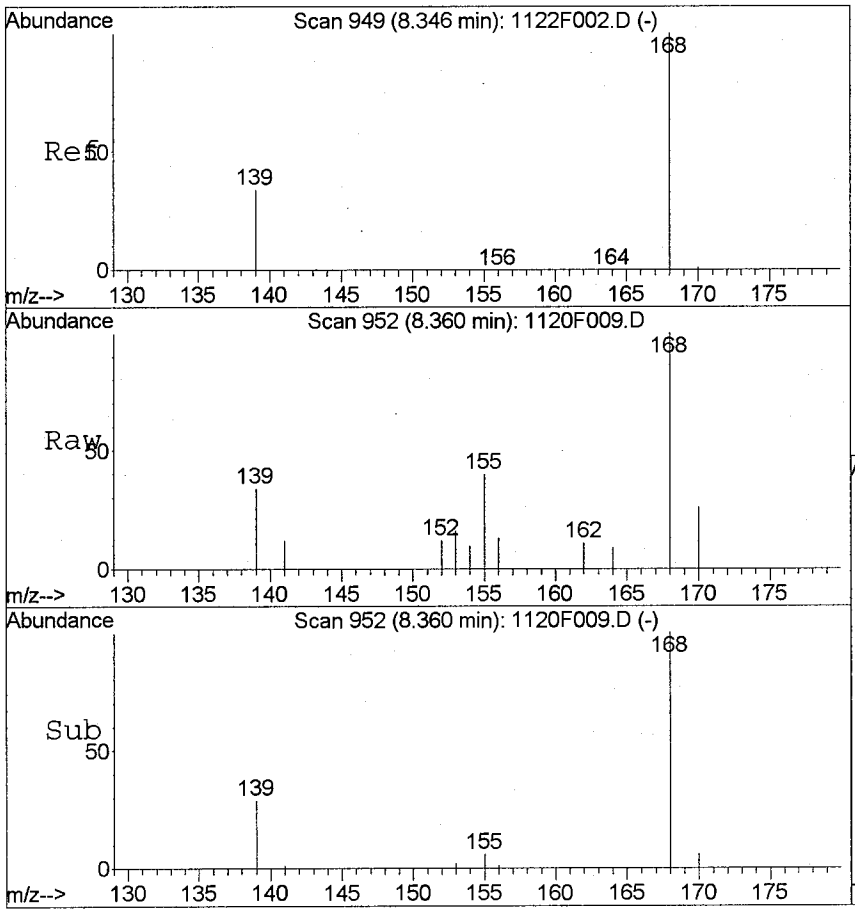


#13
Acenaphthene
Concen: 72.52 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:154 Resp: 9721

Ion	Ratio	Lower	Upper
154	100		
153	109.6	79.2	139.2
152	53.1	21.3	81.3

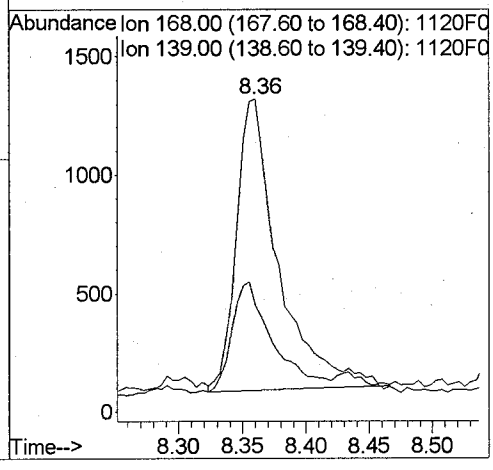


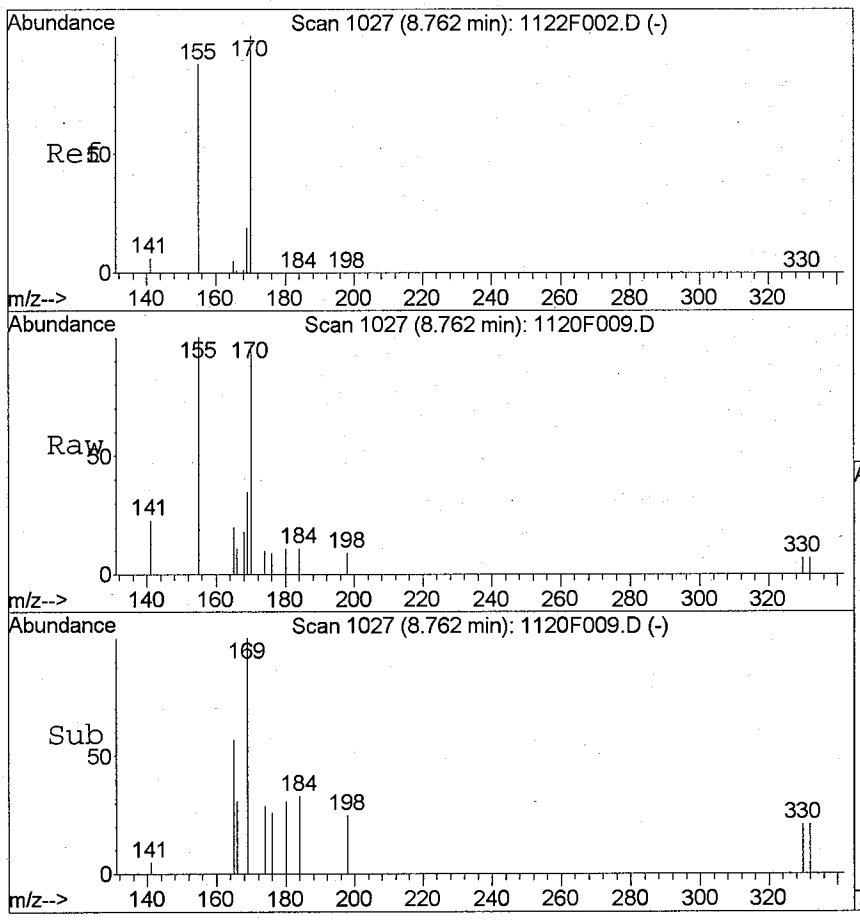


#14
Dibenzofuran
Concen: 15.68 ng/ml
RT: 8.36 min Scan# 952
Delta R.T. 0.02 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:168 Resp: 2817

Ion	Ratio	Lower	Upper
168	100		
139	30.0	5.4	65.4

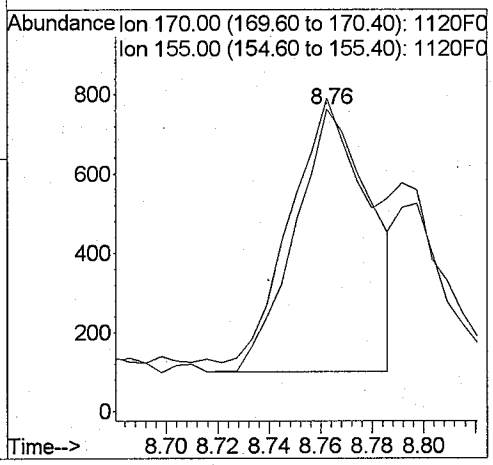


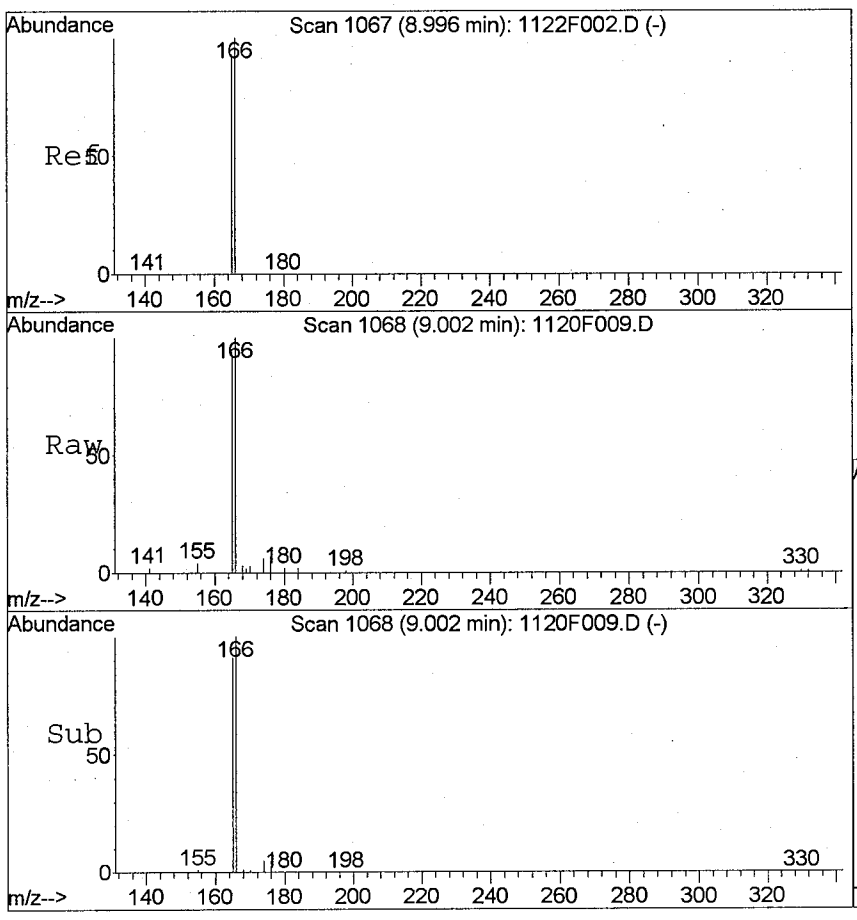


#15
2,3,5-Trimethylnaphthalene
Concen: 11.25 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. -0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:170 Resp: 1351

Ion	Ratio	Lower	Upper
170	100		
155	99.2	55.5	115.5

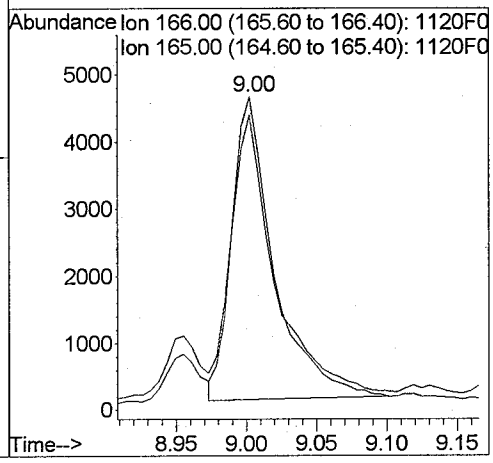


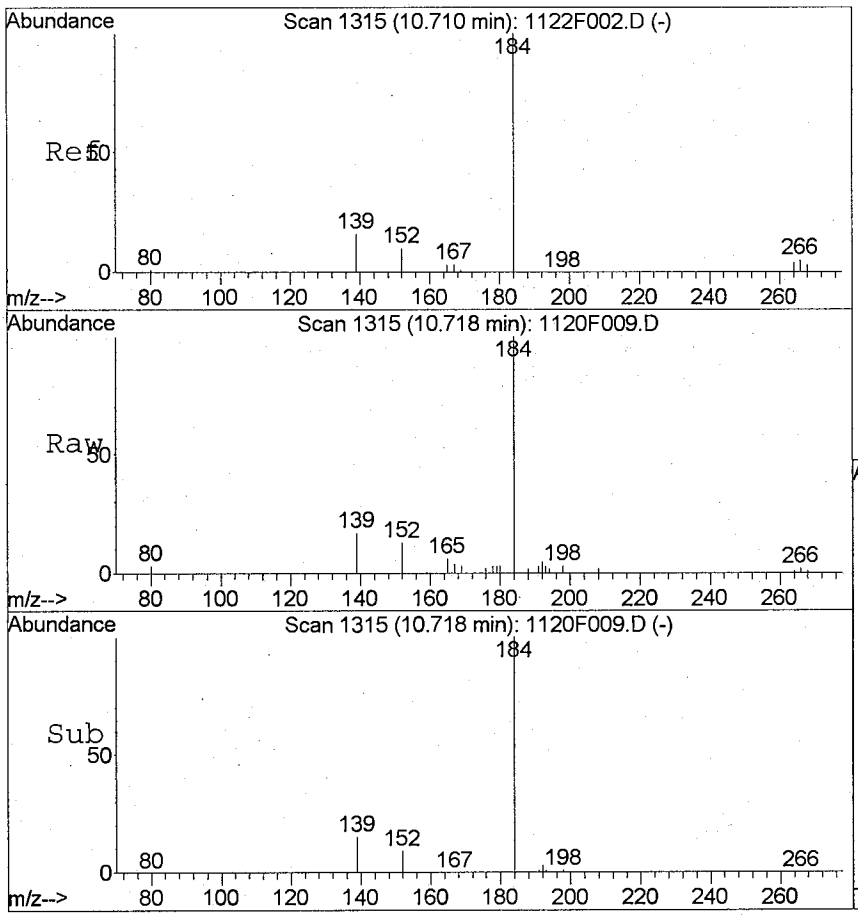


#17
Fluorene
Concen: 65.71 ng/ml
RT: 9.00 min Scan# 1068
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:166 Resp: 9435

Ion	Ratio	Lower	Upper
166	100		
165	92.3	63.3	123.3

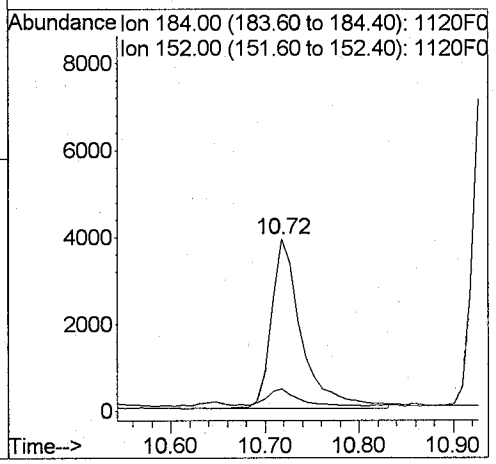


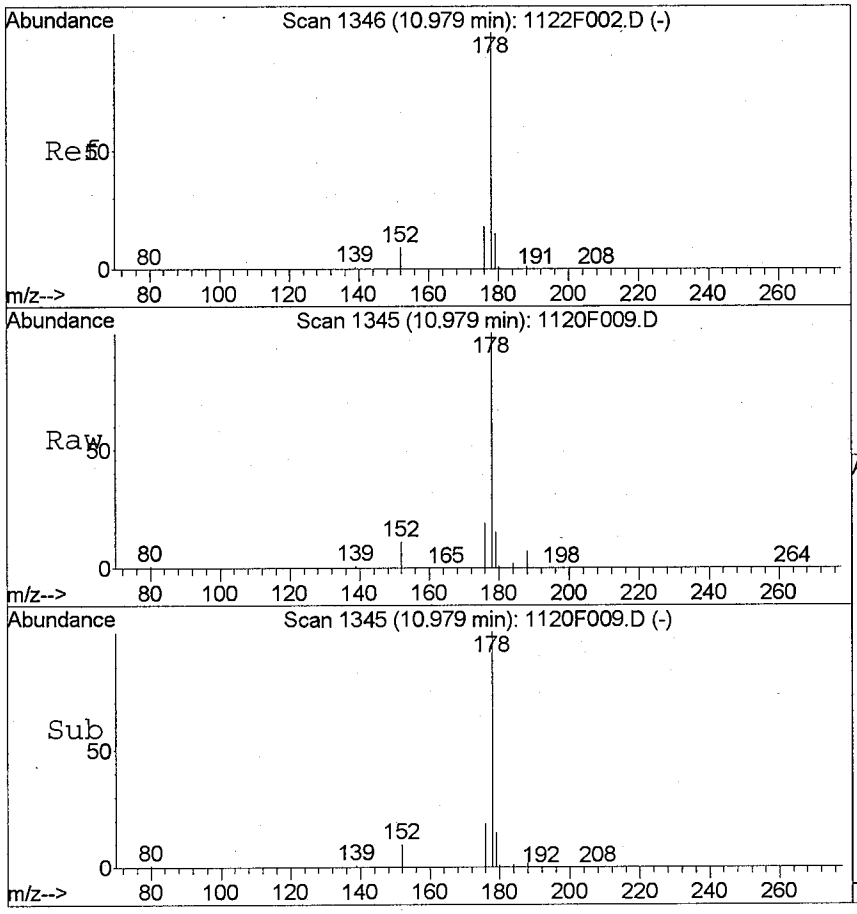


#24
Dibenzothiophene
Concen: 50.42 ng/ml
RT: 10.72 min Scan# 1315
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:184 Resp: 8697

Ion	Ratio	Lower	Upper
184	100		
152	9.5	0.0	39.0

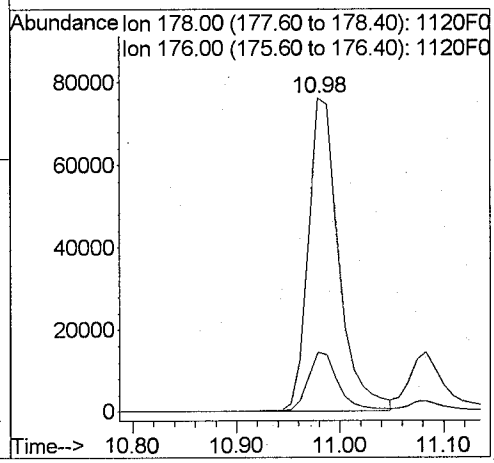


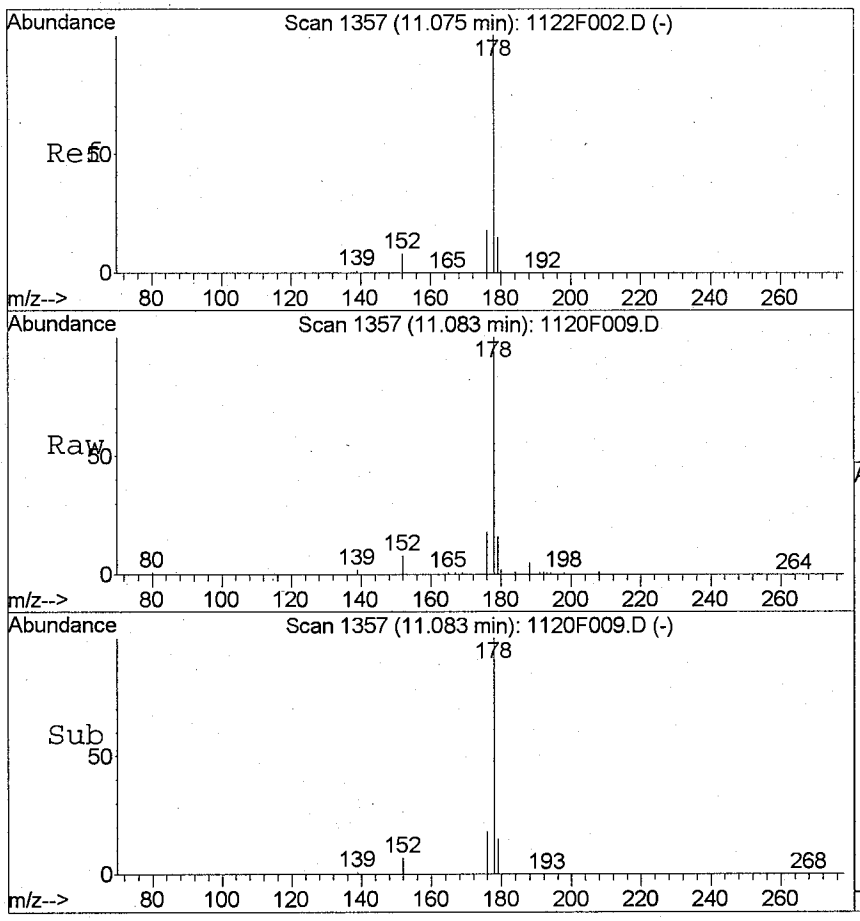


#28
Phenanthrene
Concen: 868.36 ng/ml
RT: 10.98 min Scan# 1345
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:178 Resp: 157327

Ion	Ratio	Lower	Upper
178	100		
176	18.9	0.0	49.0

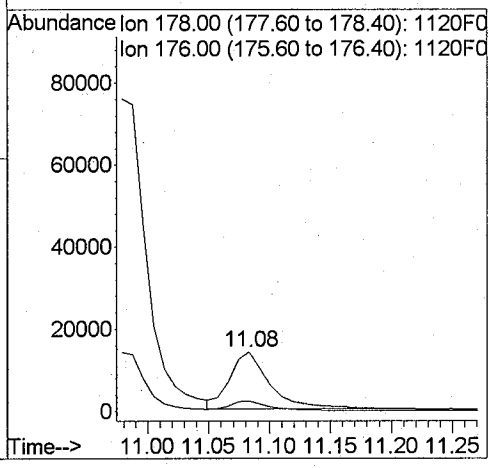


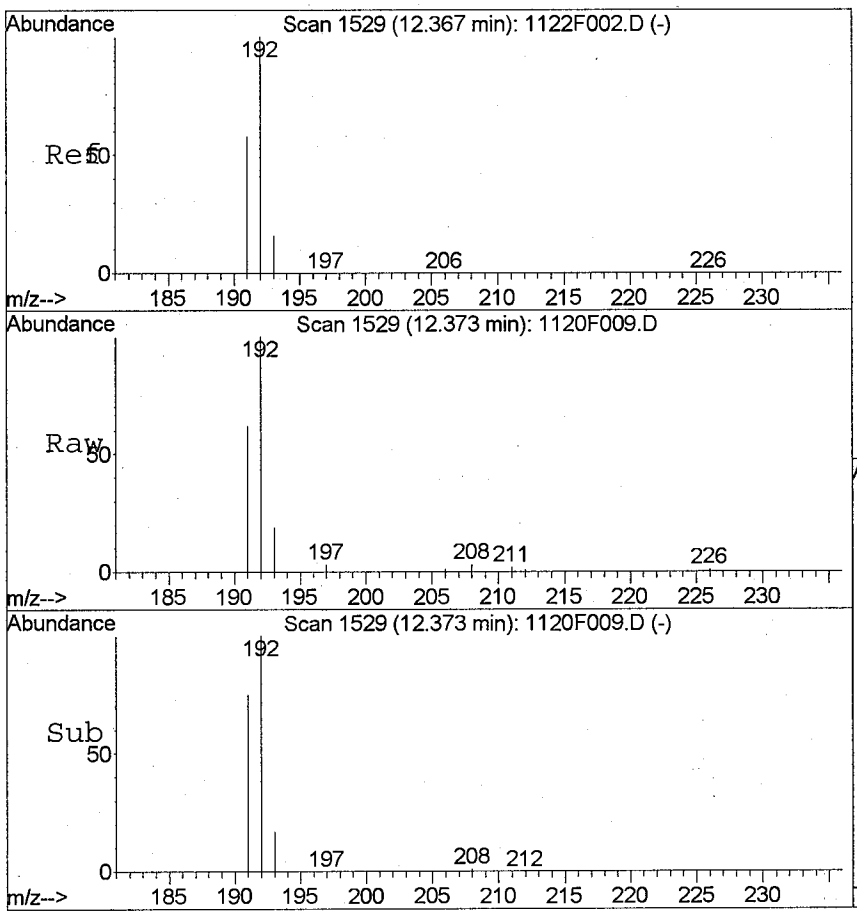


#29
Anthracene
Concen: 200.08 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:178 Resp: 30969

Ion	Ratio	Lower	Upper
178	100		
176	17.7	0.0	47.8

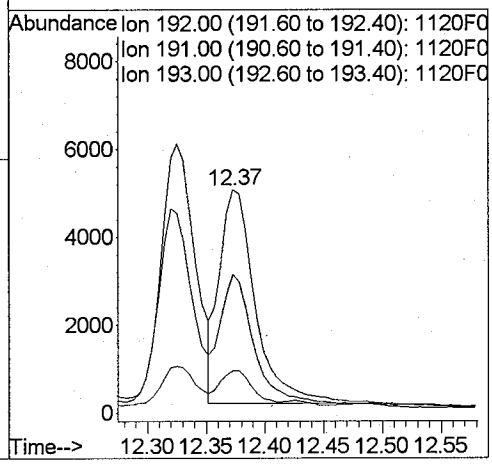


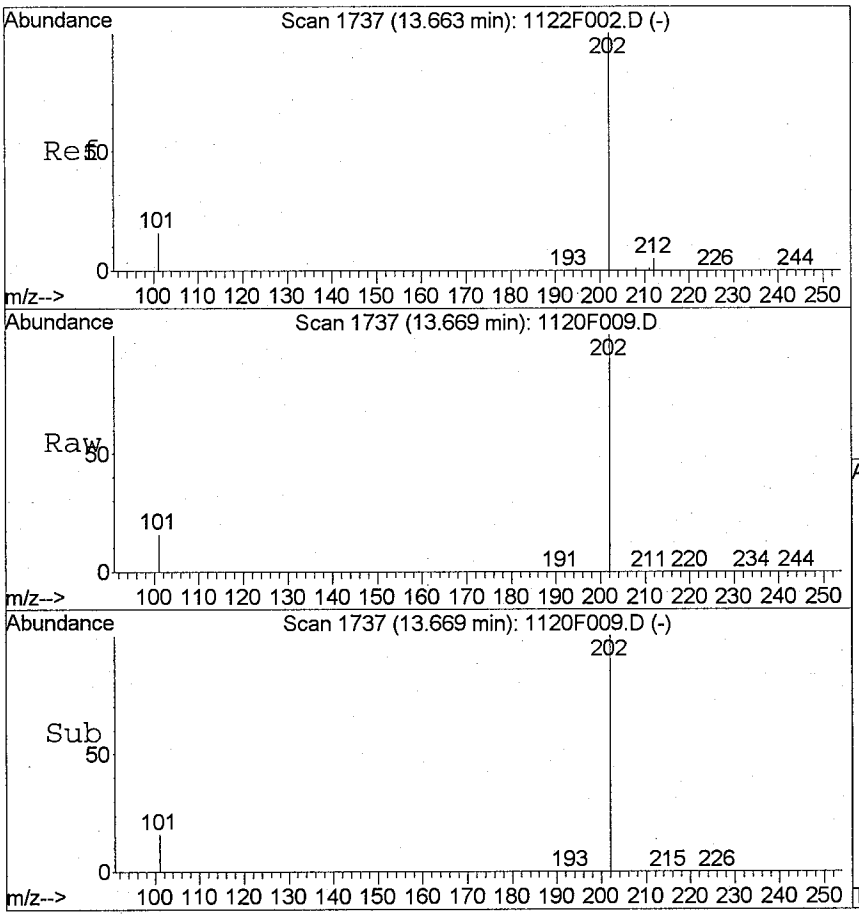


#31
1-Methylphenanthrene
Concen: 84.78 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:192 Resp: 10429

Ion	Ratio	Lower	Upper
192	100		
191	60.6	27.0	87.0
193	16.7	0.0	45.8

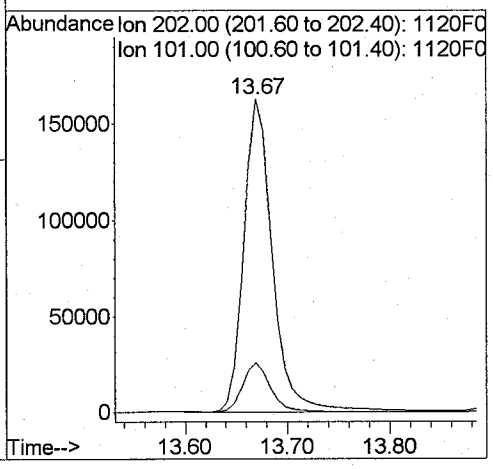


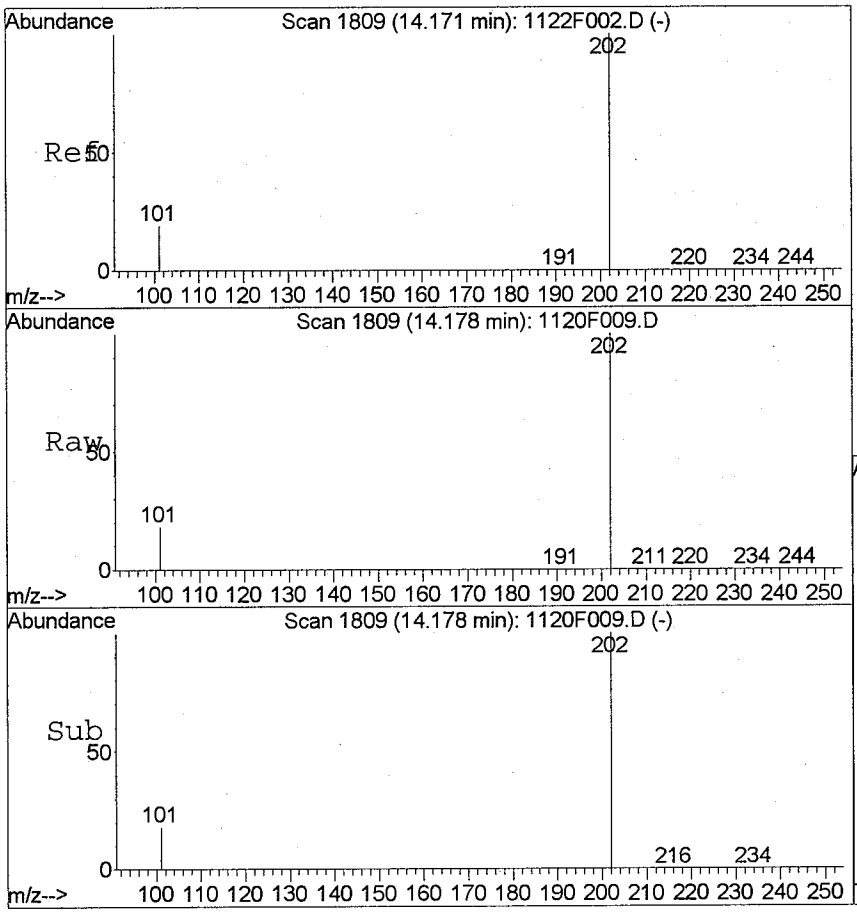


#36
Fluoranthene
Concen: 1755.73 ng/ml
RT: 13.67 min Scan# 1737
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:202 Resp: 316641

Ion	Ratio	Lower	Upper
202	100		
101	15.9	0.0	46.1

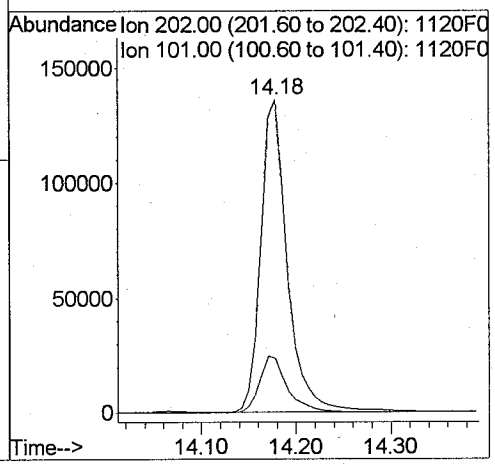


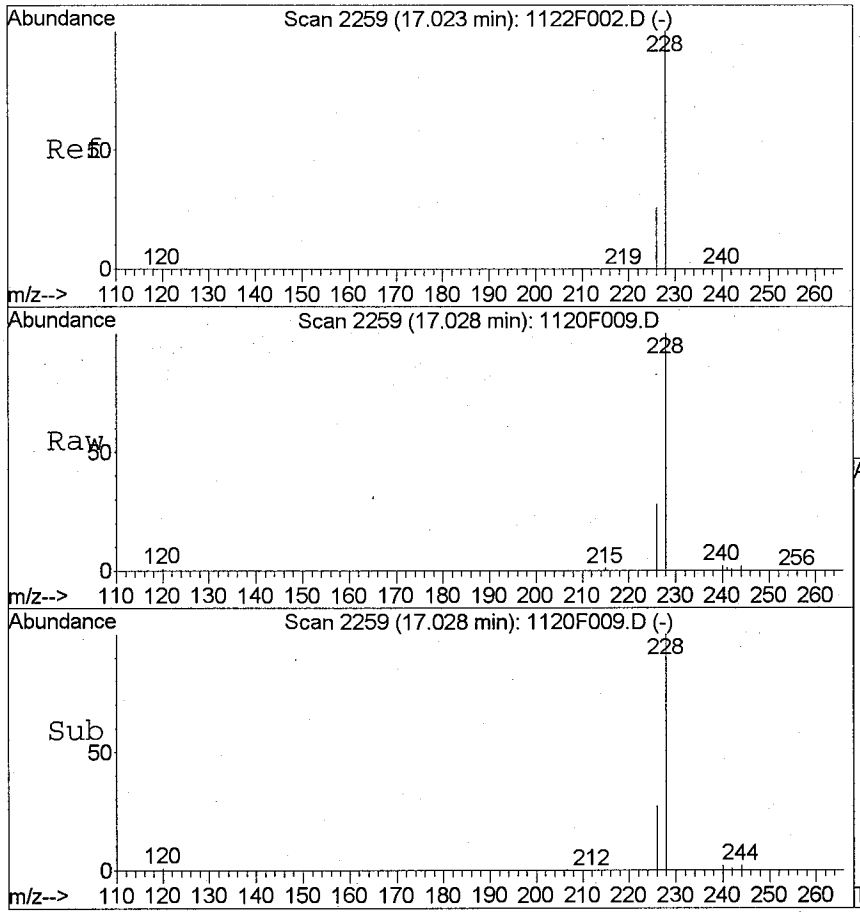


#39
Pyrene
Concen: 1570.94 ng/ml
RT: 14.18 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:202 Resp: 265112

Ion	Ratio	Lower	Upper
202	100		
101	17.5	0.0	47.3

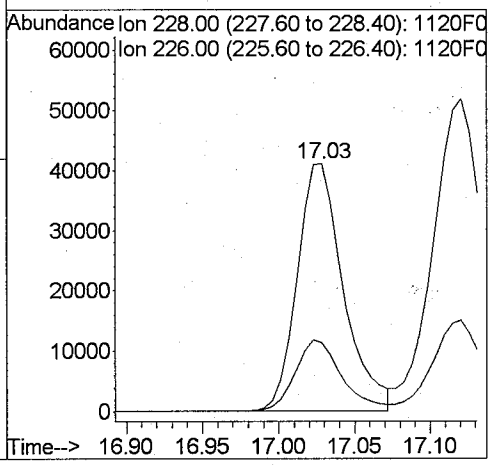


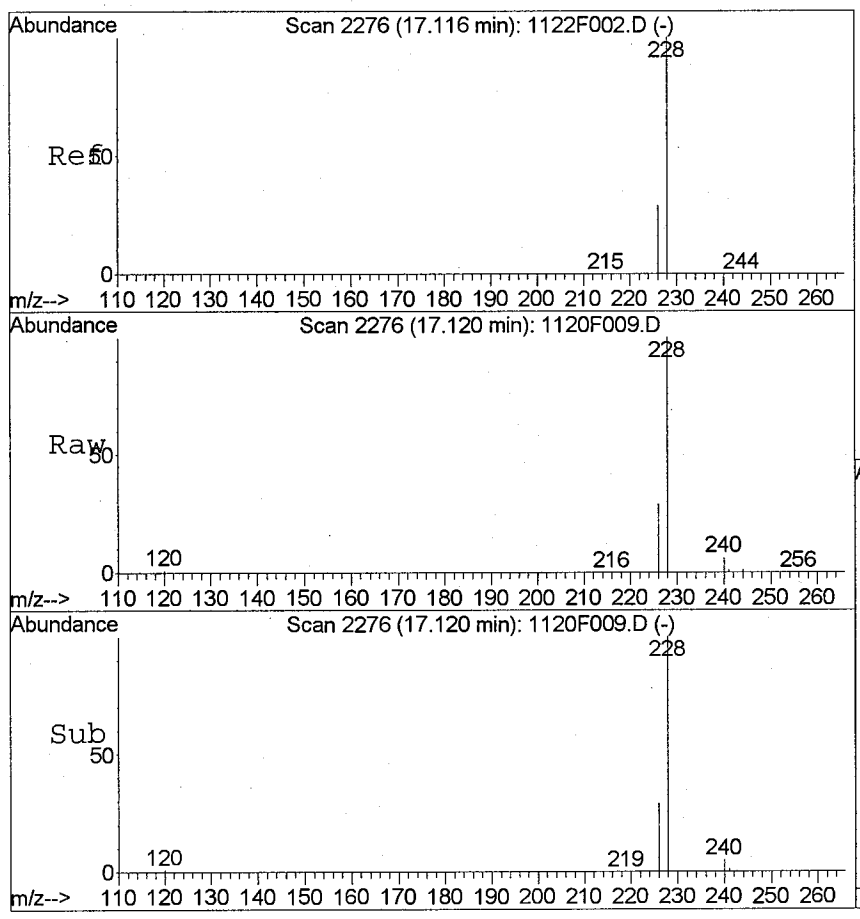


#42
Benz(a)anthracene
Concen: 674.77 ng/ml
RT: 17.03 min Scan# 2259
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:228 Resp: 86698

Ion	Ratio	Lower	Upper
228	100		
226	27.4	0.0	56.3

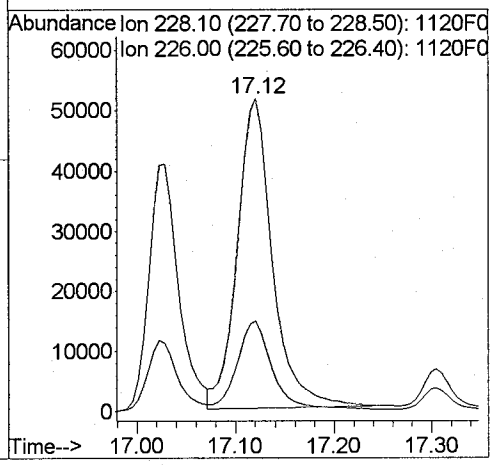


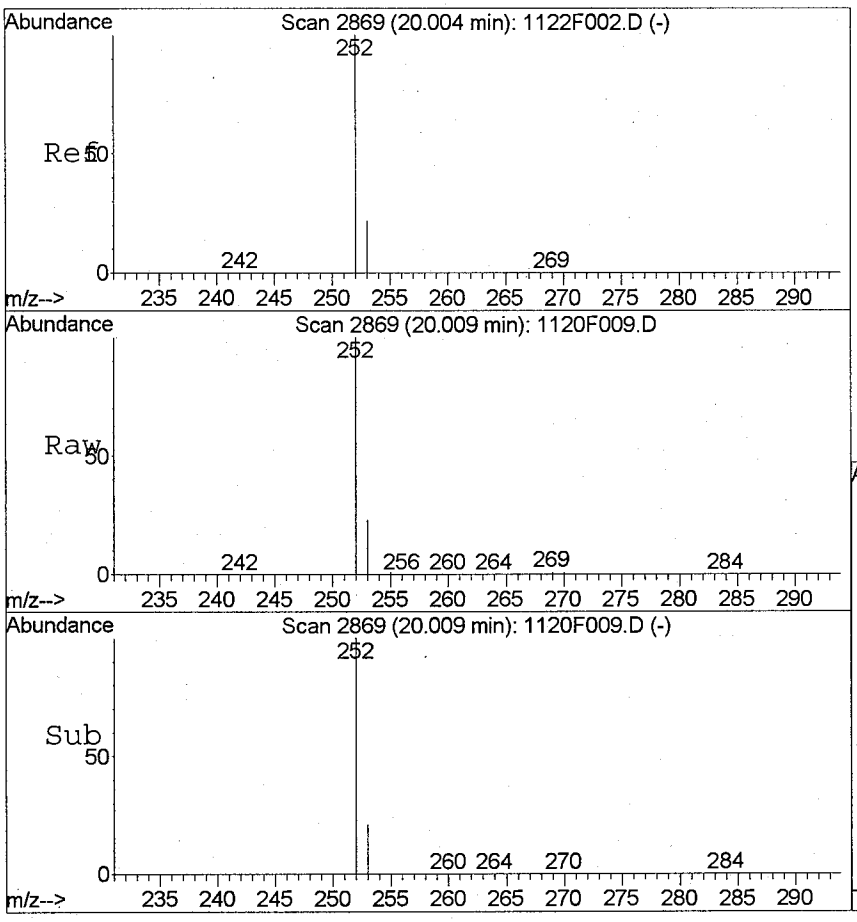


#43
Chrysene
Concen: 920.68 ng/ml
RT: 17.12 min Scan# 2276
Delta R.T. 0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:228 Resp: 126496

Ion	Ratio	Lower	Upper
228	100		
226	28.8	0.0	58.3

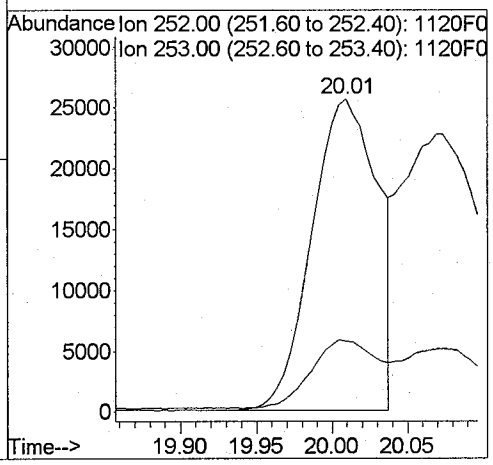


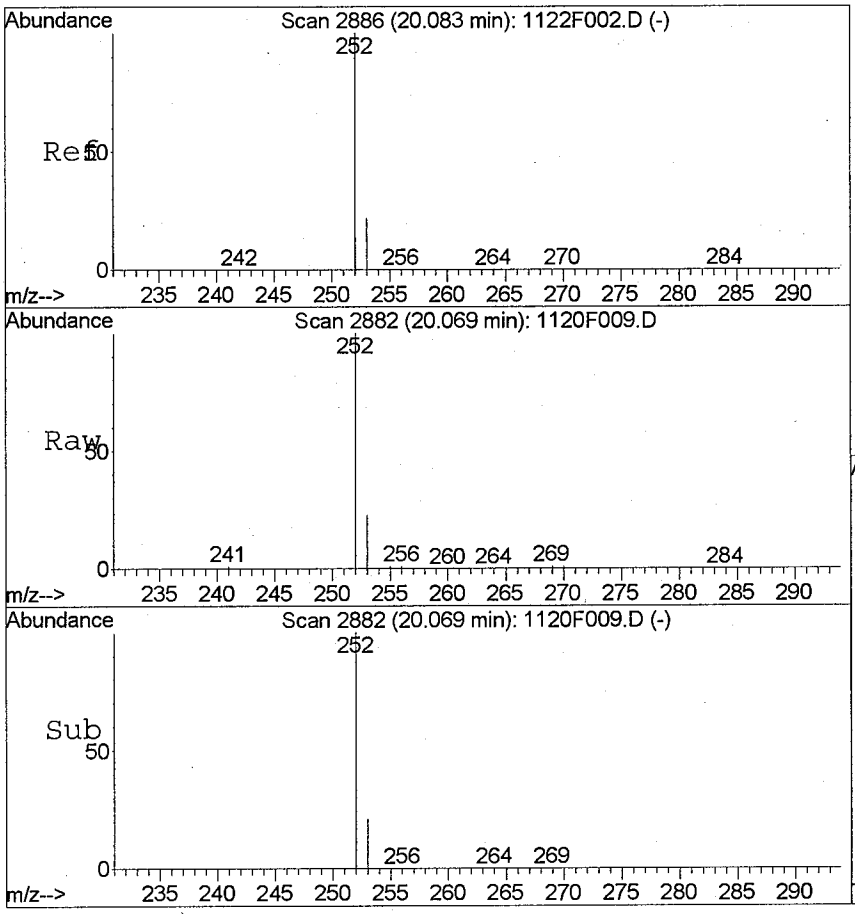


#49
Benzo(b)fluoranthene
Concen: 751.04 ng/ml
RT: 20.01 min Scan# 2869
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:252 Resp: 77610

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.9

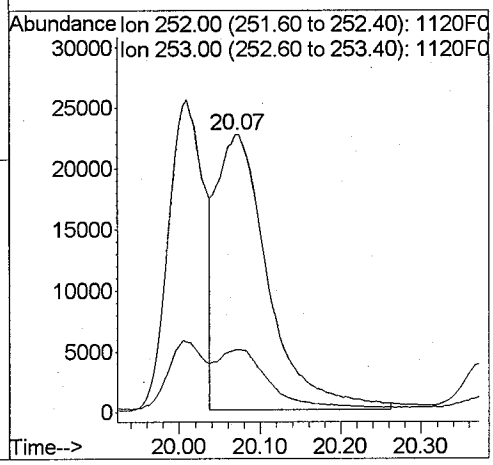


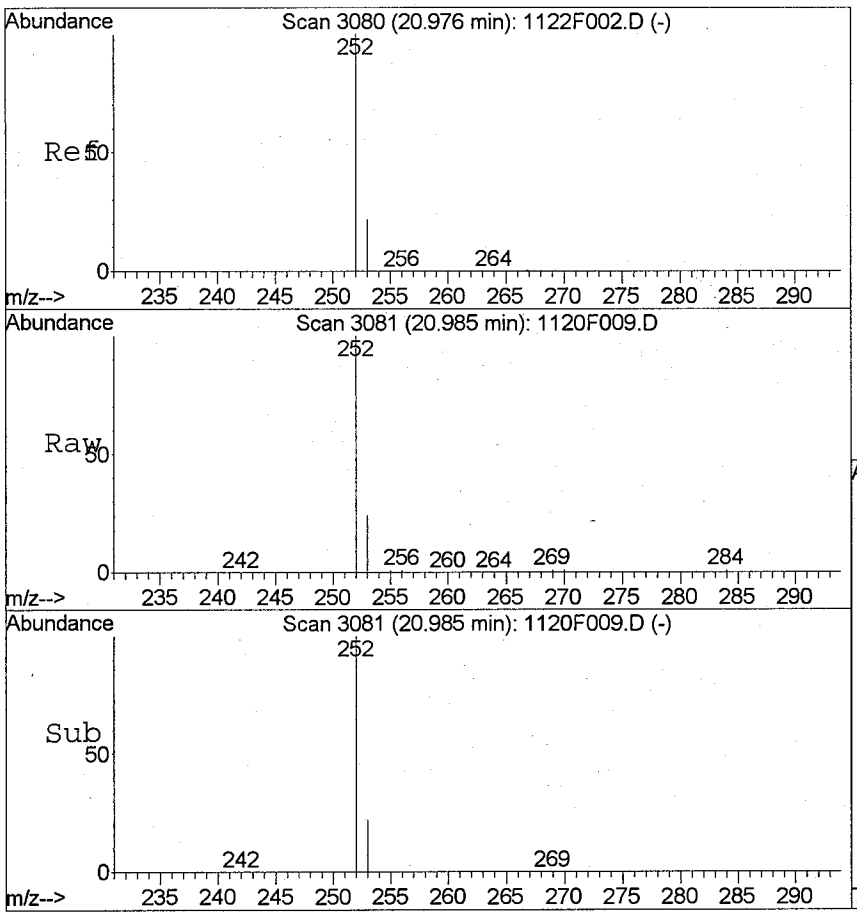


#50
Benzo(k)fluoranthene
Concen: 772.12 ng/ml m
RT: 20.07 min Scan# 2882
Delta R.T. -0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:252 Resp: 101240

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	52.0

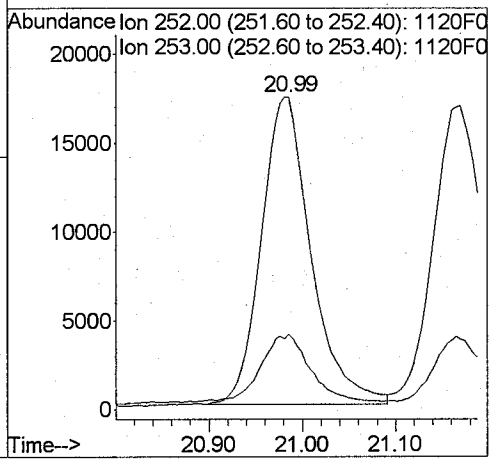


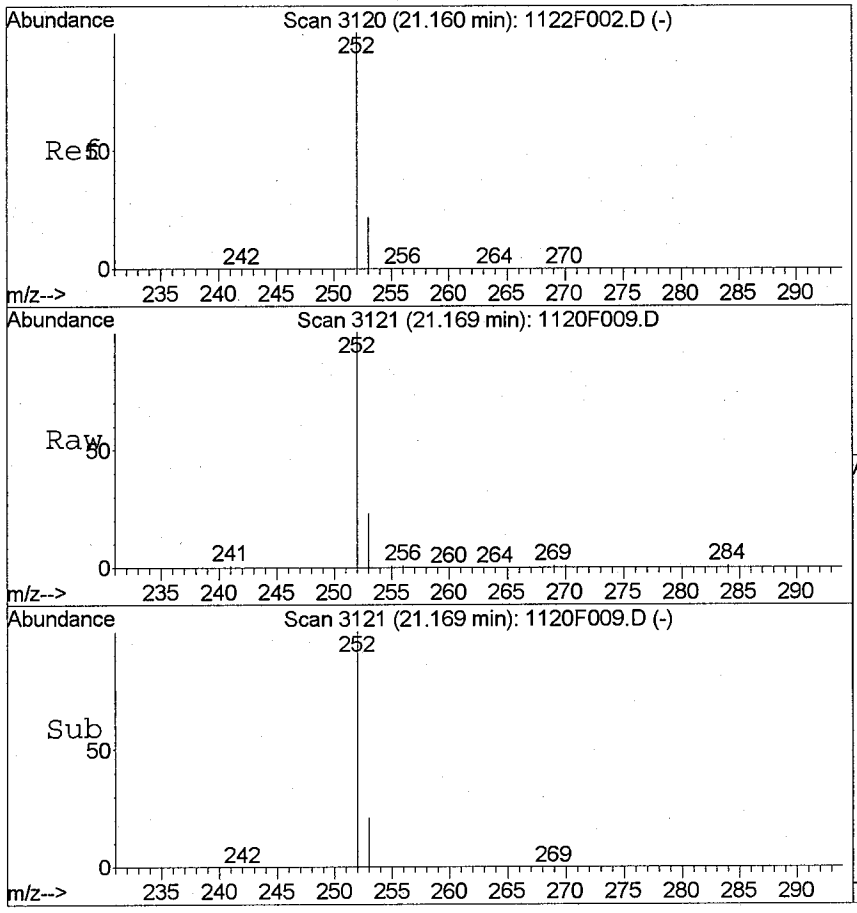


#51
Benzo(e)pyrene
Concen: 550.29 ng/ml
RT: 20.99 min Scan# 3081
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:252 Resp: 63848

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

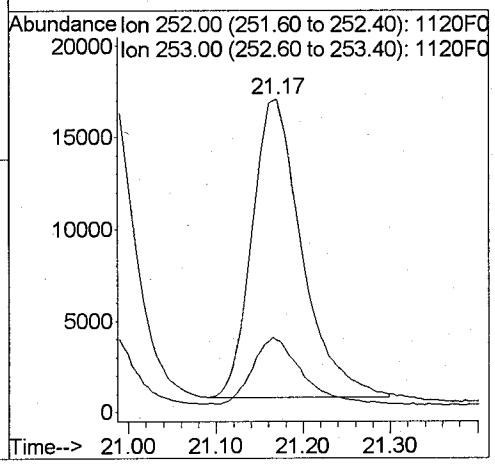


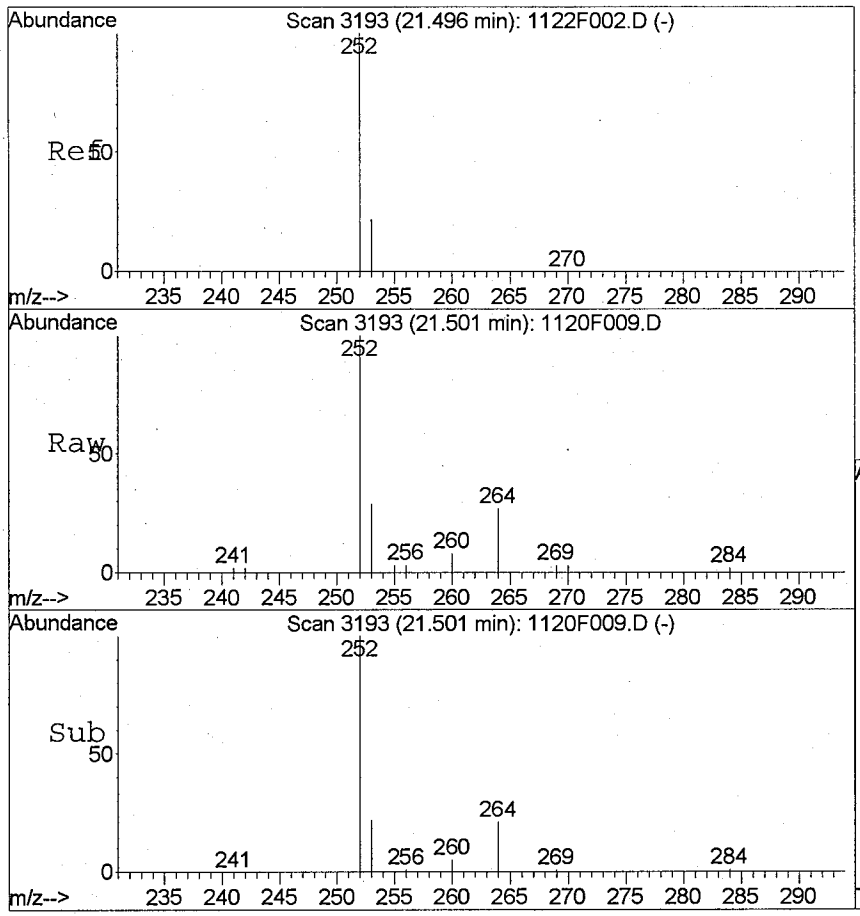


#52
Benzo(a)pyrene
Concen: 739.00 ng/ml
RT: 21.17 min Scan# 3121
Delta R.T. 0.01 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:252 Resp: 64956

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.9

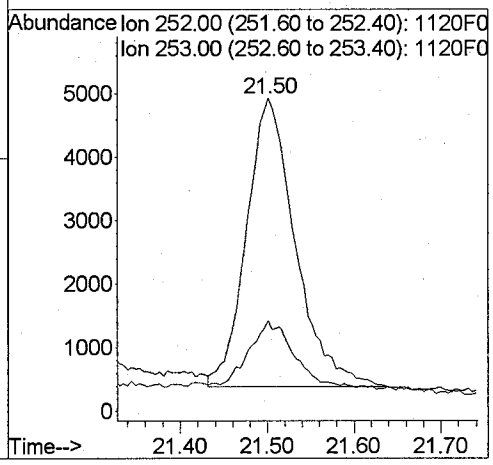


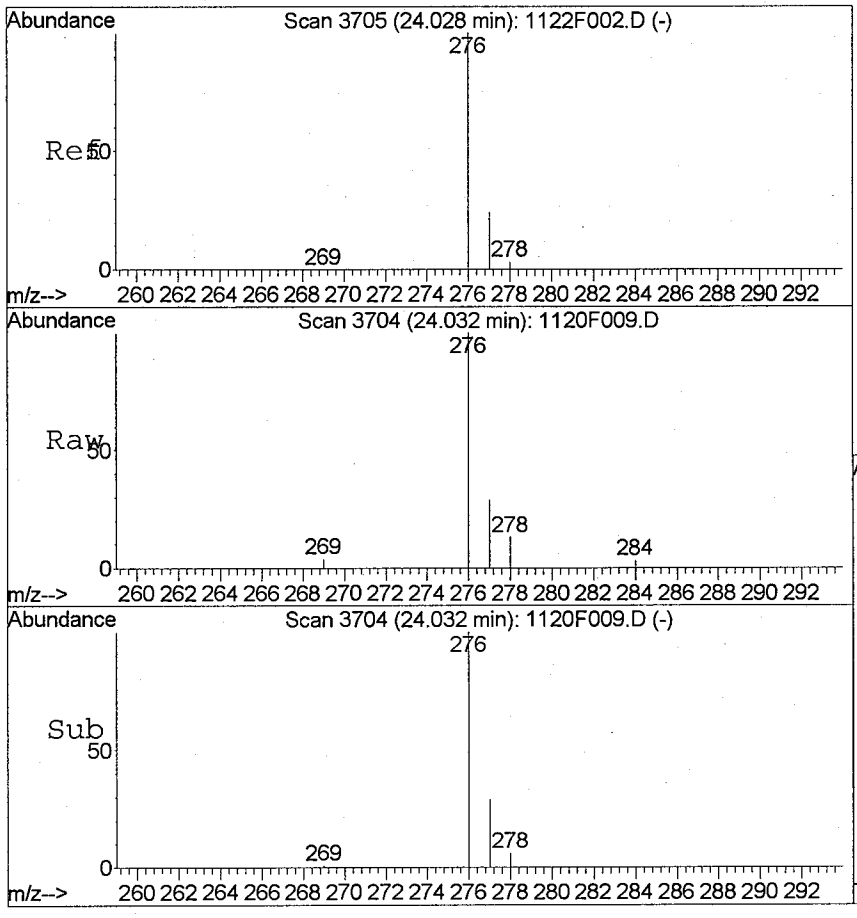


#53
Perylene
Concen: 179.71 ng/ml
RT: 21.50 min Scan# 3193
Delta R.T. 0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:252 Resp: 17732

Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	51.6

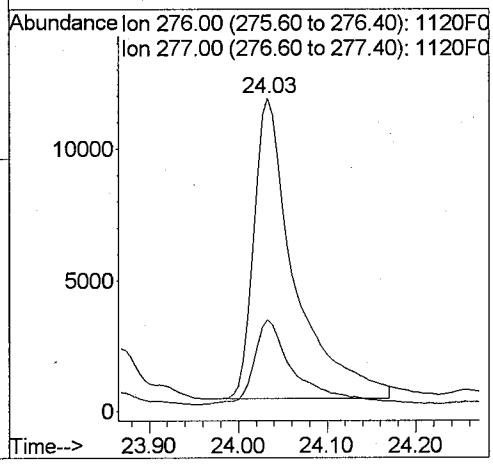


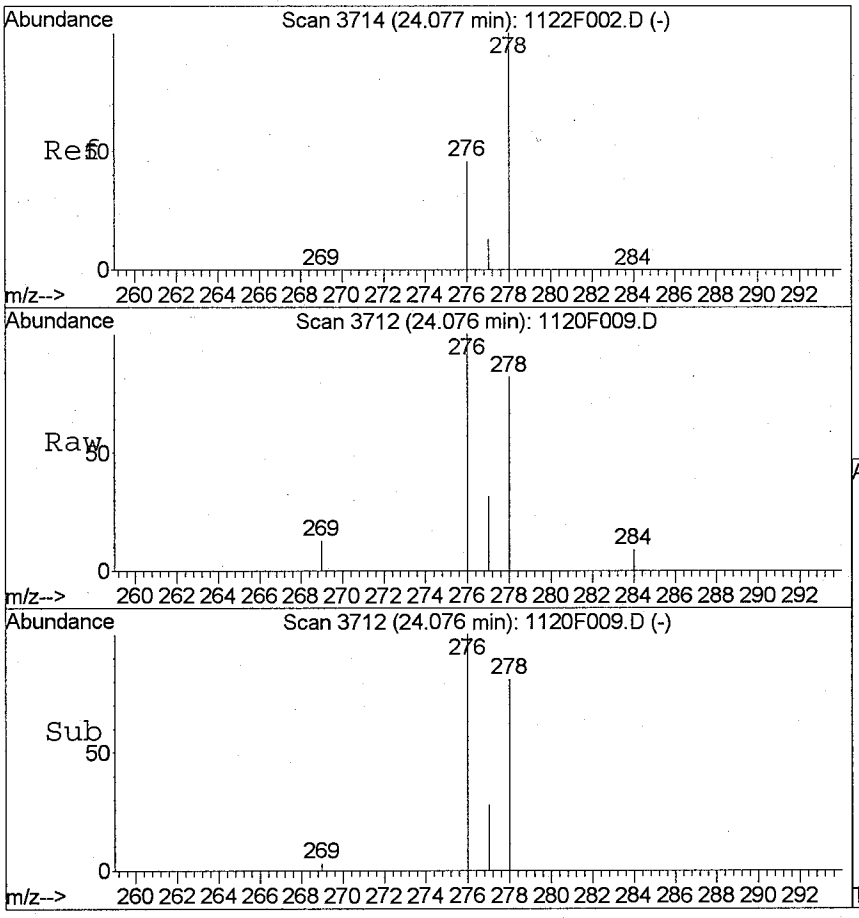


#54
Indeno(1,2,3-cd)pyrene
Concen: 685.19 ng/ml
RT: 24.03 min Scan# 3704
Delta R.T. 0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:276 Resp: 36612

Ion	Ratio	Lower	Upper
276	100		
277	28.0	0.0	53.8

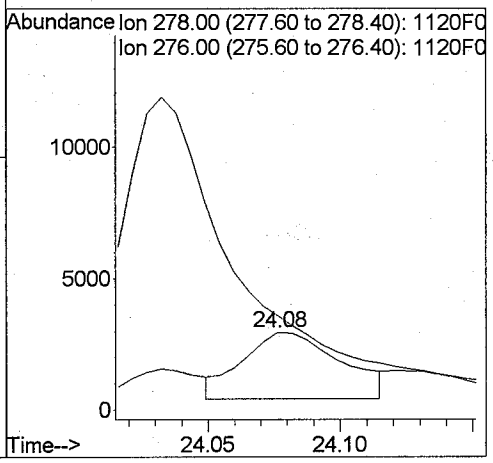


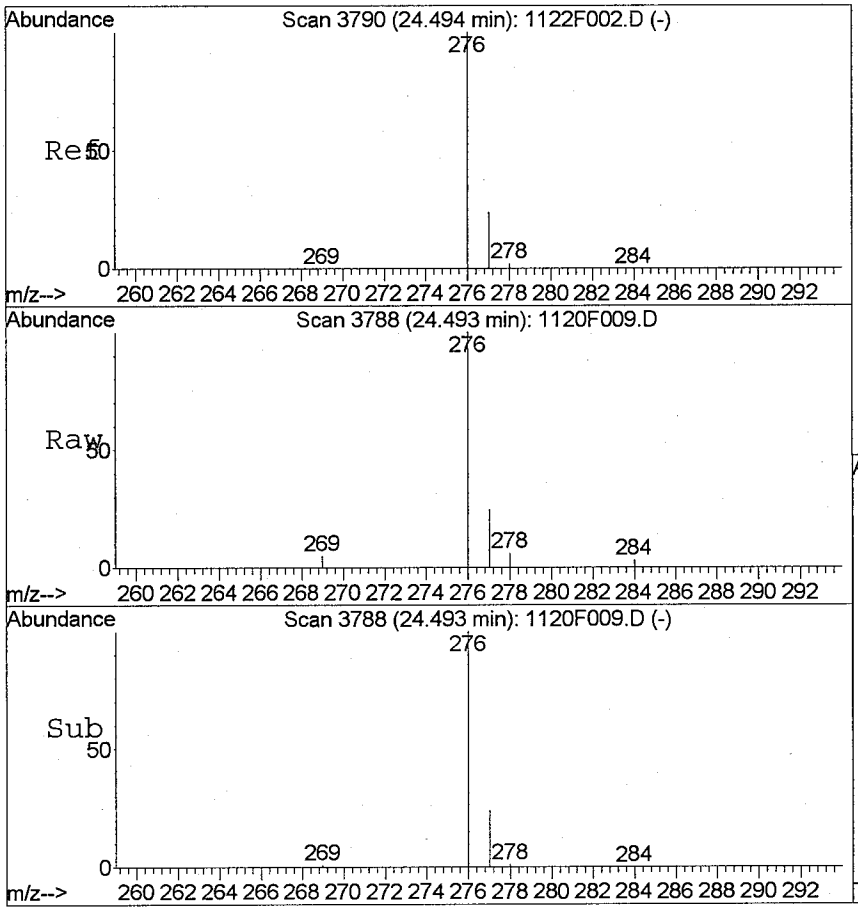


#55
Dibenz(a,h)anthracene
Concen: 85.79 ng/ml m
RT: 24.08 min Scan# 3712
Delta R.T. -0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:278 Resp: 6588

Ion	Ratio	Lower	Upper
278	100		
276	121.7	5.3	65.3#

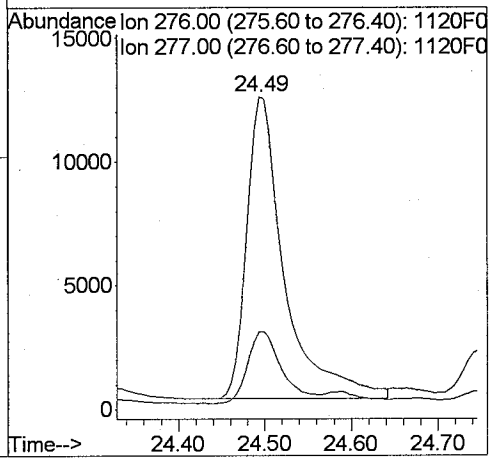




#56
Benzo(g,h,i)perylene
Concen: 419.61 ng/ml
RT: 24.49 min Scan# 3788
Delta R.T. 0.00 min
Lab File: 1120F009.D
Acq: 20 Nov 2003 10:01 am

Tgt Ion:276 Resp: 37172

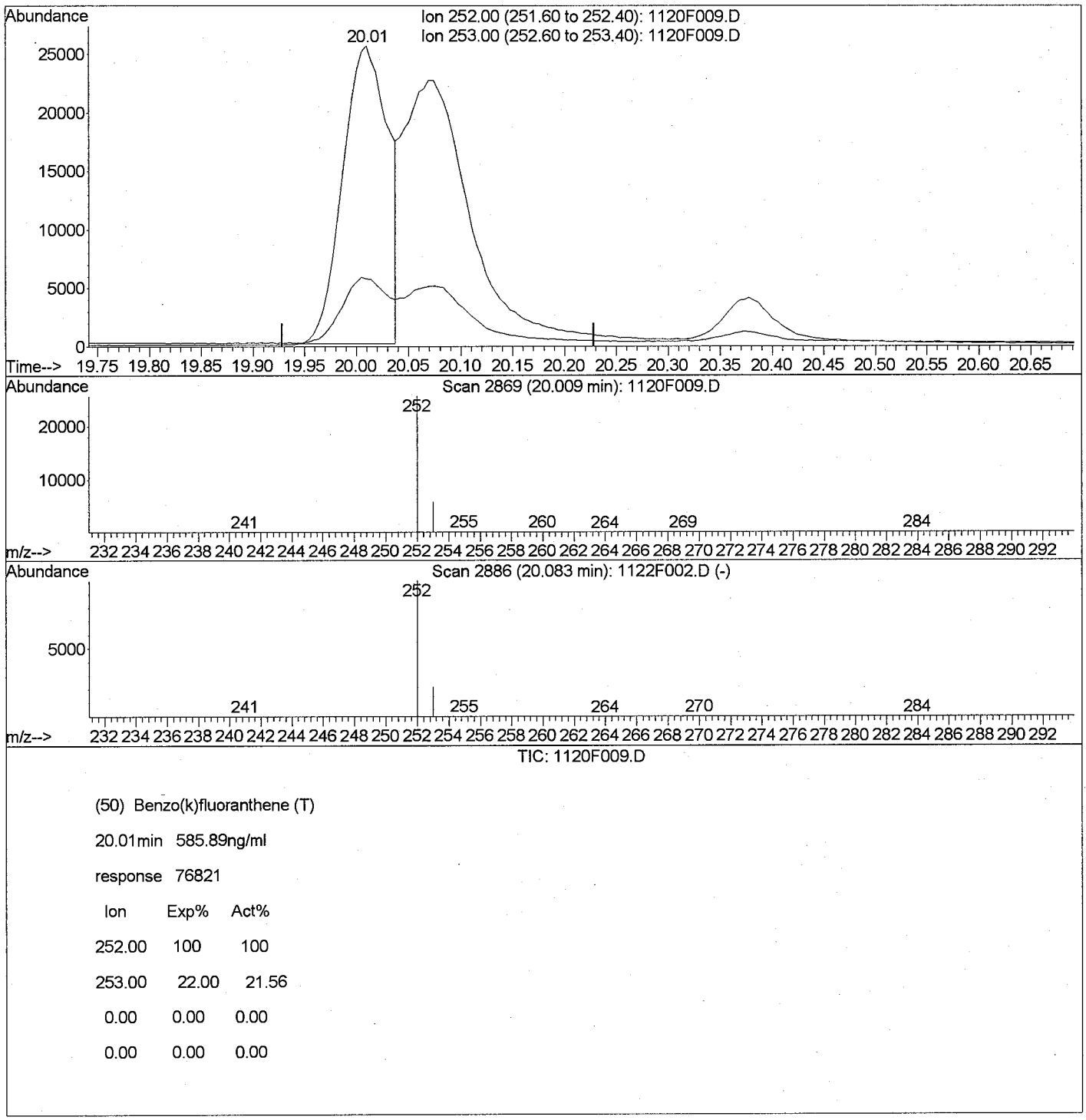
Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.5



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F009.D Vial: 6
Acq On : 20 Nov 2003 10:01 am Operator: LWeiskopf
Sample : K2308433-006DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.01min 585.89ng/ml

response 76821

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.56
0.00	0.00	0.00
0.00	0.00	0.00

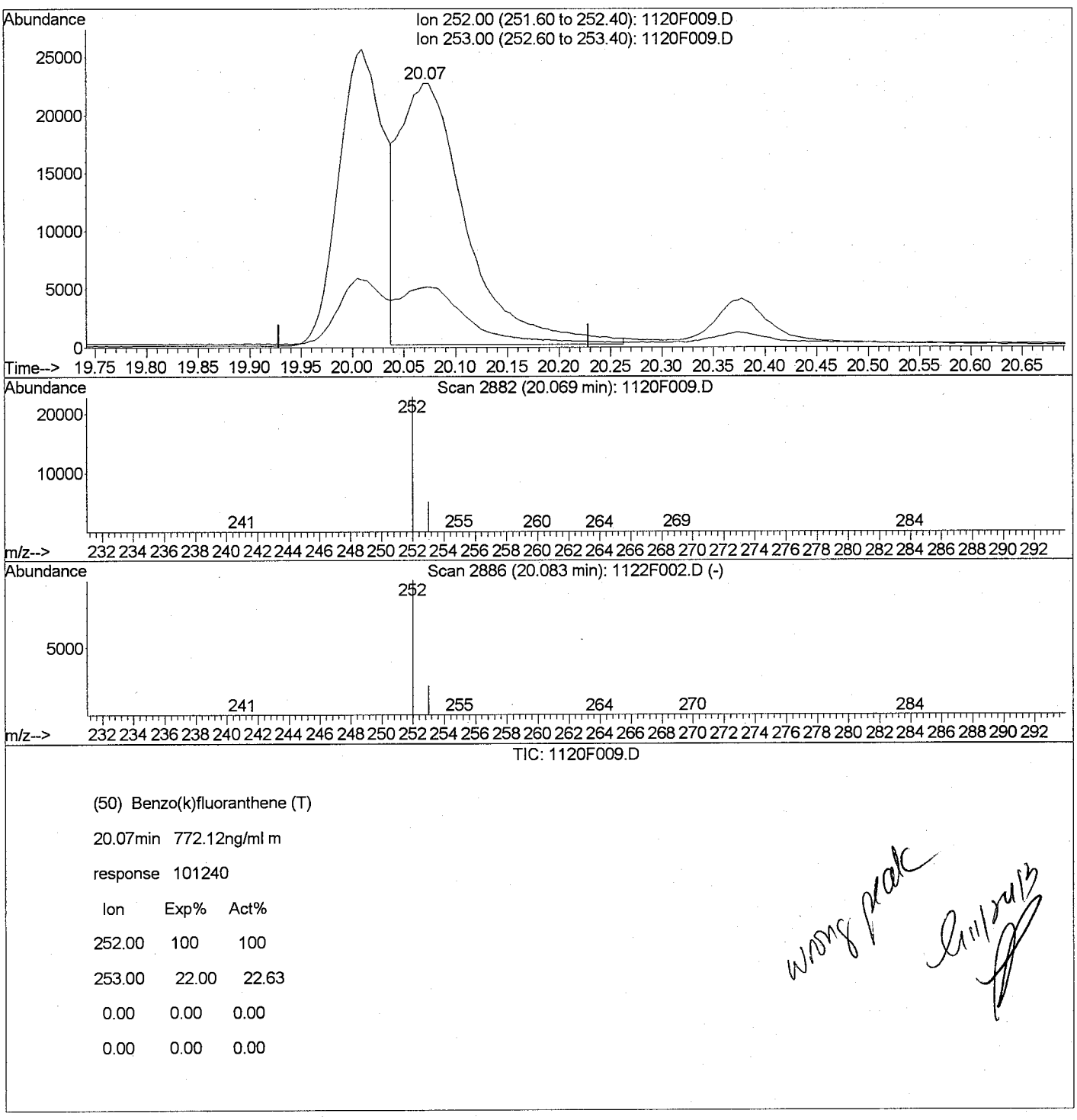
1120F009.D 1107ALK.M Mon Nov 24 09:18:51 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F009.D
Acq On : 20 Nov 2003 10:01 am
Sample : K2308433-006DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.07min 772.12ng/ml m

response 101240

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.63
0.00	0.00	0.00
0.00	0.00	0.00

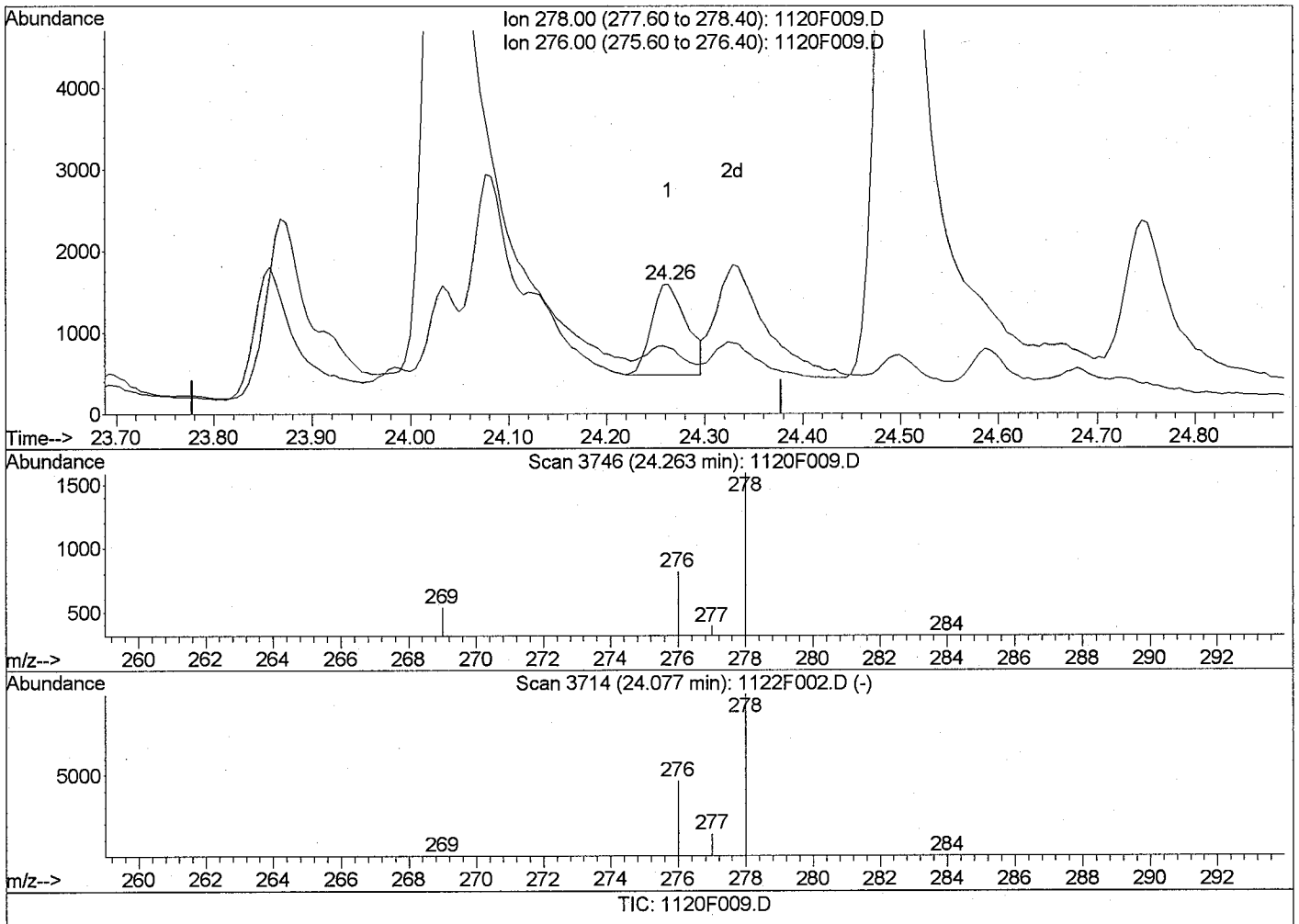
wrong peak 11/25/03

1120F009.D 1107ALK.M Mon Nov 24 09:18:58 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F009.D Vial: 6
Acq On : 20 Nov 2003 10:01 am Operator: LWeiskopf
Sample : K2308433-006DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:18 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F009.D

(55) Dibenz(a,h)anthracene (T)

24.26min 35.95ng/ml

response 2761

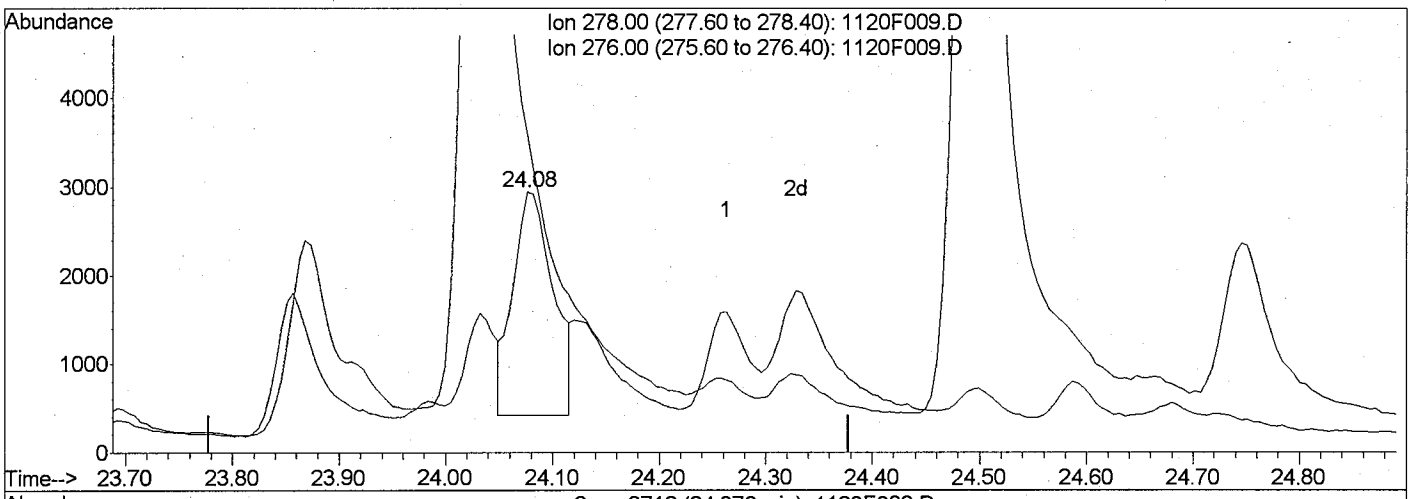
Ion	Exp%	Act%
278.00	100	100
276.00	35.30	18.11
0.00	0.00	0.00
0.00	0.00	0.00

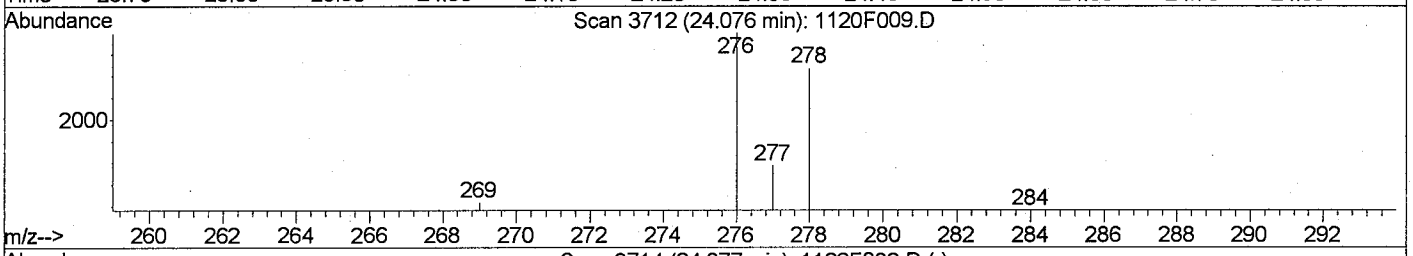
1120F009.D 1107ALK.M Mon Nov 24 09:19:04 2003

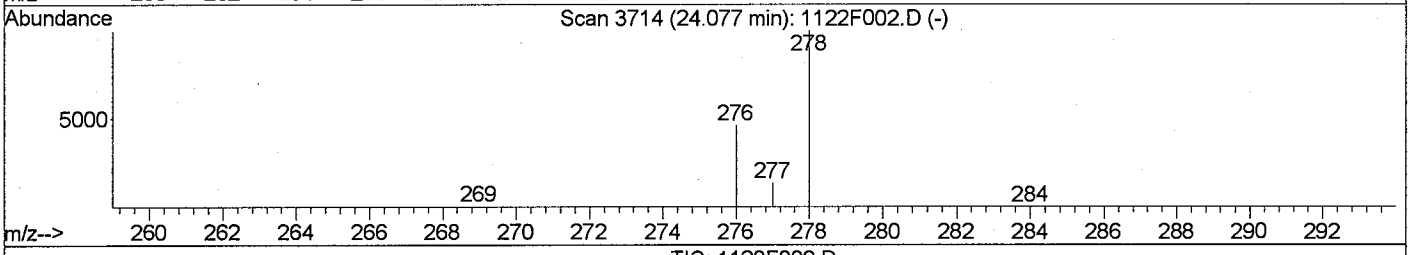
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F009.D Vial: 6
Acq On : 20 Nov 2003 10:01 am Operator: LWeiskopf
Sample : K2308433-006DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F009.D

(55) Dibenz(a,h)anthracene (T)

24.08min 85.79ng/ml m

response 6588

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	121.74#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak

1120F009.D 1107ALK.M Mon Nov 24 09:19:11 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-6
Lab Code: K2308433-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**10**		4.7	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**13**		4.7	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**8.8**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**17**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**18**		4.7	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**9.8**		4.7	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.7	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**9.3**		4.7	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**18**		4.7	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**28**		4.7	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**37**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**13**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**10**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**16**		4.7	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**30**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**6.2**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**15**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**20**		4.7	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**650**		4.7	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**86**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**140**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**63**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**41**		4.7	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**28**		4.7	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1100**	D	47	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**960**	D	47	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**300**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**410**		4.7	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**550**		4.7	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**190**		4.7	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**84**		4.7	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**48**		4.7	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**22**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**510**		4.7	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-6
Lab Code: K2308433-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**420**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**340**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**480**		4.7	1	11/05/03	11/19/03	KWG0317778	
Perylene	**110**		4.7	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**540**		4.7	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**69**		4.7	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**300**		4.7	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	27-110	11/19/03	Acceptable
Fluoranthene-d10	85	34-122	11/19/03	Acceptable
Terphenyl-d14	97	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F043.D
Lab ID: K2308433-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 20:02
Date Quantitated: 11/21/2003 12:31
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	10378.61	NA	10000	See DI
	Fluoranthene	13623.40	NA	10000	

Primary Review: 11/24/13

Secondary Review: 11/24/13

Printed: 11/21/2003 13:54:17
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247865	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F043.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 20:02	**Quant Date:**	11/21/2003 12:31	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	256437	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	134500	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	194000	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	188856	1,000.00	OK
5	Perylene-d12	21.40	0.04	264	118580	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	85601	636.36	64	27-110	OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	165902	854.42	85	34-122	OK	
4	Terphenyl-d14	14.67	0.01	0.00	244	166309	966.24	97	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	31411	108.33	10		
1	2-Methylnaphthalene	6.37		0.00	142	24766	144.64	13		
1	1-Methylnaphthalene	6.52	0.01	0.00	142	15254	95.04	8.8		
1	Biphenyl	7.04	0.01	0.00	154	7654	36.87	3.4	J	
1	C2-Naphthalenes	7.42	?	?	156	54350**m**	187.44	17		
1	C3-Naphthalenes	8.94	?	?	170	57050**m**	196.76	18		
1	C4-Naphthalenes	9.80	?	?	184	30684**m**	105.82	9.8		
2	Acenaphthylene	7.74	0.01	0.00	152	25912	99.99	9.3		
2	Acenaphthene	8.06	0.01	0.00	154	48509	303.73	28		
2	Dibenzofuran	8.35	0.01	0.00	168	41918	195.79	18		
2	Fluorene	8.99		0.00	166	69148	404.17	37		
2	C1-Fluorenes	10.13	?	?	180	24462**m**	142.98	13		
2	C2-Fluorenes	11.40	?	?	194	19278**m**	112.68	10		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F043.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 20:02	**Quant Date:**	11/21/2003 12:31	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	28832**m**	168.52	16		
3	Dibenzothiophene	10.71		0.00	184	72283	322.93	30		
3	C1-Dibenzothiophenes	10.21	?	?	198	15044**m**	67.21	6.2		
3	C2-Dibenzothiophenes	12.63	?	?	212	37403**m**	167.10	15		
3	C3-Dibenzothiophenes	14.66	?	?	226	48679**m**	217.48	20		
3	Phenanthrene	10.98	0.01	0.00	178	1640698	6,978	650		
3	Anthracene	11.08	0.01	0.00	178	187221	932.05	86		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	354922**m**	1,510	140		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	160221**m**	681.44	63		
3	C3-Phenanthrenes/Anthracenes	14.45	?	?	220	104756**m**	445.54	41		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	69863**m**	297.13	28		
3	Fluoranthene	13.67	0.02	0.00	202	3188492	13,623	1300	E	NR
4	Pyrene	14.17	0.01	0.00	202	2561961	10,379	960	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	798855**m**	3,236	300		
4	Benz(a)anthracene	17.02	0.01	0.00	228	839109	4,465	410		
4	Chrysene	17.11	0.01	0.00	228	1185005	5,896	550		
4	C1-Chrysenes	18.05	?	?	242	406663**m**	2,024	190		
4	C2-Chrysenes	19.15	?	?	256	181948**m**	905.35	84		
4	C3-Chrysenes	20.95	?	?	270	104923**m**	522.08	48		
4	C4-Chrysenes	22.41	?	?	284	47697**m**	237.33	22		
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	872909	5,514	510		
5	Benzo(k)fluoranthene	20.07	0.02	0.00	252	914980**m**	4,555	420		
5	Benzo(e)pyrene	20.97	0.04	0.00	252	648258	3,647	340		
5	Benzo(a)pyrene	21.16	0.04	0.00	252	689939	5,124	480		
5	Perylene	21.49	0.04	0.00	252	177271	1,173	110		
5	Indeno(1,2,3-cd)pyrene	24.03	0.03	0.00	276	473241	5,781	540		
5	Dibenz(a,h)anthracene	24.08	0.02	0.00	278	87552**m**	744.23	69		
5	Benzo(g,h,i)perylene	24.49	0.03	0.00	276	433202	3,192	300		

Prep Amount:	27.3 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	79.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:36 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	256437	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	134500	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	194000	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	188856	1000.00	ng/ml	0.02
48) Perylene-d12	21.40	264	118580	1000.00	ng/ml	0.04
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	78026	415.36	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	41.54%		
16) Fluorene-d10	8.94	176	85601	636.36	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	63.64%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	165902	854.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	85.44%		
41) Terphenyl-d14	14.67	244	166309	966.24	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	96.62%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	31411	108.33	ng/ml	100
3) 2-Methylnaphthalene	6.37	142	24766	144.64	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	15254	95.04	ng/ml	99
6) Biphenyl	7.04	154	7654	36.87	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.28	156	13297	91.05	ng/ml	96
8) C2-Naphthalenes	7.42	156	54350m	187.44	ng/ml	
9) C3-Naphthalenes	8.94	170	57050m	196.76	ng/ml	
10) C4-Naphthalenes	9.80	184	30684m	105.82	ng/ml	
12) Acenaphthylene	7.74	152	25912	99.99	ng/ml	99
13) Acenaphthene	8.06	154	48509	303.73	ng/ml	99
14) Dibenzofuran	8.35	168	41918	195.79	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.76	170	4371	30.55	ng/ml	95
17) Fluorene	8.99	166	69148	404.17	ng/ml	99
18) C1-Fluorenes	10.13	180	24462m	142.98	ng/ml	
19) C2-Fluorenes	11.40	194	19278m	112.68	ng/ml	
20) C3-Fluorenes	12.76	208	28832m	168.52	ng/ml	
24) Dibenzothiophene	10.71	184	72283	322.93	ng/ml	95
25) C1-Dibenzothiophenes	10.21	198	15044m	67.21	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	37403m	167.10	ng/ml	
27) C3-Dibenzothiophenes	14.66	226	48679m	217.48	ng/ml	
28) Phenanthrene	10.98	178	1640698	6978.05	ng/ml	100
29) Anthracene	11.08	178	187221	932.05	ng/ml	99
30) Carbazole	11.51	167	1782	11.22	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:36 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

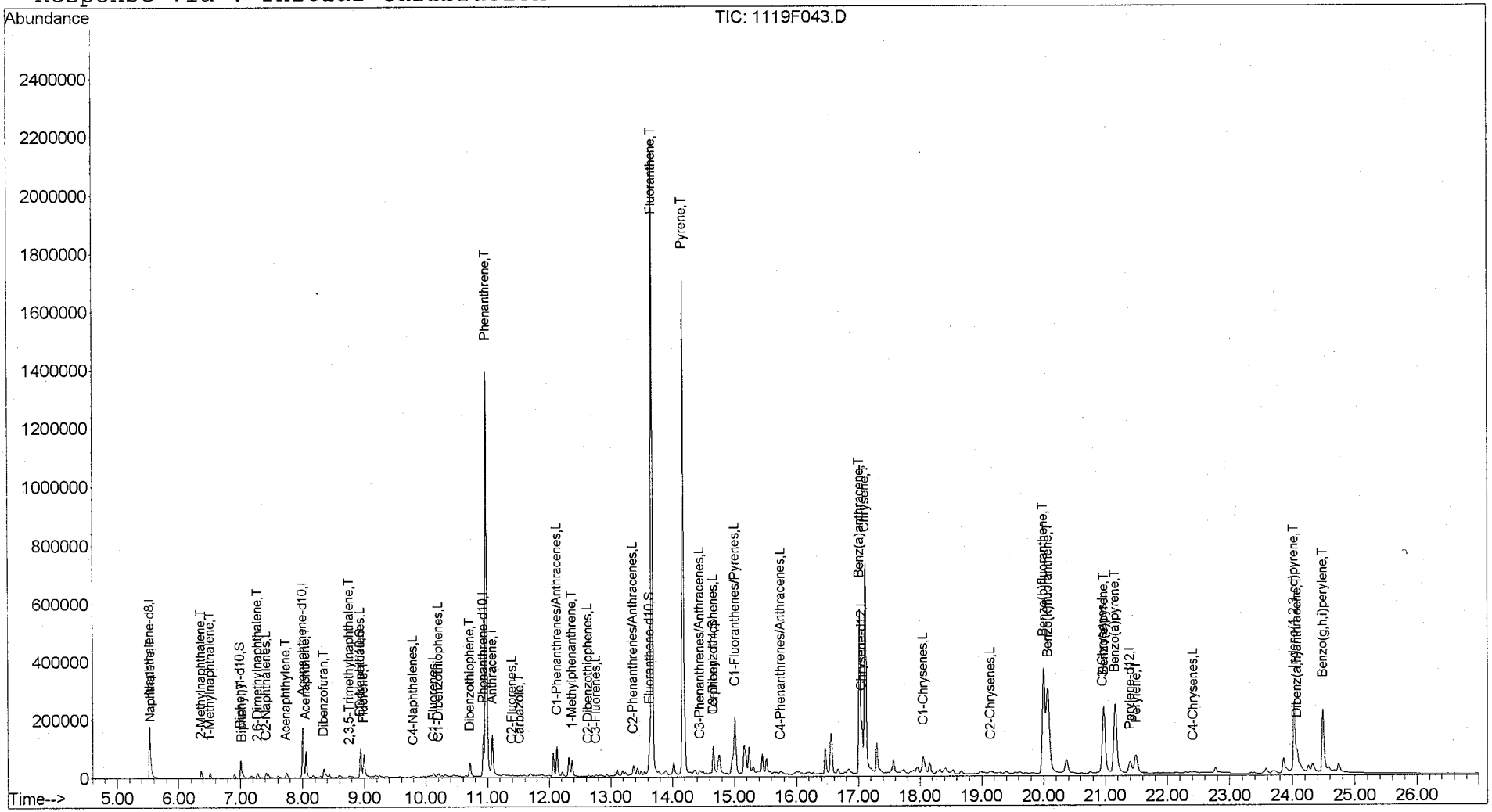
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	55477	347.51	ng/ml	99
32)	C1-Phenanthrenes/Anthracen	12.12	192	354922m	1509.52	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	160221m	681.44	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.45	220	104756m	445.54	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	69863m	297.13	ng/ml	
36)	Fluoranthene	13.67	202	3188492	13623.40	ng/ml	99
39)	Pyrene	14.17	202	2561961	10378.61	ng/ml	97
40)	C1-Fluoranthenes/Pyrenes	15.01	216	798855m	3236.20	ng/ml	
42)	Benz(a)anthracene	17.02	228	839109	4464.81	ng/ml	99
43)	Chrysene	17.11	228	1185005	5896.44	ng/ml	100
44)	C1-Chrysenes	18.05	242	406663m	2023.50	ng/ml	
45)	C2-Chrysenes	19.15	256	181948m	905.35	ng/ml	
46)	C3-Chrysenes	20.95	270	104923m	522.08	ng/ml	
47)	C4-Chrysenes	22.41	284	47697m	237.33	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	872909	5513.97	ng/ml	100
50)	Benzo(k)fluoranthene	20.07	252	914980m	4555.09	ng/ml	
51)	Benzo(e)pyrene	20.97	252	648258	3647.10	ng/ml	100
52)	Benzo(a)pyrene	21.16	252	689939	5123.72	ng/ml	100
53)	Perylene	21.49	252	177271	1172.77	ng/ml	97
54)	Indeno(1,2,3-cd)pyrene	24.03	276	473241	5781.24	ng/ml	93
55)	Dibenz(a,h)anthracene	24.08	278	87552m	744.23	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	433202	3192.08	ng/ml	100

(#) = qualifier out of range (m) = manual integration

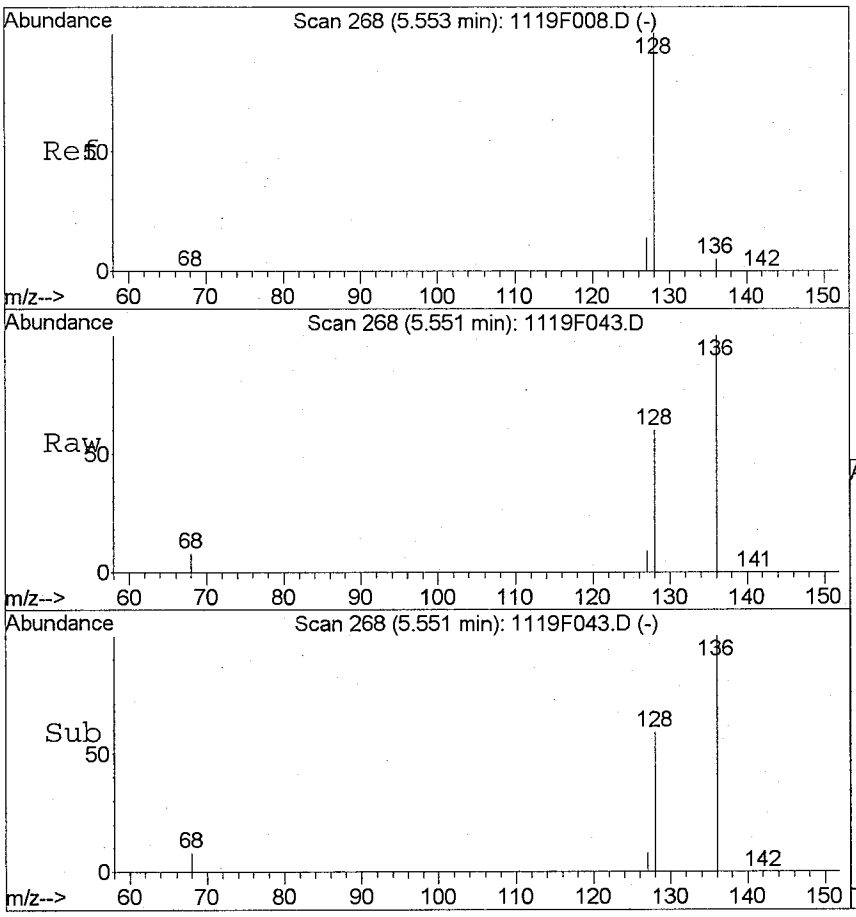
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:31 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



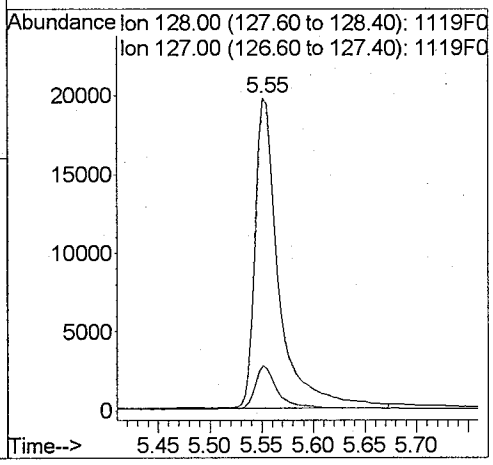
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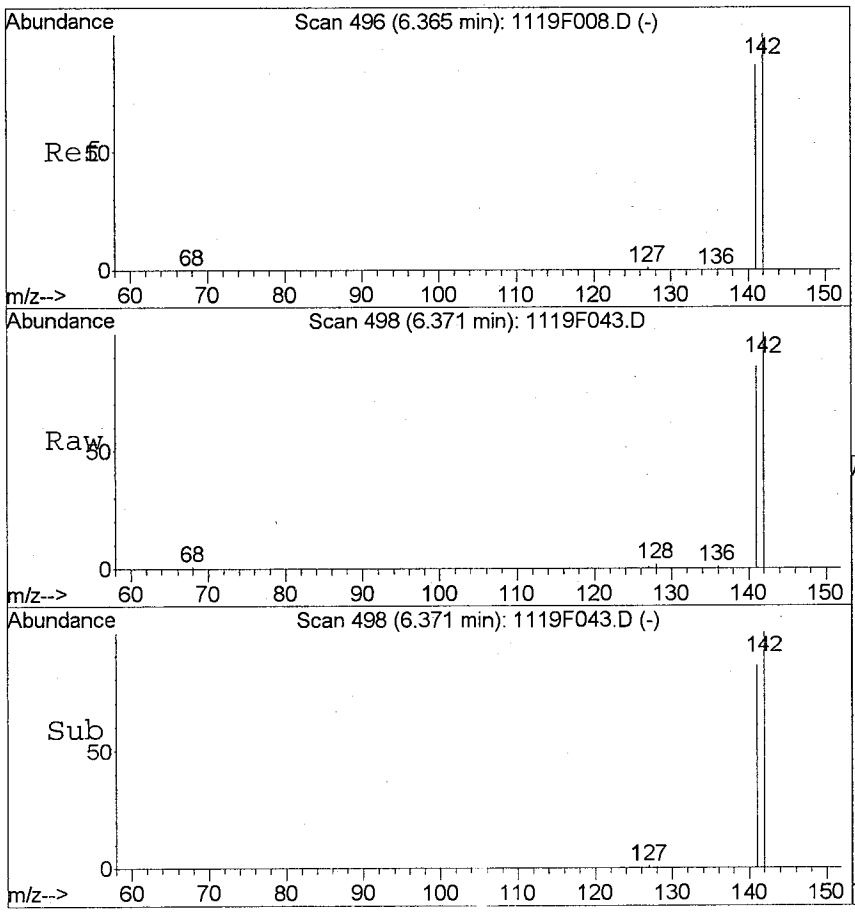


#2
Naphthalene
Concen: 108.33 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. -0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:128 Resp: 31411

Ion	Ratio	Lower	Upper
128	100		
127	13.9	0.0	43.8

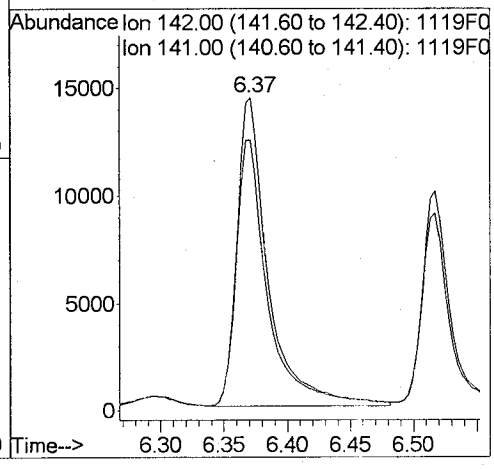


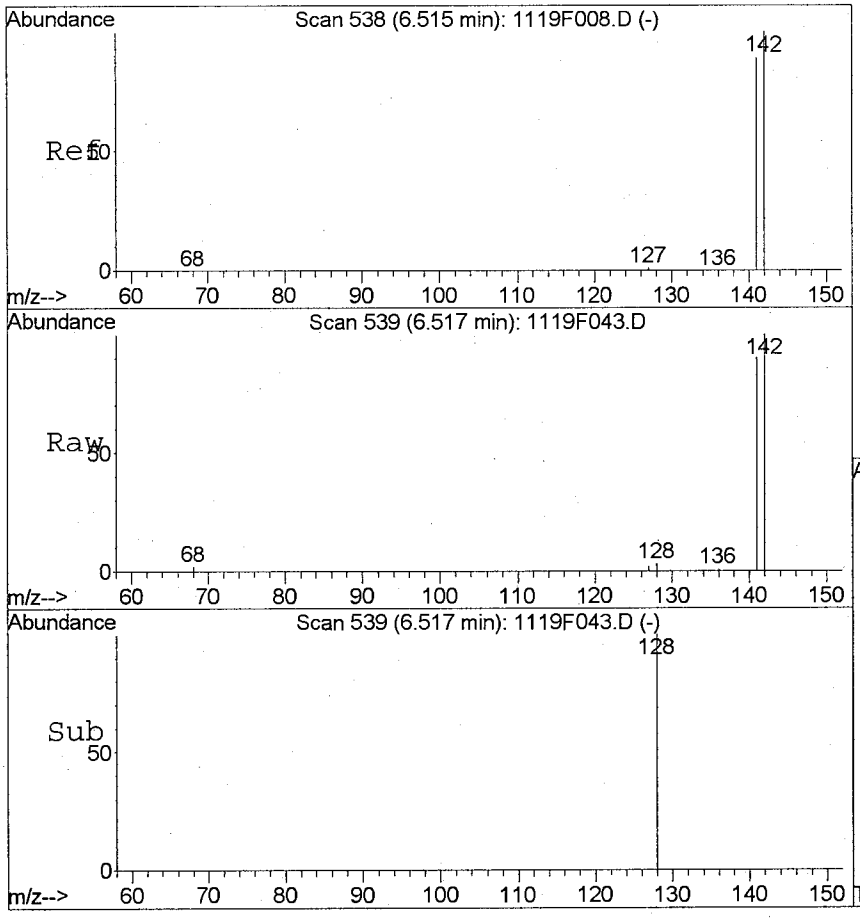


#3
2-Methylnaphthalene
Concen: 144.64 ng/ml
RT: 6.37 min Scan# 498
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:142 Resp: 24766

Ion	Ratio	Lower	Upper
142	100		
141	85.9	57.2	117.2

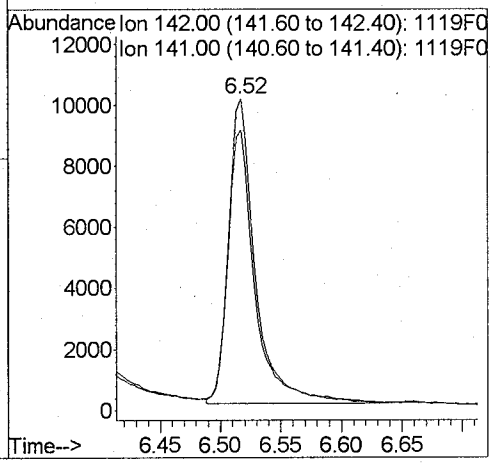


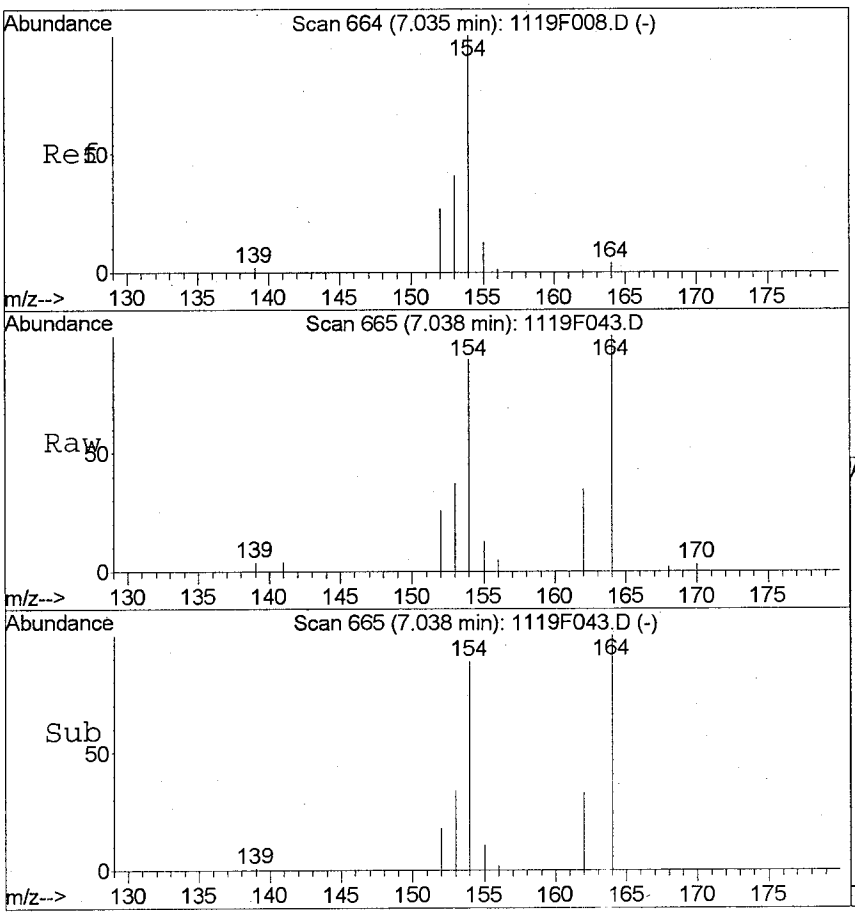


#4
1-Methylnaphthalene
Concen: 95.04 ng/ml
RT: 6.52 min Scan# 539
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:142 Resp: 15254

Ion	Ratio	Lower	Upper
142	100		
141	89.3	58.5	118.5

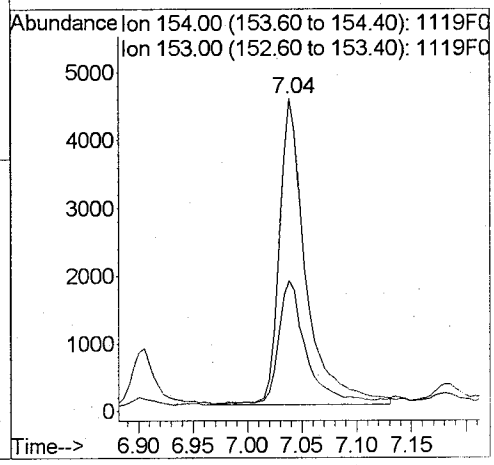


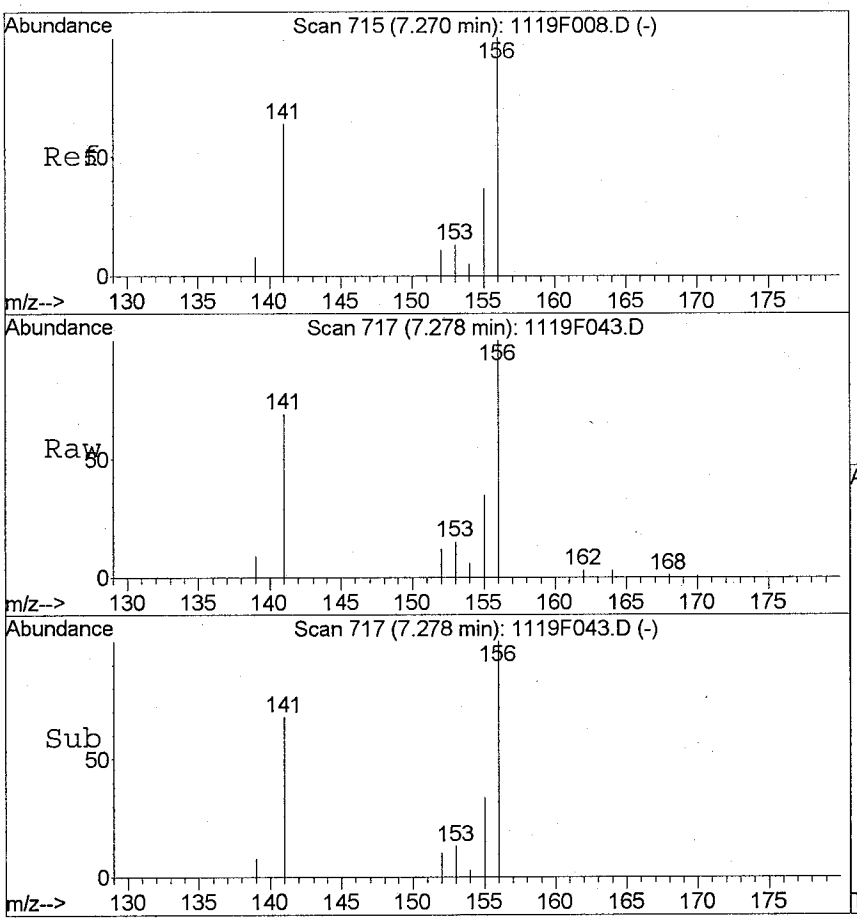


#6
Biphenyl
Concen: 36.87 ng/ml
RT: 7.04 min Scan# 665
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:154 Resp: 7654

Ion	Ratio	Lower	Upper
154	100		
153	39.8	11.3	71.3

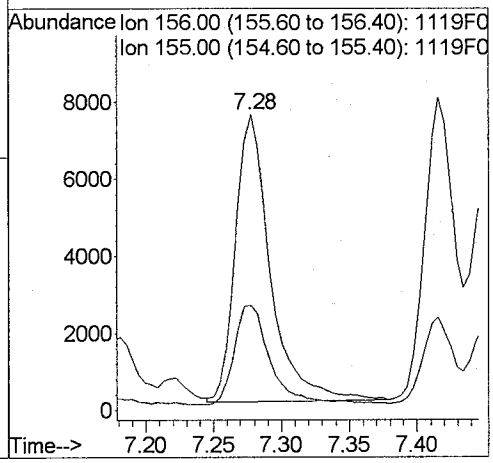


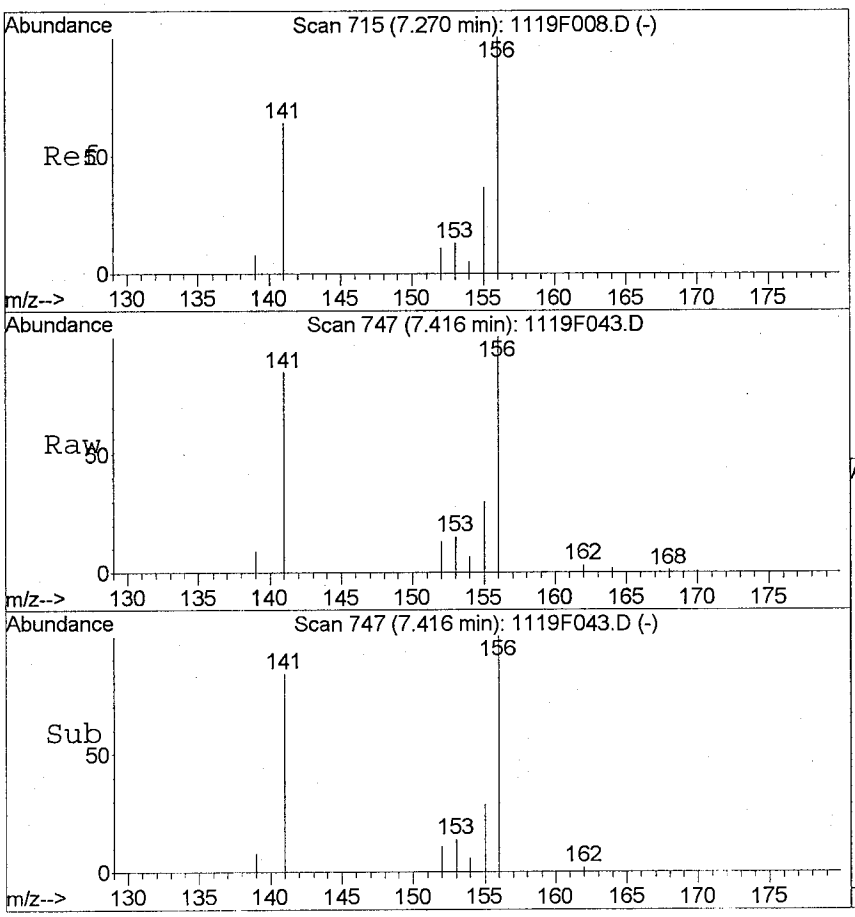


#7
2,6-Dimethylnaphthalene
Concen: 91.05 ng/ml
RT: 7.28 min Scan# 717
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:156 Resp: 13297

Ion	Ratio	Lower	Upper
156	100		
155	34.8	6.9	66.9

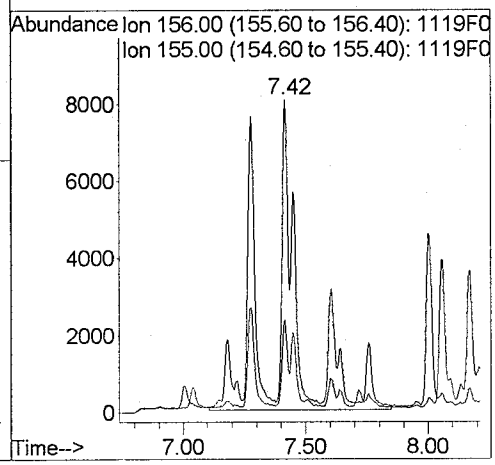


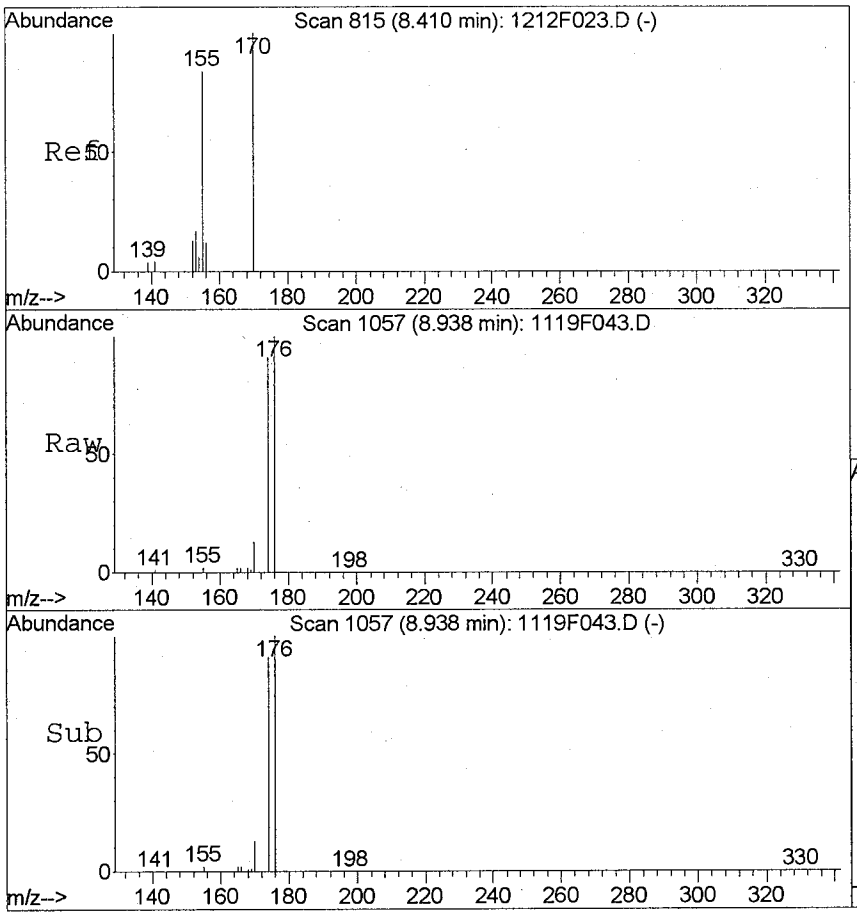


#8
C2-Naphthalenes
Concen: 187.44 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:156 Resp: 54350

Ion	Ratio	Lower	Upper
156	100		
155	29.7	8.3	68.3

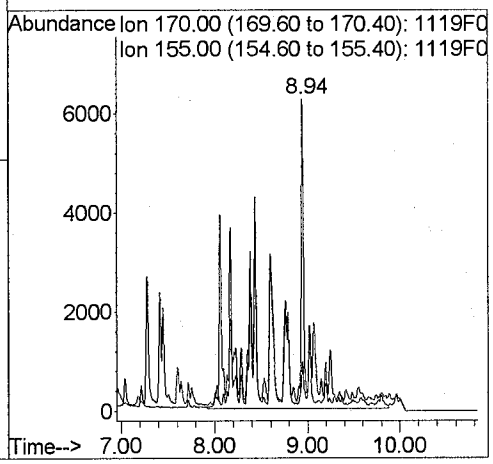


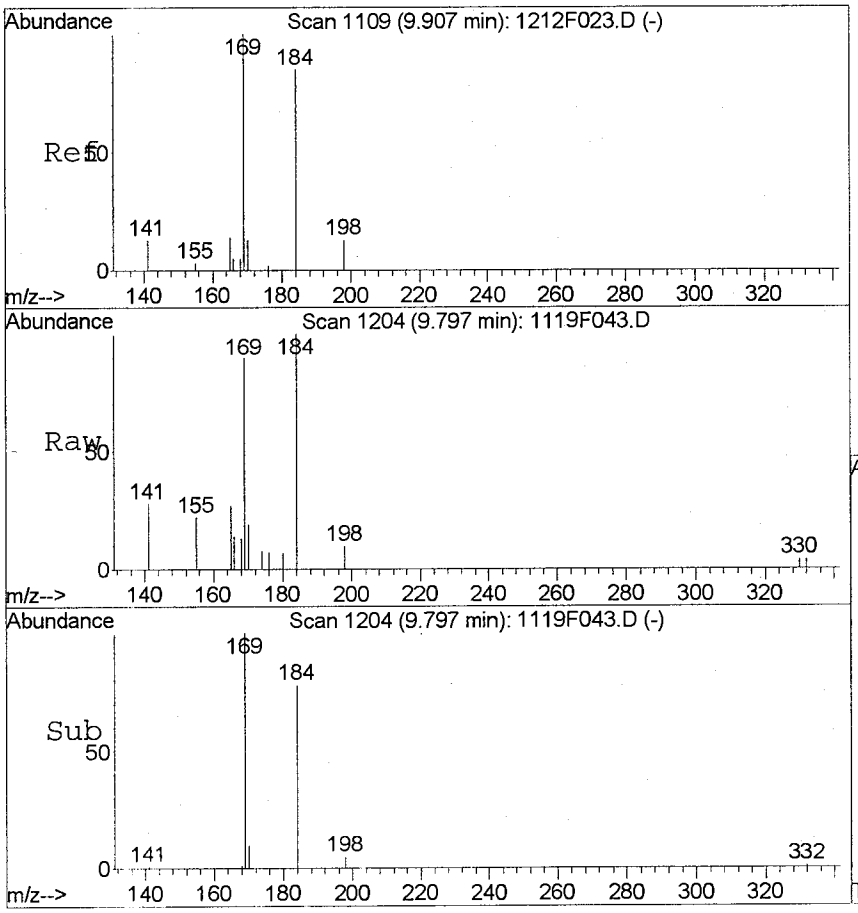


#9
C3-Naphthalenes
Concen: 196.76 ng/ml m
RT: 8.94 min Scan# 1057
Delta R.T. 0.41 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:170 Resp: 57050

Ion	Ratio	Lower	Upper
170	100		
155	15.7	56.9	116.9#

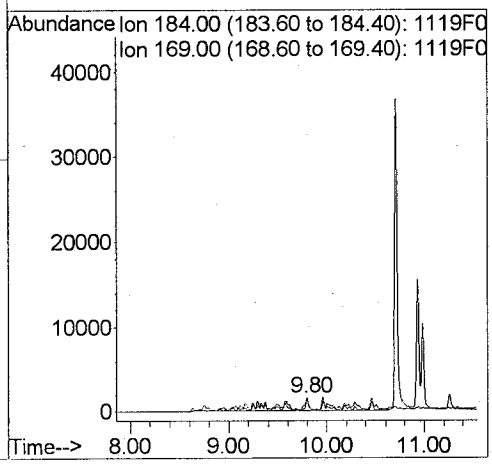


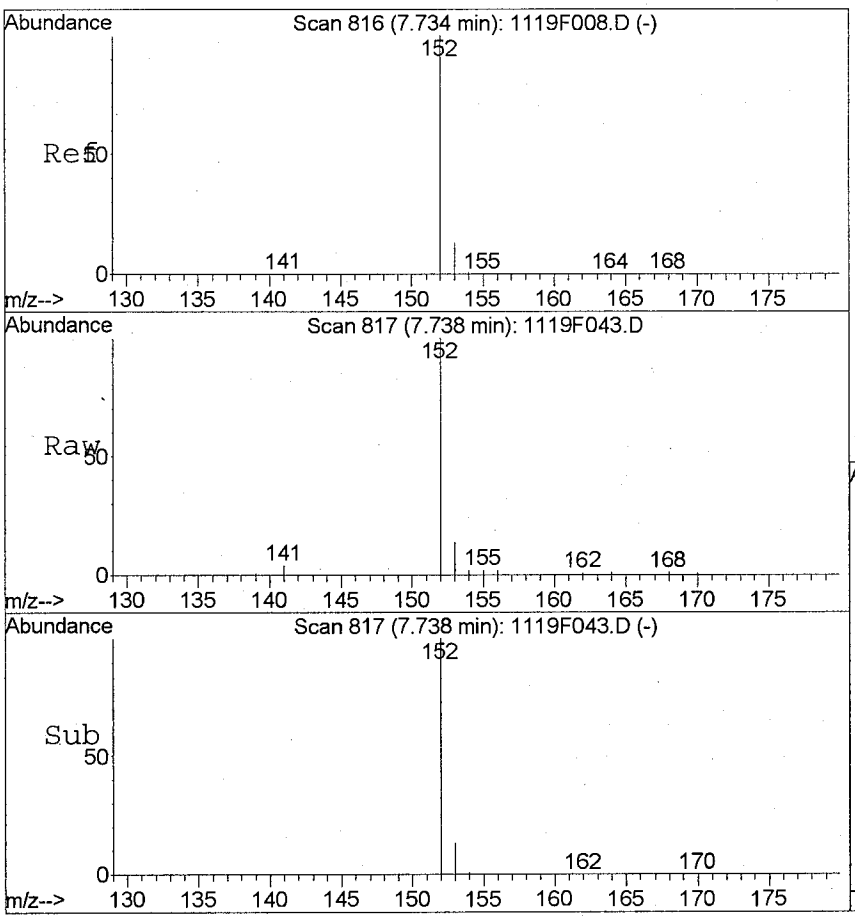


#10
C4-Naphthalenes
Concen: 105.82 ng/ml m
RT: 9.80 min Scan# 1204
Delta R.T. -0.26 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:184 Resp: 30684

Ion	Ratio	Lower	Upper
184	100		
169	90.5	89.7	149.7

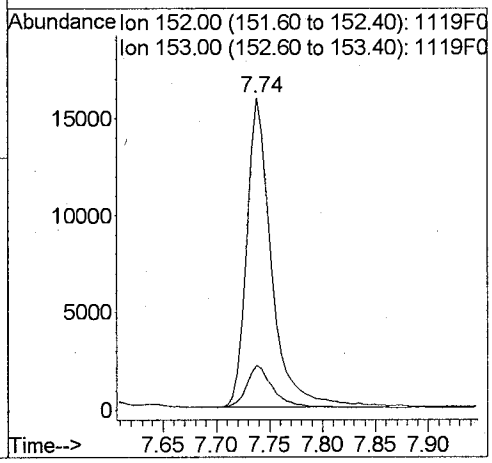


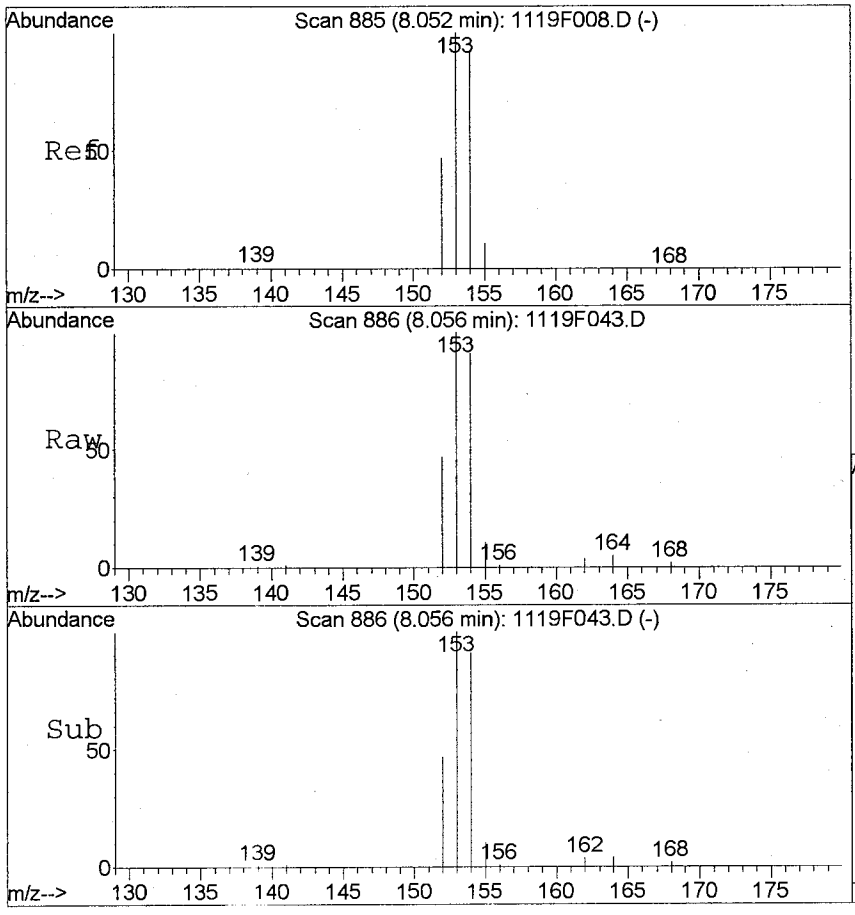


#12
Acenaphthylene
Concen: 99.99 ng/ml
RT: 7.74 min Scan# 817
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:152 Resp: 25912

Ion	Ratio	Lower	Upper
152	100		
153	13.5	0.0	43.1

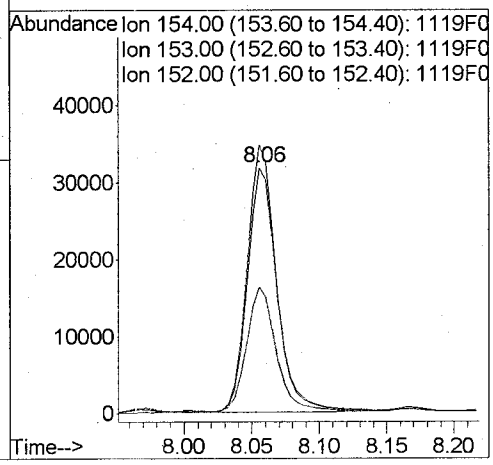


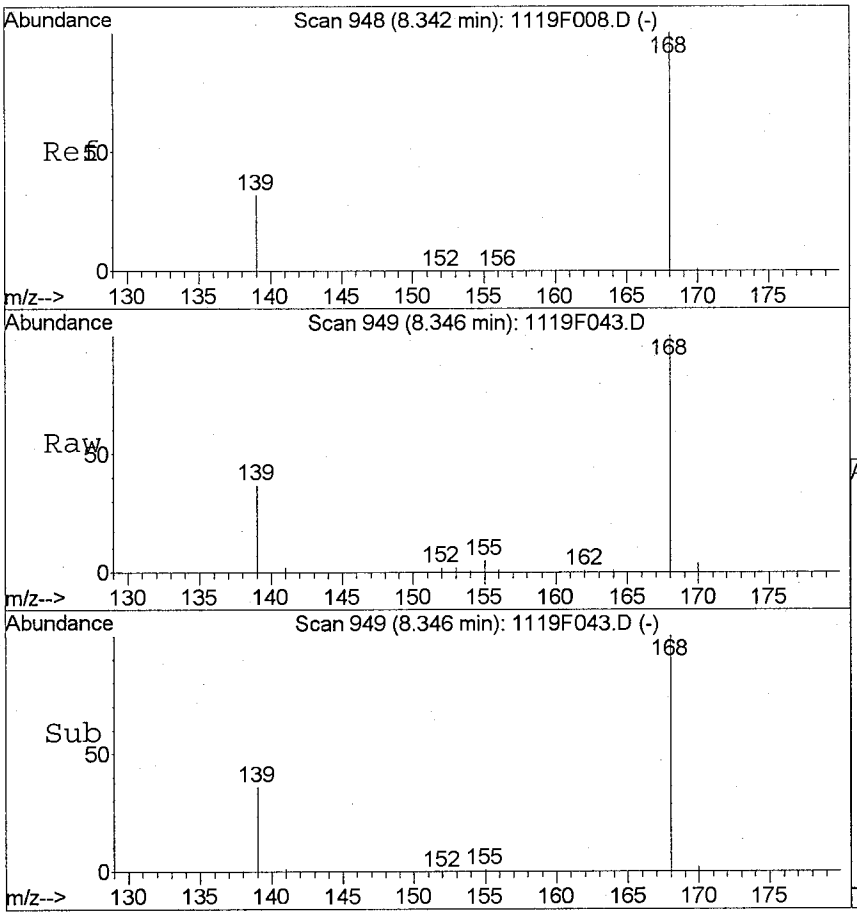


#13
Acenaphthene
Concen: 303.73 ng/ml
RT: 8.06 min Scan# 886
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:154 Resp: 48509

Ion	Ratio	Lower	Upper
154	100		
153	109.5	78.4	138.4
152	51.0	20.4	80.4

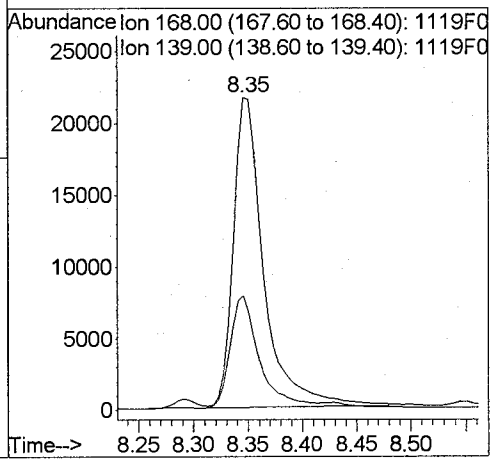


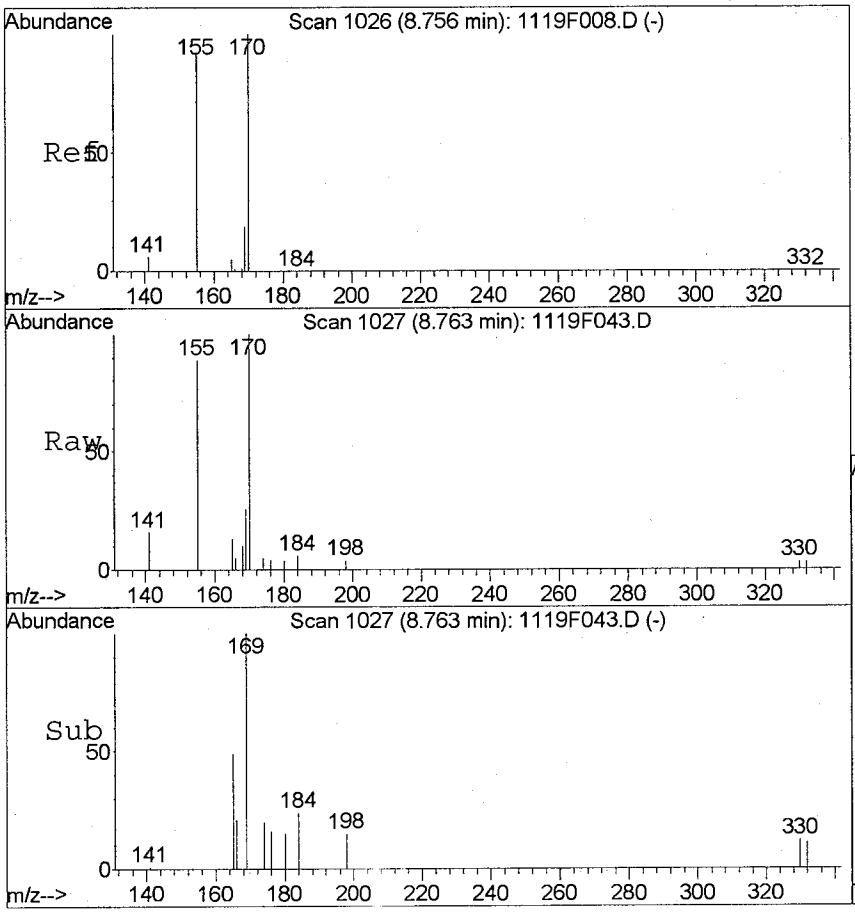


#14
Dibenzofuran
Concen: 195.79 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:168 Resp: 41918

Ion	Ratio	Lower	Upper
168	100		
139	36.3	2.4	62.4

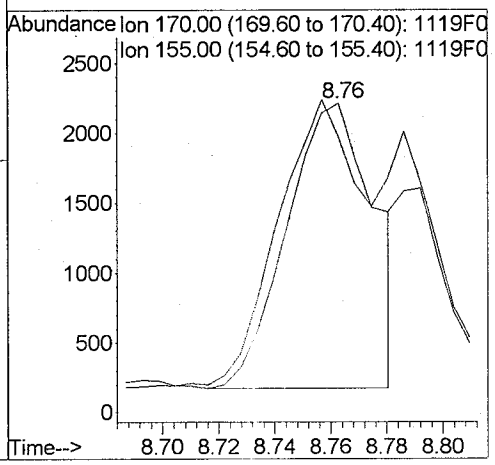


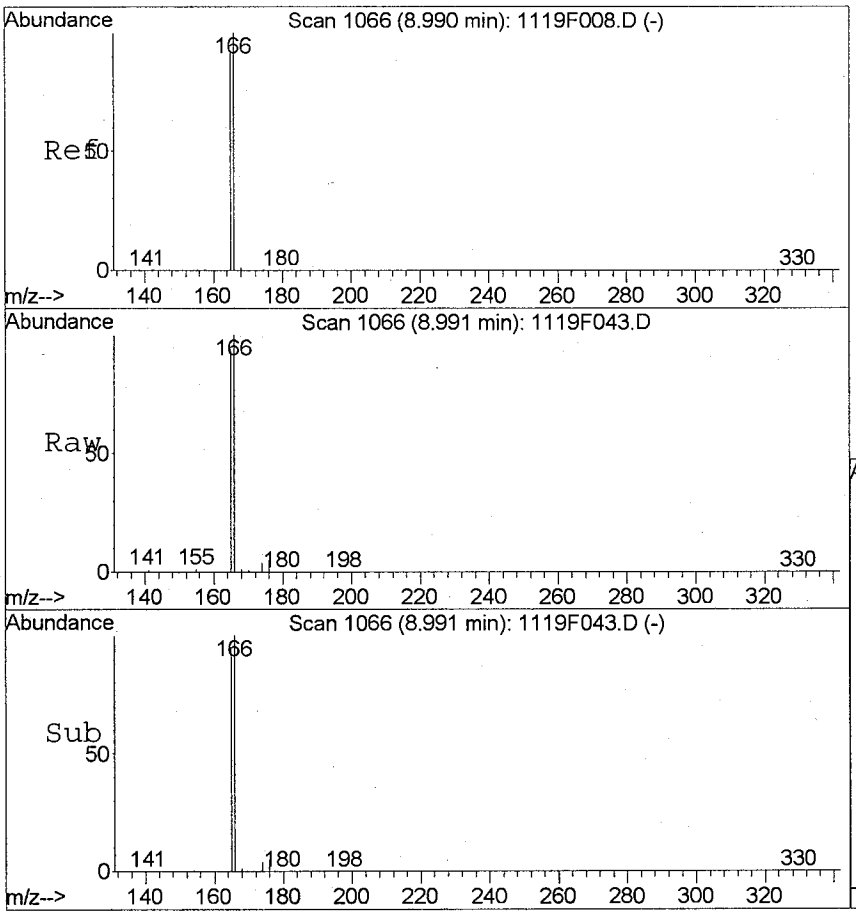


#15
2,3,5-Trimethylnaphthalene
Concen: 30.55 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:170 Resp: 4371

Ion	Ratio	Lower	Upper
170	100		
155	86.7	61.5	121.5

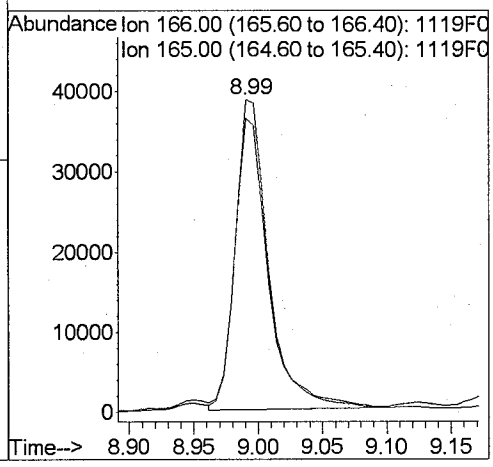


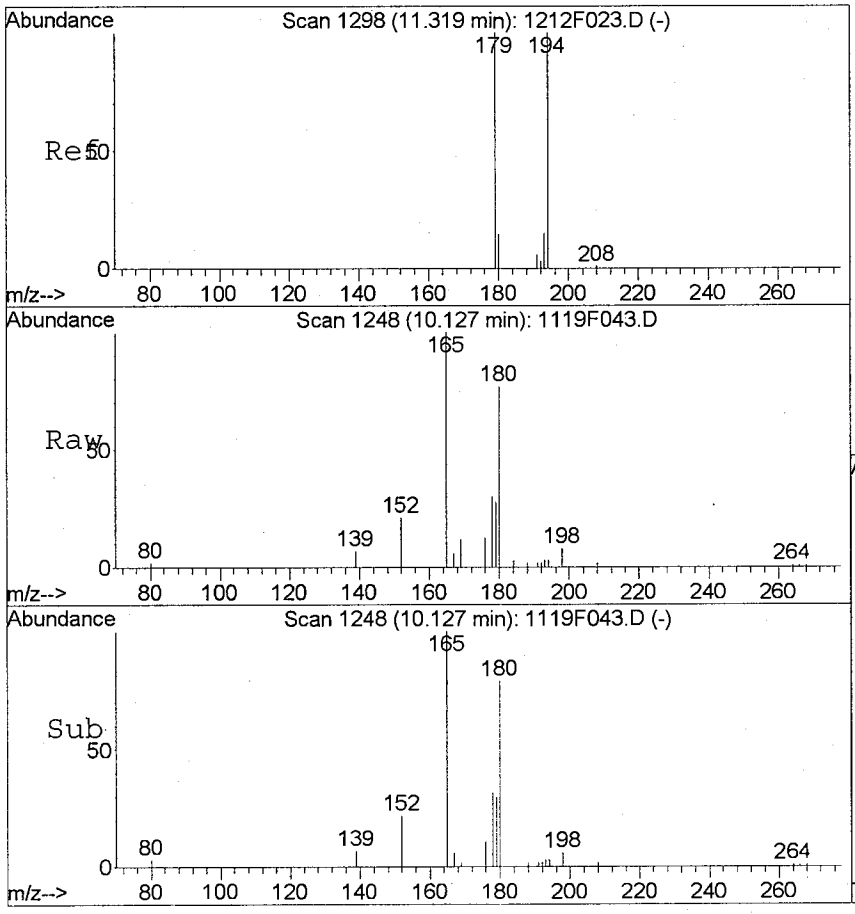


#17
Fluorene
Concen: 404.17 ng/ml
RT: 8.99 min Scan# 1066
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:166 Resp: 69148

Ion	Ratio	Lower	Upper
166	100		
165	93.7	62.9	122.9

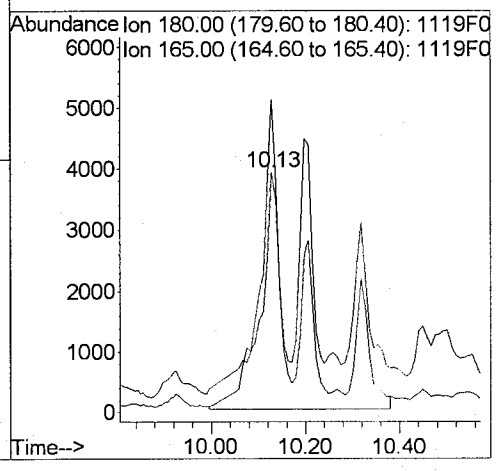


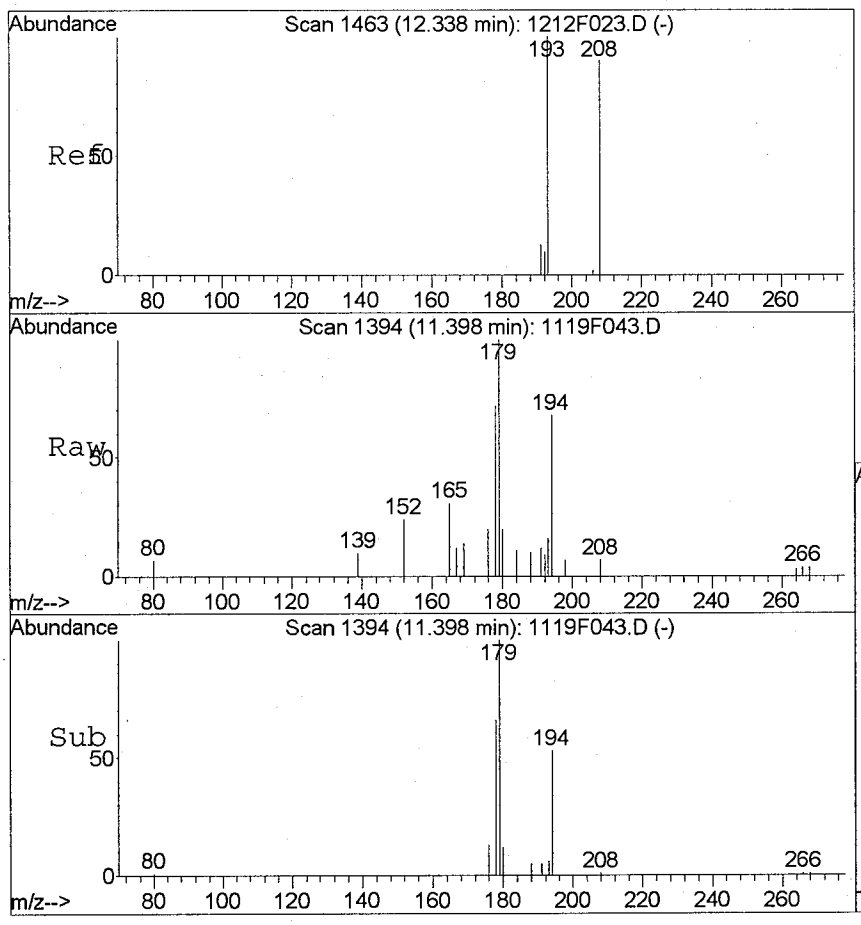


#18
C1-Fluorenes
Concen: 142.98 ng/ml m
RT: 10.13 min Scan# 1248
Delta R.T. -0.17 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:180 Resp: 24462

Ion	Ratio	Lower	Upper
180	100		
165	130.4	148.7	208.7#

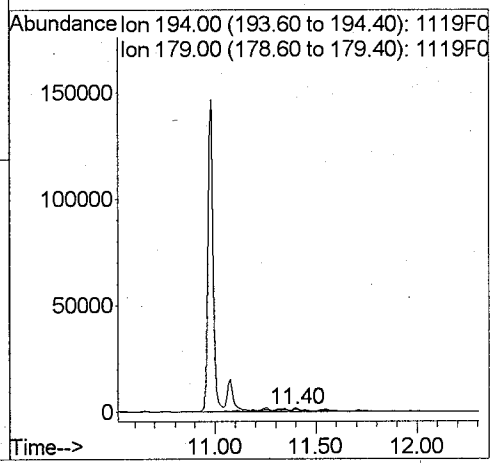


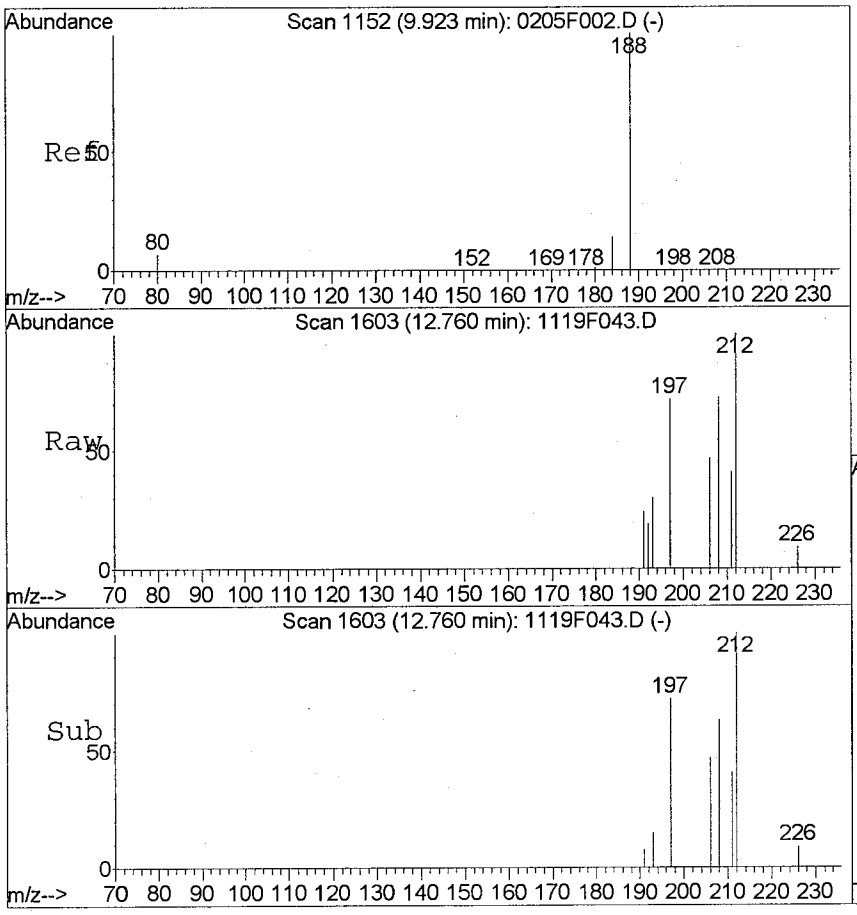


#19
C2-Fluorenes
Concen: 112.68 ng/ml m
RT: 11.40 min Scan# 1394
Delta R.T. -0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:194 Resp: 19278

Ion	Ratio	Lower	Upper
194	100		
179	147.9	107.0	167.0

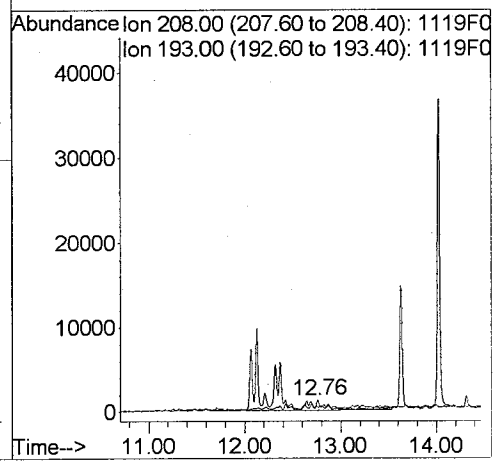


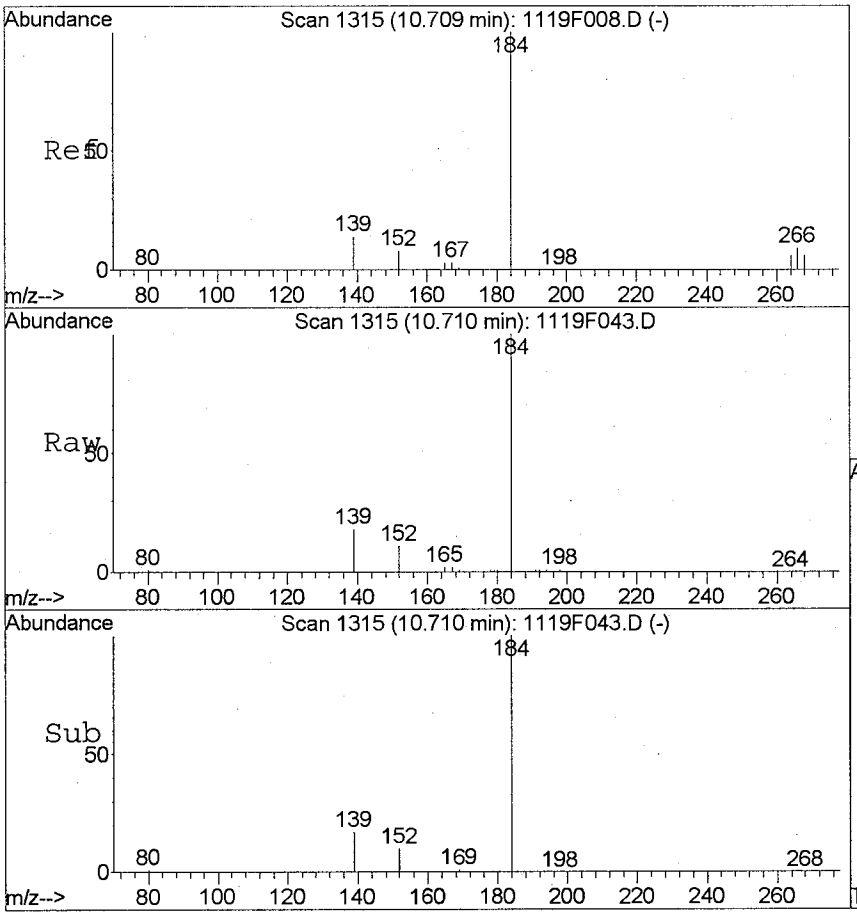


#20
C3-Fluorenes
Concen: 168.52 ng/ml m
RT: 12.76 min Scan# 1603
Delta R.T. 0.24 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:208 Resp: 28832

Ion	Ratio	Lower	Upper
208	100		
193	41.4	92.0	152.0#

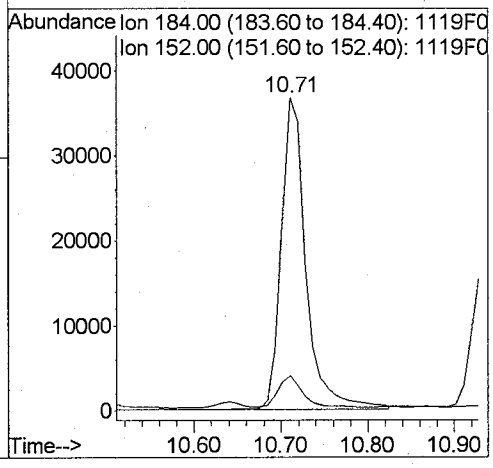


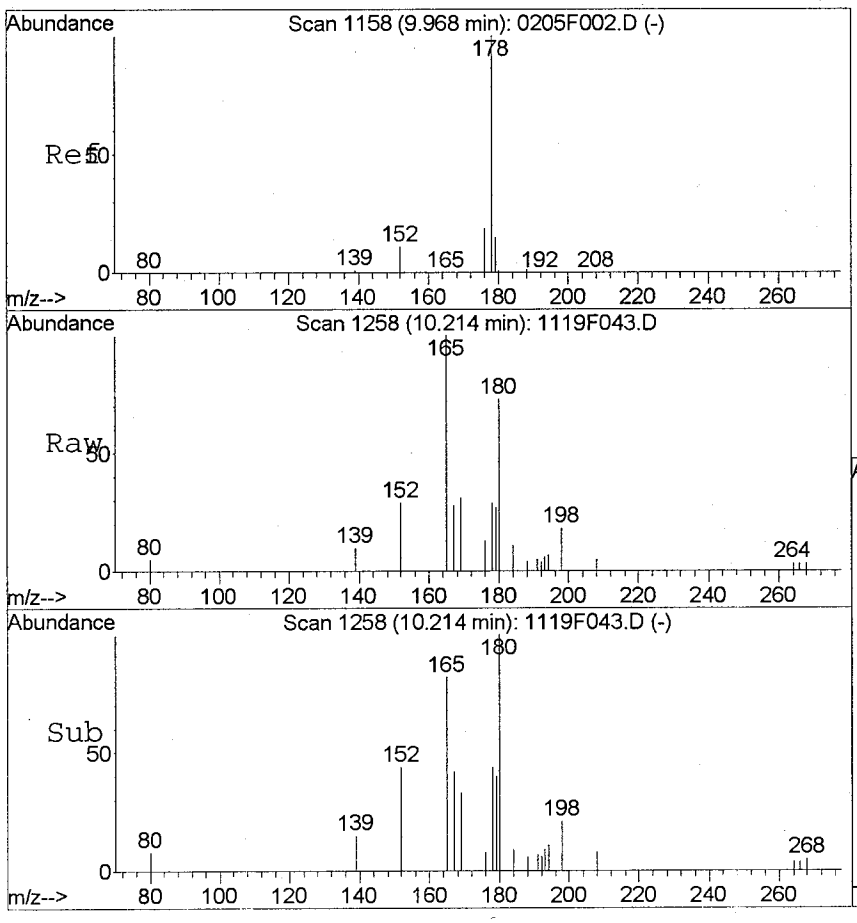


#24
Dibenzothiophene
Concen: 322.93 ng/ml
RT: 10.71 min Scan# 1315
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:184 Resp: 72283

Ion	Ratio	Lower	Upper
184	100		
152	10.1	0.0	38.4

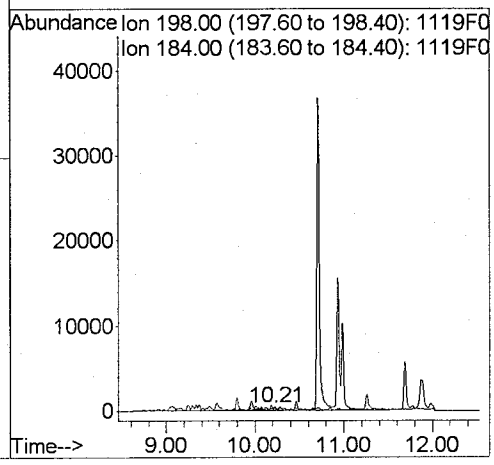


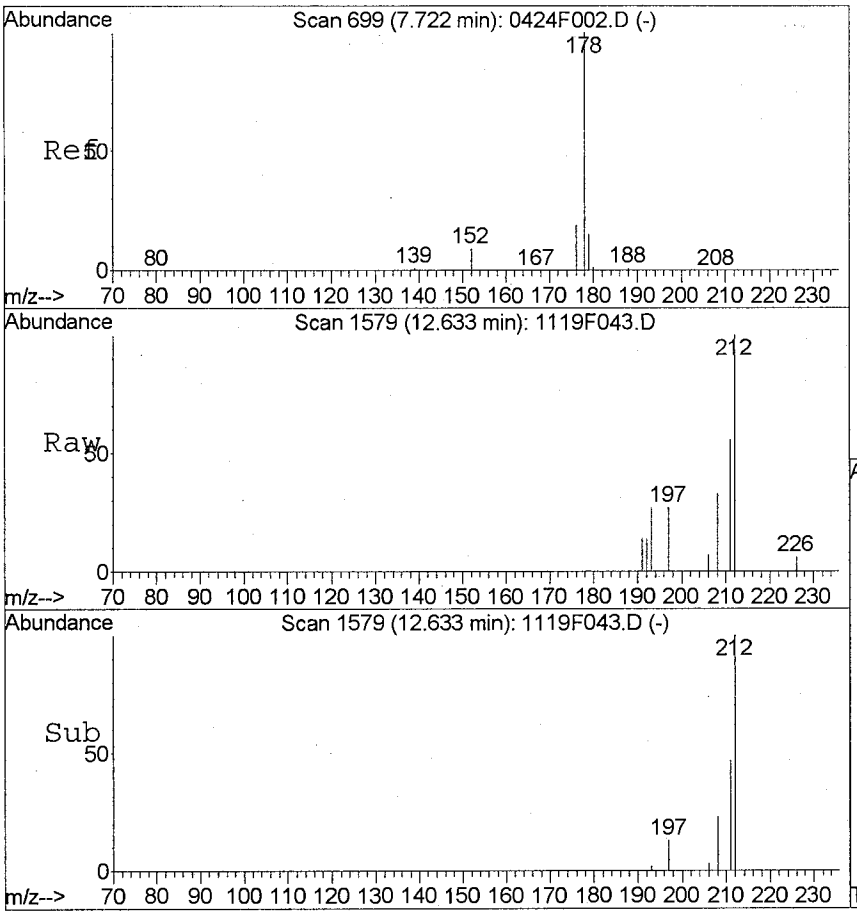


#25
C1-Dibenzothiophenes
Concen: 67.21 ng/ml m
RT: 10.21 min Scan# 1258
Delta R.T. 0.00 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:198 Resp: 15044

Ion	Ratio	Lower	Upper
198	100		
184	64.3	74.1	134.1#

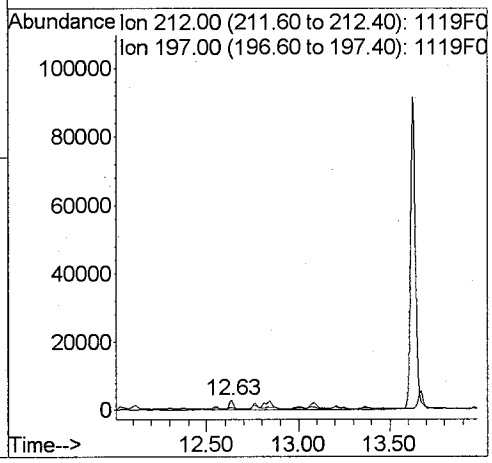


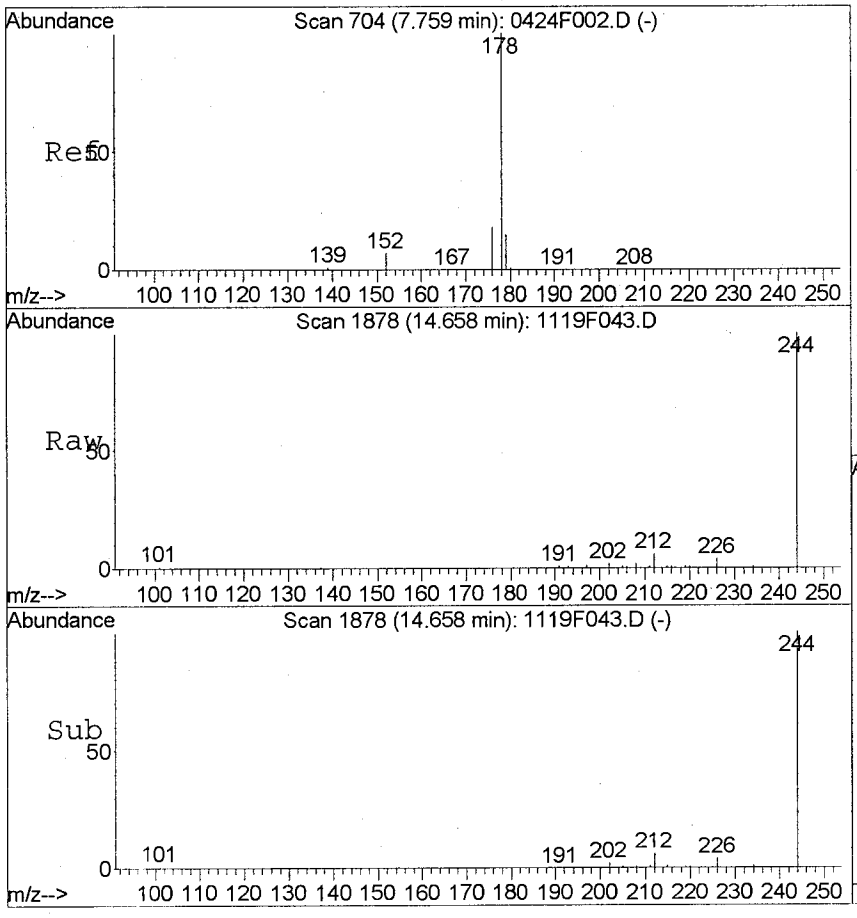


#26
C2-Dibenzothiophenes
Concen: 167.10 ng/ml m
RT: 12.63 min Scan# 1579
Delta R.T. -0.30 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:212 Resp: 37403

Ion	Ratio	Lower	Upper
212	100		
197	26.8	0.0	53.8

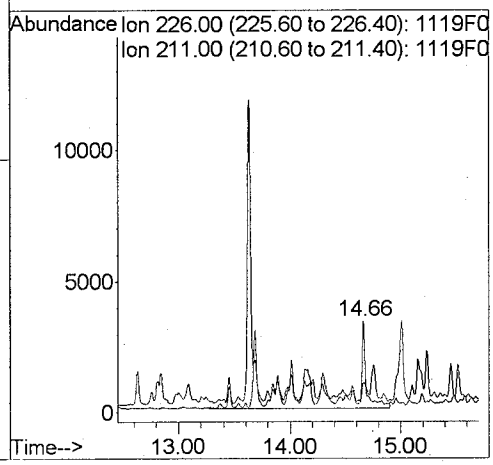


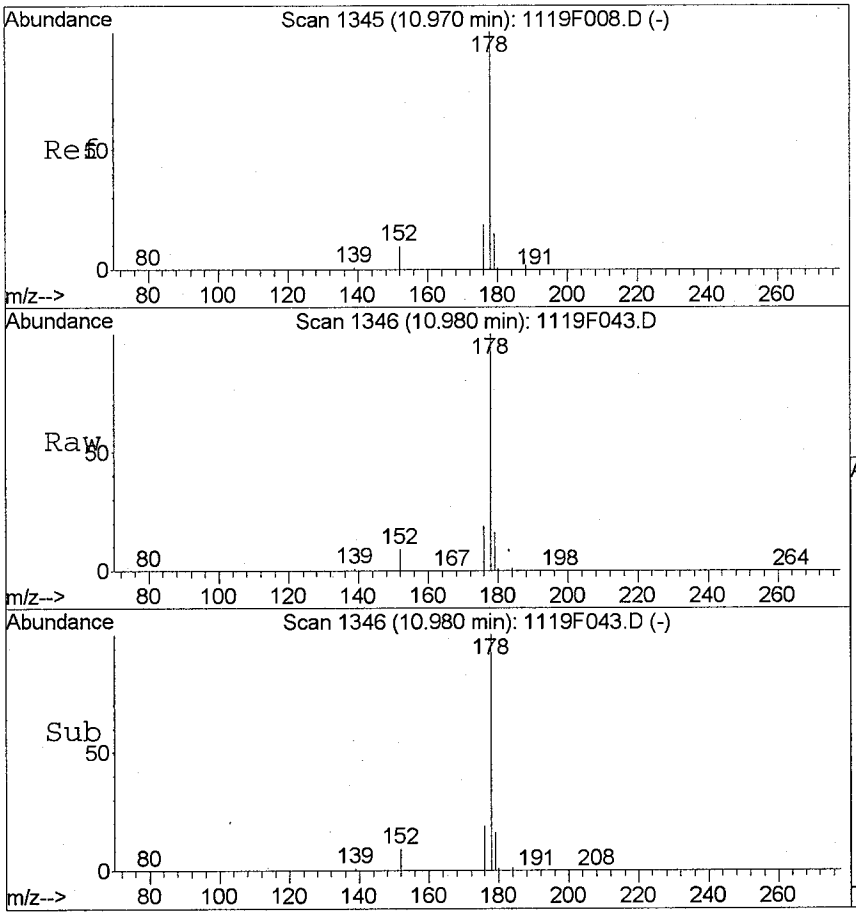


#27
C3-Dibenzothiophenes
Concen: 217.48 ng/ml m
RT: 14.66 min Scan# 1878
Delta R.T. 0.88 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:226 Resp: 48679

Ion	Ratio	Lower	Upper
226	100		
211	32.1	27.1	87.1

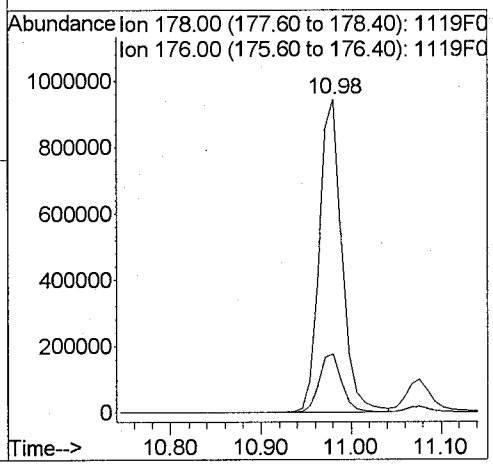


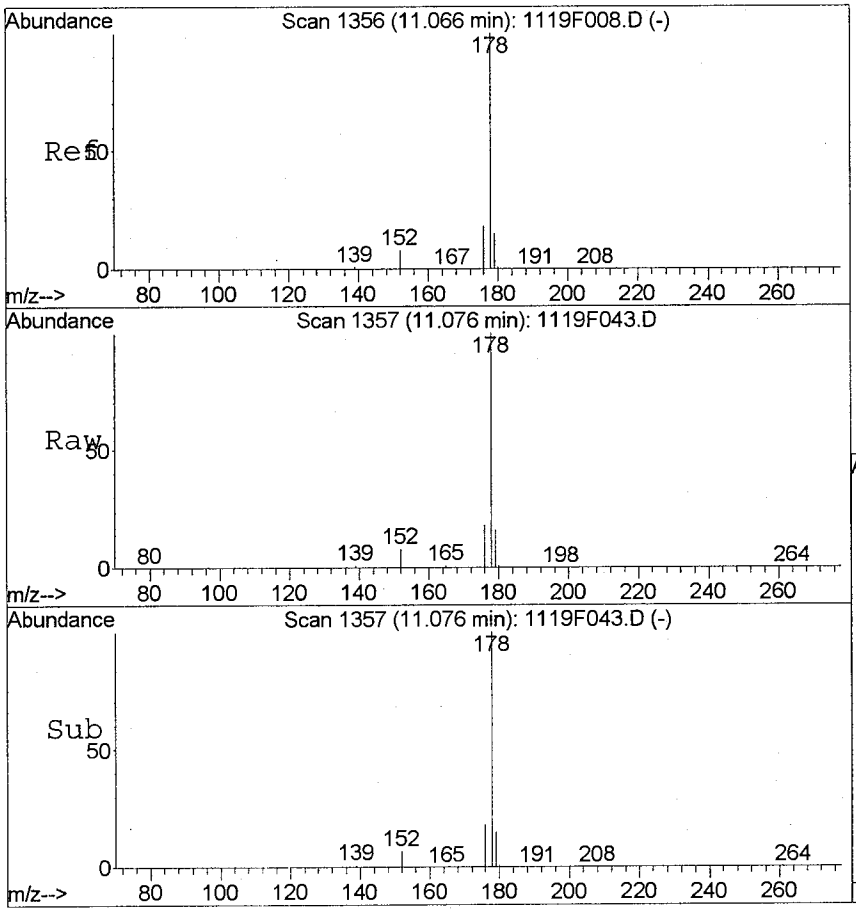


#28
Phenanthrene
Concen: 6978.05 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:178 Resp: 1640698

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	48.6

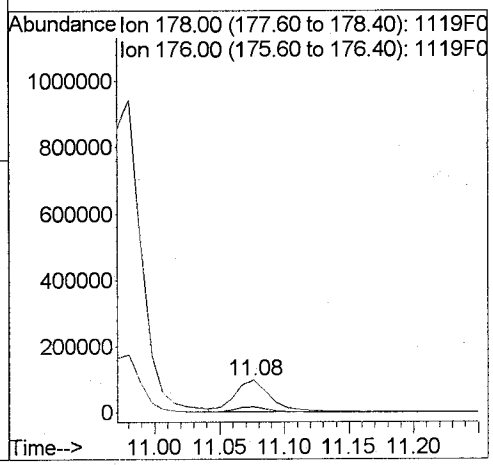


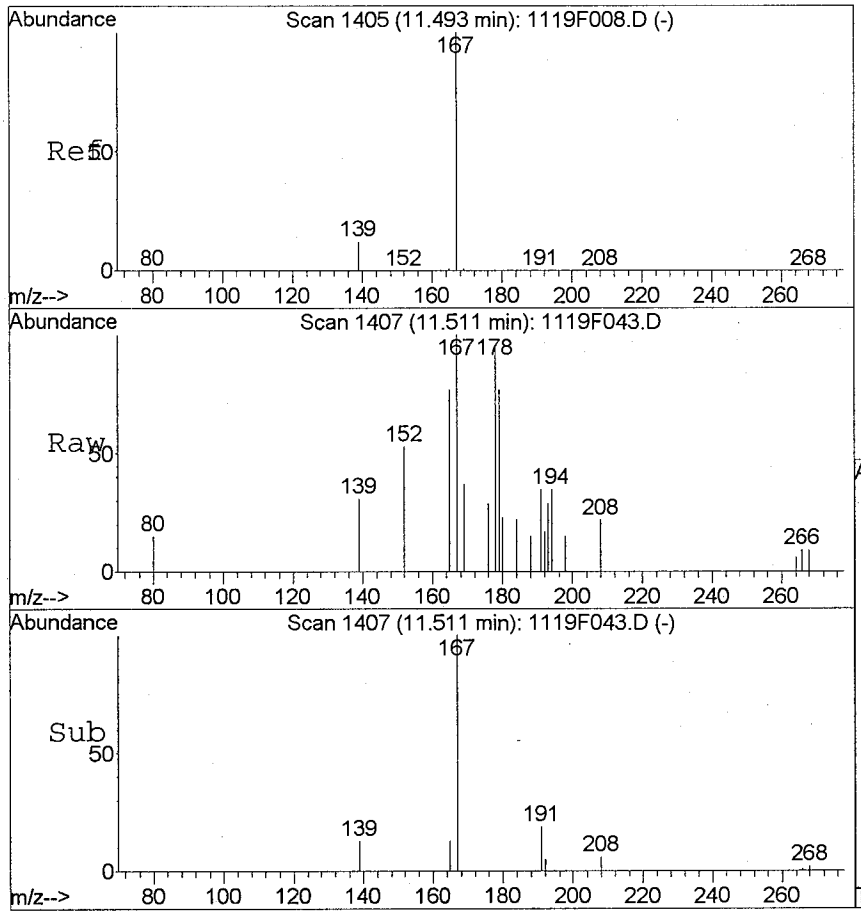


#29
Anthracene
Concen: 932.05 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:178 Resp: 187221

Ion	Ratio	Lower	Upper
178	100		
176	17.8	0.0	48.2

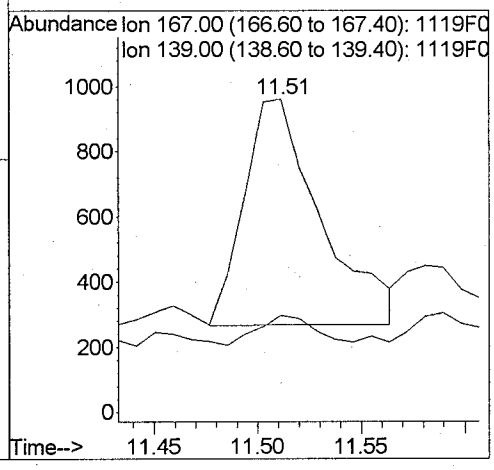


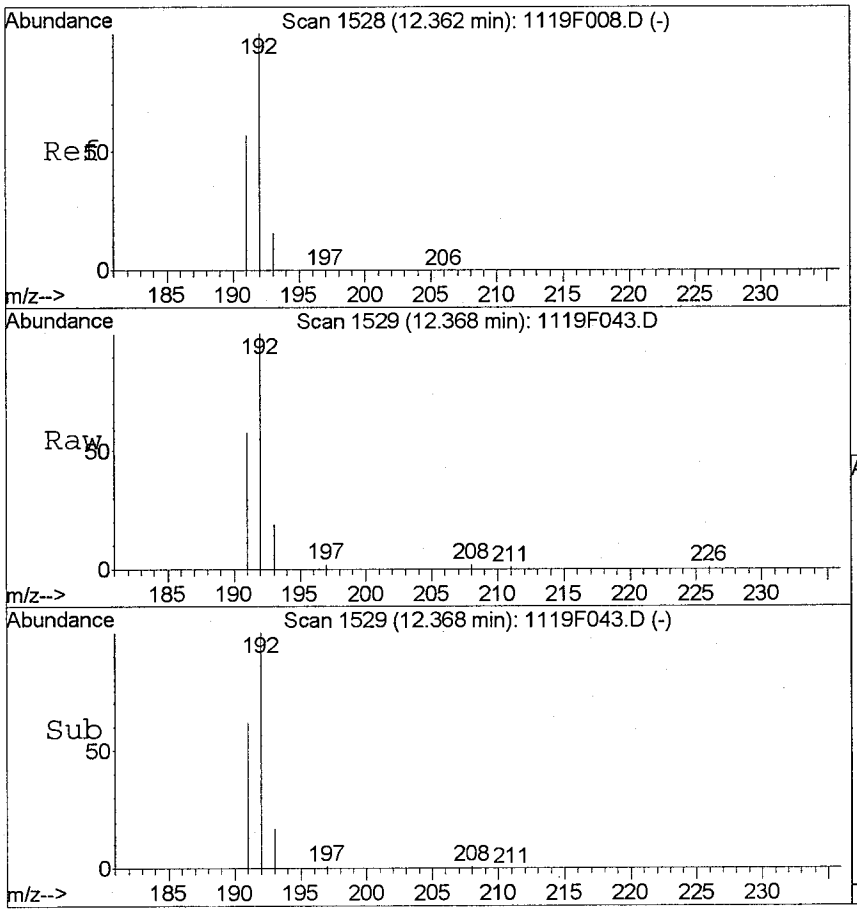


#30
Carbazole
Concen: 11.22 ng/ml
RT: 11.51 min Scan# 1407
Delta R.T. 0.02 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:167 Resp: 1782

Ion	Ratio	Lower	Upper
167	100		
139	11.8	0.0	42.5

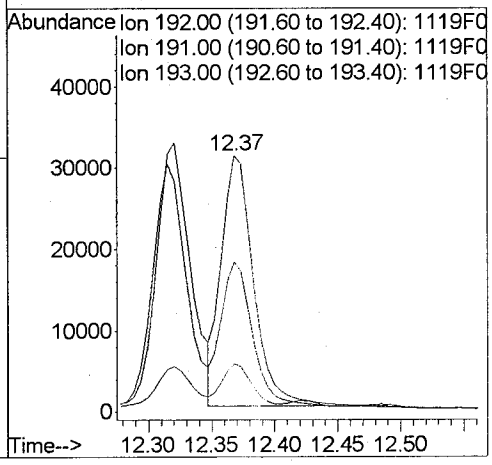


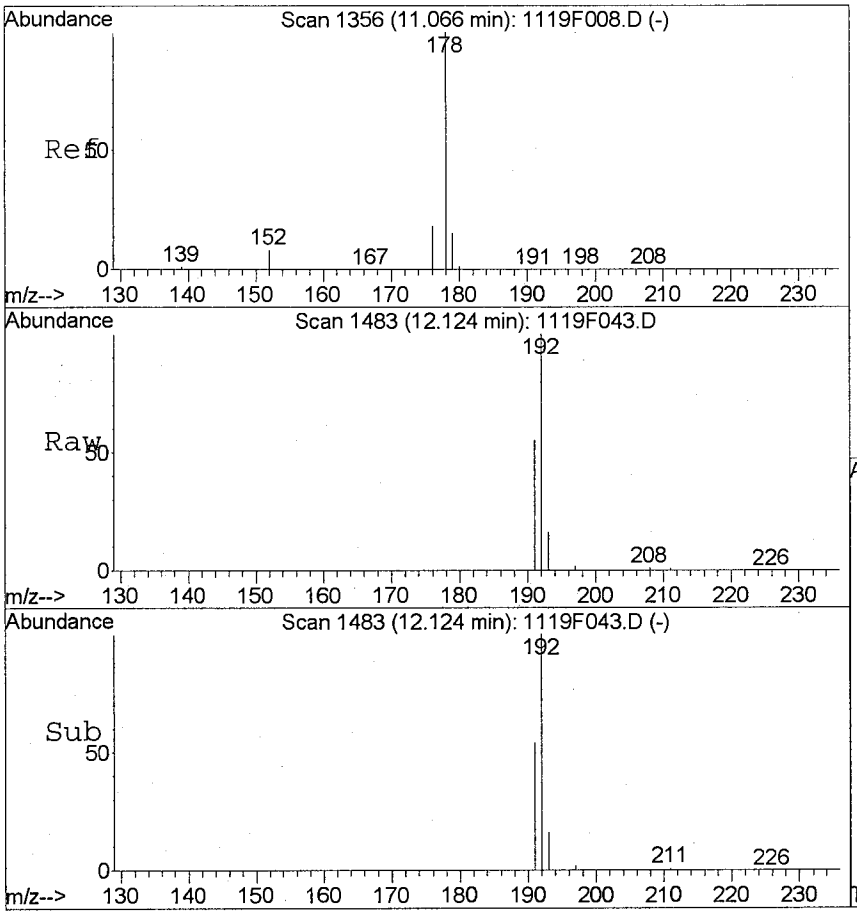


#31
1-Methylphenanthrene
Concen: 347.51 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:192 Resp: 55477

Ion	Ratio	Lower	Upper
192	100		
191	57.9	27.5	87.5
193	16.3	0.0	45.6

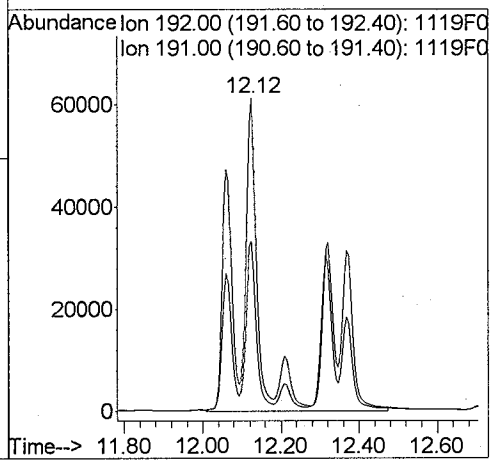


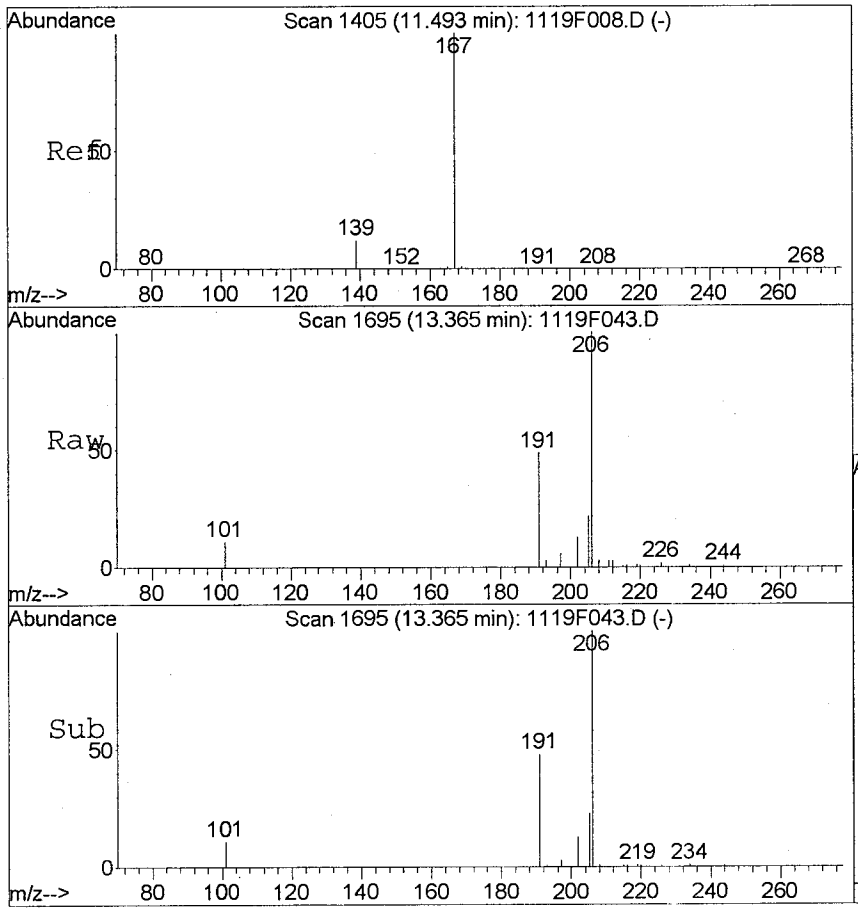


#32
C1-Phenanthrenes/Anthracenes
Concen: 1509.52 ng/ml m
RT: 12.12 min Scan# 1483
Delta R.T. -0.10 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:192 Resp: 354922

Ion	Ratio	Lower	Upper
192	100		
191	54.5	25.3	85.3

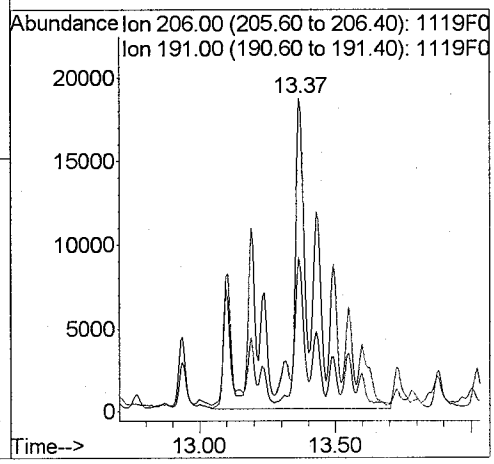


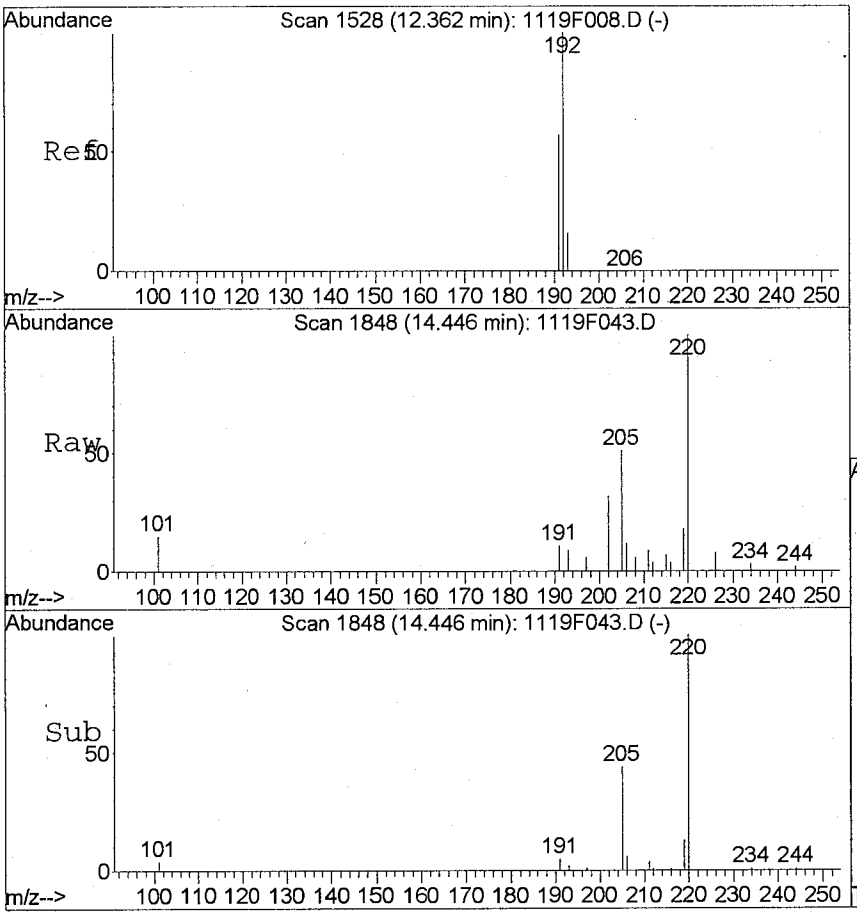


#33
C2-Phenanthrenes/Anthracenes
Concen: 681.44 ng/ml m
RT: 13.37 min Scan# 1695
Delta R.T. -0.10 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:206 Resp: 160221

Ion	Ratio	Lower	Upper
206	100		
191	49.2	15.6	75.6

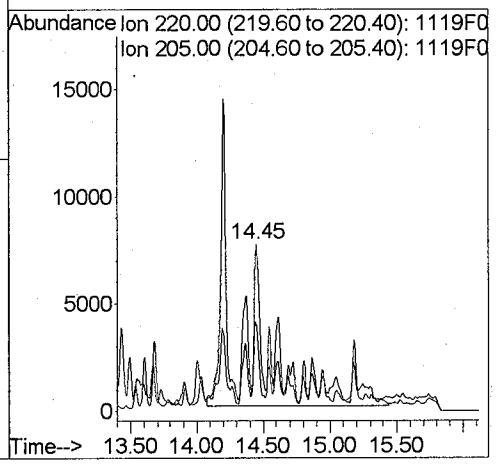


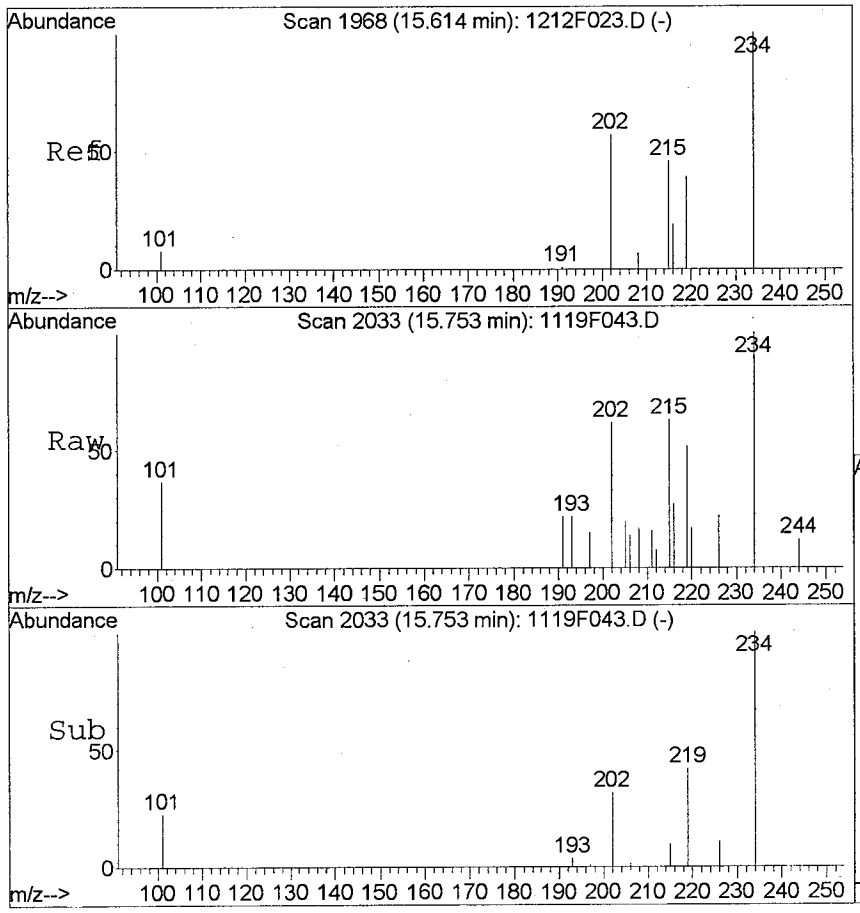


#34
C3-Phenanthrenes/Anthracenes
Concen: 445.54 ng/ml m
RT: 14.45 min Scan# 1848
Delta R.T. -0.10 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:220 Resp: 104756

Ion	Ratio	Lower	Upper
220	100		
205	51.5	20.0	80.0

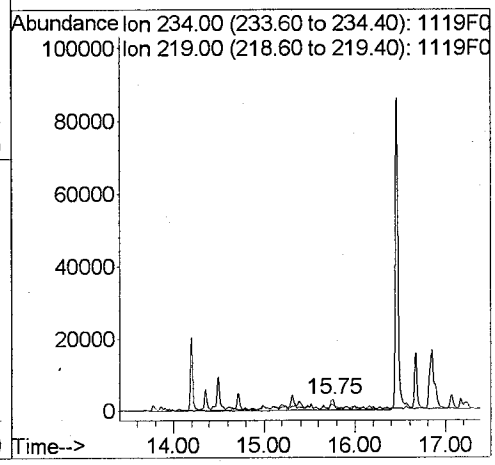


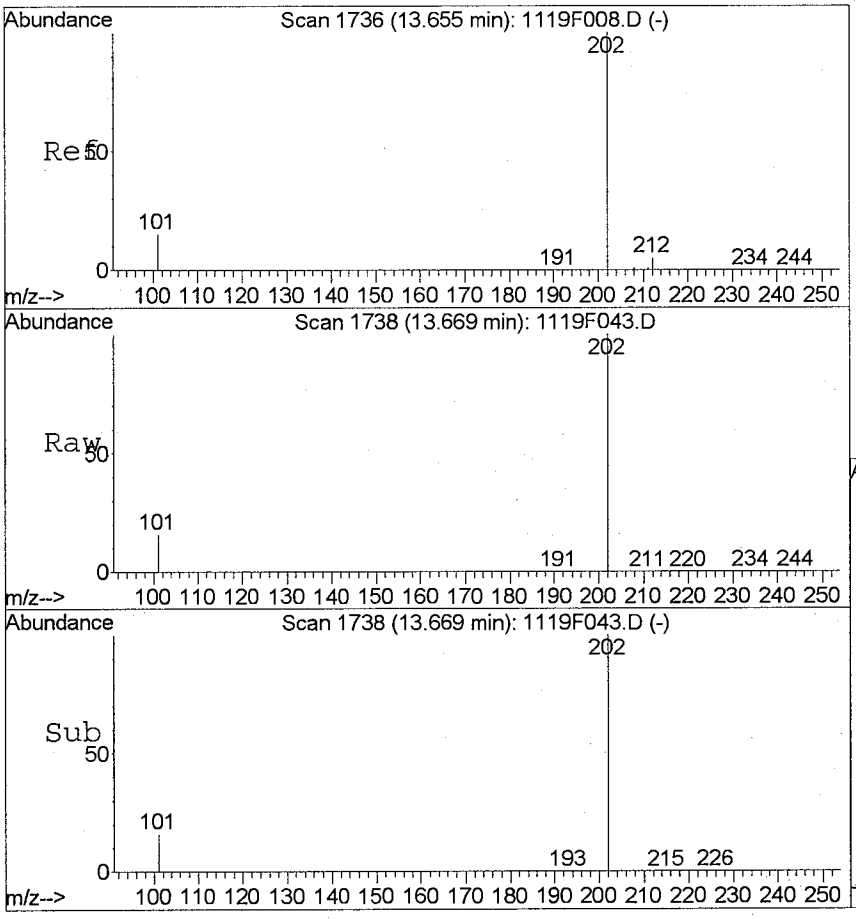


#35
C4-Phenanthrenes/Anthracenes
Concen: 297.13 ng/ml m
RT: 15.75 min Scan# 2033
Delta R.T. -0.08 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:234 Resp: 69863

Ion	Ratio	Lower	Upper
234	100		
219	52.1	17.7	77.7

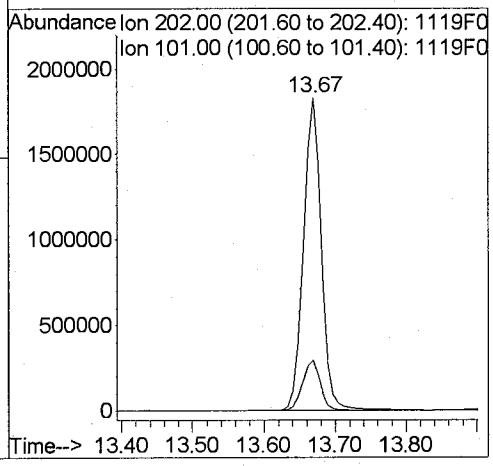


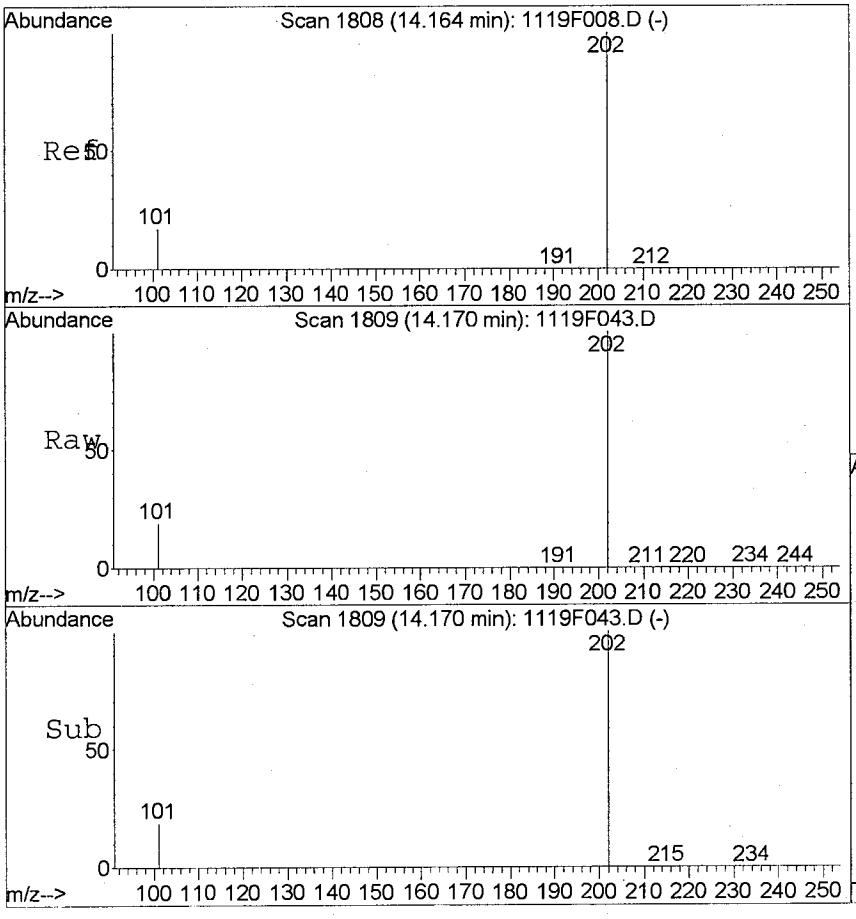


#36
Fluoranthene
Concen: 13623.40 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:202 Resp: 3188492

Ion	Ratio	Lower	Upper
202	100		
101	16.0	0.0	45.5

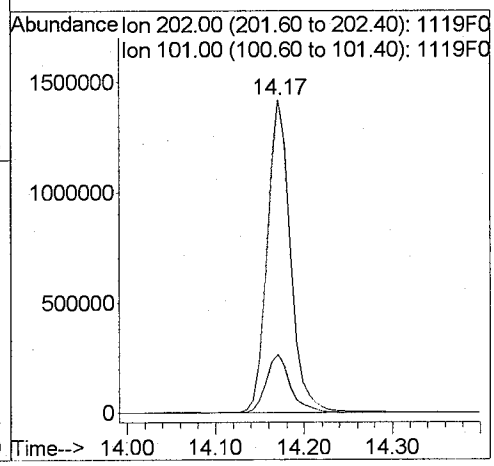


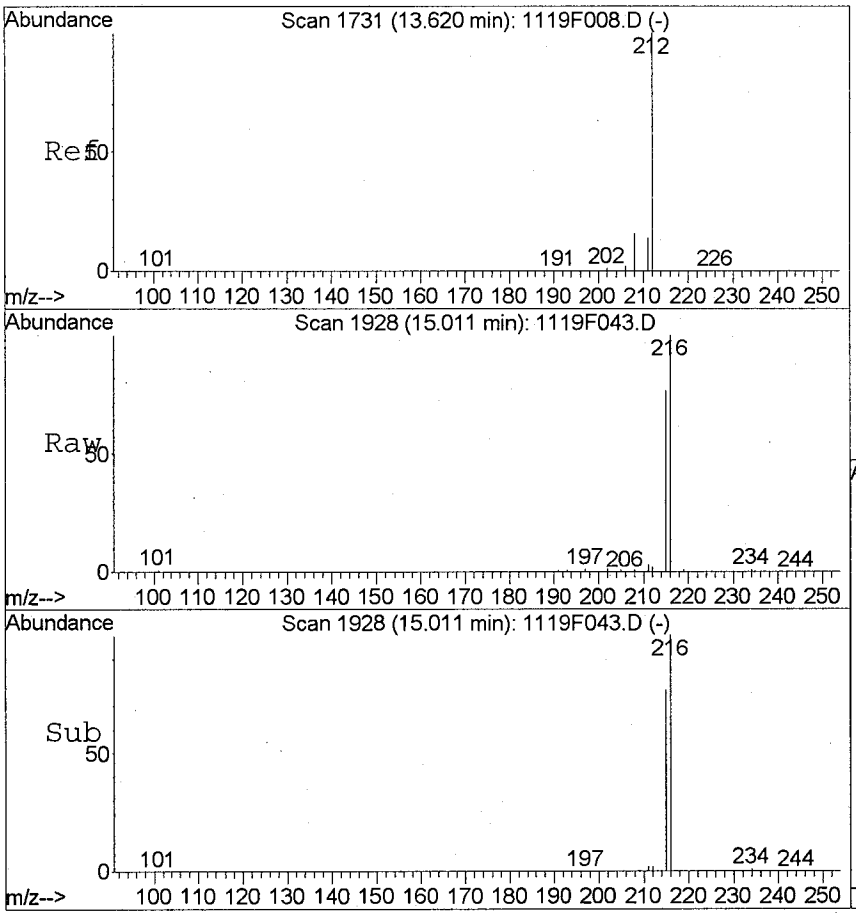


#39
Pyrene
Concen: 10378.61 ng/ml
RT: 14.17 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:202 Resp: 2561961

Ion	Ratio	Lower	Upper
202	100		
101	18.7	0.0	47.4

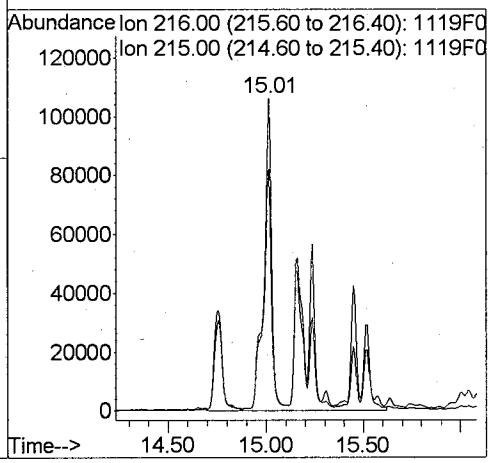


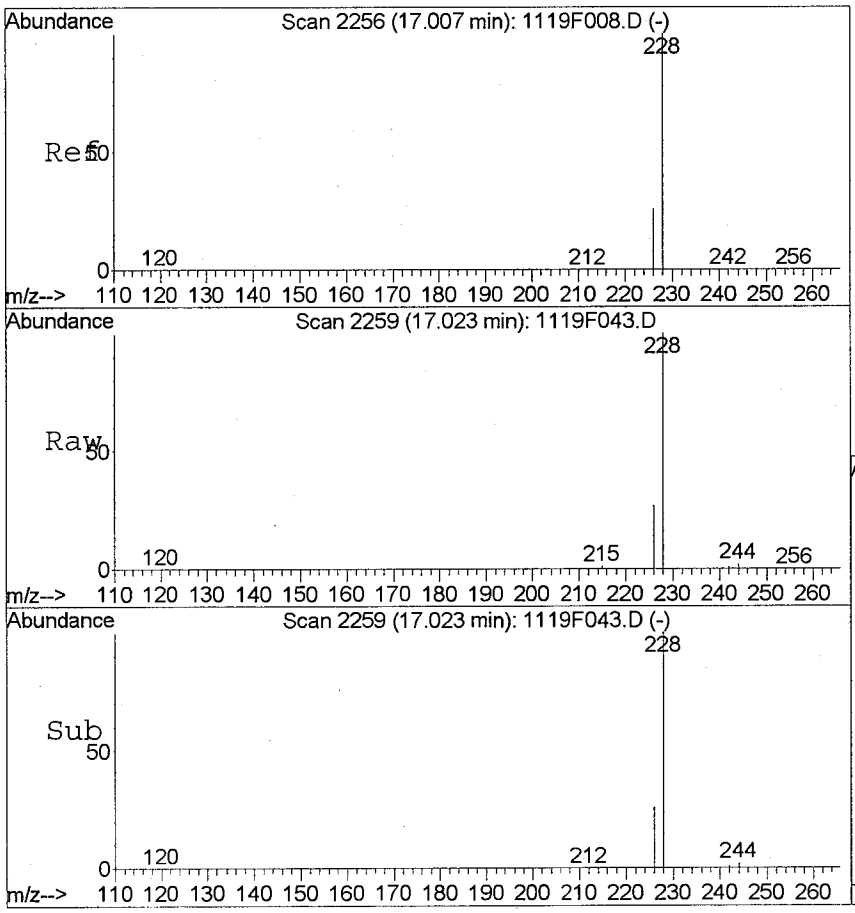


#40
C1-Fluoranthenes/Pyrenes
Concen: 3236.20 ng/ml m
RT: 15.01 min Scan# 1928
Delta R.T. -0.54 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:216 Resp: 798855

Ion	Ratio	Lower	Upper
216	100		
215	77.2	54.8	114.8

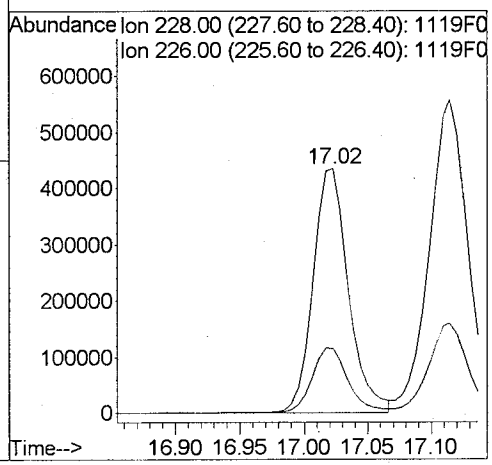


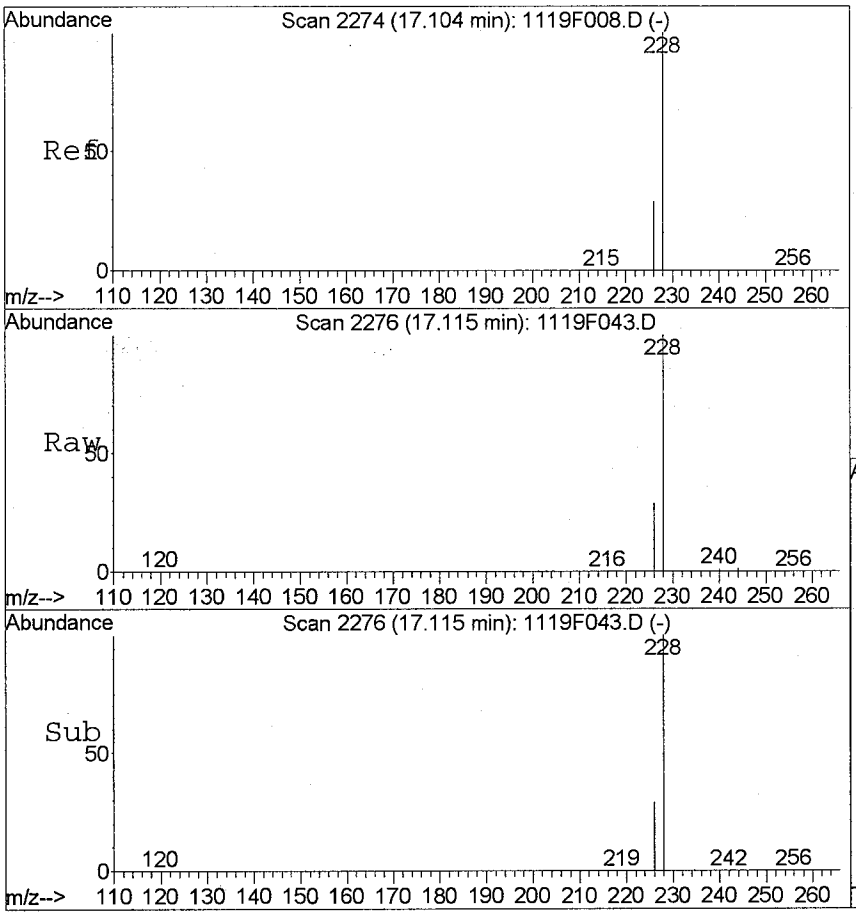


#42
Benz(a)anthracene
Concen: 4464.81 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.02 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:228 Resp: 839109

Ion	Ratio	Lower	Upper
228	100		
226	26.5	0.0	55.8

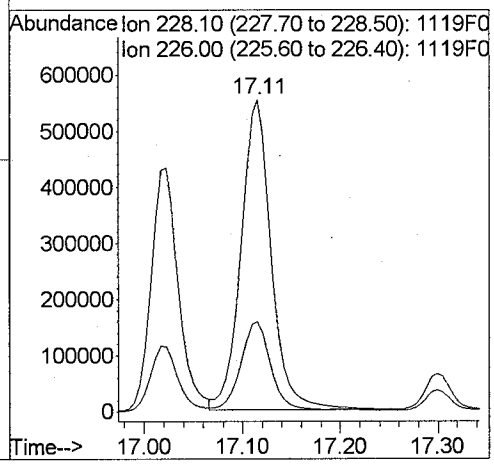


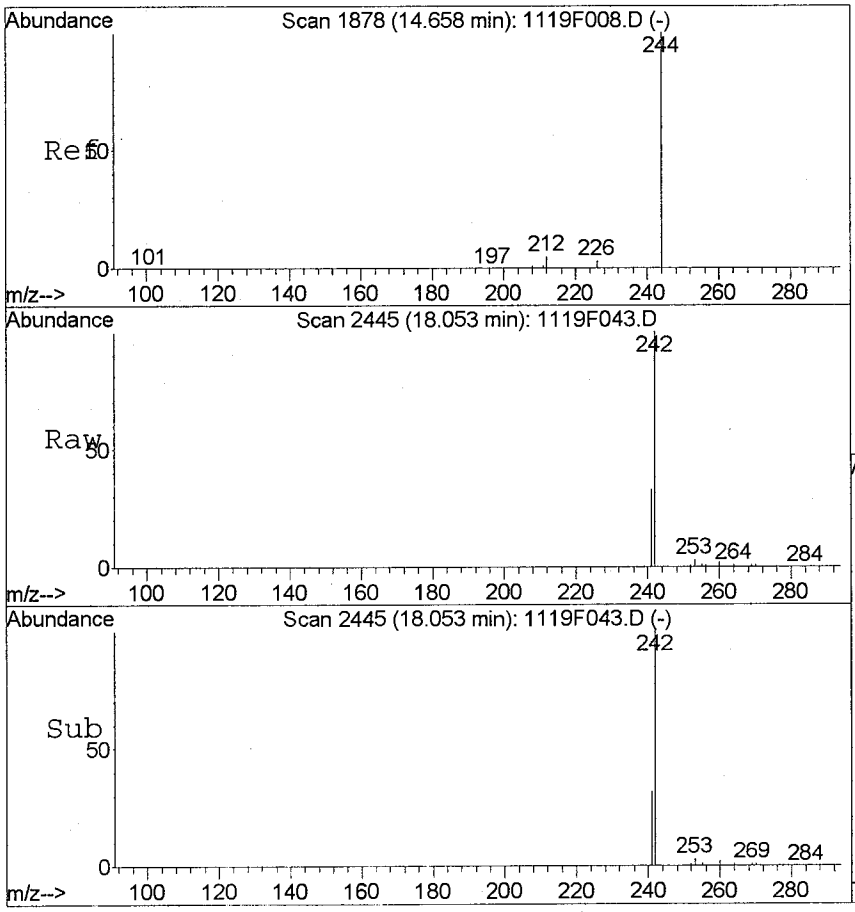


#43
Chrysene
Concen: 5896.44 ng/ml
RT: 17.11 min Scan# 2276
Delta R.T. 0.01 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:228 Resp: 1185005

Ion	Ratio	Lower	Upper
228	100		
226	28.6	0.0	58.5

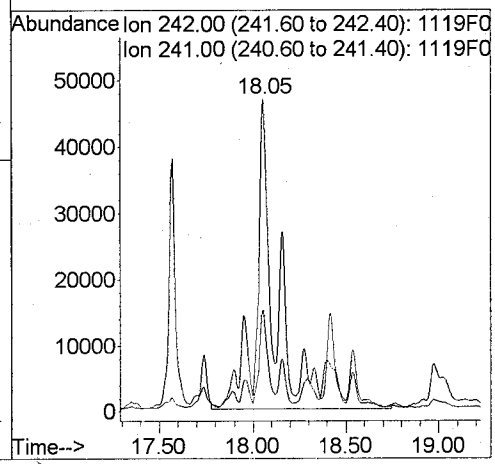


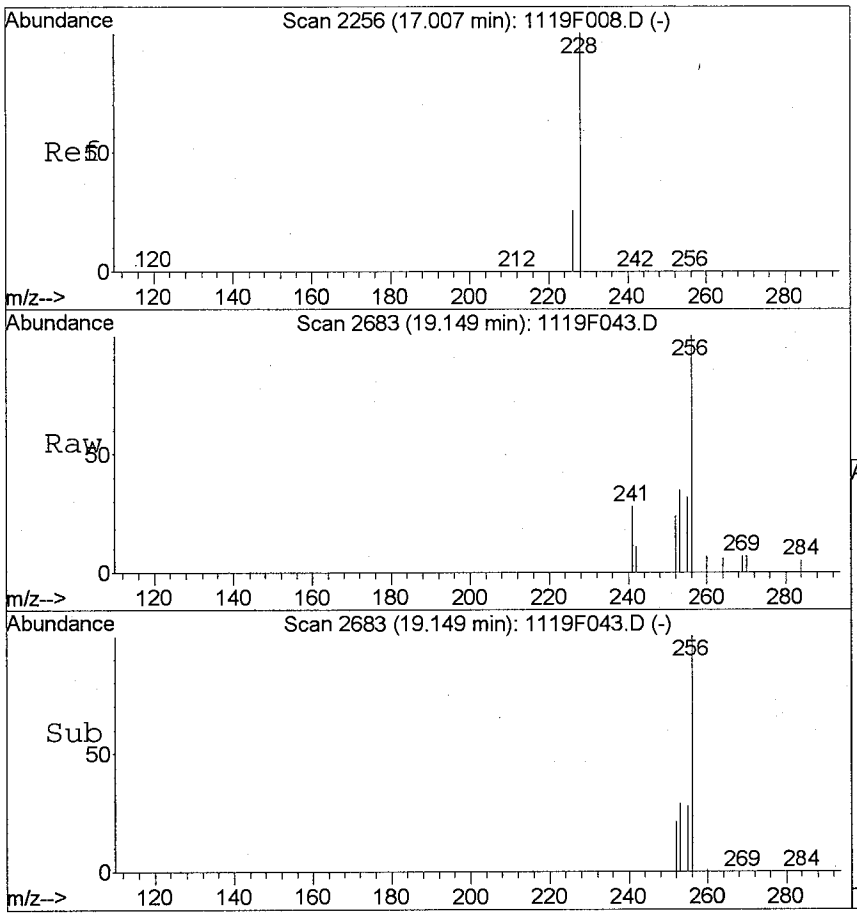


#44
C1-Chrysenes
Concen: 2023.50 ng/ml m
RT: 18.05 min Scan# 2445
Delta R.T. -0.10 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:242 Resp: 406663

Ion	Ratio	Lower	Upper
242	100		
241	32.8	0.1	60.1

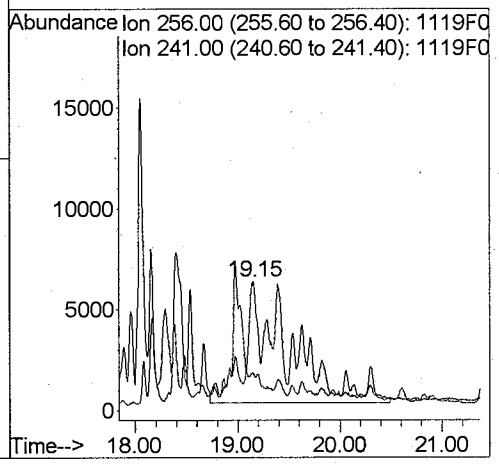


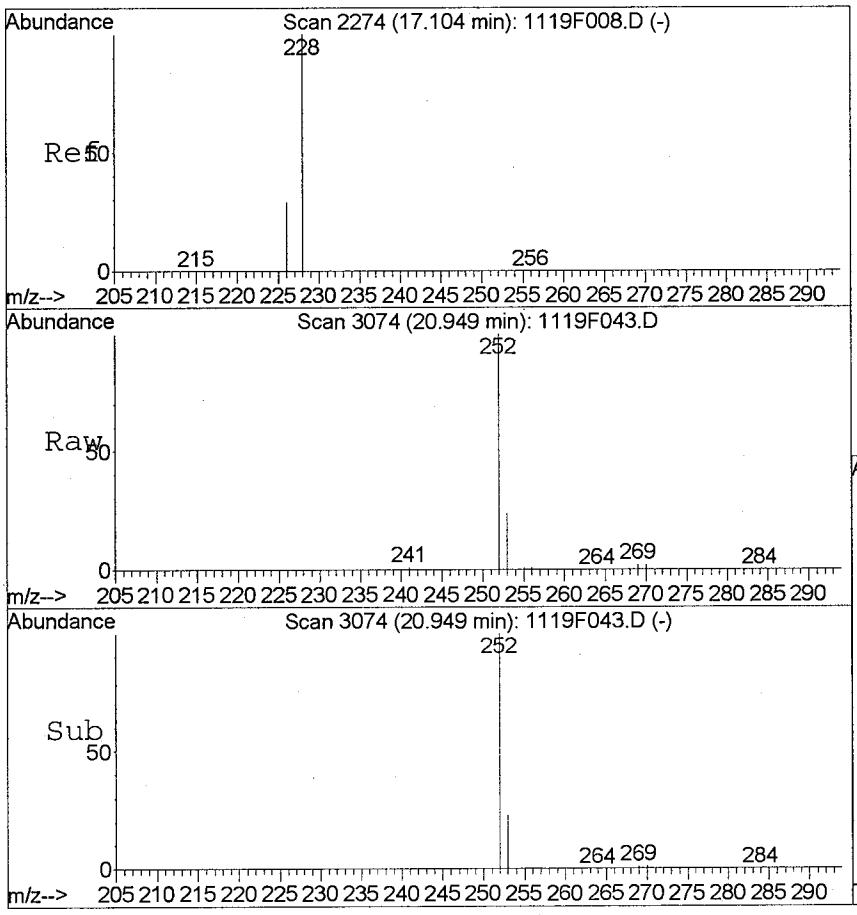


#45
C2-Chrysenes
Concen: 905.35 ng/ml m
RT: 19.15 min Scan# 2683
Delta R.T. -0.37 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:256 Resp: 181948

Ion	Ratio	Lower	Upper
256	100		
241	28.2	7.8	67.8

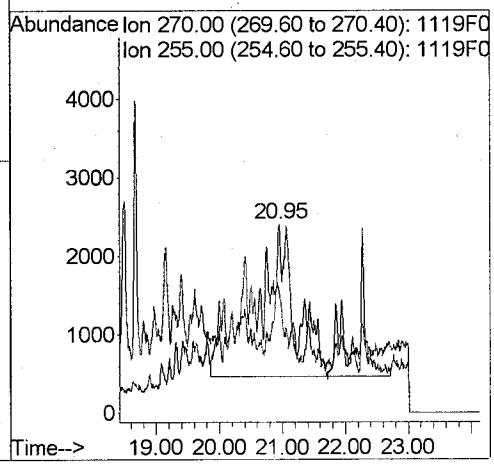


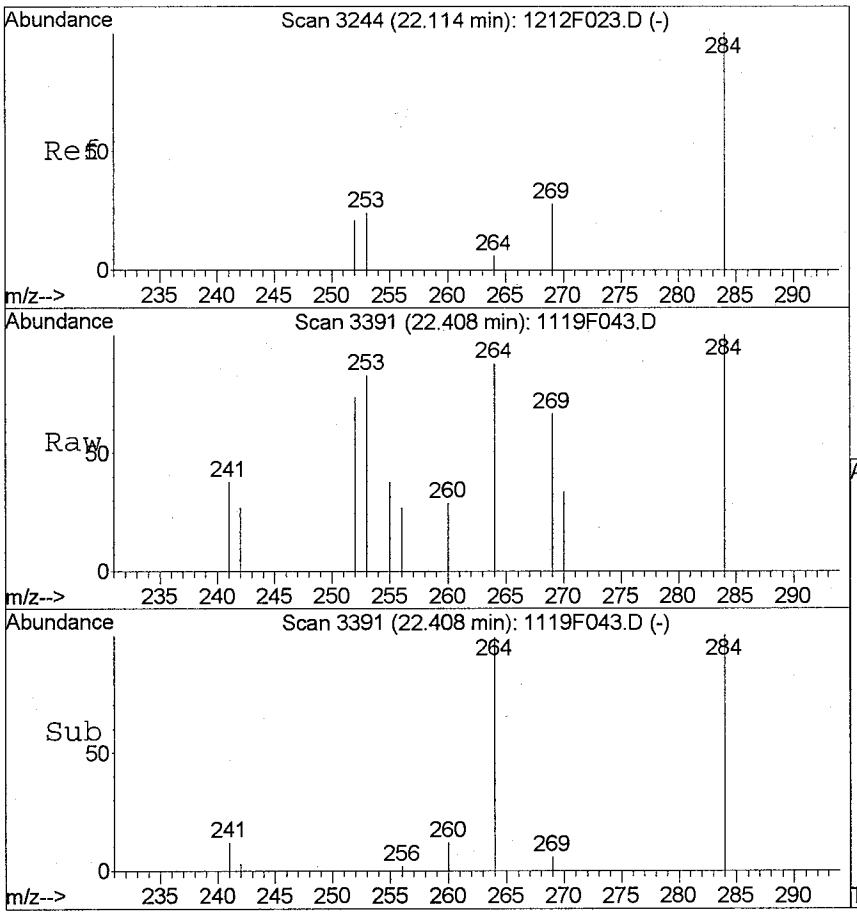


#46
C3-Chrysenes
Concen: 522.08 ng/ml m
RT: 20.95 min Scan# 3074
Delta R.T. -0.27 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:270 Resp: 104923

Ion	Ratio	Lower	Upper
270	100		
255	64.0	0.0	56.7#

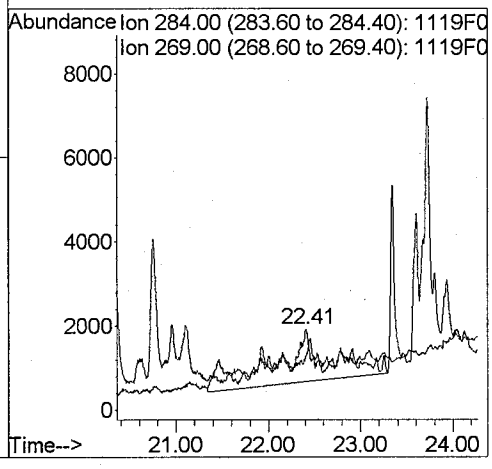


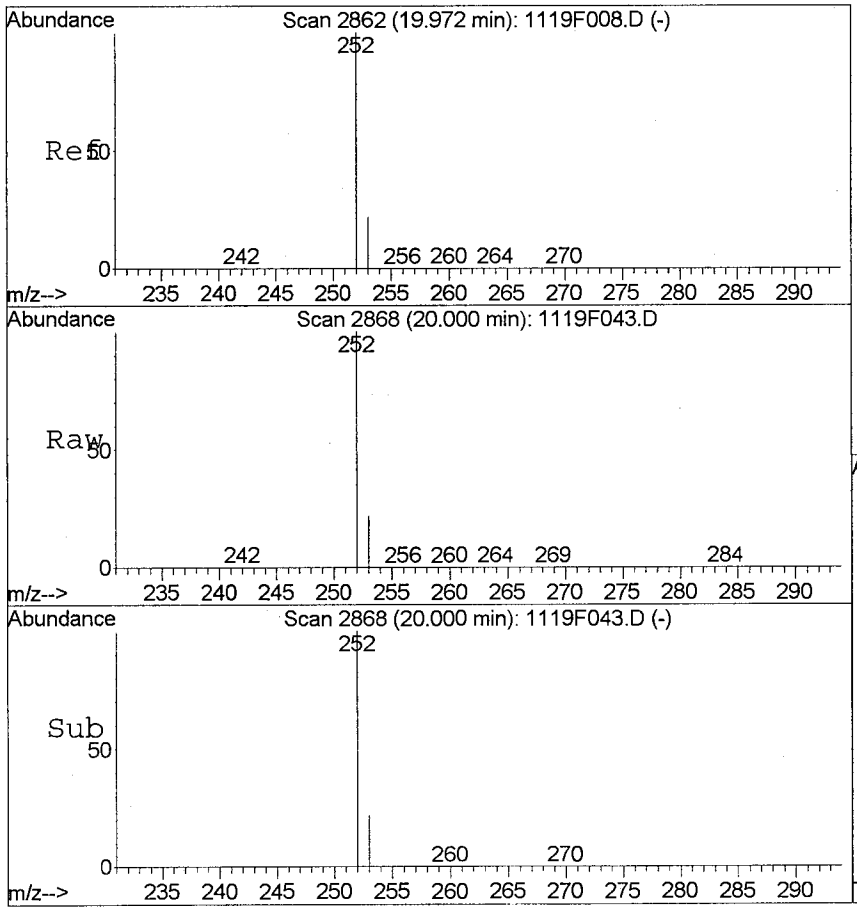


#47
C4-Chrysenes
Concen: 237.33 ng/ml m
RT: 22.41 min Scan# 3391
Delta R.T. -0.12 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:284 Resp: 47697

Ion	Ratio	Lower	Upper
284	100		
269	66.8	16.2	76.2

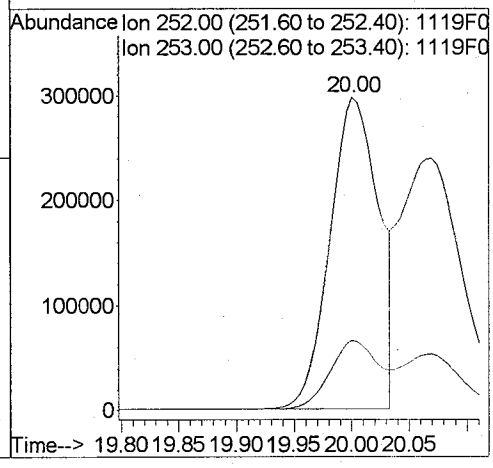


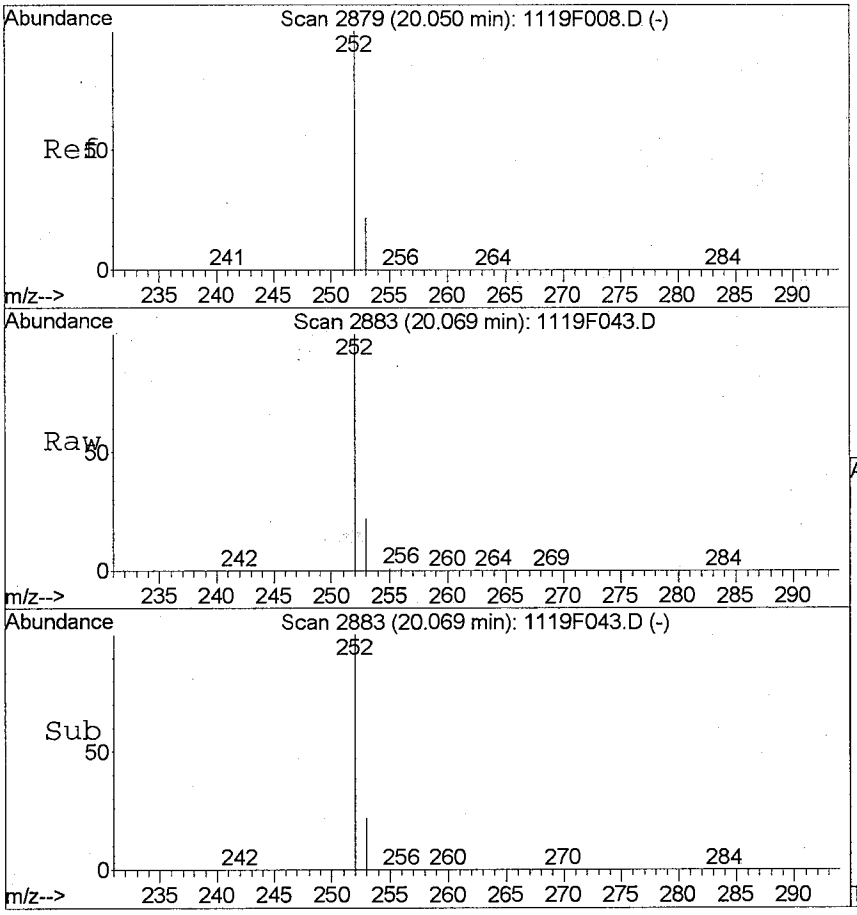


#49
Benzo(b)fluoranthene
Concen: 5513.97 ng/ml
RT: 20.00 min Scan# 2868
Delta R.T. 0.03 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:252 Resp: 872909

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.8

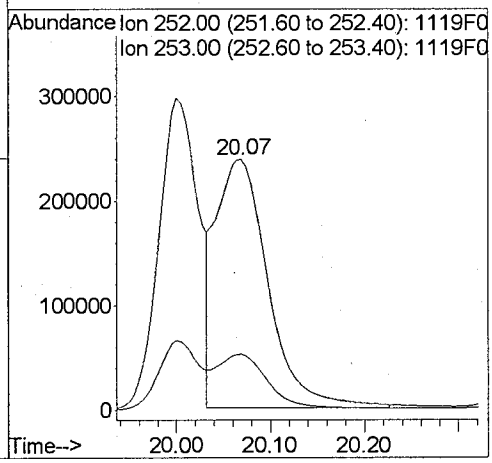


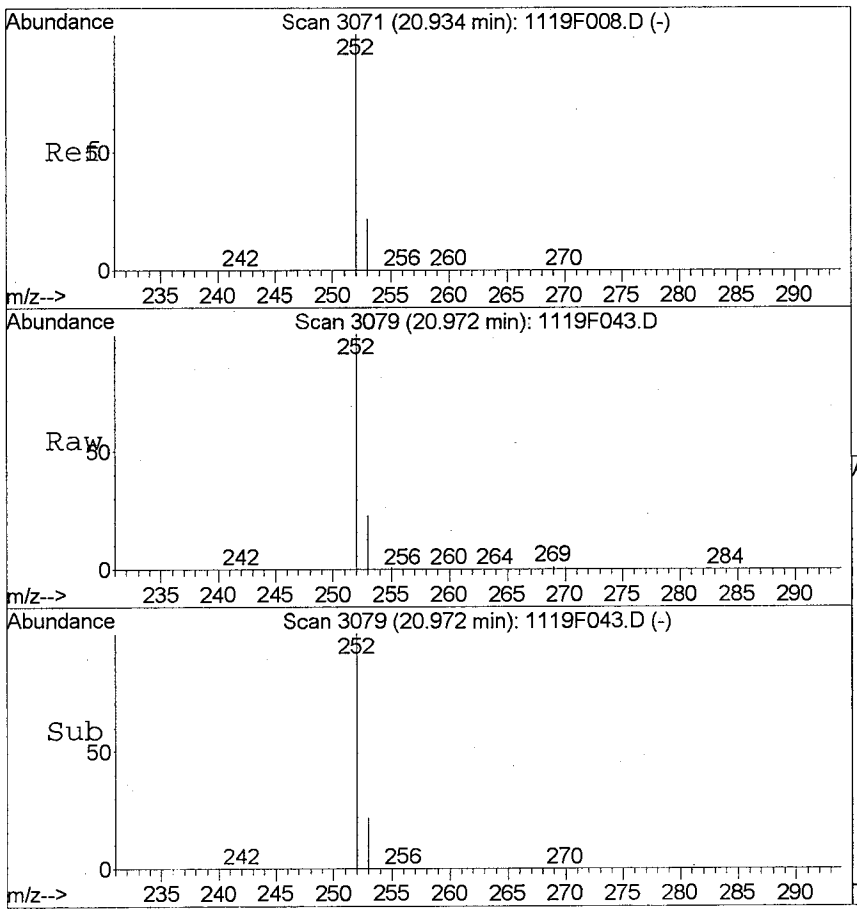


#50
Benzo(k)fluoranthene
Concen: 4555.09 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. 0.02 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:252 Resp: 914980

Ion	Ratio	Lower	Upper
252	100		
253	22.4	0.0	52.2

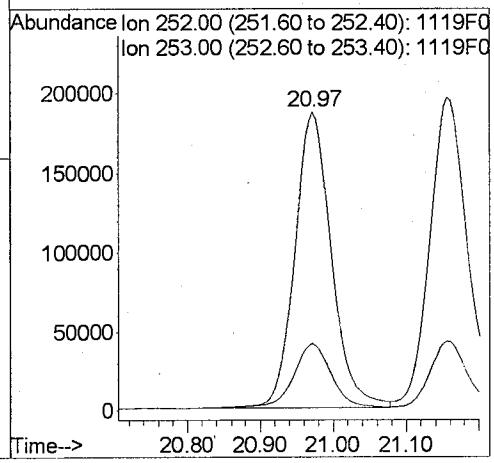


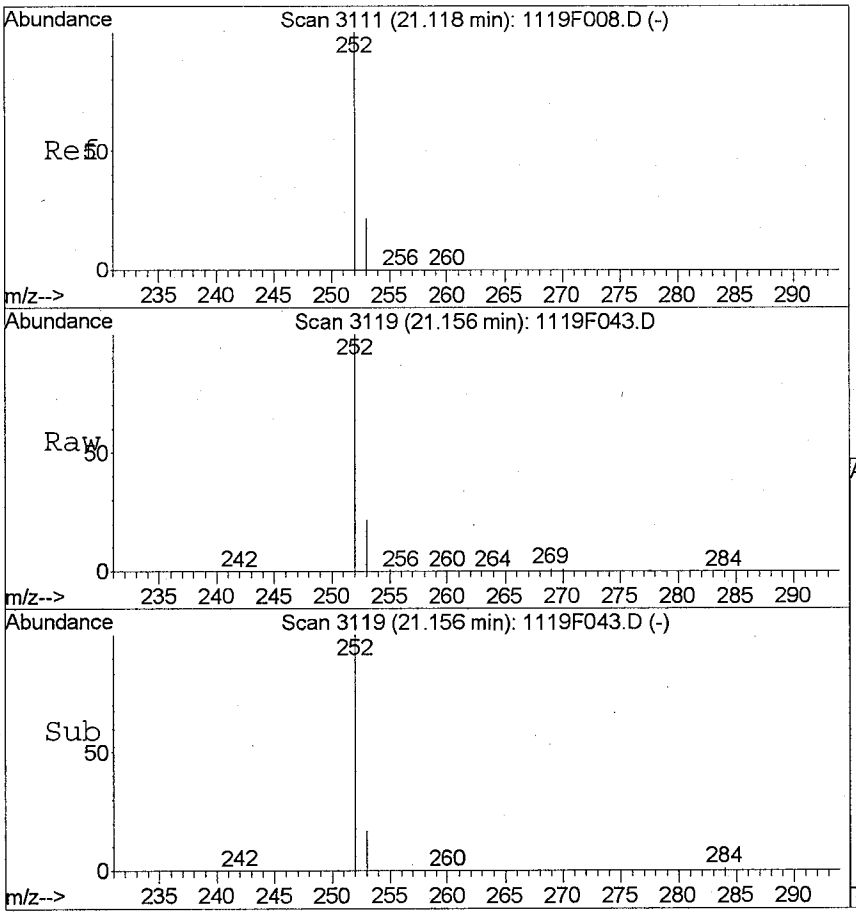


#51
Benzo(e)pyrene
Concen: 3647.10 ng/ml
RT: 20.97 min Scan# 3079
Delta R.T. 0.04 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:252 Resp: 648258

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.8

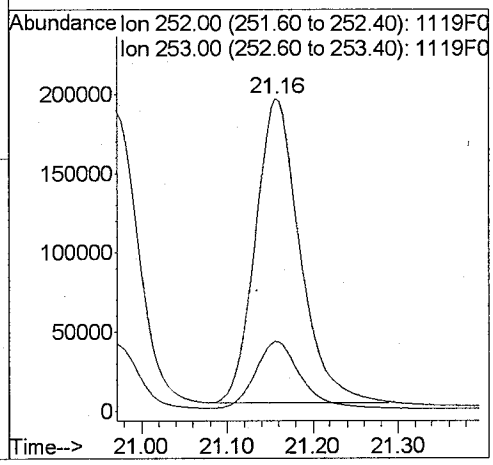


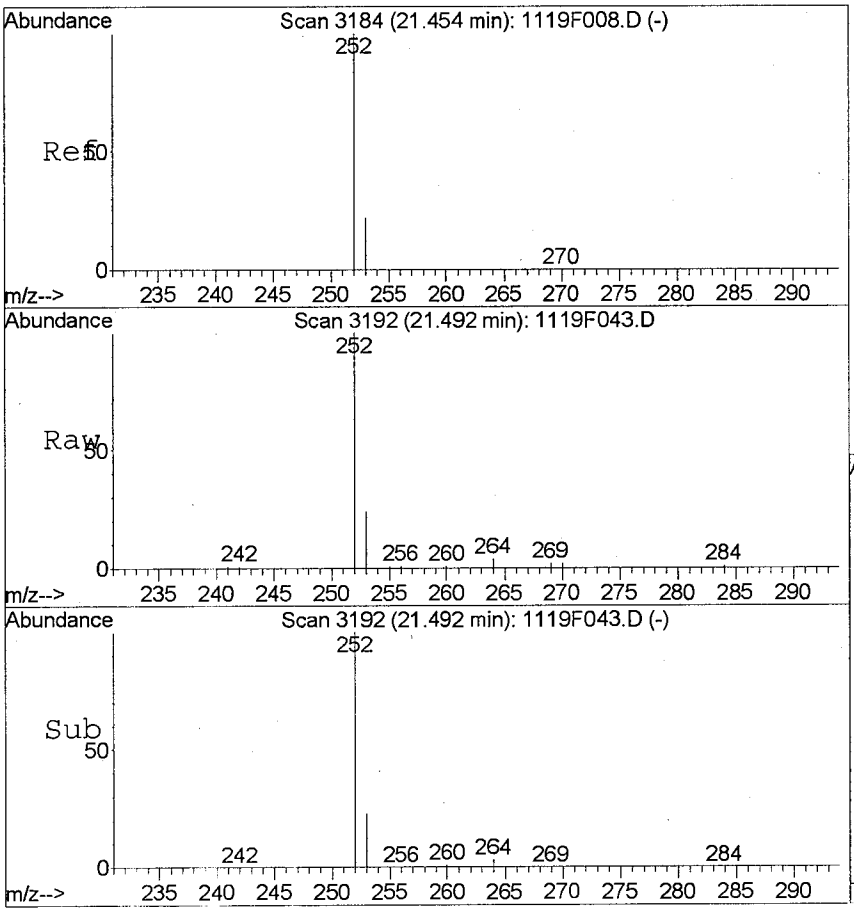


#52
Benzo(a)pyrene
Concen: 5123.72 ng/ml
RT: 21.16 min Scan# 3119
Delta R.T. 0.04 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:252 Resp: 689939

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.9

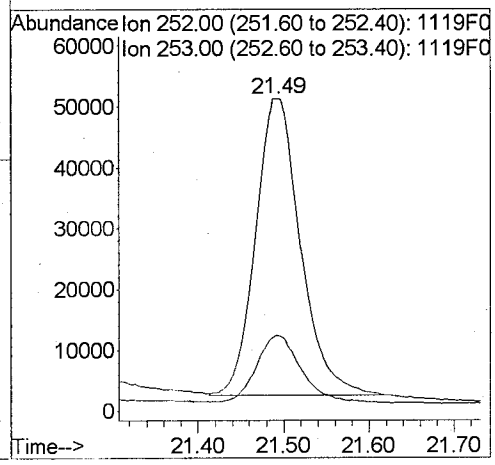


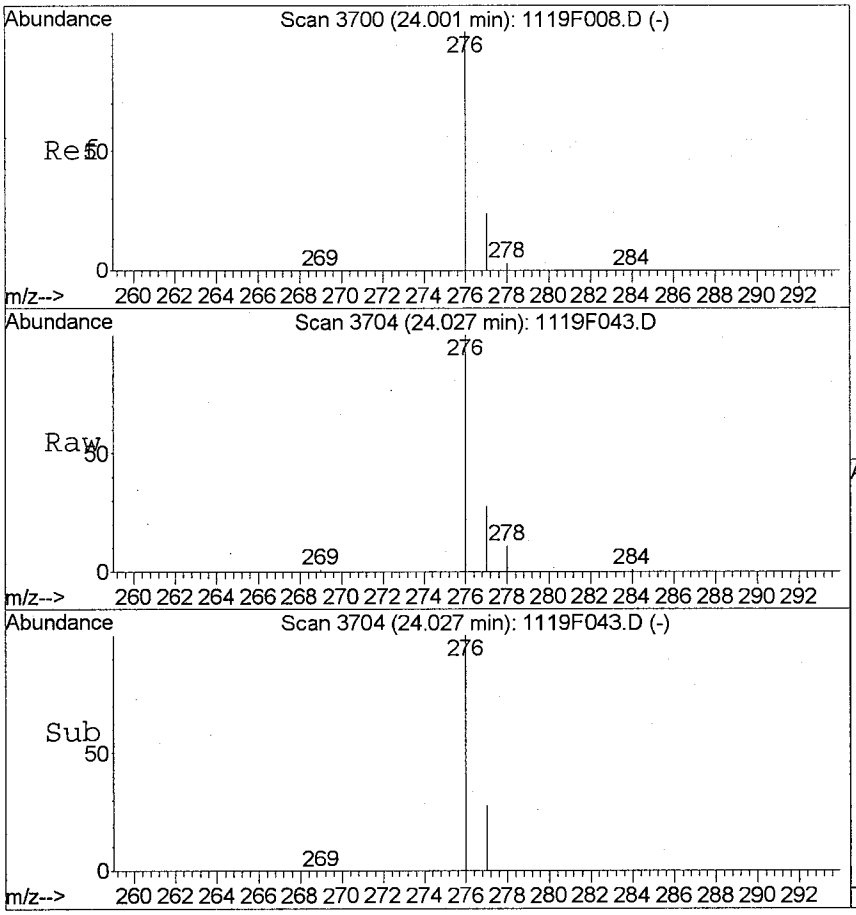


#53
Perylene
Concen: 1172.77 ng/ml
RT: 21.49 min Scan# 3192
Delta R.T. 0.04 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:252 Resp: 177271

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.6

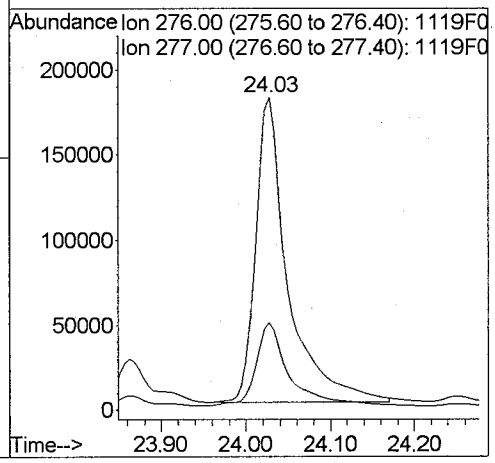


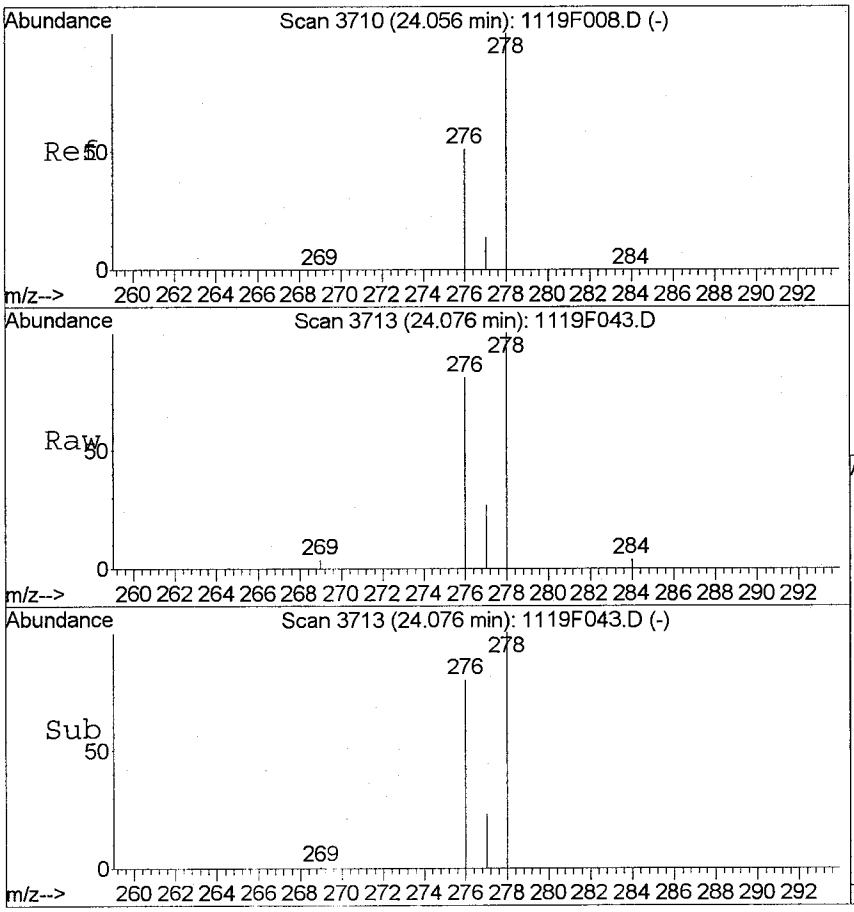


#54
Indeno(1,2,3-cd)pyrene
Concen: 5781.24 ng/ml
RT: 24.03 min Scan# 3704
Delta R.T. 0.03 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:276 Resp: 473241

Ion	Ratio	Lower	Upper
276	100		
277	27.3	0.0	53.6

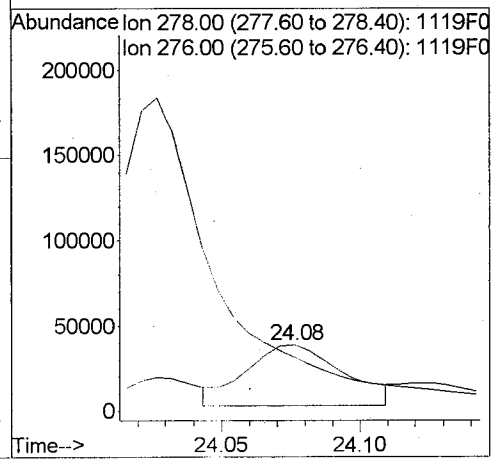


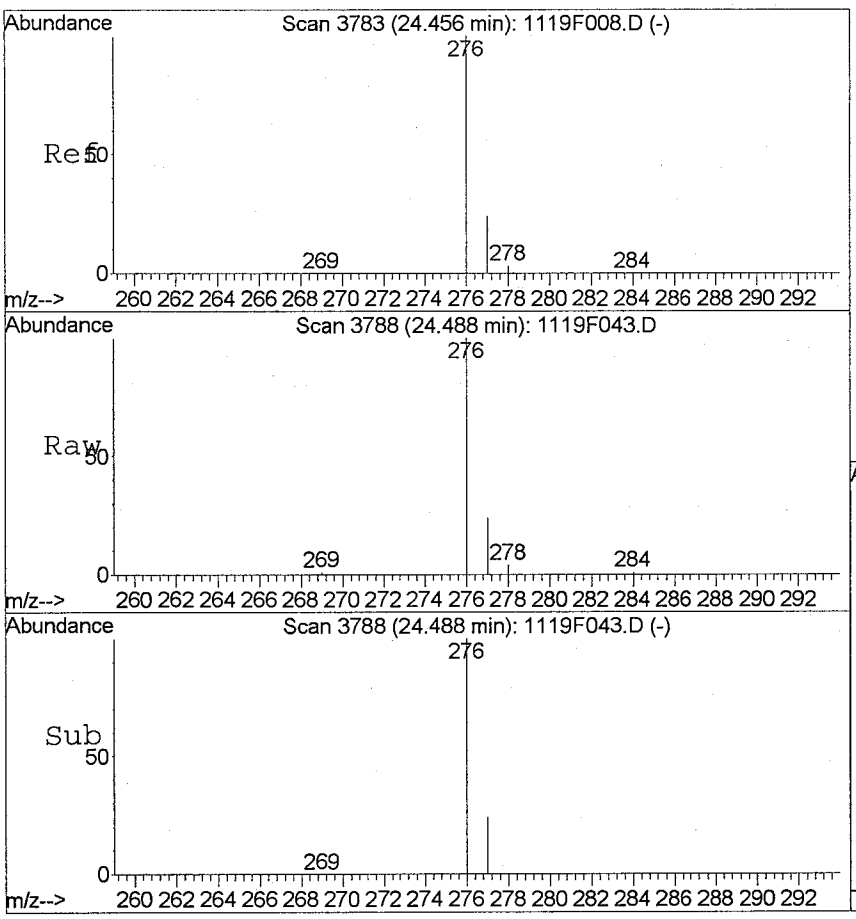


#55
Dibenz(a,h)anthracene
Concen: 744.23 ng/ml m
RT: 24.08 min Scan# 3713
Delta R.T. 0.02 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:278 Resp: 87552

Ion	Ratio	Lower	Upper
278	100		
276	81.4	21.1	81.1#

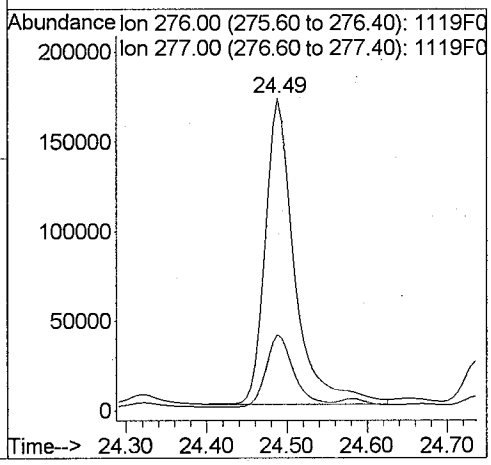




#56
Benzo(g,h,i)perylene
Concen: 3192.08 ng/ml
RT: 24.49 min Scan# 3788
Delta R.T. 0.03 min
Lab File: 1119F043.D
Acq: 19 Nov 2003 8:02 pm

Tgt Ion:276 Resp: 433202

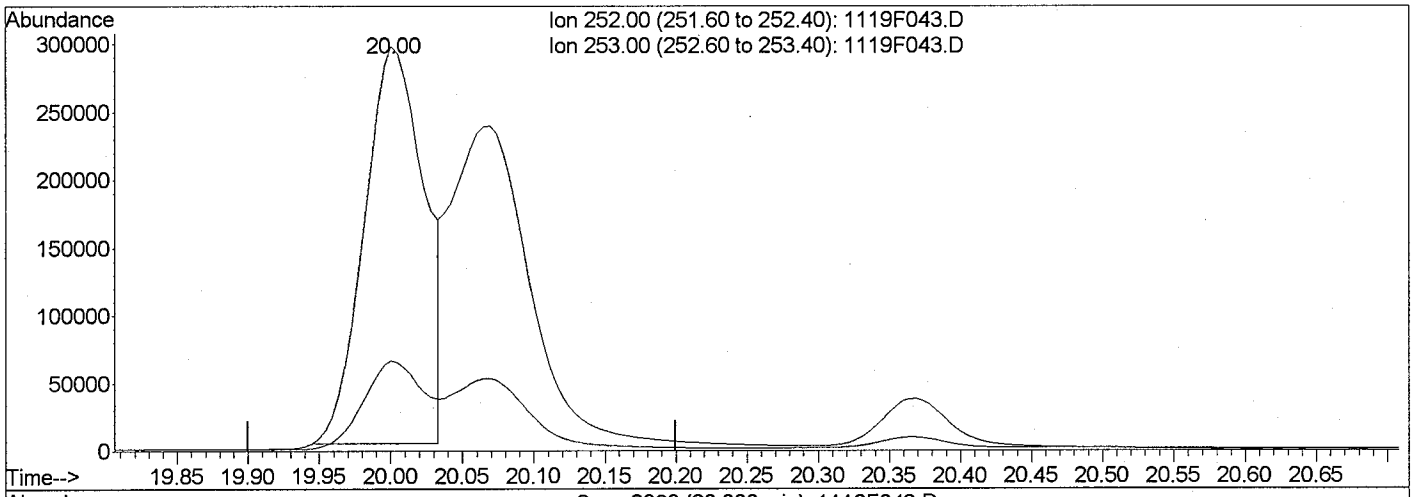
Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.6

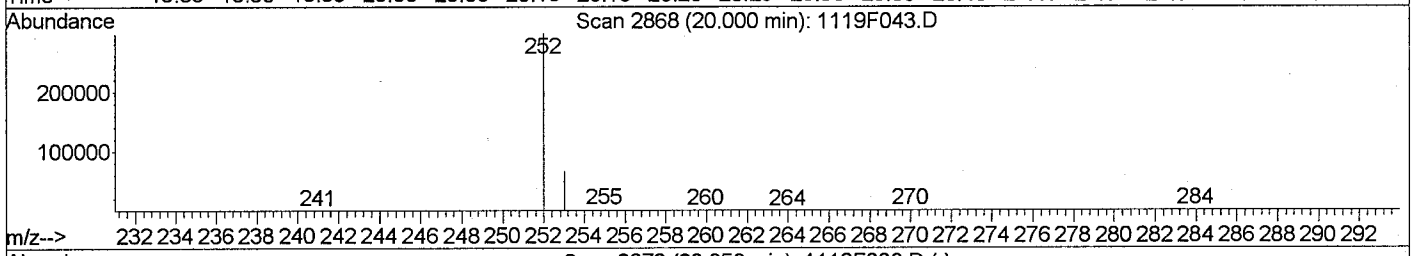


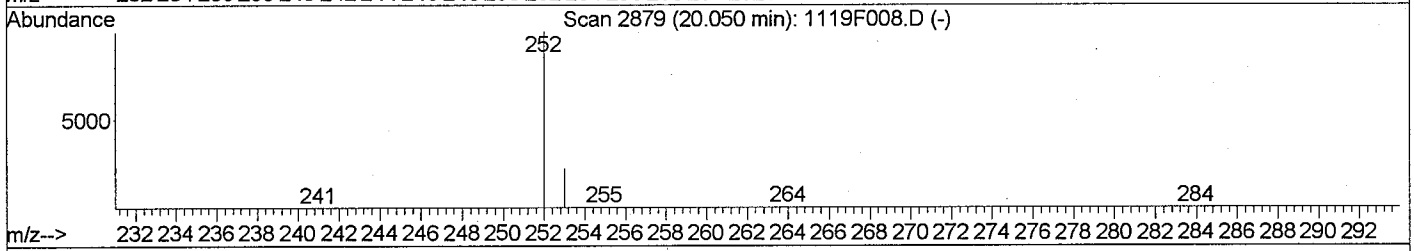
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(50) Benzo(k)fluoranthene (T)

20.00min 4222.72ng/ml

response 848217

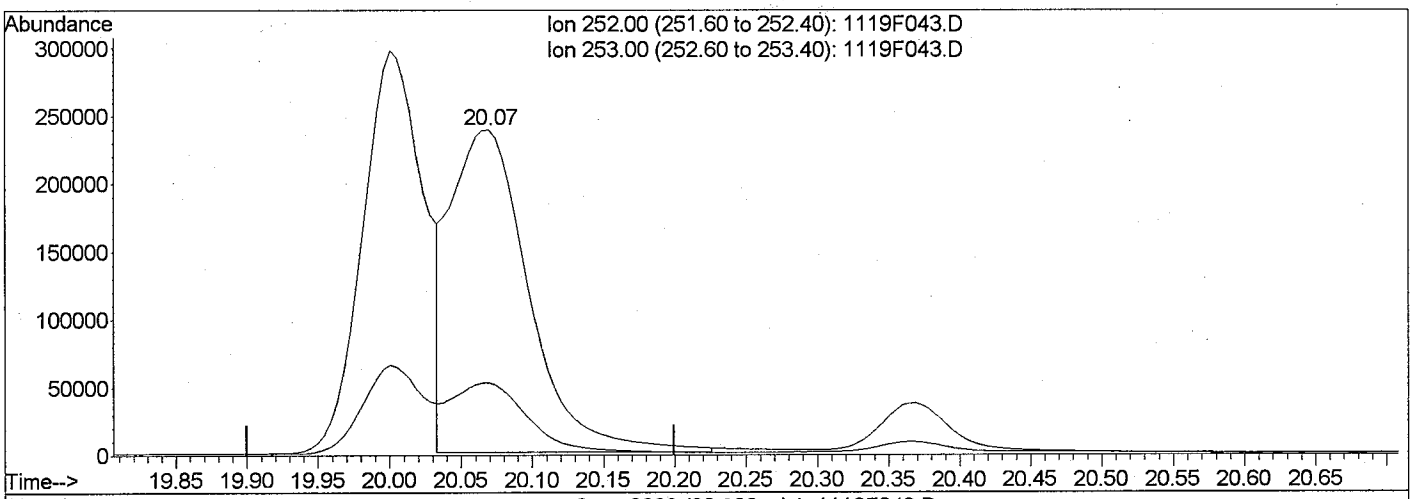
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.10
0.00	0.00	0.00
0.00	0.00	0.00

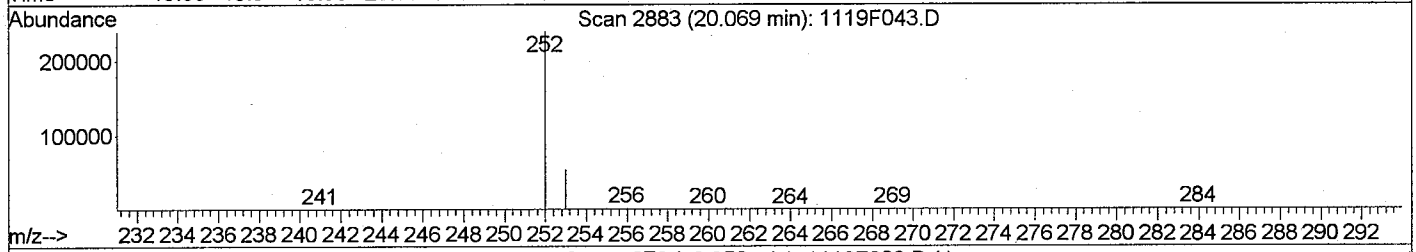
1119F043.D 1107ALK.M Thu Nov 20 14:21:58 2003

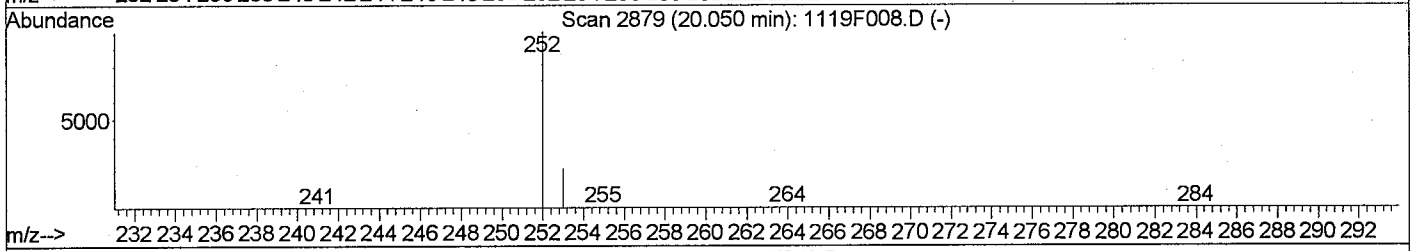
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(50) Benzo(k)fluoranthene (T)

20.07min 4555.09ng/ml m

response 914980

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.44
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/24/13

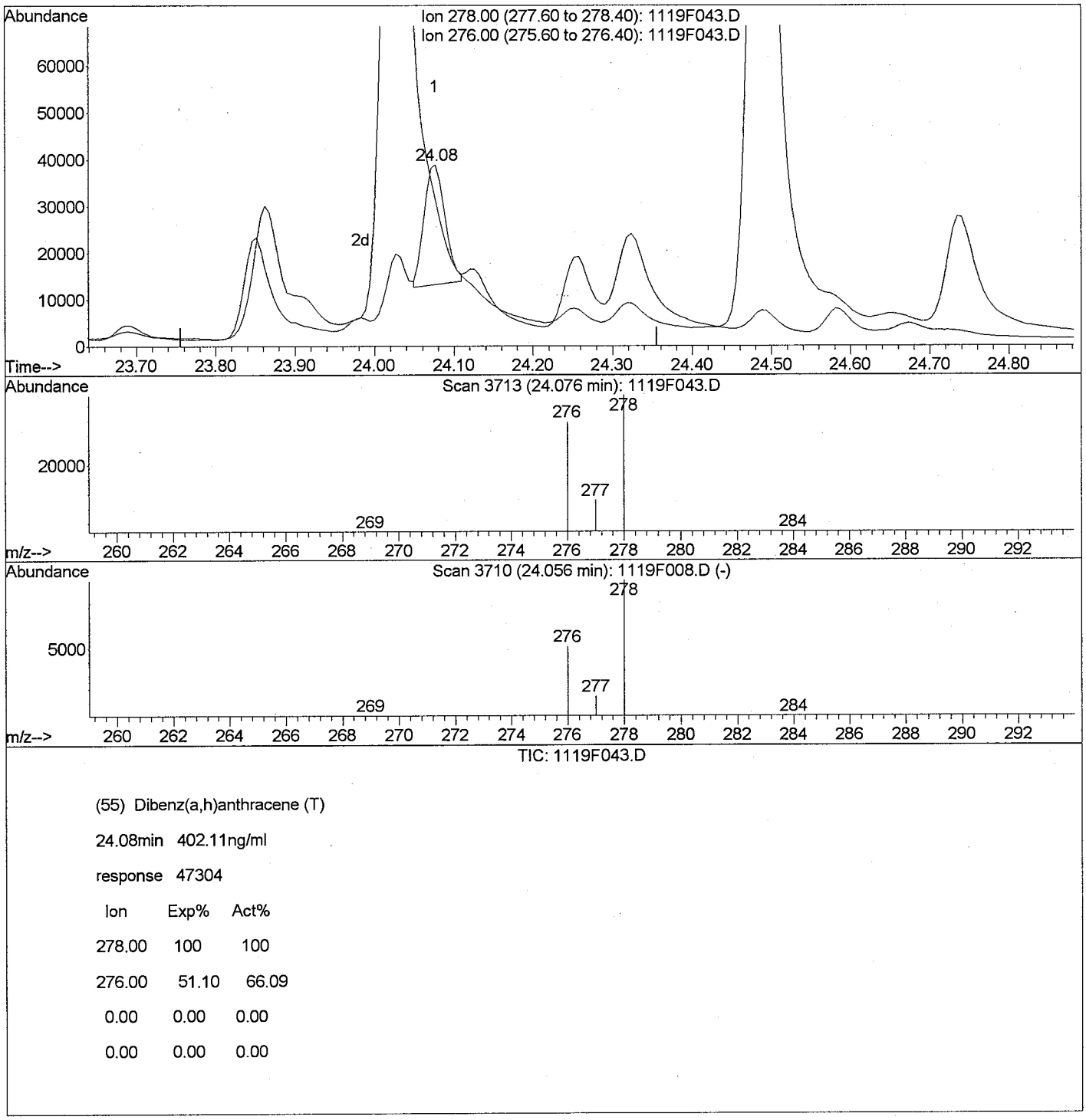
11/24/13

1119F043.D 1107ALK.M Thu Nov 20 14:22:02 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F043.D

(55) Dibenz(a,h)anthracene (T)

24.08min 402.11ng/ml

response 47304

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	66.09
0.00	0.00	0.00
0.00	0.00	0.00

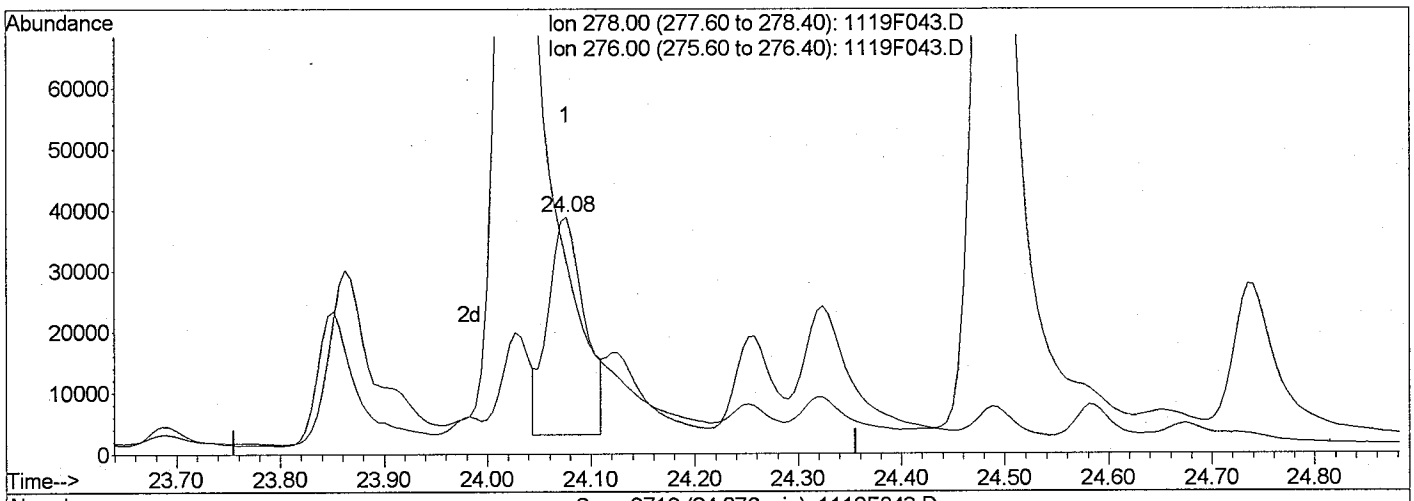
1119F043.D 1107ALK.M Thu Nov 20 14:22:08 2003

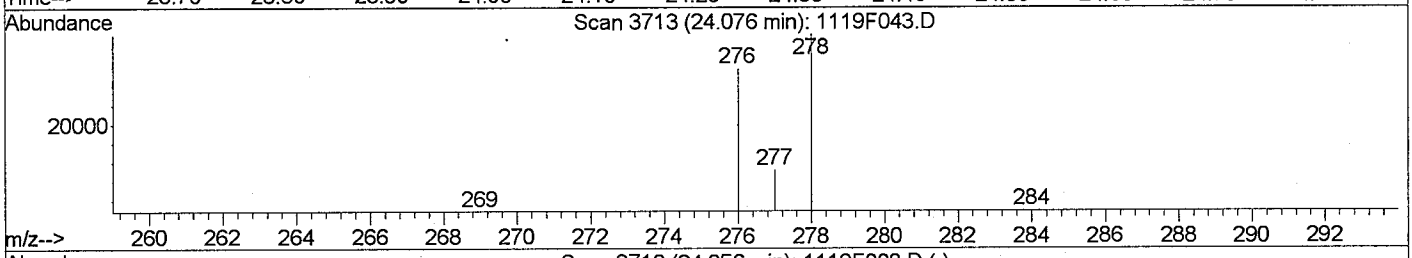
Quantitation Report (Qedit)

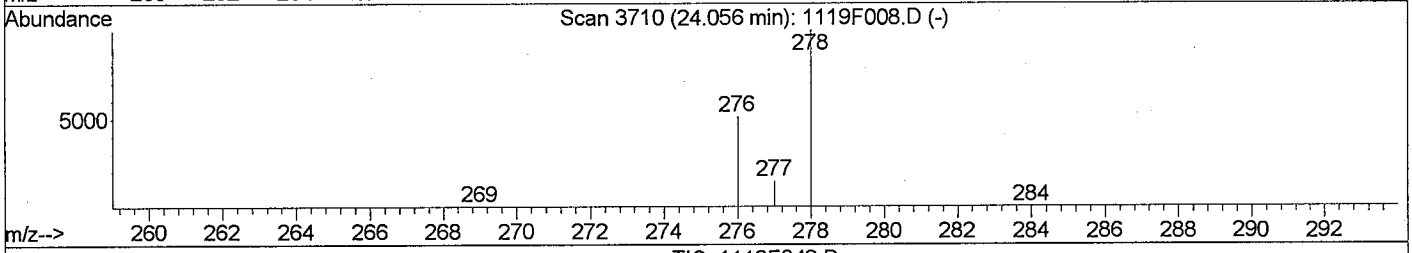
Data File : J:\MS11\DATA\111903\1119F043.D
Acq On : 19 Nov 2003 8:02 pm
Sample : K2308433-007
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:22 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(55) Dibenz(a,h)anthracene (T)

24.08min 744.23ng/ml m

response 87552

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	81.36#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

incomplete

11/24/13

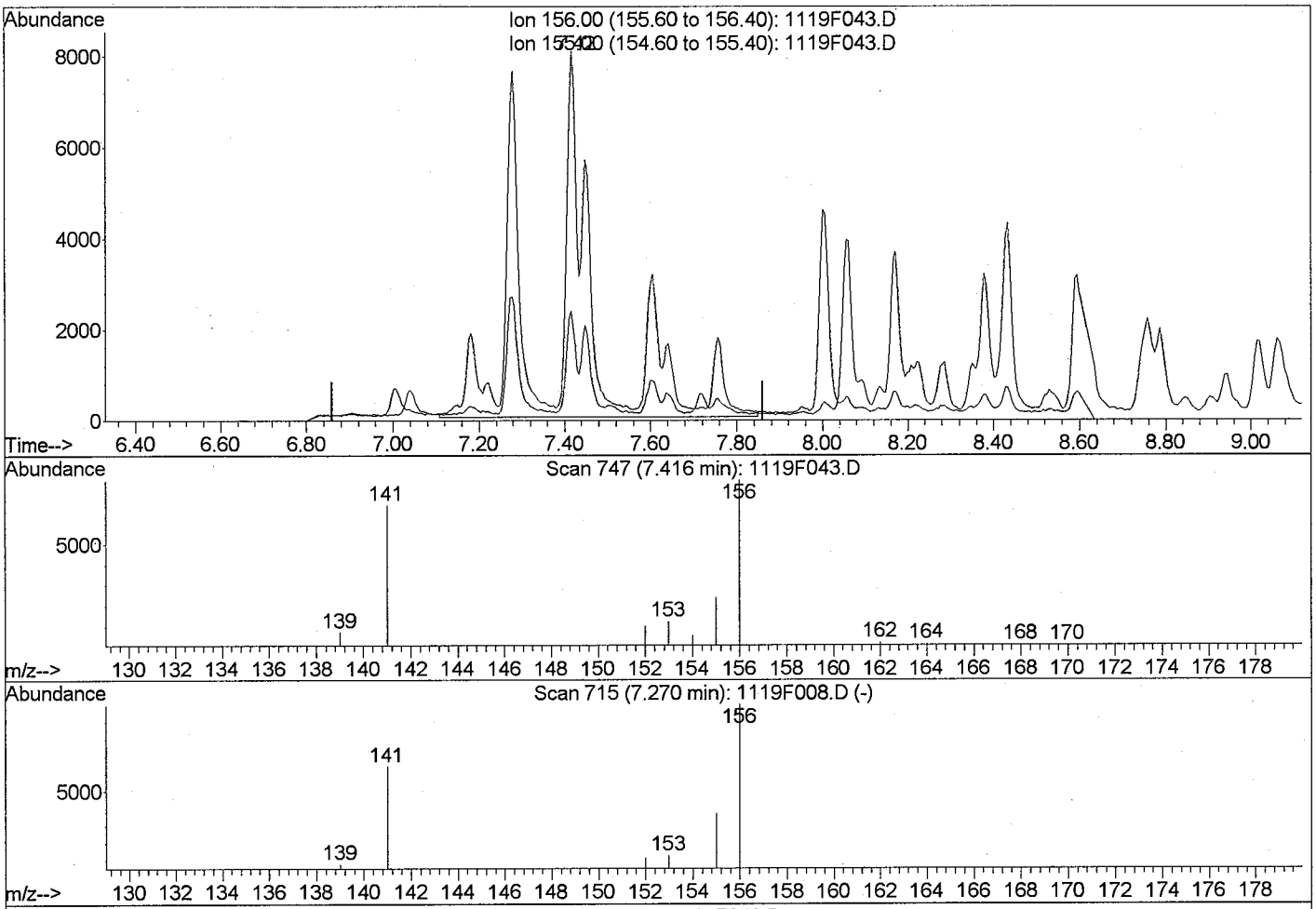
1119F043.D 1107ALK.M Thu Nov 20 14:22:15 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D
Acq On : 19 Nov 2003 8:02 pm
Sample : K2308433-007
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:27 2003

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F043.D

(8) C2-Naphthalenes (L)

7.42min 187.44ng/ml m

response 54350

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	29.65
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

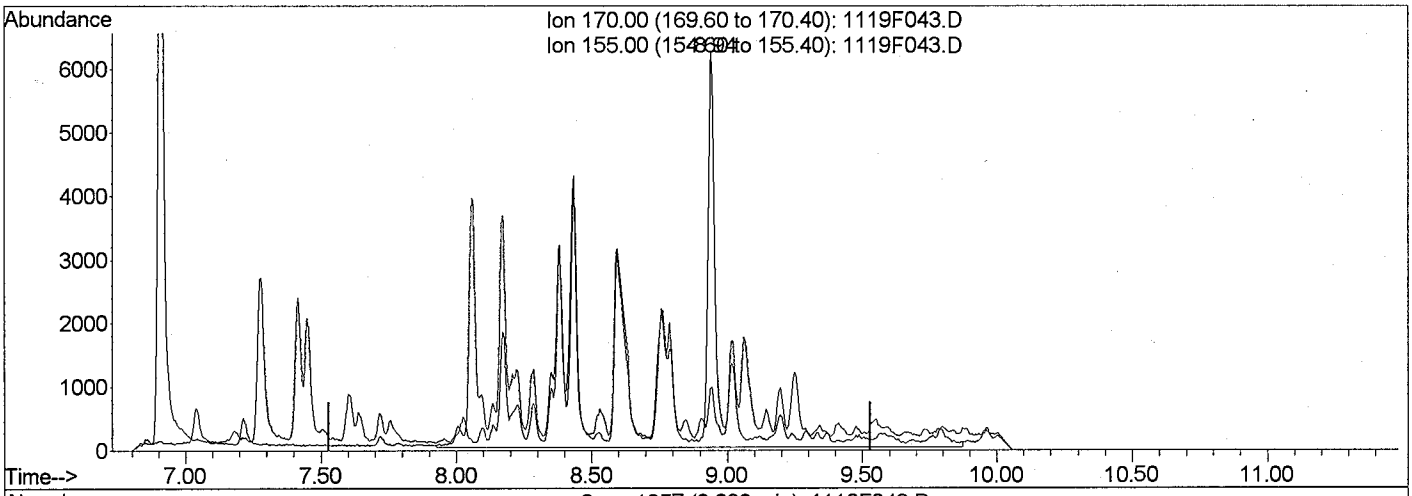
11/24/03

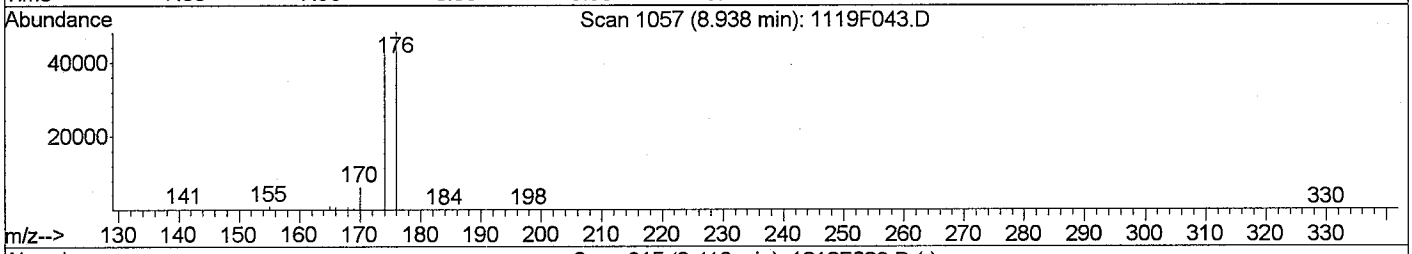
1119F043.D 1107ALK.M Fri Nov 21 12:27:17 2003

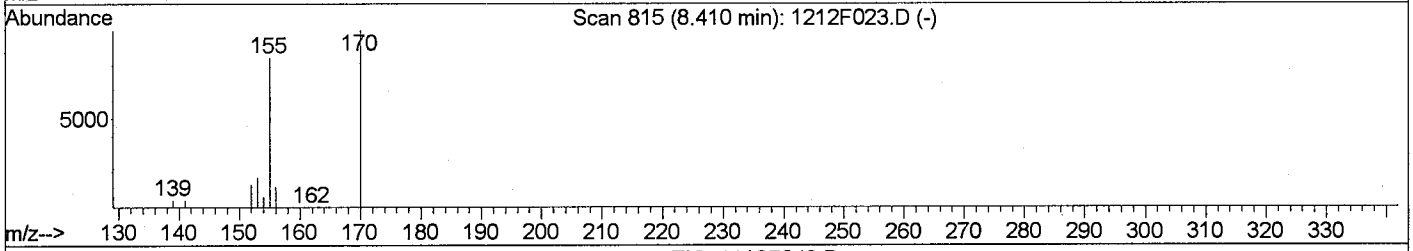
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:27 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(9) C3-Naphthalenes (L)

8.94min 196.76ng/ml m

response 57050

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	15.66#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

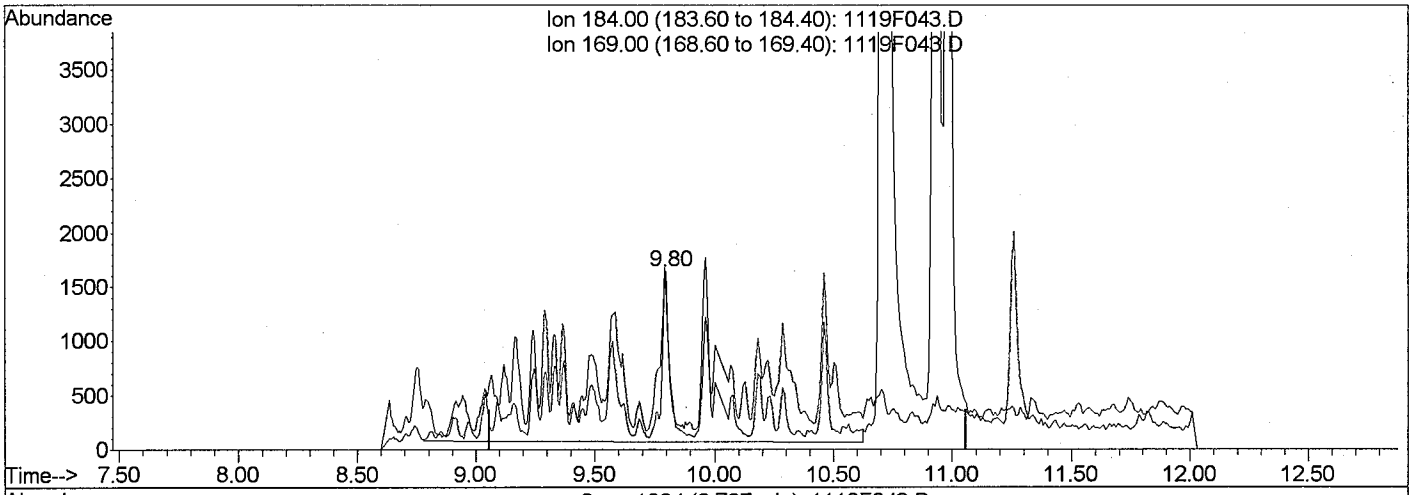
11/24/13

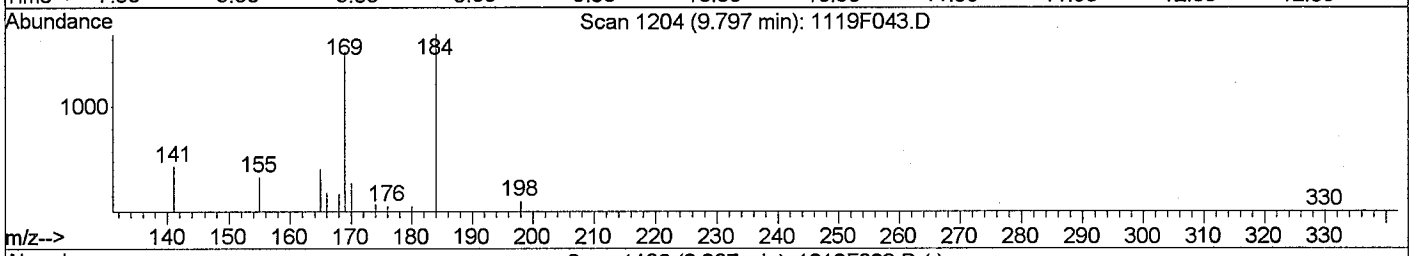
1119F043.D 1107ALK.M Fri Nov 21 12:27:32 2003

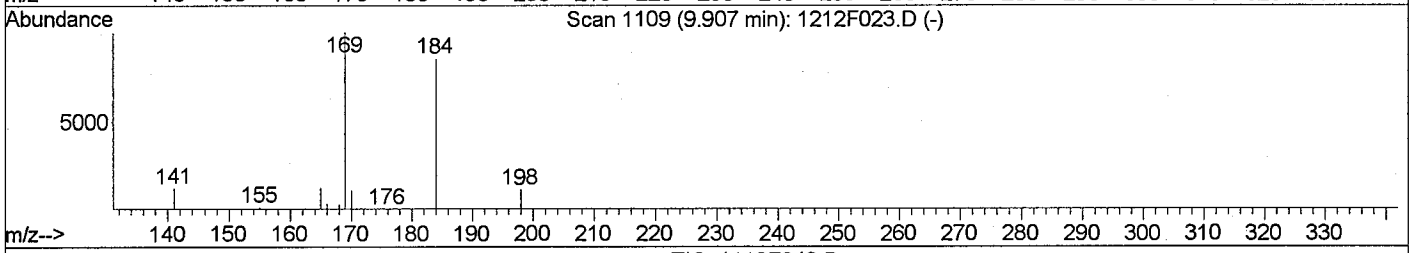
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:27 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(10) C4-Naphthalenes (L)

9.80min 105.82ng/ml m

response 30684

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	90.47
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

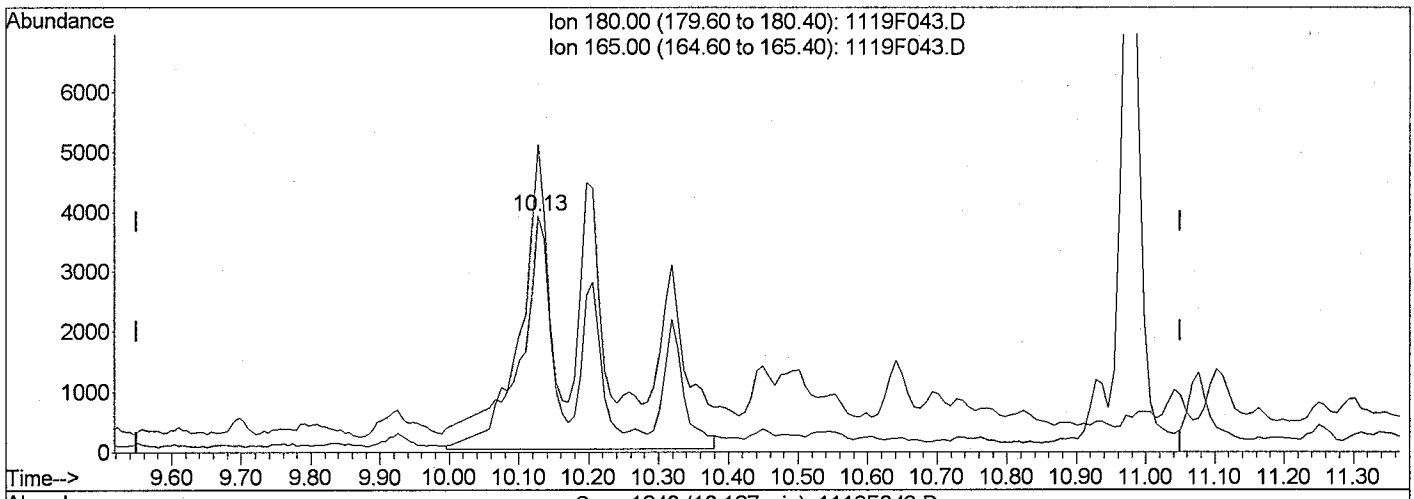
11/24/03

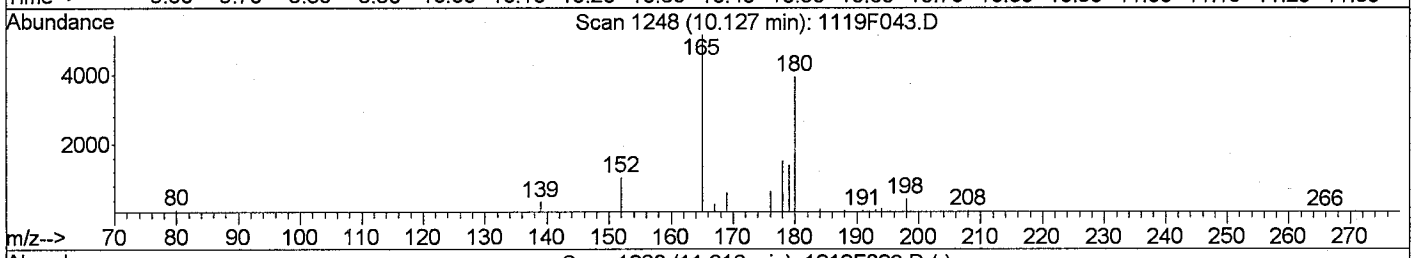
1119F043.D 1107ALK.M Fri Nov 21 12:27:43 2003

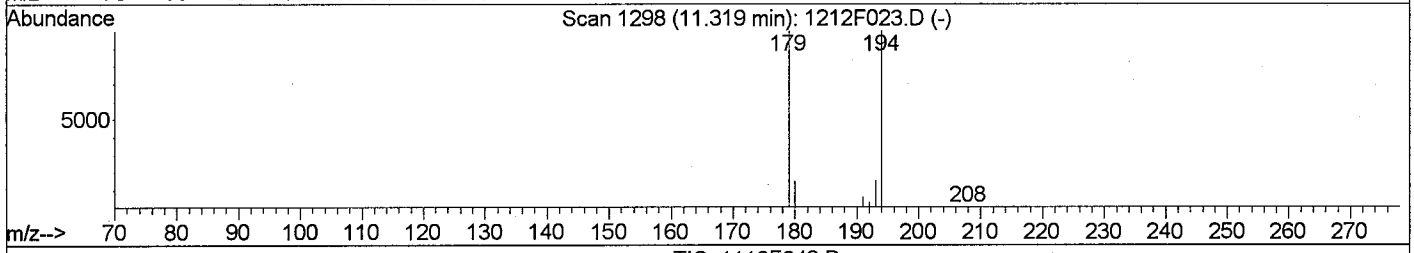
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:27 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(18) C1-Fluorenes (L)

10.13min 142.98ng/ml m

response 24462

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	130.45#
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

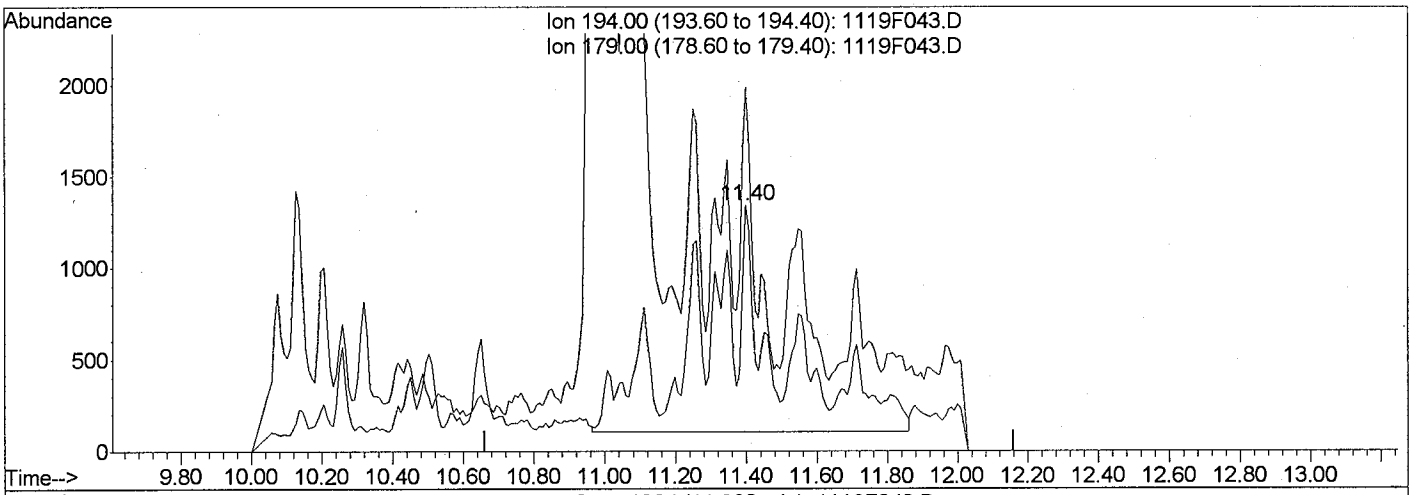
11/24/13

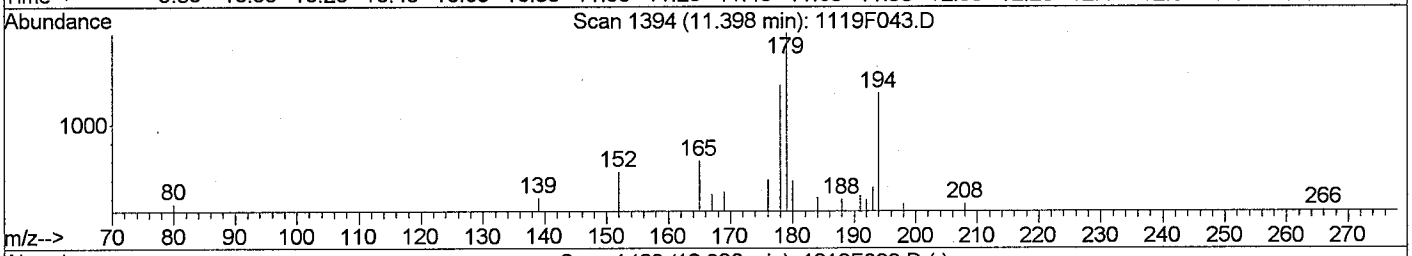
1119F043.D 1107ALK.M Fri Nov 21 12:27:51 2003

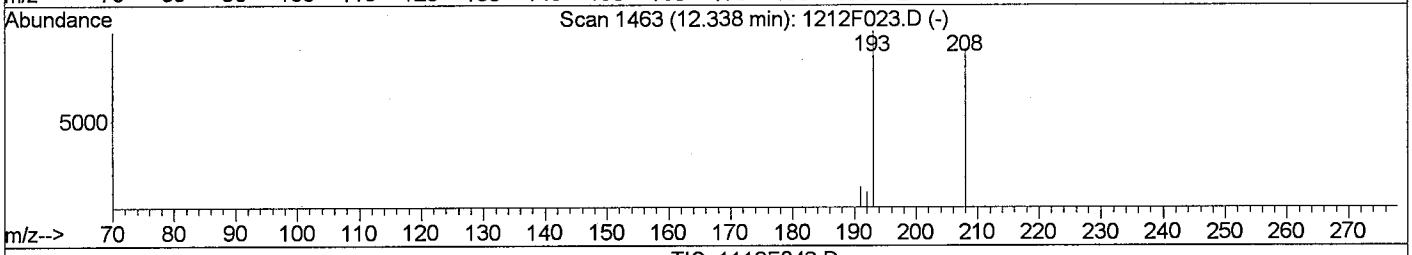
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:28 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(19) C2-Fluorenes (L)

11.40min 112.68ng/ml m

response 19278

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	147.92
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

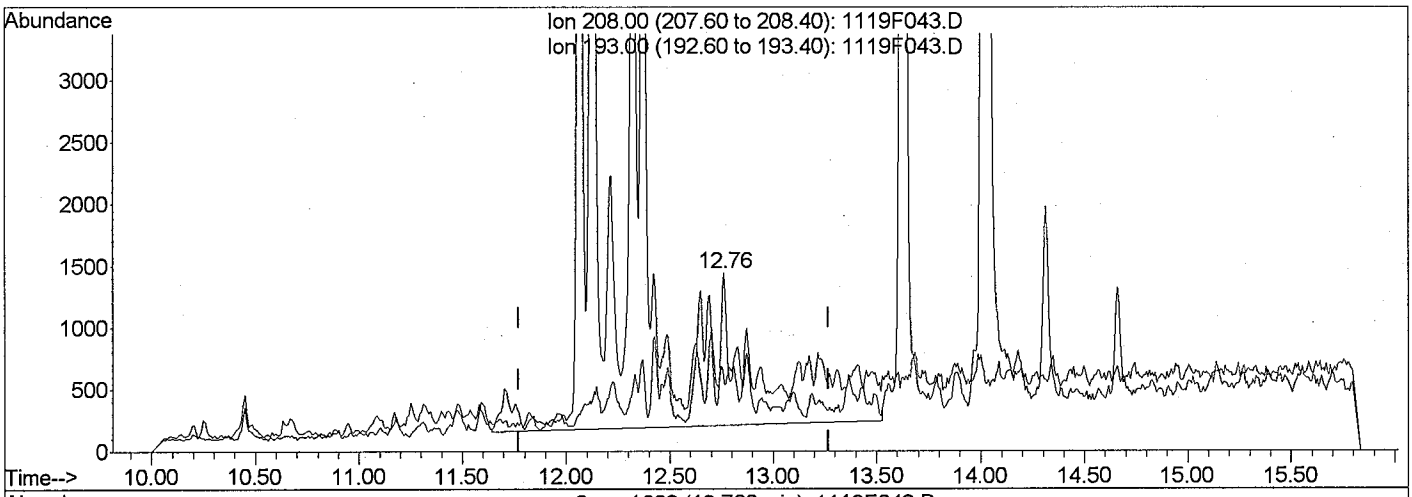
11/24/3

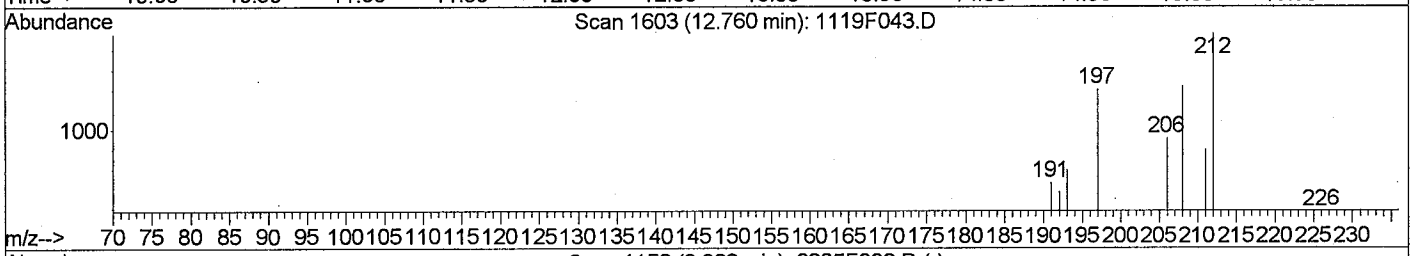
1119F043.D 1107ALK.M Fri Nov 21 12:28:06 2003

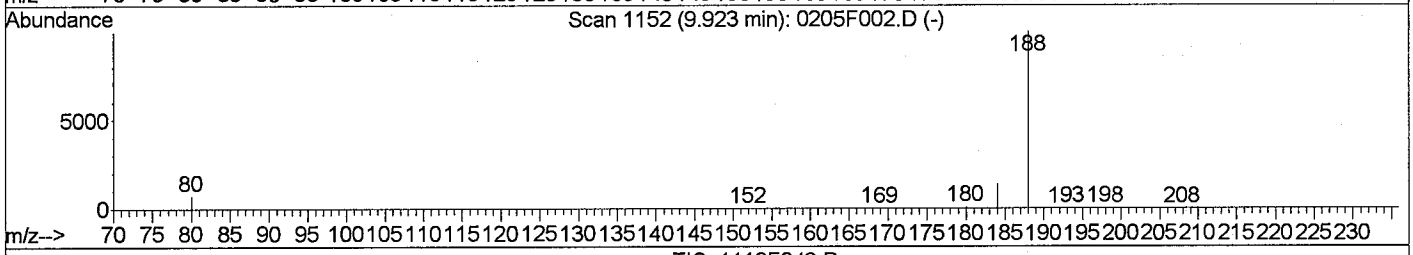
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:28 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(20) C3-Fluorenes (L)

12.76min 168.52ng/ml m

response 28832

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	41.40#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

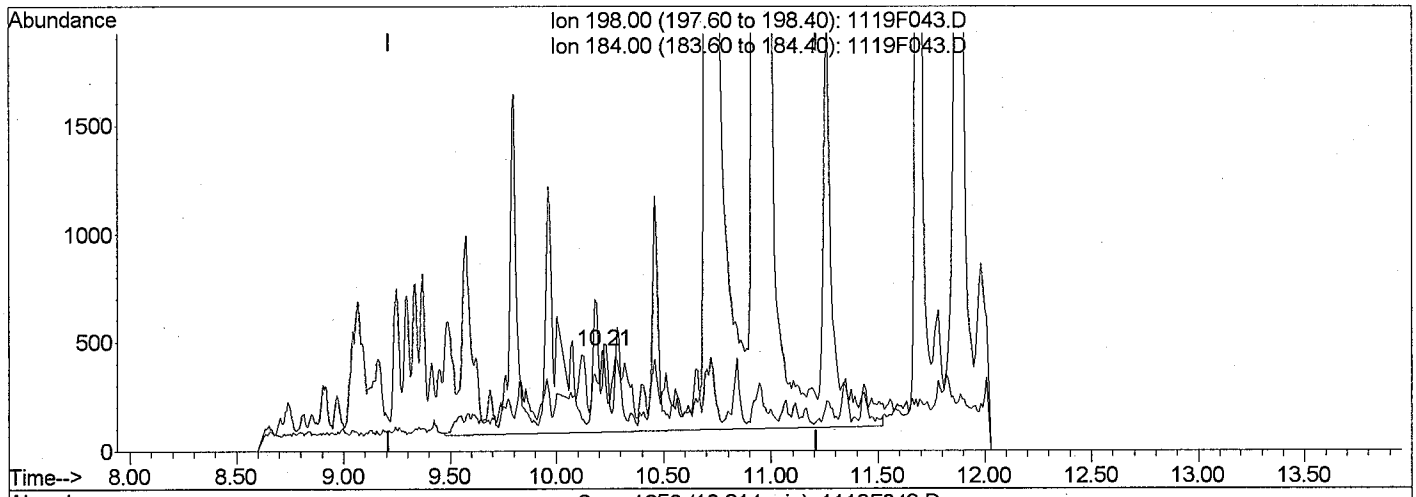
11/24/13

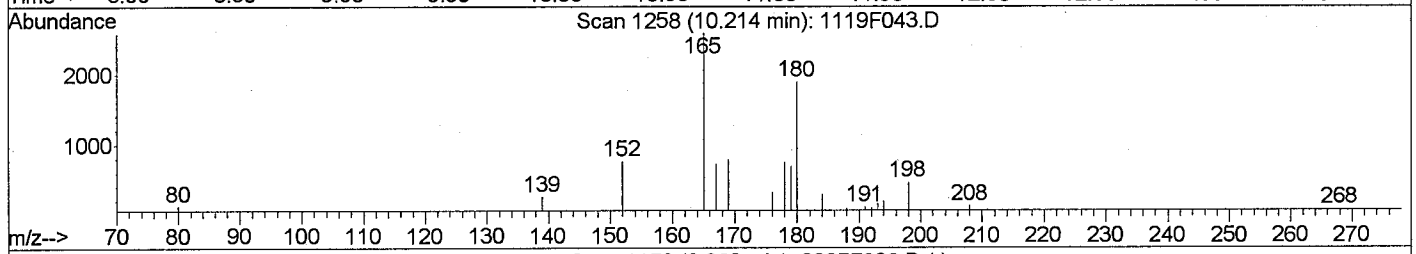
1119F043.D 1107ALK.M Fri Nov 21 12:28:21 2003

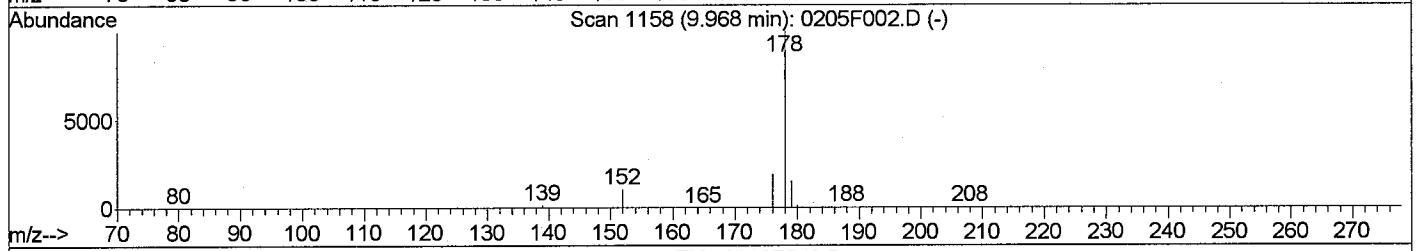
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:28 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(25) C1-Dibenzothiophenes (L)

10.21min 67.21ng/ml m

response 15044

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	64.29#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

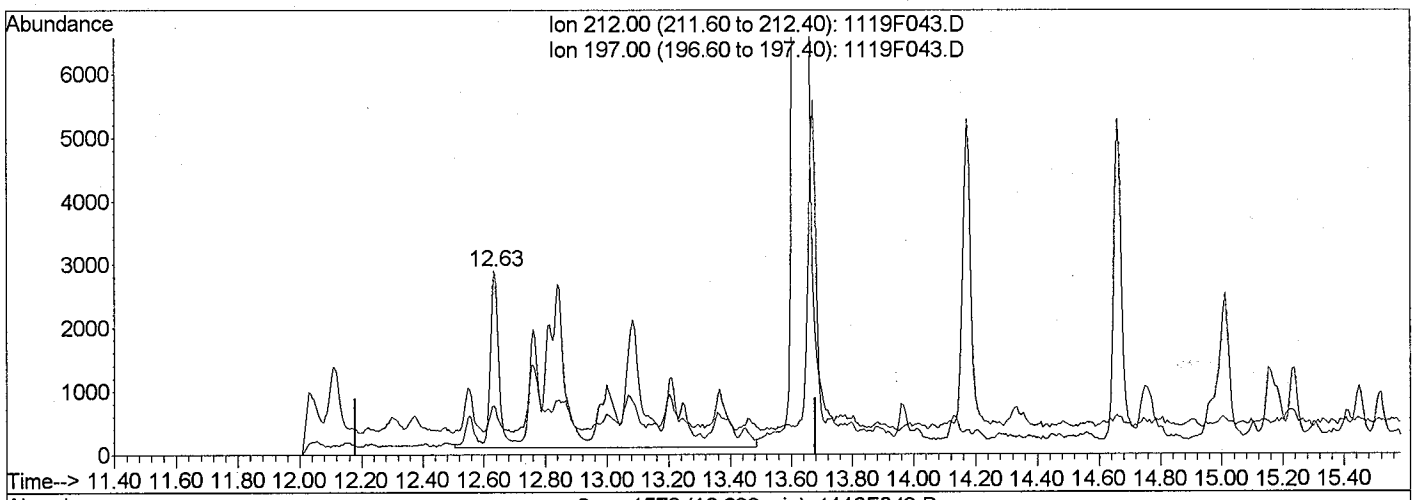
11/18/03

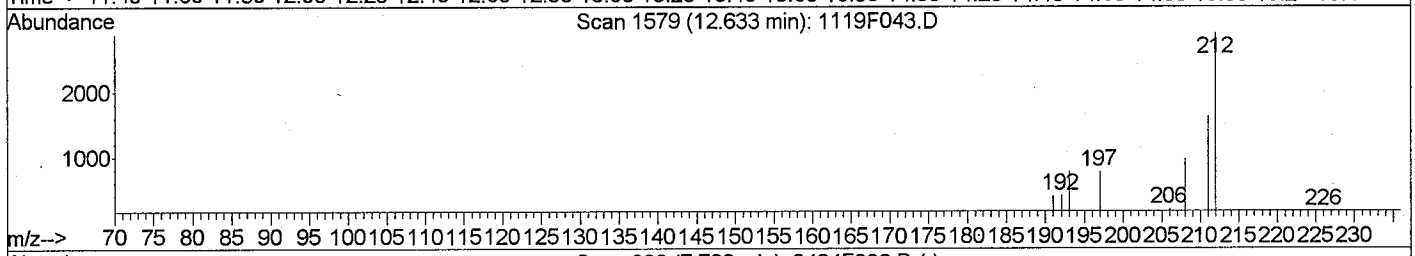
1119F043.D 1107ALK.M Fri Nov 21 12:28:40 2003

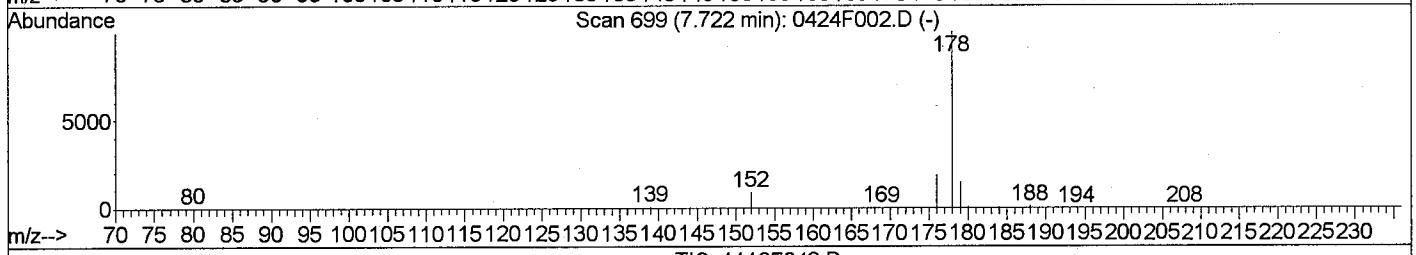
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:28 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(26) C2-Dibenzothiophenes (L)

12.63min 167.10ng/ml m

response 37403

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	26.75
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

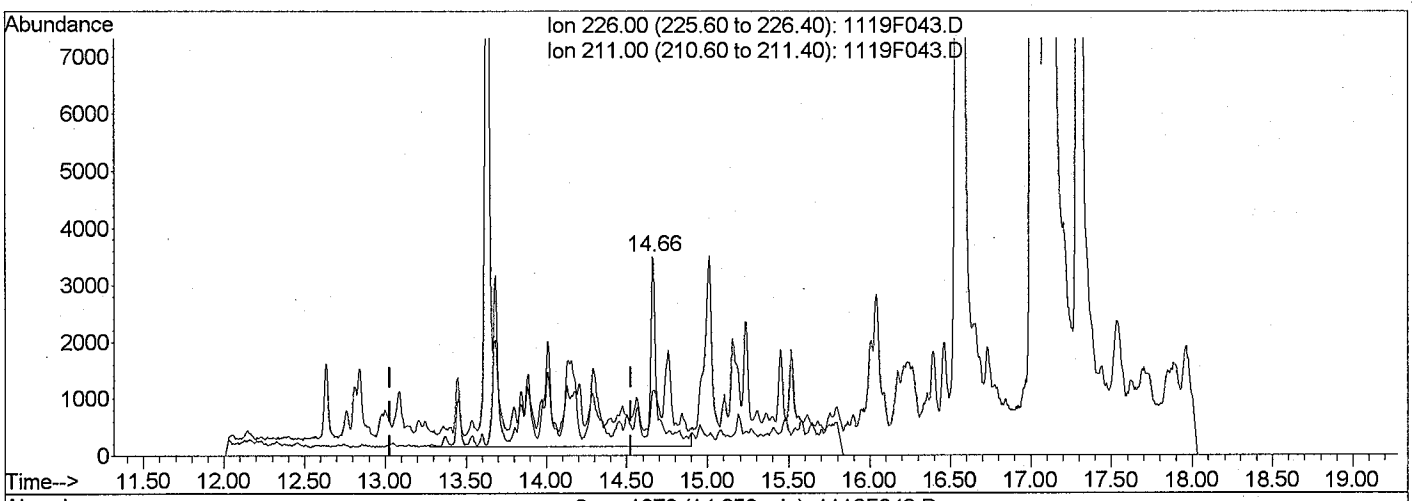
11/24/03

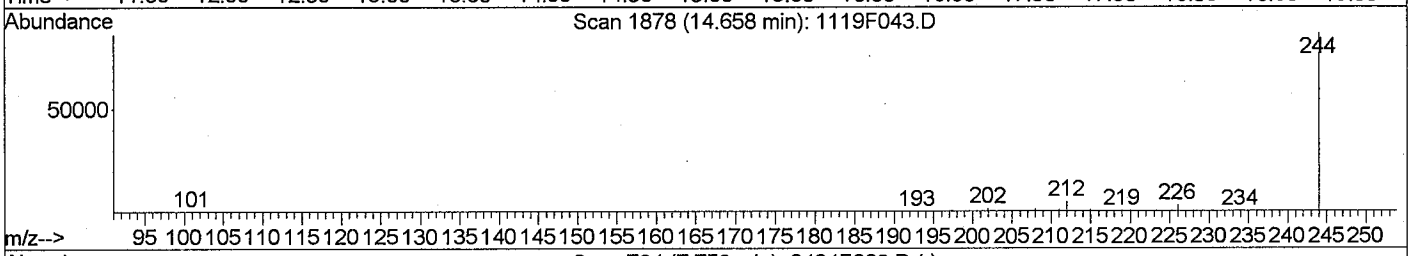
1119F043.D 1107ALK.M Fri Nov 21 12:28:51 2003

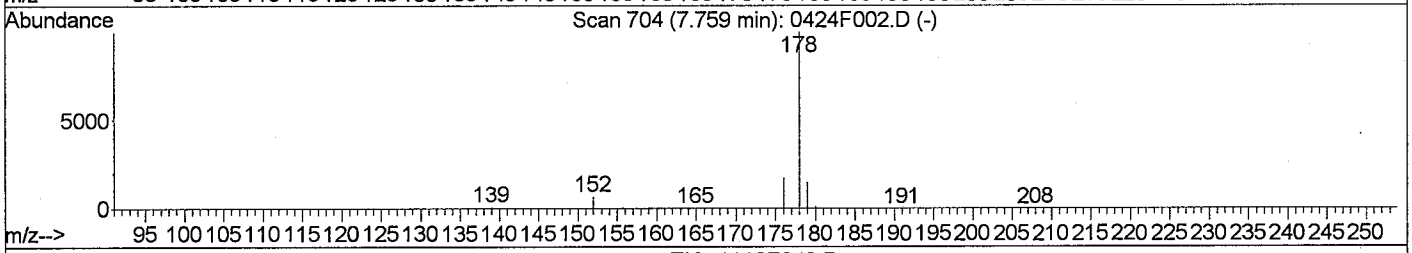
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(27) C3-Dibenzothiophenes (L)

14.66min 217.48ng/ml m

response 48679

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	32.07
0.00	0.00	0.00
0.00	0.00	0.00

J 11/24/13

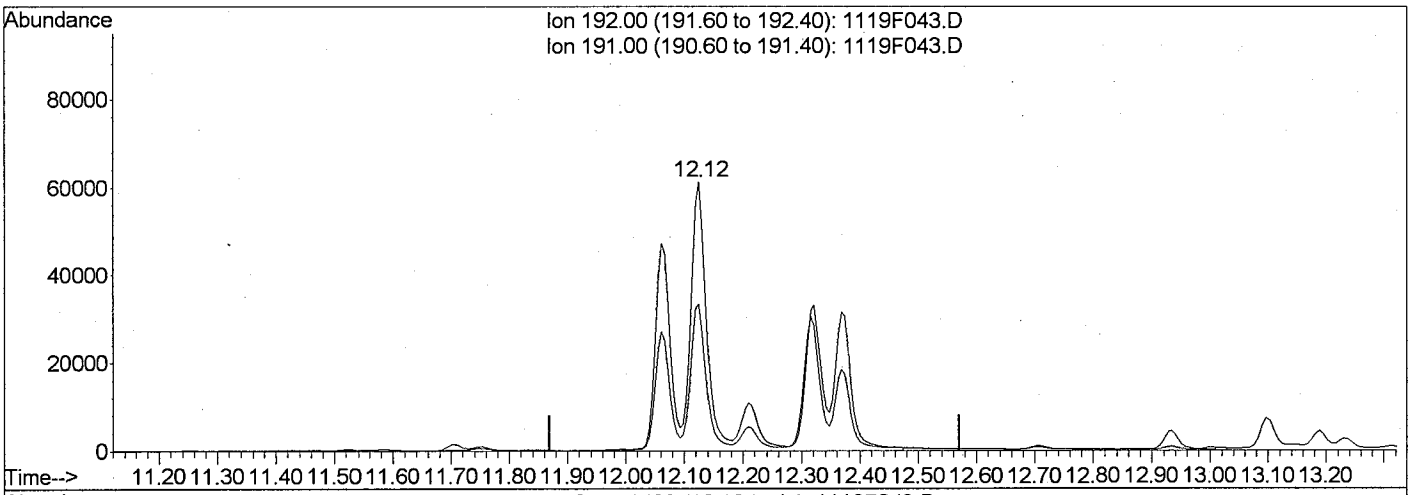
J 11/24/13

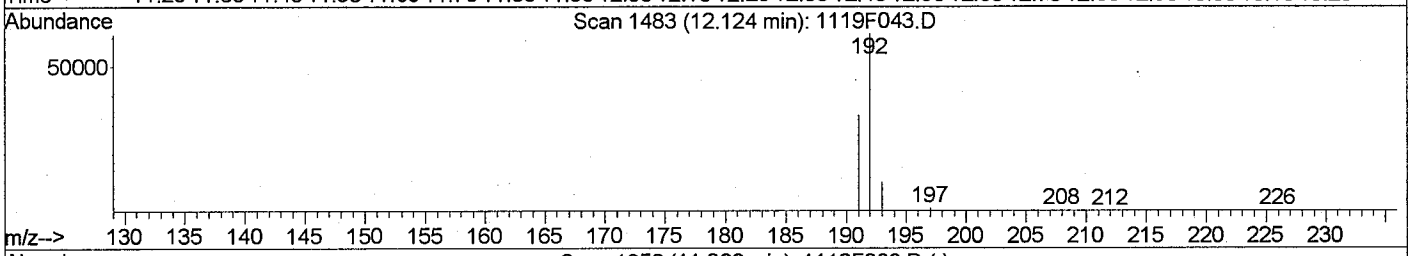
1119F043.D 1107ALK.M Fri Nov 21 12:29:09 2003

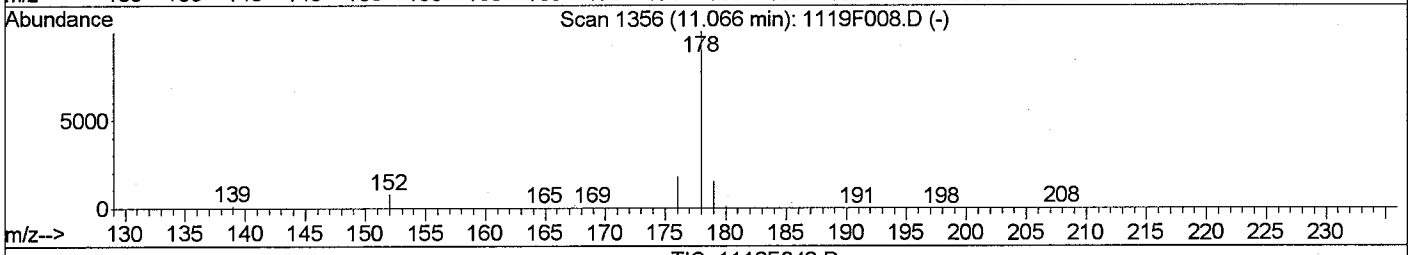
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 1509.52ng/ml m

response 354922

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	54.54
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

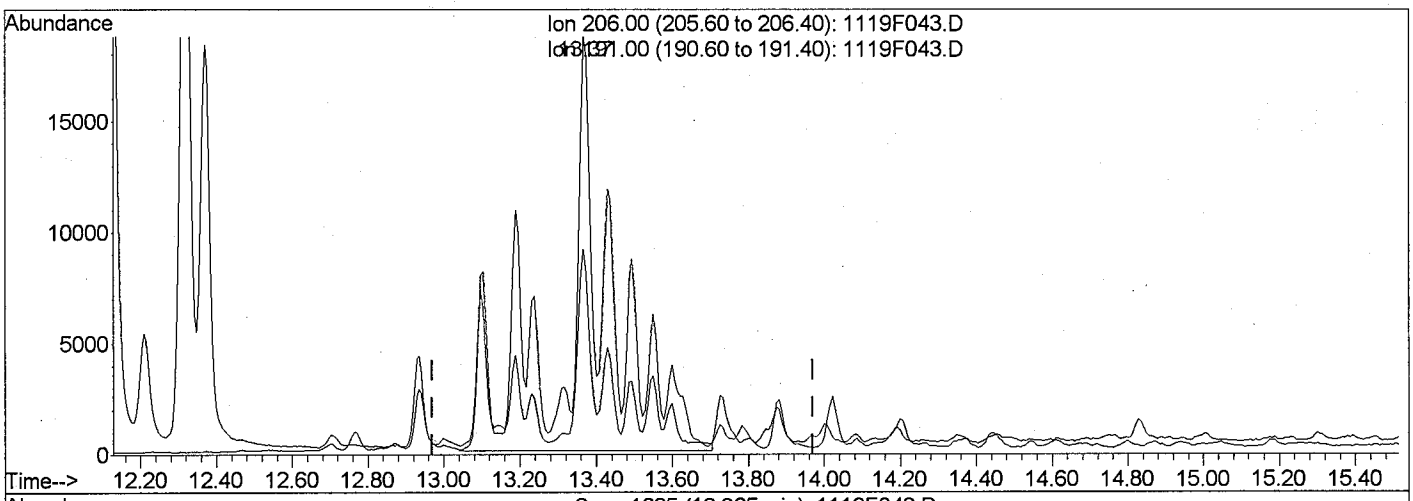
11/24/13

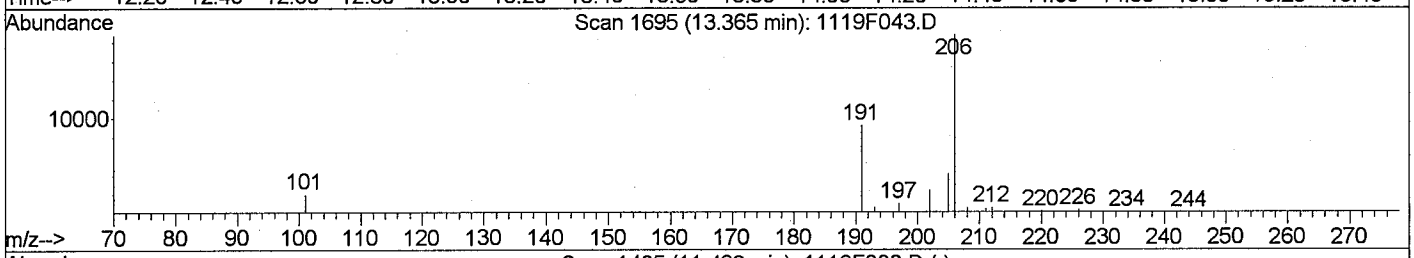
1119F043.D 1107ALK.M Fri Nov 21 12:29:14 2003

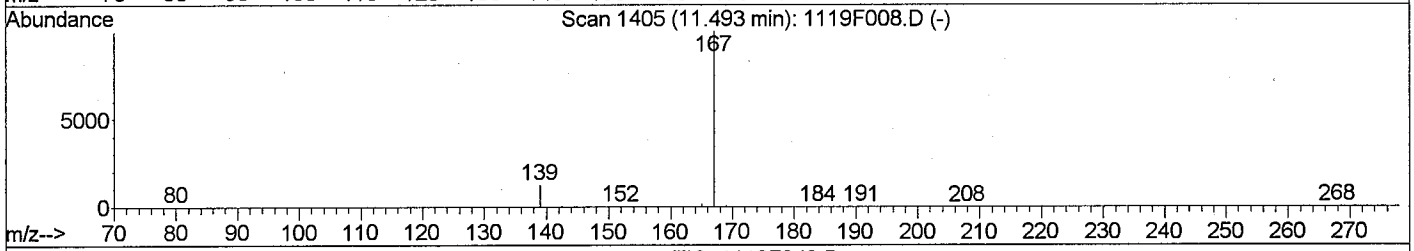
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 681.44ng/ml m

response 160221

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	49.18
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

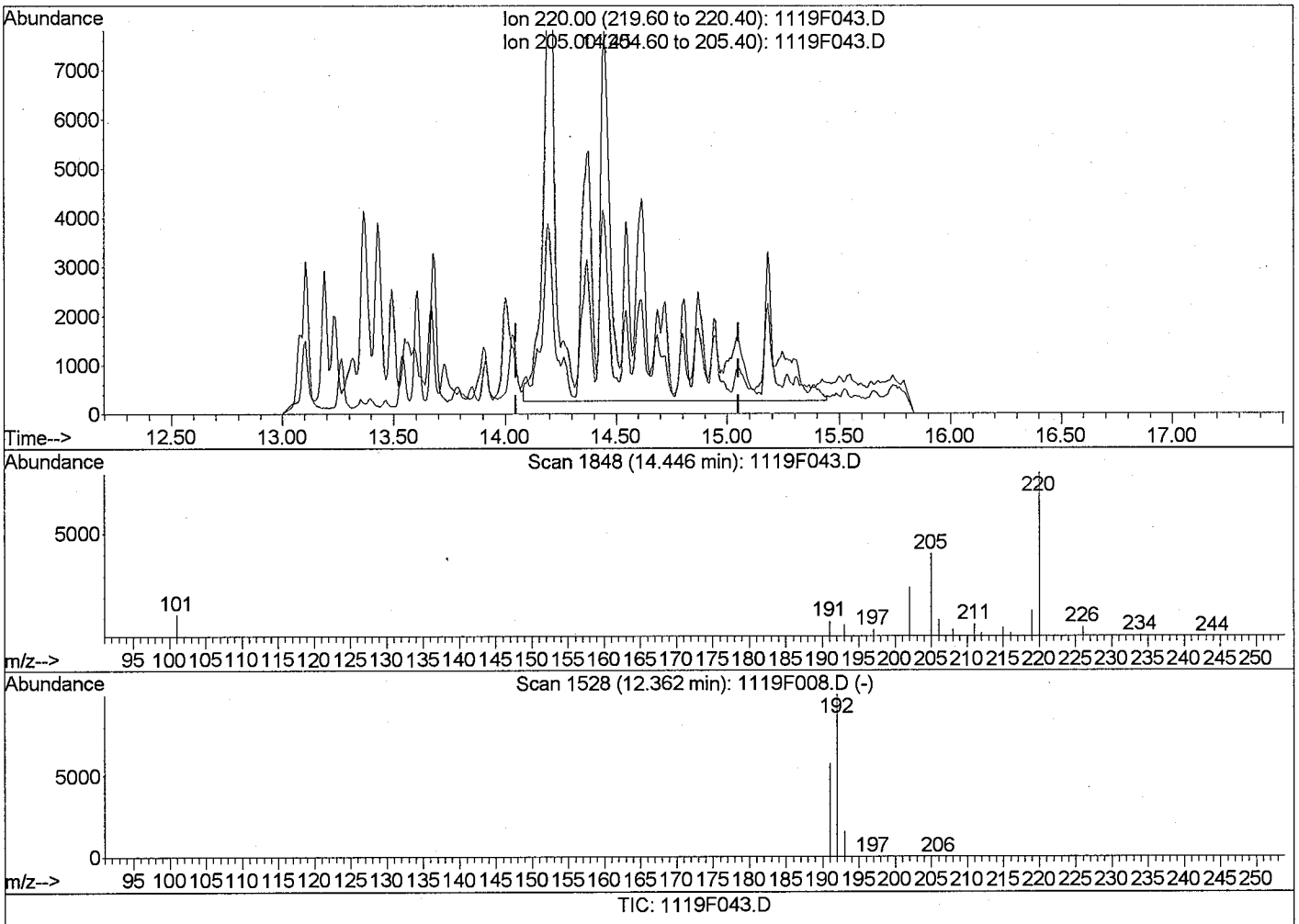
11/24/03

1119F043.D 1107ALK.M Fri Nov 21 12:29:26 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F043.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.45min 445.54ng/ml m

response 104756

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	51.46
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

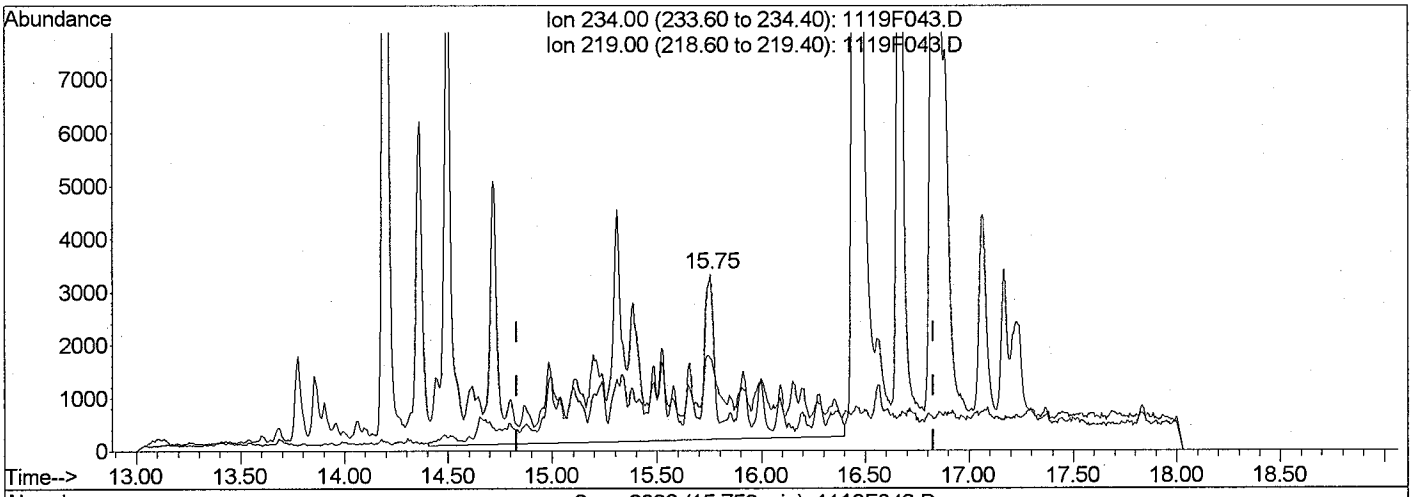
11/21/3

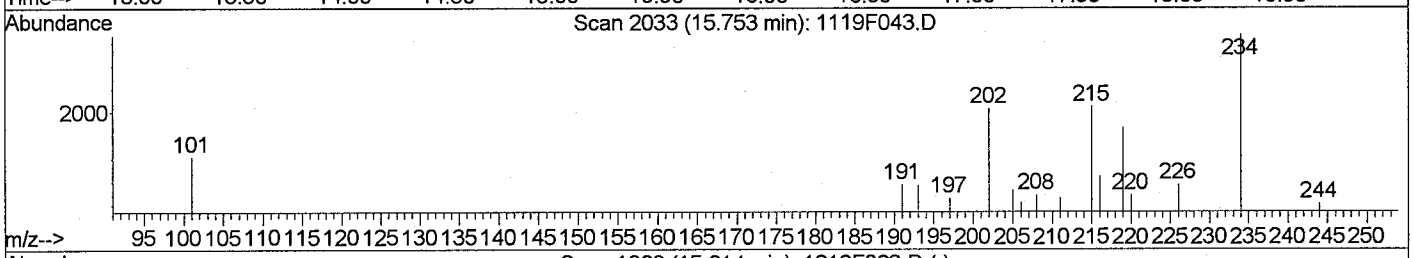
1119F043.D 1107ALK.M Fri Nov 21 12:29:40 2003

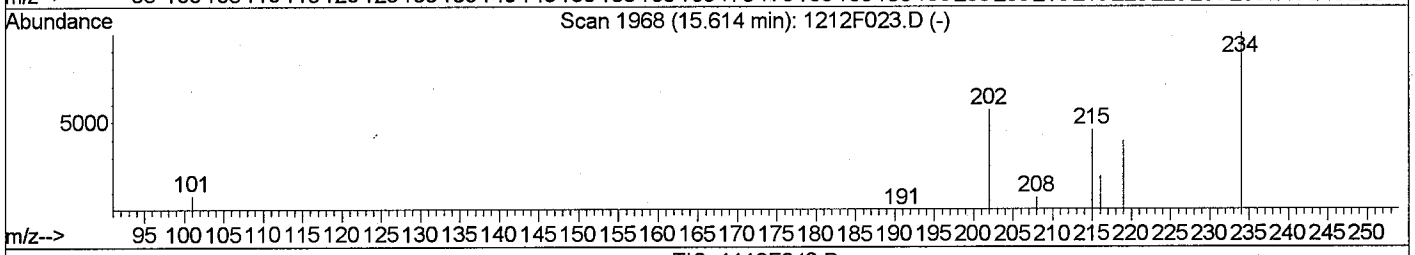
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 297.13ng/ml m

response 69863

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	52.07
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

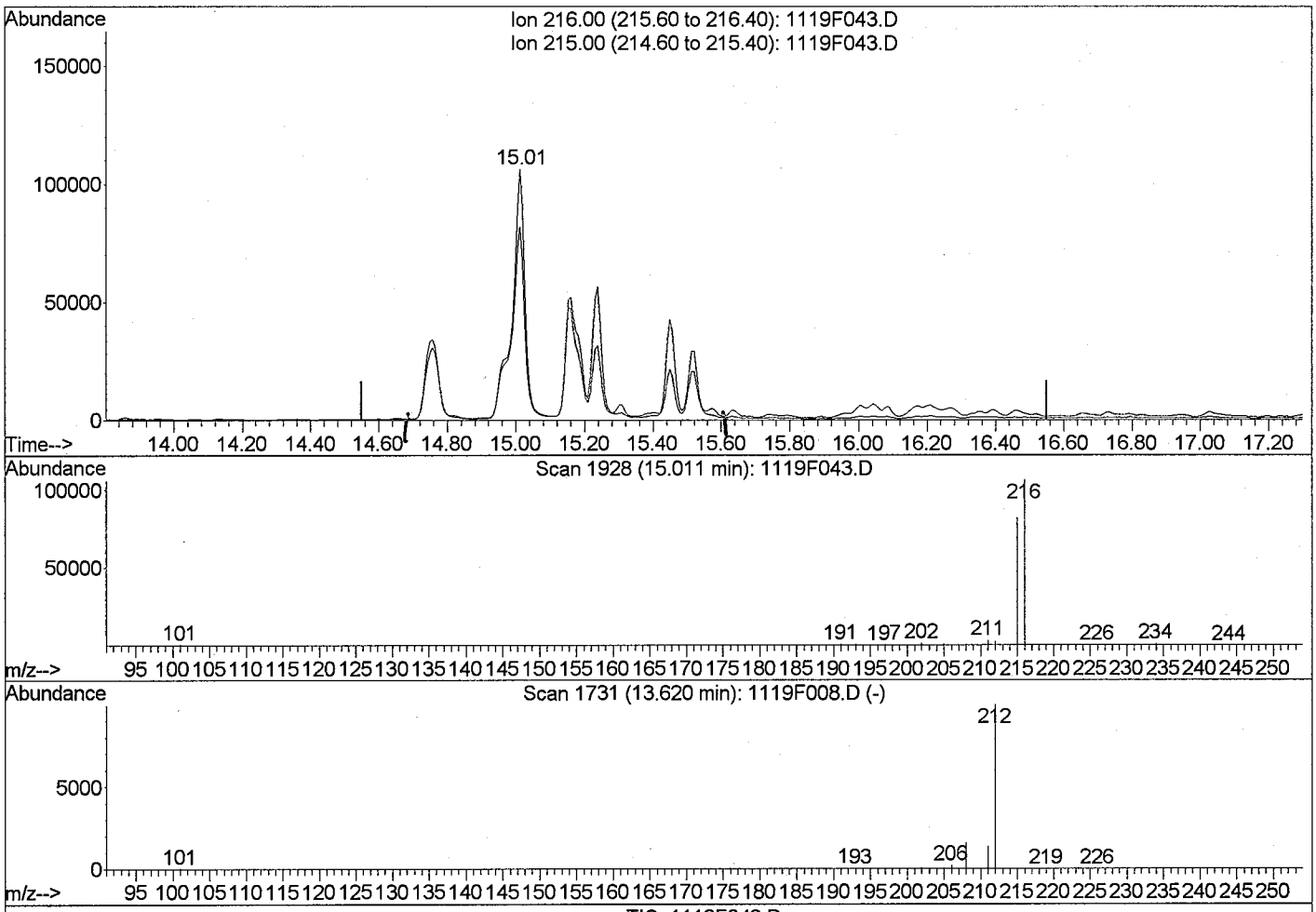
11/24/13

1119F043.D 1107ALK.M Fri Nov 21 12:29:56 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:29 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F043.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 3236.20ng/ml m

response 798855

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	77.18
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

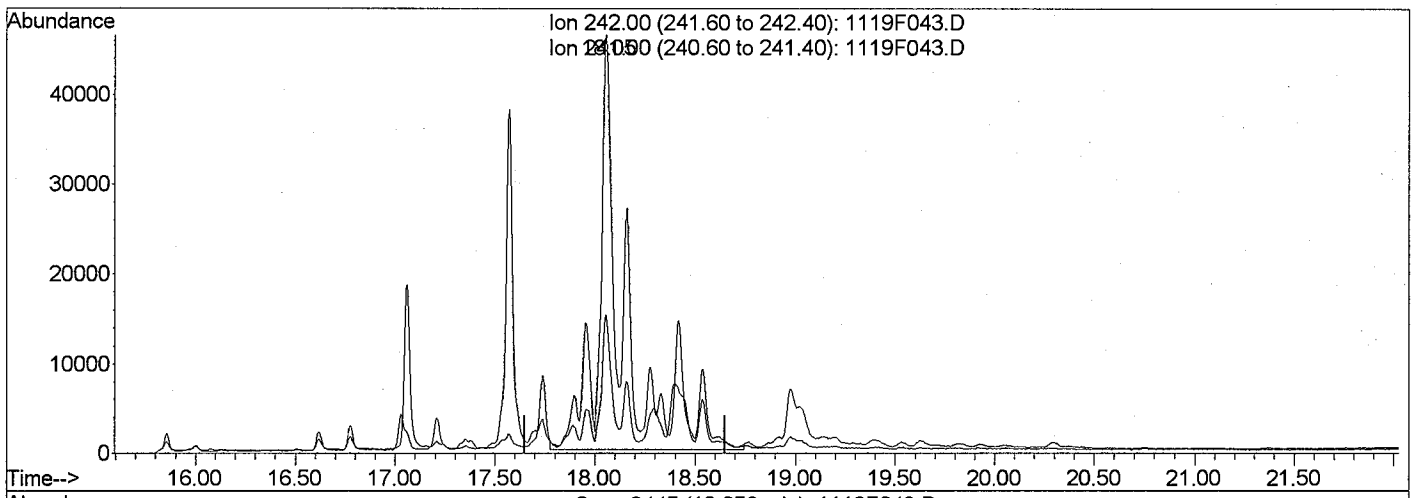
11/24/03

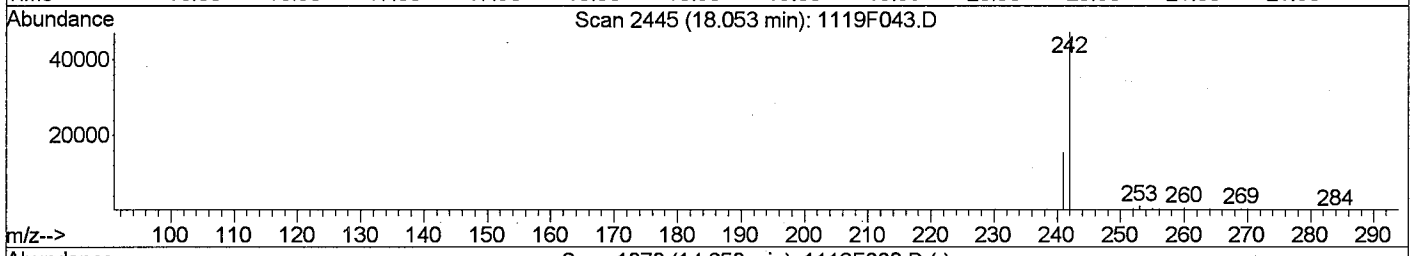
1119F043.D 1107ALK.M Fri Nov 21 12:30:01 2003

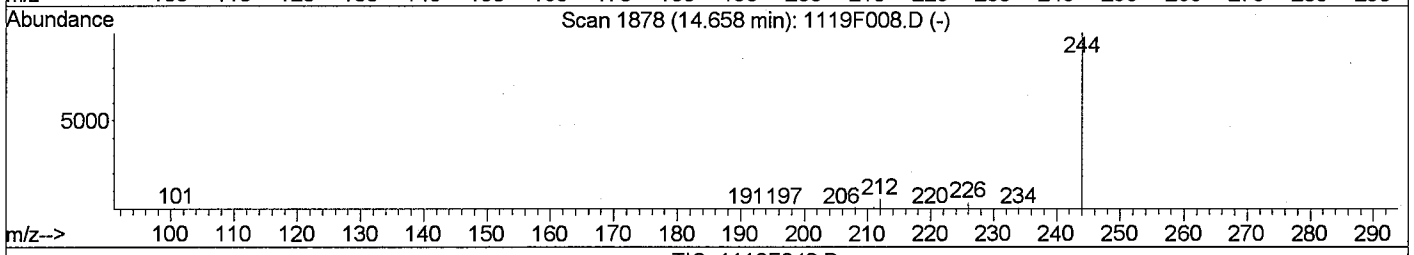
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:30 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(44) C1-Chrysenes (L)

18.05min 2023.50ng/ml m

response 406663

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	32.81
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

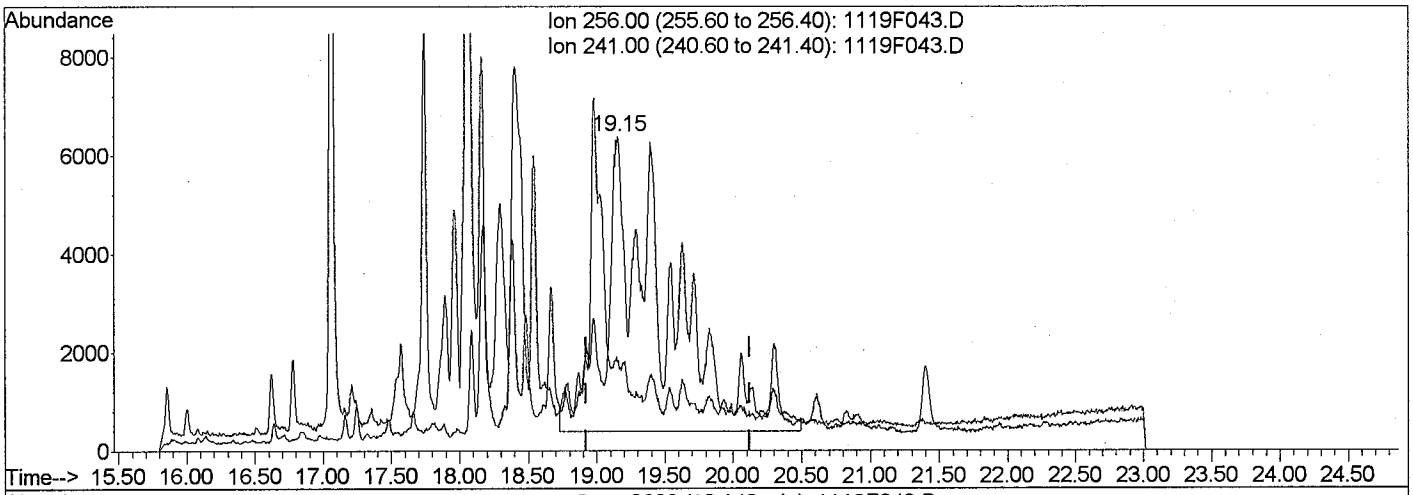
11/24/13

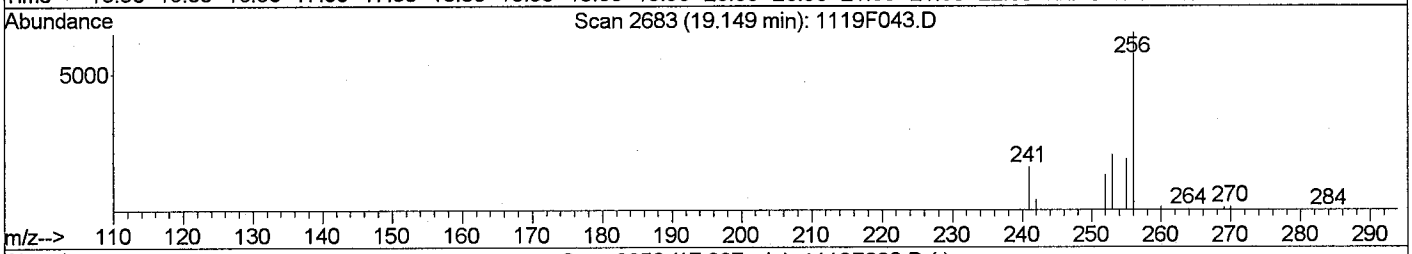
1119F043.D 1107ALK.M Fri Nov 21 12:30:16 2003

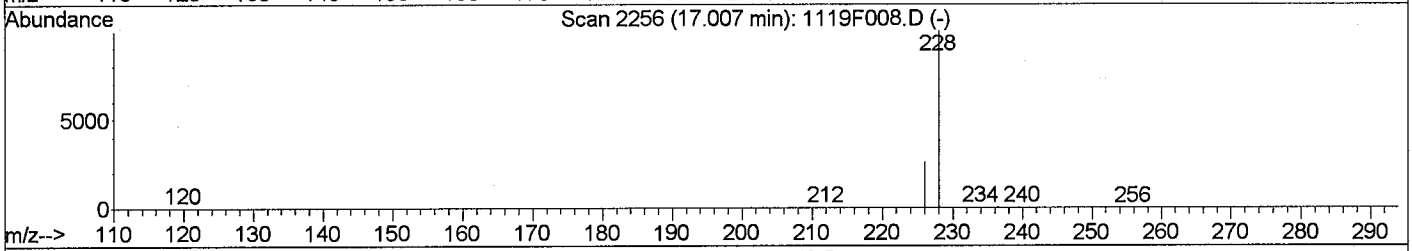
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:31 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(45) C2-Chrysenes (L)

19.15min 905.35ng/ml m

response 181948

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	28.25
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

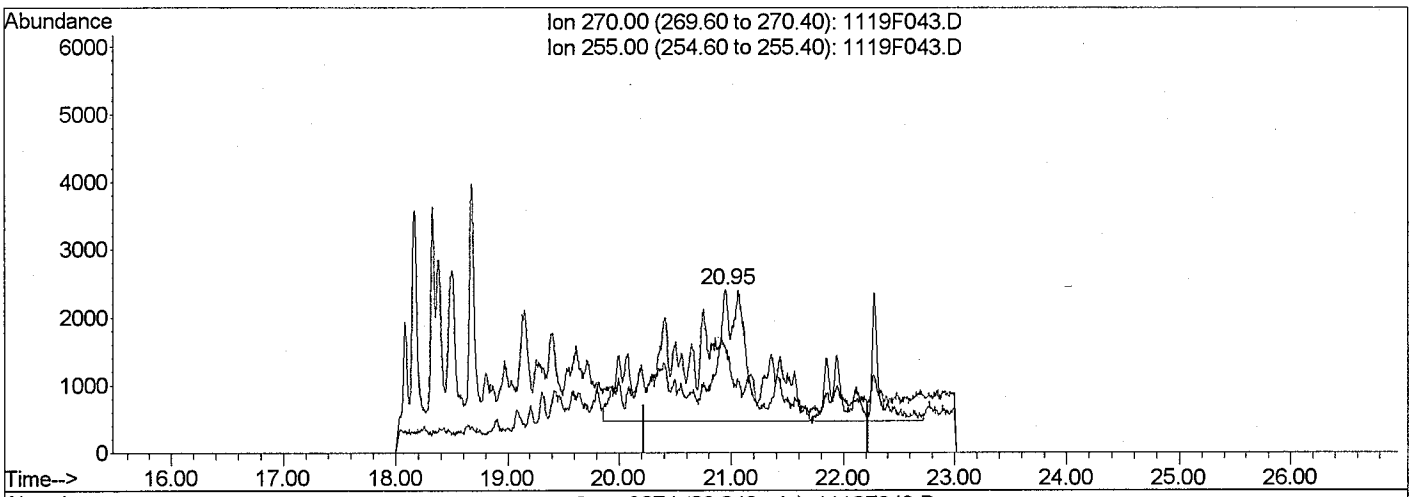
11/24/03

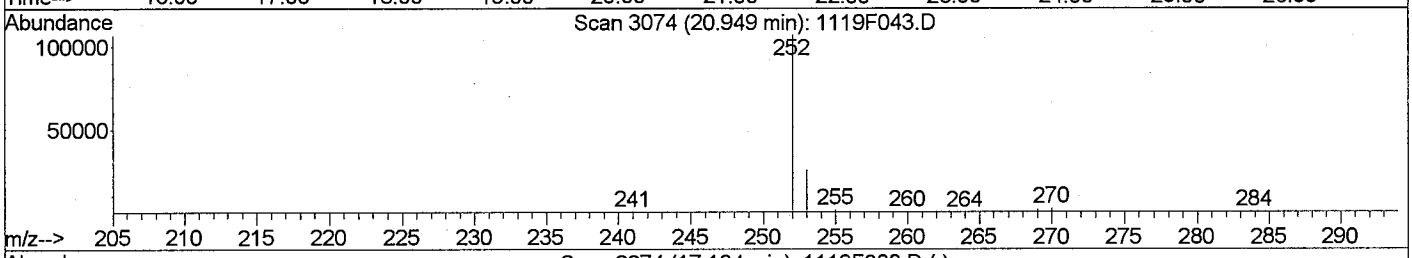
1119F043.D 1107ALK.M Fri Nov 21 12:31:05 2003

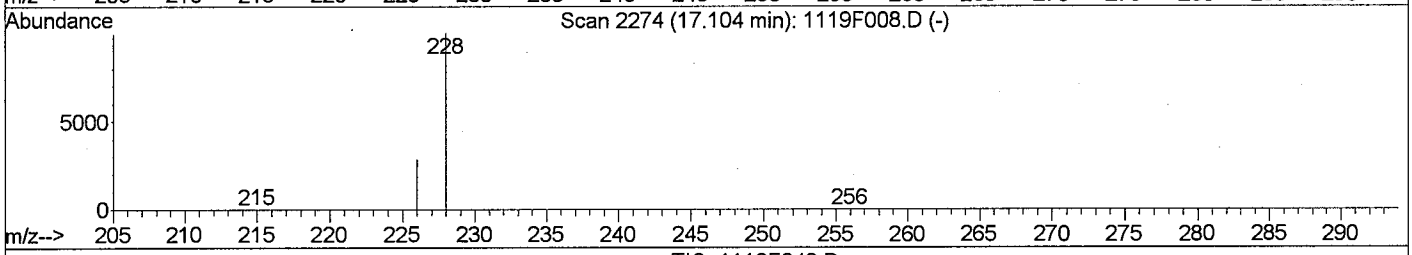
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:31 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F043.D

(46) C3-Chrysenes (L)

20.95min 522.08ng/ml m

response 104923

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	64.01#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

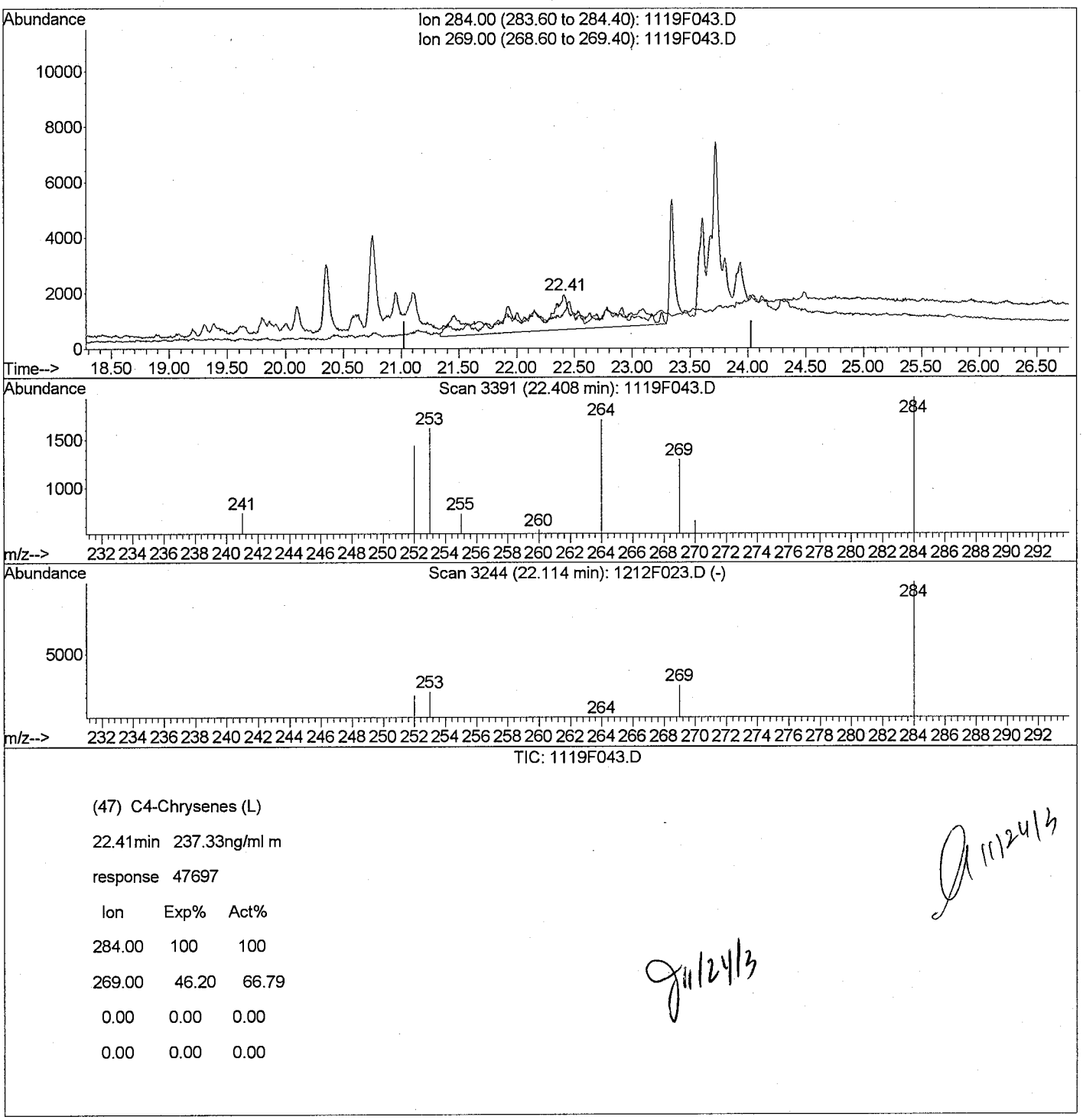
11/24/13

1119F043.D 1107ALK.M Fri Nov 21 12:31:18 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F043.D Vial: 14
Acq On : 19 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : K2308433-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:31 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F043.D

(47) C4-Chrysenes (L)

22.41min 237.33ng/ml m

response 47697

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	66.79
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

11/24/3

1119F043.D 1107ALK.M Fri Nov 21 12:31:27 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F010.D
Lab ID: K2308433-007
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 10:37
Date Quantitated: 11/24/2003 09:19
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/24/13

Secondary Review: 11.24.13

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247865	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F010.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 10:37	**Quant Date:**	11/24/2003 09:19	**Vial:**	7
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	228002	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	115492	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	149045	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	129201	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	74133	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	6142	53.17	53	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	10499	70.38	70	34-122	OK	NR
4	Terphenyl-d14	14.67	0.01	0.00	244	9961	84.59	85	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	2735	10.61	9.8	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	1898	12.47	12	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	1209	8.47	7.9	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	551	2.98	2.8	JD	NR
1	C2-Naphthalenes				156	0		32	U	NR
1	C3-Naphthalenes				170	0		32	U	NR
1	C4-Naphthalenes				184	0		32	U	NR
2	Acenaphthylene	7.74		0.00	152	2111	9.49	8.8	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	3850	28.07	26	JD	NR
2	Dibenzofuran	8.36	0.02	0.00	168	3062	16.66	15	JD	NR
2	Fluorene	9.00	0.01	0.00	166	4839	32.94	31	JD	NR
2	C1-Fluorenes				180	0		32	U	NR
2	C2-Fluorenes				194	0		32	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F010.D		**Instrument:** MS11
Acqu Date:	11/20/2003 10:37	**Quant Date:** 11/24/2003 09:19	**Vial:** 7
Run Type:	DL		**Dilution:** 10.0
Lab ID:	K2308433-007		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		32	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	5064	29.45	27	JD	NR
3	C1-Dibenzothiophenes				198	0		32	U	NR
3	C2-Dibenzothiophenes				212	0		32	U	NR
3	C3-Dibenzothiophenes				226	0		32	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	117846	652.39	600	D	NR
3	Anthracene	11.08		0.00	178	13226	85.70	79	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		32	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		32	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		32	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		32	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	218140	1,213	1100	D	
4	Pyrene	14.17		0.00	202	174047	1,031	960	D	
4	C1-Fluoranthenes/Pyrenes				216	0		32	U	NR
4	Benz(a)anthracene	17.02		0.00	228	47657	370.66	340	D	NR
4	Chrysene	17.12		0.00	228	76306	555.00	510	D	NR
4	C1-Chrysenes				242	0		32	U	NR
4	C2-Chrysenes				256	0		32	U	NR
4	C3-Chrysenes				270	0		32	U	NR
4	C4-Chrysenes				284	0		32	U	NR
5	Benzo(b)fluoranthene	20.01	0.01	0.00	252	50635	511.62	470	D	NR
5	Benzo(k)fluoranthene	20.08		0.00	252	55427**m**	441.37	410	D	NR
5	Benzo(e)pyrene	20.99	0.02	0.00	252	38747	348.69	320	D	NR
5	Benzo(a)pyrene	21.16		0.00	252	35319	419.55	390	D	NR
5	Perylene	21.51	0.01	0.00	252	10210	108.04	100	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	21786	425.71	390	D	NR
5	Dibenz(a,h)anthracene	24.08		0.00	278	3710**m**	50.44	47	JD	NR
5	Benzo(g,h,i)perylene	24.50	0.01	0.00	276	22699	267.54	250	D	NR

Prep Amount:	27.3 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	79.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F010.D Vial: 7
Acq On : 20 Nov 2003 10:37 am Operator: LWeiskopf
Sample : K2308433-007DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:36 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	228002	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	115492	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	149045	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	129201	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	74133	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	6015	36.01	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	3.60%		
16) Fluorene-d10	8.95	176	6142	53.17	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	5.32%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	10499	70.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.04%		
41) Terphenyl-d14	14.67	244	9961	84.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.46%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	2735	10.61	ng/ml	100
3) 2-Methylnaphthalene	6.38	142	1898	12.47	ng/ml	95
4) 1-Methylnaphthalene	6.52	142	1209	8.47	ng/ml	93
6) Biphenyl	7.05	154	551	2.98	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.28	156	914	7.04	ng/ml	93
12) Acenaphthylene	7.74	152	2111	9.49	ng/ml	100
13) Acenaphthene	8.06	154	3850	28.07	ng/ml	100
14) Dibenzofuran	8.36	168	3062	16.66	ng/ml	87
15) 2,3,5-Trimethylnaphthalene	8.77	170	248m	2.02	ng/ml	
17) Fluorene	9.00	166	4839	32.94	ng/ml	96
24) Dibenzothiophene	10.72	184	5064	29.45	ng/ml	99
28) Phenanthrene	10.98	178	117846	652.39	ng/ml	99
29) Anthracene	11.08	178	13226	85.70	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	3806	31.03	ng/ml	99
36) Fluoranthene	13.67	202	218140	1213.17	ng/ml	98
39) Pyrene	14.17	202	174047	1030.62	ng/ml	96
42) Benz(a)anthracene	17.02	228	47657	370.66	ng/ml	99
43) Chrysene	17.12	228	76306	555.00	ng/ml	100
49) Benzo(b)fluoranthene	20.01	252	50635	511.62	ng/ml	100
50) Benzo(k)fluoranthene	20.08	252	55427m	441.37	ng/ml	
51) Benzo(e)pyrene	20.99	252	38747	348.69	ng/ml	98
52) Benzo(a)pyrene	21.16	252	35319	419.55	ng/ml	99
53) Perylene	21.51	252	10210	108.04	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F010.D Vial: 7
Acq On : 20 Nov 2003 10:37 am Operator: LWeiskopf
Sample : K2308433-007DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:36 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

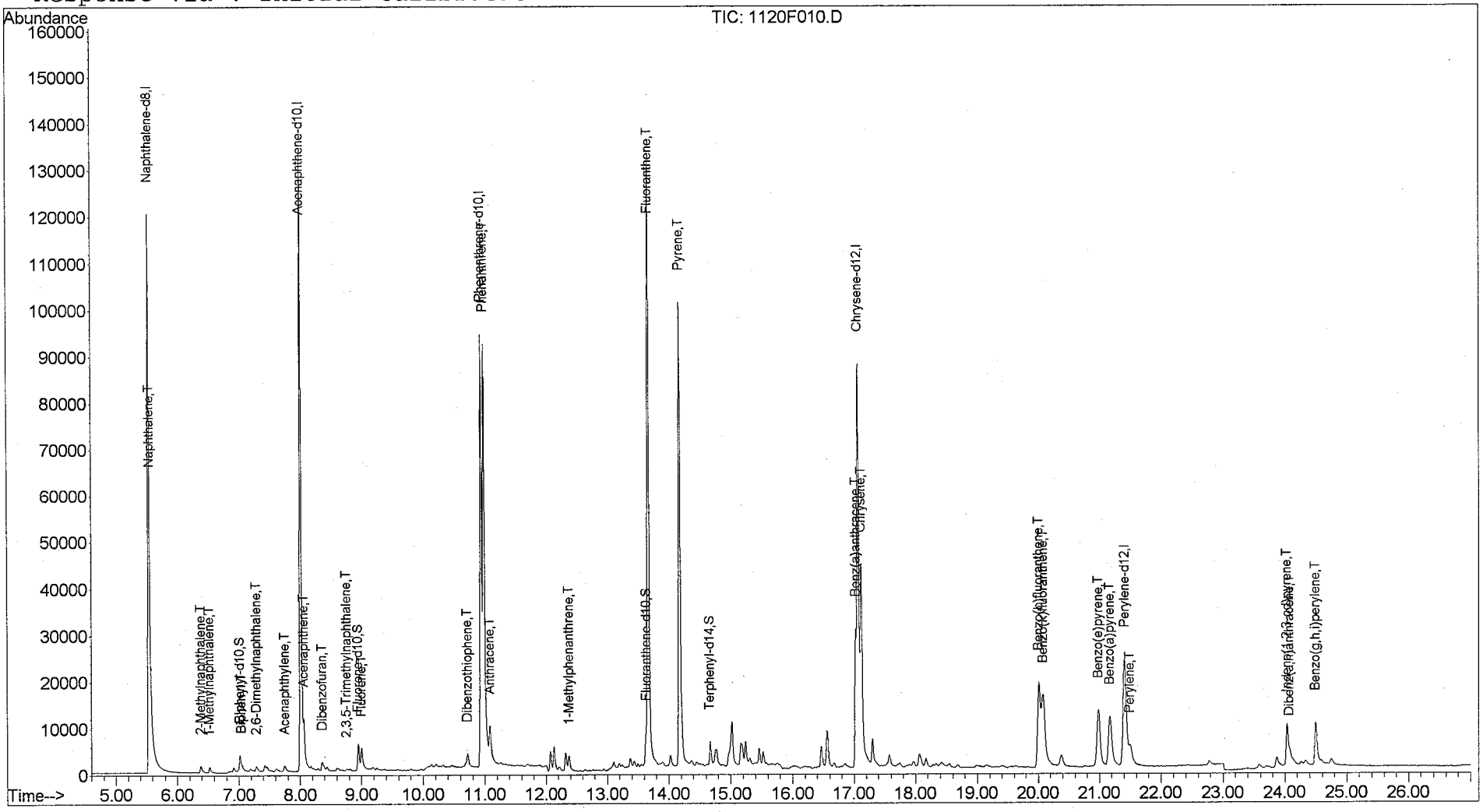
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54)	Indeno(1,2,3-cd)pyrene	24.03	276	21786	425.71	ng/ml	94
55)	Dibenz(a,h)anthracene	24.08	278	3710m	50.44	ng/ml	
56)	Benzo(g,h,i)perylene	24.50	276	22699	267.54	ng/ml	99

(#) = qualifier out of range (m) = manual integration

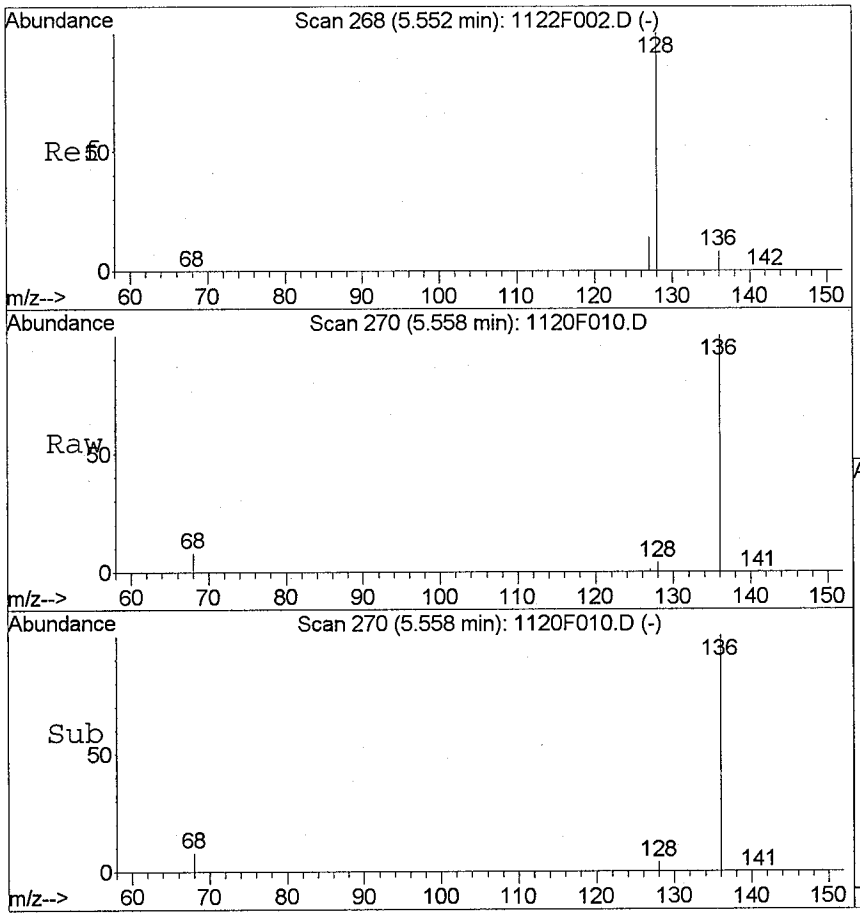
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F010.D Vial: 7
Acq On : 20 Nov 2003 10:37 am Operator: LWeiskopf
Sample : K2308433-007DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



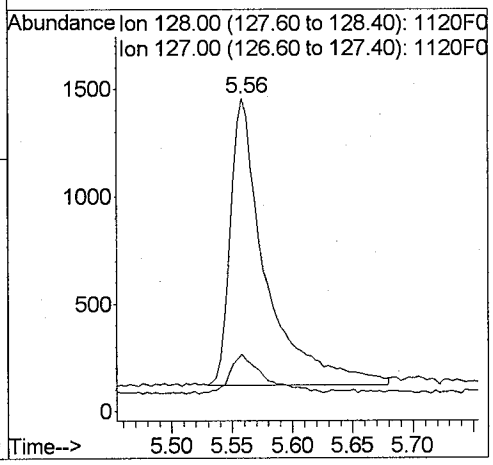
1335

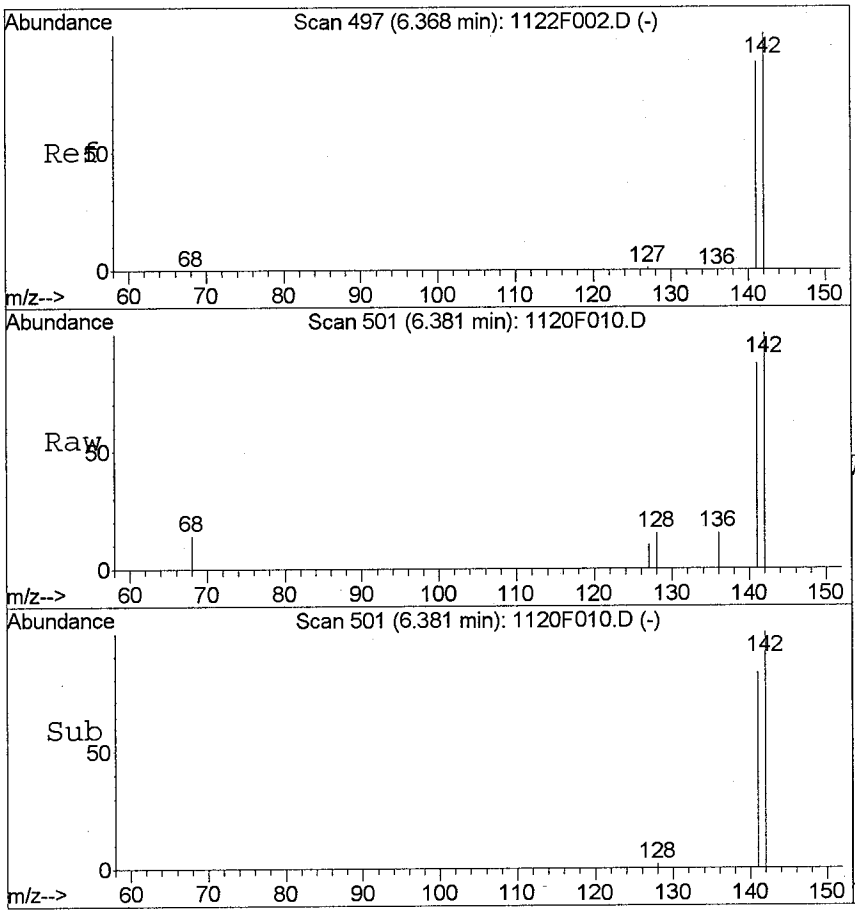


#2
Naphthalene
Concen: 10.61 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.00 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:128 Resp: 2735

Ion	Ratio	Lower	Upper
128	100		
127	13.5	0.0	43.6

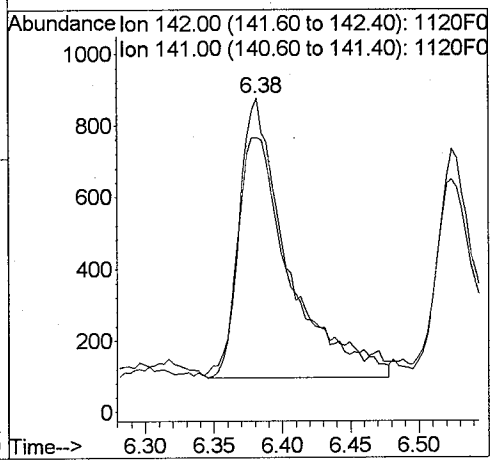


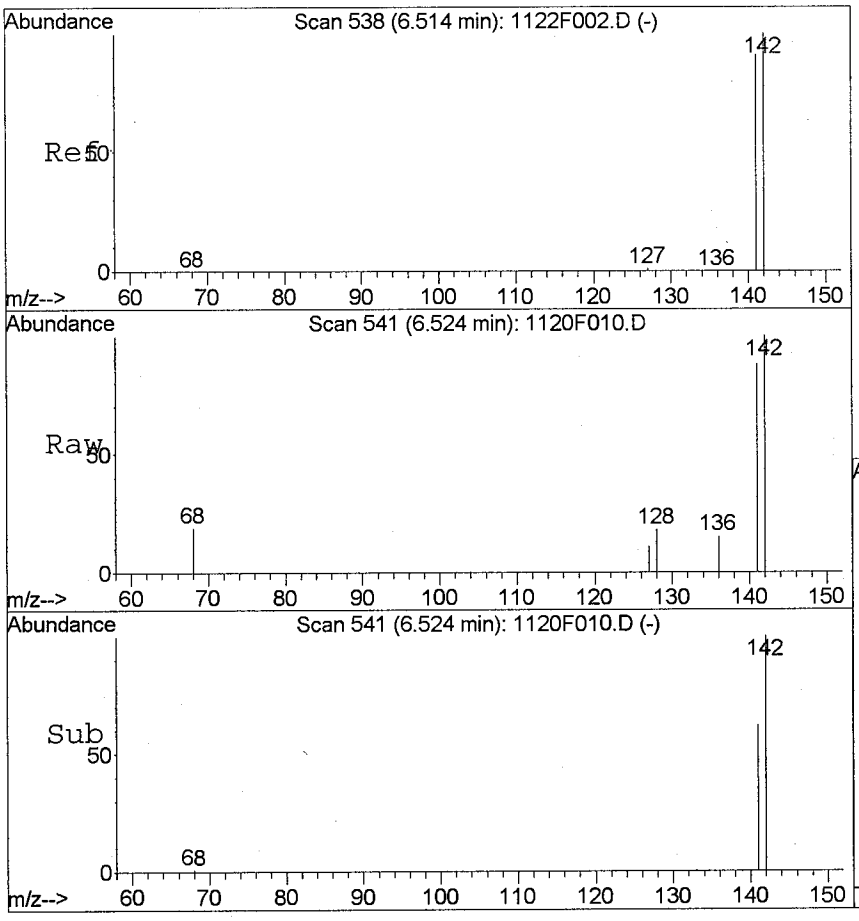


#3
2-Methylnaphthalene
Concen: 12.47 ng/ml
RT: 6.38 min Scan# 501
Delta R.T. 0.02 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:142 Resp: 1898

Ion	Ratio	Lower	Upper
142	100		
141	83.7	58.1	118.1

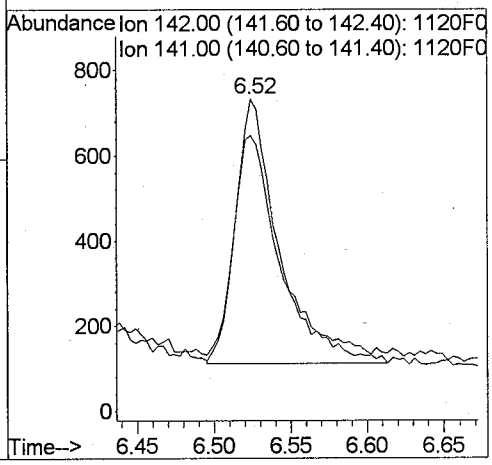


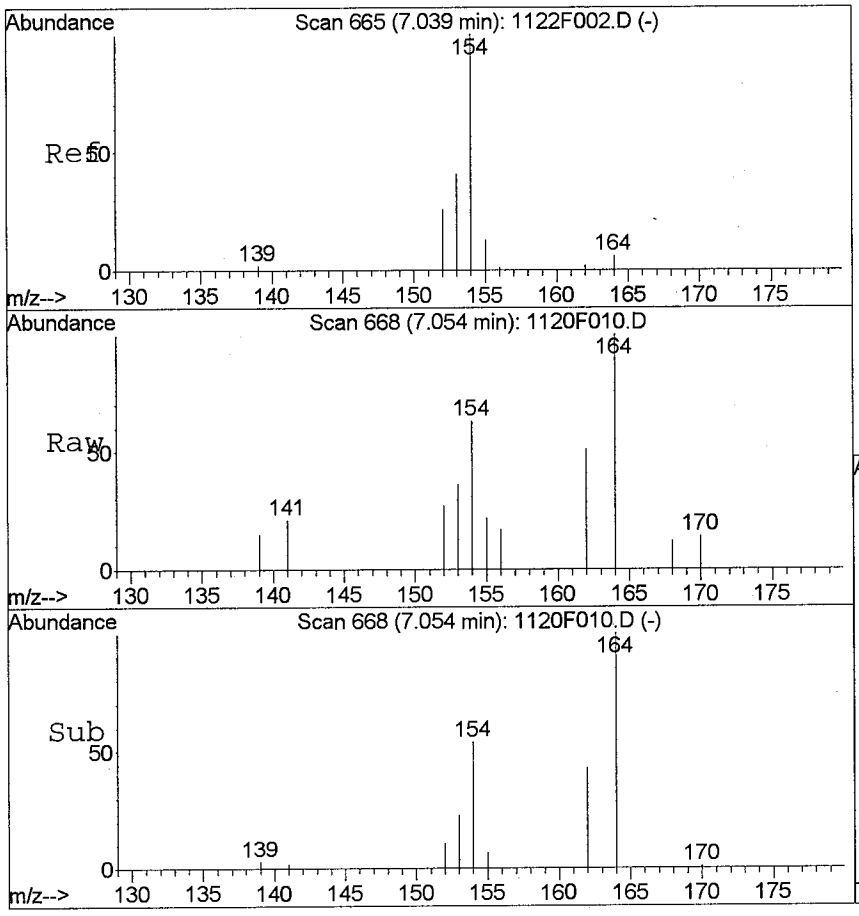


#4
1-Methylnaphthalene
Concen: 8.47 ng/ml
RT: 6.52 min Scan# 541
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:142 Resp: 1209

Ion	Ratio	Lower	Upper
142	100		
141	82.9	59.3	119.3

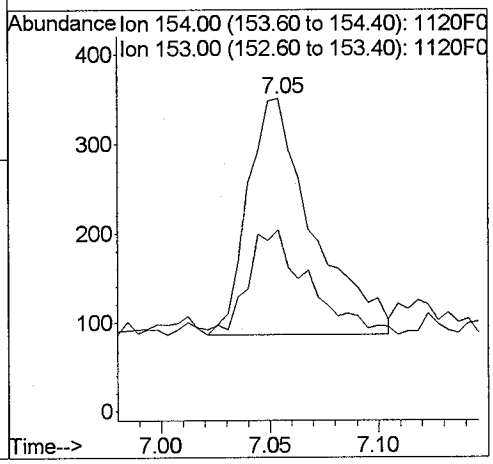


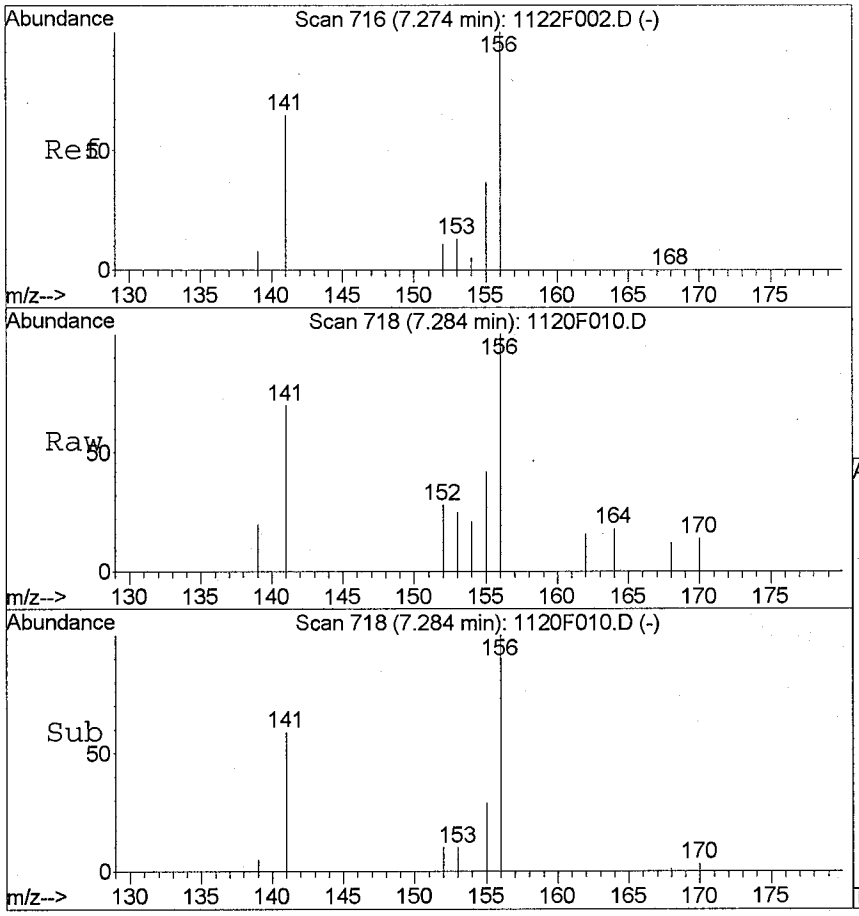


#6
Biphenyl
Concen: 2.98 ng/ml
RT: 7.05 min Scan# 668
Delta R.T. 0.02 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:154 Resp: 551

Ion	Ratio	Lower	Upper
154	100		
153	42.3	11.3	71.3

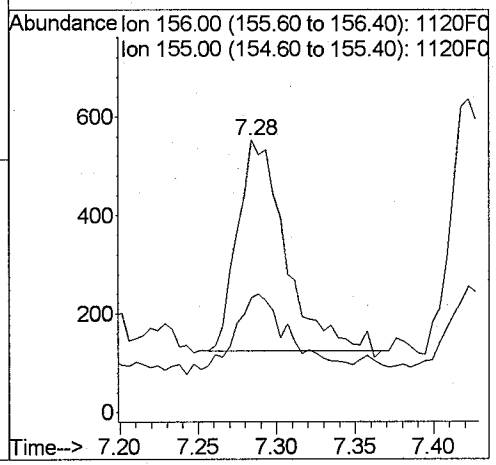


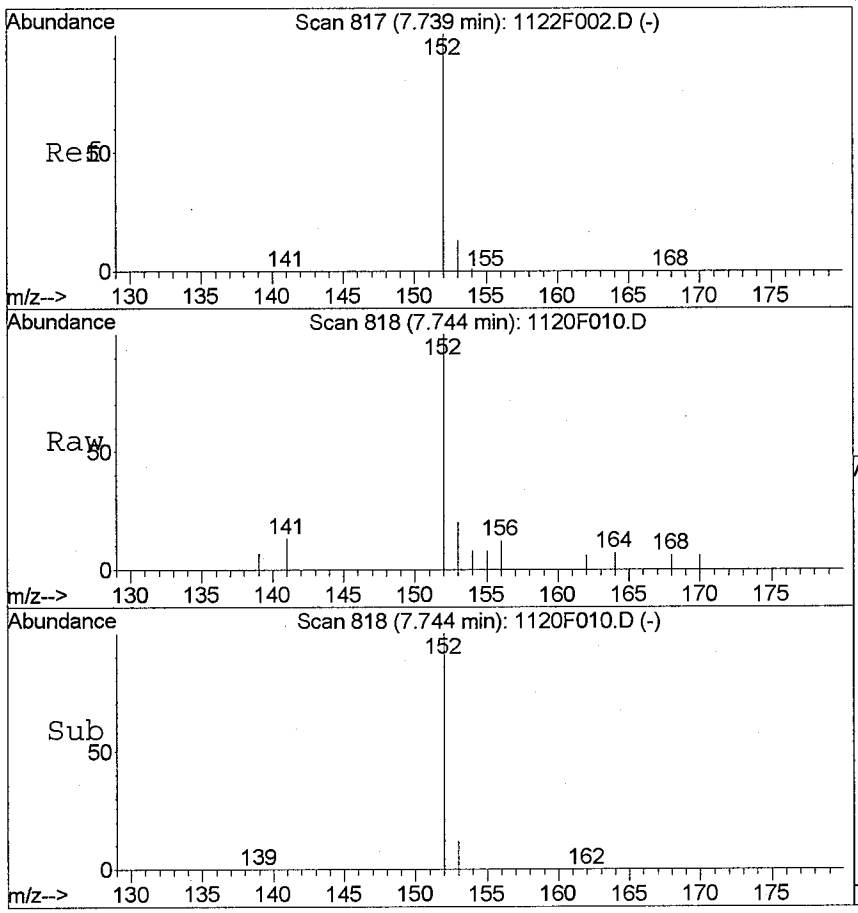


#7
2,6-Dimethylnaphthalene
Concen: 7.04 ng/ml
RT: 7.28 min Scan# 718
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:156 Resp: 914

Ion	Ratio	Lower	Upper
156	100		
155	33.1	7.1	67.1

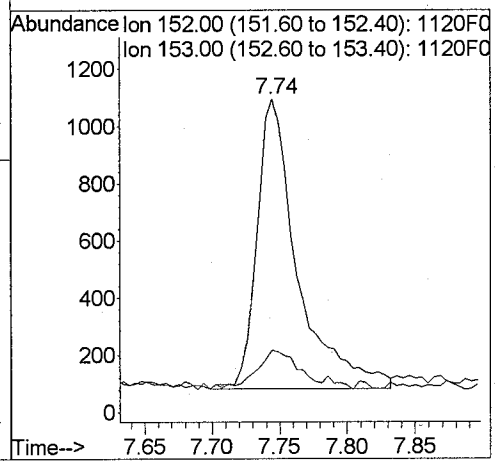


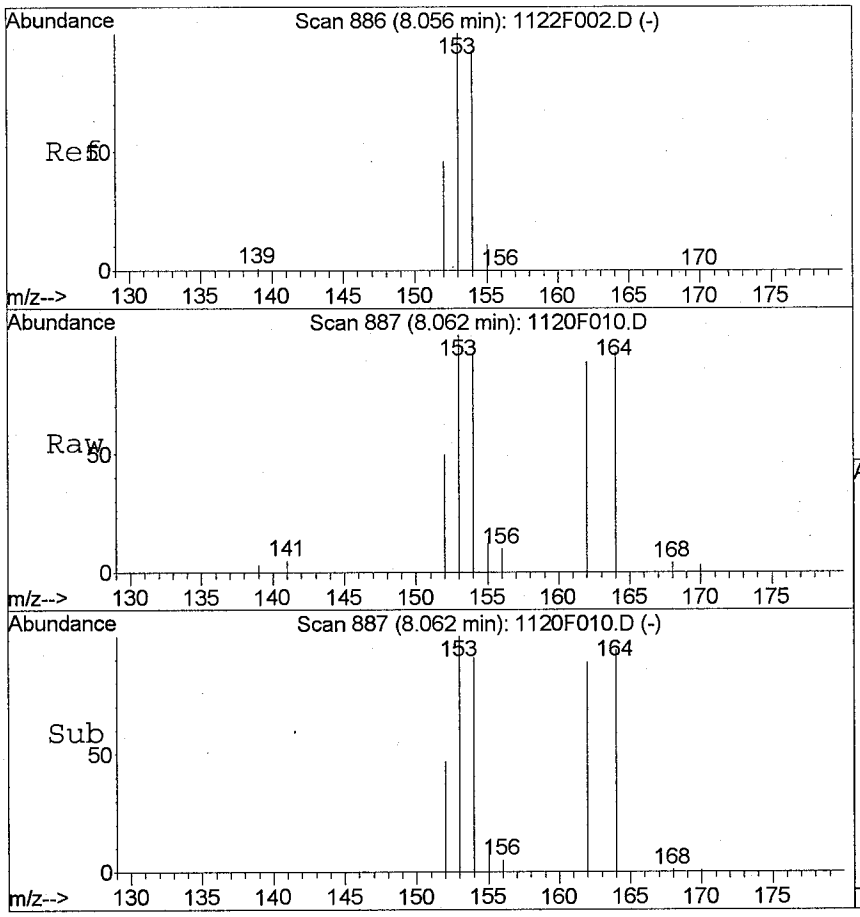


#12
Acenaphthylene
Concen: 9.49 ng/ml
RT: 7.74 min Scan# 818
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:152 Resp: 2111

Ion	Ratio	Lower	Upper
152	100		
153	13.2	0.0	43.0

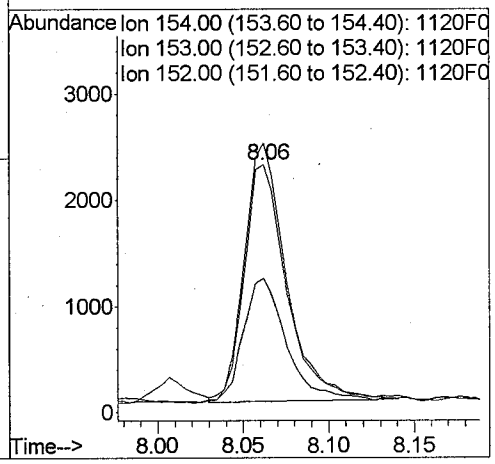


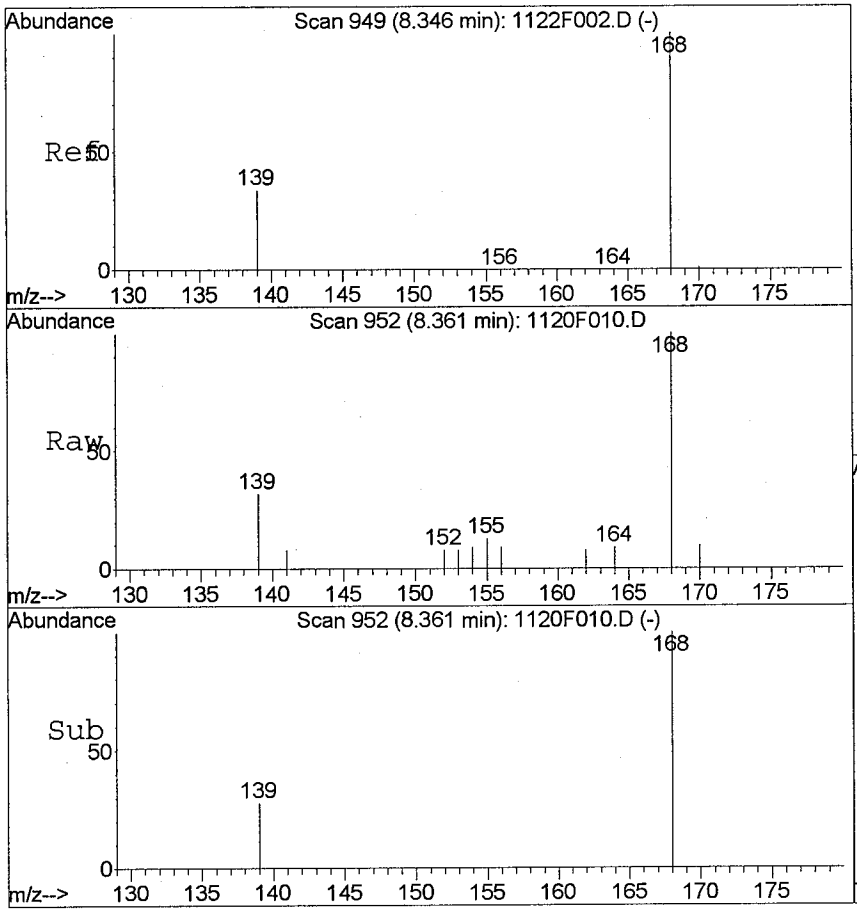


#13
Acenaphthene
Concen: 28.07 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:154 Resp: 3850

Ion	Ratio	Lower	Upper
154	100		
153	109.6	79.2	139.2
152	51.7	21.3	81.3

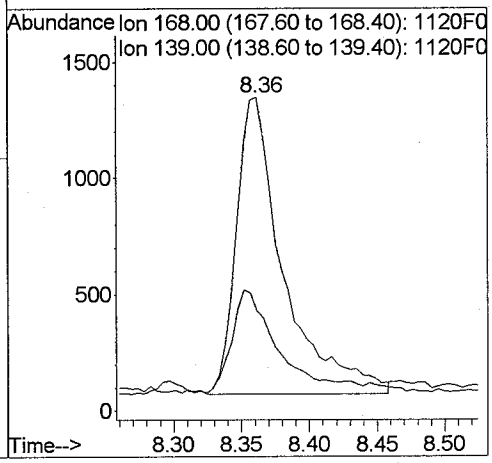


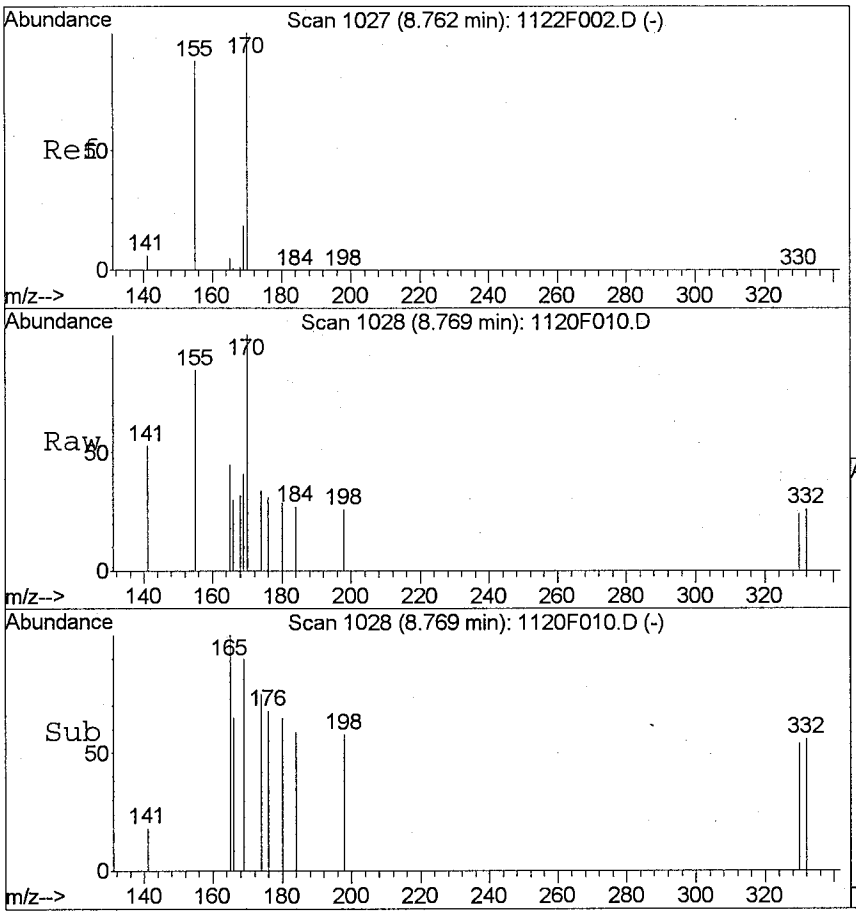


#14
Dibenzofuran
Concen: 16.66 ng/ml
RT: 8.36 min Scan# 952
Delta R.T. 0.02 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:168 Resp: 3062

Ion	Ratio	Lower	Upper
168	100		
139	27.6	5.4	65.4

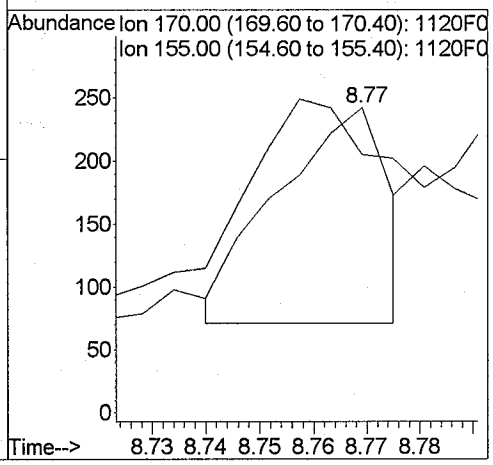


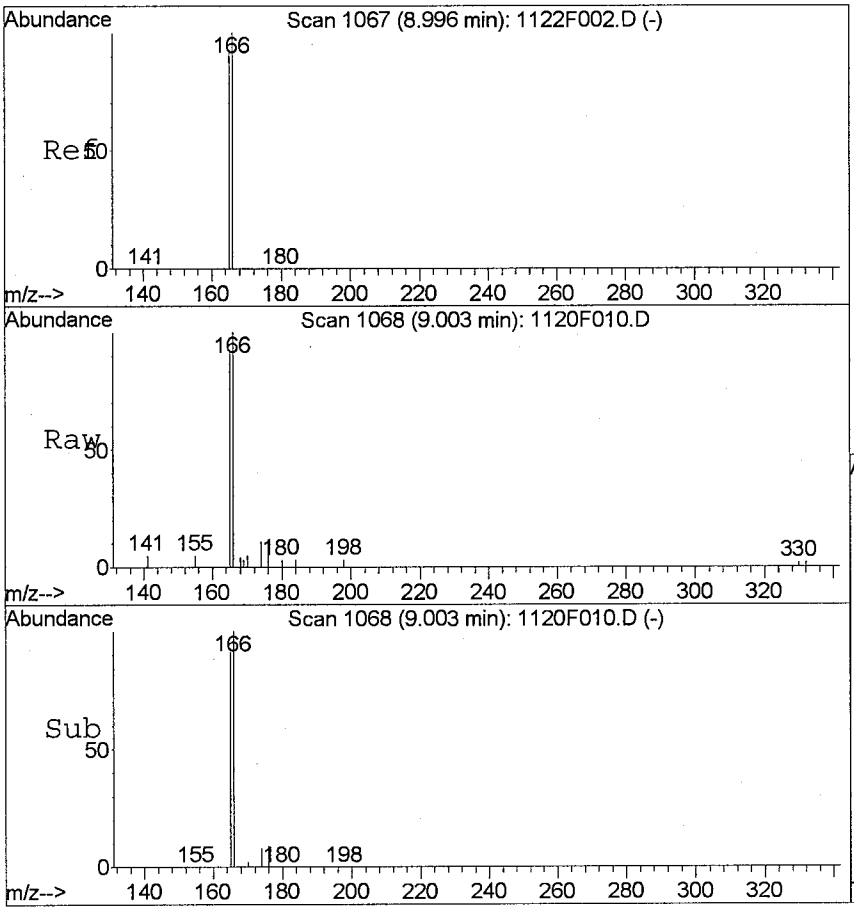


#15
2,3,5-Trimethylnaphthalene
Concen: 2.02 ng/ml m
RT: 8.77 min Scan# 1028
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:170 Resp: 248

Ion	Ratio	Lower	Upper
170	100		
155	84.7	55.5	115.5

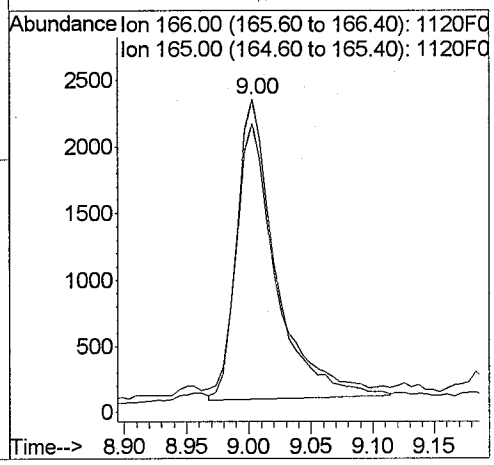


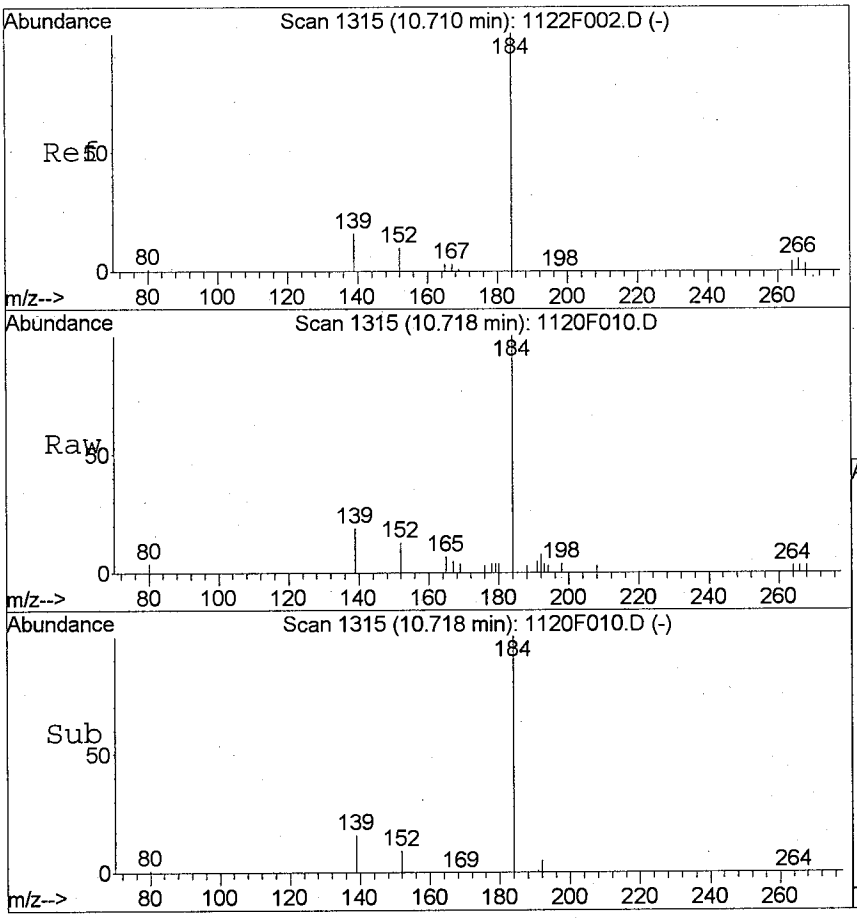


#17
Fluorene
Concen: 32.94 ng/ml
RT: 9.00 min Scan# 1068
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:166 Resp: 4839

Ion	Ratio	Lower	Upper
166	100		
165	89.4	63.3	123.3

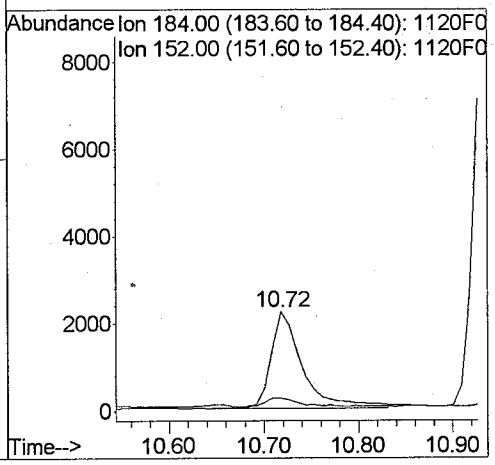


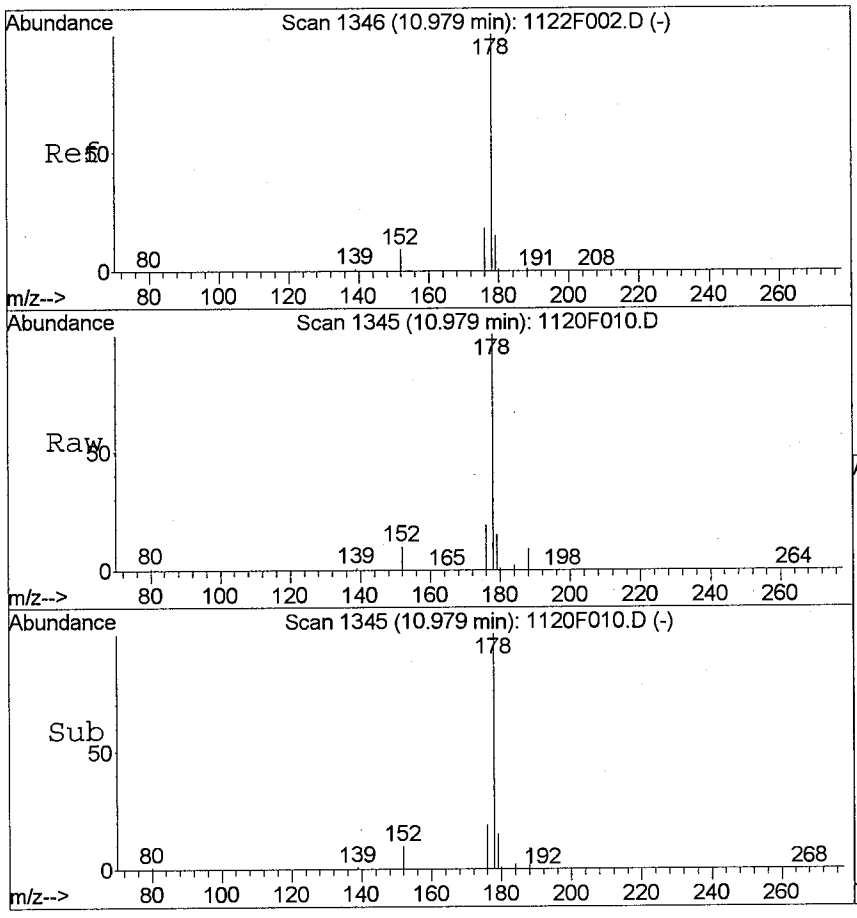


#24
Dibenzothiophene
Concen: 29.45 ng/ml
RT: 10.72 min Scan# 1315
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:184 Resp: 5064

Ion	Ratio	Lower	Upper
184	100		
152	8.7	0.0	39.0

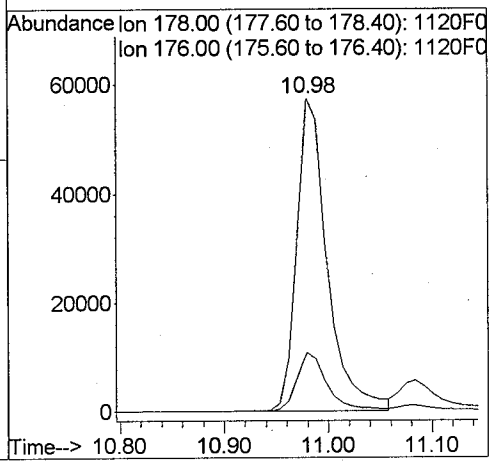


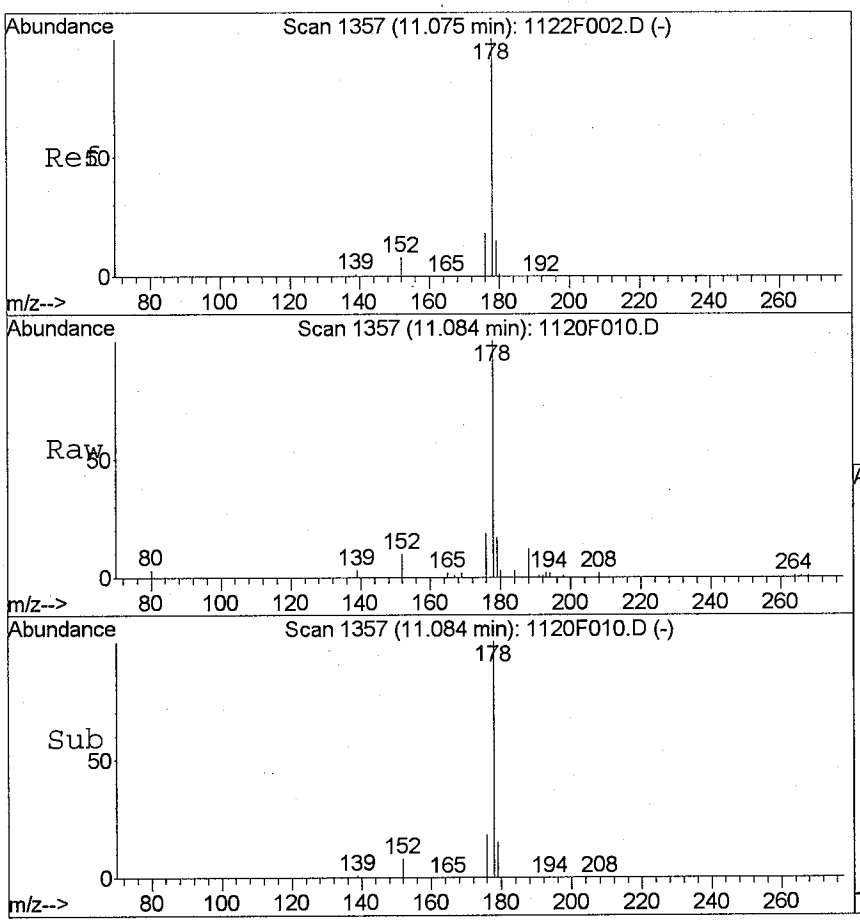


#28
Phenanthrene
Concen: 652.39 ng/ml
RT: 10.98 min Scan# 1345
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:178 Resp: 117846

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	49.0

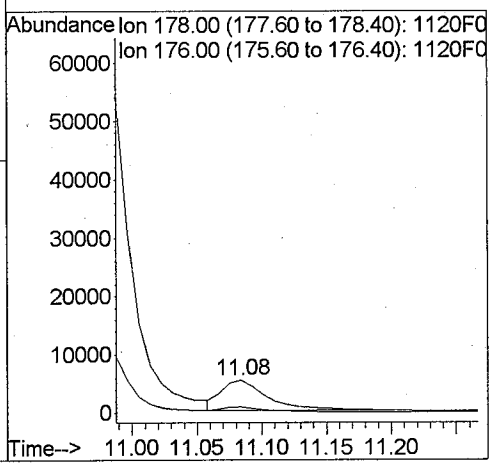


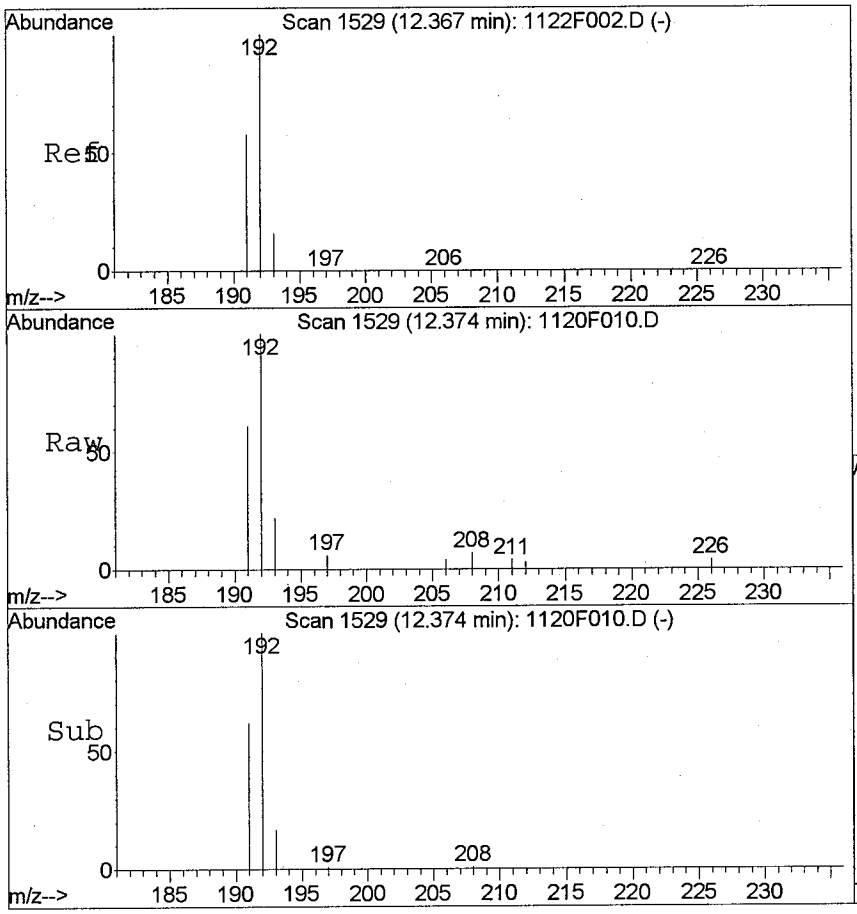


#29
Anthracene
Concen: 85.70 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:178 Resp: 13226

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	47.8

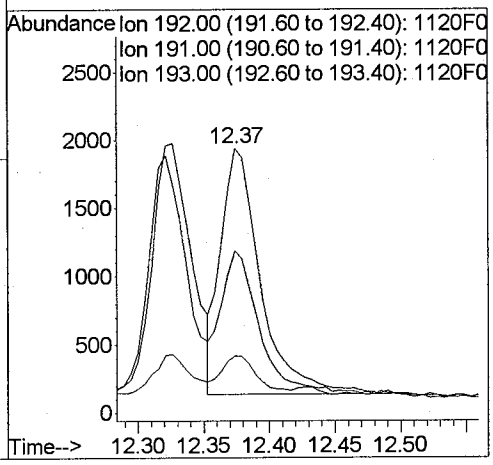


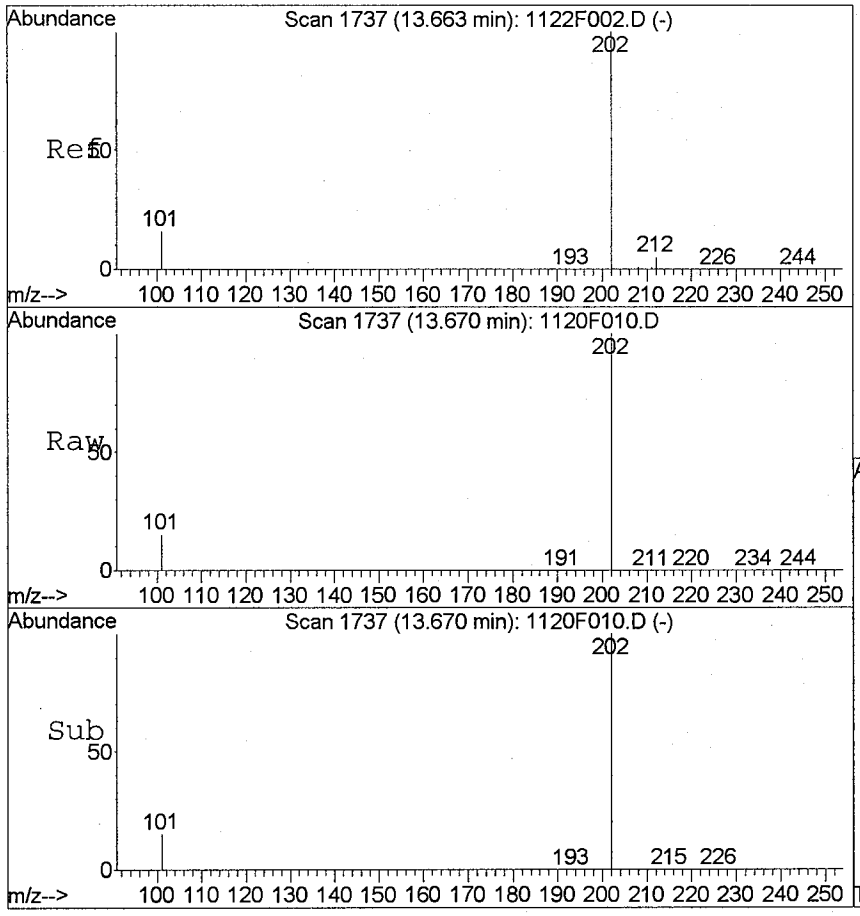


#31
1-Methylphenanthrene
Concen: 31.03 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:192 Resp: 3806

Ion	Ratio	Lower	Upper
192	100		
191	56.7	27.0	87.0
193	15.0	0.0	45.8

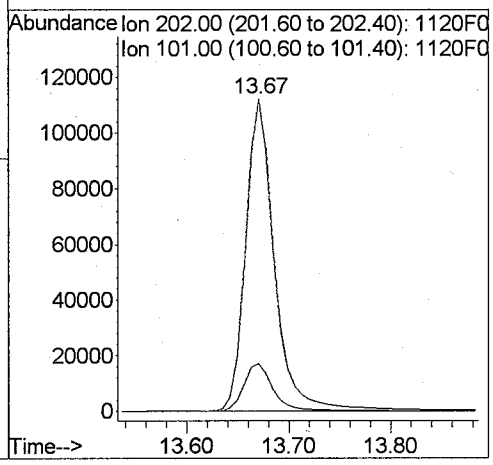


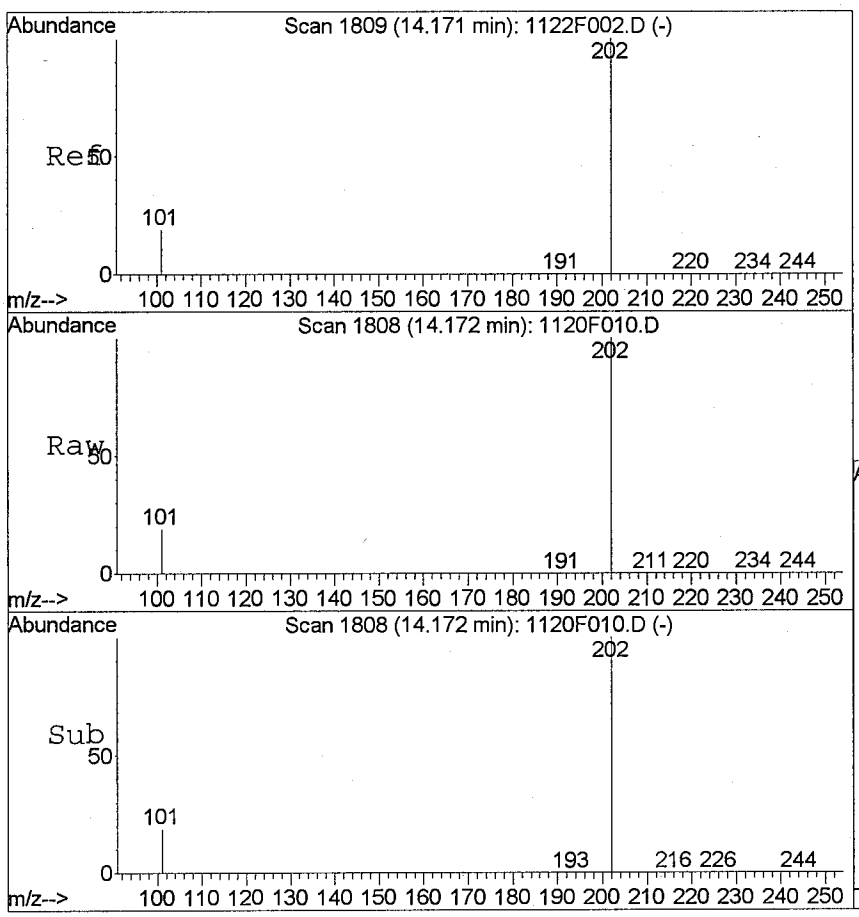


#36
Fluoranthene
Concen: 1213.17 ng/ml
RT: 13.67 min Scan# 1737
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:202 Resp: 218140

Ion	Ratio	Lower	Upper
202	100		
101	15.2	0.0	46.1

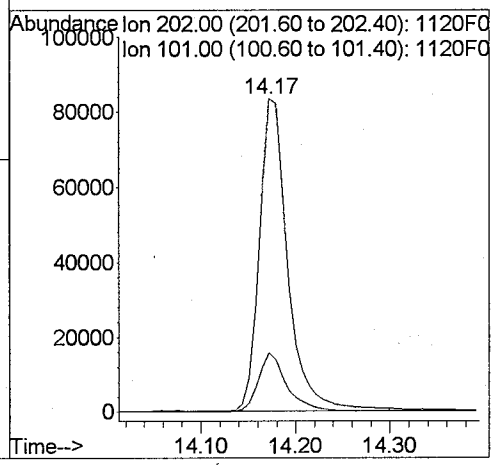


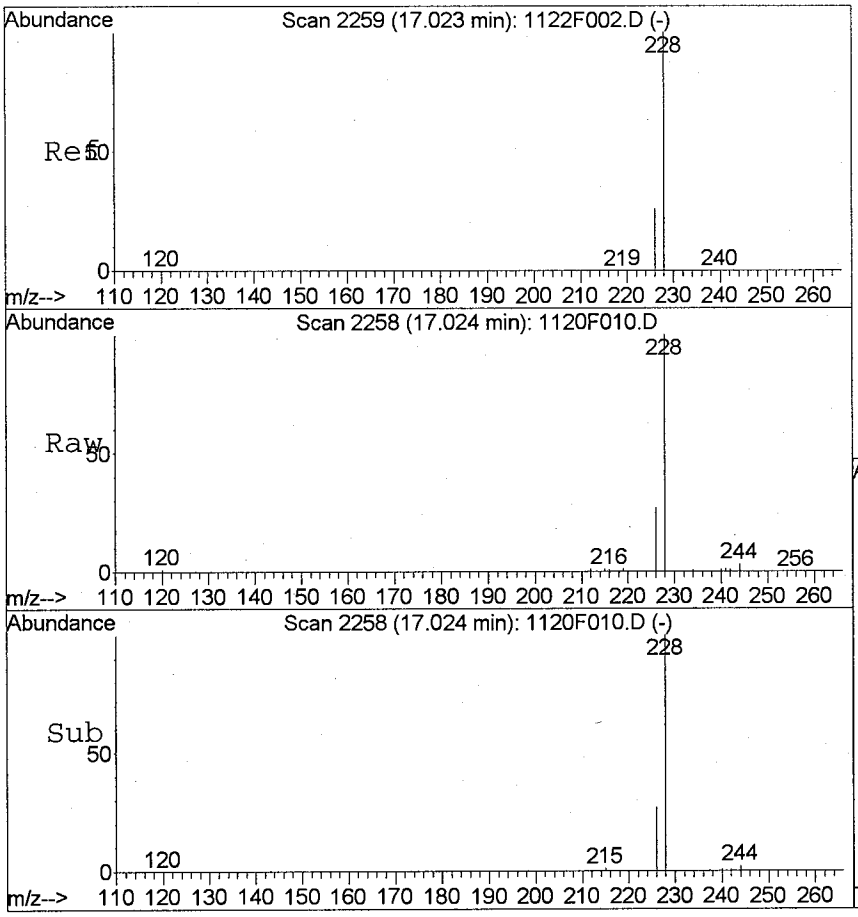


#39
Pyrene
Concen: 1030.62 ng/ml
RT: 14.17 min Scan# 1808
Delta R.T. 0.00 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:202 Resp: 174047

Ion	Ratio	Lower	Upper
202	100		
101	18.9	0.0	47.3

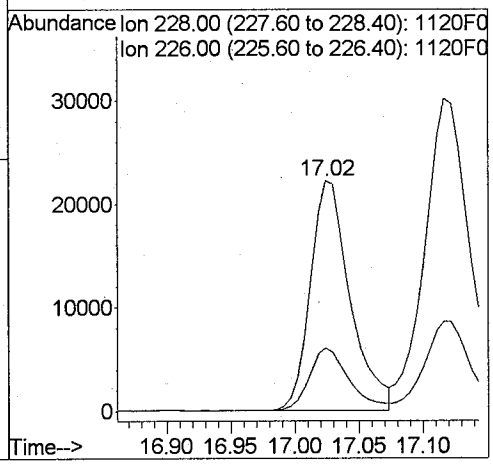


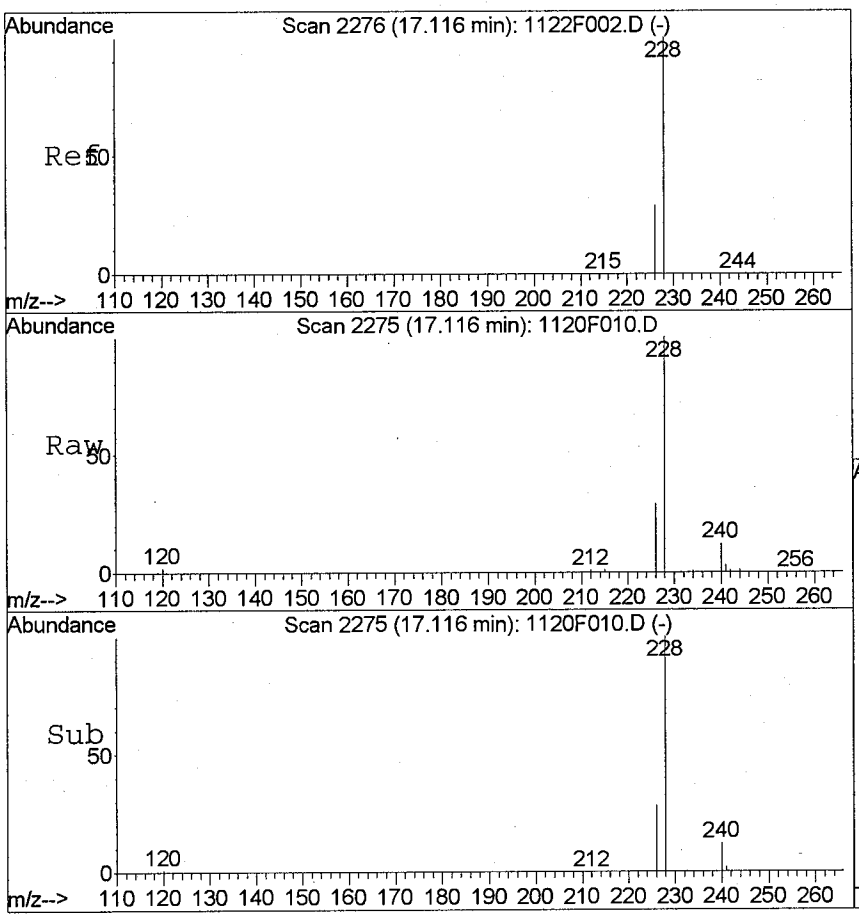


#42
Benz(a)anthracene
Concen: 370.66 ng/ml
RT: 17.02 min Scan# 2258
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:228 Resp: 47657

Ion	Ratio	Lower	Upper
228	100		
226	26.9	0.0	56.3

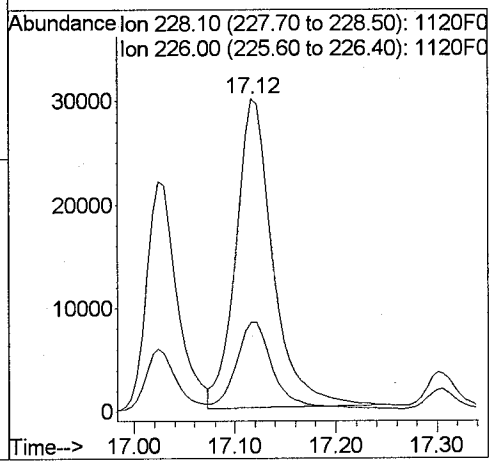


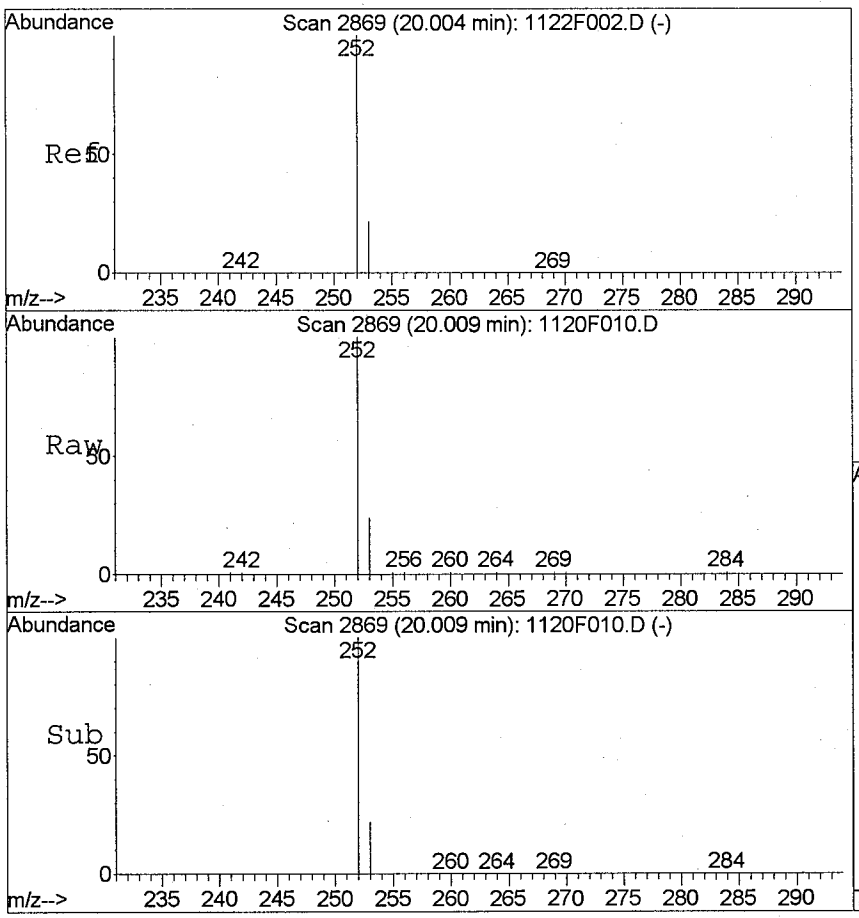


#43
Chrysene
Concen: 555.00 ng/ml
RT: 17.12 min Scan# 2275
Delta R.T. -0.00 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:228 Resp: 76306

Ion	Ratio	Lower	Upper
228	100		
226	28.4	0.0	58.3

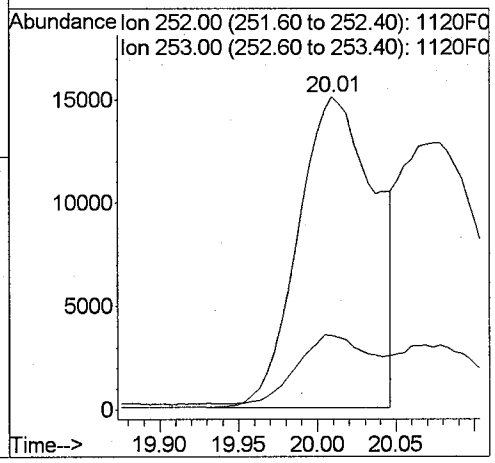


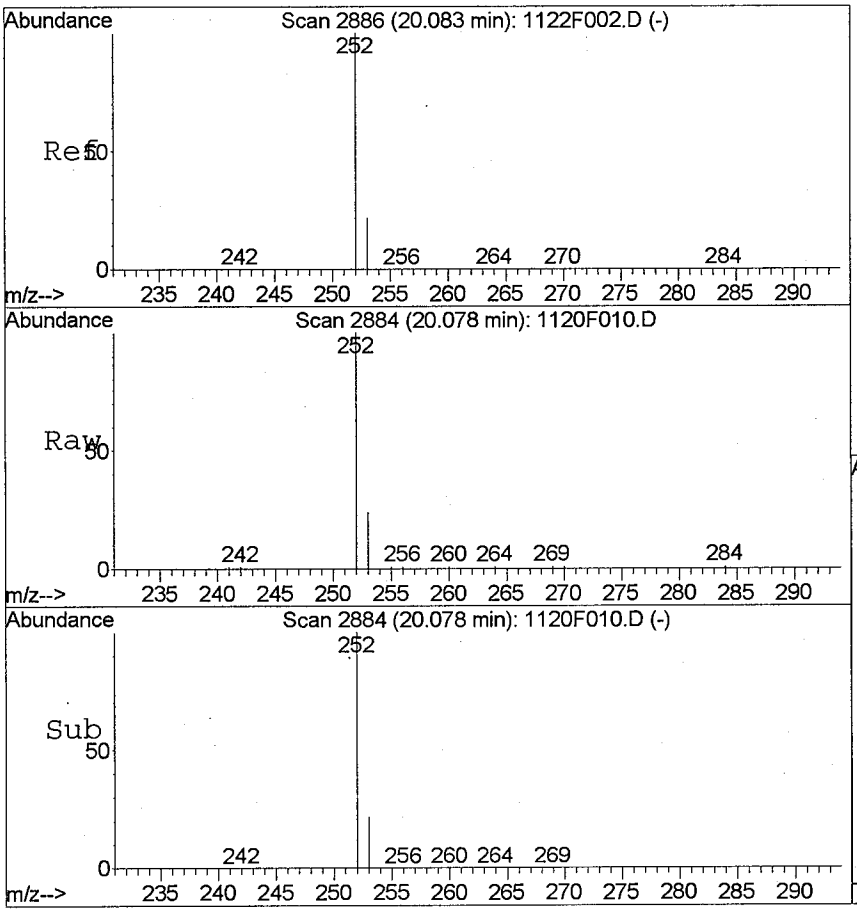


#49
Benzo(b)fluoranthene
Concen: 511.62 ng/ml
RT: 20.01 min Scan# 2869
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:252 Resp: 50635

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

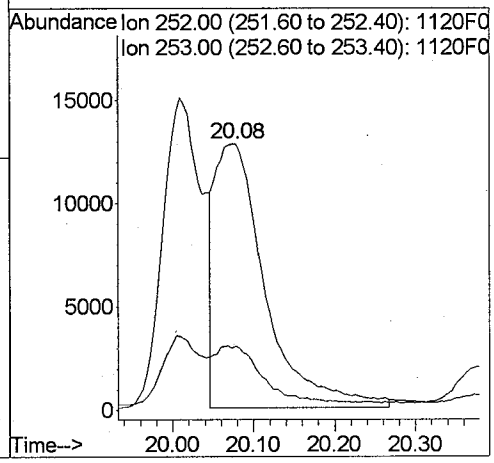


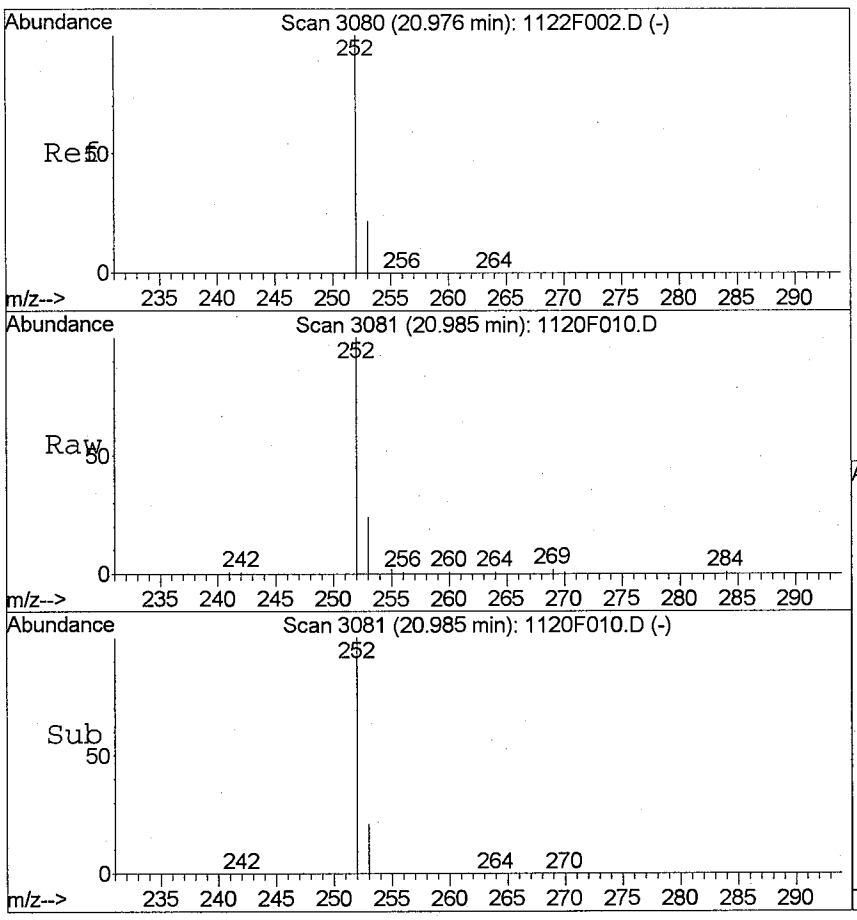


#50
Benzo(k)fluoranthene
Concen: 441.37 ng/ml m
RT: 20.08 min Scan# 2884
Delta R.T. -0.00 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:252 Resp: 55427

Ion	Ratio	Lower	Upper
252	100		
253	24.1	0.0	52.0

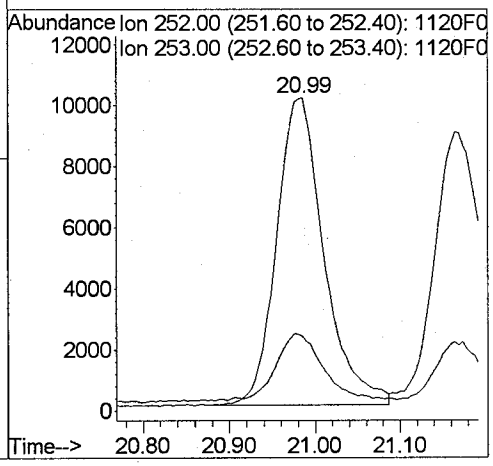


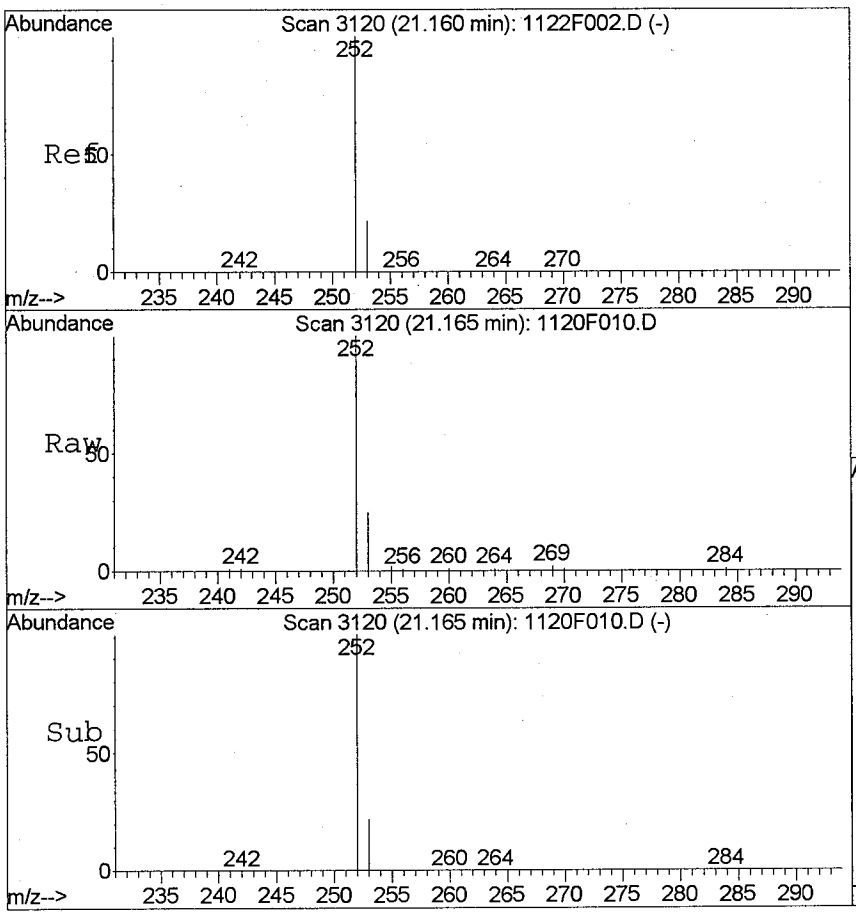


#51
Benzo(e)pyrene
Concen: 348.69 ng/ml
RT: 20.99 min Scan# 3081
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:252 Resp: 38747

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.9

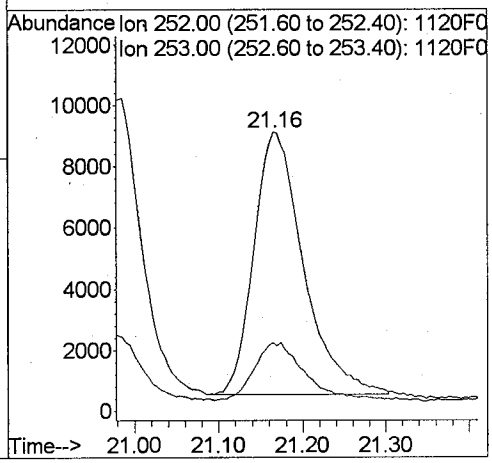


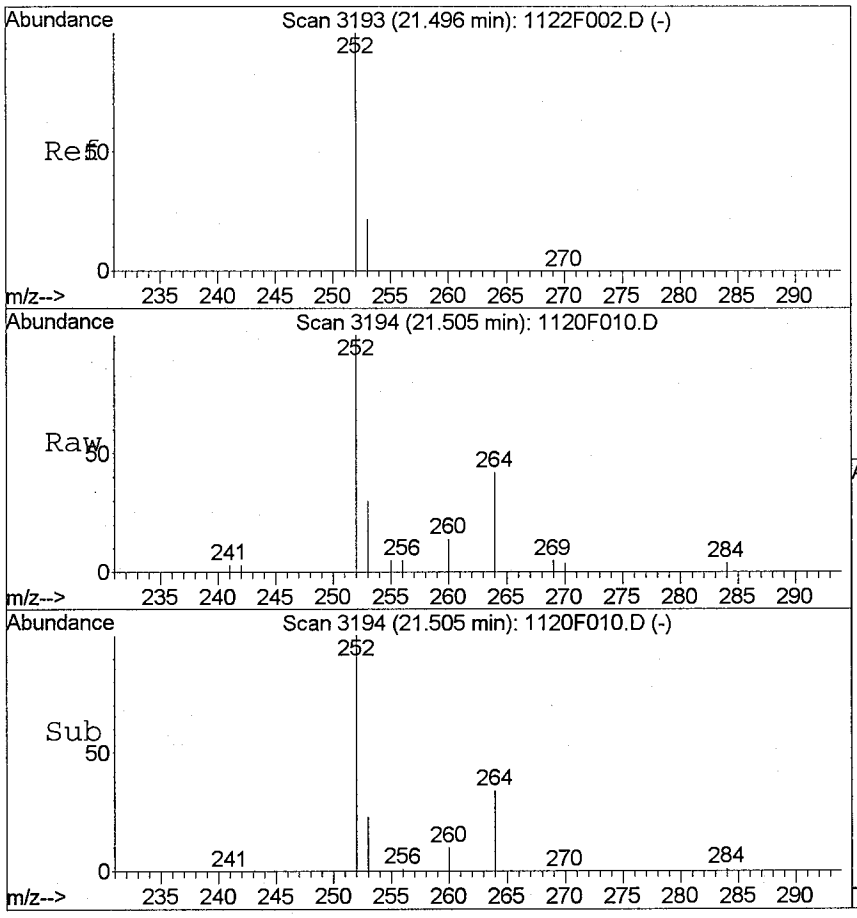


#52
Benzo(a)pyrene
Concen: 419.55 ng/ml
RT: 21.16 min Scan# 3120
Delta R.T. 0.00 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:252 Resp: 35319

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.9

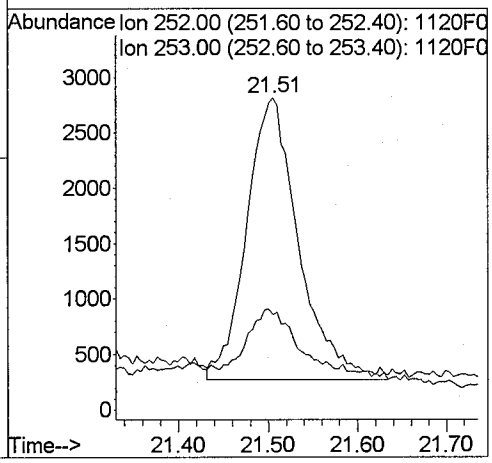


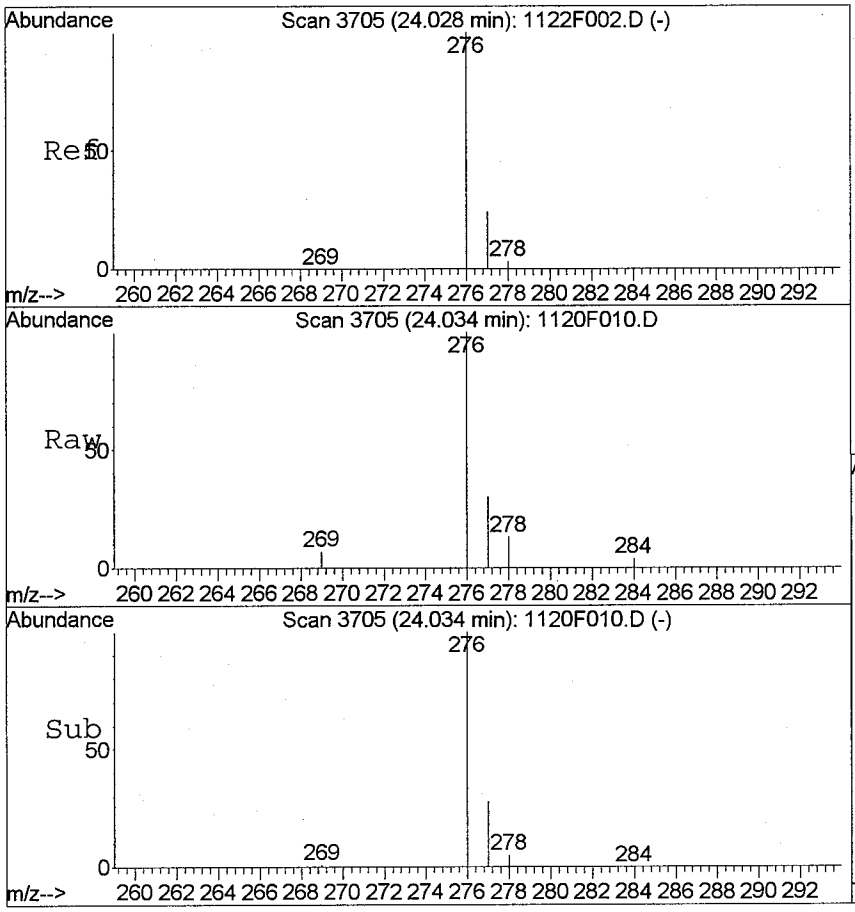


#53
Perylene
Concen: 108.04 ng/ml
RT: 21.51 min Scan# 3194
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:252 Resp: 10210

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.6

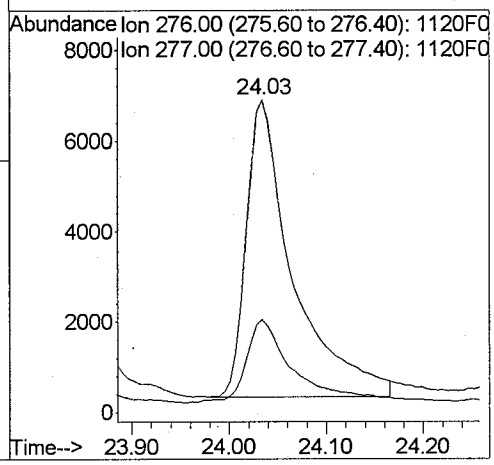


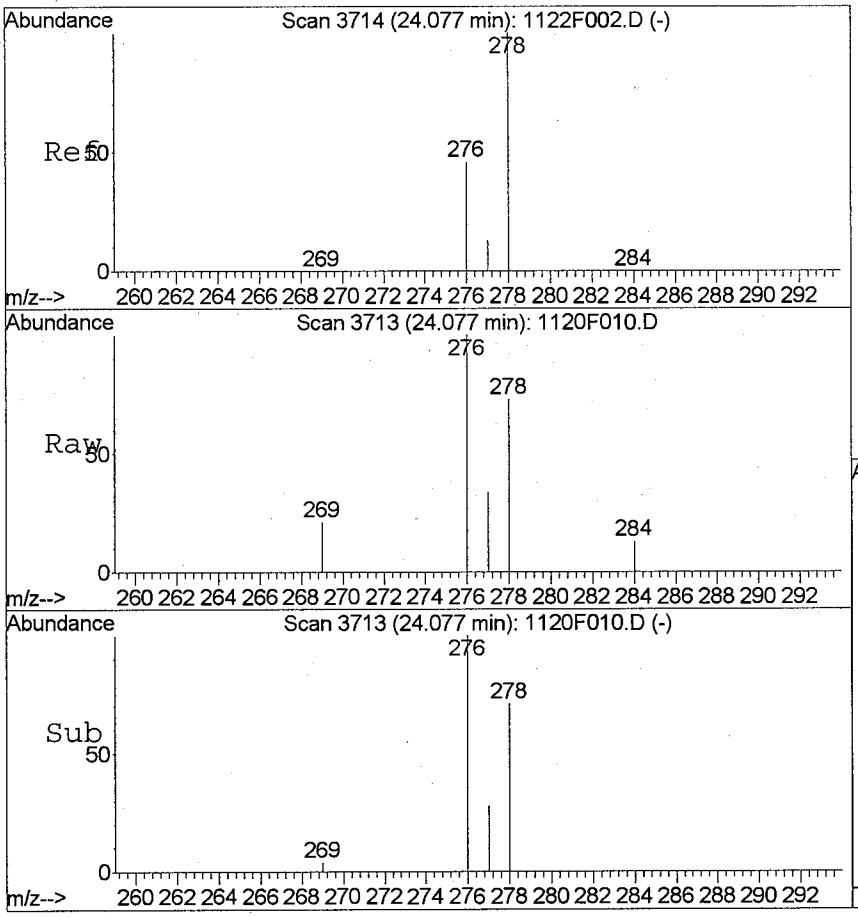


#54
Indeno(1,2,3-cd)pyrene
Concen: 425.71 ng/ml
RT: 24.03 min Scan# 3705
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:276 Resp: 21786

Ion	Ratio	Lower	Upper
276	100		
277	27.0	0.0	53.8

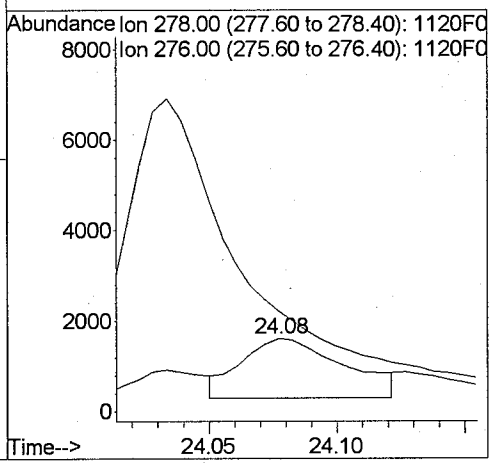


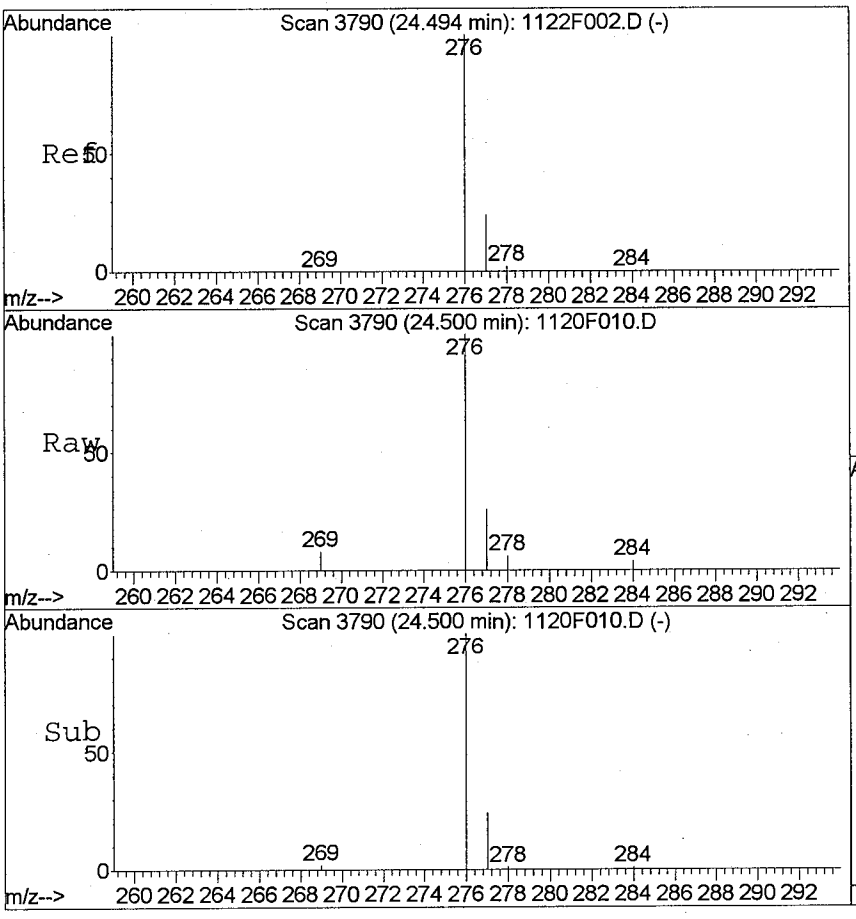


#55
Dibenz(a,h)anthracene
Concen: 50.44 ng/ml m
RT: 24.08 min Scan# 3713
Delta R.T. -0.00 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:278 Resp: 3710

Ion	Ratio	Lower	Upper
278	100		
276	137.2	5.3	65.3#

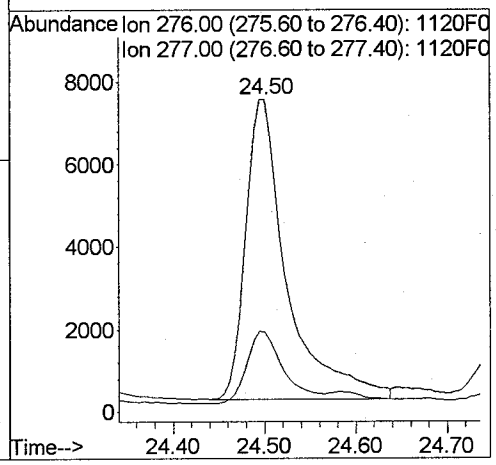




#56
Benzo(g,h,i)perylene
Concen: 267.54 ng/ml
RT: 24.50 min Scan# 3790
Delta R.T. 0.01 min
Lab File: 1120F010.D
Acq: 20 Nov 2003 10:37 am

Tgt Ion:276 Resp: 22699

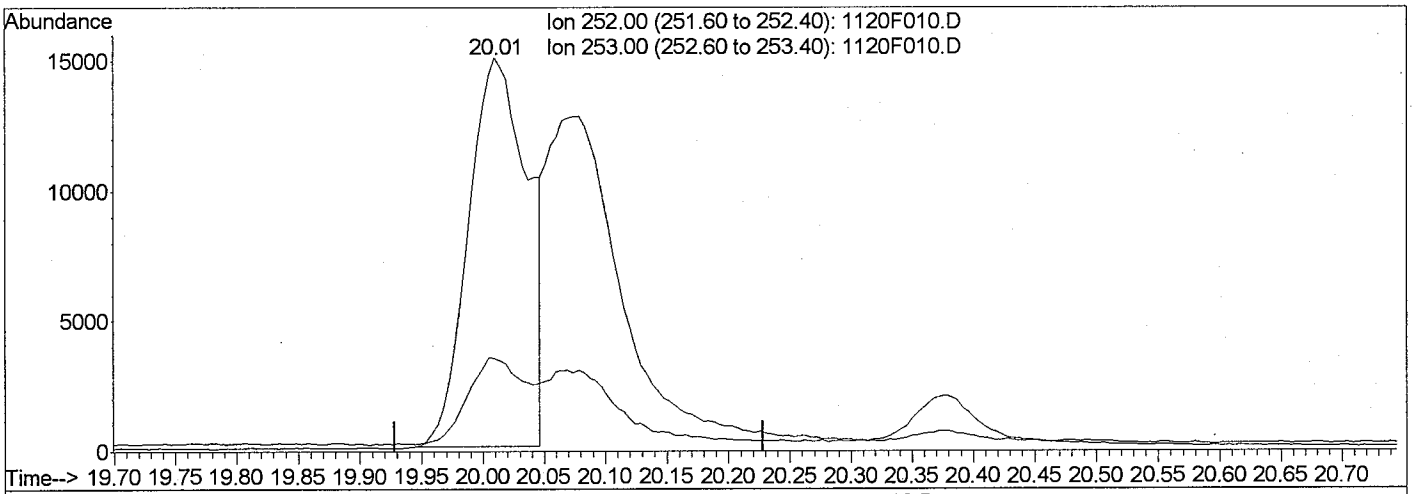
Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	53.5

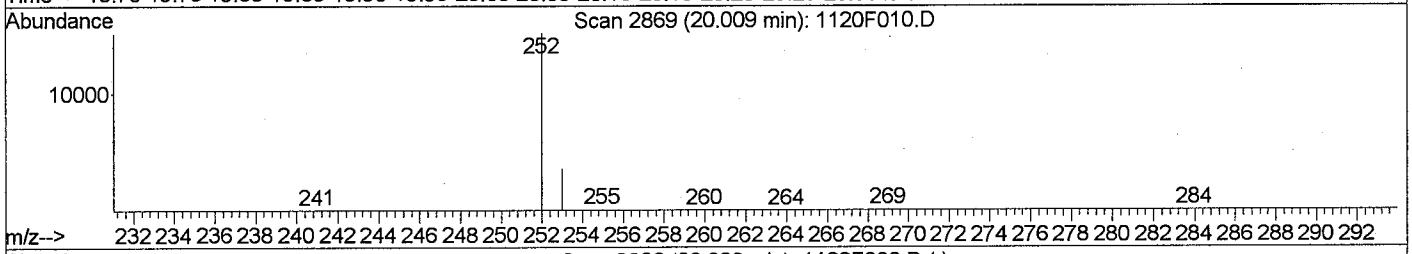


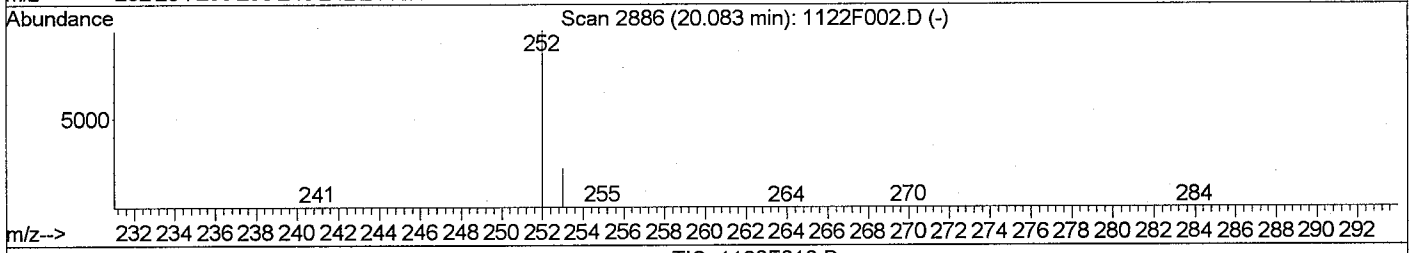
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F010.D Vial: 7
Acq On : 20 Nov 2003 10:37 am Operator: LWeiskopf
Sample : K2308433-007DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F010.D

(50) Benzo(k)fluoranthene (T)

20.01min 399.66ng/ml

response 50189

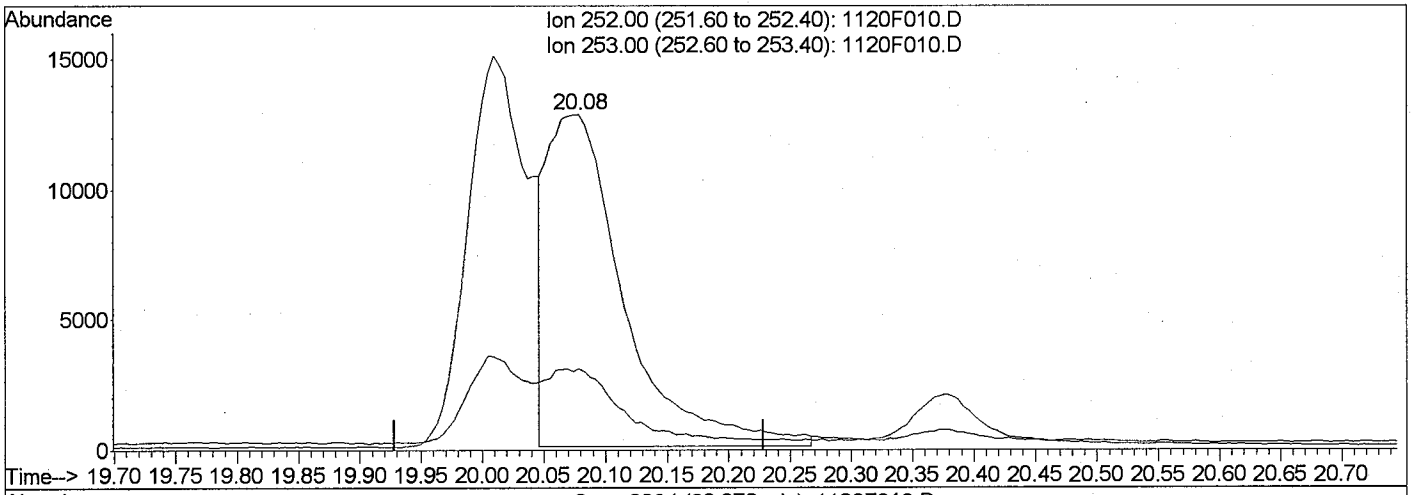
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.04
0.00	0.00	0.00
0.00	0.00	0.00

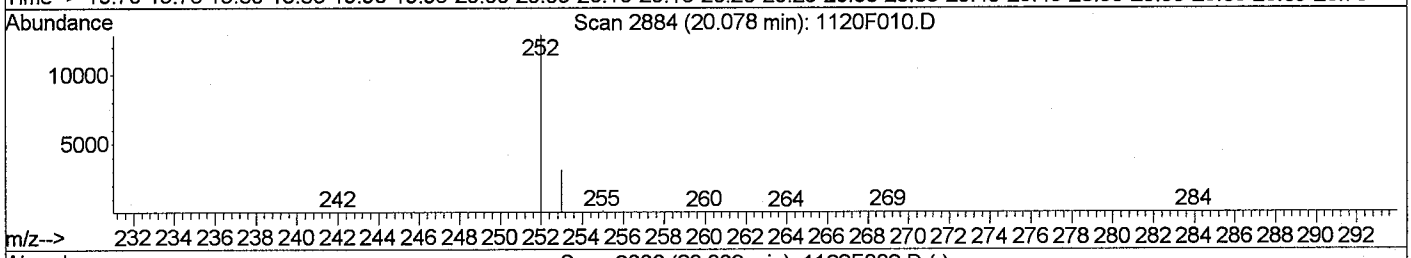
1120F010.D 1107ALK.M Mon Nov 24 09:19:44 2003

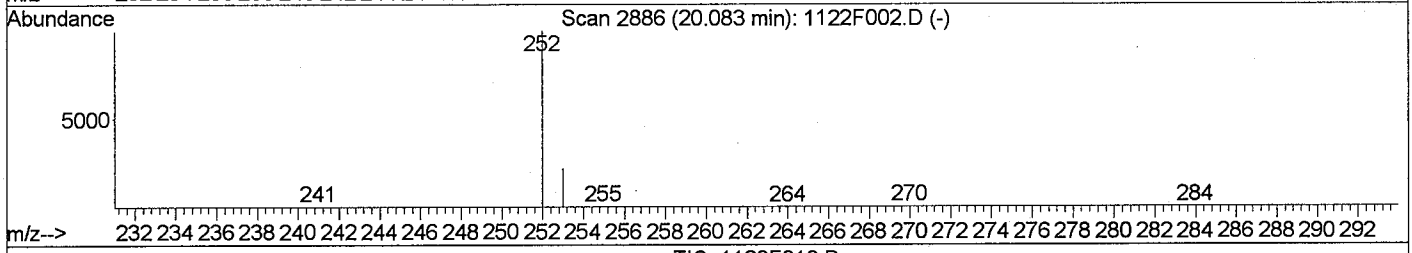
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F010.D Vial: 7
Acq On : 20 Nov 2003 10:37 am Operator: LWeiskopf
Sample : K2308433-007DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F010.D

(50) Benzo(k)fluoranthene (T)

20.08min 441.37ng/ml m

response 55427

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	24.13
0.00	0.00	0.00
0.00	0.00	0.00

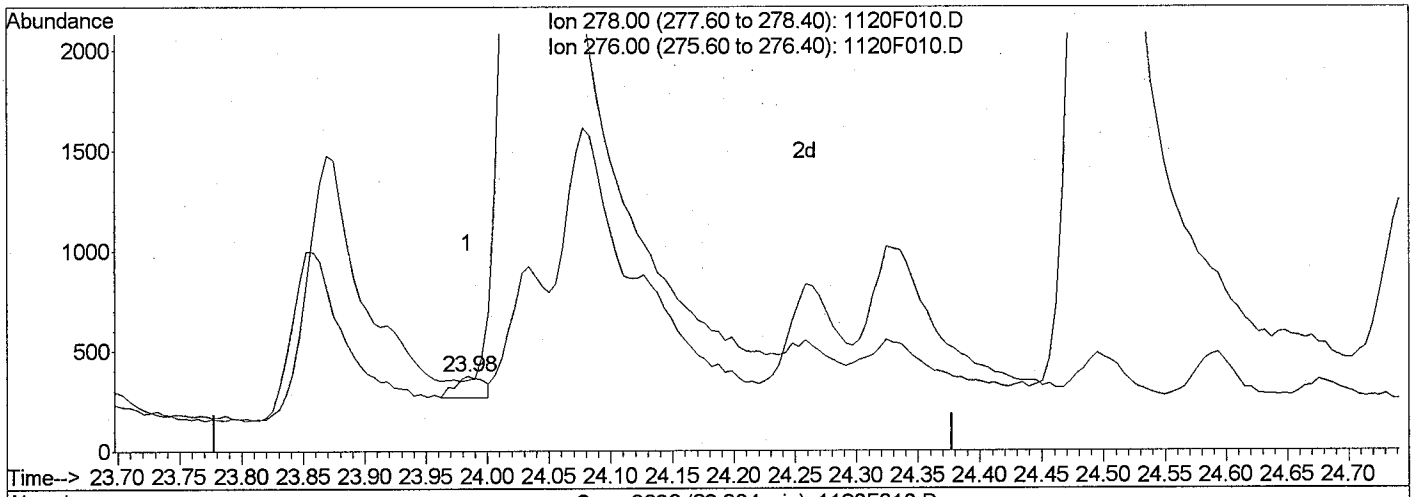
wrong peak 11/24/03

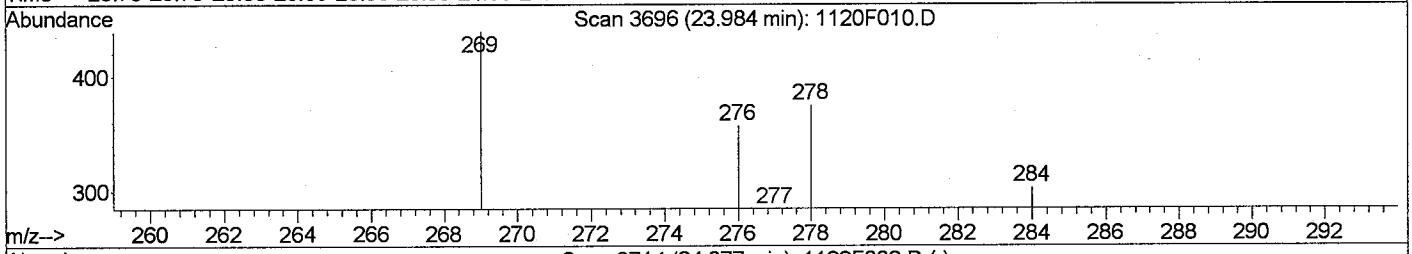
1120F010.D 1107ALK.M Mon Nov 24 09:19:51 2003

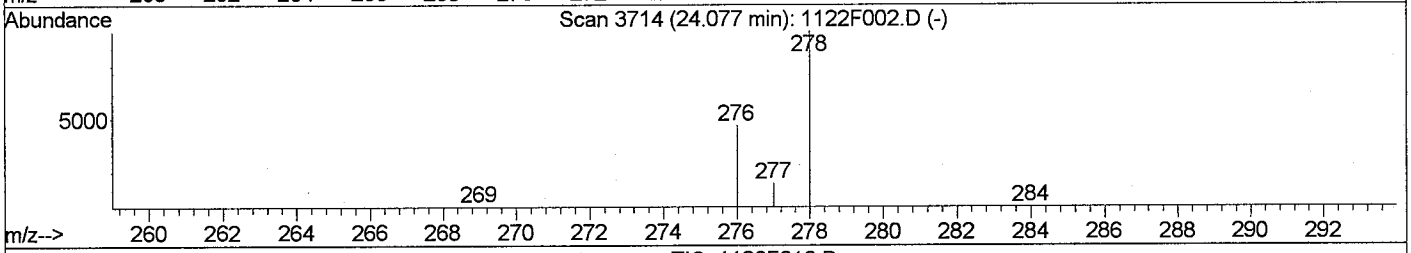
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F010.D Vial: 7
Acq On : 20 Nov 2003 10:37 am Operator: LWeiskopf
Sample : K2308433-007DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F010.D

(55) Dibenz(a,h)anthracene (T)

23.98min 2.42ng/ml

response 178

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	5.77
0.00	0.00	0.00
0.00	0.00	0.00

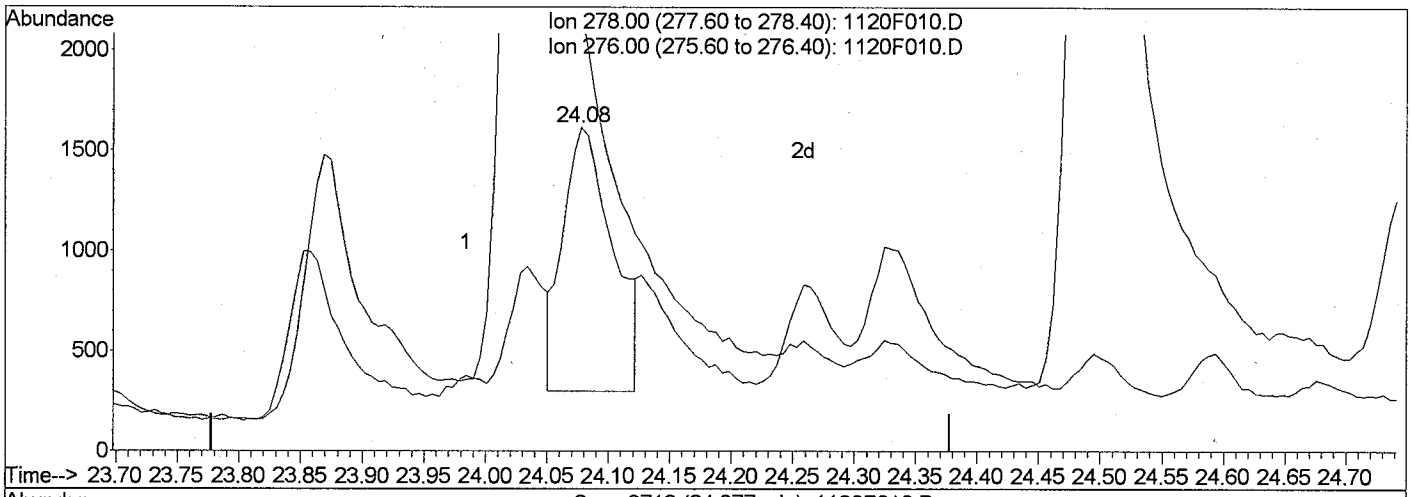
1120F010.D 1107ALK.M Mon Nov 24 09:19:56 2003

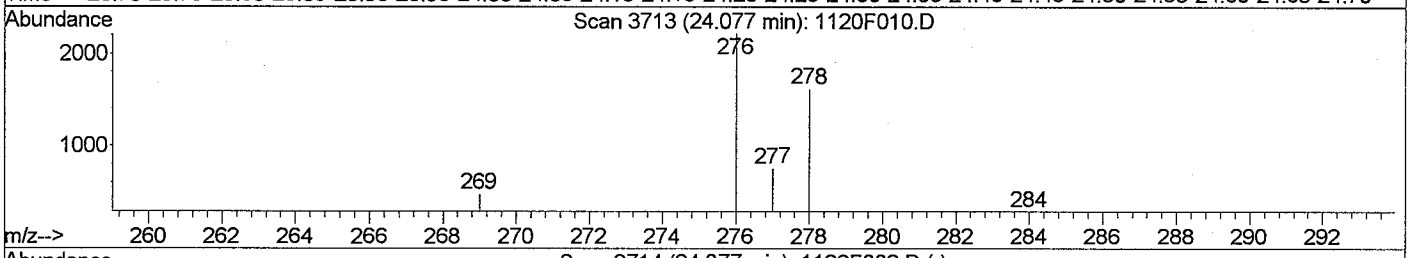
Quantitation Report (Qedit)

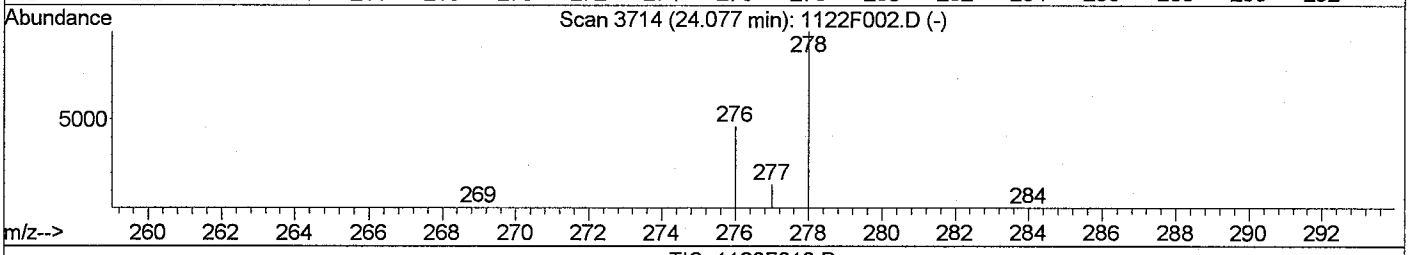
Data File : J:\MS11\DATA\112003\1120F010.D
Acq On : 20 Nov 2003 10:37 am
Sample : K2308433-007DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:19 2003

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F010.D

(55) Dibenz(a,h)anthracene (T)

24.08min 50.44ng/ml m

response 3710

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	137.15#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03
wrong peak

1120F010.D 1107ALK.M Mon Nov 24 09:20:02 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-7
Lab Code: K2308433-008

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**21**		4.6	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**9.3**		4.6	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**7.3**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	**13**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	**17**		4.6	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	**10**		4.6	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	4.6	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**12**		4.6	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**29**		4.6	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**50**		4.6	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**52**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	**16**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	**14**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	**22**		4.6	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**32**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	**8.0**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	**20**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	**28**		4.6	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**650**		4.6	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**120**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	**150**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	**72**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	**47**		4.6	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	**29**		4.6	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1000**	D	46	10	11/05/03	11/20/03	KWG0317778	
Pyrene	**860**	D	46	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	**350**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**450**		4.6	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**550**		4.6	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	**210**		4.6	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	**96**		4.6	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	**60**		4.6	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	**26**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**540**		4.6	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-7
Lab Code: K2308433-008

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**430**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**360**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**500**		4.6	1	11/05/03	11/19/03	KWG0317778	
Perylene	**120**		4.6	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**470**		4.6	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**64**		4.6	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**270**		4.6	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	67	27-110	11/19/03	Acceptable
Fluoranthene-d10	90	34-122	11/19/03	Acceptable
Terphenyl-d14	108	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F044.D
Lab ID: K2308433-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 20:38
Date Quantitated: 11/21/2003 12:38
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	10471.68	NA	10000	See DF
	Fluoranthene	12761.96	NA	10000	

Primary Review: 11/25/03

Secondary Review: 11/24/03

Printed: 11/21/2003 13:54:21
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247866	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F044.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 20:38	**Quant Date:**	11/21/2003 12:38	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-008			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	257757	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	137372	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	203318	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	186828	1,000.00	OK
5	Perylene-d12	21.40	0.04	264	105190	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	92328	672.02	67	27-110	OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	182327	895.98	90	34-122	OK	
4	Terphenyl-d14	14.67	0.01	0.00	244	183429	1,077	108	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	66966	229.77	21		
1	2-Methylnaphthalene	6.37		0.00	142	17446	101.37	9.3		
1	1-Methylnaphthalene	6.51		0.00	142	12908	80.02	7.3		
1	Biphenyl	7.04	0.01	0.00	154	8624	41.33	3.8	J	
1	C2-Naphthalenes	7.42	?	?	156	41831**m**	143.53	13		
1	C3-Naphthalenes	8.94	?	?	170	55550**m**	190.60	17		
1	C4-Naphthalenes	9.80	?	?	184	33332**m**	114.37	10		
2	Acenaphthylene	7.74	0.01	0.00	152	33873	127.98	12		
2	Acenaphthene	8.06	0.01	0.00	154	88153	540.41	50		
2	Dibenzofuran	8.35	0.01	0.00	168	69411	317.42	29		
2	Fluorene	9.00	0.01	0.00	166	98313	562.62	52		
2	C1-Fluorenes	10.14	?	?	180	30168**m**	172.64	16		
2	C2-Fluorenes	11.41	?	?	194	25944**m**	148.47	14		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F044.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 20:38	**Quant Date:**	11/21/2003 12:38	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-008			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	41613**m**	238.14	22		
3	Dibenzothiophene	10.71		0.00	184	82229	350.53	32		
3	C1-Dibenzothiophenes	10.13	?	?	198	20467**m**	87.25	8.0		
3	C2-Dibenzothiophenes	12.63	?	?	212	51926**m**	221.36	20		
3	C3-Dibenzothiophenes	13.68	?	?	226	70952**m**	302.46	28		
3	Phenanthrene	10.98	0.01	0.00	178	1735983	7,045	650		
3	Anthracene	11.08	0.01	0.00	178	272667	1,295	120		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	397694**m**	1,614	150		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	193908**m**	786.91	72		
3	C3-Phenanthrenes/Anthracenes	14.45	?	?	220	127000**m**	515.39	47		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	78292**m**	317.72	29		
3	Fluoranthene	13.67	0.02	0.00	202	3130338	12,762	1200	E	NR
4	Pyrene	14.17	0.01	0.00	202	2557178	10,472	960	E	NR
4	C1-Fluoranthenes/Pyrenes	15.01	?	?	216	920754**m**	3,771	350		
4	Benz(a)anthracene	17.02	0.01	0.00	228	907092	4,879	450		
4	Chrysene	17.12	0.02	0.00	228	1199584	6,034	550		
4	C1-Chrysenes	18.05	?	?	242	460918**m**	2,318	210		
4	C2-Chrysenes	19.15	?	?	256	208078**m**	1,047	96		
4	C3-Chrysenes	20.96	?	?	270	129125**m**	649.48	60		
4	C4-Chrysenes	22.40	?	?	284	56785**m**	285.62	26		
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	826474	5,885	540		
5	Benzo(k)fluoranthene	20.07	0.02	0.00	252	831794**m**	4,668	430		
5	Benzo(e)pyrene	20.98	0.05	0.00	252	614919	3,900	360		
5	Benzo(a)pyrene	21.16	0.04	0.00	252	649194	5,435	500		
5	Perylene	21.50	0.05	0.00	252	172085	1,283	120		
5	Indeno(1,2,3-cd)pyrene	24.03	0.03	0.00	276	375297	5,168	470		
5	Dibenz(a,h)anthracene	24.08	0.02	0.00	278	72304**m**	692.85	64		
5	Benzo(g,h,i)perylene	24.49	0.03	0.00	276	350697	2,913	270		

Prep Amount:	27.3 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	79.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	257757	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	137372	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	203318	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	186828	1000.00	ng/ml	0.02
48) Perylene-d12	21.40	264	105190	1000.00	ng/ml	0.04
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	80062	424.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 42.40%			
16) Fluorene-d10	8.94	176	92328	672.02	ng/ml	0.01
Spiked Amount 1000.000			Recovery = 67.20%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.63	212	182327	895.98	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 89.60%			
41) Terphenyl-d14	14.67	244	183429	1077.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 107.73%			
Target Compounds						Qvalue
2) Naphthalene	5.55	128	66966	229.77	ng/ml	99
3) 2-Methylnaphthalene	6.37	142	17446	101.37	ng/ml	100
4) 1-Methylnaphthalene	6.51	142	12908	80.02	ng/ml	98
6) Biphenyl	7.04	154	8624	41.33	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.28	156	7623	51.93	ng/ml	97
8) C2-Naphthalenes	7.42	156	41831m	143.53	ng/ml	
9) C3-Naphthalenes	8.94	170	55550m	190.60	ng/ml	
10) C4-Naphthalenes	9.80	184	33332m	114.37	ng/ml	
12) Acenaphthylene	7.74	152	33873	127.98	ng/ml	98
13) Acenaphthene	8.06	154	88153	540.41	ng/ml	100
14) Dibenzofuran	8.35	168	69411	317.42	ng/ml	95
15) 2,3,5-Trimethylnaphthalene	8.76	170	4462	30.54	ng/ml	93
17) Fluorene	9.00	166	98313	562.62	ng/ml	100
18) C1-Fluorenes	10.14	180	30168m	172.64	ng/ml	
19) C2-Fluorenes	11.41	194	25944m	148.47	ng/ml	
20) C3-Fluorenes	12.76	208	41613m	238.14	ng/ml	
24) Dibenzothiophene	10.71	184	82229	350.53	ng/ml	96
25) C1-Dibenzothiophenes	10.13	198	20467m	87.25	ng/ml	
26) C2-Dibenzothiophenes	12.63	212	51926m	221.36	ng/ml	
27) C3-Dibenzothiophenes	13.68	226	70952m	302.46	ng/ml	
28) Phenanthrene	10.98	178	1735983	7044.93	ng/ml	99
29) Anthracene	11.08	178	272667	1295.22	ng/ml	99
30) Carbazole	11.51	167	3477	20.90	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

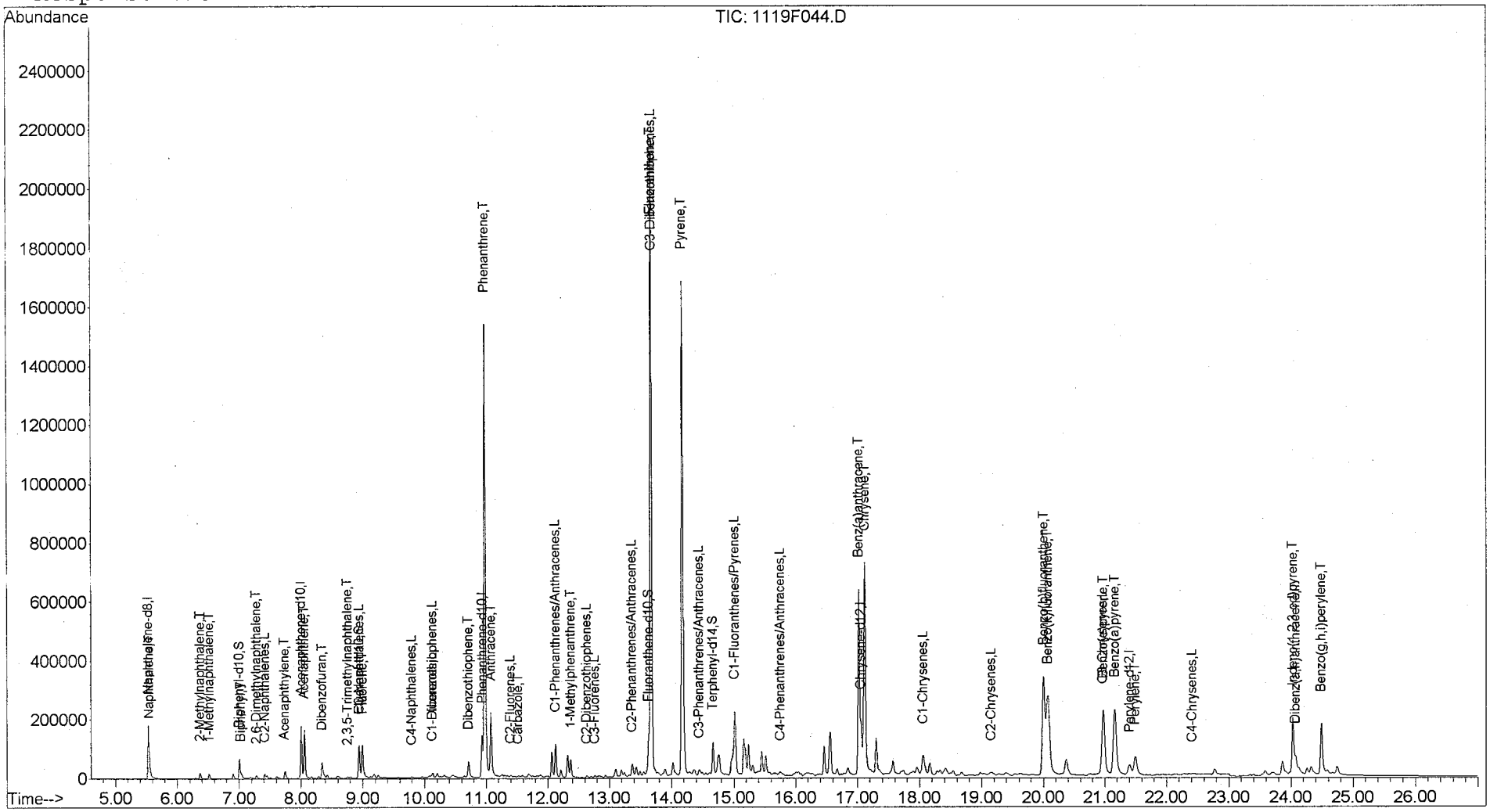
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	61754	369.10	ng/ml	98
32)	C1-Phenanthrenes/Anthracen	12.12	192	397694m	1613.91	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	193908m	786.91	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.45	220	127000m	515.39	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	78292m	317.72	ng/ml	
36)	Fluoranthene	13.67	202	3130338	12761.96	ng/ml	99
39)	Pyrene	14.17	202	2557178	10471.68	ng/ml	97
40)	C1-Fluoranthenes/Pyrenes	15.01	216	920754m	3770.50	ng/ml	
42)	Benz(a)anthracene	17.02	228	907092	4878.94	ng/ml	97
43)	Chrysene	17.12	228	1199584	6033.77	ng/ml	99
44)	C1-Chrysenes	18.05	242	460918m	2318.37	ng/ml	
45)	C2-Chrysenes	19.15	256	208078m	1046.61	ng/ml	
46)	C3-Chrysenes	20.96	270	129125m	649.48	ng/ml	
47)	C4-Chrysenes	22.40	284	56785m	285.62	ng/ml	
49)	Benzo(b)fluoranthene	20.00	252	826474	5885.20	ng/ml	99
50)	Benzo(k)fluoranthene	20.07	252	831794m	4668.08	ng/ml	
51)	Benzo(e)pyrene	20.98	252	614919	3899.91	ng/ml	100
52)	Benzo(a)pyrene	21.16	252	649194	5434.83	ng/ml	100
53)	Perylene	21.50	252	172085	1283.38	ng/ml	98
54)	Indeno(1,2,3-cd)pyrene	24.03	276	375297	5168.33	ng/ml	92
55)	Dibenz(a,h)anthracene	24.08	278	72304m	692.85	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	350697	2913.08	ng/ml	100

(#) = qualifier out of range (m) = manual integration

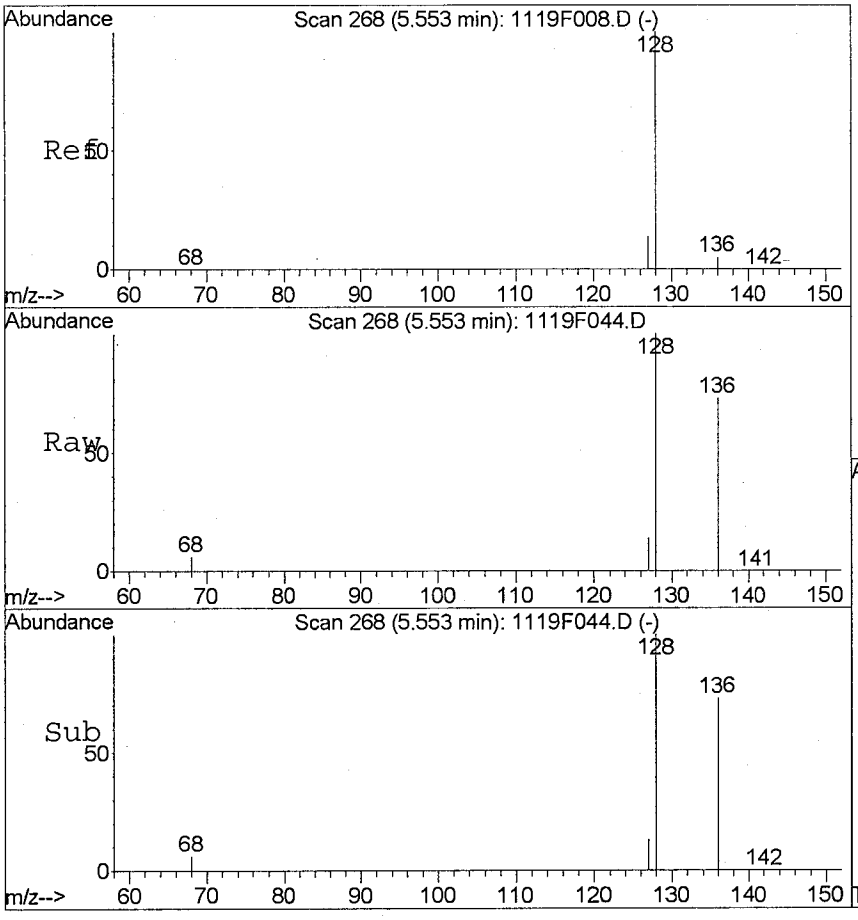
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:38 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



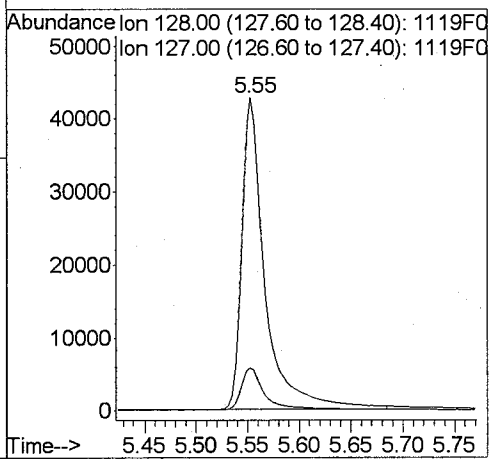
1360

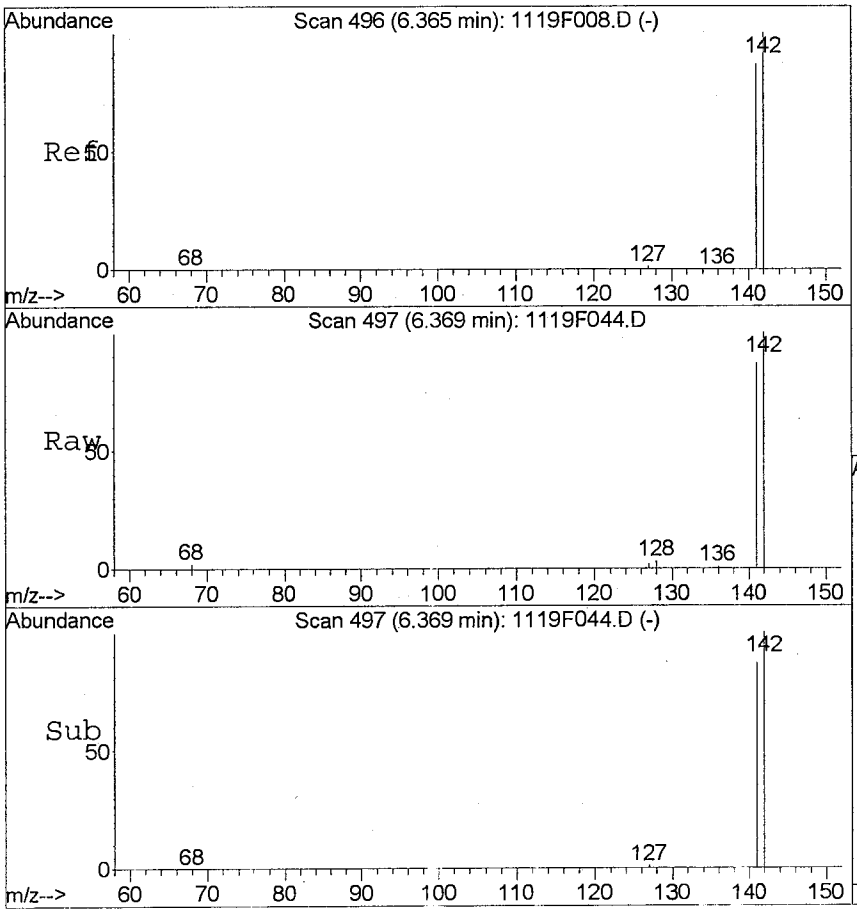


#2
Naphthalene
Concen: 229.77 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. -0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:128 Resp: 66966

Ion	Ratio	Lower	Upper
128	100		
127	13.5	0.0	43.8

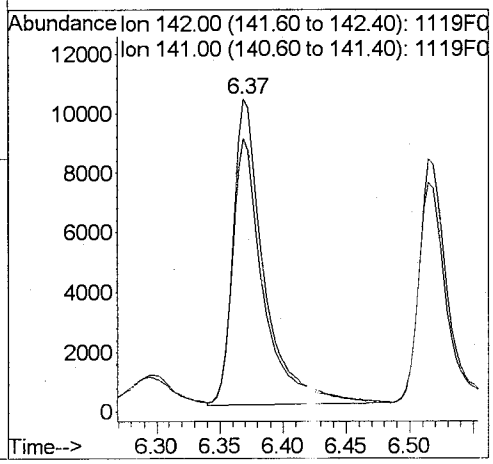


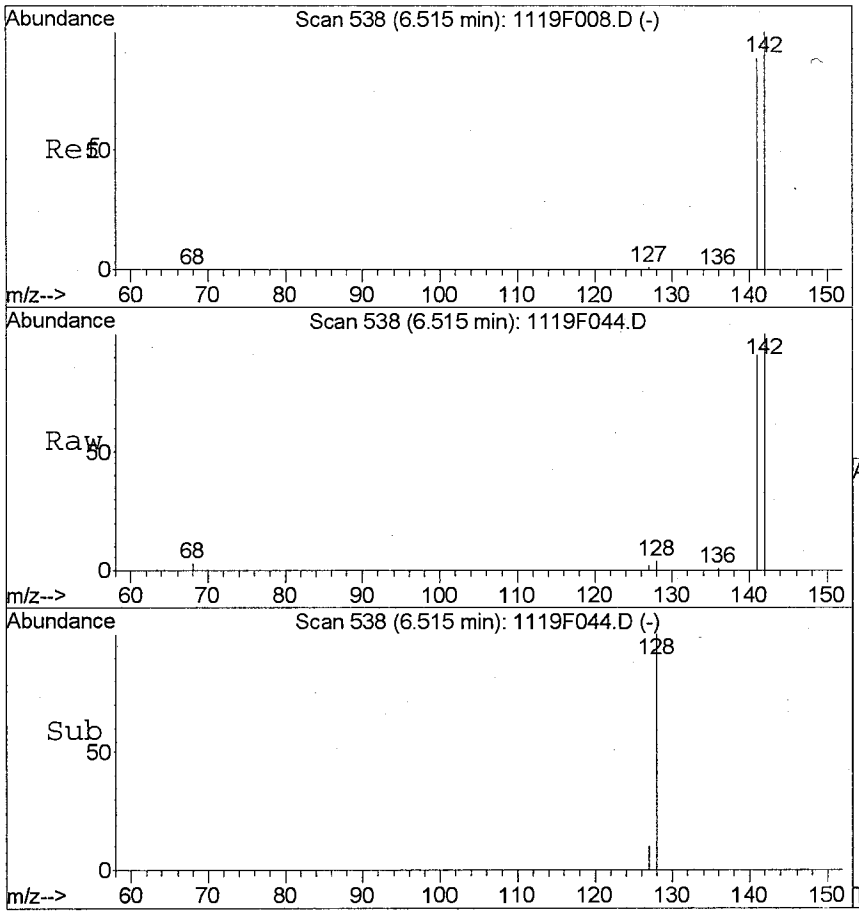


#3
2-Methylnaphthalene
Concen: 101.37 ng/ml
RT: 6.37 min Scan# 497
Delta R.T. 0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:142 Resp: 17446

Ion	Ratio	Lower	Upper
142	100		
141	86.9	57.2	117.2

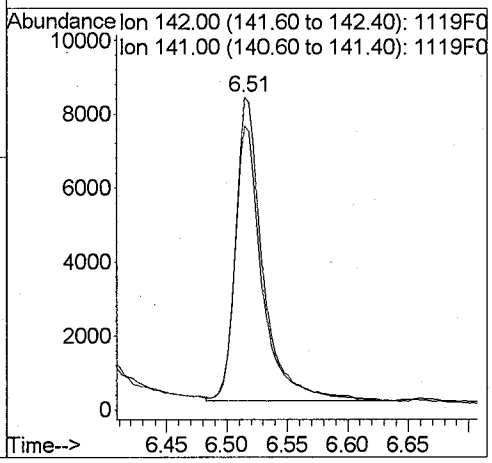


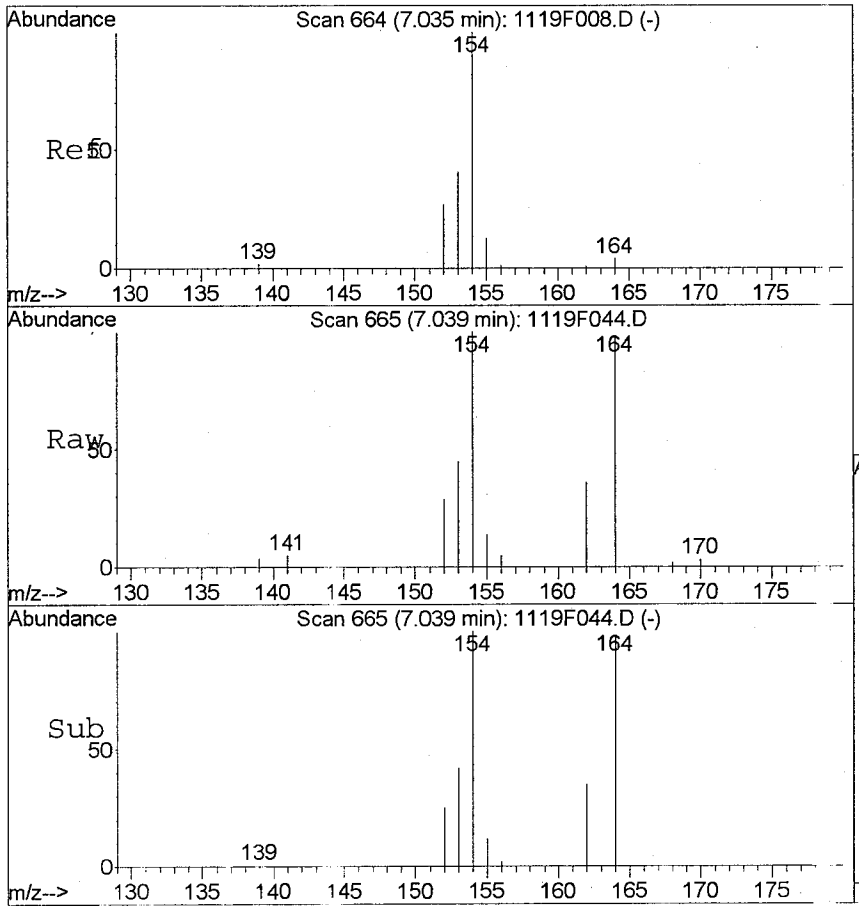


#4
1-Methylnaphthalene
Concen: 80.02 ng/ml
RT: 6.51 min Scan# 538
Delta R.T. -0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:142 Resp: 12908

Ion	Ratio	Lower	Upper
142	100		
141	90.1	58.5	118.5

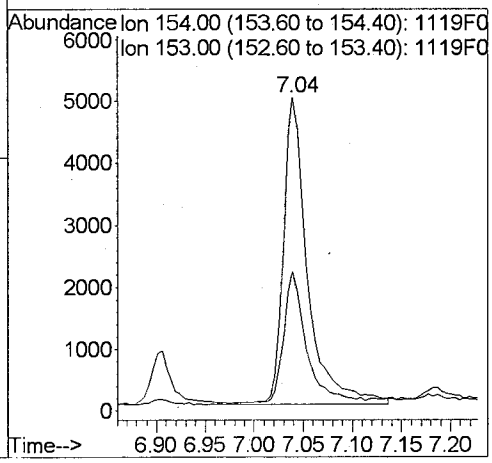


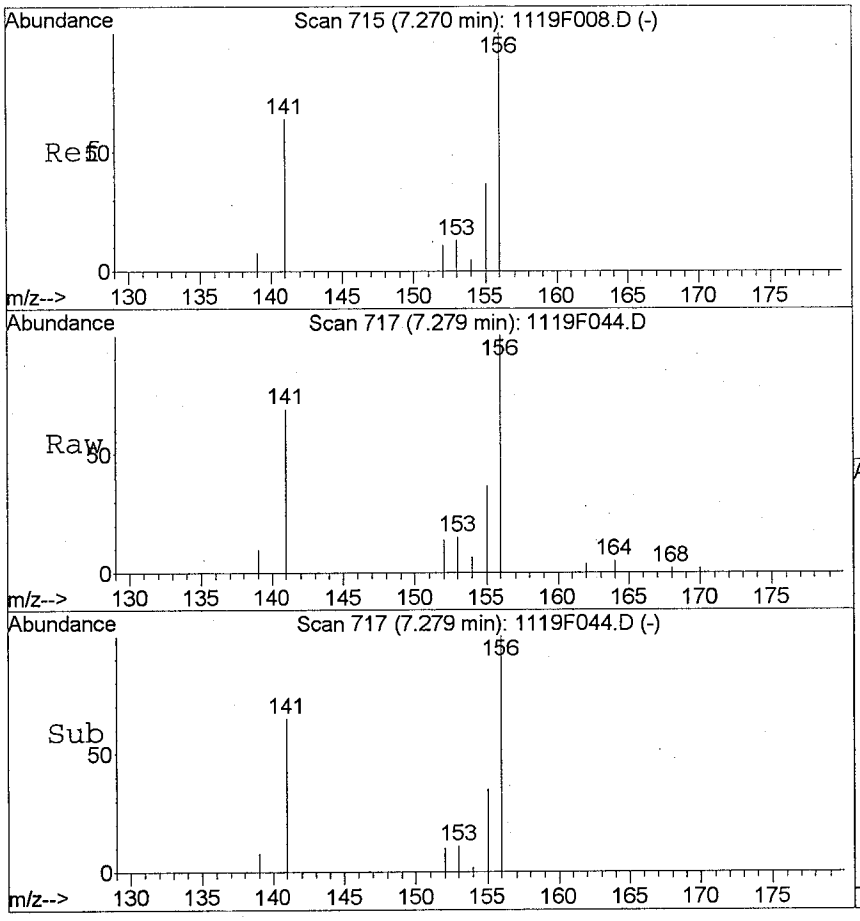


#6
Biphenyl
Concen: 41.33 ng/ml
RT: 7.04 min Scan# 665
Delta R.T. 0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:154 Resp: 8624

Ion	Ratio	Lower	Upper
154	100		
153	42.4	11.3	71.3

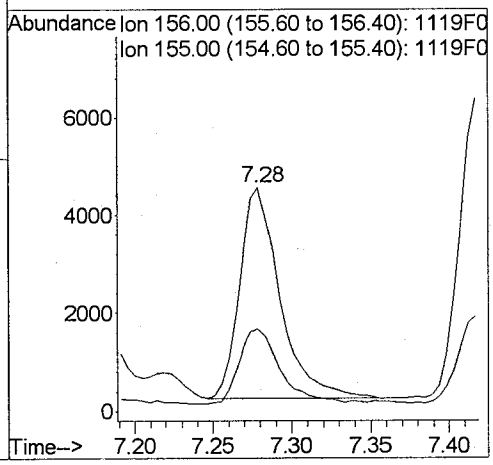


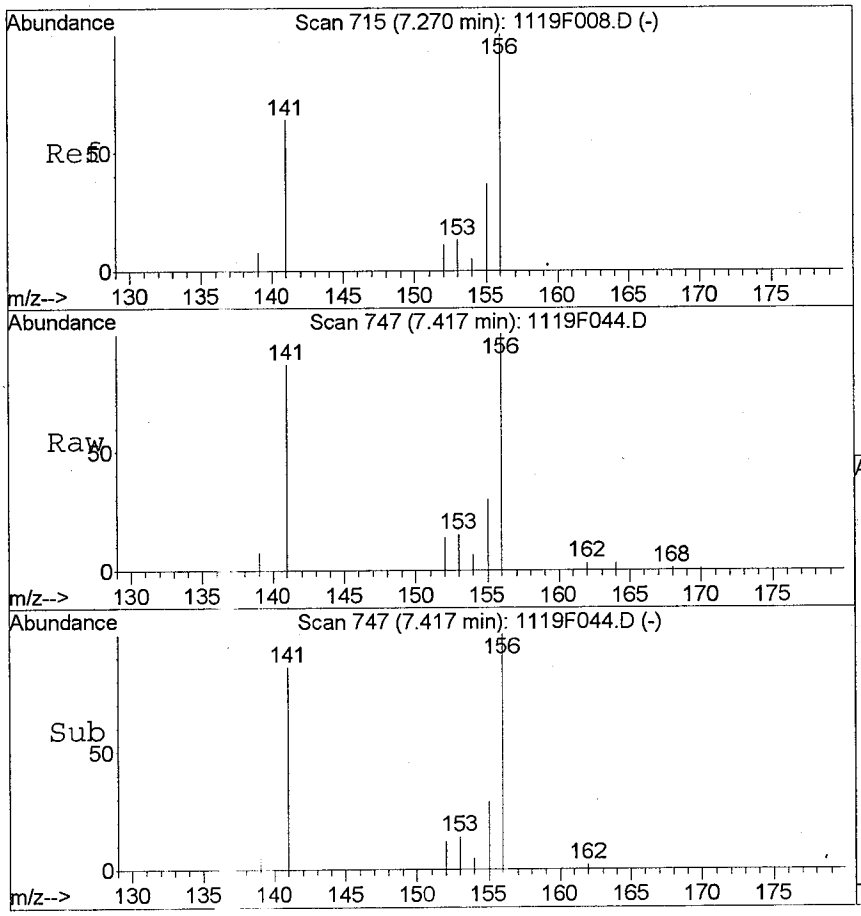


#7
2,6-Dimethylnaphthalene
Concen: 51.93 ng/ml
RT: 7.28 min Scan# 717
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:156 Resp: 7623

Ion	Ratio	Lower	Upper
156	100		
155	35.1	6.9	66.9

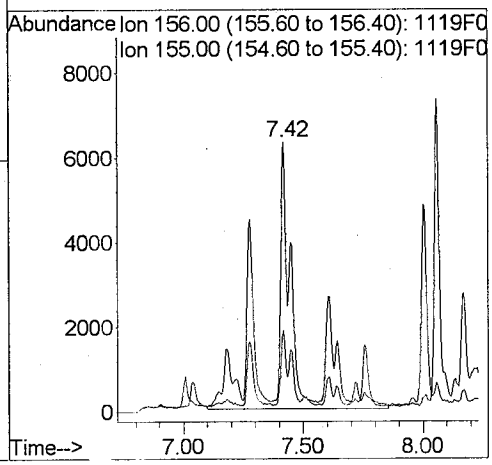


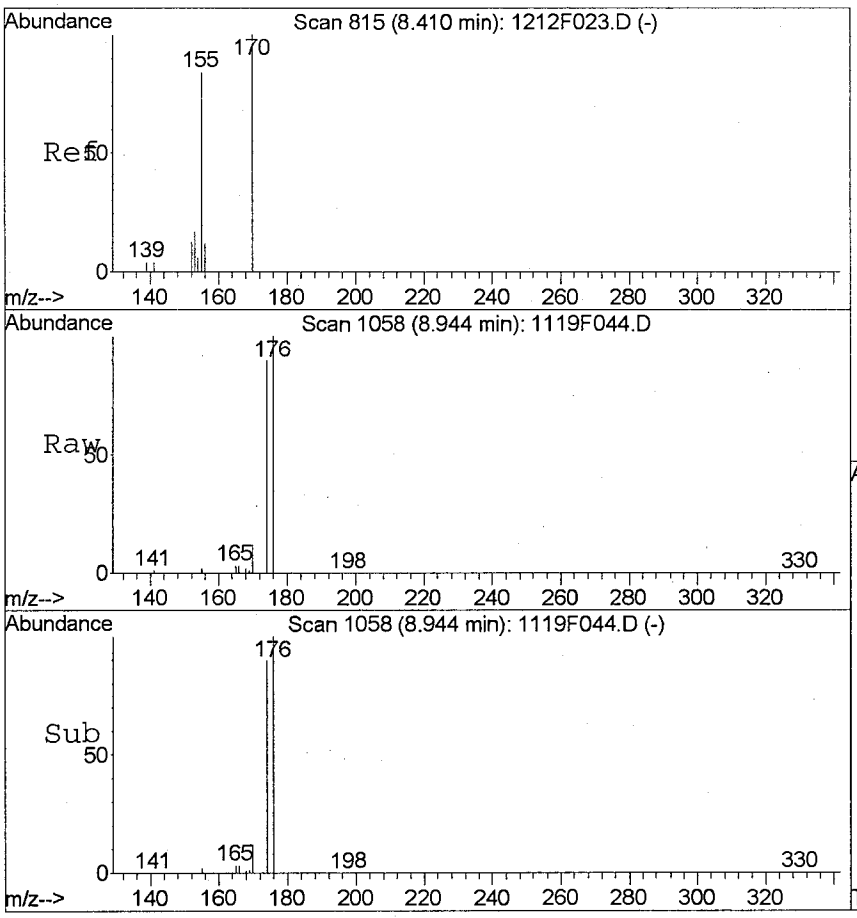


#8
C2-Naphthalenes
Concen: 143.53 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:156 Resp: 41831

Ion	Ratio	Lower	Upper
156	100		
155	30.2	8.3	68.3

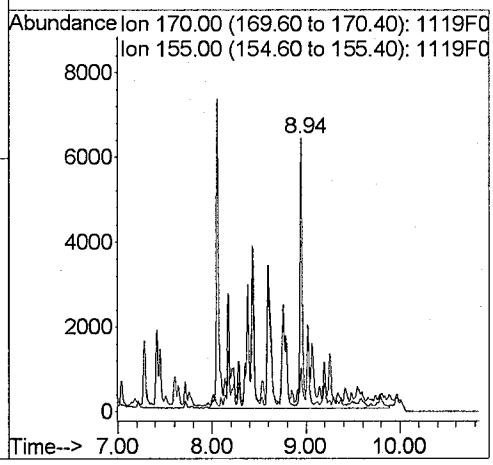


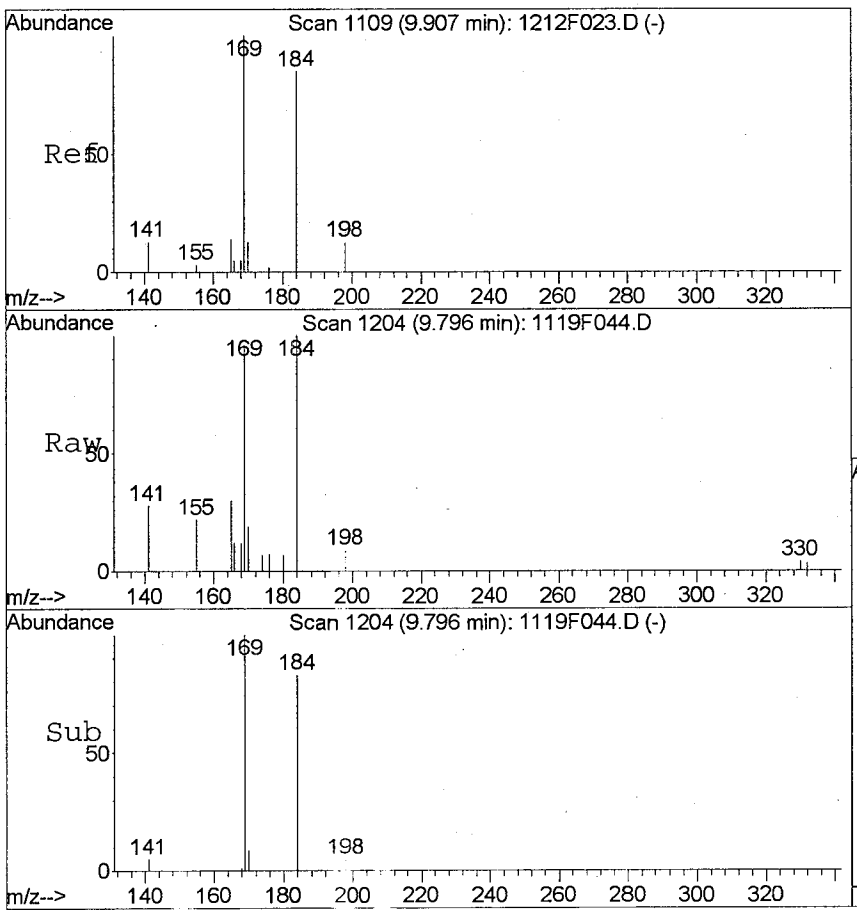


#9
C3-Naphthalenes
Concen: 190.60 ng/ml m
RT: 8.94 min Scan# 1058
Delta R.T. 0.41 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:170 Resp: 55550

Ion	Ratio	Lower	Upper
170	100		
155	16.2	56.9	116.9#

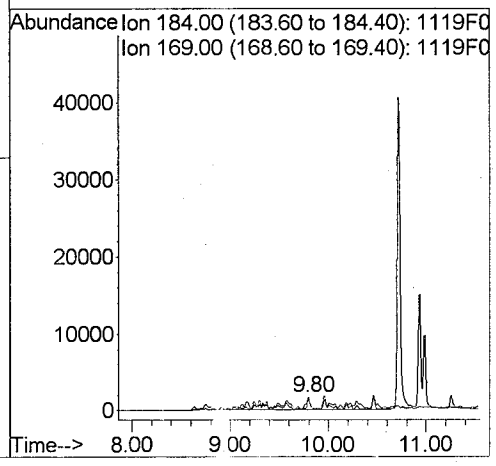


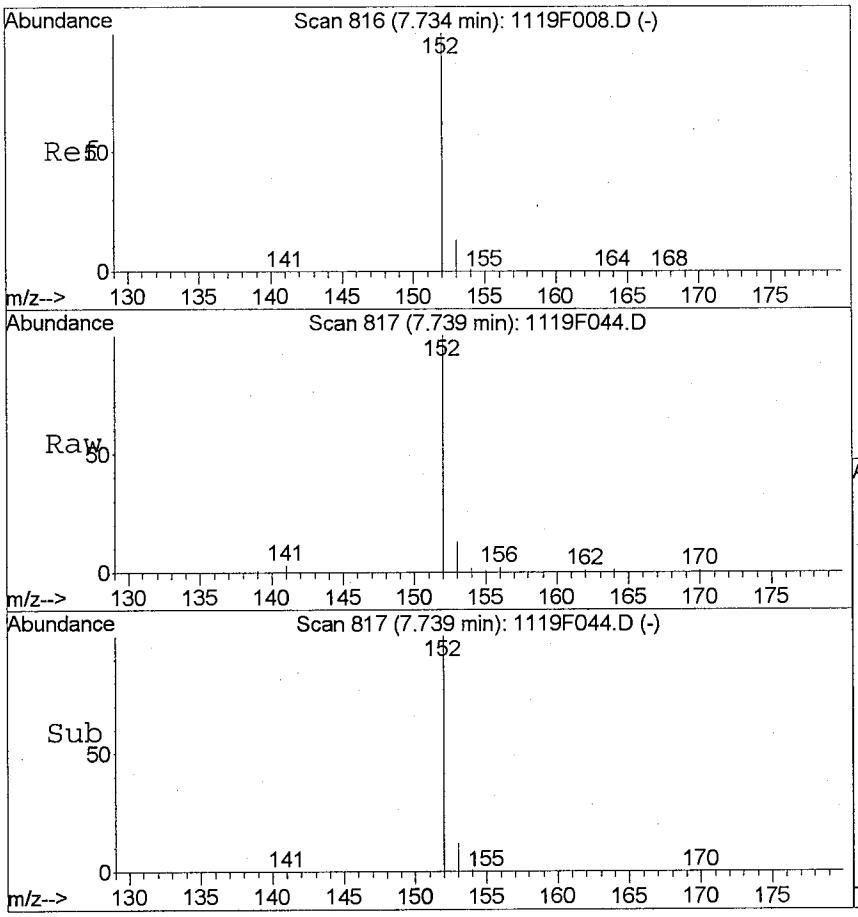


#10
C4-Naphthalenes
Concen: 114.37 ng/ml m
RT: 9.80 min Scan# 1204
Delta R.T. -0.26 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:184 Resp: 33332

Ion	Ratio	Lower	Upper
184	100		
169	95.7	89.7	149.7

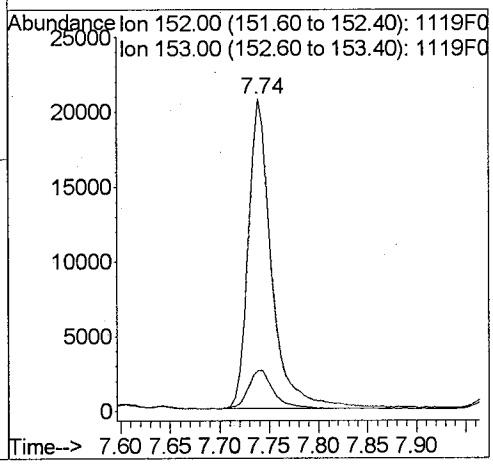


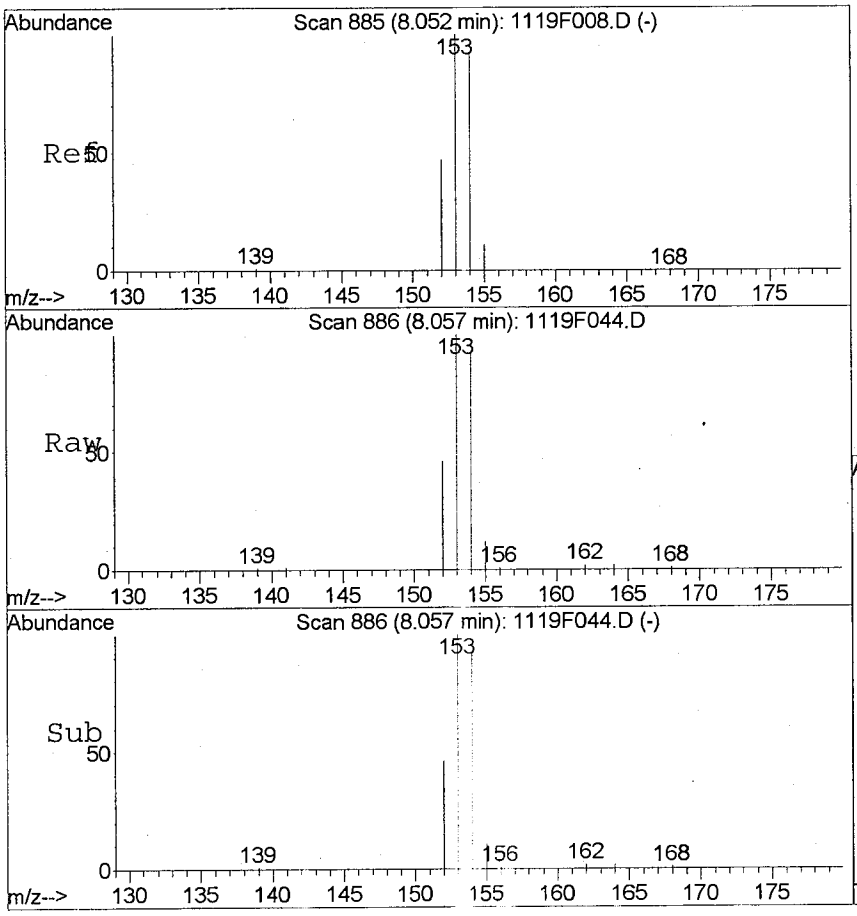


#12
Acenaphthylene
Concen: 127.98 ng/ml
RT: 7.74 min Scan# 817
Delta R.T. 0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:152 Resp: 33873

Ion	Ratio	Lower	Upper
152	100		
153	12.3	0.0	43.1

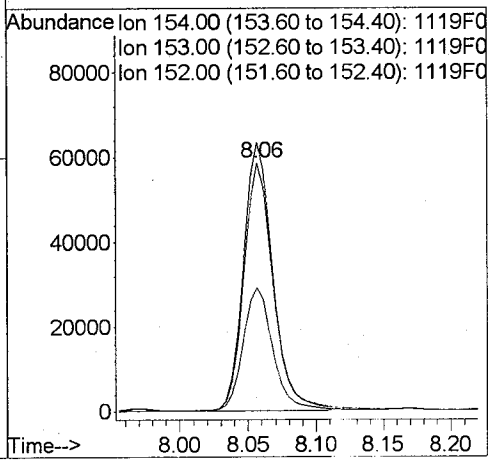


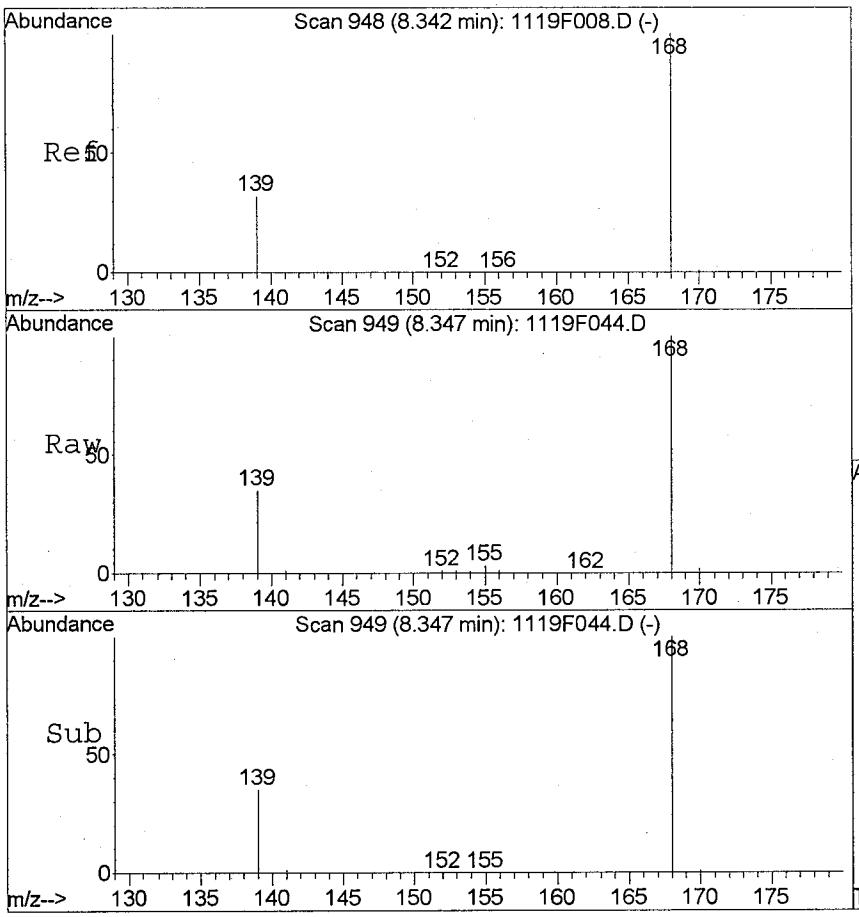


#13
Acenaphthene
Concen: 540.41 ng/ml
RT: 8.06 min Scan# 886
Delta R.T. 0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:154 Resp: 88153

Ion	Ratio	Lower	Upper
154	100		
153	108.3	78.4	138.4
152	49.9	20.4	80.4

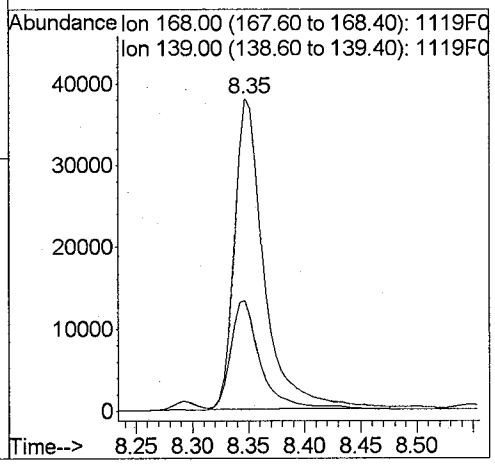


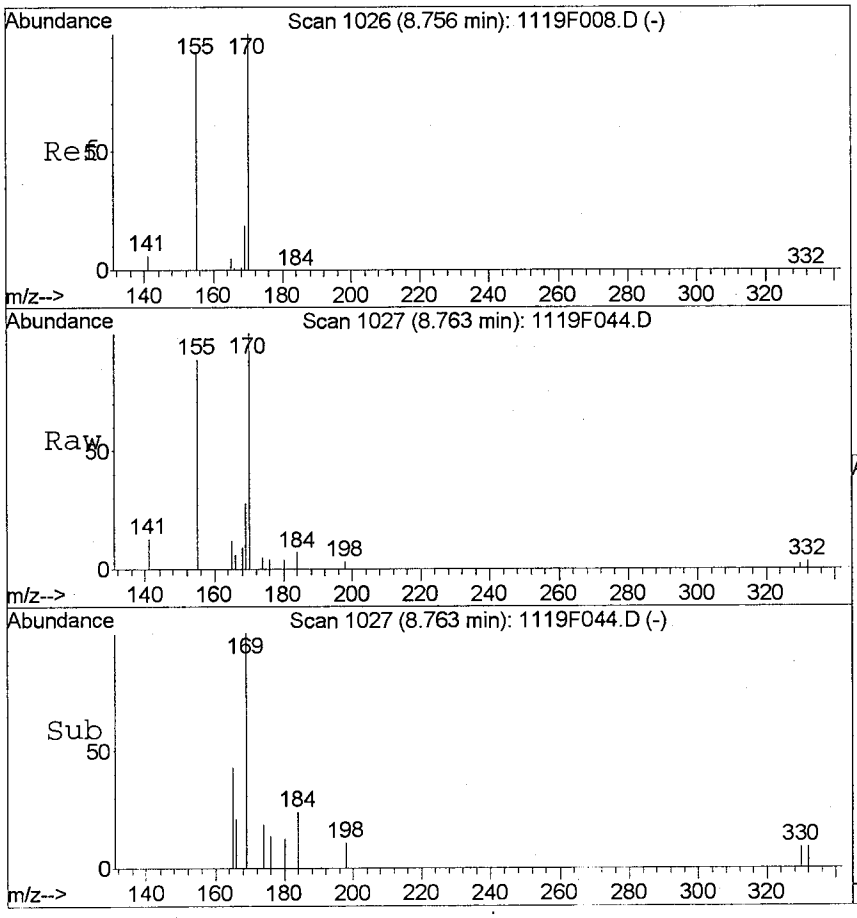


#14
Dibenzofuran
Concen: 317.42 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:168 Resp: 69411

Ion	Ratio	Lower	Upper
168	100		
139	35.0	2.4	62.4

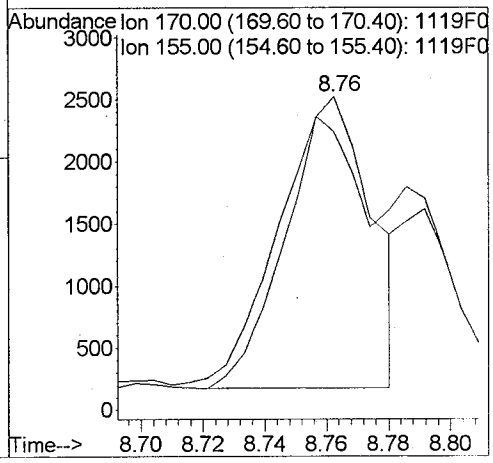


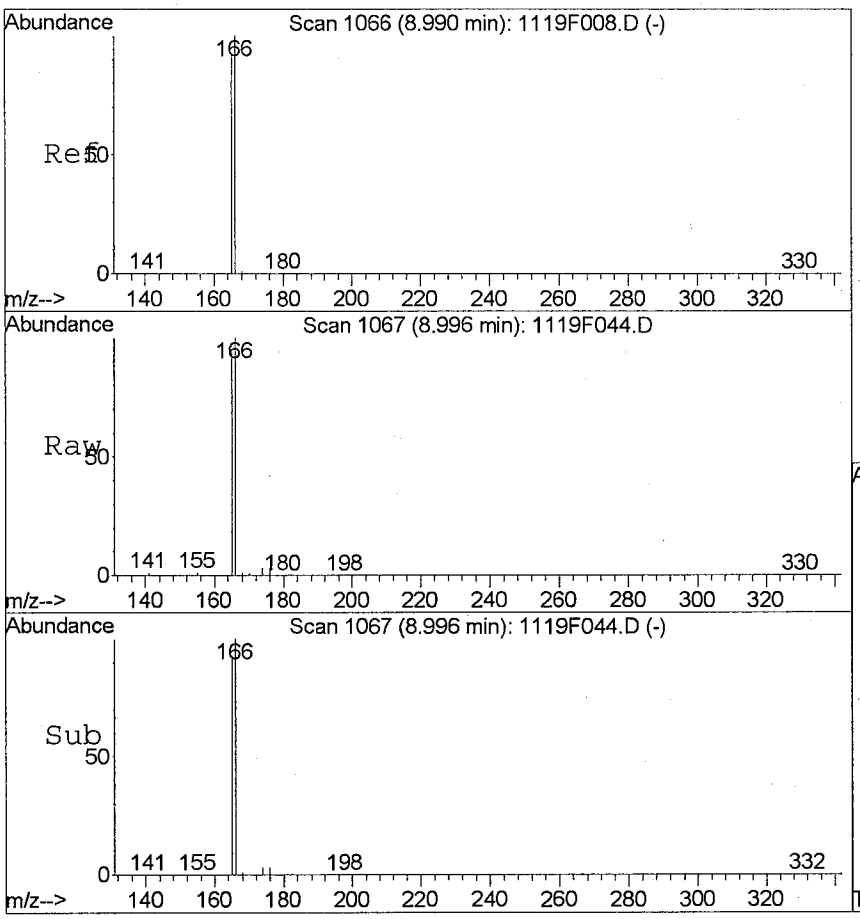


#15
2,3,5-Trimethylnaphthalene
Concen: 30.54 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:170 Resp: 4462

Ion	Ratio	Lower	Upper
170	100		
155	84.4	61.5	121.5

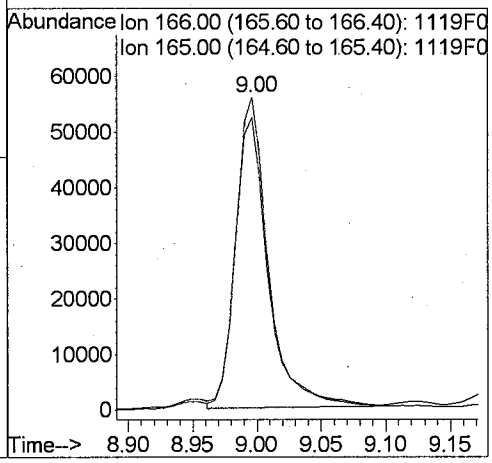


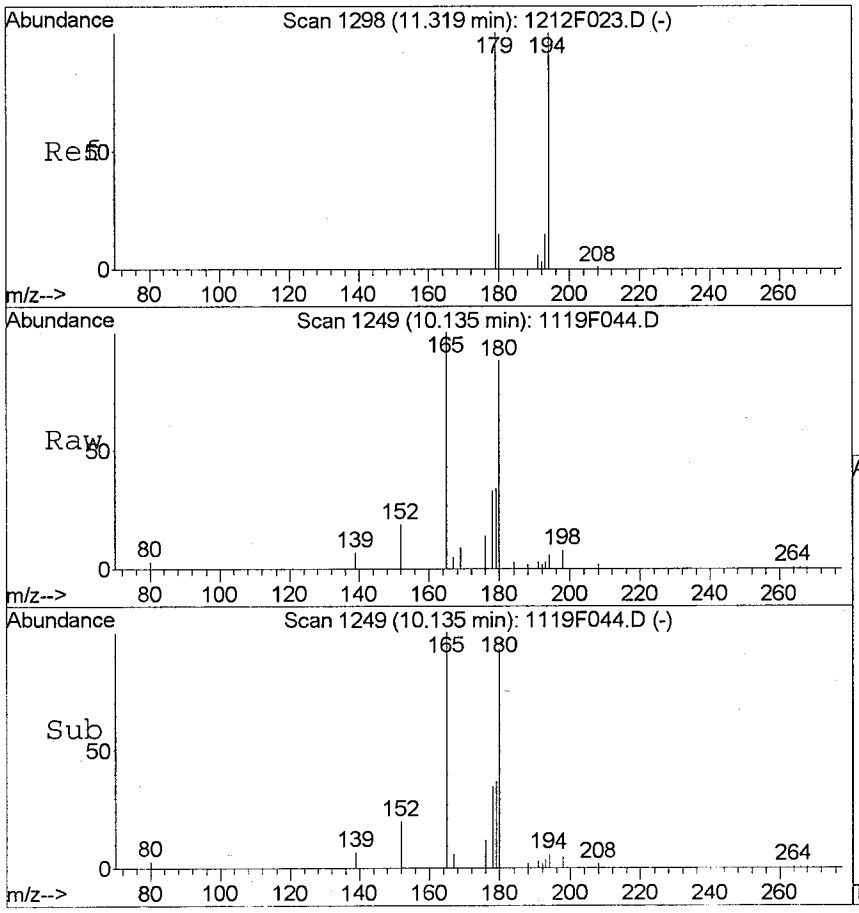


#17
Fluorene
Concen: 562.62 ng/ml
RT: 9.00 min Scan# 1067
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:166 Resp: 98313

Ion	Ratio	Lower	Upper
166	100		
165	92.9	62.9	122.9

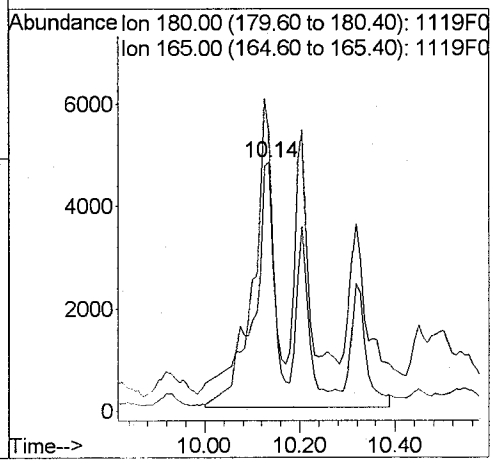


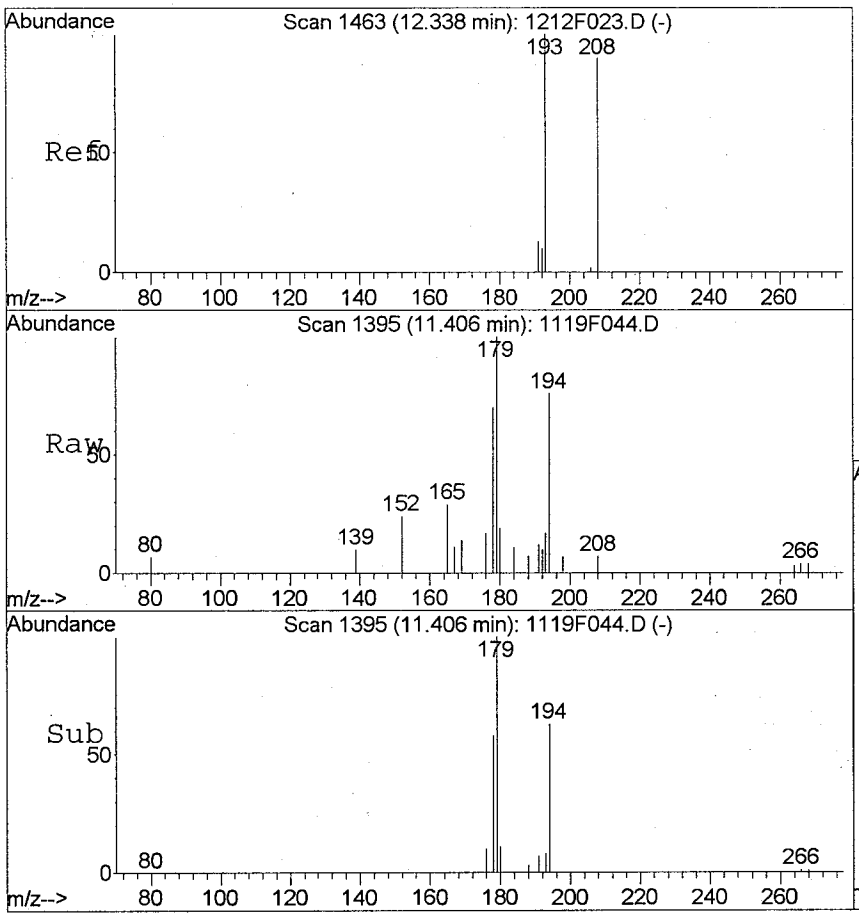


#18
C1-Fluorenes
Concen: 172.64 ng/ml m
RT: 10.14 min Scan# 1249
Delta R.T. -0.16 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:180 Resp: 30168

Ion	Ratio	Lower	Upper
180	100		
165	113.0	148.7	208.7#

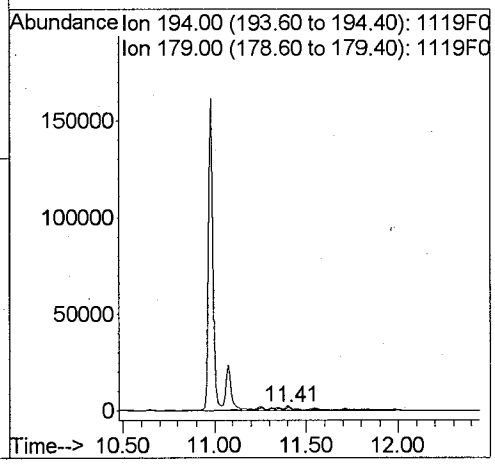


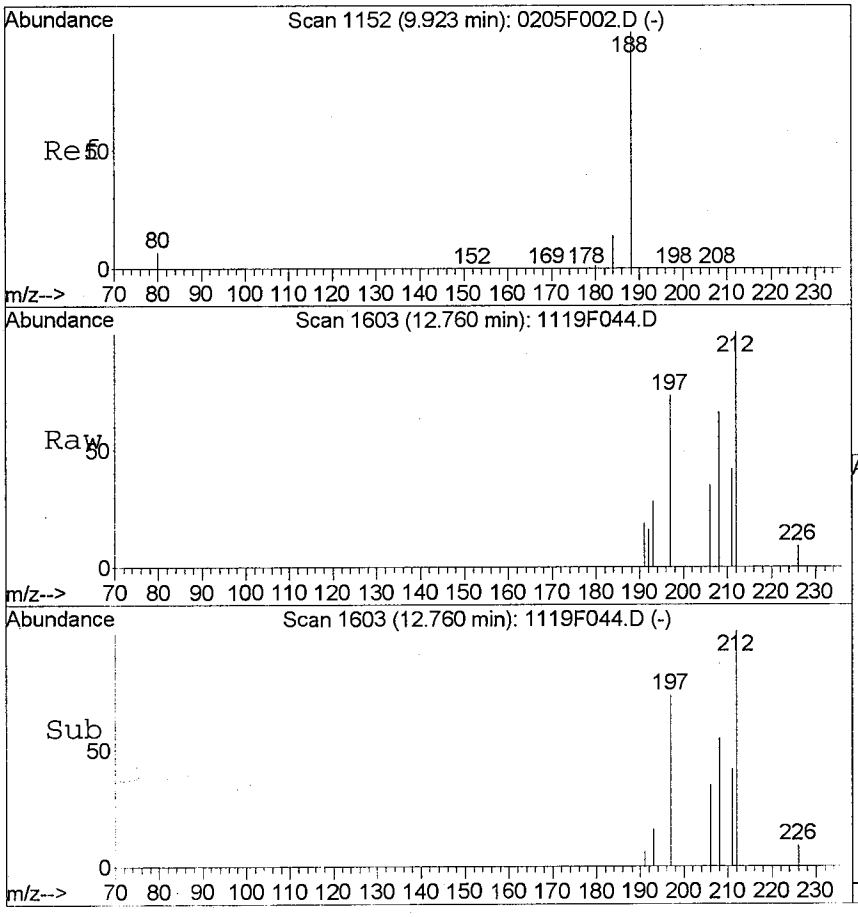


#19
C2-Fluorenes
Concen: 148.47 ng/ml m
RT: 11.41 min Scan# 1395
Delta R.T. -0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:194 Resp: 25944

Ion	Ratio	Lower	Upper
194	100		
179	132.1	107.0	167.0

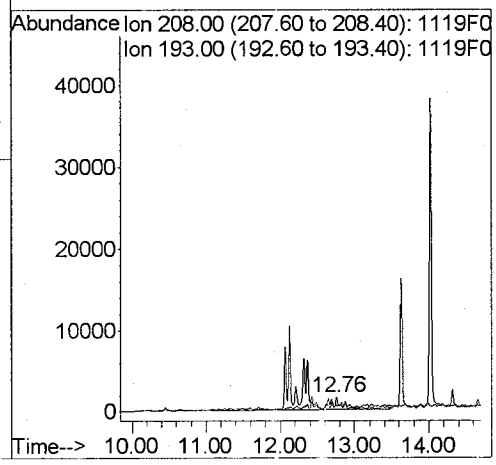


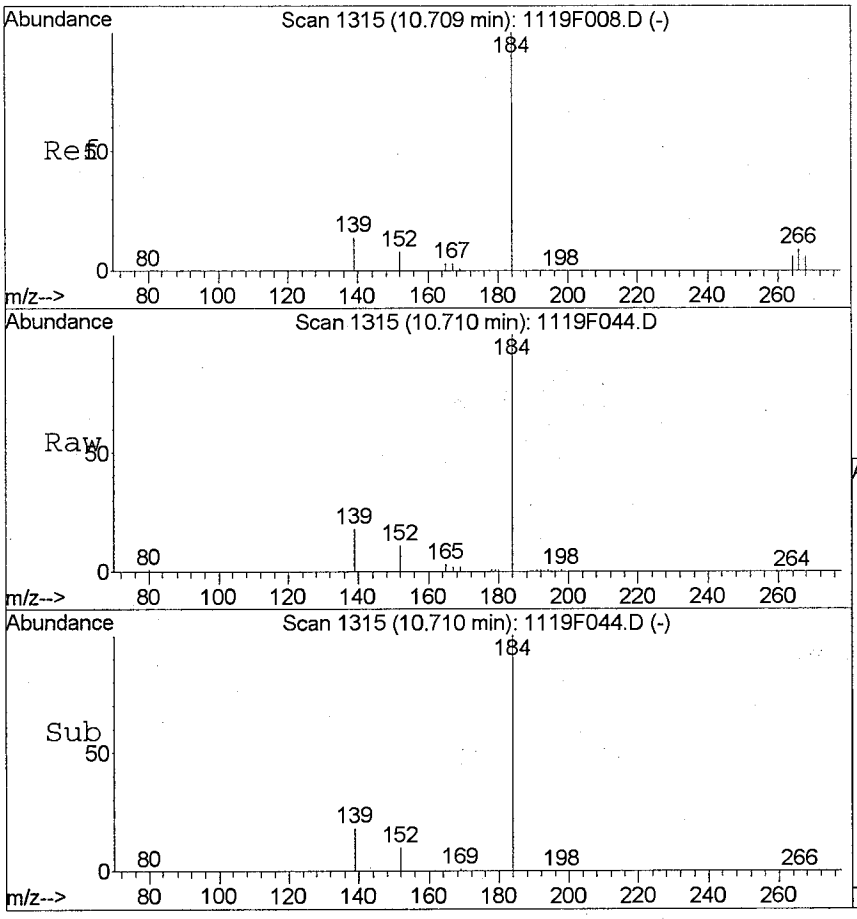


#20
C3-Fluorenes
Concen: 238.14 ng/ml m
RT: 12.76 min Scan# 1603
Delta R.T. 0.24 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:208 Resp: 41613

Ion	Ratio	Lower	Upper
208	100		
193	42.9	92.0	152.0#

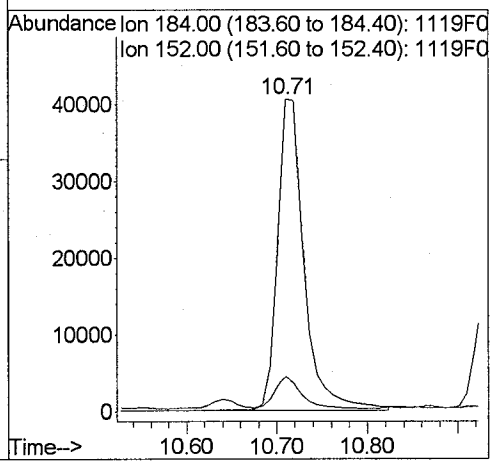


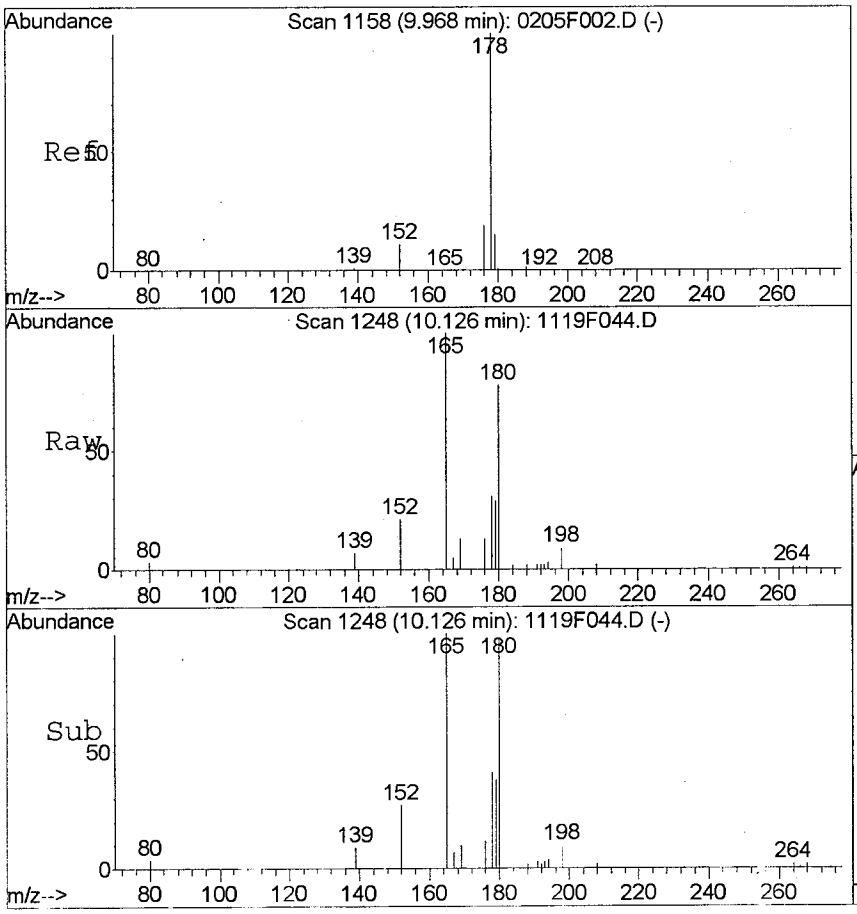


#24
Dibenzothiophene
Concen: 350.53 ng/ml
RT: 10.71 min Scan# 1315
Delta R.T. 0.00 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:184 Resp: 82229

Ion	Ratio	Lower	Upper
184	100		
152	9.8	0.0	38.4

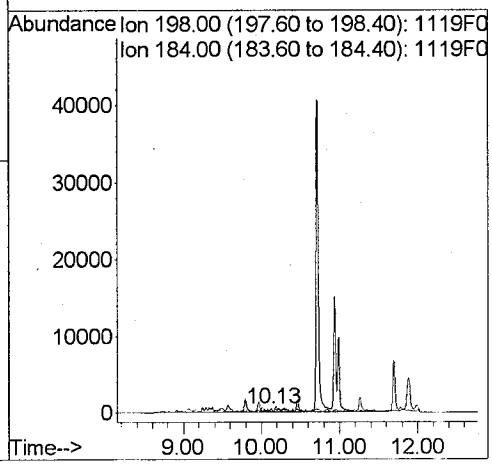


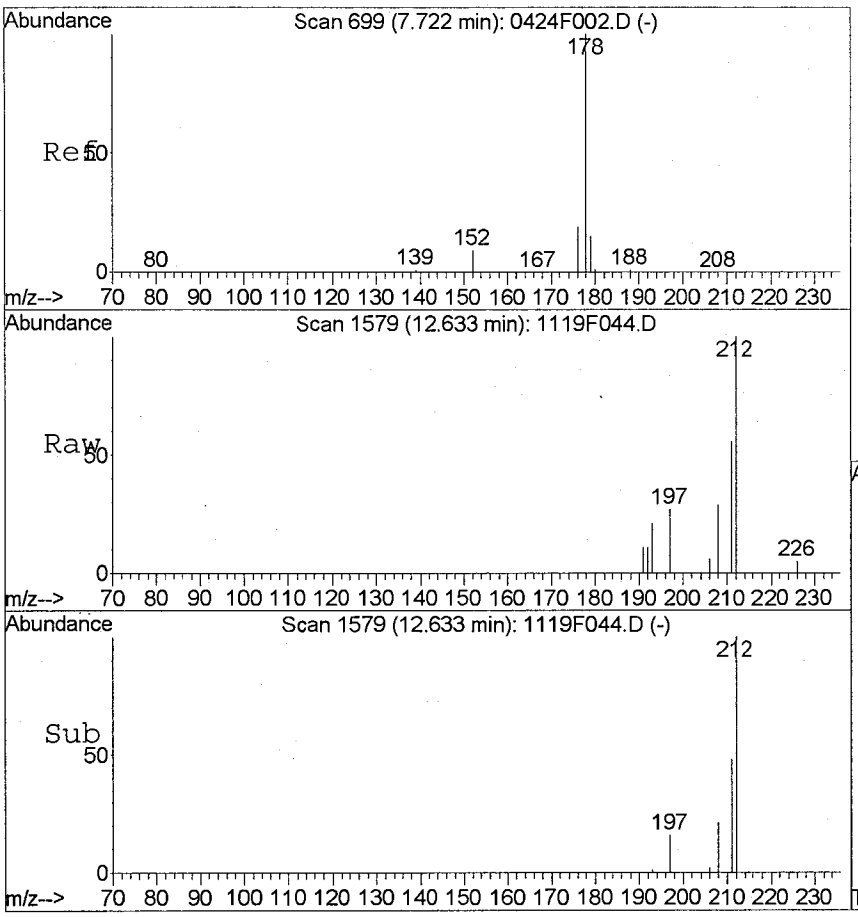


#25
C1-Dibenzothiophenes
Concen: 87.25 ng/ml m
RT: 10.13 min Scan# 1248
Delta R.T. -0.08 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:198 Resp: 20467

Ion	Ratio	Lower	Upper
198	100		
184	26.2	74.1	134.1#

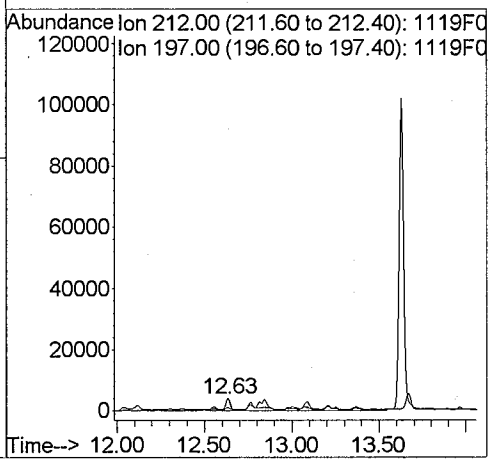


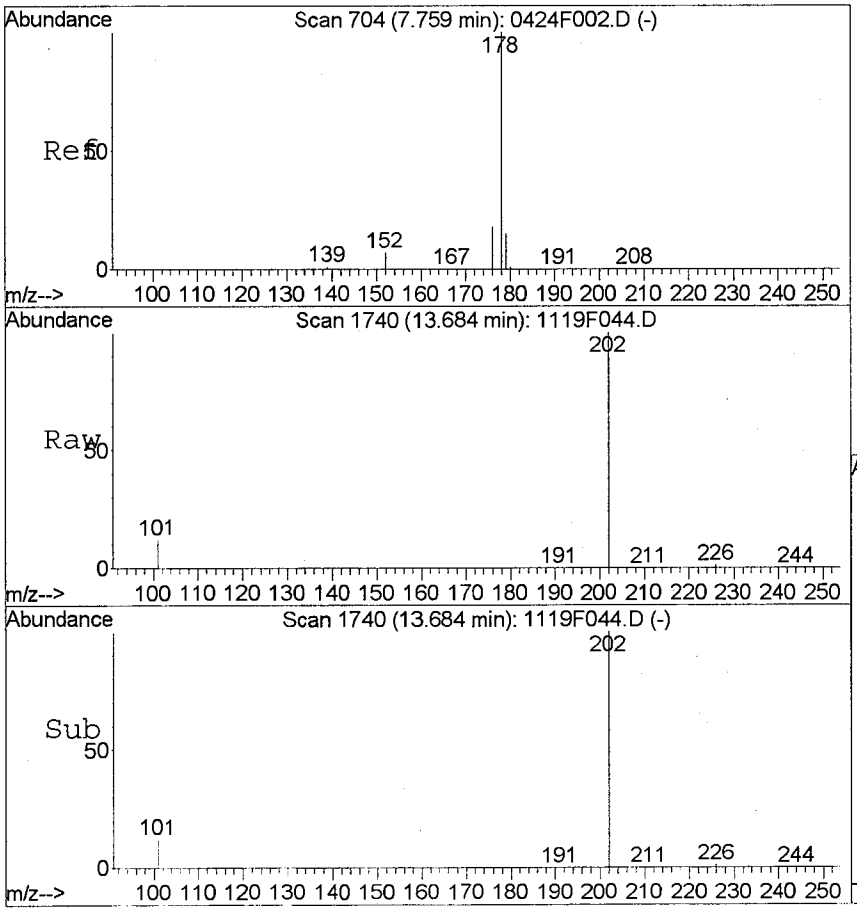


#26
C2-Dibenzothiophenes
Concen: 221.36 ng/ml m
RT: 12.63 min Scan# 1579
Delta R.T. -0.30 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:212 Resp: 51926

Ion	Ratio	Lower	Upper
212	100		
197	26.6	0.0	53.8

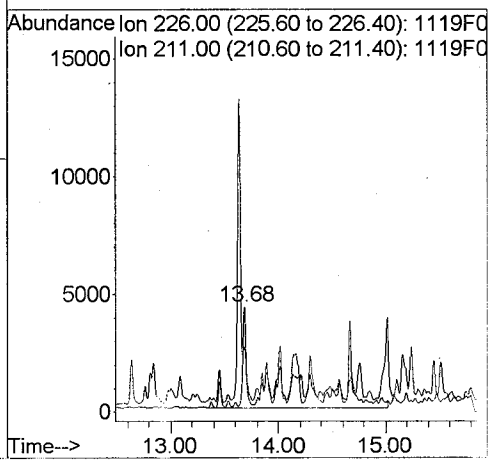


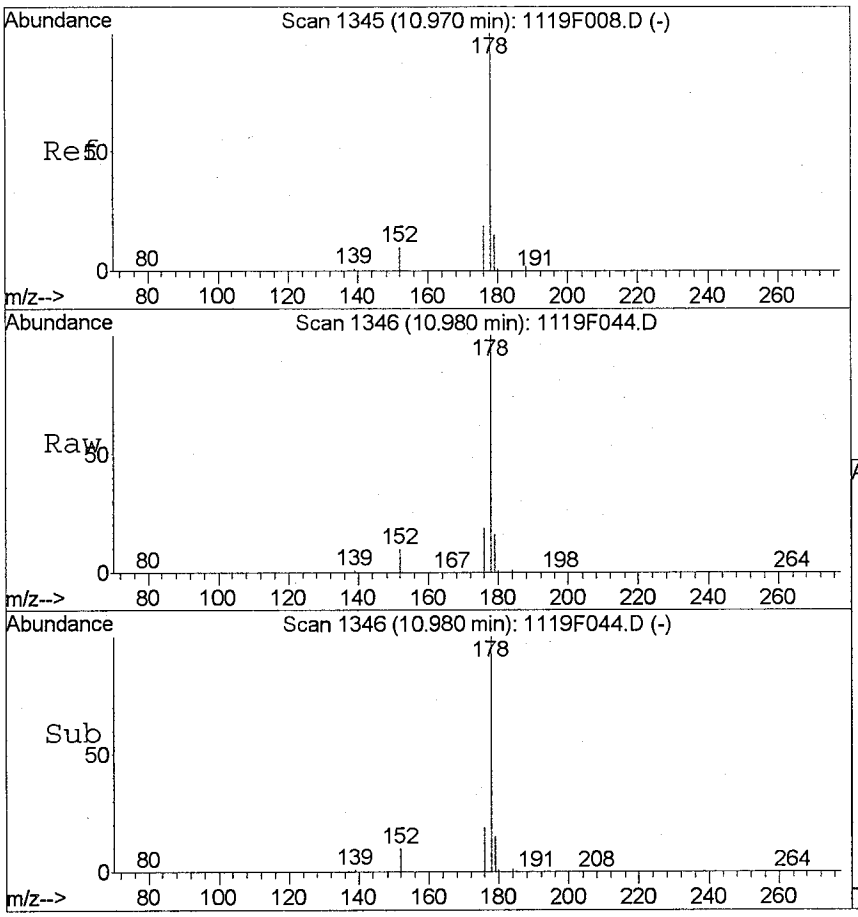


#27
C3-Dibenzothiophenes
Concen: 302.46 ng/ml m
RT: 13.68 min Scan# 1740
Delta R.T. -0.10 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:226 Resp: 70952

Ion	Ratio	Lower	Upper
226	100		
211	59.6	27.1	87.1

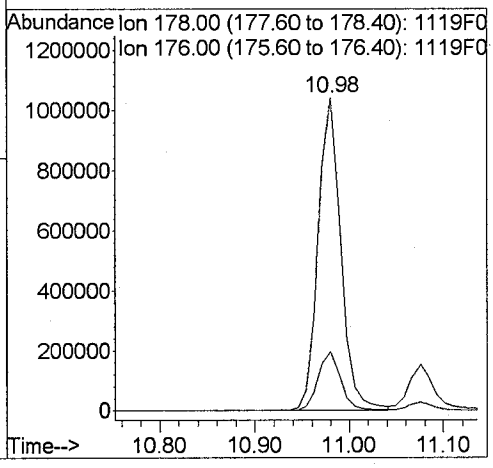


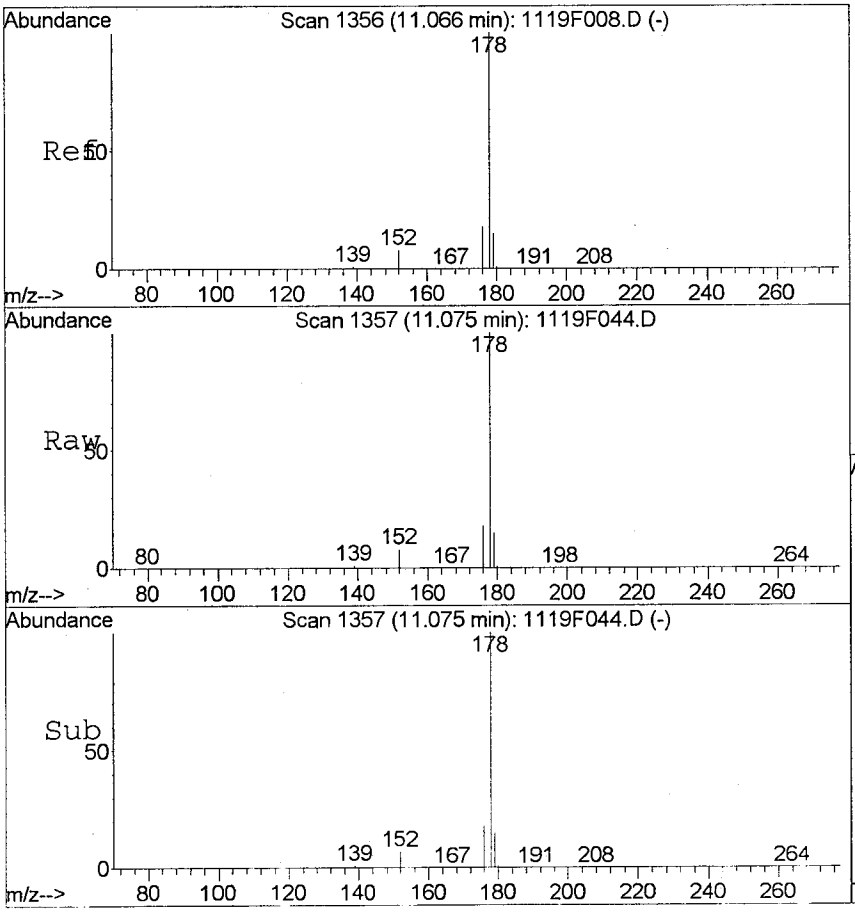


#28
Phenanthrene
Concen: 7044.93 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:178 Resp: 1735983

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.6

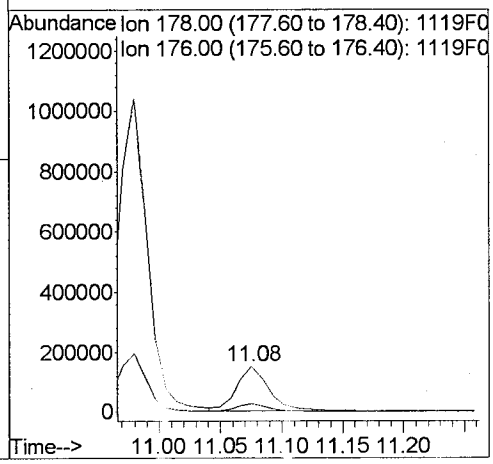


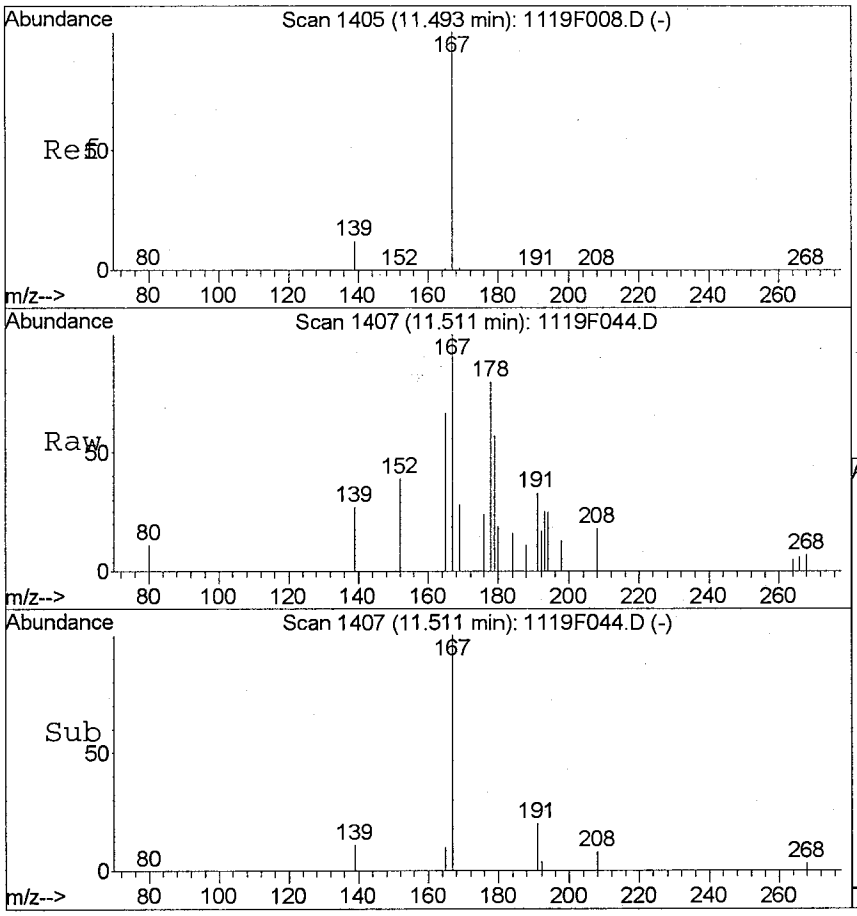


#29
Anthracene
Concen: 1295.22 ng/ml
RT: 11.08 min Scan# 1357
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:178 Resp: 272667

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	48.2

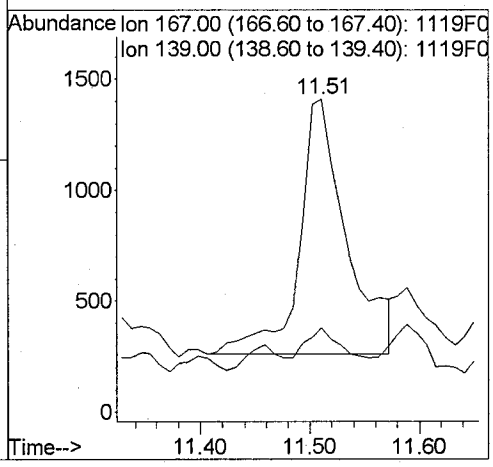


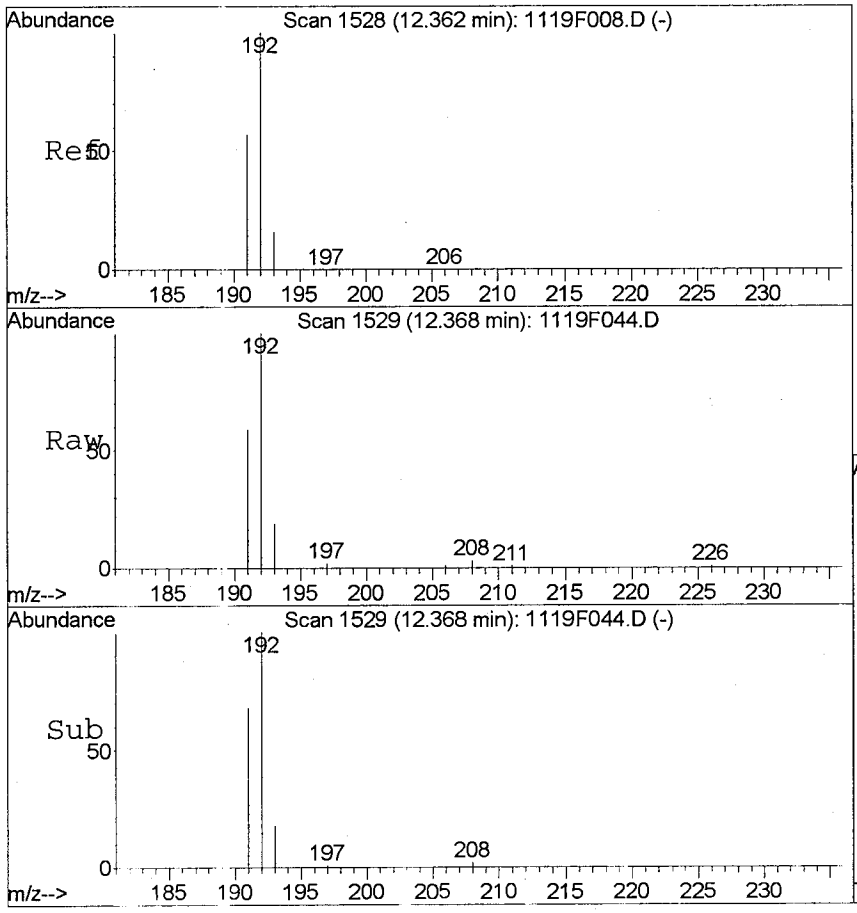


#30
Carbazole
Concen: 20.90 ng/ml
RT: 11.51 min Scan# 1407
Delta R.T. 0.02 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:167 Resp: 3477

Ion	Ratio	Lower	Upper
167	100		
139	11.9	0.0	42.5

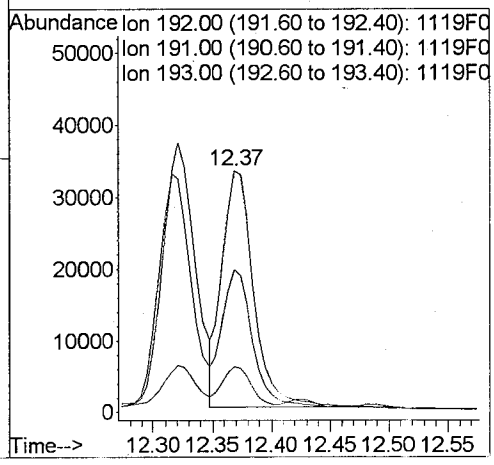


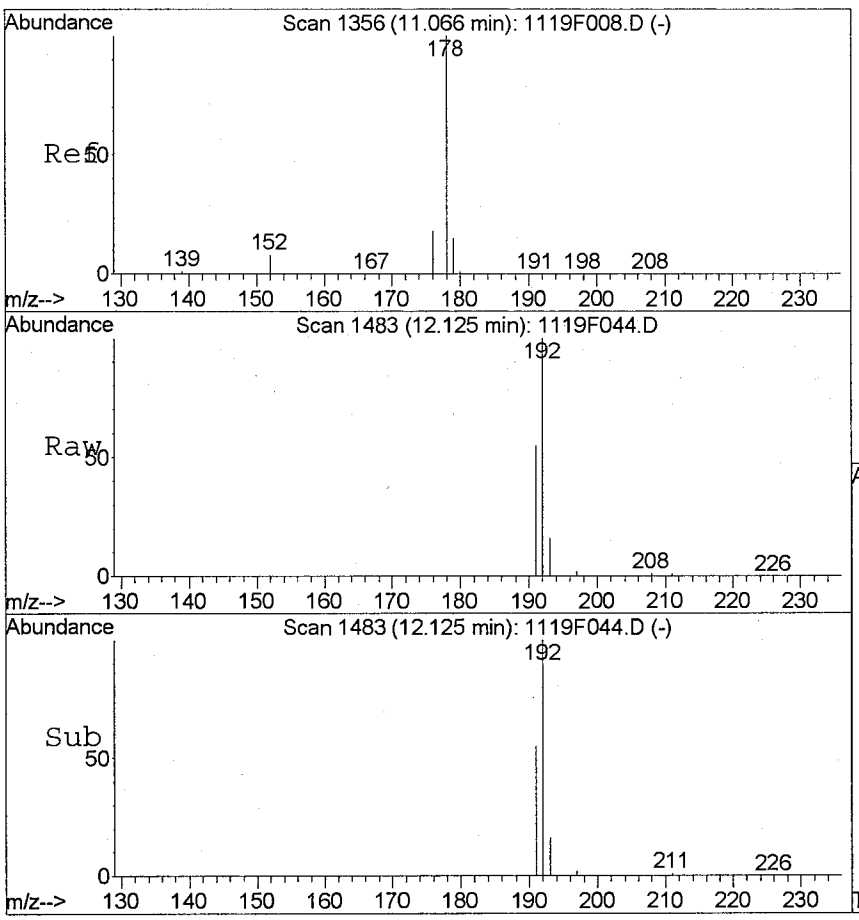


#31
1-Methylphenanthrene
Concen: 369.10 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:192 Resp: 61754

Ion	Ratio	Lower	Upper
192	100		
191	58.7	27.5	87.5
193	17.1	0.0	45.6

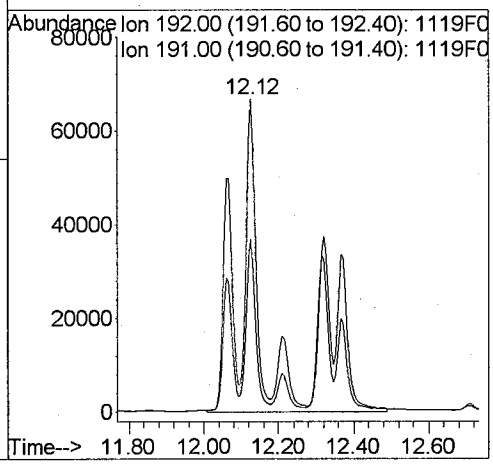


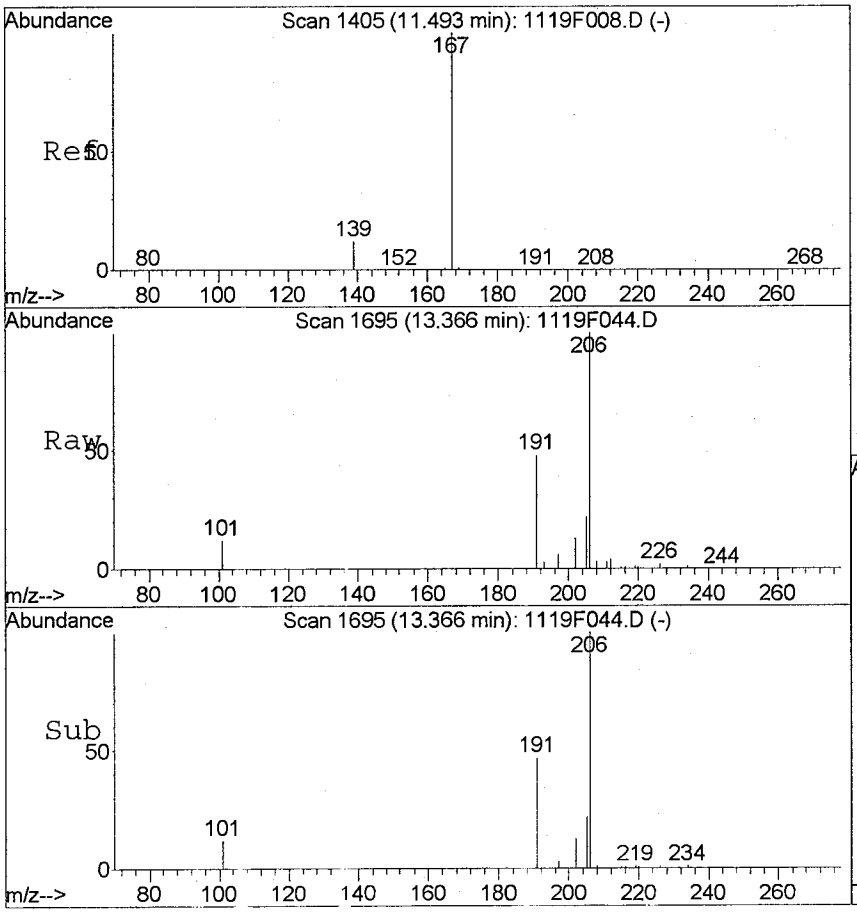


#32
C1-Phenanthrenes/Anthracenes
Concen: 1613.91 ng/ml m
RT: 12.12 min Scan# 1483
Delta R.T. -0.10 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:192 Resp: 397694

Ion	Ratio	Lower	Upper
192	100		
191	55.4	25.3	85.3

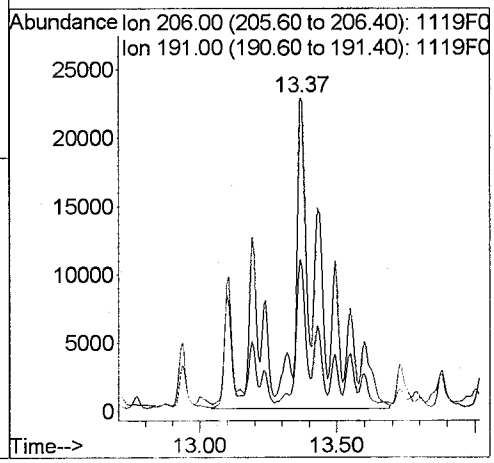


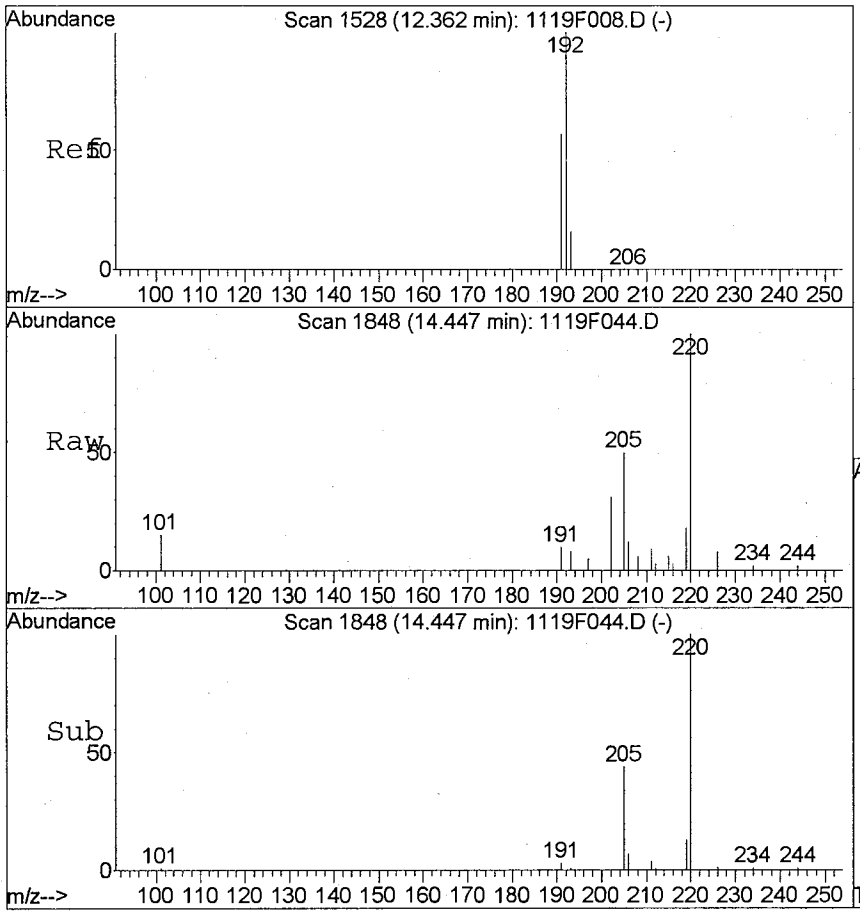


#33
C2-Phenanthrenes/Anthracenes
Concen: 786.91 ng/ml m
RT: 13.37 min Scan# 1695
Delta R.T. -0.10 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:206 Resp: 193908

Ion	Ratio	Lower	Upper
206	100		
191	48.4	15.6	75.6

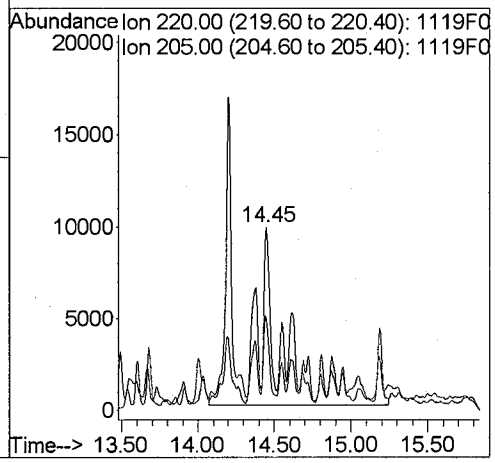


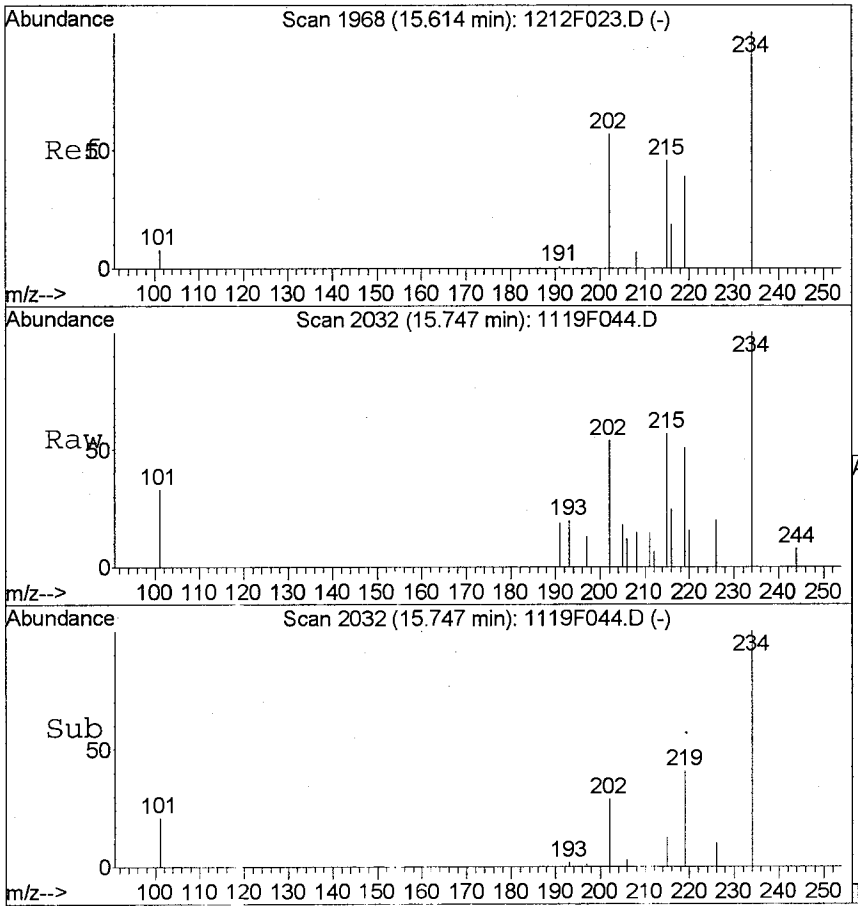


#34
C3-Phenanthrenes/Anthracenes
Concen: 515.39 ng/ml m
RT: 14.45 min Scan# 1848
Delta R.T. -0.10 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:220 Resp: 127000

Ion	Ratio	Lower	Upper
220	100		
205	50.2	20.0	80.0

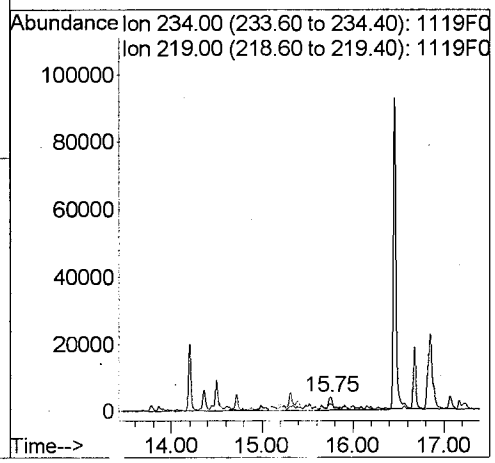


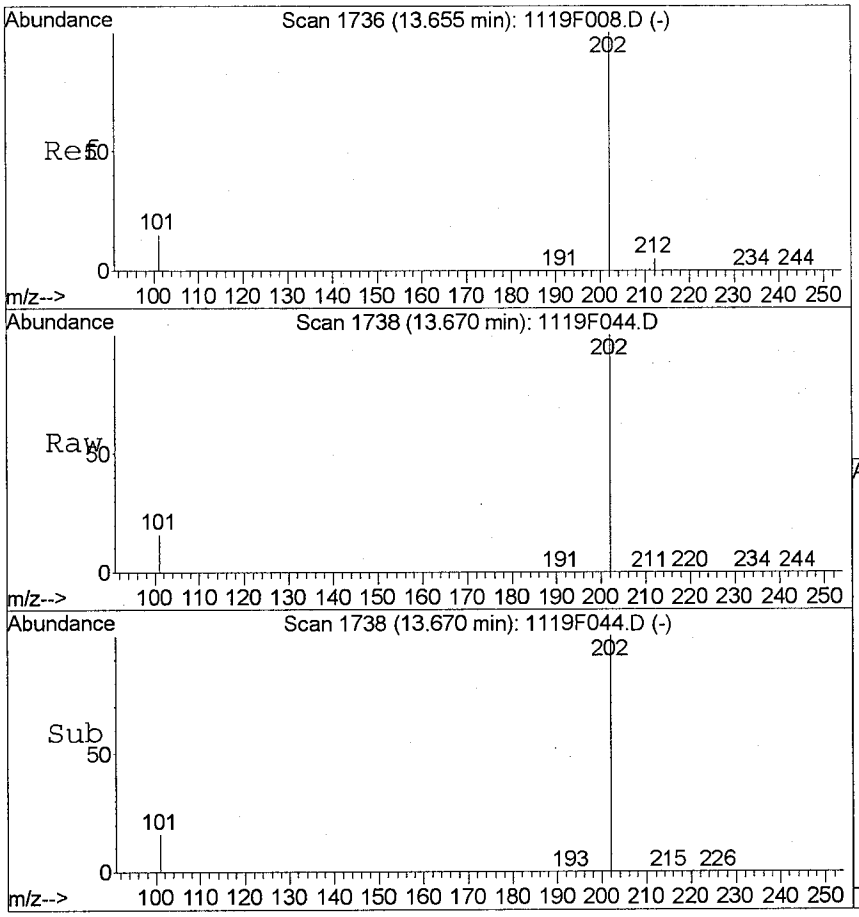


#35
C4-Phenanthrenes/Anthracenes
Concen: 317.72 ng/ml m
RT: 15.75 min Scan# 2032
Delta R.T. -0.08 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:234 Resp: 78292

Ion	Ratio	Lower	Upper
234	100		
219	50.8	17.7	77.7

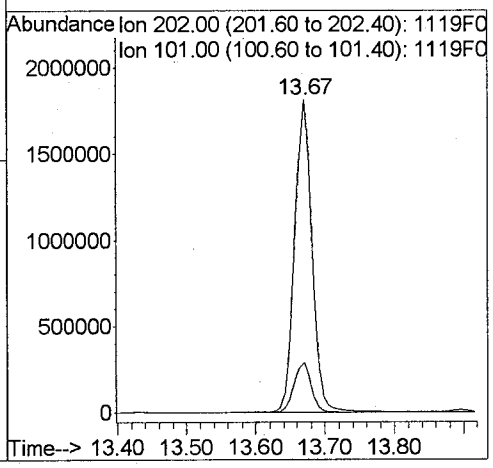


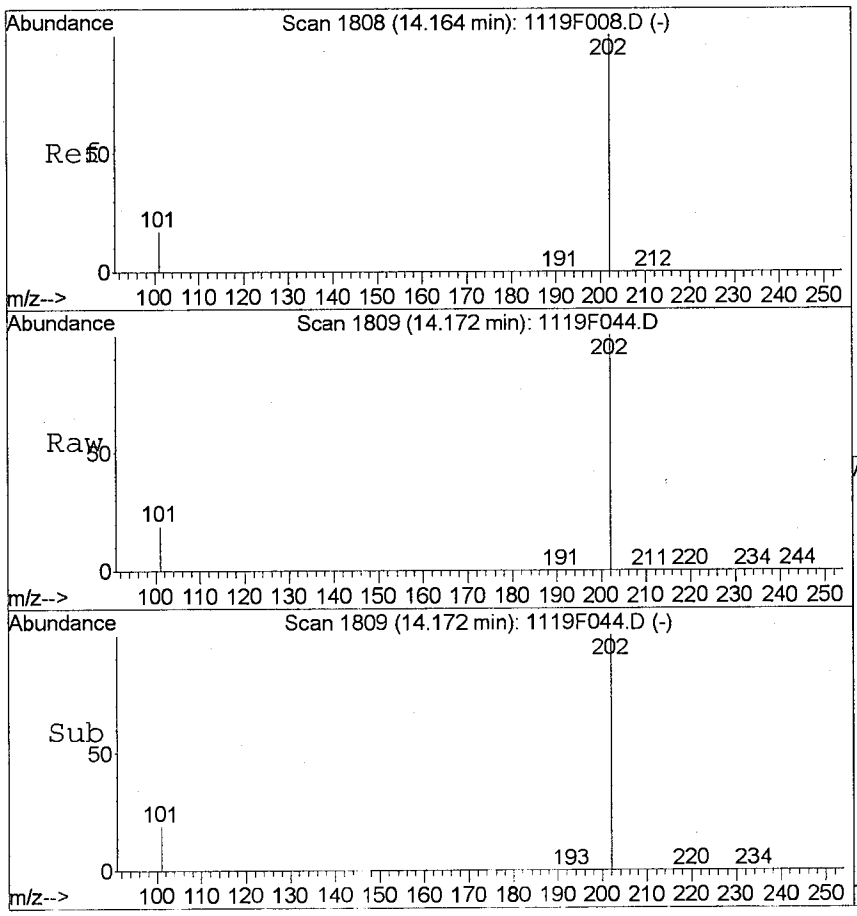


#36
Fluoranthene
Concen: 12761.96 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:202 Resp: 3130338

Ion	Ratio	Lower	Upper
202	100		
101	15.8	0.0	45.5

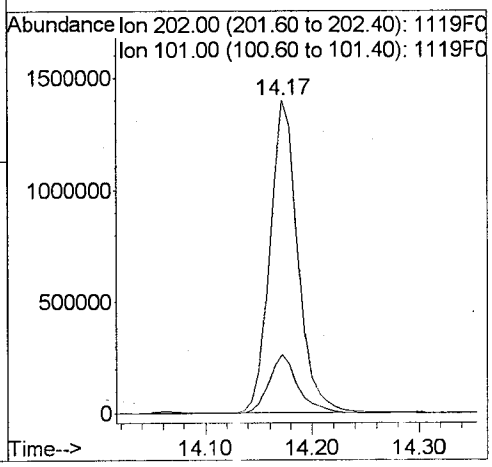


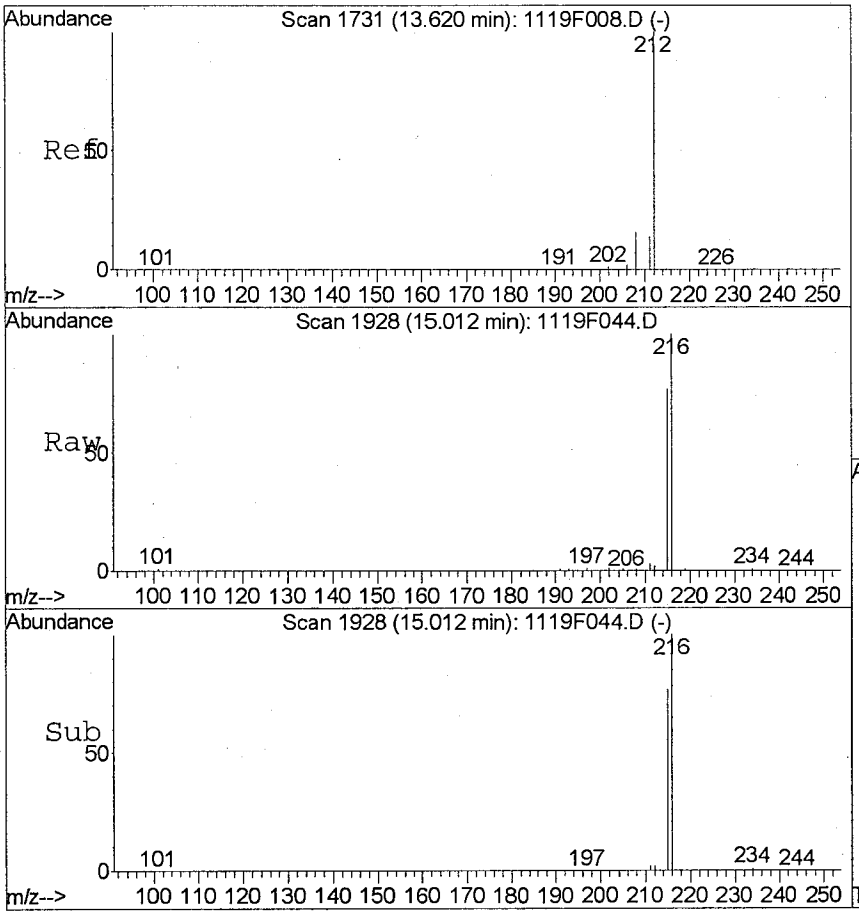


#39
Pyrene
Concen: 10471.68 ng/ml
RT: 14.17 min Scan# 1809
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:202 Resp: 2557178

Ion	Ratio	Lower	Upper
202	100		
101	18.9	0.0	47.4

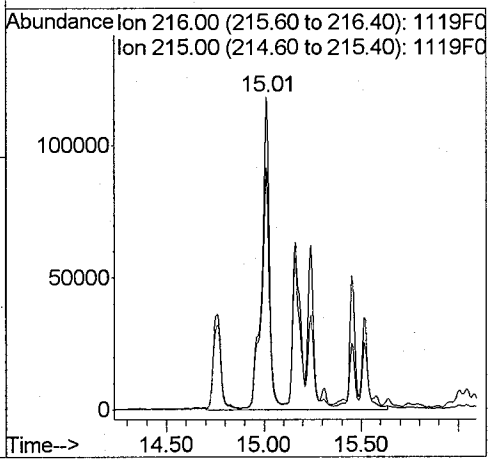


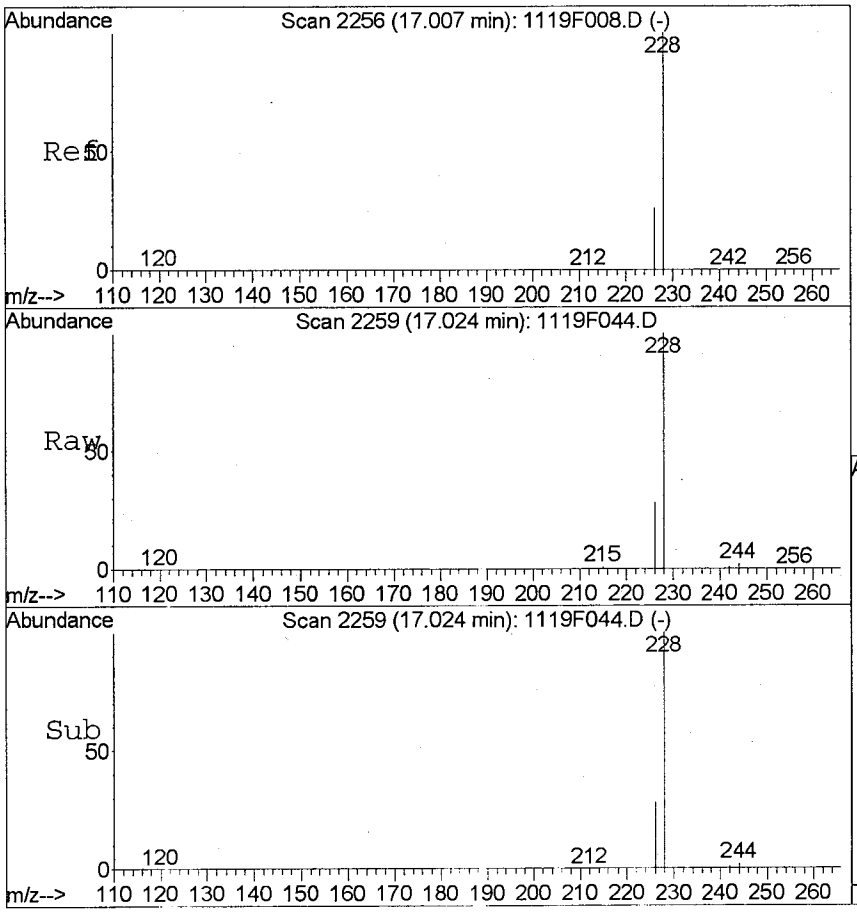


#40
C1-Fluoranthenes/Pyrenes
Concen: 3770.50 ng/ml m
RT: 15.01 min Scan# 1928
Delta R.T. -0.54 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:216 Resp: 920754

Ion	Ratio	Lower	Upper
216	100		
215	77.4	54.8	114.8

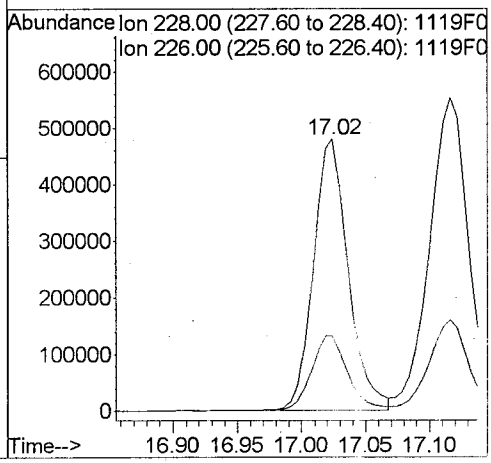


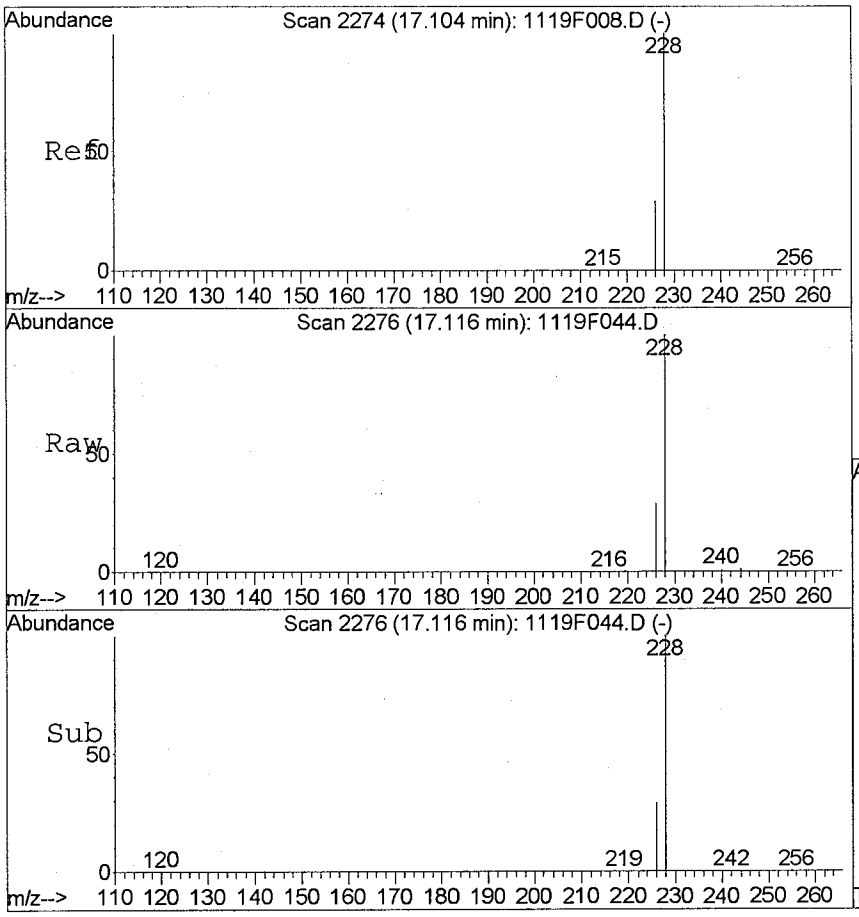


#42
Benz(a)anthracene
Concen: 4878.94 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.02 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:228 Resp: 907092

Ion	Ratio	Lower	Upper
228	100		
226	27.6	0.0	55.8

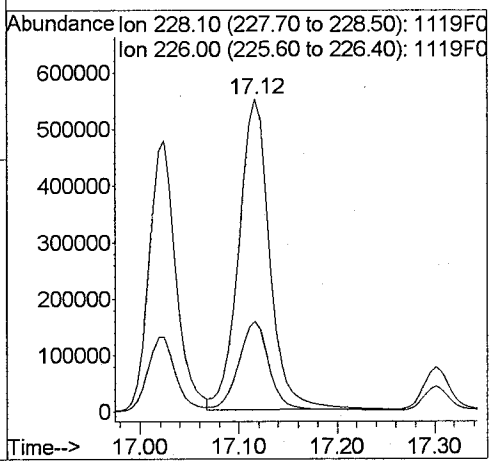


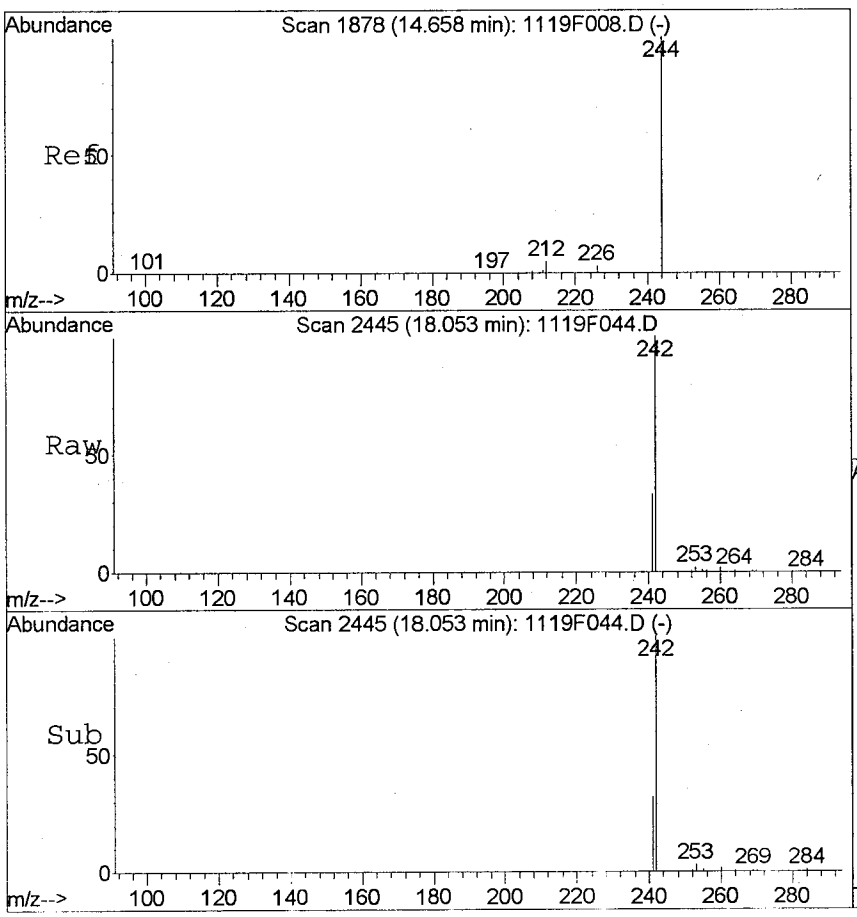


#43
Chrysene
Concen: 6033.77 ng/ml
RT: 17.12 min Scan# 2276
Delta R.T. 0.01 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:228 Resp: 1199584

Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	58.5

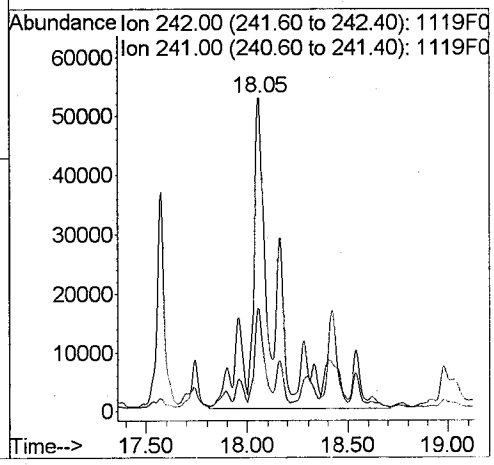


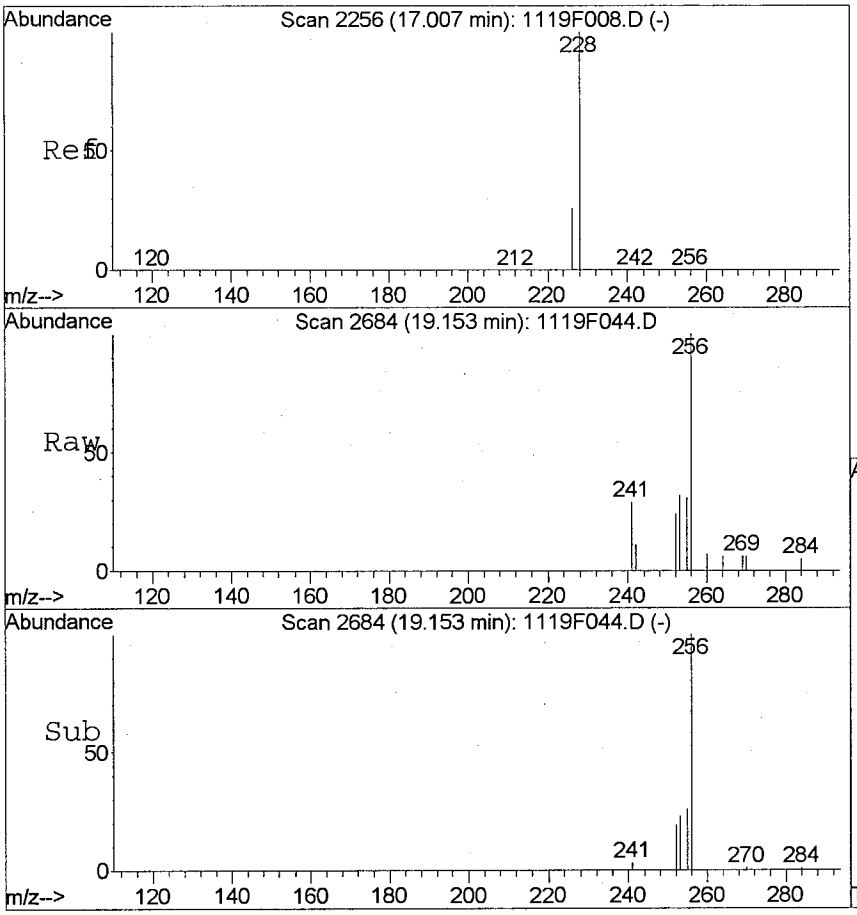


#44
C1-Chrysenes
Concen: 2318.37 ng/ml m
RT: 18.05 min Scan# 2445
Delta R.T. -0.10 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:242 Resp: 460918

Ion	Ratio	Lower	Upper
242	100		
241	33.1	0.1	60.1

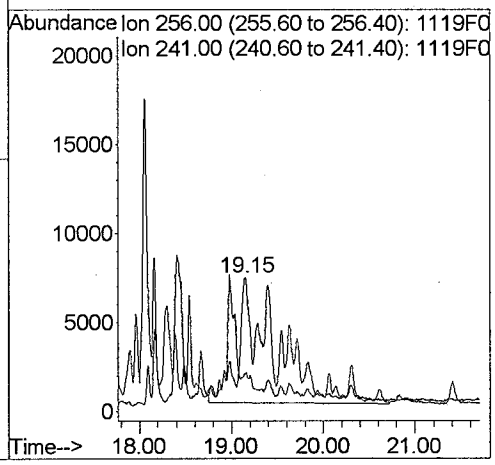


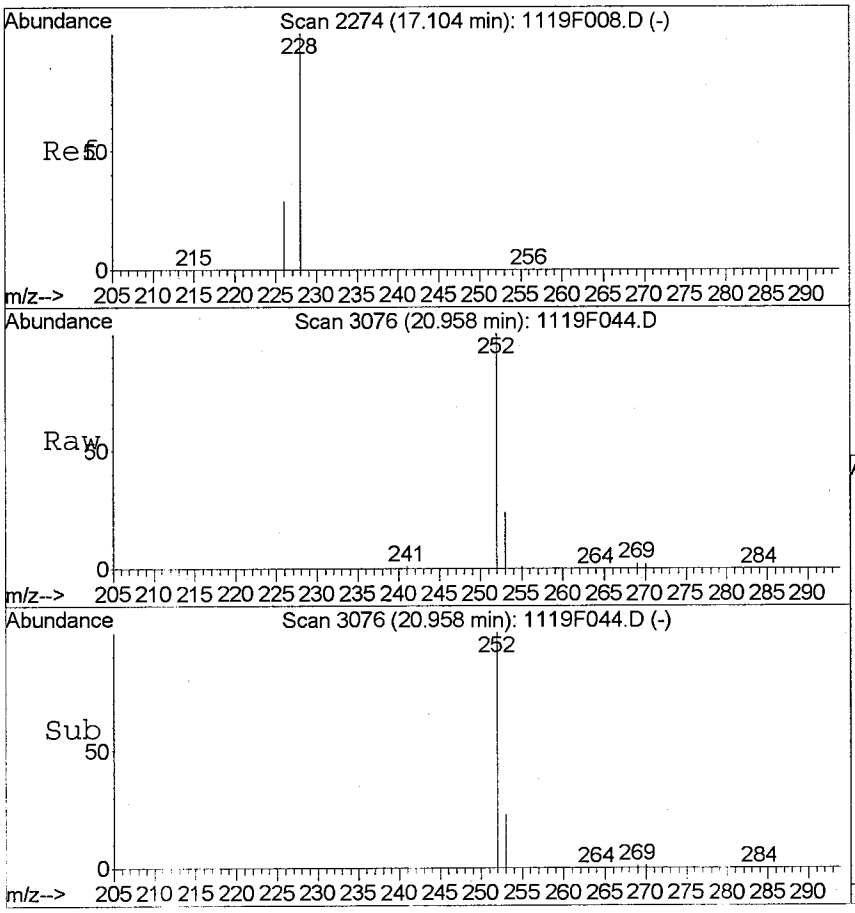


#45
C2-Chrysenes
Concen: 1046.61 ng/ml m
RT: 19.15 min Scan# 2684
Delta R.T. -0.37 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:256 Resp: 208078

Ion	Ratio	Lower	Upper
256	100		
241	28.9	7.8	67.8

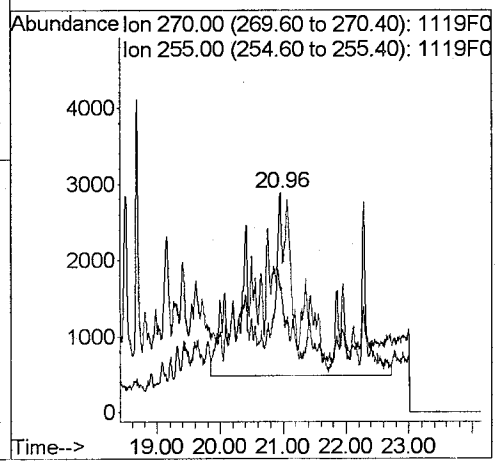


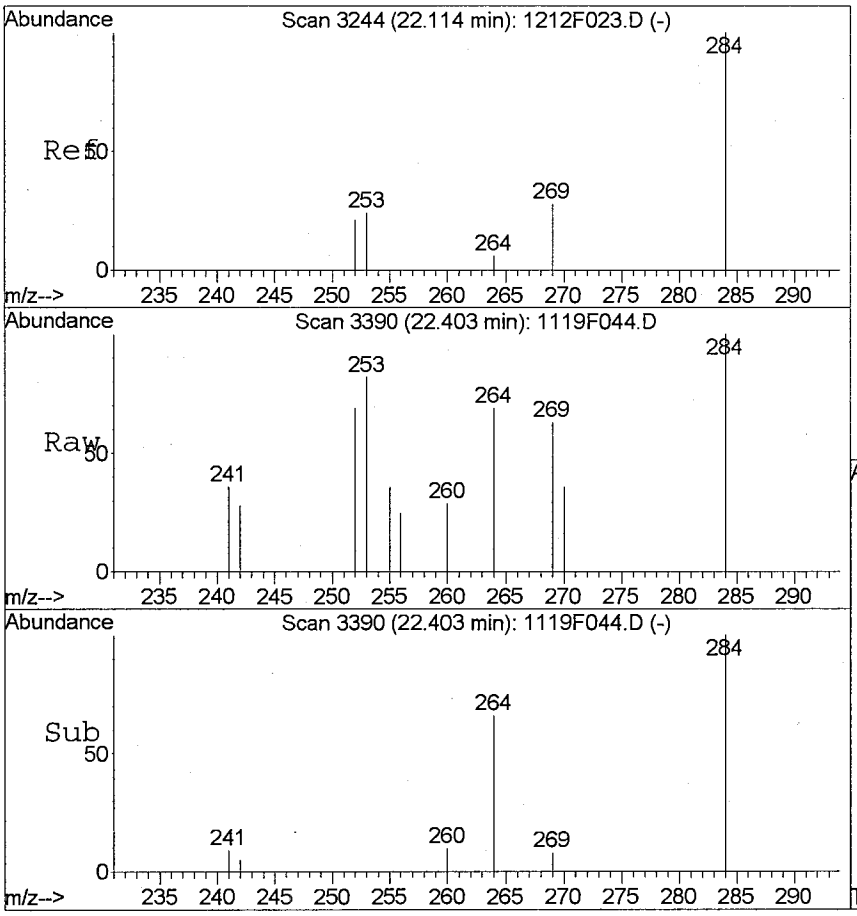


#46
C3-Chrysenes
Concen: 649.48 ng/ml m
RT: 20.96 min Scan# 3076
Delta R.T. -0.26 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:270 Resp: 129125

Ion	Ratio	Lower	Upper
270	100		
255	55.4	0.0	56.7

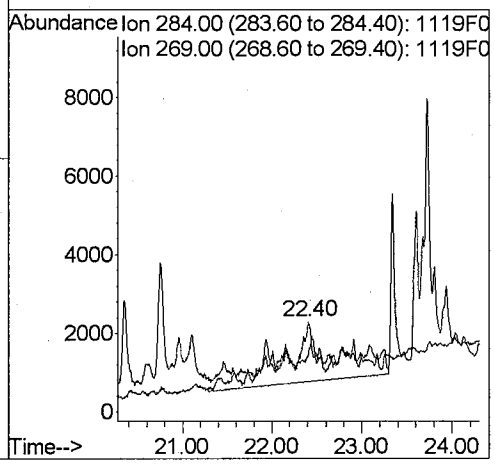


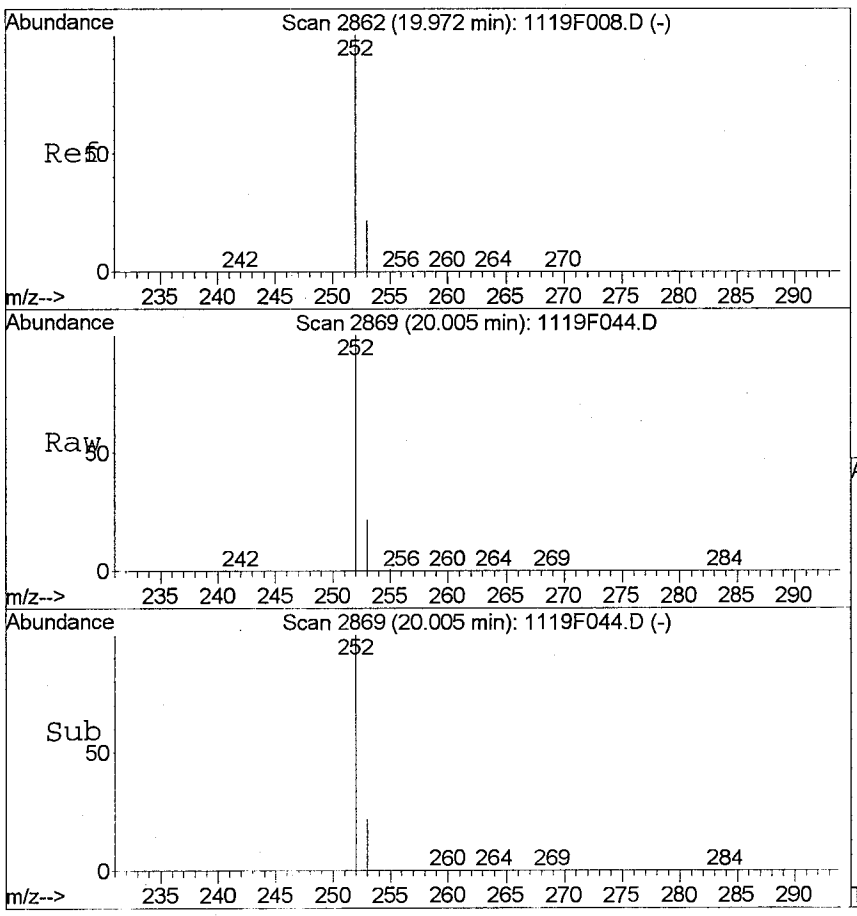


#47
C4-Chrysenes
Concen: 285.62 ng/ml m
RT: 22.40 min Scan# 3390
Delta R.T. -0.13 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:284 Resp: 56785

Ion	Ratio	Lower	Upper
284	100		
269	63.0	16.2	76.2

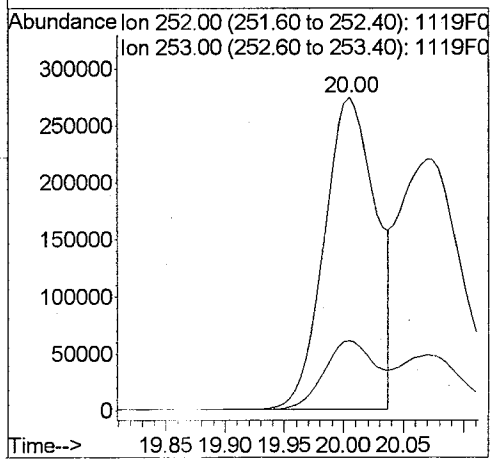


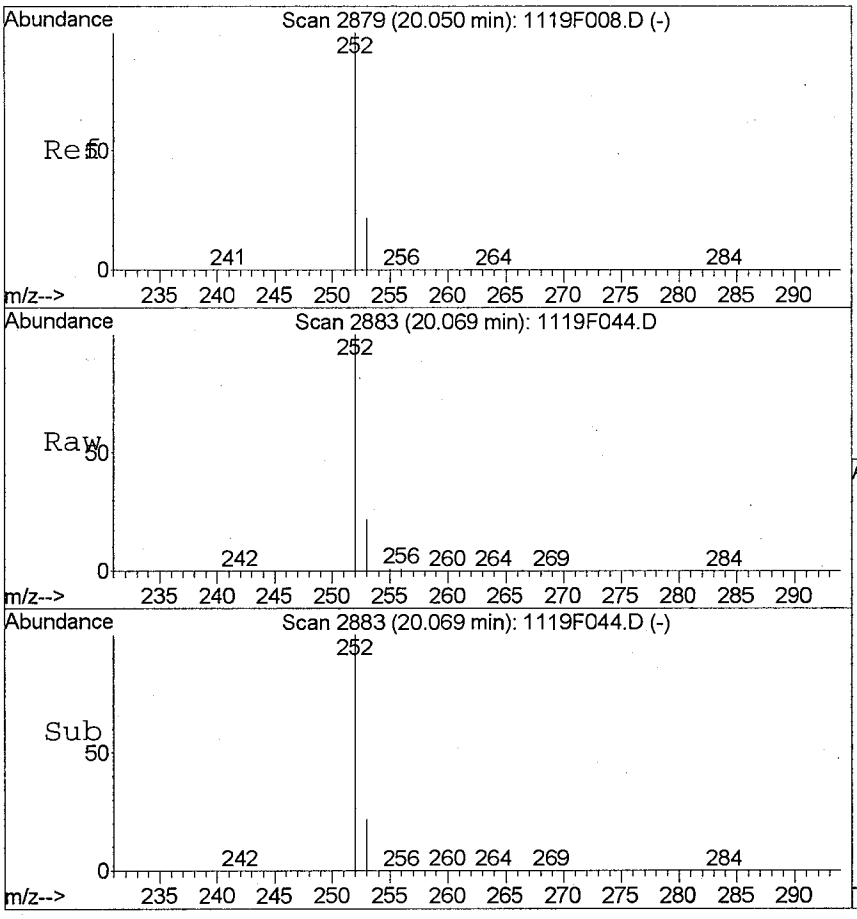


#49
Benzo(b)fluoranthene
Concen: 5885.20 ng/ml
RT: 20.00 min Scan# 2869
Delta R.T. 0.03 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:252 Resp: 826474

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.8

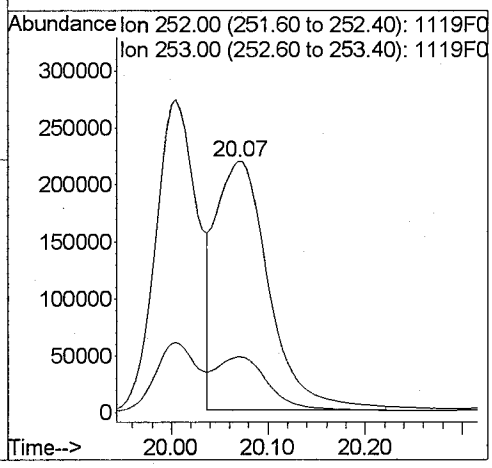


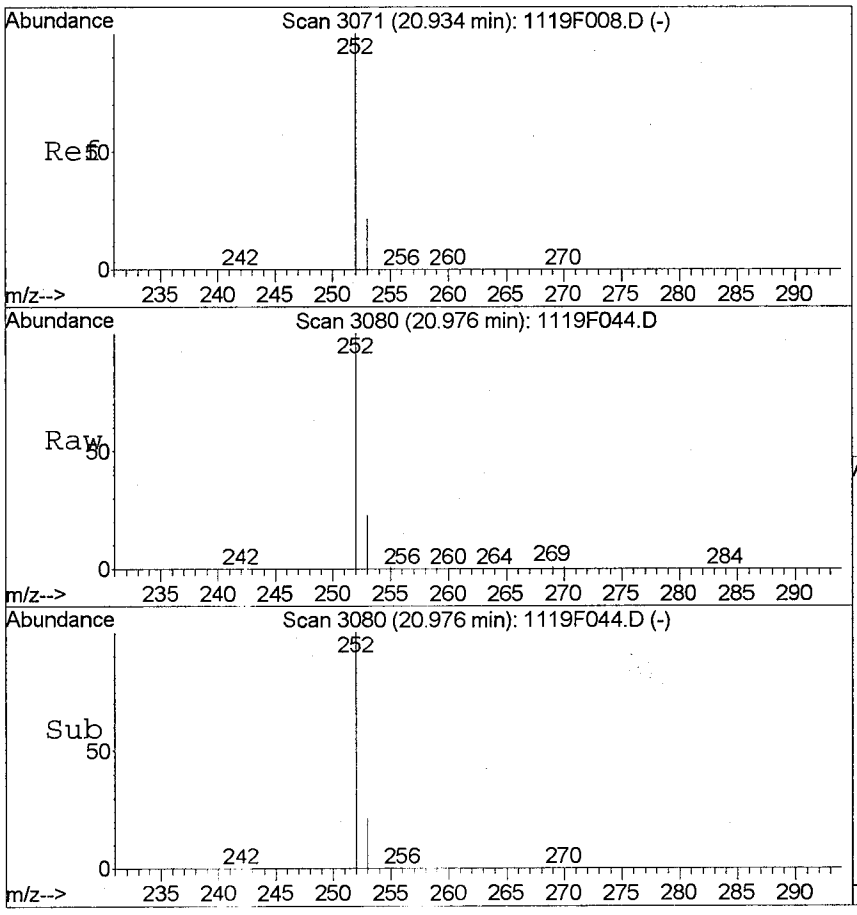


#50
Benzo(k)fluoranthene
Concen: 4668.08 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. 0.02 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:252 Resp: 831794

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	52.2

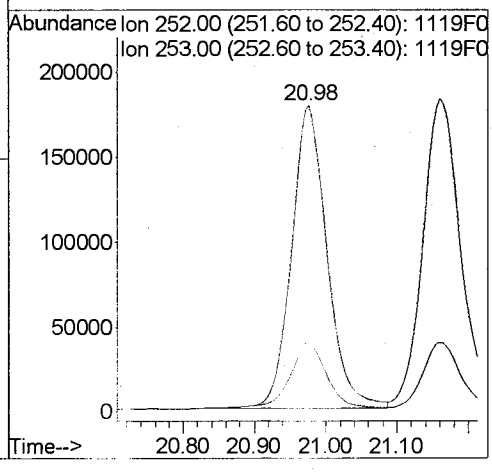


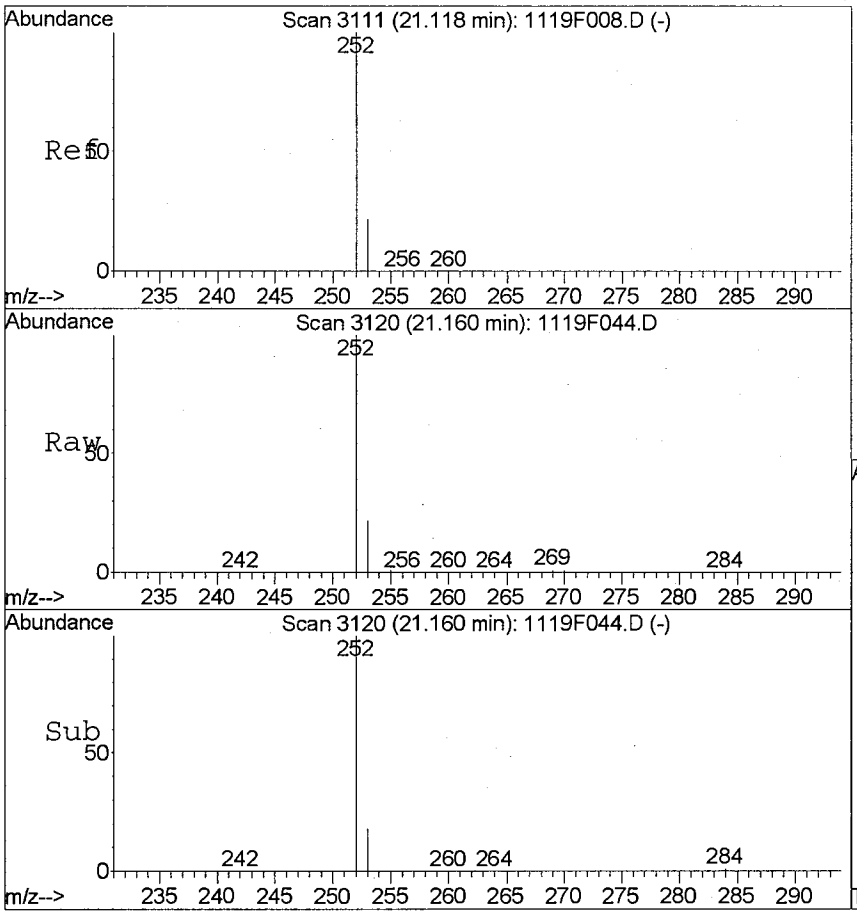


#51
Benzo(e)pyrene
Concen: 3899.91 ng/ml
RT: 20.98 min Scan# 3080
Delta R.T. 0.04 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:252 Resp: 614919

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.8

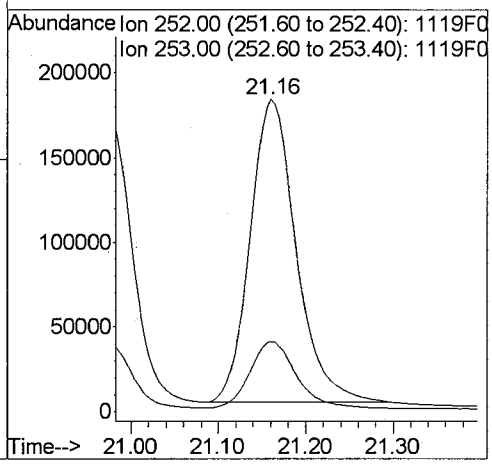


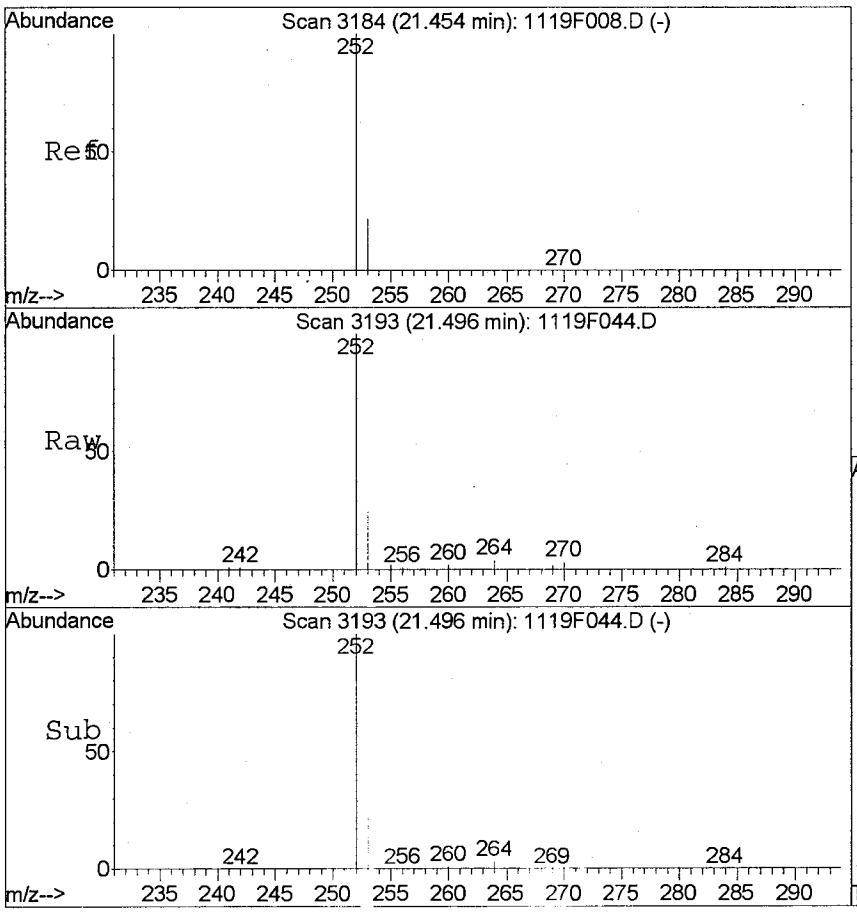


#52
Benzo(a)pyrene
Concen: 5434.83 ng/ml
RT: 21.16 min Scan# 3120
Delta R.T. 0.04 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:252 Resp: 649194

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

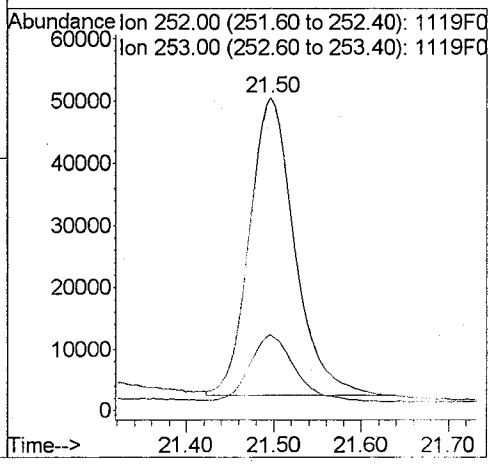


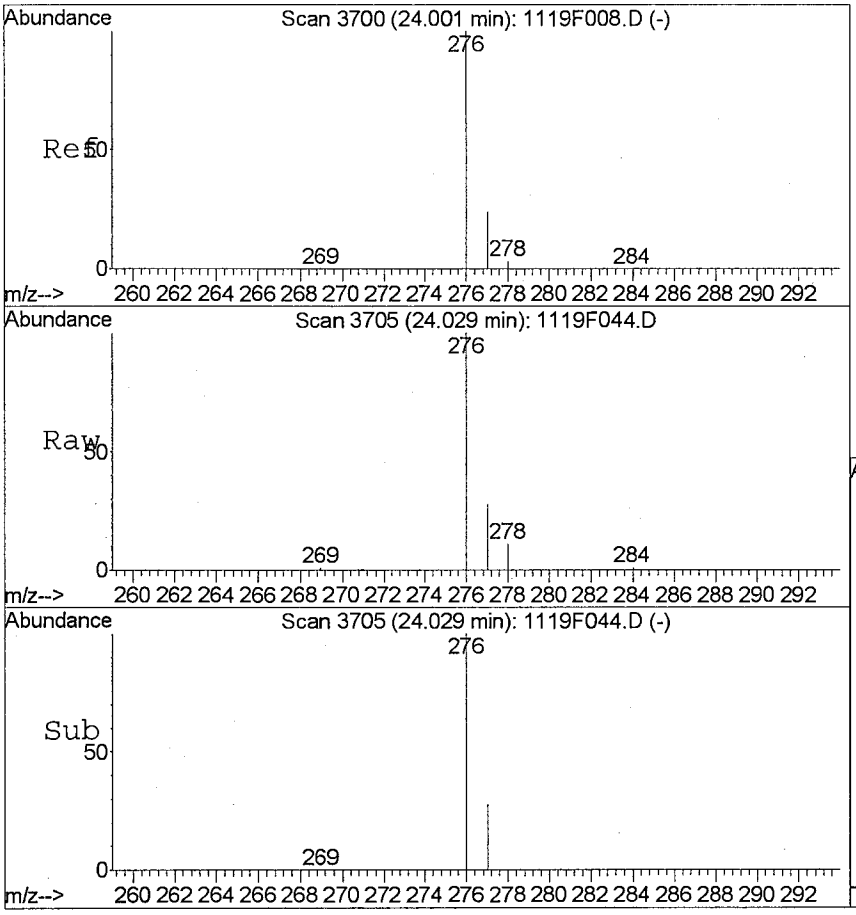


#53
Perylene
Concen: 1283.38 ng/ml
RT: 21.50 min Scan# 3193
Delta R.T. 0.04 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:252 Resp: 172085

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.6

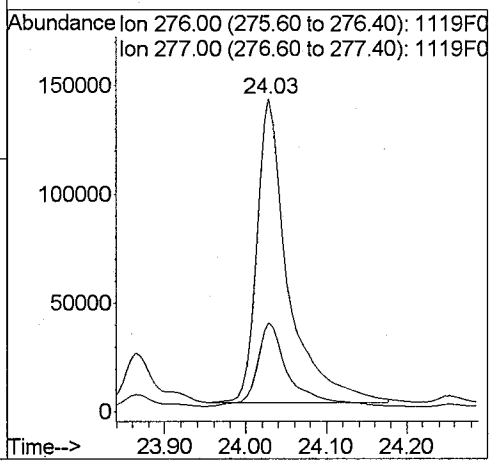


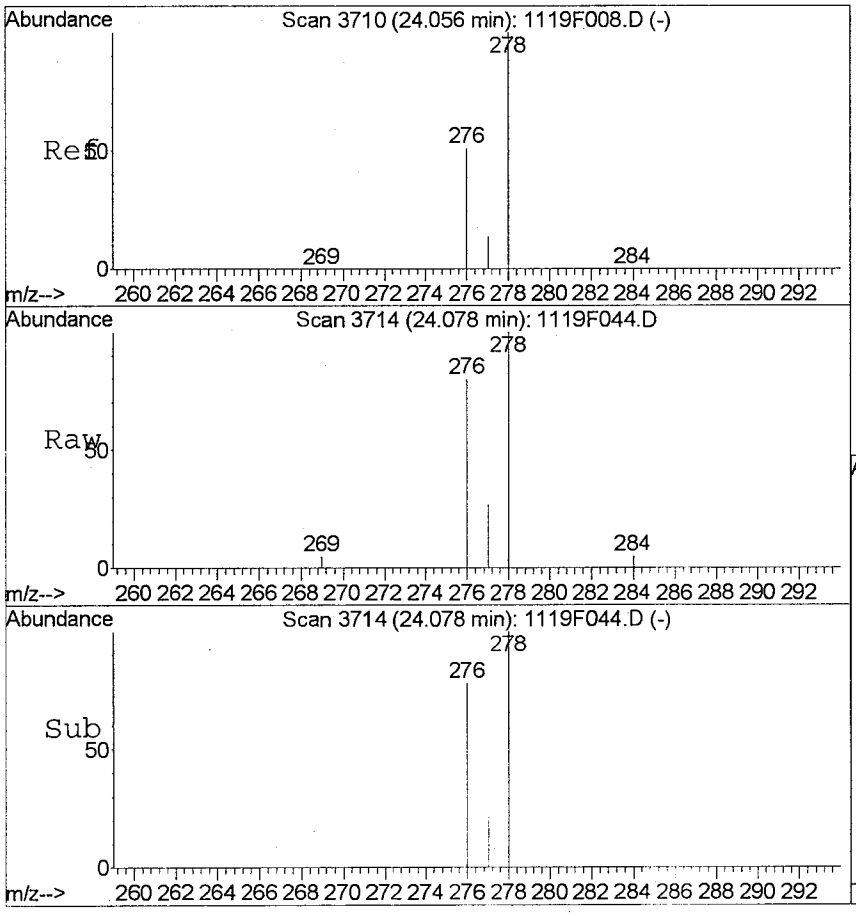


#54
Indeno(1,2,3-cd)pyrene
Concen: 5168.33 ng/ml
RT: 24.03 min Scan# 3705
Delta R.T. 0.03 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:276 Resp: 375297

Ion	Ratio	Lower	Upper
276	100		
277	27.5	0.0	53.6

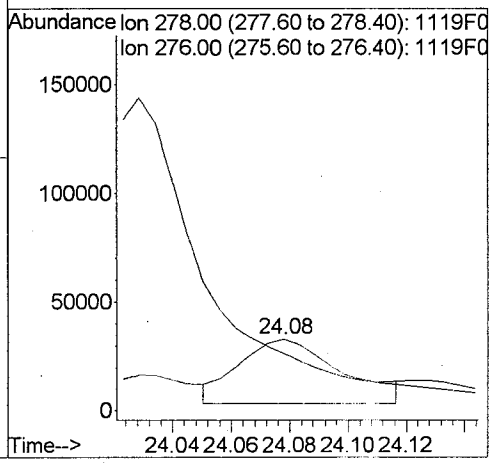


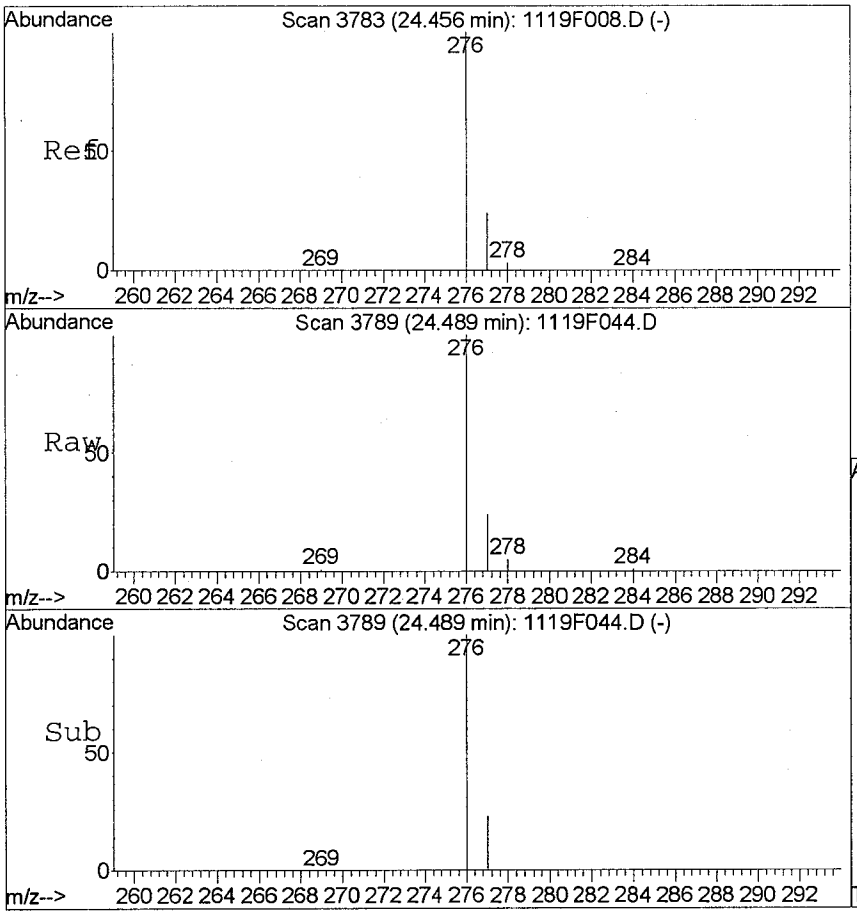


#55
Dibenz(a,h)anthracene
Concen: 692.85 ng/ml m
RT: 24.08 min Scan# 3714
Delta R.T. 0.02 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:278 Resp: 72304

Ion	Ratio	Lower	Upper
278	100		
276	80.4	21.1	81.1

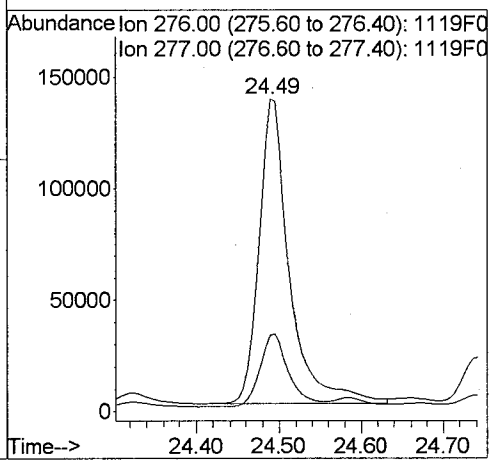




#56
Benzo(g,h,i)perylene
Concen: 2913.08 ng/ml
RT: 24.49 min Scan# 3789
Delta R.T. 0.03 min
Lab File: 1119F044.D
Acq: 19 Nov 2003 8:38 pm

Tgt Ion:276 Resp: 350697

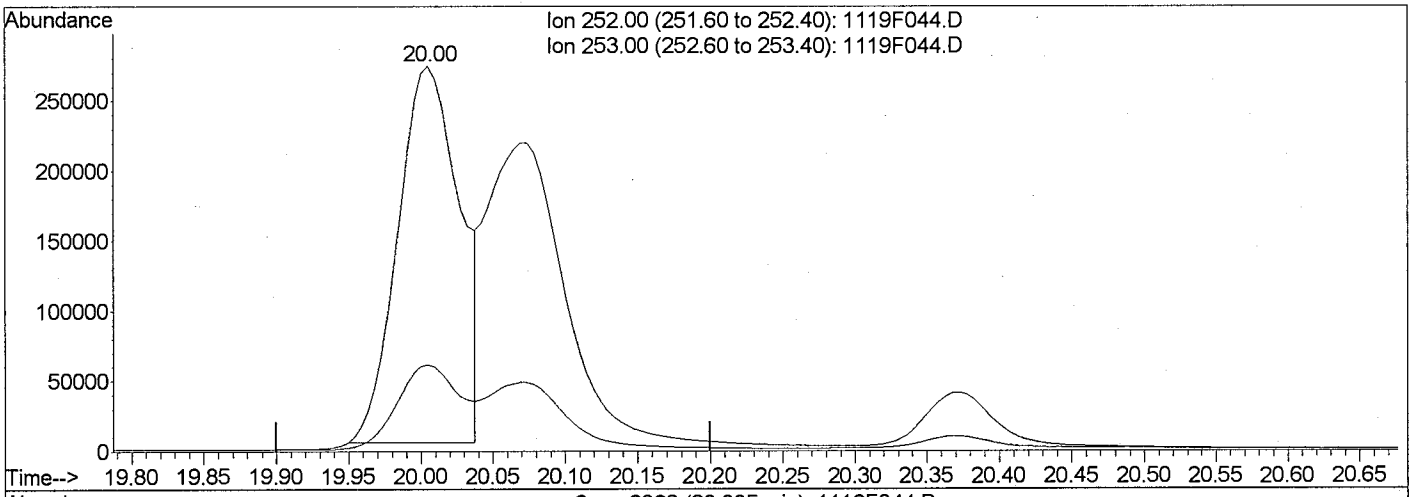
Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	53.6

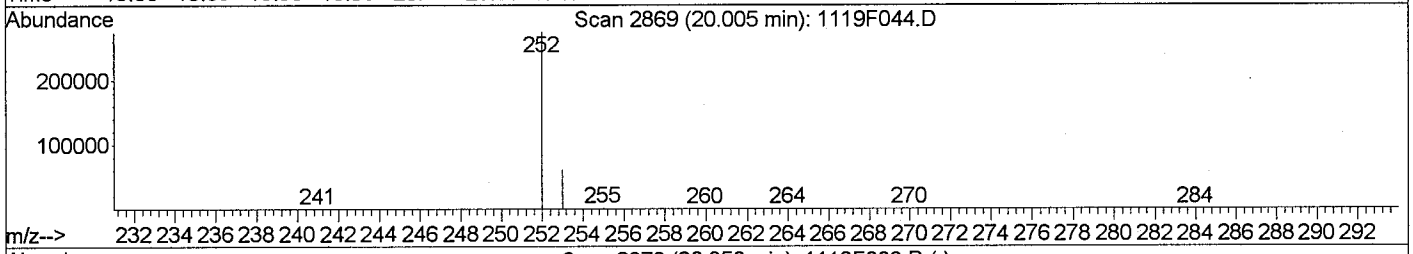


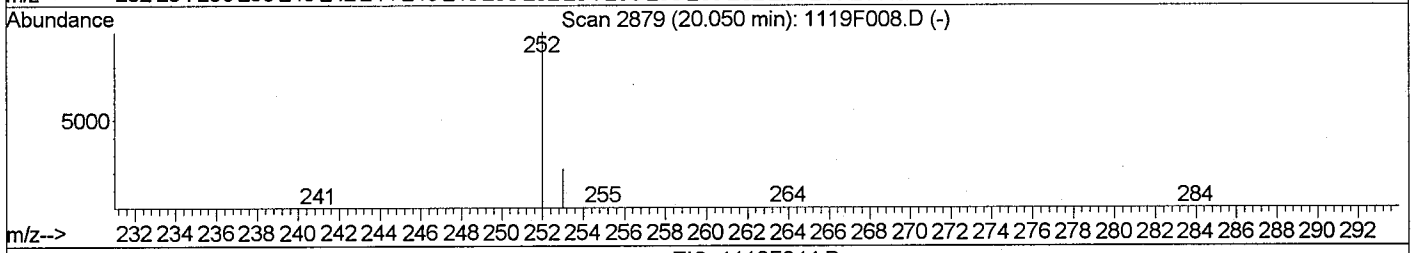
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(50) Benzo(k)fluoranthene (T)

20.00min 4480.66ng/ml

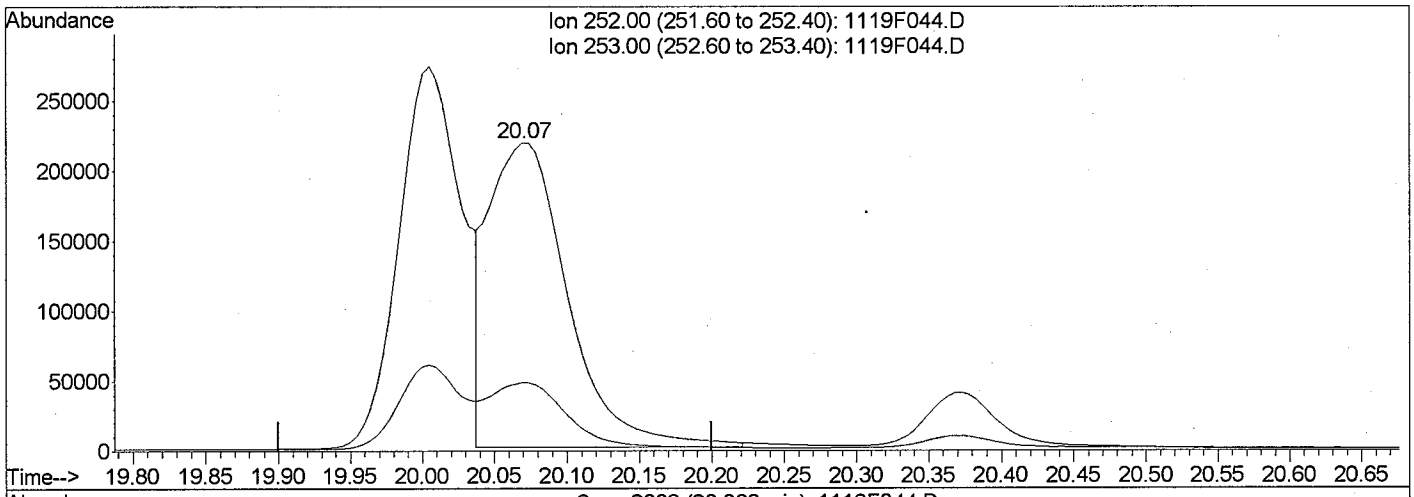
response 798398

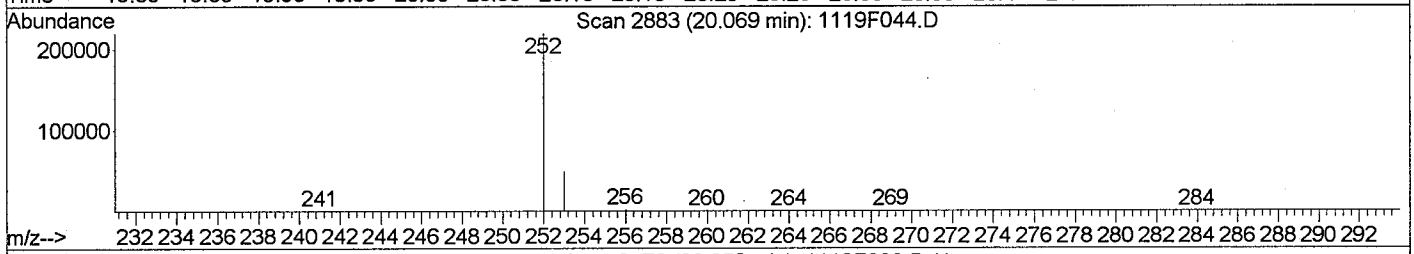
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.07
0.00	0.00	0.00
0.00	0.00	0.00

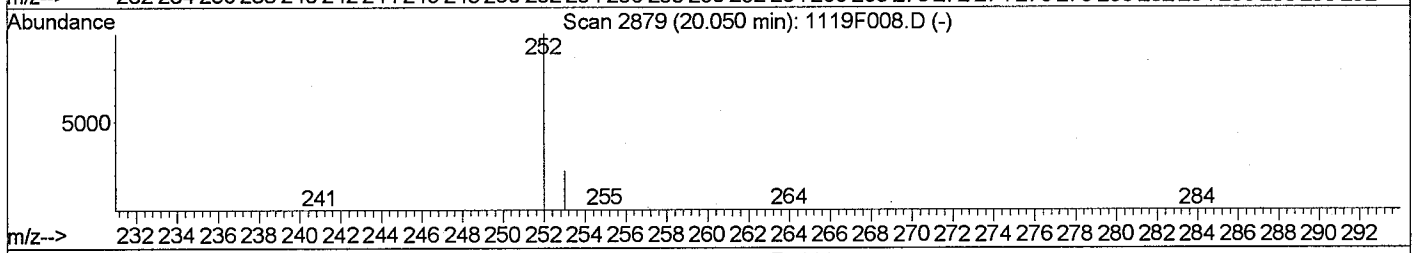
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(50) Benzo(k)fluoranthene (T)

20.07min 4668.08ng/ml m

response 831794

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.28
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/24/13

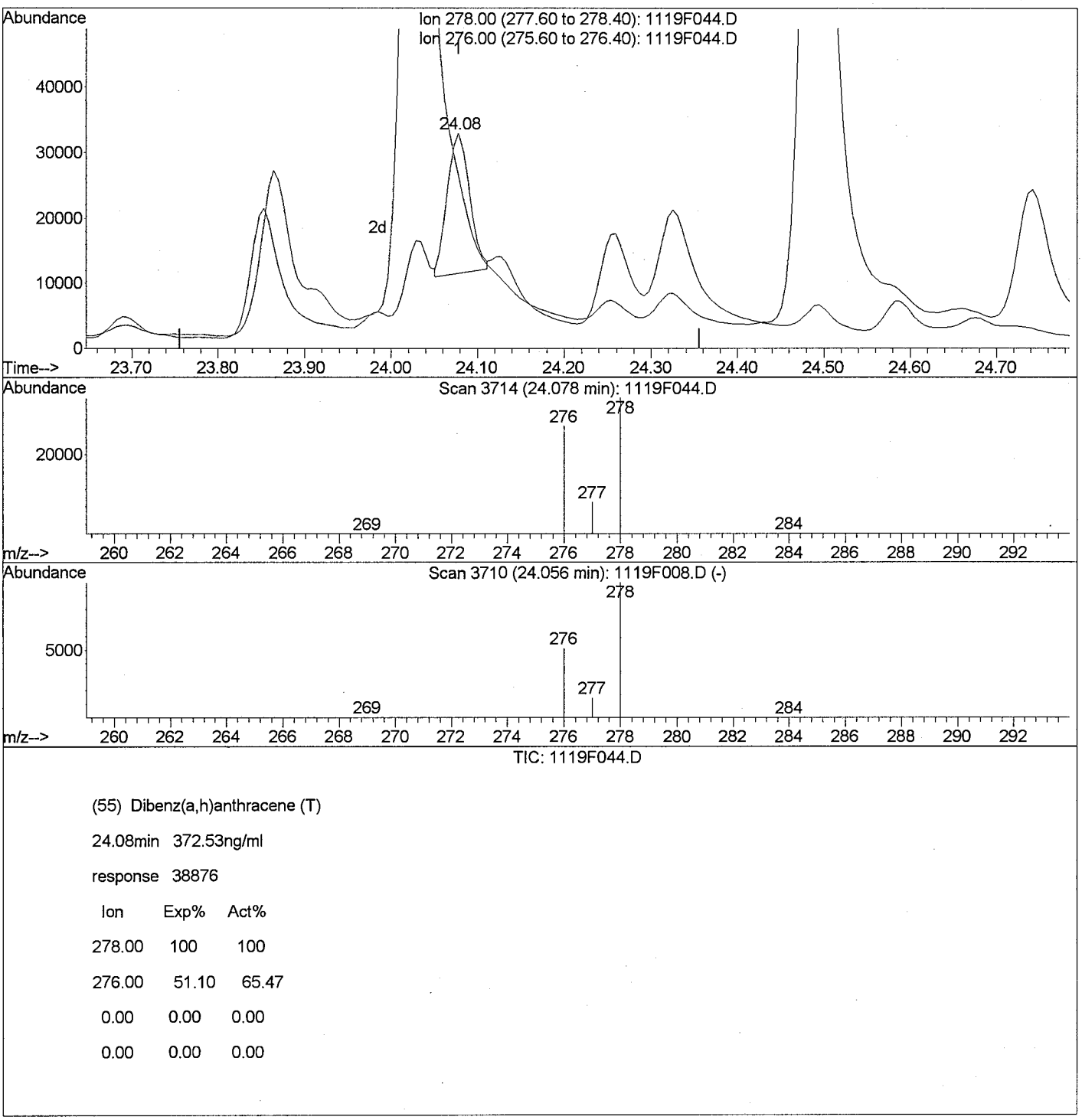
J 11/24/13

1119F044.D 1107ALK.M Thu Nov 20 14:22:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F044.D

(55) Dibenz(a,h)anthracene (T)

24.08min 372.53ng/ml

response 38876

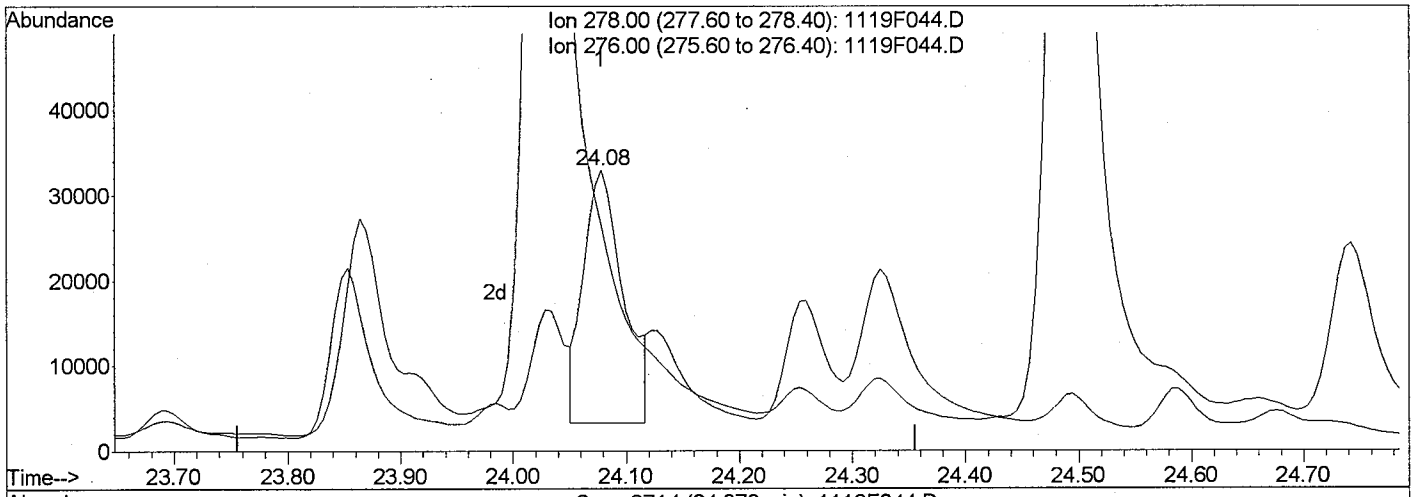
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	65.47
0.00	0.00	0.00
0.00	0.00	0.00

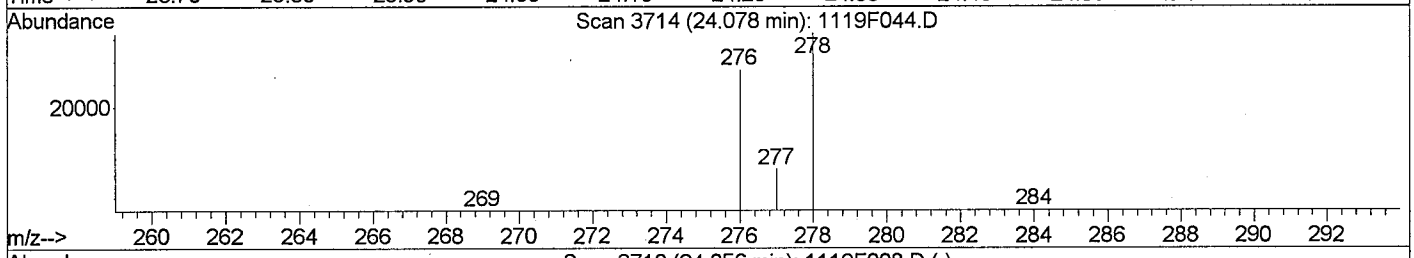
1119F044.D 1107ALK.M Thu Nov 20 14:22:54 2003

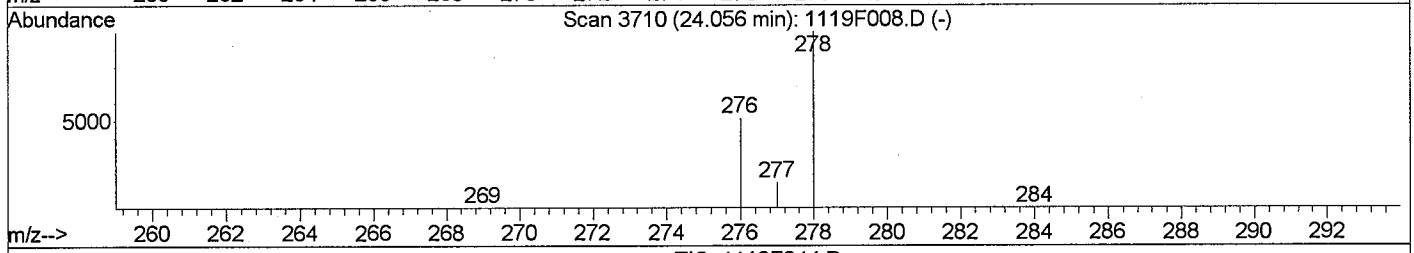
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(55) Dibenz(a,h)anthracene (T)

24.08min 692.85ng/ml m

response 72304

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	80.36
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13
complete

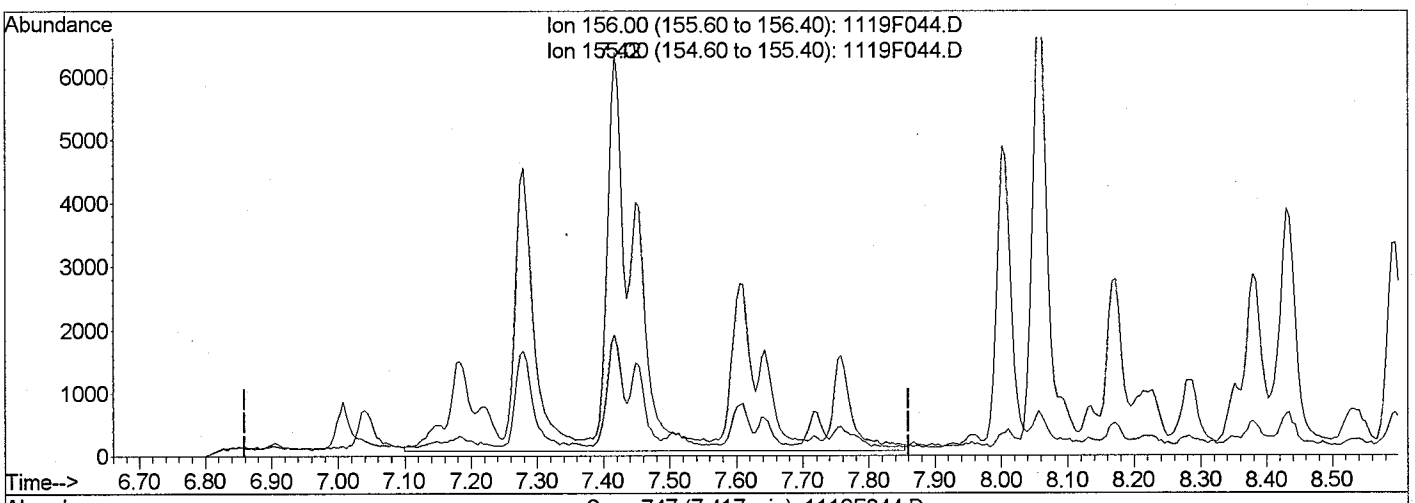
11/24/13

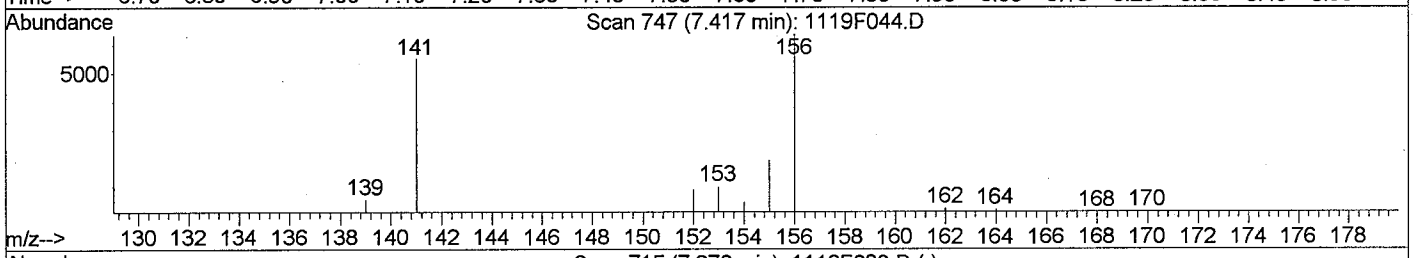
1119F044.D 1107ALK.M Thu Nov 20 14:22:59 2003

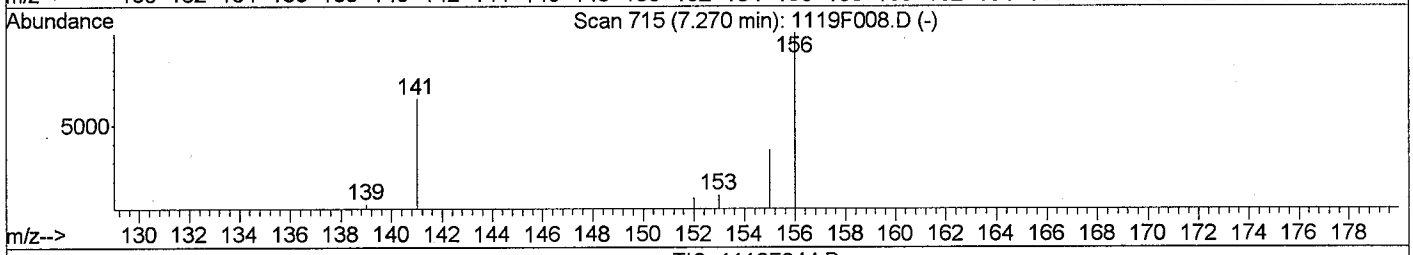
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:34 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(8) C2-Naphthalenes (L)

7.42min 143.53ng/ml m

response 41831

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	30.17
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

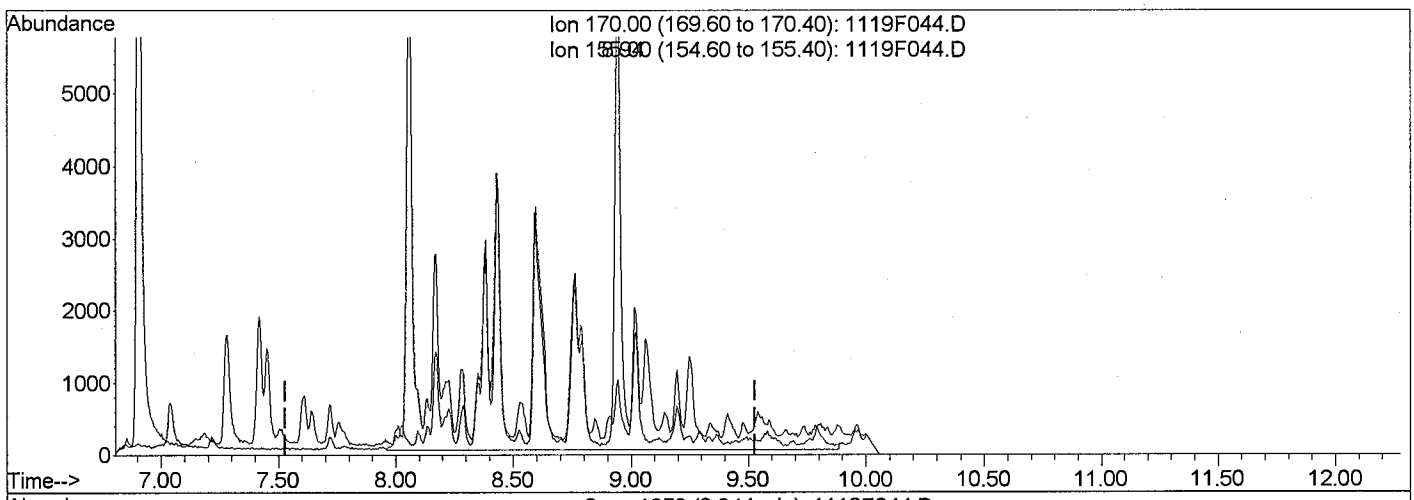
11/24/13

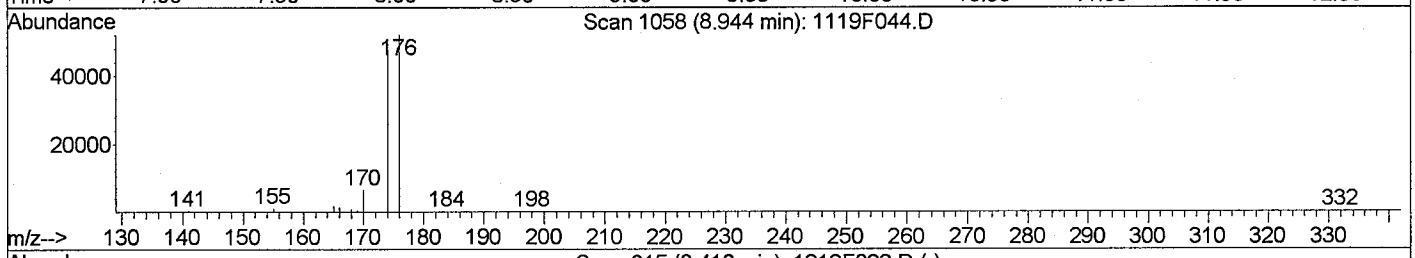
1119F044.D 1107ALK.M Fri Nov 21 12:34:28 2003

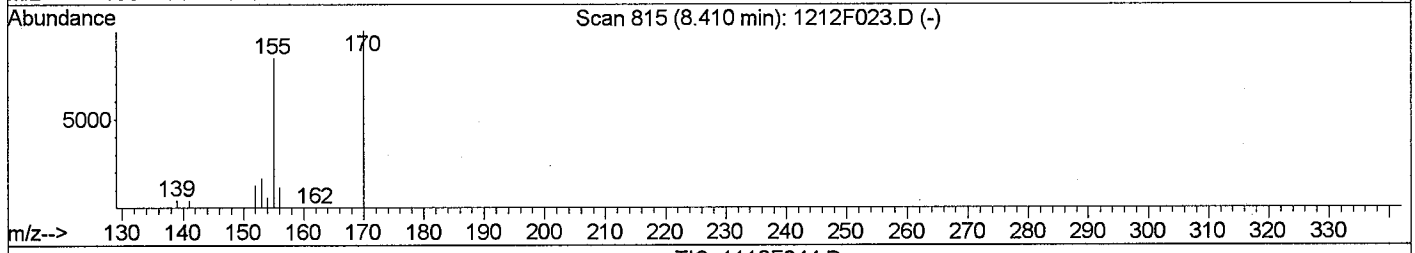
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:34 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(9) C3-Naphthalenes (L)

8.94min 190.60ng/ml m

response 55550

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	16.19#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

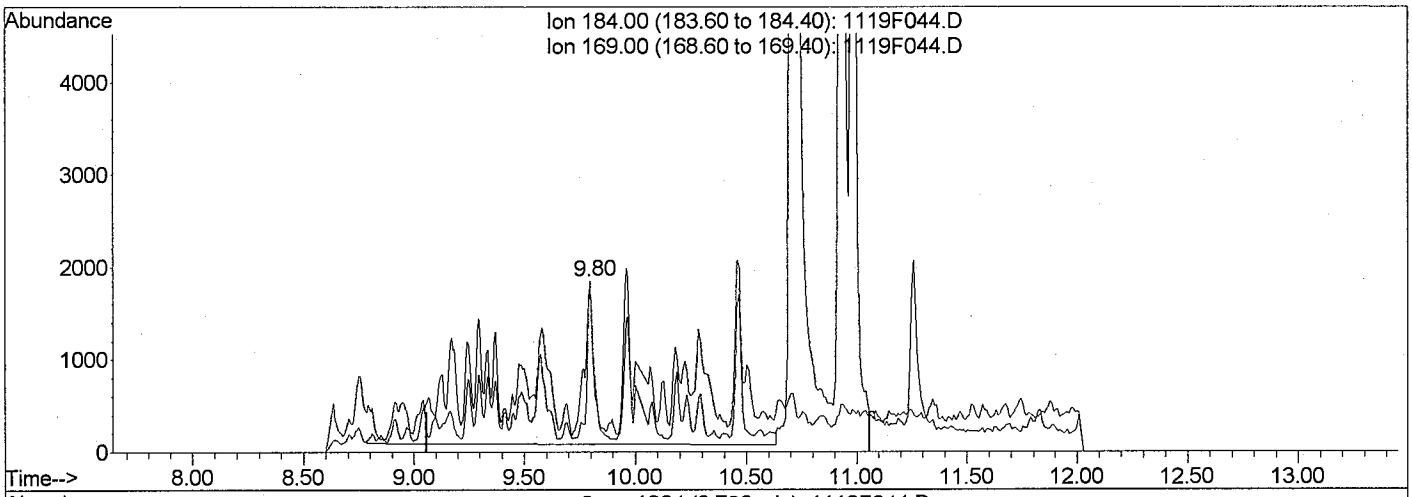
11/24/13

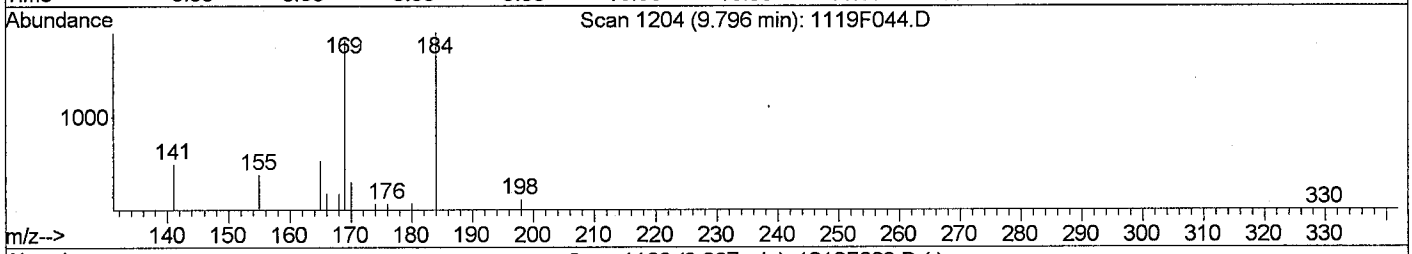
1119F044.D 1107ALK.M Fri Nov 21 12:34:45 2003

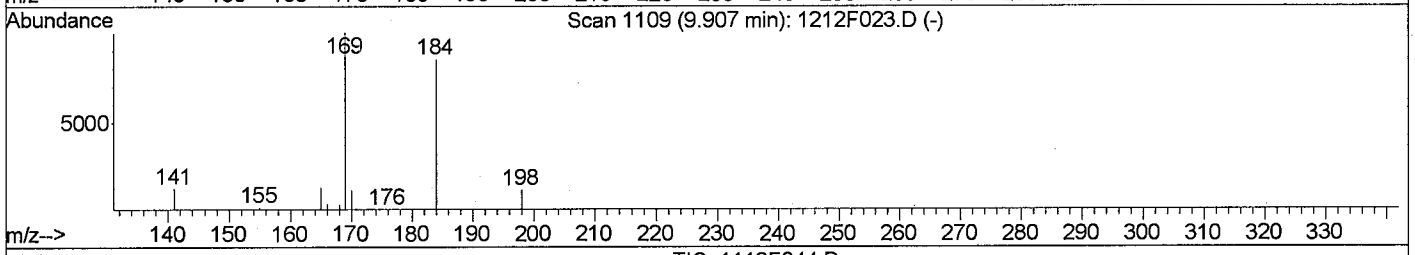
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:34 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(10) C4-Naphthalenes (L)

9.80min 114.37ng/ml m

response 33332

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	95.73
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

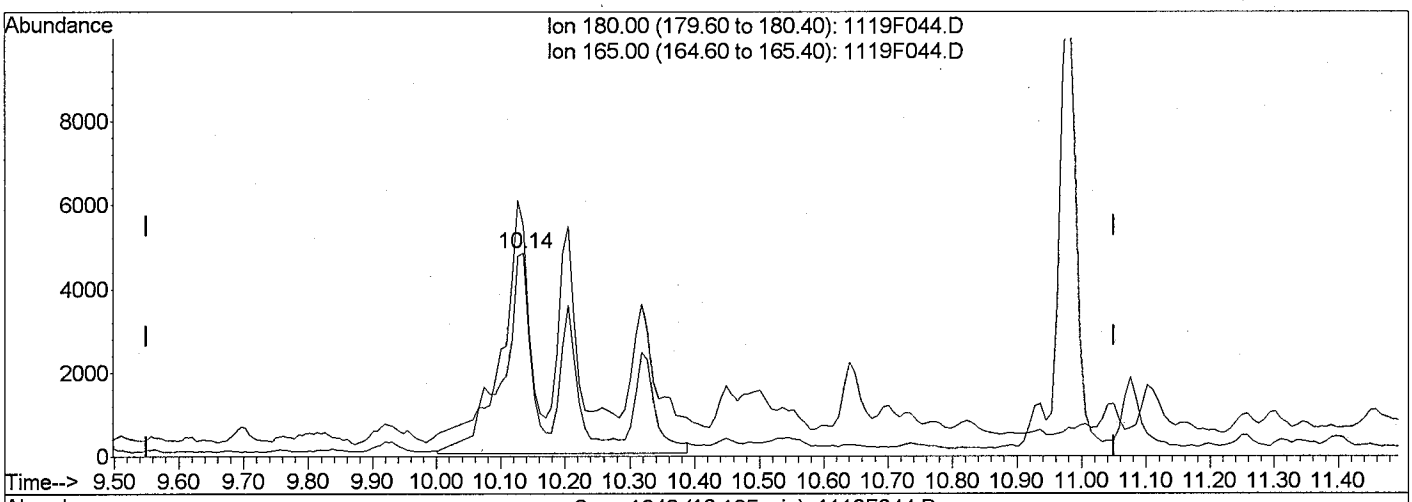
11/24/13

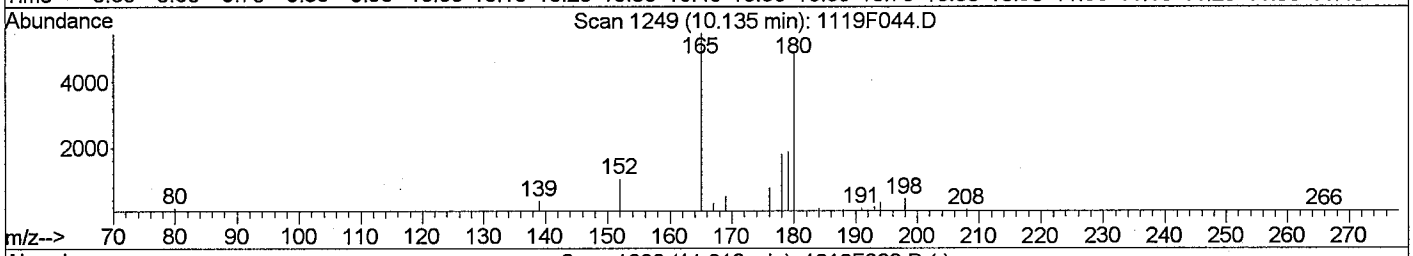
1119F044.D 1107ALK.M Fri Nov 21 12:35:02 2003

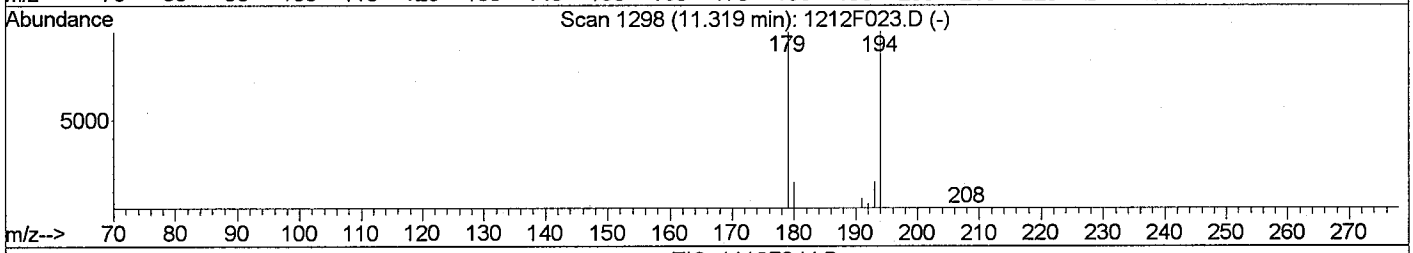
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:35 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(18) C1-Fluorenes (L)

10.14min 172.64ng/ml m

response 30168

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	113.01#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

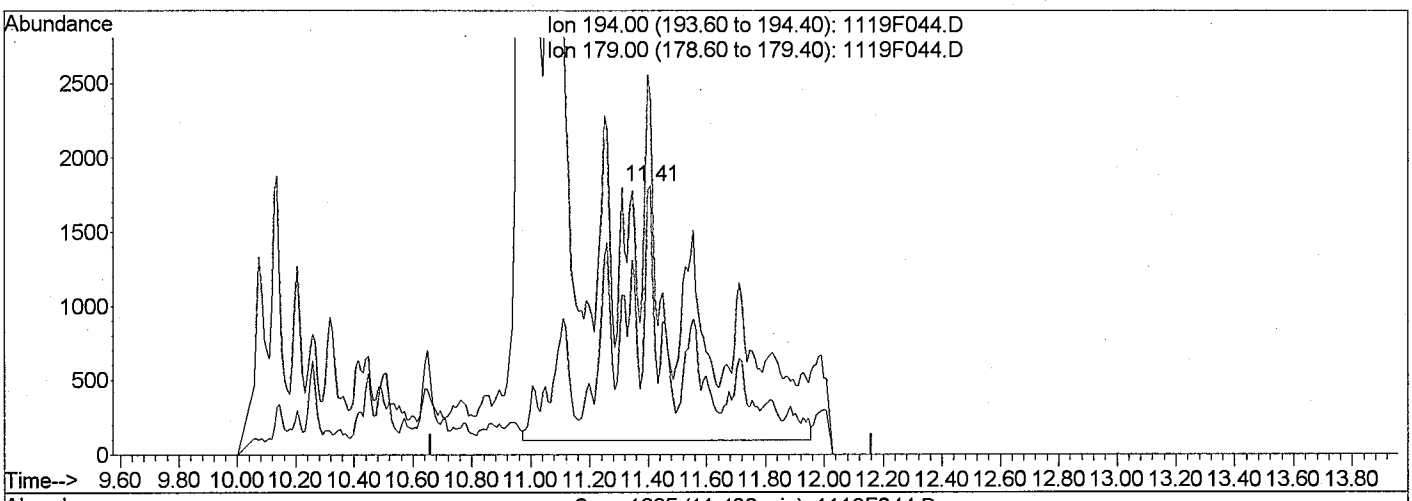
11/24/13

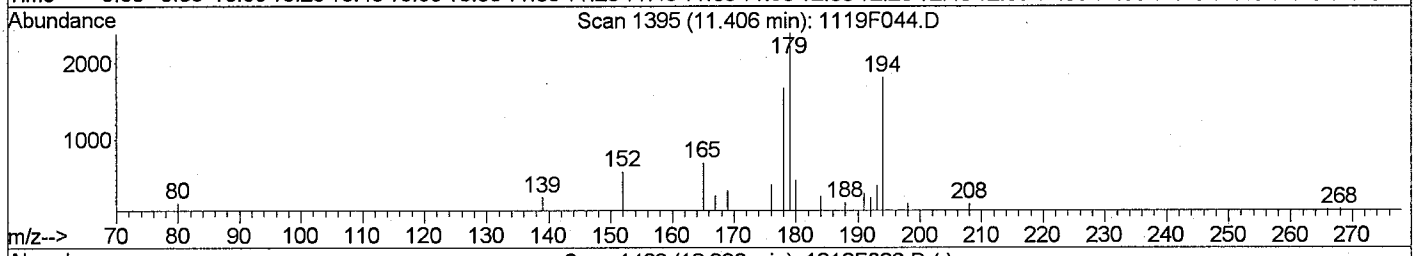
1119F044.D 1107ALK.M Fri Nov 21 12:35:08 2003

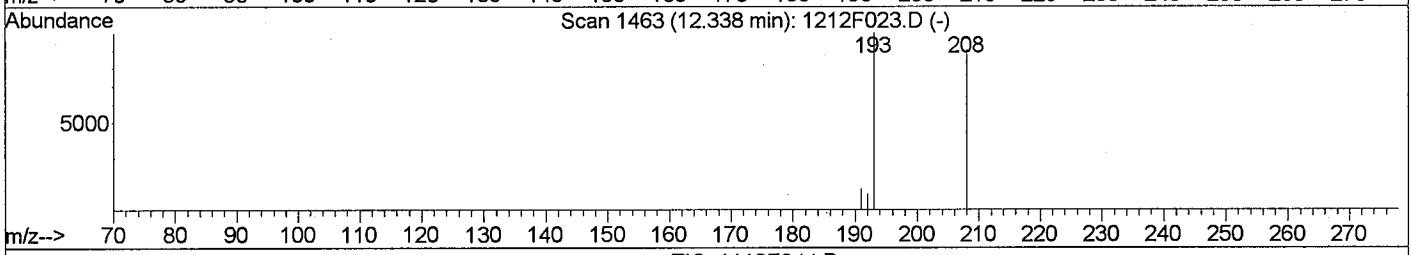
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:35 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(19) C2-Fluorenes (L)

11.41min 148.47ng/ml m

response 25944

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	132.12
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

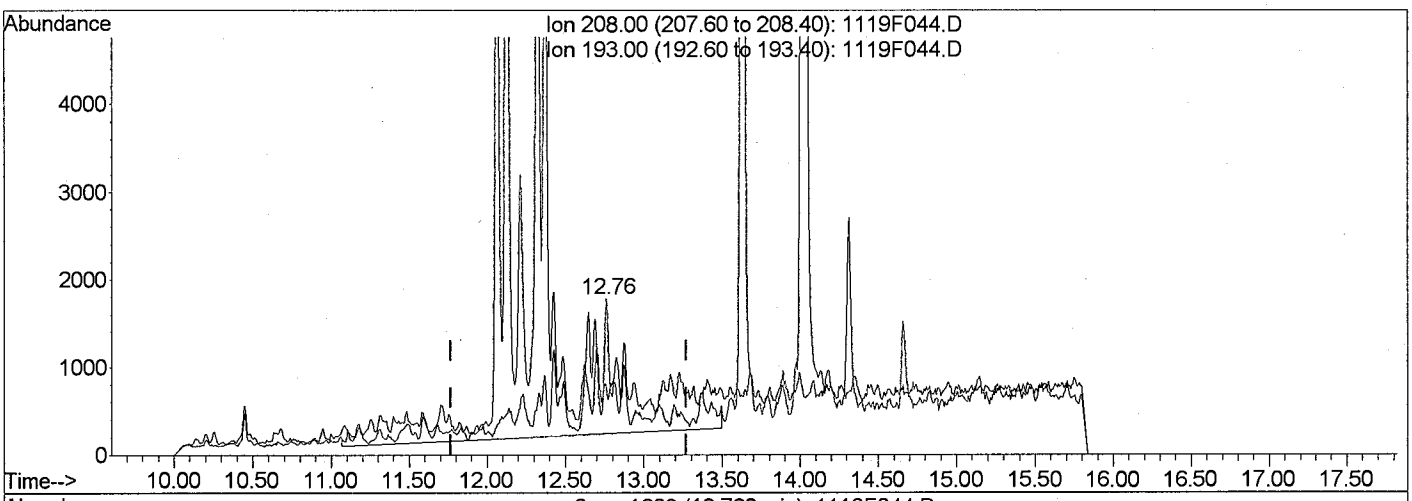
11/24/13

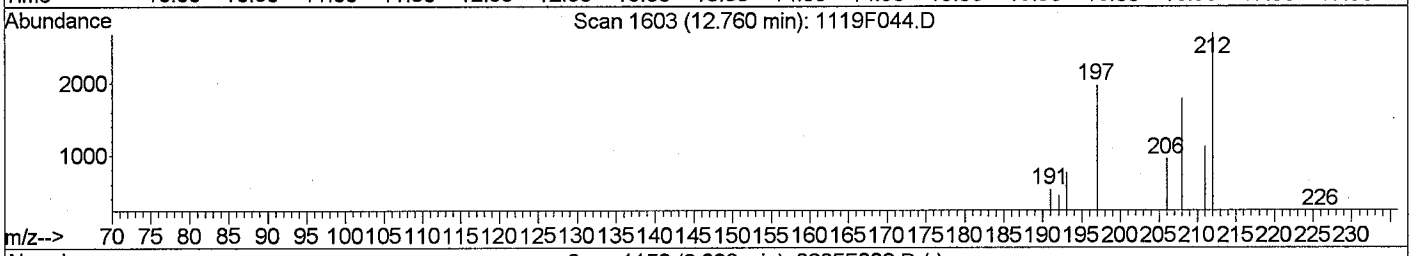
1119F044.D 1107ALK.M Fri Nov 21 12:35:27 2003

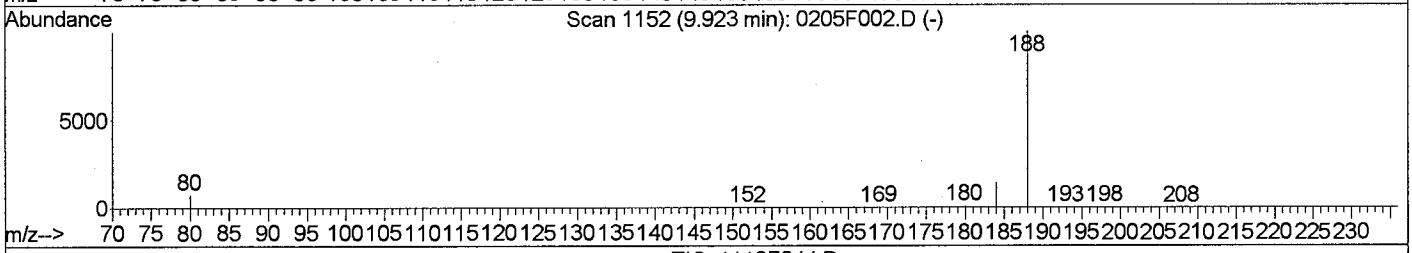
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:35 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(20) C3-Fluorenes (L)

12.76min 238.14ng/ml m

response 41613

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	42.90#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

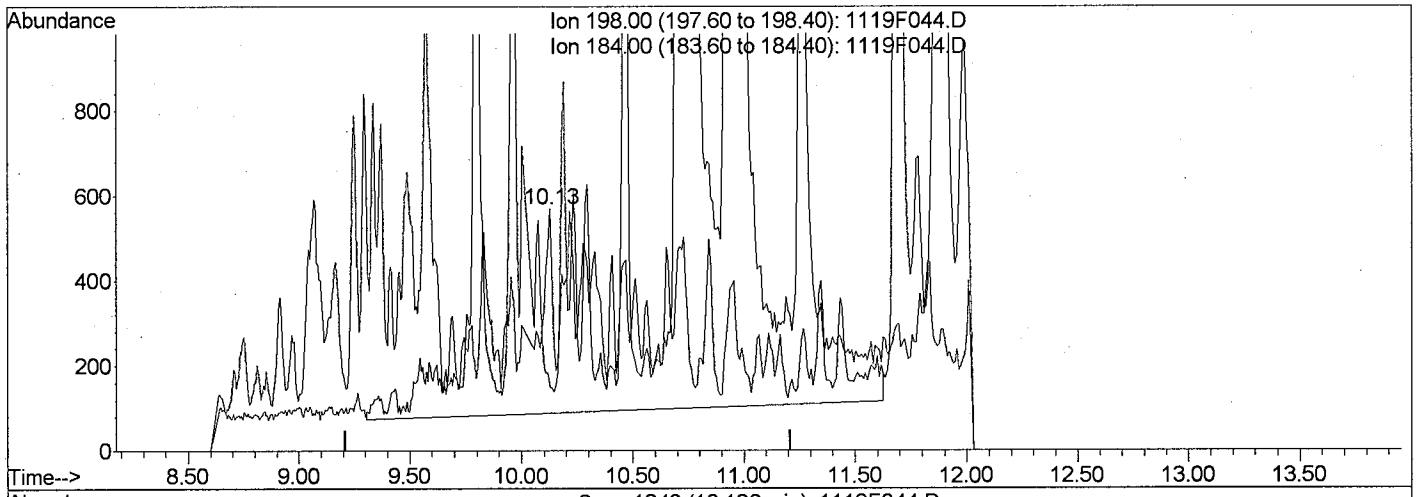
1119F044.D 1107ALK.M Fri Nov 21 12:35:44 2003

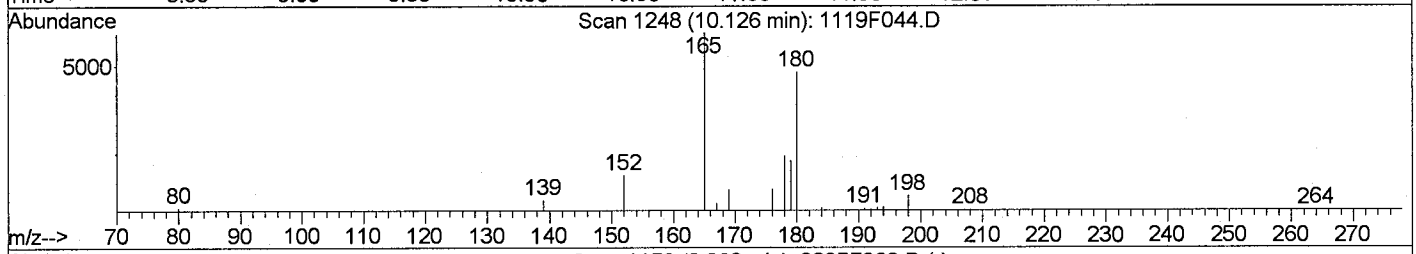
Quantitation Report (Qedit)

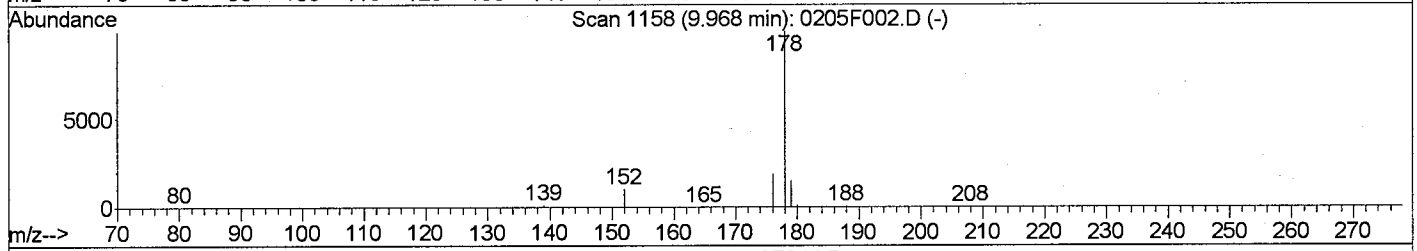
Data File : J:\MS11\DATA\111903\1119F044.D
Acq On : 19 Nov 2003 8:38 pm
Sample : K2308433-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:35 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(25) C1-Dibenzothiophenes (L)

10.13min 87.25ng/ml m

response 20467

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	26.19#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

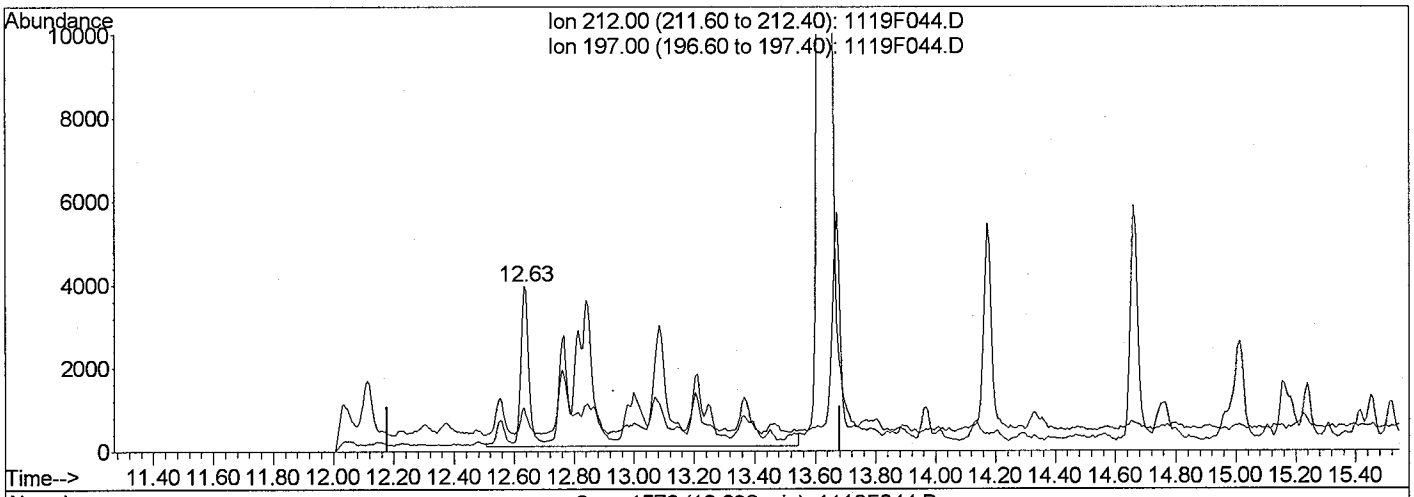
11/24/13

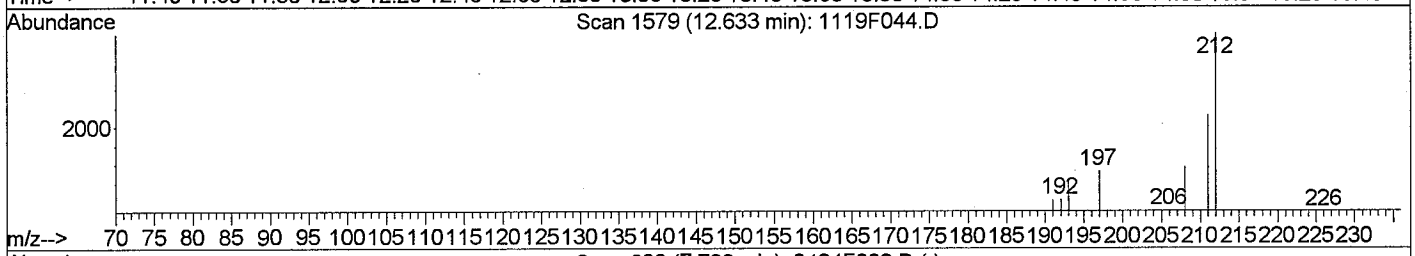
1119F044.D 1107ALK.M Fri Nov 21 12:35:56 2003

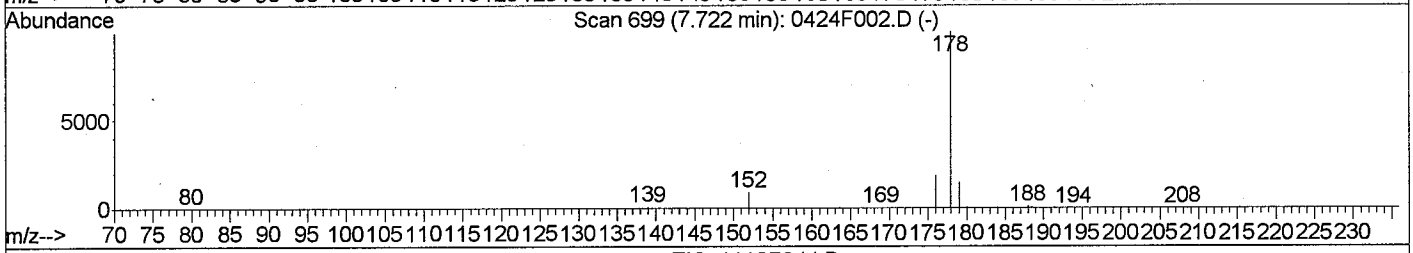
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:36 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(26) C2-Dibenzothiophenes (L)

12.63min 221.36ng/ml m

response 51926

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	26.59
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

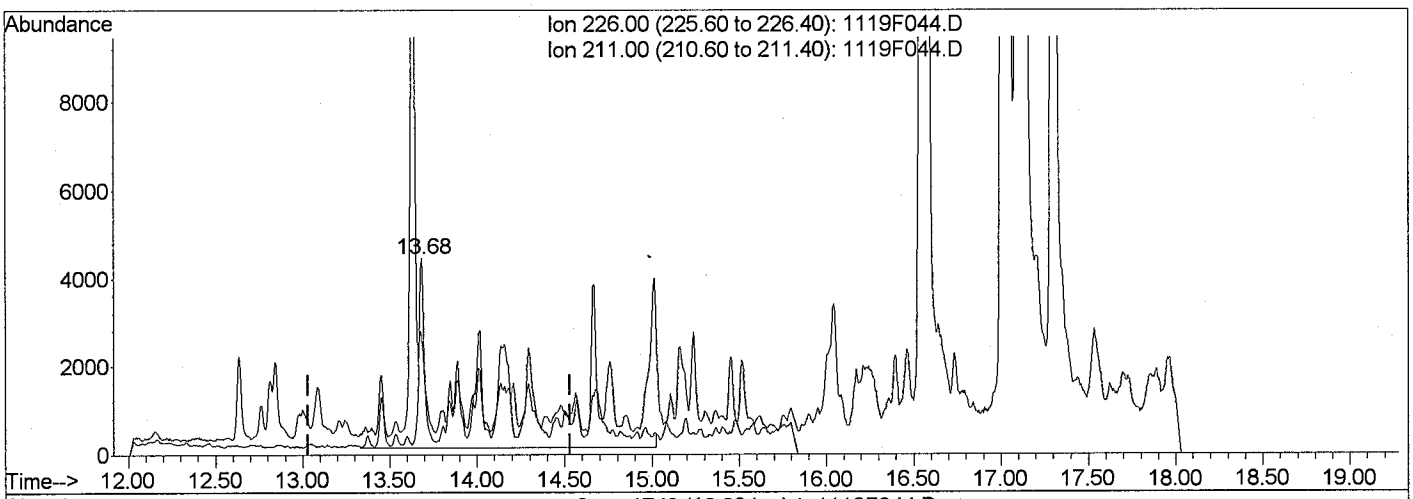
1119F044.D 1107ALK.M Fri Nov 21 12:36:08 2003

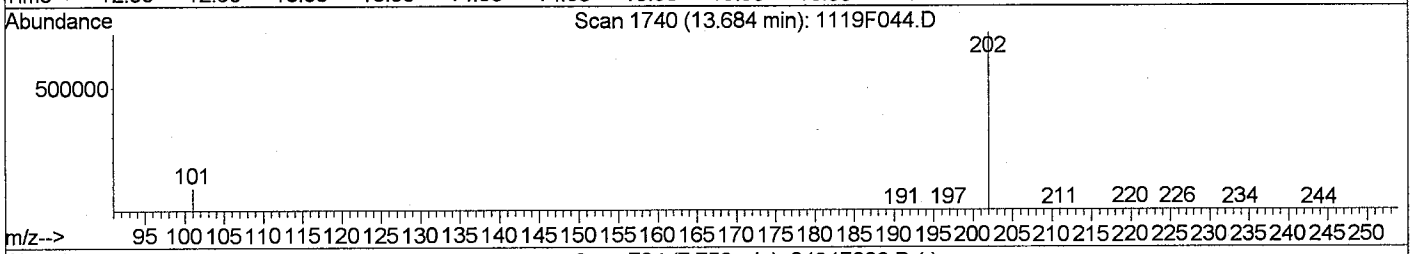
Quantitation Report (Qedit)

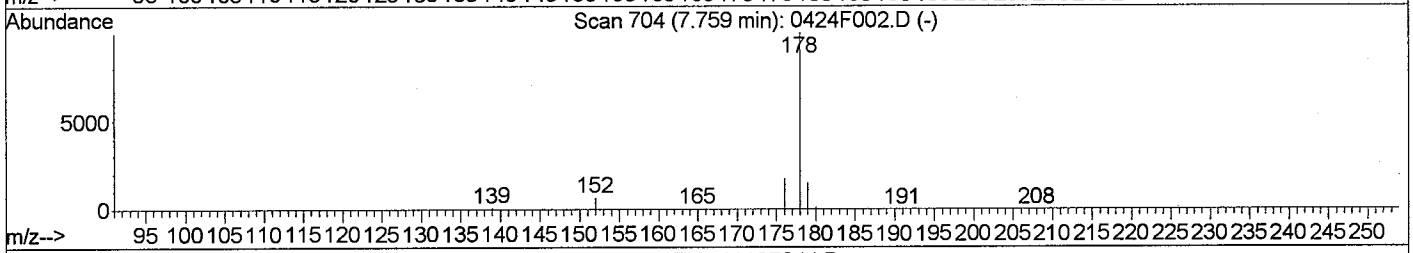
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Acq On : 19 Nov 2003 8:38 pm
Sample : K2308433-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:36 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(27) C3-Dibenzothiophenes (L)

13.68min 302.46ng/ml m

response 70952

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	59.60
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

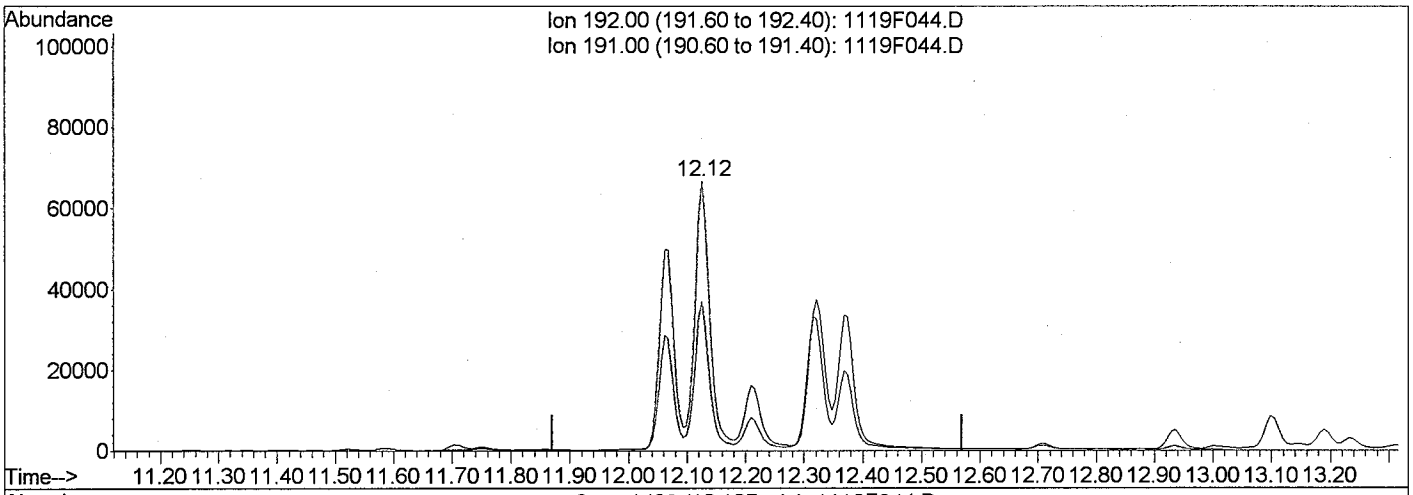
11/24/13

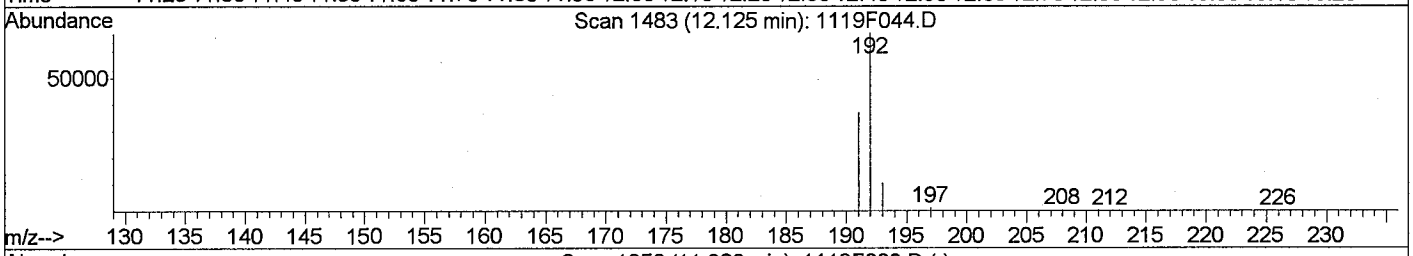
1119F044.D 1107ALK.M Fri Nov 21 12:36:26 2003

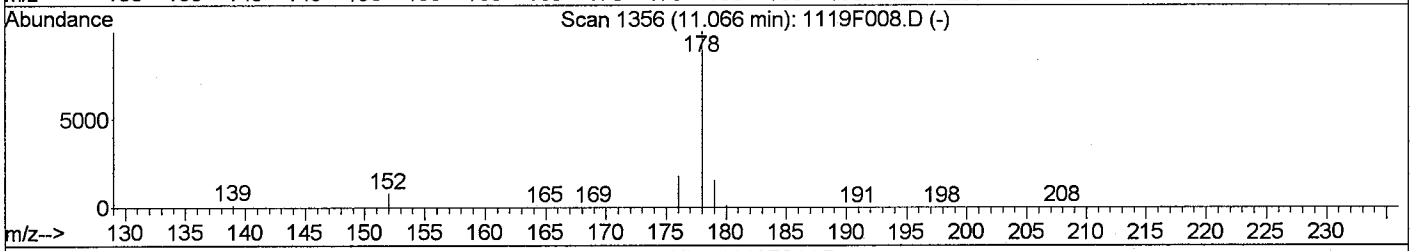
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:36 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 1613.91ng/ml m

response 397694

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	55.39
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

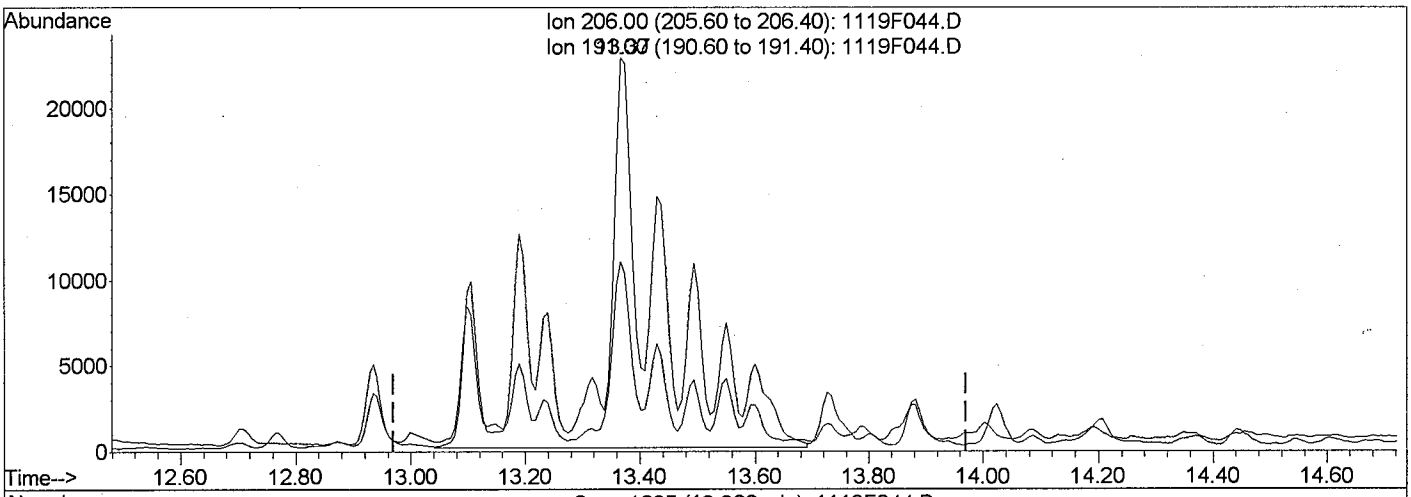
11/24/13

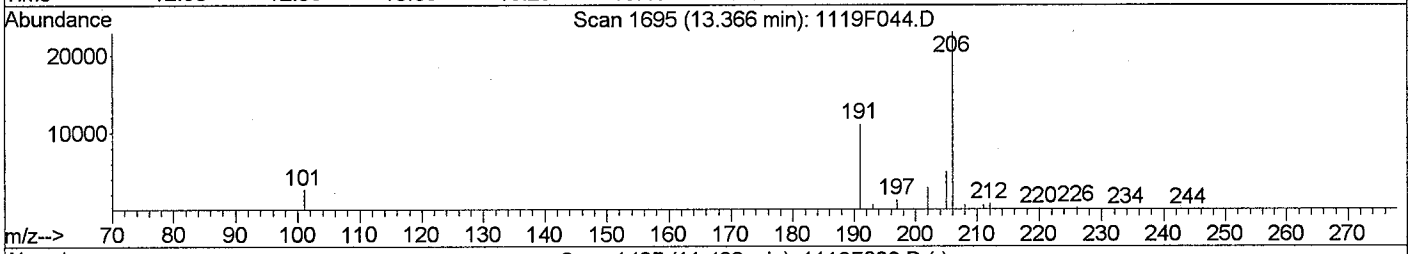
1119F044.D 1107ALK.M Fri Nov 21 12:36:31 2003

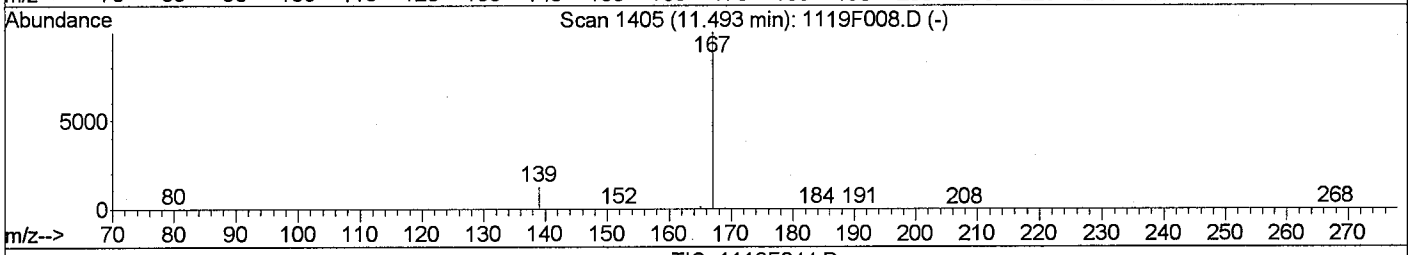
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:36 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 786.91ng/ml m

response 193908

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	48.42
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

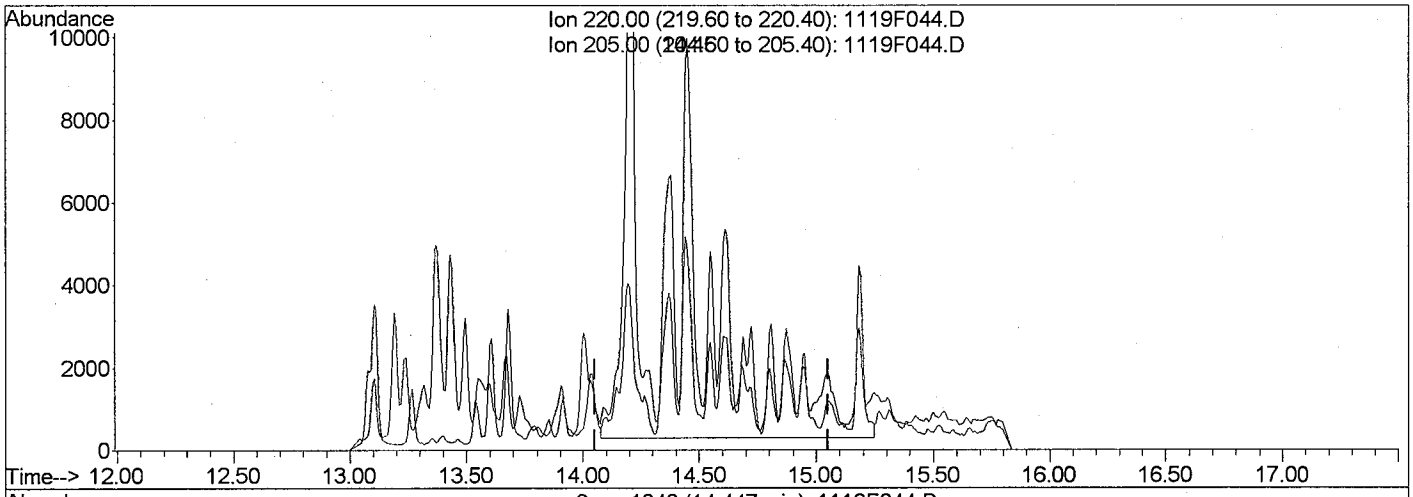
11/24/13

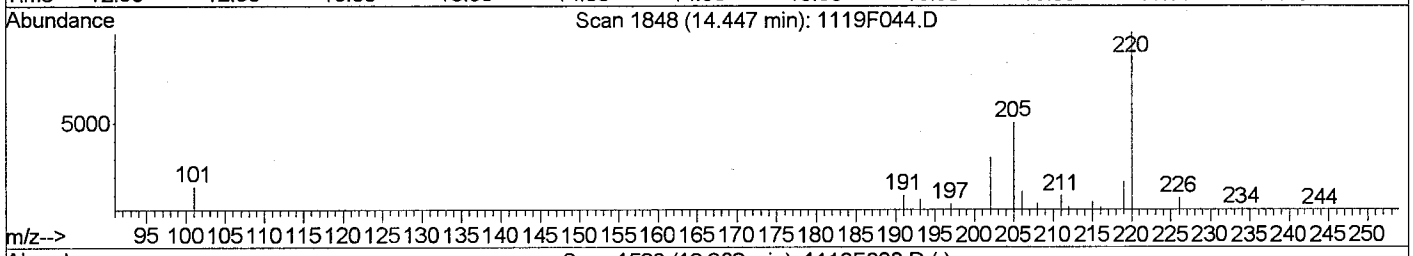
1119F044.D 1107ALK.M Fri Nov 21 12:36:49 2003

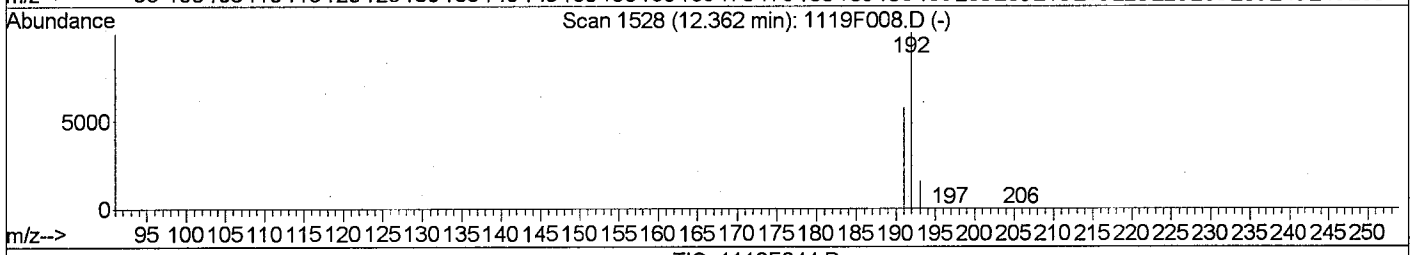
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:37 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.45min 515.39ng/ml m

response 127000

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	50.16
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

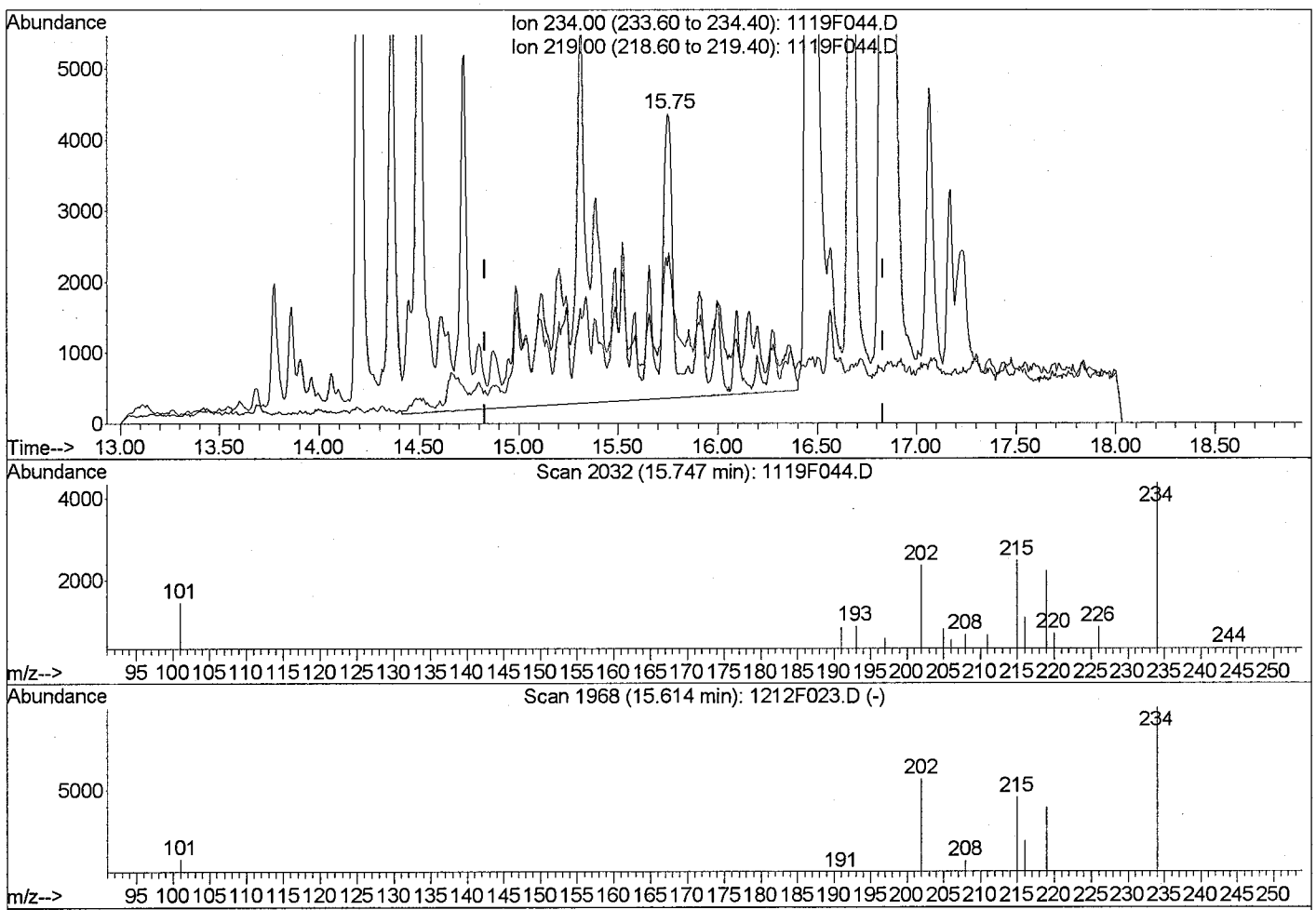
11/24/13

1119F044.D 1107ALK.M Fri Nov 21 12:37:12 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:37 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F044.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 317.72ng/ml m

response 78292

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	50.85
0.00	0.00	0.00
0.00	0.00	0.00

1/24/13

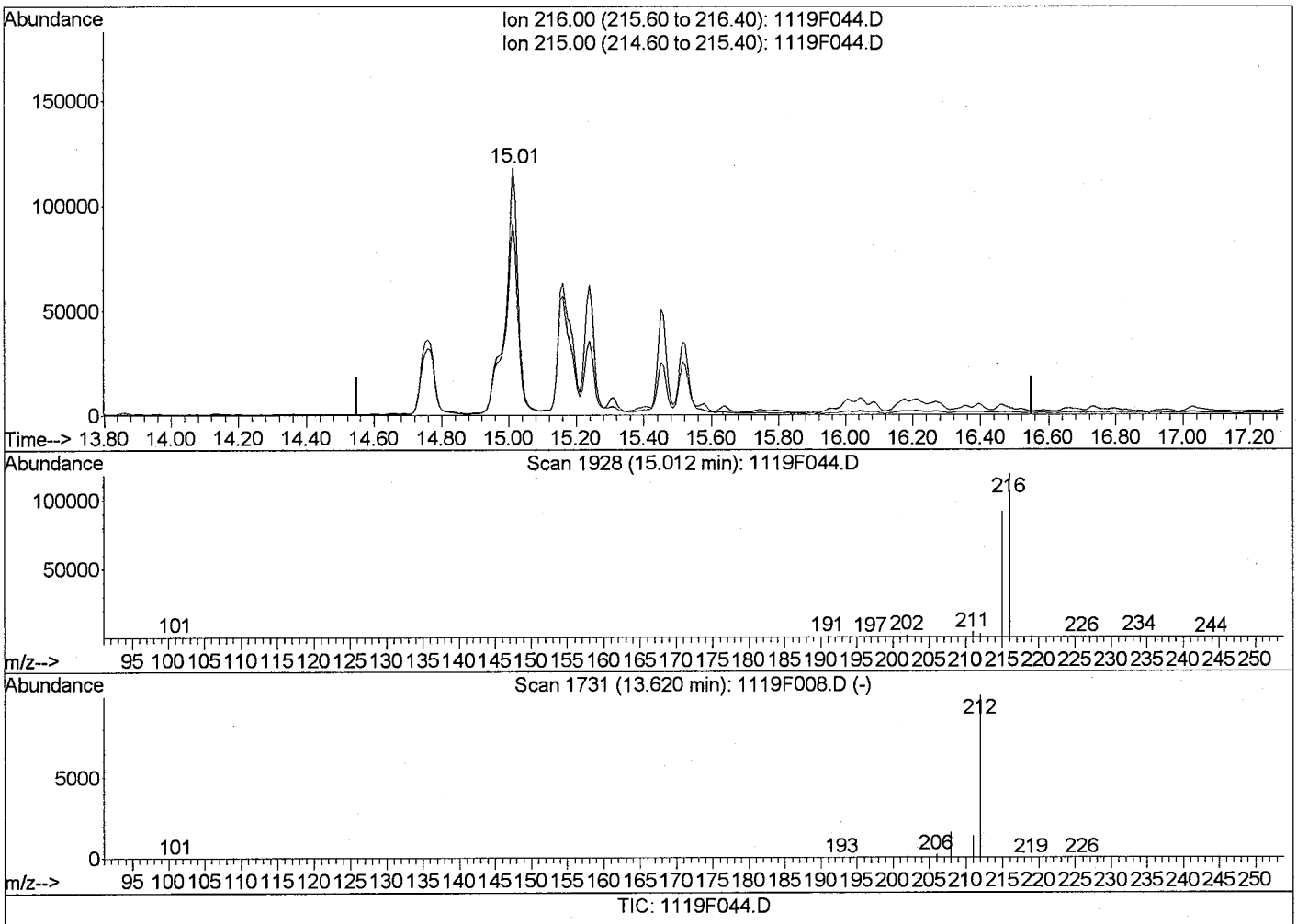
1/24/13

1119F044.D 1107ALK.M Fri Nov 21 12:37:24 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:37 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F044.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.01min 3770.50ng/ml m

response 920754

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	77.41
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

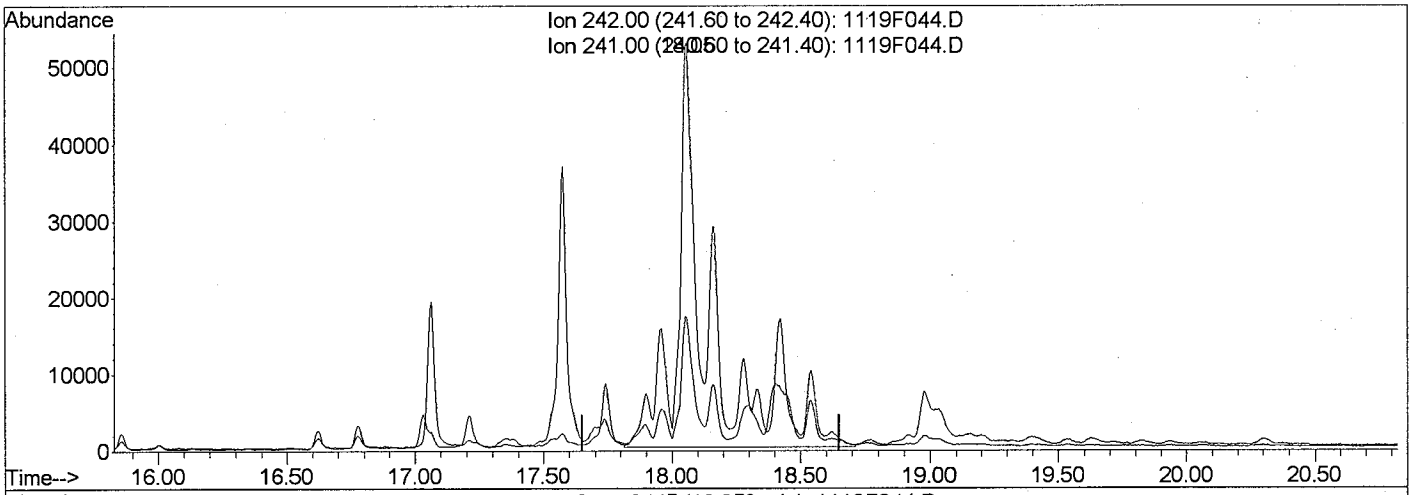
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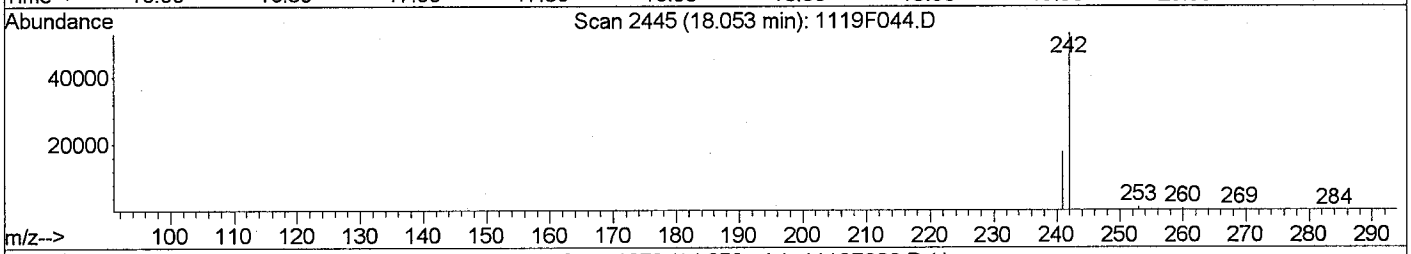
Quantitation Report (Qedit)

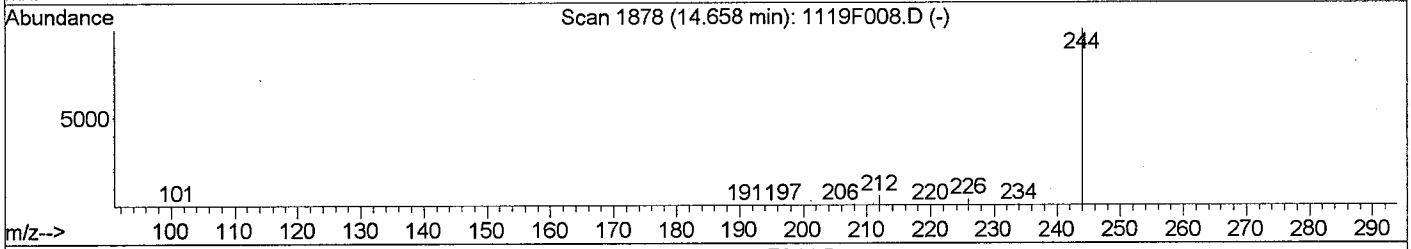
Data File : J:\MS11\DATA\111903\1119F044.D
Acq On : 19 Nov 2003 8:38 pm
Sample : K2308433-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:37 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(44) C1-Chrysenes (L)

18.05min 2318.37ng/ml m

response 460918

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	33.10
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

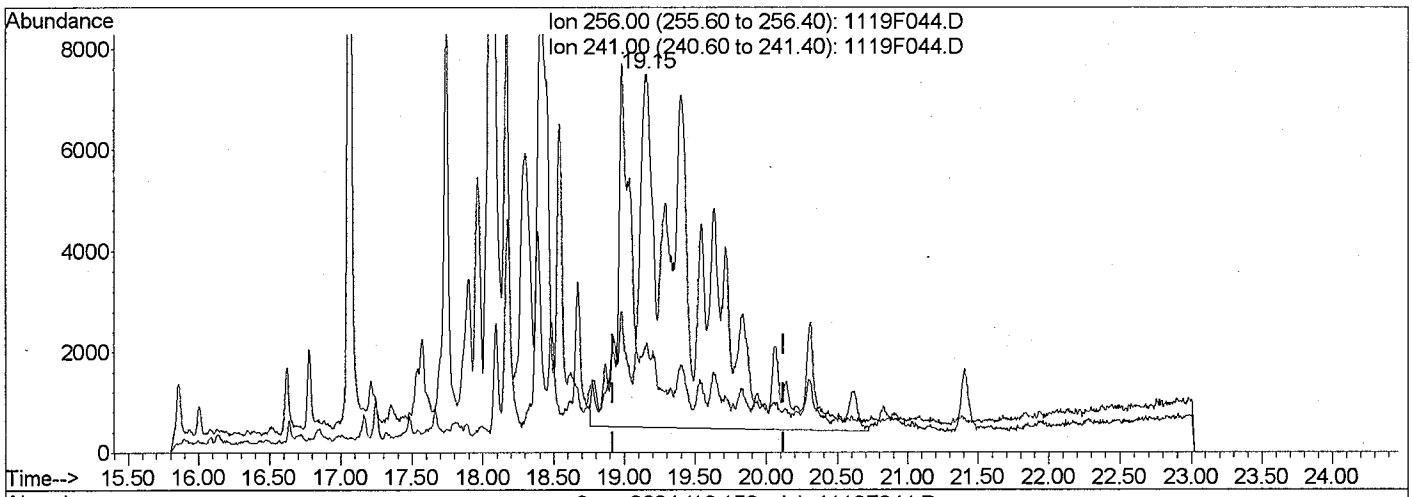
11/24/13

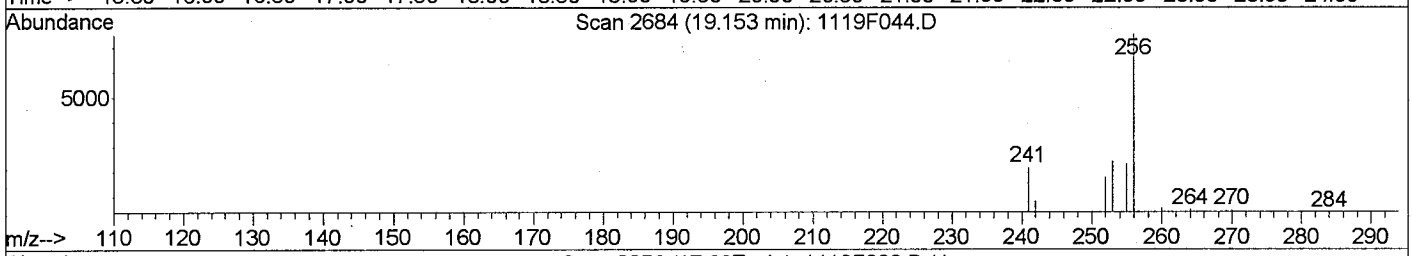
1119F044.D 1107ALK.M Fri Nov 21 12:37:45 2003

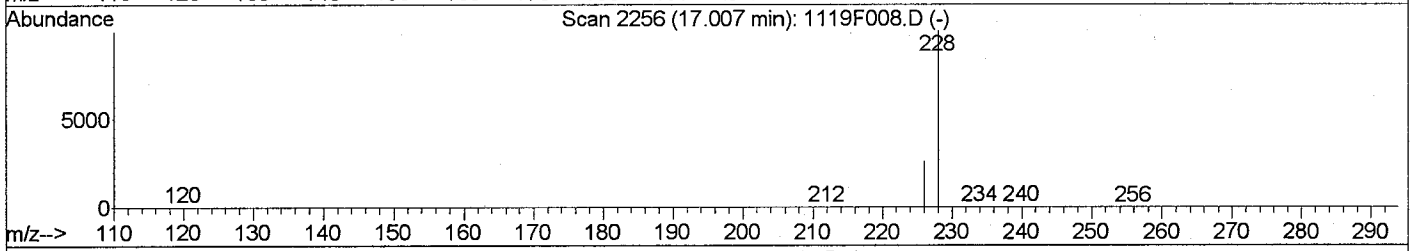
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:37 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(45) C2-Chrysenes (L)

19.15min 1046.61ng/ml m

response 208078

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	28.85
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

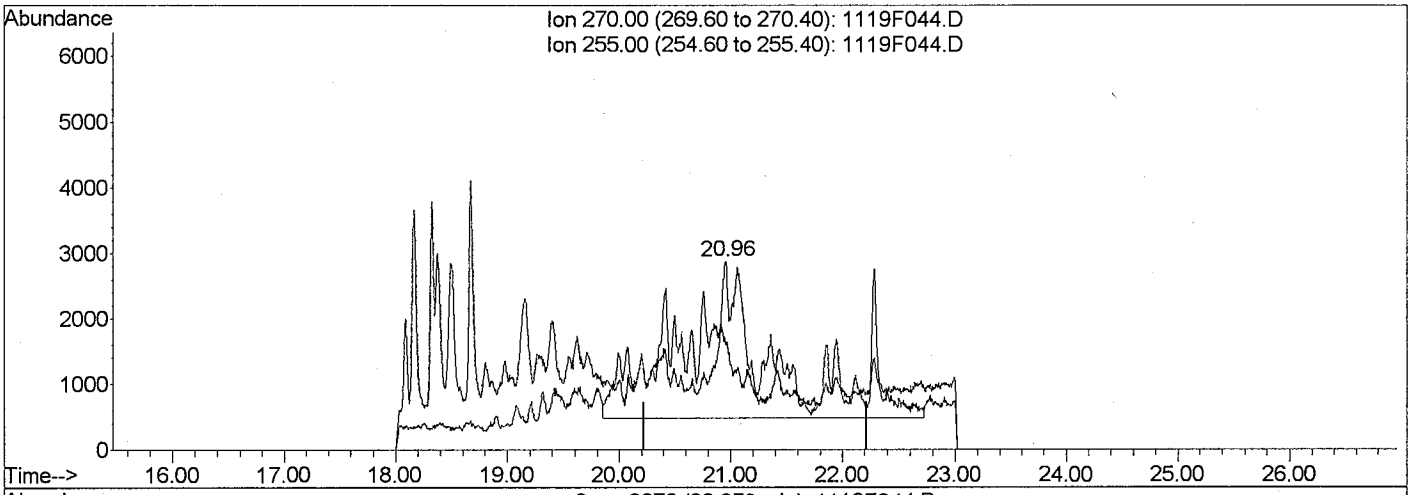
11/24/13

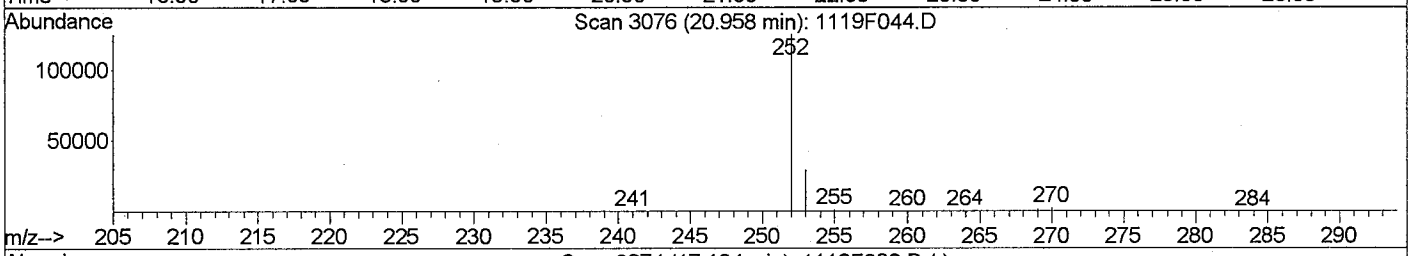
1119F044.D 1107ALK.M Fri Nov 21 12:37:57 2003

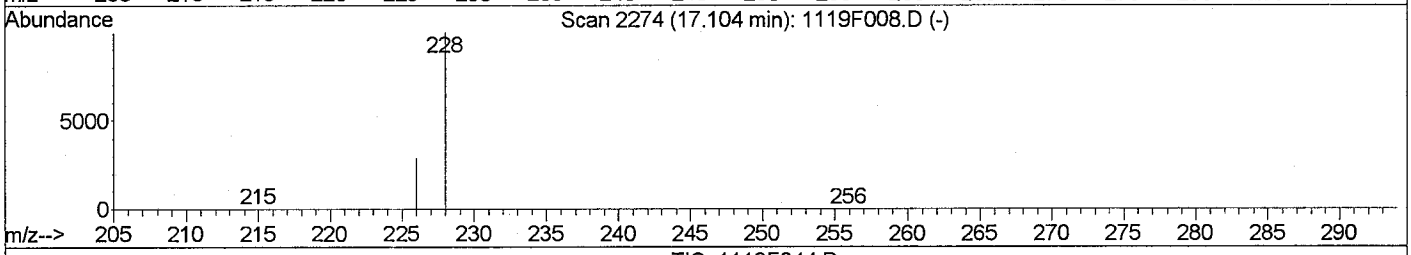
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F044.D Vial: 15
Acq On : 19 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : K2308433-008 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:38 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(46) C3-Chrysenes (L)

20.96min 649.48ng/ml m

response 129125

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	55.44
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

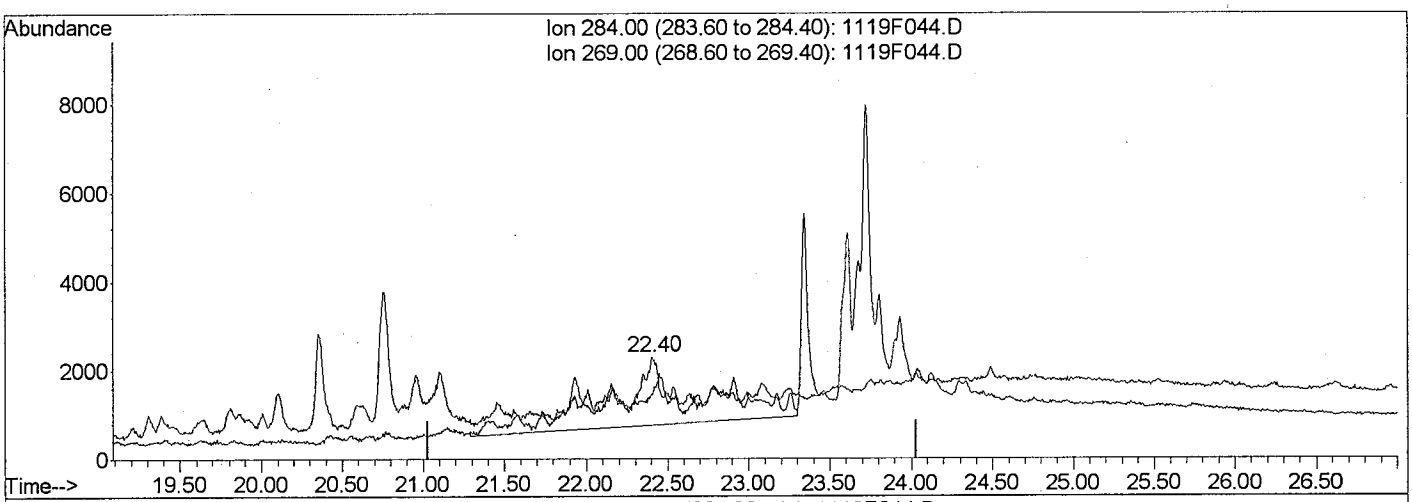
1119F044.D 1107ALK.M Fri Nov 21 12:38:12 2003

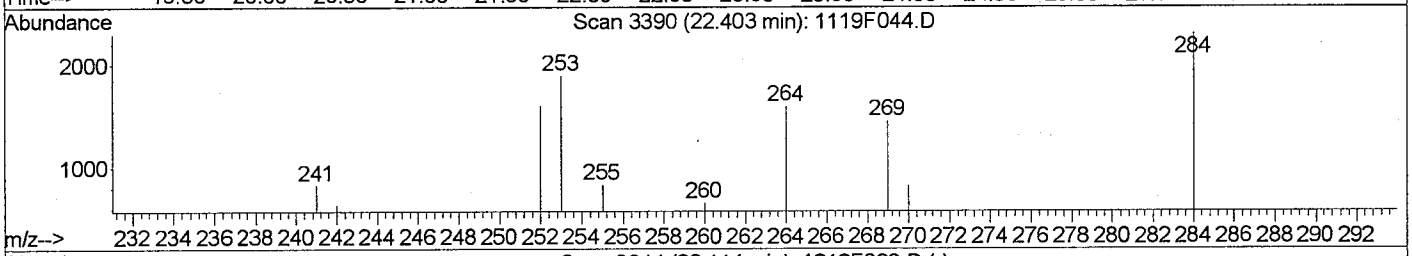
Quantitation Report (Qedit)

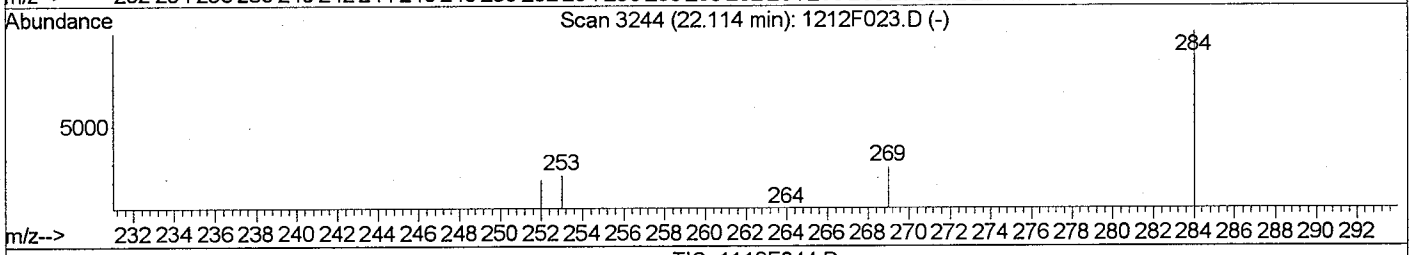
Data File : J:\MS11\DATA\111903\1119F044.D
Acq On : 19 Nov 2003 8:38 pm
Sample : K2308433-008
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:38 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F044.D

(47) C4-Chrysenes (L)

22.40min 285.62ng/ml m

response 56785

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	63.04
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F044.D 1107ALK.M Fri Nov 21 12:38:20 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F011.D
Lab ID: K2308433-008
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 11:14
Date Quantitated: 11/24/2003 09:20
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/24/03

Secondary Review: 11.24.03

Printed: 11/24/2003 09:47:11
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247866	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F011.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 11:14	**Quant Date:**	11/24/2003 09:20	**Vial:**	8
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-008			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	228853	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	117273	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	157960	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	141584	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	83112	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	6706	57.18	57	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	11799	74.63	75	34-122	OK	NR
4	Terphenyl-d14	14.66	0.00	0.00	244	11086	85.91	86	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	5331	20.60	19	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	1370	8.97	8.2	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	1112	7.76	7.1	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	599	3.23	3.0	JD	NR
1	C2-Naphthalenes				156	0		32	U	NR
1	C3-Naphthalenes				170	0		32	U	NR
1	C4-Naphthalenes				184	0		32	U	NR
2	Acenaphthylene	7.75	0.01	0.00	152	2839	12.56	12	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	6883	49.43	45	JD	NR
2	Dibenzofuran	8.36	0.02	0.00	168	5194	27.82	26	JD	NR
2	Fluorene	9.00	0.01	0.00	166	6862	46.00	42	JD	NR
2	C1-Fluorenes				180	0		32	U	NR
2	C2-Fluorenes				194	0		32	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F011.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 11:14	**Quant Date:**	11/24/2003 09:20	**Vial:**	8
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-008			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		32	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	5729	31.43	29	JD	NR
3	C1-Dibenzothiophenes				198	0		32	U	NR
3	C2-Dibenzothiophenes				212	0		32	U	NR
3	C3-Dibenzothiophenes				226	0		32	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	123678	646.03	590	D	NR
3	Anthracene	11.08		0.00	178	18690	114.27	100	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		32	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		32	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		32	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		32	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	212945	1,117	1000	D	
4	Pyrene	14.18	0.01	0.00	202	173602	938.08	860	D	
4	C1-Fluoranthenes/Pyrenes				216	0		32	U	NR
4	Benz(a)anthracene	17.02		0.00	228	57084	405.15	370	D	NR
4	Chrysene	17.12		0.00	228	83422	553.69	510	D	NR
4	C1-Chrysenes				242	0		32	U	NR
4	C2-Chrysenes				256	0		32	U	NR
4	C3-Chrysenes				270	0		32	U	NR
4	C4-Chrysenes				284	0		32	U	NR
5	Benzo(b)fluoranthene	20.01	0.01	0.00	252	54156	488.08	450	D	NR
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	65884**m**	467.96	430	D	NR
5	Benzo(e)pyrene	20.98	0.01	0.00	252	45164	362.53	330	D	NR
5	Benzo(a)pyrene	21.16		0.00	252	41649	441.29	400	D	NR
5	Perylene	21.51	0.01	0.00	252	12191	115.07	110	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	24561	428.09	390	D	NR
5	Dibenz(a,h)anthracene	24.08		0.00	278	4723**m**	57.28	53	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	26082	274.20	250	D	NR

Prep Amount:	27.3 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	79.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F011.D Vial: 8
Acq On : 20 Nov 2003 11:14 am Operator: LWeiskopf
Sample : K2308433-008DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:39 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	228853	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	117273	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	157960	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	141584	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	83112	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	5804	34.62	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	3.46%		
16) Fluorene-d10	8.95	176	6706	57.18	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	5.72%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	11799	74.63	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.46%		
41) Terphenyl-d14	14.66	244	11086	85.91	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.59%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	5331	20.60	ng/ml	98
3) 2-Methylnaphthalene	6.38	142	1370	8.97	ng/ml	95
4) 1-Methylnaphthalene	6.52	142	1112	7.76	ng/ml	97
6) Biphenyl	7.05	154	599	3.23	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.28	156	526	4.04	ng/ml	98
12) Acenaphthylene	7.75	152	2839	12.56	ng/ml	100
13) Acenaphthene	8.06	154	6883	49.43	ng/ml	99
14) Dibenzofuran	8.36	168	5194	27.82	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.76	170	339	2.72	ng/ml	91
17) Fluorene	9.00	166	6862	46.00	ng/ml	97
24) Dibenzothiophene	10.72	184	5729	31.43	ng/ml	98
28) Phenanthrene	10.98	178	123678	646.03	ng/ml	99
29) Anthracene	11.08	178	18690	114.27	ng/ml	98
31) 1-Methylphenanthrene	12.37	192	4026	30.97	ng/ml	99
36) Fluoranthene	13.67	202	212945	1117.44	ng/ml	98
39) Pyrene	14.18	202	173602	938.08	ng/ml	99
42) Benz(a)anthracene	17.02	228	57084	405.15	ng/ml	97
43) Chrysene	17.12	228	83422	553.69	ng/ml	99
49) Benzo(b)fluoranthene	20.01	252	54156	488.08	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	65884m	467.96	ng/ml	
51) Benzo(e)pyrene	20.98	252	45164	362.53	ng/ml	99
52) Benzo(a)pyrene	21.16	252	41649	441.29	ng/ml	98
53) Perylene	21.51	252	12191	115.07	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F011.D Vial: 8
Acq On : 20 Nov 2003 11:14 am Operator: LWeiskopf
Sample : K2308433-008DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:39 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

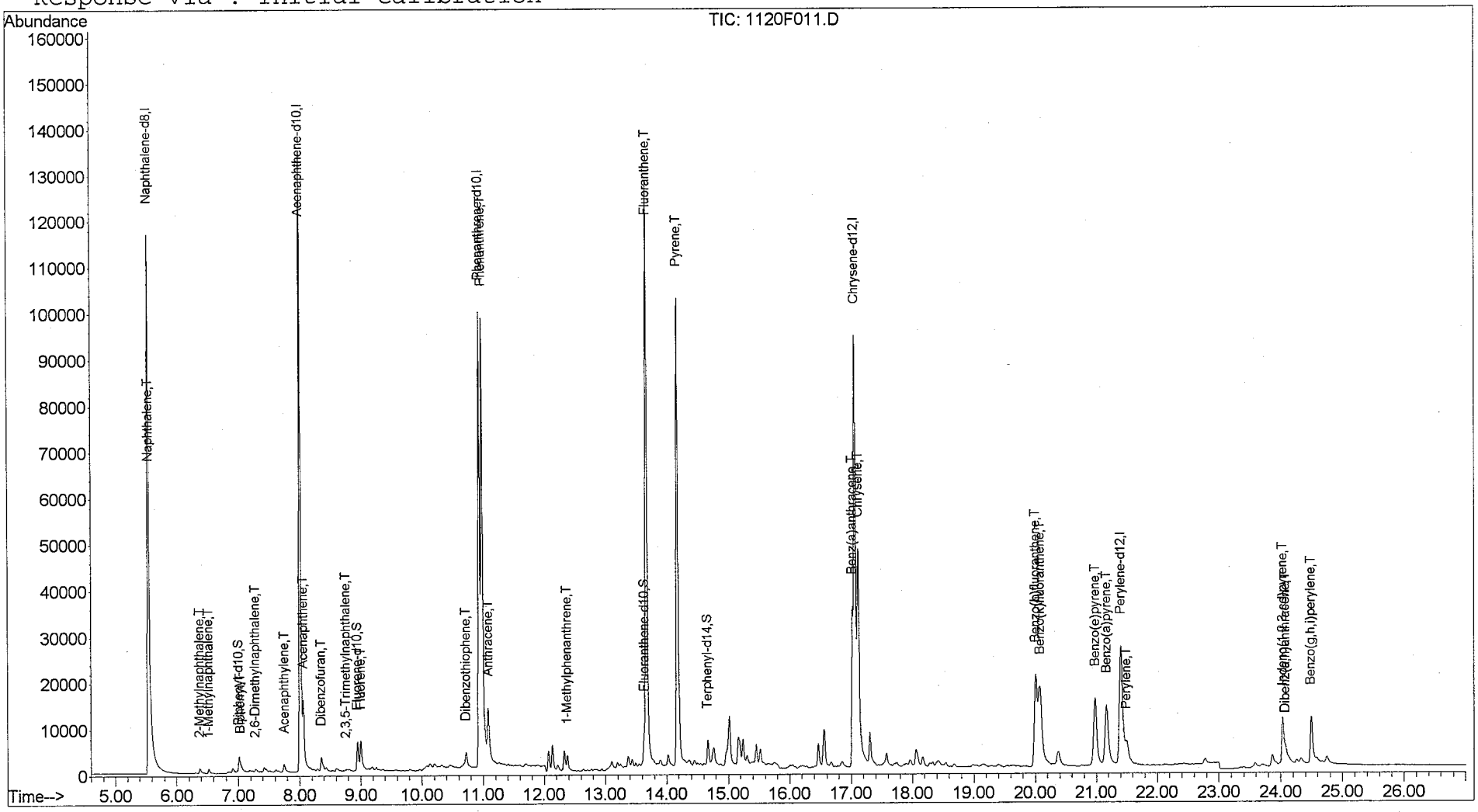
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54) Indeno(1,2,3-cd)pyrene	24.03	276	24561	428.09	ng/ml	92
55) Dibenz(a,h)anthracene	24.08	278	4723m	57.28	ng/ml	
56) Benzo(g,h,i)perylene	24.49	276	26082	274.20	ng/ml	99

(#) = qualifier out of range (m) = manual integration

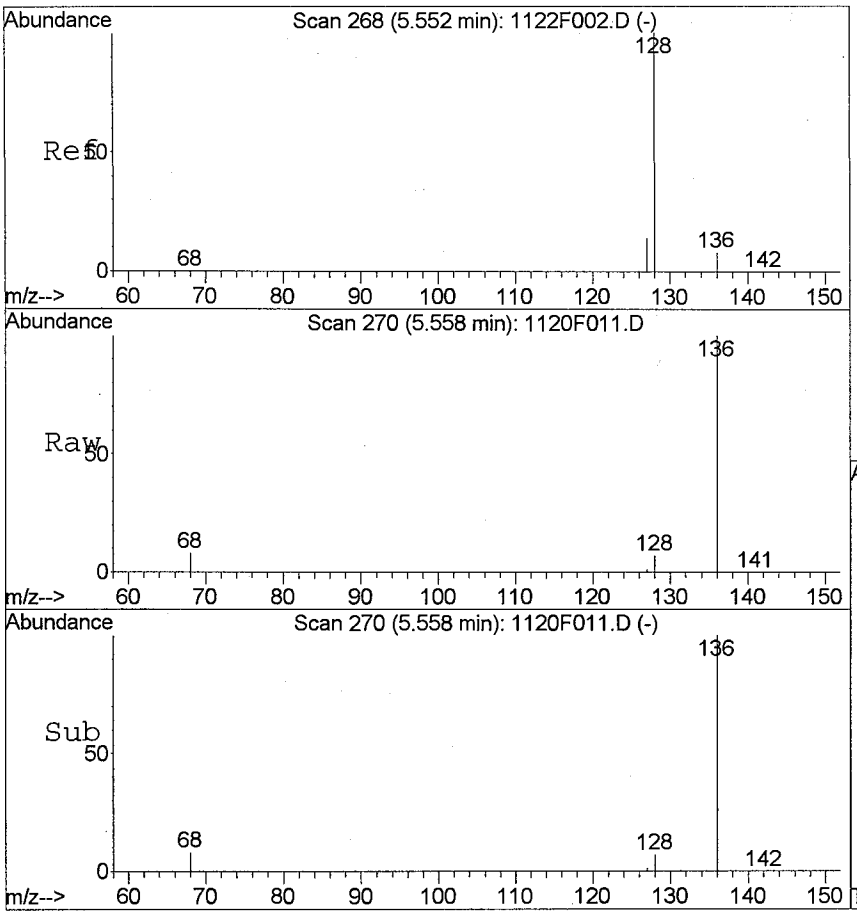
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F011.D Vial: 8
Acq On : 20 Nov 2003 11:14 am Operator: LWeiskopf
Sample : K2308433-008DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:20 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



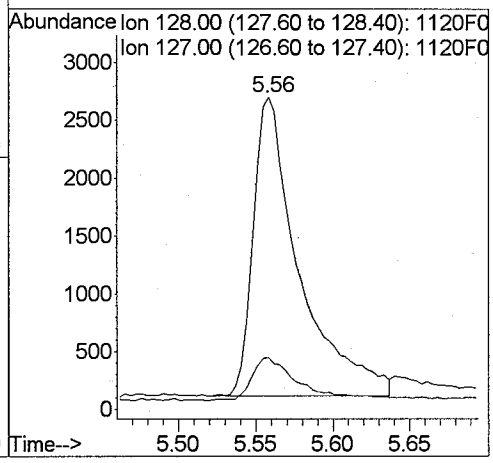
1411

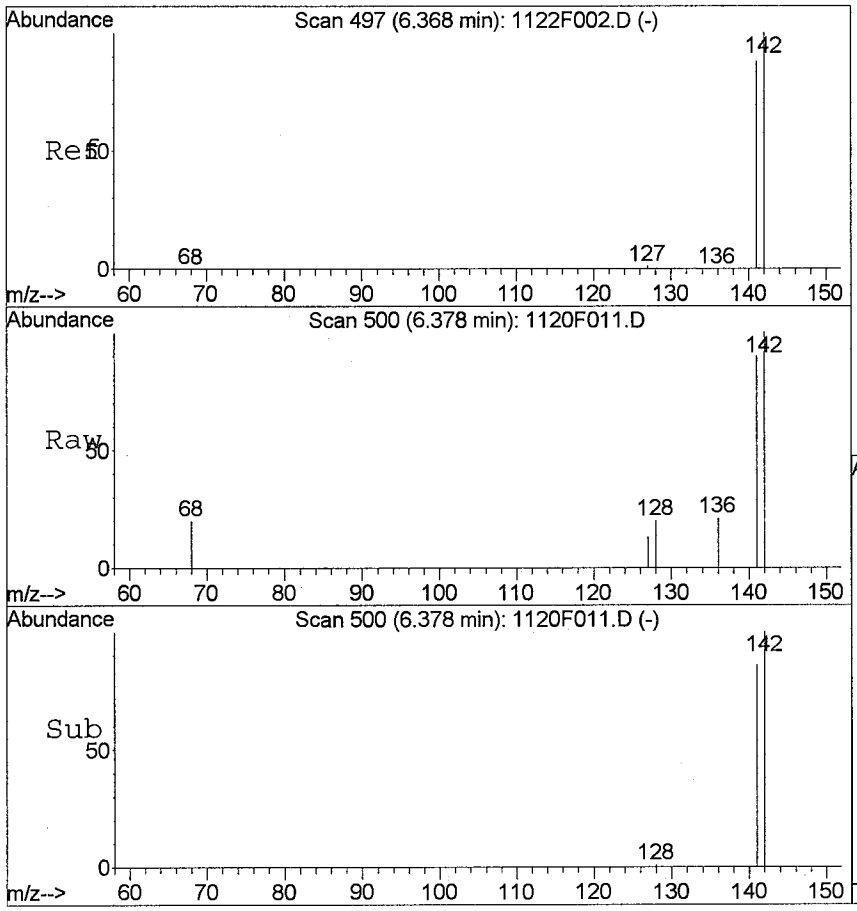


#2
Naphthalene
Concen: 20.60 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:128 Resp: 5331

Ion	Ratio	Lower	Upper
128	100		
127	14.4	0.0	43.6

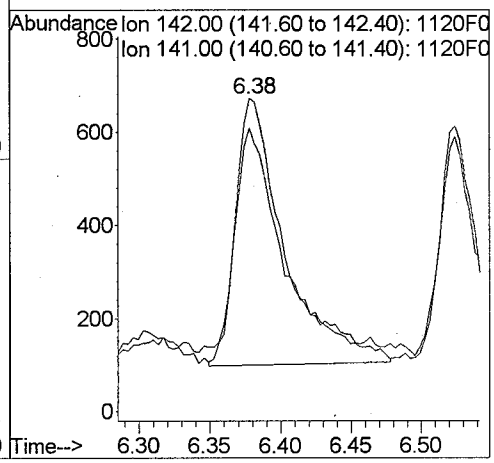


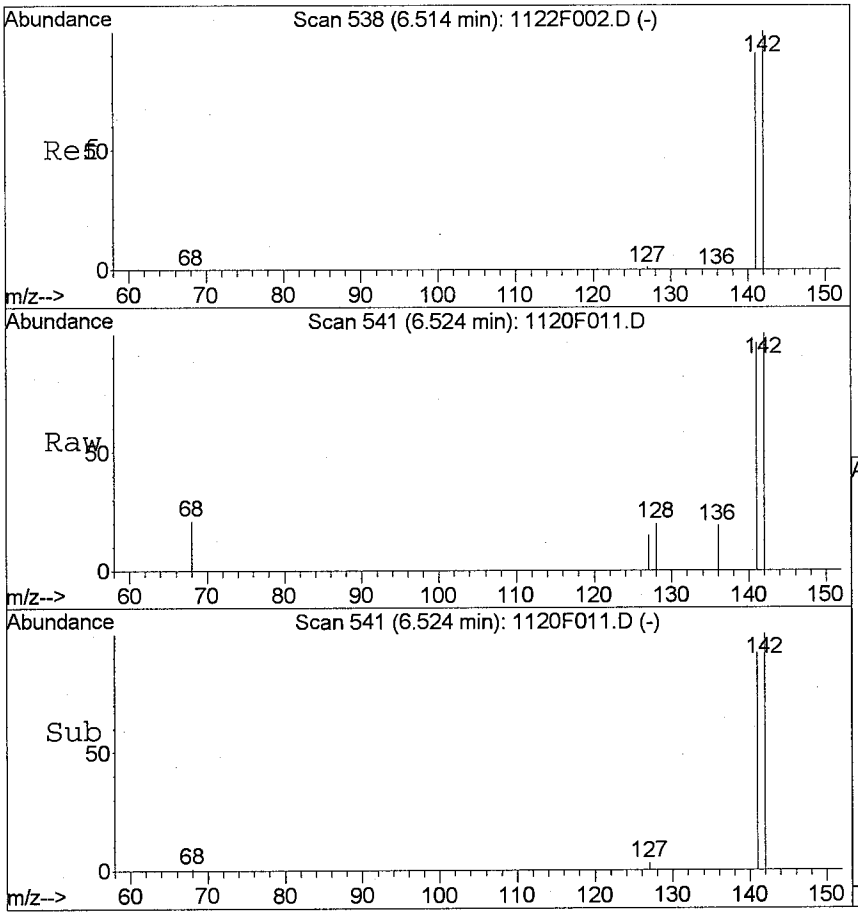


#3
2-Methylnaphthalene
Concen: 8.97 ng/ml
RT: 6.38 min Scan# 500
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:142 Resp: 1370

Ion	Ratio	Lower	Upper
142	100		
141	83.0	58.1	118.1

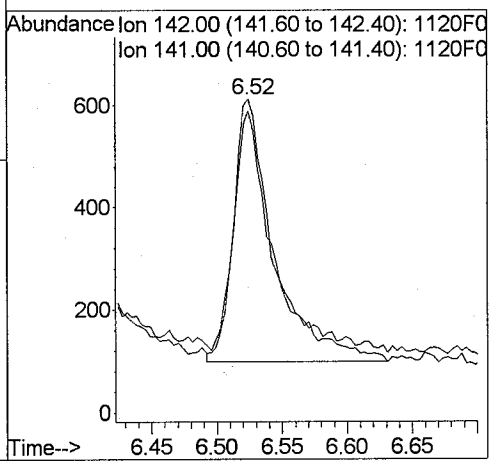


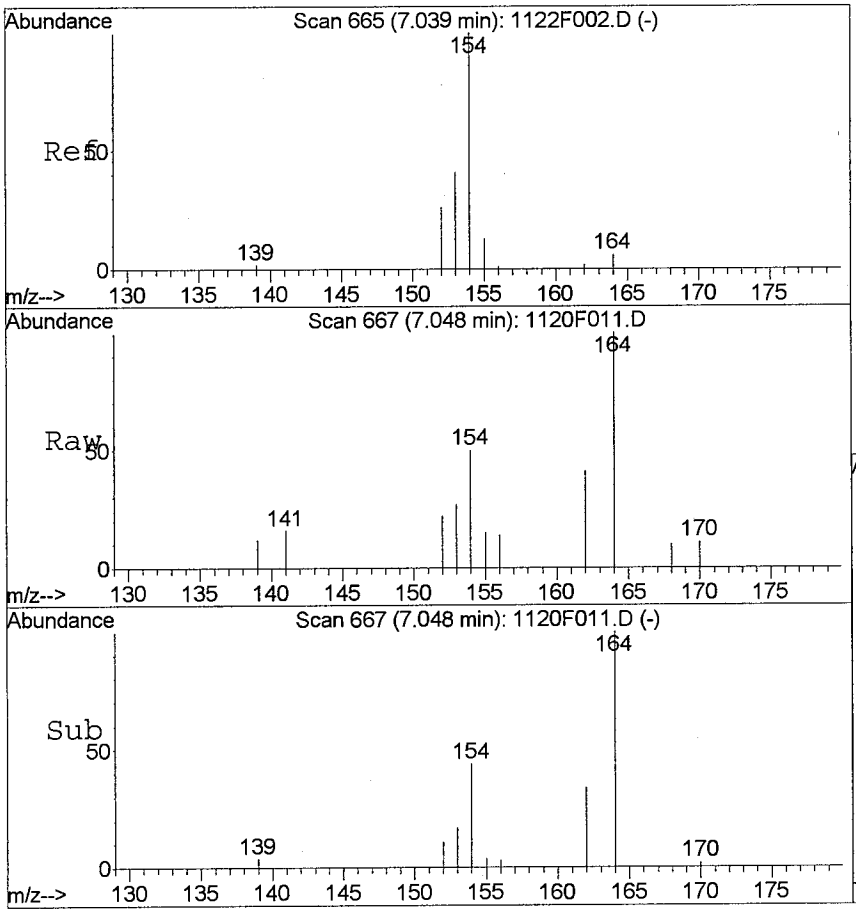


#4
1-Methylnaphthalene
Concen: 7.76 ng/ml
RT: 6.52 min Scan# 541
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:142 Resp: 1112

Ion	Ratio	Lower	Upper
142	100		
141	92.0	59.3	119.3

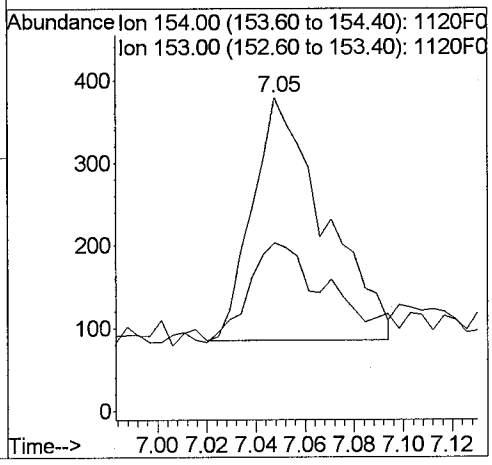


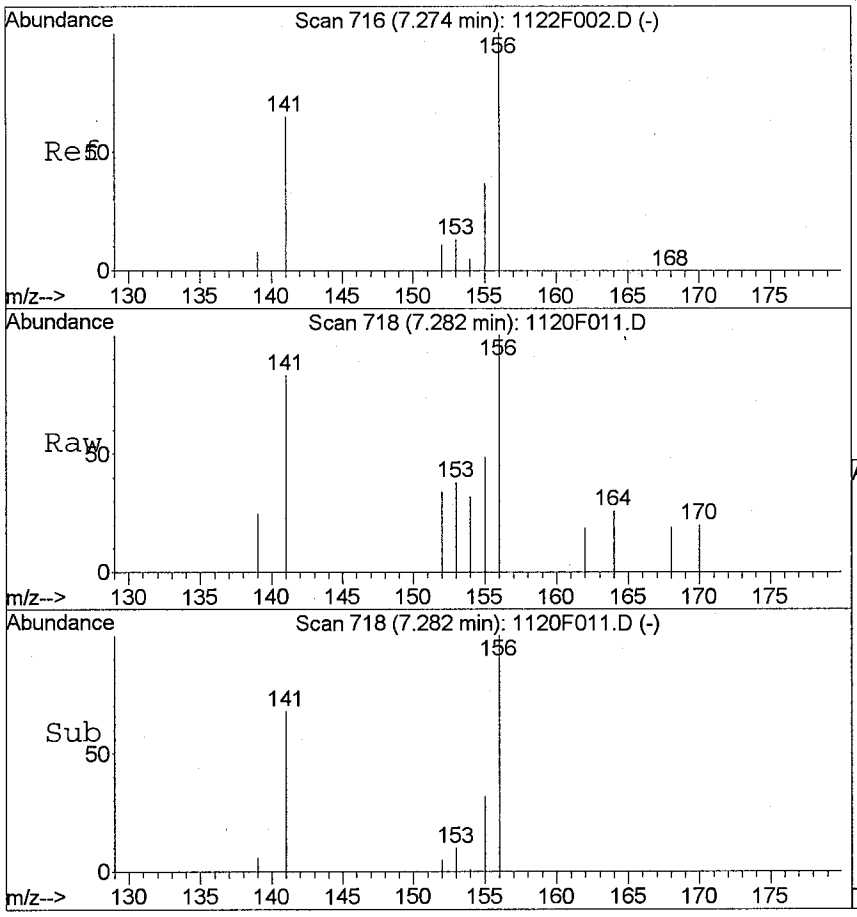


#6
Biphenyl
Concen: 3.23 ng/ml
RT: 7.05 min Scan# 667
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:154 Resp: 599

Ion	Ratio	Lower	Upper
154	100		
153	40.8	11.3	71.3

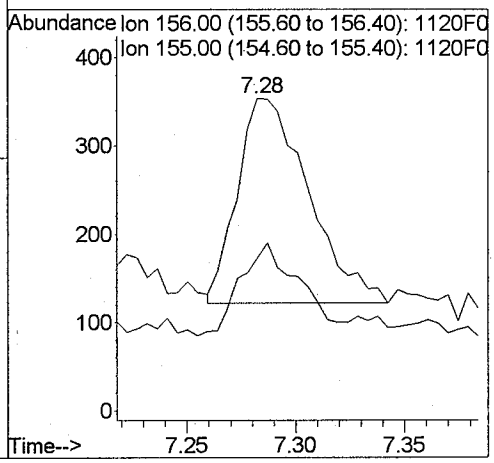


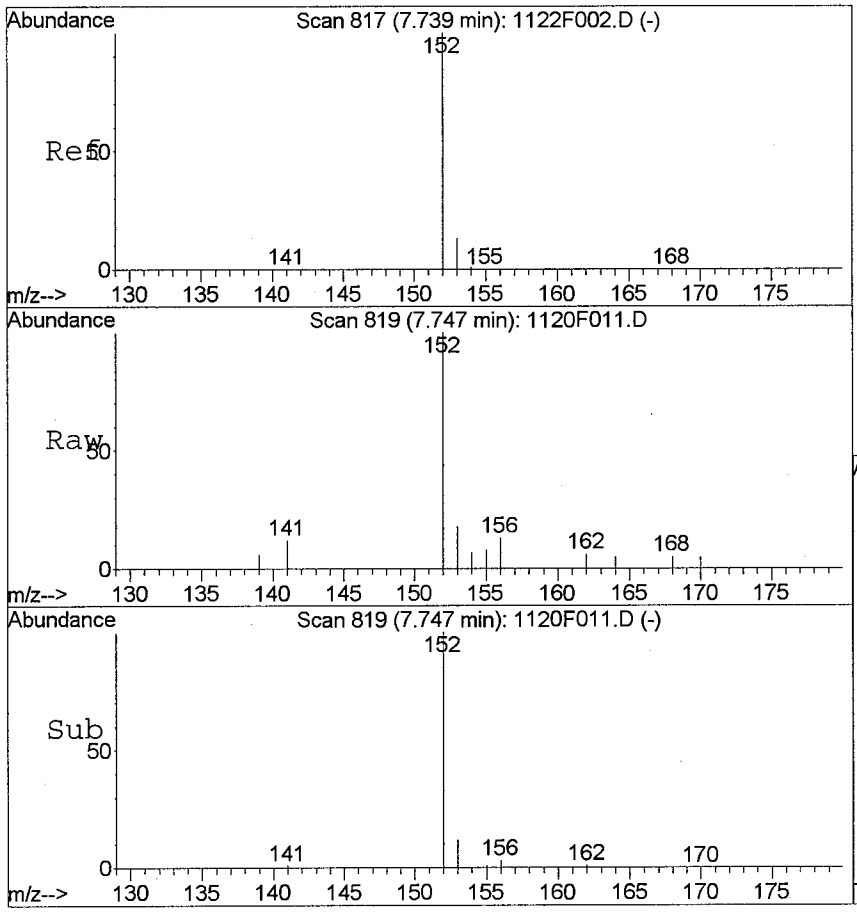


#7
2,6-Dimethylnaphthalene
Concen: 4.04 ng/ml
RT: 7.28 min Scan# 718
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:156 Resp: 526

Ion	Ratio	Lower	Upper
156	100		
155	35.8	7.1	67.1

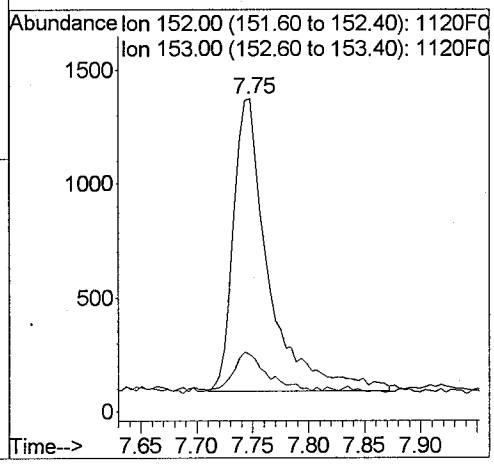


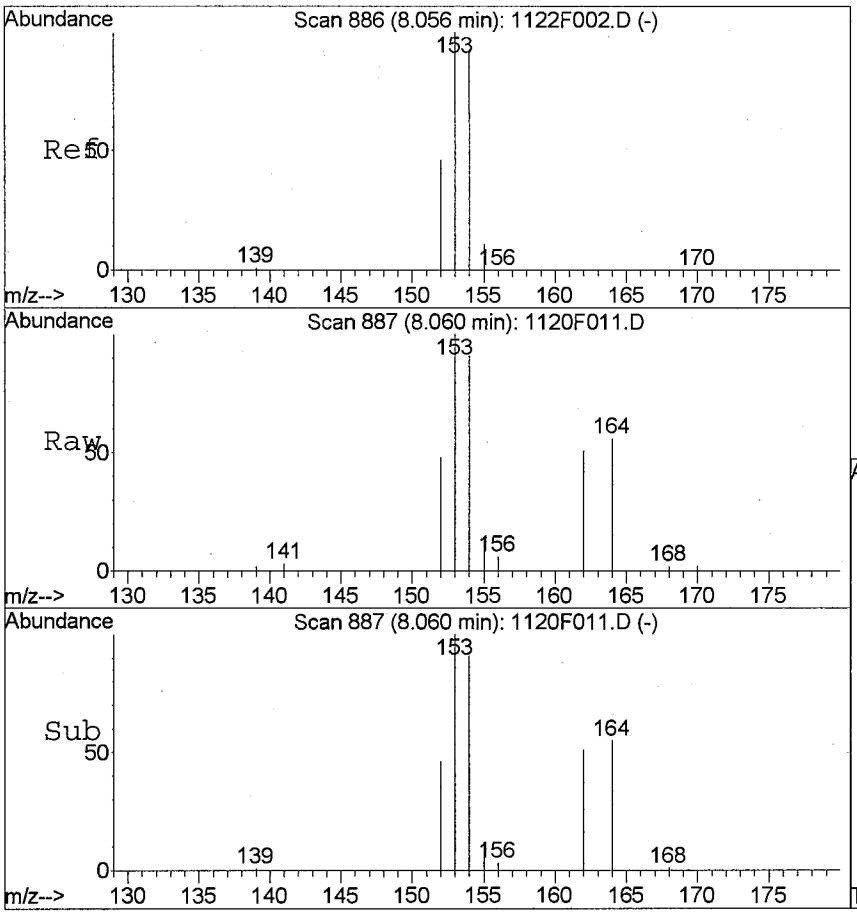


#12
Acenaphthylene
Concen: 12.56 ng/ml
RT: 7.75 min Scan# 819
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:152 Resp: 2839

Ion	Ratio	Lower	Upper
152	100		
153	12.9	0.0	43.0

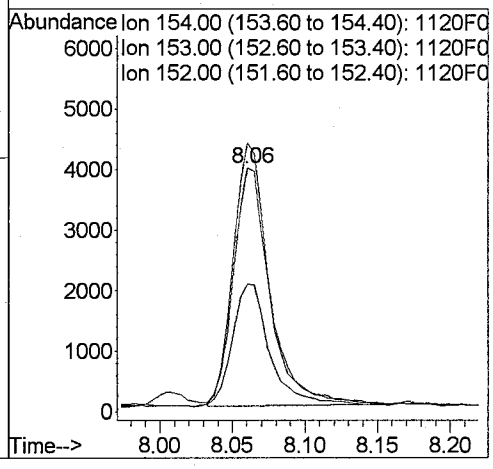


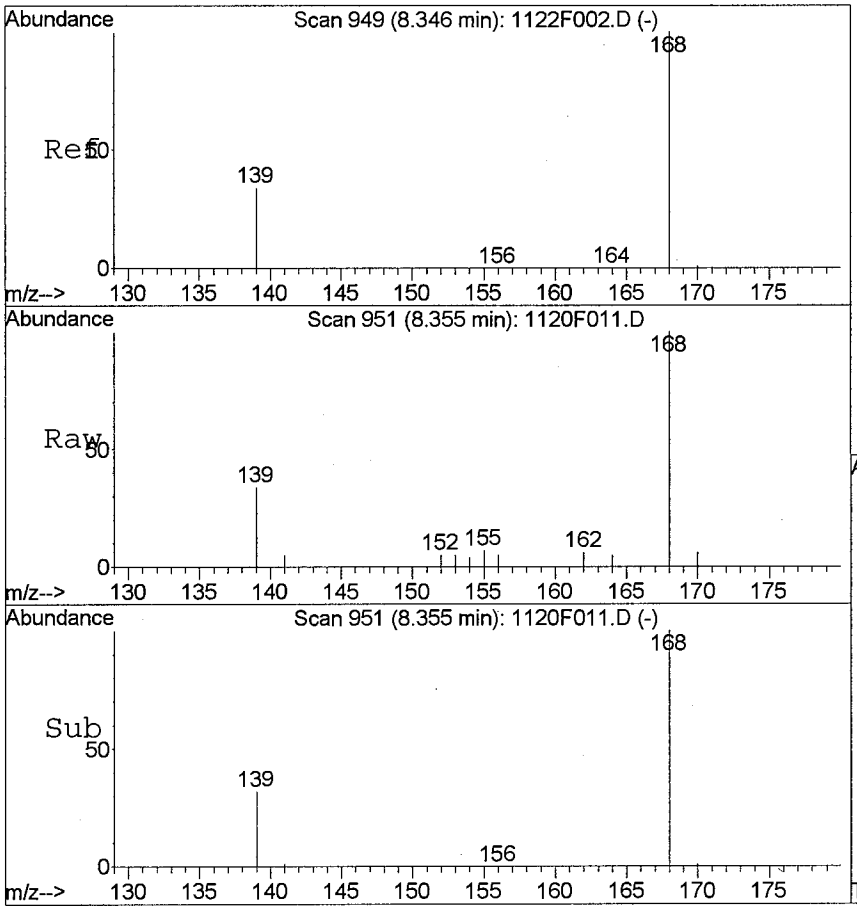


#13
Acenaphthene
Concen: 49.43 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:154 Resp: 6883

Ion	Ratio	Lower	Upper
154	100		
153	110.4	79.2	139.2
152	51.4	21.3	81.3

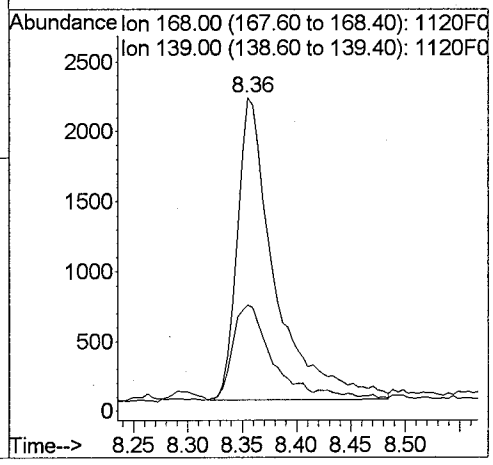


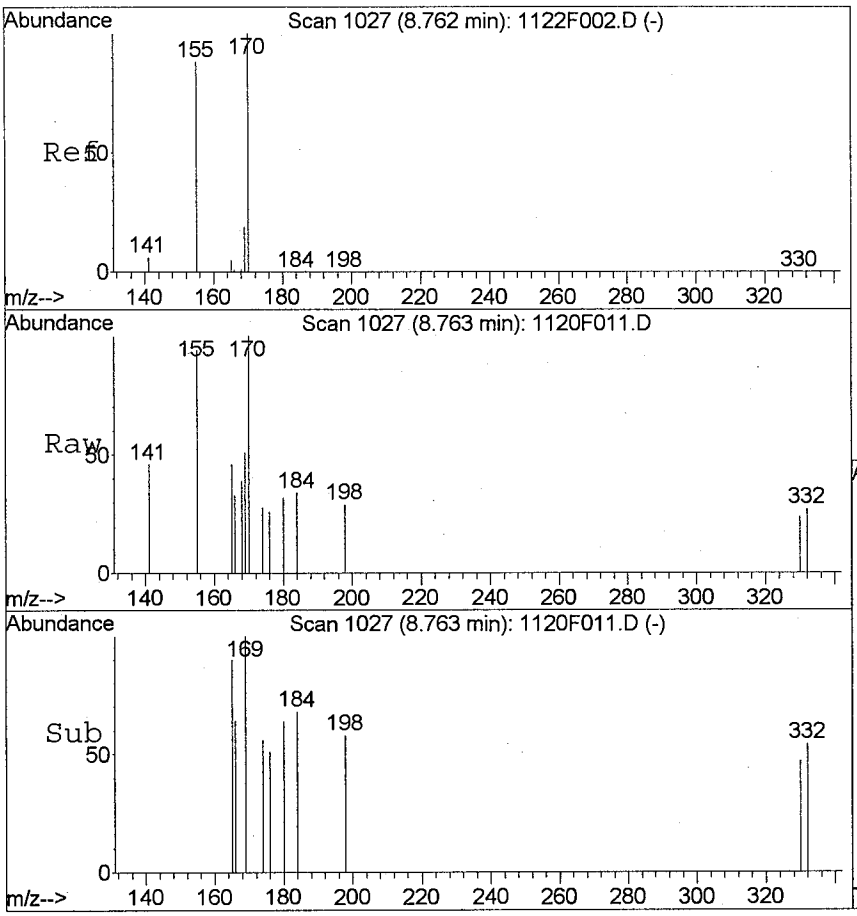


#14
Dibenzofuran
Concen: 27.82 ng/ml
RT: 8.36 min Scan# 951
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:168 Resp: 5194

Ion	Ratio	Lower	Upper
168	100		
139	31.6	5.4	65.4

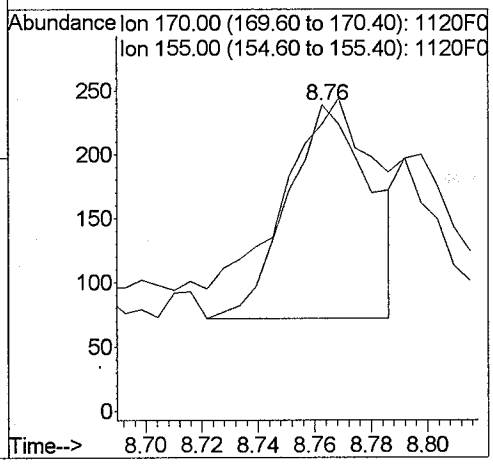


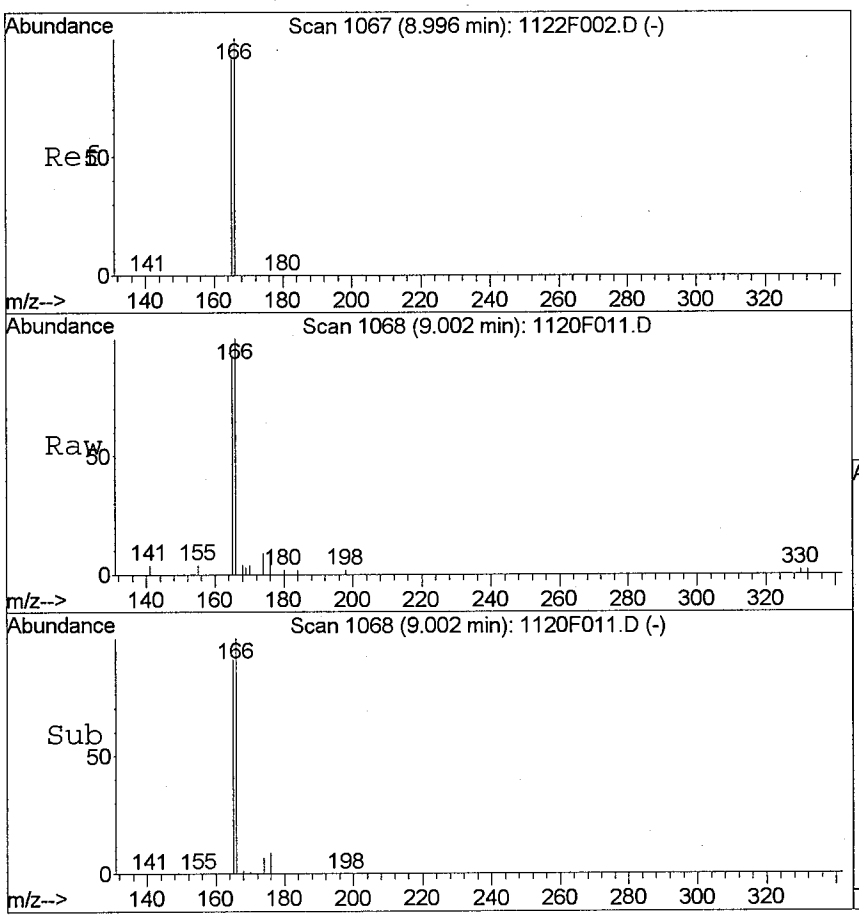


#15
2,3,5-Trimethylnaphthalene
Concen: 2.72 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. -0.00 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:170 Resp: 339

Ion	Ratio	Lower	Upper
170	100		
155	77.2	55.5	115.5

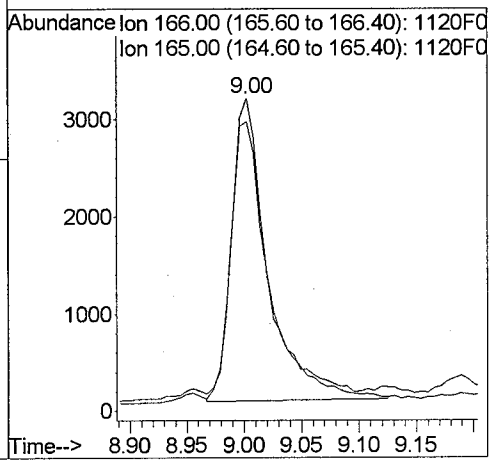


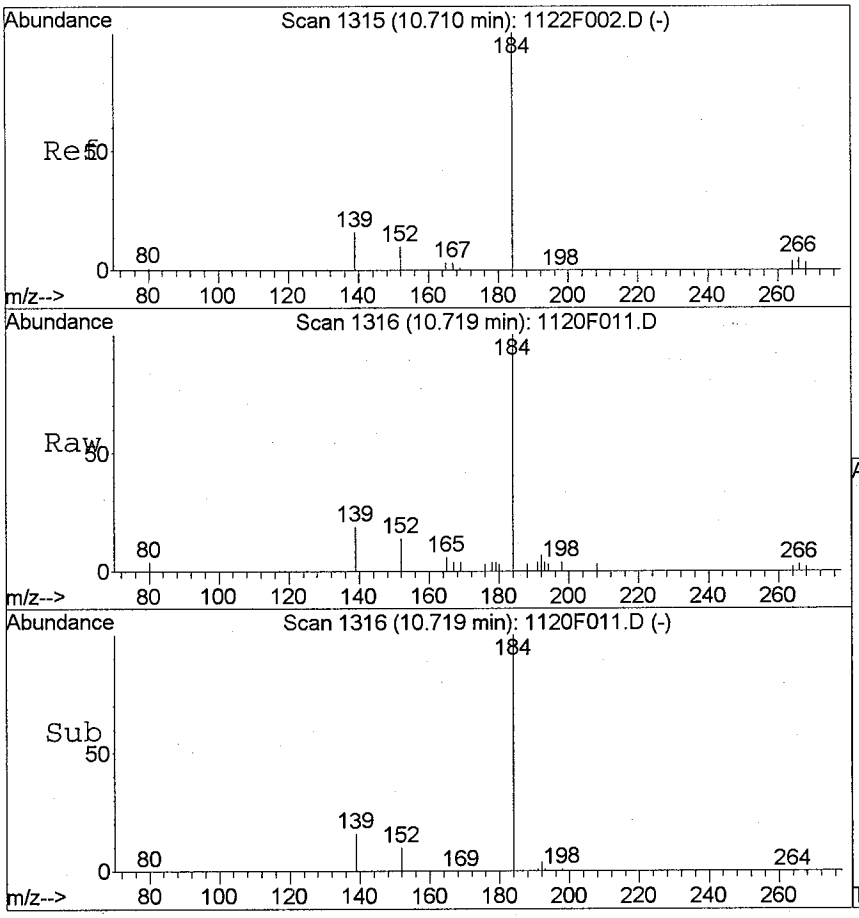


#17
Fluorene
Concen: 46.00 ng/ml
RT: 9.00 min Scan# 1068
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:166 Resp: 6862

Ion	Ratio	Lower	Upper
166	100		
165	90.5	63.3	123.3

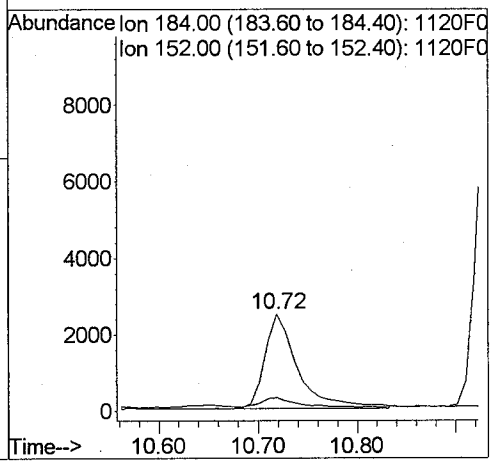


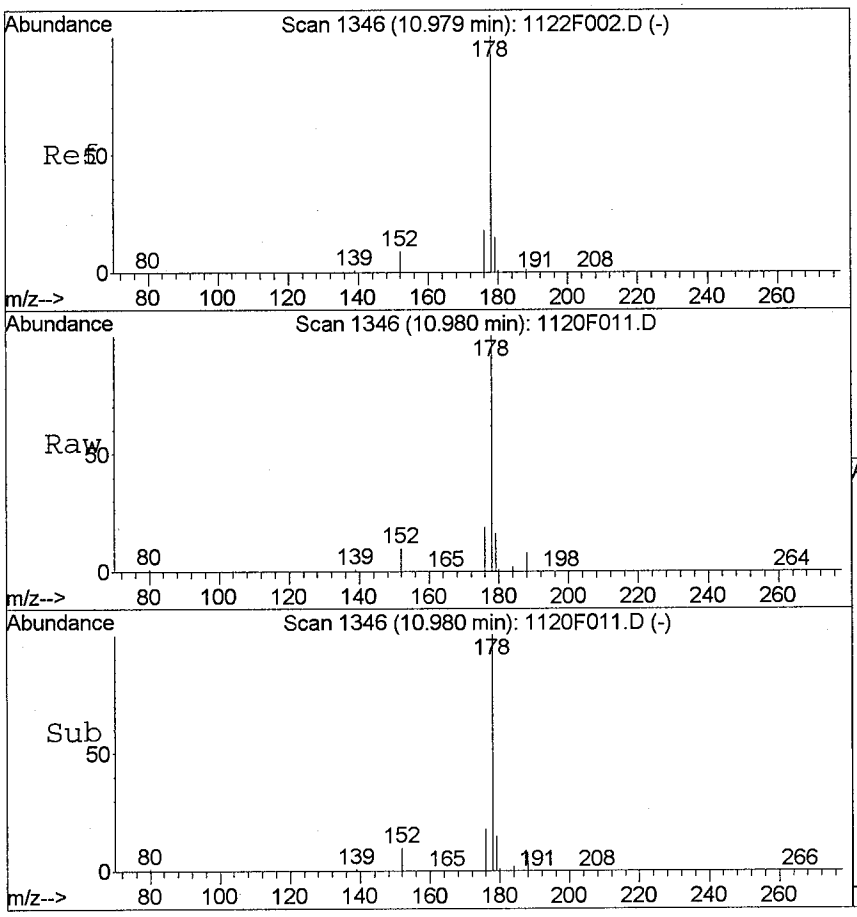


#24
Dibenzothiophene
Concen: 31.43 ng/ml
RT: 10.72 min Scan# 1316
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:184 Resp: 5729

Ion	Ratio	Lower	Upper
184	100		
152	9.7	0.0	39.0

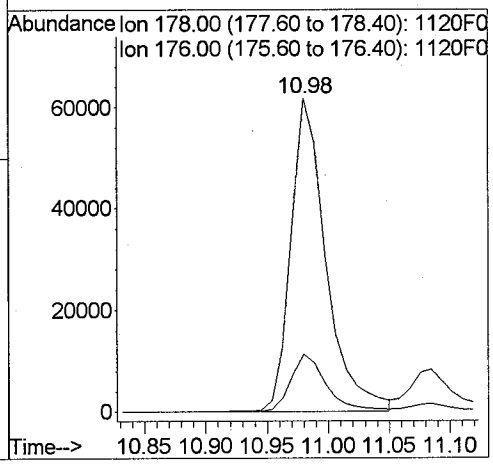


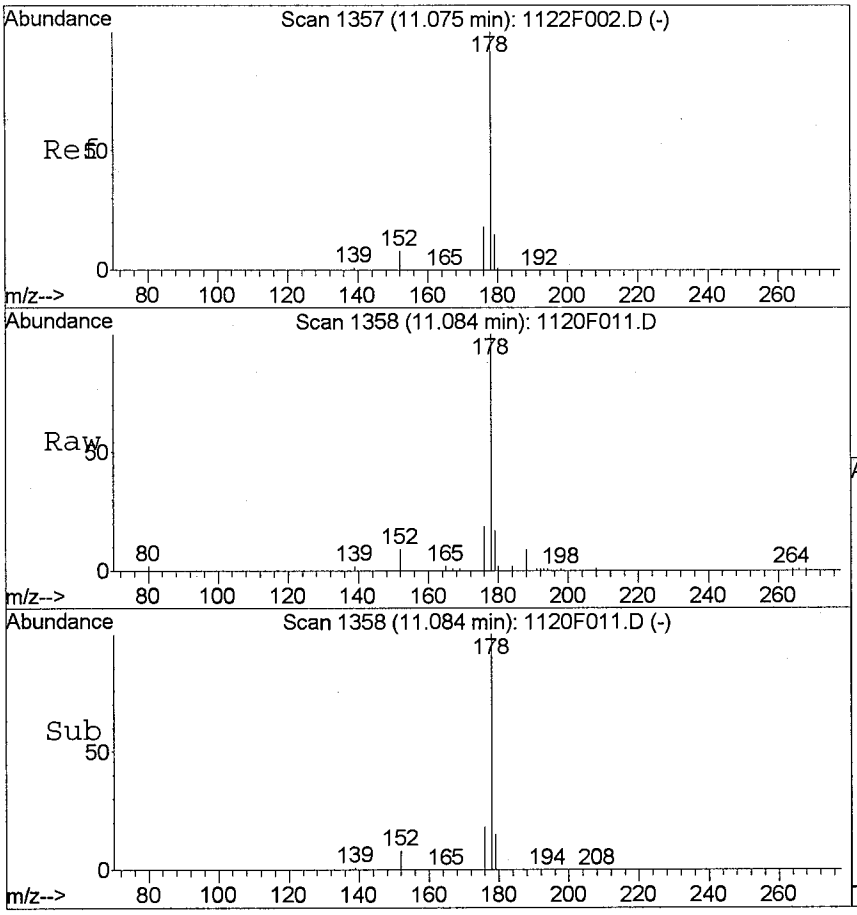


#28
Phenanthrene
Concen: 646.03 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:178 Resp: 123678

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	49.0

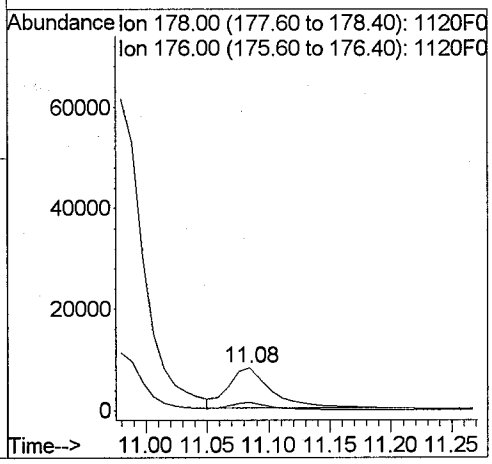


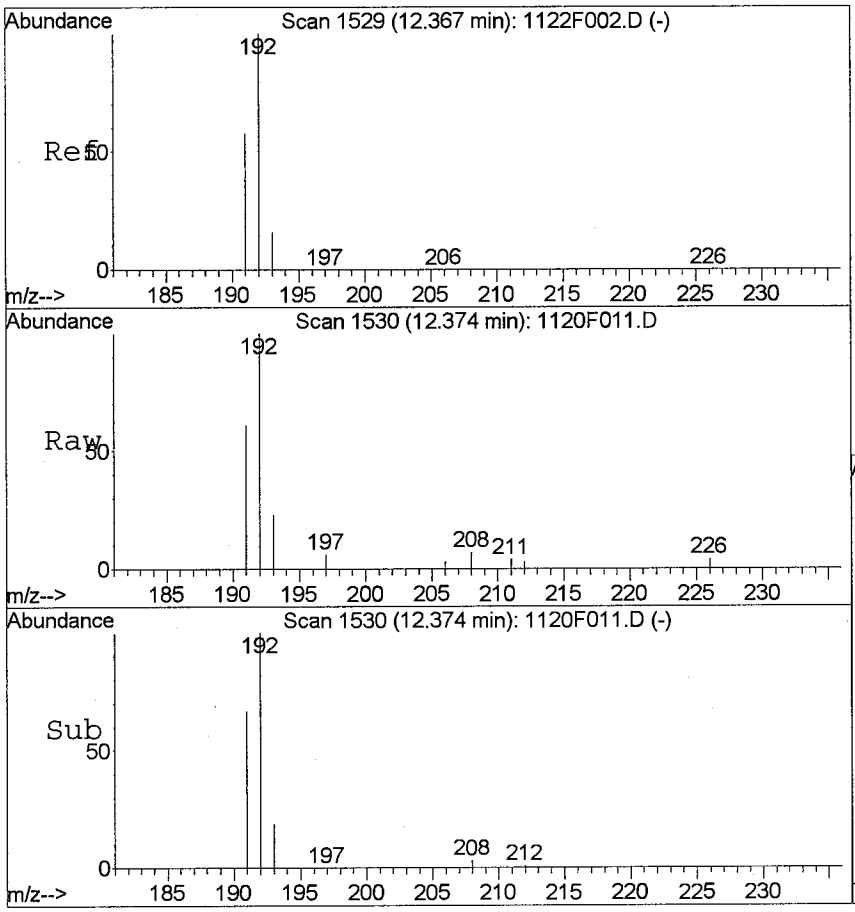


#29
Anthracene
Concen: 114.27 ng/ml
RT: 11.08 min Scan# 1358
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:178 Resp: 18690

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	47.8

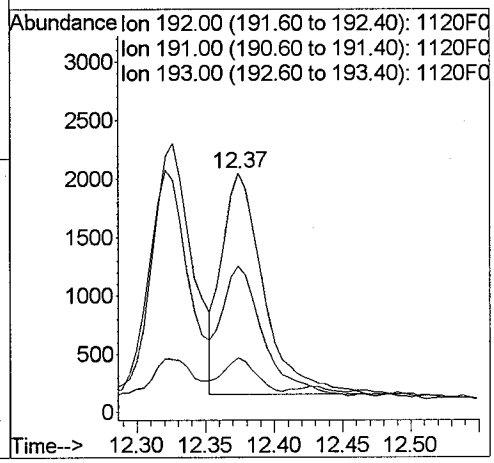


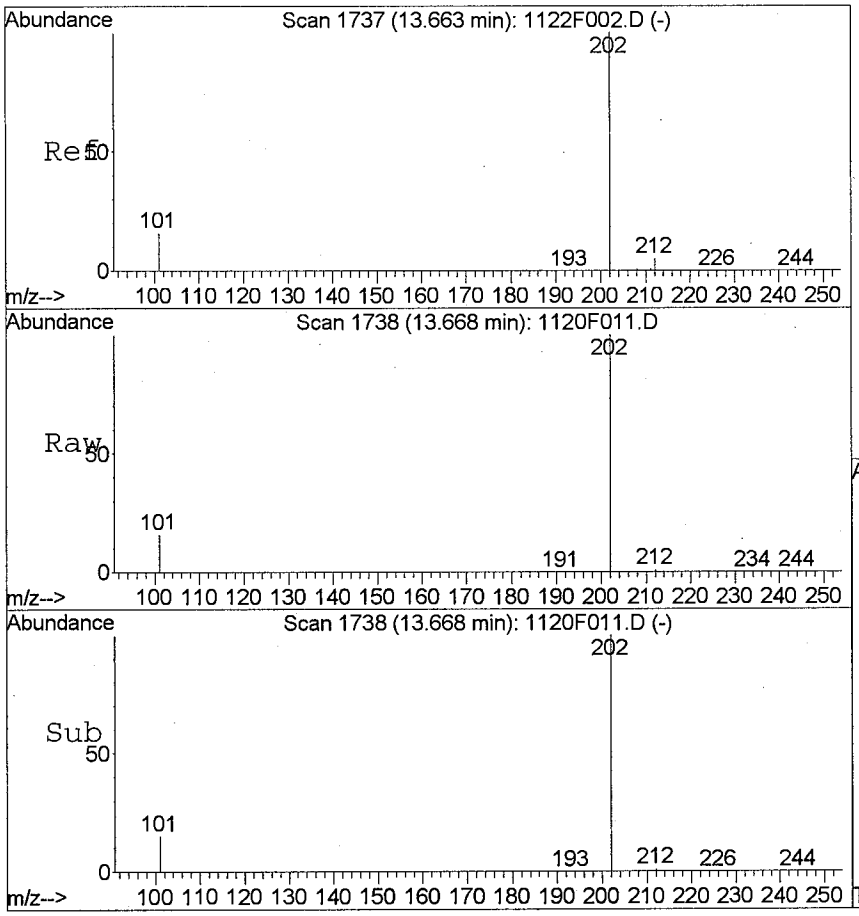


#31
1-Methylphenanthrene
Concen: 30.97 ng/ml
RT: 12.37 min Scan# 1530
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:192 Resp: 4026

Ion	Ratio	Lower	Upper
192	100		
191	58.1	27.0	87.0
193	16.5	0.0	45.8

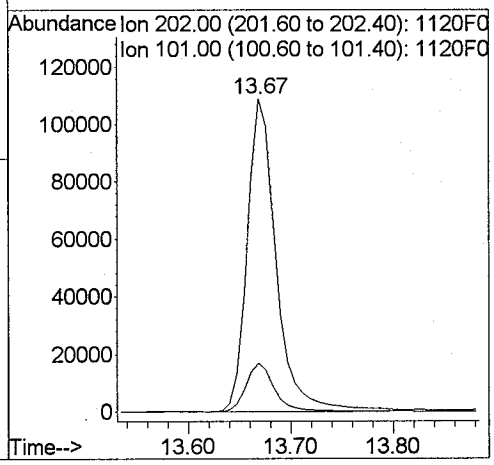


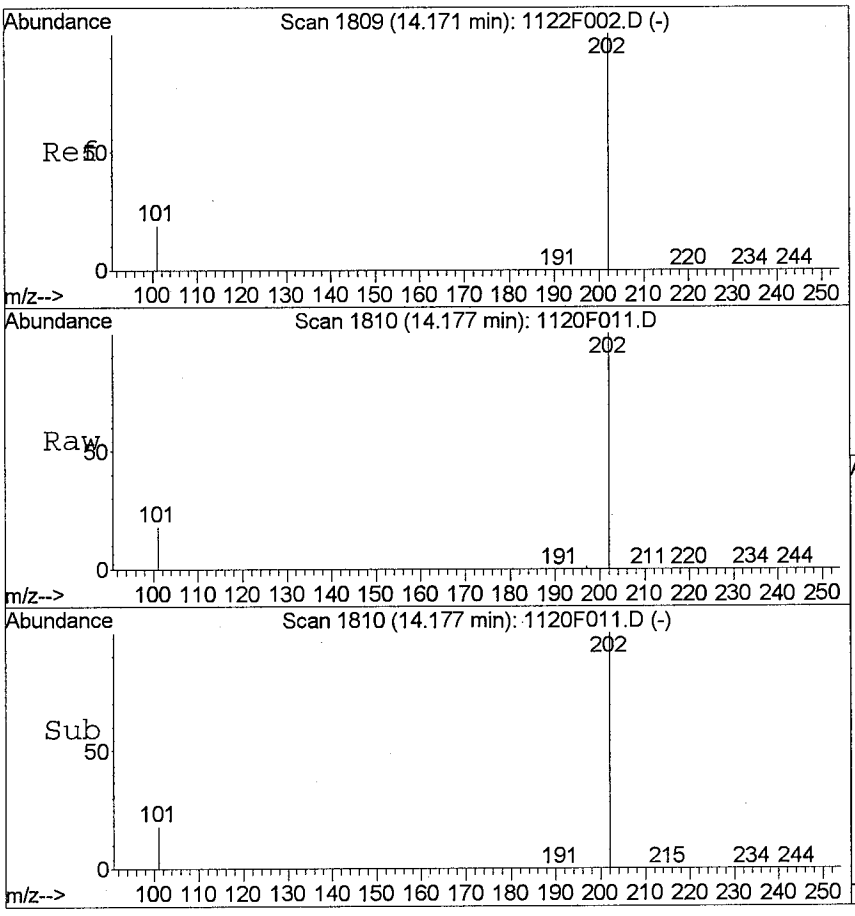


#36
Fluoranthene
Concen: 1117.44 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:202 Resp: 212945

Ion	Ratio	Lower	Upper
202	100		
101	15.4	0.0	46.1

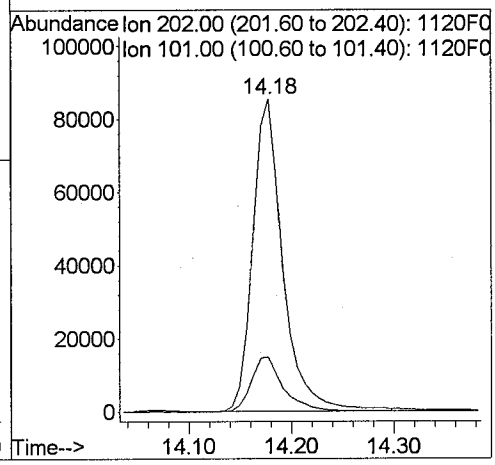


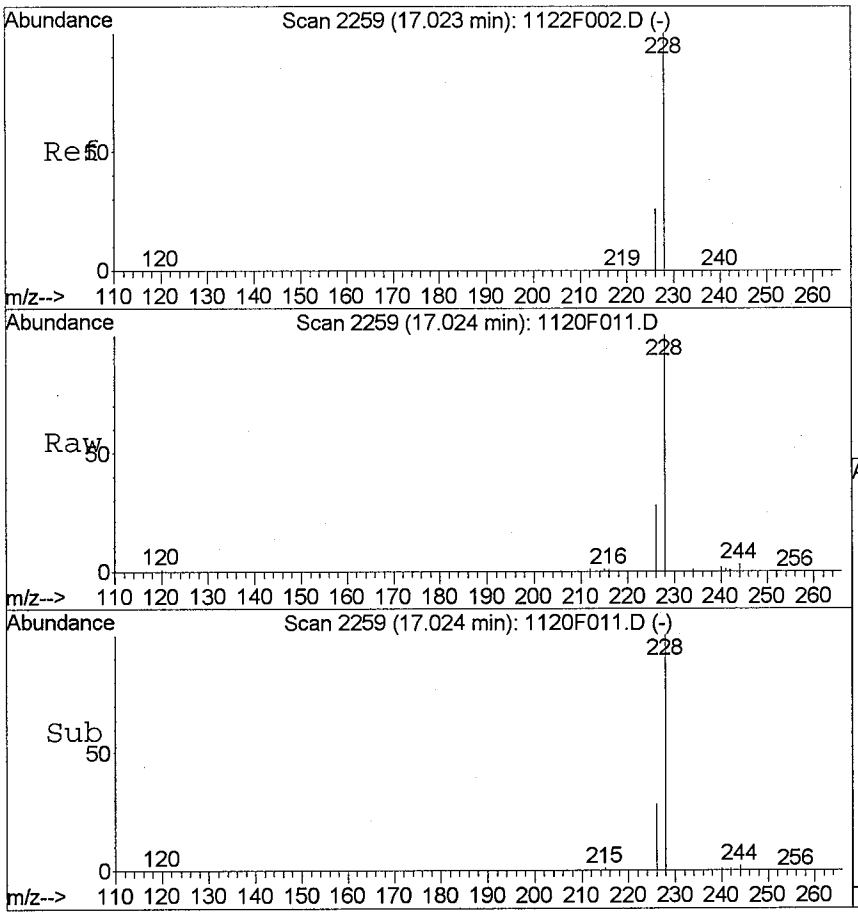


#39
Pyrene
Concen: 938.08 ng/ml
RT: 14.18 min Scan# 1810
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:202 Resp: 173602

Ion	Ratio	Lower	Upper
202	100		
101	17.6	0.0	47.3

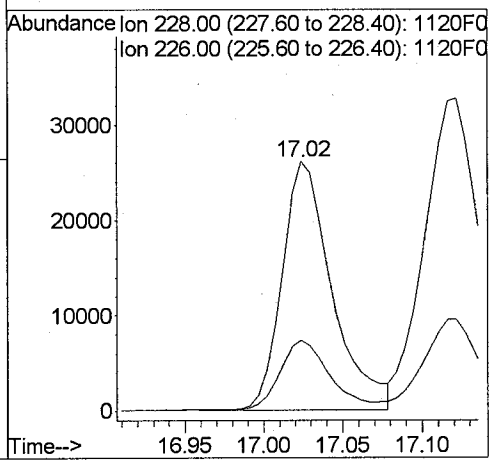


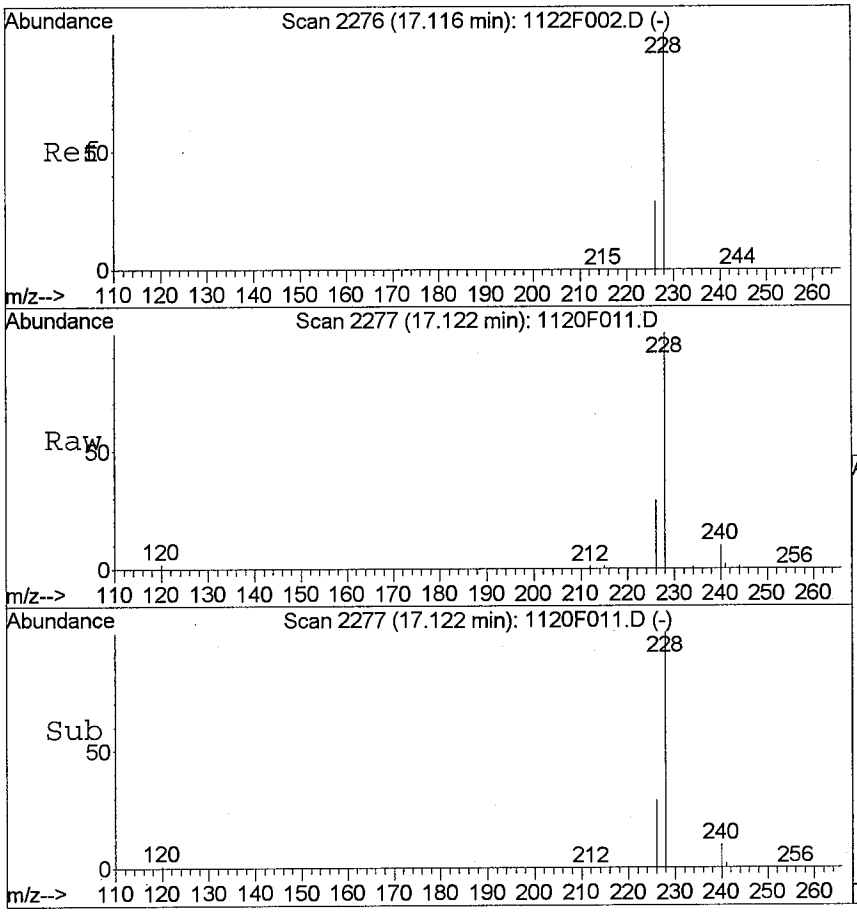


#42
Benz(a)anthracene
Concen: 405.15 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:228 Resp: 57084

Ion	Ratio	Lower	Upper
228	100		
226	27.9	0.0	56.3

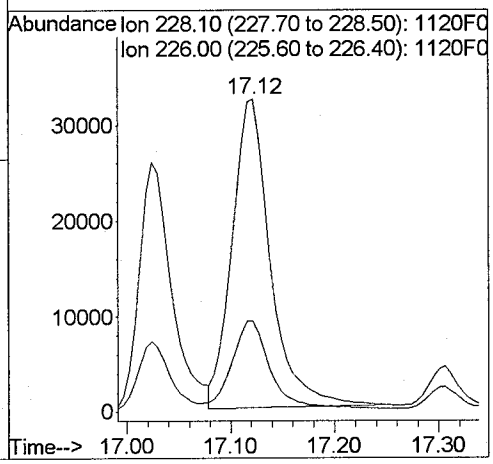


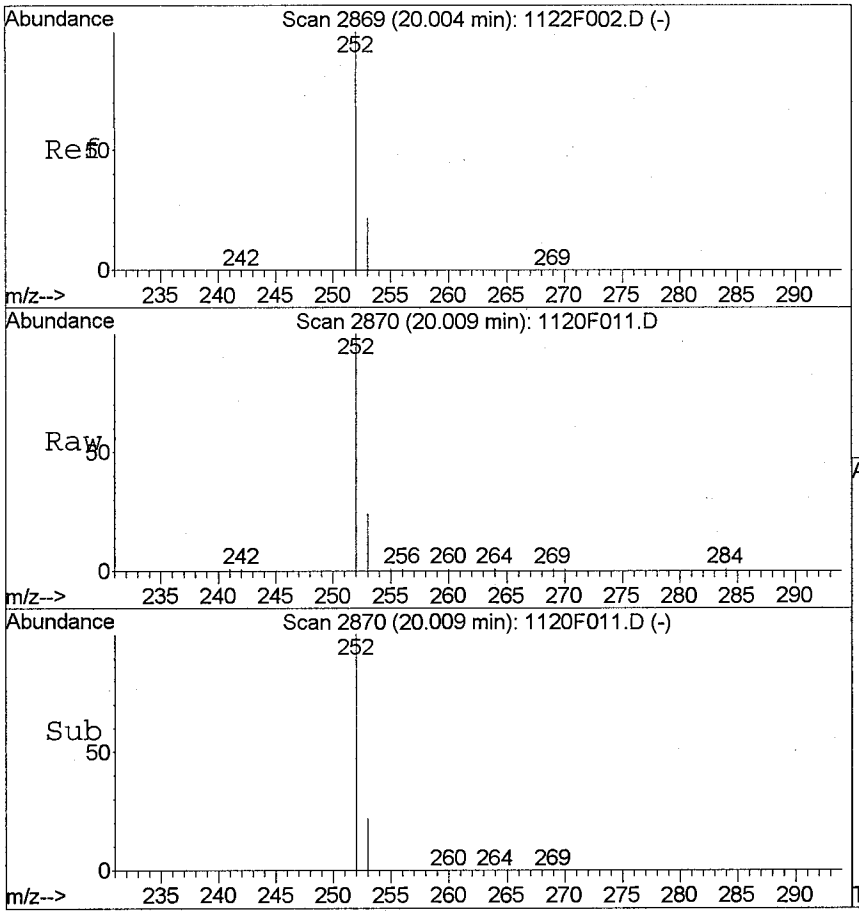


#43
Chrysene
Concen: 553.69 ng/ml
RT: 17.12 min Scan# 2277
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:228 Resp: 83422

Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	58.3

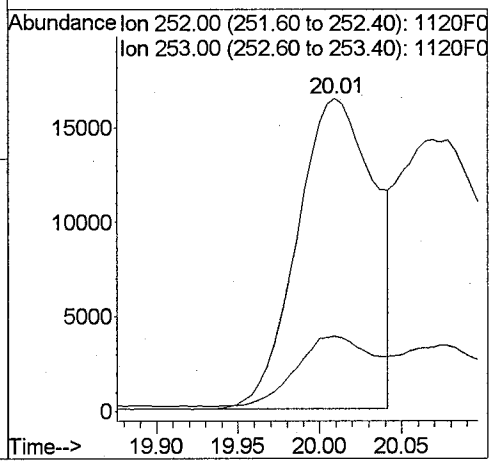


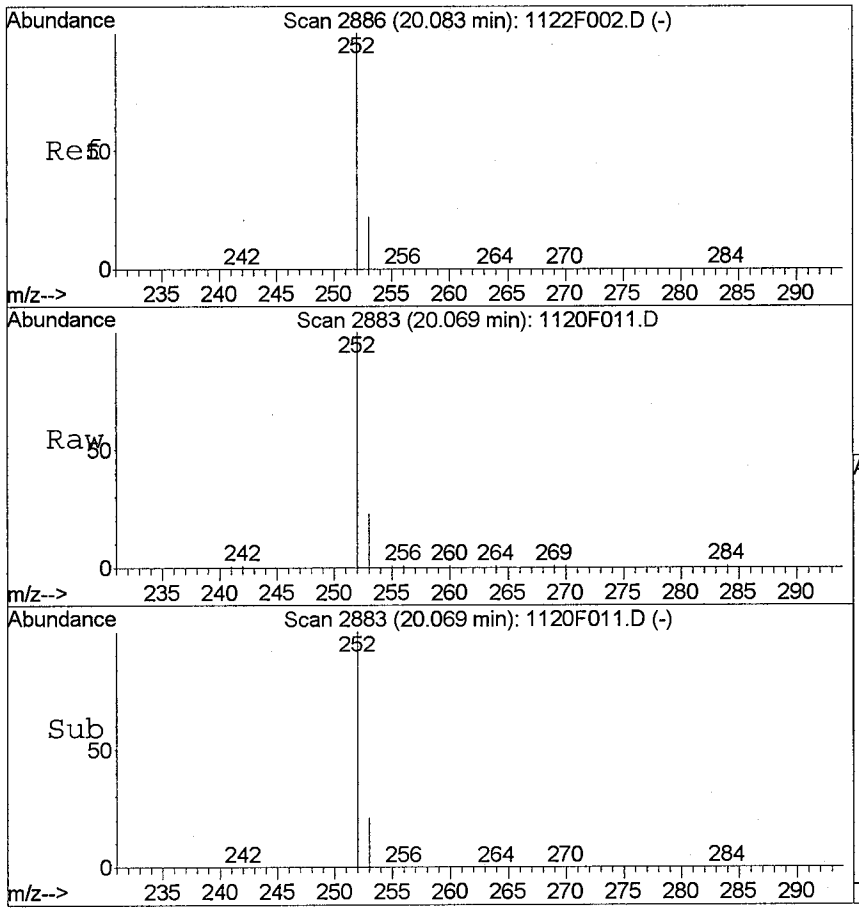


#49
Benzo(b)fluoranthene
Concen: 488.08 ng/ml
RT: 20.01 min Scan# 2870
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:252 Resp: 54156

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.9

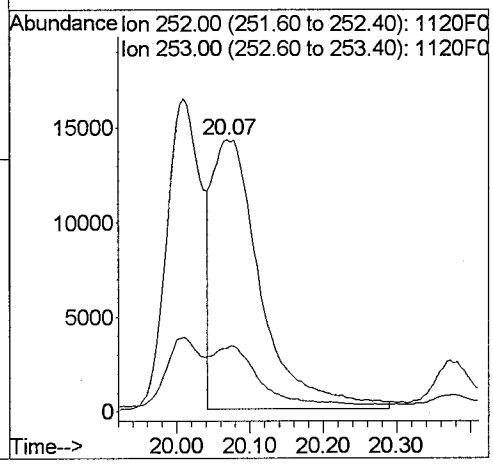


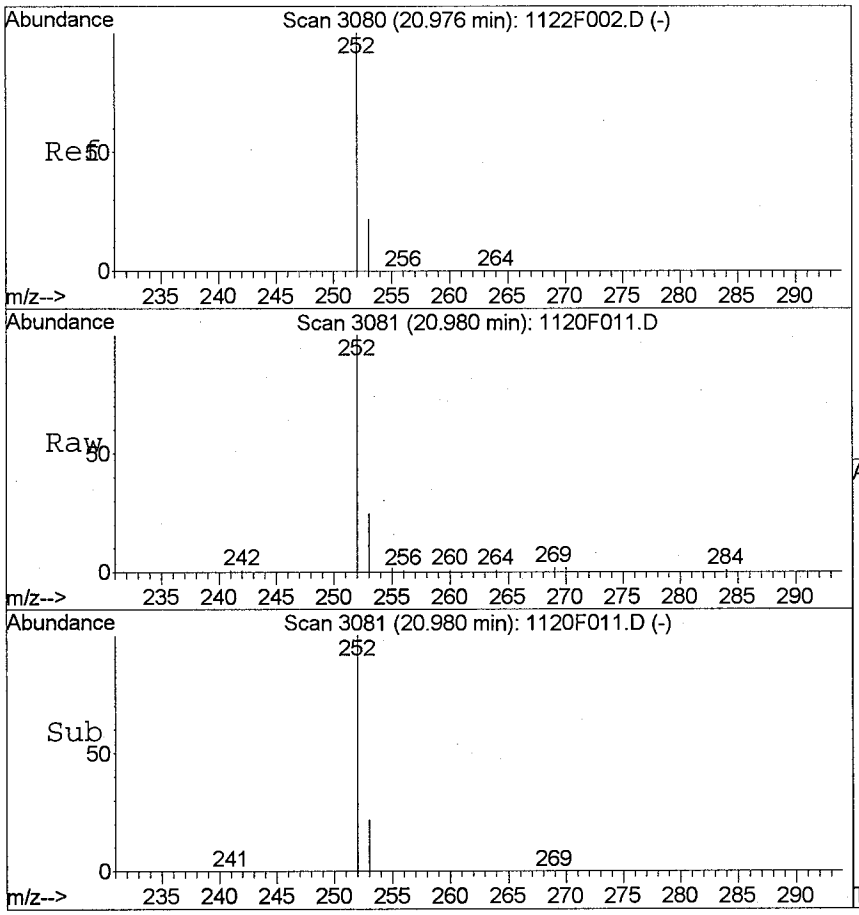


#50
Benzo(k)fluoranthene
Concen: 467.96 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. -0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:252 Resp: 65884

Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	52.0

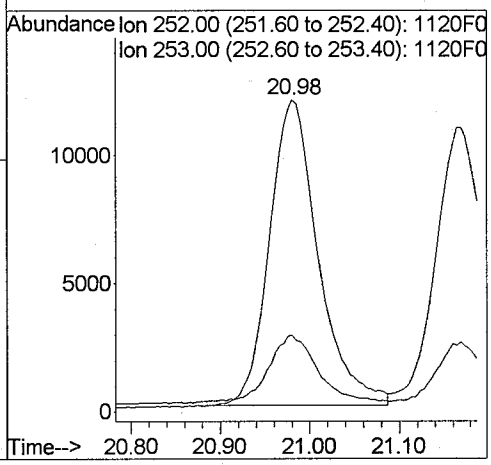


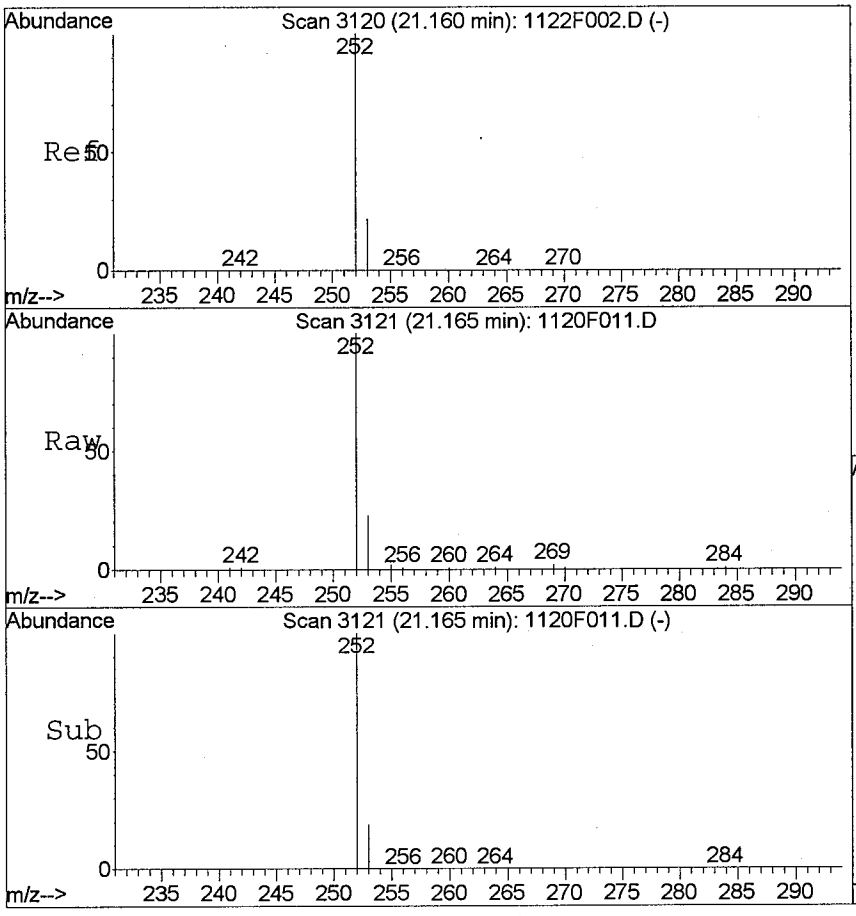


#51
Benzo(e)pyrene
Concen: 362.53 ng/ml
RT: 20.98 min Scan# 3081
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:252 Resp: 45164

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.9

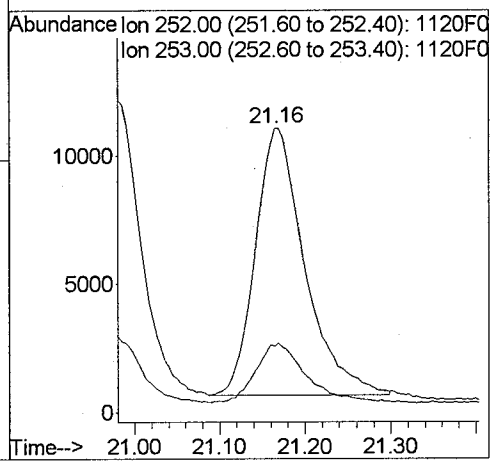


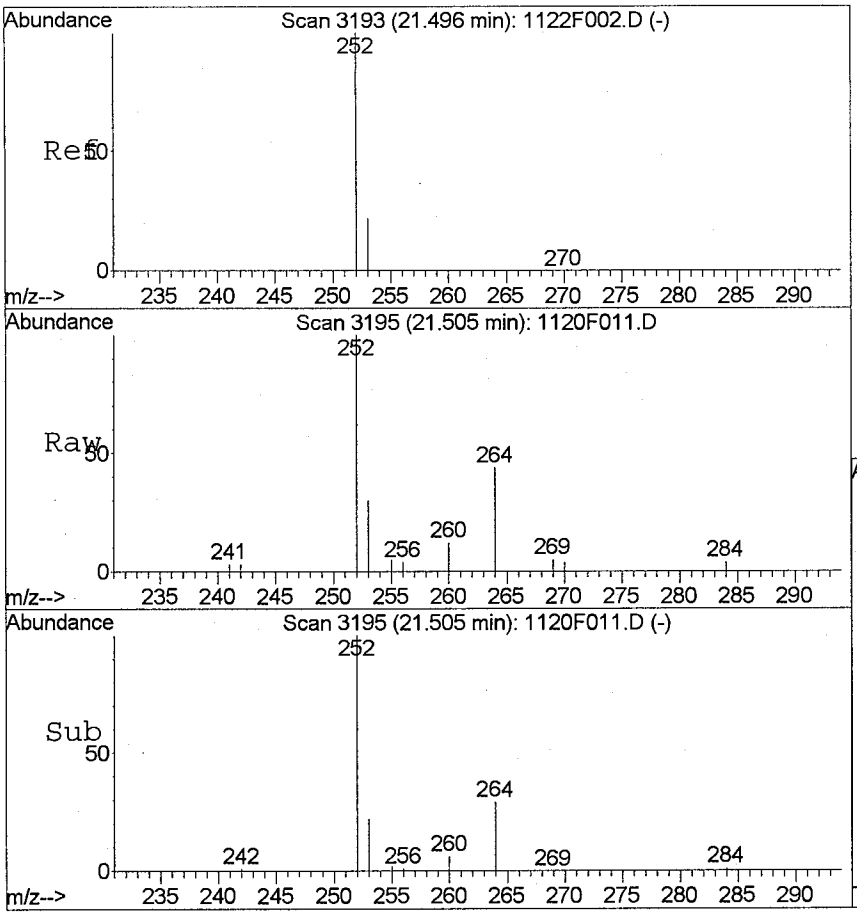


#52
Benzo(a)pyrene
Concen: 441.29 ng/ml
RT: 21.16 min Scan# 3121
Delta R.T. 0.00 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:252 Resp: 41649

Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.9

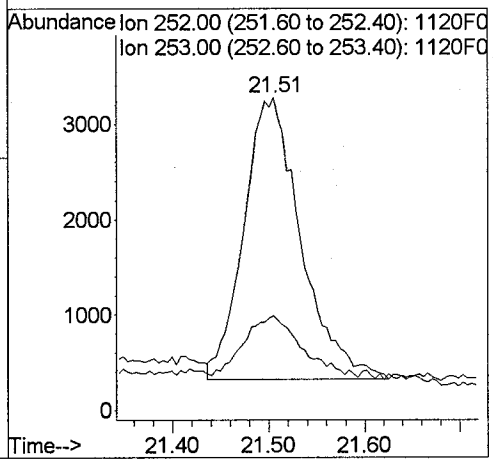


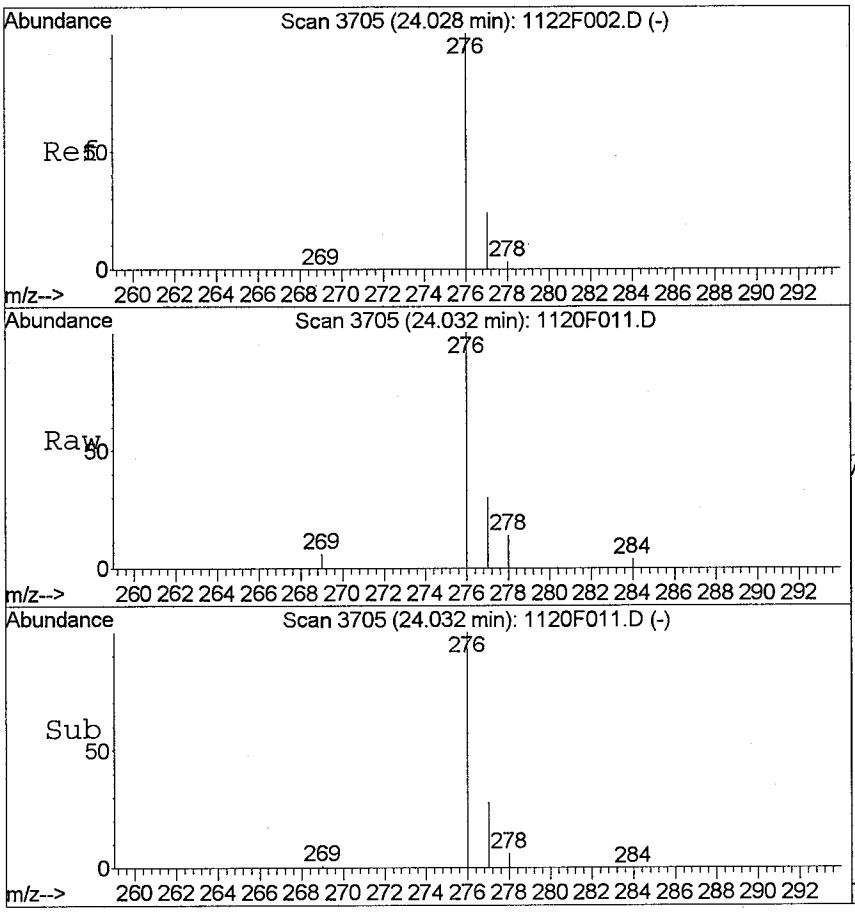


#53
Perylene
Concen: 115.07 ng/ml
RT: 21.51 min Scan# 3195
Delta R.T. 0.01 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:252 Resp: 12191

Ion	Ratio	Lower	Upper
252	100		
253	20.7	0.0	51.6

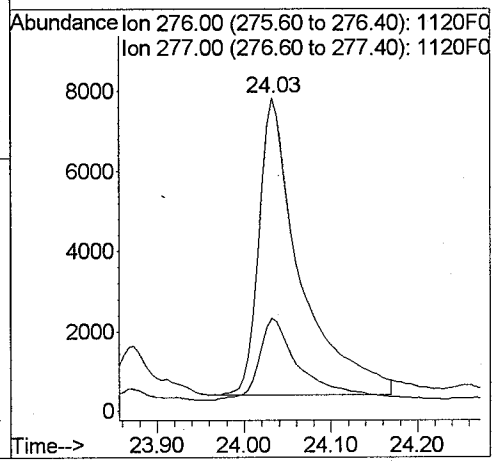


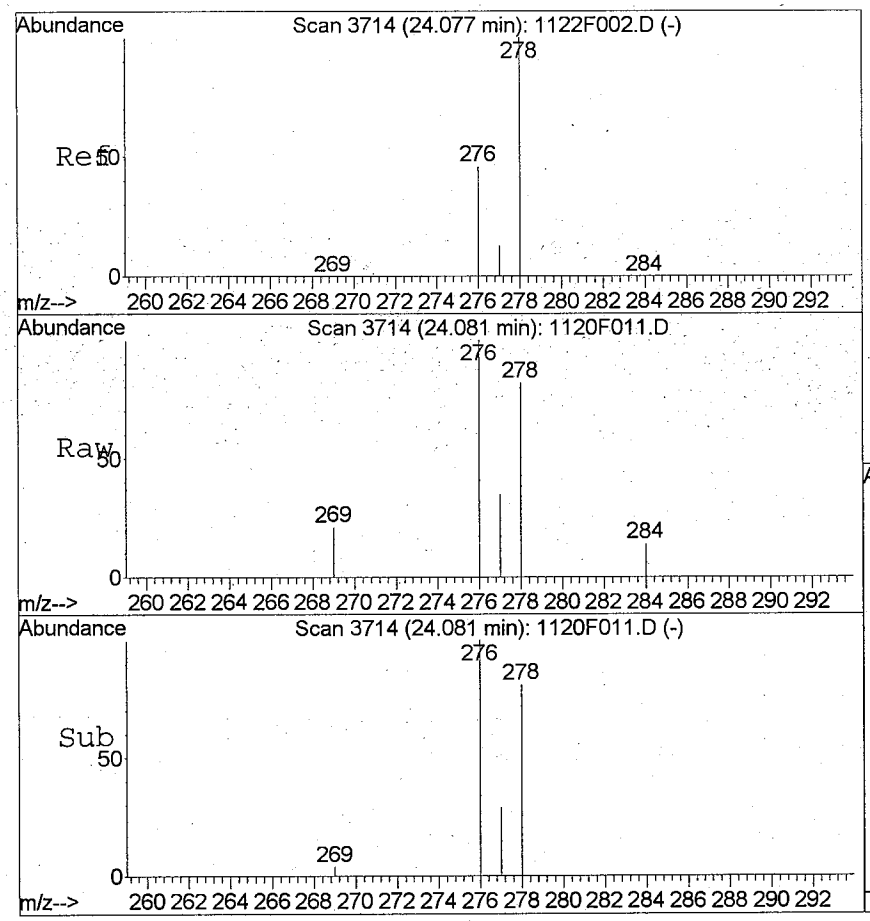


#54
Indeno(1,2,3-cd)pyrene
Concen: 428.09 ng/ml
RT: 24.03 min Scan# 3705
Delta R.T. 0.00 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:276 Resp: 24561

Ion	Ratio	Lower	Upper
276	100		
277	27.8	0.0	53.8

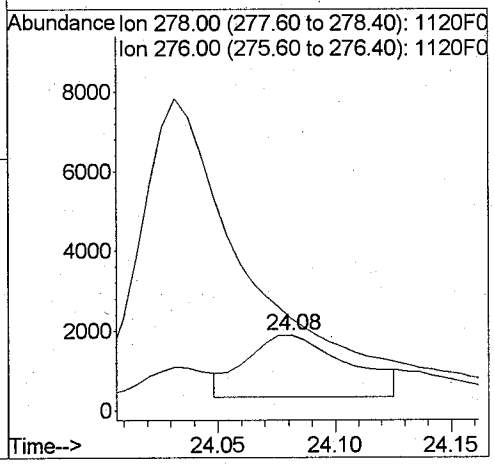


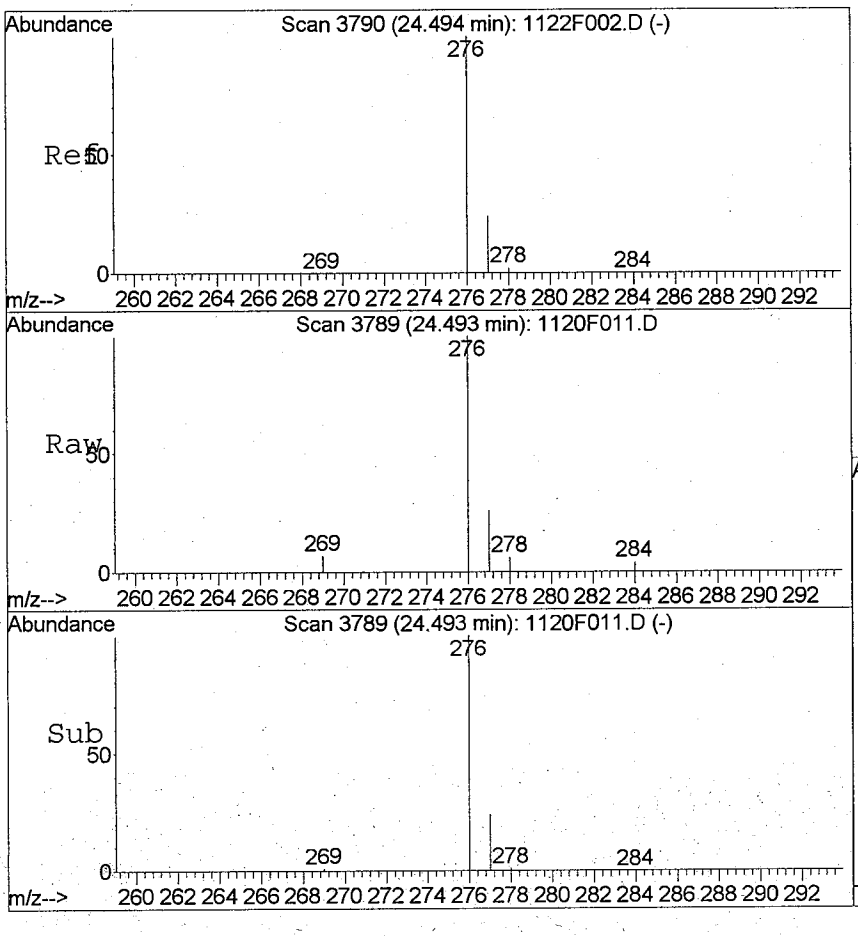


#55
Dibenz(a,h)anthracene
Concen: 57.28 ng/ml m
RT: 24.08 min Scan# 3714
Delta R.T. 0.00 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:278 Resp: 4723

Ion	Ratio	Lower	Upper
278	100		
276	122.1	5.3	65.3#

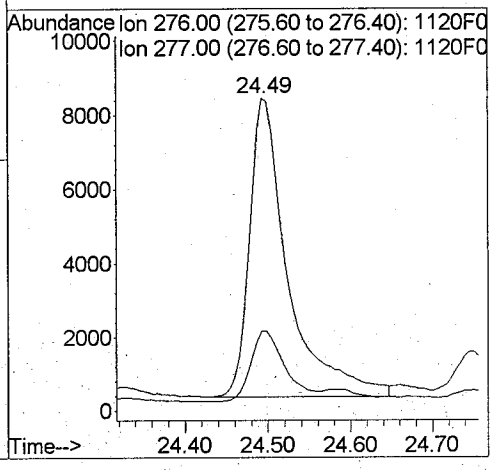




#56
Benzo(g,h,i)perylene
Concen: 274.20 ng/ml
RT: 24.49 min Scan# 3789
Delta R.T. 0.00 min
Lab File: 1120F011.D
Acq: 20 Nov 2003 11:14 am

Tgt Ion:276 Resp: 26082

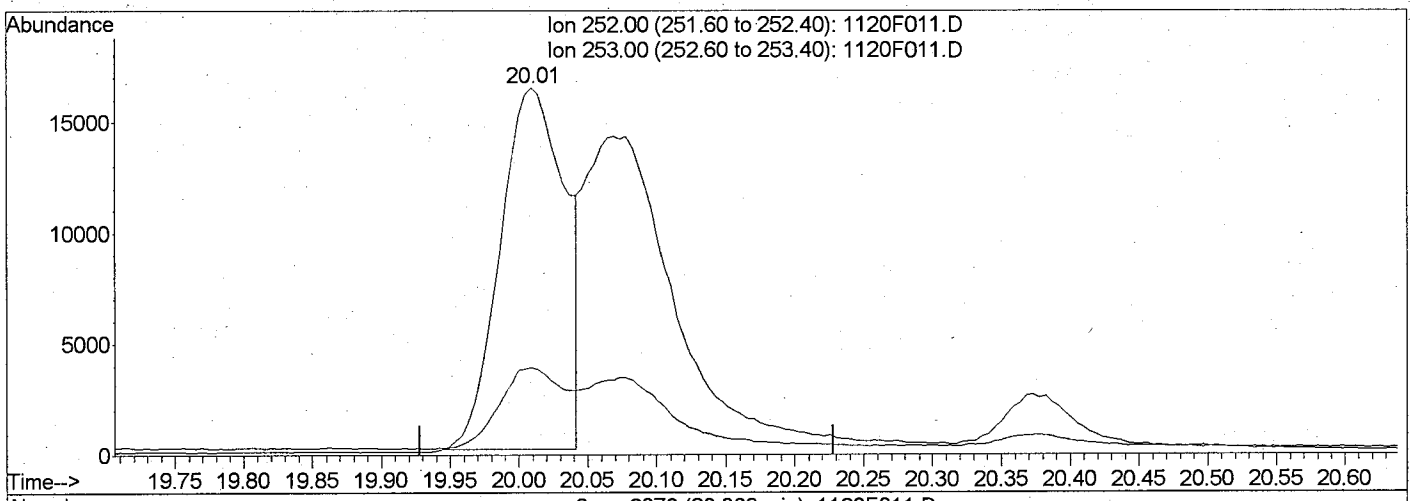
Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	53.5

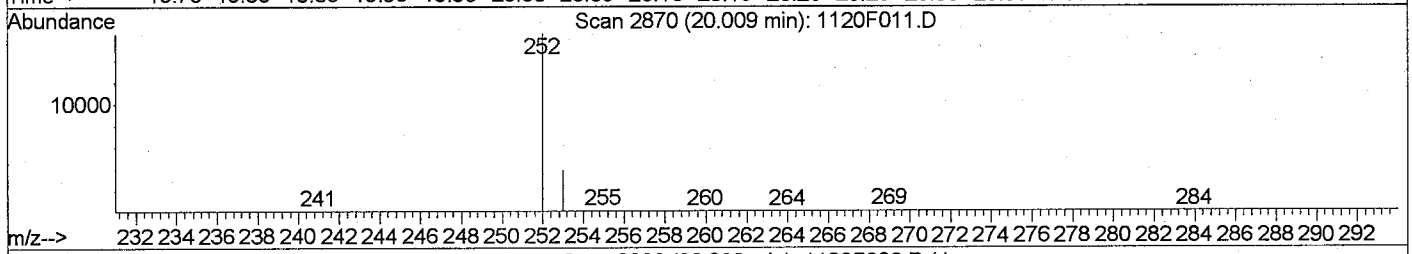


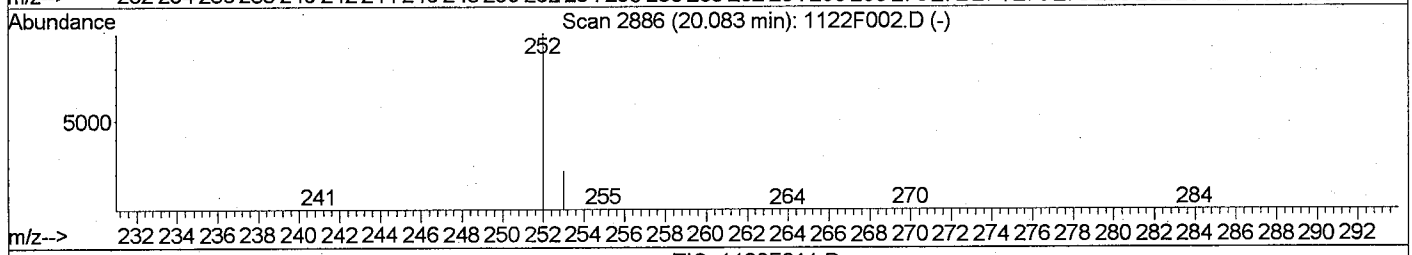
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F011.D Vial: 8
Acq On : 20 Nov 2003 11:14 am Operator: LWeiskopf
Sample : K2308433-008DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F011.D

(50) Benzo(k)fluoranthene (T)

20.01min 379.07ng/ml

response 53368

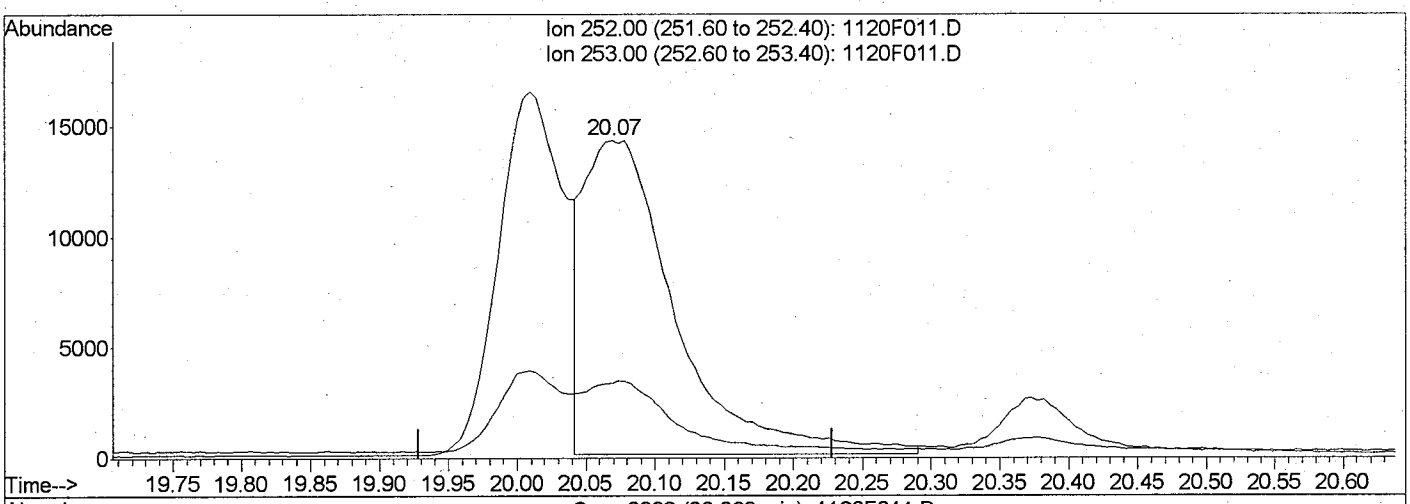
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.28
0.00	0.00	0.00
0.00	0.00	0.00

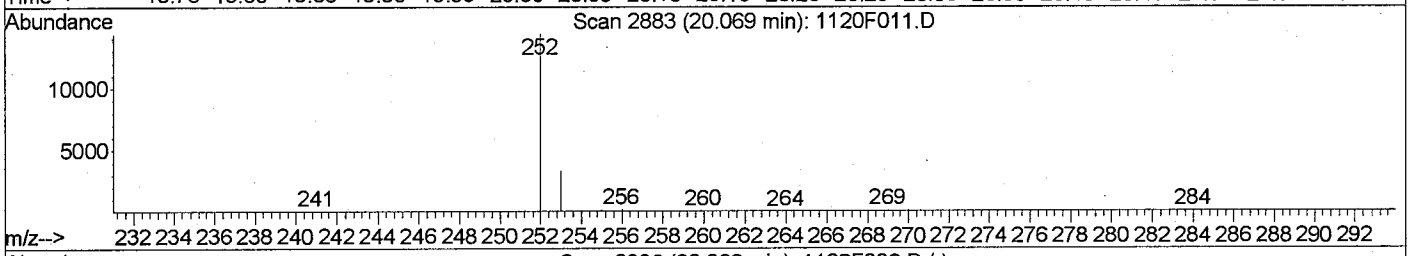
1120F011.D 1107ALK.M Mon Nov 24 09:20:29 2003

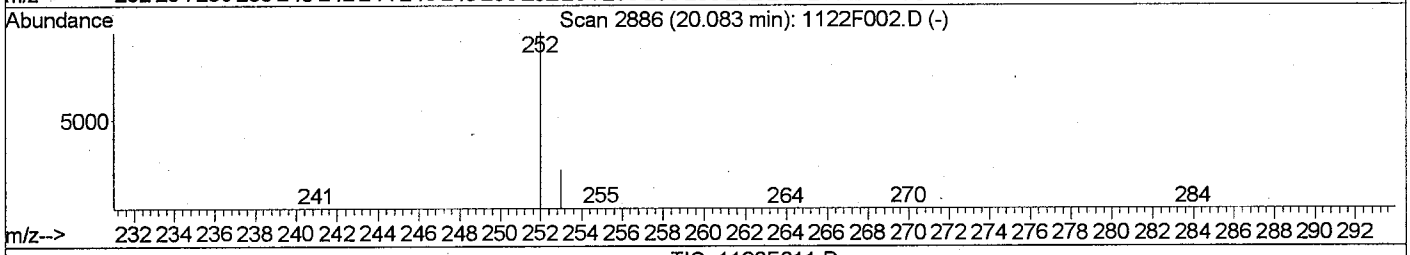
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F011.D Vial: 8
Acq On : 20 Nov 2003 11:14 am Operator: LWeiskopf
Sample : K2308433-008DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:20 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F011.D

(50) Benzo(k)fluoranthene (T)

20.07min 467.96ng/ml m

response 65884

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	23.37
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak

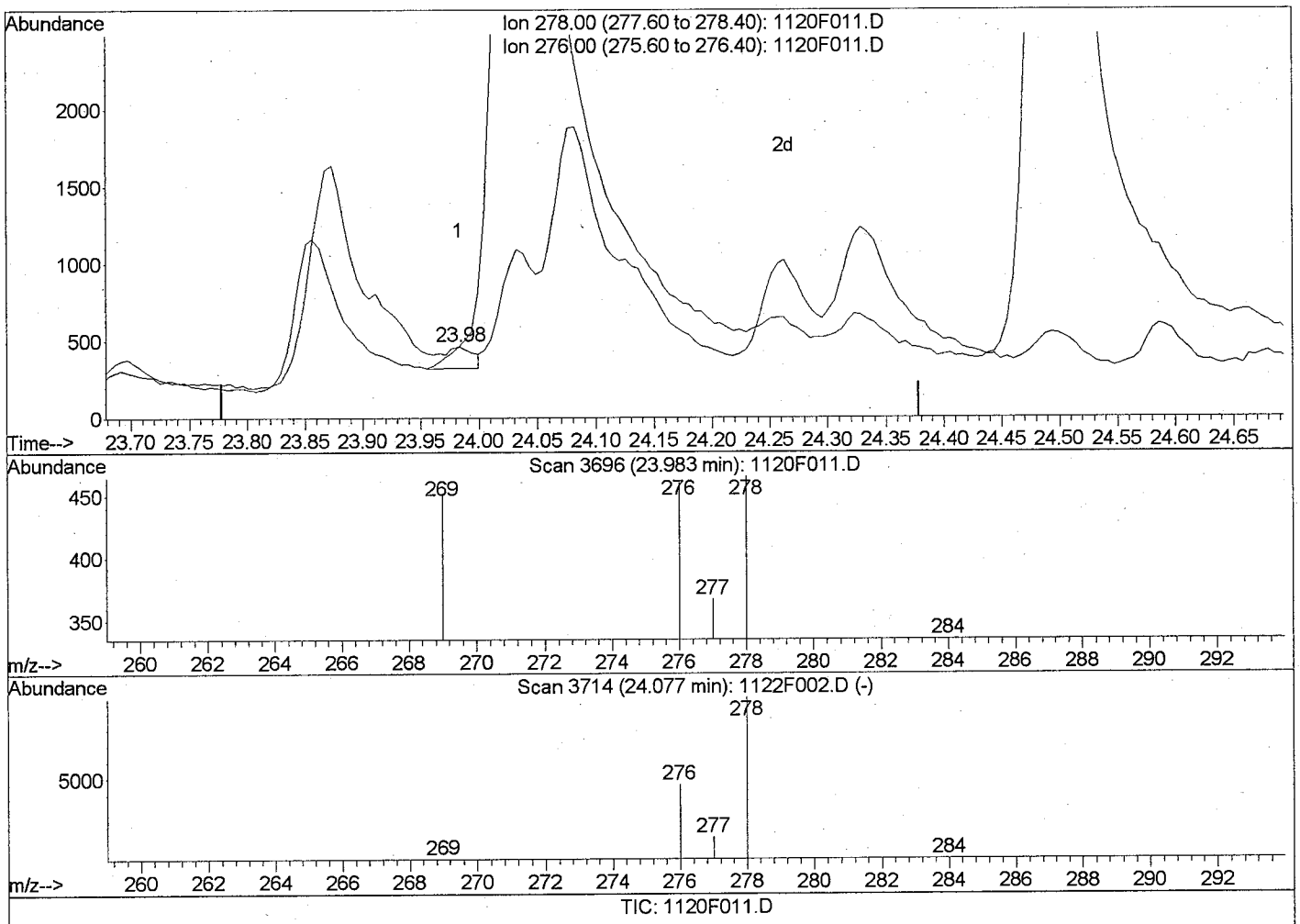
1107ALK.M Mon Nov 24 09:20:33 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F011.D
Acq On : 20 Nov 2003 11:14 am
Sample : K2308433-008DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:20 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F011.D

(55) Dibenz(a,h)anthracene (T)

23.98min 2.78ng/ml

response 229

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	27.78
0.00	0.00	0.00
0.00	0.00	0.00

1120F011.D 1107ALK.M Mon Nov 24 09:20:39 2003

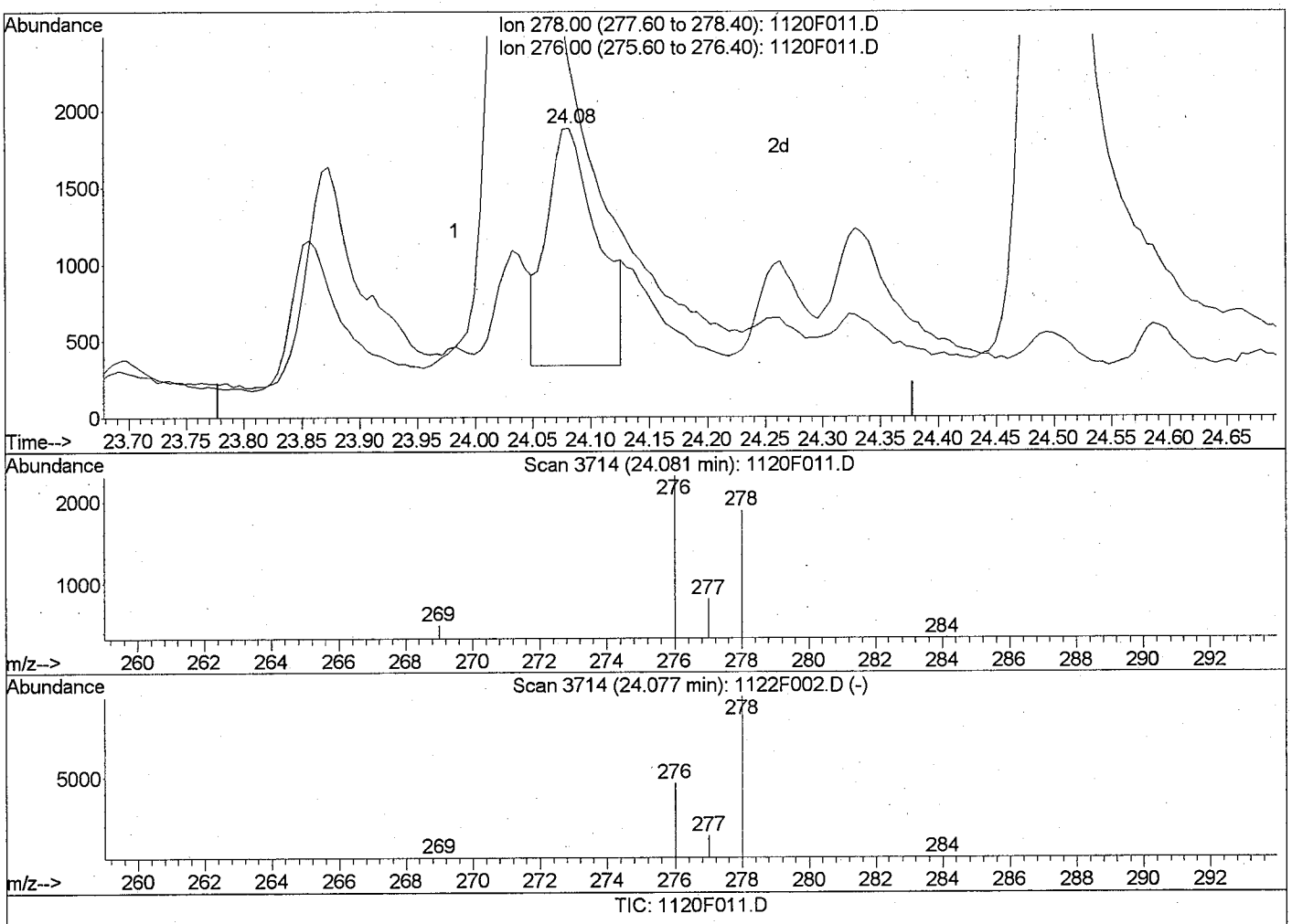
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F011.D
Acq On : 20 Nov 2003 11:14 am
Sample : K2308433-008DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:20 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F011.D

(55) Dibenz(a,h)anthracene (T)

24.08min 57.28ng/ml m

response 4723

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	122.13#
0.00	0.00	0.00
0.00	0.00	0.00

Wrong peak

1120F011.D 1107ALK.M Mon Nov 24 09:20:44 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-8
Lab Code: K2308433-009

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	20		4.9	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	15		4.9	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	14		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	26		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	34		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	22		4.9	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	7.1		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	29		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	64		4.9	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	100		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluorene	150		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	41		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	40		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	51		4.9	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	120		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	15		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	52		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	55		4.9	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	2600	D	49	10	11/05/03	11/20/03	KWG0317778	
Anthracene	380		4.9	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	600		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	270		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	140		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	78		4.9	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	5900	D	49	10	11/05/03	11/20/03	KWG0317778	
Pyrene	4400	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	1300	E	4.9	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	1800	D	49	10	11/05/03	11/20/03	KWG0317778	
Chrysene	2500	D	49	10	11/05/03	11/20/03	KWG0317778	
C1-Chrysenes	850		4.9	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	280		4.9	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	130		4.9	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	49		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	2300	D	49	10	11/05/03	11/20/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-8
Lab Code: K2308433-009

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**2200**	D	49	10	11/05/03	11/20/03	KWG0317778	
Benzo(e)pyrene	**1600**	D	49	10	11/05/03	11/20/03	KWG0317778	
Benzo(a)pyrene	**2200**	D	49	10	11/05/03	11/20/03	KWG0317778	
Perylene	**510**		4.9	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**2000**	D	49	10	11/05/03	11/20/03	KWG0317778	
Dibenz(a,h)anthracene	**270**		4.9	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**1200**	D	49	10	11/05/03	11/20/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	77	27-110	11/19/03	Acceptable
Fluoranthene-d10	91	34-122	11/19/03	Acceptable
Terphenyl-d14	97	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F045.D
Lab ID: K2308433-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 21:15
Date Quantitated: 11/21/2003 12:43
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	38297.47	NA	10000	See Dil
	Benzo(g,h,i)perylene	11274.17	NA	10000	
	Benzo(e)pyrene	15109.23	NA	10000	
	Indeno(1,2,3-cd)pyrene	21493.08	NA	10000	
	Benzo(b)fluoranthene	25649.81	NA	10000	
	Fluoranthene	52811.74	NA	10000	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Printed: 11/21/2003 13:54:26
U:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\MS11\DATA\111903\1119F045.D
Lab ID: K2308433-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/19/2003 21:15
Date Quantitated: 11/21/2003 12:43
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Benzo(k)fluoranthene	17594.18	NA	10000	See Df
	Chrysene	24974.00	NA	10000	
	Benzo(a)pyrene	23401.93	NA	10000	
	Benz(a)anthracene	20569.57	NA	10000	
	Phenanthrene	25241.71	NA	10000	
	C1-Fluoranthenes/Pyrenes	13136.42	NA	10000	NA

Primary Review: 11/24/03

Secondary Review: 11/24/3

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247867	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F045.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 21:15	**Quant Date:**	11/24/2003 12:30	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	277492	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	145728	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	218493	1,000.00	OK
4	Chrysene-d12	17.07	0.03	240	227449	1,000.00	OK
5	Perylene-d12	21.41	0.05	264	137097	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	8.94	0.01	0.00	176	111668	766.18	77	27-110 OK	
3	Fluoranthene-d10	13.63	0.01	0.00	212	198868	909.39	91	34-122 OK	
4	Terphenyl-d14	14.67	0.01	0.00	244	201363	971.39	97	50-132 OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	65194	207.78	20		
1	2-Methylnaphthalene	6.37		0.00	142	29841	161.06	15		
1	1-Methylnaphthalene	6.52	0.01	0.00	142	24864	143.17	14		
1	Biphenyl	7.04	0.01	0.00	154	16646	74.10	7.1		
1	C2-Naphthalenes	7.42	?	?	156	84448**m**	269.15	26		
1	C3-Naphthalenes	8.43	?	?	170	111433**m**	355.15	34		
1	C4-Naphthalenes	9.80	?	?	184	71322**m**	227.31	22		
2	Acenaphthylene	7.74	0.01	0.00	152	85687	305.18	29		
2	Acenaphthene	8.06	0.01	0.00	154	186151	1,076	100		
2	Dibenzofuran	8.35	0.01	0.00	168	153323	660.95	64		
2	Fluorene	9.00	0.01	0.00	166	283546	1,530	150		
2	C1-Fluorenes	10.13	?	?	180	79758**m**	430.26	41		
2	C2-Fluorenes	11.41	?	?	194	76952**m**	415.13	40		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F045.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 21:15	**Quant Date:**	11/24/2003 12:30	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes	12.76	?	?	208	99179**m**	535.03	51		
3	Dibenzothiophene	10.72	0.01	0.00	184	314749	1,249	120		
3	C1-Dibenzothiophenes	10.73	?	?	198	38007**m**	150.77	15		
3	C2-Dibenzothiophenes	12.64	?	?	212	135830**m**	538.81	52		
3	C3-Dibenzothiophenes	13.69	?	?	226	143781**m**	570.35	55		
3	Phenanthrene	10.99	0.02	0.00	178	6684199	25,242	2400	E	NR
3	Anthracene	11.07		0.00	178	903317	3,993	380		
3	C1-Phenanthrenes/Anthracenes	12.12	?	?	192	1649731**m**	6,230	600		
3	C2-Phenanthrenes/Anthracenes	13.37	?	?	206	740458**m**	2,796	270		
3	C3-Phenanthrenes/Anthracenes	14.45	?	?	220	396365**m**	1,497	140		
3	C4-Phenanthrenes/Anthracenes	15.75	?	?	234	213717**m**	807.06	78		
3	Fluoranthene	13.69	0.04	0.00	202	13920858	52,812	5100	E	NR
4	Pyrene	14.19	0.03	0.00	202	11385617	38,297	3700	E	NR
4	C1-Fluoranthenes/Pyrenes	15.02	?	?	216	3905381**m**	13,136	1300	E	
4	Benz(a)anthracene	17.03	0.02	0.00	228	4655790	20,570	2000	E	NR
4	Chrysene	17.13	0.03	0.00	228	6044661	24,974	2400	E	NR
4	C1-Chrysenes	18.06	?	?	242	2144804**m**	8,861	850		
4	C2-Chrysenes	19.40	?	?	256	698909**m**	2,888	280		
4	C3-Chrysenes	20.97	?	?	270	318437**m**	1,316	130		
4	C4-Chrysenes	22.41	?	?	284	123405**m**	509.86	49		
5	Benzo(b)fluoranthene	20.03	0.06	0.00	252	4694674	25,650	2500	E	NR
5	Benzo(k)fluoranthene	20.09	0.04	0.00	252	4086019**m**	17,594	1700	E	NR
5	Benzo(e)pyrene	21.00	0.07	0.00	252	3104983	15,109	1500	E	NR
5	Benzo(a)pyrene	21.18	0.06	0.00	252	3643290	23,402	2300	E	NR
5	Perylene	21.51	0.06	0.00	252	931696	5,331	510		
5	Indeno(1,2,3-cd)pyrene	24.04	0.04	0.00	276	2034120	21,493	2100	E	NR
5	Dibenz(a,h)anthracene	24.08	0.02	0.00	278	376372**m**	2,767	270		
5	Benzo(g,h,i)perylene	24.50	0.04	0.00	276	1768958	11,274	1100	E	NR

Prep Amount:	28.6 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	72.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:48 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	277492	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	145728	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	218493	1000.00	ng/ml	0.00
38) Chrysene-d12	17.07	240	227449	1000.00	ng/ml	0.02
48) Perylene-d12	21.41	264	137097	1000.00	ng/ml	0.05
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	107454	528.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	52.86%		
16) Fluorene-d10	8.94	176	111668	766.18	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	76.62%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	198868	909.39	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	90.94%		
41) Terphenyl-d14	14.67	244	201363	971.39	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	97.14%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	65194	207.78	ng/ml	99
3) 2-Methylnaphthalene	6.37	142	29841	161.06	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	24864	143.17	ng/ml	100
6) Biphenyl	7.04	154	16646	74.10	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.28	156	16308	103.19	ng/ml	95
8) C2-Naphthalenes	7.42	156	84448m	269.15	ng/ml	
9) C3-Naphthalenes	8.43	170	111433m	355.15	ng/ml	
10) C4-Naphthalenes	9.80	184	71322m	227.31	ng/ml	
12) Acenaphthylene	7.74	152	85687	305.18	ng/ml	100
13) Acenaphthene	8.06	154	186151	1075.74	ng/ml	99
14) Dibenzofuran	8.35	168	153323	660.95	ng/ml	95
15) 2,3,5-Trimethylnaphthalene	8.76	170	10187m	65.72	ng/ml	
17) Fluorene	9.00	166	283546	1529.62	ng/ml	100
18) C1-Fluorenes	10.13	180	79758m	430.26	ng/ml	
19) C2-Fluorenes	11.41	194	76952m	415.13	ng/ml	
20) C3-Fluorenes	12.76	208	152867m	~~824.66 ng/ml~~		See manual 11/24/03
24) Dibenzothiophene	10.72	184	314749	1248.55	ng/ml	99
25) C1-Dibenzothiophenes	10.73	198	38007m	150.77	ng/ml	
26) C2-Dibenzothiophenes	12.64	212	135830m	538.81	ng/ml	
27) C3-Dibenzothiophenes	13.69	226	143781m	570.35	ng/ml	
28) Phenanthrene	10.99	178	6684199	25241.71	ng/ml	97
29) Anthracene	11.07	178	903317	3992.89	ng/ml	99
30) Carbazole	11.51	167	7754	43.36	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:48 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

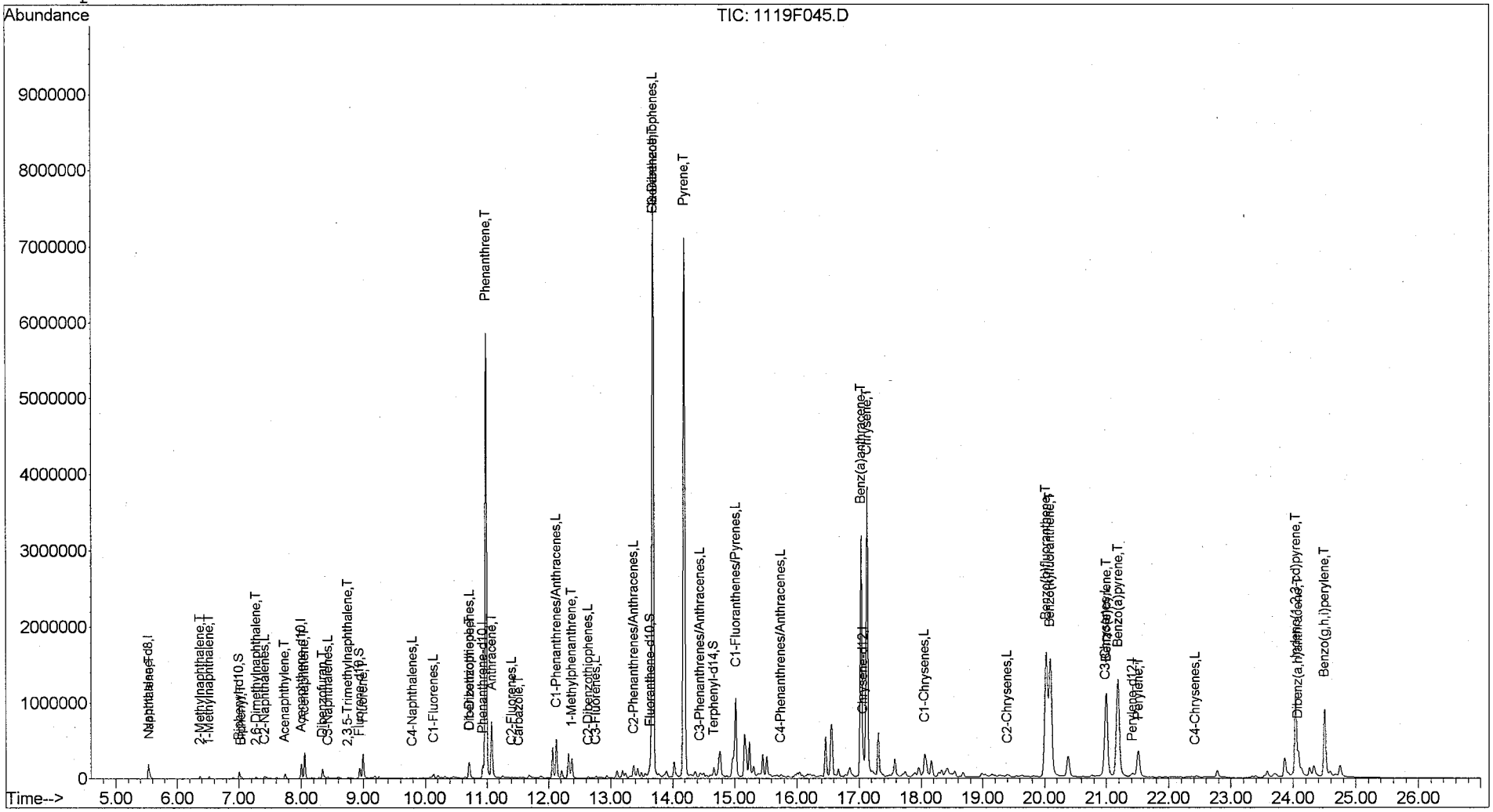
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31)	1-Methylphenanthrene	12.37	192	262529	1460.15	ng/ml	99
32)	C1-Phenanthrenes/Anthracen	12.12	192	1649731m	6229.92	ng/ml	
33)	C2-Phenanthrenes/Anthracen	13.37	206	740458m	2796.21	ng/ml	
34)	C3-Phenanthrenes/Anthracen	14.45	220	396365m	1496.80	ng/ml	
35)	C4-Phenanthrenes/Anthracen	15.75	234	213717m	807.06	ng/ml	
36)	Fluoranthene	13.69	202	13920858	52811.74	ng/ml	91
39)	Pyrene	14.19	202	11385617	38297.47	ng/ml	91
40)	C1-Fluoranthenes/Pyrenes	15.02	216	3905381m	13136.42	ng/ml	
42)	Benz(a)anthracene	17.03	228	4655790	20569.57	ng/ml	97
43)	Chrysene	17.13	228	6044661	24974.00	ng/ml	98
44)	C1-Chrysenes	18.06	242	2144804m	8861.43	ng/ml	
45)	C2-Chrysenes	19.40	256	698909m	2887.60	ng/ml	
46)	C3-Chrysenes	20.97	270	318437m	1315.65	ng/ml	
47)	C4-Chrysenes	22.41	284	123405m	509.86	ng/ml	
49)	Benzo(b)fluoranthene	20.03	252	4694674	25649.81	ng/ml	99
50)	Benzo(k)fluoranthene	20.09	252	4086019m	17594.18	ng/ml	
51)	Benzo(e)pyrene	21.00	252	3104983	15109.23	ng/ml	100
52)	Benzo(a)pyrene	21.18	252	3643290	23401.93	ng/ml	100
53)	Perylene	21.51	252	931696	5331.29	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.04	276	2034120	21493.08	ng/ml	91
55)	Dibenz(a,h)anthracene	24.08	278	376372m	2767.22	ng/ml	
56)	Benzo(g,h,i)perylene	24.50	276	1768958	11274.17	ng/ml	100

(#) = qualifier out of range (m) = manual integration

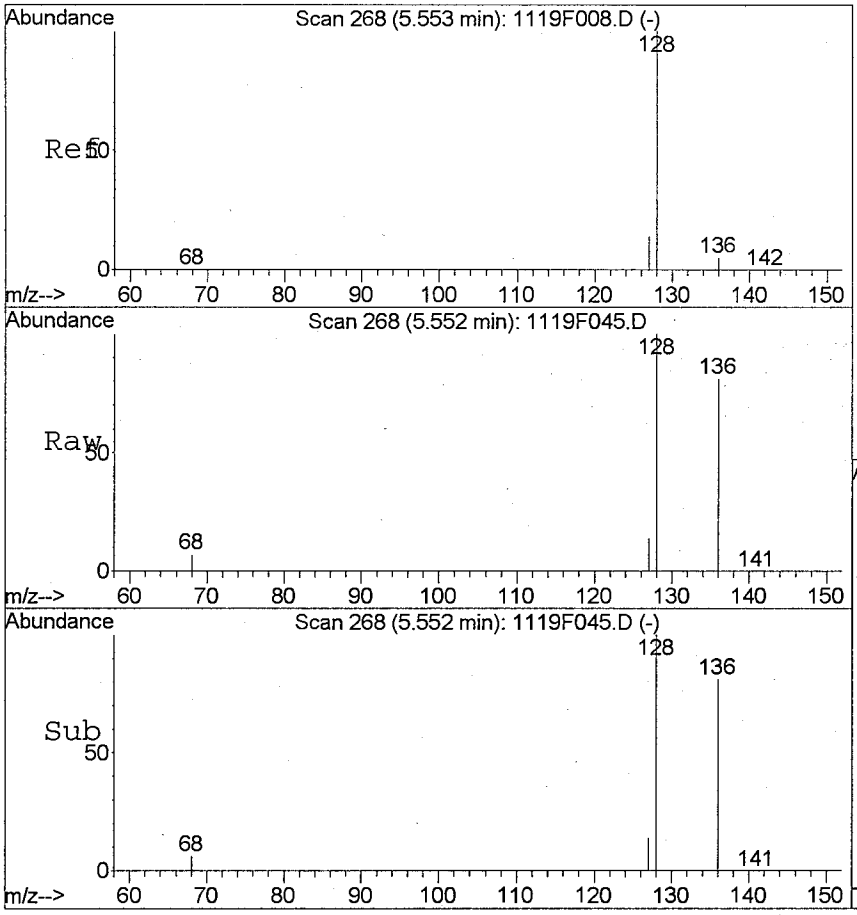
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:43 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



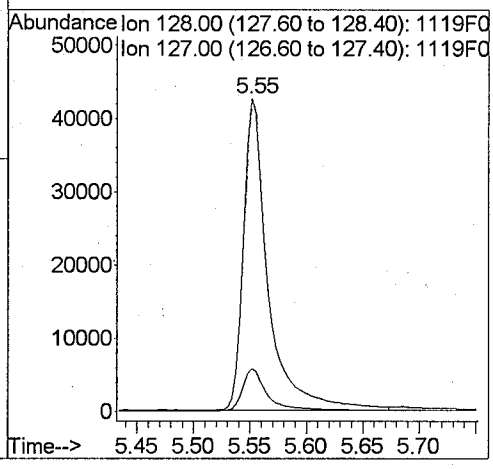
1437

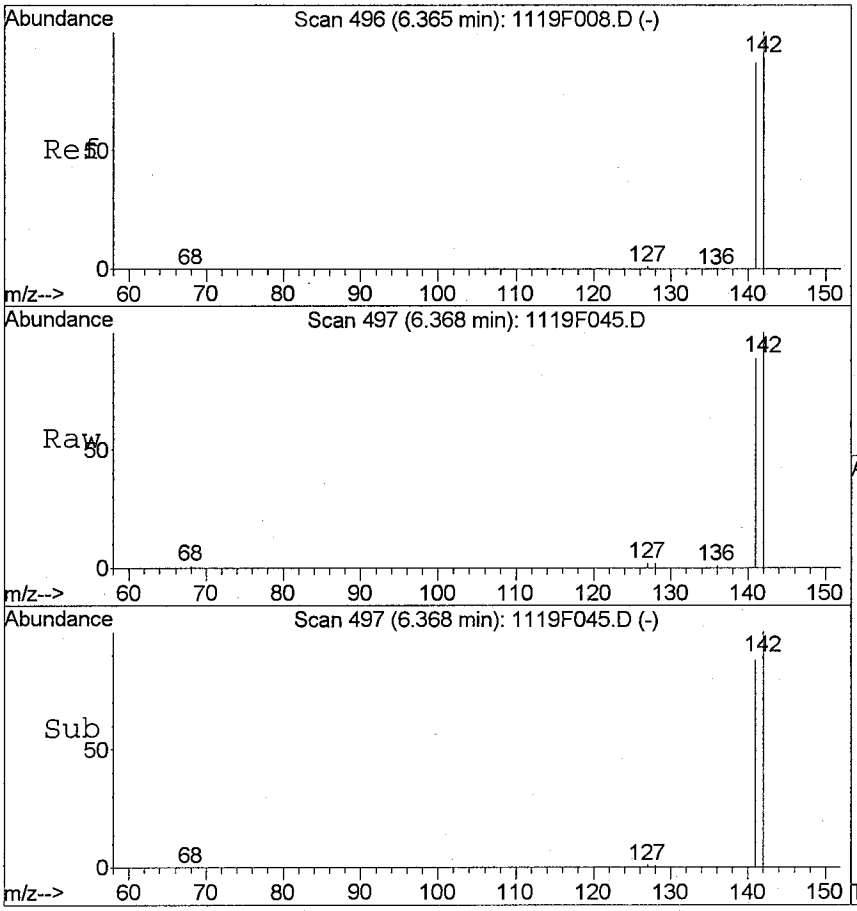


#2
Naphthalene
Concen: 207.78 ng/ml
RT: 5.55 min Scan# 268
Delta R.T. -0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:128 Resp: 65194

Ion	Ratio	Lower	Upper
128	100		
127	13.5	0.0	43.8

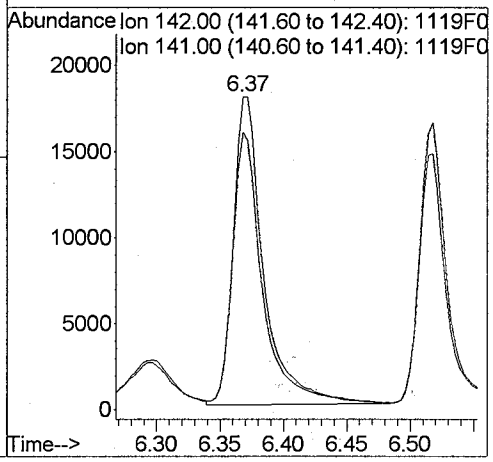


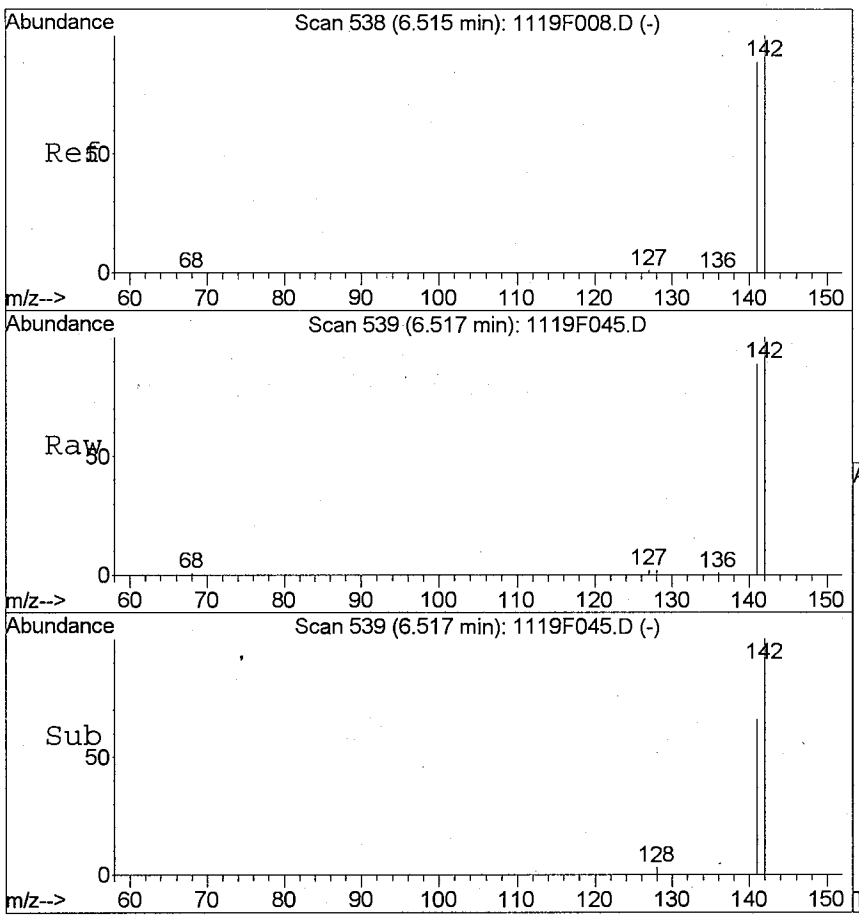


#3
2-Methylnaphthalene
Concen: 161.06 ng/ml
RT: 6.37 min Scan# 497
Delta R.T. 0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:142 Resp: 29841

Ion	Ratio	Lower	Upper
142	100		
141	88.2	57.2	117.2

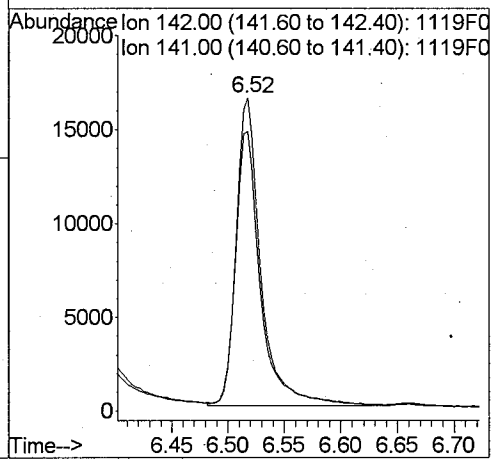


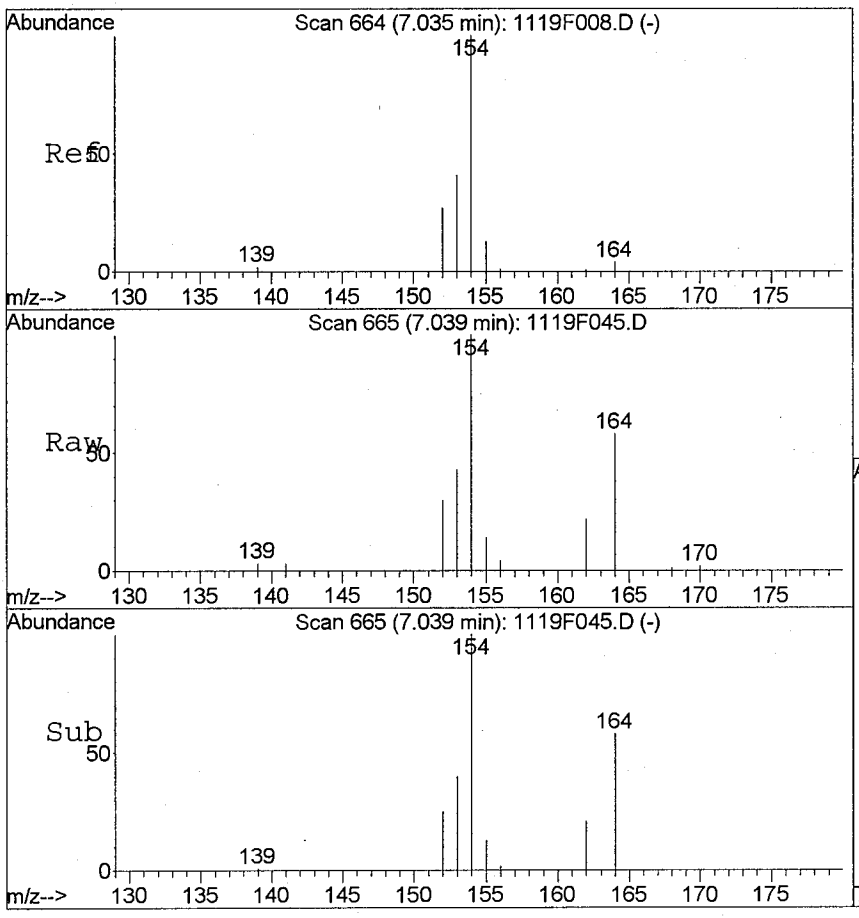


#4
1-Methylnaphthalene
Concen: 143.17 ng/ml
RT: 6.52 min Scan# 539
Delta R.T. 0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:142 Resp: 24864

Ion	Ratio	Lower	Upper
142	100		
141	88.7	58.5	118.5

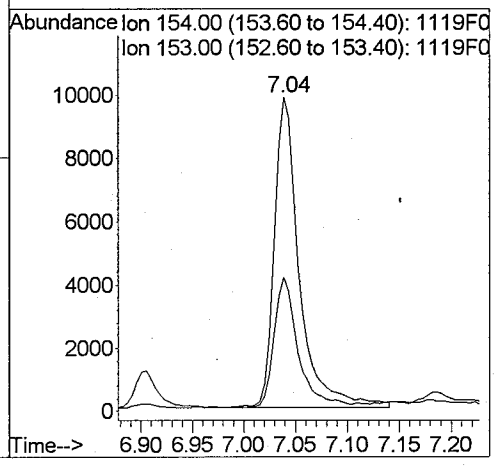


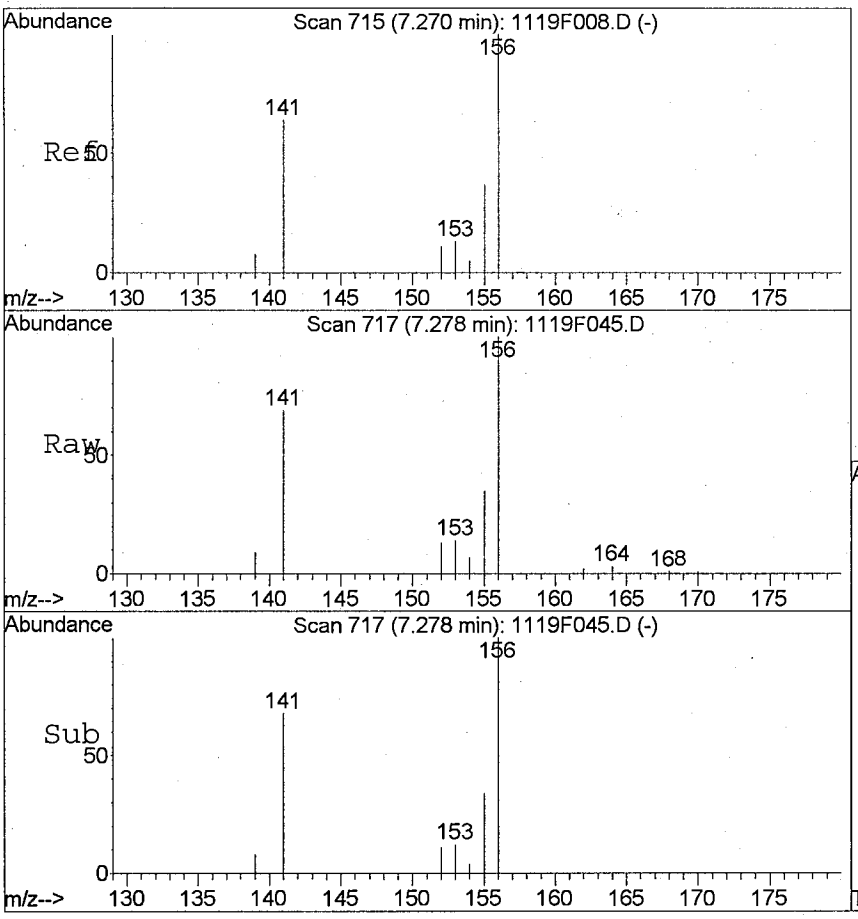


#6
Biphenyl
Concen: 74.10 ng/ml
RT: 7.04 min Scan# 665
Delta R.T. 0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:154 Resp: 16646

Ion	Ratio	Lower	Upper
154	100		
153	41.7	11.3	71.3

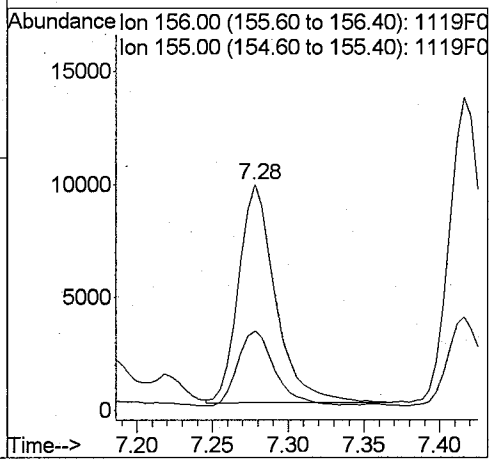


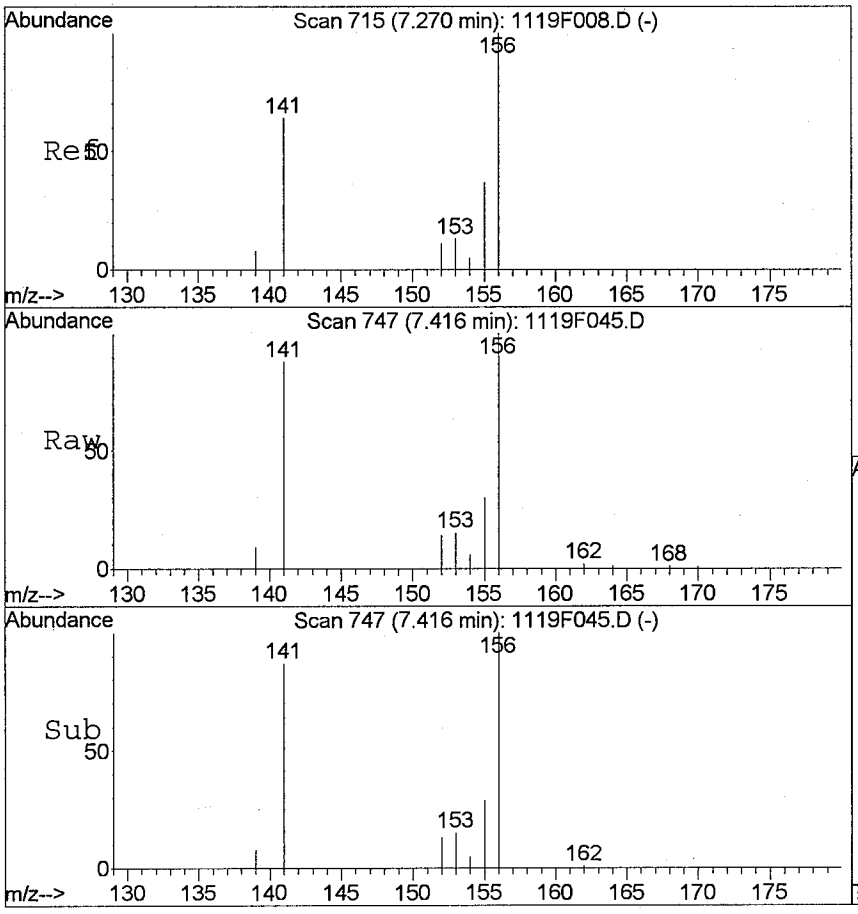


#7
2,6-Dimethylnaphthalene
Concen: 103.19 ng/ml
RT: 7.28 min Scan# 717
Delta R.T. 0.01 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:156 Resp: 16308

Ion	Ratio	Lower	Upper
156	100		
155	34.1	6.9	66.9

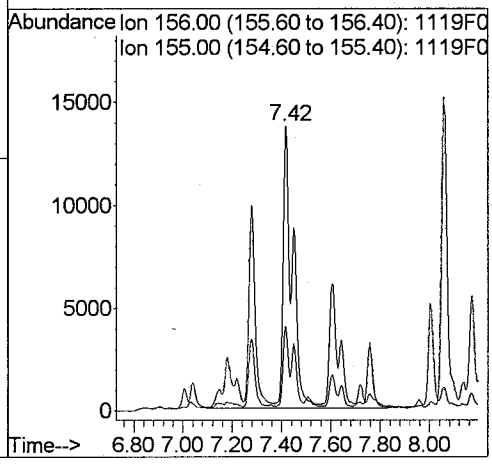


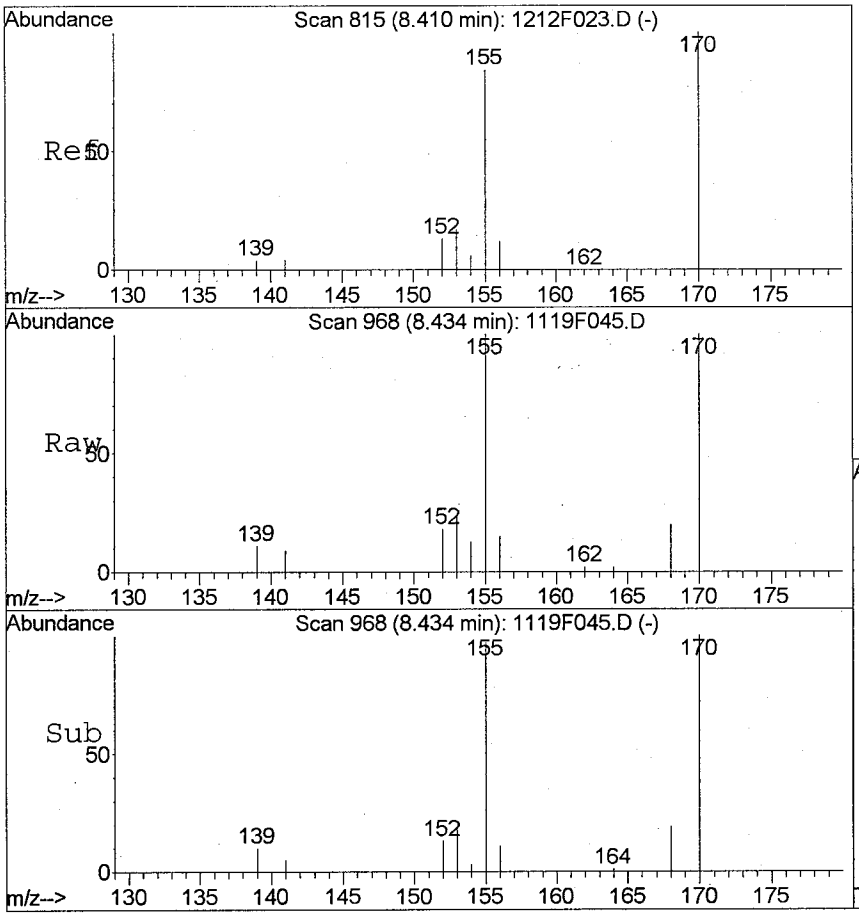


#8
C2-Naphthalenes
Concen: 269.15 ng/ml m
RT: 7.42 min Scan# 747
Delta R.T. 0.06 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:156 Resp: 84448

Ion	Ratio	Lower	Upper
156	100		
155	29.8	8.3	68.3

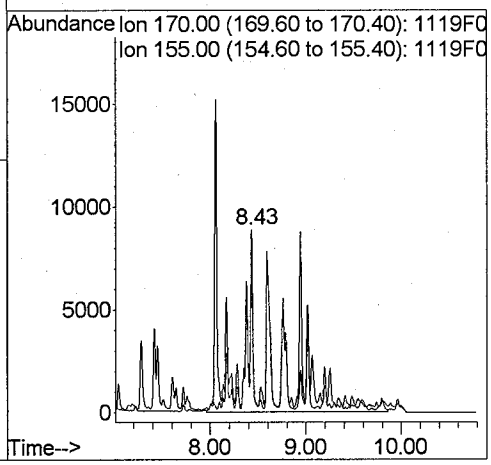


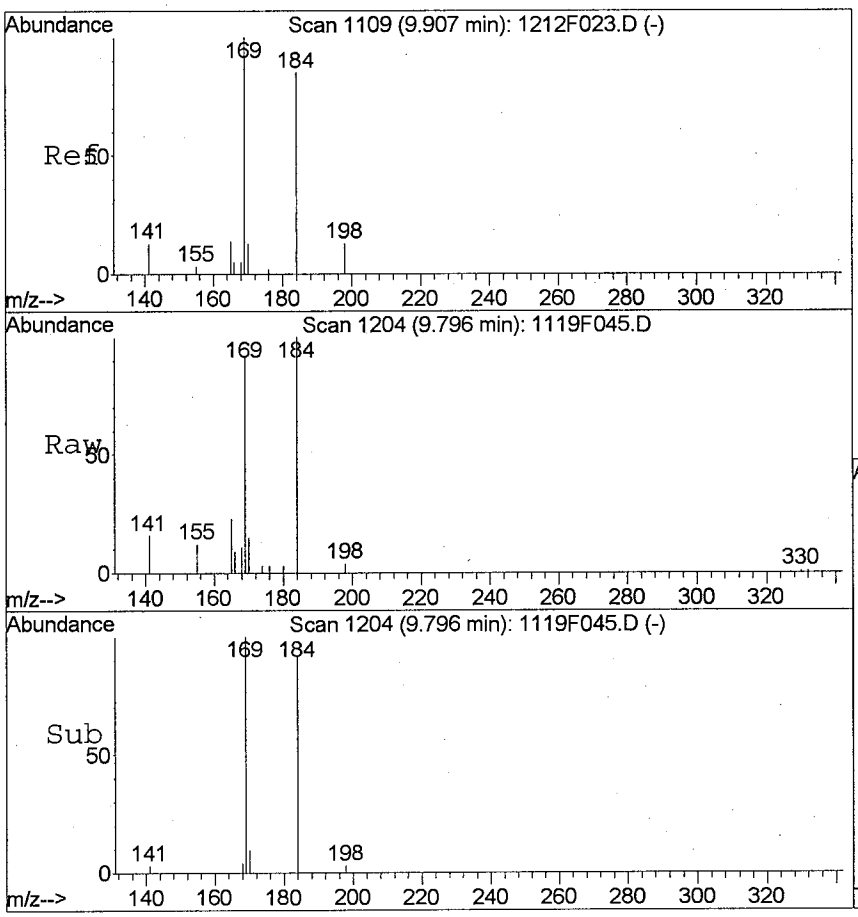


#9
C3-Naphthalenes
Concen: 355.15 ng/ml m
RT: 8.43 min Scan# 968
Delta R.T. -0.10 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:170 Resp: 111433

Ion	Ratio	Lower	Upper
170	100		
155	99.6	56.9	116.9

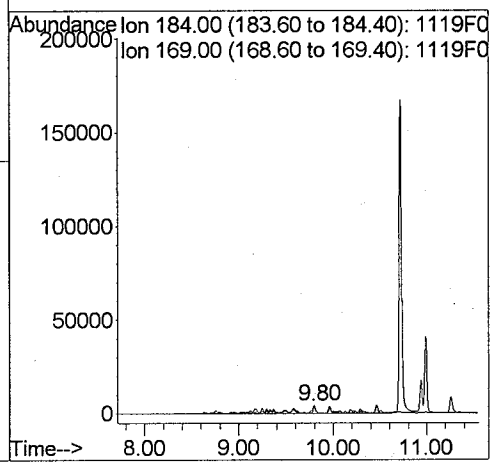


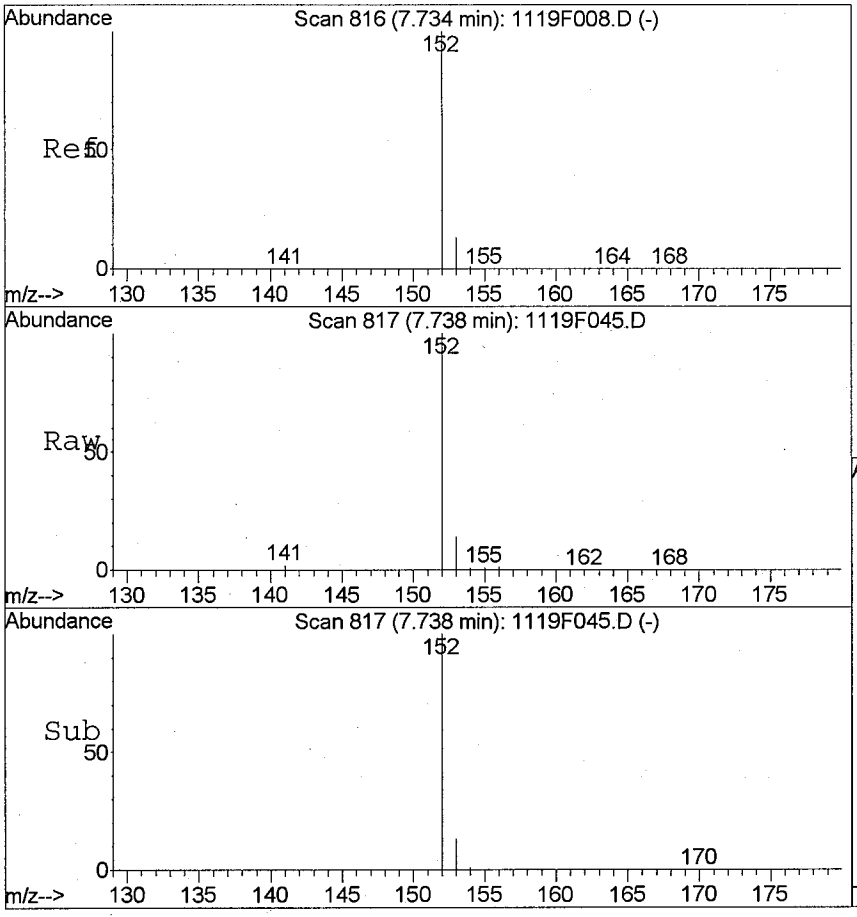


#10
C4-Naphthalenes
Concen: 227.31 ng/ml m
RT: 9.80 min Scan# 1204
Delta R.T. -0.26 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:184 Resp: 71322

Ion	Ratio	Lower	Upper
184	100		
169	92.5	89.7	149.7

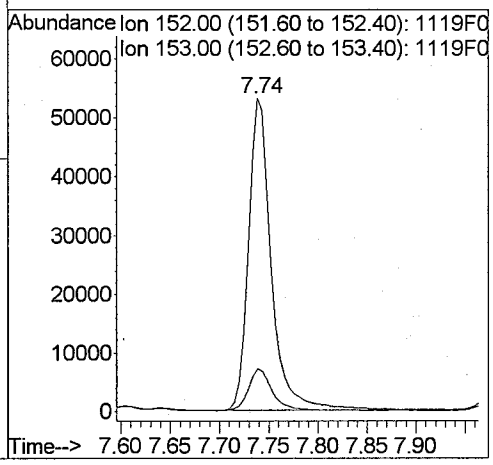


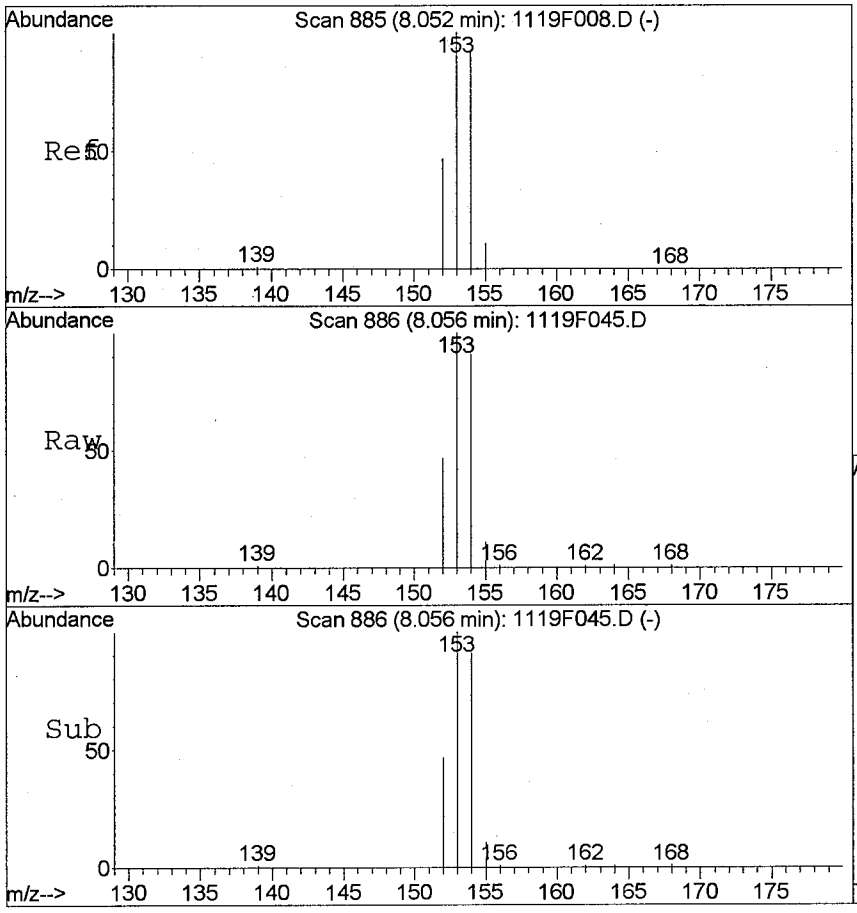


#12
Acenaphthylene
Concen: 305.18 ng/ml
RT: 7.74 min Scan# 817
Delta R.T. 0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:152 Resp: 85687

Ion	Ratio	Lower	Upper
152	100		
153	13.3	0.0	43.1

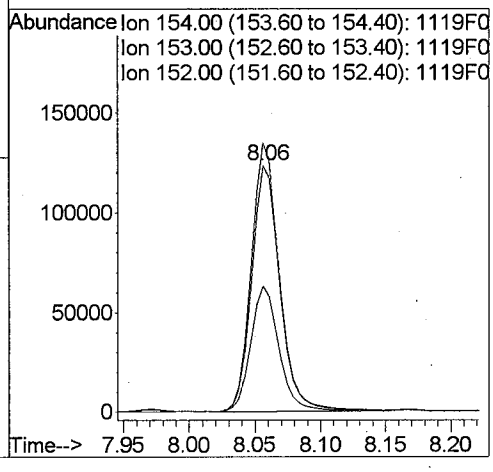


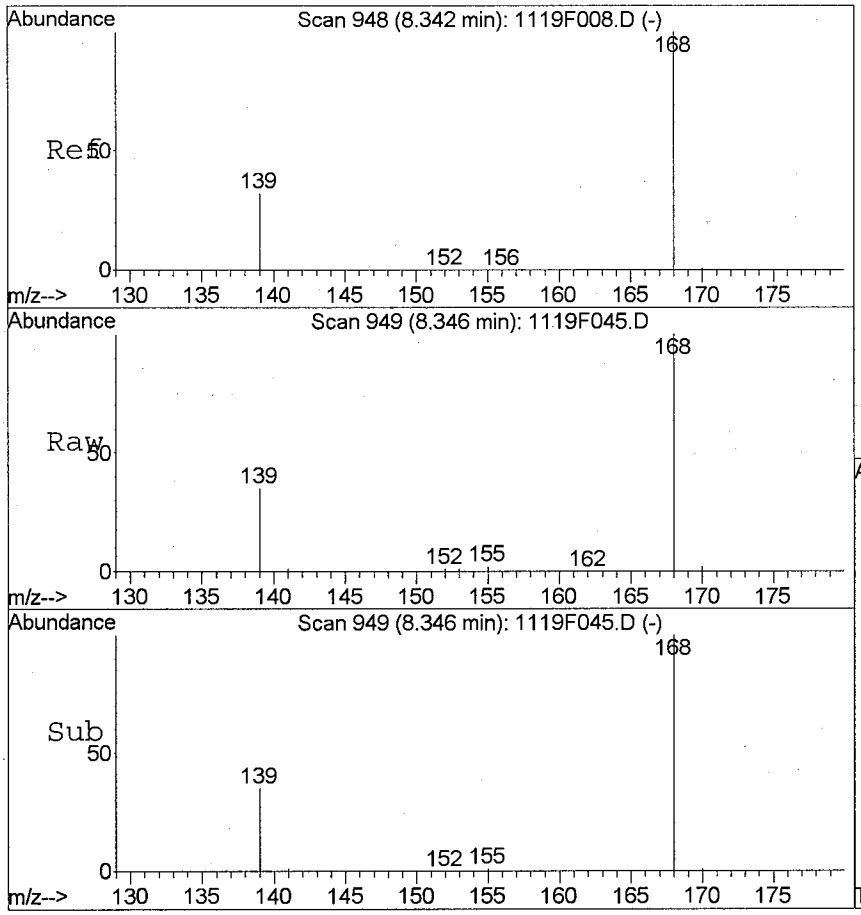


#13
Acenaphthene
Concen: 1075.74 ng/ml
RT: 8.06 min Scan# 886
Delta R.T. 0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:154 Resp: 186151

Ion	Ratio	Lower	Upper
154	100		
153	109.5	78.4	138.4
152	51.2	20.4	80.4

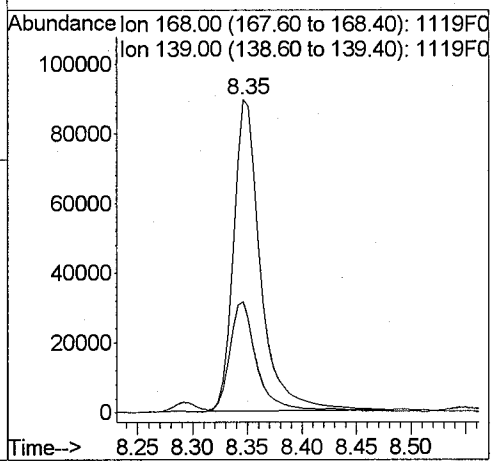


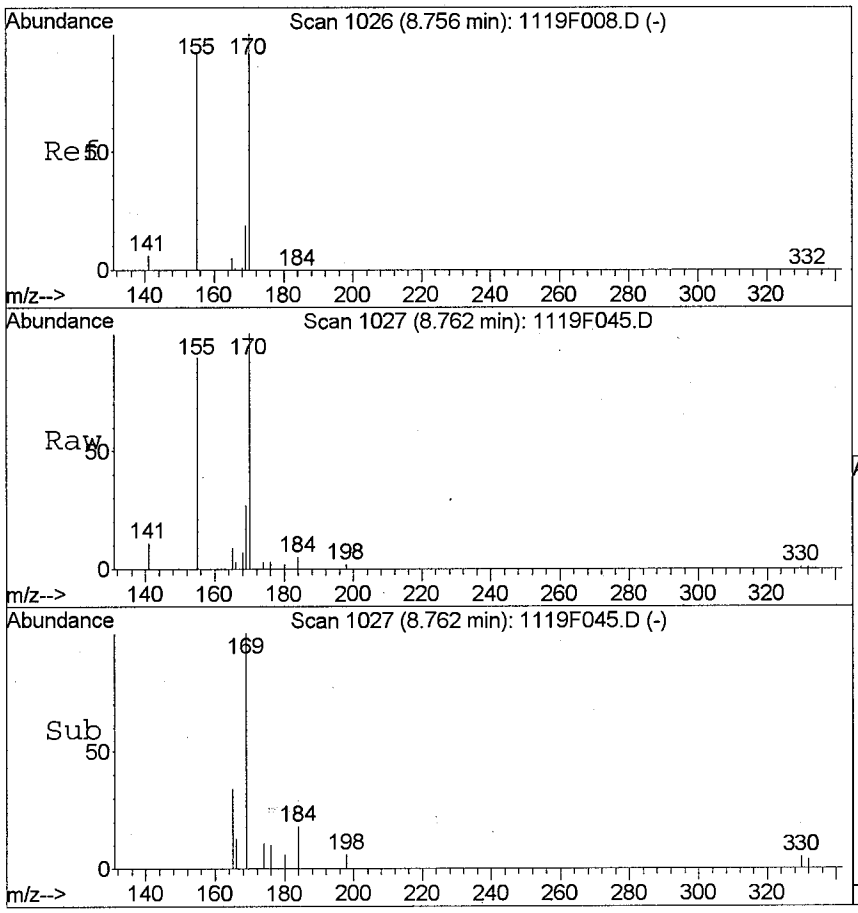


#14
Dibenzofuran
Concen: 660.95 ng/ml
RT: 8.35 min Scan# 949
Delta R.T. 0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:168 Resp: 153323

Ion	Ratio	Lower	Upper
168	100		
139	35.2	2.4	62.4

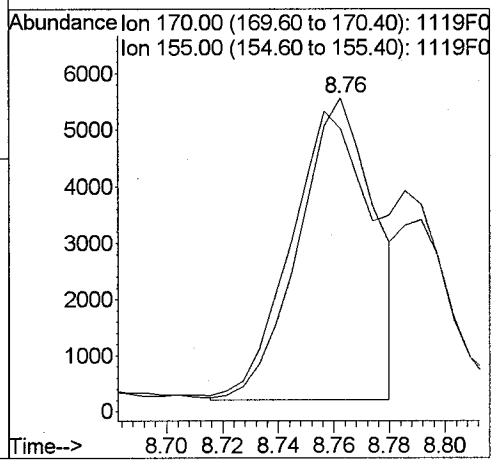


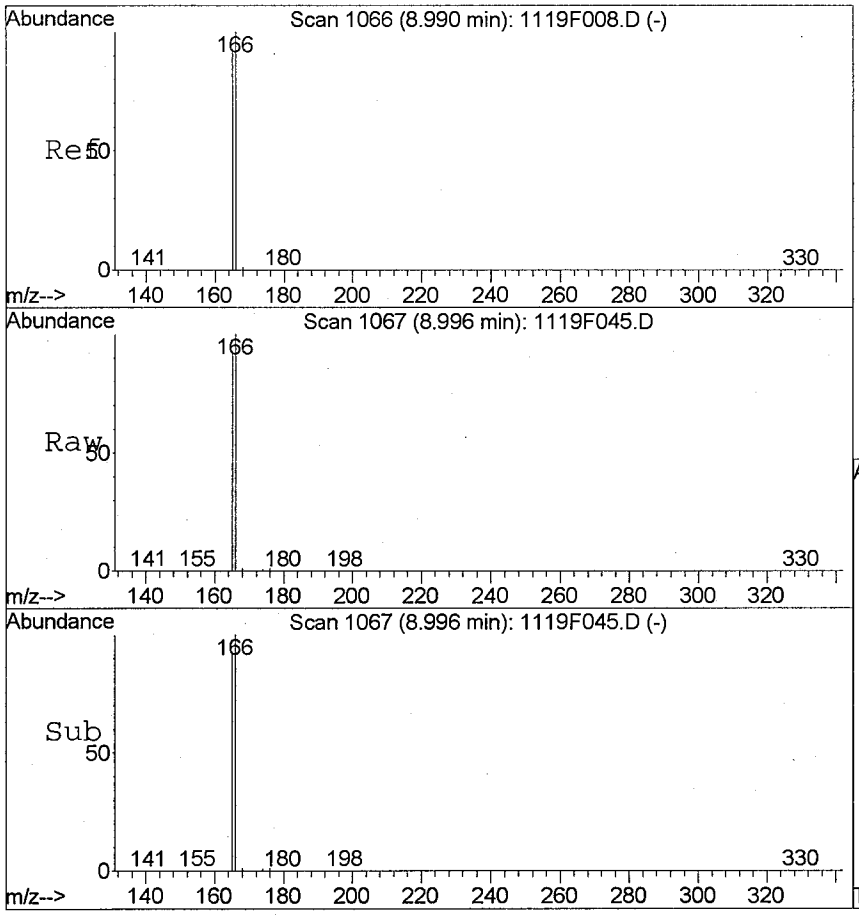


#15
2,3,5-Trimethylnaphthalene
Concen: 65.72 ng/ml m
RT: 8.76 min Scan# 1027
Delta R.T. 0.01 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:170 Resp: 10187

Ion	Ratio	Lower	Upper
170	100		
155	90.2	61.5	121.5

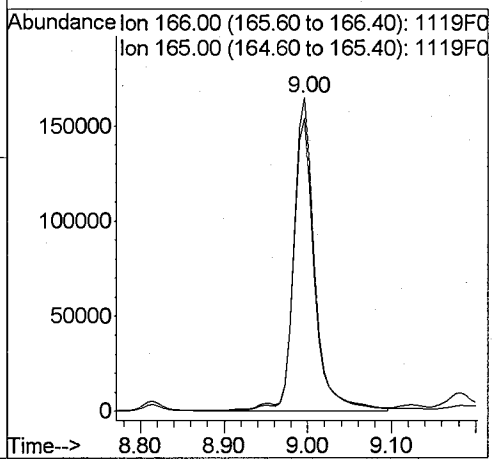


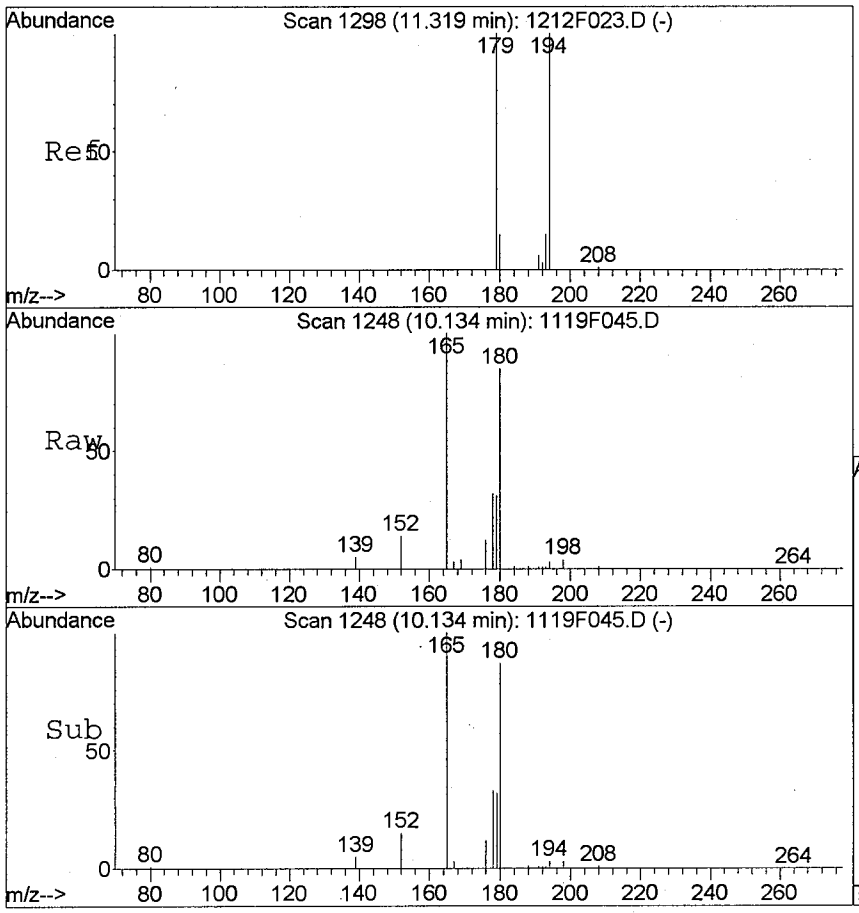


#17
Fluorene
Concen: 1529.62 ng/ml
RT: 9.00 min Scan# 1067
Delta R.T. 0.01 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:166 Resp: 283546

Ion	Ratio	Lower	Upper
166	100		
165	93.2	62.9	122.9

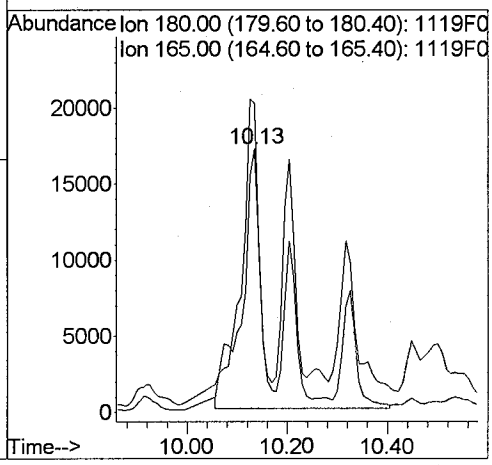


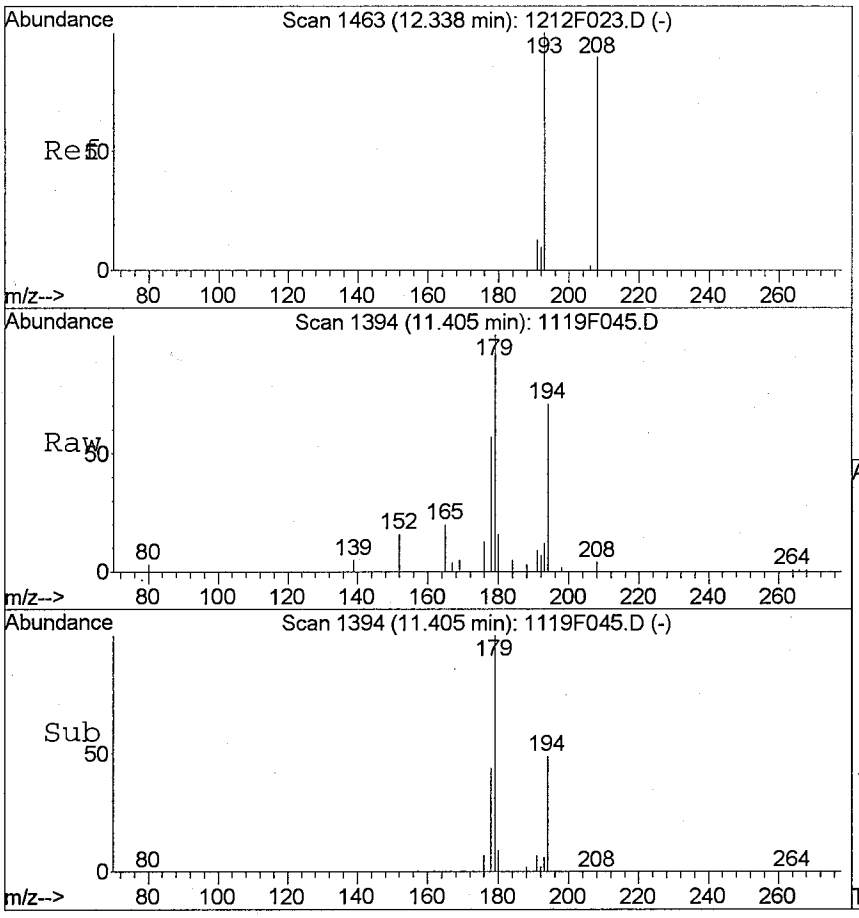


#18
C1-Fluorenes
Concen: 430.26 ng/ml m
RT: 10.13 min Scan# 1248
Delta R.T. -0.17 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:180 Resp: 79758

Ion	Ratio	Lower	Upper
180	100		
165	117.0	148.7	208.7#

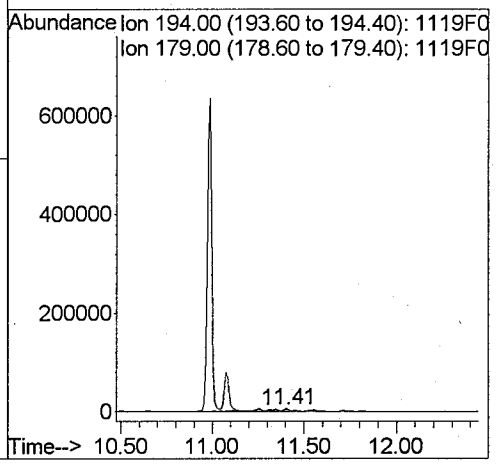


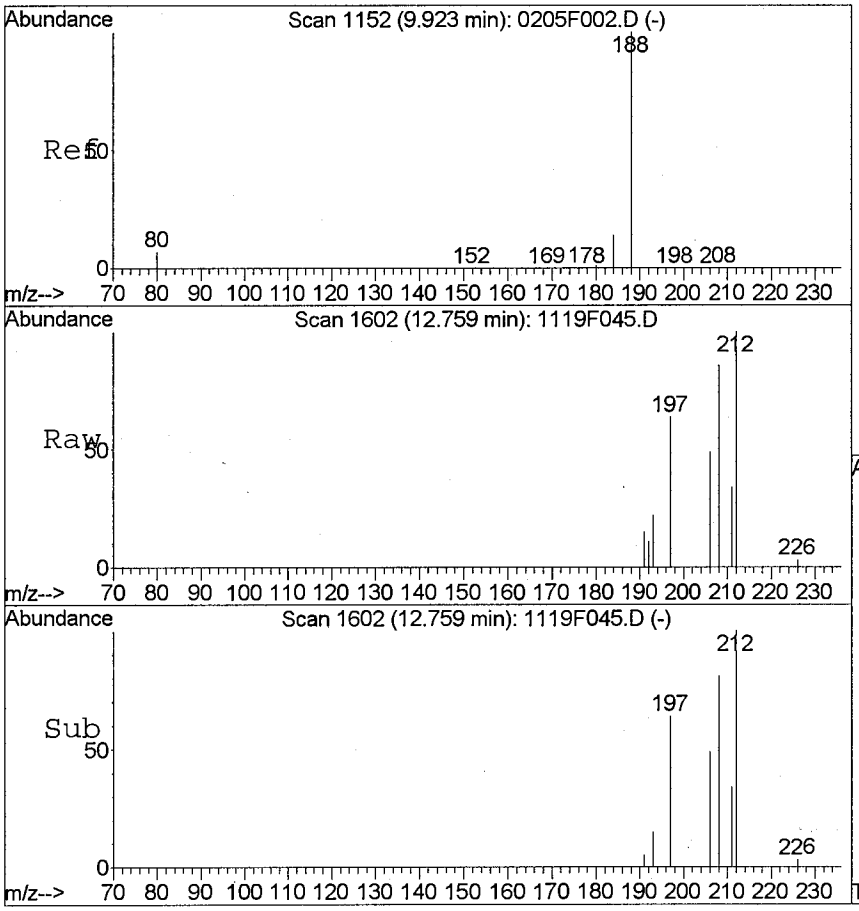


#19
C2-Fluorenes
Concen: 415.13 ng/ml m
RT: 11.41 min Scan# 1394
Delta R.T. -0.00 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:194 Resp: 76952

Ion	Ratio	Lower	Upper
194	100		
179	140.3	107.0	167.0

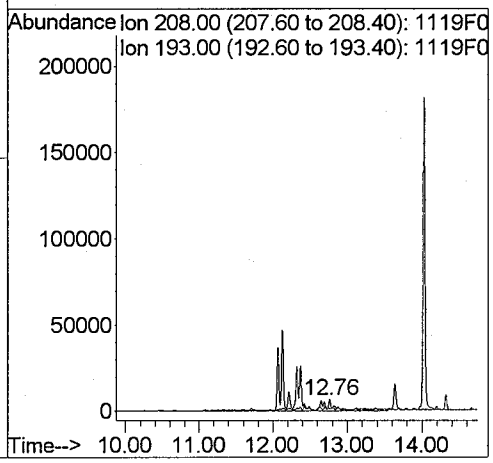


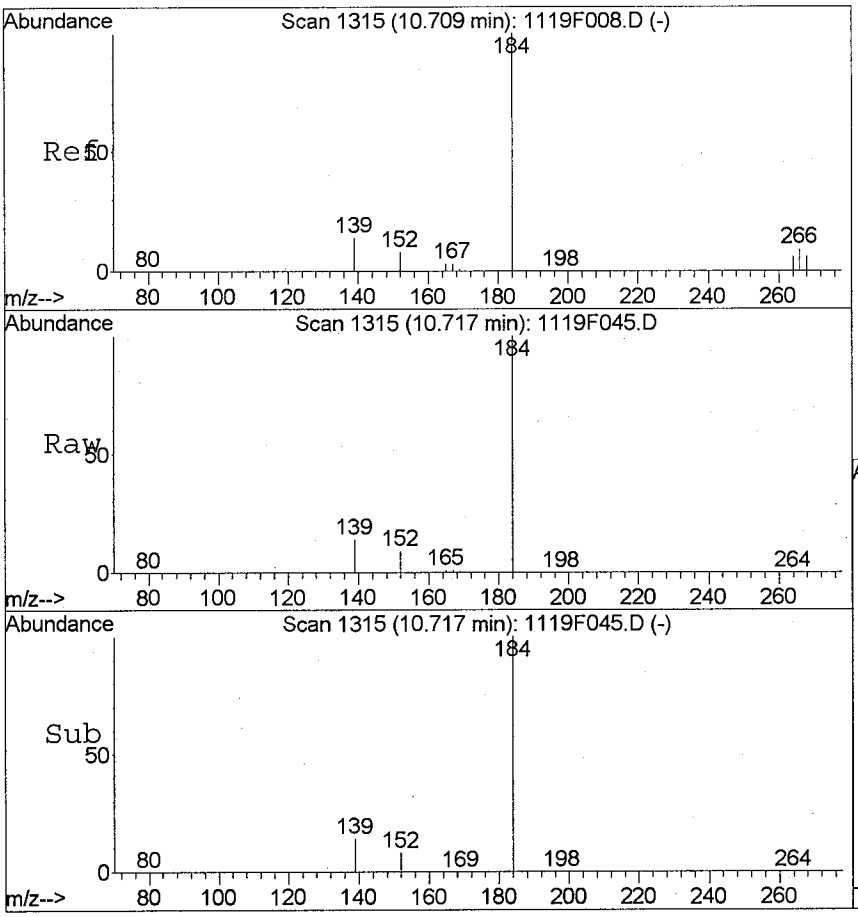


#20
C3-Fluorenes
Concen: 824.66 ng/ml m
RT: 12.76 min Scan# 1602
Delta R.T. 0.24 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:208 Resp: 152867

Ion	Ratio	Lower	Upper
208	100		
193	25.8	92.0	152.0#

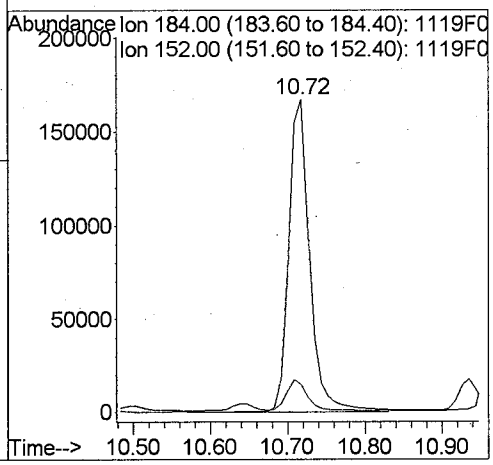


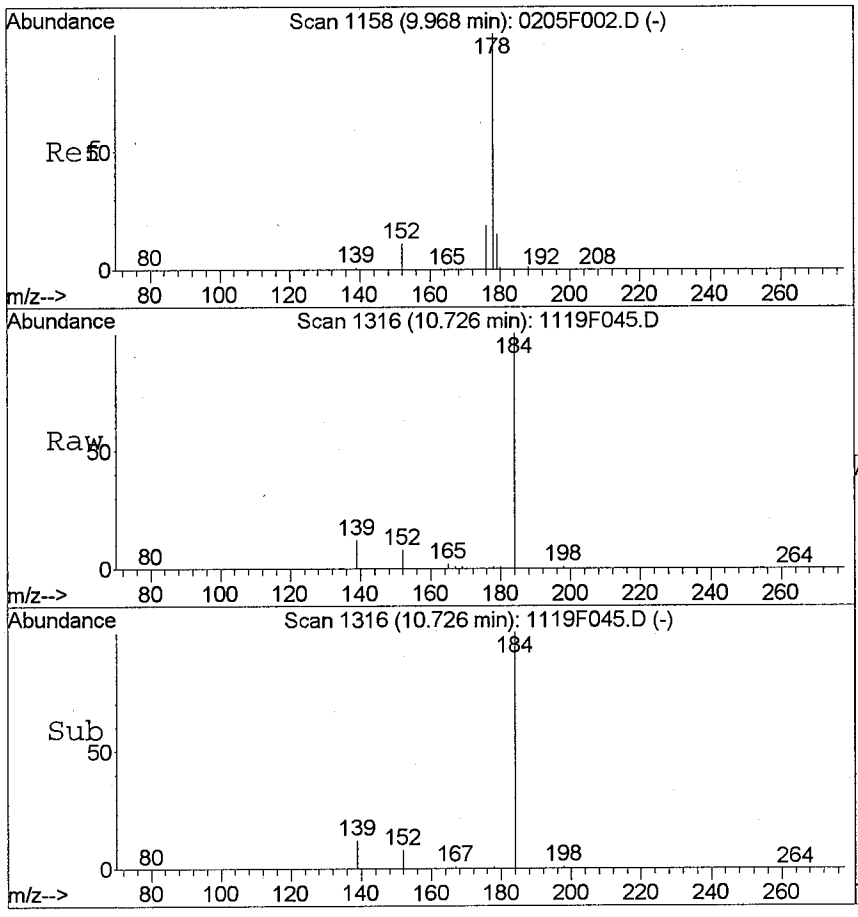


#24
Dibenzothiophene
Concen: 1248.55 ng/ml
RT: 10.72 min Scan# 1315
Delta R.T. 0.01 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:184 Resp: 314749

Ion	Ratio	Lower	Upper
184	100		
152	8.2	0.0	38.4

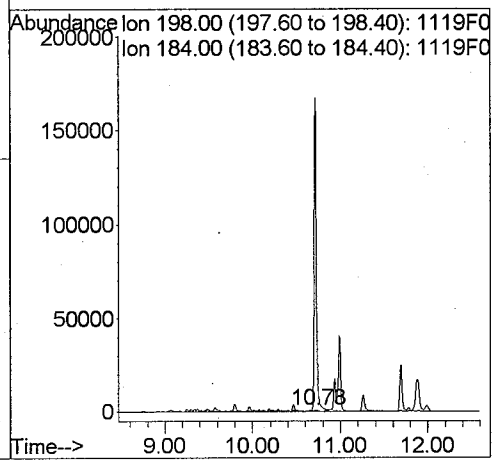


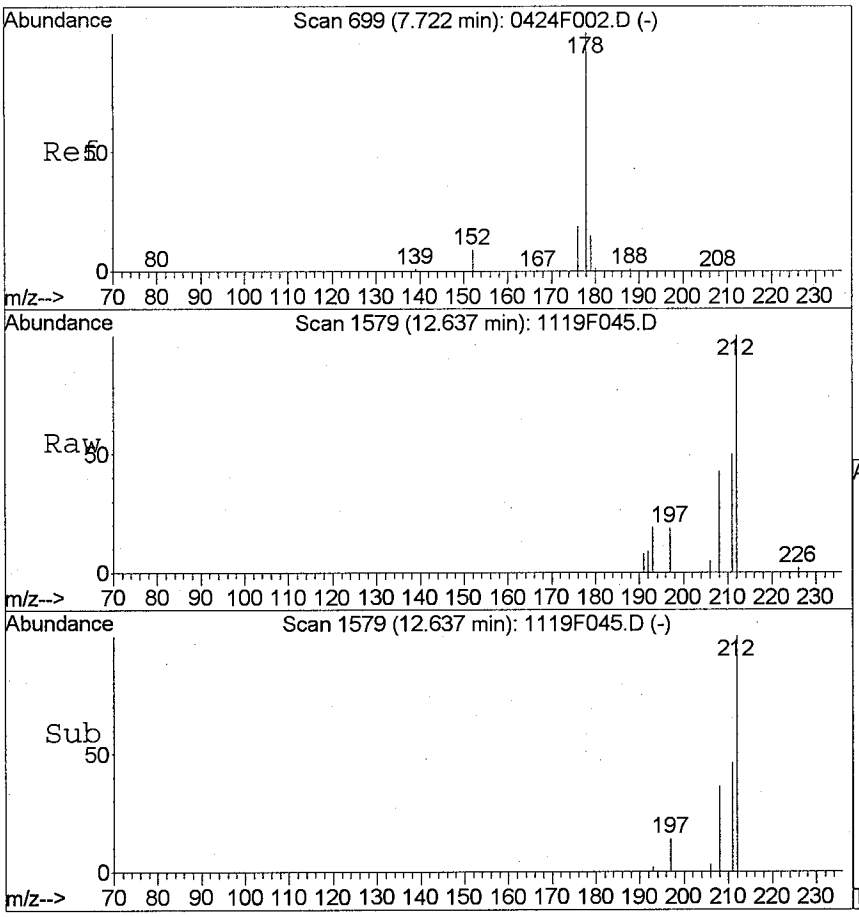


#25
C1-Dibenzothiophenes
Concen: 150.77 ng/ml m
RT: 10.73 min Scan# 1316
Delta R.T. 0.52 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:198 Resp: 38007

Ion	Ratio	Lower	Upper
198	100		
184	10385.0	74.1	134.1#

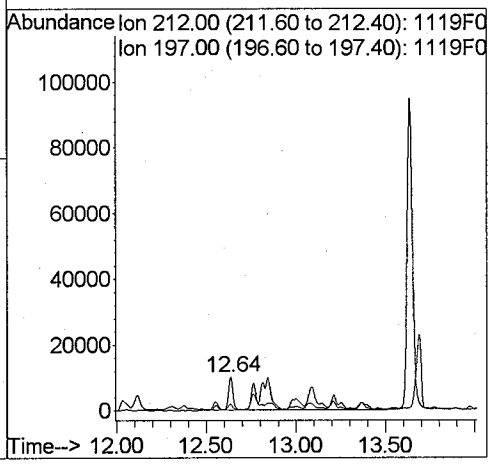


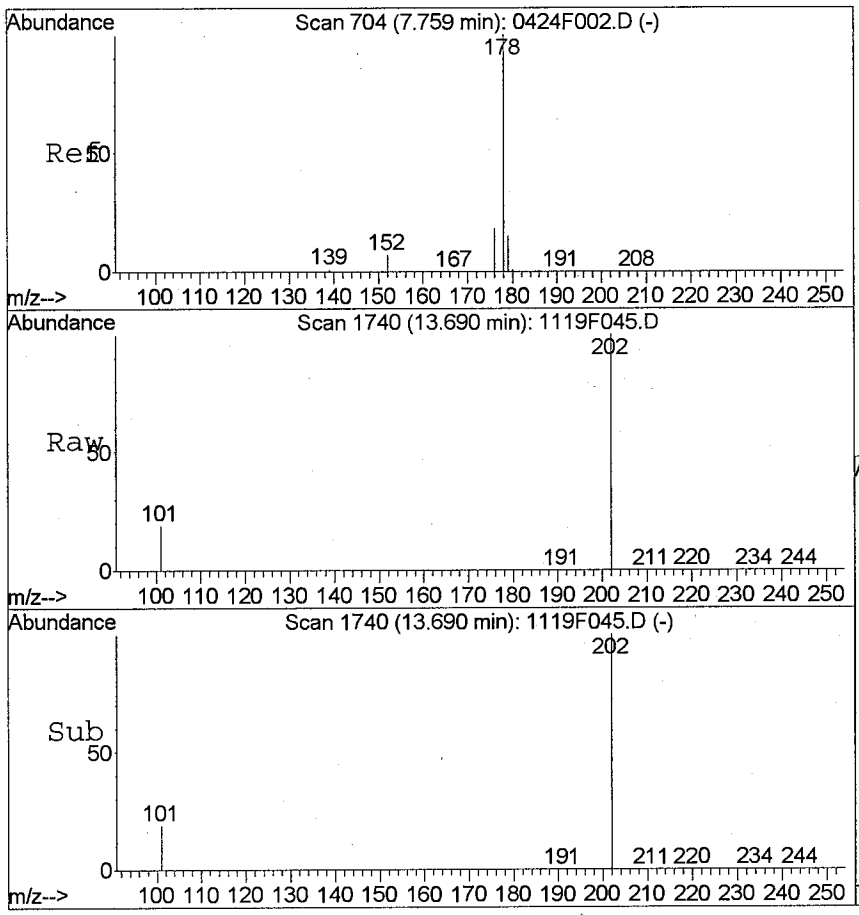


#26
C2-Dibenzothiophenes
Concen: 538.81 ng/ml m
RT: 12.64 min Scan# 1579
Delta R.T. -0.29 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:212 Resp: 135830

Ion	Ratio	Lower	Upper
212	100		
197	18.7	0.0	53.8

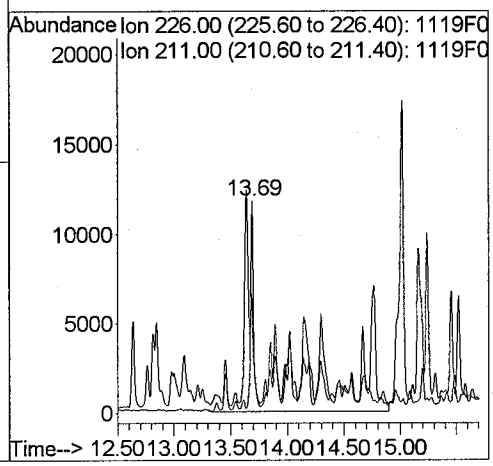


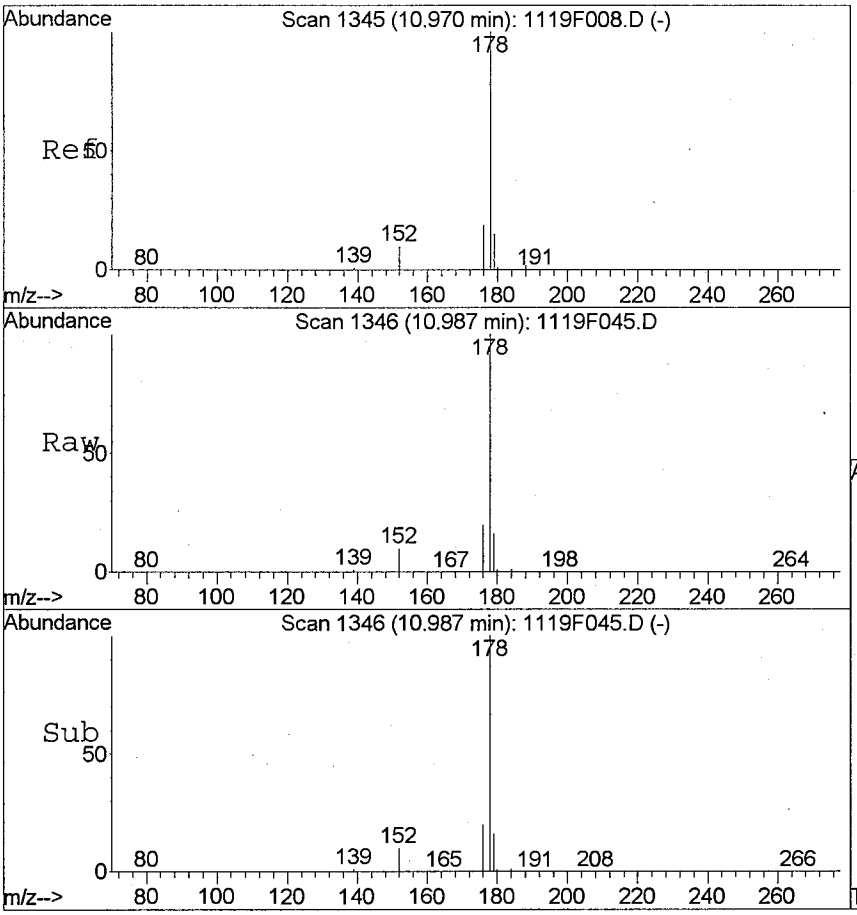


#27
C3-Dibenzothiophenes
Concen: 570.35 ng/ml m
RT: 13.69 min Scan# 1740
Delta R.T. -0.09 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:226 Resp: 143781

Ion	Ratio	Lower	Upper
226	100		
211	52.9	27.1	87.1

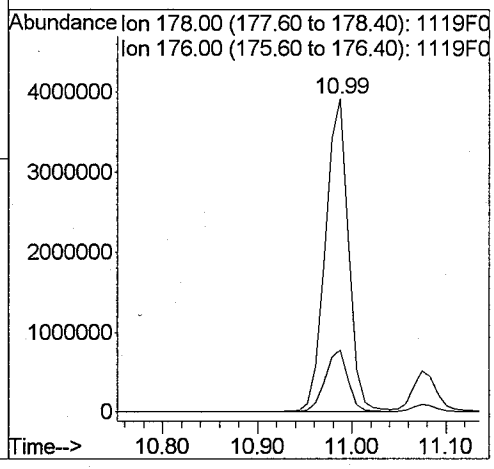


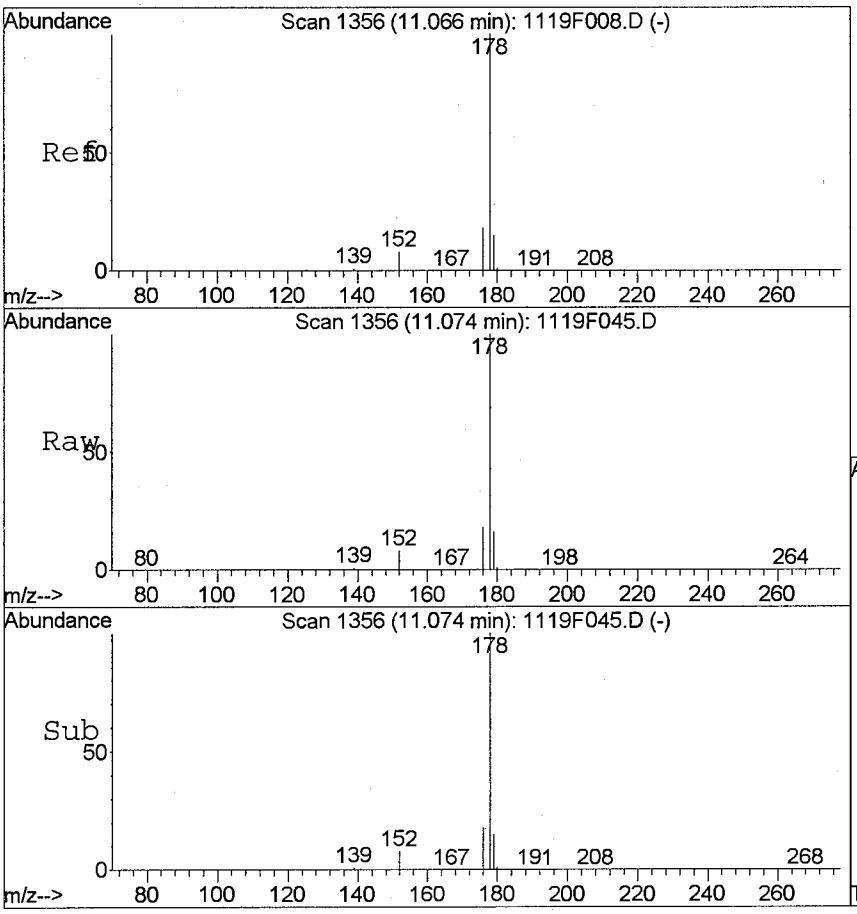


#28
Phenanthrene
Concen: 25241.71 ng/ml
RT: 10.99 min Scan# 1346
Delta R.T. 0.02 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:178 Resp: 6684199

Ion	Ratio	Lower	Upper
178	100		
176	19.9	0.0	48.6

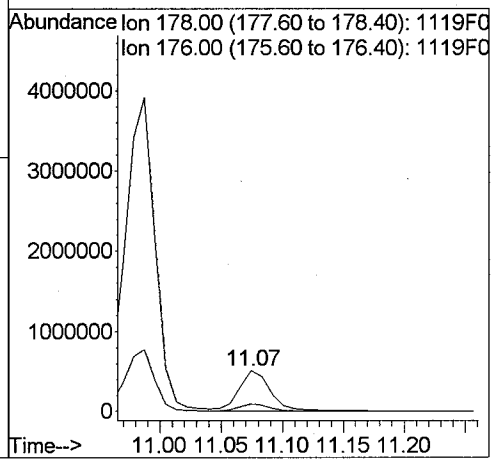


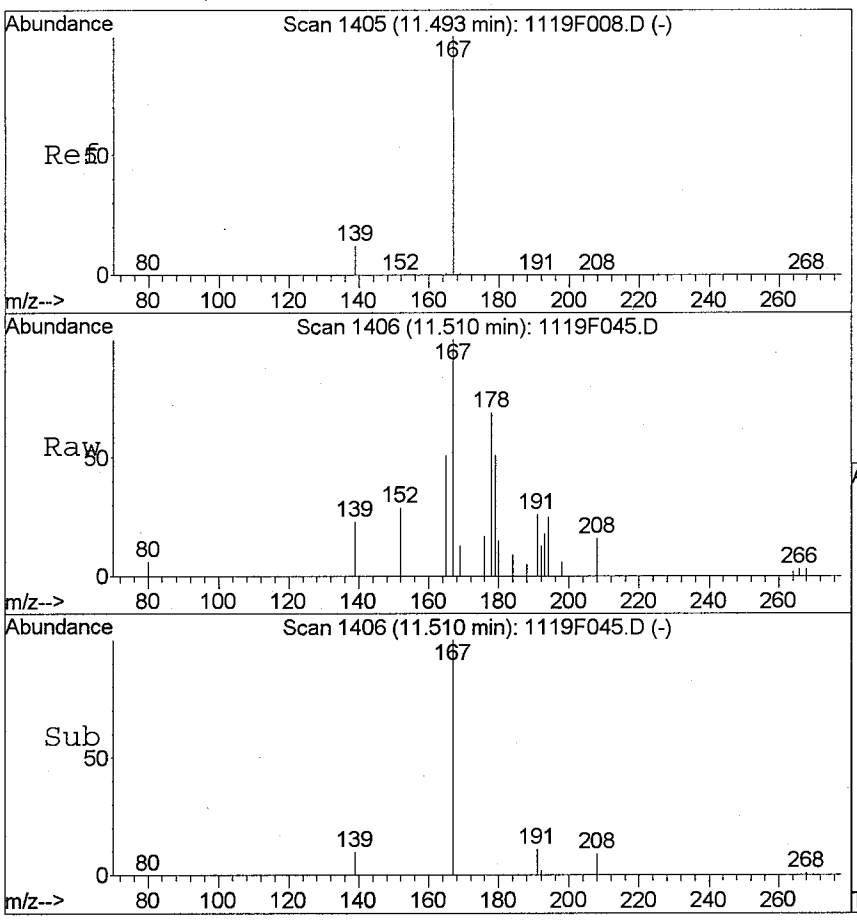


#29
Anthracene
Concen: 3992.89 ng/ml
RT: 11.07 min Scan# 1356
Delta R.T. 0.01 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:178 Resp: 903317

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	48.2

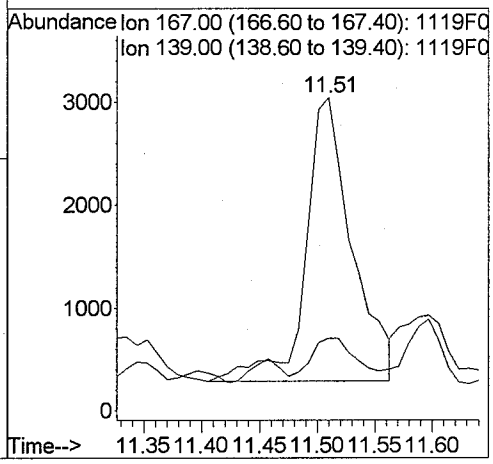


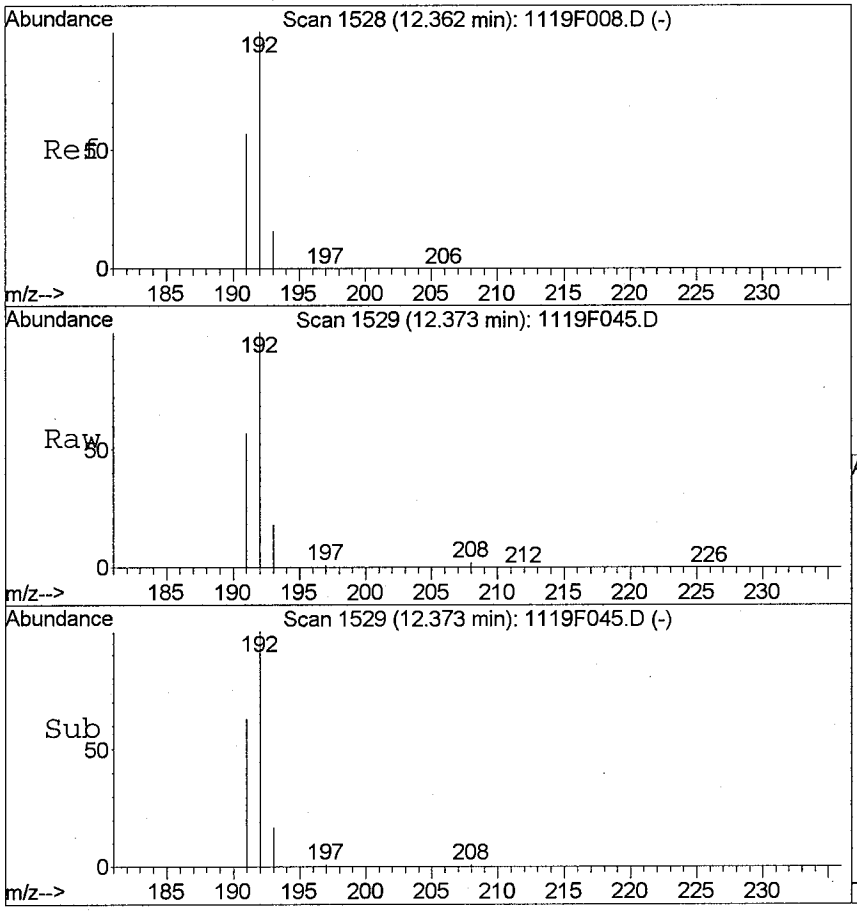


#30
Carbazole
Concen: 43.36 ng/ml
RT: 11.51 min Scan# 1406
Delta R.T. 0.02 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:167 Resp: 7754

Ion	Ratio	Lower	Upper
167	100		
139	12.3	0.0	42.5

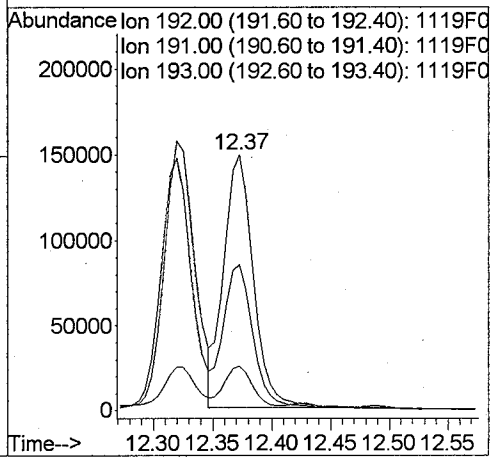


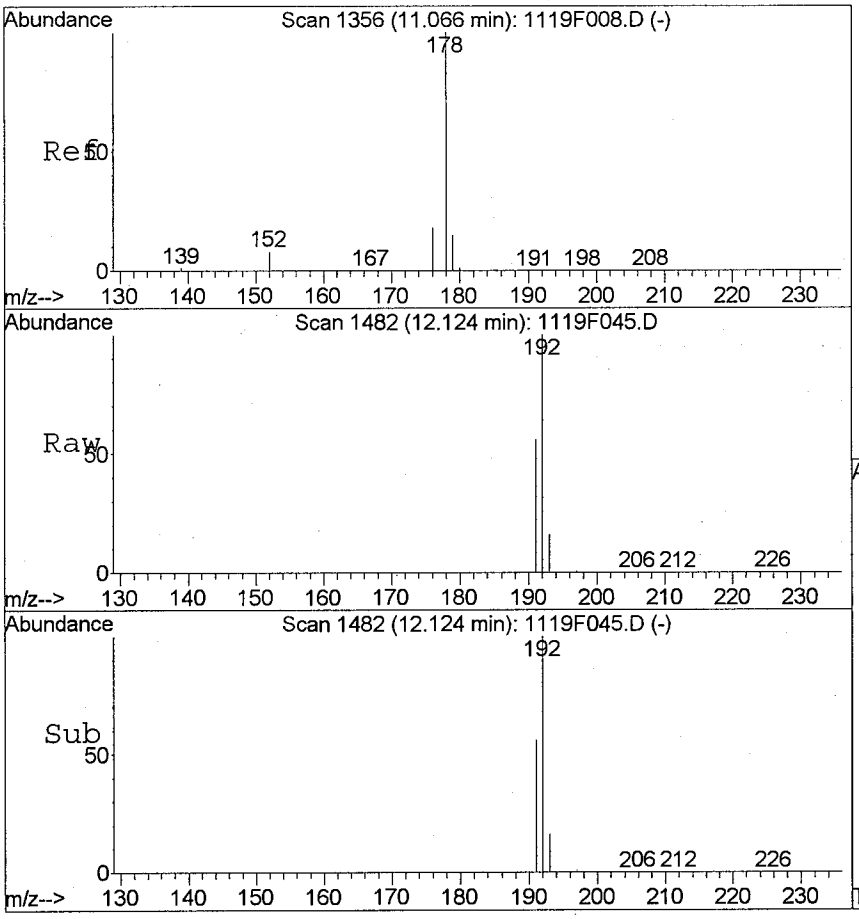


#31
1-Methylphenanthrene
Concen: 1460.15 ng/ml
RT: 12.37 min Scan# 1529
Delta R.T. 0.01 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:192 Resp: 262529

Ion	Ratio	Lower	Upper
192	100		
191	57.0	27.5	87.5
193	16.3	0.0	45.6

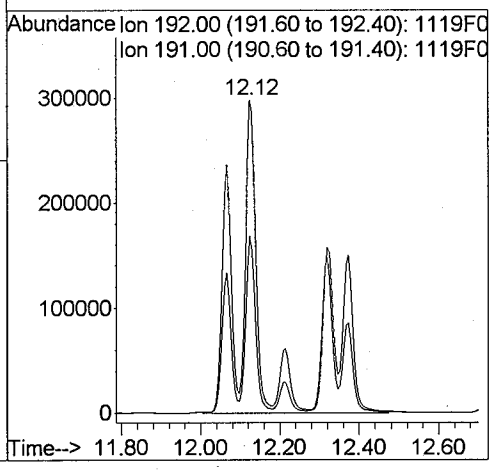


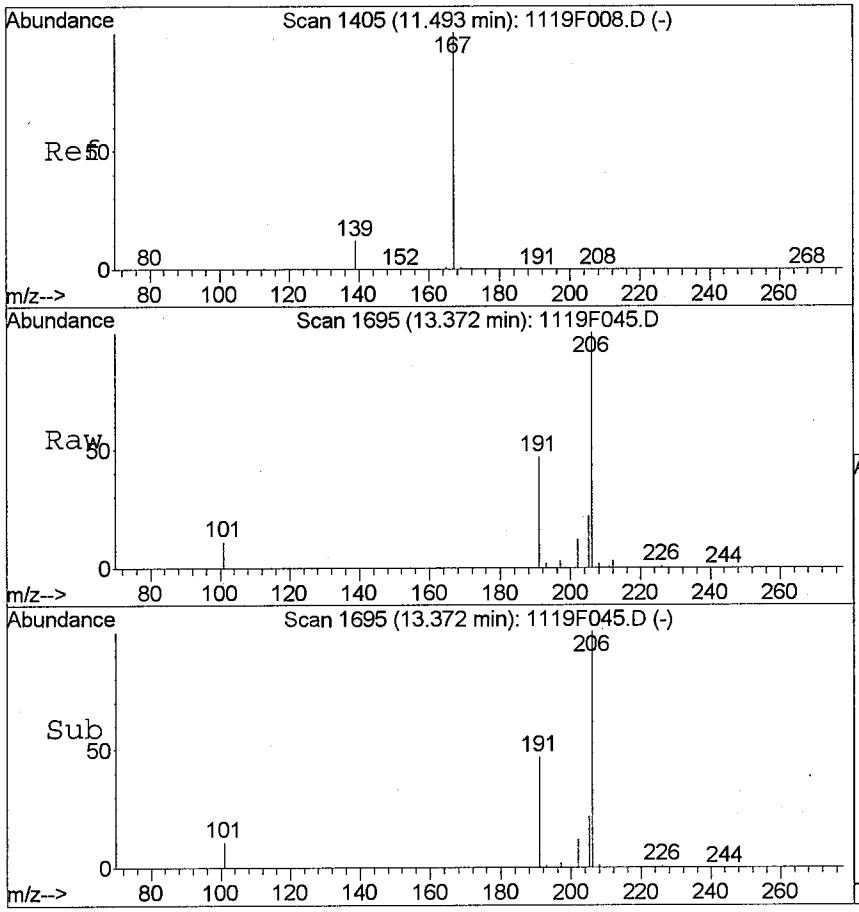


#32
C1-Phenanthrenes/Anthracenes
Concen: 6229.92 ng/ml m
RT: 12.12 min Scan# 1482
Delta R.T. -0.10 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:192 Resp: 1649731

Ion	Ratio	Lower	Upper
192	100		
191	56.5	25.3	85.3

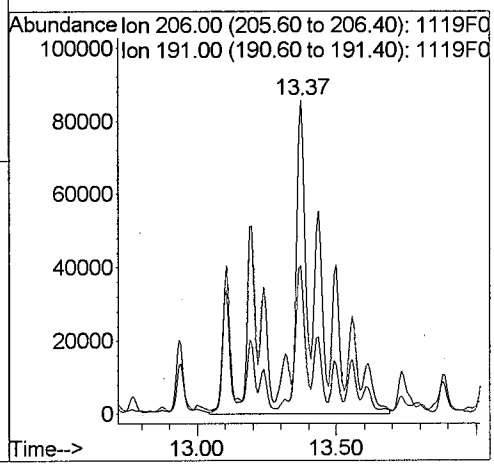


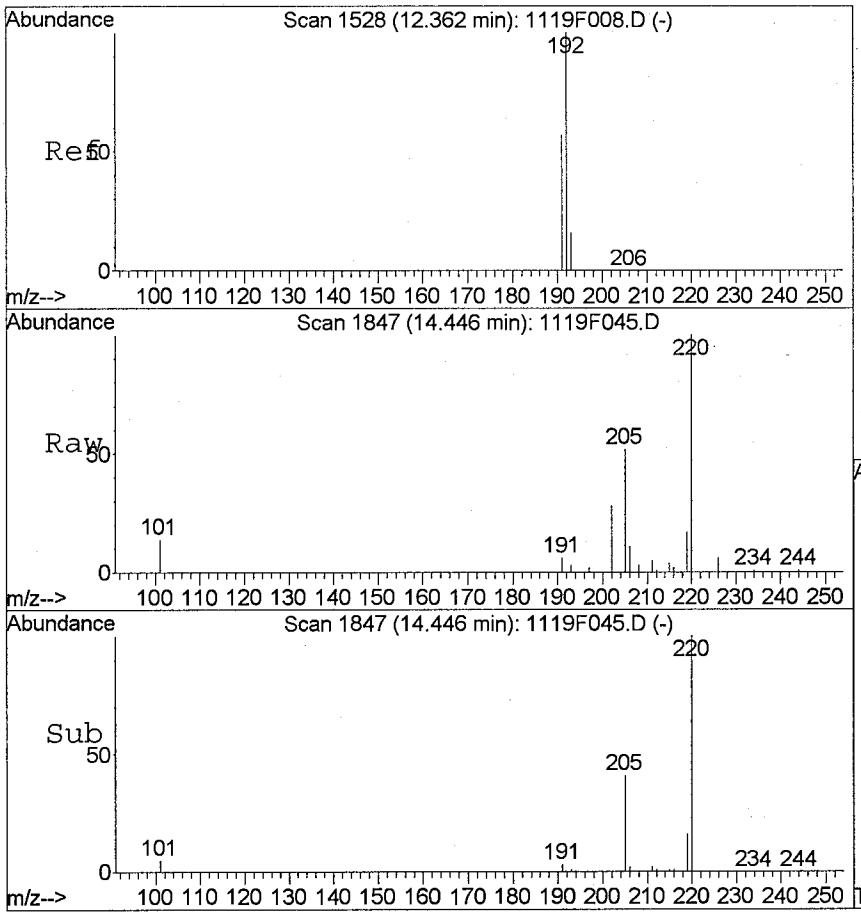


#33
C2-Phenanthrenes/Anthracenes
Concen: 2796.21 ng/ml m
RT: 13.37 min Scan# 1695
Delta R.T. -0.10 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:206 Resp: 740458

Ion	Ratio	Lower	Upper
206	100		
191	47.3	15.6	75.6

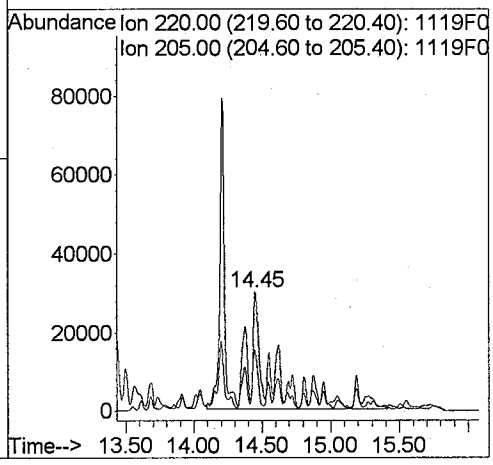


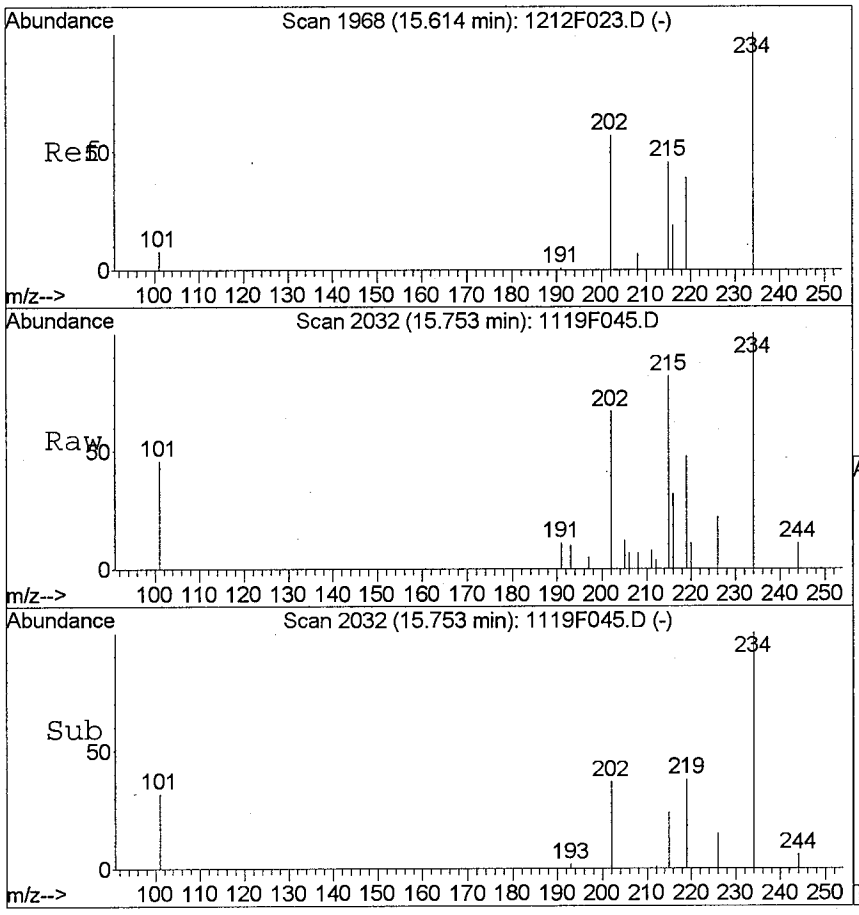


#34
C3-Phenanthrenes/Anthracenes
Concen: 1496.80 ng/ml m
RT: 14.45 min Scan# 1847
Delta R.T. -0.10 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:220 Resp: 396365

Ion	Ratio	Lower	Upper
220	100		
205	51.8	20.0	80.0

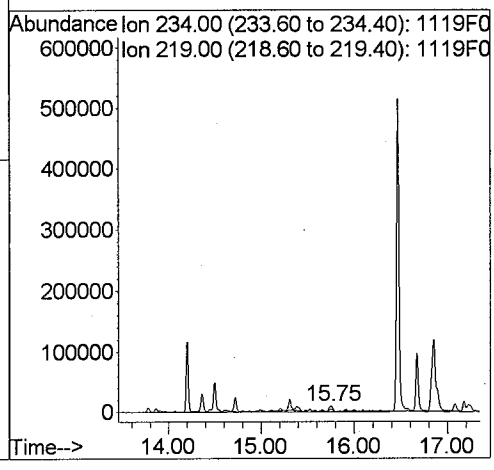


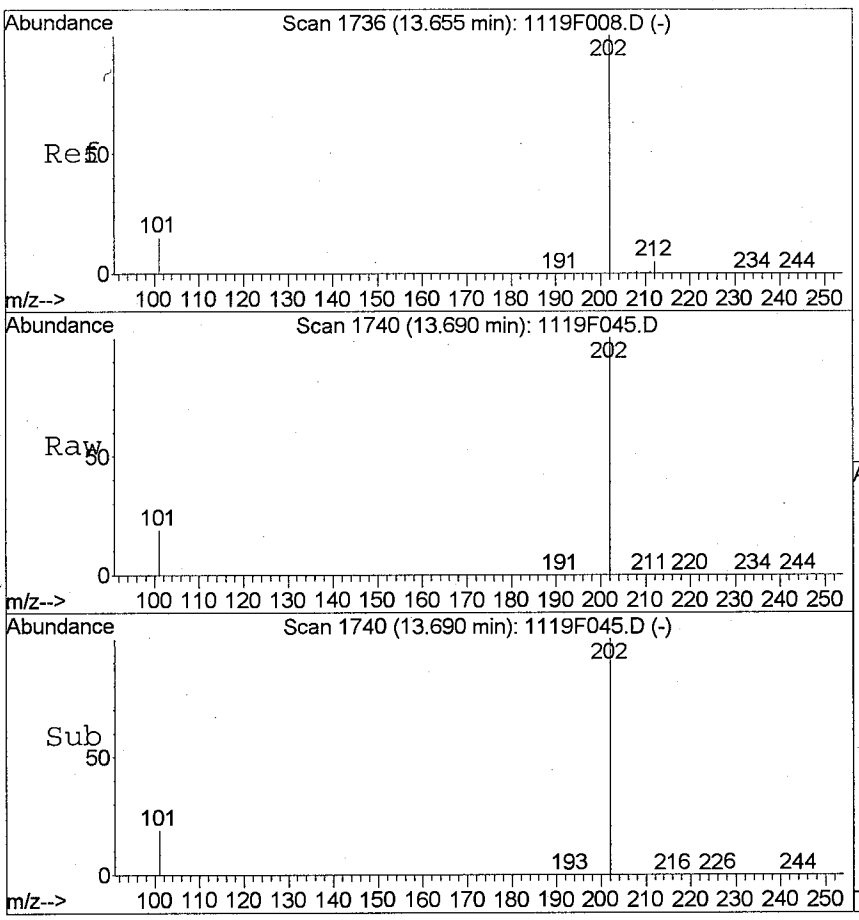


#35
C4-Phenanthrenes/Anthracenes
Concen: 807.06 ng/ml m
RT: 15.75 min Scan# 2032
Delta R.T. -0.08 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:234 Resp: 213717

Ion	Ratio	Lower	Upper
234	100		
219	47.7	17.7	77.7

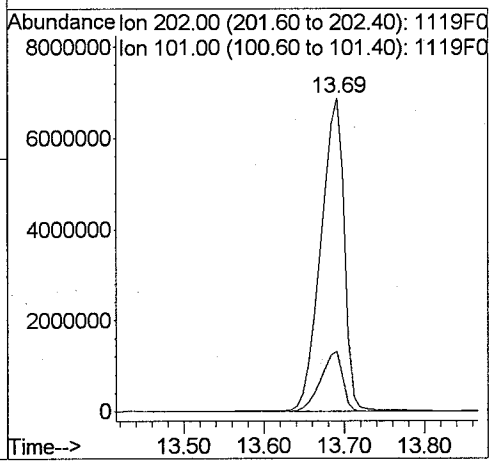


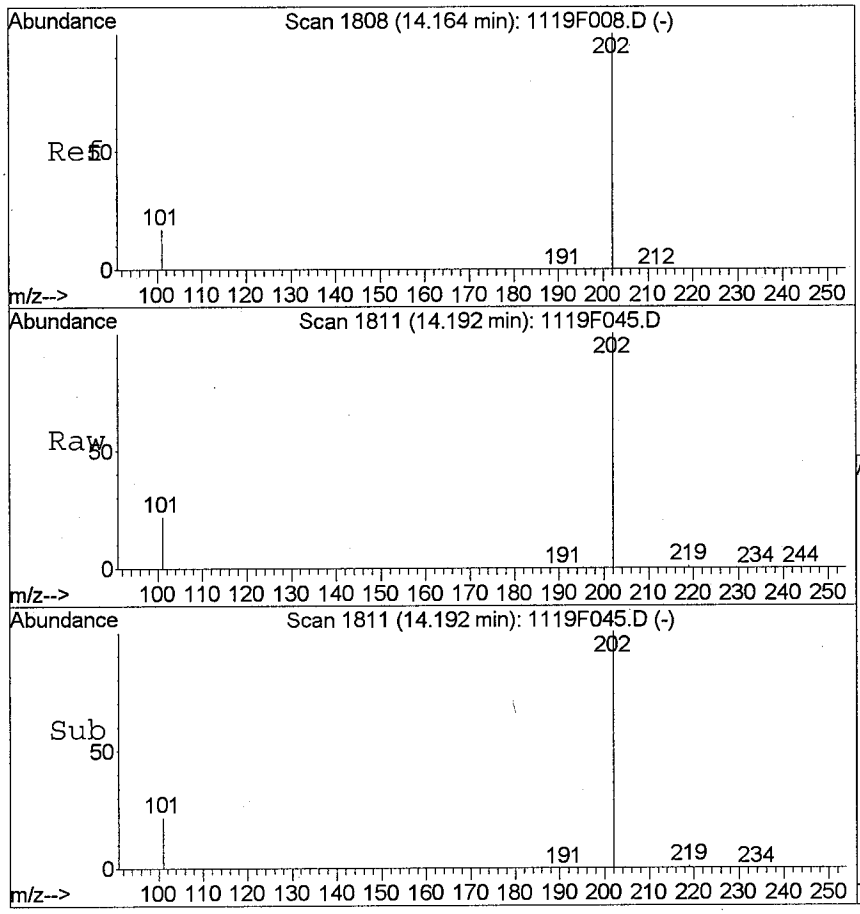


#36
Fluoranthene
Concen: 52811.74 ng/ml
RT: 13.69 min Scan# 1740
Delta R.T. 0.04 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:202 Resp:13920858

Ion	Ratio	Lower	Upper
202	100		
101	19.2	0.0	45.5

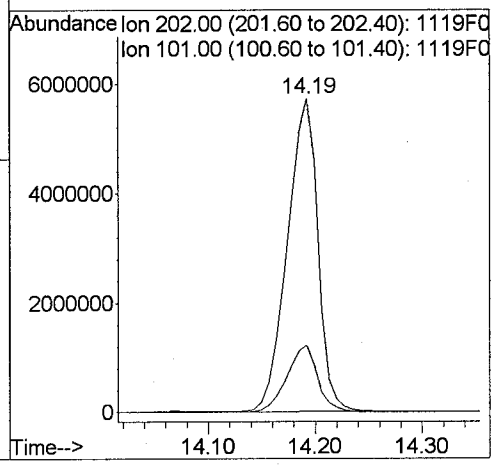


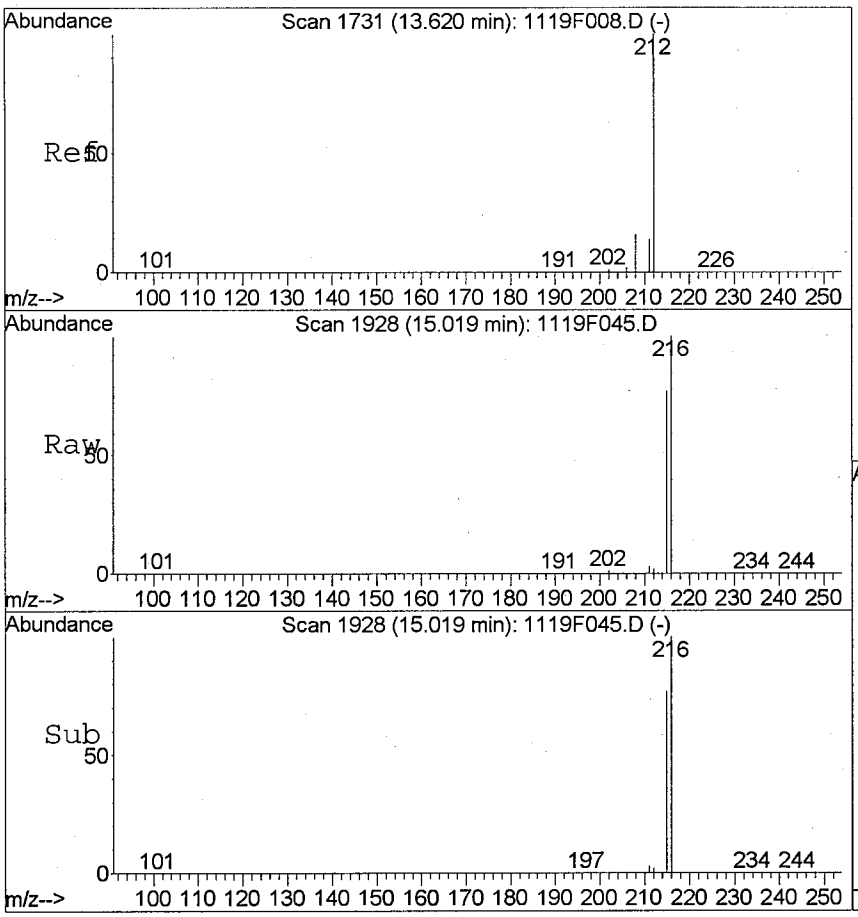


#39
Pyrene
Concen: 38297.47 ng/ml
RT: 14.19 min Scan# 1811
Delta R.T. 0.03 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:202 Resp:11385617

Ion	Ratio	Lower	Upper
202	100		
101	21.5	0.0	47.4

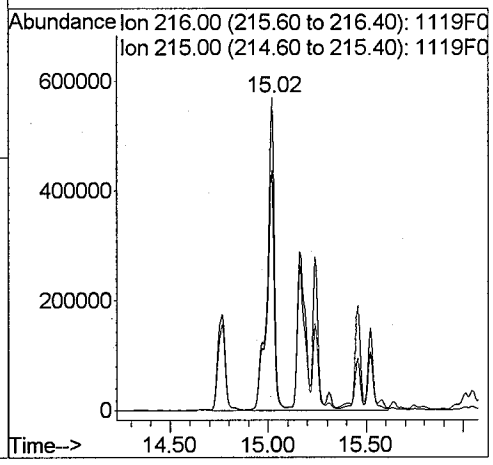


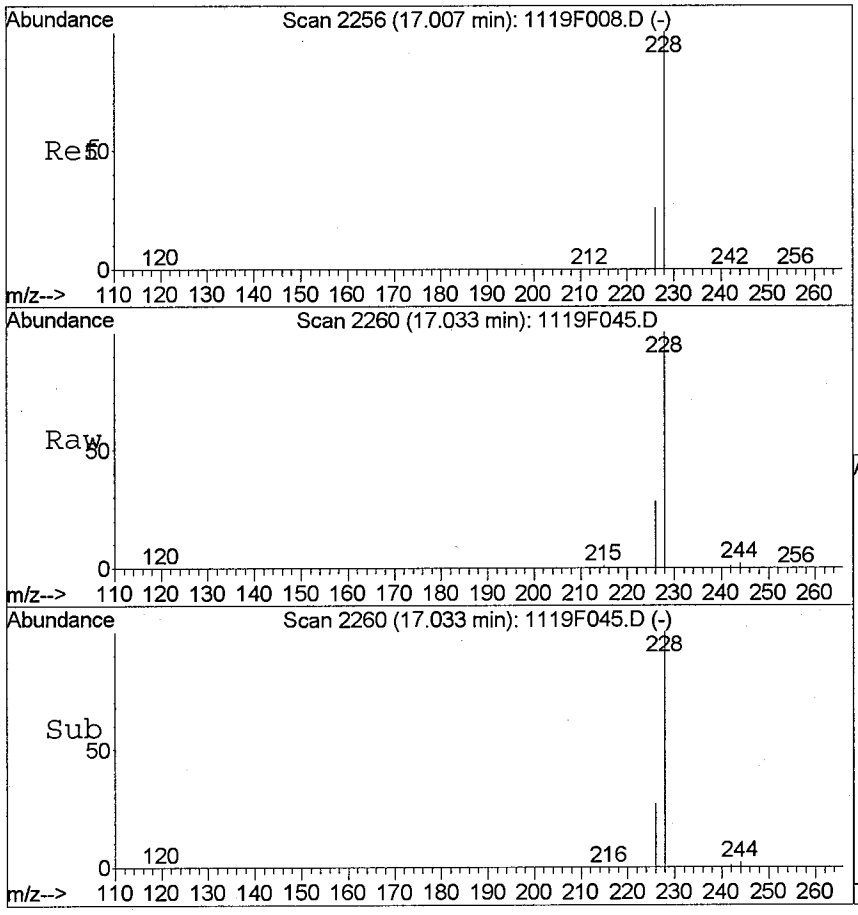


#40
C1-Fluoranthenes/Pyrenes
Concen: 13136.42 ng/ml m
RT: 15.02 min Scan# 1928
Delta R.T. -0.53 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:216 Resp: 3905381

Ion	Ratio	Lower	Upper
216	100		
215	76.6	54.8	114.8

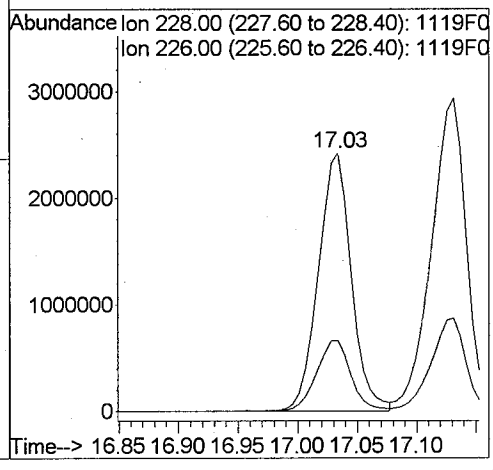


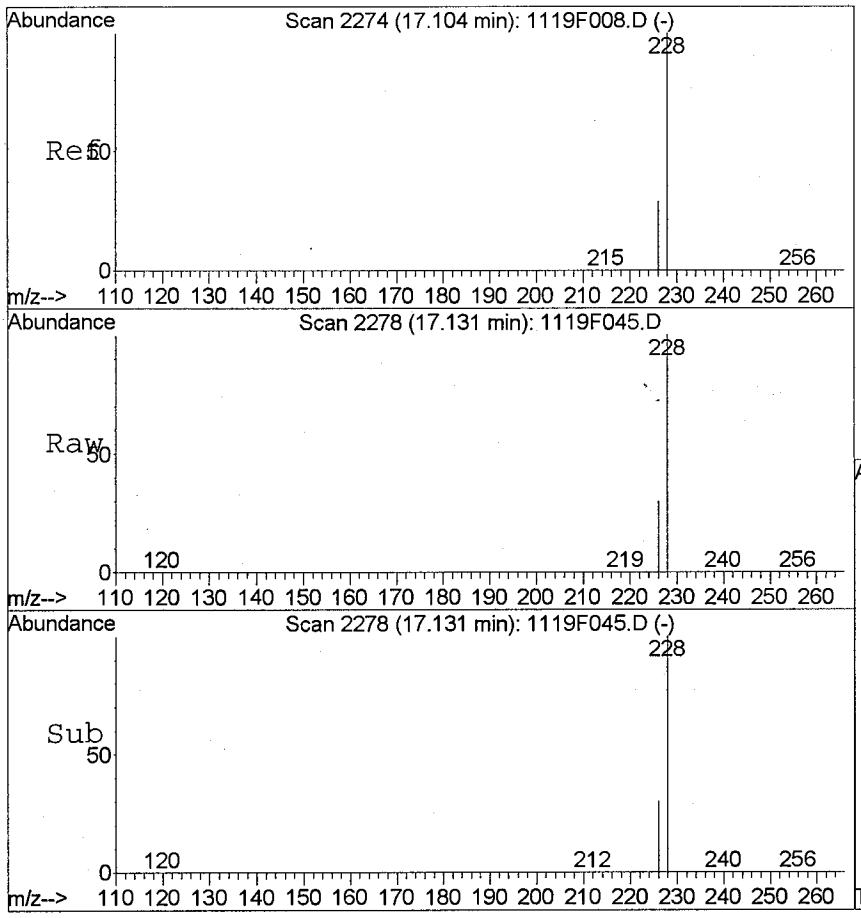


#42
Benz(a)anthracene
Concen: 20569.57 ng/ml
RT: 17.03 min Scan# 2260
Delta R.T. 0.03 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:228 Resp: 4655790

Ion	Ratio	Lower	Upper
228	100		
226	27.5	0.0	55.8

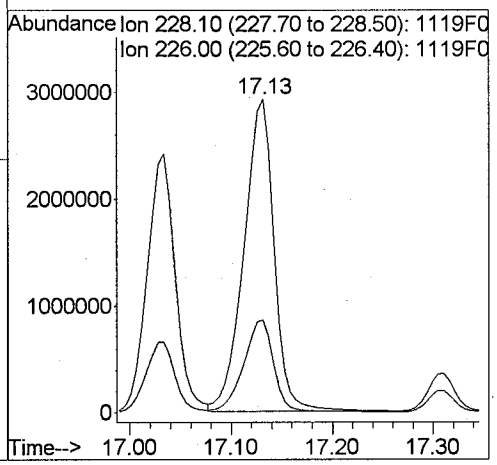


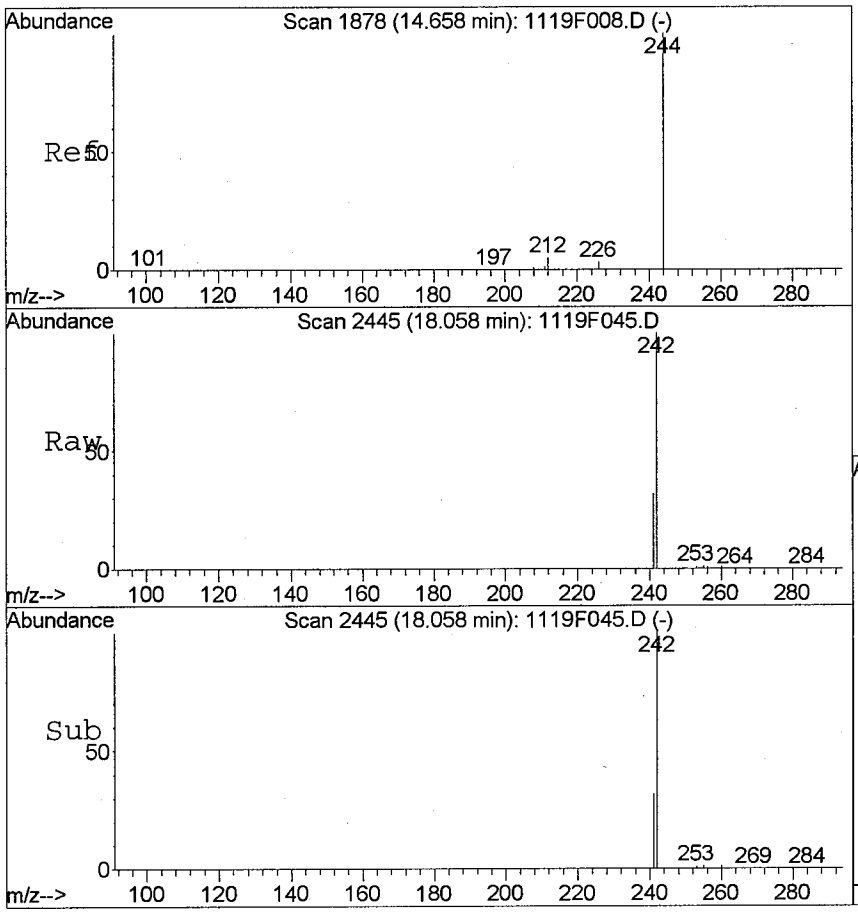


#43
Chrysene
Concen: 24974.00 ng/ml
RT: 17.13 min Scan# 2278
Delta R.T. 0.03 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:228 Resp: 6044661

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	58.5

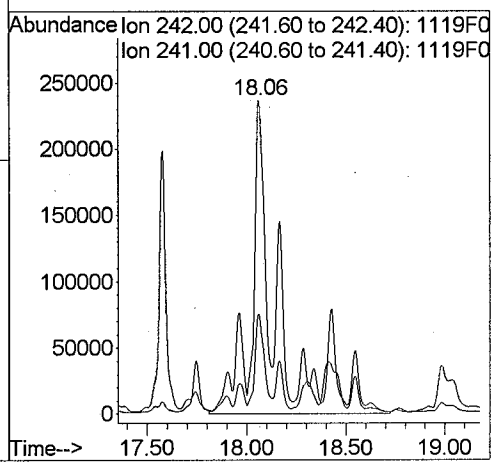


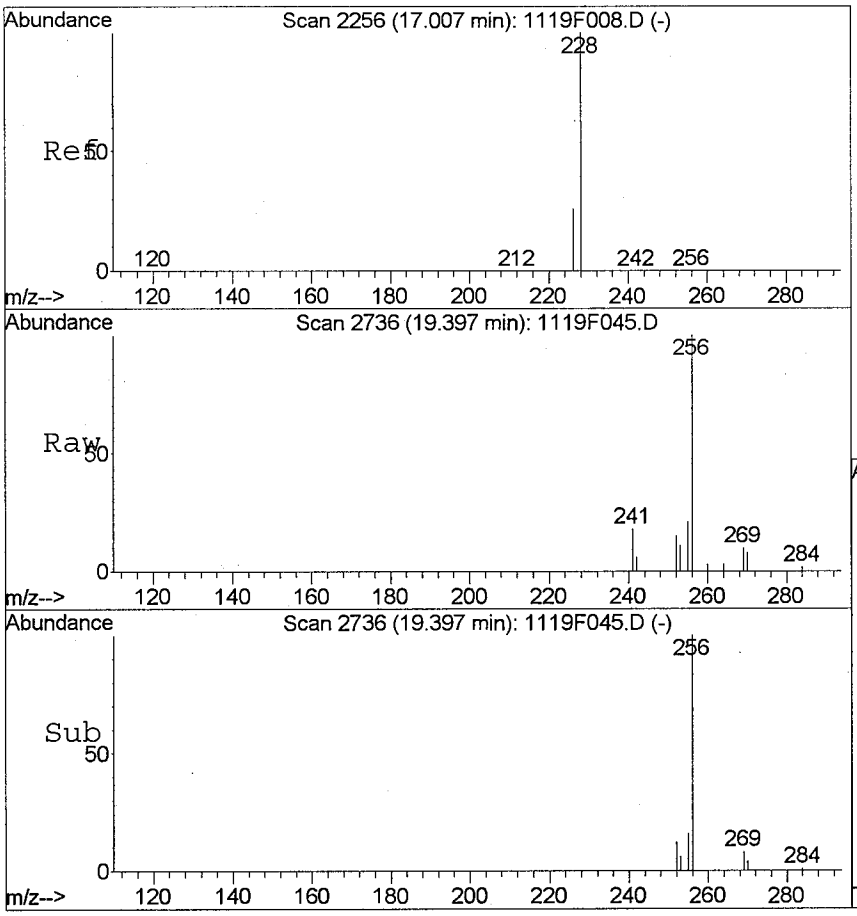


#44
C1-Chrysenes
Concen: 8861.43 ng/ml m
RT: 18.06 min Scan# 2445
Delta R.T. -0.09 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:242 Resp: 2144804

Ion	Ratio	Lower	Upper
242	100		
241	31.8	0.1	60.1

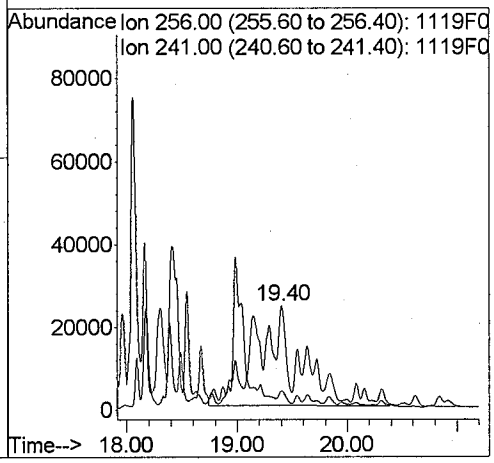


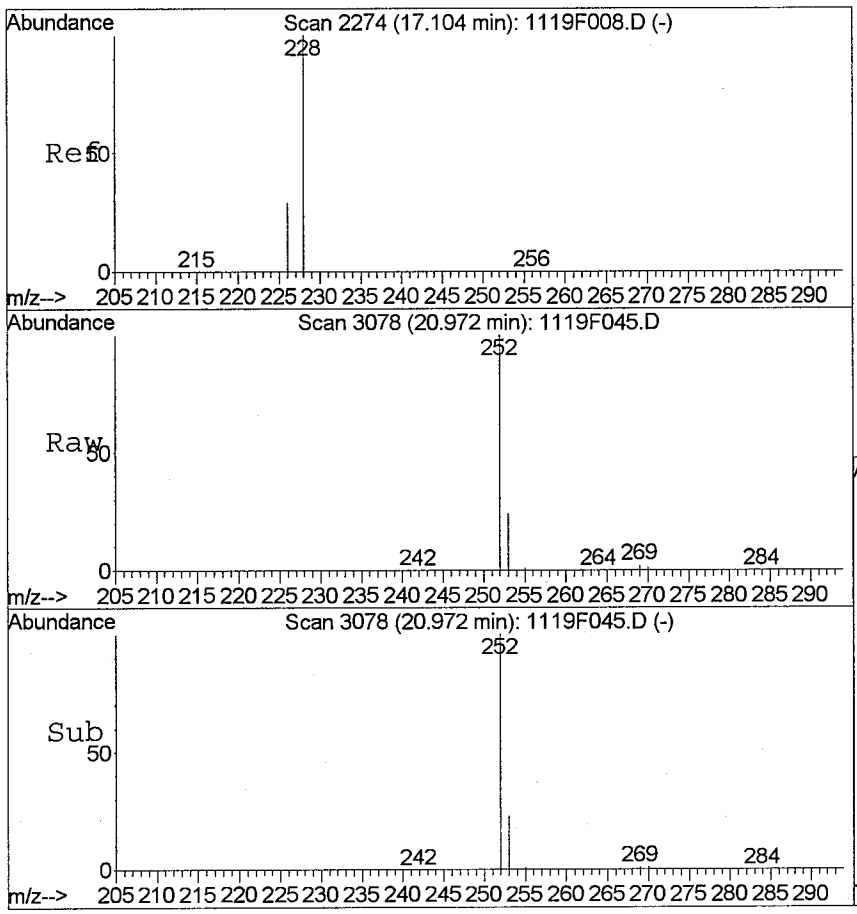


#45
C2-Chrysenes
Concen: 2887.60 ng/ml m
RT: 19.40 min Scan# 2736
Delta R.T. -0.12 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:256 Resp: 698909

Ion	Ratio	Lower	Upper
256	100		
241	17.9	7.8	67.8

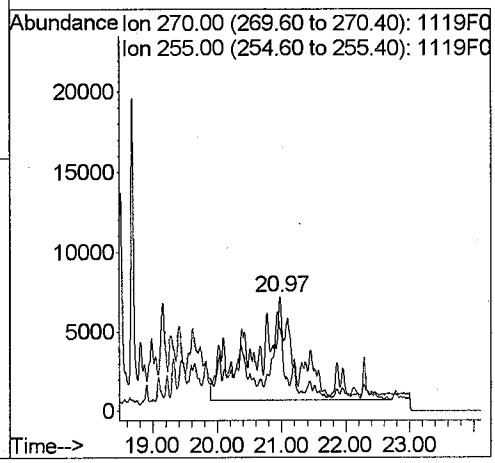


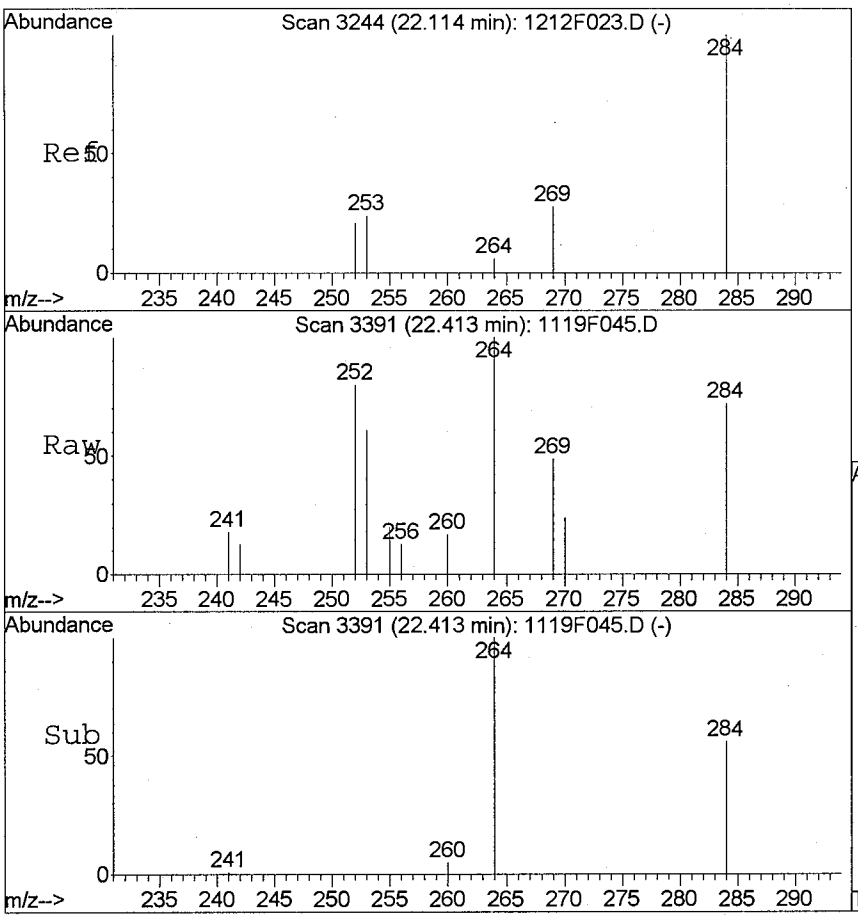


#46
C3-Chrysenes
Concen: 1315.65 ng/ml m
RT: 20.97 min Scan# 3078
Delta R.T. -0.25 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:270 Resp: 318437

Ion	Ratio	Lower	Upper
270	100		
255	71.0	0.0	56.7#

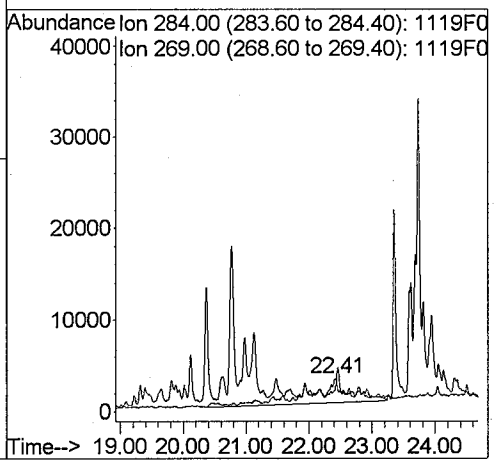


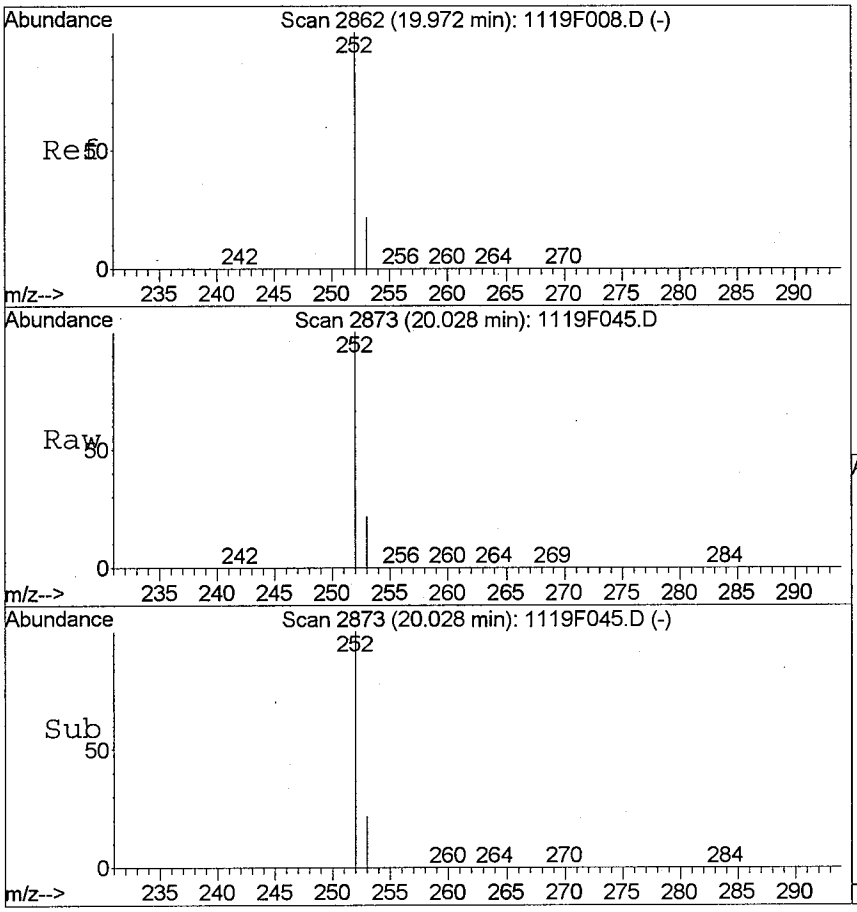


#47
C4-Chrysenes
Concen: 509.86 ng/ml m
RT: 22.41 min Scan# 3391
Delta R.T. -0.12 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:284 Resp: 123405

Ion	Ratio	Lower	Upper
284	100		
269	67.3	16.2	76.2

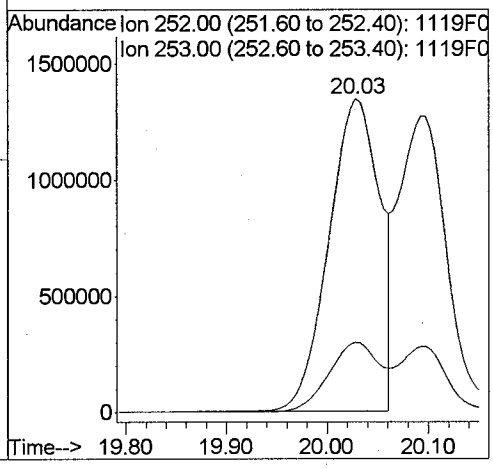


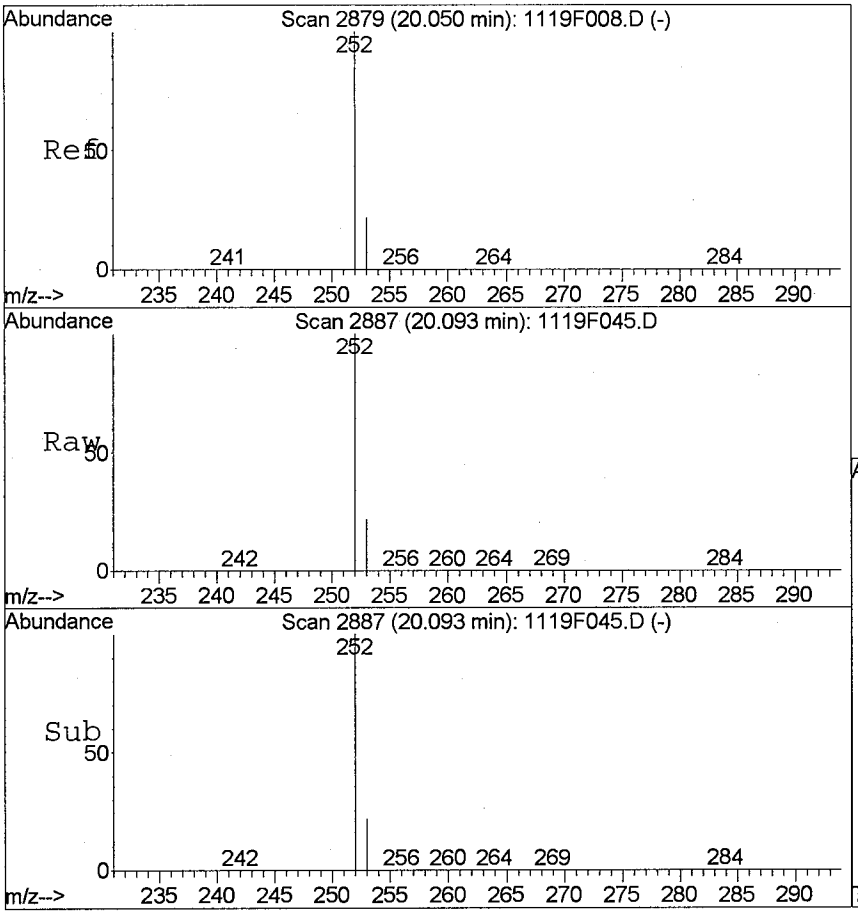


#49
Benzo(b)fluoranthene
Concen: 25649.81 ng/ml
RT: 20.03 min Scan# 2873
Delta R.T. 0.06 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:252 Resp: 4694674

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.8

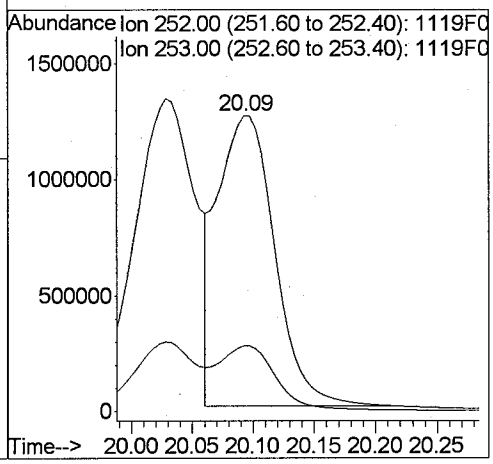


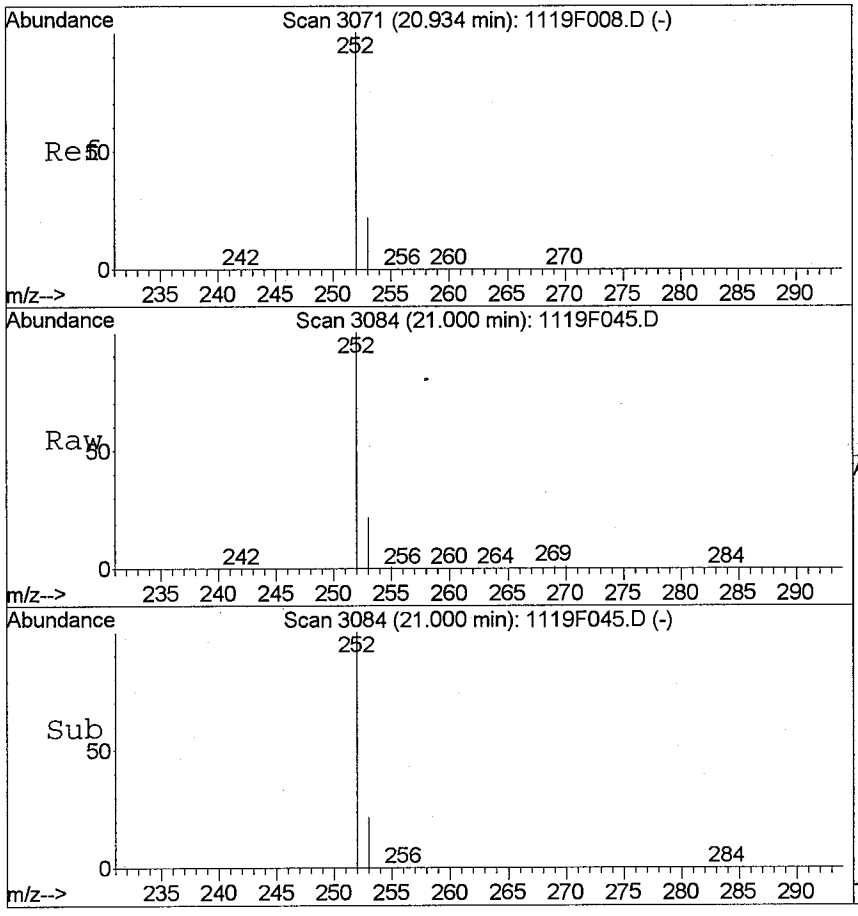


#50
Benzo(k)fluoranthene
Concen: 17594.18 ng/ml m
RT: 20.09 min Scan# 2887
Delta R.T. 0.04 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:252 Resp: 4086019

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.2

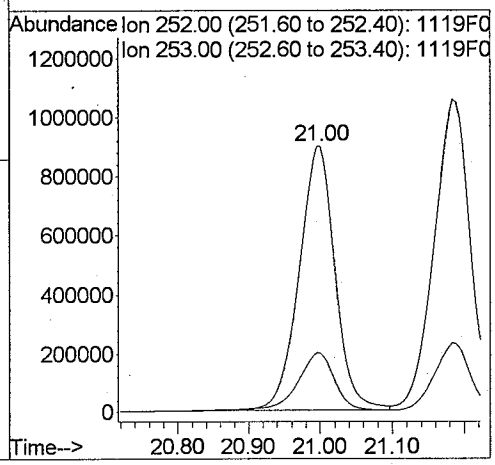


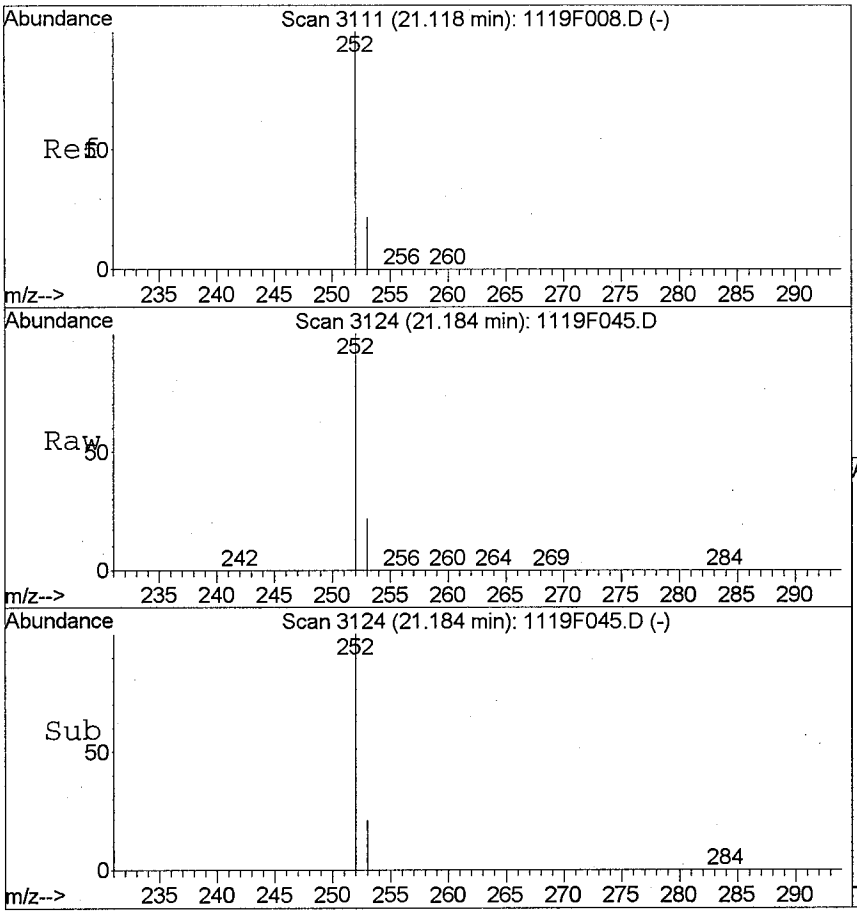


#51
Benzo(e)pyrene
Concen: 15109.23 ng/ml
RT: 21.00 min Scan# 3084
Delta R.T. 0.07 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:252 Resp: 3104983

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.8

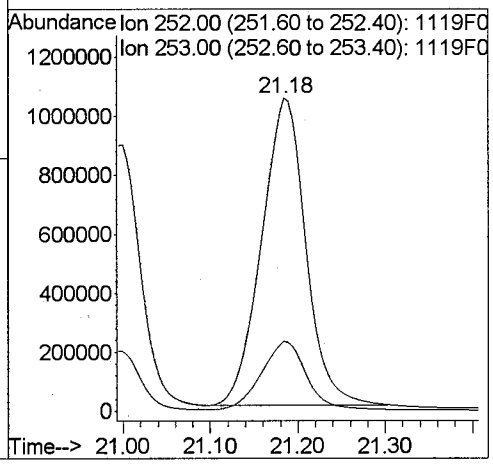


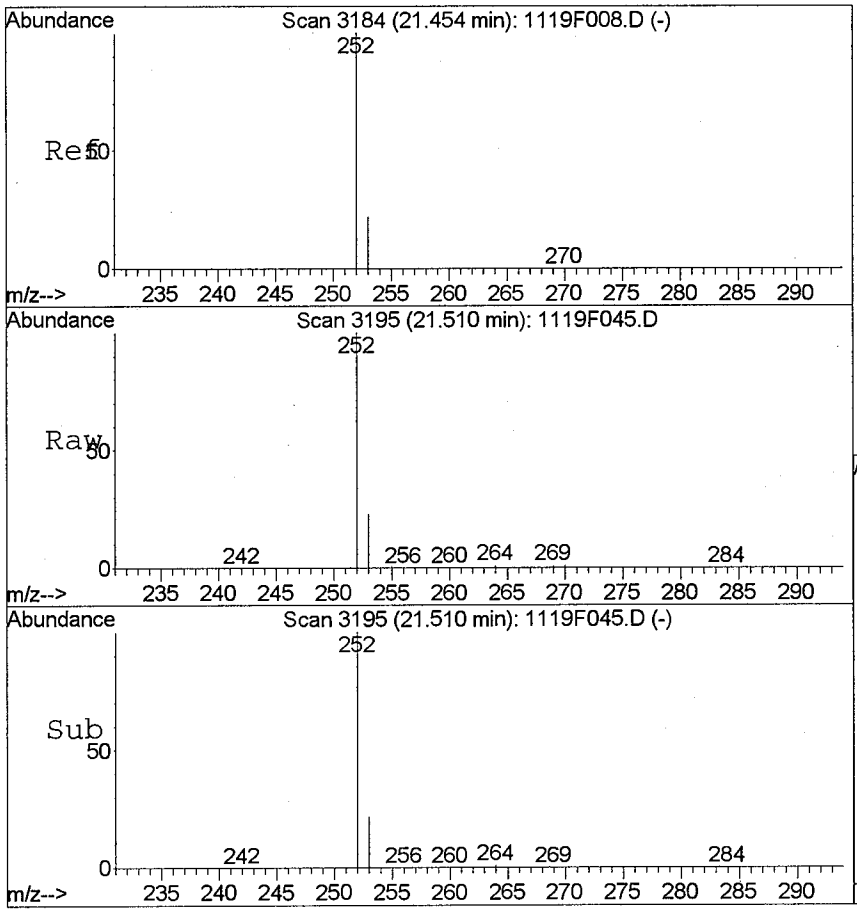


#52
Benzo(a)pyrene
Concen: 23401.93 ng/ml
RT: 21.18 min Scan# 3124
Delta R.T. 0.07 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:252 Resp: 3643290

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9

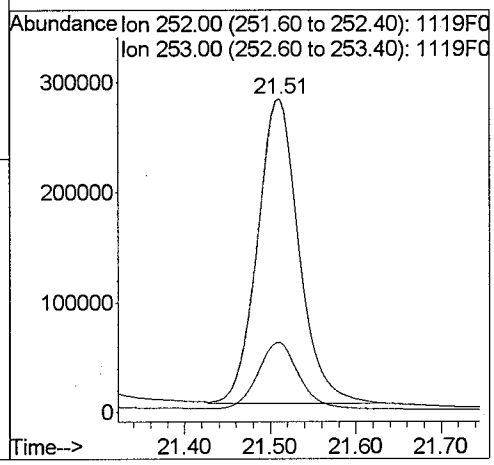


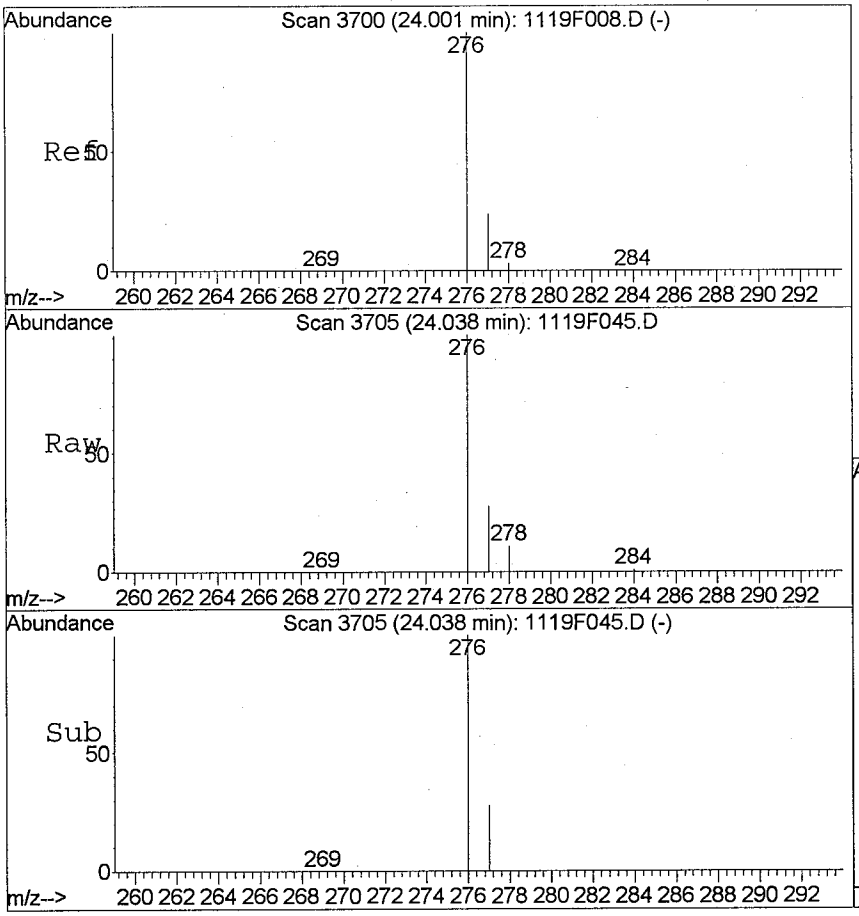


#53
Perylene
Concen: 5331.29 ng/ml
RT: 21.51 min Scan# 3195
Delta R.T. 0.06 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:252 Resp: 931696

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.6

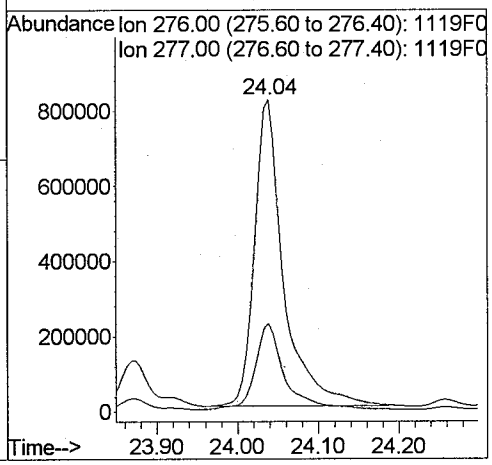


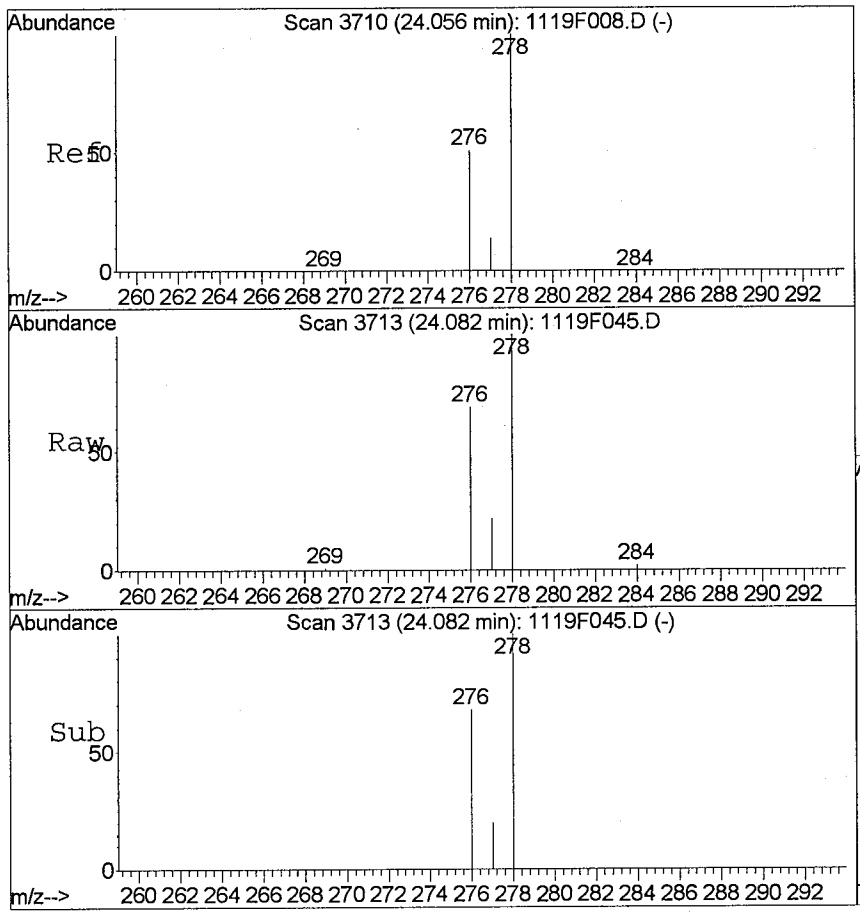


#54
Indeno(1,2,3-cd)pyrene
Concen: 21493.08 ng/ml
RT: 24.04 min Scan# 3705
Delta R.T. 0.04 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:276 Resp: 2034120

Ion	Ratio	Lower	Upper
276	100		
277	27.9	0.0	53.6

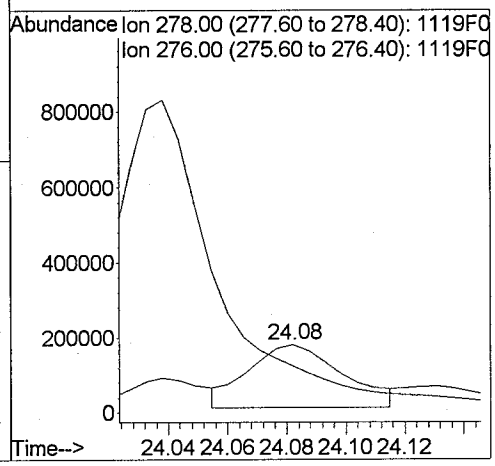


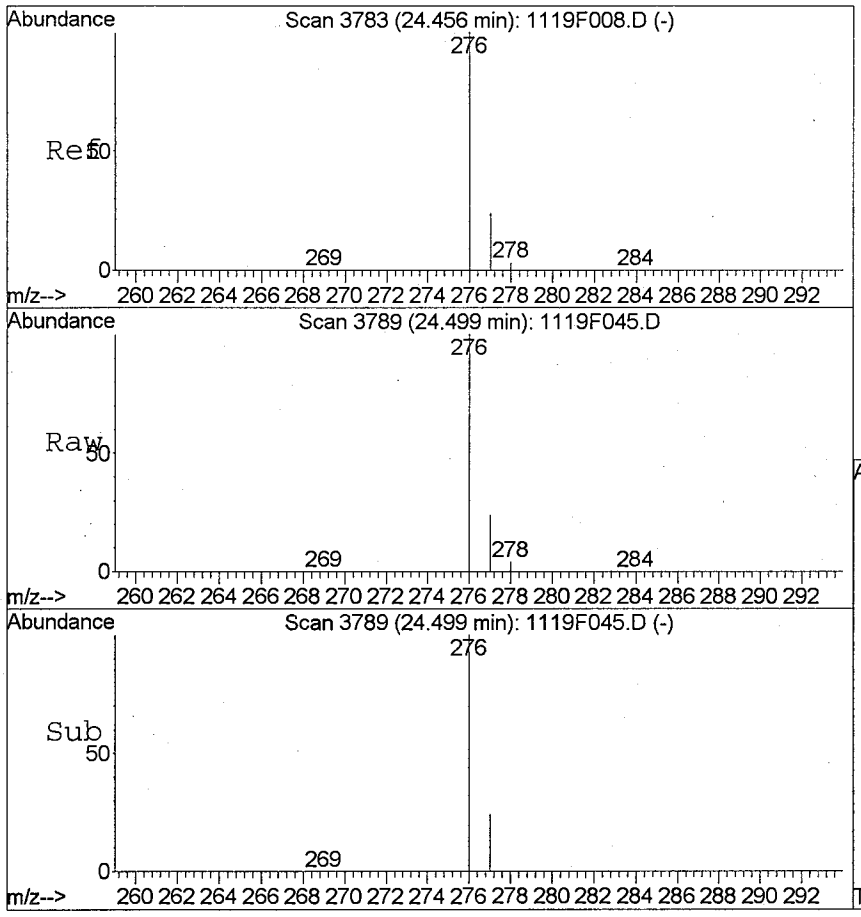


#55
Dibenz(a,h)anthracene
Concen: 2767.22 ng/ml m
RT: 24.08 min Scan# 3713
Delta R.T. 0.03 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:278 Resp: 376372

Ion	Ratio	Lower	Upper
278	100		
276	69.3	21.1	81.1

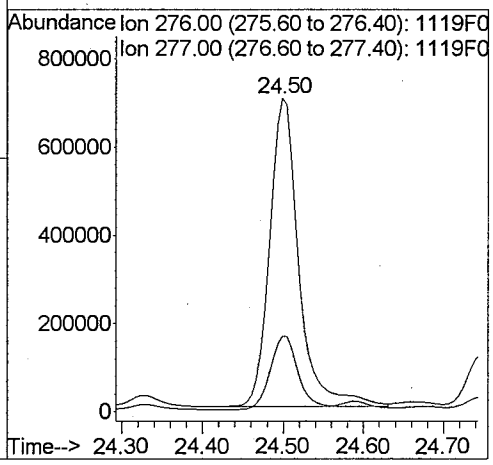




#56
Benzo(g,h,i)perylene
Concen: 11274.17 ng/ml
RT: 24.50 min Scan# 3789
Delta R.T. 0.04 min
Lab File: 1119F045.D
Acq: 19 Nov 2003 9:15 pm

Tgt Ion:276 Resp: 1768958

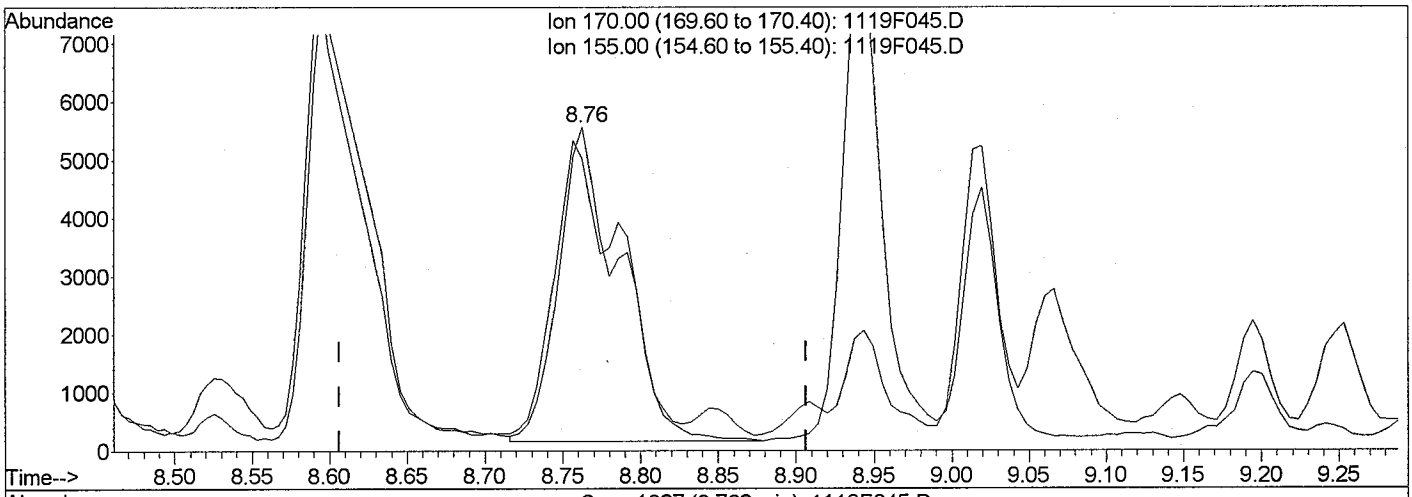
Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	53.6

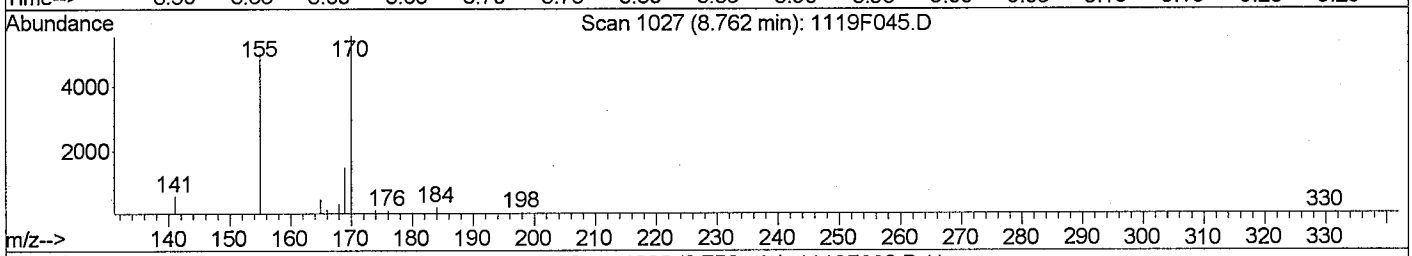


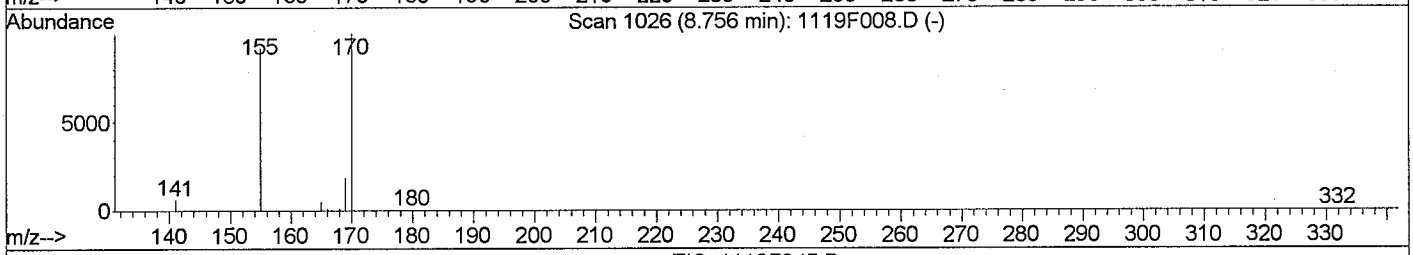
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 95.73ng/ml

response 14840

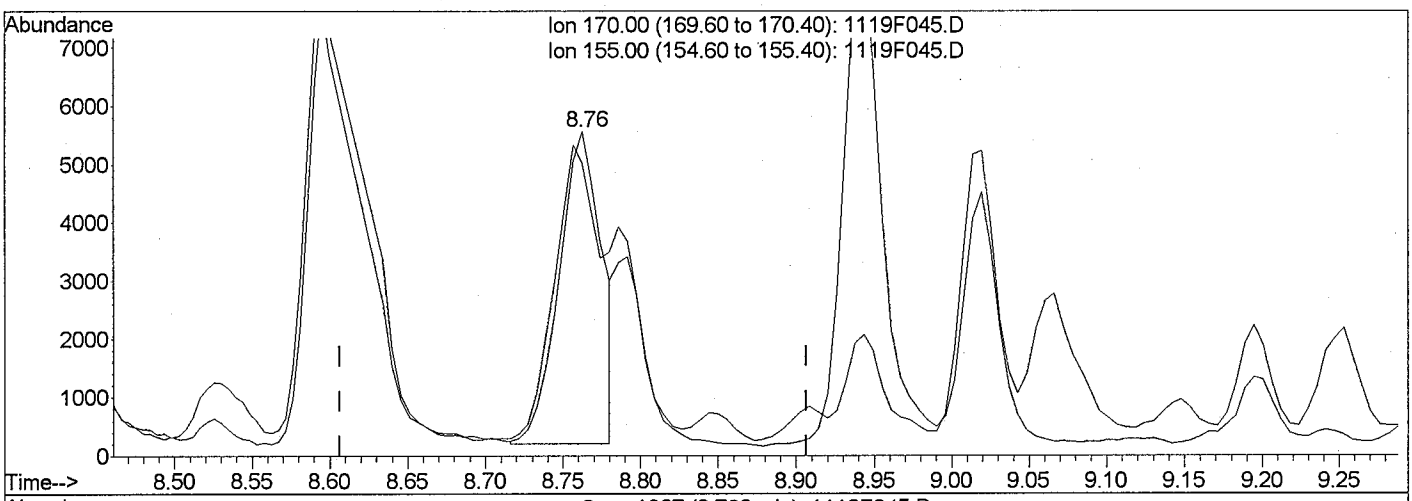
Ion	Exp%	Act%
170.00	100	100
155.00	91.50	87.67
0.00	0.00	0.00
0.00	0.00	0.00

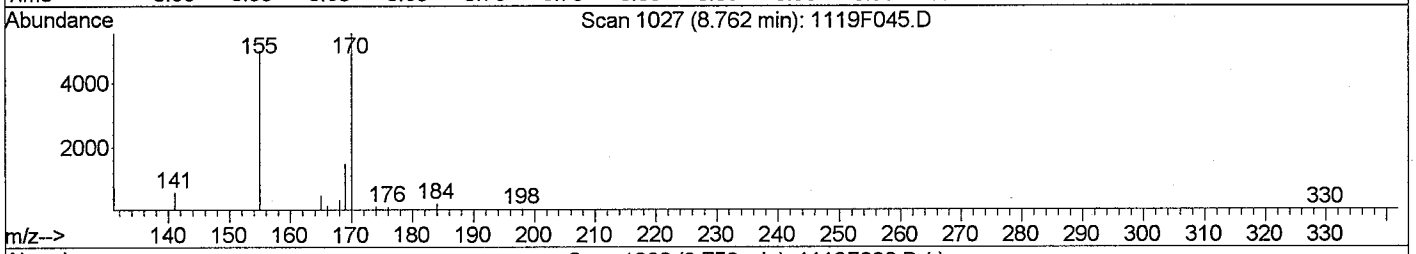
1119F045.D 1107ALK.M Thu Nov 20 14:23:14 2003

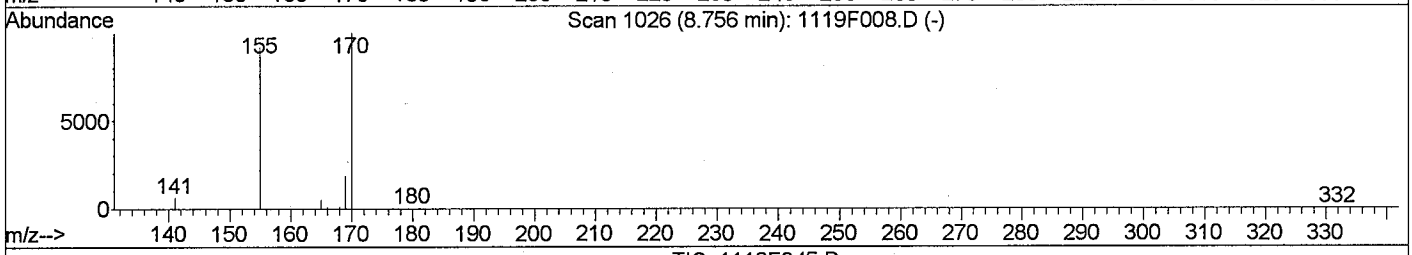
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 65.72ng/ml m

response 10187

Ion	Exp%	Act%
170.00	100	100
155.00	91.50	90.20
0.00	0.00	0.00
0.00	0.00	0.00

J11/24/13

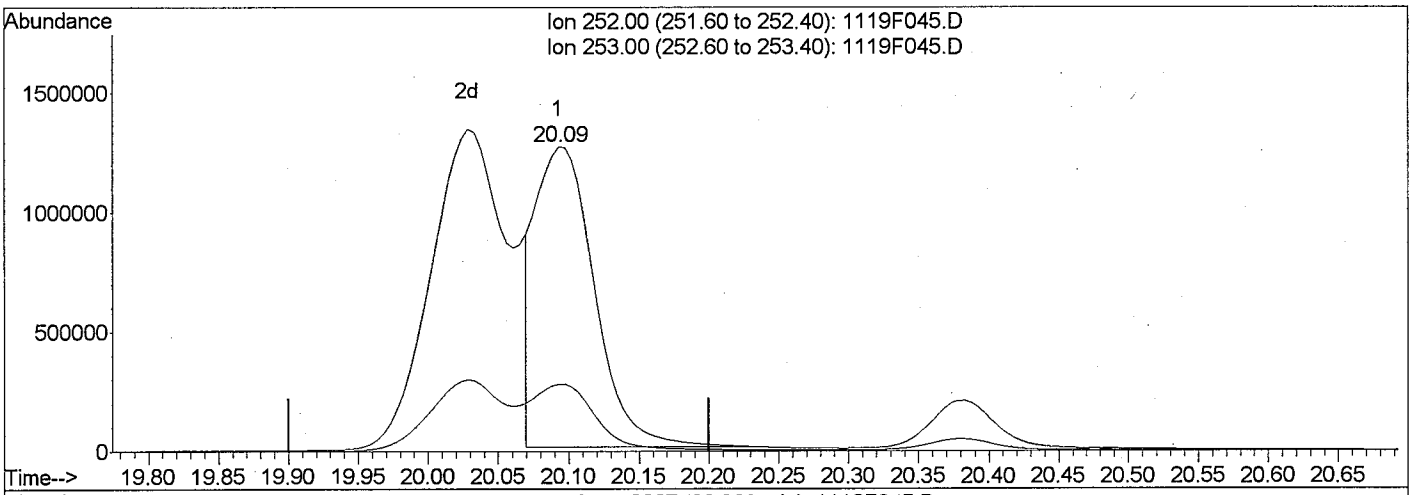
Q 11/24/13
over integrated

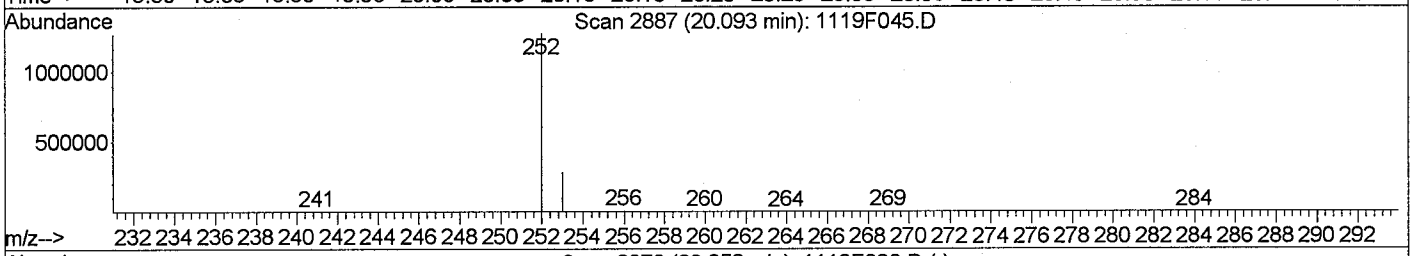
1119F045.D 1107ALK.M Thu Nov 20 14:23:19 2003

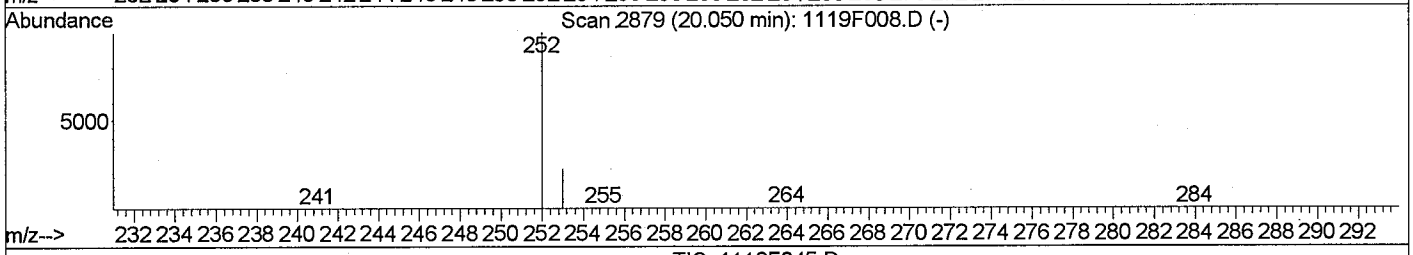
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:23 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(50) Benzo(k)fluoranthene (T)

20.09min 15627.15ng/ml

response 3629202

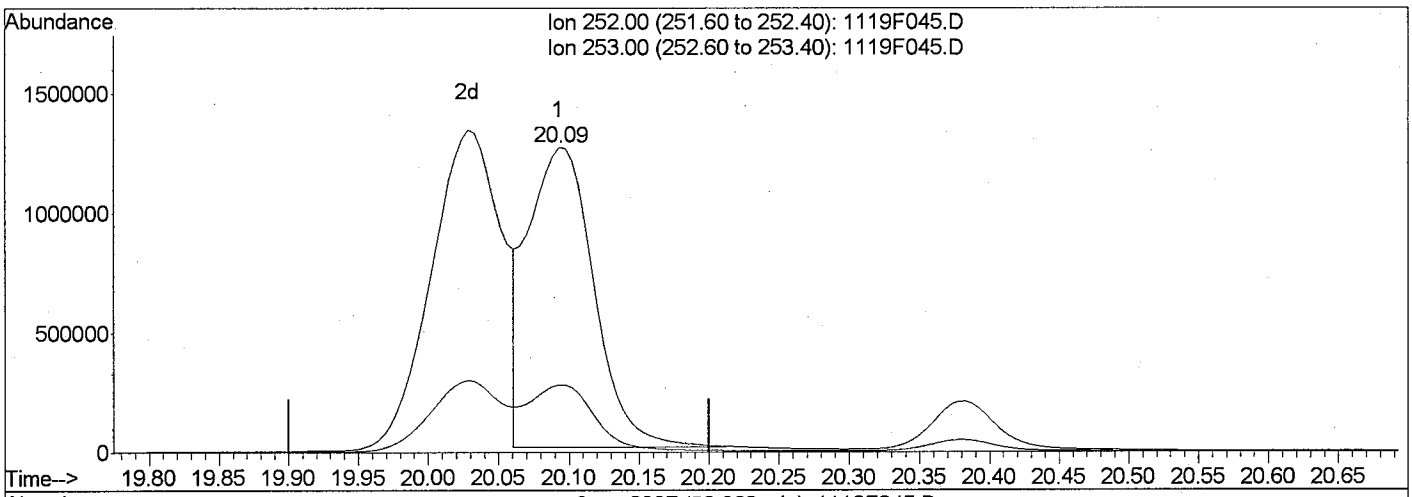
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.10
0.00	0.00	0.00
0.00	0.00	0.00

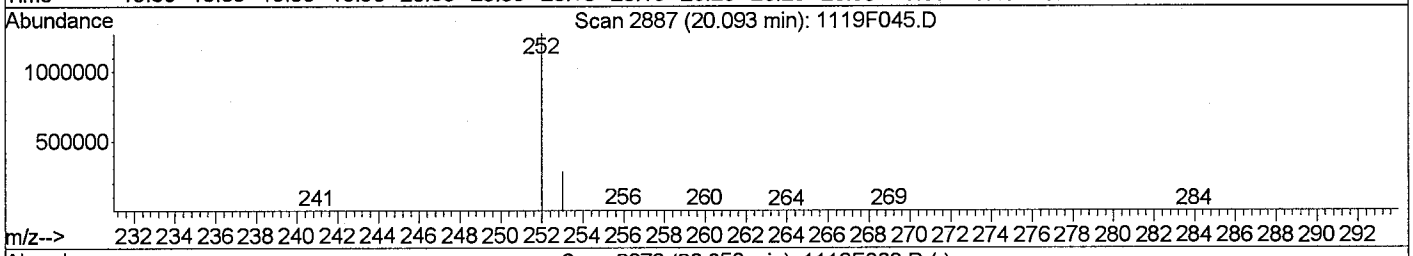
1119F045.D 1107ALK.M Thu Nov 20 14:23:43 2003

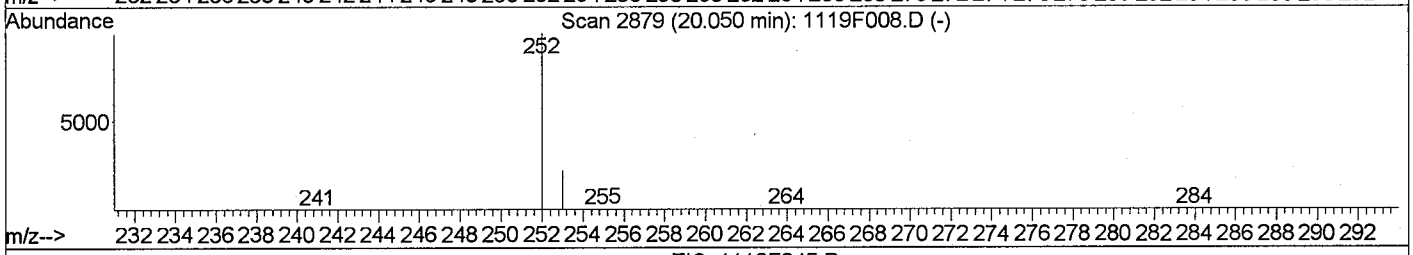
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(50) Benzo(k)fluoranthene (T)

20.09min 17594.18ng/ml m

response 4086019

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.18
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

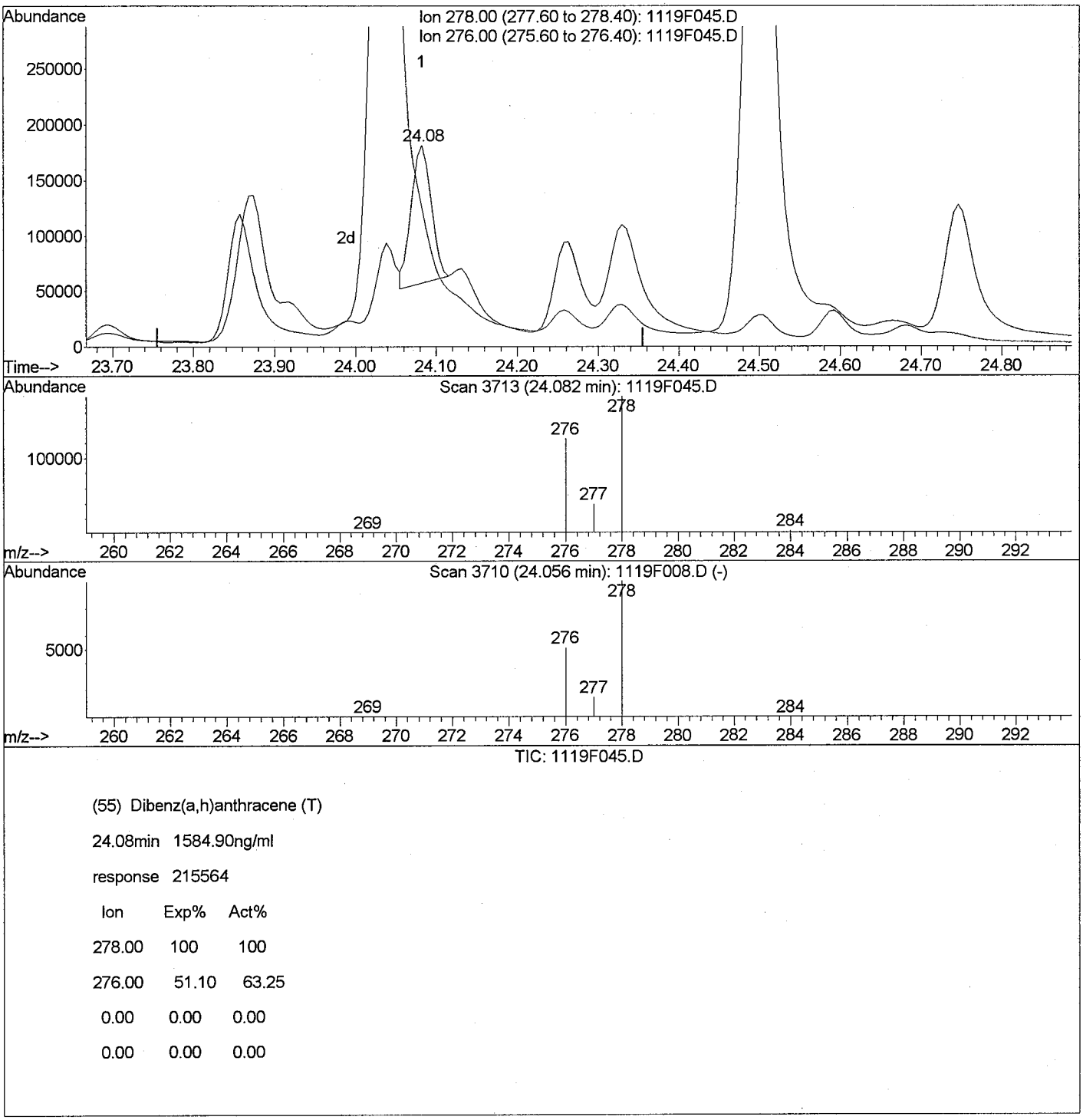
11/24/13 incomplete

1119F045.D 1107ALK.M Thu Nov 20 14:23:48 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(55) Dibenz(a,h)anthracene (T)

24.08min 1584.90ng/ml

response 215564

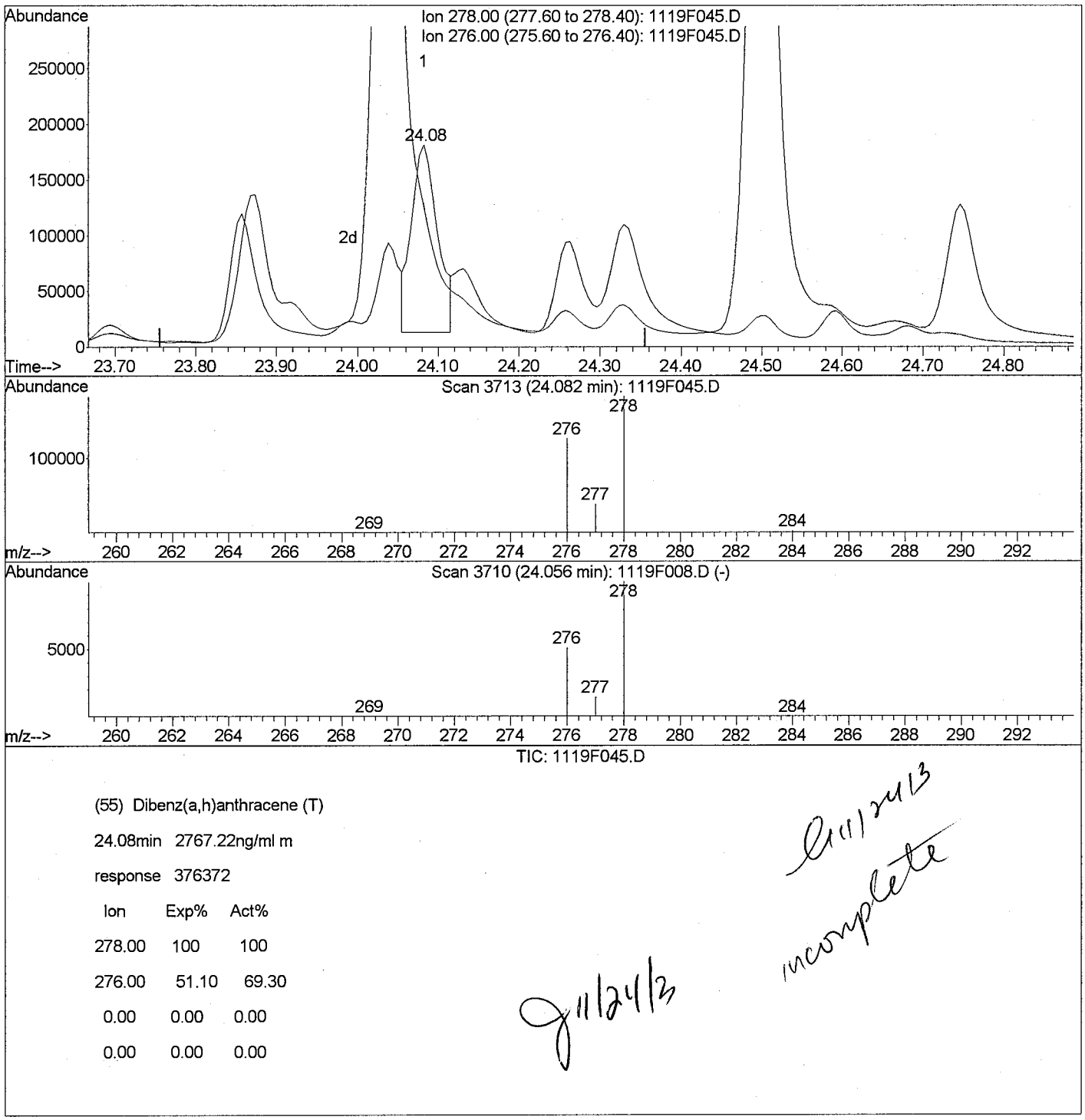
Ion	Exp%	Act%
278.00	100	100
276.00	51.10	63.25
0.00	0.00	0.00
0.00	0.00	0.00

1119F045.D 1107ALK.M Thu Nov 20 14:23:54 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:24 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.08min 2767.22ng/ml m

response 376372

Ion	Exp%	Act%
278.00	100	100
276.00	51.10	69.30
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/21/03 incomplete

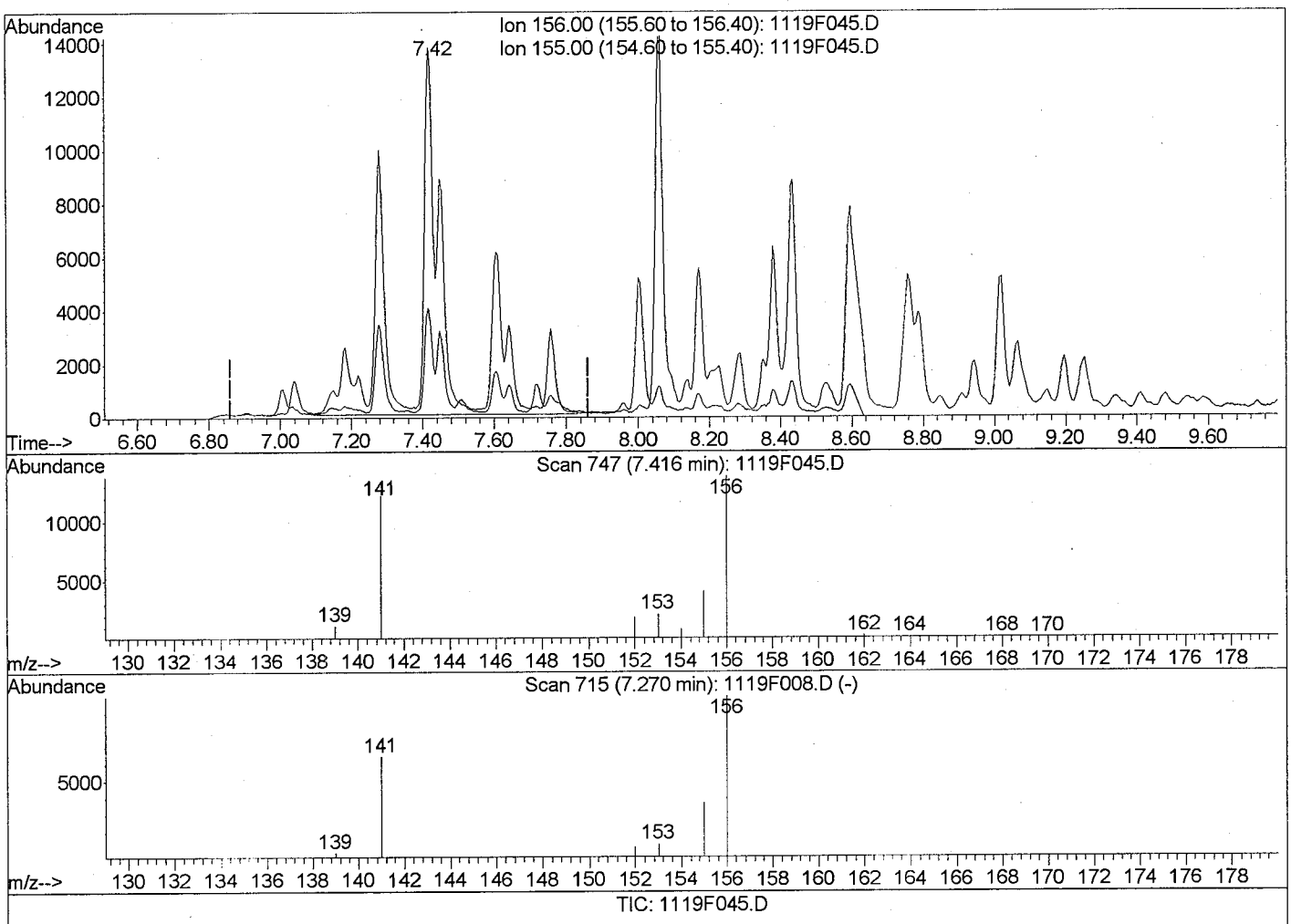
1119F045.D 1107ALK.M Thu Nov 20 14:23:59 2003

Quantitation Report (Qedit)

File : J:\MS11\DATA\111903\1119F045.D
On : 19 Nov 2003 9:15 pm
ple : K2308433-009
sc :
Integration Params: RTEINT.P
Quant Time: Nov 21 12:39 2003

Vial: 16
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(8) C2-Naphthalenes (L)

7.42min 269.15ng/ml m

response 84448

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	29.77
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

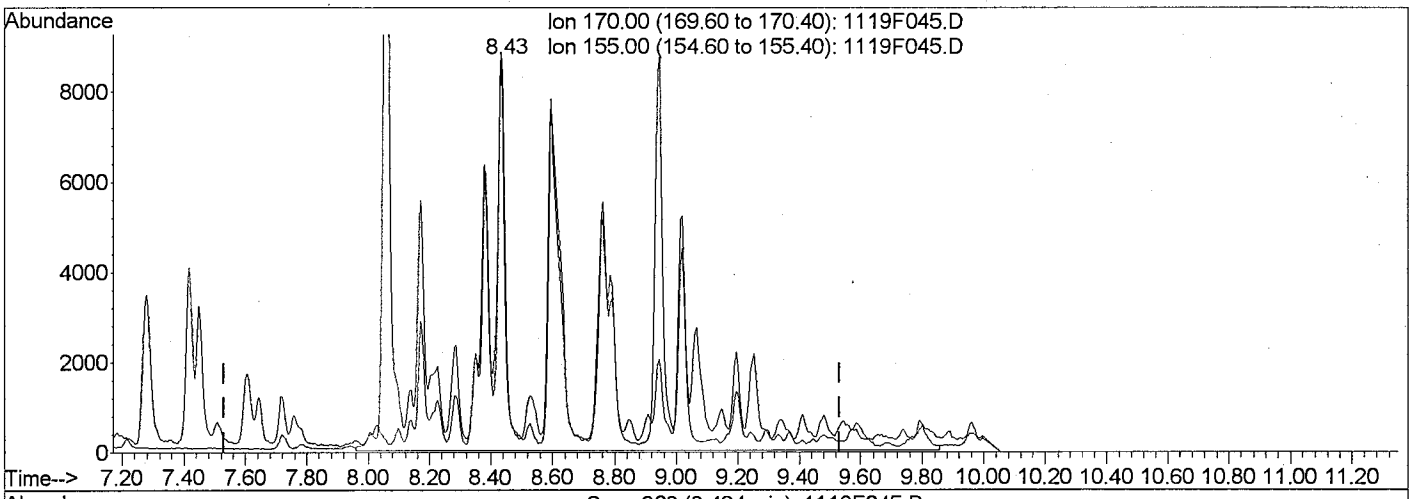
11/24/13

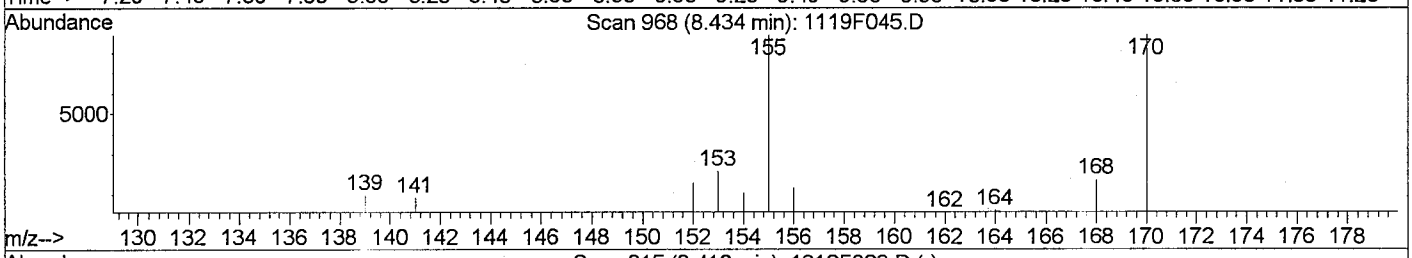
1119F045.D 1107ALK.M Fri Nov 21 12:39:07 2003

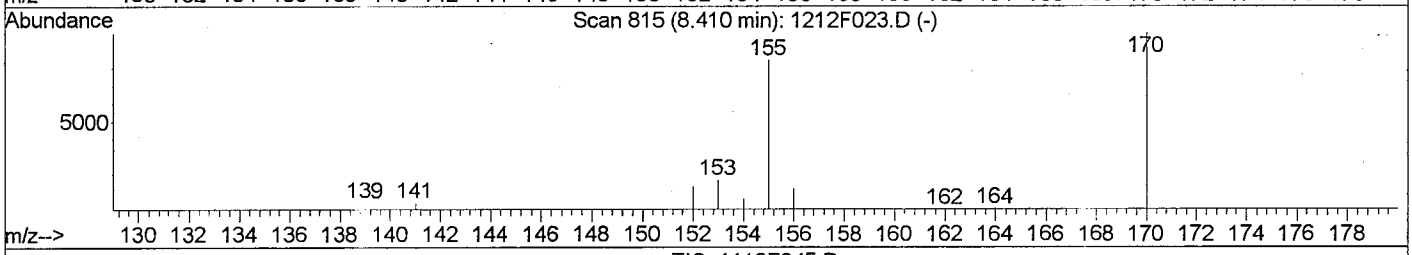
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(9) C3-Naphthalenes (L)

8.43min 355.15ng/ml m

response 111433

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	99.62
0.00	0.00	0.00
0.00	0.00	0.00

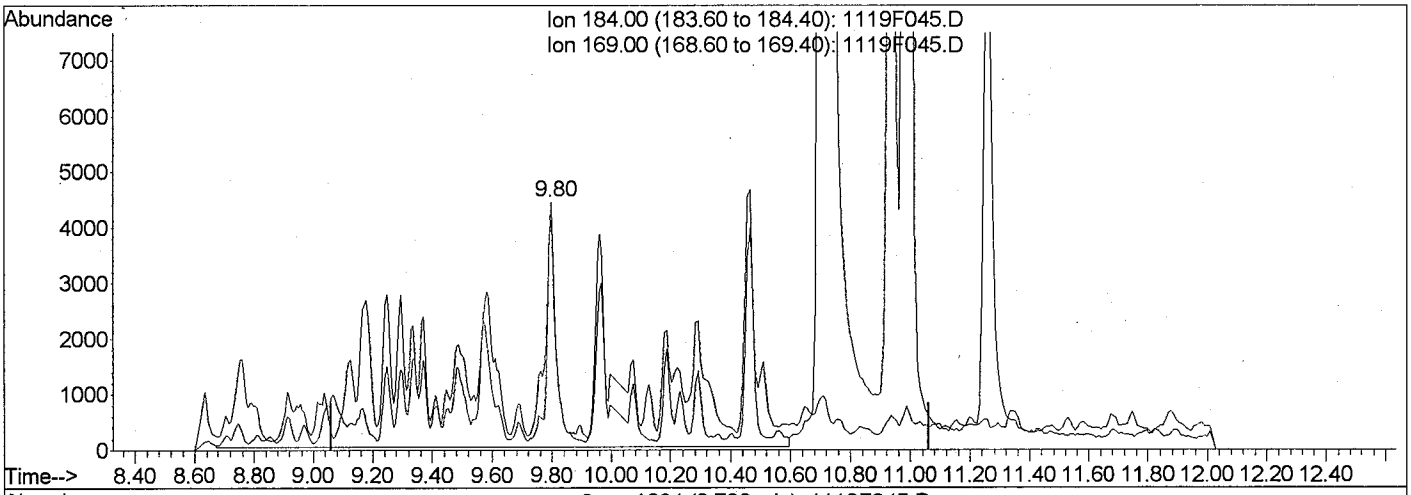
1/24/13 11/21/13

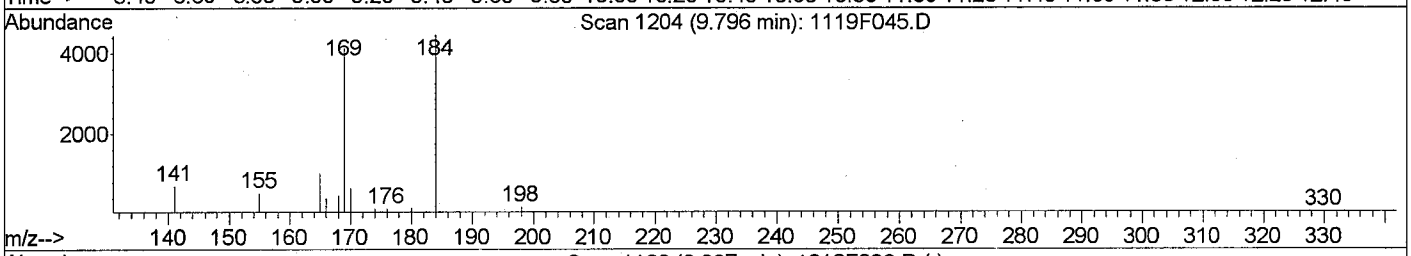
1119F045.D 1107ALK.M Fri Nov 21 12:39:20 2003

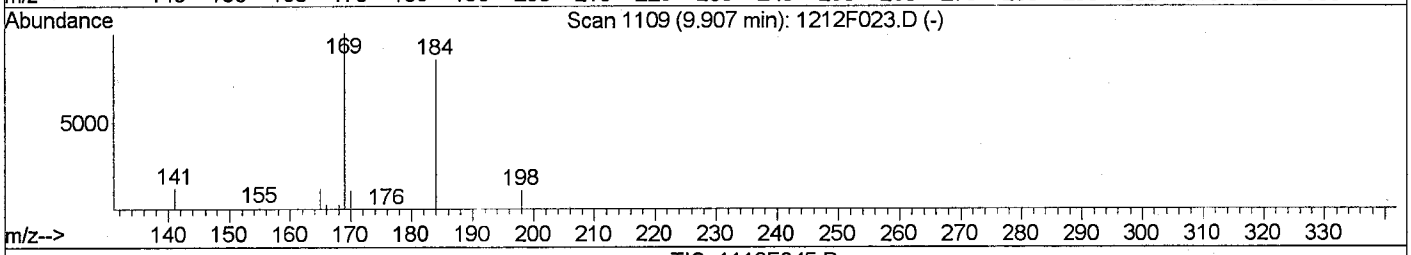
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(10) C4-Naphthalenes (L)

9.80min 227.31ng/ml m

response 71322

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	92.46
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

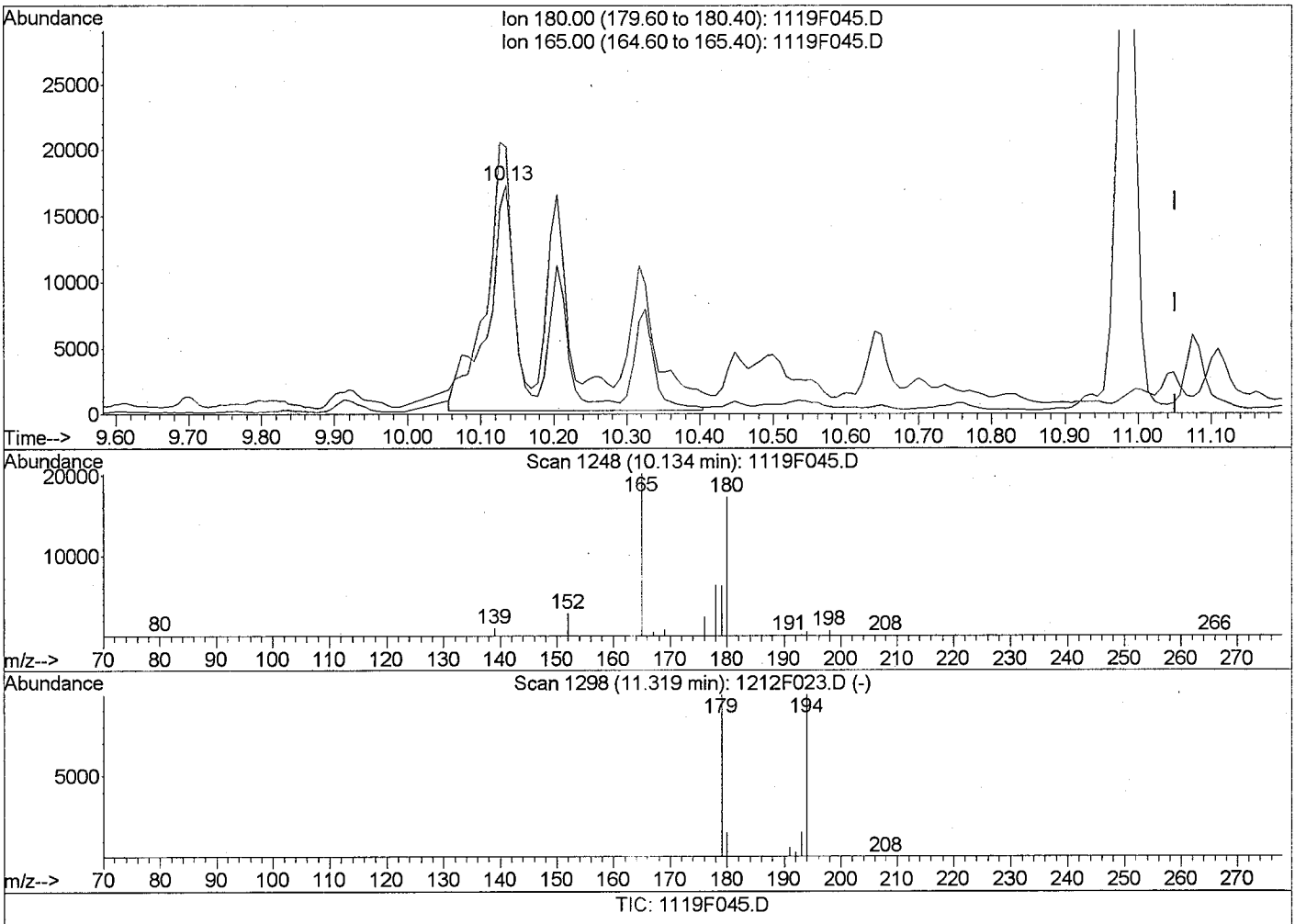
11/24/03

1119F045.D 1107ALK.M Fri Nov 21 12:39:39 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(18) C1-Fluorenes (L)

10.13min 430.26ng/ml m

response 79758

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	117.04#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

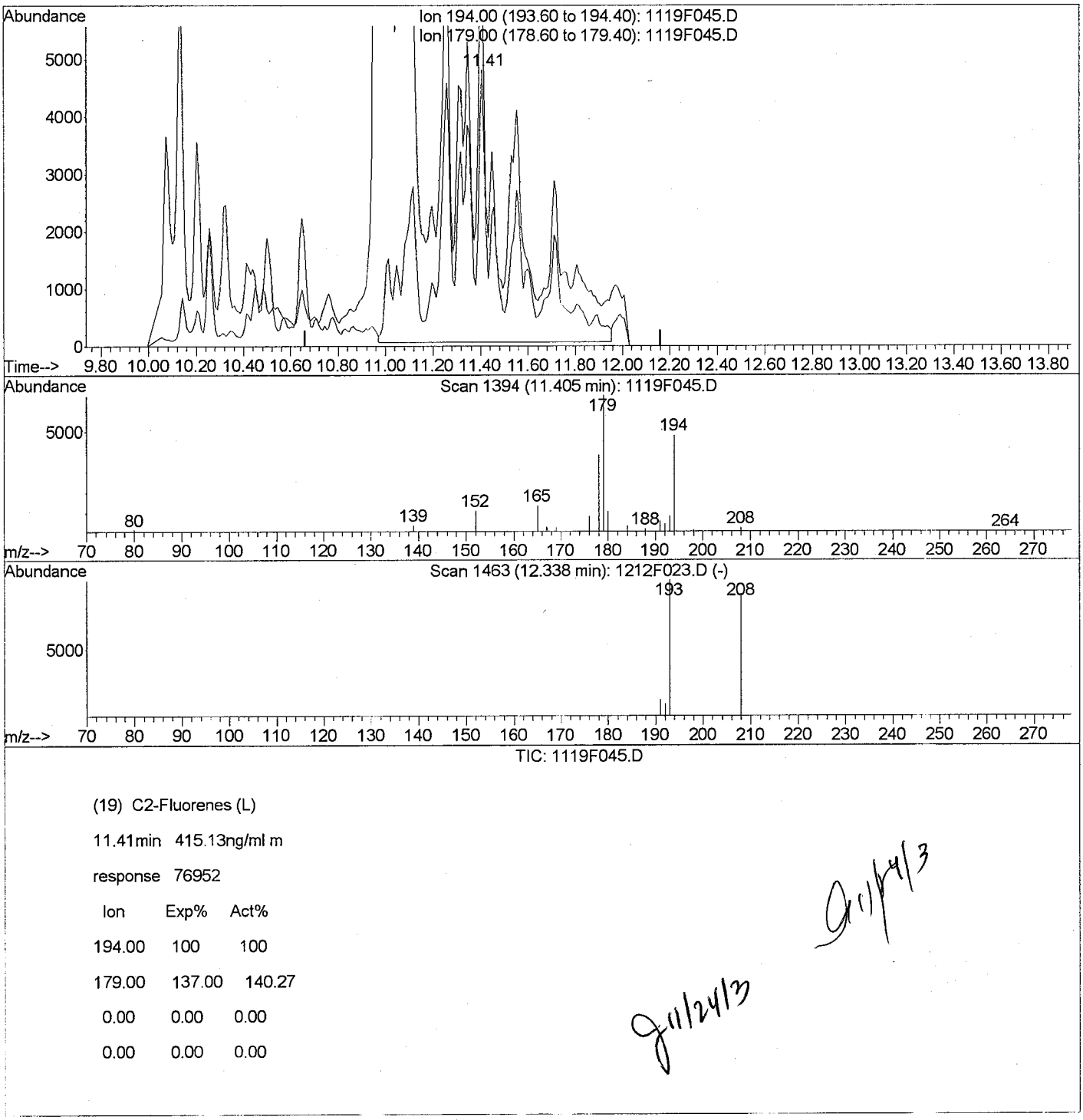
11/24/13

1119F045.D 1107ALK.M Fri Nov 21 12:39:45 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:39 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(19) C2-Fluorenes (L)

11.41min 415.13ng/ml m

response 76952

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	140.27
0.00	0.00	0.00
0.00	0.00	0.00

11/24/3

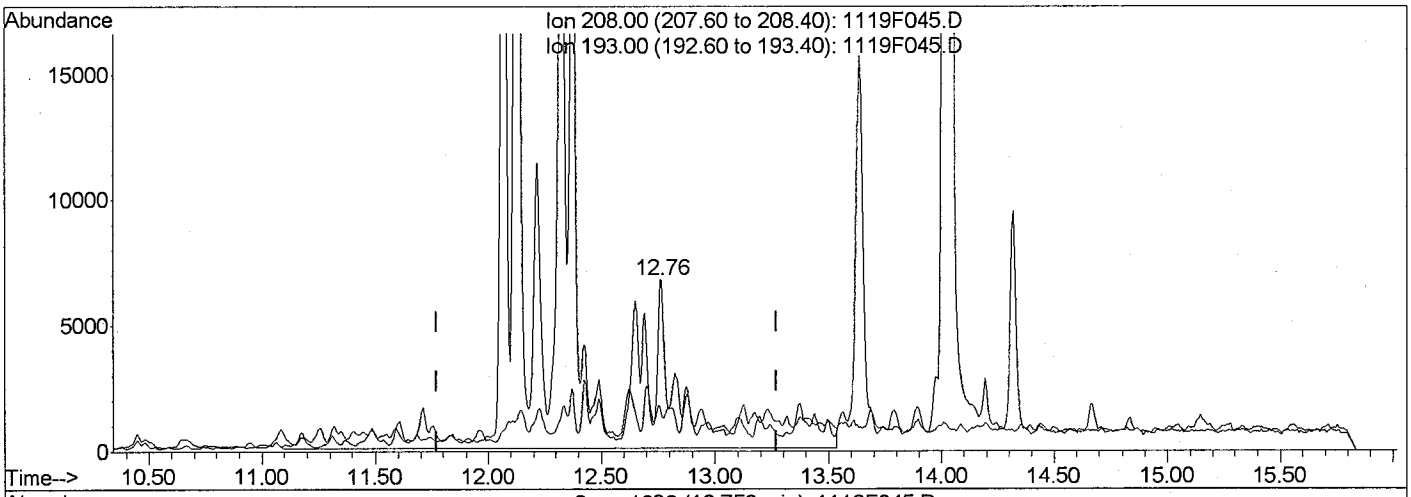
11/24/3

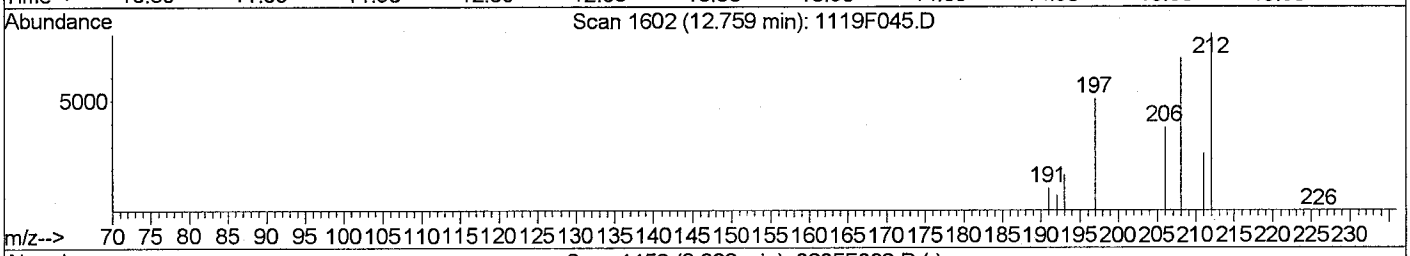
1119F045.D 1107ALK.M Fri Nov 21 12:39:58 2003

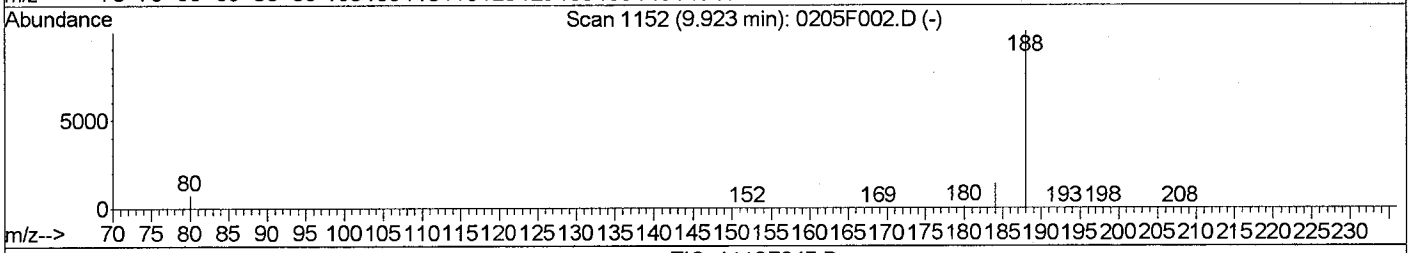
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(20) C3-Fluorenes (L)

12.76min 824.66ng/ml m

response 152867

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	25.76#
0.00	0.00	0.00
0.00	0.00	0.00

over integrated - see report
J 11/24/13

J 11/24/13

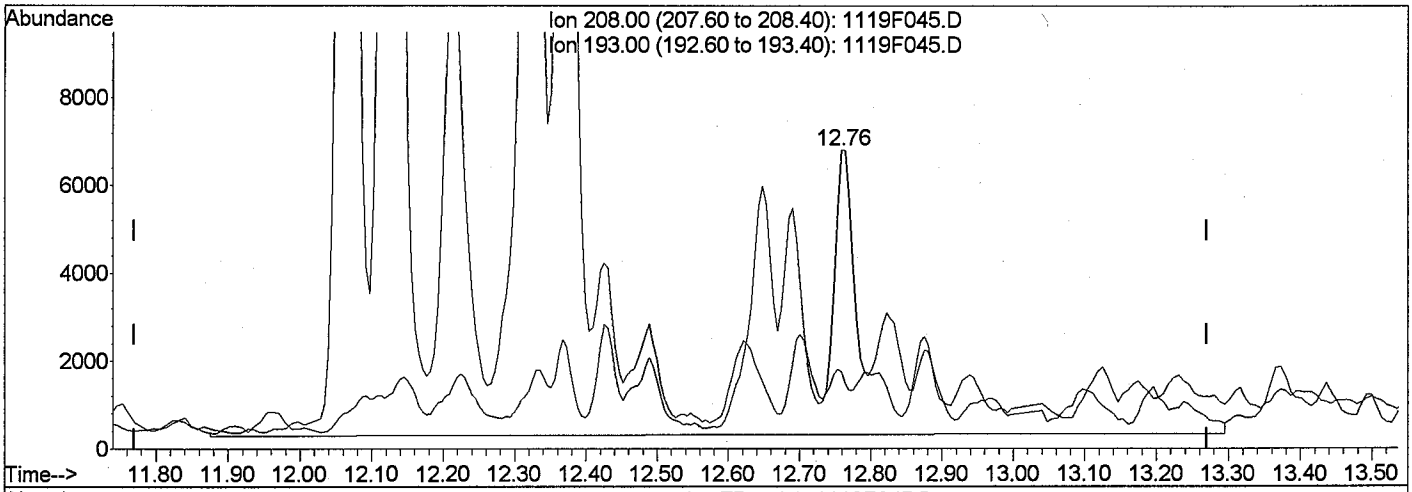
J 11/24/13

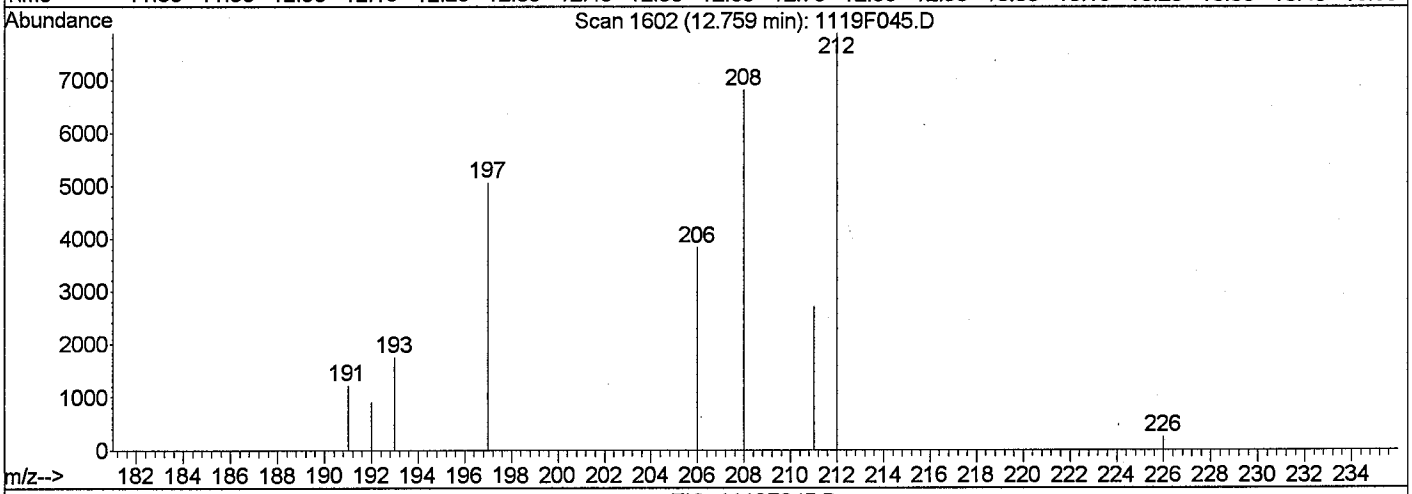
1119F045.D 1107ALK.M Fri Nov 21 12:40:14 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 21:15 Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:30 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration





TIC: 1119F045.D

(20) C3-Fluorenes (L)

12.76min 535.03ng/ml m

response 99179

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	25.76#
0.00	0.00	0.00
0.00	0.00	0.00

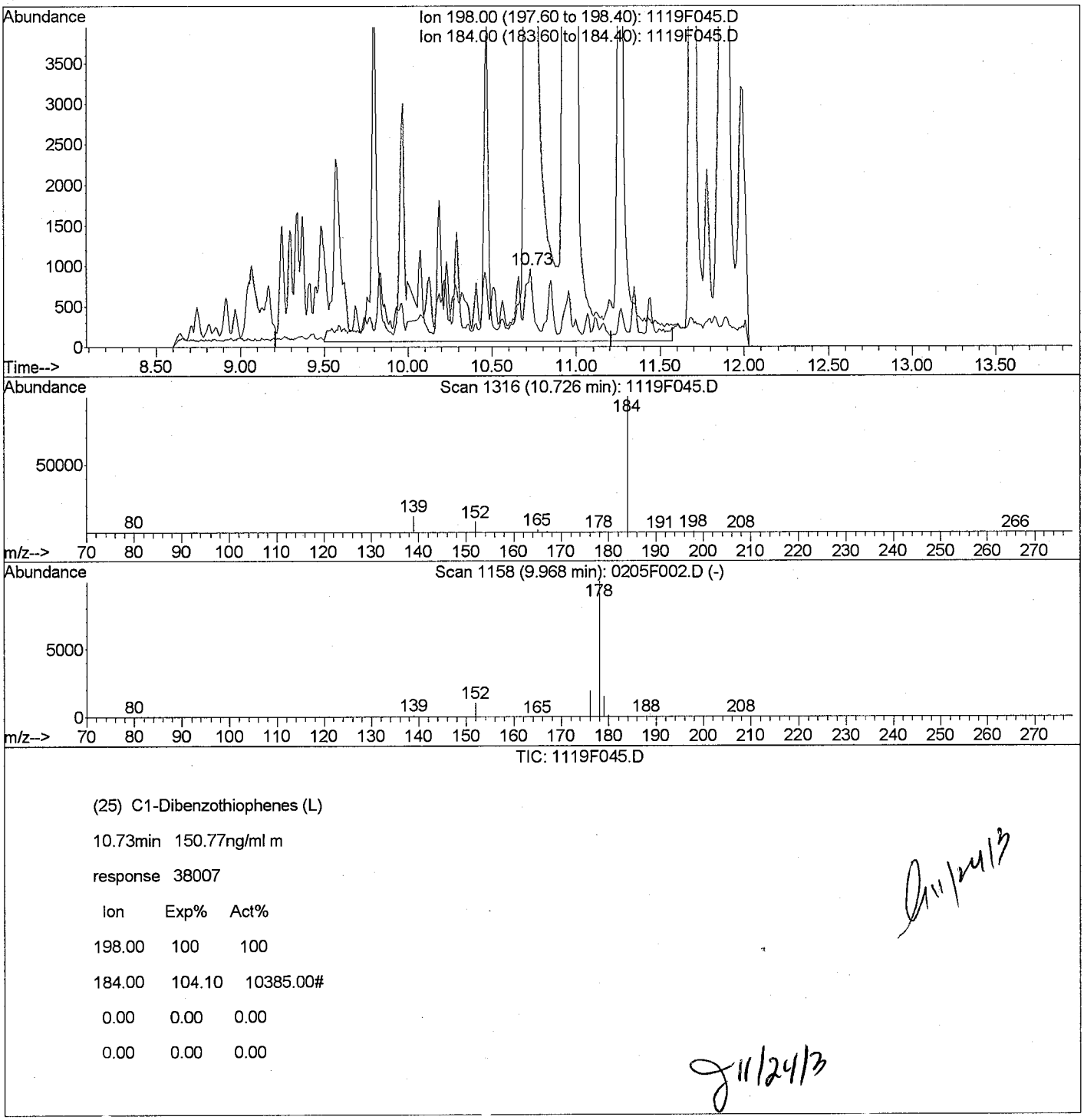
J 11/24/13

1119F045.D 1107ALK.M Mon Nov 24 12:30:33 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(25) C1-Dibenzothiophenes (L)

10.73min 150.77ng/ml m

response 38007

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	10385.00#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

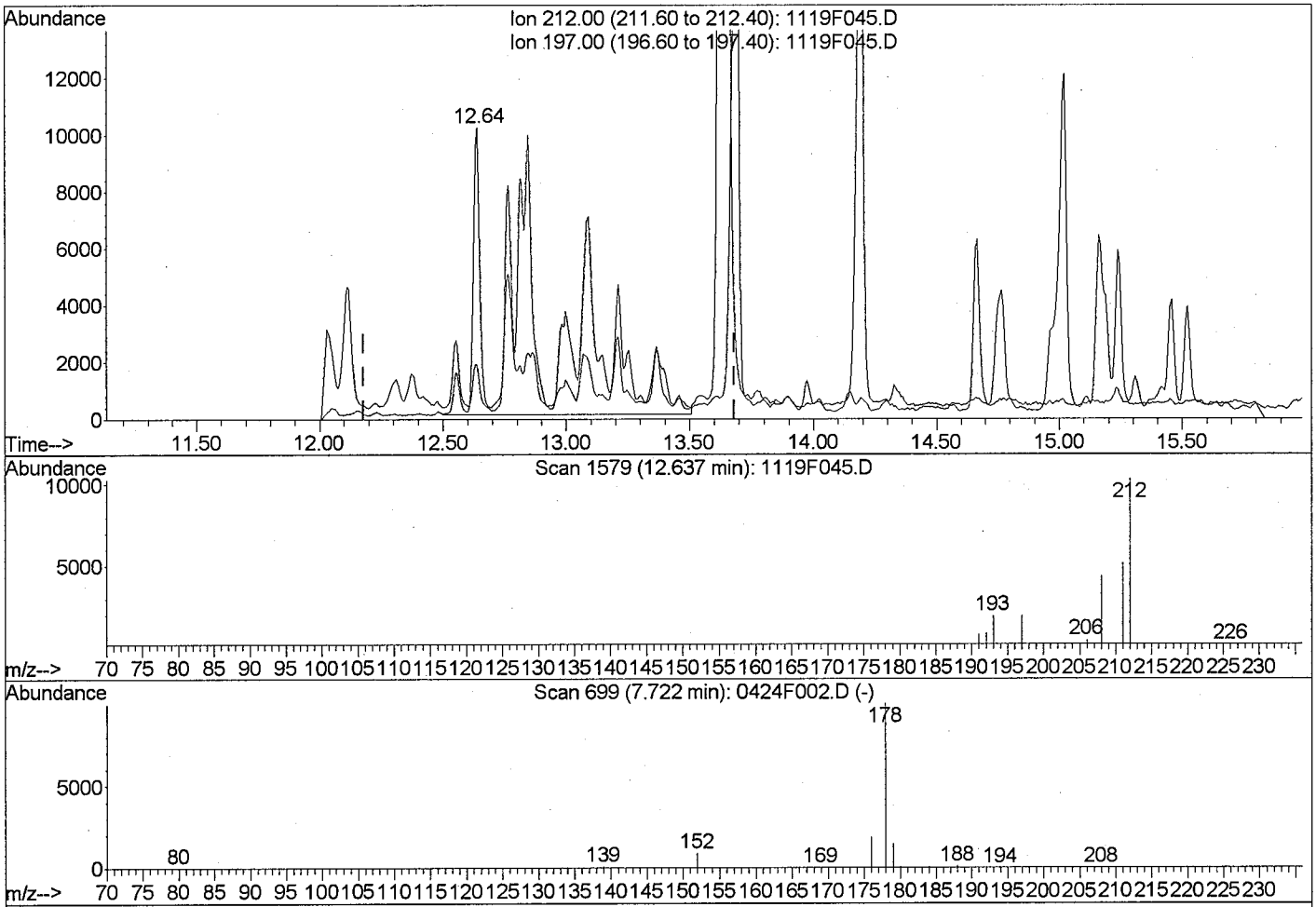
11/24/13

1119F045.D 1107ALK.M Fri Nov 21 12:40:27 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(26) C2-Dibenzothiophenes (L)

12.64min 538.81ng/ml m

response 135830

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	18.71
0.00	0.00	0.00
0.00	0.00	0.00

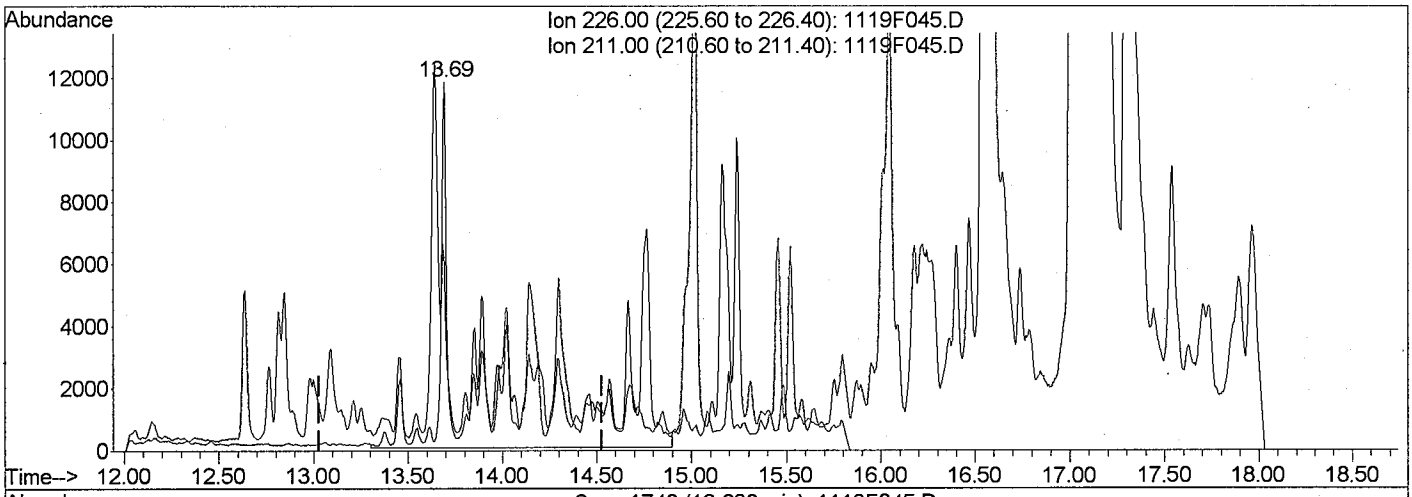
11/24/13 11/24/13

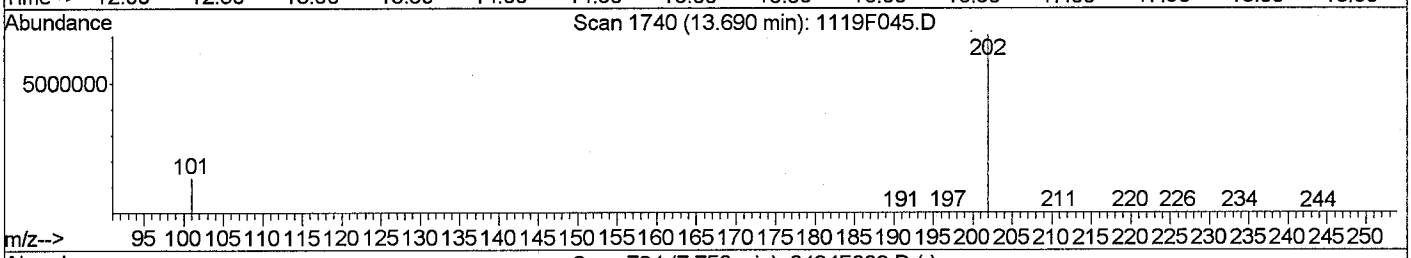
1119F045.D 1107ALK.M Fri Nov 21 12:40:41 2003

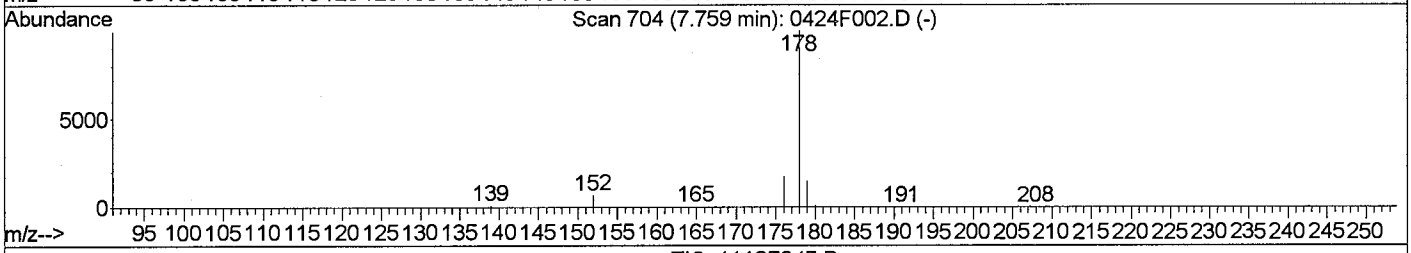
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(27) C3-Dibenzothiophenes (L)

13.69min 570.35ng/ml m

response 143781

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	52.86
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

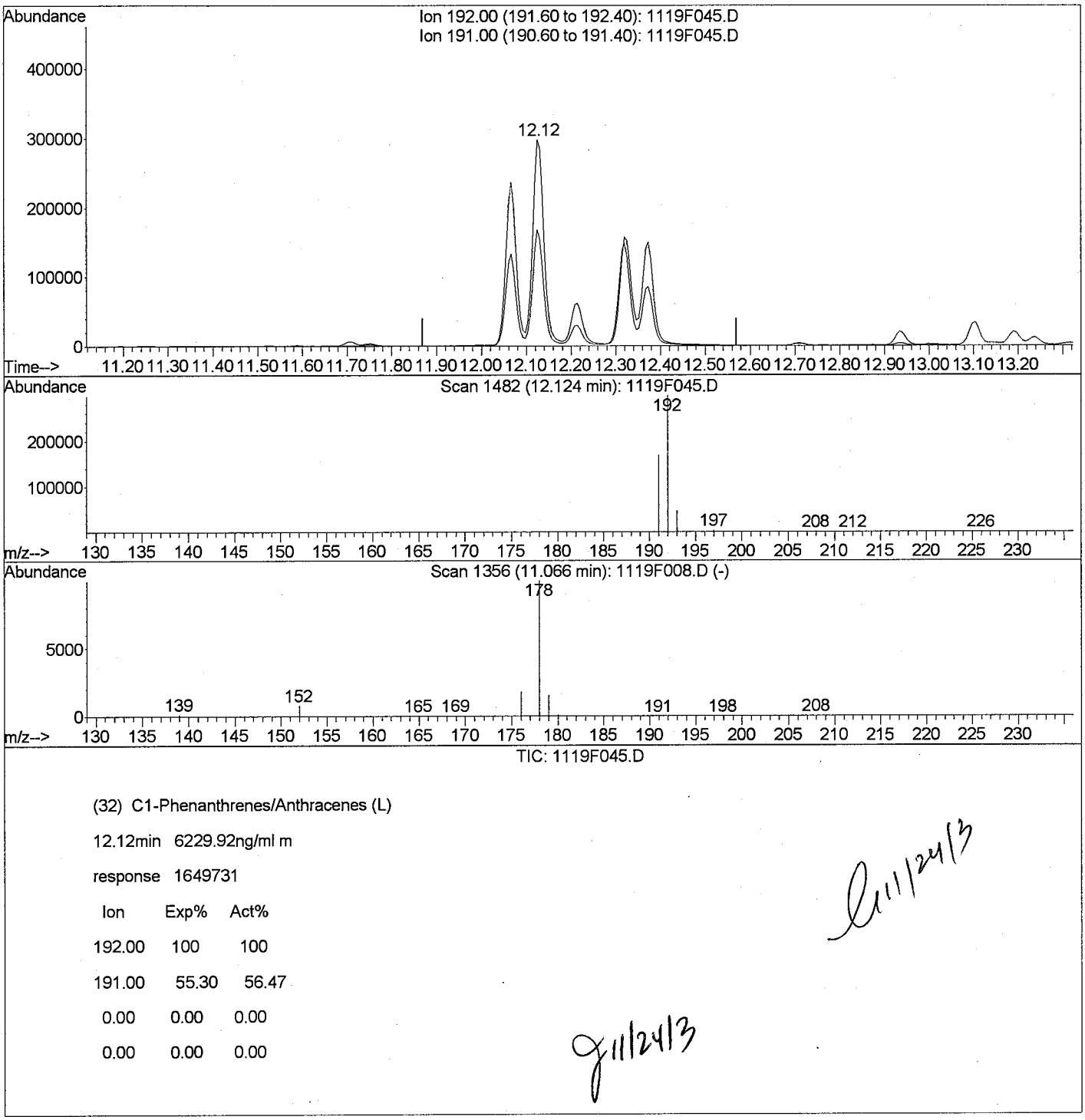
11/24/13

1119F045.D 1107ALK.M Fri Nov 21 12:41:15 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.12min 6229.92ng/ml m

response 1649731

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	56.47
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

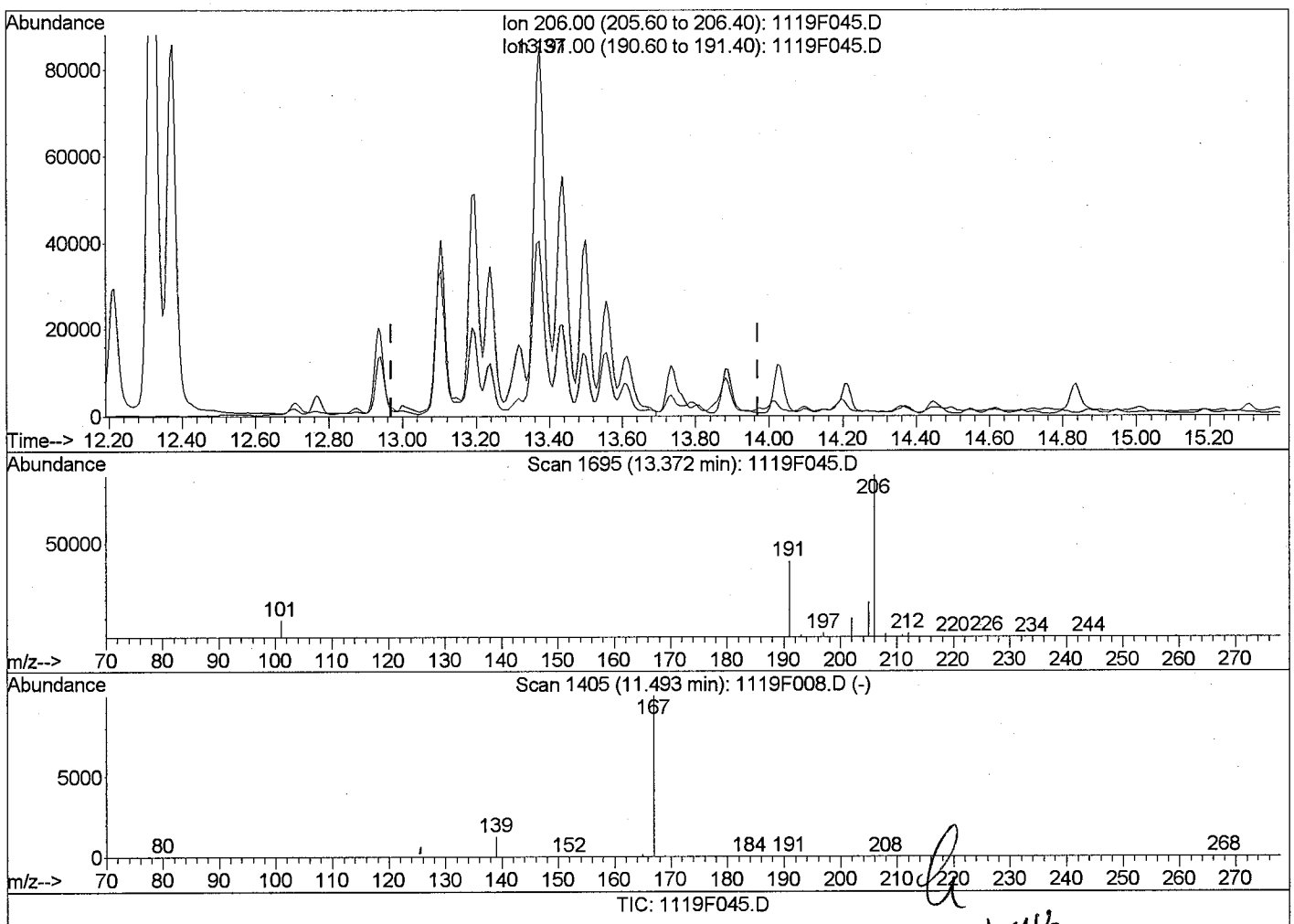
11/24/13

1119F045.D 1107ALK.M Fri Nov 21 12:41:20 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



11/24/13

(33) C2-Phenanthrenes/Anthracenes (L)

13.37min 2796.21ng/ml m

response 740458

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	47.29
0.00	0.00	0.00
0.00	0.00	0.00

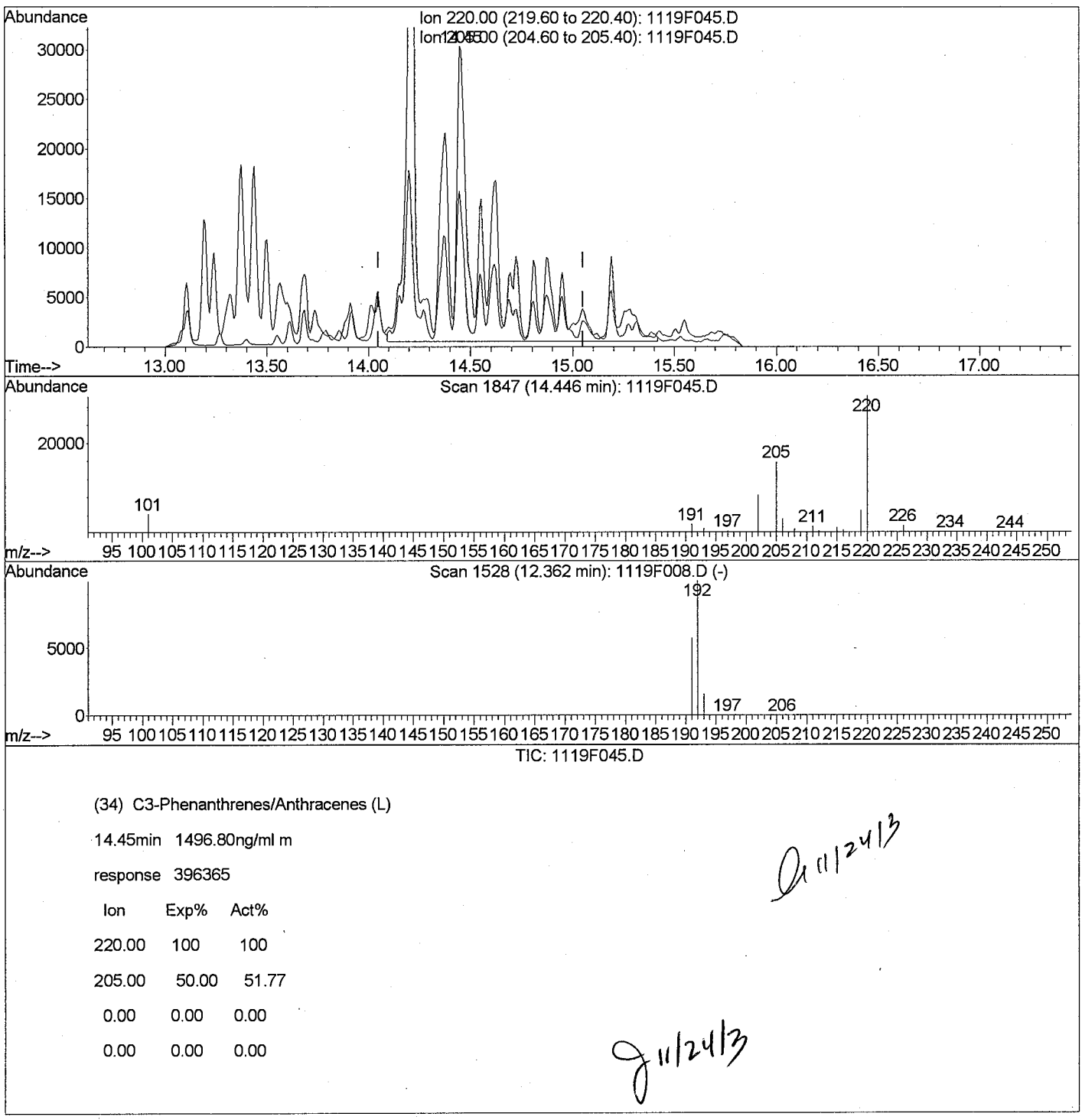
11/24/13

1119F045.D 1107ALK.M Fri Nov 21 12:41:28 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F045.D

(34) C3-Phenanthrenes/Anthracenes (L)

14.45min 1496.80ng/ml m

response 396365

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	51.77
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

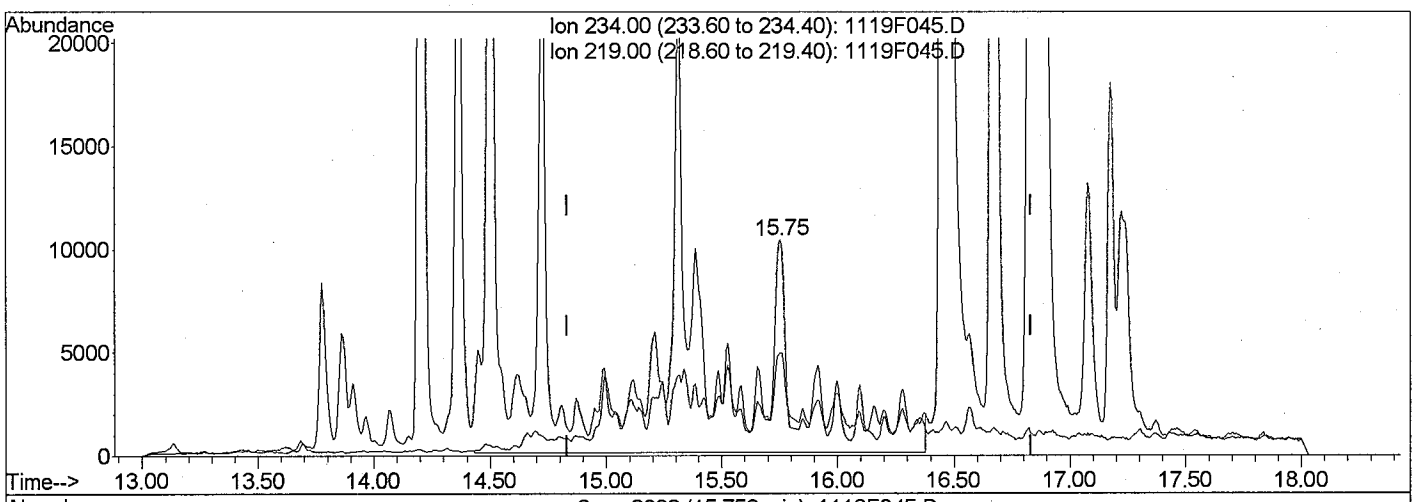
11/24/13

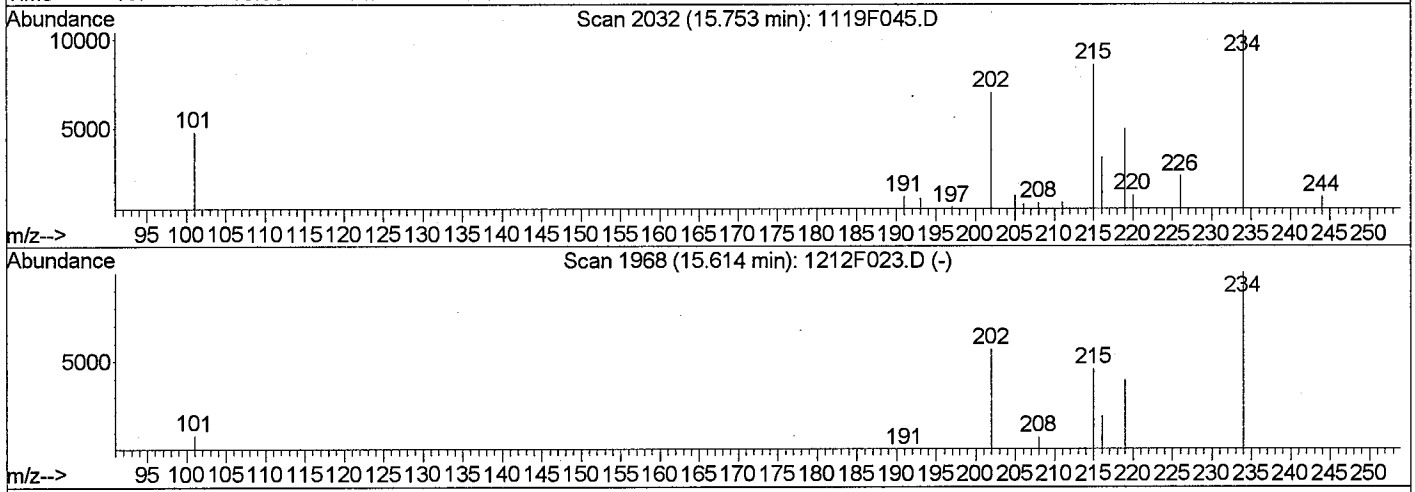
1119F045.D 1107ALK.M Fri Nov 21 12:41:44 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:41 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration





TIC: 1119F045.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.75min 807.06ng/ml m

response 213717

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	47.66
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

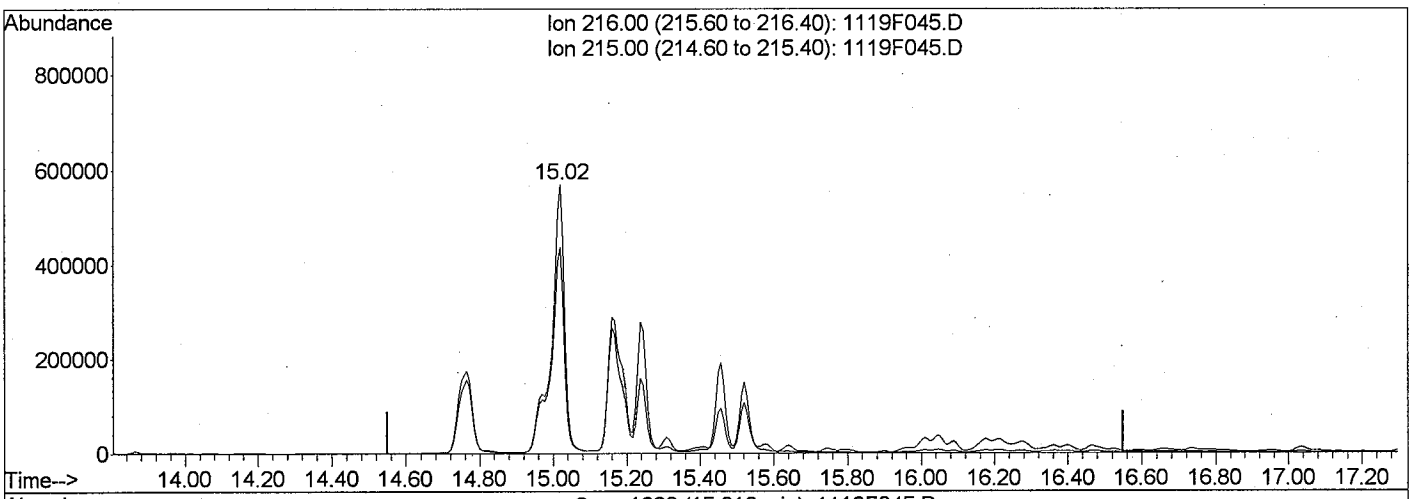
11/24/13

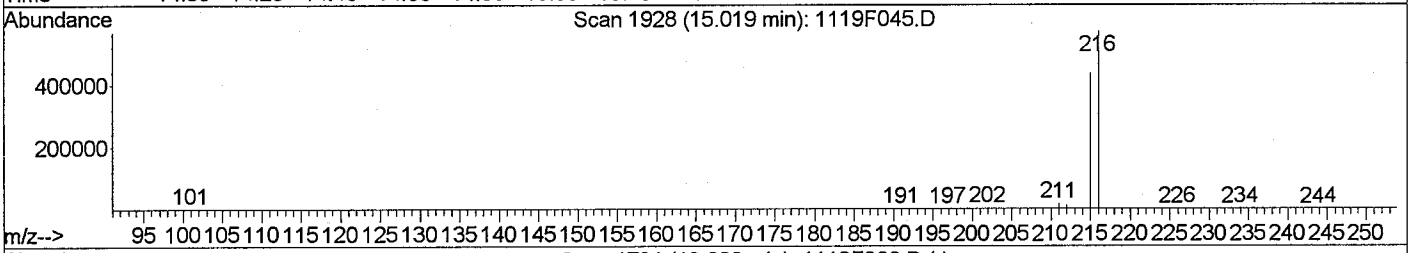
1119F045.D 1107ALK.M Fri Nov 21 12:41:57 2003

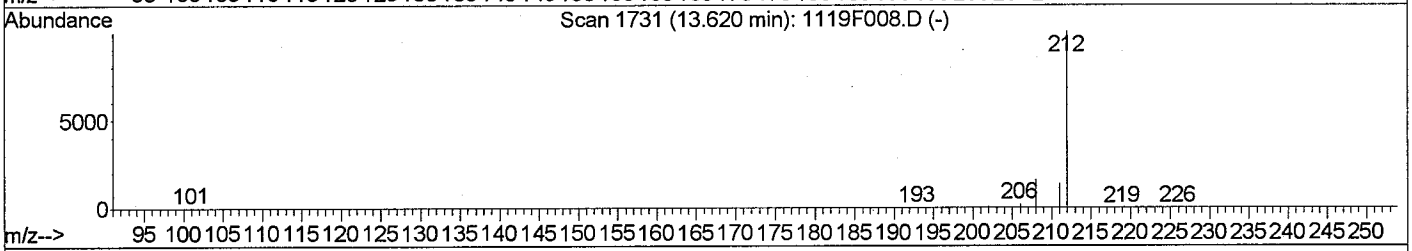
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.02min 13136.42ng/ml m

response 3905381

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	76.64
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

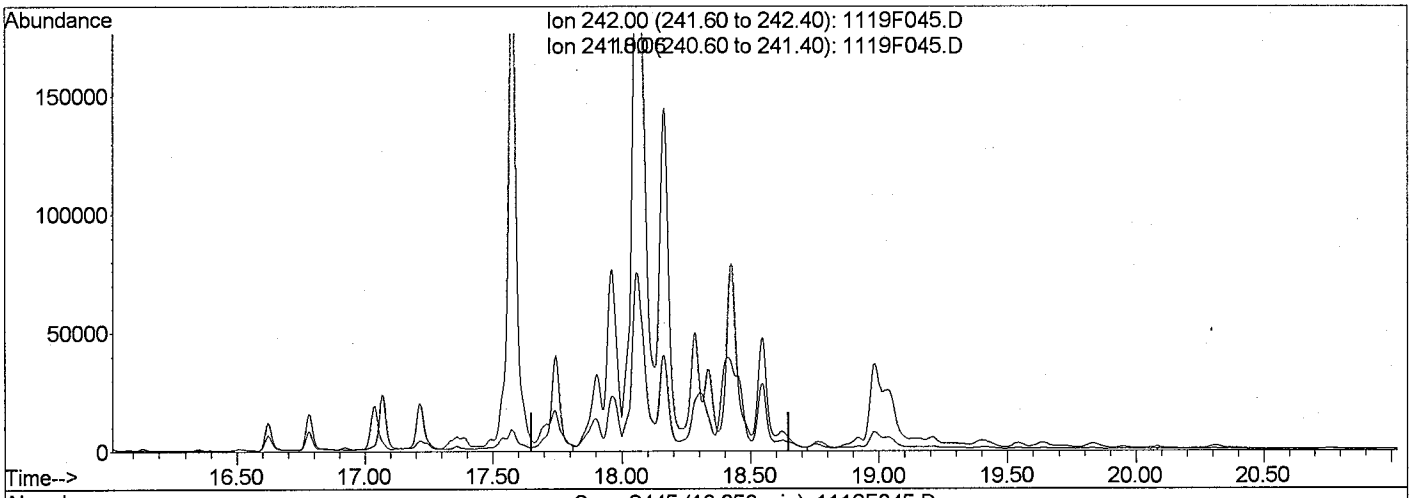
11/24/13

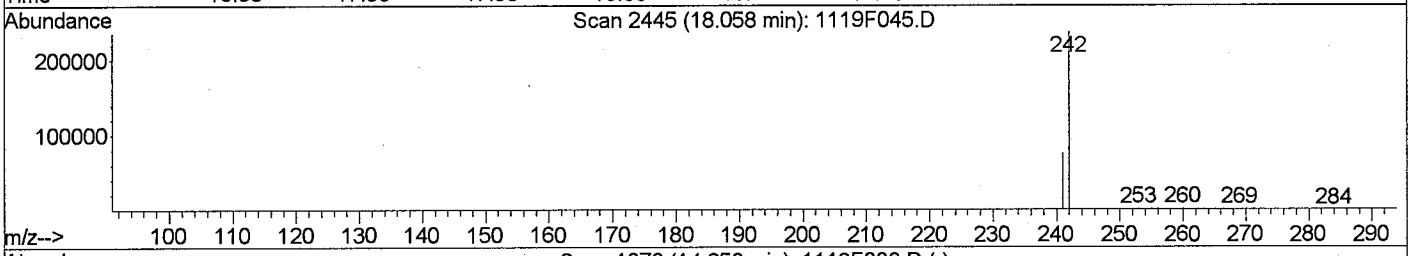
1119F045.D 1107ALK.M Fri Nov 21 12:42:02 2003

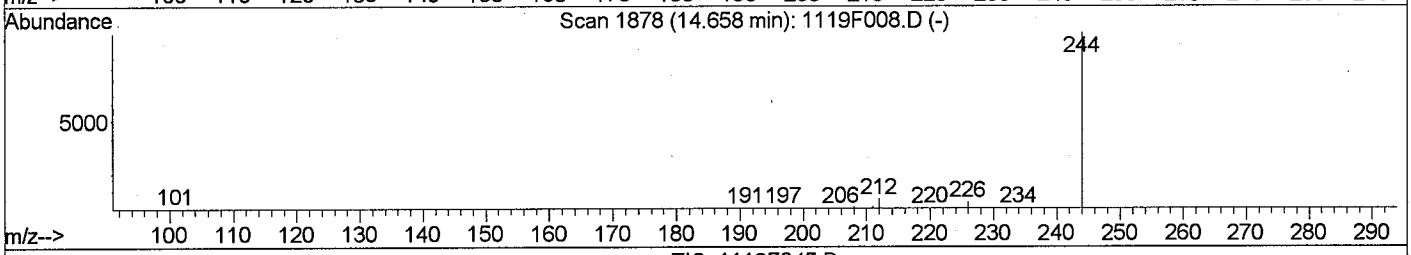
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(44) C1-Chrysenes (L)

18.06min 8861.43ng/ml m

response 2144804

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	31.84
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

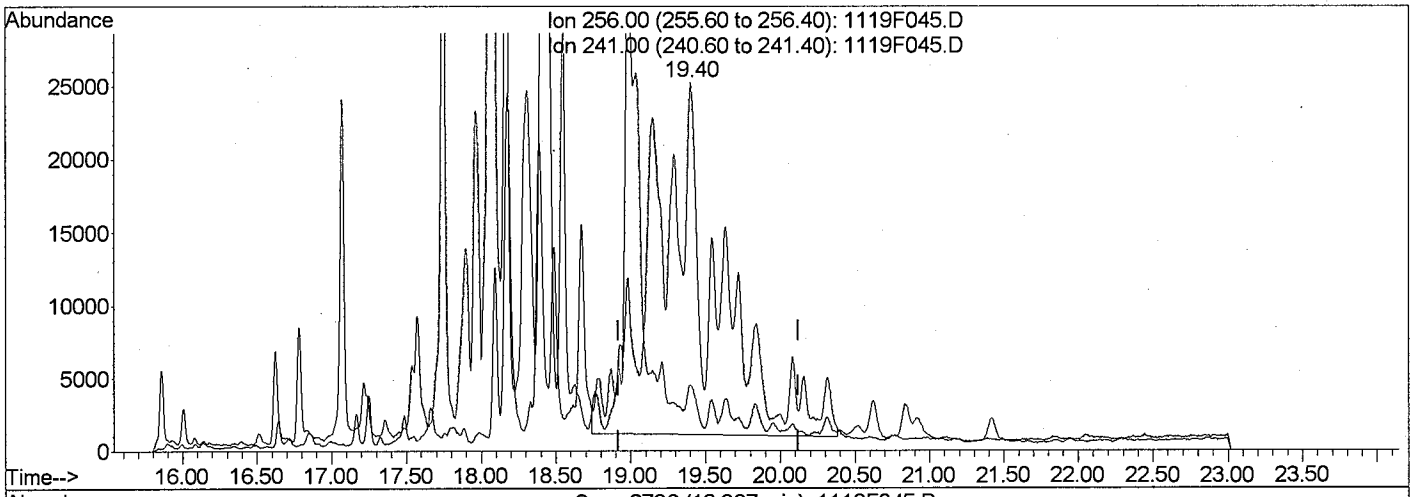
11/24/13

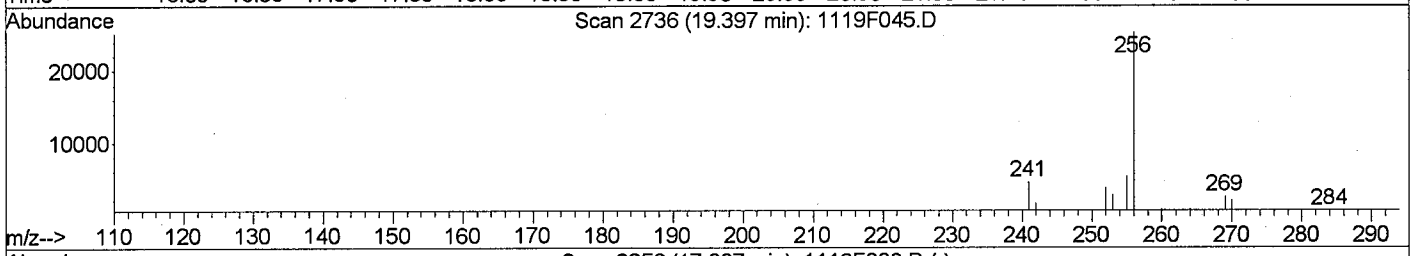
1119F045.D 1107ALK.M Fri Nov 21 12:42:16 2003

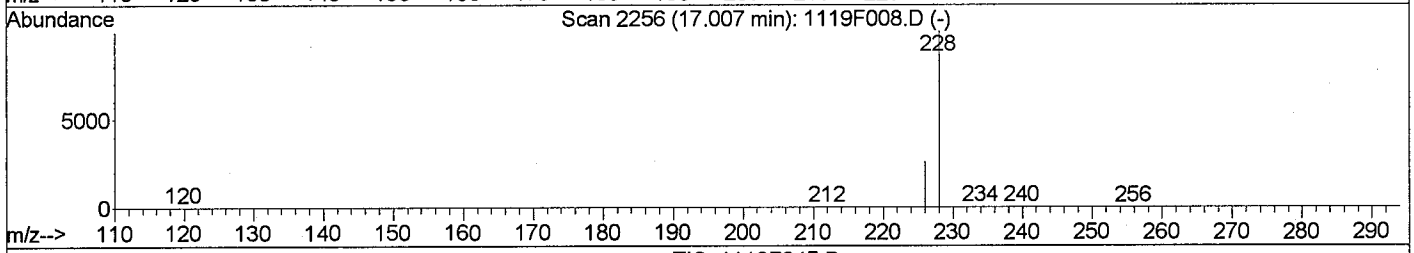
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(45) C2-Chrysenes (L)

19.40min 2887.60ng/ml m

response 698909

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	17.87
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

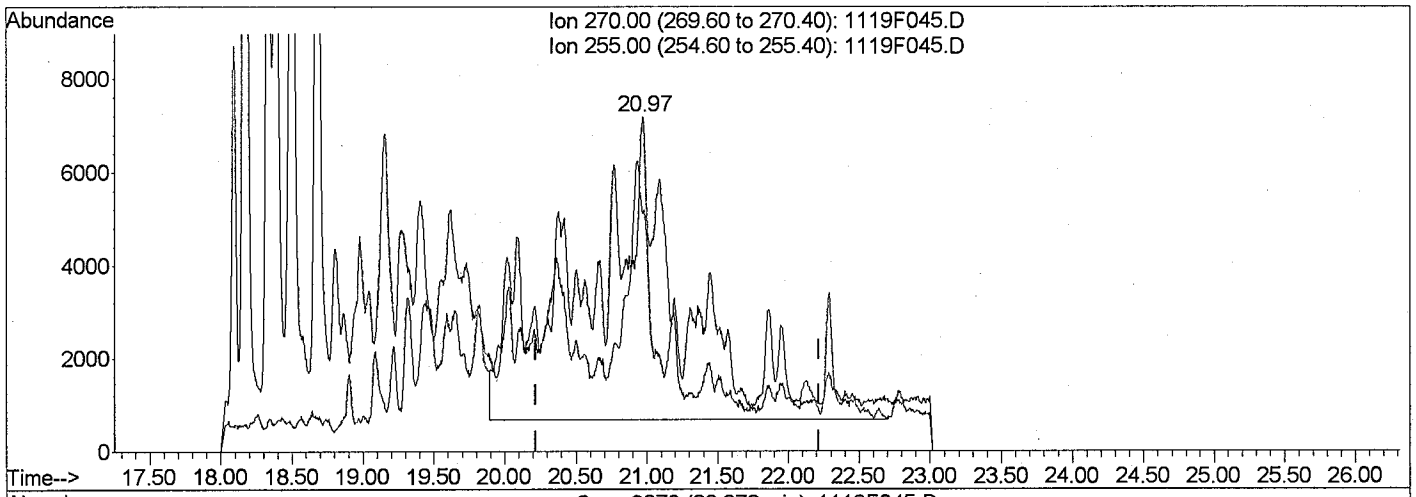
11/24/13

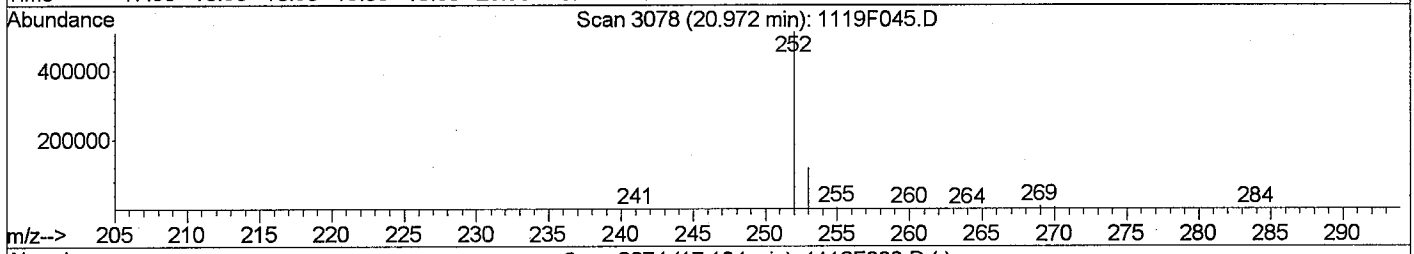
1119F045.D 1107ALK.M Fri Nov 21 12:42:32 2003

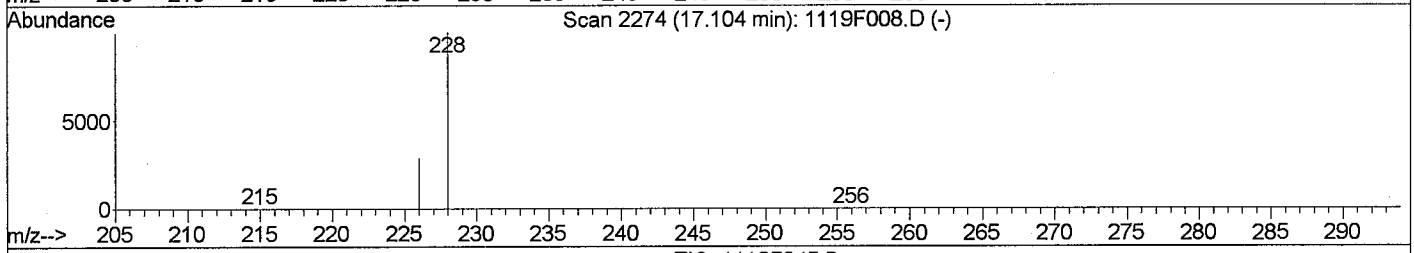
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F045.D Vial: 16
Acq On : 19 Nov 2003 9:15 pm Operator: LWeiskopf
Sample : K2308433-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:42 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(46) C3-Chrysenes (L)

20.97min 1315.65ng/ml m

response 318437

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	71.05#
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

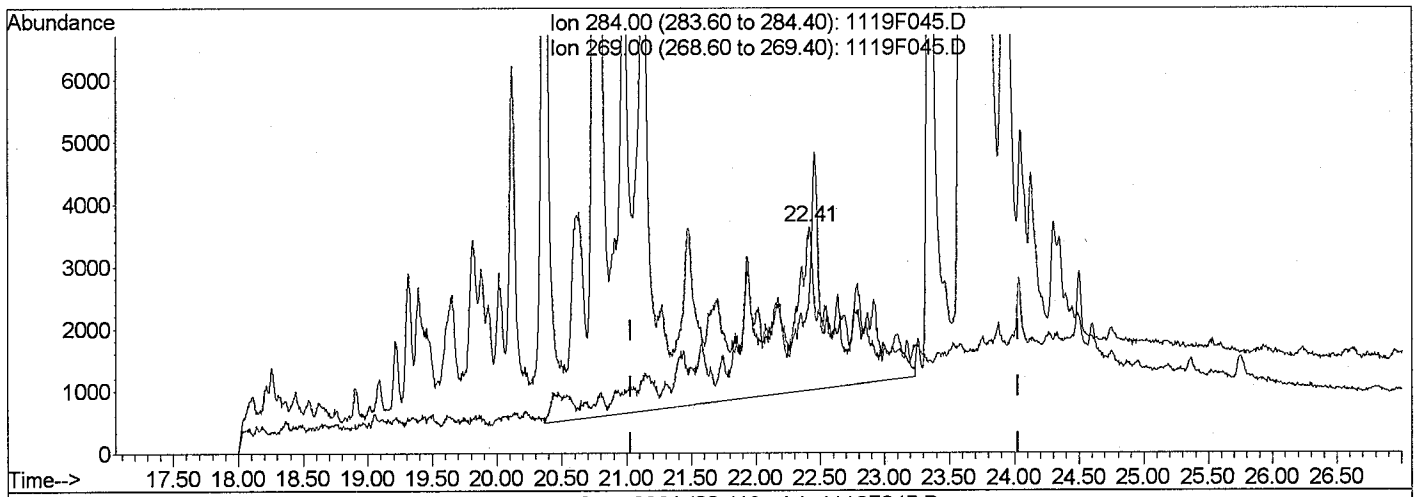
1119F045.D 1107ALK.M Fri Nov 21 12:42:58 2003

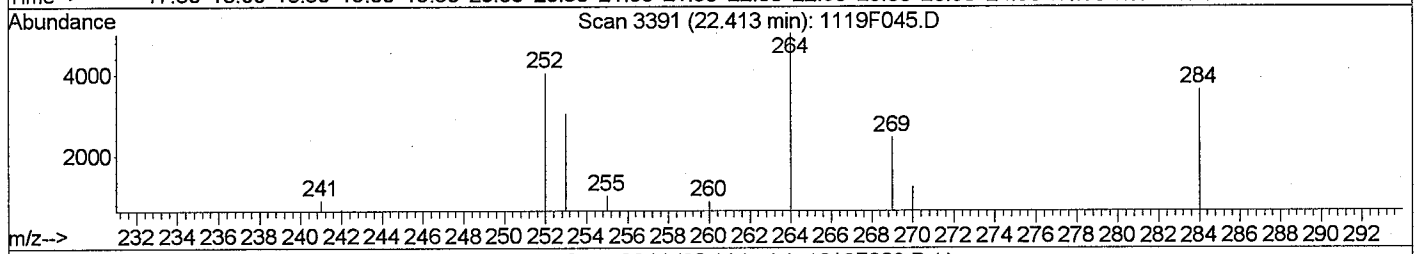
Quantitation Report (Qedit)

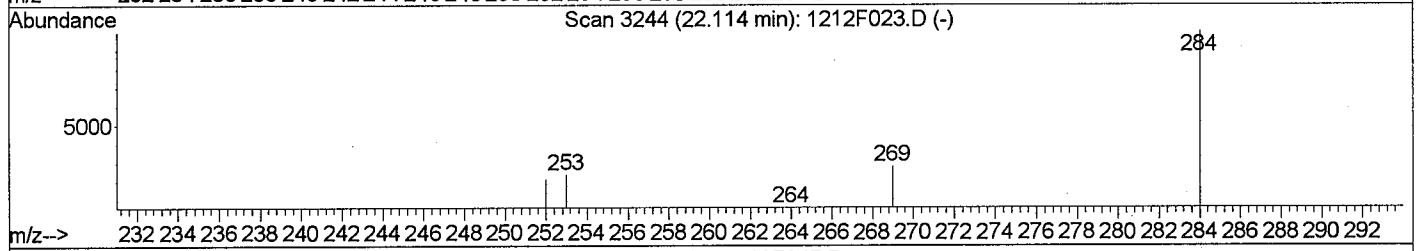
Data File : J:\MS11\DATA\111903\1119F045.D
Acq On : 19 Nov 2003 9:15 pm
Sample : K2308433-009
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 12:43 2003

Vial: 16
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F045.D

(47) C4-Chrysenes (L)

22.41min 509.86ng/ml m

response 123405

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	67.30
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

1119F045.D 1107ALK.M Fri Nov 21 12:43:06 2003

Exception Report

Data File: J:\MS11\DATA\112003\1120F012.D
Lab ID: K2308433-009
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 11:50
Date Quantitated: 11/24/2003 09:21
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 12/4/03

Secondary Review: 12.2.03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	K2308433
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247867	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F012.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 11:50	**Quant Date:**	11/24/2003 09:21	**Vial:**	9
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	252077	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	135001	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	188564	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	187403	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	104198	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.95	0.01	0.00	176	9325	69.06	69	27-110	OK	NR
3	Fluoranthene-d10	13.63	0.00	0.00	212	16767	88.84	89	34-122	OK	NR
4	Terphenyl-d14	14.66	0.00	0.00	244	15815	92.60	93	50-132	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	5849	20.52	20	JD	NR
1	2-Methylnaphthalene	6.38	0.01	0.00	142	2348	13.95	13	JD	NR
1	1-Methylnaphthalene	6.52		0.00	142	2062	13.07	13	JD	NR
1	Biphenyl	7.05	0.01	0.00	154	1403	6.87	6.6	JD	NR
1	C2-Naphthalenes				156	0		35	U	NR
1	C3-Naphthalenes				170	0		35	U	NR
1	C4-Naphthalenes				184	0		35	U	NR
2	Acenaphthylene	7.74		0.00	152	7851	30.18	29	JD	NR
2	Acenaphthene	8.06	0.01	0.00	154	16493	102.88	99	D	NR
2	Dibenzofuran	8.36	0.02	0.00	168	12445	57.91	56	D	NR
2	Fluorene	9.00	0.01	0.00	166	21761	126.72	120	D	NR
2	C1-Fluorenes				180	0		35	U	NR
2	C2-Fluorenes				194	0		35	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F012.D		**Instrument:** MS11
Acqu Date:	11/20/2003 11:50	**Quant Date:** 11/24/2003 09:21	**Vial:** 9
Run Type:	DL		**Dilution:** 10.0
Lab ID:	K2308433-009		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		35	U	NR
3	Dibenzothiophene	10.72	0.01	0.00	184	25717	118.21	110	D	NR
3	C1-Dibenzothiophenes				198	0		35	U	NR
3	C2-Dibenzothiophenes				212	0		35	U	NR
3	C3-Dibenzothiophenes				226	0		35	U	NR
3	Phenanthrene	10.98	0.01	0.00	178	612306	2,679	2600	D	
3	Anthracene	11.08		0.00	178	75682	387.63	370	D	NR
3	C1-Phenanthrenes/Anthracenes				192	0		35	U	NR
3	C2-Phenanthrenes/Anthracenes				206	0		35	U	NR
3	C3-Phenanthrenes/Anthracenes				220	0		35	U	NR
3	C4-Phenanthrenes/Anthracenes				234	0		35	U	NR
3	Fluoranthene	13.67	0.01	0.00	202	1406637	6,183	5900	D	
4	Pyrene	14.18	0.01	0.00	202	1128097	4,605	4400	D	
4	C1-Fluoranthenes/Pyrenes				216	0		35	U	NR
4	Benz(a)anthracene	17.02		0.00	228	352458	1,890	1800	D	
4	Chrysene	17.12		0.00	228	514731	2,581	2500	D	
4	C1-Chrysenes				242	0		35	U	NR
4	C2-Chrysenes				256	0		35	U	NR
4	C3-Chrysenes				270	0		35	U	NR
4	C4-Chrysenes				284	0		35	U	NR
5	Benzo(b)fluoranthene	20.00		0.00	252	331118	2,380	2300	D	
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	397405**m**	2,251	2200	D	
5	Benzo(e)pyrene	20.98	0.01	0.00	252	255362	1,635	1600	D	
5	Benzo(a)pyrene	21.17	0.01	0.00	252	270999	2,290	2200	D	
5	Perylene	21.50		0.00	252	69411	522.58	500	D	NR
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	146200	2,033	2000	D	
5	Dibenz(a,h)anthracene	24.08		0.00	278	25325**m**	244.99	240	D	NR
5	Benzo(g,h,i)perylene	24.49		0.00	276	143043	1,200	1200	D	

Prep Amount:	28.6 g	**Dilution:**	10.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	72.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F012.D Vial: 9
Acq On : 20 Nov 2003 11:50 am Operator: LWeiskopf
Sample : K2308433-009DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	252077	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	135001	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	188564	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	187403	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	104198	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.02	164	8810	47.71	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	4.77%		
16) Fluorene-d10	8.95	176	9325	69.06	ng/ml	0.01
Spiked Amount 1000.000			Recovery =	6.91%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	16767	88.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.88%		
41) Terphenyl-d14	14.66	244	15815	92.60	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.26%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	5849	20.52	ng/ml	97
3) 2-Methylnaphthalene	6.38	142	2348	13.95	ng/ml	94
4) 1-Methylnaphthalene	6.52	142	2062	13.07	ng/ml	100
6) Biphenyl	7.05	154	1403	6.87	ng/ml	94
7) 2,6-Dimethylnaphthalene	7.28	156	1258	8.76	ng/ml	93
12) Acenaphthylene	7.74	152	7851	30.18	ng/ml	96
13) Acenaphthene	8.06	154	16493	102.88	ng/ml	99
14) Dibenzofuran	8.36	168	12445	57.91	ng/ml	97
15) 2,3,5-Trimethylnaphthalene	8.76	170	821	5.72	ng/ml	88
17) Fluorene	9.00	166	21761	126.72	ng/ml	99
24) Dibenzothiophene	10.72	184	25717	118.21	ng/ml	98
28) Phenanthrene	10.98	178	612306	2679.27	ng/ml	100
29) Anthracene	11.08	178	75682	387.63	ng/ml	100
31) 1-Methylphenanthrene	12.37	192	21777	140.35	ng/ml	98
36) Fluoranthene	13.67	202	1406637	6183.37	ng/ml	98
39) Pyrene	14.18	202	1128097	4605.40	ng/ml	100
42) Benz(a)anthracene	17.02	228	352458	1889.93	ng/ml	97
43) Chrysene	17.12	228	514731	2581.10	ng/ml	99
49) Benzo(b)fluoranthene	20.00	252	331118	2380.29	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	397405m	2251.49	ng/ml	
51) Benzo(e)pyrene	20.98	252	255362	1634.96	ng/ml	100
52) Benzo(a)pyrene	21.17	252	270999	2290.31	ng/ml	99
53) Perylene	21.50	252	69411	522.58	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F012.D Vial: 9
Acq On : 20 Nov 2003 11:50 am Operator: LWeiskopf
Sample : K2308433-009DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

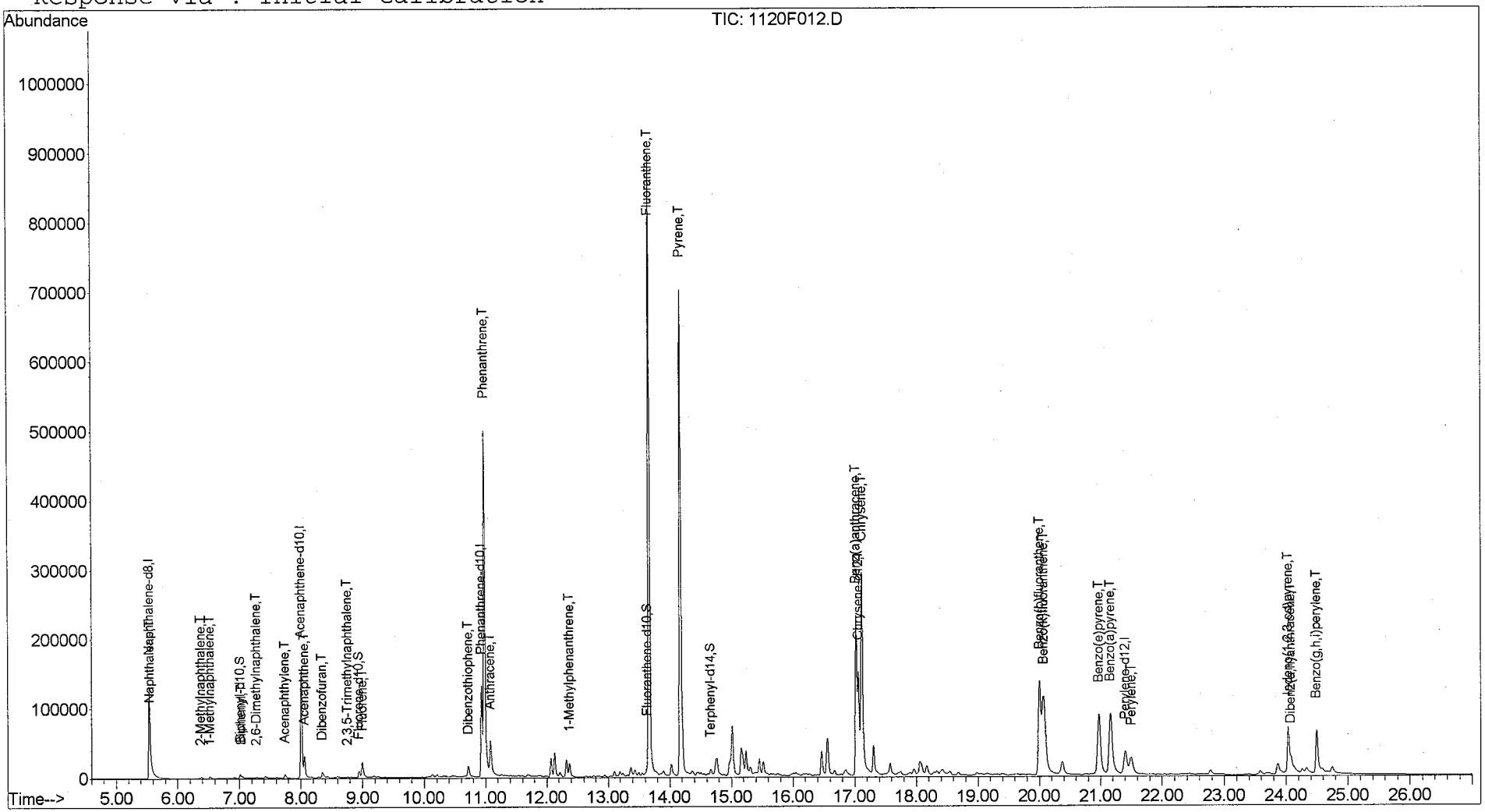
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54)	Indeno(1,2,3-cd)pyrene	24.03	276	146200	2032.53	ng/ml	93
55)	Dibenz(a,h)anthracene	24.08	278	25325m	244.99	ng/ml	
56)	Benzo(g,h,i)perylene	24.49	276	143043	1199.51	ng/ml	100

(#) = qualifier out of range (m) = manual integration

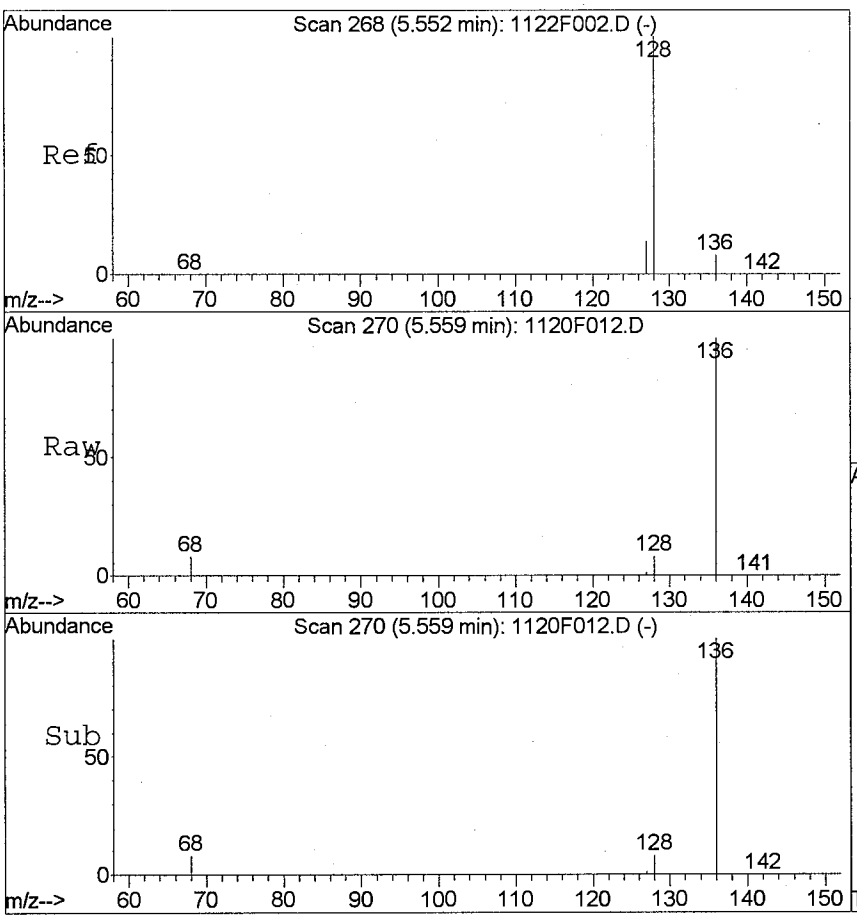
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F012.D Vial: 9
Acq On : 20 Nov 2003 11:50 am Operator: LWeiskopf
Sample : K2308433-009DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:21 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



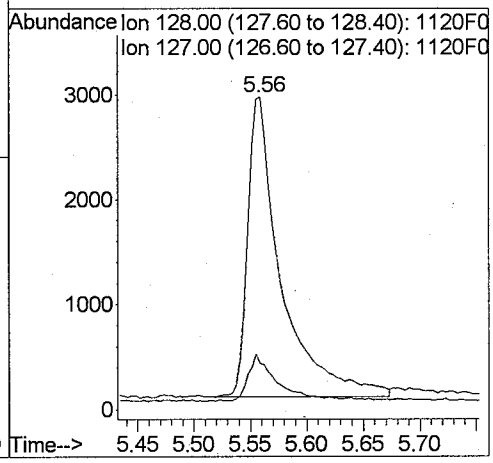
1491

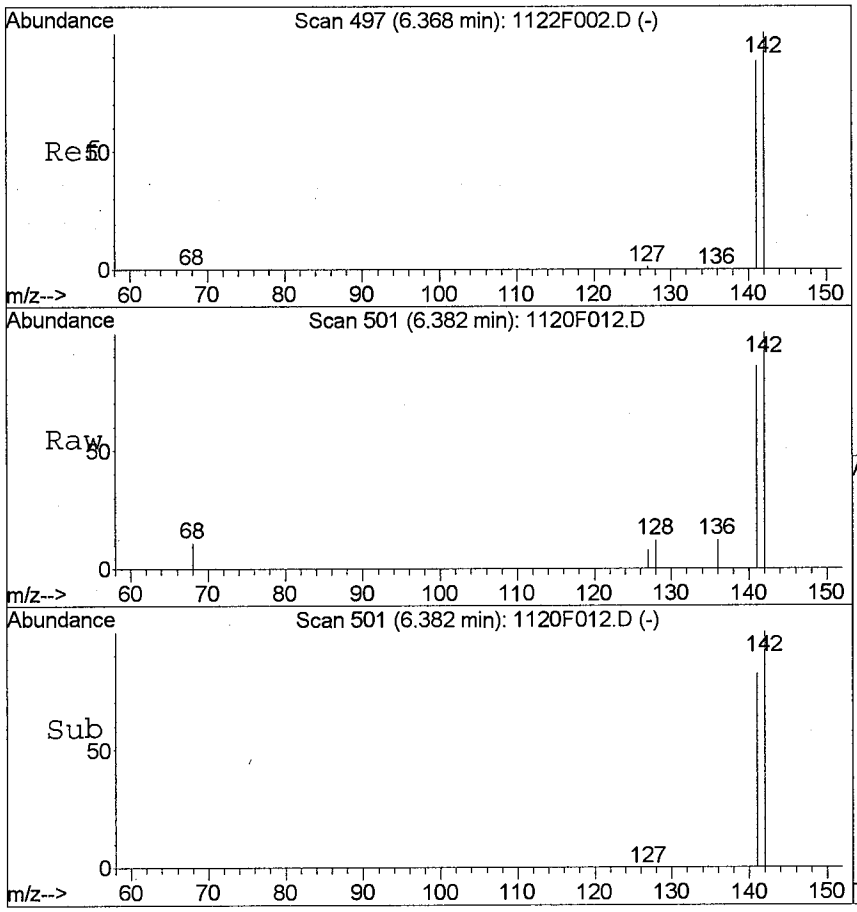


#2
Naphthalene
Concen: 20.52 ng/ml
RT: 5.56 min Scan# 270
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:128 Resp: 5849

Ion	Ratio	Lower	Upper
128	100		
127	12.5	0.0	43.6

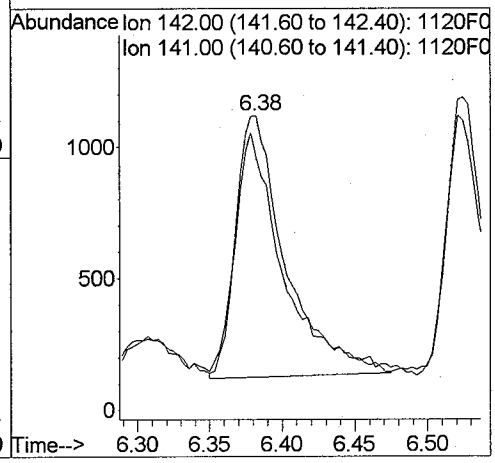


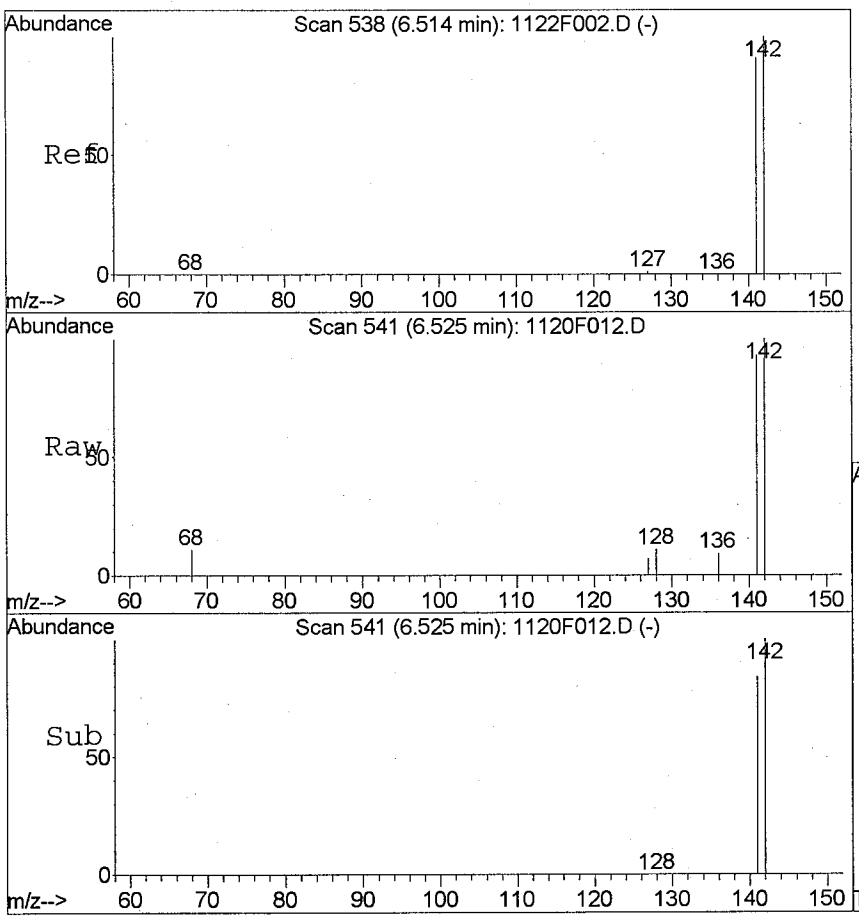


#3
2-Methylnaphthalene
Concen: 13.95 ng/ml
RT: 6.38 min Scan# 501
Delta R.T. 0.02 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:142 Resp: 2348

Ion	Ratio	Lower	Upper
142	100		
141	82.9	58.1	118.1

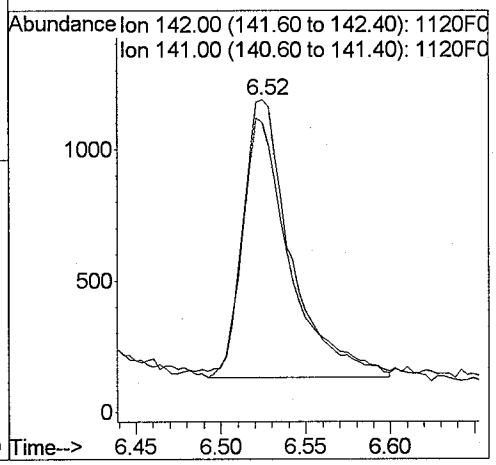


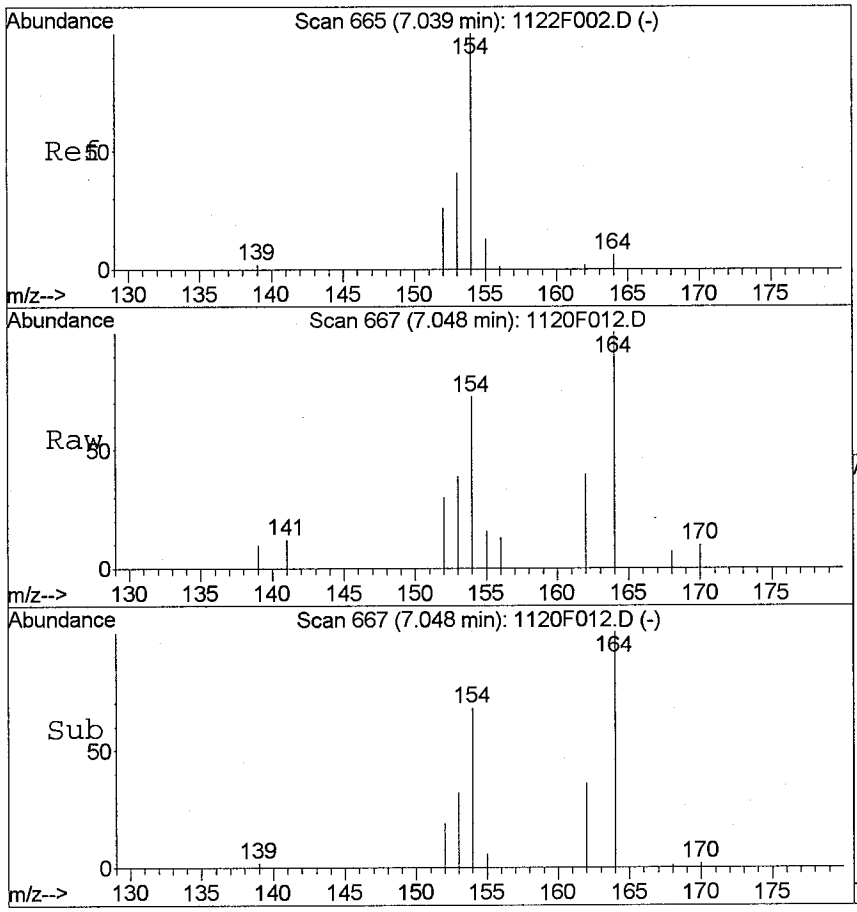


#4
1-Methylnaphthalene
Concen: 13.07 ng/ml
RT: 6.52 min Scan# 541
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:142 Resp: 2062

Ion	Ratio	Lower	Upper
142	100		
141	89.4	59.3	119.3

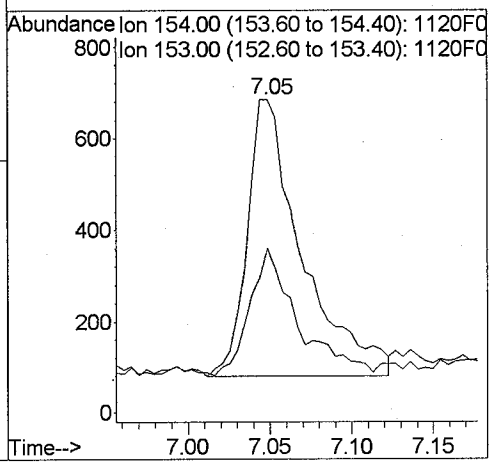


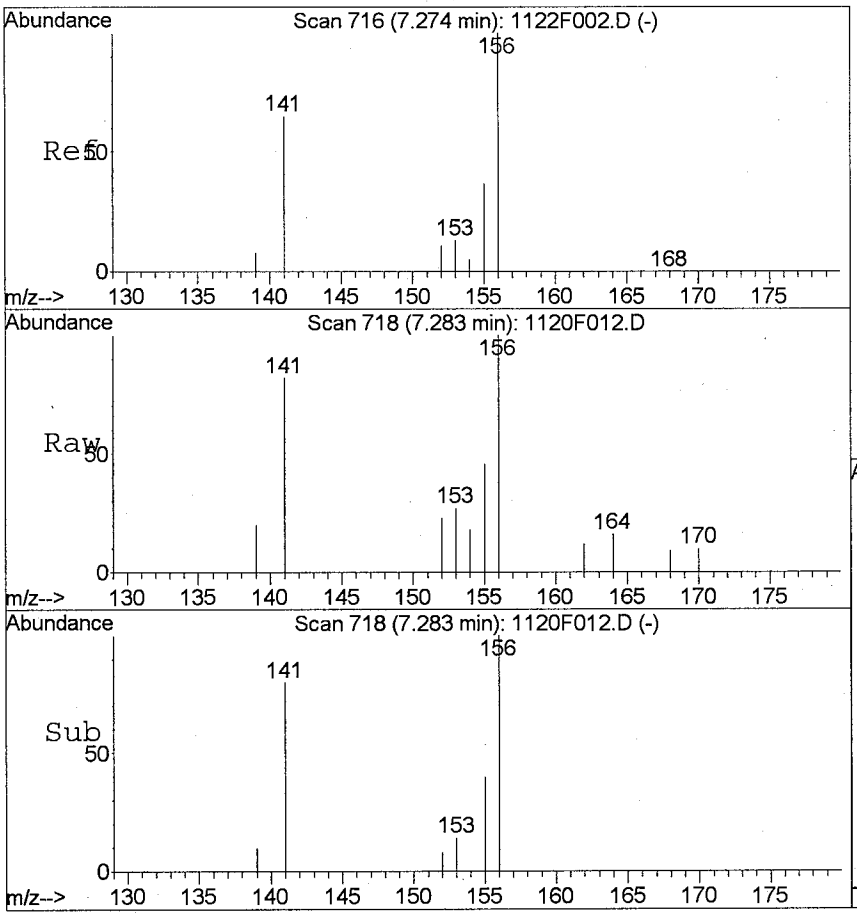


#6
Biphenyl
Concen: 6.87 ng/ml
RT: 7.05 min Scan# 667
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:154 Resp: 1403

Ion	Ratio	Lower	Upper
154	100		
153	45.0	11.3	71.3

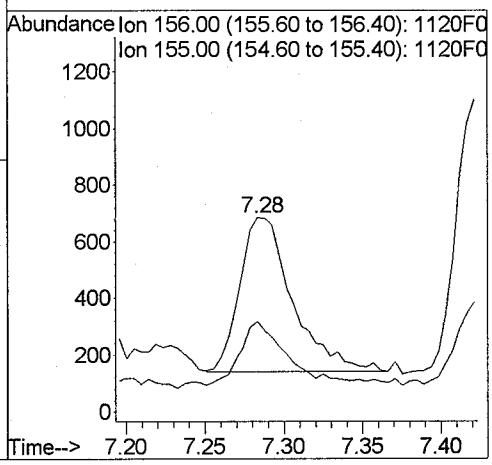


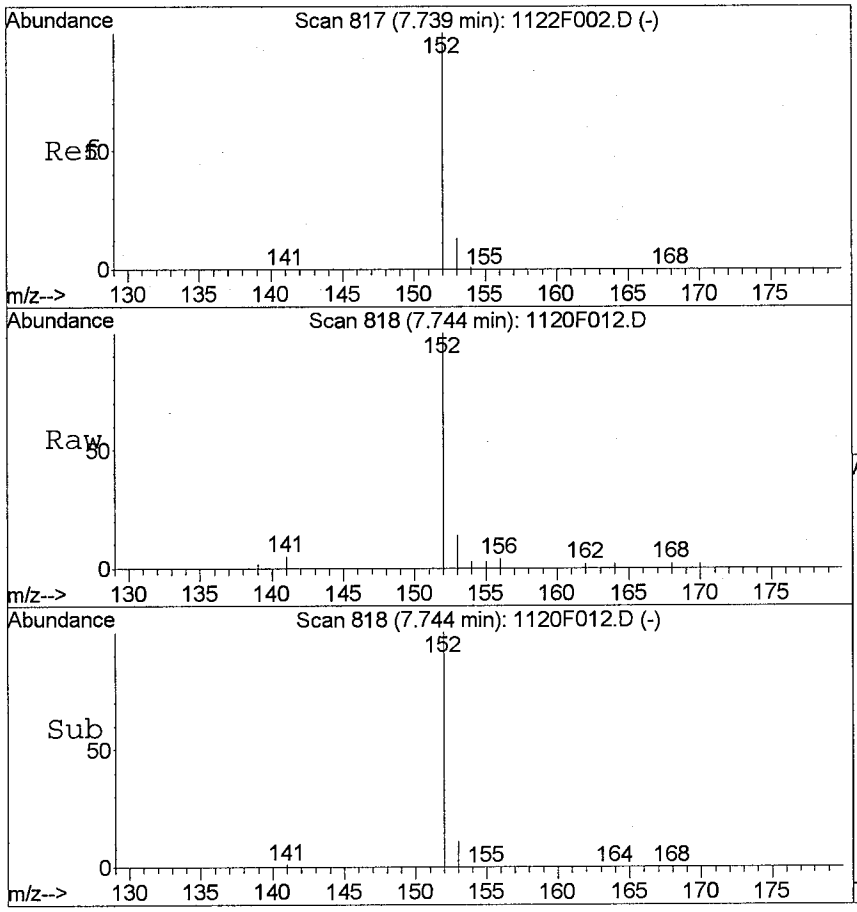


#7
2,6-Dimethylnaphthalene
Concen: 8.76 ng/ml
RT: 7.28 min Scan# 718
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:156 Resp: 1258

Ion	Ratio	Lower	Upper
156	100		
155	41.2	7.1	67.1

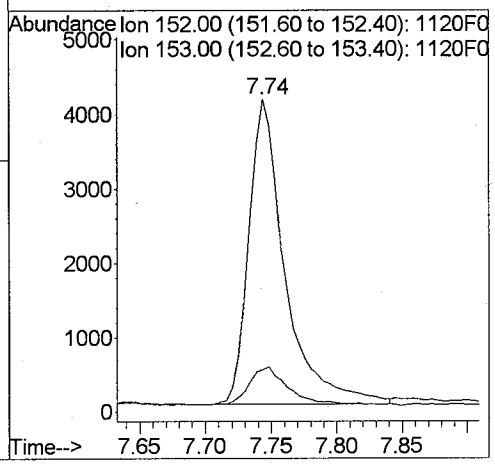


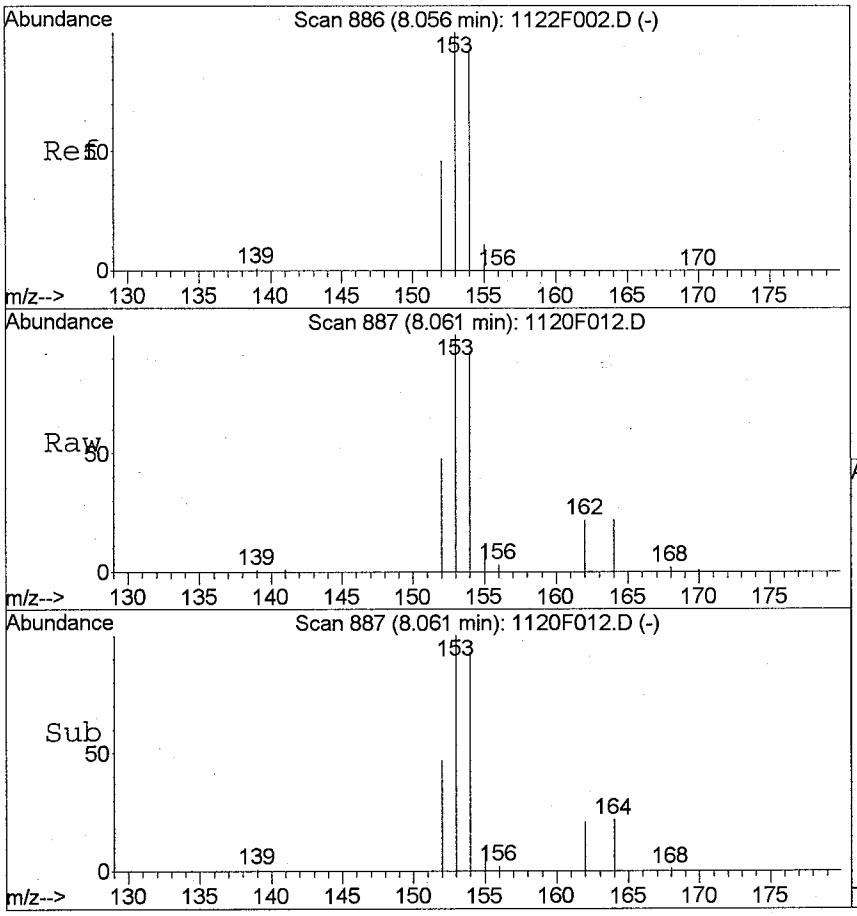


#12
Acenaphthylene
Concen: 30.18 ng/ml
RT: 7.74 min Scan# 818
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:152 Resp: 7851

Ion	Ratio	Lower	Upper
152	100		
153	11.6	0.0	43.0

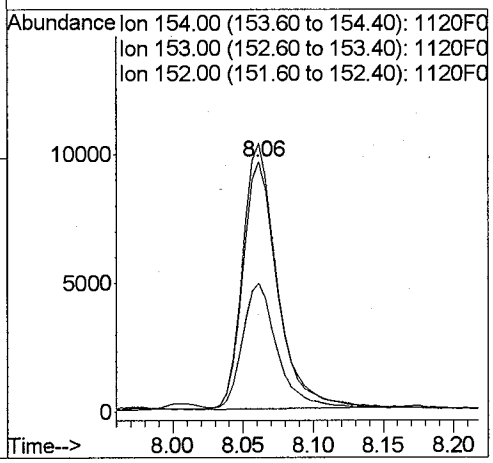


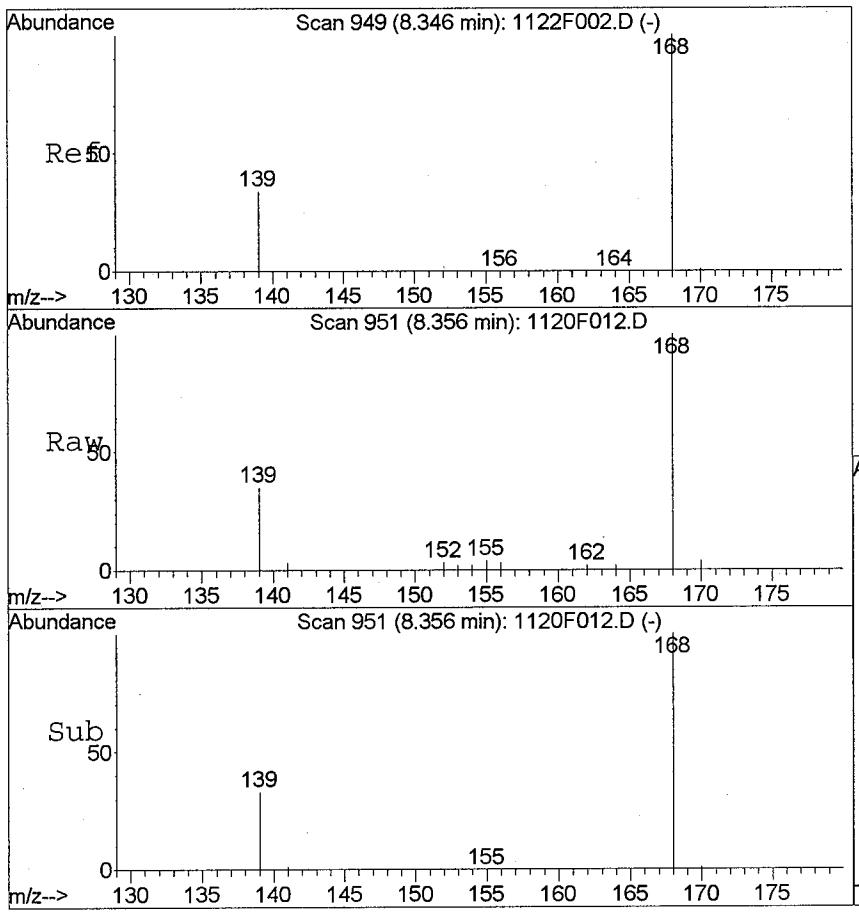


#13
Acenaphthene
Concen: 102.88 ng/ml
RT: 8.06 min Scan# 887
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:154 Resp: 16493

Ion	Ratio	Lower	Upper
154	100		
153	108.2	79.2	139.2
152	50.9	21.3	81.3

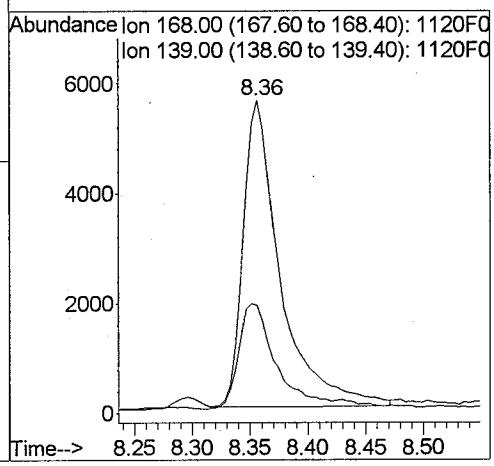


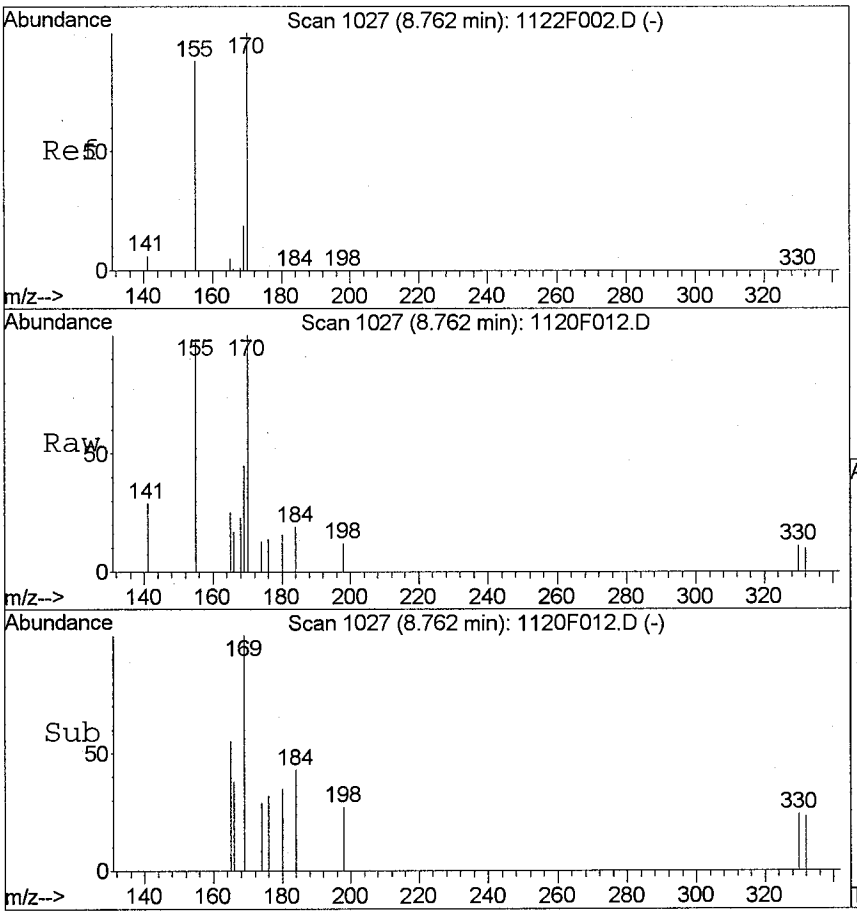


#14
Dibenzofuran
Concen: 57.91 ng/ml
RT: 8.36 min Scan# 951
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:168 Resp: 12445

Ion	Ratio	Lower	Upper
168	100		
139	33.8	5.4	65.4

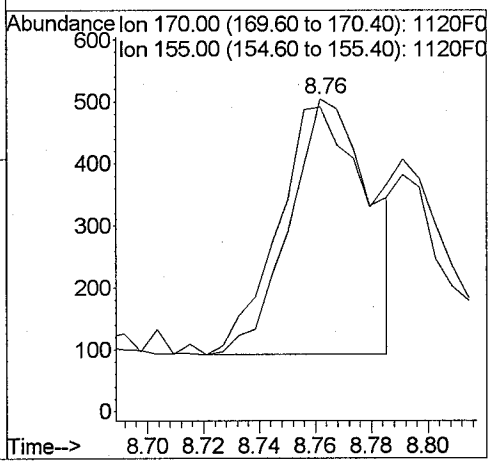


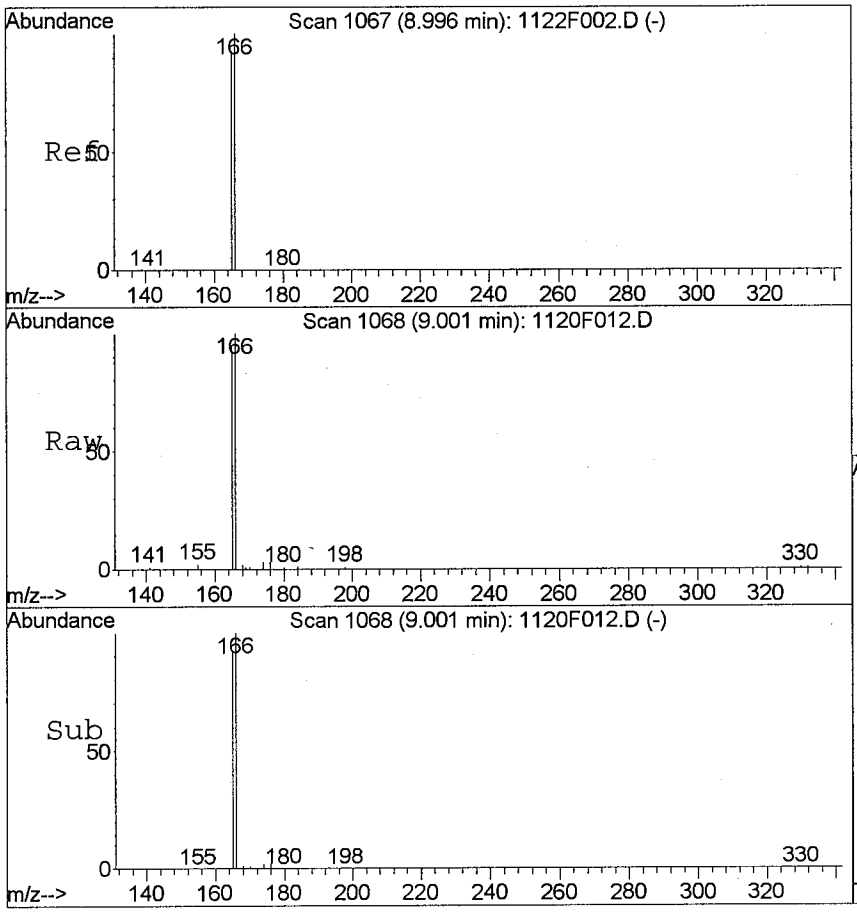


#15
2,3,5-Trimethylnaphthalene
Concen: 5.72 ng/ml
RT: 8.76 min Scan# 1027
Delta R.T. -0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:170 Resp: 821

Ion	Ratio	Lower	Upper
170	100		
155	96.8	55.5	115.5

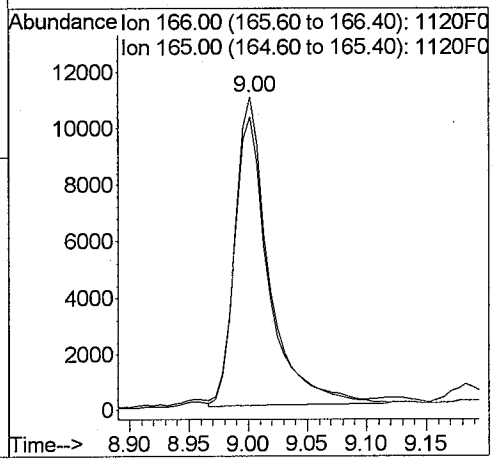


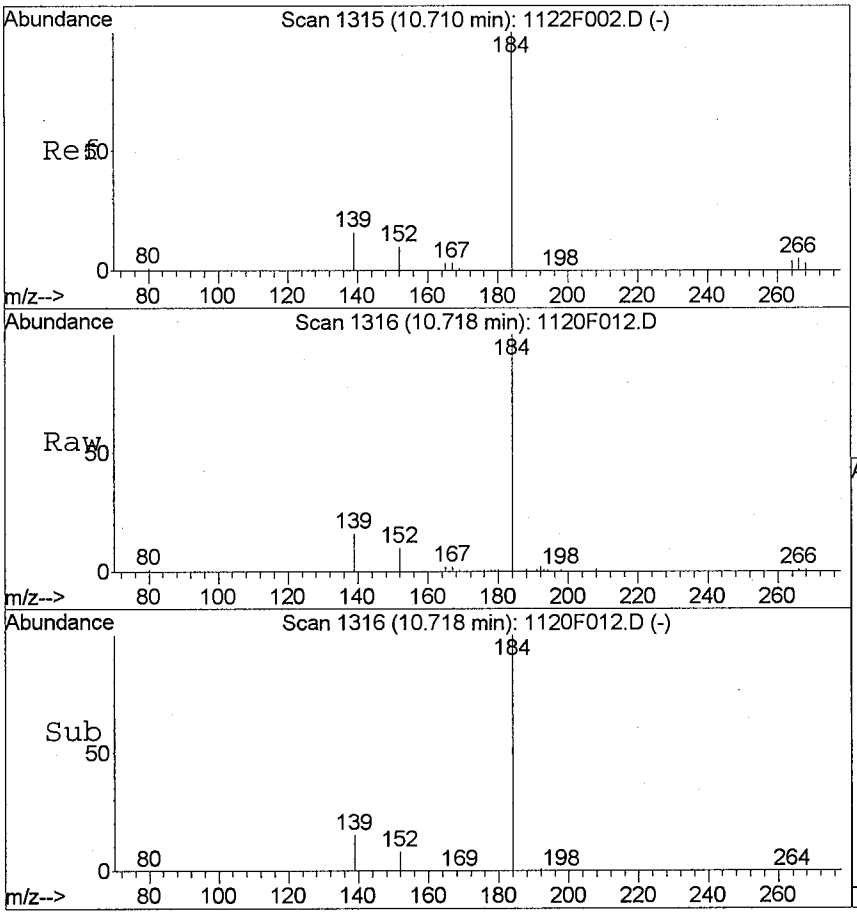


#17
Fluorene
Concen: 126.72 ng/ml
RT: 9.00 min Scan# 1068
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:166 Resp: 21761

Ion	Ratio	Lower	Upper
166	100		
165	92.5	63.3	123.3

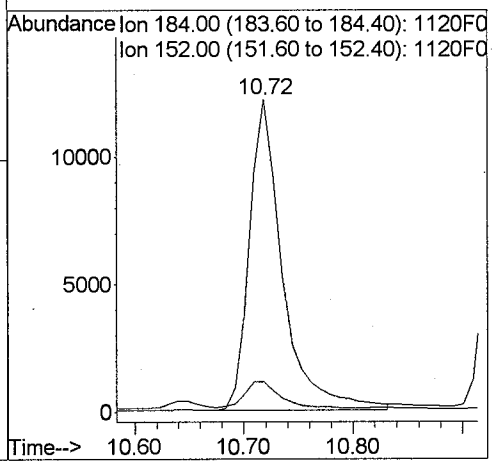


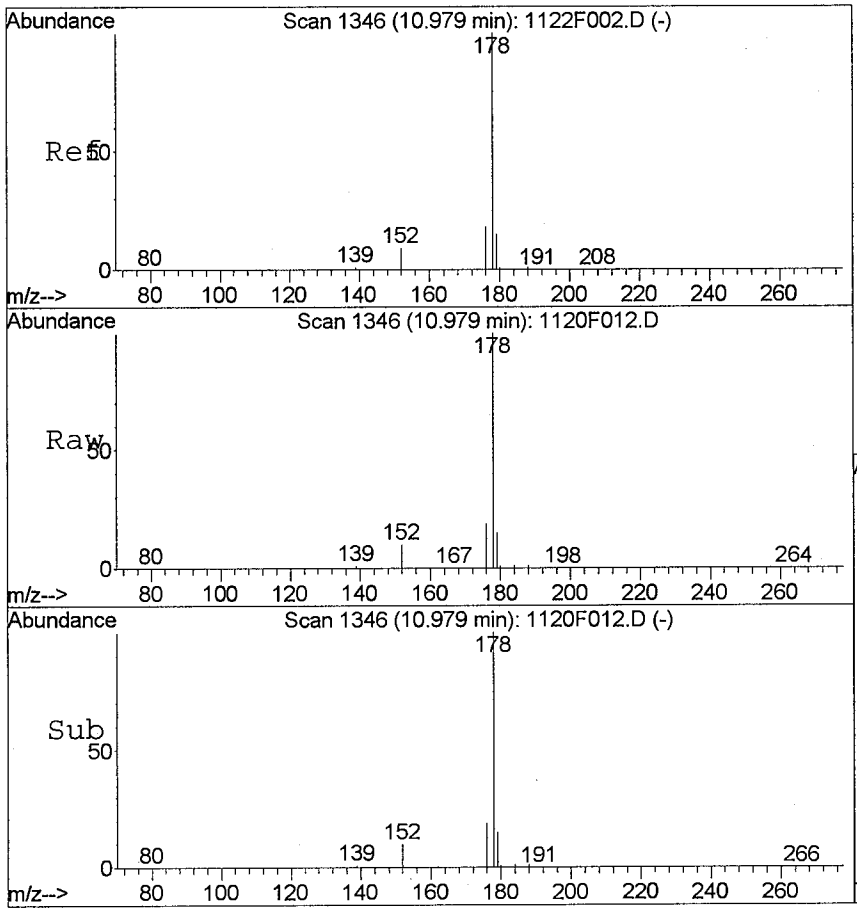


#24
Dibenzothiophene
Concen: 118.21 ng/ml
RT: 10.72 min Scan# 1316
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:184 Resp: 25717

Ion	Ratio	Lower	Upper
184	100		
152	8.4	0.0	39.0

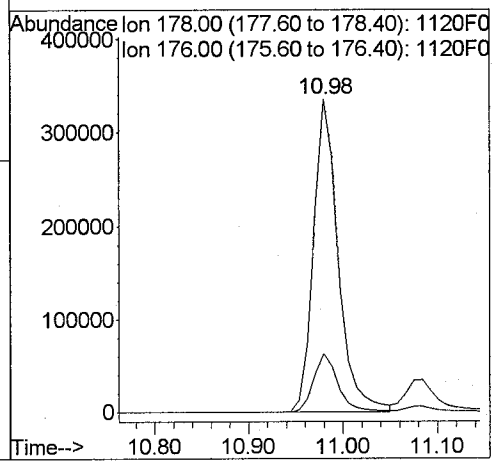


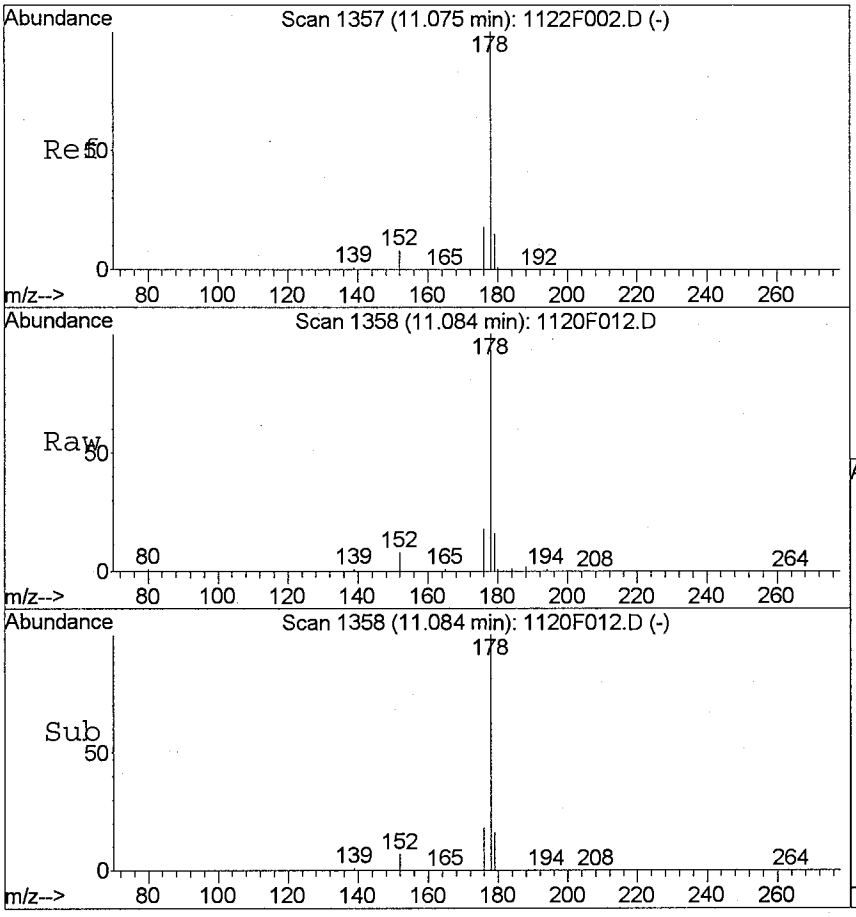


#28
Phenanthrene
Concen: 2679.27 ng/ml
RT: 10.98 min Scan# 1346
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:178 Resp: 612306

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	49.0

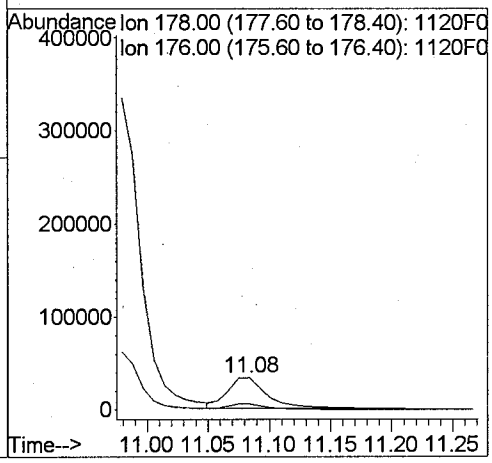


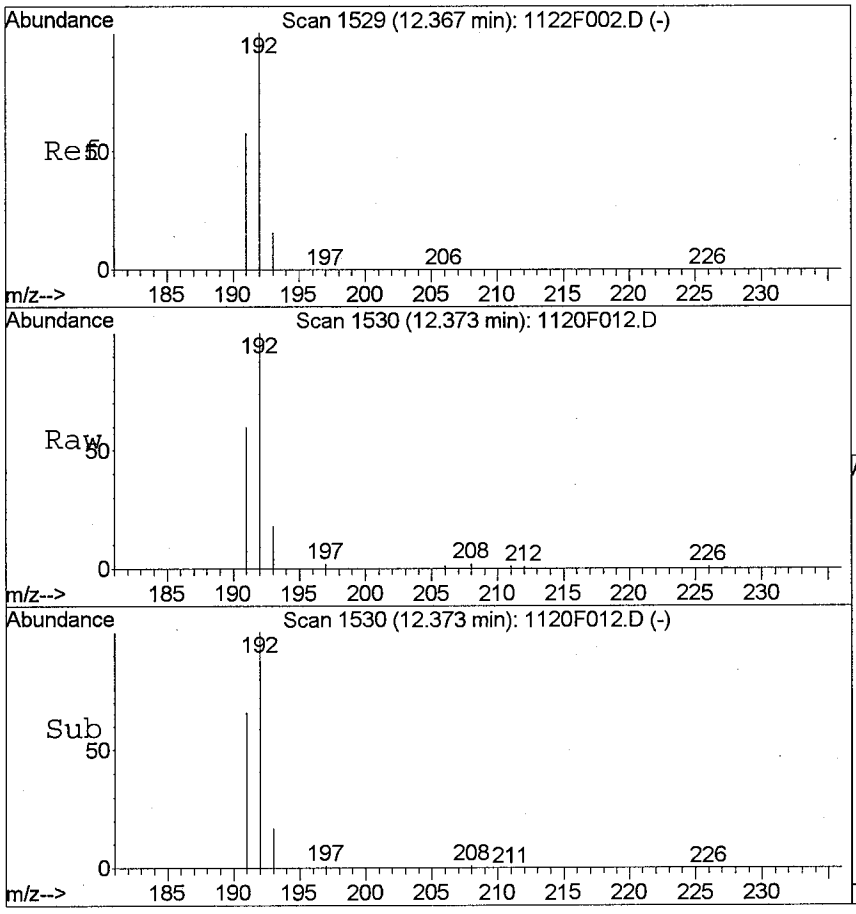


#29
Anthracene
Concen: 387.63 ng/ml
RT: 11.08 min Scan# 1358
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:178 Resp: 75682

Ion	Ratio	Lower	Upper
178	100		
176	17.8	0.0	47.8

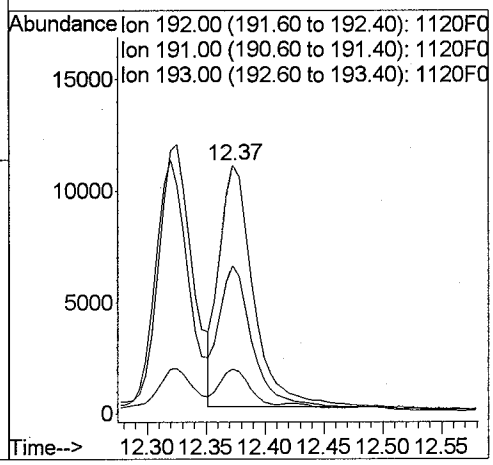


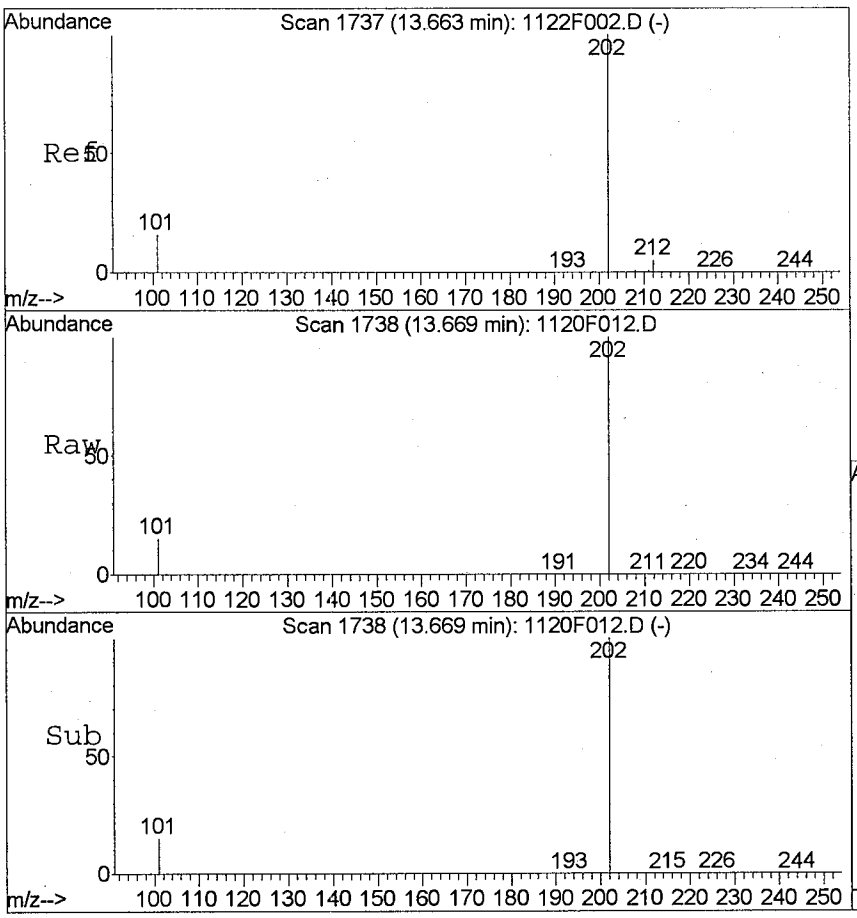


#31
1-Methylphenanthrene
Concen: 140.35 ng/ml
RT: 12.37 min Scan# 1530
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:192 Resp: 21777

Ion	Ratio	Lower	Upper
192	100		
191	58.9	27.0	87.0
193	16.8	0.0	45.8

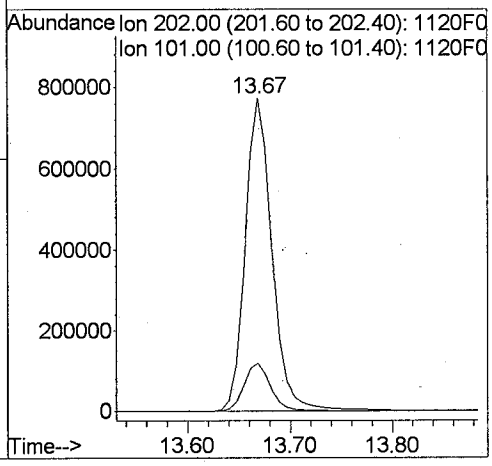


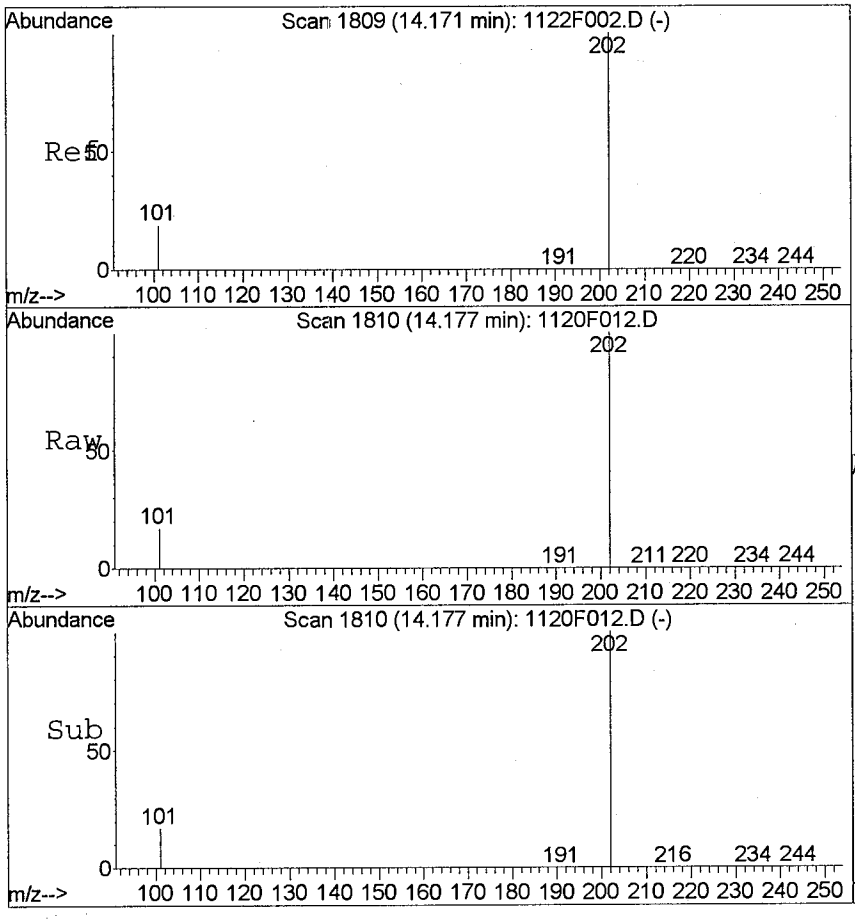


#36
Fluoranthene
Concen: 6183.37 ng/ml
RT: 13.67 min Scan# 1738
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:202 Resp: 1406637

Ion	Ratio	Lower	Upper
202	100		
101	15.4	0.0	46.1

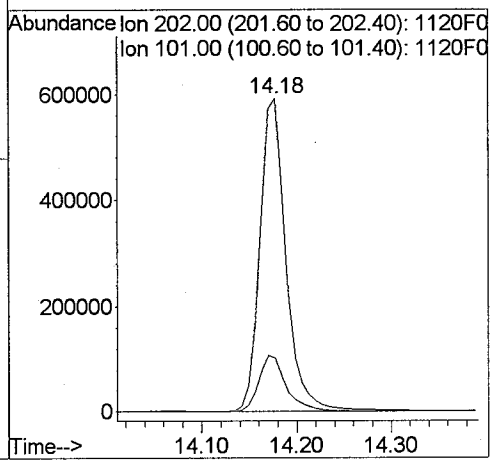


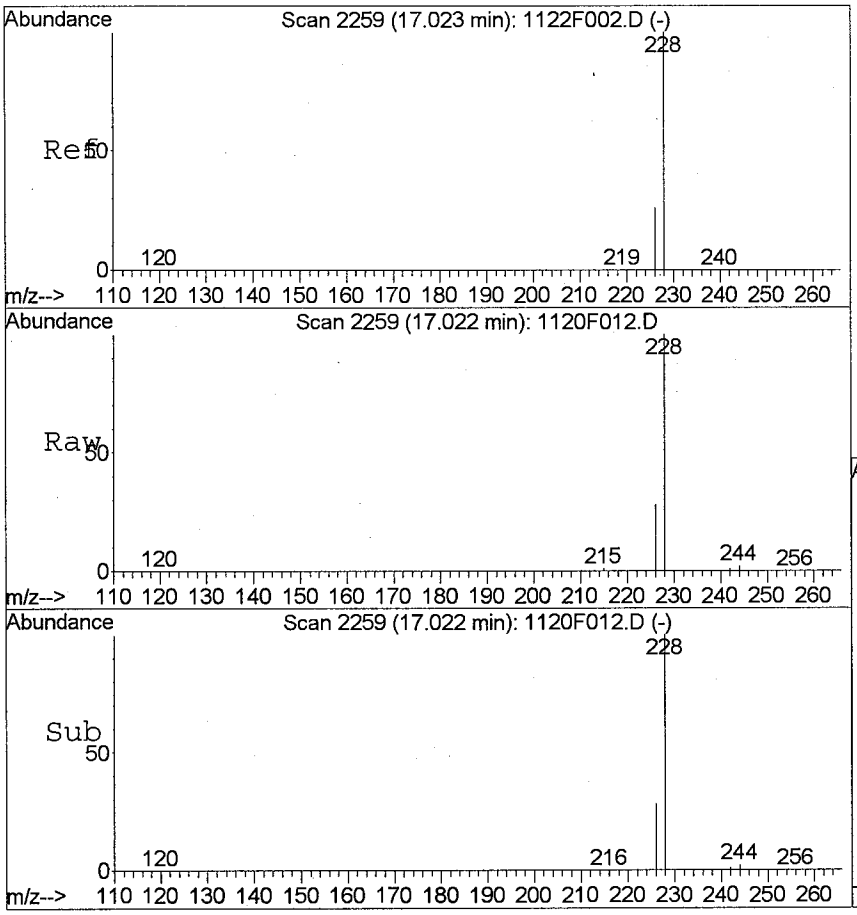


#39
Pyrene
Concen: 4605.40 ng/ml
RT: 14.18 min Scan# 1810
Delta R.T. 0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:202 Resp: 1128097

Ion	Ratio	Lower	Upper
202	100		
101	17.3	0.0	47.3

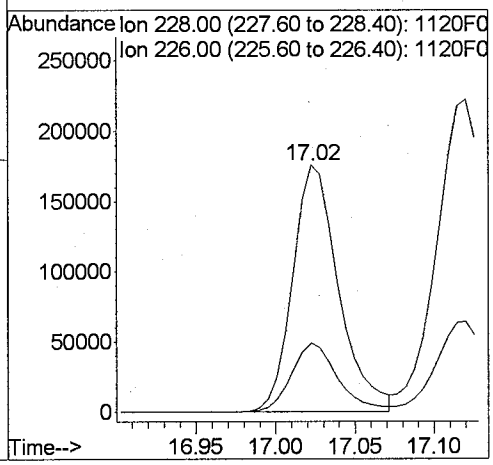


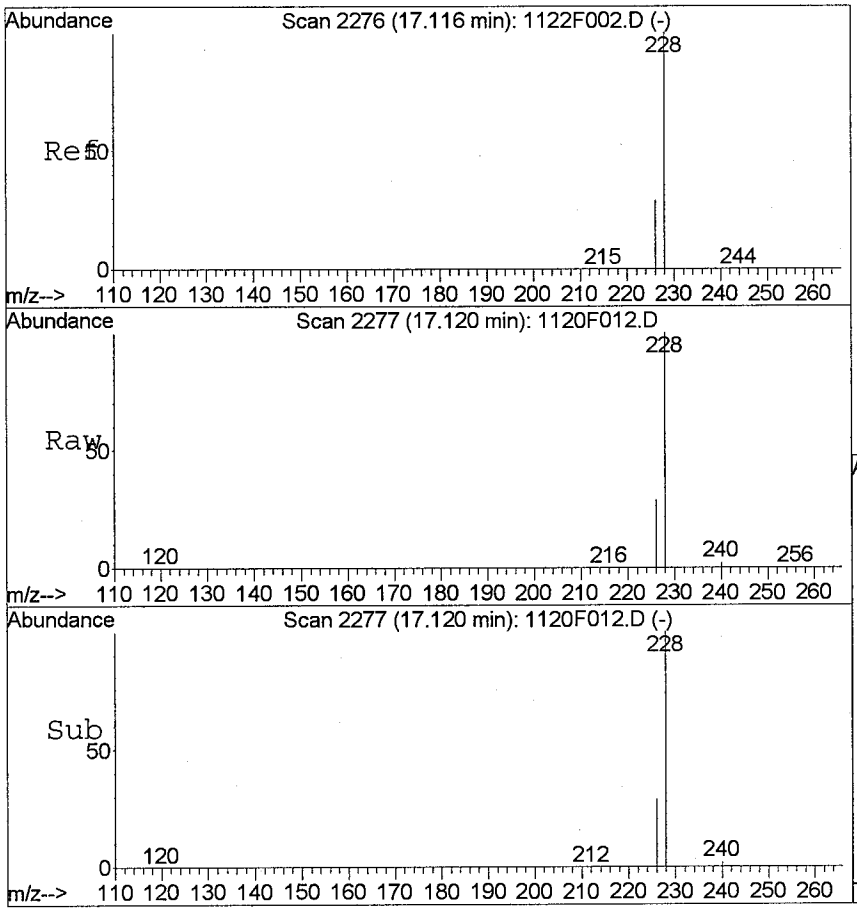


#42
Benz(a)anthracene
Concen: 1889.93 ng/ml
RT: 17.02 min Scan# 2259
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:228 Resp: 352458

Ion	Ratio	Lower	Upper
228	100		
226	27.7	0.0	56.3

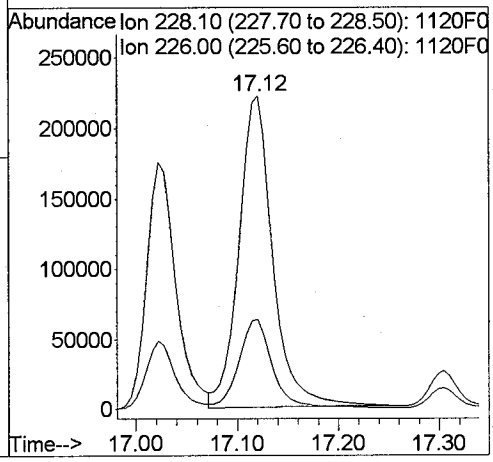


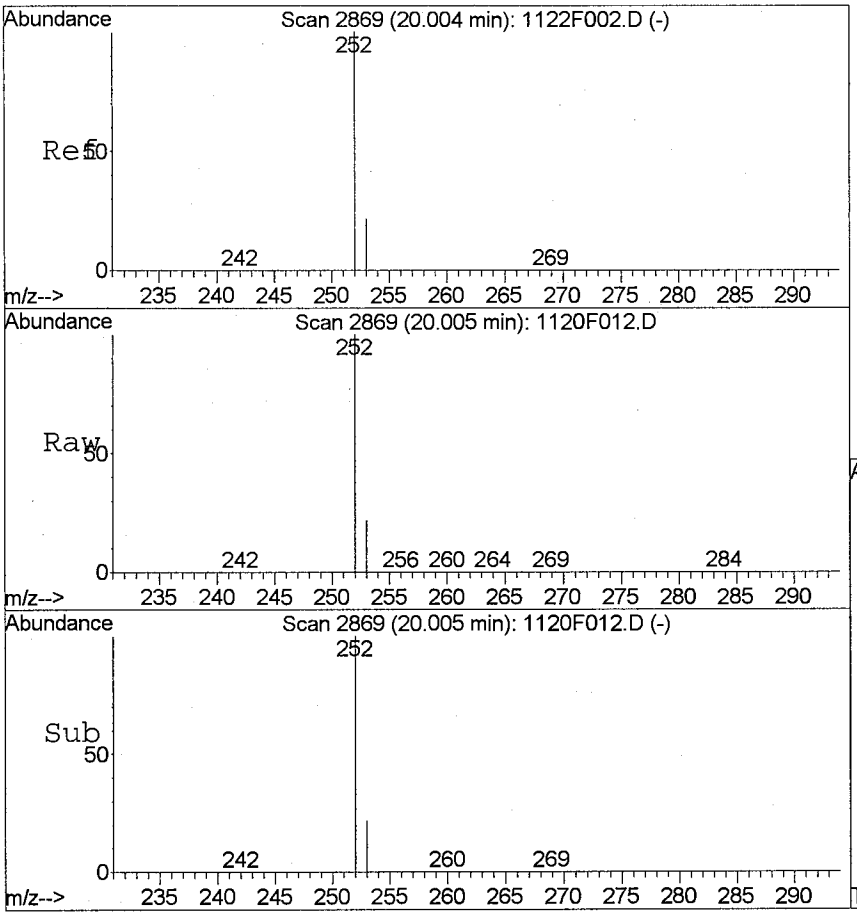


#43
Chrysene
Concen: 2581.10 ng/ml
RT: 17.12 min Scan# 2277
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:228 Resp: 514731

Ion	Ratio	Lower	Upper
228	100		
226	28.8	0.0	58.3

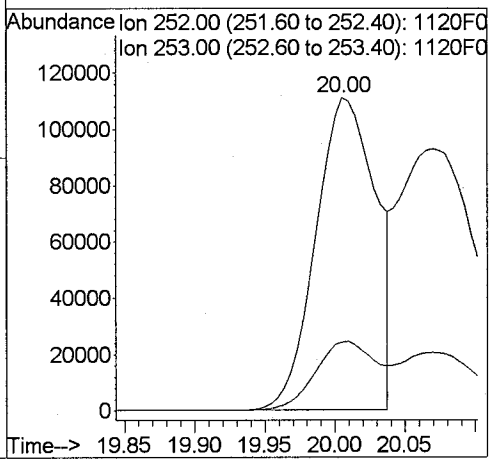


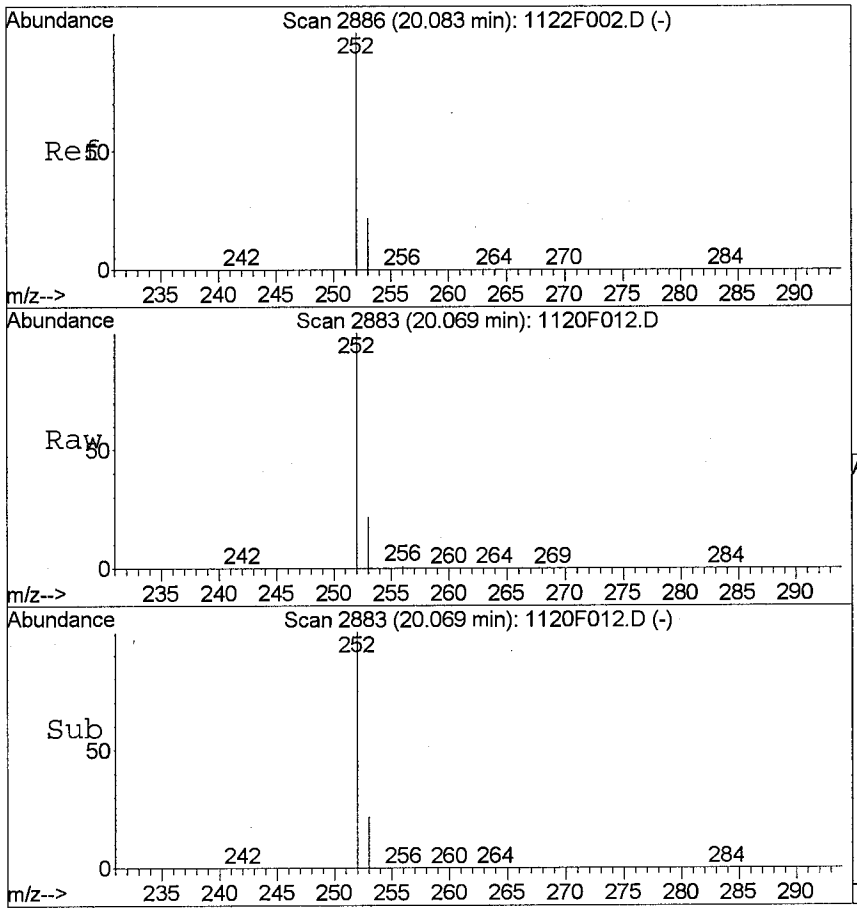


#49
Benzo(b)fluoranthene
Concen: 2380.29 ng/ml
RT: 20.00 min Scan# 2869
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:252 Resp: 331118

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.9

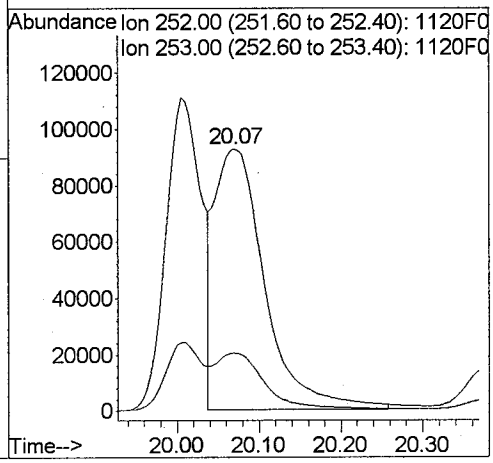


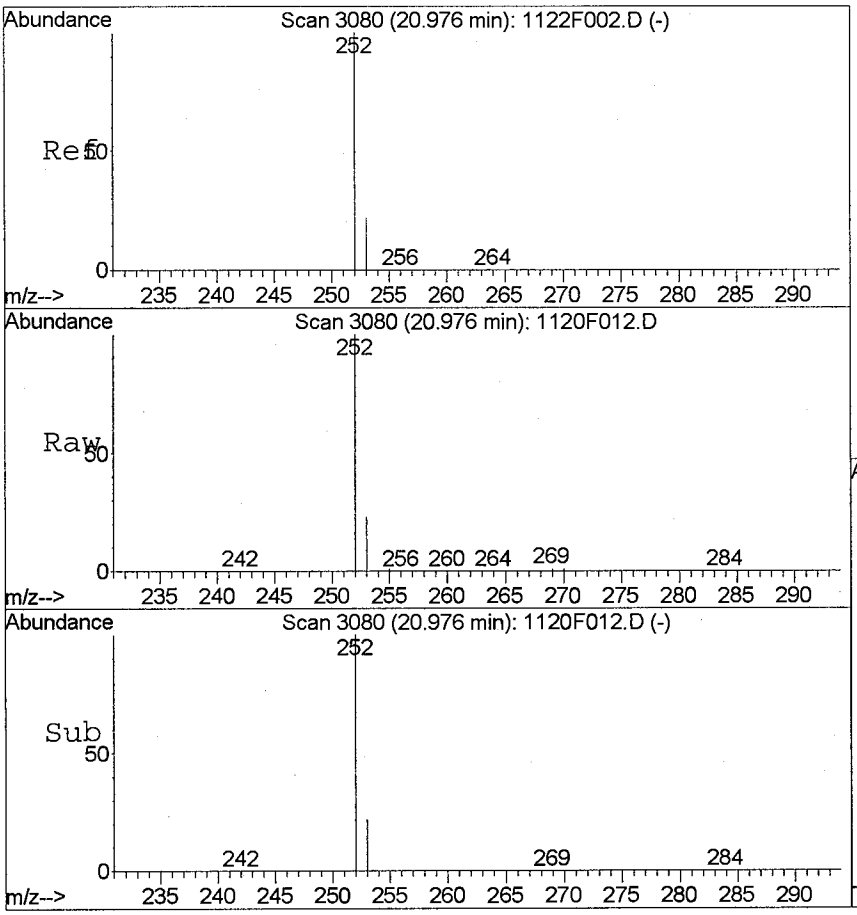


#50
Benzo(k)fluoranthene
Concen: 2251.49 ng/ml m
RT: 20.07 min Scan# 2883
Delta R.T. -0.01 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:252 Resp: 397405

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	52.0

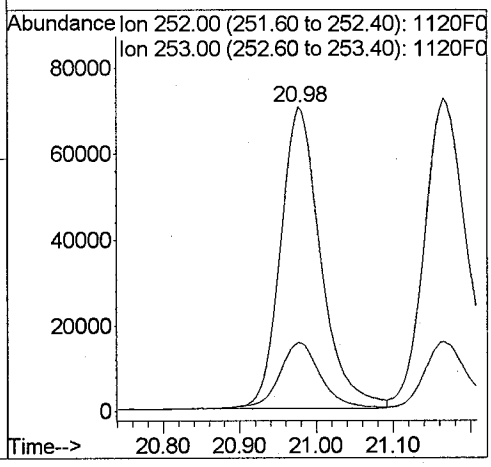


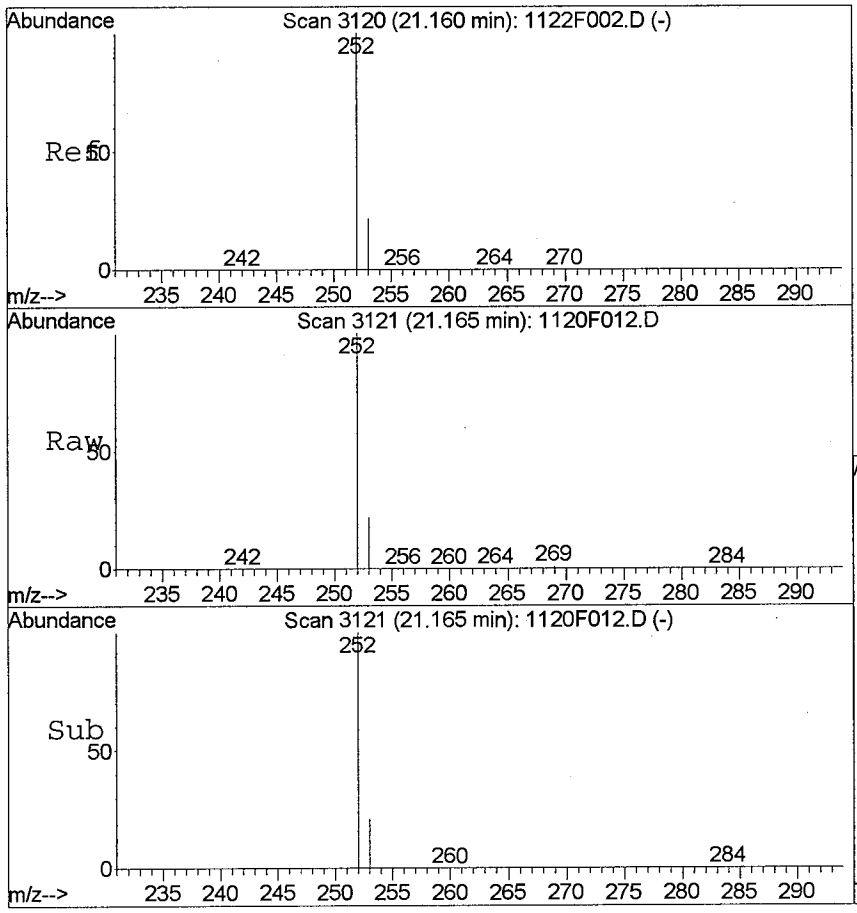


#51
Benzo(e)pyrene
Concen: 1634.96 ng/ml
RT: 20.98 min Scan# 3080
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:252 Resp: 255362

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.9

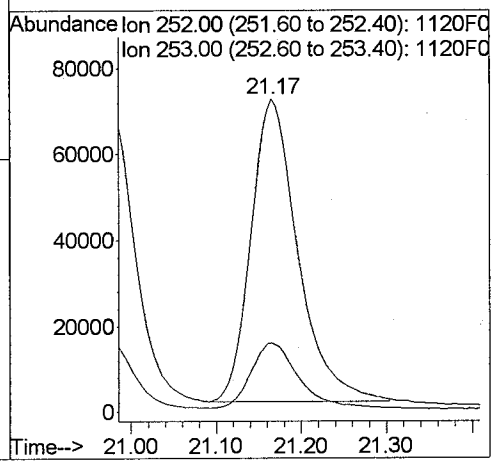


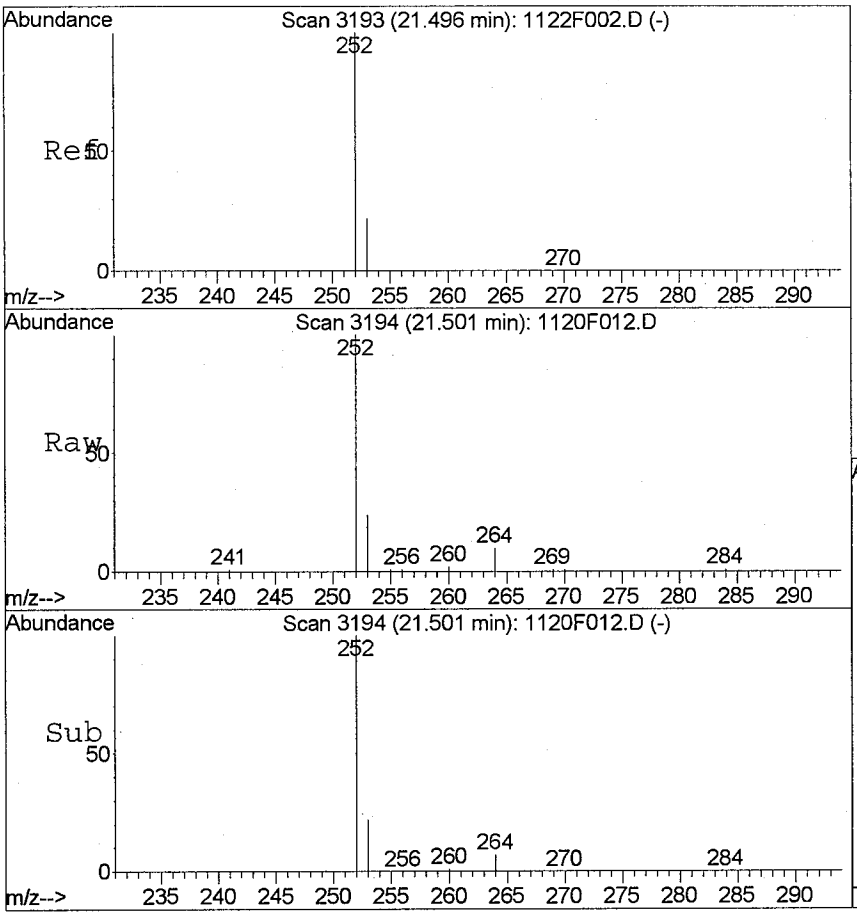


#52
Benzo(a)pyrene
Concen: 2290.31 ng/ml
RT: 21.17 min Scan# 3121
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:252 Resp: 270999

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9

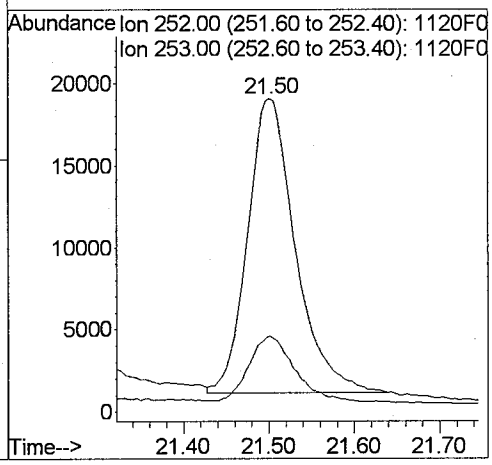


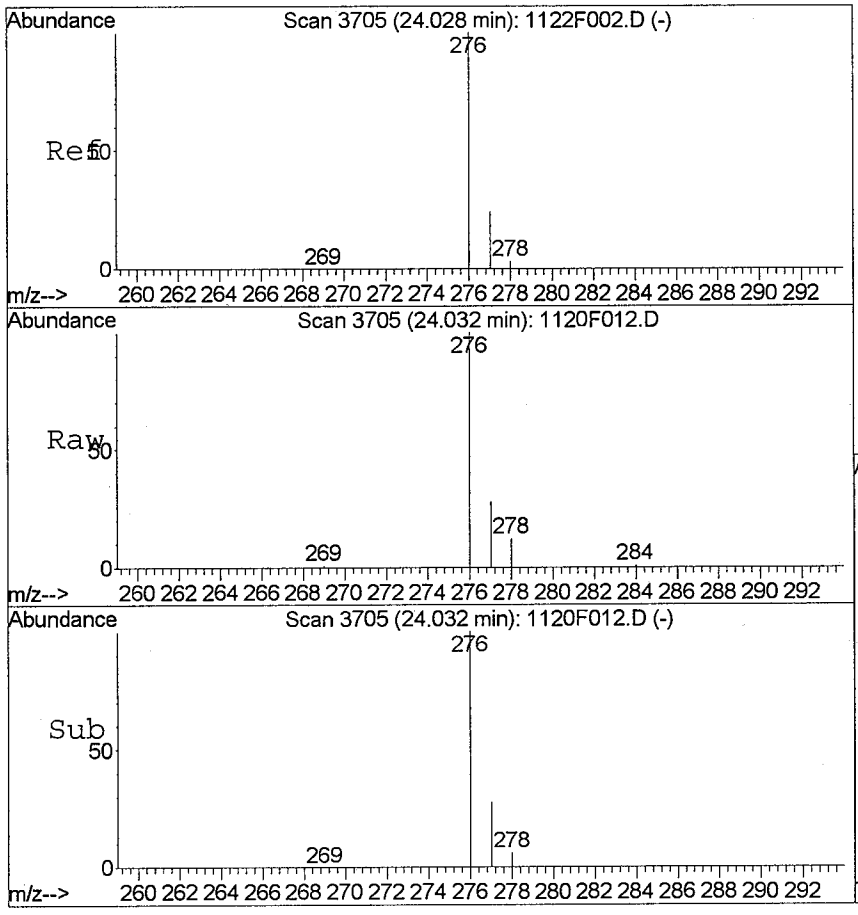


#53
Perylene
Concen: 522.58 ng/ml
RT: 21.50 min Scan# 3194
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:252 Resp: 69411

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.6

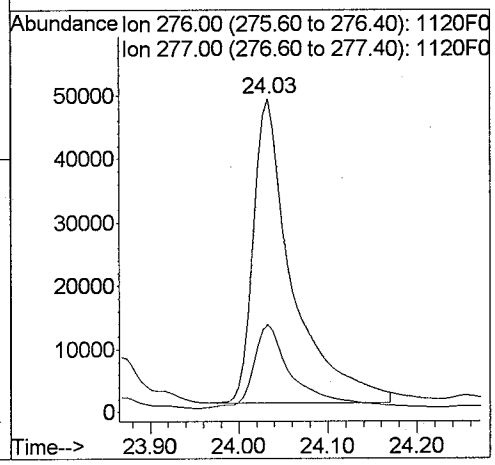


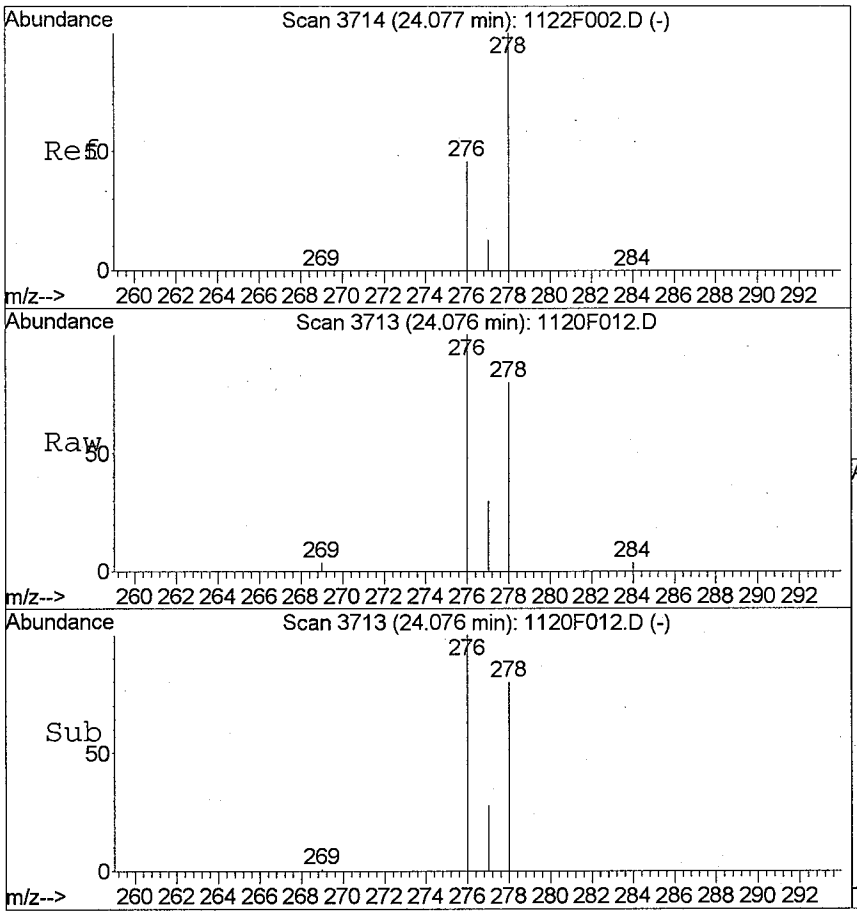


#54
Indeno(1,2,3-cd)pyrene
Concen: 2032.53 ng/ml
RT: 24.03 min Scan# 3705
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:276 Resp: 146200

Ion	Ratio	Lower	Upper
276	100		
277	27.4	0.0	53.8

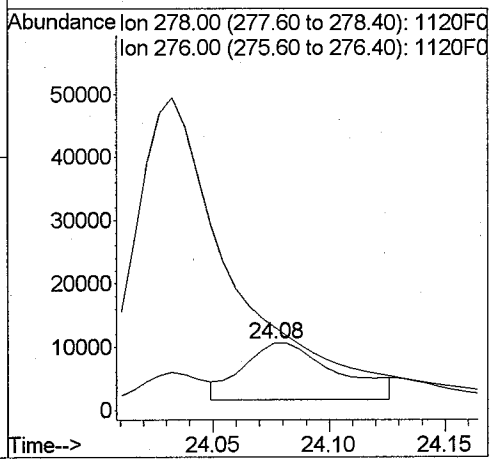


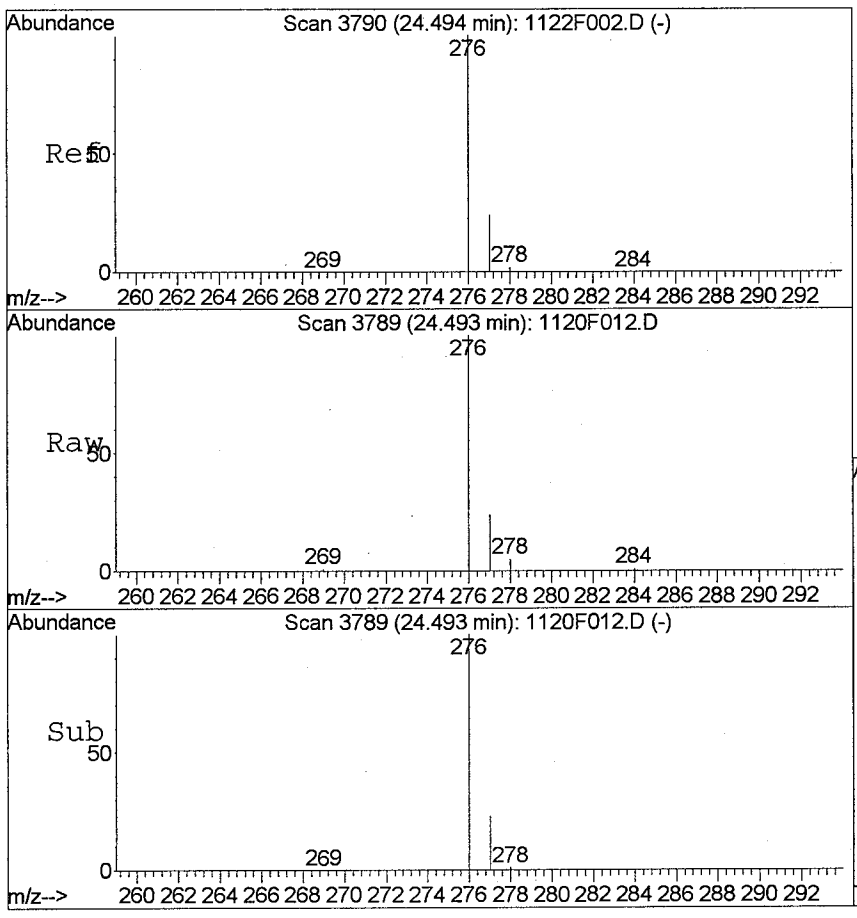


#55
Dibenz(a,h)anthracene
Concen: 244.99 ng/ml m
RT: 24.08 min Scan# 3713
Delta R.T. -0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:278 Resp: 25325

Ion	Ratio	Lower	Upper
278	100		
276	124.6	5.3	65.3#

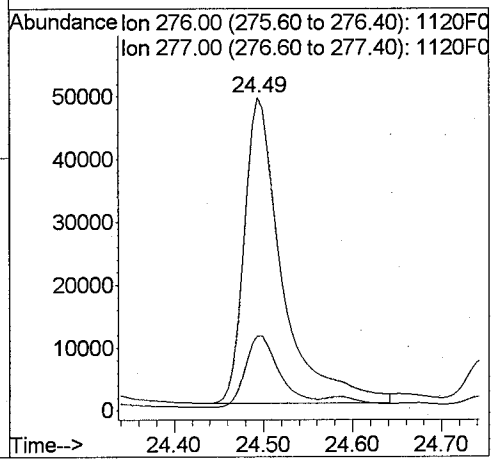




#56
Benzo(g,h,i)perylene
Concen: 1199.51 ng/ml
RT: 24.49 min Scan# 3789
Delta R.T. 0.00 min
Lab File: 1120F012.D
Acq: 20 Nov 2003 11:50 am

Tgt Ion:276 Resp: 143043

Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	53.5

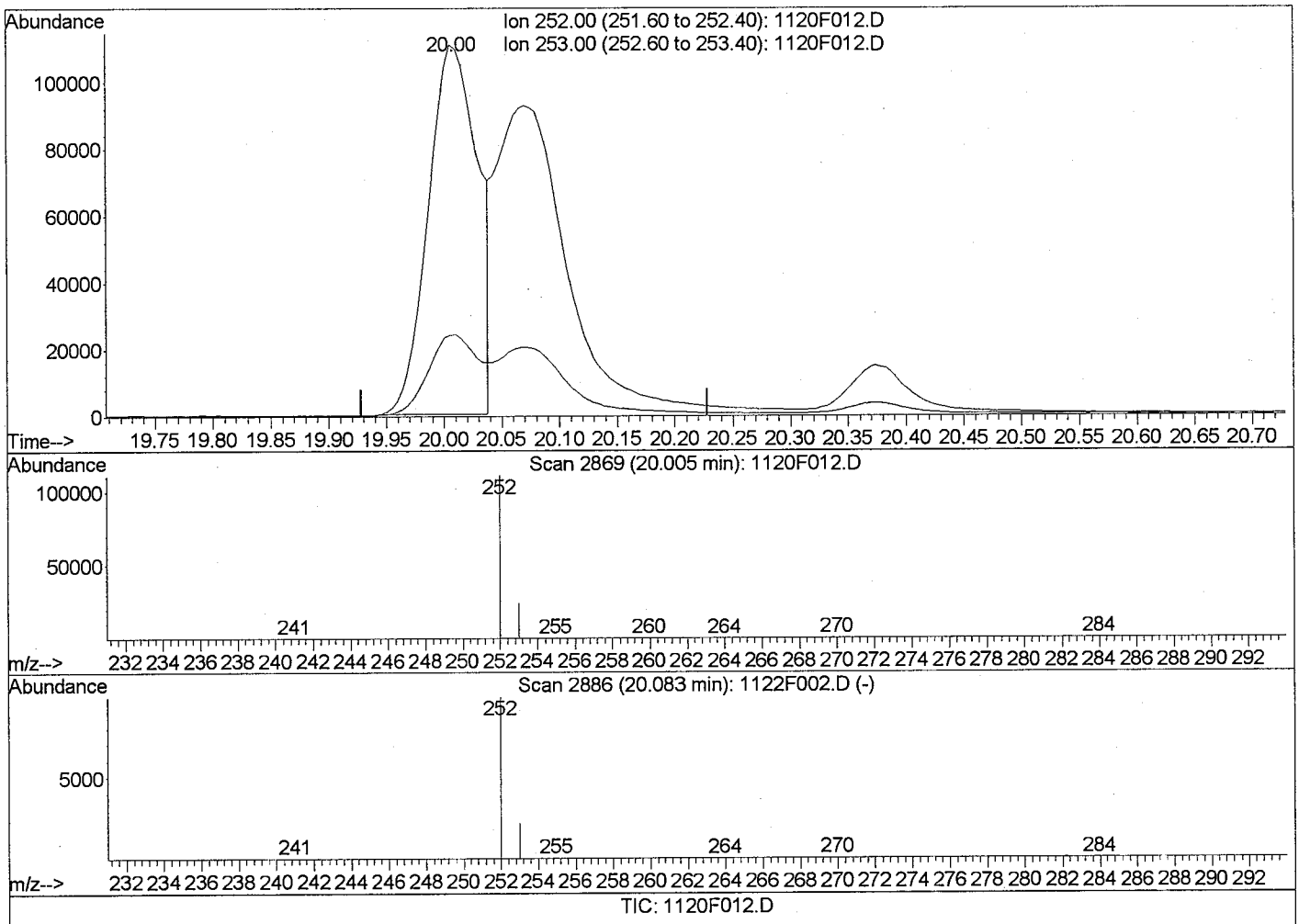


Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F012.D
Acq On : 20 Nov 2003 11:50 am
Sample : K2308433-009DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:21 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.00min 1858.85ng/ml

response 328101

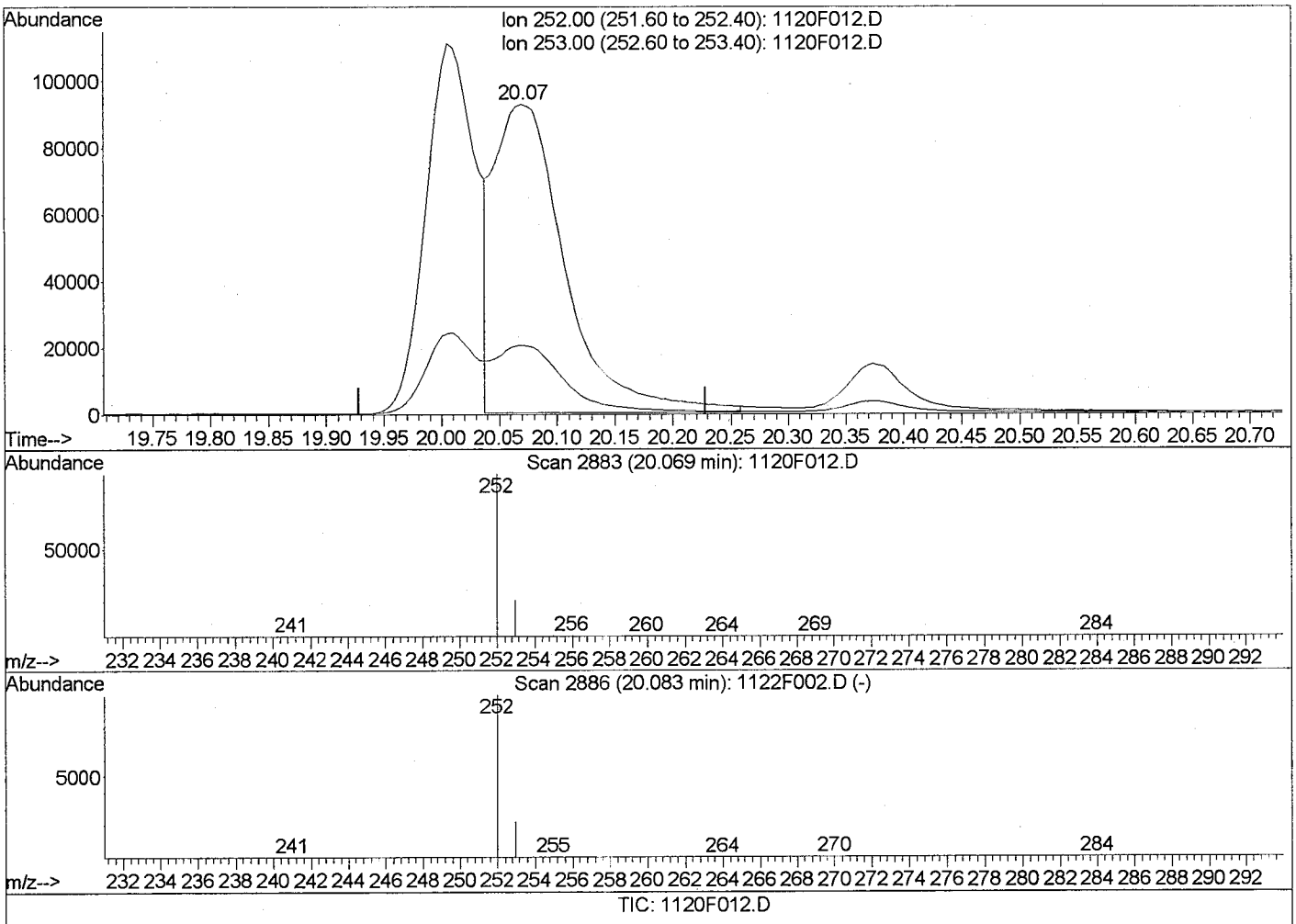
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.59
0.00	0.00	0.00
0.00	0.00	0.00

1120F012.D 1107ALK.M Mon Nov 24 09:21:11 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F012.D Vial: 9
Acq On : 20 Nov 2003 11:50 am Operator: LWeiskopf
Sample : K2308433-009DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:21 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F012.D

(50) Benzo(k)fluoranthene (T)

20.07min 2251.49ng/ml m

response 397405

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.31
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak 11/24/03

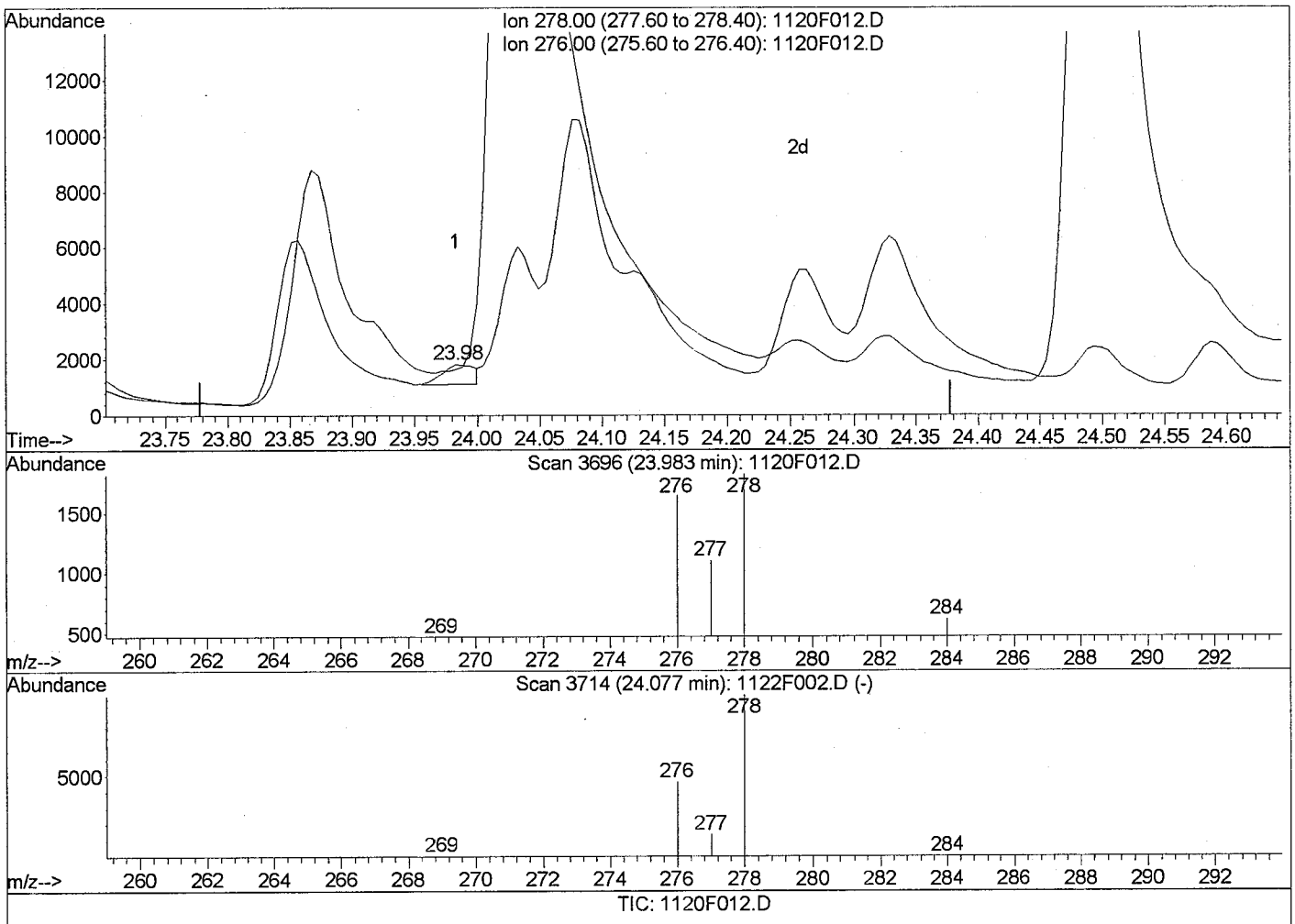
1120F012.D 1107ALK.M Mon Nov 24 09:21:15 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F012.D
Acq On : 20 Nov 2003 11:50 am
Sample : K2308433-009DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:21 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

23.98min 12.38ng/ml

response 1280

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	6.41
0.00	0.00	0.00
0.00	0.00	0.00

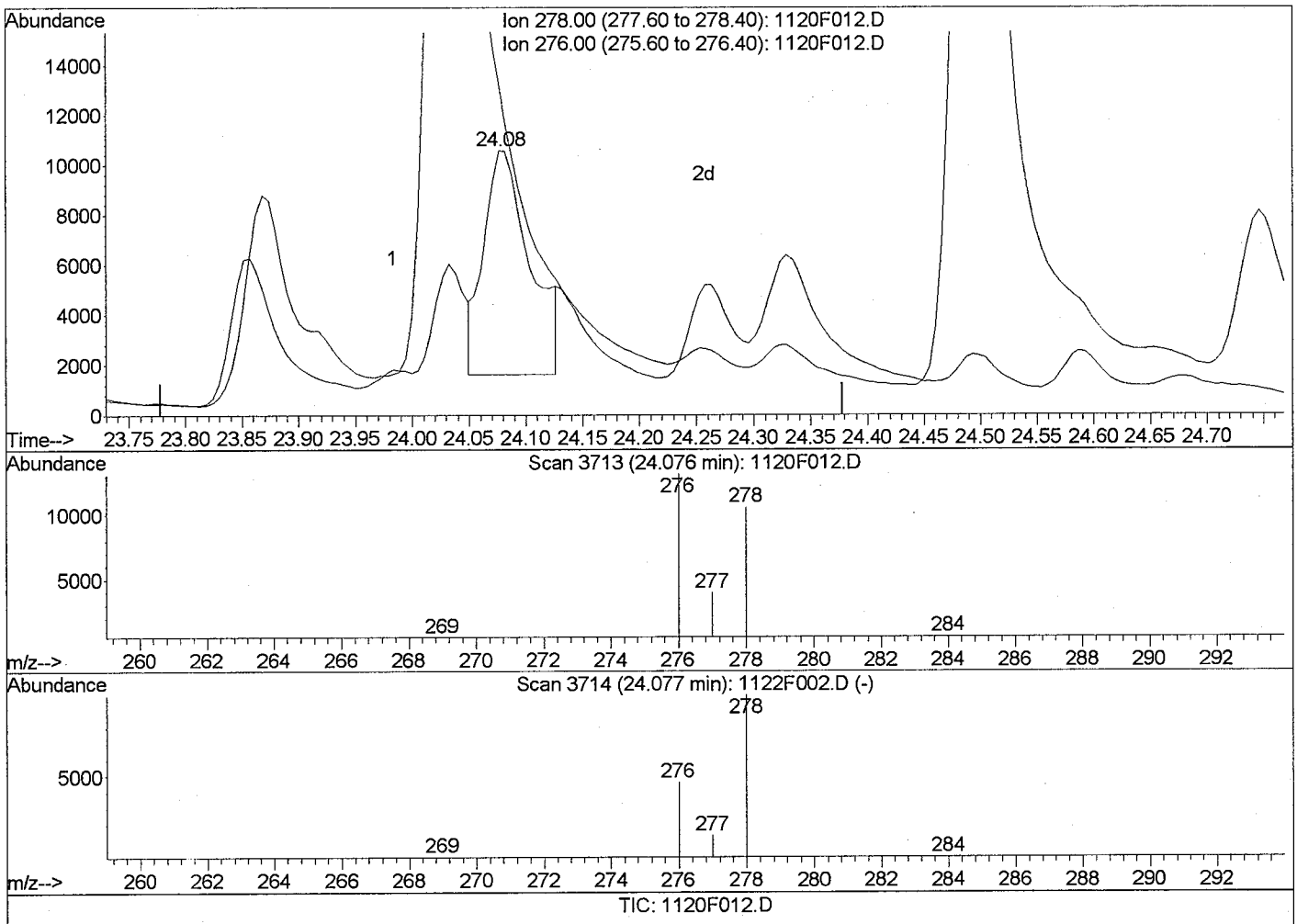
1120F012.D 1107ALK.M Mon Nov 24 09:21:29 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F012.D
Acq On : 20 Nov 2003 11:50 am
Sample : K2308433-009DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:21 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F012.D

(55) Dibenz(a,h)anthracene (T)

24.08min 244.99ng/ml m

response 25325

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	124.62#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak

1120F012.D 1107ALK.M Mon Nov 24 09:21:38 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317778-5

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Fluorene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Anthracene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Chrysene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0317778-5

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Perylene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	ND	U	3.5	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	27-110	11/19/03	Acceptable
Fluoranthene-d10	73	34-122	11/19/03	Acceptable
Terphenyl-d14	122	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F031.D
Lab ID: KWG0317778-5
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/19/2003 12:49
Date Quantitated: 11/20/2003 14:12
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8433

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	2,4,6-Tribromophenol	-20.2	NA	20	
	Pentachlorophenol	-42.0	NA	20	
Surrogates	2,4,6-Tribromophenol	0	20	140	
Std MRL Unsupported by ICAL	Pentachlorophenol	350	140	NA	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247872	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\111903\1119F031.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 12:49	**Quant Date:**	11/20/2003 14:12	**Vial:**	2
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317778-5			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	214525	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	106189	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	142248	1,000.00	OK
4	Chrysene-d12	17.05	0.01	240	93682	1,000.00	OK
5	Perylene-d12	21.36	0.00	264	41811	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.00	0.00	0.00	164	67798	431.42	43	39-97	OK	
2	Fluorene-d10	8.94	0.01	0.00	176	67909	639.43	64	27-110	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	20-140	*	
3	Fluoranthene-d10	13.62	0.00	0.00	212	104358	732.99	73	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	104532	1,224	122	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	635	2.62	0.21	U	
1	2-Methylnaphthalene	6.36	-0.01	0.00	142	105	0.7300	0.21	U	
1	1-Methylnaphthalene	6.51		0.00	142	89m	0.6600	0.20	U	
1	Biphenyl	7.04	0.01	0.00	154	223	1.28	0.18	U	
1	2,6-Dimethylnaphthalene				156	0		0.13	U	
1	C2-Naphthalenes				156	0		2.5	U	
1	C3-Naphthalenes				170	0		2.5	U	
1	C4-Naphthalenes				184	0		2.5	U	
2	Acenaphthylene				152	0		0.16	U	
2	Acenaphthene				154	0d		0.21	U	
2	Dibenzofuran				168	0		0.20	U	
2	2,3,5-Trimethylnaphthalene				170	0		0.18	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F031.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 12:49	**Quant Date:**	11/20/2003 14:12	**Vial:**	2
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317778-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene				166	0d		0.17	U	
2	C1-Fluorenes				180	0		2.5	U	
2	C2-Fluorenes				194	0		2.5	U	
2	C3-Fluorenes				208	0		2.5	U	
2	Pentachlorophenol				266	0		15	U	
3	Dibenzothiophene				184	0		0.19	U	
3	C1-Dibenzothiophenes				198	0		2.5	U	
3	C2-Dibenzothiophenes				212	0		2.5	U	
3	C3-Dibenzothiophenes				226	0		2.5	U	
3	Phenanthrene	10.97		0.00	178	217	1.26	0.15	U	
3	Anthracene				178	0d		0.19	U	
3	Carbazole				167	0		0.090	U	
3	1-Methylphenanthrene				192	0		0.11	U	
3	C1-Phenanthrenes/Anthracenes				192	0		2.5	U	
3	C2-Phenanthrenes/Anthracenes				206	0		2.5	U	
3	C3-Phenanthrenes/Anthracenes				220	0		2.5	U	
3	C4-Phenanthrenes/Anthracenes				234	0		2.5	U	
3	Fluoranthene	13.66	0.01	0.00	202	210	1.22	0.17	U	
4	Pyrene	14.16		0.00	202	170	1.39	0.11	U	
4	C1-Fluoranthenes/Pyrenes				216	0		2.5	U	
4	Benz(a)anthracene				228	0d		0.13	U	
4	Chrysene	17.10		0.00	228	235	2.36	0.165	J	
4	C1-Chrysenes				242	0		2.5	U	
4	C2-Chrysenes				256	0		2.5	U	
4	C3-Chrysenes				270	0		2.5	U	
4	C4-Chrysenes				284	0		2.5	U	
5	Benzo(b)fluoranthene	19.97		0.00	252	286m	5.12	0.358	J	
5	Benzo(k)fluoranthene	20.04	-0.01	0.00	252	290m	4.09	0.286	J	
5	Benzo(e)pyrene	20.94	0.01	0.00	252	207	3.30	0.231	J	
5	Benzo(a)pyrene				252	0		0.14	U	
5	Perylene				252	0		0.18	U	
5	Indeno(1,2,3-cd)pyrene	24.01	0.01	0.00	276	267	9.25	0.647	J	
5	Dibenz(a,h)anthracene	24.06		0.00	278	300	7.23	0.506	J	
5	Benzo(g,h,i)perylene	24.46		0.00	276	546	11.41	0.798	J	

Prep Amount:	28.6 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F031.D Vial: 2
Acq On : 19 Nov 2003 12:49 pm Operator: LWeiskopf
Sample : KWG0317778-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:24 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

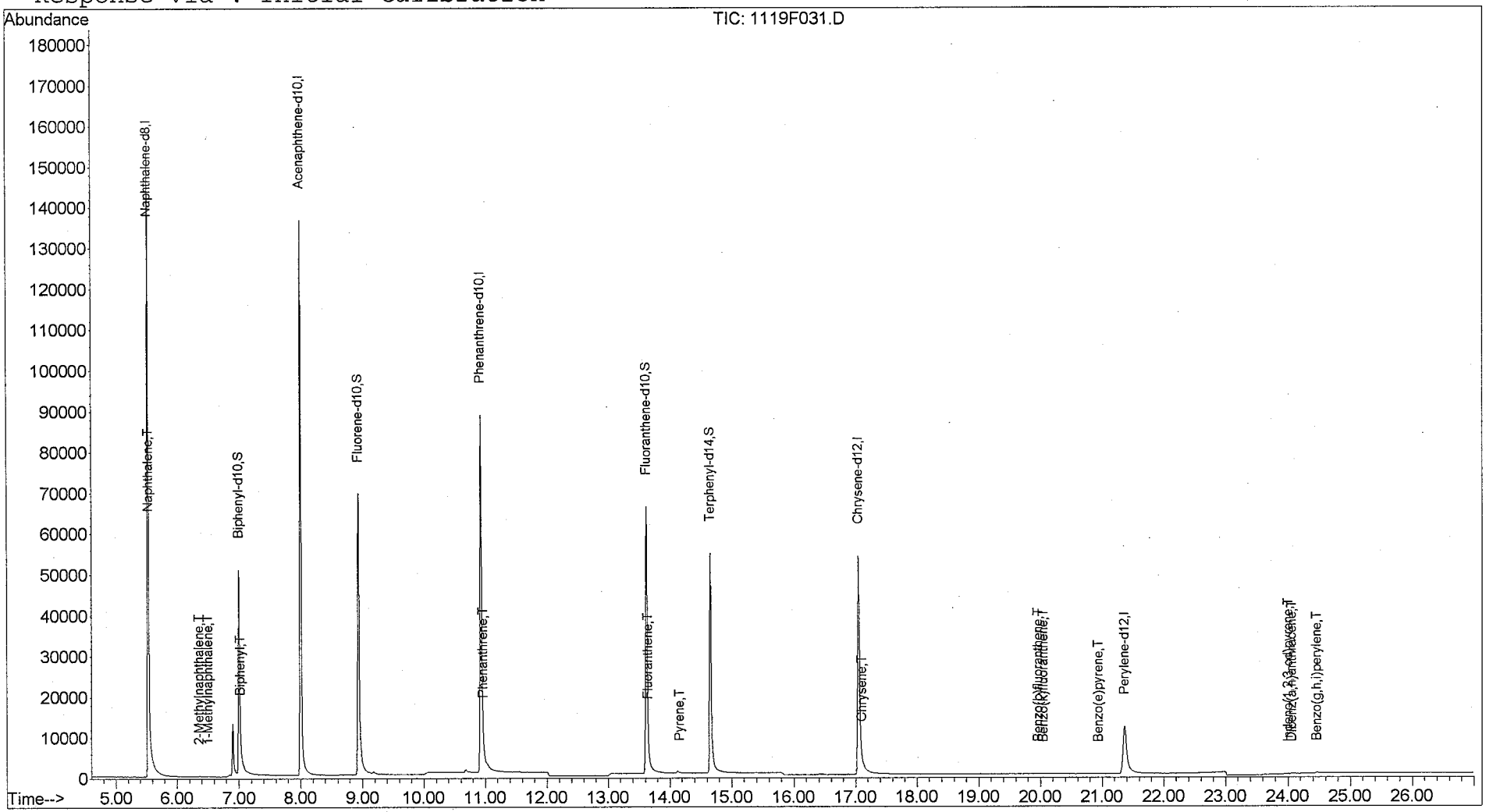
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	214525	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	106189	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	142248	1000.00	ng/ml	0.00
38) Chrysene-d12	17.05	240	93682	1000.00	ng/ml	0.00
48) Perylene-d12	21.36	264	41811	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	67798	431.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 43.14%			
16) Fluorene-d10	8.94	176	67909	639.43	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 63.94%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.62	212	104358	732.99	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 73.30%			
41) Terphenyl-d14	14.66	244	104532	1224.31	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 122.43%			
Target Compounds						Qvalue
2) Naphthalene	5.55	128	635	2.62	ng/ml	93
3) 2-Methylnaphthalene	6.36	142	105	0.73	ng/ml	80
4) 1-Methylnaphthalene	6.51	142	89m	0.66	ng/ml	
6) Biphenyl	7.04	154	223	1.28	ng/ml	97
28) Phenanthrene	10.97	178	217	1.26	ng/ml	96
36) Fluoranthene	13.66	202	210	1.22	ng/ml	99
39) Pyrene	14.16	202	170	1.39	ng/ml	82
43) Chrysene	17.10	228	235	2.36	ng/ml	91
49) Benzo(b)fluoranthene	19.97	252	286m	5.12	ng/ml	
50) Benzo(k)fluoranthene	20.04	252	290m	4.09	ng/ml	
51) Benzo(e)pyrene	20.94	252	207	3.30	ng/ml	61
54) Indeno(1,2,3-cd)pyrene	24.01	276	267	9.25	ng/ml	100
55) Dibenz(a,h)anthracene	24.06	278	300	7.23	ng/ml	82
56) Benzo(g,h,i)perylene	24.46	276	546	11.41	ng/ml	97

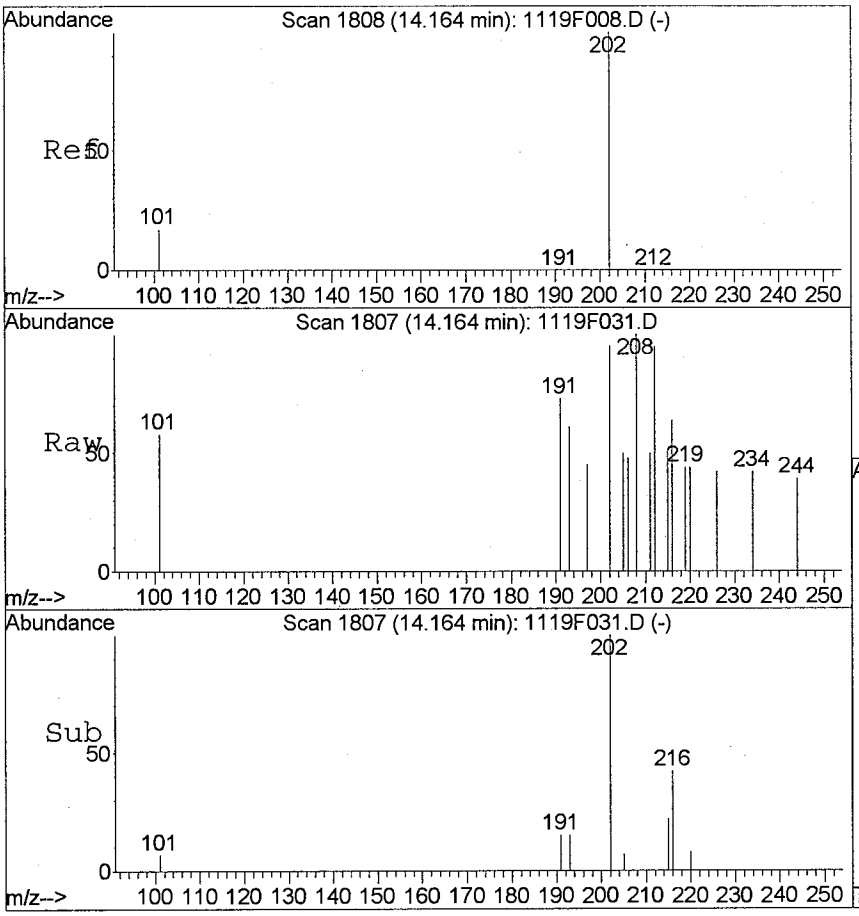
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F031.D Vial: 2
Acq On : 19 Nov 2003 12:49 pm Operator: LWeiskopf
Sample : KWG0317778-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

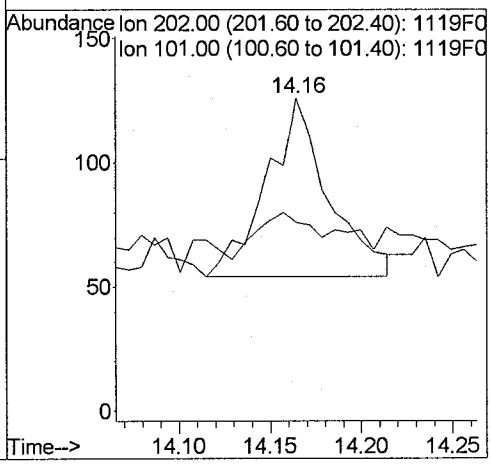


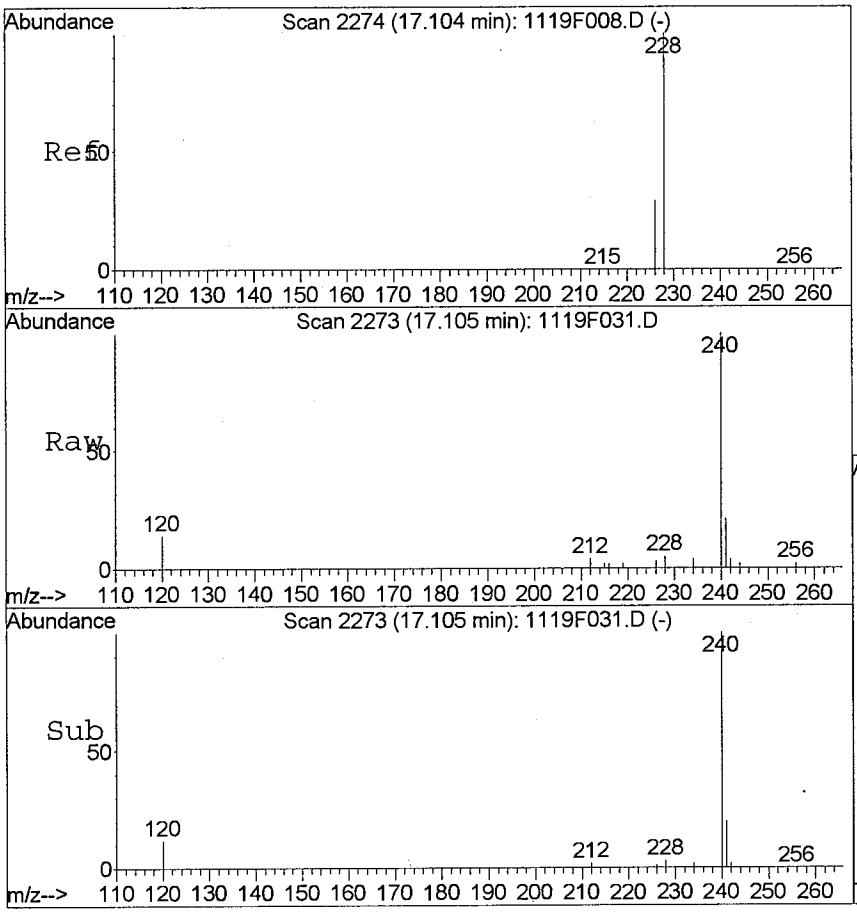


#39
Pyrene
Concen: 1.39 ng/ml
RT: 14.16 min Scan# 1807
Delta R.T. 0.00 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:202 Resp: 170

Ion	Ratio	Lower	Upper
202	100		
101	9.7	0.0	47.4

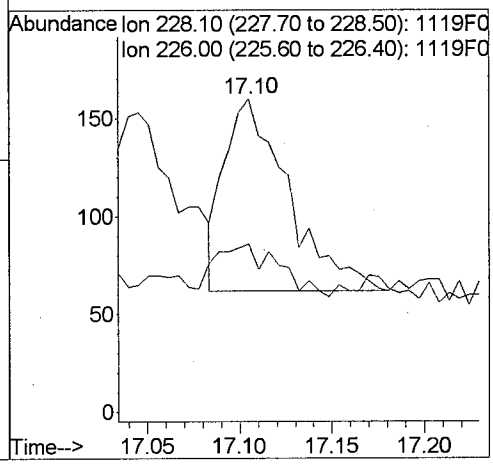


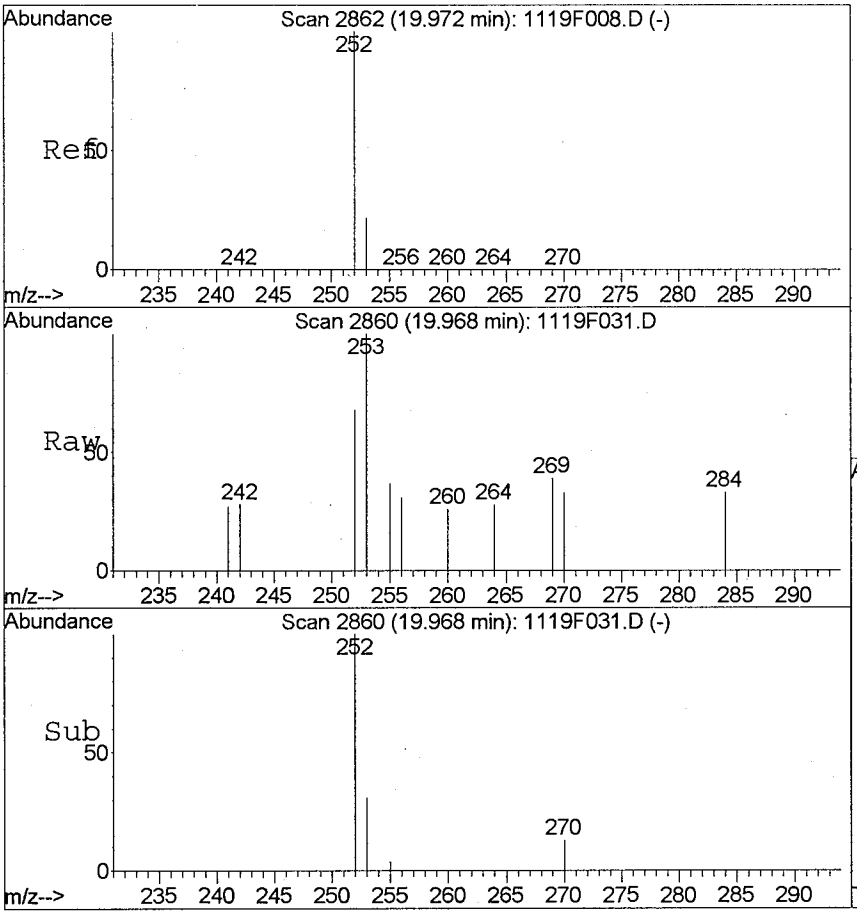


#43
Chrysene
Concen: 2.36 ng/ml
RT: 17.10 min Scan# 2273
Delta R.T. 0.00 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:228 Resp: 235

Ion	Ratio	Lower	Upper
228	100		
226	23.5	0.0	58.5

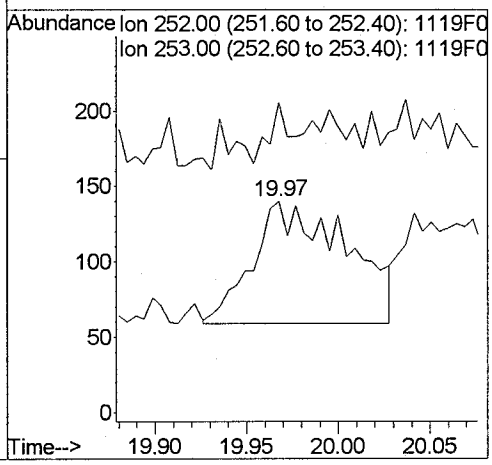


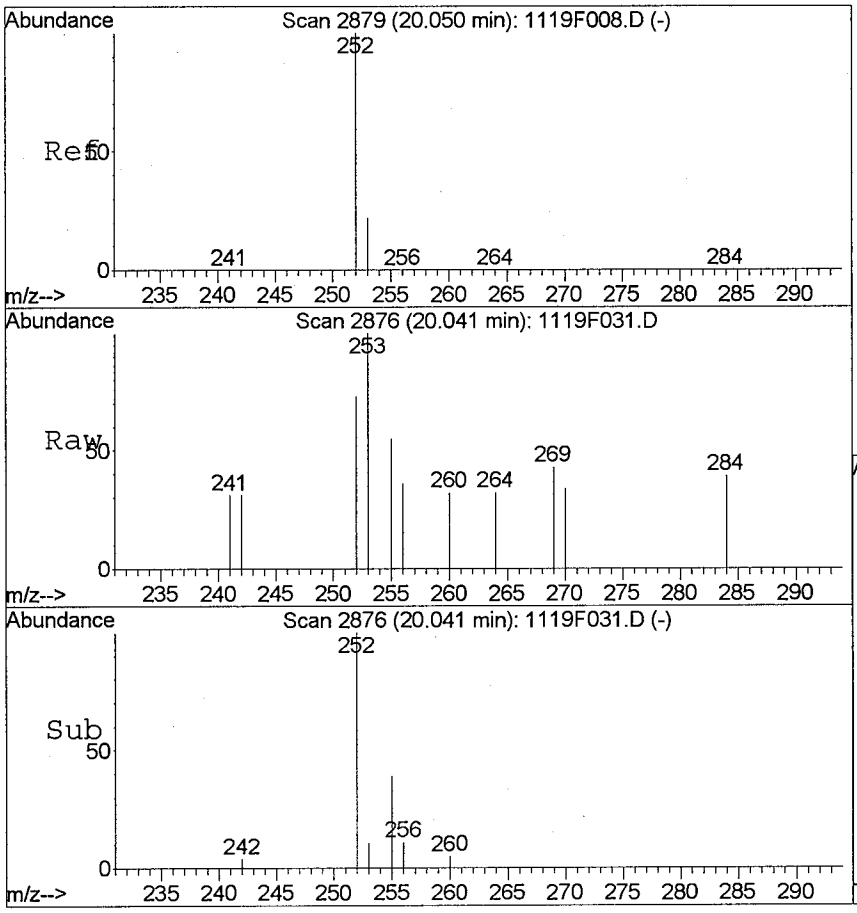


#49
Benzo(b)fluoranthene
Concen: 5.12 ng/ml m
RT: 19.97 min Scan# 2860
Delta R.T. -0.00 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:252 Resp: 286

Ion	Ratio	Lower	Upper
252	100		
253	147.1	0.0	51.8#

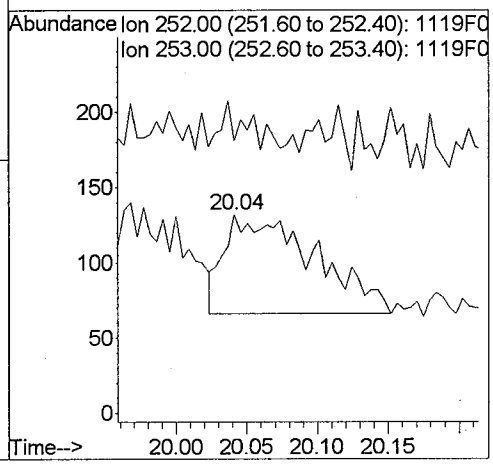


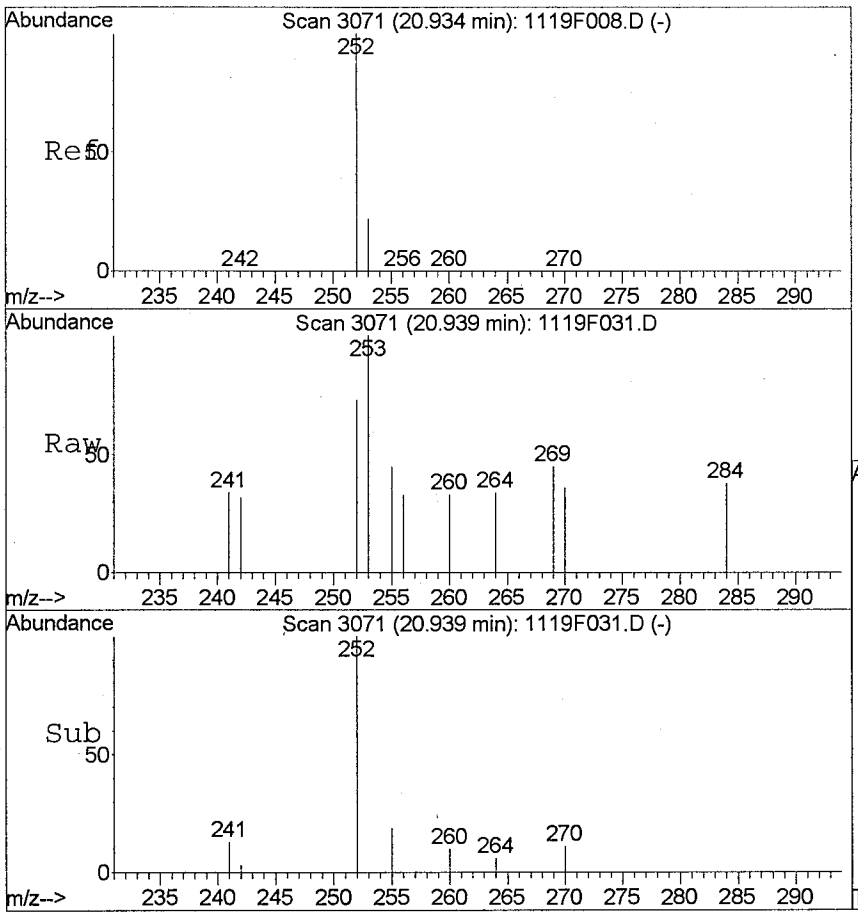


#50
Benzo(k)fluoranthene
Concen: 4.09 ng/ml m
RT: 20.04 min Scan# 2876
Delta R.T. -0.01 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:252 Resp: 290

Ion	Ratio	Lower	Upper
252	100		
253	137.1	0.0	52.2#

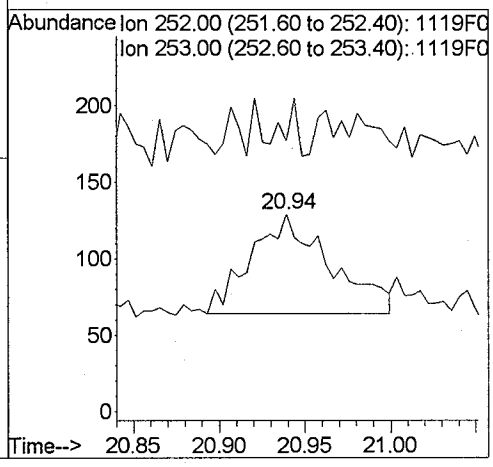


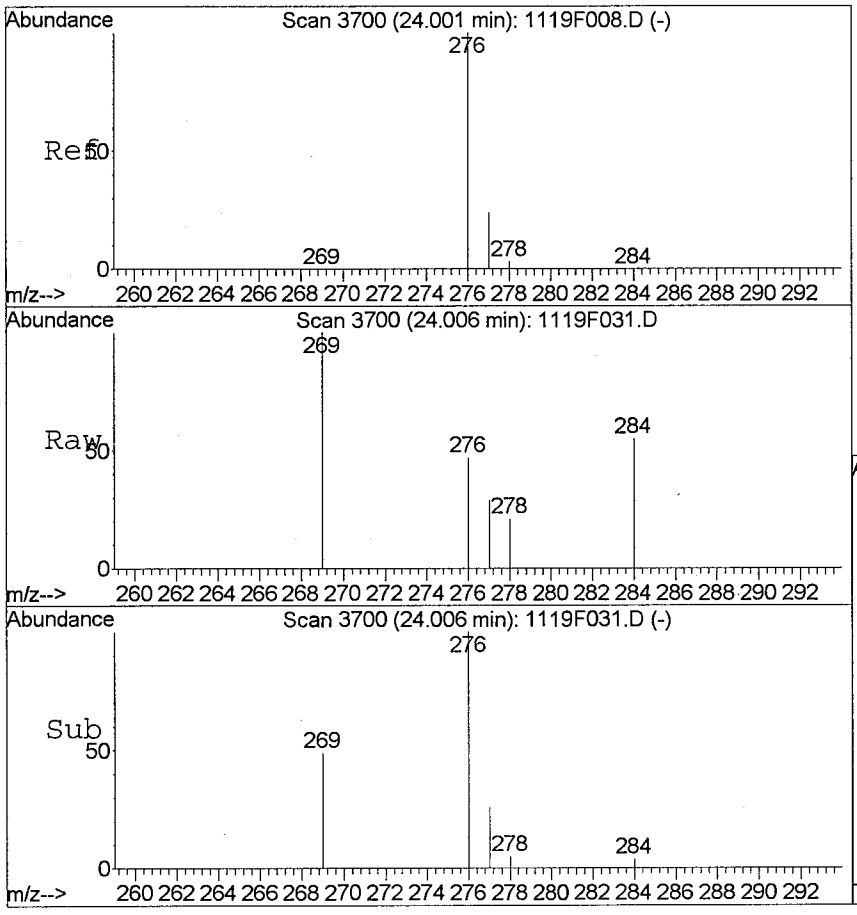


#51
Benzo(e)pyrene
Concen: 3.30 ng/ml
RT: 20.94 min Scan# 3071
Delta R.T. 0.01 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:252 Resp: 207

Ion	Ratio	Lower	Upper
252	100		
253	3.1	0.0	51.8

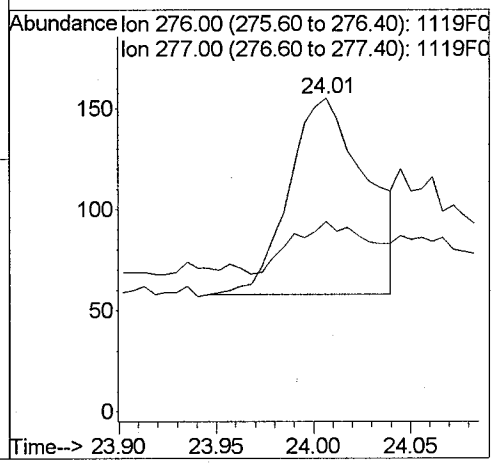


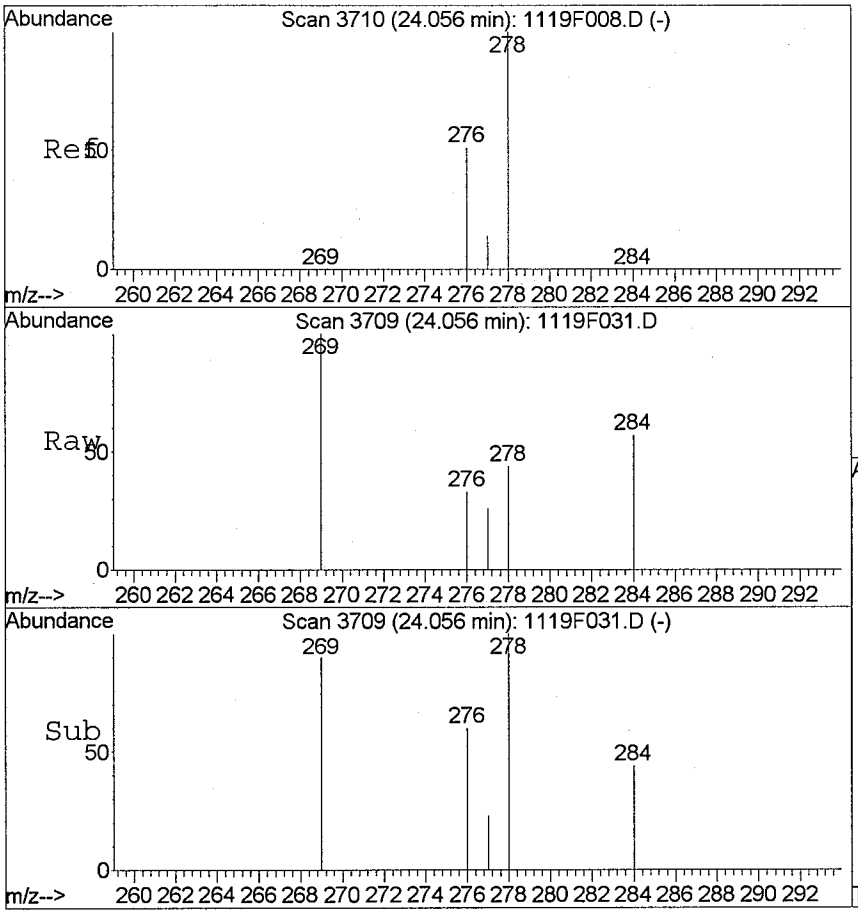


#54
Indeno(1,2,3-cd)pyrene
Concen: 9.25 ng/ml
RT: 24.01 min Scan# 3700
Delta R.T. 0.01 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:276 Resp: 267

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.6

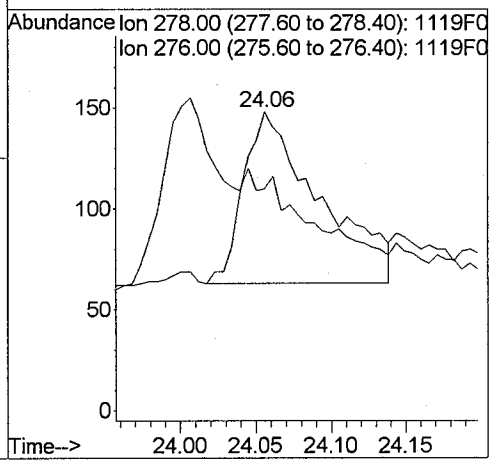


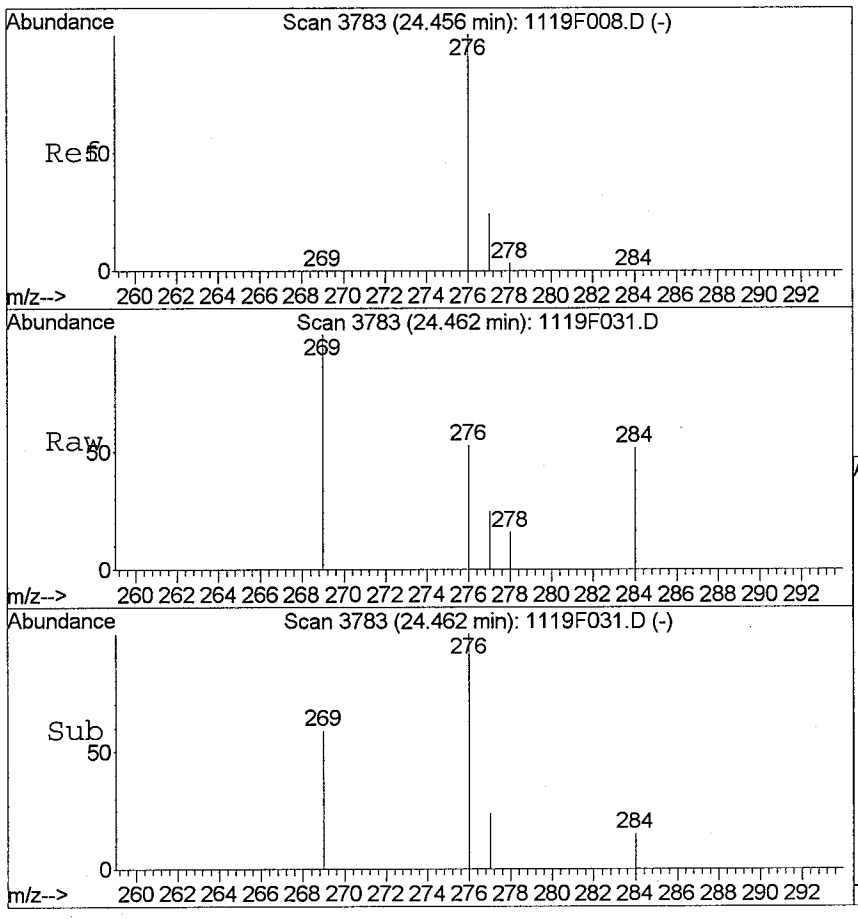


#55
Dibenz(a,h)anthracene
Concen: 7.23 ng/ml
RT: 24.06 min Scan# 3709
Delta R.T. 0.00 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:278 Resp: 300

Ion	Ratio	Lower	Upper
278	100		
276	38.8	21.1	81.1

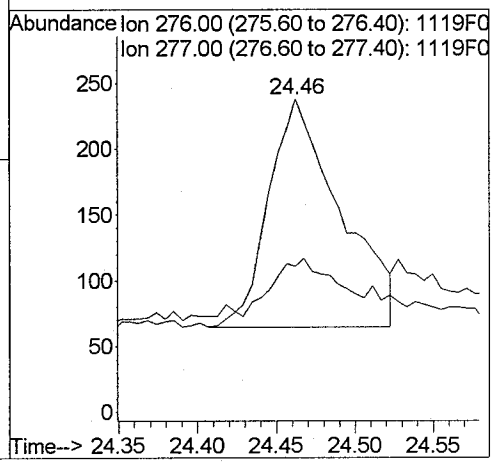




#56
Benzo(g,h,i)perylene
Concen: 11.41 ng/ml
RT: 24.46 min Scan# 3783
Delta R.T. 0.01 min
Lab File: 1119F031.D
Acq: 19 Nov 2003 12:49 pm

Tgt Ion:276 Resp: 546

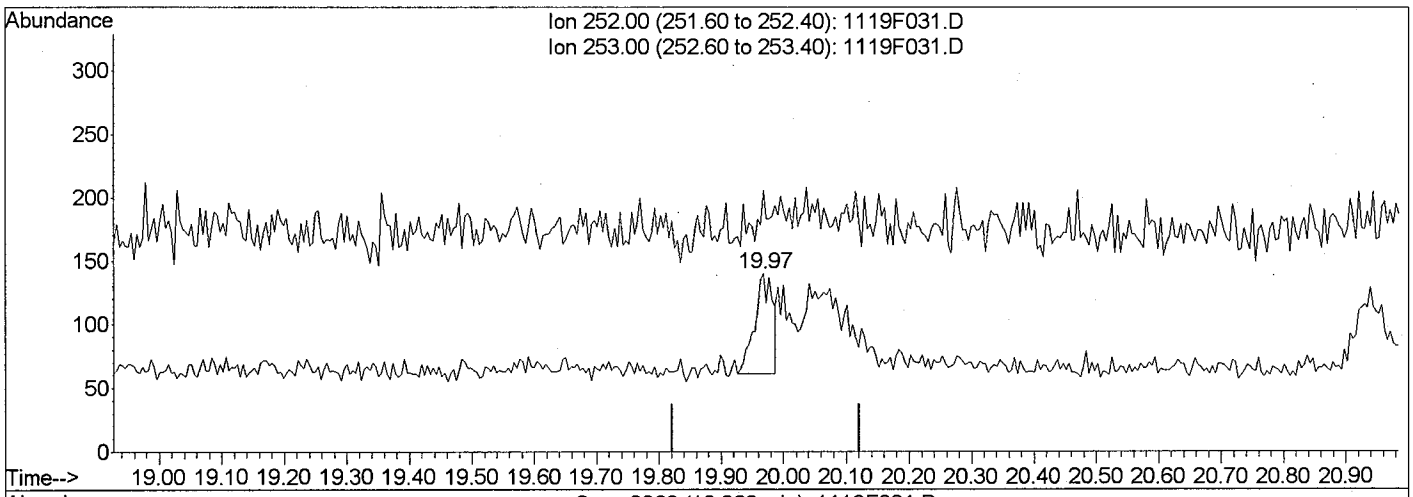
Ion	Ratio	Lower	Upper
276	100		
277	22.0	0.0	53.6

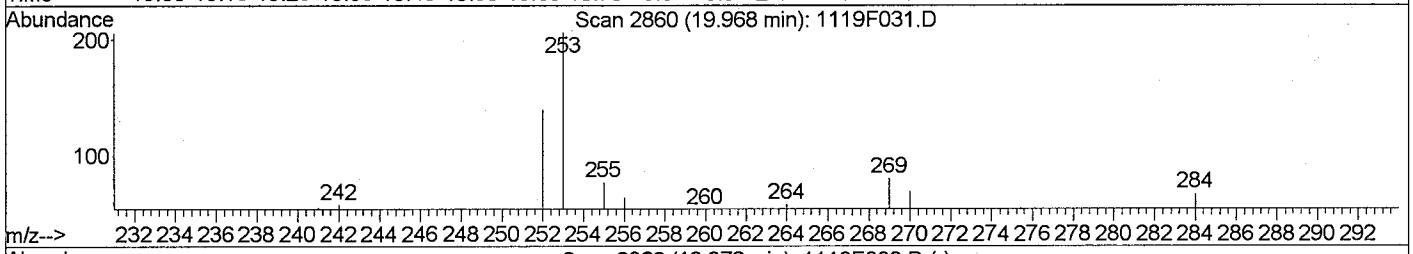


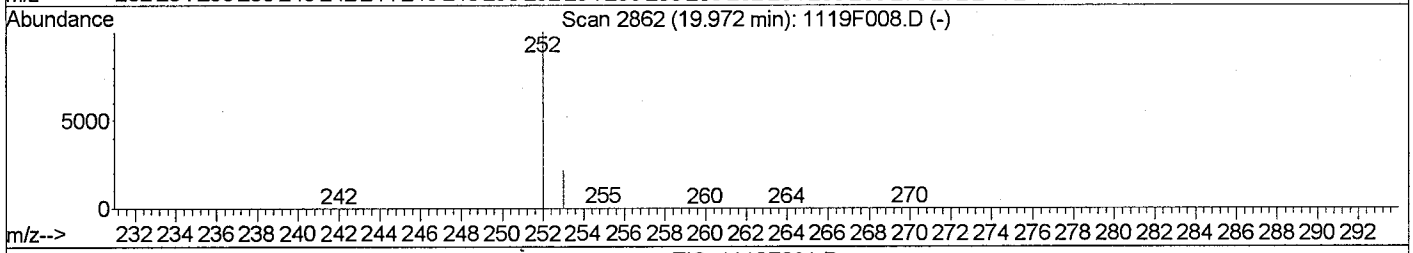
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F031.D Vial: 2
Acq On : 19 Nov 2003 12:49 pm Operator: LWeiskopf
Sample : KWG0317778-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F031.D

(49) Benzo(b)fluoranthene (T)

19.97min 2.81ng/ml

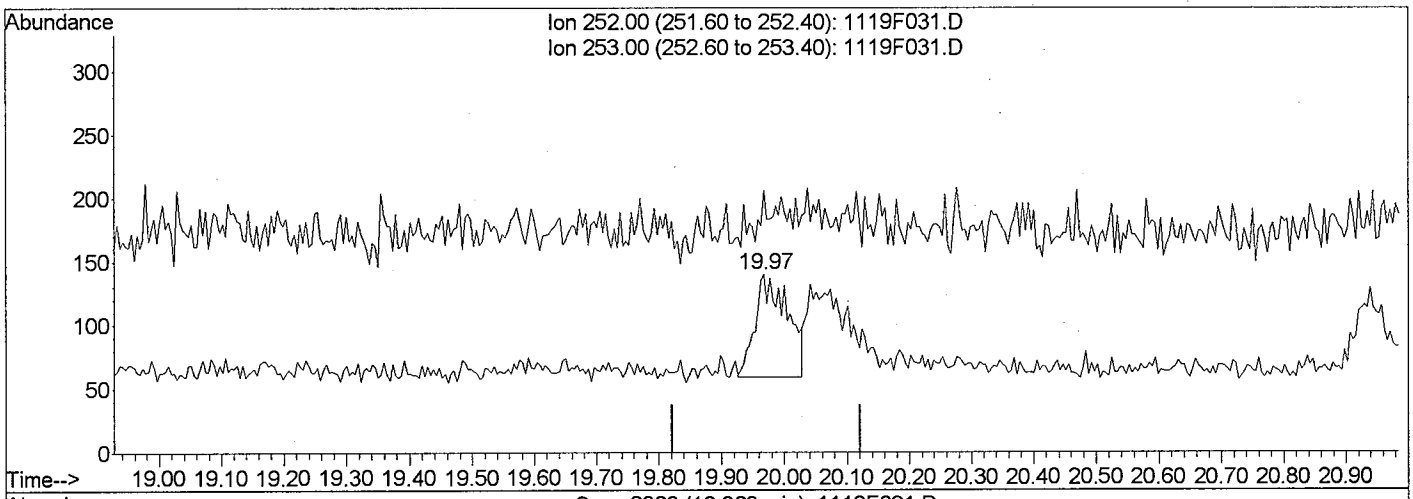
response 157

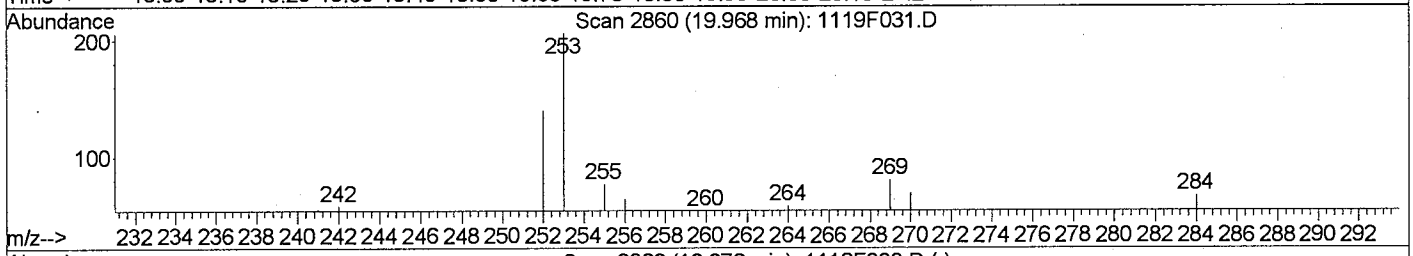
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	46.84
0.00	0.00	0.00
0.00	0.00	0.00

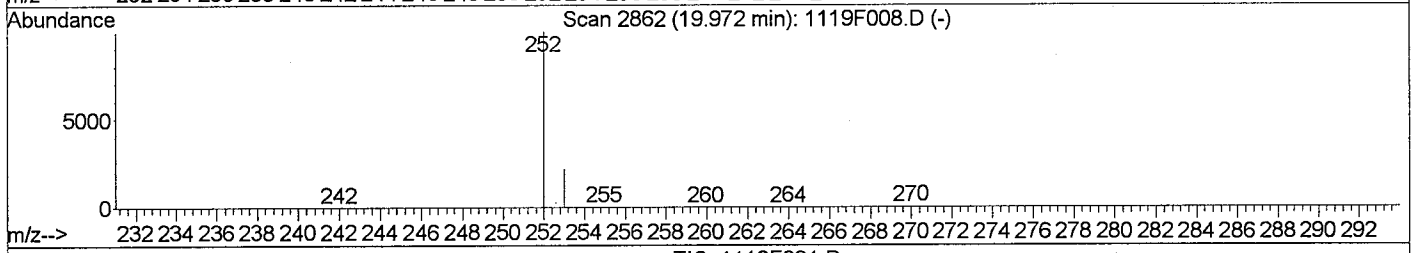
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F031.D Vial: 2
Acq On : 19 Nov 2003 12:49 pm Operator: LWeiskopf
Sample : KWG0317778-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F031.D

(49) Benzo(b)fluoranthene (T)

19.97min 5.12ng/ml m

response 286

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	147.14#
0.00	0.00	0.00
0.00	0.00	0.00

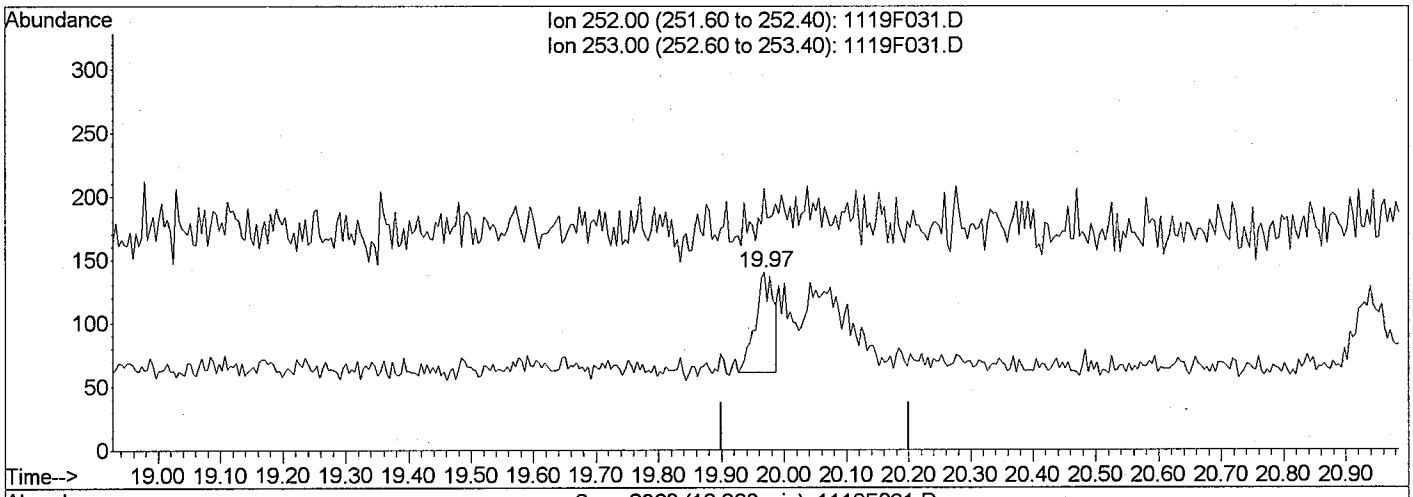
11/24/03 incomplete 11/25/03

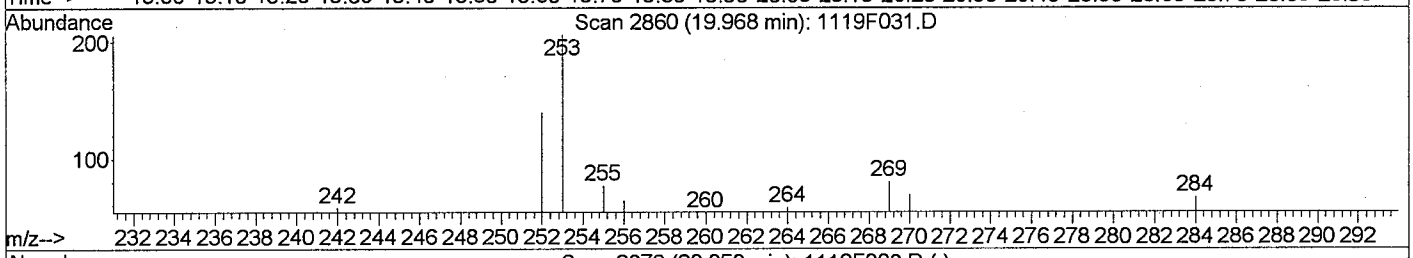
1119F031.D 1107ALK.M Thu Nov 20 14:11:44 2003

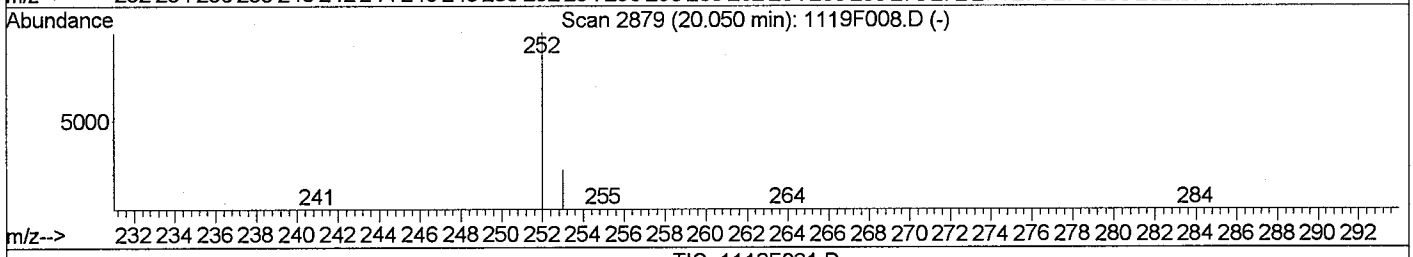
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F031.D Vial: 2
Acq On : 19 Nov 2003 12:49 pm Operator: LWeiskopf
Sample : KWG0317778-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F031.D

(50) Benzo(k)fluoranthene (T)

19.97min 2.22ng/ml

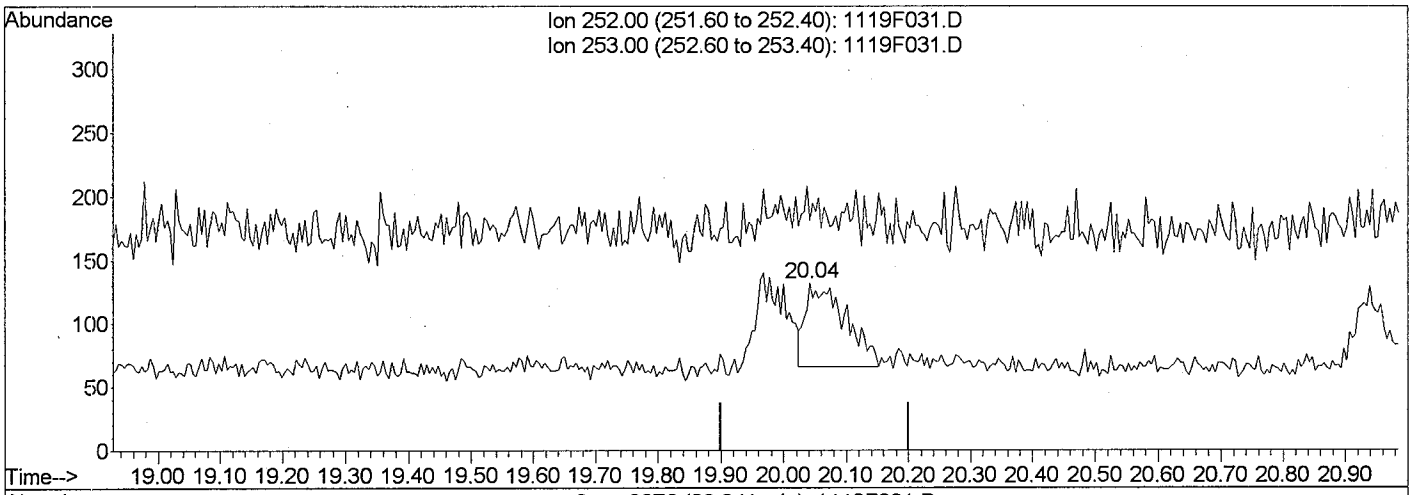
response 157

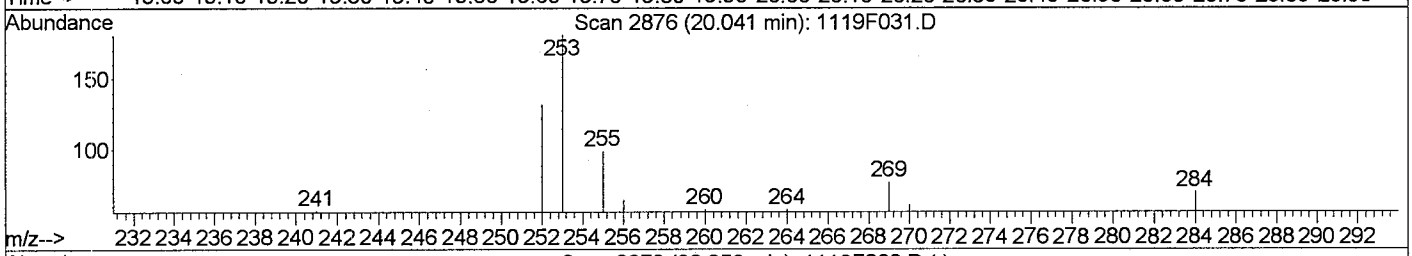
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	46.84
0.00	0.00	0.00
0.00	0.00	0.00

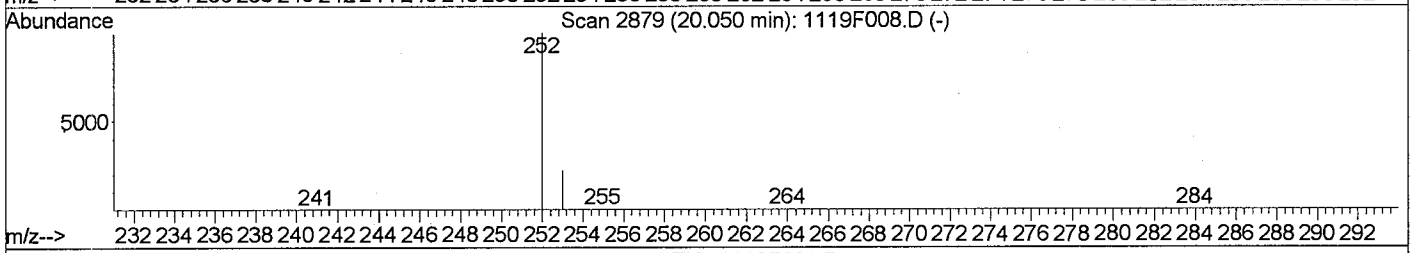
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F031.D Vial: 2
Acq On : 19 Nov 2003 12:49 pm Operator: LWeiskopf
Sample : KWG0317778-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F031.D

(50) Benzo(k)fluoranthene (T)

20.04min 4.09ng/ml m

response 290

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	137.12#
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak

1119F031.D 1107ALK.M Thu Nov 20 14:11:53 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4MS
Lab Code: KWG0317778-1

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**154**		5.0	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**169**		5.0	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**181**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**180**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**222**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**222**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**276**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**283**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**240**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**909**		5.0	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**356**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**1810**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Pyrene	**1500**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**876**		5.0	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**1030**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**950**		5.0	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4MS
Lab Code: KWG0317778-1

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**855**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**729**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**998**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Perylene	**364**		5.0	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**874**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**301**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**701**		5.0	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	80	27-110	11/19/03	Acceptable
Fluoranthene-d10	87	34-122	11/19/03	Acceptable
Terphenyl-d14	92	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F034.D
Lab ID: KWG0317778-1 -- K2308433-004MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/19/2003 14:37
Date Quantitated: 11/20/2003 14:14
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	2,4,6-Tribromophenol	-20.2	NA	20	
	Pentachlorophenol	-42.0	NA	20	
Surrogates	2,4,6-Tribromophenol	0	20	140	
Std MRL Unsupported by ICAL	Pentachlorophenol	500	200	NA	
Above Highest ICAL Level	Pyrene	15066.96	NA	10000	E flag
	Fluoranthene	18203.64	NA	10000	
	Chrysene	10397.47	NA	10000	
	Benzo(a)pyrene	10035.95	NA	10000	

Primary Review: 11/21/2003

Secondary Review: 11/24/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247868	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\111903\1119F034.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 14:37	**Quant Date:**	11/20/2003 14:14	**Vial:**	5
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0317778-1 -- K2308433-004MS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	203128	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	105086	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	158587	1,000.00	OK
4	Chrysene-d12	17.05	0.01	240	172935	1,000.00	OK
5	Perylene-d12	21.38	0.02	264	118471	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.00	0.00	0.00	164	95595	642.44	64	39-97	OK	
2	Fluorene-d10	8.94	0.01	0.00	176	84423	803.27	80	27-110	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	20-140	*	
3	Fluoranthene-d10	13.62	0.00	0.00	212	138113	870.14	87	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	144795	918.69	92	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	354960	1,545	154		
1	2-Methylnaphthalene	6.36	-0.01	0.00	142	231045	1,704	169		
1	1-Methylnaphthalene	6.51		0.00	142	231063	1,818	181		
1	Biphenyl	7.03		0.00	154	297337	1,808	180		
1	2,6-Dimethylnaphthalene	7.27		0.00	156	224688	1,942	193		
1	C2-Naphthalenes				156	0		3.4	U	
1	C3-Naphthalenes				170	0		3.4	U	
1	C4-Naphthalenes				184	0		3.4	U	
2	Acenaphthylene	7.73		0.00	152	451245	2,229	222		
2	Acenaphthene	8.05		0.00	154	346450	2,776	276		
2	Dibenzofuran	8.34		0.00	168	374057	2,236	222		
2	2,3,5-Trimethylnaphthalene	8.76		0.00	170	242163	2,166	216		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F034.D		**Instrument:** MS11
Acqu Date:	11/19/2003 14:37	**Quant Date:** 11/20/2003 14:14	**Vial:** 5
Run Type:	MS		**Dilution:** 1.0
Lab ID:	KWG0317778-1 -- K2308433-004MS		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	8.99		0.00	166	380160	2,844	283		
2	C1-Fluorenes				180	0		3.4	U	
2	C2-Fluorenes				194	0		3.4	U	
2	C3-Fluorenes				208	0		3.4	U	
2	Pentachlorophenol				266	0		20	U	
3	Dibenzothiophene	10.71		0.00	184	442134	2,416	240		
3	C1-Dibenzothiophenes				198	0		3.4	U	
3	C2-Dibenzothiophenes				212	0		3.4	U	
3	C3-Dibenzothiophenes				226	0		3.4	U	
3	Phenanthrene	10.97		0.00	178	1755554	9,134	909		
3	Anthracene	11.07		0.00	178	587569	3,578	356		
3	Carbazole	11.50	0.01	0.00	167	20829	160.48	16.0		
3	1-Methylphenanthrene	12.36		0.00	192	364983	2,797	278		
3	C1-Phenanthrenes/Anthracenes				192	0		3.4	U	
3	C2-Phenanthrenes/Anthracenes				206	0		3.4	U	
3	C3-Phenanthrenes/Anthracenes				220	0		3.4	U	
3	C4-Phenanthrenes/Anthracenes				234	0		3.4	U	
3	Fluoranthene	13.66	0.01	0.00	202	3482761	18,204	1810	E	
4	Pyrene	14.16		0.00	202	3405736	15,067	1500	E	
4	C1-Fluoranthenes/Pyrenes				216	0		3.4	U	
4	Benz(a)anthracene	17.01		0.00	228	1515609	8,807	876		
4	Chrysene	17.10		0.00	228	1913420	10,397	1030	E	
4	C1-Chrysenes				242	0		3.4	U	
4	C2-Chrysenes				256	0		3.4	U	
4	C3-Chrysenes				270	0		3.4	U	
4	C4-Chrysenes				284	0		3.4	U	
5	Benzo(b)fluoranthene	19.99	0.02	0.00	252	1510625	9,551	950		
5	Benzo(k)fluoranthene	20.06	0.01	0.00	252	1725804**m**	8,600	855		
5	Benzo(e)pyrene	20.95	0.02	0.00	252	1300877	7,325	729		
5	Benzo(a)pyrene	21.14	0.02	0.00	252	1350158	10,036	998	E	
5	Perylene	21.47	0.02	0.00	252	553053	3,662	364		
5	Indeno(1,2,3-cd)pyrene	24.01	0.01	0.00	276	718780**m**	8,789	874		
5	Dibenz(a,h)anthracene	24.06		0.00	278	355760	3,027	301		
5	Benzo(g,h,i)perylene	24.47	0.01	0.00	276	955356	7,046	701		

Prep Amount: 26.7 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: 75.3 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	203128	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	105086	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	158587	1000.00	ng/ml	0.00
38) Chrysene-d12	17.05	240	172935	1000.00	ng/ml	0.00
48) Perylene-d12	21.38	264	118471	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	95595	642.44	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	64.24%		
16) Fluorene-d10	8.94	176	84423	803.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	80.33%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.62	212	138113	870.14	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	87.01%		
41) Terphenyl-d14	14.66	244	144795	918.69	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	91.87%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	354960	1545.48	ng/ml	99
3) 2-Methylnaphthalene	6.36	142	231045	1703.53	ng/ml	99
4) 1-Methylnaphthalene	6.51	142	231063	1817.55	ng/ml	97
6) Biphenyl	7.03	154	297337	1808.05	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.27	156	224688	1942.24	ng/ml	99
12) Acenaphthylene	7.73	152	451245	2228.71	ng/ml	99
13) Acenaphthene	8.05	154	346450	2776.38	ng/ml	100
14) Dibenzofuran	8.34	168	374057	2236.14	ng/ml	100
15) 2,3,5-Trimethylnaphthalene	8.76	170	242163	2166.40	ng/ml	99
17) Fluorene	8.99	166	380160	2843.98	ng/ml	99
24) Dibenzothiophene	10.71	184	442134	2416.39	ng/ml	100
28) Phenanthrene	10.97	178	1755554	9133.84	ng/ml	99
29) Anthracene	11.07	178	587569	3578.30	ng/ml	100
30) Carbazole	11.50	167	20829	160.48	ng/ml	100
31) 1-Methylphenanthrene	12.36	192	364983	2796.81	ng/ml	100
36) Fluoranthene	13.66	202	3482761	18203.64	ng/ml	99
39) Pyrene	14.16	202	3405736	15066.96	ng/ml	97
42) Benz(a)anthracene	17.01	228	1515609	8806.84	ng/ml	93
43) Chrysene	17.10	228	1913420	10397.47	ng/ml	99
49) Benzo(b)fluoranthene	19.99	252	1510625	9551.05	ng/ml	100
50) Benzo(k)fluoranthene	20.06	252	1725804m	8599.55	ng/ml	
51) Benzo(e)pyrene	20.95	252	1300877	7325.47	ng/ml	100
52) Benzo(a)pyrene	21.14	252	1350158	10035.95	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

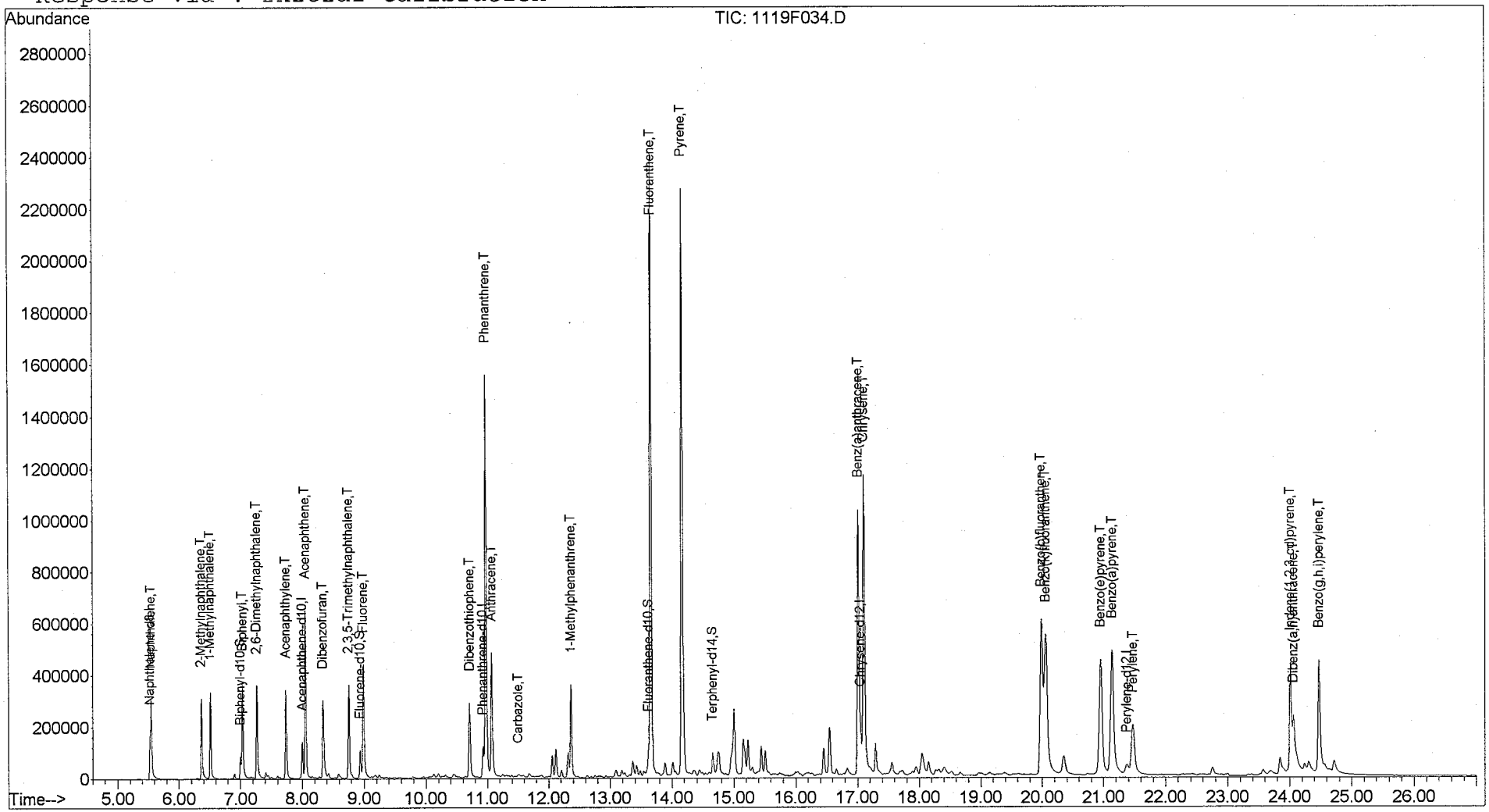
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.47	252	553053	3662.19	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.01	276	718780m	8788.89	ng/ml	
55)	Dibenz(a,h)anthracene	24.06	278	355760	3026.91	ng/ml	74
56)	Benzo(g,h,i)perylene	24.47	276	955356	7046.09	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:14 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

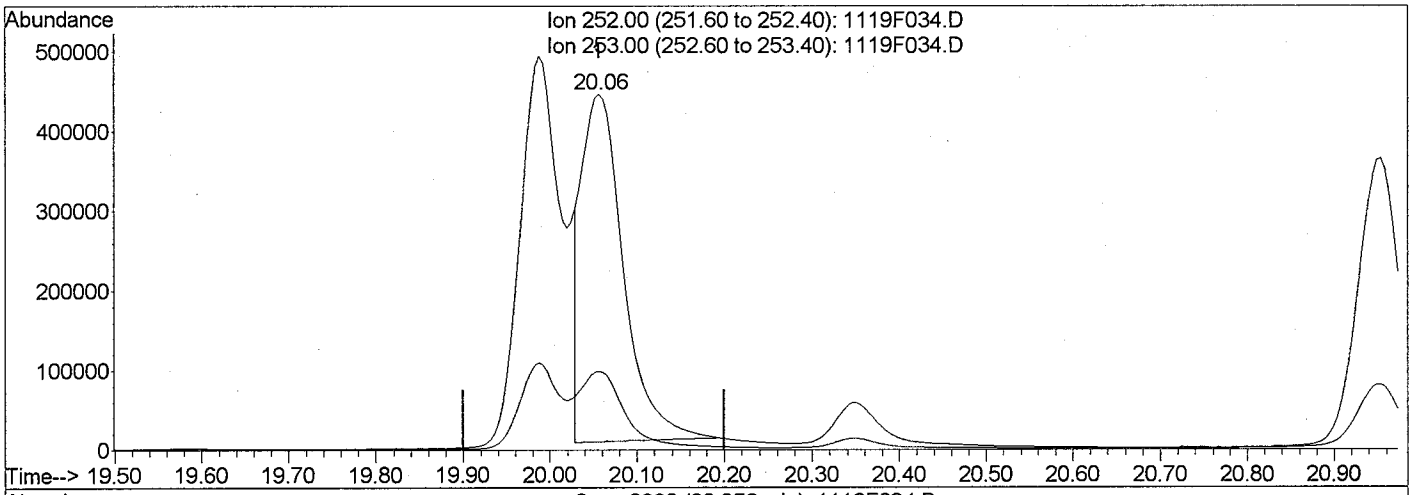


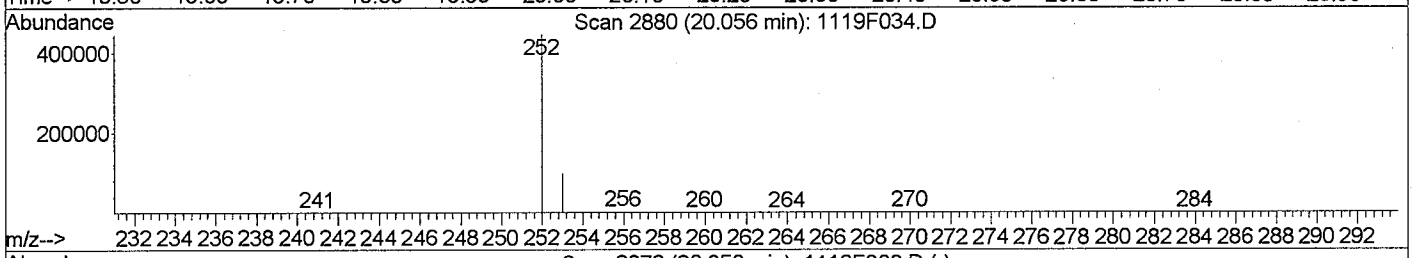
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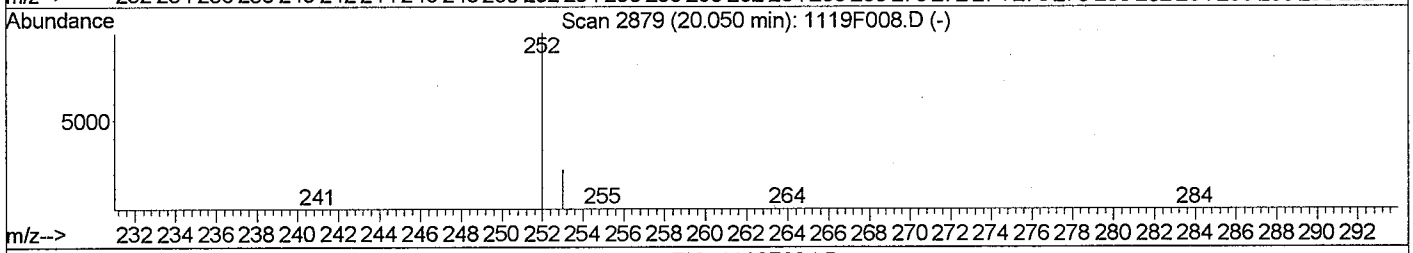
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F034.D

(50) Benzo(k)fluoranthene (T)

20.06min 7276.21ng/ml

response 1460228

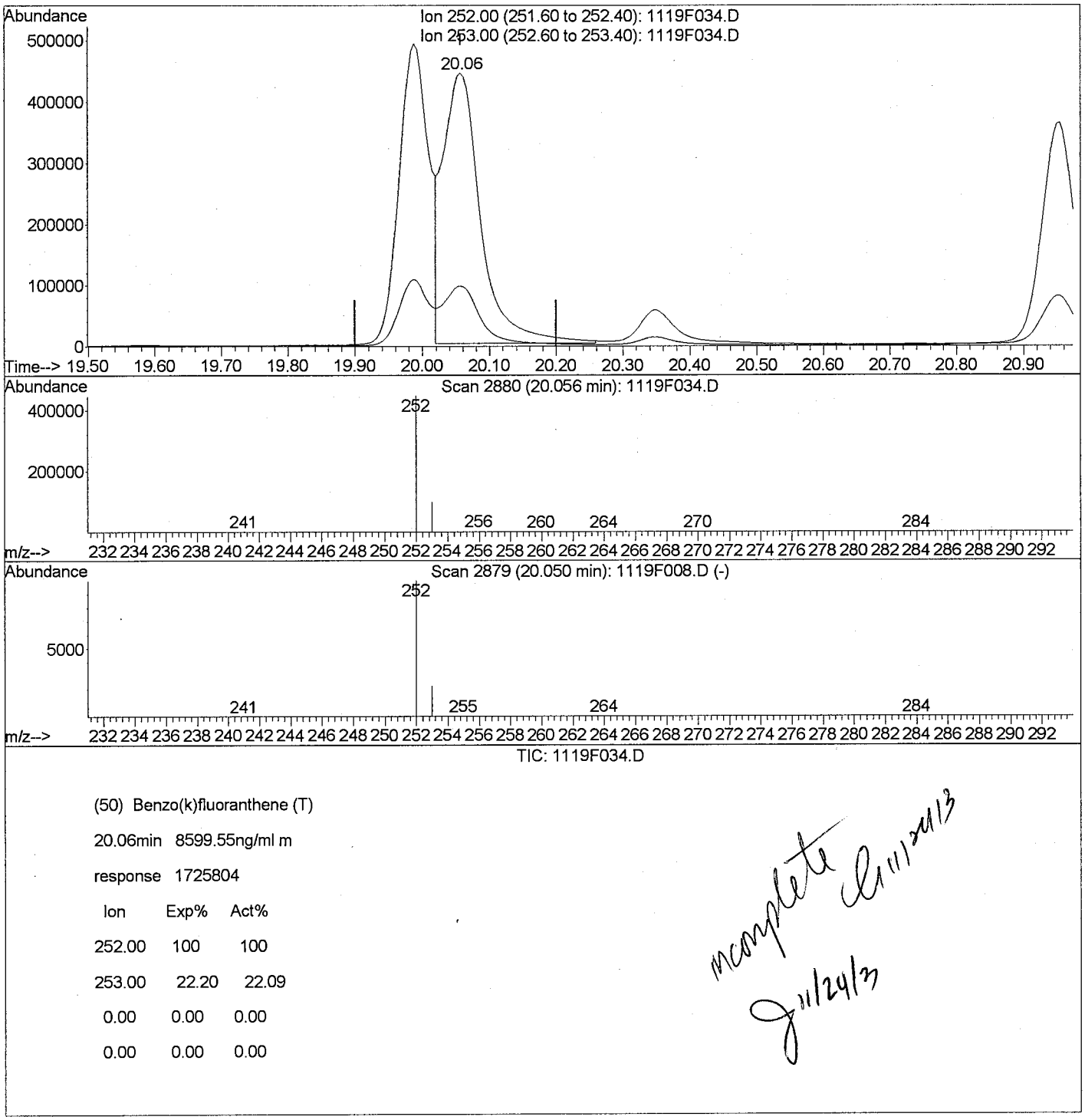
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.91
0.00	0.00	0.00
0.00	0.00	0.00

1119F034.D 1107ALK.M Thu Nov 20 14:13:17 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:13 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.06min 8599.55ng/ml m

response 1725804

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.09
0.00	0.00	0.00
0.00	0.00	0.00

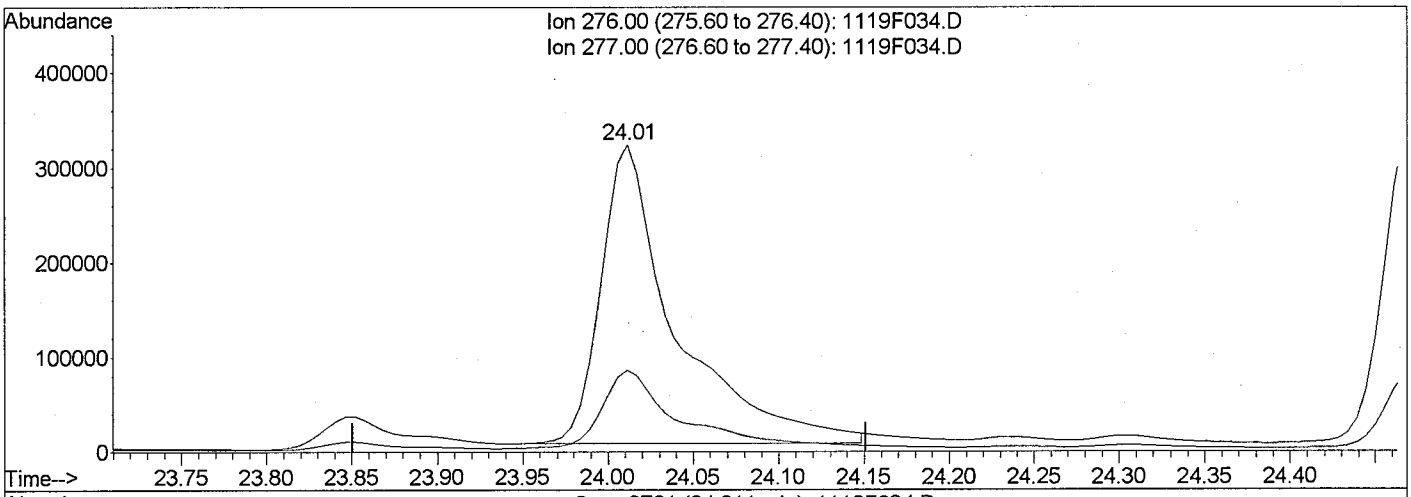
complete 11/21/13
11/24/13

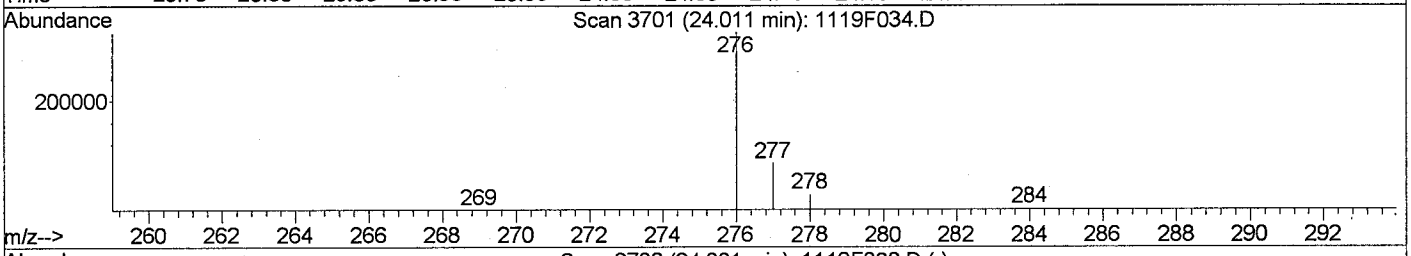
1119F034.D 1107ALK.M Thu Nov 20 14:13:25 2003

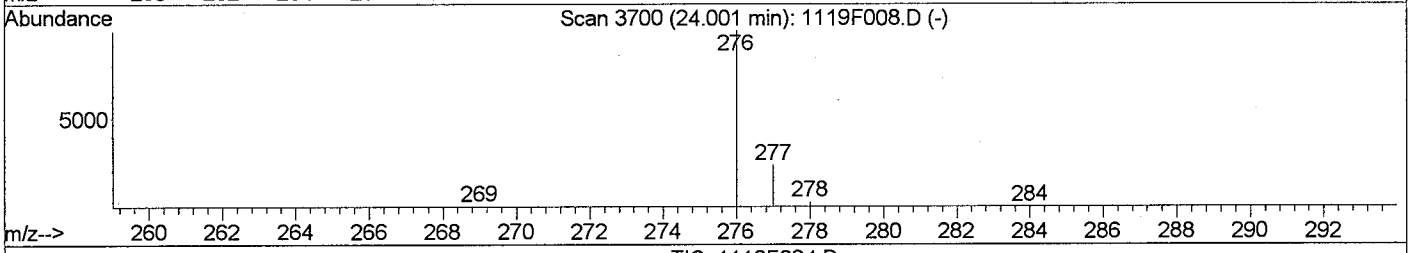
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:13 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F034.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.01min 11740.39ng/ml

response 960162

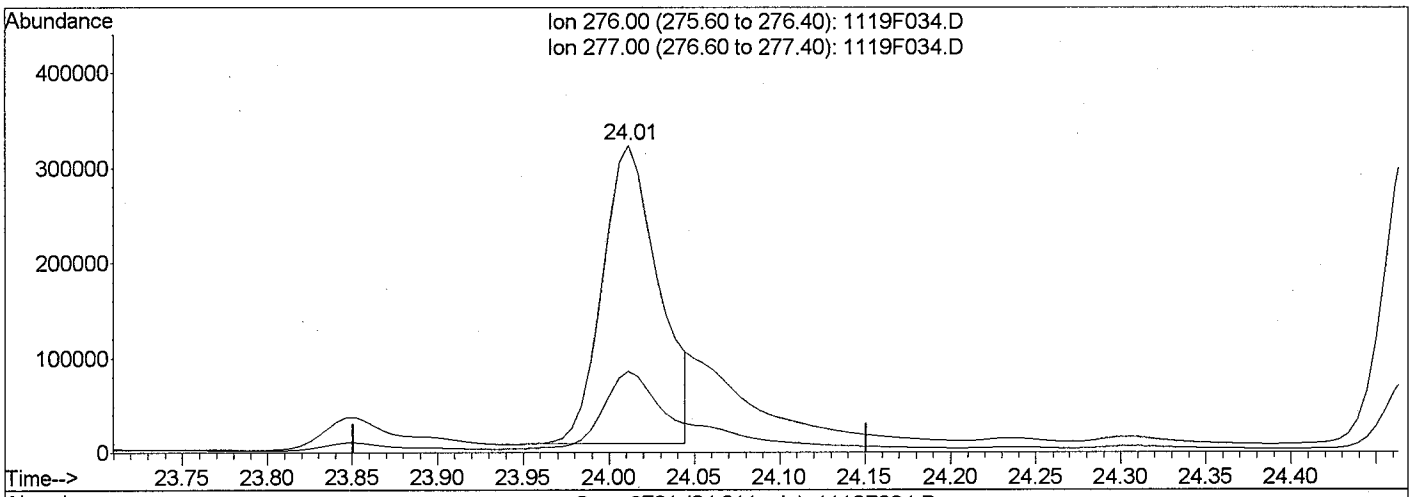
Ion	Exp%	Act%
276.00	100	100
277.00	23.60	26.03
0.00	0.00	0.00
0.00	0.00	0.00

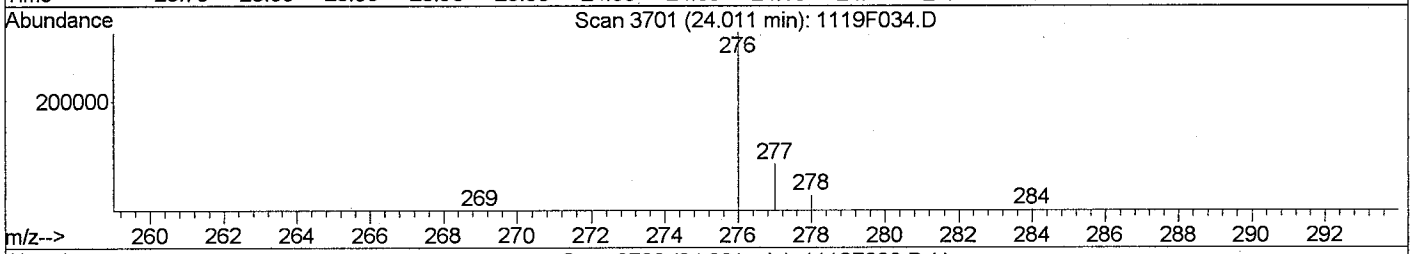
1119F034.D 1107ALK.M Thu Nov 20 14:13:31 2003

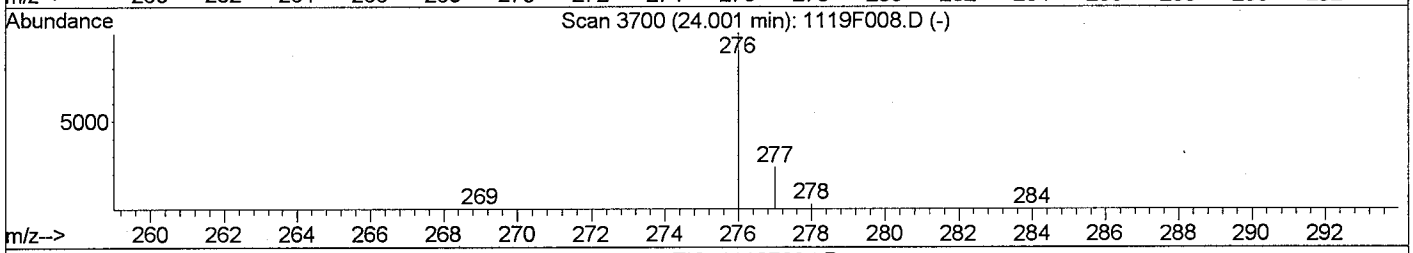
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F034.D Vial: 5
Acq On : 19 Nov 2003 2:37 pm Operator: LWeiskopf
Sample : KWG0317778-1 K2308433-004MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F034.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.01min 8788.89ng/ml m

response 718780

Ion	Exp%	Act%
276.00	100	100
277.00	23.60	26.55
0.00	0.00	0.00
0.00	0.00	0.00

over integrated 11/21/13

11/24/13

1119F034.D 1107ALK.M Thu Nov 20 14:13:37 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4DMS
Lab Code: KWG0317778-2

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**166**		5.0	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**176**		5.0	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**183**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**180**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**211**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**289**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**357**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**385**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**303**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**2340**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**528**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**4030**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Pyrene	**3090**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**1660**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**1950**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**1930**	E	5.0	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: SED-4DMS
Lab Code: KWG0317778-2

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**1470**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**1310**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**1970**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Perylene	**608**		5.0	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**1880**	E	5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**478**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**1330**	E	5.0	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	76	27-110	11/19/03	Acceptable
Fluoranthene-d10	87	34-122	11/19/03	Acceptable
Terphenyl-d14	93	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F035.D
Lab ID: KWG0317778-2 -- K2308433-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/19/2003 15:13
Date Quantitated: 11/20/2003 14:14
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	2,4,6-Tribromophenol	-20.2	NA	20	
	Pentachlorophenol	-42.0	NA	20	
Surrogates	2,4,6-Tribromophenol	0	20	140	
Std MRL Unsupported by ICAL	Pentachlorophenol	500	200	NA	
Above Highest ICAL Level	Pyrene	31307.86	NA	10000	E flag
	Benzo(g,h,i)perylene	13489.02	NA	10000	
	Benzo(e)pyrene	13257.12	NA	10000	
	Indeno(1,2,3-cd)pyrene	19038.34	NA	10000	
	Benzo(b)fluoranthene	19564.89	NA	10000	
	Fluoranthene	40859.09	NA	10000	
	Benzo(k)fluoranthene	14887.37	NA	10000	

Primary Review: 11/21/13

Secondary Review: 11/24/13

Exception Report

Data File: J:\MS11\DATA\111903\1119F035.D
Lab ID: KWG0317778-2 -- K2308433-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/19/2003 15:13
Date Quantitated: 11/20/2003 14:14
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Chrysene	19782.50	NA	10000	E flag
	Benzo(a)pyrene	19939.52	NA	10000	
	Benz(a)anthracene	16793.17	NA	10000	
	Phenanthrene	23713.67	NA	10000	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247869	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\111903\1119F035.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 15:13	**Quant Date:**	11/20/2003 14:14	**Vial:**	6
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0317778-2 -- K2308433-004DMS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	231957	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	121666	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	183137	1,000.00	OK
4	Chrysene-d12	17.06	0.02	240	185560	1,000.00	OK
5	Perylene-d12	21.38	0.02	264	130192	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.00	0.00	0.00	164	101900	599.70	60	39-97	OK	
2	Fluorene-d10	8.94	0.01	0.00	176	92701	761.84	76	27-110	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	20-140	*	
3	Fluoranthene-d10	13.63	0.01	0.00	212	160112	873.51	87	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	156495	925.37	93	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	440707	1,680	166		
1	2-Methylnaphthalene	6.36	-0.01	0.00	142	275899	1,781	176		
1	1-Methylnaphthalene	6.51		0.00	142	268840	1,852	183		
1	Biphenyl	7.03		0.00	154	341606	1,819	180		
1	2,6-Dimethylnaphthalene	7.27		0.00	156	258314	1,955	193		
1	C2-Naphthalenes				156	0		3.4	U	
1	C3-Naphthalenes				170	0		3.4	U	
1	C4-Naphthalenes				184	0		3.4	U	
2	Acenaphthylene	7.73		0.00	152	501451	2,139	211		
2	Acenaphthene	8.05		0.00	154	522068	3,614	357		
2	Dibenzofuran	8.34		0.00	168	567491	2,930	289		
2	2,3,5-Trimethylnaphthalene	8.76		0.00	170	273431	2,113	209		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F035.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 15:13	**Quant Date:**	11/20/2003 14:14	**Vial:**	6
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0317778-2 -- K2308433-004DMS			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	8.99		0.00	166	602884	3,896	385		
2	C1-Fluorenes				180	0		3.4	U	
2	C2-Fluorenes				194	0		3.4	U	
2	C3-Fluorenes				208	0		3.4	U	
2	Pentachlorophenol				266	0		20	U	
3	Dibenzothiophene	10.71		0.00	184	648359	3,068	303		
3	C1-Dibenzothiophenes				198	0		3.4	U	
3	C2-Dibenzothiophenes				212	0		3.4	U	
3	C3-Dibenzothiophenes				226	0		3.4	U	
3	Phenanthrene	10.98	0.01	0.00	178	5263420	23,714	2340	E	
3	Anthracene	11.07		0.00	178	1014537	5,350	528		
3	Carbazole	11.50	0.01	0.00	167	2516	16.79	1.66	J	
3	1-Methylphenanthrene	12.36		0.00	192	498300	3,307	326		
3	C1-Phenanthrenes/Anthracenes				192	0		3.4	U	
3	C2-Phenanthrenes/Anthracenes				206	0		3.4	U	
3	C3-Phenanthrenes/Anthracenes				220	0		3.4	U	
3	C4-Phenanthrenes/Anthracenes				234	0		3.4	U	
3	Fluoranthene	13.67	0.02	0.00	202	9027402	40,859	4030	E	
4	Pyrene	14.17	0.01	0.00	202	7593469	31,308	3090	E	
4	C1-Fluoranthenes/Pyrenes				216	0		3.4	U	
4	Benz(a)anthracene	17.02	0.01	0.00	228	3100996	16,793	1660	E	
4	Chrysene	17.11	0.01	0.00	228	3906297	19,783	1950	E	
4	C1-Chrysenes				242	0		3.4	U	
4	C2-Chrysenes				256	0		3.4	U	
4	C3-Chrysenes				270	0		3.4	U	
4	C4-Chrysenes				284	0		3.4	U	
5	Benzo(b)fluoranthene	20.00	0.03	0.00	252	3400595	19,565	1930	E	
5	Benzo(k)fluoranthene	20.07	0.02	0.00	252	3283264**m**	14,887	1470	E	
5	Benzo(e)pyrene	20.96	0.03	0.00	252	2587154	13,257	1310	E	
5	Benzo(a)pyrene	21.15	0.03	0.00	252	2947902	19,940	1970	E	
5	Perylene	21.48	0.03	0.00	252	1021191	6,153	608		
5	Indeno(1,2,3-cd)pyrene	24.02	0.02	0.00	276	1711053**m**	19,038	1880	E	
5	Dibenz(a,h)anthracene	24.07	0.01	0.00	278	624627	4,836	478		
5	Benzo(g,h,i)perylene	24.48	0.02	0.00	276	2009879	13,489	1330	E	

Prep Amount:	26.9 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	75.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:48 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	231957	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	121666	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	183137	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	185560	1000.00	ng/ml	0.01
48) Perylene-d12	21.38	264	130192	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	101900	599.70	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	59.97%		
16) Fluorene-d10	8.94	176	92701	761.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	76.18%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	160112	873.51	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	87.35%		
41) Terphenyl-d14	14.66	244	156495	925.37	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	92.54%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	440707	1680.33	ng/ml	100
3) 2-Methylnaphthalene	6.36	142	275899	1781.41	ng/ml	100
4) 1-Methylnaphthalene	6.51	142	268840	1851.87	ng/ml	99
6) Biphenyl	7.03	154	341606	1819.07	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.27	156	258314	1955.39	ng/ml	100
12) Acenaphthylene	7.73	152	501451	2139.17	ng/ml	100
13) Acenaphthene	8.05	154	522068	3613.61	ng/ml	99
14) Dibenzofuran	8.34	168	567491	2930.20	ng/ml	99
15) 2,3,5-Trimethylnaphthalene	8.76	170	273431	2112.78	ng/ml	95
17) Fluorene	8.99	166	602884	3895.55	ng/ml	98
24) Dibenzothiophene	10.71	184	648359	3068.45	ng/ml	100
28) Phenanthrene	10.98	178	5263420	23713.67	ng/ml	98
29) Anthracene	11.07	178	1014537	5350.29	ng/ml	100
30) Carbazole	11.50	167	2516	16.79	ng/ml	95
31) 1-Methylphenanthrene	12.36	192	498300	3306.53	ng/ml	99
36) Fluoranthene	13.67	202	9027402	40859.09	ng/ml	94
39) Pyrene	14.17	202	7593469	31307.86	ng/ml	93
42) Benz(a)anthracene	17.02	228	3100996	16793.17	ng/ml	96
43) Chrysene	17.11	228	3906297	19782.50	ng/ml	99
49) Benzo(b)fluoranthene	20.00	252	3400595	19564.89	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	3283264m	14887.37	ng/ml	
51) Benzo(e)pyrene	20.96	252	2587154	13257.12	ng/ml	99
52) Benzo(a)pyrene	21.15	252	2947902	19939.52	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:48 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

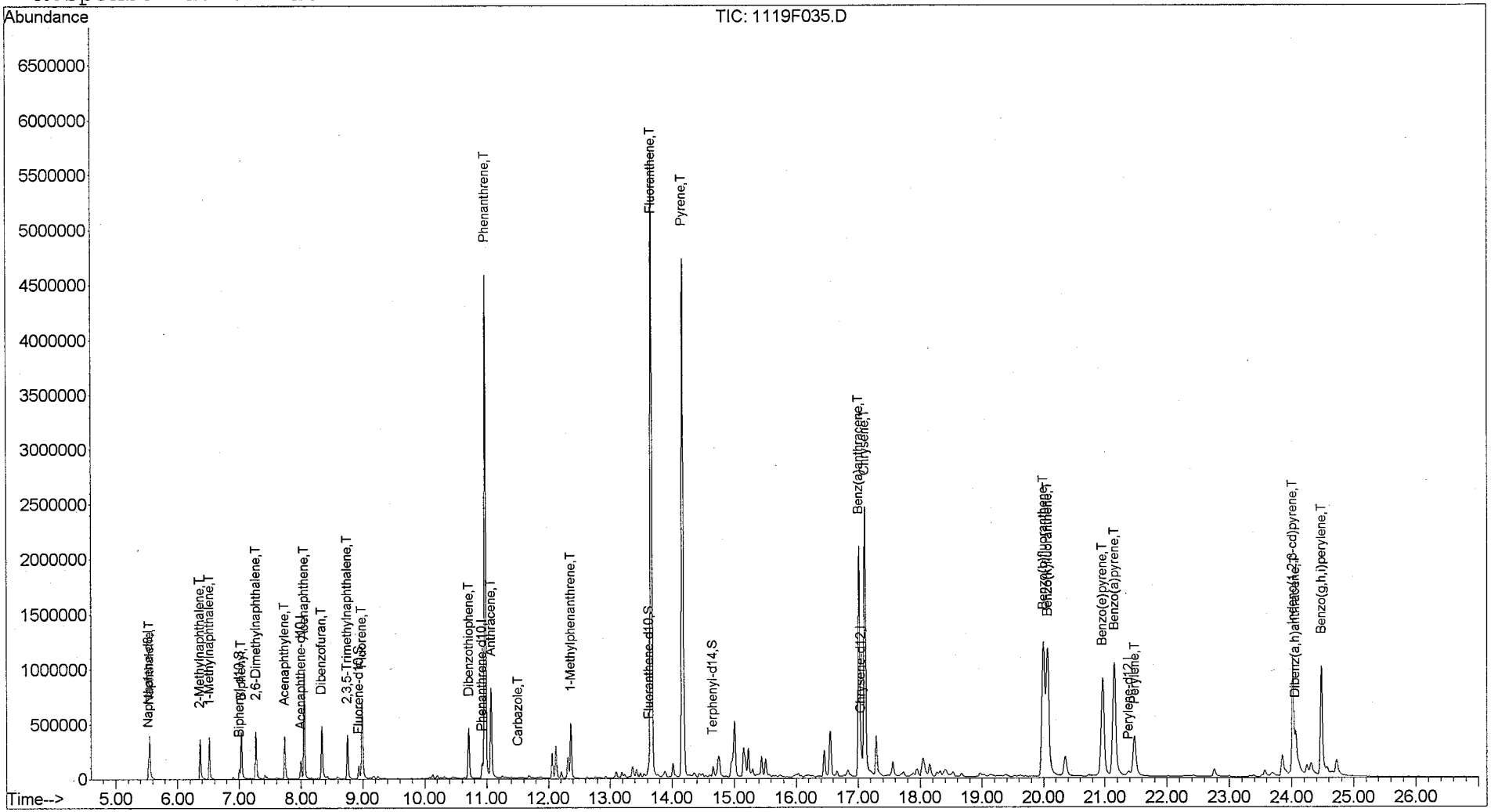
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.48	252	1021191	6153.30	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.02	276	1711053m	19038.34	ng/ml	
55)	Dibenz(a,h)anthracene	24.07	278	624627	4836.05	ng/ml	81
56)	Benzo(g,h,i)perylene	24.48	276	2009879	13489.02	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:14 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

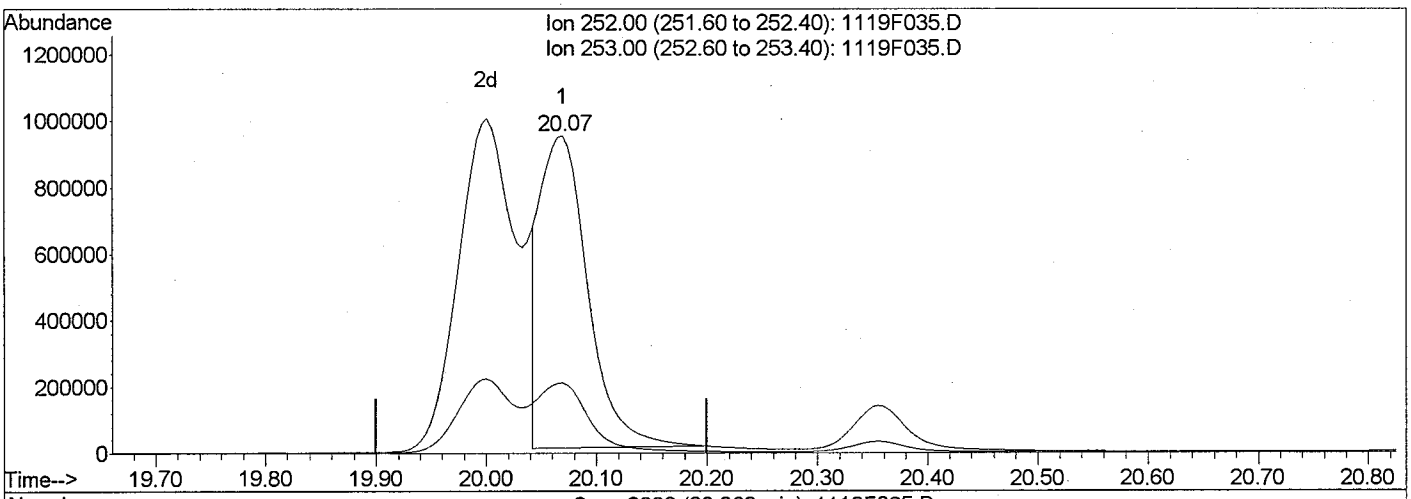


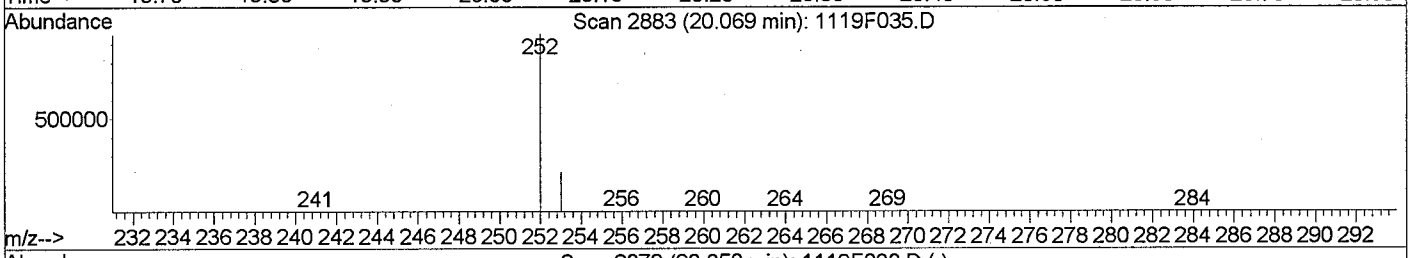
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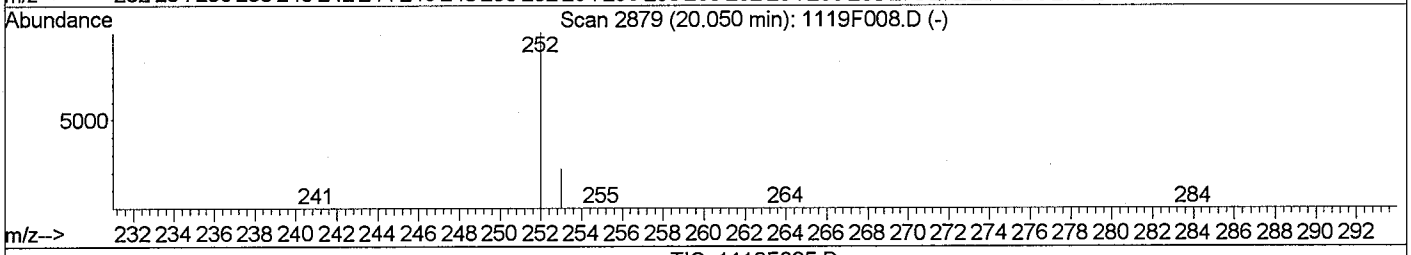
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F035.D

(50) Benzo(k)fluoranthene (T)

20.07min 12900.07ng/ml

response 2844984

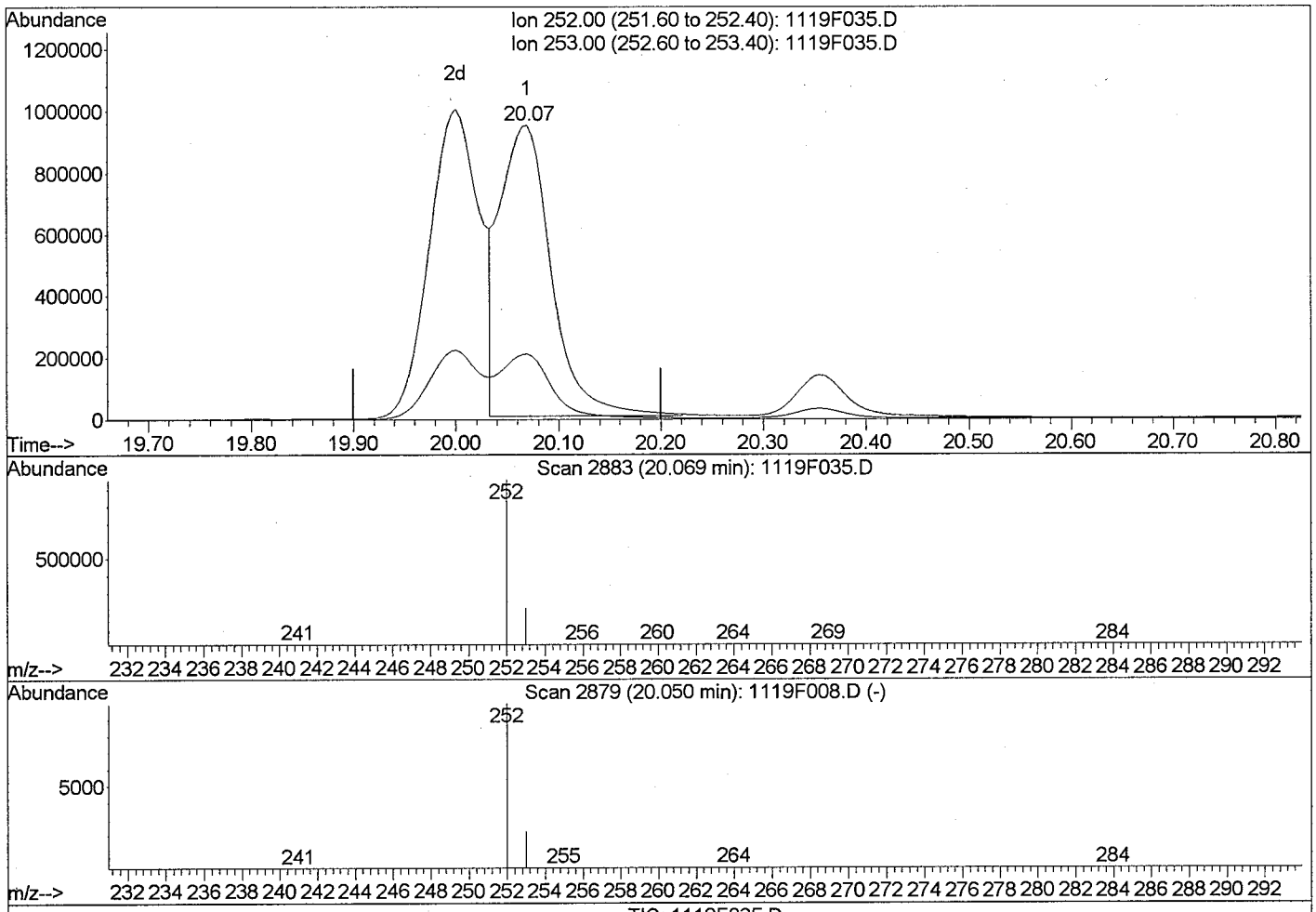
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.20
0.00	0.00	0.00
0.00	0.00	0.00

1119F035.D 1107ALK.M Thu Nov 20 14:14:08 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F035.D

(50) Benzo(k)fluoranthene (T)

20.07min 14887.37ng/ml m

response 3283264

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.27
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/24/03

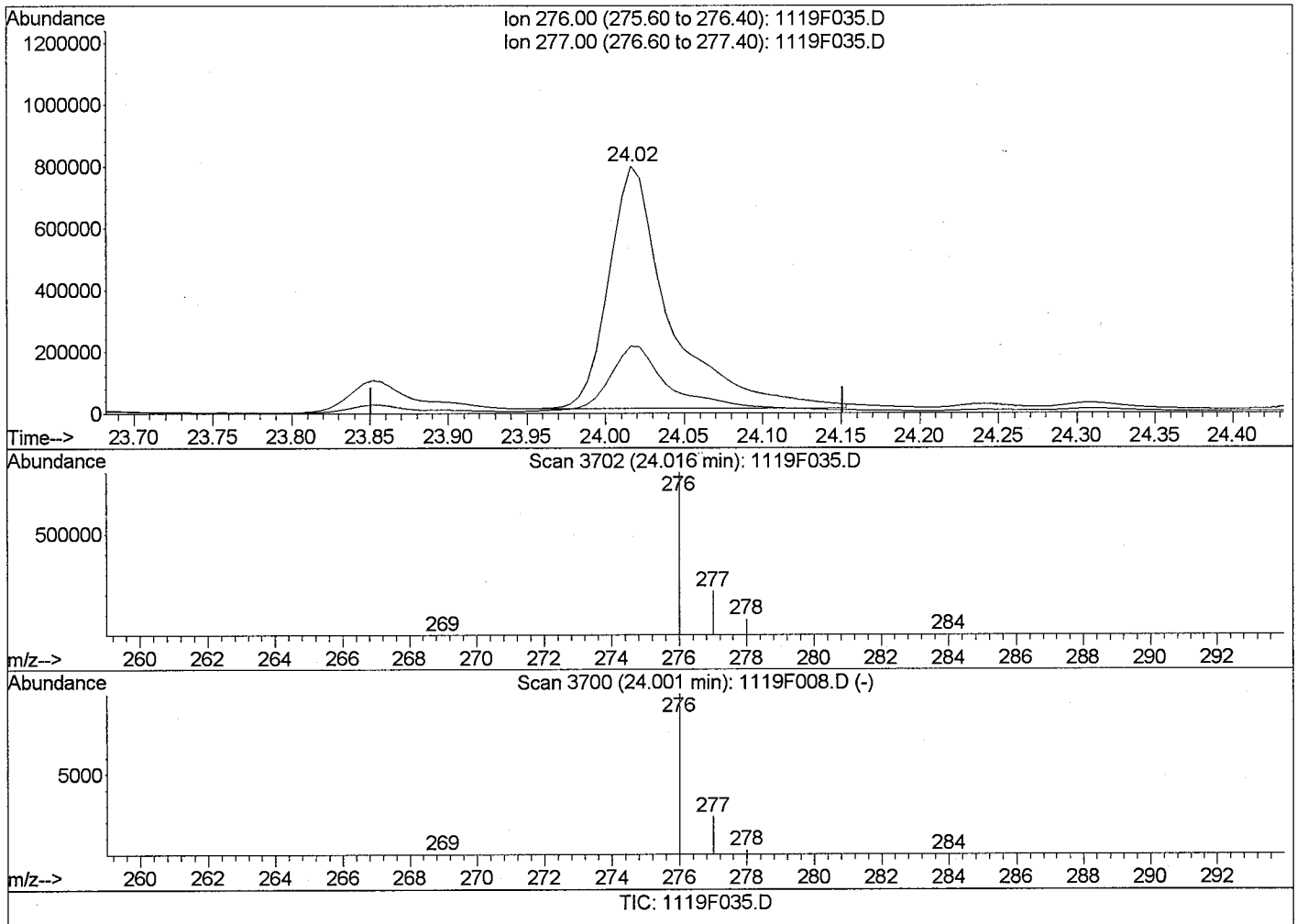
11/24/03

1119F035.D 1107ALK.M Thu Nov 20 14:14:15 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.02min 23473.77ng/ml

response 2109683

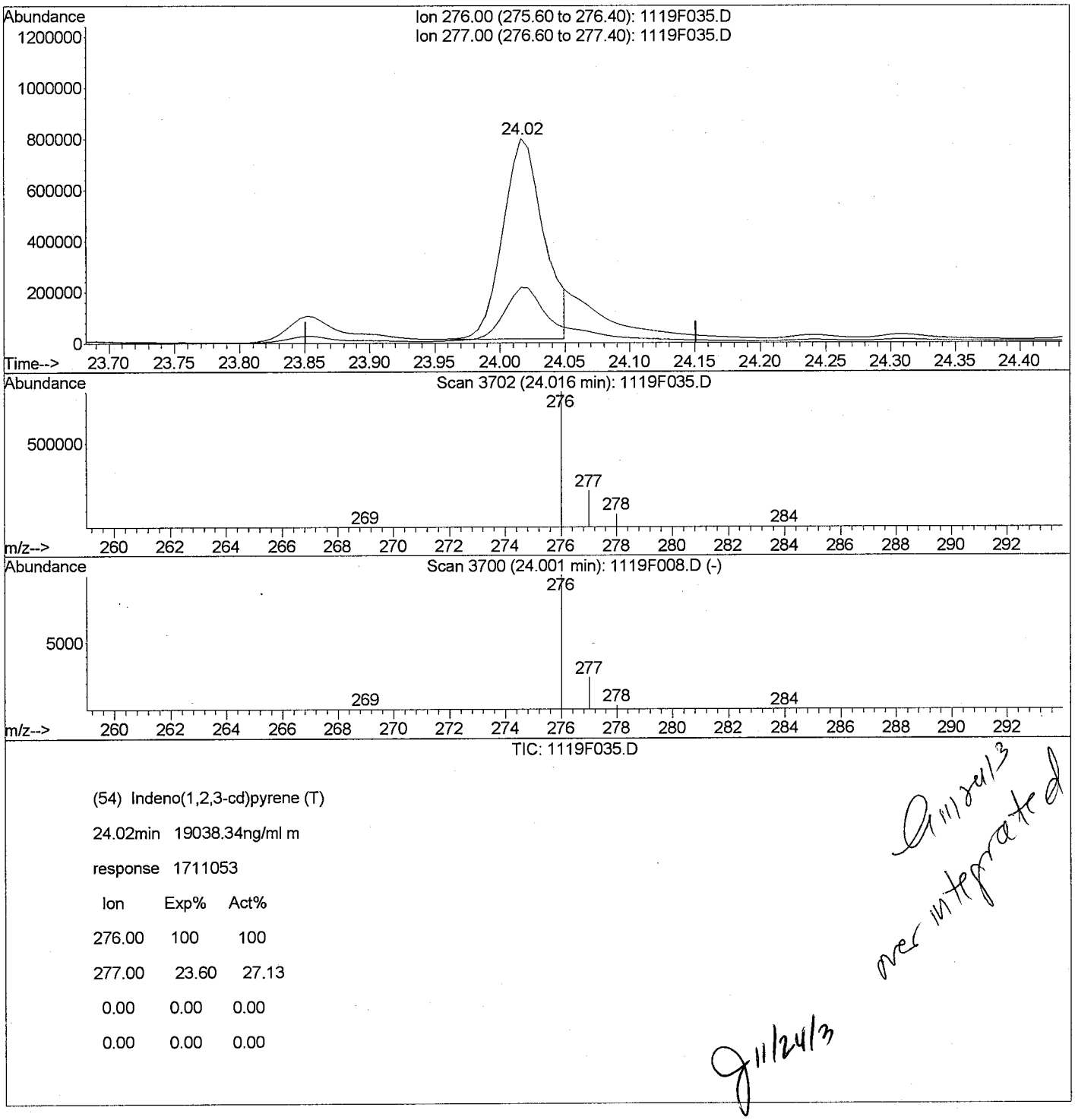
Ion	Exp%	Act%
276.00	100	100
277.00	23.60	26.85
0.00	0.00	0.00
0.00	0.00	0.00

1119F035.D 1107ALK.M Thu Nov 20 14:14:20 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F035.D Vial: 6
Acq On : 19 Nov 2003 3:13 pm Operator: LWeiskopf
Sample : KWG0317778-2 K2308433-004DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:14 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.02min 19038.34ng/ml m

response 1711053

Ion	Exp%	Act%
276.00	100	100
277.00	23.60	27.13
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13
over integrated

11/24/13

1119F035.D 1107ALK.M Thu Nov 20 14:14:25 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Lab Control Sample
Lab Code: KWG0317778-3

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**176**		5.0	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**185**		5.0	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**189**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**183**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**189**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**189**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**190**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**198**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**124**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**196**		5.0	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**210**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**211**		5.0	1	11/05/03	11/19/03	KWG0317778	
Pyrene	**225**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**196**		5.0	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**214**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**228**		5.0	1	11/05/03	11/19/03	KWG0317778	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0317778-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**248**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**223**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**211**		5.0	1	11/05/03	11/19/03	KWG0317778	
Perylene	**201**		5.0	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**180**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**187**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**204**		5.0	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	27-110	11/19/03	Acceptable
Fluoranthene-d10	75	34-122	11/19/03	Acceptable
Terphenyl-d14	91	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F032.D
Lab ID: KWG0317778-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/19/2003 13:25
Date Quantitated: 11/20/2003 14:12
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8433

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	2,4,6-Tribromophenol	-20.2	NA	20	
	Pentachlorophenol	-42.0	NA	20	
Surrogates	2,4,6-Tribromophenol	0	20	140	
Std MRL Unsupported by ICAL	Pentachlorophenol	500	200	NA	

11/24/13

Primary Review: _____

Secondary Review: 11/24/13

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247870	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\111903\1119F032.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 13:25	**Quant Date:**	11/20/2003 14:12	**Vial:**	3
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317778-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	234781	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	118555	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	166979	1,000.00	OK
4	Chrysene-d12	17.05	0.01	240	143859	1,000.00	OK
5	Perylene-d12	21.36	0.00	264	73794	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.00	0.00	0.00	164	117815	685.02	69	39-97	OK	
2	Fluorene-d10	8.93	0.00	0.00	176	84920	716.20	72	27-110	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	20-140	*	
3	Fluoranthene-d10	13.62	0.00	0.00	212	124873	747.18	75	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	119487	911.34	91	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	467188	1,760	176		
1	2-Methylnaphthalene	6.36	-0.01	0.00	142	289238	1,845	185		
1	1-Methylnaphthalene	6.51		0.00	142	278418	1,895	189		
1	Biphenyl	7.03		0.00	154	348780	1,835	183		
1	2,6-Dimethylnaphthalene	7.27		0.00	156	248986	1,862	186		
1	C2-Naphthalenes				156	0		2.5	U	
1	C3-Naphthalenes				170	0		2.5	U	
1	C4-Naphthalenes				184	0		2.5	U	
2	Acenaphthylene	7.73		0.00	152	431621	1,890	189		
2	Acenaphthene	8.05		0.00	154	268145	1,905	190		
2	Dibenzofuran	8.34		0.00	168	356526	1,889	189		
2	2,3,5-Trimethylnaphthalene	8.76		0.00	170	235155	1,865	186		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F032.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 13:25	**Quant Date:**	11/20/2003 14:12	**Vial:**	3
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317778-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	8.99		0.00	166	297920	1,976	198		
2	C1-Fluorenes				180	0		2.5	U	
2	C2-Fluorenes				194	0		2.5	U	
2	C3-Fluorenes				208	0		2.5	U	
2	Pentachlorophenol				266	0		15	U	
3	Dibenzothiophene	10.71		0.00	184	239104	1,241	124		
3	C1-Dibenzothiophenes				198	0		2.5	U	
3	C2-Dibenzothiophenes				212	0		2.5	U	
3	C3-Dibenzothiophenes				226	0		2.5	U	
3	Phenanthrene	10.97		0.00	178	397627	1,965	196		
3	Anthracene	11.07		0.00	178	362698	2,098	210		
3	Carbazole	11.51	0.02	0.00	167	1056	7.73	0.773	J	
3	1-Methylphenanthrene	12.36		0.00	192	279541	2,034	203		
3	C1-Phenanthrenes/Anthracenes				192	0		2.5	U	
3	C2-Phenanthrenes/Anthracenes				206	0		2.5	U	
3	C3-Phenanthrenes/Anthracenes				220	0		2.5	U	
3	C4-Phenanthrenes/Anthracenes				234	0		2.5	U	
3	Fluoranthene	13.66	0.01	0.00	202	424439	2,107	211		
4	Pyrene	14.16		0.00	202	423903	2,254	225		
4	C1-Fluoranthenes/Pyrenes				216	0		2.5	U	
4	Benz(a)anthracene	17.01		0.00	228	281258	1,965	196		
4	Chrysene	17.10		0.00	228	327192	2,137	214		
4	C1-Chrysenes				242	0		2.5	U	
4	C2-Chrysenes				256	0		2.5	U	
4	C3-Chrysenes				270	0		2.5	U	
4	C4-Chrysenes				284	0		2.5	U	
5	Benzo(b)fluoranthene	19.97		0.00	252	224978	2,284	228		
5	Benzo(k)fluoranthene	20.05		0.00	252	310415**m**	2,483	248		
5	Benzo(e)pyrene	20.93		0.00	252	246886	2,232	223		
5	Benzo(a)pyrene	21.12		0.00	252	176754	2,109	211		
5	Perylene	21.45		0.00	252	189452	2,014	201		
5	Indeno(1,2,3-cd)pyrene	24.00		0.00	276	91556	1,797	180		
5	Dibenz(a,h)anthracene	24.06		0.00	278	136985	1,871	187		
5	Benzo(g,h,i)perylene	24.46		0.00	276	172020	2,037	204		

Prep Amount:	20.0 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F032.D Vial: 3
Acq On : 19 Nov 2003 1:25 pm Operator: LWeiskopf
Sample : KWG0317778-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:30 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	234781	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	118555	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	166979	1000.00	ng/ml	0.00
38) Chrysene-d12	17.05	240	143859	1000.00	ng/ml	0.00
48) Perylene-d12	21.36	264	73794	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	117815	685.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	68.50%		
16) Fluorene-d10	8.93	176	84920	716.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	71.62%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.62	212	124873	747.18	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	74.72%		
41) Terphenyl-d14	14.66	244	119487	911.34	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	91.13%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	467188	1759.88	ng/ml	100
3) 2-Methylnaphthalene	6.36	142	289238	1845.08	ng/ml	99
4) 1-Methylnaphthalene	6.51	142	278418	1894.78	ng/ml	97
6) Biphenyl	7.03	154	348780	1834.93	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.27	156	248986	1862.11	ng/ml	99
12) Acenaphthylene	7.73	152	431621	1889.60	ng/ml	100
13) Acenaphthene	8.05	154	268145	1904.73	ng/ml	99
14) Dibenzofuran	8.34	168	356526	1889.20	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.76	170	235155	1864.71	ng/ml	93
17) Fluorene	8.99	166	297920	1975.53	ng/ml	99
24) Dibenzothiophene	10.71	184	239104	1241.10	ng/ml	99
28) Phenanthrene	10.97	178	397627	1964.81	ng/ml	100
29) Anthracene	11.07	178	362698	2097.82	ng/ml	100
30) Carbazole	11.51	167	1056	7.73	ng/ml	97
31) 1-Methylphenanthrene	12.36	192	279541	2034.42	ng/ml	99
36) Fluoranthene	13.66	202	424439	2106.96	ng/ml	100
39) Pyrene	14.16	202	423903	2254.38	ng/ml	97
42) Benz(a)anthracene	17.01	228	281258	1964.64	ng/ml	100
43) Chrysene	17.10	228	327192	2137.30	ng/ml	100
49) Benzo(b)fluoranthene	19.97	252	224978	2283.63	ng/ml	100
50) Benzo(k)fluoranthene	20.05	252	310415m	2483.24	ng/ml	
51) Benzo(e)pyrene	20.93	252	246886	2231.96	ng/ml	99
52) Benzo(a)pyrene	21.12	252	176754	2109.28	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F032.D Vial: 3
Acq On : 19 Nov 2003 1:25 pm Operator: LWeiskopf
Sample : KWG0317778-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:30 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

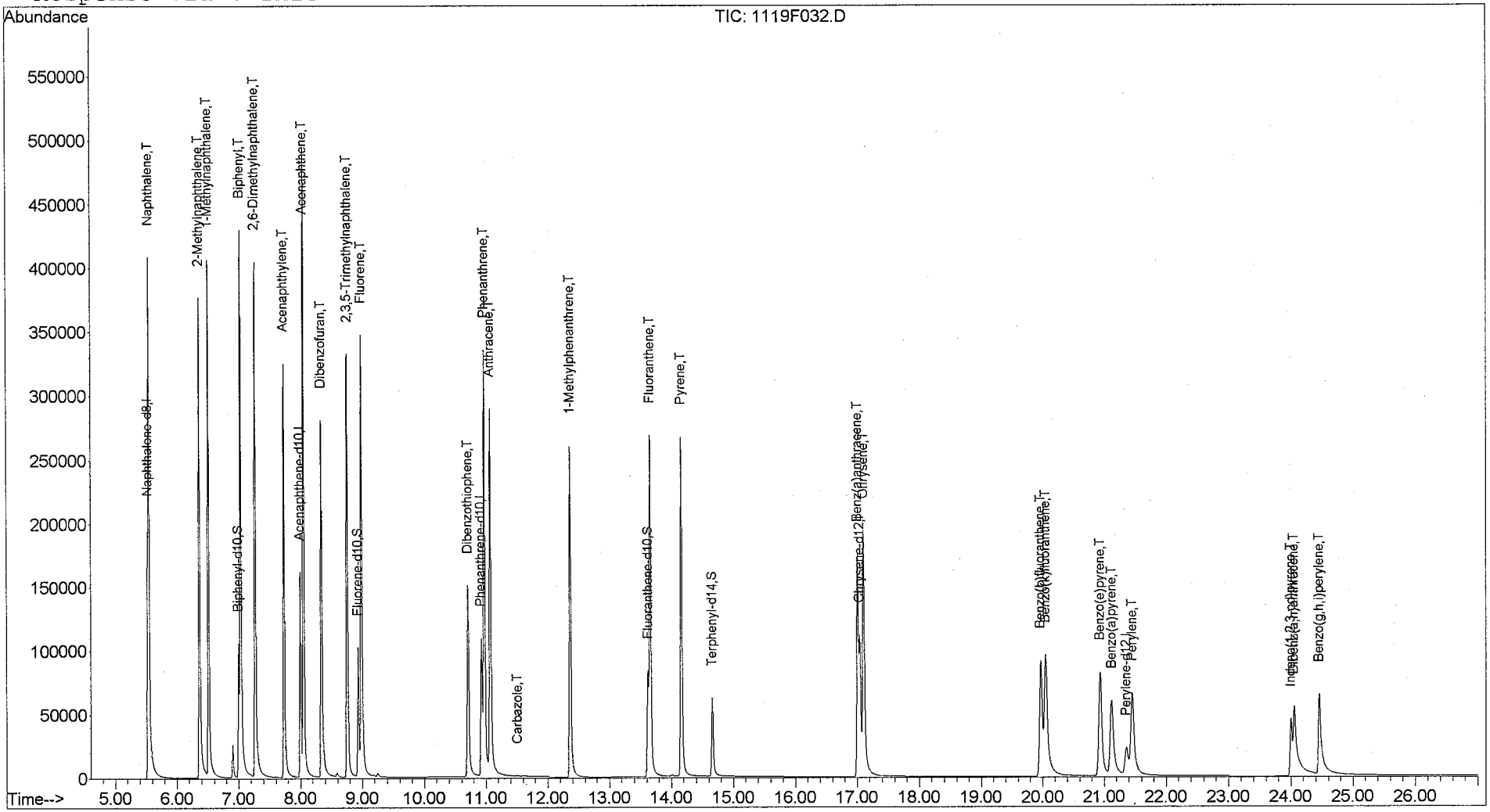
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53) Perylene	21.45	252	189452	2014.02	ng/ml	100
54) Indeno(1,2,3-cd)pyrene	24.00	276	91556	1797.28	ng/ml	99
55) Dibenz(a,h)anthracene	24.06	278	136985	1871.14	ng/ml	95
56) Benzo(g,h,i)perylene	24.46	276	172020	2036.82	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F032.D Vial: 3
Acq On : 19 Nov 2003 1:25 pm Operator: LWeiskopf
Sample : KWG0317778-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

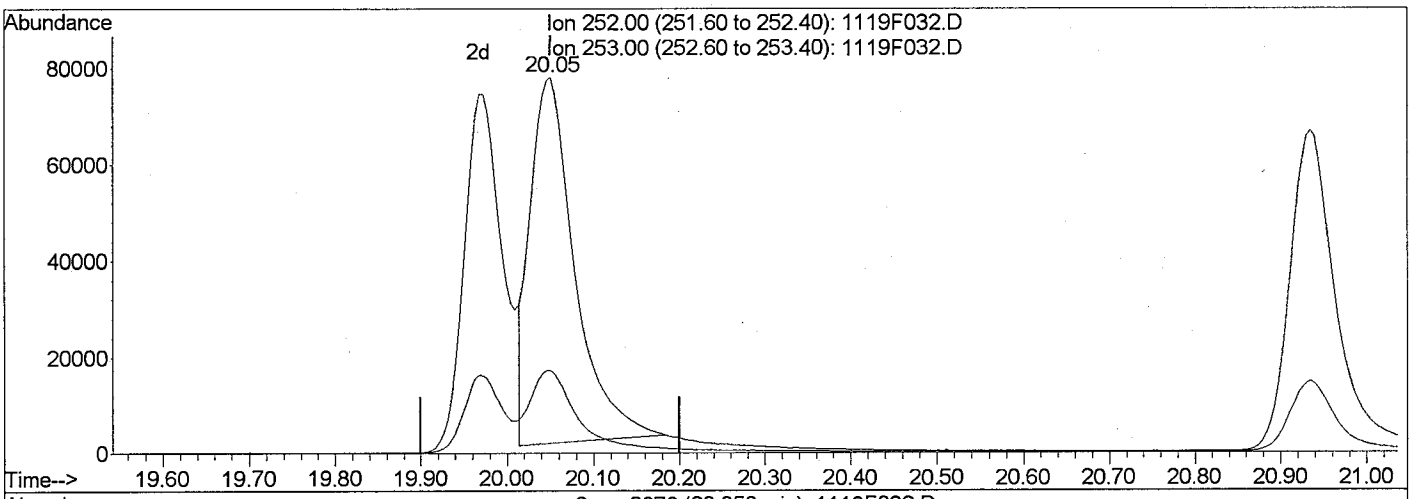


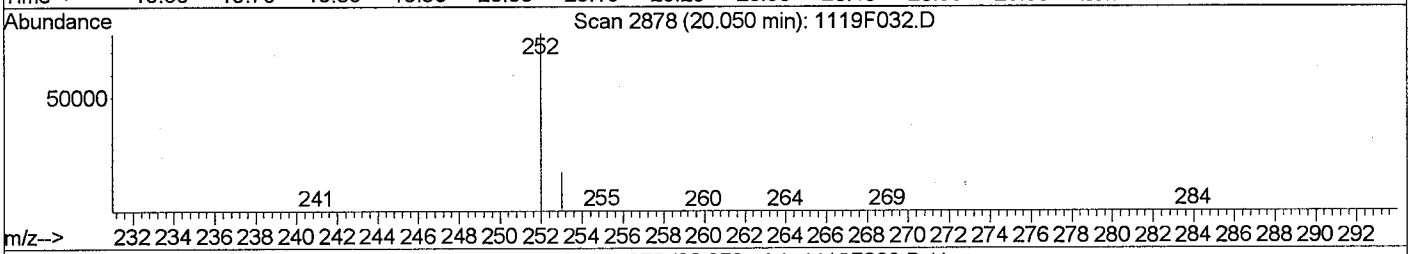
1556

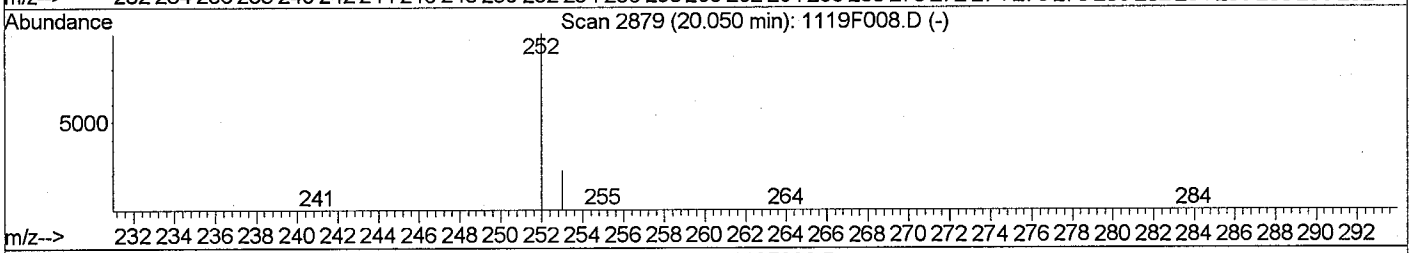
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F032.D Vial: 3
Acq On : 19 Nov 2003 1:25 pm Operator: LWeiskopf
Sample : KWG0317778-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F032.D

(50) Benzo(k)fluoranthene (T)

20.05min 2176.25ng/ml

response 272040

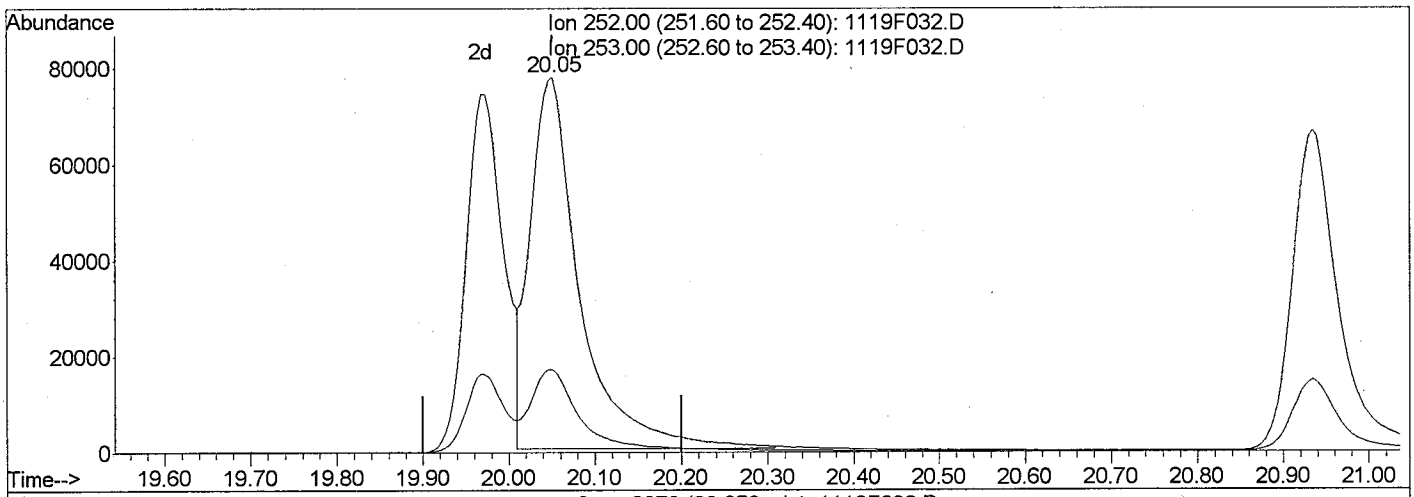
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.73
0.00	0.00	0.00
0.00	0.00	0.00

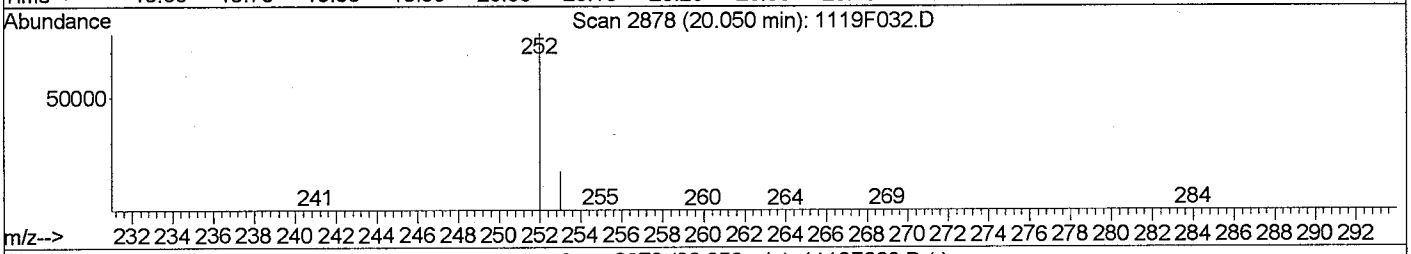
1119F032.D 1107ALK.M Thu Nov 20 14:12:16 2003

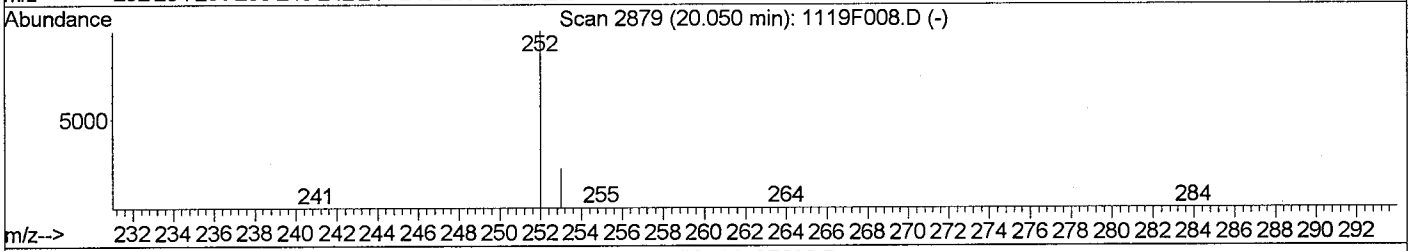
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F032.D Vial: 3
Acq On : 19 Nov 2003 1:25 pm Operator: LWeiskopf
Sample : KWG0317778-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:12 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F032.D

(50) Benzo(k)fluoranthene (T)

20.05min 2483.24ng/ml m

response 310415

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.06
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/24/13

11/24/13

1119F032.D 1107ALK.M Thu Nov 20 14:12:25 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Duplicate Lab Control Sample
Lab Code: KWG0317778-4

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**180**		5.0	1	11/05/03	11/19/03	KWG0317778	
2-Methylnaphthalene	**191**		5.0	1	11/05/03	11/19/03	KWG0317778	
1-Methylnaphthalene	**195**		5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Naphthalenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Biphenyl	**189**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthylene	**192**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzofuran	**193**		5.0	1	11/05/03	11/19/03	KWG0317778	
Acenaphthene	**193**		5.0	1	11/05/03	11/19/03	KWG0317778	
Fluorene	**203**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Fluorenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenzothiophene	**172**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Dibenzothiophenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Phenanthrene	**204**		5.0	1	11/05/03	11/19/03	KWG0317778	
Anthracene	**217**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Phenanthrenes/Anthracenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Fluoranthene	**218**		5.0	1	11/05/03	11/19/03	KWG0317778	
Pyrene	**227**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Fluoranthenes/Pyrenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benz(a)anthracene	**195**		5.0	1	11/05/03	11/19/03	KWG0317778	
Chrysene	**210**		5.0	1	11/05/03	11/19/03	KWG0317778	
C1-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C2-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C3-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
C4-Chrysenes	ND	U	5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(b)fluoranthene	**227**		5.0	1	11/05/03	11/19/03	KWG0317778	

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Duplicate Lab Control Sample
Lab Code: KWG0317778-4

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(k)fluoranthene	**251**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(e)pyrene	**225**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(a)pyrene	**214**		5.0	1	11/05/03	11/19/03	KWG0317778	
Perylene	**208**		5.0	1	11/05/03	11/19/03	KWG0317778	
Indeno(1,2,3-cd)pyrene	**155**		5.0	1	11/05/03	11/19/03	KWG0317778	
Dibenz(a,h)anthracene	**165**		5.0	1	11/05/03	11/19/03	KWG0317778	
Benzo(g,h,i)perylene	**180**		5.0	1	11/05/03	11/19/03	KWG0317778	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	76	27-110	11/19/03	Acceptable
Fluoranthene-d10	81	34-122	11/19/03	Acceptable
Terphenyl-d14	95	50-132	11/19/03	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\111903\1119F033.D
Lab ID: KWG0317778-4
RunType: DLCS
Matrix: SEDIMENT

Date Acquired: 11/19/2003 14:01
Date Quantitated: 11/20/2003 14:13
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8433

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT
Continuing Calibration Recovery	2,4,6-Tribromophenol	-20.2	NA	20	
	Pentachlorophenol	-42.0	NA	20	
Surrogates	2,4,6-Tribromophenol	0	20	140	
Std MRL Unsupported by ICAL	Pentachlorophenol	500	200	NA	

Primary Review: 11/24/13

Secondary Review: 11/24/13

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/10/2003

Analysis Lot:	KWG0318851	**Prep Lot:**	KWG0317778	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247871	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\111903\1119F033.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 14:01	**Quant Date:**	11/20/2003 14:13	**Vial:**	4
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0317778-4			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	0.00	136	230255	1,000.00	OK
2	Acenaphthene-d10	8.00	0.00	164	119456	1,000.00	OK
3	Phenanthrene-d10	10.93	0.00	188	168651	1,000.00	OK
4	Chrysene-d12	17.05	0.01	240	150040	1,000.00	OK
5	Perylene-d12	21.36	0.00	264	72439	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.00	0.00	0.00	164	123597	732.77	73	39-97	OK	
2	Fluorene-d10	8.94	0.01	0.00	176	90666	758.90	76	27-110	OK	
2	2,4,6-Tribromophenol			0.00	330	0		0	20-140	*	
3	Fluoranthene-d10	13.62	0.00	0.00	212	136072	806.12	81	34-122	OK	
4	Terphenyl-d14	14.66	0.00	0.00	244	129914	950.05	95	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55		0.00	128	469010	1,801	180		
1	2-Methylnaphthalene	6.37		0.00	142	293184	1,907	191		
1	1-Methylnaphthalene	6.51		0.00	142	281436	1,953	195		
1	Biphenyl	7.04	0.01	0.00	154	352930	1,893	189		
1	2,6-Dimethylnaphthalene	7.27		0.00	156	254077	1,938	194		
1	C2-Naphthalenes				156	0		2.5	U	
1	C3-Naphthalenes				170	0		2.5	U	
1	C4-Naphthalenes				184	0		2.5	U	
2	Acenaphthylene	7.73		0.00	152	441960	1,920	192		
2	Acenaphthene	8.05		0.00	154	274083	1,932	193		
2	Dibenzofuran	8.34		0.00	168	367183	1,931	193		
2	2,3,5-Trimethylnaphthalene	8.76		0.00	170	242538	1,909	191		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F033.D		**Instrument:** MS11
Acqu Date:	11/19/2003 14:01	**Quant Date:** 11/20/2003 14:13	**Vial:** 4
Run Type:	DLCS		**Dilution:** 1.0
Lab ID:	KWG0317778-4		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	8.99		0.00	166	308592	2,031	203		
2	C1-Fluorenes				180	0		2.5	U	
2	C2-Fluorenes				194	0		2.5	U	
2	C3-Fluorenes				208	0		2.5	U	
2	Pentachlorophenol				266	0		15	U	
3	Dibenzothiophene	10.71		0.00	184	334140	1,717	172		
3	C1-Dibenzothiophenes				198	0		2.5	U	
3	C2-Dibenzothiophenes				212	0		2.5	U	
3	C3-Dibenzothiophenes				226	0		2.5	U	
3	Phenanthrene	10.97		0.00	178	417546	2,043	204		
3	Anthracene	11.07		0.00	178	379541	2,173	217		
3	Carbazole				167	0		0.090	U	
3	1-Methylphenanthrene	12.36		0.00	192	293504	2,115	211		
3	C1-Phenanthrenes/Anthracenes				192	0		2.5	U	
3	C2-Phenanthrenes/Anthracenes				206	0		2.5	U	
3	C3-Phenanthrenes/Anthracenes				220	0		2.5	U	
3	C4-Phenanthrenes/Anthracenes				234	0		2.5	U	
3	Fluoranthene	13.66	0.01	0.00	202	443562	2,180	218		
4	Pyrene	14.16		0.00	202	445443	2,271	227		
4	C1-Fluoranthenes/Pyrenes				216	0		2.5	U	
4	Benz(a)anthracene	17.01		0.00	228	291024	1,949	195		
4	Chrysene	17.11	0.01	0.00	228	335761	2,103	210		
4	C1-Chrysenes				242	0		2.5	U	
4	C2-Chrysenes				256	0		2.5	U	
4	C3-Chrysenes				270	0		2.5	U	
4	C4-Chrysenes				284	0		2.5	U	
5	Benzo(b)fluoranthene	19.97		0.00	252	219449	2,269	227		
5	Benzo(k)fluoranthene	20.05		0.00	252	308431 **m**	2,514	251		
5	Benzo(e)pyrene	20.93		0.00	252	244694	2,254	225		
5	Benzo(a)pyrene	21.12		0.00	252	175845	2,138	214		
5	Perylene	21.45		0.00	252	192404	2,084	208		
5	Indeno(1,2,3-cd)pyrene	24.00		0.00	276	77563	1,551	155		
5	Dibenz(a,h)anthracene	24.06		0.00	278	118519	1,649	165		
5	Benzo(g,h,i)perylene	24.46		0.00	276	149590	1,804	180		

Prep Amount: 20.0 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F033.D Vial: 4
Acq On : 19 Nov 2003 2:01 pm Operator: LWeiskopf
Sample : KWG0317778-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:36 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	230255	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	119456	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	168651	1000.00	ng/ml	0.00
38) Chrysene-d12	17.05	240	150040	1000.00	ng/ml	0.00
48) Perylene-d12	21.36	264	72439	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	123597	732.77	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	73.28%		
16) Fluorene-d10	8.94	176	90666	758.90	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	75.89%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.62	212	136072	806.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	80.61%		
41) Terphenyl-d14	14.66	244	129914	950.05	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	95.00%		
Target Compounds						Qvalue
2) Naphthalene	5.55	128	469010	1801.47	ng/ml	100
3) 2-Methylnaphthalene	6.37	142	293184	1907.01	ng/ml	98
4) 1-Methylnaphthalene	6.51	142	281436	1952.97	ng/ml	98
6) Biphenyl	7.04	154	352930	1893.26	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.27	156	254077	1937.53	ng/ml	99
12) Acenaphthylene	7.73	152	441960	1920.26	ng/ml	100
13) Acenaphthene	8.05	154	274083	1932.23	ng/ml	99
14) Dibenzofuran	8.34	168	367183	1931.00	ng/ml	99
15) 2,3,5-Trimethylnaphthalene	8.76	170	242538	1908.75	ng/ml	99
17) Fluorene	8.99	166	308592	2030.87	ng/ml	100
24) Dibenzothiophene	10.71	184	334140	1717.20	ng/ml	99
28) Phenanthrene	10.97	178	417546	2042.78	ng/ml	100
29) Anthracene	11.07	178	379541	2173.48	ng/ml	100
31) 1-Methylphenanthrene	12.36	192	293504	2114.87	ng/ml	100
36) Fluoranthene	13.66	202	443562	2180.05	ng/ml	100
39) Pyrene	14.16	202	445443	2271.34	ng/ml	98
42) Benz(a)anthracene	17.01	228	291024	1949.12	ng/ml	99
43) Chrysene	17.11	228	335761	2102.92	ng/ml	99
49) Benzo(b)fluoranthene	19.97	252	219449	2269.17	ng/ml	100
50) Benzo(k)fluoranthene	20.05	252	308431m	2513.52	ng/ml	
51) Benzo(e)pyrene	20.93	252	244694	2253.52	ng/ml	99
52) Benzo(a)pyrene	21.12	252	175845	2137.68	ng/ml	99
53) Perylene	21.45	252	192404	2083.66	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F033.D Vial: 4
Acq On : 19 Nov 2003 2:01 pm Operator: LWeiskopf
Sample : KWG0317778-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:21:36 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

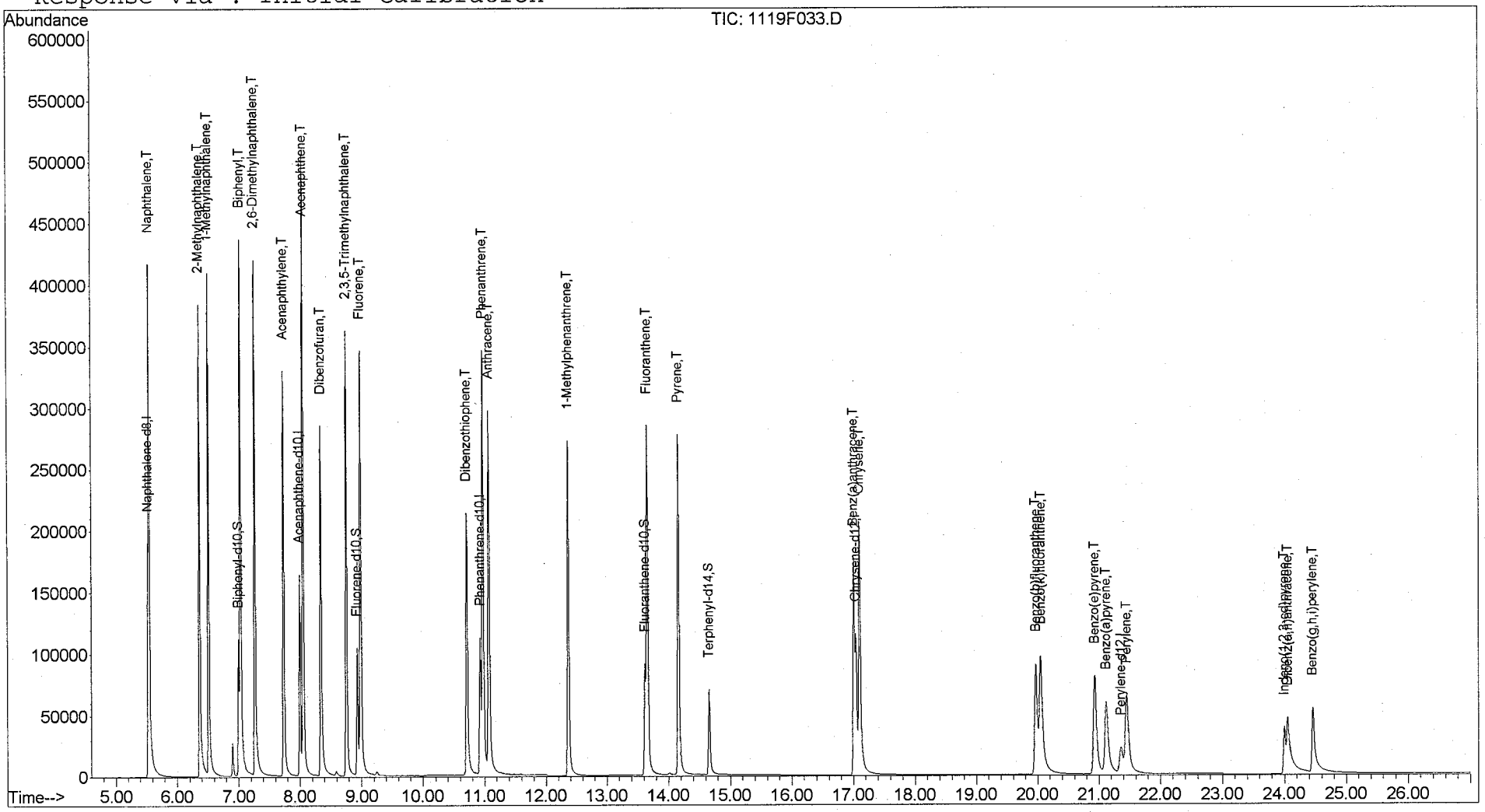
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54)	Indeno(1,2,3-cd)pyrene	24.00	276	77563	1551.07	ng/ml	100
55)	Dibenz(a,h)anthracene	24.06	278	118519	1649.19	ng/ml	92
56)	Benzo(g,h,i)perylene	24.46	276	149590	1804.37	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F033.D Vial: 4
Acq On : 19 Nov 2003 2:01 pm Operator: LWeiskopf
Sample : KWG0317778-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:13 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

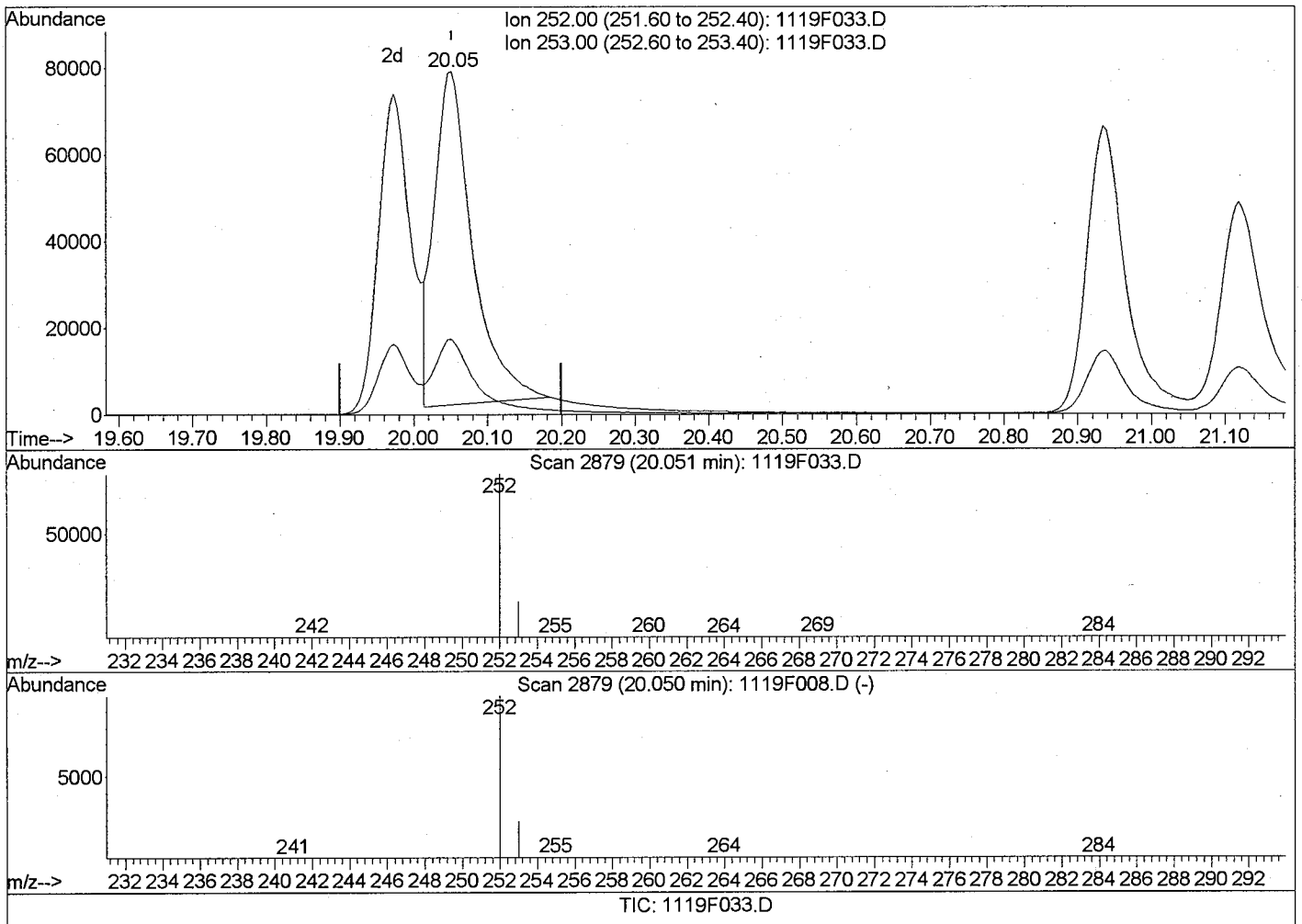


1566

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F033.D Vial: 4
Acq On : 19 Nov 2003 2:01 pm Operator: LWeiskopf
Sample : KWG0317778-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 5:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F033.D

(50) Benzo(k)fluoranthene (T)

20.05min 2238.49ng/ml

response 274683

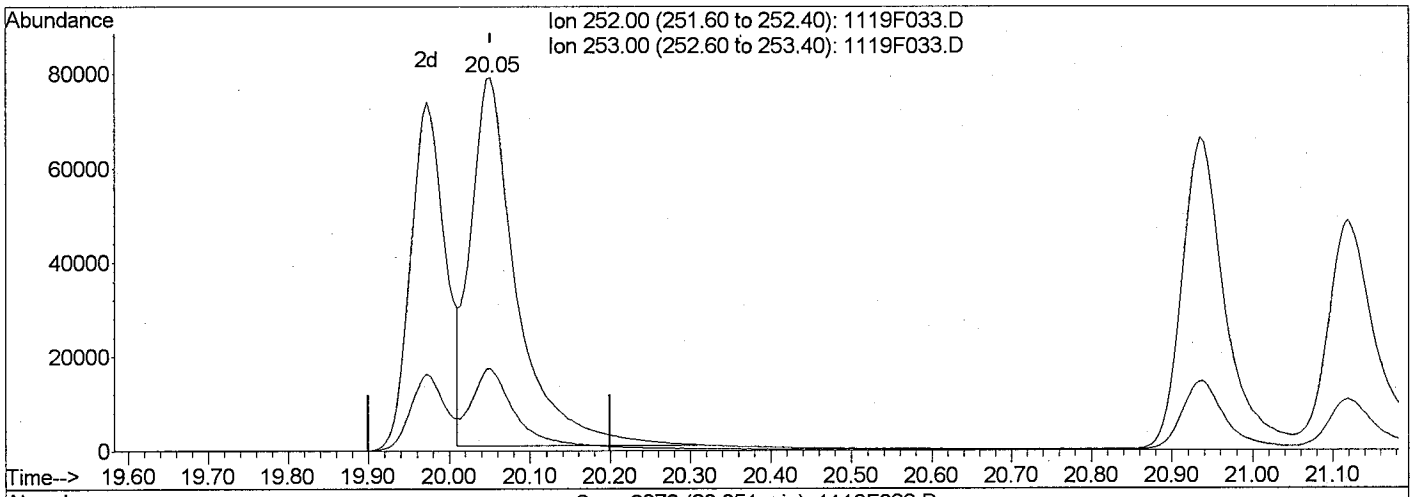
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.80
0.00	0.00	0.00
0.00	0.00	0.00

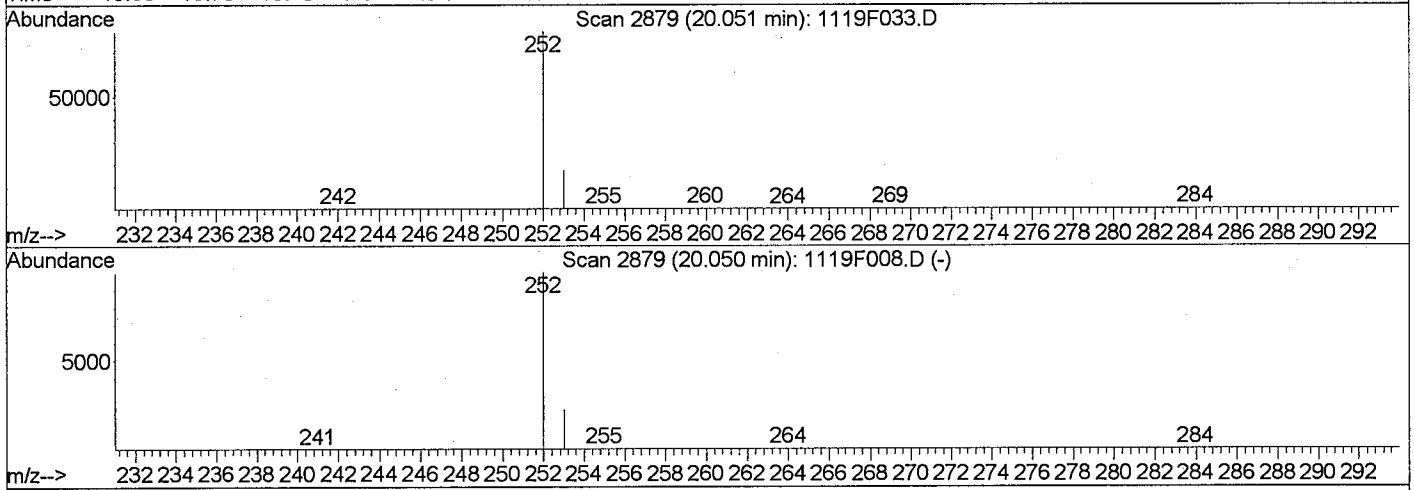
1119F033.D 1107ALK.M Thu Nov 20 14:12:42 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F033.D Vial: 4
Acq On : 19 Nov 2003 2:01 pm Operator: LWeiskopf
Sample : KWG0317778-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:13 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration





TIC: 1119F033.D

(50) Benzo(k)fluoranthene (T)

20.05min 2513.52ng/ml m

response 308431

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	22.07
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

incomplete

11/24/13

1119F033.D 1107ALK.M Thu Nov 20 14:12:48 2003

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
SRM Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA
Date Extracted: 11/5/2003
Date Analyzed: 11/20/2003

Standard Reference Material
Polynuclear Aromatic Hydrocarbons

Sample Name: Standard Reference Material
Lab Code: KWG0317778-6
Test Notes:

Units: ug/Kg (ppb)
Basis: Dry

Analyte	Prep Method	Analysis Method	True Value	Result	CAS Advisory Limits	Result Notes
Phenanthrene	EPA 3541	SIM	5270 ± 220	3500	2520-8240	
Anthracene	EPA 3541	SIM	1770 ± 330	730	720-3150	
Fluoranthene	EPA 3541	SIM	8920 ± 320	6300	4300-13900	
Pyrene	EPA 3541	SIM	9700 ± 420	4900	4640-15200	
Benz(a)anthracene	EPA 3541	SIM	4720 ± 110	2300	2310-7250	*
Chrysene	EPA 3541	SIM	5900 ± 370	3000	2770-9410	
Benzo(b)fluoranthene	EPA 3541	SIM	3870 ± 420	1900	1720-6440	
Benzo(k)fluoranthene	EPA 3541	SIM	4390 ± 640	2000	1880-7550	
Benzo(a)pyrene	EPA 3541	SIM	4300 ± 130	1900	2090-6650	*
Indeno(1,2,3-cd)pyrene	EPA 3541	SIM	2780 ± 100	1700	1340-4320	
Dibenz(a,h)anthracene	EPA 3541	SIM	424 ± 69	250	178-740	
Benzo(g,h,i)perylene	EPA 3541	SIM	2840 ± 100	1100	1370-4410	*

Approved By: _____ Date: 11/26/03

LCS (44)/091898p

Exception Report

Data File: J:\MS11\DATA\112003\1120F013.D
Lab ID: KWG0317778-6
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/20/2003 12:26
Date Quantitated: 11/24/2003 09:22
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8433

Primary Review: 11/24/03

Secondary Review: 11.24.3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	SIM-ALKH	**Collect Date:**		**Receive Date:**	11/21/2003

Analysis Lot:	KWG0318915	**Prep Lot:**	KWG0317778	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	247873	**Prep Date:**	11/05/2003		

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ4524
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\111903\1119F031.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F013.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 12:26	**Quant Date:**	11/24/2003 09:22	**Vial:**	10
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	KWG0317778-6			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54	0.01	136	307463	1,000.00	OK
2	Acenaphthene-d10	8.01	0.01	164	171654	1,000.00	OK
3	Phenanthrene-d10	10.94	0.01	188	261605	1,000.00	OK
4	Chrysene-d12	17.06	0.00	240	329918	1,000.00	OK
5	Perylene-d12	21.41	0.01	264	215843	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	8.94	0.00	0.00	176	24544	142.97	71	27-110	OK	
3	Fluoranthene-d10	13.63	0.00	0.00	212	44151**m**	168.62	84	34-122	OK	
4	Terphenyl-d14	14.67	0.01	0.00	244	43031	143.11	72	50-132	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56	0.01	0.00	128	87086	250.50	500	D	
1	2-Methylnaphthalene	6.37		0.00	142	31129	151.63	300	D	
1	1-Methylnaphthalene	6.52		0.00	142	22613	117.51	240	D	
1	Biphenyl	7.04		0.00	154	12215	49.07	98	JD	
1	C2-Naphthalenes				156	0		51	U	
1	C3-Naphthalenes				170	0		51	U	
1	C4-Naphthalenes				184	0		51	U	
2	Acenaphthylene	7.74		0.00	152	58642	177.31	360	D	
2	Acenaphthene	8.06	0.01	0.00	154	21655	106.24	210	D	
2	Dibenzofuran	8.35	0.01	0.00	168	24788	90.72	180	D	
2	Fluorene	9.00	0.01	0.00	166	31932	146.24	290	D	
2	C1-Fluorenes				180	0		51	U	
2	C2-Fluorenes				194	0		51	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F013.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 12:26	**Quant Date:**	11/24/2003 09:22	**Vial:**	10
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	KWG0317778-6			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C3-Fluorenes				208	0		51	U	
3	Dibenzothiophene	10.72	0.01	0.00	184	64695	214.34	430	D	
3	C1-Dibenzothiophenes				198	0		51	U	
3	C2-Dibenzothiophenes				212	0		51	U	
3	C3-Dibenzothiophenes				226	0		51	U	
3	Phenanthrene	10.98	0.01	0.00	178	550810	1,737	3500	D	
3	Anthracene	11.08		0.00	178	98783	364.69	730	D	
3	C1-Phenanthrenes/Anthracenes				192	0		51	U	
3	C2-Phenanthrenes/Anthracenes				206	0		51	U	
3	C3-Phenanthrenes/Anthracenes				220	0		51	U	
3	C4-Phenanthrenes/Anthracenes				234	0		51	U	
3	Fluoranthene	13.67	0.01	0.00	202	994612	3,151	6300	D	
4	Pyrene	14.17		0.00	202	1063258	2,466	4900	D	
4	C1-Fluoranthenes/Pyrenes				216	0		51	U	
4	Benz(a)anthracene	17.02		0.00	228	383959	1,169	2300	D	
4	Chrysene	17.12		0.00	228	521128	1,484	3000	D	
4	C1-Chrysenes				242	0		51	U	
4	C2-Chrysenes				256	0		51	U	
4	C3-Chrysenes				270	0		51	U	
4	C4-Chrysenes				284	0		51	U	
5	Benzo(b)fluoranthene	20.01	0.01	0.00	252	268887	933.12	1900	D	
5	Benzo(k)fluoranthene	20.07	-0.01	0.00	252	365942**m**	1,001	2000	D	
5	Benzo(e)pyrene	20.98	0.01	0.00	252	250121	773.08	1600	D	
5	Benzo(a)pyrene	21.16		0.00	252	235196	959.57	1900	D	
5	Perylene	21.51	0.01	0.00	252	61427	223.26	450	D	
5	Indeno(1,2,3-cd)pyrene	24.03		0.00	276	128974	865.59	1700	D	
5	Dibenz(a,h)anthracene	24.08		0.00	278	26923**m**	125.73	250	D	
5	Benzo(g,h,i)perylene	24.50	0.01	0.00	276	129481	524.16	1100	D	

Prep Amount:	5.05 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	98.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F013.D Vial: 10
Acq On : 20 Nov 2003 12:26 pm Operator: LWeiskopf
Sample : KWG0317778-6 SRM 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:45 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	307463	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	171654	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	261605	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	329918	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	215843	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.01	164	26009	115.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	11.55%		
16) Fluorene-d10	8.94	176	24544	142.97	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.30%		
21) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.63	212	44151m	168.62	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.86%		
41) Terphenyl-d14	14.67	244	43031	143.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.31%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	87086	250.50	ng/ml	99
3) 2-Methylnaphthalene	6.37	142	31129	151.63	ng/ml	100
4) 1-Methylnaphthalene	6.52	142	22613	117.51	ng/ml	99
6) Biphenyl	7.04	154	12215	49.07	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.28	156	31462	179.67	ng/ml	98
12) Acenaphthylene	7.74	152	58642	177.31	ng/ml	99
13) Acenaphthene	8.06	154	21655	106.24	ng/ml	99
14) Dibenzofuran	8.35	168	24788	90.72	ng/ml	98
15) 2,3,5-Trimethylnaphthalene	8.76	170	20633m	113.00	ng/ml	
17) Fluorene	9.00	166	31932	146.24	ng/ml	99
24) Dibenzothiophene	10.72	184	64695	214.34	ng/ml	98
28) Phenanthrene	10.98	178	550810	1737.25	ng/ml	99
29) Anthracene	11.08	178	98783	364.69	ng/ml	99
31) 1-Methylphenanthrene	12.37	192	106190	493.28	ng/ml	99
36) Fluoranthene	13.67	202	994612	3151.44	ng/ml	98
39) Pyrene	14.17	202	1063258	2465.64	ng/ml	97
42) Benz(a)anthracene	17.02	228	383959	1169.49	ng/ml	92
43) Chrysene	17.12	228	521128	1484.36	ng/ml	100
49) Benzo(b)fluoranthene	20.01	252	268887	933.12	ng/ml	99
50) Benzo(k)fluoranthene	20.07	252	365942m	1000.85	ng/ml	
51) Benzo(e)pyrene	20.98	252	250121	773.08	ng/ml	99
52) Benzo(a)pyrene	21.16	252	235196	959.57	ng/ml	99
53) Perylene	21.51	252	61427	223.26	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F013.D Vial: 10
Acq On : 20 Nov 2003 12:26 pm Operator: LWeiskopf
Sample : KWG0317778-6 SRM 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:45 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
54) Indeno(1,2,3-cd)pyrene	24.03	276	128974	865.59	ng/ml	97
55) Dibenz(a,h)anthracene	24.08	278	26923m	125.73	ng/ml	
56) Benzo(g,h,i)perylene	24.50	276	129481	524.16	ng/ml	99

(#) = qualifier out of range (m) = manual integration

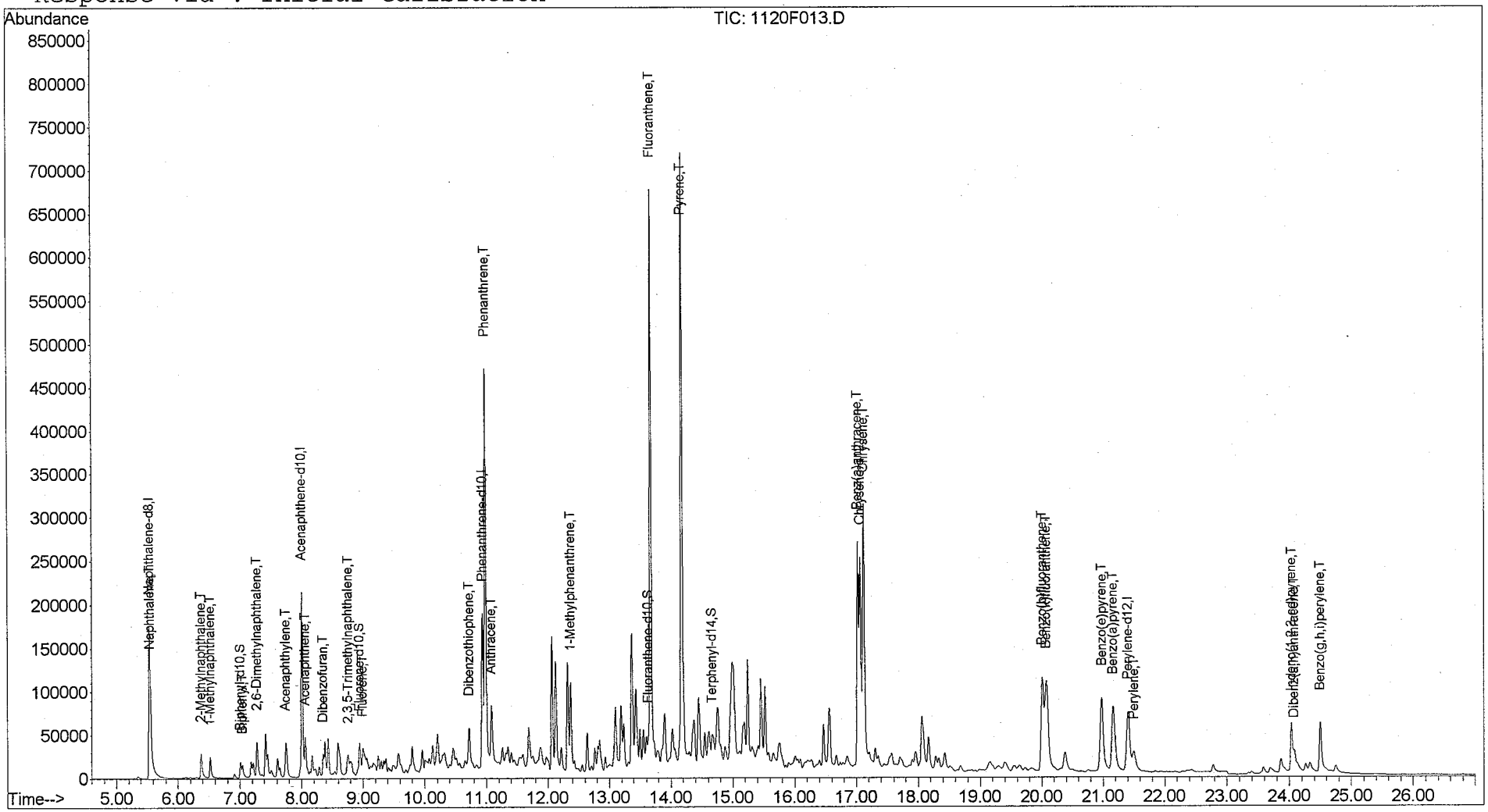
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F013.D
Acq On : 20 Nov 2003 12:26 pm
Sample : KWG0317778-6 SRM 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



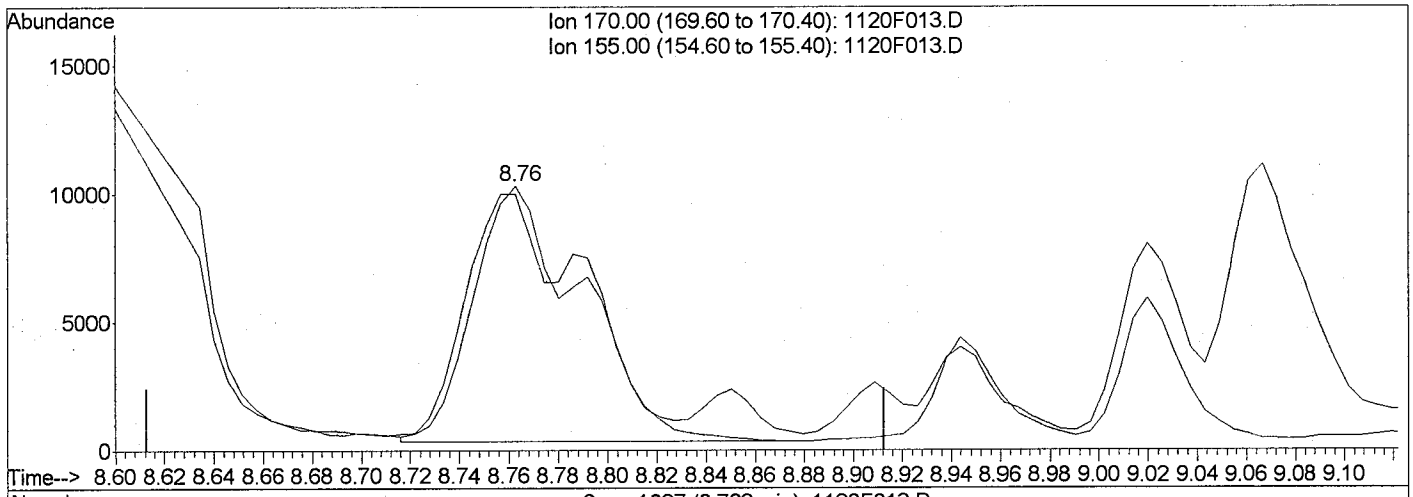
1575

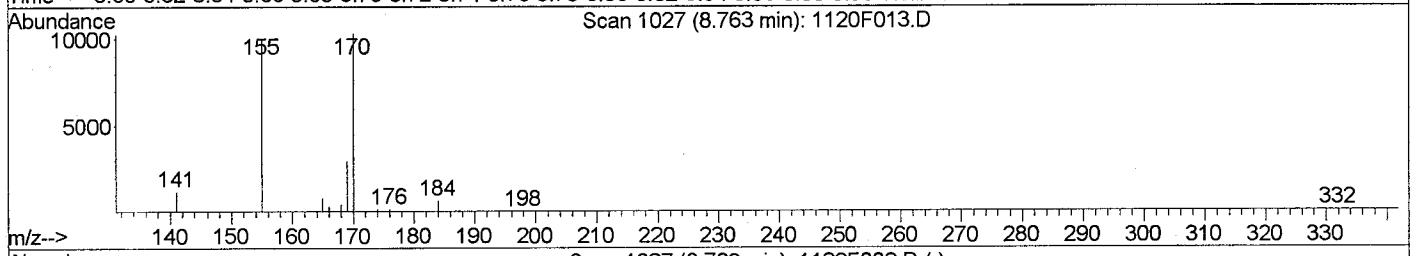
Quantitation Report (Qedit)

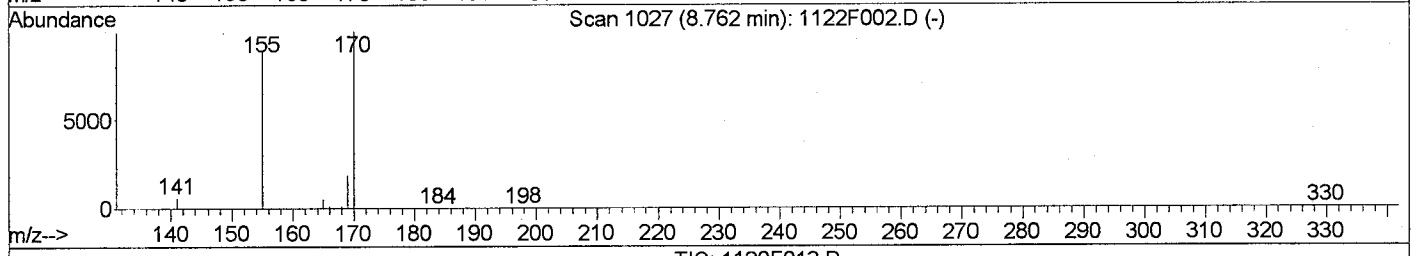
Data File : J:\MS11\DATA\112003\1120F013.D
Acq On : 20 Nov 2003 12:26 pm
Sample : KWG0317778-6 SRM 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:58 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F013.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 167.52ng/ml

response 30588

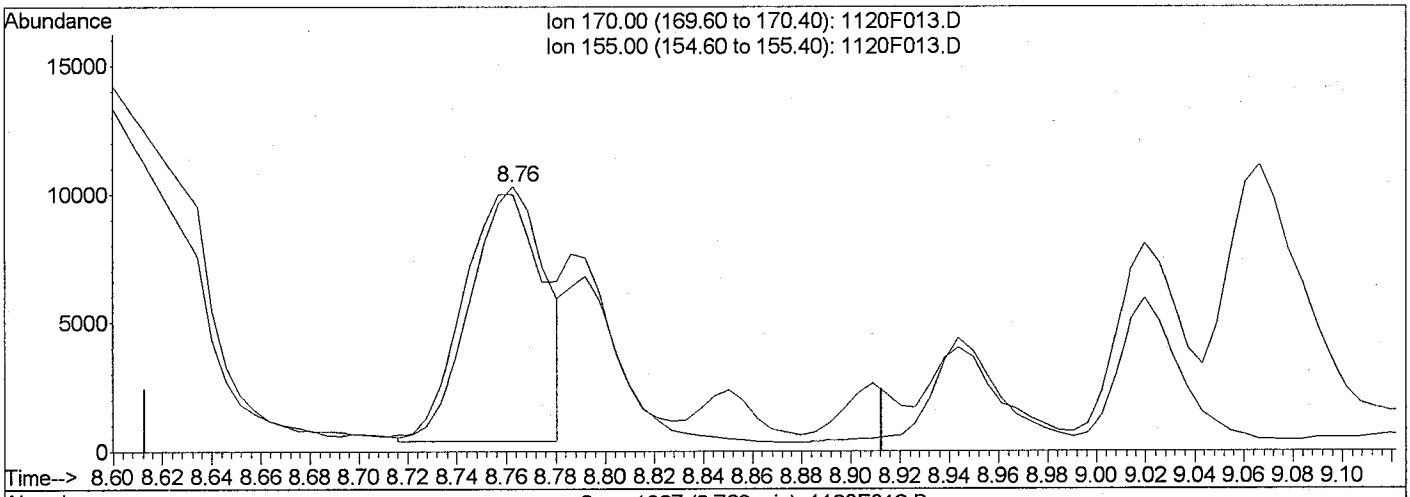
Ion	Exp%	Act%
170.00	100	100
155.00	85.50	93.96
0.00	0.00	0.00
0.00	0.00	0.00

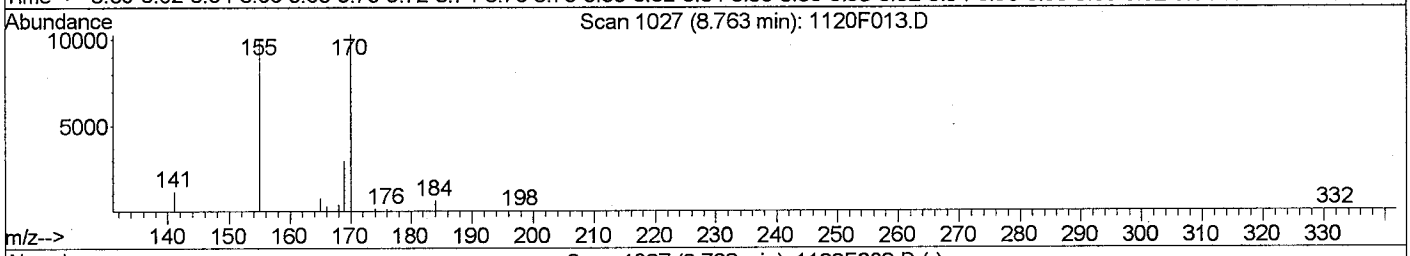
Quantitation Report (Qedit)

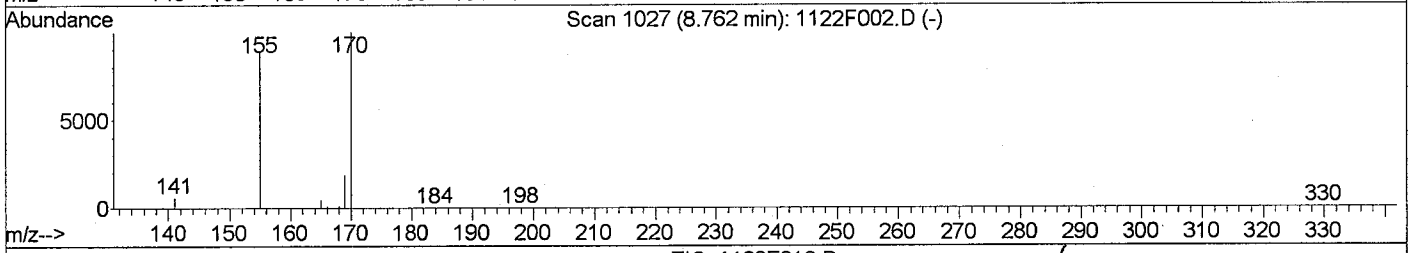
Data File : J:\MS11\DATA\112003\1120F013.D
Acq On : 20 Nov 2003 12:26 pm
Sample : KWG0317778-6 SRM 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:21 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F013.D

(15) 2,3,5-Trimethylnaphthalene (T)

8.76min 113.00ng/ml m

response 20633

Ion	Exp%	Act%
170.00	100	100
155.00	85.50	96.98
0.00	0.00	0.00
0.00	0.00	0.00

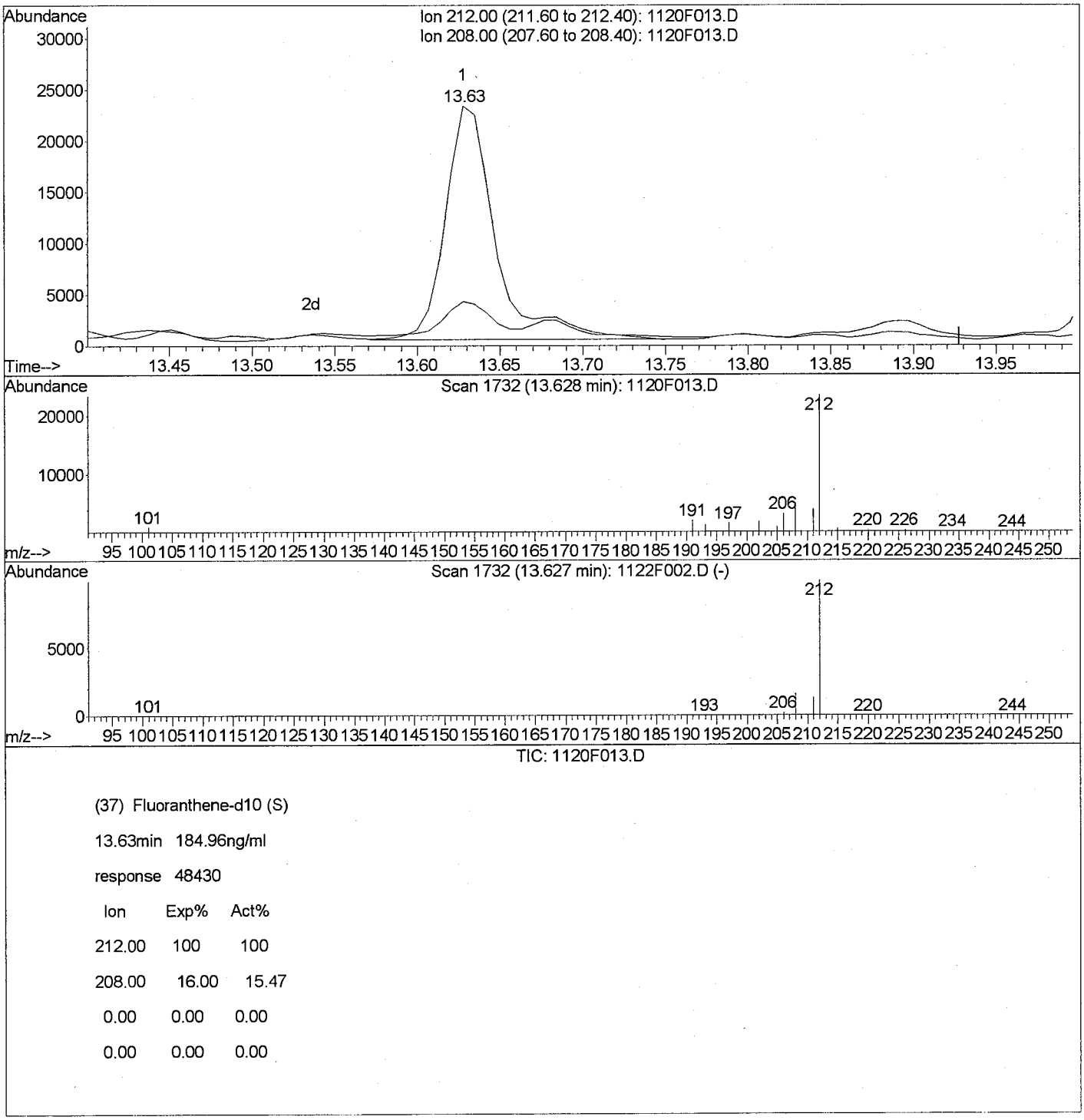
002 integrated
11-24-03

1120F013.D 1107ALK.M Mon Nov 24 09:21:58 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F013.D Vial: 10
Acq On : 20 Nov 2003 12:26 pm Operator: LWeiskopf
Sample : KWG0317778-6 SRM 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F013.D

(37) Fluoranthene-d10 (S)

13.63min 184.96ng/ml

response 48430

Ion	Exp%	Act%
212.00	100	100
208.00	16.00	15.47
0.00	0.00	0.00
0.00	0.00	0.00

1120F013.D 1107ALK.M Mon Nov 24 09:22:16 2003

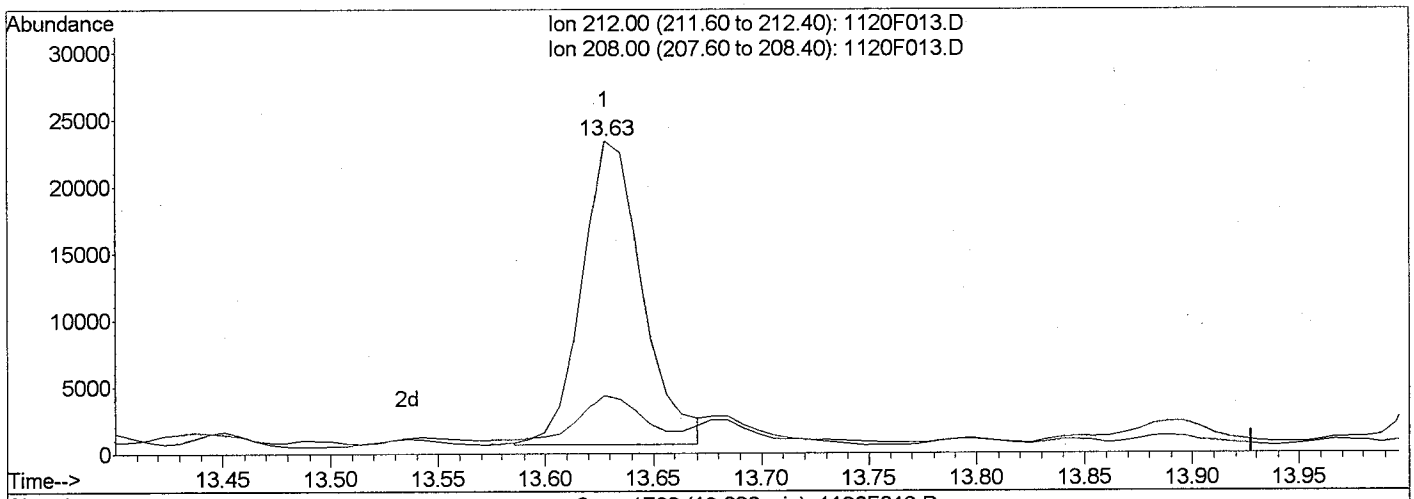
Quantitation Report (Qedit)

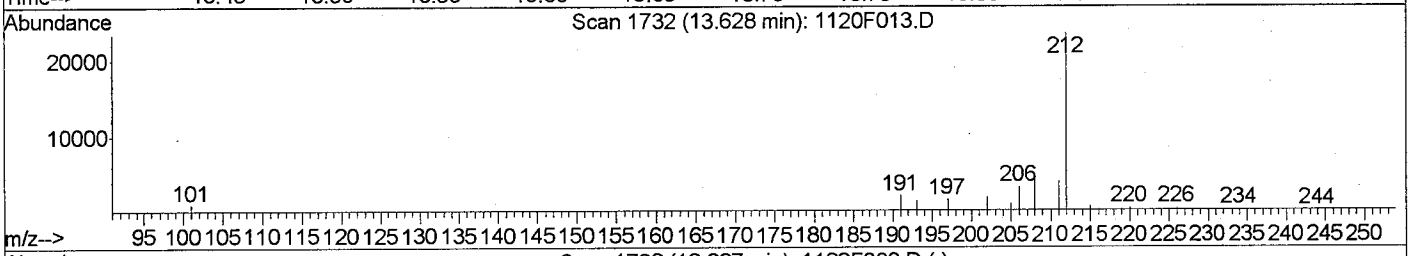
Data File : J:\MS11\DATA\112003\1120F013.D
Acq On : 20 Nov 2003 12:26 pm
Sample : KWG0317778-6 SRM 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003

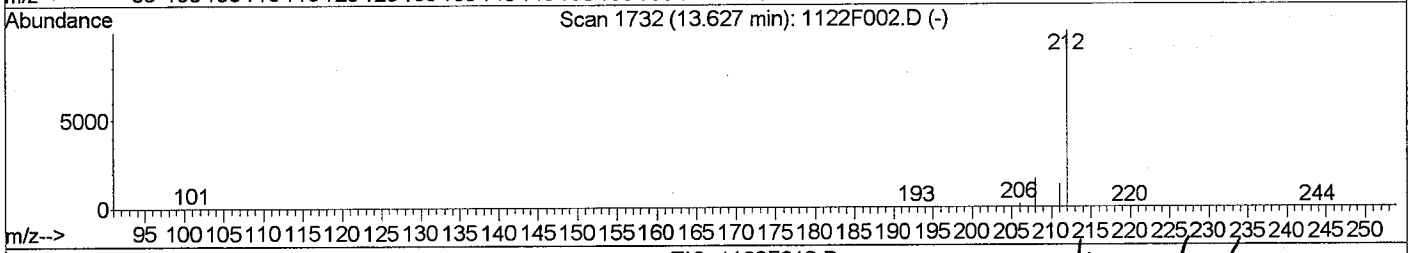
Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F013.D

overintegrated
11.24.3

(37) Fluoranthene-d10 (S)

13.63min 168.62ng/ml m

response 44151

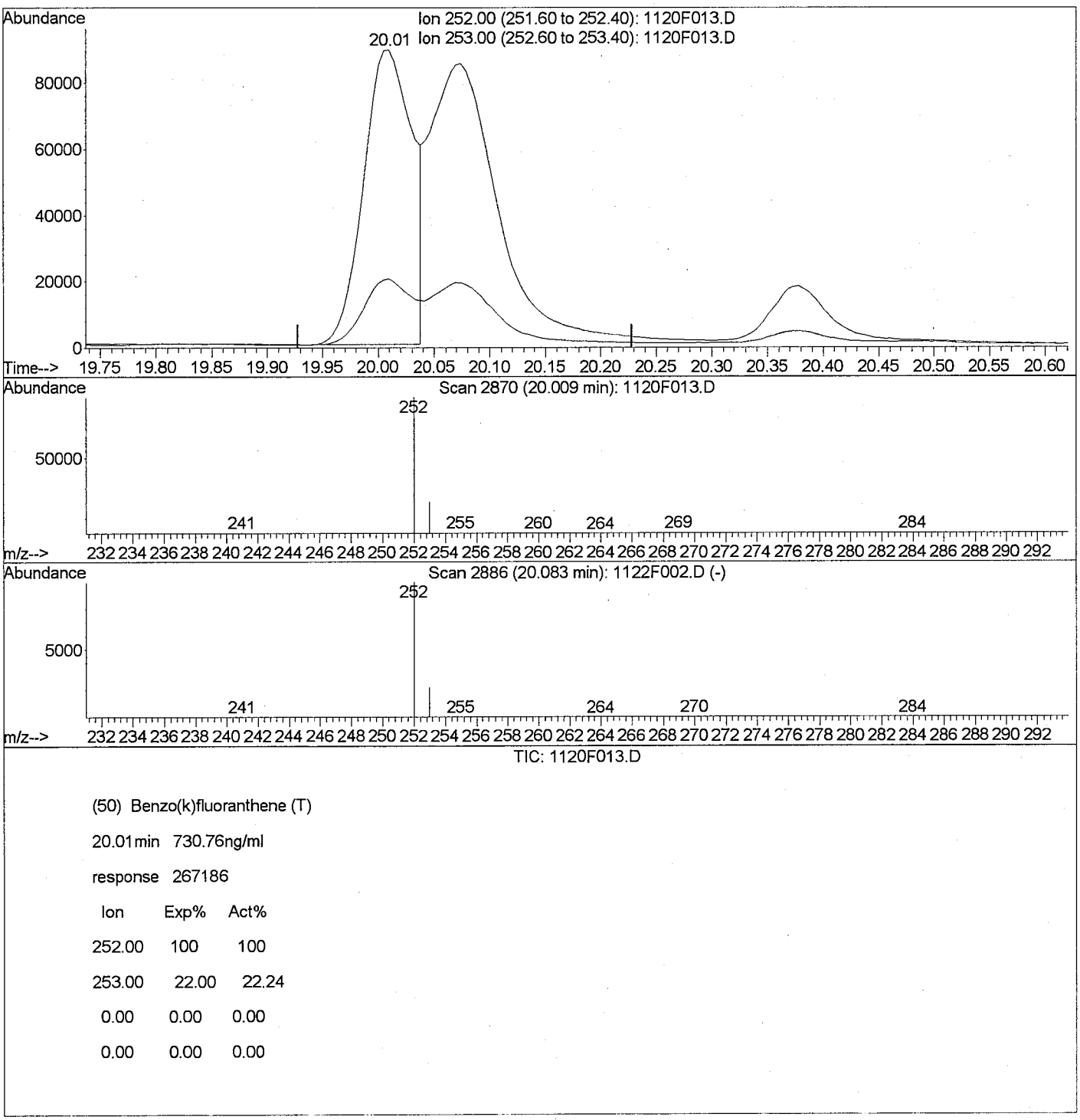
Ion	Exp%	Act%
212.00	100	100
208.00	16.00	18.56
0.00	0.00	0.00
0.00	0.00	0.00

1120F013.D 1107ALK.M Mon Nov 24 09:22:22 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F013.D Vial: 10
Acq On : 20 Nov 2003 12:26 pm Operator: LWeiskopf
Sample : KWG0317778-6 SRM 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.01min 730.76ng/ml

response 267186

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.24
0.00	0.00	0.00
0.00	0.00	0.00

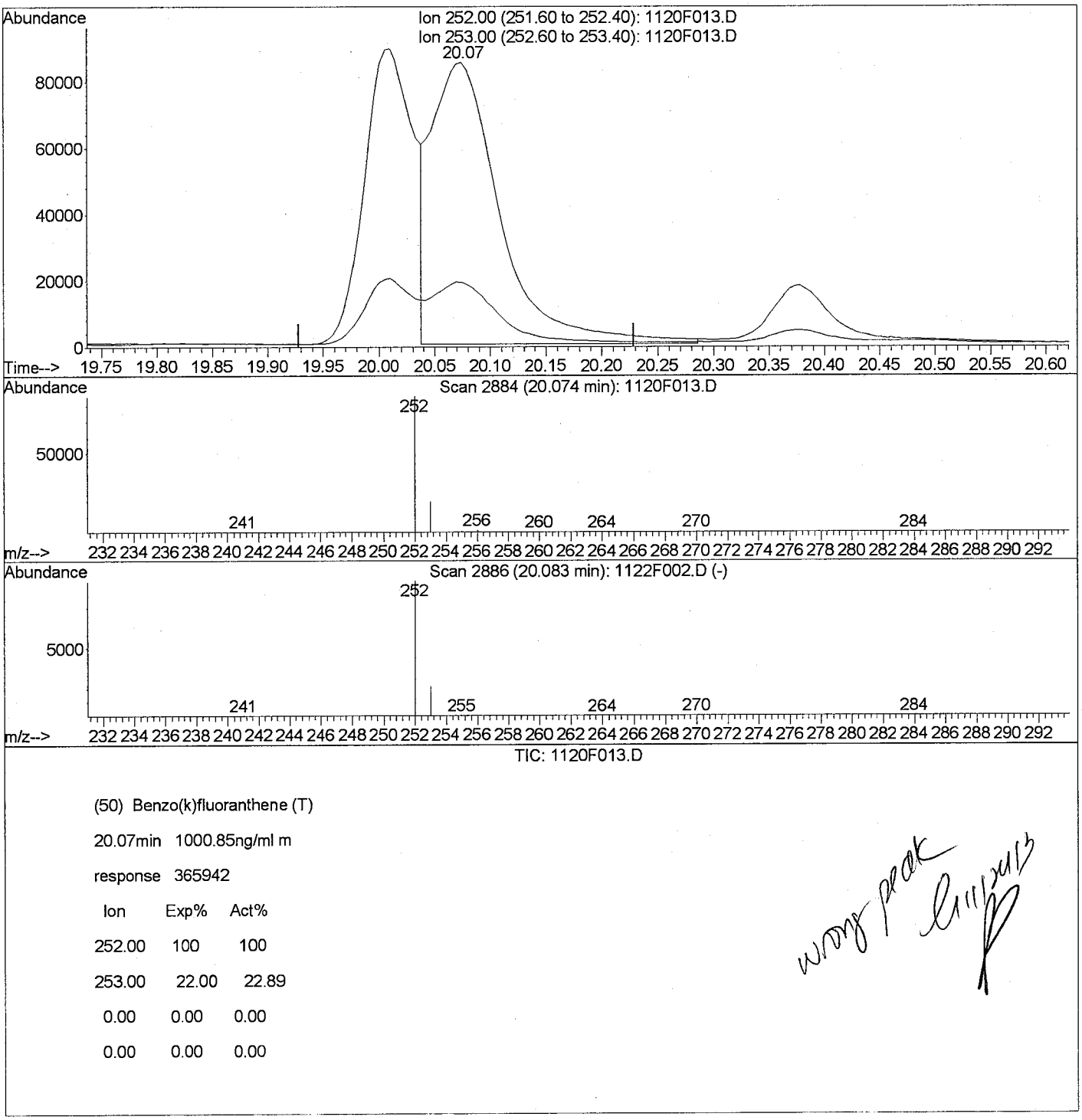
1120F013.D 1107ALK.M Mon Nov 24 09:22:32 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F013.D
Acq On : 20 Nov 2003 12:26 pm
Sample : KWG0317778-6 SRM 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration



TIC: 1120F013.D

(50) Benzo(k)fluoranthene (T)

20.07min 1000.85ng/ml m

response 365942

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.89
0.00	0.00	0.00
0.00	0.00	0.00

wrong peak

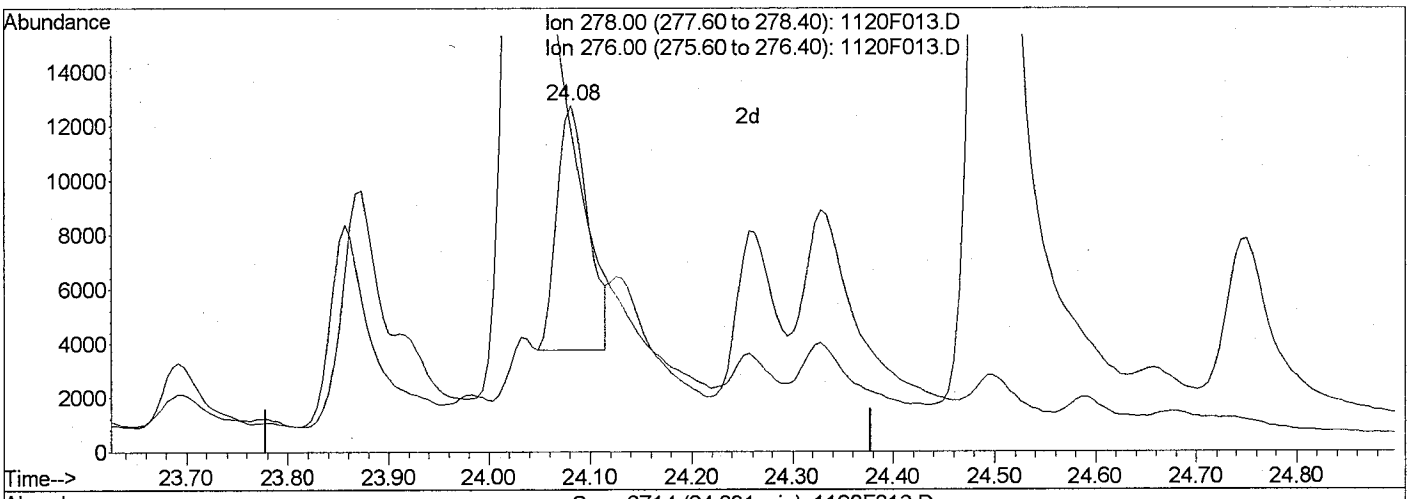
1120F013.D 1107ALK.M Mon Nov 24 09:22:38 2003

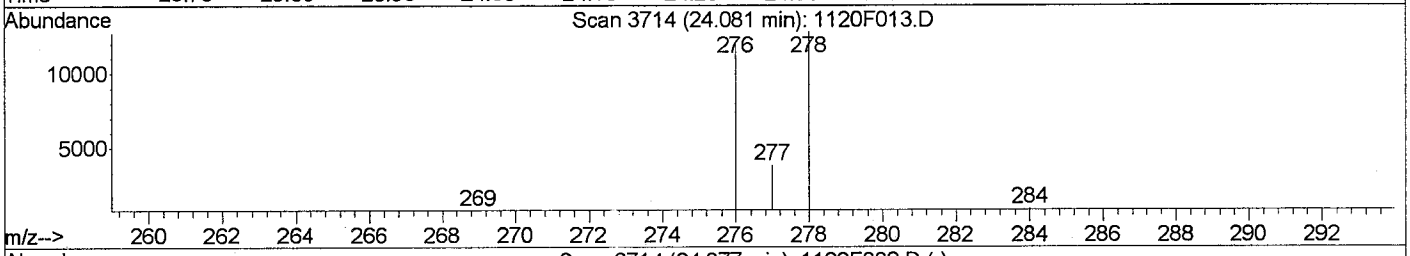
Quantitation Report (Qedit)

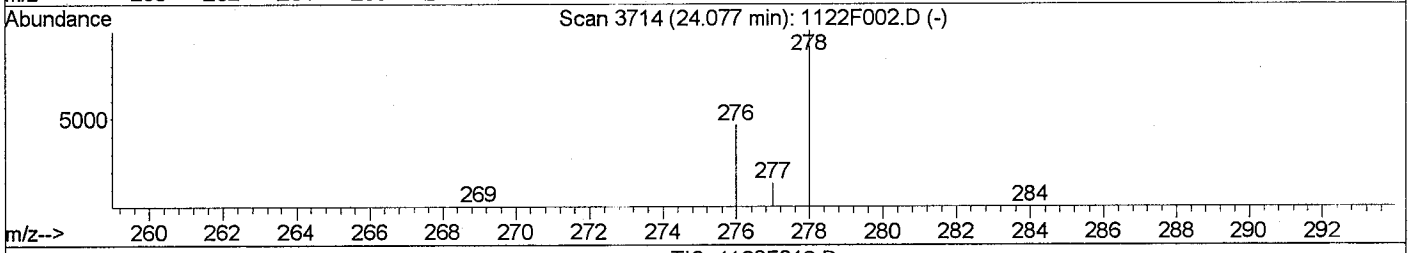
Data File : J:\MS11\DATA\112003\1120F013.D
Acq On : 20 Nov 2003 12:26 pm
Sample : KWG0317778-6 SRM 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F013.D

(55) Dibenz(a,h)anthracene (T)

24.08min 90.06ng/ml

response 19284

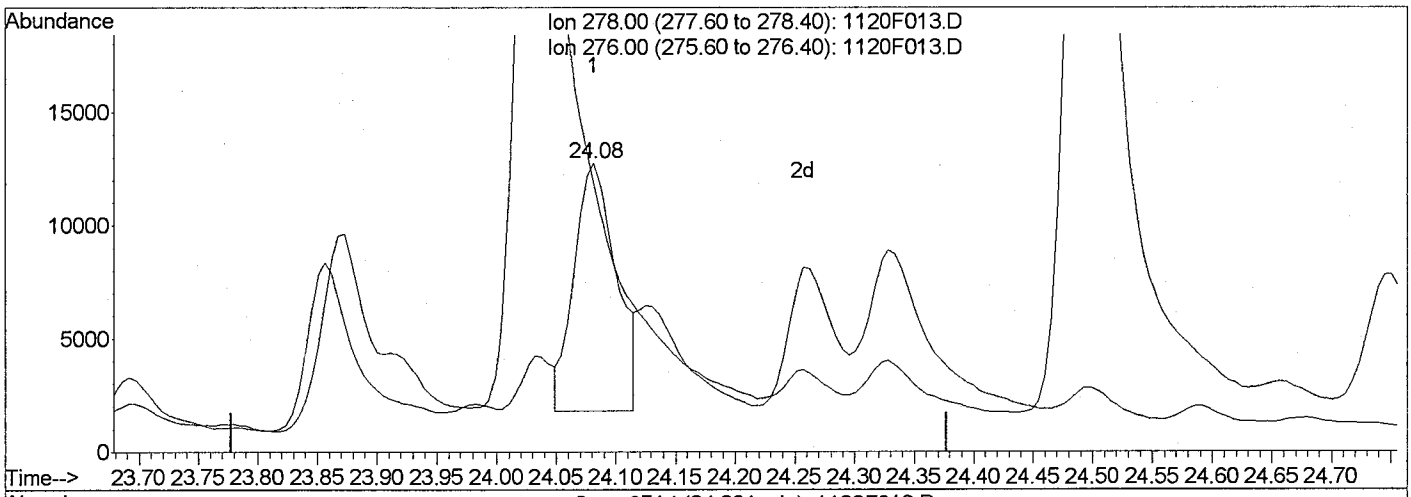
Ion	Exp%	Act%
278.00	100	100
276.00	35.30	59.41
0.00	0.00	0.00
0.00	0.00	0.00

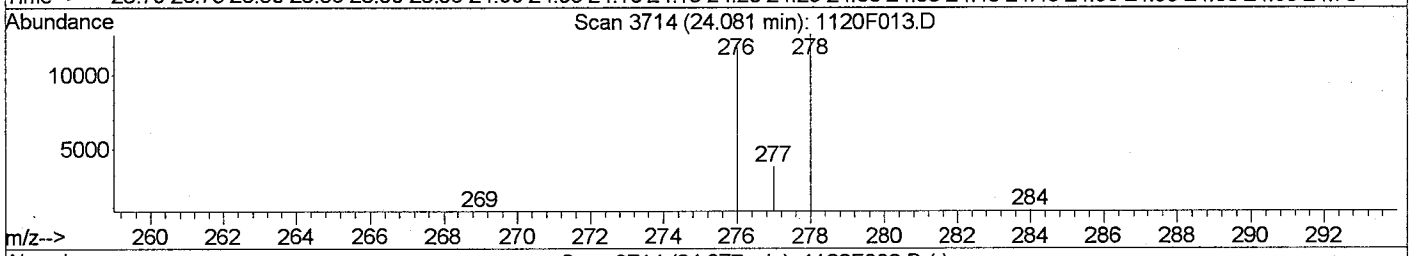
1120F013.D 1107ALK.M Mon Nov 24 09:22:45 2003

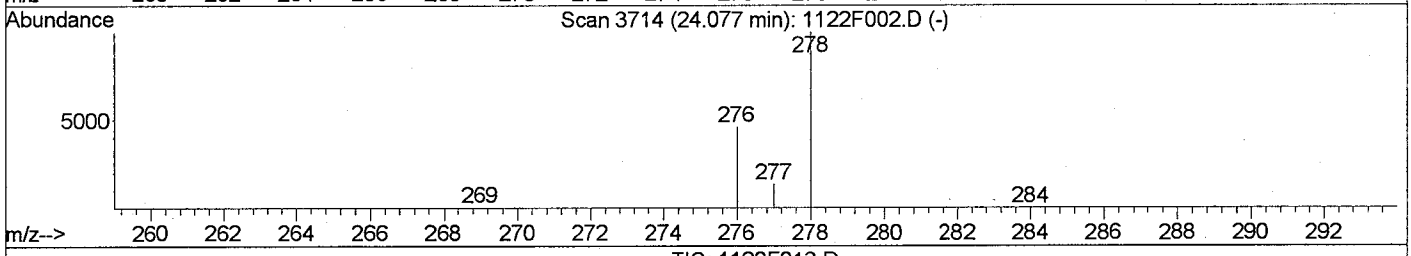
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112003\1120F013.D Vial: 10
Acq On : 20 Nov 2003 12:26 pm Operator: LWeiskopf
Sample : KWG0317778-6 SRM 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:22 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration







TIC: 1120F013.D

(55) Dibenz(a,h)anthracene (T)

24.08min 125.73ng/ml m

response 26923

Ion	Exp%	Act%
278.00	100	100
276.00	35.30	93.07#
0.00	0.00	0.00
0.00	0.00	0.00

complete

1120F013.D 1107ALK.M Mon Nov 24 09:22:54 2003

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003
Time Analyzed: 10:01

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\111903\1119F005.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318851

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	50.2	577728	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	50.5	580928	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	51.3	590272	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	61.5	1150464	PASS
199	198	5	9	7.1	81456	PASS
275	198	10	60	32.3	372096	PASS
365	442	1	50	2.4	44912	PASS
441	443	0	100	72.5	277696	PASS
442	442	100	100	100.0	1871360	PASS
443	442	15	24	20.5	382912	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318851-2	J:\MS11\DATA\111903\1119F008.D	11/19/2003	11:36	
Method Blank	KWG0317778-5	J:\MS11\DATA\111903\1119F031.D	11/19/2003	12:49	
Lab Control Sample	KWG0317778-3	J:\MS11\DATA\111903\1119F032.D	11/19/2003	13:25	
Duplicate Lab Control Sample	KWG0317778-4	J:\MS11\DATA\111903\1119F033.D	11/19/2003	14:01	
SED-4MS	KWG0317778-1	J:\MS11\DATA\111903\1119F034.D	11/19/2003	14:37	
SED-4DMS	KWG0317778-2	J:\MS11\DATA\111903\1119F035.D	11/19/2003	15:13	
SED-1	K2308433-001	J:\MS11\DATA\111903\1119F037.D	11/19/2003	16:26	
SED-2	K2308433-002	J:\MS11\DATA\111903\1119F038.D	11/19/2003	17:02	
SED-3	K2308433-003	J:\MS11\DATA\111903\1119F039.D	11/19/2003	17:38	
SED-4	K2308433-004	J:\MS11\DATA\111903\1119F040.D	11/19/2003	18:14	
SED-4-DUP	K2308433-005	J:\MS11\DATA\111903\1119F041.D	11/19/2003	18:50	
SED-5	K2308433-006	J:\MS11\DATA\111903\1119F042.D	11/19/2003	19:26	
SED-6	K2308433-007	J:\MS11\DATA\111903\1119F043.D	11/19/2003	20:02	
SED-7	K2308433-008	J:\MS11\DATA\111903\1119F044.D	11/19/2003	20:38	
SED-8	K2308433-009	J:\MS11\DATA\111903\1119F045.D	11/19/2003	21:15	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\111903\1119F005.D
Lab ID: KWG0318851-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/19/2003 10:01
Date Quantitated:
Batch ID: KWG0318851
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/24/3

Secondary Review: 11/24/3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	TUNE-8270	**Collect Date:**		**Receive Date:**	11/21/2003

Analysis Lot:	KWG0318851	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL3082
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\111903\1119F005.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 10:01	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318851-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	50.2	577728	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	50.5	580928	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	51.3	590272	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	61.5	1150464	Pass
199	198	5	9	7.1	81456	Pass
275	198	10	60	32.3	372096	Pass
365	442	1	50	2.4	44912	Pass
441	443	0.01	100	72.5	277696	Pass
442	442	100	100	100.0	1871360	Pass
443	442	15	24	20.5	382912	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

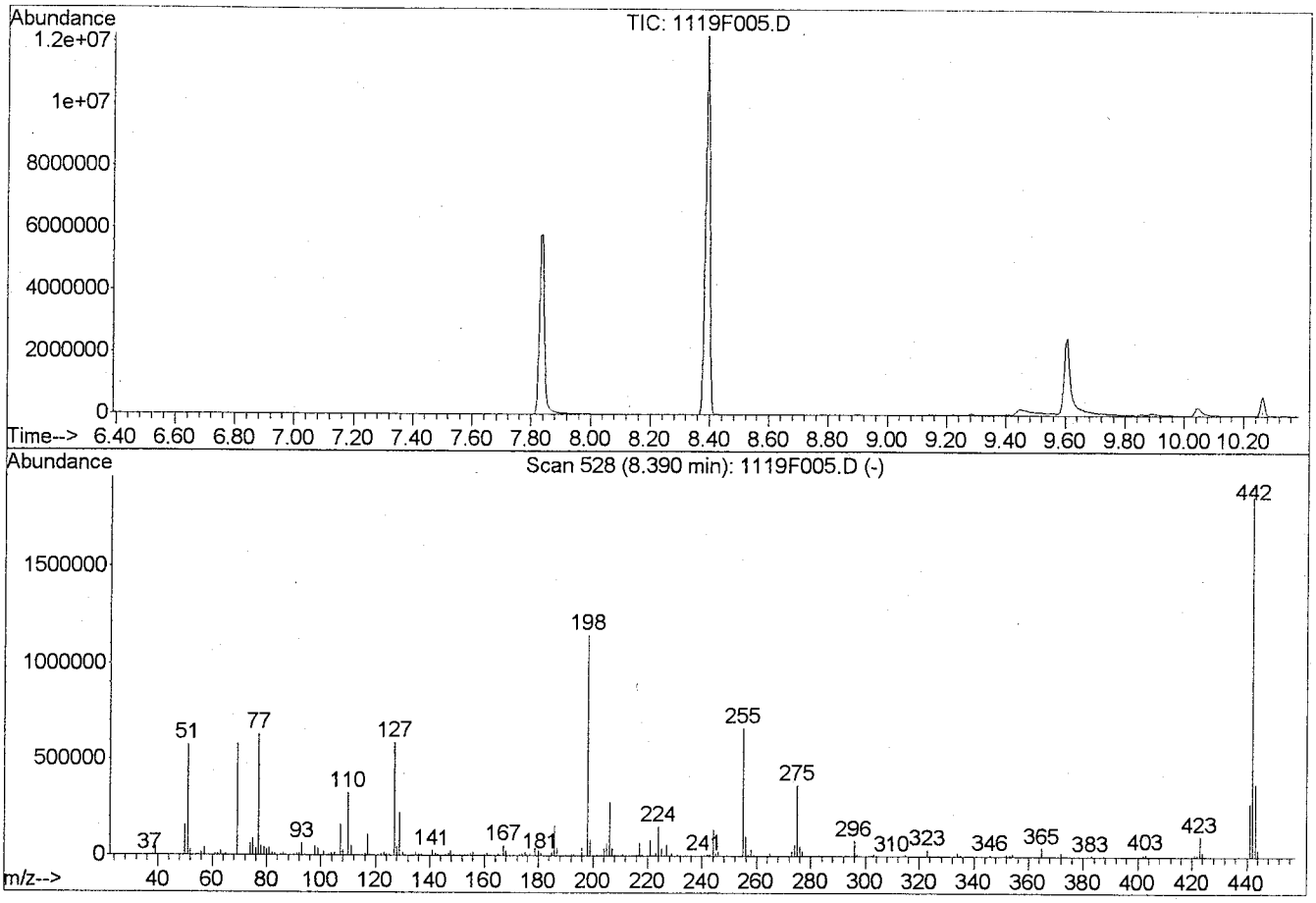
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\111903\1119F005.D
Acq On : 19 Nov 2003 10:01 am
Sample : DFTPP @ 50ug/mL | SVM16-1F
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 528

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	50.2	577728	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	51.3	590272	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	61.5	1150464	PASS
199	198	5	9	7.1	81456	PASS
275	198	10	60	32.3	372096	PASS
365	442	1	50	2.4	44912	PASS
441	443	0.01	100	72.5	277696	PASS
442	442	30	100	100.0	1871360	PASS
443	442	15	24	20.5	382912	PASS

1119F005.D DFTPPPAH.M Wed Nov 19 12:15:55 2003

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	615	52.00	29832	66.10	919	81.00	42008
37.00	3155	53.10	1274	69.00	580928	82.00	10673
38.00	8740	55.00	3522	71.00	546	83.00	10264
39.00	47064	56.00	17600	73.10	4957	84.00	1346
40.00	1331	57.00	38784	74.00	60448	85.00	8483
41.10	1435	58.00	1288	75.00	88232	86.00	12658
42.95	103	61.00	7771	76.10	37664	87.00	5896
44.00	990	62.00	8208	77.00	632128	87.90	2180
45.00	1128	63.00	24352	78.00	45872	89.00	1476
50.00	157696	64.00	3364	79.00	44144	91.00	10416
51.00	577728	65.00	11351	80.00	31384	92.00	10690

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	62352	105.00	12941	118.90	1143	131.00	3373
94.00	4093	107.00	162688	119.90	2505	132.00	2214
95.00	1015	108.00	25248	120.90	885	132.90	1300
96.00	2800	109.90	327552	121.90	11628	134.00	6562
97.90	48176	111.00	48704	123.00	16131	134.90	17320
99.00	38120	112.00	6054	124.00	7465	135.90	7030
100.00	3434	112.90	1686	125.00	7601	137.00	8556
101.00	21656	115.10	954	127.00	590272	137.90	1911
101.90	1345	116.00	10535	128.00	48456	138.80	1363
103.00	8509	116.90	110944	128.90	227584	140.00	2913
103.90	15202	117.90	8589	129.90	18312	140.90	28664

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
141.90	10122	153.00	8441	163.90	1740	175.00	20096
142.90	7450	154.00	7095	164.90	9436	175.90	7539
143.90	2034	155.00	14269	165.90	7946	176.90	9932
145.00	1901	156.00	22776	167.00	52720	177.90	3939
145.90	5659	157.00	5074	167.90	21912	178.90	40576
147.00	14108	157.90	4675	169.00	4371	180.00	26760
147.90	28464	158.90	3430	169.90	2312	180.90	12885
149.00	6294	160.00	9000	170.90	2485	182.00	2105
149.90	1898	161.00	12546	171.90	5189	182.90	1517
151.10	3608	161.90	3540	173.00	6844	183.90	3818
151.90	2528	162.90	601	174.00	10692	185.00	19128

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.00	156096	197.90	1150464	211.00	10428	226.00	4712
187.00	43272	198.90	81456	212.90	777	226.90	58544
188.00	4651	199.90	6691	214.90	2601	227.90	8454
188.90	9209	201.40	7016	216.00	6042	228.90	14934
189.90	1768	203.00	8215	216.90	70744	229.90	2245
191.00	4329	204.00	38856	217.90	9674	230.90	6028
192.00	11895	205.00	66376	218.90	835	231.90	973
193.00	12698	206.00	284352	220.90	83560	232.90	1677
193.90	2471	207.00	38984	222.90	16416	233.90	4000
195.10	2508	207.90	9086	224.00	156416	234.90	4482
195.90	42368	209.00	2590	225.00	41472	235.90	2871

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
237.00	4575	247.90	1434	260.00	913	274.90	372096
237.90	880	248.90	5294	260.90	1427	275.90	51248
238.90	2666	249.90	877	264.00	1719	276.90	25832
239.90	2117	250.90	1094	264.90	13737	277.90	4755
240.90	3516	251.90	1246	265.85	2124	278.90	1124
242.00	8689	252.90	3131	267.90	500	282.00	845
243.00	9962	254.90	670400	269.90	855	283.00	3261
244.00	139776	255.90	101480	270.90	1479	283.90	2029
245.00	18024	256.90	7789	272.00	2008	285.00	5065
245.90	22672	257.90	34152	272.90	23088	286.00	982
246.90	4982	258.90	5513	273.90	57696	288.90	1446

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
290.00	1063	303.90	3202	323.00	34352	336.00	913
290.90	665	308.00	2032	324.00	6605	340.00	539
292.00	1242	308.90	1081	324.90	946	341.00	4073
292.90	6713	310.00	1094	325.90	952	342.00	1190
294.00	1518	312.90	927	326.90	6285	345.90	7575
295.90	80672	313.90	4579	327.90	2980	346.90	1249
296.90	12037	314.90	10834	329.00	540	350.90	751
297.80	789	315.90	5590	331.90	2484	352.00	10851
301.00	1255	317.00	1229	333.00	3801	353.00	7448
301.90	1700	320.90	3144	333.90	20840	354.00	12854
303.00	12082	321.90	1520	335.00	5826	355.00	2282

Scan 528 (8.390 min): 1119F005.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
358.90	947	384.00	1709	420.90	13500		
364.90	44912	384.90	564	421.90	12159		
365.90	6200	390.00	3070	422.90	107288		
366.90	576	390.90	2225	424.00	23400		
369.90	1056	391.90	1562	424.90	2065		
370.90	3508	400.90	1340	439.10	616		
372.00	21552	401.90	9403	441.00	277696		
372.90	5733	402.90	14549	442.00	1871360		
373.90	661	403.90	4879	443.00	382912		
376.90	564	404.90	727	444.00	36192		
382.90	5401	414.90	557	445.00	2673		

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003
Time Analyzed: 05:26

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112003\1120F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0318915

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	48.8	492096	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	48.6	490624	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	50.5	509312	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	61.7	1008896	PASS
199	198	5	9	6.8	68800	PASS
275	198	10	60	31.6	319232	PASS
365	442	1	50	2.3	38312	PASS
441	443	0	100	71.6	233984	PASS
442	442	100	100	100.0	1635328	PASS
443	442	15	24	20.0	326784	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318915-2	J:\MS11\DATA\112003\1120F002.D	11/20/2003	05:47	
SED-1	K2308433-001	J:\MS11\DATA\112003\1120F005.D	11/20/2003	07:35	
SED-3	K2308433-003	J:\MS11\DATA\112003\1120F006.D	11/20/2003	08:11	
SED-4	K2308433-004	J:\MS11\DATA\112003\1120F007.D	11/20/2003	08:47	
SED-4-DUP	K2308433-005	J:\MS11\DATA\112003\1120F008.D	11/20/2003	09:24	
SED-5	K2308433-006	J:\MS11\DATA\112003\1120F009.D	11/20/2003	10:01	
SED-6	K2308433-007	J:\MS11\DATA\112003\1120F010.D	11/20/2003	10:37	
SED-7	K2308433-008	J:\MS11\DATA\112003\1120F011.D	11/20/2003	11:14	
SED-8	K2308433-009	J:\MS11\DATA\112003\1120F012.D	11/20/2003	11:50	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\112003\1120F001.D
Lab ID: KWG0318915-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/20/2003 05:26
Date Quantitated:
Batch ID: KWG0318915
Analysis Method: 8270C SIM
ListJoinID: LJ4524

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/24/03

Secondary Review: 11.24.3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	TUNE-8270	**Collect Date:**		**Receive Date:**	11/24/2003

Analysis Lot:	KWG0318915	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL3082
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112003\1120F001.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 05:26	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318915-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	48.8	492096	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	48.6	490624	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	50.5	509312	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	61.7	1008896	Pass
199	198	5	9	6.8	68800	Pass
275	198	10	60	31.6	319232	Pass
365	442	1	50	2.3	38312	Pass
441	443	0.01	100	71.6	233984	Pass
442	442	100	100	100.0	1635328	Pass
443	442	15	24	20.0	326784	Pass

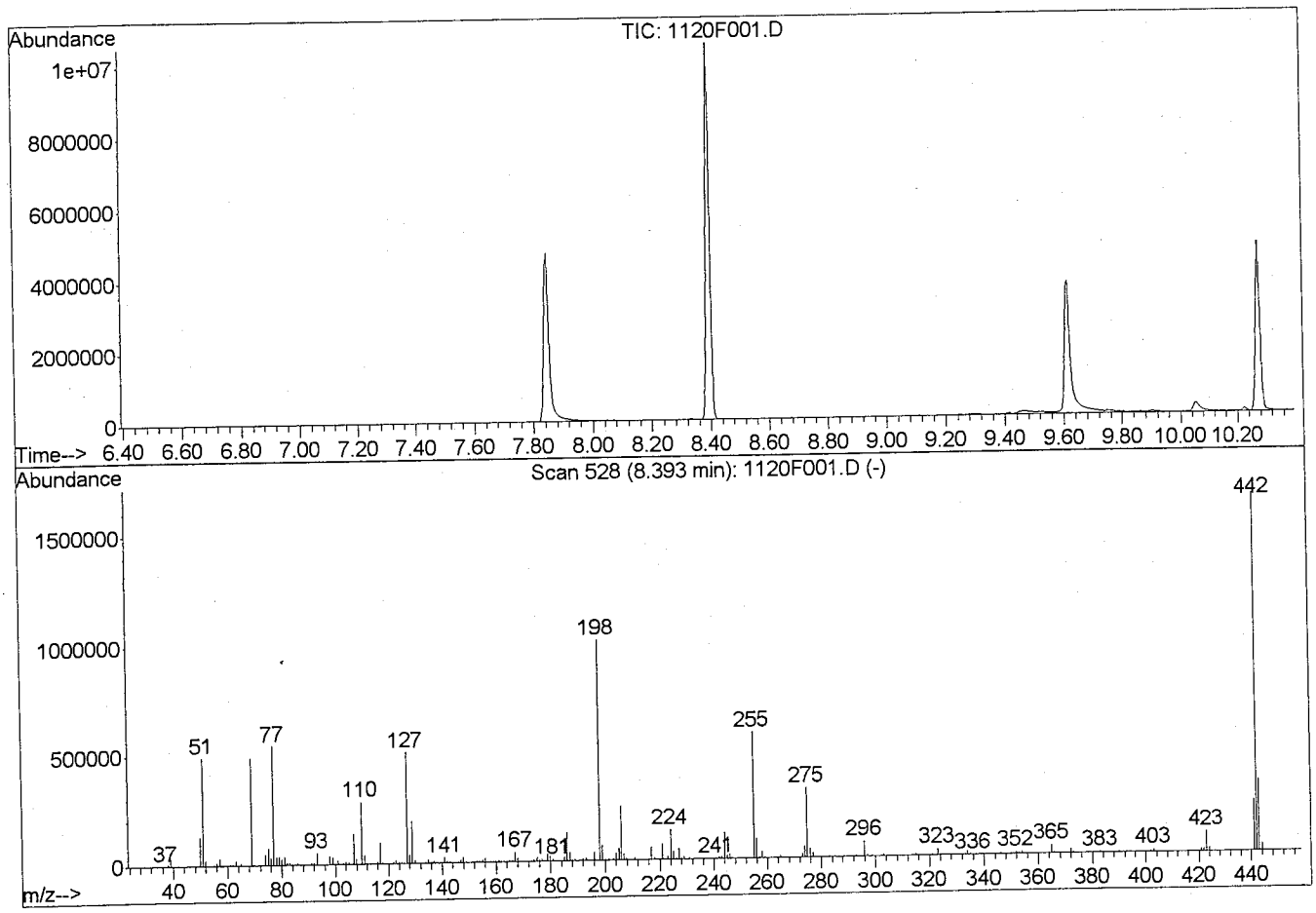
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112003\1120F001.D
Acq On : 20 Nov 2003 5:26 am
Sample : DFTPP @ 50ug/mL | SVM16-1F
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 528

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	48.8	492096	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	50.5	509312	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	61.7	1008896	PASS
199	198	5	9	6.8	68800	PASS
275	198	10	60	31.6	319232	PASS
365	442	1	50	2.3	38312	PASS
441	443	0.01	100	71.6	233984	PASS
442	442	30	100	100.0	1635328	PASS
443	442	15	24	20.0	326784	PASS

1120F001.D DFTPPPAH.M Thu Nov 20 13:56:08 2003

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	2302	55.00	2724	68.90	490624	83.00	8929
38.10	7869	56.00	14977	73.00	4058	83.90	1178
39.00	41552	57.00	33712	74.00	50224	85.00	6096
40.00	1601	58.00	1648	75.00	76976	86.00	10256
41.00	1169	60.00	655	76.10	32152	87.00	4761
44.00	513	61.00	6999	77.00	543680	88.00	1642
45.00	890	62.00	6949	78.00	39192	88.90	912
50.00	131520	63.00	19776	79.00	36688	91.00	7770
51.00	492096	64.00	2533	80.00	26032	92.00	9306
52.00	23784	65.00	9878	81.00	36888	93.00	52144
53.00	1223	66.00	890	82.00	9478	94.00	3595

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.90	1141	107.90	22448	120.90	900	132.90	994
96.00	2489	109.90	283904	121.90	9872	134.00	6037
98.00	41208	111.00	42272	122.90	14478	134.90	14933
99.00	31768	112.00	5186	124.00	6462	135.90	5999
100.00	3171	112.90	1643	124.90	5809	137.00	7927
101.00	19488	114.70	940	127.00	509312	137.90	2034
102.00	1231	116.00	8884	128.00	40520	138.90	1111
103.00	7377	116.90	96792	128.90	193600	140.00	2715
103.90	12503	117.90	7602	130.00	15913	140.90	24920
105.00	10413	119.00	1026	131.00	2845	141.90	8862
107.00	137216	120.00	1855	131.90	2464	142.90	5175

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
144.00	1686	155.00	12538	166.00	7319	176.90	9431
145.00	1649	156.00	20408	167.00	44216	178.00	3247
145.90	4417	157.00	4226	167.90	17704	178.90	33968
147.00	12378	157.90	4816	169.00	3909	179.90	22504
147.90	24216	158.90	3646	169.90	1569	180.90	10649
148.90	5543	159.90	7570	170.90	2108	182.00	1665
150.00	1544	161.00	10173	171.90	3934	182.90	1698
151.00	3295	162.00	3716	173.00	4773	184.00	2794
151.90	2495	163.00	1096	174.00	9546	185.00	16672
153.00	7604	164.00	1634	175.00	17936	186.00	129640
153.90	5958	164.90	8630	176.00	5420	187.00	37472

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
188.00	4018	200.00	5311	214.90	2475	227.90	6593
188.90	7370	201.40	5992	216.00	5217	228.90	11561
189.90	1627	203.00	5958	216.90	59320	229.90	1519
191.00	3917	204.00	32536	218.00	9018	231.00	5321
192.00	9968	205.00	56208	219.00	706	231.90	542
193.00	11562	206.00	246464	220.90	72808	232.90	866
194.00	2374	207.00	31216	222.90	14541	233.90	2863
195.00	2737	207.90	8722	224.00	134656	234.90	3683
196.00	36792	208.90	2352	225.00	35264	235.90	2427
197.90	1008896	210.90	10292	226.00	3905	236.90	4414
198.90	68800	213.00	602	226.90	51152	237.90	776

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
238.90	2202	249.90	1050	263.90	1451	278.00	3287
239.90	1805	250.90	850	264.90	13068	279.00	746
240.90	3327	251.90	831	265.80	2203	282.90	2409
242.00	7497	253.00	2597	269.90	572	283.90	1859
243.00	8573	254.90	577600	270.90	1490	285.00	4157
244.00	117696	255.90	88528	272.00	1756	285.90	633
245.00	16019	257.00	6364	272.90	18128	288.90	995
245.90	19280	257.90	28856	273.90	51080	289.90	726
246.90	4257	258.90	5212	274.90	319232	291.90	1411
247.90	1007	259.90	1115	275.90	42272	292.90	5618
248.90	4117	260.90	1042	276.90	21440	293.90	1579

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
295.90	71240	313.90	3495	327.90	2779	346.90	1058
296.90	10703	314.90	8921	328.90	565	350.90	715
298.00	683	316.00	4801	331.90	2142	351.90	9532
300.90	1211	316.90	1008	332.90	2683	352.90	6885
302.00	1685	320.90	3127	334.00	19440	354.00	10766
303.00	8904	322.00	1711	335.00	5275	355.00	2209
304.00	2434	323.00	29632	336.10	764	358.90	955
307.90	1381	324.00	5614	339.90	651	364.90	38312
308.90	884	325.00	677	340.90	4003	365.90	6499
309.90	982	326.00	629	341.90	1087	369.90	880
312.90	707	326.90	5214	345.90	6807	370.90	2896

Scan 528 (8.393 min): 1120F001.D
DFTPP @ 50ug/mL | SVM16-1F
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
372.00	18432	404.00	4495	444.00	31136		
373.00	4644	404.90	537	445.00	1814		
374.00	721	414.90	631				
382.90	5123	420.90	11186				
383.90	1441	421.90	11226				
390.00	2470	422.90	92344				
390.90	1815	424.00	18472				
391.90	1622	425.00	1865				
400.90	1188	441.00	233984				
401.90	7393	442.00	1635328				
402.90	12854	443.00	326784				

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\110703\1107F010.D	F	J:\MS11\DATA\110703\1107F015.D
B	J:\MS11\DATA\110703\1107F011.D	G	J:\MS11\DATA\110703\1107F016.D
C	J:\MS11\DATA\110703\1107F012.D	H	J:\MS11\DATA\110703\1107F017.D
D	J:\MS11\DATA\110703\1107F013.D	I	J:\MS11\DATA\110703\1107F018.D
E	J:\MS11\DATA\110703\1107F014.D	J	J:\MS11\DATA\110703\1107F019.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
2-Methylnaphthalene	A	10	0.592	B	20	0.617	C	40	0.597	D	100	0.643	E	500	0.653
	F	1000	0.688	G	2000	0.717	H	5000	0.719	I	8000	0.734	J	10000	0.716
1-Methylnaphthalene	A	10	0.538	B	20	0.612	C	40	0.534	D	100	0.601	E	500	0.623
	F	1000	0.650	G	2000	0.676	H	5000	0.674	I	8000	0.684	J	10000	0.667
C2-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C3-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
C4-Naphthalenes	A	10	1.13	B	20	1.12	C	40	1.08	D	100	1.14	E	500	1.12
	F	1000	1.14	G	2000	1.16	H	5000	1.13	I	8000	1.15	J	10000	1.13
Biphenyl	A	10	0.744	B	20	0.715	C	40	0.720	D	100	0.787	E	500	0.805
	F	1000	0.845	G	2000	0.875	H	5000	0.873	I	8000	0.880	J	10000	0.852
Acenaphthylene	A	10	1.83	B	20	1.82	C	40	1.71	D	100	1.79	E	500	1.84
	F	1000	1.97	G	2000	2.06	H	5000	2.05	I	8000	2.12	J	10000	2.07
Dibenzofuran	A	10	1.44	B	20	1.49	C	40	1.45	D	100	1.54	E	500	1.53
	F	1000	1.62	G	2000	1.70	H	5000	1.70	I	8000	1.75	J	10000	1.70
Acenaphthene	A	10	1.14	B	20	1.09	C	40	1.07	D	100	1.18	E	500	1.17
	F	1000	1.23	G	2000	1.25	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluorene	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C1-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C2-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40
C3-Fluorenes	A	10	1.09	B	20	1.17	C	40	1.09	D	100	1.19	E	500	1.23
	F	1000	1.32	G	2000	1.38	H	5000	1.40	I	8000	1.45	J	10000	1.40

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibenzothiophene	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C1-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C2-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
C3-Dibenzothiophenes	A	10	1.03	B	20	1.09	C	40	1.04	D	100	1.09	E	500	1.11
	F	1000	1.23	G	2000	1.25	H	5000	1.23	I	8000	1.25	J	10000	1.23
Phenanthrene	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Anthracene	A	10	0.828	B	20	0.870	C	40	0.887	D	100	0.919	E	500	0.962
	F	1000	1.11	G	2000	1.18	H	5000	1.19	I	8000	1.22	J	10000	1.19
C1-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C2-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C3-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
C4-Phenanthrenes/Anthracenes	A	10	1.24	B	20	1.20	C	40	1.11	D	100	1.16	E	500	1.15
	F	1000	1.26	G	2000	1.27	H	5000	1.24	I	8000	1.26	J	10000	1.23
Fluoranthene	A	10	1.03	B	20	1.06	C	40	1.05	D	100	1.15	E	500	1.14
	F	1000	1.31	G	2000	1.36	H	5000	1.32	I	8000	1.35	J	10000	1.29
Pyrene	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
C1-Fluoranthenes/Pyrenes	A	10	1.32	B	20	1.30	C	40	1.19	D	100	1.22	E	500	1.27
	F	1000	1.38	G	2000	1.40	H	5000	1.33	I	8000	1.32	J	10000	1.35
Benz(a)anthracene	A	10	1.06	B	20	0.923	C	40	0.887	D	100	1.01	E	500	0.976
	F	1000	0.962	G	2000	1.01	H	5000	1.03	I	8000	1.07	J	10000	1.04
Chrysene	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C1-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C2-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
C3-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
C4-Chrysenes	A	10	0.986	B	20	1.08	C	40	1.00	D	100	1.07	E	500	1.05
	F	1000	1.10	G	2000	1.12	H	5000	1.08	I	8000	1.09	J	10000	1.07
Benzo(b)fluoranthene	A	10	1.19	B	20	1.15	C	40	1.14	D	100	1.20	E	500	1.30
	F	1000	1.38	G	2000	1.45	H	5000	1.48	I	8000	1.54	J	10000	1.52
Benzo(k)fluoranthene	A	10	1.56	B	20	1.35	C	40	1.41	D	100	1.70	E	500	1.74
	F	1000	1.80	G	2000	1.89	H	5000	1.85	I	8000	1.82	J	10000	1.84
Benzo(e)pyrene	A	10	1.40	B	20	1.41	C	40	1.39	D	100	1.48	E	500	1.50
	F	1000	1.54	G	2000	1.59	H	5000	1.55	I	8000	1.56	J	10000	1.57
Benzo(a)pyrene	A	10	0.993	B	20	0.923	C	40	1.01	D	100	0.938	E	500	1.03
	F	1000	1.15	G	2000	1.25	H	5000	1.32	I	8000	1.37	J	10000	1.36
Perylene	A	10	1.09	B	20	1.19	C	40	1.09	D	100	1.13	E	500	1.21
	F	1000	1.32	G	2000	1.40	H	5000	1.42	I	8000	1.45	J	10000	1.45
Indeno(1,2,3-cd)pyrene	A	10	0.693	B	20	0.554	C	40	0.589	D	100	0.554	E	500	0.599
	F	1000	0.677	G	2000	0.720	H	5000	0.797	I	8000	0.872	J	10000	0.848
Dibenz(a,h)anthracene	A	10	0.737	B	20	0.798	C	40	0.841	D	100	0.918	E	500	0.947
	F	1000	1.05	G	2000	1.08	H	5000	1.15	I	8000	1.21	J	10000	1.19
Benzo(g,h,i)perylene	A	10	1.35	B	20	1.01	C	40	1.01	D	100	1.06	E	500	1.04
	F	1000	1.17	G	2000	1.16	H	5000	1.19	I	8000	1.23	J	10000	1.21
Fluorene-d10							C	40	0.872	D	100	0.932	E	500	0.945
	F	1000	1.01	G	2000	1.05	H	5000	1.05	I	8000	1.09	J	10000	1.05
Fluoranthene-d10				B	20	0.932	C	40	0.836	D	100	0.957	E	500	0.930
	F	1000	1.05	G	2000	1.09	H	5000	1.07	I	8000	1.10	J	10000	1.05
Terphenyl-d14	A	10	1.01	B	20	0.919	C	40	0.836	D	100	0.911	E	500	0.898
	F	1000	0.918	G	2000	0.935	H	5000	0.889	I	8000	0.900	J	10000	0.896

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† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	1.8		≤ 15	1.13		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	8.1		≤ 15	0.668		0.01
1-Methylnaphthalene	MS	AverageRF	% RSD	8.8		≤ 15	0.626		0.01
C2-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C3-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
C4-Naphthalenes	TRG	AverageRF	% RSD	1.8		≤ 15	1.13		
Biphenyl	MS	AverageRF	% RSD	8.0		≤ 15	0.810		0.01
Acenaphthylene	MS	AverageRF	% RSD	7.5		≤ 15	1.93		0.01
Dibenzofuran	MS	AverageRF	% RSD	7.3		≤ 15	1.59		0.01
Acenaphthene	MS	AverageRF	% RSD	5.6		≤ 15	1.19		0.01
Fluorene	MS	AverageRF	% RSD	10.7		≤ 15	1.27		0.01
C1-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C2-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
C3-Fluorenes	TRG	AverageRF	% RSD	10.7		≤ 15	1.27		
Dibenzothiophene	MS	AverageRF	% RSD	7.8		≤ 15	1.15		0.01
C1-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C2-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
C3-Dibenzothiophenes	TRG	AverageRF	% RSD	7.8		≤ 15	1.15		
Phenanthrene	MS	AverageRF	% RSD	4.5		≤ 15	1.21		0.01
Anthracene	MS	AverageRF	% RSD	15.1	*	≤ 15	1.04		0.01
C1-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C2-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C3-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
C4-Phenanthrenes/Anthracenes	TRG	AverageRF	% RSD	4.5		≤ 15	1.21		
Fluoranthene	MS	AverageRF	% RSD	11.0		≤ 15	1.21		0.01
Pyrene	MS	AverageRF	% RSD	4.9		≤ 15	1.31		0.01
C1-Fluoranthenes/Pyrenes	TRG	AverageRF	% RSD	4.9		≤ 15	1.31		
Benz(a)anthracene	MS	AverageRF	% RSD	5.8		≤ 15	0.995		0.01
Chrysene	MS	AverageRF	% RSD	3.8		≤ 15	1.06		0.01
C1-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C2-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C3-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
C4-Chrysenes	TRG	AverageRF	% RSD	3.8		≤ 15	1.06		
Benzo(b)fluoranthene	MS	AverageRF	% RSD	11.8		≤ 15	1.34		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	11.3		≤ 15	1.69		0.01
Benzo(e)pyrene	MS	AverageRF	% RSD	5.1		≤ 15	1.50		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	15.7	*	≤ 15	1.14		0.01
Perylene	MS	AverageRF	% RSD	11.7		≤ 15	1.27		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	17.1	*	≤ 15	0.690		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	17.0	*	≤ 15	0.992		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	9.6		≤ 15	1.14		0.01
Fluorene-d10	SURR	AverageRF	% RSD	7.5		≤ 15	1.00		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL3082
Instrument ID: MS11

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Fluoranthene-d10	SURR	AverageRF	% RSD	9.1		≤ 15	1.00		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.8		≤ 15	0.911		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/07/2003
Date Analyzed: 11/07/2003

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL3082
Units: ng/ml

File ID: J:\MS11\DATA\110703\1107F023.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	1.13	1.17	4	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.668	0.720	8	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.626	0.677	8	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.810	0.887	10	NA	± 20 %	AverageRF
Acenaphthylene	2000	2100	1.93	2.07	7	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	1.59	1.72	8	NA	± 20 %	AverageRF
Acenaphthene	2000	2100	1.19	1.26	6	NA	± 20 %	AverageRF
Fluorene	2000	2200	1.27	1.40	10	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	1.15	1.20	4	NA	± 20 %	AverageRF
Phenanthrene	2000	2000	1.21	1.24	2	NA	± 20 %	AverageRF
Anthracene	2000	2200	1.04	1.14	10	NA	± 20 %	AverageRF
Fluoranthene	2000	2100	1.21	1.29	7	NA	± 20 %	AverageRF
Pyrene	2000	2100	1.31	1.37	4	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2000	0.995	0.975	-2	NA	± 20 %	AverageRF
Chrysene	2000	2100	1.06	1.11	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2100	1.34	1.41	6	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2200	1.69	1.89	11	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2100	1.50	1.58	5	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	1.14	1.20	6	NA	± 20 %	AverageRF
Perylene	2000	2200	1.27	1.39	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1800	0.690	0.636	-8	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2000	0.992	1.00	1	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	2000	1.14	1.14	0	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Injection Log

Directory: J:\MS11\DATA\110703

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1107F001.D	1.	CCV LOC		7 Nov 2003 11:2
2	2	1107F002.D	1.	IB		7 Nov 2003 12:0
3	2	1107F003.D	1.	IB		7 Nov 2003 12:3
4	1	1107F004.D	1.	DFTPP @ 50ug/mL | SVM15-97C		7 Nov 2003 13:2
5	2	1107F005.D	1.	SIM PAH @ 1.0ug/mL | SVM15-94K		7 Nov 2003 13:4
6	3	1107F006.D	1.	ALKH CCV		7 Nov 2003 14:1
7	1	1107F007.D	1.	IB		7 Nov 2003 14:5
8	2	1107F008.D	1.	DFTPP @ 50ug/mL | SVM15-97C		7 Nov 2003 15:3
9	3	1107F009.D	1.	IB		7 Nov 2003 15:5
10	4	1107F010.D	1.	SIM PAH ICAL @ 0.01ug/mL | SVM15-55A		7 Nov 2003 16:2
11	5	1107F011.D	1.	SIM PAH ICAL @ 0.02ug/mL | SVM15-55B		7 Nov 2003 17:0
12	6	1107F012.D	1.	SIM PAH ICAL @ 0.04ug/mL | SVM15-55C		7 Nov 2003 17:3
13	7	1107F013.D	1.	SIM PAH ICAL @ 0.1ug/mL | SVM15-55D		7 Nov 2003 18:1
14	8	1107F014.D	1.	SIM PAH ICAL @ 0.5ug/mL | SVM15-55E		7 Nov 2003 18:5
15	9	1107F015.D	1.	SIM PAH ICAL @ 1.0ug/mL | SVM15-55J		7 Nov 2003 19:2
16	10	1107F016.D	1.	SIM PAH ICAL @ 2.0ug/mL | SVM15-55F		7 Nov 2003 20:0
17	11	1107F017.D	1.	SIM PAH ICAL @ 5.0ug/mL | SVM15-55G		7 Nov 2003 20:3
18	12	1107F018.D	1.	SIM PAH ICAL @ 8.0ug/mL | SVM15-55H		7 Nov 2003 21:1
19	13	1107F019.D	1.	SIM PAH ICAL @ 10ug/mL | SVM15-55I		7 Nov 2003 21:5
20	14	1107F020.D	1.	DCM		7 Nov 2003 22:2
21	14	1107F021.D	1.	DCM		7 Nov 2003 23:0
22	2	1107F022.D	1.	DFTPP @ 50ug/mL | SVM15-97C		7 Nov 2003 23:3
23	15	1107F023.D	1.	SIM PAH ICV @ 2.0ug/mL | SVM15-97E		7 Nov 2003 23:5

SIM-PAH/ALKH ICAL

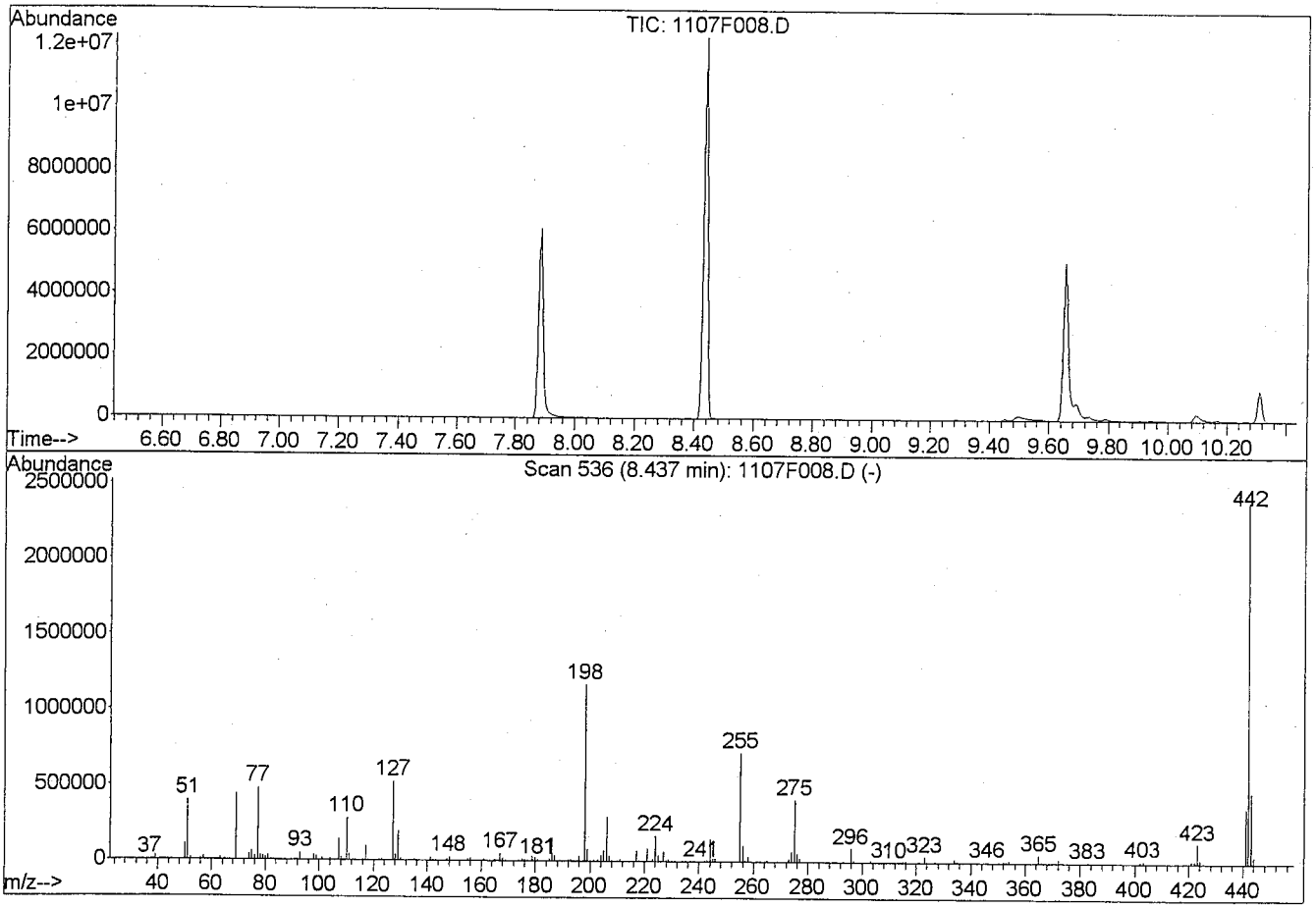
CAL 3082

11/10/03

mt
11/11/03

Data File : J:\MS11\DATA\110703\1107F008.D
Acq On : 7 Nov 2003 3:30 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 536

11/11/03 mt 11/11/03

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.8	397056	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2312	PASS
127	198	10	80	44.7	525120	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	48.9	1174016	PASS
199	198	5	9	6.9	81120	PASS
275	198	10	60	35.1	412480	PASS
365	442	1	50	2.3	54280	PASS
441	443	0.01	100	76.5	360384	PASS
442	442	30	100	100.0	2399744	PASS
443	442	15	24	19.6	471040	PASS

1107F008.D DFTPPPAH.M Mon Nov 10 14:43:08 2003

Scan 536 (8.437 min): 1107F008.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
237.90	876	249.00	5452	260.90	1521	275.00	412480
238.90	2370	250.00	1145	263.00	808	276.00	55904
240.00	2116	250.90	1240	263.80	1616	277.00	28432
240.90	3449	252.00	1429	264.90	14858	277.90	5422
242.00	9006	253.00	2641	266.00	2869	279.00	1058
243.00	11632	255.00	724928	267.90	633	280.90	582
244.00	148992	256.00	106064	269.90	1358	281.90	825
245.00	19976	256.90	8449	270.90	1583	282.90	3368
245.90	23432	257.90	36192	272.00	2401	284.00	2305
246.90	4864	258.90	5511	272.90	24040	284.90	5196
248.00	1167	259.90	908	273.90	65736	285.90	957

Scan 536 (8.437 min): 1107F008.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.90	1659	303.00	12309	319.90	555	333.00	4306
289.90	961	304.00	3740	320.90	4007	334.00	25536
290.90	783	307.90	1440	322.00	2160	335.00	6870
292.00	1798	308.90	1257	323.00	40600	335.90	684
292.90	6894	309.90	1606	324.00	6538	338.90	547
294.00	2047	311.90	530	325.00	654	340.00	732
295.90	91872	313.00	772	325.90	657	340.90	4693
296.90	12398	314.00	5073	326.90	7244	342.00	1252
297.90	729	314.90	10787	327.90	3918	345.90	8504
300.90	1473	316.00	7710	329.00	883	346.90	1776
302.00	2126	316.90	1196	331.90	3056	351.00	1239

Scan 536 (8.437 min): 1107F008.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
352.00	12371	373.00	6935	401.90	11870	439.10	771
352.90	9881	373.90	1109	403.00	17040	441.00	360384
354.00	16156	376.90	919	403.90	5677	442.00	2399744
355.00	2799	382.90	7323	404.90	857	443.00	471040
358.90	897	383.90	2575	410.00	613	444.00	45040
364.90	54280	385.00	622	414.90	806	445.00	2775
365.90	8521	390.00	3421	420.90	16324		
367.00	500	390.90	2342	422.00	17400		
369.90	1524	392.00	2811	423.00	134272		
370.90	3878	396.80	575	424.00	27512		
372.00	27056	400.90	1582	425.00	2946		

11/10/03

mt 11/11/03

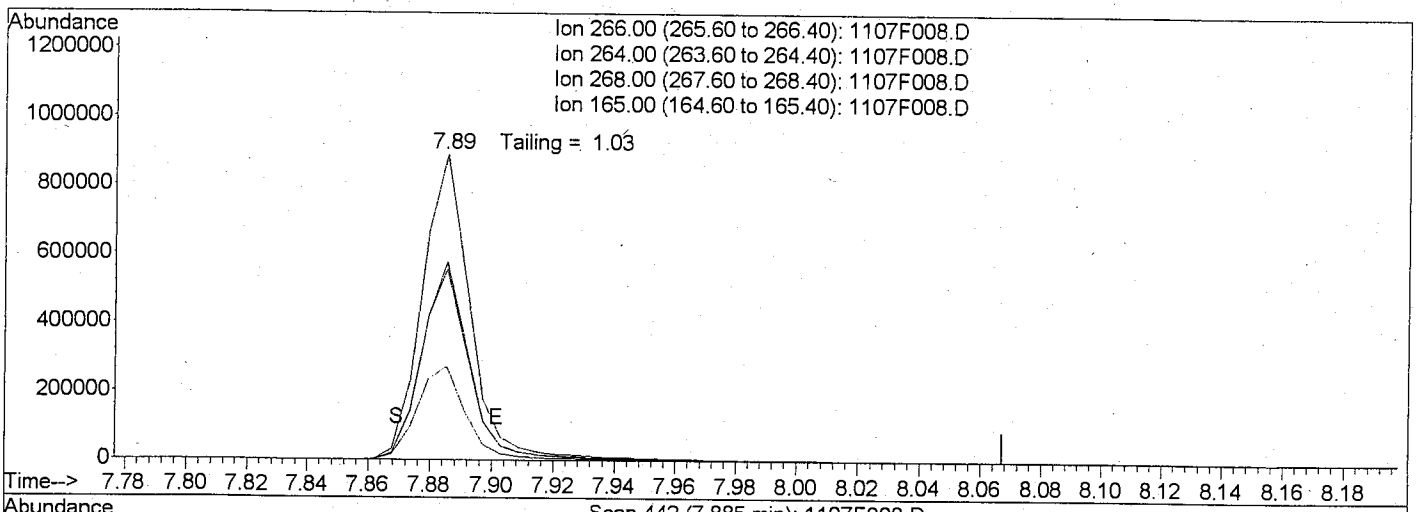
Quantitation Report (Qedit)

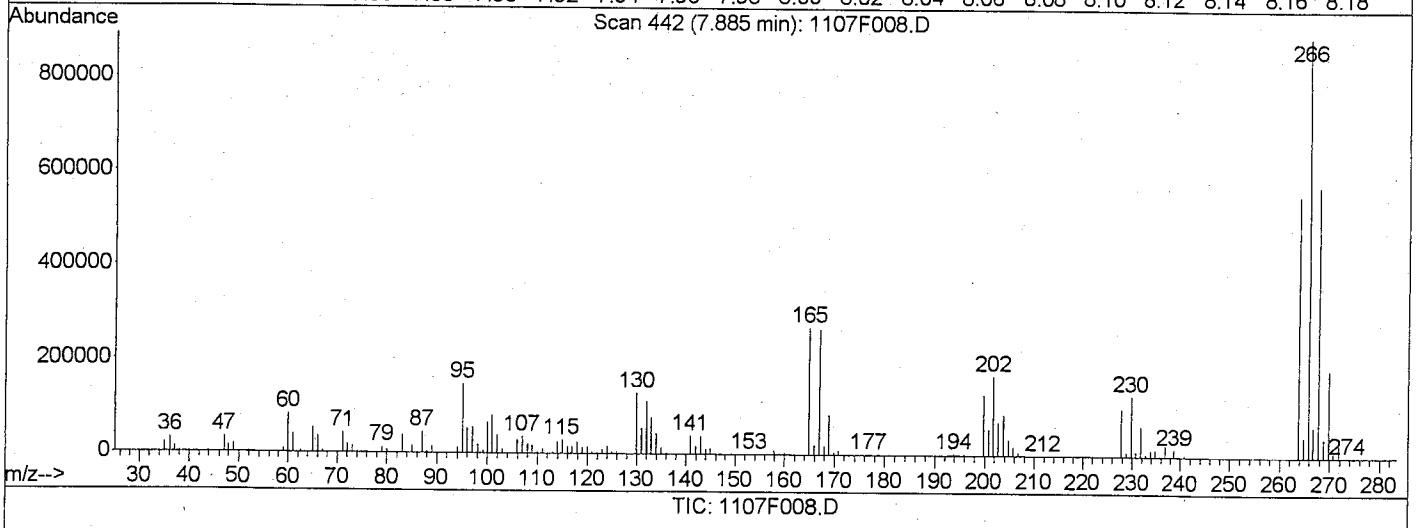
Data File : J:\MS11\DATA\110703\1107F008.D
Acq On : 7 Nov 2003 3:30 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:40 2003

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Jun 11 11:12:55 2002
Response via : Single Level Calibration





TIC: 1107F008.D

(1) Pentachlorophenol

7.57min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	64.50	0.00#
268.00	63.70	0.00#
165.00	28.70	0.00

11/10/03
mnt 11/11/03

1107F008.D DFTPPPAH.M Mon Nov 10 14:43:20 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:39 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mst 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	254806	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	131052	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	182190	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	148792	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	87118	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	2235	12.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.21%		
16) Fluorene-d10	9.01	176	1726	12.88	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.29%		
21) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.70	212	2197	11.96	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.20%		
41) Terphenyl-d14	14.74	244	1505	10.31	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	1.03%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2879	9.47	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	1508	8.16	ng/ml	100
4) 1-Methylnaphthalene	6.57	142	1370	8.06	ng/ml	98
6) Biphenyl	7.10	154	1897	8.35	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.33	156	1170	7.41	ng/ml	92
12) Acenaphthylene	7.80	152	2392	8.92	ng/ml	99
13) Acenaphthene	8.12	154	1500	8.95	ng/ml	95
14) Dibenzofuran	8.41	168	1888	8.04	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.83	170	1315	8.96	ng/ml	93
17) Fluorene	9.06	166	1424	7.67	ng/ml	100
24) Dibenzothiophene	10.79	184	1882	8.02	ng/ml	99
28) Phenanthrene	11.05	178	2256	9.36	ng/ml	95
29) Anthracene	11.15	178	1508	7.12	ng/ml	92
30) Carbazole	11.58	167	1238	7.19	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	1356	8.36	ng/ml	97
36) Fluoranthene	13.74	202	1882	8.06	ng/ml	99
39) Pyrene	14.24	202	1957	8.79	ng/ml	99
42) Benz(a)anthracene	17.09	228	1570	9.54	ng/ml	95
43) Chrysene	17.19	228	1467	8.78	ng/ml	98
49) Benzo(b)fluoranthene	20.11	252	1041	7.78	ng/ml	91
50) Benzo(k)fluoranthene	20.19	252	1361m	10.52	ng/ml	
51) Benzo(e)pyrene	21.09	252	1218m	8.81	ng/ml	
52) Benzo(a)pyrene	21.27	252	865	7.56	ng/ml	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:39 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03

mt 11/11/03

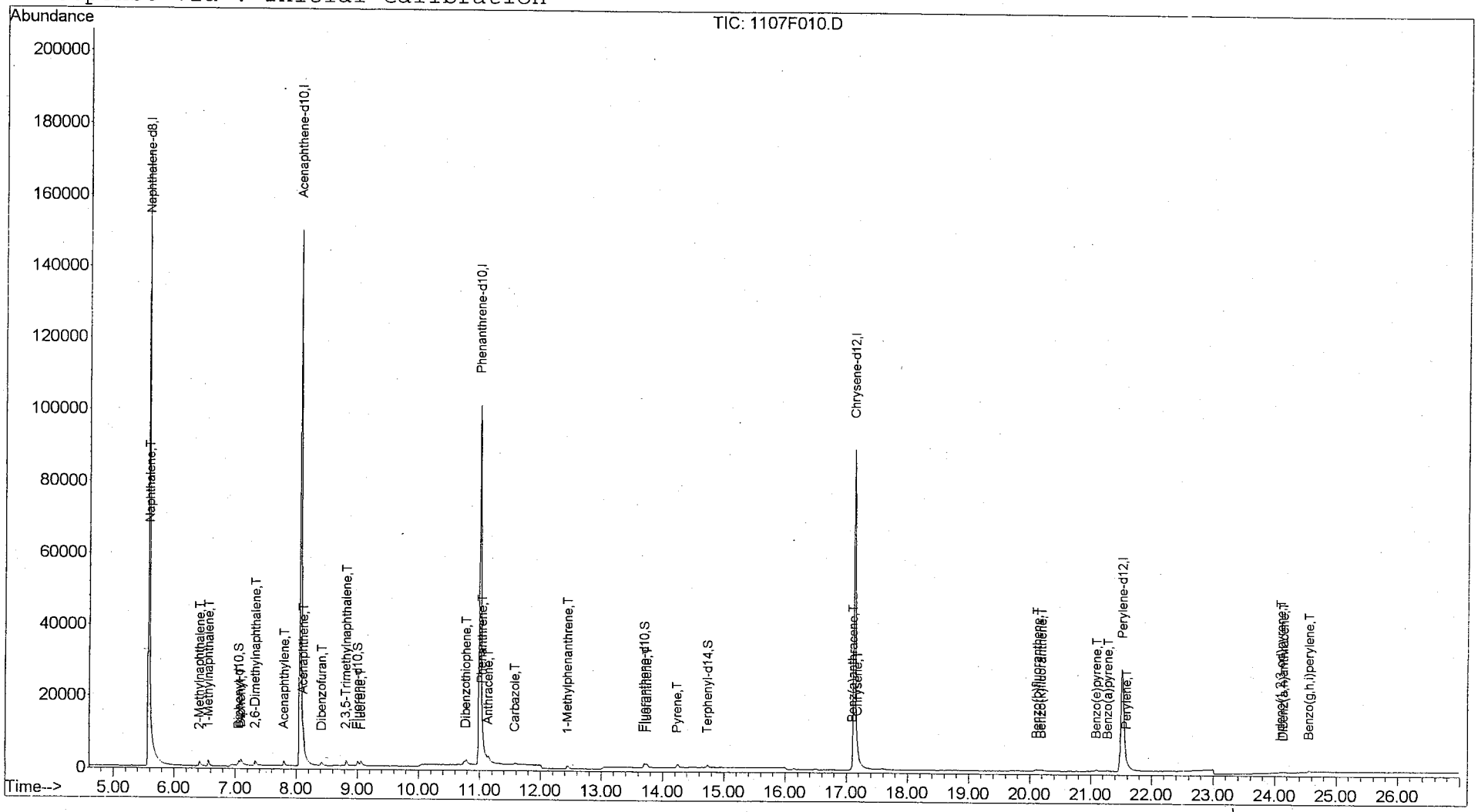
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.60	252	946	7.91	ng/ml	94
54)	Indeno(1,2,3-cd)pyrene	24.09	276	604m	5.21	ng/ml	
55)	Dibenz(a,h)anthracene	24.15	278	642m	5.03	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	1173m	8.07	ng/ml	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1609

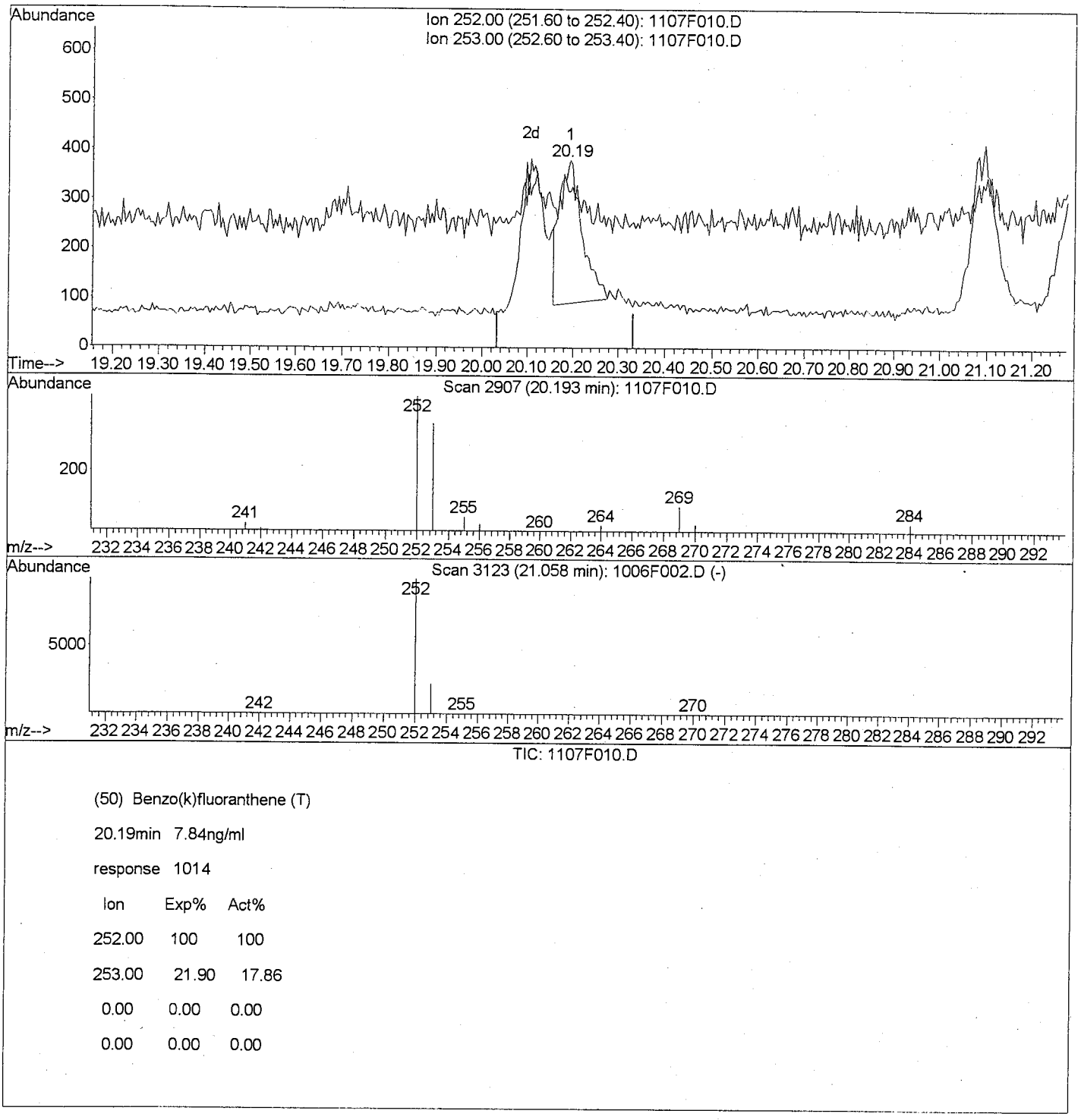
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:39 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(50) Benzo(k)fluoranthene (T)

20.19min 7.84ng/ml

response 1014

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	17.86
0.00	0.00	0.00
0.00	0.00	0.00

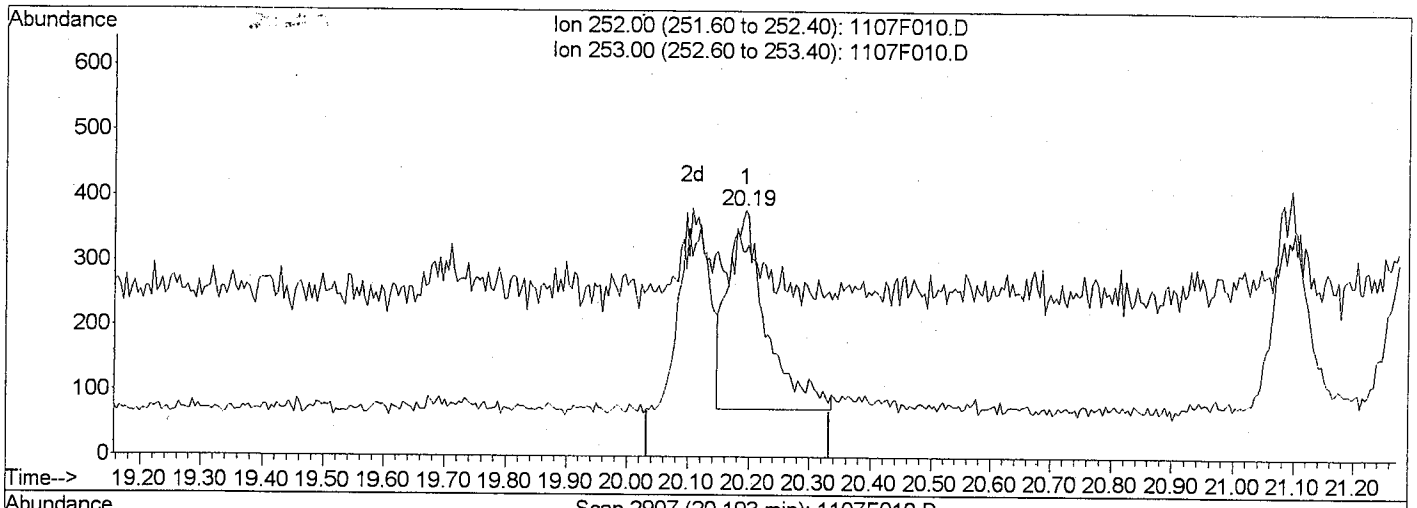
Quantitation Report (Qedit)

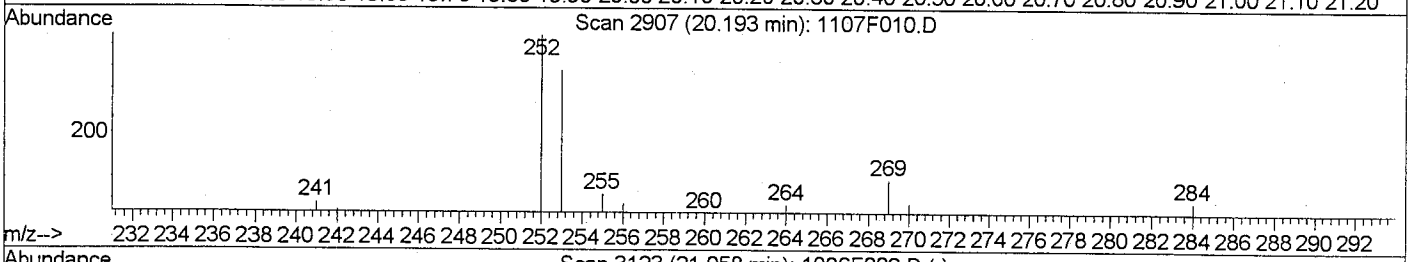
Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:39 2003

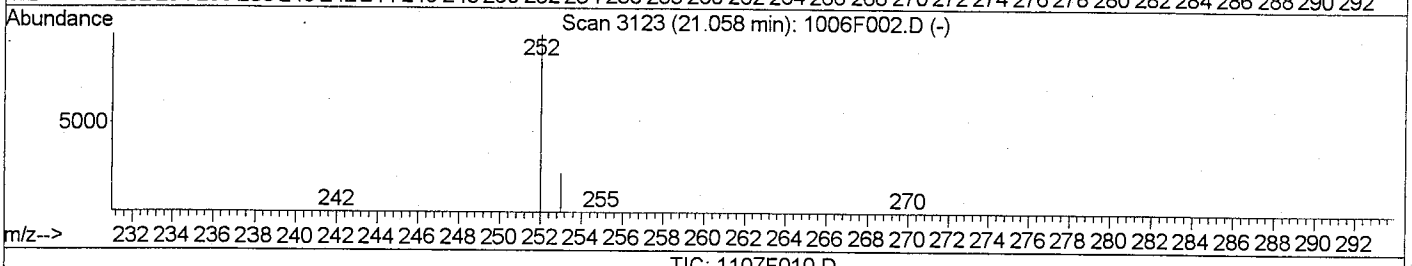
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(50) Benzo(k)fluoranthene (T)

20.19min 10.52ng/ml m

response 1361

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	83.16#
0.00	0.00	0.00
0.00	0.00	0.00

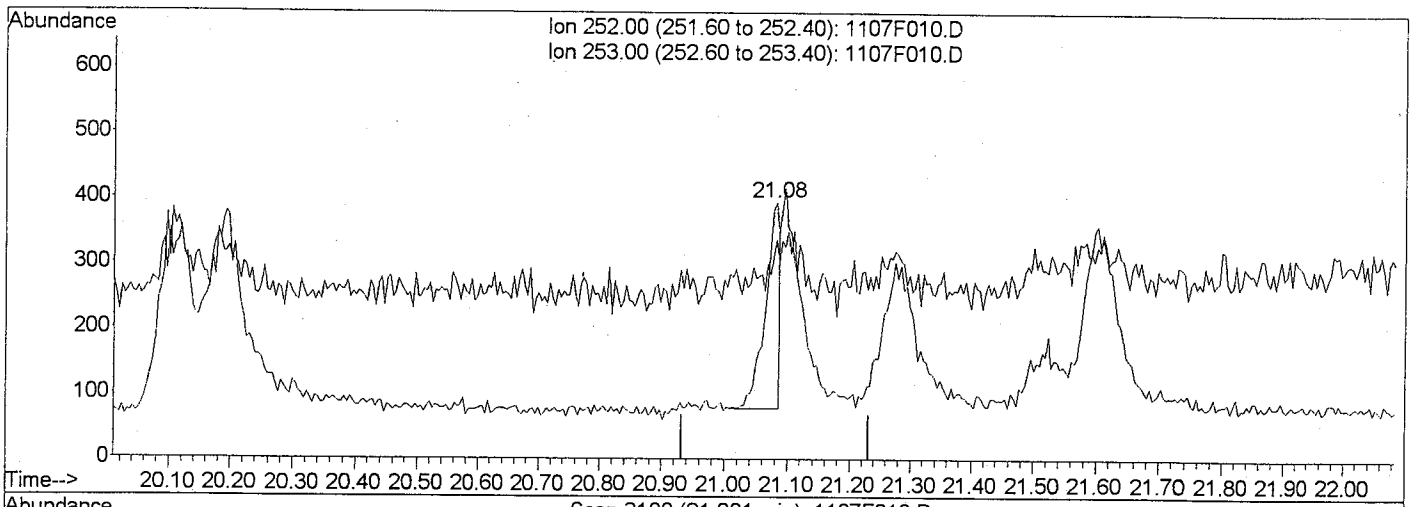
11/10/03 complete mt 11/11/03

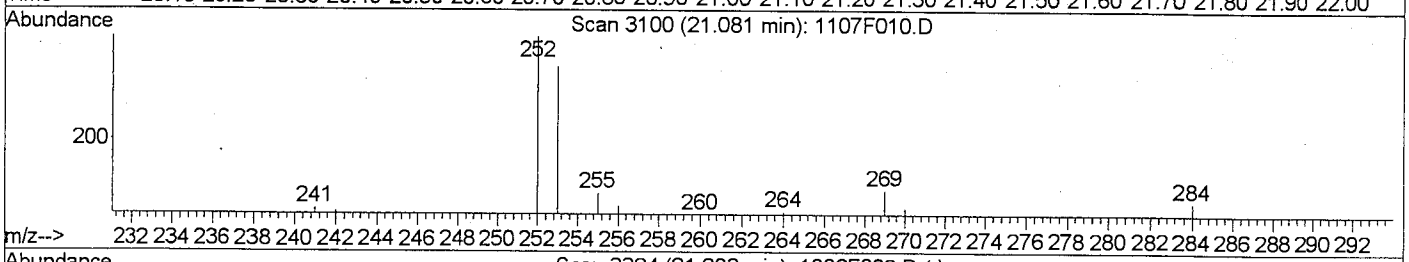
Quantitation Report (Qedit)

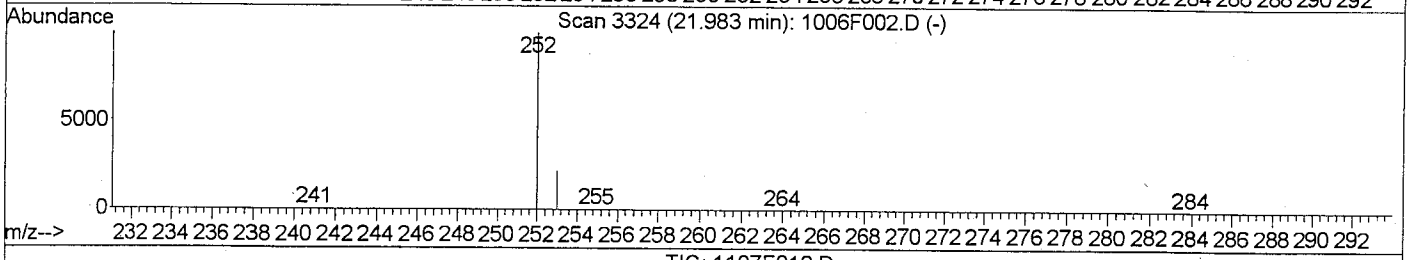
Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:39 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(51) Benzo(e)pyrene (T)

21.08min 3.63ng/ml

response 502

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	16.77
0.00	0.00	0.00
0.00	0.00	0.00

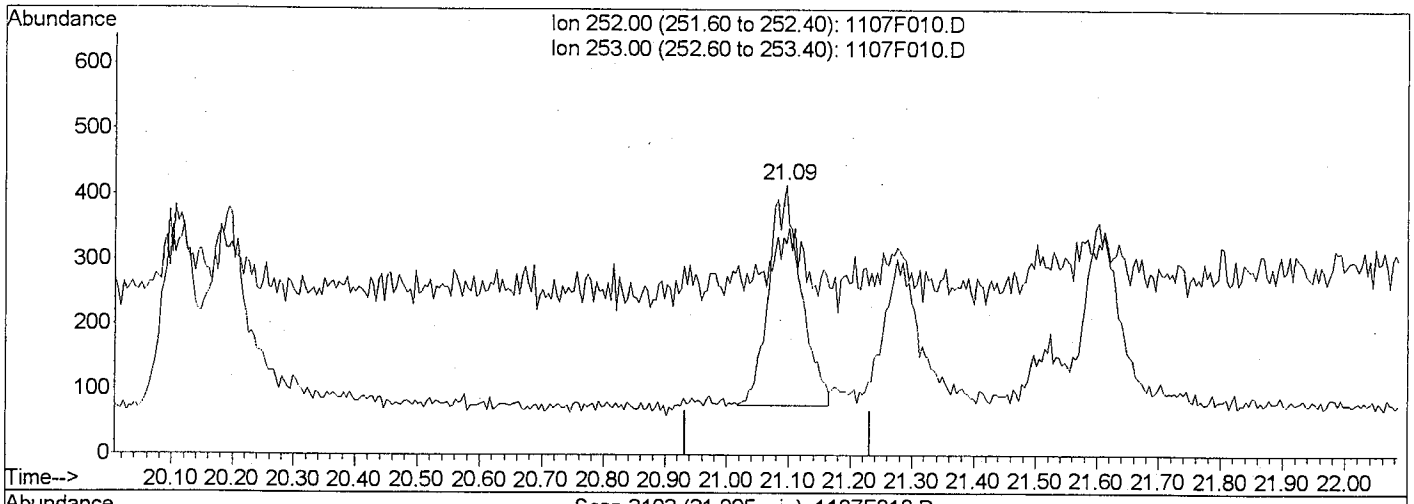
Quantitation Report (Qedit)

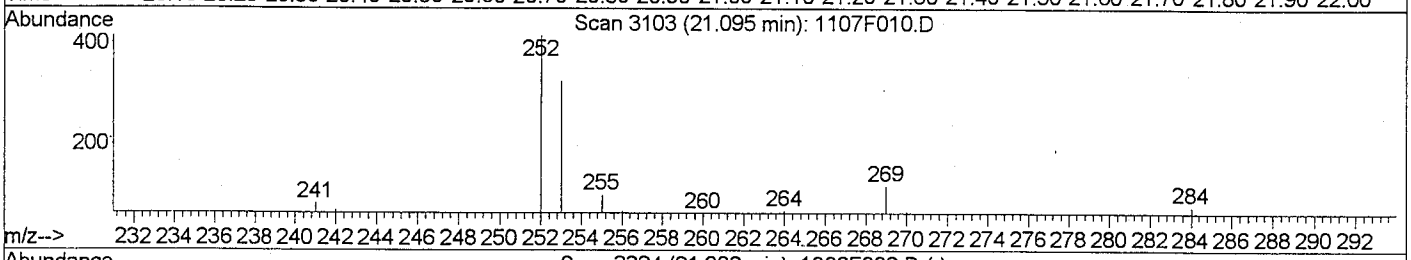
Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

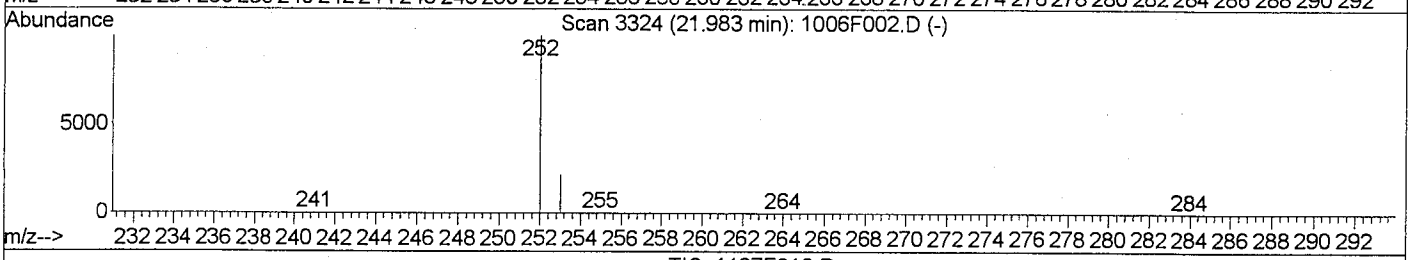
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(51) Benzo(e)pyrene (T)

21.09min 8.81ng/ml m

response 1218

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	78.13#
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/03

11/11/03

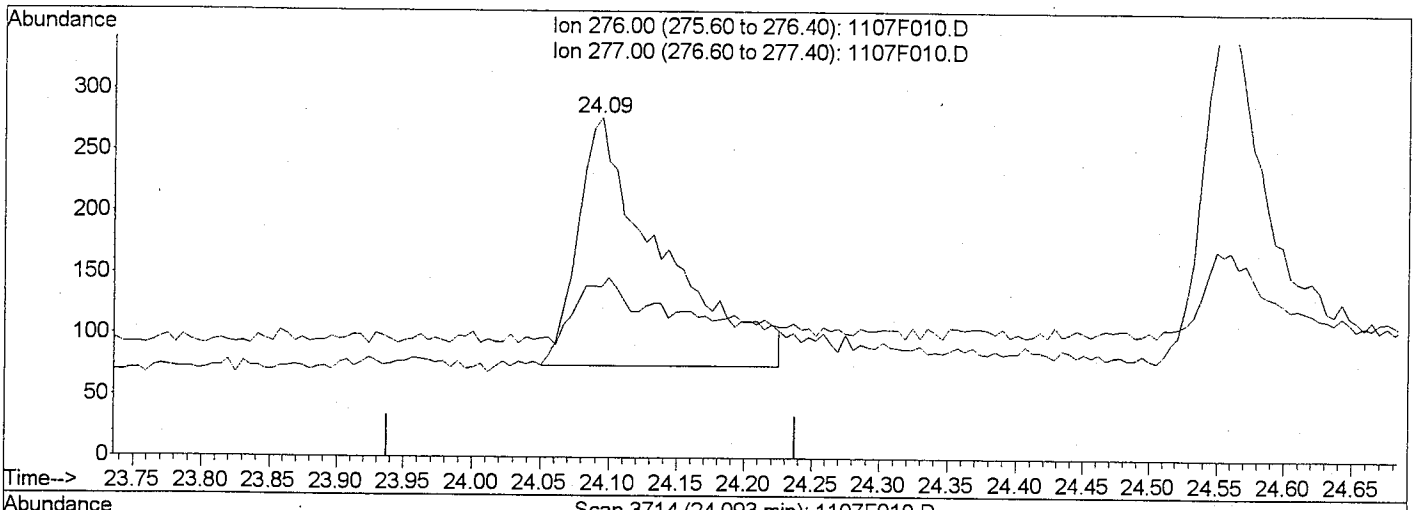
Quantitation Report (Qedit)

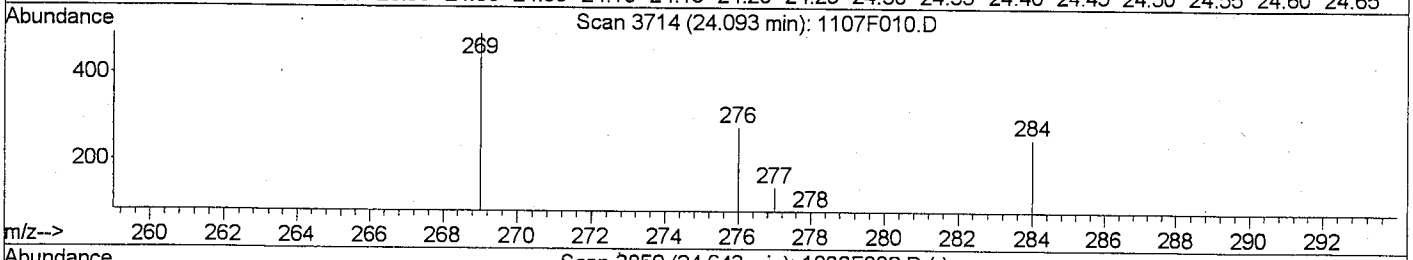
Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

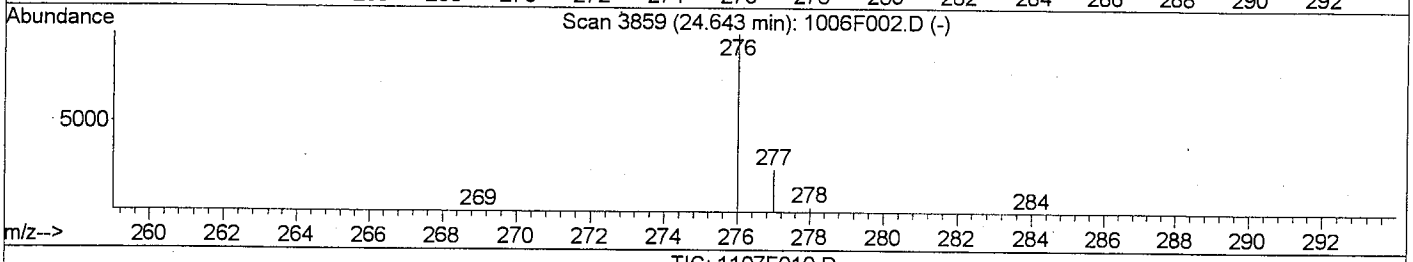
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 7.43ng/ml

response 861

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	20.69
0.00	0.00	0.00
0.00	0.00	0.00

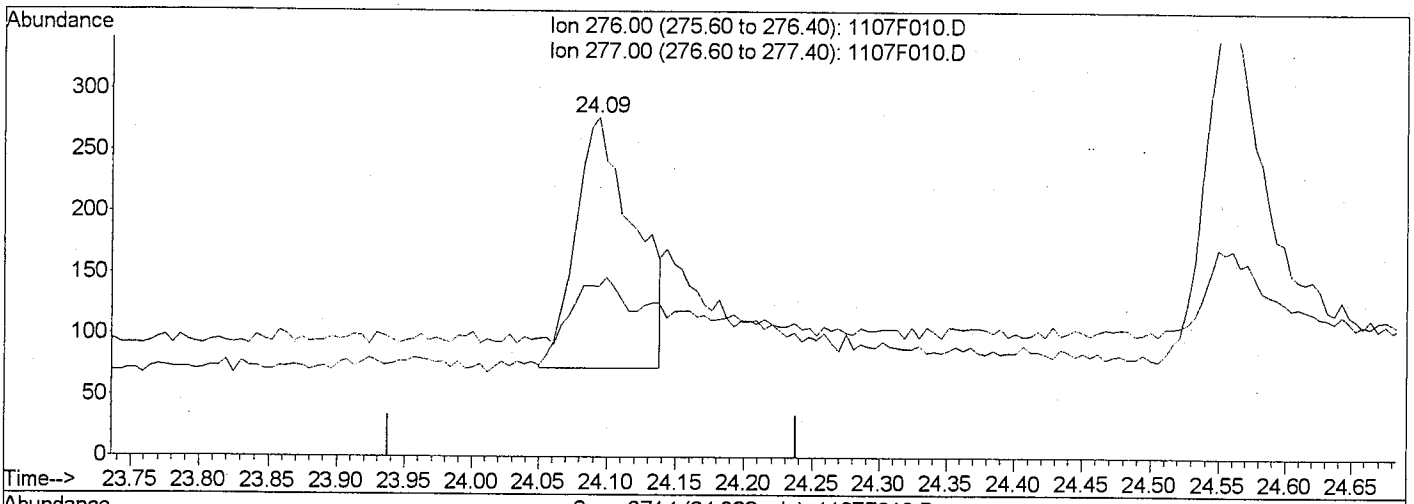
Quantitation Report (Qedit)

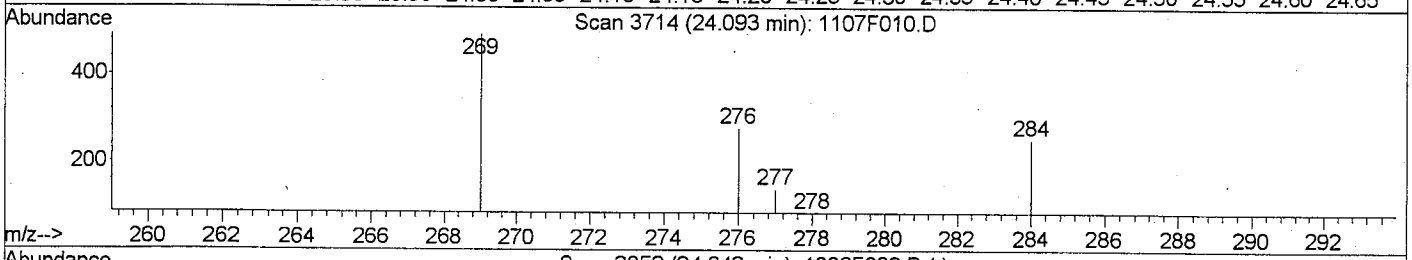
Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

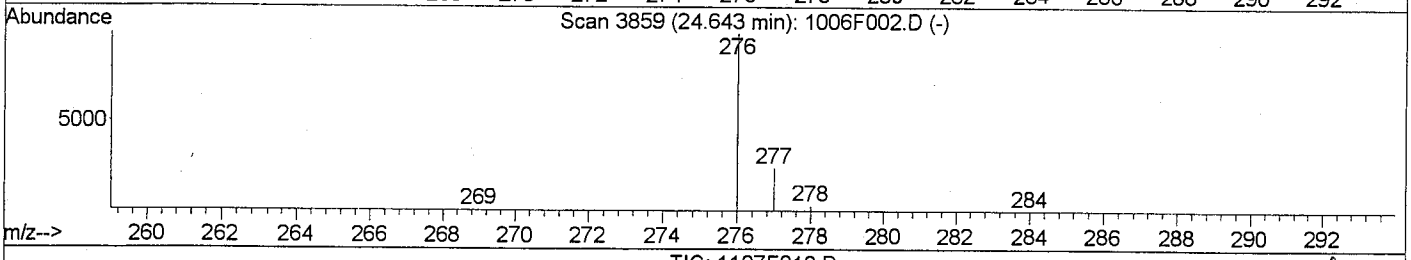
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F010.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 5.21ng/ml m

response 604

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	50.00
0.00	0.00	0.00
0.00	0.00	0.00

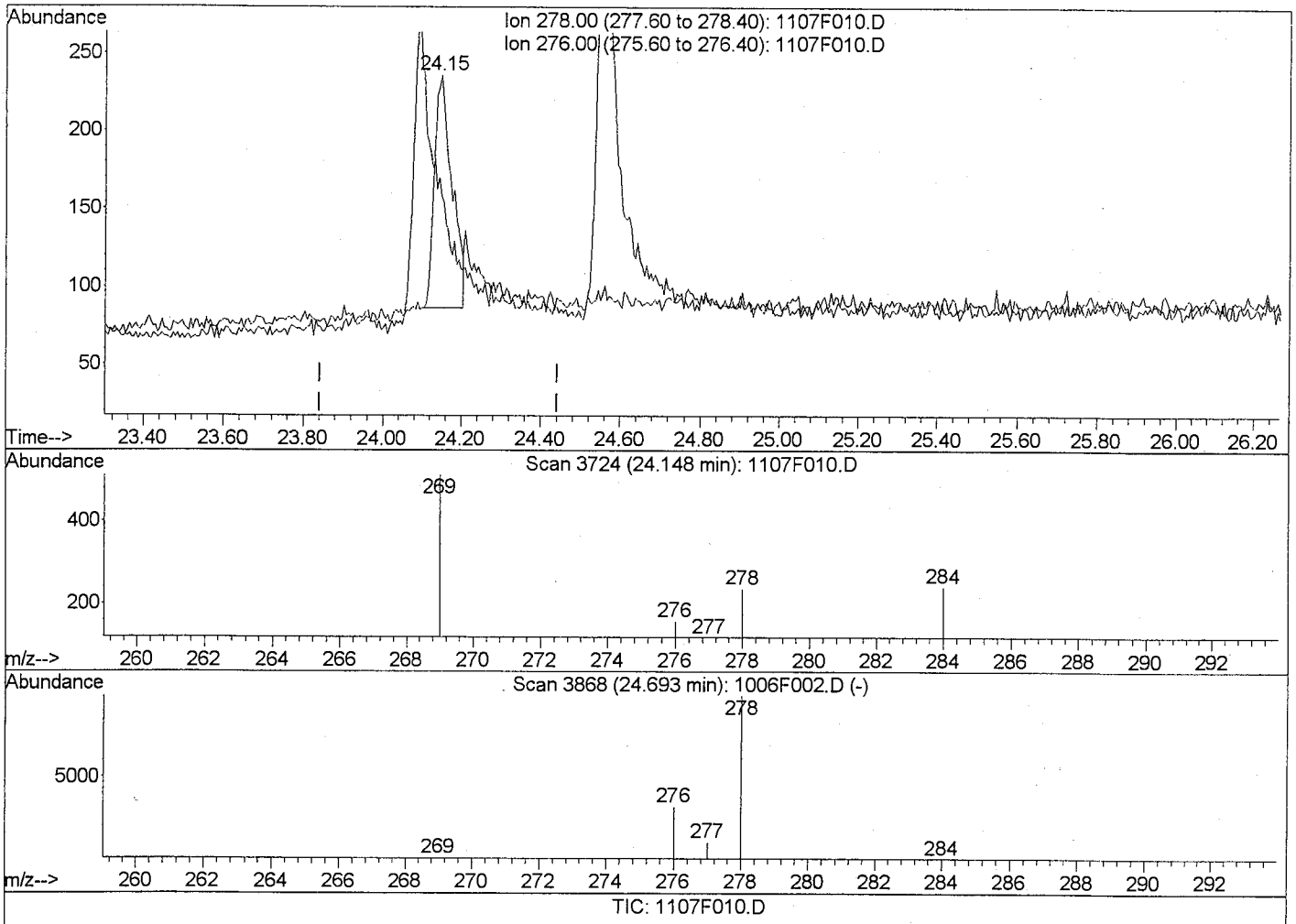
over integrated
11/11/03

1107F010.D 1107ALK.M Sat Nov 08 06:42:43 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D Vial: 4
Acq On : 7 Nov 2003 4:27 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(55) Dibenz(a,h)anthracene (T)

24.15min 3.61ng/ml

response 461

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	31.33
0.00	0.00	0.00
0.00	0.00	0.00

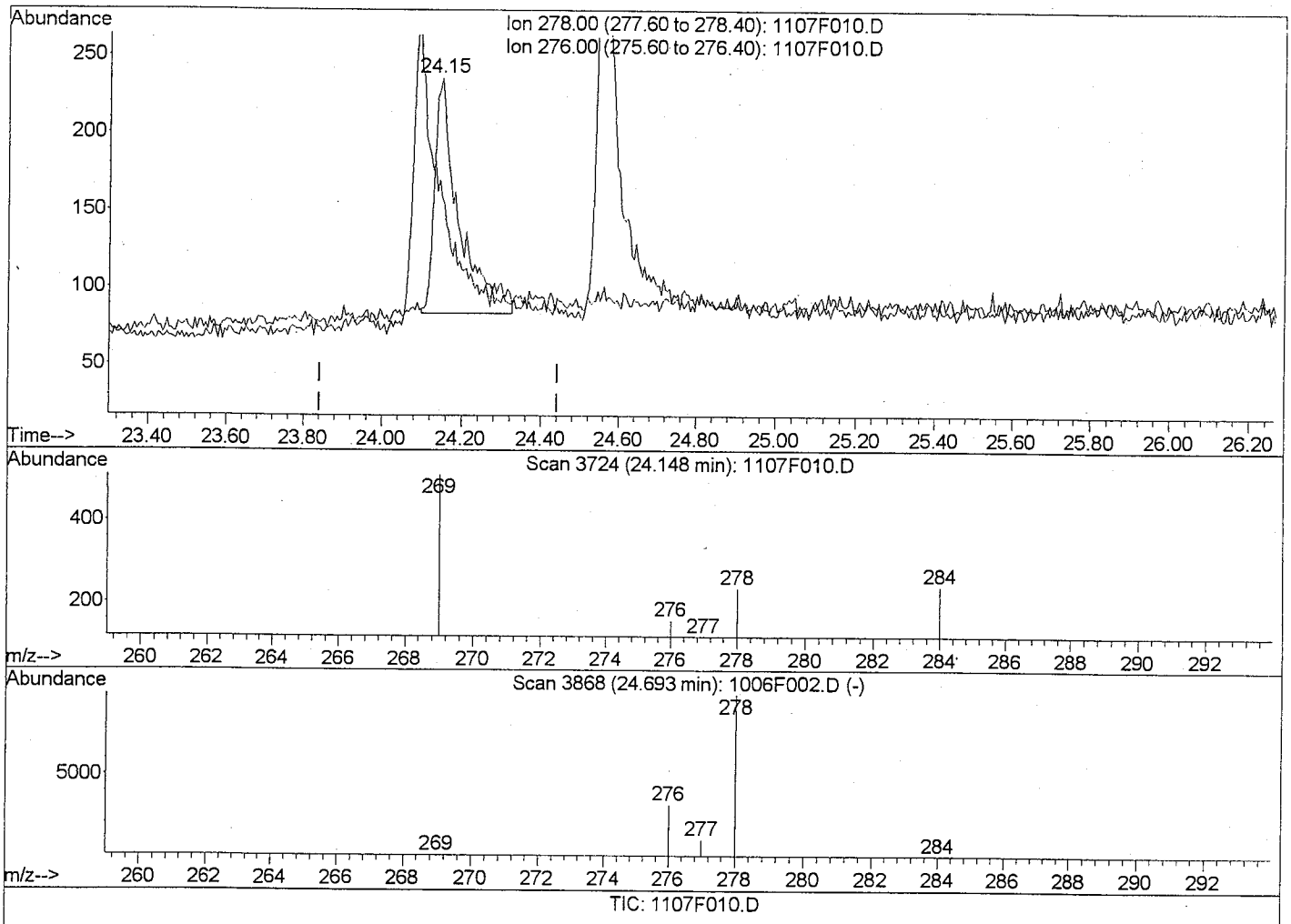
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(55) Dibenz(a,h)anthracene (T)

24.15min 5.03ng/ml m

response 642

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	66.95#
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/12/03 mt 11/11/03

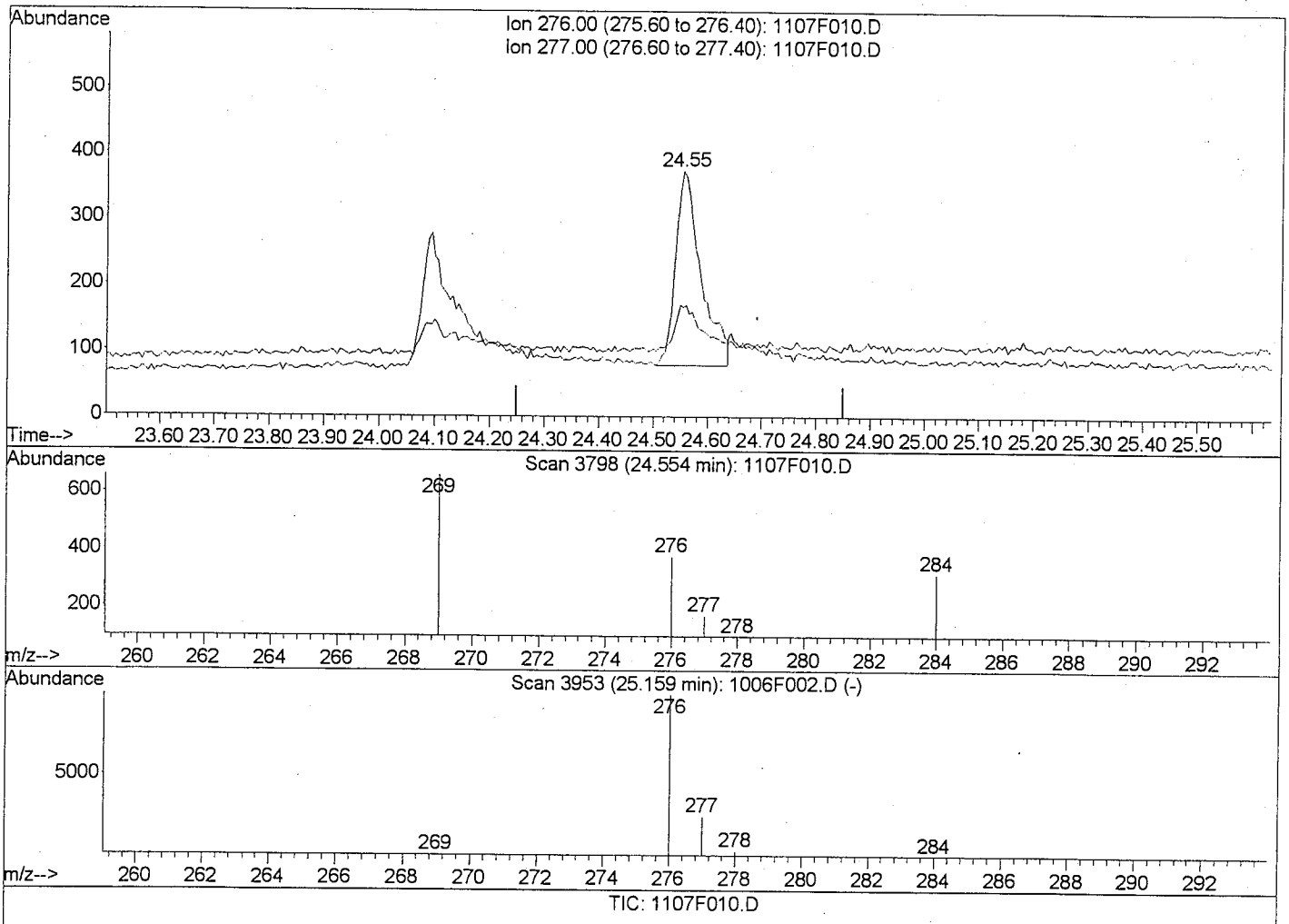
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(56) Benzo(g,h,i)perylene (T)

24.55min 6.64ng/ml

response 966

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	22.64
0.00	0.00	0.00
0.00	0.00	0.00

1107F010.D 1107ALK.M Sat Nov 08 06:42:55 2003

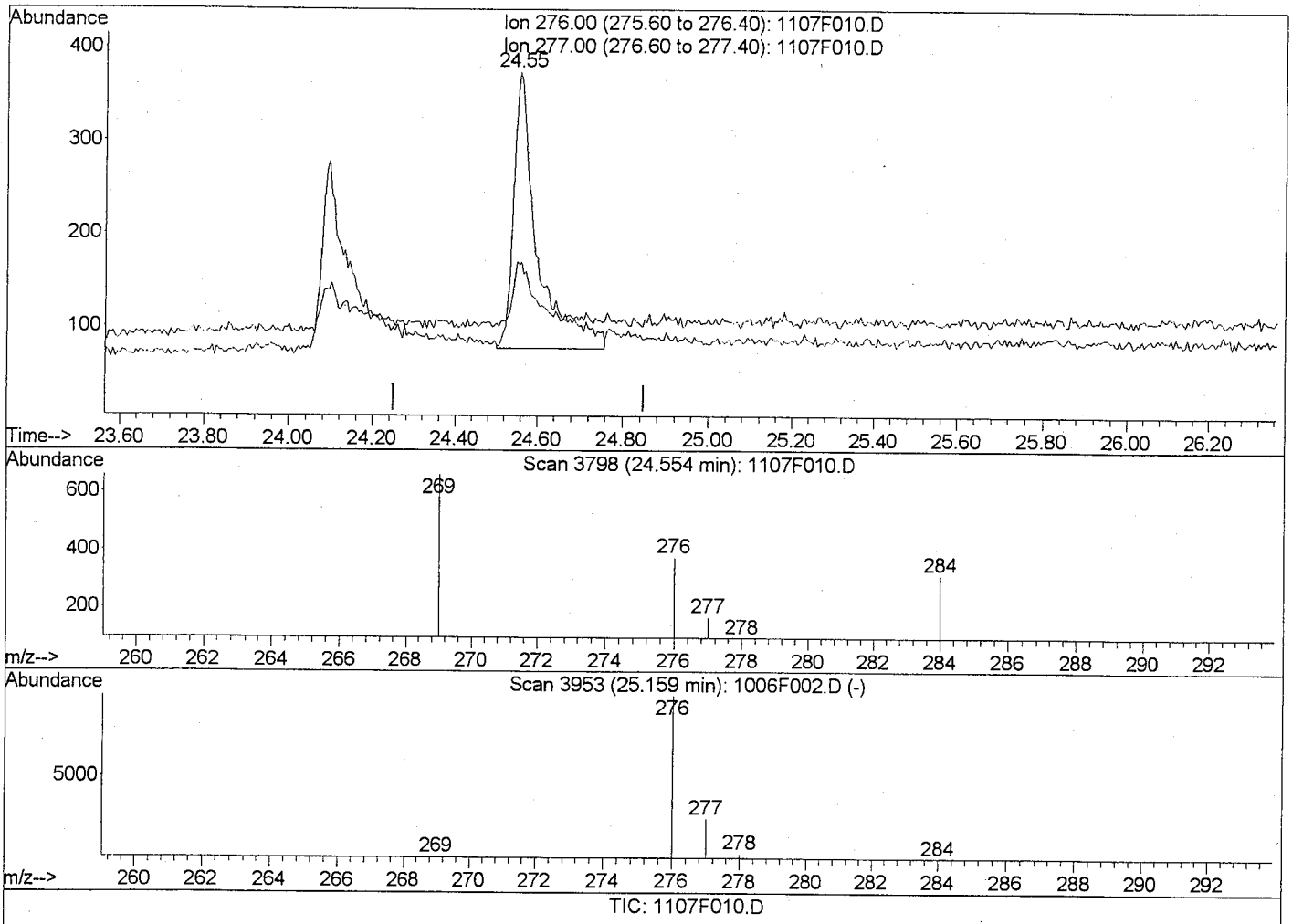
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F010.D
Acq On : 7 Nov 2003 4:27 pm
Sample : SIM PAH ICAL @ 0.01ug/mL | SVM15-55A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F010.D

(56) Benzo(g,h,i)perylene (T)

24.55min 8.07ng/ml m

response 1173

Ion	Exp%	Act%
276.00	100	100
277.00	24.00	44.53
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03

11/14/03

1107F010.D 1107ALK.M Sat Nov 08 06:43:02 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:42 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	268823	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	136863	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	196388	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	164123	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	98214	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	3895	19.98	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 2.00%			
16) Fluorene-d10	9.01	176	2711	19.37	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 1.94%			
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery = 0.00%			
37) Fluoranthene-d10	13.70	212	3659	18.48	ng/ml	0.01
Spiked Amount 1000.000			Recovery = 1.85%			
41) Terphenyl-d14	14.73	244	3016	18.74	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 1.87%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	6045	18.85	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	3318m	17.02	ng/ml	
4) 1-Methylnaphthalene	6.57	142	3288m	18.33	ng/ml	
6) Biphenyl	7.10	154	3844	16.03	ng/ml	97
7) 2,6-Dimethylnaphthalene	7.33	156	2915	17.49	ng/ml	97
12) Acenaphthylene	7.80	152	4989	17.81	ng/ml	100
13) Acenaphthene	8.11	154	2986	17.06	ng/ml	98
14) Dibenzofuran	8.41	168	4066	16.57	ng/ml	83
15) 2,3,5-Trimethylnaphthalene	8.82	170	2665	17.38	ng/ml	99
17) Fluorene	9.06	166	3208	16.55	ng/ml	99
24) Dibenzothiophene	10.79	184	4271	16.88	ng/ml	100
28) Phenanthrene	11.05	178	4721	18.16	ng/ml	97
29) Anthracene	11.15	178	3419	14.98	ng/ml	96
30) Carbazole	11.58	167	2698	14.53	ng/ml	90
31) 1-Methylphenanthrene	12.44	192	2905	16.62	ng/ml	100
36) Fluoranthene	13.74	202	4163	16.54	ng/ml	98
39) Pyrene	14.25	202	4257	17.33	ng/ml	98
42) Benz(a)anthracene	17.09	228	3030	16.69	ng/ml	97
43) Chrysene	17.18	228	3534m	19.18	ng/ml	
49) Benzo(b)fluoranthene	20.11	252	2257	14.95	ng/ml	90
50) Benzo(k)fluoranthene	20.19	252	2645m	18.13	ng/ml	
51) Benzo(e)pyrene	21.09	252	2771	17.78	ng/ml	93
52) Benzo(a)pyrene	21.28	252	1814m	14.07	ng/ml	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:42 2003

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mrt 11/14/03

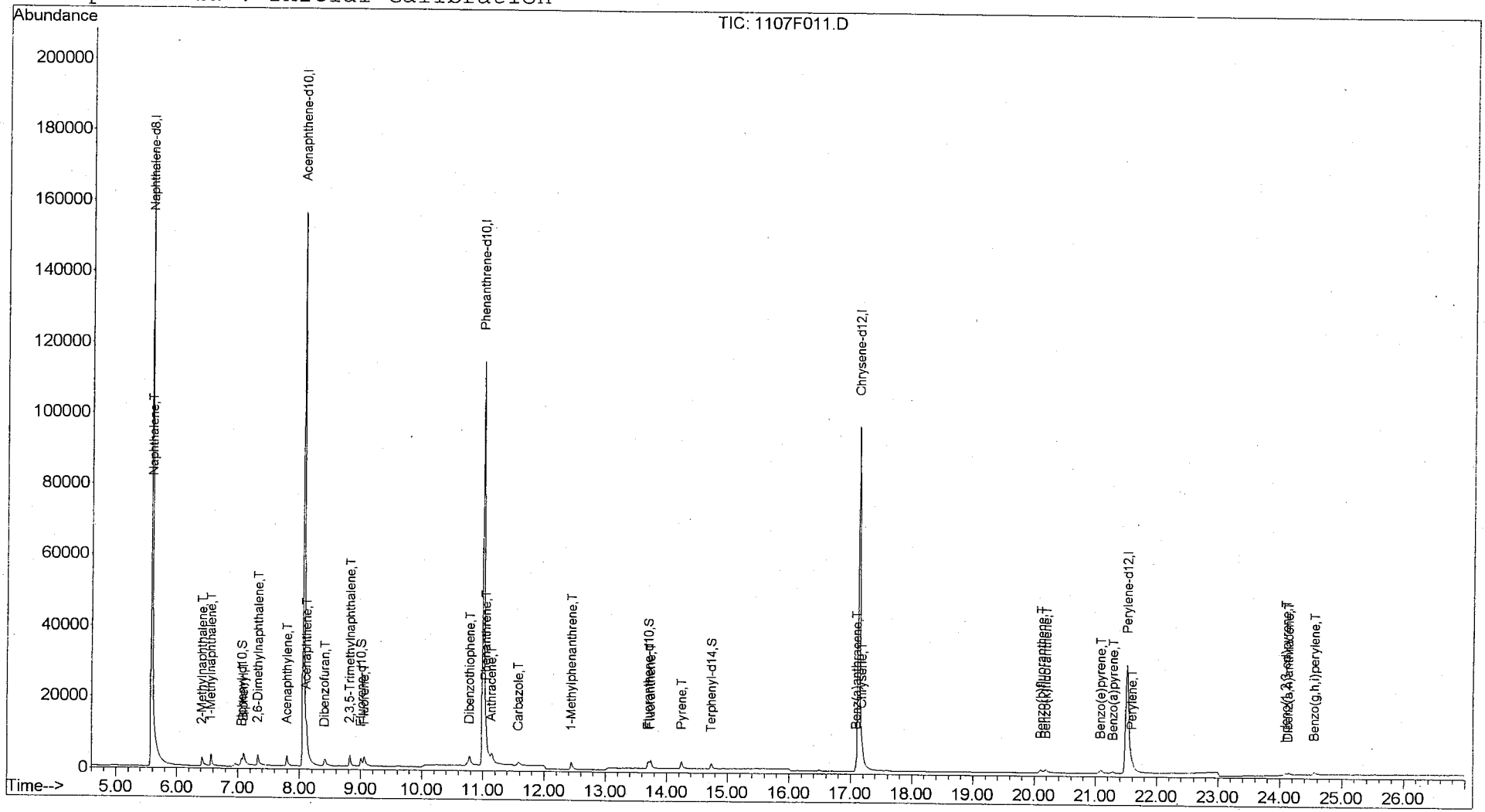
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.61	252	2332	17.29	ng/ml	96
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1089m	8.33	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	1567m	10.90	ng/ml	
56)	Benzo(g,h,i)perylene	24.56	276	1993	12.16	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F011.D Vial: 5
Acq On : 7 Nov 2003 5:03 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:42 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1622

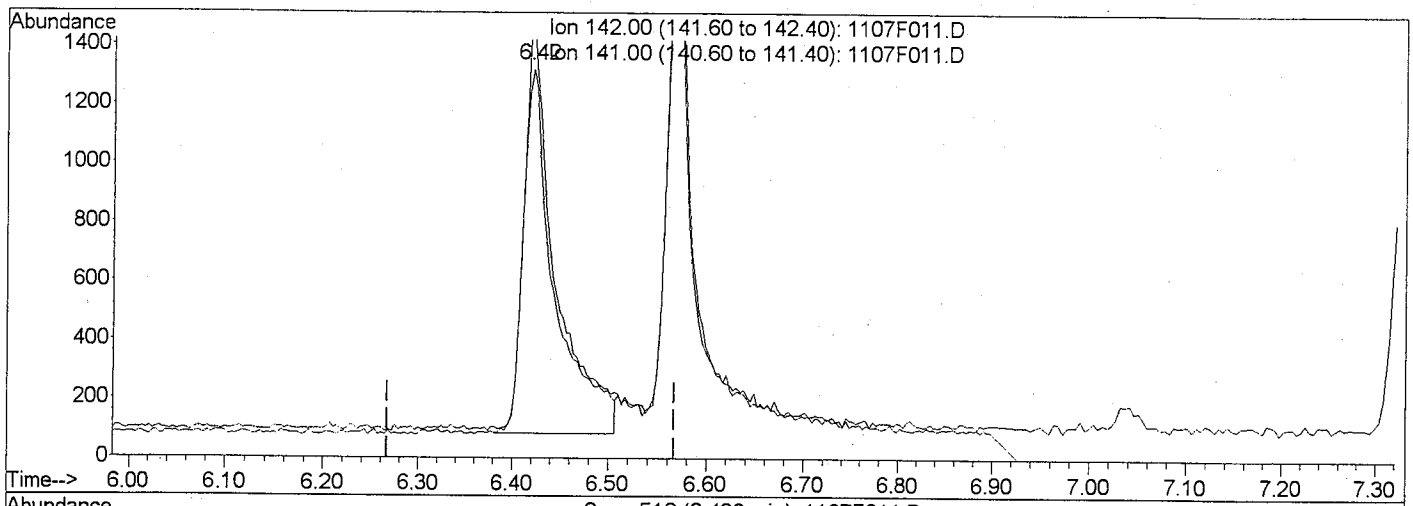
Quantitation Report (Qedit)

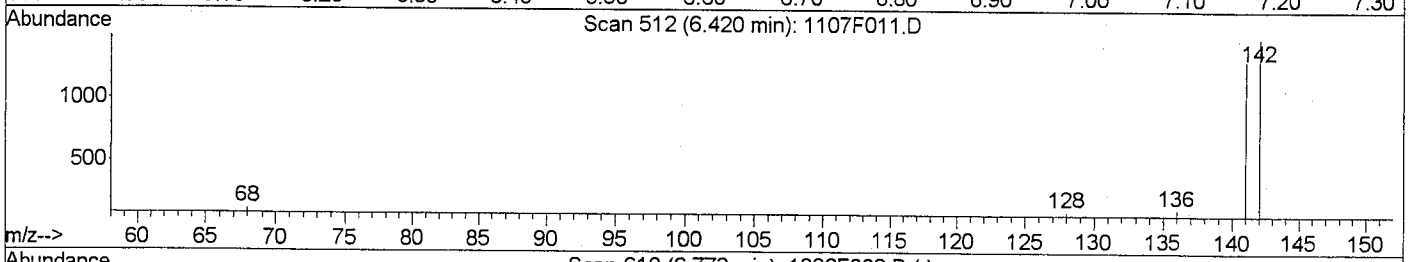
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003

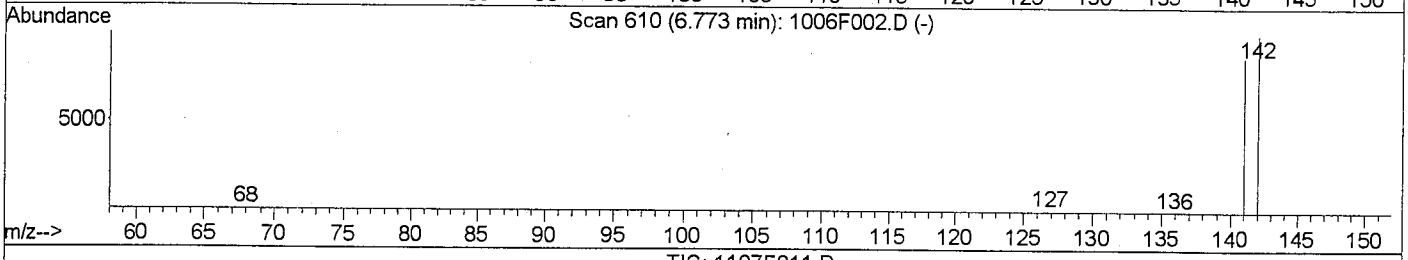
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(3) 2-Methylnaphthalene (T)

6.42min 16.11ng/ml

response 3141

Ion	Exp%	Act%
142.00	100	100
141.00	87.50	85.91
0.00	0.00	0.00
0.00	0.00	0.00

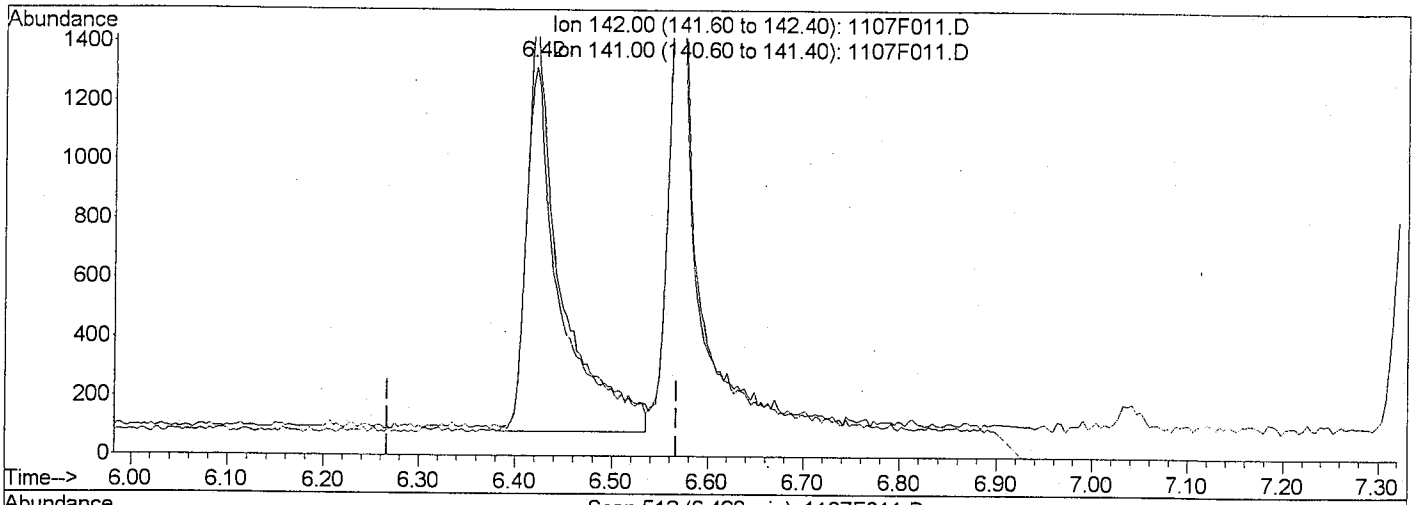
Quantitation Report (Qedit)

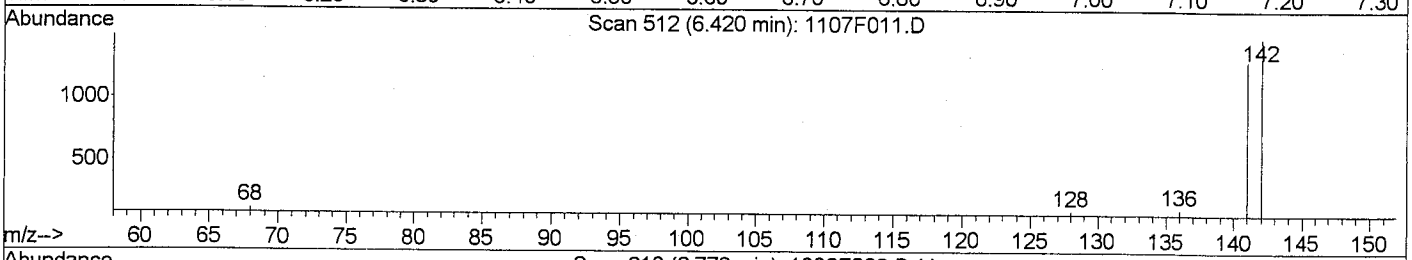
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

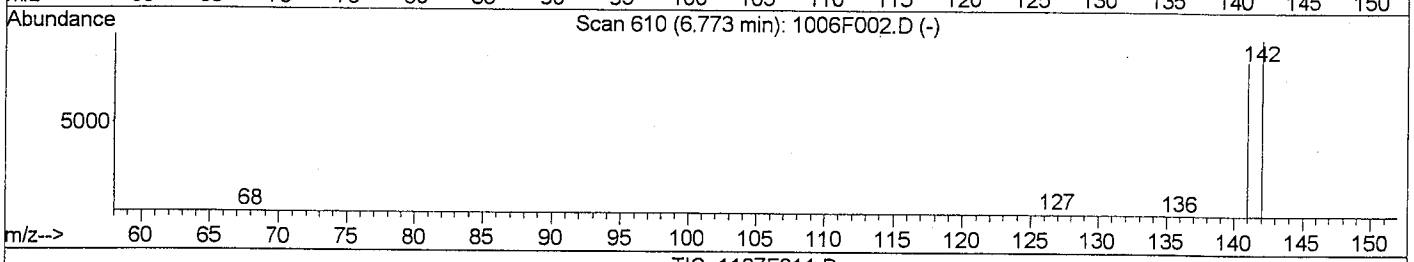
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(3) 2-Methylnaphthalene (T)

6.42min 17.02ng/ml m

response 3318

Ion	Exp%	Act%
142.00	100	100
141.00	87.50	88.10
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

mt 11/11/03

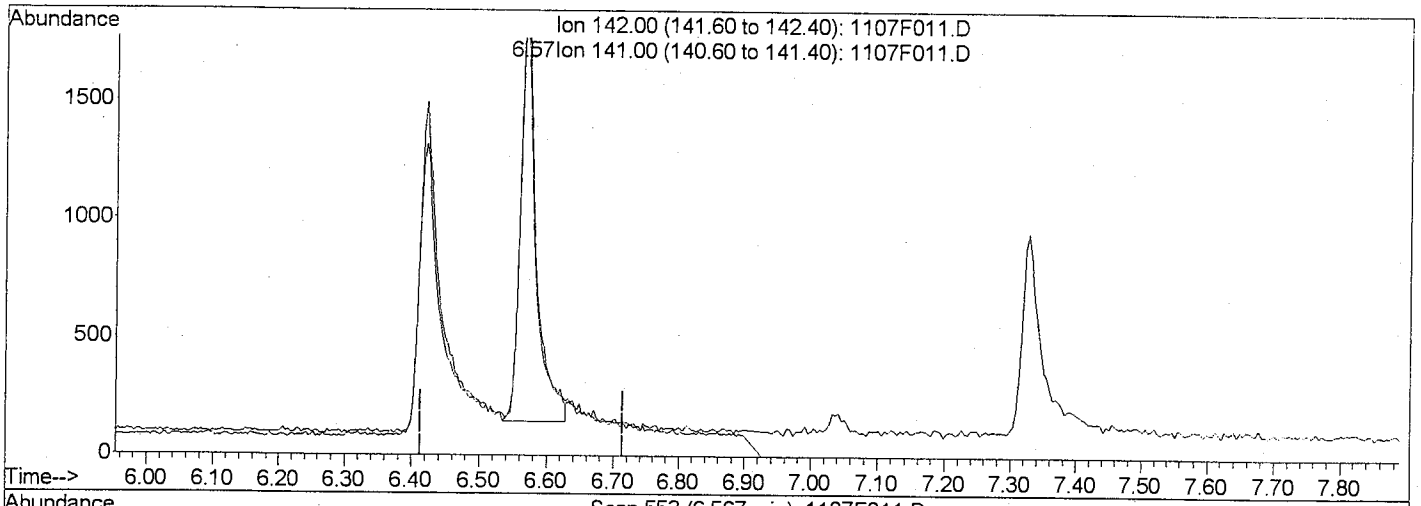
Quantitation Report (Qedit)

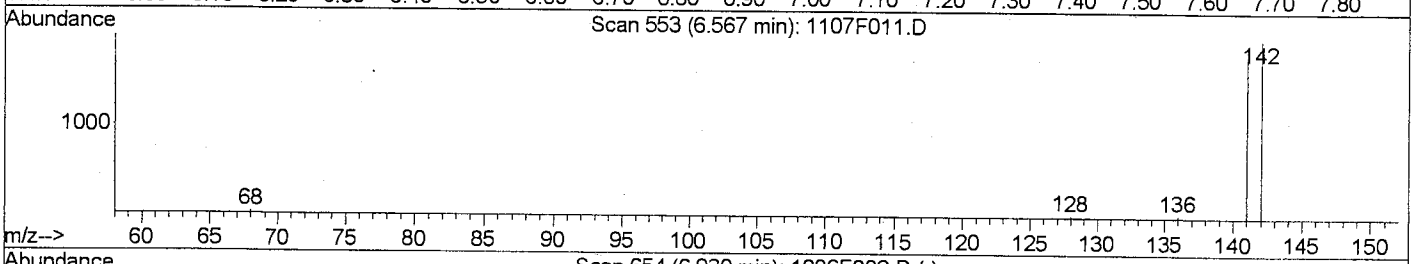
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:40 2003

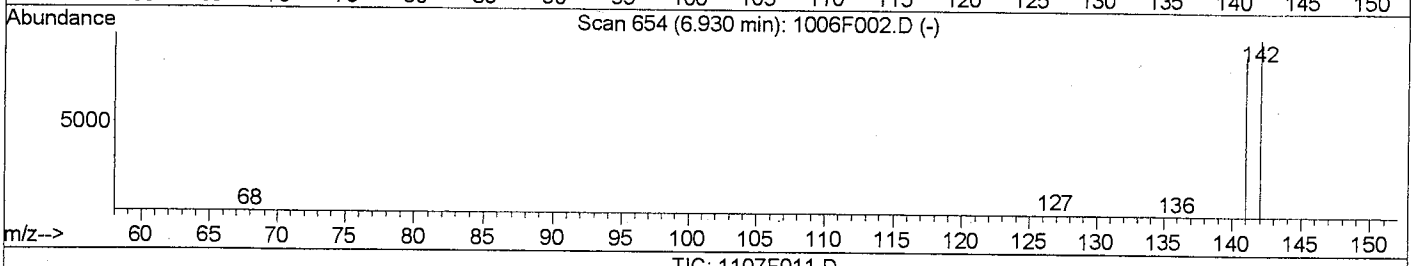
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(4) 1-Methylnaphthalene (T)

6.57min 16.36ng/ml

response 2935

Ion	Exp%	Act%
142.00	100	100
141.00	90.60	95.16
0.00	0.00	0.00
0.00	0.00	0.00

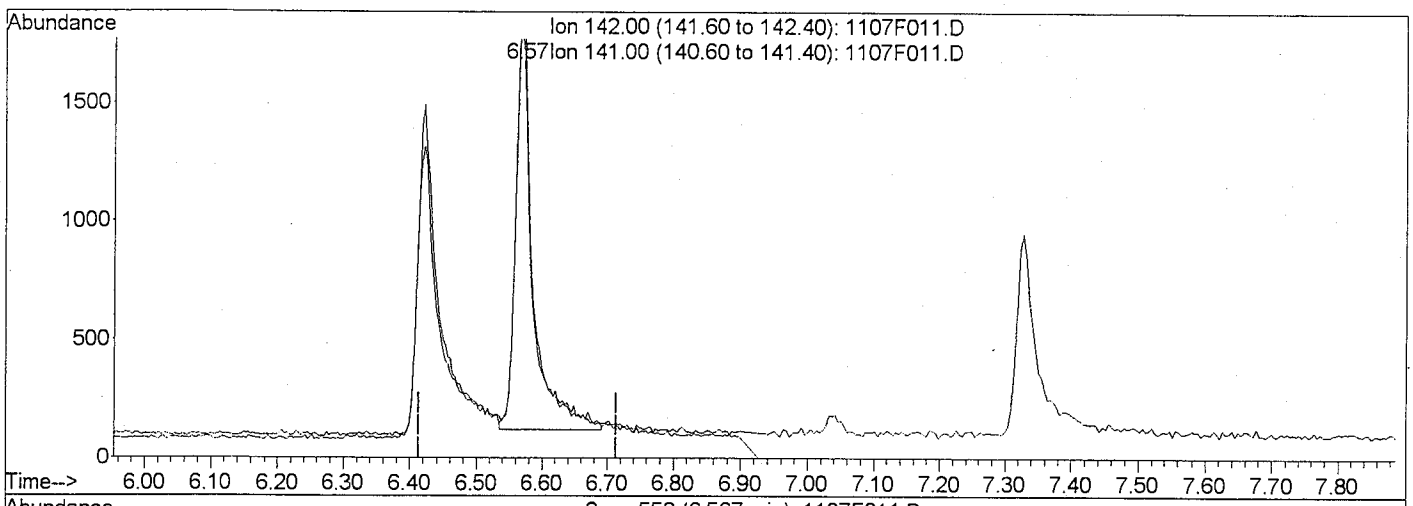
Quantitation Report (Qedit)

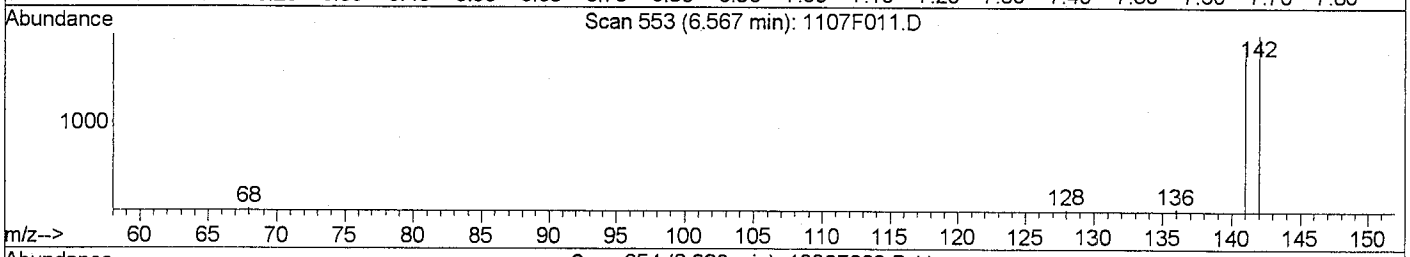
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

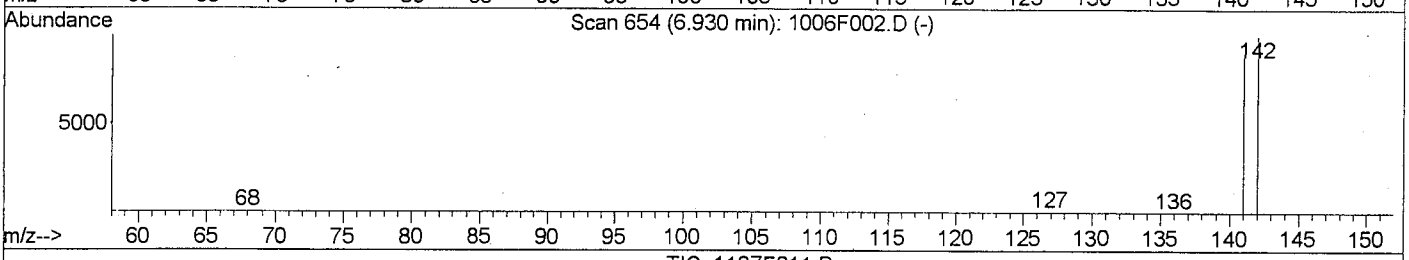
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(4) 1-Methylnaphthalene (T)

6.57min 18.33ng/ml m

response 3288

Ion	Exp%	Act%
142.00	100	100
141.00	90.60	97.35
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/3

mst 11/11/03

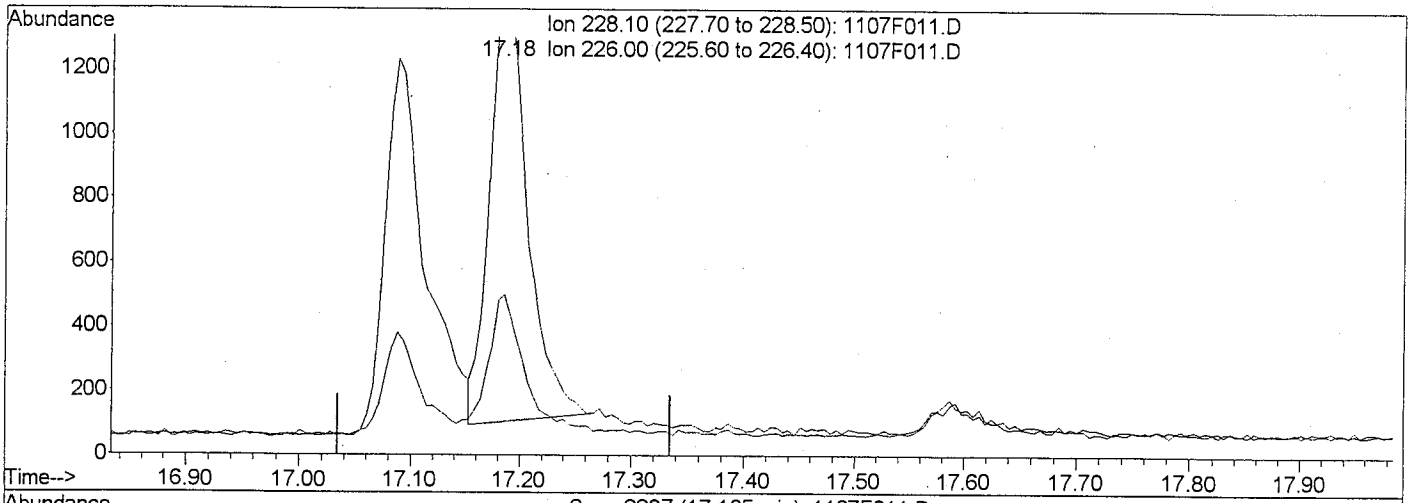
Quantitation Report (Qedit)

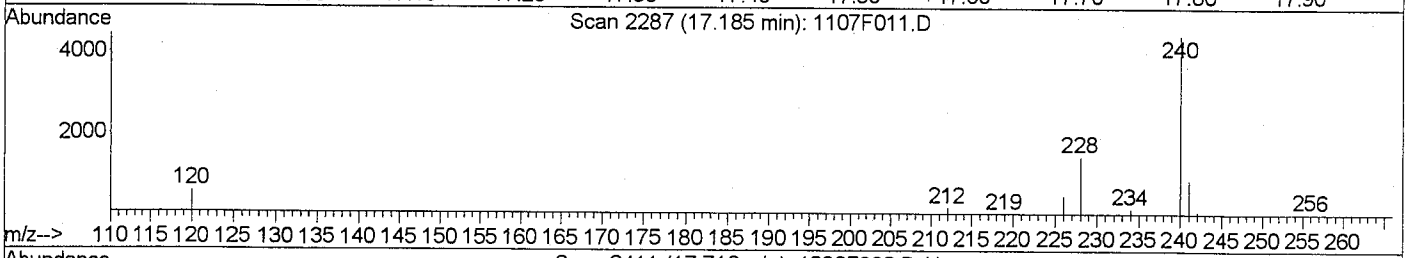
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

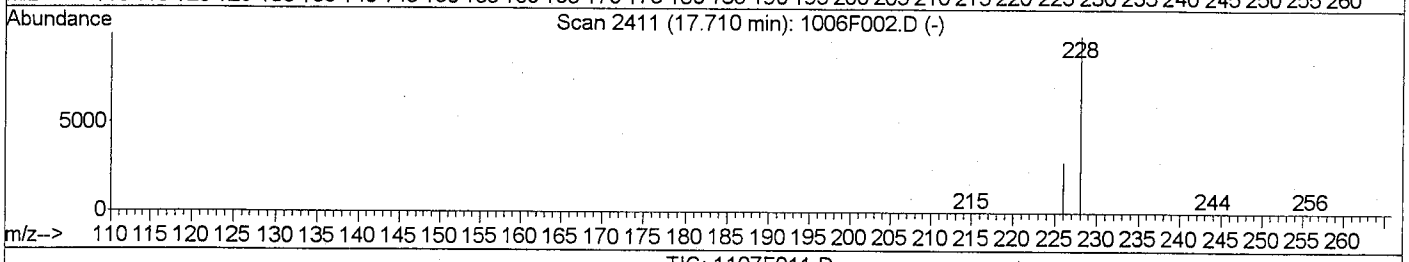
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(43) Chrysene (T)

17.18min 17.51ng/ml

response 3226

Ion	Exp%	Act%
228.10	100	100
226.00	28.50	31.90
0.00	0.00	0.00
0.00	0.00	0.00

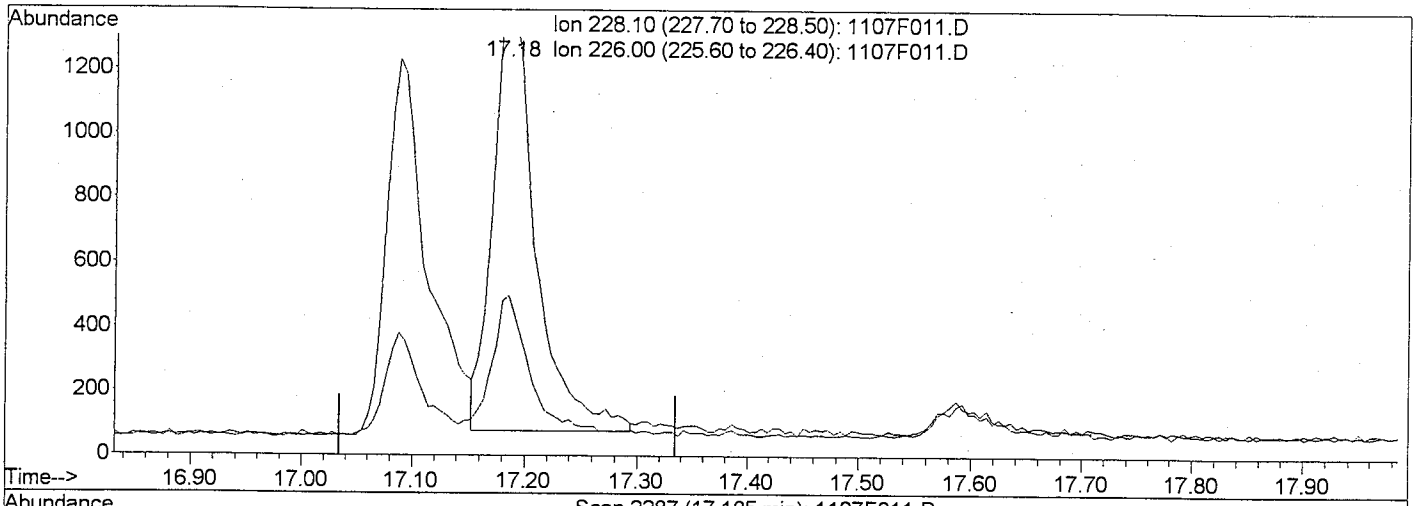
Quantitation Report (Qedit)

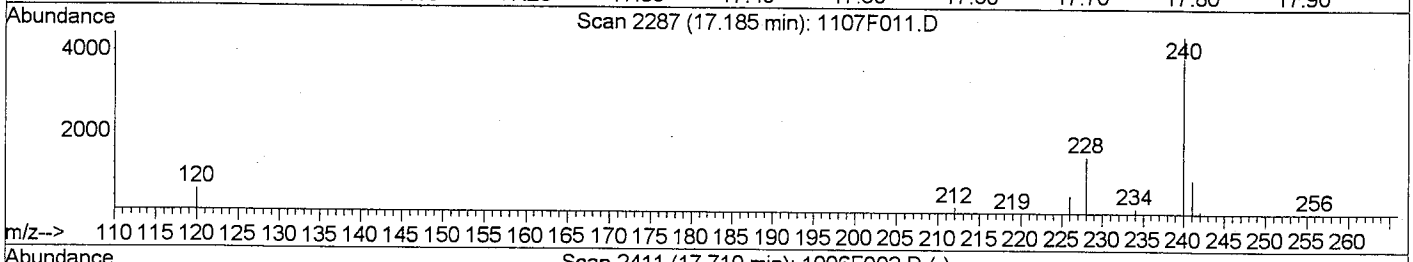
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

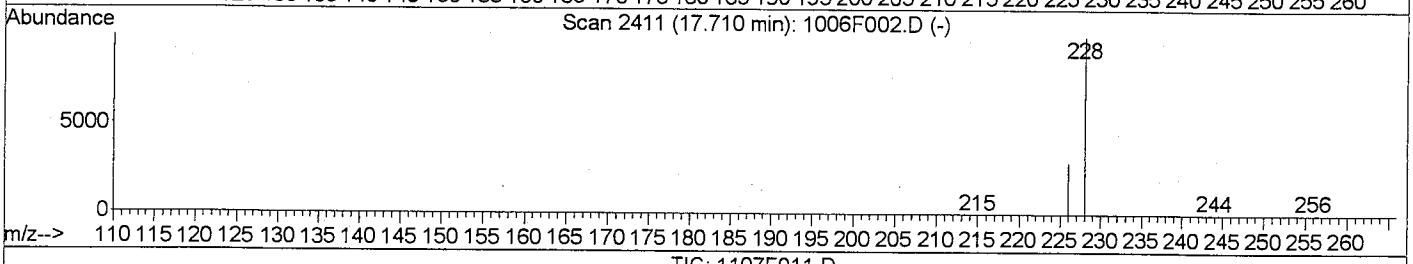
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(43) Chrysene (T)

17.18min 19.18ng/ml m

response 3534

Ion	Exp%	Act%
228.10	100	100
226.00	28.50	34.20
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/11/03

mm 11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:43:57 2003

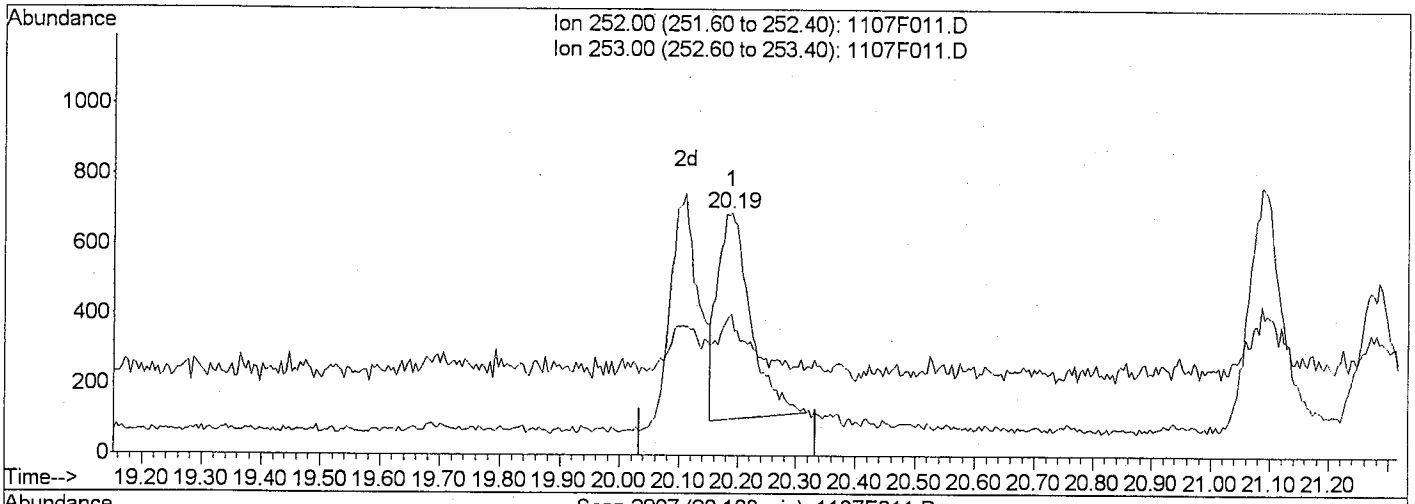
Quantitation Report (Qedit)

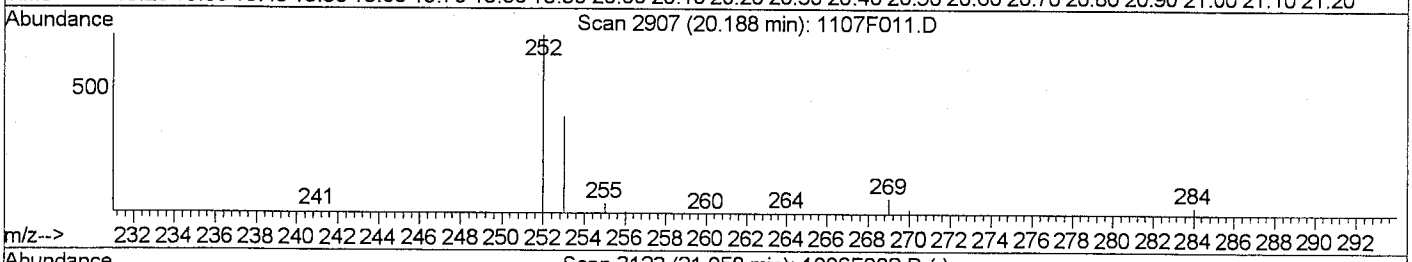
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

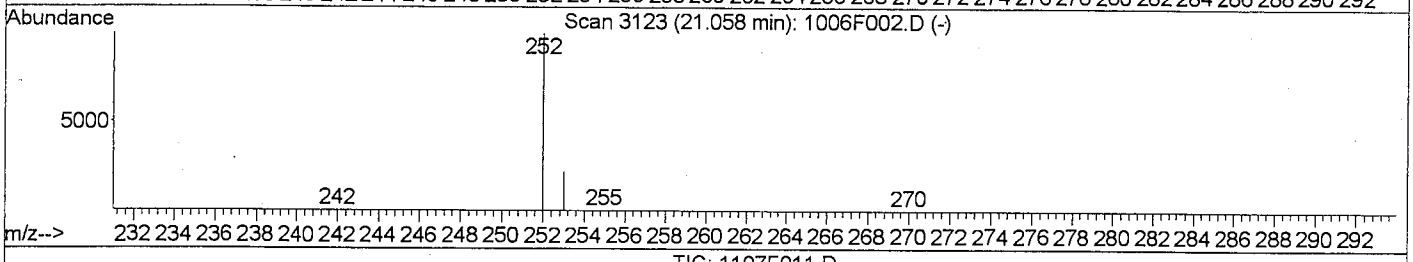
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(50) Benzo(k)fluoranthene (T)

20.19min 15.99ng/ml

response 2332

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	26.54
0.00	0.00	0.00
0.00	0.00	0.00

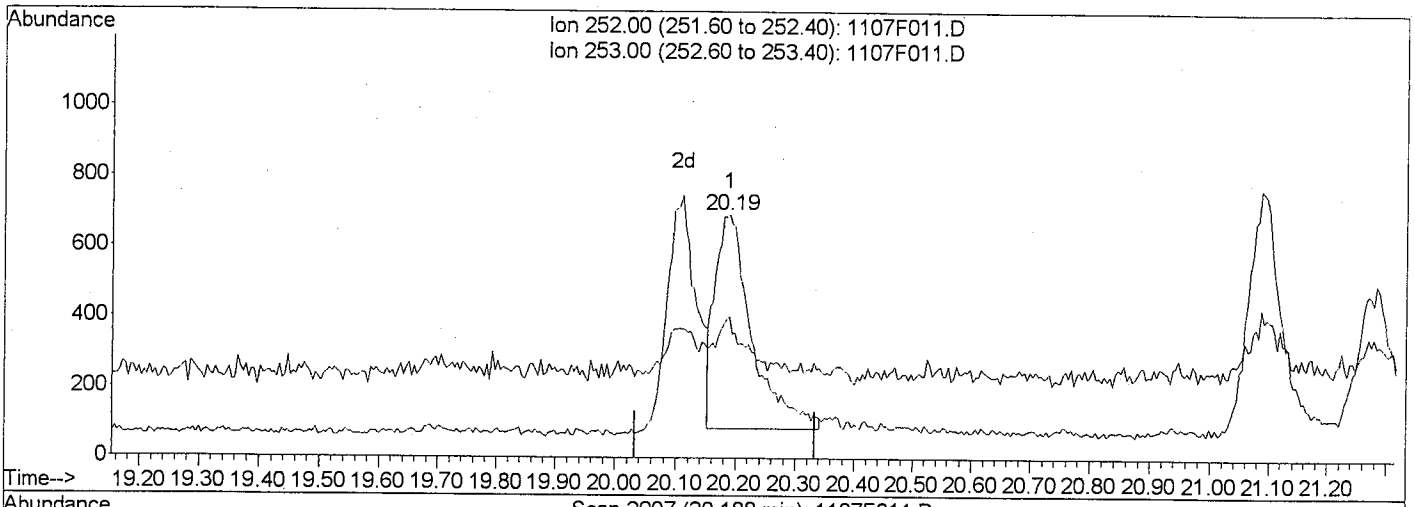
Quantitation Report (Qedit)

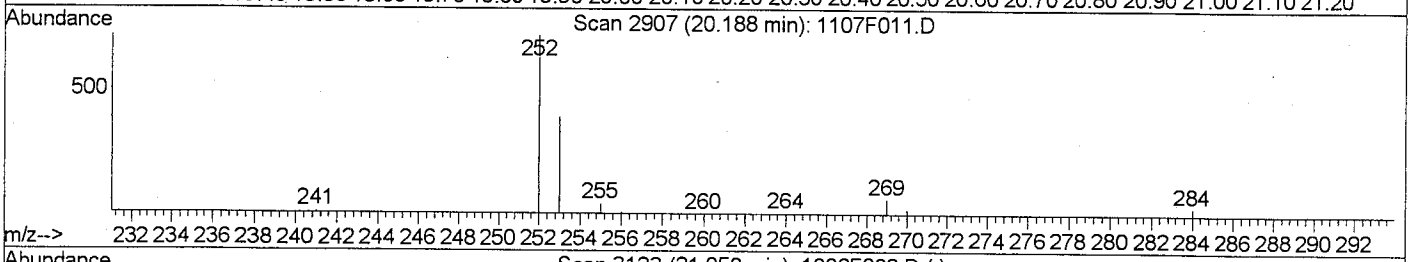
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

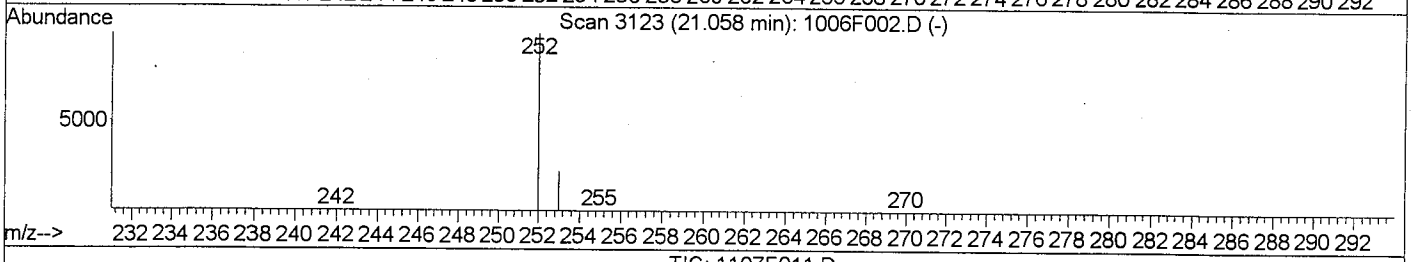
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(50) Benzo(k)fluoranthene (T)

20.19min 18.13ng/ml m

response 2645

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	58.30#
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/11/03

mm 11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:44:10 2003

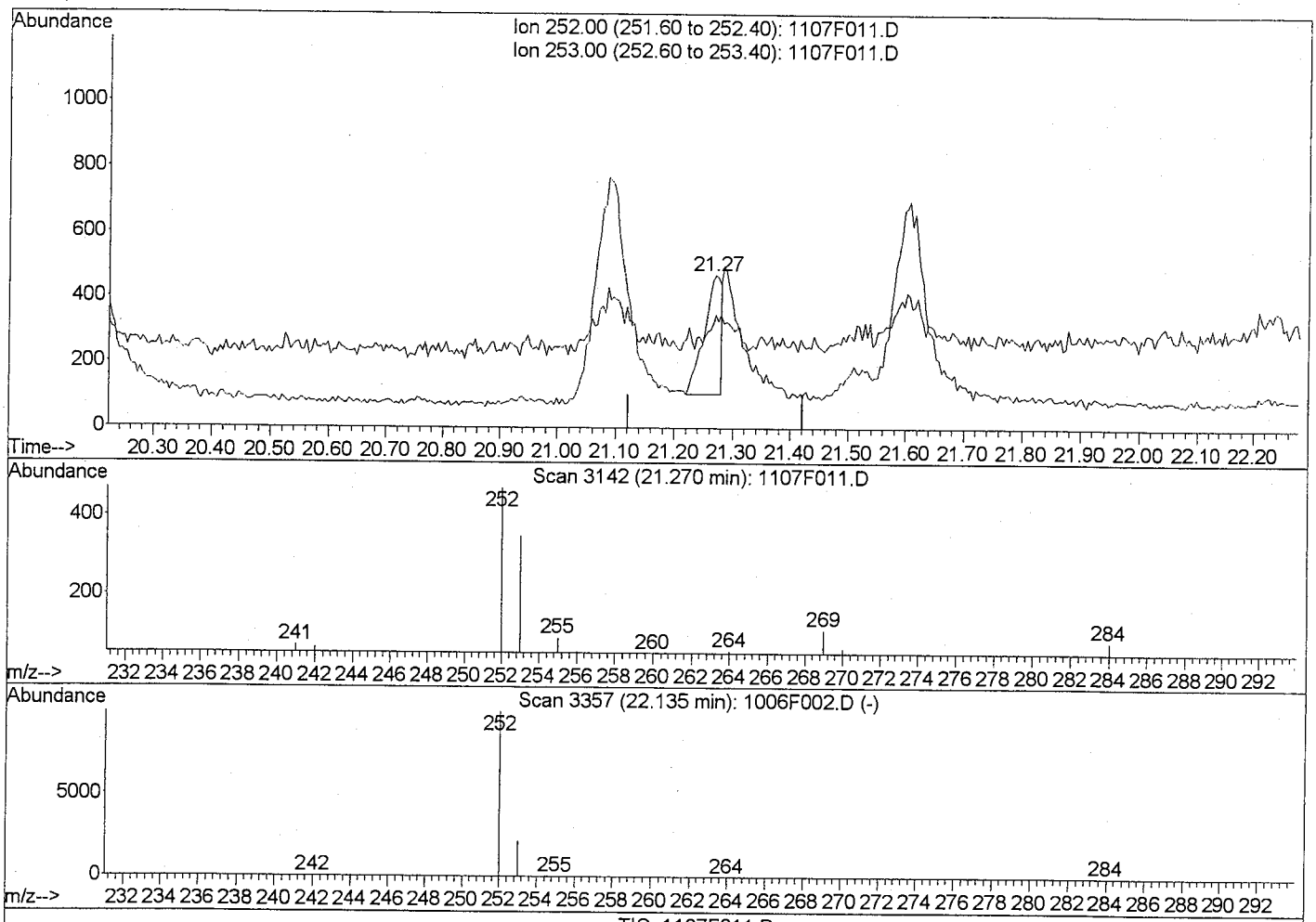
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(52) Benzo(a)pyrene (T)

21.27min 5.91ng/ml

response 762

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	20.92
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:44:13 2003

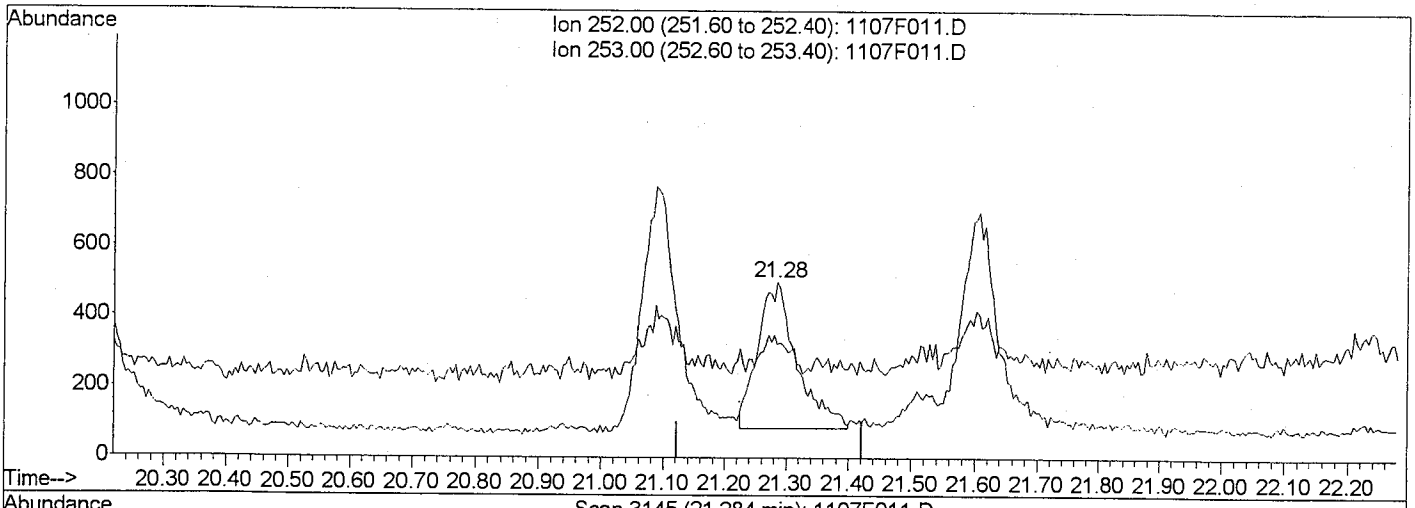
Quantitation Report (Qedit)

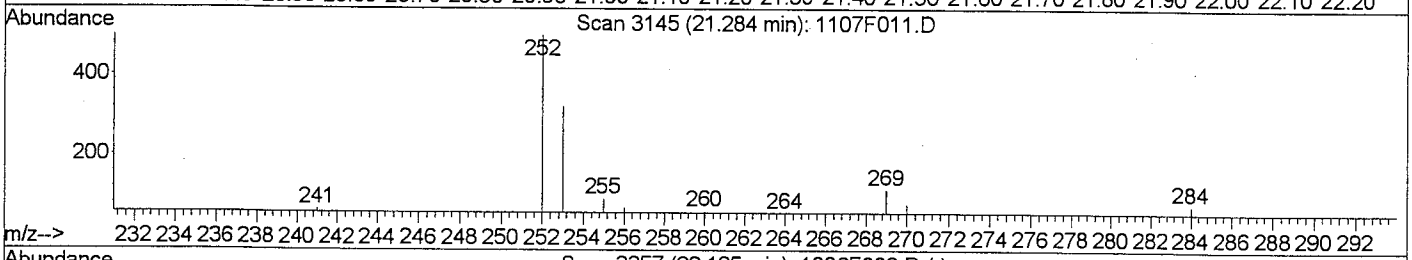
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

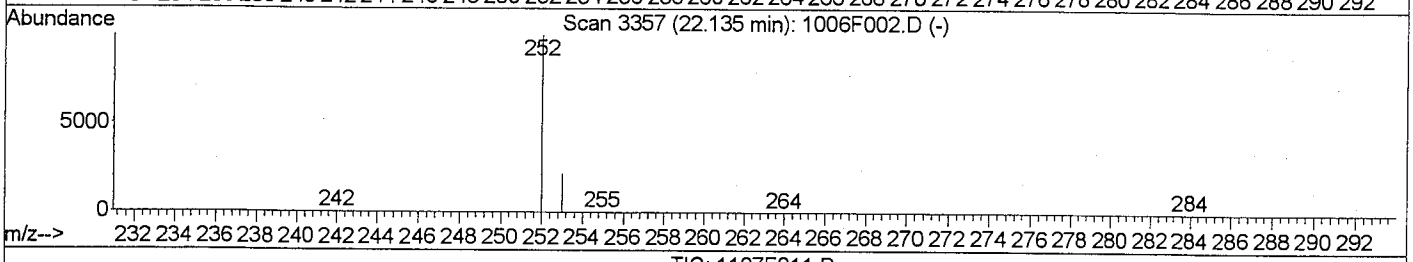
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(52) Benzo(a)pyrene (T)

21.28min 14.07ng/ml m

response 1814

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	64.60#
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

mt 11/11/03

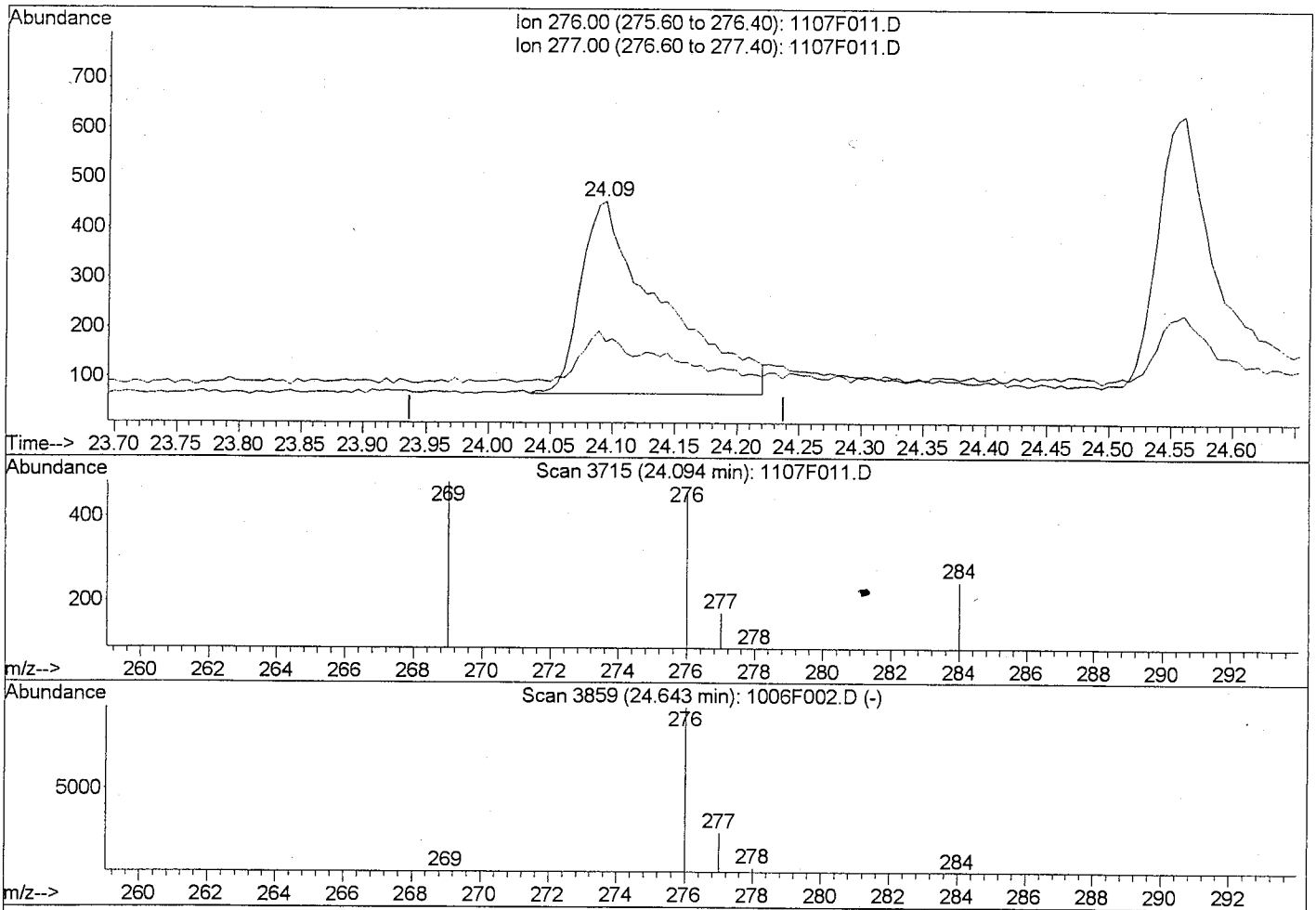
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 13.42ng/ml

response 1753

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	20.67
0.00	0.00	0.00
0.00	0.00	0.00

1107F011.D 1107ALK.M Sat Nov 08 06:44:23 2003

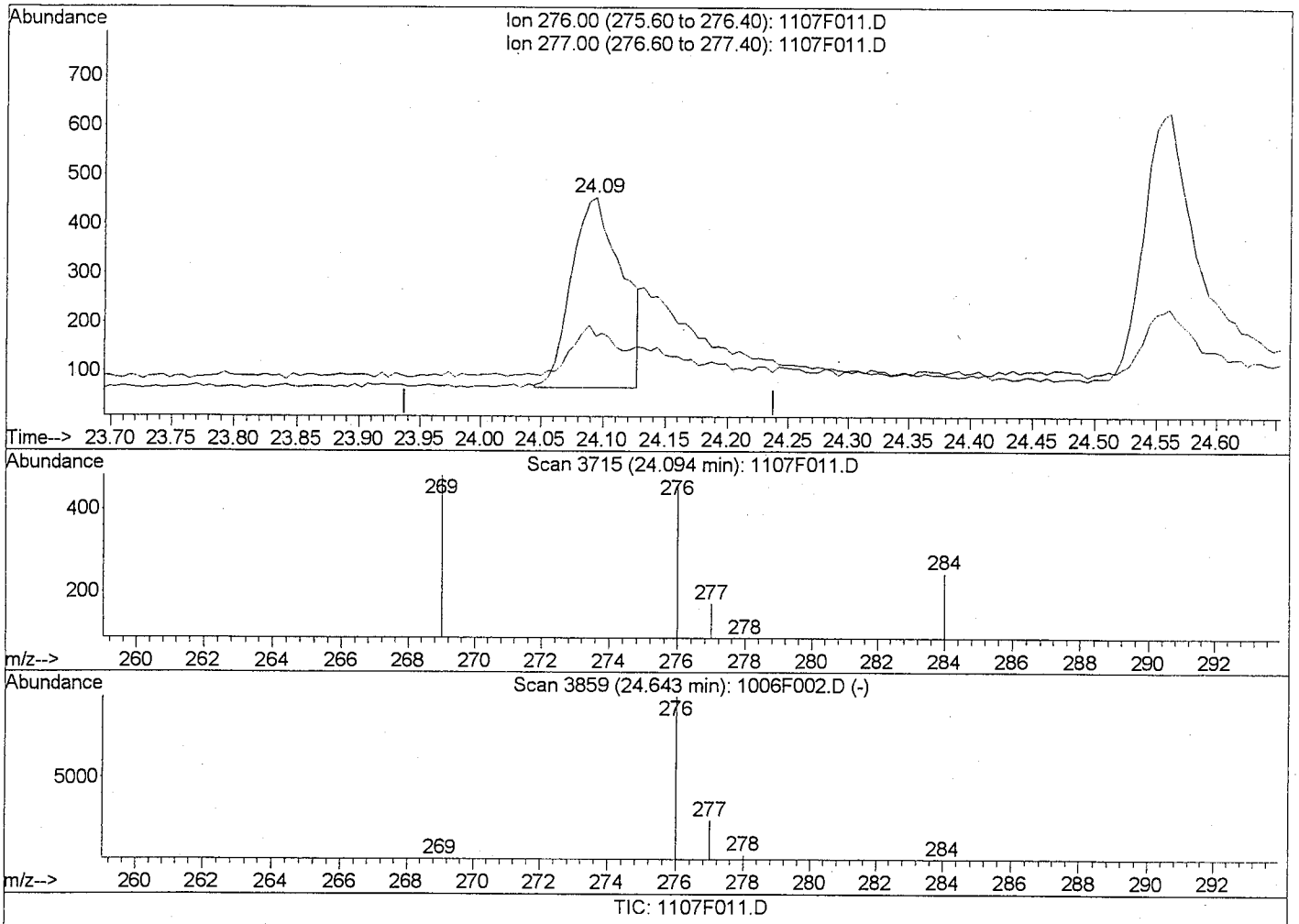
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 8.33ng/ml m

response 1089

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	37.89
0.00	0.00	0.00
0.00	0.00	0.00

11/11/03
ions integrated
11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:44:28 2003

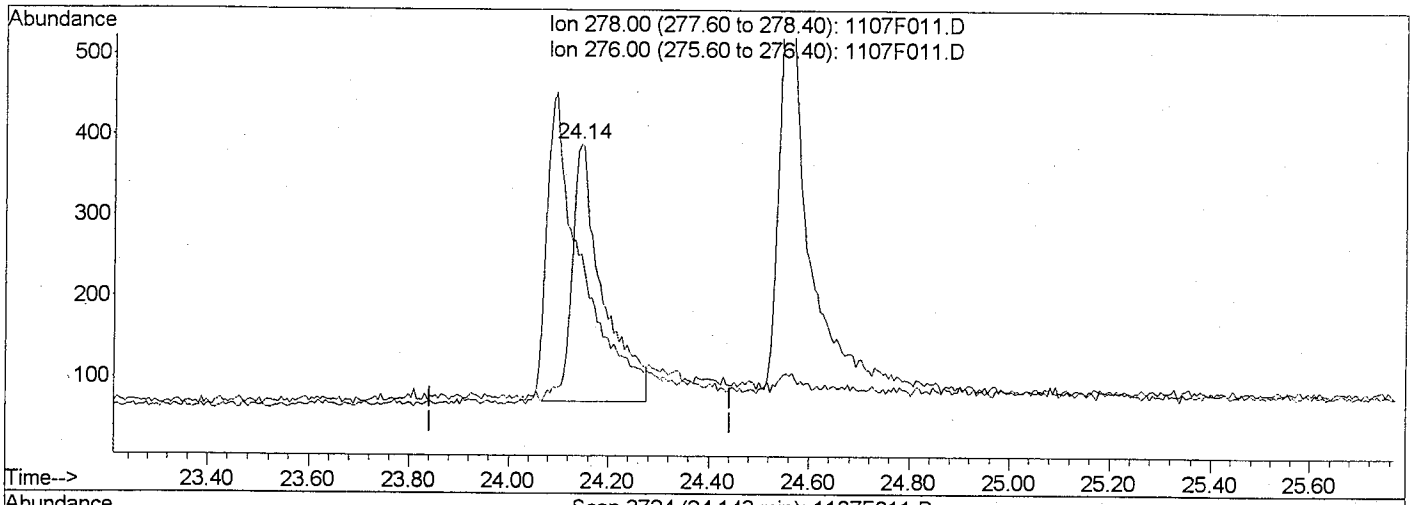
Quantitation Report (Qedit)

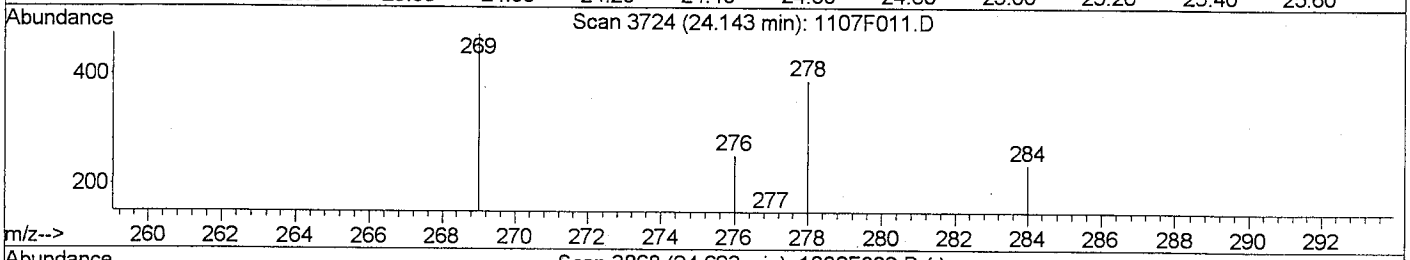
Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:41 2003

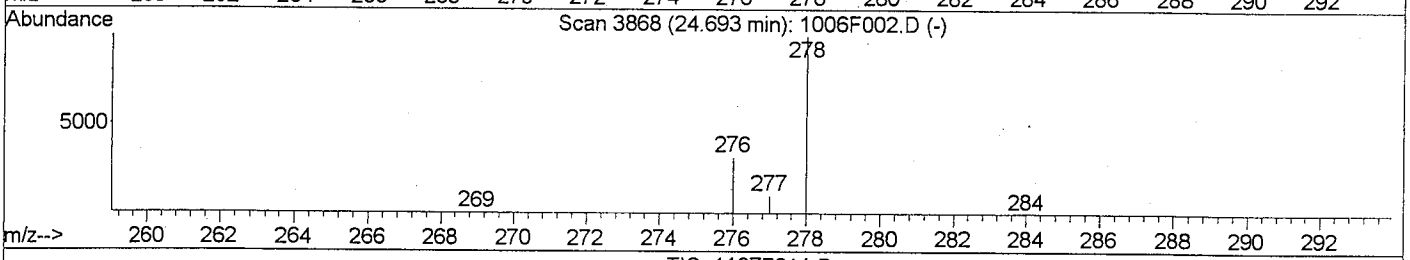
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F011.D

(55) Dibenz(a,h)anthracene (T)

24.14min 9.46ng/ml

response 1360

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	44.83
0.00	0.00	0.00
0.00	0.00	0.00

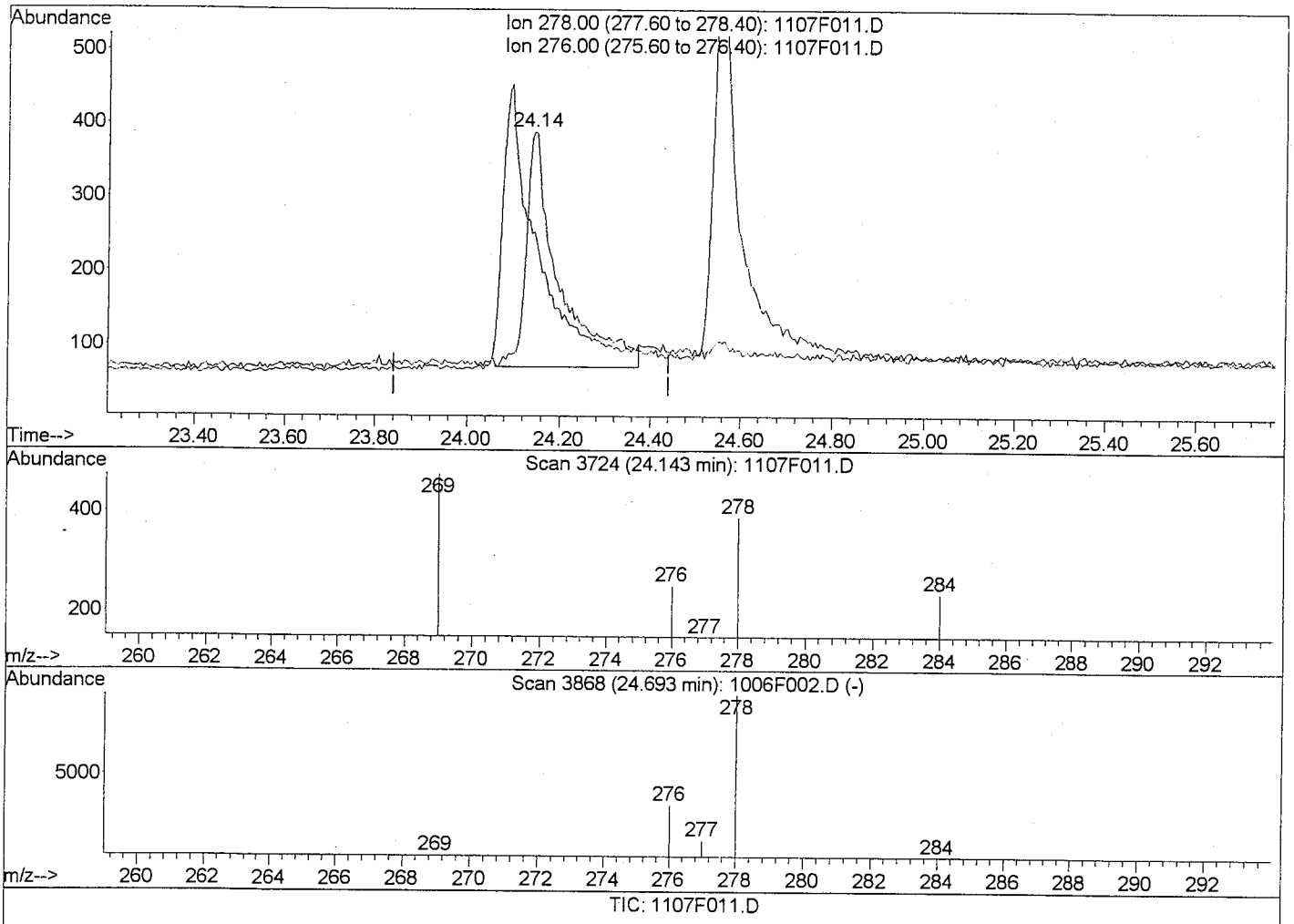
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F011.D
Acq On : 7 Nov 2003 5:03 pm
Sample : SIM PAH ICAL @ 0.02ug/mL | SVM15-55B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:42 2003

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F011.D

(55) Dibenz(a,h)anthracene (T)

24.14min 10.90ng/ml m

response 1567

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	64.87#
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/3
mt
11/11/03

1107F011.D 1107ALK.M Sat Nov 08 06:44:37 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:46 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Jm 11/10/03
mst 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	216388	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	109234	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	155830	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	139272	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	79633	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	5411	34.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.45%		
16) Fluorene-d10	9.01	176	3811	34.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.41%		
21) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	13.70	212	5209	33.15	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.31%		
41) Terphenyl-d14	14.74	244	4658	34.10	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.41%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	9387	36.36	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	5170	32.95	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	4625	32.02	ng/ml	98
6) Biphenyl	7.10	154	6232	32.30	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.33	156	4371	32.58	ng/ml	99
12) Acenaphthylene	7.80	152	7458	33.36	ng/ml	100
13) Acenaphthene	8.11	154	4693	33.58	ng/ml	95
14) Dibenzofuran	8.41	168	6352	32.44	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.83	170	4224	34.51	ng/ml	96
17) Fluorene	9.06	166	4770	30.83	ng/ml	94
24) Dibenzothiophene	10.78	184	6455	32.15	ng/ml	98
28) Phenanthrene	11.05	178	6945	33.68	ng/ml	100
29) Anthracene	11.15	178	5526	30.51	ng/ml	98
30) Carbazole	11.58	167	4058	27.55	ng/ml	92
31) 1-Methylphenanthrene	12.44	192	4467	32.21	ng/ml	99
36) Fluoranthene	13.74	202	6571	32.90	ng/ml	98
39) Pyrene	14.24	202	6655	31.93	ng/ml	100
42) Benz(a)anthracene	17.09	228	4943	32.09	ng/ml	94
43) Chrysene	17.18	228	5593	35.78	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	3643	29.77	ng/ml	94
50) Benzo(k)fluoranthene	20.18	252	4495m	38.00	ng/ml	
51) Benzo(e)pyrene	21.09	252	4433	35.08	ng/ml	94
52) Benzo(a)pyrene	21.27	252	3223m	30.83	ng/ml	

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:46 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Perylene	21.60	252	3481	31.84	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1877m	17.72	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	2679m	22.98	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	3216	24.19	ng/ml	99

(#) = qualifier out of range (m) = manual integration

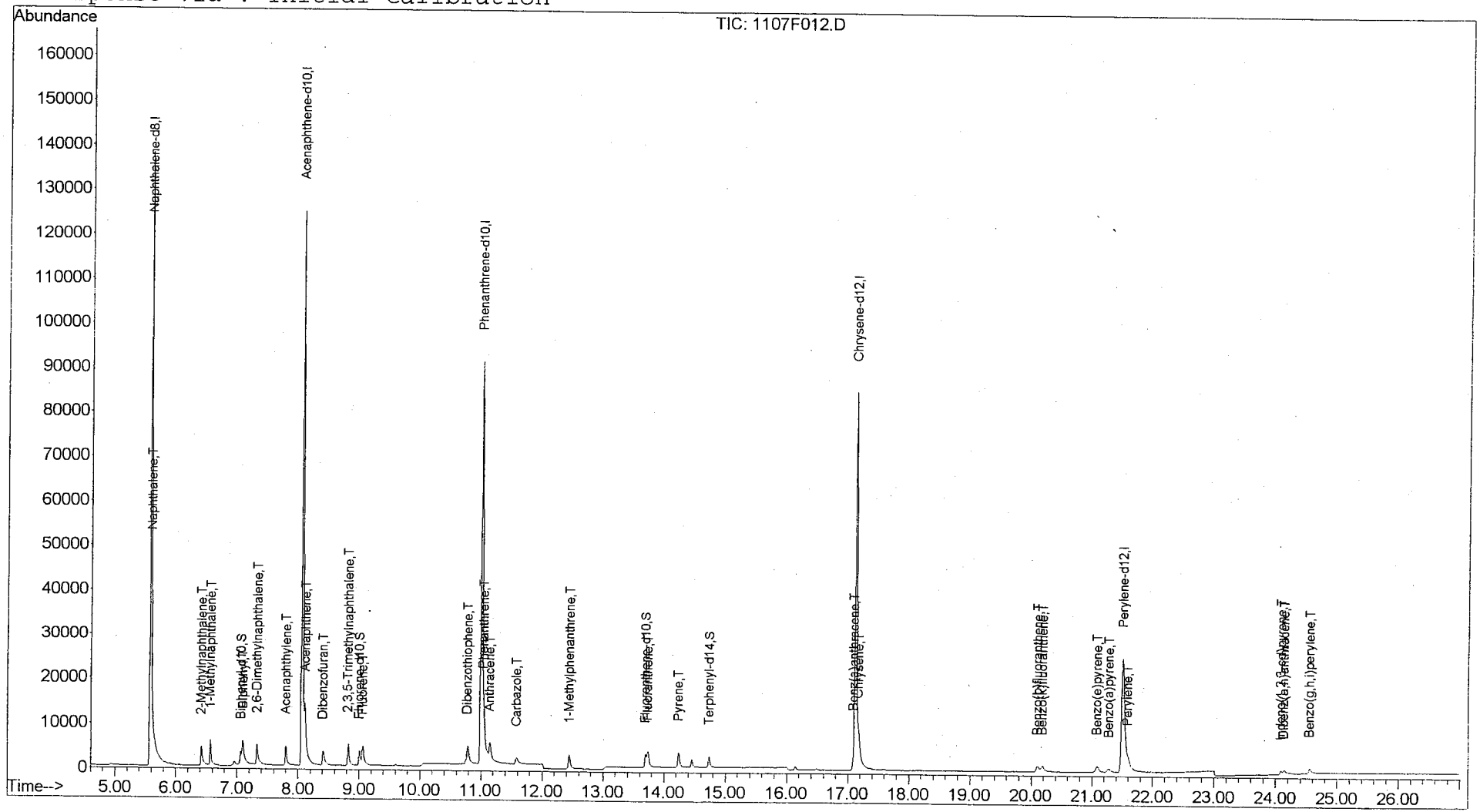
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1639

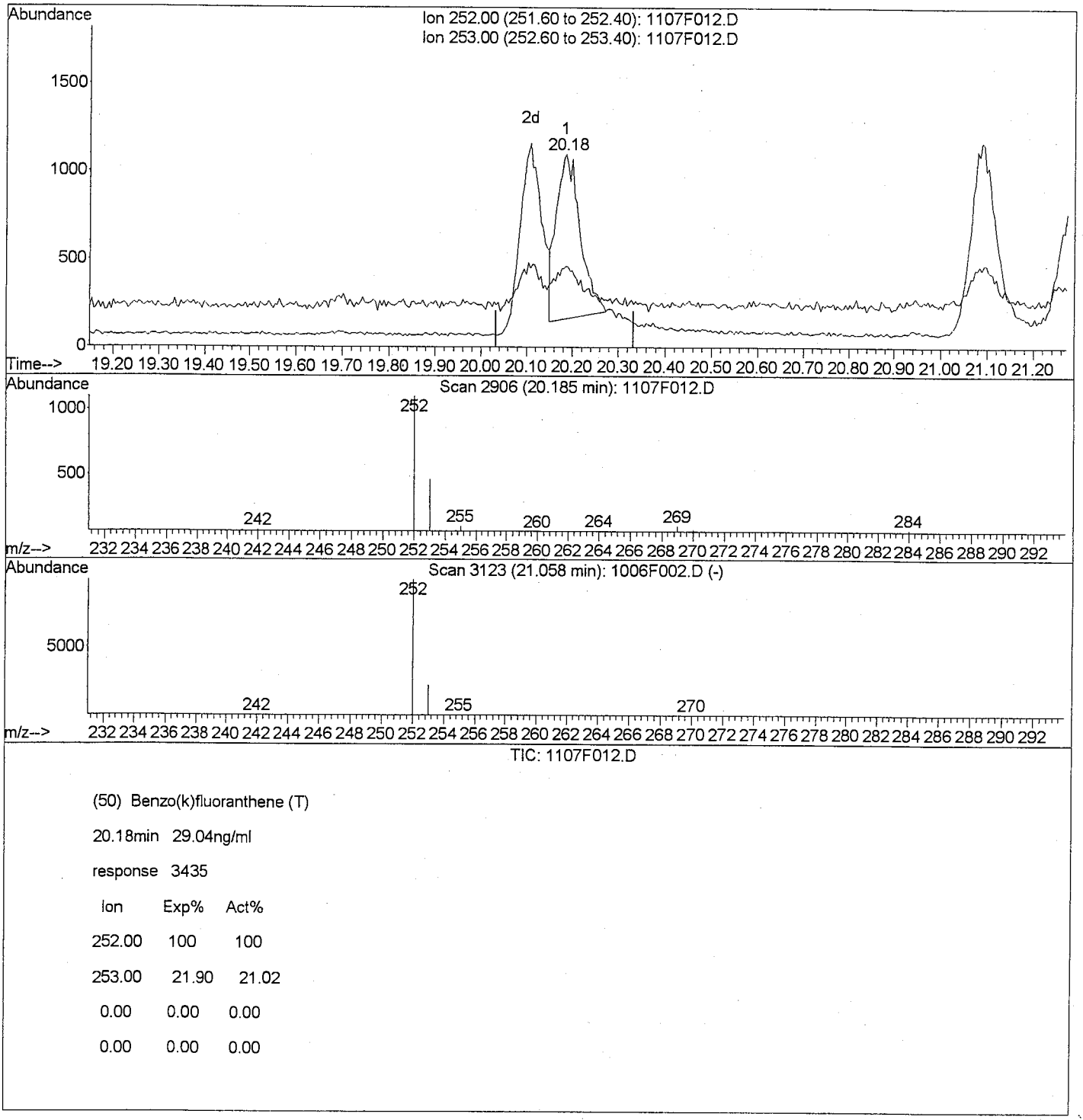
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 29.04ng/ml

response 3435

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.02
0.00	0.00	0.00
0.00	0.00	0.00

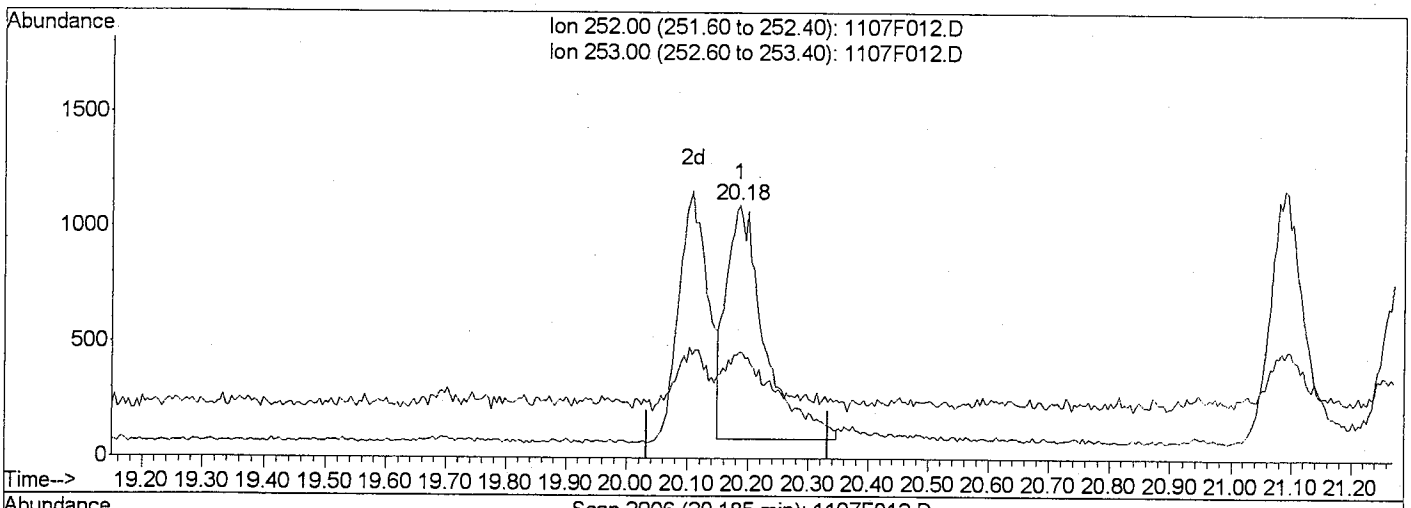
Quantitation Report (Qedit)

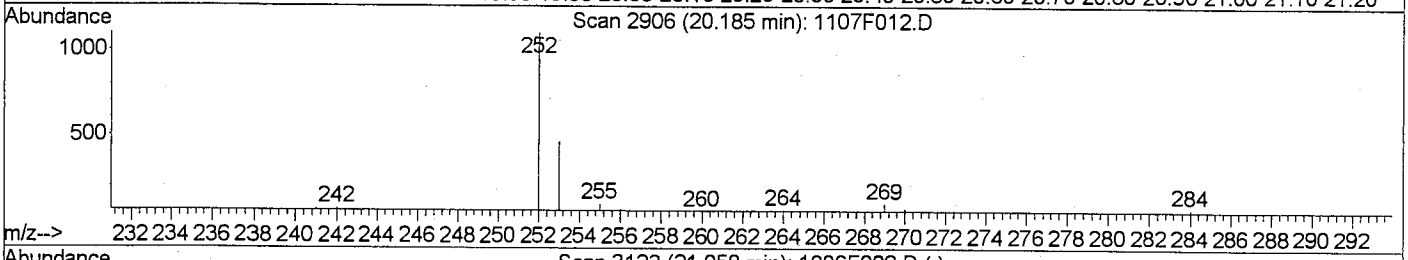
Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003

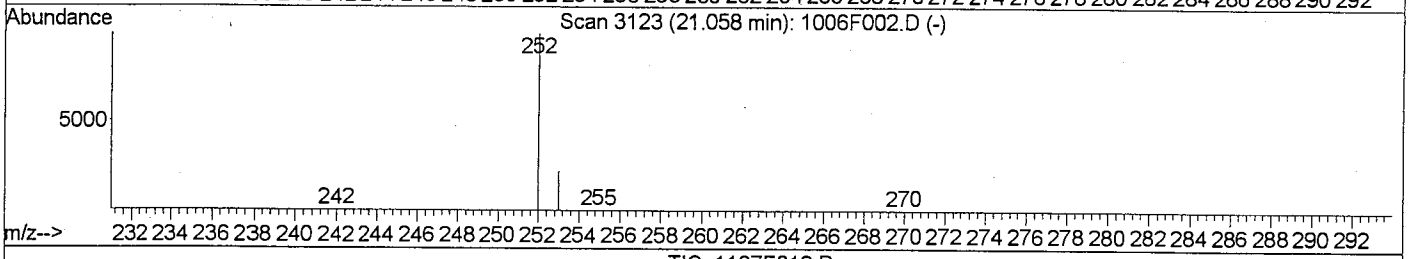
Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F012.D

(50) Benzo(k)fluoranthene (T)

20.18min 38.00ng/ml m

response 4495

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	41.89
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
complete
mt
11/11/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:08 2003

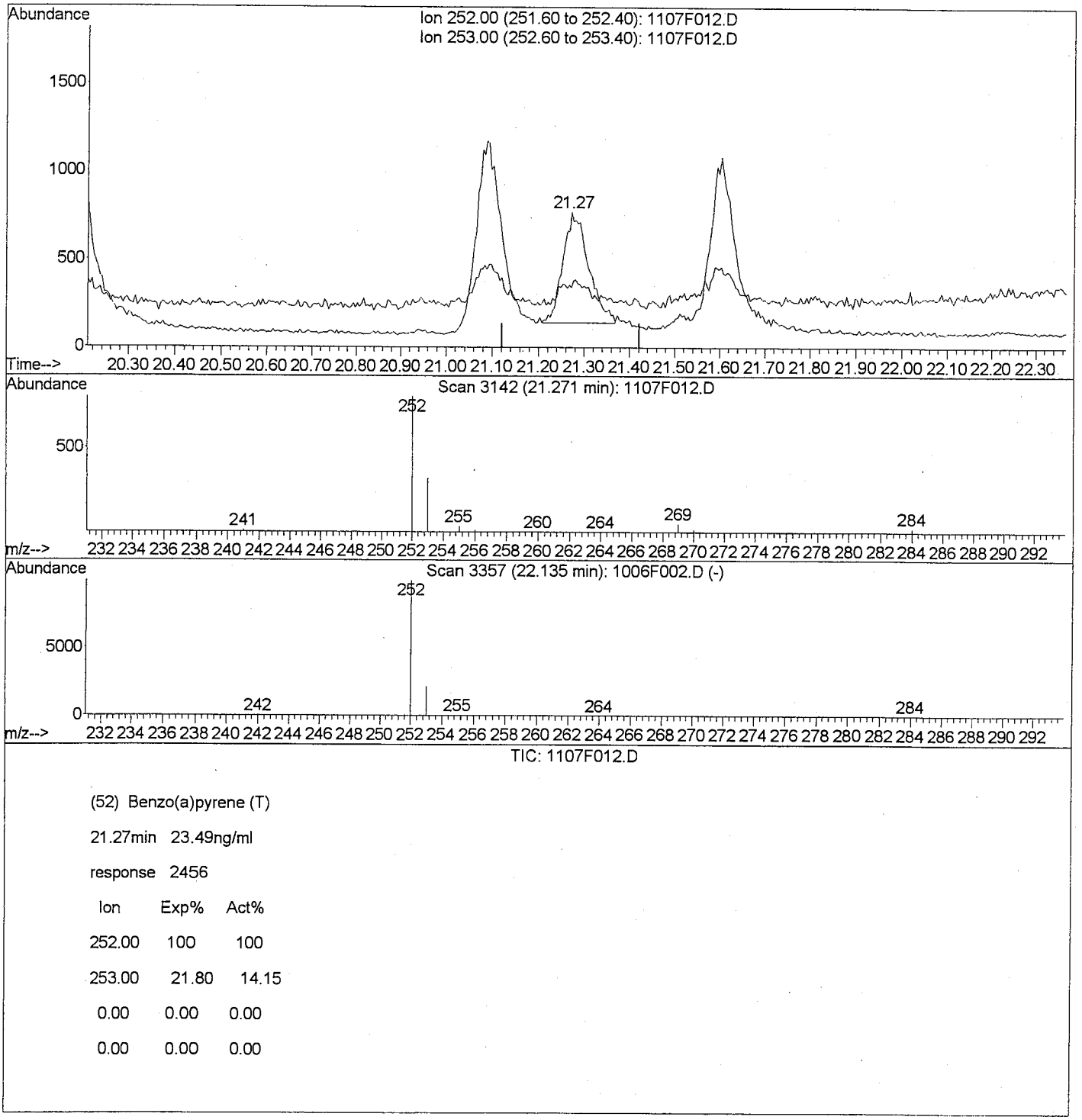
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(52) Benzo(a)pyrene (T)

21.27min 23.49ng/ml

response 2456

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	14.15
0.00	0.00	0.00
0.00	0.00	0.00

1107F012.D 1107ALK.M Sat Nov 08 07:00:11 2003

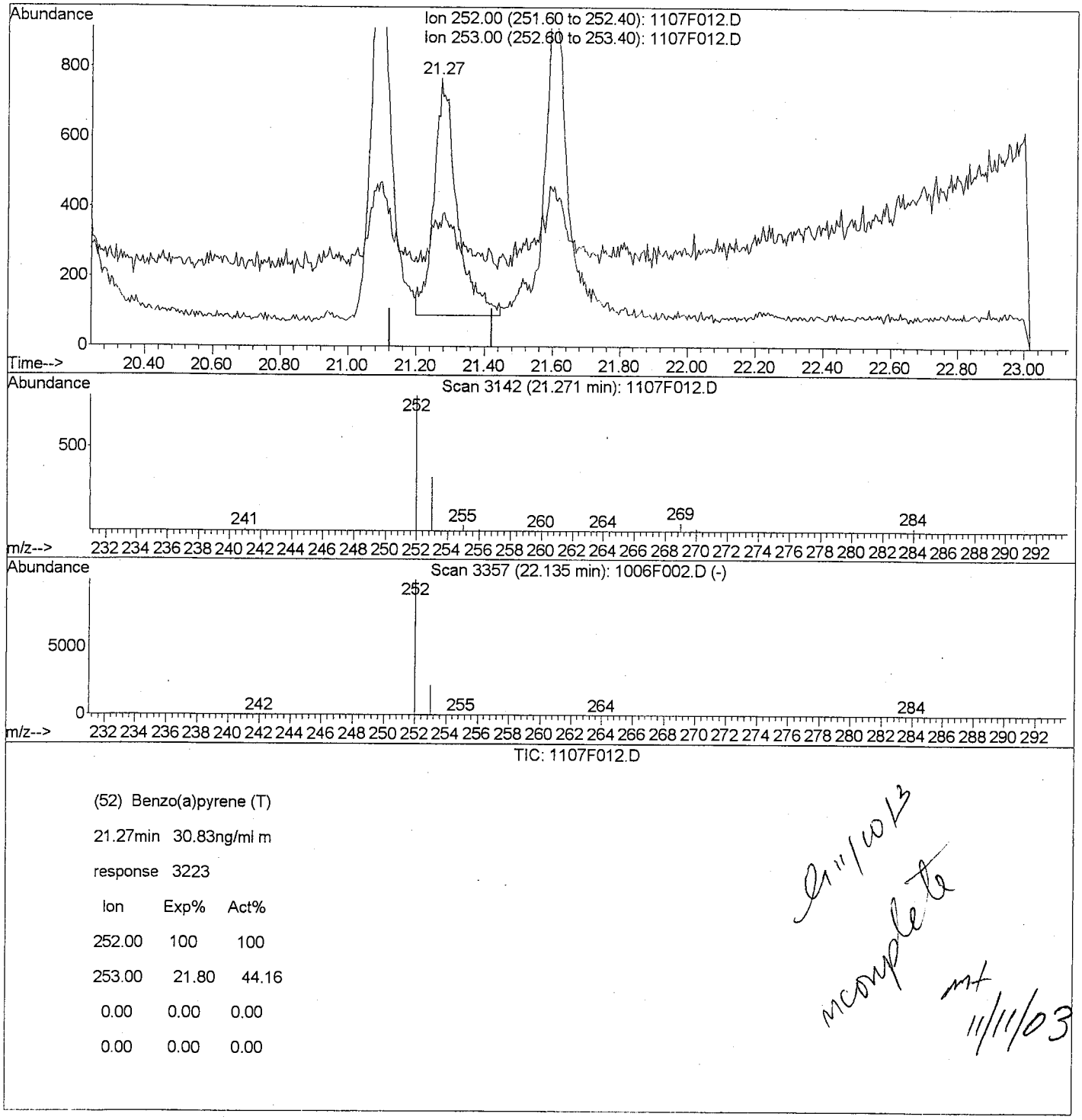
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(52) Benzo(a)pyrene (T)

21.27min 30.83ng/ml m

response 3223

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	44.16
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
complete
mt
11/11/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:18 2003

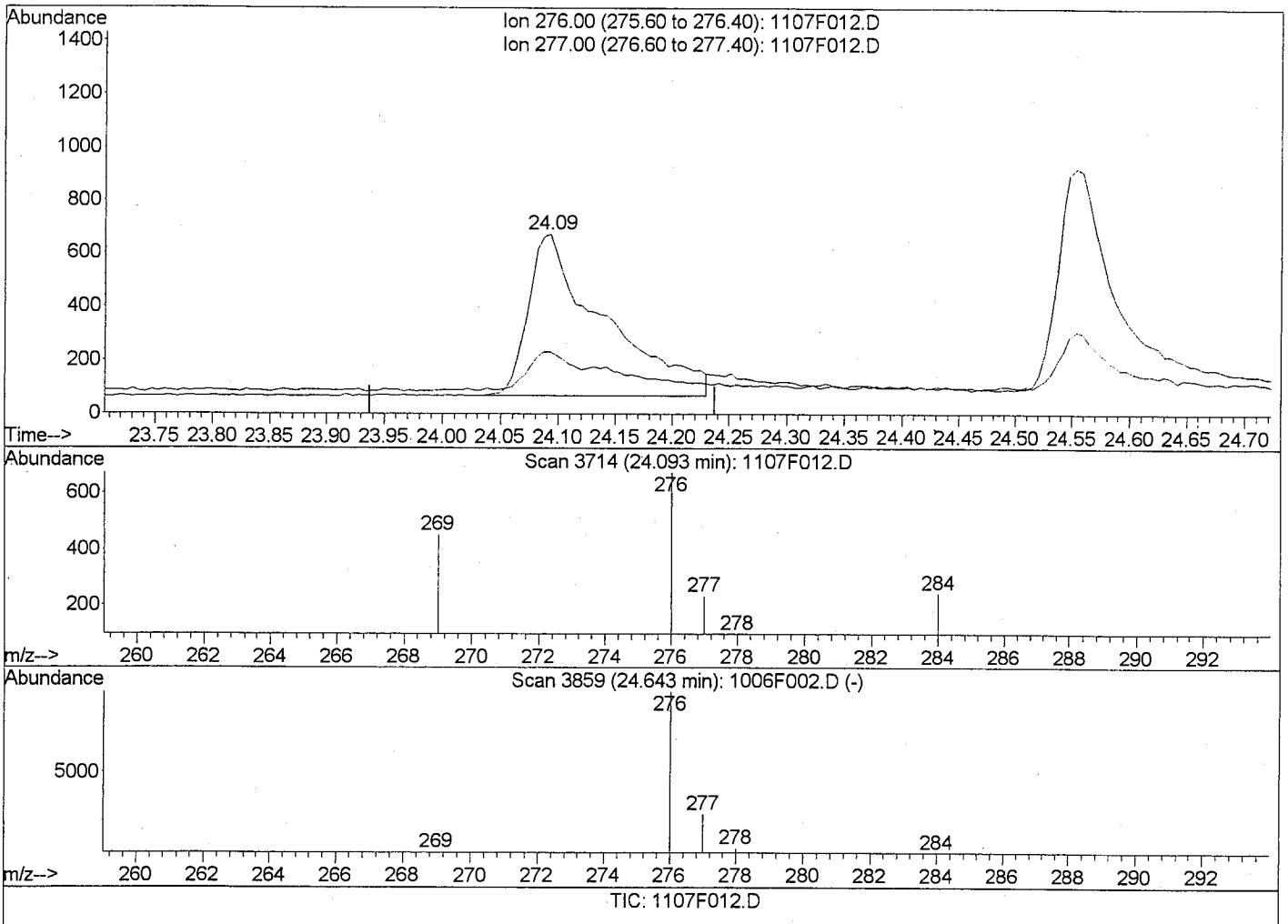
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 26.12ng/ml

response 2767

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	23.80
0.00	0.00	0.00
0.00	0.00	0.00

1107F012.D 1107ALK.M Sat Nov 08 07:00:22 2003

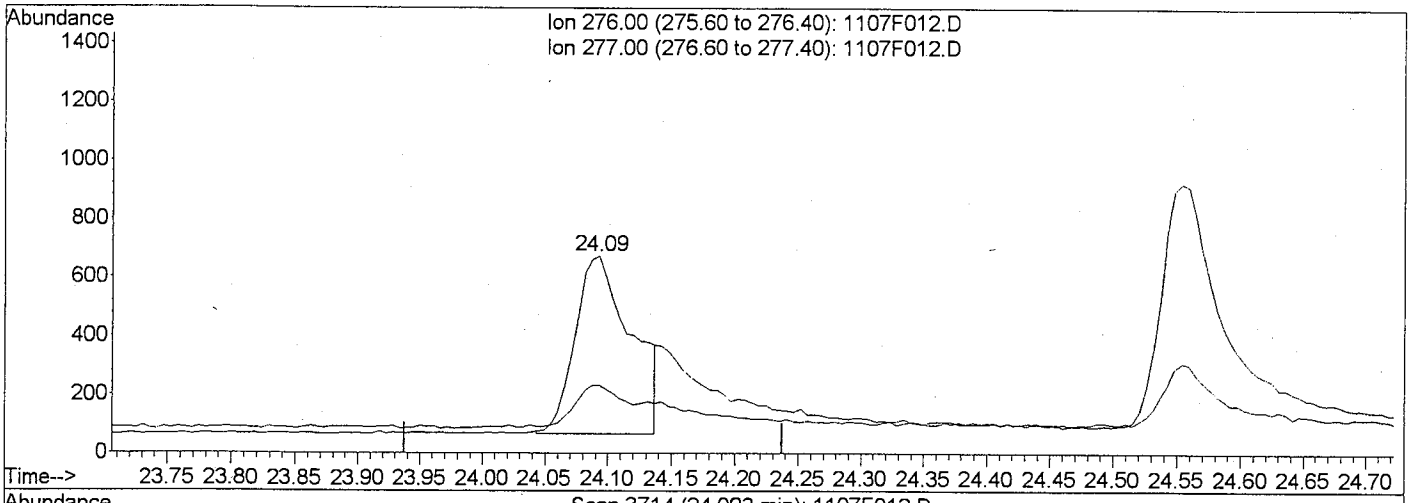
Quantitation Report (Qedit)

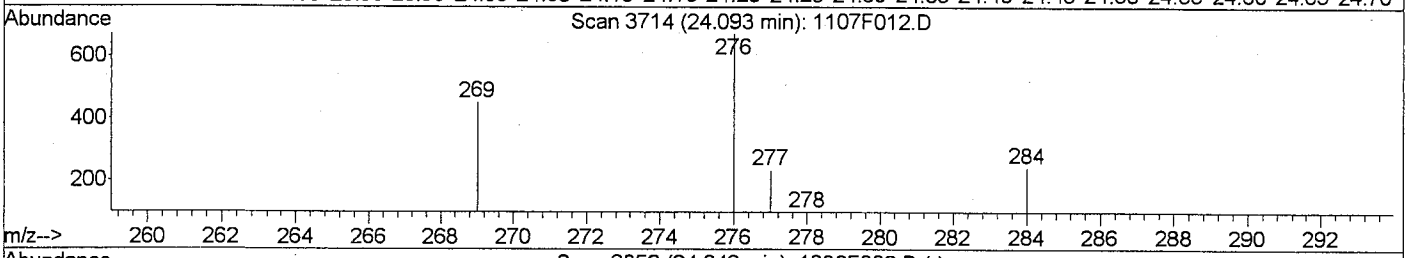
Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003

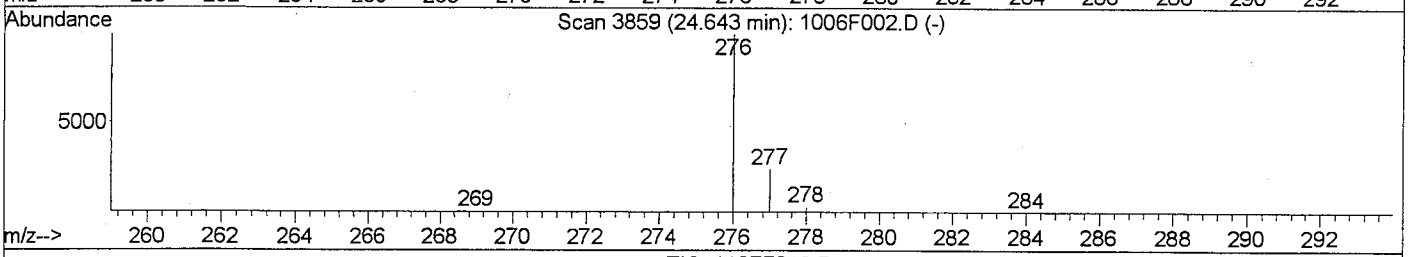
Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F012.D

(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 17.72ng/ml m

response 1877

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	34.47
0.00	0.00	0.00
0.00	0.00	0.00

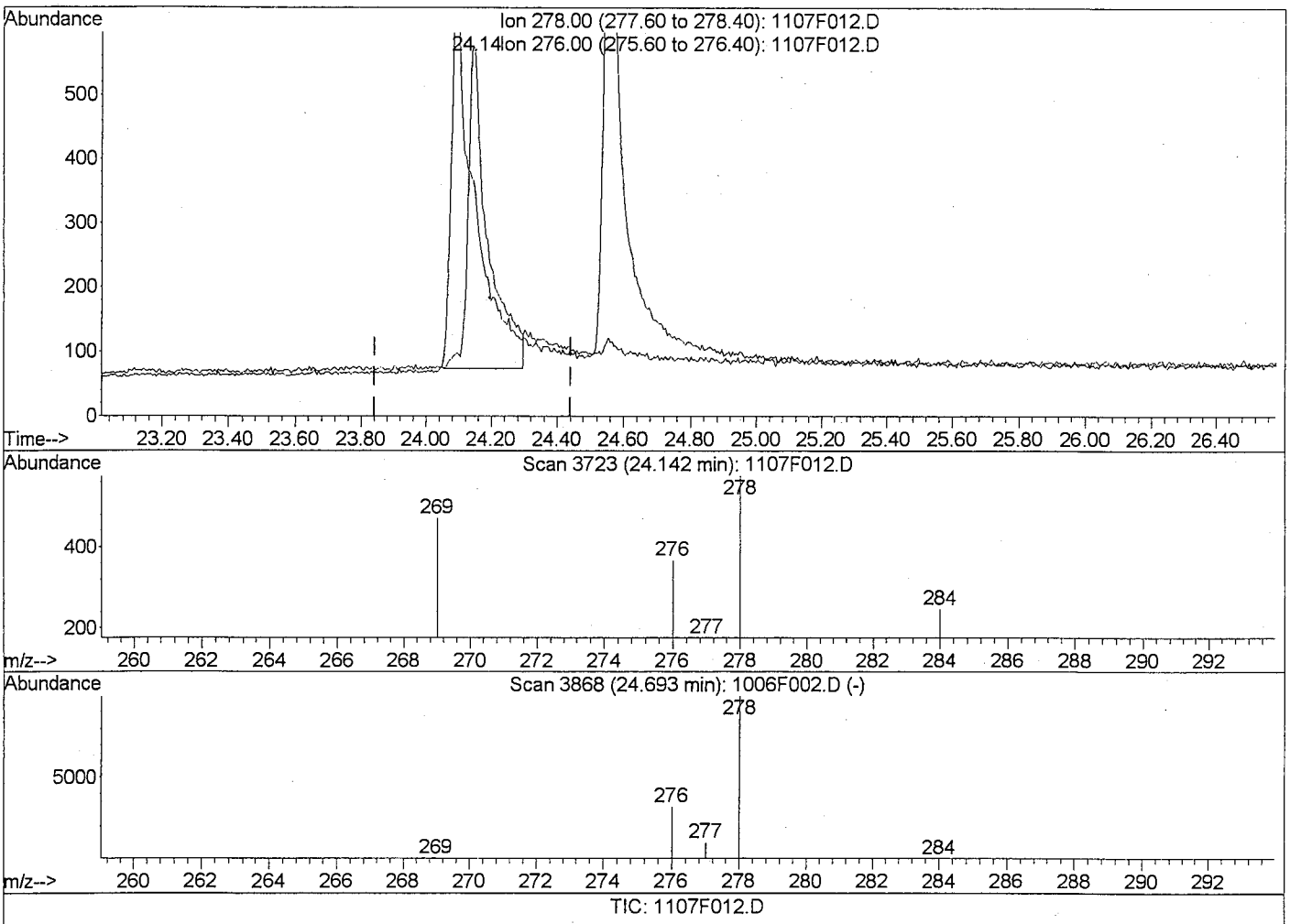
over integrated [illegible] 11/14/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:27 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D Vial: 6
Acq On : 7 Nov 2003 5:39 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:57 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F012.D

(55) Dibenz(a,h)anthracene (T)

24.14min 18.23ng/ml

response 2125

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	53.88
0.00	0.00	0.00
0.00	0.00	0.00

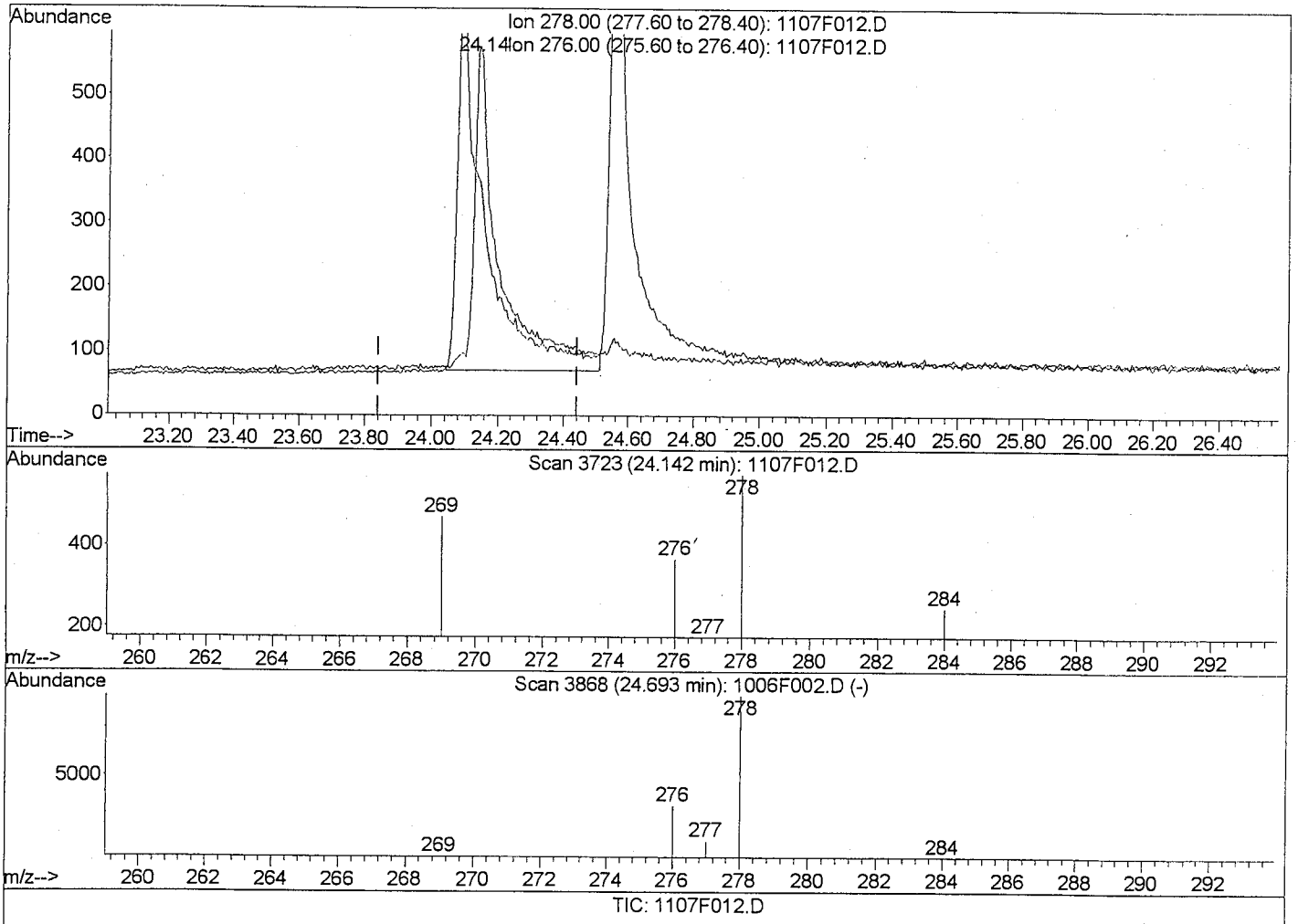
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F012.D
Acq On : 7 Nov 2003 5:39 pm
Sample : SIM PAH ICAL @ 0.04ug/mL | SVM15-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 22.98ng/ml m

response 2679

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	63.72#
0.00	0.00	0.00
0.00	0.00	0.00

incomplete lrr 11/10/03

mt 11/14/03

1107F012.D 1107ALK.M Sat Nov 08 07:00:36 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F013.D
Acq On : 7 Nov 2003 6:15 pm
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:49 2003

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Qa/10/13 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	269417	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	138187	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	198025	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	190599	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	116819	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	18581	95.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.51%		
16) Fluorene-d10	9.01	176	12881	91.17	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.12%		
21) 2,4,6 Tribromophenol	9.60	330	1038	51.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.18%		
37) Fluoranthene-d10	13.70	212	18952	94.92	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.49%		
41) Terphenyl-d14	14.74	244	17364	92.89	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.29%		
Target Compounds						Qvalue
2) Naphthalene	5.60	128	30685	95.46	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	17327	88.69	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	16186	90.01	ng/ml	99
6) Biphenyl	7.09	154	21211	88.28	ng/ml	98
7) 2,6-Dimethylnaphthalene	7.33	156	14268	85.43	ng/ml	99
12) Acenaphthylene	7.80	152	24786	87.63	ng/ml	99
13) Acenaphthene	8.12	154	16374	92.63	ng/ml	100
14) Dibenzofuran	8.41	168	21296	85.97	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.83	170	13888	89.70	ng/ml	95
17) Fluorene	9.06	166	16382	83.69	ng/ml	96
22) Pentachlorophenol	10.79	266	3333	149.16	ng/ml	95
24) Dibenzothiophene	10.78	184	21622	84.75	ng/ml	96
28) Phenanthrene	11.05	178	22900	87.38	ng/ml	98
29) Anthracene	11.15	178	18208	79.11	ng/ml	100
30) Carbazole	11.58	167	13701	73.19	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	14880	84.44	ng/ml	98
36) Fluoranthene	13.74	202	22697	89.43	ng/ml	98
39) Pyrene	14.24	202	23306	81.71	ng/ml	99
42) Benz(a)anthracene	17.09	228	19165	90.93	ng/ml	99
43) Chrysene	17.18	228	20378	95.25	ng/ml	97
49) Benzo(b)fluoranthene	20.10	252	13968	77.80	ng/ml	97
50) Benzo(k)fluoranthene	20.19	252	19803m	114.13	ng/ml	
51) Benzo(e)pyrene	21.09	252	17285	93.25	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F013.D
Acq On : 7 Nov 2003 6:15 pm
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:49 2003

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	10958	71.44	ng/ml	98
53)	Perylene	21.60	252	13243	82.57	ng/ml	98
54)	Indeno(1,2,3-cd)pyrene	24.09	276	6471m	41.64	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	10725m	62.71	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	12369	63.43	ng/ml	100

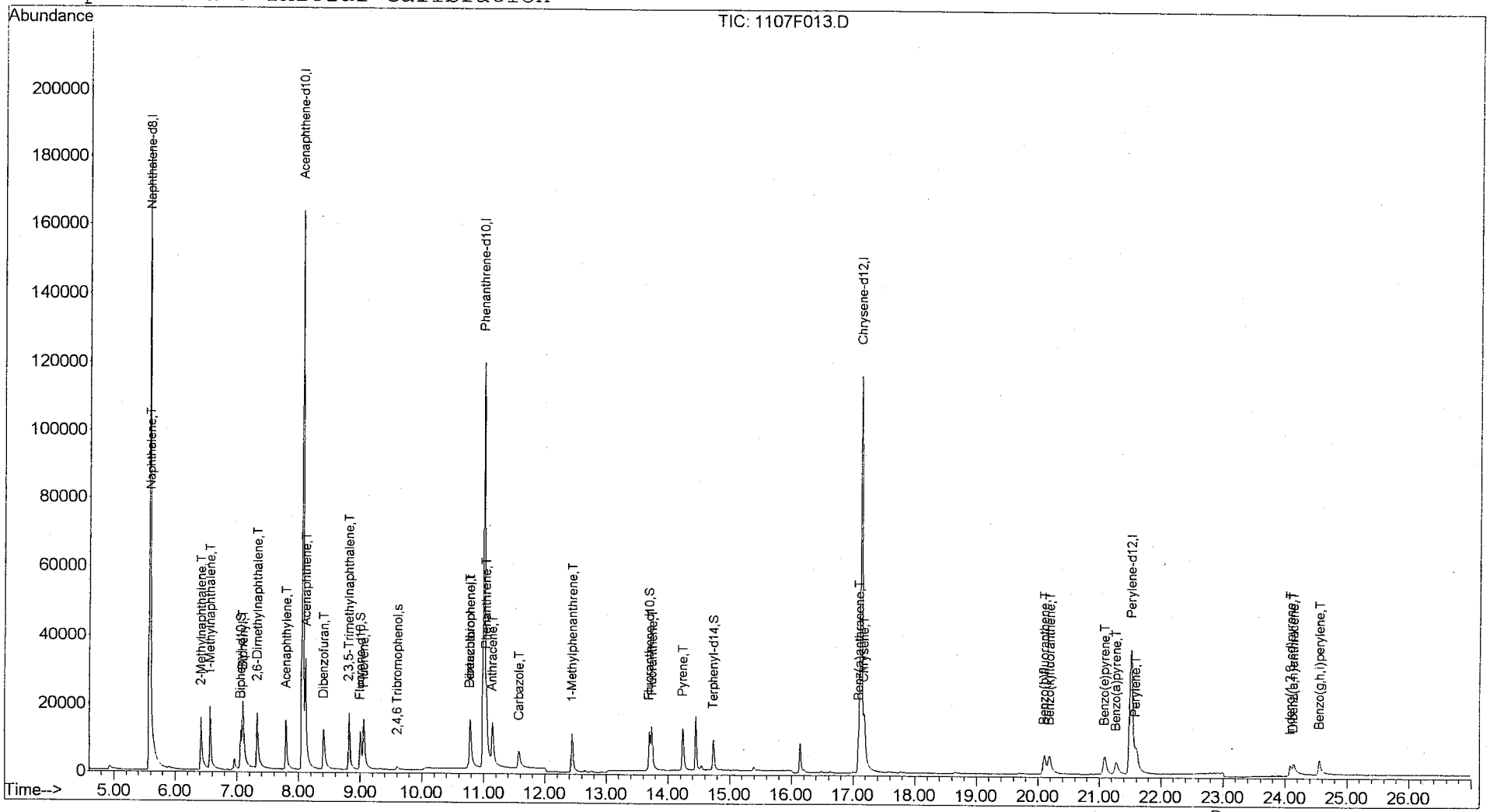
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

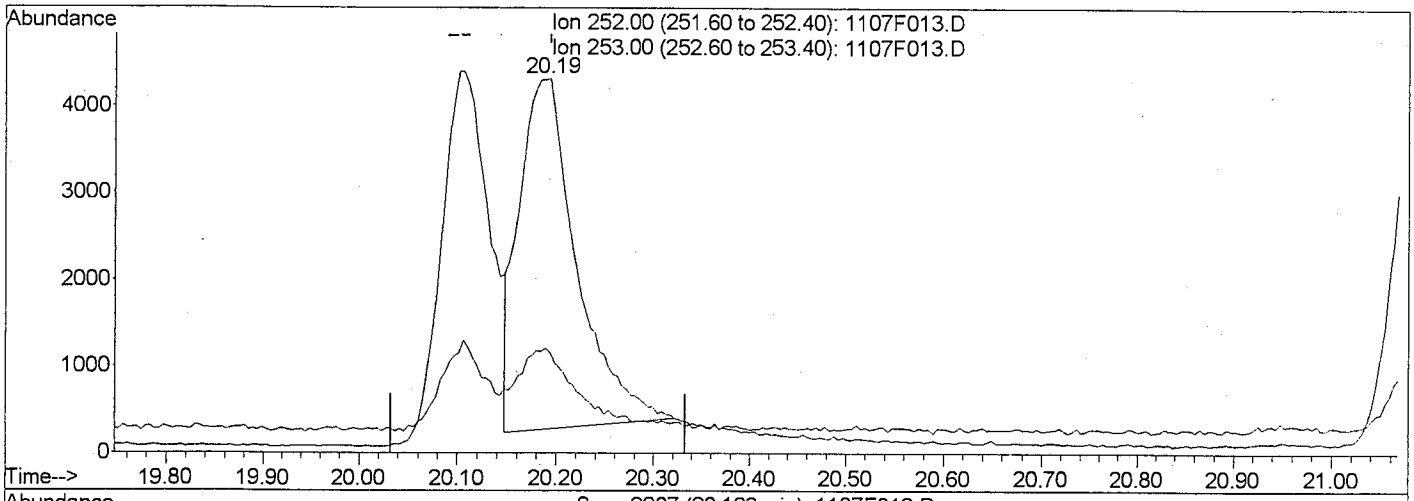
1650

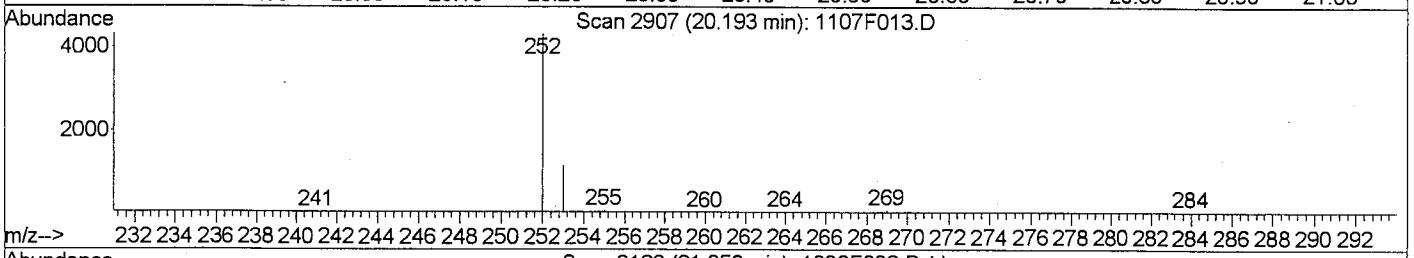


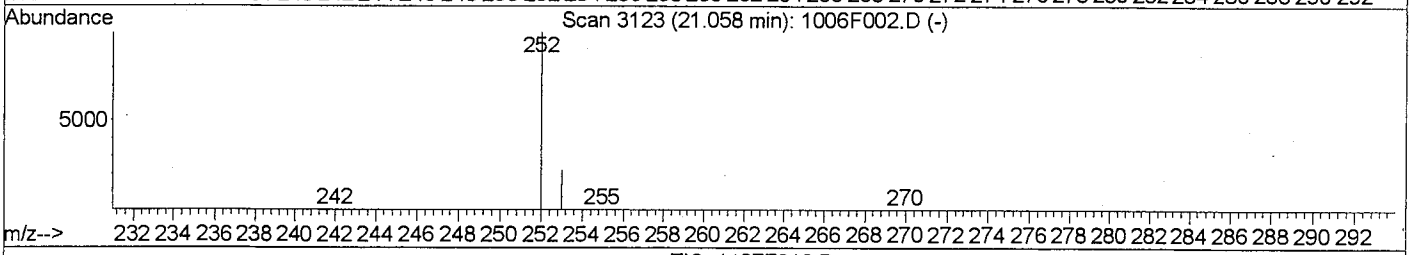
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F013.D

(50) Benzo(k)fluoranthene (T)

20.19min 95.33ng/ml

response 16542

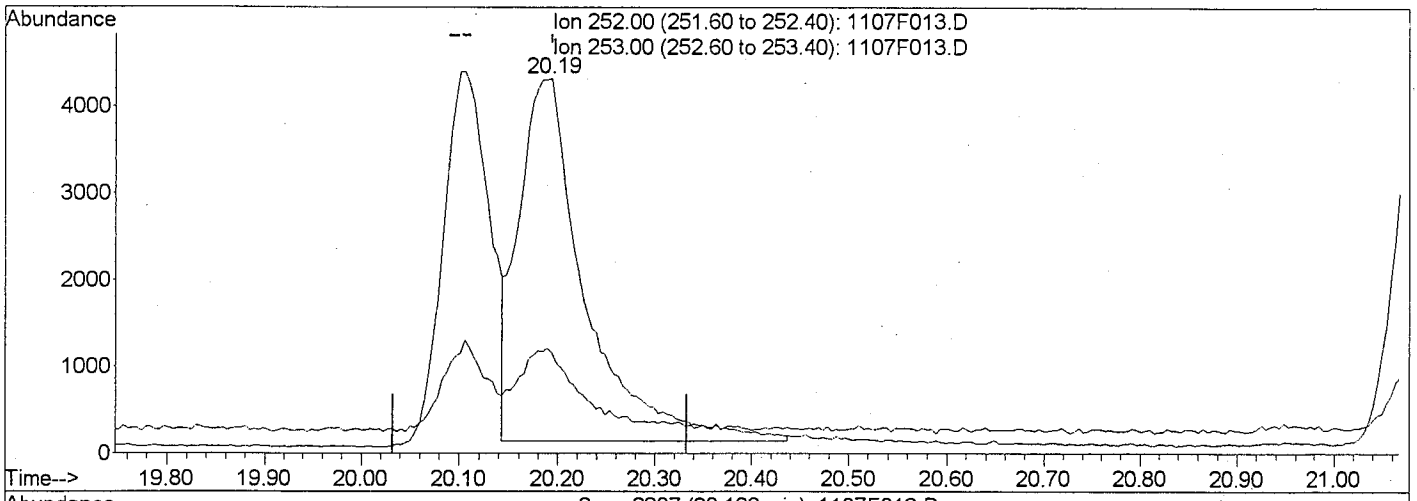
Ion	Exp%	Act%
252.00	100	100
253.00	21.90	20.65
0.00	0.00	0.00
0.00	0.00	0.00

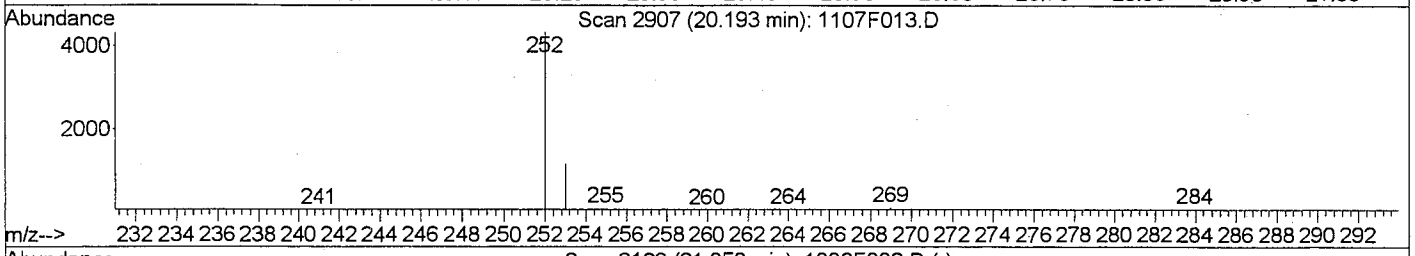
1107F013.D 1107ALK.M Sat Nov 08 07:01:11 2003

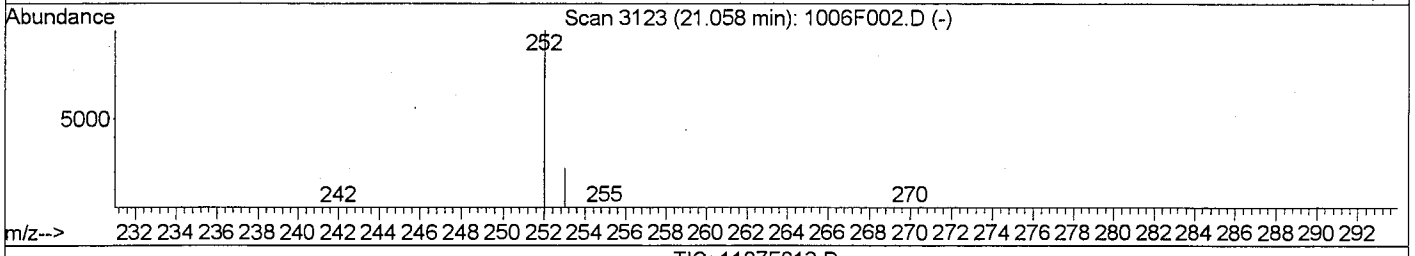
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F013.D

(50) Benzo(k)fluoranthene (T)

20.19min 114.13ng/ml m

response 19803

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	26.96
0.00	0.00	0.00
0.00	0.00	0.00

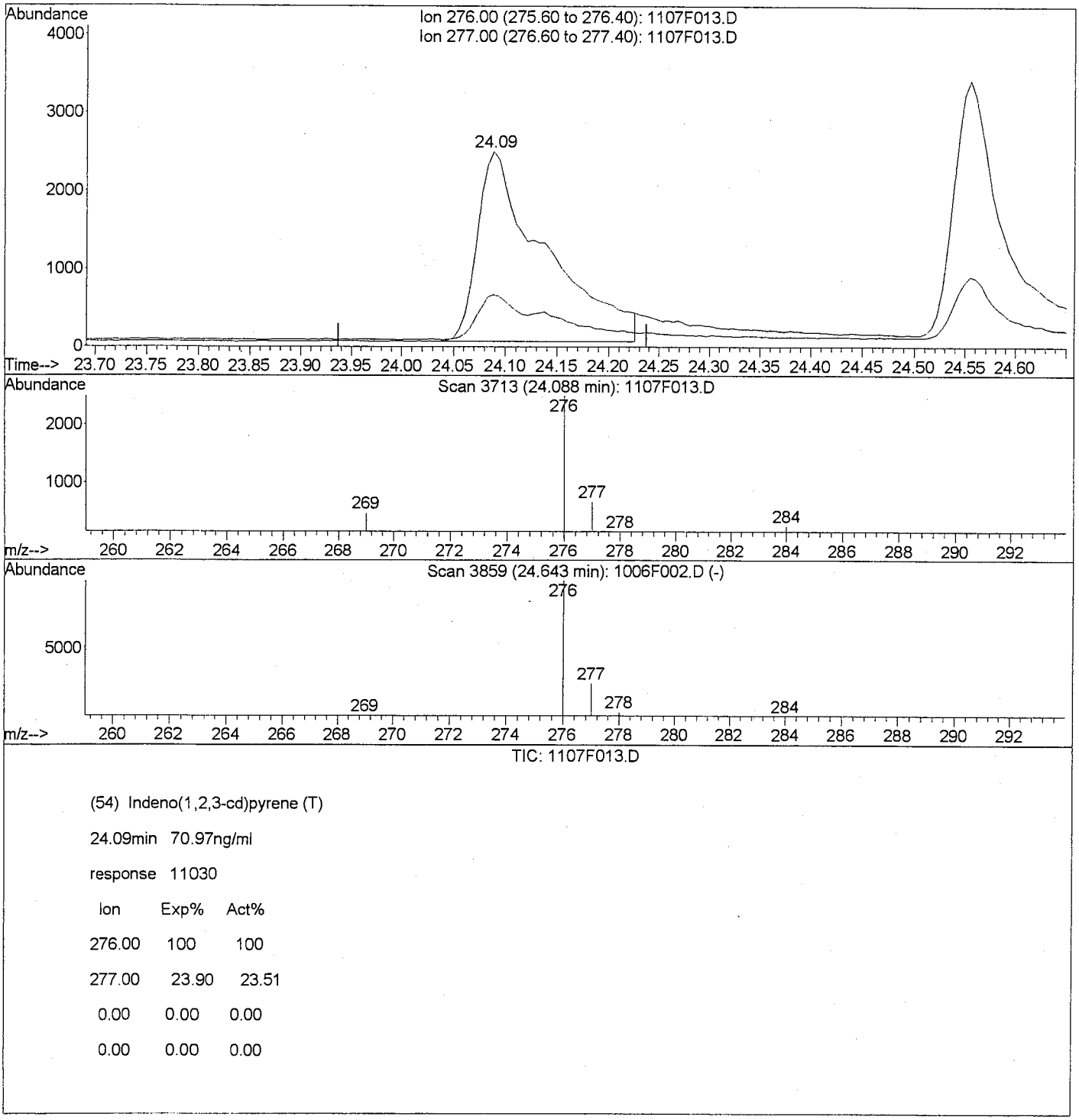
complete 11/10/03 mt 11/11/03

1107F013.D 1107ALK.M Sat Nov 08 07:01:17 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:58 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 70.97ng/ml

response 11030

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	23.51
0.00	0.00	0.00
0.00	0.00	0.00

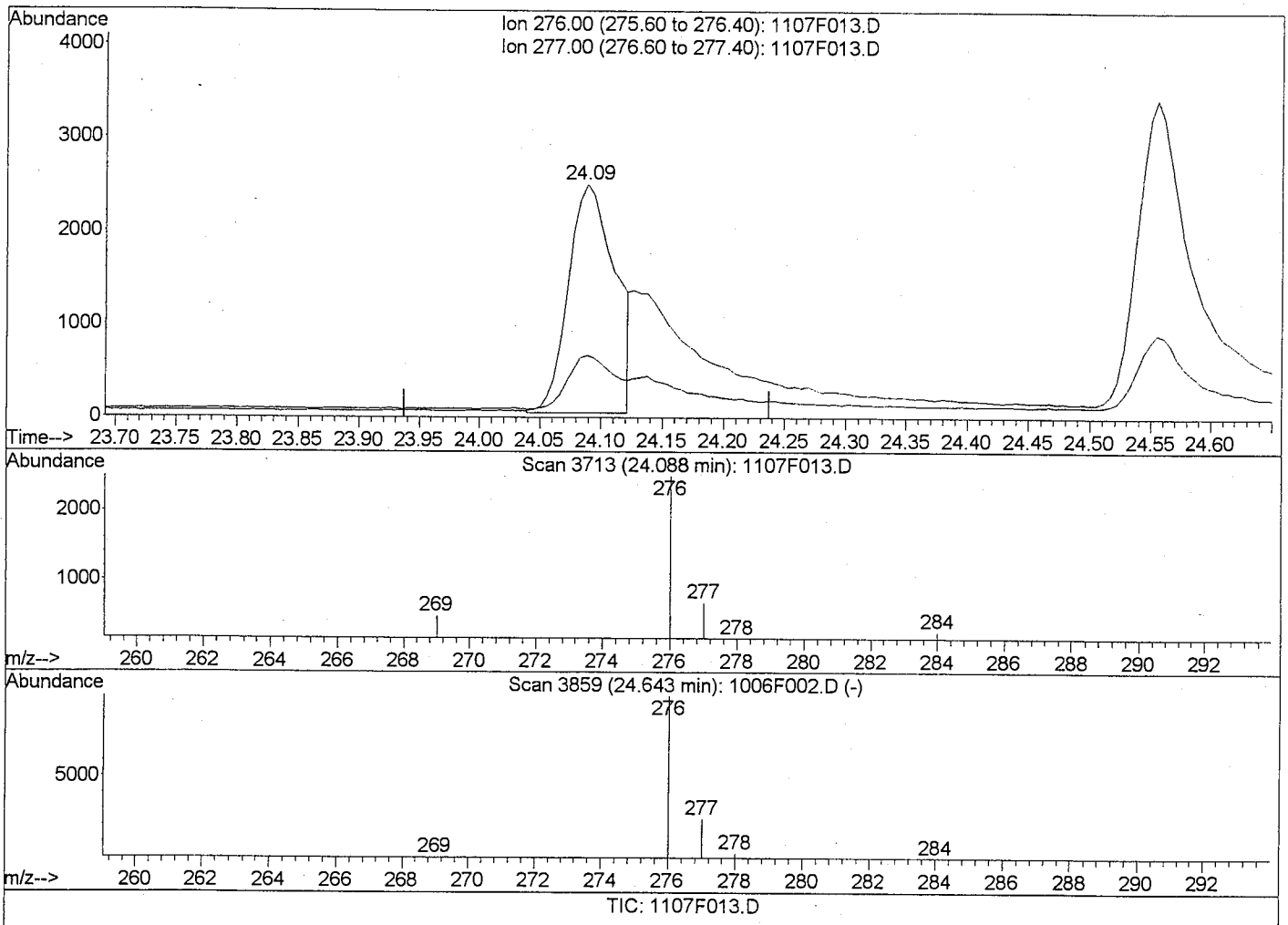
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D
Acq On : 7 Nov 2003 6:15 pm
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 41.64ng/ml m

response 6471

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	26.73
0.00	0.00	0.00
0.00	0.00	0.00

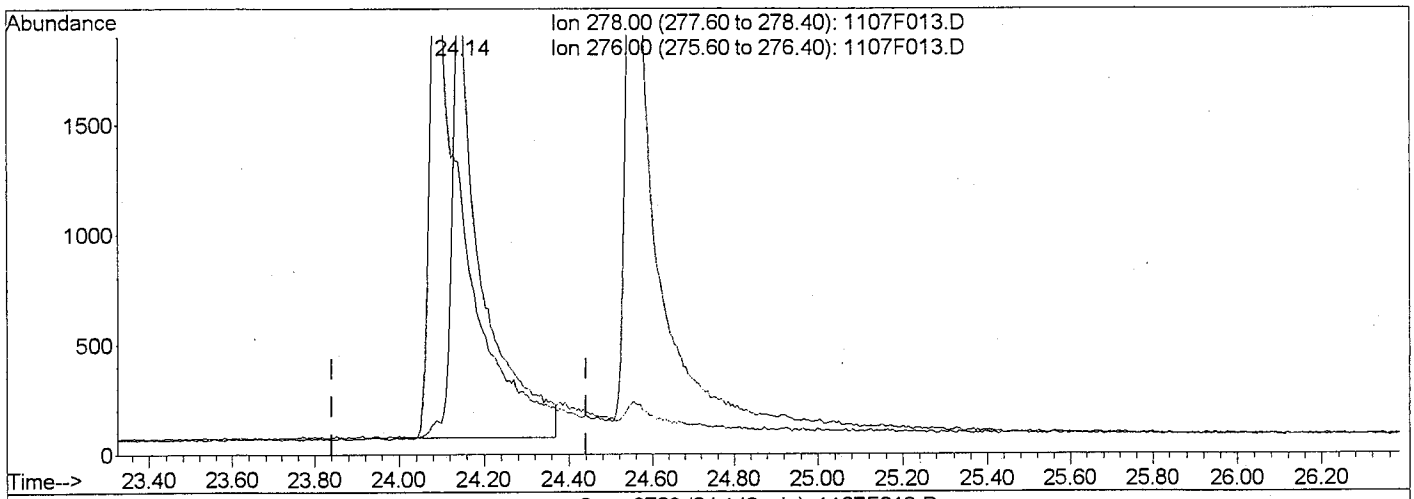
11/10/03
over integrated
11/11/03

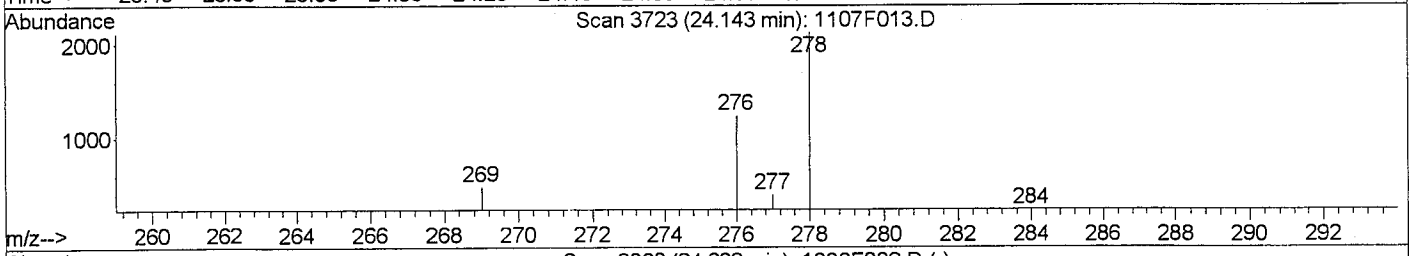
1107F013.D 1107ALK.M Sat Nov 08 07:01:29 2003

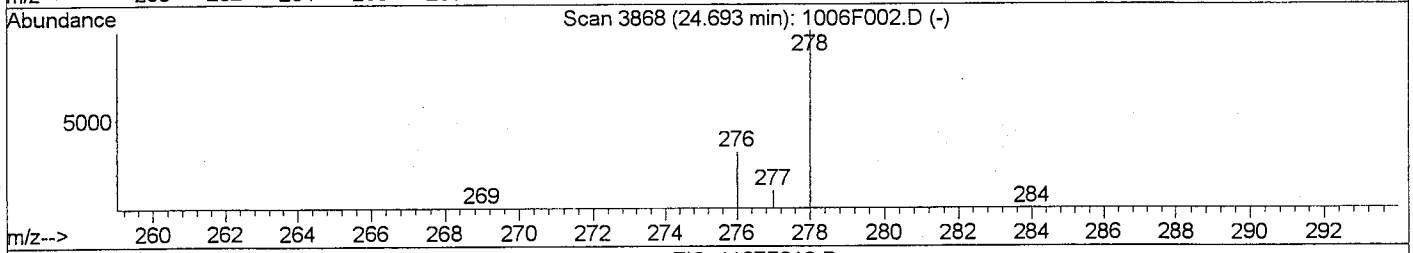
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D Vial: 7
Acq On : 7 Nov 2003 6:15 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F013.D

(55) Dibenz(a,h)anthracene (T)

24.14min 55.98ng/ml

response 9574

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	56.56
0.00	0.00	0.00
0.00	0.00	0.00

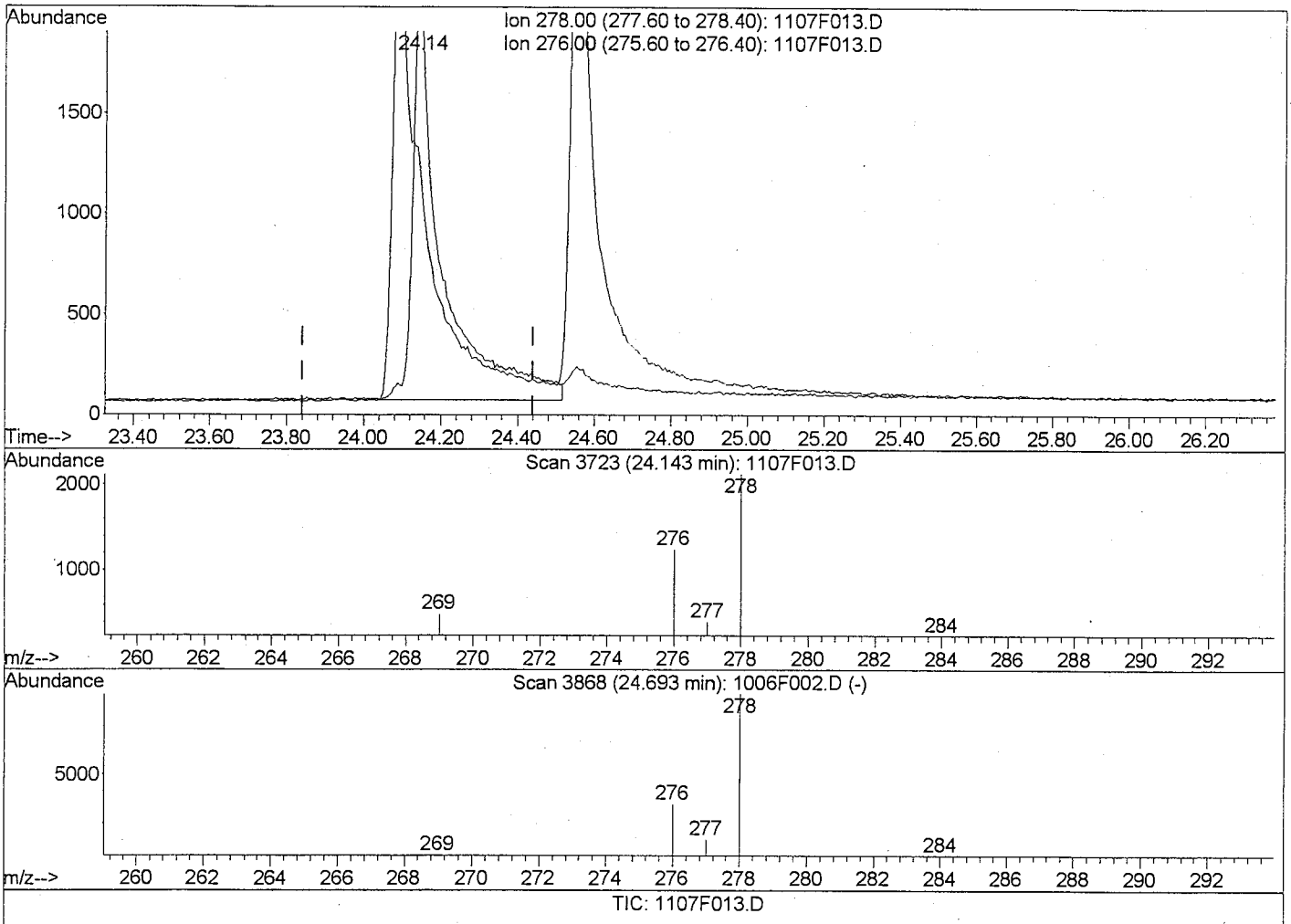
1107F013.D 1107ALK.M Sat Nov 08 07:01:33 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F013.D
Acq On : 7 Nov 2003 6:15 pm
Sample : SIM PAH ICAL @ 0.1ug/mL | SVM15-55D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 62.71ng/ml m

response 10725

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	58.51
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/12/03

mt 11/14/03

1107F013.D 1107ALK.M Sat Nov 08 07:01:39 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:52 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	243984	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	125357	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	173255	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	153386	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	93296	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	84457	477.38	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 47.74%			
16) Fluorene-d10	9.00	176	59218	462.03	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 46.20%			
21) 2,4,6 Tribromophenol	9.60	330	5331	293.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 29.35%			
37) Fluoranthene-d10	13.70	212	80552	461.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 46.11%			
41) Terphenyl-d14	14.73	244	68882	457.87	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 45.79%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	136443	468.73	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	79645	450.15	ng/ml	98
4) 1-Methylnaphthalene	6.56	142	75951	466.41	ng/ml	100
6) Biphenyl	7.09	154	98167	451.18	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	67759	447.98	ng/ml	99
12) Acenaphthylene	7.80	152	115594	450.53	ng/ml	99
13) Acenaphthene	8.12	154	73238	456.71	ng/ml	100
14) Dibenzofuran	8.41	168	95648	425.64	ng/ml	96
15) 2,3,5-Trimethylnaphthalene	8.83	170	64464	458.98	ng/ml	90
17) Fluorene	9.06	166	76880	432.93	ng/ml	100
22) Pentachlorophenol	10.78	266	21405	1055.96	ng/ml	99
24) Dibenzothiophene	10.78	184	96252	431.23	ng/ml	96
28) Phenanthrene	11.05	178	99421	433.60	ng/ml	100
29) Anthracene	11.14	178	83307	413.68	ng/ml	100
30) Carbazole	11.57	167	65358	399.08	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	66881	433.81	ng/ml	98
36) Fluoranthene	13.73	202	98751	444.71	ng/ml	99
39) Pyrene	14.24	202	97338	424.08	ng/ml	98
42) Benz(a)anthracene	17.09	228	74844	441.23	ng/ml	99
43) Chrysene	17.19	228	80663	468.53	ng/ml	99
49) Benzo(b)fluoranthene	20.10	252	60539	422.21	ng/ml	98
50) Benzo(k)fluoranthene	20.18	252	81058m	584.94	ng/ml	
51) Benzo(e)pyrene	21.09	252	69802	471.50	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:52 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	48209	393.56	ng/ml	100
53)	Perylene	21.60	252	56290	439.44	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	27965m	225.31	ng/ml	
55)	Dibenz(a,h)anthracene	24.14	278	44164m	323.34	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	48726	312.88	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1107F014.D 1107ALK.M Sat Nov 08 07:09:21 2003 Page 2

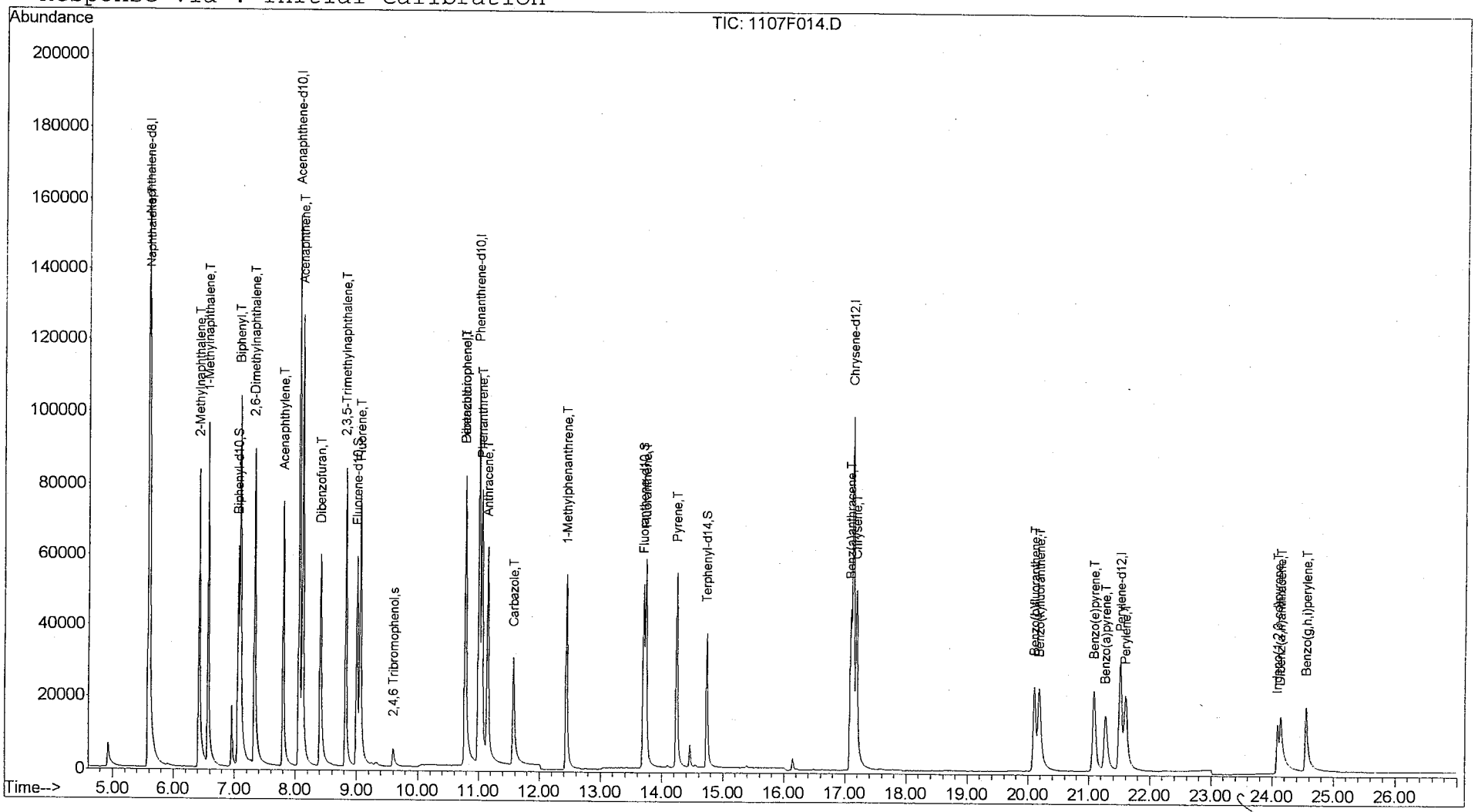
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F014.D
Acq On : 7 Nov 2003 6:51 pm
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1659

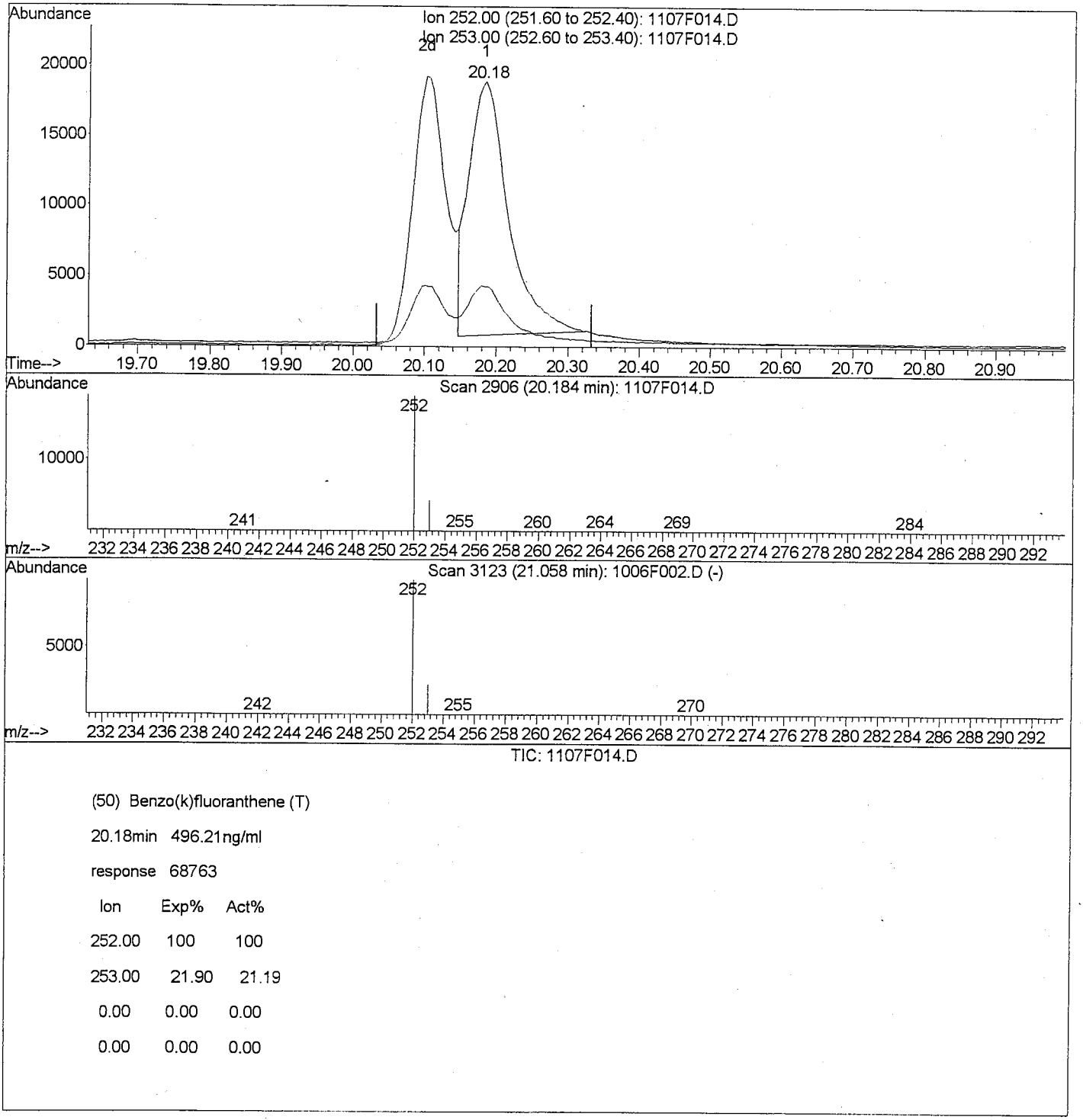
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D
Acq On : 7 Nov 2003 6:51 pm
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F014.D

(50) Benzo(k)fluoranthene (T)

20.18min 496.21ng/ml

response 68763

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.19
0.00	0.00	0.00
0.00	0.00	0.00

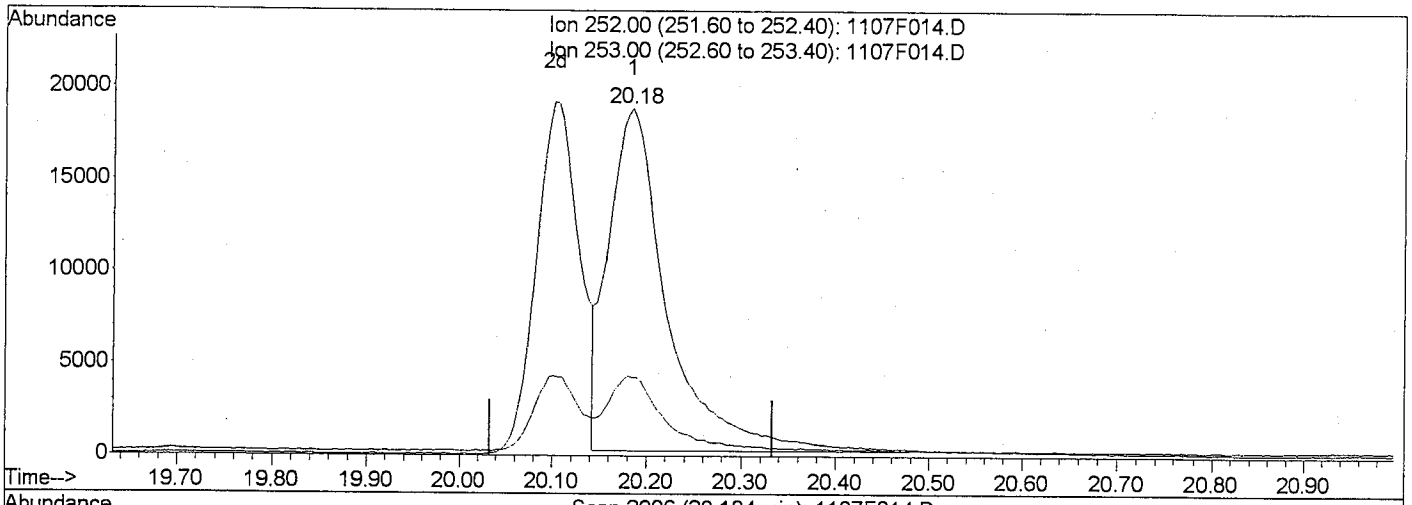
Quantitation Report (Qedit)

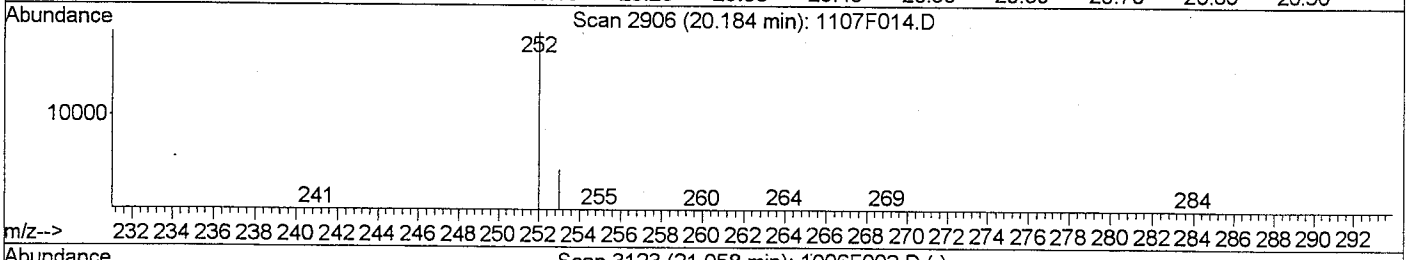
Data File : J:\MS11\DATA\110703\1107F014.D
Acq On : 7 Nov 2003 6:51 pm
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003

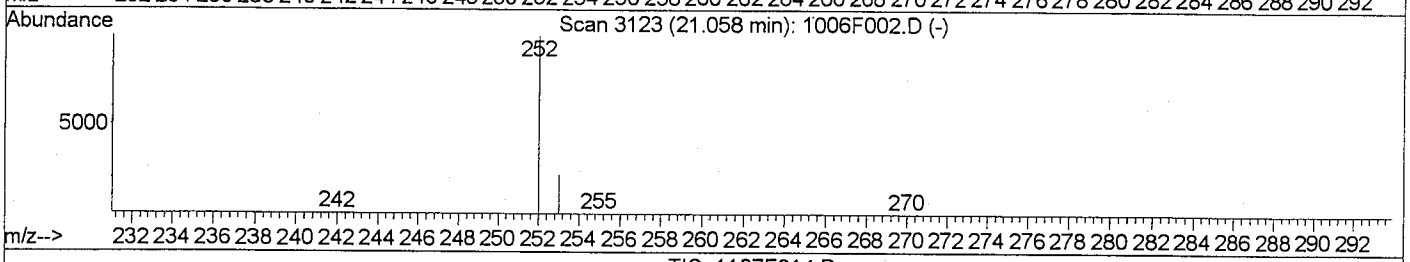
Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F014.D

(50) Benzo(k)fluoranthene (T)

20.18min 584.94ng/ml m

response 81058

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.67
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/11/03 mt 11/11/03

1107F014.D 1107ALK.M Sat Nov 08 07:02:13 2003

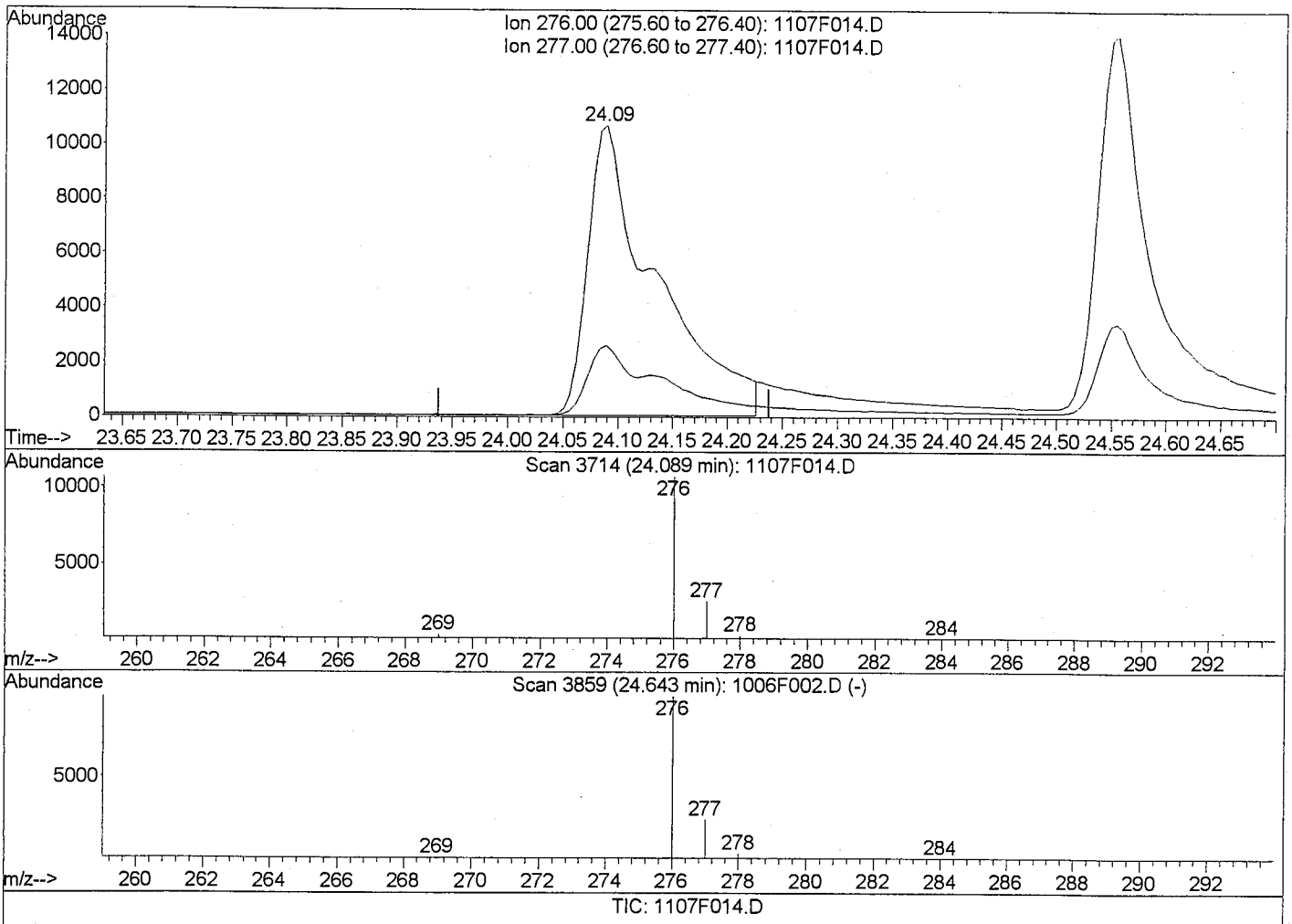
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D
Acq On : 7 Nov 2003 6:51 pm
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:59 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 371.38ng/ml

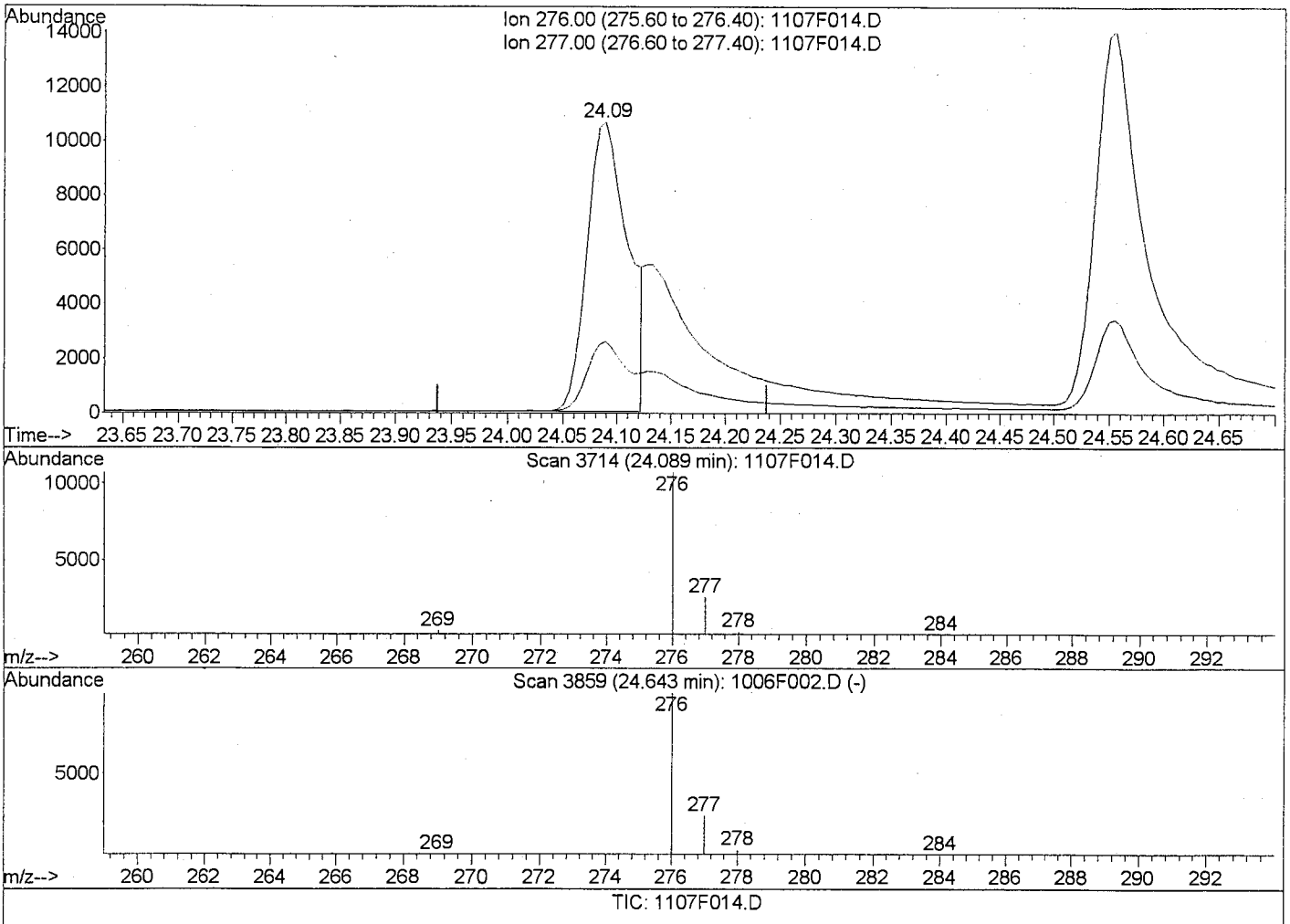
response 46095

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	23.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D Vial: 8
Acq On : 7 Nov 2003 6:51 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(54) Indeno(1,2,3-cd)pyrene (T)

24.09min 225.31ng/ml m

response 27965

Ion	Exp%	Act%
276.00	100	100
277.00	23.90	24.52
0.00	0.00	0.00
0.00	0.00	0.00

ves integrated 11/10/03 mt 11/11/03

1107F014.D 1107ALK.M Sat Nov 08 07:02:31 2003

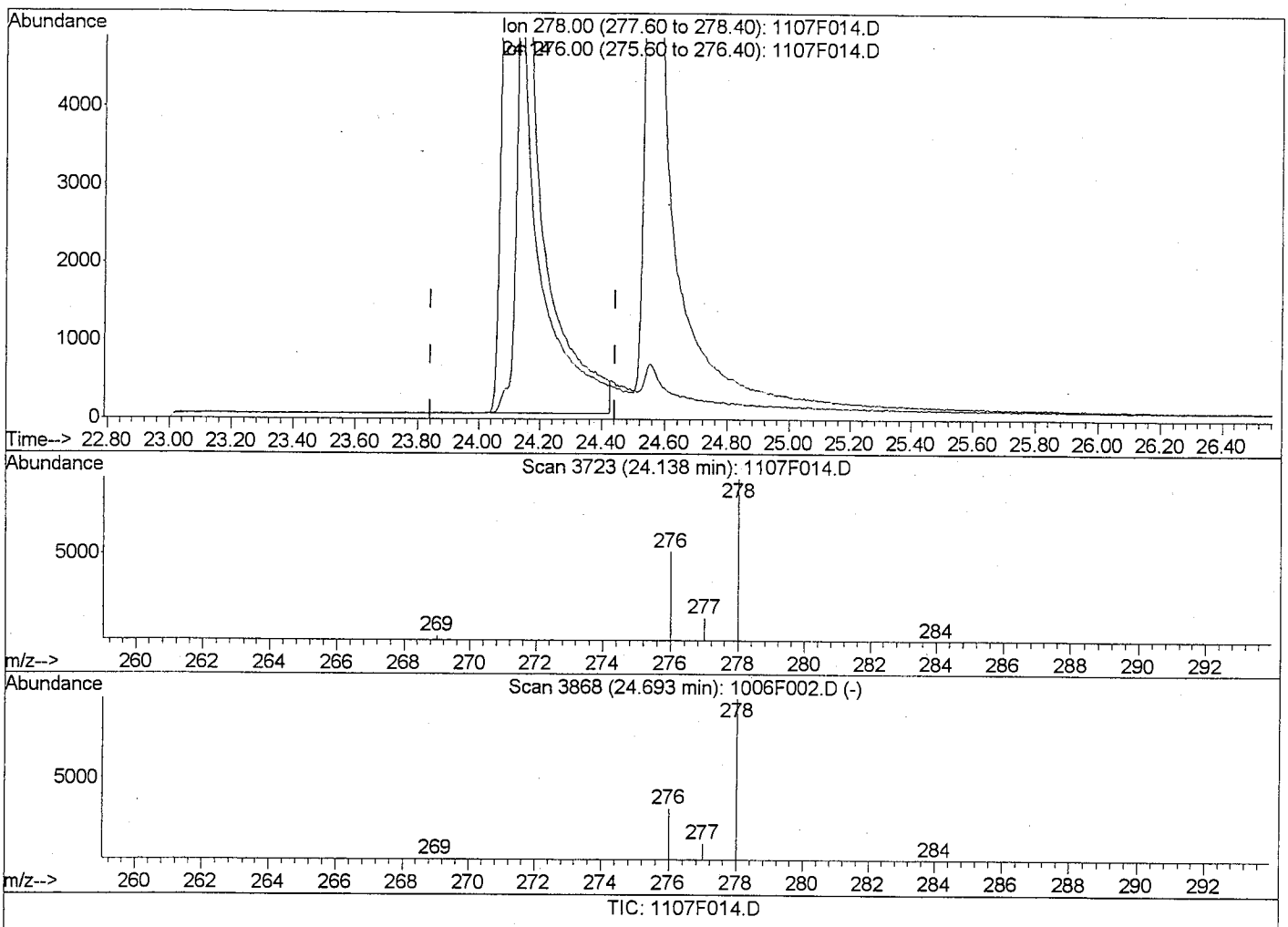
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D
Acq On : 7 Nov 2003 6:51 pm
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 307.04ng/ml

response 41938

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	55.56
0.00	0.00	0.00
0.00	0.00	0.00

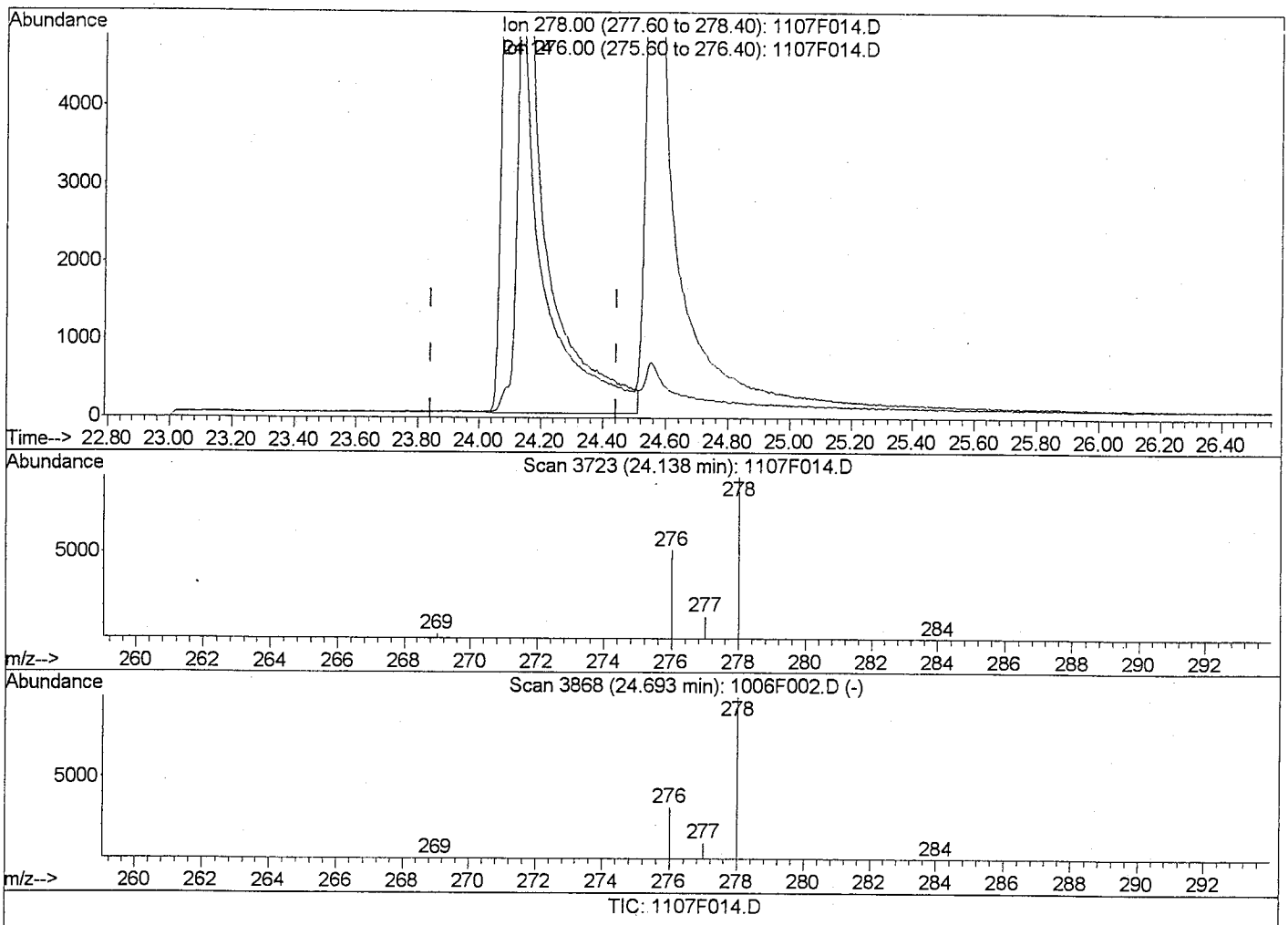
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F014.D
Acq On : 7 Nov 2003 6:51 pm
Sample : SIM PAH ICAL @ 0.5ug/mL | SVM15-55E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 323.34ng/ml m

response 44164

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	56.07
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03 mnt 11/11/03

1107F014.D 1107ALK.M Sat Nov 08 07:02:39 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F015.D
Acq On : 7 Nov 2003 7:26 pm
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:56 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	266248	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	136639	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	186916	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	174814	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	107089	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	196231	1016.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 101.64%			
16) Fluorene-d10	9.00	176	137764	986.11	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 98.61%			
21) 2,4,6 Tribromophenol	9.60	330	13128	663.05	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 66.30%			
37) Fluoranthene-d10	13.70	212	195549	1037.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 103.76%			
41) Terphenyl-d14	14.73	244	160412	935.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 93.56%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	303720	956.14	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	183088	948.27	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	172952	973.26	ng/ml	97
6) Biphenyl	7.09	154	224927	947.32	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.33	156	157409	953.66	ng/ml	98
12) Acenaphthylene	7.79	152	269455	963.49	ng/ml	100
13) Acenaphthene	8.12	154	167723	959.55	ng/ml	99
14) Dibenzofuran	8.41	168	221987	906.29	ng/ml	89
15) 2,3,5-Trimethylnaphthalene	8.83	170	149167	974.36	ng/ml	90
17) Fluorene	9.05	166	180398	931.98	ng/ml	98
22) Pentachlorophenol	10.78	266	70977	3212.36	ng/ml	97
24) Dibenzothiophene	10.78	184	229776	954.20	ng/ml	98
28) Phenanthrene	11.04	178	234804	949.21	ng/ml	99
29) Anthracene	11.15	178	207208	953.74	ng/ml	99
30) Carbazole	11.57	167	164951	933.59	ng/ml	99
31) 1-Methylphenanthrene	12.44	192	163939	985.63	ng/ml	98
36) Fluoranthene	13.73	202	244535	1020.74	ng/ml	98
39) Pyrene	14.24	202	242068	925.36	ng/ml	98
42) Benz(a)anthracene	17.09	228	168145	869.77	ng/ml	100
43) Chrysene	17.19	228	191935	978.19	ng/ml	99
49) Benzo(b)fluoranthene	20.10	252	147720	897.54	ng/ml	99
50) Benzo(k)fluoranthene	20.18	252	192503m	1210.23	ng/ml	
51) Benzo(e)pyrene	21.09	252	164764	969.60	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:56 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

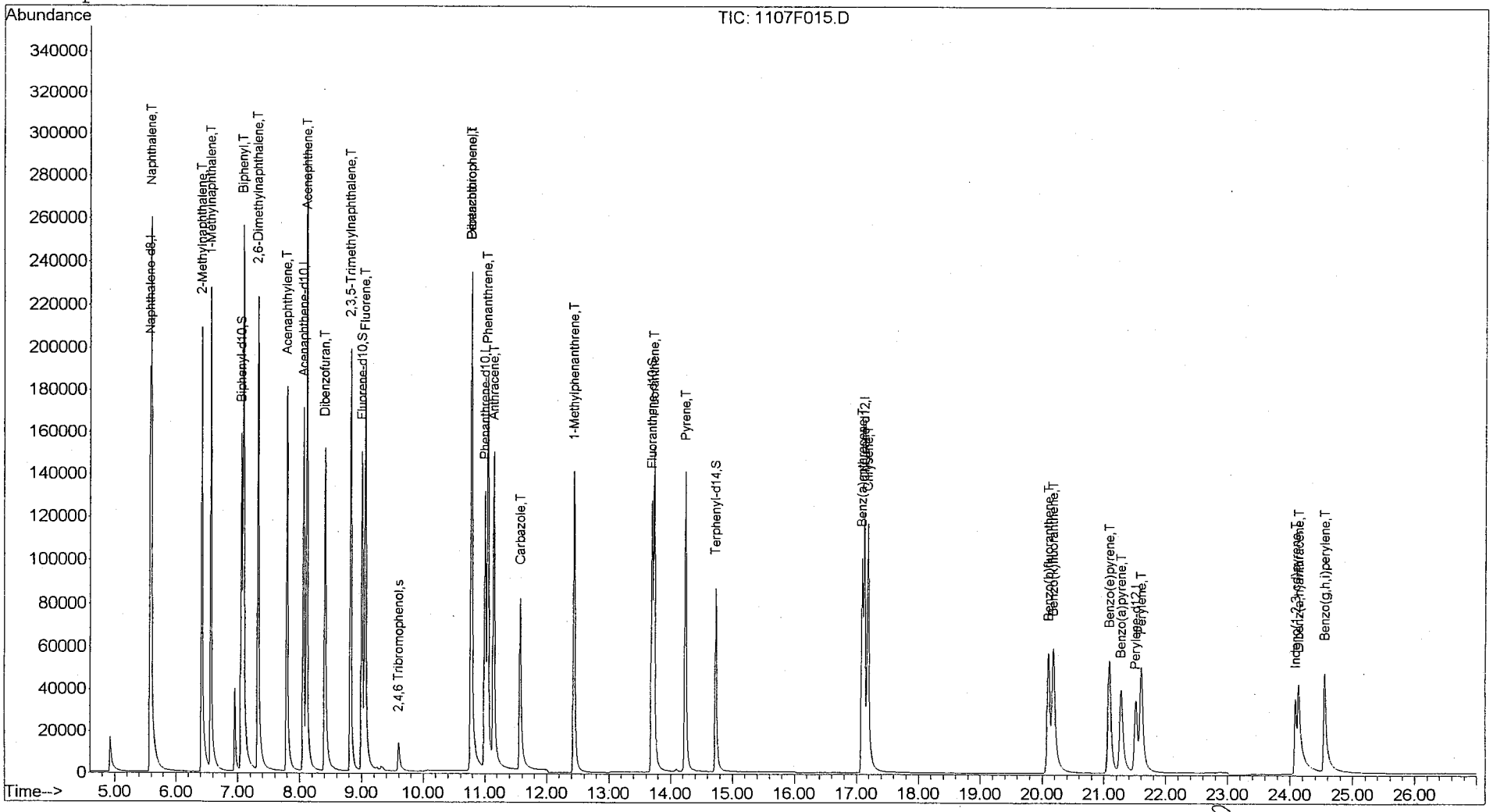
11/10/03
11/11/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	122944	874.39	ng/ml	99
53)	Perylene	21.60	252	141665	963.49	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	72483	508.76	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	111963m	714.14	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	125716	703.27	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\110703\1107F015.D Vial: 9
Acq On : 7 Nov 2003 7:26 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1668

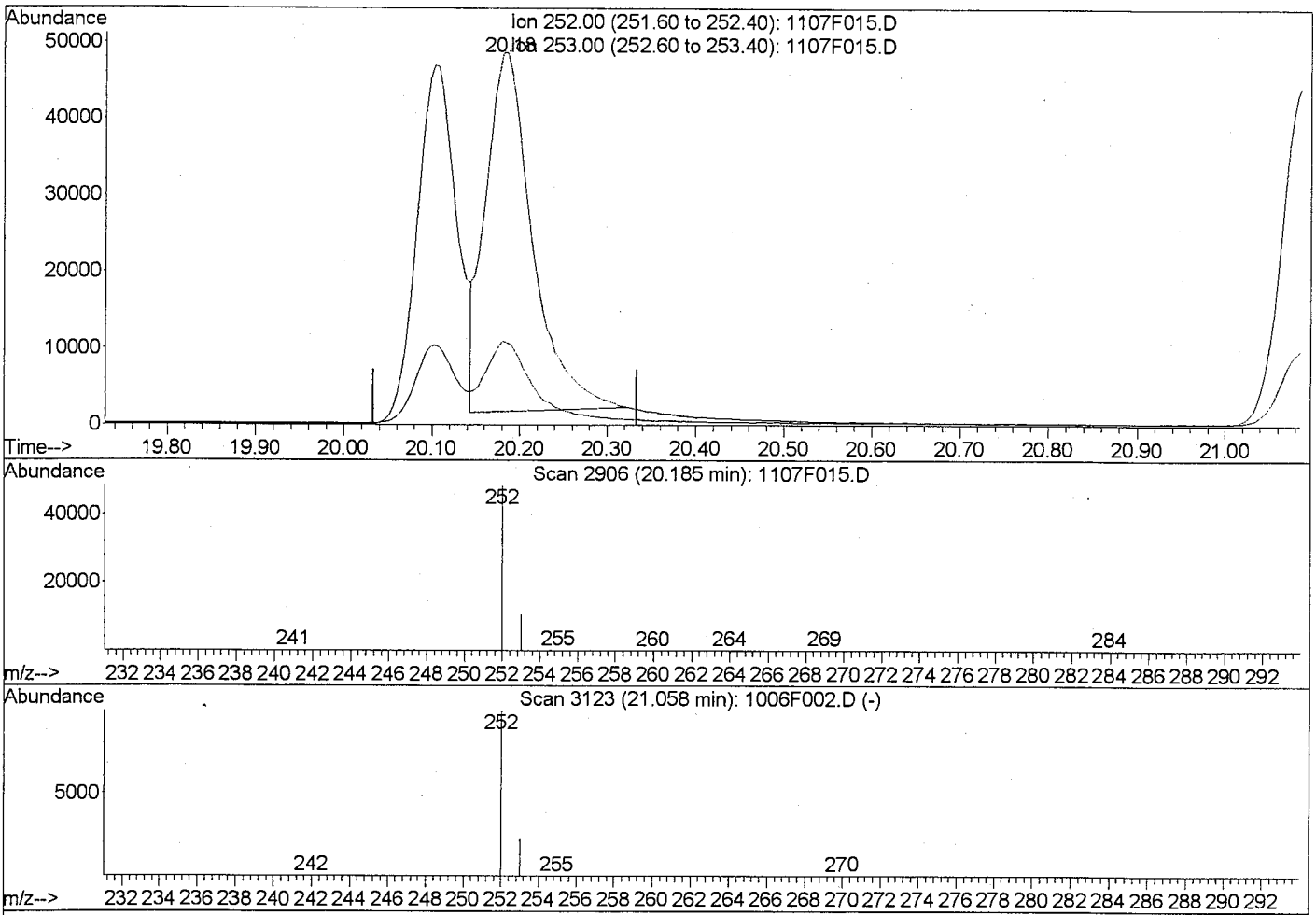
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D
Acq On : 7 Nov 2003 7:26 pm
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F015.D

(50) Benzo(k)fluoranthene (T)

20.18min 1092.84ng/ml

response 173830

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.63
0.00	0.00	0.00
0.00	0.00	0.00

1107F015.D 1107ALK.M Sat Nov 08 07:03:09 2003

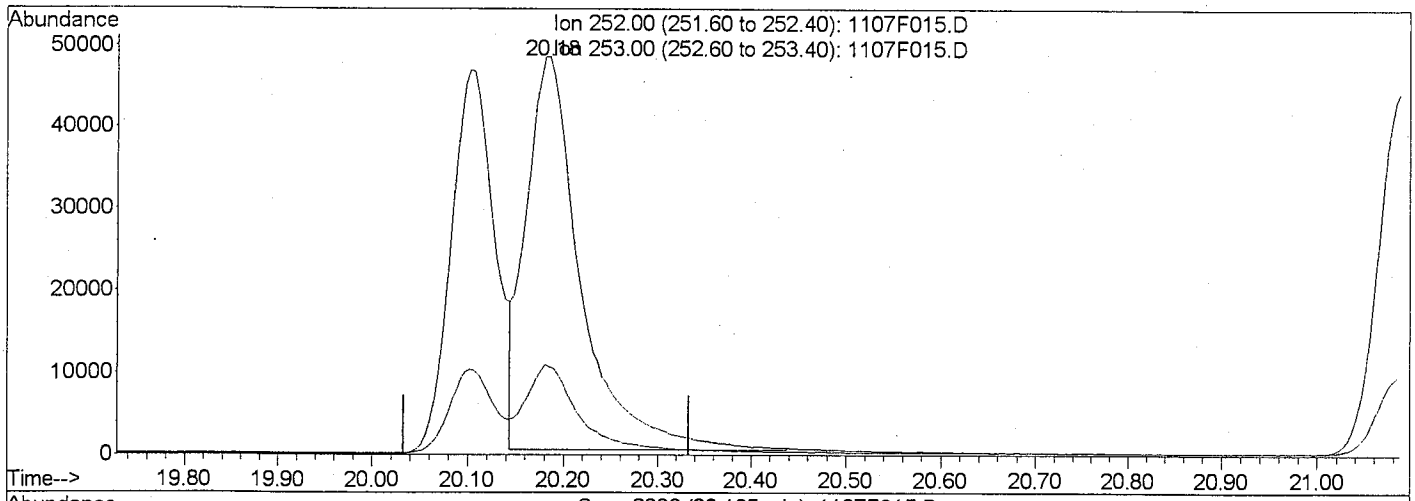
Quantitation Report (Qedit)

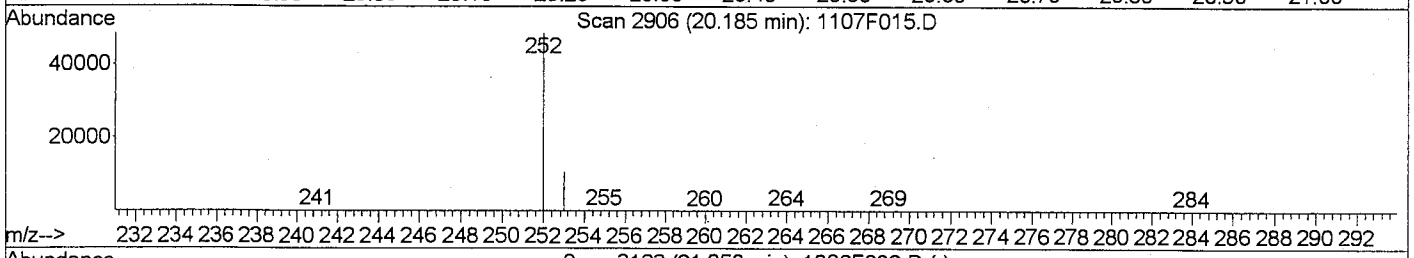
Data File : J:\MS11\DATA\110703\1107F015.D
Acq On : 7 Nov 2003 7:26 pm
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003

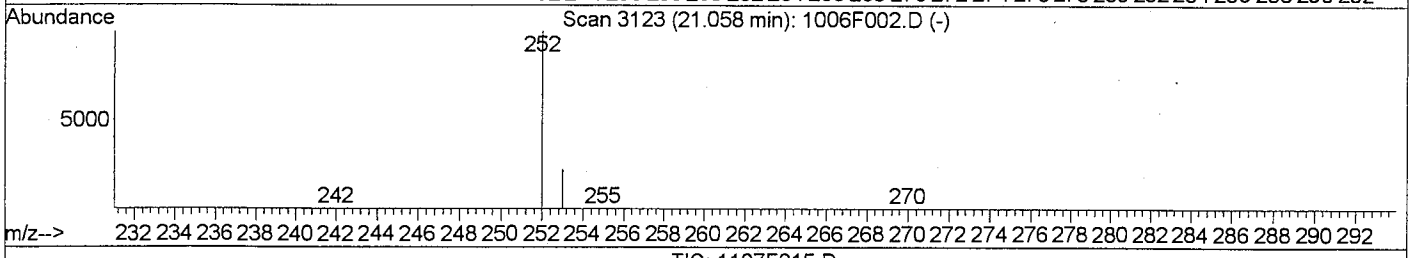
Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F015.D

(50) Benzo(k)fluoranthene (T)

20.18min 1210.23ng/ml m

response 192503

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.03
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03
mt 11/11/03

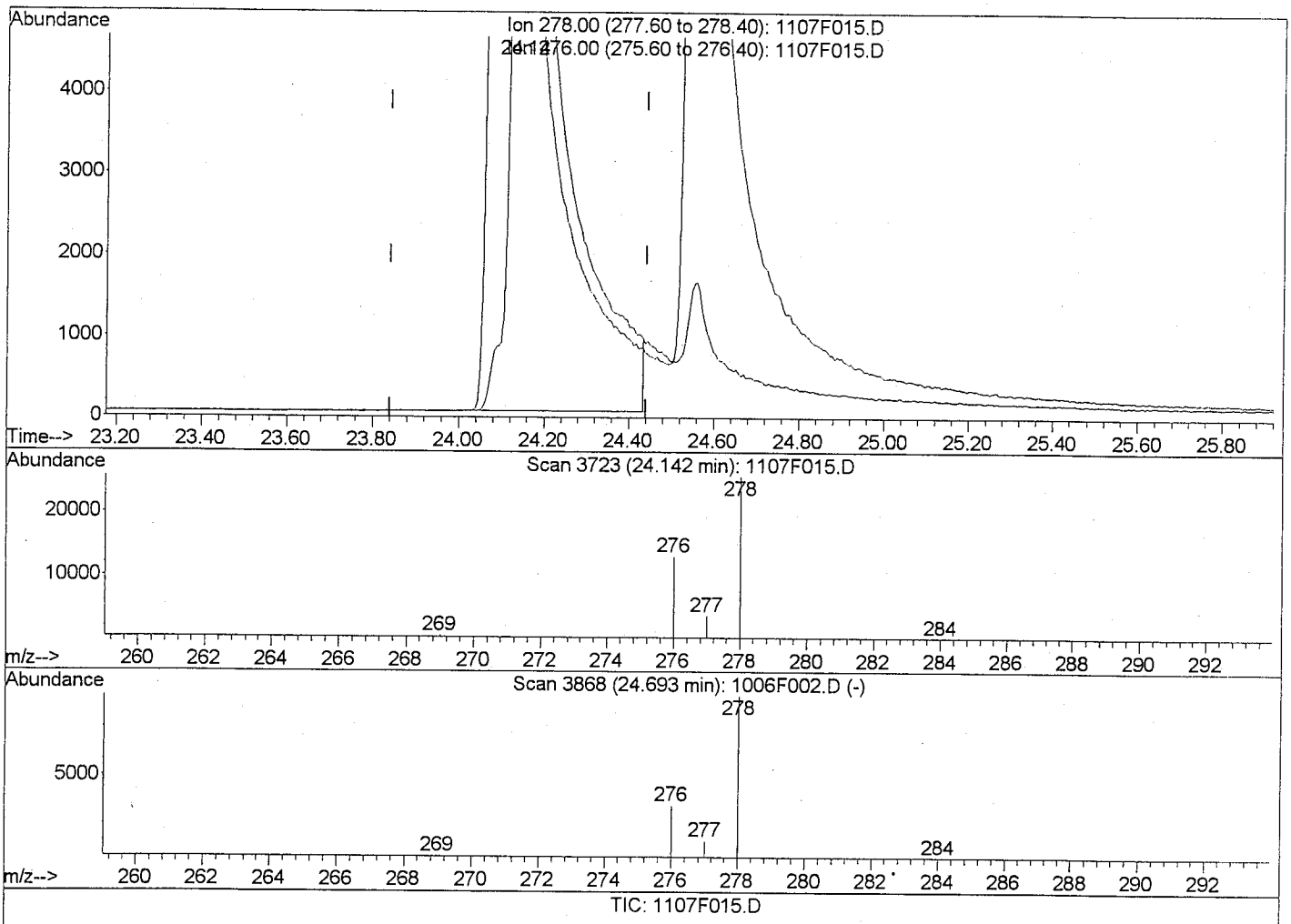
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D
Acq On : 7 Nov 2003 7:26 pm
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F015.D

(55) Dibenz(a,h)anthracene (T)

24.14min 691.85ng/ml

response 108469

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	50.54
0.00	0.00	0.00
0.00	0.00	0.00

1107F015.D 1107ALK.M Sat Nov 08 07:03:20 2003

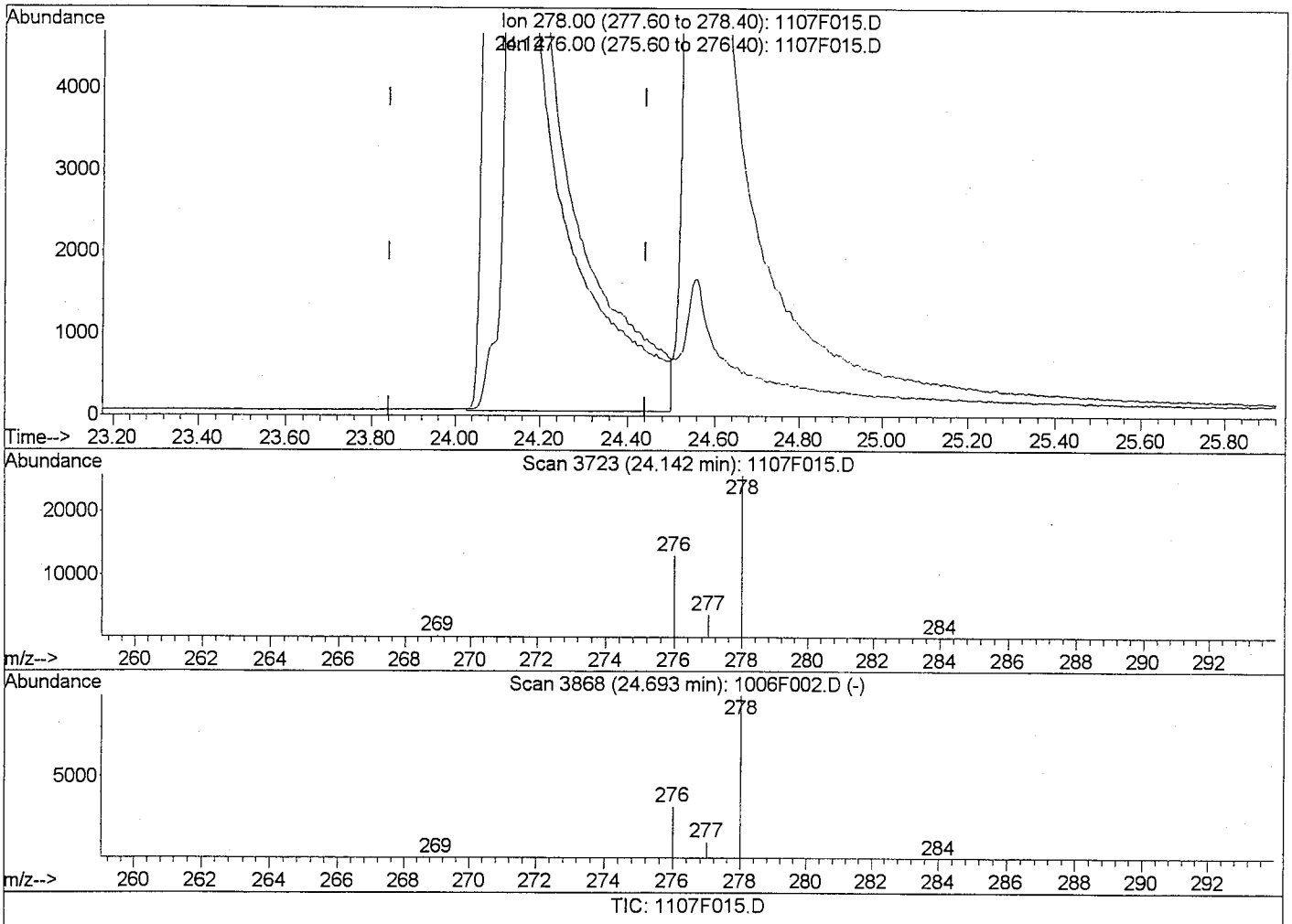
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F015.D
Acq On : 7 Nov 2003 7:26 pm
Sample : SIM PAH ICAL @ 1.0ug/mL | SVM15-55J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:00 2003

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 714.14ng/ml m

response 111963

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	50.70
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/14/03
mt
11/14/03

1107F015.D 1107ALK.M Sat Nov 08 07:03:28 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:59 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/11/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.58	136	278033	1000.00 ng/ml	0.00
11) Acenaphthene-d10	8.06	164	143768	1000.00 ng/ml	0.00
23) Phenanthrene-d10	11.00	188	205570	1000.00 ng/ml	0.00
38) Chrysene-d12	17.13	240	199135	1000.00 ng/ml	0.00
48) Perylene-d12	21.52	264	120438	1000.00 ng/ml	0.01
System Monitoring Compounds					
5) Biphenyl-d10	7.06	164	422935	2097.80 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 209.78%		
16) Fluorene-d10	9.00	176	301815	2053.26 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 205.33%		
21) 2,4,6 Tribromophenol	9.60	330	33721	1618.68 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 161.87%		
37) Fluoranthene-d10	13.70	212	447659	2159.79 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 215.98%		
41) Terphenyl-d14	14.73	244	372315	1906.27 ng/ml	0.00
Spiked Amount 1000.000			Recovery = 190.63%		
Target Compounds					Qvalue
2) Naphthalene	5.60	128	647096	1950.78 ng/ml	100
3) 2-Methylnaphthalene	6.42	142	398887	1978.38 ng/ml	99
4) 1-Methylnaphthalene	6.57	142	376059	2026.52 ng/ml	99
6) Biphenyl	7.09	154	486537	1962.28 ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	344227	1997.09 ng/ml	99
12) Acenaphthylene	7.80	152	593276	2016.19 ng/ml	100
13) Acenaphthene	8.11	154	360355	1959.38 ng/ml	99
14) Dibenzofuran	8.41	168	487546	1891.77 ng/ml	97
15) 2,3,5-Trimethylnaphthalene	8.82	170	323751	2009.89 ng/ml	100
17) Fluorene	9.06	166	397752	1952.99 ng/ml	99
22) Pentachlorophenol	10.77	266	202620	8715.69 ng/ml	100
24) Dibenzothiophene	10.78	184	512877	1936.58 ng/ml	98
28) Phenanthrene	11.04	178	522812	1921.71 ng/ml	99
29) Anthracene	11.15	178	485749	2032.92 ng/ml	100
30) Carbazole	11.56	167	386029	1986.58 ng/ml	97
31) 1-Methylphenanthrene	12.44	192	372629	2037.02 ng/ml	99
36) Fluoranthene	13.73	202	559453	2123.36 ng/ml	99
39) Pyrene	14.24	202	556735	1868.33 ng/ml	99
42) Benz(a)anthracene	17.09	228	400788	1819.97 ng/ml	100
43) Chrysene	17.18	228	444428	1988.38 ng/ml	100
49) Benzo(b)fluoranthene	20.10	252	349753	1889.55 ng/ml	100
50) Benzo(k)fluoranthene	20.18	252	454775m	2542.20 ng/ml	
51) Benzo(e)pyrene	21.09	252	383175	2004.96 ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F016.D
Acq On : 7 Nov 2003 8:02 pm
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:11:59 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Q 11/10/03
mt 11/11/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	300946	1903.13	ng/ml	100
53)	Perylene	21.61	252	337866	2043.19	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	173444	1082.48	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	260549m	1477.67	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	280576	1395.60	ng/ml	100

(#) = qualifier out of range (m) = manual integration

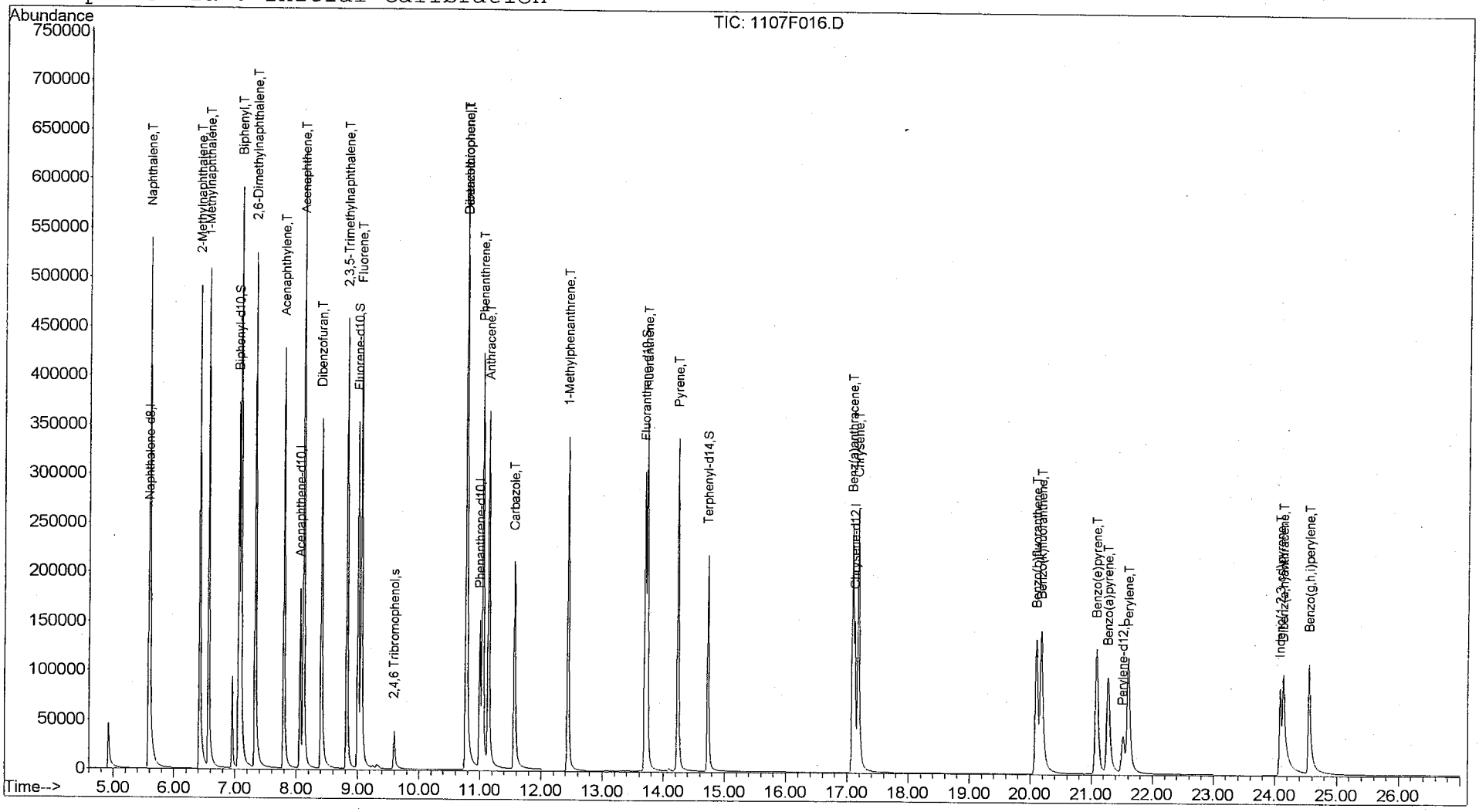
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F016.D
Acq On : 7 Nov 2003 8:02 pm
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration

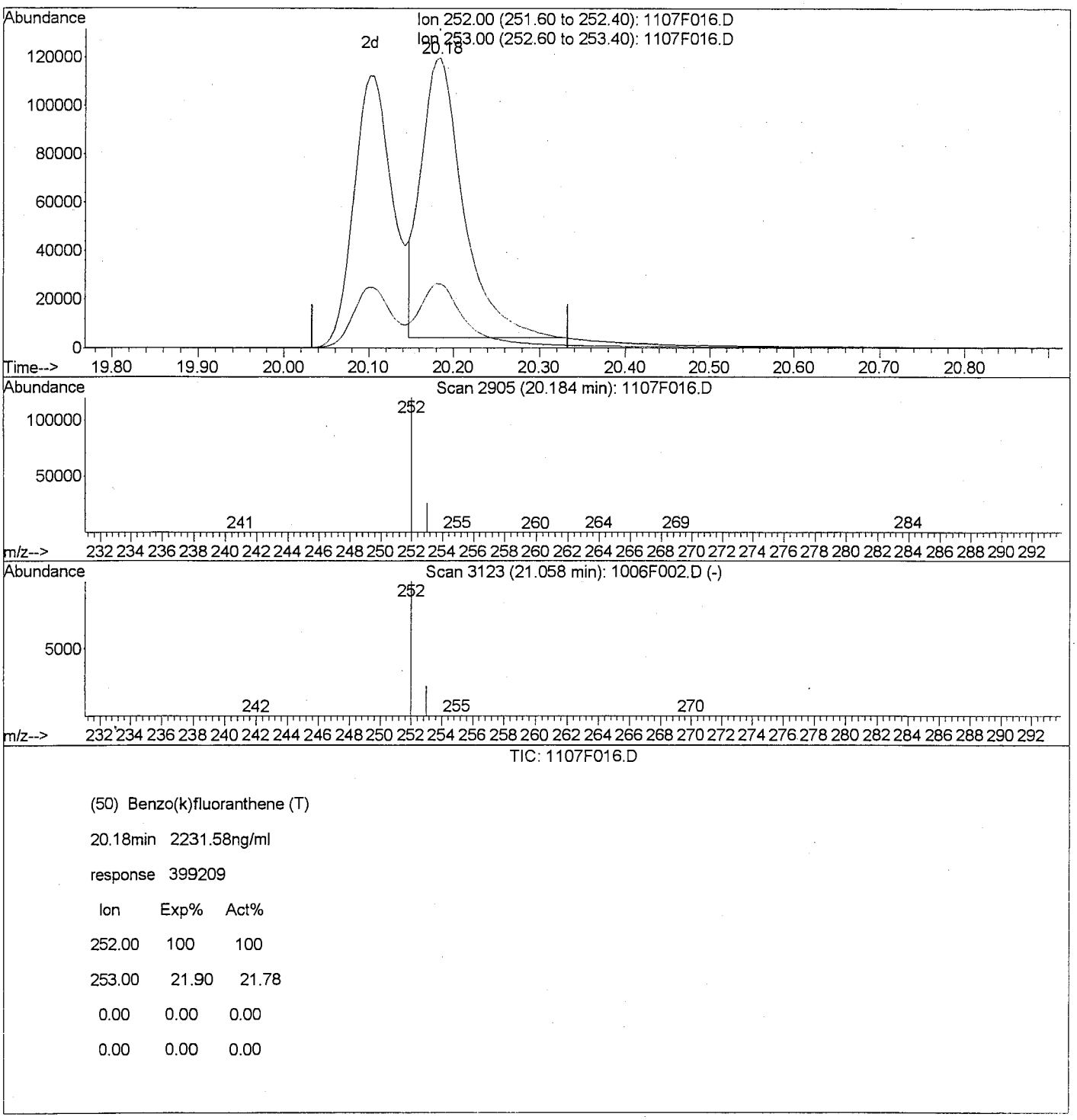


1675

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D Vial: 10
Acq On : 7 Nov 2003 8:02 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F016.D

(50) Benzo(k)fluoranthene (T)

20.18min 2231.58ng/ml

response 399209

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.78
0.00	0.00	0.00
0.00	0.00	0.00

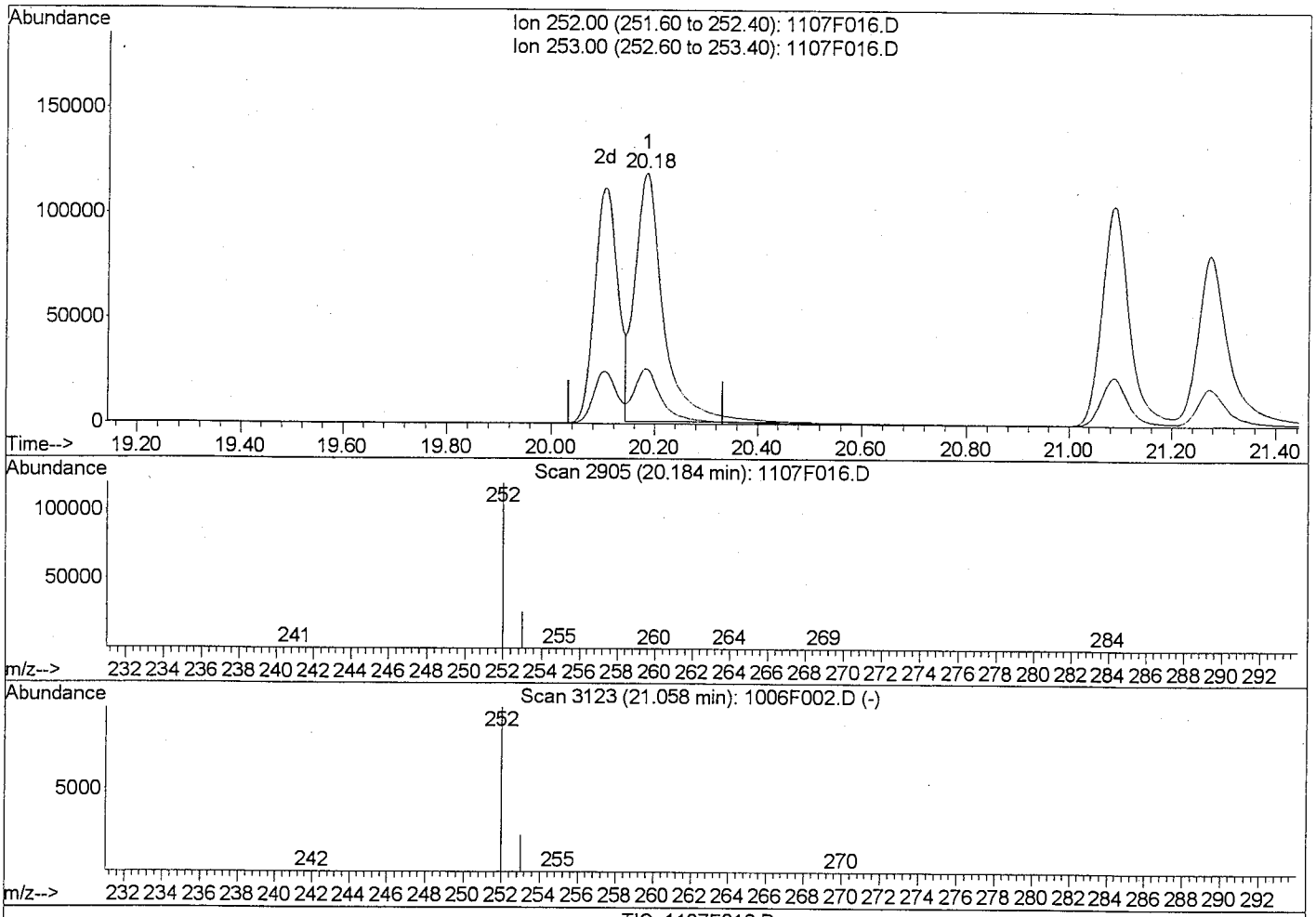
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D
Acq On : 7 Nov 2003 8:02 pm
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F016.D

(50) Benzo(k)fluoranthene (T)

20.18min 2542.20ng/ml m

response 454775

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	21.99
0.00	0.00	0.00
0.00	0.00	0.00

incomplete lm 11/10/3
mt 11/10/03

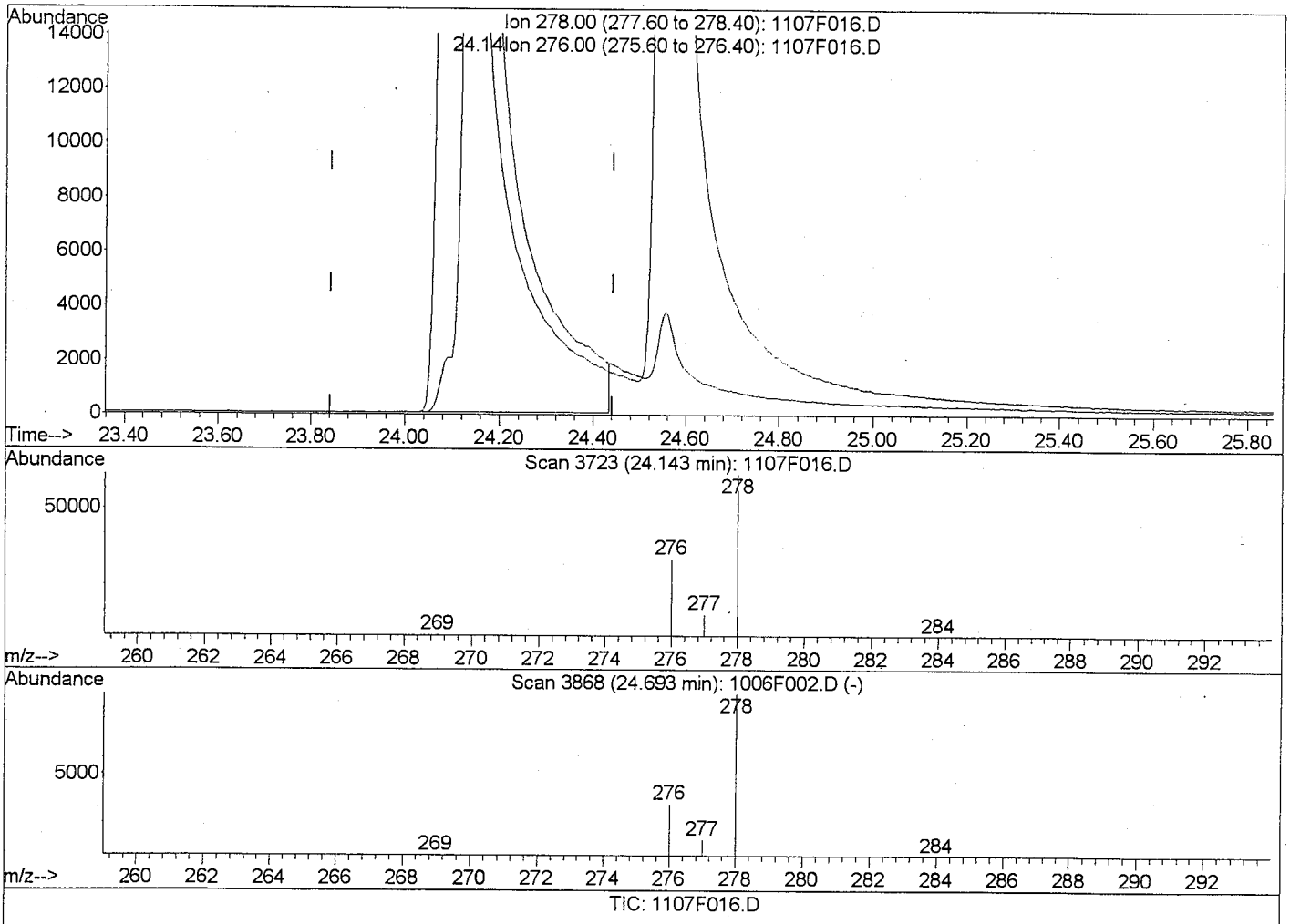
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D
Acq On : 7 Nov 2003 8:02 pm
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 1435.80ng/ml

response 253166

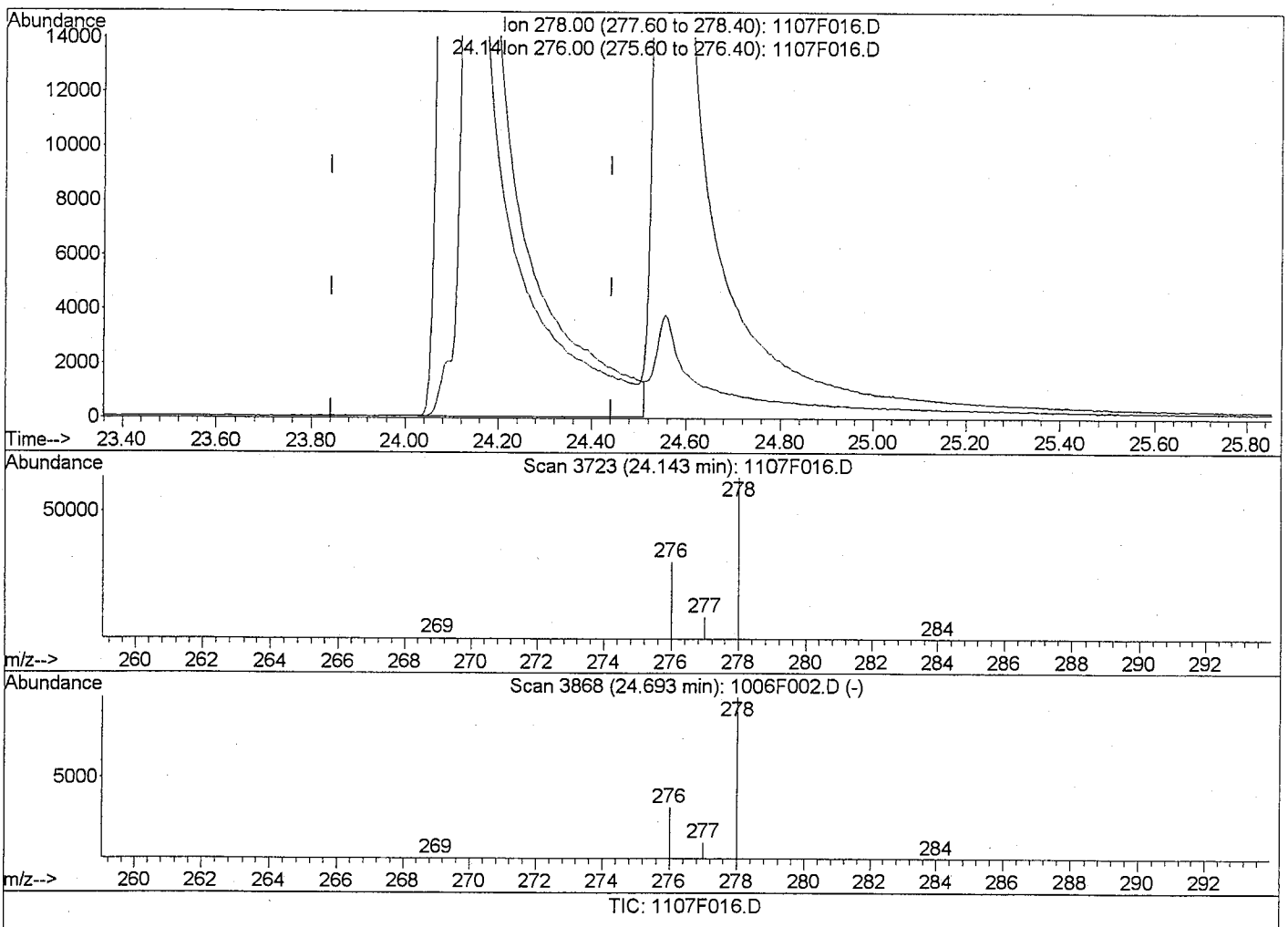
Ion	Exp%	Act%
278.00	100	100
276.00	31.70	47.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F016.D
Acq On : 7 Nov 2003 8:02 pm
Sample : SIM PAH ICAL @ 2.0ug/mL | SVM15-55F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:01 2003

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F016.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1477.67ng/ml m

response 260549

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	47.87
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03
mt
11/11/03

1107F016.D 1107ALK.M Sat Nov 08 07:04:20 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:02 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	276266	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	148122	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	223217	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	225298	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	141638	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	1028163	5132.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 513.24%			
16) Fluorene-d10	9.00	176	780474	5153.51	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 515.35%			
21) 2,4,6 Tribromophenol	9.59	330	98444	4586.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 458.66%			
37) Fluoranthene-d10	13.70	212	1195208	5310.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 531.06%			
41) Terphenyl-d14	14.73	244	1001999	4534.53	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 453.45%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	1564149	4745.54	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	993787	4960.47	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	931440	5051.48	ng/ml	99
6) Biphenyl	7.09	154	1206436	4896.87	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.32	156	873422	5099.72	ng/ml	100
12) Acenaphthylene	7.79	152	1520506	5015.40	ng/ml	100
13) Acenaphthene	8.12	154	915114	4829.53	ng/ml	99
14) Dibenzofuran	8.41	168	1259413	4743.12	ng/ml	94
15) 2,3,5-Trimethylnaphthalene	8.82	170	841650	5071.48	ng/ml	100
17) Fluorene	9.05	166	1037277	4943.39	ng/ml	99
22) Pentachlorophenol	10.77	266	649759	27127.78	ng/ml	99
24) Dibenzothiophene	10.78	184	1368220	4757.85	ng/ml	99
28) Phenanthrene	11.04	178	1388441	4700.04	ng/ml	98
29) Anthracene	11.14	178	1329194	5123.06	ng/ml	99
30) Carbazole	11.56	167	1064410	5044.61	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	1007664	5073.03	ng/ml	99
36) Fluoranthene	13.73	202	1475181	5156.29	ng/ml	98
39) Pyrene	14.24	202	1493115	4428.81	ng/ml	98
42) Benz(a)anthracene	17.09	228	1160974	4659.76	ng/ml	100
43) Chrysene	17.19	228	1218841	4819.88	ng/ml	99
49) Benzo(b)fluoranthene	20.10	252	1045711	4803.88	ng/ml	99
50) Benzo(k)fluoranthene	20.18	252	1307838m	6216.57	ng/ml	
51) Benzo(e)pyrene	21.09	252	1096069	4876.76	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:02 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mmt 11/11/03

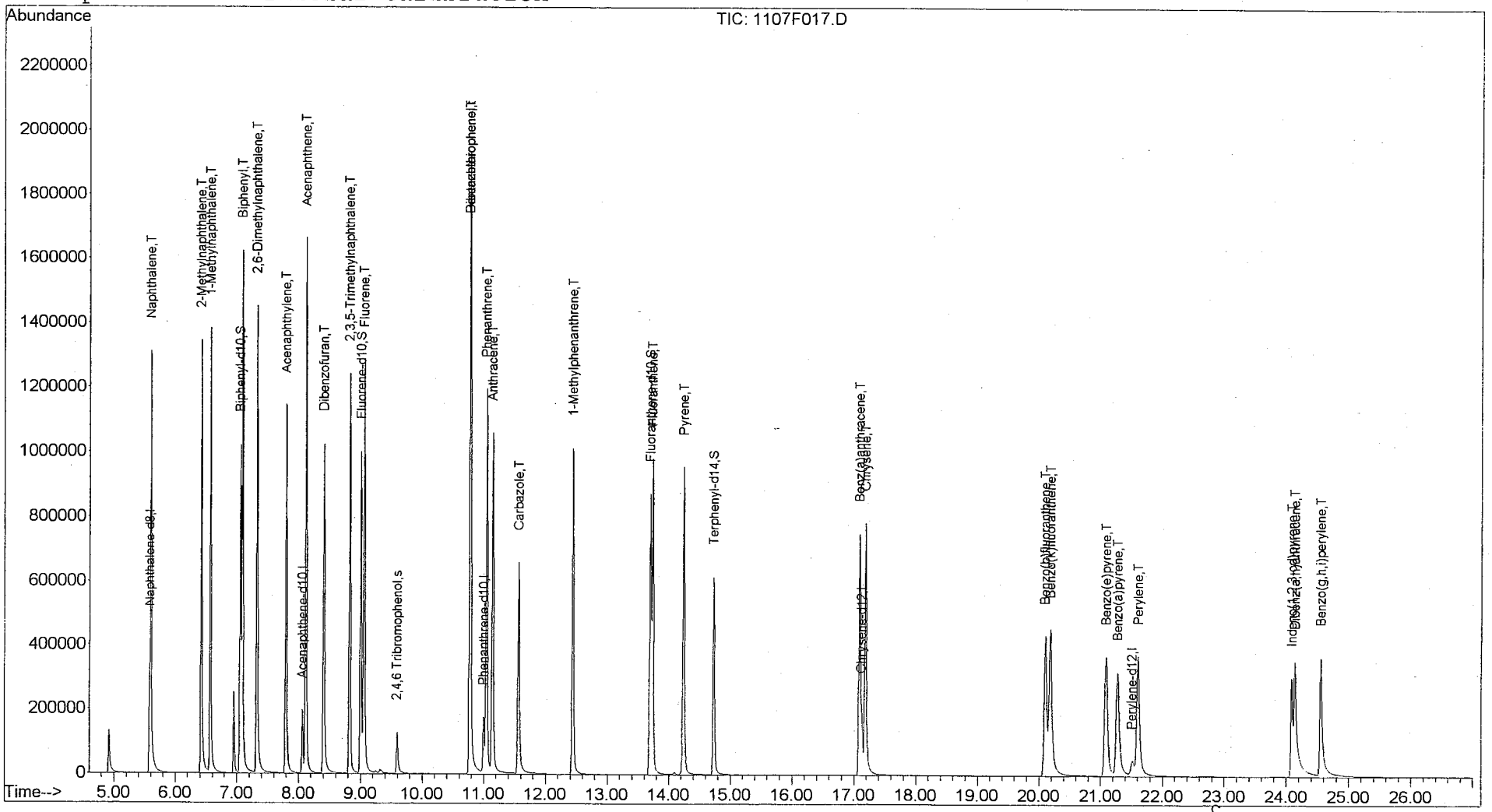
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	938040	5044.12	ng/ml	100
53)	Perylene	21.61	252	1004440	5165.03	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	564137	2993.85	ng/ml	99
55)	Dibenz(a,h)anthracene	24.14	278	817645m	3943.09	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	843877	3569.22	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1107F017.D 1107ALK.M Sat Nov 08 07:09:30 2003 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F017.D Vial: 11
Acq On : 7 Nov 2003 8:38 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



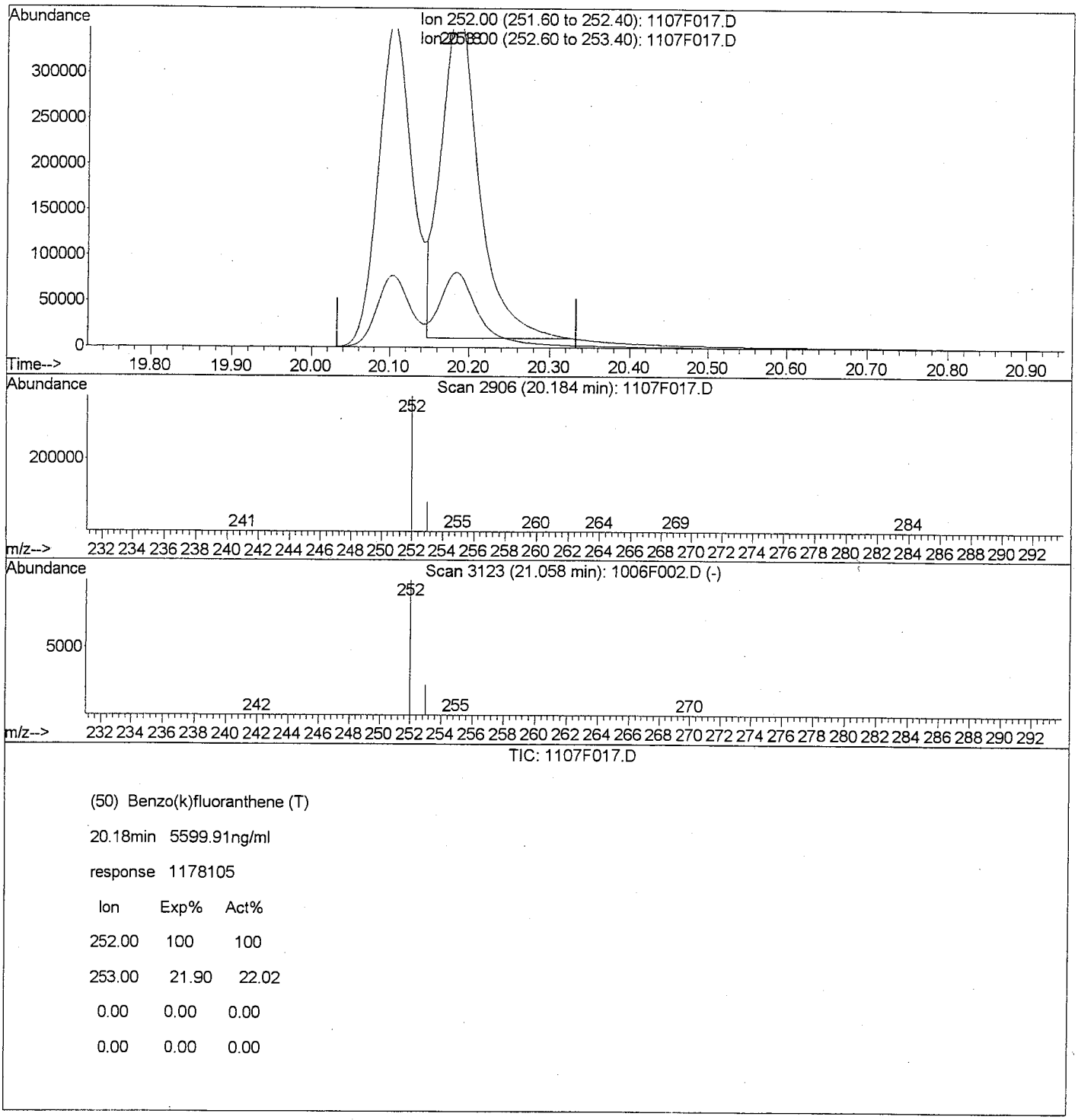
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D
Acq On : 7 Nov 2003 8:38 pm
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 5599.91ng/ml

response 1178105

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.02
0.00	0.00	0.00
0.00	0.00	0.00

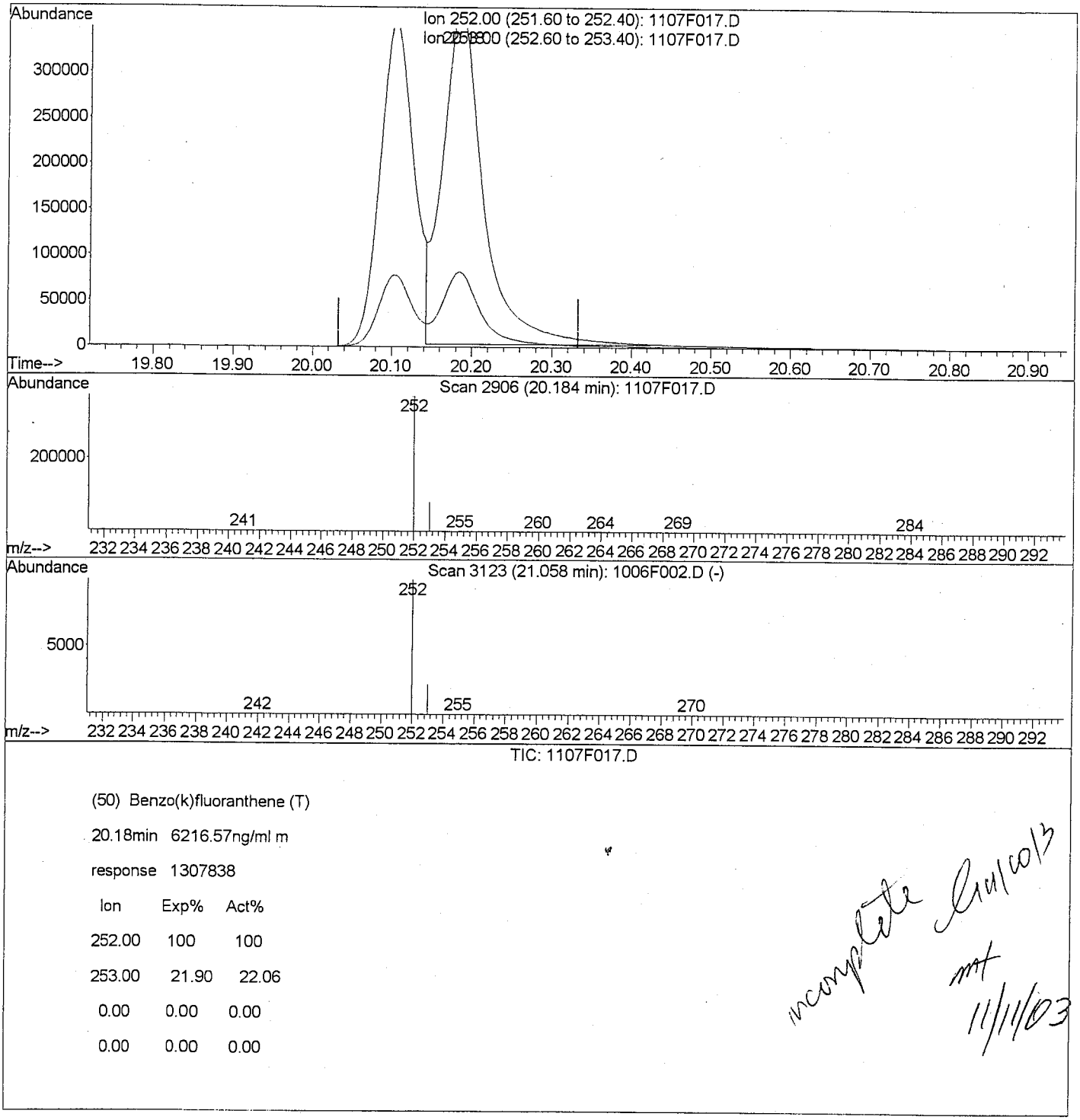
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D
Acq On : 7 Nov 2003 8:38 pm
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.18min 6216.57ng/ml m

response 1307838

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.06
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03
mt
11/14/03

1107F017.D 1107ALK.M Sat Nov 08 07:04:54 2003

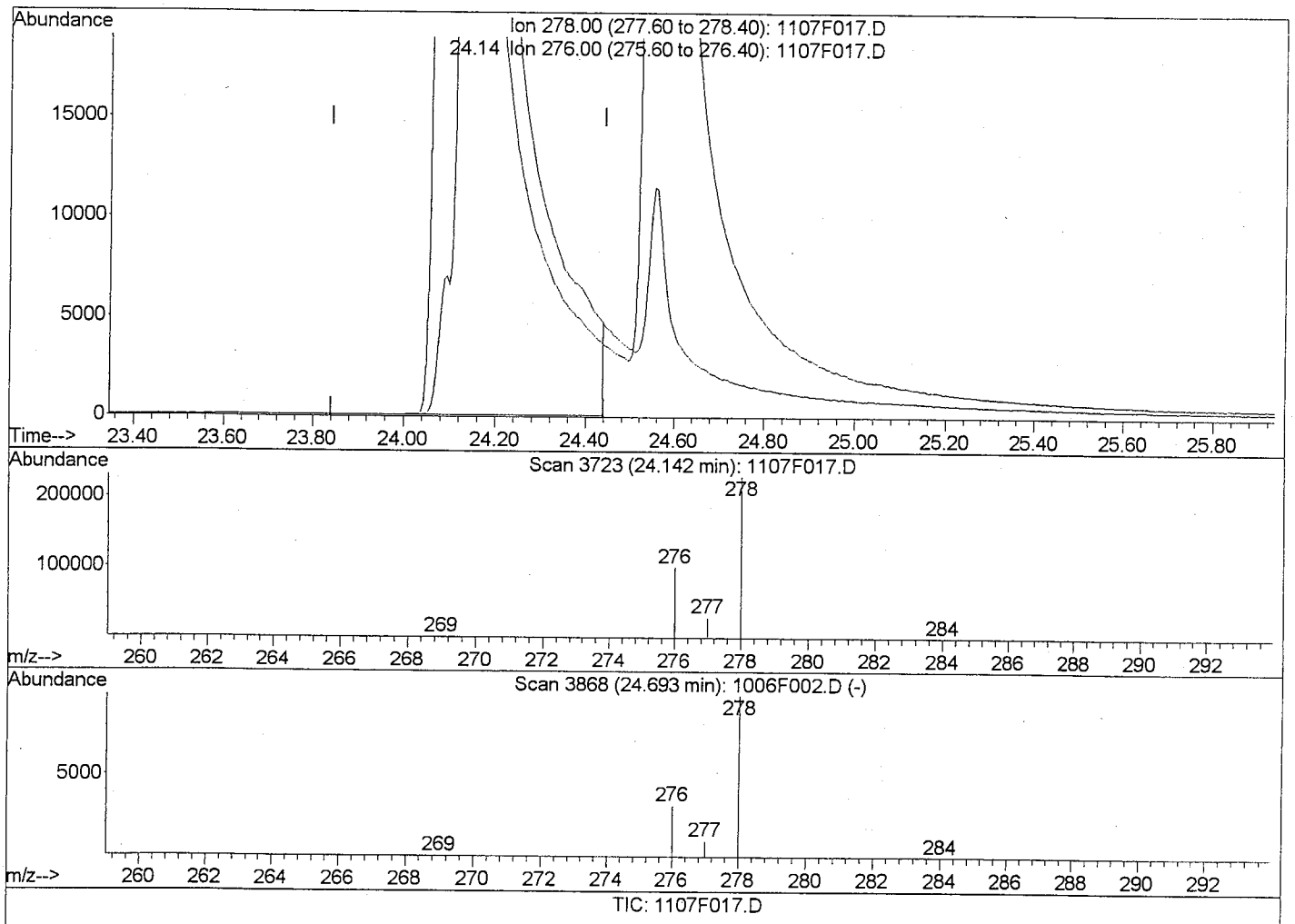
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D
Acq On : 7 Nov 2003 8:38 pm
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 3859.39ng/ml

response 800289

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	43.56
0.00	0.00	0.00
0.00	0.00	0.00

1107F017.D 1107ALK.M Sat Nov 08 07:05:00 2003

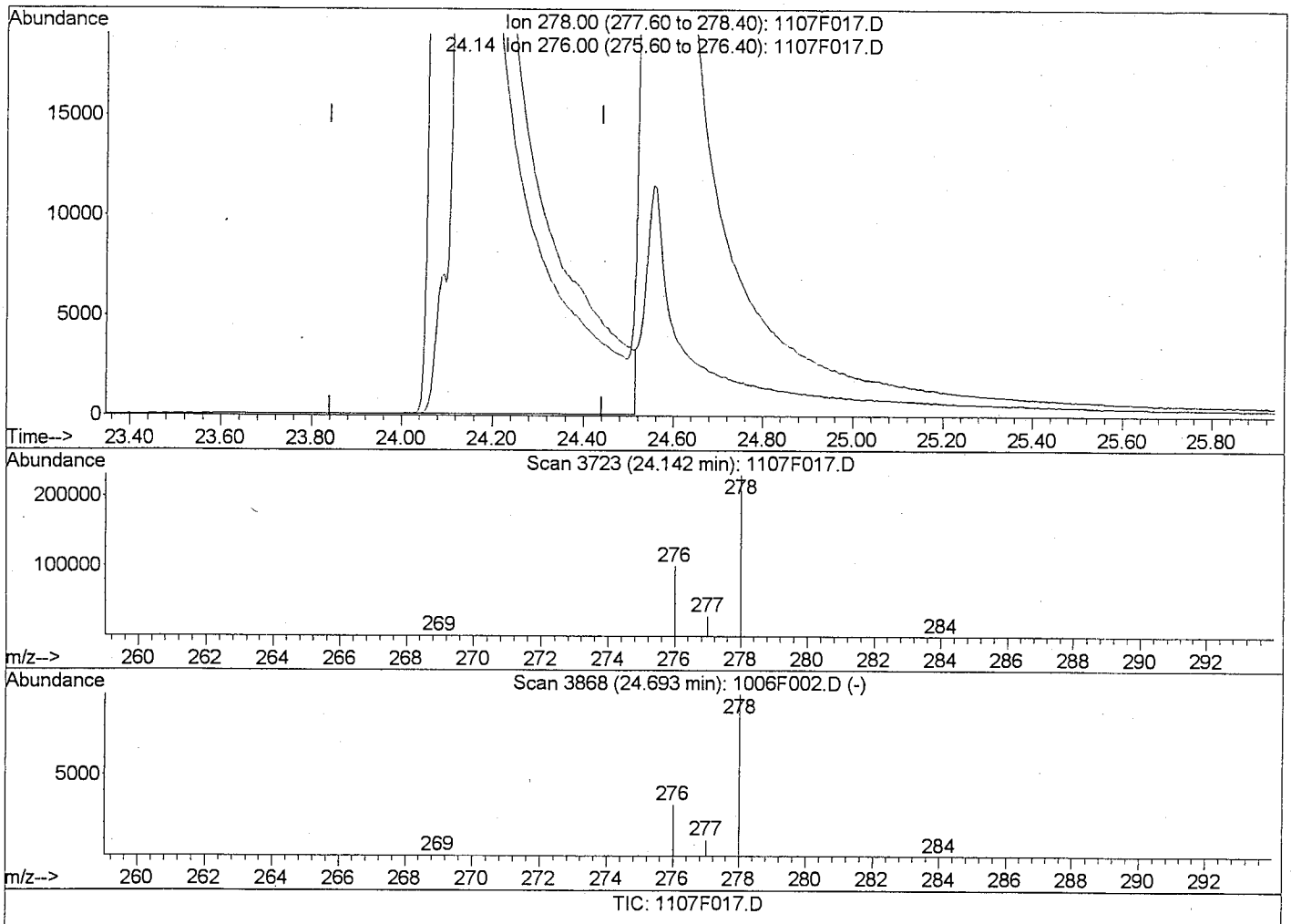
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F017.D
Acq On : 7 Nov 2003 8:38 pm
Sample : SIM PAH ICAL @ 5.0ug/mL | SVM15-55G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:02 2003

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 3943.09ng/ml m

response 817645

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	43.59
0.00	0.00	0.00
0.00	0.00	0.00

mcomplete 11/10/03

mmt 11/11/03

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F018.D
Acq On : 7 Nov 2003 9:14 pm
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:05 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	263851	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	139342	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	216348	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	226183	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	145486	1000.00	ng/ml	0.01
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	1582623	8271.91	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 827.19%			
16) Fluorene-d10	9.00	176	1212406	8510.02	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 851.00%			
21) 2,4,6 Tribromophenol	9.59	330	164830	8163.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 816.35%			
37) Fluoranthene-d10	13.70	212	1906411	8739.52	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 873.95%			
41) Terphenyl-d14	14.73	244	1628200	7339.57	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 733.96%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2423976	7700.25	ng/ml	99
3) 2-Methylnaphthalene	6.42	142	1549238	8096.85	ng/ml	98
4) 1-Methylnaphthalene	6.57	142	1444311	8201.50	ng/ml	98
6) Biphenyl	7.09	154	1856873	7891.60	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.33	156	1351686	8263.54	ng/ml	99
12) Acenaphthylene	7.80	152	2360735	8277.56	ng/ml	99
13) Acenaphthene	8.11	154	1405239	7883.47	ng/ml	99
14) Dibenzofuran	8.40	168	1951754	7813.73	ng/ml	90
15) 2,3,5-Trimethylnaphthalene	8.82	170	1303784	8351.15	ng/ml	98
17) Fluorene	9.05	166	1618816	8200.97	ng/ml	99
22) Pentachlorophenol	10.78	266	1098723	48762.70	ng/ml	98
24) Dibenzothiophene	10.78	184	2158559	7744.50	ng/ml	98
28) Phenanthrene	11.05	178	2176476	7601.56	ng/ml	100
29) Anthracene	11.15	178	2103558	8365.08	ng/ml	99
30) Carbazole	11.56	167	1719865	8409.84	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	1600397	8312.92	ng/ml	99
36) Fluoranthene	13.73	202	2342391	8447.45	ng/ml	97
39) Pyrene	14.24	202	2385159	7047.08	ng/ml	98
42) Benz(a)anthracene	17.09	228	1927576	7706.36	ng/ml	99
43) Chrysene	17.19	228	1977742	7790.34	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	1792964	8018.82	ng/ml	99
50) Benzo(k)fluoranthene	20.19	252	2114516m	9785.12	ng/ml	
51) Benzo(e)pyrene	21.09	252	1821102	7888.35	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:05 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

11/10/03 mt 11/11/03

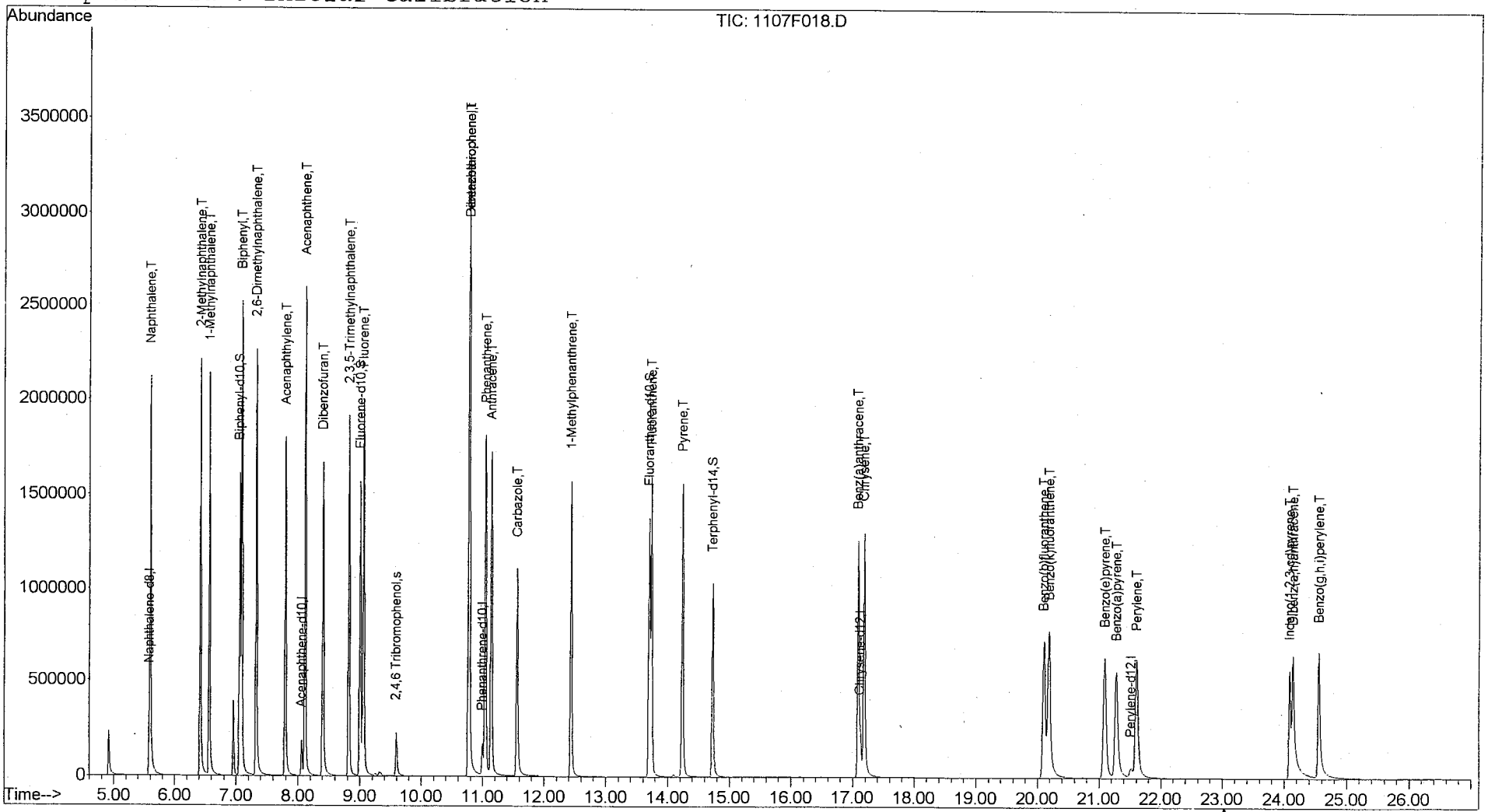
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	1595718	8353.69	ng/ml	100
53)	Perylene	21.61	252	1689309	8457.00	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1014603	5242.03	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	1407676m	6608.97	ng/ml	
56)	Benzo(g,h,i)perylene	24.56	276	1431303	5893.65	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1107F018.D 1107ALK.M Sat Nov 08 07:09:33 2003 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F018.D Vial: 12
Acq On : 7 Nov 2003 9:14 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1689

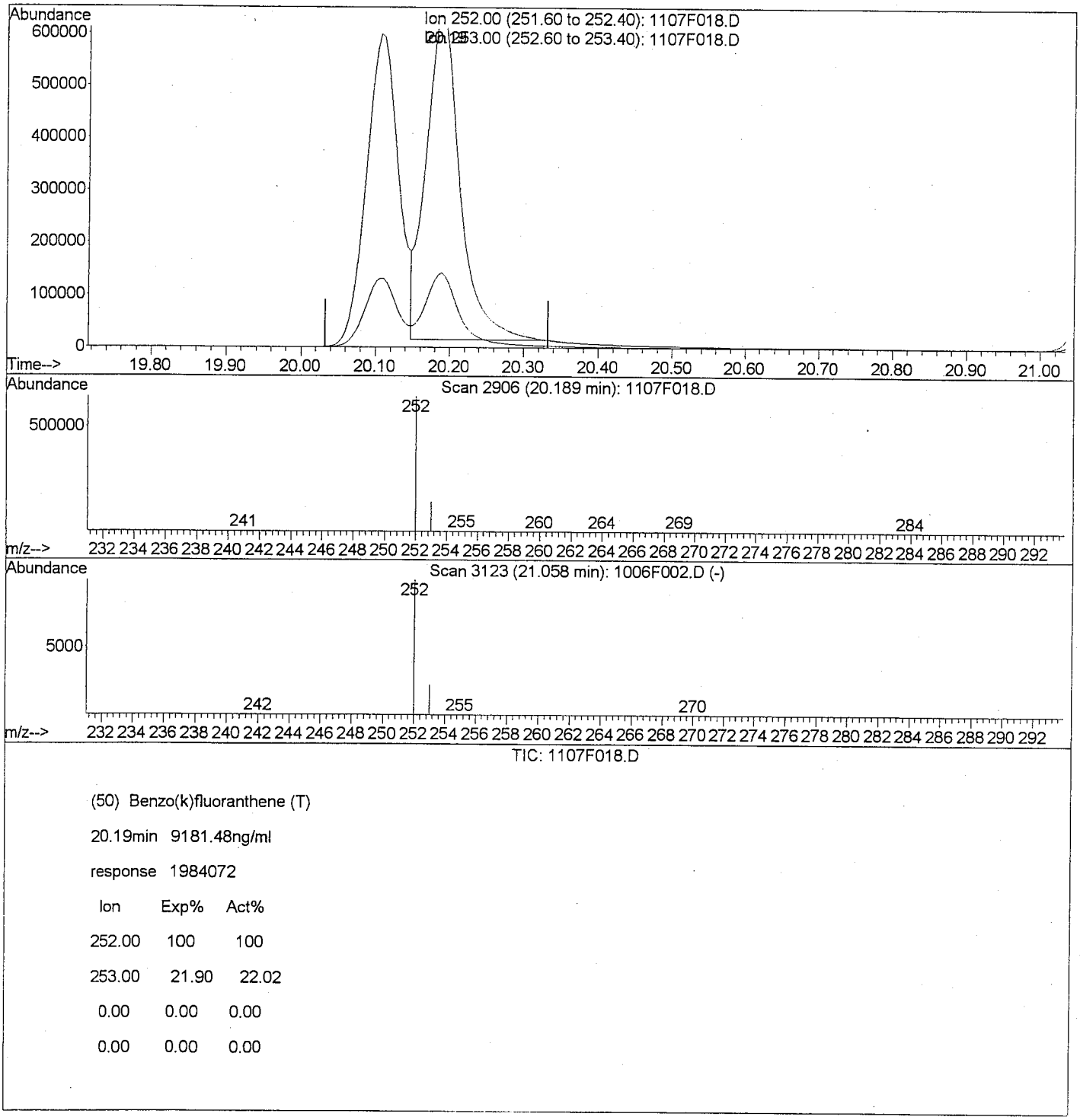
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D
Acq On : 7 Nov 2003 9:14 pm
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(50) Benzo(k)fluoranthene (T)

20.19min 9181.48ng/ml

response 1984072

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.02
0.00	0.00	0.00
0.00	0.00	0.00

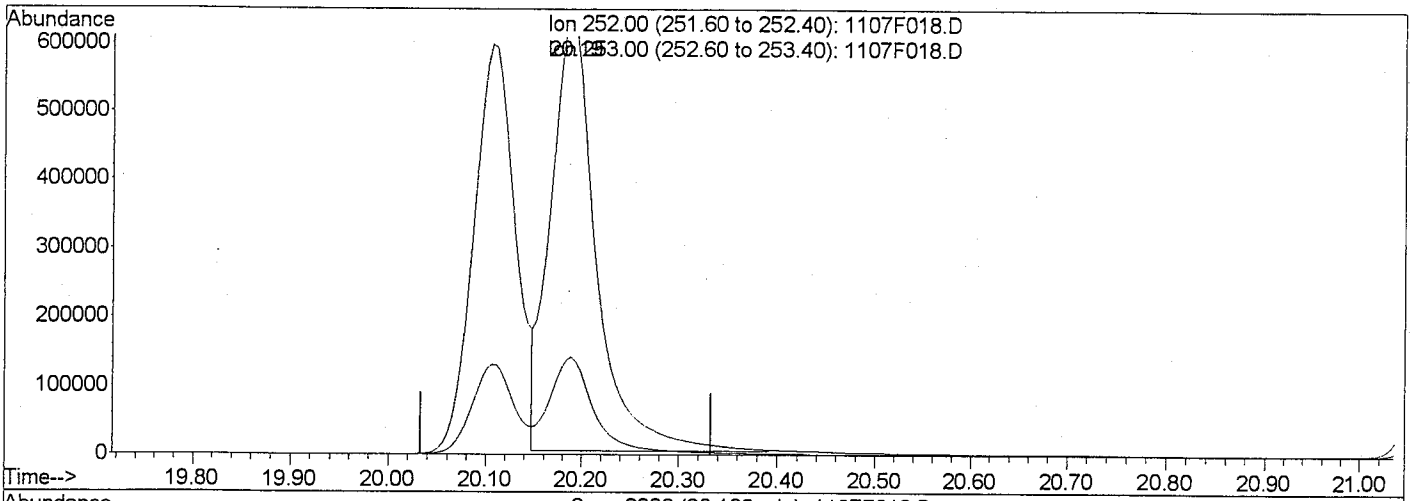
Quantitation Report (Qedit)

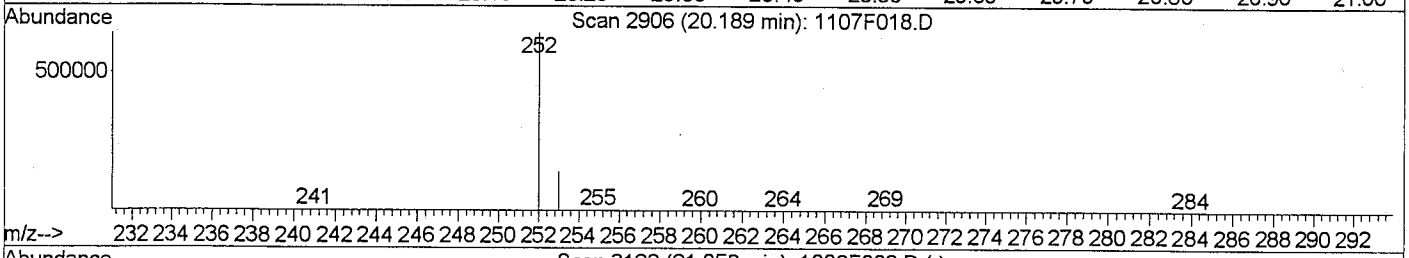
Data File : J:\MS11\DATA\110703\1107F018.D
Acq On : 7 Nov 2003 9:14 pm
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003

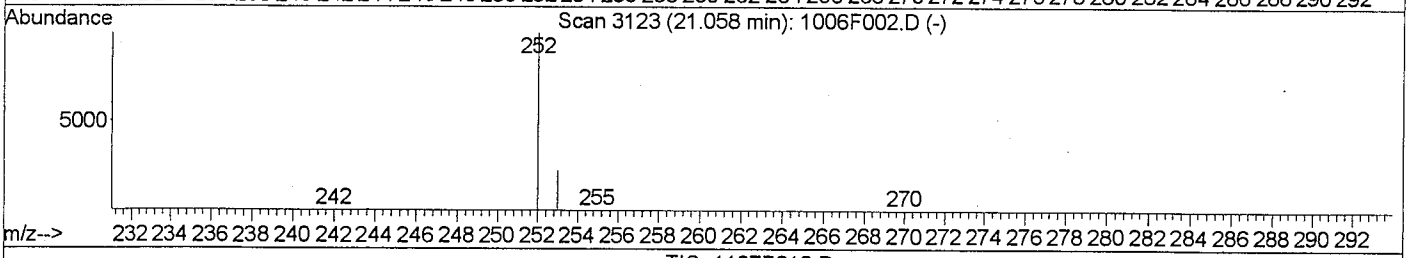
Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F018.D

(50) Benzo(k)fluoranthene (T)

20.19min 9785.12ng/ml m

response 2114516

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.05
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03 mt 11/11/03

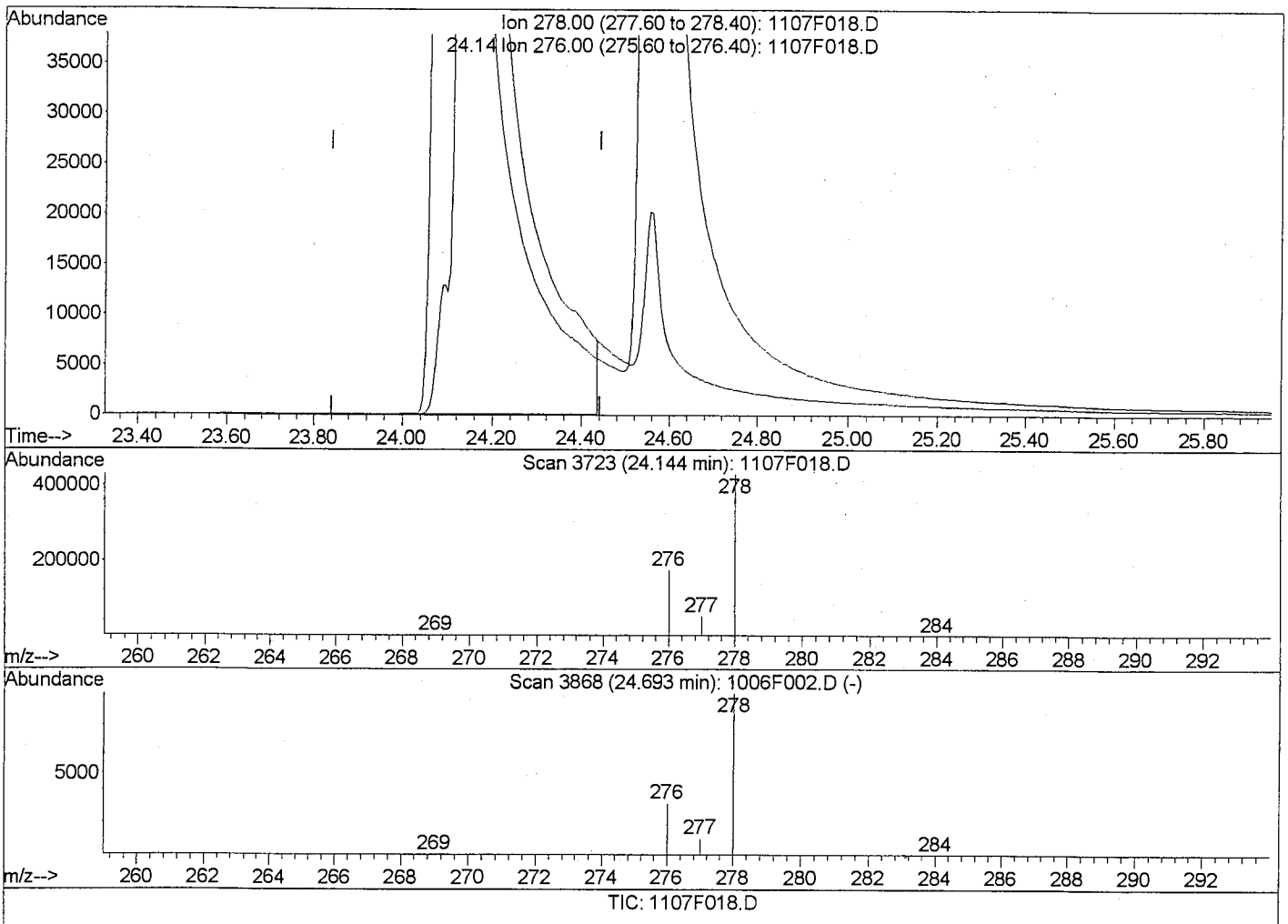
1107F018.D 1107ALK.M Sat Nov 08 07:07:45 2003

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D
Acq On : 7 Nov 2003 9:14 pm
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 6490.14ng/ml

response 1382366

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	40.40
0.00	0.00	0.00
0.00	0.00	0.00

1107F018.D 1107ALK.M Sat Nov 08 07:07:53 2003

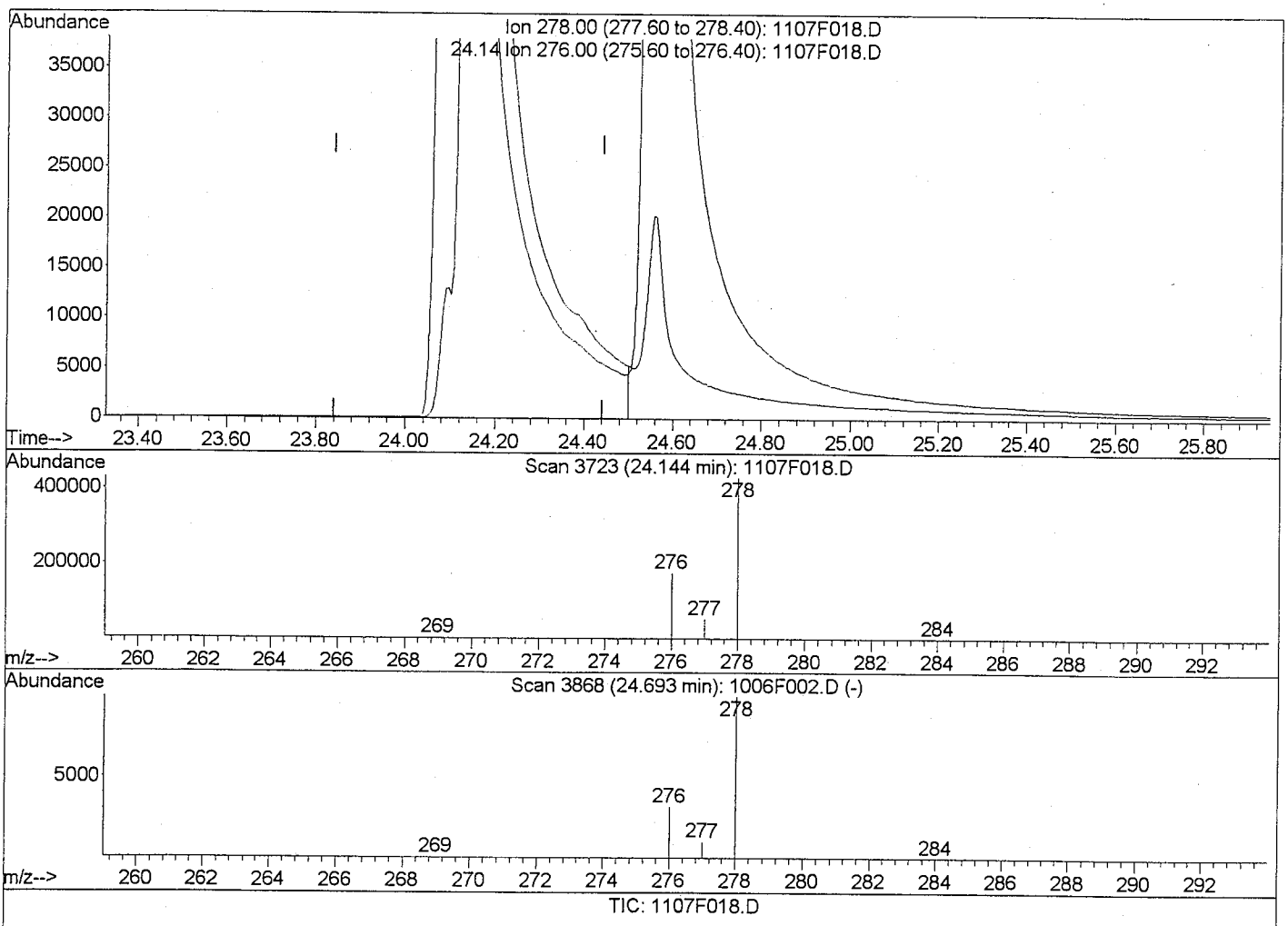
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F018.D
Acq On : 7 Nov 2003 9:14 pm
Sample : SIM PAH ICAL @ 8.0ug/mL | SVM15-55H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:05 2003

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 6608.97ng/ml m

response 1407676

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	40.43
0.00	0.00	0.00
0.00	0.00	0.00

incomplete dwl/cal
11/11/03

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:09 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mt 11/11/03 JW 11/10/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	263518	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.06	164	137662	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	207450	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	201623	1000.00	ng/ml	0.00
48) Perylene-d12	21.52	264	125321	1000.00	ng/ml	0.02
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	1910510	9998.30	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 999.83%			
16) Fluorene-d10	9.00	176	1448919	10294.24	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 1029.42%			
21) 2,4,6 Tribromophenol	9.60	330	197545	9903.16	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 990.32%			
37) Fluoranthene-d10	13.70	212	2170558	10377.24	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 1037.72%			
41) Terphenyl-d14	14.73	244	1807524	9140.43	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 914.04%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	2966406	9435.30	ng/ml	98
3) 2-Methylnaphthalene	6.42	142	1887554	9877.48	ng/ml	100
4) 1-Methylnaphthalene	6.57	142	1758228	9996.69	ng/ml	99
6) Biphenyl	7.09	154	2244325	9550.30	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	1636147	10015.24	ng/ml	99
12) Acenaphthylene	7.79	152	2847161	10104.97	ng/ml	99
13) Acenaphthene	8.12	154	1699634	9651.41	ng/ml	100
14) Dibenzofuran	8.41	168	2339737	9481.31	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.83	170	1564116	10140.93	ng/ml	93
17) Fluorene	9.06	166	1929450	9893.94	ng/ml	99
22) Pentachlorophenol	10.78	266	1303524	58558.04	ng/ml	99
24) Dibenzothiophene	10.78	184	2549455	9539.30	ng/ml	97
28) Phenanthrene	11.05	178	2555490	9308.13	ng/ml	99
29) Anthracene	11.15	178	2472669	10254.65	ng/ml	99
30) Carbazole	11.56	167	1974027	10066.67	ng/ml	97
31) 1-Methylphenanthrene	12.44	192	1854548	10046.23	ng/ml	100
36) Fluoranthene	13.74	202	2669632	10040.54	ng/ml	99
39) Pyrene	14.24	202	2713582	8994.03	ng/ml	97
42) Benz(a)anthracene	17.09	228	2097665	9407.93	ng/ml	100
43) Chrysene	17.18	228	2147580	9489.77	ng/ml	99
49) Benzo(b)fluoranthene	20.11	252	1905811	9895.01	ng/ml	100
50) Benzo(k)fluoranthene	20.19	252	2303034m	12372.38	ng/ml	
51) Benzo(e)pyrene	21.09	252	1969252	9902.63	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F019.D
Acq On : 7 Nov 2003 9:50 pm
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 08 06:12:09 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mrt 11/11/03 11/10/03

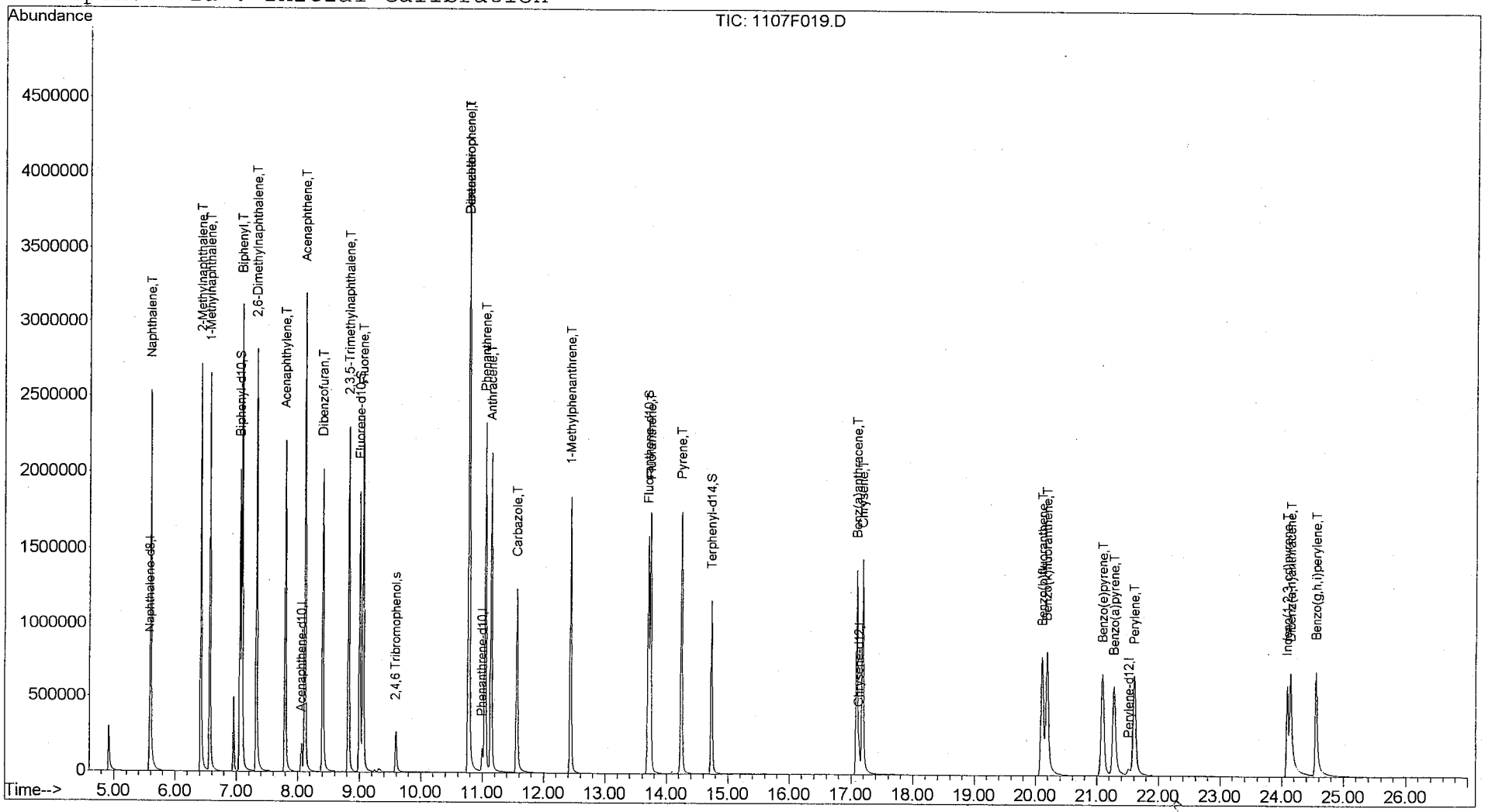
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.28	252	1708076	10380.70	ng/ml	100
53)	Perylene	21.61	252	1811713	10529.17	ng/ml	100
54)	Indeno(1,2,3-cd)pyrene	24.09	276	1062171	6370.82	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	1490083m	8121.55	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	1517060	7251.92	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F019.D Vial: 13
Acq On : 7 Nov 2003 9:50 pm Operator: LWeiskopf
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Initial Calibration



1107F019.D 1107ALK.M Sat Nov 08 07:09:37 2003 Page 3

1696

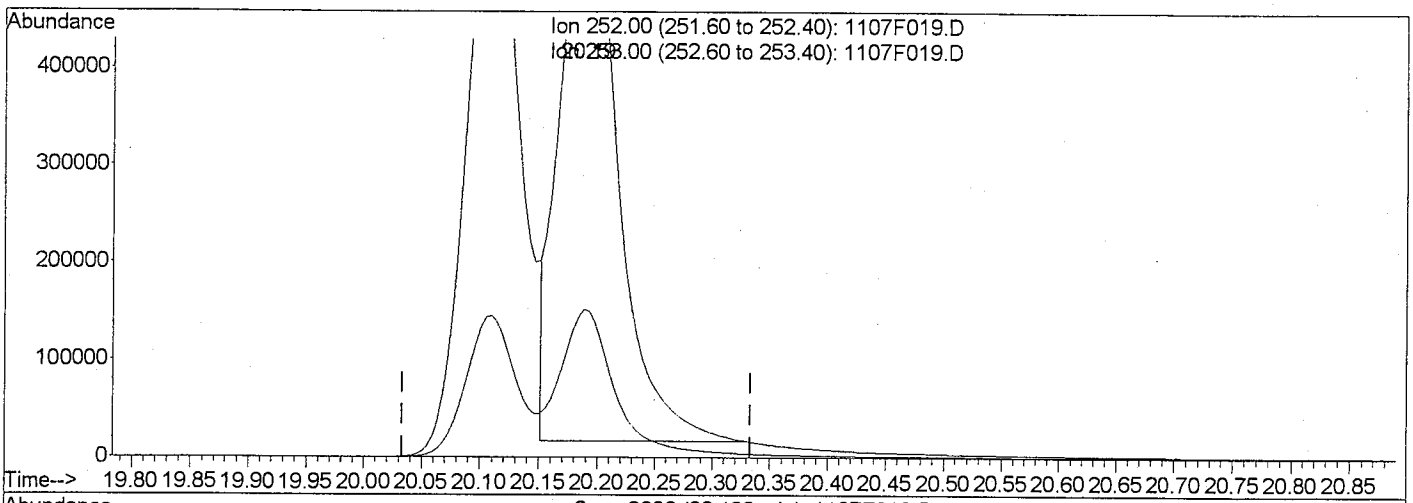
Quantitation Report (Qedit)

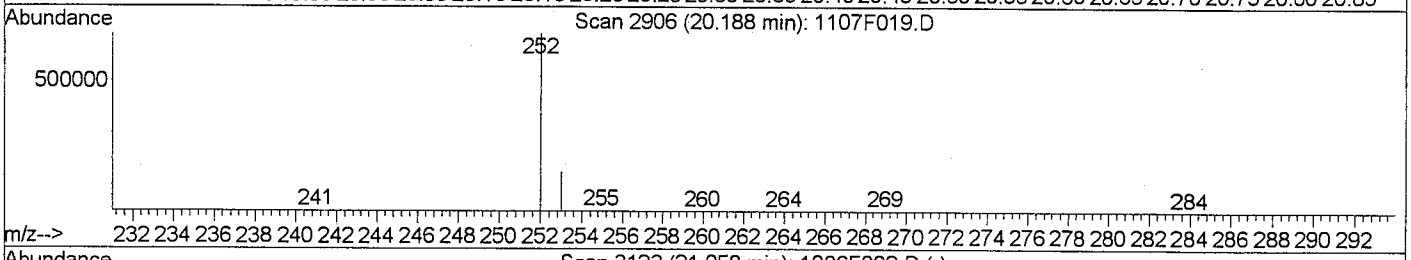
Data File : J:\MS11\DATA\110703\1107F019.D
Acq On : 7 Nov 2003 9:50 pm
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 6:09 2003

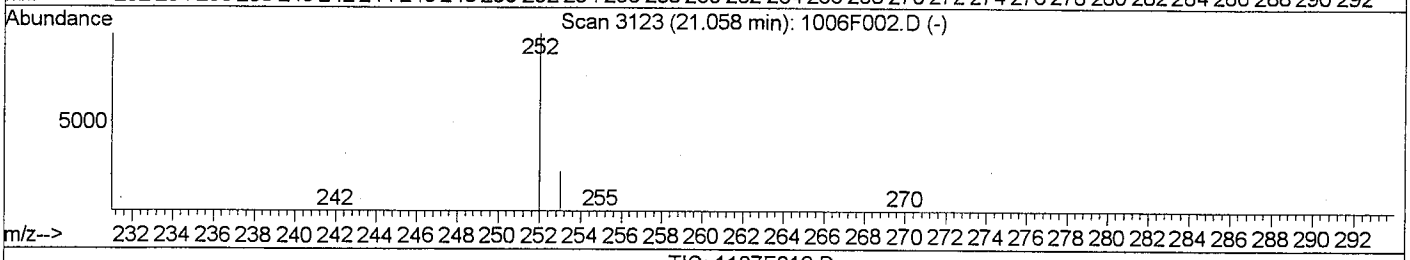
Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F019.D

(50) Benzo(k)fluoranthene (T)

20.19min 11303.11ng/ml

response 2103998

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.05
0.00	0.00	0.00
0.00	0.00	0.00

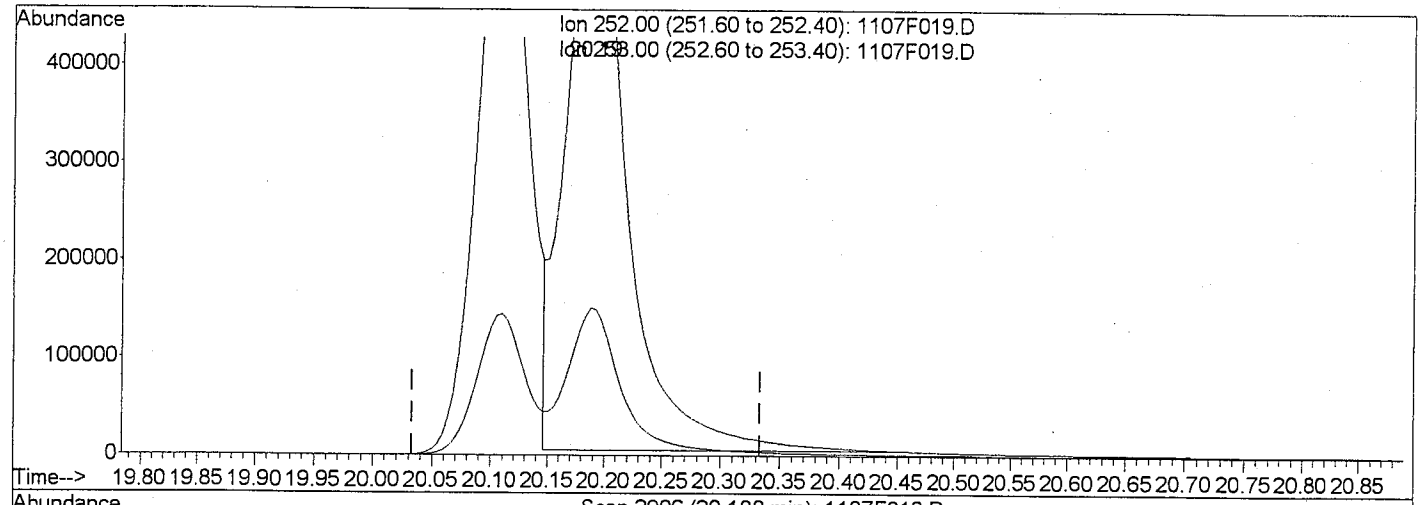
Quantitation Report (Qedit)

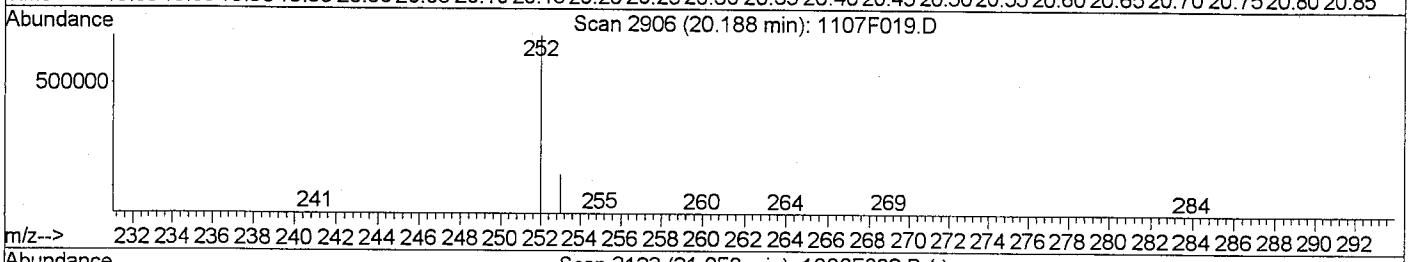
Data File : J:\MS11\DATA\110703\1107F019.D
Acq On : 7 Nov 2003 9:50 pm
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003

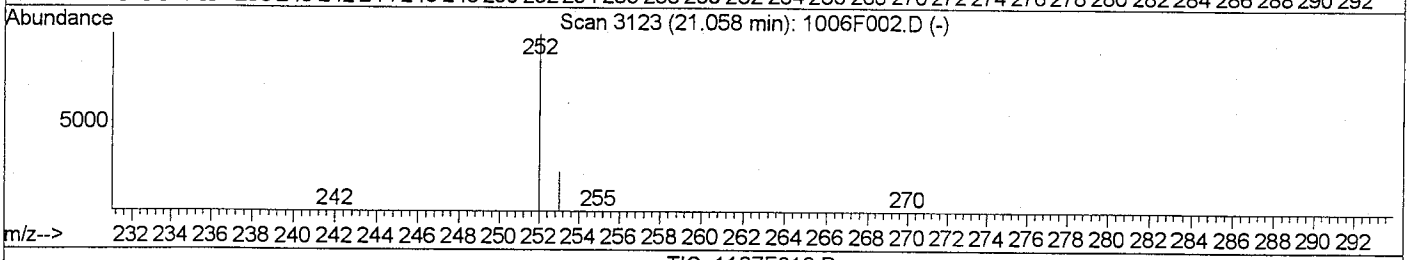
Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration







TIC: 1107F019.D

(50) Benzo(k)fluoranthene (T)

20.19min 12372.38ng/ml m

response 2303034

Ion	Exp%	Act%
252.00	100	100
253.00	21.90	22.08
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03 mst 11/11/03

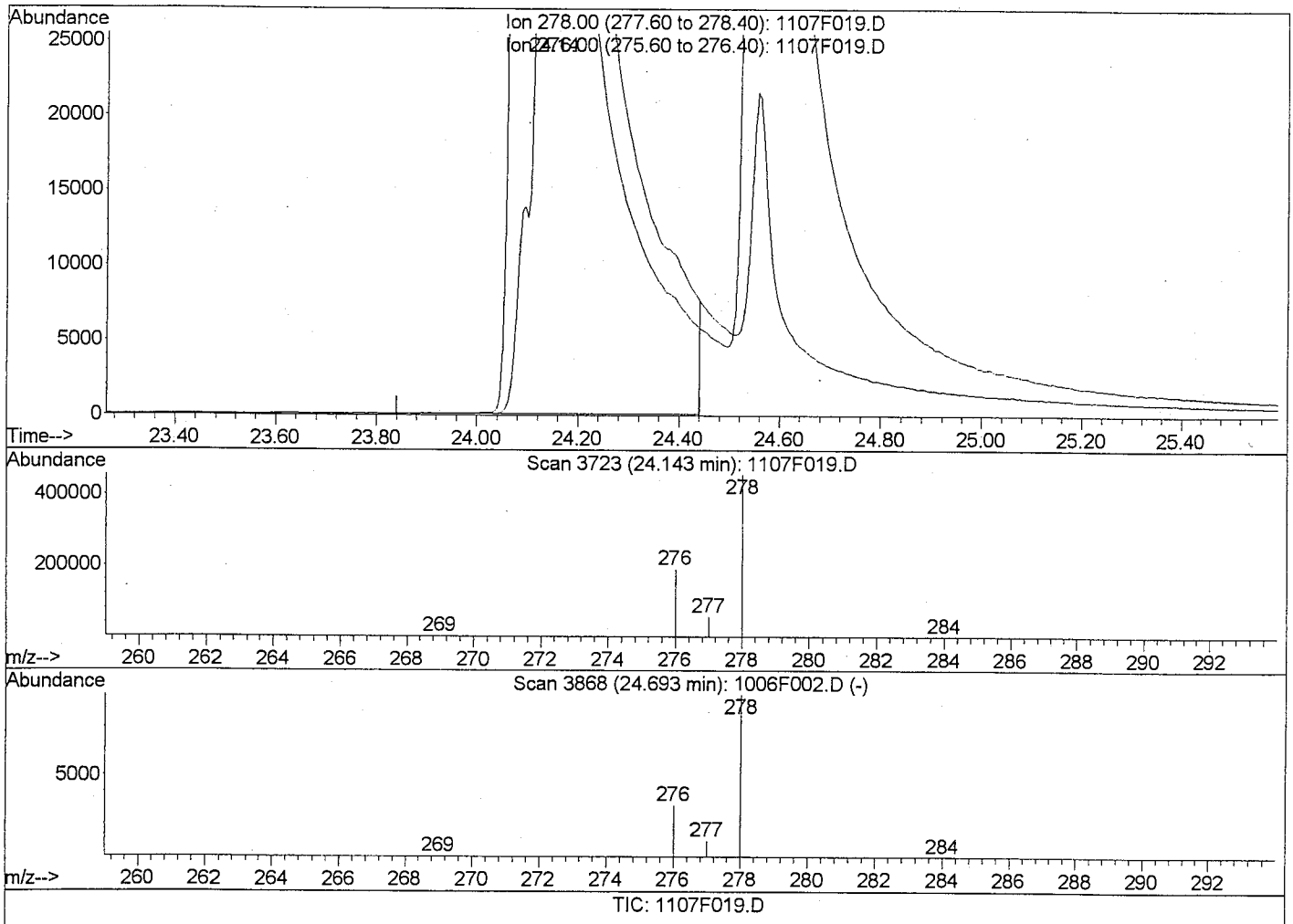
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F019.D
Acq On : 7 Nov 2003 9:50 pm
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



TIC: 1107F019.D

(55) Dibenz(a,h)anthracene (T)

24.14min 7976.85ng/ml

response 1463536

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	41.61
0.00	0.00	0.00
0.00	0.00	0.00

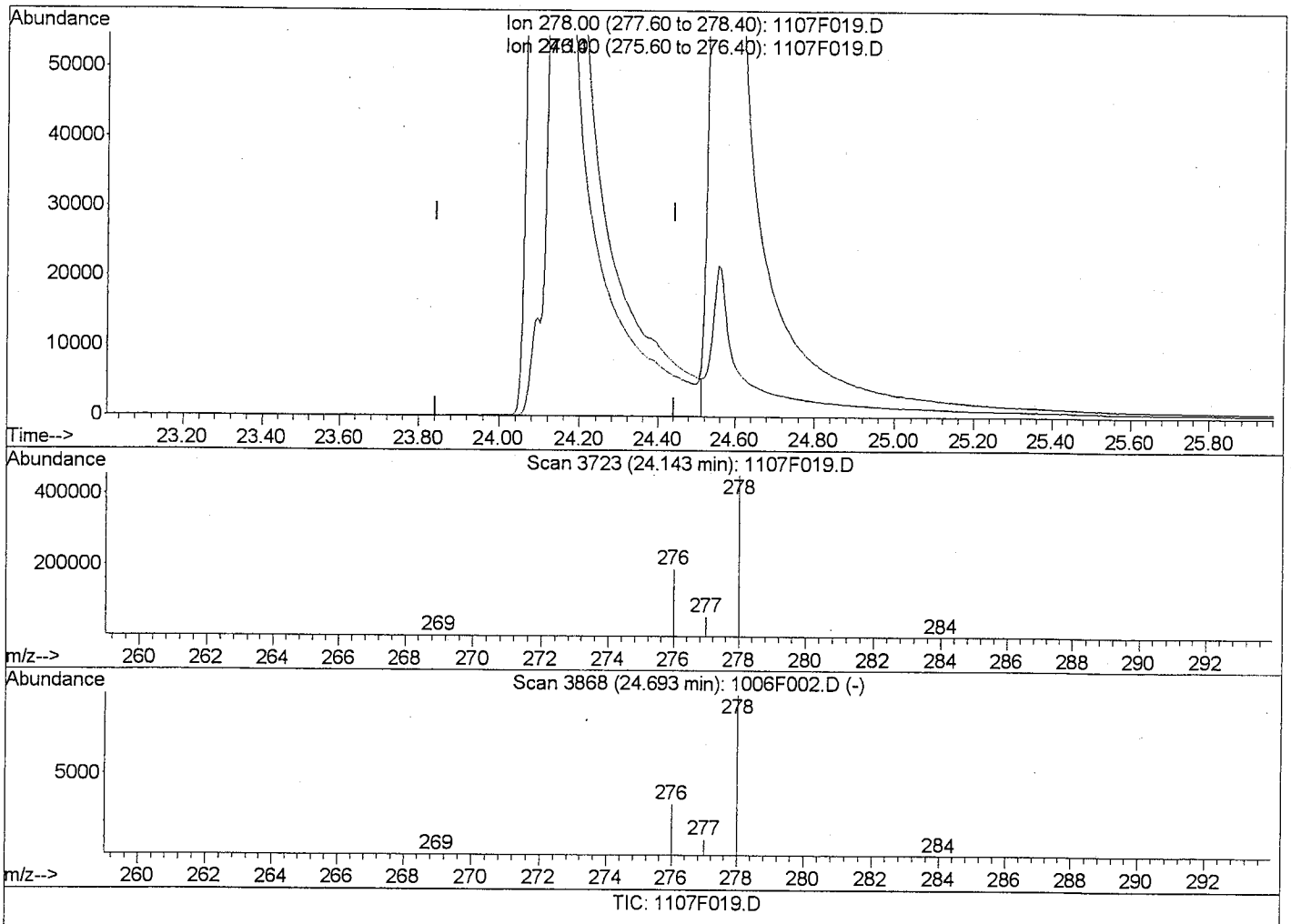
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F019.D
Acq On : 7 Nov 2003 9:50 pm
Sample : SIM PAH ICAL @ 10ug/mL | SVM15-55I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 8 7:06 2003

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 07 13:11:58 2003
Response via : Multiple Level Calibration



(55) Dibenz(a,h)anthracene (T)

24.14min 8121.55ng/ml m

response 1490083

Ion	Exp%	Act%
278.00	100	100
276.00	31.70	41.64
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

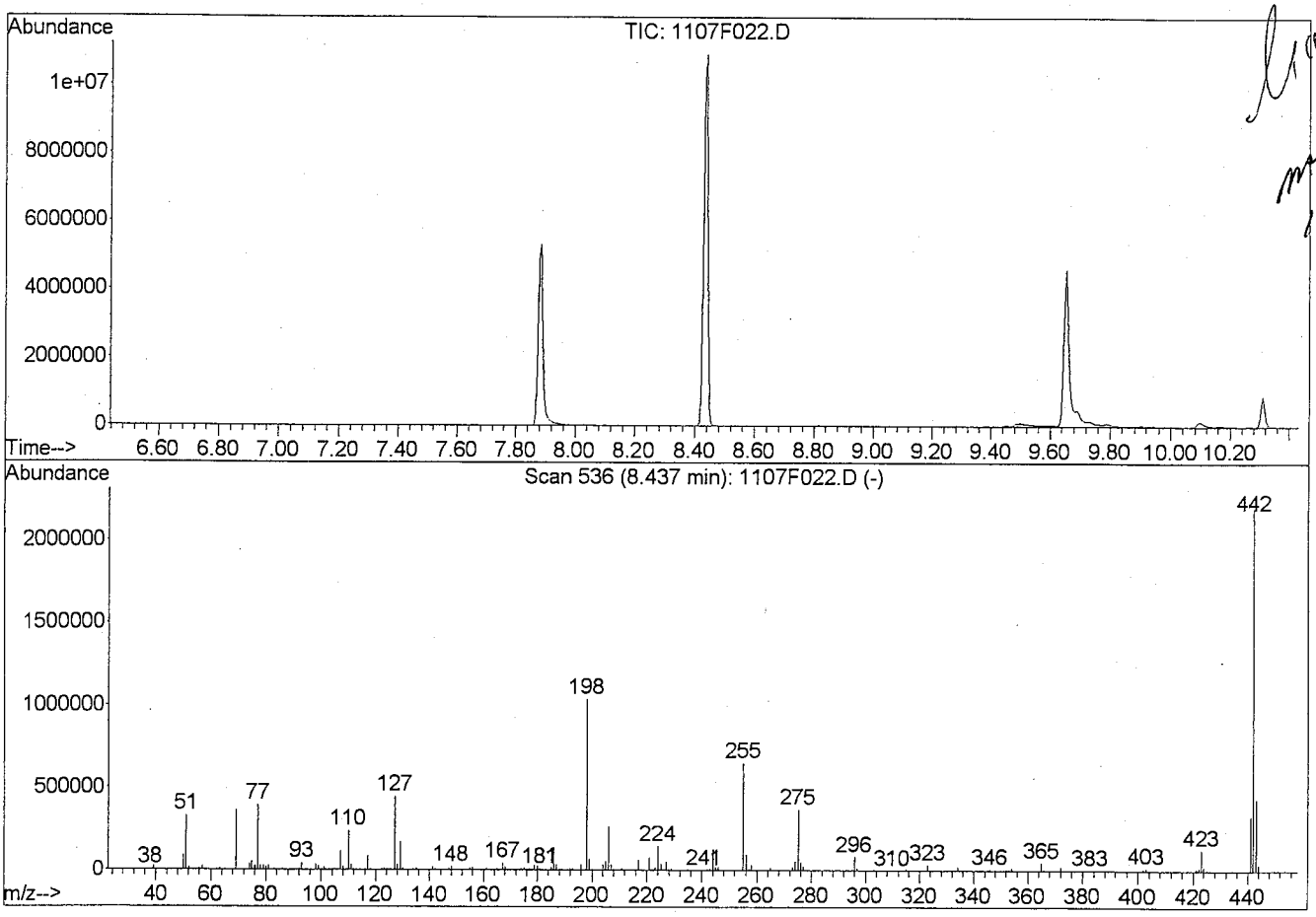
mt 11/11/03

1107F019.D 1107ALK.M Sat Nov 08 07:08:51 2003

DFTPP

Data File : J:\MS11\DATA\110703\1107F022.D
Acq On : 7 Nov 2003 11:36 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.7	329344	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	2100	PASS
127	198	10	80	43.1	448256	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	47.1	1039680	PASS
199	198	5	9	6.6	68888	PASS
275	198	10	60	35.8	371968	PASS
365	442	1	50	2.2	49192	PASS
441	443	0.01	100	75.3	330624	PASS
442	442	30	100	100.0	2205184	PASS
443	442	15	24	19.9	439104	PASS

1107F022.D DFTPPPAH.M Mon Nov 10 14:43:48 2003

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	585	53.10	655	67.00	1015	81.00	28544
37.10	1649	55.00	2018	69.00	366016	82.00	6486
38.00	4877	56.00	10126	70.00	2100	83.00	7206
39.10	26496	57.00	23376	73.00	3193	83.95	533
40.00	1019	58.00	1208	74.00	35320	85.00	5257
41.10	898	61.00	4706	75.00	56600	86.00	7926
44.00	33	62.00	4858	76.10	22904	87.00	3671
45.00	804	63.00	14088	77.00	393920	88.00	1426
50.10	89680	64.10	2008	78.00	27152	89.00	1046
51.10	329344	65.10	6551	79.00	26960	91.00	6251
52.10	16976	66.00	556	80.00	20600	92.00	7379

11/10/03

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	42792	105.00	8780	118.90	833	131.00	2652
94.00	3132	107.00	116656	120.00	1583	132.00	2225
95.00	955	108.00	18400	121.00	752	132.90	647
96.10	2286	110.00	240704	122.00	8442	134.00	5025
98.00	33456	111.00	34648	123.00	11817	135.00	14062
99.00	27144	111.90	3751	123.90	5230	136.00	5209
100.00	2310	113.00	976	125.00	6033	137.00	6889
101.00	15647	115.10	594	127.00	448256	137.90	1571
102.00	826	116.00	6903	128.00	35592	139.00	1000
103.00	6550	117.00	85200	129.00	170944	140.00	1818
104.00	10464	118.00	6164	130.00	13548	141.00	21624

mt 11/11/03

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.00	7489	153.00	7082	164.00	1801	175.00	17048
143.00	5382	154.00	5745	165.00	8410	176.00	6164
144.00	1415	155.00	12251	166.00	6773	176.90	8781
145.00	1327	156.00	18064	167.00	44584	177.90	2722
146.00	3811	157.00	3830	168.00	18832	178.90	33328
147.00	12008	158.00	4041	169.00	3485	180.00	23600
148.00	21880	159.00	3505	170.00	1526	181.00	11030
149.00	4838	159.90	7066	170.90	1841	182.00	1614
150.00	1398	161.00	10945	172.00	3906	182.90	1109
151.00	2983	161.90	2988	173.00	6096	184.00	2716
151.90	1664	163.00	941	174.00	9800	185.00	16856

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.00	133888	197.90	1039680	210.00	3659	225.00	41144
187.00	36992	198.90	68888	211.00	10786	226.00	3840
188.00	3791	200.00	5034	212.90	742	226.90	55592
189.00	8470	201.50	5705	214.90	2705	227.90	7346
189.90	1578	203.00	5936	216.00	6027	228.90	11841
191.00	3871	204.00	35008	216.90	66720	229.90	1919
192.00	10892	205.00	60272	217.90	7974	231.00	6032
193.00	11670	206.00	269120	218.90	758	232.00	963
193.90	2853	207.00	33768	221.00	78792	233.00	1230
194.90	2387	208.00	7589	223.00	15420	234.00	3819
196.00	36544	208.90	2337	224.00	147136	234.90	4967

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
235.90	2527	246.90	4893	259.00	5280	273.90	59592
237.00	4590	247.90	1074	259.90	1020	275.00	371968
237.90	761	248.90	5404	260.90	946	276.00	48840
238.90	2564	249.90	953	263.90	1401	276.90	25120
240.00	1801	251.00	1010	264.90	15235	277.90	3357
241.00	3329	252.00	1156	265.85	1632	278.90	978
242.00	8396	252.90	2438	267.90	617	281.90	905
243.00	9909	255.00	653696	270.00	772	283.00	3046
244.00	133504	256.00	98408	271.00	2011	283.90	2231
245.00	19496	257.00	8253	272.00	2088	285.00	4388
245.90	22848	257.90	35040	272.90	22840	286.00	1029

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.90	1108	303.00	10899	321.90	2590	335.00	5884
289.90	1269	303.90	2923	323.00	36808	335.90	600
290.90	1072	307.90	1995	324.00	6712	339.00	771
292.00	1531	309.00	924	325.00	553	340.90	4662
293.00	6242	310.00	1485	325.90	884	342.00	1212
293.90	1883	312.90	837	326.90	5623	345.90	8654
295.90	84792	314.00	4675	327.90	3538	346.90	1408
296.90	11872	314.90	11088	328.90	569	349.90	507
298.00	913	316.00	6441	332.00	2636	351.00	695
301.00	1338	317.00	969	333.00	4268	352.00	11221
301.90	1882	321.00	3531	334.00	23320	352.90	9068

Scan 536 (8.437 min): 1107F022.D
DFTPP @ 50ug/mL | SVM15-97C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
354.00	14617	376.90	705	405.00	842	442.00	2205184
355.00	2781	382.90	6254	409.80	550	443.00	439104
358.90	844	383.90	2189	414.90	924	444.00	40720
364.90	49192	384.90	604	421.00	14710	445.00	2165
365.90	7939	389.90	3761	422.00	15766		
366.90	638	391.00	2618	423.00	128152		
369.90	1501	391.90	2250	424.00	25464		
371.00	4280	400.90	1979	425.00	2538		
372.00	25456	401.90	10582	437.90	843		
373.00	6378	402.90	16776	438.90	897		
373.90	573	404.00	6192	441.00	330624		

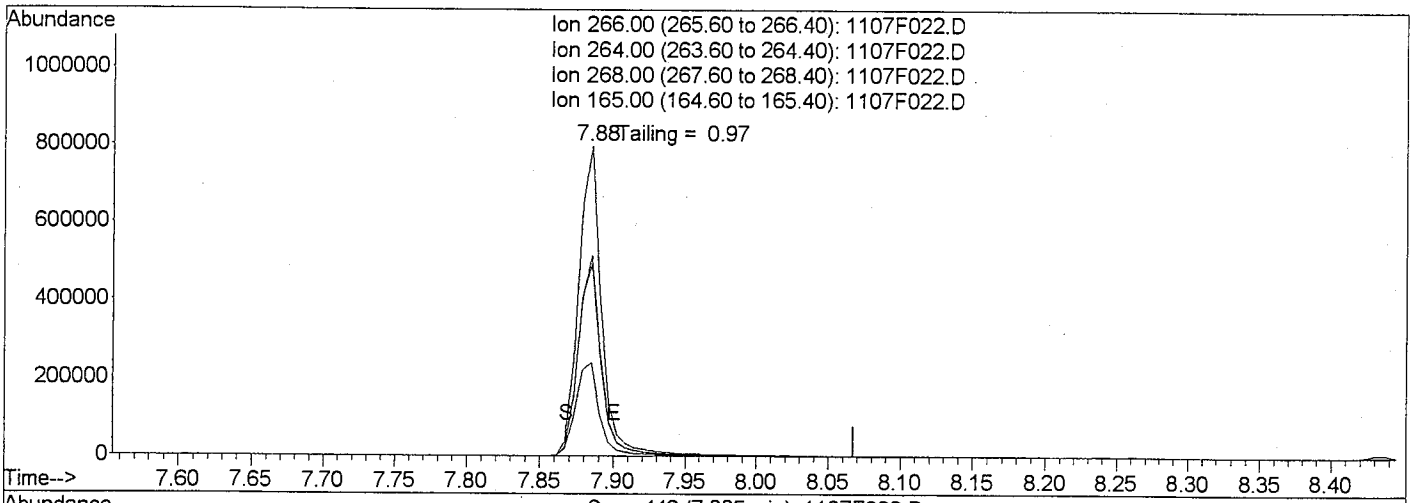
11/10/17
mt 11/11/03

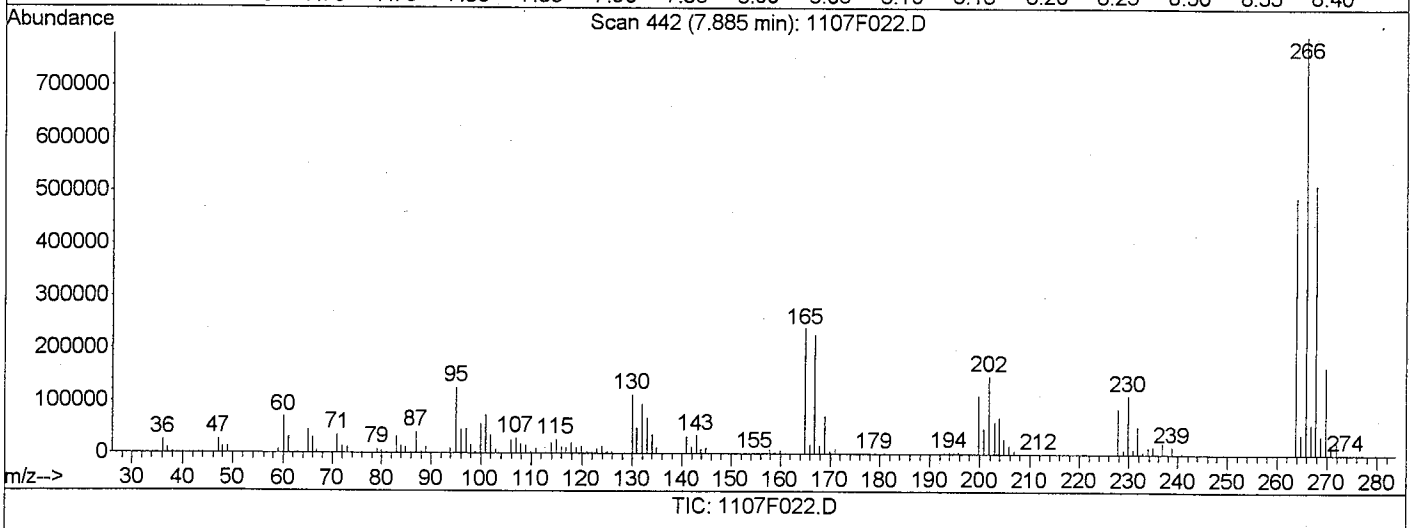
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F022.D
Acq On : 7 Nov 2003 11:36 pm
Sample : DFTPP @ 50ug/mL | SVM15-97C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:41 2003

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Jun 11 11:12:55 2002
Response via : Single Level Calibration





TIC: 1107F022.D

(1) Pentachlorophenol

7.57min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	64.50	0.00#
268.00	63.70	0.00#
165.00	28.70	0.00

11/10/03 mt 11/11/03

1107F022.D DFTPPPAH.M Mon Nov 10 14:43:58 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:44:59 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 08 07:14:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mrt 11/11/03 11/11/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.58	136	228894	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.07	164	119020	1000.00	ng/ml	0.00
23) Phenanthrene-d10	11.00	188	175521	1000.00	ng/ml	0.00
38) Chrysene-d12	17.13	240	163814	1000.00	ng/ml	0.00
48) Perylene-d12	21.51	264	96785	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.06	164	339696	2025.92	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 202.59%			
16) Fluorene-d10	9.00	176	262573	2205.85	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 220.58%			
21) 2,4,6 Tribromophenol	9.60	330	25010	1843.71	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 184.37%			
37) Fluoranthene-d10	13.70	212	351044	1998.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 199.83%			
41) Terphenyl-d14	14.73	244	288903	1935.08	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 193.51%			
Target Compounds						Qvalue
2) Naphthalene	5.60	128	536784	2074.05	ng/ml	100
3) 2-Methylnaphthalene	6.42	142	329703	2157.30	ng/ml	99
4) 1-Methylnaphthalene	6.57	142	310037	2164.23	ng/ml	99
6) Biphenyl	7.09	154	405941	2190.58	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.33	156	284908	2185.56	ng/ml	99
12) Acenaphthylene	7.80	152	492080	2145.86	ng/ml	100
13) Acenaphthene	8.12	154	299546	2119.47	ng/ml	99
14) Dibenzofuran	8.41	168	409681	2162.38	ng/ml	93
15) 2,3,5-Trimethylnaphthalene	8.83	170	268917	2124.10	ng/ml	91
17) Fluorene	9.06	166	334079	2206.65	ng/ml	99
22) Pentachlorophenol	10.78	266	68138m	3547.92	ng/ml	
24) Dibenzothiophene	10.78	184	420930	2078.55	ng/ml	99
28) Phenanthrene	11.05	178	434328	2041.72	ng/ml	100
29) Anthracene	11.14	178	398532	2192.90	ng/ml	100
30) Carbazole	11.57	167	315711	2197.79	ng/ml	98
31) 1-Methylphenanthrene	12.44	192	303509	2101.36	ng/ml	99
36) Fluoranthene	13.73	202	452451	2136.70	ng/ml	99
39) Pyrene	14.24	202	447228	2088.70	ng/ml	98
42) Benz(a)anthracene	17.09	228	319542	1960.17	ng/ml	100
43) Chrysene	17.19	228	363173	2083.35	ng/ml	100
49) Benzo(b)fluoranthene	20.11	252	273090	2113.51	ng/ml	100
50) Benzo(k)fluoranthene	20.18	252	365589m	2229.88	ng/ml	
51) Benzo(e)pyrene	21.09	252	306077	2109.76	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:44:59 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 08 07:14:03 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

mnt 11/11/03 11/10/03

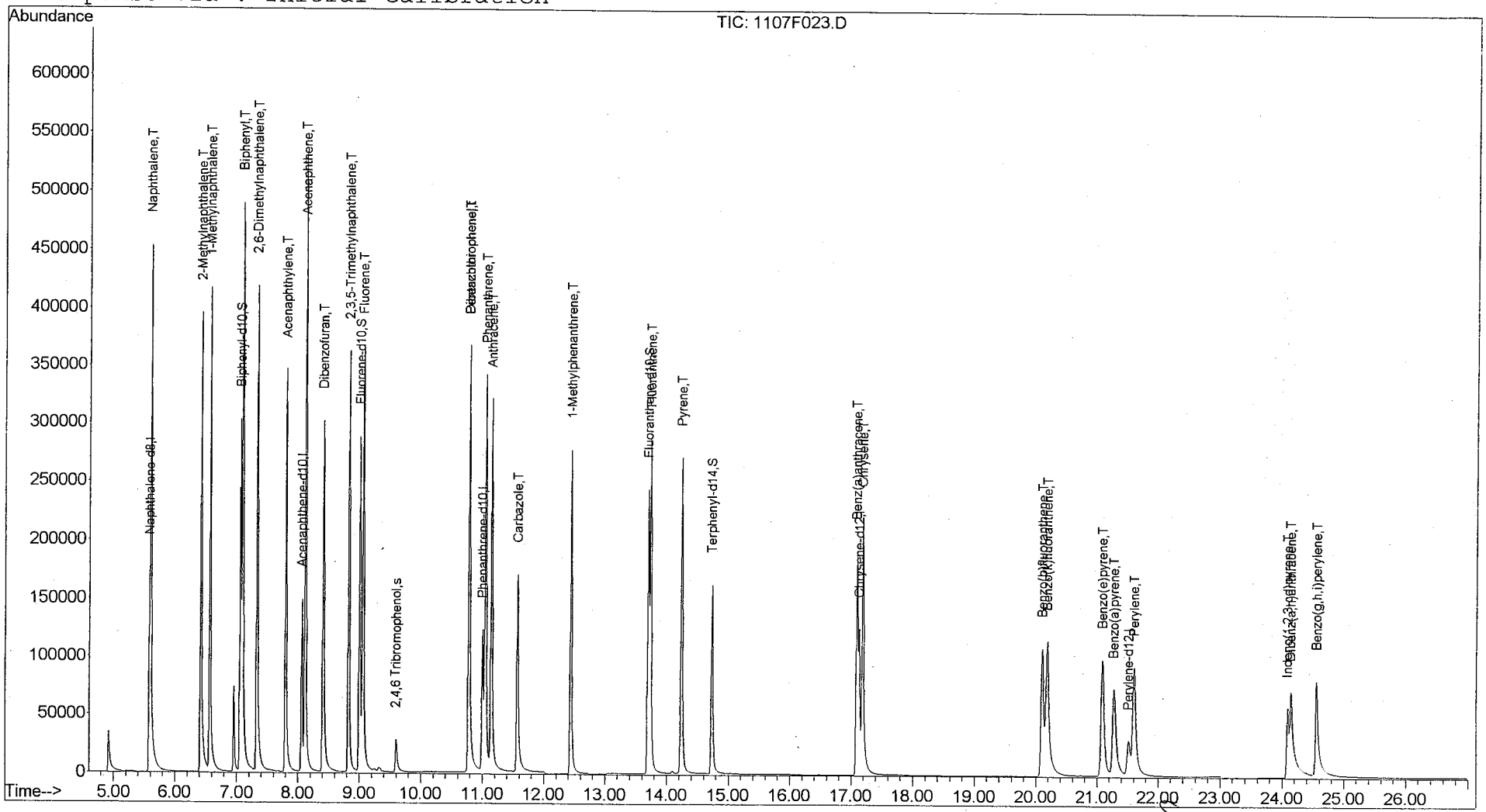
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	Benzo(a)pyrene	21.27	252	232633	2116.65	ng/ml	99
53)	Perylene	21.61	252	269531	2184.67	ng/ml	99
54)	Indeno(1,2,3-cd)pyrene	24.09	276	123107	1842.57	ng/ml	100
55)	Dibenz(a,h)anthracene	24.14	278	193513m	2015.38	ng/ml	
56)	Benzo(g,h,i)perylene	24.55	276	221079	1995.88	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\110703\1107F023.D Vial: 15
Acq On : 7 Nov 2003 11:57 pm Operator: LWeiskopf
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Initial Calibration



1707

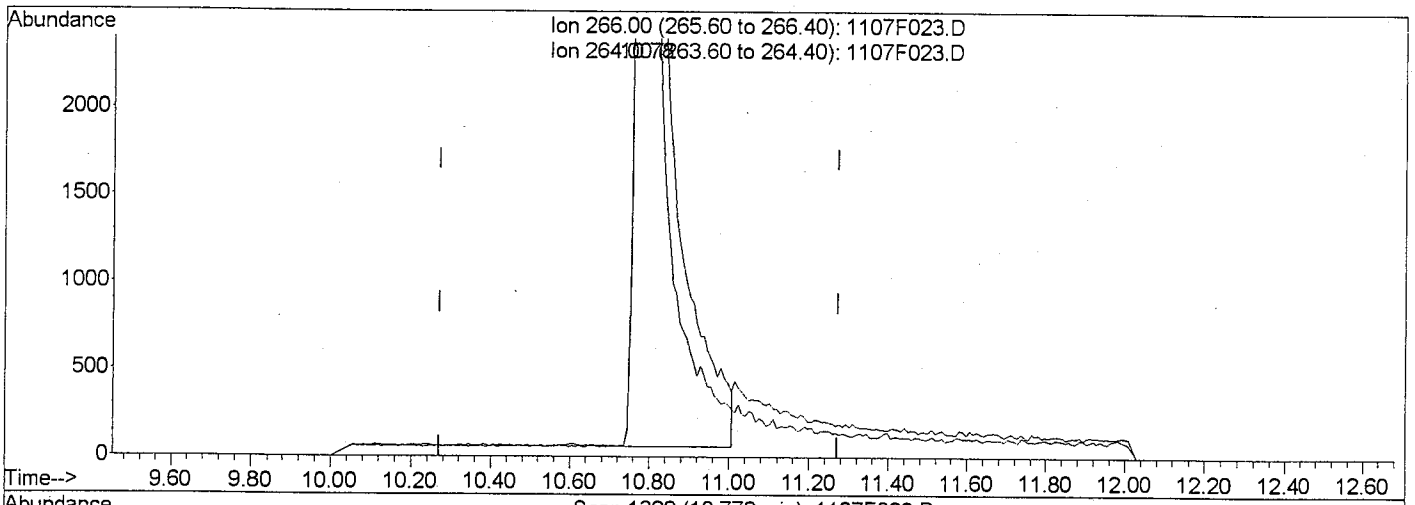
Quantitation Report (Qedit)

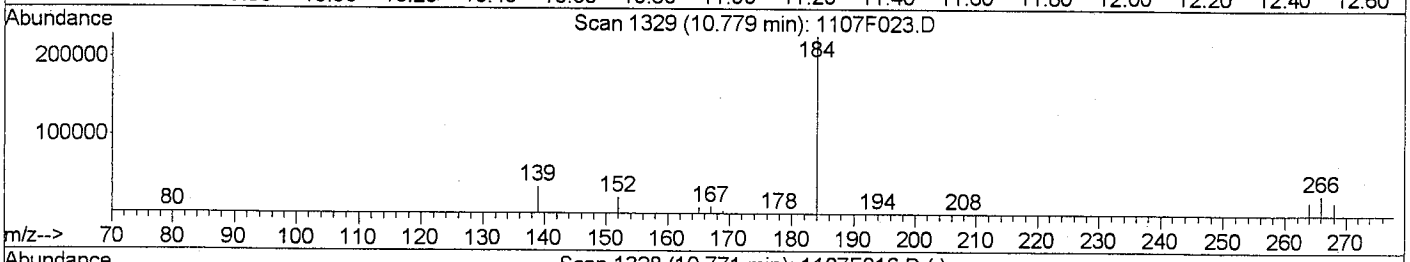
Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:42 2003

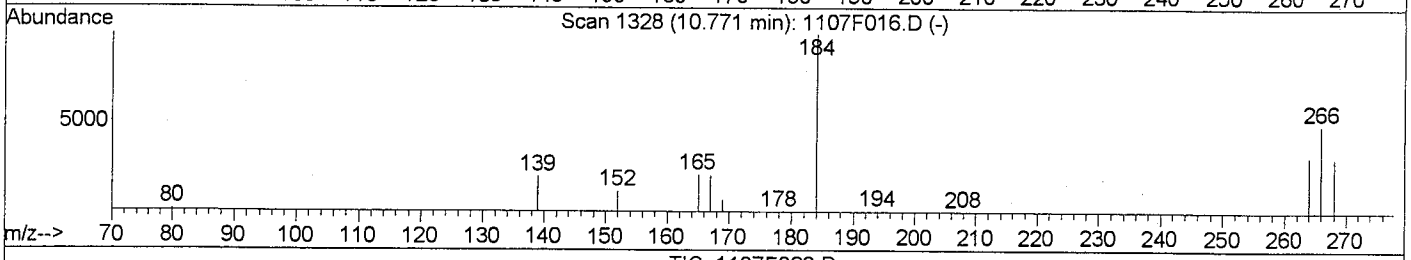
Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Single Level Calibration







TIC: 1107F023.D

(22) Pentachlorophenol (t)

10.78min 3308.82ng/ml

response 63546

Ion	Exp%	Act%
266.00	100	100
264.00	64.00	62.65
0.00	0.00	0.00
0.00	0.00	0.00

1107F023.D 1107ALK.M Mon Nov 10 14:45:42 2003

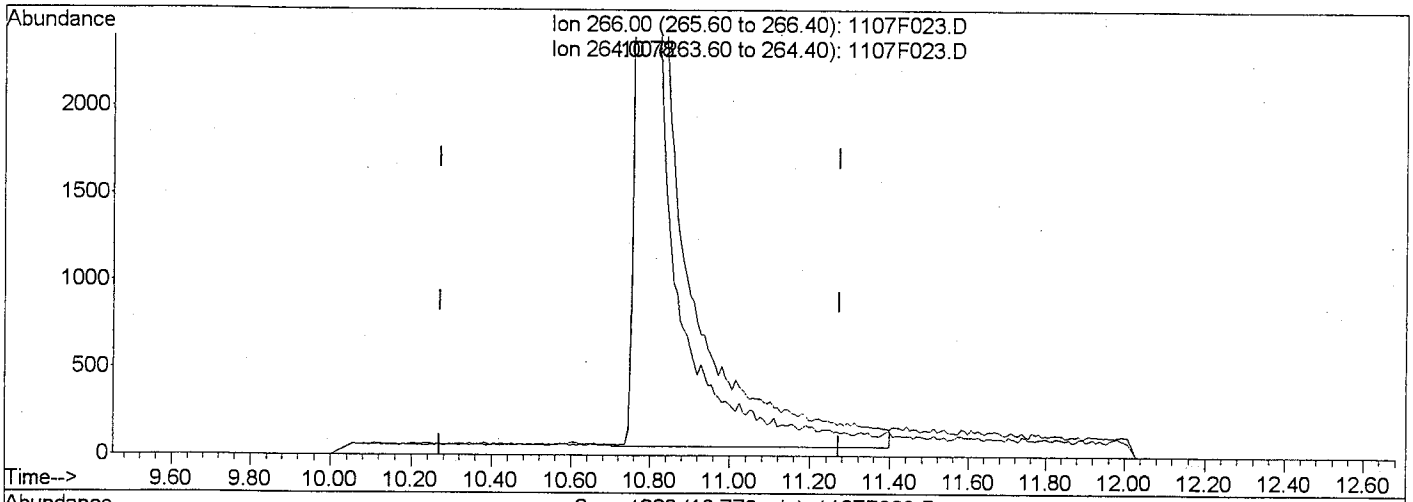
Quantitation Report (Qedit)

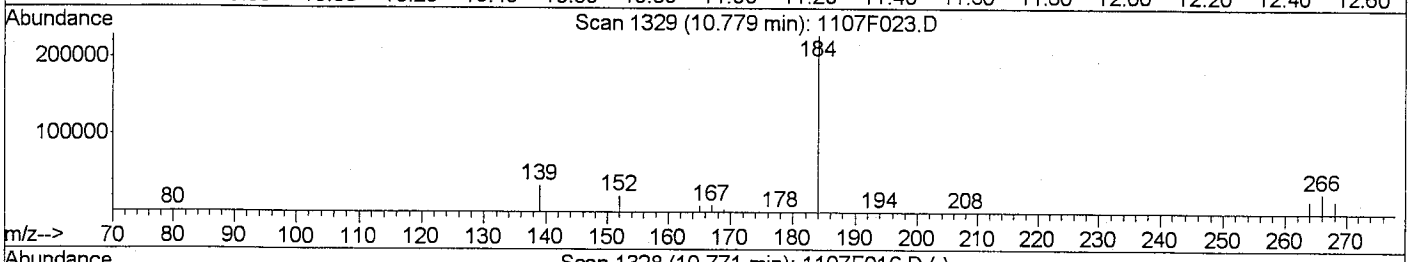
Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003

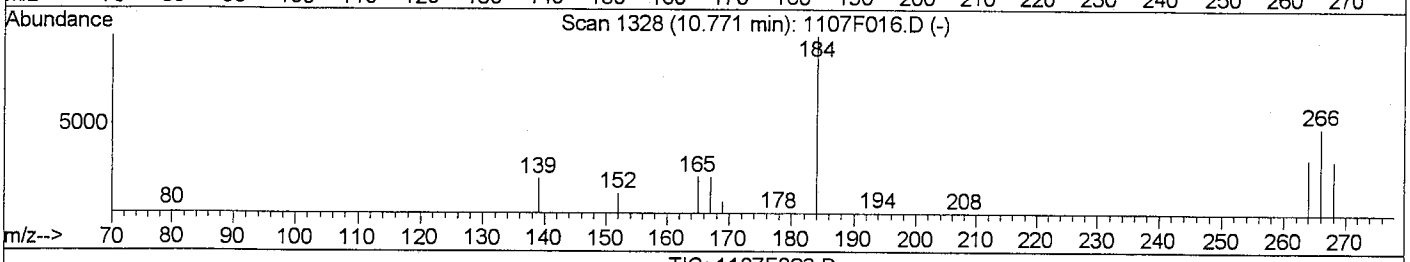
Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Single Level Calibration







TIC: 1107F023.D

(22) Pentachlorophenol (t)

10.78min 3547.92ng/ml m

response 68138

Ion	Exp%	Act%
266.00	100	100
264.00	64.00	62.73
0.00	0.00	0.00
0.00	0.00	0.00

11/10/03
complete
mt
11/11/03

1107F023.D 1107ALK.M Mon Nov 10 14:45:48 2003

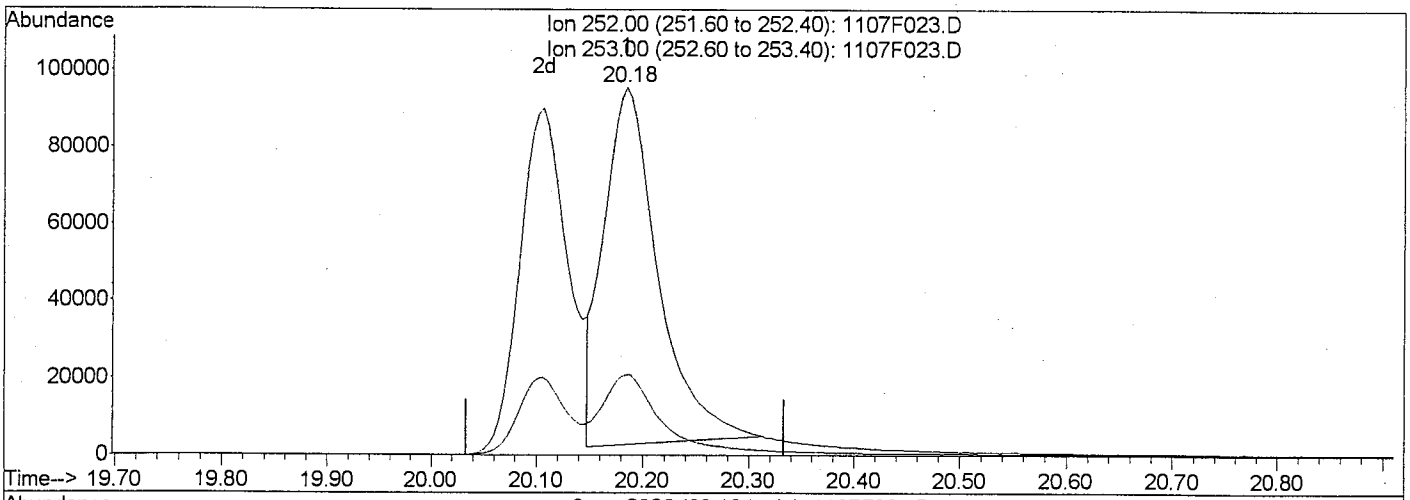
Quantitation Report (Qedit)

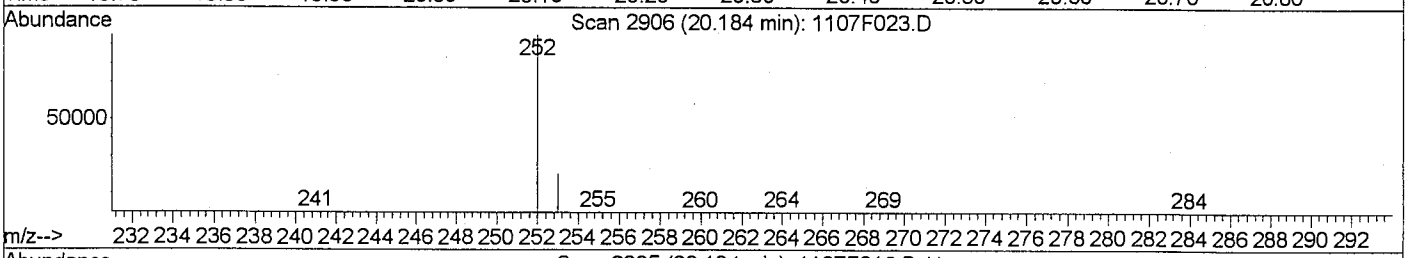
Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003

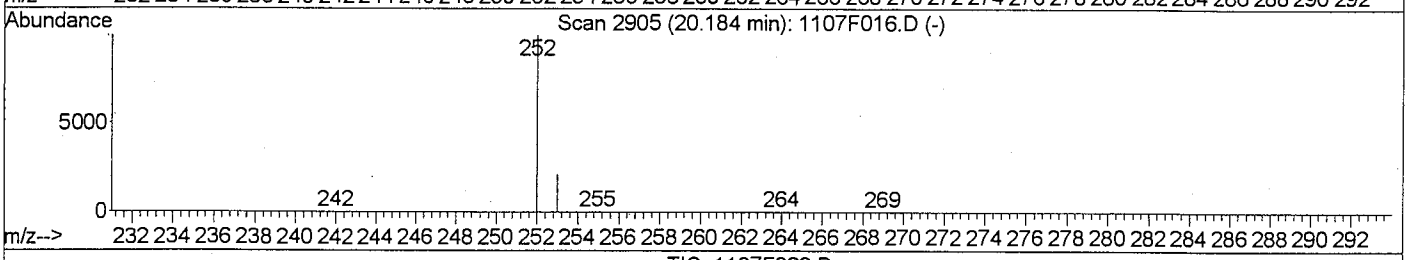
Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration







TIC: 1107F023.D

(50) Benzo(k)fluoranthene (T)

20.18min 1993.63ng/ml

response 326855

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.38
0.00	0.00	0.00
0.00	0.00	0.00

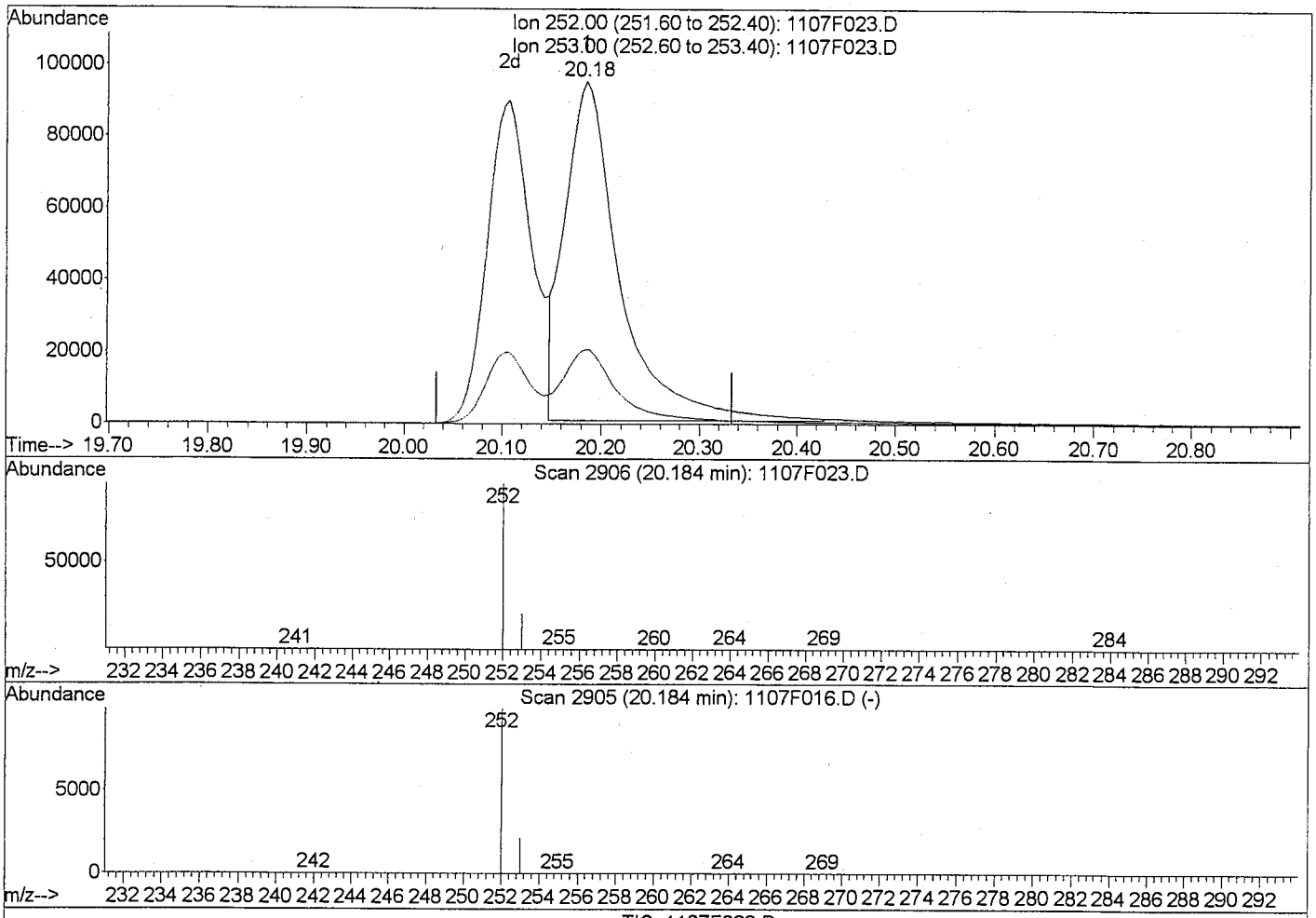
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration



TIC: 1107F023.D

(50) Benzo(k)fluoranthene (T)

20.18min 2229.88ng/ml m

response 365589

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.70
0.00	0.00	0.00
0.00	0.00	0.00

complete 11/10/03

mt 11/11/03

1107F023.D 1107ALK.M Mon Nov 10 14:46:04 2003

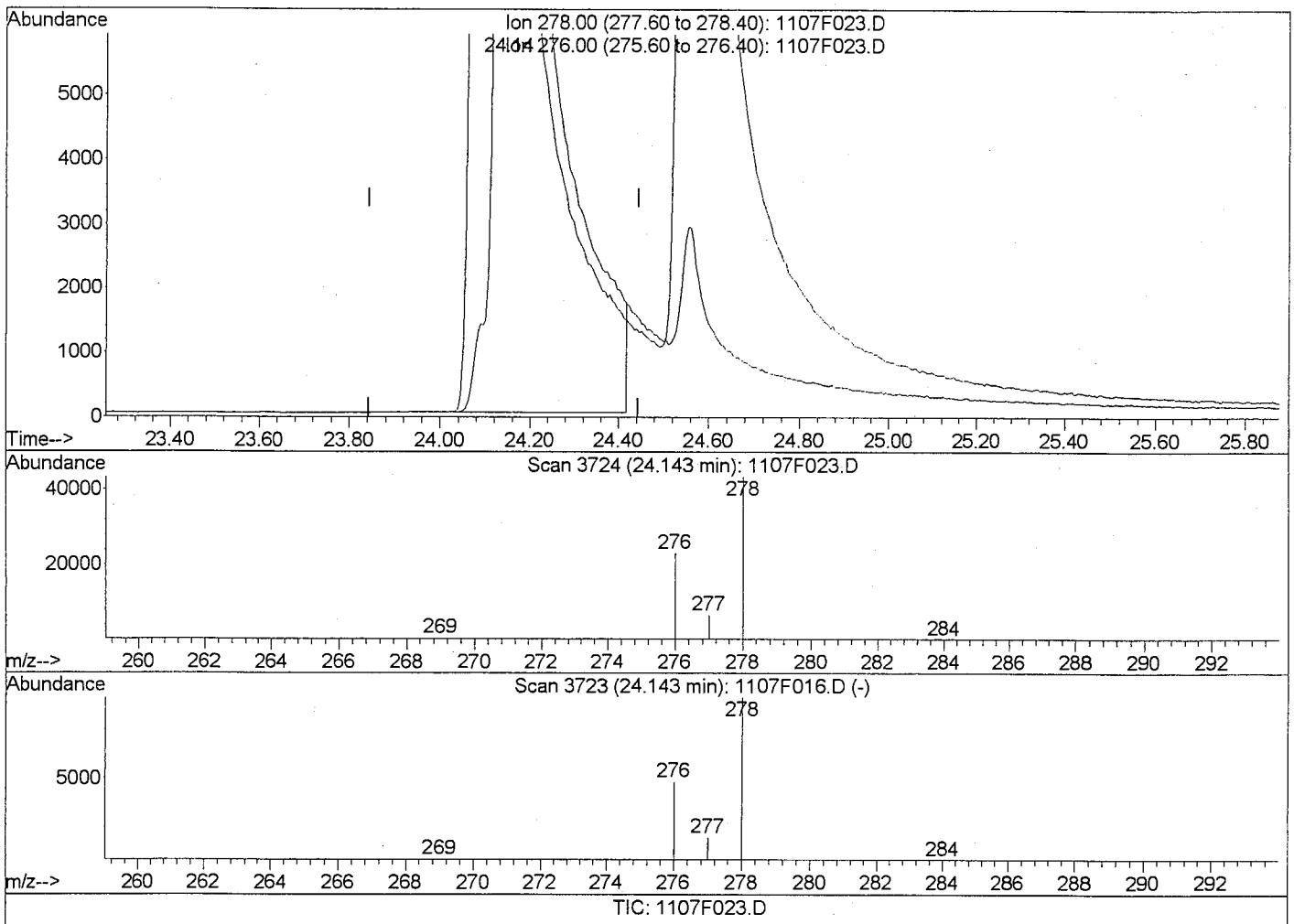
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003

Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration



TIC: 1107F023.D

(55) Dibenz(a,h)anthracene (T)

24.14min 1932.80ng/ml

response 185584

Ion	Exp%	Act%
278.00	100	100
276.00	47.90	53.14
0.00	0.00	0.00
0.00	0.00	0.00

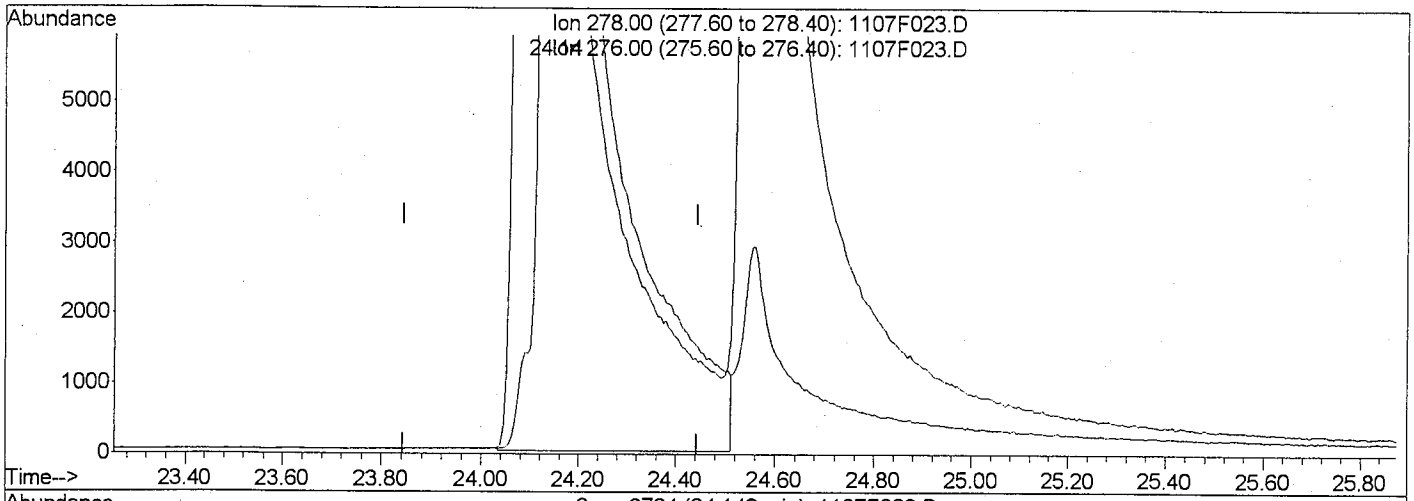
Quantitation Report (Qedit)

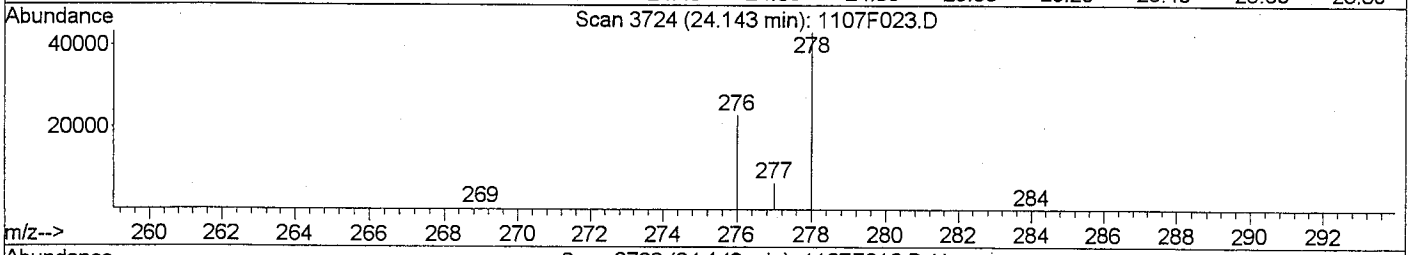
Data File : J:\MS11\DATA\110703\1107F023.D
Acq On : 7 Nov 2003 11:57 pm
Sample : SIM PAH ICV @ 2.0ug/mL | SVM15-97E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 14:43 2003

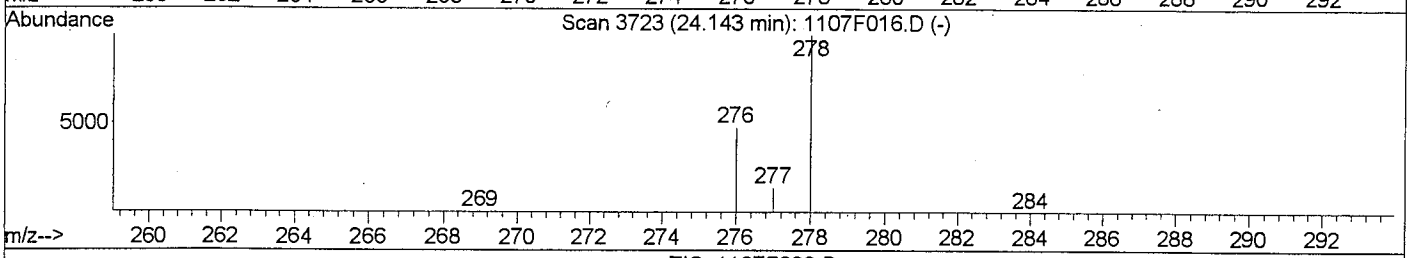
Vial: 15
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 14:45:18 2003
Response via : Multiple Level Calibration







TIC: 1107F023.D

(55) Dibenz(a,h)anthracene (T)

24.14min 2015.38ng/ml m

response 193513

Ion	Exp%	Act%
278.00	100	100
276.00	47.90	53.27
0.00	0.00	0.00
0.00	0.00	0.00

incomplete 11/10/03

mt 11/11/03

1107F023.D 1107ALK.M Mon Nov 10 14:46:16 2003

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/19/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318851
Units: ng/ml

File ID: J:\MS11\DATA\111903\1119F008.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	0.01	1.13	1.19	5	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.01	0.668	0.732	10	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.01	0.626	0.700	12	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.01	0.810	0.882	9	NA	± 20 %	AverageRF
Acenaphthylene	2000	2200	0.01	1.93	2.12	10	NA	± 20 %	AverageRF
Dibenzofuran	2000	2100	0.01	1.59	1.69	6	NA	± 20 %	AverageRF
Acenaphthene	2000	2200	0.01	1.19	1.30	10	NA	± 20 %	AverageRF
Fluorene	2000	2200	0.01	1.27	1.42	12	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	0.01	1.15	1.23	6	NA	± 20 %	AverageRF
Phenanthrene	2000	2100	0.01	1.21	1.27	5	NA	± 20 %	AverageRF
Anthracene	2000	2300	0.01	1.04	1.18	14	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.33	10	NA	± 20 %	AverageRF
Pyrene	2000	2300	0.01	1.31	1.52	17	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2000	0.01	0.995	1.01	1	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.12	5	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2400	0.01	1.34	1.58	18	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	2200	0.01	1.69	1.90	12	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	2300	0.01	1.50	1.69	13	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.21	7	NA	± 20 %	AverageRF
Perylene	2000	2200	0.01	1.27	1.39	9	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	1700	0.01	0.690	0.595	-14	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	1800	0.01	0.992	0.907	-9	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1800	0.01	1.14	1.04	-9	NA	± 20 %	AverageRF
Fluorene-d10	2000	2200	0.01	1.00	1.09	9	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2000	0.01	1.00	1.01	1	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2100	0.01	0.911	0.957	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS11\DATA\111903\1119F008.D
Lab ID: KWG0318851-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/19/2003 11:36
Date Quantitated: 11/19/2003 12:18
Batch ID: KWG0318851
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT

Primary Review: 11/24/13

Secondary Review: 11/24/13

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-PAH	**Collect Date:**		**Receive Date:**	11/21/2003

Analysis Lot:	KWG0318851	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\111903\1119F005.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\111903\1119F008.D			**Instrument:**	MS11
Acqu Date:	11/19/2003 11:36	**Quant Date:**	11/19/2003 12:18	**Vial:**	4
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318851-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	-0.05	136	225768	1,000.00	OK
2	Acenaphthene-d10	8.00	-0.06	164	117412	1,000.00	OK
3	Phenanthrene-d10	10.93	-0.07	188	168471	1,000.00	OK
4	Chrysene-d12	17.04	-0.09	240	145342	1,000.00	OK
5	Perylene-d12	21.36	-0.15	264	77295	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Biphenyl-d10	7.00			164	324599	1,963		39-97	NA
2	Fluorene-d10	8.93			176	255458	2,175		27-110	NA
2	2,4,6-Tribromophenol	9.53			330	21344	1,595		20-140	NA
3	Fluoranthene-d10	13.62			212	340603	2,020		34-122	NA
4	Terphenyl-d14	14.66			244	278225	2,100		50-132	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55			128	535665	2,098			
1	2-Methylnaphthalene	6.37			142	330366	2,192			
1	1-Methylnaphthalene	6.51			142	316169	2,238			
1	Biphenyl	7.03			154	398299	2,179			
1	2,6-Dimethylnaphthalene	7.27			156	286205	2,226			
1	C2-Naphthalenes				156	0				
1	C3-Naphthalenes				170	0				
1	C4-Naphthalenes				184	0				
2	Acenaphthylene	7.73			152	498312	2,203			
2	Acenaphthene	8.05			154	305413	2,191			
2	Dibenzofuran	8.34			168	397191	2,125			
2	2,3,5-Trimethylnaphthalene	8.76			170	270043	2,162			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\111903\1119F008.D		**Instrument:** MS11
Acqu Date:	11/19/2003 11:36	**Quant Date:** 11/19/2003 12:18	**Vial:** 4
Run Type:	CCV		**Dilution:** 1.0
Lab ID:	KWG0318851-2		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	8.99			166	334078	2,237			
2	C1-Fluorenes				180	0				
2	C2-Fluorenes				194	0				
2	C3-Fluorenes				208	0				
2	Pentachlorophenol	10.70			266	54933	2,900			
3	Dibenzothiophene	10.71			184	412835	2,124			
3	C1-Dibenzothiophenes				198	0				
3	C2-Dibenzothiophenes				212	0				
3	C3-Dibenzothiophenes				226	0				
3	Phenanthrene	10.97			178	429146	2,102			
3	Anthracene	11.07			178	397757	2,280			
3	Carbazole	11.49			167	305199	2,214			
3	1-Methylphenanthrene	12.36			192	302250	2,180			
3	C1-Phenanthrenes/Anthracenes				192	0				
3	C2-Phenanthrenes/Anthracenes				206	0				
3	C3-Phenanthrenes/Anthracenes				220	0				
3	C4-Phenanthrenes/Anthracenes				234	0				
3	Fluoranthene	13.65			202	446990	2,199			
4	Pyrene	14.16			202	442899	2,331			
4	C1-Fluoranthenes/Pyrenes				216	0				
4	Benz(a)anthracene	17.01			228	292679	2,024			
4	Chrysene	17.10			228	324988	2,101			
4	C1-Chrysenes				242	0				
4	C2-Chrysenes				256	0				
4	C3-Chrysenes				270	0				
4	C4-Chrysenes				284	0				
5	Benzo(b)fluoranthene	19.97			252	243665	2,361			
5	Benzo(k)fluoranthene	20.05			252	294380**m**	2,248			
5	Benzo(e)pyrene	20.93			252	260710	2,250			
5	Benzo(a)pyrene	21.12			252	187260	2,133			
5	Perylene	21.45			252	215533	2,188			
5	Indeno(1,2,3-cd)pyrene	24.00			276	91996	1,724			
5	Dibenz(a,h)anthracene	24.06			278	140220**m**	1,829			
5	Benzo(g,h,i)perylene	24.46			276	160312	1,812			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : SIM-PAH ccv @ 2.0 ppm | SVM16-16
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:09:09 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 09:56:38 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	225768	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	117412	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	168471	1000.00	ng/ml	0.00
38) Chrysene-d12	17.04	240	145342	1000.00	ng/ml	0.00
48) Perylene-d12	21.36	264	77295	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	324599	1962.69	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 196.27%			
16) Fluorene-d10	8.93	176	255458	2175.47	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 217.55%			
21) 2,4,6 Tribromophenol	9.53	330	21344	1595.00	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 159.50%			
37) Fluoranthene-d10	13.62	212	340603	2019.97	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 202.00%			
41) Terphenyl-d14	14.66	244	278225	2100.40	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 210.04%			
Target Compounds						Qvalue
2) Naphthalene	5.55	128	535665	2098.38	ng/ml	99
3) 2-Methylnaphthalene	6.37	142	330366	2191.57	ng/ml	97
4) 1-Methylnaphthalene	6.51	142	316169	2237.60	ng/ml	99
6) Biphenyl	7.03	154	398299	2179.10	ng/ml	99
7) 2,6-Dimethylnaphthalene	7.27	156	286205	2225.91	ng/ml	98
12) Acenaphthylene	7.73	152	498312	2202.80	ng/ml	98
13) Acenaphthene	8.05	154	305413	2190.58	ng/ml	97
14) Dibenzofuran	8.34	168	397191	2125.17	ng/ml	94
15) 2,3,5-Trimethylnaphthalene	8.76	170	270043	2162.21	ng/ml	95
17) Fluorene	8.99	166	334078	2236.87	ng/ml	99
22) Pentachlorophenol	10.70	266	54933	2899.52	ng/ml	96
24) Dibenzothiophene	10.71	184	412835	2123.89	ng/ml	96
28) Phenanthrene	10.97	178	429146	2101.78	ng/ml	99
29) Anthracene	11.07	178	397757	2280.23	ng/ml	99
30) Carbazole	11.49	167	305199	2213.52	ng/ml	97
31) 1-Methylphenanthrene	12.36	192	302250	2180.21	ng/ml	100
36) Fluoranthene	13.65	202	446990	2199.25	ng/ml	100
39) Pyrene	14.16	202	442899	2331.37	ng/ml	97
42) Benz(a)anthracene	17.01	228	292679	2023.56	ng/ml	98
43) Chrysene	17.10	228	324988	2101.24	ng/ml	99
49) Benzo(b)fluoranthene	19.97	252	243665	2361.29	ng/ml	99
50) Benzo(k)fluoranthene	20.05	252	294380m	2248.30	ng/ml	
51) Benzo(e)pyrene	20.93	252	260710	2250.18	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : SIM
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:09:09 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 09:56:38 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52) Benzo(a)pyrene	21.12	252	187260	2133.44	ng/ml	100
53) Perylene	21.45	252	215533	2187.50	ng/ml	94
54) Indeno(1,2,3-cd)pyrene	24.00	276	91996	1724.12	ng/ml	100
55) Dibenz(a,h)anthracene	24.06	278	140220m	1828.58	ng/ml	
56) Benzo(g,h,i)perylene	24.46	276	160312	1812.21	ng/ml	98

(#) = qualifier out of range (m) = manual integration

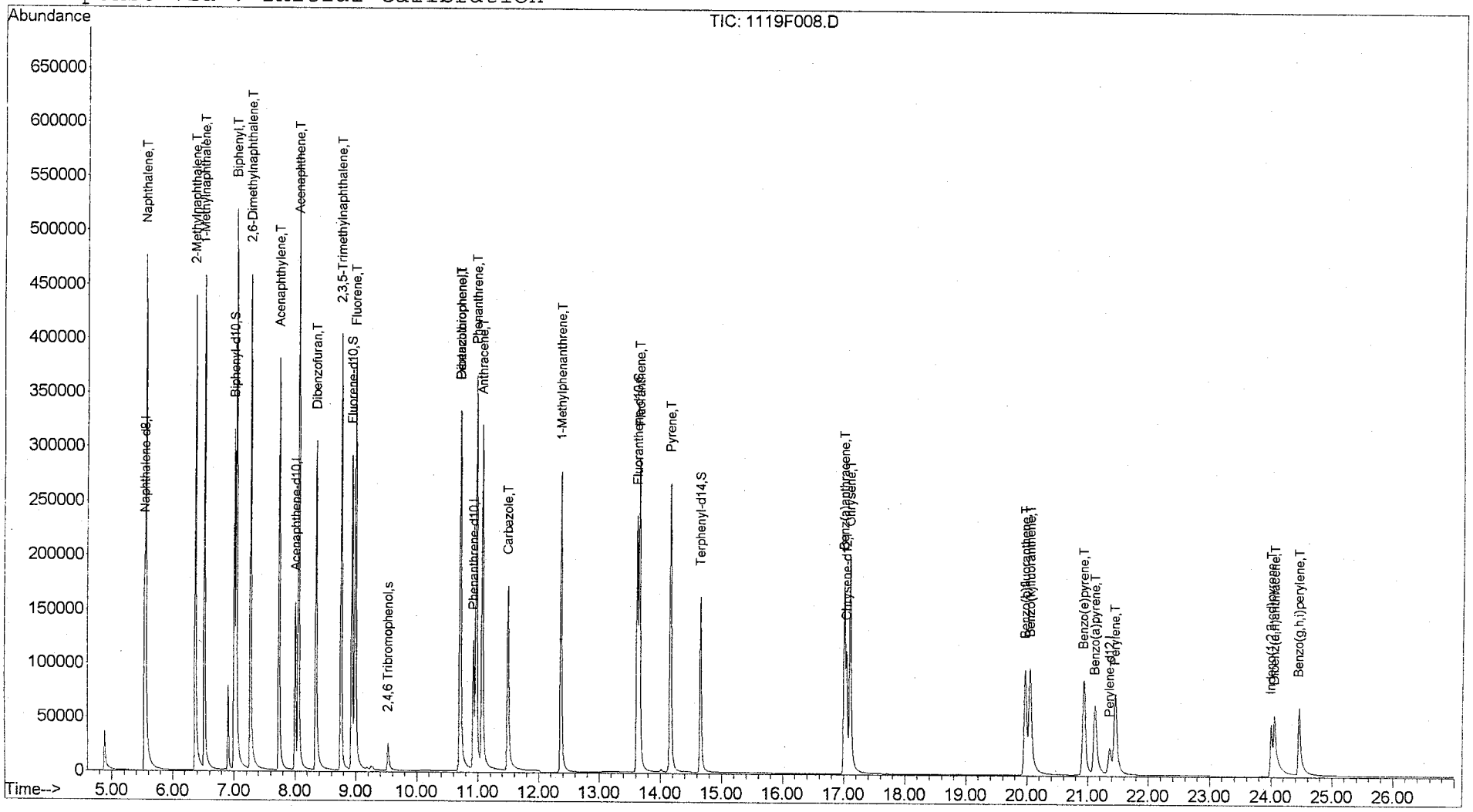
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : SIM
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:18 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



1720

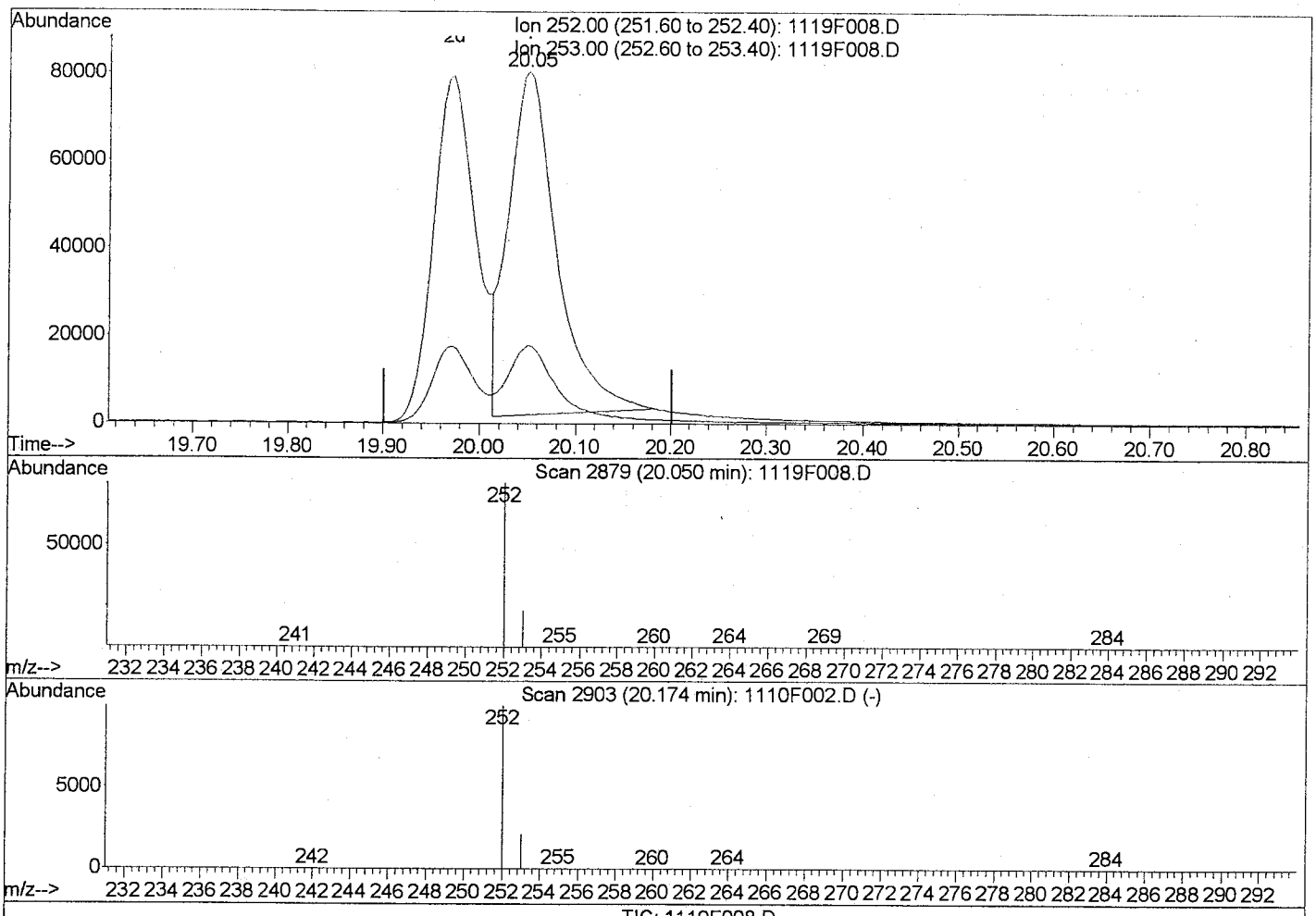
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : ICV
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:09 2003

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 09:56:38 2003
Response via : Multiple Level Calibration



TIC: 1119F008.D

(50) Benzo(k)fluoranthene (T)

20.05min 2096.79ng/ml

response 274543

Ion	Exp%	Act%
252.00	100	100
253.00	19.90	21.93
0.00	0.00	0.00
0.00	0.00	0.00

1119F008.D 1107ALK.M Wed Nov 19 12:17:32 2003

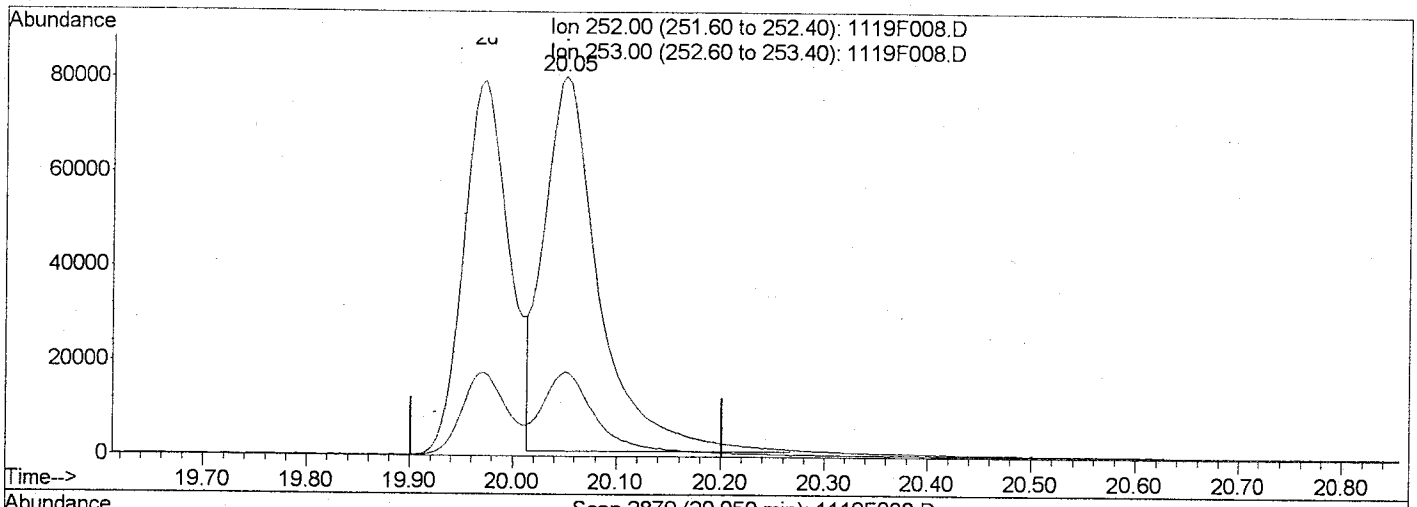
Quantitation Report (Qedit)

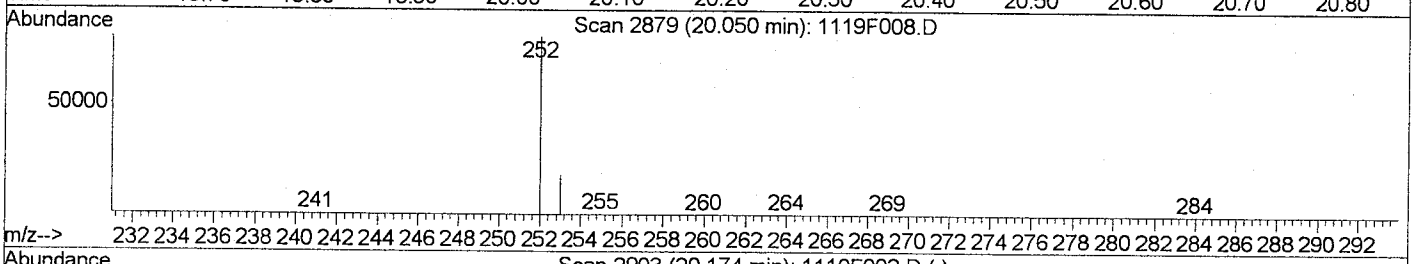
Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : ICV
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:18 2003

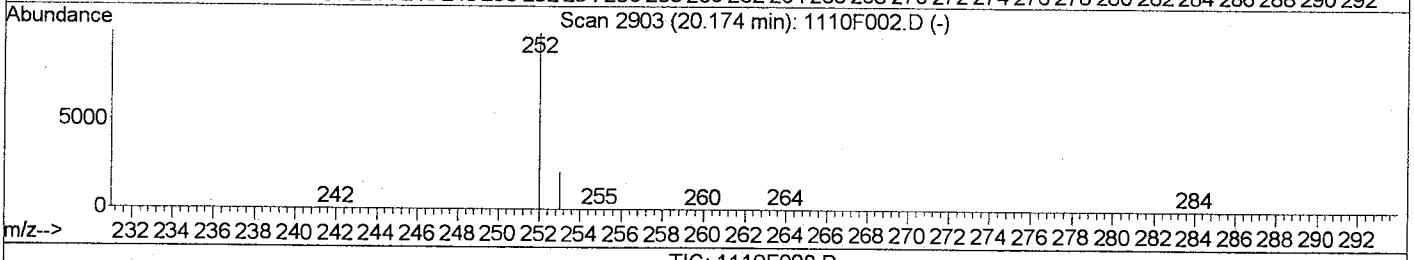
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 09:56:38 2003
Response via : Multiple Level Calibration







TIC: 1119F008.D

(50) Benzo(k)fluoranthene (T)

20.05min 2248.30ng/ml m

response 294380

Ion	Exp%	Act%
252.00	100	100
253.00	19.90	22.23
0.00	0.00	0.00
0.00	0.00	0.00

incomplete

J. 11/22/13

1119F008.D 1107ALK.M Wed Nov 19 12:17:39 2003

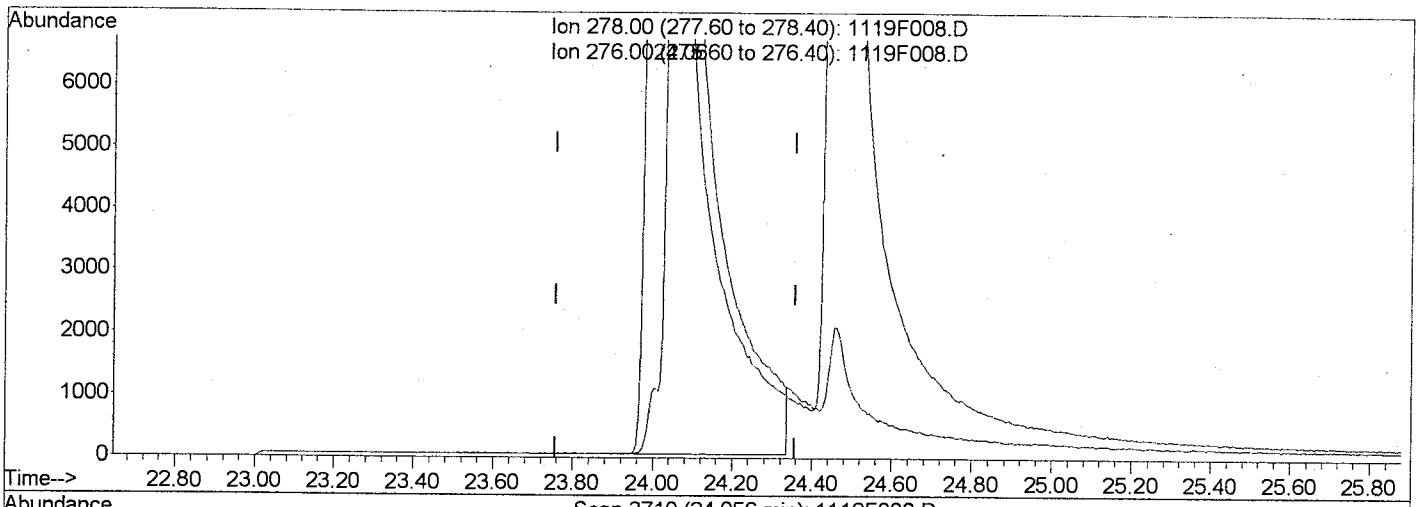
Quantitation Report (Qedit)

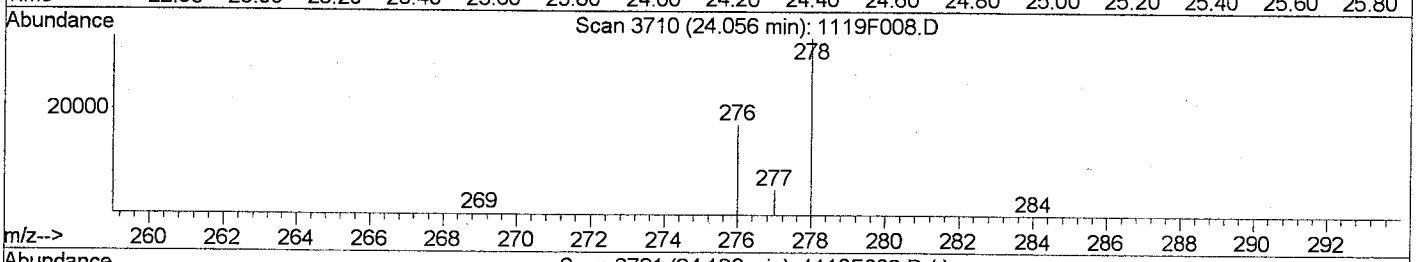
Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : ICV
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:18 2003

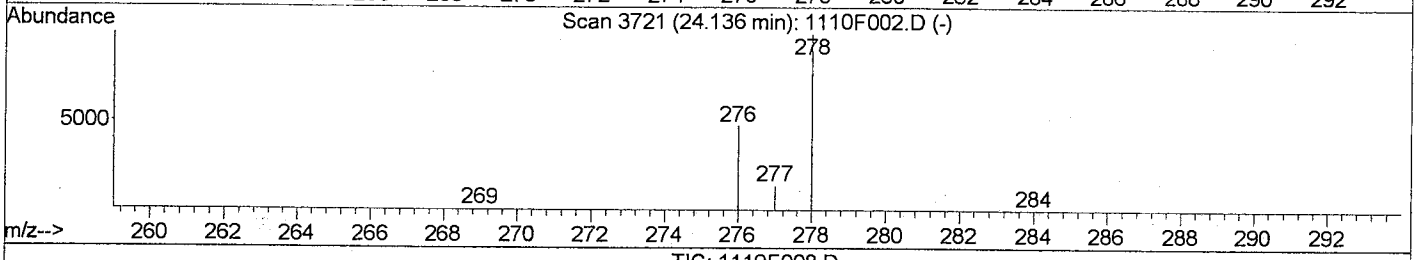
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 09:56:38 2003
Response via : Multiple Level Calibration







TIC: 1119F008.D

(55) Dibenz(a,h)anthracene (T)

24.06min 1766.14ng/ml

response 135432

Ion	Exp%	Act%
278.00	100	100
276.00	36.10	51.00
0.00	0.00	0.00
0.00	0.00	0.00

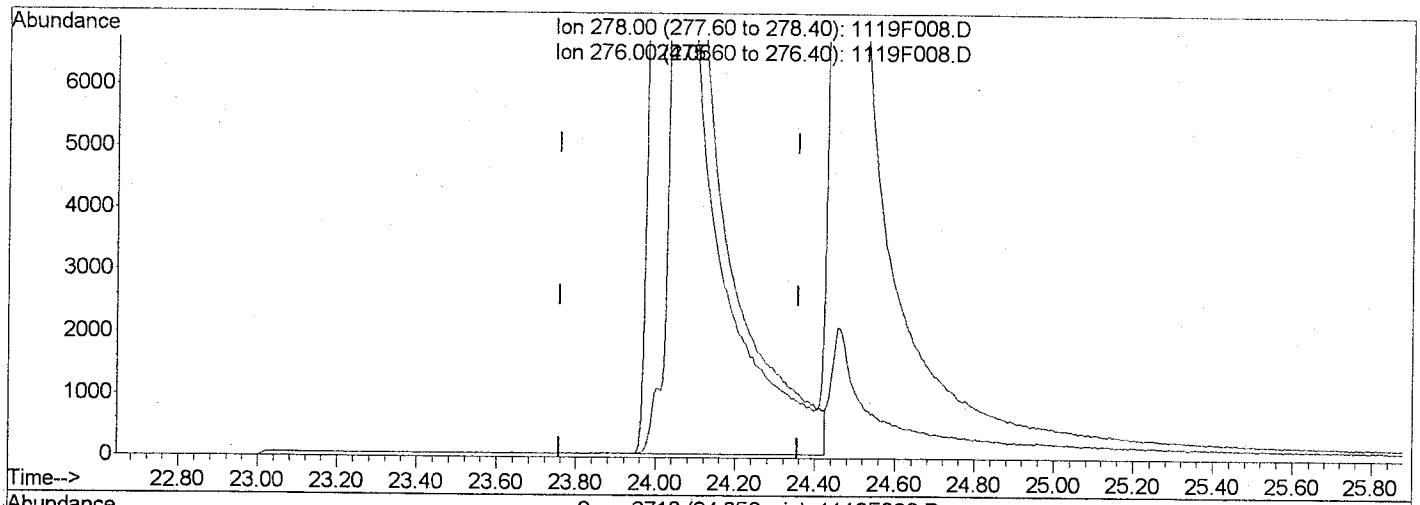
Quantitation Report (Qedit)

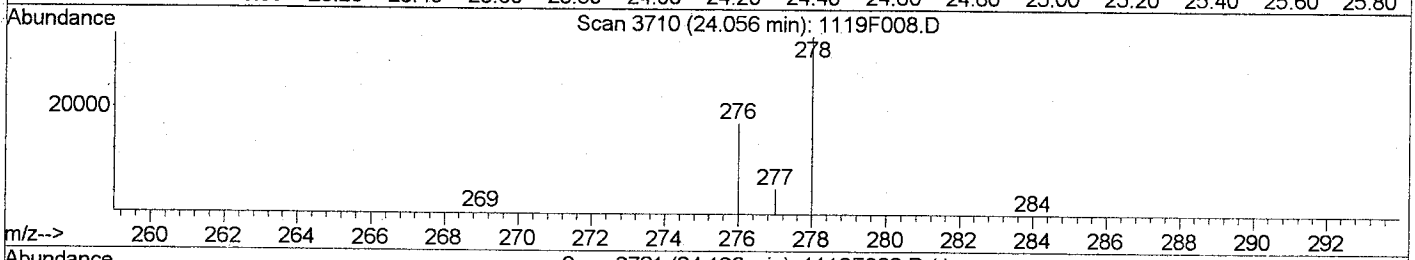
Data File : J:\MS11\DATA\111903\1119F008.D
Acq On : 19 Nov 2003 11:36 am
Sample : ICV
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 12:18 2003

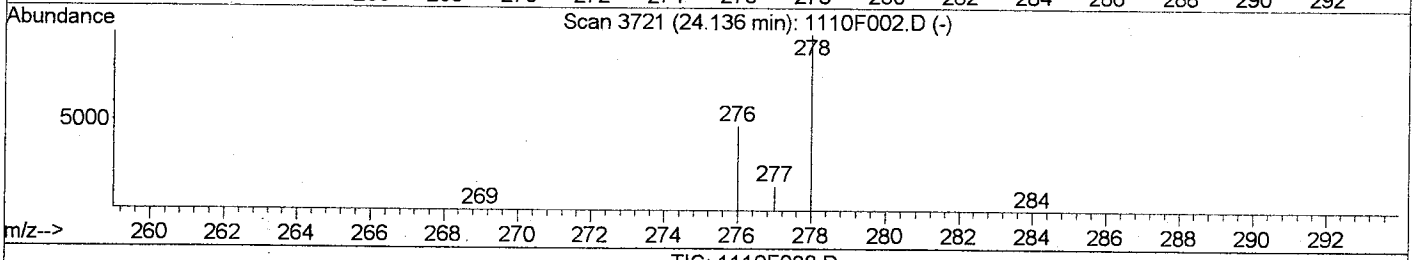
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 09:56:38 2003
Response via : Multiple Level Calibration







TIC: 1119F008.D

(55) Dibenz(a,h)anthracene (T)

24.06min 1828.58ng/ml m

response 140220

Ion	Exp%	Act%
278.00	100	100
276.00	36.10	51.10
0.00	0.00	0.00
0.00	0.00	0.00

incomplete

11/22/03

1119F008.D 1107ALK.M Wed Nov 19 12:17:56 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 05:22:54 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.55	136	318054	1000.00	ng/ml	0.01
11) Acenaphthene-d10	8.03	164	339955	1000.00	ng/ml	0.03
23) Phenanthrene-d10	10.97	188	363600	1000.00	ng/ml	0.04
38) Chrysene-d12	17.09	240	285356	1000.00	ng/ml	0.04
48) Perylene-d12	21.45	264	251776	1000.00	ng/ml	0.08
System Monitoring Compounds						
5) Biphenyl-d10	0.00	164	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
16) Fluorene-d10	0.00	176	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
21) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	0.00	212	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
41) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
8) C2-Naphthalenes	7.49	156	40940573m	113842.96	ng/ml	
9) C3-Naphthalenes	8.48	170	47897748m	133188.69	ng/ml	
10) C4-Naphthalenes	10.00	184	34981353m	97272.22	ng/ml	
18) C1-Fluorenes	10.25	180	3756996m	8688.08	ng/ml	
19) C2-Fluorenes	11.44	194	7806805m	18053.29	ng/ml	
20) C3-Fluorenes	12.47	208	16091137m	37210.86	ng/ml	
25) C1-Dibenzothiophenes	10.26	198	16499656m	39330.67	ng/ml	
26) C2-Dibenzothiophenes	12.88	212	12497071m	29789.60	ng/ml	
27) C3-Dibenzothiophenes	13.72	226	10143414m	24179.13	ng/ml	
32) C1-Phenanthrenes/Anthracen	12.17	192	13227892m	30017.44	ng/ml	
33) C2-Phenanthrenes/Anthracen	13.42	206	18967484m	43042.03	ng/ml	
34) C3-Phenanthrenes/Anthracen	15.23	220	20660982m	46885.00	ng/ml	
35) C4-Phenanthrenes/Anthracen	15.77	234	12753581m	28941.11	ng/ml	
40) C1-Fluoranthenes/Pyrenes	15.05	216	7676814m	20582.19	ng/ml	
44) C1-Chrysenes	18.09	242	2433246m	8013.08	ng/ml	
45) C2-Chrysenes	20.34	256	4327090m	14249.81	ng/ml	
46) C3-Chrysenes	22.31	270	3884823m	12793.36	ng/ml	
47) C4-Chrysenes	22.45	284	3281791m	10807.47	ng/ml	
56) Benzo(g,h,i)perylene	24.51	276	37388	129.75	ng/ml	94

11/24/3

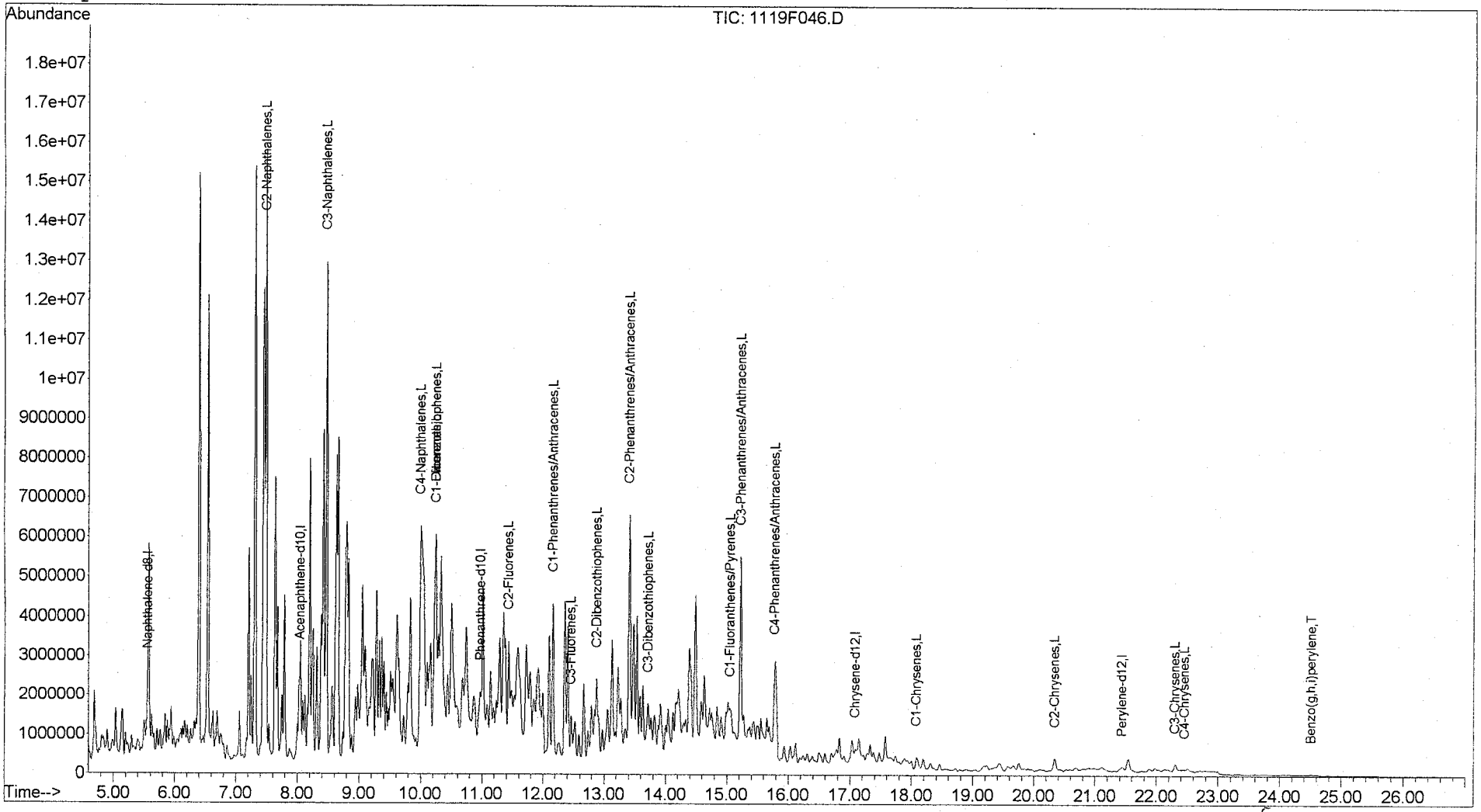
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111903\1119F046.D Vial: 17
Acq On : 19 Nov 2003 9:51 pm Operator: LWeiskopf
Sample : SIM-ALKH CCV | SVM3-88E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003 Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration

1726



11/21/03

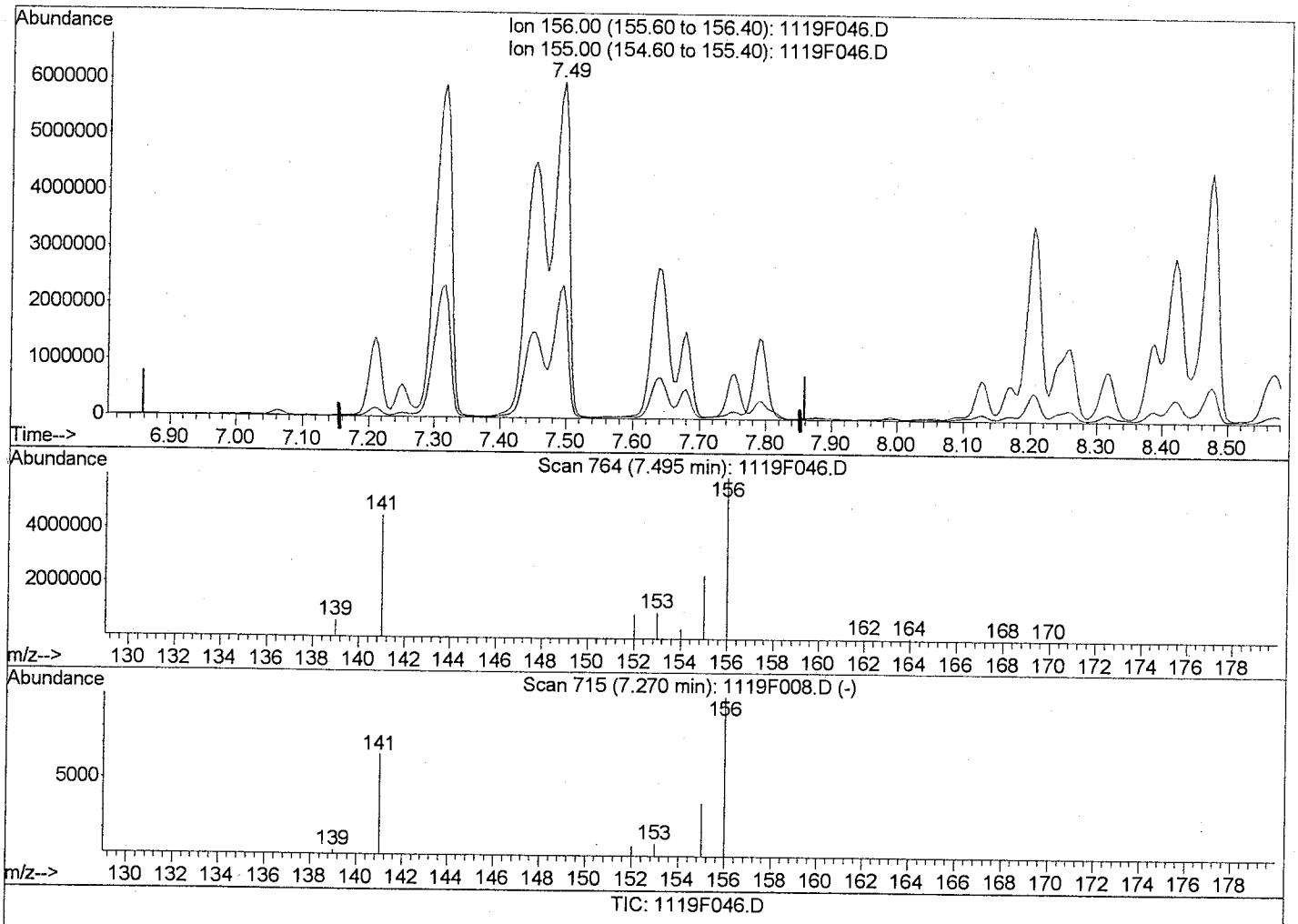
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:07 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(8) C2-Naphthalenes (L)

7.49min 113842.96ng/ml m

response 40940573

Ion	Exp%	Act%
156.00	100	100
155.00	38.30	39.51
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

1119F046.D 1107ALK.M Thu Nov 20 14:06:37 2003

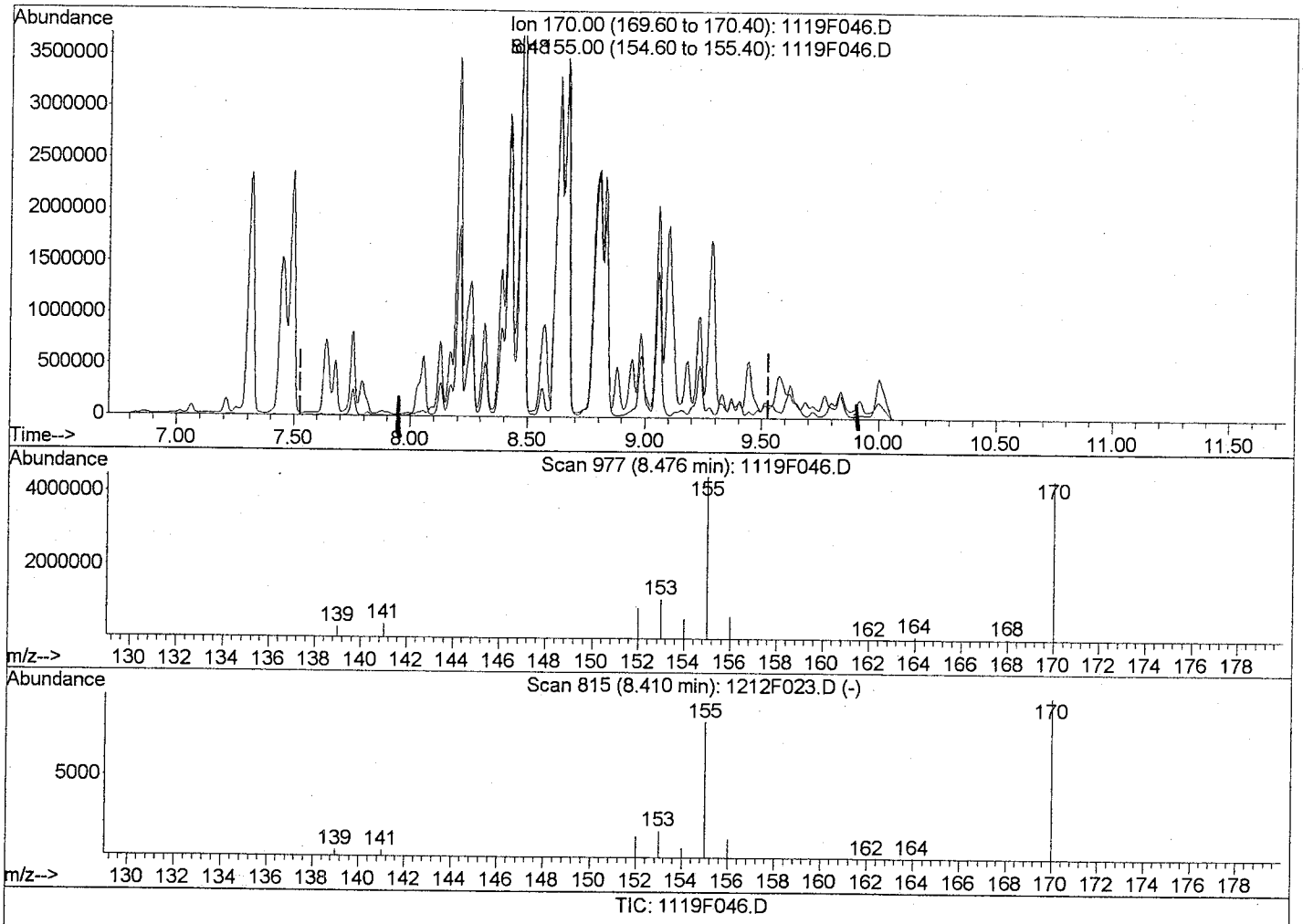
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:07 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(9) C3-Naphthalenes (L)

8.48min 133188.69ng/ml m

response 47897748

Ion	Exp%	Act%
170.00	100	100
155.00	86.90	101.38
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

1119F046.D 1107ALK.M Thu Nov 20 14:07:13 2003

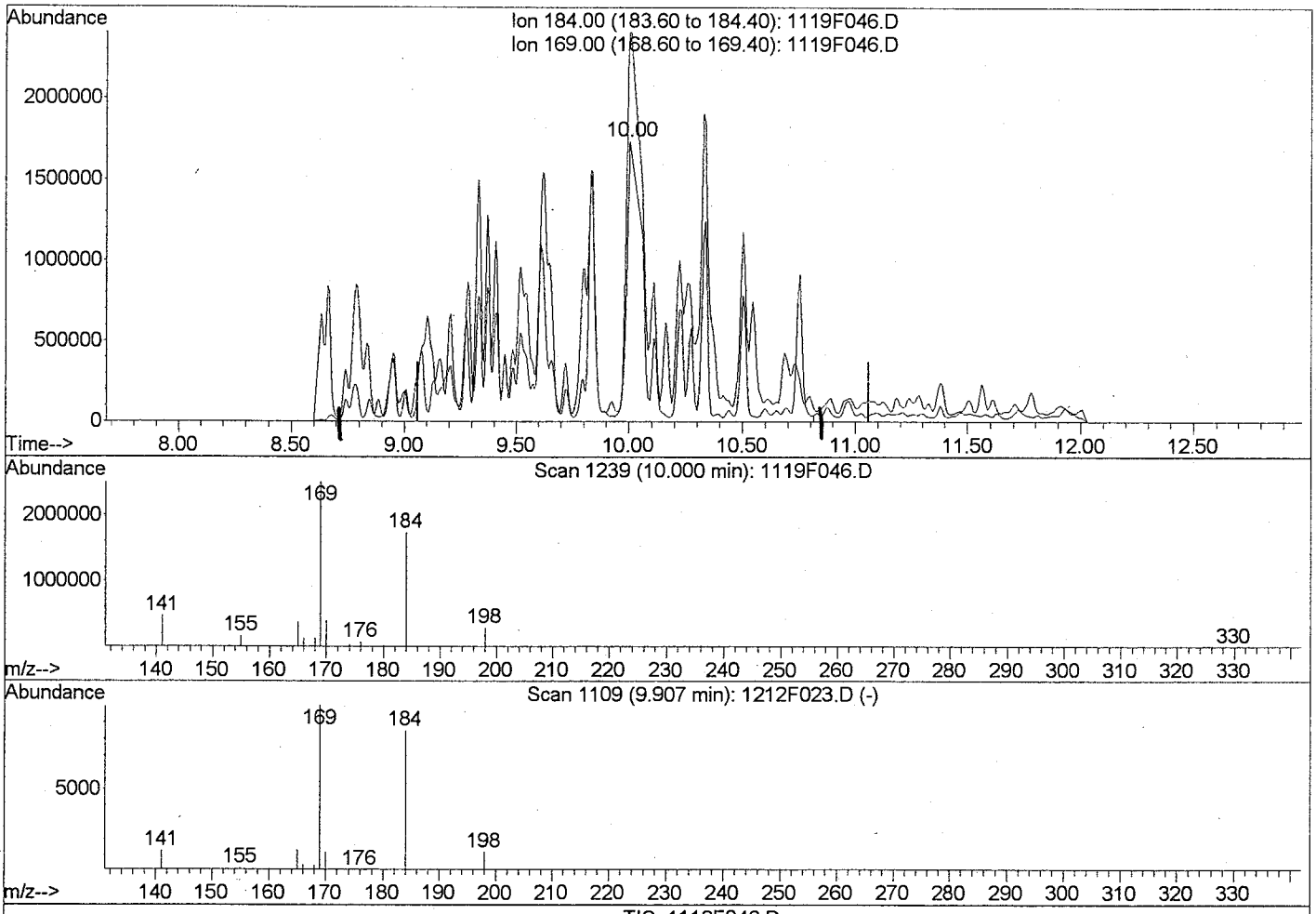
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:07 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(10) C4-Naphthalenes (L)

10.00min 97272.22ng/ml m

response 34981353

Ion	Exp%	Act%
184.00	100	100
169.00	119.70	144.42
0.00	0.00	0.00
0.00	0.00	0.00

11/21/03

11/24/03

1119F046.D 1107ALK.M Thu Nov 20 14:07:24 2003

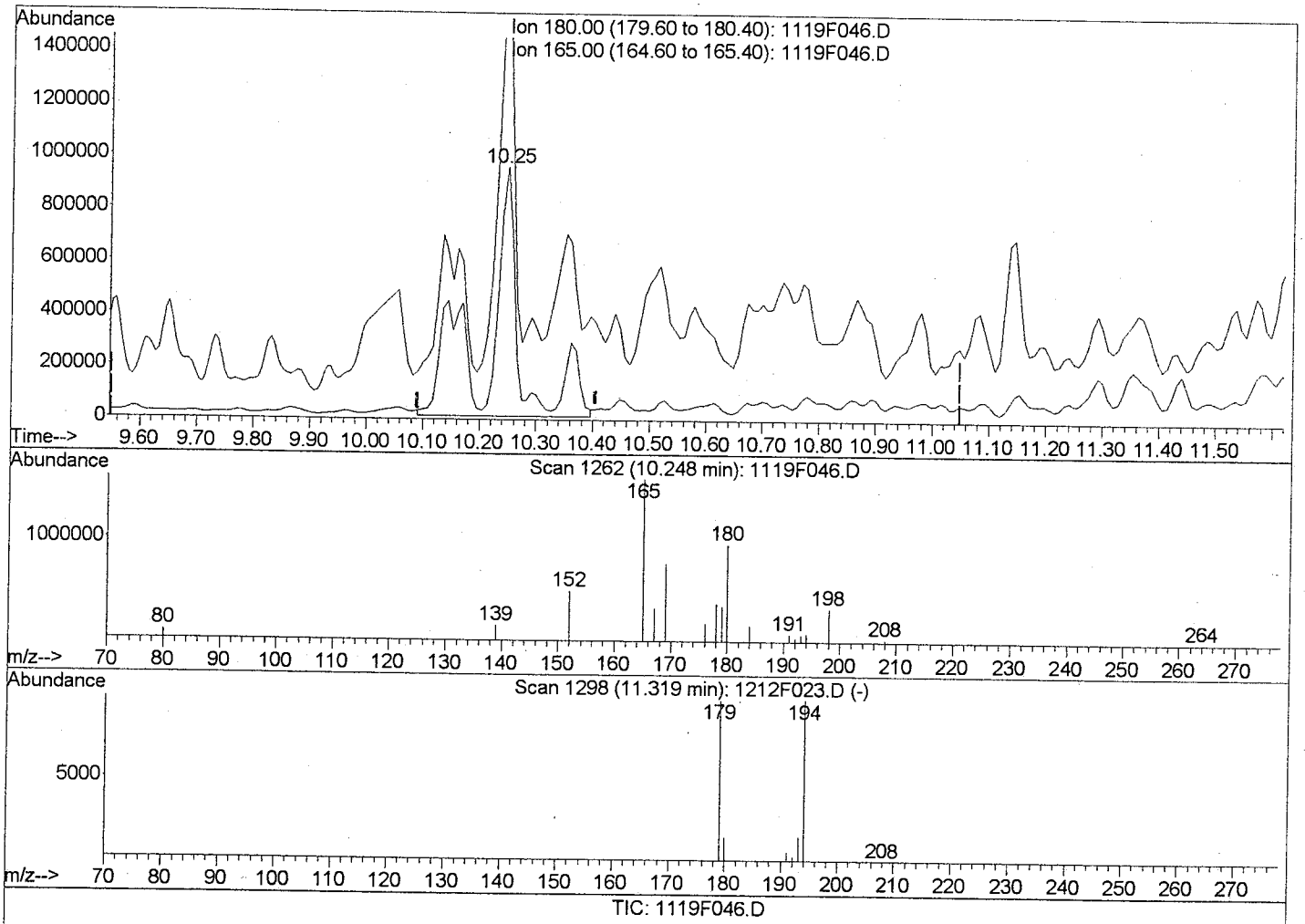
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:08 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(18) C1-Fluorenes (L)

10.25min 8688.08ng/ml m

response 3756996

Ion	Exp%	Act%
180.00	100	100
165.00	178.70	167.60
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

1119F046.D 1107ALK.M Thu Nov 20 14:07:50 2003

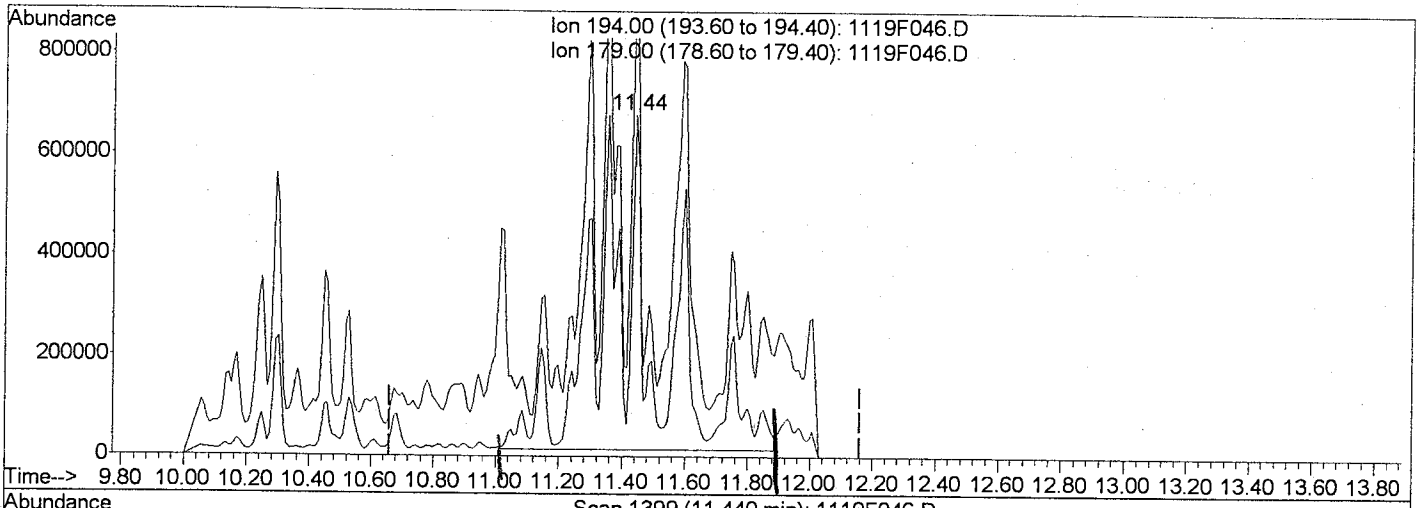
Quantitation Report (Qedit)

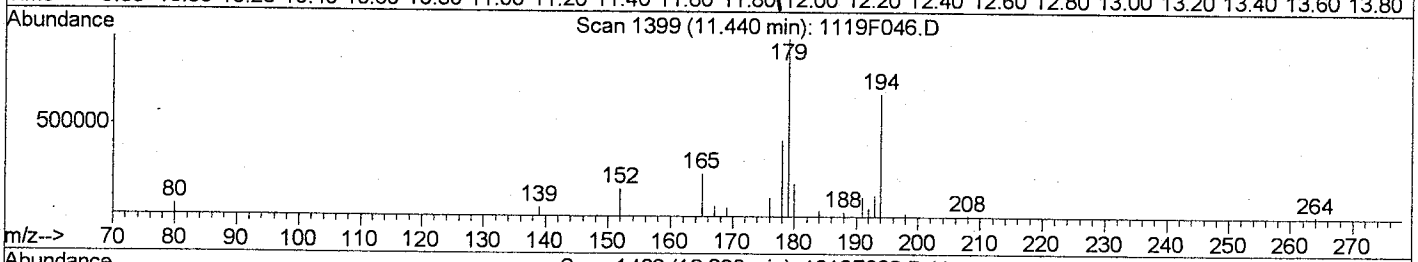
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:08 2003

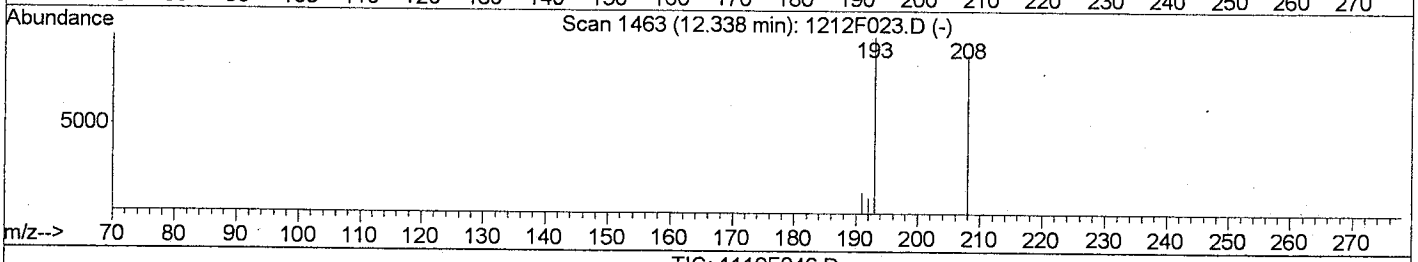
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(19) C2-Fluorenes (L)

11.44min 18053.29ng/ml m

response 7806805

Ion	Exp%	Act%
194.00	100	100
179.00	137.00	144.05
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:08:03 2003

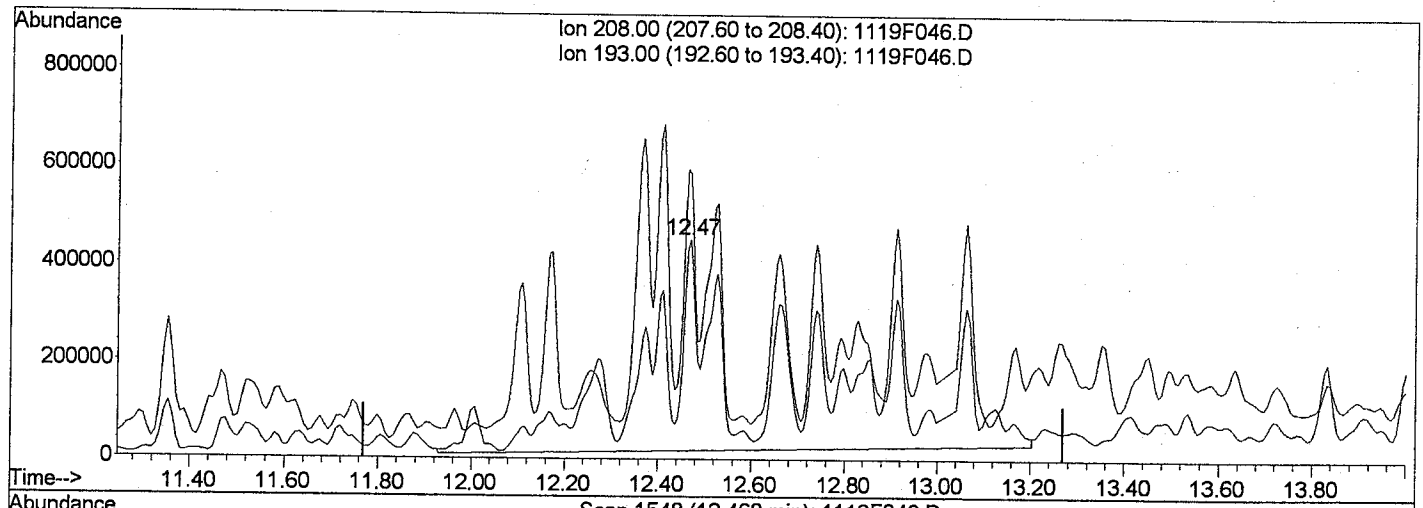
Quantitation Report (Qedit)

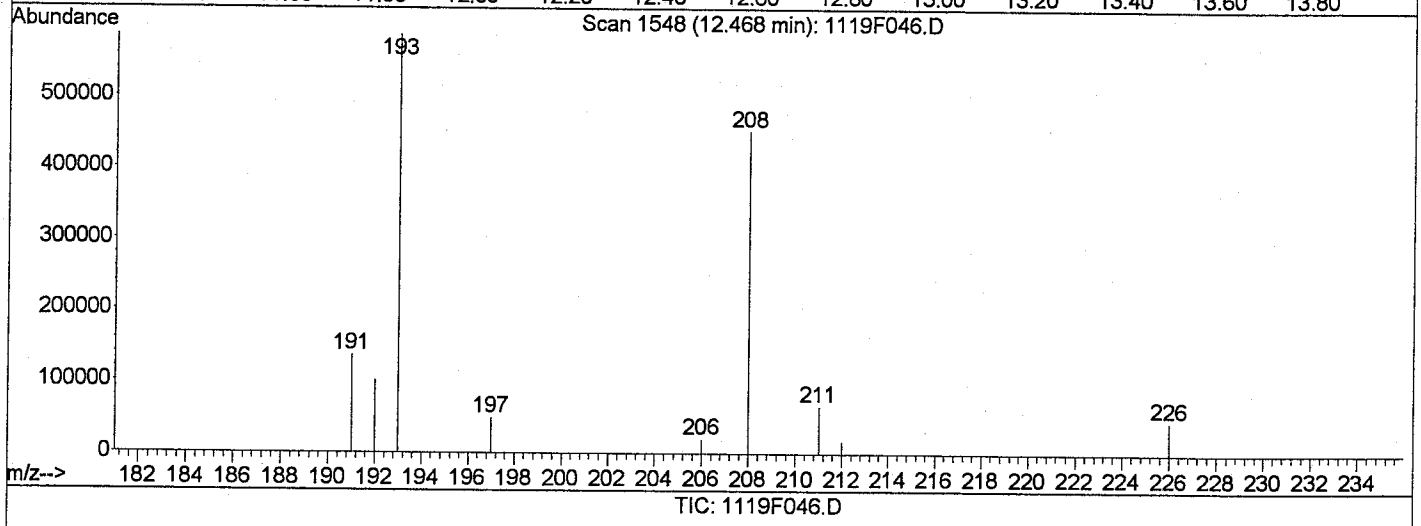
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 21:51
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 10:07 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Multiple Level Calibration





TIC: 1119F046.D

(20) C3-Fluorenes (L)

12.47min 20242.33ng/ml m

response 8753415

Ion	Exp%	Act%
208.00	100	100
193.00	122.00	129.68
0.00	0.00	0.00
0.00	0.00	0.00

RW

11/24/03

1119F046.D 1107ALK.M Mon Nov 24 10:07:46 2003

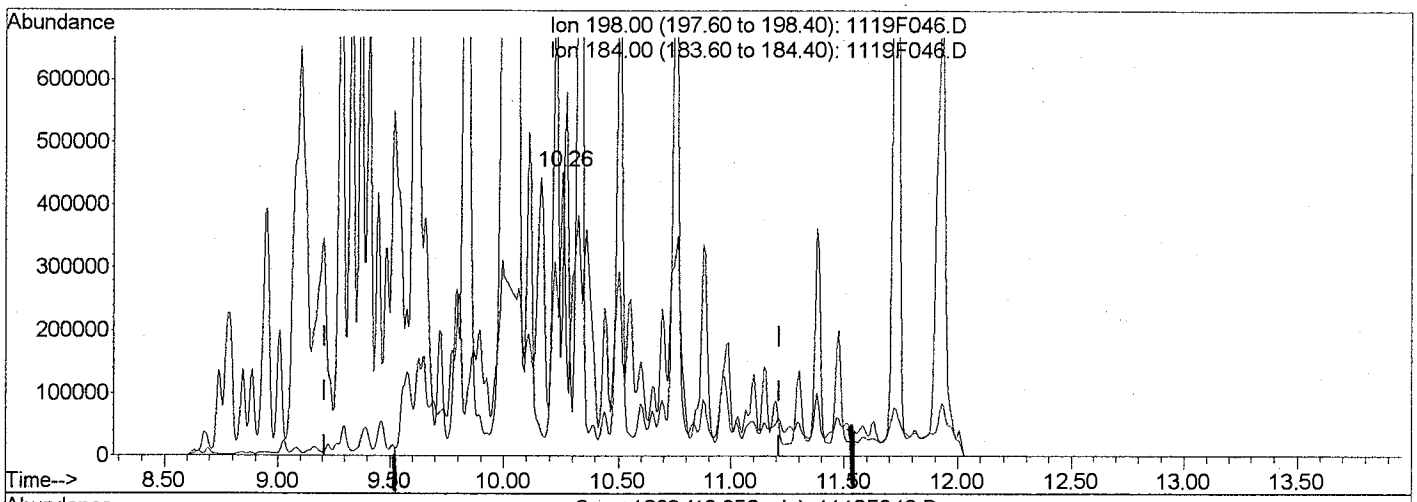
Quantitation Report (Qedit)

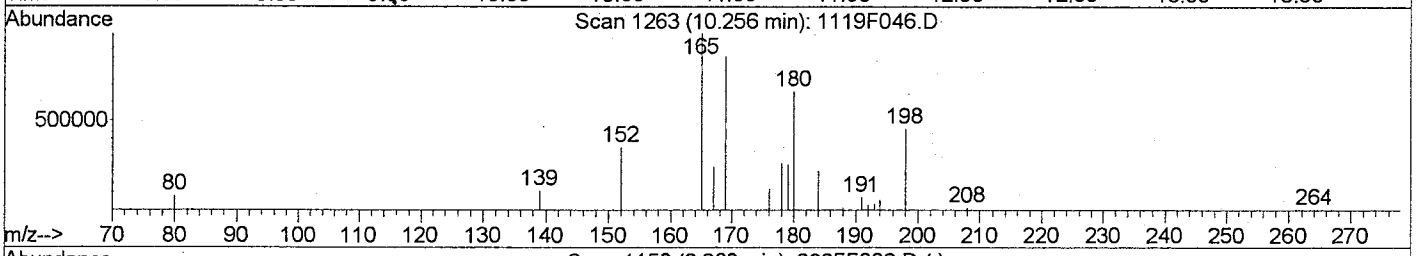
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:08 2003

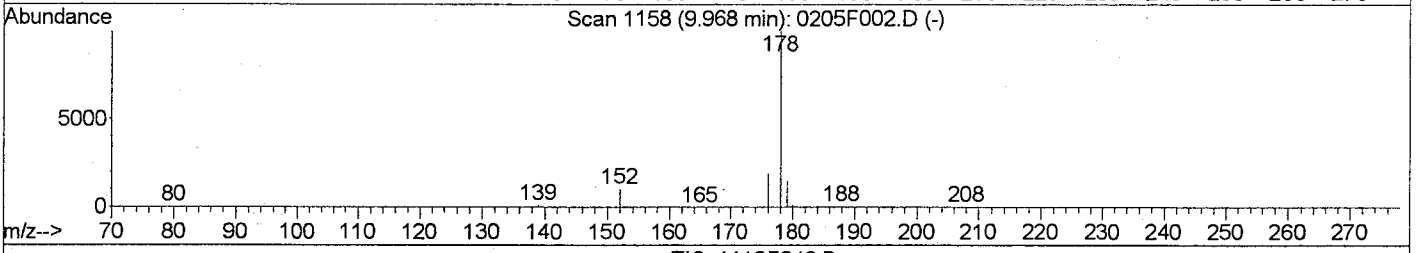
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(25) C1-Dibenzothiophenes (L)

10.26min 39330.67ng/ml m

response 16499656

Ion	Exp%	Act%
198.00	100	100
184.00	104.10	48.55#
0.00	0.00	0.00
0.00	0.00	0.00

11/21/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:08:32 2003

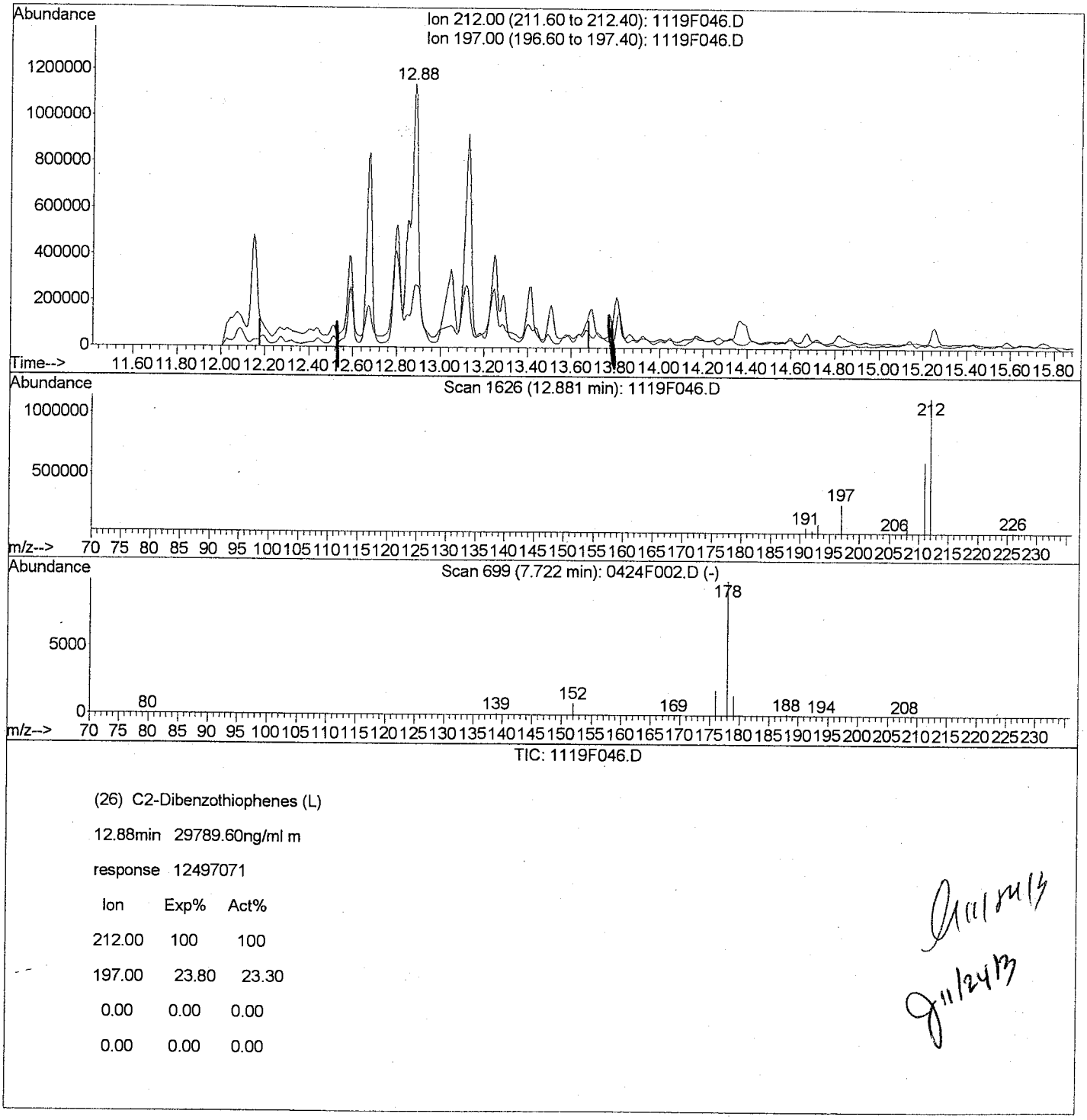
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:09 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(26) C2-Dibenzothiophenes (L)

12.88min 29789.60ng/ml m

response 12497071

Ion	Exp%	Act%
212.00	100	100
197.00	23.80	23.30
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

1119F046.D 1107ALK.M Thu Nov 20 14:08:49 2003

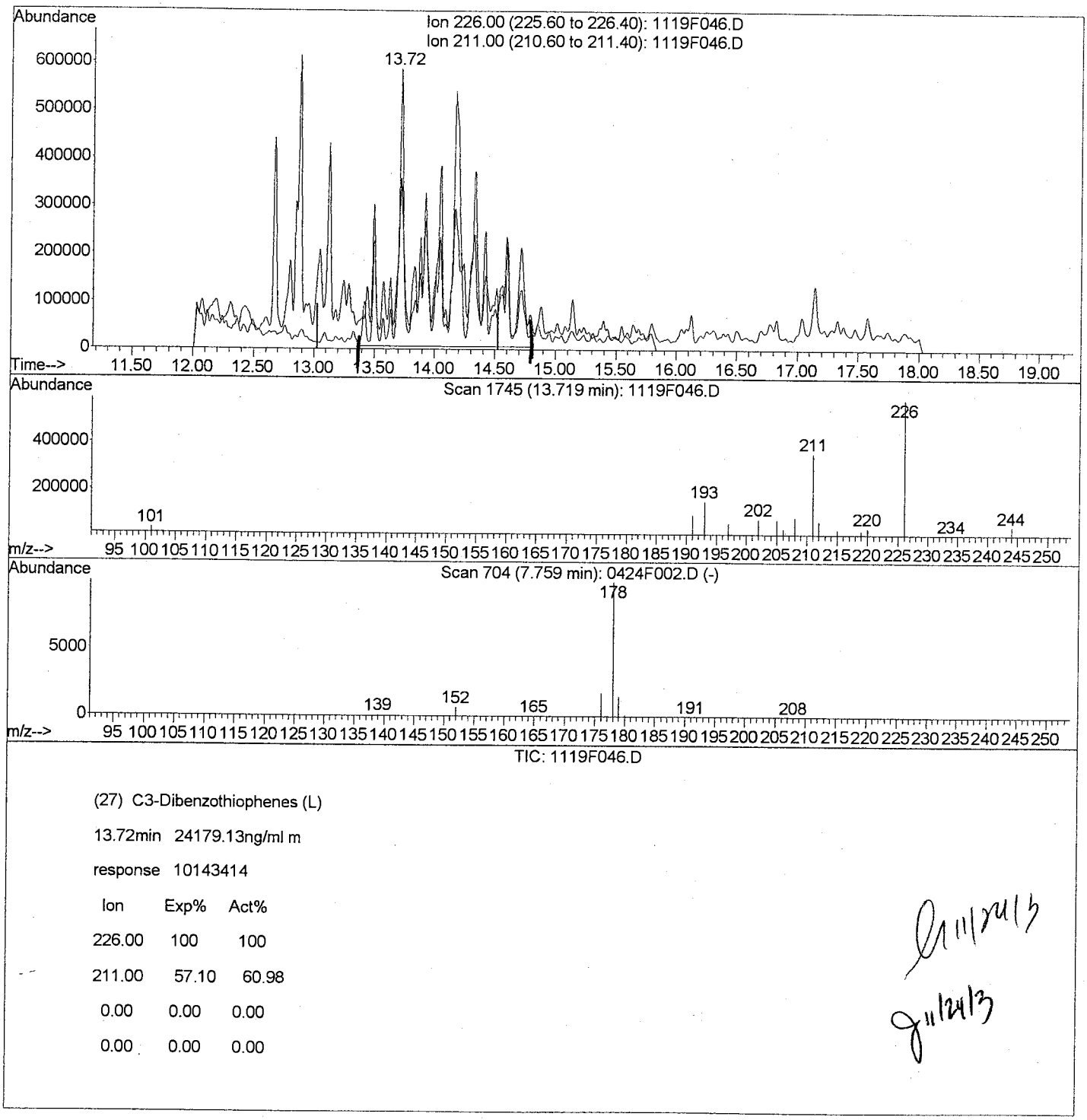
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:09 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(27) C3-Dibenzothiophenes (L)

13.72min 24179.13ng/ml m

response 10143414

Ion	Exp%	Act%
226.00	100	100
211.00	57.10	60.98
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:08:58 2003

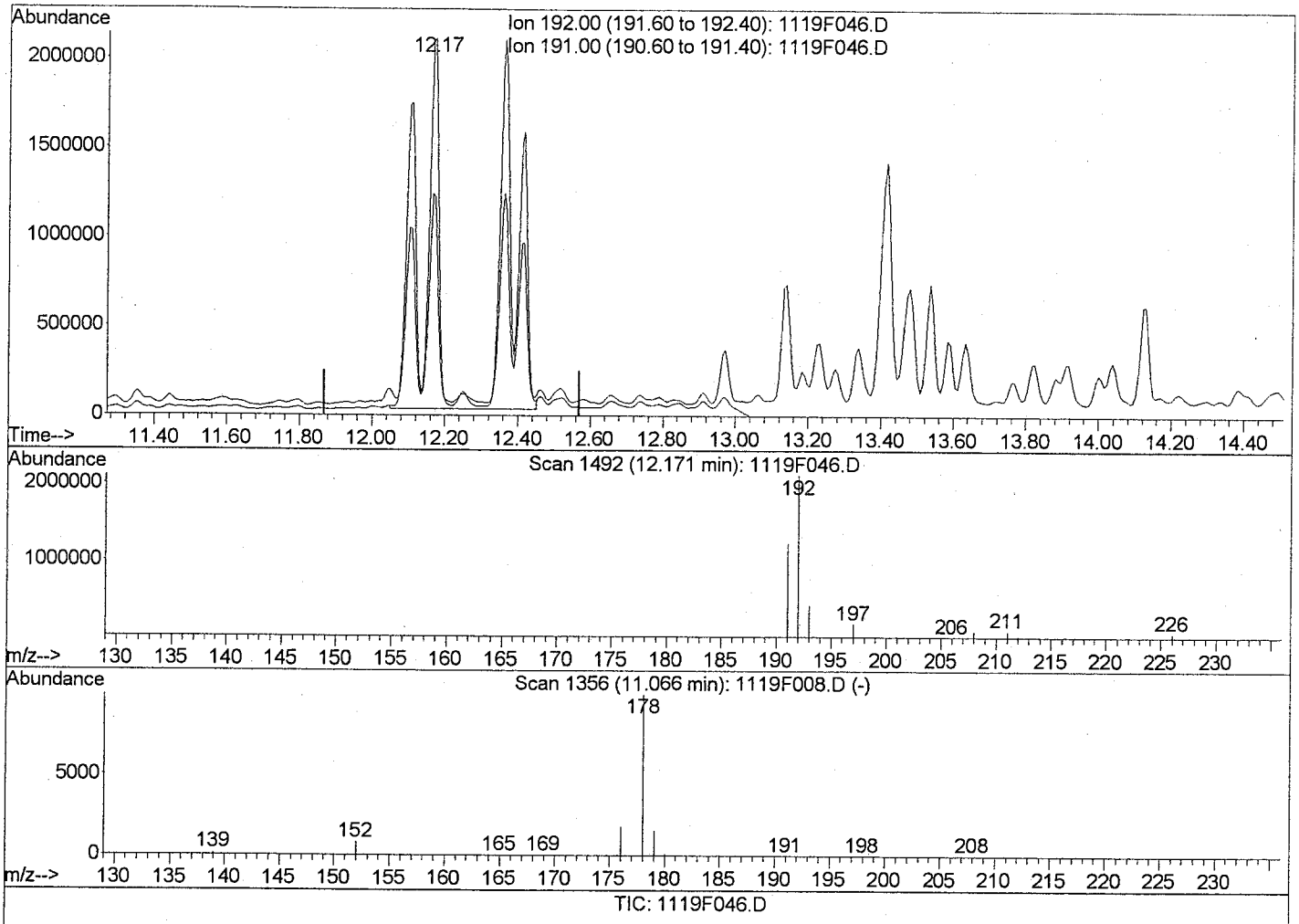
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:09 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(32) C1-Phenanthrenes/Anthracenes (L)

12.17min 30017.44ng/ml m

response 13227892

Ion	Exp%	Act%
192.00	100	100
191.00	55.30	58.07
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:09:07 2003

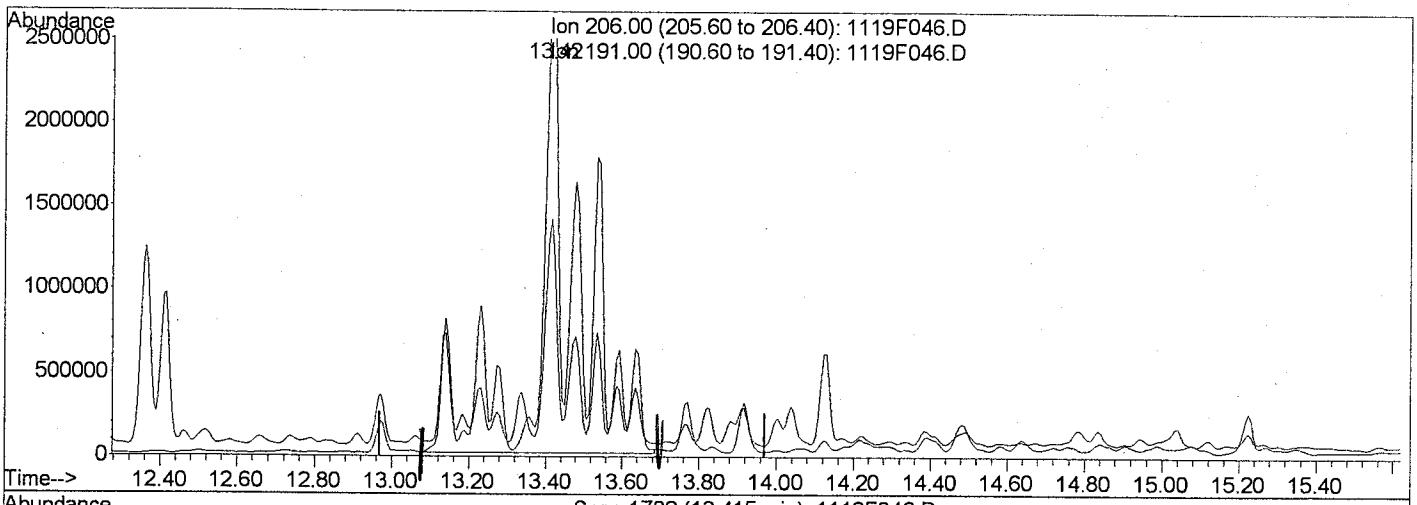
Quantitation Report (Qedit)

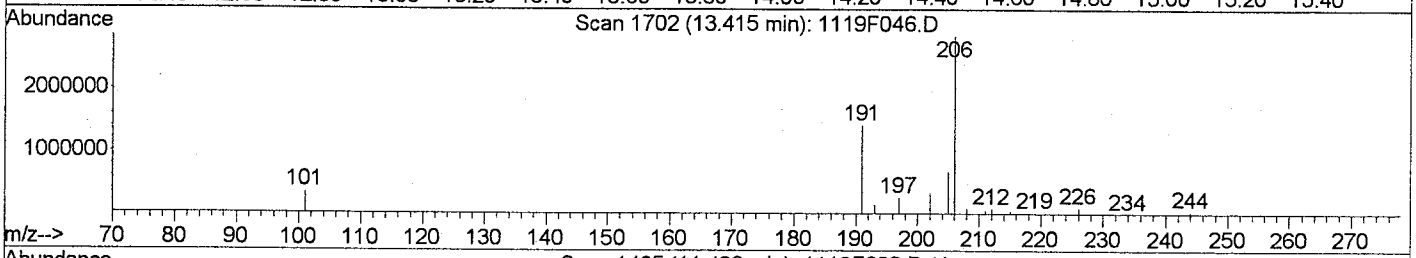
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:09 2003

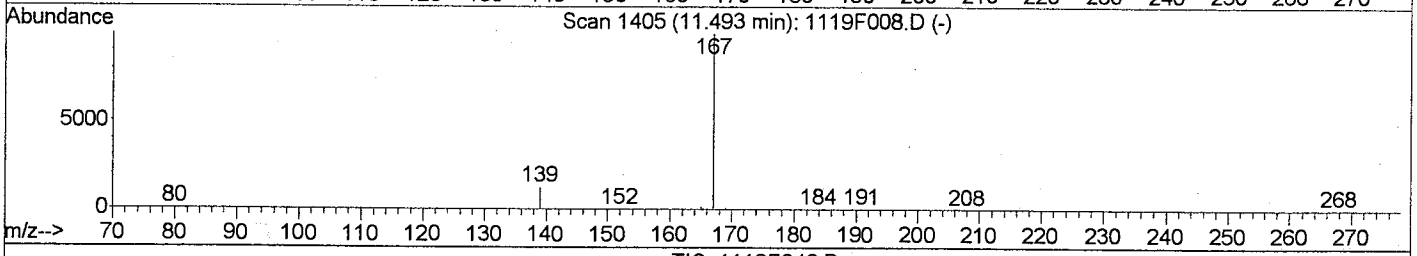
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(33) C2-Phenanthrenes/Anthracenes (L)

13.42min 43042.03ng/ml m

response 18967484

Ion	Exp%	Act%
206.00	100	100
191.00	45.60	49.80
0.00	0.00	0.00
0.00	0.00	0.00

Q 11/24/13

Q 11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:09:15 2003

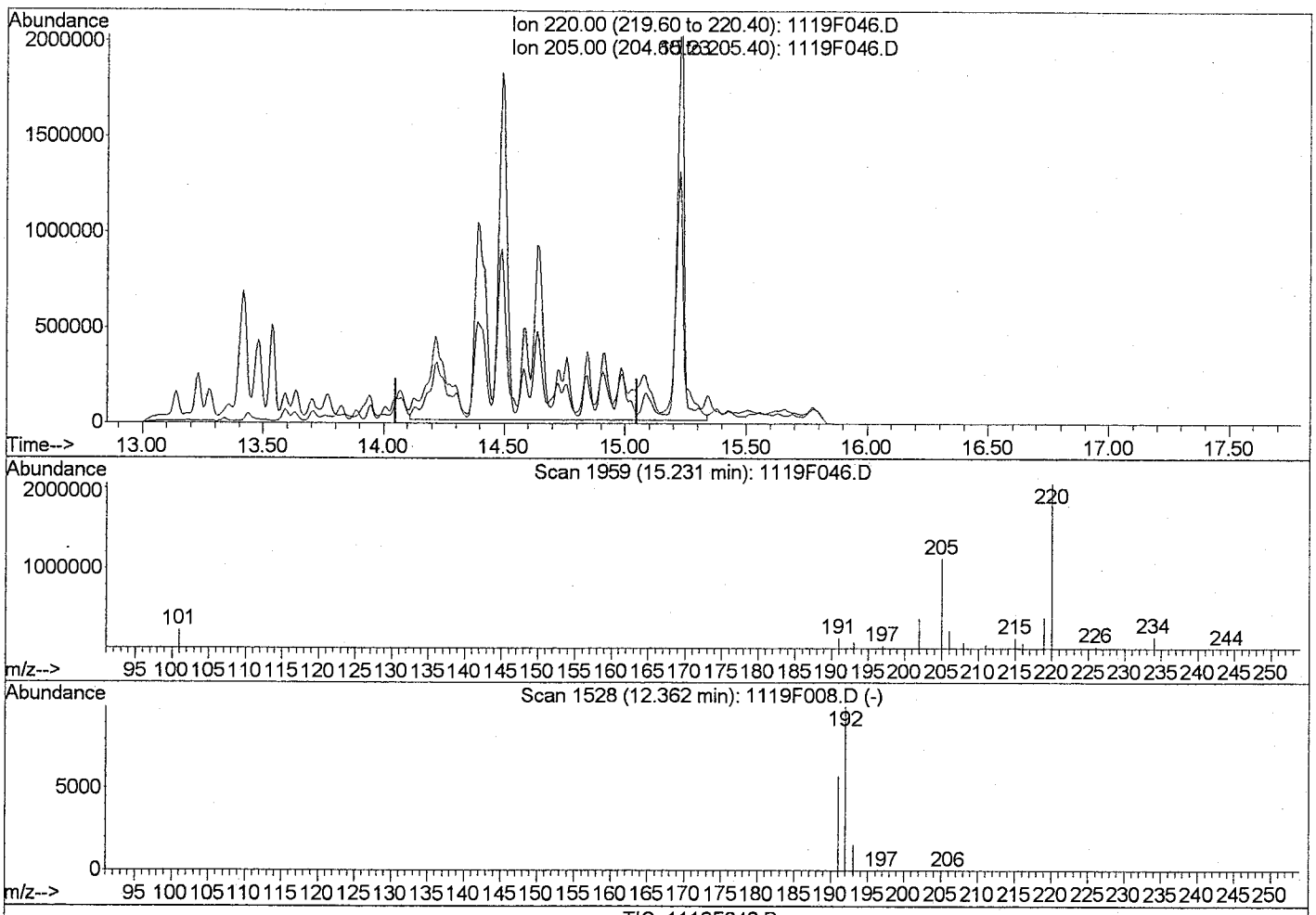
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:09 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(34) C3-Phenanthrenes/Anthracenes (L)

15.23min 46885.00ng/ml m

response 20660982

Ion	Exp%	Act%
220.00	100	100
205.00	50.00	54.79
0.00	0.00	0.00
0.00	0.00	0.00

11/24/17

11/24/17

1119F046.D 1107ALK.M Thu Nov 20 14:09:25 2003

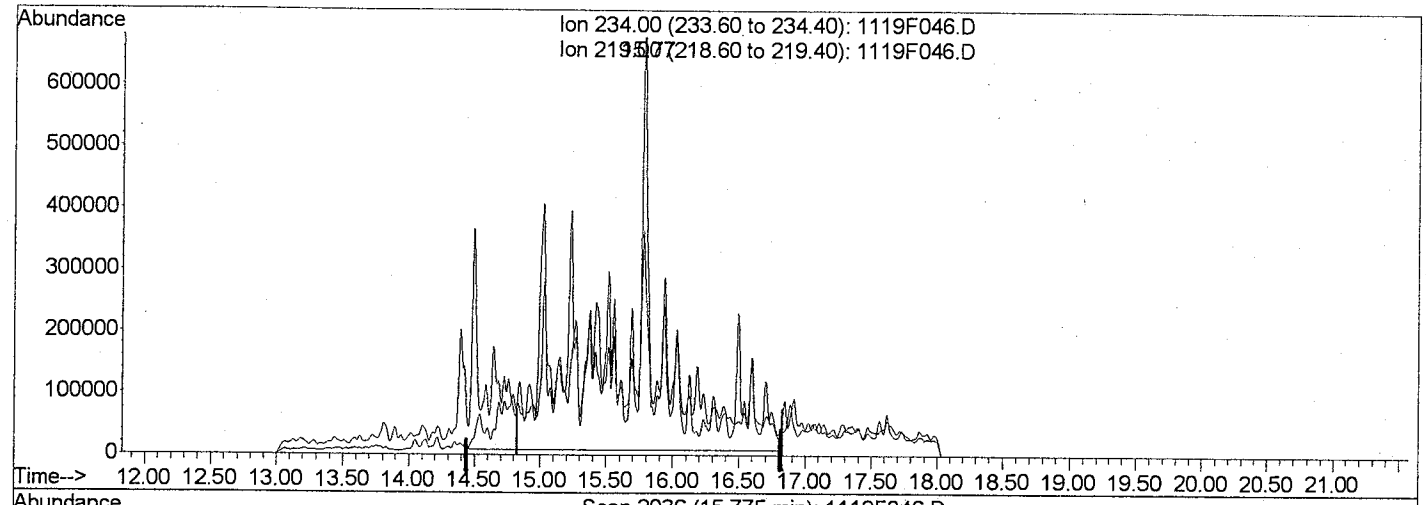
Quantitation Report (Qedit)

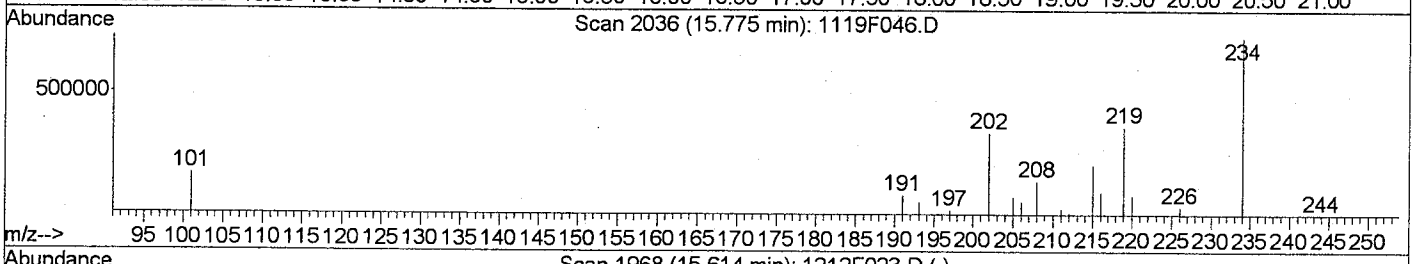
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003

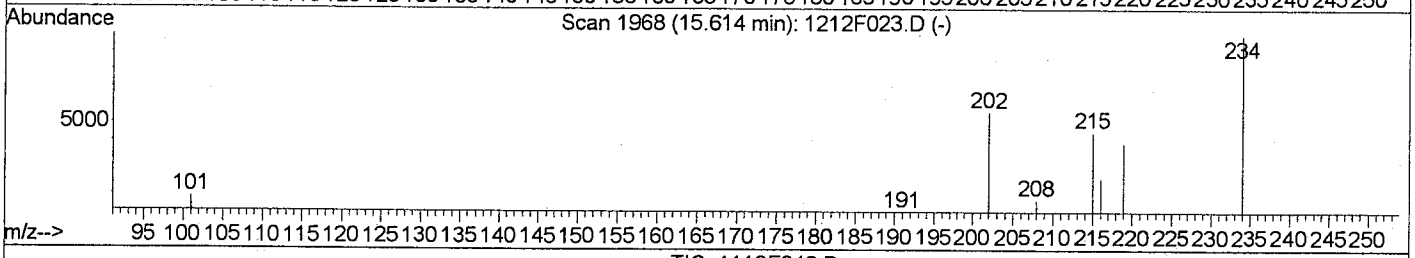
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(35) C4-Phenanthrenes/Anthracenes (L)

15.77min 28941.11ng/ml m

response 12753581

Ion	Exp%	Act%
234.00	100	100
219.00	47.70	50.31
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:09:34 2003

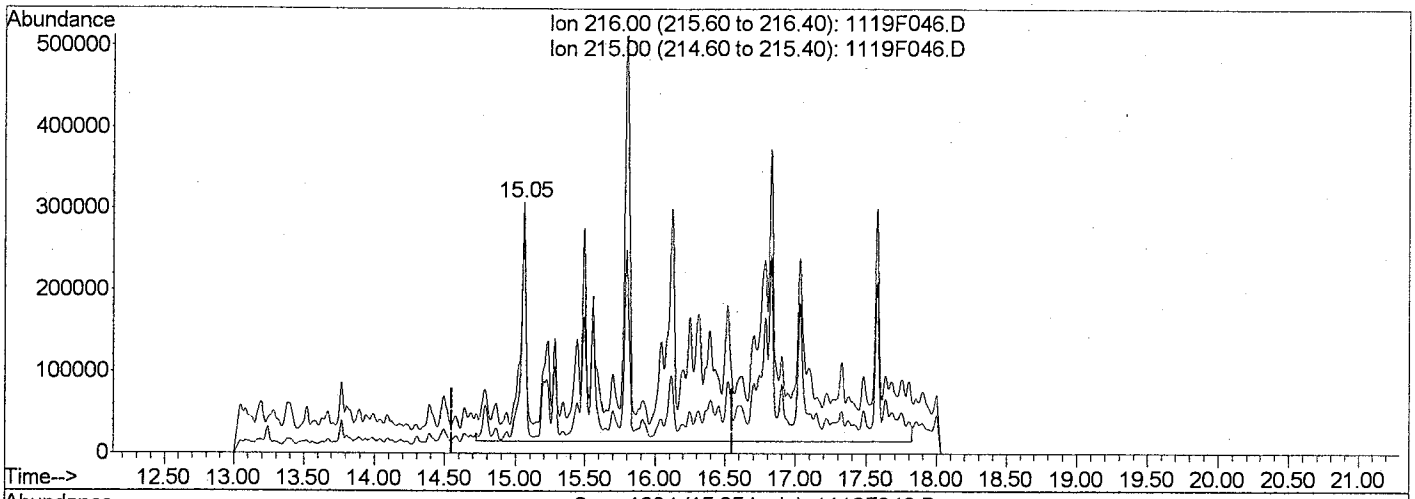
Quantitation Report (Qedit)

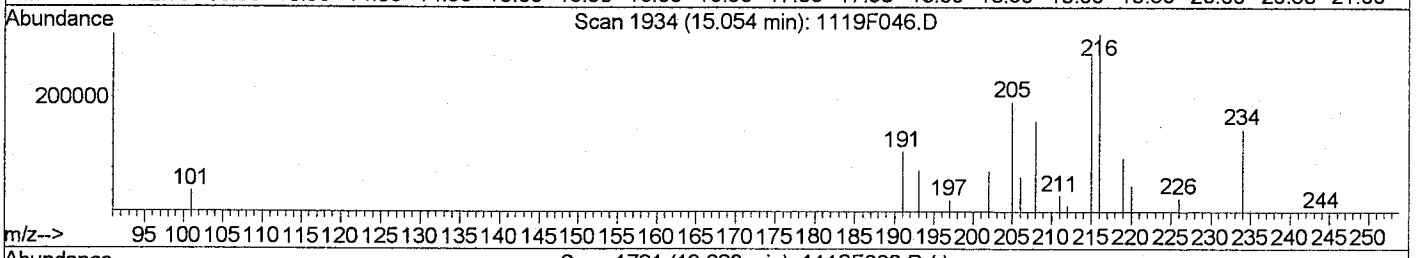
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003

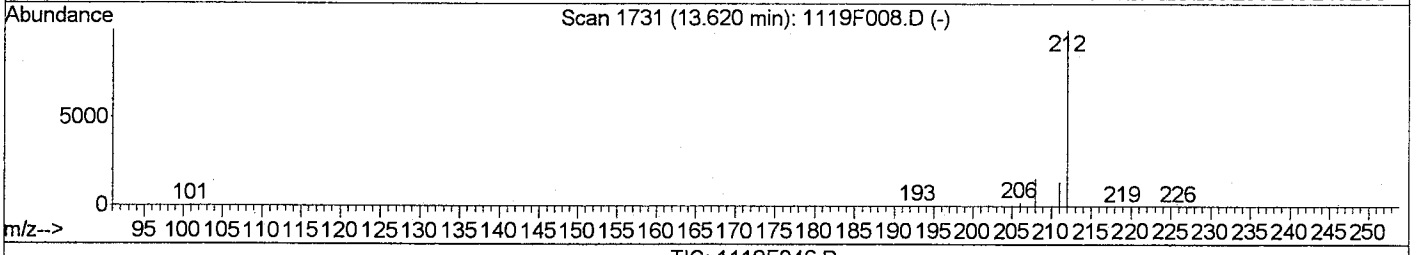
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(40) C1-Fluoranthenes/Pyrenes (L)

15.05min 20582.19ng/ml m

response 7676814

Ion	Exp%	Act%
216.00	100	100
215.00	84.80	88.70
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:09:45 2003

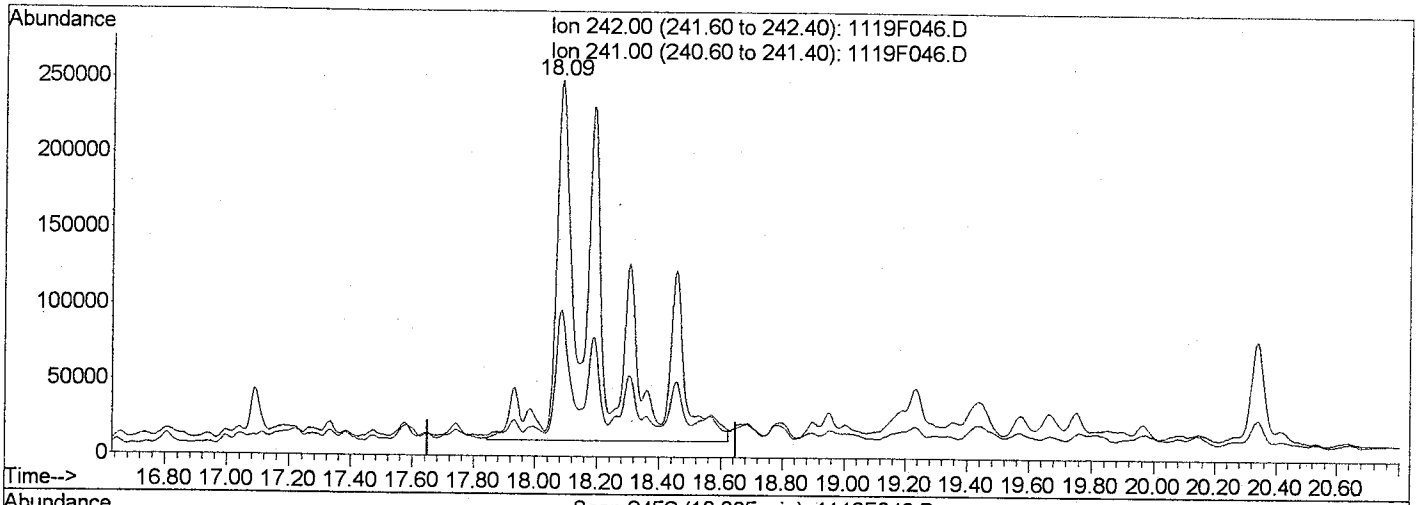
Quantitation Report (Qedit)

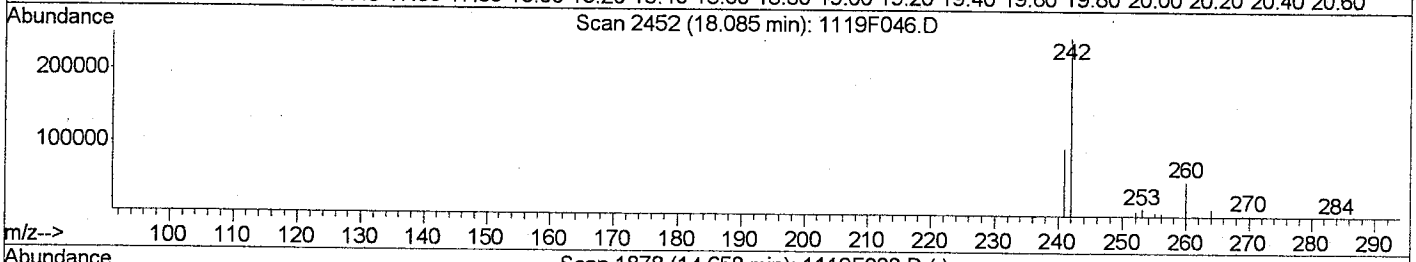
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003

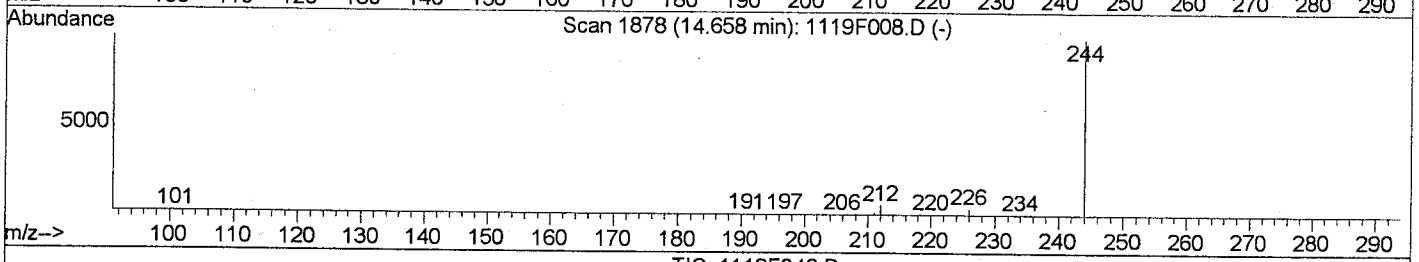
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(44) C1-Chrysenes (L)

18.09min 8013.08ng/ml m

response 2433246

Ion	Exp%	Act%
242.00	100	100
241.00	30.10	38.87
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/24/03

1119F046.D 1107ALK.M Thu Nov 20 14:09:53 2003

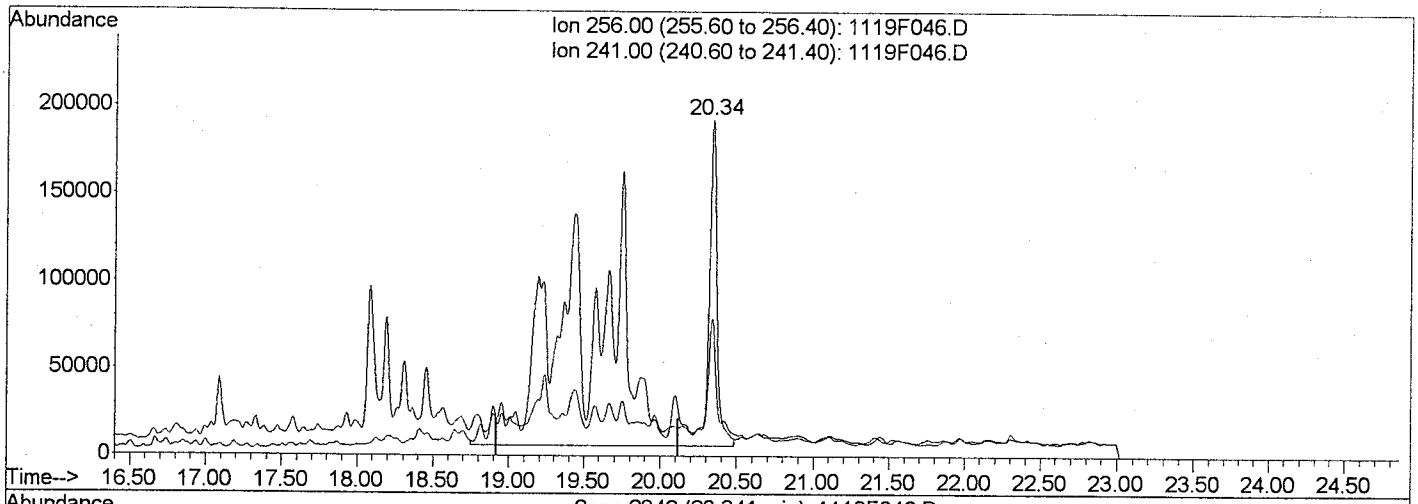
Quantitation Report (Qedit)

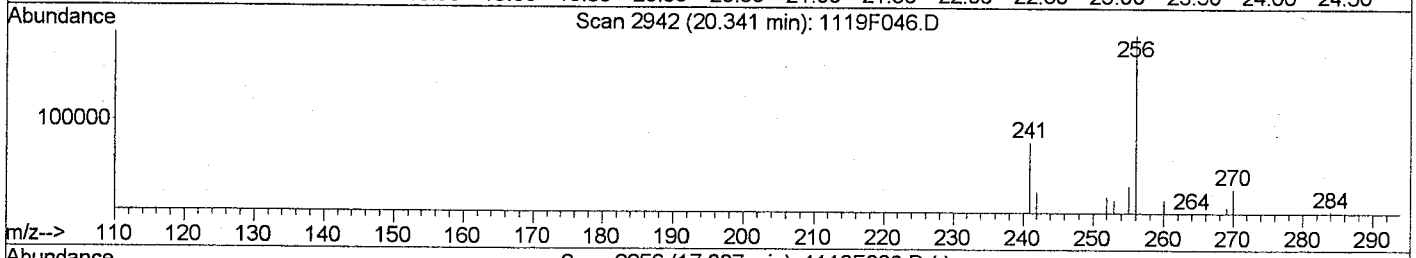
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003

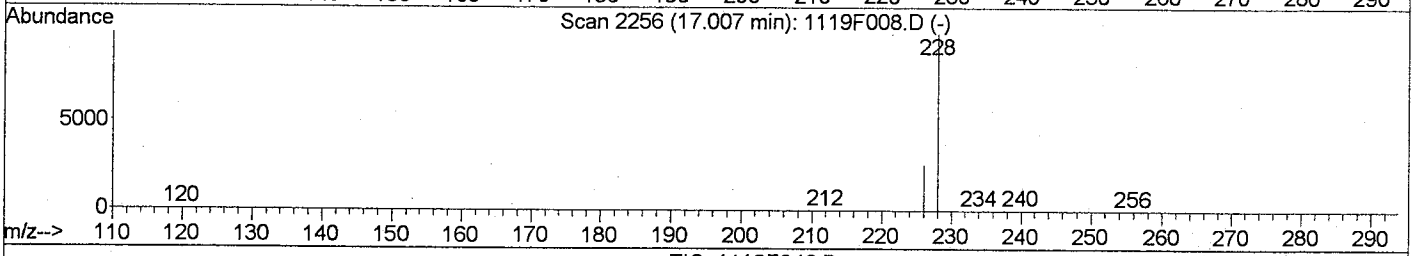
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(45) C2-Chrysenes (L)

20.34min 14249.81ng/ml m

response 4327090

Ion	Exp%	Act%
256.00	100	100
241.00	37.80	40.90
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:10:04 2003

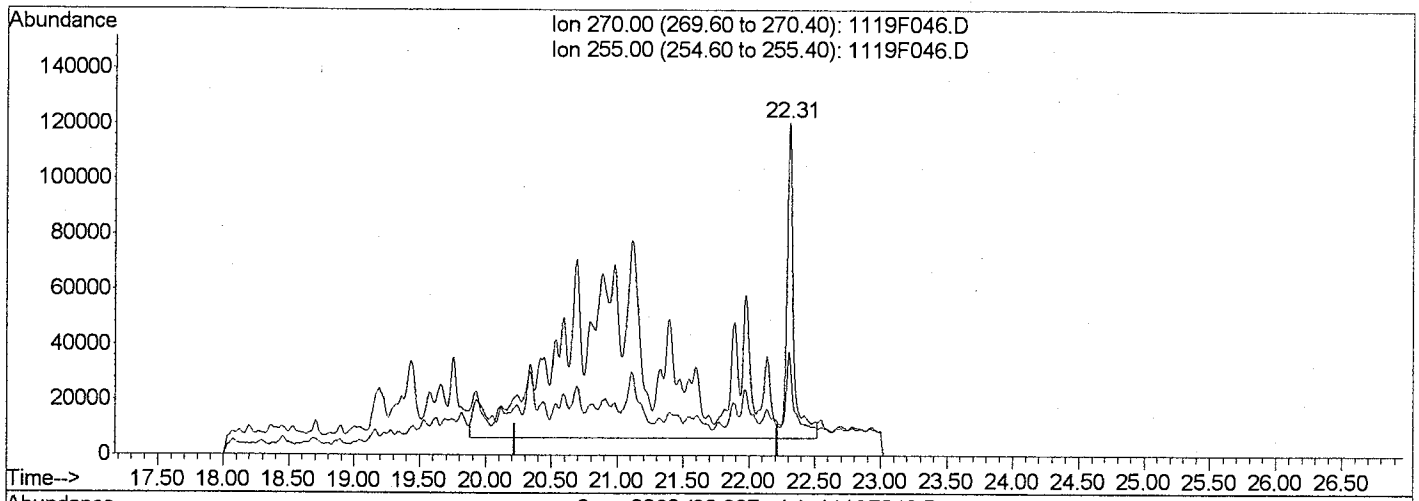
Quantitation Report (Qedit)

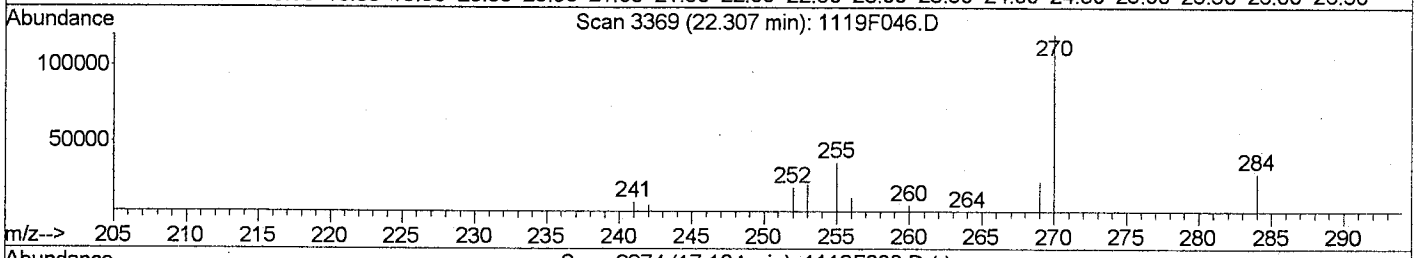
Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003

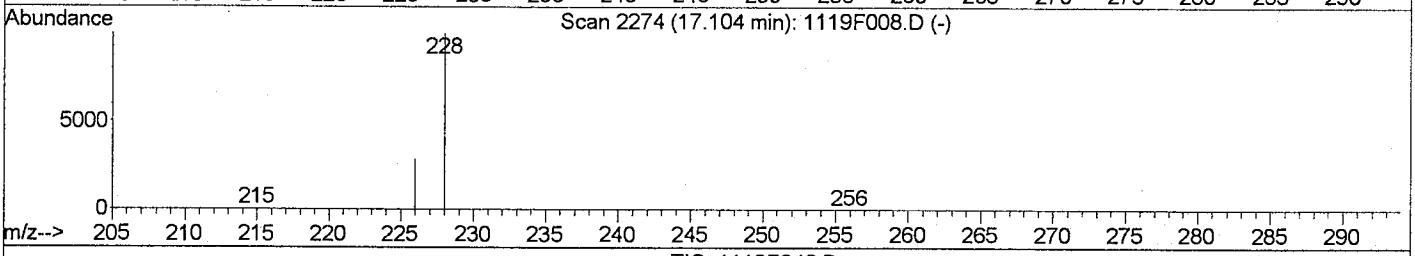
Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration







TIC: 1119F046.D

(46) C3-Chrysenes (L)

22.31min 12793.36ng/ml m

response 3884823

Ion	Exp%	Act%
270.00	100	100
255.00	26.70	29.80
0.00	0.00	0.00
0.00	0.00	0.00

11/24/13

11/24/13

1119F046.D 1107ALK.M Thu Nov 20 14:10:15 2003

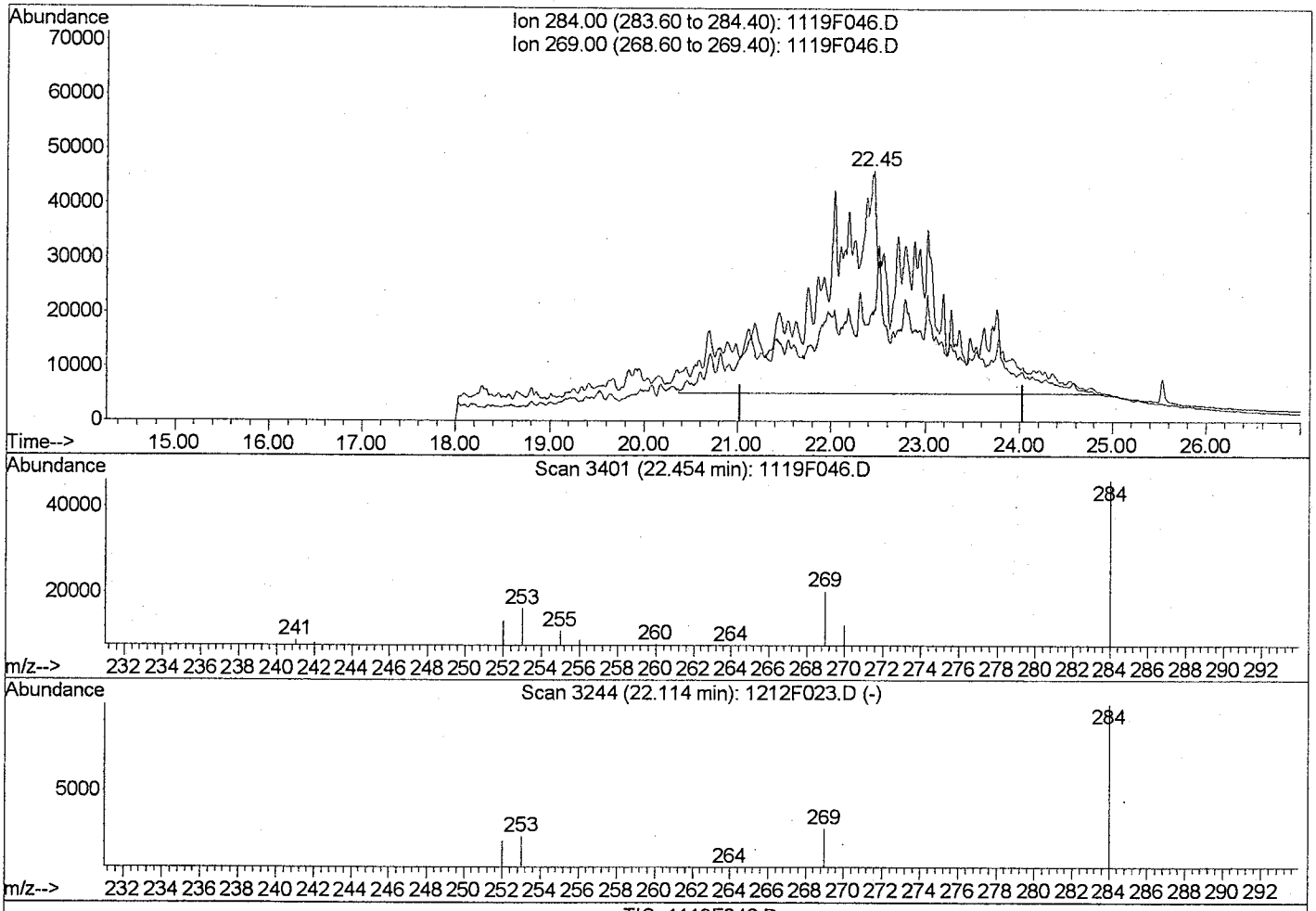
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\111903\1119F046.D
Acq On : 19 Nov 2003 9:51 pm
Sample : SIM-ALKH CCV | SVM3-88E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 14:10 2003

Vial: 17
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Multiple Level Calibration



TIC: 1119F046.D

(47) C4-Chrysenes (L)

22.45min 10807.47ng/ml m

response 3281791

Ion	Exp%	Act%
284.00	100	100
269.00	46.20	44.19
0.00	0.00	0.00
0.00	0.00	0.00

11/24/03

11/21/03

1119F046.D 1107ALK.M Thu Nov 20 14:10:26 2003

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/20/2003

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/07/2003
Calibration ID: CAL3082
Analysis Lot: KWG0318915
Units: ng/ml

File ID: J:\MS11\DATA\112003\1120F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	2000	2100	0.01	1.13	1.19	5	NA	± 20 %	AverageRF
2-Methylnaphthalene	2000	2200	0.01	0.668	0.745	12	NA	± 20 %	AverageRF
1-Methylnaphthalene	2000	2200	0.01	0.626	0.701	12	NA	± 20 %	AverageRF
Biphenyl	2000	2200	0.01	0.810	0.902	11	NA	± 20 %	AverageRF
Acenaphthylene	2000	2300	0.01	1.93	2.18	13	NA	± 20 %	AverageRF
Dibenzofuran	2000	2200	0.01	1.59	1.75	10	NA	± 20 %	AverageRF
Acenaphthene	2000	2200	0.01	1.19	1.30	10	NA	± 20 %	AverageRF
Fluorene	2000	2300	0.01	1.27	1.45	14	NA	± 20 %	AverageRF
Dibenzothiophene	2000	2100	0.01	1.15	1.22	6	NA	± 20 %	AverageRF
Phenanthrene	2000	2100	0.01	1.21	1.27	5	NA	± 20 %	AverageRF
Anthracene	2000	2400	0.01	1.04	1.22	18	NA	± 20 %	AverageRF
Fluoranthene	2000	2200	0.01	1.21	1.35	12	NA	± 20 %	AverageRF
Pyrene	2000	2300	0.01	1.31	1.50	14	NA	± 20 %	AverageRF
Benz(a)anthracene	2000	2200	0.01	0.995	1.10	11	NA	± 20 %	AverageRF
Chrysene	2000	2100	0.01	1.06	1.14	7	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	2000	2200	0.01	1.34	1.49	12	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	2000	1800	0.01	1.69	1.55	-8	NA	± 20 %	AverageRF
Benzo(e)pyrene	2000	1900	0.01	1.50	1.41	-6	NA	± 20 %	AverageRF
Benzo(a)pyrene	2000	2100	0.01	1.14	1.21	7	NA	± 20 %	AverageRF
Perylene	2000	2100	0.01	1.27	1.36	7	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	2000	2400	0.01	0.690	0.820	19	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	2000	2100	0.01	0.992	1.02	3	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	2000	1700	0.01	1.14	0.972	-15	NA	± 20 %	AverageRF
Fluorene-d10	2000	2200	0.01	1.00	1.10	10	NA	± 20 %	AverageRF
Fluoranthene-d10	2000	2100	0.01	1.00	1.04	3	NA	± 20 %	AverageRF
Terphenyl-d14	2000	2100	0.01	0.911	0.960	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS11\DATA\112003\1120F002.D
Lab ID: KWG0318915-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/20/2003 05:47
Date Quantitated: 11/20/2003 06:17
Batch ID: KWG0318915
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT

Primary Review: 11/24/03

Secondary Review: 11.24.3

Printed: 11/24/2003 09:46:38
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-PAH	**Collect Date:**		**Receive Date:**	11/24/2003

Analysis Lot:	KWG0318915	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112003\1120F002.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 05:47	**Quant Date:**	11/20/2003 06:17	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318915-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.53	-0.05	136	253624	1,000.00	OK
2	Acenaphthene-d10	8.00	-0.06	164	132414	1,000.00	OK
3	Phenanthrene-d10	10.93	-0.07	188	198017	1,000.00	OK
4	Chrysene-d12	17.06	-0.07	240	181741	1,000.00	OK
5	Perylene-d12	21.40	-0.11	264	111133	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10	7.00			164	373334	2,009		39-97	NA	
2	Fluorene-d10	8.94			176	291949	2,205		27-110	NA	
2	2,4,6-Tribromophenol	9.53			330	30487	2,020		20-140	NA	
3	Fluoranthene-d10	13.63			212	409951	2,068		34-122	NA	
4	Terphenyl-d14	14.66			244	348796	2,106		50-132	NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.55			128	604871	2,109			
1	2-Methylnaphthalene	6.37			142	377757	2,231			
1	1-Methylnaphthalene	6.52			142	355793	2,241			
1	Biphenyl	7.04			154	457790	2,229			
1	2,6-Dimethylnaphthalene	7.27			156	326717	2,262			
1	C2-Naphthalenes				156	0				
1	C3-Naphthalenes				170	0				
1	C4-Naphthalenes				184	0				
2	Acenaphthylene	7.74			152	577714	2,264			
2	Acenaphthene	8.05			154	344829	2,193			
2	Dibenzofuran	8.34			168	464019	2,201			
2	2,3,5-Trimethylnaphthalene	8.76			170	302354	2,147			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F002.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 05:47	**Quant Date:**	11/20/2003 06:17	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318915-2			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:**

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	8.99			166	384107	2,280			
2	C1-Fluorenes				180	0				
2	C2-Fluorenes				194	0				
2	C3-Fluorenes				208	0				
2	Pentachlorophenol	10.72			266	77369	3,621			
3	Dibenzothiophene	10.71			184	482313	2,111			
3	C1-Dibenzothiophenes				198	0				
3	C2-Dibenzothiophenes				212	0				
3	C3-Dibenzothiophenes				226	0				
3	Phenanthrene	10.97			178	503221	2,097			
3	Anthracene	11.08			178	482737	2,354			
3	Carbazole	11.49			167	379546	2,342			
3	1-Methylphenanthrene	12.37			192	359827	2,208			
3	C1-Phenanthrenes/Anthracenes				192	0				
3	C2-Phenanthrenes/Anthracenes				206	0				
3	C3-Phenanthrenes/Anthracenes				220	0				
3	C4-Phenanthrenes/Anthracenes				234	0				
3	Fluoranthene	13.66			202	535204	2,240			
4	Pyrene	14.17			202	543659	2,289			
4	C1-Fluoranthenes/Pyrenes				216	0				
4	Benz(a)anthracene	17.02			228	400516	2,215			
4	Chrysene	17.12			228	412842	2,135			
4	C1-Chrysenes				242	0				
4	C2-Chrysenes				256	0				
4	C3-Chrysenes				270	0				
4	C4-Chrysenes				284	0				
5	Benzo(b)fluoranthene	20.00			252	331383	2,234			
5	Benzo(k)fluoranthene	20.08			252	345622	1,836			
5	Benzo(e)pyrene	20.97			252	312620	1,877			
5	Benzo(a)pyrene	21.16			252	268881	2,131			
5	Perylene	21.50			252	303030	2,139			
5	Indeno(1,2,3-cd)pyrene	24.03			276	182329	2,377			
5	Dibenz(a,h)anthracene	24.08			278	226895	2,058			
5	Benzo(g,h,i)perylene	24.49			276	216030	1,699			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F002.D Vial: 2
Acq On : 20 Nov 2003 5:47 am Operator: LWeiskopf
Sample : SIM PAF CCV @ 2.0ug/mL | SVM16-1G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 06:16:34 2003 Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.53	136	253624	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.00	164	132414	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.93	188	198017	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	181741	1000.00	ng/ml	0.01
48) Perylene-d12	21.40	264	111133	1000.00	ng/ml	0.04
System Monitoring Compounds						
5) Biphenyl-d10	7.00	164	373334	2009.43	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 200.94%			
16) Fluorene-d10	8.94	176	291949	2204.54	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 220.45%			
21) 2,4,6 Tribromophenol	9.53	330	30487	2020.13	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 202.01%			
37) Fluoranthene-d10	13.63	212	409951	2068.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 206.85%			
41) Terphenyl-d14	14.66	244	348796	2105.80	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 210.58%			
Target Compounds						Qvalue
2) Naphthalene	5.55	128	604871	2109.24	ng/ml	100
3) 2-Methylnaphthalene	6.37	142	377757	2230.72	ng/ml	99
4) 1-Methylnaphthalene	6.52	142	355793	2241.47	ng/ml	99
6) Biphenyl	7.04	154	457790	2229.49	ng/ml	100
7) 2,6-Dimethylnaphthalene	7.27	156	326717	2261.90	ng/ml	100
12) Acenaphthylene	7.74	152	577714	2264.46	ng/ml	100
13) Acenaphthene	8.05	154	344829	2193.08	ng/ml	99
14) Dibenzofuran	8.34	168	464019	2201.45	ng/ml	95
15) 2,3,5-Trimethylnaphthalene	8.76	170	302354	2146.64	ng/ml	94
17) Fluorene	8.99	166	384107	2280.46	ng/ml	100
22) Pentachlorophenol	10.72	266	77369	3621.08	ng/ml	100
24) Dibenzothiophene	10.71	184	482313	2111.09	ng/ml	98
28) Phenanthrene	10.97	178	503221	2096.83	ng/ml	99
29) Anthracene	11.08	178	482737	2354.47	ng/ml	99
30) Carbazole	11.49	167	379546	2342.00	ng/ml	98
31) 1-Methylphenanthrene	12.37	192	359827	2208.26	ng/ml	99
36) Fluoranthene	13.66	202	535204	2240.37	ng/ml	99
39) Pyrene	14.17	202	543659	2288.61	ng/ml	100
42) Benz(a)anthracene	17.02	228	400516	2214.54	ng/ml	99
43) Chrysene	17.12	228	412842	2134.67	ng/ml	100
49) Benzo(b)fluoranthene	20.00	252	331383	2233.54	ng/ml	100
50) Benzo(k)fluoranthene	20.08	252	345622	1835.92	ng/ml	100
51) Benzo(e)pyrene	20.97	252	312620	1876.66	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112003\1120F002.D
Acq On : 20 Nov 2003 5:47 am
Sample : SIM PAF CCV @ 2.0ug/mL | SVM16-1G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 06:16:34 2003

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Nov 19 12:18:06 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52) Benzo(a)pyrene	21.16	252	268881	2130.61	ng/ml	100
53) Perylene	21.50	252	303030	2139.09	ng/ml	100
54) Indeno(1,2,3-cd)pyrene	24.03	276	182329	2376.64	ng/ml	100
55) Dibenz(a,h)anthracene	24.08	278	226895	2057.96	ng/ml	77
56) Benzo(g,h,i)perylene	24.49	276	216030	1698.50	ng/ml	100

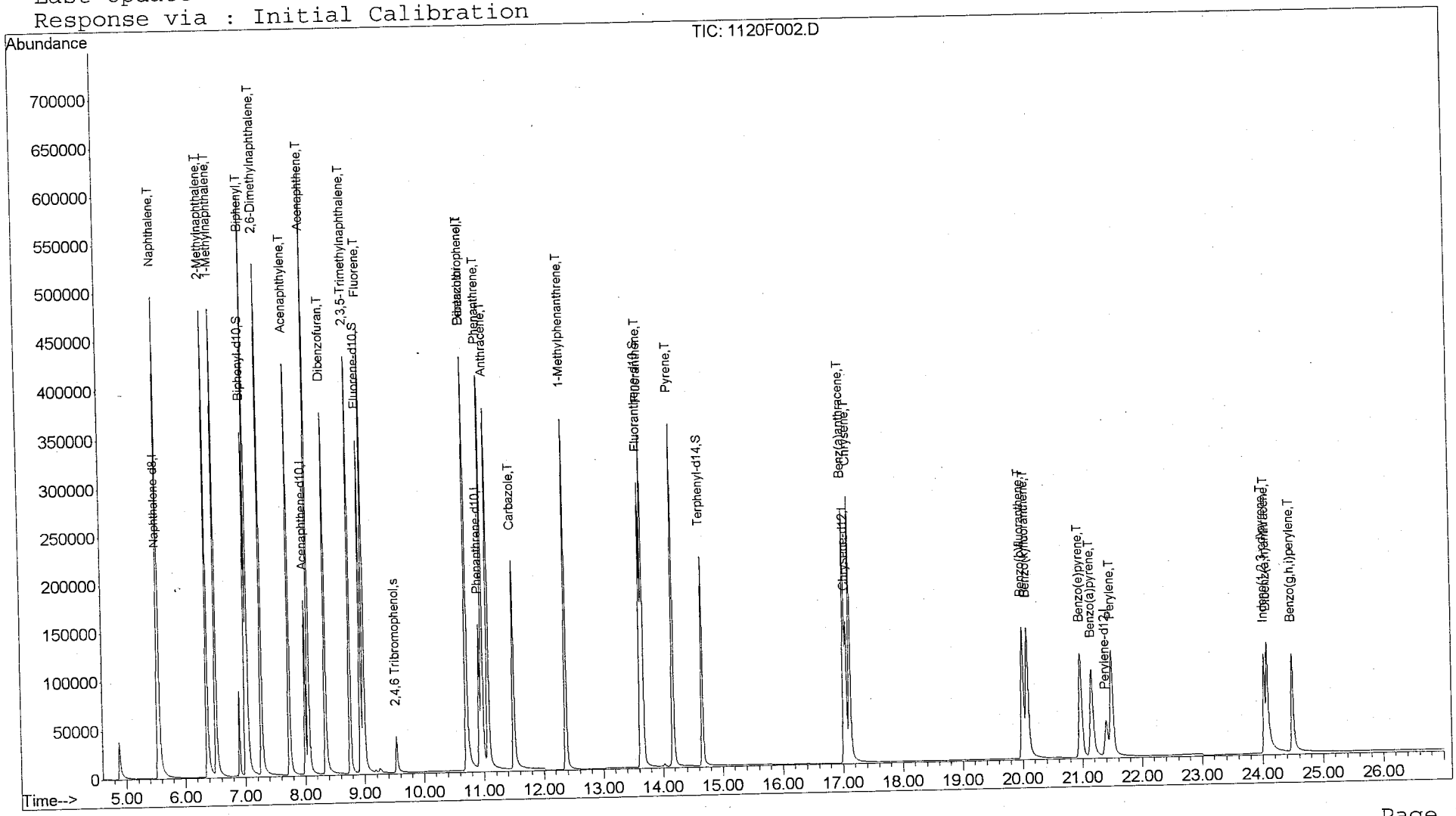
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F002.D
Acq On : 20 Nov 2003 5:47 am
Sample : SIM PAF CCV @ 2.0ug/mL | SVM16-1G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 6:17 2003

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration



1751

Exception Report

Data File: J:\MS11\DATA\112003\1120F004.D
Lab ID: KWG0318915-3
RunType: IB
Matrix: WATER

Date Acquired: 11/20/2003 06:59
Date Quantitated: 11/24/2003 09:14
Batch ID: KWG0318915
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	-29.0	NA	20	NT

Primary Review: 11/24/3

Secondary Review: 11.29.3

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	SIM-PAH	**Collect Date:**		**Receive Date:**	11/24/2003

Analysis Lot:	KWG0318915	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1107ALK.M	**Calibration ID:**	CAL3082
Title:			
Tune Ref:	J:\MS11\DATA\112003\1120F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112003\1120F004.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 06:59	**Quant Date:**	11/24/2003 09:14	**Vial:**	1
Run Type:	IB			**Dilution:**	1.0
Lab ID:	KWG0318915-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.54		136	332964	1,000.00	OK
2	Acenaphthene-d10	8.01		164	172618	1,000.00	OK
3	Phenanthrene-d10	10.94		188	230142	1,000.00	OK
4	Chrysene-d12	17.06		240	205058	1,000.00	OK
5	Perylene-d12	21.41		264	130020	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Biphenyl-d10			0.00	164	0d			39-97	NA	
2	Fluorene-d10			0.00	176	0d			27-110	NA	
2	2,4,6-Tribromophenol			0.00	330	0			20-140	NA	
3	Fluoranthene-d10			0.00	212	0			34-122	NA	
4	Terphenyl-d14	14.67			244	514	2.75		50-132	NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.56			128	219	0.5800			
1	2-Methylnaphthalene				142	0d				
1	1-Methylnaphthalene				142	0				
1	Biphenyl				154	0d				
1	2,6-Dimethylnaphthalene				156	0d				
1	C2-Naphthalenes				156	0				
1	C3-Naphthalenes				170	0				
1	C4-Naphthalenes				184	0				
2	Acenaphthylene				152	0				
2	Acenaphthene				154	0d				
2	Dibenzofuran				168	0				
2	2,3,5-Trimethylnaphthalene				170	0				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112003\1120F004.D			**Instrument:**	MS11
Acqu Date:	11/20/2003 06:59	**Quant Date:**	11/24/2003 09:14	**Vial:**	1
Run Type:	IB			**Dilution:**	1.0
Lab ID:	KWG0318915-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:**

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene				166	0				
2	C1-Fluorenes				180	0				
2	C2-Fluorenes				194	0				
2	C3-Fluorenes				208	0				
2	Pentachlorophenol				266	0				
3	Dibenzothiophene				184	0				
3	C1-Dibenzothiophenes				198	0				
3	C2-Dibenzothiophenes				212	0				
3	C3-Dibenzothiophenes				226	0				
3	Phenanthrene				178	0				
3	Anthracene				178	0**d**				
3	Carbazole				167	0				
3	1-Methylphenanthrene				192	0				
3	C1-Phenanthrenes/Anthracenes				192	0				
3	C2-Phenanthrenes/Anthracenes				206	0				
3	C3-Phenanthrenes/Anthracenes				220	0				
3	C4-Phenanthrenes/Anthracenes				234	0				
3	Fluoranthene				202	0				
4	Pyrene				202	0				
4	C1-Fluoranthenes/Pyrenes				216	0				
4	Benz(a)anthracene				228	0**d**				
4	Chrysene				228	0**d**				
4	C1-Chrysenes				242	0				
4	C2-Chrysenes				256	0				
4	C3-Chrysenes				270	0				
4	C4-Chrysenes				284	0				
5	Benzo(b)fluoranthene				252	0				
5	Benzo(k)fluoranthene				252	0				
5	Benzo(e)pyrene				252	0				
5	Benzo(a)pyrene				252	0				
5	Perylene				252	0**d**				
5	Indeno(1,2,3-cd)pyrene	24.04			276	291	3.24			
5	Dibenz(a,h)anthracene	24.08			278	199	1.54			
5	Benzo(g,h,i)perylene	24.49			276	437	2.94			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F004.D
Acq On : 20 Nov 2003 6:59 am
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 20 13:57:18 2003

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:56:47 2003
Response via : Initial Calibration
DataAcq Meth : A_PAHK

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.54	136	332964	1000.00	ng/ml	0.00
11) Acenaphthene-d10	8.01	164	172618	1000.00	ng/ml	0.00
23) Phenanthrene-d10	10.94	188	230142	1000.00	ng/ml	0.00
38) Chrysene-d12	17.06	240	205058	1000.00	ng/ml	0.00
48) Perylene-d12	21.41	264	130020	1000.00	ng/ml	0.00
System Monitoring Compounds						
5) Biphenyl-d10	0.00	164	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
16) Fluorene-d10	0.00	176	0d	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
21) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
37) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
41) Terphenyl-d14	14.67	244	514	2.75	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	0.27%		
Target Compounds						Qvalue
2) Naphthalene	5.56	128	219	0.58	ng/ml	98
54) Indeno(1,2,3-cd)pyrene	24.04	276	291	3.24	ng/ml	96
55) Dibenz(a,h)anthracene	24.08	278	199	1.54	ng/ml	88
56) Benzo(g,h,i)perylene	24.49	276	437	2.94	ng/ml	93

(#) = qualifier out of range (m) = manual integration

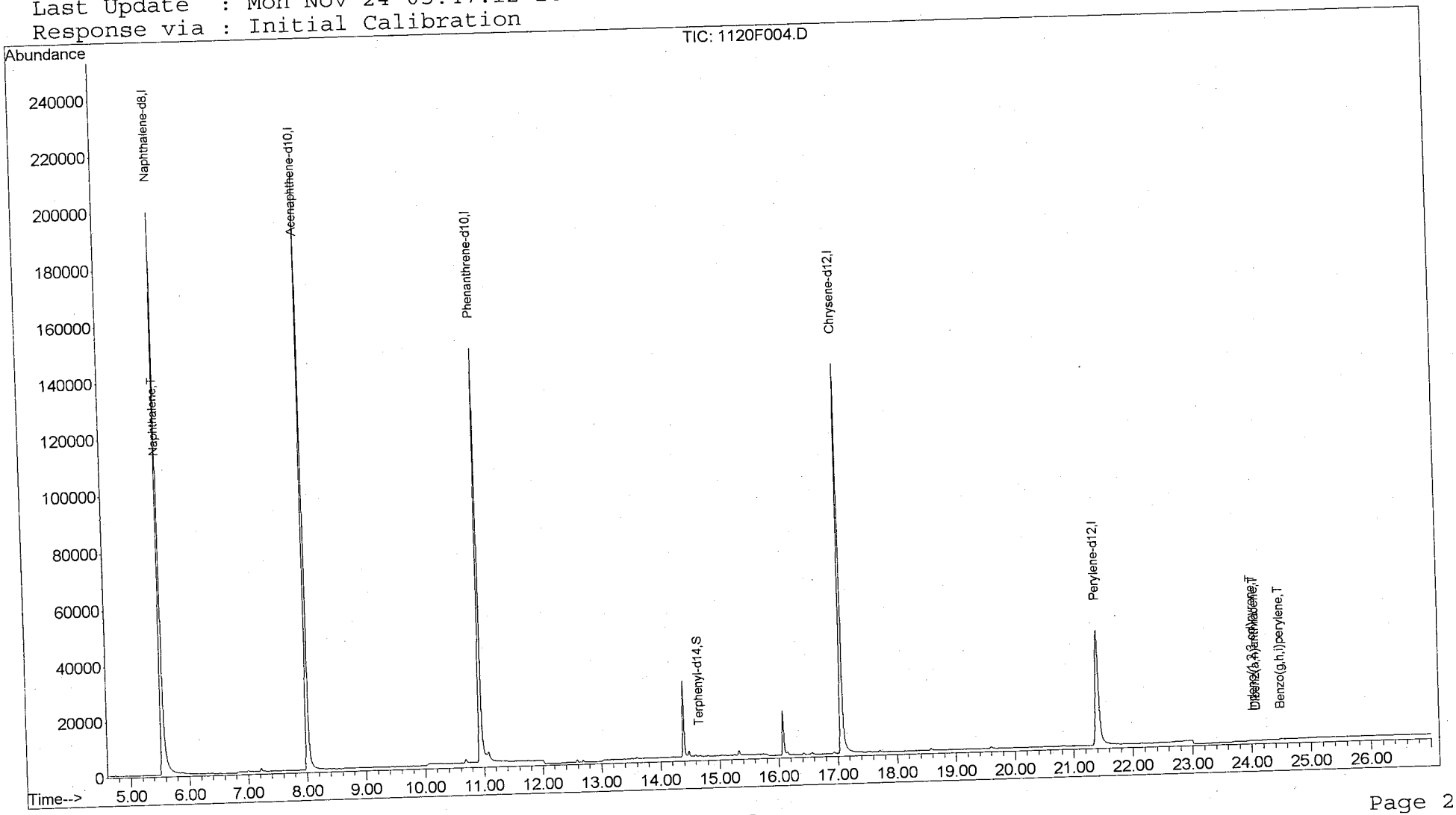
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112003\1120F004.D
Acq On : 20 Nov 2003 6:59 am
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 9:14 2003

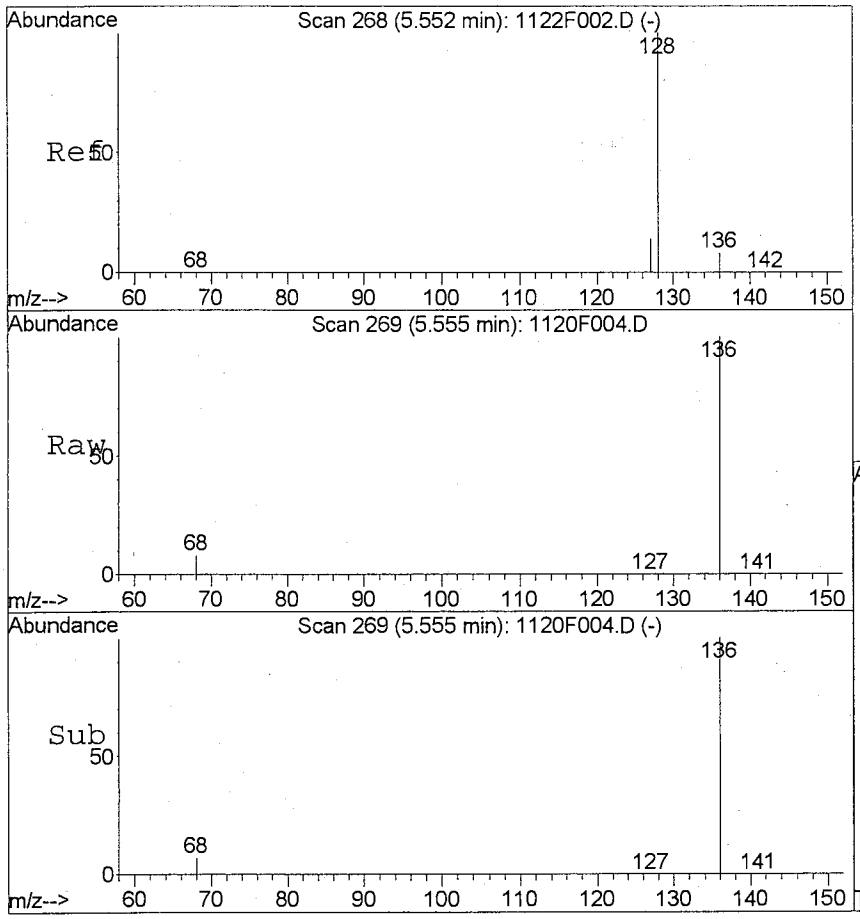
Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1107ALK.RES

Method : J:\MS11\METHODS\SIM\1107ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 05:47:12 2003
Response via : Initial Calibration



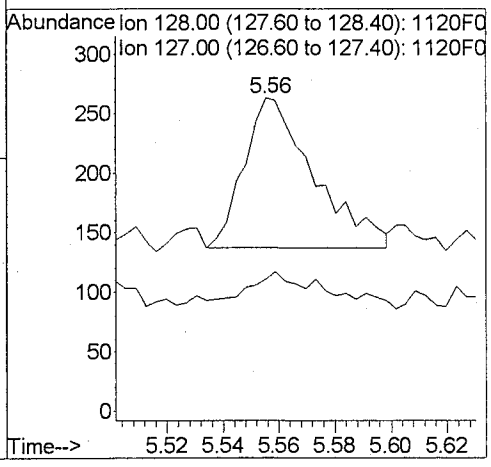
1756

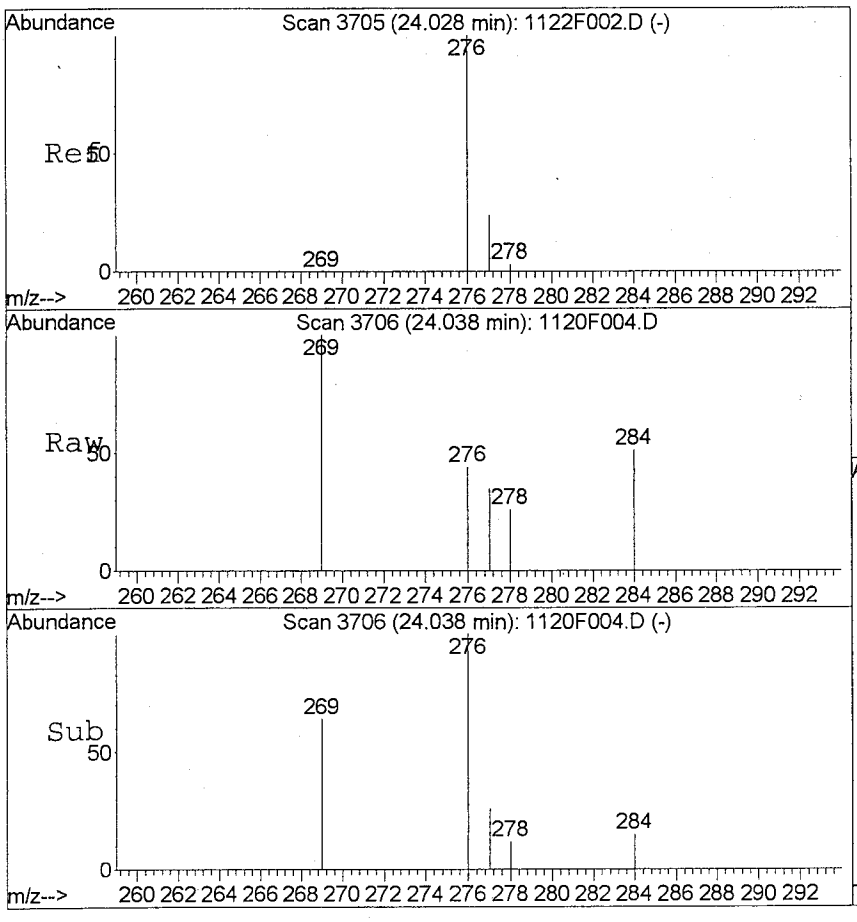


#2
Naphthalene
Concen: 0.58 ng/ml
RT: 5.56 min Scan# 269
Delta R.T. 0.00 min
Lab File: 1120F004.D
Acq: 20 Nov 2003 6:59 am

Tgt Ion:128 Resp: 219

Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	43.6

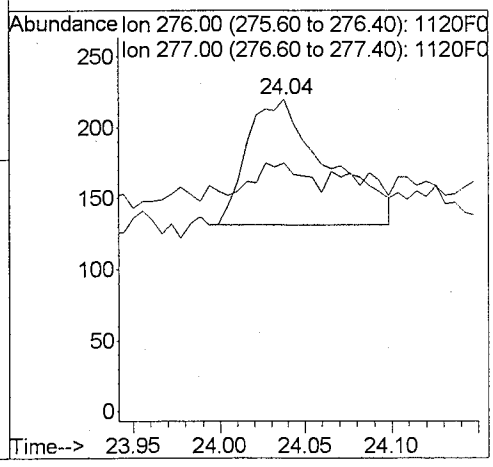


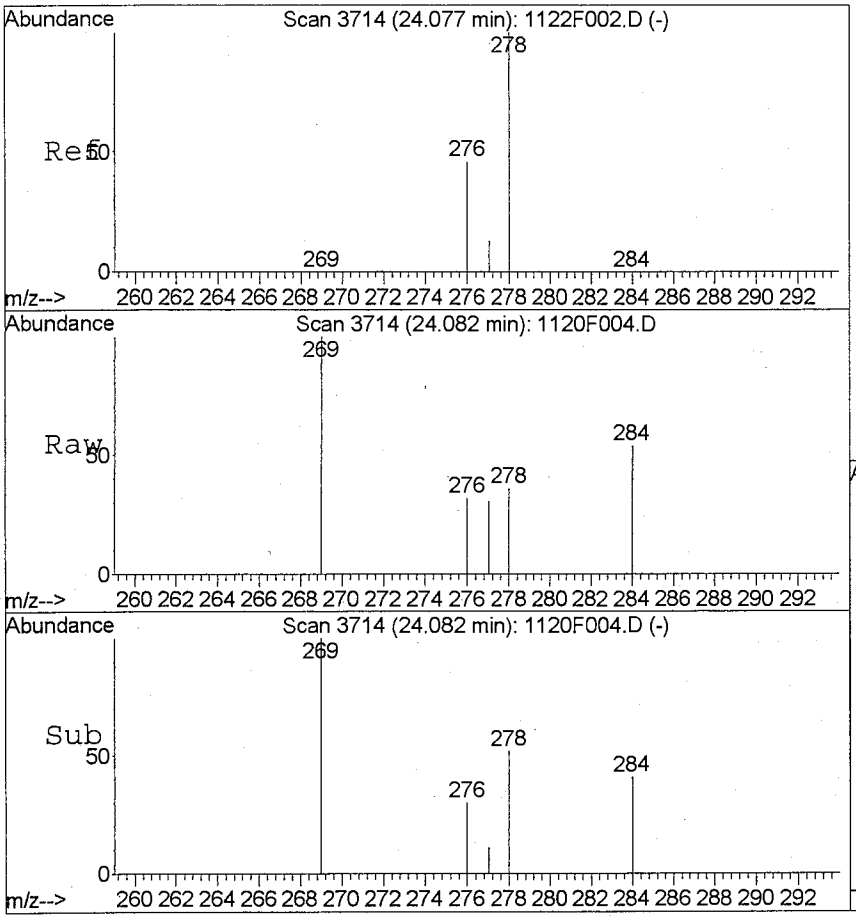


#54
Indeno(1,2,3-cd)pyrene
Concen: 3.24 ng/ml
RT: 24.04 min Scan# 3706
Delta R.T. 0.01 min
Lab File: 1120F004.D
Acq: 20 Nov 2003 6:59 am

Tgt Ion:276 Resp: 291

Ion	Ratio	Lower	Upper
276	100		
277	25.8	0.0	53.8

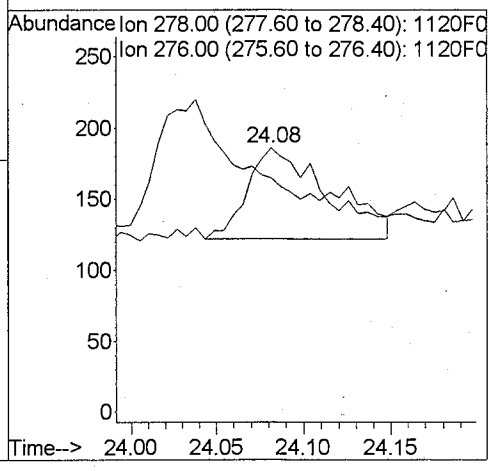


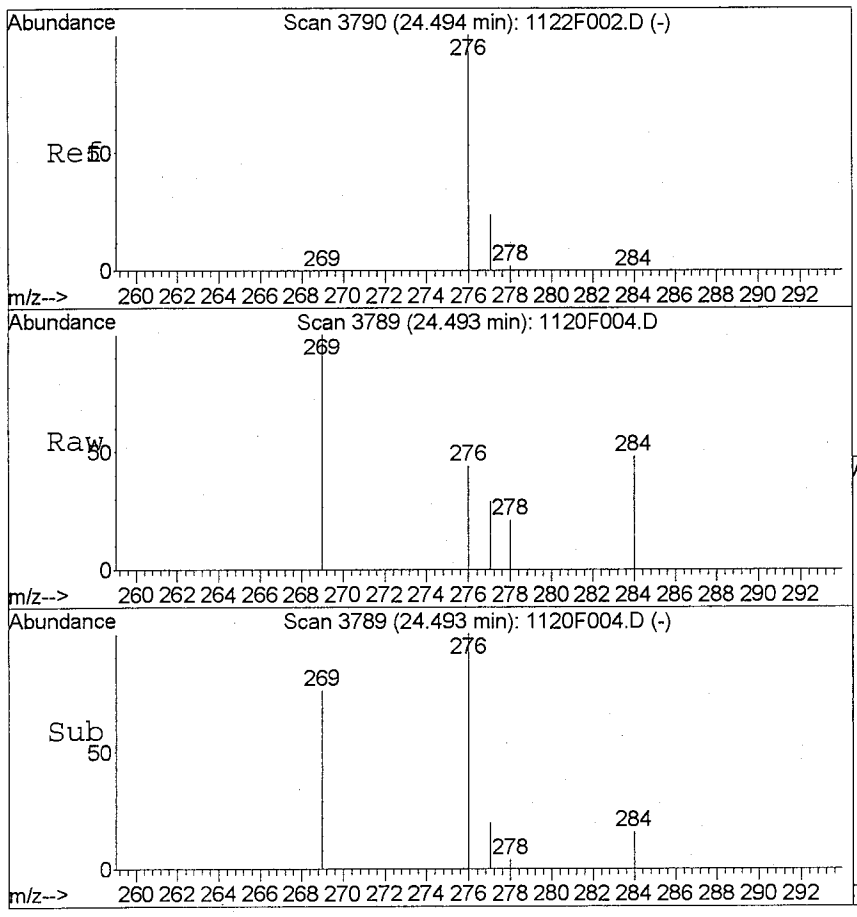


#55
Dibenz(a,h)anthracene
Concen: 1.54 ng/ml
RT: 24.08 min Scan# 3714
Delta R.T. 0.00 min
Lab File: 1120F004.D
Acq: 20 Nov 2003 6:59 am

Tgt Ion:278 Resp: 199

Ion	Ratio	Lower	Upper
278	100		
276	42.2	5.3	65.3

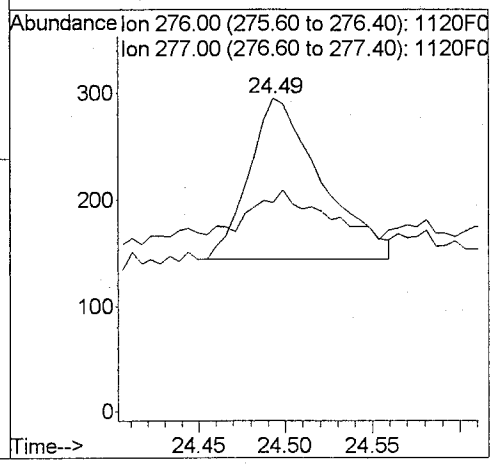




#56
Benzo(g,h,i)perylene
Concen: 2.94 ng/ml
RT: 24.49 min Scan# 3789
Delta R.T. 0.00 min
Lab File: 1120F004.D
Acq: 20 Nov 2003 6:59 am

Tgt Ion:276 Resp: 437

Ion	Ratio	Lower	Upper
276	100		
277	19.9	0.0	53.5



Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0317778	**Prep Method:**	EPA 3541	**Prep Date:**	11/05/03 00:00
Department:	MSP				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K2308433-001	SED-1	SIM-ALKH	SEDIMENT	28.0g	2ml	
K2308433-002	SED-2	SIM-ALKH	SEDIMENT	26.9g	2ml	
K2308433-003	SED-3	SIM-ALKH	SEDIMENT	25.1g	2ml	
K2308433-004	SED-4	SIM-ALKH	SEDIMENT	26.8g	2ml	
K2308433-005	SED-4-DUP	SIM-ALKH	SEDIMENT	28.6g	2ml	
K2308433-006	SED-5	SIM-ALKH	SEDIMENT	25.0g	2ml	
K2308433-007	SED-6	SIM-ALKH	SEDIMENT	27.3g	2ml	
K2308433-008	SED-7	SIM-ALKH	SEDIMENT	27.3g	2ml	
K2308433-009	SED-8	SIM-ALKH	SEDIMENT	28.6g	2ml	
KWG0317778-1	Matrix Spike	SIM-ALKH	SEDIMENT	26.7g	2ml	
KWG0317778-2	Duplicate Matrix Spike	SIM-ALKH	SEDIMENT	26.9g	2ml	
KWG0317778-3	Lab Control Sample	SIM-ALKH	SEDIMENT	20.0g	2ml	
KWG0317778-4	Duplicate Lab Control Sampl	SIM-ALKH	SEDIMENT	20.0g	2ml	
KWG0317778-5	Method Blank	SIM-ALKH	SEDIMENT	28.6g	2ml	
KWG0317778-6	Standard Reference Material	SIM-ALKH	SEDIMENT	5.05g	2ml	

Lab Code	Parent Lab Code	Comments
KWG0317778-1	K2308433-004	
KWG0317778-2	K2308433-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308433-001	247859	SVMP3-23-C	20uL			DHaderly
K2308433-002	247860	SVMP3-23-C	20uL			DHaderly
K2308433-003	247861	SVMP3-23-C	20uL			DHaderly
K2308433-004	247862	SVMP3-23-C	20uL			DHaderly
K2308433-005	247863	SVMP3-23-C	20uL			DHaderly
K2308433-006	247864	SVMP3-23-C	20uL			DHaderly
K2308433-007	247865	SVMP3-23-C	20uL			DHaderly
K2308433-008	247866	SVMP3-23-C	20uL			DHaderly
K2308433-009	247867	SVMP3-23-C	20uL			DHaderly
KWG0317778-1	247868	SVMP3-23-C	20uL	SVMP3-20-H	200uL	DHaderly
KWG0317778-2	247869	SVMP3-23-C	20uL	SVMP3-20-H	200uL	DHaderly
KWG0317778-3	247870	SVMP3-23-C	20uL	SVMP3-20-H	200uL	DHaderly
KWG0317778-4	247871	SVMP3-23-C	20uL	SVMP3-20-H	200uL	DHaderly
KWG0317778-5	247872	SVMP3-23-C	20uL			DHaderly

Comments: I.S. SVM 15-60C

Started By: MThompso Assisted By: Training Yes No

Completed By: SMurray Assisted By: Yes No

Reviewed By: JMJones Date: 11/11/03 Storage: 2A.B

Chain of Custody

Relinquished By: MT Date: 11-10-03

Received By: Date: 11/20/13 Extracts Examined Yes No

Group ID:	KWG0317778	**Prep Method:** EPA 3541	**Prep Date:** 11/05/03 00:00
Department:	MSP		

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
KWG0317778-6	247873	SVMP3-23-C	20uL			DHaderly

Comments:

Started By: MThompso Assisted By:

Completed By: SMurray Assisted By:

Reviewed By: [signature] Date: 11/11/03 Storage:

Training: Yes / No (circled) — Yes / No

Chain of Custody

Relinquished By: MT Date: 11-10-03

Received By: [signature] Date: 11/20/3

Extracts Examined: Yes (circled) / No

Preparation Information

Group ID:	KWG0317778	**Prep Method:**	EPA 3541	**Prep Date:**	11/05/03 00:00
Department:	MSP				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K2308433-001	SED-1	NA	✓	SIM-ALKH	SEDIMENT	28.0	NA	2mL	2mL	Yes	NO
2	K2308433-002	SED-2		✓	SIM-ALKH	SEDIMENT	26.9					
3	K2308433-003	SED-3		✓	SIM-ALKH	SEDIMENT	25.1					
4	K2308433-004	SED-4		✓	SIM-ALKH	SEDIMENT	26.8					
5	K2308433-005	SED-4-DUP		✓	SIM-ALKH	SEDIMENT	28.6					
6	K2308433-006	SED-5		✓	SIM-ALKH	SEDIMENT	25.0					
7	K2308433-007	SED-6		✓	SIM-ALKH	SEDIMENT	27.3					
8	K2308433-008	SED-7		✓	SIM-ALKH	SEDIMENT	27.3					
9	K2308433-009	SED-8		✓	SIM-ALKH	SEDIMENT	28.6					
10	KWG0317778-1	Matrix Spike 4		✓	SIM-ALKH	SEDIMENT	26.7					Yes
11	KWG0317778-2	Duplicate Matrix Spike 4		✓	SIM-ALKH	SEDIMENT	26.9					
12	KWG0317778-3	Lab Control Sample		NA	SIM-ALKH	SEDIMENT	20.0					
13	KWG0317778-4	Duplicate Lab Control Sample			SIM-ALKH	SEDIMENT						
14	KWG0317778-5	Method Blank			SIM-ALKH	SEDIMENT	28.0 MT					NO
15	KWG0317778-6	Standard Reference Material 1944		✓	SIM-ALKH	SEDIMENT	5.05					

Dany Hardy 11/5/03

Comments: SRM: 1944 MT 11-10-03 (1)

(4) Filtered SRM sample because of large amount of sediment in tube.

Surrogate ID: SUMP3-~~20 G~~ (1) 23-C | 100-150ppm | 20µl xp 2/1/04

Spike ID: SUMP3-20 H | 25ppm | 200µl xp 1/9/04

Witness: Dany Hardy 11/5/03

Started By: MThompso

Completed By: ~~MThompso~~ SM 11/10/03

Assisted By:

Assisted By:

Additional Prep Information For EPA 3541

Service Request 8433 **Workgroup** 7778

DCM Lot 43253 Hexane Lot UB3497

Start (Time/Date/Initial): 1115 11/05/03 MT

Stop (Time/Date/Initial): 1415 11/05/03 MT

Sulfate Lot # 43205333 Pipette Lot # 011503

S-Evap Temp NA N-evap Temp 35c Silica gel Lot # UB109333

Solvent Exchange: 110703

Clean-up #1: Silica Gel Initial/Date: SM 110703

Clean-up #2: _____ Initial/Date: _____

Extract Storage: VI Rm Bath Row F, G

Date Completed: 11/10/03 SM

Comments/Observations:

Bench Sheet Review Check List
☑ Hold Times Met (if no, Reason: _____)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

Injection Log

Directory: J:\MS11\DATA\111903

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1119F002.D	1.	primer		19 Nov 2003 07:5
2	1	1119F004.D	1.	CCV-LOC		19 Nov 2003 09:2
3	1	1119F005.D	1.	DFTPP @ 50ug/mL | SVM16-1F		19 Nov 2003 10:0
4	2	1119F006.D	1.	SIM PAF CCV @ 2.0ug/mL | SVM16-1G	NR	19 Nov 2003 10:2
5	4	1119F008.D	1.	SIM-PAH CCV @ 2.0ug/mL | SVM16-1G		
6	1	1119F030.D	1.	IB	NR	19 Nov 2003 11:3
7	2	1119F031.D	1.	KWG0317778-5 MB		19 Nov 2003 12:1
8	3	1119F032.D	1.	KWG0317778-3 LCS		19 Nov 2003 12:4
9	4	1119F033.D	1.	KWG0317778-4 DLCS		19 Nov 2003 13:2
10	5	1119F034.D	1.	KWG0317778-1 K2308433-004MS		19 Nov 2003 14:0
11	6	1119F035.D	1.	KWG0317778-2 K2308433-004DMS		19 Nov 2003 14:3
12	7	1119F036.D	5.	KWG0317778-6 SRM 5X		19 Nov 2003 15:1
13	8	1119F037.D	1.	K2308433-001		19 Nov 2003 15:4
14	9	1119F038.D	1.	K2308433-002		19 Nov 2003 16:2
15	10	1119F039.D	1.	K2308433-003		19 Nov 2003 17:0
16	11	1119F040.D	1.	K2308433-004		19 Nov 2003 17:3
17	12	1119F041.D	1.	K2308433-005		19 Nov 2003 18:1
18	13	1119F042.D	1.	K2308433-006		19 Nov 2003 18:5
19	14	1119F043.D	1.	K2308433-007		19 Nov 2003 19:2
20	15	1119F044.D	1.	K2308433-008		19 Nov 2003 20:0
21	16	1119F045.D	1.	K2308433-009		19 Nov 2003 20:3
22	17	1119F046.D	1.	SIM-ALKH CCV | SVM3-88E		19 Nov 2003 21:1
						19 Nov 2003 21:5

CAL 3082

11/21/03

Jay 11/24/3

21 Nov 2003 12:50

Injection Log

Directory: J:\MS11\DATA\112003

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1120F001.D	1.	DFTPP @ 50ug/mL | SVM16-1F		20 Nov 2003 05:2
2	2	1120F002.D	1.	SIM PAF CCV @ 2.0ug/mL | SVM16-1G		20 Nov 2003 05:4
3	1	1120F003.D	1.	IB		20 Nov 2003 06:2
4	1	1120F004.D	1.	IB		20 Nov 2003 06:5
5	2	1120F005.D	1.	K2308433-001DIL 10X		20 Nov 2003 07:3
6	3	1120F006.D	1.	K2308433-003DIL 10X		20 Nov 2003 08:1
7	4	1120F007.D	1.	K2308433-004DIL 10X		20 Nov 2003 08:4
8	5	1120F008.D	1.	K2308433-005DIL 10X		20 Nov 2003 09:2
9	6	1120F009.D	1.	K2308433-006DIL 10X		20 Nov 2003 10:0
10	7	1120F010.D	1.	K2308433-007DIL 10X		20 Nov 2003 10:3
11	8	1120F011.D	1.	K2308433-008DIL 10X		20 Nov 2003 11:1
12	9	1120F012.D	1.	K2308433-009DIL 10X		20 Nov 2003 11:5
13	10	1120F013.D	1.	KWG0317778-6 SRM 5X		20 Nov 2003 12:2

CAL 3082
11/24/03
K2308433

Semi-Volatile Organic Compounds
Method 8270

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Summary Package

Sample and QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
SED-1	K2308433-001	10/22/2003	10/27/2003
SED-2	K2308433-002	10/22/2003	10/27/2003
SED-3	K2308433-003	10/22/2003	10/27/2003
SED-4	K2308433-004	10/22/2003	10/27/2003
SED-4-DUP	K2308433-005	10/22/2003	10/27/2003
SED-5	K2308433-006	10/23/2003	10/27/2003
SED-6	K2308433-007	10/23/2003	10/27/2003
SED-7	K2308433-008	10/23/2003	10/27/2003
SED-8	K2308433-009	10/23/2003	10/27/2003
SED-4MS	KWG0317457-1	10/22/2003	10/27/2003
SED-4DMS	KWG0317457-2	10/22/2003	10/27/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Carl Degner

Name: Carl Degner

Date: 12/1/03

Title: SVM Supervisor

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
SED-5	K2308433-006	10/23/2003	10/27/2003
SED-6	K2308433-007	10/23/2003	10/27/2003
SED-8	K2308433-009	10/23/2003	10/27/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Carl Degner

Date: 12/1/03 Title: SVM Supervisor

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-1
Lab Code: K2308433-001

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	170	5	10/30/03	11/17/03	KWG0317457	
2-Methylphenol	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
4-Methylphenol†	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
2,4-Dimethylphenol	ND	U	280	5	10/30/03	11/17/03	KWG0317457	
2,4-Dichlorophenol	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
Pentachlorophenol	ND	U	280	5	10/30/03	11/17/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	10/30/03	11/17/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	75	40-123	11/17/03	Acceptable
2,4,6-Tribromophenol	64	35-138	11/17/03	Acceptable
Terphenyl-d14	91	56-152	11/17/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-2
Lab Code: K2308433-002

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	160	5	10/30/03	11/17/03	KWG0317457	
2-Methylphenol	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
4-Methylphenol†	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
2,4-Dimethylphenol	ND	U	260	5	10/30/03	11/17/03	KWG0317457	
2,4-Dichlorophenol	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
Pentachlorophenol	ND	U	260	5	10/30/03	11/17/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	10/30/03	11/17/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	75	40-123	11/17/03	Acceptable
2,4,6-Tribromophenol	70	35-138	11/17/03	Acceptable
Terphenyl-d14	97	56-152	11/17/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-3
Lab Code: K2308433-003

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/17/03	KWG0317457	
2-Methylphenol	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
4-Methylphenol†	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
2,4-Dimethylphenol	ND	U	240	5	10/30/03	11/17/03	KWG0317457	
2,4-Dichlorophenol	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
Pentachlorophenol	ND	U	240	5	10/30/03	11/17/03	KWG0317457	
Butyl Benzyl Phthalate	**78**	D	48	5	10/30/03	11/17/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	950	5	10/30/03	11/17/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	60	40-123	11/17/03	Acceptable
2,4,6-Tribromophenol	47	35-138	11/17/03	Acceptable
Terphenyl-d14	87	56-152	11/17/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SED-4	**Units:**	ug/Kg
Lab Code:	K2308433-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	170	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	290	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	290	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1200	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	68	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	63	35-138	11/18/03	Acceptable
Terphenyl-d14	93	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1000	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	67	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	60	35-138	11/18/03	Acceptable
Terphenyl-d14	86	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-5
Lab Code: K2308433-006

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	140	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	940	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	33	40-123	11/18/03	Outside Control Limits
2,4,6-Tribromophenol	18	35-138	11/18/03	Outside Control Limits
Terphenyl-d14	81	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-5
Lab Code: K2308433-006

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	140	5	11/20/03	11/25/03	KWG0318722	*
2-Methylphenol	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
4-Methylphenol†	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dimethylphenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dichlorophenol	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
2,4,6-Trichlorophenol	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
Pentachlorophenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
Butyl Benzyl Phthalate	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
Bis(2-ethylhexyl) Phthalate	ND	U	930	5	11/20/03	11/25/03	KWG0318722	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	64	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	76	35-138	11/25/03	Acceptable
Terphenyl-d14	92	56-152	11/25/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-6
Lab Code: K2308433-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	960	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	17	40-123	11/18/03	Outside Control Limits
2,4,6-Tribromophenol	0	35-138	11/18/03	Outside Control Limits
Terphenyl-d14	93	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-6
Lab Code: K2308433-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	11/20/03	11/25/03	KWG0318722	*
2-Methylphenol	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
4-Methylphenol†	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dimethylphenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dichlorophenol	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
2,4,6-Trichlorophenol	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
Pentachlorophenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
Butyl Benzyl Phthalate	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
Bis(2-ethylhexyl) Phthalate	ND	U	960	5	11/20/03	11/25/03	KWG0318722	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	70	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	75	35-138	11/25/03	Acceptable
Terphenyl-d14	93	56-152	11/25/03	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-7
Lab Code: K2308433-008

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	990	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	64	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	56	35-138	11/18/03	Acceptable
Terphenyl-d14	100	56-152	11/18/03	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-8
Lab Code: K2308433-009

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	160	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	260	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	260	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	**340**	D	51	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	38	40-123	11/18/03	Outside Control Limits
2,4,6-Tribromophenol	15	35-138	11/18/03	Outside Control Limits
Terphenyl-d14	98	56-152	11/18/03	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-8
Lab Code: K2308433-009

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	160	5	11/20/03	11/25/03	KWG0318722	*
2-Methylphenol	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
4-Methylphenol†	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dimethylphenol	ND	U	260	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dichlorophenol	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
2,4,6-Trichlorophenol	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
Pentachlorophenol	ND	U	260	5	11/20/03	11/25/03	KWG0318722	*
Butyl Benzyl Phthalate	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	11/20/03	11/25/03	KWG0318722	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	67	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	77	35-138	11/25/03	Acceptable
Terphenyl-d14	90	56-152	11/25/03	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0317457-5

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	21	1	10/30/03	11/12/03	KWG0317457	
2-Methylphenol	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
4-Methylphenol†	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
2,4-Dimethylphenol	ND	U	35	1	10/30/03	11/12/03	KWG0317457	
2,4-Dichlorophenol	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
Pentachlorophenol	ND	U	35	1	10/30/03	11/12/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	140	1	10/30/03	11/12/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	89	40-123	11/12/03	Acceptable
2,4,6-Tribromophenol	64	35-138	11/12/03	Acceptable
Terphenyl-d14	115	56-152	11/12/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0318722-3

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	22	1	11/20/03	11/25/03	KWG0318722	
2-Methylphenol	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
4-Methylphenol†	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
2,4-Dimethylphenol	ND	U	37	1	11/20/03	11/25/03	KWG0318722	
2,4-Dichlorophenol	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
2,4,6-Trichlorophenol	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
Pentachlorophenol	ND	U	37	1	11/20/03	11/25/03	KWG0318722	
Butyl Benzyl Phthalate	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
Bis(2-ethylhexyl) Phthalate	ND	U	150	1	11/20/03	11/25/03	KWG0318722	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	44	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	63	35-138	11/25/03	Acceptable
Terphenyl-d14	107	56-152	11/25/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED-1	K2308433-001	75 D	64 D	91 D
SED-2	K2308433-002	75 D	70 D	97 D
SED-3	K2308433-003	60 D	47 D	87 D
SED-4	K2308433-004	68 D	63 D	93 D
SED-4-DUP	K2308433-005	67 D	60 D	86 D
SED-5	K2308433-006	33 D *	18 D *	81 D
SED-6	K2308433-007	17 D *	0 D *	93 D
SED-7	K2308433-008	64 D	56 D	100 D
SED-8	K2308433-009	38 D *	15 D *	98 D
Method Blank	KWG0317457-5	89	64	115
SED-4MS	KWG0317457-1	61 D	53 D	100 D
SED-4DMS	KWG0317457-2	80 D	72 D	106 D
Lab Control Sample	KWG0317457-3	53	65	89
Duplicate Lab Control Sample	KWG0317457-4	63	75	83

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	40-123
Sur2 = 2,4,6-Tribromophenol	35-138
Sur3 = Terphenyl-d14	56-152

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED-5	K2308433-006	64 D	76 D	92 D
SED-6	K2308433-007	70 D	75 D	93 D
SED-8	K2308433-009	67 D	77 D	90 D
Method Blank	KWG0318722-3	44	63	107
Lab Control Sample	KWG0318722-1	63	78	113
Duplicate Lab Control Sample	KWG0318722-2	62	76	117

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	40-123
Sur2 = 2,4,6-Tribromophenol	35-138
Sur3 = Terphenyl-d14	56-152

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003
Time Analyzed: 22:51

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111303\1112F012.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318325-2
Analysis Lot: KWG0318325

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	57,205	8.62	149,882	10.88	96,948	14.64
	Upper Limit ==>	114,410	9.12	299,764	11.38	193,896	15.14
	Lower Limit ==>	28,603	8.12	74,941	10.38	48,474	14.14
	ICAL Result ==>	65,394	8.63	147,459	10.88	96,127	14.63
Associated Analyses							
Method Blank	KWG0317457-5	56,825	8.62	205,378	10.87	110,250	14.63
Lab Control Sample	KWG0317457-3	73,502	8.63	165,722	10.88	97,073	14.63
Duplicate Lab Control Sample	KWG0317457-4	54,607	8.63	166,424	10.88	117,112	14.63

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003
Time Analyzed: 22:51

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111303\1112F012.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318325-2
Analysis Lot: KWG0318325

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT	Area	RT
	Results ==>	173,601	17.96	169,286	24.11	119,749	27.51
	Upper Limit ==>	347,202	18.46	338,572	24.61	239,498	28.01
	Lower Limit ==>	86,801	17.46	84,643	23.61	59,875	27.01
	ICAL Result ==>	225,063	17.97	206,674	24.11	145,249	27.51
Associated Analyses							
Method Blank	KWG0317457-5	177,779	17.96	185,390	24.10	114,671	27.51
Lab Control Sample	KWG0317457-3	194,795	17.96	205,758	24.11	115,375	27.51
Duplicate Lab Control Sample	KWG0317457-4	171,645	17.97	171,650	24.11	115,628	27.52

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003
Time Analyzed: 09:06

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111703\1117F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318538-2
Analysis Lot: KWG0318538

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	61,838	8.97	170,690	11.26	105,335	15.04
	Upper Limit ==>	123,676	9.47	341,380	11.76	210,670	15.54
	Lower Limit ==>	30,919	8.47	85,345	10.76	52,668	14.54
	ICAL Result ==>	61,811	8.97	157,723	11.26	105,815	15.04
Associated Analyses							
SED-1	K2308433-001	50,927	8.98	149,778	11.27	92,504	15.05
SED-2	K2308433-002	52,489	8.98	150,678	11.26	93,536	15.06
SED-3	K2308433-003	53,364	8.98	154,551	11.26	96,029	15.05

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003
Time Analyzed: 09:06

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111703\1117F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318538-2
Analysis Lot: KWG0318538

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT	Area	RT
	Results ==>	191,276	18.37	186,195	24.54	135,991	28.02
	Upper Limit ==>	382,552	18.87	372,390	25.04	271,982	28.52
	Lower Limit ==>	95,638	17.87	93,098	24.04	67,996	27.52
	ICAL Result ==>	190,162	18.38	194,716	24.54	137,443	28.02
Associated Analyses							
SED-1	K2308433-001	161,809	18.40	171,907	24.56	125,527	28.06
SED-2	K2308433-002	171,934	18.39	172,827	24.57	131,497	28.06
SED-3	K2308433-003	174,530	18.40	176,093	24.56	126,703	28.06

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003
Time Analyzed: 12:31

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111803\1118F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318619-2
Analysis Lot: KWG0318619

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	63,019	8.99	180,926	11.28	113,865	15.07
	Upper Limit ==>	126,038	9.49	361,852	11.78	227,730	15.57
	Lower Limit ==>	31,510	8.49	90,463	10.78	56,933	14.57
	ICAL Result ==>	61,811	8.97	157,723	11.26	105,815	15.04
Associated Analyses							
SED-4	K2308433-004	53,803	8.99	155,663	11.28	95,550	15.07
SED-4MS	KWG0317457-1	56,201	8.99	159,696	11.28	99,648	15.08
SED-4DMS	KWG0317457-2	57,909	9.00	164,369	11.29	101,252	15.08
SED-4-DUP	K2308433-005	57,978	9.01	161,895	11.30	104,639	15.08
SED-5	K2308433-006	60,232	9.00	164,432	11.29	105,508	15.08
SED-6	K2308433-007	55,240	9.00	161,516	11.29	103,455	15.08
SED-7	K2308433-008	54,859	9.01	158,722	11.30	104,186	15.09
SED-8	K2308433-009	52,959	9.01	157,674	11.30	105,466	15.09

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003
Time Analyzed: 12:31

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111803\1118F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318619-2
Analysis Lot: KWG0318619

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	205,135	18.41	202,476	24.58	144,586	28.05
	Upper Limit ==>	410,270	18.91	404,952	25.08	289,172	28.55
	Lower Limit ==>	102,568	17.91	101,238	24.08	72,293	27.55
	ICAL Result ==>	190,162	18.38	194,716	24.54	137,443	28.02
Associated Analyses							
SED-4	K2308433-004	176,057	18.41	171,930	24.58	120,638	28.06
SED-4MS	KWG0317457-1	175,218	18.41	174,397	24.59	124,646	28.08
SED-4DMS	KWG0317457-2	170,961	18.42	179,360	24.59	126,820	28.09
SED-4-DUP	K2308433-005	175,313	18.42	175,655	24.59	135,039	28.09
SED-5	K2308433-006	181,148	18.42	183,817	24.60	129,844	28.09
SED-6	K2308433-007	180,531	18.42	179,776	24.60	130,956	28.09
SED-7	K2308433-008	175,984	18.45	183,042	24.65	129,077	28.17
SED-8	K2308433-009	177,544	18.44	177,242	24.61	132,483	28.13

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003
Time Analyzed: 12:17

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\112403\1124F014.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0319154-2
Analysis Lot: KWG0319154

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	42,095	8.97	130,561	11.26	71,651	15.04
	Upper Limit ==>	84,190	9.47	261,122	11.76	143,302	15.54
	Lower Limit ==>	21,048	8.47	65,281	10.76	35,826	14.54
	ICAL Result ==>	48,672	8.95	151,773	11.24	82,842	15.02
Associated Analyses							
Method Blank	KWG0318722-3	42,805	8.97	132,404	11.25	70,334	15.03
Lab Control Sample	KWG0318722-1	39,557	8.96	127,407	11.25	66,403	15.03
Duplicate Lab Control Sample	KWG0318722-2	41,117	8.96	130,053	11.25	69,117	15.03
SED-5	K2308433-006	40,614	8.96	129,744	11.25	72,830	15.03
SED-6	K2308433-007	41,502	8.97	133,102	11.25	73,923	15.03
SED-8	K2308433-009	40,303	8.97	132,612	11.25	71,612	15.04

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003
Time Analyzed: 12:17

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\112403\1124F014.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0319154-2
Analysis Lot: KWG0319154

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT	Area	RT
	Results ==>	120,376	18.39	118,167	24.57	78,879	28.04
	Upper Limit ==>	240,752	18.89	236,334	25.07	157,758	28.54
	Lower Limit ==>	60,188	17.89	59,084	24.07	39,440	27.54
	ICAL Result ==>	138,429	18.38	140,813	24.55	89,621	28.02
Associated Analyses							
Method Blank	KWG0318722-3	109,717	18.37	103,495	24.56	66,097	28.03
Lab Control Sample	KWG0318722-1	108,688	18.38	99,516	24.56	66,200	28.03
Duplicate Lab Control Sample	KWG0318722-2	112,854	18.38	104,918	24.56	68,608	28.03
SED-5	K2308433-006	121,619	18.38	119,413	24.56	79,310	28.04
SED-6	K2308433-007	123,916	18.38	119,314	24.56	82,418	28.05
SED-8	K2308433-009	123,119	18.38	119,790	24.58	81,338	28.07

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003
Date Analyzed: 11/18/2003

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-4
Lab Code: K2308433-004

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low
Extraction Lot: KWG0317457

Analyte Name	Sample Result	SED-4MS KWG0317457-1 Matrix Spike Result	Expected	%Rec	SED-4DMS KWG0317457-2 Duplicate Matrix Spike Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
Phenol	ND	174	282	62	207	281	74	26-140	17	40
2-Methylphenol	ND	26.3	282	9 *	79.2	281	28 *	29-124	100 *	40
4-Methylphenol	ND	39.2	282	14	89.4	281	32	13-139	78 *	40
2,4-Dimethylphenol	ND	19.3	282	7 *	25.1	281	9 *	10-144	26	40
2,4-Dichlorophenol	ND	168	282	59	202	281	72	39-123	19	40
2,4,6-Trichlorophenol	ND	146	282	52	212	281	75	38-129	37	40
Pentachlorophenol	ND	143	282	51	169	281	60	10-150	17	40
Butyl Benzyl Phthalate	ND	250	282	89	329	281	117	38-155	27	40
Bis(2-ethylhexyl) Phthalate	ND	422	282	150	543	281	193 *	27-167	25	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003
Date Analyzed: 11/13/2003

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0317457

	Lab Control Sample KWG0317457-3 Lab Control Spike			Duplicate Lab Control Sample KWG0317457-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	131	250	52	162	250	65	39-124	21	40
2-Methylphenol	104	250	42	135	250	54	31-111	26	40
4-Methylphenol	94.9	250	38	131	250	53	30-111	32	40
2,4-Dimethylphenol	54.8	250	22	65.1	250	26	10-79	17	40
2,4-Dichlorophenol	140	250	56	153	250	61	42-120	9	40
2,4,6-Trichlorophenol	153	250	61	151	250	60	40-124	2	40
Pentachlorophenol	165	250	66	154	250	62	29-130	7	40
Butyl Benzyl Phthalate	177	250	71	179	250	72	54-134	1	40
Bis(2-ethylhexyl) Phthalate	172	250	69	183	250	73	45-155	6	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/20/2003
Date Analyzed: 11/25/2003

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0318722

	Lab Control Sample KWG0318722-1 Lab Control Spike			Duplicate Lab Control Sample KWG0318722-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	150	250	60	140	250	56	39-124	7	40
2-Methylphenol	140	250	56	126	250	50	31-111	11	40
4-Methylphenol	140	250	56	125	250	50	30-111	11	40
2,4-Dimethylphenol	96.5	250	39	88.4	250	35	10-79	9	40
2,4-Dichlorophenol	143	250	57	133	250	53	42-120	7	40
2,4,6-Trichlorophenol	153	250	61	141	250	56	40-124	9	40
Pentachlorophenol	179	250	72	182	250	73	29-130	1	40
Butyl Benzyl Phthalate	239	250	96	236	250	94	54-134	1	40
Bis(2-ethylhexyl) Phthalate	249	250	100	241	250	96	45-155	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003
Date Analyzed: 11/12/2003
Time Analyzed: 23:33

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0317457-5

File ID: J:\MS10\DATA\111303\1112F013.D
Instrument ID: MS10

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low
Extraction Lot: KWG0317457

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317457-3	J:\MS10\DATA\111303\1112F014.D	11/13/03	00:14
Duplicate Lab Control Sample	KWG0317457-4	J:\MS10\DATA\111303\1112F015.D	11/13/03	00:55
SED-1	K2308433-001	J:\MS10\DATA\111703\1117F014.D	11/17/03	18:23
SED-2	K2308433-002	J:\MS10\DATA\111703\1117F015.D	11/17/03	19:04
SED-3	K2308433-003	J:\MS10\DATA\111703\1117F016.D	11/17/03	19:45
SED-4	K2308433-004	J:\MS10\DATA\111803\1118F005.D	11/18/03	15:25
SED-4MS	KWG0317457-1	J:\MS10\DATA\111803\1118F006.D	11/18/03	16:06
SED-4DMS	KWG0317457-2	J:\MS10\DATA\111803\1118F007.D	11/18/03	16:48
SED-4-DUP	K2308433-005	J:\MS10\DATA\111803\1118F008.D	11/18/03	17:29
SED-5	K2308433-006	J:\MS10\DATA\111803\1118F009.D	11/18/03	18:10
SED-6	K2308433-007	J:\MS10\DATA\111803\1118F010.D	11/18/03	18:52
SED-7	K2308433-008	J:\MS10\DATA\111803\1118F011.D	11/18/03	19:33
SED-8	K2308433-009	J:\MS10\DATA\111803\1118F012.D	11/18/03	20:14

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	11/20/2003
Sample Matrix:	Sediment	**Date Analyzed:**	11/25/2003
		Time Analyzed:	19:53

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**File ID:**	J:\MS10\DATA\112403\1124F025.D
Lab Code:	KWG0318722-3	**Instrument ID:**	MS10
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0318722

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0318722-1	J:\MS10\DATA\112403\1124F026.D	11/25/03	20:35
Duplicate Lab Control Sample	KWG0318722-2	J:\MS10\DATA\112403\1124F027.D	11/25/03	21:16
SED-5	K2308433-006	J:\MS10\DATA\112403\1124F028.D	11/25/03	21:57
SED-6	K2308433-007	J:\MS10\DATA\112403\1124F029.D	11/25/03	22:38
SED-8	K2308433-009	J:\MS10\DATA\112403\1124F030.D	11/25/03	23:19

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Lab Control Sample/Duplicate Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0317457-3	**Lab Code:**	KWG0317457-4
File ID:	J:\MS10\DATA\111303\1112F014.D	**File ID:**	J:\MS10\DATA\111303\1112F015.D
Instrument ID:	MS10	**Instrument ID:**	MS10
Date Extracted:	10/30/2003	**Date Extracted:**	10/30/2003
Date Analyzed:	11/13/2003	**Date Analyzed:**	11/13/2003
Time Analyzed:	00:14	**Time Analyzed:**	00:55

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0317457

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0317457-5	J:\MS10\DATA\111303\1112F013.D	11/12/03	23:33
SED-1	K2308433-001	J:\MS10\DATA\111703\1117F014.D	11/17/03	18:23
SED-2	K2308433-002	J:\MS10\DATA\111703\1117F015.D	11/17/03	19:04
SED-3	K2308433-003	J:\MS10\DATA\111703\1117F016.D	11/17/03	19:45
SED-4	K2308433-004	J:\MS10\DATA\111803\1118F005.D	11/18/03	15:25
SED-4MS	KWG0317457-1	J:\MS10\DATA\111803\1118F006.D	11/18/03	16:06
SED-4DMS	KWG0317457-2	J:\MS10\DATA\111803\1118F007.D	11/18/03	16:48
SED-4-DUP	K2308433-005	J:\MS10\DATA\111803\1118F008.D	11/18/03	17:29
SED-5	K2308433-006	J:\MS10\DATA\111803\1118F009.D	11/18/03	18:10
SED-6	K2308433-007	J:\MS10\DATA\111803\1118F010.D	11/18/03	18:52
SED-7	K2308433-008	J:\MS10\DATA\111803\1118F011.D	11/18/03	19:33
SED-8	K2308433-009	J:\MS10\DATA\111803\1118F012.D	11/18/03	20:14

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Lab Control Sample/Duplicate Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0318722-1	**Lab Code:**	KWG0318722-2
File ID:	J:\MS10\DATA\112403\1124F026.D	**File ID:**	J:\MS10\DATA\112403\1124F027.D
Instrument ID:	MS10	**Instrument ID:**	MS10
Date Extracted:	11/20/2003	**Date Extracted:**	11/20/2003
Date Analyzed:	11/25/2003	**Date Analyzed:**	11/25/2003
Time Analyzed:	20:35	**Time Analyzed:**	21:16

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0318722

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0318722-3	J:\MS10\DATA\112403\1124F025.D	11/25/03	19:53
SED-5	K2308433-006	J:\MS10\DATA\112403\1124F028.D	11/25/03	21:57
SED-6	K2308433-007	J:\MS10\DATA\112403\1124F029.D	11/25/03	22:38
SED-8	K2308433-009	J:\MS10\DATA\112403\1124F030.D	11/25/03	23:19

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003
Time Analyzed: 22:51

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111303\1112F012.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0318325

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	47.7	9559	PASS
68	69	0	2	0.8	111	PASS
69	198	0	100	73.4	14723	PASS
70	69	0	2	0.2	36	PASS
127	198	25	75	43.9	8792	PASS
197	198	0	1	0.8	162	PASS
198	198	100	100	100.0	20045	PASS
199	198	5	9	6.7	1349	PASS
275	198	10	30	20.7	4145	PASS
365	198	1	100	2.5	502	PASS
441	443	0	100	84.8	1913	PASS
442	198	40	110	64.8	12989	PASS
443	442	15	24	17.4	2256	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318325-2	J:\MS10\DATA\111303\1112F012.D	11/12/2003	22:51	
Method Blank	KWG0317457-5	J:\MS10\DATA\111303\1112F013.D	11/12/2003	23:33	
Lab Control Sample	KWG0317457-3	J:\MS10\DATA\111303\1112F014.D	11/13/2003	00:14	
Duplicate Lab Control Sample	KWG0317457-4	J:\MS10\DATA\111303\1112F015.D	11/13/2003	00:55	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003
Time Analyzed: 09:06

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111703\1117A001.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0318538

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	43.2	10798	PASS
68	69	0	2	0.6	111	PASS
69	198	0	100	70.2	17549	PASS
70	69	0	2	0.0	0	PASS
127	198	25	75	42.1	10523	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	25016	PASS
199	198	5	9	6.2	1539	PASS
275	198	10	30	19.7	4939	PASS
365	198	1	100	2.9	731	PASS
441	443	0	100	71.0	2352	PASS
442	198	40	110	67.2	16809	PASS
443	442	15	24	19.7	3313	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318538-2	J:\MS10\DATA\111703\1117F001.D	11/17/2003	09:06	
SED-1	K2308433-001	J:\MS10\DATA\111703\1117F014.D	11/17/2003	18:23	
SED-2	K2308433-002	J:\MS10\DATA\111703\1117F015.D	11/17/2003	19:04	
SED-3	K2308433-003	J:\MS10\DATA\111703\1117F016.D	11/17/2003	19:45	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003
Time Analyzed: 12:31

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111803\1118F001.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0318619

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	45.1	15096	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	72.1	24142	PASS
70	69	0	2	0.3	80	PASS
127	198	25	75	43.0	14406	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	33492	PASS
199	198	5	9	7.3	2458	PASS
275	198	10	30	22.6	7574	PASS
365	198	1	100	3.0	990	PASS
441	443	0	100	71.1	2979	PASS
442	198	40	110	68.5	22957	PASS
443	442	15	24	18.3	4191	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318619-2	J:\MS10\DATA\111803\1118F001.D	11/18/2003	12:31	
SED-4	K2308433-004	J:\MS10\DATA\111803\1118F005.D	11/18/2003	15:25	
SED-4MS	KWG0317457-1	J:\MS10\DATA\111803\1118F006.D	11/18/2003	16:06	
SED-4DMS	KWG0317457-2	J:\MS10\DATA\111803\1118F007.D	11/18/2003	16:48	
SED-4-DUP	K2308433-005	J:\MS10\DATA\111803\1118F008.D	11/18/2003	17:29	
SED-5	K2308433-006	J:\MS10\DATA\111803\1118F009.D	11/18/2003	18:10	
SED-6	K2308433-007	J:\MS10\DATA\111803\1118F010.D	11/18/2003	18:52	
SED-7	K2308433-008	J:\MS10\DATA\111803\1118F011.D	11/18/2003	19:33	
SED-8	K2308433-009	J:\MS10\DATA\111803\1118F012.D	11/18/2003	20:14	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003
Time Analyzed: 12:17

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\112403\1124F014.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0319154

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	54.7	10829	PASS
68	69	0	2	0.3	45	PASS
69	198	0	100	82.7	16382	PASS
70	69	0	2	0.0	0	PASS
127	198	25	75	48.5	9597	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	19800	PASS
199	198	5	9	6.8	1351	PASS
275	198	10	30	19.1	3775	PASS
365	198	1	100	2.1	421	PASS
441	443	0	100	74.9	1782	PASS
442	198	40	110	61.5	12179	PASS
443	442	15	24	19.5	2378	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0319154-2	J:\MS10\DATA\112403\1124F014.D	11/25/2003	12:17	
Method Blank	KWG0318722-3	J:\MS10\DATA\112403\1124F025.D	11/25/2003	19:53	
Lab Control Sample	KWG0318722-1	J:\MS10\DATA\112403\1124F026.D	11/25/2003	20:35	
Duplicate Lab Control Sample	KWG0318722-2	J:\MS10\DATA\112403\1124F027.D	11/25/2003	21:16	
SED-5	K2308433-006	J:\MS10\DATA\112403\1124F028.D	11/25/2003	21:57	
SED-6	K2308433-007	J:\MS10\DATA\112403\1124F029.D	11/25/2003	22:38	
SED-8	K2308433-009	J:\MS10\DATA\112403\1124F030.D	11/25/2003	23:19	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3091
Instrument ID: MS10

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS10\DATA\111303\1112F003.D	E	J:\MS10\DATA\111303\1112F007.D
B	J:\MS10\DATA\111303\1112F004.D	F	J:\MS10\DATA\111303\1112F008.D
C	J:\MS10\DATA\111303\1112F005.D	G	J:\MS10\DATA\111303\1112F009.D
D	J:\MS10\DATA\111303\1112F006.D	H	J:\MS10\DATA\111303\1112F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	100	1.72	B	500	1.77	C	1000	2.13	D	2000	1.75	E	4000	1.42
	F	6000	1.43	G	8000	1.31	H	10000	1.50						
2-Methylphenol	A	100	0.958	B	500	1.02	C	1000	1.28	D	2000	1.08	E	4000	0.855
	F	6000	0.839	G	8000	0.774	H	10000	1.00						
4-Methylphenol	A	100	1.74	B	500	1.60	C	1000	1.93	D	2000	1.54	E	4000	1.08
	F	6000	1.10	G	8000	1.02	H	10000	1.61						
2,4-Dimethylphenol	A	100	0.330	B	500	0.352	C	1000	0.346	D	2000	0.347	E	4000	0.317
	F	6000	0.311	G	8000	0.306	H	10000	0.320						
‡ 2,4-Dichlorophenol	A	100	0.368	B	500	0.374	C	1000	0.381	D	2000	0.393	E	4000	0.356
	F	6000	0.359	G	8000	0.364	H	10000	0.402						
‡ 2,4,6-Trichlorophenol	A	100	0.404	B	500	0.427	C	1000	0.473	D	2000	0.485	E	4000	0.415
	F	6000	0.415	G	8000	0.447	H	10000	0.502						
‡ Pentachlorophenol				B	500	0.0884	C	1000	0.118	D	2000	0.121	E	4000	0.153
	F	6000	0.169	G	8000	0.173	H	10000	0.179						
Butyl Benzyl Phthalate	A	100	0.592	B	200	0.628	C	500	0.636	D	1000	0.574	E	2000	0.603
	F	3000	0.603	G	4000	0.597	H	5000	0.561						
Bis(2-ethylhexyl) Phthalate				B	200	0.813	C	500	0.887	D	1000	0.882	E	2000	0.829
	F	3000	0.807	G	4000	0.807	H	5000	0.853						
Phenol-d6	A	100	1.39	B	200	1.52	C	500	1.85	D	1000	1.65	E	2000	1.33
	F	3000	1.36	G	4000	1.27	H	5000	1.47						
2,4,6-Tribromophenol				B	200	0.124	C	500	0.130	D	1000	0.158	E	2000	0.148
	F	3000	0.145	G	4000	0.158	H	5000	0.183						
Terphenyl-d14	A	100	0.705	B	200	0.848	C	500	0.900	D	1000	0.675	E	2000	0.763
	F	3000	0.812	G	4000	0.756	H	5000	0.692						
† 4-Nitrophenol				B	500	0.270	C	1000	0.296	D	2000	0.316	E	4000	0.386
	F	6000	0.489	G	8000	0.487									
‡ 1,4-Dichlorobenzene	A	100	1.66	B	200	1.47	C	500	1.45	D	1000	1.52	E	2000	1.39
	F	3000	1.45	G	4000	1.35	H	5000	1.47						

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3091
Instrument ID: MS10

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Di-n-octyl Phthalate	A	100	1.68	B	200	1.83	C	500	2.08	D	1000	2.16	E	2000	1.99
	F	3000	1.88	G	4000	2.09	H	5000	1.95						
‡ Fluoranthene	A	100	1.26	B	200	1.23	C	500	1.37	D	1000	1.03	E	2000	1.16
	F	3000	1.20	G	4000	1.19	H	5000	1.10						
‡ Benzo(a)pyrene	A	100	1.23	B	200	1.28	C	500	1.31	D	1000	1.43	E	2000	1.23
	F	3000	1.31	G	4000	1.31	H	5000	1.38						
† 2,4-Dinitrophenol										D	2000	0.134	E	4000	0.228
	F	6000	0.289	G	8000	0.306	H	10000	0.243						
‡ 4-Chloro-3-methylphenol	A	100	0.389	B	500	0.421	C	1000	0.378	D	2000	0.427	E	4000	0.390
	F	6000	0.381	G	8000	0.379	H	10000	0.476						
† N-Nitrosodi-n-propylamine	A	100	0.886	B	200	1.09	C	500	1.27	D	1000	1.13	E	2000	0.824
	F	3000	0.861	G	4000	0.806	H	5000	1.20						
† Hexachlorocyclopentadiene							C	500	0.184	D	1000	0.266	E	2000	0.246
	F	3000	0.291	G	4000	0.322									
‡ Acenaphthene	A	100	0.954	B	200	0.901	C	500	0.963	D	1000	1.06	E	2000	0.938
	F	3000	0.977	G	4000	1.01	H	5000	0.991						
‡ N-Nitrosodiphenylamine	A	100	0.770	B	200	0.902	C	500	0.777	D	1000	0.994	E	2000	0.984
	F	3000	1.12	G	4000	1.11	H	5000	0.903						
‡ Hexachlorobutadiene	A	100	0.264	B	200	0.274	C	500	0.280	D	1000	0.314	E	2000	0.277
	F	3000	0.288	G	4000	0.286	H	5000	0.329						
‡ 2-Nitrophenol	A	100	0.180	B	500	0.213	C	1000	0.222	D	2000	0.231	E	4000	0.236
	F	6000	0.237	G	8000	0.242	H	10000	0.217						

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3091
Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	16.3	*	≤ 15	1.63		0.01
2-Methylphenol	MS	AverageRF	% RSD	16.4	*	≤ 15	0.975		0.01
4-Methylphenol	MS	AverageRF	% RSD	23.5	*	≤ 15	1.45		0.01
2,4-Dimethylphenol	MS	AverageRF	% RSD	5.4		≤ 15	0.329		0.01
‡ 2,4-Dichlorophenol	MS	AverageRF	% RSD	4.4		≤ 15	0.375		0.01
‡ 2,4,6-Trichlorophenol	MS	AverageRF	% RSD	8.2		≤ 15	0.446		0.01
‡ Pentachlorophenol	MS	Quadratic	COD	0.999		≥ 0.990	0.143		0.01
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	4.2		≤ 15	0.599		0.01
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	4.1		≤ 15	0.839		0.01
Phenol-d6	SURR	AverageRF	% RSD	12.9		≤ 15	1.48		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	13.2		≤ 15	0.149		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	10.3		≤ 15	0.769		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	25.8	*	≤ 15	0.374		0.05
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	6.3		≤ 15	1.47		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	8.1		≤ 15	1.96		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	8.5		≤ 15	1.19		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	5.3		≤ 15	1.31		0.01
† 2,4-Dinitrophenol	TRG	AverageRF	% RSD	28.1	*	≤ 15	0.240		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	8.5		≤ 15	0.405		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	18.3	*	≤ 15	1.01		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	19.9	*	≤ 15	0.262		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	5.0		≤ 15	0.975		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	14.1		≤ 15	0.945		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	7.5		≤ 15	0.289		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	8.9		≤ 15	0.222		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003
Date Analyzed: 11/12/2003

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL3091
Units: ng/ml

File ID: J:\MS10\DATA\111303\1112F012.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	1.63	1.66	2	NA	± 20 %	AverageRF
2-Methylphenol	3000	3000	0.975	0.970	-1	NA	± 30 %	AverageRF
4-Methylphenol	3000	2700	1.45	1.31	-10	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3100	0.329	0.334	2	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3100	0.375	0.384	2	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3300	0.446	0.484	9	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.143	0.138	NA	-6	± 20 %	Quadratic
Butyl Benzyl Phthalate	3000	3000	0.599	0.607	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.839	0.826	-2	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	1.47	1.48	1	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2200	0.240	0.173	-28	NA	± 30 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.222	0.237	7	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3400	0.405	0.454	12	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	2800	0.374	0.347	-7	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.975	1.01	3	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	1.31	1.38	6	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3100	1.96	2.02	3	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2900	1.19	1.15	-3	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	3200	0.289	0.304	5	NA	± 20 %	AverageRF
† Hexachlorocyclopentadiene	3000	3400	0.262	0.300	15	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3000	1.01	1.00	-1	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.945	0.969	3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3102
Instrument ID: MS10

Column: MS

Level ID	File ID
A	J:\MS10\DATA\111403\1114F003.D
B	J:\MS10\DATA\111403\1114F004.D
C	J:\MS10\DATA\111403\1114F005.D
D	J:\MS10\DATA\111403\1114F006.D
E	J:\MS10\DATA\111403\1114F007.D
F	J:\MS10\DATA\111403\1114F008.D
G	J:\MS10\DATA\111403\1114F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	100	1.31	B	500	0.986	C	1000	1.64	D	2000	1.46	E	4000	1.44
	F	6000	1.31	G	10000	1.33									
2-Methylphenol	A	100	1.01	B	500	0.557	C	1000	1.04	D	2000	0.891	E	4000	0.965
	F	6000	0.813	G	10000	0.820									
4-Methylphenol	A	100	1.32	B	500	0.911	C	1000	1.51	D	2000	1.28	E	4000	1.61
	F	6000	1.17	G	10000	1.25									
2,4-Dimethylphenol	A	100	0.324	B	500	0.304	C	1000	0.319	D	2000	0.312	E	4000	0.344
	F	6000	0.308	G	10000	0.308									
‡ 2,4-Dichlorophenol	A	100	0.385	B	500	0.399	C	1000	0.385	D	2000	0.396	E	4000	0.454
	F	6000	0.395	G	10000	0.407									
‡ 2,4,6-Trichlorophenol	A	100	0.474	B	500	0.550	C	1000	0.501	D	2000	0.526	E	4000	0.513
	F	6000	0.509	G	10000	0.528									
‡ Pentachlorophenol				B	500	0.150	C	1000	0.195	D	2000	0.216	E	4000	0.221
	F	6000	0.225	G	10000	0.235									
Butyl Benzyl Phthalate	A	100	0.463	B	200	0.538	C	500	0.585	D	1000	0.617	E	2000	0.514
	F	3000	0.571	G	5000	0.581									
Bis(2-ethylhexyl) Phthalate				B	200	0.788	C	500	0.813	D	1000	0.815	E	2000	0.815
	F	3000	0.783	G	5000	0.791									
Phenol-d6	A	100	1.33	B	200	0.995	C	500	1.48	D	1000	1.42	E	2000	1.30
	F	3000	1.21	G	5000	1.27									
2,4,6-Tribromophenol				B	200	0.146	C	500	0.154	D	1000	0.177	E	2000	0.163
	F	3000	0.181	G	5000	0.193									
Terphenyl-d14	A	100	0.789	B	200	0.724	C	500	0.813	D	1000	0.847	E	2000	0.769
	F	3000	0.767	G	5000	0.779									
† 4-Nitrophenol							C	1000	0.404	D	2000	0.459	E	4000	0.478
	F	6000	0.437	G	10000	0.460									
‡ 1,4-Dichlorobenzene	A	100	1.48	B	200	1.38	C	500	1.47	D	1000	1.62	E	2000	1.42
	F	3000	1.37	G	5000	1.41									

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound**

‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3102
Instrument ID: MS10

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Di-n-octyl Phthalate	A	100	1.33	B	200	1.60	C	500	1.82	D	1000	1.86	E	2000	1.77
	F	3000	1.83	G	5000	1.88									
‡ Fluoranthene	A	100	1.21	B	200	0.988	C	500	1.27	D	1000	1.23	E	2000	1.16
	F	3000	1.19	G	5000	1.29									
‡ Benzo(a)pyrene	A	100	1.21	B	200	1.25	C	500	1.30	D	1000	1.32	E	2000	1.27
	F	3000	1.33	G	5000	1.35									
† 2,4-Dinitrophenol							C	1000	0.112	D	2000	0.177	E	4000	0.228
	F	6000	0.253	G	10000	0.294									
‡ 4-Chloro-3-methylphenol	A	100	0.408	B	500	0.546	C	1000	0.367	D	2000	0.386	E	4000	0.434
	F	6000	0.413	G	10000	0.434									
† N-Nitrosodi-n-propylamine	A	100	0.917	B	200	0.614	C	500	1.08	D	1000	0.954	E	2000	1.07
	F	3000	0.892	G	5000	0.932									
† Hexachlorocyclopentadiene							C	500	0.458	D	1000	0.520	E	2000	0.536
	F	3000	0.489	G	5000	0.528									
‡ Acenaphthene	A	100	1.01	B	200	0.893	C	500	0.968	D	1000	1.00	E	2000	0.916
	F	3000	0.962	G	5000	0.971									
‡ N-Nitrosodiphenylamine	A	100	0.831	B	200	0.987	C	500	0.845	D	1000	0.977	E	2000	0.913
	F	3000	0.937	G	5000	0.919									
‡ Hexachlorobutadiene	A	100	0.313	B	200	0.309	C	500	0.328	D	1000	0.348	E	2000	0.371
	F	3000	0.343	G	5000	0.349									
‡ 2-Nitrophenol	A	100	0.198	B	500	0.230	C	1000	0.213	D	2000	0.227	E	4000	0.221
	F	6000	0.237	G	10000	0.237									

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3102
Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	14.8		≤ 15	1.35		0.01
2-Methylphenol	MS	AverageRF	% RSD	18.8	*	≤ 15	0.870		0.01
4-Methylphenol	MS	AverageRF	% RSD	17.6	*	≤ 15	1.29		0.01
2,4-Dimethylphenol	MS	AverageRF	% RSD	4.3		≤ 15	0.317		0.01
‡ 2,4-Dichlorophenol	MS	AverageRF	% RSD	5.9		≤ 15	0.403		0.01
‡ 2,4,6-Trichlorophenol	MS	AverageRF	% RSD	4.7		≤ 15	0.514		0.01
‡ Pentachlorophenol	MS	AverageRF	% RSD	14.9		≤ 15	0.207		0.01
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	9.4		≤ 15	0.553		0.01
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	1.9		≤ 15	0.801		0.01
Phenol-d6	SURR	AverageRF	% RSD	12.2		≤ 15	1.29		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	10.5		≤ 15	0.169		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.9		≤ 15	0.784		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	6.3		≤ 15	0.447		0.05
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	6.0		≤ 15	1.45		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	11.5		≤ 15	1.73		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	8.5		≤ 15	1.19		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	3.8		≤ 15	1.29		0.01
† 2,4-Dinitrophenol	TRG	Linear	R2	0.995		≥ 0.990	0.213		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	13.6		≤ 15	0.427		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	16.8	*	≤ 15	0.923		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	6.4		≤ 15	0.506		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	4.3		≤ 15	0.959		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	6.5		≤ 15	0.916		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	6.5		≤ 15	0.337		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	6.2		≤ 15	0.223		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003
Date Analyzed: 11/17/2003

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL3102
Units: ng/ml

File ID: J:\MS10\DATA\111703\1117F001.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3200	1.35	1.43	6	NA	± 20 %	AverageRF
2-Methylphenol	3000	3200	0.870	0.918	6	NA	± 30 %	AverageRF
4-Methylphenol	3000	3100	1.29	1.32	2	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3000	0.317	0.319	1	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3000	0.403	0.403	0	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3000	0.514	0.519	1	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	3000	0.207	0.205	-1	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3300	0.553	0.611	11	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3100	0.801	0.832	4	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2900	1.45	1.42	-2	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	3400	0.213	0.263	NA	13	± 30 %	Linear
‡ 2-Nitrophenol	3000	3200	0.223	0.240	8	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	2900	0.427	0.409	-4	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	2800	0.447	0.422	-6	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.959	1.00	4	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	1.29	1.36	5	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3300	1.73	1.89	10	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	1.19	1.21	2	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.337	0.327	-3	NA	± 20 %	AverageRF
† Hexachlorocyclopentadiene	3000	2800	0.506	0.469	-7	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3200	0.923	0.994	8	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3200	0.916	0.966	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/12/2003
Calibration ID: CAL3091
Analysis Lot: KWG0318325
Units: ng/ml

File ID: J:\MS10\DATA\111303\1112F012.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	0.01	1.63	1.66	2	NA	± 20 %	AverageRF
2-Methylphenol	3000	3000	0.01	0.975	0.970	-1	NA	± 30 %	AverageRF
4-Methylphenol	3000	2700	0.01	1.45	1.31	-10	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3100	0.01	0.329	0.334	2	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3100	0.01	0.375	0.384	2	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3300	0.01	0.446	0.484	9	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.01	0.143	0.138	NA	-6	± 20 %	Quadratic
Butyl Benzyl Phthalate	3000	3000	0.01	0.599	0.607	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.01	0.839	0.826	-2	NA	± 30 %	AverageRF
Phenol-d6	3000	3000	0.01	1.48	1.49	1	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	3100	0.01	0.149	0.154	3	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3000	0.01	0.769	0.767	0	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	2800	0.05	0.374	0.347	-7	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	0.01	1.47	1.48	1	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3100	0.01	1.96	2.02	3	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2900	0.01	1.19	1.15	-3	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	0.01	1.31	1.38	6	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2200	0.05	0.240	0.173	-28	NA	± 30 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3400	0.01	0.405	0.454	12	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3000	0.05	1.01	1.00	-1	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	3400	0.05	0.262	0.300	15	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.01	0.975	1.01	3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.01	0.945	0.969	3	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	3200	0.01	0.289	0.304	5	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.222	0.237	7	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/14/2003
Calibration ID: CAL3102
Analysis Lot: KWG0318538
Units: ng/ml

File ID: J:\MS10\DATA\111703\1117F001.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3200	0.01	1.35	1.43	6	NA	± 20 %	AverageRF
2-Methylphenol	3000	3200	0.01	0.870	0.918	6	NA	± 30 %	AverageRF
4-Methylphenol	3000	3100	0.01	1.29	1.32	2	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3000	0.01	0.317	0.319	1	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3000	0.01	0.403	0.403	0	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3000	0.01	0.514	0.519	1	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	3000	0.01	0.207	0.205	-1	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3300	0.01	0.553	0.611	11	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3100	0.01	0.801	0.832	4	NA	± 30 %	AverageRF
Phenol-d6	3000	3200	0.01	1.29	1.37	6	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	2900	0.01	0.169	0.166	-2	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3100	0.01	0.784	0.804	3	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	2800	0.05	0.447	0.422	-6	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2900	0.01	1.45	1.42	-2	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3300	0.01	1.73	1.89	10	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	0.01	1.19	1.21	2	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	0.01	1.29	1.36	5	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	3400	0.05	0.213	0.263	NA	13	± 30 %	Linear
‡ 4-Chloro-3-methylphenol	3000	2900	0.01	0.427	0.409	-4	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3200	0.05	0.923	0.994	8	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2800	0.05	0.506	0.469	-7	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.01	0.959	1.00	4	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3200	0.01	0.916	0.966	5	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.01	0.337	0.327	-3	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.223	0.240	8	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/14/2003
Calibration ID: CAL3102
Analysis Lot: KWG0318619
Units: ng/ml

File ID: J:\MS10\DATA\111803\1118F001.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3500	0.01	1.35	1.58	17	NA	± 20 %	AverageRF
2-Methylphenol	3000	3300	0.01	0.870	0.948	9	NA	± 30 %	AverageRF
4-Methylphenol	3000	3200	0.01	1.29	1.37	6	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2900	0.01	0.317	0.305	-4	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3000	0.01	0.403	0.408	1	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3000	0.01	0.514	0.520	1	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.01	0.207	0.190	-8	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3200	0.01	0.553	0.594	8	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.01	0.801	0.810	1	NA	± 30 %	AverageRF
Phenol-d6	3000	3200	0.01	1.29	1.39	8	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	3100	0.01	0.169	0.174	3	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3200	0.01	0.784	0.825	5	NA	± 30 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3300	0.01	1.73	1.88	9	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	2800	0.05	0.447	0.417	-7	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	0.01	1.45	1.44	-1	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	0.01	1.19	1.25	5	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	0.01	1.29	1.37	6	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	3000	0.05	0.213	0.223	NA	1	± 30 %	Linear
‡ 4-Chloro-3-methylphenol	3000	3000	0.01	0.427	0.424	-1	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3300	0.05	0.923	1.03	11	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2600	0.05	0.506	0.443	-13	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.01	0.959	0.992	3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3200	0.01	0.916	0.981	7	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.01	0.337	0.327	-3	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.223	0.237	6	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3116
Instrument ID: MS10

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS10\DATA\112403\1124F003.D	E	J:\MS10\DATA\112403\1124F007.D
B	J:\MS10\DATA\112403\1124F004.D	F	J:\MS10\DATA\112403\1124F008.D
C	J:\MS10\DATA\112403\1124F005.D	G	J:\MS10\DATA\112403\1124F011.D
D	J:\MS10\DATA\112403\1124F006.D	H	J:\MS10\DATA\112403\1124F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	100	1.65	B	500	1.56	C	1000	1.71	D	2000	1.67	E	4000	1.70
	F	6000	1.68	G	8000	1.71	H	10000	1.69						
2-Methylphenol	A	100	1.00	B	500	0.922	C	1000	0.952	D	2000	0.963	E	4000	0.965
	F	6000	0.975	G	8000	1.02	H	10000	0.956						
4-Methylphenol	A	100	1.47	B	500	1.29	C	1000	1.43	D	2000	1.41	E	4000	1.44
	F	6000	1.44	G	8000	1.48	H	10000	1.40						
2,4-Dimethylphenol	A	100	0.320	B	500	0.292	C	1000	0.306	D	2000	0.300	E	4000	0.314
	F	6000	0.304	G	8000	0.307	H	10000	0.316						
‡ 2,4-Dichlorophenol	A	100	0.286	B	500	0.310	C	1000	0.329	D	2000	0.336	E	4000	0.344
	F	6000	0.343	G	8000	0.336	H	10000	0.349						
‡ 2,4,6-Trichlorophenol	A	100	0.407	B	500	0.413	C	1000	0.437	D	2000	0.436	E	4000	0.447
	F	6000	0.460	G	8000	0.452	H	10000	0.457						
‡ Pentachlorophenol				B	500	0.142	C	1000	0.167	D	2000	0.177	E	4000	0.190
	F	6000	0.195	G	8000	0.203	H	10000	0.200						
Butyl Benzyl Phthalate	A	100	0.540	B	200	0.485	C	500	0.555	D	1000	0.565	E	2000	0.578
	F	3000	0.558	G	4000	0.584	H	5000	0.587						
Bis(2-ethylhexyl) Phthalate				B	200	0.686	C	500	0.760	D	1000	0.764	E	2000	0.791
	F	3000	0.757	G	4000	0.809	H	5000	0.799						
Phenol-d6	A	100	1.43	B	200	1.31	C	500	1.56	D	1000	1.57	E	2000	1.51
	F	3000	1.53	G	4000	1.60	H	5000	1.58						
2,4,6-Tribromophenol				B	200	0.128	C	500	0.155	D	1000	0.150	E	2000	0.152
	F	3000	0.154	G	4000	0.156	H	5000	0.159						
Terphenyl-d14	A	100	0.689	B	200	0.634	C	500	0.663	D	1000	0.675	E	2000	0.709
	F	3000	0.677	G	4000	0.728	H	5000	0.700						
† 4-Nitrophenol				B	500	0.236	C	1000	0.296	D	2000	0.297	E	4000	0.328
	F	6000	0.337	G	8000	0.343	H	10000	0.346						
‡ 1,4-Dichlorobenzene	A	100	1.39	B	200	1.39	C	500	1.49	D	1000	1.45	E	2000	1.46
	F	3000	1.43	G	4000	1.47	H	5000	1.50						

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3116
Instrument ID: MS10

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Di-n-octyl Phthalate	A	100	1.45	B	200	1.51	C	500	1.80	D	1000	1.93	E	2000	1.98
	F	3000	1.99	G	4000	2.06	H	5000	2.05						
‡ Fluoranthene	A	100	1.44	B	200	1.13	C	500	1.17	D	1000	1.09	E	2000	1.06
	F	3000	1.06	G	4000	1.10	H	5000	1.10						
‡ Benzo(a)pyrene	A	100	1.22	B	200	1.09	C	500	1.22	D	1000	1.21	E	2000	1.21
	F	3000	1.21	G	4000	1.25	H	5000	1.28						
† 2,4-Dinitrophenol							C	1000	0.0641	D	2000	0.102	E	4000	0.154
	F	6000	0.178	G	8000	0.195	H	10000	0.210						
‡ 4-Chloro-3-methylphenol	A	100	0.362	B	500	0.343	C	1000	0.361	D	2000	0.368	E	4000	0.371
	F	6000	0.367	G	8000	0.373	H	10000	0.382						
† N-Nitrosodi-n-propylamine	A	100	1.10	B	200	1.06	C	500	1.11	D	1000	1.13	E	2000	1.10
	F	3000	1.08	G	4000	1.17	H	5000	1.11						
† Hexachlorocyclopentadiene							C	500	0.322	D	1000	0.346	E	2000	0.382
	F	3000	0.402	G	4000	0.405	H	5000	0.437						
‡ Acenaphthene	A	100	1.06	B	200	1.01	C	500	1.09	D	1000	1.01	E	2000	0.973
	F	3000	0.988	G	4000	0.985	H	5000	1.04						
‡ N-Nitrosodiphenylamine	A	100	0.820	B	200	0.747	C	500	0.821	D	1000	0.813	E	2000	0.813
	F	3000	0.811	G	4000	0.841	H	5000	0.863						
‡ Hexachlorobutadiene	A	100	0.261	B	200	0.223	C	500	0.267	D	1000	0.249	E	2000	0.260
	F	3000	0.248	G	4000	0.252	H	5000	0.266						
‡ 2-Nitrophenol	A	100	0.175	B	500	0.175	C	1000	0.196	D	2000	0.209	E	4000	0.216
	F	6000	0.219	G	8000	0.221	H	10000	0.227						

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3116
Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	2.9		≤ 15	1.67		0.01
2-Methylphenol	MS	AverageRF	% RSD	3.1		≤ 15	0.970		0.01
4-Methylphenol	MS	AverageRF	% RSD	4.1		≤ 15	1.42		0.01
2,4-Dimethylphenol	MS	AverageRF	% RSD	3.0		≤ 15	0.307		0.01
‡ 2,4-Dichlorophenol	MS	AverageRF	% RSD	6.4		≤ 15	0.329		0.01
‡ 2,4,6-Trichlorophenol	MS	AverageRF	% RSD	4.5		≤ 15	0.438		0.01
‡ Pentachlorophenol	MS	AverageRF	% RSD	11.9		≤ 15	0.182		0.01
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	5.9		≤ 15	0.556		0.01
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	5.4		≤ 15	0.767		0.01
Phenol-d6	SURR	AverageRF	% RSD	6.4		≤ 15	1.51		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	7.0		≤ 15	0.151		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.2		≤ 15	0.684		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	12.6		≤ 15	0.312		0.05
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.9		≤ 15	1.45		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	12.9		≤ 15	1.85		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	11.0		≤ 15	1.14		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	4.4		≤ 15	1.21		0.01
† 2,4-Dinitrophenol	TRG	Quadratic	COD	1.000		≥ 0.990	0.150		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	3.2		≤ 15	0.366		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	2.9		≤ 15	1.11		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	11.0		≤ 15	0.382		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	4.0		≤ 15	1.02		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	4.1		≤ 15	0.816		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	5.7		≤ 15	0.253		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	10.0		≤ 15	0.205		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003
Date Analyzed: 11/25/2003

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL3116
Units: ng/ml

File ID: J:\MS10\DATA\112403\1124F014.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	1.67	1.73	4	NA	± 20 %	AverageRF
2-Methylphenol	3000	2800	0.970	0.911	-6	NA	± 30 %	AverageRF
4-Methylphenol	3000	2900	1.42	1.36	-4	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2800	0.307	0.292	-5	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	2900	0.329	0.318	-3	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	2900	0.438	0.425	-3	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.182	0.169	-7	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3000	0.556	0.561	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.767	0.779	2	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2800	1.45	1.36	-6	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2900	0.150	0.133	NA	-3	± 30 %	Quadratic
‡ 2-Nitrophenol	3000	3000	0.205	0.208	2	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	2800	0.366	0.345	-6	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	3000	0.312	0.312	0	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	2800	1.02	0.964	-6	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	2900	1.21	1.18	-3	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3000	1.85	1.87	1	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2700	1.14	1.02	-11	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	2800	0.253	0.239	-5	NA	± 20 %	AverageRF
† Hexachlorocyclopentadiene	3000	2700	0.382	0.341	-11	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3100	1.11	1.13	2	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.816	0.834	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/24/2003
Calibration ID: CAL3116
Analysis Lot: KWG0319154
Units: ng/ml

File ID: J:\MS10\DATA\112403\1124F014.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	0.01	1.67	1.73	4	NA	± 20 %	AverageRF
2-Methylphenol	3000	2800	0.01	0.970	0.911	-6	NA	± 30 %	AverageRF
4-Methylphenol	3000	2900	0.01	1.42	1.36	-4	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2800	0.01	0.307	0.292	-5	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	2900	0.01	0.329	0.318	-3	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	2900	0.01	0.438	0.425	-3	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.01	0.182	0.169	-7	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3000	0.01	0.556	0.561	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.01	0.767	0.779	2	NA	± 30 %	AverageRF
Phenol-d6	3000	3000	0.01	1.51	1.51	0	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	2800	0.01	0.151	0.141	-6	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3000	0.01	0.684	0.690	1	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	3000	0.05	0.312	0.312	0	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2800	0.01	1.45	1.36	-6	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3000	0.01	1.85	1.87	1	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2700	0.01	1.14	1.02	-11	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	2900	0.01	1.21	1.18	-3	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2900	0.05	0.150	0.133	NA	-3	± 30 %	Quadratic
‡ 4-Chloro-3-methylphenol	3000	2800	0.01	0.366	0.345	-6	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3100	0.05	1.11	1.13	2	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2700	0.05	0.382	0.341	-11	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	2800	0.01	1.02	0.964	-6	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.01	0.816	0.834	2	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	2800	0.01	0.253	0.239	-5	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3000	0.01	0.205	0.208	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS **Service Request:** K2308433
Project: Bloomington, IN/IN000072.0021

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270C **Analysis Lot:** KWG0318325
Instrument ID: MS10

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1112F012.D	Continuing Calibration Verification	KWG0318325-2	11/12/2003	22:51		11/12/2003	23:23
1112A012.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318325-1	11/12/2003	22:51		11/12/2003	23:23
1112F013.D	Method Blank	KWG0317457-5	11/12/2003	23:33		11/13/2003	00:05
1112F014.D	Lab Control Sample	KWG0317457-3	11/13/2003	00:14		11/13/2003	00:46
1112F015.D	Duplicate Lab Control Sample	KWG0317457-4	11/13/2003	00:55		11/13/2003	01:27
1112F016.D	ZZZZZZ	ZZZZZZ	11/13/2003	01:36		11/13/2003	02:08
1112F017.D	ZZZZZZ	ZZZZZZ	11/13/2003	02:17		11/13/2003	02:49
1112F018.D	ZZZZZZ	ZZZZZZ	11/13/2003	02:58		11/13/2003	03:30
1112F019.D	ZZZZZZ	ZZZZZZ	11/13/2003	03:40		11/13/2003	04:12
1112F020.D	ZZZZZZ	ZZZZZZ	11/13/2003	04:21		11/13/2003	04:53
1112F021.D	ZZZZZZ	ZZZZZZ	11/13/2003	05:02		11/13/2003	05:34
1112F022.D	ZZZZZZ	ZZZZZZ	11/13/2003	05:43		11/13/2003	06:15
1112F023.D	ZZZZZZ	ZZZZZZ	11/13/2003	06:24		11/13/2003	06:56

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270C

Analysis Lot: KWG0318538
Instrument ID: MS10

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1117F001.D	Continuing Calibration Verification	KWG0318538-2	11/17/2003	09:06		11/17/2003	09:38
1117A001.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318538-1	11/17/2003	09:06		11/17/2003	09:38
1117F002.D	ZZZZZZ	ZZZZZZ	11/17/2003	09:47		11/17/2003	10:19
1117F003.D	ZZZZZZ	ZZZZZZ	11/17/2003	10:29		11/17/2003	11:01
1117F004.D	ZZZZZZ	ZZZZZZ	11/17/2003	11:11		11/17/2003	11:43
1117F005.D	ZZZZZZ	ZZZZZZ	11/17/2003	11:52		11/17/2003	12:24
1117F006.D	ZZZZZZ	ZZZZZZ	11/17/2003	12:33		11/17/2003	13:05
1117F007.D	ZZZZZZ	ZZZZZZ	11/17/2003	13:15		11/17/2003	13:47
1117F008.D	ZZZZZZ	ZZZZZZ	11/17/2003	13:56		11/17/2003	14:28
1117F009.D	ZZZZZZ	ZZZZZZ	11/17/2003	14:37		11/17/2003	15:09
1117F010.D	ZZZZZZ	ZZZZZZ	11/17/2003	15:19		11/17/2003	15:51
1117F011.D	ZZZZZZ	ZZZZZZ	11/17/2003	16:00		11/17/2003	16:32
1117F012.D	ZZZZZZ	ZZZZZZ	11/17/2003	17:01		11/17/2003	17:33
1117F013.D	ZZZZZZ	ZZZZZZ	11/17/2003	17:42		11/17/2003	18:14
1117F014.D	SED-1	K2308433-001	11/17/2003	18:23		11/17/2003	18:55
1117F015.D	SED-2	K2308433-002	11/17/2003	19:04		11/17/2003	19:36
1117F016.D	SED-3	K2308433-003	11/17/2003	19:45		11/17/2003	20:17

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS **Service Request:** K2308433
Project: Bloomington, IN/IN000072.0021

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270C **Analysis Lot:** KWG0318619
Instrument ID: MS10

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1118F001.D	Continuing Calibration Verification	KWG0318619-2	11/18/2003	12:31		11/18/2003	13:03
1118A001.D	GC/MS Tuning - Decafluorotriphenyl	KWG0318619-1	11/18/2003	12:31		11/18/2003	13:03
1118F003.D	ZZZZZZ	ZZZZZZ	11/18/2003	13:59		11/18/2003	14:31
1118F004.D	ZZZZZZ	ZZZZZZ	11/18/2003	14:43		11/18/2003	15:15
1118F005.D	SED-4	K2308433-004	11/18/2003	15:25		11/18/2003	15:57
1118F006.D	SED-4MS	KWG0317457-1	11/18/2003	16:06		11/18/2003	16:38
1118F007.D	SED-4DMS	KWG0317457-2	11/18/2003	16:48		11/18/2003	17:20
1118F008.D	SED-4-DUP	K2308433-005	11/18/2003	17:29		11/18/2003	18:01
1118F009.D	SED-5	K2308433-006	11/18/2003	18:10		11/18/2003	18:42
1118F010.D	SED-6	K2308433-007	11/18/2003	18:52		11/18/2003	19:24
1118F011.D	SED-7	K2308433-008	11/18/2003	19:33		11/18/2003	20:05
1118F012.D	SED-8	K2308433-009	11/18/2003	20:14		11/18/2003	20:46
1118F013.D	ZZZZZZ	ZZZZZZ	11/18/2003	20:55		11/18/2003	21:27
1118F014.D	ZZZZZZ	ZZZZZZ	11/18/2003	21:36		11/18/2003	22:08
1118F015.D	ZZZZZZ	ZZZZZZ	11/18/2003	22:17		11/18/2003	22:49
1118F016.D	ZZZZZZ	ZZZZZZ	11/18/2003	22:58		11/18/2003	23:30
1118F017.D	ZZZZZZ	ZZZZZZ	11/18/2003	23:40		11/19/2003	00:12
1118F018.D	ZZZZZZ	ZZZZZZ	11/19/2003	00:21		11/19/2003	00:53

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS **Service Request:** K2308433
Project: Bloomington, IN/IN000072.0021

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270C **Analysis Lot:** KWG0319154
Instrument ID: MS10

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1124F014.D	Continuing Calibration Verification	KWG0319154-2	11/25/2003	12:17		11/25/2003	12:49
1124A014.D	GC/MS Tuning - Decafluorotriphenyl	KWG0319154-1	11/25/2003	12:17		11/25/2003	12:49
1124F015.D	ZZZZZZ	ZZZZZZ	11/25/2003	12:59		11/25/2003	13:31
1124F016.D	ZZZZZZ	ZZZZZZ	11/25/2003	13:40		11/25/2003	14:12
1124F017.D	ZZZZZZ	ZZZZZZ	11/25/2003	14:22		11/25/2003	14:54
1124F018.D	ZZZZZZ	ZZZZZZ	11/25/2003	15:03		11/25/2003	15:35
1124F019.D	ZZZZZZ	ZZZZZZ	11/25/2003	15:46		11/25/2003	16:18
1124F020.D	ZZZZZZ	ZZZZZZ	11/25/2003	16:27		11/25/2003	16:59
1124F021.D	ZZZZZZ	ZZZZZZ	11/25/2003	17:08		11/25/2003	17:40
1124F022.D	ZZZZZZ	ZZZZZZ	11/25/2003	17:50		11/25/2003	18:22
1124F023.D	ZZZZZZ	ZZZZZZ	11/25/2003	18:31		11/25/2003	19:03
1124F024.D	ZZZZZZ	ZZZZZZ	11/25/2003	19:12		11/25/2003	19:44
1124F025.D	Method Blank	KWG0318722-3	11/25/2003	19:53		11/25/2003	20:25
1124F026.D	Lab Control Sample	KWG0318722-1	11/25/2003	20:35		11/25/2003	21:07
1124F027.D	Duplicate Lab Control Sample	KWG0318722-2	11/25/2003	21:16		11/25/2003	21:48
1124F028.D	SED-5	K2308433-006	11/25/2003	21:57		11/25/2003	22:29
1124F029.D	SED-6	K2308433-007	11/25/2003	22:38		11/25/2003	23:10
1124F030.D	SED-8	K2308433-009	11/25/2003	23:19		11/25/2003	23:51

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Extraction Lot: KWG0317457
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SED-1	K2308433-001	10/22/03	10/27/03	24.63g	2ml	74.5	
SED-2	K2308433-002	10/22/03	10/27/03	25.77g	2ml	77.3	
SED-3	K2308433-003	10/22/03	10/27/03	26.07g	2ml	81.6	
SED-4	K2308433-004	10/22/03	10/27/03	23.57g	2ml	75.3	
SED-4-DUP	K2308433-005	10/22/03	10/27/03	27.48g	2ml	73.0	
SED-5	K2308433-006	10/23/03	10/27/03	26.19g	2ml	82.0	
SED-6	K2308433-007	10/23/03	10/27/03	26.55g	2ml	79.0	
SED-7	K2308433-008	10/23/03	10/27/03	25.39g	2ml	79.9	
SED-8	K2308433-009	10/23/03	10/27/03	27.25g	2ml	72.7	
Method Blank	KWG0317457-5	NA	NA	28.96g	2ml	NA	
SED-4MS	KWG0317457-1	10/22/03	10/27/03	23.57g	2ml	75.3	
SED-4DMS	KWG0317457-2	10/22/03	10/27/03	23.63g	2ml	75.3	
Lab Control Sample	KWG0317457-3	NA	NA	20.00g	2ml	NA	
Duplicate Lab Control Sample	KWG0317457-4	NA	NA	20.00g	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/20/2003

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Extraction Lot: KWG0318722
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SED-5	K2308433-006	10/23/03	10/27/03	26.32g	2.0ml	82.0	*
SED-6	K2308433-007	10/23/03	10/27/03	26.63g	2.0ml	79.0	*
SED-8	K2308433-009	10/23/03	10/27/03	27.40g	2.0ml	72.7	*
Method Blank	KWG0318722-3	NA	NA	27.41g	2.0ml	NA	
Lab Control Sample	KWG0318722-1	NA	NA	20.00g	2.0ml	NA	
Duplicate Lab Control Sample	KWG0318722-2	NA	NA	20.00g	2.0ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

QC Reports

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED-1	K2308433-001	75 D	64 D	91 D
SED-2	K2308433-002	75 D	70 D	97 D
SED-3	K2308433-003	60 D	47 D	87 D
SED-4	K2308433-004	68 D	63 D	93 D
SED-4-DUP	K2308433-005	67 D	60 D	86 D
SED-5	K2308433-006	33 D *	18 D *	81 D
SED-6	K2308433-007	17 D *	0 D *	93 D
SED-7	K2308433-008	64 D	56 D	100 D
SED-8	K2308433-009	38 D *	15 D *	98 D
Method Blank	KWG0317457-5	89	64	115
SED-4MS	KWG0317457-1	61 D	53 D	100 D
SED-4DMS	KWG0317457-2	80 D	72 D	106 D
Lab Control Sample	KWG0317457-3	53	65	89
Duplicate Lab Control Sample	KWG0317457-4	63	75	83

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	40-123
Sur2 = 2,4,6-Tribromophenol	35-138
Sur3 = Terphenyl-d14	56-152

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003
Time Analyzed: 22:51

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111303\1112F012.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318325-2
Analysis Lot: KWG0318325

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	57,205	8.62	149,882	10.88	96,948	14.64
	Upper Limit ==>	114,410	9.12	299,764	11.38	193,896	15.14
	Lower Limit ==>	28,603	8.12	74,941	10.38	48,474	14.14
	ICAL Result ==>	65,394	8.63	147,459	10.88	96,127	14.63
Associated Analyses							
Method Blank	KWG0317457-5	56,825	8.62	205,378	10.87	110,250	14.63
Lab Control Sample	KWG0317457-3	73,502	8.63	165,722	10.88	97,073	14.63
Duplicate Lab Control Sample	KWG0317457-4	54,607	8.63	166,424	10.88	117,112	14.63

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003
Time Analyzed: 22:51

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111303\1112F012.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318325-2
Analysis Lot: KWG0318325

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT	Area	RT
	Results ==>	173,601	17.96	169,286	24.11	119,749	27.51
	Upper Limit ==>	347,202	18.46	338,572	24.61	239,498	28.01
	Lower Limit ==>	86,801	17.46	84,643	23.61	59,875	27.01
	ICAL Result ==>	225,063	17.97	206,674	24.11	145,249	27.51
Associated Analyses							
Method Blank	KWG0317457-5	177,779	17.96	185,390	24.10	114,671	27.51
Lab Control Sample	KWG0317457-3	194,795	17.96	205,758	24.11	115,375	27.51
Duplicate Lab Control Sample	KWG0317457-4	171,645	17.97	171,650	24.11	115,628	27.52

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003
Time Analyzed: 09:06

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111703\1117F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318538-2
Analysis Lot: KWG0318538

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	61,838	8.97	170,690	11.26	105,335	15.04
	Upper Limit ==>	123,676	9.47	341,380	11.76	210,670	15.54
	Lower Limit ==>	30,919	8.47	85,345	10.76	52,668	14.54
	ICAL Result ==>	61,811	8.97	157,723	11.26	105,815	15.04
Associated Analyses							
SED-1	K2308433-001	50,927	8.98	149,778	11.27	92,504	15.05
SED-2	K2308433-002	52,489	8.98	150,678	11.26	93,536	15.06
SED-3	K2308433-003	53,364	8.98	154,551	11.26	96,029	15.05

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003
Time Analyzed: 09:06

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111703\1117F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318538-2
Analysis Lot: KWG0318538

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	191,276	18.37	186,195	24.54	135,991	28.02
	Upper Limit ==>	382,552	18.87	372,390	25.04	271,982	28.52
	Lower Limit ==>	95,638	17.87	93,098	24.04	67,996	27.52
	ICAL Result ==>	190,162	18.38	194,716	24.54	137,443	28.02
Associated Analyses							
SED-1	K2308433-001	161,809	18.40	171,907	24.56	125,527	28.06
SED-2	K2308433-002	171,934	18.39	172,827	24.57	131,497	28.06
SED-3	K2308433-003	174,530	18.40	176,093	24.56	126,703	28.06

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003
Time Analyzed: 12:31

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111803\1118F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318619-2
Analysis Lot: KWG0318619

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	63,019	8.99	180,926	11.28	113,865	15.07
	Upper Limit ==>	126,038	9.49	361,852	11.78	227,730	15.57
	Lower Limit ==>	31,510	8.49	90,463	10.78	56,933	14.57
	ICAL Result ==>	61,811	8.97	157,723	11.26	105,815	15.04
Associated Analyses							
SED-4	K2308433-004	53,803	8.99	155,663	11.28	95,550	15.07
SED-4MS	KWG0317457-1	56,201	8.99	159,696	11.28	99,648	15.08
SED-4DMS	KWG0317457-2	57,909	9.00	164,369	11.29	101,252	15.08
SED-4-DUP	K2308433-005	57,978	9.01	161,895	11.30	104,639	15.08
SED-5	K2308433-006	60,232	9.00	164,432	11.29	105,508	15.08
SED-6	K2308433-007	55,240	9.00	161,516	11.29	103,455	15.08
SED-7	K2308433-008	54,859	9.01	158,722	11.30	104,186	15.09
SED-8	K2308433-009	52,959	9.01	157,674	11.30	105,466	15.09

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003
Time Analyzed: 12:31

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111803\1118F001.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0318619-2
Analysis Lot: KWG0318619

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	205,135	18.41	202,476	24.58	144,586	28.05
	Upper Limit ==>	410,270	18.91	404,952	25.08	289,172	28.55
	Lower Limit ==>	102,568	17.91	101,238	24.08	72,293	27.55
	ICAL Result ==>	190,162	18.38	194,716	24.54	137,443	28.02
Associated Analyses							
SED-4	K2308433-004	176,057	18.41	171,930	24.58	120,638	28.06
SED-4MS	KWG0317457-1	175,218	18.41	174,397	24.59	124,646	28.08
SED-4DMS	KWG0317457-2	170,961	18.42	179,360	24.59	126,820	28.09
SED-4-DUP	K2308433-005	175,313	18.42	175,655	24.59	135,039	28.09
SED-5	K2308433-006	181,148	18.42	183,817	24.60	129,844	28.09
SED-6	K2308433-007	180,531	18.42	179,776	24.60	130,956	28.09
SED-7	K2308433-008	175,984	18.45	183,042	24.65	129,077	28.17
SED-8	K2308433-009	177,544	18.44	177,242	24.61	132,483	28.13

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003
Date Analyzed: 11/18/2003

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-4
Lab Code: K2308433-004

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low
Extraction Lot: KWG0317457

Analyte Name	Sample Result	SED-4MS KWG0317457-1 Matrix Spike Result	Expected	%Rec	SED-4DMS KWG0317457-2 Duplicate Matrix Spike Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
Phenol	ND	174	282	62	207	281	74	26-140	17	40
2-Methylphenol	ND	26.3	282	9 *	79.2	281	28 *	29-124	100 *	40
4-Methylphenol	ND	39.2	282	14	89.4	281	32	13-139	78 *	40
2,4-Dimethylphenol	ND	19.3	282	7 *	25.1	281	9 *	10-144	26	40
2,4-Dichlorophenol	ND	168	282	59	202	281	72	39-123	19	40
2,4,6-Trichlorophenol	ND	146	282	52	212	281	75	38-129	37	40
Pentachlorophenol	ND	143	282	51	169	281	60	10-150	17	40
Butyl Benzyl Phthalate	ND	250	282	89	329	281	117	38-155	27	40
Bis(2-ethylhexyl) Phthalate	ND	422	282	150	543	281	193 *	27-167	25	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003
Date Analyzed: 11/13/2003

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0317457

	Lab Control Sample KWG0317457-3 Lab Control Spike			Duplicate Lab Control Sample KWG0317457-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	131	250	52	162	250	65	39-124	21	40
2-Methylphenol	104	250	42	135	250	54	31-111	26	40
4-Methylphenol	94.9	250	38	131	250	53	30-111	32	40
2,4-Dimethylphenol	54.8	250	22	65.1	250	26	10-79	17	40
2,4-Dichlorophenol	140	250	56	153	250	61	42-120	9	40
2,4,6-Trichlorophenol	153	250	61	151	250	60	40-124	2	40
Pentachlorophenol	165	250	66	154	250	62	29-130	7	40
Butyl Benzyl Phthalate	177	250	71	179	250	72	54-134	1	40
Bis(2-ethylhexyl) Phthalate	172	250	69	183	250	73	45-155	6	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 10/30/2003
Date Analyzed: 11/12/2003
Time Analyzed: 23:33

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0317457-5

Extraction Method: EPA 3541
Analysis Method: 8270C

File ID: J:\MS10\DATA\111303\1112F013.D
Instrument ID: MS10

Level: Low
Extraction Lot: KWG0317457

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0317457-3	J:\MS10\DATA\111303\1112F014.D	11/13/03	00:14
Duplicate Lab Control Sample	KWG0317457-4	J:\MS10\DATA\111303\1112F015.D	11/13/03	00:55
SED-1	K2308433-001	J:\MS10\DATA\111703\1117F014.D	11/17/03	18:23
SED-2	K2308433-002	J:\MS10\DATA\111703\1117F015.D	11/17/03	19:04
SED-3	K2308433-003	J:\MS10\DATA\111703\1117F016.D	11/17/03	19:45
SED-4	K2308433-004	J:\MS10\DATA\111803\1118F005.D	11/18/03	15:25
SED-4MS	KWG0317457-1	J:\MS10\DATA\111803\1118F006.D	11/18/03	16:06
SED-4DMS	KWG0317457-2	J:\MS10\DATA\111803\1118F007.D	11/18/03	16:48
SED-4-DUP	K2308433-005	J:\MS10\DATA\111803\1118F008.D	11/18/03	17:29
SED-5	K2308433-006	J:\MS10\DATA\111803\1118F009.D	11/18/03	18:10
SED-6	K2308433-007	J:\MS10\DATA\111803\1118F010.D	11/18/03	18:52
SED-7	K2308433-008	J:\MS10\DATA\111803\1118F011.D	11/18/03	19:33
SED-8	K2308433-009	J:\MS10\DATA\111803\1118F012.D	11/18/03	20:14

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Lab Control Sample/Duplicate Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0317457-3	**Lab Code:**	KWG0317457-4
File ID:	J:\MS10\DATA\111303\1112F014.D	**File ID:**	J:\MS10\DATA\111303\1112F015.D
Instrument ID:	MS10	**Instrument ID:**	MS10
Date Extracted:	10/30/2003	**Date Extracted:**	10/30/2003
Date Analyzed:	11/13/2003	**Date Analyzed:**	11/13/2003
Time Analyzed:	00:14	**Time Analyzed:**	00:55

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0317457

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0317457-5	J:\MS10\DATA\111303\1112F013.D	11/12/03	23:33
SED-1	K2308433-001	J:\MS10\DATA\111703\1117F014.D	11/17/03	18:23
SED-2	K2308433-002	J:\MS10\DATA\111703\1117F015.D	11/17/03	19:04
SED-3	K2308433-003	J:\MS10\DATA\111703\1117F016.D	11/17/03	19:45
SED-4	K2308433-004	J:\MS10\DATA\111803\1118F005.D	11/18/03	15:25
SED-4MS	KWG0317457-1	J:\MS10\DATA\111803\1118F006.D	11/18/03	16:06
SED-4DMS	KWG0317457-2	J:\MS10\DATA\111803\1118F007.D	11/18/03	16:48
SED-4-DUP	K2308433-005	J:\MS10\DATA\111803\1118F008.D	11/18/03	17:29
SED-5	K2308433-006	J:\MS10\DATA\111803\1118F009.D	11/18/03	18:10
SED-6	K2308433-007	J:\MS10\DATA\111803\1118F010.D	11/18/03	18:52
SED-7	K2308433-008	J:\MS10\DATA\111803\1118F011.D	11/18/03	19:33
SED-8	K2308433-009	J:\MS10\DATA\111803\1118F012.D	11/18/03	20:14

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-1
Lab Code: K2308433-001

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	170	5	10/30/03	11/17/03	KWG0317457	
2-Methylphenol	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
4-Methylphenol†	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
2,4-Dimethylphenol	ND	U	280	5	10/30/03	11/17/03	KWG0317457	
2,4-Dichlorophenol	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
Pentachlorophenol	ND	U	280	5	10/30/03	11/17/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	55	5	10/30/03	11/17/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	10/30/03	11/17/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	75	40-123	11/17/03	Acceptable
2,4,6-Tribromophenol	64	35-138	11/17/03	Acceptable
Terphenyl-d14	91	56-152	11/17/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111703\1117F014.D
Lab ID: K2308433-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/17/2003 18:23
Date Quantitated: 11/18/2003 09:20
Batch ID: KWG0318538
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Sample diluted due to matrix; will not be analyzed more concentrated

Primary Review: 11/18/3

Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318538	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245967	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111703\1117A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111703\1117F014.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 18:23	**Quant Date:**	11/18/2003 09:20	**Vial:**	14
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.98	0.01	152	50927	1,000.00	OK
2	Naphthalene-d8	11.27	0.01	136	149778	1,000.00	OK
3	Acenaphthene-d10	15.05	0.01	164	92504	1,000.00	OK
4	Phenanthrene-d10	18.40	0.03	188	161809	1,000.00	OK
5	Chrysene-d12	24.56	0.02	240	171907	1,000.00	OK
6	Perylene-d12	28.06	0.04	264	125527	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.48	0.02	0.00	99	36698	559.98	75	40-123	OK	
4	2,4,6-Tribromophenol	16.86	0.01	0.00	330	13210	483.05	64	35-138	OK	
5	Terphenyl-d14	22.20	0.01	0.00	244	61630	457.31	91	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0**d**		13	U	
1	2-Methylphenol				107	0		23	U	
1	4-Methylphenol				107	0		20	U	
2	2,4-Dimethylphenol				122	0**d**		37	U	
2	2,4-Dichlorophenol				162	0		13	U	
3	2,4,6-Trichlorophenol				196	0		13	U	
4	Pentachlorophenol				266	0		58	U	
5	Butyl Benzyl Phthalate				149	0		11	U	
5	Bis(2-ethylhexyl) Phthalate	25.00	0.02	0.00	149	34354	249.55	140	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F014.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 18:23	**Quant Date:**	11/18/2003 09:20	**Vial:**	14
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-001			**Soln Conc. Units:**	ng/ml

Prep Amount:	24.63 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	74.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F014.D Vial: 14
Acq On : 17 Nov 2003 18:23 Operator: JGISH
Sample : K2308433-001 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 08:48:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	50927	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.27	136	149778	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.05	164	92504	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.40	188	161809	1000.00	ng/ml	0.02
67) Chrysene-d12	24.56	240	171907	1000.00	ng/ml	0.02
76) Perylene-d12	28.06	264	125527	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	25205	460.94	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 12.29%#			
6) Phenol-d6	8.48	99	36698	559.98	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 14.93%#			
19) Nitrobenzene-d5	9.95	82	26103	320.91	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.84%#			
38) 2-Fluorobiphenyl	13.59	172	45027	351.11	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 14.04%#			
58) 2,4,6-Tribromophenol	16.86	330	13210	483.05	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 12.88%#			
70) Terphenyl-d14	22.20	244	61630	457.31	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 18.29%#			
Target Compounds						Qvalue
29) Naphthalene	11.30	128	12761	81.66	ng/ml	98
33) 2-Methylnaphthalene	12.73	142	3478	35.91	ng/ml	95
41) Acenaphthylene	14.70	152	21900	147.83	ng/ml	99
44) Acenaphthene	15.12	154	13672	154.06	ng/ml	79
47) Dibenzofuran	15.48	168	20161	128.75	ng/ml	88
50) Fluorene	16.27	166	29333	253.86	ng/ml	94
52) Diethyl Phthalate	16.24	149	2440	17.05	ng/ml	91
62) Phenanthrene	18.45	178	505969	2882.85	ng/ml	98
63) Anthracene	18.55	178	95980	542.72	ng/ml	91
64) Carbazole	18.97	167	100877	655.76	ng/ml	93
66) Fluoranthene	21.22	202	1104733	5729.94	ng/ml	93
69) Pyrene	21.72	202	907669	4256.29	ng/ml	98
73) Benz(a)anthracene	24.53	228	416391	2205.02	ng/ml	95
74) Chrysene	24.62	228	473237	2644.65	ng/ml	97
75) Bis(2-ethylhexyl) Phthalat	25.00	149	34354	249.55	ng/ml	95
78) Benzo(b)fluoranthene	27.15	252	435116	2549.22	ng/ml	93
79) Benzo(k)fluoranthene	27.21	252	310534	1914.18	ng/ml	94
80) Benzo(a)pyrene	27.93	252	388896	2400.63	ng/ml	94
81) Indeno(1,2,3-cd)pyrene	30.61	276	275881	1824.74	ng/ml	85
82) Dibenz(a,h)anthracene	30.67	278	59600	402.56	ng/ml	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F014.D Vial: 14
Acq On : 17 Nov 2003 18:23 Operator: JGISH
Sample : K2308433-001 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 08:48:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

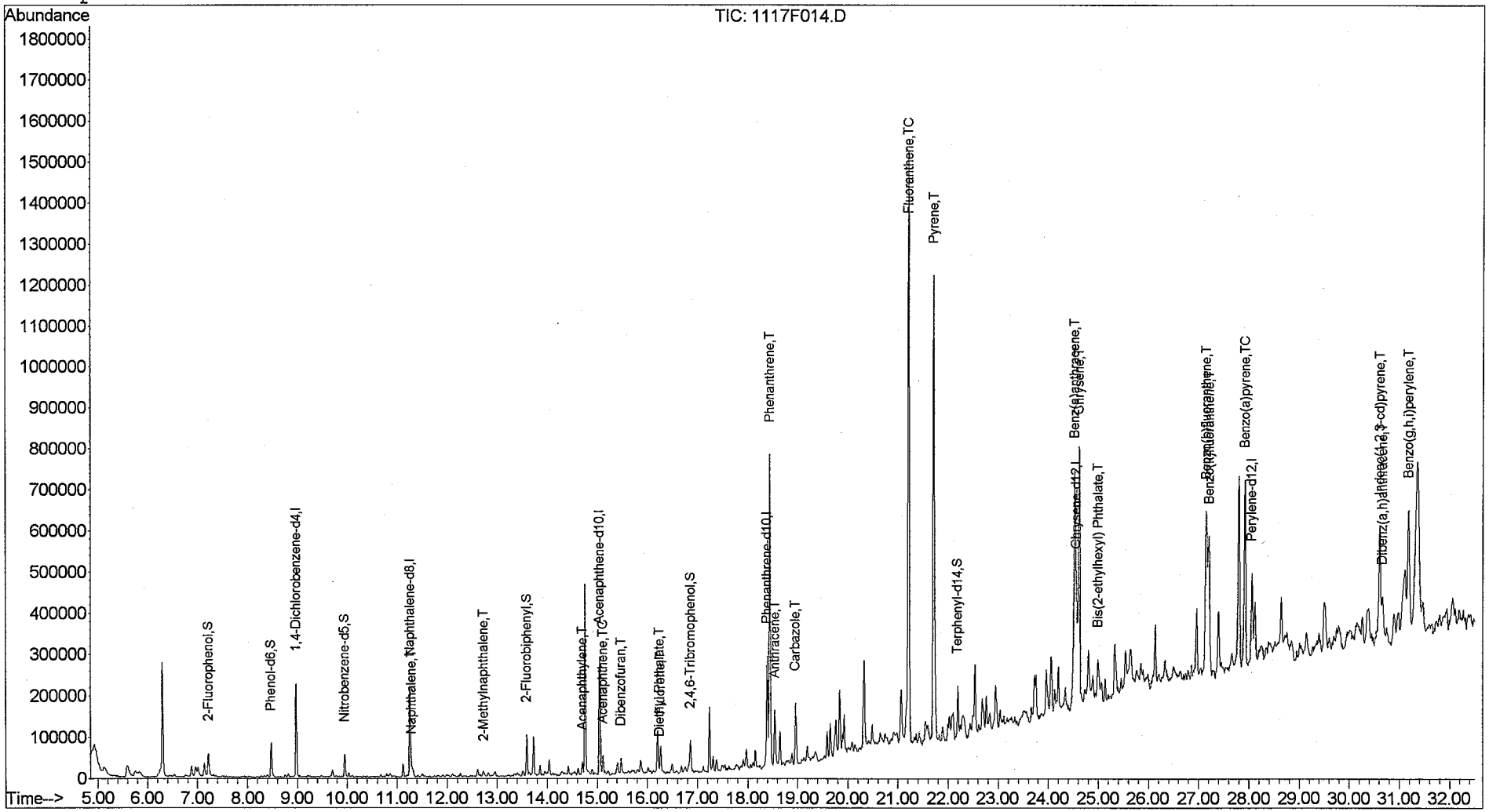
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83)	Benzo(g,h,i)perylene	31.19	276	270631	1726.45	ng/ml	86

(#) = qualifier out of range (m) = manual integration

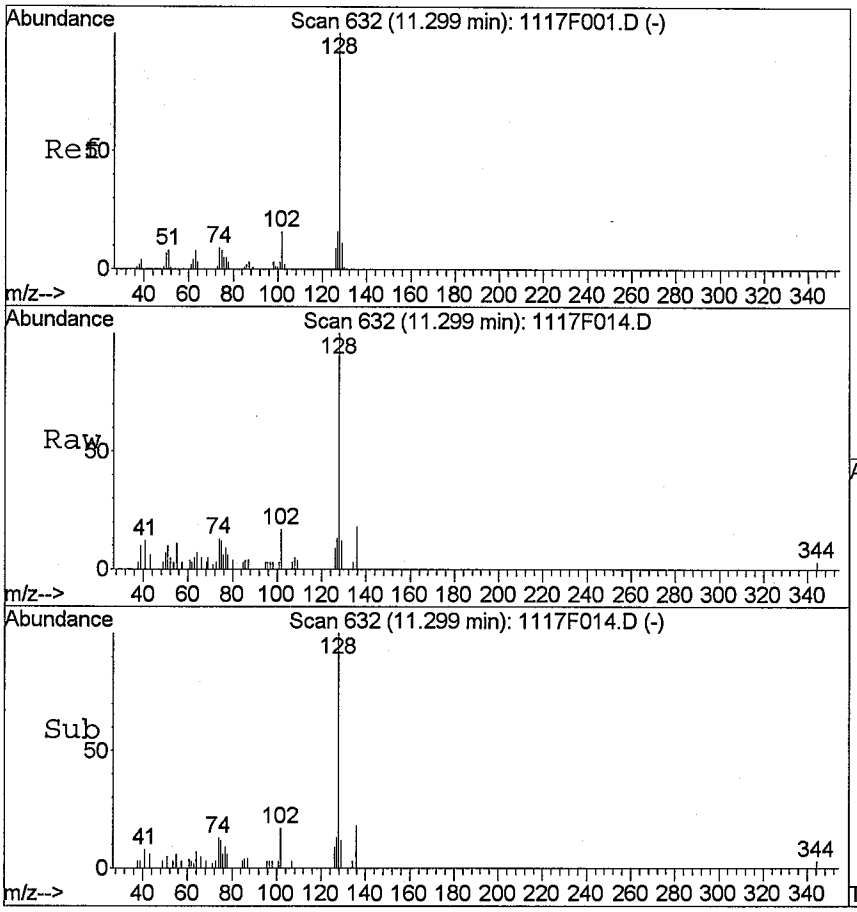
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F014.D Vial: 14
Acq On : 17 Nov 2003 18:23 Operator: JGISH
Sample : K2308433-001 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 9:20 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



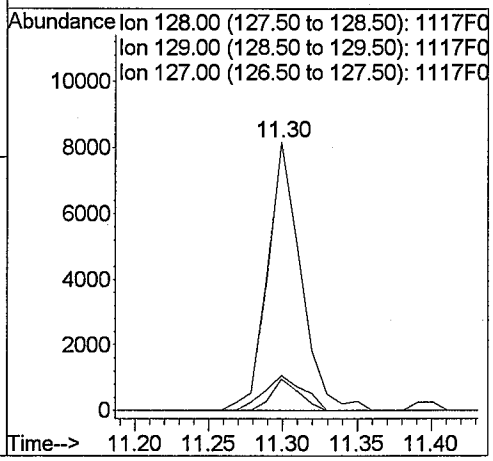
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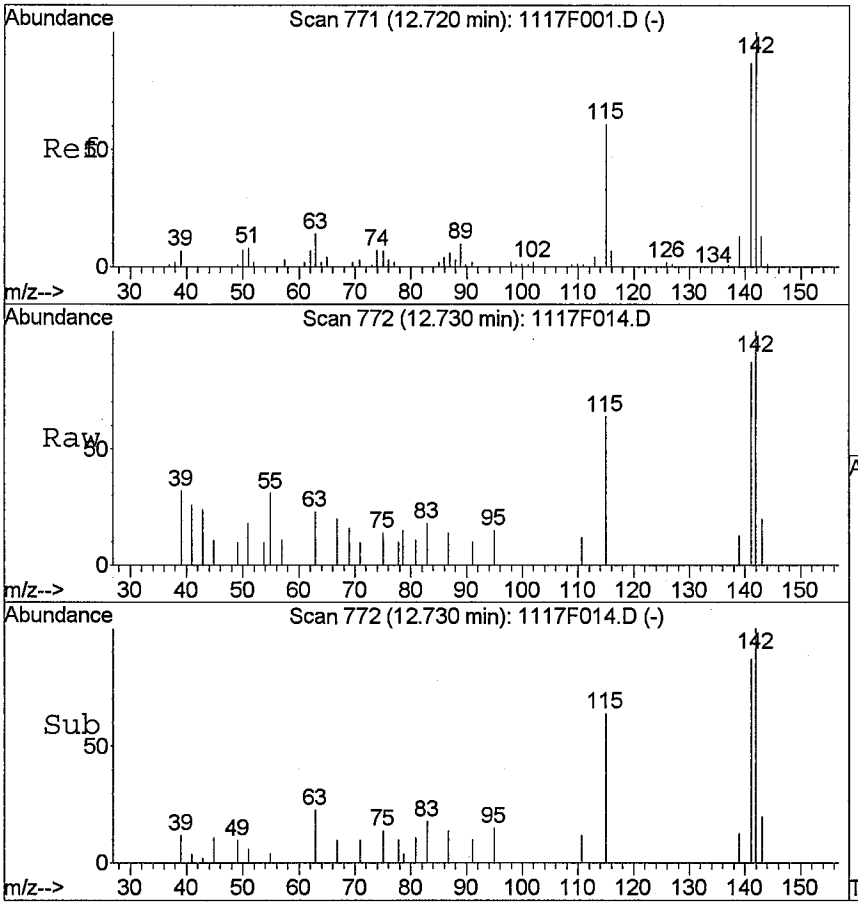


#29
Naphthalene
Concen: 81.66 ng/ml
RT: 11.30 min Scan# 632
Delta R.T. -0.00 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:128 Resp: 12761

Ion	Ratio	Lower	Upper
128	100		
129	11.8	0.0	41.3
127	13.0	0.0	44.2

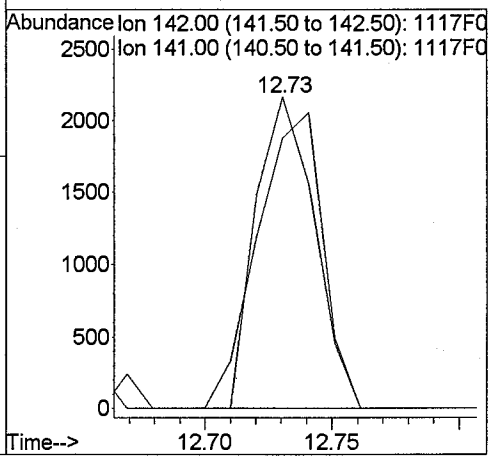


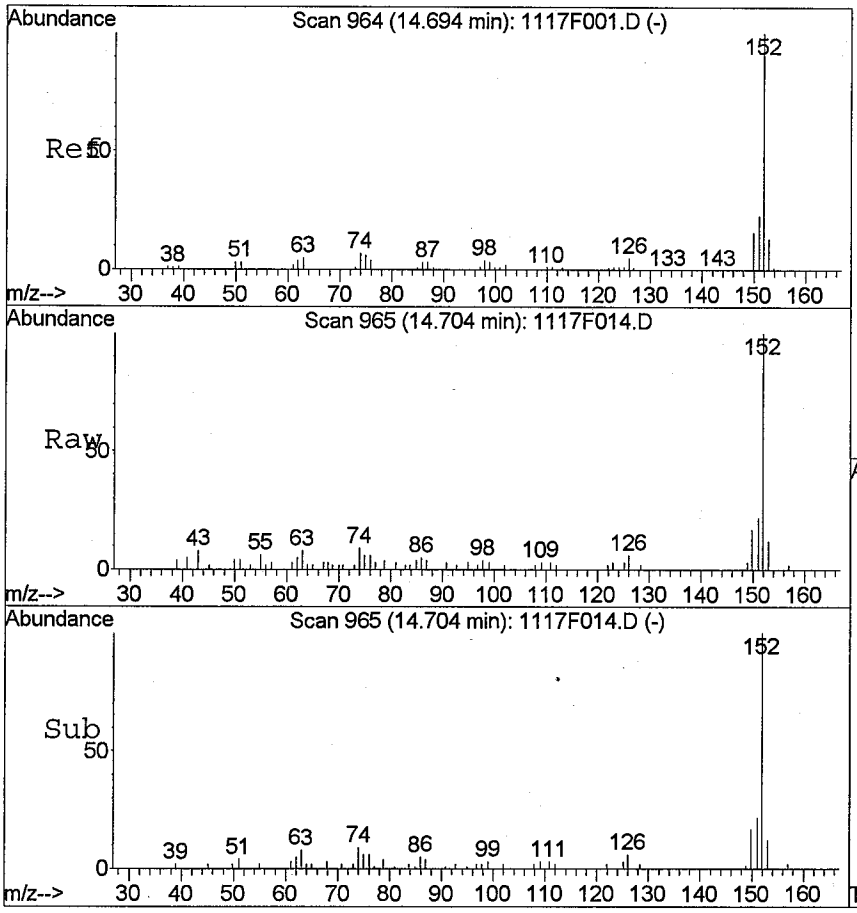


#33
2-Methylnaphthalene
Concen: 35.91 ng/ml
RT: 12.73 min Scan# 772
Delta R.T. 0.01 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:142 Resp: 3478

Ion	Ratio	Lower	Upper
142	100		
141	86.7	61.0	121.0

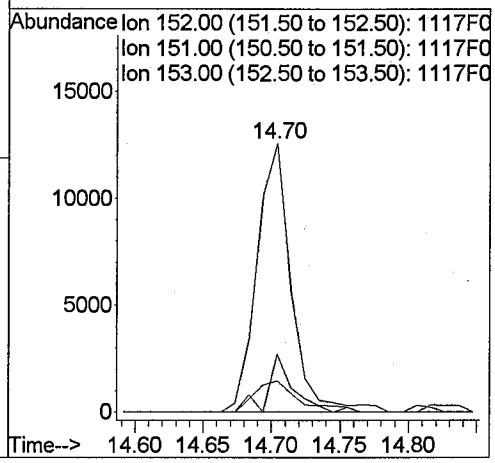


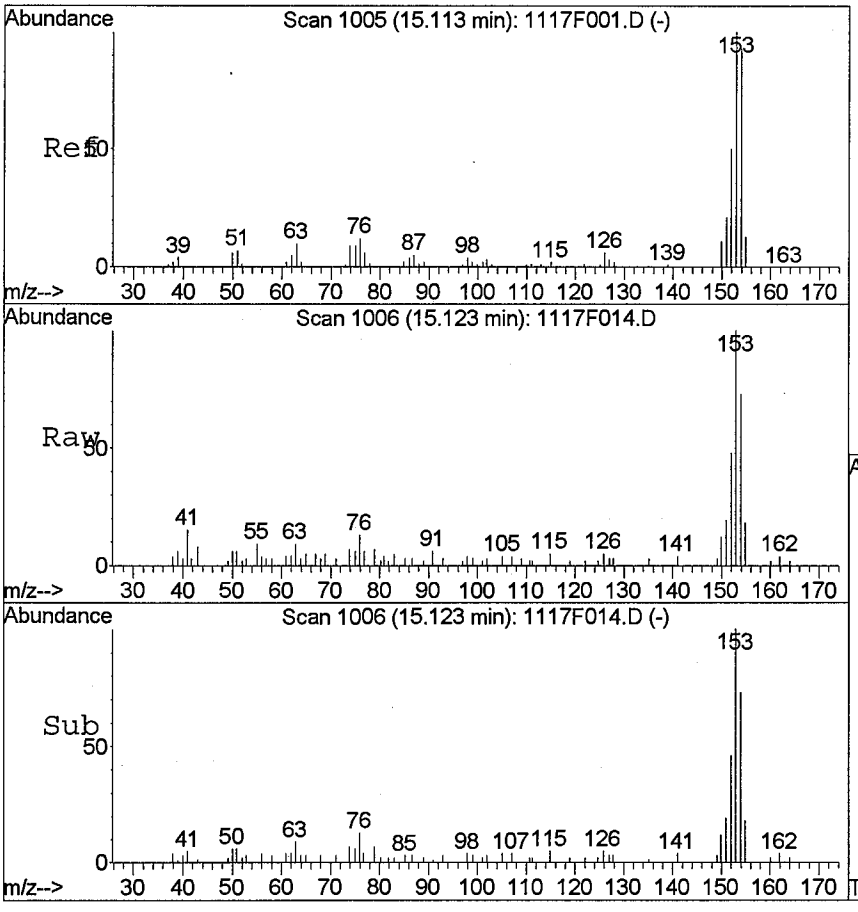


#41
Acenaphthylene
Concen: 147.83 ng/ml
RT: 14.70 min Scan# 965
Delta R.T. 0.02 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:152 Resp: 21900

Ion	Ratio	Lower	Upper
152	100		
151	21.6	0.0	51.5
153	11.7	0.0	42.9

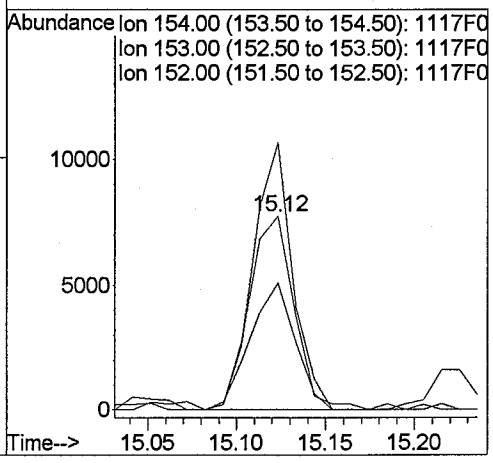


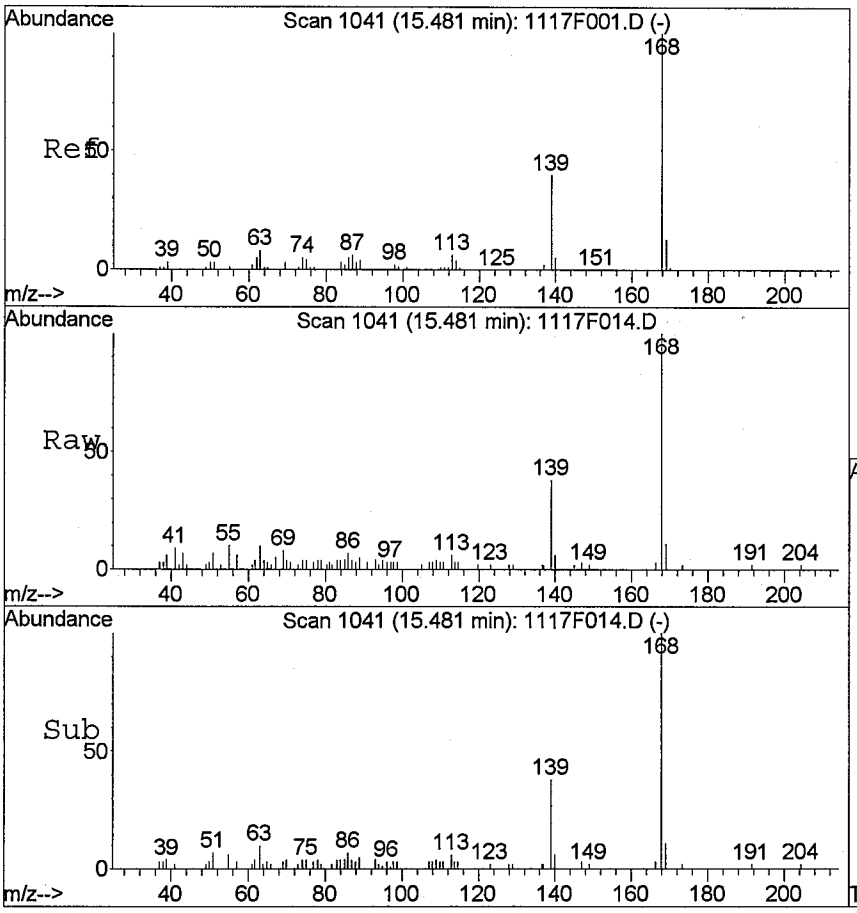


#44
Acenaphthene
Concen: 154.06 ng/ml
RT: 15.12 min Scan# 1006
Delta R.T. 0.01 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:154 Resp: 13672

Ion	Ratio	Lower	Upper
154	100		
153	137.7	82.4	142.4
152	65.8	24.4	84.4

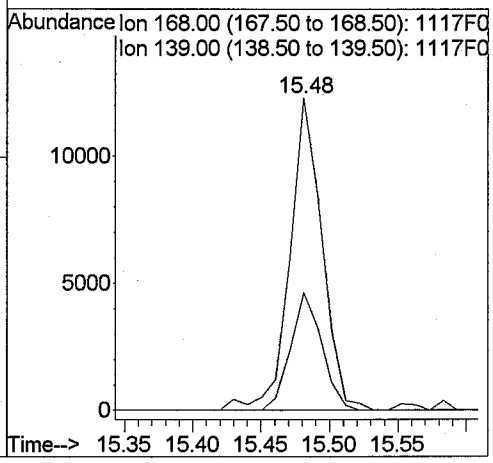


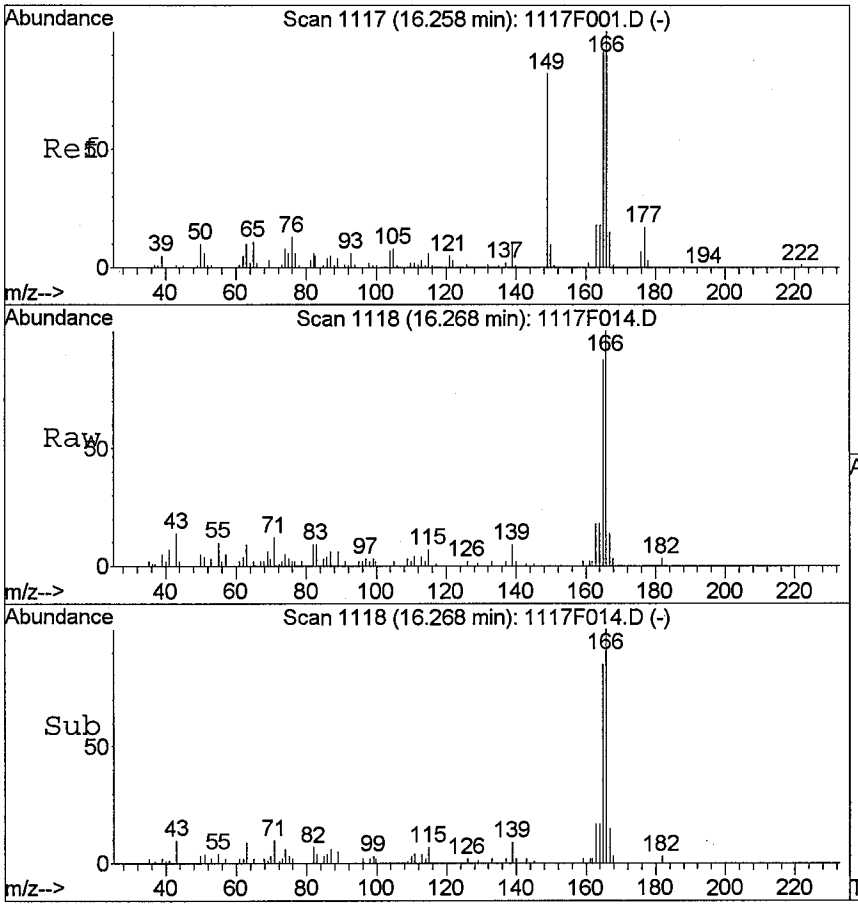


#47
Dibenzofuran
Concen: 128.75 ng/ml
RT: 15.48 min Scan# 1041
Delta R.T. 0.01 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:168 Resp: 20161

Ion	Ratio	Lower	Upper
168	100		
139	37.6	1.2	61.2

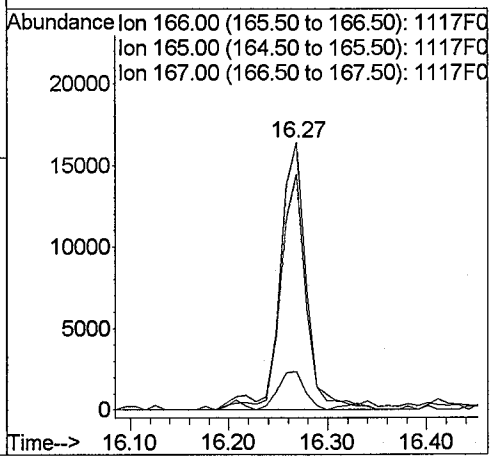


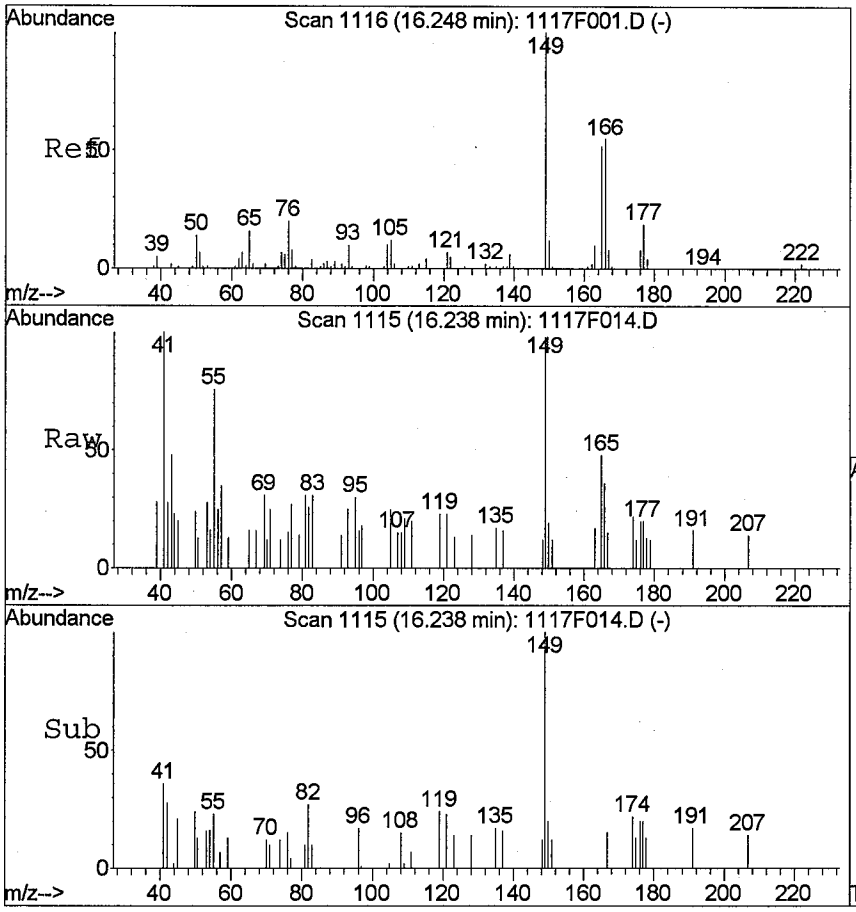


#50
Fluorene
Concen: 253.86 ng/ml
RT: 16.27 min Scan# 1118
Delta R.T. 0.01 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:166 Resp: 29333

Ion	Ratio	Lower	Upper
166	100		
165	86.7	63.2	123.2
167	14.4	0.0	43.0

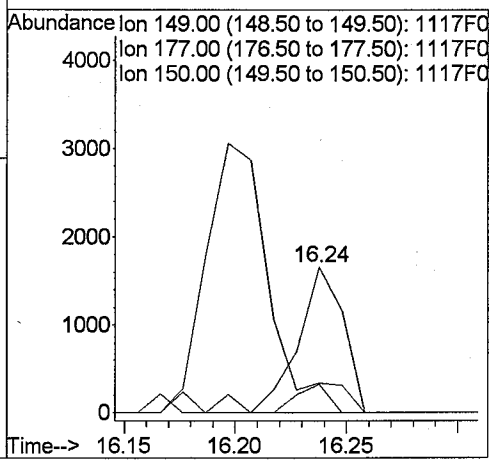


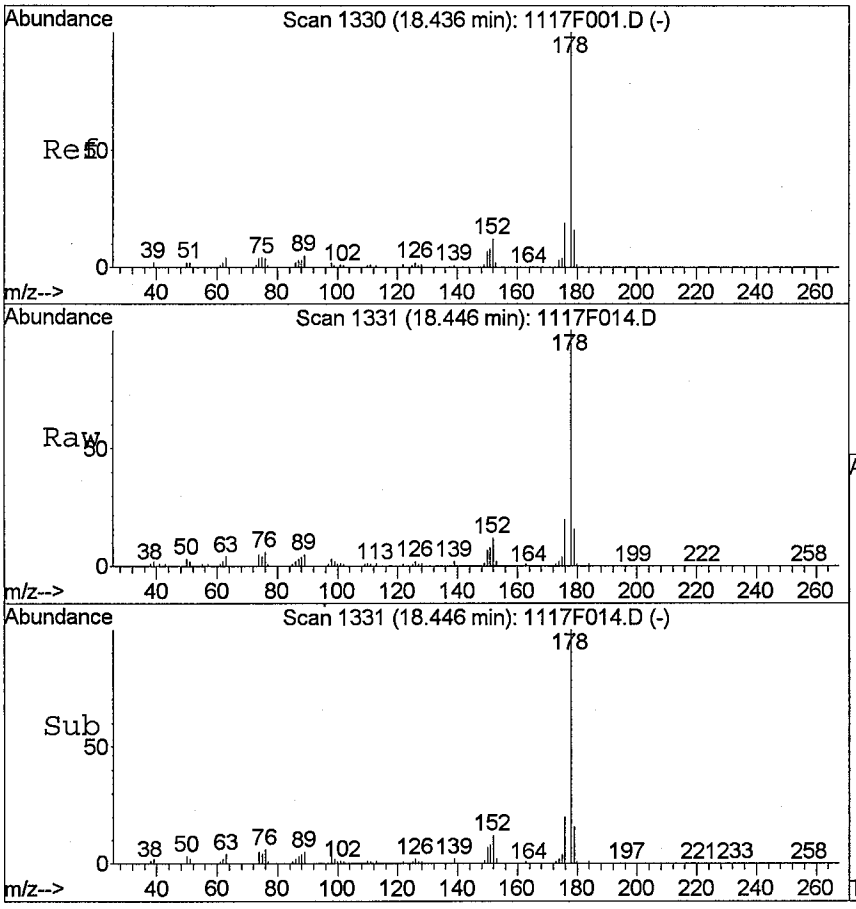


#52
Diethyl Phthalate
Concen: 17.05 ng/ml
RT: 16.24 min Scan# 1115
Delta R.T. -0.01 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:149 Resp: 2440

Ion	Ratio	Lower	Upper
149	100		
177	20.4	0.0	51.6
150	19.6	0.0	41.6

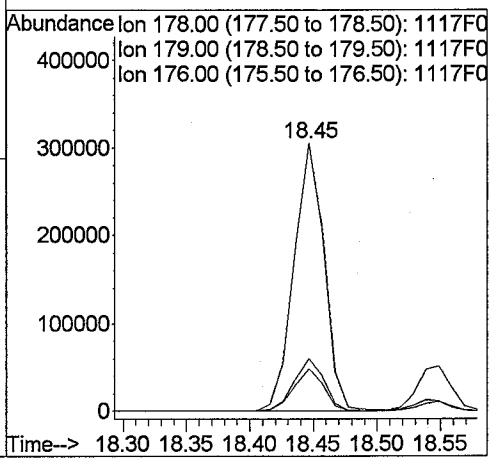


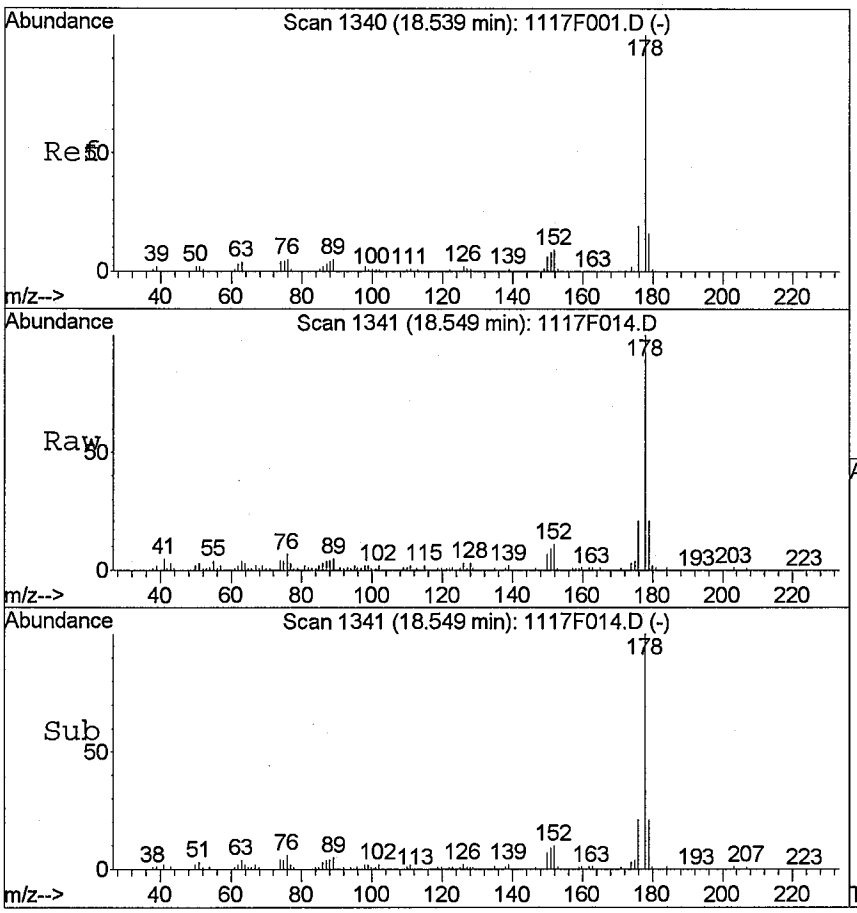


#62
Phenanthrene
Concen: 2882.85 ng/ml
RT: 18.45 min Scan# 1331
Delta R.T. 0.02 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:178 Resp: 505969

Ion	Ratio	Lower	Upper
178	100		
179	16.0	0.0	44.8
176	19.7	0.0	49.3

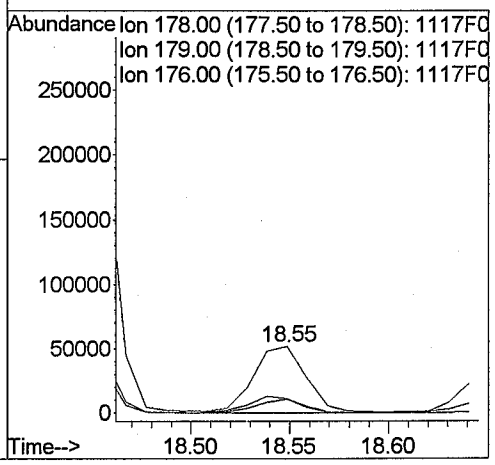


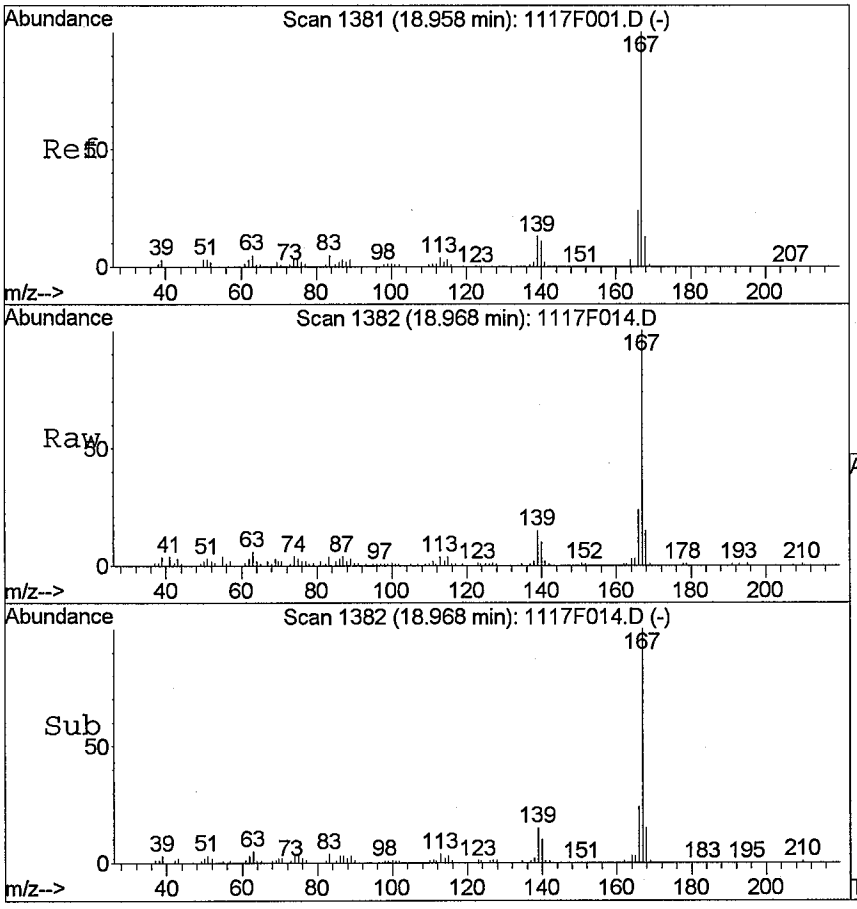


#63
Anthracene
Concen: 542.72 ng/ml
RT: 18.55 min Scan# 1341
Delta R.T. 0.02 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:178 Resp: 95980

Ion	Ratio	Lower	Upper
178	100		
179	21.3	0.0	44.7
176	21.3	0.0	49.8

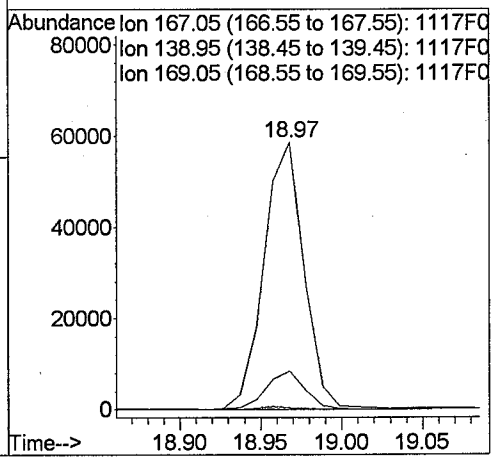


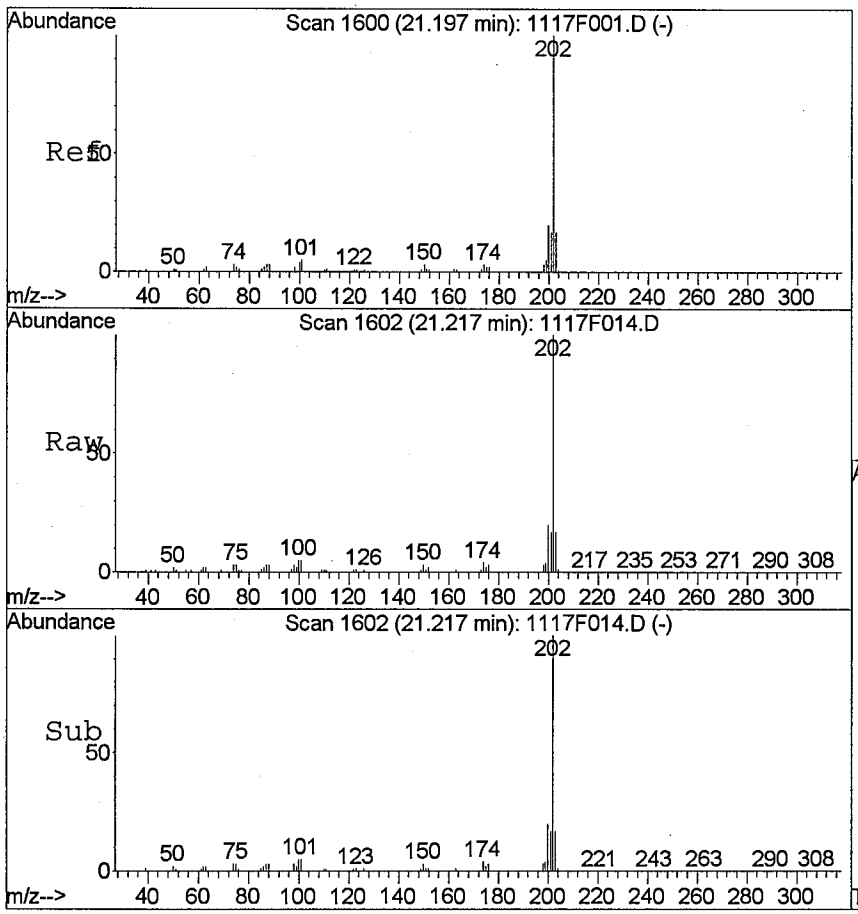


#64
Carbazole
Concen: 655.76 ng/ml
RT: 18.97 min Scan# 1382
Delta R.T. 0.02 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:167 Resp: 100877

Ion	Ratio	Lower	Upper
167	100		
139	14.5	0.0	41.7
169	0.7	0.0	30.8

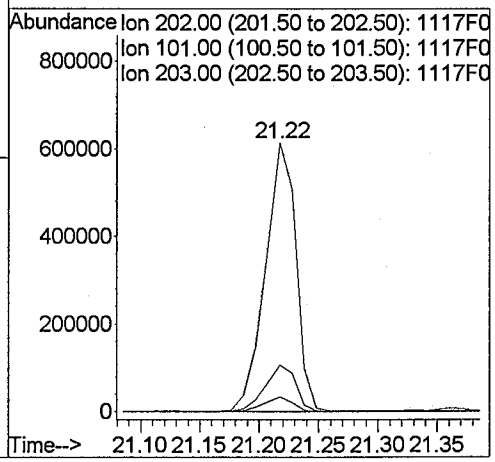


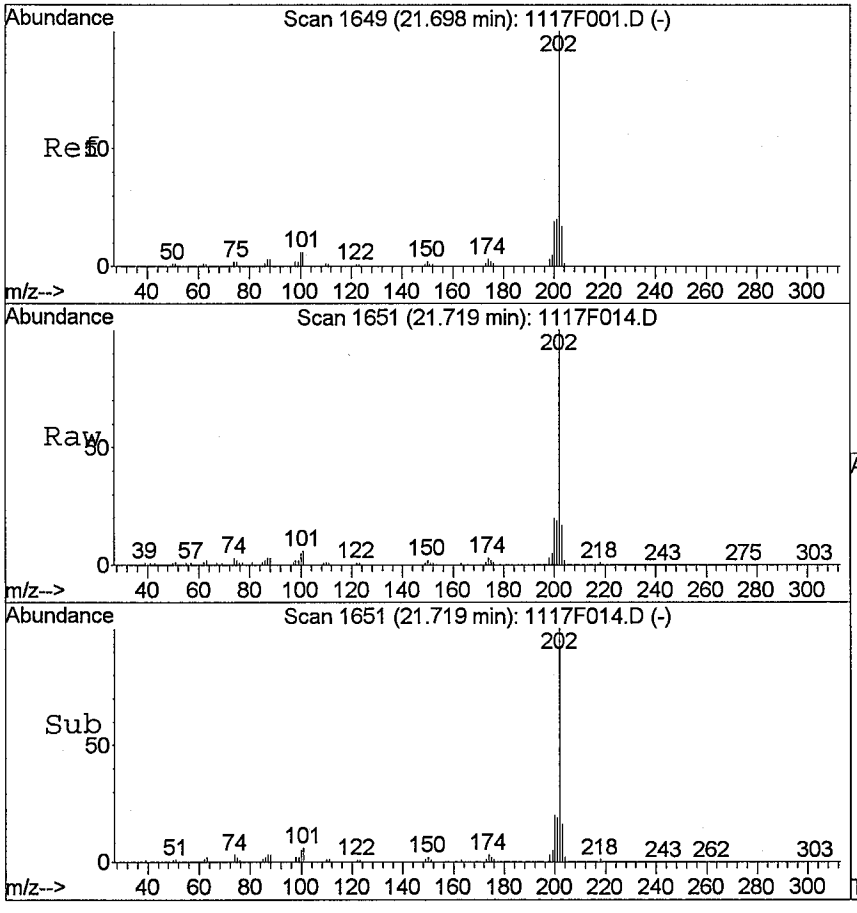


#66
Fluoranthene
Concen: 5729.94 ng/ml
RT: 21.22 min Scan# 1602
Delta R.T. 0.03 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:202 Resp: 1104733

Ion	Ratio	Lower	Upper
202	100		
101	5.4	0.0	42.0
203	17.2	0.0	47.2

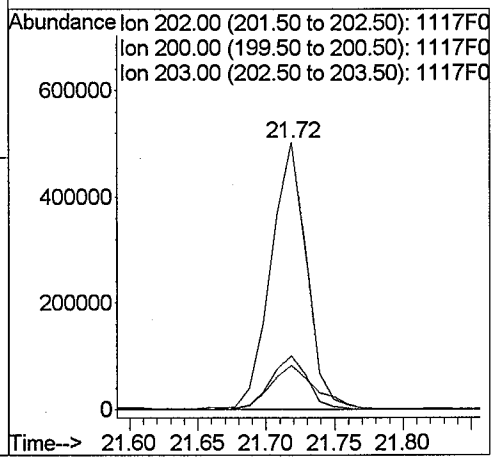


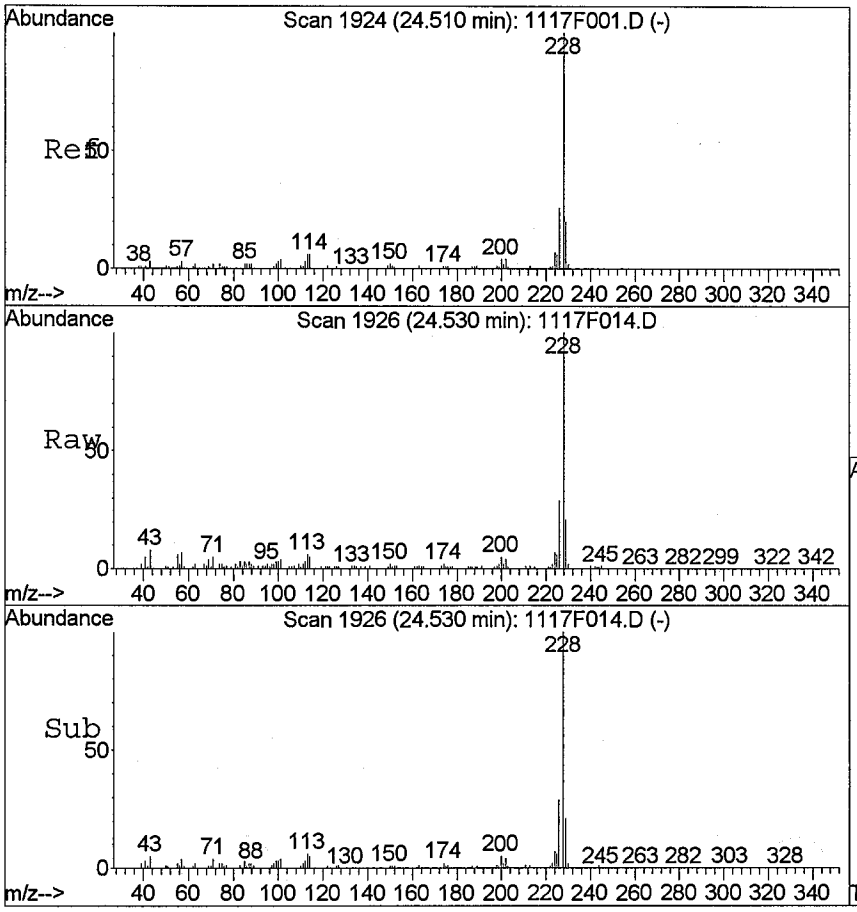


#69
Pyrene
Concen: 4256.29 ng/ml
RT: 21.72 min Scan# 1651
Delta R.T. 0.03 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:202 Resp: 907669

Ion	Ratio	Lower	Upper
202	100		
200	20.2	0.0	50.3
203	16.5	0.0	48.1

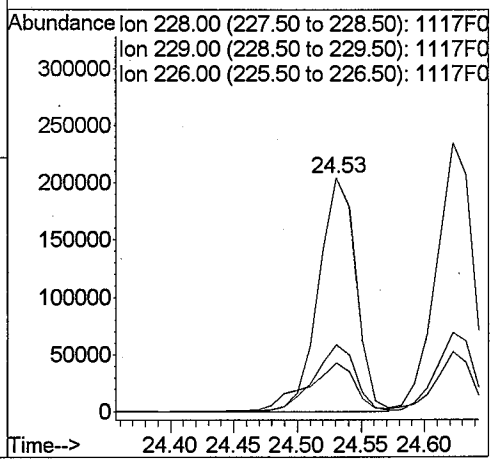


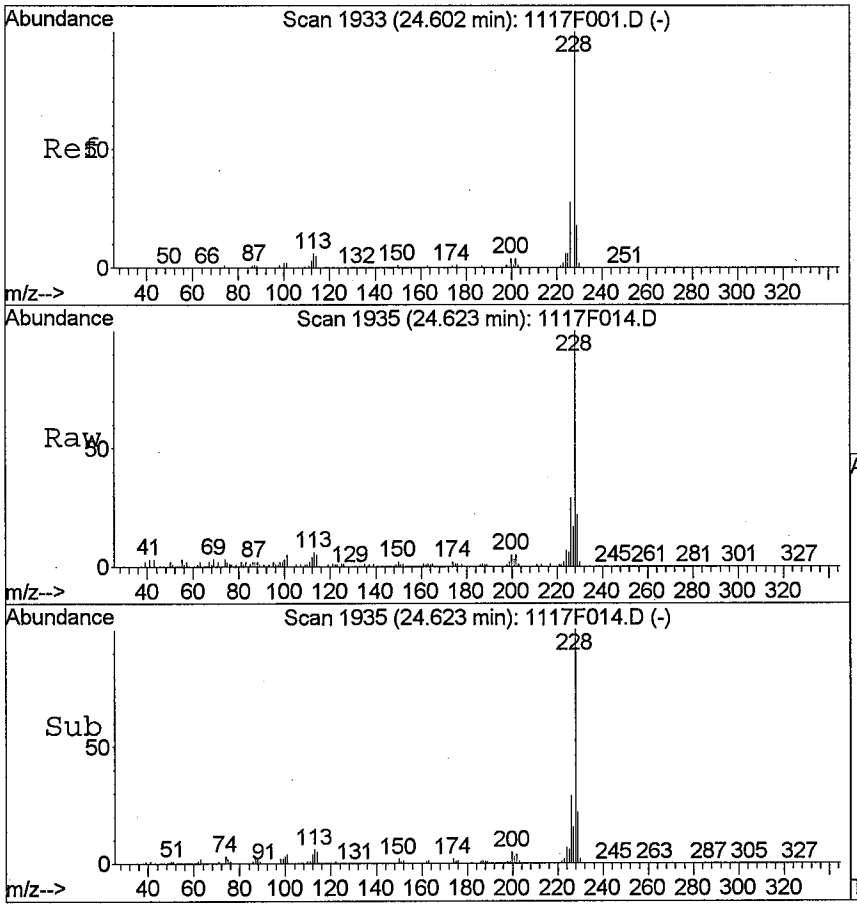


#73
Benz(a)anthracene
Concen: 2205.02 ng/ml
RT: 24.53 min Scan# 1926
Delta R.T. 0.03 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:228 Resp: 416391

Ion	Ratio	Lower	Upper
228	100		
229	20.5	0.0	48.5
226	28.7	0.0	55.6

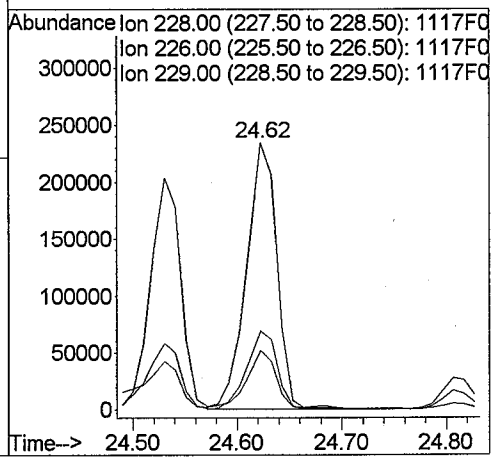


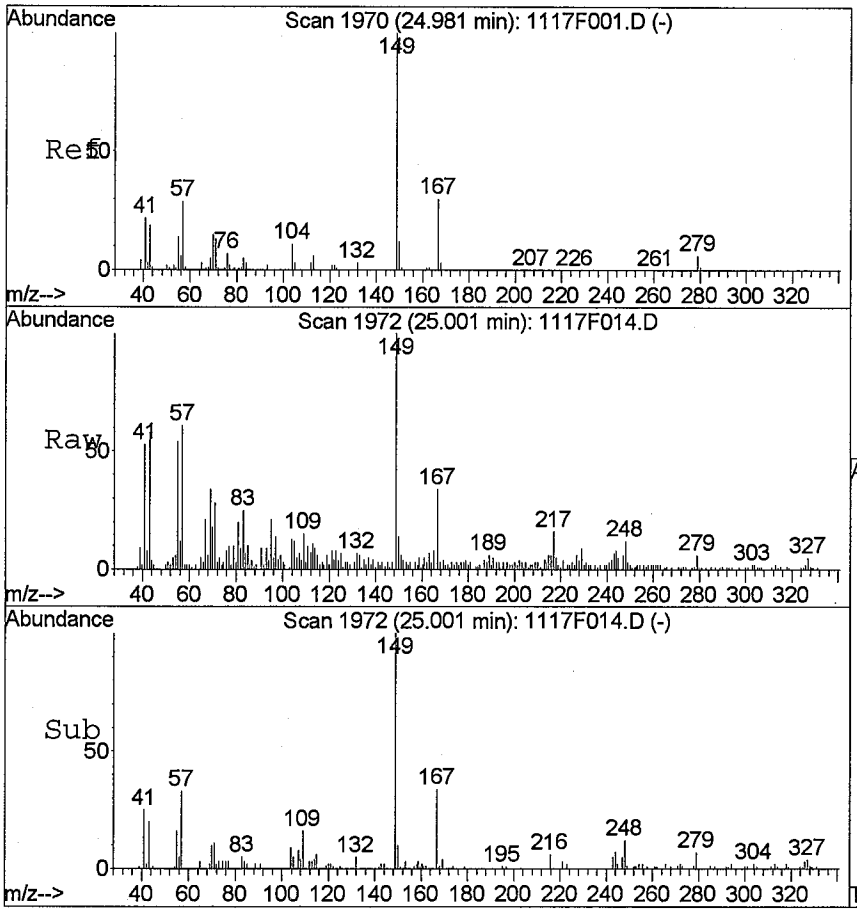


#74
Chrysene
Concen: 2644.65 ng/ml
RT: 24.62 min Scan# 1935
Delta R.T. 0.02 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:228 Resp: 473237

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.4
229	21.8	0.0	49.1

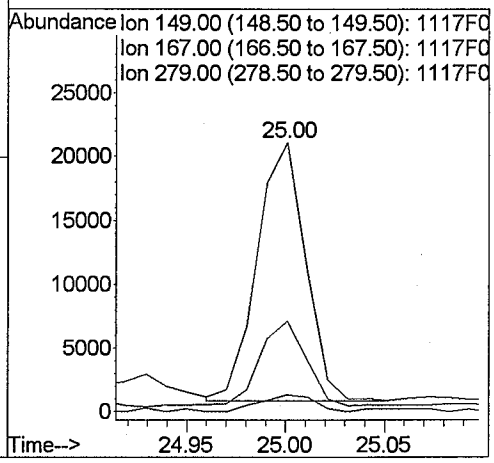


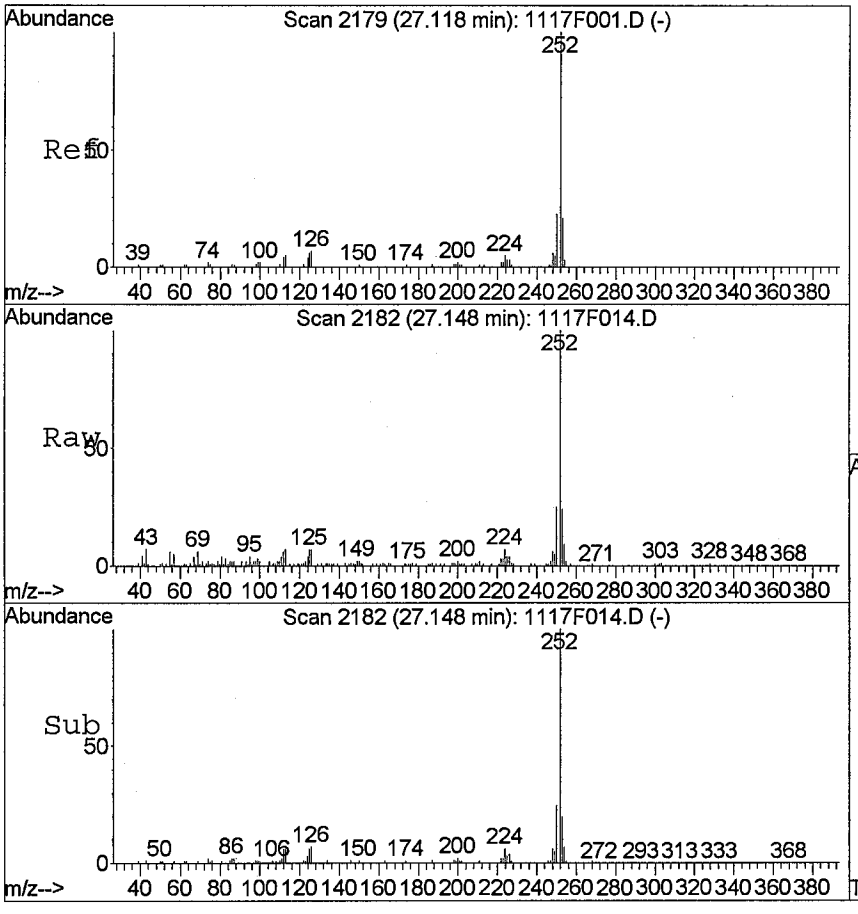


#75
Bis(2-ethylhexyl) Phthalate
Concen: 249.55 ng/ml
RT: 25.00 min Scan# 1972
Delta R.T. 0.02 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:149 Resp: 34354

Ion	Ratio	Lower	Upper
149	100		
167	32.9	0.2	60.2
279	6.7	0.0	34.5

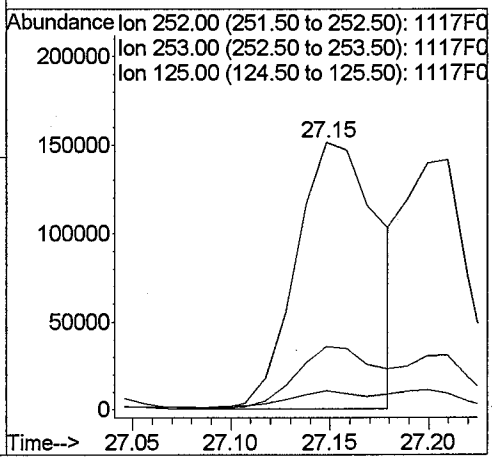


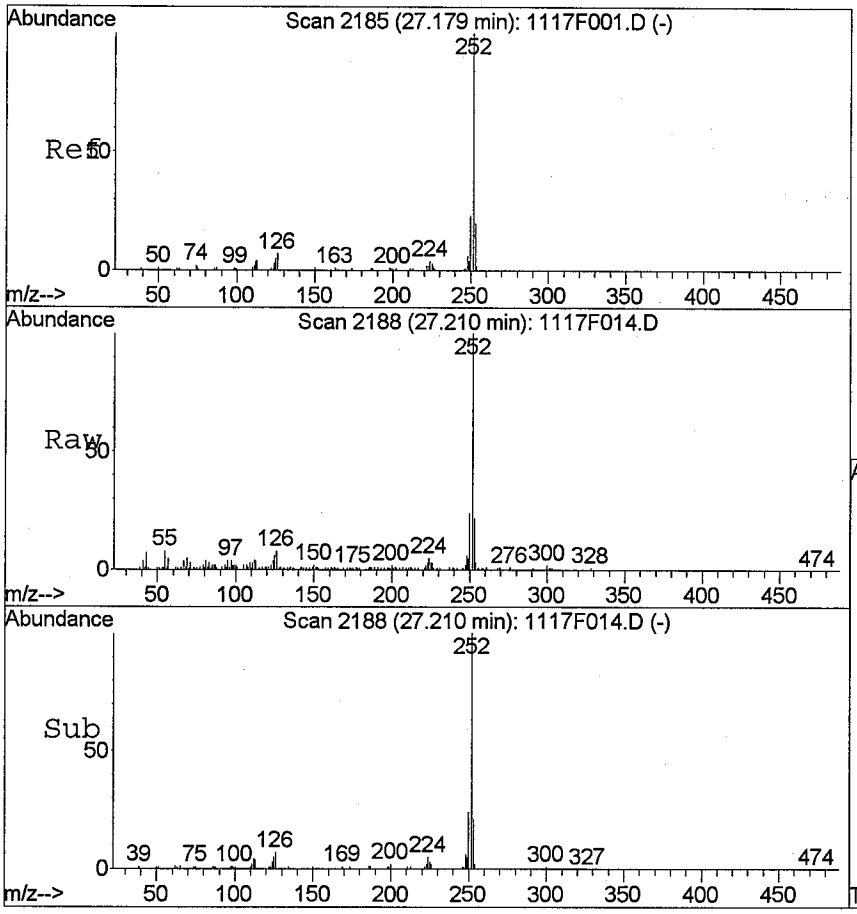


#78
Benzo(b)fluoranthene
Concen: 2549.22 ng/ml
RT: 27.15 min Scan# 2182
Delta R.T. 0.04 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:252 Resp: 435116

Ion	Ratio	Lower	Upper
252	100		
253	23.3	0.0	51.3
125	6.3	0.0	41.2

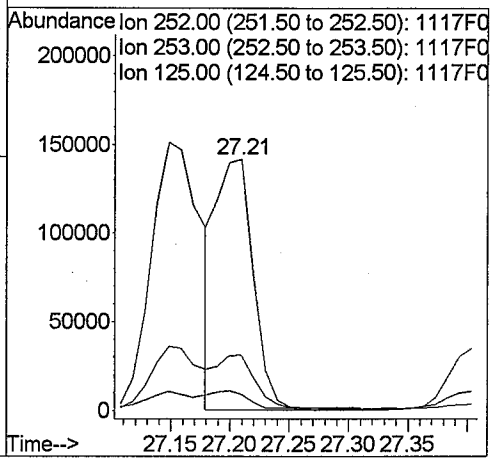


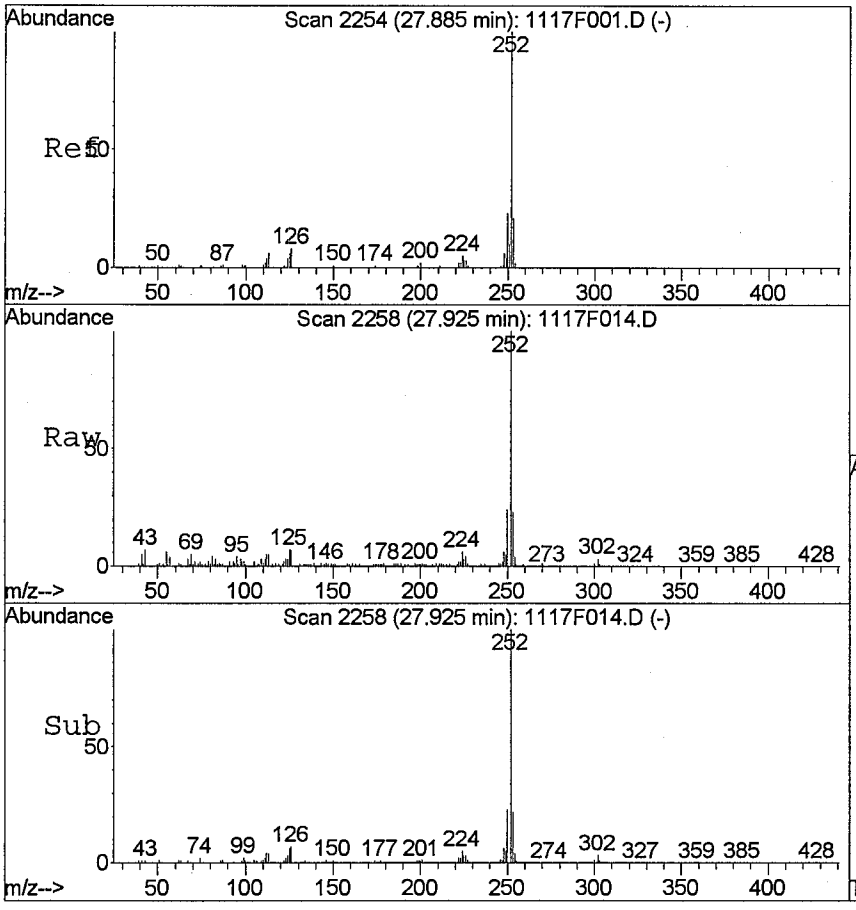


#79
Benzo(k)fluoranthene
Concen: 1914.18 ng/ml
RT: 27.21 min Scan# 2188
Delta R.T. 0.04 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:252 Resp: 310534

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.9
125	5.3	0.0	40.9

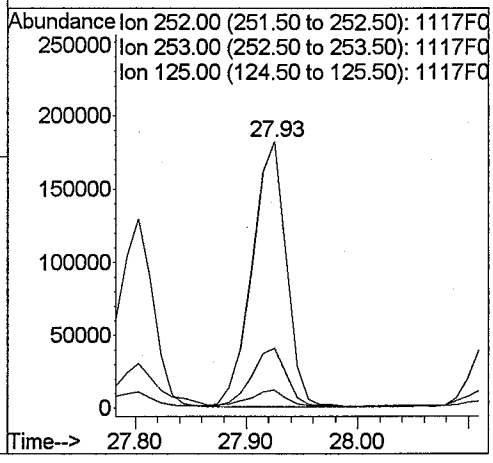


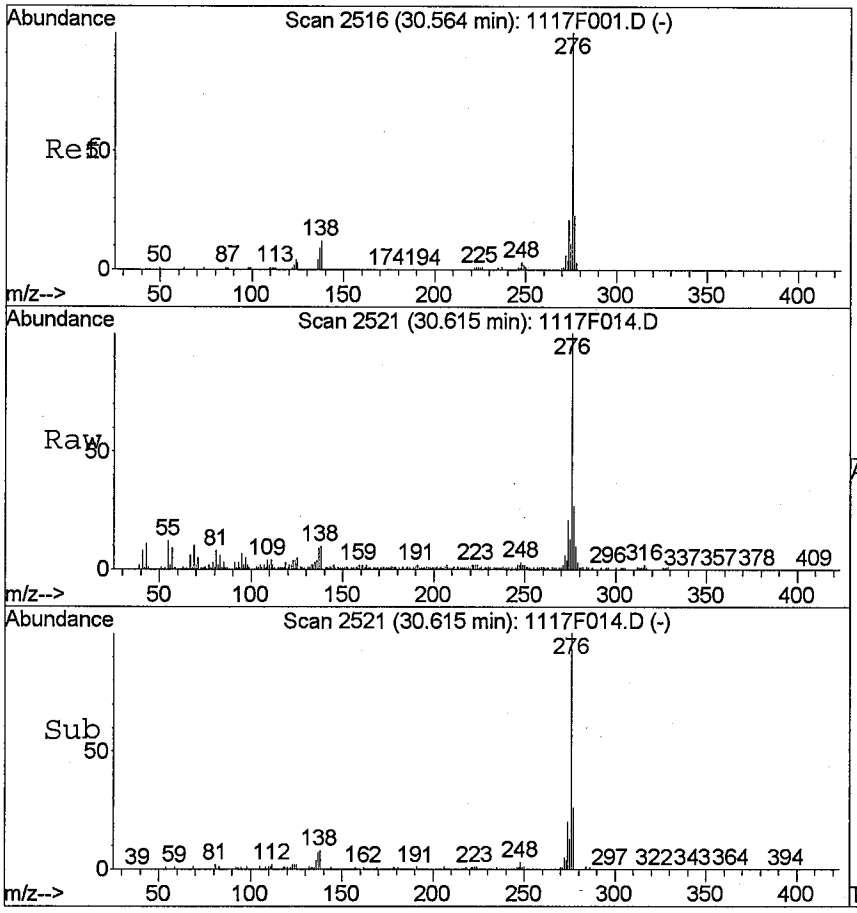


#80
Benzo(a)pyrene
Concen: 2400.63 ng/ml
RT: 27.93 min Scan# 2258
Delta R.T. 0.05 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:252 Resp: 388896

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	52.2
125	6.0	0.0	42.3

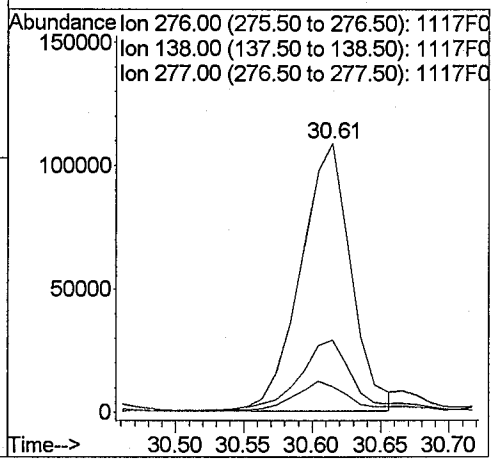


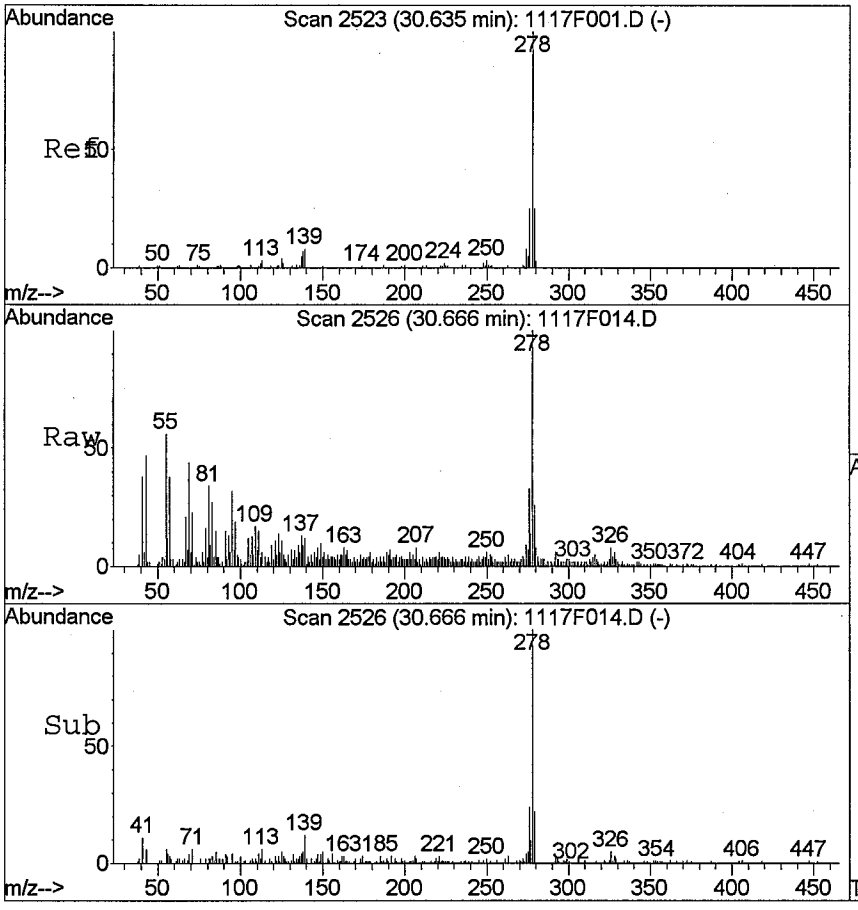


#81
Indeno(1,2,3-cd)pyrene
Concen: 1824.74 ng/ml
RT: 30.61 min Scan# 2521
Delta R.T. 0.05 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:276 Resp: 275881

Ion	Ratio	Lower	Upper
276	100		
138	8.8	0.0	51.4
277	26.5	0.0	54.0

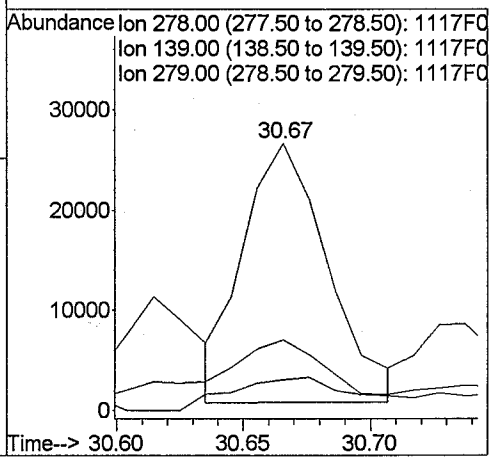


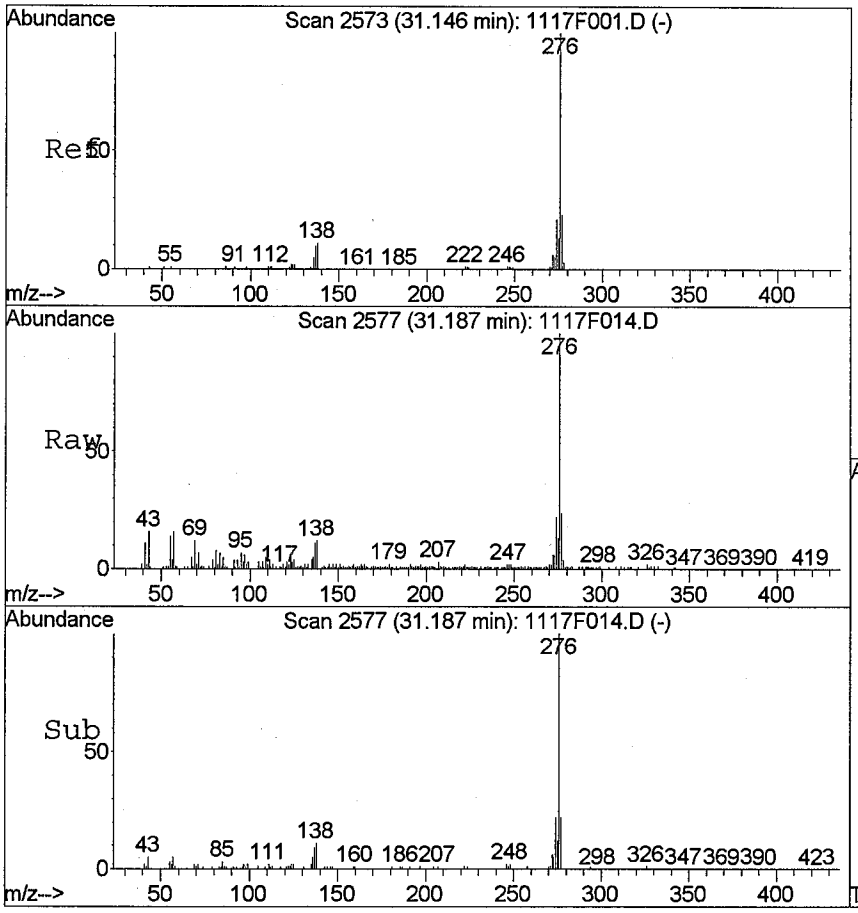


#82
Dibenz(a,h)anthracene
Concen: 402.56 ng/ml
RT: 30.67 min Scan# 2526
Delta R.T. 0.03 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:278 Resp: 59600

Ion	Ratio	Lower	Upper
278	100		
139	7.1	0.0	46.3
279	24.1	0.0	54.8

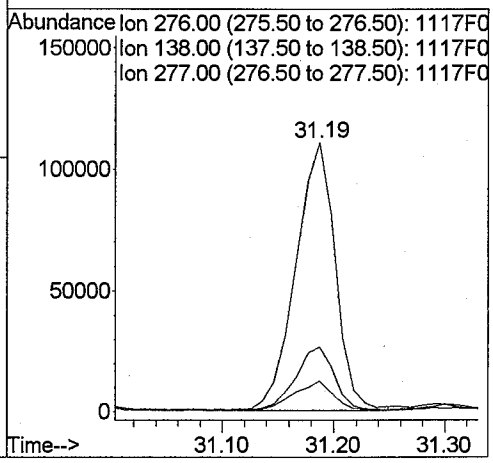




#83
Benzo(g,h,i)perylene
Concen: 1726.45 ng/ml
RT: 31.19 min Scan# 2577
Delta R.T. 0.05 min
Lab File: 1117F014.D
Acq: 17 Nov 2003 18:23

Tgt Ion:276 Resp: 270631

Ion	Ratio	Lower	Upper
276	100		
138	11.0	0.0	52.7
277	23.9	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-2
Lab Code: K2308433-002

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	160	5	10/30/03	11/17/03	KWG0317457	
2-Methylphenol	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
4-Methylphenol†	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
2,4-Dimethylphenol	ND	U	260	5	10/30/03	11/17/03	KWG0317457	
2,4-Dichlorophenol	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
Pentachlorophenol	ND	U	260	5	10/30/03	11/17/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	51	5	10/30/03	11/17/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	10/30/03	11/17/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	75	40-123	11/17/03	Acceptable
2,4,6-Tribromophenol	70	35-138	11/17/03	Acceptable
Terphenyl-d14	97	56-152	11/17/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111703\1117F015.D
Lab ID: K2308433-002
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/17/2003 19:04
Date Quantitated: 11/18/2003 09:21
Batch ID: KWG0318538
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

sample diluted due to matrix; will not be analyzed more concentrated

Primary Review: 11/18/3

Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318538	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245968	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111703\1117A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111703\1117F015.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 19:04	**Quant Date:**	11/18/2003 09:21	**Vial:**	15
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.98	0.01	152	52489	1,000.00	OK
2	Naphthalene-d8	11.26	0.00	136	150678	1,000.00	OK
3	Acenaphthene-d10	15.06	0.02	164	93536	1,000.00	OK
4	Phenanthrene-d10	18.39	0.02	188	171934	1,000.00	OK
5	Chrysene-d12	24.57	0.03	240	172827	1,000.00	OK
6	Perylene-d12	28.06	0.04	264	131497	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.47	0.01	0.00	99	37993	562.49	75	40-123	OK	
4	2,4,6-Tribromophenol	16.87	0.02	0.00	330	15155	521.54	70	35-138	OK	
5	Terphenyl-d14	22.20	0.01	0.00	244	65903	486.42	97	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		13	U	
1	2-Methylphenol				107	0		22	U	
1	4-Methylphenol				107	0		19	U	
2	2,4-Dimethylphenol				122	0		36	U	
2	2,4-Dichlorophenol				162	0		12	U	
3	2,4,6-Trichlorophenol				196	0		12	U	
4	Pentachlorophenol				266	0		55	U	
5	Butyl Benzyl Phthalate				149	0		9.8	U	
5	Bis(2-ethylhexyl) Phthalate	25.00	0.02	0.00	149	34016	245.78	120	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F015.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 19:04	**Quant Date:**	11/18/2003 09:21	**Vial:**	15
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-002			**Soln Conc. Units:**	ng/ml

Prep Amount:	25.77 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	77.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F015.D Vial: 15
Acq On : 17 Nov 2003 19:04 Operator: JGISH
Sample : K2308433-002 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 08:48:46 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	52489	1000.00	ng/ml	0.01
21) Naphthalene-d8	11.26	136	150678	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.06	164	93536	1000.00	ng/ml	0.01
57) Phenanthrene-d10	18.39	188	171934	1000.00	ng/ml	0.01
67) Chrysene-d12	24.57	240	172827	1000.00	ng/ml	0.02
76) Perylene-d12	28.06	264	131497	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	25926	460.02	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 12.27%#			
6) Phenol-d6	8.47	99	37993	562.49	ng/ml	0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 15.00%#			
19) Nitrobenzene-d5	9.95	82	26245	313.06	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.52%#			
38) 2-Fluorobiphenyl	13.59	172	43817	337.91	ng/ml	0.01
Spiked Amount 2500.000	Range 37 - 126		Recovery = 13.52%#			
58) 2,4,6-Tribromophenol	16.87	330	15155	521.54	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 157		Recovery = 13.91%#			
70) Terphenyl-d14	22.20	244	65903	486.42	ng/ml	0.01
Spiked Amount 2500.000	Range 54 - 158		Recovery = 19.46%#			
Target Compounds						Qvalue
29) Naphthalene	11.30	128	8375	53.27	ng/ml	95
33) 2-Methylnaphthalene	12.73	142	2655	27.25	ng/ml	92
41) Acenaphthylene	14.70	152	10679	71.29	ng/ml	97
44) Acenaphthene	15.12	154	6878	76.65	ng/ml	95
47) Dibenzofuran	15.49	168	8069	50.96	ng/ml	76
50) Fluorene	16.26	166	10372	88.77	ng/ml	99
52) Diethyl Phthalate	16.24	149	3791	26.20	ng/ml	86
62) Phenanthrene	18.44	178	159963	857.75	ng/ml	98
63) Anthracene	18.54	178	30009	159.69	ng/ml	94
64) Carbazole	18.96	167	29313	179.33	ng/ml	99
65) Di-n-butyl Phthalate	20.05	149	4051	17.79	ng/ml	79
66) Fluoranthene	21.21	202	440595	2150.67	ng/ml	93
69) Pyrene	21.71	202	355171	1656.62	ng/ml	98
73) Benz(a)anthracene	24.52	228	146598	772.18	ng/ml	94
74) Chrysene	24.62	228	180318	1002.33	ng/ml	97
75) Bis(2-ethylhexyl) Phthalat	25.00	149	34016	245.78	ng/ml	91
78) Benzo(b)fluoranthene	27.14	252	171257	957.79	ng/ml	93
79) Benzo(k)fluoranthene	27.19	252	111878	658.32	ng/ml	96
80) Benzo(a)pyrene	27.91	252	137899	812.59	ng/ml	93
81) Indeno(1,2,3-cd)pyrene	30.61	276	104059	657.02	ng/ml	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F015.D Vial: 15
Acq On : 17 Nov 2003 19:04 Operator: JGISH
Sample : K2308433-002 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 08:48:46 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

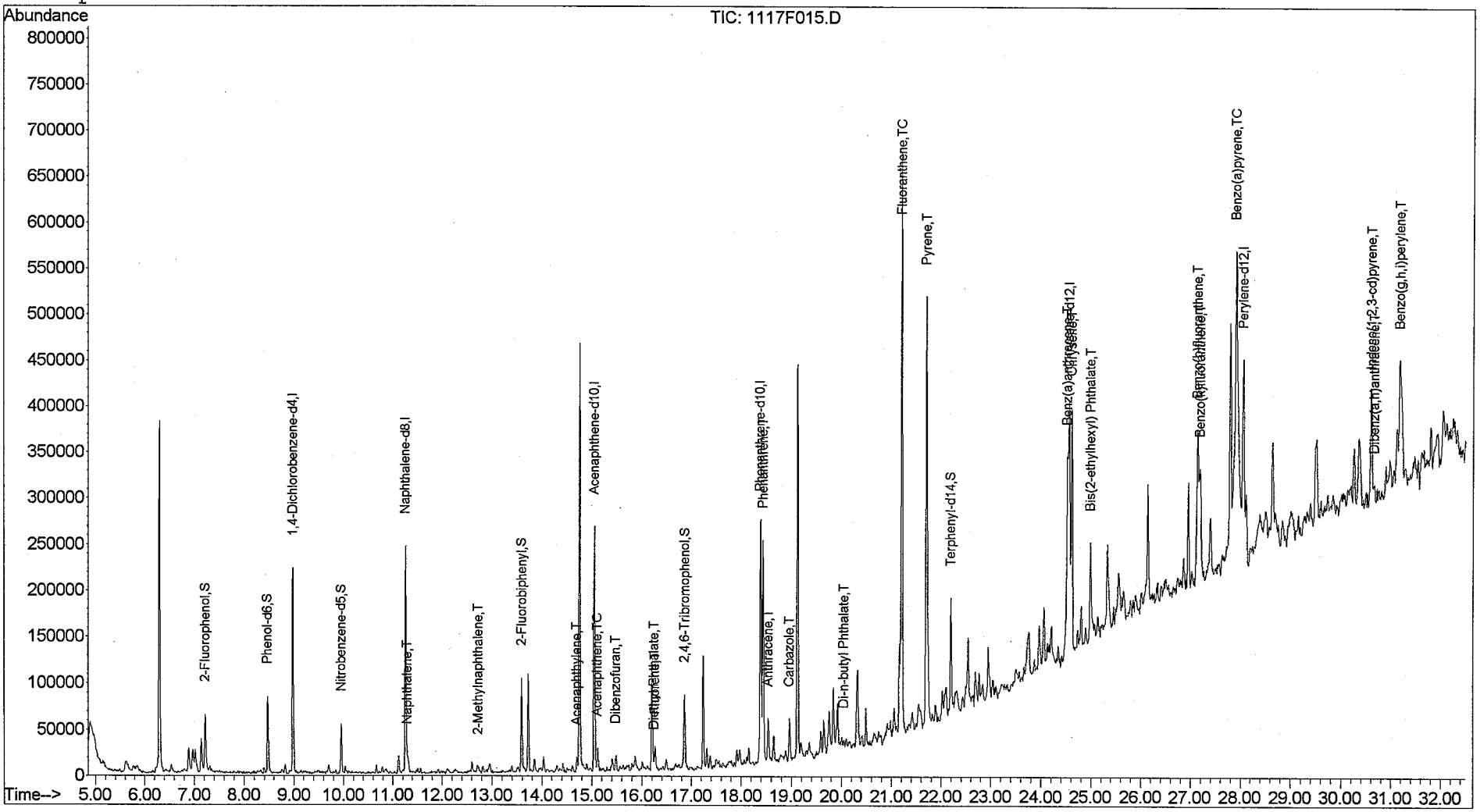
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	Dibenz(a,h)anthracene	30.67	278	19696	127.00	ng/ml	82
83)	Benzo(g,h,i)perylene	31.18	276	104399	635.76	ng/ml	88

(#) = qualifier out of range (m) = manual integration

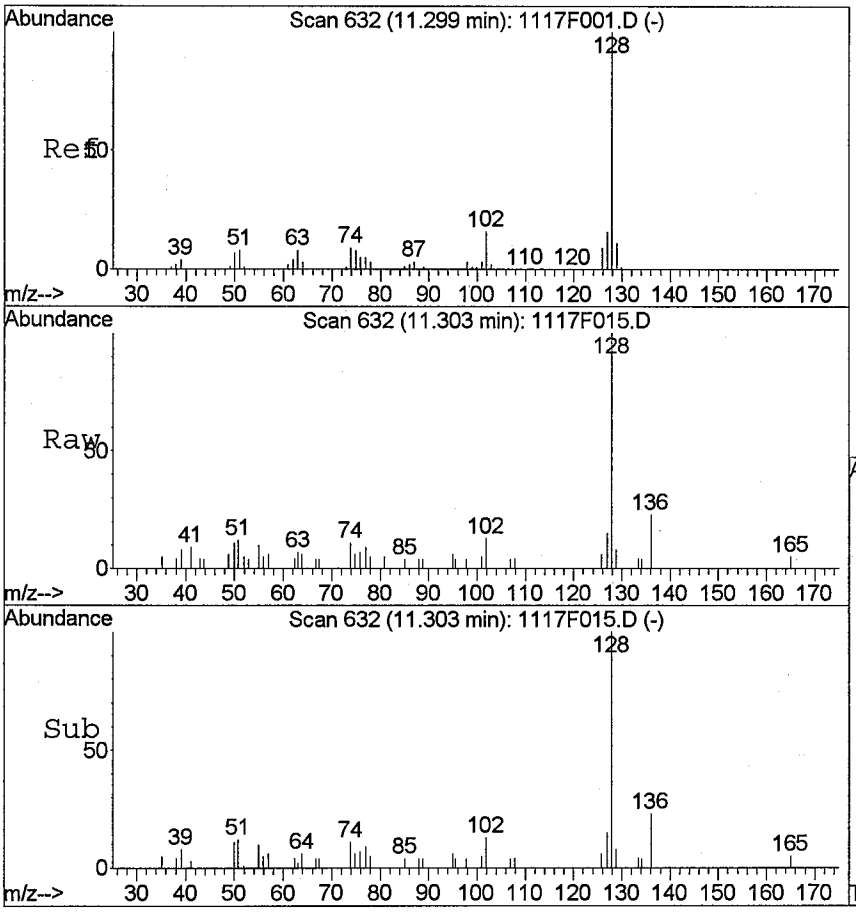
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F015.D Vial: 15
Acq On : 17 Nov 2003 19:04 Operator: JGISH
Sample : K2308433-002 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 9:21 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



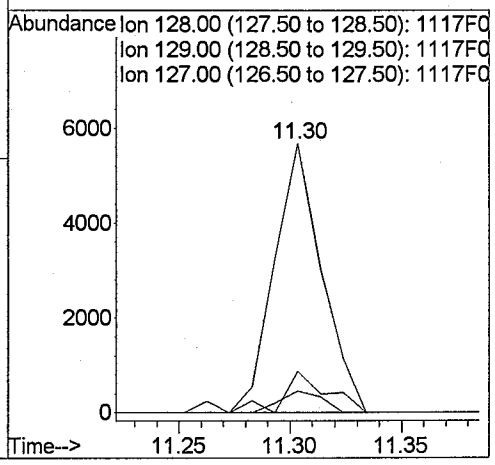
1865

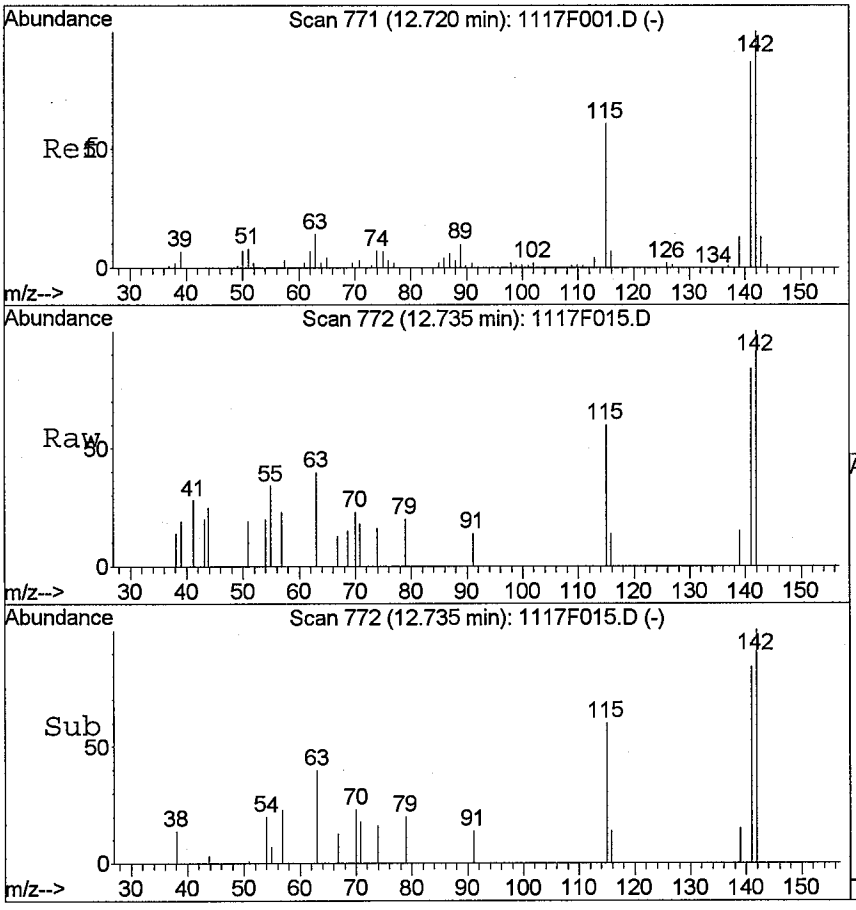


#29
Naphthalene
Concen: 53.27 ng/ml
RT: 11.30 min Scan# 632
Delta R.T. 0.00 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:128 Resp: 8375

Ion	Ratio	Lower	Upper
128	100		
129	8.1	0.0	41.3
127	15.4	0.0	44.2

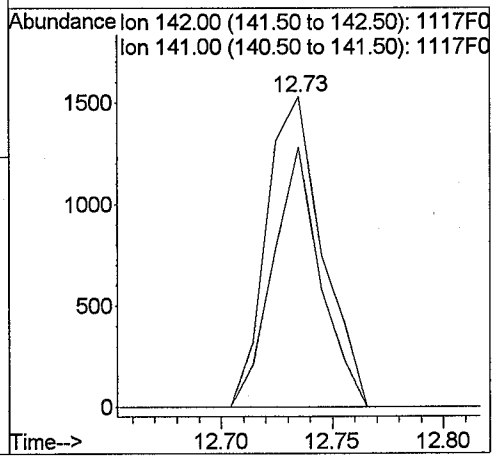


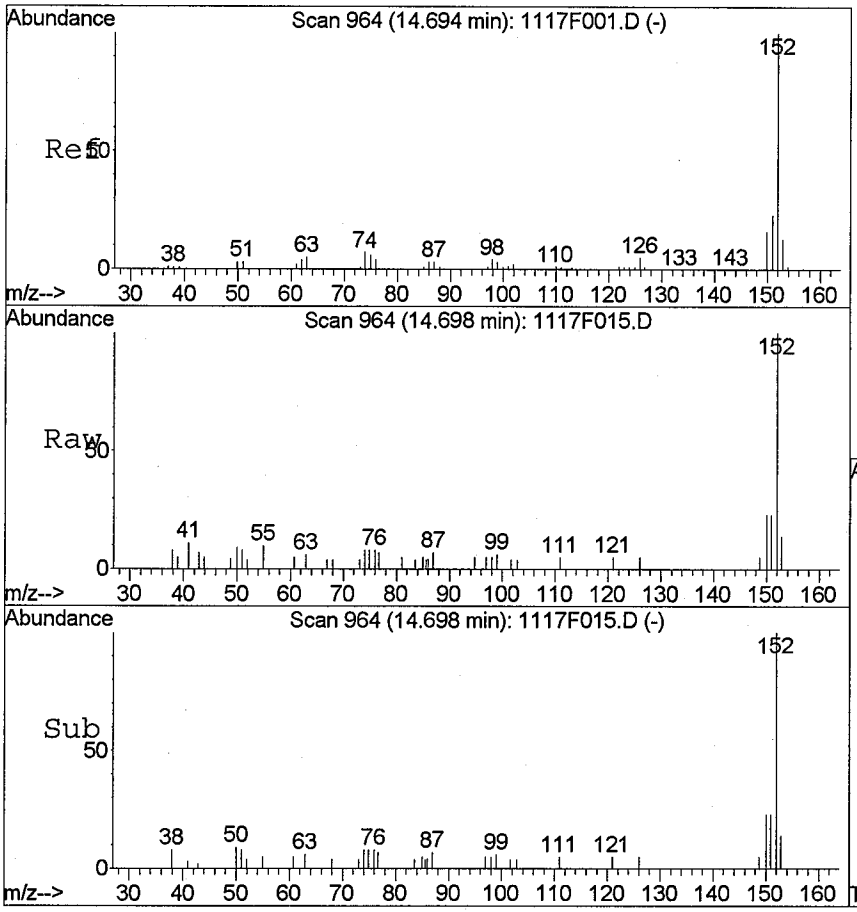


#33
2-Methylnaphthalene
Concen: 27.25 ng/ml
RT: 12.73 min Scan# 772
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:142 Resp: 2655

Ion	Ratio	Lower	Upper
142	100		
141	83.8	61.0	121.0

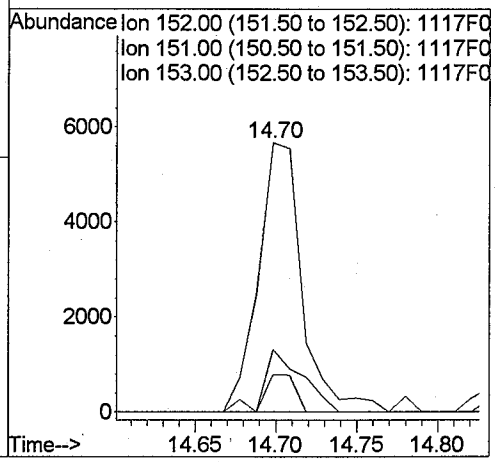


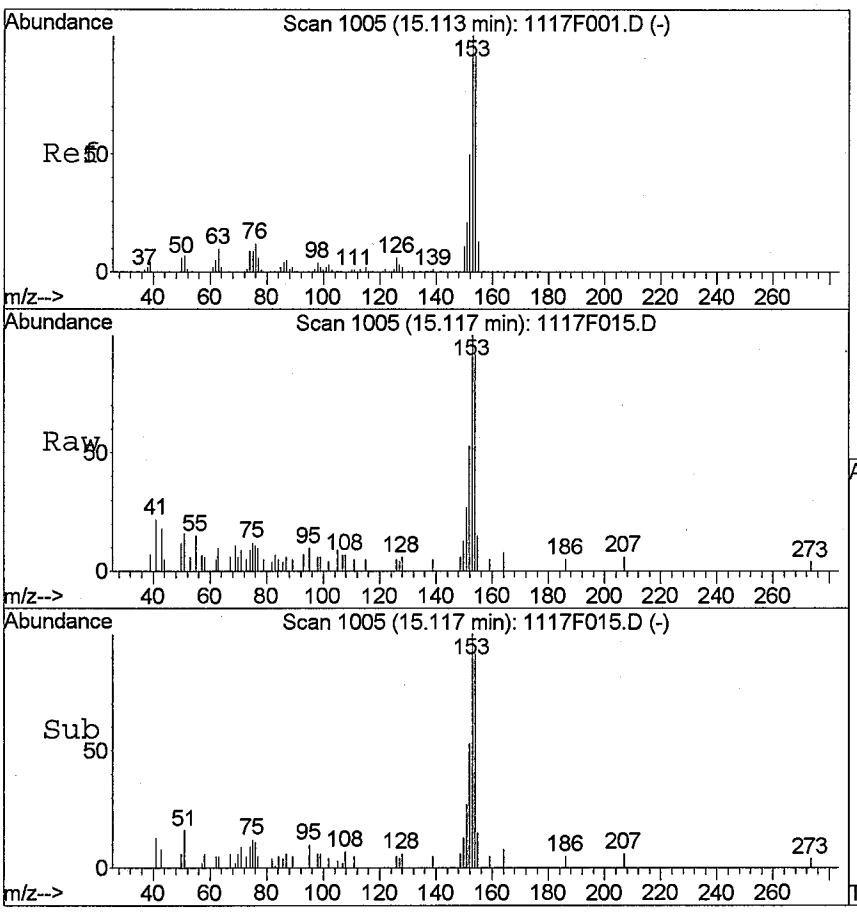


#41
Acenaphthylene
Concen: 71.29 ng/ml
RT: 14.70 min Scan# 964
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:152 Resp: 10679

Ion	Ratio	Lower	Upper
152	100		
151	23.3	0.0	51.5
153	14.0	0.0	42.9

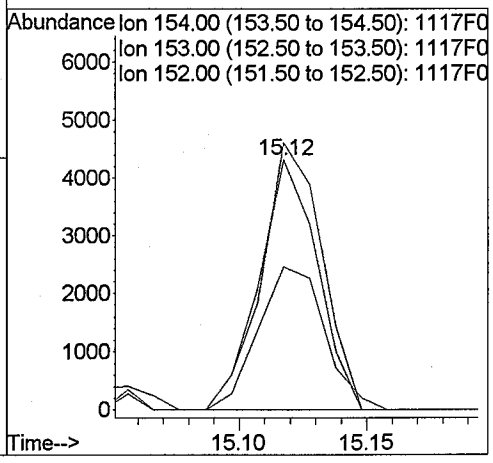


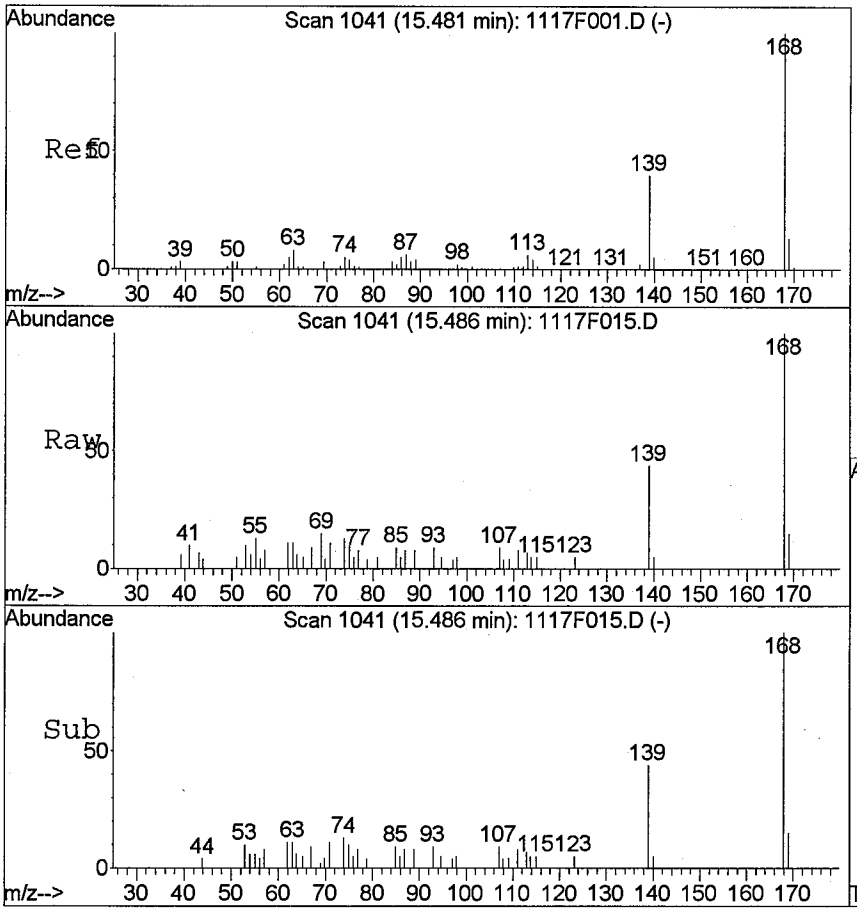


#44
Acenaphthene
Concen: 76.65 ng/ml
RT: 15.12 min Scan# 1005
Delta R.T. 0.00 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:154 Resp: 6878

Ion	Ratio	Lower	Upper
154	100		
153	106.7	82.4	142.4
152	56.9	24.4	84.4

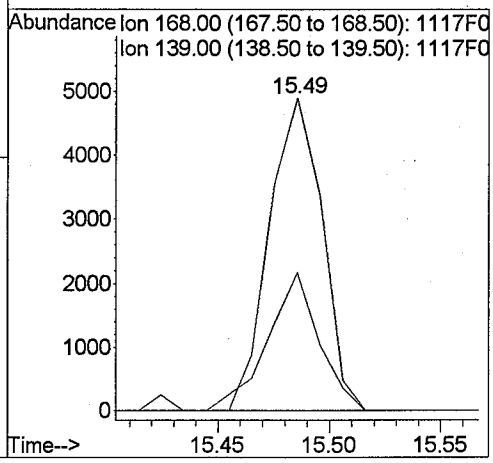


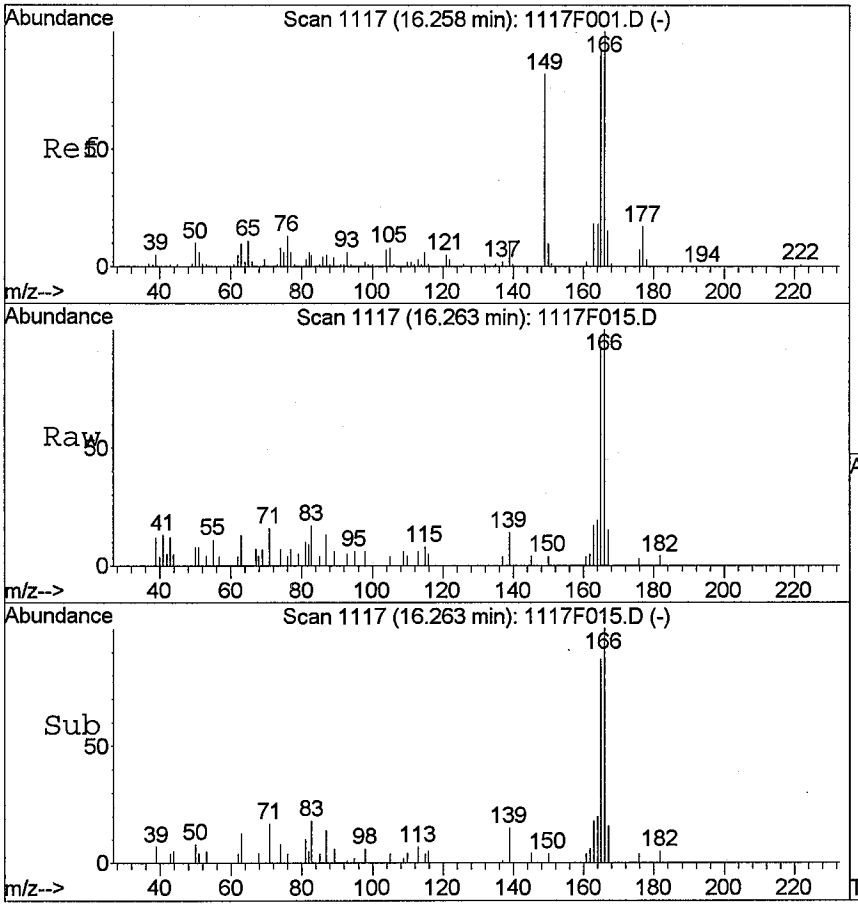


#47
Dibenzofuran
Concen: 50.96 ng/ml
RT: 15.49 min Scan# 1041
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:168 Resp: 8069

Ion	Ratio	Lower	Upper
168	100		
139	44.4	1.2	61.2

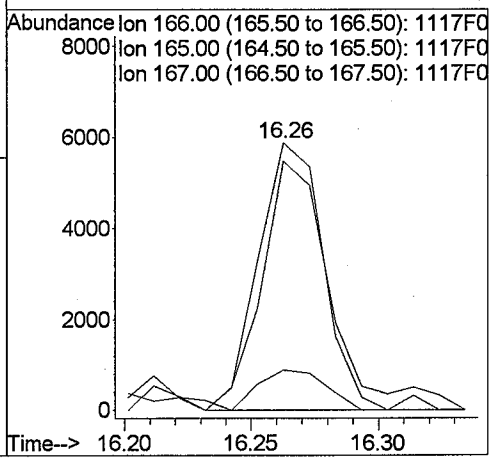


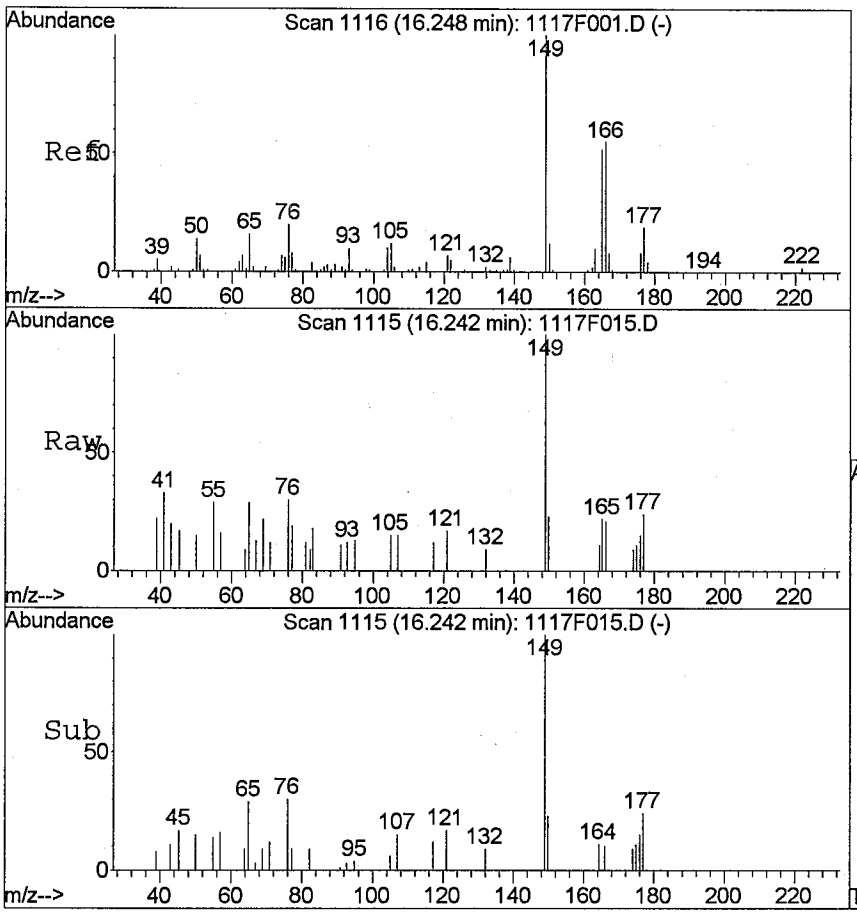


#50
Fluorene
Concen: 88.77 ng/ml
RT: 16.26 min Scan# 1117
Delta R.T. 0.00 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:166 Resp: 10372

Ion	Ratio	Lower	Upper
166	100		
165	93.1	63.2	123.2
167	15.2	0.0	43.0

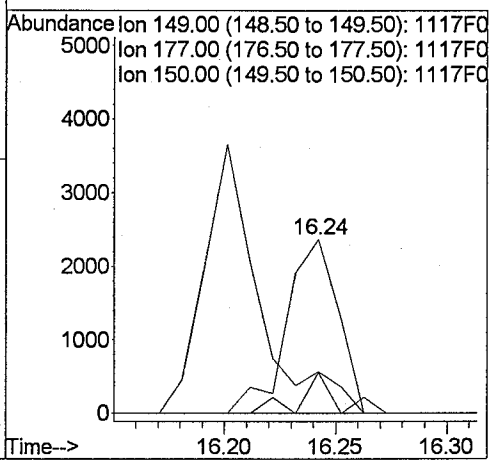


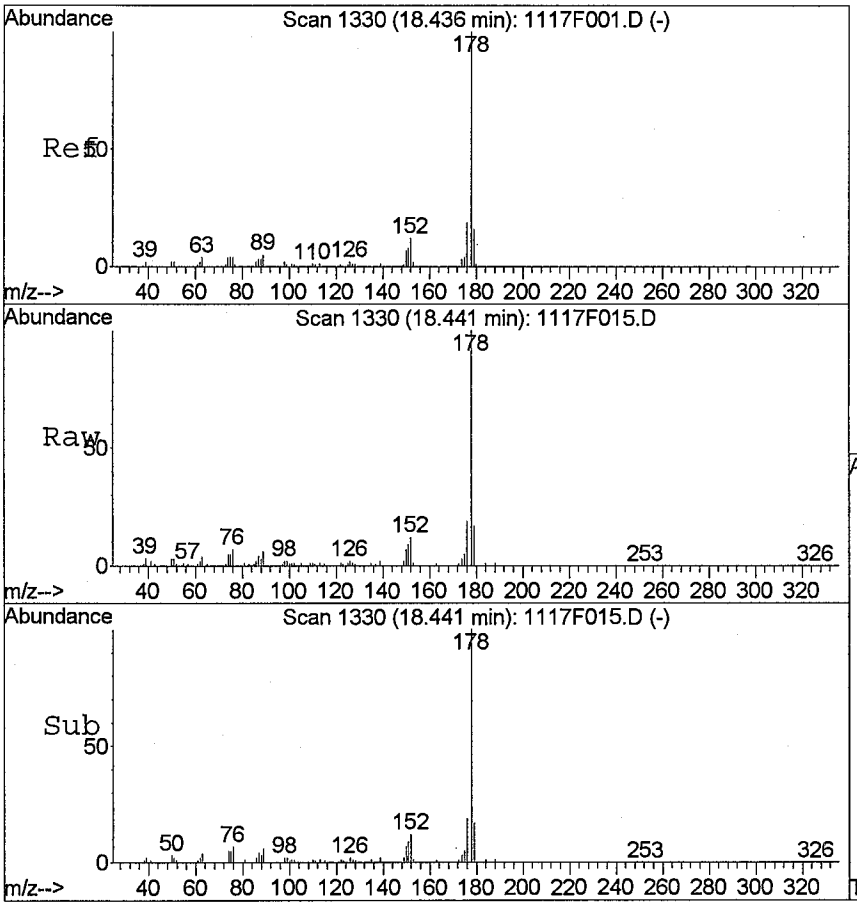


#52
Diethyl Phthalate
Concen: 26.20 ng/ml
RT: 16.24 min Scan# 1115
Delta R.T. -0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:149 Resp: 3791

Ion	Ratio	Lower	Upper
149	100		
177	23.8	0.0	51.6
150	23.5	0.0	41.6

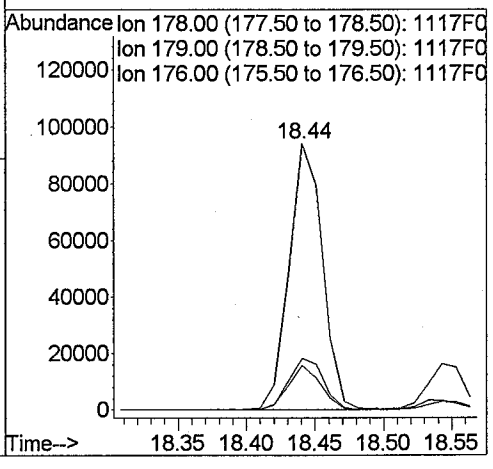


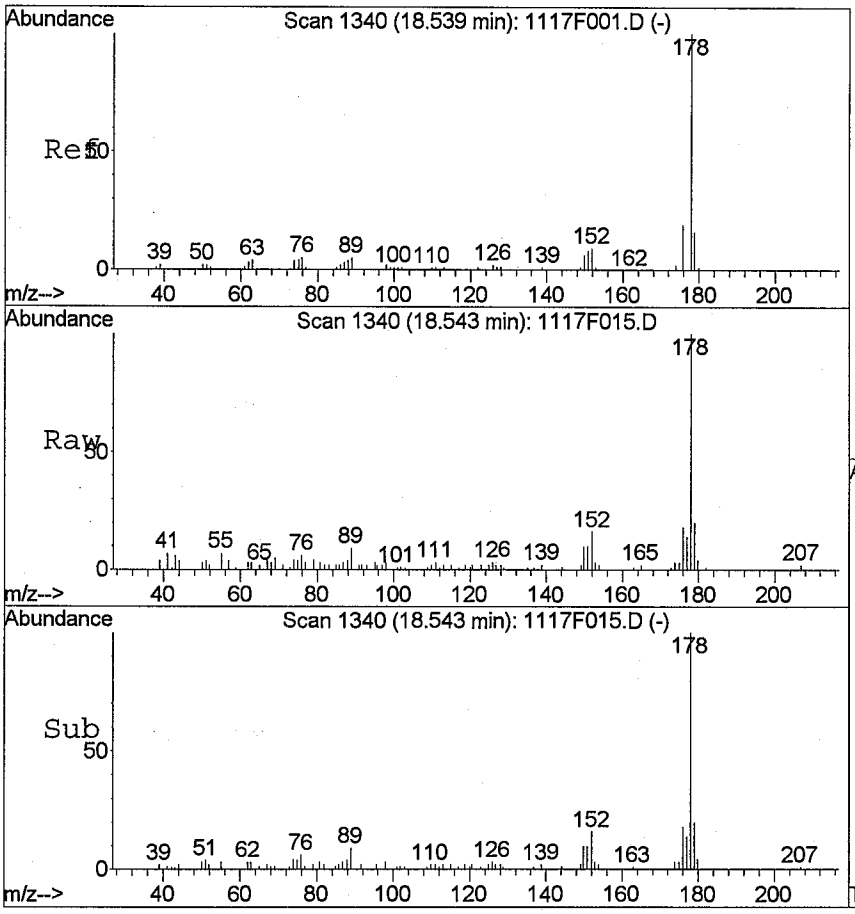


#62
Phenanthrene
Concen: 857.75 ng/ml
RT: 18.44 min Scan# 1330
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:178 Resp: 159963

Ion	Ratio	Lower	Upper
178	100		
179	16.8	0.0	44.8
176	19.5	0.0	49.3

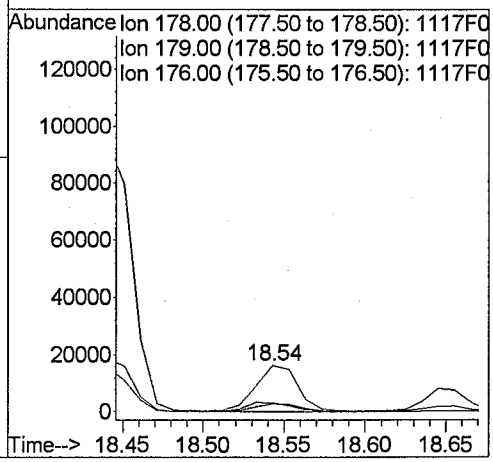


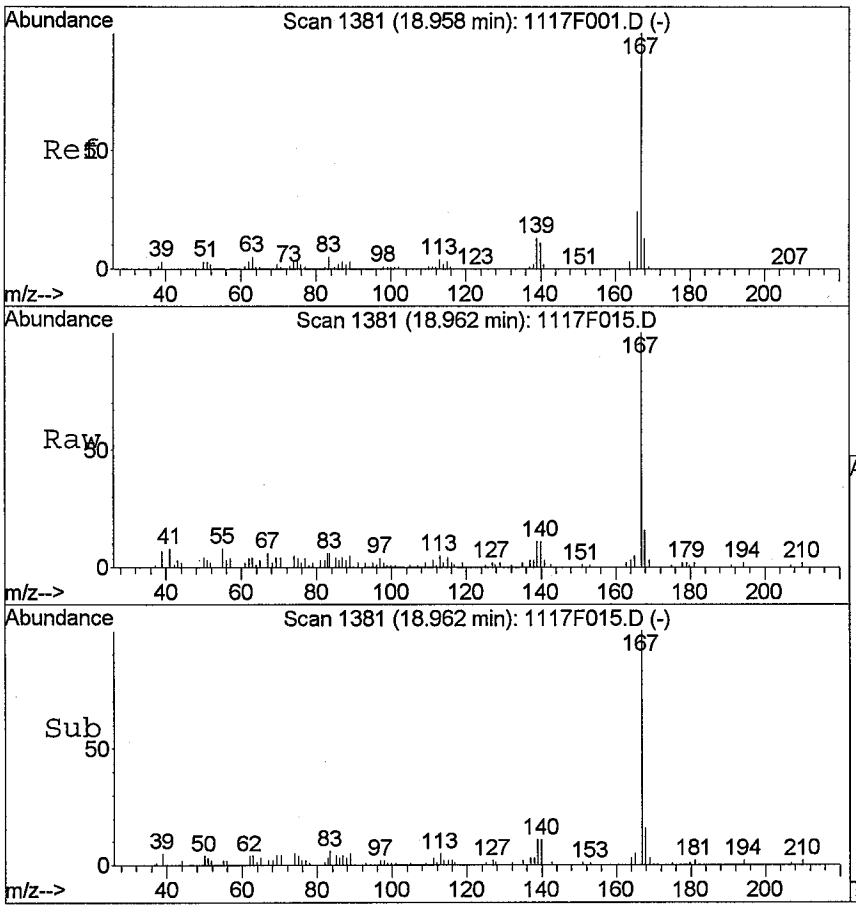


#63
Anthracene
Concen: 159.69 ng/ml
RT: 18.54 min Scan# 1340
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:178 Resp: 30009

Ion	Ratio	Lower	Upper
178	100		
179	18.7	0.0	44.7
176	18.4	0.0	49.8

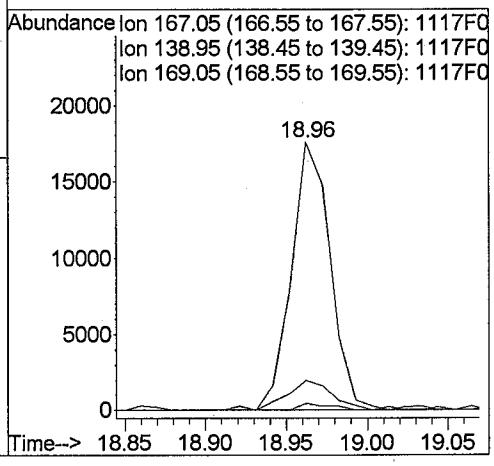


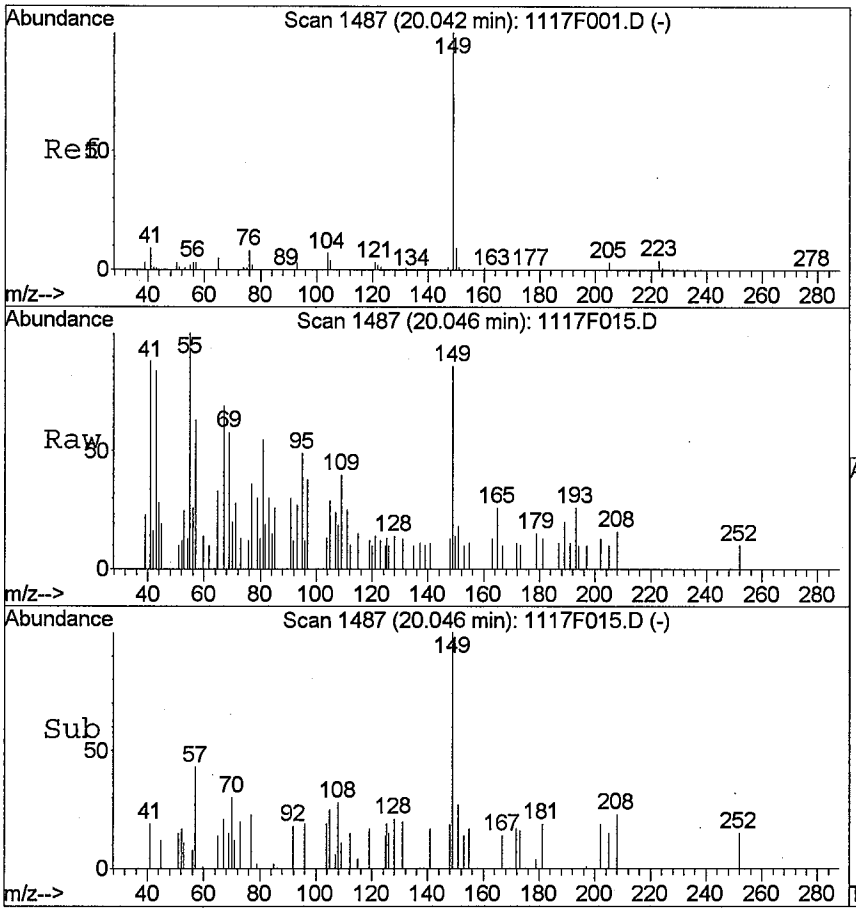


#64
Carbazole
Concen: 179.33 ng/ml
RT: 18.96 min Scan# 1381
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:167 Resp: 29313

Ion	Ratio	Lower	Upper
167	100		
139	11.3	0.0	41.7
169	2.6	0.0	30.8

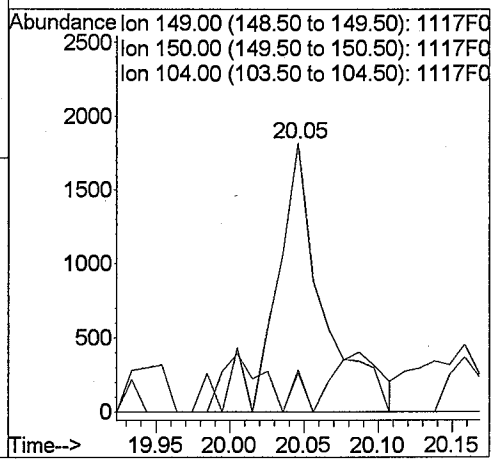


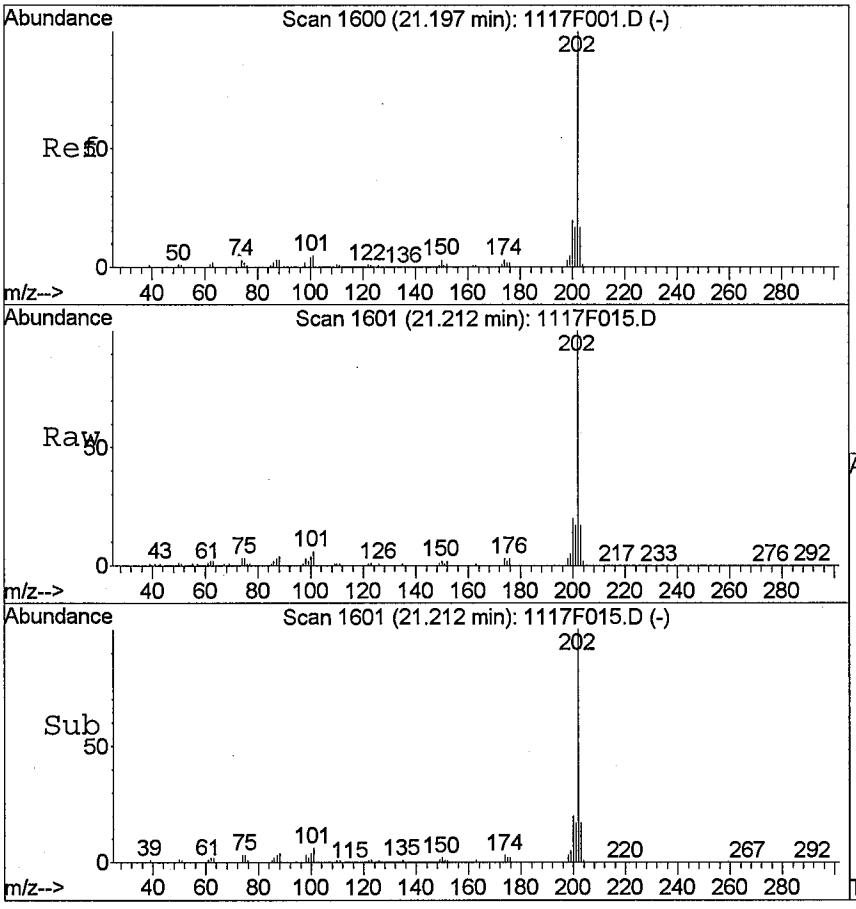


#65
Di-n-butyl Phthalate
Concen: 17.79 ng/ml
RT: 20.05 min Scan# 1487
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:149 Resp: 4051

Ion	Ratio	Lower	Upper
149	100		
150	15.7	0.0	39.4
104	14.6	0.0	35.0

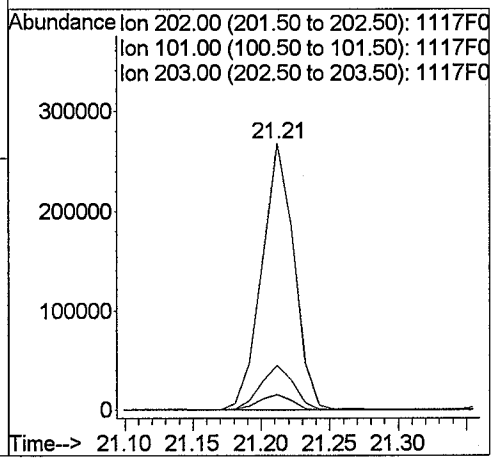


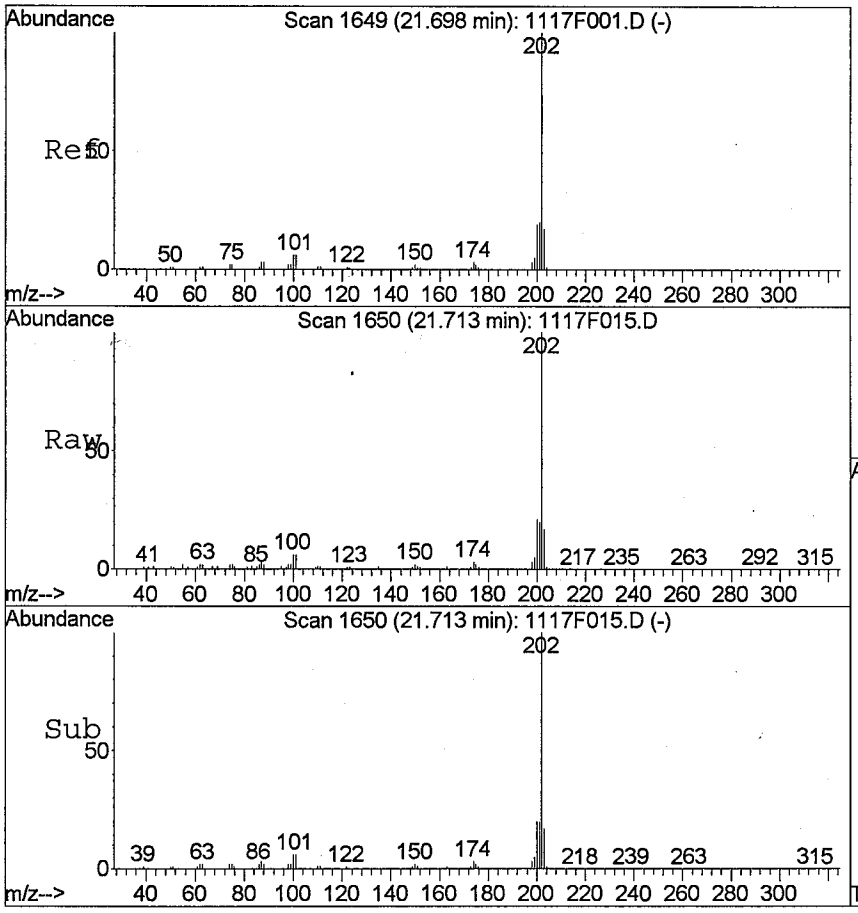


#66
Fluoranthene
Concen: 2150.67 ng/ml
RT: 21.21 min Scan# 1601
Delta R.T. 0.02 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:202 Resp: 440595

Ion	Ratio	Lower	Upper
202	100		
101	5.9	0.0	42.0
203	16.7	0.0	47.2

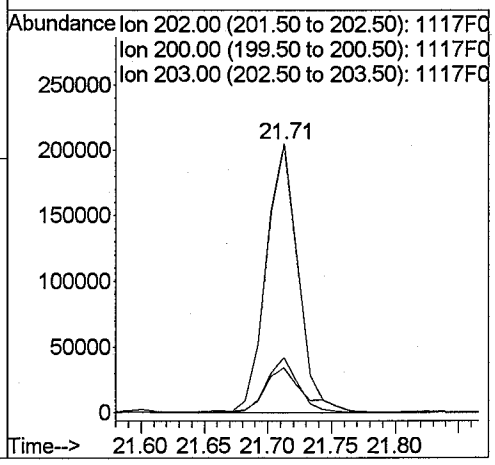


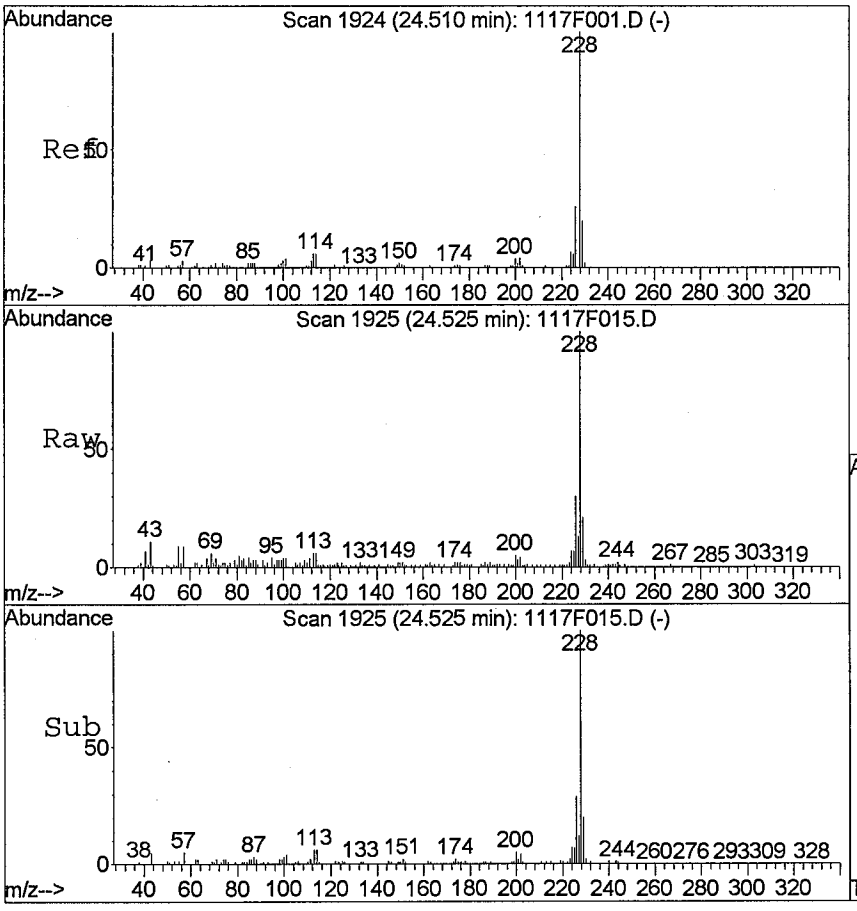


#69
Pyrene
Concen: 1656.62 ng/ml
RT: 21.71 min Scan# 1650
Delta R.T. 0.02 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:202 Resp: 355171

Ion	Ratio	Lower	Upper
202	100		
200	20.6	0.0	50.3
203	16.5	0.0	48.1

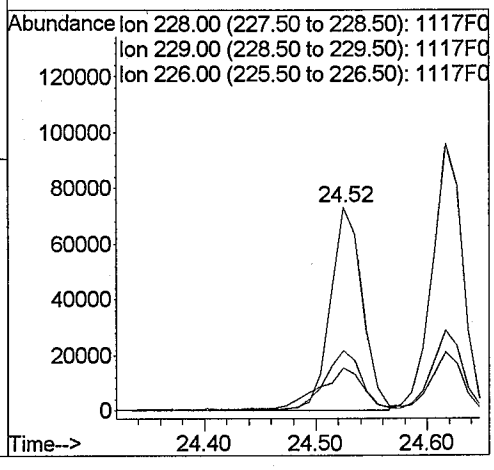


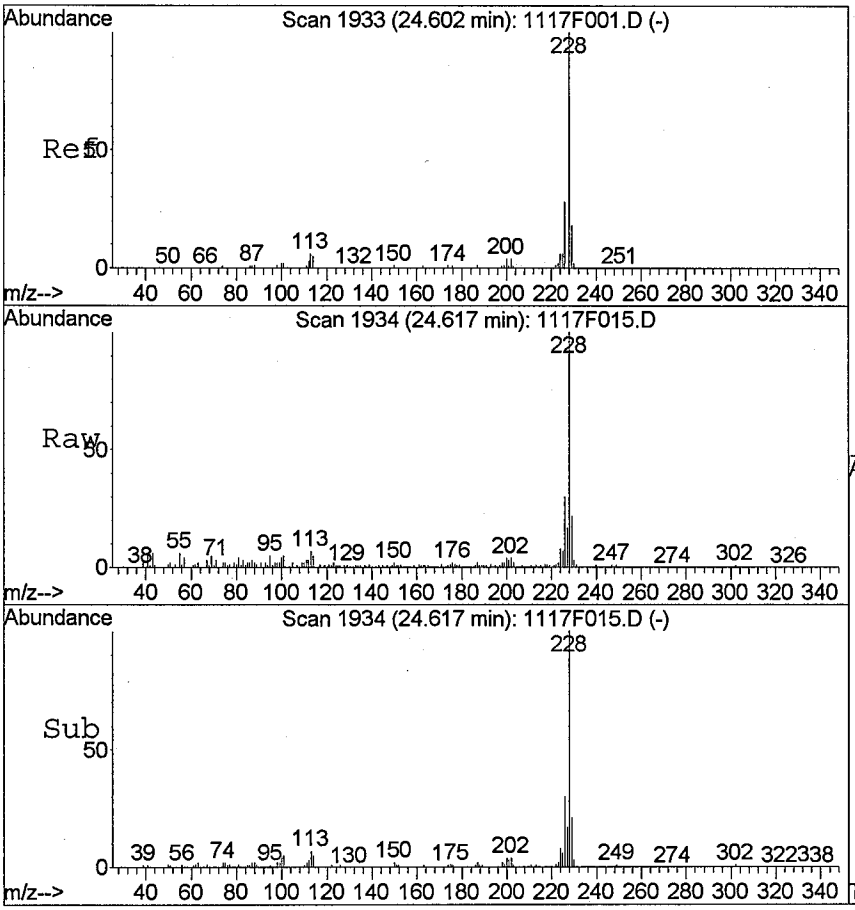


#73
Benz(a)anthracene
Concen: 772.18 ng/ml
RT: 24.52 min Scan# 1925
Delta R.T. 0.02 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:228 Resp: 146598

Ion	Ratio	Lower	Upper
228	100		
229	20.2	0.0	48.5
226	29.7	0.0	55.6

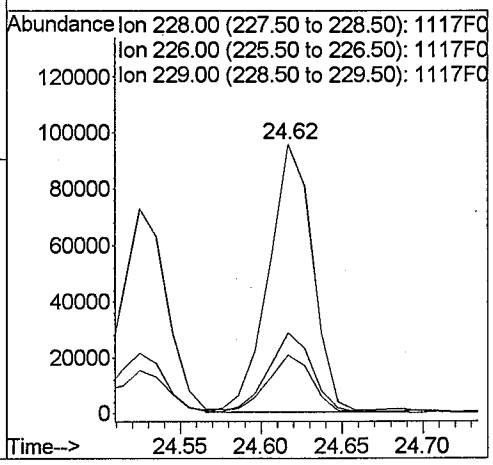


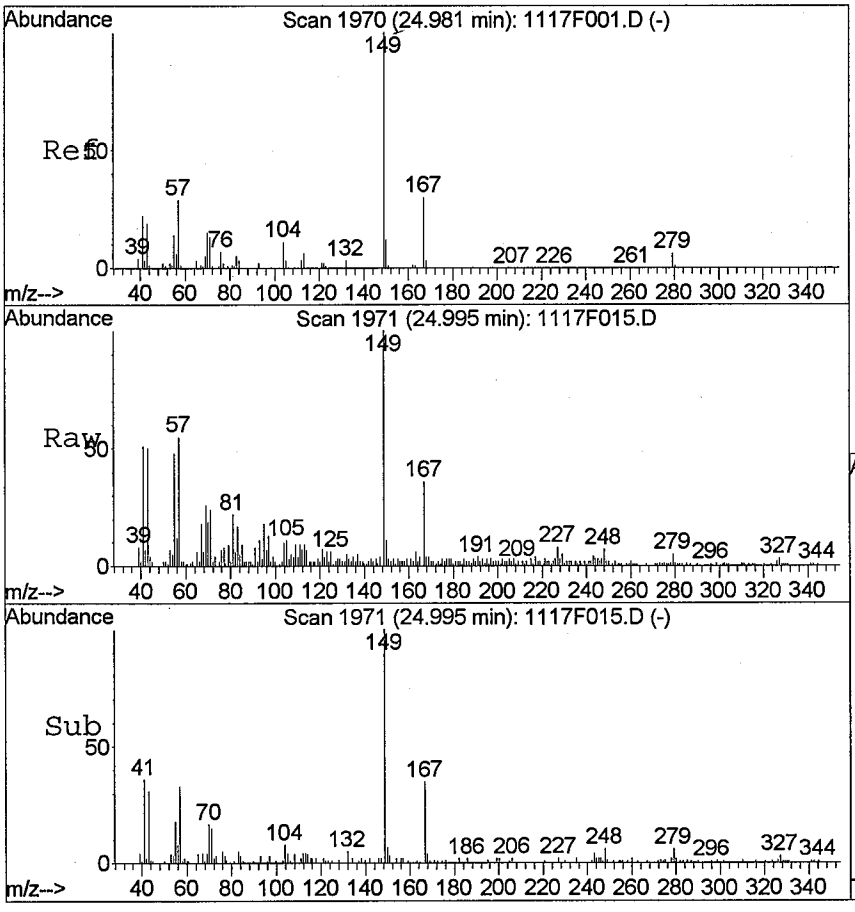


#74
Chrysene
Concen: 1002.33 ng/ml
RT: 24.62 min Scan# 1934
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:228 Resp: 180318

Ion	Ratio	Lower	Upper
228	100		
226	29.7	0.0	58.4
229	20.7	0.0	49.1

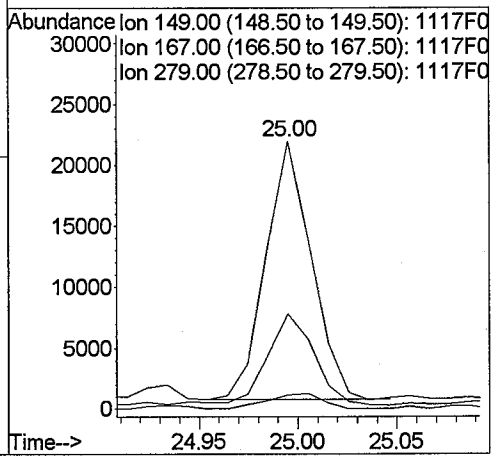


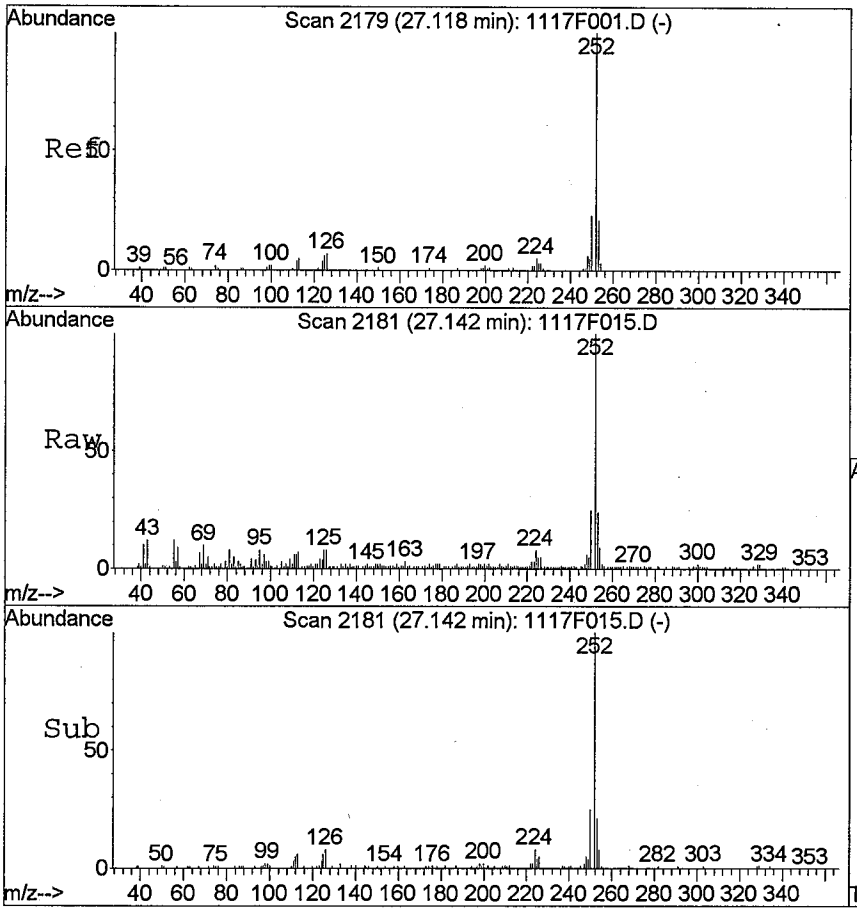


#75
Bis(2-ethylhexyl) Phthalate
Concen: 245.78 ng/ml
RT: 25.00 min Scan# 1971
Delta R.T. 0.01 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:149 Resp: 34016

Ion	Ratio	Lower	Upper
149	100		
167	35.5	0.2	60.2
279	5.6	0.0	34.5

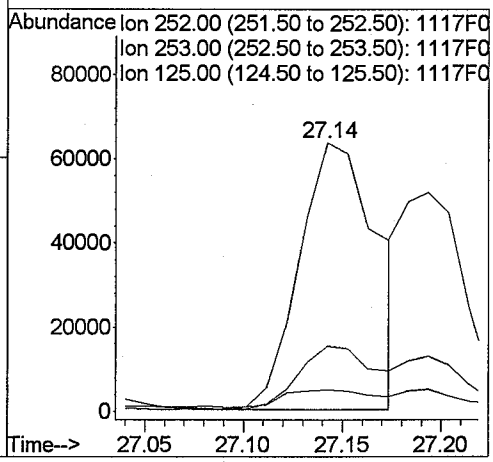


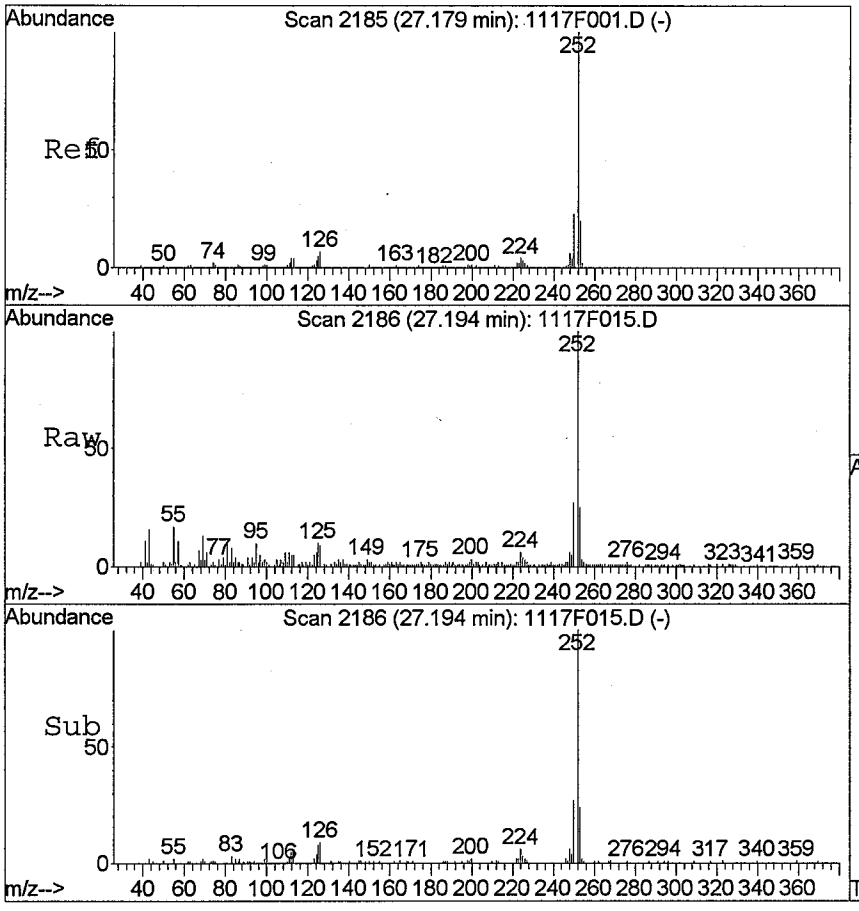


#78
Benzo(b)fluoranthene
Concen: 957.79 ng/ml
RT: 27.14 min Scan# 2181
Delta R.T. 0.03 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:252 Resp: 171257

Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	51.3
125	6.0	0.0	41.2

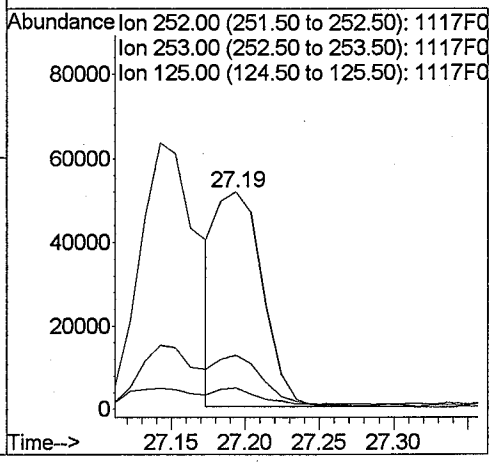


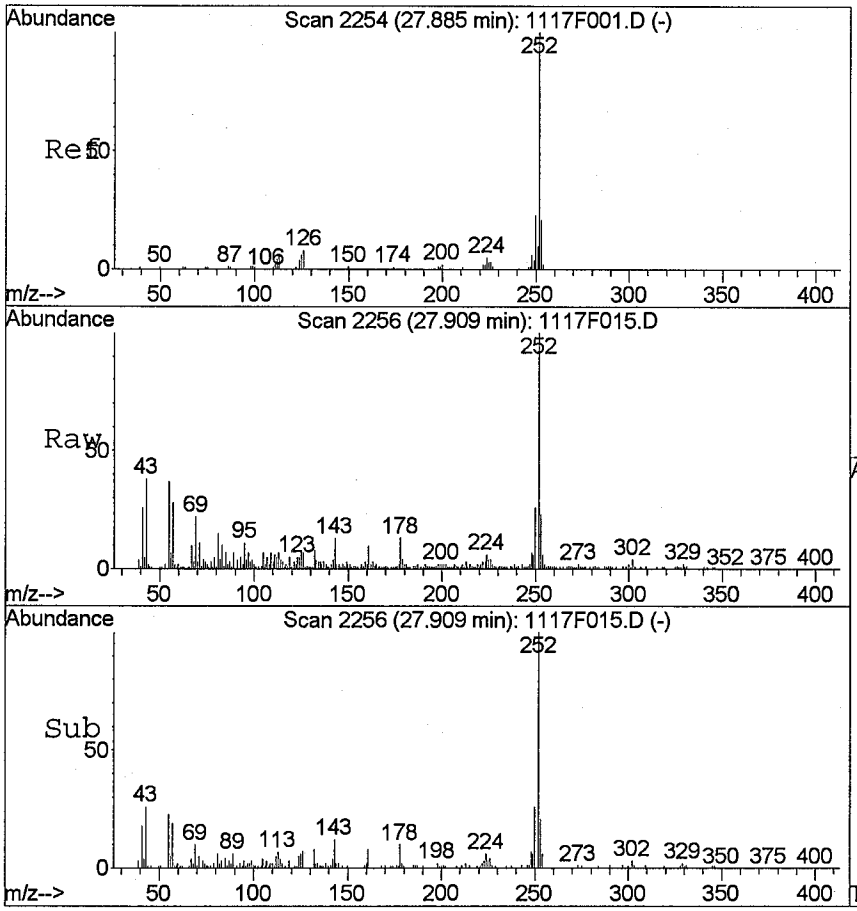


#79
Benzo(k)fluoranthene
Concen: 658.32 ng/ml
RT: 27.19 min Scan# 2186
Delta R.T. 0.02 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:252 Resp: 111878

Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	51.9
125	7.7	0.0	40.9

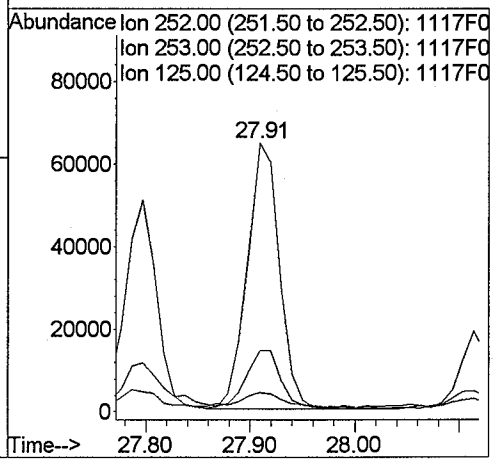


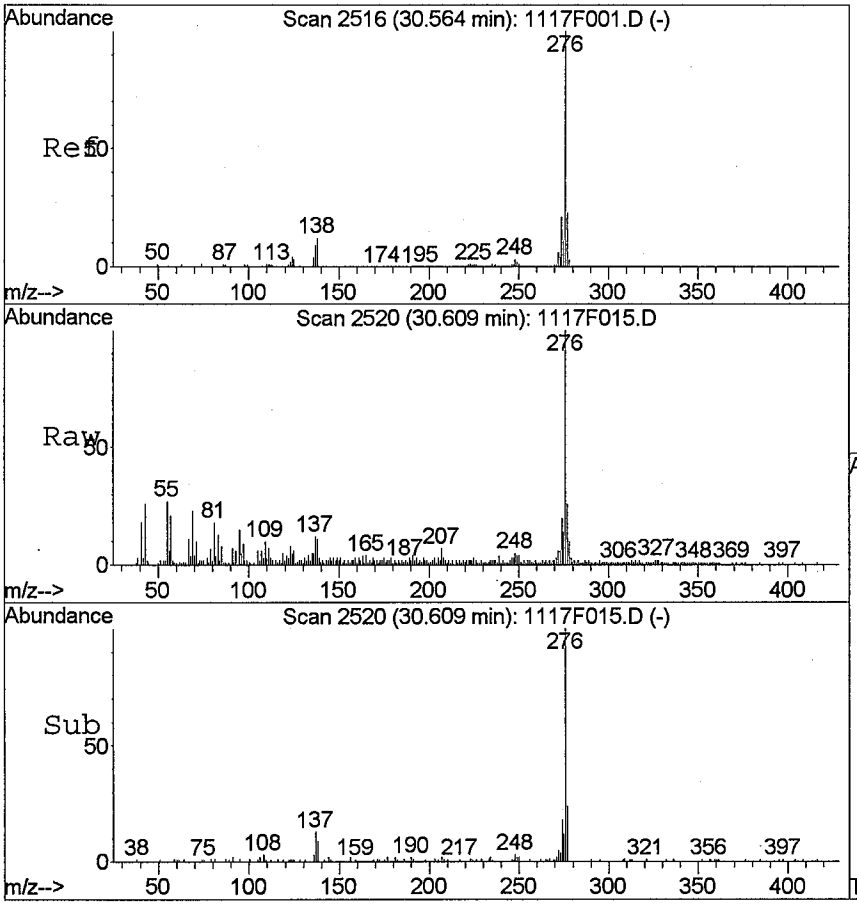


#80
Benzo(a)pyrene
Concen: 812.59 ng/ml
RT: 27.91 min Scan# 2256
Delta R.T. 0.03 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:252 Resp: 137899

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	52.2
125	5.3	0.0	42.3

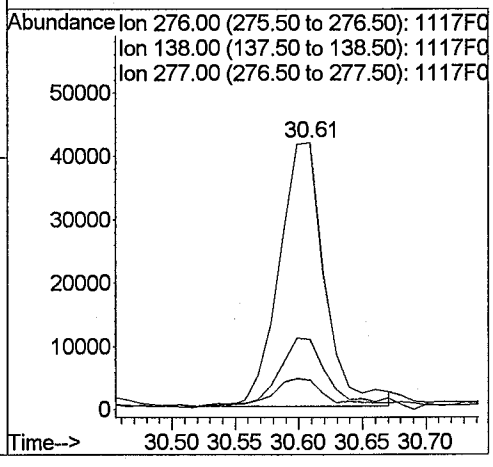


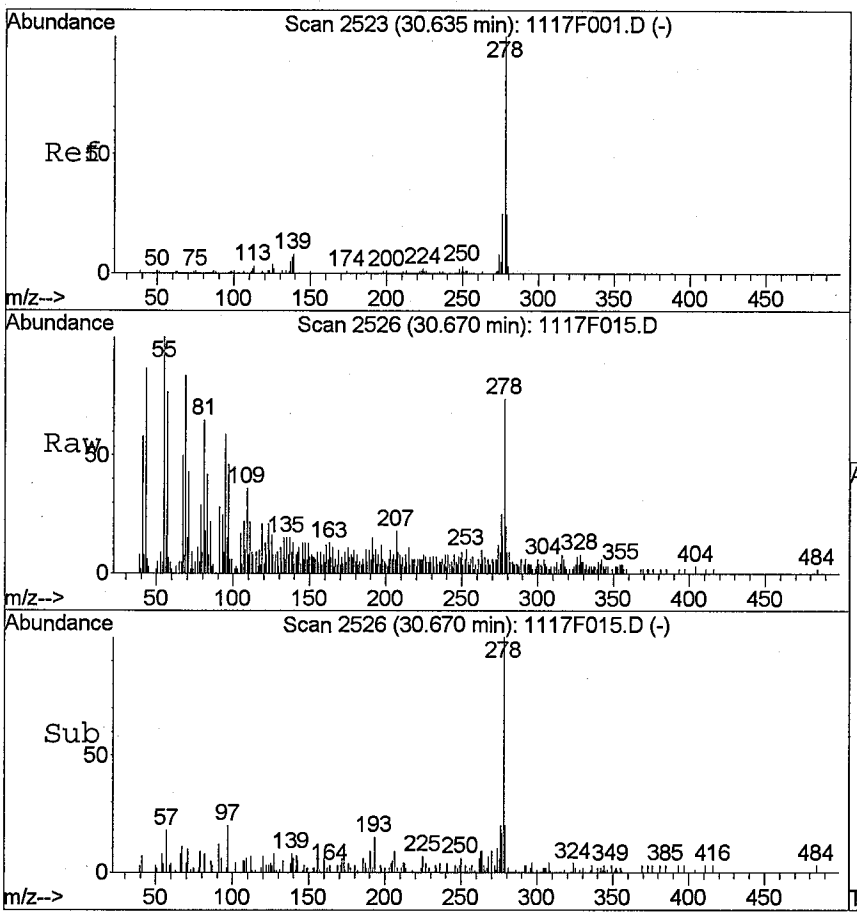


#81
Indeno(1,2,3-cd)pyrene
Concen: 657.02 ng/ml
RT: 30.61 min Scan# 2520
Delta R.T. 0.04 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:276 Resp: 104059

Ion	Ratio	Lower	Upper
276	100		
138	9.5	0.0	51.4
277	24.8	0.0	54.0

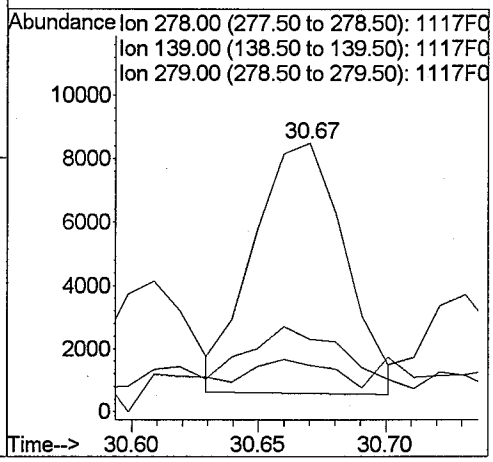


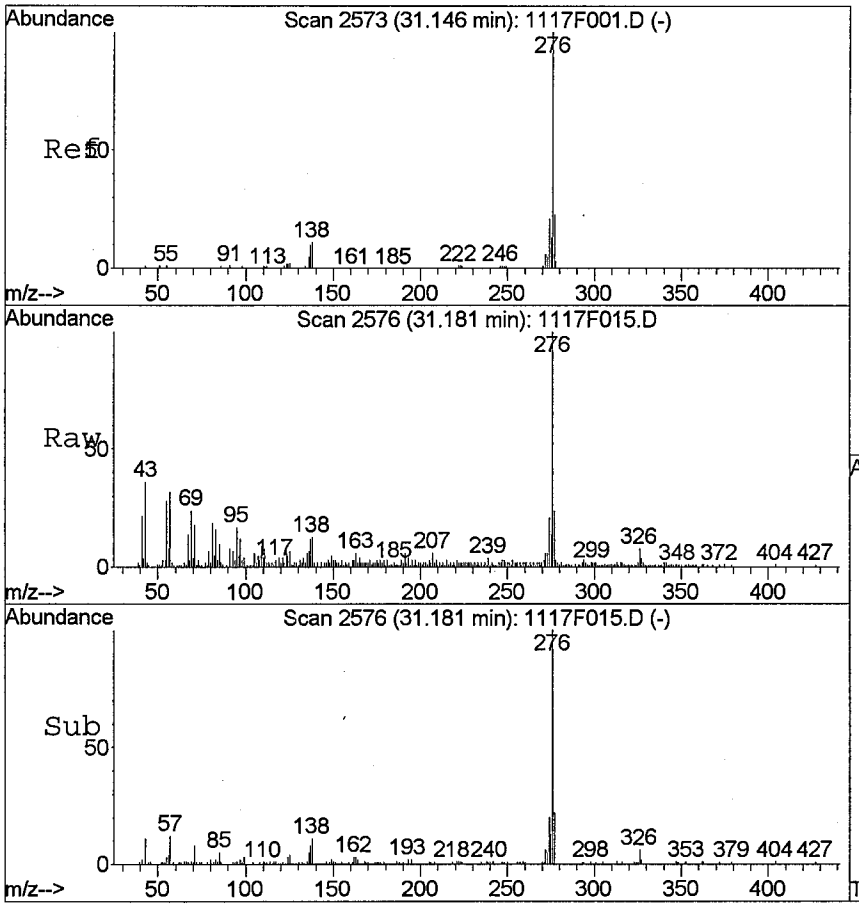


#82
Dibenz(a,h)anthracene
Concen: 127.00 ng/ml
RT: 30.67 min Scan# 2526
Delta R.T. 0.03 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:278 Resp: 19696

Ion	Ratio	Lower	Upper
278	100		
139	5.5	0.0	46.3
279	18.2	0.0	54.8

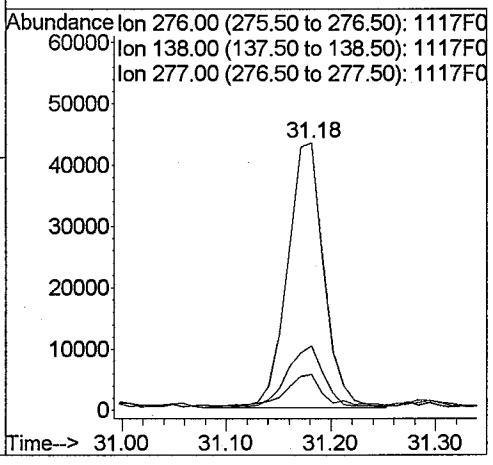




#83
Benzo(g,h,i)perylene
Concen: 635.76 ng/ml
RT: 31.18 min Scan# 2576
Delta R.T. 0.04 min
Lab File: 1117F015.D
Acq: 17 Nov 2003 19:04

Tgt Ion:276 Resp: 104399

Ion	Ratio	Lower	Upper
276	100		
138	12.0	0.0	52.7
277	23.6	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-3
Lab Code: K2308433-003

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/17/03	KWG0317457	
2-Methylphenol	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
4-Methylphenol†	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
2,4-Dimethylphenol	ND	U	240	5	10/30/03	11/17/03	KWG0317457	
2,4-Dichlorophenol	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	48	5	10/30/03	11/17/03	KWG0317457	
Pentachlorophenol	ND	U	240	5	10/30/03	11/17/03	KWG0317457	
Butyl Benzyl Phthalate	**78**	D	48	5	10/30/03	11/17/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	950	5	10/30/03	11/17/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	60	40-123	11/17/03	Acceptable
2,4,6-Tribromophenol	47	35-138	11/17/03	Acceptable
Terphenyl-d14	87	56-152	11/17/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111703\1117F016.D
Lab ID: K2308433-003
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/17/2003 19:45
Date Quantitated: 11/18/2003 09:22
Batch ID: KWG0318538
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

- sample diluted due to matrix; will not be analyzed more concentrated

Primary Review: 11/18/03

Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318538	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245969	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111703\1117A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111703\1117F016.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 19:45	**Quant Date:**	11/18/2003 09:22	**Vial:**	16
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.98	0.01	152	53364	1,000.00	OK
2	Naphthalene-d8	11.26	0.00	136	154551	1,000.00	OK
3	Acenaphthene-d10	15.05	0.01	164	96029	1,000.00	OK
4	Phenanthrene-d10	18.40	0.03	188	174530	1,000.00	OK
5	Chrysene-d12	24.56	0.02	240	176093	1,000.00	OK
6	Perylene-d12	28.06	0.04	264	126703	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.48	0.02	0.00	99	30678	446.74	60	40-123	OK	
4	2,4,6-Tribromophenol	16.86	0.01	0.00	330	10375	351.73	47	35-138	OK	
5	Terphenyl-d14	22.20	0.01	0.00	244	60018	434.76	87	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		12	U	
1	2-Methylphenol				107	0		21	U	
1	4-Methylphenol				107	0		18	U	
2	2,4-Dimethylphenol				122	0d		34	U	
2	2,4-Dichlorophenol				162	0		12	U	
3	2,4,6-Trichlorophenol				196	0		12	U	
4	Pentachlorophenol				266	0		53	U	
5	Butyl Benzyl Phthalate	23.51	0.01	0.00	149	16056	164.98	78	D	
5	Bis(2-ethylhexyl) Phthalate	24.99	0.01	0.00	149	35139	249.19	120	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F016.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 19:45	**Quant Date:**	11/18/2003 09:22	**Vial:**	16
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-003			**Soln Conc. Units:**	ng/ml

Prep Amount:	26.07 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	81.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F016.D Vial: 16
Acq On : 17 Nov 2003 19:45 Operator: JGISH
Sample : K2308433-003 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 08:48:52 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	53364	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	154551	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.05	164	96029	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.40	188	174530	1000.00	ng/ml	0.02
67) Chrysene-d12	24.56	240	176093	1000.00	ng/ml	0.02
76) Perylene-d12	28.06	264	126703	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	20117	351.09	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 9.36%#			
6) Phenol-d6	8.48	99	30678	446.74	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 11.91%#			
19) Nitrobenzene-d5	9.95	82	25653	300.98	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.04%#			
38) 2-Fluorobiphenyl	13.59	172	42546	319.59	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 12.78%#			
58) 2,4,6-Tribromophenol	16.86	330	10375	351.73	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 9.38%#			
70) Terphenyl-d14	22.20	244	60018	434.76	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 17.39%#			
Target Compounds						Qvalue
29) Naphthalene	11.30	128	23928	148.39	ng/ml	99
41) Acenaphthylene	14.71	152	8938	58.12	ng/ml	91
44) Acenaphthene	15.13	154	5709	61.97	ng/ml	85
47) Dibenzofuran	15.48	168	6433	39.57	ng/ml	70
50) Fluorene	16.27	166	8652	72.13	ng/ml	94
52) Diethyl Phthalate	16.24	149	7513	50.57	ng/ml	89
62) Phenanthrene	18.45	178	101704	537.24	ng/ml	98
63) Anthracene	18.55	178	19883	104.23	ng/ml	92
64) Carbazole	18.97	167	14121	85.10	ng/ml	95
65) Di-n-butyl Phthalate	20.04	149	4569	19.77	ng/ml	73
66) Fluoranthene	21.21	202	204731	984.48	ng/ml	93
69) Pyrene	21.71	202	186002	851.48	ng/ml	99
71) Butyl Benzyl Phthalate	23.51	149	16056	164.98	ng/ml	88
73) Benz(a)anthracene	24.53	228	75380	389.69	ng/ml	93
74) Chrysene	24.63	228	101249	552.37	ng/ml	92
75) Bis(2-ethylhexyl) Phthalat	24.99	149	35139	249.19	ng/ml	100
78) Benzo(b)fluoranthene	27.15	252	97688	567.01	ng/ml	95
79) Benzo(k)fluoranthene	27.19	252	72883	445.09	ng/ml	95
80) Benzo(a)pyrene	27.92	252	85029	520.01	ng/ml	91
81) Indeno(1,2,3-cd)pyrene	30.61	276	65279	427.76	ng/ml	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F016.D Vial: 16
Acq On : 17 Nov 2003 19:45 Operator: JGISH
Sample : K2308433-003 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 08:48:52 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

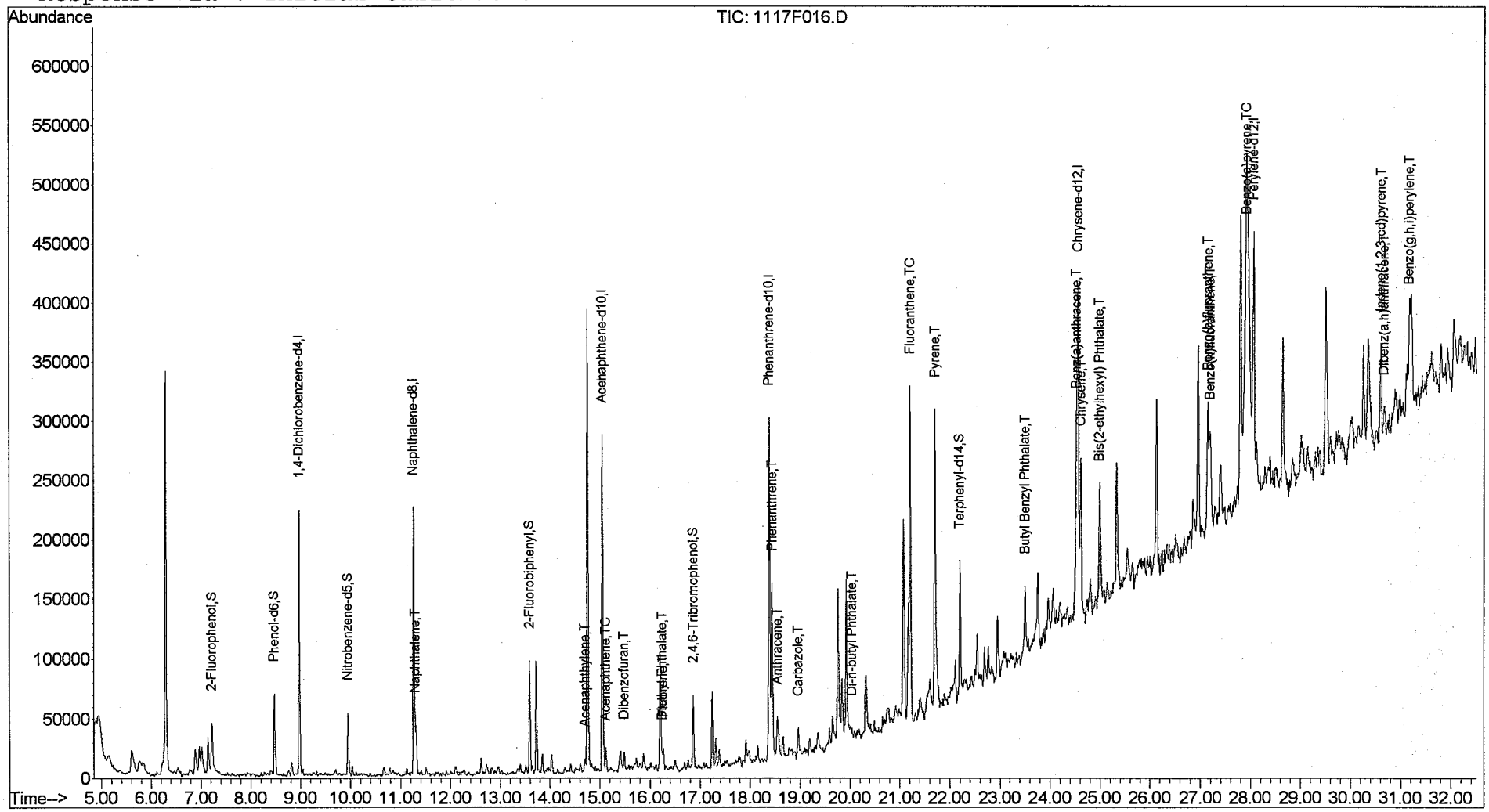
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	Dibenz(a,h)anthracene	30.67	278	12189	81.57	ng/ml	85
83)	Benzo(g,h,i)perylene	31.17	276	67017	423.56	ng/ml	89

(#) = qualifier out of range (m) = manual integration
1117F016.D 1114BNLL.M Tue Nov 18 09:31:44 2003 Page 2

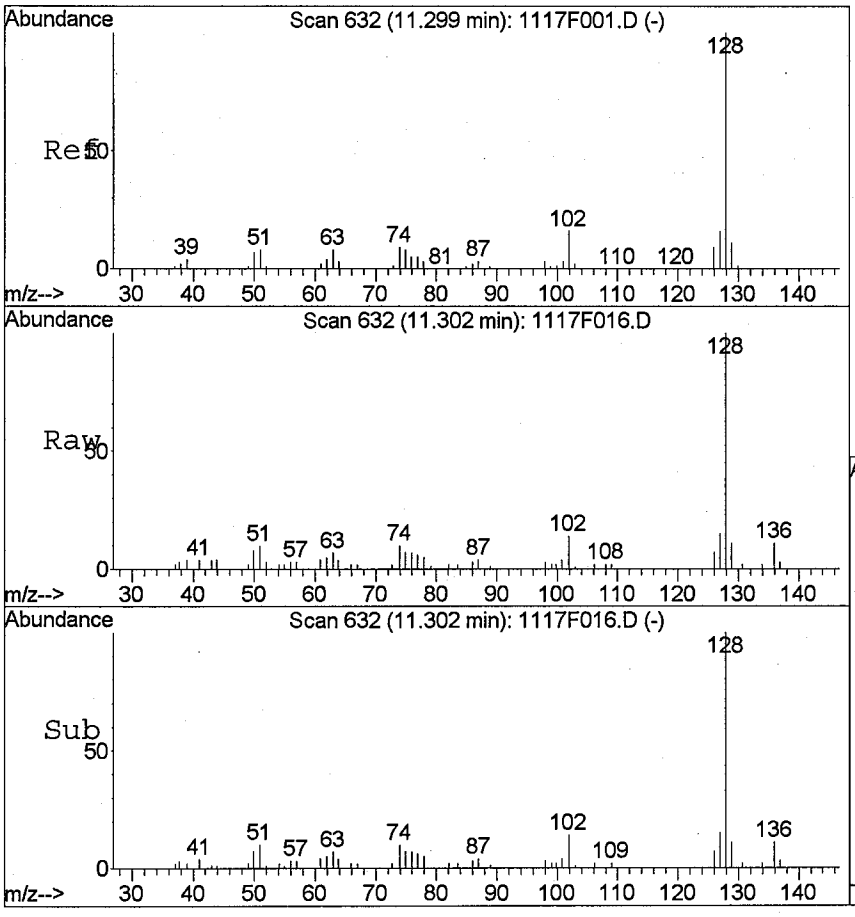
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F016.D Vial: 16
Acq On : 17 Nov 2003 19:45 Operator: JGISH
Sample : K2308433-003 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 9:22 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration

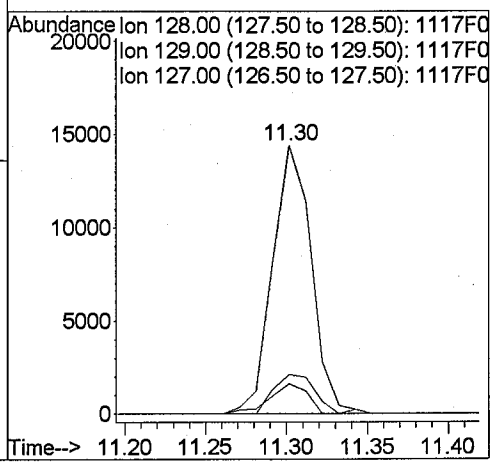


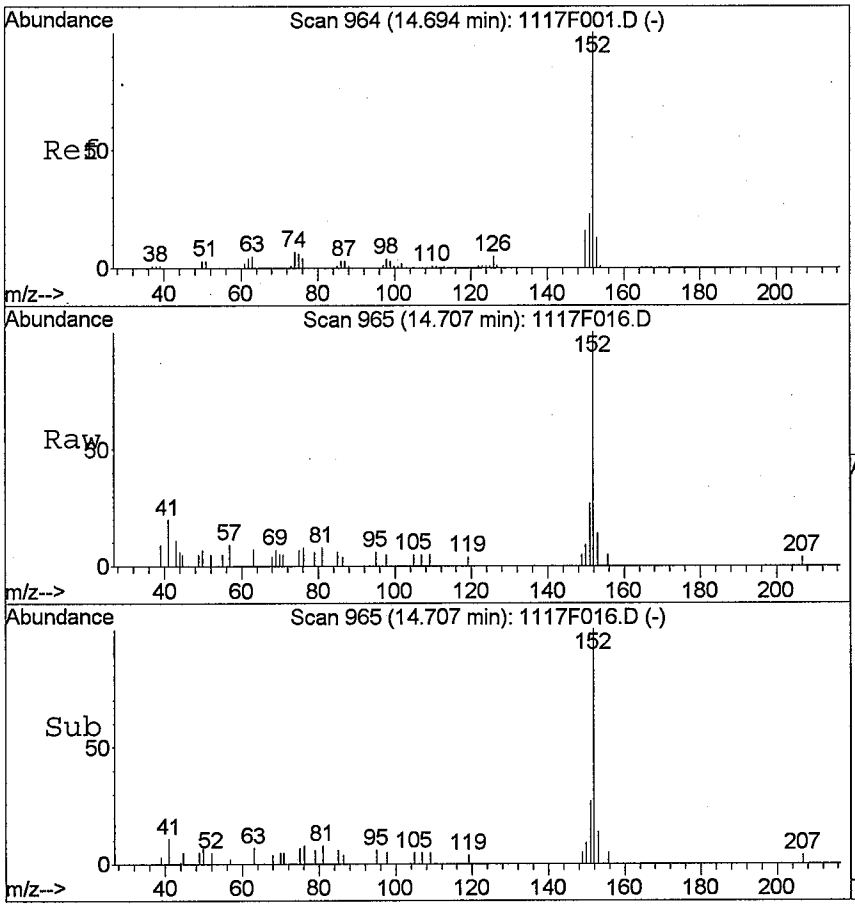
1883



#29
Naphthalene
Concen: 148.39 ng/ml
RT: 11.30 min Scan# 632
Delta R.T. -0.00 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

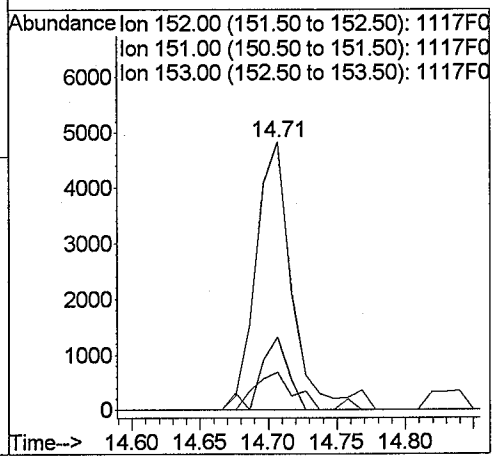
Tgt Ion:128	Resp:	23928	
Ion	Ratio	Lower	Upper
128	100		
129	11.3	0.0	41.3
127	14.7	0.0	44.2

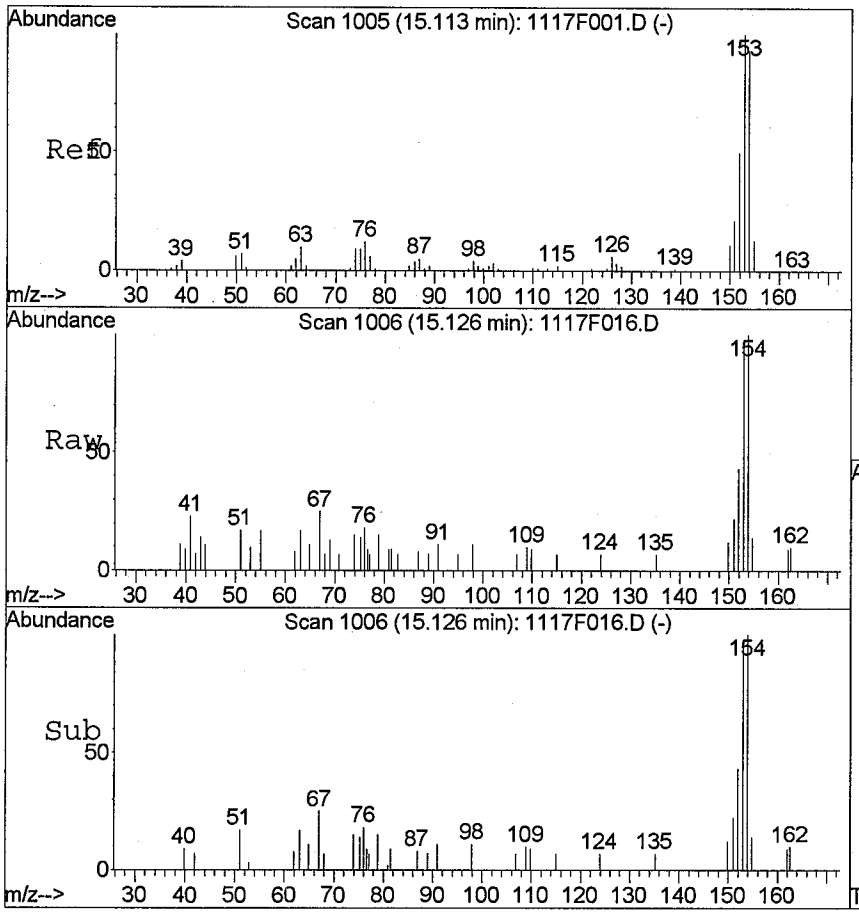




#41
Acenaphthylene
Concen: 58.12 ng/ml
RT: 14.71 min Scan# 965
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:152	Resp:	8938	
Ion	Ratio	Lower	Upper
152	100		
151	27.3	0.0	51.5
153	14.2	0.0	42.9

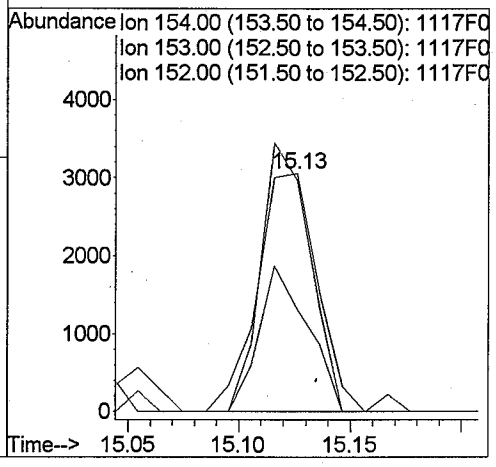


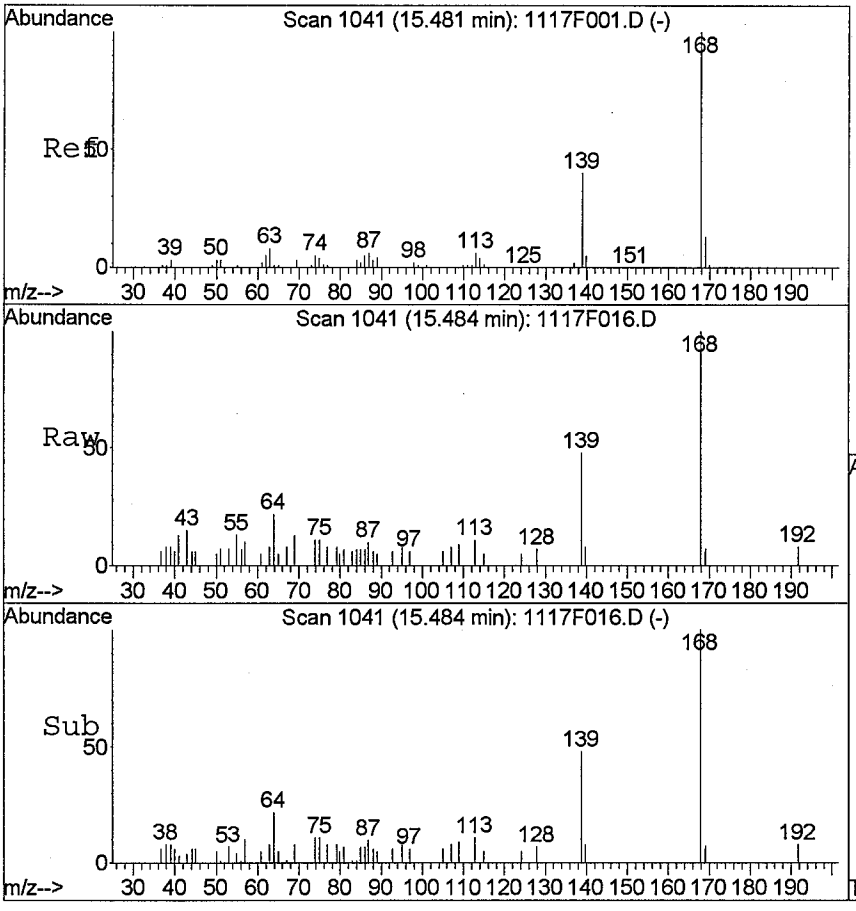


#44
Acenaphthene
Concen: 61.97 ng/ml
RT: 15.13 min Scan# 1006
Delta R.T. 0.01 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:154 Resp: 5709

Ion	Ratio	Lower	Upper
154	100		
153	97.2	82.4	142.4
152	43.2	24.4	84.4

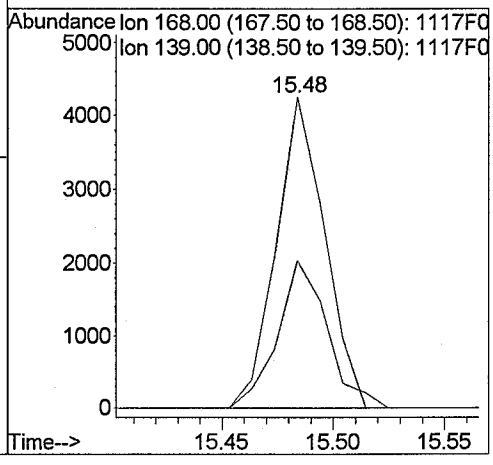


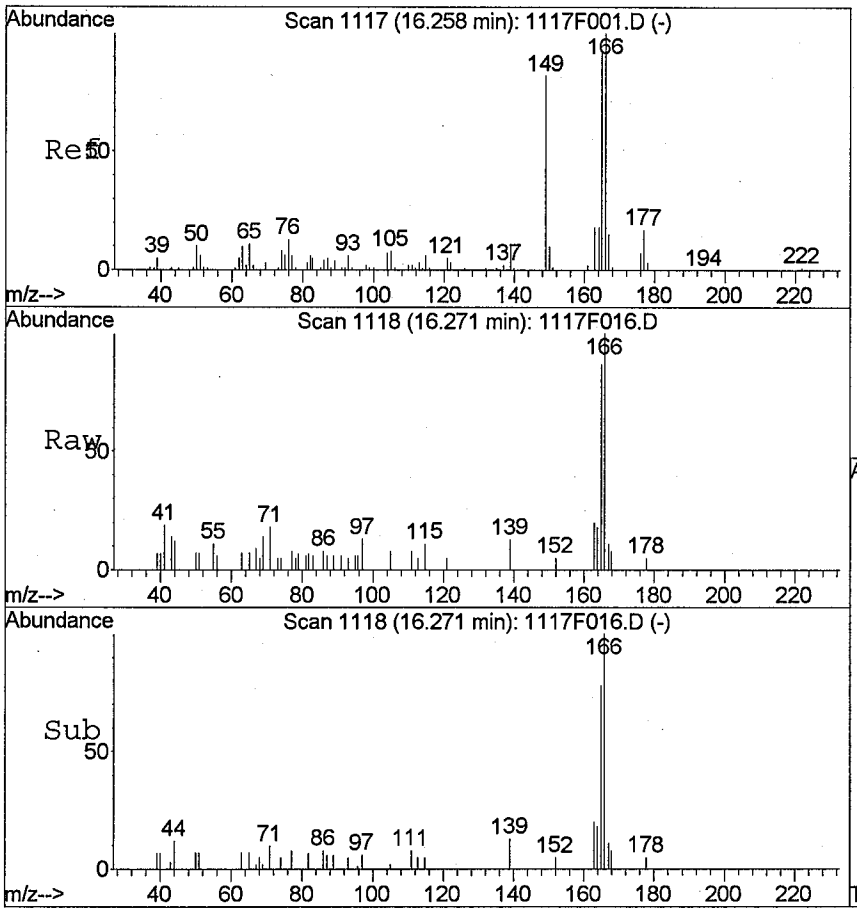


#47
Dibenzofuran
Concen: 39.57 ng/ml
RT: 15.48 min Scan# 1041
Delta R.T. 0.01 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:168 Resp: 6433

Ion	Ratio	Lower	Upper
168	100		
139	47.8	1.2	61.2

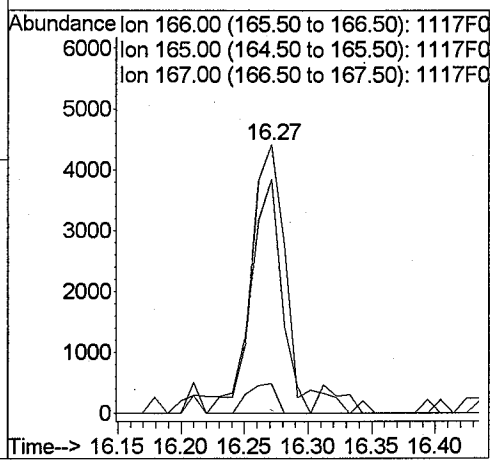


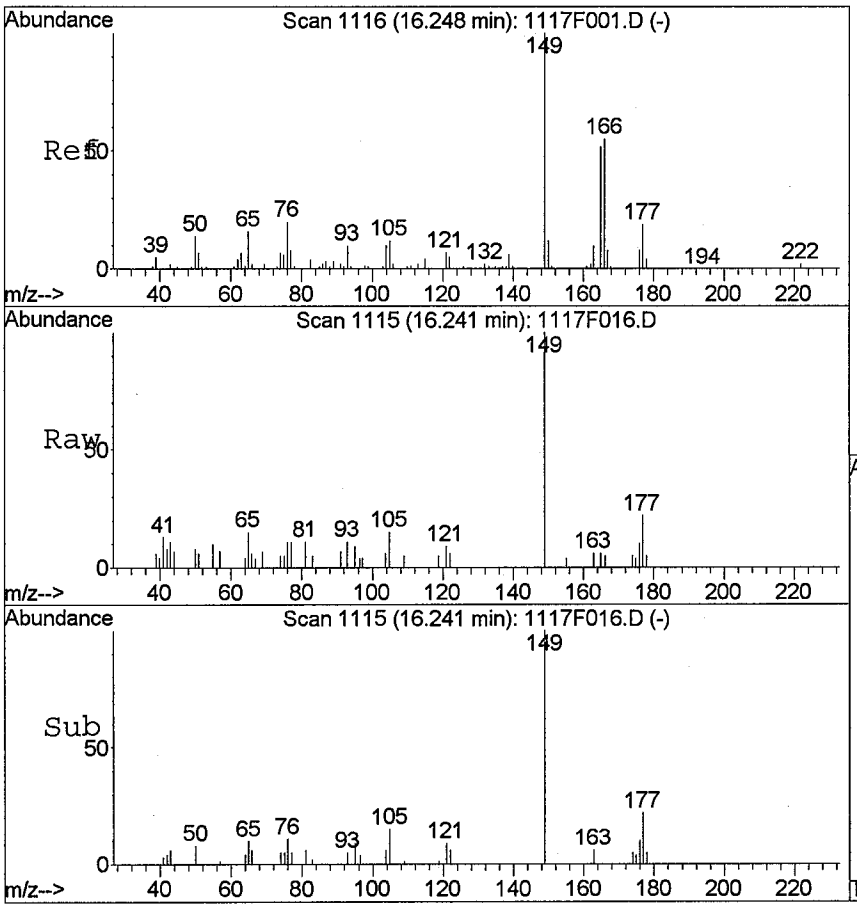


#50
Fluorene
Concen: 72.13 ng/ml
RT: 16.27 min Scan# 1118
Delta R.T. 0.01 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:166 Resp: 8652

Ion	Ratio	Lower	Upper
166	100		
165	87.0	63.2	123.2
167	11.2	0.0	43.0

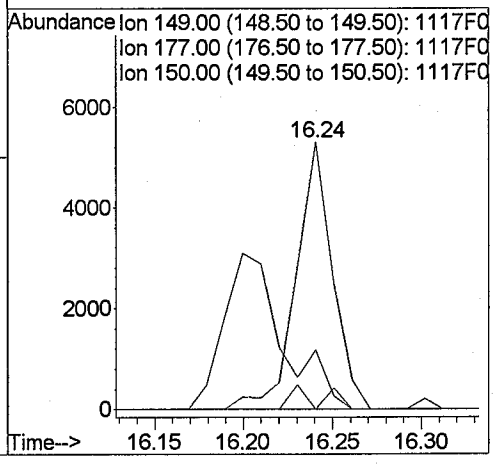


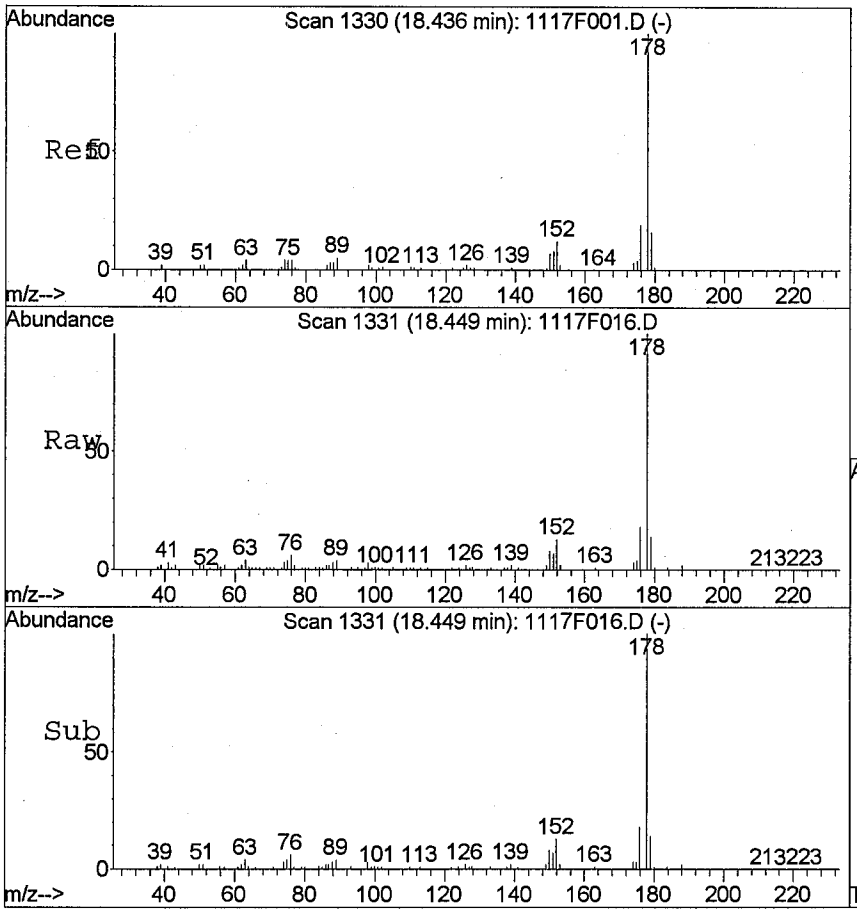


#52
Diethyl Phthalate
Concen: 50.57 ng/ml
RT: 16.24 min Scan# 1115
Delta R.T. -0.01 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:149 Resp: 7513

Ion	Ratio	Lower	Upper
149	100		
177	22.3	0.0	51.6
150	0.0	0.0	41.6

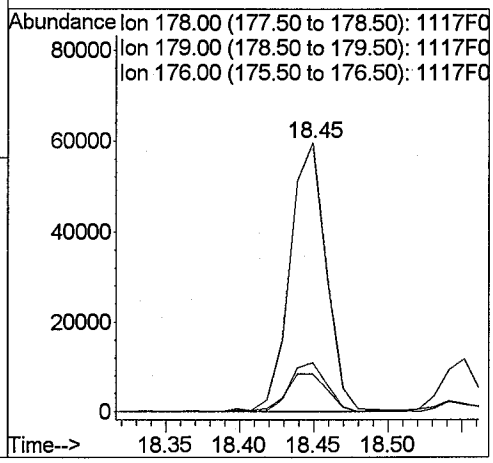


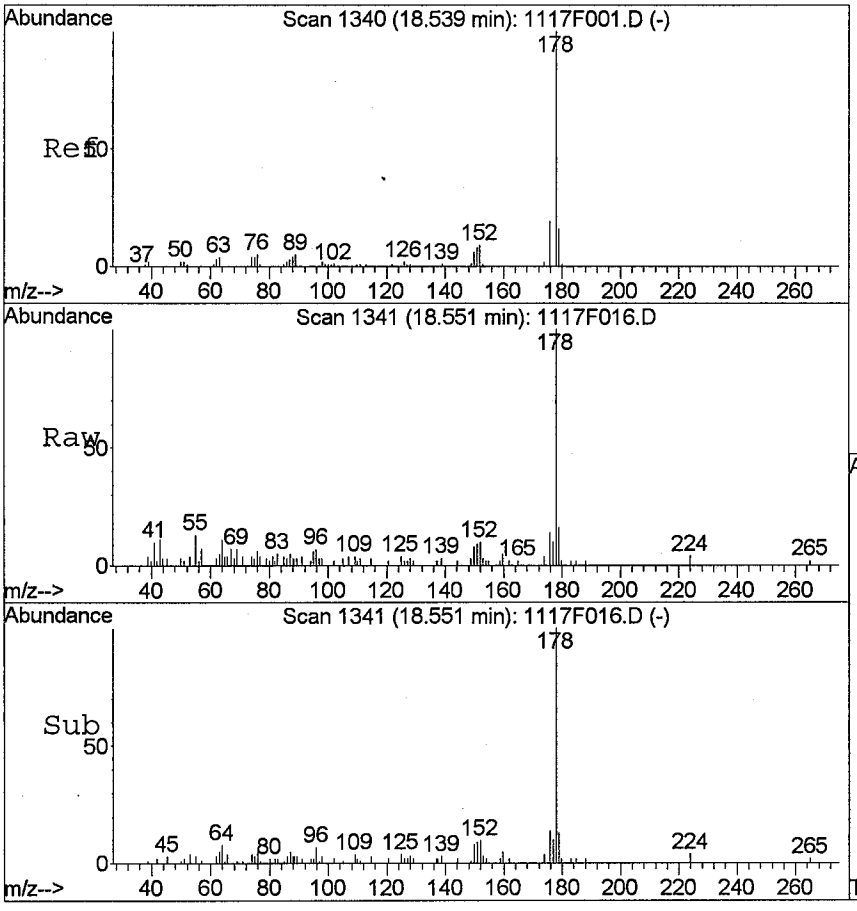


#62
Phenanthrene
Concen: 537.24 ng/ml
RT: 18.45 min Scan# 1331
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:178 Resp: 101704

Ion	Ratio	Lower	Upper
178	100		
179	14.3	0.0	44.8
176	18.4	0.0	49.3

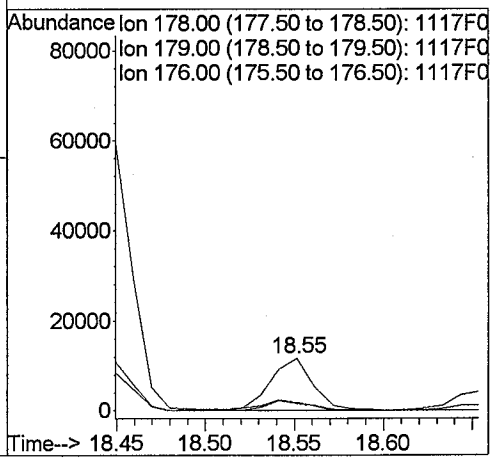


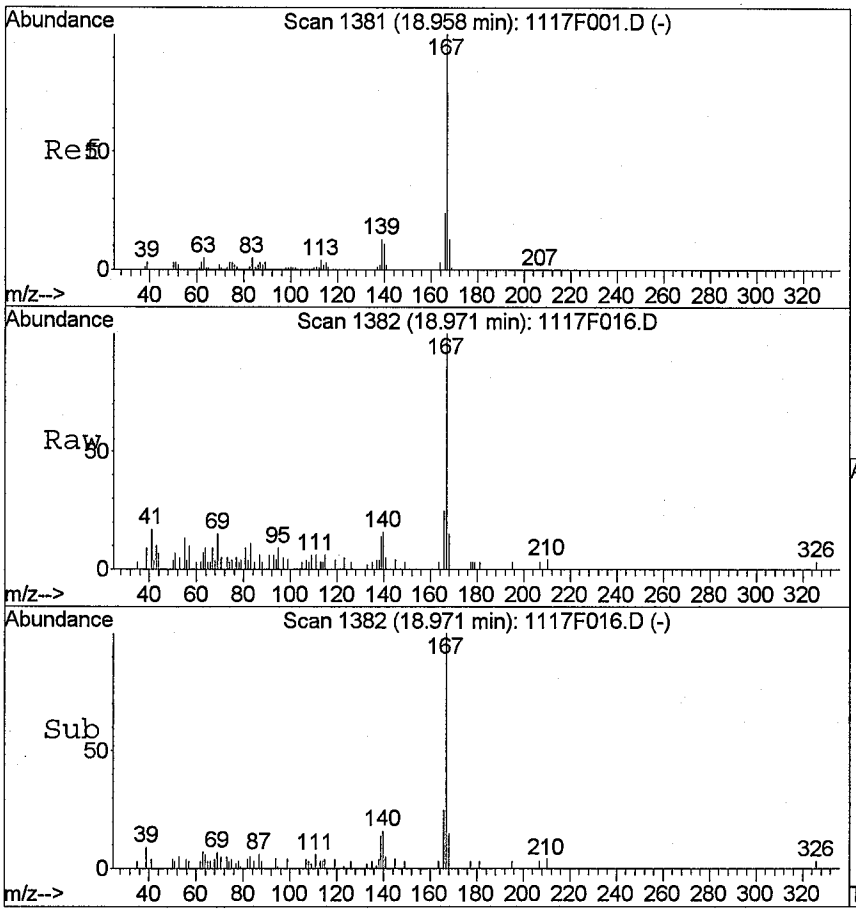


#63
Anthracene
Concen: 104.23 ng/ml
RT: 18.55 min Scan# 1341
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:178 Resp: 19883

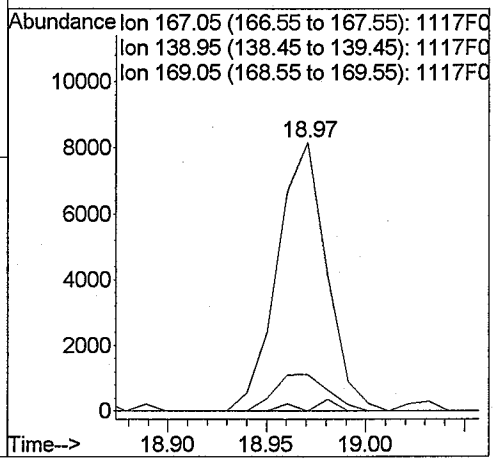
Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	44.7
176	13.9	0.0	49.8

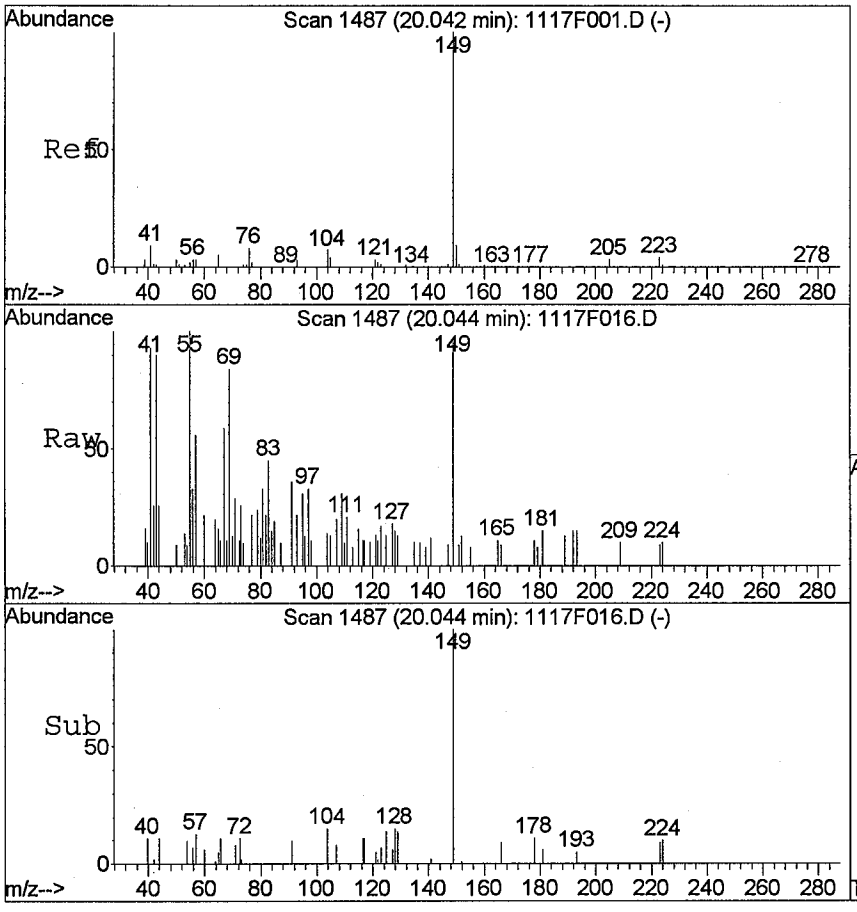




#64
Carbazole
Concen: 85.10 ng/ml
RT: 18.97 min Scan# 1382
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

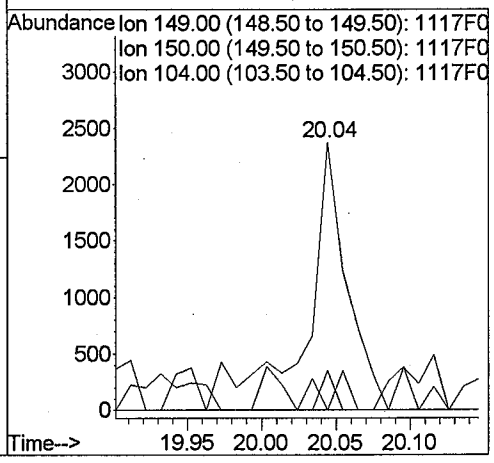
Tgt Ion:167	Resp:	14121	
Ion	Ratio	Lower	Upper
167	100		
139	13.6	0.0	41.7
169	0.0	0.0	30.8

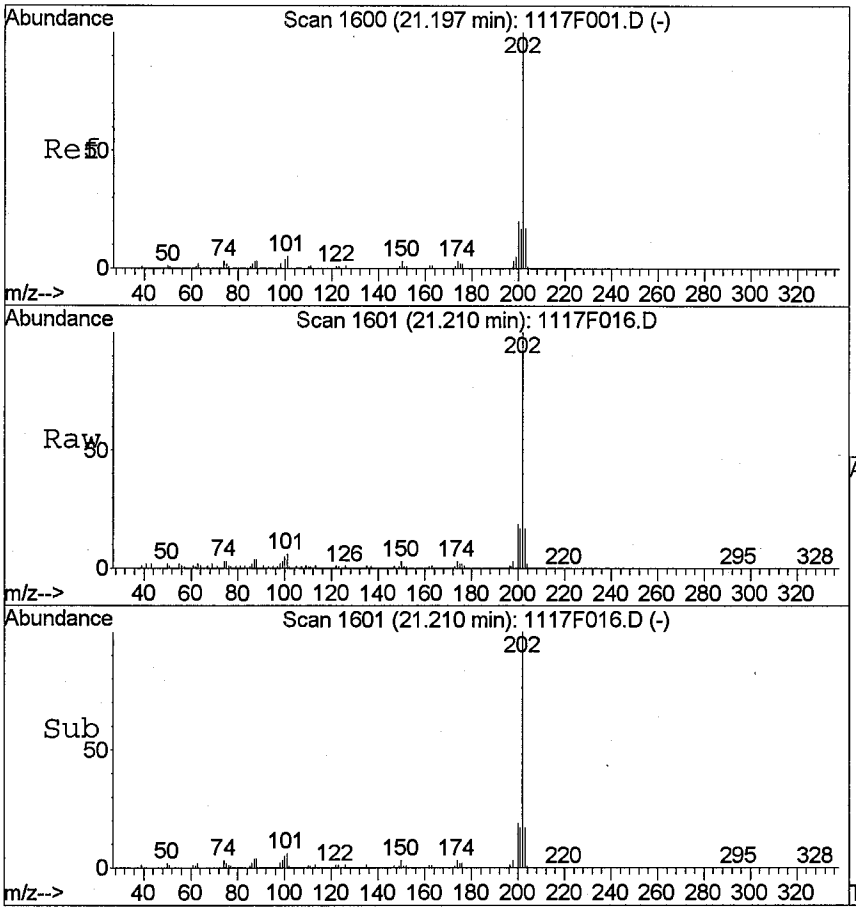




#65
Di-n-butyl Phthalate
Concen: 19.77 ng/ml
RT: 20.04 min Scan# 1487
Delta R.T. 0.01 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:149	Resp:	4569	
Ion	Ratio	Lower	Upper
149	100		
150	0.0	0.0	39.4
104	14.9	0.0	35.0

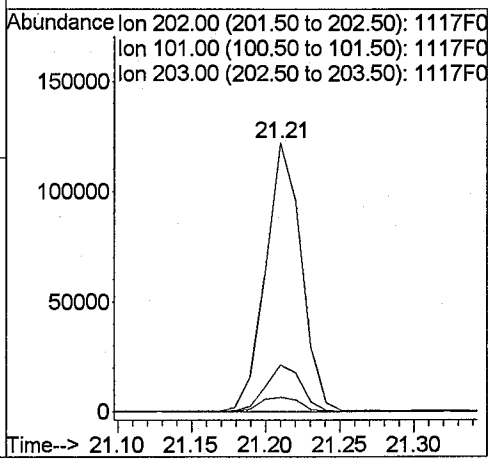


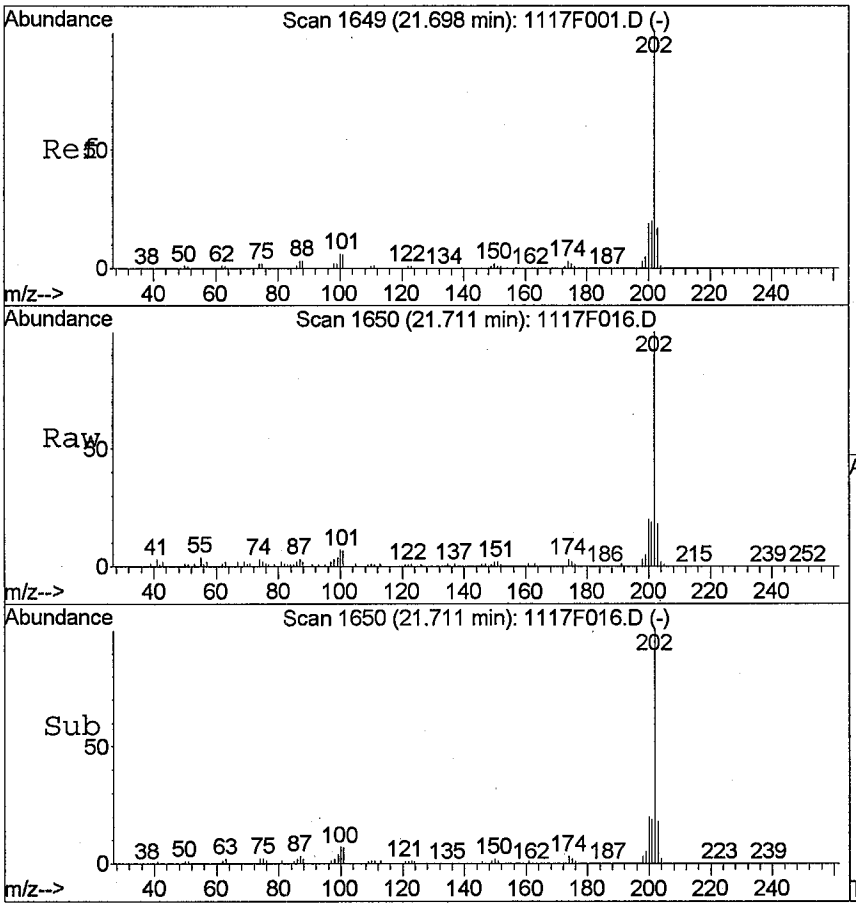


#66
Fluoranthene
Concen: 984.48 ng/ml
RT: 21.21 min Scan# 1601
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:202 Resp: 204731

Ion	Ratio	Lower	Upper
202	100		
101	5.5	0.0	42.0
203	17.1	0.0	47.2

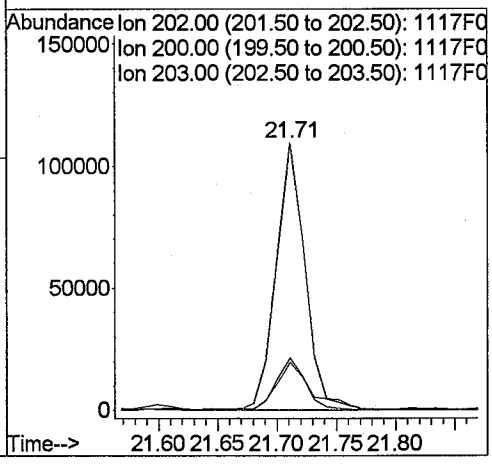


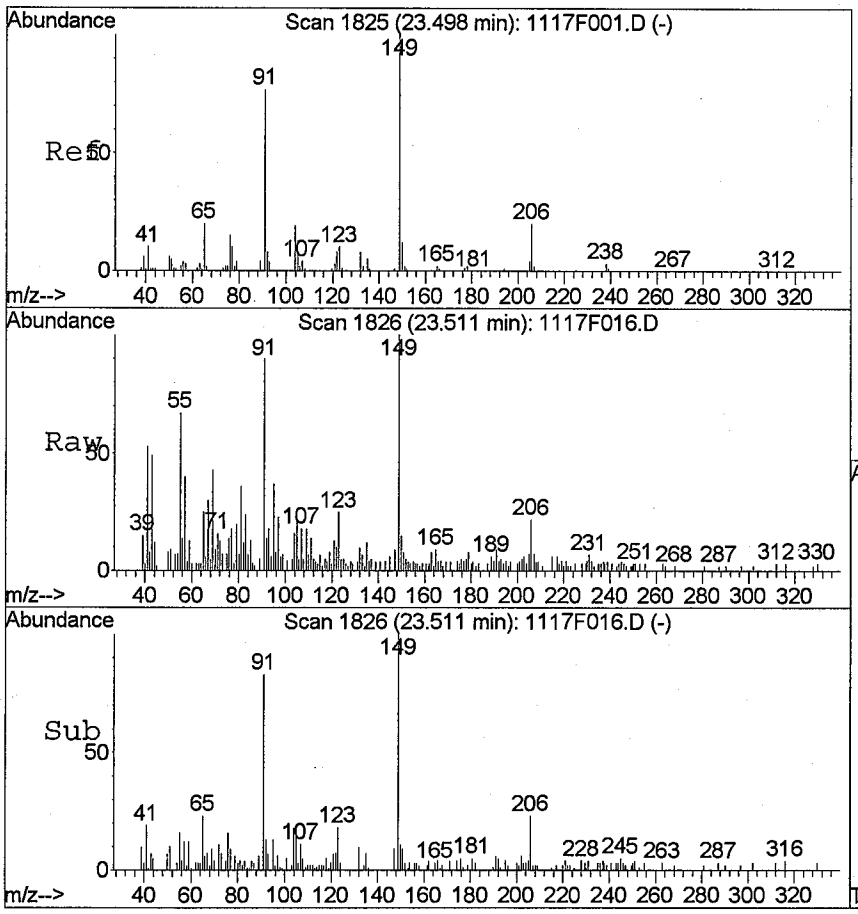


#69
Pyrene
Concen: 851.48 ng/ml
RT: 21.71 min Scan# 1650
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:202 Resp: 186002

Ion	Ratio	Lower	Upper
202	100		
200	19.6	0.0	50.3
203	17.5	0.0	48.1

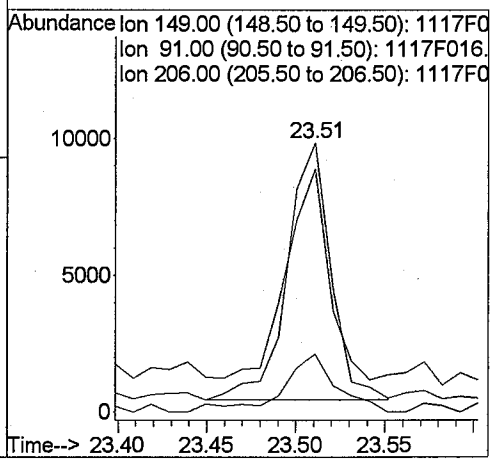


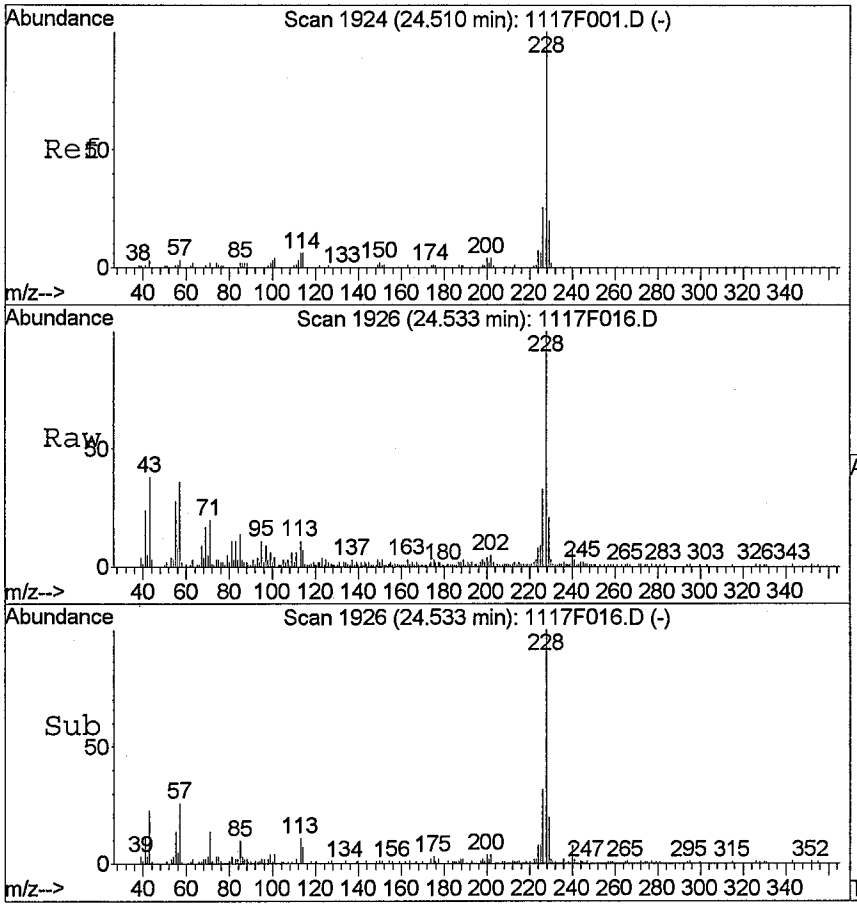


#71
Butyl Benzyl Phthalate
Concen: 164.98 ng/ml
RT: 23.51 min Scan# 1826
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:149 Resp: 16056

Ion	Ratio	Lower	Upper
149	100		
91	80.9	41.4	101.4
206	22.6	0.0	46.5

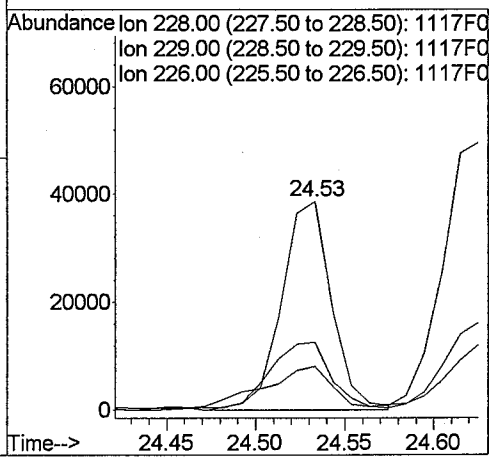


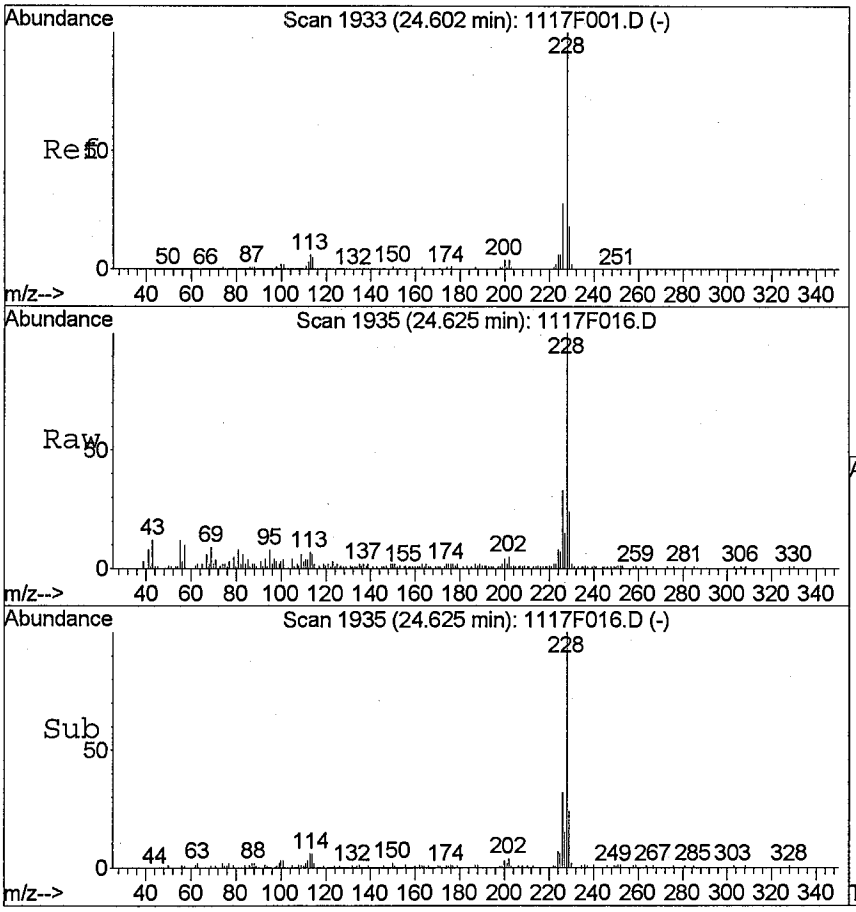


#73
Benz(a)anthracene
Concen: 389.69 ng/ml
RT: 24.53 min Scan# 1926
Delta R.T. 0.03 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:228 Resp: 75380

Ion	Ratio	Lower	Upper
228	100		
229	19.1	0.0	48.5
226	31.6	0.0	55.6

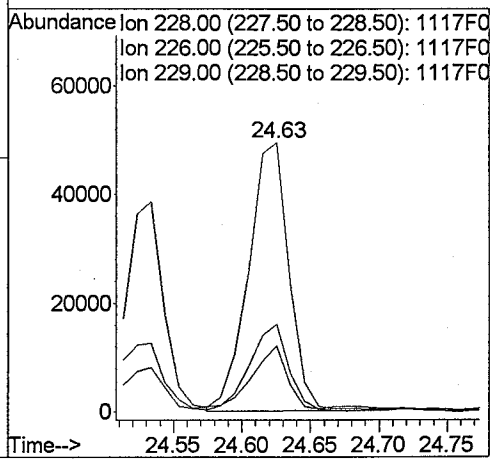


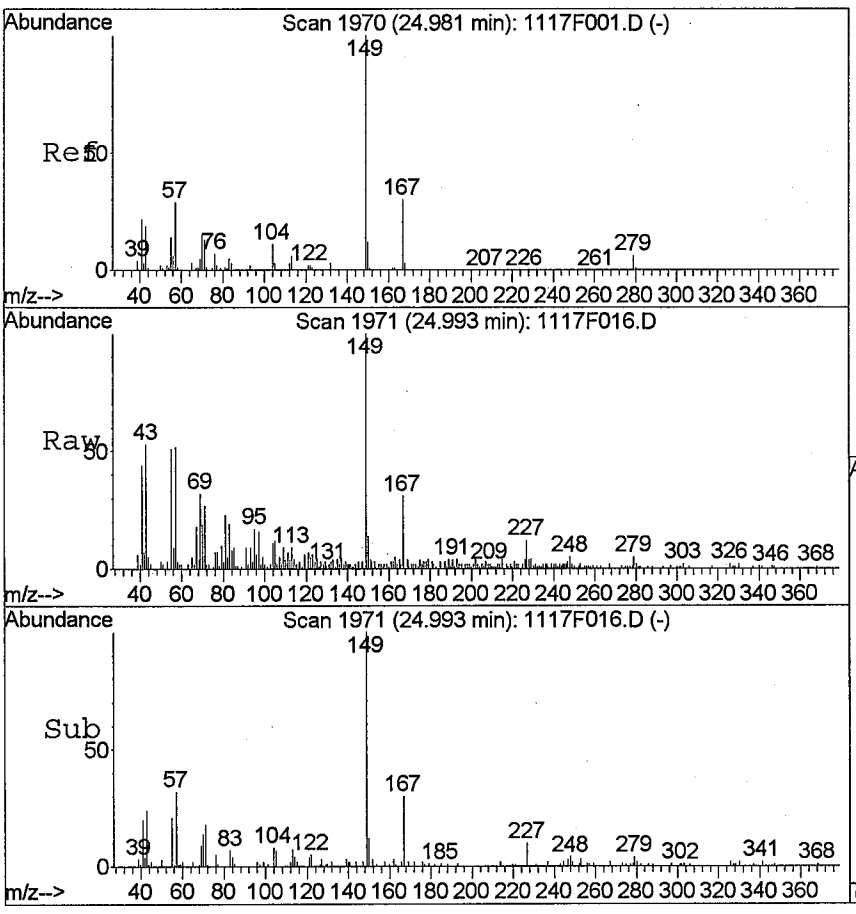


#74
Chrysene
Concen: 552.37 ng/ml
RT: 24.63 min Scan# 1935
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:228 Resp: 101249

Ion	Ratio	Lower	Upper
228	100		
226	31.9	0.0	58.4
229	23.4	0.0	49.1

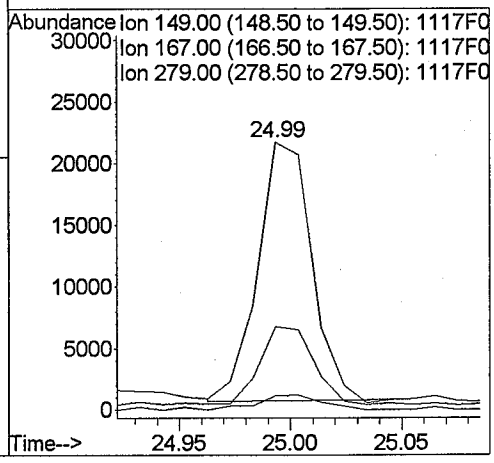


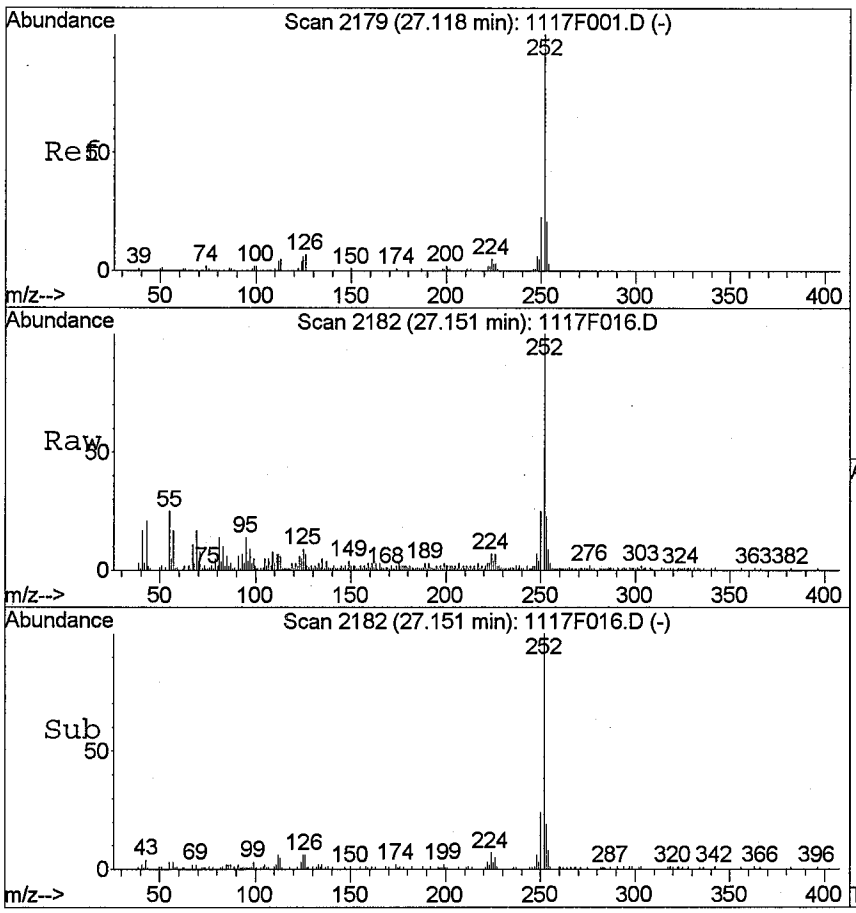


#75
Bis(2-ethylhexyl) Phthalate
Concen: 249.19 ng/ml
RT: 24.99 min Scan# 1971
Delta R.T. 0.01 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:149 Resp: 35139

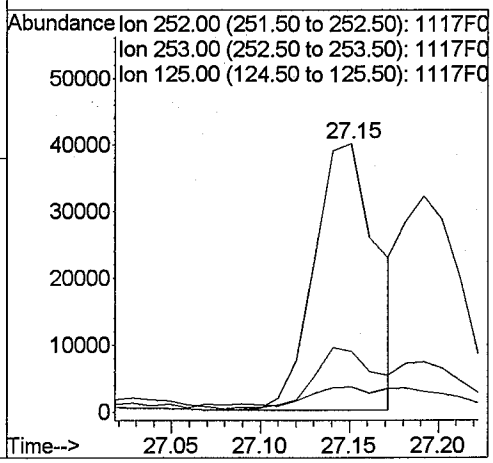
Ion	Ratio	Lower	Upper
149	100		
167	30.2	0.2	60.2
279	5.6	0.0	34.5

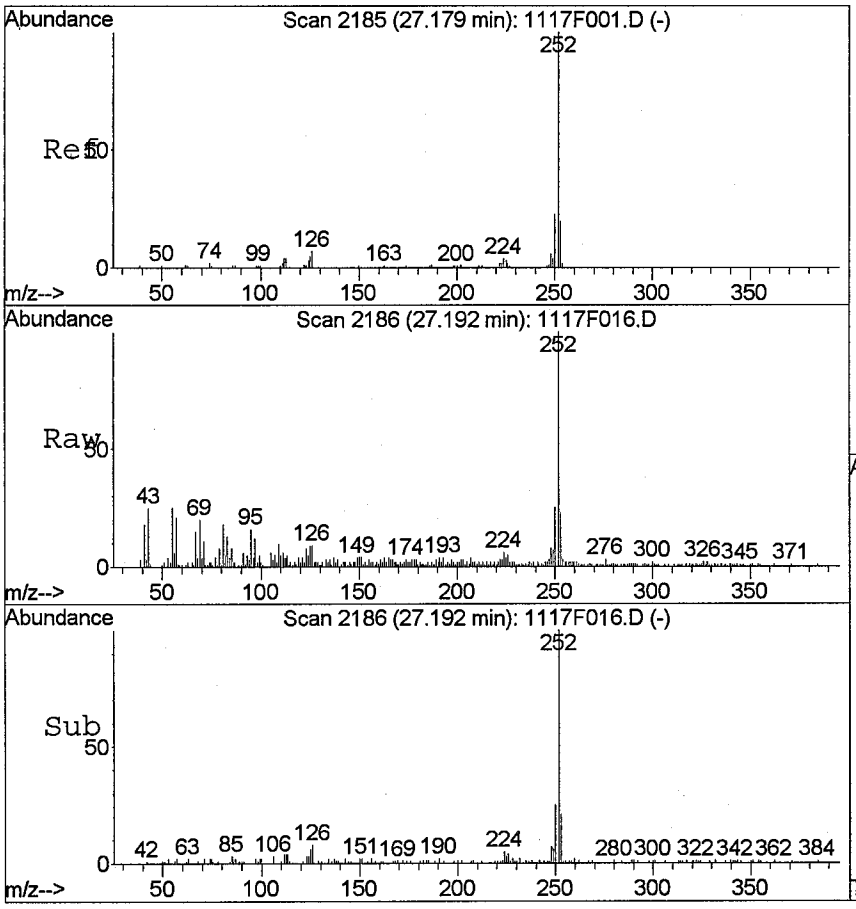




#78
Benzo(b)fluoranthene
Concen: 567.01 ng/ml
RT: 27.15 min Scan# 2182
Delta R.T. 0.04 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

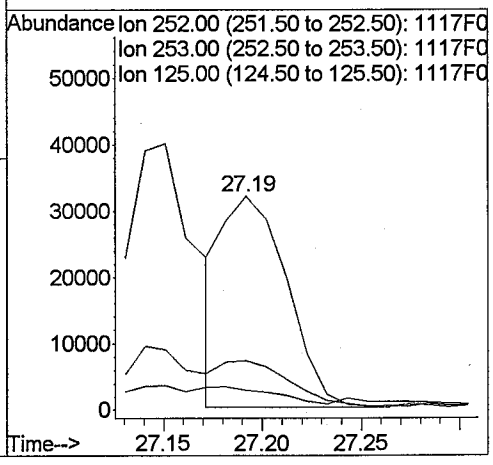
Tgt Ion:252	Resp:	97688	
Ion	Ratio	Lower	Upper
252	100		
253	20.7	0.0	51.3
125	6.4	0.0	41.2

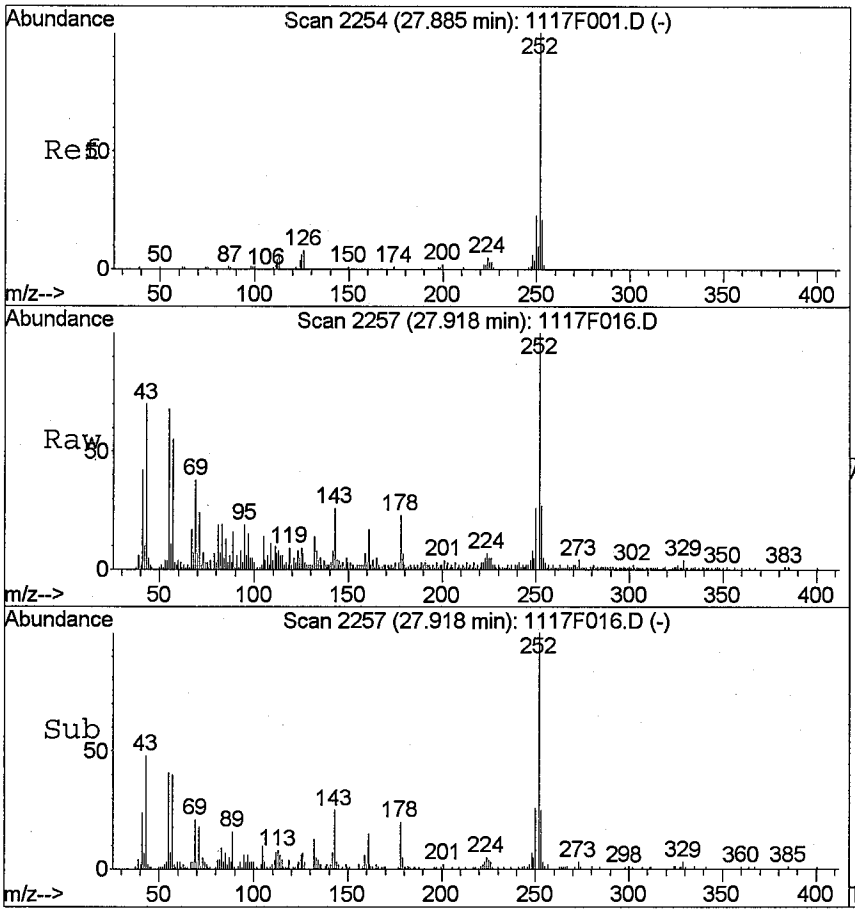




#79
Benzo(k)fluoranthene
Concen: 445.09 ng/ml
RT: 27.19 min Scan# 2186
Delta R.T. 0.02 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:252	Resp:	72883	
Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.9
125	5.6	0.0	40.9

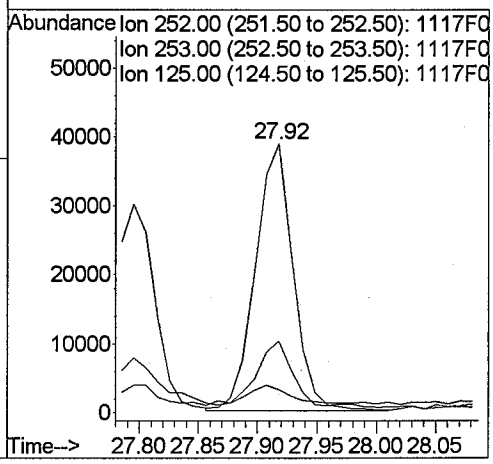


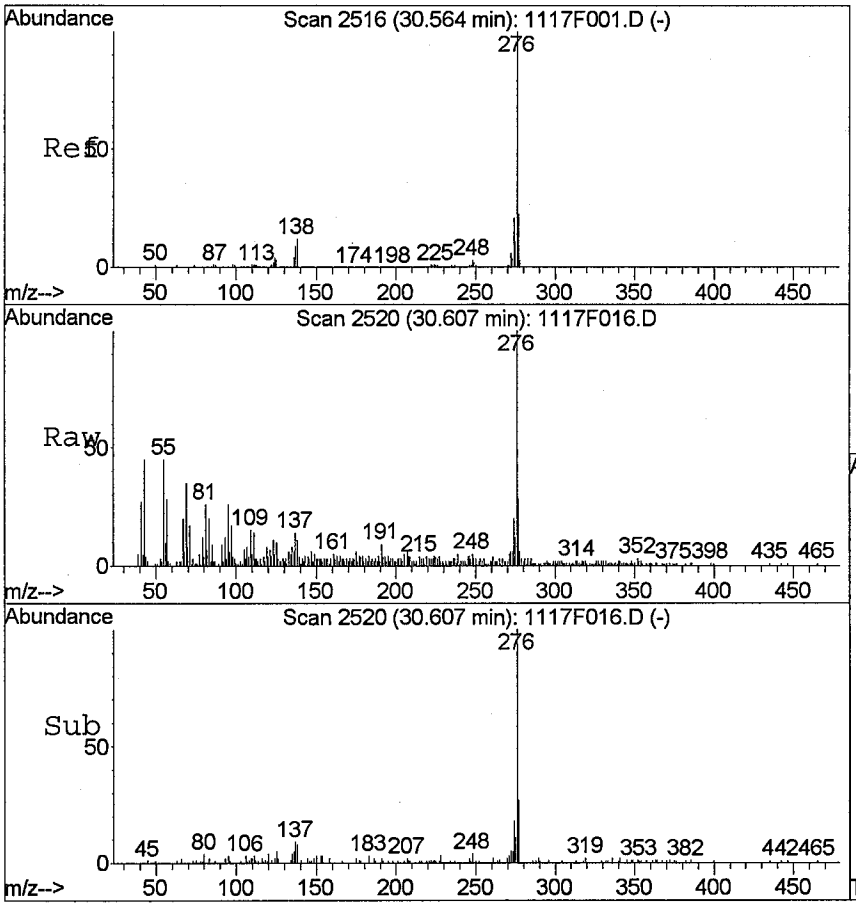


#80
Benzo(a)pyrene
Concen: 520.01 ng/ml
RT: 27.92 min Scan# 2257
Delta R.T. 0.04 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:252 Resp: 85029

Ion	Ratio	Lower	Upper
252	100		
253	24.8	0.0	52.2
125	6.0	0.0	42.3

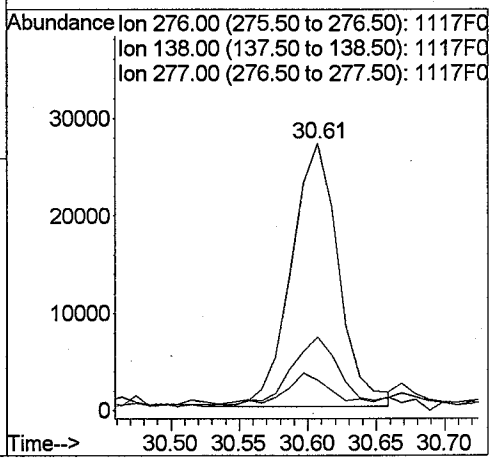


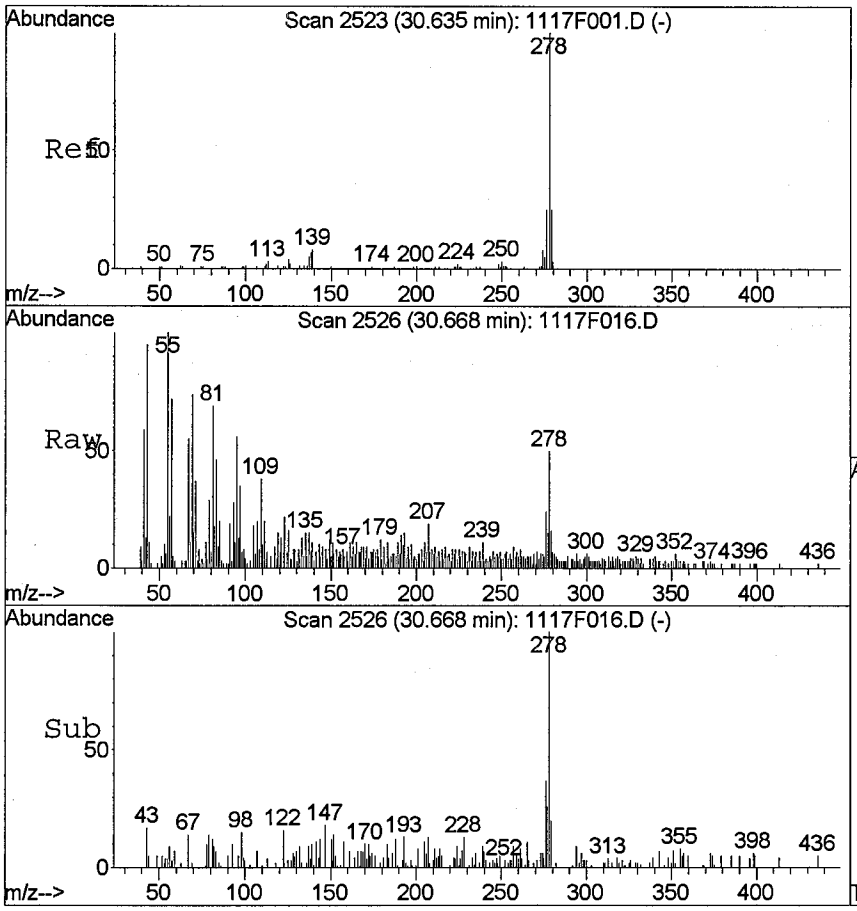


#81
Indeno(1,2,3-cd)pyrene
Concen: 427.76 ng/ml
RT: 30.61 min Scan# 2520
Delta R.T. 0.04 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:276 Resp: 65279

Ion	Ratio	Lower	Upper
276	100		
138	8.4	0.0	51.4
277	25.8	0.0	54.0

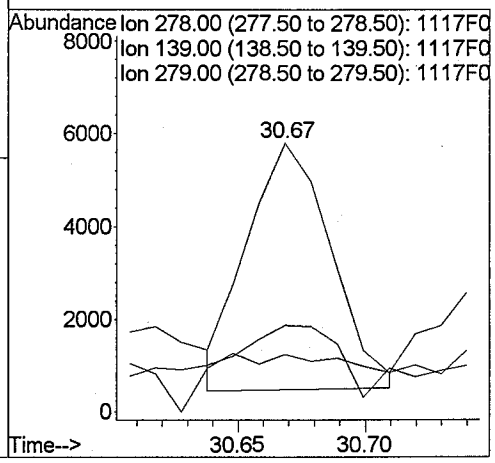


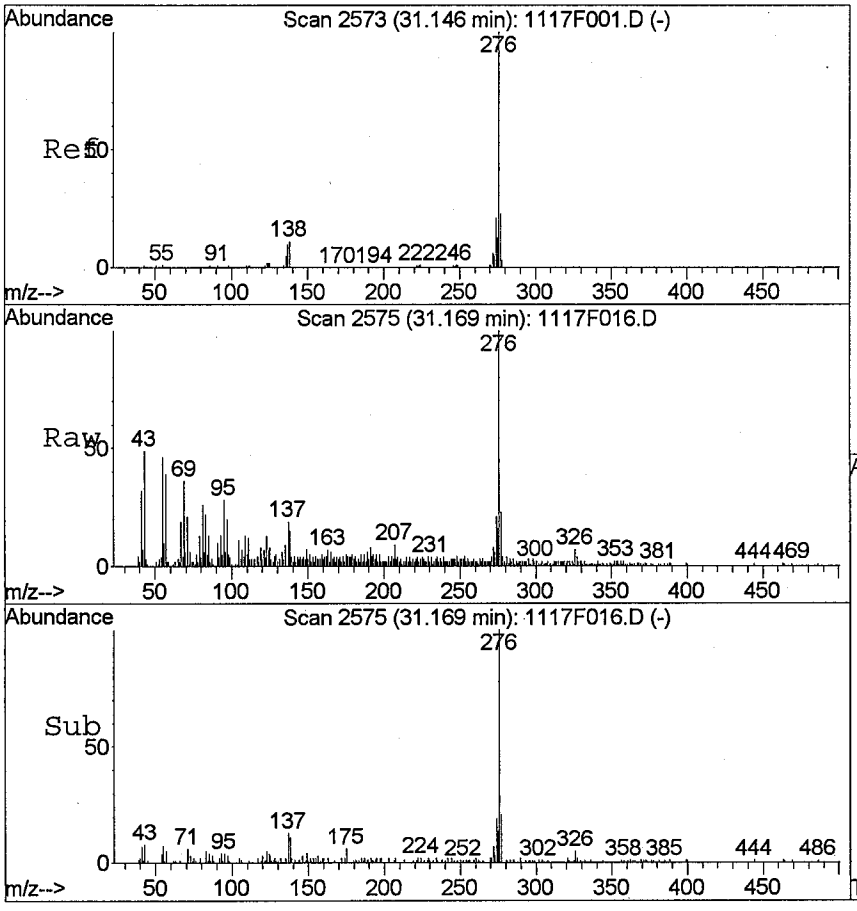


#82
Dibenz(a,h)anthracene
Concen: 81.57 ng/ml
RT: 30.67 min Scan# 2526
Delta R.T. 0.03 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:278 Resp: 12189

Ion	Ratio	Lower	Upper
278	100		
139	8.0	0.0	46.3
279	18.6	0.0	54.8

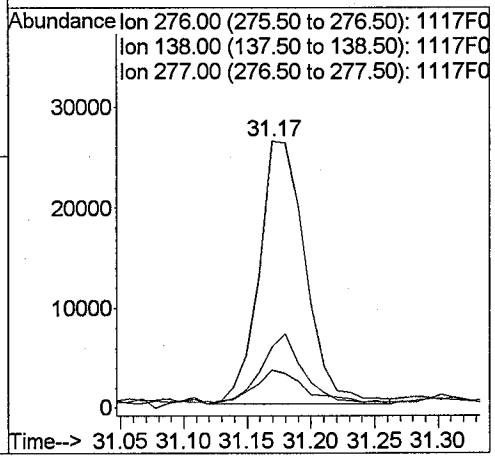




#83
Benzo(g,h,i)perylene
Concen: 423.56 ng/ml
RT: 31.17 min Scan# 2575
Delta R.T. 0.03 min
Lab File: 1117F016.D
Acq: 17 Nov 2003 19:45

Tgt Ion:276 Resp: 67017

Ion	Ratio	Lower	Upper
276	100		
138	13.3	0.0	52.7
277	21.4	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-4
Lab Code: K2308433-004

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	170	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	290	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	290	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	57	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1200	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	68	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	63	35-138	11/18/03	Acceptable
Terphenyl-d14	93	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F005.D
Lab ID: K2308433-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/18/2003 15:25
Date Quantitated: 11/19/2003 08:44
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

MRLMATRIX2

BatchQC8291

Primary Review: 11/19/3

Secondary Review: 11/19/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245970	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118F005.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 15:25	**Quant Date:**	11/19/2003 08:44	**Vial:**	5
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-004			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.99	0.00	152	53803	1,000.00	OK
2	Naphthalene-d8	11.28	0.00	136	155663	1,000.00	OK
3	Acenaphthene-d10	15.07	0.00	164	95550	1,000.00	OK
4	Phenanthrene-d10	18.41	0.00	188	176057	1,000.00	OK
5	Chrysene-d12	24.58	0.00	240	171930	1,000.00	OK
6	Perylene-d12	28.06	0.01	264	120638	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.49	0.01	0.00	99	35097	506.92	68	40-123	OK	
4	2,4,6-Tribromophenol	16.88	-0.01	0.00	330	14168	476.15	63	35-138	OK	
5	Terphenyl-d14	22.21	0.00	0.00	244	62486	463.60	93	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		13	U	
1	2-Methylphenol				107	0		23	U	
1	4-Methylphenol				107	0		20	U	
2	2,4-Dimethylphenol				122	0		37	U	
2	2,4-Dichlorophenol				162	0		12	U	
3	2,4,6-Trichlorophenol				196	0		12	U	
4	Pentachlorophenol				266	0		57	U	
5	Butyl Benzyl Phthalate	23.52		0.00	149	4164	43.82	25	JD	
5	Bis(2-ethylhexyl) Phthalate	25.00		0.00	149	51667	375.27	210	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F005.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 15:25	**Quant Date:**	11/19/2003 08:44	**Vial:**	5
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-004			**Soln Conc. Units:**	ng/ml

Prep Amount:	23.57 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	75.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F005.D Vial: 5
Acq On : 18 Nov 2003 15:25 Operator: JGISH
Sample : K2308433-004 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:28:50 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.99	152	53803	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.28	136	155663	1000.00	ng/ml	0.02
34) Acenaphthene-d10	15.07	164	95550	1000.00	ng/ml	0.02
57) Phenanthrene-d10	18.41	188	176057	1000.00	ng/ml	0.03
67) Chrysene-d12	24.58	240	171930	1000.00	ng/ml	0.03
76) Perylene-d12	28.06	264	120638	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	23300	403.33	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 10.76%#			
6) Phenol-d6	8.49	99	35097	506.92	ng/ml	0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 13.52%#			
19) Nitrobenzene-d5	9.97	82	27097	315.33	ng/ml	0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.61%#			
38) 2-Fluorobiphenyl	13.61	172	46764	353.03	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 14.12%#			
58) 2,4,6-Tribromophenol	16.88	330	14168	476.15	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 12.70%#			
70) Terphenyl-d14	22.21	244	62486	463.60	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 18.54%#			
Target Compounds						Qvalue
29) Naphthalene	11.32	128	6004	36.97	ng/ml	92
33) 2-Methylnaphthalene	12.75	142	2862	28.44	ng/ml	82
41) Acenaphthylene	14.72	152	18867	123.29	ng/ml	97
44) Acenaphthene	15.14	154	14878	162.30	ng/ml	96
47) Dibenzofuran	15.51	168	11263	69.63	ng/ml	84
50) Fluorene	16.28	166	19020	159.36	ng/ml	97
52) Diethyl Phthalate	16.26	149	2679	18.12	ng/ml	88
62) Phenanthrene	18.46	178	370157	1938.36	ng/ml	99
63) Anthracene	18.56	178	80108	416.31	ng/ml	95
64) Carbazole	18.98	167	48414	289.25	ng/ml	98
65) Di-n-butyl Phthalate	20.07	149	6170	26.47	ng/ml	83
66) Fluoranthene	21.23	202	852130	4062.07	ng/ml	92
69) Pyrene	21.73	202	689562	3233.09	ng/ml	98
71) Butyl Benzyl Phthalate	23.52	149	4164	43.82	ng/ml	71
73) Benz(a)anthracene	24.54	228	302778	1603.16	ng/ml	98
74) Chrysene	24.63	228	335108	1872.48	ng/ml	98
75) Bis(2-ethylhexyl) Phthalat	25.00	149	51667	375.27	ng/ml	96
78) Benzo(b)fluoranthene	27.15	252	326305	1989.20	ng/ml	94
79) Benzo(k)fluoranthene	27.20	252	233152	1495.43	ng/ml	93
80) Benzo(a)pyrene	27.93	252	277084	1779.74	ng/ml	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F005.D Vial: 5
Acq On : 18 Nov 2003 15:25 Operator: JGISH
Sample : K2308433-004 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:28:50 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

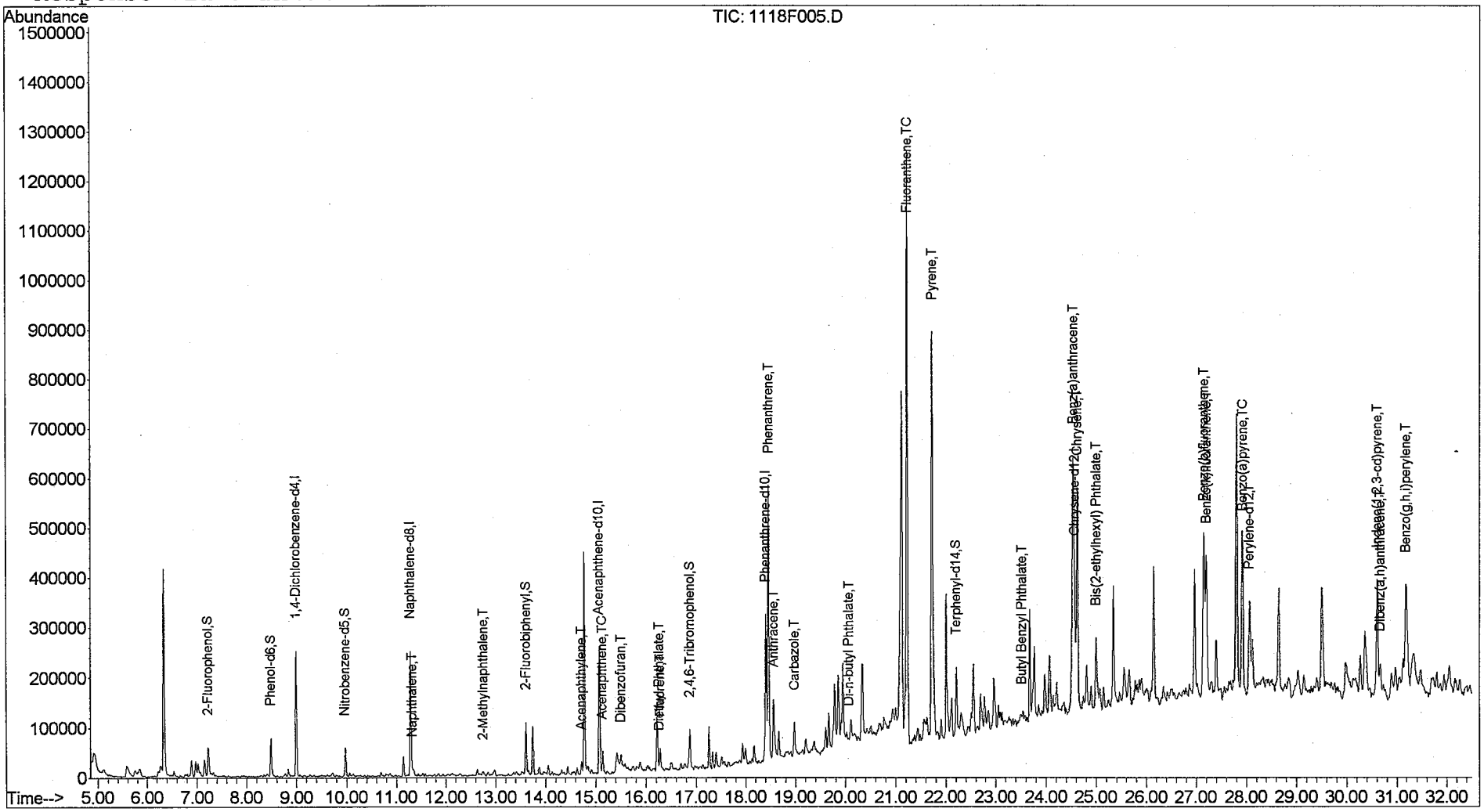
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Indeno(1,2,3-cd)pyrene	30.61	276	199997	1376.44	ng/ml	90
82)	Dibenz(a,h)anthracene	30.67	278	40183	282.41	ng/ml	92
83)	Benzo(g,h,i)perylene	31.18	276	197334	1309.88	ng/ml	88

(#) = qualifier out of range (m) = manual integration

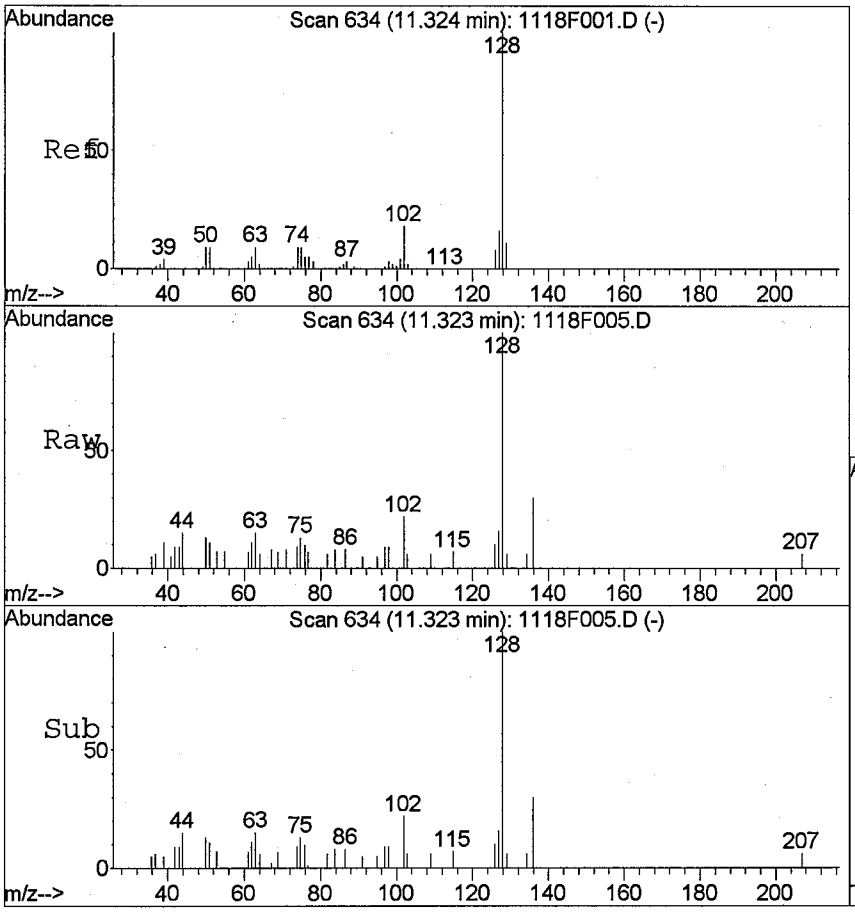
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F005.D Vial: 5
Acq On : 18 Nov 2003 15:25 Operator: JGISH
Sample : K2308433-004 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:44 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration



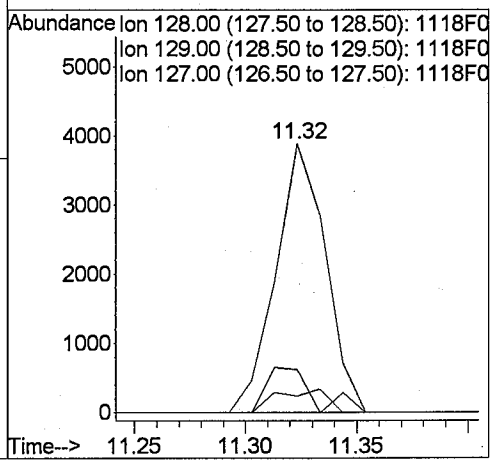
1901

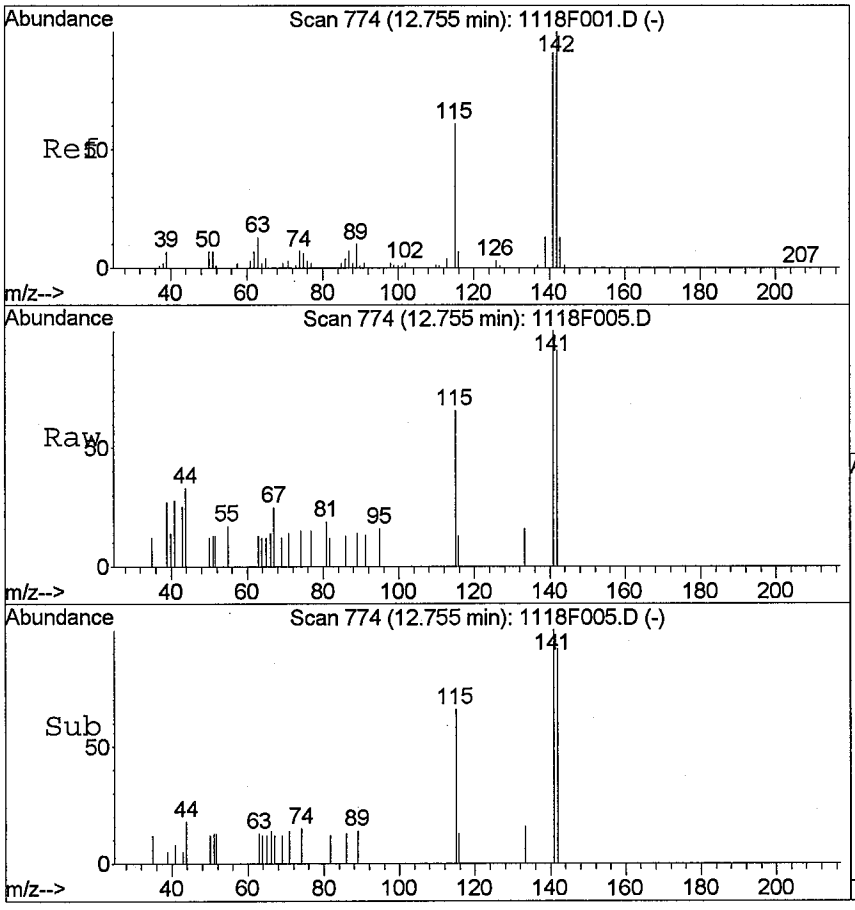


#29
Naphthalene
Concen: 36.97 ng/ml
RT: 11.32 min Scan# 634
Delta R.T. 0.02 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:128 Resp: 6004

Ion	Ratio	Lower	Upper
128	100		
129	6.2	0.0	41.3
127	16.0	0.0	44.2

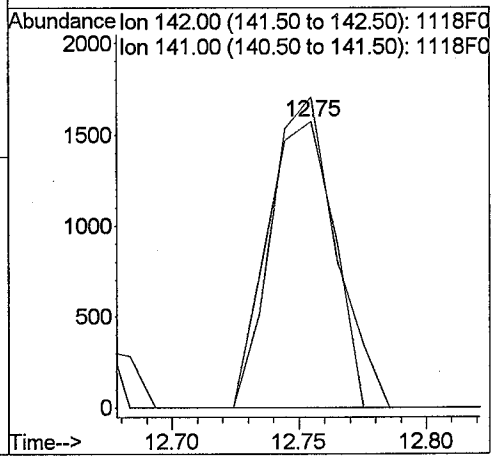


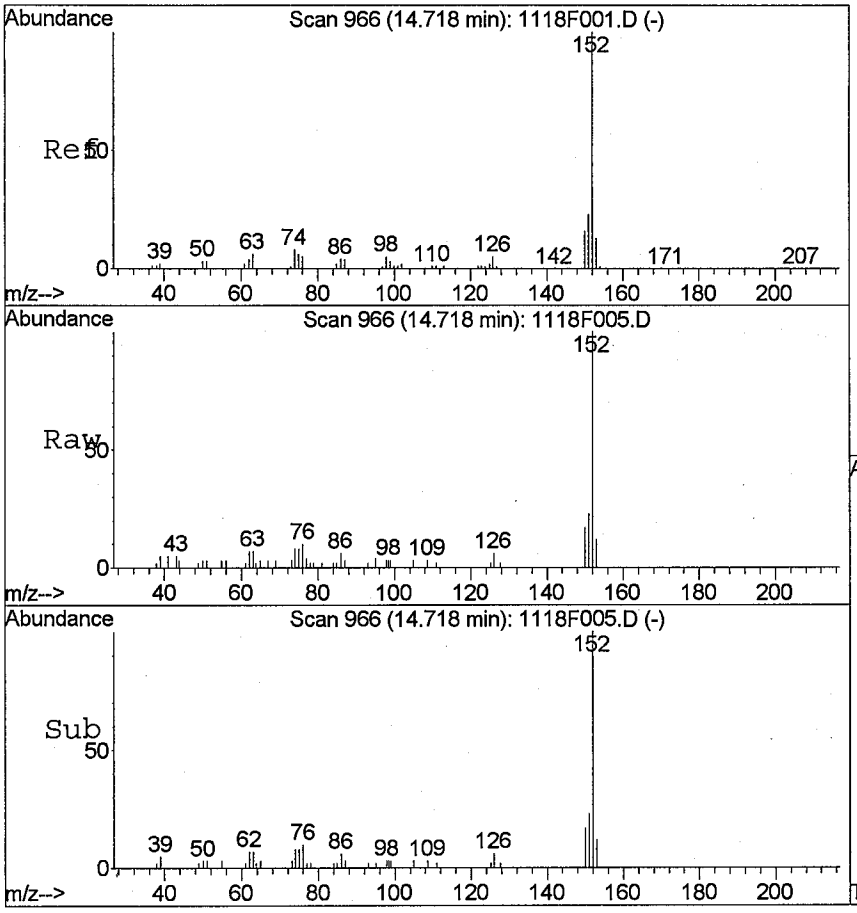


#33
2-Methylnaphthalene
Concen: 28.44 ng/ml
RT: 12.75 min Scan# 774
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:142 Resp: 2862

Ion	Ratio	Lower	Upper
142	100		
141	108.5	61.0	121.0

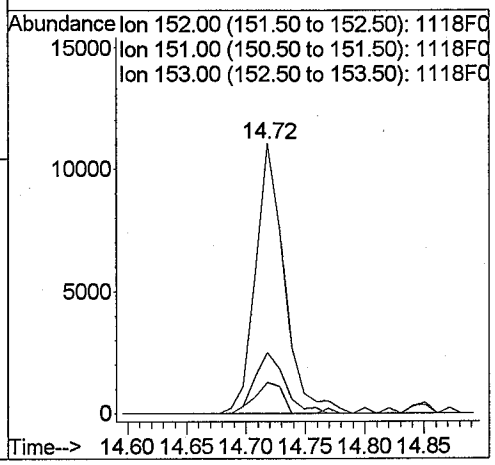


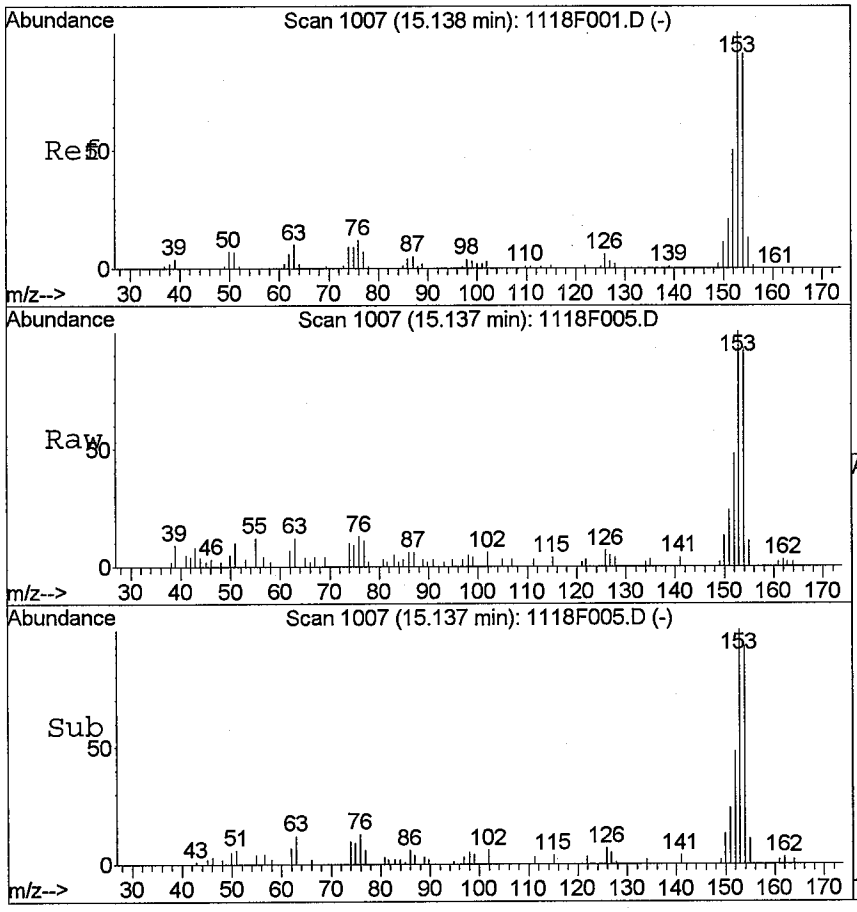


#41
Acenaphthylene
Concen: 123.29 ng/ml
RT: 14.72 min Scan# 966
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:152 Resp: 18867

Ion	Ratio	Lower	Upper
152	100		
151	22.7	0.0	51.5
153	11.6	0.0	42.9

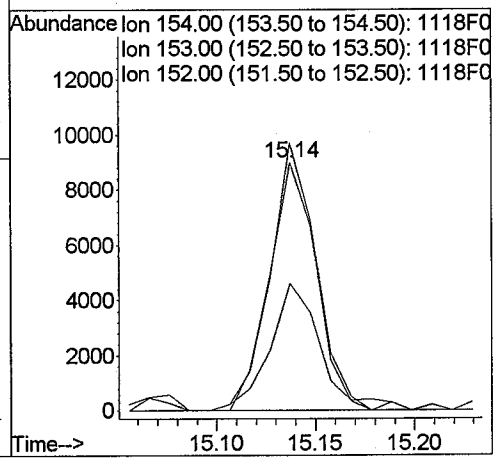


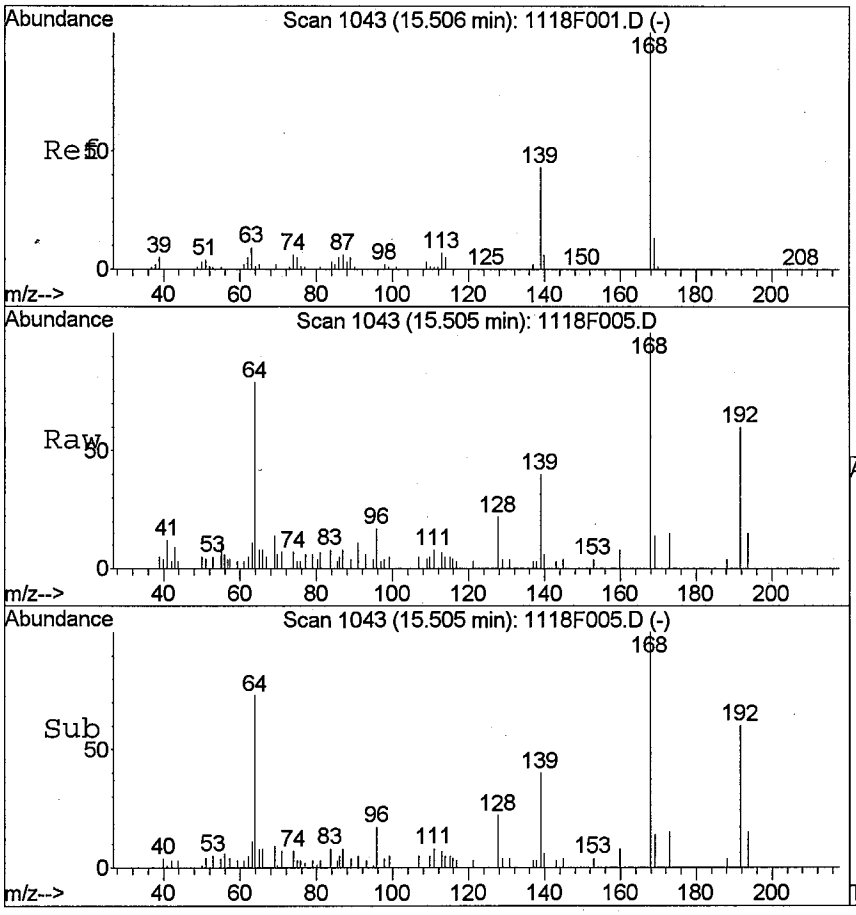


#44
Acenaphthene
Concen: 162.30 ng/ml
RT: 15.14 min Scan# 1007
Delta R.T. 0.02 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:154 Resp: 14878

Ion	Ratio	Lower	Upper
154	100		
153	107.9	82.4	142.4
152	51.3	24.4	84.4

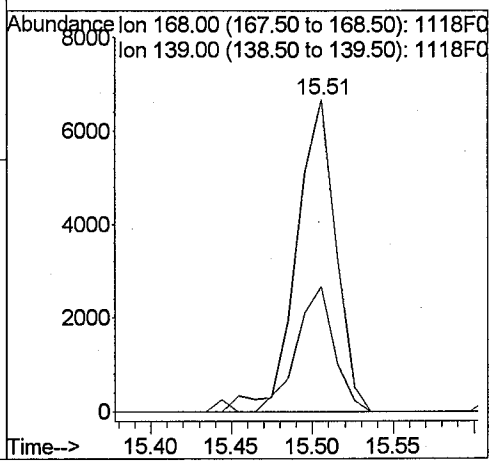


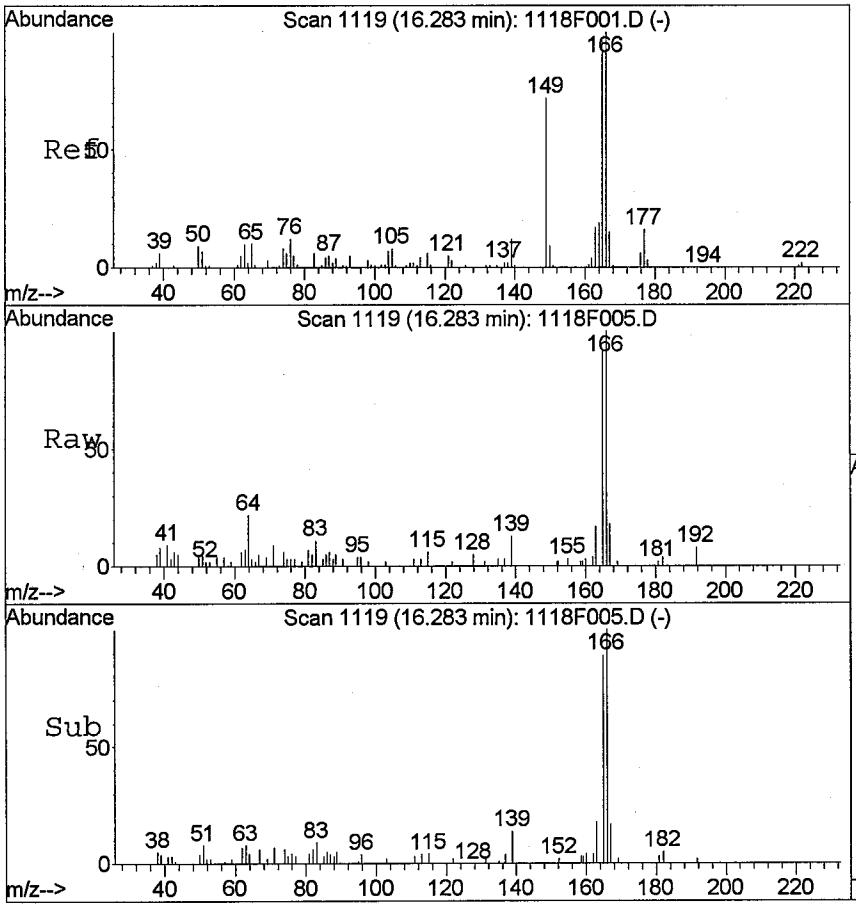


#47
Dibenzofuran
Concen: 69.63 ng/ml
RT: 15.51 min Scan# 1043
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:168 Resp: 11263

Ion	Ratio	Lower	Upper
168	100		
139	39.9	1.2	61.2

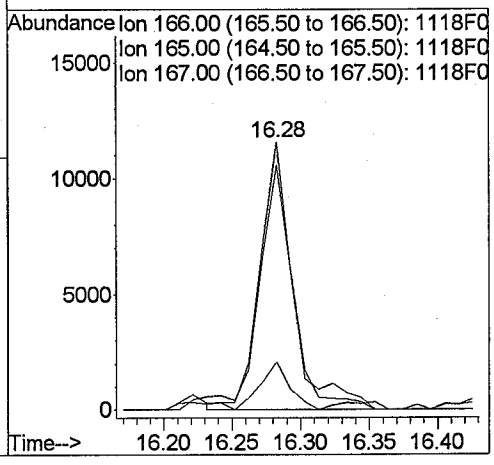


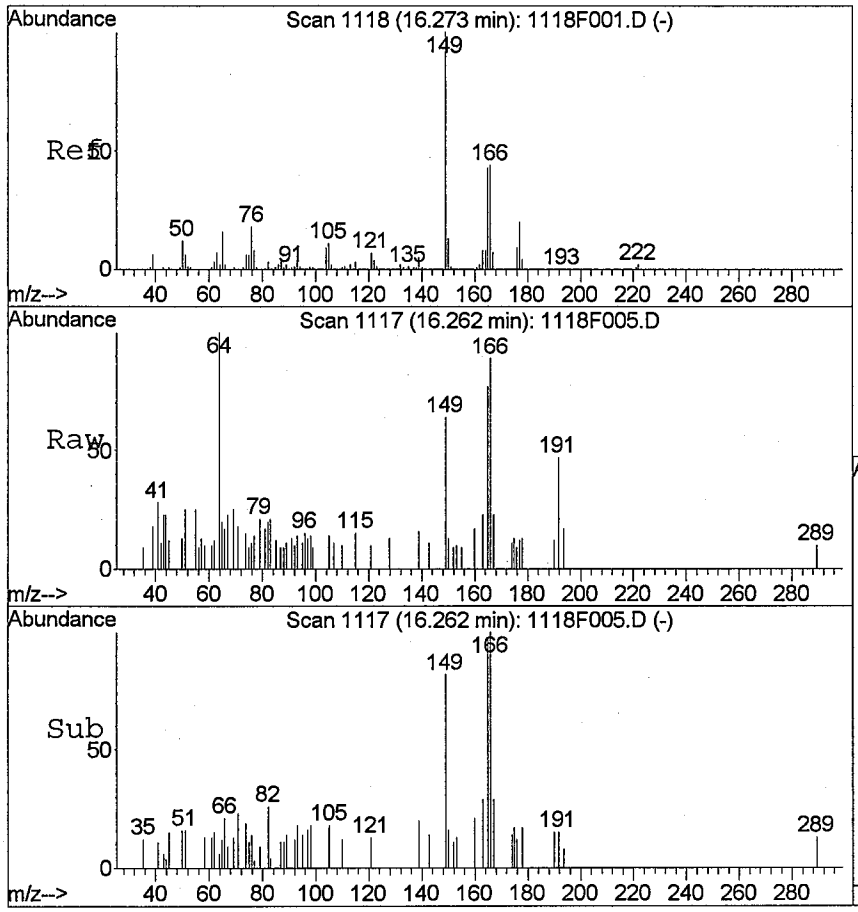


#50
Fluorene
Concen: 159.36 ng/ml
RT: 16.28 min Scan# 1119
Delta R.T. 0.02 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:166 Resp: 19020

Ion	Ratio	Lower	Upper
166	100		
165	91.7	63.2	123.2
167	18.1	0.0	43.0

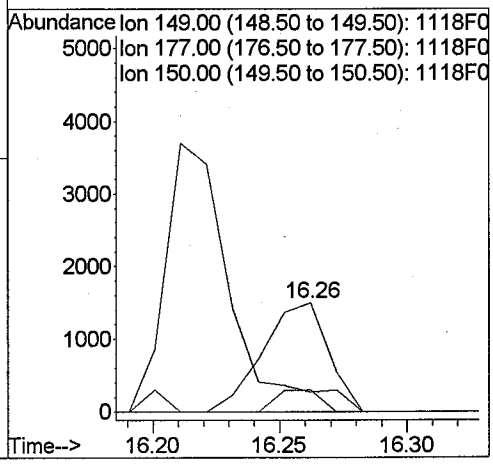


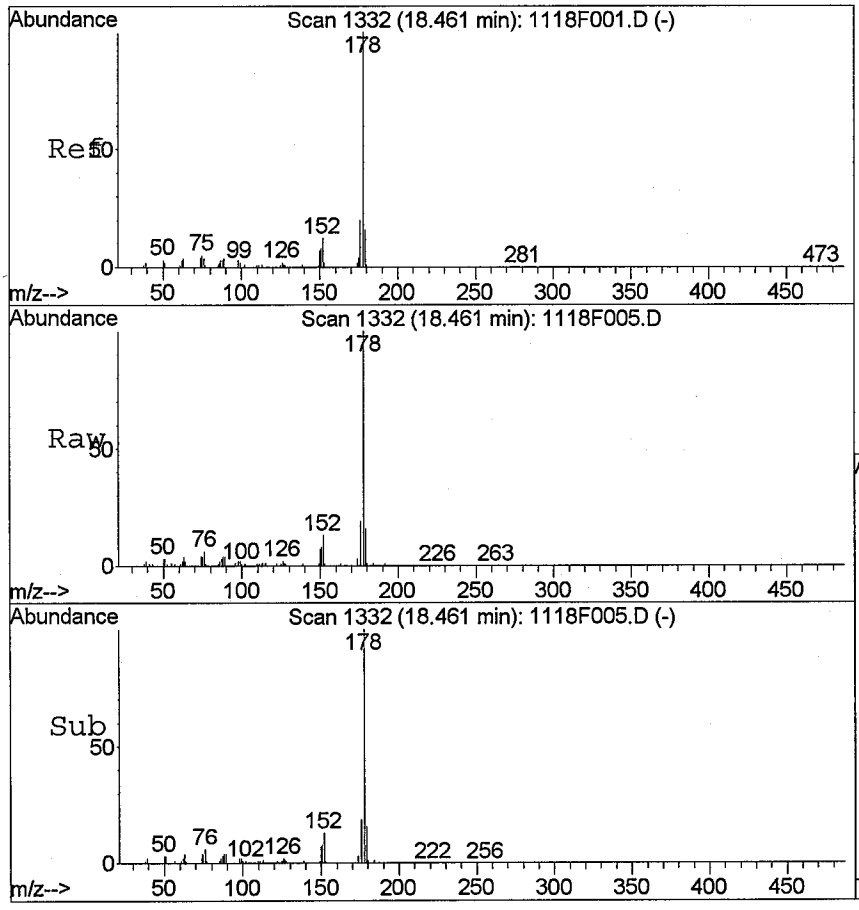


#52
Diethyl Phthalate
Concen: 18.12 ng/ml
RT: 16.26 min Scan# 1117
Delta R.T. 0.01 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:149 Resp: 2679

Ion	Ratio	Lower	Upper
149	100		
177	18.2	0.0	51.6
150	20.1	0.0	41.6

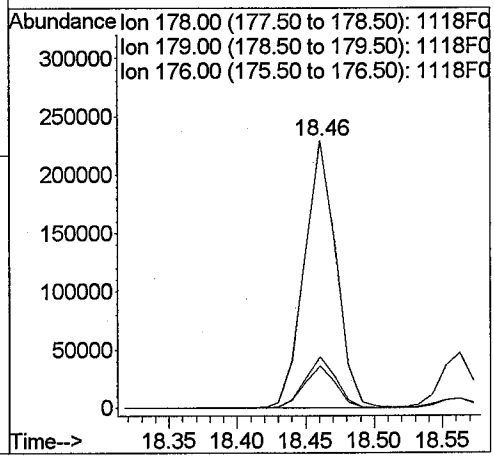


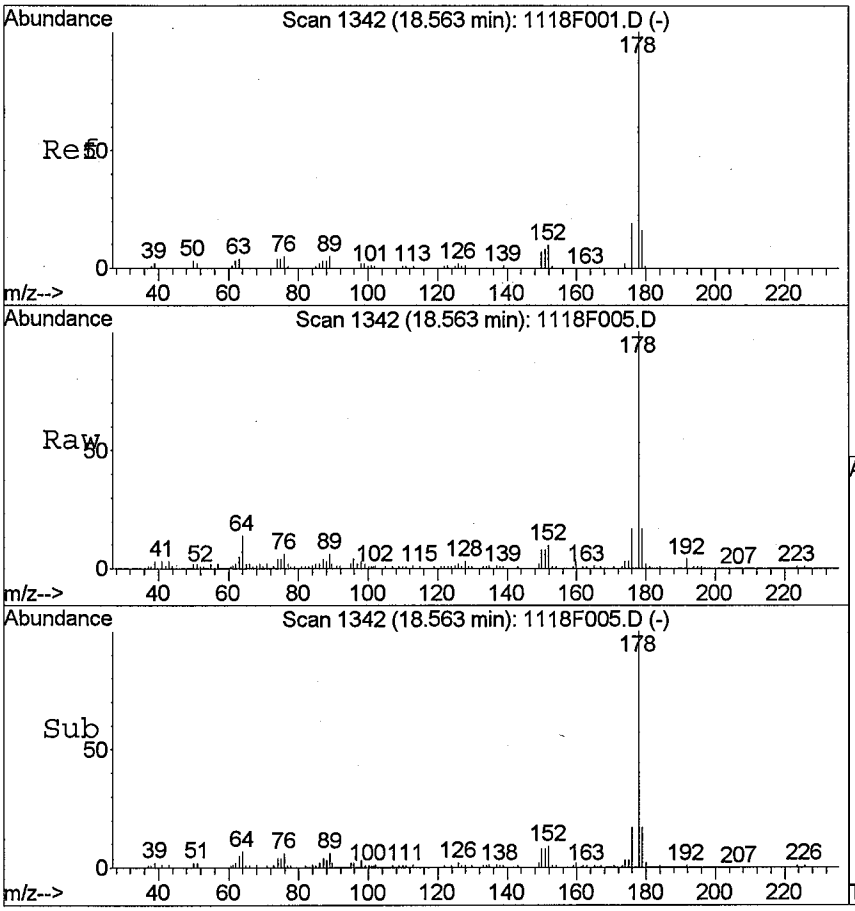


#62
Phenanthrene
Concen: 1938.36 ng/ml
RT: 18.46 min Scan# 1332
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:178 Resp: 370157

Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	44.8
176	19.2	0.0	49.3

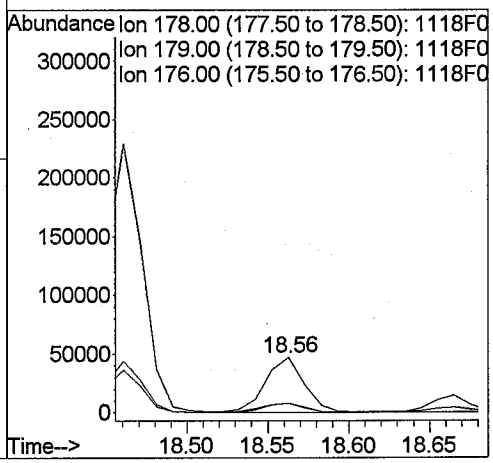


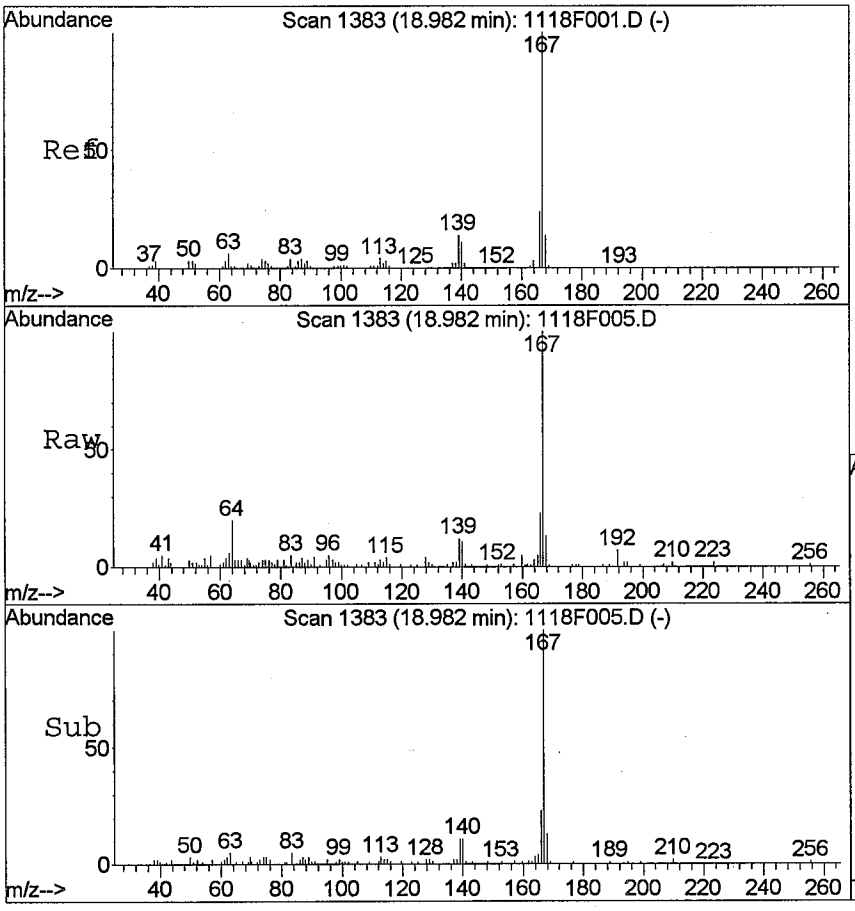


#63
Anthracene
Concen: 416.31 ng/ml
RT: 18.56 min Scan# 1342
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:178 Resp: 80108

Ion	Ratio	Lower	Upper
178	100		
179	16.6	0.0	44.7
176	17.3	0.0	49.8

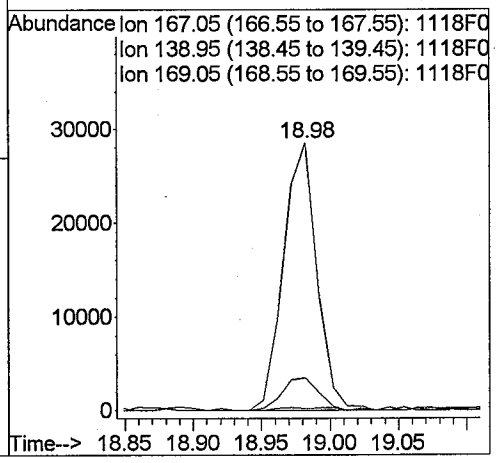


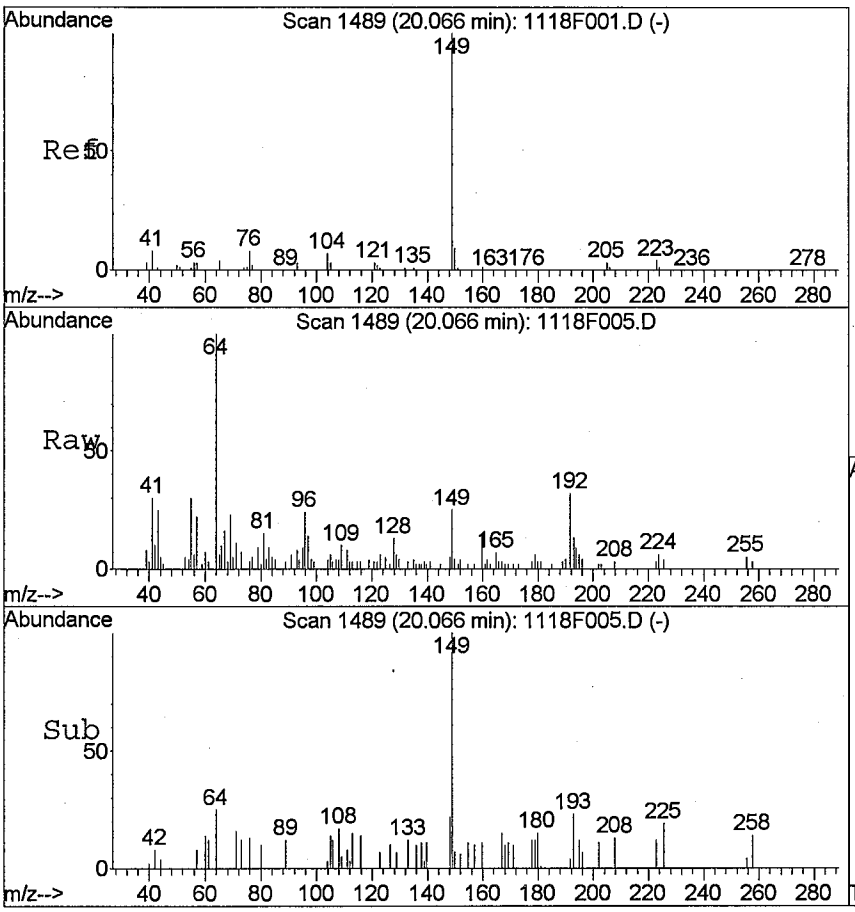


#64
Carbazole
Concen: 289.25 ng/ml
RT: 18.98 min Scan# 1383
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:167 Resp: 48414

Ion	Ratio	Lower	Upper
167	100		
139	12.3	0.0	41.7
169	0.8	0.0	30.8

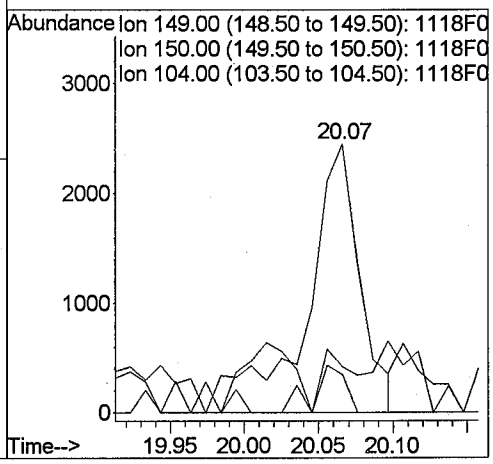


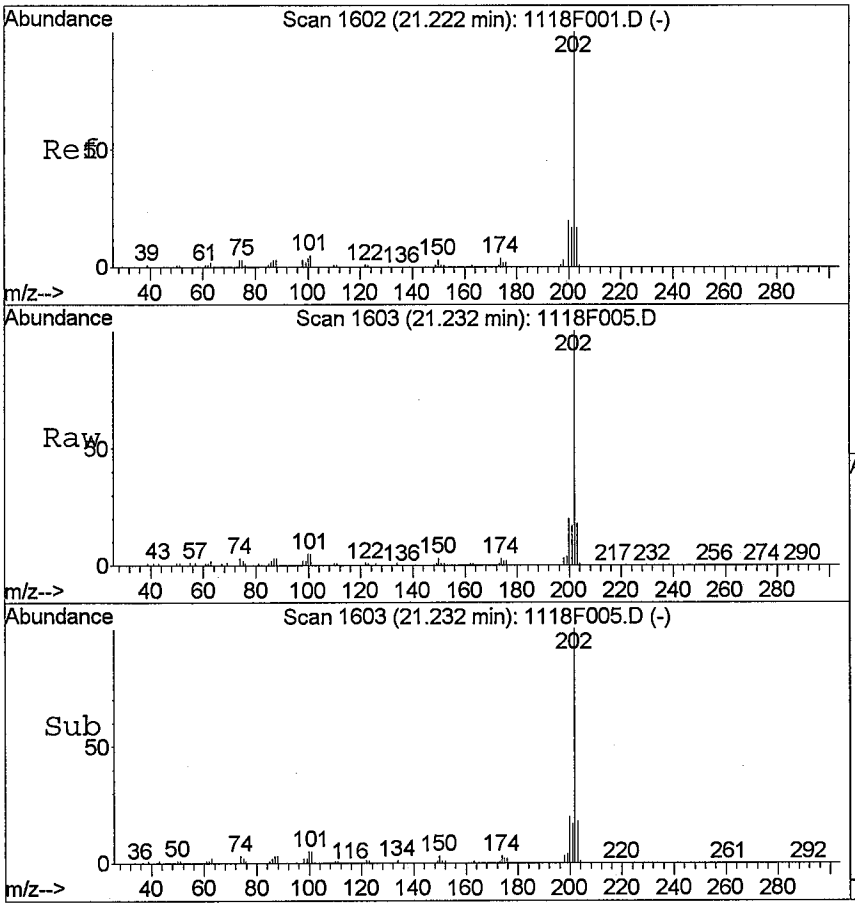


#65
Di-n-butyl Phthalate
Concen: 26.47 ng/ml
RT: 20.07 min Scan# 1489
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:149 Resp: 6170

Ion	Ratio	Lower	Upper
149	100		
150	5.5	0.0	39.4
104	14.3	0.0	35.0

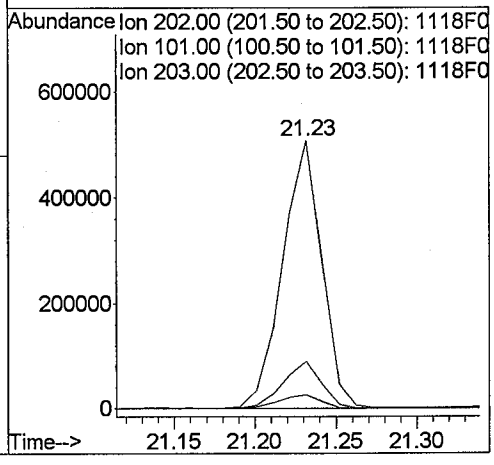


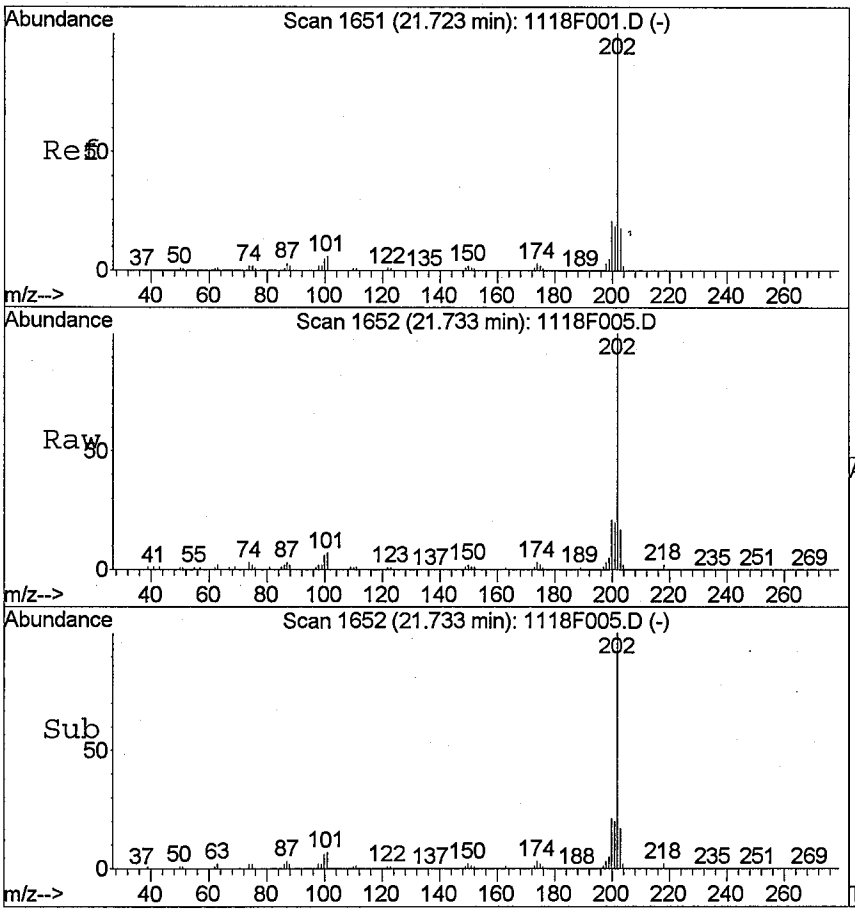


#66
Fluoranthene
Concen: 4062.07 ng/ml
RT: 21.23 min Scan# 1603
Delta R.T. 0.04 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:202 Resp: 852130

Ion	Ratio	Lower	Upper
202	100		
101	5.2	0.0	42.0
203	17.7	0.0	47.2

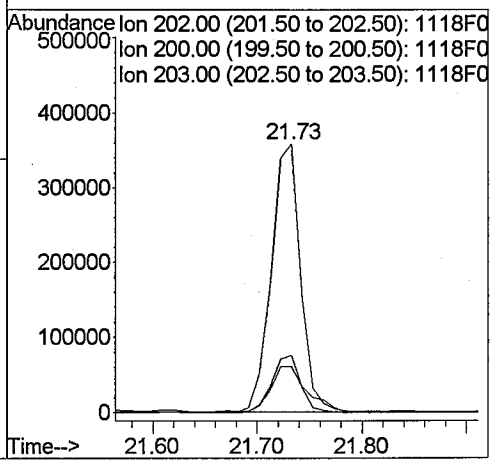


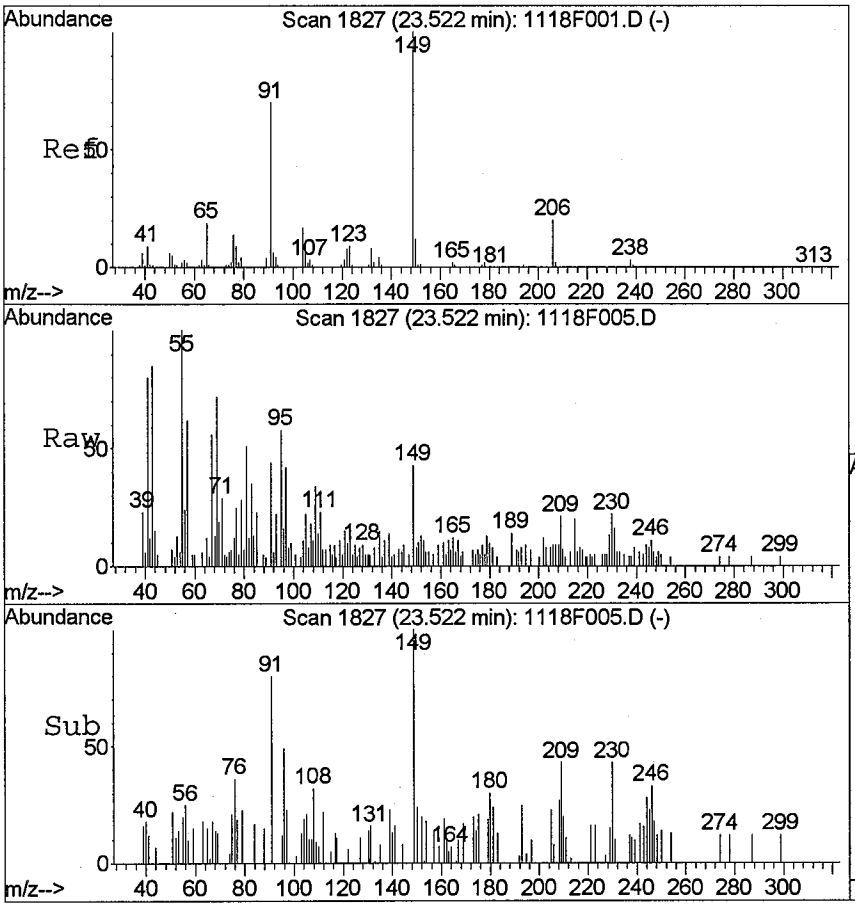


#69
Pyrene
Concen: 3233.09 ng/ml
RT: 21.73 min Scan# 1652
Delta R.T. 0.04 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:202 Resp: 689562

Ion	Ratio	Lower	Upper
202	100		
200	21.2	0.0	50.3
203	16.7	0.0	48.1

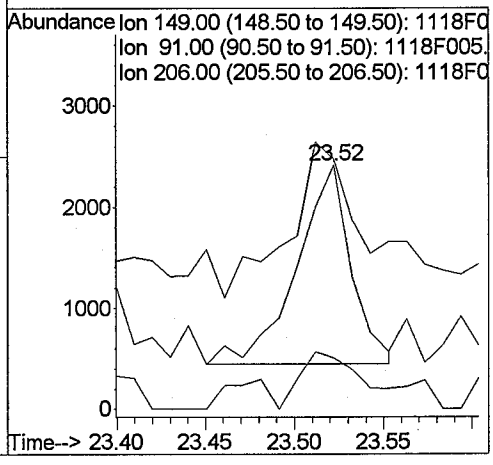


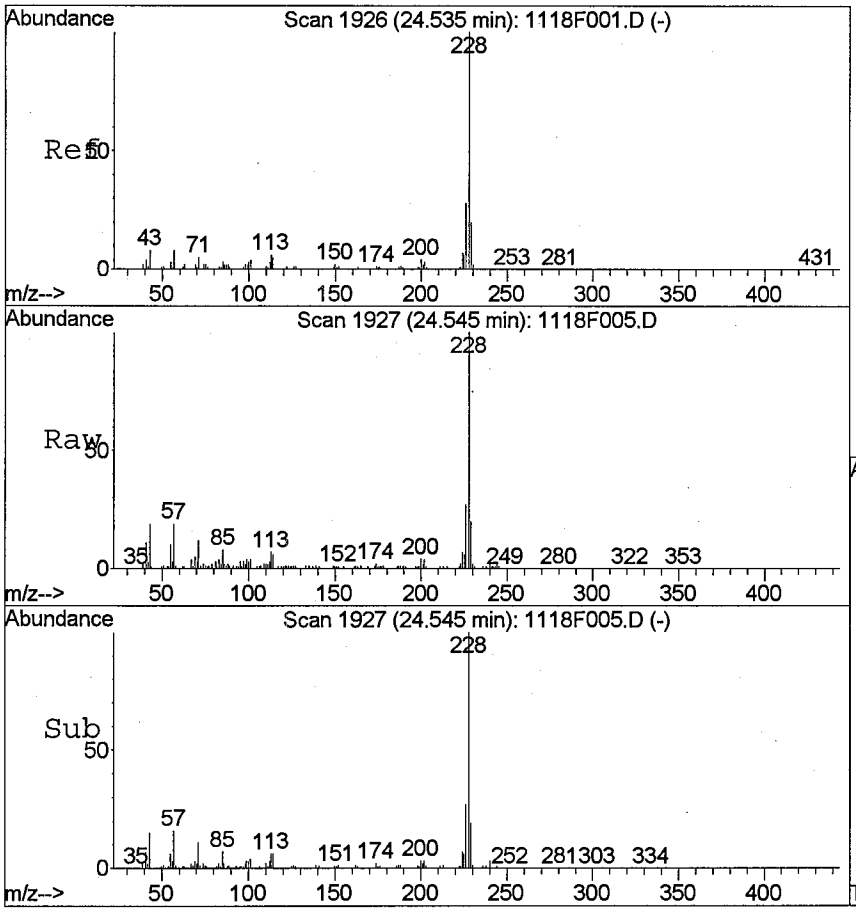


#71
Butyl Benzyl Phthalate
Concen: 43.82 ng/ml
RT: 23.52 min Scan# 1827
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:149 Resp: 4164

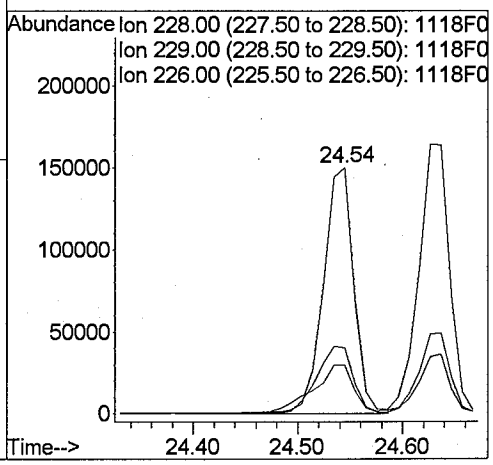
Ion	Ratio	Lower	Upper
149	100		
91	45.7	41.4	101.4
206	25.9	0.0	46.5

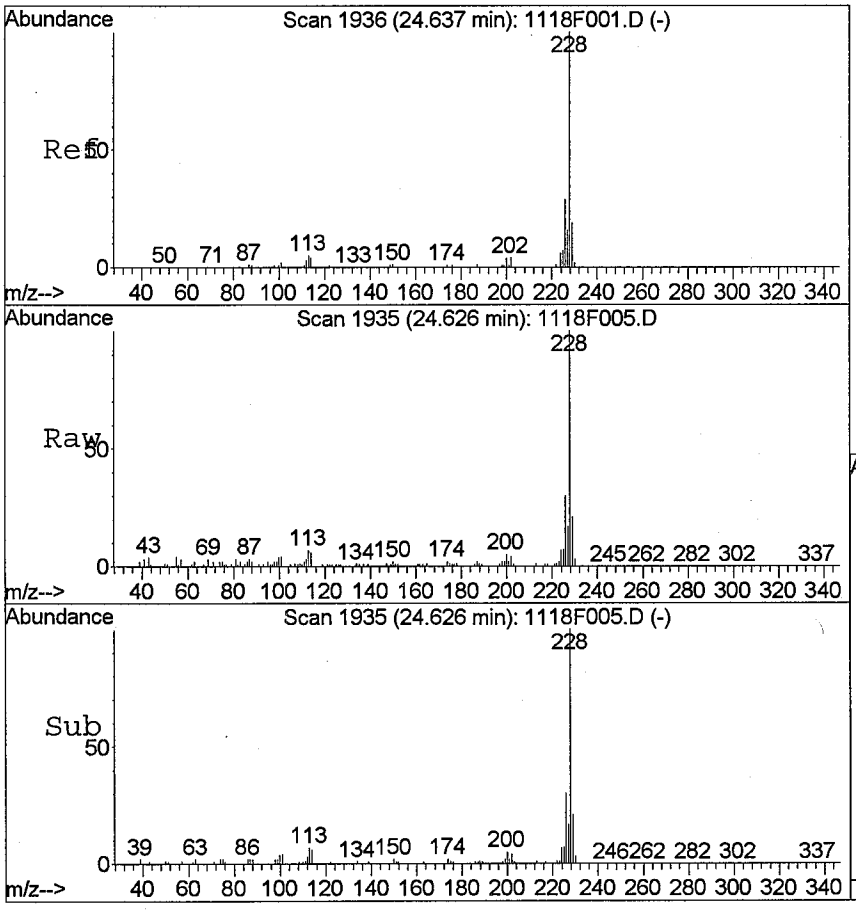




#73
Benz(a)anthracene
Concen: 1603.16 ng/ml
RT: 24.54 min Scan# 1927
Delta R.T. 0.04 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

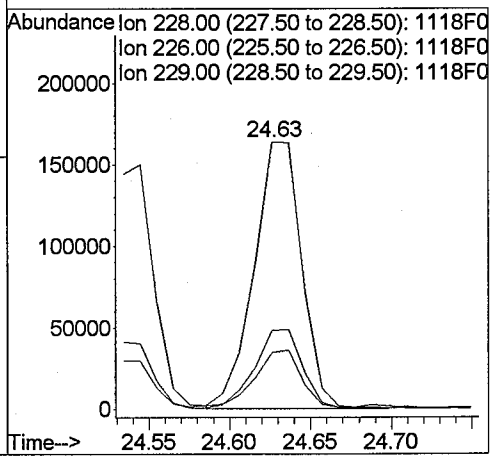
Tgt Ion:228	Resp:	302778	
Ion	Ratio	Lower	Upper
228	100		
229	19.5	0.0	48.5
226	26.7	0.0	55.6

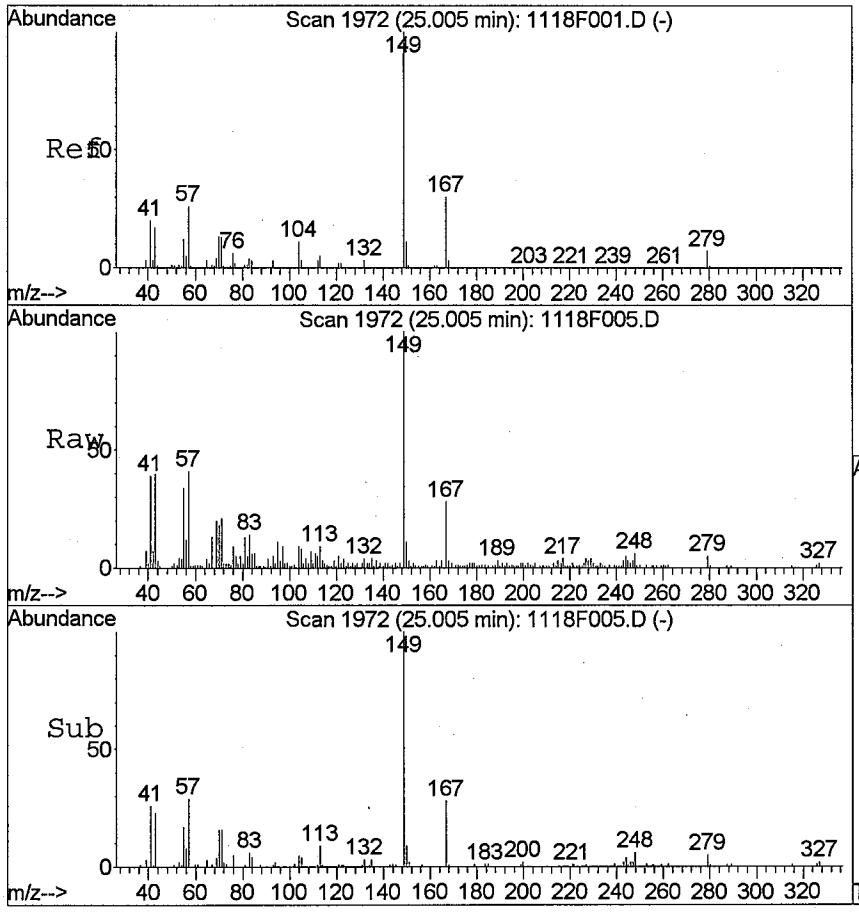




#74
Chrysene
Concen: 1872.48 ng/ml
RT: 24.63 min Scan# 1935
Delta R.T. 0.02 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:228	Resp:	335108	
Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.4
229	20.1	0.0	49.1

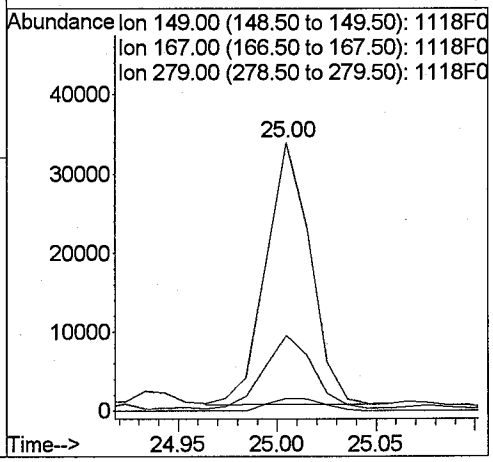


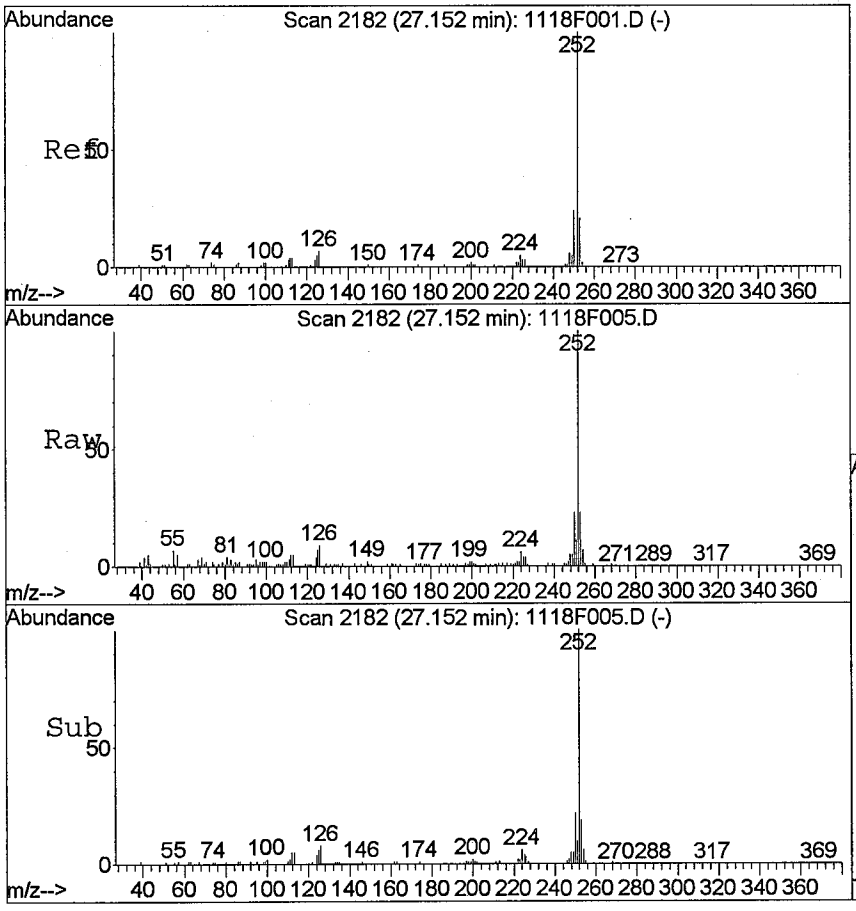


#75
Bis(2-ethylhexyl) Phthalate
Concen: 375.27 ng/ml
RT: 25.00 min Scan# 1972
Delta R.T. 0.02 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:149 Resp: 51667

Ion	Ratio	Lower	Upper
149	100		
167	28.0	0.2	60.2
279	4.8	0.0	34.5

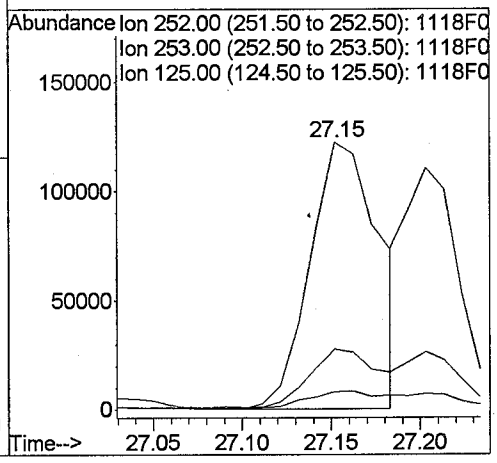


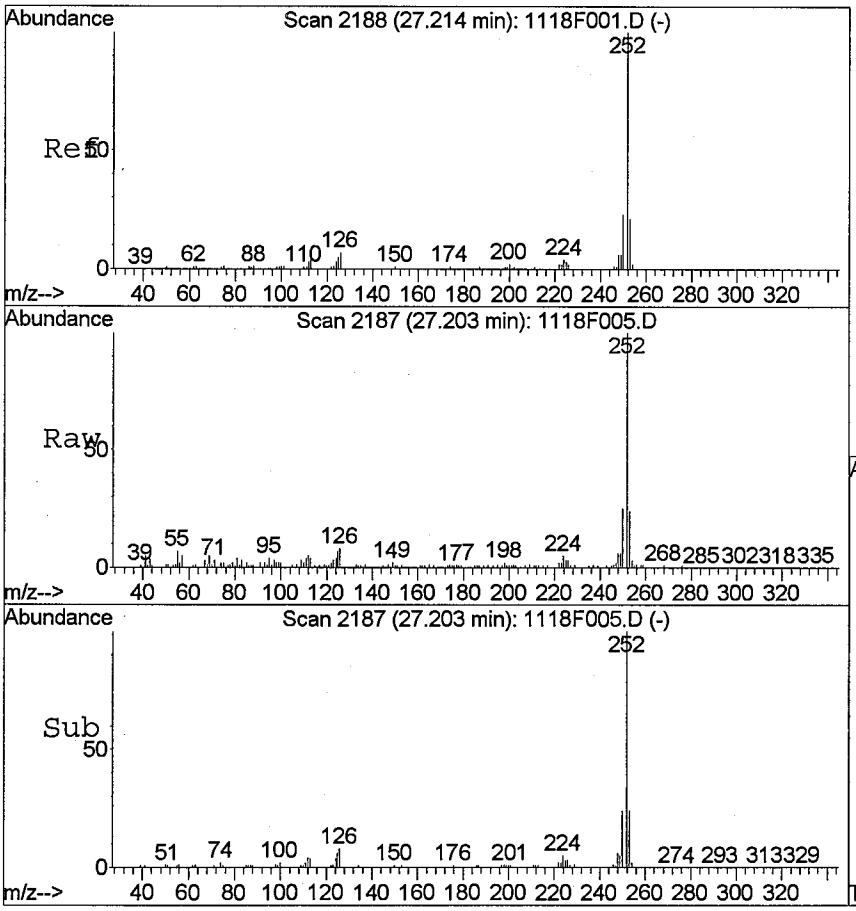


#78
Benzo(b)fluoranthene
Concen: 1989.20 ng/ml
RT: 27.15 min Scan# 2182
Delta R.T. 0.04 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:252 Resp: 326305

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	51.3
125	6.0	0.0	41.2

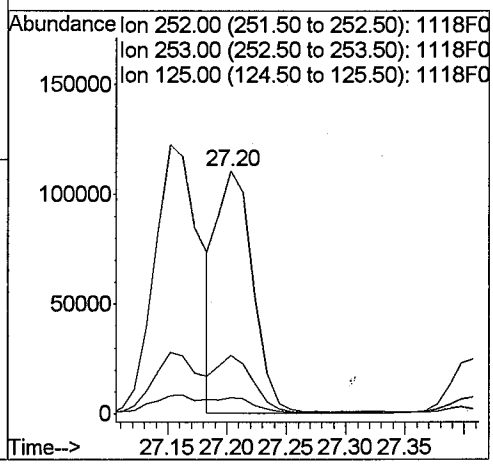


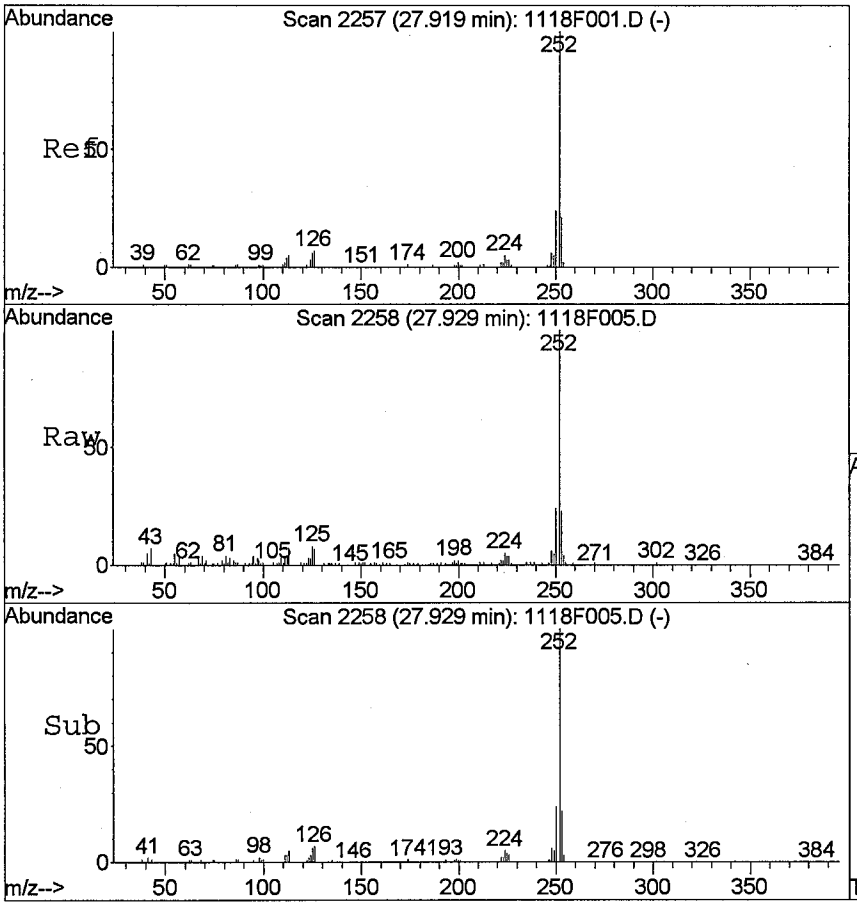


#79
Benzo(k)fluoranthene
Concen: 1495.43 ng/ml
RT: 27.20 min Scan# 2187
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:252 Resp: 233152

Ion	Ratio	Lower	Upper
252	100		
253	23.9	0.0	51.9
125	5.8	0.0	40.9

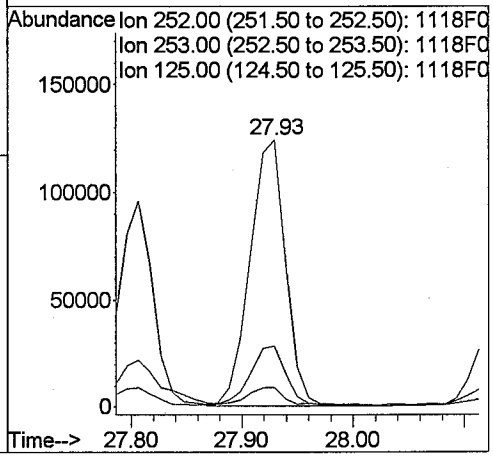


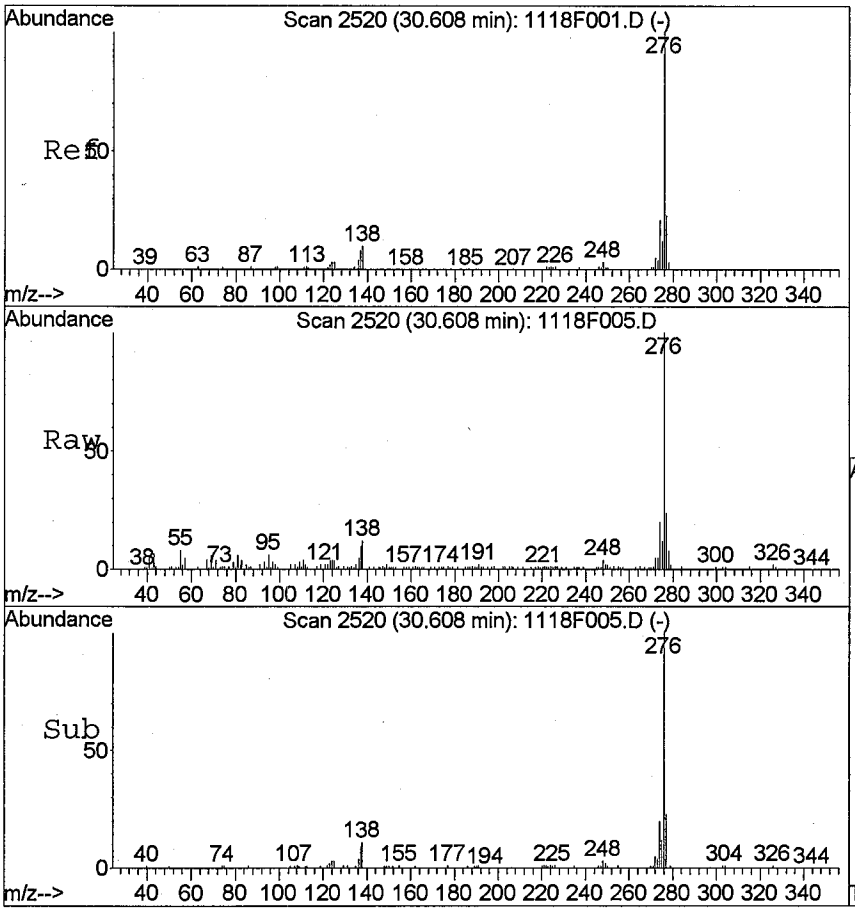


#80
Benzo(a)pyrene
Concen: 1779.74 ng/ml
RT: 27.93 min Scan# 2258
Delta R.T. 0.05 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:252 Resp: 277084

Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	52.2
125	6.7	0.0	42.3

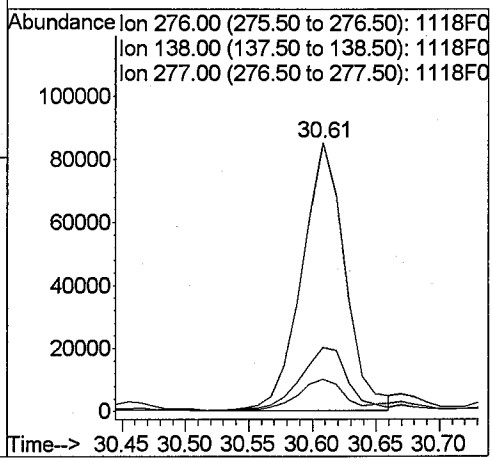


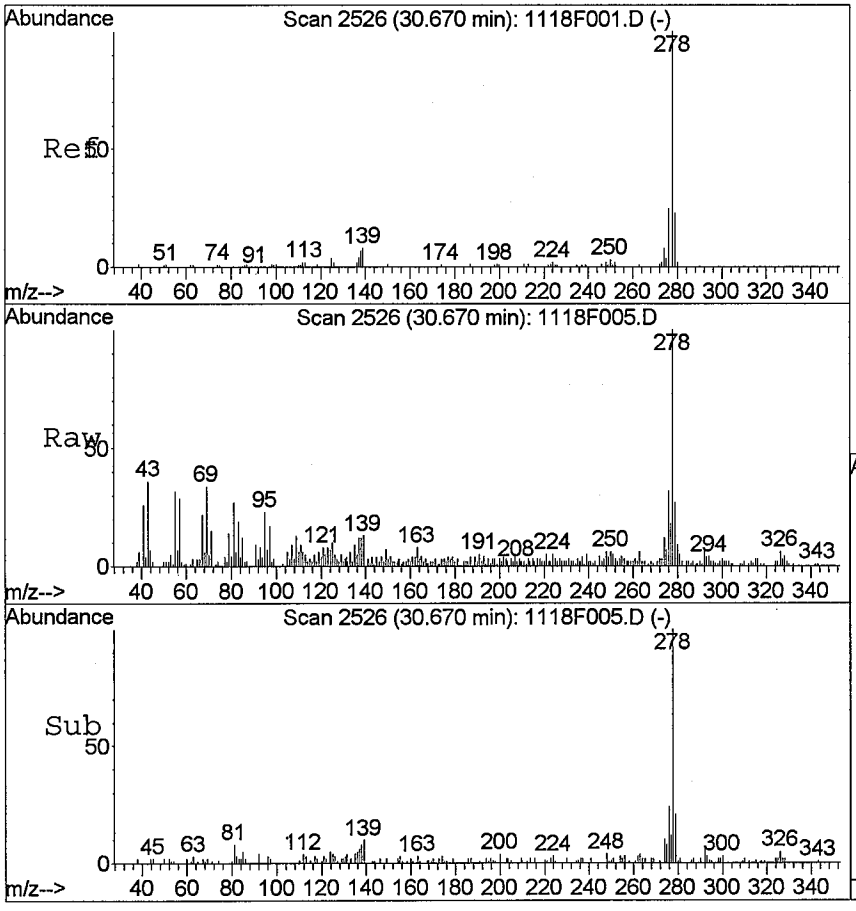


#81
Indeno(1,2,3-cd)pyrene
Concen: 1376.44 ng/ml
RT: 30.61 min Scan# 2520
Delta R.T. 0.04 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:276 Resp: 199997

Ion	Ratio	Lower	Upper
276	100		
138	11.7	0.0	51.4
277	23.5	0.0	54.0

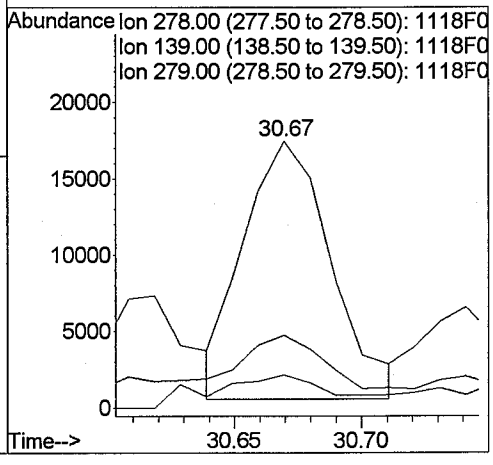


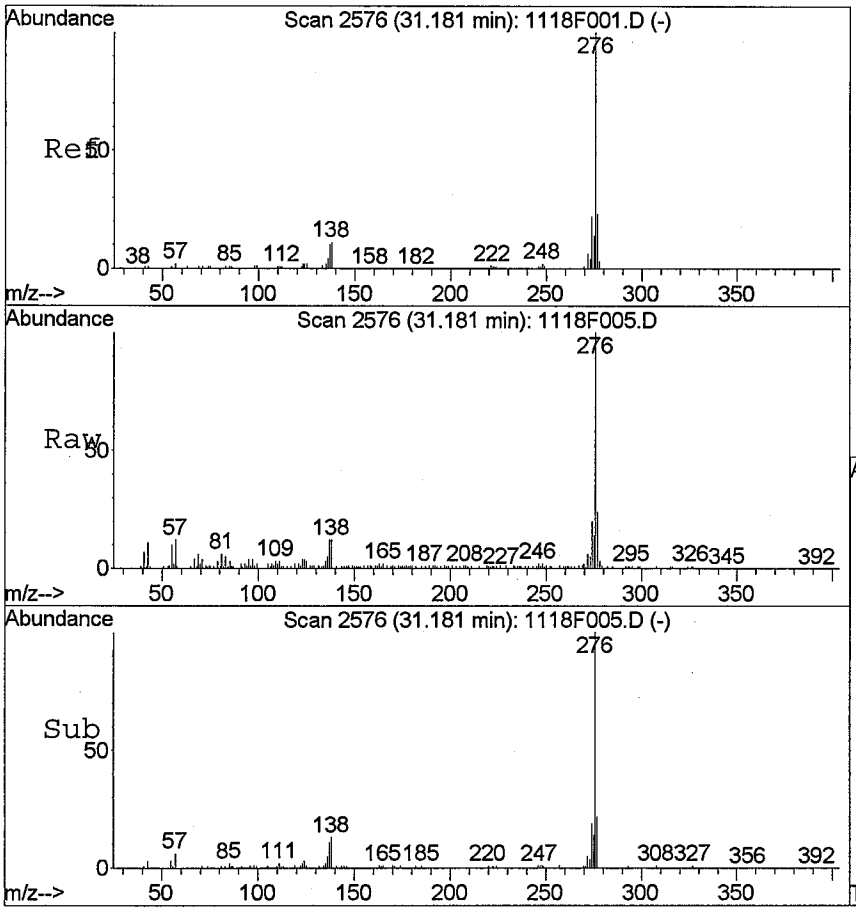


#82
Dibenz(a,h)anthracene
Concen: 282.41 ng/ml
RT: 30.67 min Scan# 2526
Delta R.T. 0.03 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:278 Resp: 40183

Ion	Ratio	Lower	Upper
278	100		
139	9.8	0.0	46.3
279	23.4	0.0	54.8

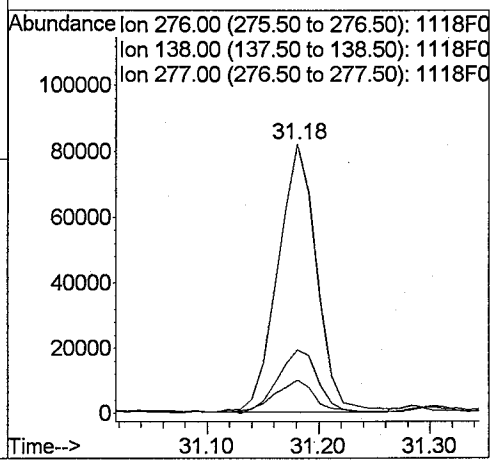




#83
Benzo(g,h,i)perylene
Concen: 1309.88 ng/ml
RT: 31.18 min Scan# 2576
Delta R.T. 0.04 min
Lab File: 1118F005.D
Acq: 18 Nov 2003 15:25

Tgt Ion:276 Resp: 197334

Ion	Ratio	Lower	Upper
276	100		
138	12.0	0.0	52.7
277	23.3	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1000	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	67	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	60	35-138	11/18/03	Acceptable
Terphenyl-d14	86	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F008.D
Lab ID: K2308433-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/18/2003 17:29
Date Quantitated: 11/19/2003 08:54
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

MRL MATRIX 2

Primary Review: 11/19/03

Secondary Review: MH 11/19/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/22/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245971	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118F008.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 17:29	**Quant Date:**	11/19/2003 08:54	**Vial:**	8
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-005			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.01	0.02	152	57978	1,000.00	OK
2	Naphthalene-d8	11.30	0.02	136	161895	1,000.00	OK
3	Acenaphthene-d10	15.08	0.01	164	104639	1,000.00	OK
4	Phenanthrene-d10	18.42	0.01	188	175313	1,000.00	OK
5	Chrysene-d12	24.59	0.01	240	175655	1,000.00	OK
6	Perylene-d12	28.09	0.04	264	135039	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.50	0.02	0.00	99	37602	503.99	67	40-123	OK	
4	2,4,6-Tribromophenol	16.89	0.00	0.00	330	13440	453.60	60	35-138	OK	
5	Terphenyl-d14	22.23	0.02	0.00	244	59294	430.59	86	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		14	U	
1	2-Methylphenol				107	0		24	U	
1	4-Methylphenol				107	0		20	U	
2	2,4-Dimethylphenol				122	0		38	U	
2	2,4-Dichlorophenol				162	0		13	U	
3	2,4,6-Trichlorophenol				196	0		13	U	
4	Pentachlorophenol				266	0		59	U	
5	Butyl Benzyl Phthalate	23.53	0.01	0.00	149	3105	31.98	16	JD	
5	Bis(2-ethylhexyl) Phthalate	25.02	0.02	0.00	149	37013	263.13	130	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F008.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 17:29	**Quant Date:**	11/19/2003 08:54	**Vial:**	8
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-005			**Soln Conc. Units:**	ng/ml

Prep Amount:	27.48 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	73.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F008.D Vial: 8
Acq On : 18 Nov 2003 17:29 Operator: JGISH
Sample : K2308433-005 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:06 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.01	152	57978	1000.00	ng/ml	0.04
21) Naphthalene-d8	11.30	136	161895	1000.00	ng/ml	0.04
34) Acenaphthene-d10	15.08	164	104639	1000.00	ng/ml	0.04
57) Phenanthrene-d10	18.42	188	175313	1000.00	ng/ml	0.05
67) Chrysene-d12	24.59	240	175655	1000.00	ng/ml	0.05
76) Perylene-d12	28.09	264	135039	1000.00	ng/ml	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.24	112	27213	437.14	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 11.66%#			
6) Phenol-d6	8.50	99	37602	503.99	ng/ml	0.04
Spiked Amount 3750.000	Range 43 - 128		Recovery = 13.44%#			
19) Nitrobenzene-d5	9.98	82	29299	316.40	ng/ml	0.04
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.66%#			
38) 2-Fluorobiphenyl	13.62	172	44913	309.61	ng/ml	0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 12.38%#			
58) 2,4,6-Tribromophenol	16.89	330	13440	453.60	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 12.10%#			
70) Terphenyl-d14	22.23	244	59294	430.59	ng/ml	0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 17.22%#			
Target Compounds						Qvalue
29) Naphthalene	11.33	128	9792	57.97	ng/ml	79
33) 2-Methylnaphthalene	12.76	142	4827	46.11	ng/ml	96
41) Acenaphthylene	14.73	152	14804	88.34	ng/ml	69
44) Acenaphthene	15.15	154	24317	242.23	ng/ml	87
47) Dibenzofuran	15.51	168	19782	111.68	ng/ml	86
50) Fluorene	16.30	166	32391	247.81	ng/ml	97
52) Diethyl Phthalate	16.27	149	4245	26.22	ng/ml	87
62) Phenanthrene	18.48	178	442247	2325.69	ng/ml	98
63) Anthracene	18.58	178	85740	447.47	ng/ml	96
64) Carbazole	19.00	167	50710	304.25	ng/ml	95
65) Di-n-butyl Phthalate	20.07	149	5839	25.15	ng/ml	87
66) Fluoranthene	21.25	202	811896	3886.70	ng/ml	92
69) Pyrene	21.75	202	678927	3115.73	ng/ml	100
71) Butyl Benzyl Phthalate	23.53	149	3105	31.98	ng/ml#	51
73) Benz(a)anthracene	24.56	228	291568	1511.07	ng/ml	95
74) Chrysene	24.65	228	342327	1872.25	ng/ml	93
75) Bis(2-ethylhexyl) Phthalat	25.02	149	37013	263.13	ng/ml	98
78) Benzo(b)fluoranthene	27.18	252	327488	1783.51	ng/ml	94
79) Benzo(k)fluoranthene	27.23	252	210383	1205.48	ng/ml	94
80) Benzo(a)pyrene	27.95	252	275579	1581.30	ng/ml	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F008.D
Acq On : 18 Nov 2003 17:29
Sample : K2308433-005
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:06 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 5.00

Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

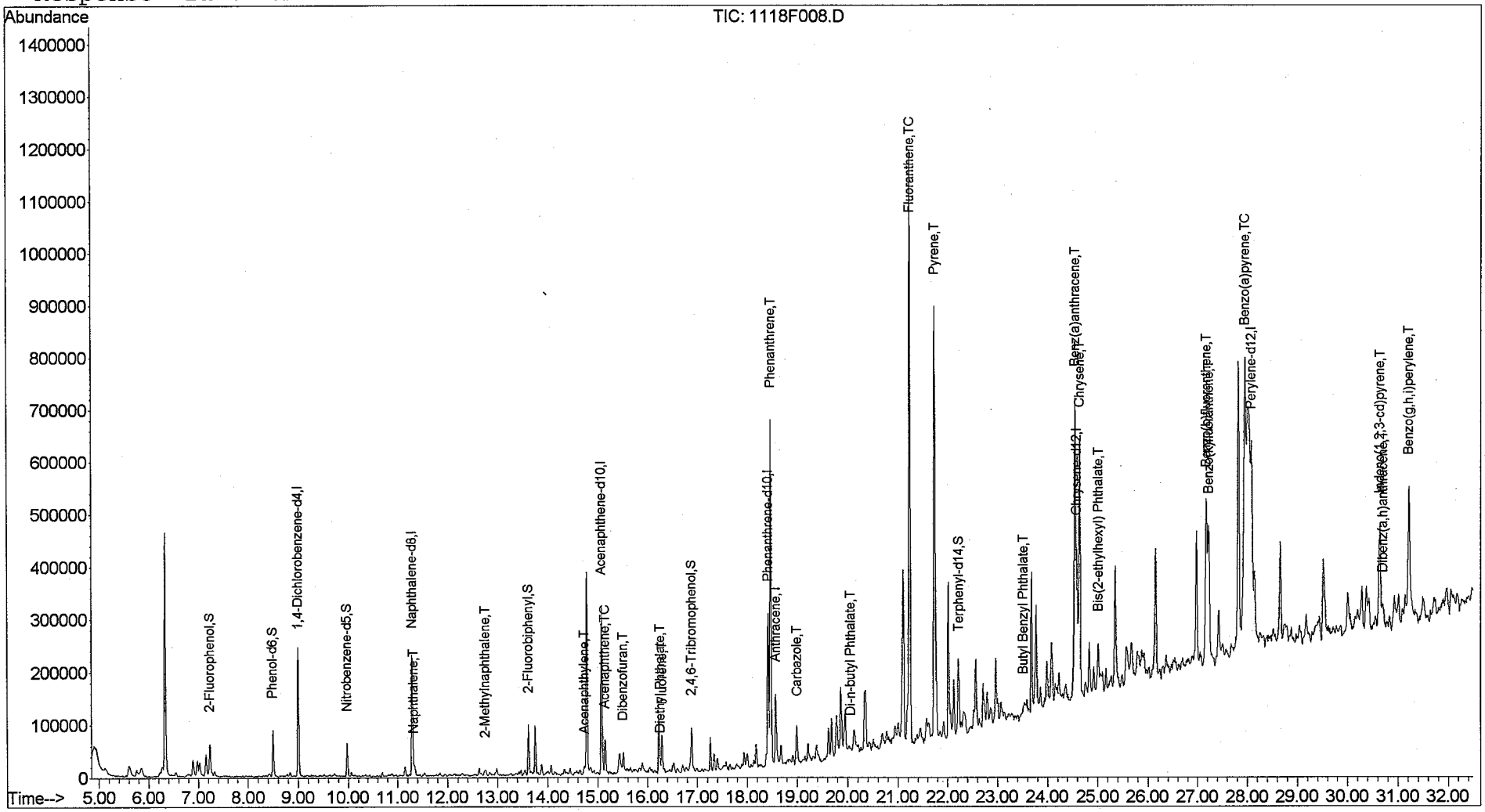
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Indeno(1,2,3-cd)pyrene	30.64	276	188733	1160.39	ng/ml	89
82)	Dibenz(a,h)anthracene	30.70	278	37362	234.58	ng/ml	95
83)	Benzo(g,h,i)perylene	31.22	276	184993	1097.01	ng/ml	89

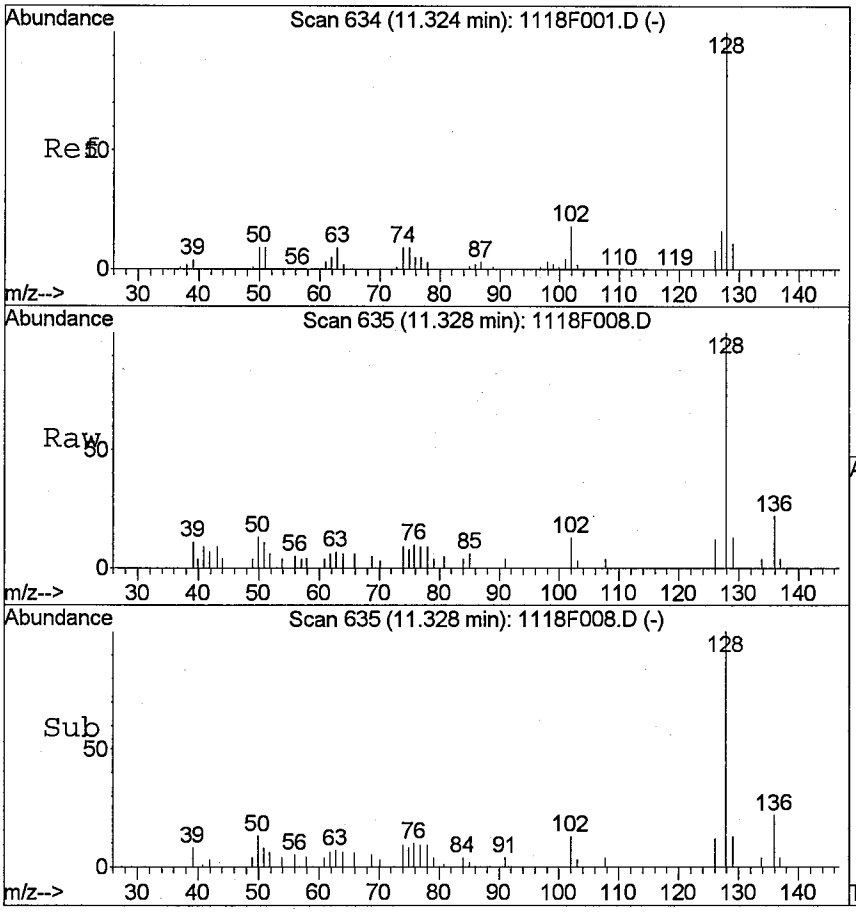
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F008.D Vial: 8
Acq On : 18 Nov 2003 17:29 Operator: JGISH
Sample : K2308433-005 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:54 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration

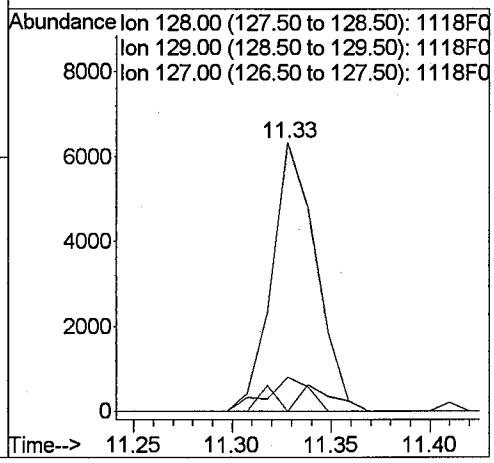


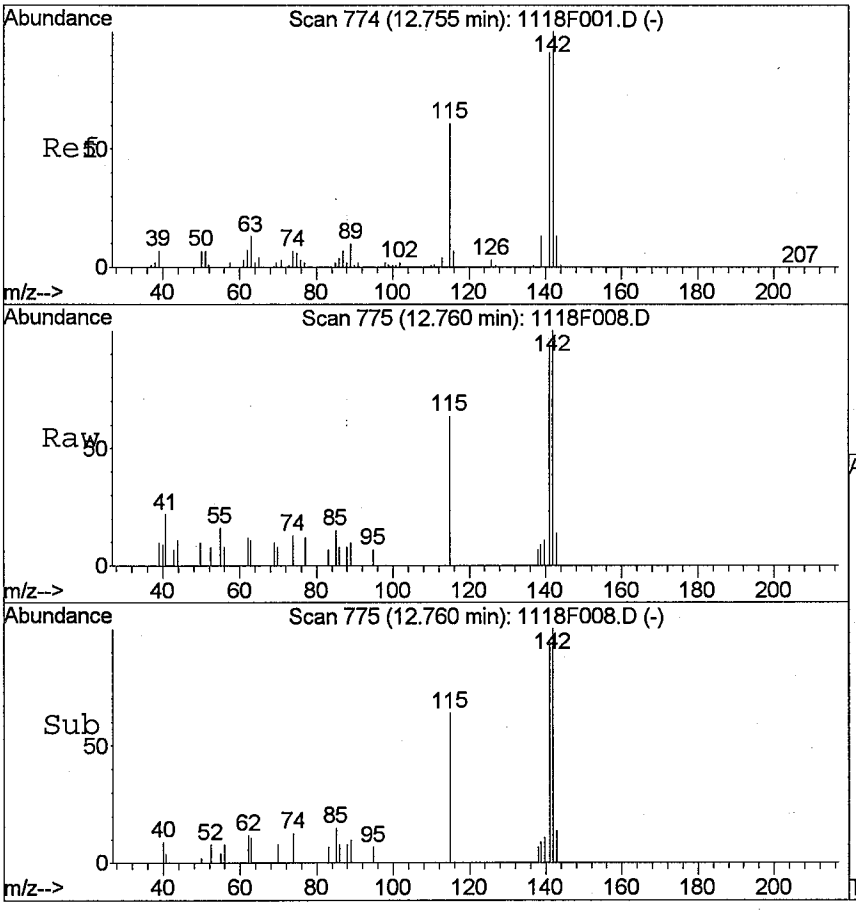


#29
Naphthalene
Concen: 57.97 ng/ml
RT: 11.33 min Scan# 635
Delta R.T. 0.03 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:128 Resp: 9792

Ion	Ratio	Lower	Upper
128	100		
129	12.8	0.0	41.3
127	0.0	0.0	44.2

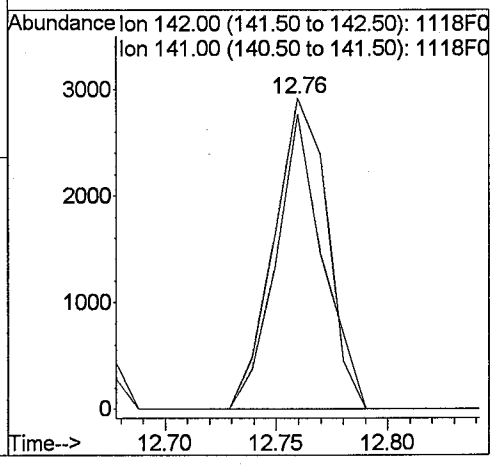


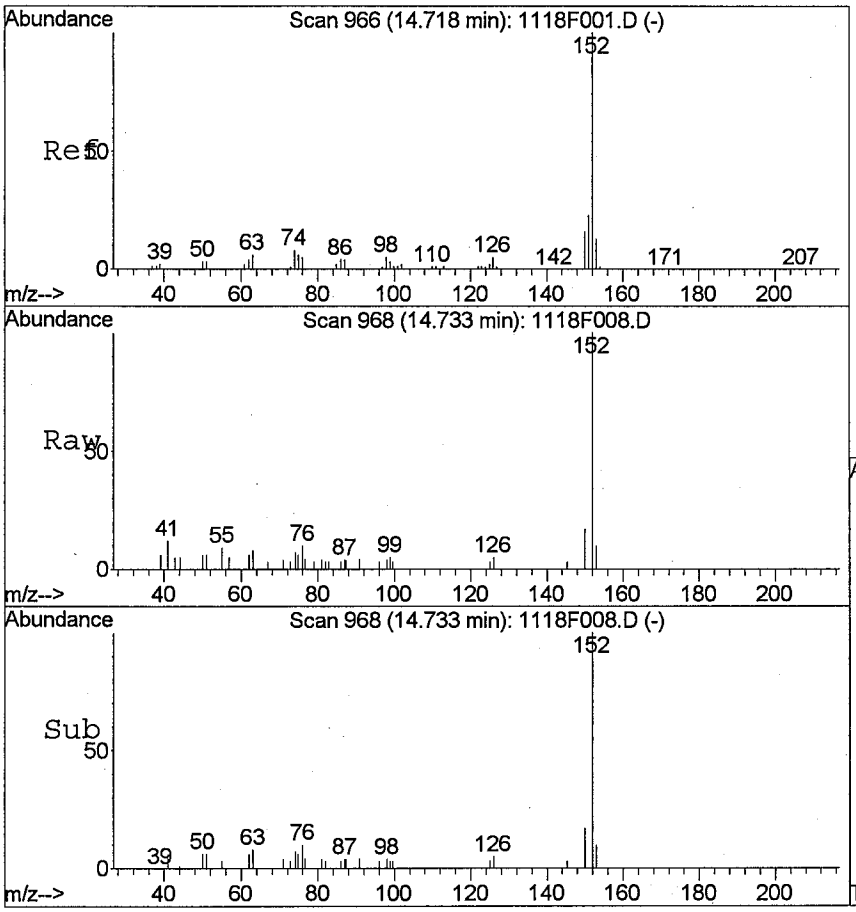


#33
2-Methylnaphthalene
Concen: 46.11 ng/ml
RT: 12.76 min Scan# 775
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:142 Resp: 4827

Ion	Ratio	Lower	Upper
142	100		
141	94.8	61.0	121.0

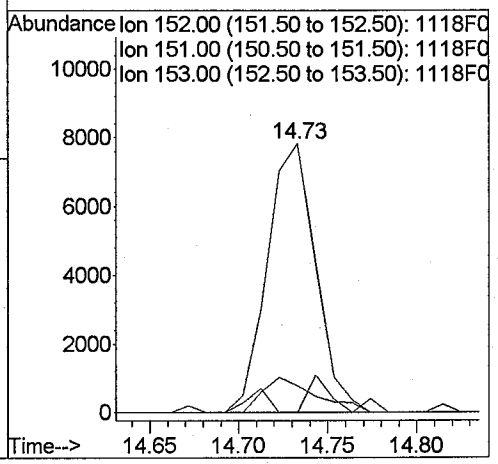


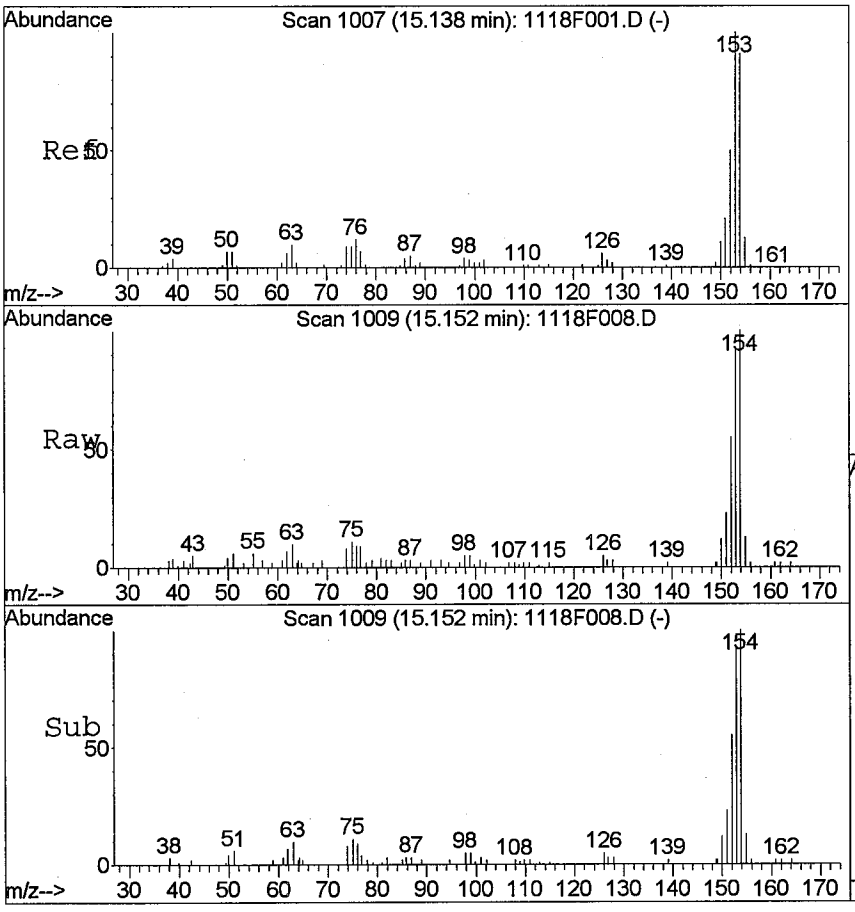


#41
Acenaphthylene
Concen: 88.34 ng/ml
RT: 14.73 min Scan# 968
Delta R.T. 0.05 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:152 Resp: 14804

Ion	Ratio	Lower	Upper
152	100		
151	0.0	0.0	51.5
153	10.1	0.0	42.9

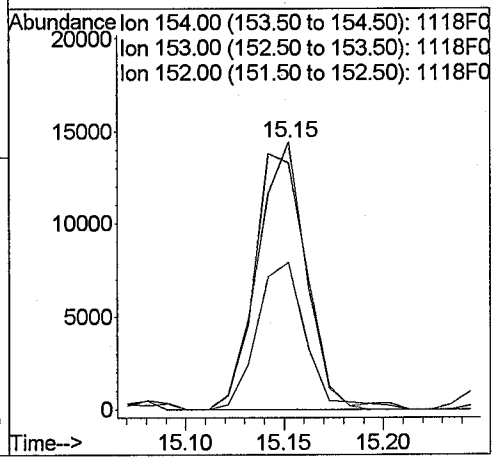


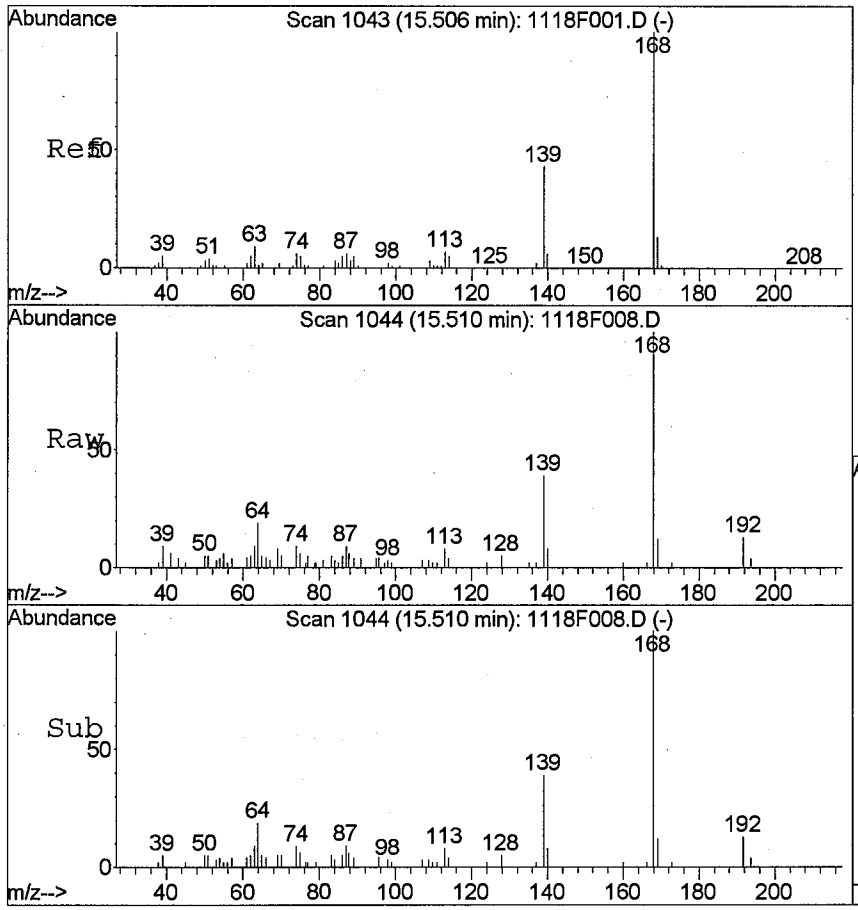


#44
Acenaphthene
Concen: 242.23 ng/ml
RT: 15.15 min Scan# 1009
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:154 Resp: 24317

Ion	Ratio	Lower	Upper
154	100		
153	92.4	82.4	142.4
152	54.7	24.4	84.4

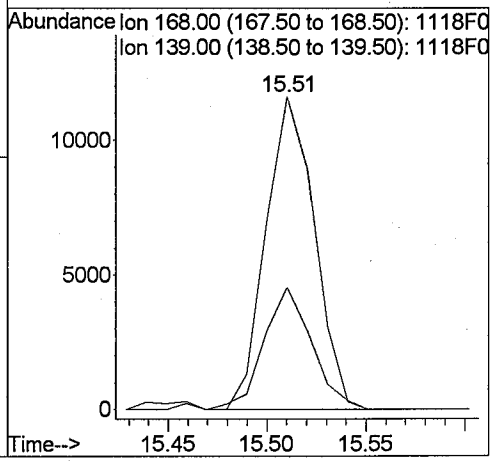


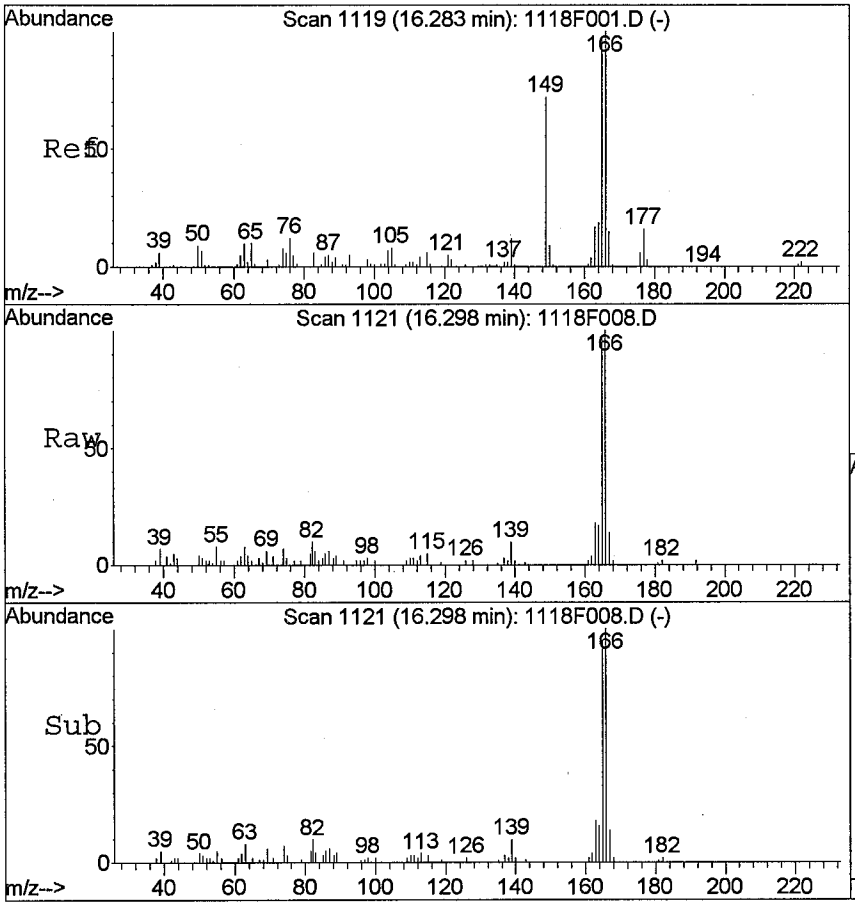


#47
Dibenzofuran
Concen: 111.68 ng/ml
RT: 15.51 min Scan# 1044
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:168 Resp: 19782

Ion	Ratio	Lower	Upper
168	100		
139	39.2	1.2	61.2

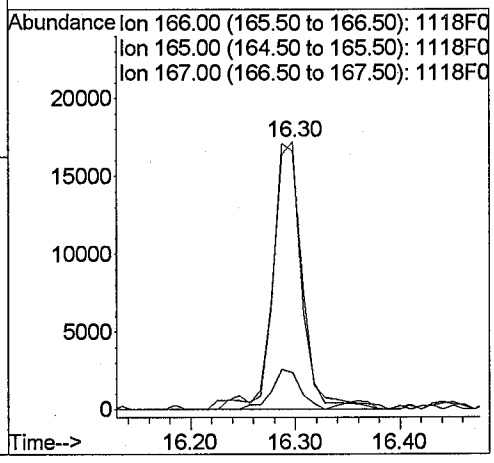


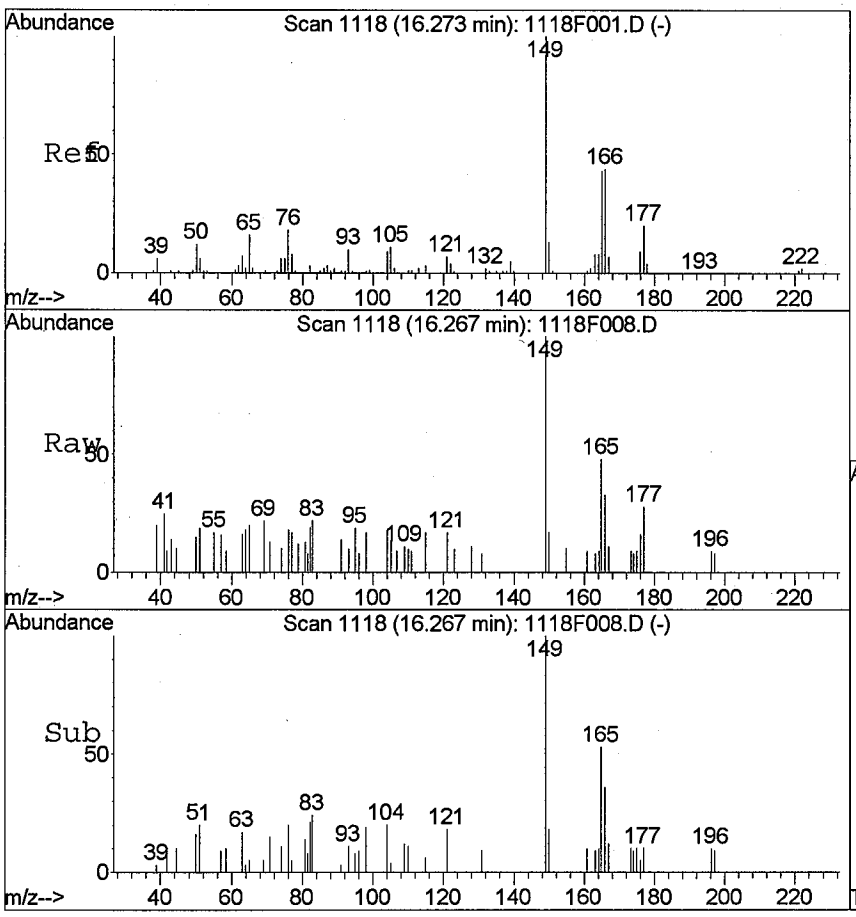


#50
Fluorene
Concen: 247.81 ng/ml
RT: 16.30 min Scan# 1121
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:166 Resp: 32391

Ion	Ratio	Lower	Upper
166	100		
165	96.6	63.2	123.2
167	13.9	0.0	43.0

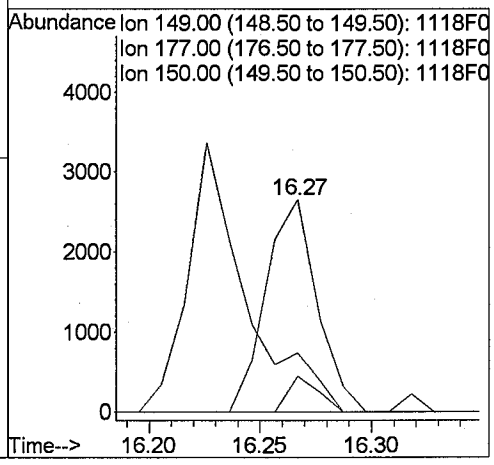


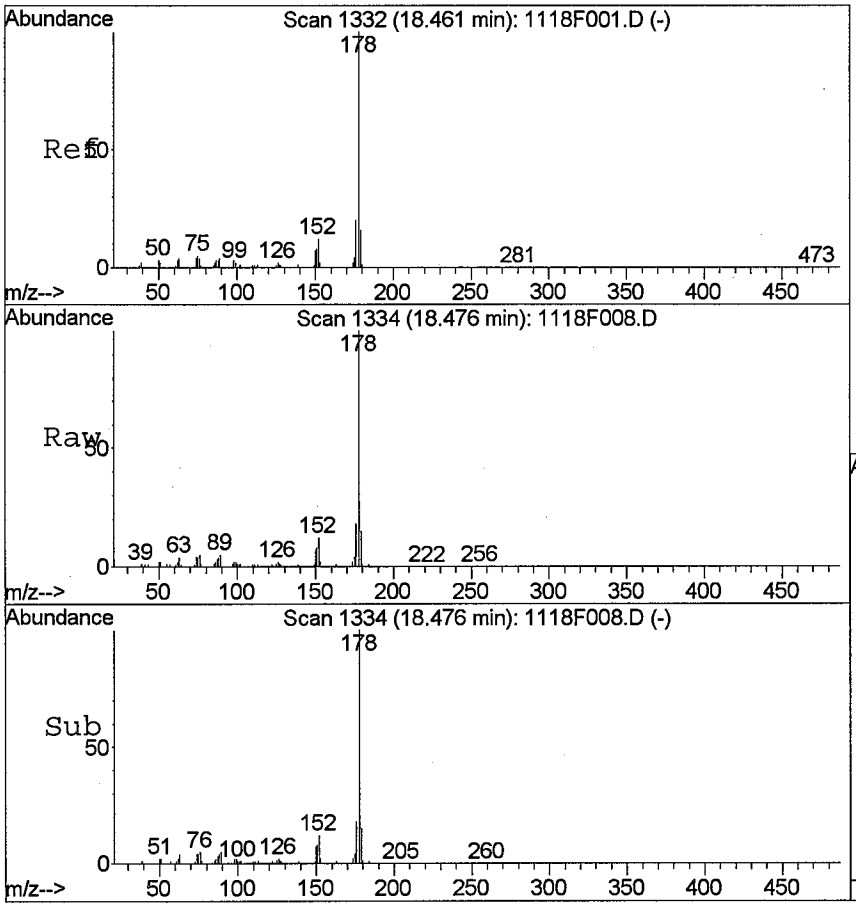


#52
Diethyl Phthalate
Concen: 26.22 ng/ml
RT: 16.27 min Scan# 1118
Delta R.T. 0.01 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:149 Resp: 4245

Ion	Ratio	Lower	Upper
149	100		
177	27.7	0.0	51.6
150	16.9	0.0	41.6

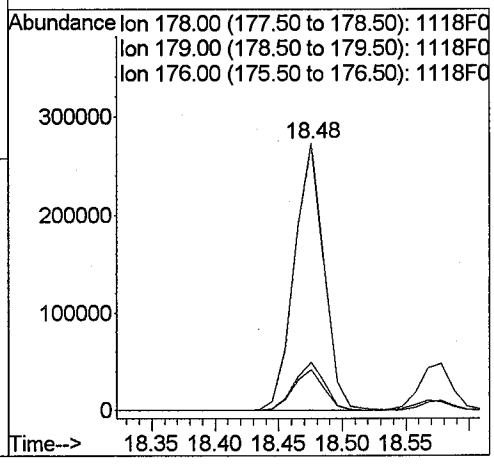


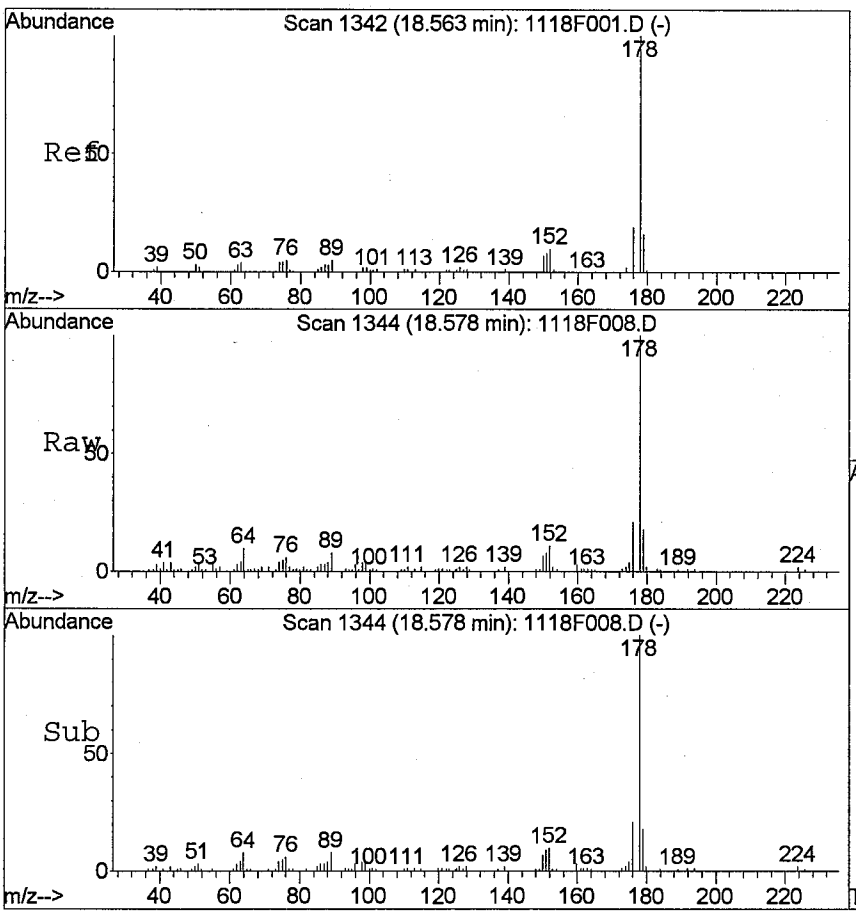


#62
Phenanthrene
Concen: 2325.69 ng/ml
RT: 18.48 min Scan# 1334
Delta R.T. 0.05 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:178 Resp: 442247

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	44.8
176	18.1	0.0	49.3

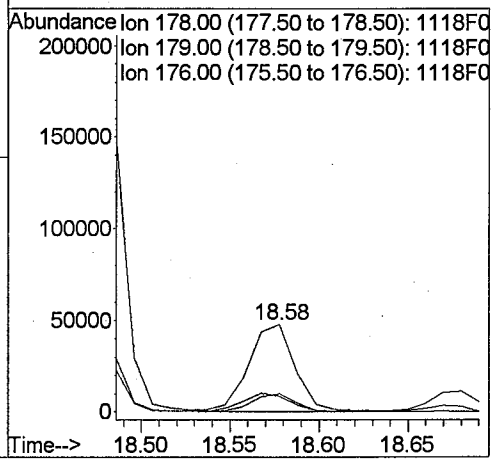


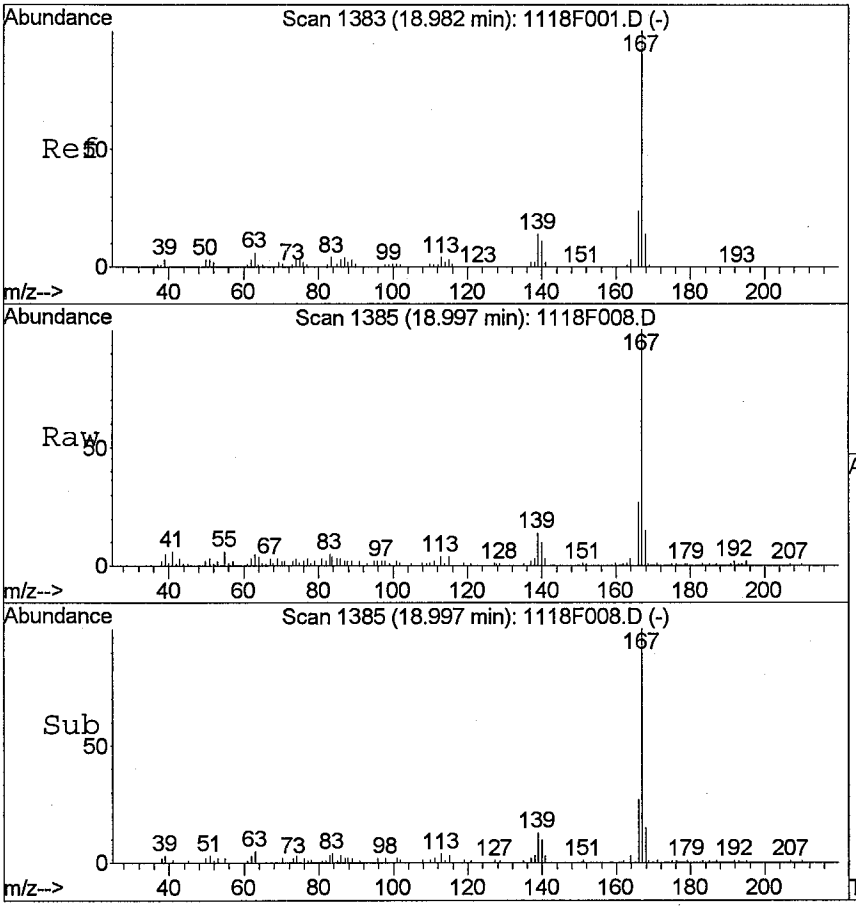


#63
Anthracene
Concen: 447.47 ng/ml
RT: 18.58 min Scan# 1344
Delta R.T. 0.05 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:178 Resp: 85740

Ion	Ratio	Lower	Upper
178	100		
179	17.8	0.0	44.7
176	20.5	0.0	49.8

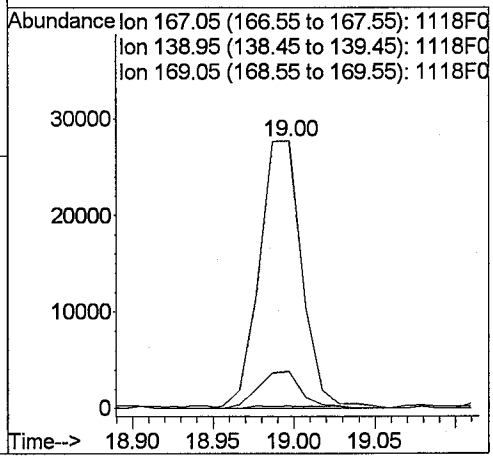


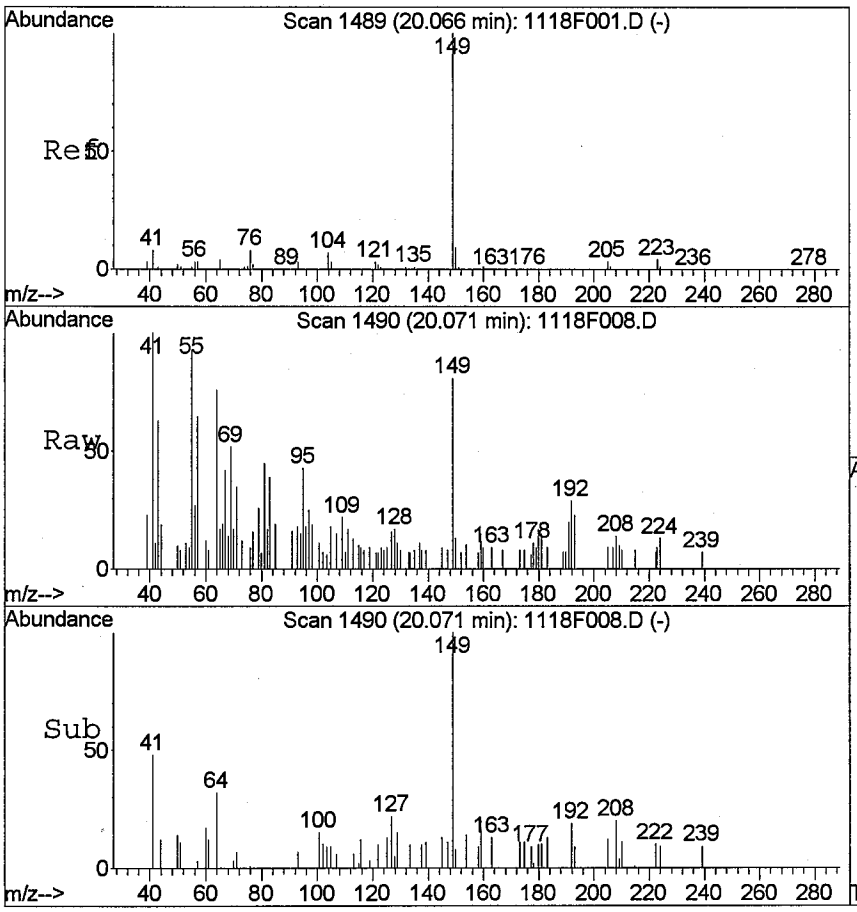


#64
Carbazole
Concen: 304.25 ng/ml
RT: 19.00 min Scan# 1385
Delta R.T. 0.05 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:167 Resp: 50710

Ion	Ratio	Lower	Upper
167	100		
139	13.9	0.0	41.7
169	1.0	0.0	30.8

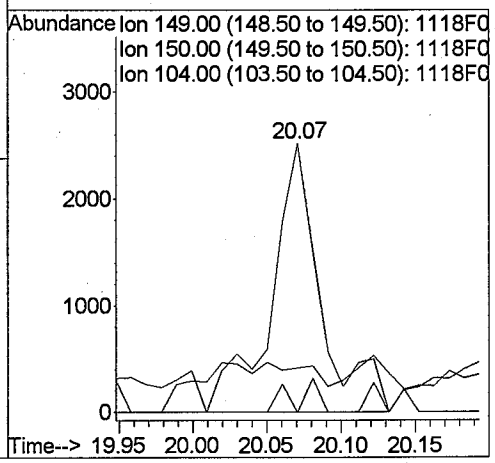


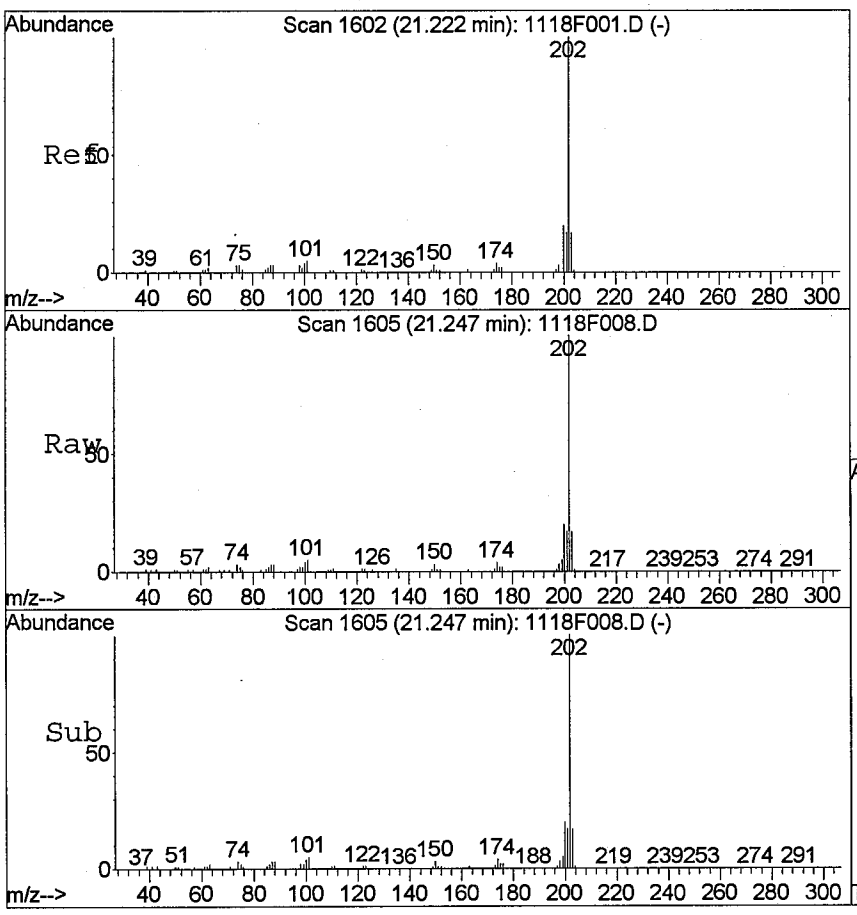


#65
Di-n-butyl Phthalate
Concen: 25.15 ng/ml
RT: 20.07 min Scan# 1490
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:149 Resp: 5839

Ion	Ratio	Lower	Upper
149	100		
150	5.2	0.0	39.4
104	0.0	0.0	35.0

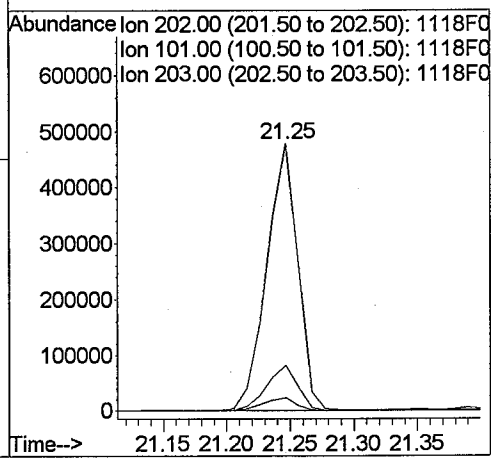


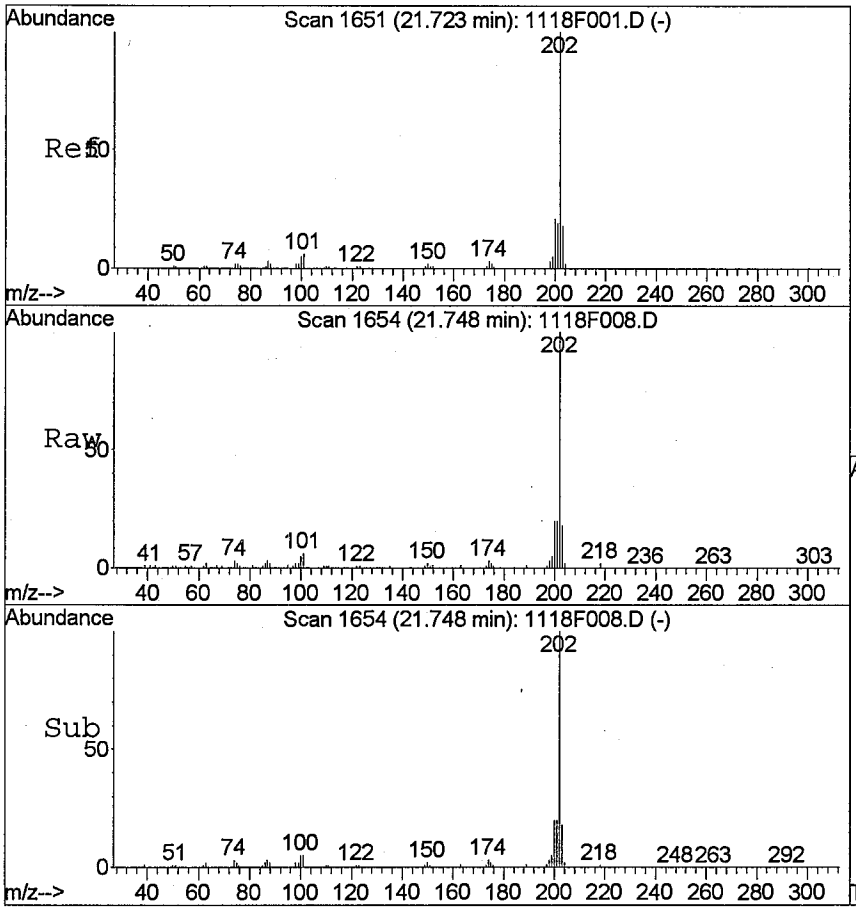


#66
Fluoranthene
Concen: 3886.70 ng/ml
RT: 21.25 min Scan# 1605
Delta R.T. 0.06 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:202 Resp: 811896

Ion	Ratio	Lower	Upper
202	100		
101	5.0	0.0	42.0
203	17.0	0.0	47.2

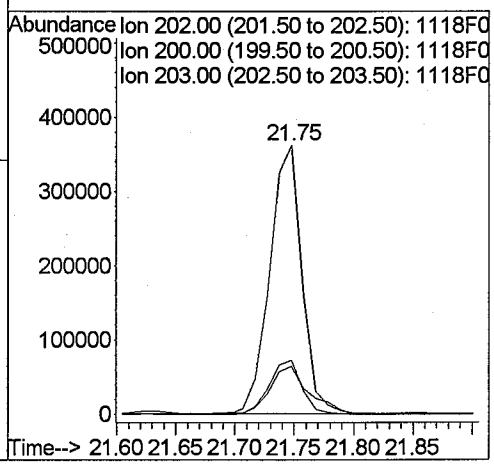


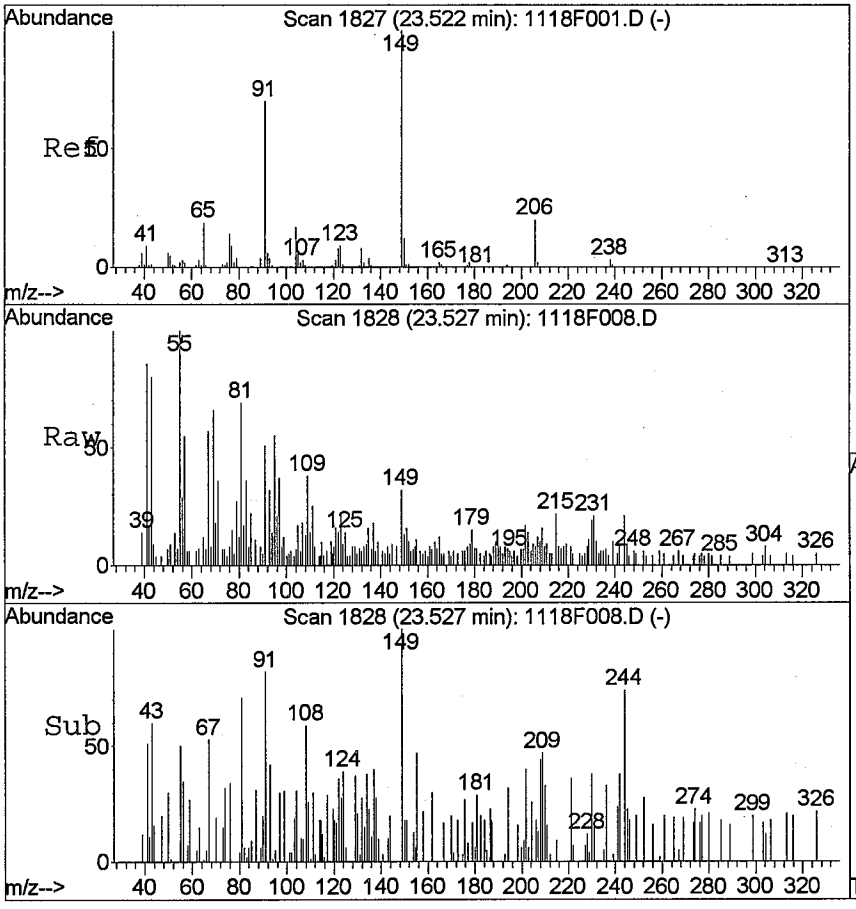


#69
Pyrene
Concen: 3115.73 ng/ml
RT: 21.75 min Scan# 1654
Delta R.T. 0.06 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:202 Resp: 678927

Ion	Ratio	Lower	Upper
202	100		
200	20.2	0.0	50.3
203	17.8	0.0	48.1

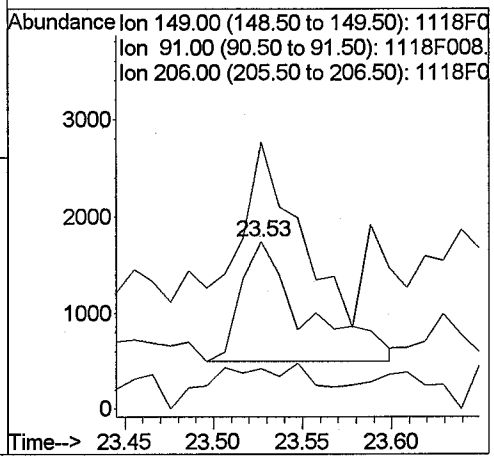


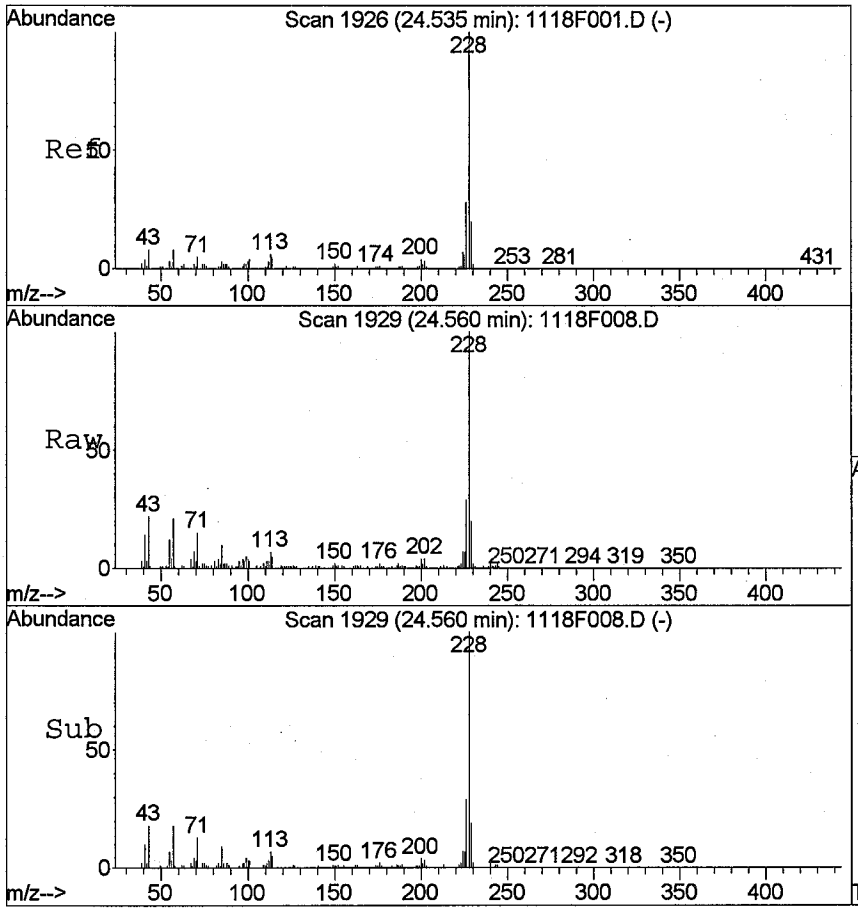


#71
Butyl Benzyl Phthalate
Concen: 31.98 ng/ml
RT: 23.53 min Scan# 1828
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:149 Resp: 3105

Ion	Ratio	Lower	Upper
149	100		
91	120.7	41.4	101.4#
206	14.4	0.0	46.5

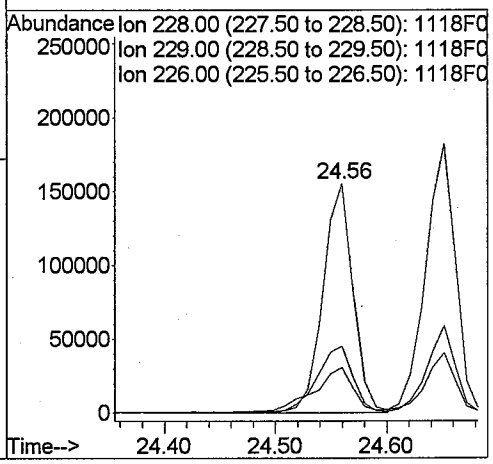


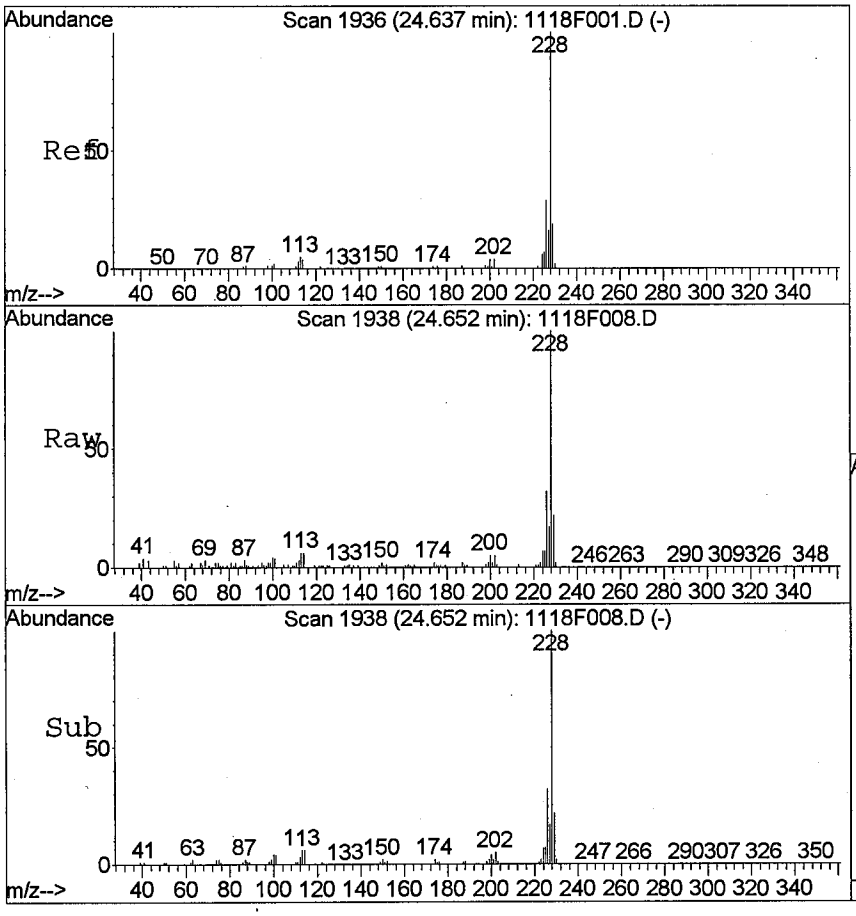


#73
Benz(a)anthracene
Concen: 1511.07 ng/ml
RT: 24.56 min Scan# 1929
Delta R.T. 0.06 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:228 Resp: 291568

Ion	Ratio	Lower	Upper
228	100		
229	19.6	0.0	48.5
226	29.0	0.0	55.6

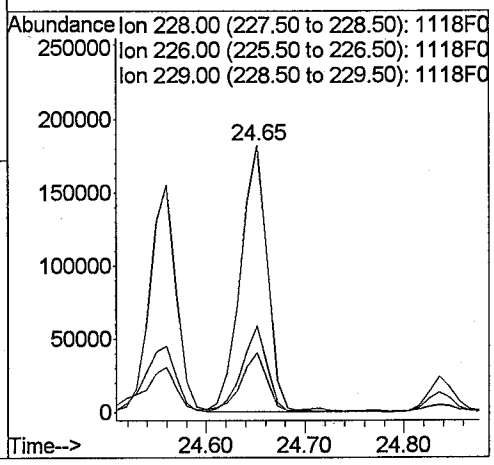


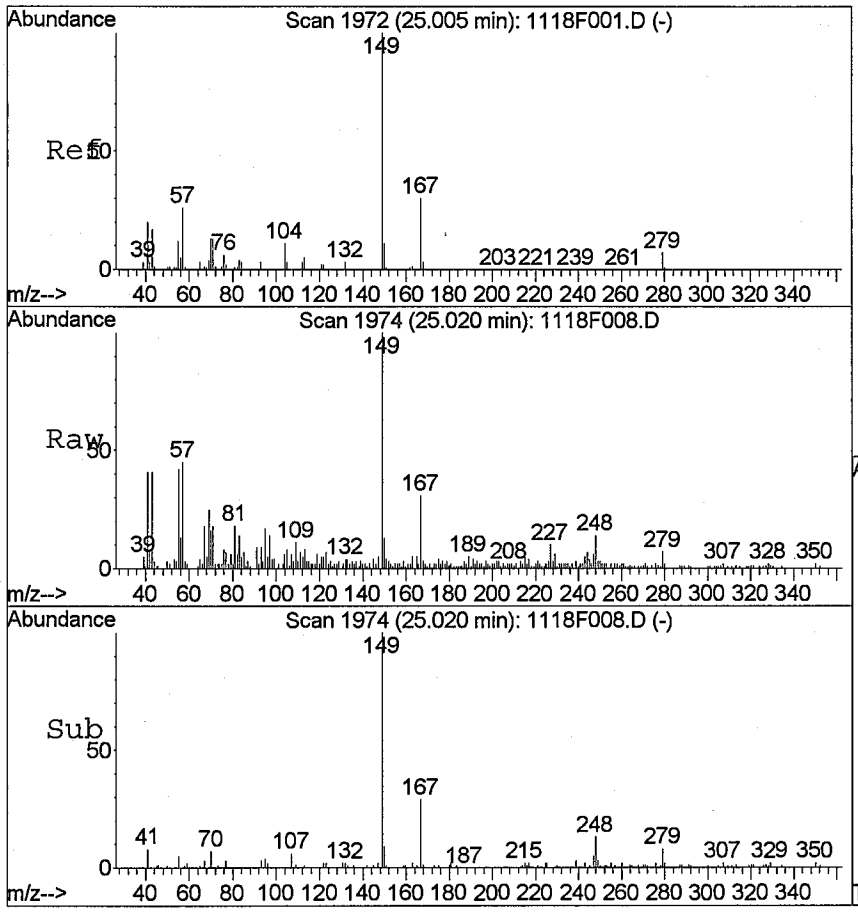


#74
Chrysene
Concen: 1872.25 ng/ml
RT: 24.65 min Scan# 1938
Delta R.T. 0.05 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:228 Resp: 342327

Ion	Ratio	Lower	Upper
228	100		
226	32.2	0.0	58.4
229	22.0	0.0	49.1

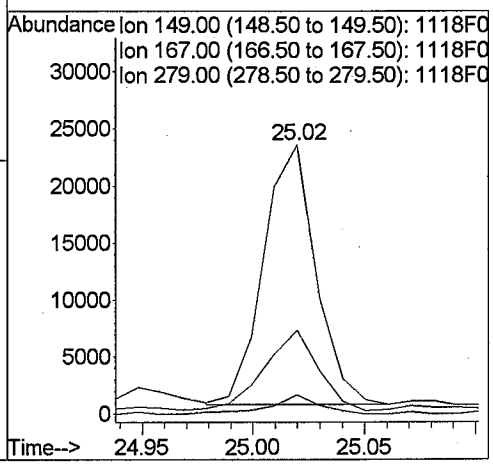


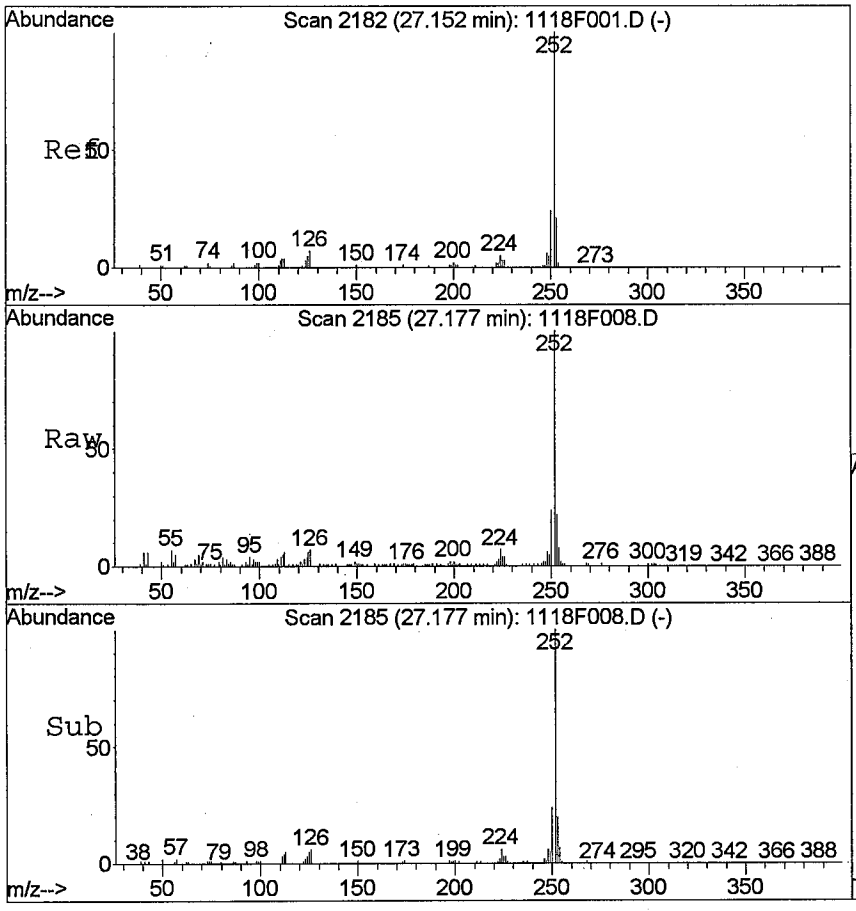


#75
Bis(2-ethylhexyl) Phthalate
Concen: 263.13 ng/ml
RT: 25.02 min Scan# 1974
Delta R.T. 0.04 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:149 Resp: 37013

Ion	Ratio	Lower	Upper
149	100		
167	30.6	0.2	60.2
279	7.5	0.0	34.5

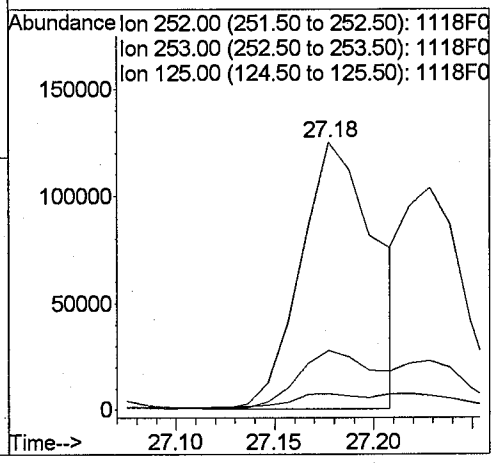


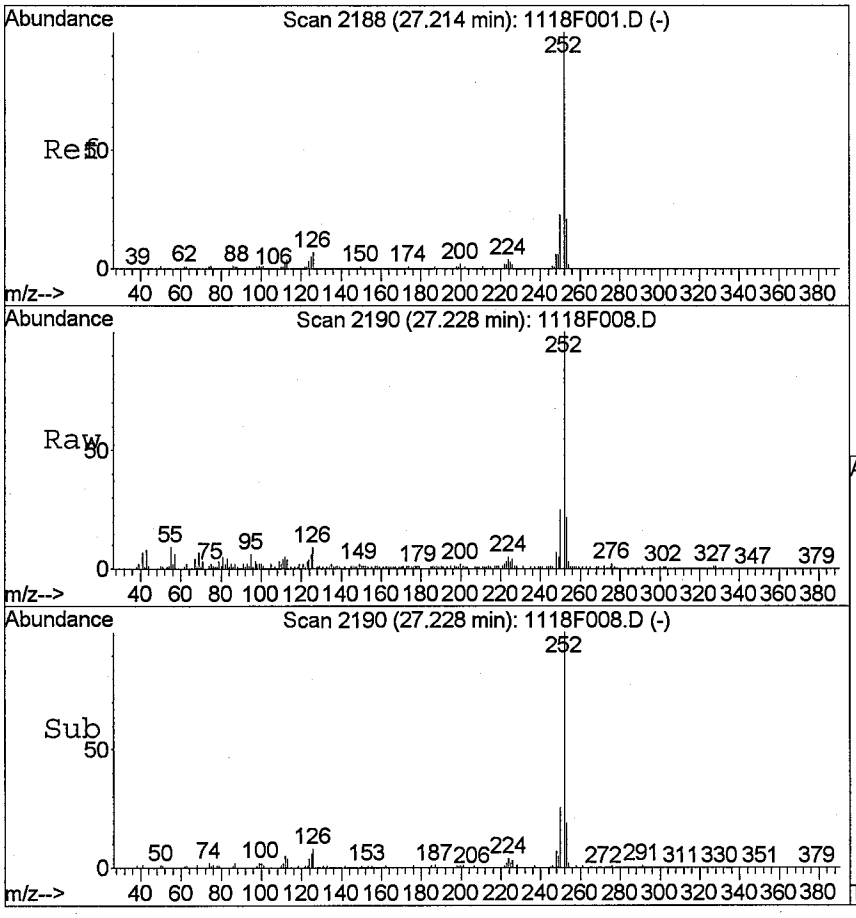


#78
Benzo(b)fluoranthene
Concen: 1783.51 ng/ml
RT: 27.18 min Scan# 2185
Delta R.T. 0.07 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:252 Resp: 327488

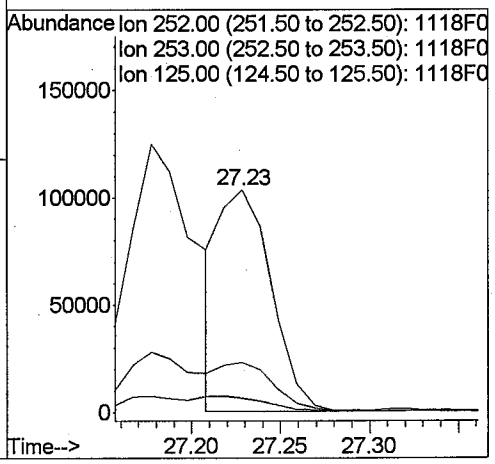
Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.3
125	5.2	0.0	41.2

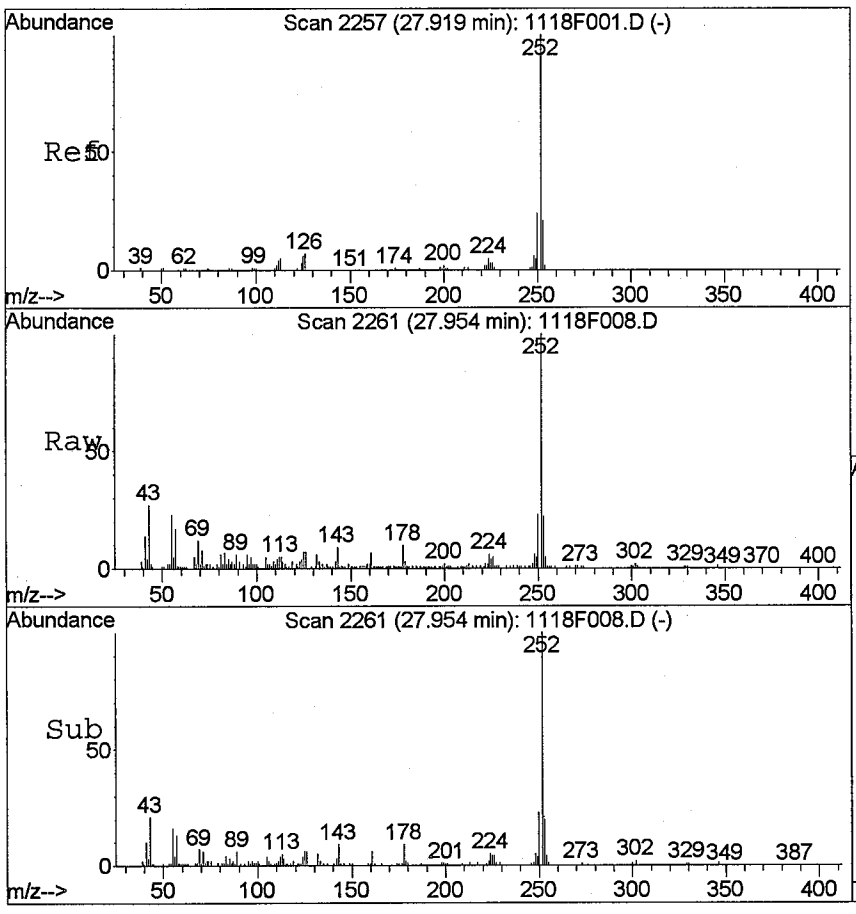




#79
Benzo(k)fluoranthene
Concen: 1205.48 ng/ml
RT: 27.23 min Scan# 2190
Delta R.T. 0.06 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

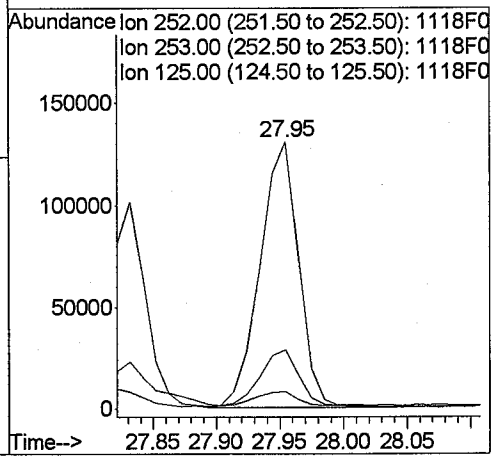
Tgt Ion:252	Resp:	210383	
Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9
125	4.8	0.0	40.9

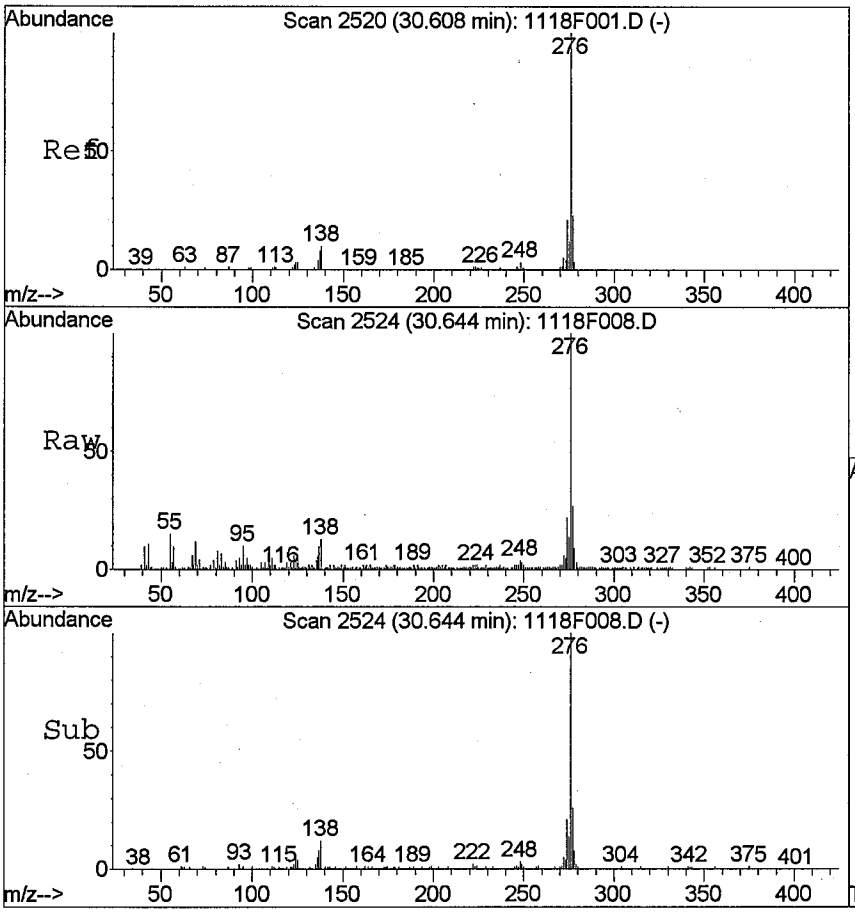




#80
Benzo(a)pyrene
Concen: 1581.30 ng/ml
RT: 27.95 min Scan# 2261
Delta R.T. 0.08 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:252	Resp:	275579	
Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	52.2
125	5.9	0.0	42.3

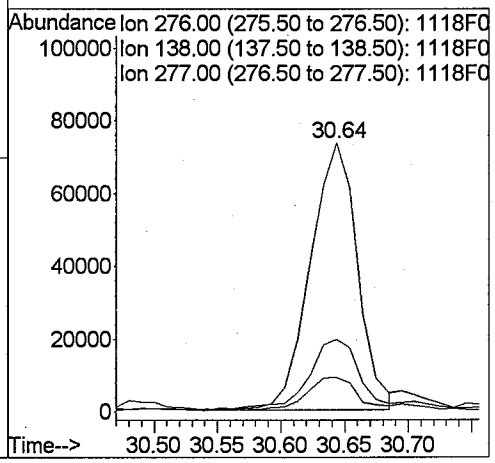


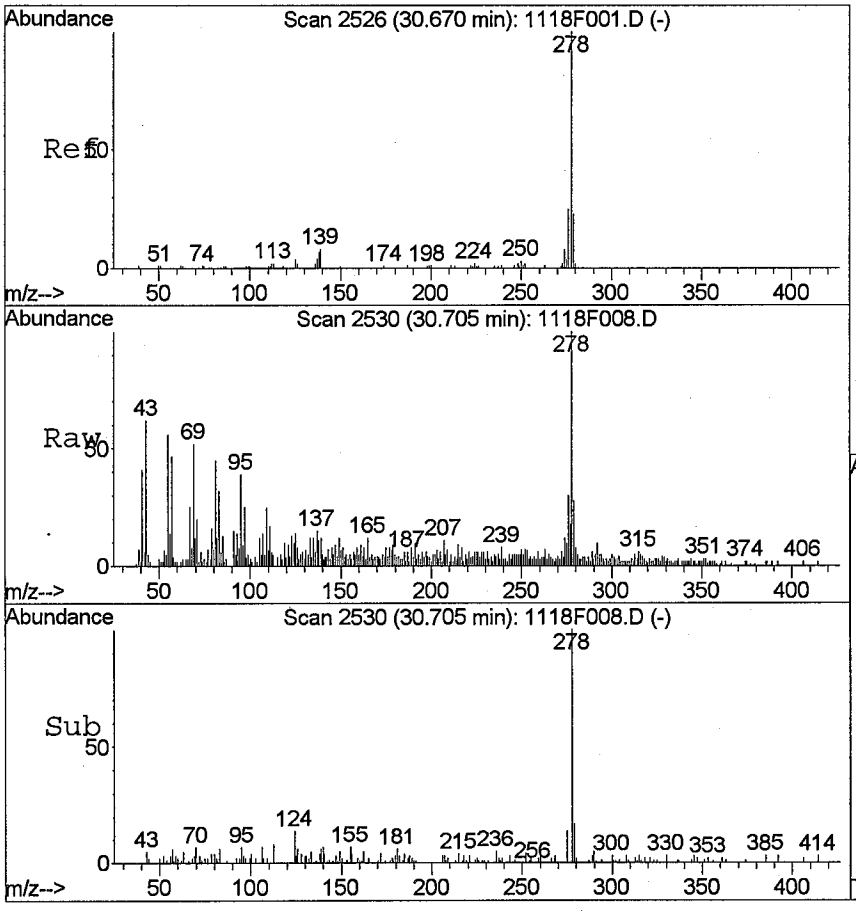


#81
Indeno(1,2,3-cd)pyrene
Concen: 1160.39 ng/ml
RT: 30.64 min Scan# 2524
Delta R.T. 0.08 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:276 Resp: 188733

Ion	Ratio	Lower	Upper
276	100		
138	12.5	0.0	51.4
277	26.1	0.0	54.0

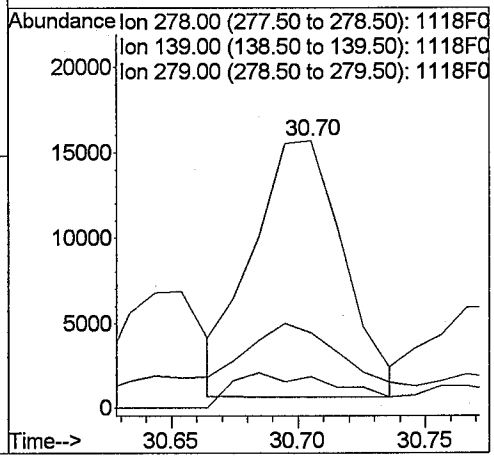


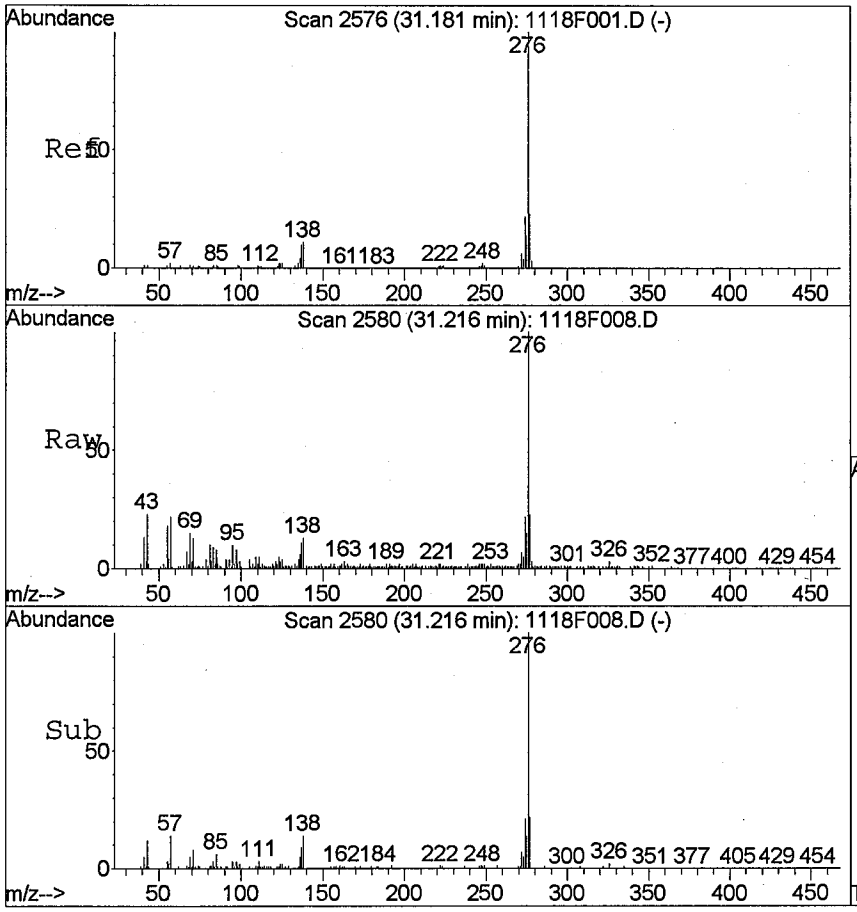


#82
Dibenz(a,h)anthracene
Concen: 234.58 ng/ml
RT: 30.70 min Scan# 2530
Delta R.T. 0.07 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:278 Resp: 37362

Ion	Ratio	Lower	Upper
278	100		
139	14.1	0.0	46.3
279	21.9	0.0	54.8

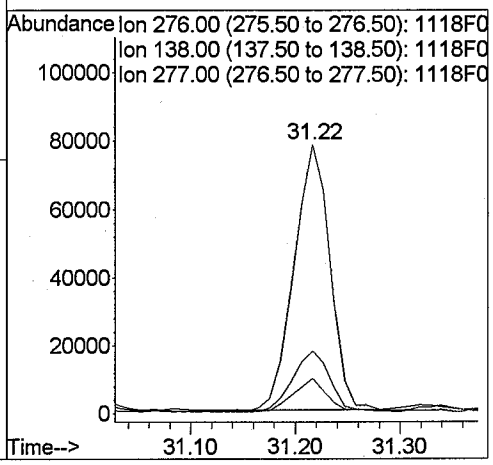




#83
Benzo(g,h,i)perylene
Concen: 1097.01 ng/ml
RT: 31.22 min Scan# 2580
Delta R.T. 0.08 min
Lab File: 1118F008.D
Acq: 18 Nov 2003 17:29

Tgt Ion:276 Resp: 184993

Ion	Ratio	Lower	Upper
276	100		
138	12.3	0.0	52.7
277	22.7	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-5
Lab Code: K2308433-006

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	140	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	47	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	940	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	33	40-123	11/18/03	Outside Control Limits
2,4,6-Tribromophenol	18	35-138	11/18/03	Outside Control Limits
Terphenyl-d14	81	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F009.D
Lab ID: K2308433-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/18/2003 18:10
Date Quantitated: 11/19/2003 08:57
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	18	35	138	RX
	Phenol-d6	33	40	123	

Primary Review: 11/19/03

Secondary Review: mt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245972	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118F009.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 18:10	**Quant Date:**	11/19/2003 08:57	**Vial:**	9
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.00	0.01	152	60232	1,000.00	OK
2	Naphthalene-d8	11.29	0.01	136	164432	1,000.00	OK
3	Acenaphthene-d10	15.08	0.01	164	105508	1,000.00	OK
4	Phenanthrene-d10	18.42	0.01	188	181148	1,000.00	OK
5	Chrysene-d12	24.60	0.02	240	183817	1,000.00	OK
6	Perylene-d12	28.09	0.04	264	129844	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Phenol-d6	8.49	0.01	0.00	99	19414	250.47	33	40-123	*
4	2,4,6-Tribromophenol	16.90	0.01	0.00	330	4152	135.62	18	35-138	*
5	Terphenyl-d14	22.23	0.02	0.00	244	58660	407.07	81	56-152	OK

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		12	U	
1	2-Methylphenol				107	0		21	U	
1	4-Methylphenol				107	0		18	U	
2	2,4-Dimethylphenol				122	0		34	U	
2	2,4-Dichlorophenol				162	0		11	U	
3	2,4,6-Trichlorophenol				196	0		11	U	
4	Pentachlorophenol				266	0		52	U	
5	Butyl Benzyl Phthalate				149	0d		9.2	U	
5	Bis(2-ethylhexyl) Phthalate	25.01	0.01	0.00	149	27068	183.89	86	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F009.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 18:10	**Quant Date:**	11/19/2003 08:57	**Vial:**	9
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Prep Amount:	26.19 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	82.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F009.D Vial: 9
Acq On : 18 Nov 2003 18:10 Operator: JGISH
Sample : K2308433-006 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:10 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

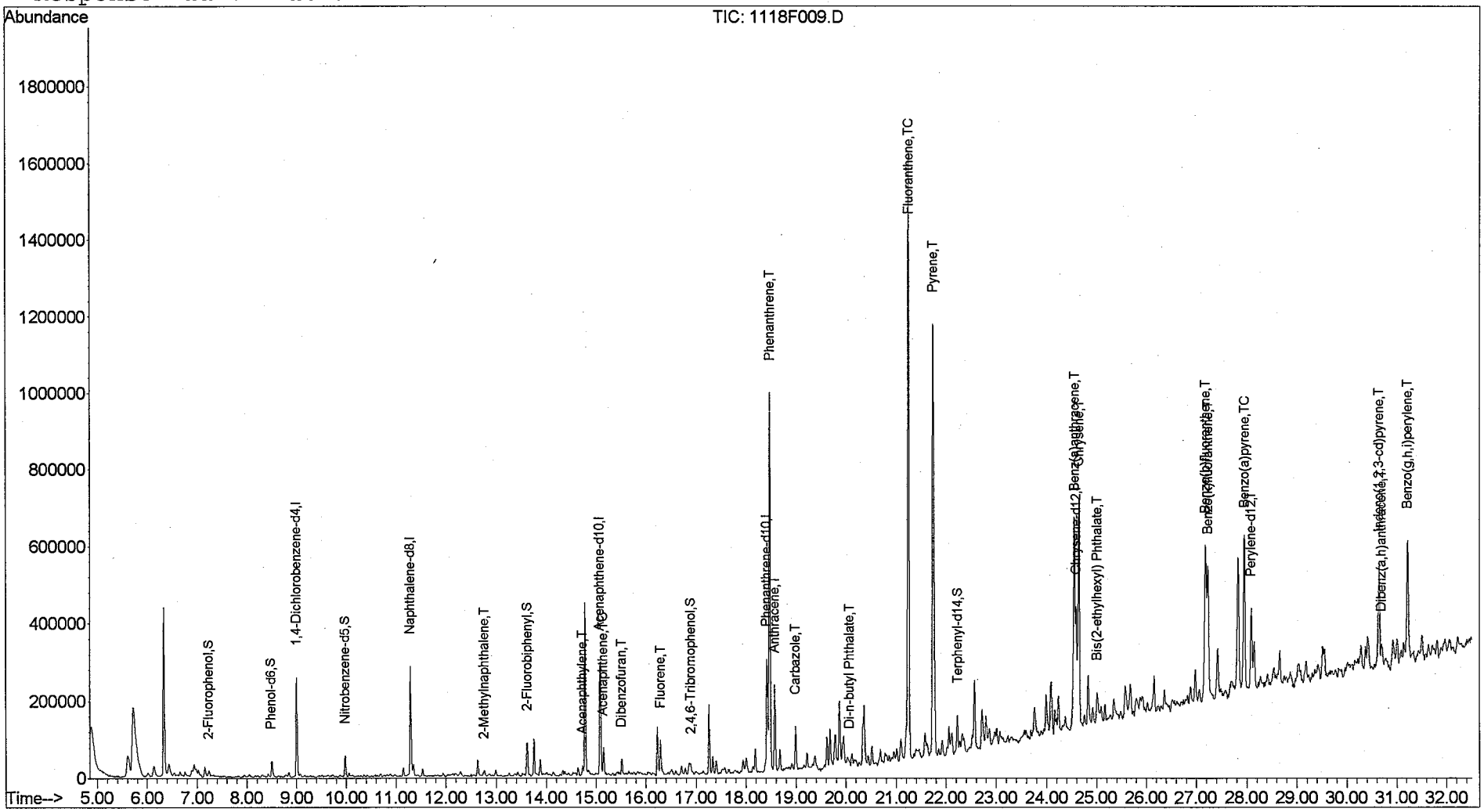
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.00	152	60232	1000.00	ng/ml	0.03
21) Naphthalene-d8	11.29	136	164432	1000.00	ng/ml	0.03
34) Acenaphthene-d10	15.08	164	105508	1000.00	ng/ml	0.03
57) Phenanthrene-d10	18.42	188	181148	1000.00	ng/ml	0.04
67) Chrysene-d12	24.60	240	183817	1000.00	ng/ml	0.05
76) Perylene-d12	28.09	264	129844	1000.00	ng/ml	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	5852	90.49	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery = 2.41%#			
6) Phenol-d6	8.49	99	19414	250.47	ng/ml	0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 6.68%#			
19) Nitrobenzene-d5	9.98	82	27779	288.76	ng/ml	0.04
Spiked Amount 2500.000	Range 30 - 139		Recovery = 11.55%#			
38) 2-Fluorobiphenyl	13.62	172	42292	289.14	ng/ml	0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 11.57%#			
58) 2,4,6-Tribromophenol	16.90	330	4152	135.62	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 3.62%#			
70) Terphenyl-d14	22.23	244	58660	407.07	ng/ml	0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 16.28%#			
Target Compounds						Qvalue
33) 2-Methylnaphthalene	12.76	142	4264	40.11	ng/ml	97
41) Acenaphthylene	14.73	152	17629	104.33	ng/ml	89
44) Acenaphthene	15.15	154	23646	233.60	ng/ml	95
47) Dibenzofuran	15.52	168	24903	139.43	ng/ml	83
50) Fluorene	16.29	166	38694	293.60	ng/ml	88
62) Phenanthrene	18.48	178	689081	3507.01	ng/ml	98
63) Anthracene	18.57	178	158254	799.32	ng/ml	95
64) Carbazole	18.99	167	70433	408.98	ng/ml	95
65) Di-n-butyl Phthalate	20.07	149	2597m	10.83	ng/ml	
66) Fluoranthene	21.25	202	1190720	5516.60	ng/ml	92
69) Pyrene	21.74	202	962160	4219.47	ng/ml	99
73) Benz(a)anthracene	24.56	228	419310	2076.61	ng/ml	98
74) Chrysene	24.66	228	456113	2383.80	ng/ml	99
75) Bis(2-ethylhexyl) Phthalat	25.01	149	27068	183.89	ng/ml	93
78) Benzo(b)fluoranthene	27.18	252	436886	2474.49	ng/ml	94
79) Benzo(k)fluoranthene	27.23	252	282654	1684.39	ng/ml	95
80) Benzo(a)pyrene	27.96	252	348961	2082.49	ng/ml	93
81) Indeno(1,2,3-cd)pyrene	30.65	276	249419	1594.87	ng/ml	87
82) Dibenz(a,h)anthracene	30.70	278	53264	347.81	ng/ml	89
83) Benzo(g,h,i)perylene	31.22	276	246979	1523.18	ng/ml	87

(#) = qualifier out of range (m) = manual integration

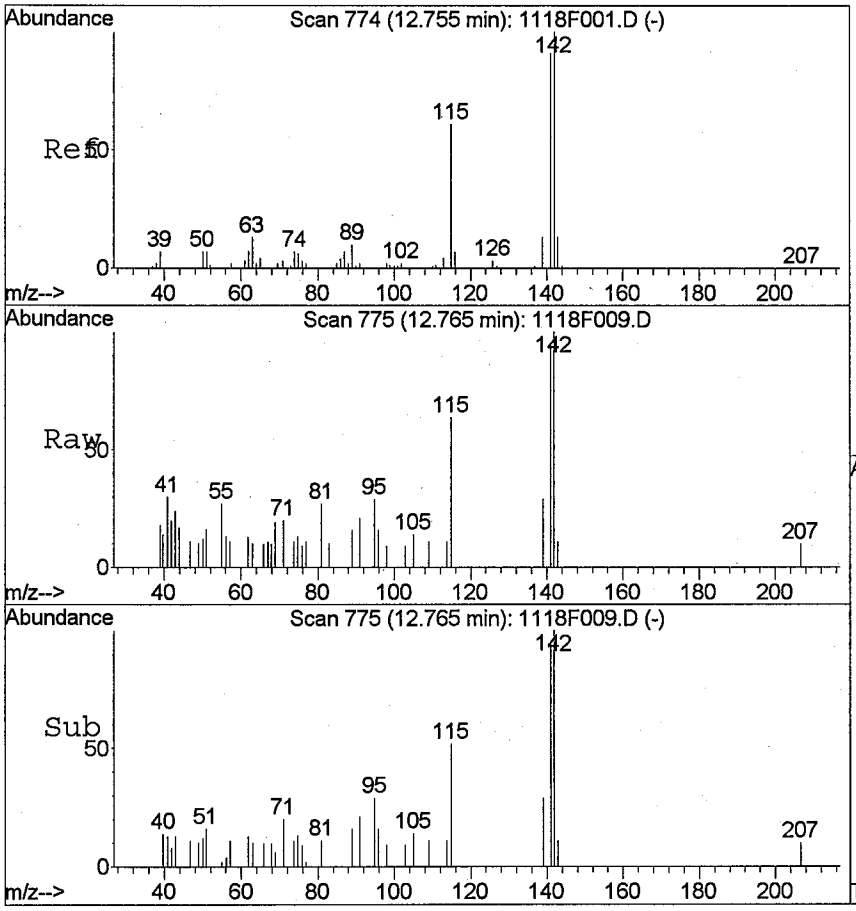
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F009.D Vial: 9
Acq On : 18 Nov 2003 18:10 Operator: JGISH
Sample : K2308433-006 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:57 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration

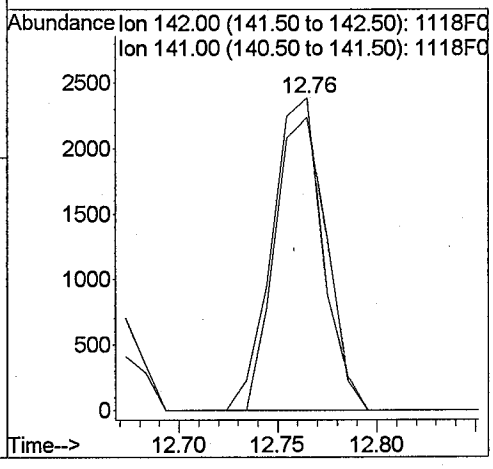


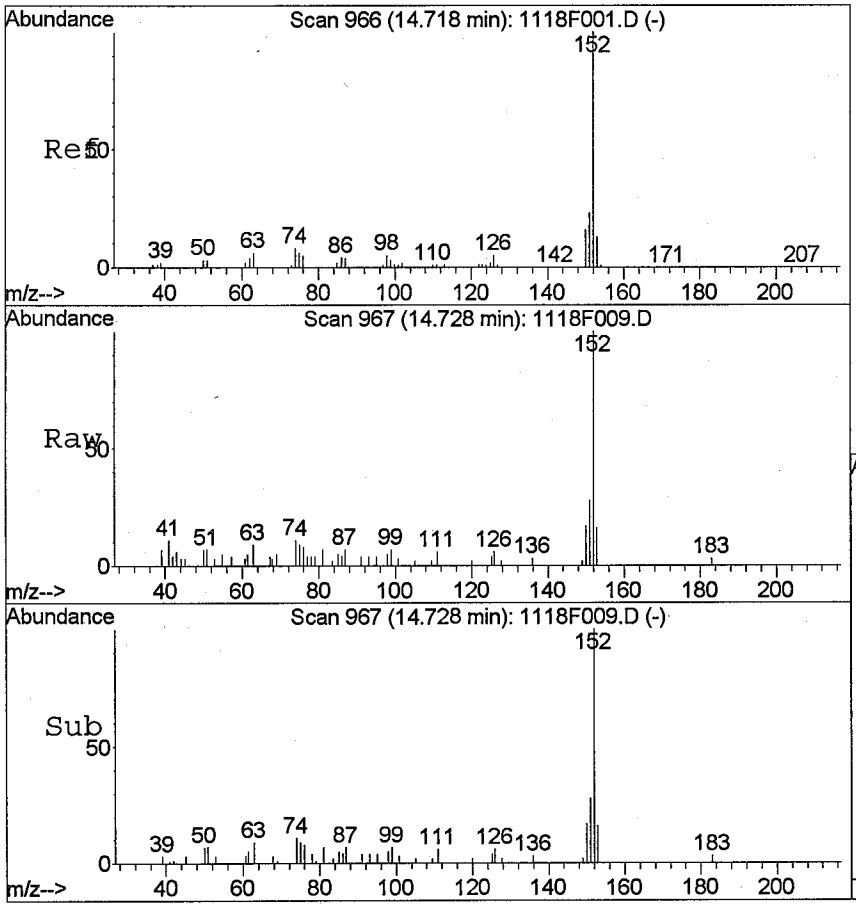
1938



#33
2-Methylnaphthalene
Concen: 40.11 ng/ml
RT: 12.76 min Scan# 775
Delta R.T. 0.04 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

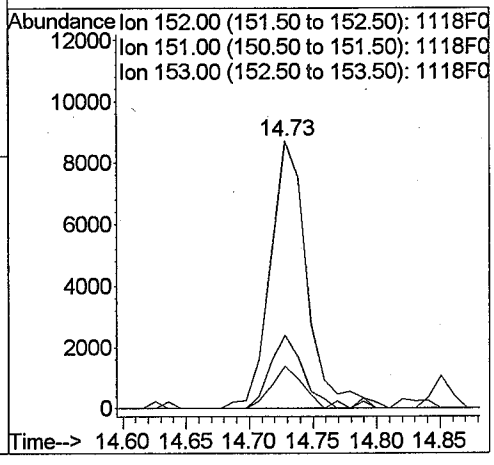
Tgt Ion:142	Resp:	4264	
Ion	Ratio	Lower	Upper
142	100		
141	93.8	61.0	121.0

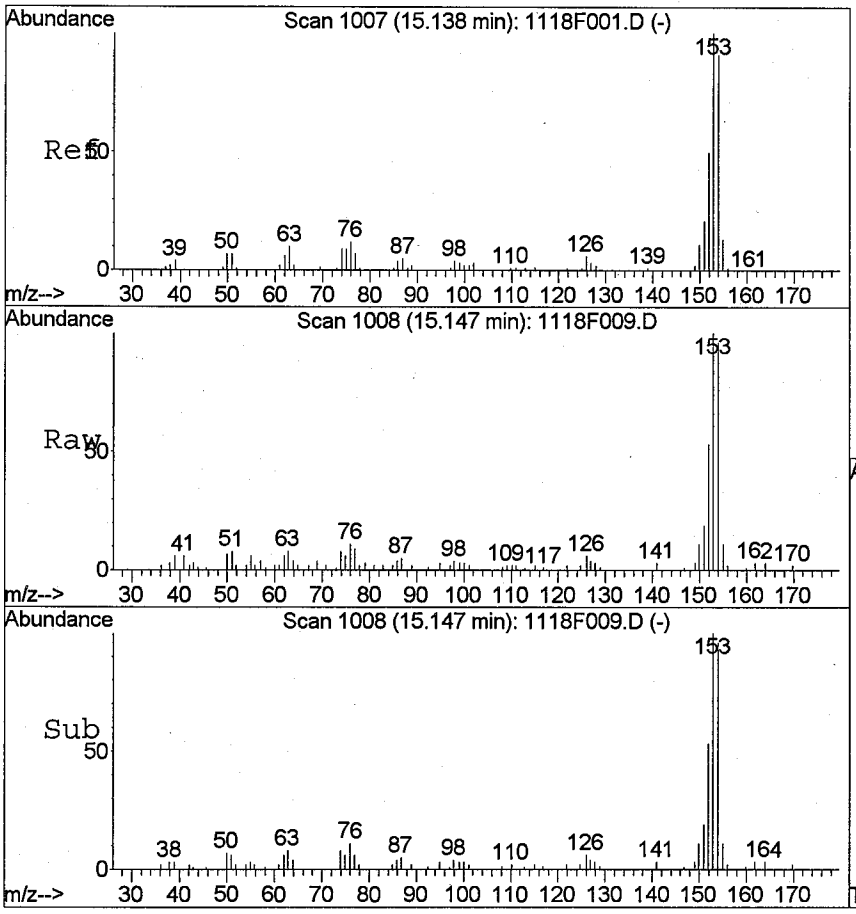




#41
Acenaphthylene
Concen: 104.33 ng/ml
RT: 14.73 min Scan# 967
Delta R.T. 0.04 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:152	Resp:	17629	
Ion	Ratio	Lower	Upper
152	100		
151	27.5	0.0	51.5
153	16.0	0.0	42.9

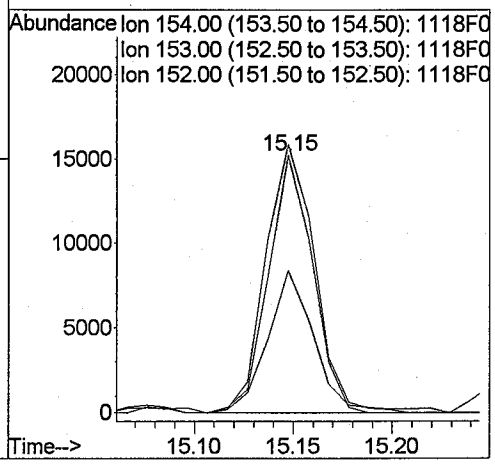


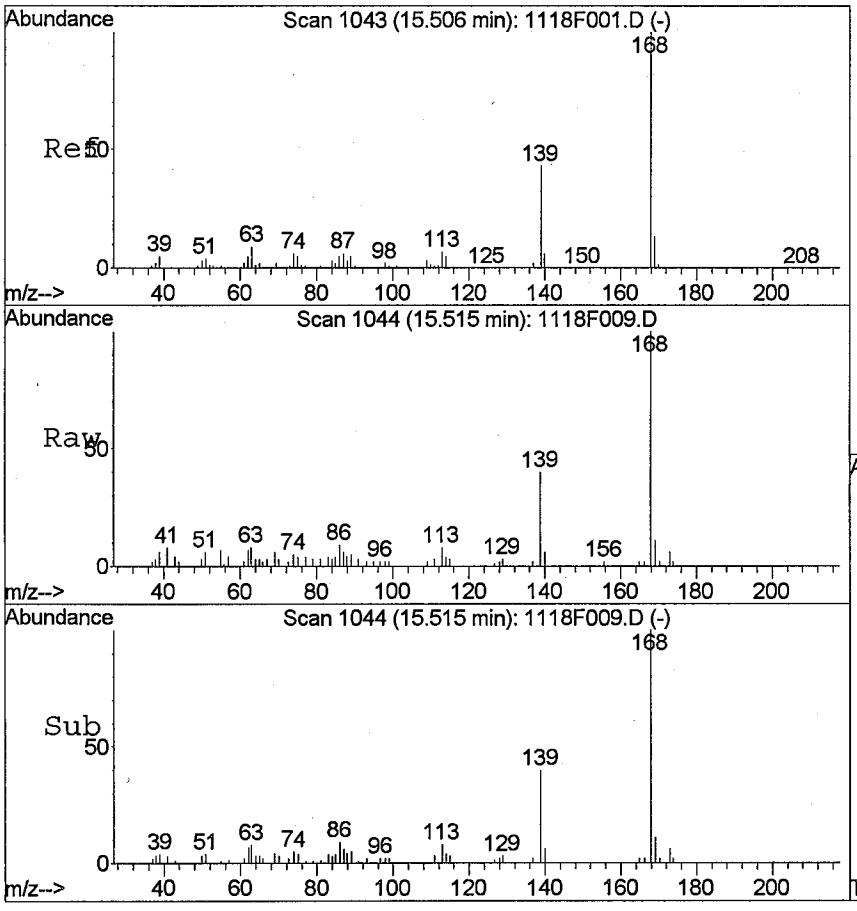


#44
Acenaphthene
Concen: 233.60 ng/ml
RT: 15.15 min Scan# 1008
Delta R.T. 0.03 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:154 Resp: 23646

Ion	Ratio	Lower	Upper
154	100		
153	104.3	82.4	142.4
152	55.1	24.4	84.4

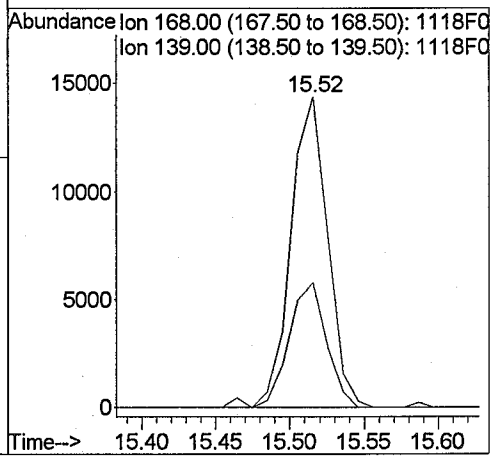


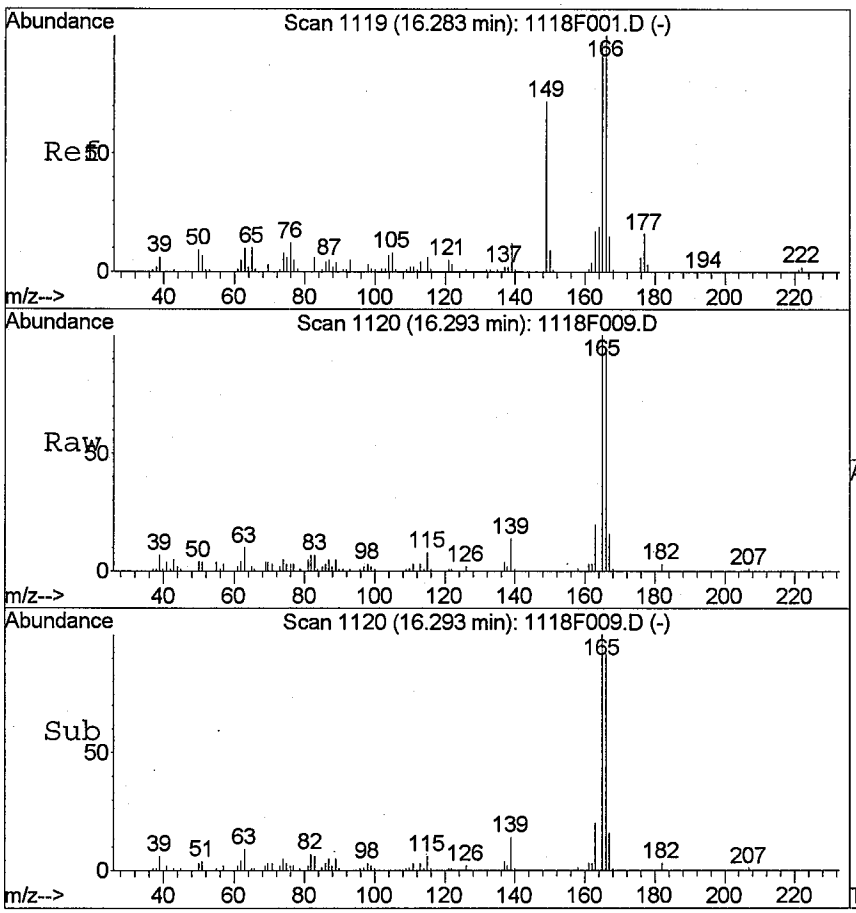


#47
Dibenzofuran
Concen: 139.43 ng/ml
RT: 15.52 min Scan# 1044
Delta R.T. 0.04 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:168 Resp: 24903

Ion	Ratio	Lower	Upper
168	100		
139	40.3	1.2	61.2

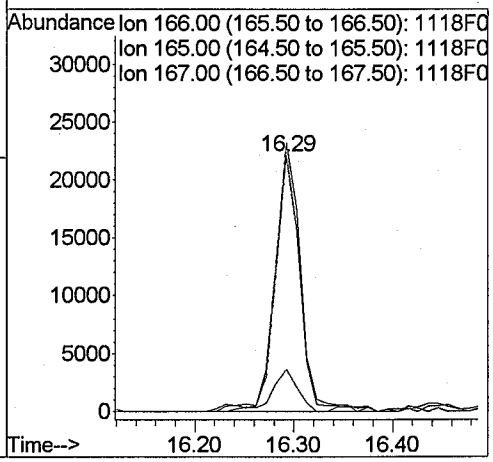


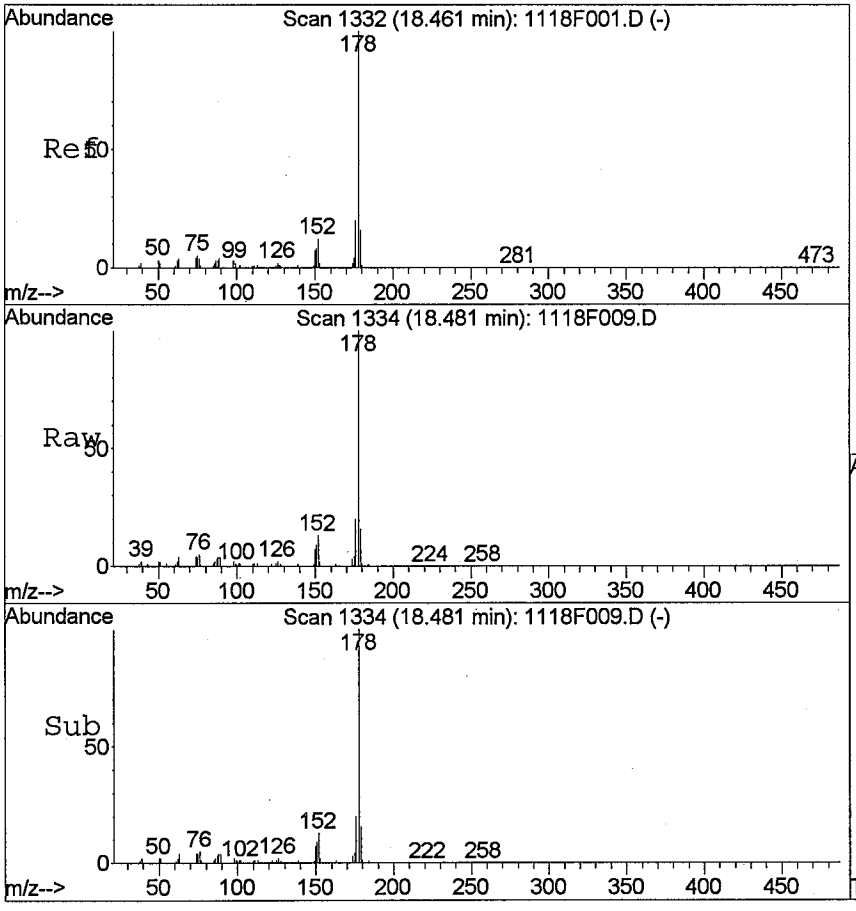


#50
Fluorene
Concen: 293.60 ng/ml
RT: 16.29 min Scan# 1120
Delta R.T. 0.03 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:166 Resp: 38694

Ion	Ratio	Lower	Upper
166	100		
165	105.1	63.2	123.2
167	16.4	0.0	43.0

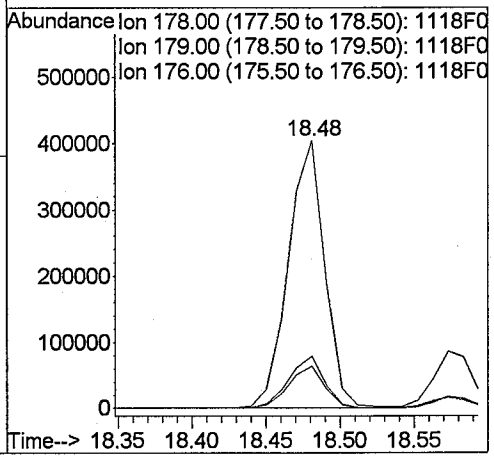


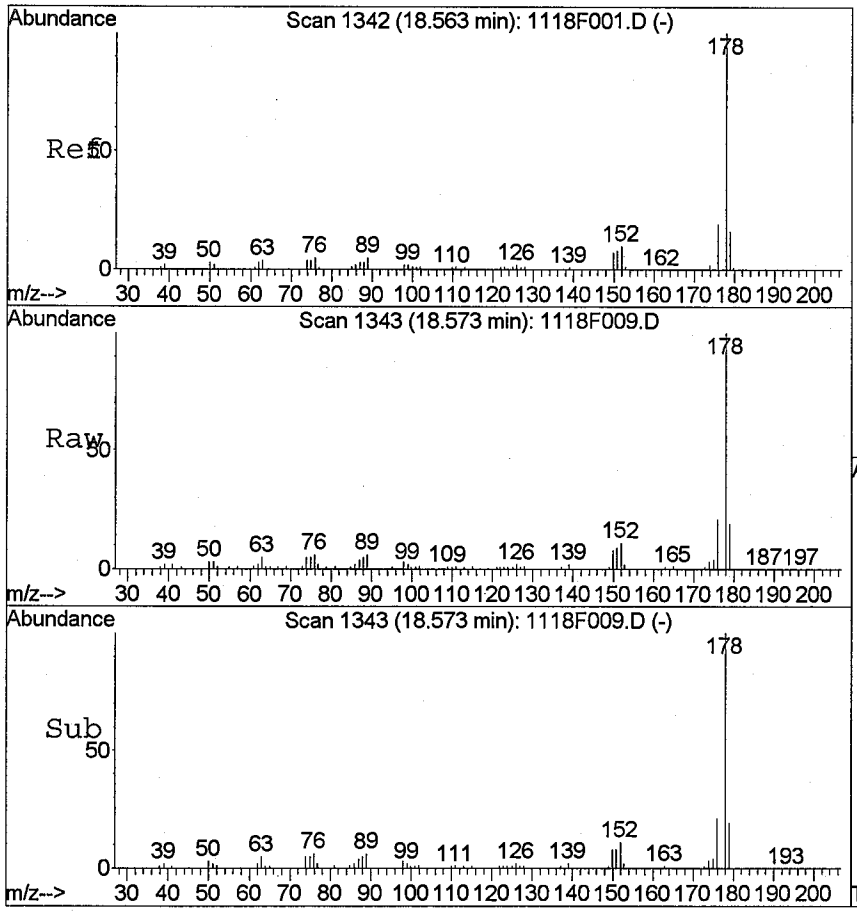


#62
Phenanthrene
Concen: 3507.01 ng/ml
RT: 18.48 min Scan# 1334
Delta R.T. 0.05 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:178 Resp: 689081

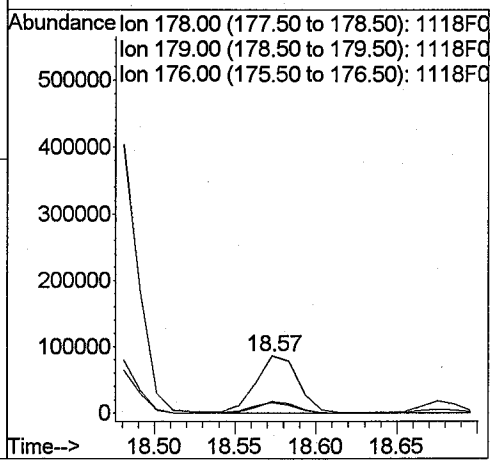
Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	44.8
176	19.7	0.0	49.3

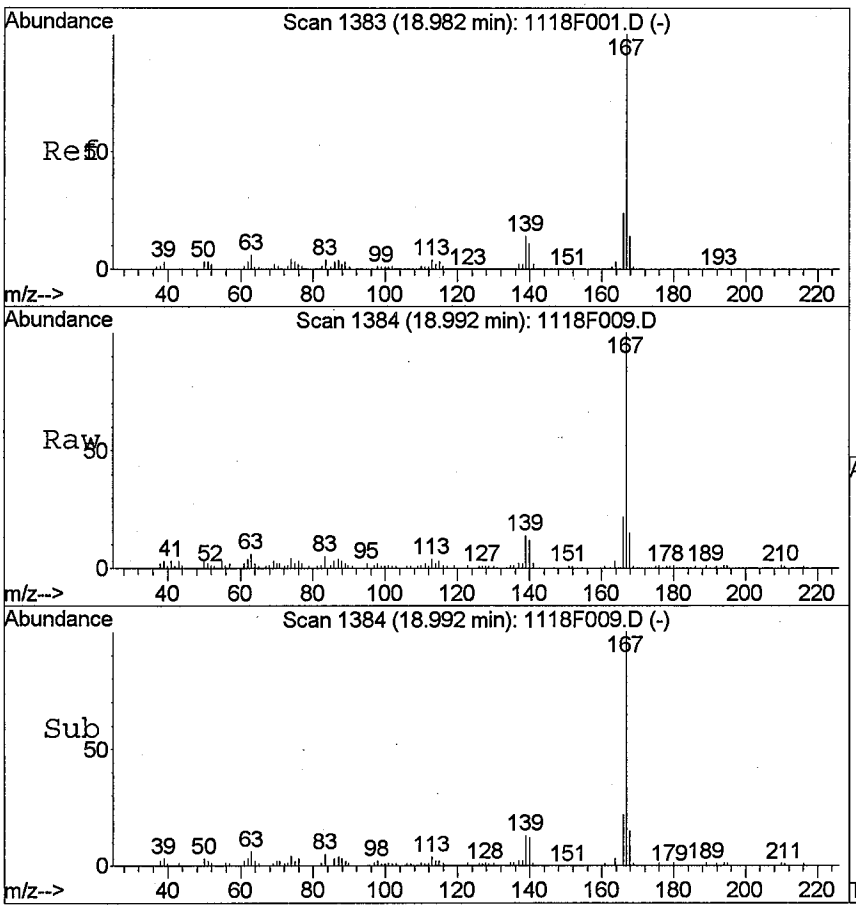




#63
Anthracene
Concen: 799.32 ng/ml
RT: 18.57 min Scan# 1343
Delta R.T. 0.04 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

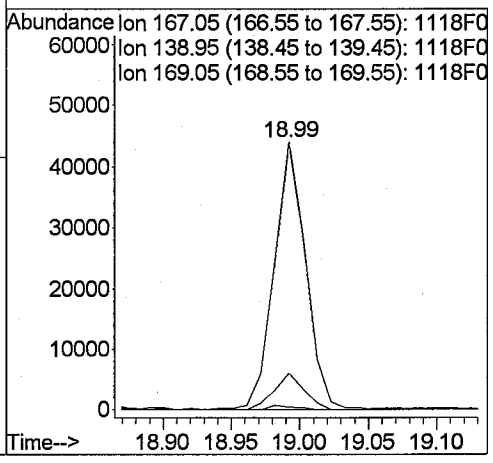
Tgt Ion:178	Resp:	158254	
Ion	Ratio	Lower	Upper
178	100		
179	18.6	0.0	44.7
176	20.4	0.0	49.8

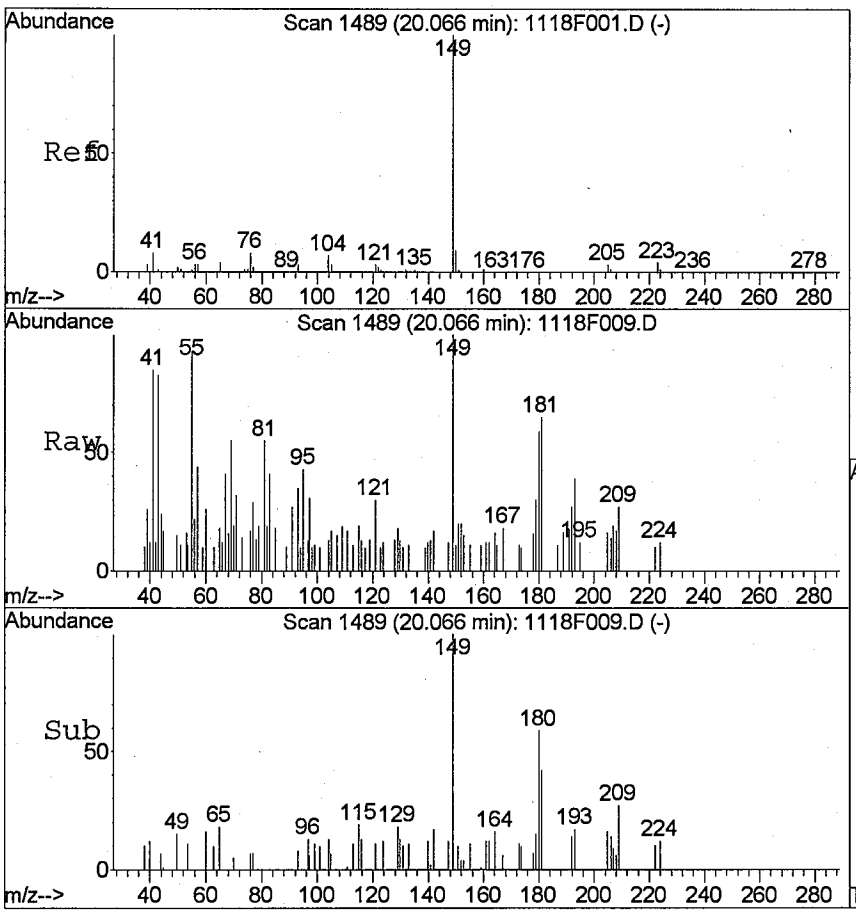




#64
Carbazole
Concen: 408.98 ng/ml
RT: 18.99 min Scan# 1384
Delta R.T. 0.04 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:167	Resp:	70433	
Ion	Ratio	Lower	Upper
167	100		
139	13.8	0.0	41.7
169	1.0	0.0	30.8

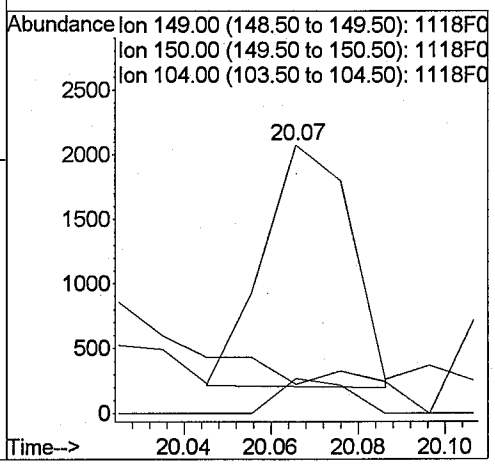


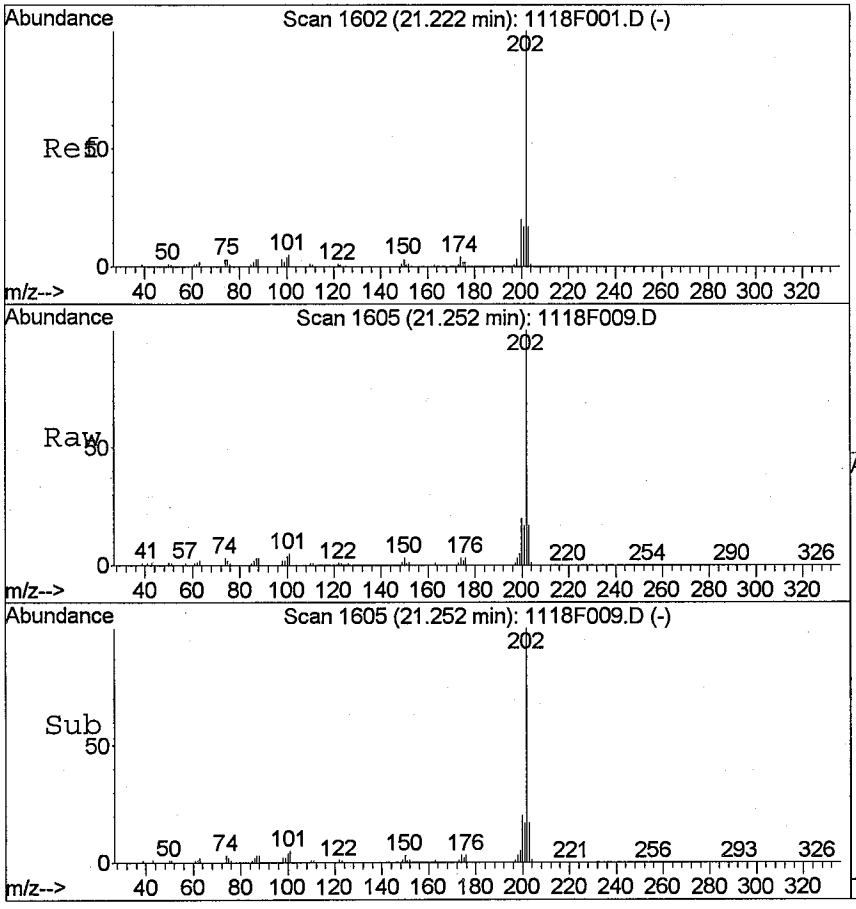


#65
Di-n-butyl Phthalate
Concen: 10.83 ng/ml m
RT: 20.07 min Scan# 1489
Delta R.T. 0.03 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:149 Resp: 2597

Ion	Ratio	Lower	Upper
149	100		
150	10.8	0.0	39.4
104	13.0	0.0	35.0

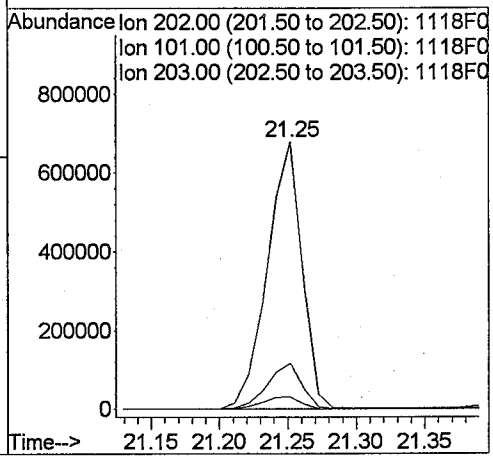


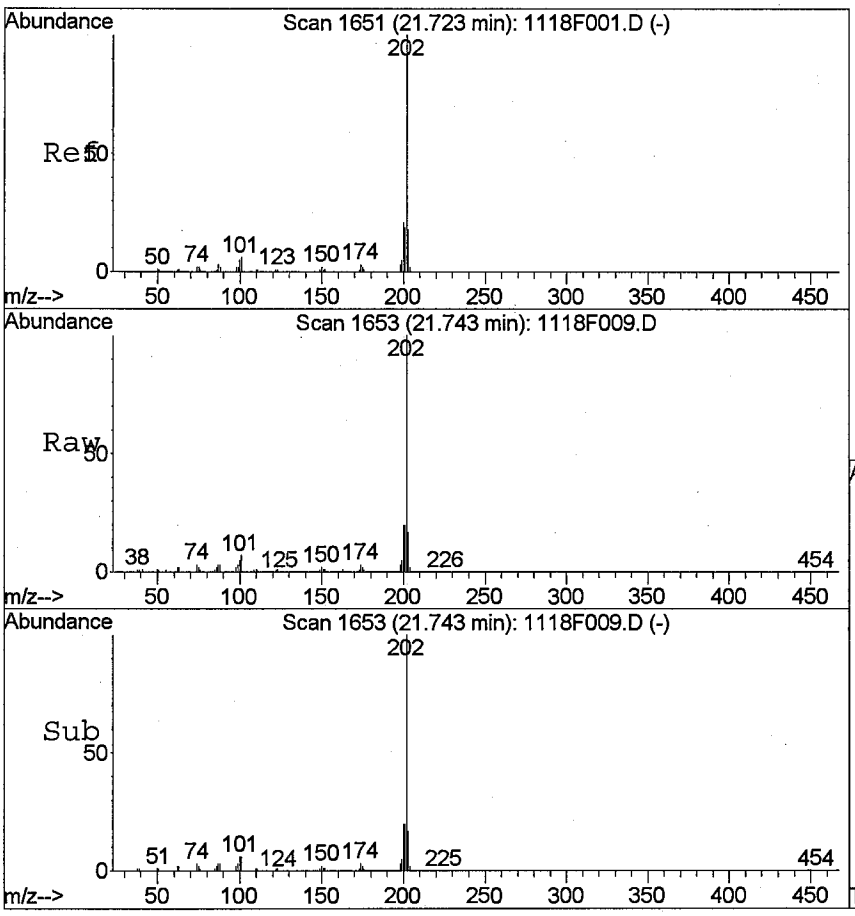


#66
Fluoranthene
Concen: 5516.60 ng/ml
RT: 21.25 min Scan# 1605
Delta R.T. 0.06 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:202 Resp: 1190720

Ion	Ratio	Lower	Upper
202	100		
101	4.5	0.0	42.0
203	17.1	0.0	47.2

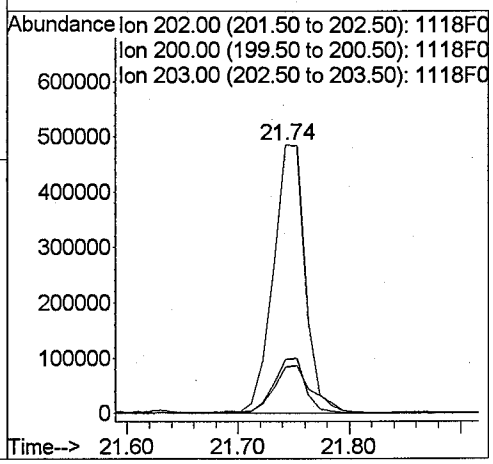


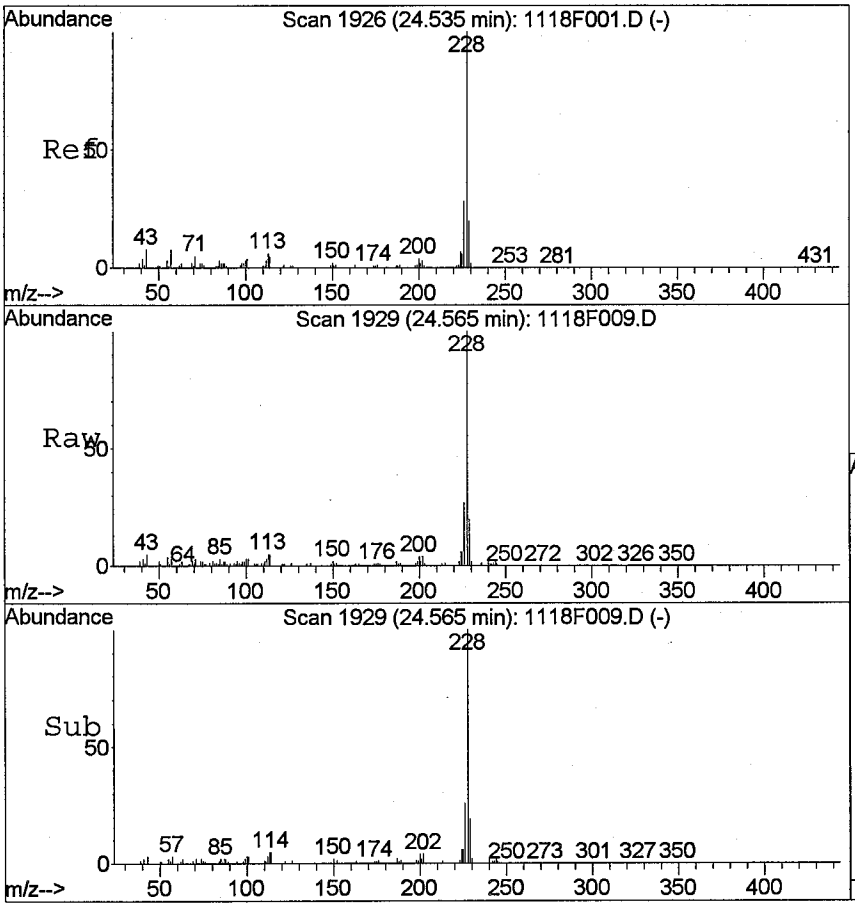


#69
Pyrene
Concen: 4219.47 ng/ml
RT: 21.74 min Scan# 1653
Delta R.T. 0.05 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:202 Resp: 962160

Ion	Ratio	Lower	Upper
202	100		
200	20.2	0.0	50.3
203	17.1	0.0	48.1

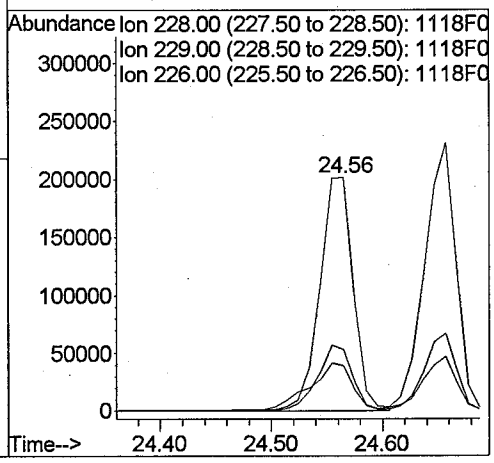


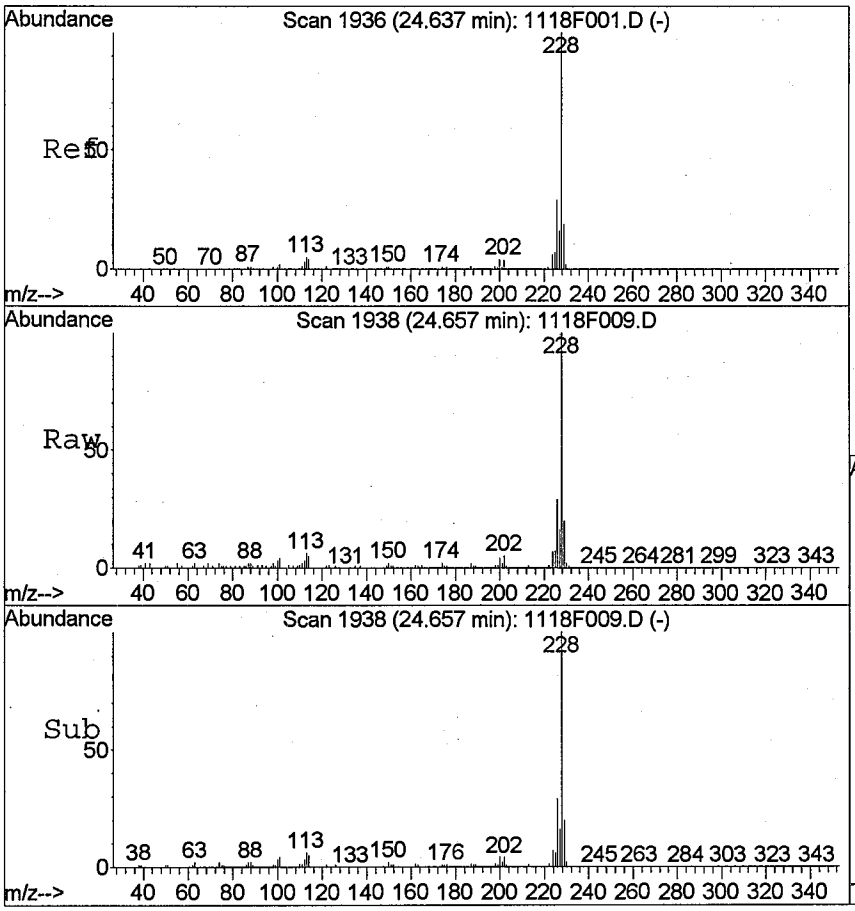


#73
Benz(a)anthracene
Concen: 2076.61 ng/ml
RT: 24.56 min Scan# 1929
Delta R.T. 0.06 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:228 Resp: 419310

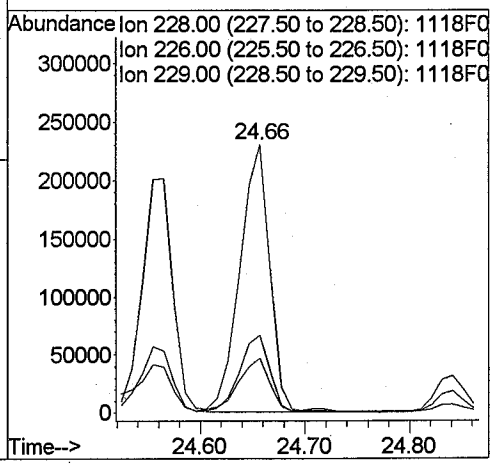
Ion	Ratio	Lower	Upper
228	100		
229	19.2	0.0	48.5
226	26.4	0.0	55.6

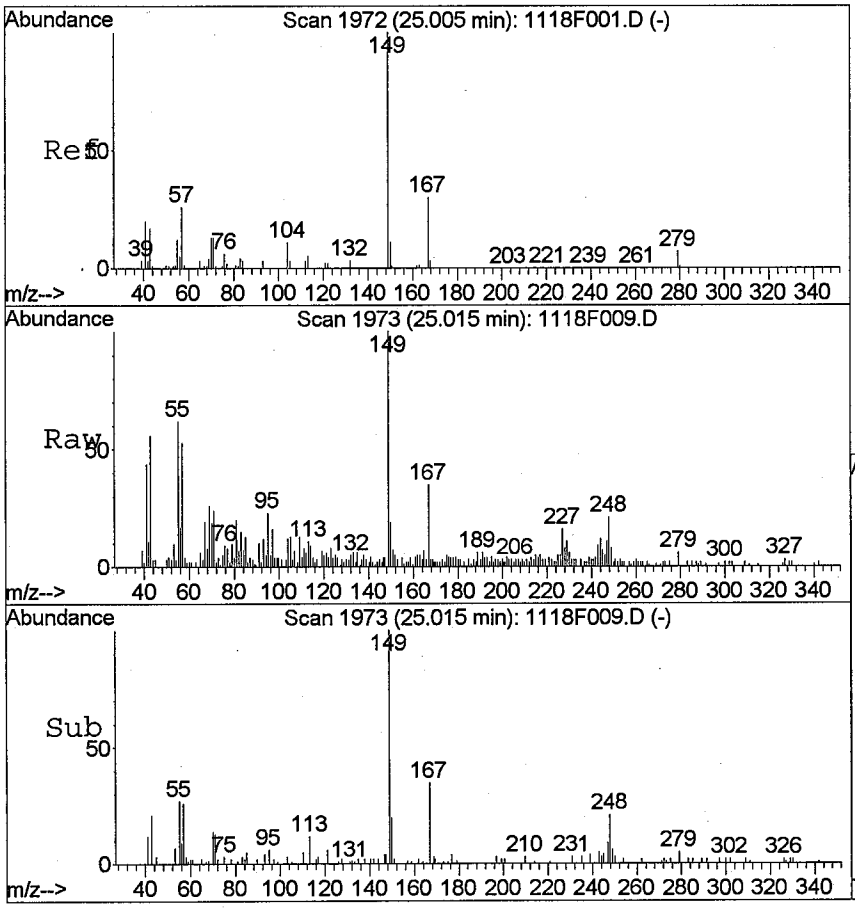




#74
Chrysene
Concen: 2383.80 ng/ml
RT: 24.66 min Scan# 1938
Delta R.T. 0.05 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

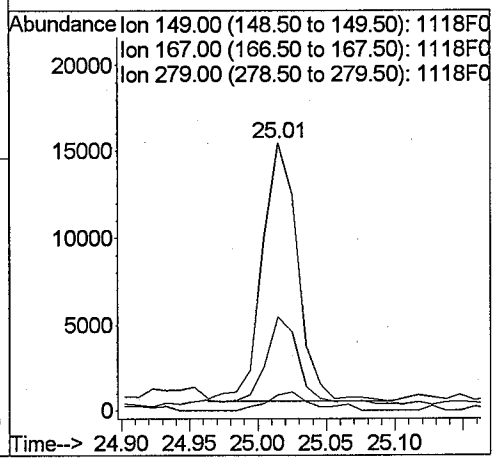
Tgt Ion:228	Resp:	456113	
Ion	Ratio	Lower	Upper
228	100		
226	28.8	0.0	58.4
229	19.9	0.0	49.1

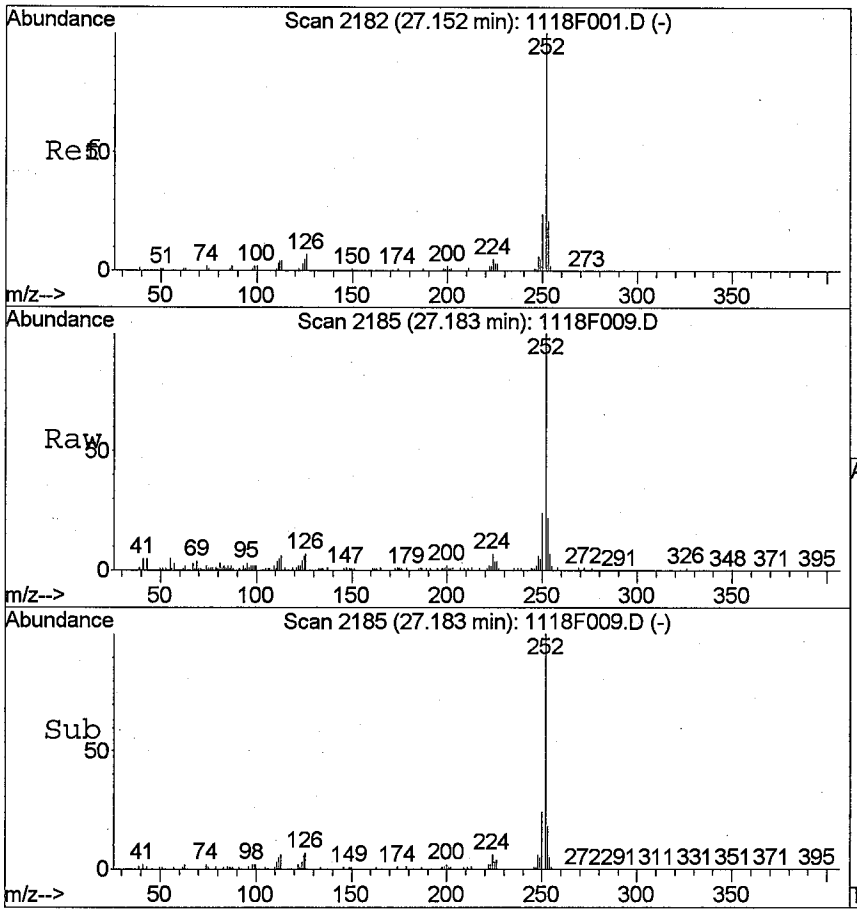




#75
Bis(2-ethylhexyl) Phthalate
Concen: 183.89 ng/ml
RT: 25.01 min Scan# 1973
Delta R.T. 0.03 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:149	Resp:	27068	
Ion	Ratio	Lower	Upper
149	100		
167	33.9	0.2	60.2
279	6.3	0.0	34.5

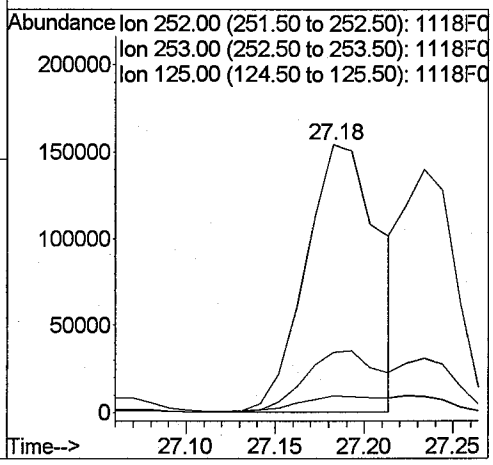


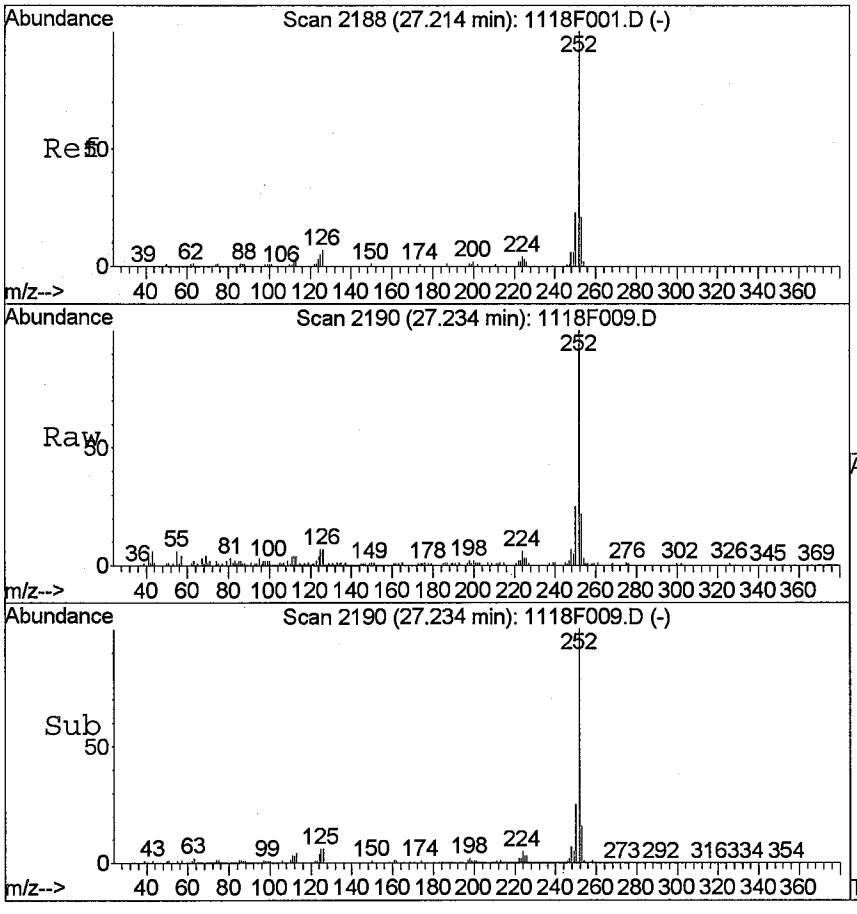


#78
Benzo(b)fluoranthene
Concen: 2474.49 ng/ml
RT: 27.18 min Scan# 2185
Delta R.T. 0.07 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:252 Resp: 436886

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.3
125	5.8	0.0	41.2

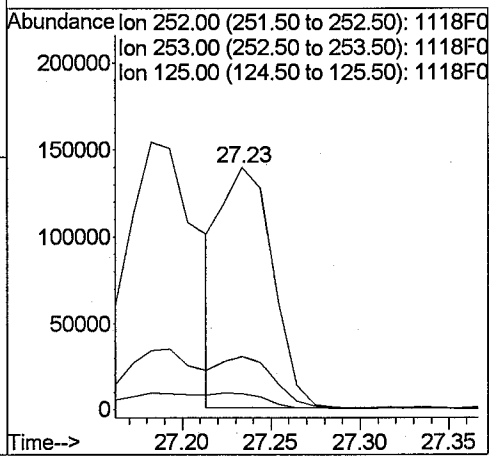


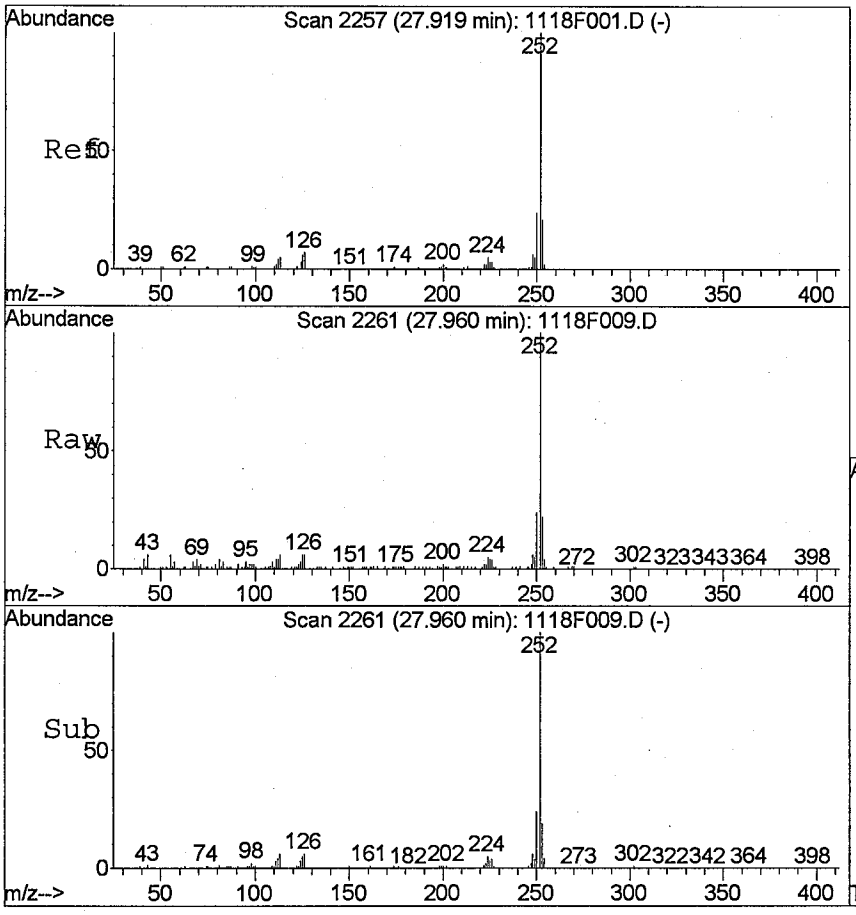


#79
Benzo(k)fluoranthene
Concen: 1684.39 ng/ml
RT: 27.23 min Scan# 2190
Delta R.T. 0.06 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:252 Resp: 282654

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.9
125	5.8	0.0	40.9

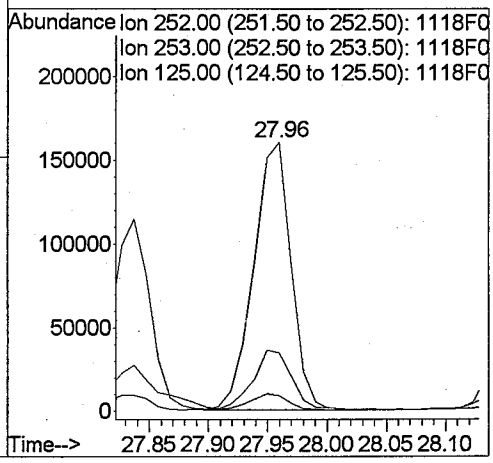


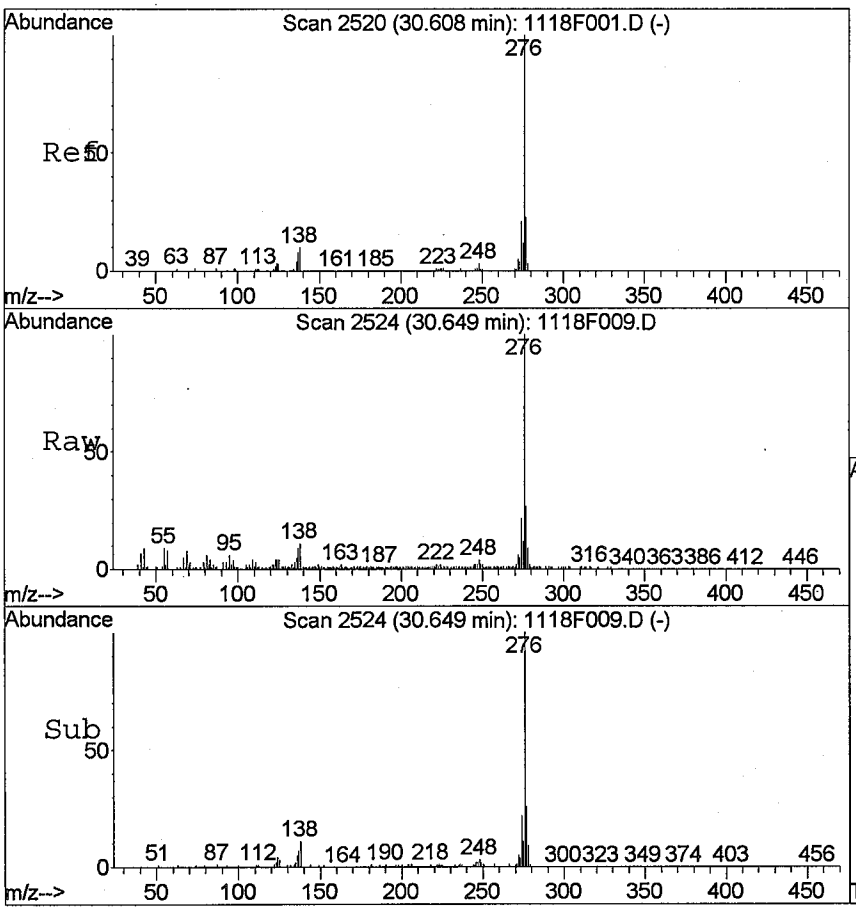


#80
Benzo(a)pyrene
Concen: 2082.49 ng/ml
RT: 27.96 min Scan# 2261
Delta R.T. 0.08 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:252 Resp: 348961

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	52.2
125	5.5	0.0	42.3

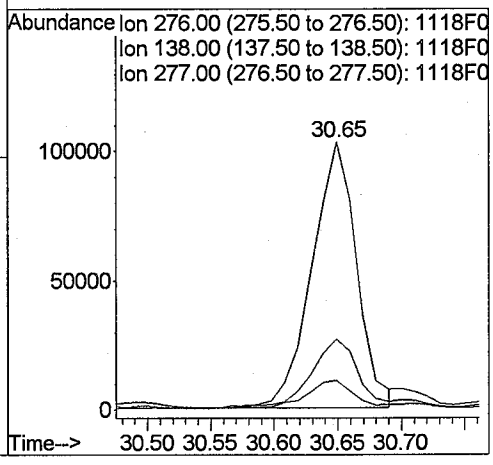


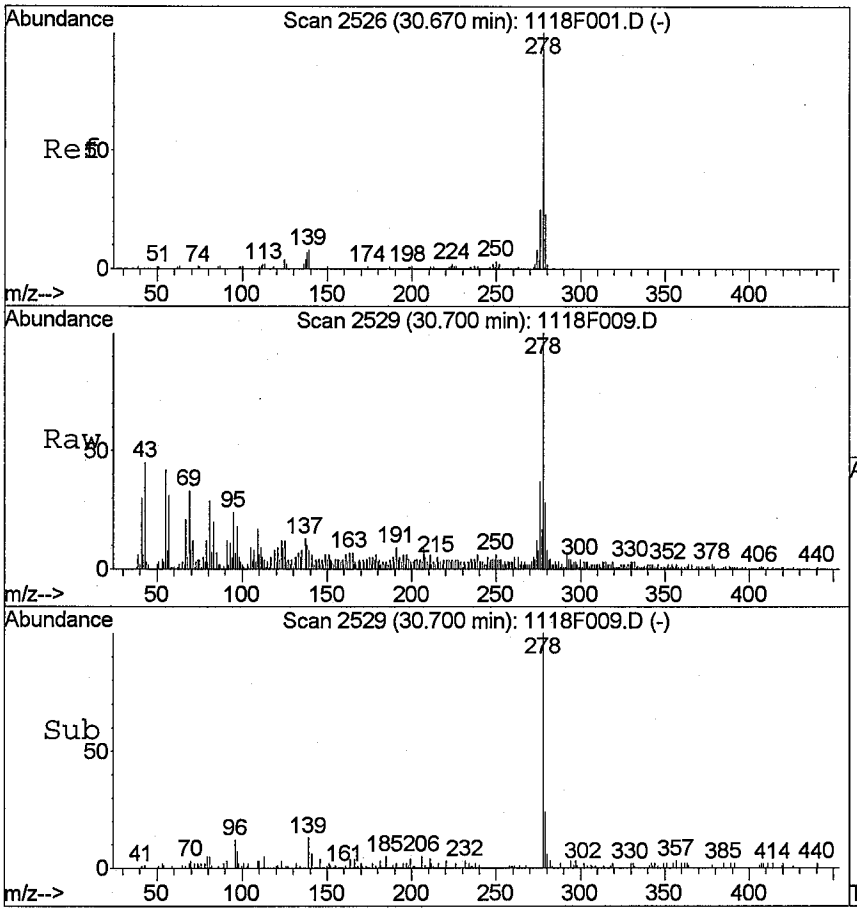


#81
Indeno(1,2,3-cd)pyrene
Concen: 1594.87 ng/ml
RT: 30.65 min Scan# 2524
Delta R.T. 0.08 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:276 Resp: 249419

Ion	Ratio	Lower	Upper
276	100		
138	10.6	0.0	51.4
277	25.9	0.0	54.0

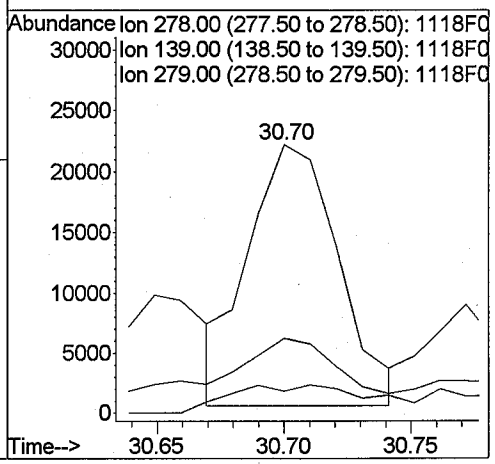


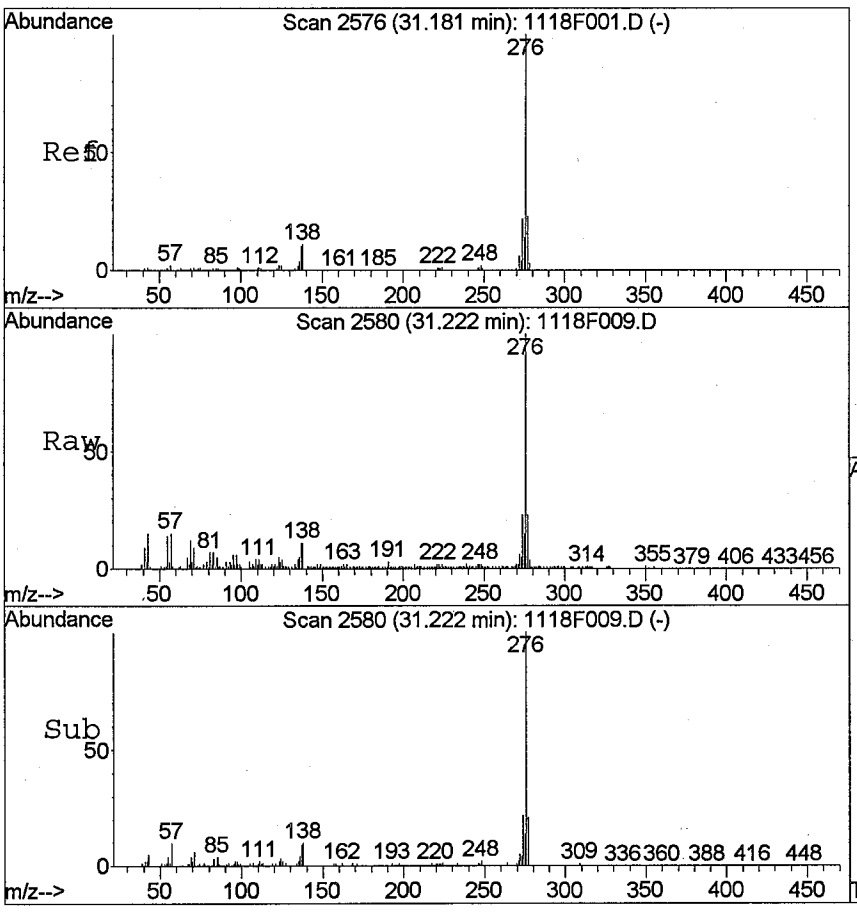


#82
Dibenz(a,h)anthracene
Concen: 347.81 ng/ml
RT: 30.70 min Scan# 2529
Delta R.T. 0.06 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:278 Resp: 53264

Ion	Ratio	Lower	Upper
278	100		
139	4.9	0.0	46.3
279	25.0	0.0	54.8

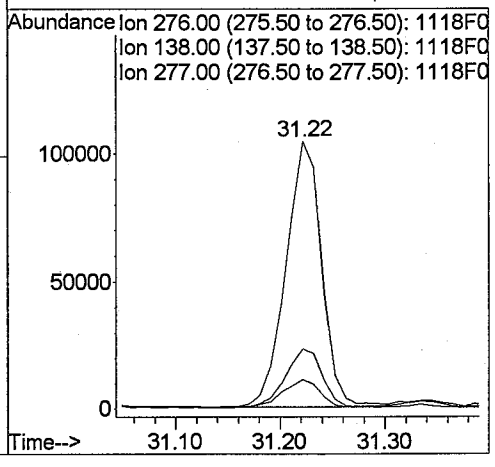




#83
Benzo(g,h,i)perylene
Concen: 1523.18 ng/ml
RT: 31.22 min Scan# 2580
Delta R.T. 0.08 min
Lab File: 1118F009.D
Acq: 18 Nov 2003 18:10

Tgt Ion:276 Resp: 246979

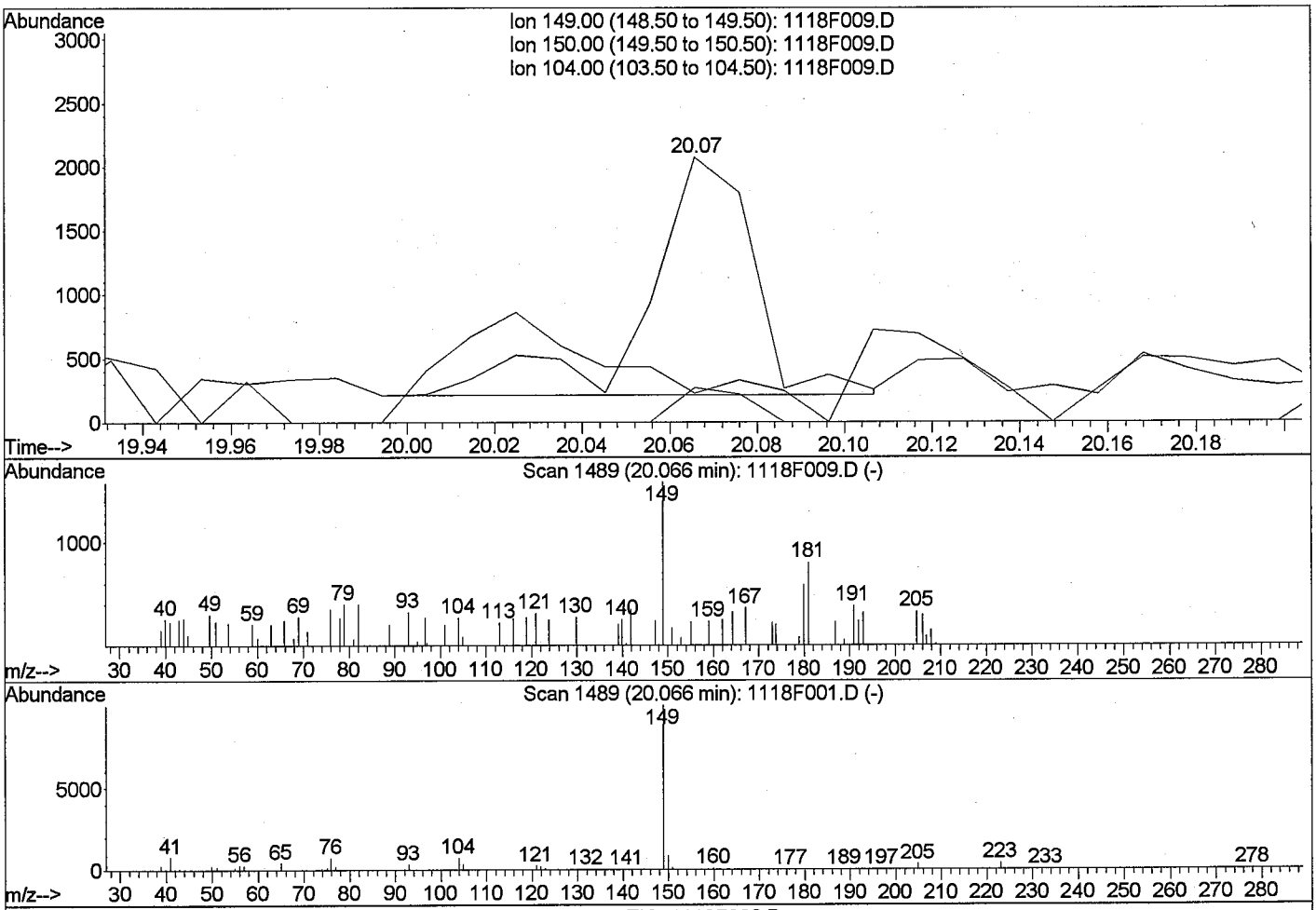
Ion	Ratio	Lower	Upper
276	100		
138	10.7	0.0	52.7
277	22.4	0.0	52.5



Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111803\1118F009.D Vial: 9
Acq On : 18 Nov 2003 18:10 Operator: JGISH
Sample : K2308433-006 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:54 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Multiple Level Calibration



TIC: 1118F009.D

(65) Di-n-butyl Phthalate (T)

20.07min 13.16ng/ml

response 3157

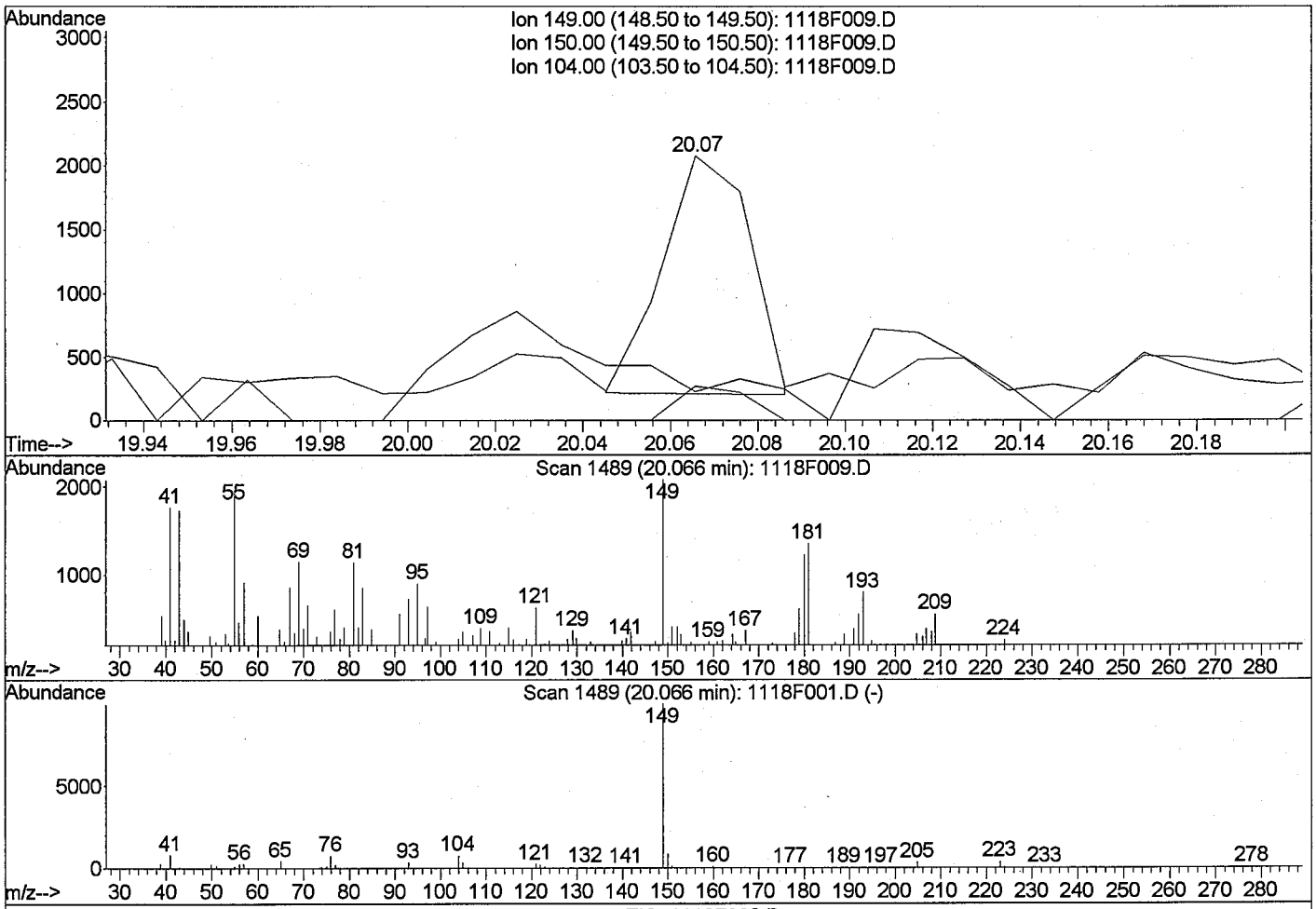
Ion	Exp%	Act%
149.00	100	100
150.00	9.40	12.08
104.00	5.00	14.44
0.00	0.00	0.00

1118F009.D 1114BNLL.M Wed Nov 19 08:56:28 2003

Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111803\1118F009.D Vial: 9
Acq On : 18 Nov 2003 18:10 Operator: JGISH
Sample : K2308433-006 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:56 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Multiple Level Calibration



TIC: 1118F009.D

(65) Di-n-butyl Phthalate (T)

20.07min 10.83ng/ml m

response 2597

Ion	Exp%	Act%
149.00	100	100
150.00	9.40	10.84
104.00	5.00	12.96
0.00	0.00	0.00

11/18/03 BL

11/19/03

1118F009.D 1114BNLL.M Wed Nov 19 08:56:38 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-6
Lab Code: K2308433-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	240	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	48	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	960	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	17	40-123	11/18/03	Outside Control Limits
2,4,6-Tribromophenol	0	35-138	11/18/03	Outside Control Limits
Terphenyl-d14	93	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F010.D
Lab ID: K2308433-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/18/2003 18:52
Date Quantitated: 11/19/2003 09:00
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

MRL MATRIX2

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	0	35	138	
	Phenol-d6	17	40	123	

Primary Review: 11/19/3

Secondary Review: 11/19/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245973	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118F010.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 18:52	**Quant Date:**	11/19/2003 09:00	**Vial:**	10
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.00	0.01	152	55240	1,000.00	OK
2	Naphthalene-d8	11.29	0.01	136	161516	1,000.00	OK
3	Acenaphthene-d10	15.08	0.01	164	103455	1,000.00	OK
4	Phenanthrene-d10	18.42	0.01	188	180531	1,000.00	OK
5	Chrysene-d12	24.60	0.02	240	179776	1,000.00	OK
6	Perylene-d12	28.09	0.04	264	130956	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.50	0.02	0.00	99	8852	124.53	17	40-123	*	
4	2,4,6-Tribromophenol			0.00	330	0		0	35-138	*	
5	Terphenyl-d14	22.23	0.02	0.00	244	65367	463.81	93	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		13	U	
1	2-Methylphenol				107	0		22	U	
1	4-Methylphenol				107	0		19	U	
2	2,4-Dimethylphenol				122	0		35	U	
2	2,4-Dichlorophenol				162	0		12	U	
3	2,4,6-Trichlorophenol				196	0		12	U	
4	Pentachlorophenol				266	0d		54	U	
5	Butyl Benzyl Phthalate				149	0d		9.5	U	
5	Bis(2-ethylhexyl) Phthalate	25.02	0.02	0.00	149	39377	273.52	130	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F010.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 18:52	**Quant Date:**	11/19/2003 09:00	**Vial:**	10
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Prep Amount:	26.55 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	79.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F010.D Vial: 10
Acq On : 18 Nov 2003 18:52 Operator: JGISH
Sample : K2308433-007 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:16 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

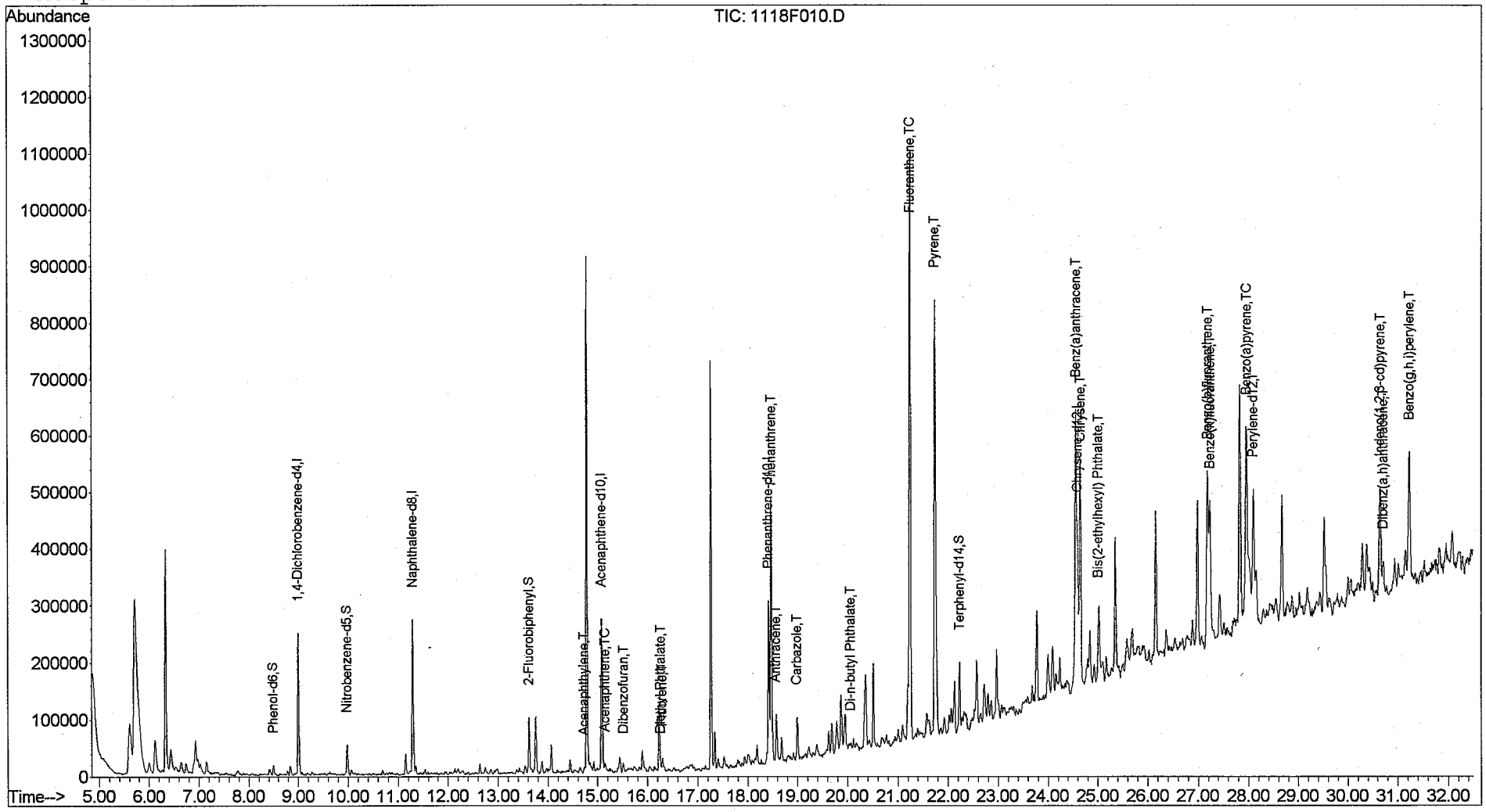
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.00	152	55240	1000.00	ng/ml	0.03
21) Naphthalene-d8	11.29	136	161516	1000.00	ng/ml	0.03
34) Acenaphthene-d10	15.08	164	103455	1000.00	ng/ml	0.03
57) Phenanthrene-d10	18.42	188	180531	1000.00	ng/ml	0.04
67) Chrysene-d12	24.60	240	179776	1000.00	ng/ml	0.05
76) Perylene-d12	28.09	264	130956	1000.00	ng/ml	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 110		Recovery = 0.00%#			
6) Phenol-d6	8.50	99	8852	124.53	ng/ml	0.04
Spiked Amount 3750.000	Range 43 - 128		Recovery = 3.32%#			
19) Nitrobenzene-d5	9.99	82	26922	305.14	ng/ml	0.04
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.21%#			
38) 2-Fluorobiphenyl	13.63	172	46884	326.89	ng/ml	0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 13.08%#			
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery = 0.00%#			
70) Terphenyl-d14	22.23	244	65367	463.81	ng/ml	0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 18.55%#			
Target Compounds						Qvalue
41) Acenaphthylene	14.73	152	7217	43.56	ng/ml	70
44) Acenaphthene	15.15	154	3758	37.86	ng/ml#	68
47) Dibenzofuran	15.52	168	5003	28.57	ng/ml	72
50) Fluorene	16.29	166	8316	64.35	ng/ml	86
52) Diethyl Phthalate	16.26	149	2549	15.93	ng/ml	86
62) Phenanthrene	18.48	178	336432	1718.09	ng/ml	97
63) Anthracene	18.57	178	54532	276.37	ng/ml	87
64) Carbazole	18.99	167	50042	291.57	ng/ml	97
65) Di-n-butyl Phthalate	20.07	149	5648	23.63	ng/ml	89
66) Fluoranthene	21.25	202	815724	3792.16	ng/ml	92
69) Pyrene	21.74	202	622242	2790.13	ng/ml	99
73) Benz(a)anthracene	24.57	228	258180	1307.36	ng/ml	97
74) Chrysene	24.66	228	314385	1680.02	ng/ml	98
75) Bis(2-ethylhexyl) Phthalat	25.02	149	39377	273.52	ng/ml	96
78) Benzo(b)fluoranthene	27.18	252	308860	1734.51	ng/ml	93
79) Benzo(k)fluoranthene	27.24	252	194433	1148.83	ng/ml	96
80) Benzo(a)pyrene	27.96	252	224564	1328.75	ng/ml	93
81) Indeno(1,2,3-cd)pyrene	30.65	276	174809	1108.30	ng/ml	85
82) Dibenz(a,h)anthracene	30.71	278	38601	249.92	ng/ml	91
83) Benzo(g,h,i)perylene	31.23	276	169257	1034.98	ng/ml	87

(#) = qualifier out of range (m) = manual integration

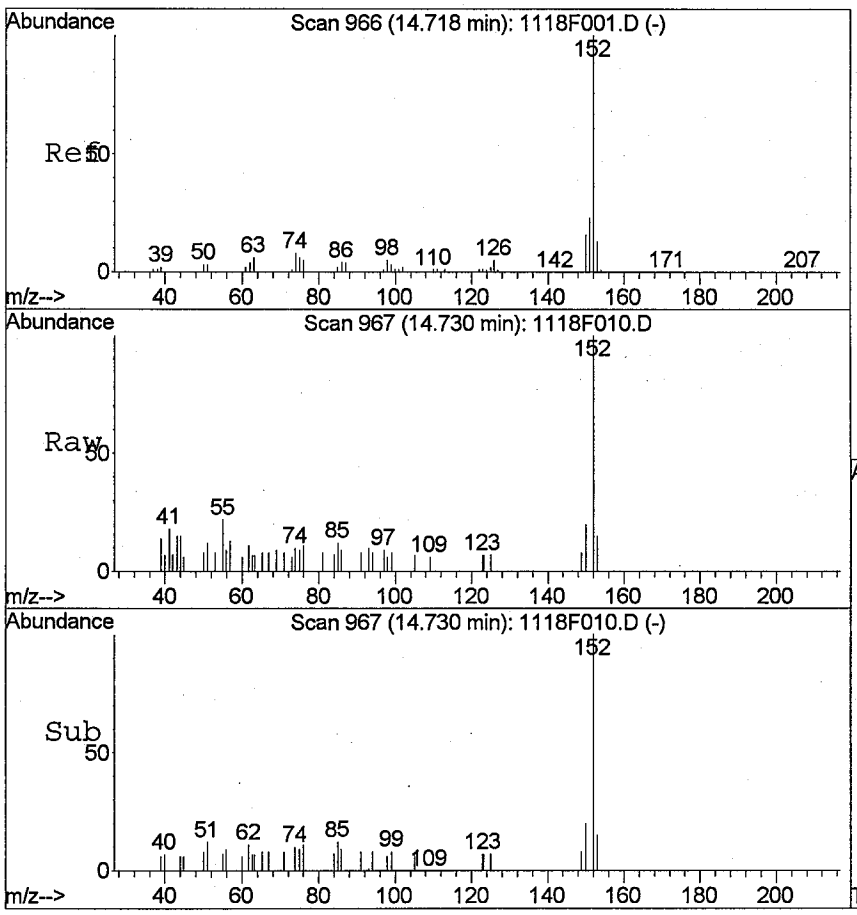
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F010.D Vial: 10
Acq On : 18 Nov 2003 18:52 Operator: JGISH
Sample : K2308433-007 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 9:00 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration



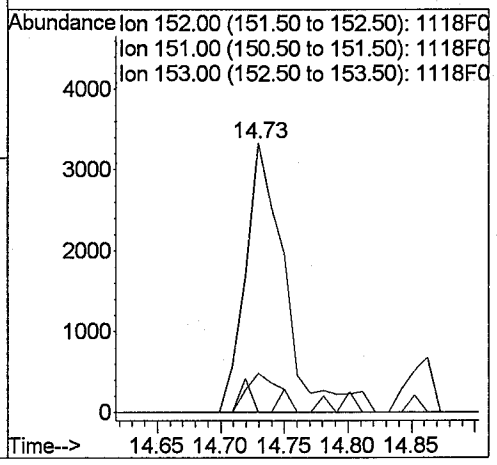
1956

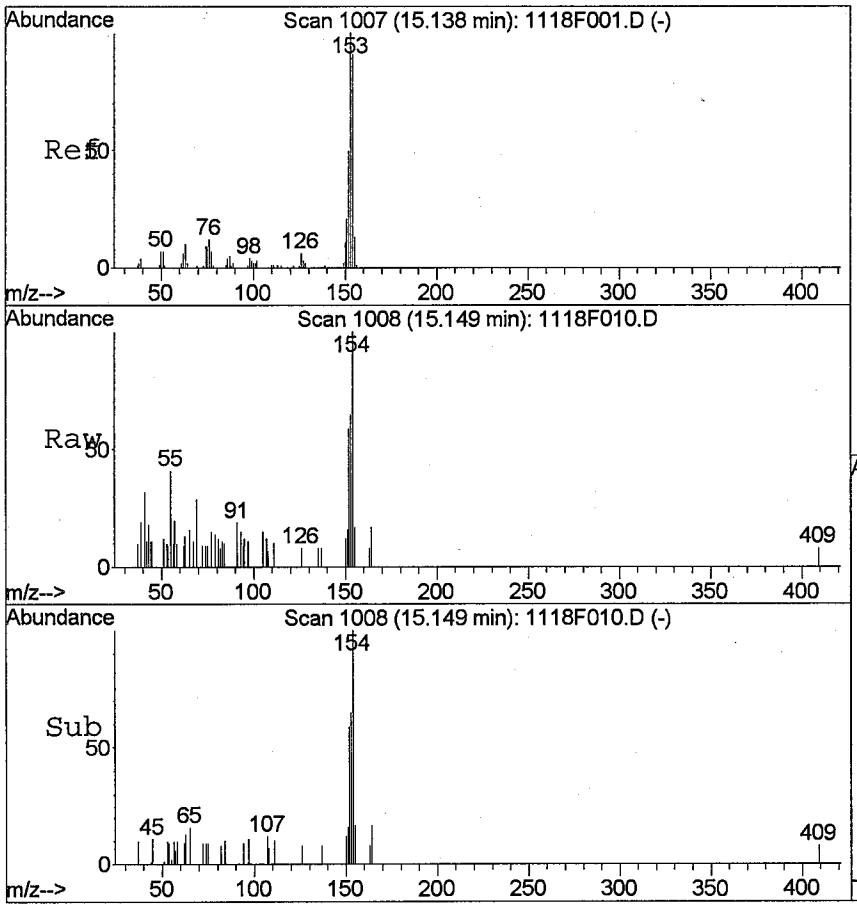


#41
Acenaphthylene
Concen: 43.56 ng/ml
RT: 14.73 min Scan# 967
Delta R.T. 0.04 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:152 Resp: 7217

Ion	Ratio	Lower	Upper
152	100		
151	0.0	0.0	51.5
153	14.5	0.0	42.9

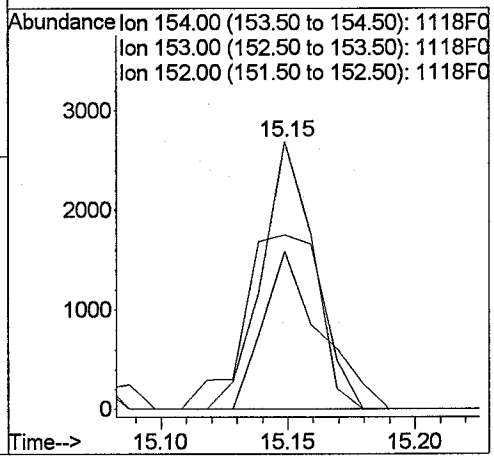


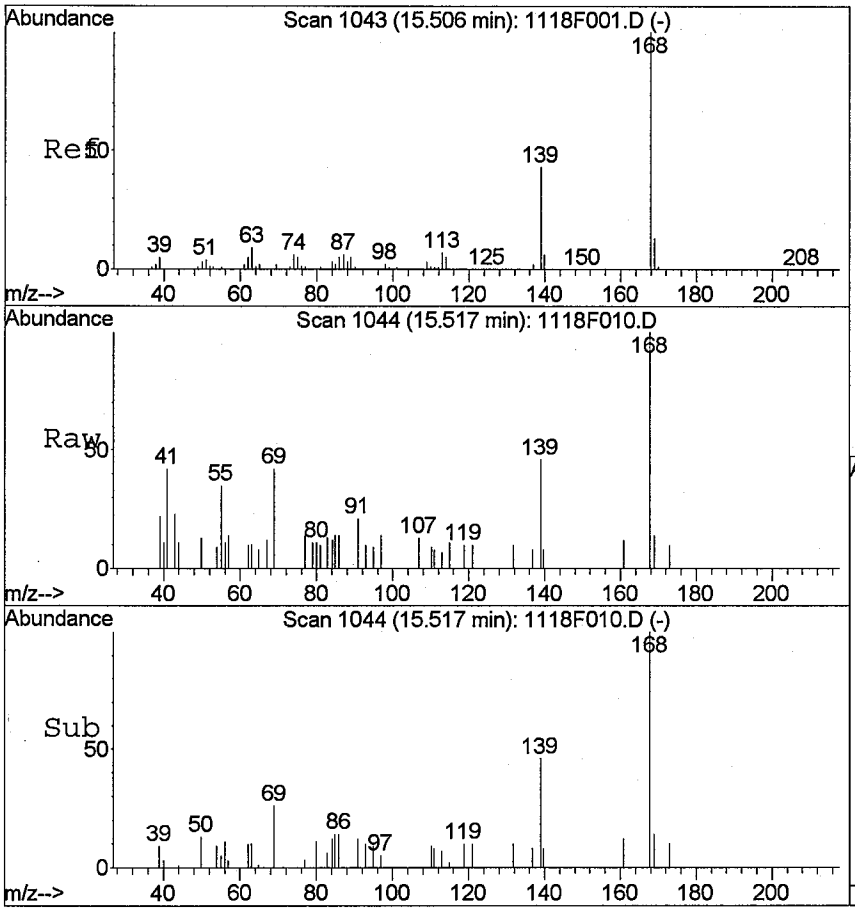


#44
Acenaphthene
Concen: 37.86 ng/ml
RT: 15.15 min Scan# 1008
Delta R.T. 0.03 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:154 Resp: 3758

Ion	Ratio	Lower	Upper
154	100		
153	65.2	82.4	142.4#
152	59.0	24.4	84.4

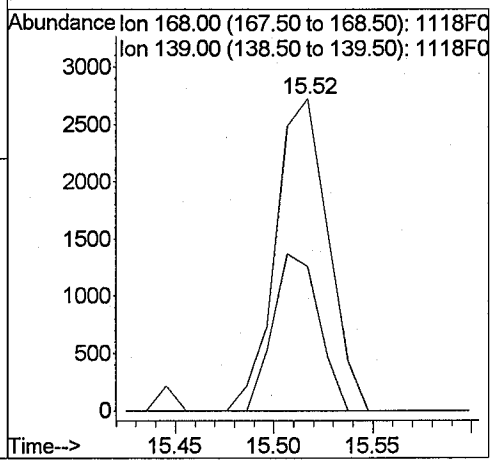


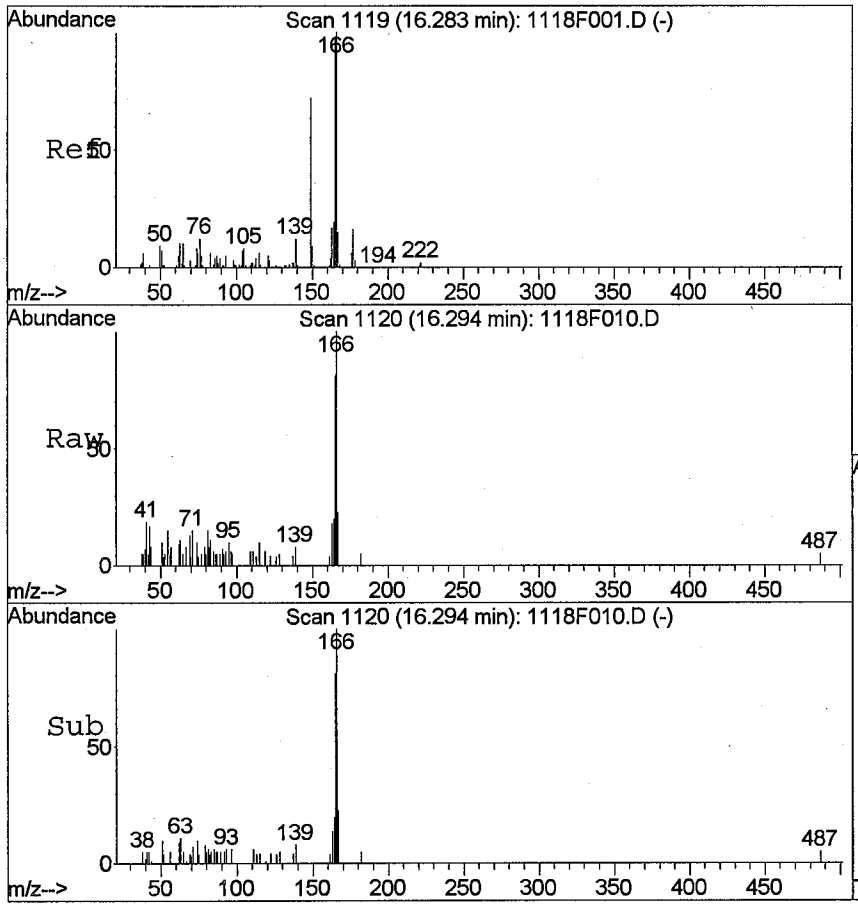


#47
Dibenzofuran
Concen: 28.57 ng/ml
RT: 15.52 min Scan# 1044
Delta R.T. 0.04 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:168 Resp: 5003

Ion	Ratio	Lower	Upper
168	100		
139	46.4	1.2	61.2

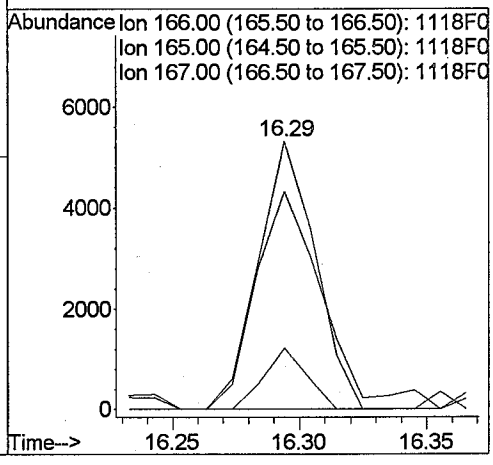


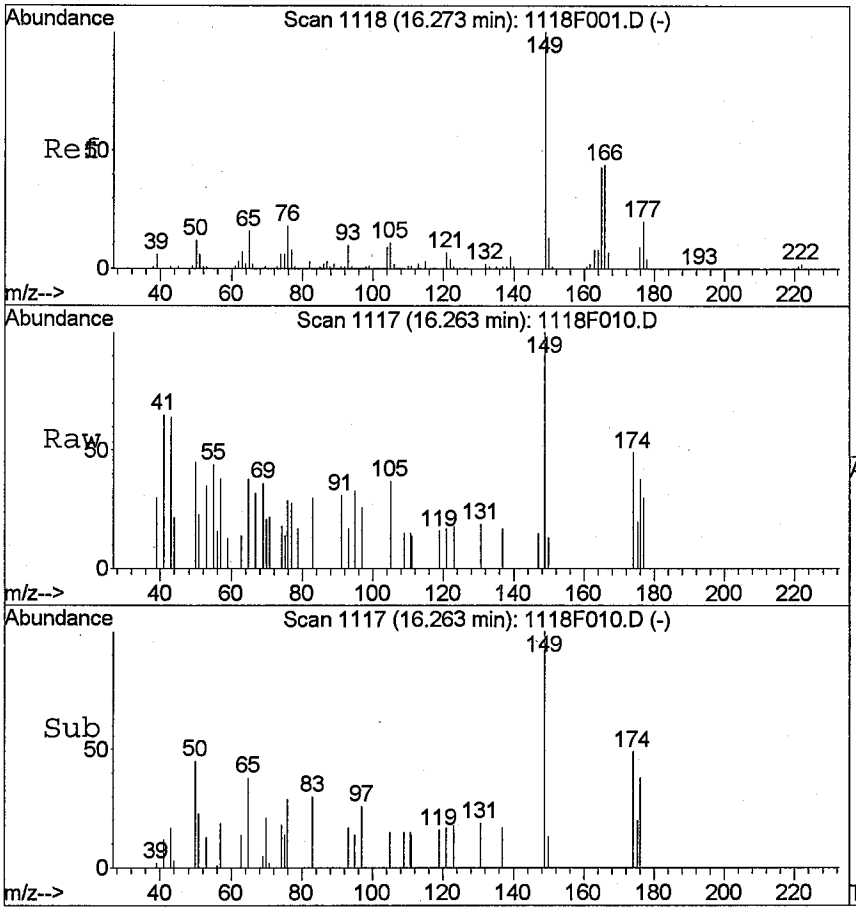


#50
Fluorene
Concen: 64.35 ng/ml
RT: 16.29 min Scan# 1120
Delta R.T. 0.03 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:166 Resp: 8316

Ion	Ratio	Lower	Upper
166	100		
165	81.2	63.2	123.2
167	23.0	0.0	43.0

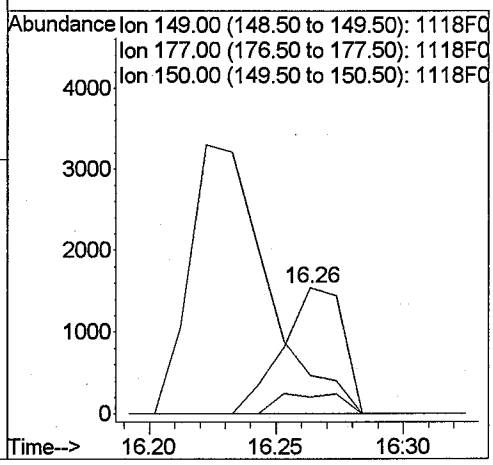


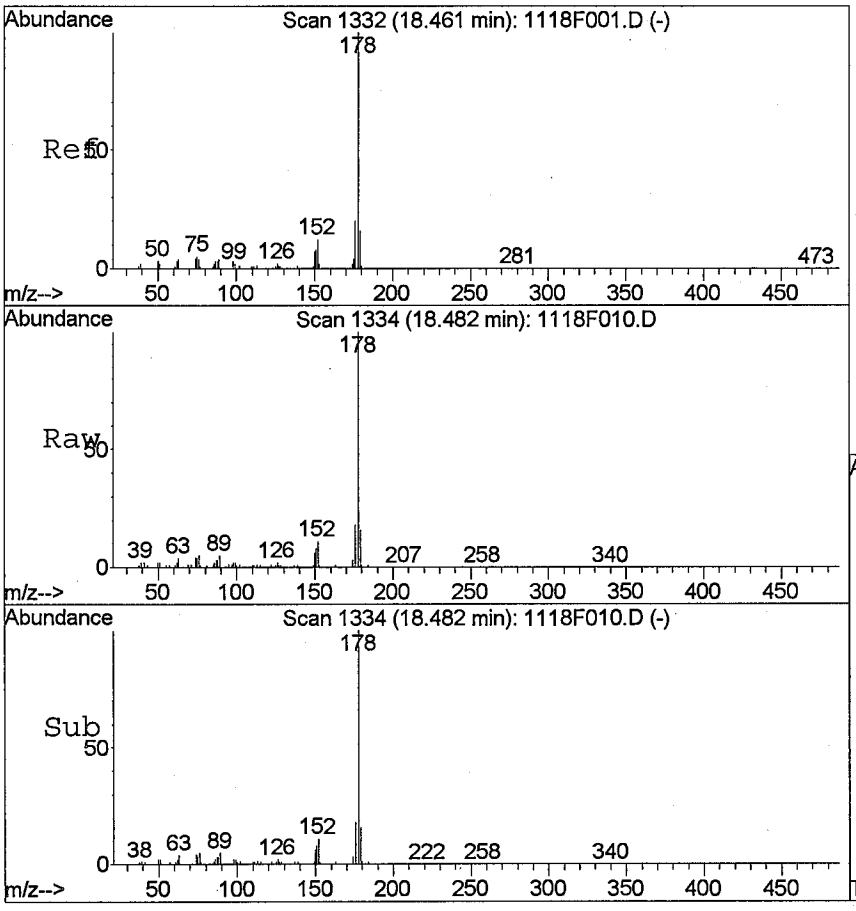


#52
Diethyl Phthalate
Concen: 15.93 ng/ml
RT: 16.26 min Scan# 1117
Delta R.T. 0.01 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:149 Resp: 2549

Ion	Ratio	Lower	Upper
149	100		
177	30.4	0.0	51.6
150	13.4	0.0	41.6

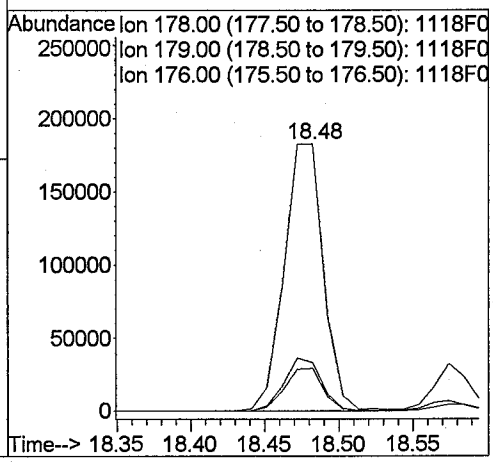


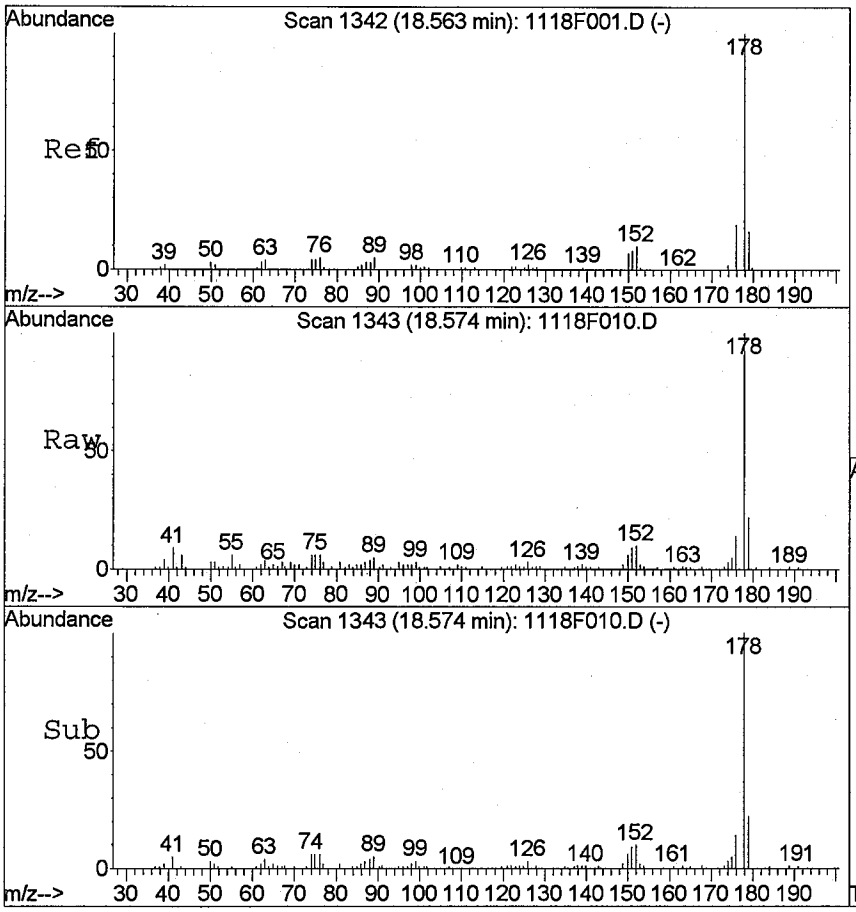


#62
Phenanthrene
Concen: 1718.09 ng/ml
RT: 18.48 min Scan# 1334
Delta R.T. 0.05 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:178 Resp: 336432

Ion	Ratio	Lower	Upper
178	100		
179	16.1	0.0	44.8
176	18.3	0.0	49.3

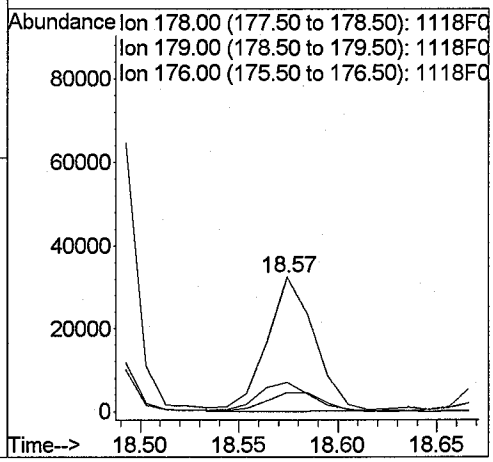


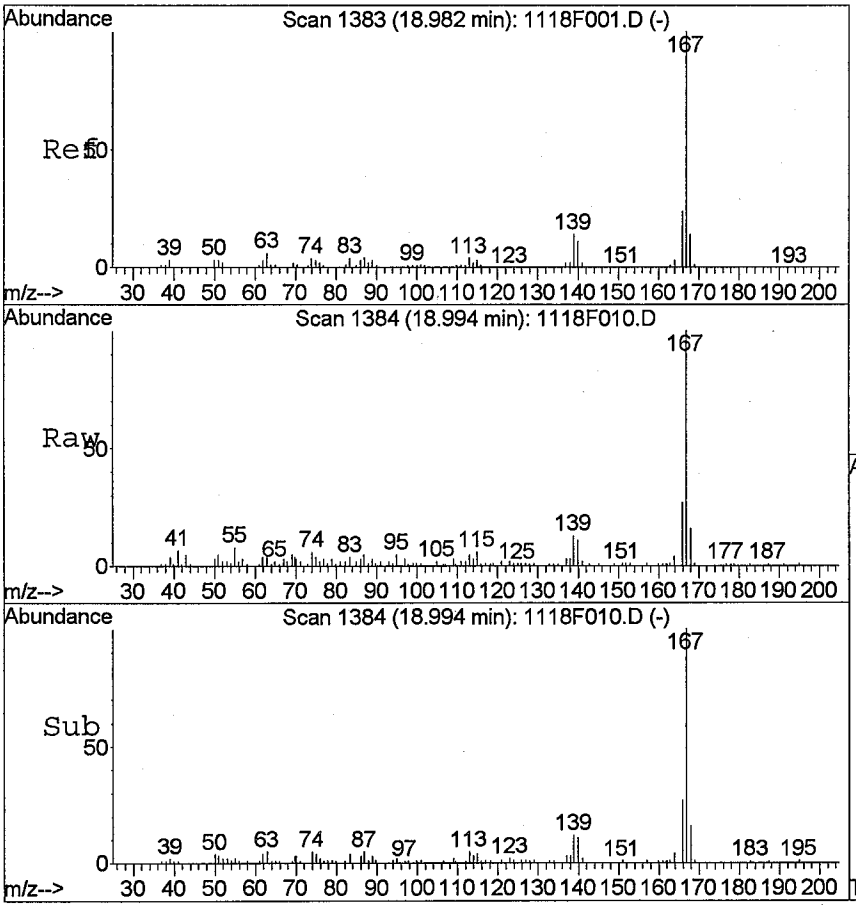


#63
Anthracene
Concen: 276.37 ng/ml
RT: 18.57 min Scan# 1343
Delta R.T. 0.04 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:178 Resp: 54532

Ion	Ratio	Lower	Upper
178	100		
179	20.9	0.0	44.7
176	14.3	0.0	49.8

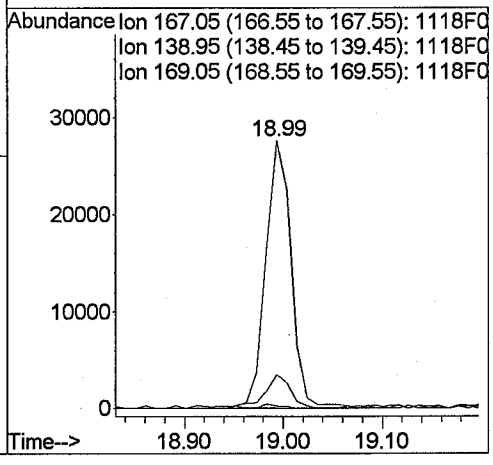


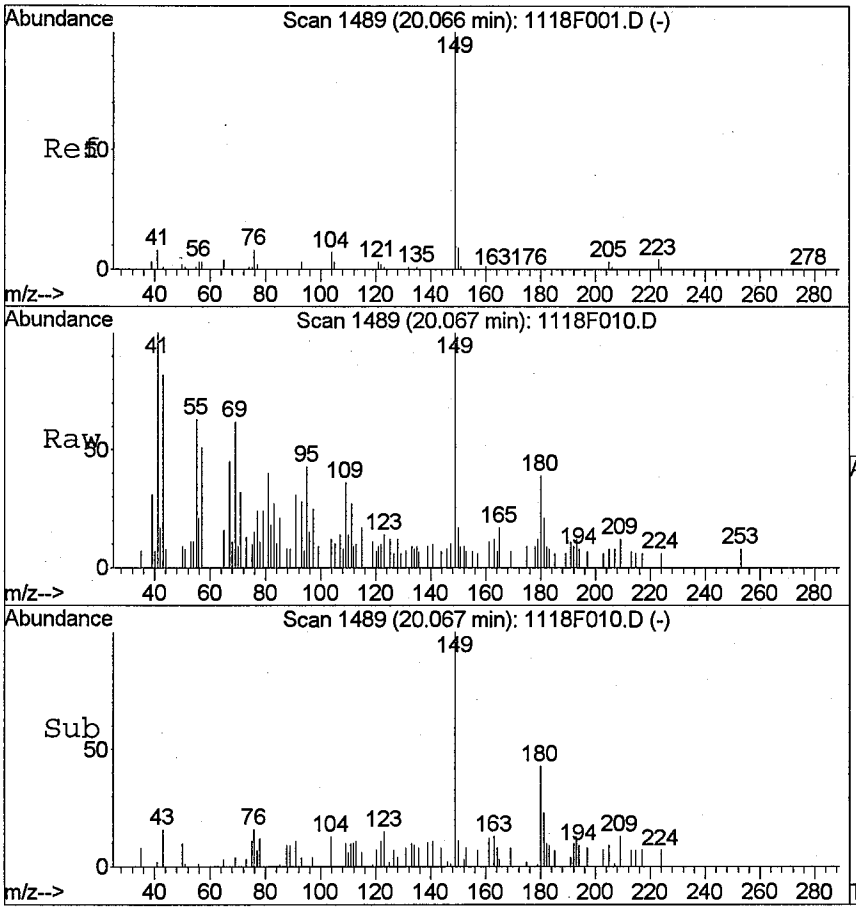


#64
Carbazole
Concen: 291.57 ng/ml
RT: 18.99 min Scan# 1384
Delta R.T. 0.04 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:167 Resp: 50042

Ion	Ratio	Lower	Upper
167	100		
139	12.9	0.0	41.7
169	0.1	0.0	30.8

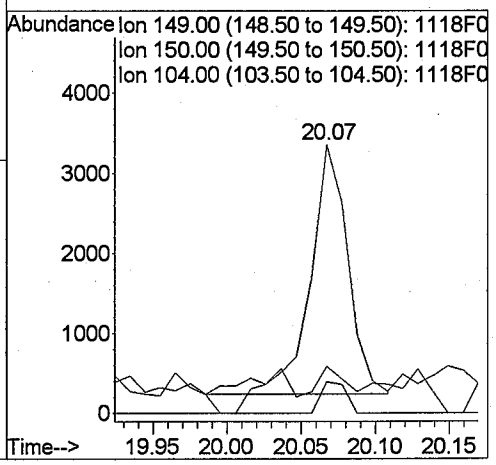


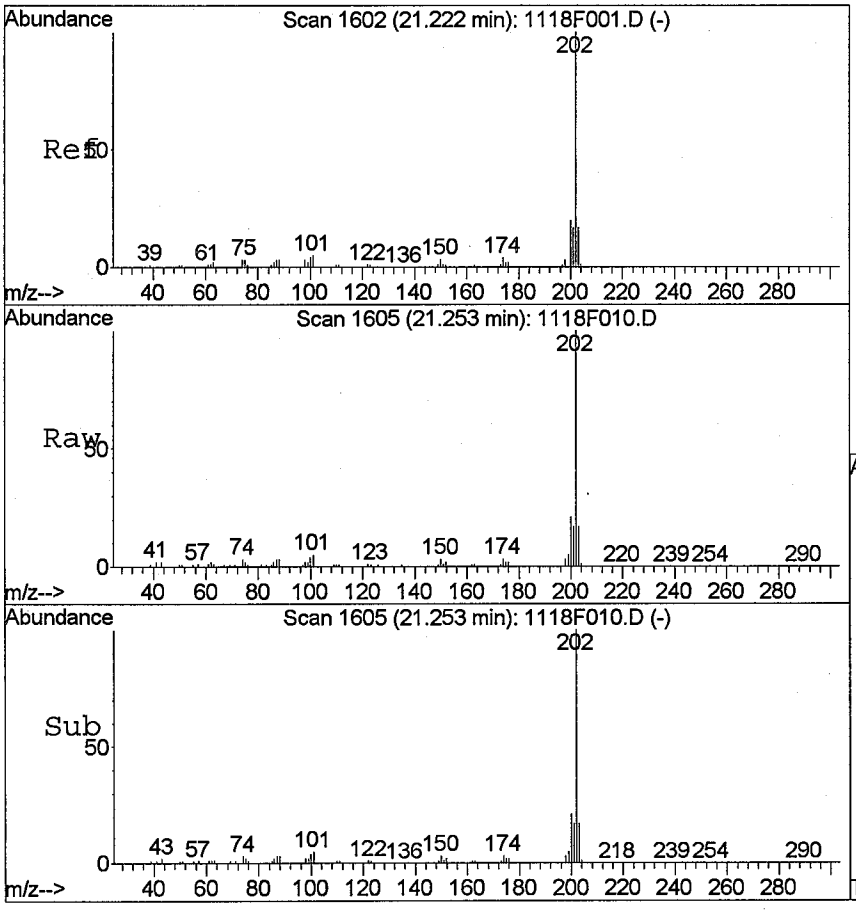


#65
Di-n-butyl Phthalate
Concen: 23.63 ng/ml
RT: 20.07 min Scan# 1489
Delta R.T. 0.03 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:149 Resp: 5648

Ion	Ratio	Lower	Upper
149	100		
150	11.1	0.0	39.4
104	12.8	0.0	35.0

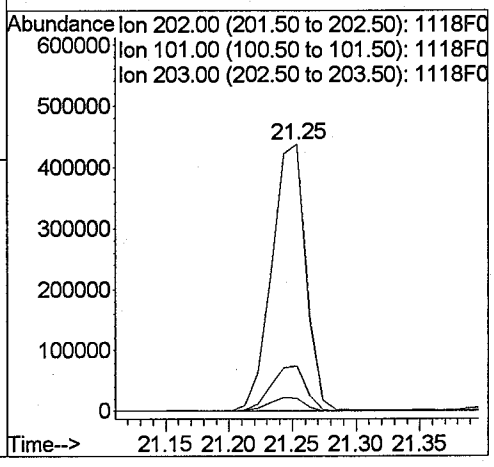


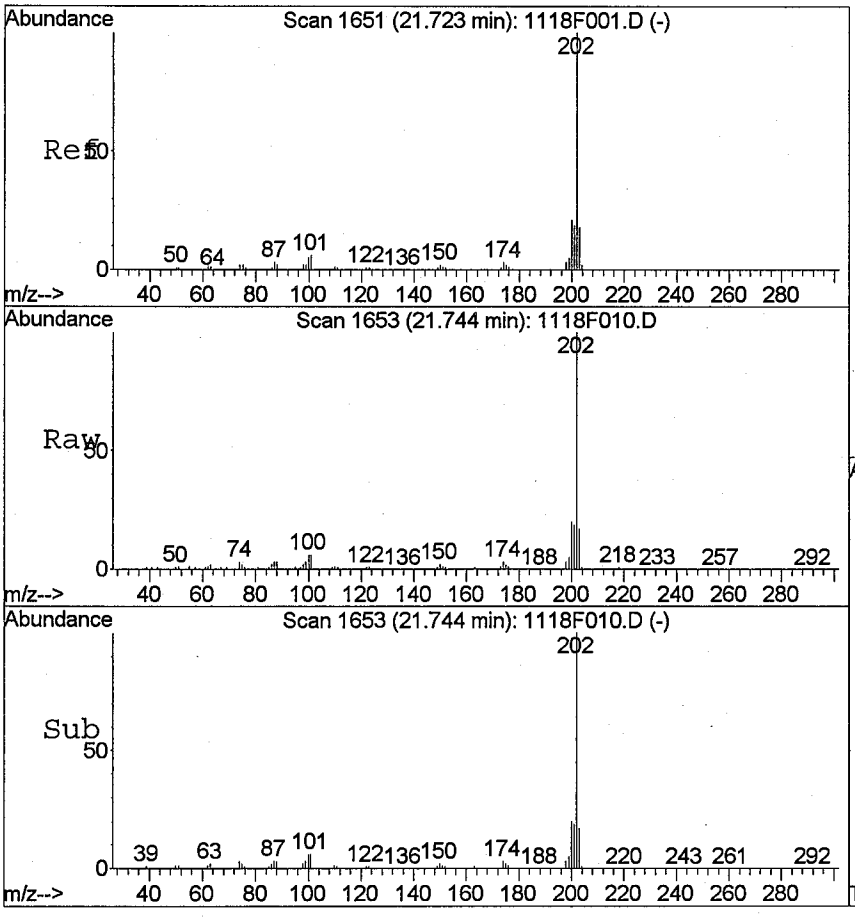


#66
Fluoranthene
Concen: 3792.16 ng/ml
RT: 21.25 min Scan# 1605
Delta R.T. 0.06 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:202 Resp: 815724

Ion	Ratio	Lower	Upper
202	100		
101	4.8	0.0	42.0
203	17.0	0.0	47.2

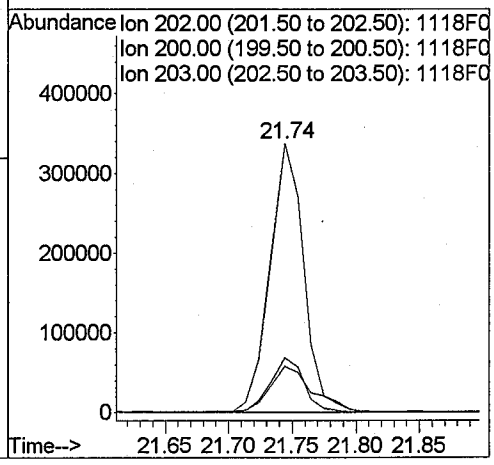


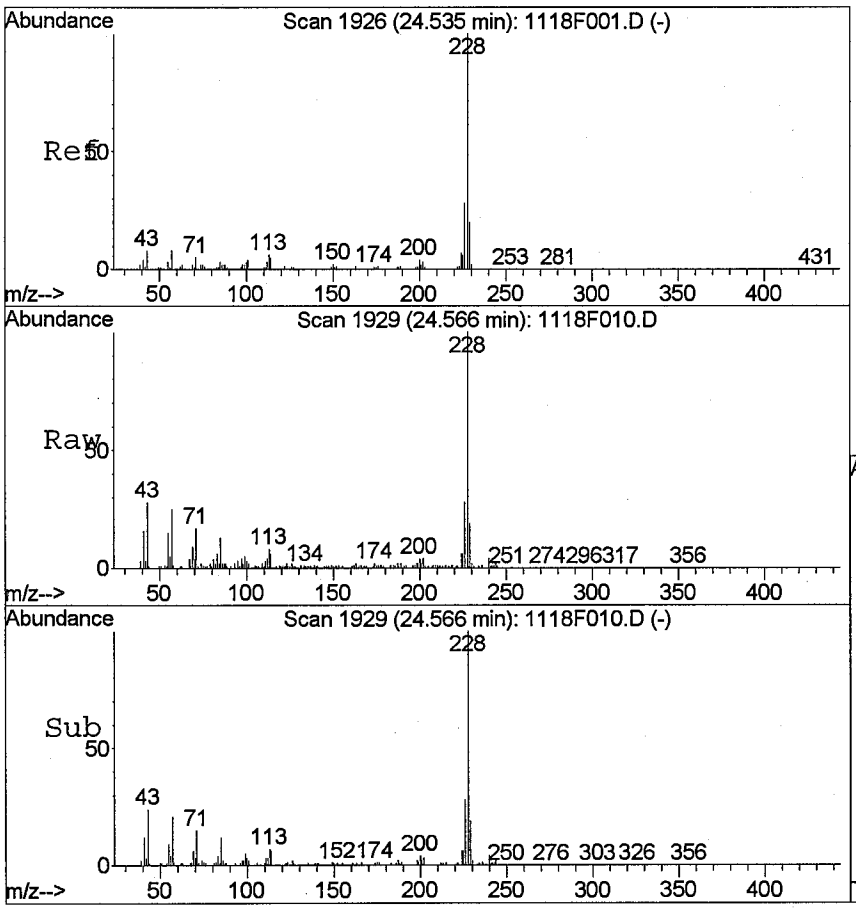


#69
Pyrene
Concen: 2790.13 ng/ml
RT: 21.74 min Scan# 1653
Delta R.T. 0.05 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:202 Resp: 622242

Ion	Ratio	Lower	Upper
202	100		
200	20.4	0.0	50.3
203	17.1	0.0	48.1

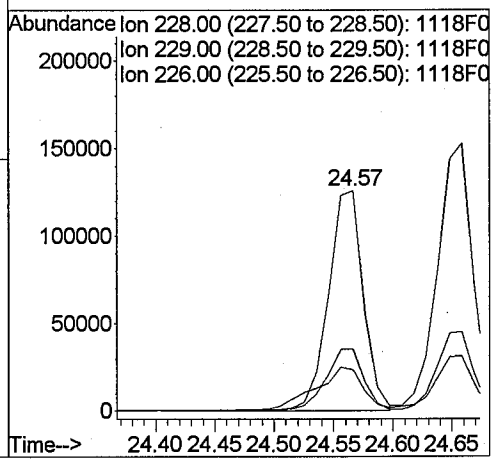


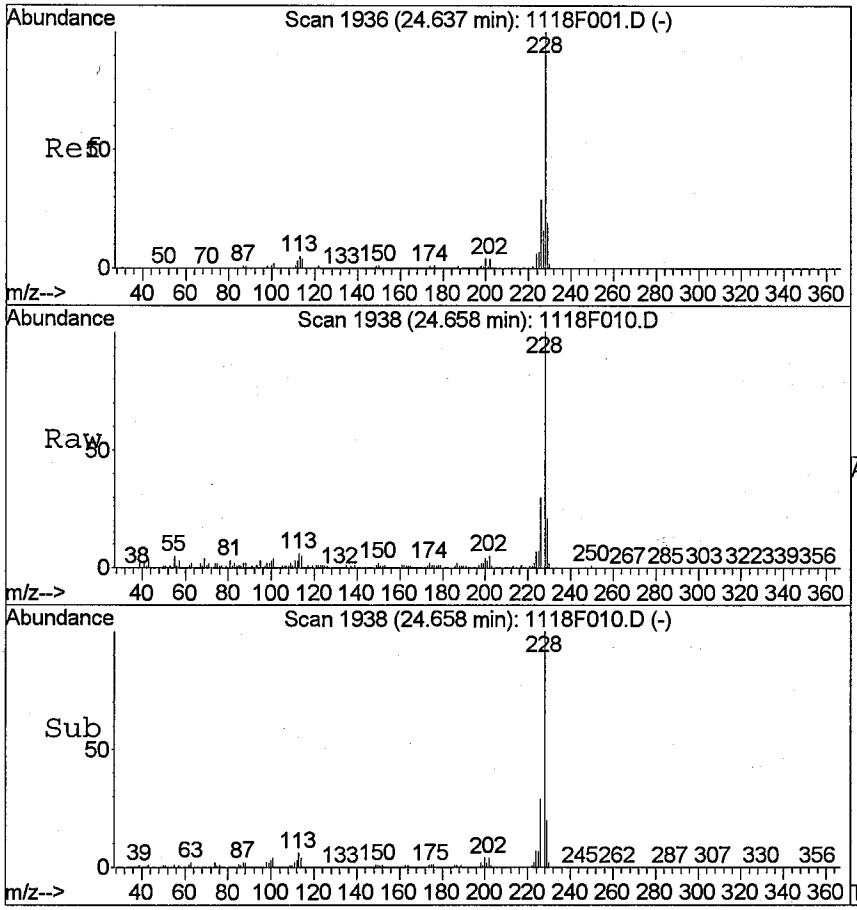


#73
Benz(a)anthracene
Concen: 1307.36 ng/ml
RT: 24.57 min Scan# 1929
Delta R.T. 0.06 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:228 Resp: 258180

Ion	Ratio	Lower	Upper
228	100		
229	18.5	0.0	48.5
226	28.3	0.0	55.6

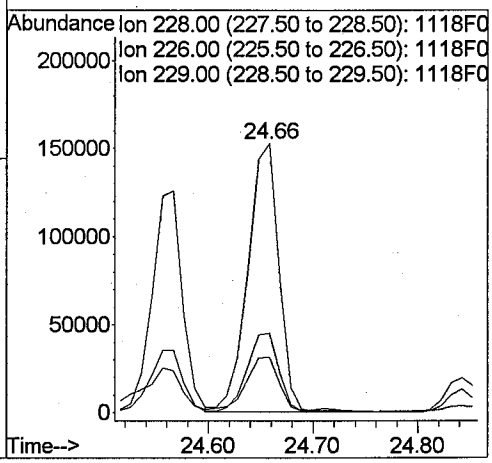


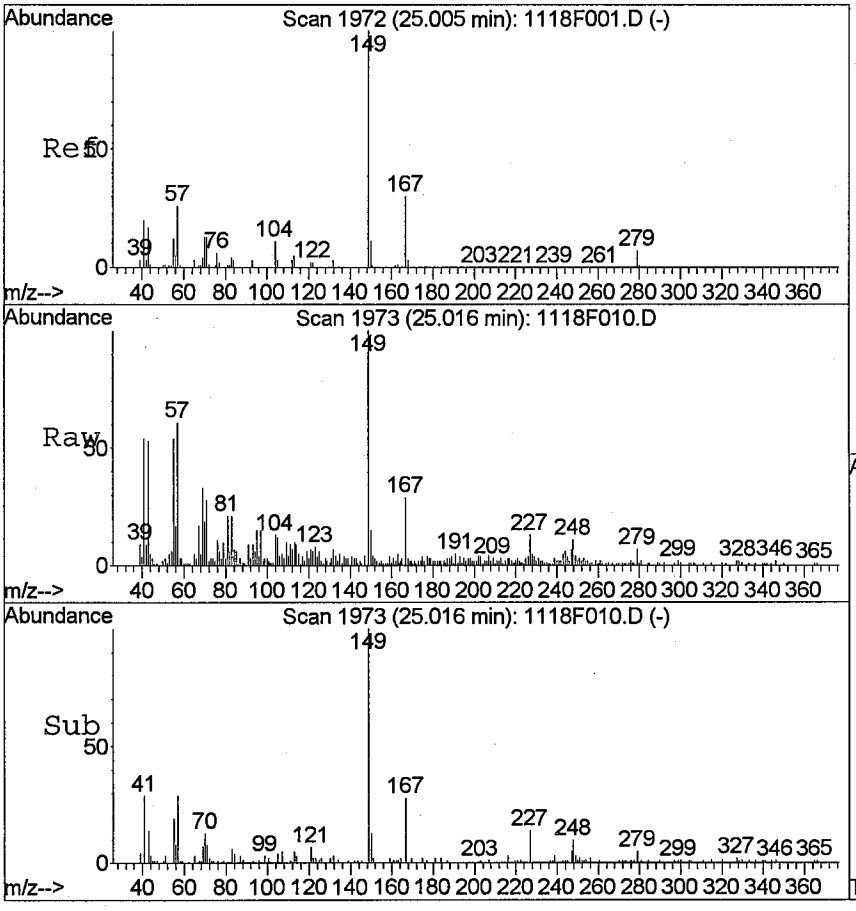


#74
Chrysene
Concen: 1680.02 ng/ml
RT: 24.66 min Scan# 1938
Delta R.T. 0.05 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:228 Resp: 314385

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.4
229	20.0	0.0	49.1

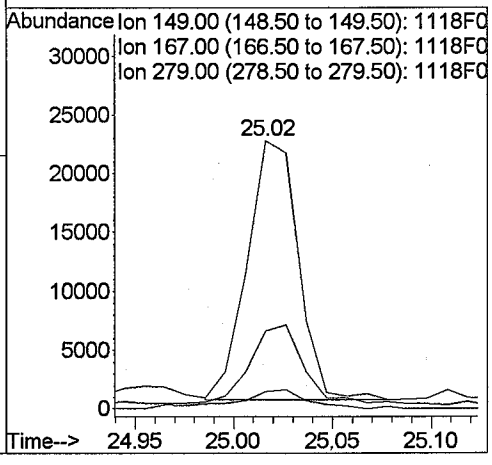


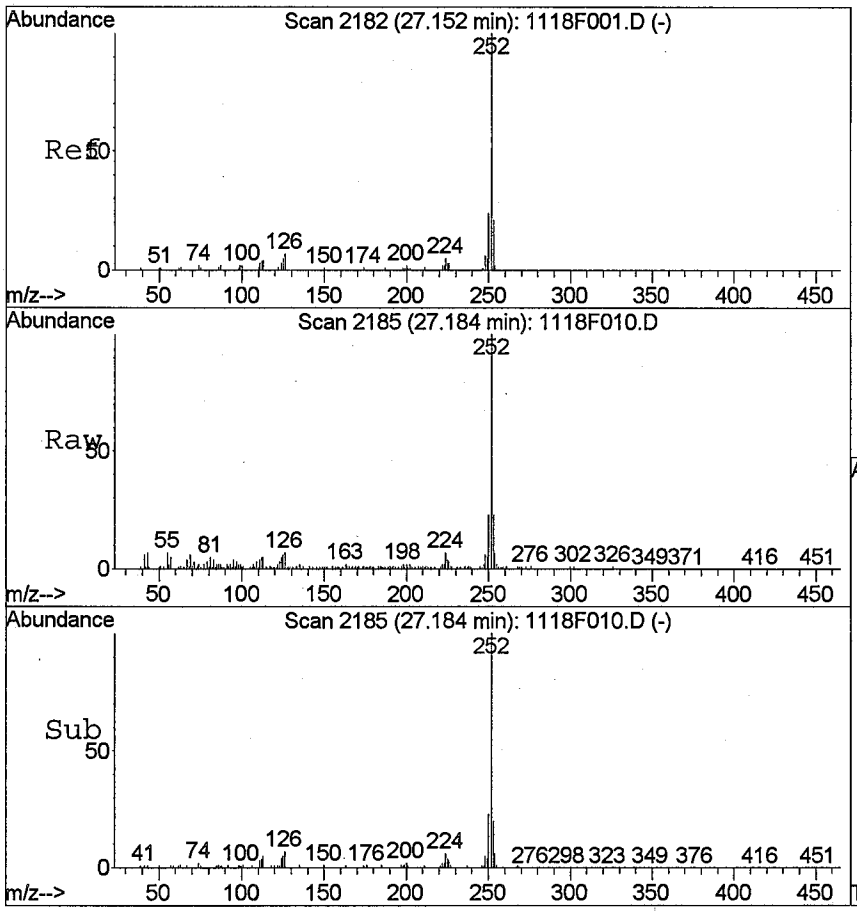


#75
Bis(2-ethylhexyl) Phthalate
Concen: 273.52 ng/ml
RT: 25.02 min Scan# 1973
Delta R.T. 0.03 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:149 Resp: 39377

Ion	Ratio	Lower	Upper
149	100		
167	27.8	0.2	60.2
279	5.9	0.0	34.5

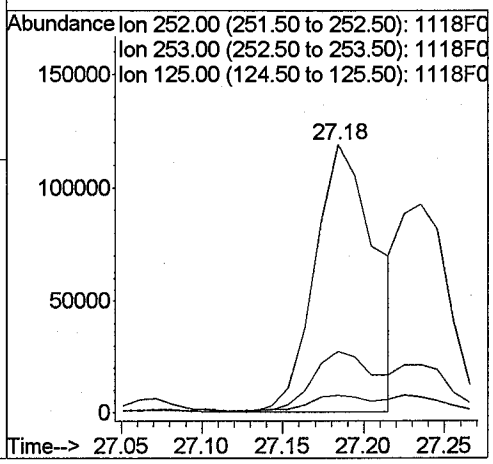


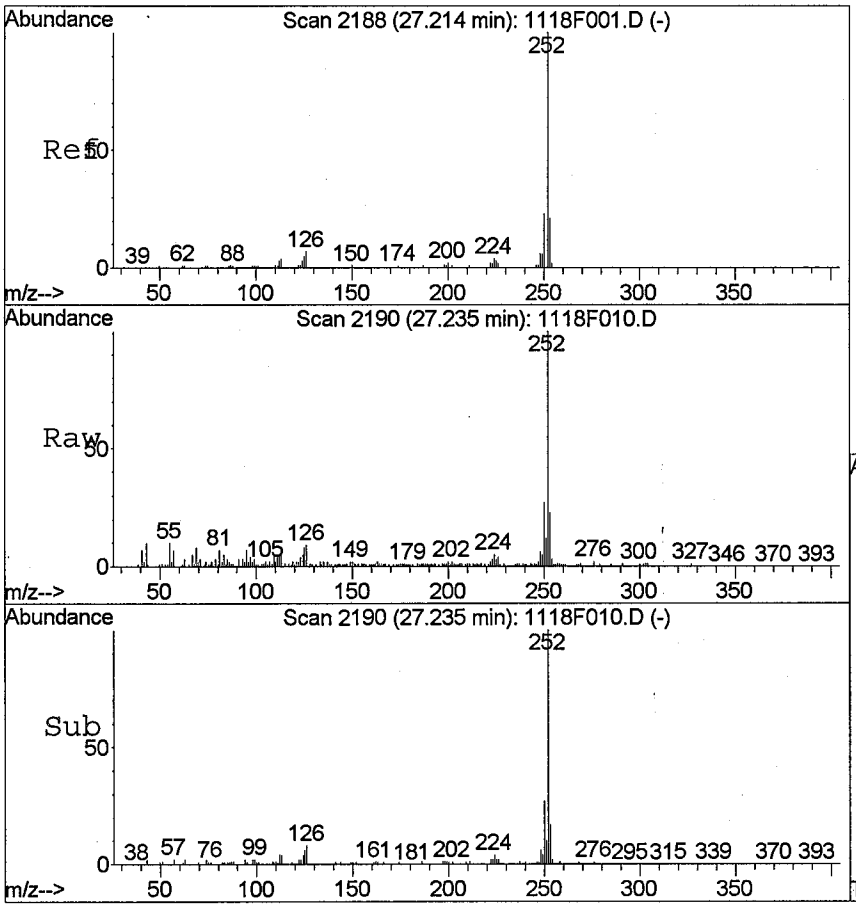


#78
Benzo(b)fluoranthene
Concen: 1734.51 ng/ml
RT: 27.18 min Scan# 2185
Delta R.T. 0.07 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:252 Resp: 308860

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.3
125	5.0	0.0	41.2

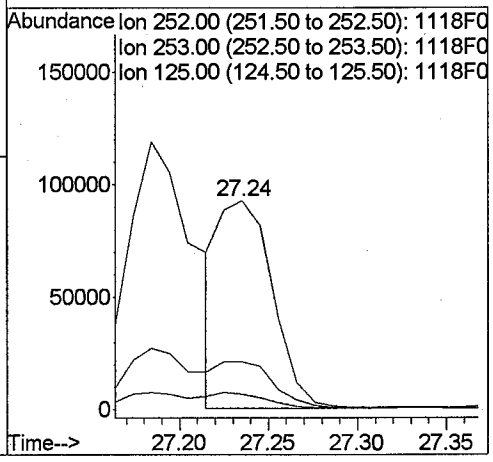


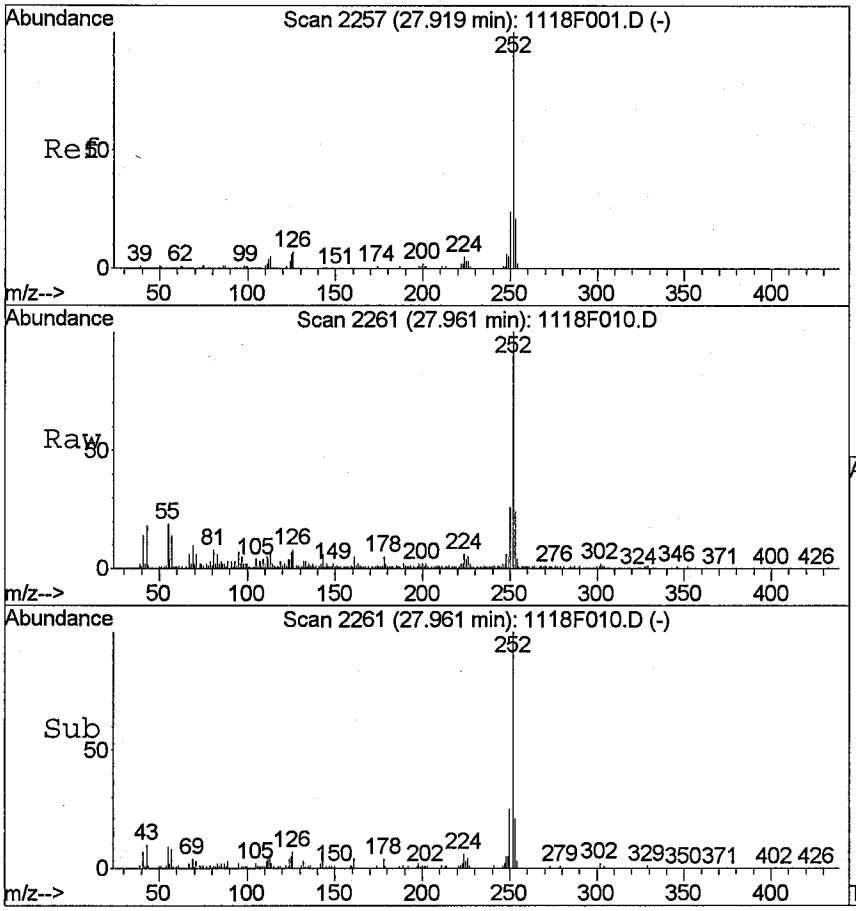


#79
Benzo(k)fluoranthene
Concen: 1148.83 ng/ml
RT: 27.24 min Scan# 2190
Delta R.T. 0.06 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:252 Resp: 194433

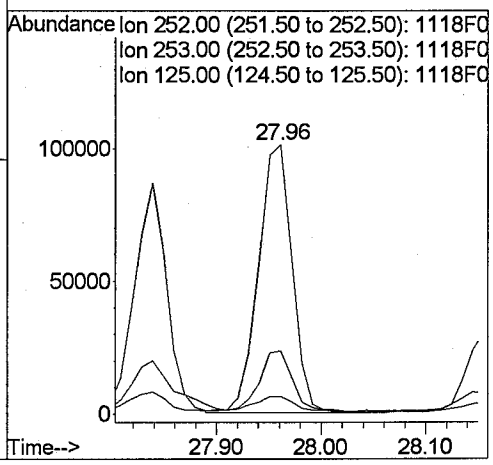
Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.9
125	6.2	0.0	40.9

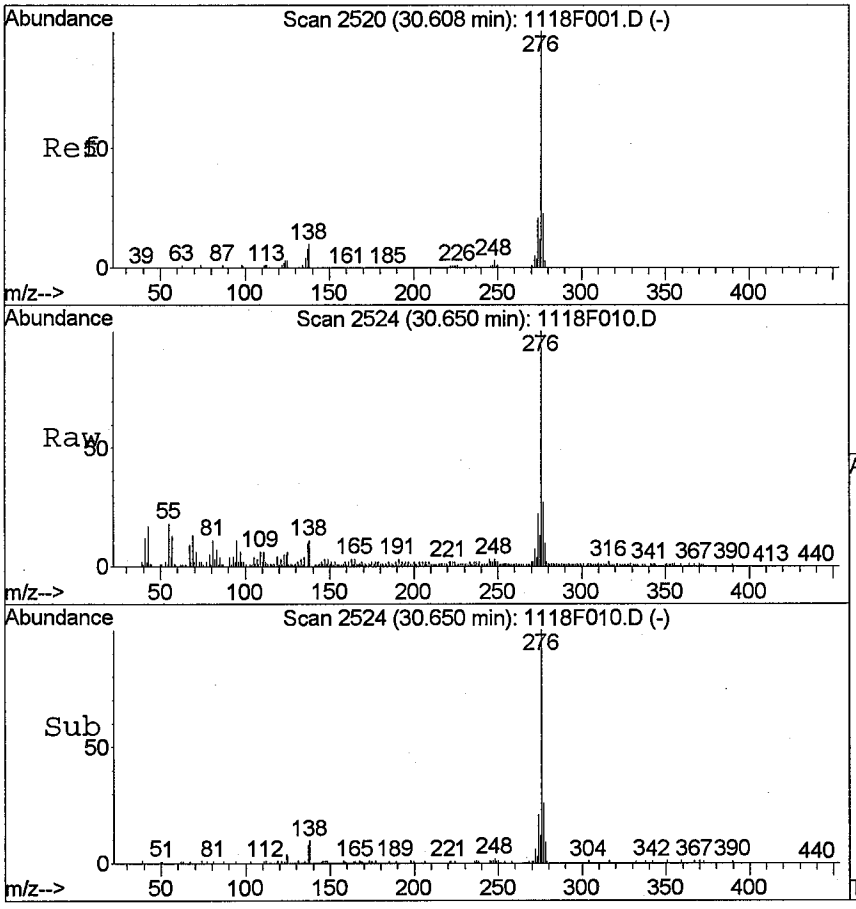




#80
Benzo(a)pyrene
Concen: 1328.75 ng/ml
RT: 27.96 min Scan# 2261
Delta R.T. 0.08 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

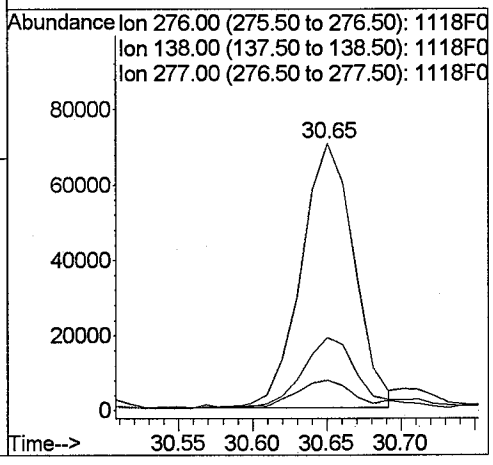
Tgt Ion:252	Resp:	224564	
Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	52.2
125	5.4	0.0	42.3

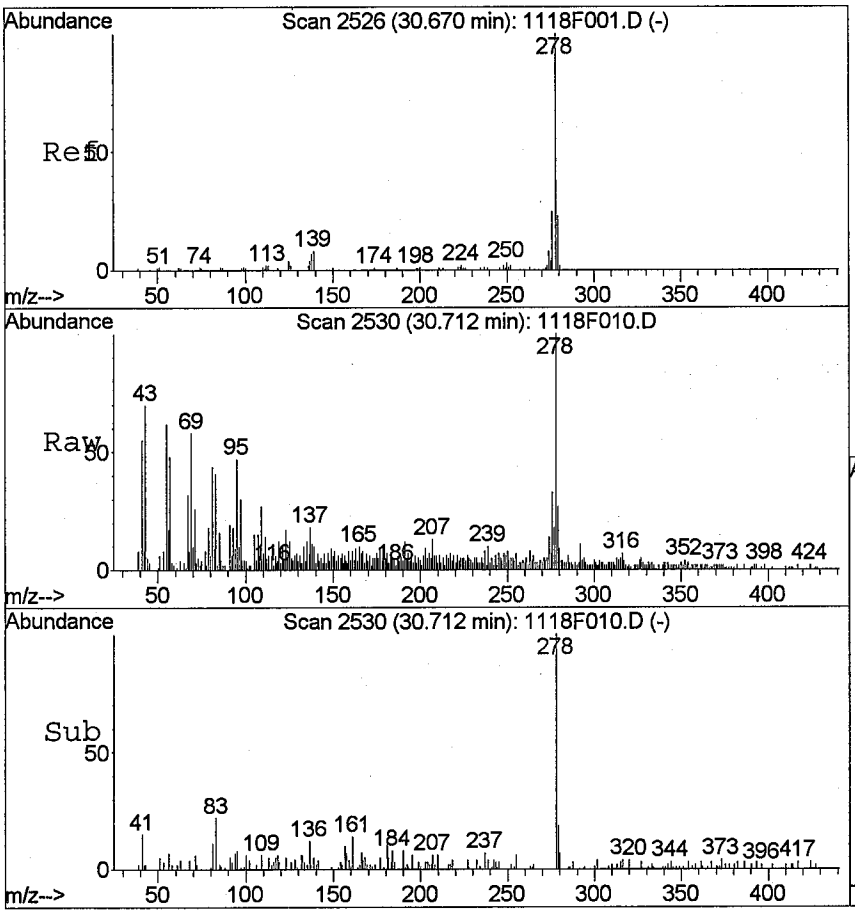




#81
Indeno(1,2,3-cd)pyrene
Concen: 1108.30 ng/ml
RT: 30.65 min Scan# 2524
Delta R.T. 0.08 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

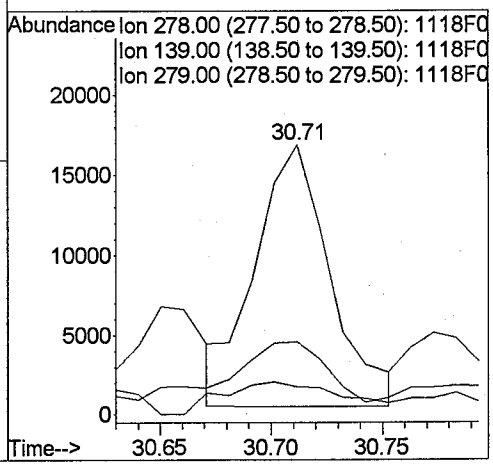
Tgt Ion:276	Resp:	174809	
Ion	Ratio	Lower	Upper
276	100		
138	9.4	0.0	51.4
277	26.4	0.0	54.0

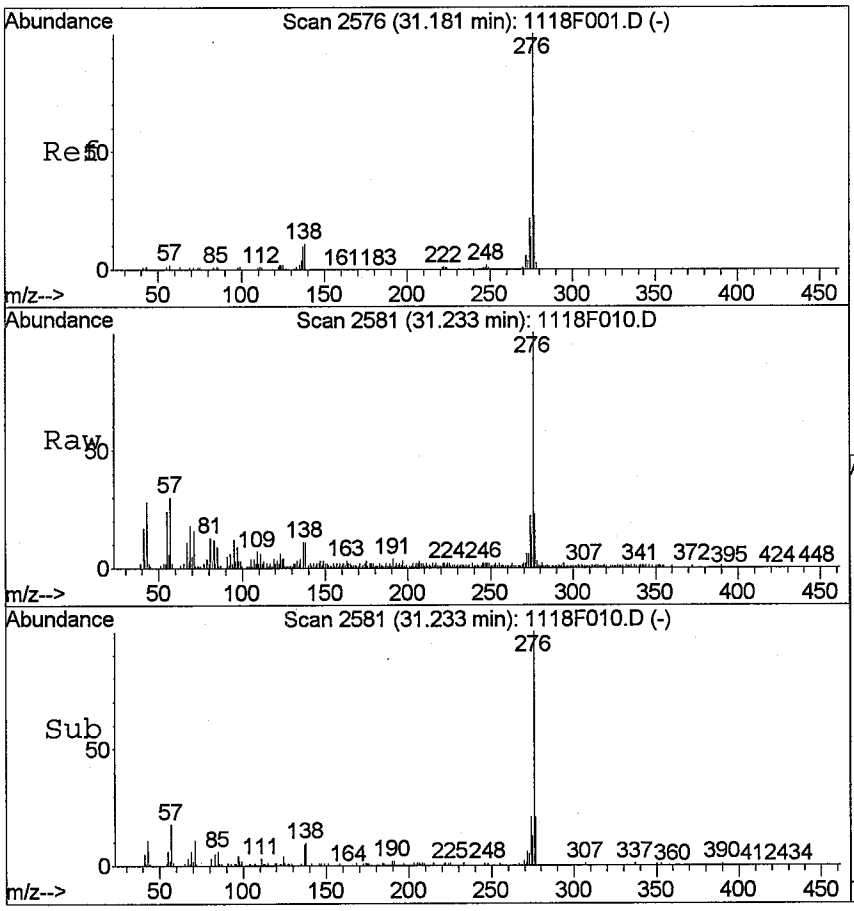




#82
Dibenz(a,h)anthracene
Concen: 249.92 ng/ml
RT: 30.71 min Scan# 2530
Delta R.T. 0.07 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

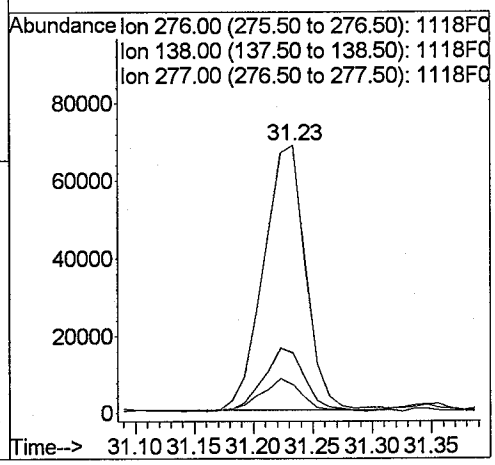
Tgt Ion:278	Resp:	38601	
Ion	Ratio	Lower	Upper
278	100		
139	7.2	0.0	46.3
279	25.1	0.0	54.8





#83
Benzo(g,h,i)perylene
Concen: 1034.98 ng/ml
RT: 31.23 min Scan# 2581
Delta R.T. 0.09 min
Lab File: 1118F010.D
Acq: 18 Nov 2003 18:52

Tgt Ion:276	Resp:	169257	
Ion	Ratio	Lower	Upper
276	100		
138	10.2	0.0	52.7
277	22.3	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-7
Lab Code: K2308433-008

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	250	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	50	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	990	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	64	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	56	35-138	11/18/03	Acceptable
Terphenyl-d14	100	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F011.D
Lab ID: K2308433-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/18/2003 19:33
Date Quantitated: 11/19/2003 09:05
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

MRL MATRIX2

Primary Review: 11/19/3

Secondary Review: mt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245974	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118F011.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 19:33	**Quant Date:**	11/19/2003 09:05	**Vial:**	11
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-008			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.01	0.02	152	54859	1,000.00	OK
2	Naphthalene-d8	11.30	0.02	136	158722	1,000.00	OK
3	Acenaphthene-d10	15.09	0.02	164	104186	1,000.00	OK
4	Phenanthrene-d10	18.45	0.04	188	175984	1,000.00	OK
5	Chrysene-d12	24.65	0.07	240	183042	1,000.00	OK
6	Perylene-d12	28.17	0.12	264	129077	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.50	0.02	0.00	99	33745	478.01	64	40-123	OK	
4	2,4,6-Tribromophenol	16.90	0.01	0.00	330	12555	422.12	56	35-138	OK	
5	Terphenyl-d14	22.25	0.04	0.00	244	71656	499.36	100	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol	8.52	0.02	0.00	94	6410	86.27	43	JD	
1	2-Methylphenol				107	0		22	U	
1	4-Methylphenol	9.73	0.02	0.00	107	5293	74.54	37	JD	
2	2,4-Dimethylphenol				122	0		35	U	
2	2,4-Dichlorophenol				162	0		12	U	
3	2,4,6-Trichlorophenol				196	0		12	U	
4	Pentachlorophenol				266	0		54	U	
5	Butyl Benzyl Phthalate				149	0d		9.4	U	
5	Bis(2-ethylhexyl) Phthalate	25.04	0.04	0.00	149	72687	495.89	240	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F011.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 19:33	**Quant Date:**	11/19/2003 09:05	**Vial:**	11
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-008			**Soln Conc. Units:**	ng/ml

Prep Amount:	25.39 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	79.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F011.D Vial: 11
Acq On : 18 Nov 2003 19:33 Operator: JGISH
Sample : K2308433-008 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:21 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.01	152	54859	1000.00	ng/ml	0.04
21) Naphthalene-d8	11.30	136	158722	1000.00	ng/ml	0.04
34) Acenaphthene-d10	15.09	164	104186	1000.00	ng/ml	0.05
57) Phenanthrene-d10	18.45	188	175984	1000.00	ng/ml	0.07
67) Chrysene-d12	24.65	240	183042	1000.00	ng/ml	0.11
76) Perylene-d12	28.17	264	129077	1000.00	ng/ml	0.15
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	20181	342.61	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery = 9.14%#			
6) Phenol-d6	8.50	99	33745	478.01	ng/ml	0.04
Spiked Amount 3750.000	Range 43 - 128		Recovery = 12.75%#			
19) Nitrobenzene-d5	9.98	82	29342	334.88	ng/ml	0.04
Spiked Amount 2500.000	Range 30 - 139		Recovery = 13.40%#			
38) 2-Fluorobiphenyl	13.63	172	52928	366.44	ng/ml	0.05
Spiked Amount 2500.000	Range 37 - 126		Recovery = 14.66%#			
58) 2,4,6-Tribromophenol	16.90	330	12555	422.12	ng/ml	0.05
Spiked Amount 3750.000	Range 38 - 157		Recovery = 11.26%#			
70) Terphenyl-d14	22.25	244	71656	499.36	ng/ml	0.06
Spiked Amount 2500.000	Range 54 - 158		Recovery = 19.97%#			
Target Compounds						Qvalue
7) Phenol	8.52	94	6410	86.27	ng/ml	93
18) 4-Methylphenol	9.73	107	5293	74.54	ng/ml#	70
29) Naphthalene	11.35	128	1620590	9786.29	ng/ml	96
33) 2-Methylnaphthalene	12.77	142	261559	2548.64	ng/ml	99
41) Acenaphthylene	14.73	152	50650	303.56	ng/ml	96
44) Acenaphthene	15.16	154	858603	8589.96	ng/ml	98
47) Dibenzofuran	15.53	168	1117597	6336.69	ng/ml	82
48) 4-Nitrophenol	15.53	109	6265	134.38	ng/ml#	1
50) Fluorene	16.31	166	841666	6467.32	ng/ml	97
62) Phenanthrene	18.56	178	14731868	77176.55	ng/ml	99
63) Anthracene	18.63	178	1624029	8443.42	ng/ml	97
64) Carbazole	19.03	167	1484514	8872.94	ng/ml	96
65) Di-n-butyl Phthalate	20.08	149	6695	28.73	ng/ml	88
66) Fluoranthene	21.35	202	19163454m	91389.38	ng/ml	
69) Pyrene	21.84	202	15013945	66121.22	ng/ml	96
73) Benz(a)anthracene	24.63	228	5163907	25682.20	ng/ml	97
74) Chrysene	24.74	228	6567406	34468.83	ng/ml	96
75) Bis(2-ethylhexyl) Phthalat	25.04	149	72687	495.89	ng/ml	95
78) Benzo(b)fluoranthene	27.32	252	8040086m	45809.10	ng/ml	
79) Benzo(k)fluoranthene	27.36	252	2423697m	14529.13	ng/ml	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F011.D Vial: 11
Acq On : 18 Nov 2003 19:33 Operator: JGISH
Sample : K2308433-008 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:21 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

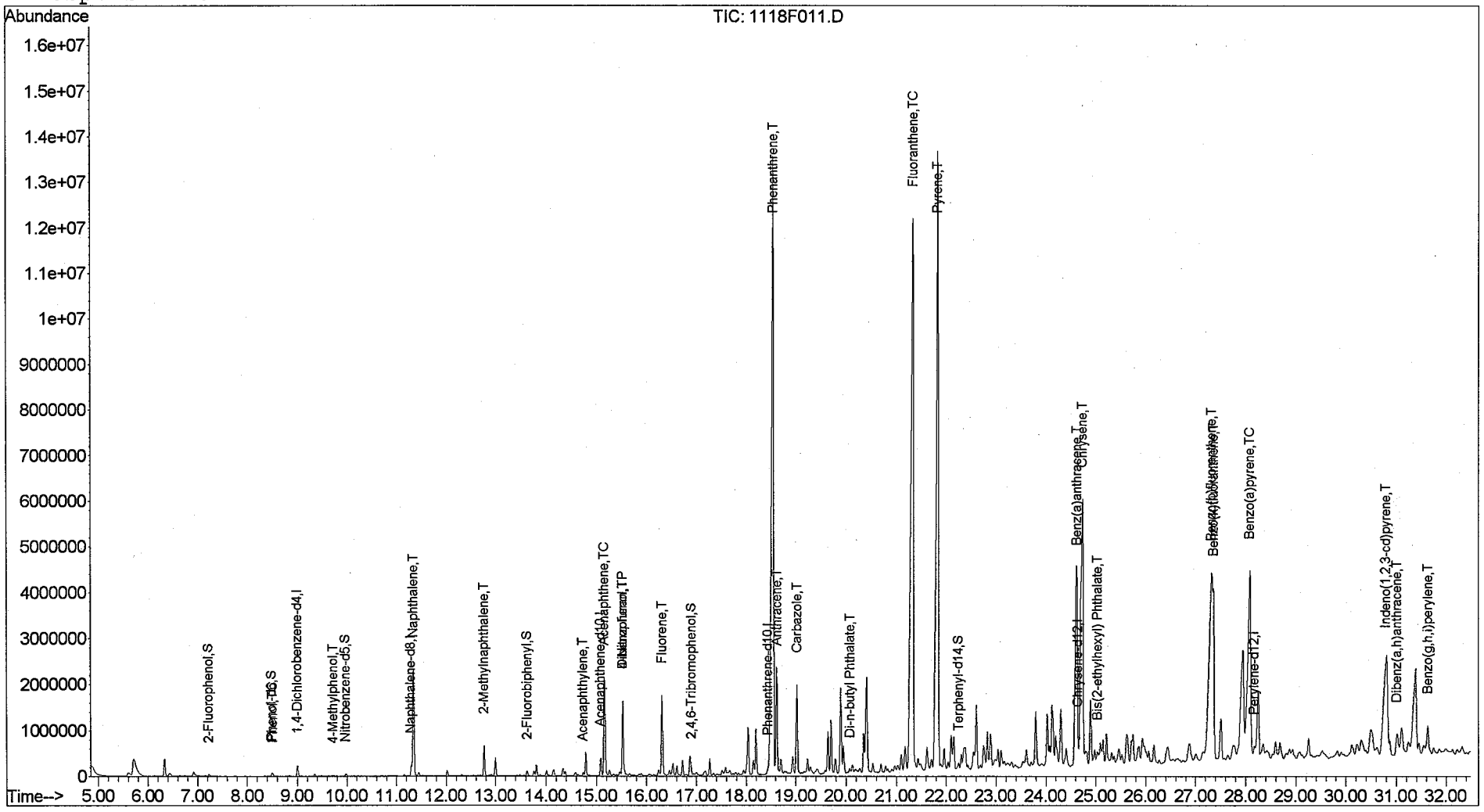
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
80)	Benzo(a)pyrene	28.09	252	4992756	29972.30	ng/ml	91
81)	Indeno(1,2,3-cd)pyrene	30.80	276	3928068m	25266.63	ng/ml	
82)	Dibenz(a,h)anthracene	31.01	278	491919m	3231.24	ng/ml	
83)	Benzo(g,h,i)perylene	31.64	276	575064m	3567.63	ng/ml	

(#) = qualifier out of range (m) = manual integration

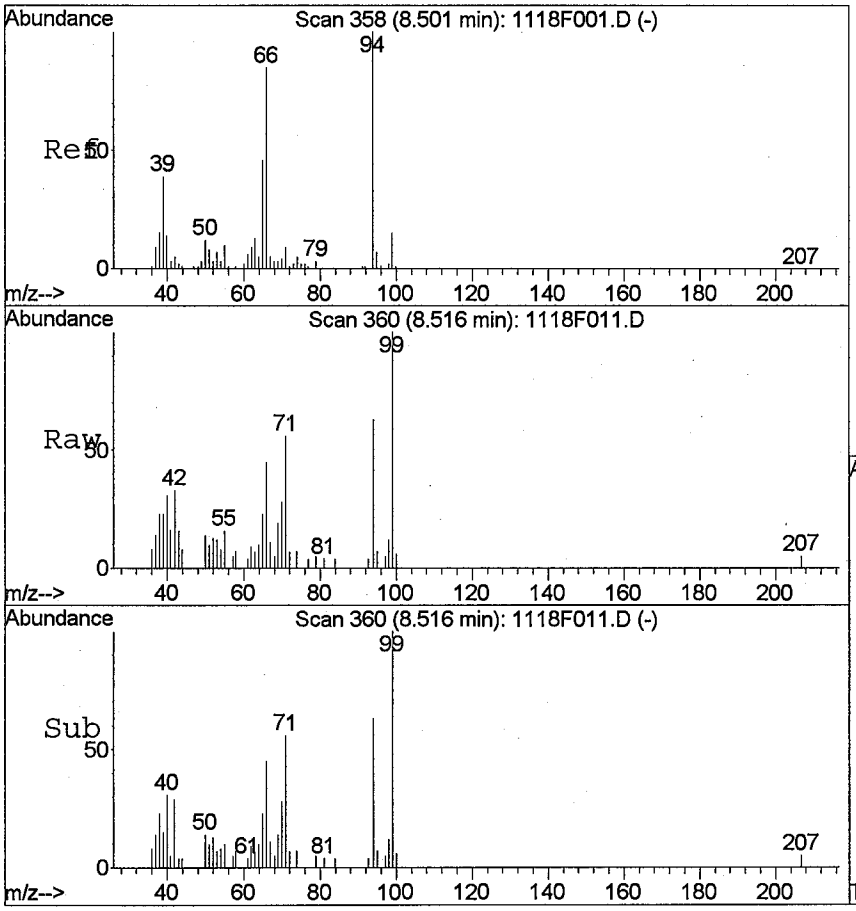
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F011.D Vial: 11
Acq On : 18 Nov 2003 19:33 Operator: JGISH
Sample : K2308433-008 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 9:05 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration



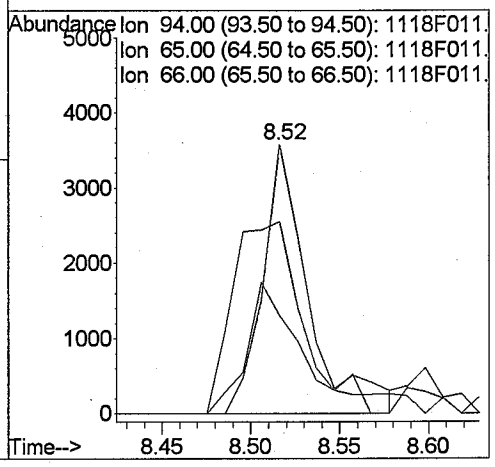
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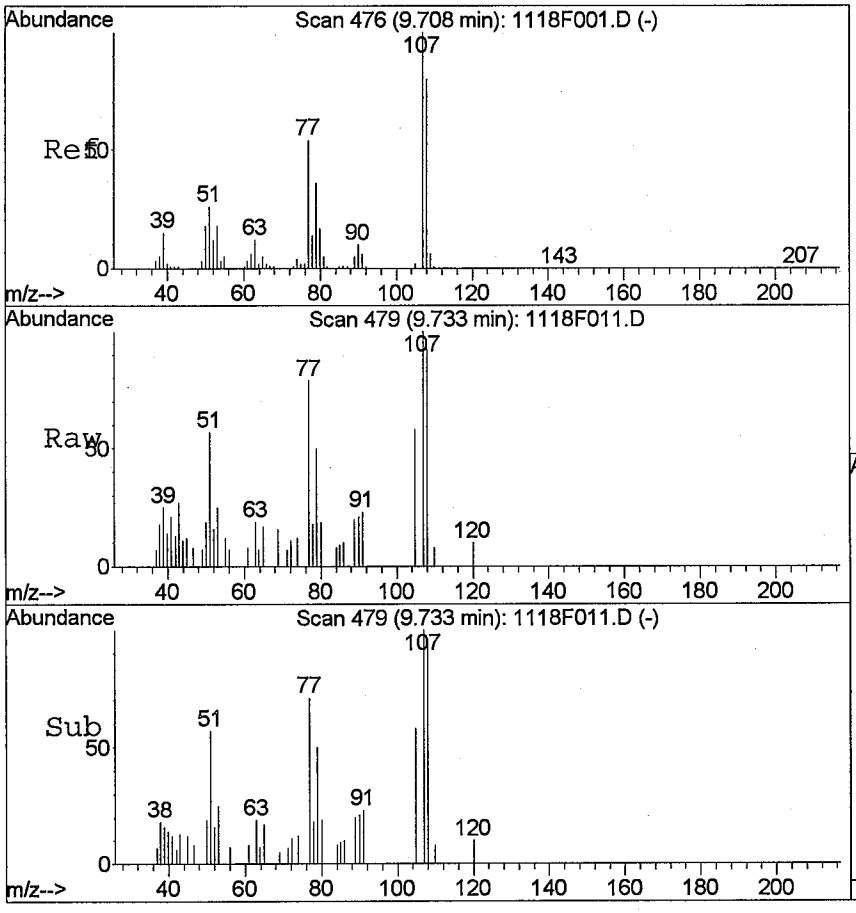


#7
Phenol
Concen: 86.27 ng/ml
RT: 8.52 min Scan# 360
Delta R.T. 0.04 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion: 94 Resp: 6410

Ion	Ratio	Lower	Upper
94	100		
65	36.5	6.3	66.3
66	71.2	32.9	92.9

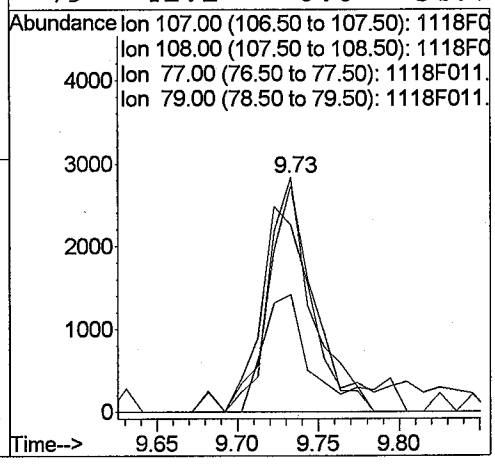


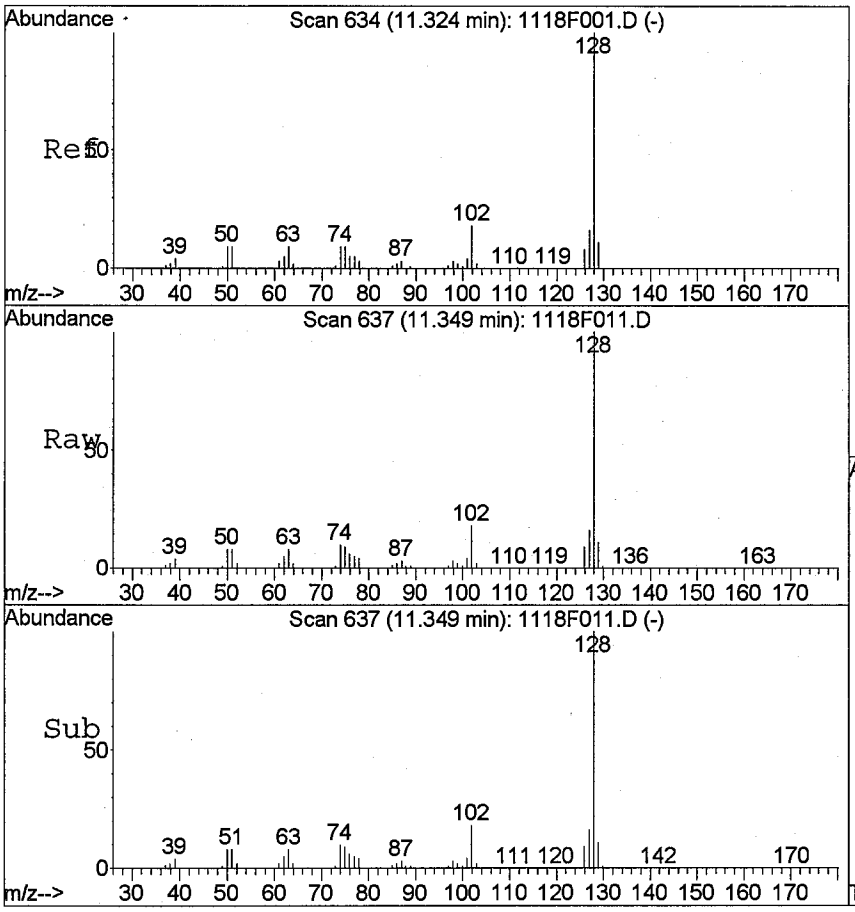


#18
4-Methylphenol
Concen: 74.54 ng/ml
RT: 9.73 min Scan# 479
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:107 Resp: 5293

Ion	Ratio	Lower	Upper
107	100		
108	96.3	52.6	112.6
77	71.0	4.5	64.5#
79	41.1	0.0	54.7

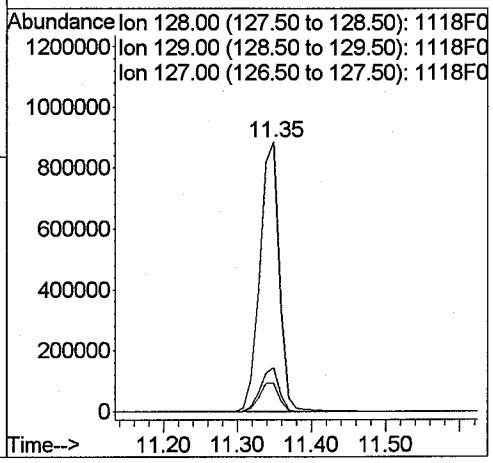


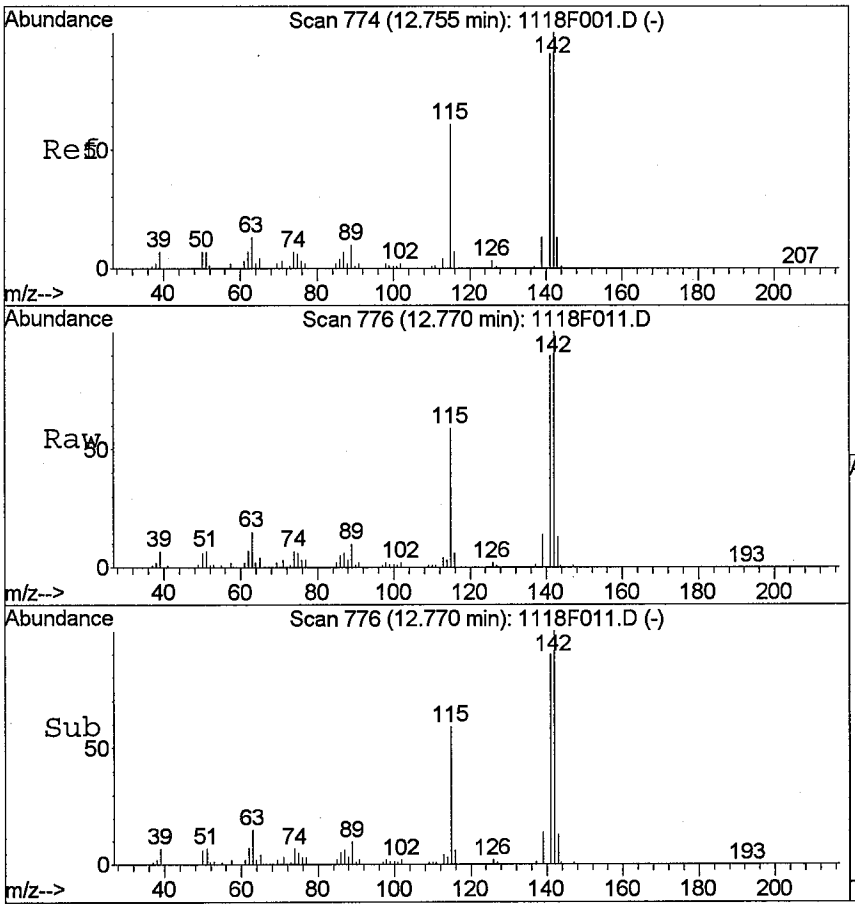


#29
Naphthalene
Concen: 9786.29 ng/ml
RT: 11.35 min Scan# 637
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:128 Resp: 1620590

Ion	Ratio	Lower	Upper
128	100		
129	10.6	0.0	41.3
127	16.3	0.0	44.2

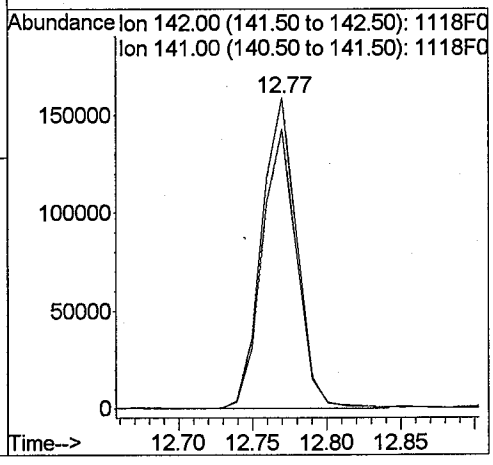


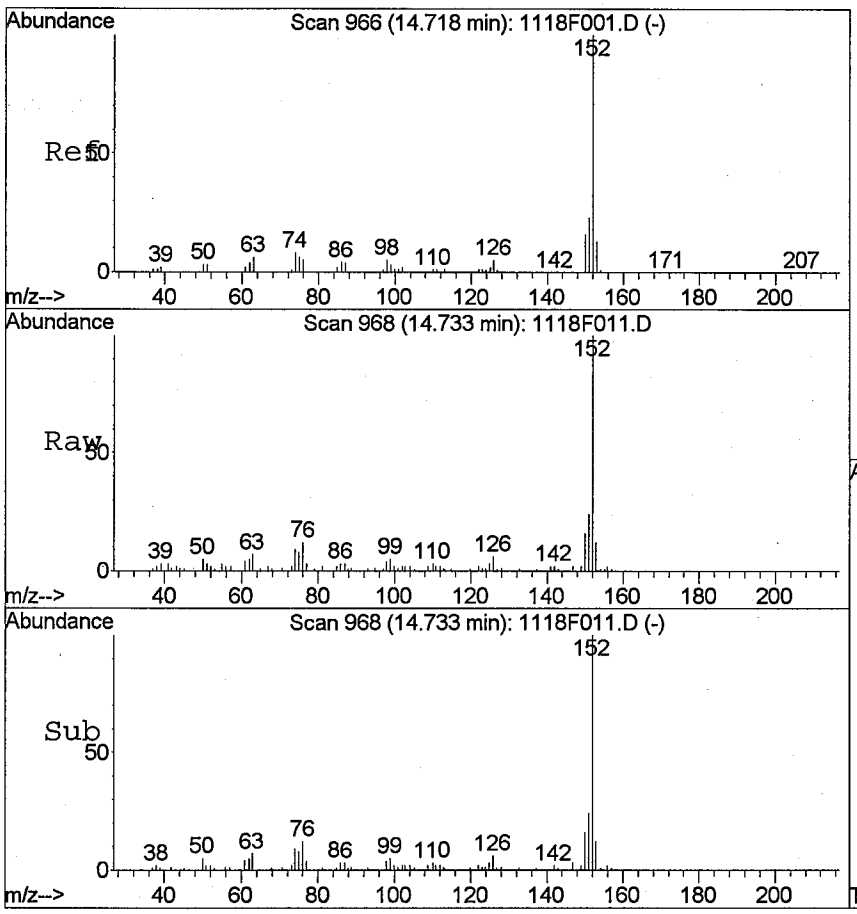


#33
2-Methylnaphthalene
Concen: 2548.64 ng/ml
RT: 12.77 min Scan# 776
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:142 Resp: 261559

Ion	Ratio	Lower	Upper
142	100		
141	89.8	61.0	121.0

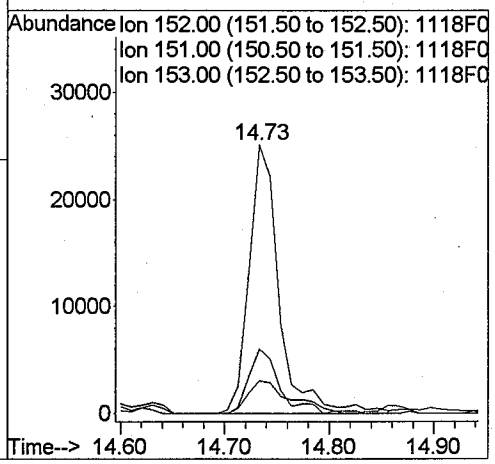


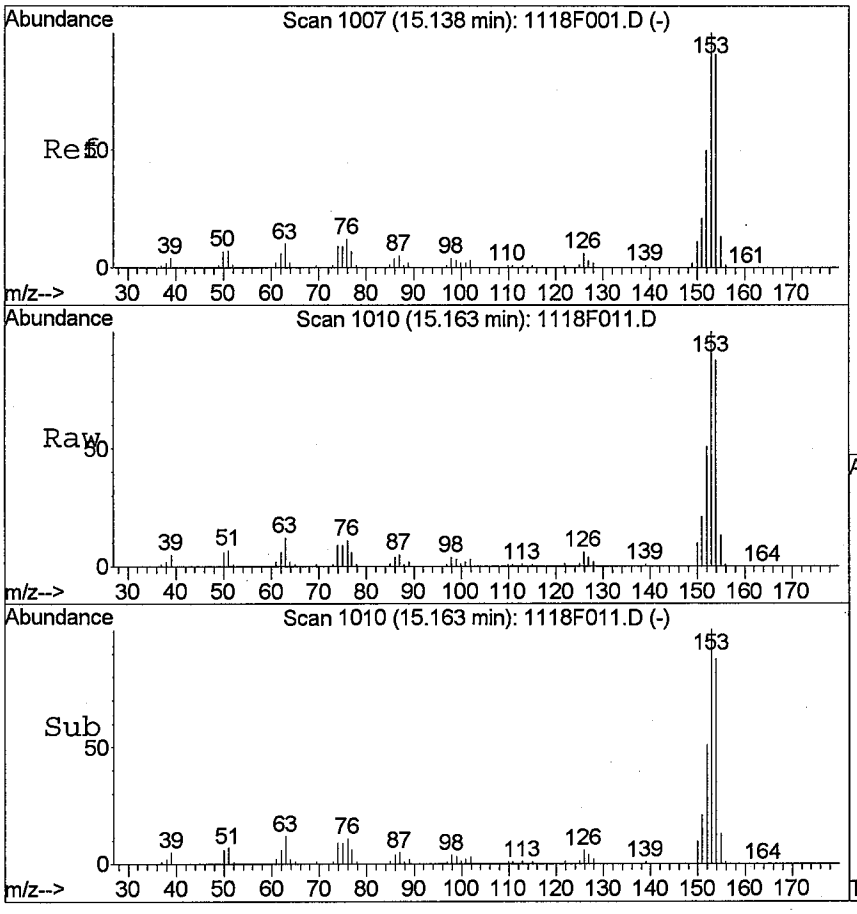


#41
Acenaphthylene
Concen: 303.56 ng/ml
RT: 14.73 min Scan# 968
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:152 Resp: 50650

Ion	Ratio	Lower	Upper
152	100		
151	23.9	0.0	51.5
153	12.2	0.0	42.9

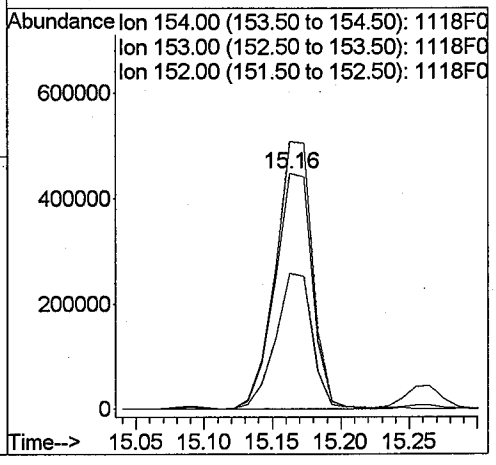


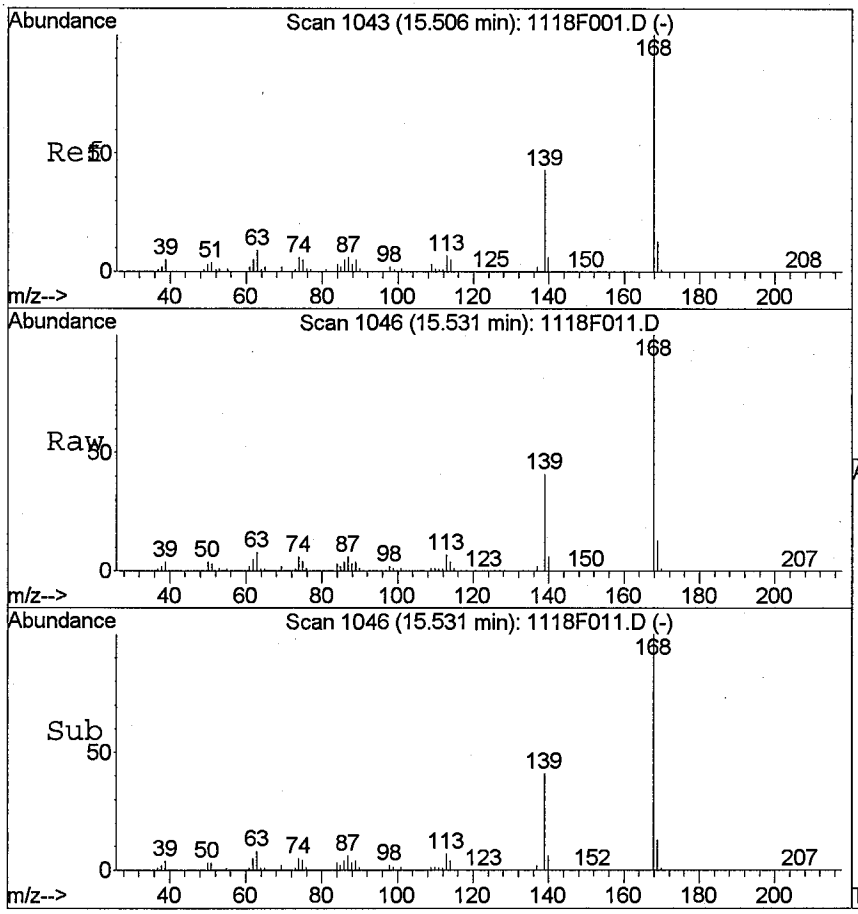


#44
Acenaphthene
Concen: 8589.96 ng/ml
RT: 15.16 min Scan# 1010
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:154 Resp: 858603

Ion	Ratio	Lower	Upper
154	100		
153	113.1	82.4	142.4
152	57.9	24.4	84.4

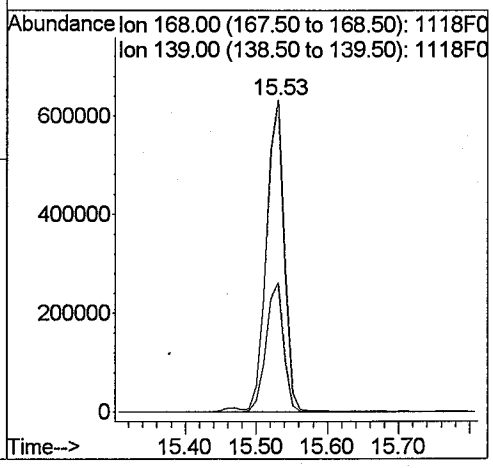


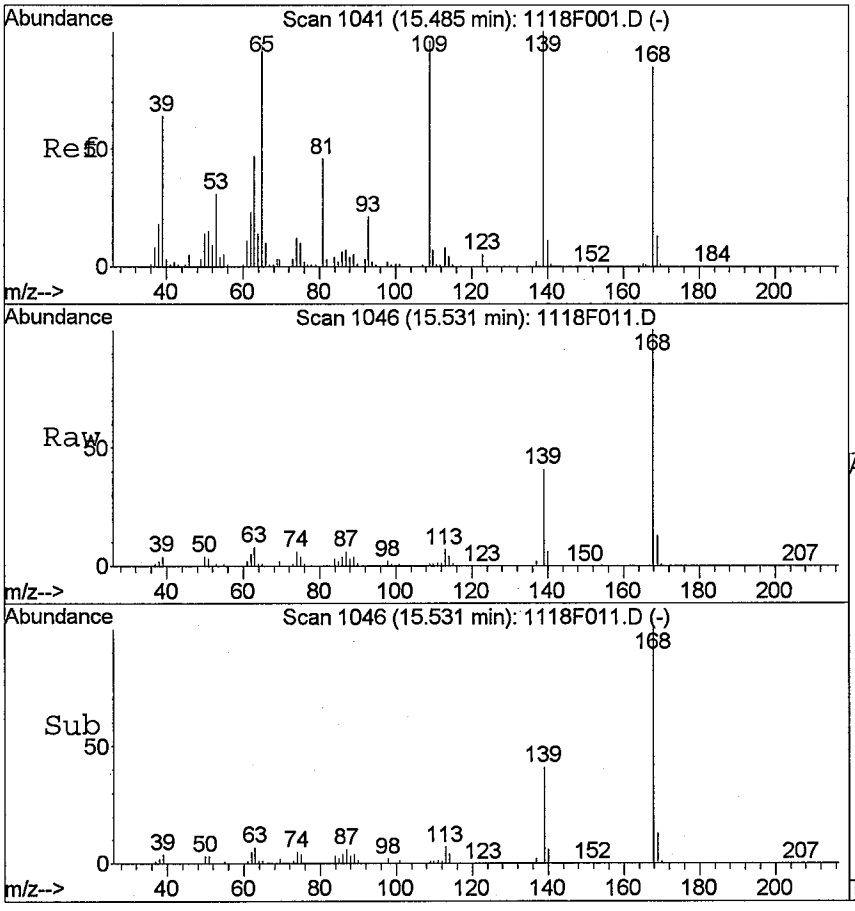


#47
Dibenzofuran
Concen: 6336.69 ng/ml
RT: 15.53 min Scan# 1046
Delta R.T. 0.06 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:168 Resp: 1117597

Ion	Ratio	Lower	Upper
168	100		
139	41.4	1.2	61.2

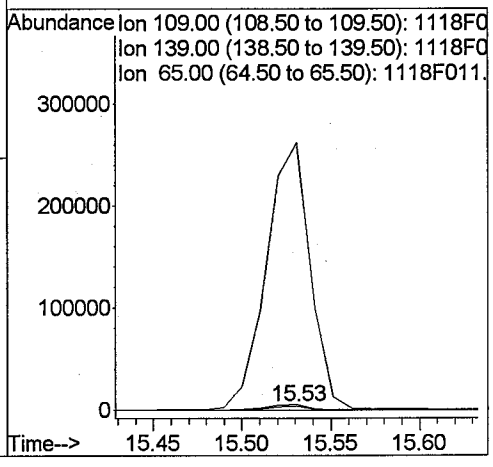


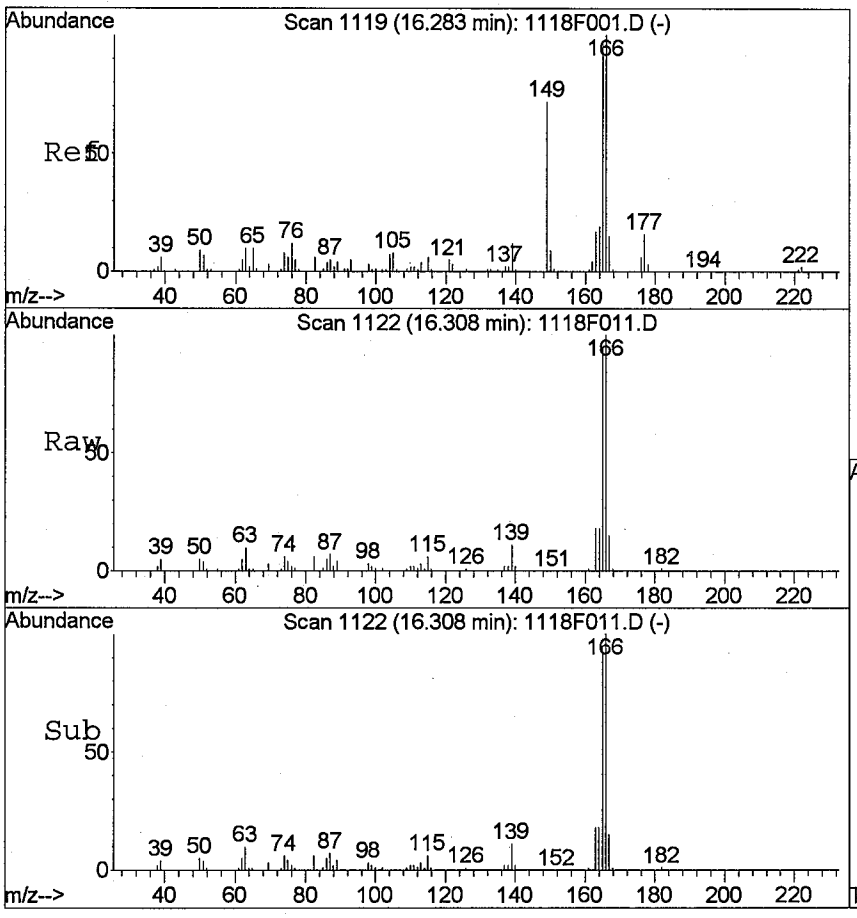


#48
4-Nitrophenol
Concen: 134.38 ng/ml
RT: 15.53 min Scan# 1046
Delta R.T. 0.08 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:109 Resp: 6265

Ion	Ratio	Lower	Upper
109	100		
139	6285.9	96.9	156.9#
65	136.6	101.9	161.9

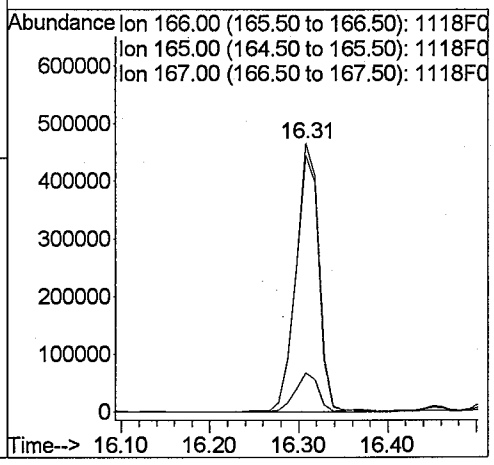


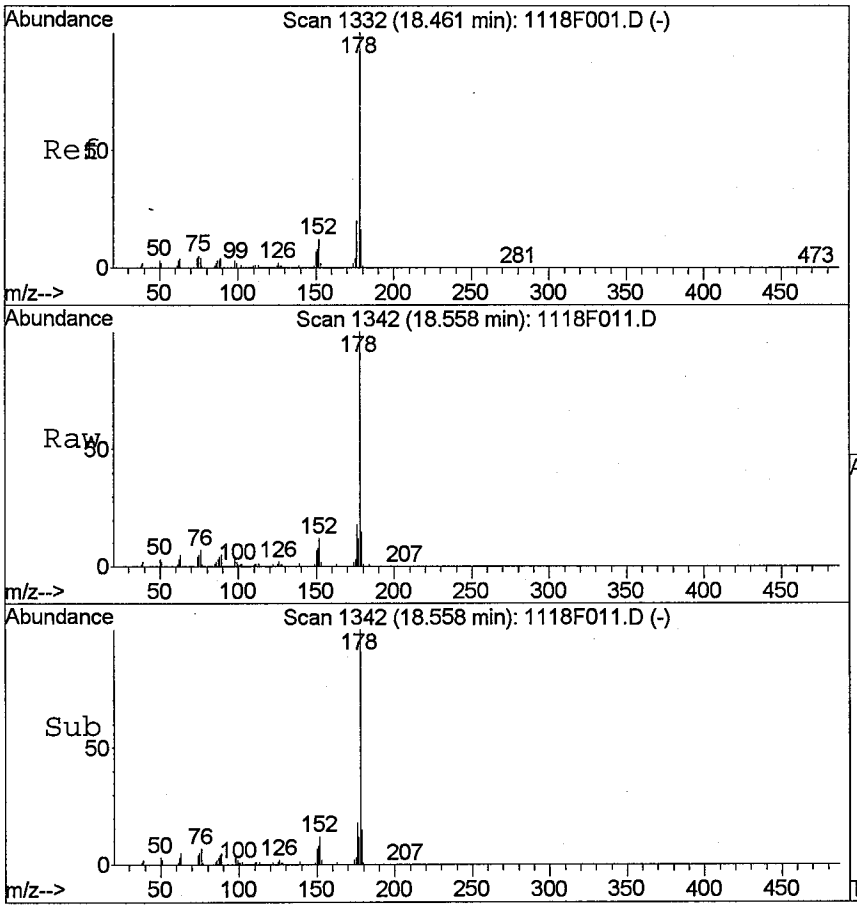


#50
Fluorene
Concen: 6467.32 ng/ml
RT: 16.31 min Scan# 1122
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:166 Resp: 841666

Ion	Ratio	Lower	Upper
166	100		
165	95.4	63.2	123.2
167	14.6	0.0	43.0

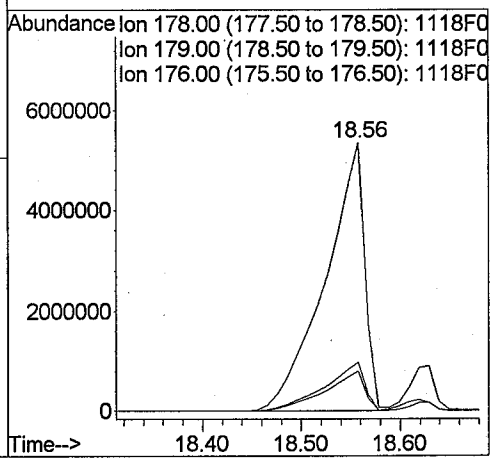


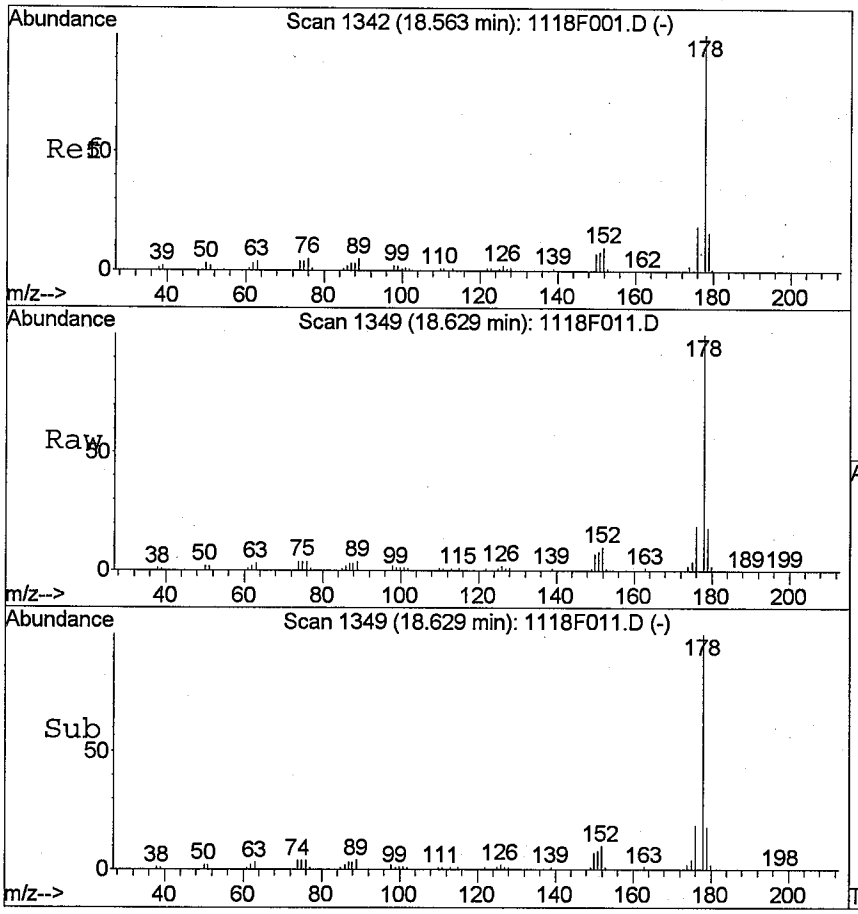


#62
Phenanthrene
Concen: 77176.55 ng/ml
RT: 18.56 min Scan# 1342
Delta R.T. 0.13 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:178 Resp:14731868

Ion	Ratio	Lower	Upper
178	100		
179	15.0	0.0	44.8
176	18.3	0.0	49.3

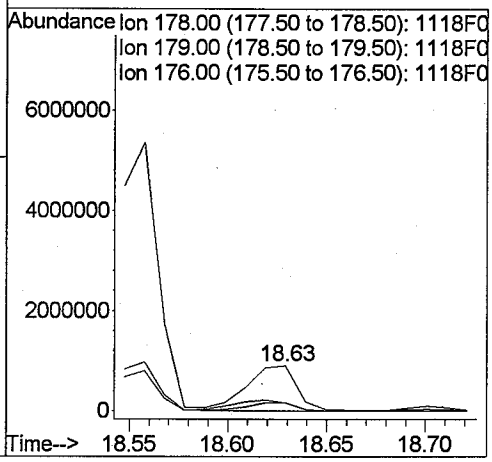


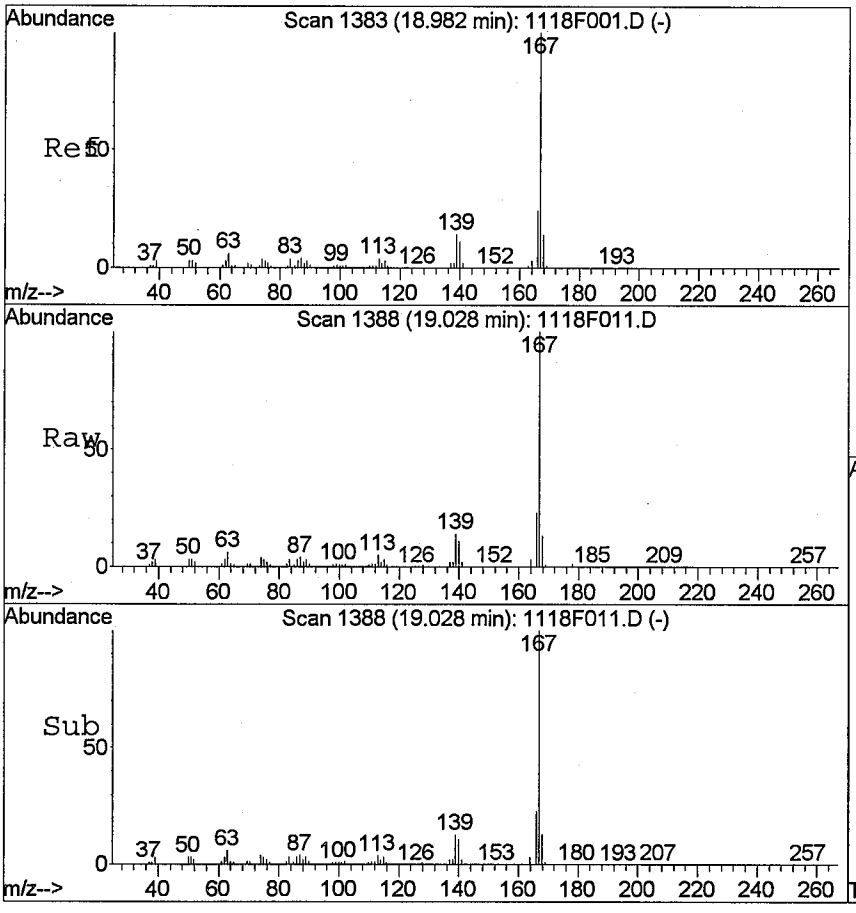


#63
Anthracene
Concen: 8443.42 ng/ml
RT: 18.63 min Scan# 1349
Delta R.T. 0.10 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:178 Resp: 1624029

Ion	Ratio	Lower	Upper
178	100		
179	16.8	0.0	44.7
176	18.9	0.0	49.8

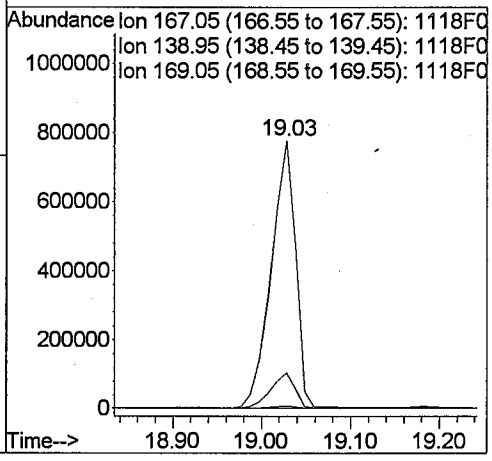


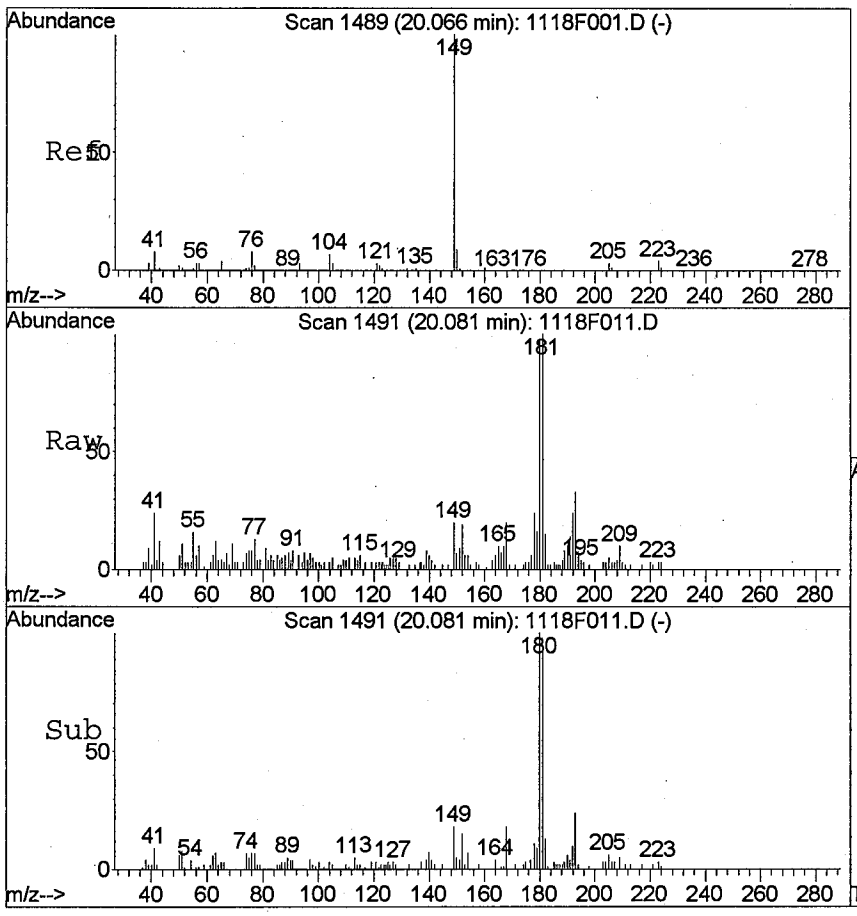


#64
Carbazole
Concen: 8872.94 ng/ml
RT: 19.03 min Scan# 1388
Delta R.T. 0.08 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:167 Resp: 1484514

Ion	Ratio	Lower	Upper
167	100		
139	13.5	0.0	41.7
169	0.8	0.0	30.8

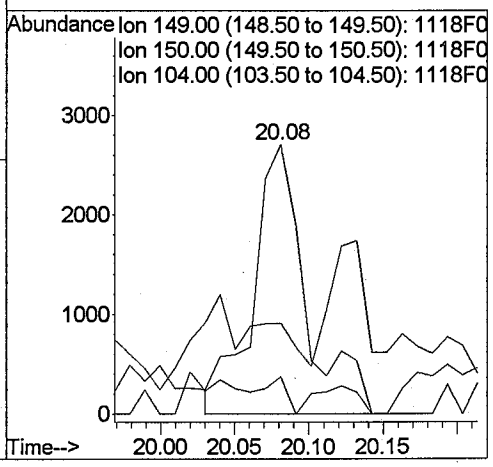


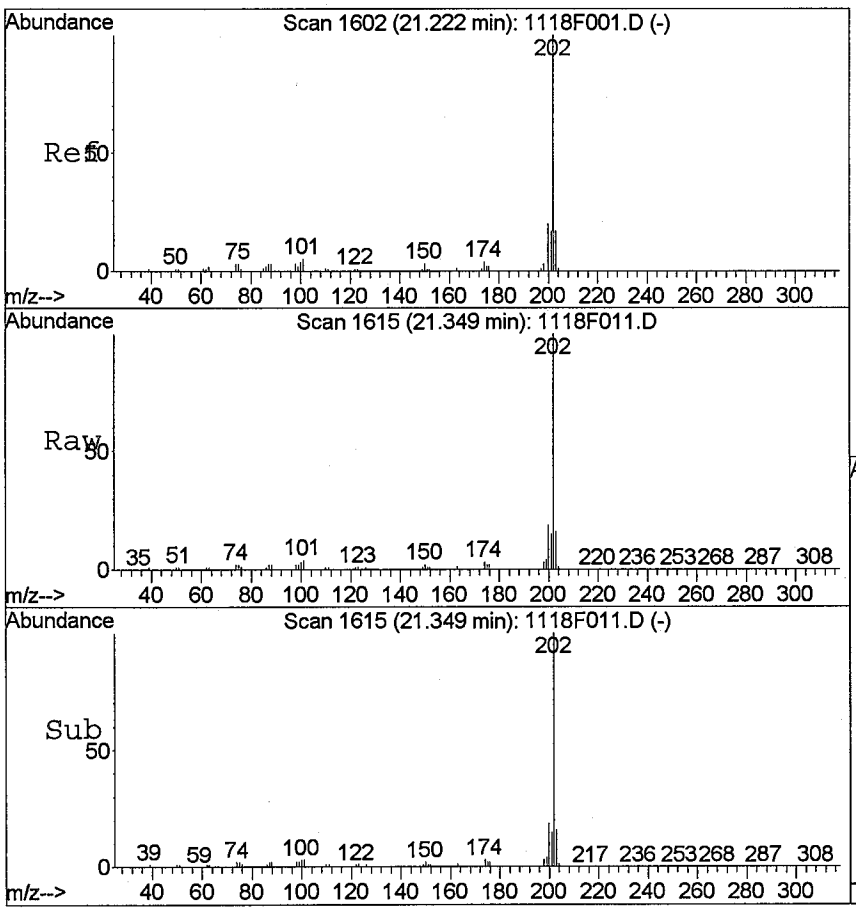


#65
Di-n-butyl Phthalate
Concen: 28.73 ng/ml
RT: 20.08 min Scan# 1491
Delta R.T. 0.05 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:149 Resp: 6695

Ion	Ratio	Lower	Upper
149	100		
150	10.8	0.0	39.4
104	13.9	0.0	35.0

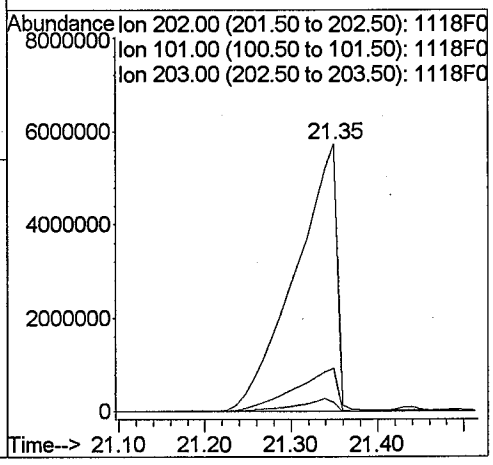


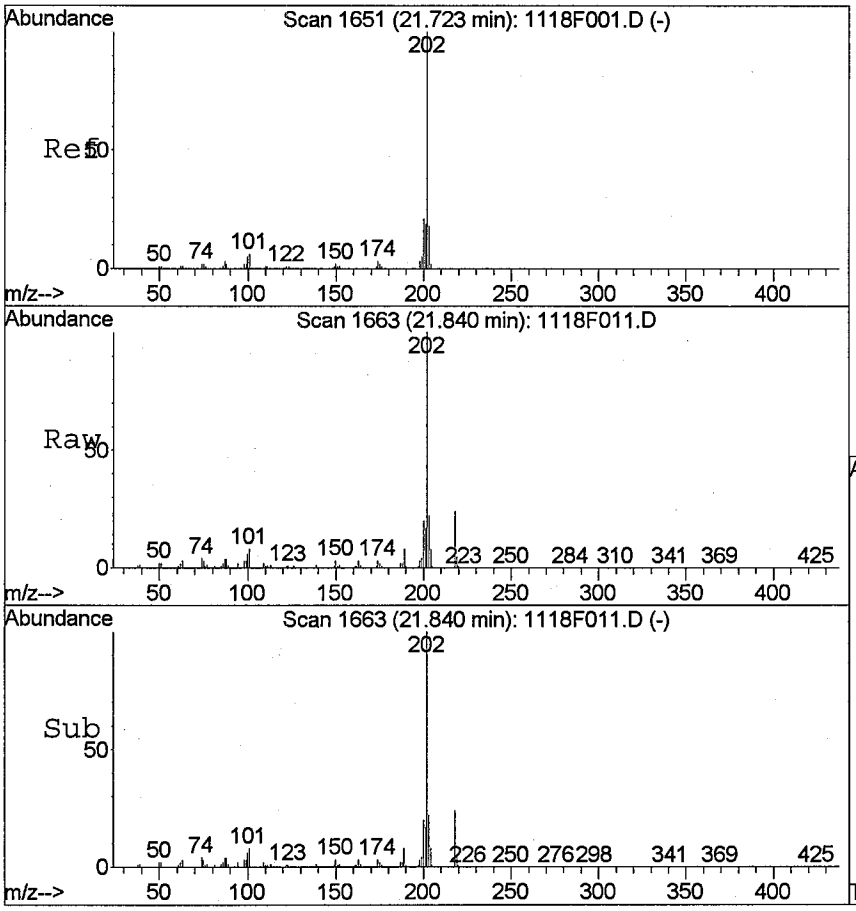


#66
Fluoranthene
Concen: 91389.38 ng/ml m
RT: 21.35 min Scan# 1615
Delta R.T. 0.16 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:202 Resp:19163454

Ion	Ratio	Lower	Upper
202	100		
101	3.5	0.0	42.0
203	16.4	0.0	47.2

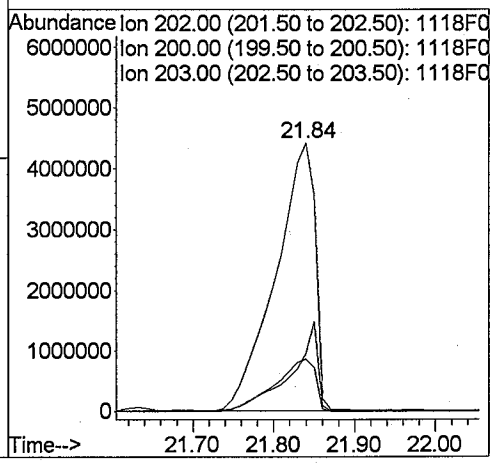


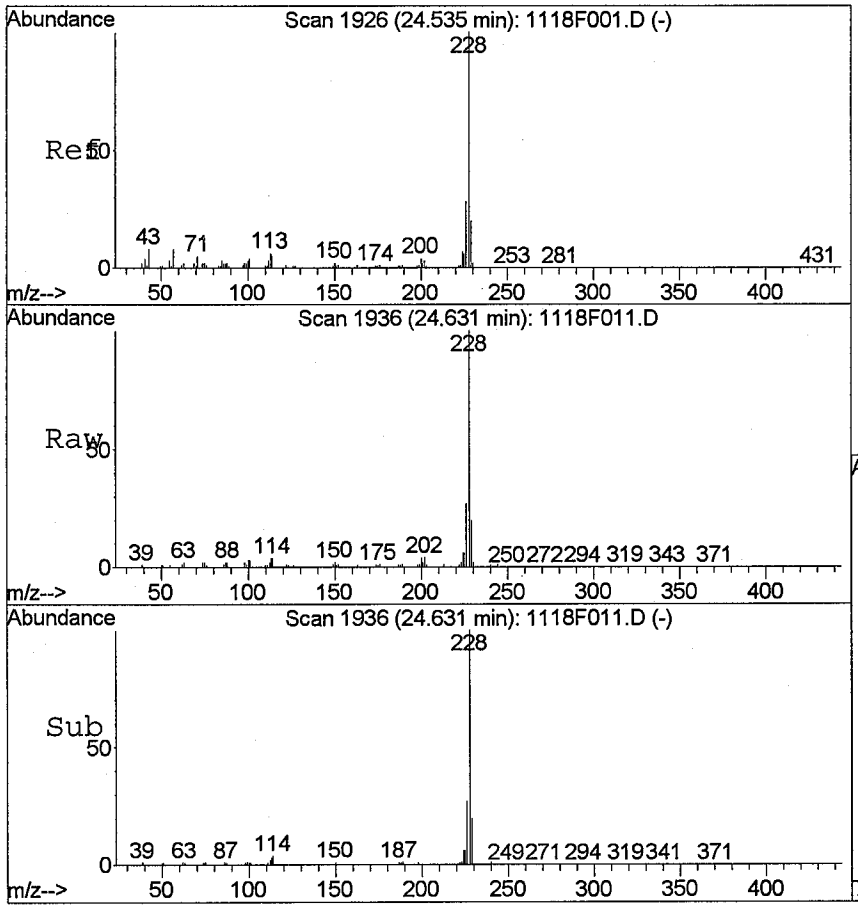


#69
Pyrene
Concen: 66121.22 ng/ml
RT: 21.84 min Scan# 1663
Delta R.T. 0.15 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:202 Resp:15013945

Ion	Ratio	Lower	Upper
202	100		
200	19.6	0.0	50.3
203	21.5	0.0	48.1

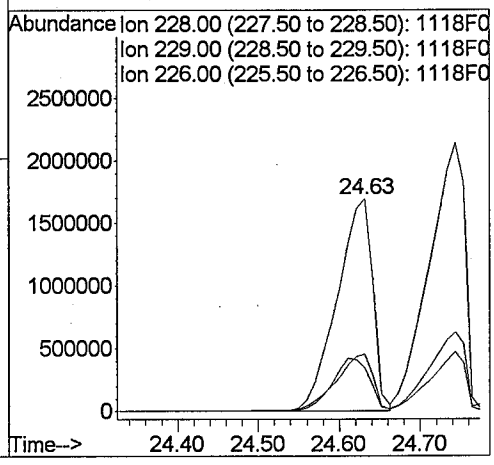


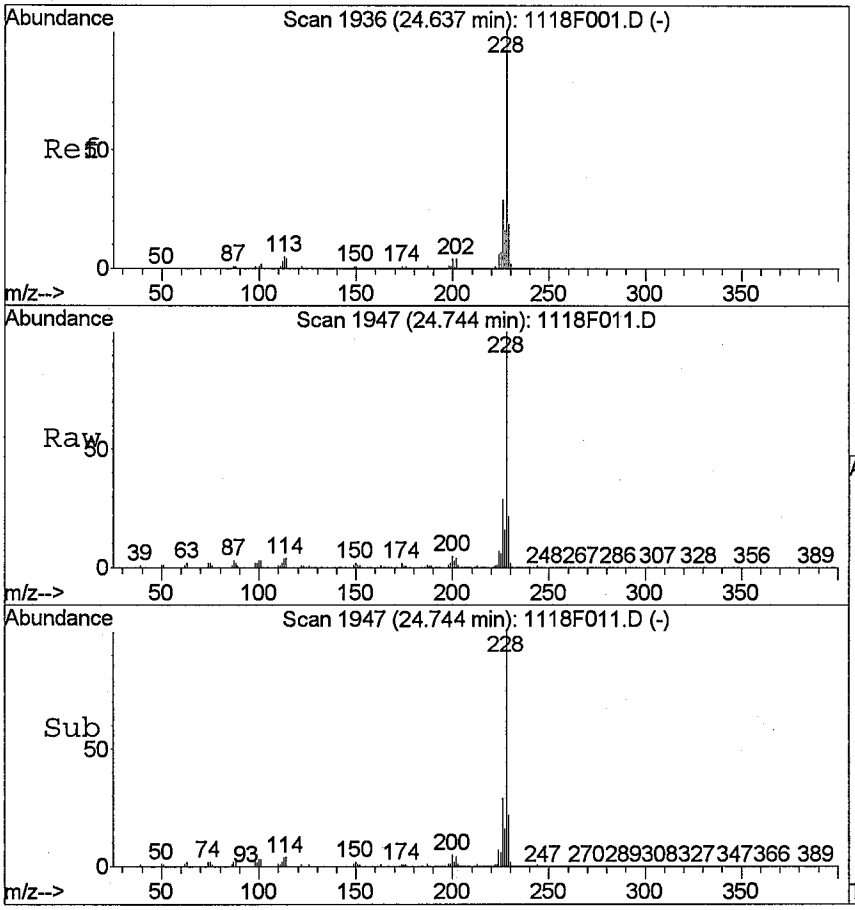


#73
Benz(a)anthracene
Concen: 25682.20 ng/ml
RT: 24.63 min Scan# 1936
Delta R.T. 0.13 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:228 Resp: 5163907

Ion	Ratio	Lower	Upper
228	100		
229	20.2	0.0	48.5
226	26.8	0.0	55.6

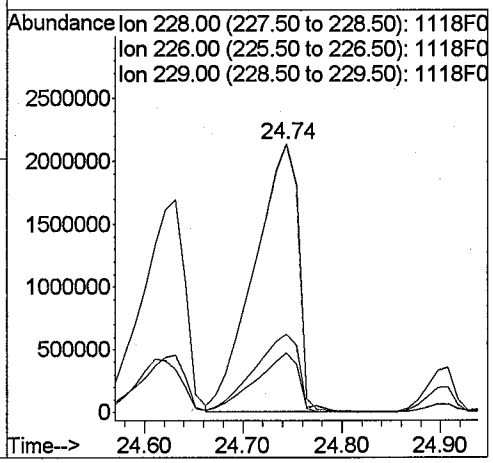


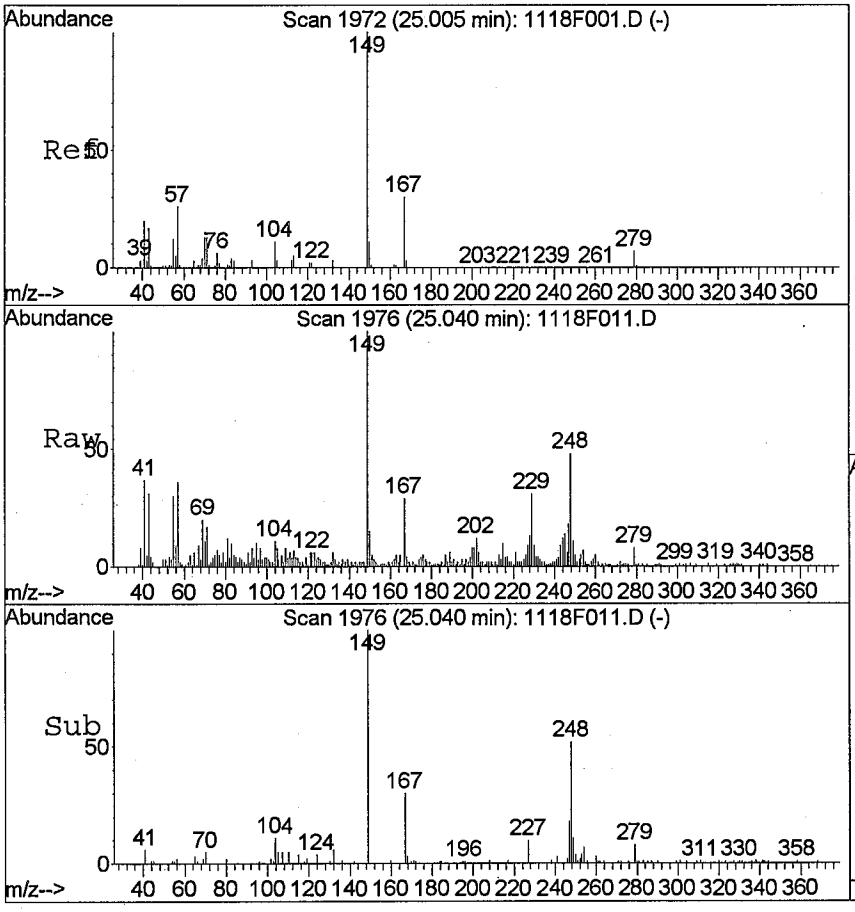


#74
Chrysene
Concen: 34468.83 ng/ml
RT: 24.74 min Scan# 1947
Delta R.T. 0.14 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:228 Resp: 6567406

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.4
229	21.9	0.0	49.1

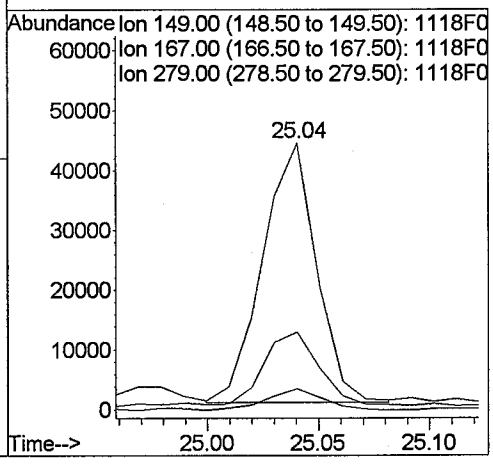


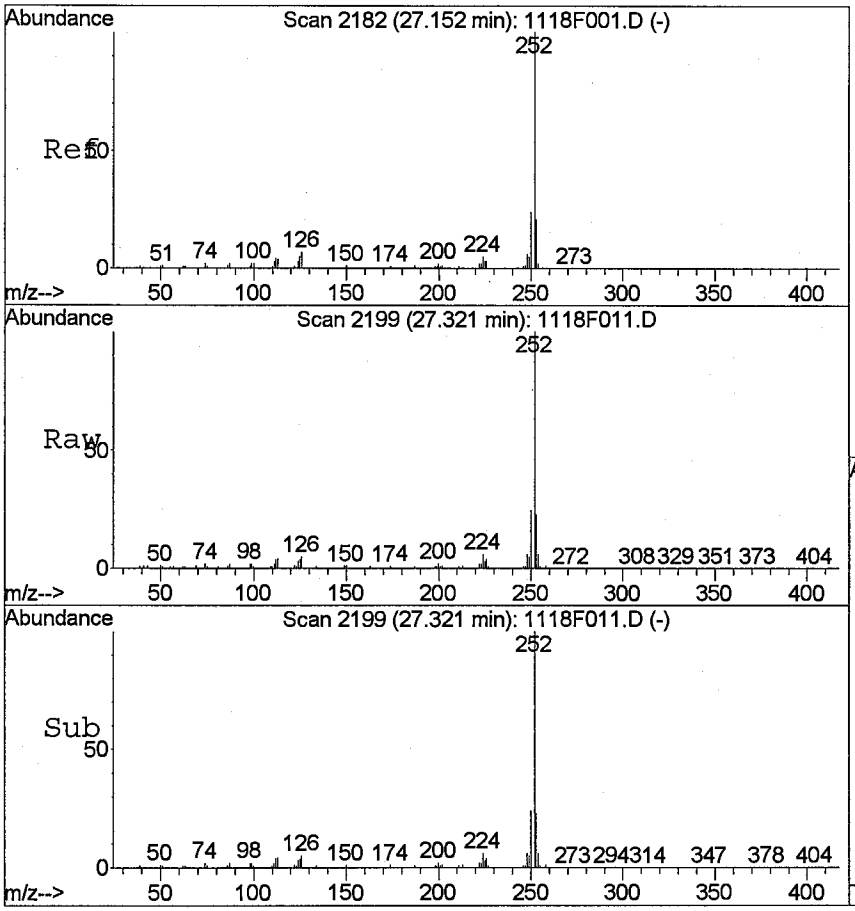


#75
Bis(2-ethylhexyl) Phthalate
Concen: 495.89 ng/ml
RT: 25.04 min Scan# 1976
Delta R.T. 0.06 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:149 Resp: 72687

Ion	Ratio	Lower	Upper
149	100		
167	28.2	0.2	60.2
279	8.5	0.0	34.5

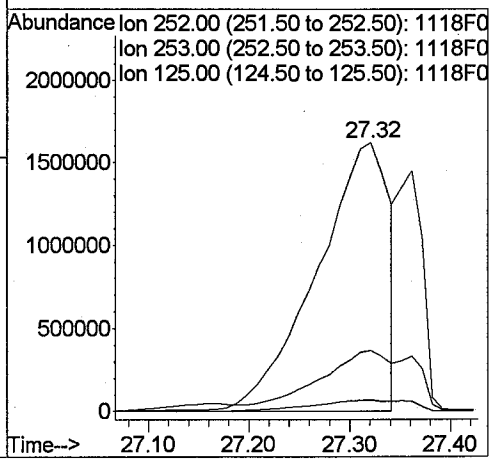


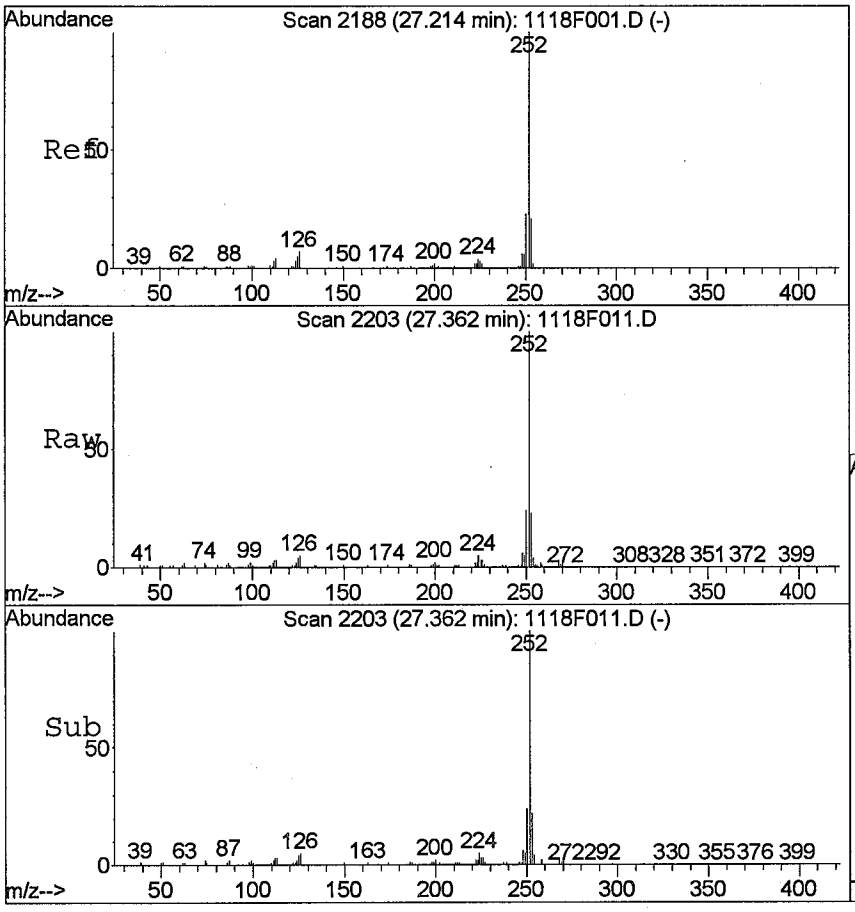


#78
Benzo(b)fluoranthene
Concen: 45809.10 ng/ml m
RT: 27.32 min Scan# 2199
Delta R.T. 0.21 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:252 Resp: 8040086

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	51.3
125	4.3	0.0	41.2

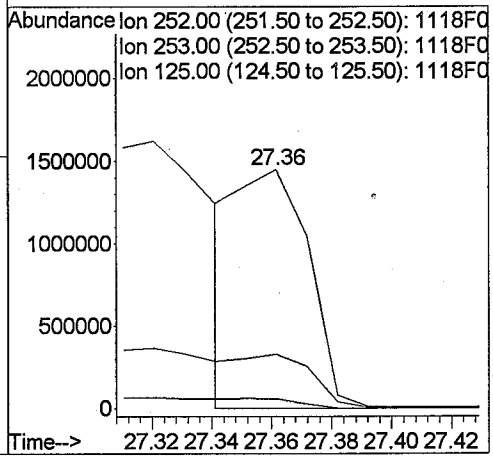


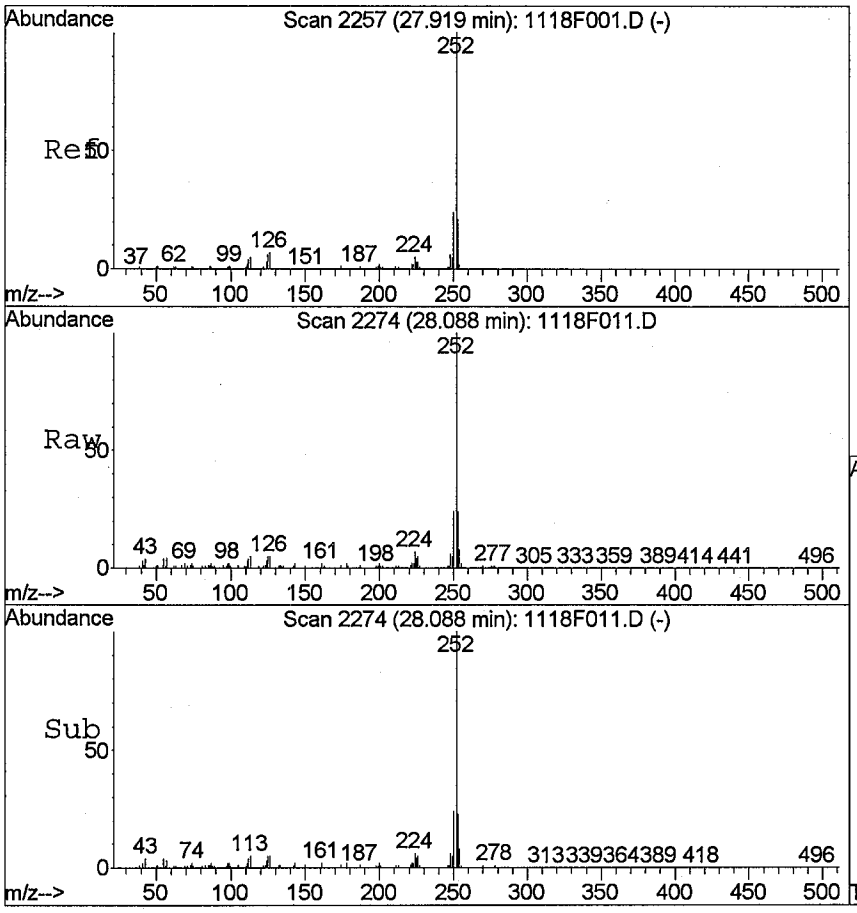


#79
Benzo(k)fluoranthene
Concen: 14529.13 ng/ml m
RT: 27.36 min Scan# 2203
Delta R.T. 0.19 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:252 Resp: 2423697

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.9
125	4.2	0.0	40.9

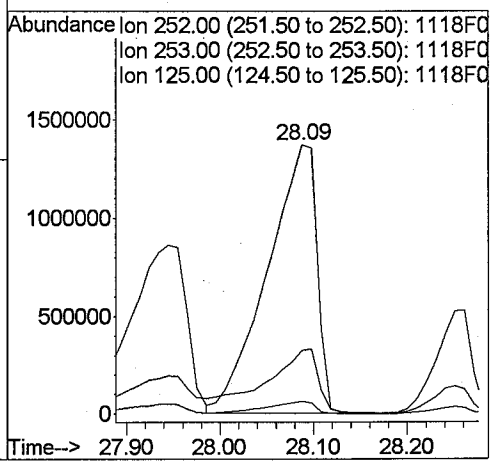


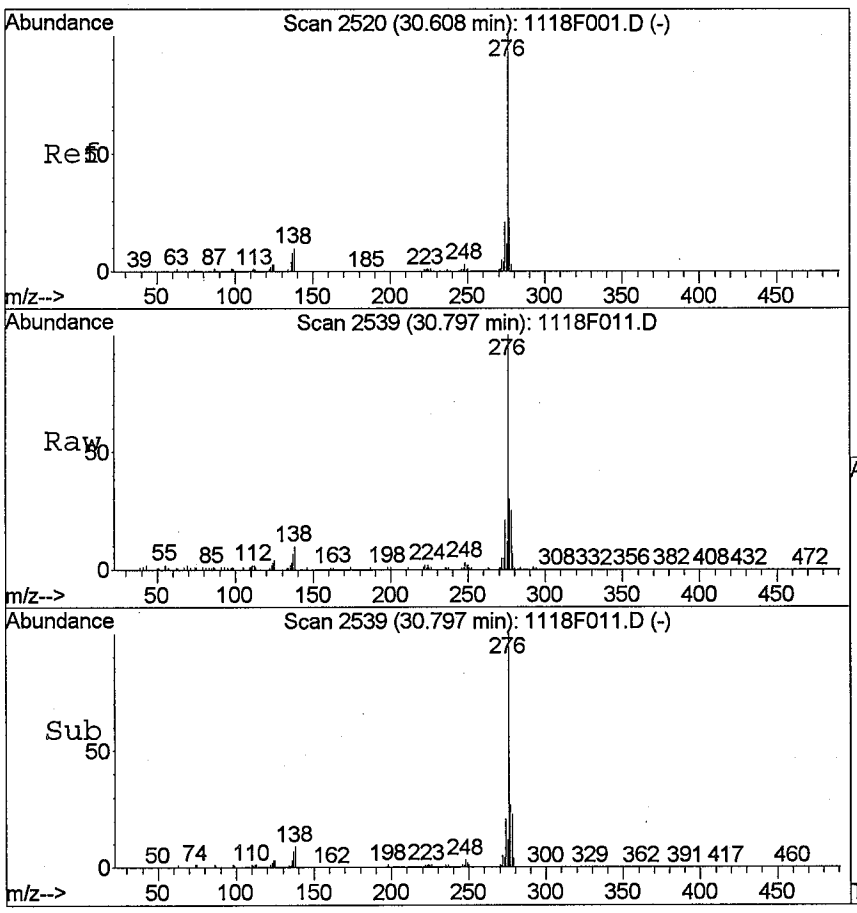


#80
Benzo(a)pyrene
Concen: 29972.30 ng/ml
RT: 28.09 min Scan# 2274
Delta R.T. 0.21 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:252 Resp: 4992756

Ion	Ratio	Lower	Upper
252	100		
253	23.6	0.0	52.2
125	4.6	0.0	42.3

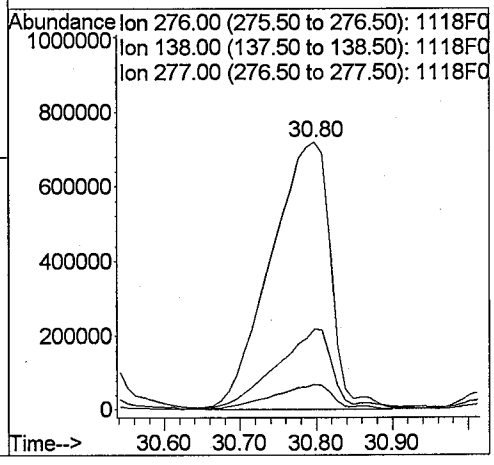


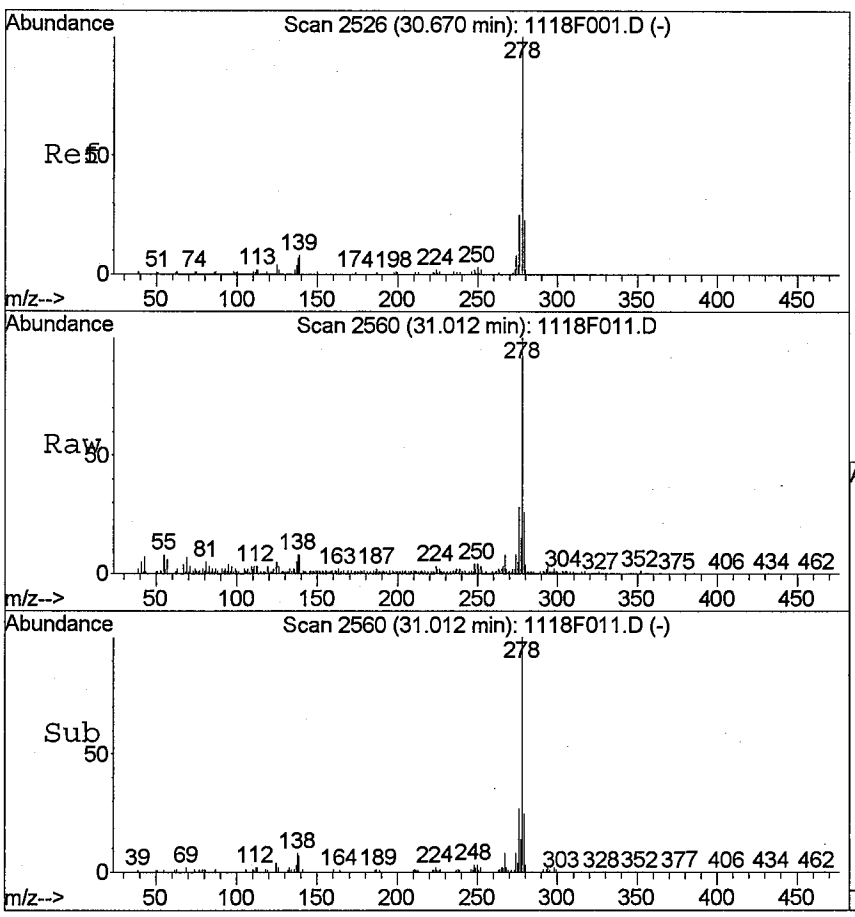


#81
Indeno(1,2,3-cd)pyrene
Concen: 25266.63 ng/ml m
RT: 30.80 min Scan# 2539
Delta R.T. 0.23 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:276 Resp: 3928068

Ion	Ratio	Lower	Upper
276	100		
138	9.7	0.0	51.4
277	30.1	0.0	54.0

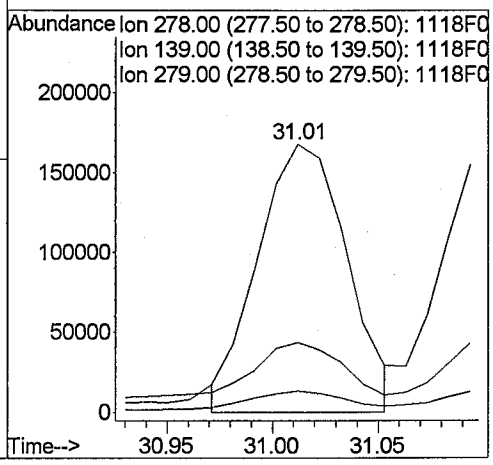


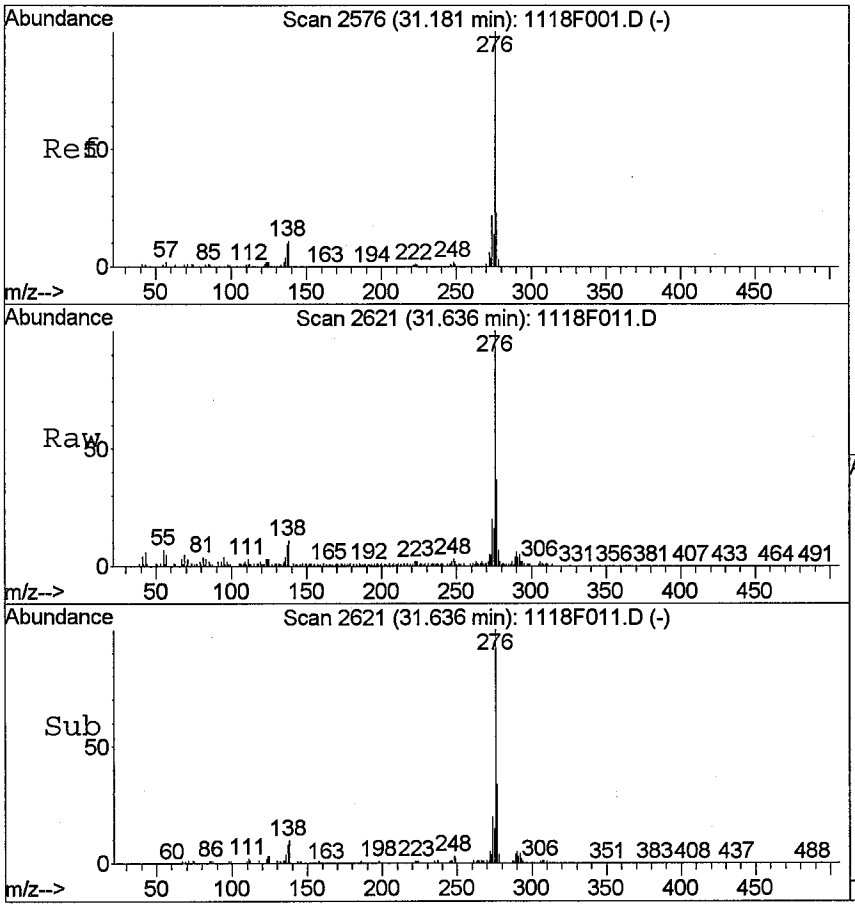


#82
Dibenz(a,h)anthracene
Concen: 3231.24 ng/ml m
RT: 31.01 min Scan# 2560
Delta R.T. 0.37 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:278 Resp: 491919

Ion	Ratio	Lower	Upper
278	100		
139	7.9	0.0	46.3
279	26.0	0.0	54.8

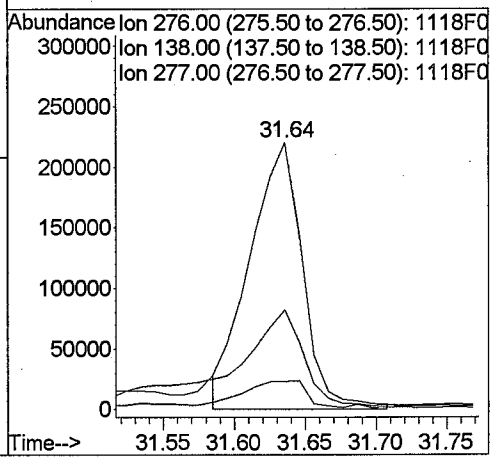




#83
Benzo(g,h,i)perylene
Concen: 3567.63 ng/ml m
RT: 31.64 min Scan# 2621
Delta R.T. 0.50 min
Lab File: 1118F011.D
Acq: 18 Nov 2003 19:33

Tgt Ion:276 Resp: 575064

Ion	Ratio	Lower	Upper
276	100		
138	10.6	0.0	52.7
277	37.3	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SED-8	**Units:**	ug/Kg
Lab Code:	K2308433-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	160	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	ND	U	260	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	51	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	ND	U	260	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	**340**	D	51	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	38	40-123	11/18/03	Outside Control Limits
2,4,6-Tribromophenol	15	35-138	11/18/03	Outside Control Limits
Terphenyl-d14	98	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F012.D
Lab ID: K2308433-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/18/2003 20:14
Date Quantitated: 11/19/2003 09:07
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

MRL MATRIX2

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	15	35	138	RX
	Phenol-d6	38	40	123	

Primary Review: 11/19/3

Secondary Review: mt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245975	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118F012.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 20:14	**Quant Date:**	11/19/2003 09:07	**Vial:**	12
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.01	0.02	152	52959	1,000.00	OK
2	Naphthalene-d8	11.30	0.02	136	157674	1,000.00	OK
3	Acenaphthene-d10	15.09	0.02	164	105466	1,000.00	OK
4	Phenanthrene-d10	18.44	0.03	188	177544	1,000.00	OK
5	Chrysene-d12	24.61	0.03	240	177242	1,000.00	OK
6	Perylene-d12	28.13	0.08	264	132483	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.51	0.03	0.00	99	19250	282.47	38	40-123	*	
4	2,4,6-Tribromophenol	16.90	0.01	0.00	330	3406	113.51	15	35-138	*	
5	Terphenyl-d14	22.24	0.03	0.00	244	68240	491.12	98	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		14	U	
1	2-Methylphenol				107	0		24	U	
1	4-Methylphenol				107	0		20	U	
2	2,4-Dimethylphenol				122	0		38	U	
2	2,4-Dichlorophenol				162	0		13	U	
3	2,4,6-Trichlorophenol				196	0		13	U	
4	Pentachlorophenol				266	0		59	U	
5	Butyl Benzyl Phthalate	23.54	0.02	0.00	149	66352	677.35	340	D	
5	Bis(2-ethylhexyl) Phthalate	25.03	0.03	0.00	149	76671	540.18	270	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F012.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 20:14	**Quant Date:**	11/19/2003 09:07	**Vial:**	12
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Prep Amount:	27.25 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	72.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F012.D Vial: 12
Acq On : 18 Nov 2003 20:14 Operator: JGISH
Sample : K2308433-009 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:26 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.01	152	52959	1000.00	ng/ml	0.04
21) Naphthalene-d8	11.30	136	157674	1000.00	ng/ml	0.04
34) Acenaphthene-d10	15.09	164	105466	1000.00	ng/ml	0.05
57) Phenanthrene-d10	18.44	188	177544	1000.00	ng/ml	0.06
67) Chrysene-d12	24.61	240	177242	1000.00	ng/ml	0.07
76) Perylene-d12	28.13	264	132483	1000.00	ng/ml	0.11
System Monitoring Compounds						
4) 2-Fluorophenol	7.24	112	4267	75.04	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 2.00%#			
6) Phenol-d6	8.51	99	19250	282.47	ng/ml	0.05
Spiked Amount 3750.000	Range 43 - 128		Recovery = 7.53%#			
19) Nitrobenzene-d5	9.99	82	29962	354.22	ng/ml	0.05
Spiked Amount 2500.000	Range 30 - 139		Recovery = 14.17%#			
38) 2-Fluorobiphenyl	13.63	172	45312	309.91	ng/ml	0.05
Spiked Amount 2500.000	Range 37 - 126		Recovery = 12.40%#			
58) 2,4,6-Tribromophenol	16.90	330	3406	113.51	ng/ml	0.05
Spiked Amount 3750.000	Range 38 - 157		Recovery = 3.03%#			
70) Terphenyl-d14	22.24	244	68240	491.12	ng/ml	0.05
Spiked Amount 2500.000	Range 54 - 158		Recovery = 19.64%#			
Target Compounds						Qvalue
29) Naphthalene	11.34	128	15744	95.71	ng/ml	90
33) 2-Methylnaphthalene	12.76	142	5171	50.72	ng/ml	85
41) Acenaphthylene	14.74	152	31608	187.13	ng/ml	94
44) Acenaphthene	15.16	154	26247	259.40	ng/ml	94
47) Dibenzofuran	15.52	168	25766	144.32	ng/ml	81
50) Fluorene	16.30	166	46014	349.28	ng/ml	91
52) Diethyl Phthalate	16.28	149	2696	16.52	ng/ml	83
62) Phenanthrene	18.50	178	962562	4998.31	ng/ml	99
63) Anthracene	18.59	178	189389	975.99	ng/ml	96
64) Carbazole	19.01	167	128465	761.09	ng/ml	95
65) Di-n-butyl Phthalate	20.07	149	4479	19.05	ng/ml	77
66) Fluoranthene	21.28	202	2186507	10335.70	ng/ml	90
69) Pyrene	21.77	202	1792406	8152.04	ng/ml	99
71) Butyl Benzyl Phthalate	23.54	149	66352	677.35	ng/ml	92
73) Benz(a)anthracene	24.58	228	750938	3856.93	ng/ml	94
74) Chrysene	24.69	228	918398	4977.92	ng/ml	96
75) Bis(2-ethylhexyl) Phthalat	25.03	149	76671	540.18	ng/ml	97
78) Benzo(b)fluoranthene	27.23	252	891268	4947.53	ng/ml	94
79) Benzo(k)fluoranthene	27.28	252	591134	3452.52	ng/ml	94
80) Benzo(a)pyrene	28.00	252	694610	4062.65	ng/ml	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F012.D Vial: 12
Acq On : 18 Nov 2003 20:14 Operator: JGISH
Sample : K2308433-009 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:26 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

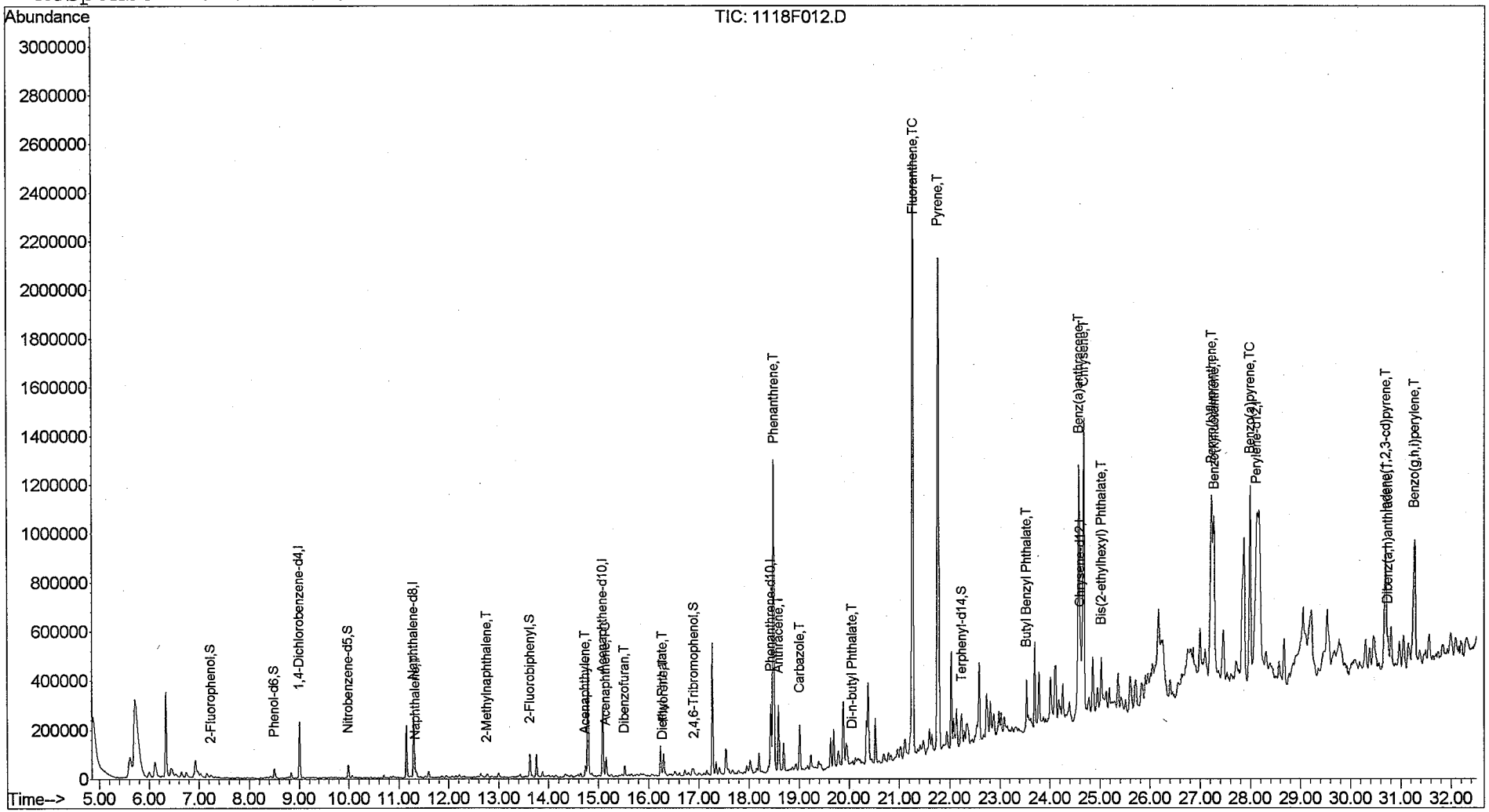
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Indeno(1,2,3-cd)pyrene	30.71	276	542165	3397.73	ng/ml	83
82)	Dibenz(a,h)anthracene	30.75	278	104286m	667.41	ng/ml	
83)	Benzo(g,h,i)perylene	31.28	276	528153	3192.36	ng/ml	86

(#) = qualifier out of range (m) = manual integration

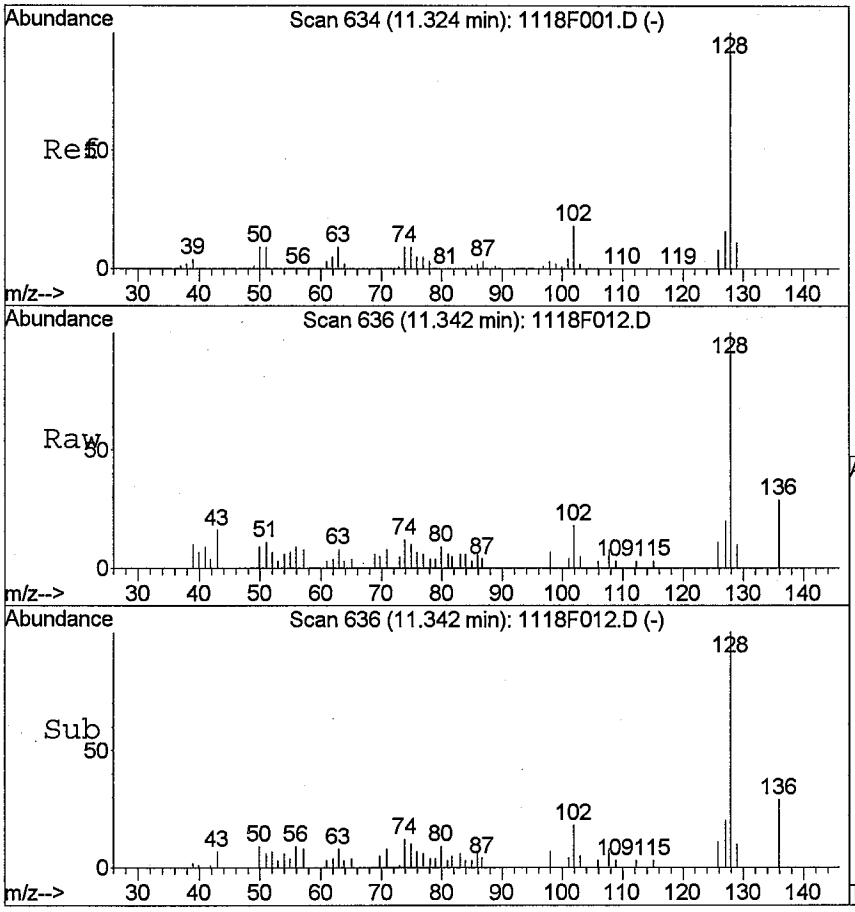
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F012.D Vial: 12
Acq On : 18 Nov 2003 20:14 Operator: JGISH
Sample : K2308433-009 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 9:07 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration



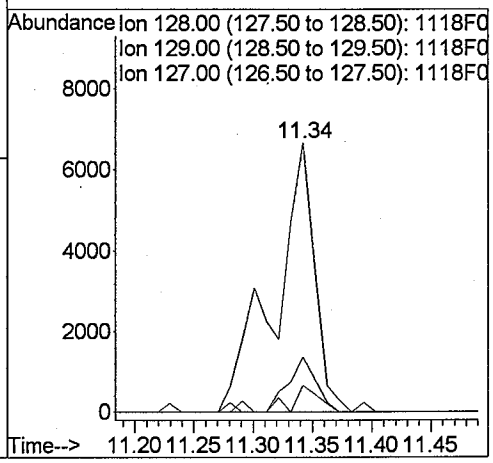
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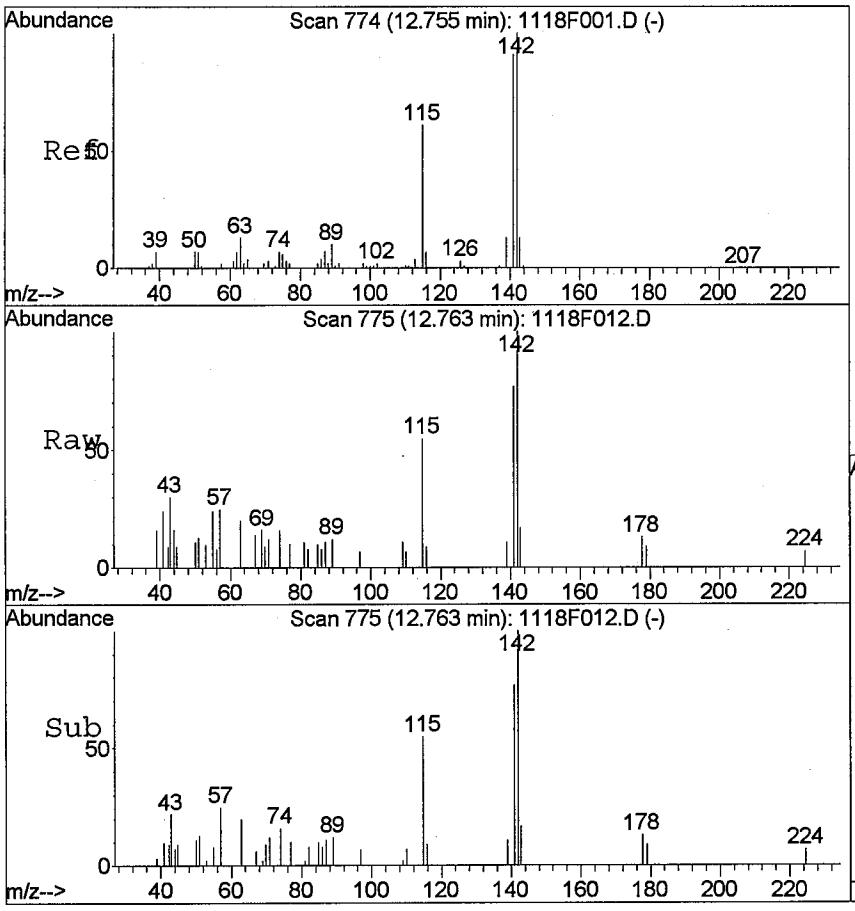


#29
Naphthalene
Concen: 95.71 ng/ml
RT: 11.34 min Scan# 636
Delta R.T. 0.04 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:128 Resp: 15744

Ion	Ratio	Lower	Upper
128	100		
129	10.0	0.0	41.3
127	20.5	0.0	44.2

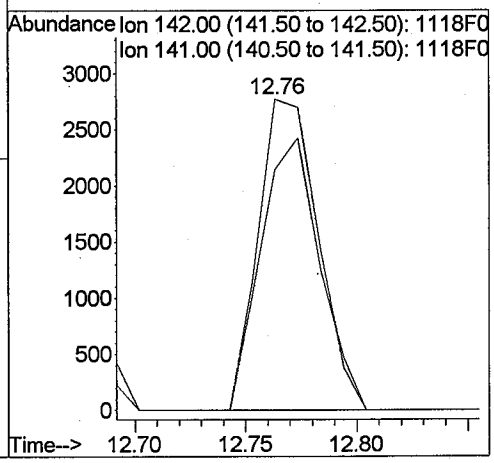


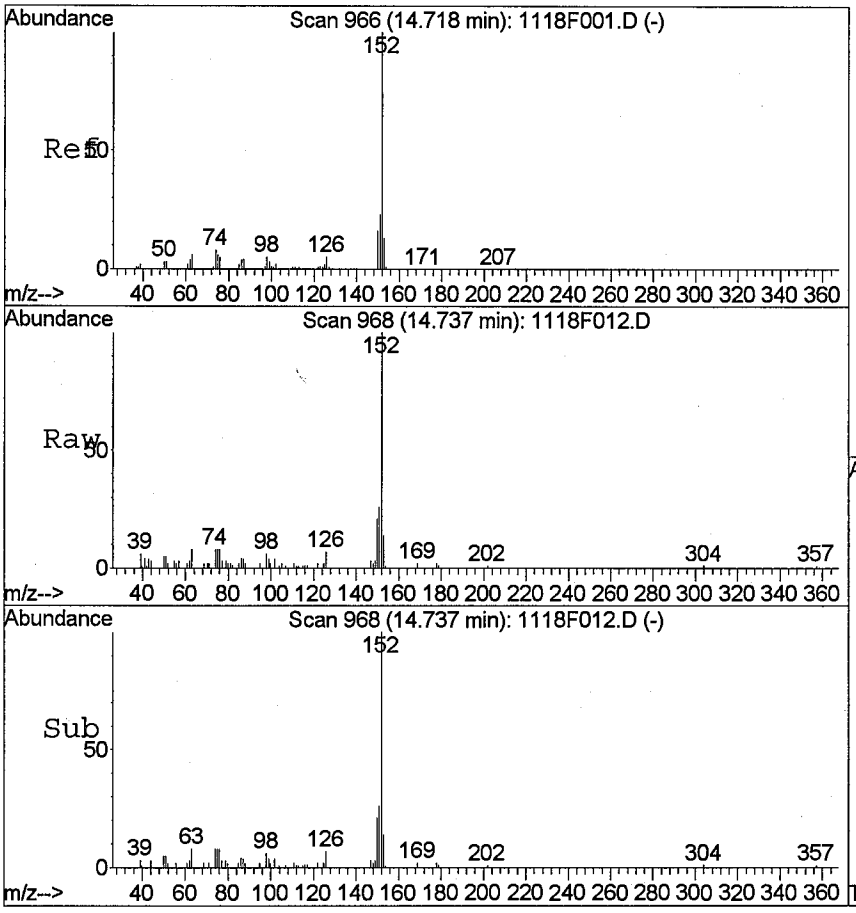


#33
2-Methylnaphthalene
Concen: 50.72 ng/ml
RT: 12.76 min Scan# 775
Delta R.T. 0.04 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:142 Resp: 5171

Ion	Ratio	Lower	Upper
142	100		
141	77.2	61.0	121.0

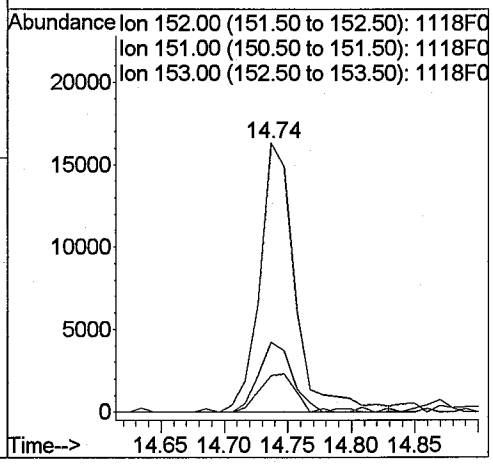


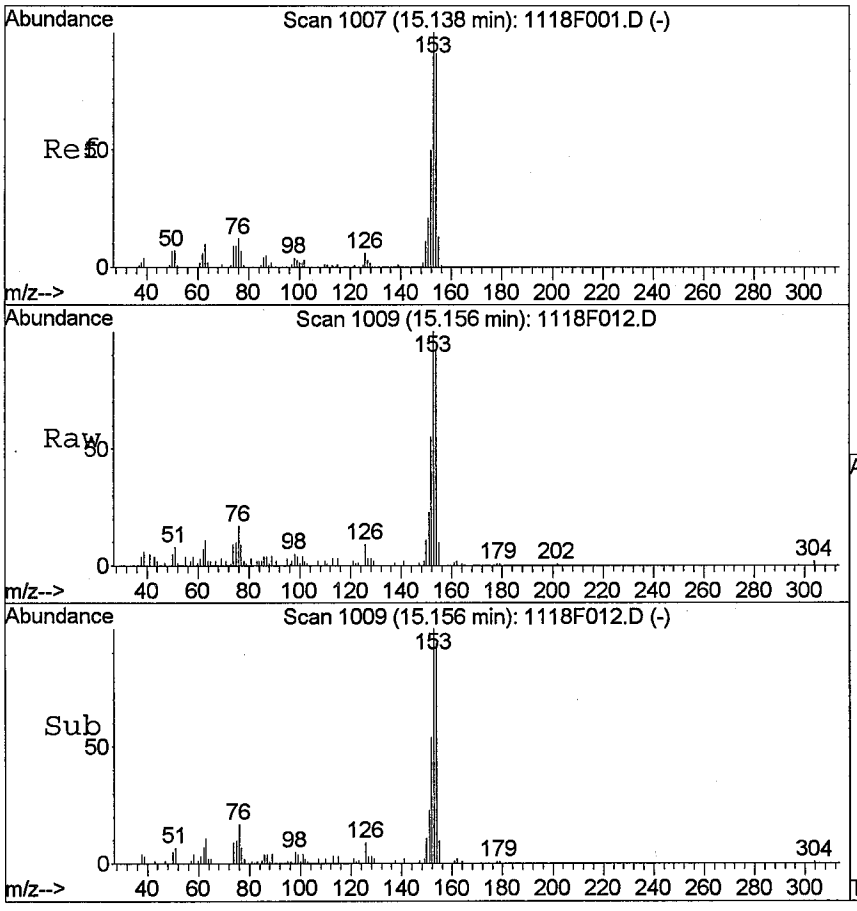


#41
Acenaphthylene
Concen: 187.13 ng/ml
RT: 14.74 min Scan# 968
Delta R.T. 0.05 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:152 Resp: 31608

Ion	Ratio	Lower	Upper
152	100		
151	25.9	0.0	51.5
153	13.5	0.0	42.9

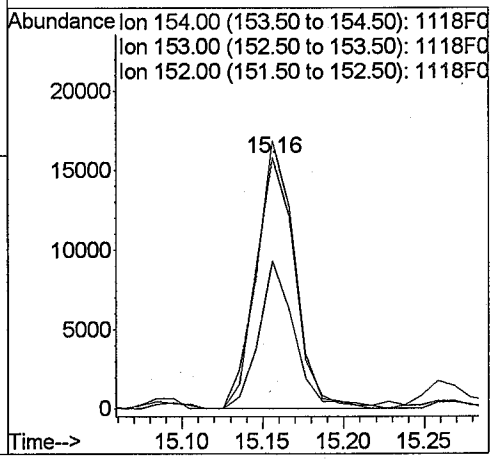


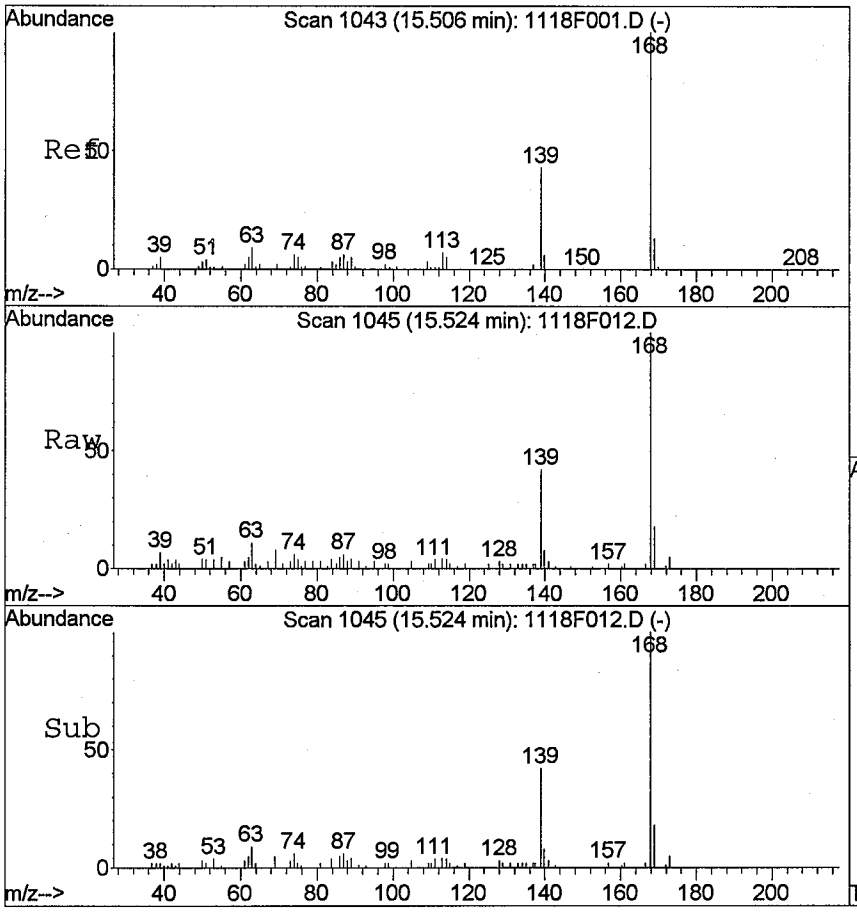


#44
Acenaphthene
Concen: 259.40 ng/ml
RT: 15.16 min Scan# 1009
Delta R.T. 0.04 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:154 Resp: 26247

Ion	Ratio	Lower	Upper
154	100		
153	106.8	82.4	142.4
152	58.8	24.4	84.4

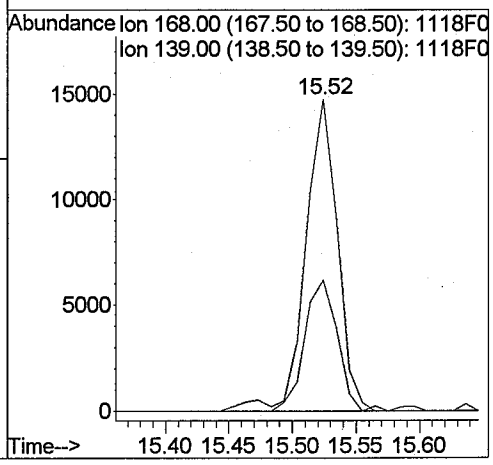


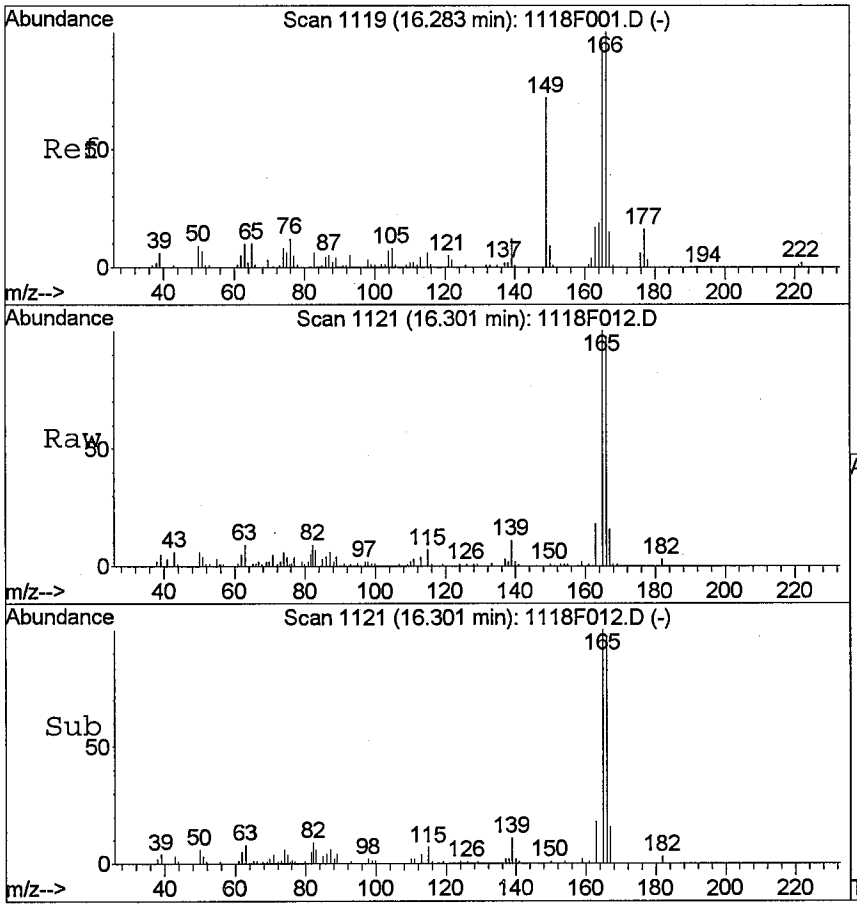


#47
Dibenzofuran
Concen: 144.32 ng/ml
RT: 15.52 min Scan# 1045
Delta R.T. 0.05 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:168 Resp: 25766

Ion	Ratio	Lower	Upper
168	100		
139	41.8	1.2	61.2

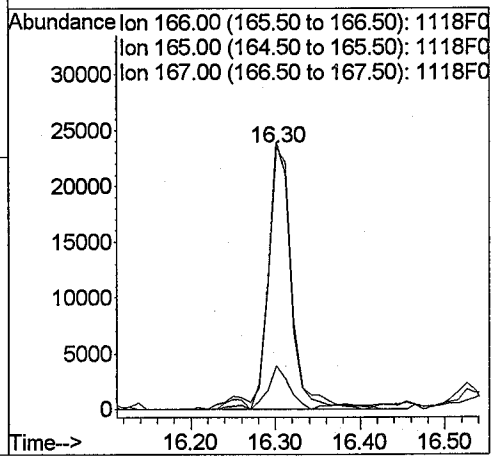


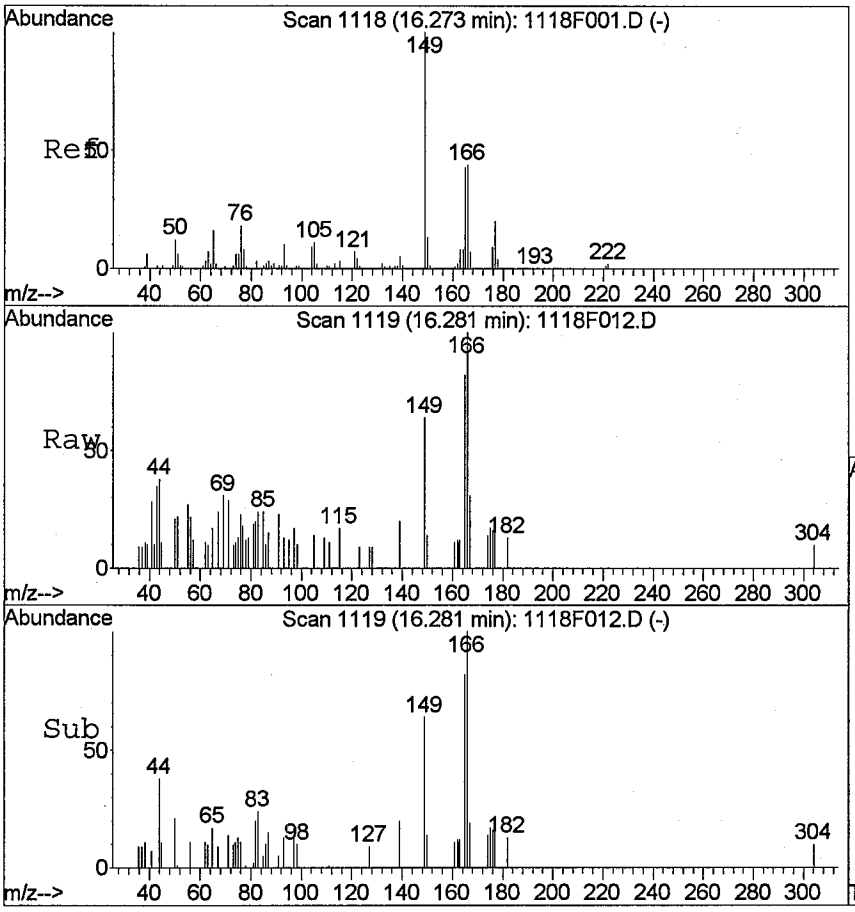


#50
Fluorene
Concen: 349.28 ng/ml
RT: 16.30 min Scan# 1121
Delta R.T. 0.04 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:166 Resp: 46014

Ion	Ratio	Lower	Upper
166	100		
165	102.2	63.2	123.2
167	16.8	0.0	43.0

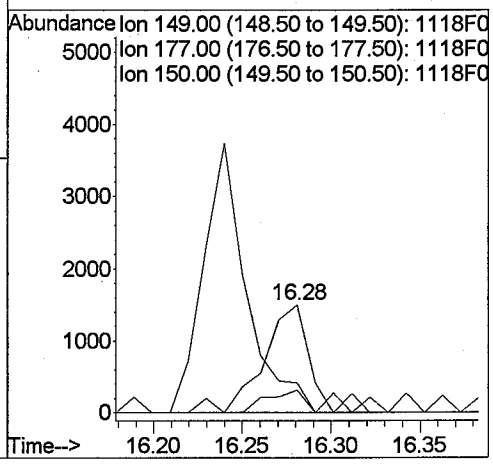


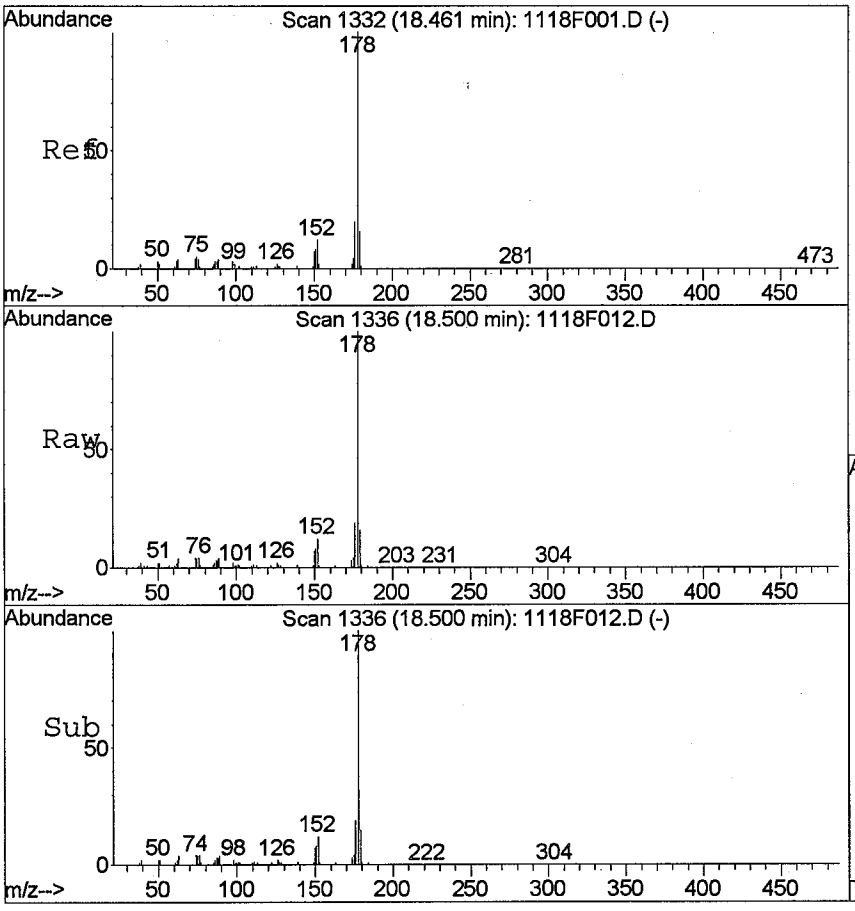


#52
Diethyl Phthalate
Concen: 16.52 ng/ml
RT: 16.28 min Scan# 1119
Delta R.T. 0.03 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:149 Resp: 2696

Ion	Ratio	Lower	Upper
149	100		
177	27.8	0.0	51.6
150	21.1	0.0	41.6

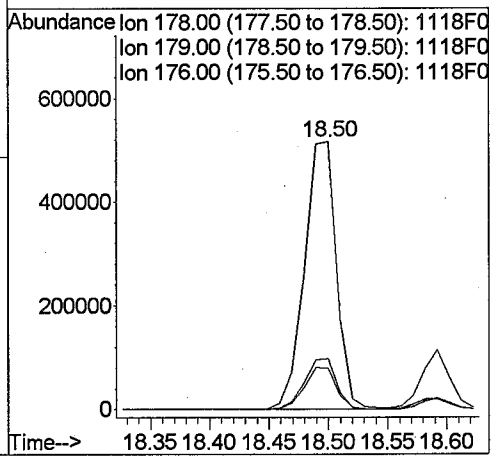


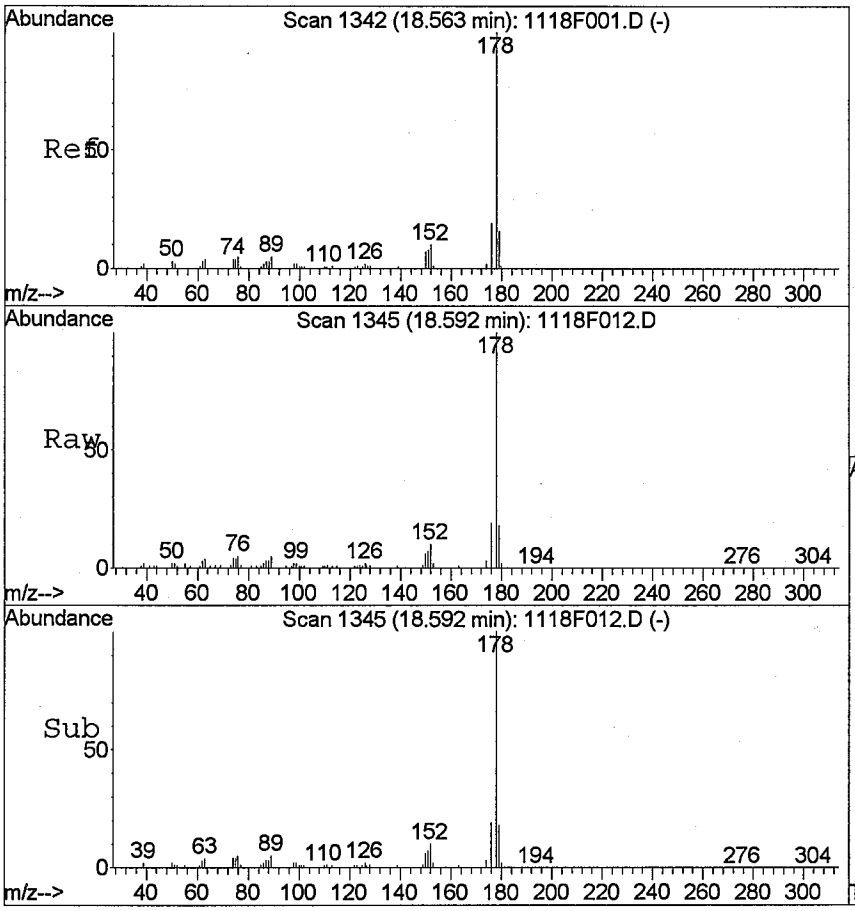


#62
Phenanthrene
Concen: 4998.31 ng/ml
RT: 18.50 min Scan# 1336
Delta R.T. 0.07 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:178 Resp: 962562

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	44.8
176	19.1	0.0	49.3

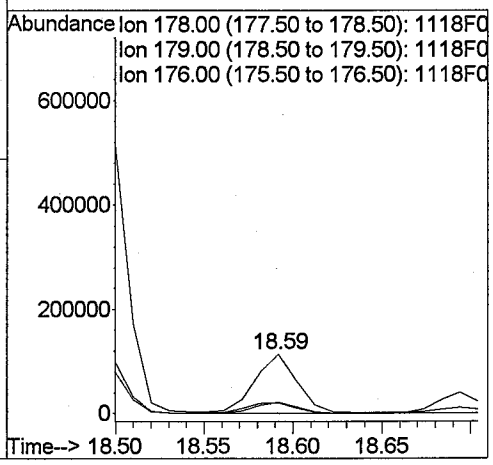


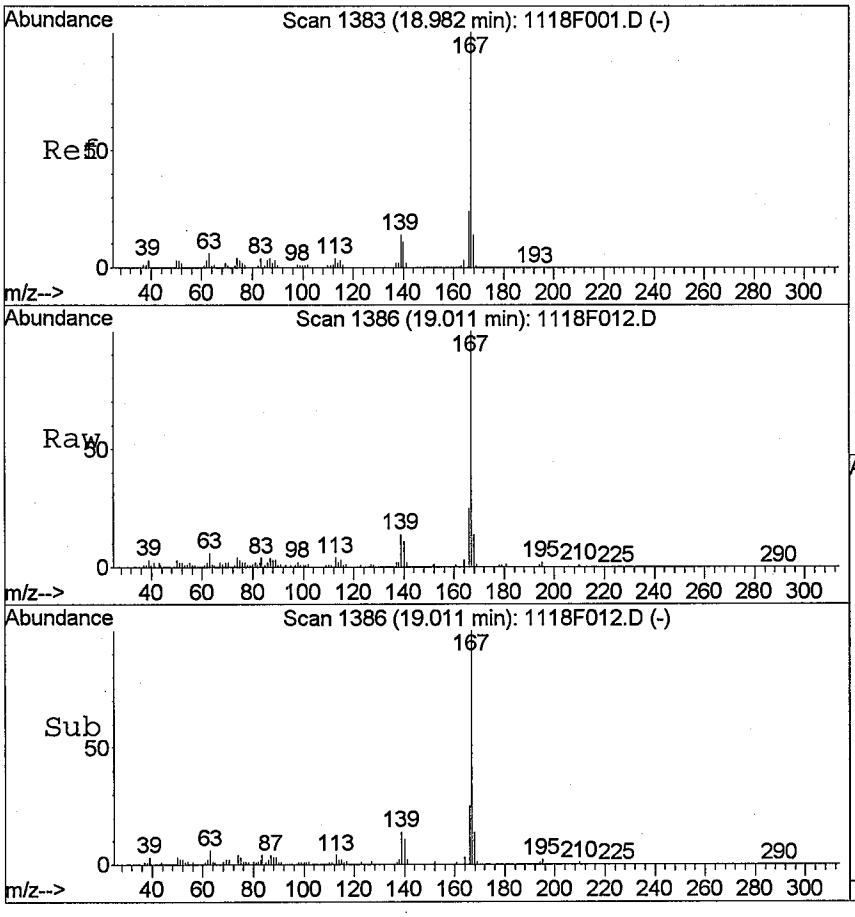


#63
Anthracene
Concen: 975.99 ng/ml
RT: 18.59 min Scan# 1345
Delta R.T. 0.06 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:178 Resp: 189389

Ion	Ratio	Lower	Upper
178	100		
179	17.5	0.0	44.7
176	19.0	0.0	49.8

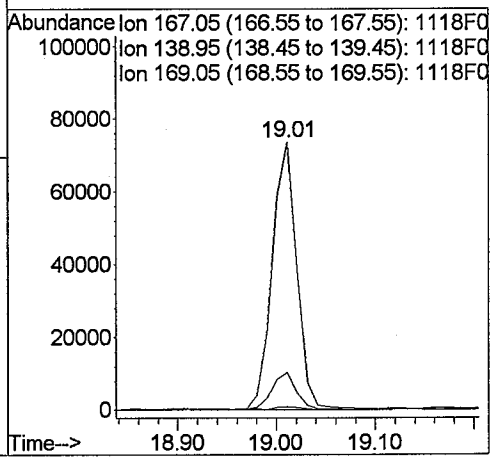


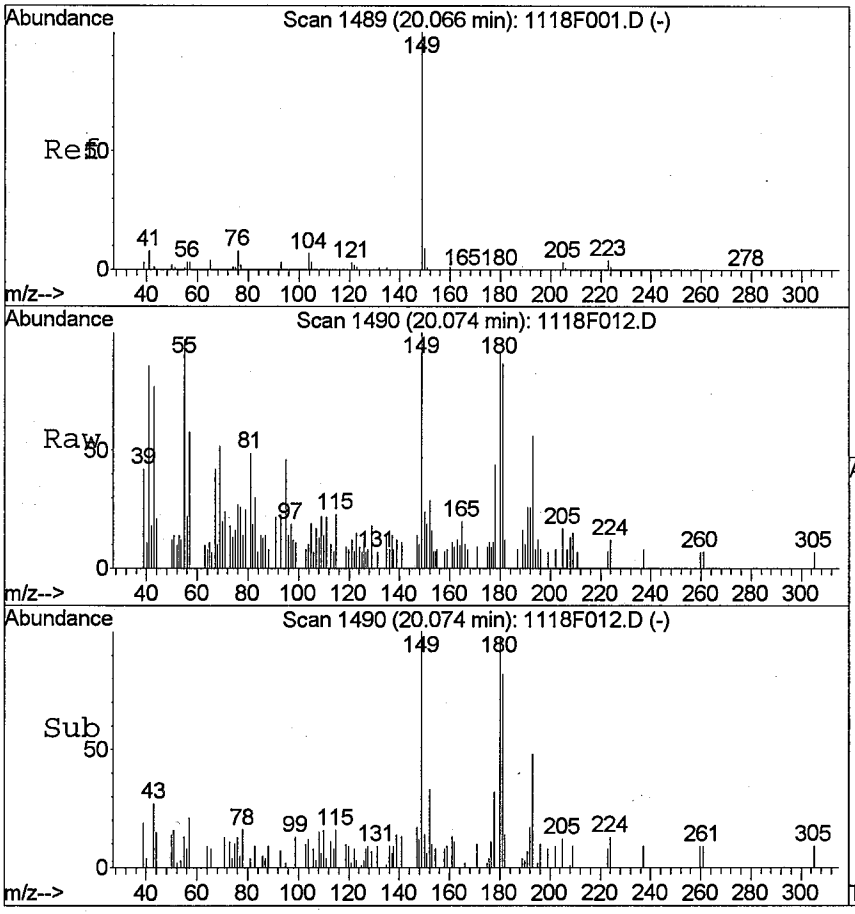


#64
Carbazole
Concen: 761.09 ng/ml
RT: 19.01 min Scan# 1386
Delta R.T. 0.06 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:167 Resp: 128465

Ion	Ratio	Lower	Upper
167	100		
139	13.7	0.0	41.7
169	1.2	0.0	30.8

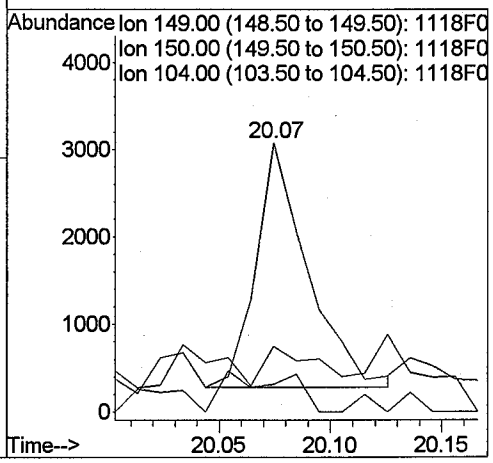


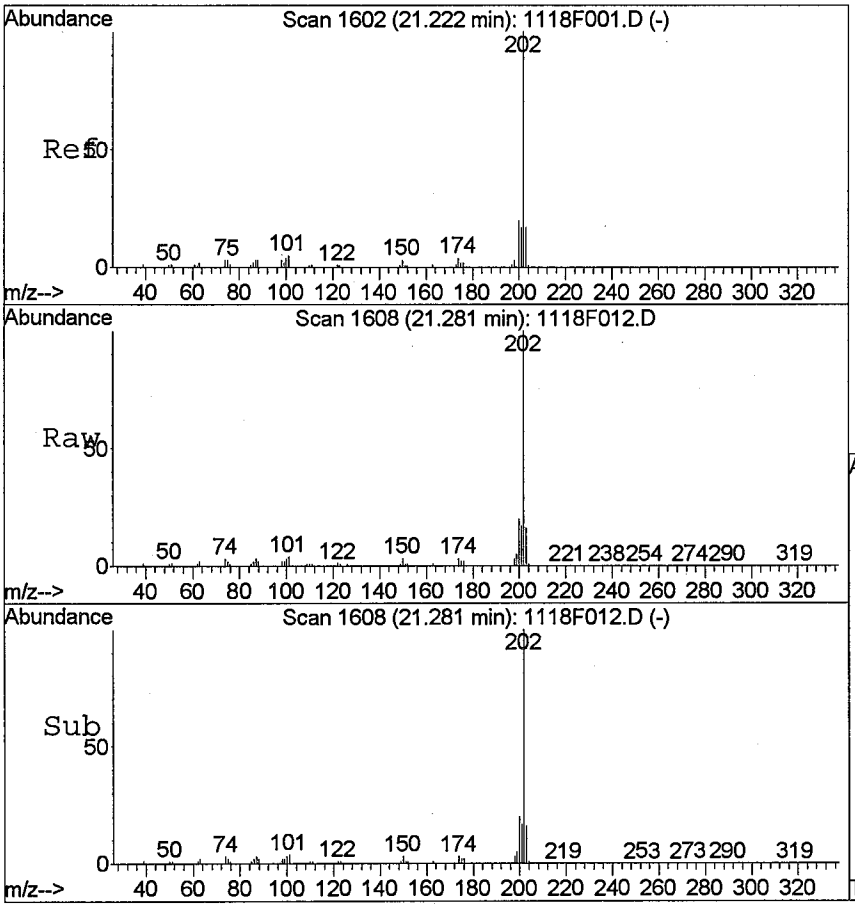


#65
Di-n-butyl Phthalate
Concen: 19.05 ng/ml
RT: 20.07 min Scan# 1490
Delta R.T. 0.04 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:149 Resp: 4479

Ion	Ratio	Lower	Upper
149	100		
150	0.0	0.0	39.4
104	11.3	0.0	35.0

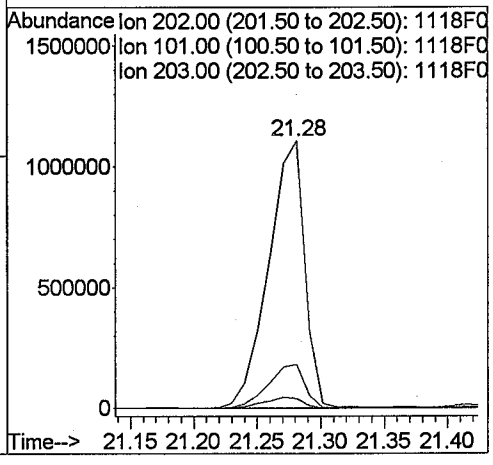


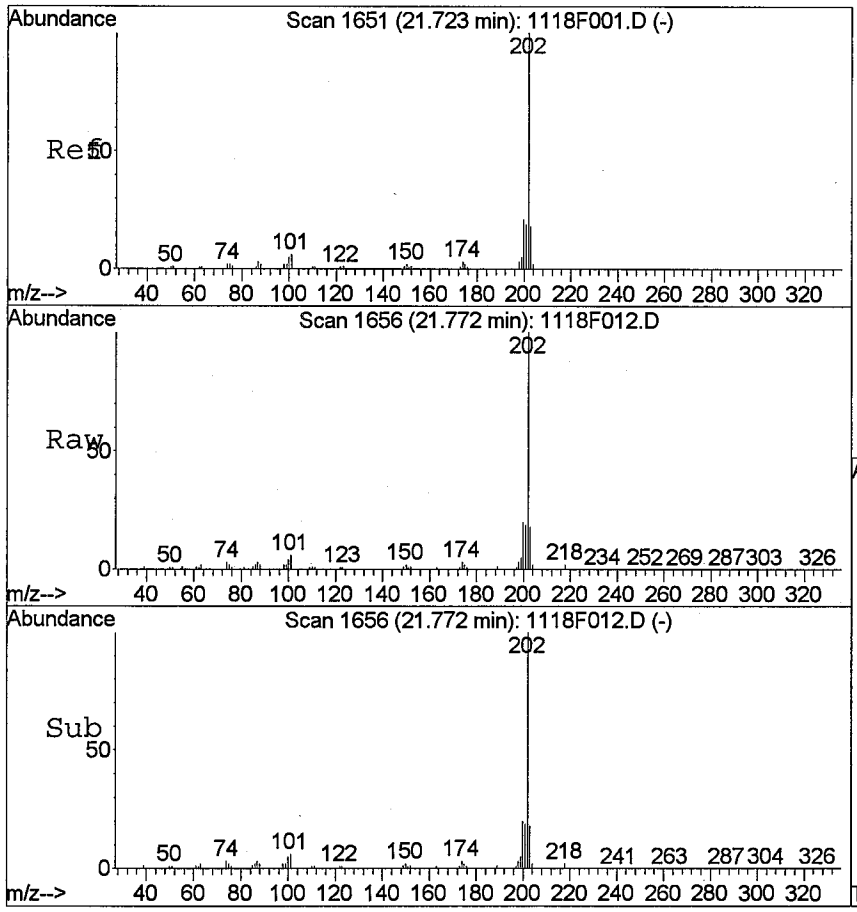


#66
Fluoranthene
Concen: 10335.70 ng/ml
RT: 21.28 min Scan# 1608
Delta R.T. 0.09 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:202 Resp: 2186507

Ion	Ratio	Lower	Upper
202	100		
101	3.7	0.0	42.0
203	16.4	0.0	47.2

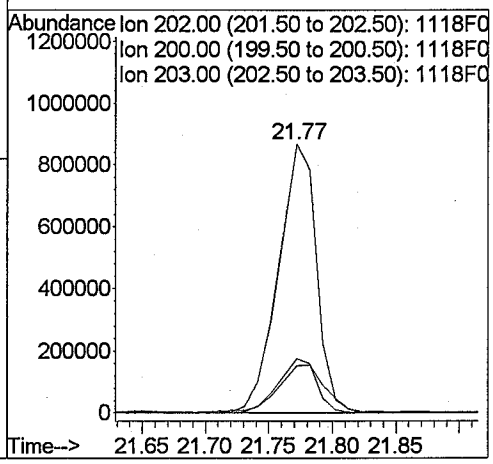


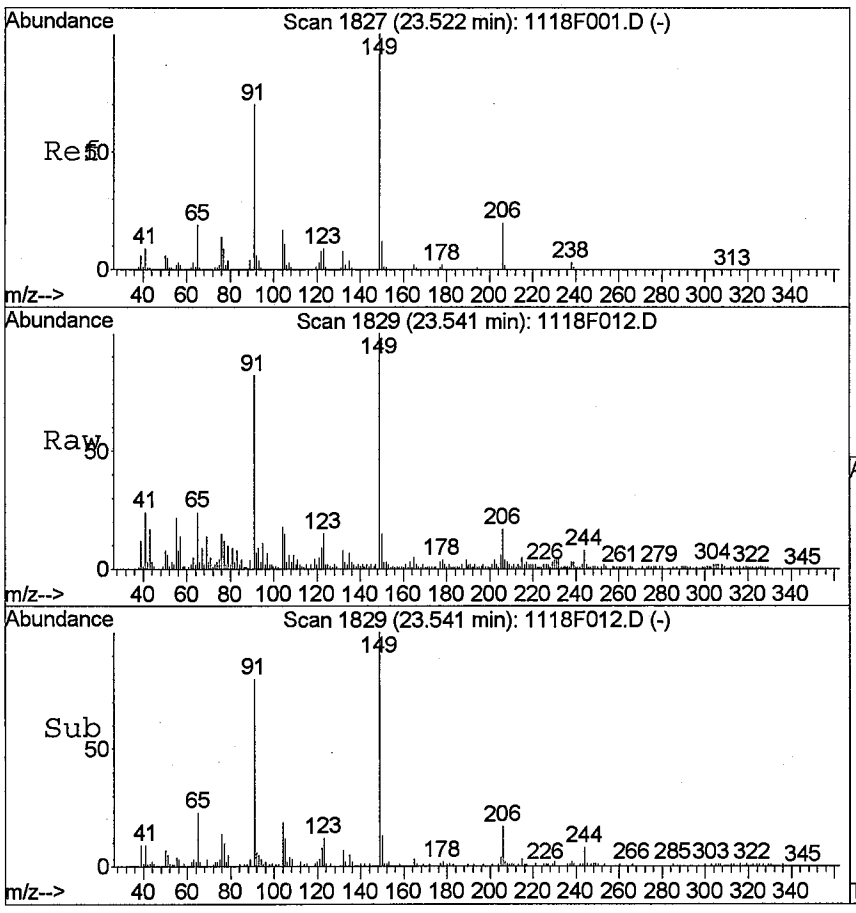


#69
Pyrene
Concen: 8152.04 ng/ml
RT: 21.77 min Scan# 1656
Delta R.T. 0.08 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:202 Resp: 1792406

Ion	Ratio	Lower	Upper
202	100		
200	20.2	0.0	50.3
203	17.4	0.0	48.1

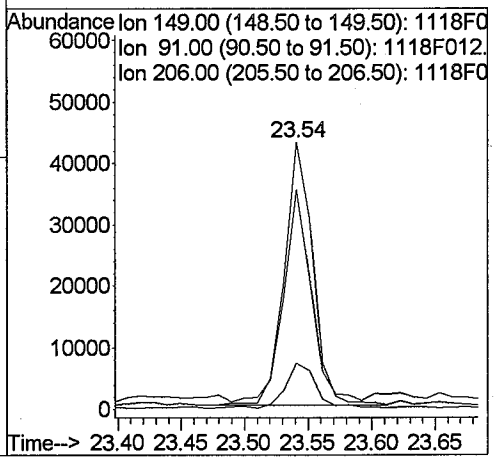


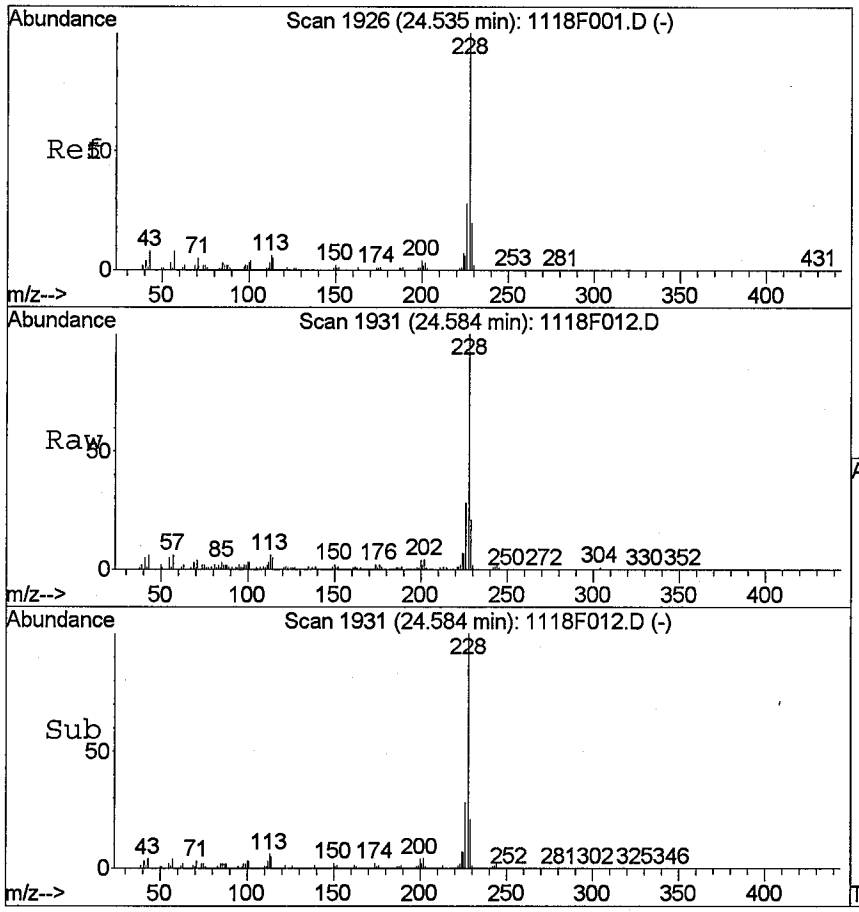


#71
Butyl Benzyl Phthalate
Concen: 677.35 ng/ml
RT: 23.54 min Scan# 1829
Delta R.T. 0.05 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:149 Resp: 66352

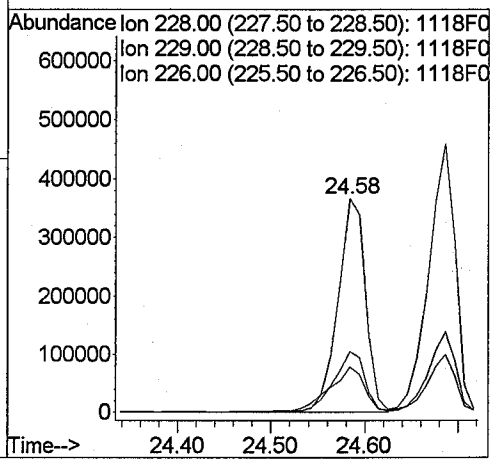
Ion	Ratio	Lower	Upper
149	100		
91	78.8	41.4	101.4
206	17.1	0.0	46.5

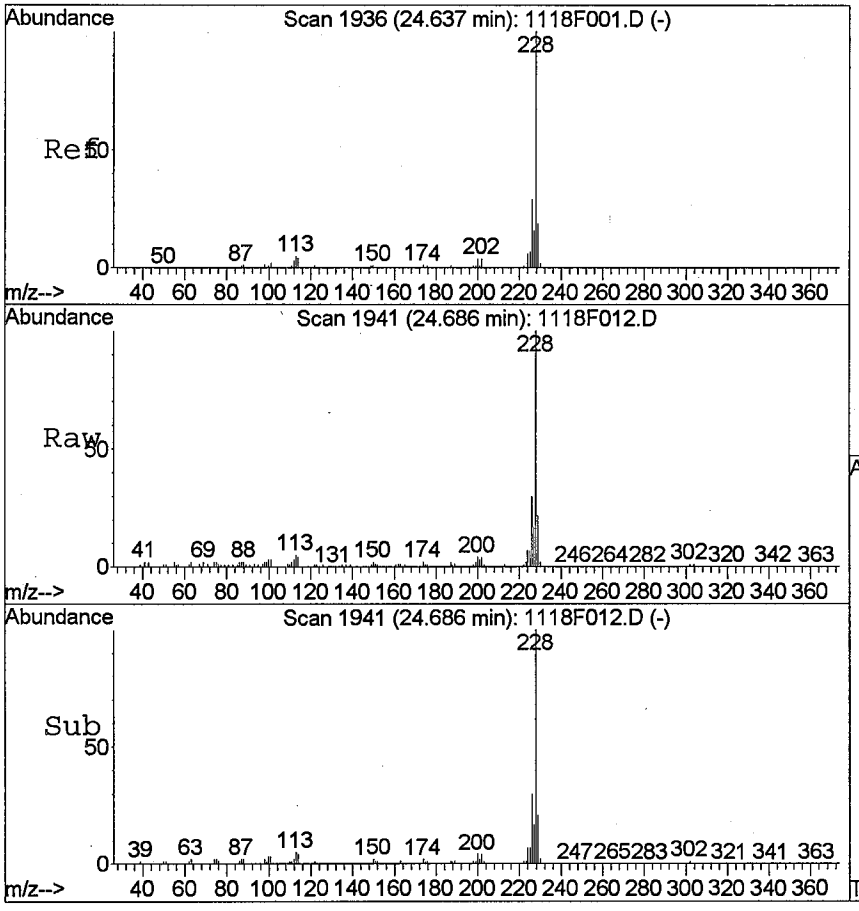




#73
Benz(a)anthracene
Concen: 3856.93 ng/ml
RT: 24.58 min Scan# 1931
Delta R.T. 0.08 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

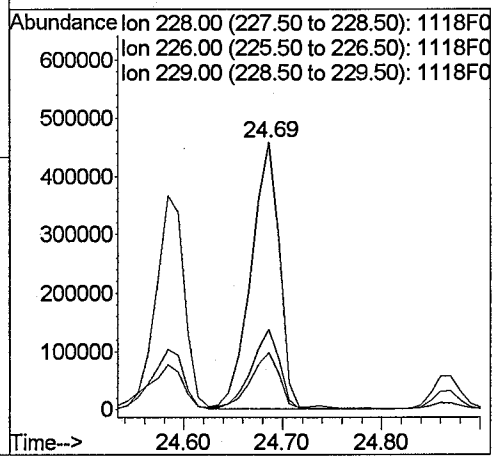
Tgt Ion:228	Resp:	750938	
Ion	Ratio	Lower	Upper
228	100		
229	21.1	0.0	48.5
226	28.4	0.0	55.6

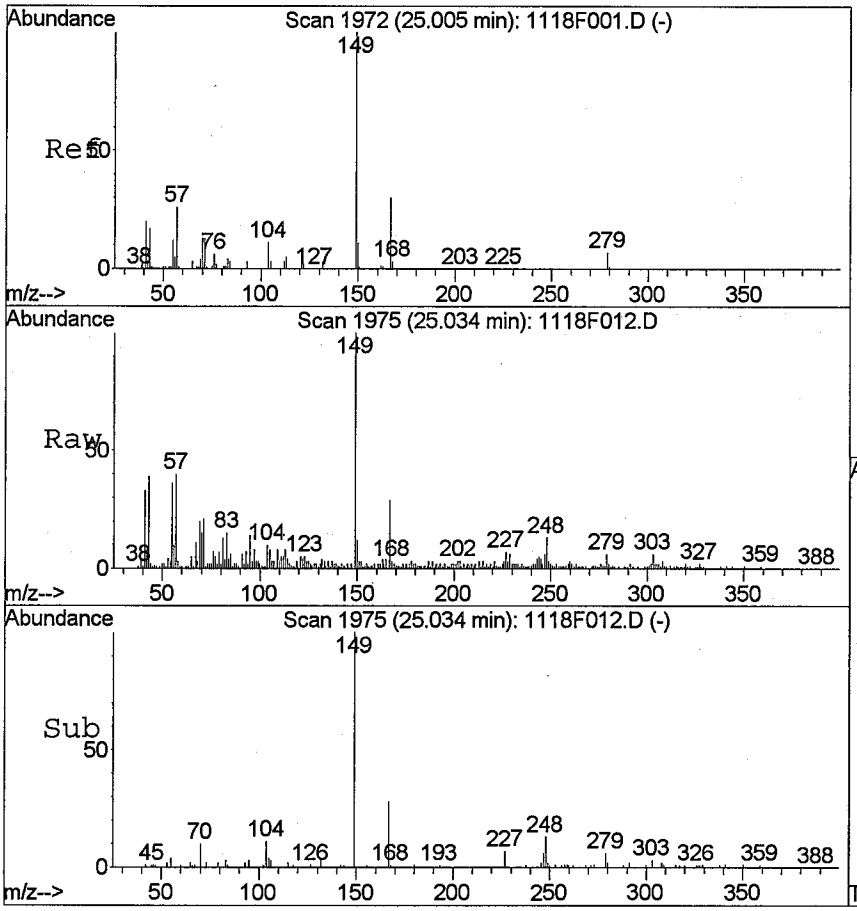




#74
Chrysene
Concen: 4977.92 ng/ml
RT: 24.69 min Scan# 1941
Delta R.T. 0.08 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:228	Resp:	918398	
Ion	Ratio	Lower	Upper
228	100		
226	29.9	0.0	58.4
229	21.2	0.0	49.1

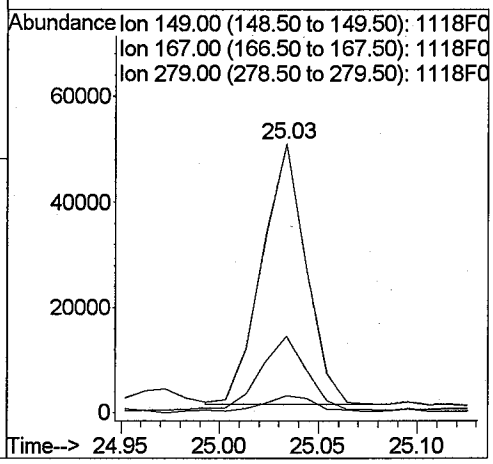


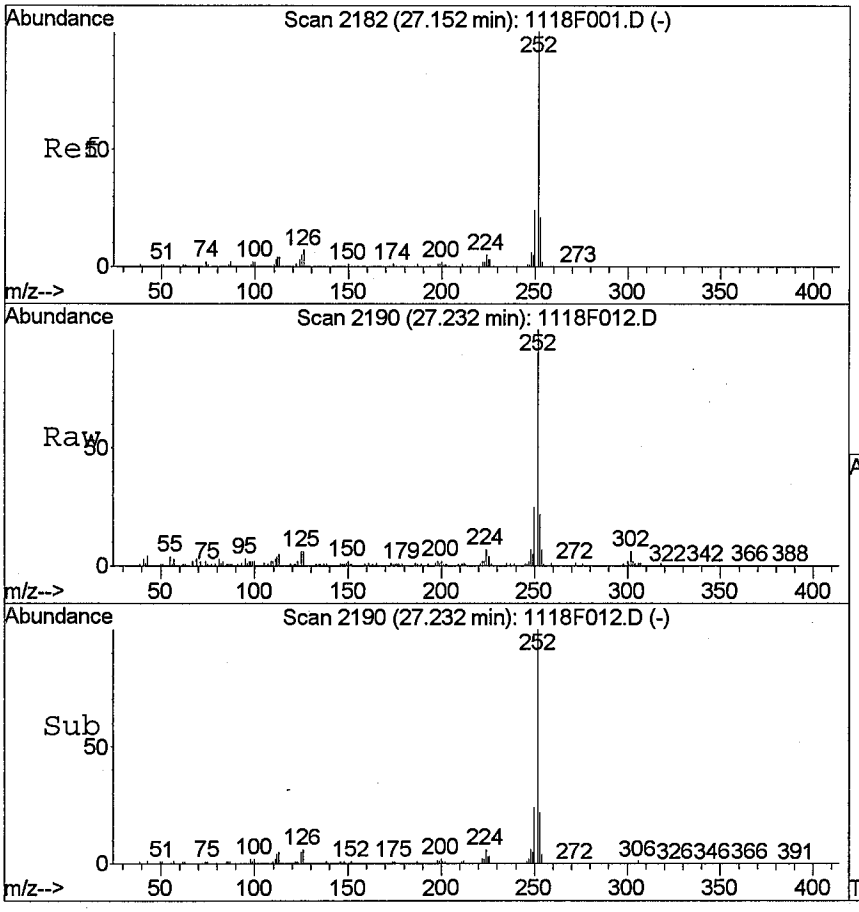


#75
Bis(2-ethylhexyl) Phthalate
Concen: 540.18 ng/ml
RT: 25.03 min Scan# 1975
Delta R.T. 0.05 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:149 Resp: 76671

Ion	Ratio	Lower	Upper
149	100		
167	28.5	0.2	60.2
279	5.8	0.0	34.5

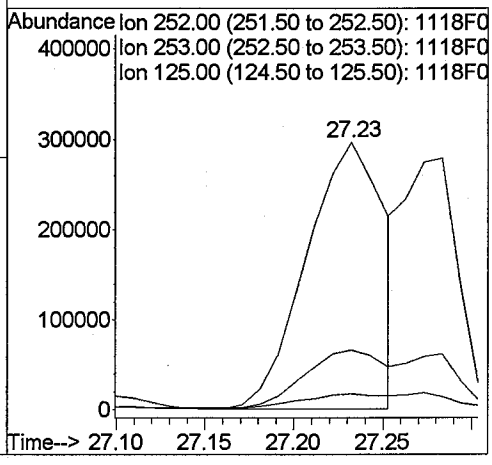


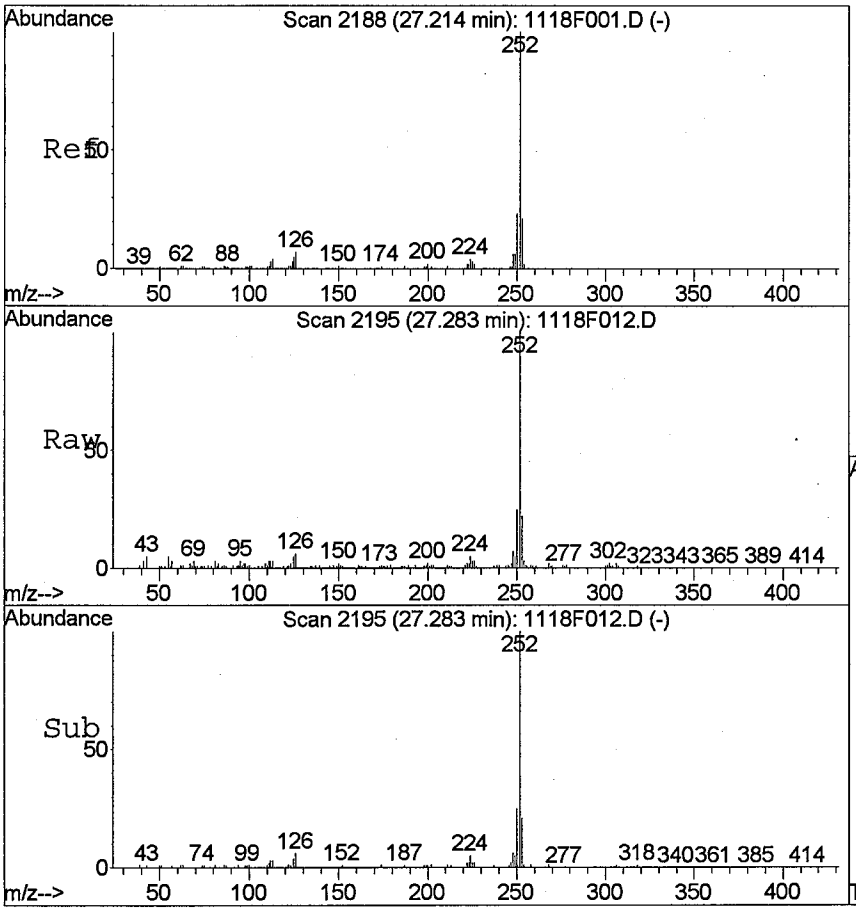


#78
Benzo(b)fluoranthene
Concen: 4947.53 ng/ml
RT: 27.23 min Scan# 2190
Delta R.T. 0.12 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:252 Resp: 891268

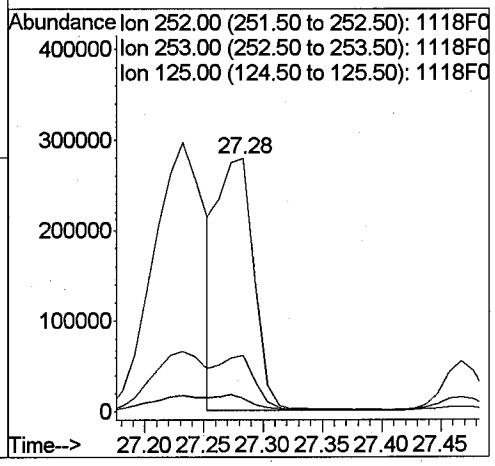
Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.3
125	5.3	0.0	41.2

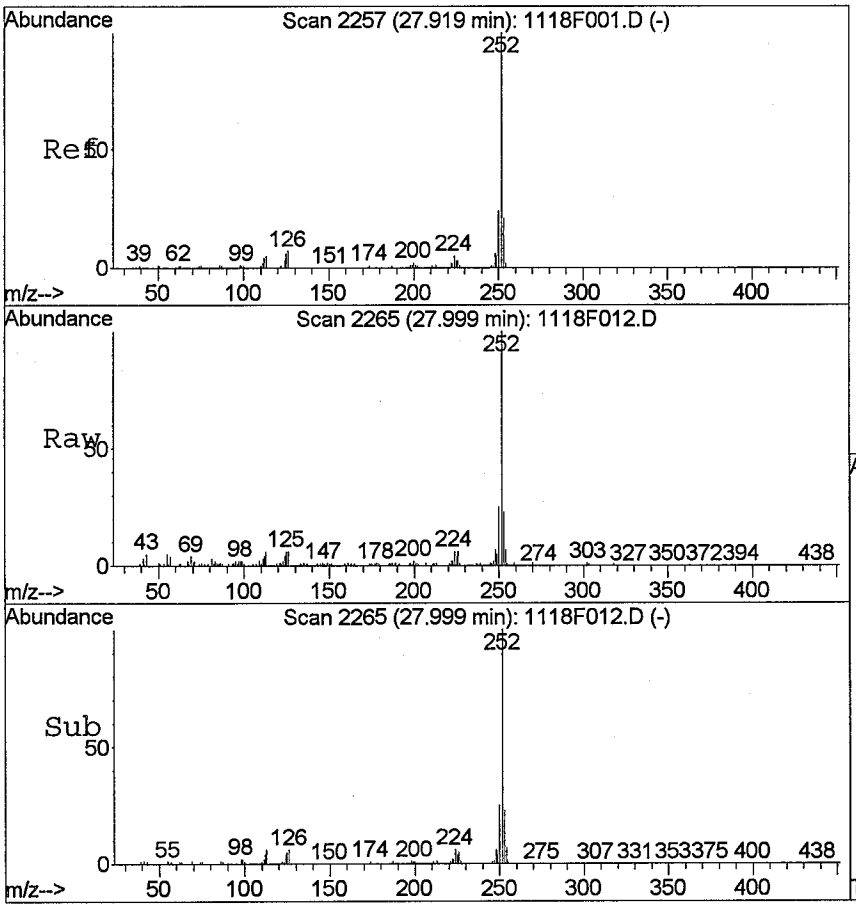




#79
Benzo(k)fluoranthene
Concen: 3452.52 ng/ml
RT: 27.28 min Scan# 2195
Delta R.T. 0.11 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

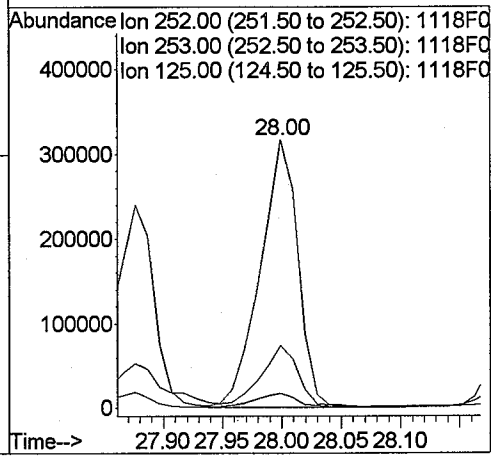
Tgt Ion:252	Resp:	591134	
Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	51.9
125	4.5	0.0	40.9

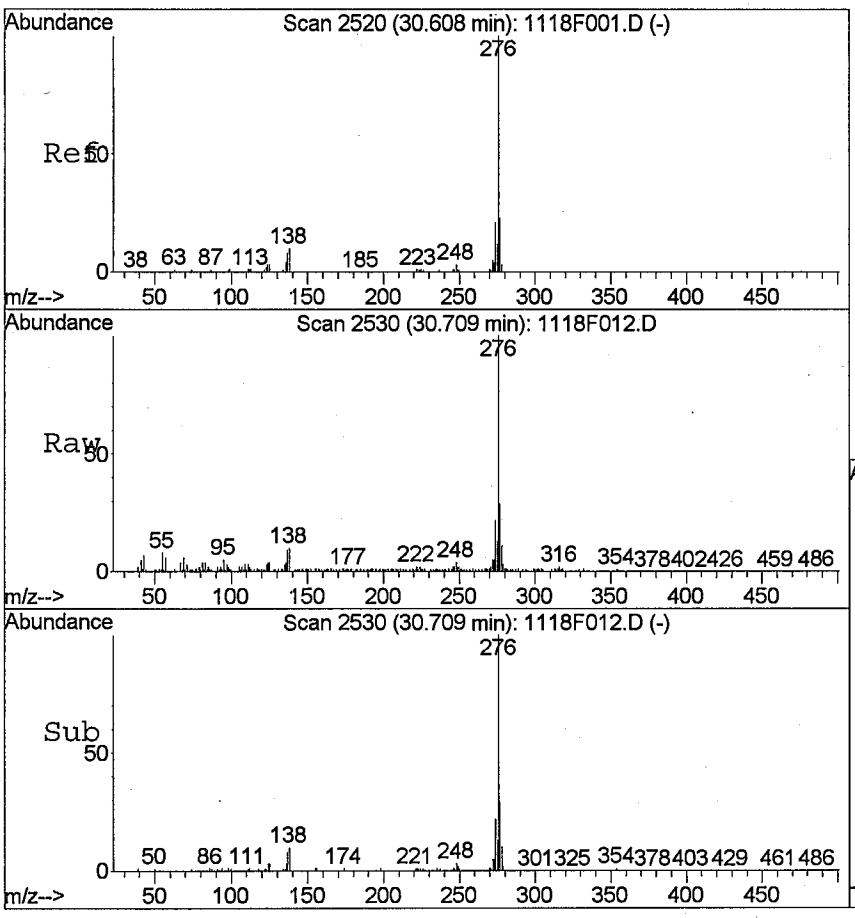




#80
Benzo(a)pyrene
Concen: 4062.65 ng/ml
RT: 28.00 min Scan# 2265
Delta R.T. 0.12 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:252	Resp:	694610	
Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	52.2
125	5.0	0.0	42.3

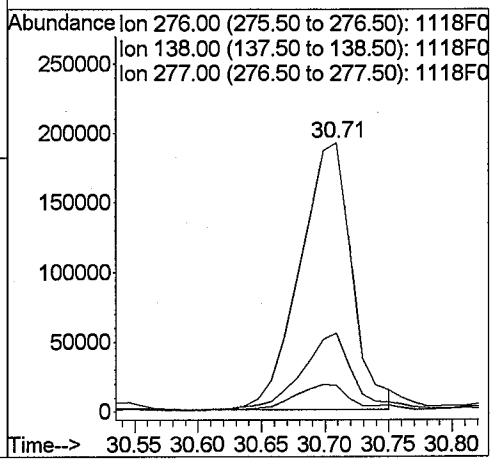


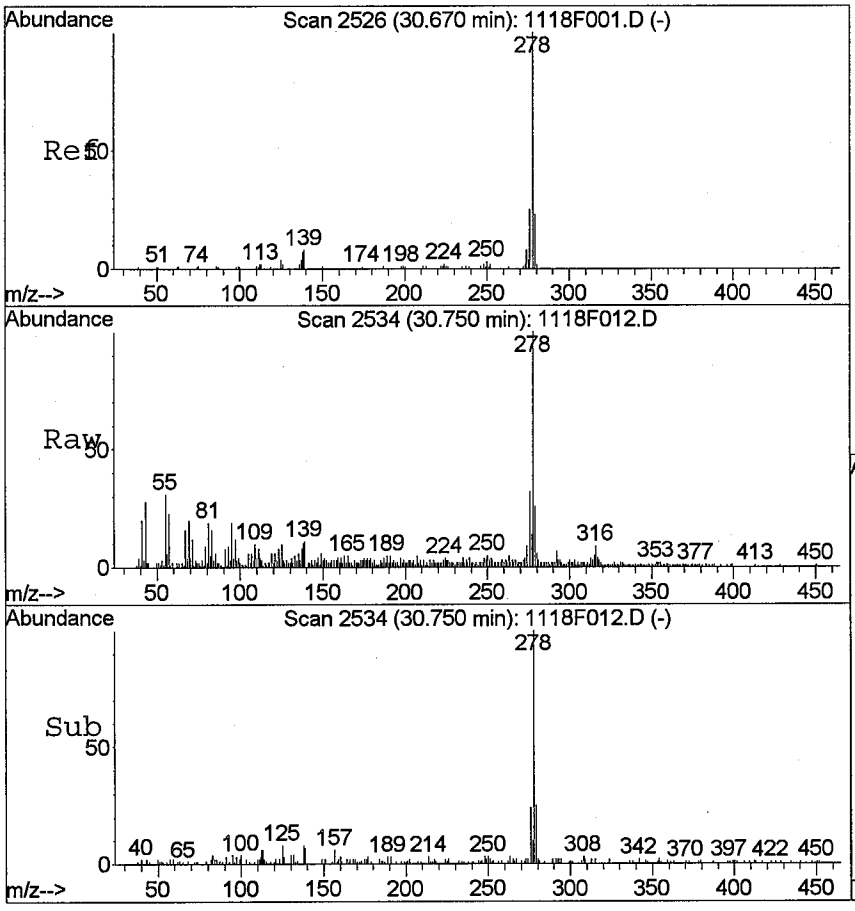


#81
Indeno(1,2,3-cd)pyrene
Concen: 3397.73 ng/ml
RT: 30.71 min Scan# 2530
Delta R.T. 0.14 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:276 Resp: 542165

Ion	Ratio	Lower	Upper
276	100		
138	9.1	0.0	51.4
277	28.5	0.0	54.0

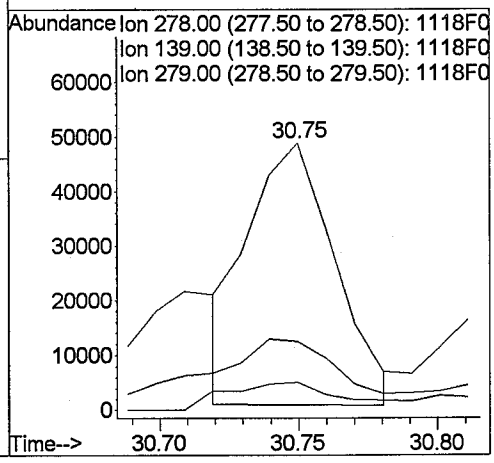


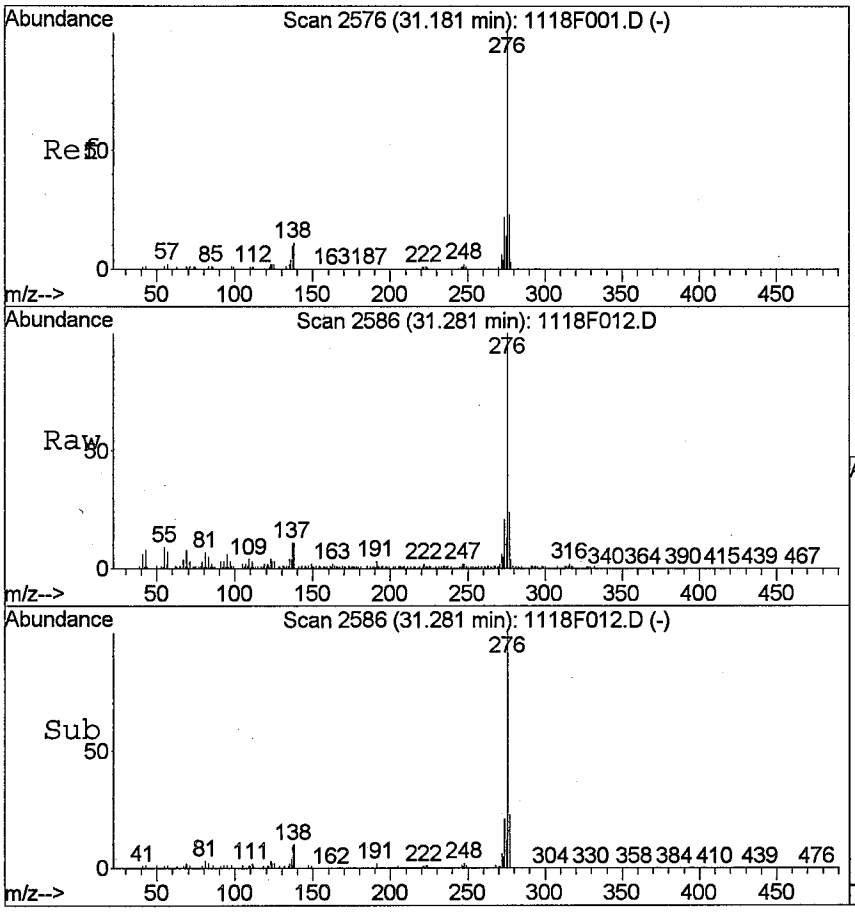


#82
Dibenz(a,h)anthracene
Concen: 667.41 ng/ml m
RT: 30.75 min Scan# 2534
Delta R.T. 0.11 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:278 Resp: 104286

Ion	Ratio	Lower	Upper
278	100		
139	10.5	0.0	46.3
279	25.6	0.0	54.8

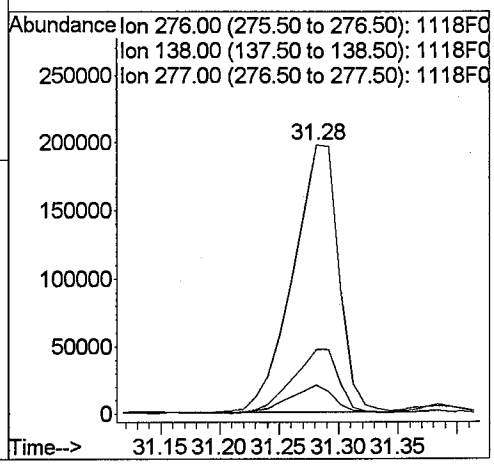




#83
Benzo(g,h,i)perylene
Concen: 3192.36 ng/ml
RT: 31.28 min Scan# 2586
Delta R.T. 0.14 min
Lab File: 1118F012.D
Acq: 18 Nov 2003 20:14

Tgt Ion:276 Resp: 528153

Ion	Ratio	Lower	Upper
276	100		
138	10.4	0.0	52.7
277	23.5	0.0	52.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0317457-5

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	21	1	10/30/03	11/12/03	KWG0317457	
2-Methylphenol	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
4-Methylphenol†	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
2,4-Dimethylphenol	ND	U	35	1	10/30/03	11/12/03	KWG0317457	
2,4-Dichlorophenol	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
2,4,6-Trichlorophenol	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
Pentachlorophenol	ND	U	35	1	10/30/03	11/12/03	KWG0317457	
Butyl Benzyl Phthalate	ND	U	7.0	1	10/30/03	11/12/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	ND	U	140	1	10/30/03	11/12/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	89	40-123	11/12/03	Acceptable
2,4,6-Tribromophenol	64	35-138	11/12/03	Acceptable
Terphenyl-d14	115	56-152	11/12/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111303\1112F013.D
Lab ID: KWG0317457-5
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/12/2003 23:33
Date Quantitated: 11/13/2003 10:36
Batch ID: KWG0318325
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K 8291
K 8433

Primary Review: 11/13/3

Secondary Review: mt 11/13/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/05/2003

Analysis Lot:	KWG0318325	**Prep Lot:**	KWG0317457	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245980	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1112BNLL.M	**Calibration ID:**	CAL3091
Title:			
Tune Ref:	J:\MS10\DATA\111303\1112A012.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\111303\1112F013.D			**Instrument:**	MS10
Acqu Date:	11/12/2003 23:33	**Quant Date:**	11/13/2003 10:36	**Vial:**	12
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317457-5			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.62	0.00	152	56825	1,000.00	OK
2	Naphthalene-d8	10.87	-0.01	136	205378	1,000.00	OK
3	Acenaphthene-d10	14.63	-0.01	164	110250	1,000.00	OK
4	Phenanthrene-d10	17.96	0.00	188	177779	1,000.00	OK
5	Chrysene-d12	24.10	-0.01	240	185390	1,000.00	OK
6	Perylene-d12	27.51	0.00	264	114671	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	6.90	0.01	0.00	112	157650	2,288	61	28-109	OK
1	Phenol-d6	8.15	0.00	0.00	99	279743	3,326	89	40-123	OK
1	Nitrobenzene-d5	9.58	0.00	0.00	82	210596	2,232	89	24-128	OK
3	2-Fluorobiphenyl	13.19	0.00	0.00	172	325931	2,228	89	28-126	OK
4	2,4,6-Tribromophenol	16.44	-0.01	0.00	330	63552	2,392	64	35-138	OK
5	Terphenyl-d14	21.78	0.00	0.00	244	411216	2,885	115	56-152	OK

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine				42	0		6.1	U	
1	Pyridine				79	0d		3.0	U	
1	Bis(2-chloroethyl) Ether				93	0d		2.4	U	
1	Phenol	8.17		0.00	94	10920	118.08	8.15	J	
1	Aniline				93	0d		1.5	U	
1	2-Chlorophenol				128	0		1.7	U	
1	1,3-Dichlorobenzene				146	0		1.6	U	
1	1,4-Dichlorobenzene				146	0		1.9	U	
1	1,2-Dichlorobenzene				146	0		1.3	U	
1	Benzyl Alcohol				108	0		3.7	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F013.D			**Instrument:**	MS10
Acqu Date:	11/12/2003 23:33	**Quant Date:**	11/13/2003 10:36	**Vial:**	12
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317457-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether				45	0		1.2	U	
1	2-Methylphenol				107	0		3.4	U	
1	Hexachloroethane				117	0		2.2	U	
1	N-Nitrosodi-n-propylamine				70	0		3.2	U	
1	4-Methylphenol				107	0		2.9	U	
1	Nitrobenzene				77	0d		2.0	U	
2	Isophorone				82	0		1.6	U	
2	2-Nitrophenol				139	0		2.6	U	
2	2,4-Dimethylphenol				122	0		5.5	U	
2	Bis(2-chloroethoxy)methane				93	0		1.3	U	
2	2,4-Dichlorophenol				162	0		1.8	U	
2	Benzoic Acid				122	0		96	U	
2	1,2,4-Trichlorobenzene				180	0		1.5	U	
2	Naphthalene				128	0		1.3	U	
2	4-Chloroaniline	11.09		0.00	127	2781	30.85	2.13	J	
2	Hexachlorobutadiene				225	0		1.4	U	
2	4-Chloro-3-methylphenol				107	0		2.1	U	
2	2-Methylnaphthalene				142	0		1.2	U	
3	Hexachlorocyclopentadiene				237	0		15	U	
3	2,4,6-Trichlorophenol				196	0		1.8	U	
3	2,4,5-Trichlorophenol				196	0		3.0	U	
3	2-Chloronaphthalene				127	0		3.6	U	
3	2-Nitroaniline				65	0		2.7	U	
3	Acenaphthylene				152	0		1.4	U	
3	Dimethyl Phthalate				163	0		1.8	U	
3	2,6-Dinitrotoluene				165	0		2.8	U	
3	Acenaphthene				154	0		1.0	U	
3	3-Nitroaniline				138	0		2.6	U	
3	2,4-Dinitrophenol				184	0		36	U	
3	Dibenzofuran				168	0		1.3	U	
3	4-Nitrophenol				109	0		30	U	
3	2,4-Dinitrotoluene				165	0		2.8	U	
3	Fluorene				166	0		1.7	U	
3	4-Chlorophenyl Phenyl Ether				204	0		2.0	U	
3	Diethyl Phthalate	15.83	-0.02	0.00	149	13672	77.80	5.37	J	
3	4-Nitroaniline				138	0		3.4	U	
3	2-Methyl-4,6-dinitrophenol				198	0		1.7	U	
3	N-Nitrosodiphenylamine				169	0		2.2	U	
3	Azobenzene				77	0		2.4	U	
4	4-Bromophenyl Phenyl Ether				248	0		1.4	U	
4	Hexachlorobenzene				284	0		2.1	U	
4	Pentachlorophenol				266	0		8.5	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F013.D			**Instrument:**	MS10
Acqu Date:	11/12/2003 23:33	**Quant Date:**	11/13/2003 10:36	**Vial:**	12
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0317457-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene				178	0		1.3	U	
4	Anthracene				178	0		1.4	U	
4	Carbazole				167	0		1.3	U	
4	Di-n-butyl Phthalate	19.64	-0.01	0.00	149	15871	65.08	4.49	J	
4	Fluoranthene				202	0		2.2	U	
5	Pyrene				202	0		1.3	U	
5	Butyl Benzyl Phthalate				149	0		1.5	U	
5	3,3'-Dichlorobenzidine				252	0d		3.7	U	
5	Benz(a)anthracene				228	0		1.4	U	
5	Chrysene				228	0		1.4	U	
5	Bis(2-ethylhexyl) Phthalate	24.58	0.01	0.00	149	6271	40.29	2.78	J	
6	Di-n-octyl Phthalate				149	0		1.2	U	
6	Benzo(b)fluoranthene				252	0		2.5	U	
6	Benzo(k)fluoranthene				252	0		2.5	U	
6	Benzo(a)pyrene				252	0		1.6	U	
6	Indeno(1,2,3-cd)pyrene				276	0		1.9	U	
6	Dibenz(a,h)anthracene				278	0		2.2	U	
6	Benzo(g,h,i)perylene				276	0		2.3	U	

Prep Amount:	28.96 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Data File : J:\MS10\DATA\111303\1112F013.D Vial: 12
Acq On : 12 Nov 2003 23:33 Operator: JGISH
Sample : KWG0317457-5 MB Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:36:59 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:35:20 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

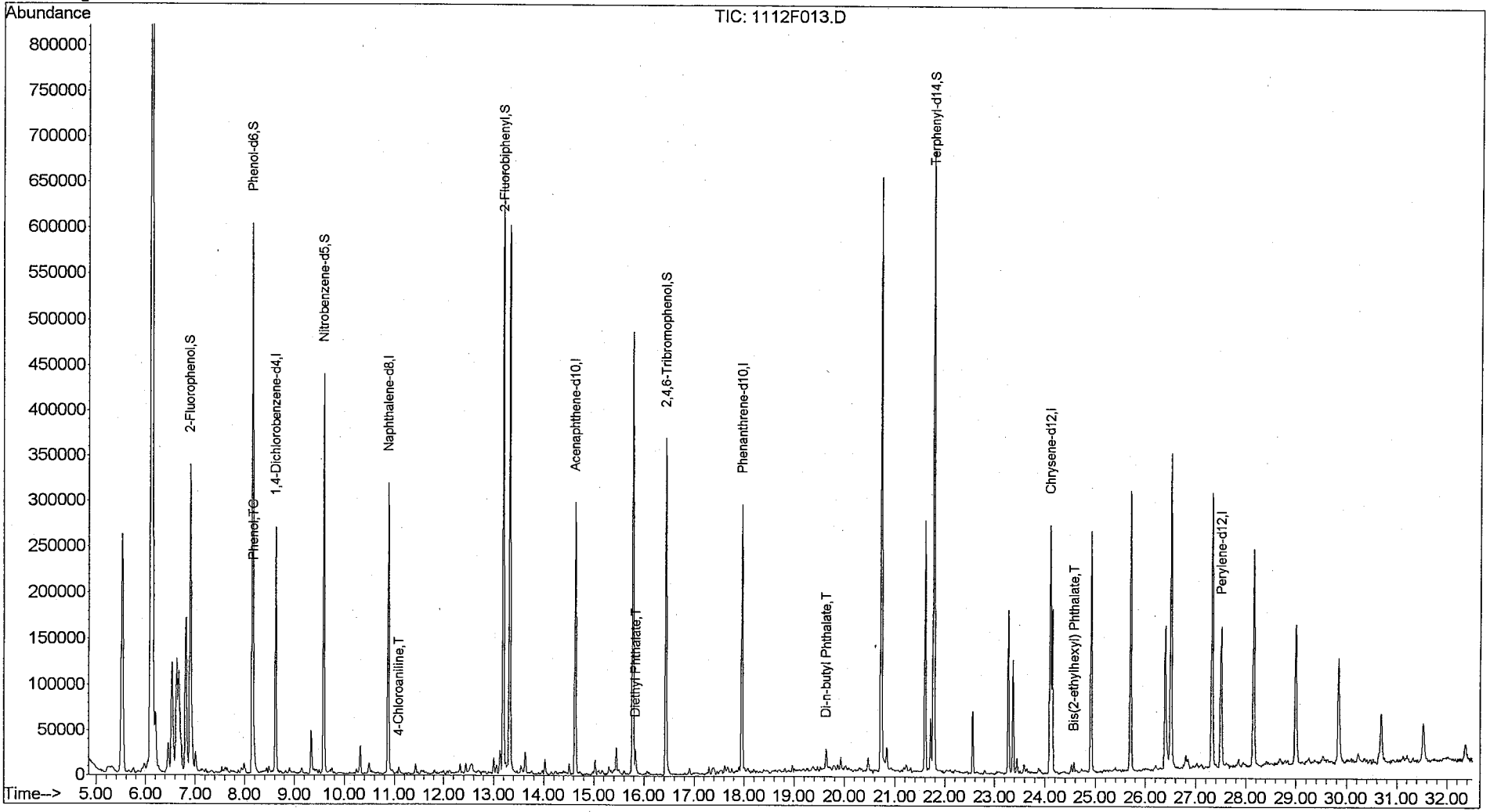
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	56825	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.87	136	205378	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.63	164	110250	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	177779	1000.00	ng/ml	0.00
67) Chrysene-d12	24.10	240	185390	1000.00	ng/ml	0.00
76) Perylene-d12	27.51	264	114671	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.90	112	157650	2288.09	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 61.02%			
6) Phenol-d6	8.15	99	279743	3326.15	ng/ml	-0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 88.70%			
19) Nitrobenzene-d5	9.58	82	210596	2232.03	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 89.28%			
38) 2-Fluorobiphenyl	13.19	172	325931	2228.08	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 89.12%			
58) 2,4,6-Tribromophenol	16.44	330	63552	2392.41	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 63.80%			
70) Terphenyl-d14	21.78	244	411216	2884.97	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 115.40%			
Target Compounds						Qvalue
7) Phenol	8.17	94	10920	118.08	ng/ml#	27
30) 4-Chloroaniline	11.09	127	2781	30.85	ng/ml	92
52) Diethyl Phthalate	15.83	149	13672	77.80	ng/ml	96
65) Di-n-butyl Phthalate	19.64	149	15871	65.08	ng/ml	95
75) Bis(2-ethylhexyl) Phthalat	24.58	149	6271	40.29	ng/ml	92

(#) = qualifier out of range (m) = manual integration

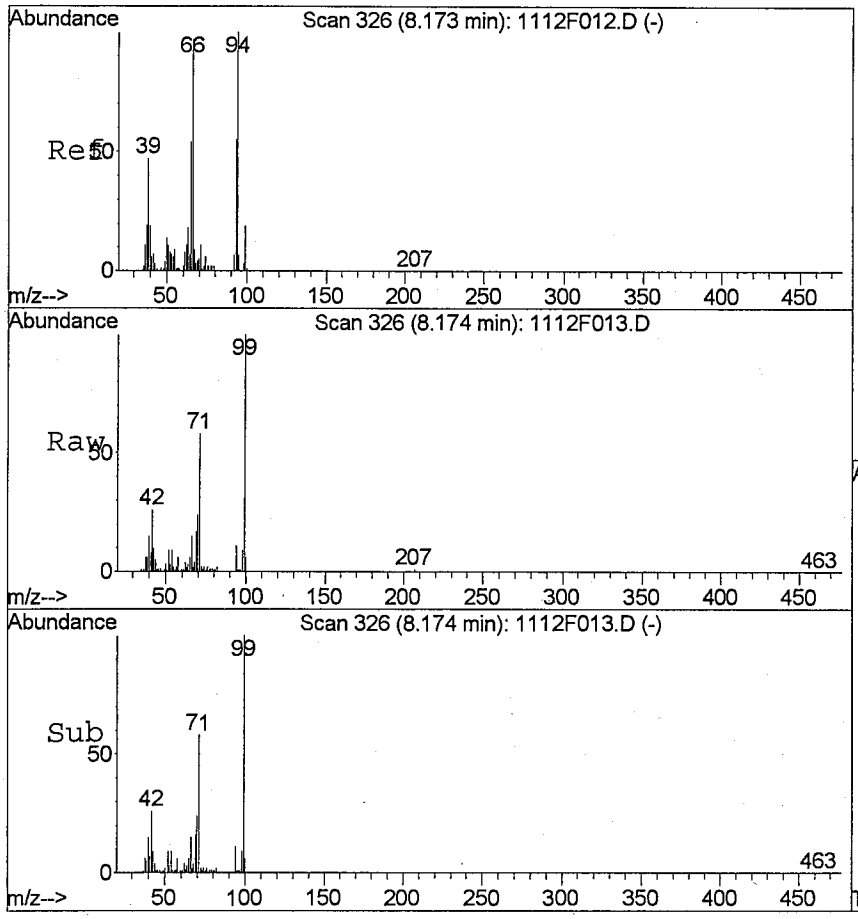
Quantitation Report (Not Reviewed)

Data File : J:\MS10\DATA\111303\1112F013.D Vial: 12
Acq On : 12 Nov 2003 23:33 Operator: JGISH
Sample : KWG0317457-5 MB Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:36 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration



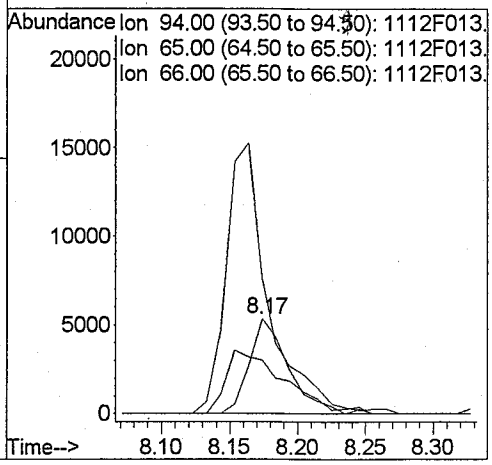
2011

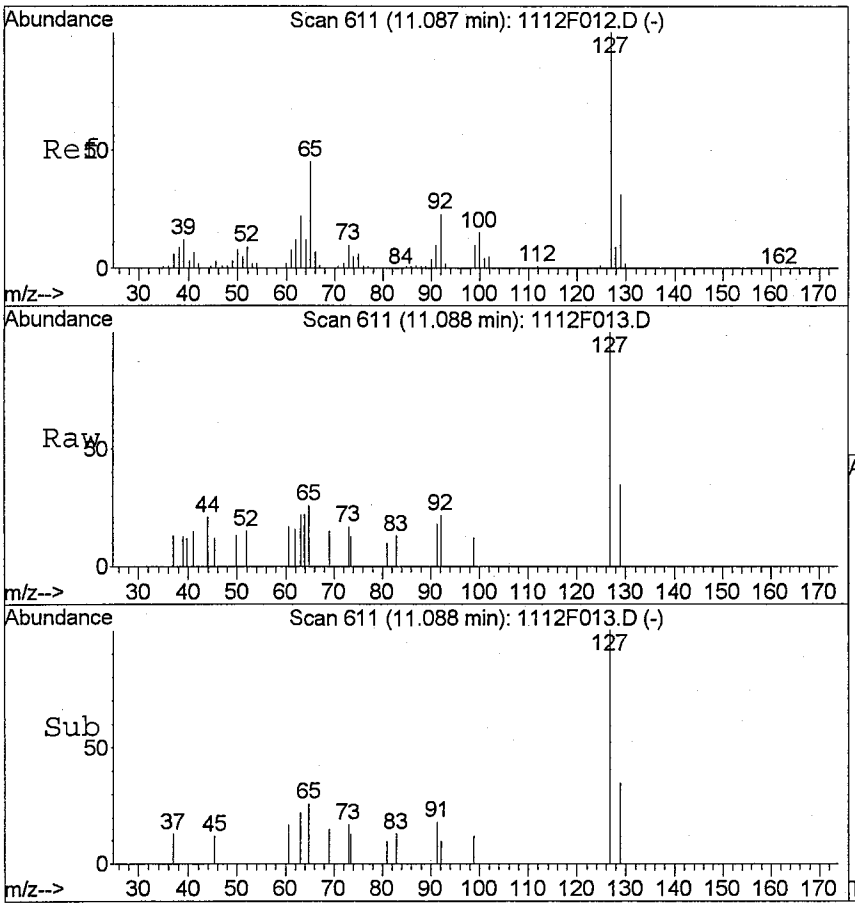


#7
Phenol
Concen: 118.08 ng/ml
RT: 8.17 min Scan# 326
Delta R.T. -0.00 min
Lab File: 1112F013.D
Acq: 12 Nov 2003 23:33

Tgt Ion: 94 Resp: 10920

Ion	Ratio	Lower	Upper
94	100		
65	56.4	6.3	66.3
66	137.3	32.9	92.9#

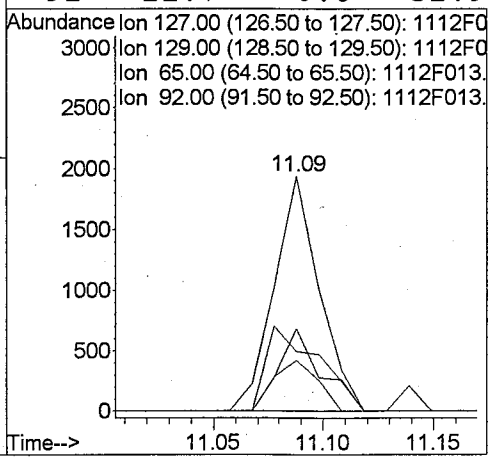


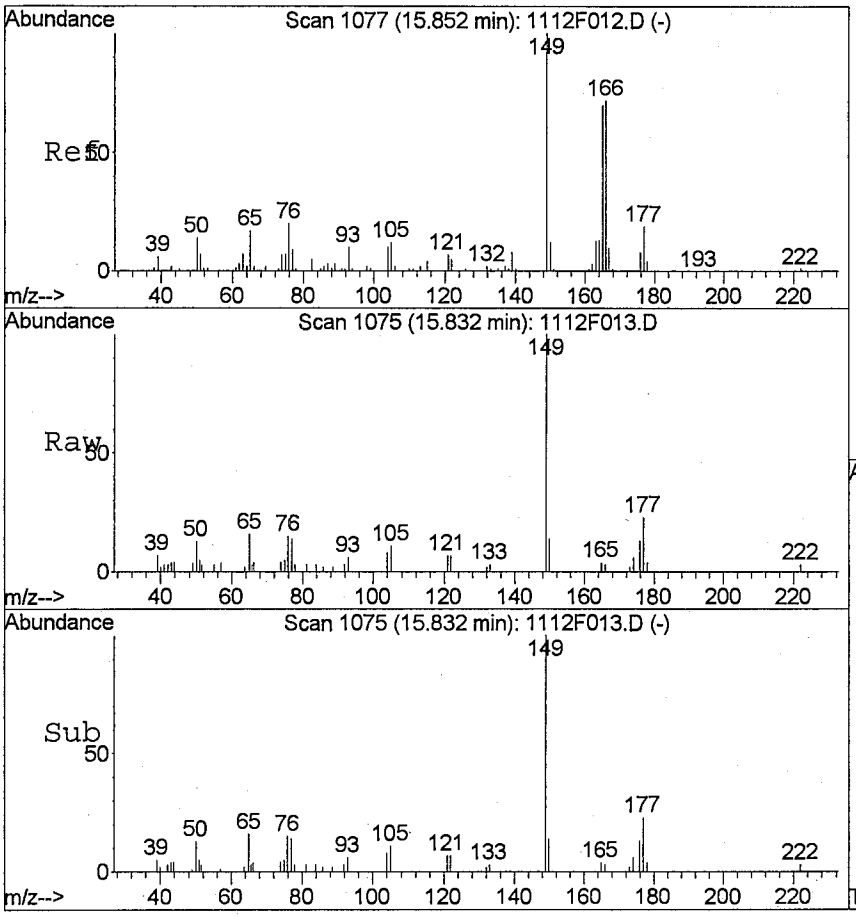


#30
4-Chloroaniline
Concen: 30.85 ng/ml
RT: 11.09 min Scan# 611
Delta R.T. -0.00 min
Lab File: 1112F013.D
Acq: 12 Nov 2003 23:33

Tgt Ion:127 Resp: 2781

Ion	Ratio	Lower	Upper
127	100		
129	35.3	1.6	61.6
65	25.6	3.3	63.3
92	21.7	0.0	52.9

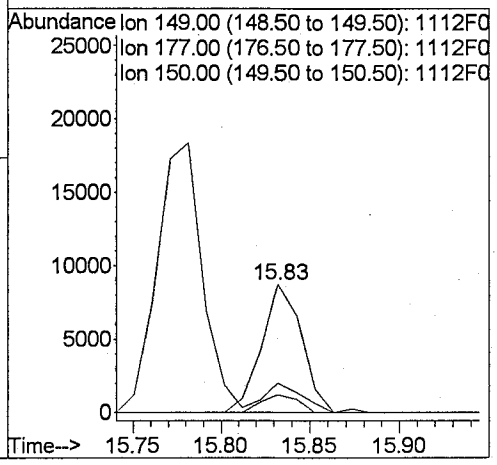


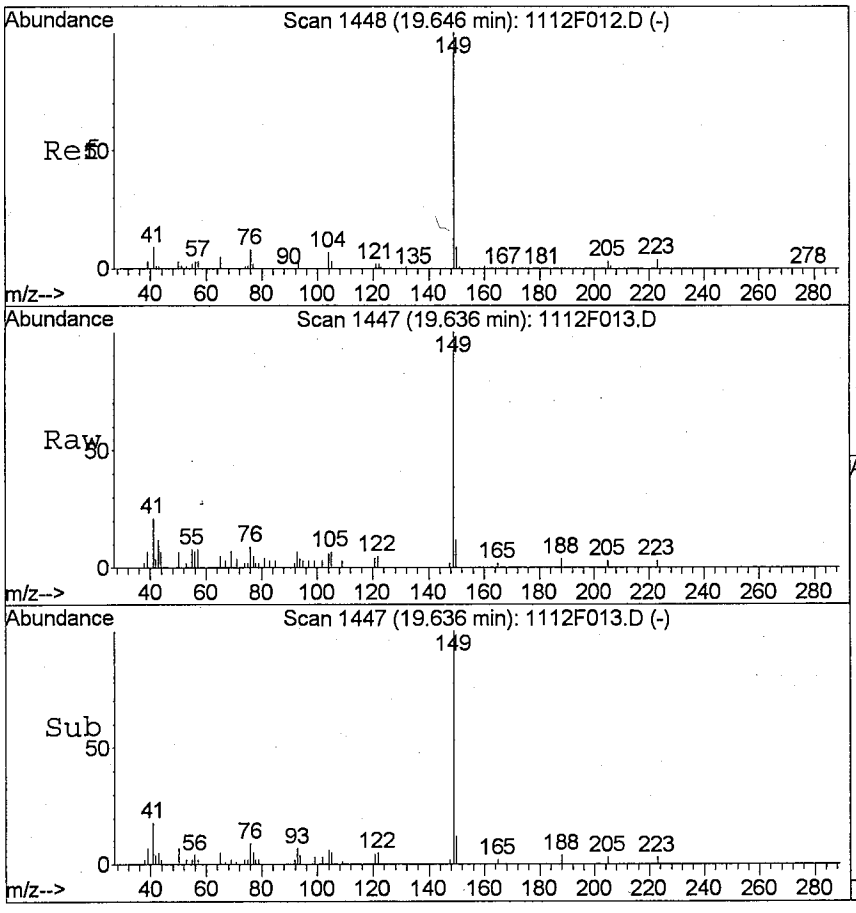


#52
Diethyl Phthalate
Concen: 77.80 ng/ml
RT: 15.83 min Scan# 1075
Delta R.T. -0.02 min
Lab File: 1112F013.D
Acq: 12 Nov 2003 23:33

Tgt Ion:149 Resp: 13672

Ion	Ratio	Lower	Upper
149	100		
177	22.9	0.0	51.6
150	14.1	0.0	41.6

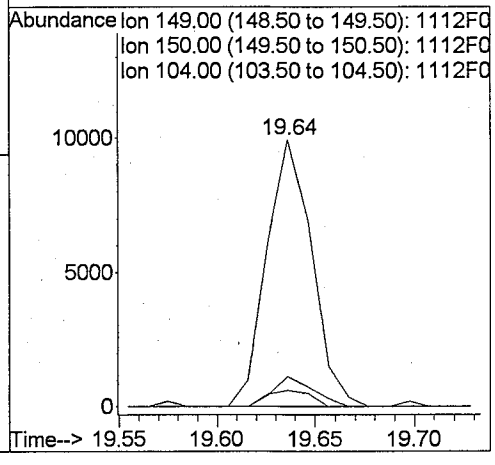


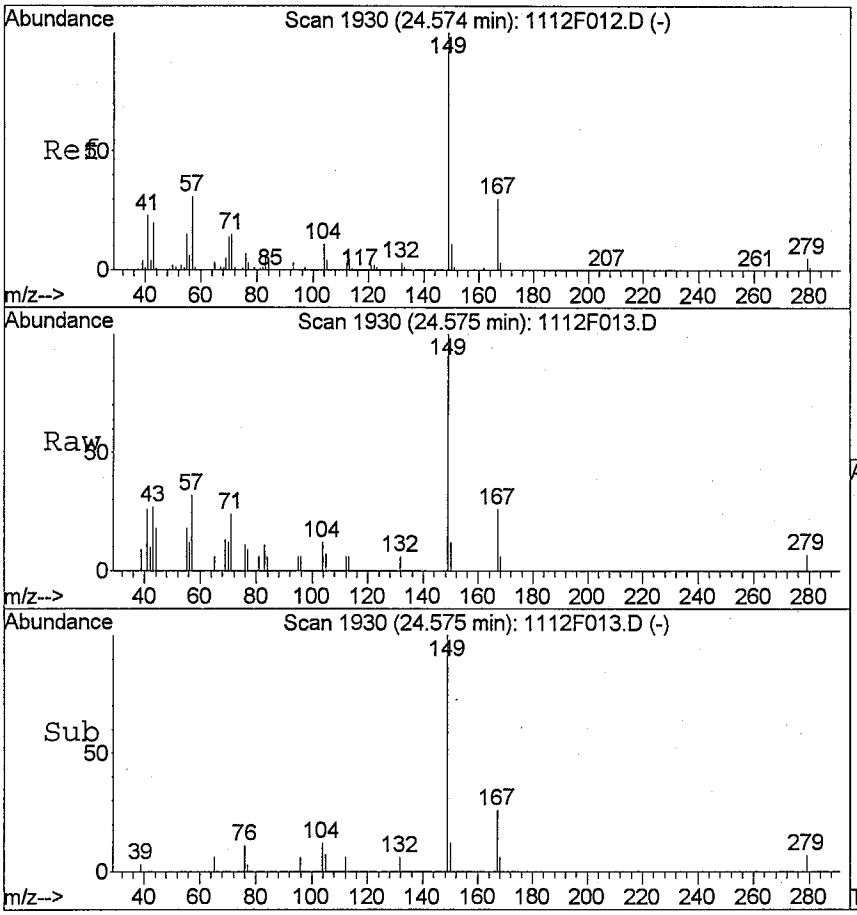


#65
Di-n-butyl Phthalate
Concen: 65.08 ng/ml
RT: 19.64 min Scan# 1447
Delta R.T. -0.00 min
Lab File: 1112F013.D
Acq: 12 Nov 2003 23:33

Tgt Ion:149 Resp: 15871

Ion	Ratio	Lower	Upper
149	100		
150	11.5	0.0	39.4
104	6.2	0.0	35.0

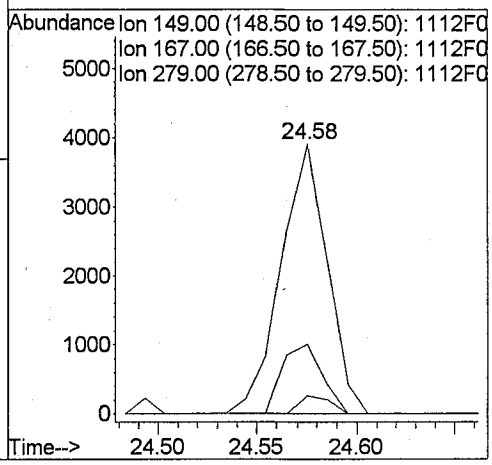




#75
Bis(2-ethylhexyl) Phthalate
Concen: 40.29 ng/ml
RT: 24.58 min Scan# 1930
Delta R.T. 0.01 min
Lab File: 1112F013.D
Acq: 12 Nov 2003 23:33

Tgt Ion:149 Resp: 6271

Ion	Ratio	Lower	Upper
149	100		
167	25.7	0.2	60.2
279	6.7	0.0	34.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/22/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SED-4MS	**Units:**	ug/Kg
Lab Code:	KWG0317457-1	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**174**	D	170	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	**26.3**	D	57	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	**39.2**	D	57	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	**19.3**	D	290	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	**168**	D	57	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	**146**	D	57	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	**143**	D	290	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	**250**	D	57	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	**422**	D	1200	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	61	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	53	35-138	11/18/03	Acceptable
Terphenyl-d14	100	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F006.D
Lab ID: KWG0317457-1 -- K2308433-004MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/18/2003 16:06
Date Quantitated: 11/19/2003 08:50
Batch ID: KWG0318619
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Batch QC K8291

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Bis(2-chloroethyl) Ether	8.63	NA	NA	
	Aniline	8.63	NA	NA	DR
Above Highest ICAL Level	Pyrene	8237.78	NA	5000	
	Fluoranthene	8807.53	NA	5000	
	Chrysene	5147.21	NA	5000	

Primary Review: 11/19/3

Secondary Review: mt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/05/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245976	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:			
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Method**	

Data File:	J:\MS10\DATA\111803\1118F006.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 16:06	**Quant Date:**	11/19/2003 08:50	**Vial:**	6
Run Type:	MS			**Dilution:**	5.0
Lab ID:	KWG0317457-1 -- K2308433-004MS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.99	0.00	152	56201	1,000.00	OK
2	Naphthalene-d8	11.28	0.00	136	159696	1,000.00	OK
3	Acenaphthene-d10	15.08	0.01	164	99648	1,000.00	OK
4	Phenanthrene-d10	18.41	0.00	188	175218	1,000.00	OK
5	Chrysene-d12	24.59	0.01	240	174397	1,000.00	OK
6	Perylene-d12	28.08	0.03	264	124646	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.22	0.02	0.00	112	19480	322.81	43	28-109	OK	
1	Phenol-d6	8.48	0.00	0.00	99	33140	458.23	61	40-123	OK	
1	Nitrobenzene-d5	9.97	0.00	0.00	82	31360	349.36	70	24-128	OK	
3	2-Fluorobiphenyl	13.62	0.01	0.00	172	53135	384.63	77	28-126	OK	
4	2,4,6-Tribromophenol	16.89	0.00	0.00	330	11691	394.79	53	35-138	OK	
5	Terphenyl-d14	22.22	0.01	0.00	244	68422	500.46	100	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.70	0.09	0.01	42	89451	1,462	824	D	
1	Pyridine	5.70	0.09	0.01	79	14945m	240.58	136	JD	
1	Bis(2-chloroethyl) Ether	8.63c	0.01	0.00	93	27332	414.99	234	D	
1	Phenol	8.50		0.00	94	23570	309.63	174	D	
1	Aniline	8.63c	0.09	0.01	93	27332	332.40	187	D	
1	2-Chlorophenol	8.72	0.01	0.00	128	18376	296.91	167	D	
1	1,3-Dichlorobenzene	8.94	0.01	0.00	146	22879	297.07	167	D	
1	1,4-Dichlorobenzene	9.02	0.01	0.00	146	24312	298.26	168	D	
1	1,2-Dichlorobenzene	9.33		0.00	146	22538	313.57	177	D	
1	Benzyl Alcohol	9.25		0.00	108	14200	382.91	216	D	

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J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F006.D		**Instrument:** MS10
Acqu Date:	11/18/2003 16:06	**Quant Date:** 11/19/2003 08:50	**Vial:** 6
Run Type:	MS		**Dilution:** 5.0
Lab ID:	KWG0317457-1 -- K2308433-004MS		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.51		0.00	45	22045	336.86	190	D	
1	2-Methylphenol	9.46		0.00	107	2283	46.67	26.3	JD	
1	Hexachloroethane	9.85		0.00	117	11982	309.38	174	D	
1	N-Nitrosodi-n-propylamine	9.75	-0.01	0.00	70	19052	367.33	207	D	
1	4-Methylphenol	9.71		0.00	107	5065	69.63	39.2	JD	
1	Nitrobenzene	10.01	0.01	0.00	77	30709	348.99	197	D	
2	Isophorone	10.43		0.00	82	51713	364.36	205	D	
2	2-Nitrophenol	10.60		0.00	139	11642	326.64	184	D	
2	2,4-Dimethylphenol	10.69		0.00	122	1731**m**	34.21	19.3	JD	
2	Bis(2-chloroethoxy)methane	10.87		0.00	93	26889	350.93	198	D	
2	2,4-Dichlorophenol	11.04		0.00	162	19138	297.36	168	D	
2	Benzoic Acid	10.81	-0.09	-0.01	122	6642	658.62	371	JD	
2	1,2,4-Trichlorobenzene	11.21		0.00	180	25119	326.39	184	D	
2	Naphthalene	11.32		0.00	128	75900	455.54	257	D	
2	4-Chloroaniline	11.50	0.01	0.00	127	5079	70.76	39.9	JD	
2	Hexachlorobutadiene	11.71		0.00	225	15648	290.50	164	D	
2	4-Chloro-3-methylphenol	12.52	0.01	0.00	107	13218	193.94	109	D	
2	2-Methylnaphthalene	12.76		0.00	142	48829	472.89	266	D	
3	Hexachlorocyclopentadiene	13.26		0.00	237	3763	74.59	42.0	JD	
3	2,4,6-Trichlorophenol	13.44	0.01	0.00	196	13317	259.78	146	D	
3	2,4,5-Trichlorophenol	13.51	0.01	0.00	196	20012	365.52	206	D	
3	2-Chloronaphthalene	13.80		0.00	127	19404	410.22	231	D	
3	2-Nitroaniline	14.11	-0.01	0.00	65	16533	349.67	197	D	
3	Acenaphthylene	14.72		0.00	152	111614	699.39	394	D	
3	Dimethyl Phthalate	14.64		0.00	163	58659	400.61	226	D	
3	2,6-Dinitrotoluene	14.76	-0.01	0.00	165	12517	411.56	232	D	
3	Acenaphthene	15.14		0.00	154	78473	820.84	462	D	
3	3-Nitroaniline	15.05	-0.01	0.00	138	4137	142.65	80.4	JD	
3	2,4-Dinitrophenol	15.29	0.01	0.00	184	4540	1,044	588	JD	
3	Dibenzofuran	15.51		0.00	168	98959	586.64	331	D	
3	4-Nitrophenol	15.49		0.00	109	14429	323.58	182	JD	
3	2,4-Dinitrotoluene	15.64		0.00	165	18072	425.69	240	D	
3	Fluorene	16.28		0.00	166	92603	743.96	419	D	
3	4-Chlorophenyl Phenyl Ether	16.33		0.00	204	28321	374.71	211	D	
3	Diethyl Phthalate	16.26	-0.01	0.00	149	61823	401.01	226	D	
3	4-Nitroaniline	16.44	-0.02	0.00	138	6279	206.63	116	JD	
3	2-Methyl-4,6-dinitrophenol	16.56		0.00	198	9183	262.83	148	JD	
3	N-Nitrosodiphenylamine	16.62	-0.01	0.00	169	34028	372.95	210	D	
3	Azobenzene	16.68	-0.01	0.00	77	60726	351.94	198	D	
4	4-Bromophenyl Phenyl Ether	17.44		0.00	248	18563	380.14	214	D	
4	Hexachlorobenzene	17.75	0.02	0.00	284	20672	386.21	218	D	
4	Pentachlorophenol	18.18	0.02	0.00	266	9202	253.67	143	JD	

U: Undetected at or above MDL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F006.D		**Instrument:** MS10
Acqu Date:	11/18/2003 16:06	**Quant Date:** 11/19/2003 08:50	**Vial:** 6
Run Type:	MS		**Dilution:** 5.0
Lab ID:	KWG0317457-1 -- K2308433-004MS		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.47	0.01	0.00	178	937315	4,932	2780	D	
4	Anthracene	18.57	0.01	0.00	178	247166	1,291	727	D	
4	Carbazole	18.98		0.00	167	183144	1,099	619	D	
4	Di-n-butyl Phthalate	20.07		0.00	149	100867	434.73	245	D	
4	Fluoranthene	21.24	0.02	0.00	202	1838813	8,808	4960	ED	
5	Pyrene	21.74	0.02	0.00	202	1782183	8,238	4640	ED	
5	Butyl Benzyl Phthalate	23.52		0.00	149	42682	442.83	250	D	
5	3,3'-Dichlorobenzidine				252	0**d**		25	U	
5	Benz(a)anthracene	24.56	0.03	0.00	228	828960	4,327	2440	D	
5	Chrysene	24.65	0.01	0.00	228	934389	5,147	2900	ED	
5	Bis(2-ethylhexyl) Phthalate	25.02	0.02	0.00	149	104671	749.49	422	JD	
6	Di-n-octyl Phthalate	26.53	0.02	0.00	149	100362	466.43	263	D	
6	Benzo(b)fluoranthene	27.18	0.03	0.00	252	758034	4,473	2520	D	
6	Benzo(k)fluoranthene	27.24	0.03	0.00	252	616848	3,829	2160	D	
6	Benzo(a)pyrene	27.96	0.04	0.00	252	724652	4,505	2540	D	
6	Indeno(1,2,3-cd)pyrene	30.64	0.03	0.00	276	471135	3,138	1770	D	
6	Dibenz(a,h)anthracene	30.70	0.03	0.00	278	148202**m**	1,008	568	D	
6	Benzo(g,h,i)perylene	31.22	0.04	0.00	276	468379	3,009	1700	D	

Prep Amount:	23.57 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	75.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F006.D Vial: 6
Acq On : 18 Nov 2003 16:06 Operator: JGISH
Sample : K2308433-004MS Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:28:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.99	152	56201	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.28	136	159696	1000.00	ng/ml	0.02
34) Acenaphthene-d10	15.08	164	99648	1000.00	ng/ml	0.03
57) Phenanthrene-d10	18.41	188	175218	1000.00	ng/ml	0.03
67) Chrysene-d12	24.59	240	174397	1000.00	ng/ml	0.04
76) Perylene-d12	28.08	264	124646	1000.00	ng/ml	0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	19480	322.81	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 8.61%#			
6) Phenol-d6	8.48	99	33140	458.23	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 12.22%#			
19) Nitrobenzene-d5	9.97	82	31360	349.36	ng/ml	0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 13.97%#			
38) 2-Fluorobiphenyl	13.62	172	53135	384.63	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 15.39%#			
58) 2,4,6-Tribromophenol	16.89	330	11691	394.79	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 10.53%#			
70) Terphenyl-d14	22.22	244	68422	500.46	ng/ml	0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery = 20.02%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.70	42	89451	1461.62	ng/ml#	1
3) Pyridine	5.70	79	14945m	240.58	ng/ml	
5) Bis(2-chloroethyl) Ether	8.63	93	27332	414.99	ng/ml	97
7) Phenol	8.50	94	23570	309.63	ng/ml	80
8) Aniline	8.63	93	27332	332.40	ng/ml#	18
9) 2-Chlorophenol	8.72	128	18376	296.91	ng/ml	93
10) 1,3-Dichlorobenzene	8.94	146	22879	297.07	ng/ml	95
11) 1,4-Dichlorobenzene	9.02	146	24312	298.26	ng/ml	91
12) 1,2-Dichlorobenzene	9.33	146	22538	313.57	ng/ml	100
13) Benzyl Alcohol	9.25	108	14200	382.91	ng/ml#	54
14) Bis(2-chloroisopropyl) Eth	9.51	45	22045	336.86	ng/ml	79
15) 2-Methylphenol	9.46	107	2283	46.67	ng/ml#	82
16) Hexachloroethane	9.85	117	11982	309.38	ng/ml	94
17) N-Nitrosodi-n-propylamine	9.75	70	19052	367.33	ng/ml	86
18) 4-Methylphenol	9.71	107	5065	69.63	ng/ml#	72
20) Nitrobenzene	10.01	77	30709	348.99	ng/ml	85
22) Isophorone	10.43	82	51713	364.36	ng/ml	97
23) 2-Nitrophenol	10.60	139	11642	326.64	ng/ml	60
24) 2,4-Dimethylphenol	10.69	122	1731m	34.21	ng/ml	
25) Bis(2-chloroethoxy)methane	10.87	93	26889	350.93	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F006.D Vial: 6
Acq On : 18 Nov 2003 16:06 Operator: JGISH
Sample : K2308433-004MS Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:28:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.04	162	19138	297.36	ng/ml	95
27)	Benzoic Acid	10.81	122	6642	658.62	ng/ml	94
28)	1,2,4-Trichlorobenzene	11.21	180	25119	326.39	ng/ml	97
29)	Naphthalene	11.32	128	75900	455.54	ng/ml	96
30)	4-Chloroaniline	11.50	127	5079	70.76	ng/ml	80
31)	Hexachlorobutadiene	11.71	225	15648	290.50	ng/ml	79
32)	4-Chloro-3-methylphenol	12.52	107	13218	193.94	ng/ml#	75
33)	2-Methylnaphthalene	12.76	142	48829	472.89	ng/ml	95
35)	Hexachlorocyclopentadiene	13.26	237	3763	74.59	ng/ml	91
36)	2,4,6-Trichlorophenol	13.44	196	13317	259.78	ng/ml	89
37)	2,4,5-Trichlorophenol	13.51	196	20012	365.52	ng/ml	96
39)	2-Chloronaphthalene	13.80	127	19404	410.22	ng/ml	90
40)	2-Nitroaniline	14.11	65	16533	349.67	ng/ml#	76
41)	Acenaphthylene	14.72	152	111614	699.39	ng/ml	98
42)	Dimethyl Phthalate	14.64	163	58659	400.61	ng/ml	96
43)	2,6-Dinitrotoluene	14.76	165	12517	411.56	ng/ml#	64
44)	Acenaphthene	15.14	154	78473	820.84	ng/ml	99
45)	3-Nitroaniline	15.05	138	4137	142.65	ng/ml	94
46)	2,4-Dinitrophenol	15.29	184	4540	1044.12	ng/ml	86
47)	Dibenzofuran	15.51	168	98959	586.64	ng/ml	80
48)	4-Nitrophenol	15.49	109	14429	323.58	ng/ml	83
49)	2,4-Dinitrotoluene	15.64	165	18072	425.69	ng/ml	66
50)	Fluorene	16.28	166	92603	743.96	ng/ml	95
51)	4-Chlorophenyl Phenyl Ethe	16.33	204	28321	374.71	ng/ml	88
52)	Diethyl Phthalate	16.26	149	61823	401.01	ng/ml	98
53)	4-Nitroaniline	16.44	138	6279	206.63	ng/ml#	51
54)	2-Methyl-4,6-dinitrophenol	16.56	198	9183	262.83	ng/ml	73
55)	N-Nitrosodiphenylamine	16.62	169	34028	372.95	ng/ml	98
56)	Azobenzene	16.68	77	60726	351.94	ng/ml	82
59)	4-Bromophenyl Phenyl Ether	17.44	248	18563	380.14	ng/ml	91
60)	Hexachlorobenzene	17.75	284	20672	386.21	ng/ml	89
61)	Pentachlorophenol	18.18	266	9202	253.67	ng/ml	92
62)	Phenanthrene	18.47	178	937315	4931.82	ng/ml	99
63)	Anthracene	18.57	178	247166	1290.65	ng/ml	95
64)	Carbazole	18.98	167	183144	1099.44	ng/ml	97
65)	Di-n-butyl Phthalate	20.07	149	100867	434.73	ng/ml	98
66)	Fluoranthene	21.24	202	1838813	8807.53	ng/ml	92
69)	Pyrene	21.74	202	1782183	8237.78	ng/ml	98
71)	Butyl Benzyl Phthalate	23.52	149	42682	442.83	ng/ml	87
73)	Benz(a)anthracene	24.56	228	828960	4327.12	ng/ml	96
74)	Chrysene	24.65	228	934389	5147.21	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F006.D Vial: 6
Acq On : 18 Nov 2003 16:06 Operator: JGISH
Sample : K2308433-004MS Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:28:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

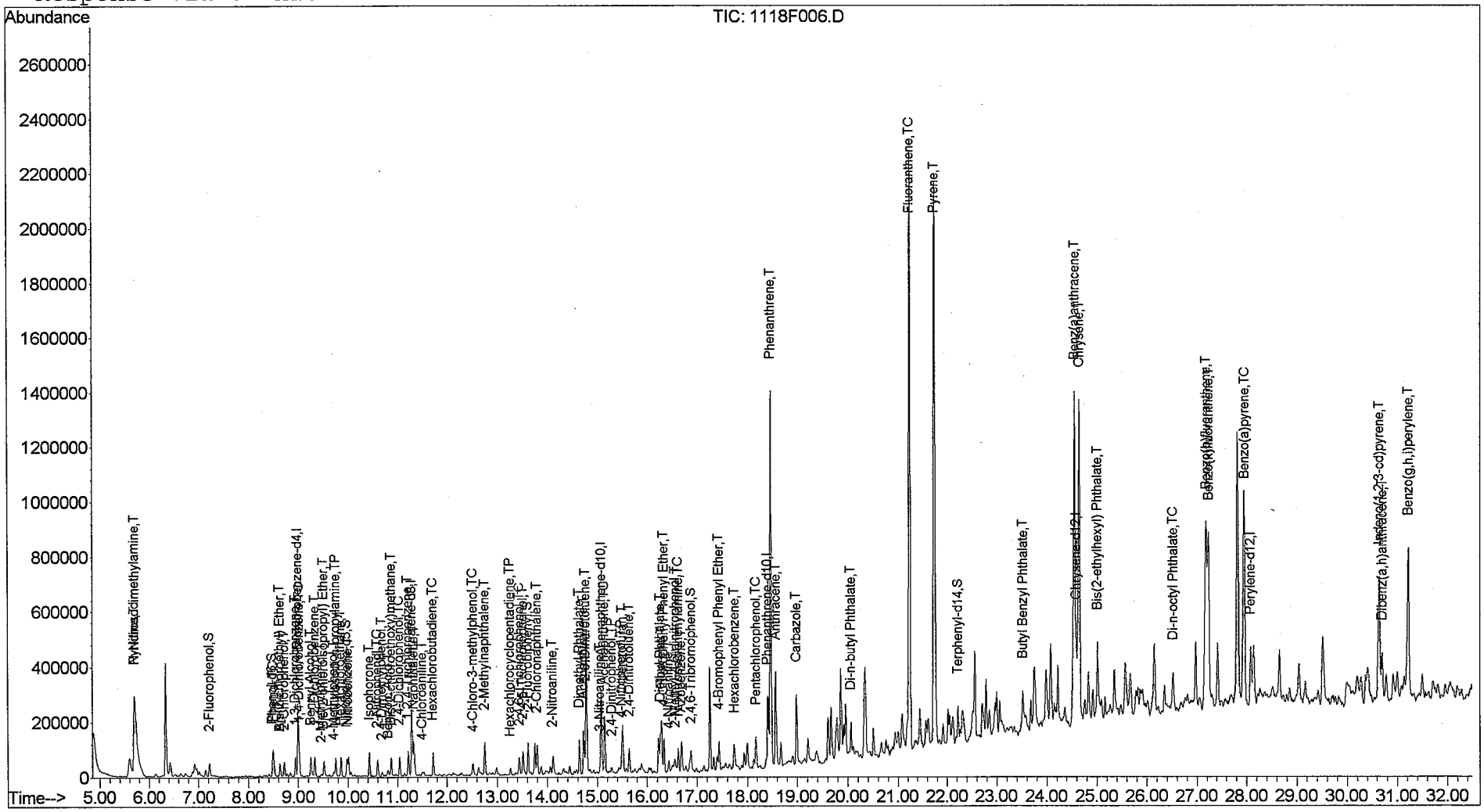
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Bis(2-ethylhexyl) Phthalat	25.02	149	104671	749.49	ng/ml	98
77)	Di-n-octyl Phthalate	26.53	149	100362	466.43	ng/ml	90
78)	Benzo(b)fluoranthene	27.18	252	758034	4472.50	ng/ml	94
79)	Benzo(k)fluoranthene	27.24	252	616848	3829.22	ng/ml	95
80)	Benzo(a)pyrene	27.96	252	724652	4504.84	ng/ml	93
81)	Indeno(1,2,3-cd)pyrene	30.64	276	471135	3138.23	ng/ml	88
82)	Dibenz(a,h)anthracene	30.70	278	148202m	1008.09	ng/ml	
83)	Benzo(g,h,i)perylene	31.22	276	468379	3009.07	ng/ml	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F006.D Vial: 6
Acq On : 18 Nov 2003 16:06 Operator: JGISH
Sample : K2308433-004MS Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:50 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration

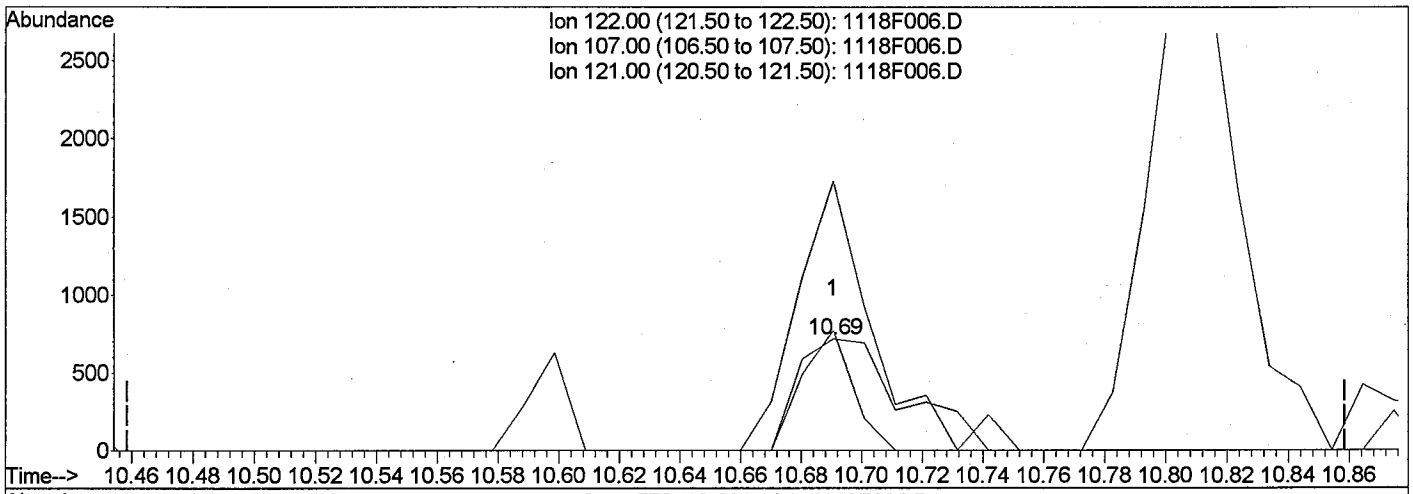


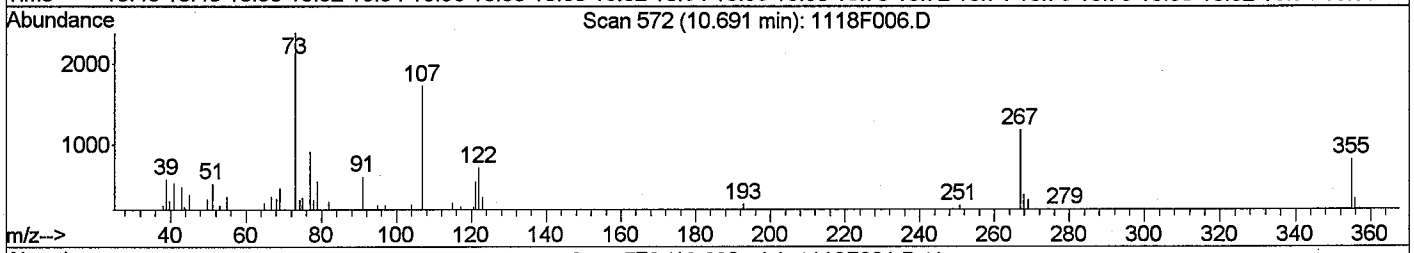
2023

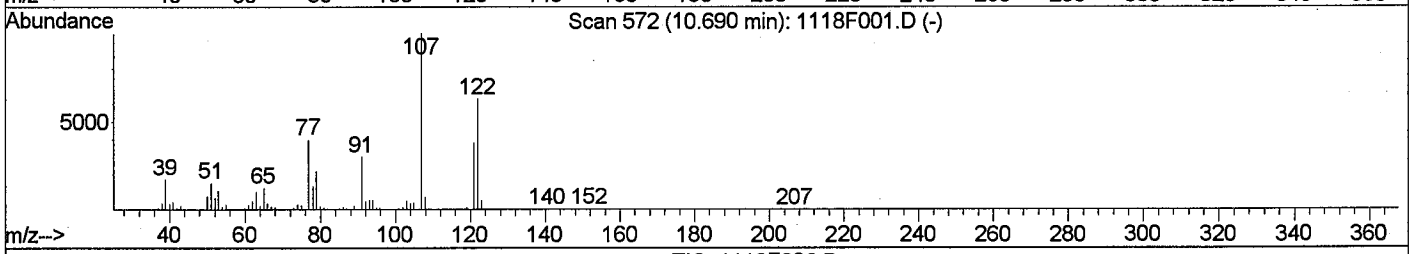
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111803\1118F006.D Vial: 6
Acq On : 18 Nov 2003 16:06 Operator: JGISH
Sample : K2308433-004MS Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:50 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Multiple Level Calibration







TIC: 1118F006.D

(24) 2,4-Dimethylphenol (T)

10.69min 34.21ng/ml m

response 1731

Ion	Exp%	Act%
122.00	100	100
107.00	121.50	241.76#
121.00	59.40	75.56
0.00	0.00	0.00

Qual by mistake
J 11/26/03

1118F006.D 1114BNLL.M Wed Nov 19 08:50:02 2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/22/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-4DMS
Lab Code: KWG0317457-2

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**207**	D	170	5	10/30/03	11/18/03	KWG0317457	
2-Methylphenol	**79.2**	D	57	5	10/30/03	11/18/03	KWG0317457	
4-Methylphenol†	**89.4**	D	57	5	10/30/03	11/18/03	KWG0317457	
2,4-Dimethylphenol	**25.1**	D	290	5	10/30/03	11/18/03	KWG0317457	
2,4-Dichlorophenol	**202**	D	57	5	10/30/03	11/18/03	KWG0317457	
2,4,6-Trichlorophenol	**212**	D	57	5	10/30/03	11/18/03	KWG0317457	
Pentachlorophenol	**169**	D	290	5	10/30/03	11/18/03	KWG0317457	
Butyl Benzyl Phthalate	**329**	D	57	5	10/30/03	11/18/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	**543**	D	1200	5	10/30/03	11/18/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	80	40-123	11/18/03	Acceptable
2,4,6-Tribromophenol	72	35-138	11/18/03	Acceptable
Terphenyl-d14	106	56-152	11/18/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111803\1118F007.D
Lab ID: KWG0317457-2 -- K2308433-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/18/2003 16:48
Date Quantitated: 11/19/2003 08:49
Batch ID: KWG0318619
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Fluoranthene	5770.29	NA	5000	ND

Primary Review: 11/19/03

Secondary Review: mt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/05/2003

Analysis Lot:	KWG0318619	**Prep Lot:**	KWG0317457	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245977	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:			
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Method**	

Data File:	J:\MS10\DATA\111803\1118F007.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 16:48	**Quant Date:**	11/19/2003 08:49	**Vial:**	7
Run Type:	DMS			**Dilution:**	5.0
Lab ID:	KWG0317457-2 -- K2308433-004DMS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.00	0.01	152	57909	1,000.00	OK
2	Naphthalene-d8	11.29	0.01	136	164369	1,000.00	OK
3	Acenaphthene-d10	15.08	0.01	164	101252	1,000.00	OK
4	Phenanthrene-d10	18.42	0.01	188	170961	1,000.00	OK
5	Chrysene-d12	24.59	0.01	240	179360	1,000.00	OK
6	Perylene-d12	28.09	0.04	264	126820	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.23	0.03	0.00	112	30623	492.50	66	28-109	OK	
1	Phenol-d6	8.49	0.01	0.00	99	44927	602.89	80	40-123	OK	
1	Nitrobenzene-d5	9.98	0.01	0.00	82	32144	347.54	70	24-128	OK	
3	2-Fluorobiphenyl	13.62	0.01	0.00	172	54459	387.97	78	28-126	OK	
4	2,4,6-Tribromophenol	16.89	0.00	0.00	330	15680	542.68	72	35-138	OK	
5	Terphenyl-d14	22.23	0.02	0.00	244	74604	530.58	106	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.73	0.12	0.01	42	55940m	887.10	499	D	
1	Pyridine	5.71	0.10	0.01	79	21758m	339.92	191	JD	
1	Bis(2-chloroethyl) Ether	8.63	0.01	0.00	93	30635	451.42	254	D	
1	Phenol	8.51	0.01	0.00	94	28915	368.64	207	D	
1	Aniline				93	0d		10	U	
1	2-Chlorophenol	8.72	0.01	0.00	128	24752	388.13	218	D	
1	1,3-Dichlorobenzene	8.94	0.01	0.00	146	22914	288.75	162	D	
1	1,4-Dichlorobenzene	9.03	0.02	0.00	146	22430	267.06	150	D	
1	1,2-Dichlorobenzene	9.34	0.01	0.00	146	23415	316.16	178	D	
1	Benzyl Alcohol	9.25		0.00	108	16532	432.65	243	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F007.D		**Instrument:** MS10
Acqu Date:	11/18/2003 16:48	**Quant Date:** 11/19/2003 08:49	**Vial:** 7
Run Type:	DMS		**Dilution:** 5.0
Lab ID:	KWG0317457-2 -- K2308433-004DMS		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.52	0.01	0.00	45	23156	343.40	193	D	
1	2-Methylphenol	9.47	0.01	0.00	107	7106	140.98	79.2	D	
1	Hexachloroethane	9.86	0.01	0.00	117	11895	298.08	168	D	
1	N-Nitrosodi-n-propylamine	9.75	-0.01	0.00	70	22247	416.28	234	D	
1	4-Methylphenol	9.71		0.00	107	11920	159.03	89.4	D	
1	Nitrobenzene	10.01	0.01	0.00	77	34965	385.64	217	D	
2	Isophorone	10.44	0.01	0.00	82	60300	412.78	232	D	
2	2-Nitrophenol	10.60		0.00	139	13991	381.38	214	D	
2	2,4-Dimethylphenol	10.70	0.01	0.00	122	2323	44.60	25.1	JD	
2	Bis(2-chloroethoxy)methane	10.88	0.01	0.00	93	30959	392.56	221	D	
2	2,4-Dichlorophenol	11.04		0.00	162	23820	359.58	202	D	
2	Benzoic Acid	10.81	-0.09	-0.01	122	3388	585.15	329	JD	
2	1,2,4-Trichlorobenzene	11.22	0.01	0.00	180	27306	344.72	194	D	
2	Naphthalene	11.33	0.01	0.00	128	71626	417.67	235	D	
2	4-Chloroaniline	11.50	0.01	0.00	127	7251	98.15	55.2	JD	
2	Hexachlorobutadiene	11.72	0.01	0.00	225	17653	318.40	179	D	
2	4-Chloro-3-methylphenol	12.53	0.02	0.00	107	19661	280.27	158	D	
2	2-Methylnaphthalene	12.76		0.00	142	45579	428.87	241	D	
3	Hexachlorocyclopentadiene	13.26		0.00	237	3427	66.85	37.6	JD	
3	2,4,6-Trichlorophenol	13.45	0.02	0.00	196	19650	377.25	212	D	
3	2,4,5-Trichlorophenol	13.52	0.02	0.00	196	22635	406.88	229	D	
3	2-Chloronaphthalene	13.80		0.00	127	19420	404.06	227	D	
3	2-Nitroaniline	14.11	-0.01	0.00	65	21844	454.68	256	D	
3	Acenaphthylene	14.72		0.00	152	102511	632.17	355	D	
3	Dimethyl Phthalate	14.64		0.00	163	65976	443.44	249	D	
3	2,6-Dinitrotoluene	14.76	-0.01	0.00	165	14353	464.46	261	D	
3	Acenaphthene	15.14		0.00	154	61325	631.31	355	D	
3	3-Nitroaniline	15.05	-0.01	0.00	138	6701	227.41	128	D	
3	2,4-Dinitrophenol	15.30	0.02	0.00	184	4776	1,049	590	JD	
3	Dibenzofuran	15.51		0.00	168	90175	526.10	296	D	
3	4-Nitrophenol	15.49		0.00	109	17696	390.56	219	JD	
3	2,4-Dinitrotoluene	15.64		0.00	165	19593	454.21	255	D	
3	Fluorene	16.29	0.01	0.00	166	81824	646.95	364	D	
3	4-Chlorophenyl Phenyl Ether	16.34	0.01	0.00	204	32448	422.51	237	D	
3	Diethyl Phthalate	16.27		0.00	149	69583	444.19	250	D	
3	4-Nitroaniline	16.44	-0.02	0.00	138	10442	338.18	190	D	
3	2-Methyl-4,6-dinitrophenol	16.56		0.00	198	10815	304.63	171	JD	
3	N-Nitrosodiphenylamine	16.63		0.00	169	42732	460.93	259	D	
3	Azobenzene	16.69		0.00	77	71349	406.95	229	D	
4	4-Bromophenyl Phenyl Ether	17.44		0.00	248	21382	448.77	252	D	
4	Hexachlorobenzene	17.75	0.02	0.00	284	22609	432.91	243	D	
4	Pentachlorophenol	18.17	0.01	0.00	266	10643	300.70	169	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F007.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 16:48	**Quant Date:**	11/19/2003 08:49	**Vial:**	7
Run Type:	DMS			**Dilution:**	5.0
Lab ID:	KWG0317457-2 -- K2308433-004DMS			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.48	0.02	0.00	178	557965	3,009	1690	D	
4	Anthracene	18.57	0.01	0.00	178	185756	994.13	559	D	
4	Carbazole	18.99	0.01	0.00	167	142527	876.91	493	D	
4	Di-n-butyl Phthalate	20.07		0.00	149	113642	501.99	282	D	
4	Fluoranthene	21.25	0.03	0.00	202	1175438	5,770	3240	ED	
5	Pyrene	21.74	0.02	0.00	202	1006752	4,525	2540	D	
5	Butyl Benzyl Phthalate	23.53	0.01	0.00	149	57990	585.00	329	D	
5	3,3'-Dichlorobenzidine				252	0**d**		25	U	
5	Benz(a)anthracene	24.56	0.03	0.00	228	482358	2,448	1380	D	
5	Chrysene	24.65	0.01	0.00	228	540687	2,896	1630	D	
5	Bis(2-ethylhexyl) Phthalate	25.01	0.01	0.00	149	138799	966.36	543	JD	
6	Di-n-octyl Phthalate	26.53	0.02	0.00	149	121444	554.74	312	D	
6	Benzo(b)fluoranthene	27.18	0.03	0.00	252	505460	2,931	1650	D	
6	Benzo(k)fluoranthene	27.23	0.02	0.00	252	357034	2,178	1220	D	
6	Benzo(a)pyrene	27.96	0.04	0.00	252	439635	2,686	1510	D	
6	Indeno(1,2,3-cd)pyrene	30.64	0.03	0.00	276	316453	2,072	1160	D	
6	Dibenz(a,h)anthracene	30.71	0.04	0.00	278	117707**m**	786.94	442	D	
6	Benzo(g,h,i)perylene	31.22	0.04	0.00	276	305032	1,926	1080	D	

Prep Amount:	23.63 g	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	75.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F007.D Vial: 7
Acq On : 18 Nov 2003 16:48 Operator: JGISH
Sample : K2308433-004MSD Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:00 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.00	152	57909	1000.00	ng/ml	0.03
21) Naphthalene-d8	11.29	136	164369	1000.00	ng/ml	0.03
34) Acenaphthene-d10	15.08	164	101252	1000.00	ng/ml	0.04
57) Phenanthrene-d10	18.42	188	170961	1000.00	ng/ml	0.04
67) Chrysene-d12	24.59	240	179360	1000.00	ng/ml	0.05
76) Perylene-d12	28.09	264	126820	1000.00	ng/ml	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	30623	492.50	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery = 13.13%#			
6) Phenol-d6	8.49	99	44927	602.89	ng/ml	0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 16.08%#			
19) Nitrobenzene-d5	9.98	82	32144	347.54	ng/ml	0.04
Spiked Amount 2500.000	Range 30 - 139		Recovery = 13.90%#			
38) 2-Fluorobiphenyl	13.62	172	54459	387.97	ng/ml	0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 15.52%#			
58) 2,4,6-Tribromophenol	16.89	330	15680	542.68	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 14.47%#			
70) Terphenyl-d14	22.23	244	74604	530.58	ng/ml	0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 21.22%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.73	42	55940m	887.10	ng/ml	
3) Pyridine	5.71	79	21758m	339.92	ng/ml	
5) Bis(2-chloroethyl) Ether	8.63	93	30635	451.42	ng/ml	92
7) Phenol	8.51	94	28915	368.64	ng/ml	83
9) 2-Chlorophenol	8.72	128	24752	388.13	ng/ml	90
10) 1,3-Dichlorobenzene	8.94	146	22914	288.75	ng/ml	90
11) 1,4-Dichlorobenzene	9.03	146	22430	267.06	ng/ml	90
12) 1,2-Dichlorobenzene	9.34	146	23415	316.16	ng/ml	99
13) Benzyl Alcohol	9.25	108	16532	432.65	ng/ml#	66
14) Bis(2-chloroisopropyl) Eth	9.52	45	23156	343.40	ng/ml	72
15) 2-Methylphenol	9.47	107	7106	140.98	ng/ml	88
16) Hexachloroethane	9.86	117	11895	298.08	ng/ml	94
17) N-Nitrosodi-n-propylamine	9.75	70	22247	416.28	ng/ml	87
18) 4-Methylphenol	9.71	107	11920	159.03	ng/ml	75
20) Nitrobenzene	10.01	77	34965	385.64	ng/ml	84
22) Isophorone	10.44	82	60300	412.78	ng/ml	95
23) 2-Nitrophenol	10.60	139	13991	381.38	ng/ml	68
24) 2,4-Dimethylphenol	10.70	122	2323	44.60	ng/ml	83
25) Bis(2-chloroethoxy)methane	10.88	93	30959	392.56	ng/ml	98
26) 2,4-Dichlorophenol	11.04	162	23820	359.58	ng/ml	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F007.D Vial: 7
Acq On : 18 Nov 2003 16:48 Operator: JGISH
Sample : K2308433-004MSD Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:00 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	Benzoic Acid	10.81	122	3388	585.15	ng/ml#	74
28)	1,2,4-Trichlorobenzene	11.22	180	27306	344.72	ng/ml	99
29)	Naphthalene	11.33	128	71626	417.67	ng/ml	97
30)	4-Chloroaniline	11.50	127	7251	98.15	ng/ml	88
31)	Hexachlorobutadiene	11.72	225	17653	318.40	ng/ml	94
32)	4-Chloro-3-methylphenol	12.53	107	19661	280.27	ng/ml	84
33)	2-Methylnaphthalene	12.76	142	45579	428.87	ng/ml	99
35)	Hexachlorocyclopentadiene	13.26	237	3427	66.85	ng/ml	83
36)	2,4,6-Trichlorophenol	13.45	196	19650	377.25	ng/ml	98
37)	2,4,5-Trichlorophenol	13.52	196	22635	406.88	ng/ml	97
39)	2-Chloronaphthalene	13.80	127	19420	404.06	ng/ml	80
40)	2-Nitroaniline	14.11	65	21844	454.68	ng/ml#	68
41)	Acenaphthylene	14.72	152	102511	632.17	ng/ml	96
42)	Dimethyl Phthalate	14.64	163	65976	443.44	ng/ml	96
43)	2,6-Dinitrotoluene	14.76	165	14353	464.46	ng/ml#	59
44)	Acenaphthene	15.14	154	61325	631.31	ng/ml	96
45)	3-Nitroaniline	15.05	138	6701	227.41	ng/ml	94
46)	2,4-Dinitrophenol	15.30	184	4776	1049.22	ng/ml#	65
47)	Dibenzofuran	15.51	168	90175	526.10	ng/ml	73
48)	4-Nitrophenol	15.49	109	17696	390.56	ng/ml#	79
49)	2,4-Dinitrotoluene	15.64	165	19593	454.21	ng/ml	71
50)	Fluorene	16.29	166	81824	646.95	ng/ml	94
51)	4-Chlorophenyl Phenyl Ethe	16.34	204	32448	422.51	ng/ml	91
52)	Diethyl Phthalate	16.27	149	69583	444.19	ng/ml	98
53)	4-Nitroaniline	16.44	138	10442	338.18	ng/ml#	52
54)	2-Methyl-4,6-dinitrophenol	16.56	198	10815	304.63	ng/ml#	72
55)	N-Nitrosodiphenylamine	16.63	169	42732	460.93	ng/ml	97
56)	Azobenzene	16.69	77	71349	406.95	ng/ml	86
59)	4-Bromophenyl Phenyl Ether	17.44	248	21382	448.77	ng/ml	87
60)	Hexachlorobenzene	17.75	284	22609	432.91	ng/ml	89
61)	Pentachlorophenol	18.17	266	10643	300.70	ng/ml	97
62)	Phenanthrene	18.48	178	557965	3008.92	ng/ml	98
63)	Anthracene	18.57	178	185756	994.13	ng/ml	96
64)	Carbazole	18.99	167	142527	876.91	ng/ml	94
65)	Di-n-butyl Phthalate	20.07	149	113642	501.99	ng/ml	97
66)	Fluoranthene	21.25	202	1175438	5770.29	ng/ml	91
69)	Pyrene	21.74	202	1006752	4524.74	ng/ml	99
71)	Butyl Benzyl Phthalate	23.53	149	57990	585.00	ng/ml	98
73)	Benz(a)anthracene	24.56	228	482358	2448.21	ng/ml	98
74)	Chrysene	24.65	228	540687	2896.03	ng/ml	97
75)	Bis(2-ethylhexyl) Phthalat	25.01	149	138799	966.36	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F007.D Vial: 7
Acq On : 18 Nov 2003 16:48 Operator: JGISH
Sample : K2308433-004MSD Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 08:29:00 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

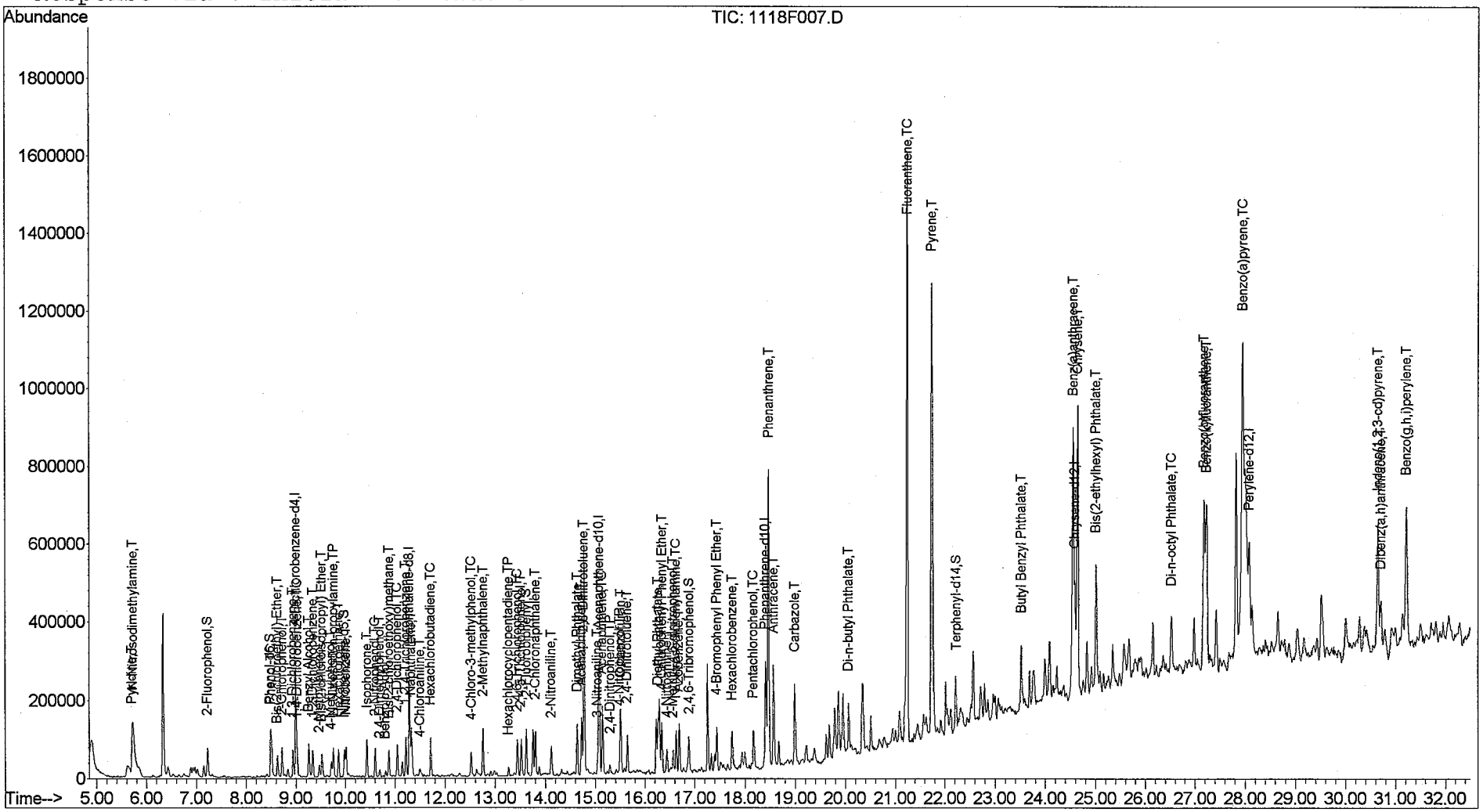
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
77)	Di-n-octyl Phthalate	26.53	149	121444	554.74	ng/ml	95
78)	Benzo(b)fluoranthene	27.18	252	505460	2931.16	ng/ml	93
79)	Benzo(k)fluoranthene	27.23	252	357034	2178.37	ng/ml	94
80)	Benzo(a)pyrene	27.96	252	439635	2686.17	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.64	276	316453	2071.76	ng/ml	89
82)	Dibenz(a,h)anthracene	30.71	278	117707m	786.94	ng/ml	
83)	Benzo(g,h,i)perylene	31.22	276	305032	1926.06	ng/ml	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F007.D Vial: 7
Acq On : 18 Nov 2003 16:48 Operator: JGISH
Sample : K2308433-004MSD Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 19 8:49 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 19 08:28:01 2003
Response via : Initial Calibration



2033

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample
Lab Code: KWG0317457-3

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**131**		30	1	10/30/03	11/13/03	KWG0317457	
2-Methylphenol	**104**		10	1	10/30/03	11/13/03	KWG0317457	
4-Methylphenol†	**94.9**		10	1	10/30/03	11/13/03	KWG0317457	
2,4-Dimethylphenol	**54.8**		50	1	10/30/03	11/13/03	KWG0317457	
2,4-Dichlorophenol	**140**		10	1	10/30/03	11/13/03	KWG0317457	
2,4,6-Trichlorophenol	**153**		10	1	10/30/03	11/13/03	KWG0317457	
Pentachlorophenol	**165**		50	1	10/30/03	11/13/03	KWG0317457	
Butyl Benzyl Phthalate	**177**		10	1	10/30/03	11/13/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	**172**		200	1	10/30/03	11/13/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	53	40-123	11/13/03	Acceptable
2,4,6-Tribromophenol	65	35-138	11/13/03	Acceptable
Terphenyl-d14	89	56-152	11/13/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111303\1112F014.D
Lab ID: KWG0317457-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/13/2003 00:14
Date Quantitated: 11/13/2003 10:40
Batch ID: KWG0318325
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K 8291
K 8433

Primary Review: 11/13/3
Secondary Review: mrt 11/13/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/05/2003

Analysis Lot:	KWG0318325	**Prep Lot:**	KWG0317457	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245978	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1112BNLL.M	**Calibration ID:**	CAL3091
Title:			
Tune Ref:	J:\MS10\DATA\111303\1112A012.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Method**	

Data File:	J:\MS10\DATA\111303\1112F014.D			**Instrument:**	MS10
Acqu Date:	11/13/2003 00:14	**Quant Date:**	11/13/2003 10:40	**Vial:**	13
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317457-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.63	0.01	152	73502	1,000.00	OK
2	Naphthalene-d8	10.88	0.00	136	165722	1,000.00	OK
3	Acenaphthene-d10	14.63	-0.01	164	97073	1,000.00	OK
4	Phenanthrene-d10	17.96	0.00	188	194795	1,000.00	OK
5	Chrysene-d12	24.11	0.00	240	205758	1,000.00	OK
6	Perylene-d12	27.51	0.00	264	115375	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.91	0.02	0.00	112	184300	2,068	55	28-109	OK	
1	Phenol-d6	8.16	0.01	0.00	99	216043	1,986	53	40-123	OK	
1	Nitrobenzene-d5	9.59	0.01	0.00	82	162638	1,333	53	24-128	OK	
3	2-Fluorobiphenyl	13.19	0.00	0.00	172	192528	1,495	60	28-126	OK	
4	2,4,6-Tribromophenol	16.44	-0.01	0.00	330	71120	2,443	65	35-138	OK	
5	Terphenyl-d14	21.78	0.00	0.00	244	352109	2,226	89	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.34	0.05	0.01	42	91897**m**	1,206	121		
1	Pyridine	5.41	0.10	0.01	79	57185**m**	557.84	55.8		
1	Bis(2-chloroethyl) Ether	8.27		0.00	93	139914	1,392	139		
1	Phenol	8.18	0.01	0.00	94	156398	1,307	131		
1	Aniline				93	0**d**		1.5	U	
1	2-Chlorophenol	8.36		0.00	128	122013	1,432	143		
1	1,3-Dichlorobenzene	8.57	0.01	0.00	146	149104	1,493	149		
1	1,4-Dichlorobenzene	8.65	0.01	0.00	146	153124	1,417	142		
1	1,2-Dichlorobenzene	8.96	0.01	0.00	146	136773	1,469	147		
1	Benzyl Alcohol	8.89		0.00	108	64947	1,212	121		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F014.D			**Instrument:**	MS10
Acqu Date:	11/13/2003 00:14	**Quant Date:**	11/13/2003 10:40	**Vial:**	13
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317457-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.14		0.00	45	127386	1,278	128		
1	2-Methylphenol	9.11	0.01	0.00	107	74400	1,038	104		
1	Hexachloroethane	9.47	0.01	0.00	117	70757	1,448	145		
1	N-Nitrosodi-n-propylamine	9.38		0.00	70	89664	1,209	121		
1	4-Methylphenol	9.36		0.00	107	101220	948.55	94.9		
1	Nitrobenzene	9.62	0.01	0.00	77	146986	1,178	118		
2	Isophorone	10.04		0.00	82	227075	1,498	150		
2	2-Nitrophenol	10.21	0.01	0.00	139	56636	1,538	154		
2	2,4-Dimethylphenol	10.31		0.00	122	29829	547.76	54.8		
2	Bis(2-chloroethoxy)methane	10.48		0.00	93	119568	1,382	138		
2	2,4-Dichlorophenol	10.65		0.00	162	86887	1,399	140		
2	Benzoic Acid	10.56	0.02	0.00	122	93124	2,992	299		
2	1,2,4-Trichlorobenzene	10.81		0.00	180	108383	1,446	145		
2	Naphthalene	10.92	0.01	0.00	128	256850	1,482	148		
2	4-Chloroaniline	11.09		0.00	127	72201	992.61	99.3		
2	Hexachlorobutadiene	11.31	0.01	0.00	225	69125	1,443	144		
2	4-Chloro-3-methylphenol	12.13		0.00	107	91123	1,357	136		
2	2-Methylnaphthalene	12.33		0.00	142	146946	1,419	142		
3	Hexachlorocyclopentadiene	12.83	-0.01	0.00	237	32324	1,272	127		
3	2,4,6-Trichlorophenol	13.02		0.00	196	66242	1,530	153		
3	2,4,5-Trichlorophenol	13.09		0.00	196	70451	1,515	152		
3	2-Chloronaphthalene	13.37		0.00	127	67928	1,524	152		
3	2-Nitroaniline	13.68	-0.01	0.00	65	79661	1,640	164		
3	Acenaphthylene	14.28	-0.01	0.00	152	255782	1,580	158		
3	Dimethyl Phthalate	14.22	-0.01	0.00	163	240843	1,667	167		
3	2,6-Dinitrotoluene	14.34		0.00	165	50705	1,569	157		
3	Acenaphthene	14.70	-0.01	0.00	154	142746	1,509	151		
3	3-Nitroaniline	14.62		0.00	138	54823	1,757	176		
3	2,4-Dinitrophenol	14.86		0.00	184	26836	1,151	115	J	
3	Dibenzofuran	15.06		0.00	168	263618	1,580	158		
3	4-Nitrophenol	15.10	-0.01	0.00	109	62803	1,730	173		
3	2,4-Dinitrotoluene	15.21		0.00	165	82250	1,945	195		
3	Fluorene	15.84		0.00	166	201094	1,605	160		
3	4-Chlorophenyl Phenyl Ether	15.90		0.00	204	119583	1,633	163		
3	Diethyl Phthalate	15.85		0.00	149	285776	1,847	185		
3	4-Nitroaniline	16.01	-0.02	0.00	138	59742	1,775	177		
3	2-Methyl-4,6-dinitrophenol	16.13		0.00	198	54009	1,719	172		
3	N-Nitrosodiphenylamine	16.20		0.00	169	164975	1,799	180		
3	Azobenzene	16.25	-0.01	0.00	77	282883	1,522	152		
4	4-Bromophenyl Phenyl Ether	17.01		0.00	248	78342	1,491	149		
4	Hexachlorobenzene	17.29		0.00	284	90250	1,568	157		
4	Pentachlorophenol	17.73		0.00	266	42116	1,653	165		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F014.D			**Instrument:**	MS10
Acqu Date:	11/13/2003 00:14	**Quant Date:**	11/13/2003 10:40	**Vial:**	13
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0317457-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.01	-0.01	0.00	178	345142	1,588	159		
4	Anthracene	18.11	-0.01	0.00	178	363841	1,677	168		
4	Carbazole	18.54	-0.01	0.00	167	351386	1,868	187		
4	Di-n-butyl Phthalate	19.64	-0.01	0.00	149	490085	1,834	183		
4	Fluoranthene	20.77		0.00	202	445658	1,919	192		
5	Pyrene	21.26		0.00	202	423801	1,712	171		
5	Butyl Benzyl Phthalate	23.09		0.00	149	217834	1,767	177		
5	3,3'-Dichlorobenzidine	24.14		0.00	252	115225	1,374	137		
5	Benz(a)anthracene	24.08		0.00	228	393286	1,772	177		
5	Chrysene	24.17	-0.01	0.00	228	361916	1,698	170		
5	Bis(2-ethylhexyl) Phthalate	24.57		0.00	149	296528	1,717	172	J	
6	Di-n-octyl Phthalate	26.06		0.00	149	460081	2,037	204		
6	Benzo(b)fluoranthene	26.62	-0.01	0.00	252	301496	1,841	184		
6	Benzo(k)fluoranthene	26.69		0.00	252	295163	1,968	197		
6	Benzo(a)pyrene	27.38		0.00	252	268836	1,779	178		
6	Indeno(1,2,3-cd)pyrene	30.01	-0.01	0.00	276	231657	1,697	170		
6	Dibenz(a,h)anthracene	30.08	-0.02	0.00	278	232694	1,749	175		
6	Benzo(g,h,i)perylene	30.58	-0.02	0.00	276	249046	1,773	177		

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F014.D Vial: 13
Acq On : 13 Nov 2003 00:14 Operator: JGISH
Sample : KWG0317457-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:37:04 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.63	152	73502	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.88	136	165722	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.63	164	97073	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	194795	1000.00	ng/ml	0.00
67) Chrysene-d12	24.11	240	205758	1000.00	ng/ml	0.00
76) Perylene-d12	27.51	264	115375	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.91	112	184300	2067.97	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 55.15%			
6) Phenol-d6	8.16	99	216043	1985.93	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 52.96%			
19) Nitrobenzene-d5	9.59	82	162638	1332.64	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 53.31%			
38) 2-Fluorobiphenyl	13.19	172	192528	1494.79	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 59.79%			
58) 2,4,6-Tribromophenol	16.44	330	71120	2443.44	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 65.16%			
70) Terphenyl-d14	21.78	244	352109	2225.76	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 89.03%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.34	42	91897m	1206.46	ng/ml	
3) Pyridine	5.41	79	57185m	557.84	ng/ml	
5) Bis(2-chloroethyl) Ether	8.27	93	139914	1392.13	ng/ml	86
7) Phenol	8.18	94	156398	1307.46	ng/ml	86
9) 2-Chlorophenol	8.36	128	122013	1431.71	ng/ml	87
10) 1,3-Dichlorobenzene	8.57	146	149104	1493.38	ng/ml	94
11) 1,4-Dichlorobenzene	8.65	146	153124	1416.53	ng/ml	94
12) 1,2-Dichlorobenzene	8.96	146	136773	1468.78	ng/ml	96
13) Benzyl Alcohol	8.89	108	64947	1211.66	ng/ml#	52
14) Bis(2-chloroisopropyl) Eth	9.14	45	127386	1277.50	ng/ml	77
15) 2-Methylphenol	9.11	107	74400	1037.76	ng/ml	84
16) Hexachloroethane	9.47	117	70757	1448.39	ng/ml	85
17) N-Nitrosodi-n-propylamine	9.38	70	89664	1209.49	ng/ml	81
18) 4-Methylphenol	9.36	107	101220	948.55	ng/ml	87
20) Nitrobenzene	9.62	77	146986	1178.00	ng/ml	90
22) Isophorone	10.04	82	227075	1497.53	ng/ml	95
23) 2-Nitrophenol	10.21	139	56636	1537.95	ng/ml	79
24) 2,4-Dimethylphenol	10.31	122	29829	547.76	ng/ml#	81
25) Bis(2-chloroethoxy)methane	10.48	93	119568	1382.36	ng/ml	98
26) 2,4-Dichlorophenol	10.65	162	86887	1399.18	ng/ml	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F014.D Vial: 13
Acq On : 13 Nov 2003 00:14 Operator: JGISH
Sample : KWG0317457-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:37:04 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	Benzoic Acid	10.56	122	93124	2992.19	ng/ml#	78
28)	1,2,4-Trichlorobenzene	10.81	180	108383	1446.44	ng/ml	96
29)	Naphthalene	10.92	128	256850	1482.30	ng/ml	98
30)	4-Chloroaniline	11.09	127	72201	992.61	ng/ml	91
31)	Hexachlorobutadiene	11.31	225	69125	1443.07	ng/ml	93
32)	4-Chloro-3-methylphenol	12.13	107	91123	1357.27	ng/ml	80
33)	2-Methylnaphthalene	12.33	142	146946	1418.64	ng/ml	96
35)	Hexachlorocyclopentadiene	12.83	237	32324	1271.62	ng/ml	95
36)	2,4,6-Trichlorophenol	13.02	196	66242	1530.19	ng/ml	95
37)	2,4,5-Trichlorophenol	13.09	196	70451	1515.47	ng/ml	97
39)	2-Chloronaphthalene	13.37	127	67928	1524.26	ng/ml	87
40)	2-Nitroaniline	13.68	65	79661	1640.15	ng/ml#	73
41)	Acenaphthylene	14.28	152	255782	1579.65	ng/ml	98
42)	Dimethyl Phthalate	14.22	163	240843	1666.77	ng/ml	96
43)	2,6-Dinitrotoluene	14.34	165	50705	1569.40	ng/ml#	57
44)	Acenaphthene	14.70	154	142746	1508.91	ng/ml	94
45)	3-Nitroaniline	14.62	138	54823	1756.95	ng/ml	91
46)	2,4-Dinitrophenol	14.86	184	26836	1151.45	ng/ml	80
47)	Dibenzofuran	15.06	168	263618	1580.37	ng/ml	82
48)	4-Nitrophenol	15.10	109	62803	1730.09	ng/ml#	72
49)	2,4-Dinitrotoluene	15.21	165	82250	1945.42	ng/ml	68
50)	Fluorene	15.84	166	201094	1604.95	ng/ml	96
51)	4-Chlorophenyl Phenyl Ethe	15.90	204	119583	1633.47	ng/ml	90
52)	Diethyl Phthalate	15.85	149	285776	1846.85	ng/ml	96
53)	4-Nitroaniline	16.01	138	59742	1774.82	ng/ml#	45
54)	2-Methyl-4,6-dinitrophenol	16.13	198	54009	1718.85	ng/ml	83
55)	N-Nitrosodiphenylamine	16.20	169	164975	1798.71	ng/ml	99
56)	Azobenzene	16.25	77	282883	1521.84	ng/ml	82
59)	4-Bromophenyl Phenyl Ether	17.01	248	78342	1491.27	ng/ml	90
60)	Hexachlorobenzene	17.29	284	90250	1568.26	ng/ml	90
61)	Pentachlorophenol	17.73	266	42116	1652.64	ng/ml	98
62)	Phenanthrene	18.01	178	345142	1587.90	ng/ml	98
63)	Anthracene	18.11	178	363841	1676.50	ng/ml	98
64)	Carbazole	18.54	167	351386	1867.72	ng/ml	98
65)	Di-n-butyl Phthalate	19.64	149	490085	1833.95	ng/ml	98
66)	Fluoranthene	20.77	202	445658	1919.26	ng/ml	93
69)	Pyrene	21.26	202	423801	1712.08	ng/ml	99
71)	Butyl Benzyl Phthalate	23.09	149	217834	1766.81	ng/ml	90
72)	3,3'-Dichlorobenzidine	24.14	252	115225	1373.64	ng/ml	99
73)	Benz(a)anthracene	24.08	228	393286	1772.40	ng/ml	96
74)	Chrysene	24.17	228	361916	1697.71	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F014.D Vial: 13
Acq On : 13 Nov 2003 00:14 Operator: JGISH
Sample : KWG0317457-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:37:04 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

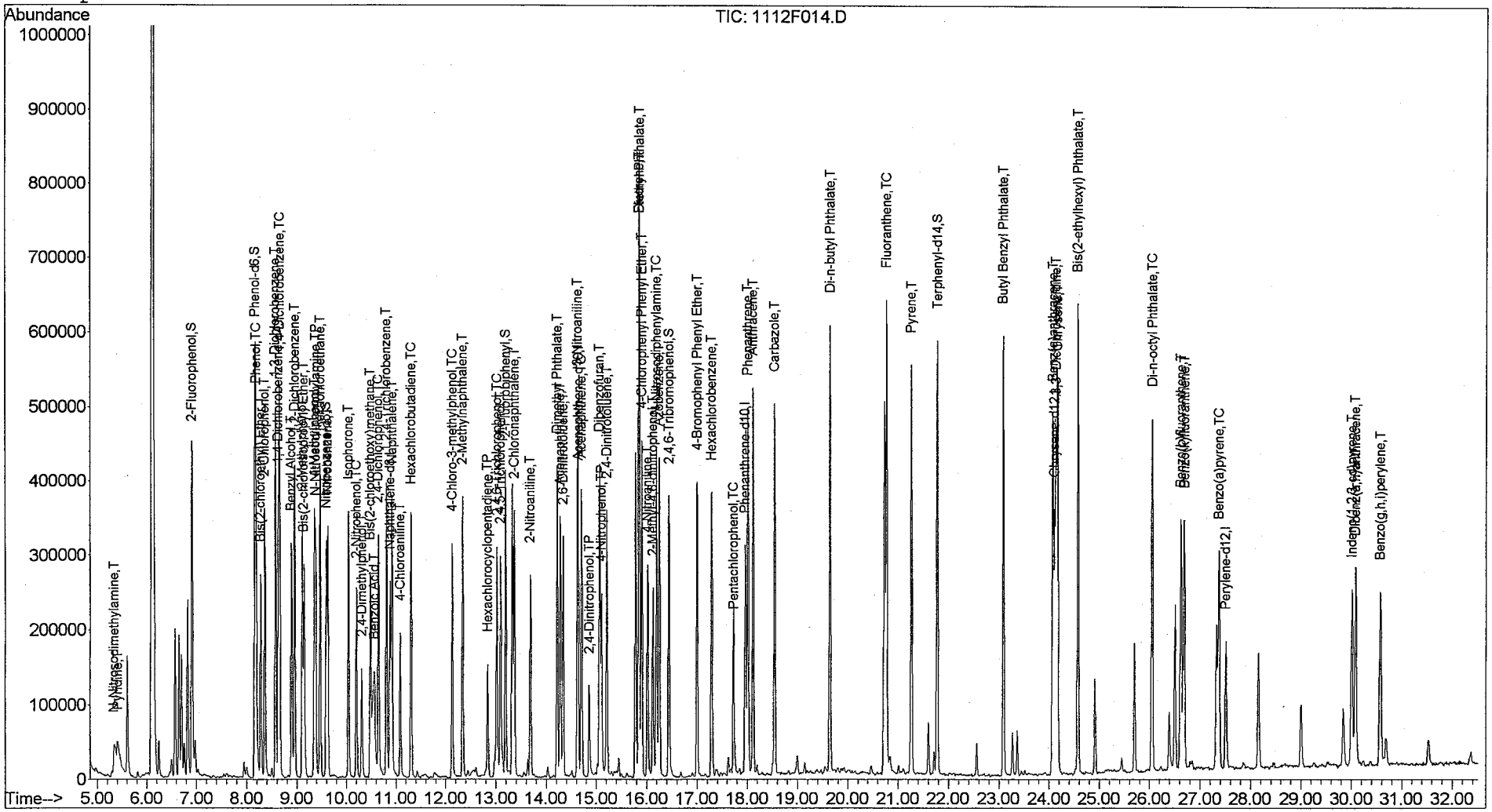
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Bis(2-ethylhexyl) Phthalat	24.57	149	296528	1716.70	ng/ml	99
77)	Di-n-octyl Phthalate	26.06	149	460081	2036.53	ng/ml	96
78)	Benzo(b)fluoranthene	26.62	252	301496	1841.06	ng/ml	96
79)	Benzo(k)fluoranthene	26.69	252	295163	1968.09	ng/ml	96
80)	Benzo(a)pyrene	27.38	252	268836	1779.10	ng/ml	95
81)	Indeno(1,2,3-cd)pyrene	30.01	276	231657	1696.53	ng/ml	91
82)	Dibenz(a,h)anthracene	30.08	278	232694	1749.36	ng/ml	92
83)	Benzo(g,h,i)perylene	30.58	276	249046	1772.75	ng/ml	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F014.D Vial: 13
Acq On : 13 Nov 2003 00:14 Operator: JGISH
Sample : KWG0317457-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:40 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration



2042

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Duplicate Lab Control Sample
Lab Code: KWG0317457-4

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**162**		30	1	10/30/03	11/13/03	KWG0317457	
2-Methylphenol	**135**		10	1	10/30/03	11/13/03	KWG0317457	
4-Methylphenol†	**131**		10	1	10/30/03	11/13/03	KWG0317457	
2,4-Dimethylphenol	**65.1**		50	1	10/30/03	11/13/03	KWG0317457	
2,4-Dichlorophenol	**153**		10	1	10/30/03	11/13/03	KWG0317457	
2,4,6-Trichlorophenol	**151**		10	1	10/30/03	11/13/03	KWG0317457	
Pentachlorophenol	**154**		50	1	10/30/03	11/13/03	KWG0317457	
Butyl Benzyl Phthalate	**179**		10	1	10/30/03	11/13/03	KWG0317457	
Bis(2-ethylhexyl) Phthalate	**183**		200	1	10/30/03	11/13/03	KWG0317457	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	63	40-123	11/13/03	Acceptable
2,4,6-Tribromophenol	75	35-138	11/13/03	Acceptable
Terphenyl-d14	83	56-152	11/13/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\111303\1112F015.D
Lab ID: KWG0317457-4
RunType: DLCS
Matrix: SEDIMENT

Date Acquired: 11/13/2003 00:55
Date Quantitated: 11/13/2003 10:40
Batch ID: KWG0318325
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K8291
K8433

Primary Review: 11/13/3

Secondary Review: mtt 11/13/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/05/2003

Analysis Lot:	KWG0318325	**Prep Lot:**	KWG0317457	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	245979	**Prep Date:**	10/30/2003		

Quant Method:	J:\MS10\METHODS\BNA\1112BNLL.M	**Calibration ID:**	CAL3091
Title:			
Tune Ref:	J:\MS10\DATA\111303\1112A012.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\111303\1112F013.D	**Quant based on Method**	

Data File:	J:\MS10\DATA\111303\1112F015.D			**Instrument:**	MS10
Acqu Date:	11/13/2003 00:55	**Quant Date:**	11/13/2003 10:40	**Vial:**	14
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0317457-4			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.63	0.01	152	54607	1,000.00	OK
2	Naphthalene-d8	10.88	0.00	136	166424	1,000.00	OK
3	Acenaphthene-d10	14.63	-0.01	164	117112	1,000.00	OK
4	Phenanthrene-d10	17.97	0.01	188	171645	1,000.00	OK
5	Chrysene-d12	24.11	0.00	240	171650	1,000.00	OK
6	Perylene-d12	27.52	0.01	264	115628	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.90	0.01	0.00	112	139795	2,111	56	28-109	OK	
1	Phenol-d6	8.16	0.01	0.00	99	189866	2,349	63	40-123	OK	
1	Nitrobenzene-d5	9.59	0.01	0.00	82	142639	1,573	63	24-128	OK	
3	2-Fluorobiphenyl	13.19	0.00	0.00	172	230288	1,482	59	28-126	OK	
4	2,4,6-Tribromophenol	16.44	-0.01	0.00	330	71889	2,803	75	35-138	OK	
5	Terphenyl-d14	21.78	0.00	0.00	244	272674	2,066	83	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.34	0.05	0.01	42	82494	1,458	146		
1	Pyridine	5.41	0.10	0.01	79	46410m	609.39	60.9		
1	Bis(2-chloroethyl) Ether	8.27		0.00	93	107415	1,439	144		
1	Phenol	8.18	0.01	0.00	94	143750	1,618	162		
1	Aniline				93	0d		1.5	U	
1	2-Chlorophenol	8.35	-0.01	0.00	128	99645	1,574	157		
1	1,3-Dichlorobenzene	8.57	0.01	0.00	146	112868	1,522	152		
1	1,4-Dichlorobenzene	8.65	0.01	0.00	146	113838	1,417	142		
1	1,2-Dichlorobenzene	8.96	0.01	0.00	146	110013	1,590	159		
1	Benzyl Alcohol	8.89		0.00	108	63064	1,584	158		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F015.D		**Instrument:** MS10
Acqu Date:	11/13/2003 00:55	**Quant Date:** 11/13/2003 10:40	**Vial:** 14
Run Type:	DLCS		**Dilution:** 1.0
Lab ID:	KWG0317457-4		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.15	0.01	0.00	45	106754	1,441	144		
1	2-Methylphenol	9.11	0.01	0.00	107	72067	1,353	135		
1	Hexachloroethane	9.47	0.01	0.00	117	58639	1,616	162		
1	N-Nitrosodi-n-propylamine	9.38		0.00	70	86737	1,575	157		
1	4-Methylphenol	9.36		0.00	107	104123	1,313	131		
1	Nitrobenzene	9.62	0.01	0.00	77	135915	1,466	147		
2	Isophorone	10.04		0.00	82	247981	1,629	163		
2	2-Nitrophenol	10.21	0.01	0.00	139	56859	1,537	154		
2	2,4-Dimethylphenol	10.31		0.00	122	35621	651.36	65.1		
2	Bis(2-chloroethoxy)methane	10.49	0.01	0.00	93	127875	1,472	147		
2	2,4-Dichlorophenol	10.65		0.00	162	95208	1,527	153		
2	Benzoic Acid	10.52	-0.02	0.00	122	36189	1,629	163	J	
2	1,2,4-Trichlorobenzene	10.81		0.00	180	105284	1,399	140		
2	Naphthalene	10.92	0.01	0.00	128	257313	1,479	148		
2	4-Chloroaniline	11.08	-0.01	0.00	127	76784	1,051	105		
2	Hexachlorobutadiene	11.31	0.01	0.00	225	73134	1,520	152		
2	4-Chloro-3-methylphenol	12.13		0.00	107	110641	1,641	164		
2	2-Methylnaphthalene	12.33		0.00	142	172812	1,661	166		
3	Hexachlorocyclopentadiene	12.84		0.00	237	37439	1,221	122		
3	2,4,6-Trichlorophenol	13.02		0.00	196	78633	1,506	151		
3	2,4,5-Trichlorophenol	13.10	0.01	0.00	196	88880	1,585	158		
3	2-Chloronaphthalene	13.36	-0.01	0.00	127	80099	1,490	149		
3	2-Nitroaniline	13.69		0.00	65	93819	1,601	160		
3	Acenaphthylene	14.28	-0.01	0.00	152	307255	1,573	157		
3	Dimethyl Phthalate	14.22	-0.01	0.00	163	277487	1,592	159		
3	2,6-Dinitrotoluene	14.35	0.01	0.00	165	62113	1,594	159		
3	Acenaphthene	14.70	-0.01	0.00	154	169587	1,486	149		
3	3-Nitroaniline	14.62		0.00	138	55506	1,474	147		
3	2,4-Dinitrophenol	14.86		0.00	184	19452	691.81	69.2	J	
3	Dibenzofuran	15.07	0.01	0.00	168	309047	1,536	154		
3	4-Nitrophenol	15.10	-0.01	0.00	109	58084	1,326	133		
3	2,4-Dinitrotoluene	15.22	0.01	0.00	165	92294	1,809	181		
3	Fluorene	15.85	0.01	0.00	166	220043	1,456	146		
3	4-Chlorophenyl Phenyl Ether	15.90		0.00	204	132615	1,502	150		
3	Diethyl Phthalate	15.85		0.00	149	309218	1,656	166		
3	4-Nitroaniline	16.02	-0.01	0.00	138	57503	1,416	142		
3	2-Methyl-4,6-dinitrophenol	16.13		0.00	198	52556	1,472	147		
3	N-Nitrosodiphenylamine	16.20		0.00	169	172456	1,559	156		
3	Azobenzene	16.26		0.00	77	300416	1,340	134		
4	4-Bromophenyl Phenyl Ether	17.00	-0.01	0.00	248	81046	1,751	175		
4	Hexachlorobenzene	17.29		0.00	284	92757	1,829	183		
4	Pentachlorophenol	17.73		0.00	266	34069	1,545	154		

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F015.D			**Instrument:**	MS10
Acqu Date:	11/13/2003 00:55	**Quant Date:**	11/13/2003 10:40	**Vial:**	14
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0317457-4			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.02		0.00	178	324971	1,697	170		
4	Anthracene	18.12		0.00	178	333861	1,746	175		
4	Carbazole	18.55		0.00	167	295670	1,784	178		
4	Di-n-butyl Phthalate	19.64	-0.01	0.00	149	387294	1,645	164		
4	Fluoranthene	20.77		0.00	202	338937	1,657	166		
5	Pyrene	21.27	0.01	0.00	202	324024	1,569	157		
5	Butyl Benzyl Phthalate	23.10	0.01	0.00	149	184403	1,793	179		
5	3,3'-Dichlorobenzidine	24.14		0.00	252	102261	1,461	146		
5	Benz(a)anthracene	24.08		0.00	228	351234	1,897	190		
5	Chrysene	24.17	-0.01	0.00	228	317815	1,787	179		
5	Bis(2-ethylhexyl) Phthalate	24.58	0.01	0.00	149	263656	1,830	183	J	
6	Di-n-octyl Phthalate	26.05	-0.01	0.00	149	409744	1,810	181		
6	Benzo(b)fluoranthene	26.63		0.00	252	310586	1,892	189		
6	Benzo(k)fluoranthene	26.69		0.00	252	289467	1,926	193		
6	Benzo(a)pyrene	27.37	-0.01	0.00	252	276023	1,823	182		
6	Indeno(1,2,3-cd)pyrene	30.02		0.00	276	248504	1,816	182		
6	Dibenz(a,h)anthracene	30.09	-0.01	0.00	278	242034	1,816	182		
6	Benzo(g,h,i)perylene	30.58	-0.02	0.00	276	253576	1,801	180		

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

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J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F015.D Vial: 14
Acq On : 13 Nov 2003 00:55 Operator: JGISH
Sample : KWG0317457-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:37:09 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.63	152	54607	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.88	136	166424	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.63	164	117112	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.97	188	171645	1000.00	ng/ml	0.00
67) Chrysene-d12	24.11	240	171650	1000.00	ng/ml	0.00
76) Perylene-d12	27.52	264	115628	1000.00	ng/ml	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.90	112	139795	2111.36	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 56.30%			
6) Phenol-d6	8.16	99	189866	2349.21	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 62.65%			
19) Nitrobenzene-d5	9.59	82	142639	1573.18	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 62.93%			
38) 2-Fluorobiphenyl	13.19	172	230288	1482.02	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 59.28%			
58) 2,4,6-Tribromophenol	16.44	330	71889	2802.97	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 74.75%			
70) Terphenyl-d14	21.78	244	272674	2066.13	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 82.65%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.34	42	82494	1457.76	ng/ml#	40
3) Pyridine	5.41	79	46410m	609.39	ng/ml	
5) Bis(2-chloroethyl) Ether	8.27	93	107415	1438.58	ng/ml	92
7) Phenol	8.18	94	143750	1617.54	ng/ml	90
9) 2-Chlorophenol	8.35	128	99645	1573.82	ng/ml	89
10) 1,3-Dichlorobenzene	8.57	146	112868	1521.60	ng/ml	96
11) 1,4-Dichlorobenzene	8.65	146	113838	1417.49	ng/ml	95
12) 1,2-Dichlorobenzene	8.96	146	110013	1590.19	ng/ml	96
13) Benzyl Alcohol	8.89	108	63064	1583.63	ng/ml#	62
14) Bis(2-chloroisopropyl) Eth	9.15	45	106754	1441.04	ng/ml	73
15) 2-Methylphenol	9.11	107	72067	1353.04	ng/ml	86
16) Hexachloroethane	9.47	117	58639	1615.68	ng/ml	90
17) N-Nitrosodi-n-propylamine	9.38	70	86737	1574.85	ng/ml	80
18) 4-Methylphenol	9.36	107	104123	1313.38	ng/ml	87
20) Nitrobenzene	9.62	77	135915	1466.18	ng/ml	88
22) Isophorone	10.04	82	247981	1628.51	ng/ml	96
23) 2-Nitrophenol	10.21	139	56859	1537.49	ng/ml	71
24) 2,4-Dimethylphenol	10.31	122	35621	651.36	ng/ml	82
25) Bis(2-chloroethoxy)methane	10.49	93	127875	1472.17	ng/ml	98
26) 2,4-Dichlorophenol	10.65	162	95208	1526.71	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F015.D
Acq On : 13 Nov 2003 00:55
Sample : KWG0317457-DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:37:09 2003

Vial: 14
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	Benzoic Acid	10.52	122	36189	1628.90	ng/ml#	72
28)	1,2,4-Trichlorobenzene	10.81	180	105284	1399.15	ng/ml	95
29)	Naphthalene	10.92	128	257313	1478.71	ng/ml	96
30)	4-Chloroaniline	11.08	127	76784	1051.17	ng/ml	87
31)	Hexachlorobutadiene	11.31	225	73134	1520.32	ng/ml	91
32)	4-Chloro-3-methylphenol	12.13	107	110641	1641.04	ng/ml	76
33)	2-Methylnaphthalene	12.33	142	172812	1661.32	ng/ml	96
35)	Hexachlorocyclopentadiene	12.84	237	37439	1220.83	ng/ml	98
36)	2,4,6-Trichlorophenol	13.02	196	78633	1505.62	ng/ml	99
37)	2,4,5-Trichlorophenol	13.10	196	88880	1584.75	ng/ml	99
39)	2-Chloronaphthalene	13.36	127	80099	1489.82	ng/ml	91
40)	2-Nitroaniline	13.69	65	93819	1601.13	ng/ml#	73
41)	Acenaphthylene	14.28	152	307255	1572.85	ng/ml	99
42)	Dimethyl Phthalate	14.22	163	277487	1591.77	ng/ml	100
43)	2,6-Dinitrotoluene	14.35	165	62113	1593.54	ng/ml	75
44)	Acenaphthene	14.70	154	169587	1485.90	ng/ml	99
45)	3-Nitroaniline	14.62	138	55506	1474.46	ng/ml	83
46)	2,4-Dinitrophenol	14.86	184	19452	691.81	ng/ml	71
47)	Dibenzofuran	15.07	168	309047	1535.70	ng/ml	88
48)	4-Nitrophenol	15.10	109	58084	1326.30	ng/ml#	63
49)	2,4-Dinitrotoluene	15.22	165	92294	1809.46	ng/ml	85
50)	Fluorene	15.85	166	220043	1455.68	ng/ml	97
51)	4-Chlorophenyl Phenyl Ethe	15.90	204	132615	1501.53	ng/ml	86
52)	Diethyl Phthalate	15.85	149	309218	1656.41	ng/ml	97
53)	4-Nitroaniline	16.02	138	57503	1415.99	ng/ml#	47
54)	2-Methyl-4,6-dinitrophenol	16.13	198	52556	1472.01	ng/ml	79
55)	N-Nitrosodiphenylamine	16.20	169	172456	1558.54	ng/ml	93
56)	Azobenzene	16.26	77	300416	1339.62	ng/ml	88
59)	4-Bromophenyl Phenyl Ether	17.00	248	81046	1750.81	ng/ml	88
60)	Hexachlorobenzene	17.29	284	92757	1829.22	ng/ml	98
61)	Pentachlorophenol	17.73	266	34069	1544.98	ng/ml	97
62)	Phenanthrene	18.02	178	324971	1696.75	ng/ml	99
63)	Anthracene	18.12	178	333861	1745.84	ng/ml	97
64)	Carbazole	18.55	167	295670	1783.53	ng/ml	97
65)	Di-n-butyl Phthalate	19.64	149	387294	1644.76	ng/ml	97
66)	Fluoranthene	20.77	202	338937	1656.52	ng/ml	95
69)	Pyrene	21.27	202	324024	1569.10	ng/ml	99
71)	Butyl Benzyl Phthalate	23.10	149	184403	1792.86	ng/ml	92
72)	3,3'-Dichlorobenzidine	24.14	252	102261	1461.33	ng/ml	96
73)	Benz(a)anthracene	24.08	228	351234	1897.42	ng/ml	97
74)	Chrysene	24.17	228	317815	1787.08	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F015.D Vial: 14
Acq On : 13 Nov 2003 00:55 Operator: JGISH
Sample : KWG0317457-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:37:09 2003 Quant Results File: 1112BNLL.RES

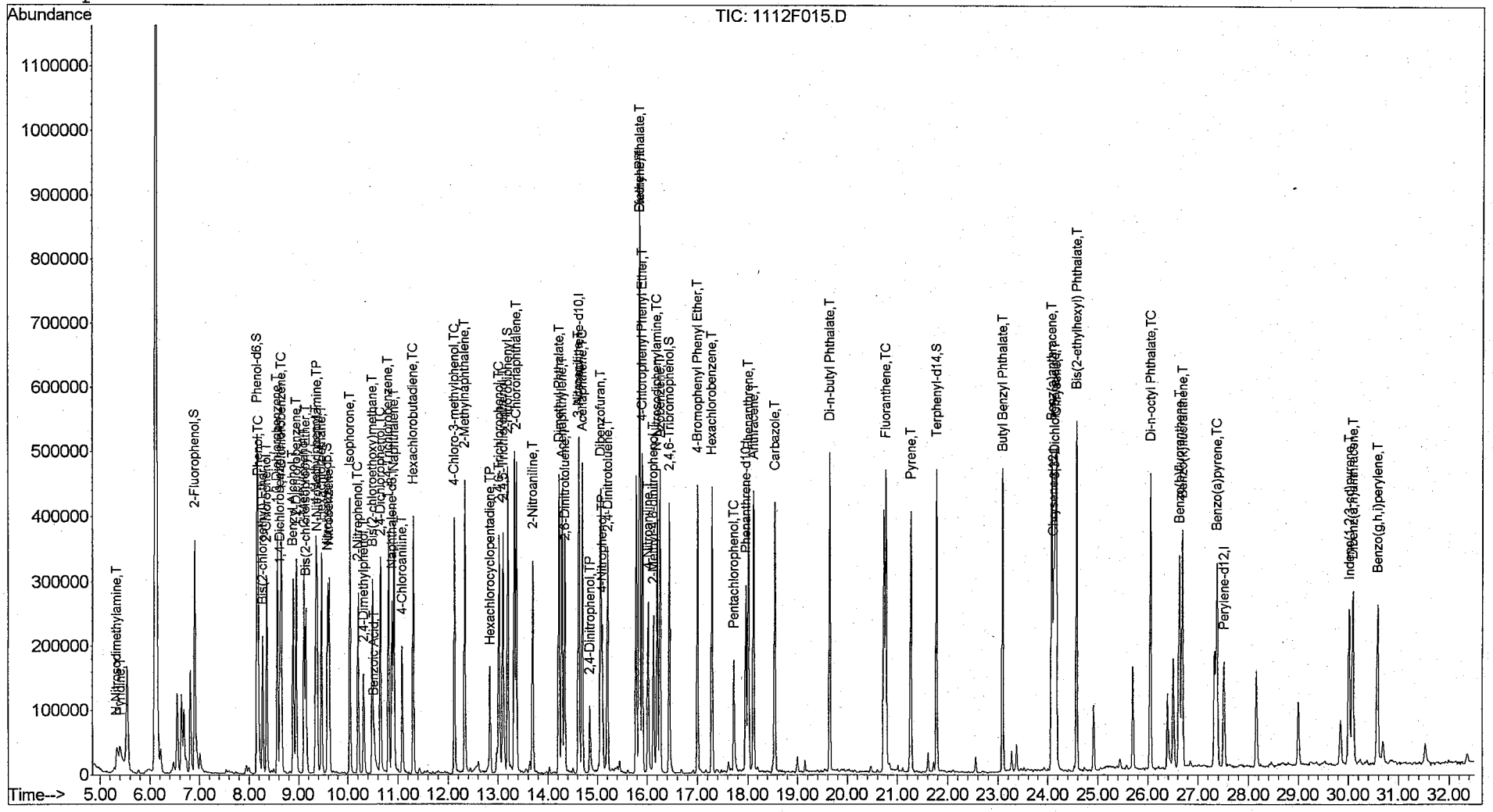
Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Bis(2-ethylhexyl) Phthalat	24.58	149	263656	1829.70	ng/ml	97
77)	Di-n-octyl Phthalate	26.05	149	409744	1809.74	ng/ml	93
78)	Benzo(b)fluoranthene	26.63	252	310586	1892.42	ng/ml	96
79)	Benzo(k)fluoranthene	26.69	252	289467	1925.88	ng/ml	93
80)	Benzo(a)pyrene	27.37	252	276023	1822.67	ng/ml	93
81)	Indeno(1,2,3-cd)pyrene	30.02	276	248504	1815.93	ng/ml	90
82)	Dibenz(a,h)anthracene	30.09	278	242034	1815.59	ng/ml	93
83)	Benzo(g,h,i)perylene	30.58	276	253576	1801.05	ng/ml	89

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS10\DATA\111303\1112F015.D Vial: 14
Acq On : 13 Nov 2003 00:55 Operator: JGISH
Sample : KWG0317457-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 10:40 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 10:36:37 2003
Response via : Initial Calibration



Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Standards Data

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003
Time Analyzed: 22:51

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111303\1112F012.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0318325

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	47.7	9559	PASS
68	69	0	2	0.8	111	PASS
69	198	0	100	73.4	14723	PASS
70	69	0	2	0.2	36	PASS
127	198	25	75	43.9	8792	PASS
197	198	0	1	0.8	162	PASS
198	198	100	100	100.0	20045	PASS
199	198	5	9	6.7	1349	PASS
275	198	10	30	20.7	4145	PASS
365	198	1	100	2.5	502	PASS
441	443	0	100	84.8	1913	PASS
442	198	40	110	64.8	12989	PASS
443	442	15	24	17.4	2256	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318325-2	J:\MS10\DATA\111303\1112F012.D	11/12/2003	22:51	
Method Blank	KWG0317457-5	J:\MS10\DATA\111303\1112F013.D	11/12/2003	23:33	
Lab Control Sample	KWG0317457-3	J:\MS10\DATA\111303\1112F014.D	11/13/2003	00:14	
Duplicate Lab Control Sample	KWG0317457-4	J:\MS10\DATA\111303\1112F015.D	11/13/2003	00:55	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS10\DATA\111303\1112F012.D
Lab ID: KWG0318325-1
RunType: DFTPP
Matrix: LIQUID

Date Acquired: 11/12/2003 22:51
Date Quantitated:
Batch ID: KWG0318325
Analysis Method: 8270C
ListJoinID: LJ2394

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/13/3

Secondary Review: 11/13/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/13/2003

Analysis Lot:	KWG0318325	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1112BNLL.M	**Calibration ID:**	CAL3091
Title:		**Report List ID:**	LJ1747
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS10\DATA\111303\1112A012.D			**Instrument:**	MS10
Acqu Date:	11/12/2003 22:51	**Quant Date:**		**Vial:**	11
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318325-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	47.7	9559	Pass
68	69	0	2	0.8	111	Pass
69	198	0	100	73.4	14723	Pass
70	69	0	2	0.2	36	Pass
127	198	25	75	43.9	8792	Pass
197	198	0	1	0.8	162	Pass
198	198	100	100	100.0	20045	Pass
199	198	5	9	6.7	1349	Pass
275	198	10	30	20.7	4145	Pass
365	198	0.75	100	2.5	502	Pass
441	443	0.01	100	84.8	1913	Pass
442	198	40	110	64.8	12989	Pass
443	442	15	24	17.4	2256	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

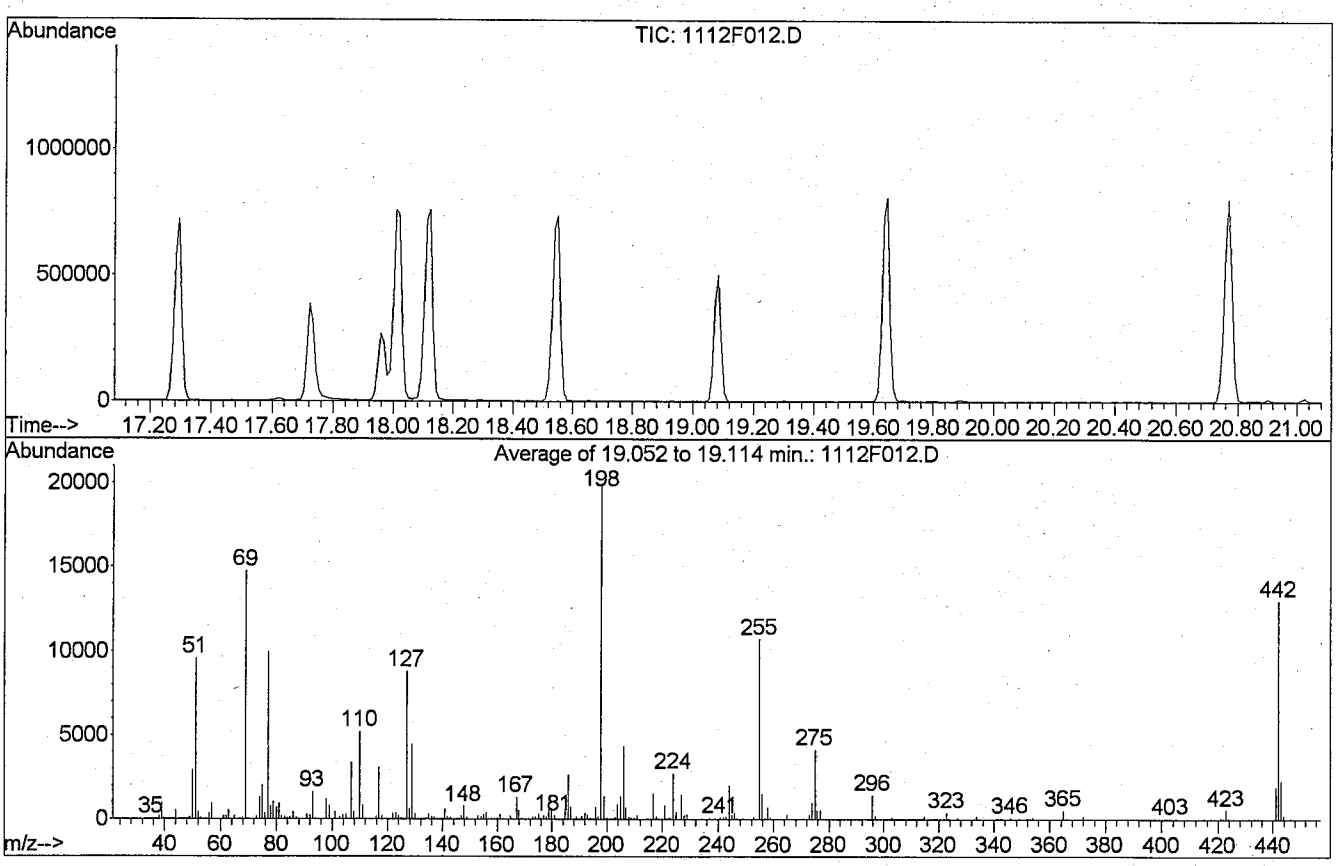
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS10\DATA\111303\1112F012.D
Acq On : 12 Nov 2003 22:51
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 11
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.052 to 19.114 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	47.7	9559	PASS
68	69	0.00	2	0.8	111	PASS
69	198	0.00	100	73.4	14723	PASS
70	69	0.00	2	0.2	36	PASS
127	198	25	75	43.9	8792	PASS
197	198	0.00	1	0.8	162	PASS
198	198	100	100	100.0	20045	PASS
199	198	5	9	6.7	1349	PASS
275	198	10	30	20.7	4145	PASS
365	198	0.75	100	2.5	502	PASS
441	443	0.01	100	84.8	1913	PASS
441	443	0.01	100	84.8	1913	PASS
442	198	40	110	64.8	12989	PASS
443	442	15	24	17.4	2256	PASS

1112F012.D 1112BNLL.M Thu Nov 13 10:33:10 2003

Average of 19.052 to 19.114 min.: 1112F012.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	30	48.80	79	61.95	188	71.55	36
36.75	29	48.95	125	62.95	542	72.85	149
37.05	30	49.95	2927	63.85	44	73.95	1312
38.05	210	51.00	9559	64.85	32	74.90	2046
39.00	973	51.95	425	65.00	201	75.90	359
39.80	74	52.95	103	66.75	28	76.95	9946
40.15	29	54.95	62	67.80	111	77.95	766
41.95	30	55.85	354	68.85	14723	78.85	1027
43.90	484	56.90	923	69.05	52	79.95	687
44.95	34	60.90	221	69.75	31	80.85	925
47.80	32	61.15	29	70.05	36	81.90	196

Average of 19.052 to 19.114 min.: 1112F012.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
82.90	170	92.85	1614	106.85	3378	117.85	217
83.40	29	93.75	91	107.70	92	121.90	301
83.90	77	94.95	28	107.85	451	122.90	357
84.85	118	95.85	32	108.05	31	123.20	31
85.05	32	97.85	1185	108.85	75	123.95	209
85.95	412	98.90	789	109.90	5225	124.60	32
87.10	126	100.00	33	110.90	808	124.90	102
87.85	37	100.95	427	111.85	59	125.10	40
90.85	253	102.75	121	112.05	40	126.90	8792
91.75	48	103.85	239	115.85	150	127.90	629
91.90	251	104.95	255	116.85	3087	128.90	4455

Average of 19.052 to 19.114 min.: 1112F012.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
129.70	48	142.65	39	156.65	43	165.85	63
129.85	338	142.85	109	157.85	84	166.85	1323
133.90	83	145.80	74	158.90	73	167.75	548
134.85	321	146.85	186	159.70	80	168.85	74
135.85	160	147.10	95	159.95	73	170.80	32
136.75	59	147.75	751	160.95	258	171.30	36
136.95	142	148.85	124	161.75	46	172.95	138
138.95	33	152.85	206	162.05	55	173.80	160
139.85	44	154.00	160	164.65	194	174.95	314
140.85	578	154.85	281	164.85	40	175.65	81
141.85	183	155.85	389	165.45	42	175.90	69

Average of 19.052 to 19.114 min.: 1112F012.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.90	182	186.85	728	196.80	162	203.40	36
177.90	168	187.85	36	197.80	20045	203.80	844
178.80	985	188.75	47	198.60	42	204.80	1356
179.80	506	188.95	154	198.85	1349	205.95	4377
180.80	225	190.80	176	199.70	37	206.85	694
182.55	28	191.85	341	199.95	93	207.80	116
183.85	57	192.85	270	201.00	30	208.05	84
184.05	60	193.70	32	201.30	49	208.90	104
184.85	489	194.10	105	201.90	29	209.85	80
185.90	2654	194.70	39	202.80	76	210.85	252
186.65	53	195.90	699	203.00	126	214.55	31

Average of 19.052 to 19.114 min.: 1112F012.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
214.75	35	222.80	92	235.85	38	252.85	115
215.85	48	223.90	2733	236.90	84	254.85	10706
216.75	1532	224.80	253	238.85	30	255.90	1519
217.60	33	224.95	433	240.75	78	256.90	103
217.85	138	226.80	1468	241.85	110	257.80	684
218.80	33	227.85	222	242.95	168	258.85	108
219.90	40	228.75	261	243.90	2016	264.75	268
220.85	784	230.85	61	244.90	223	265.90	32
221.70	82	233.65	30	245.85	385	270.80	30
221.90	83	233.95	46	246.80	70	271.70	35
222.50	53	234.85	41	248.90	60	272.80	286

Average of 19.052 to 19.114 min.: 1112F012.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
273.00	88	314.85	179	352.75	32	423.80	80
273.85	966	315.80	36	353.00	62	441.00	1913
274.90	4145	322.90	401	353.90	122	441.90	12989
275.80	544	323.80	36	364.85	502	442.90	2256
276.80	533	326.85	97	365.90	33	443.90	222
285.15	32	333.85	192	371.90	146		
292.90	66	334.75	40	401.85	42		
295.85	1423	345.90	82	402.95	59		
296.95	178	351.75	43	420.85	78		
302.90	127	351.95	51	421.80	33		
313.95	40	352.55	30	422.85	565		

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003
Time Analyzed: 09:06

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111703\1117A001.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0318538

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	43.2	10798	PASS
68	69	0	2	0.6	111	PASS
69	198	0	100	70.2	17549	PASS
70	69	0	2	0.0	0	PASS
127	198	25	75	42.1	10523	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	25016	PASS
199	198	5	9	6.2	1539	PASS
275	198	10	30	19.7	4939	PASS
365	198	1	100	2.9	731	PASS
441	443	0	100	71.0	2352	PASS
442	198	40	110	67.2	16809	PASS
443	442	15	24	19.7	3313	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318538-2	J:\MS10\DATA\111703\1117F001.D	11/17/2003	09:06	
SED-1	K2308433-001	J:\MS10\DATA\111703\1117F014.D	11/17/2003	18:23	
SED-2	K2308433-002	J:\MS10\DATA\111703\1117F015.D	11/17/2003	19:04	
SED-3	K2308433-003	J:\MS10\DATA\111703\1117F016.D	11/17/2003	19:45	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS10\DATA\111703\1117A001.D
Lab ID: KWG0318538-1
RunType: DFTPP
Matrix: LIQUID

Date Acquired: 11/17/2003 09:06
Date Quantitated:
Batch ID: KWG0318538
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/18/3

Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/18/2003

Analysis Lot:	KWG0318538	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:		**Report List ID:**	LJ1747
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS10\DATA\111703\1117A001.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318538-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	43.2	10798	Pass
68	69	0	2	0.6	111	Pass
69	198	0	100	70.2	17549	Pass
70	69	0	2	0.0	0	Pass
127	198	25	75	42.1	10523	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	25016	Pass
199	198	5	9	6.2	1539	Pass
275	198	10	30	19.7	4939	Pass
365	198	0.75	100	2.9	731	Pass
441	443	0.01	100	71.0	2352	Pass
442	198	40	110	67.2	16809	Pass
443	442	15	24	19.7	3313	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

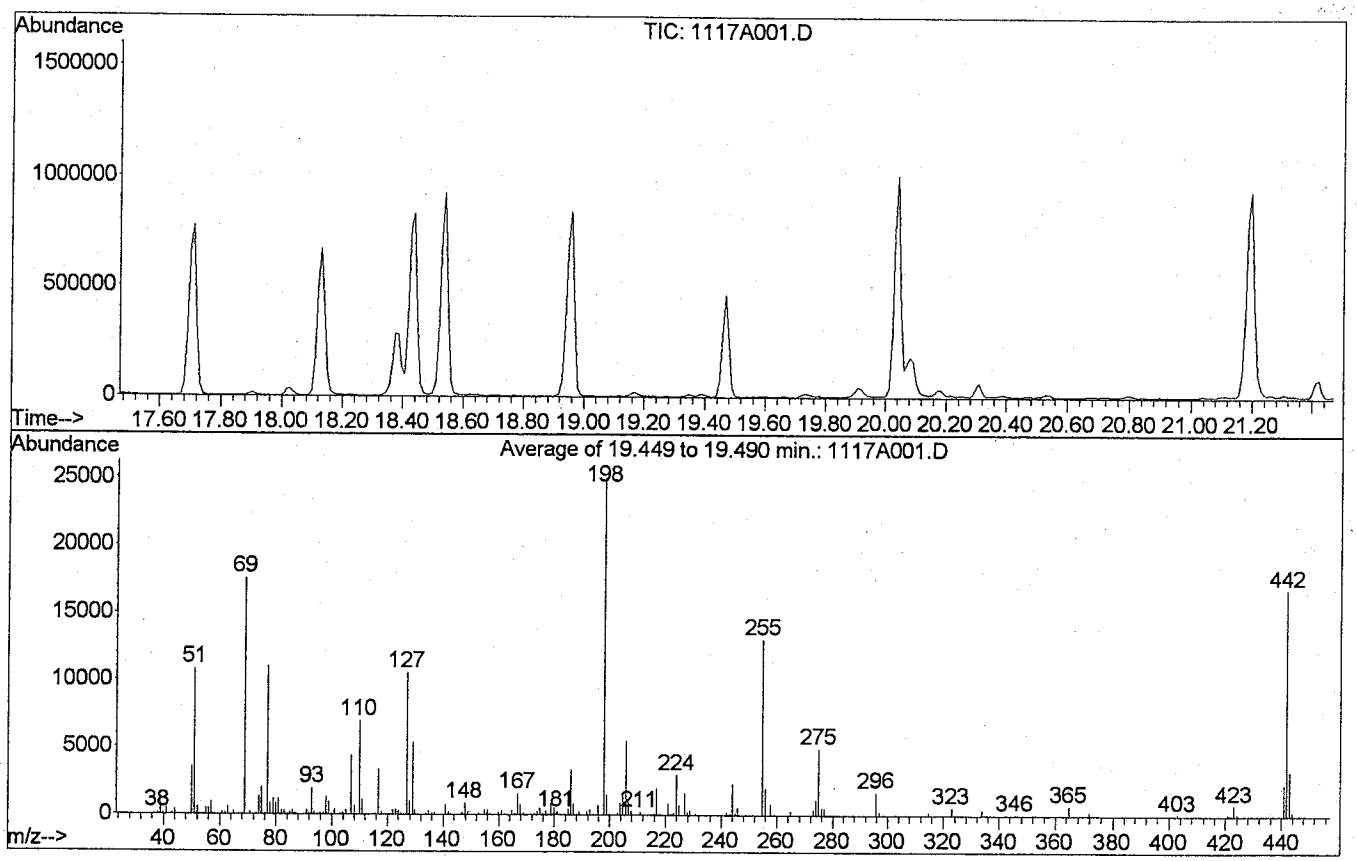
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS10\DATA\111703\1117A001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.449 to 19.490 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	43.2	10798	PASS
68	69	0.00	2	0.6	111	PASS
69	198	0.00	100	70.2	17549	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	42.1	10523	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	25016	PASS
199	198	5	9	6.2	1539	PASS
275	198	10	30	19.7	4939	PASS
365	198	0.75	100	2.9	731	PASS
441	443	0.01	100	71.0	2352	PASS
441	443	0.01	100	71.0	2352	PASS
442	198	40	110	67.2	16809	PASS
443	442	15	24	19.7	3313	PASS

1117A001.D 1114BNLL.M Mon Nov 17 11:24:39 2003

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.85	71	51.00	10798	66.80	91	78.95	1201
37.90	148	51.95	592	67.85	111	79.85	889
39.00	1157	53.00	61	68.85	17549	80.85	1144
39.95	142	55.00	467	70.80	192	81.70	60
40.95	467	55.90	504	71.15	45	81.90	286
42.95	141	56.70	74	72.90	126	82.90	294
43.10	112	56.95	964	73.95	1373	83.85	45
43.90	423	60.90	211	74.90	2073	84.95	203
48.90	51	61.90	161	75.90	113	85.85	343
49.70	65	62.95	589	76.95	11008	86.55	83
50.00	3545	64.95	241	77.90	819	86.95	114

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.90	374	99.90	51	110.90	1171	125.70	42
91.75	73	100.50	41	111.45	48	126.90	10523
91.95	103	100.90	383	111.75	53	127.90	1031
92.85	1969	102.85	129	115.70	130	128.90	5383
93.80	191	103.70	118	116.85	3350	129.75	331
94.95	43	103.90	148	117.85	210	130.80	58
95.80	136	104.95	371	118.65	54	133.75	71
96.90	164	106.90	4361	121.85	329	133.90	124
97.90	1342	107.95	657	122.90	424	134.85	299
98.60	41	109.05	48	123.85	282	135.85	160
98.85	984	109.85	6941	124.75	144	136.90	155

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
140.80	747	154.80	376	164.80	345	173.30	68
141.90	269	155.70	151	165.65	102	173.80	265
142.60	125	155.85	350	166.05	88	174.85	475
145.90	43	156.80	126	166.35	45	175.70	104
146.80	136	158.85	49	166.85	1579	176.00	66
146.95	201	159.90	228	167.75	763	176.80	305
147.80	863	160.35	40	168.05	82	177.60	47
148.75	202	160.95	339	168.85	127	177.90	48
152.80	181	161.85	73	171.65	106	178.80	1092
153.00	55	162.75	42	172.70	90	179.70	144
153.90	58	164.65	46	172.90	57	179.85	517

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
180.60	132	191.95	83	204.85	1682	217.80	134
180.95	276	192.80	399	205.85	5494	220.85	875
181.85	50	194.00	101	206.95	962	221.50	57
183.95	49	194.90	76	207.85	301	221.80	54
184.90	467	195.85	728	208.95	41	222.40	63
185.85	3422	197.80	25016	209.75	89	222.70	107
186.85	844	198.80	1539	210.90	273	222.90	210
187.85	118	199.90	59	214.55	40	223.90	3008
188.95	237	202.60	53	215.55	65	224.85	732
189.15	44	202.85	188	215.75	90	226.80	1707
191.75	259	203.90	936	216.80	2040	227.85	270

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
228.75	380	252.80	81	276.80	521	334.85	76
230.85	98	254.85	13039	277.80	40	345.70	59
233.85	60	255.85	2008	295.85	1741	351.85	64
235.85	53	257.85	826	296.85	271	352.85	53
241.90	193	258.95	58	302.85	96	353.95	46
242.60	47	264.85	346	314.85	206	364.85	731
242.95	157	272.85	430	315.90	83	371.85	253
243.85	2360	273.85	1134	322.85	582	401.65	45
244.80	167	274.85	4939	324.00	80	401.95	49
245.00	178	275.60	118	327.85	46	402.90	130
245.80	592	275.85	561	333.80	432	403.85	49

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
420.90	139						
421.90	47						
422.90	805						
423.95	154						
440.95	2352						
441.90	16809						
442.90	3313						
443.90	296						

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003
Time Analyzed: 12:31

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\111803\1118F001.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0318619

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	45.1	15096	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	72.1	24142	PASS
70	69	0	2	0.3	80	PASS
127	198	25	75	43.0	14406	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	33492	PASS
199	198	5	9	7.3	2458	PASS
275	198	10	30	22.6	7574	PASS
365	198	1	100	3.0	990	PASS
441	443	0	100	71.1	2979	PASS
442	198	40	110	68.5	22957	PASS
443	442	15	24	18.3	4191	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0318619-2	J:\MS10\DATA\111803\1118F001.D	11/18/2003	12:31	
SED-4	K2308433-004	J:\MS10\DATA\111803\1118F005.D	11/18/2003	15:25	
SED-4MS	KWG0317457-1	J:\MS10\DATA\111803\1118F006.D	11/18/2003	16:06	
SED-4DMS	KWG0317457-2	J:\MS10\DATA\111803\1118F007.D	11/18/2003	16:48	
SED-4-DUP	K2308433-005	J:\MS10\DATA\111803\1118F008.D	11/18/2003	17:29	
SED-5	K2308433-006	J:\MS10\DATA\111803\1118F009.D	11/18/2003	18:10	
SED-6	K2308433-007	J:\MS10\DATA\111803\1118F010.D	11/18/2003	18:52	
SED-7	K2308433-008	J:\MS10\DATA\111803\1118F011.D	11/18/2003	19:33	
SED-8	K2308433-009	J:\MS10\DATA\111803\1118F012.D	11/18/2003	20:14	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS10\DATA\111803\1118F001.D
Lab ID: KWG0318619-1
RunType: DFTPP
Matrix: LIQUID

Date Acquired: 11/18/2003 12:31
Date Quantitated:
Batch ID: KWG0318619
Analysis Method: 8270C
ListJoinID: LJ2563

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/19/03

Secondary Review: mt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/19/2003

Analysis Lot:	KWG0318619	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:		**Report List ID:**	LJ1747
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS10\DATA\111803\1118A001.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 12:31	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318619-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	45.1	15096	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	72.1	24142	Pass
70	69	0	2	0.3	80	Pass
127	198	25	75	43.0	14406	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	33492	Pass
199	198	5	9	7.3	2458	Pass
275	198	10	30	22.6	7574	Pass
365	198	0.75	100	3.0	990	Pass
441	443	0.01	100	71.1	2979	Pass
442	198	40	110	68.5	22957	Pass
443	442	15	24	18.3	4191	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

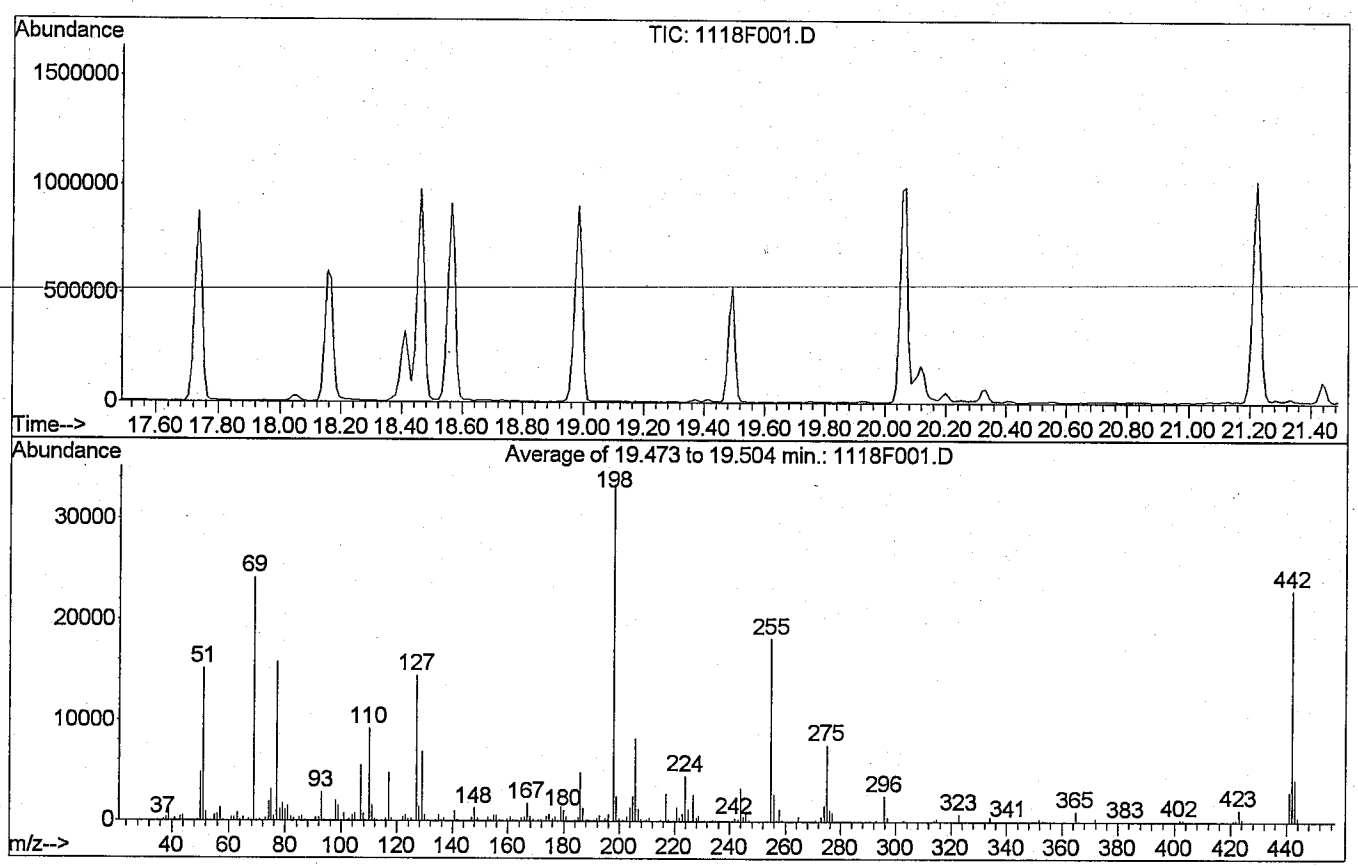
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS10\DATA\111803\1118F001.D
Acq On : 18 Nov 2003 12:31
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.473 to 19.504 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	45.1	15096	PASS
68	69	0.00	2	0.3	66	PASS
69	198	0.00	100	72.1	24142	PASS
70	69	0.00	2	0.3	80	PASS
127	198	25	75	43.0	14406	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	33492	PASS
199	198	5	9	7.3	2458	PASS
275	198	10	30	22.6	7574	PASS
365	198	0.75	100	3.0	990	PASS
441	443	0.01	100	71.1	2979	PASS
441	443	0.01	100	71.1	2979	PASS
442	198	40	110	68.5	22957	PASS
443	442	15	24	18.3	4191	PASS

1118F001.D 1114BNLL.M Tue Nov 18 13:19:12 2003

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.00	67	50.00	4788	65.00	356	75.80	496
37.00	173	51.00	15096	66.35	50	76.90	15743
38.10	335	51.95	865	66.90	189	77.95	1183
38.95	1420	54.95	508	67.75	66	78.85	1671
39.95	64	55.85	657	68.85	24142	79.80	1101
41.00	279	56.95	1300	69.75	80	80.85	1504
41.75	62	57.80	80	70.80	137	81.90	376
43.05	382	60.90	332	71.05	52	82.60	100
43.85	470	61.95	339	72.90	276	82.90	248
45.05	64	62.95	788	74.00	1966	85.00	298
49.10	108	63.85	174	74.90	3150	85.90	450

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.75	60	97.90	2006	107.80	711	116.85	4746
87.00	104	98.90	1461	108.15	85	117.75	69
88.05	57	99.70	52	108.85	103	117.90	278
90.55	56	100.85	712	109.85	9150	121.20	60
90.85	363	102.60	161	110.90	1513	121.90	424
91.90	299	102.85	203	111.80	191	122.85	602
92.80	2845	103.85	527	112.85	66	123.85	180
93.85	165	104.40	72	114.65	62	124.90	290
94.80	116	104.90	703	115.15	57	126.90	14406
95.75	116	105.80	59	115.65	203	127.80	1406
96.10	53	106.85	5560	115.95	69	128.85	6868

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
129.80	564	142.65	88	151.80	95	160.90	399
131.00	83	142.95	115	152.85	323	161.85	141
133.75	140	145.90	97	153.80	138	163.35	51
134.90	579	146.70	181	154.85	488	163.55	55
135.80	146	146.95	303	155.70	51	164.80	352
136.75	185	147.85	1279	155.85	514	165.85	426
136.90	280	148.80	96	157.00	152	166.65	204
138.85	55	149.05	238	157.65	103	166.80	1740
140.85	958	150.10	55	158.05	50	167.55	195
141.70	171	150.70	66	159.70	212	167.85	484
142.05	175	151.10	57	160.55	67	168.90	183

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.80	100	180.75	445	190.35	58	195.95	659
171.85	130	182.25	53	191.00	150	197.80	33492
172.80	110	183.90	178	191.65	64	198.80	2458
173.90	504	184.85	109	191.90	283	199.60	68
174.85	678	185.05	367	192.80	526	199.95	258
175.80	221	185.85	4791	193.60	106	201.05	144
176.90	381	186.85	1289	194.00	68	201.60	54
177.80	91	187.85	148	194.20	72	201.80	54
178.00	104	188.05	131	194.85	234	202.85	439
178.80	1454	188.55	129	195.60	118	203.80	1304
179.85	1034	189.00	176	195.80	259	204.85	2425

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
205.85	8245	220.80	1357	233.90	171	245.80	811
206.90	1138	221.70	301	234.85	128	246.85	181
207.90	248	221.90	79	235.75	65	248.90	58
208.90	117	222.90	742	236.95	66	251.60	56
209.75	65	223.90	4477	238.75	106	252.80	101
210.00	170	224.90	1196	239.85	72	253.60	84
210.90	329	226.80	2619	240.80	114	254.85	18155
215.00	129	227.90	315	241.80	270	255.85	2683
216.75	2725	228.75	510	243.00	186	256.85	147
217.85	244	230.85	179	243.90	3278	257.85	1164
219.90	65	233.05	53	244.90	485	258.65	135

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.80	487	277.90	52	322.90	761	371.85	345
265.65	67	284.95	64	323.90	50	382.85	54
270.95	107	292.85	153	326.85	104	390.00	52
271.80	56	295.85	2555	333.85	443	401.90	177
272.80	445	296.85	396	340.80	109	402.85	163
273.00	235	302.75	86	351.80	255	420.90	120
273.90	1562	302.90	133	353.00	172	421.90	182
274.85	7574	303.85	51	353.85	90	422.90	1200
275.85	1084	313.70	156	354.05	83	424.00	300
276.80	832	314.75	254	364.85	990	440.95	2979
277.60	52	316.00	91	365.85	145	441.90	22957

Average of 19.473 to 19.504 min.: 1118F001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
442.95	4191						
443.85	400						

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3091
Instrument ID: MS10

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS10\DATA\111303\1112F003.D	E	J:\MS10\DATA\111303\1112F007.D
B	J:\MS10\DATA\111303\1112F004.D	F	J:\MS10\DATA\111303\1112F008.D
C	J:\MS10\DATA\111303\1112F005.D	G	J:\MS10\DATA\111303\1112F009.D
D	J:\MS10\DATA\111303\1112F006.D	H	J:\MS10\DATA\111303\1112F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	100	1.72	B	500	1.77	C	1000	2.13	D	2000	1.75	E	4000	1.42
	F	6000	1.43	G	8000	1.31	H	10000	1.50						
2-Methylphenol	A	100	0.958	B	500	1.02	C	1000	1.28	D	2000	1.08	E	4000	0.855
	F	6000	0.839	G	8000	0.774	H	10000	1.00						
4-Methylphenol	A	100	1.74	B	500	1.60	C	1000	1.93	D	2000	1.54	E	4000	1.08
	F	6000	1.10	G	8000	1.02	H	10000	1.61						
2,4-Dimethylphenol	A	100	0.330	B	500	0.352	C	1000	0.346	D	2000	0.347	E	4000	0.317
	F	6000	0.311	G	8000	0.306	H	10000	0.320						
‡ 2,4-Dichlorophenol	A	100	0.368	B	500	0.374	C	1000	0.381	D	2000	0.393	E	4000	0.356
	F	6000	0.359	G	8000	0.364	H	10000	0.402						
‡ 2,4,6-Trichlorophenol	A	100	0.404	B	500	0.427	C	1000	0.473	D	2000	0.485	E	4000	0.415
	F	6000	0.415	G	8000	0.447	H	10000	0.502						
‡ Pentachlorophenol				B	500	0.0884	C	1000	0.118	D	2000	0.121	E	4000	0.153
	F	6000	0.169	G	8000	0.173	H	10000	0.179						
Butyl Benzyl Phthalate	A	100	0.592	B	200	0.628	C	500	0.636	D	1000	0.574	E	2000	0.603
	F	3000	0.603	G	4000	0.597	H	5000	0.561						
Bis(2-ethylhexyl) Phthalate				B	200	0.813	C	500	0.887	D	1000	0.882	E	2000	0.829
	F	3000	0.807	G	4000	0.807	H	5000	0.853						
Phenol-d6	A	100	1.39	B	200	1.52	C	500	1.85	D	1000	1.65	E	2000	1.33
	F	3000	1.36	G	4000	1.27	H	5000	1.47						
2,4,6-Tribromophenol				B	200	0.124	C	500	0.130	D	1000	0.158	E	2000	0.148
	F	3000	0.145	G	4000	0.158	H	5000	0.183						
Terphenyl-d14	A	100	0.705	B	200	0.848	C	500	0.900	D	1000	0.675	E	2000	0.763
	F	3000	0.812	G	4000	0.756	H	5000	0.692						
† 4-Nitrophenol				B	500	0.270	C	1000	0.296	D	2000	0.316	E	4000	0.386
	F	6000	0.489	G	8000	0.487									
‡ 1,4-Dichlorobenzene	A	100	1.66	B	200	1.47	C	500	1.45	D	1000	1.52	E	2000	1.39
	F	3000	1.45	G	4000	1.35	H	5000	1.47						

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3091
Instrument ID: MS10

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Di-n-octyl Phthalate	A	100	1.68	B	200	1.83	C	500	2.08	D	1000	2.16	E	2000	1.99
	F	3000	1.88	G	4000	2.09	H	5000	1.95						
‡ Fluoranthene	A	100	1.26	B	200	1.23	C	500	1.37	D	1000	1.03	E	2000	1.16
	F	3000	1.20	G	4000	1.19	H	5000	1.10						
‡ Benzo(a)pyrene	A	100	1.23	B	200	1.28	C	500	1.31	D	1000	1.43	E	2000	1.23
	F	3000	1.31	G	4000	1.31	H	5000	1.38						
† 2,4-Dinitrophenol										D	2000	0.134	E	4000	0.228
	F	6000	0.289	G	8000	0.306	H	10000	0.243						
‡ 4-Chloro-3-methylphenol	A	100	0.389	B	500	0.421	C	1000	0.378	D	2000	0.427	E	4000	0.390
	F	6000	0.381	G	8000	0.379	H	10000	0.476						
† N-Nitrosodi-n-propylamine	A	100	0.886	B	200	1.09	C	500	1.27	D	1000	1.13	E	2000	0.824
	F	3000	0.861	G	4000	0.806	H	5000	1.20						
† Hexachlorocyclopentadiene							C	500	0.184	D	1000	0.266	E	2000	0.246
	F	3000	0.291	G	4000	0.322									
‡ Acenaphthene	A	100	0.954	B	200	0.901	C	500	0.963	D	1000	1.06	E	2000	0.938
	F	3000	0.977	G	4000	1.01	H	5000	0.991						
‡ N-Nitrosodiphenylamine	A	100	0.770	B	200	0.902	C	500	0.777	D	1000	0.994	E	2000	0.984
	F	3000	1.12	G	4000	1.11	H	5000	0.903						
‡ Hexachlorobutadiene	A	100	0.264	B	200	0.274	C	500	0.280	D	1000	0.314	E	2000	0.277
	F	3000	0.288	G	4000	0.286	H	5000	0.329						
‡ 2-Nitrophenol	A	100	0.180	B	500	0.213	C	1000	0.222	D	2000	0.231	E	4000	0.236
	F	6000	0.237	G	8000	0.242	H	10000	0.217						

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3091
Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	16.3	*	≤ 15	1.63		0.01
2-Methylphenol	MS	AverageRF	% RSD	16.4	*	≤ 15	0.975		0.01
4-Methylphenol	MS	AverageRF	% RSD	23.5	*	≤ 15	1.45		0.01
2,4-Dimethylphenol	MS	AverageRF	% RSD	5.4		≤ 15	0.329		0.01
‡ 2,4-Dichlorophenol	MS	AverageRF	% RSD	4.4		≤ 15	0.375		0.01
‡ 2,4,6-Trichlorophenol	MS	AverageRF	% RSD	8.2		≤ 15	0.446		0.01
‡ Pentachlorophenol	MS	Quadratic	COD	0.999		≥ 0.990	0.143		0.01
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	4.2		≤ 15	0.599		0.01
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	4.1		≤ 15	0.839		0.01
Phenol-d6	SURR	AverageRF	% RSD	12.9		≤ 15	1.48		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	13.2		≤ 15	0.149		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	10.3		≤ 15	0.769		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	25.8	*	≤ 15	0.374		0.05
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	6.3		≤ 15	1.47		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	8.1		≤ 15	1.96		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	8.5		≤ 15	1.19		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	5.3		≤ 15	1.31		0.01
† 2,4-Dinitrophenol	TRG	AverageRF	% RSD	28.1	*	≤ 15	0.240		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	8.5		≤ 15	0.405		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	18.3	*	≤ 15	1.01		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	19.9	*	≤ 15	0.262		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	5.0		≤ 15	0.975		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	14.1		≤ 15	0.945		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	7.5		≤ 15	0.289		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	8.9		≤ 15	0.222		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/12/2003
Date Analyzed: 11/12/2003

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL3091
Units: ng/ml

File ID: J:\MS10\DATA\111303\1112F012.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	1.63	1.66	2	NA	± 20 %	AverageRF
2-Methylphenol	3000	3000	0.975	0.970	-1	NA	± 30 %	AverageRF
4-Methylphenol	3000	2700	1.45	1.31	-10	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3100	0.329	0.334	2	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3100	0.375	0.384	2	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3300	0.446	0.484	9	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.143	0.138	NA	-6	± 20 %	Quadratic
Butyl Benzyl Phthalate	3000	3000	0.599	0.607	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.839	0.826	-2	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	1.47	1.48	1	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2200	0.240	0.173	-28	NA	± 30 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.222	0.237	7	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3400	0.405	0.454	12	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	2800	0.374	0.347	-7	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.975	1.01	3	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	1.31	1.38	6	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3100	1.96	2.02	3	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2900	1.19	1.15	-3	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	3200	0.289	0.304	5	NA	± 20 %	AverageRF
† Hexachlorocyclopentadiene	3000	3400	0.262	0.300	15	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3000	1.01	1.00	-1	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.945	0.969	3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Injection Log

Directory: J:\MS10\DATA\111303

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1112F001.D	1.	TUNE @ 2.5 ppm SVM15-99E		12 Nov 2003 15:1
2	2	1112F002.D	1.	IB		12 Nov 2003 16:0
3	3	1112F003.D	1.	8270-LL @ 0.1 ppm SVM15-70D		12 Nov 2003 16:4
4	4	1112F004.D	1.	8270-LL @ .2/.5 ppm SVM15-70E	CAL 3091	12 Nov 2003 17:2
5	5	1112F005.D	1.	8270-LL @ .5/1 ppm SVM15-70F		12 Nov 2003 18:0
6	6	1112F006.D	1.	8270-LL @ 1/2 ppm SVM15-70G		12 Nov 2003 18:4
7	7	1112F007.D	1.	8270-LL @ 2/4 ppm SVM15-70H		12 Nov 2003 19:2
8	8	1112F008.D	1.	8270-LL @ 3/6 ppm SVM15-70I		12 Nov 2003 20:0
9	9	1112F009.D	1.	8270-LL @ 4/8 ppm SVM15-70J		12 Nov 2003 20:4
10	10	1112F010.D	1.	8270-LL @ 5/10 ppm SVM15-70K		12 Nov 2003 21:2
11	1	1112F011.D	1.	TUNE @ 2.5 ppm SVM15-99E		12 Nov 2003 22:1
12	11	1112F012.D	1.	8270-LL ICV/CCV @ 3 ppm SVM15-99D		12 Nov 2003 22:5
13	12	1112F013.D	1.	KWG0317457-5 MB		12 Nov 2003 23:3
14	13	1112F014.D	1.	KWG0317457-LCS	KWG0318325	13 Nov 2003 00:1
15	14	1112F015.D	1.	KWG0317457-DLCS		13 Nov 2003 00:5
16	15	1112F016.D	1.	KWG0317621-5 MB		13 Nov 2003 01:3
17	16	1112F017.D	1.	KWG0317621-LCS		13 Nov 2003 02:1
18	17	1112F018.D	1.	KWG0317621-DLCS		13 Nov 2003 02:5
19	18	1112F019.D	1.	KWG0317220-MB		13 Nov 2003 03:4
20	19	1112F020.D	1.	KWG0317220-LCS		13 Nov 2003 04:2
21	20	1112F021.D	1.	KWG0317220-DLCS		13 Nov 2003 05:0
22	21	1112F022.D	1.	K2308414-001		13 Nov 2003 05:4
23	22	1112F023.D	1.	K2308414-002		13 Nov 2003 06:2
24	23	1112F024.D	1.	GPC BLANK 11/8/03		13 Nov 2003 07:0

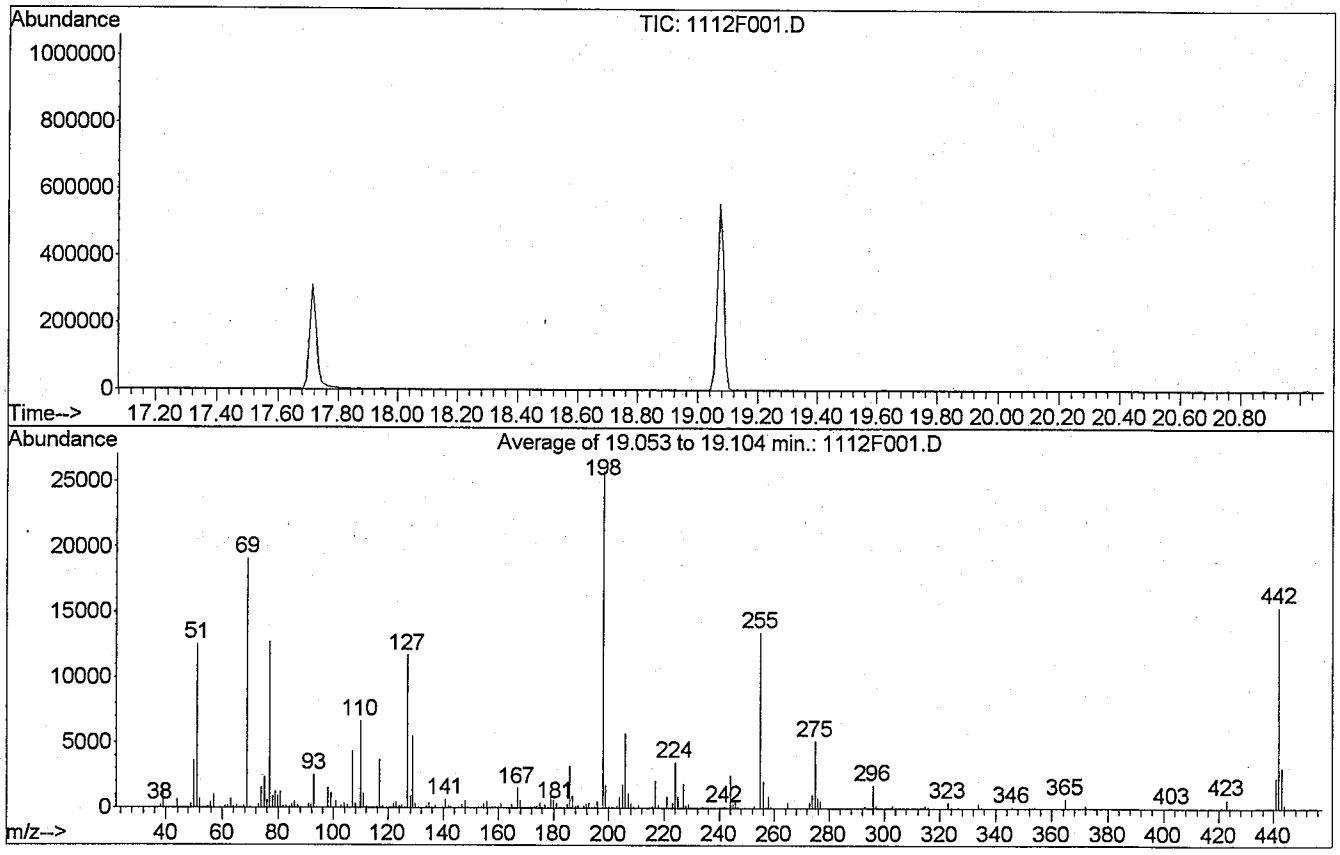
jay 11/13/03

mt 11/13/03

DFTPP

Data File : J:\MS10\DATA\111303\1112F001.D
Acq On : 12 Nov 2003 15:18
Sample : TUNE @ 2.5 ppm SVM15-99E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.053 to 19.104 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	48.6	12552	PASS
68	69	0.00	2	0.9	164	PASS
69	198	0.00	100	73.9	19095	PASS
70	69	0.00	2	0.2	40	PASS
127	198	25	75	45.4	11732	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	25836	PASS
199	198	5	9	6.7	1731	PASS
275	198	10	30	19.9	5148	PASS
365	198	0.75	100	2.7	695	PASS
441	443	0.01	100	74.3	2344	PASS
441	443	0.01	100	74.3	2344	PASS
442	198	40	110	60.0	15497	PASS
443	442	15	24	20.3	3153	PASS

1112F001.D 1112BNLL.M Thu Nov 13 10:17:11 2003

11/13/3

mt 11/13/03

Average of 19.053 to 19.104 min.: 1112F001.D
TUNE @ 2.5 ppm SVM15-99E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	48	52.00	734	67.70	164	80.85	1266
36.85	45	54.70	77	68.85	19095	81.75	183
38.00	200	54.90	78	69.85	40	82.00	52
38.75	39	55.90	445	72.95	234	82.90	181
39.05	1154	56.90	1006	73.95	1554	83.90	136
43.90	644	58.50	41	74.90	2332	84.15	42
48.30	42	61.00	184	75.95	598	84.85	264
48.80	81	61.90	200	76.90	12748	85.85	474
49.00	320	62.90	693	77.90	898	86.90	230
49.90	3630	64.00	129	78.90	1228	87.85	49
51.00	12552	65.05	206	79.90	955	90.90	288

Average of 19.053 to 19.104 min.: 1112F001.D
TUNE @ 2.5 ppm SVM15-99E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.75	286	103.85	327	116.85	3734	129.80	367
92.85	2532	104.90	279	117.90	144	130.95	82
93.75	51	106.85	4348	121.90	305	133.90	151
93.95	56	107.80	364	122.85	470	134.85	388
96.10	34	107.90	314	123.85	151	135.75	36
96.70	36	108.05	41	124.10	44	136.00	80
97.85	1509	109.85	6661	124.70	35	137.00	205
98.90	1174	110.05	39	124.90	219	137.95	36
100.00	70	110.85	1121	126.90	11732	139.95	48
100.85	507	111.90	147	128.00	897	140.80	658
102.80	226	115.85	108	128.90	5508	141.85	191

Average of 19.053 to 19.104 min.: 1112F001.D
TUNE @ 2.5 ppm SVM15-99E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.65	102	154.75	332	164.80	266	173.00	121
142.85	90	155.85	508	165.75	45	173.60	50
145.70	59	156.95	42	166.85	1518	173.90	158
146.80	266	157.35	42	167.45	48	174.90	406
147.10	56	157.85	105	167.80	567	175.90	71
147.85	574	158.85	112	168.85	94	176.85	235
148.80	119	159.75	72	170.00	35	177.90	56
151.00	37	159.90	132	170.90	41	178.85	1163
152.60	58	160.90	291	171.50	43	179.80	608
152.85	119	161.75	37	171.80	50	180.90	352
153.85	107	161.95	40	172.80	42	182.05	43

Average of 19.053 to 19.104 min.: 1112F001.D
TUNE @ 2.5 ppm SVM15-99E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
183.15	42	191.80	287	202.85	159	214.90	68
183.65	76	192.80	411	203.70	47	215.65	104
183.80	75	193.90	64	203.85	862	215.85	87
184.80	304	194.90	125	204.90	1792	216.80	2104
185.05	189	195.75	485	205.90	5727	217.85	246
185.85	3213	196.00	307	206.95	1097	220.85	907
186.85	977	197.80	25836	207.90	350	221.00	74
187.90	146	198.80	1731	208.80	115	221.20	39
188.75	202	199.85	119	209.75	78	221.70	92
190.90	132	200.95	90	210.80	231	222.00	56
191.65	80	201.60	74	214.35	78	222.90	417

9/11/13/7 mt 11/13/03

Average of 19.053 to 19.104 min.: 1112F001.D
TUNE @ 2.5 ppm SVM15-99E

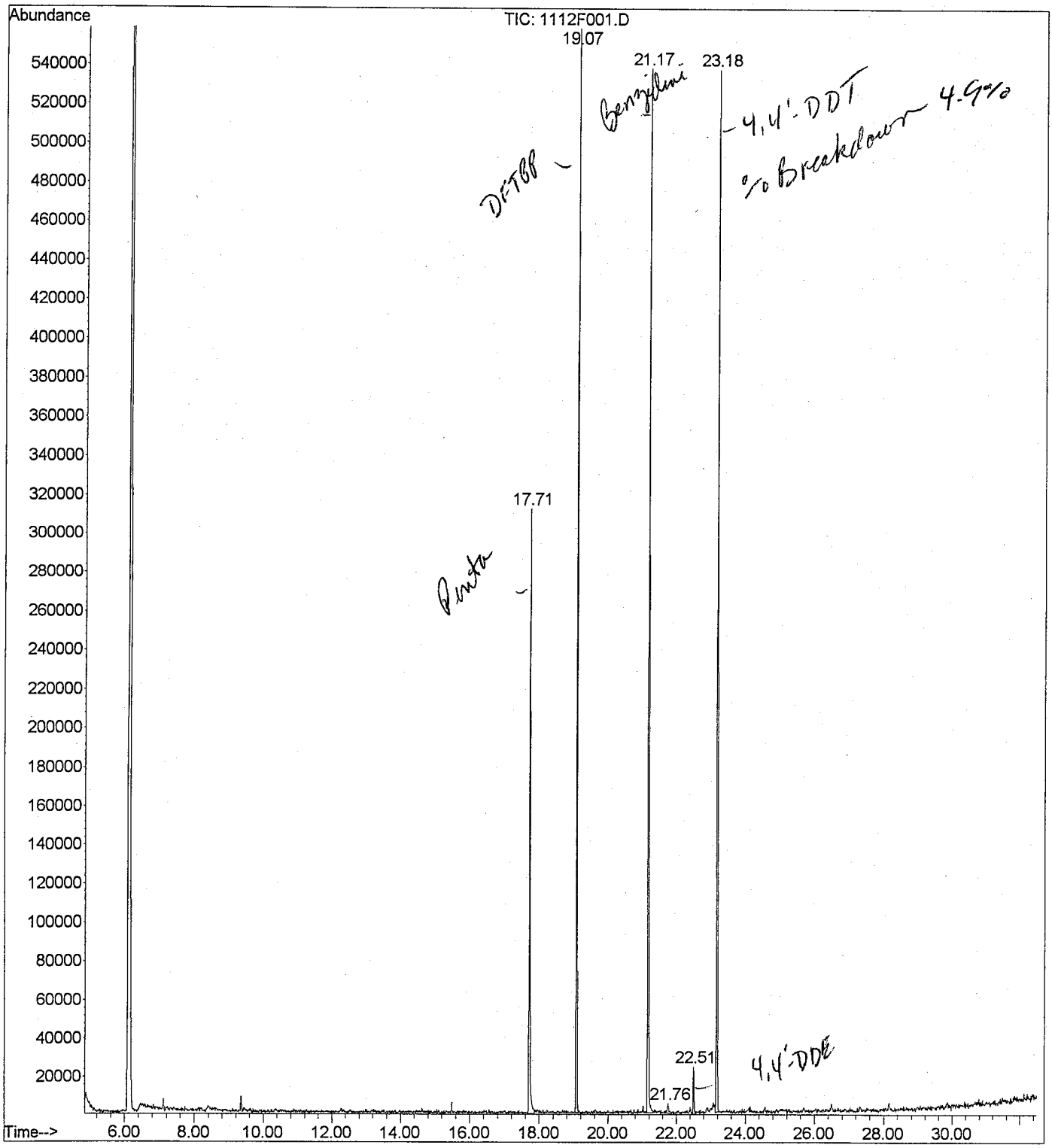
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
223.90	3505	236.85	46	254.85	13490	277.60	41
224.90	894	240.05	40	255.90	2034	284.90	80
226.80	1849	240.85	82	256.85	71	292.85	169
227.95	211	241.85	131	257.85	875	295.85	1756
228.75	306	243.90	2495	258.85	108	296.85	217
230.65	43	244.95	351	264.80	383	302.85	189
231.05	47	245.85	579	272.90	458	303.75	35
233.85	95	246.85	96	273.85	1036	313.95	39
234.85	56	248.70	42	274.90	5148	314.75	206
235.05	34	249.00	39	275.85	795	315.85	88
235.75	42	252.85	186	276.80	540	320.80	37

Average of 19.053 to 19.104 min.: 1112F001.D
TUNE @ 2.5 ppm SVM15-99E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
322.85	475	365.80	36	441.90	15497		
323.80	36	371.85	207	442.90	3153		
324.00	59	401.65	40	443.95	308		
326.75	52	402.15	36				
333.90	372	402.85	86				
334.95	35	404.05	35				
345.75	101	420.90	112				
351.95	107	421.90	48				
352.95	78	422.90	711				
353.90	102	423.85	65				
364.85	695	440.90	2344				

11/13/13

File : J:\MS10\DATA\111303\1112F001.D
Operator : JGISH
Acquired : 12 Nov 2003 15:18 using AcqMethod 8270LVI
Instrument : MS10
Sample Name: TUNE @ 2.5 ppm SVM15-99E
Misc Info :
Vial Number: 1



11/13/3 mt 11/13/03

1	17.713	rBV	0.205		521284	17.652	17.856
2	19.073	rBV	0.153		861300	18.991	19.145
3	21.169	rVV	0.215		944487	21.098	21.313
4	21.762	rBV	0.153		16356	21.701	21.855
5	22.509	rBV	0.112		44265	22.458	22.570
6	23.184	rVB	0.112		852473	23.133	23.245

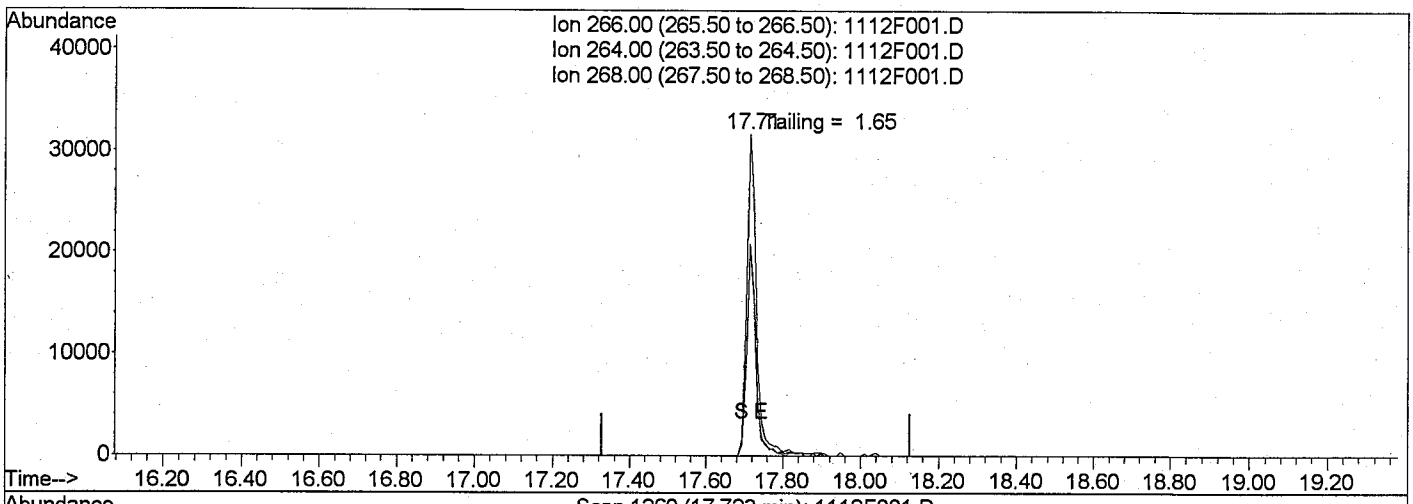
11/13/3
mnt 11/13/03

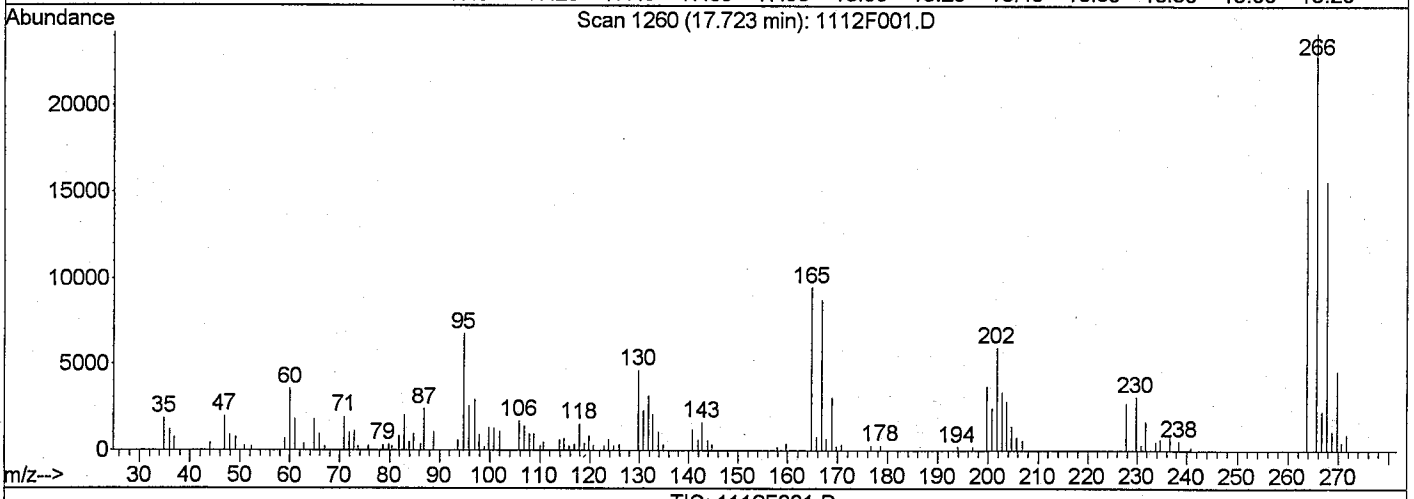
Quantitation Report

Data File : J:\MS10\DATA\111303\1112F001.D
Acq On : 12 Nov 2003 15:18
Sample : TUNE @ 2.5 ppm SVM15-99E
Misc :
MS Integration Params: RTEINT.P

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration





TIC: 1112F001.D

(61) Pentachlorophenol

Exp R.T. 17.73min

response 0

Ion	Exp%	Act%
266.00	100	100
264.00	62.60	682.19
268.00	63.80	700.31
0.00	0.00	0.00

JGJ 11/13/3

mnt 11/13/03

1112F001.D 1112BNLL.M Thu Nov 13 10:27:45 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F003.D
Acq On : 12 Nov 2003 16:41
Sample : 8270-LL @ 0.1 ppm SVM15-70D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:45:53 2003

Vial: 3
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	60677	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.87	136	166533	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.62	164	99179	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.95	188	157701	1000.00	ng/ml	0.00
67) Chrysene-d12	24.10	240	168846	1000.00	ng/ml	0.00
76) Perylene-d12	27.50	264	115662	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.92	112	6913	91.99	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 2.45%#			
6) Phenol-d6	8.16	99	8430	96.02	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 2.56%#			
19) Nitrobenzene-d5	9.58	82	8616	108.65	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 4.35%#			
38) 2-Fluorobiphenyl	13.19	172	13369	96.91	ng/ml	-0.01
Spiked Amount 2500.000	Range 37 - 126		Recovery = 3.88%#			
58) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery = 0.00%#			
70) Terphenyl-d14	21.77	244	11907	85.77	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 3.43%#			
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.27	93	8275	96.11	ng/ml	89
7) Phenol	8.18	94	10425	105.76	ng/ml	91
8) Aniline	8.19	93	9251	86.62	ng/ml#	73
9) 2-Chlorophenol	8.35	128	6214	90.53	ng/ml	87
10) 1,3-Dichlorobenzene	8.57	146	8727	103.12	ng/ml	92
11) 1,4-Dichlorobenzene	8.65	146	10056	116.78	ng/ml	98
12) 1,2-Dichlorobenzene	8.94	146	7142	92.17	ng/ml	92
13) Benzyl Alcohol	8.88	108	4091	98.03	ng/ml#	68
14) Bis(2-chloroisopropyl) Eth	9.14	45	7461	124.14	ng/ml	81
15) 2-Methylphenol	9.10	107	5815	106.71	ng/ml	92
16) Hexachloroethane	9.46	117	3848	103.06	ng/ml	83
17) N-Nitrosodi-n-propylamine	9.37	70	5376	110.76	ng/ml	91
18) 4-Methylphenol	9.34	107	10580	137.22	ng/ml	87
20) Nitrobenzene	9.61	77	10148	126.94	ng/ml	78
22) Isophorone	10.04	82	15504	134.27	ng/ml	97
23) 2-Nitrophenol	10.19	139	3005	96.26	ng/ml#	30
24) 2,4-Dimethylphenol	10.30	122	5499	115.61	ng/ml#	77
25) Bis(2-chloroethoxy)methane	10.48	93	8042	97.83	ng/ml	97
26) 2,4-Dichlorophenol	10.64	162	6136	119.73	ng/ml	84
28) 1,2,4-Trichlorobenzene	10.80	180	7176	114.65	ng/ml	85

(#) = qualifier out of range (m) = manual integration

11/13/3

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F003.D
Acq On : 12 Nov 2003 16:41
Sample : 8270-LL @ 0.1 ppm SVM15-70D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:45:53 2003

Vial: 3
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Naphthalene	10.91	128	17446	113.41	ng/ml	96
30)	4-Chloroaniline	11.08	127	7292	114.35	ng/ml	88
31)	Hexachlorobutadiene	11.30	225	4398	119.67	ng/ml	87
32)	4-Chloro-3-methylphenol	12.12	107	6479	125.81	ng/ml#	73
33)	2-Methylnaphthalene	12.32	142	9456	89.16	ng/ml	97
36)	2,4,6-Trichlorophenol	13.01	196	4006	88.23	ng/ml	92
37)	2,4,5-Trichlorophenol	13.09	196	4438	92.80	ng/ml	83
39)	2-Chloronaphthalene	13.35	127	4907	108.70	ng/ml	74
40)	2-Nitroaniline	13.68	65	3866	100.28	ng/ml	90
41)	Acenaphthylene	14.27	152	16228	89.23	ng/ml	100
42)	Dimethyl Phthalate	14.20	163	13677	97.72	ng/ml	92
43)	2,6-Dinitrotoluene	14.32	165	2780	91.94	ng/ml#	41
44)	Acenaphthene	14.69	154	9464	88.33	ng/ml	89
45)	3-Nitroaniline	14.61	138	2733	86.69	ng/ml#	80
47)	Dibenzofuran	15.05	168	17091	99.67	ng/ml	84
49)	2,4-Dinitrotoluene	15.19	165	2788	69.97	ng/ml#	65
50)	Fluorene	15.83	166	12382	96.52	ng/ml	95
51)	4-Chlorophenyl Phenyl Ethe	15.89	204	6968	99.06	ng/ml	84
52)	Diethyl Phthalate	15.83	149	13832	95.94	ng/ml	96
55)	N-Nitrosodiphenylamine	16.18	169	7638	83.95	ng/ml	87
56)	Azobenzene	16.23	77	16983	109.29	ng/ml	86
59)	4-Bromophenyl Phenyl Ether	16.99	248	4123	100.82	ng/ml	88
60)	Hexachlorobenzene	17.28	284	4728	98.61	ng/ml	98
62)	Phenanthrene	18.00	178	18832	107.19	ng/ml	97
63)	Anthracene	18.11	178	17345	95.74	ng/ml	96
64)	Carbazole	18.54	167	15046	92.18	ng/ml	100
65)	Di-n-butyl Phthalate	19.63	149	21584	96.06	ng/ml	96
66)	Fluoranthene	20.75	202	19842	103.25	ng/ml	96
69)	Pyrene	21.24	202	18528	85.01	ng/ml	91
71)	Butyl Benzyl Phthalate	23.09	149	9995	95.89	ng/ml	99
73)	Benz(a)anthracene	24.07	228	17585	95.58	ng/ml	84
74)	Chrysene	24.15	228	17624	99.44	ng/ml	93
77)	Di-n-octyl Phthalate	26.04	149	19421	86.93	ng/ml	99
78)	Benzo(b)fluoranthene	26.60	252	15972	96.76	ng/ml	98
79)	Benzo(k)fluoranthene	26.66	252	14233	90.09	ng/ml	88
80)	Benzo(a)pyrene	27.35	252	14225	91.10	ng/ml	96
81)	Indeno(1,2,3-cd)pyrene	29.99	276	12302	85.30	ng/ml	87
82)	Dibenz(a,h)anthracene	30.06	278	12207	87.85	ng/ml	95
83)	Benzo(g,h,i)perylene	30.55	276	13664	94.26	ng/ml	93

11/13/3

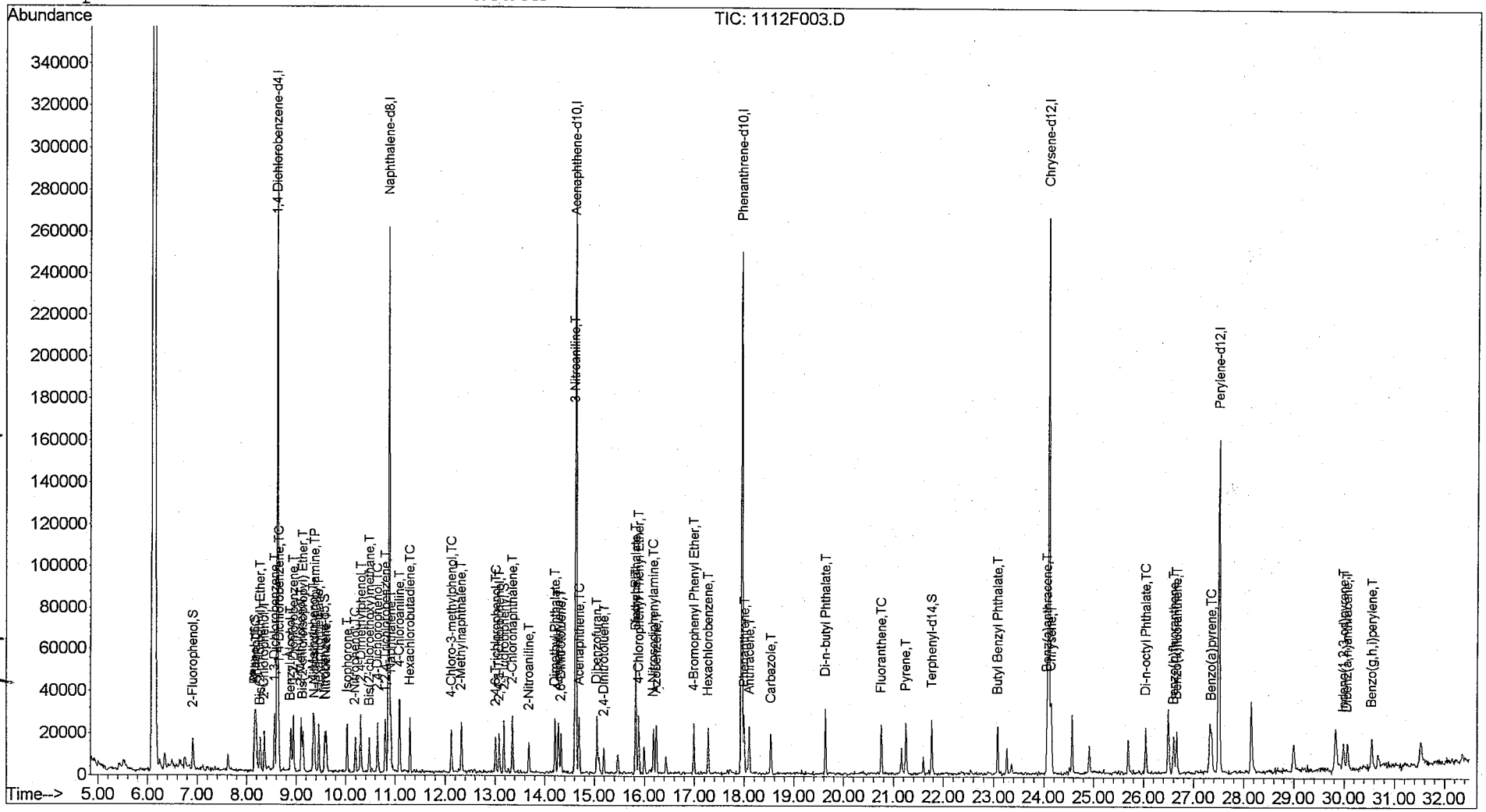
(#) = qualifier out of range (m) = manual integration

mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F003.D Vial: 3
Acq On : 12 Nov 2003 16:41 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM15-70D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:46 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



2084 mt 5 4/13/7

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F004.D
Acq On : 12 Nov 2003 17:22
Sample : 8270-LL @ .2/.5 ppm SVM15-70E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:45:58 2003

Vial: 4
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	60532	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.87	136	182756	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.62	164	114770	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	201080	1000.00	ng/ml	0.00
67) Chrysene-d12	24.10	240	181388	1000.00	ng/ml	0.00
76) Perylene-d12	27.50	264	112482	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	6.92	112	15068	200.99	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 5.36%#			
6) Phenol-d6	8.16	99	18359	209.61	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 5.59%#			
19) Nitrobenzene-d5	9.58	82	21181	267.73	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 10.71%#			
38) 2-Fluorobiphenyl	13.18	172	31010	194.25	ng/ml	-0.02
Spiked Amount 2500.000	Range 37 - 126		Recovery = 7.77%#			
58) 2,4,6-Tribromophenol	16.43	330	4973	161.56	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 4.31%#			
70) Terphenyl-d14	21.77	244	30749	206.18	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 8.25%#			
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.27	93	16965	197.52	ng/ml	86
7) Phenol	8.17	94	53524	544.30	ng/ml	98
8) Aniline	8.19	93	23504	220.61	ng/ml	87
9) 2-Chlorophenol	8.35	128	35449	517.70	ng/ml	88
10) 1,3-Dichlorobenzene	8.57	146	16272	192.73	ng/ml	94
11) 1,4-Dichlorobenzene	8.65	146	17842	207.69	ng/ml	96
12) 1,2-Dichlorobenzene	8.95	146	16081	208.03	ng/ml	89
13) Benzyl Alcohol	8.90	108	9483	227.78	ng/ml#	72
14) Bis(2-chloroisopropyl) Eth	9.14	45	17153	286.08	ng/ml	75
15) 2-Methylphenol	9.10	107	30991	570.08	ng/ml	90
16) Hexachloroethane	9.46	117	8253	221.57	ng/ml	91
17) N-Nitrosodi-n-propylamine	9.38	70	13190	272.40	ng/ml	92
18) 4-Methylphenol	9.35	107	48408	629.36	ng/ml	89
20) Nitrobenzene	9.61	77	21884	274.41	ng/ml	91
22) Isophorone	10.03	82	34906	275.47	ng/ml	91
23) 2-Nitrophenol	10.19	139	19445	567.58	ng/ml	59
24) 2,4-Dimethylphenol	10.31	122	32176	616.41	ng/ml	91
25) Bis(2-chloroethoxy)methane	10.48	93	18857	209.03	ng/ml	95
26) 2,4-Dichlorophenol	10.64	162	34154	607.26	ng/ml	95
28) 1,2,4-Trichlorobenzene	10.80	180	16226	236.23	ng/ml	99

(#) = qualifier out of range (m) = manual integration

11/13/3

11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F004.D
Acq On : 12 Nov 2003 17:22
Sample : 8270-LL @ .2/.5 ppm SVM15-70E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:45:58 2003

Vial: 4
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Naphthalene	10.91	128	39333	233.00	ng/ml	98
30)	4-Chloroaniline	11.08	127	16652	237.94	ng/ml	86
31)	Hexachlorobutadiene	11.30	225	10008	248.15	ng/ml	90
32)	4-Chloro-3-methylphenol	12.12	107	38452	680.39	ng/ml	75
33)	2-Methylnaphthalene	12.32	142	23173	199.11	ng/ml	97
36)	2,4,6-Trichlorophenol	13.01	196	24513	466.54	ng/ml	95
37)	2,4,5-Trichlorophenol	13.09	196	23910	432.04	ng/ml	92
39)	2-Chloronaphthalene	13.35	127	10576	202.45	ng/ml	92
40)	2-Nitroaniline	13.68	65	11741	263.17	ng/ml#	66
41)	Acenaphthylene	14.27	152	38400	182.47	ng/ml	94
42)	Dimethyl Phthalate	14.20	163	32620	201.41	ng/ml	97
43)	2,6-Dinitrotoluene	14.33	165	6753	193.00	ng/ml#	45
44)	Acenaphthene	14.69	154	20682	166.81	ng/ml	90
45)	3-Nitroaniline	14.61	138	6778	185.79	ng/ml	74
47)	Dibenzofuran	15.05	168	37749	190.23	ng/ml	88
48)	4-Nitrophenol	15.09	109	15482	575.29	ng/ml#	65
49)	2,4-Dinitrotoluene	15.19	165	8612	186.77	ng/ml#	62
50)	Fluorene	15.83	166	28592	192.60	ng/ml	97
51)	4-Chlorophenyl Phenyl Ethe	15.89	204	15997	196.52	ng/ml	87
52)	Diethyl Phthalate	15.83	149	34348	205.88	ng/ml	95
53)	4-Nitroaniline	15.99	138	6629	178.94	ng/ml#	52
54)	2-Methyl-4,6-dinitrophenol	16.10	198	9864	286.48	ng/ml	76
55)	N-Nitrosodiphenylamine	16.19	169	20699	196.61	ng/ml	95
56)	Azobenzene	16.24	77	39989	222.38	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	16.99	248	9723	186.46	ng/ml	88
60)	Hexachlorobenzene	17.28	284	11401	186.49	ng/ml	94
61)	Pentachlorophenol	17.72	266	8892	729.56	ng/ml	96
62)	Phenanthrene	18.00	178	45257	202.02	ng/ml	98
63)	Anthracene	18.10	178	43684	189.11	ng/ml	97
64)	Carbazole	18.53	167	39714	190.83	ng/ml	99
65)	Di-n-butyl Phthalate	19.63	149	56924	198.68	ng/ml	95
66)	Fluoranthene	20.76	202	49583	202.35	ng/ml	96
68)	Benzidine	21.17	184	55284	523.36	ng/ml	96
69)	Pyrene	21.25	202	48120	205.51	ng/ml	96
71)	Butyl Benzyl Phthalate	23.08	149	22767	203.32	ng/ml	92
72)	3,3'-Dichlorobenzidine	24.13	252	31928	421.70	ng/ml	95
73)	Benz(a)anthracene	24.06	228	36549	184.91	ng/ml	96
74)	Chrysene	24.15	228	36123	189.72	ng/ml	97
75)	Bis(2-ethylhexyl) Phthalat	24.57	149	29511	183.76	ng/ml	99
77)	Di-n-octyl Phthalate	26.04	149	41123	189.28	ng/ml	95
78)	Benzo(b)fluoranthene	26.61	252	30939	192.72	ng/ml	93

(#) = qualifier out of range (m) = manual integration

11/13/3
11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F004.D Vial: 4
Acq On : 12 Nov 2003 17:22 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM15-70E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:45:58 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
79)	Benzo(k)fluoranthene	26.66	252	26625	173.28	ng/ml	98
80)	Benzo(a)pyrene	27.35	252	28695	188.96	ng/ml	91
81)	Indeno(1,2,3-cd)pyrene	29.99	276	28124	200.52	ng/ml	94
82)	Dibenz(a,h)anthracene	30.07	278	28473	210.70	ng/ml	92
83)	Benzo(g,h,i)perylene	30.55	276	29857	211.79	ng/ml	88

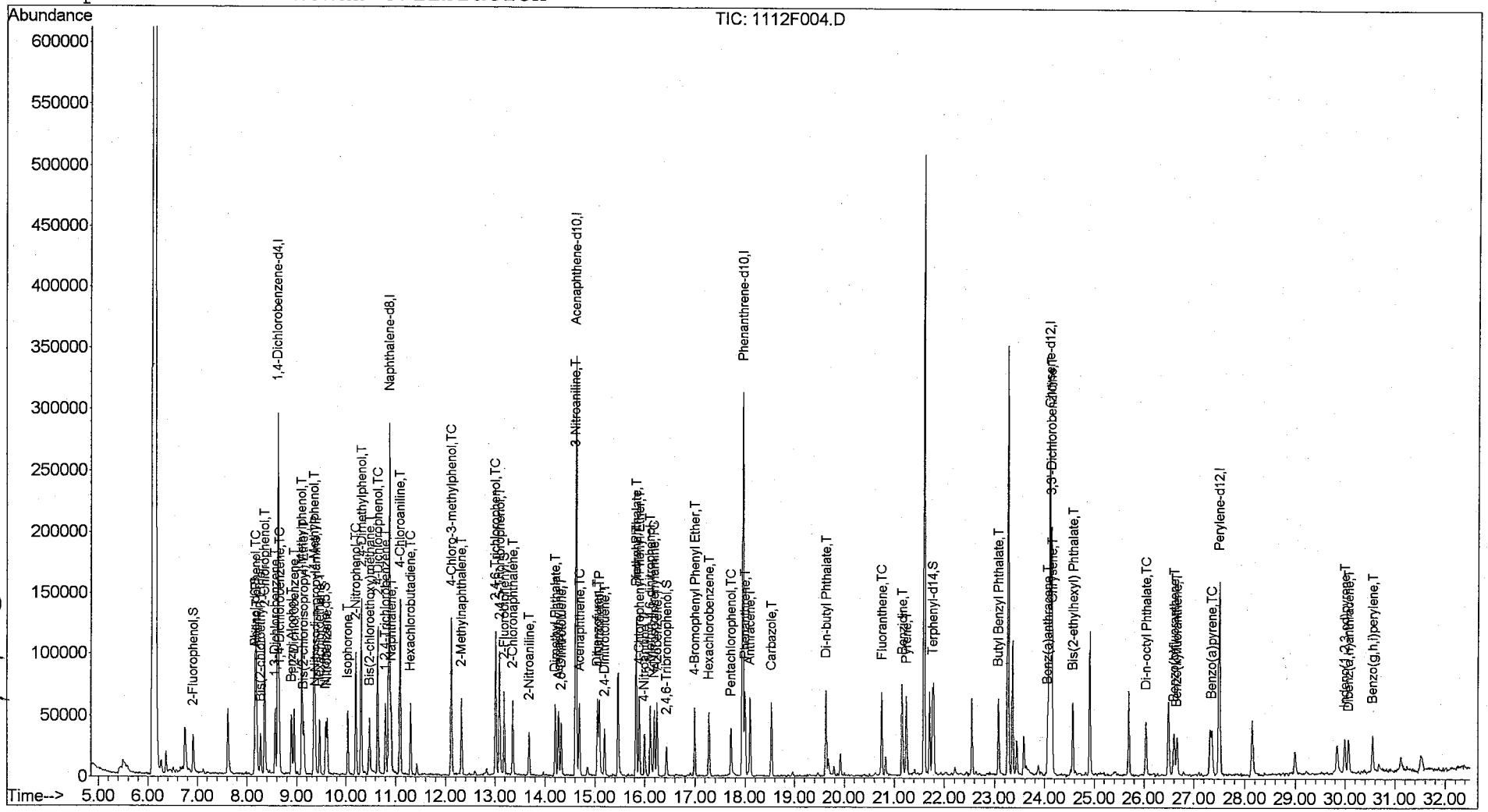
(#) = qualifier out of range (m) = manual integration
1112F004.D 1112BNLL.M Thu Nov 13 10:18:31 2003 Page 3

11/13/3
mt
11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F004.D Vial: 4
Acq On : 12 Nov 2003 17:22 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM15-70E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:48 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:03 2003

Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	58030	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.88	136	213376	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.62	164	116420	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.95	188	179120	1000.00	ng/ml	0.00
67) Chrysene-d12	24.10	240	165339	1000.00	ng/ml	0.00
76) Perylene-d12	27.50	264	114993	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.90	112	36843	512.64	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 13.67%#			
6) Phenol-d6	8.15	99	53717	639.73	ng/ml	-0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 17.06%#			
19) Nitrobenzene-d5	9.58	82	59718	787.38	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 31.50%			
38) 2-Fluorobiphenyl	13.19	172	87105	537.90	ng/ml	-0.01
Spiked Amount 2500.000	Range 37 - 126		Recovery = 21.52%#			
58) 2,4,6-Tribromophenol	16.43	330	11662	425.33	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 11.34%#			
70) Terphenyl-d14	21.77	244	74387	547.19	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 21.89%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.34	42	34061m	881.55	ng/ml	
3) Pyridine	5.40	79	48673m	623.91	ng/ml	
5) Bis(2-chloroethyl) Ether	8.27	93	45173	548.62	ng/ml	96
7) Phenol	8.17	94	123598	1311.09	ng/ml	94
8) Aniline	8.19	93	62000	607.02	ng/ml#	59
9) 2-Chlorophenol	8.35	128	77378	1178.76	ng/ml	91
10) 1,3-Dichlorobenzene	8.57	146	36782	454.44	ng/ml	97
11) 1,4-Dichlorobenzene	8.64	146	42136	511.62	ng/ml	93
12) 1,2-Dichlorobenzene	8.94	146	38286	516.63	ng/ml	97
13) Benzyl Alcohol	8.88	108	28492	713.88	ng/ml#	60
14) Bis(2-chloroisopropyl) Eth	9.14	45	48618	845.83	ng/ml	76
15) 2-Methylphenol	9.10	107	74139	1422.59	ng/ml	87
16) Hexachloroethane	9.46	117	19820	555.06	ng/ml	92
17) N-Nitrosodi-n-propylamine	9.36	70	36927	795.48	ng/ml	78
18) 4-Methylphenol	9.34	107	111956	1518.32	ng/ml	91
20) Nitrobenzene	9.61	77	61058	798.63	ng/ml	88
22) Isophorone	10.03	82	99988	675.85	ng/ml	94
23) 2-Nitrophenol	10.19	139	47274	1181.86	ng/ml	65
24) 2,4-Dimethylphenol	10.30	122	73801	1210.95	ng/ml	87
25) Bis(2-chloroethoxy)methane	10.48	93	59671	566.54	ng/ml	96

(#) = qualifier out of range (m) = manual integration

11/13/3

11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:03 2003

Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.64	162	81246	1237.25	ng/ml	99
27)	Benzoic Acid	10.48	122	19899m	1434.12	ng/ml	
28)	1,2,4-Trichlorobenzene	10.81	180	44912	560.03	ng/ml	96
29)	Naphthalene	10.91	128	112839	572.51	ng/ml	99
30)	4-Chloroaniline	11.08	127	47455	580.78	ng/ml	87
31)	Hexachlorobutadiene	11.30	225	29917	635.34	ng/ml	98
32)	4-Chloro-3-methylphenol	12.12	107	80727	1223.45	ng/ml	80
33)	2-Methylnaphthalene	12.33	142	71122	523.41	ng/ml	98
35)	Hexachlorocyclopentadiene	12.83	237	10713	396.74	ng/ml	97
36)	2,4,6-Trichlorophenol	13.01	196	55102	1033.87	ng/ml	98
37)	2,4,5-Trichlorophenol	13.09	196	52445	934.21	ng/ml	95
39)	2-Chloronaphthalene	13.35	127	28235	532.82	ng/ml	91
40)	2-Nitroaniline	13.68	65	26604	587.87	ng/ml#	76
41)	Acenaphthylene	14.27	152	97348	456.02	ng/ml	98
42)	Dimethyl Phthalate	14.21	163	73608	448.04	ng/ml	98
43)	2,6-Dinitrotoluene	14.33	165	17671	497.88	ng/ml	85
44)	Acenaphthene	14.69	154	56051	445.66	ng/ml	96
45)	3-Nitroaniline	14.61	138	14778	399.33	ng/ml	85
47)	Dibenzofuran	15.06	168	86192	428.20	ng/ml	78
48)	4-Nitrophenol	15.09	109	34507	1264.06	ng/ml#	65
49)	2,4-Dinitrotoluene	15.20	165	20059	428.86	ng/ml	70
50)	Fluorene	15.84	166	61676	409.56	ng/ml	93
51)	4-Chlorophenyl Phenyl Ethe	15.90	204	35697	432.32	ng/ml	94
52)	Diethyl Phthalate	15.84	149	74514	440.30	ng/ml	98
53)	4-Nitroaniline	16.00	138	18260	485.91	ng/ml#	55
54)	2-Methyl-4,6-dinitrophenol	16.11	198	30210	864.94	ng/ml	88
55)	N-Nitrosodiphenylamine	16.18	169	45239	423.61	ng/ml	99
56)	Azobenzene	16.25	77	88774	486.68	ng/ml	88
59)	4-Bromophenyl Phenyl Ether	16.99	248	22437	483.02	ng/ml	85
60)	Hexachlorobenzene	17.28	284	25316	464.88	ng/ml	96
61)	Pentachlorophenol	17.72	266	21086	1209.12	ng/ml	96
62)	Phenanthrene	18.00	178	99685	499.54	ng/ml	99
63)	Anthracene	18.11	178	99378	482.97	ng/ml	98
64)	Carbazole	18.54	167	93924	506.63	ng/ml	93
65)	Di-n-butyl Phthalate	19.63	149	144622	566.65	ng/ml	94
66)	Fluoranthene	20.75	202	122268	560.15	ng/ml	95
68)	Benzidine	21.16	184	91536	950.67	ng/ml	99
69)	Pyrene	21.26	202	115921	543.12	ng/ml	98
71)	Butyl Benzyl Phthalate	23.09	149	52584	515.18	ng/ml	84
72)	3,3'-Dichlorobenzidine	24.13	252	64617	936.28	ng/ml	100
73)	Benz(a)anthracene	24.07	228	95156	528.15	ng/ml	97

(#) = qualifier out of range (m) = manual integration

11/13/3

mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F005.D Vial: 5
Acq On : 12 Nov 2003 18:03 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM15-70F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:03 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chrysene	24.16	228	88778	511.52	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.57	149	73317	500.85	ng/ml	99
77)	Di-n-octyl Phthalate	26.04	149	119514	538.09	ng/ml	89
78)	Benzo(b)fluoranthene	26.61	252	78471	478.14	ng/ml	96
79)	Benzo(k)fluoranthene	26.66	252	80998	515.65	ng/ml	96
80)	Benzo(a)pyrene	27.36	252	75054	483.45	ng/ml	92
81)	Indeno(1,2,3-cd)pyrene	30.00	276	72697	507.01	ng/ml	91
82)	Dibenz(a,h)anthracene	30.07	278	67522	488.75	ng/ml	91
83)	Benzo(g,h,i)perylene	30.56	276	75249	522.12	ng/ml	85

11/13/3

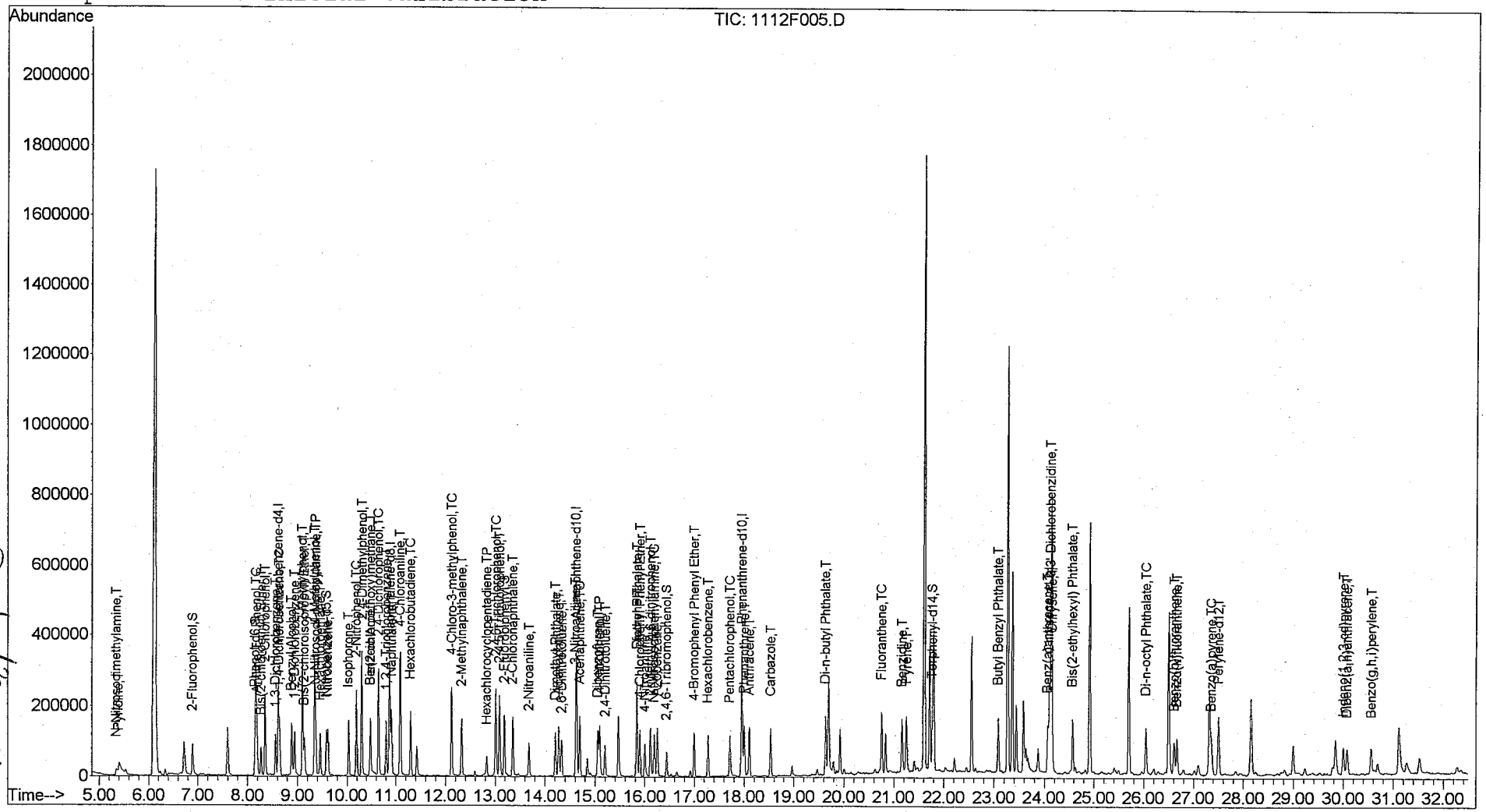
(#) = qualifier out of range (m) = manual integration
1112F005.D 1112BNLL.M Thu Nov 13 10:18:35 2003 Page 3

mnt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F005.D Vial: 5
Acq On : 12 Nov 2003 18:03 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM15-70F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:55 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



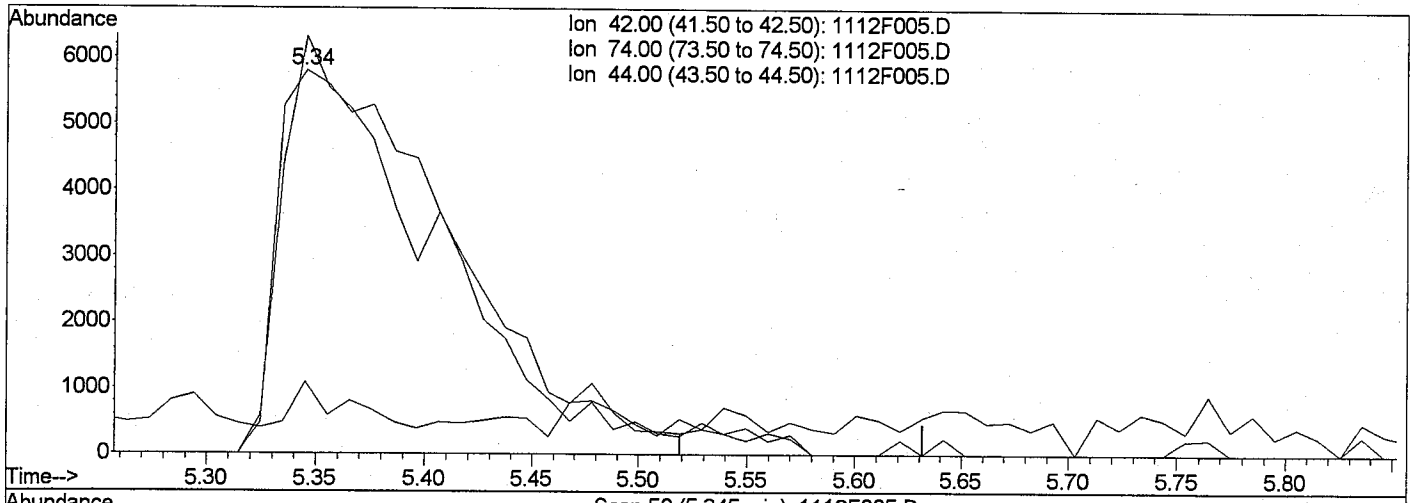
Quantitation Report (Qedit)

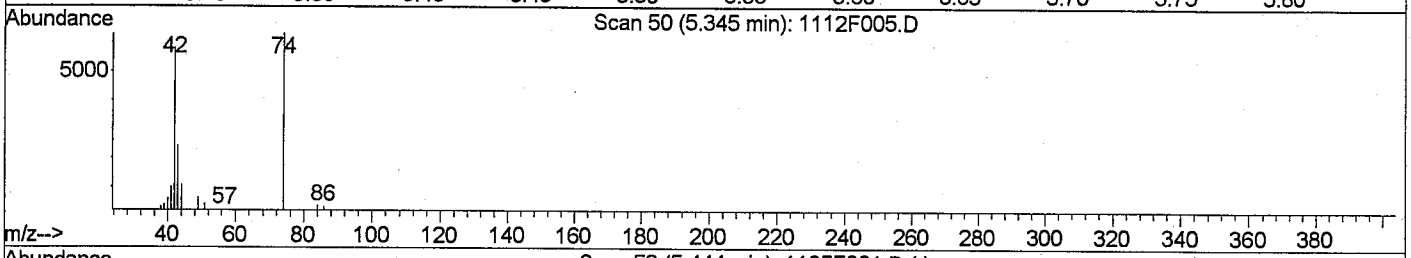
Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:43 2003

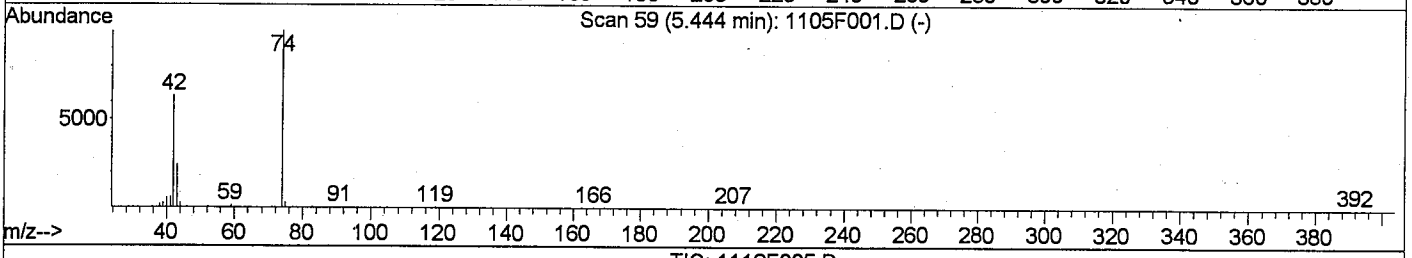
Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F005.D

(2) N-Nitrosodimethylamine (T)

5.34min 856.19ng/ml

response 33081

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	108.82#
44.00	5.00	9.35
0.00	0.00	0.00

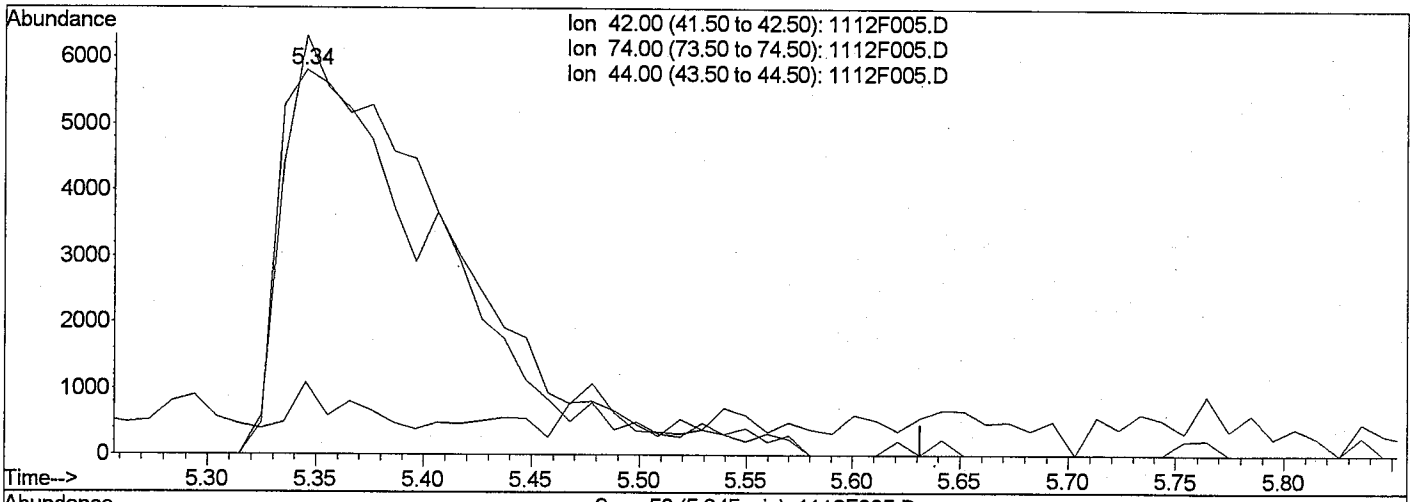
Quantitation Report (Qedit)

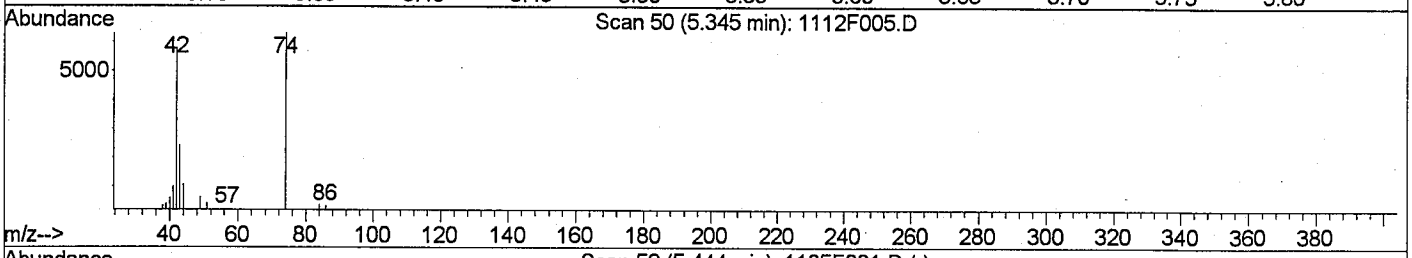
Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:50 2003

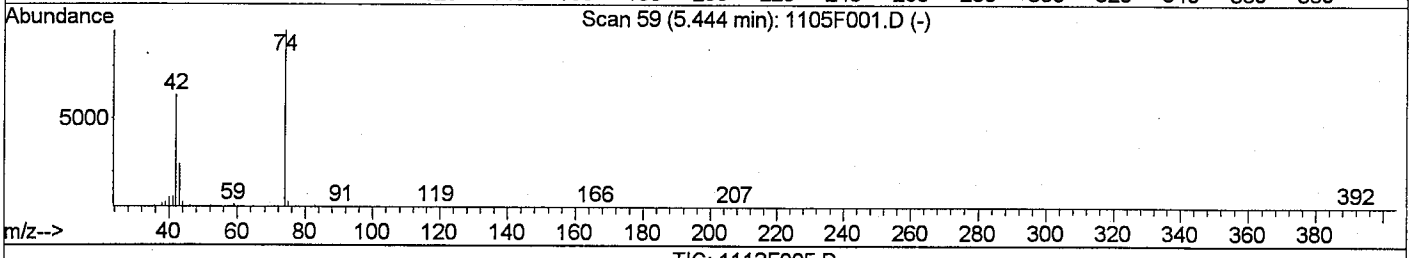
Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F005.D

(2) N-Nitrosodimethylamine (T)

5.34min 881.55ng/ml m

response 34061

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	108.82#
44.00	5.00	18.64
0.00	0.00	0.00

mt 11/13/03

JJ 11/13/3 Incomplete

1112F005.D 1112BNLL.M Thu Nov 13 08:52:38 2003

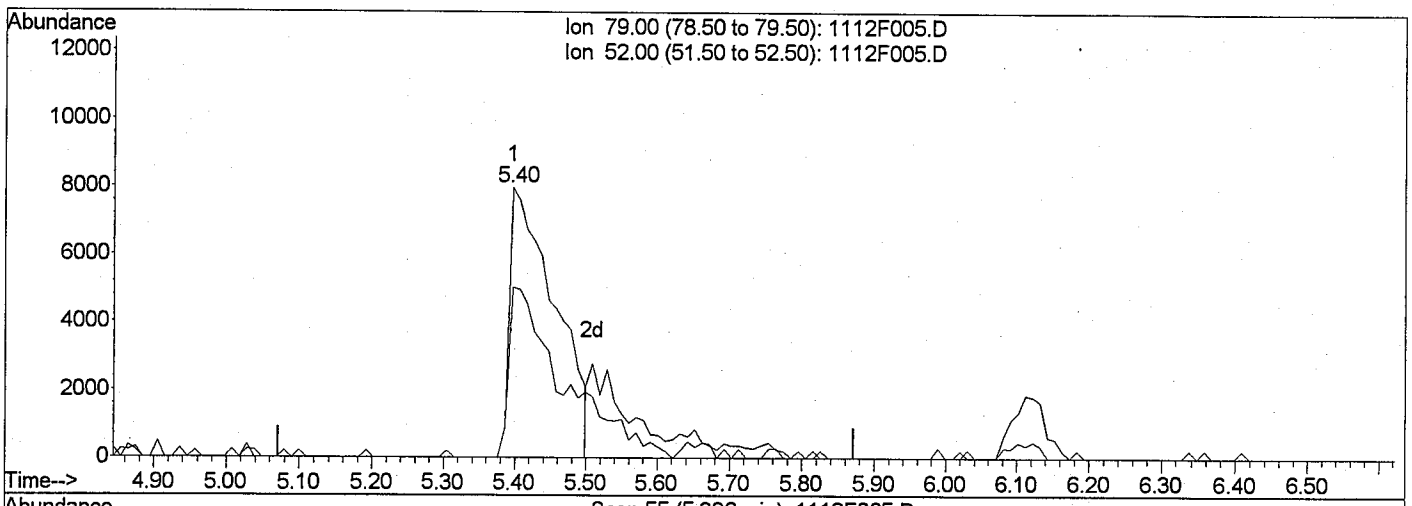
Quantitation Report (Qedit)

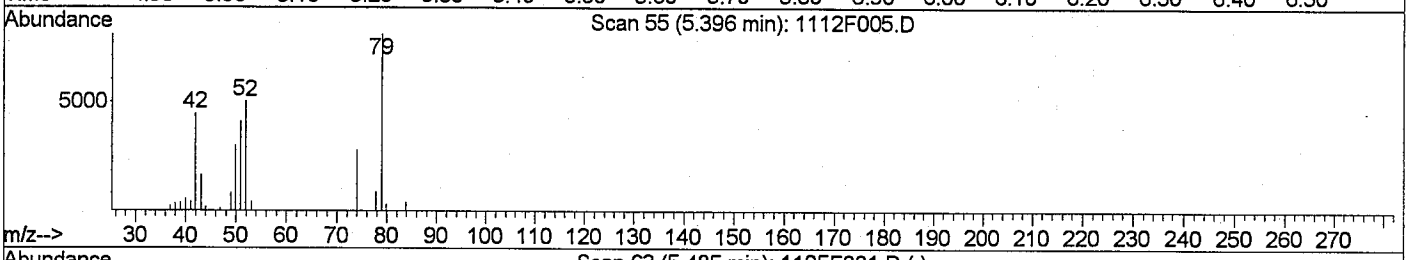
Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:50 2003

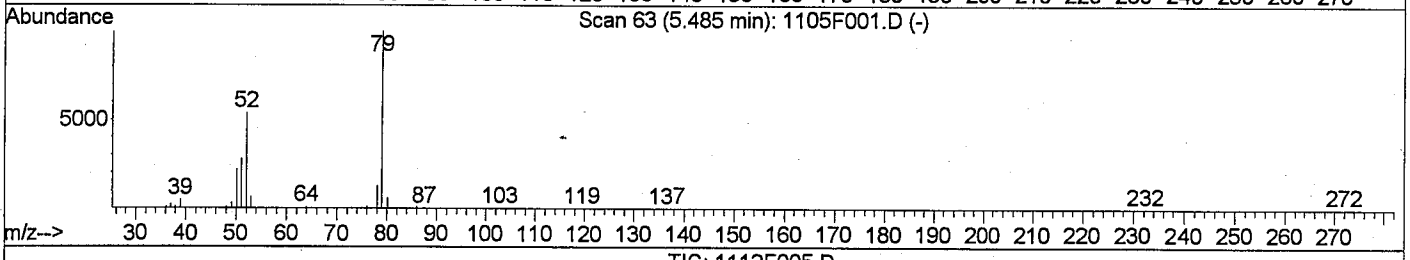
Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F005.D

(3) Pyridine (T)

5.40min 448.42ng/ml

response 34983

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	63.09
0.00	0.00	0.00
0.00	0.00	0.00

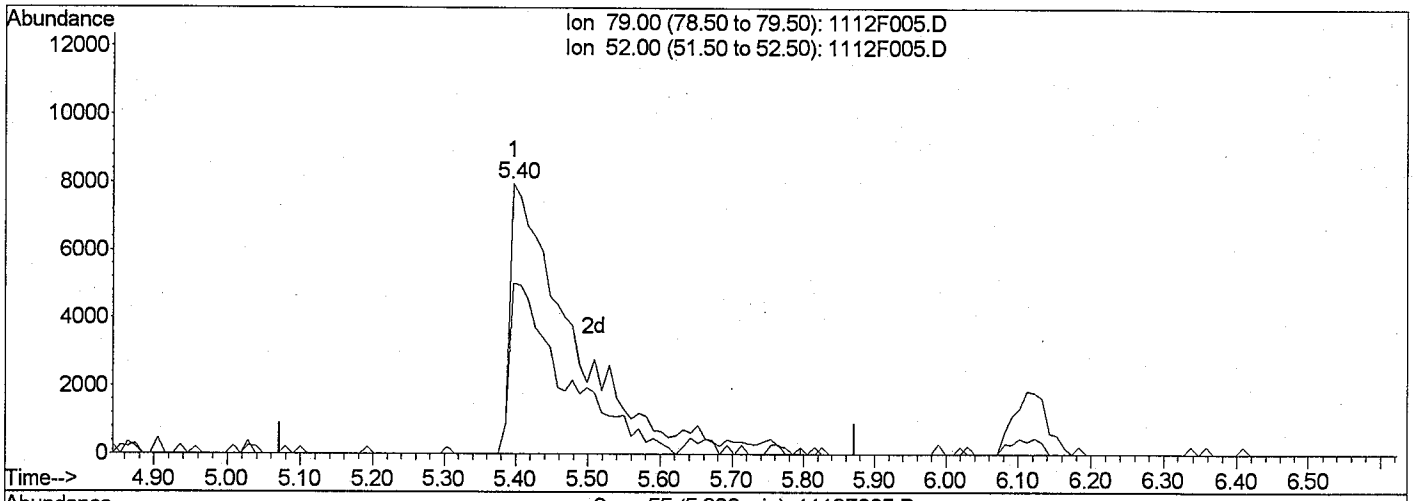
Quantitation Report (Qedit)

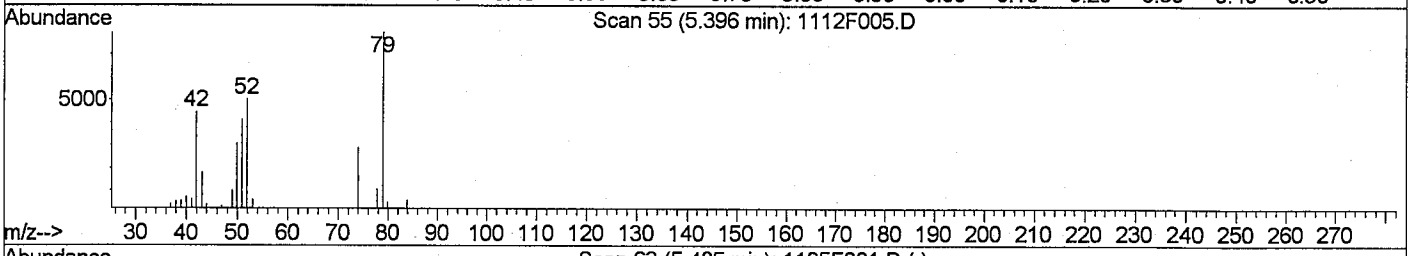
Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:50 2003

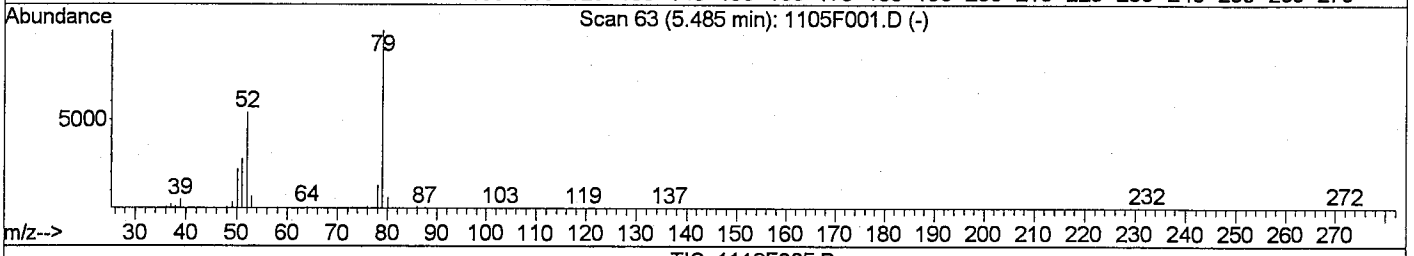
Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F005.D

(3) Pyridine (T)

5.40min 623.91ng/ml m

response 48673

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	63.09
0.00	0.00	0.00
0.00	0.00	0.00

Jw 11/13/3 Incomplete

mt 11/13/03

1112F005.D 1112BNLL.M Thu Nov 13 08:52:47 2003

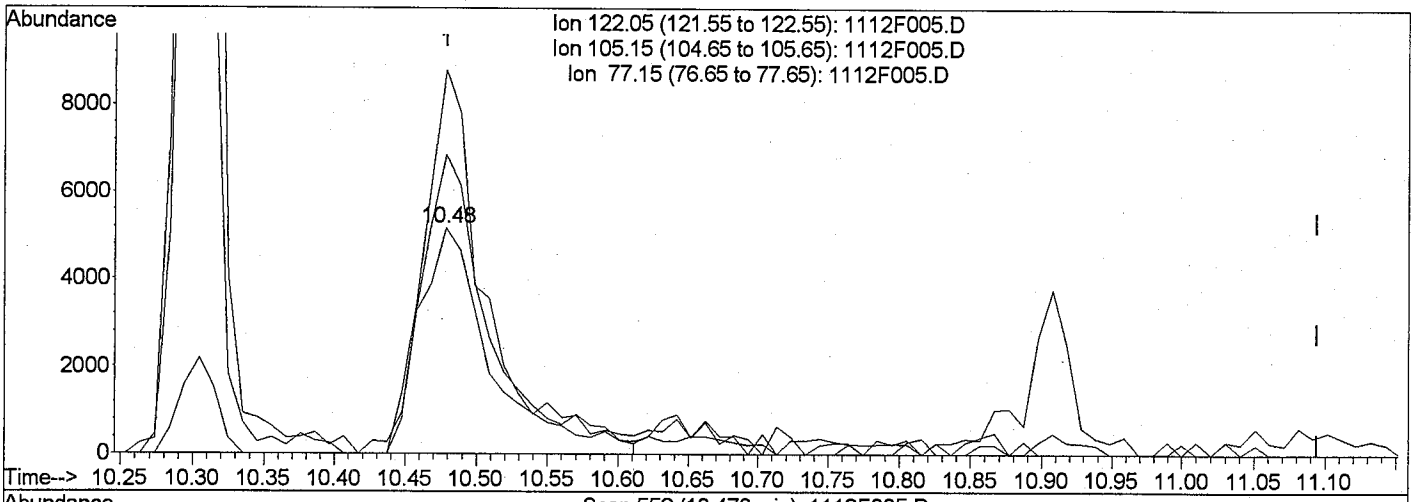
Quantitation Report (Qedit)

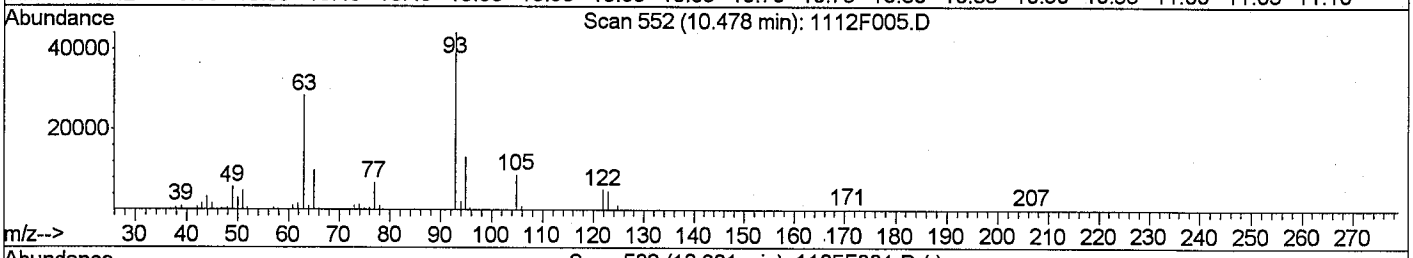
Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:50 2003

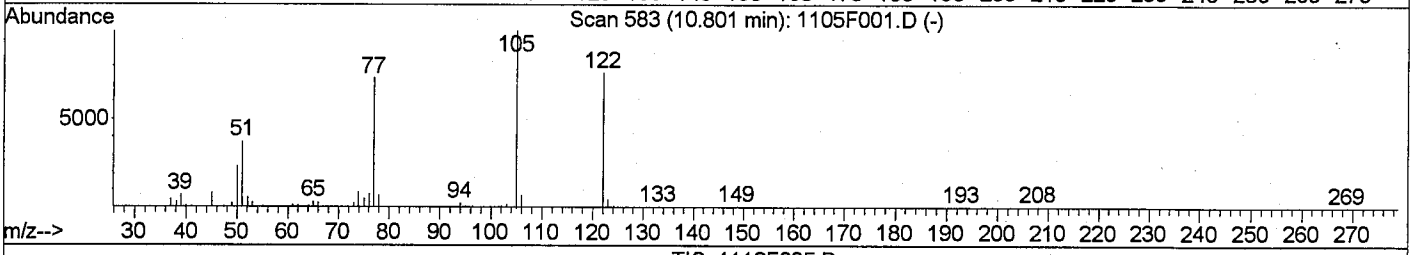
Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Single Level Calibration







TIC: 1112F005.D

(27) Benzoic Acid (T)

10.48min, 1379.88ng/ml

response 18160

Ion	Exp%	Act%
122.05	100	100
105.15	131.70	170.46#
77.15	100.10	127.25
0.00	0.00	0.00

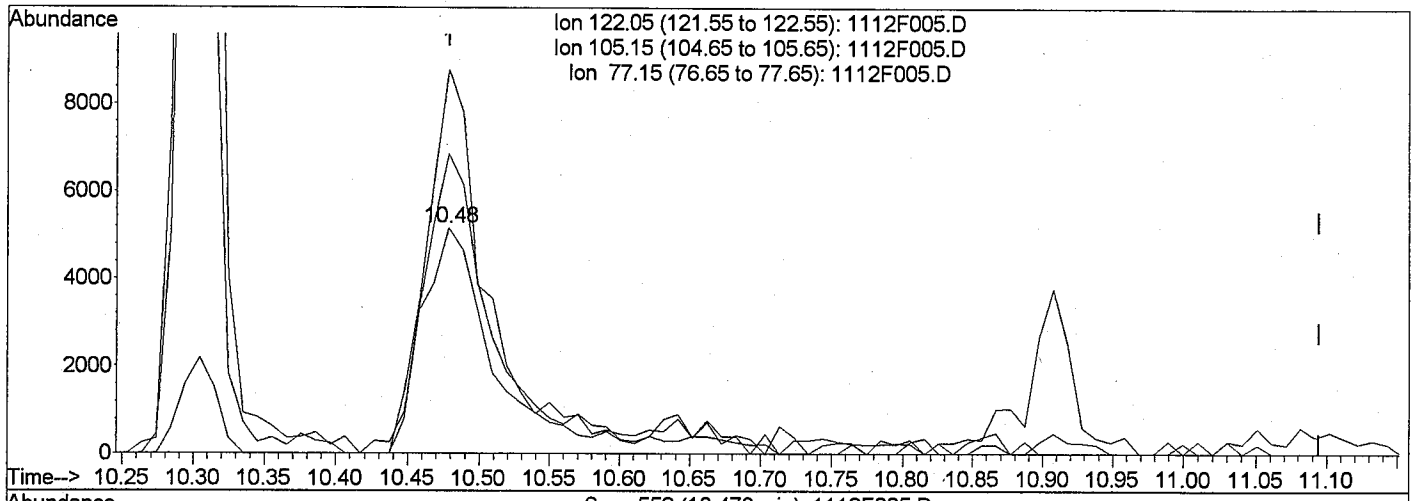
Quantitation Report (Qedit)

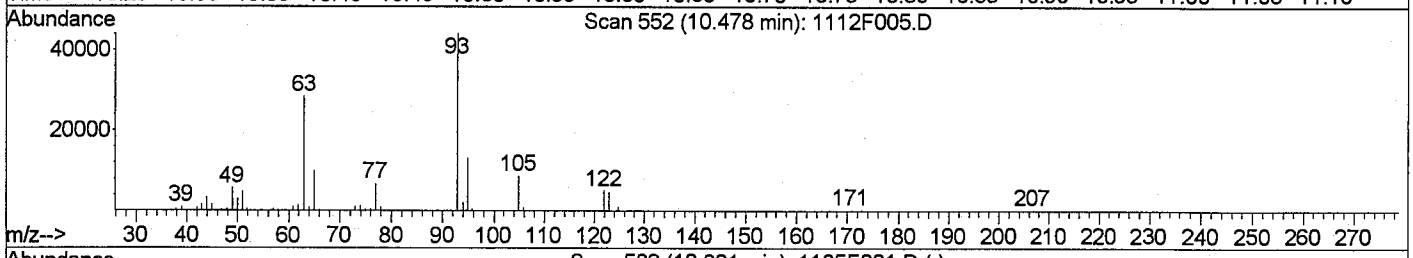
Data File : J:\MS10\DATA\111303\1112F005.D
Acq On : 12 Nov 2003 18:03
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:50 2003

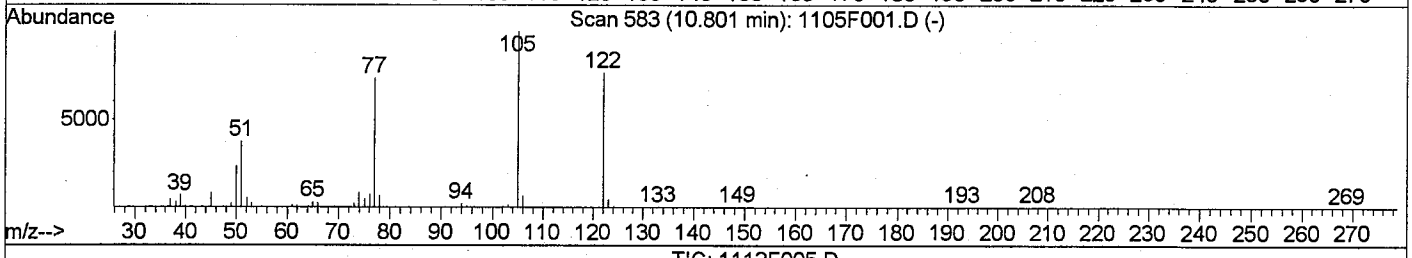
Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Single Level Calibration







TIC: 1112F005.D

(27) Benzoic Acid (T)

10.48min 1434.12ng/ml m

response 19899

Ion	Exp%	Act%
122.05	100	100
105.15	131.70	170.46#
77.15	100.10	132.84#
0.00	0.00	0.00

mat 11/13/03

JJ 11/13/3 incomplete

1112F005.D 1112BNLL.M Thu Nov 13 08:53:20 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F006.D Vial: 6
Acq On : 12 Nov 2003 18:45 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:08 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	60943	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.87	136	190298	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.63	164	116940	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	203064	1000.00	ng/ml	0.00
67) Chrysene-d12	24.10	240	190811	1000.00	ng/ml	0.00
76) Perylene-d12	27.50	264	130602	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.90	112	76678	1015.91	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery = 27.09%#			
6) Phenol-d6	8.15	99	100391	1138.44	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 30.36%#			
19) Nitrobenzene-d5	9.59	82	113818	1428.96	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 57.16%			
38) 2-Fluorobiphenyl	13.18	172	171809	1056.25	ng/ml	-0.02
Spiked Amount 2500.000	Range 37 - 126		Recovery = 42.25%			
58) 2,4,6-Tribromophenol	16.44	330	32006	1029.66	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 27.46%#			
70) Terphenyl-d14	21.77	244	128777	820.83	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 32.83%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.31	42	67093m	1653.47	ng/ml	
3) Pyridine	5.36	79	86443	1055.09	ng/ml	93
5) Bis(2-chloroethyl) Ether	8.27	93	88777	1026.65	ng/ml	87
7) Phenol	8.17	94	212945	2150.88	ng/ml	82
8) Aniline	8.18	93	121175	1129.67	ng/ml#	82
9) 2-Chlorophenol	8.35	128	144099	2090.26	ng/ml	88
10) 1,3-Dichlorobenzene	8.56	146	89112	1048.36	ng/ml	96
11) 1,4-Dichlorobenzene	8.64	146	92771	1072.60	ng/ml	99
12) 1,2-Dichlorobenzene	8.95	146	81691	1049.64	ng/ml	97
13) Benzyl Alcohol	8.89	108	56146	1339.52	ng/ml#	68
14) Bis(2-chloroisopropyl) Eth	9.15	45	91868	1521.87	ng/ml	74
15) 2-Methylphenol	9.10	107	131086	2395.07	ng/ml	89
16) Hexachloroethane	9.46	117	43036	1147.61	ng/ml	91
17) N-Nitrosodi-n-propylamine	9.37	70	68981	1414.96	ng/ml	82
18) 4-Methylphenol	9.35	107	187863	2425.98	ng/ml	90
20) Nitrobenzene	9.62	77	114984	1432.09	ng/ml	87
22) Isophorone	10.03	82	183527	1390.95	ng/ml	95
23) 2-Nitrophenol	10.20	139	87958	2465.64	ng/ml	71
24) 2,4-Dimethylphenol	10.31	122	131893	2426.60	ng/ml#	81
25) Bis(2-chloroethoxy)methane	10.48	93	108863	1158.94	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1112F006.D 1112BNLL.M Thu Nov 13 10:18:39 2003 JJ 11/13/3 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F006.D Vial: 6
Acq On : 12 Nov 2003 18:45 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:08 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.65	162	149613	2554.69	ng/ml	96
27)	Benzoic Acid	10.52	122	42721	2303.48	ng/ml	87
28)	1,2,4-Trichlorobenzene	10.80	180	91366	1277.45	ng/ml	96
29)	Naphthalene	10.91	128	211909	1205.55	ng/ml	96
30)	4-Chloroaniline	11.09	127	93001	1276.23	ng/ml	89
31)	Hexachlorobutadiene	11.30	225	59699	1421.57	ng/ml	96
32)	4-Chloro-3-methylphenol	12.12	107	162517	2761.70	ng/ml	75
33)	2-Methylnaphthalene	12.33	142	135425	1117.50	ng/ml	97
35)	Hexachlorocyclopentadiene	12.84	237	31087	856.85	ng/ml	98
36)	2,4,6-Trichlorophenol	13.02	196	113340	2117.11	ng/ml	95
37)	2,4,5-Trichlorophenol	13.09	196	120163	2130.97	ng/ml	99
39)	2-Chloronaphthalene	13.36	127	60586	1138.24	ng/ml	93
40)	2-Nitroaniline	13.69	65	68059	1497.21	ng/ml#	73
41)	Acenaphthylene	14.28	152	212515	991.09	ng/ml	98
42)	Dimethyl Phthalate	14.21	163	189191	1146.46	ng/ml	97
43)	2,6-Dinitrotoluene	14.33	165	42671	1196.90	ng/ml#	53
44)	Acenaphthene	14.70	154	124394	984.65	ng/ml	97
45)	3-Nitroaniline	14.62	138	38179	1027.09	ng/ml	85
46)	2,4-Dinitrophenol	14.85	184	31340	1990.01	ng/ml	79
47)	Dibenzofuran	15.06	168	216085	1068.74	ng/ml	86
48)	4-Nitrophenol	15.10	109	73872	2694.05	ng/ml#	71
49)	2,4-Dinitrotoluene	15.20	165	58370	1242.39	ng/ml#	60
50)	Fluorene	15.83	166	160231	1059.30	ng/ml	93
51)	4-Chlorophenyl Phenyl Ethe	15.89	204	94287	1136.83	ng/ml	92
52)	Diethyl Phthalate	15.84	149	196203	1154.20	ng/ml	97
53)	4-Nitroaniline	16.01	138	39315	1041.54	ng/ml#	48
54)	2-Methyl-4,6-dinitrophenol	16.12	198	70705	2015.36	ng/ml	86
55)	N-Nitrosodiphenylamine	16.19	169	116212	1083.34	ng/ml	98
56)	Azobenzene	16.24	77	227184	1239.95	ng/ml	82
59)	4-Bromophenyl Phenyl Ether	17.00	248	60449	1147.90	ng/ml	94
60)	Hexachlorobenzene	17.28	284	62020	1004.59	ng/ml	92
61)	Pentachlorophenol	17.72	266	49305	2001.62	ng/ml	95
62)	Phenanthrene	18.00	178	238420	1053.89	ng/ml	97
63)	Anthracene	18.10	178	244172	1046.73	ng/ml	98
64)	Carbazole	18.53	167	198223	943.15	ng/ml	94
65)	Di-n-butyl Phthalate	19.64	149	257597	890.29	ng/ml	98
66)	Fluoranthene	20.76	202	208496	842.56	ng/ml	93
68)	Benzidine	21.17	184	168088	1512.68	ng/ml	95
69)	Pyrene	21.25	202	206659	839.00	ng/ml	99
71)	Butyl Benzyl Phthalate	23.09	149	109510	929.67	ng/ml	93
72)	3,3'-Dichlorobenzidine	24.14	252	150683	1891.89	ng/ml	98

(#) = qualifier out of range (m) = manual integration

11/13/3 mf 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F006.D
Acq On : 12 Nov 2003 18:45
Sample : 8270-LL @ 1/2 ppm SVM15-70G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:08 2003

Vial: 6
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.07	228	215317	1035.55	ng/ml	99
74)	Chrysene	24.17	228	206013	1028.55	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	24.58	149	168244	995.89	ng/ml	95
77)	Di-n-octyl Phthalate	26.05	149	282732	1120.81	ng/ml	94
78)	Benzo(b)fluoranthene	26.62	252	190875	1024.03	ng/ml	94
79)	Benzo(k)fluoranthene	26.67	252	186107	1043.18	ng/ml	96
80)	Benzo(a)pyrene	27.37	252	186572	1058.15	ng/ml	95
81)	Indeno(1,2,3-cd)pyrene	30.00	276	154304	947.55	ng/ml	91
82)	Dibenz(a,h)anthracene	30.08	278	145621	928.07	ng/ml	94
83)	Benzo(g,h,i)perylene	30.57	276	160499	980.53	ng/ml	87

11/13/3

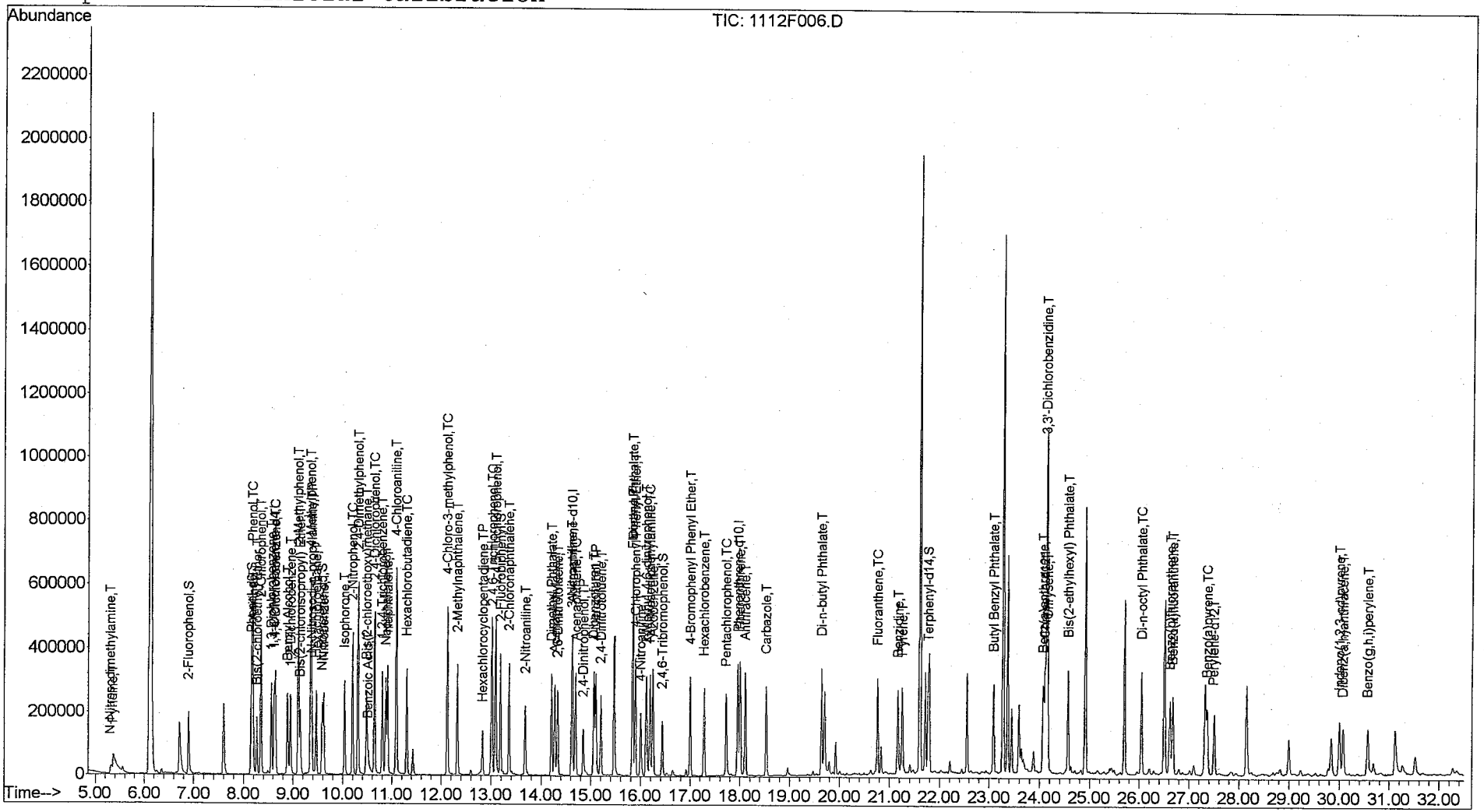
(#) = qualifier out of range (m) = manual integration

11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F006.D Vial: 6
Acq On : 12 Nov 2003 18:45 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:55 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



2102

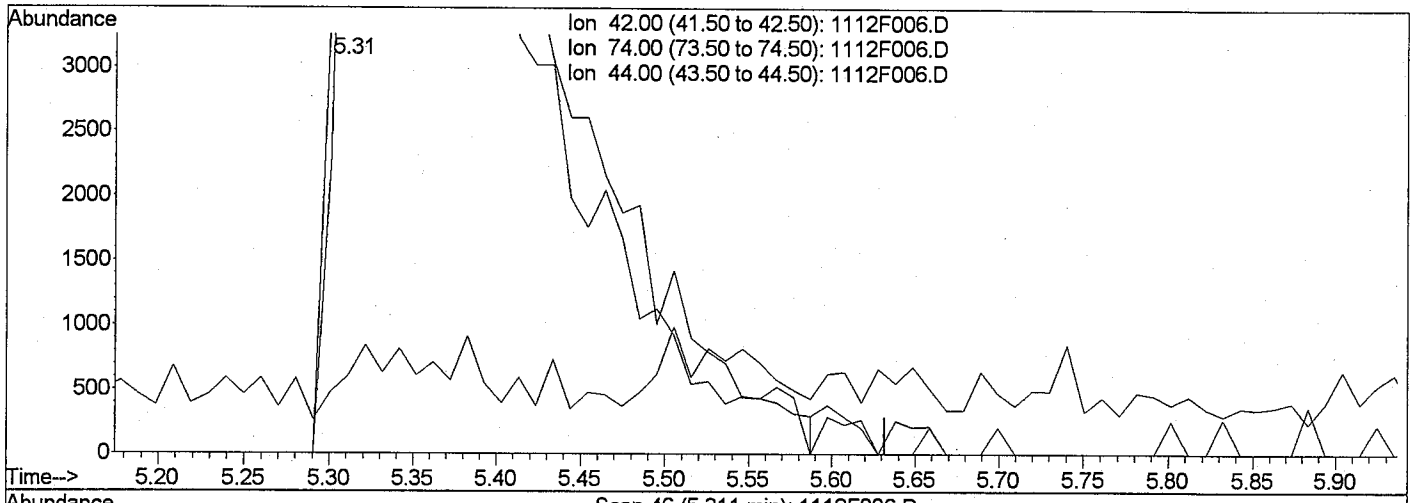
Quantitation Report (Qedit)

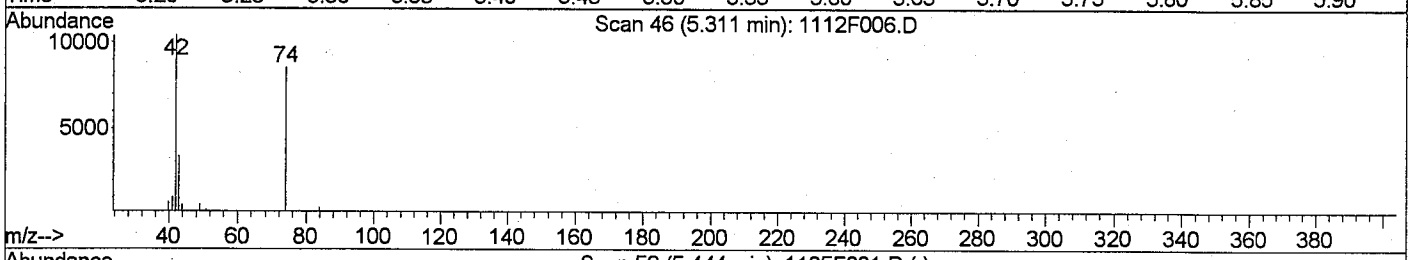
Data File : J:\MS10\DATA\111303\1112F006.D
Acq On : 12 Nov 2003 18:45
Sample : 8270-LL @ 1/2 ppm SVM15-70G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:43 2003

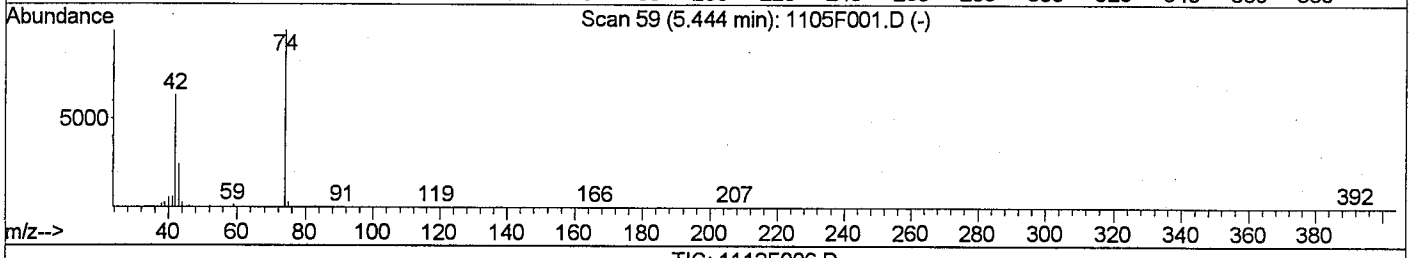
Vial: 6
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F006.D

(2) N-Nitrosodimethylamine (T)

5.31min 1630.13ng/ml

response 66146

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	82.13#
44.00	5.00	1.66
0.00	0.00	0.00

1112F006.D 1112BNLL.M Thu Nov 13 08:58:14 2003

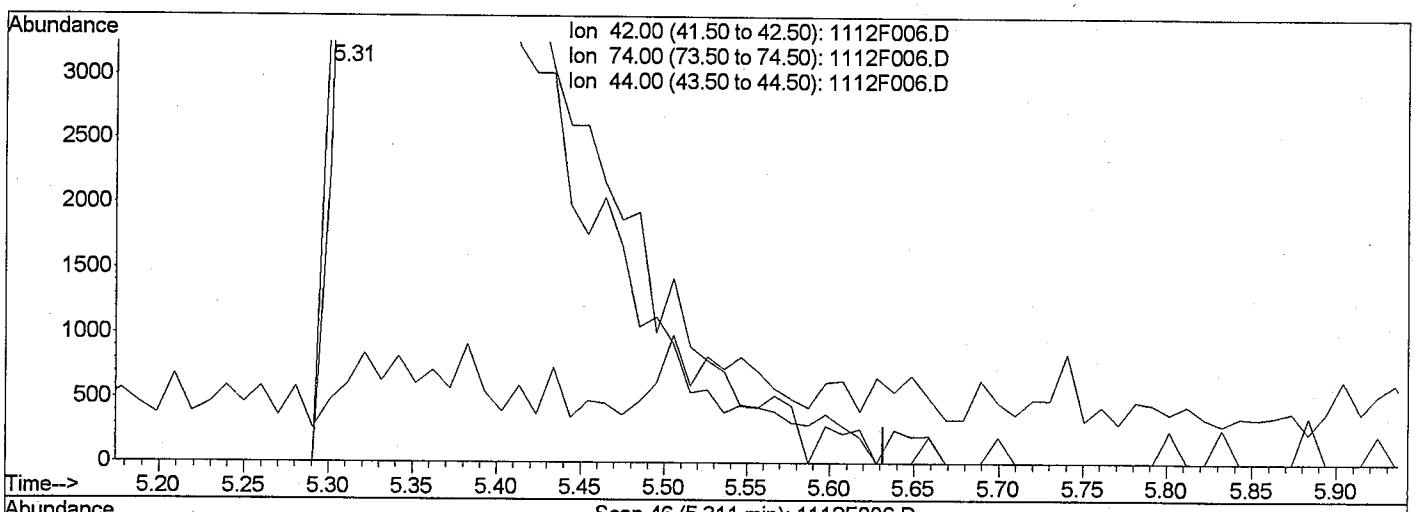
Quantitation Report (Qedit)

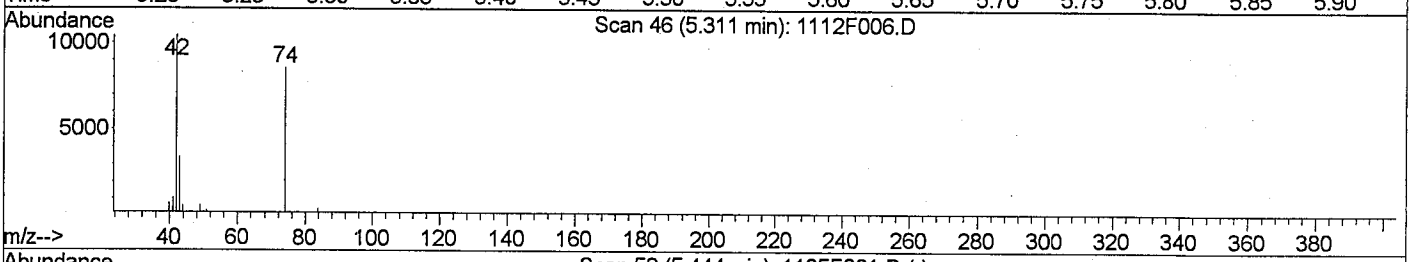
Data File : J:\MS10\DATA\111303\1112F006.D
Acq On : 12 Nov 2003 18:45
Sample : 8270-LL @ 1/2 ppm SVM15-70G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:55 2003

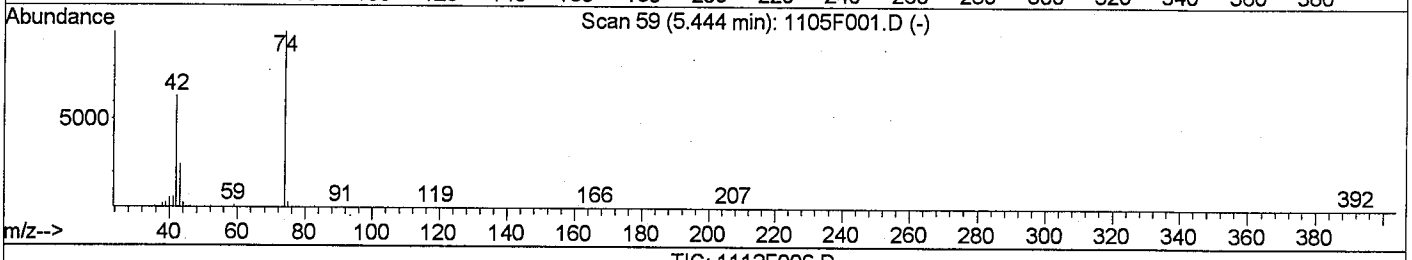
Vial: 6
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F006.D

(2) N-Nitrosodimethylamine (T)

5.31min 1653.47ng/ml m

response 67093

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	82.13#
44.00	5.00	5.80
0.00	0.00	0.00

J 11/13/3 gncmglitt
mt 11/13/03

1112F006.D 1112BNLL.M Thu Nov 13 08:58:19 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F007.D Vial: 7
Acq On : 12 Nov 2003 19:26 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:13 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.63	152	79468	1000.00	ng/ml	0.01
21) Naphthalene-d8	10.88	136	169162	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.63	164	111080	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	210173	1000.00	ng/ml	0.00
67) Chrysene-d12	24.11	240	205186	1000.00	ng/ml	0.00
76) Perylene-d12	27.50	264	140518	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.91	112	183965	1869.18	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 49.84%			
6) Phenol-d6	8.17	99	211796	1841.89	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 49.12%			
19) Nitrobenzene-d5	9.59	82	225849	2174.49	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 86.98%			
38) 2-Fluorobiphenyl	13.19	172	259414	1678.96	ng/ml	-0.01
Spiked Amount 2500.000	Range 37 - 126		Recovery = 67.16%			
58) 2,4,6-Tribromophenol	16.44	330	62156	1931.97	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 51.52%			
70) Terphenyl-d14	21.78	244	313178	1856.36	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 74.25%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.34	42	139737m	2640.95	ng/ml	
3) Pyridine	5.37	79	192427m	1801.19	ng/ml	
5) Bis(2-chloroethyl) Ether	8.28	93	205302	1820.73	ng/ml	86
7) Phenol	8.18	94	450710	3491.23	ng/ml	72
8) Aniline	8.20	93	258513	1848.21	ng/ml#	66
9) 2-Chlorophenol	8.36	128	361044	4016.34	ng/ml	90
10) 1,3-Dichlorobenzene	8.58	146	210540	1899.50	ng/ml	95
11) 1,4-Dichlorobenzene	8.66	146	221383	1962.91	ng/ml	98
12) 1,2-Dichlorobenzene	8.95	146	195872	1930.06	ng/ml	97
13) Benzyl Alcohol	8.89	108	91500	1674.11	ng/ml#	67
14) Bis(2-chloroisopropyl) Eth	9.15	45	193147	2453.76	ng/ml	77
15) 2-Methylphenol	9.11	107	271718	3807.25	ng/ml	84
16) Hexachloroethane	9.47	117	100397	2053.13	ng/ml	90
17) N-Nitrosodi-n-propylamine	9.38	70	130935	2059.70	ng/ml	86
18) 4-Methylphenol	9.35	107	343112	3397.92	ng/ml	87
20) Nitrobenzene	9.62	77	221042	2111.26	ng/ml	90
22) Isophorone	10.05	82	278021	2370.40	ng/ml	98
23) 2-Nitrophenol	10.20	139	159952	5044.01	ng/ml	68
24) 2,4-Dimethylphenol	10.31	122	214548	4440.50	ng/ml#	77
25) Bis(2-chloroethoxy)methane	10.49	93	171507	2053.96	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1112F007.D 1112BNLL.M Thu Nov 13 10:18:42 2003 Page 1

11/13/3 mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F007.D
Acq On : 12 Nov 2003 19:26
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:13 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.65	162	240610	4621.82	ng/ml	98
27)	Benzoic Acid	10.59	122	135486	6038.23	ng/ml	77
28)	1,2,4-Trichlorobenzene	10.81	180	154981	2437.64	ng/ml	96
29)	Naphthalene	10.92	128	341781	2187.33	ng/ml	98
30)	4-Chloroaniline	11.09	127	139643	2155.72	ng/ml	88
31)	Hexachlorobutadiene	11.31	225	93655	2508.79	ng/ml	97
32)	4-Chloro-3-methylphenol	12.12	107	263997	5046.72	ng/ml	75
33)	2-Methylnaphthalene	12.33	142	186676	1732.89	ng/ml	100
35)	Hexachlorocyclopentadiene	12.83	237	54599	1426.29	ng/ml	96
36)	2,4,6-Trichlorophenol	13.01	196	184409	3626.36	ng/ml	94
37)	2,4,5-Trichlorophenol	13.10	196	213156	3979.52	ng/ml	98
39)	2-Chloronaphthalene	13.36	127	90899	1797.82	ng/ml	89
40)	2-Nitroaniline	13.69	65	111928	2592.18	ng/ml#	77
41)	Acenaphthylene	14.27	152	351844	1727.43	ng/ml	98
42)	Dimethyl Phthalate	14.22	163	329667	2103.11	ng/ml	98
43)	2,6-Dinitrotoluene	14.33	165	73917	2182.72	ng/ml#	51
44)	Acenaphthene	14.70	154	208316	1735.93	ng/ml	99
45)	3-Nitroaniline	14.62	138	76640	2170.53	ng/ml	90
46)	2,4-Dinitrophenol	14.85	184	101183	4579.99	ng/ml	72
47)	Dibenzofuran	15.06	168	376851	1962.21	ng/ml	79
48)	4-Nitrophenol	15.11	109	171303	6576.84	ng/ml#	64
49)	2,4-Dinitrotoluene	15.21	165	102675	2300.70	ng/ml	73
50)	Fluorene	15.84	166	285949	1990.15	ng/ml	97
51)	4-Chlorophenyl Phenyl Ethe	15.90	204	168064	2133.26	ng/ml	89
52)	Diethyl Phthalate	15.86	149	353533	2189.43	ng/ml	97
53)	4-Nitroaniline	16.02	138	76515	2133.98	ng/ml#	46
54)	2-Methyl-4,6-dinitrophenol	16.12	198	167662	5031.11	ng/ml	76
55)	N-Nitrosodiphenylamine	16.19	169	218596	2145.27	ng/ml	96
56)	Azobenzene	16.26	77	431037	2476.67	ng/ml	87
59)	4-Bromophenyl Phenyl Ether	17.00	248	110227	2022.36	ng/ml	90
60)	Hexachlorobenzene	17.29	284	117997	1846.65	ng/ml	93
61)	Pentachlorophenol	17.73	266	128565	4190.20	ng/ml	99
62)	Phenanthrene	18.01	178	444446	1898.14	ng/ml	100
63)	Anthracene	18.12	178	472004	1954.97	ng/ml	98
64)	Carbazole	18.55	167	398069	1829.96	ng/ml	96
65)	Di-n-butyl Phthalate	19.64	149	575607	1922.08	ng/ml	96
66)	Fluoranthene	20.77	202	489431	1910.96	ng/ml	94
68)	Benzidine	21.17	184	453958	3799.11	ng/ml	96
69)	Pyrene	21.27	202	483482	1825.34	ng/ml	99
71)	Butyl Benzyl Phthalate	23.10	149	247518	1954.06	ng/ml	94
72)	3,3'-Dichlorobenzidine	24.15	252	338041	3946.91	ng/ml	98

(#) = qualifier out of range (m) = manual integration

11/13/3

MAT 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F007.D
Acq On : 12 Nov 2003 19:26
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:13 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.08	228	448097	2004.11	ng/ml	97
74)	Chrysene	24.17	228	413451	1919.59	ng/ml	97
75)	Bis(2-ethylhexyl) Phthalat	24.57	149	340049	1871.85	ng/ml	97
77)	Di-n-octyl Phthalate	26.05	149	558218	2056.74	ng/ml	95
78)	Benzo(b)fluoranthene	26.62	252	395354	1971.37	ng/ml	94
79)	Benzo(k)fluoranthene	26.69	252	348319	1814.65	ng/ml	96
80)	Benzo(a)pyrene	27.37	252	345450	1820.97	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.01	276	290834	1659.92	ng/ml	91
82)	Dibenz(a,h)anthracene	30.08	278	298337	1767.19	ng/ml	92
83)	Benzo(g,h,i)perylene	30.58	276	307853	1748.03	ng/ml	89

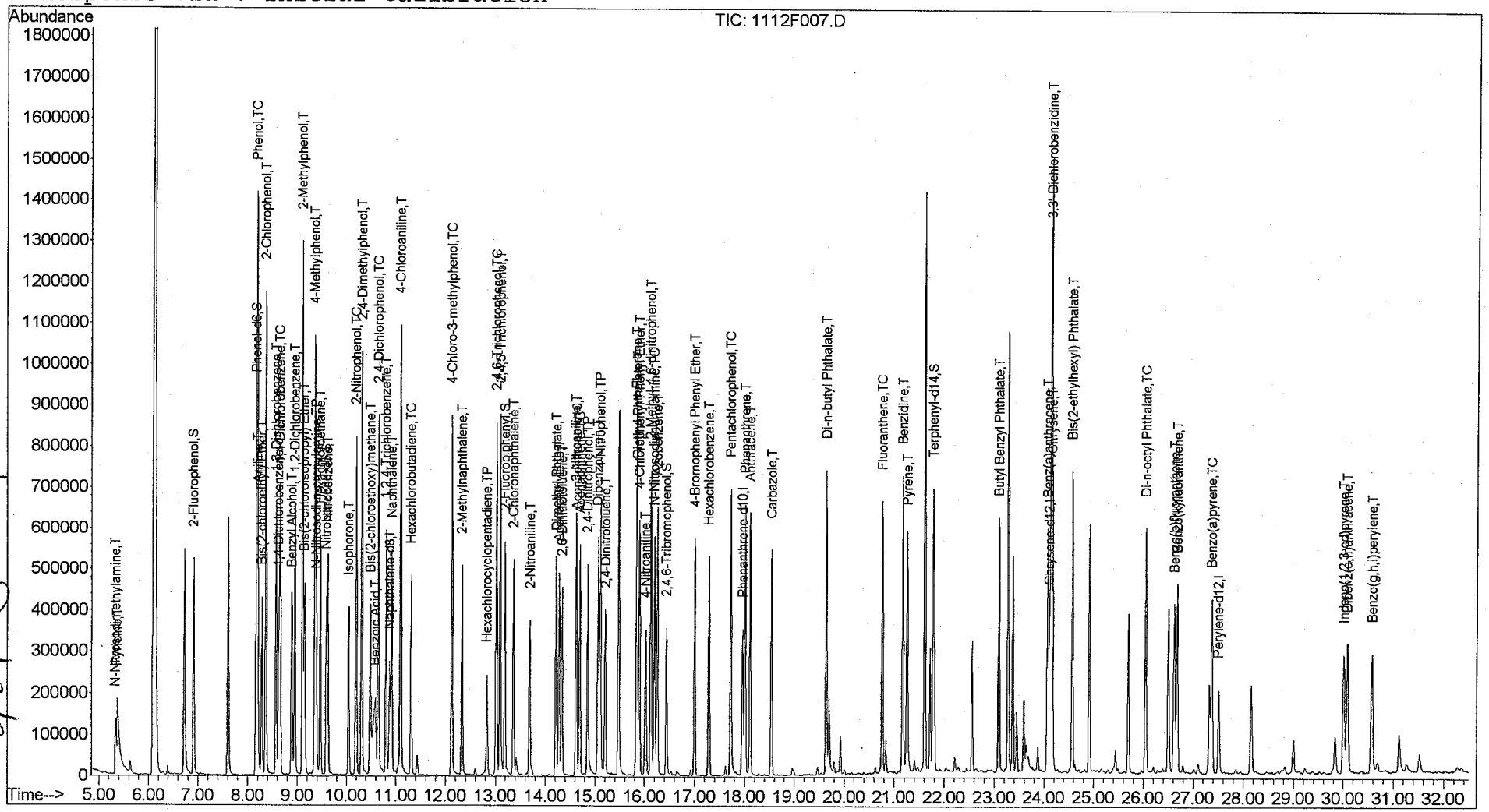
11/13/03

(#) = qualifier out of range (m) = manual integration
mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F007.D Vial: 7
Acq On : 12 Nov 2003 19:26 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:57 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



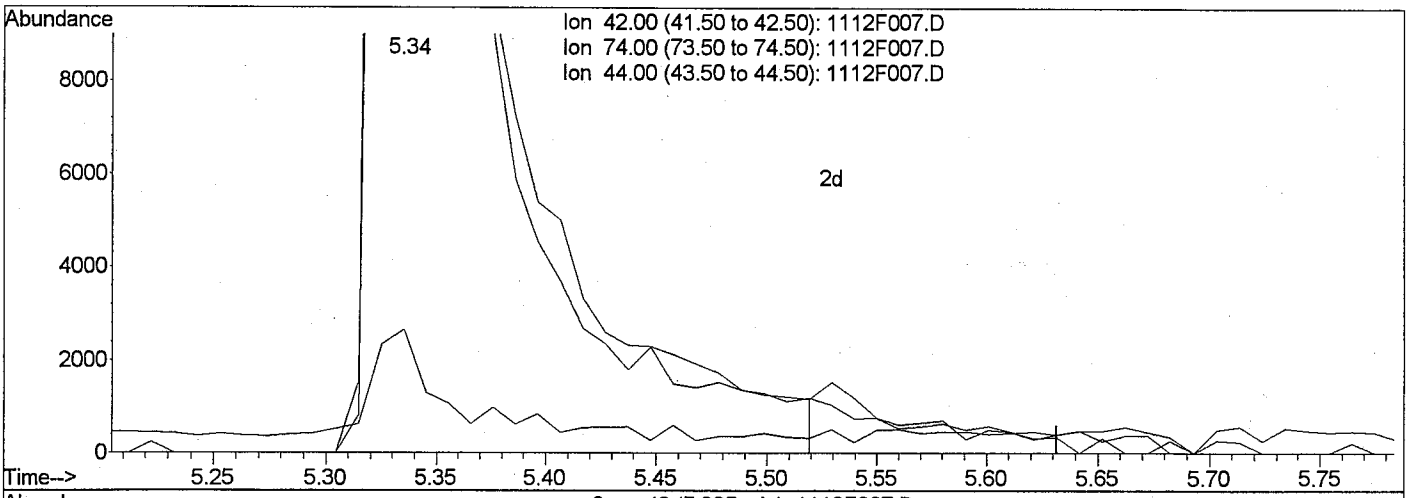
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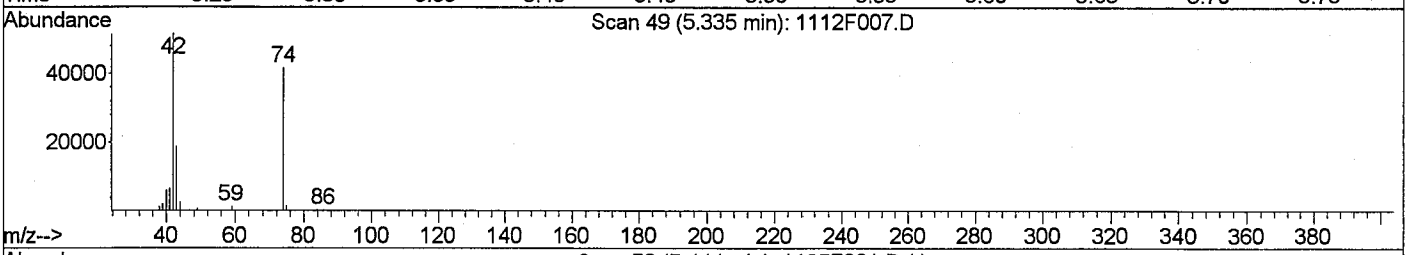
Quantitation Report (Qedit)

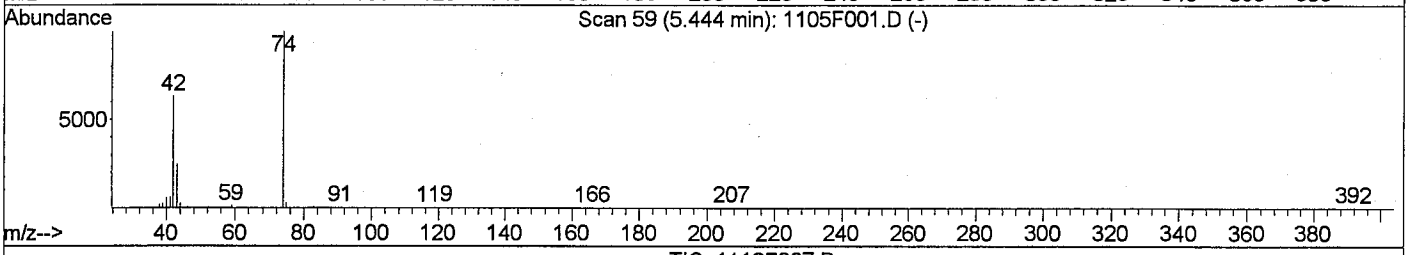
Data File : J:\MS10\DATA\111303\1112F007.D
Acq On : 12 Nov 2003 19:26
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:43 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F007.D

(2) N-Nitrosodimethylamine (T)

5.34min 2547.65ng/ml

response 134800

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	81.02#
44.00	5.00	4.52
0.00	0.00	0.00

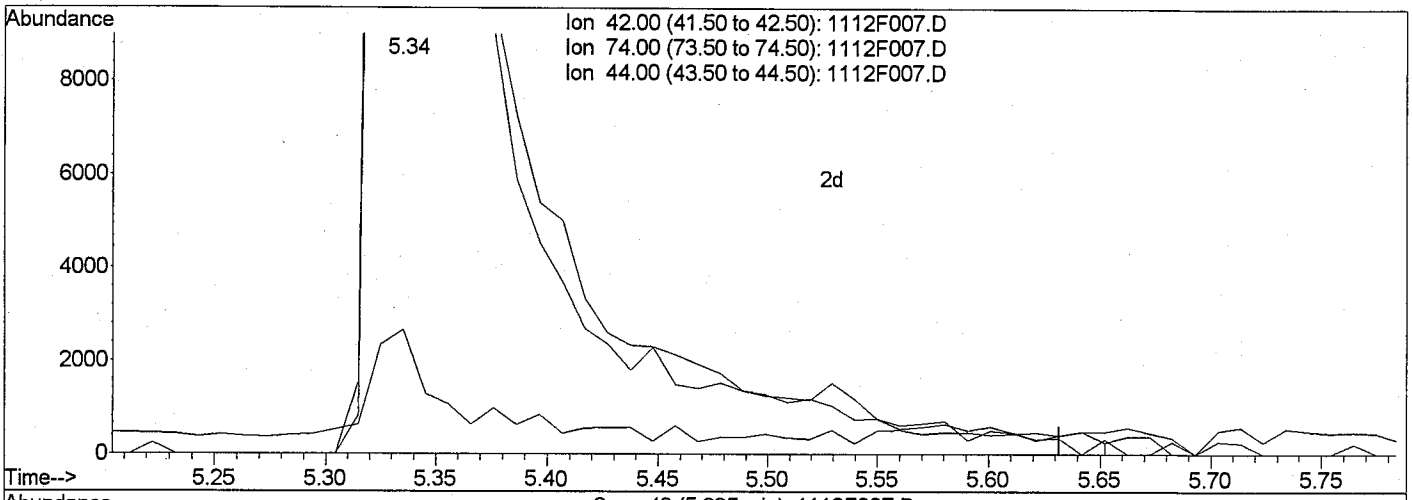
Quantitation Report (Qedit)

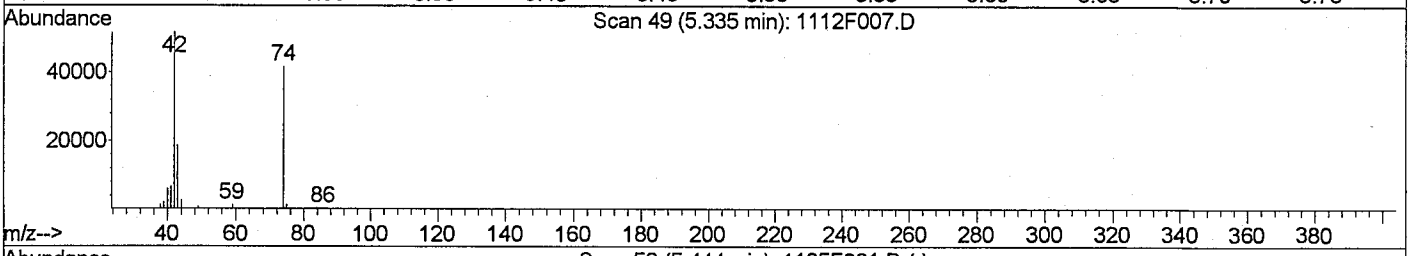
Data File : J:\MS10\DATA\111303\1112F007.D
Acq On : 12 Nov 2003 19:26
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:57 2003

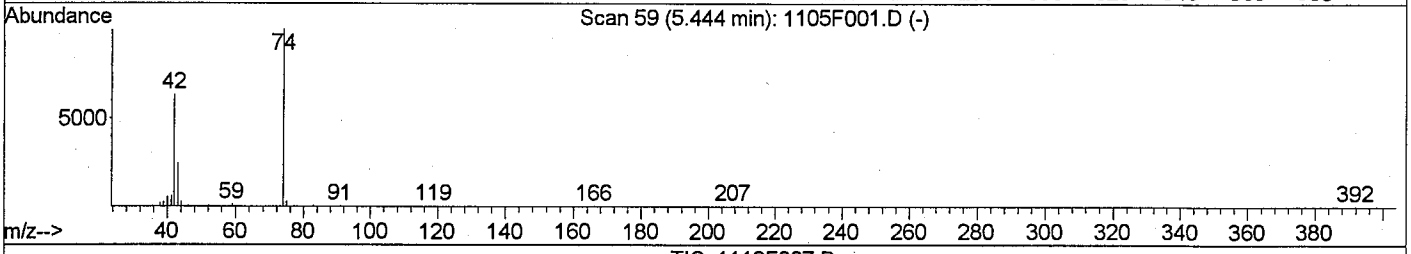
Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F007.D

(2) N-Nitrosodimethylamine (T)

5.34min 2640.95ng/ml m

response 139737

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	81.02#
44.00	5.00	5.15
0.00	0.00	0.00

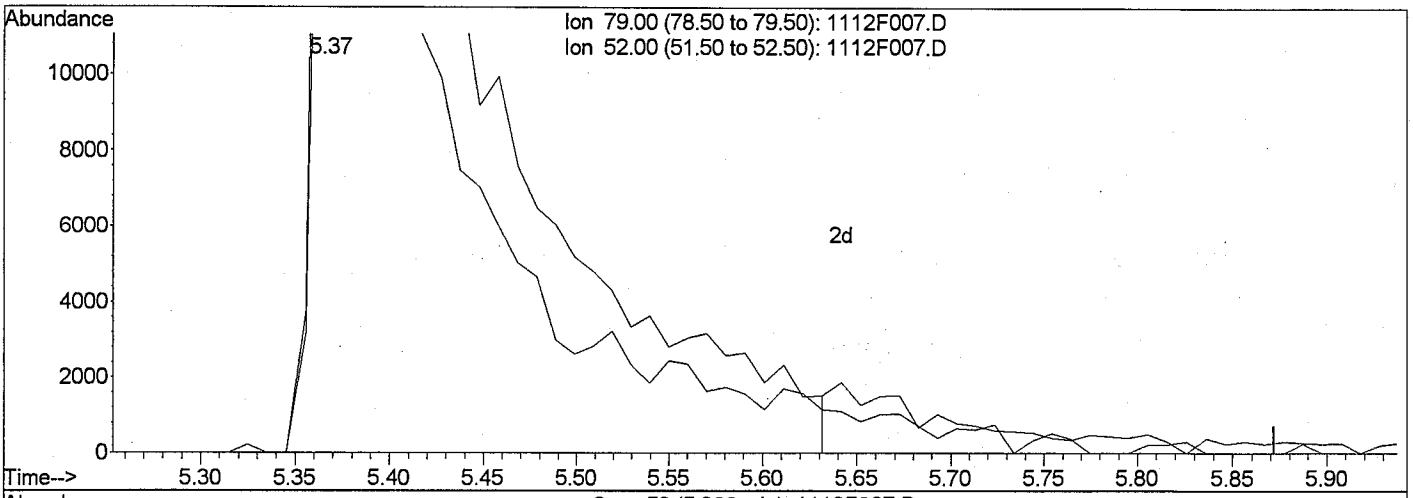
11/13/3 Incomplete mt 11/13/03

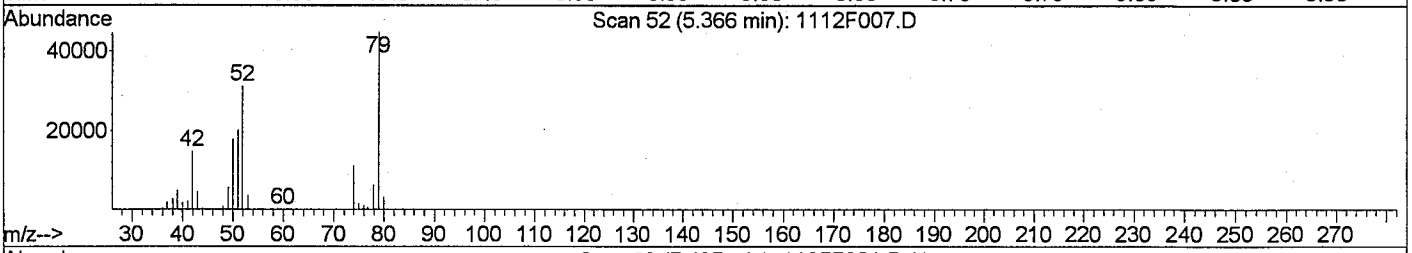
1112F007.D 1112BNLL.M Thu Nov 13 08:59:46 2003

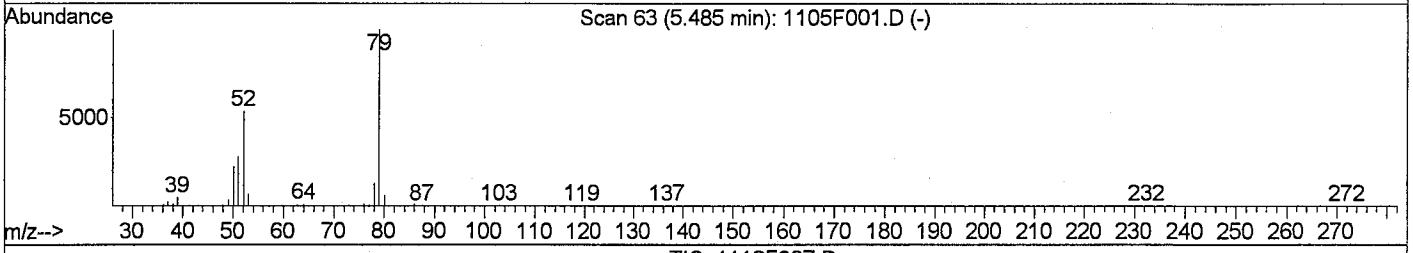
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111303\1112F007.D Vial: 7
Acq On : 12 Nov 2003 19:26 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:57 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F007.D

(3) Pyridine (T)

5.37min 1720.11ng/ml

response 183765

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	69.78
0.00	0.00	0.00
0.00	0.00	0.00

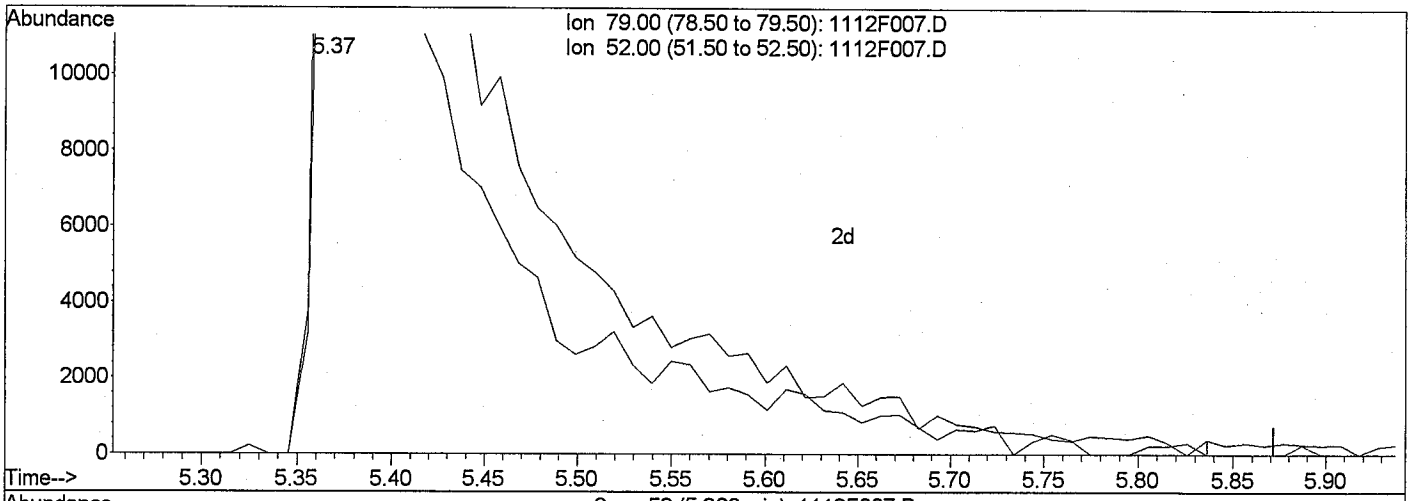
Quantitation Report (Qedit)

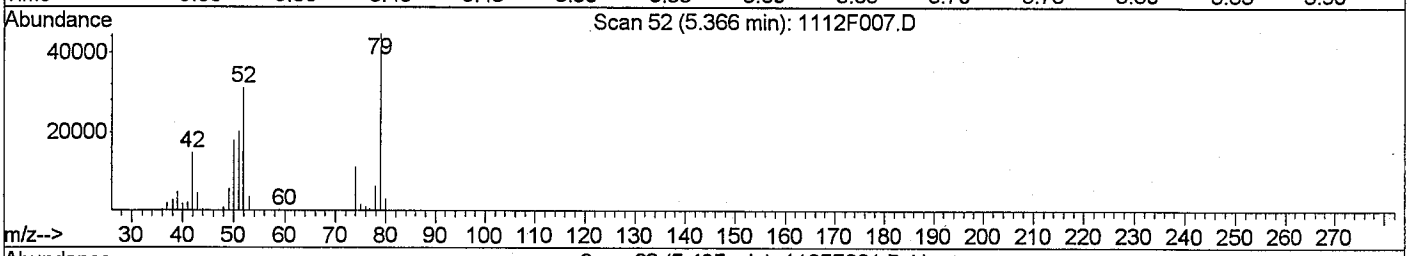
Data File : J:\MS10\DATA\111303\1112F007.D
Acq On : 12 Nov 2003 19:26
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:57 2003

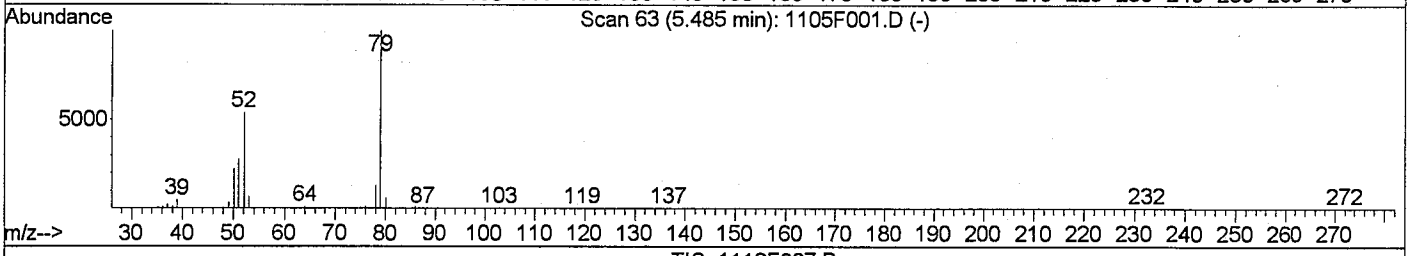
Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F007.D

(3) Pyridine (T)

5.37min 1801.19ng/ml m

response 192427

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	69.78
0.00	0.00	0.00
0.00	0.00	0.00

11/13/3 Incomplete not 11/13/03

1112F007.D 1112BNLL.M Thu Nov 13 08:59:57 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F008.D Vial: 8
Acq On : 12 Nov 2003 20:07 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM15-70I Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:17 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.63	152	65394	1000.00	ng/ml	0.01
21) Naphthalene-d8	10.88	136	147459	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.63	164	96127	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.97	188	225063	1000.00	ng/ml	0.00
67) Chrysene-d12	24.11	240	206674	1000.00	ng/ml	0.00
76) Perylene-d12	27.51	264	145249	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.91	112	238428	2943.93	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 78.50%			
6) Phenol-d6	8.17	99	266398	2815.34	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 75.08%			
19) Nitrobenzene-d5	9.59	82	292054	3417.10	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 136.68%			
38) 2-Fluorobiphenyl	13.19	172	343053	2565.66	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 102.63%			
58) 2,4,6-Tribromophenol	16.44	330	97899	2841.64	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 75.78%			
70) Terphenyl-d14	21.78	244	503306	2961.87	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 118.47%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.34	42	191060m	4388.07	ng/ml	
3) Pyridine	5.36	79	257371m	2927.56	ng/ml	
5) Bis(2-chloroethyl) Ether	8.28	93	260572	2808.24	ng/ml	87
7) Phenol	8.19	94	559569	5267.31	ng/ml#	54
8) Aniline	8.19	93	334850	2909.20	ng/ml#	27
9) 2-Chlorophenol	8.36	128	463549	6266.43	ng/ml	93
10) 1,3-Dichlorobenzene	8.58	146	262013	2872.64	ng/ml	97
11) 1,4-Dichlorobenzene	8.65	146	284555	3066.04	ng/ml	94
12) 1,2-Dichlorobenzene	8.96	146	245712	2942.25	ng/ml	95
13) Benzyl Alcohol	8.89	108	120695	2683.53	ng/ml#	58
14) Bis(2-chloroisopropyl) Eth	9.15	45	251572	3883.83	ng/ml	74
15) 2-Methylphenol	9.11	107	329119	5604.03	ng/ml	81
16) Hexachloroethane	9.47	117	126939	3154.61	ng/ml	90
17) N-Nitrosodi-n-propylamine	9.39	70	168976	3230.18	ng/ml	85
18) 4-Methylphenol	9.37	107	430231	5177.65	ng/ml	89
20) Nitrobenzene	9.62	77	287094	3332.30	ng/ml	86
22) Isophorone	10.05	82	381401	3730.41	ng/ml	95
23) 2-Nitrophenol	10.21	139	209548	7580.56	ng/ml	66
24) 2,4-Dimethylphenol	10.32	122	275373	6538.23	ng/ml#	77
25) Bis(2-chloroethoxy)methane	10.49	93	227282	3122.54	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1112F008.D 1112BNLL.M Thu Nov 13 10:18:46 2003 Page 1

11/13/3 mnt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F008.D
Acq On : 12 Nov 2003 20:07
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:17 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.66	162	317975	7006.87	ng/ml	99
27)	Benzoic Acid	10.62	122	211105	9980.41	ng/ml#	75
28)	1,2,4-Trichlorobenzene	10.81	180	204723	3693.93	ng/ml	98
29)	Naphthalene	10.92	128	450466	3307.20	ng/ml	97
30)	4-Chloroaniline	11.09	127	177395	3141.56	ng/ml	86
31)	Hexachlorobutadiene	11.31	225	127299	3911.92	ng/ml	96
32)	4-Chloro-3-methylphenol	12.13	107	337199	7394.82	ng/ml	73
33)	2-Methylnaphthalene	12.33	142	258911	2757.17	ng/ml	94
35)	Hexachlorocyclopentadiene	12.83	237	84031	2331.07	ng/ml	94
36)	2,4,6-Trichlorophenol	13.02	196	239215	5435.85	ng/ml	100
37)	2,4,5-Trichlorophenol	13.10	196	280590	6053.36	ng/ml	99
39)	2-Chloronaphthalene	13.36	127	112169	2563.61	ng/ml	90
40)	2-Nitroaniline	13.69	65	145902	3904.61	ng/ml#	77
41)	Acenaphthylene	14.27	152	462093	2621.63	ng/ml	97
42)	Dimethyl Phthalate	14.22	163	465355	3430.54	ng/ml	98
43)	2,6-Dinitrotoluene	14.34	165	104532	3566.92	ng/ml#	54
44)	Acenaphthene	14.70	154	281808	2713.65	ng/ml	98
45)	3-Nitroaniline	14.62	138	109728	3591.02	ng/ml	88
46)	2,4-Dinitrophenol	14.87	184	166941	7644.04	ng/ml	76
47)	Dibenzofuran	15.07	168	522117	3141.48	ng/ml	85
48)	4-Nitrophenol	15.12	109	282074	12514.28	ng/ml#	64
49)	2,4-Dinitrotoluene	15.22	165	149538	3872.02	ng/ml	64
50)	Fluorene	15.85	166	419913	3377.13	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	15.90	204	251717	3692.09	ng/ml	88
52)	Diethyl Phthalate	15.86	149	550402	3938.87	ng/ml	97
53)	4-Nitroaniline	16.04	138	125795	4054.13	ng/ml#	45
54)	2-Methyl-4,6-dinitrophenol	16.14	198	266154	9228.96	ng/ml	76
55)	N-Nitrosodiphenylamine	16.21	169	322986	3662.81	ng/ml	98
56)	Azobenzene	16.26	77	628385	4172.25	ng/ml	86
59)	4-Bromophenyl Phenyl Ether	17.00	248	177006	3032.72	ng/ml	90
60)	Hexachlorobenzene	17.29	284	194914	2848.58	ng/ml	96
61)	Pentachlorophenol	17.73	266	227783	6363.24	ng/ml	99
62)	Phenanthrene	18.02	178	733640	2925.93	ng/ml	99
63)	Anthracene	18.12	178	740411	2863.78	ng/ml	97
64)	Carbazole	18.55	167	644481	2766.73	ng/ml	96
65)	Di-n-butyl Phthalate	19.64	149	928198	2894.41	ng/ml	97
66)	Fluoranthene	20.77	202	810464	2955.06	ng/ml	94
68)	Benzidine	21.19	184	708491	5886.56	ng/ml	96
69)	Pyrene	21.27	202	801045	3002.50	ng/ml	99
71)	Butyl Benzyl Phthalate	23.10	149	373964	2931.04	ng/ml	91
72)	3,3'-Dichlorobenzidine	24.15	252	530860	6153.60	ng/ml	97

(#) = qualifier out of range (m) = manual integration

11/13/3 mnt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F008.D
Acq On : 12 Nov 2003 20:07
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:17 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.08	228	666914	2961.29	ng/ml	99
74)	Chrysene	24.17	228	627014	2890.18	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.57	149	500090	2733.00	ng/ml	98
77)	Di-n-octyl Phthalate	26.05	149	821379	2927.78	ng/ml	94
78)	Benzo(b)fluoranthene	26.64	252	596074	2875.42	ng/ml	95
79)	Benzo(k)fluoranthene	26.69	252	548550	2764.72	ng/ml	95
80)	Benzo(a)pyrene	27.38	252	572071	2917.34	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.02	276	534404	2950.74	ng/ml	90
82)	Dibenz(a,h)anthracene	30.09	278	535274	3067.41	ng/ml	93
83)	Benzo(g,h,i)perylene	30.59	276	528018	2900.51	ng/ml	88

JJ 11/13/3

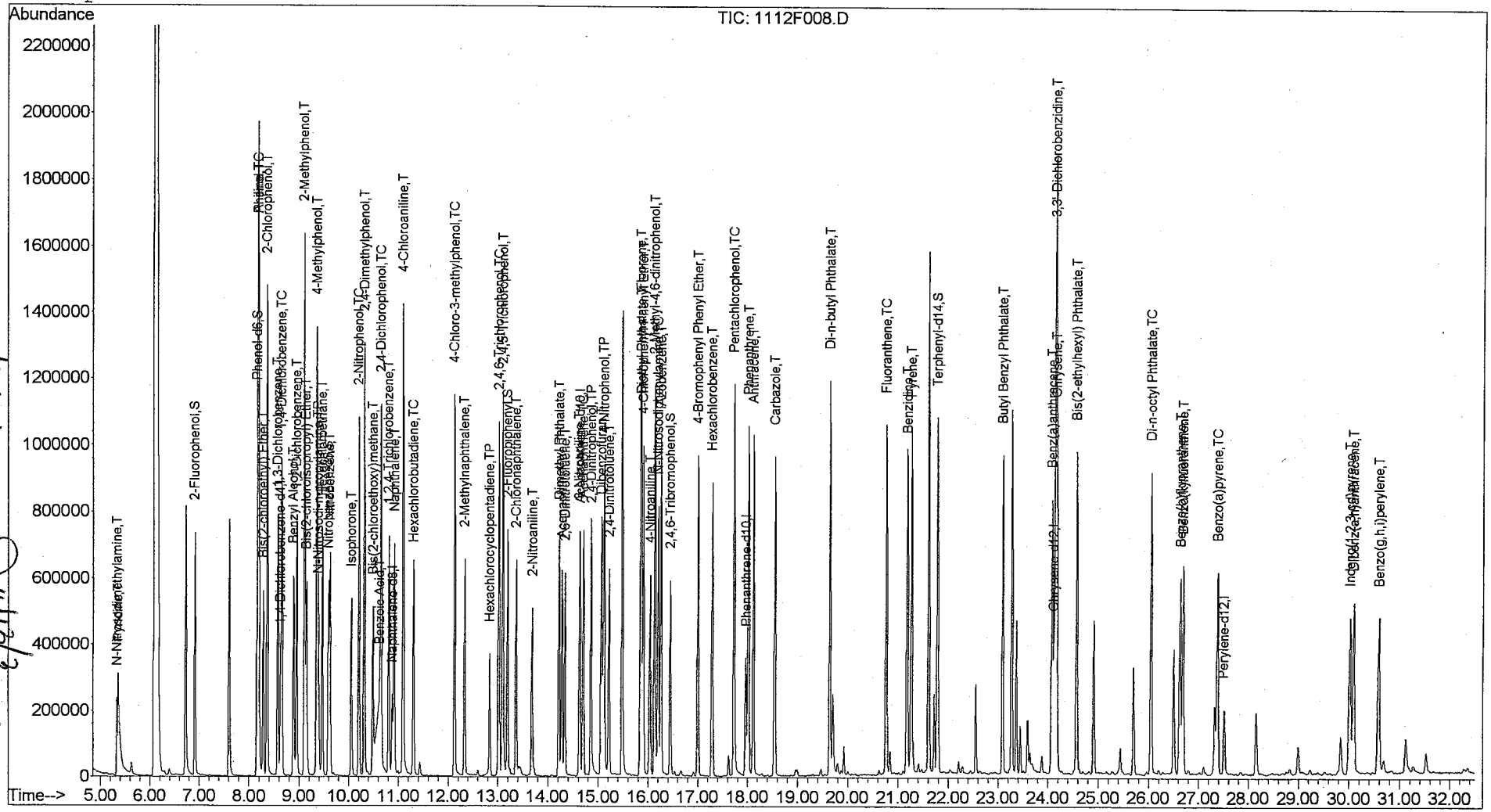
(#) = qualifier out of range (m) = manual integration

mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F008.D Vial: 8
Acq On : 12 Nov 2003 20:07 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM15-70I Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:59 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



2116 mtx 11/13/03

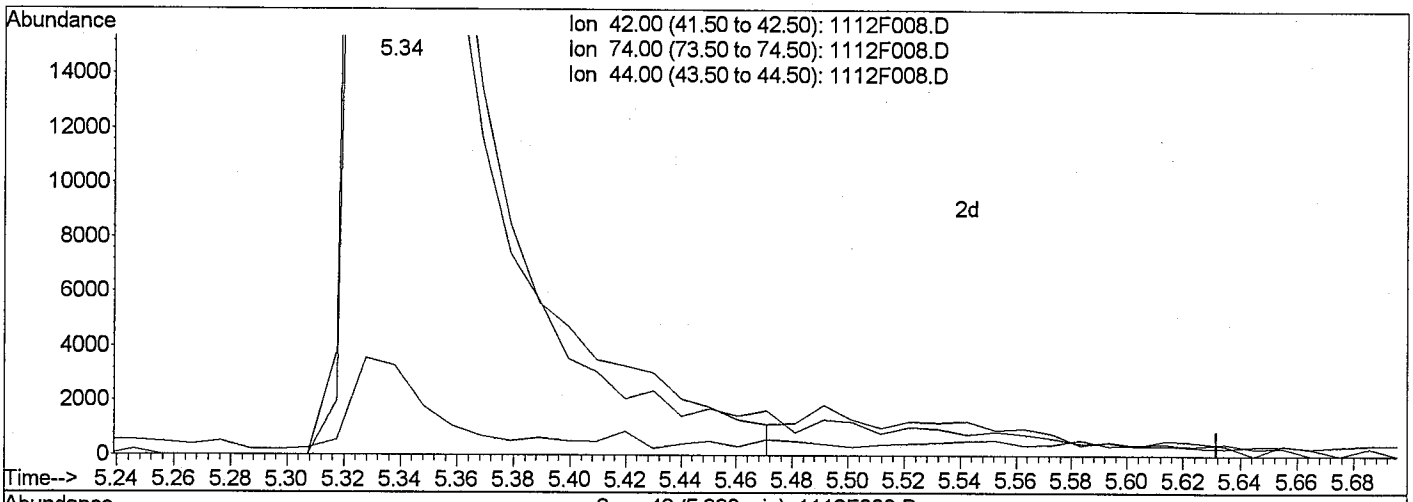
Quantitation Report (Qedit)

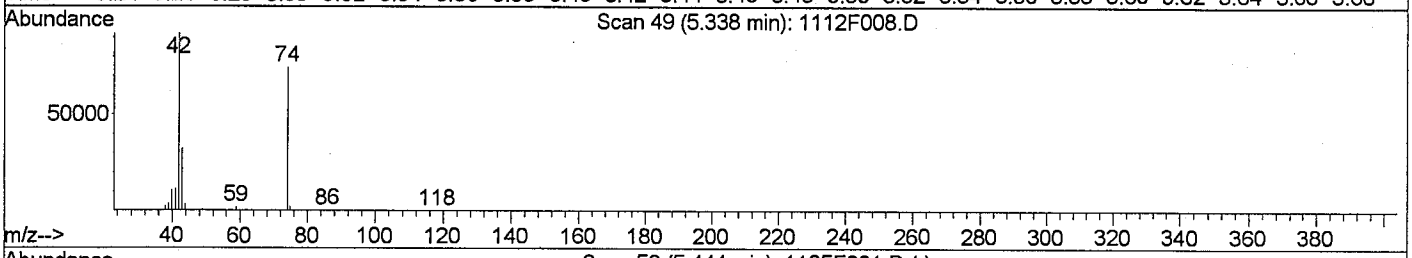
Data File : J:\MS10\DATA\111303\1112F008.D
Acq On : 12 Nov 2003 20:07
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:43 2003

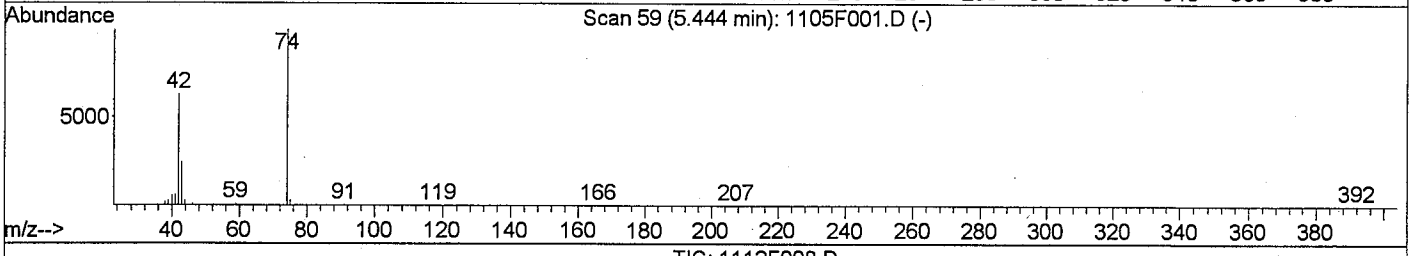
Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F008.D

(2) N-Nitrosodimethylamine (T)

5.34min 4203.14ng/ml

response 183008

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	81.06#
44.00	5.00	3.35
0.00	0.00	0.00

1112F008.D 1112BNLL.M Thu Nov 13 09:01:28 2003

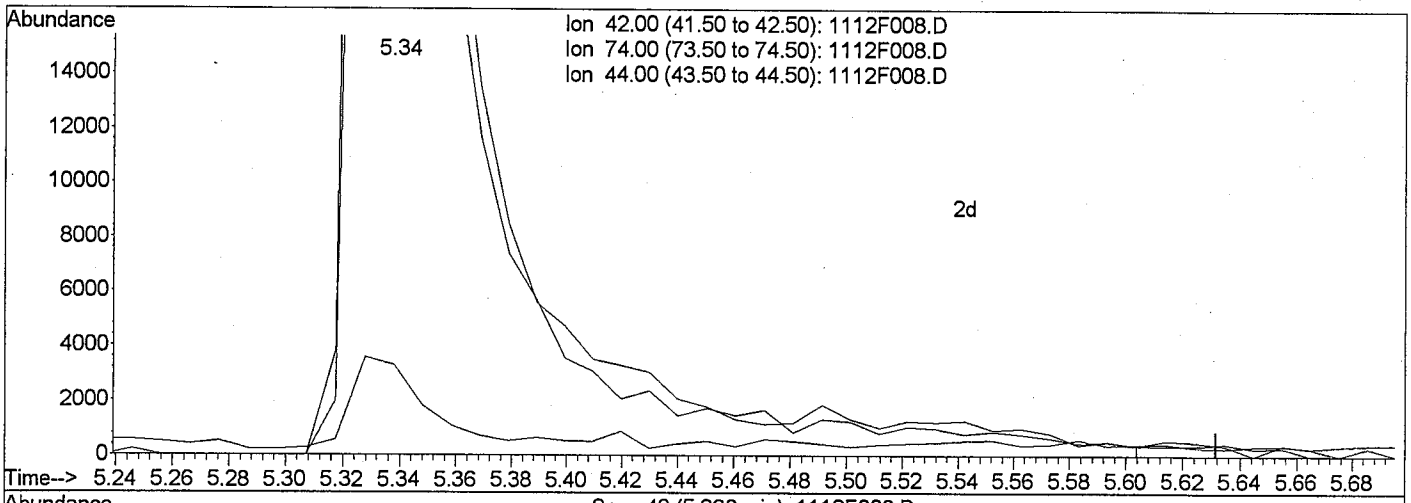
Quantitation Report (Qedit)

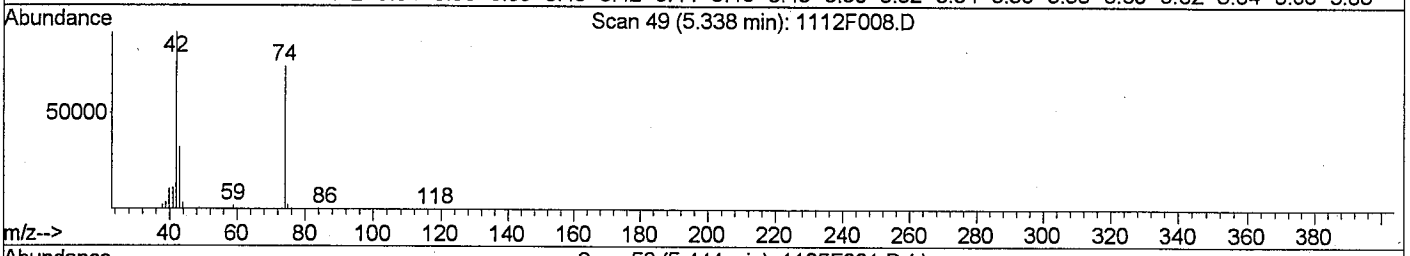
Data File : J:\MS10\DATA\111303\1112F008.D
Acq On : 12 Nov 2003 20:07
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:59 2003

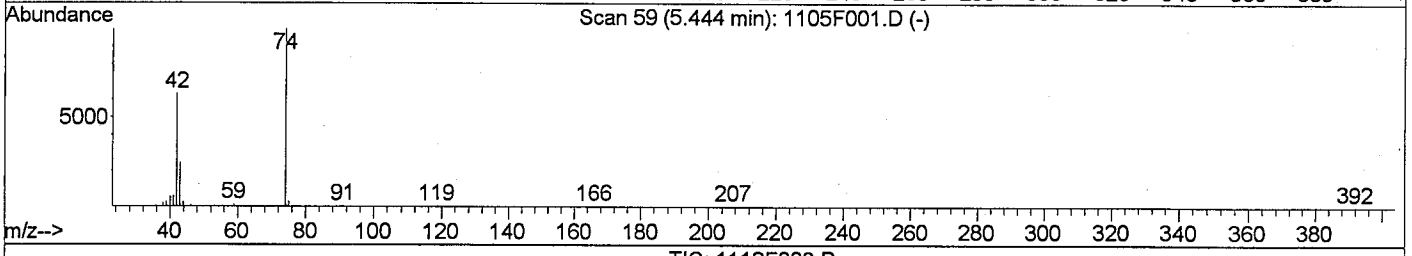
Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F008.D

(2) N-Nitrosodimethylamine (T)

5.34min 4388.07ng/ml m

response 191060

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	81.06#
44.00	5.00	3.58
0.00	0.00	0.00

11/13/3 JG complete
mt 11/13/03

1112F008.D 1112BNLL.M Thu Nov 13 09:01:33 2003

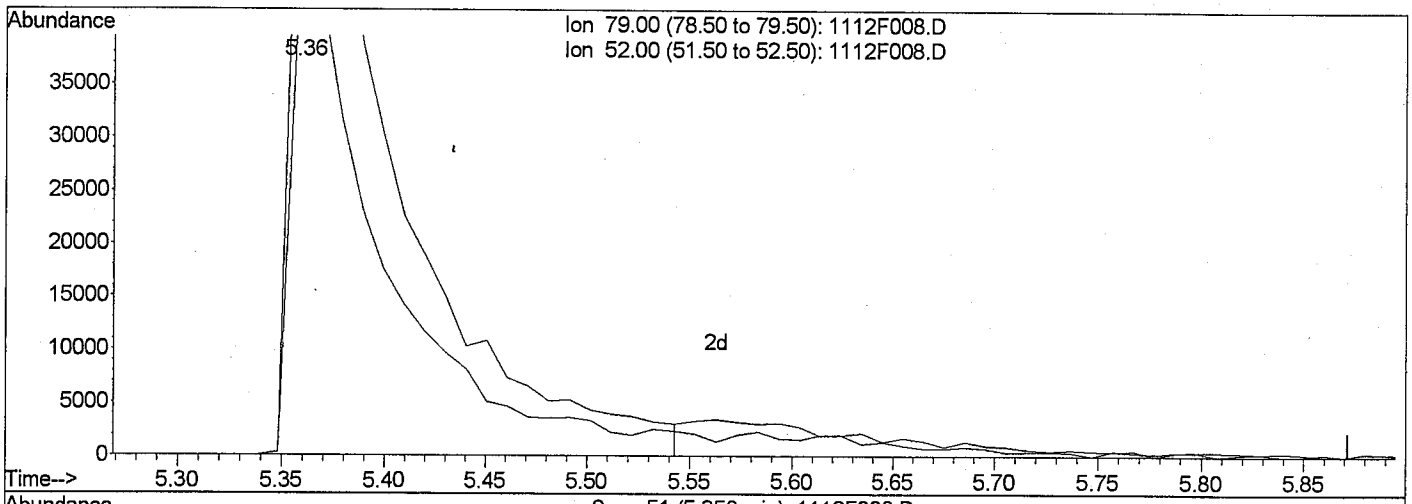
Quantitation Report (Qedit)

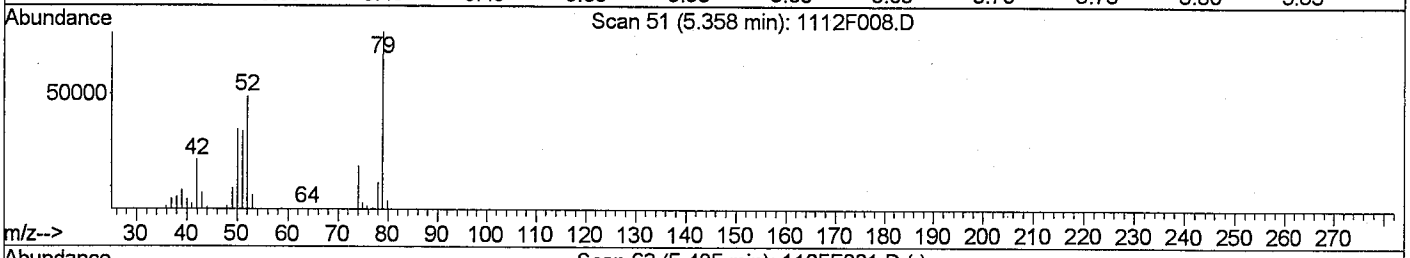
Data File : J:\MS10\DATA\111303\1112F008.D
Acq On : 12 Nov 2003 20:07
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:59 2003

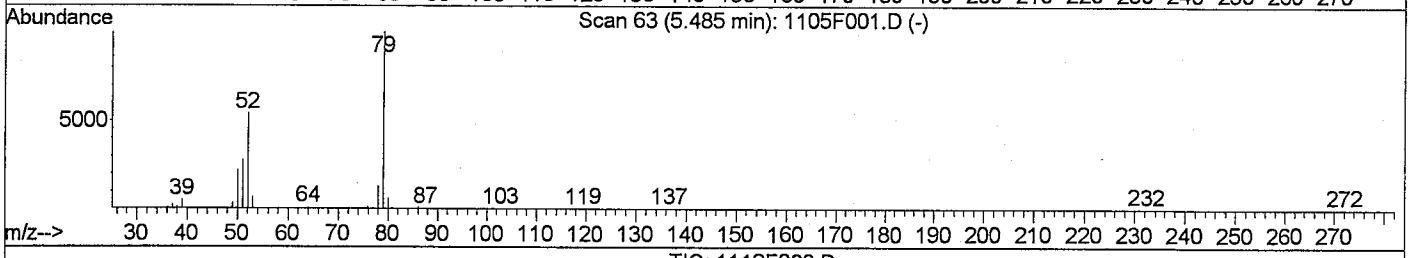
Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F008.D

(3) Pyridine (T)

5.36min 2698.69ng/ml

response 237250

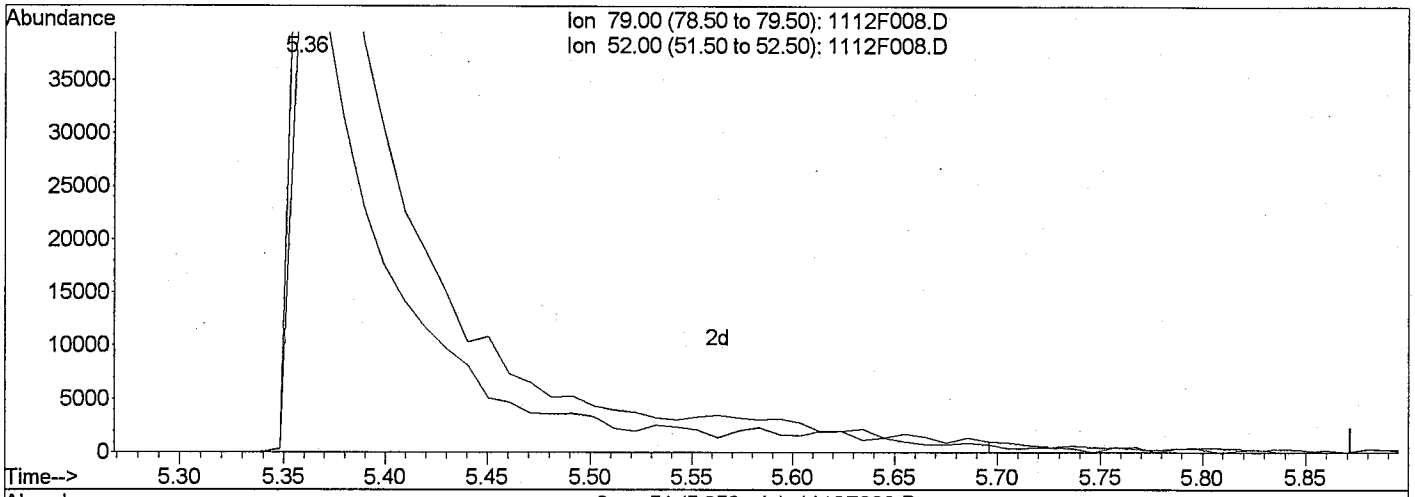
Ion	Exp%	Act%
79.00	100	100
52.00	59.50	64.33
0.00	0.00	0.00
0.00	0.00	0.00

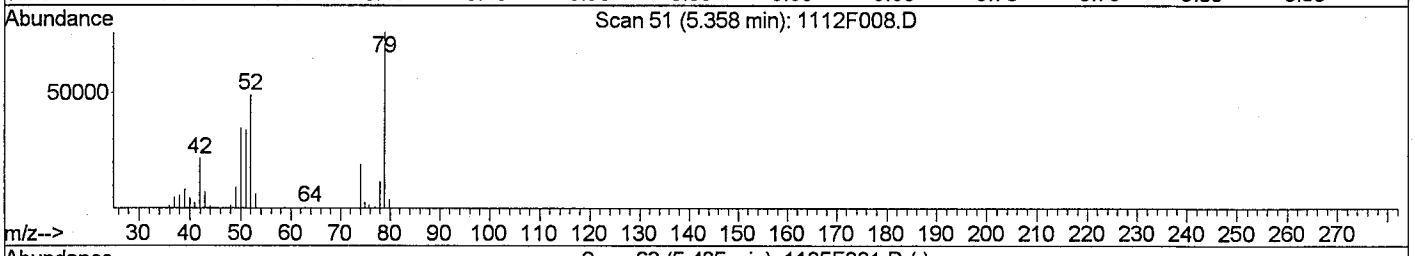
Quantitation Report (Qedit)

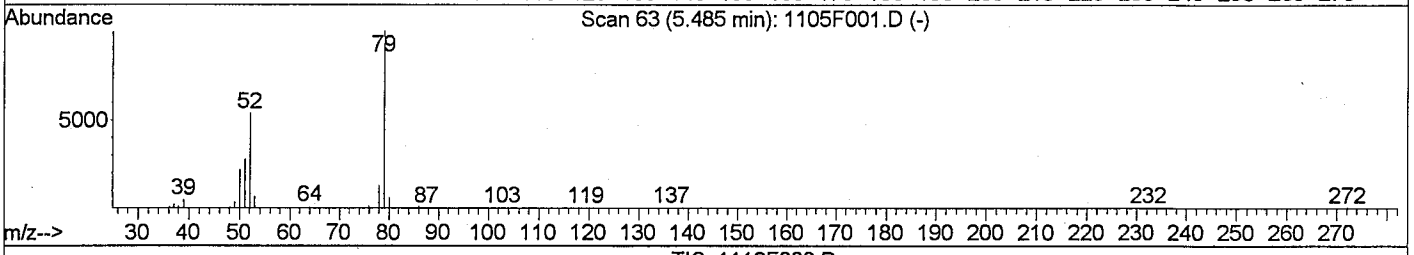
Data File : J:\MS10\DATA\111303\1112F008.D
Acq On : 12 Nov 2003 20:07
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:59 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F008.D

(3) Pyridine (T)

5.36min 2927.56ng/ml m

response 257371

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	64.33
0.00	0.00	0.00
0.00	0.00	0.00

J 11/13/3 incomplete mt 11/13/03

1112F008.D 1112BNLL.M Thu Nov 13 09:01:43 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F009.D Vial: 9
Acq On : 12 Nov 2003 20:48 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM15-70J Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:22 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.63	152	75180	1000.00	ng/ml	0.01
21) Naphthalene-d8	10.89	136	155114	1000.00	ng/ml	0.01
34) Acenaphthene-d10	14.63	164	99489	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	222950	1000.00	ng/ml	0.00
67) Chrysene-d12	24.12	240	216342	1000.00	ng/ml	0.01
76) Perylene-d12	27.51	264	138195	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.91	112	342836	3682.07	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 98.19%			
6) Phenol-d6	8.18	99	382616	3517.22	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 93.79%			
19) Nitrobenzene-d5	9.60	82	417455	4248.54	ng/ml	0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 169.94%#			
38) 2-Fluorobiphenyl	13.20	172	480670	3473.41	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 138.94%#			
58) 2,4,6-Tribromophenol	16.45	330	141206	4137.52	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 110.33%			
70) Terphenyl-d14	21.79	244	654542	3679.73	ng/ml	0.01
Spiked Amount 2500.000	Range 54 - 158		Recovery = 147.19%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.31	42	270721m	5408.31	ng/ml	
3) Pyridine	5.34	79	366152m	3622.79	ng/ml	
5) Bis(2-chloroethyl) Ether	8.29	93	373255	3499.03	ng/ml	91
7) Phenol	8.20	94	788357	6454.96	ng/ml#	53
8) Aniline	8.20	93	473329	3577.02	ng/ml#	16
9) 2-Chlorophenol	8.36	128	649777	7640.54	ng/ml	85
10) 1,3-Dichlorobenzene	8.58	146	388808	3707.91	ng/ml	96
11) 1,4-Dichlorobenzene	8.66	146	404526	3791.35	ng/ml	96
12) 1,2-Dichlorobenzene	8.95	146	355374	3701.47	ng/ml	94
13) Benzyl Alcohol	8.90	108	166324	3216.67	ng/ml#	62
14) Bis(2-chloroisopropyl) Eth	9.15	45	347369	4664.71	ng/ml	77
15) 2-Methylphenol	9.12	107	465349	6892.26	ng/ml	81
16) Hexachloroethane	9.47	117	184767	3994.02	ng/ml	92
17) N-Nitrosodi-n-propylamine	9.40	70	242429	4031.08	ng/ml	83
18) 4-Methylphenol	9.37	107	613248	6419.52	ng/ml	86
20) Nitrobenzene	9.63	77	413381	4173.56	ng/ml	86
22) Isophorone	10.06	82	535695	4980.96	ng/ml	96
23) 2-Nitrophenol	10.21	139	299943	10315.18	ng/ml	67
24) 2,4-Dimethylphenol	10.32	122	379711	8570.62	ng/ml#	76
25) Bis(2-chloroethoxy)methane	10.50	93	314710	4110.30	ng/ml	99

(#) = qualifier out of range (m) = manual integration

11/13/3 mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F009.D
Acq On : 12 Nov 2003 20:48
Sample : 8270-LL @ 4/8 ppm SVM15-70J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:22 2003

Vial: 9
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26)	2,4-Dichlorophenol	10.66	162	452049	9469.72 ng/ml	97
27)	Benzoic Acid	10.66	122	286281	12493.59 ng/ml#	66
28)	1,2,4-Trichlorobenzene	10.82	180	288680	4951.76 ng/ml	96
29)	Naphthalene	10.92	128	636887	4445.09 ng/ml	98
30)	4-Chloroaniline	11.09	127	245927	4140.28 ng/ml	81
31)	Hexachlorobutadiene	11.31	225	177616	5188.81 ng/ml	95
32)	4-Chloro-3-methylphenol	12.13	107	469759	9793.47 ng/ml	77
33)	2-Methylnaphthalene	12.33	142	351800	3561.47 ng/ml	97
35)	Hexachlorocyclopentadiene	12.84	237	128249	3241.69 ng/ml	94
36)	2,4,6-Trichlorophenol	13.02	196	355784	7811.52 ng/ml	98
37)	2,4,5-Trichlorophenol	13.10	196	399724	8332.10 ng/ml	99
39)	2-Chloronaphthalene	13.36	127	170827	3772.29 ng/ml	91
40)	2-Nitroaniline	13.69	65	212964	5506.72 ng/ml#	68
41)	Acenaphthylene	14.28	152	660425	3620.22 ng/ml	98
42)	Dimethyl Phthalate	14.23	163	630619	4491.75 ng/ml	98
43)	2,6-Dinitrotoluene	14.34	165	143721	4738.43 ng/ml#	46
44)	Acenaphthene	14.70	154	401257	3733.31 ng/ml	97
45)	3-Nitroaniline	14.64	138	149858	4738.60 ng/ml	98
46)	2,4-Dinitrophenol	14.87	184	243570	10095.45 ng/ml	73
47)	Dibenzofuran	15.07	168	736736	4283.00 ng/ml	82
48)	4-Nitrophenol	15.13	109	387643	16616.71 ng/ml#	63
49)	2,4-Dinitrotoluene	15.22	165	215622	5394.48 ng/ml	67
50)	Fluorene	15.85	166	571645	4442.06 ng/ml	94
51)	4-Chlorophenyl Phenyl Ethe	15.91	204	344563	4883.13 ng/ml	89
52)	Diethyl Phthalate	15.87	149	753812	5212.25 ng/ml	97
53)	4-Nitroaniline	16.06	138	166689	5190.52 ng/ml#	45
54)	2-Methyl-4,6-dinitrophenol	16.15	198	356696	11950.56 ng/ml	79
55)	N-Nitrosodiphenylamine	16.21	169	441423	4836.78 ng/ml	96
56)	Azobenzene	16.27	77	929673	5964.10 ng/ml	84
59)	4-Bromophenyl Phenyl Ether	17.01	248	240112	4152.93 ng/ml	92
60)	Hexachlorobenzene	17.30	284	260824	3847.96 ng/ml	91
61)	Pentachlorophenol	17.74	266	308554	8233.92 ng/ml	98
62)	Phenanthrene	18.02	178	951568	3831.05 ng/ml	99
63)	Anthracene	18.13	178	987411	3855.33 ng/ml	98
64)	Carbazole	18.56	167	871863	3778.34 ng/ml	95
65)	Di-n-butyl Phthalate	19.65	149	1213031	3818.45 ng/ml	97
66)	Fluoranthene	20.77	202	1058804	3897.13 ng/ml	92
68)	Benzidine	21.19	184	964268	7653.68 ng/ml	95
69)	Pyrene	21.28	202	1008968	3612.84 ng/ml	98
71)	Butyl Benzyl Phthalate	23.10	149	516236	3865.32 ng/ml	89
72)	3,3'-Dichlorobenzidine	24.16	252	747036	8272.49 ng/ml	98

(#) = qualifier out of range (m) = manual integration

11/13/3 mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F009.D Vial: 9
Acq On : 12 Nov 2003 20:48 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM15-70J Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:22 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.09	228	902984	3830.33	ng/ml	97
74)	Chrysene	24.18	228	883921	3892.30	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.58	149	697930	3643.74	ng/ml	98
77)	Di-n-octyl Phthalate	26.06	149	1157240	4335.49	ng/ml	93
78)	Benzo(b)fluoranthene	26.64	252	829826	4207.35	ng/ml	94
79)	Benzo(k)fluoranthene	26.71	252	761632	4034.60	ng/ml	94
80)	Benzo(a)pyrene	27.39	252	725832	3890.39	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.03	276	639106	3708.98	ng/ml	88
82)	Dibenz(a,h)anthracene	30.10	278	613167	3693.14	ng/ml	93
83)	Benzo(g,h,i)perylene	30.60	276	626064	3614.64	ng/ml	86

11/13/3

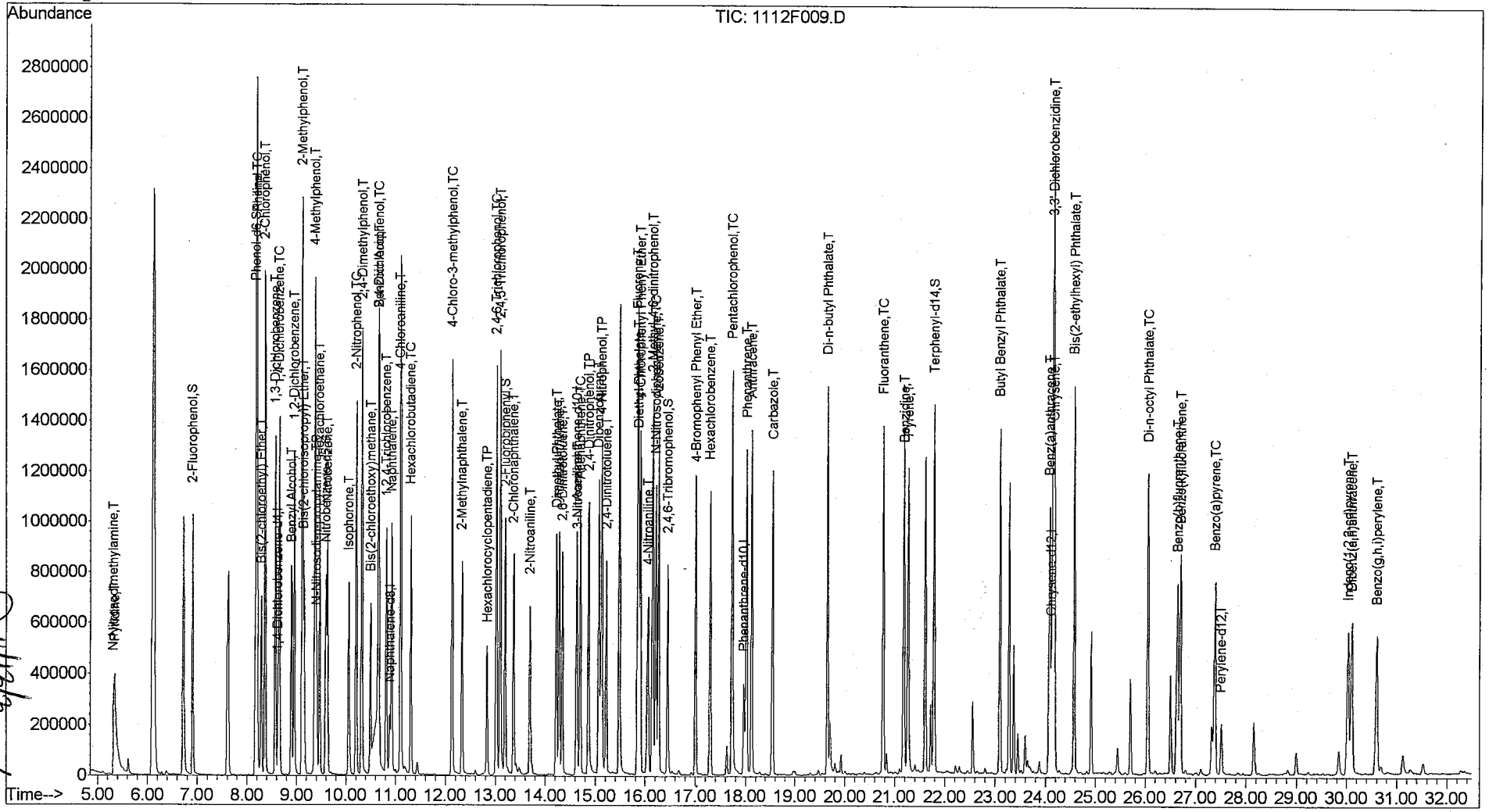
(#) = qualifier out of range (m) = manual integration
1112F009.D 1112BNLL.M Thu Nov 13 10:18:50 2003 Page 3

mf 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F009.D Vial: 9
Acq On : 12 Nov 2003 20:48 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM15-70J Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:00 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



2124

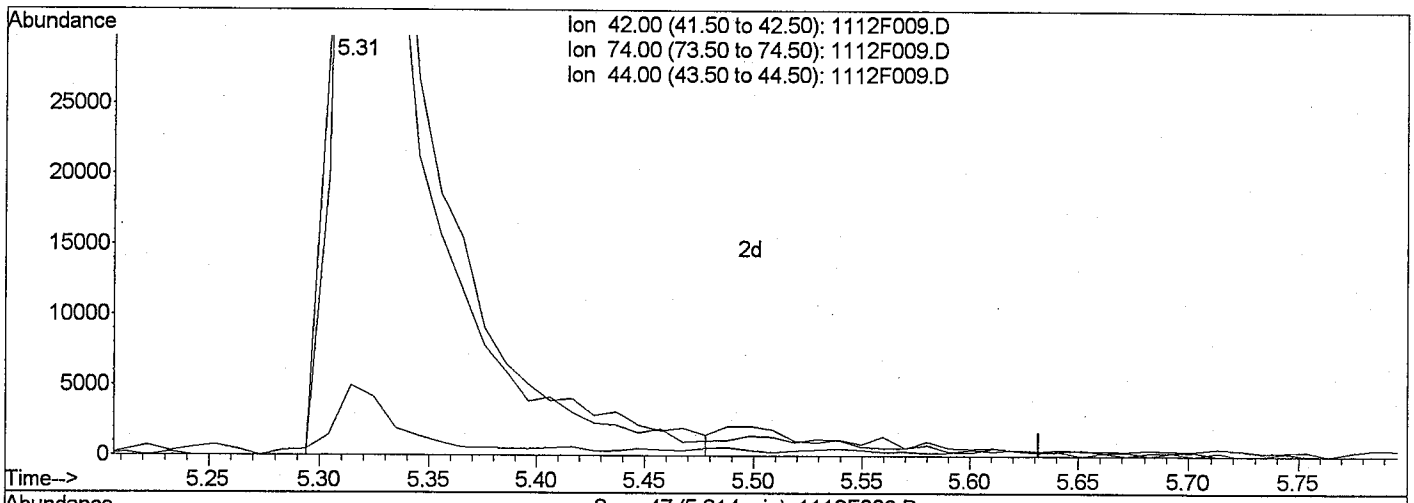
Quantitation Report (Qedit)

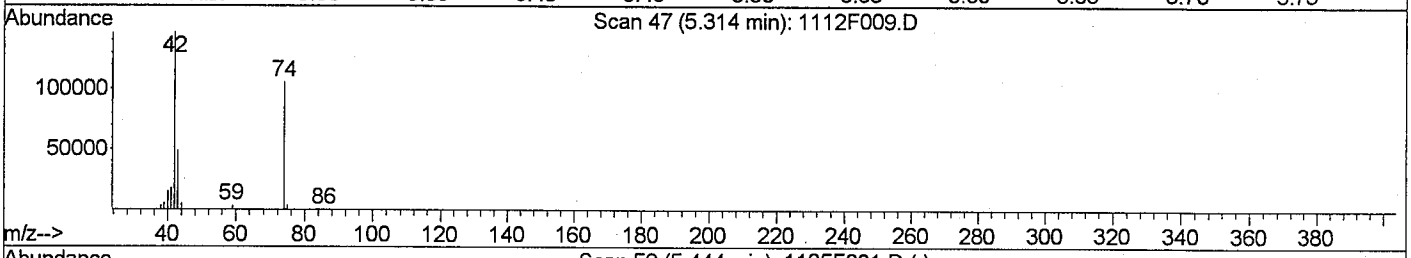
Data File : J:\MS10\DATA\111303\1112F009.D
Acq On : 12 Nov 2003 20:48
Sample : 8270-LL @ 4/8 ppm SVM15-70J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:43 2003

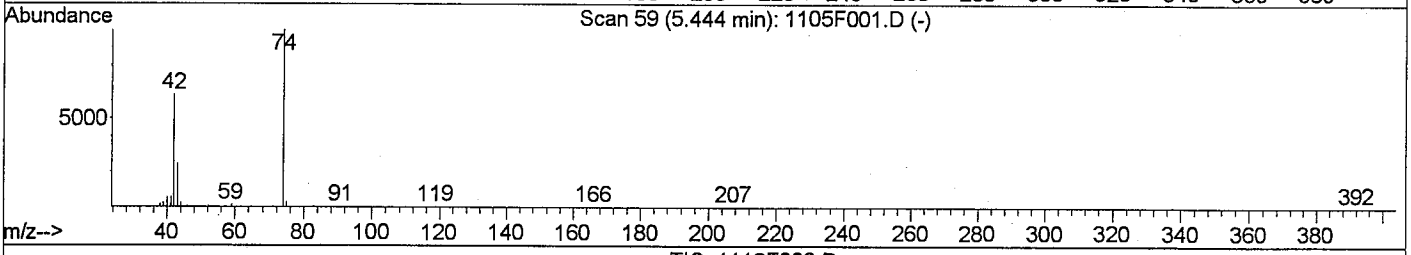
Vial: 9
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F009.D

(2) N-Nitrosodimethylamine (T)

5.31min 5251.02ng/ml

response 262848

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	72.24#
44.00	5.00	3.14
0.00	0.00	0.00

1112F009.D 1112BNLL.M Thu Nov 13 09:03:13 2003

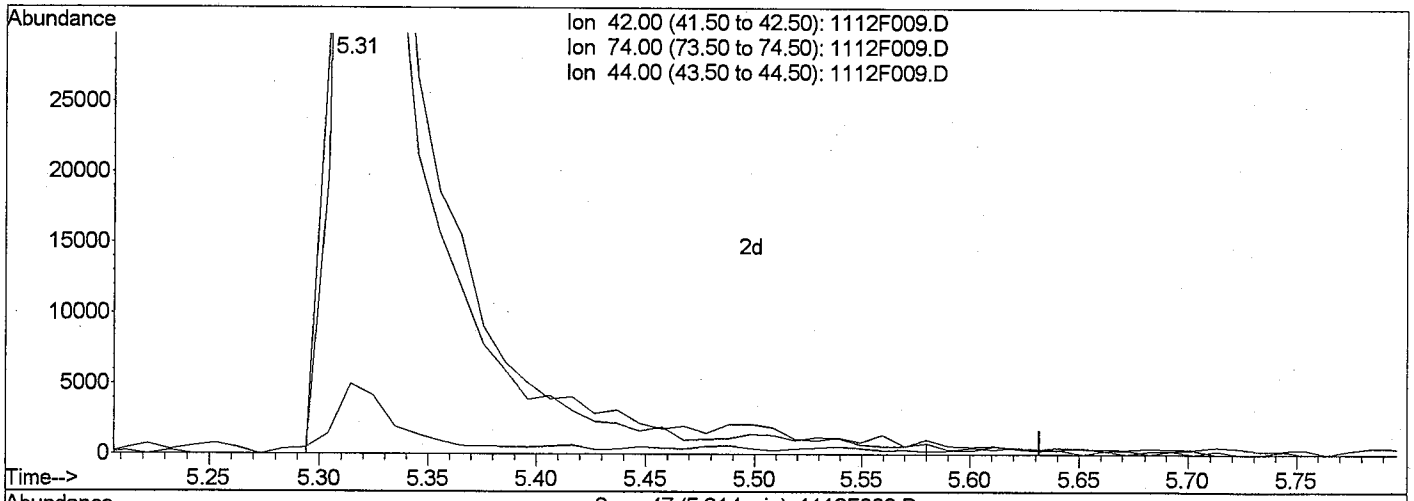
Quantitation Report (Qedit)

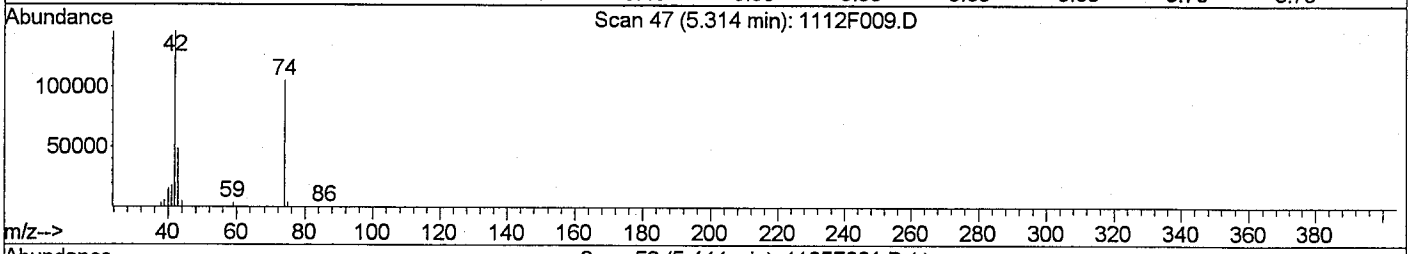
Data File : J:\MS10\DATA\111303\1112F009.D
Acq On : 12 Nov 2003 20:48
Sample : 8270-LL @ 4/8 ppm SVM15-70J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:00 2003

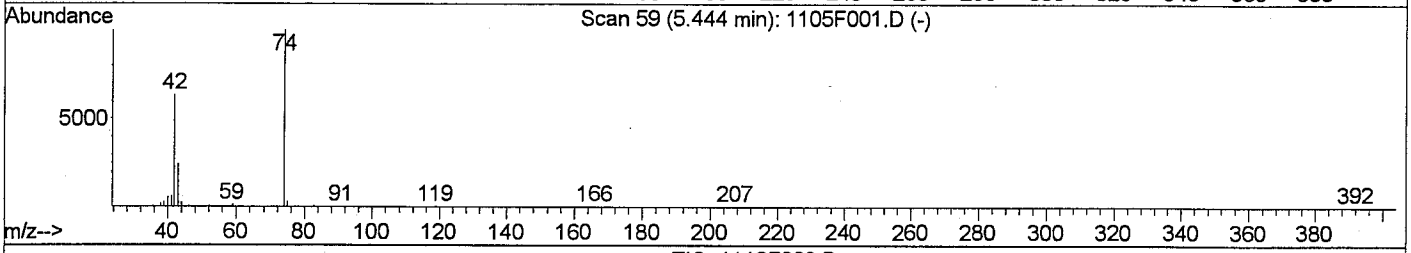
Vial: 9
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F009.D

(2) N-Nitrosodimethylamine (T)

5.31min 5408.31ng/ml m

response 270721

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	72.24#
44.00	5.00	3.39
0.00	0.00	0.00

J 11/13/03 Incomplete

mt 11/13/03

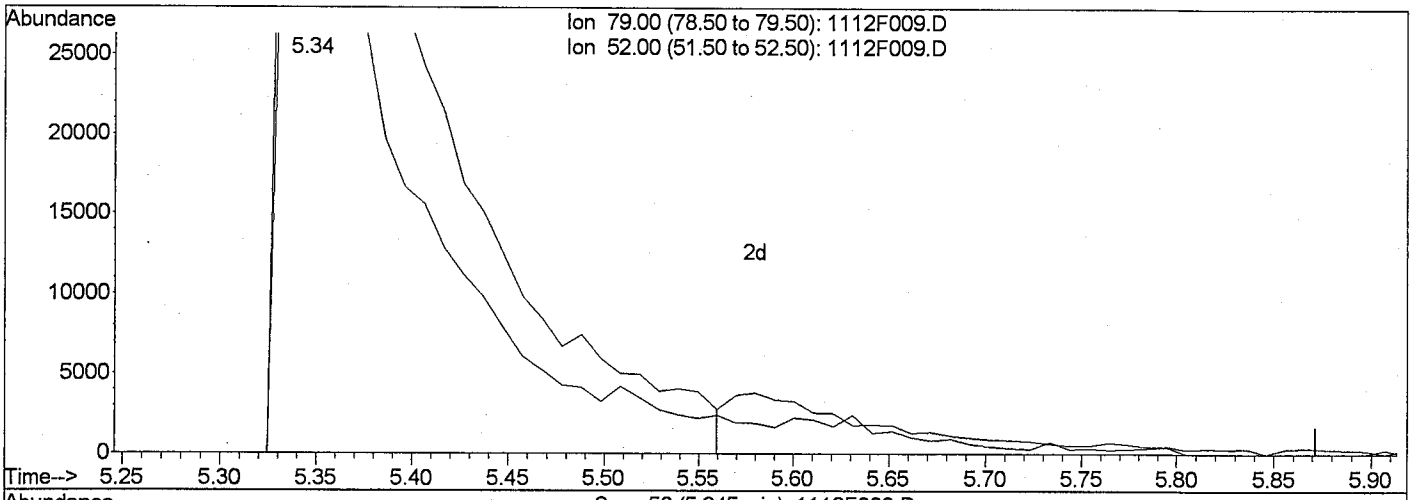
1112F009.D 1112BNLL.M Thu Nov 13 09:03:17 2003

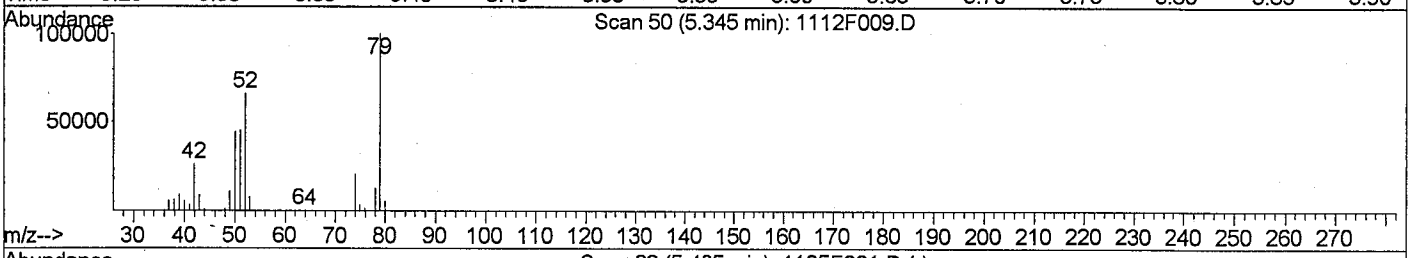
Quantitation Report (Qedit)

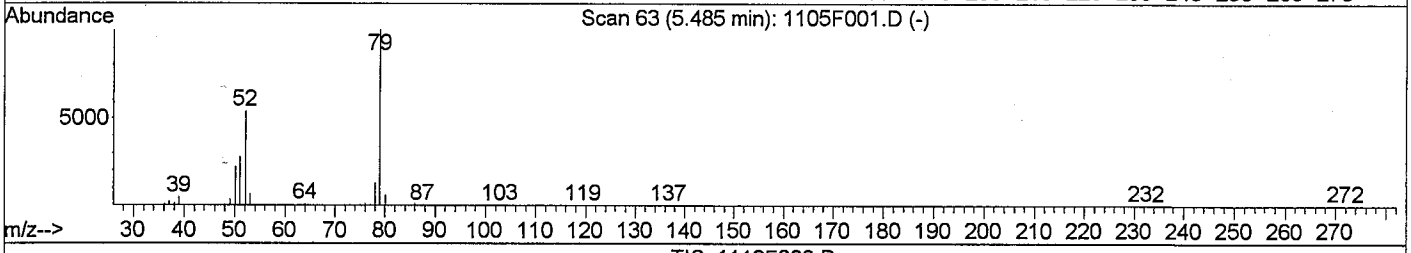
Data File : J:\MS10\DATA\111303\1112F009.D
Acq On : 12 Nov 2003 20:48
Sample : 8270-LL @ 4/8 ppm SVM15-70J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:00 2003

Vial: 9
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F009.D

(3) Pyridine (T)

5.34min 3422.27ng/ml

response 345885

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	66.43
0.00	0.00	0.00
0.00	0.00	0.00

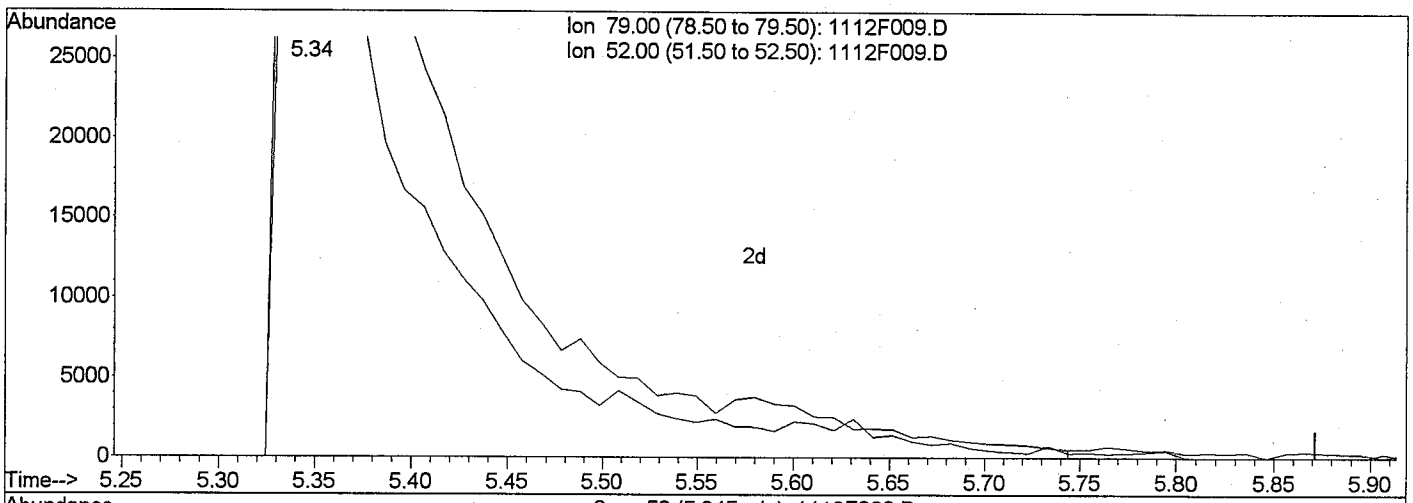
Quantitation Report (Qedit)

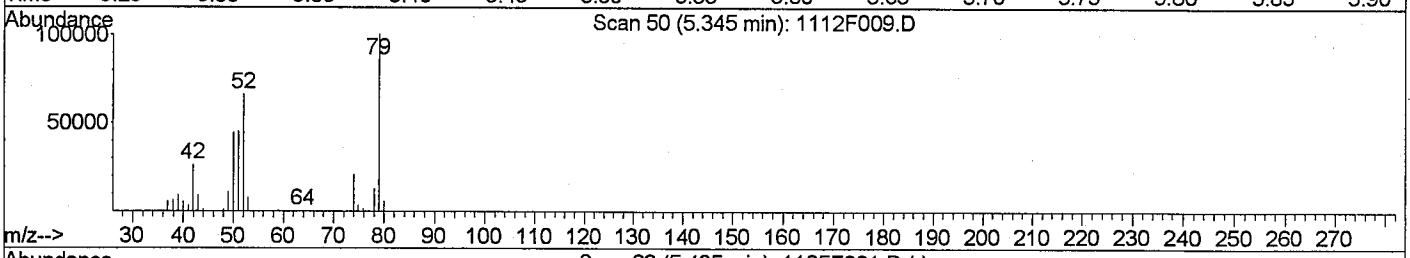
Data File : J:\MS10\DATA\111303\1112F009.D
Acq On : 12 Nov 2003 20:48
Sample : 8270-LL @ 4/8 ppm SVM15-70J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:00 2003

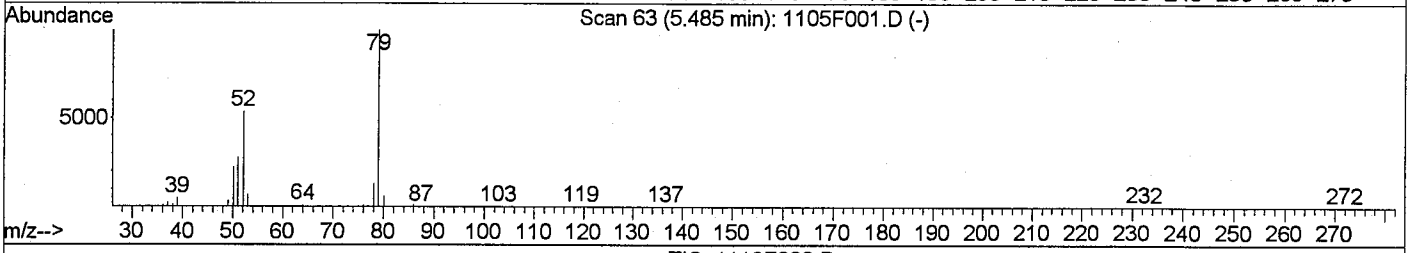
Vial: 9
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F009.D

(3) Pyridine (T)

5.34min 3622.79ng/ml m

response 366152

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	66.43
0.00	0.00	0.00
0.00	0.00	0.00

JJ 11/13/3 incomplete

mt 11/13/03

1112F009.D 1112BNLL.M Thu Nov 13 09:03:27 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F010.D
Acq On : 12 Nov 2003 21:29
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:28 2003

Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	49287	1000.00 ng/ml	0.00
21) Naphthalene-d8	10.89	136	185910	1000.00 ng/ml	0.01
34) Acenaphthene-d10	14.63	164	132785	1000.00 ng/ml	0.00
57) Phenanthrene-d10	17.97	188	203700	1000.00 ng/ml	0.01
67) Chrysene-d12	24.12	240	204115	1000.00 ng/ml	0.01
76) Perylene-d12	27.51	264	133685	1000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	6.89	112	314251	5148.16 ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery = 137.28%#		
6) Phenol-d6	8.16	99	363039	5090.49 ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 135.75%#		
19) Nitrobenzene-d5	9.59	82	465747	7230.19 ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 289.21%#		
38) 2-Fluorobiphenyl	13.20	172	919554	4978.66 ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 199.15%#		
58) 2,4,6-Tribromophenol	16.46	330	186651	5985.96 ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 159.63%#		
70) Terphenyl-d14	21.79	244	706248	4208.25 ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 168.33%#		
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	5.26	42	293179	8933.92 ng/ml#	44
3) Pyridine	5.29	79	377505m	5697.38 ng/ml	
5) Bis(2-chloroethyl) Ether	8.28	93	320117	4577.42 ng/ml	88
7) Phenol	8.19	94	739843	9240.18 ng/ml#	51
8) Aniline	8.19	93	407124	4693.05 ng/ml#	14
9) 2-Chlorophenol	8.35	128	575176	10316.46 ng/ml	87
10) 1,3-Dichlorobenzene	8.57	146	345404	5024.49 ng/ml	95
11) 1,4-Dichlorobenzene	8.65	146	362593	5183.66 ng/ml	96
12) 1,2-Dichlorobenzene	8.94	146	321188	5102.91 ng/ml	93
14) Bis(2-chloroisopropyl) Eth	9.15	45	337803	6919.38 ng/ml	75
15) 2-Methylphenol	9.11	107	493050	11138.93 ng/ml#	79
16) Hexachloroethane	9.47	117	177137	5840.70 ng/ml	87
17) N-Nitrosodi-n-propylamine	9.42	70	295067	7483.90 ng/ml	77
18) 4-Methylphenol	9.37	107	791152	12632.71 ng/ml	83
20) Nitrobenzene	9.63	77	463453	7137.26 ng/ml	88
22) Isophorone	10.09	82	915555	7102.77 ng/ml	94
23) 2-Nitrophenol	10.21	139	403177	11568.63 ng/ml	62
24) 2,4-Dimethylphenol	10.33	122	594496	11195.83 ng/ml#	73
25) Bis(2-chloroethoxy)methane	10.50	93	480882	5240.22 ng/ml	100
26) 2,4-Dichlorophenol	10.66	162	748025	13074.22 ng/ml	97

(#) = qualifier out of range (m) = manual integration

11/13/3

mnt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F010.D
Acq On : 12 Nov 2003 21:29
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:28 2003

Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27)	Benzoic Acid	10.71	122	422454	15027.06 ng/ml#	72
28)	1,2,4-Trichlorobenzene	10.82	180	423076	6054.93 ng/ml	97
29)	Naphthalene	10.93	128	943351	5493.39 ng/ml	97
30)	4-Chloroaniline	11.10	127	440849	6192.44 ng/ml	81
31)	Hexachlorobutadiene	11.31	225	306280	7465.39 ng/ml	96
32)	4-Chloro-3-methylphenol	12.15	107	884782	15390.27 ng/ml	76
33)	2-Methylnaphthalene	12.34	142	665716	5623.04 ng/ml	100
36)	2,4,6-Trichlorophenol	13.04	196	666345	10961.61 ng/ml	96
37)	2,4,5-Trichlorophenol	13.11	196	709518	11081.13 ng/ml	100
39)	2-Chloronaphthalene	13.37	127	323083	5345.51 ng/ml	88
40)	2-Nitroaniline	13.70	65	343559	6656.01 ng/ml#	71
41)	Acenaphthylene	14.29	152	1128664	4635.56 ng/ml	98
42)	Dimethyl Phthalate	14.24	163	1024827	5469.21 ng/ml	98
43)	2,6-Dinitrotoluene	14.35	165	241206	5958.38 ng/ml#	52
44)	Acenaphthene	14.71	154	658118	4587.76 ng/ml	98
45)	3-Nitroaniline	14.65	138	211331	5006.79 ng/ml	95
46)	2,4-Dinitrophenol	14.89	184	323002	10043.02 ng/ml	73
47)	Dibenzofuran	15.08	168	1123725	4894.66 ng/ml	82
49)	2,4-Dinitrotoluene	15.23	165	306543	5746.11 ng/ml	62
50)	Fluorene	15.86	166	811611	4725.33 ng/ml	96
51)	4-Chlorophenyl Phenyl Ethe	15.91	204	477364	5068.81 ng/ml	90
52)	Diethyl Phthalate	15.87	149	1001935	5190.72 ng/ml	95
53)	4-Nitroaniline	16.07	138	191967	4478.75 ng/ml#	32
55)	N-Nitrosodiphenylamine	16.23	169	599328	4920.31 ng/ml	98
56)	Azobenzene	16.27	77	1288919	6195.35 ng/ml	82
59)	4-Bromophenyl Phenyl Ether	17.01	248	318229	6024.17 ng/ml	90
60)	Hexachlorobenzene	17.30	284	336267	5429.80 ng/ml	95
61)	Pentachlorophenol	17.74	266	365564	10166.70 ng/ml	99
62)	Phenanthrene	18.03	178	1129536	4977.31 ng/ml	98
63)	Anthracene	18.13	178	1108209	4735.90 ng/ml	98
64)	Carbazole	18.56	167	897176	4255.47 ng/ml	94
65)	Di-n-butyl Phthalate	19.65	149	1225265	4221.45 ng/ml	96
66)	Fluoranthene	20.78	202	1121625	4518.49 ng/ml	93
68)	Benzidine	21.18	184	962375	8096.23 ng/ml	95
69)	Pyrene	21.28	202	1101456	4180.26 ng/ml	98
71)	Butyl Benzyl Phthalate	23.10	149	572837	4546.05 ng/ml	88
72)	3,3'-Dichlorobenzidine	24.17	252	907181	10647.67 ng/ml	98
73)	Benz(a)anthracene	24.09	228	1110323	4991.97 ng/ml	99
74)	Chrysene	24.19	228	1076935	5026.29 ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	24.58	149	870163	4815.07 ng/ml	99
77)	Di-n-octyl Phthalate	26.06	149	1303009	5046.29 ng/ml	93

(#) = qualifier out of range (m) = manual integration

11/13/3

mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F010.D
Acq On : 12 Nov 2003 21:29
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 08:46:28 2003

Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
78)	Benzo(b)fluoranthene	26.65	252	1000446	5243.54	ng/ml	95
79)	Benzo(k)fluoranthene	26.71	252	852356	4667.52	ng/ml	94
80)	Benzo(a)pyrene	27.39	252	924582	5122.86	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.04	276	862950	5176.99	ng/ml	88
82)	Dibenz(a,h)anthracene	30.11	278	811215	5050.82	ng/ml	92
83)	Benzo(g,h,i)perylene	30.61	276	838984	5007.36	ng/ml	87

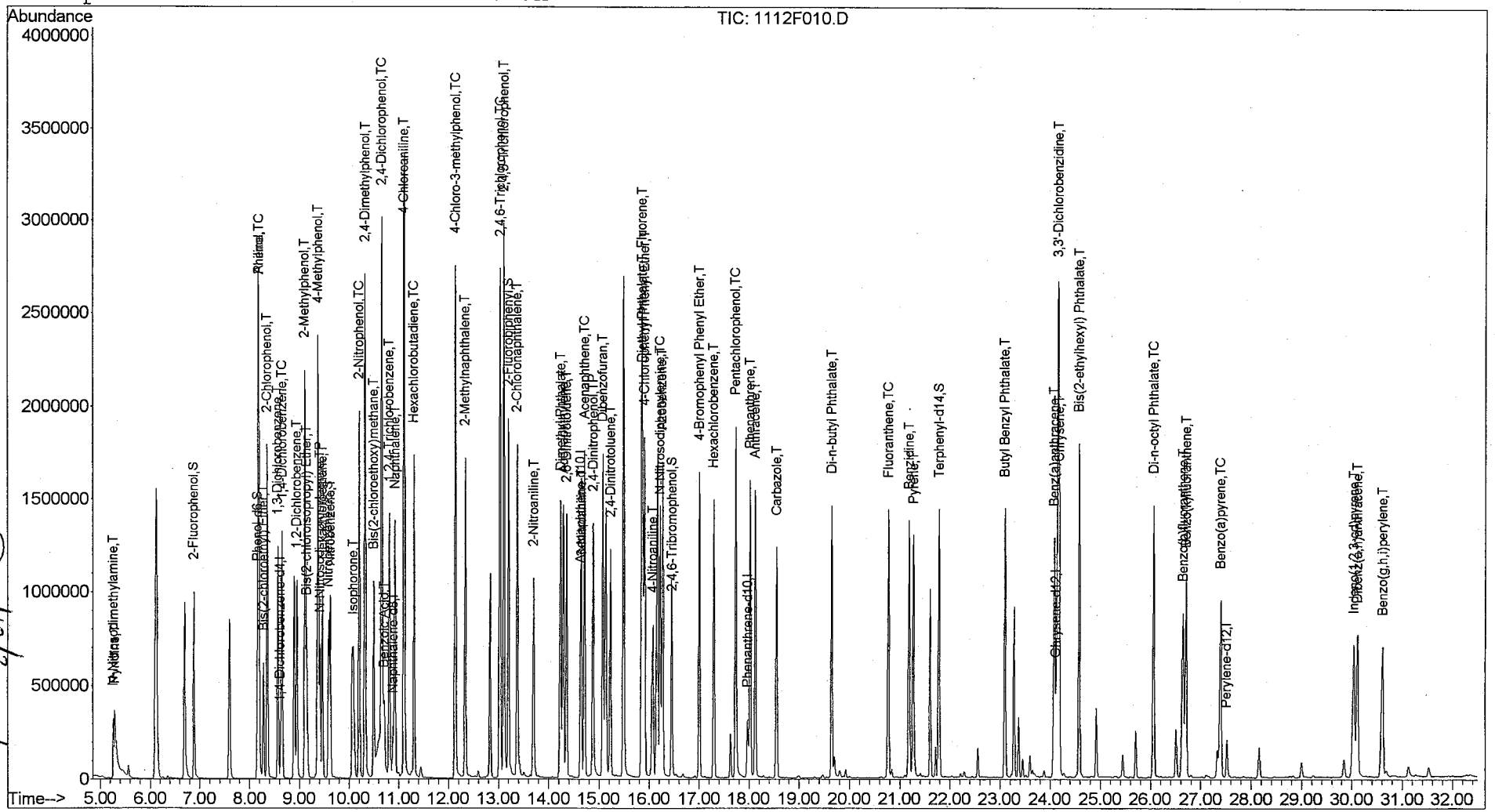
(#) = qualifier out of range (m) = manual integration

11/13/3
mt
11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F010.D Vial: 10
Acq On : 12 Nov 2003 21:29 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM15-70K Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:56 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



2132

11/13/03 mt 11/13/03

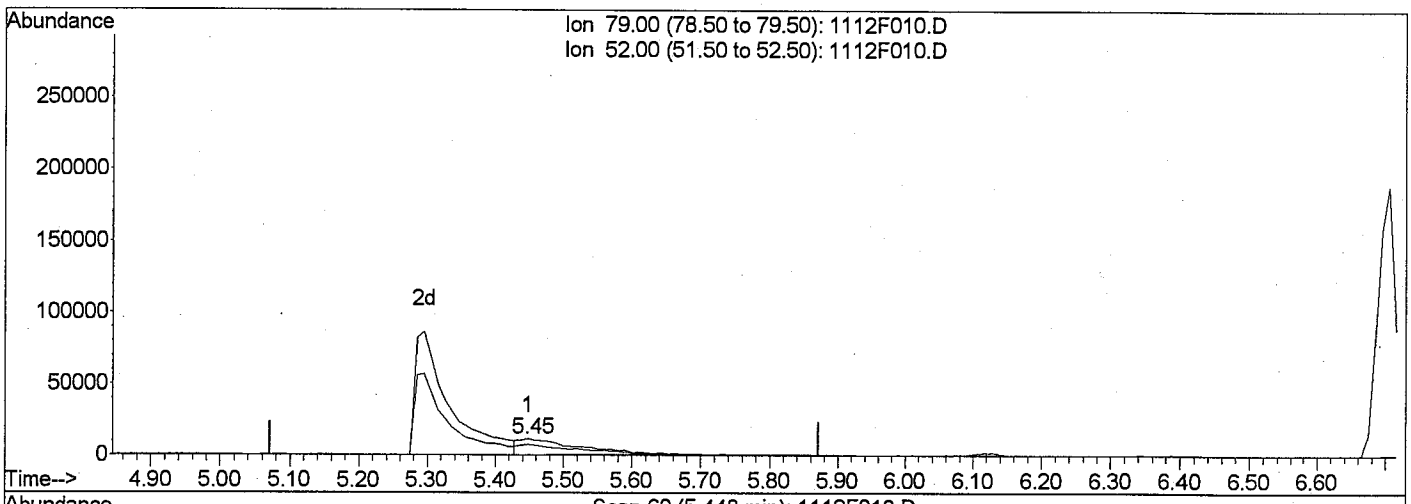
Quantitation Report (Qedit)

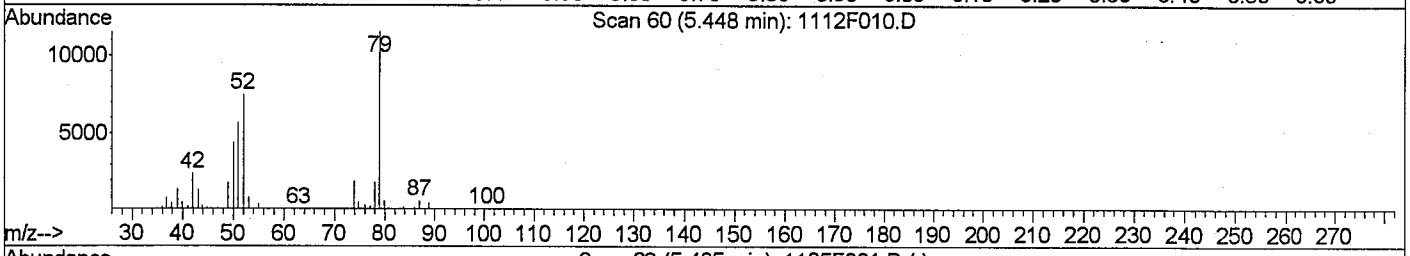
Data File : J:\MS10\DATA\111303\1112F010.D
Acq On : 12 Nov 2003 21:29
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 8:44 2003

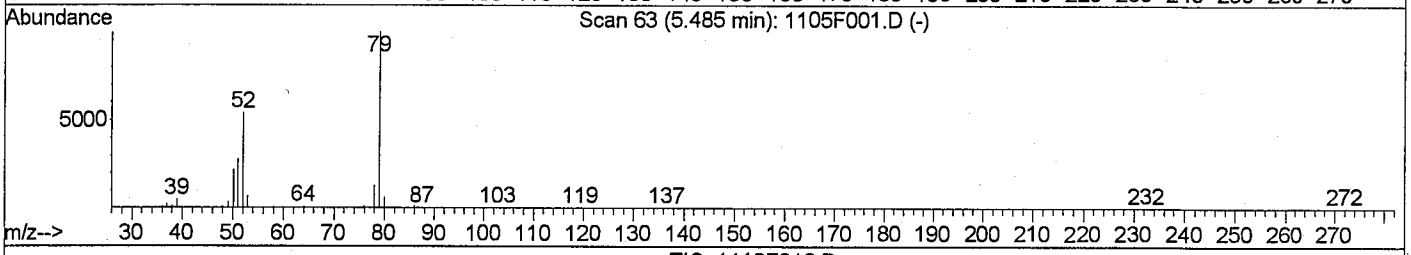
Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration







TIC: 1112F010.D

(3) Pyridine (T)

5.45min 1064.01ng/ml

response 70501

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	64.24
0.00	0.00	0.00
0.00	0.00	0.00

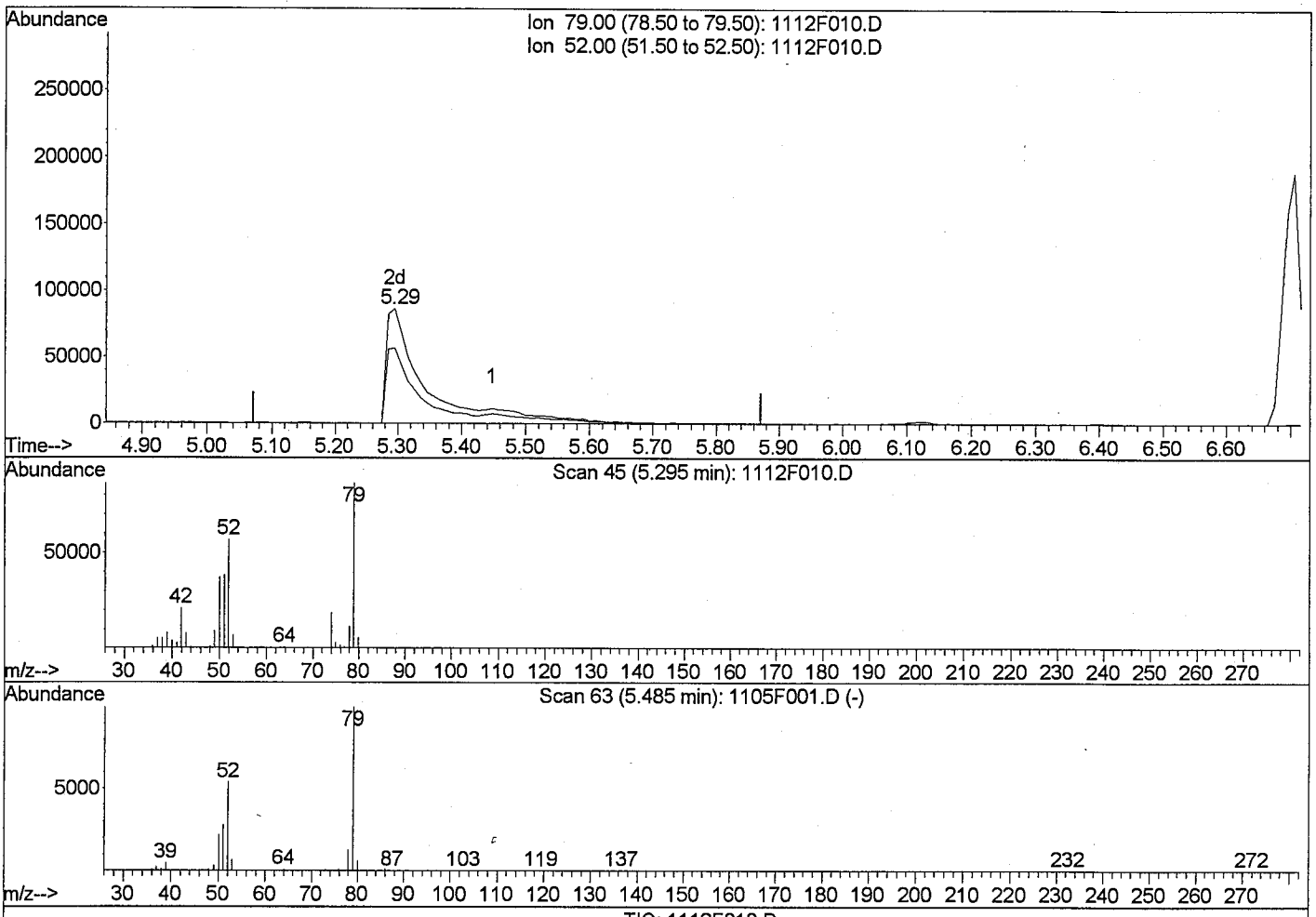
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111303\1112F010.D
Acq On : 12 Nov 2003 21:29
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:03 2003

Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 12 14:12:42 2003
Response via : Multiple Level Calibration



TIC: 1112F010.D

(3) Pyridine (T)

5.29min 5697.38ng/ml m

response 377505

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	65.67
0.00	0.00	0.00
0.00	0.00	0.00

JJ 11/13/3 complete
mt 11/13/03

1112F010.D 1112BNLL.M Thu Nov 13 09:05:51 2003

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3102
Instrument ID: MS10

Column: MS

Level ID	File ID
A	J:\MS10\DATA\111403\1114F003.D
B	J:\MS10\DATA\111403\1114F004.D
C	J:\MS10\DATA\111403\1114F005.D
D	J:\MS10\DATA\111403\1114F006.D
E	J:\MS10\DATA\111403\1114F007.D
F	J:\MS10\DATA\111403\1114F008.D
G	J:\MS10\DATA\111403\1114F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	100	1.31	B	500	0.986	C	1000	1.64	D	2000	1.46	E	4000	1.44
	F	6000	1.31	G	10000	1.33									
2-Methylphenol	A	100	1.01	B	500	0.557	C	1000	1.04	D	2000	0.891	E	4000	0.965
	F	6000	0.813	G	10000	0.820									
4-Methylphenol	A	100	1.32	B	500	0.911	C	1000	1.51	D	2000	1.28	E	4000	1.61
	F	6000	1.17	G	10000	1.25									
2,4-Dimethylphenol	A	100	0.324	B	500	0.304	C	1000	0.319	D	2000	0.312	E	4000	0.344
	F	6000	0.308	G	10000	0.308									
‡ 2,4-Dichlorophenol	A	100	0.385	B	500	0.399	C	1000	0.385	D	2000	0.396	E	4000	0.454
	F	6000	0.395	G	10000	0.407									
‡ 2,4,6-Trichlorophenol	A	100	0.474	B	500	0.550	C	1000	0.501	D	2000	0.526	E	4000	0.513
	F	6000	0.509	G	10000	0.528									
‡ Pentachlorophenol				B	500	0.150	C	1000	0.195	D	2000	0.216	E	4000	0.221
	F	6000	0.225	G	10000	0.235									
Butyl Benzyl Phthalate	A	100	0.463	B	200	0.538	C	500	0.585	D	1000	0.617	E	2000	0.514
	F	3000	0.571	G	5000	0.581									
Bis(2-ethylhexyl) Phthalate				B	200	0.788	C	500	0.813	D	1000	0.815	E	2000	0.815
	F	3000	0.783	G	5000	0.791									
Phenol-d6	A	100	1.33	B	200	0.995	C	500	1.48	D	1000	1.42	E	2000	1.30
	F	3000	1.21	G	5000	1.27									
2,4,6-Tribromophenol				B	200	0.146	C	500	0.154	D	1000	0.177	E	2000	0.163
	F	3000	0.181	G	5000	0.193									
Terphenyl-d14	A	100	0.789	B	200	0.724	C	500	0.813	D	1000	0.847	E	2000	0.769
	F	3000	0.767	G	5000	0.779									
† 4-Nitrophenol							C	1000	0.404	D	2000	0.459	E	4000	0.478
	F	6000	0.437	G	10000	0.460									
‡ 1,4-Dichlorobenzene	A	100	1.48	B	200	1.38	C	500	1.47	D	1000	1.62	E	2000	1.42
	F	3000	1.37	G	5000	1.41									

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3102
Instrument ID: MS10

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Di-n-octyl Phthalate	A	100	1.33	B	200	1.60	C	500	1.82	D	1000	1.86	E	2000	1.77
	F	3000	1.83	G	5000	1.88									
‡ Fluoranthene	A	100	1.21	B	200	0.988	C	500	1.27	D	1000	1.23	E	2000	1.16
	F	3000	1.19	G	5000	1.29									
‡ Benzo(a)pyrene	A	100	1.21	B	200	1.25	C	500	1.30	D	1000	1.32	E	2000	1.27
	F	3000	1.33	G	5000	1.35									
† 2,4-Dinitrophenol							C	1000	0.112	D	2000	0.177	E	4000	0.228
	F	6000	0.253	G	10000	0.294									
‡ 4-Chloro-3-methylphenol	A	100	0.408	B	500	0.546	C	1000	0.367	D	2000	0.386	E	4000	0.434
	F	6000	0.413	G	10000	0.434									
† N-Nitrosodi-n-propylamine	A	100	0.917	B	200	0.614	C	500	1.08	D	1000	0.954	E	2000	1.07
	F	3000	0.892	G	5000	0.932									
† Hexachlorocyclopentadiene							C	500	0.458	D	1000	0.520	E	2000	0.536
	F	3000	0.489	G	5000	0.528									
‡ Acenaphthene	A	100	1.01	B	200	0.893	C	500	0.968	D	1000	1.00	E	2000	0.916
	F	3000	0.962	G	5000	0.971									
‡ N-Nitrosodiphenylamine	A	100	0.831	B	200	0.987	C	500	0.845	D	1000	0.977	E	2000	0.913
	F	3000	0.937	G	5000	0.919									
‡ Hexachlorobutadiene	A	100	0.313	B	200	0.309	C	500	0.328	D	1000	0.348	E	2000	0.371
	F	3000	0.343	G	5000	0.349									
‡ 2-Nitrophenol	A	100	0.198	B	500	0.230	C	1000	0.213	D	2000	0.227	E	4000	0.221
	F	6000	0.237	G	10000	0.237									

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound**

‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3102
Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	14.8		≤ 15	1.35		0.01
2-Methylphenol	MS	AverageRF	% RSD	18.8	*	≤ 15	0.870		0.01
4-Methylphenol	MS	AverageRF	% RSD	17.6	*	≤ 15	1.29		0.01
2,4-Dimethylphenol	MS	AverageRF	% RSD	4.3		≤ 15	0.317		0.01
‡ 2,4-Dichlorophenol	MS	AverageRF	% RSD	5.9		≤ 15	0.403		0.01
‡ 2,4,6-Trichlorophenol	MS	AverageRF	% RSD	4.7		≤ 15	0.514		0.01
‡ Pentachlorophenol	MS	AverageRF	% RSD	14.9		≤ 15	0.207		0.01
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	9.4		≤ 15	0.553		0.01
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	1.9		≤ 15	0.801		0.01
Phenol-d6	SURR	AverageRF	% RSD	12.2		≤ 15	1.29		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	10.5		≤ 15	0.169		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.9		≤ 15	0.784		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	6.3		≤ 15	0.447		0.05
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	6.0		≤ 15	1.45		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	11.5		≤ 15	1.73		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	8.5		≤ 15	1.19		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	3.8		≤ 15	1.29		0.01
† 2,4-Dinitrophenol	TRG	Linear	R2	0.995		≥ 0.990	0.213		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	13.6		≤ 15	0.427		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	16.8	*	≤ 15	0.923		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	6.4		≤ 15	0.506		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	4.3		≤ 15	0.959		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	6.5		≤ 15	0.916		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	6.5		≤ 15	0.337		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	6.2		≤ 15	0.223		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/14/2003
Date Analyzed: 11/17/2003

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL3102
Units: ng/ml

File ID: J:\MS10\DATA\111703\1117F001.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3200	1.35	1.43	6	NA	± 20 %	AverageRF
2-Methylphenol	3000	3200	0.870	0.918	6	NA	± 30 %	AverageRF
4-Methylphenol	3000	3100	1.29	1.32	2	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3000	0.317	0.319	1	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3000	0.403	0.403	0	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3000	0.514	0.519	1	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	3000	0.207	0.205	-1	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3300	0.553	0.611	11	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3100	0.801	0.832	4	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2900	1.45	1.42	-2	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	3400	0.213	0.263	NA	13	± 30 %	Linear
‡ 2-Nitrophenol	3000	3200	0.223	0.240	8	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	2900	0.427	0.409	-4	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	2800	0.447	0.422	-6	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.959	1.00	4	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	1.29	1.36	5	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3300	1.73	1.89	10	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	1.19	1.21	2	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.337	0.327	-3	NA	± 20 %	AverageRF
† Hexachlorocyclopentadiene	3000	2800	0.506	0.469	-7	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3200	0.923	0.994	8	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3200	0.916	0.966	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Injection Log

Directory: J:\MS10\DATA\111403

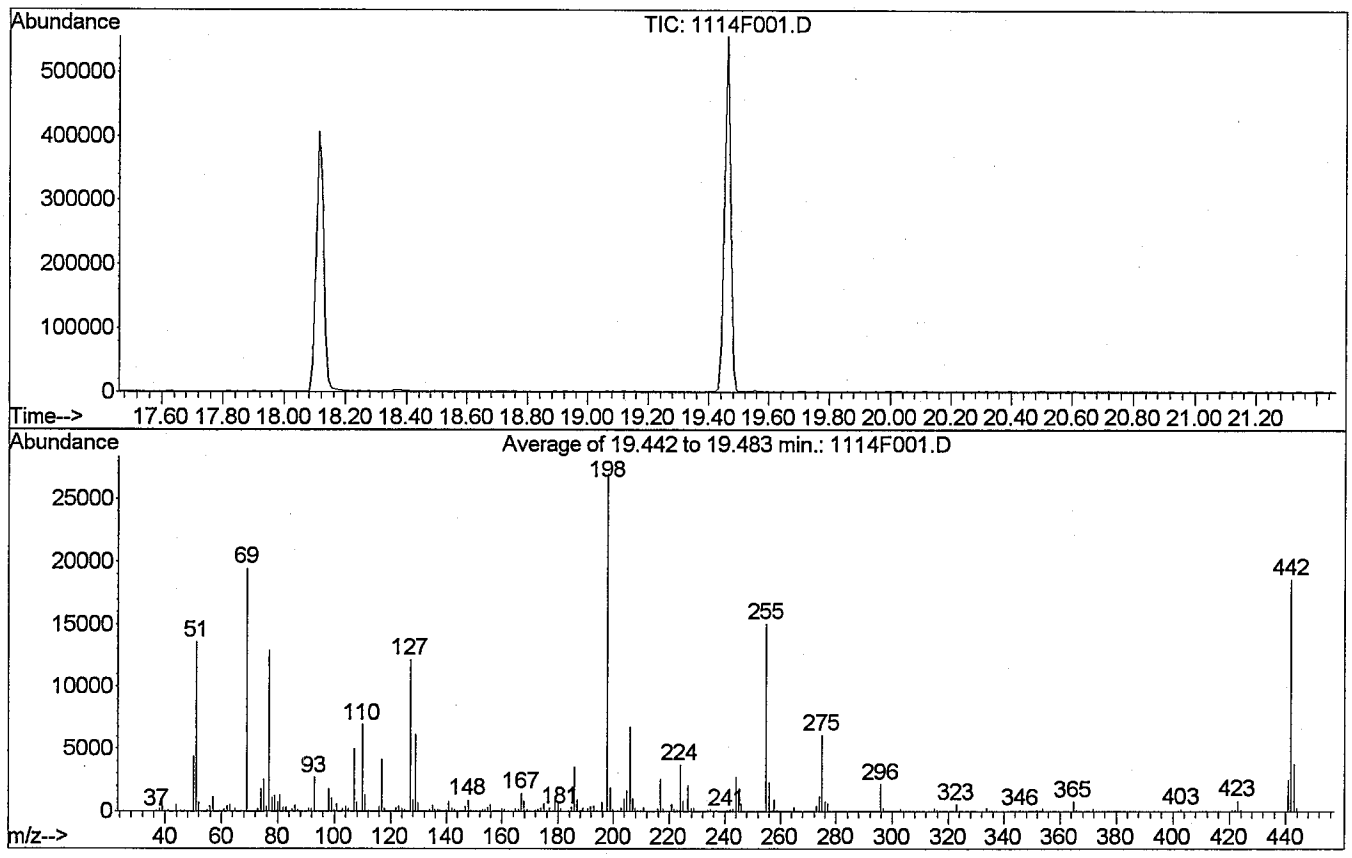
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1114F001.D	1.	TUNE @ 2.5 ppm SVM15-100E		14 Nov 2003 14:4
2	2	1114F002.D	1.	IB		14 Nov 2003 15:2
3	3	1114F003.D	1.	8270-LL @ 0.1 ppm SVM15-70D		14 Nov 2003 16:0
4	4	1114F004.D	1.	8270-LL @ .2/.5 ppm SVM15-70E	CAL 3107	14 Nov 2003 16:4
5	5	1114F005.D	1.	8270-LL @ .5/1 ppm SVM15-70F		14 Nov 2003 17:2
6	6	1114F006.D	1.	8270-LL @ 1/2 ppm SVM15-70G		14 Nov 2003 18:0
7	7	1114F007.D	1.	8270-LL @ 2/4 ppm SVM15-70H		14 Nov 2003 18:5
8	8	1114F008.D	1.	8270-LL @ 3/6 ppm SVM15-70I		14 Nov 2003 19:3
9	9	1114F009.D	1.	8270-LL @ 4/8 ppm SVM15-70J — NR - Bad inj.		14 Nov 2003 20:1
10	10	1114F010.D	1.	8270-LL @ 5/10 ppm SVM15-70K		14 Nov 2003 20:5
11	11	1114F011.D	1.	8270-LL ICV/CCV @ 3 ppm SVM15-99D — NR		14 Nov 2003 21:3
12	12	1114F012.D	1.	KWG0317621-MB		14 Nov 2003 22:1
13	13	1114F013.D	1.	SVMP3-24I @ 20X		14 Nov 2003 22:5
14	14	1114F014.D	1.	EPA3541 TEST	BEFOE GPC	14 Nov 2003 23:3

Jeg 11/17/3

mt 11/18/03

Data File : J:\MS10\DATA\111403\1114F001.D
Acq On : 14 Nov 2003 14:43
Sample : TUNE @ 2.5 ppm SVM15-100E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.442 to 19.483 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	50.1	13564	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	71.8	19427	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	45.0	12175	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	27052	PASS
199	198	5	9	6.9	1871	PASS
275	198	10	30	22.7	6128	PASS
365	198	0.75	100	2.8	768	PASS
441	443	0.01	100	66.6	2524	PASS
441	443	0.01	100	66.6	2524	PASS
442	198	40	110	68.7	18593	PASS
443	442	15	24	20.4	3789	PASS

1114F001.D 1114BNLL.M Mon Nov 17 11:19:12 2003

11/17/3 11/18/03

Average of 19.442 to 19.483 min.: 1114F001.D
TUNE @ 2.5 ppm SVM15-100E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	46	51.00	13564	66.85	41	80.80	1328
38.10	218	51.95	754	68.85	19427	81.90	308
38.75	50	52.80	42	72.95	202	82.85	332
39.00	1080	54.90	115	73.95	1785	84.80	170
40.05	74	55.90	408	74.90	2537	85.15	164
41.00	111	56.90	1136	75.90	360	85.90	462
43.90	545	59.00	41	76.90	12926	86.95	165
45.45	45	60.90	176	77.90	1081	90.80	240
46.85	40	62.05	406	78.90	1238	91.85	255
49.00	40	62.90	555	79.70	142	92.85	2684
50.00	4417	64.90	256	79.90	775	93.05	48

Average of 19.442 to 19.483 min.: 1114F001.D
TUNE @ 2.5 ppm SVM15-100E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.75	91	106.90	4986	118.15	43	132.10	51
97.90	1748	107.90	715	118.75	51	133.85	165
98.80	135	108.75	40	119.05	52	134.95	500
98.95	1060	109.90	6958	121.90	273	135.80	158
99.85	92	110.85	1321	122.90	435	136.90	170
100.85	579	111.95	45	123.90	229	137.50	106
102.75	204	112.25	51	124.90	181	139.95	111
103.90	375	115.45	45	126.90	12175	140.80	787
104.70	136	116.00	374	127.90	920	141.90	274
104.85	222	116.85	4136	128.90	6158	142.85	152
105.90	60	117.85	289	129.80	698	144.90	41

Average of 19.442 to 19.483 min.: 1114F001.D
TUNE @ 2.5 ppm SVM15-100E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
145.70	44	155.85	533	165.90	154	178.00	79
145.90	80	156.85	54	166.65	118	178.75	1231
146.90	394	157.75	62	166.85	1426	179.70	48
147.85	892	158.05	70	167.85	837	179.85	701
148.95	116	158.95	41	168.95	162	180.60	41
150.80	42	159.65	78	171.85	107	180.90	223
152.00	60	159.95	202	172.75	147	183.65	69
152.90	187	160.75	94	173.80	280	184.80	344
153.85	176	160.90	186	174.90	602	185.90	3549
154.85	296	161.85	42	175.80	55	186.65	94
155.20	44	164.85	240	176.95	254	186.85	950

Average of 19.442 to 19.483 min.: 1114F001.D
TUNE @ 2.5 ppm SVM15-100E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
187.85	75	195.70	40	205.95	6746	220.80	552
188.25	43	195.95	742	206.90	1044	220.95	556
188.55	87	197.80	27052	207.85	288	221.50	49
188.85	293	198.80	1871	208.75	87	221.70	210
190.80	203	199.80	181	209.85	117	222.90	105
191.80	401	200.10	55	210.85	313	223.90	3695
192.95	415	201.00	49	214.85	52	224.85	829
193.70	62	201.60	67	215.85	191	226.00	57
194.00	58	202.80	283	216.80	2538	226.80	2033
194.30	73	203.80	1018	217.80	223	227.70	43
195.20	72	204.80	1628	219.80	50	227.85	222

11/17/3 mt 11/18/03

Average of 19.442 to 19.483 min.: 1114F001.D
TUNE @ 2.5 ppm SVM15-100E

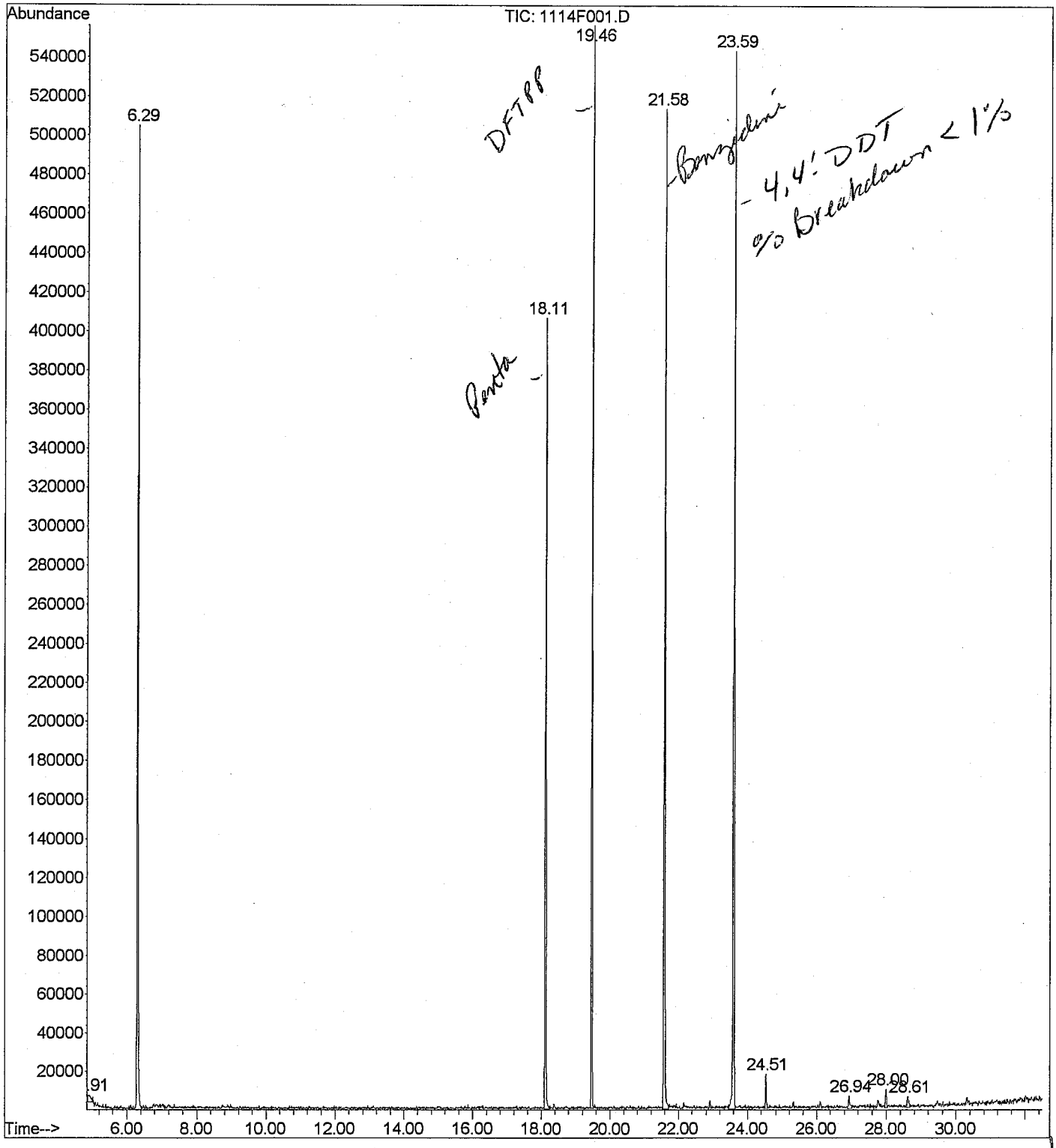
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
228.80	268	244.85	425	257.65	119	284.95	78
230.05	41	245.85	624	257.85	925	292.80	68
230.85	73	248.70	54	258.70	125	295.85	2160
233.90	108	249.00	41	264.65	104	296.80	258
234.85	188	251.40	40	264.85	315	297.00	83
236.80	109	251.90	45	272.85	429	302.95	161
240.80	94	253.00	57	273.90	1215	313.85	40
241.55	54	253.20	50	274.90	6128	314.85	240
241.95	176	254.85	15062	275.90	785	315.80	129
242.90	235	255.85	2285	276.80	630	322.90	568
243.90	2699	256.95	66	277.75	94	323.80	62

Average of 19.442 to 19.483 min.: 1114F001.D
TUNE @ 2.5 ppm SVM15-100E

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
326.70	83	401.95	52				
327.15	44	402.90	187				
333.90	304	420.85	123				
334.75	82	422.00	121				
345.85	120	422.90	833				
351.85	133	423.85	129				
352.95	51	424.05	84				
353.85	198	440.95	2524				
364.85	768	441.90	18593				
365.80	122	442.95	3789				
371.90	222	443.90	280				

11/17/03 mt 11/18/03

File : J:\MS10\DATA\111403\1114F001.D
Operator : JGISH
Acquired : 14 Nov 2003 14:43 using AcqMethod 8270LVI
Instrument : MS10
Sample Name: TUNE @ 2.5 ppm SVM15-100E
Misc Info :
Vial Number: 1



11/17/03 mt 11/18/03

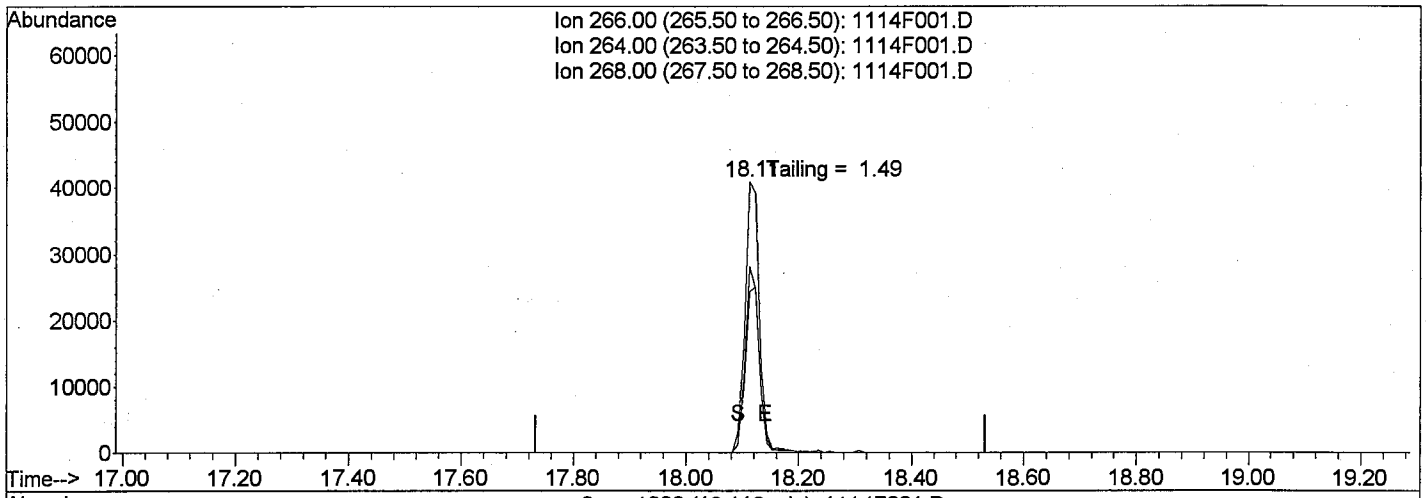
1	4.912	rVB	0.123	19468	4.881	5.004
2	6.292	rVV	0.205	918486	6.210	6.415
3	18.112	rBV	0.164	680692	18.072	18.235
4	19.462	rBV	0.123	783516	19.401	19.524
5	21.579	rBV	0.184	874673	21.528	21.712
6	23.593	rBV	0.184	882225	23.460	23.644
7	24.514	rBV	0.133	33143	24.462	24.595
8	26.937	rVB	0.133	19168	26.886	27.019
9	28.000	rVB	0.092	21510	27.949	28.041
10	28.614	rBV	0.123	18210	28.553	28.675

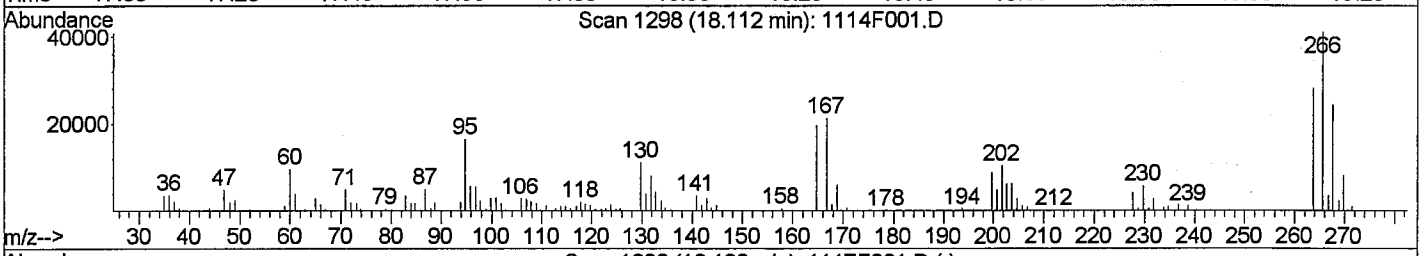
11/7/03
mat
11/8/03

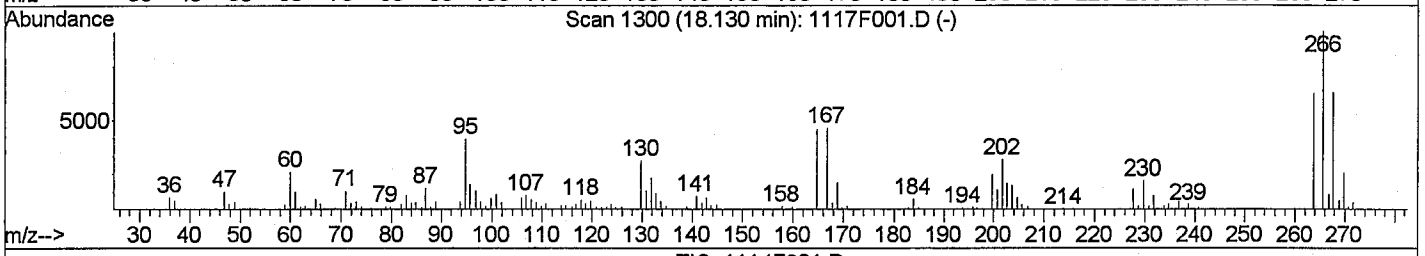
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F001.D Vial: 1
Acq On : 14 Nov 2003 2:43 pm Operator: JGISH
Sample : TUNE @ 2.5 ppm SVM15-100E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 13:27 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Multiple Level Calibration







TIC: 1114F001.D

(61) Pentachlorophenol (TC)

18.11min 158062.89ng/ml

response 72712

Ion	Exp%	Act%
266.00	100	100
264.00	62.60	68.73
268.00	63.80	59.53
0.00	0.00	0.00

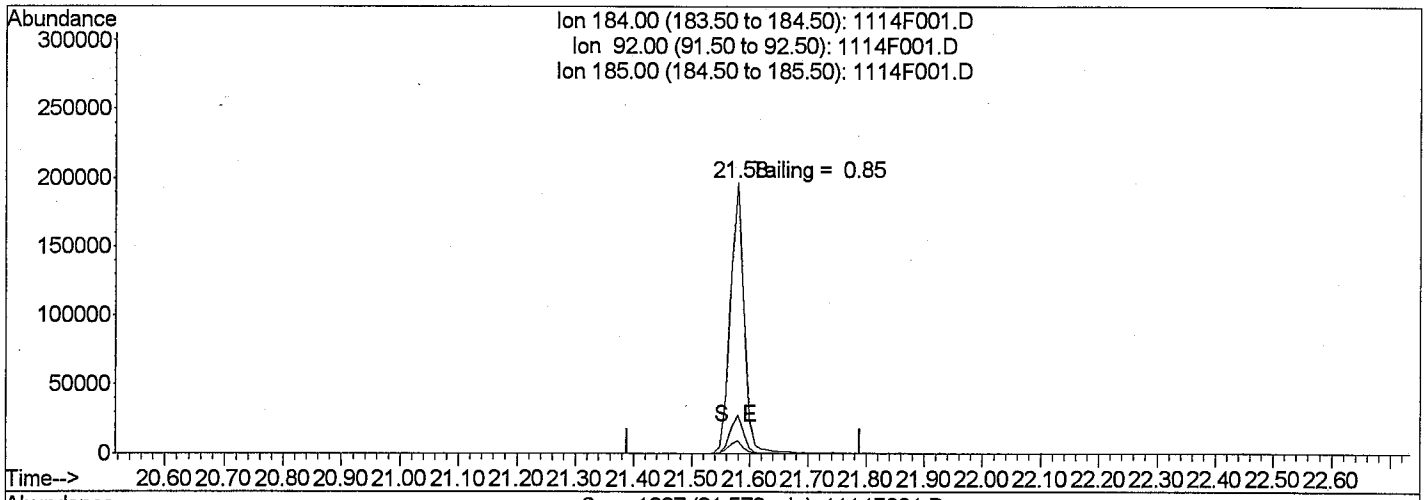
jgs 11/18/3 mrt 11/18/03

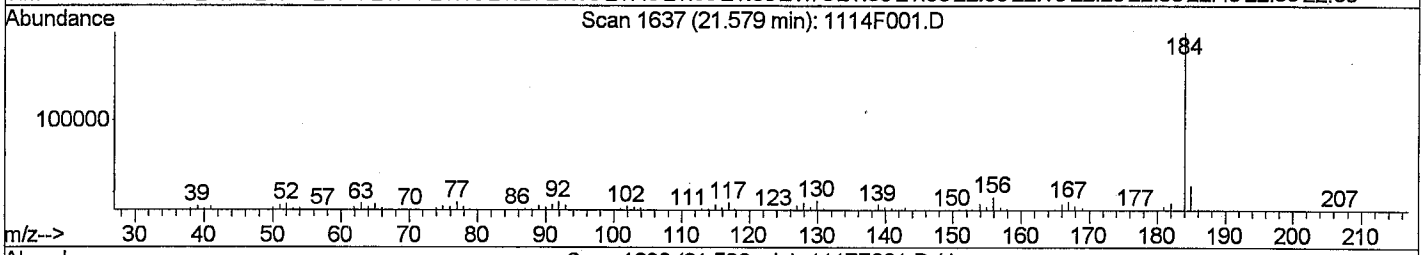
1114F001.D 1114BNLL.M Tue Nov 18 13:28:15 2003

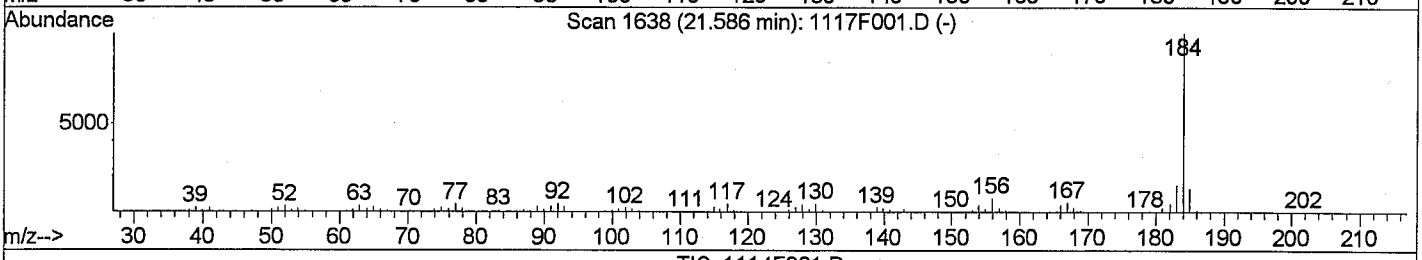
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F001.D Vial: 1
Acq On : 14 Nov 2003 2:43 pm Operator: JGISH
Sample : TUNE @ 2.5 ppm SVM15-100E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 13:29 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Multiple Level Calibration







TIC: 1114F001.D

(68) Benzidine (T)

21.58min 49081.01ng/ml m

response 322098

Ion	Exp%	Act%
184.00	100	100
92.00	8.30	4.84
185.00	13.50	14.11
0.00	0.00	0.00

11/18/03

mt 11/18/03

1114F001.D 1114BNLL.M Tue Nov 18 13:28:59 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F002.D
Acq On : 14 Nov 2003 15:25
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:36 2003

Vial: 2
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	66131	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	186896	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	120525	1000.00	ng/ml	-0.01
57) Phenanthrene-d10	18.37	188	207952	1000.00	ng/ml	-0.01
67) Chrysene-d12	24.53	240	237649	1000.00	ng/ml	-0.02
76) Perylene-d12	28.00	264	166812	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 110		Recovery =	0.00%#		
6) Phenol-d6	0.00	99	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 43 - 128		Recovery =	0.00%#		
19) Nitrobenzene-d5	0.00	82	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 30 - 139		Recovery =	0.00%#		
38) 2-Fluorobiphenyl	0.00	172	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 37 - 126		Recovery =	0.00%#		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery =	0.00%#		
70) Terphenyl-d14	22.18	244	4173	22.84	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	0.91%#		

Target Compounds Qvalue

amt 11/18/03

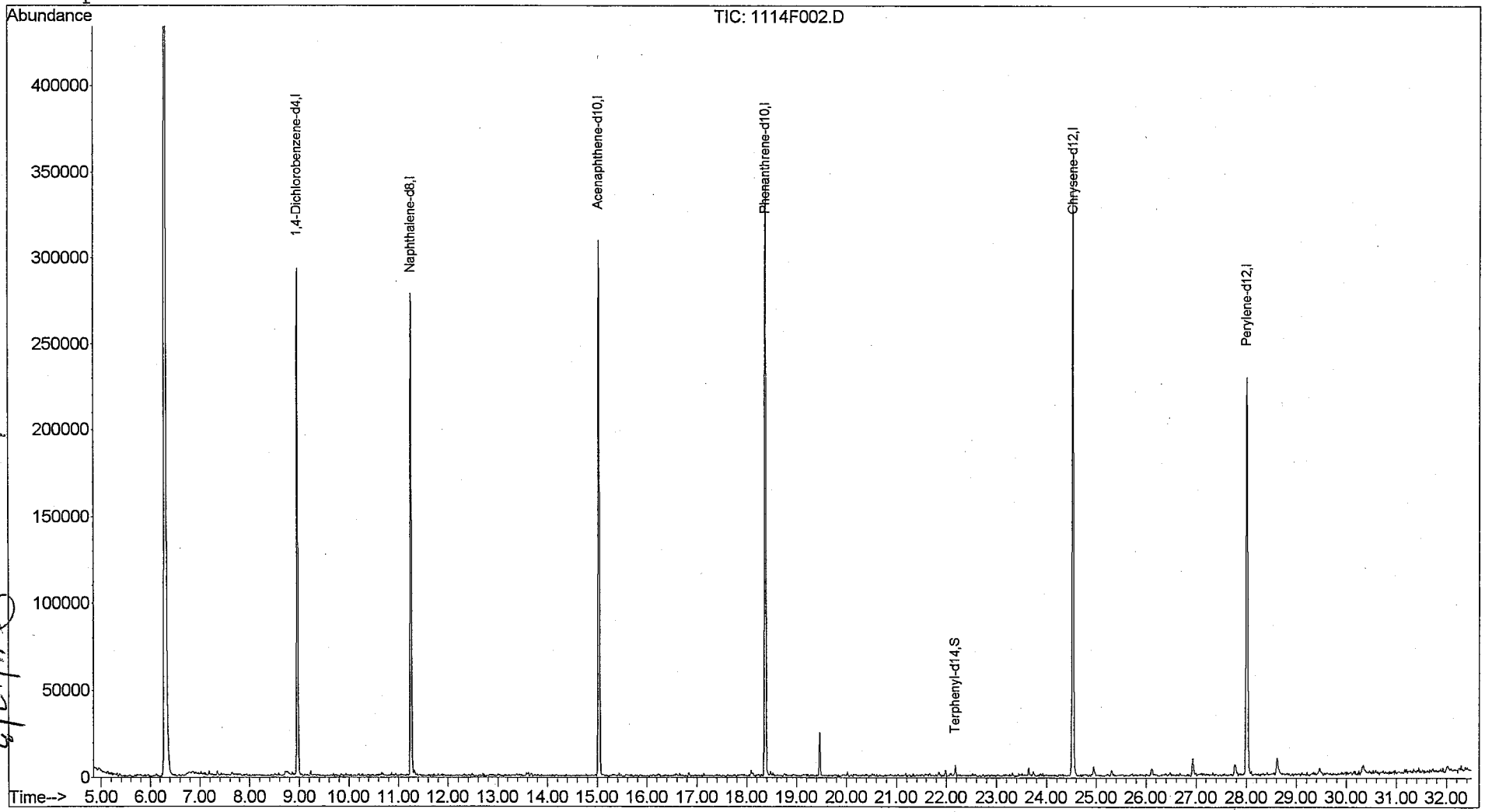
JJ 11/17/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F002.D Vial: 2
Acq On : 14 Nov 2003 15:25 Operator: JGISH
Sample : IB Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:23 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



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11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F003.D Vial: 3
Acq On : 14 Nov 2003 16:06 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM15-70D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	61374	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	163157	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	99658	1000.00	ng/ml	-0.01
57) Phenanthrene-d10	18.37	188	170224	1000.00	ng/ml	-0.01
67) Chrysene-d12	24.53	240	179396	1000.00	ng/ml	-0.02
76) Perylene-d12	28.01	264	130462	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.24	112	6514	87.54	ng/ml	0.06
Spiked Amount 3750.000	Range 38 - 110		Recovery = 2.33%#			
6) Phenol-d6	8.46	99	8176	90.01	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 2.40%#			
19) Nitrobenzene-d5	9.95	82	9403	92.27	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 3.69%#			
38) 2-Fluorobiphenyl	13.58	172	14316	108.27	ng/ml	0.02
Spiked Amount 2500.000	Range 37 - 126		Recovery = 4.33%#			
58) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery = 0.00%#			
70) Terphenyl-d14	22.18	244	14149	102.58	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 4.10%#			
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.61	93	6787	80.87	ng/ml	81
7) Phenol	8.49	94	8053	80.63	ng/ml	82
8) Aniline	8.54	93	8550	78.76	ng/ml#	57
9) 2-Chlorophenol	8.70	128	6943	97.57	ng/ml	88
10) 1,3-Dichlorobenzene	8.91	146	8502	101.98	ng/ml	89
11) 1,4-Dichlorobenzene	9.00	146	9087	100.67	ng/ml	96
12) 1,2-Dichlorobenzene	9.30	146	7389	95.03	ng/ml	84
13) Benzyl Alcohol	9.23	108	3384	75.61	ng/ml#	55
14) Bis(2-chloroisopropyl) Eth	9.49	45	7459	89.59	ng/ml	82
15) 2-Methylphenol	9.44	107	6185	103.32	ng/ml	84
16) Hexachloroethane	9.82	117	4012	98.35	ng/ml	76
17) N-Nitrosodi-n-propylamine	9.73	70	5626	90.89	ng/ml	94
18) 4-Methylphenol	9.68	107	8130	91.24	ng/ml	82
20) Nitrobenzene	9.98	77	9286	89.13	ng/ml	88
22) Isophorone	10.41	82	13743	92.06	ng/ml	93
23) 2-Nitrophenol	10.57	139	3238	89.31	ng/ml#	61
24) 2,4-Dimethylphenol	10.65	122	5280	98.48	ng/ml#	68
25) Bis(2-chloroethoxy)methane	10.85	93	7262	85.28	ng/ml	92
26) 2,4-Dichlorophenol	11.00	162	6288	102.85	ng/ml	82
28) 1,2,4-Trichlorobenzene	11.18	180	7504	101.72	ng/ml	94

(#) = qualifier out of range (m) = manual integration

11/17/3

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mnt 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F003.D Vial: 3
Acq On : 14 Nov 2003 16:06 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM15-70D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Naphthalene	11.29	128	18275	107.12	ng/ml	97
30)	4-Chloroaniline	11.45	127	7588	105.96	ng/ml	90
31)	Hexachlorobutadiene	11.69	225	5105	108.25	ng/ml	83
32)	4-Chloro-3-methylphenol	12.48	107	6661	100.77	ng/ml	80
33)	2-Methylnaphthalene	12.72	142	9599	94.13	ng/ml	83
36)	2,4,6-Trichlorophenol	13.39	196	4720	106.20	ng/ml	97
37)	2,4,5-Trichlorophenol	13.46	196	5239	109.77	ng/ml	96
39)	2-Chloronaphthalene	13.75	127	4660	101.85	ng/ml	92
40)	2-Nitroaniline	14.07	65	3927	78.76	ng/ml#	62
41)	Acenaphthylene	14.68	152	15977	96.11	ng/ml	71
42)	Dimethyl Phthalate	14.60	163	13449	90.66	ng/ml	88
43)	2,6-Dinitrotoluene	14.72	165	2157	65.03	ng/ml#	72
44)	Acenaphthene	15.10	154	10017	103.14	ng/ml	90
47)	Dibenzofuran	15.47	168	16683	97.42	ng/ml	90
49)	2,4-Dinitrotoluene	15.59	165	2832	65.25	ng/ml#	57
50)	Fluorene	16.25	166	11657	90.62	ng/ml	92
51)	4-Chlorophenyl Phenyl Ethe	16.30	204	7206	95.88	ng/ml	88
52)	Diethyl Phthalate	16.23	149	15264	96.09	ng/ml	94
55)	N-Nitrosodiphenylamine	16.58	169	8279	87.92	ng/ml	96
56)	Azobenzene	16.65	77	16309	85.46	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.40	248	4825	105.10	ng/ml	87
60)	Hexachlorobenzene	17.70	284	4977	98.97	ng/ml	86
62)	Phenanthrene	18.42	178	18196	95.80	ng/ml	97
63)	Anthracene	18.52	178	18302	96.50	ng/ml	97
64)	Carbazole	18.95	167	15932	96.91	ng/ml	99
65)	Di-n-butyl Phthalate	20.03	149	22163	94.91	ng/ml	98
66)	Fluoranthene	21.17	202	20557	101.31	ng/ml	91
69)	Pyrene	21.68	202	21272	98.56	ng/ml	94
71)	Butyl Benzyl Phthalate	23.49	149	8298	77.19	ng/ml	90
73)	Benz(a)anthracene	24.49	228	19634	101.49	ng/ml	96
74)	Chrysene	24.58	228	18468	99.36	ng/ml	97
77)	Di-n-octyl Phthalate	26.48	149	17325	67.82	ng/ml	92
78)	Benzo(b)fluoranthene	27.10	252	17234	93.07	ng/ml	93
79)	Benzo(k)fluoranthene	27.16	252	15875	93.61	ng/ml	96
80)	Benzo(a)pyrene	27.86	252	15813	92.55	ng/ml	91
81)	Indeno(1,2,3-cd)pyrene	30.53	276	13655	88.44	ng/ml	86
82)	Dibenz(a,h)anthracene	30.61	278	12974	86.26	ng/ml	94
83)	Benzo(g,h,i)perylene	31.10	276	14421	90.78	ng/ml	90

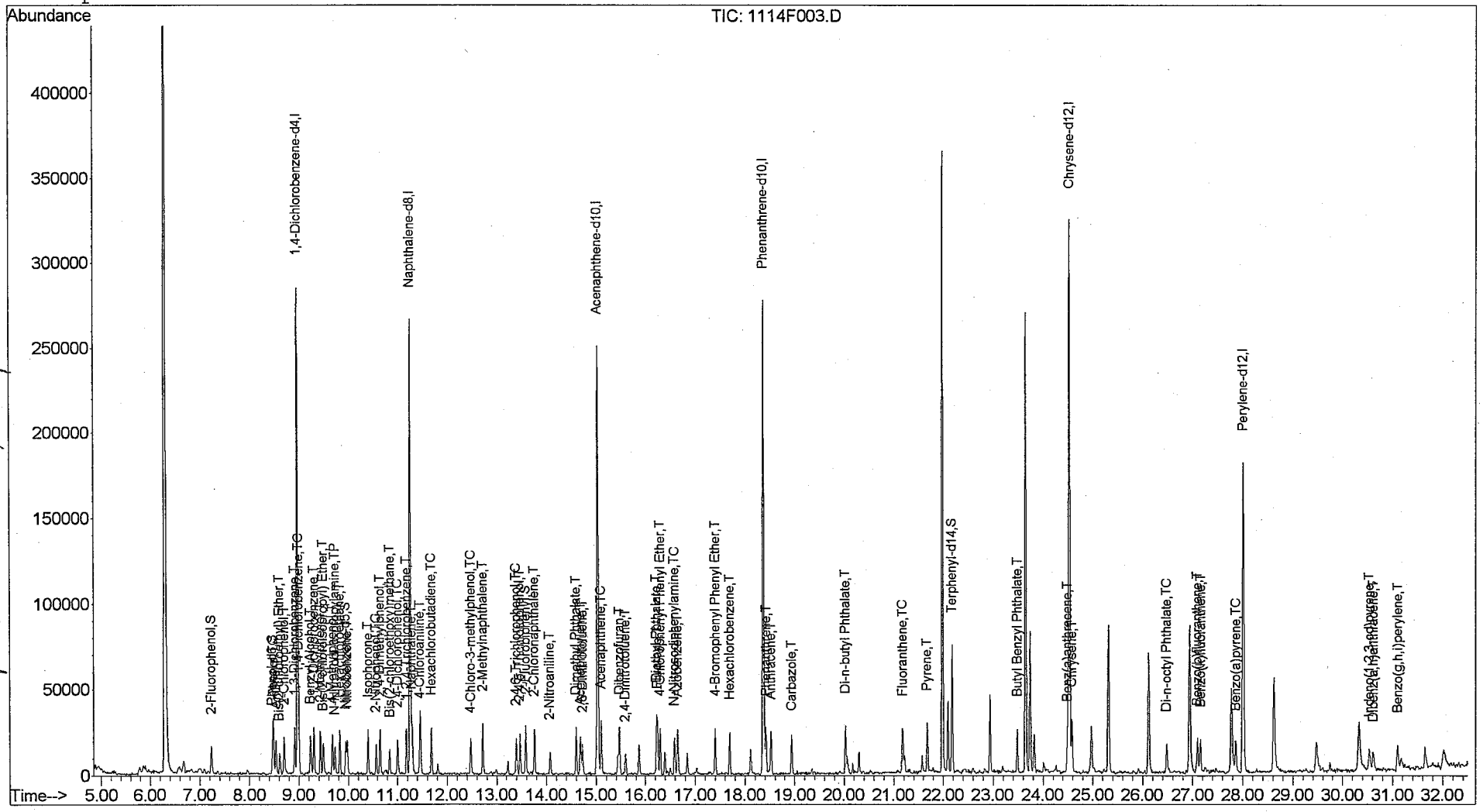
(#) = qualifier out of range (m) = manual integration 11/17/3
1114F003.D 1114BNLL.M Mon Nov 17 11:20:12 2003 Page 2

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Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F003.D Vial: 3
Acq On : 14 Nov 2003 16:06 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM15-70D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:29 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



4/17/04 2151

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F004.D
Acq On : 14 Nov 2003 16:47
Sample : 8270-LL @ .2/.5 ppm SVM15-70E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:45 2003

Vial: 4
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	77179	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	141660	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	109904	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	216589	1000.00	ng/ml	-0.01
67) Chrysene-d12	24.53	240	179908	1000.00	ng/ml	-0.02
76) Perylene-d12	28.02	264	148624	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.24	112	11474	122.61	ng/ml	0.06
Spiked Amount 3750.000	Range 38 - 110		Recovery = 3.27%#			
6) Phenol-d6	8.46	99	15361	134.48	ng/ml	-0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 3.59%#			
19) Nitrobenzene-d5	9.95	82	16828	131.32	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 5.25%#			
38) 2-Fluorobiphenyl	13.58	172	25458	174.58	ng/ml	0.02
Spiked Amount 2500.000	Range 37 - 126		Recovery = 6.98%#			
58) 2,4,6-Tribromophenol	16.84	330	6319	195.25	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 157		Recovery = 5.21%#			
70) Terphenyl-d14	22.19	244	26038	188.24	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 7.53%#			
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.62	93	15888	150.55	ng/ml	96
7) Phenol	8.48	94	38058	303.00	ng/ml	94
8) Aniline	8.54	93	16463	120.59	ng/ml#	48
9) 2-Chlorophenol	8.70	128	29446	329.06	ng/ml	90
10) 1,3-Dichlorobenzene	8.92	146	21318	203.34	ng/ml	90
11) 1,4-Dichlorobenzene	9.01	146	21315	187.79	ng/ml	94
12) 1,2-Dichlorobenzene	9.31	146	19516	199.59	ng/ml	95
13) Benzyl Alcohol	9.23	108	8061	143.22	ng/ml#	43
14) Bis(2-chloroisopropyl) Eth	9.50	45	15189	145.07	ng/ml	75
15) 2-Methylphenol	9.44	107	21505	285.67	ng/ml#	74
16) Hexachloroethane	9.82	117	9436	183.95	ng/ml	93
17) N-Nitrosodi-n-propylamine	9.73	70	9477	121.75	ng/ml	96
18) 4-Methylphenol	9.68	107	35173	313.91	ng/ml	88
20) Nitrobenzene	9.98	77	16655	127.12	ng/ml	84
22) Isophorone	10.41	82	27797	214.46	ng/ml	93
23) 2-Nitrophenol	10.57	139	16261	516.57	ng/ml	74
24) 2,4-Dimethylphenol	10.65	122	21528	462.47	ng/ml#	75
25) Bis(2-chloroethoxy)methane	10.85	93	13421	181.52	ng/ml	99
26) 2,4-Dichlorophenol	11.01	162	28231	531.84	ng/ml	95
28) 1,2,4-Trichlorobenzene	11.18	180	13391	209.07	ng/ml	98

(#) = qualifier out of range (m) = manual integration

11/17/3

mnt 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F004.D Vial: 4
Acq On : 14 Nov 2003 16:47 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM15-70E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:45 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Naphthalene	11.30	128	28933	195.34	ng/ml	96
30)	4-Chloroaniline	11.46	127	13250	213.10	ng/ml	84
31)	Hexachlorobutadiene	11.69	225	8768	214.13	ng/ml	92
32)	4-Chloro-3-methylphenol	12.47	107	38696	674.27	ng/ml#	71
33)	2-Methylnaphthalene	12.72	142	16251	183.54	ng/ml	94
36)	2,4,6-Trichlorophenol	13.40	196	30242	617.03	ng/ml	95
37)	2,4,5-Trichlorophenol	13.46	196	32051	608.96	ng/ml	93
39)	2-Chloronaphthalene	13.76	127	8278	164.07	ng/ml	69
40)	2-Nitroaniline	14.07	65	10192	185.35	ng/ml#	67
41)	Acenaphthylene	14.68	152	33384	182.10	ng/ml	94
42)	Dimethyl Phthalate	14.60	163	34763	212.49	ng/ml	97
43)	2,6-Dinitrotoluene	14.72	165	6168	168.62	ng/ml#	57
44)	Acenaphthene	15.10	154	19627	183.25	ng/ml	93
45)	3-Nitroaniline	15.01	138	5065	143.37	ng/ml#	60
47)	Dibenzofuran	15.47	168	39412	208.69	ng/ml	84
49)	2,4-Dinitrotoluene	15.60	165	9622	201.02	ng/ml	95
50)	Fluorene	16.25	166	30925	218.00	ng/ml	100
51)	4-Chlorophenyl Phenyl Ethe	16.30	204	18137	218.82	ng/ml	95
52)	Diethyl Phthalate	16.23	149	33660	192.13	ng/ml	96
53)	4-Nitroaniline	16.40	138	5253	137.84	ng/ml#	19
55)	N-Nitrosodiphenylamine	16.59	169	21686	208.84	ng/ml	93
56)	Azobenzene	16.65	77	41547	197.42	ng/ml	84
59)	4-Bromophenyl Phenyl Ether	17.40	248	12075	206.72	ng/ml	87
60)	Hexachlorobenzene	17.70	284	13087	204.53	ng/ml	95
61)	Pentachlorophenol	18.12	266	16251	782.92	ng/ml	89
62)	Phenanthrene	18.42	178	47529	196.66	ng/ml	99
63)	Anthracene	18.53	178	45990	190.59	ng/ml	98
64)	Carbazole	18.95	167	36518	174.57	ng/ml	100
65)	Di-n-butyl Phthalate	20.03	149	44876	151.03	ng/ml	97
66)	Fluoranthene	21.18	202	42793	165.75	ng/ml	92
69)	Pyrene	21.68	202	42038	194.23	ng/ml	97
71)	Butyl Benzyl Phthalate	23.49	149	19373	179.71	ng/ml	89
72)	3,3'-Dichlorobenzidine	24.55	252	33138	451.81	ng/ml	98
73)	Benz(a)anthracene	24.50	228	38952	200.77	ng/ml	96
74)	Chrysene	24.59	228	36962	198.30	ng/ml	95
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	28364	187.80	ng/ml	99
77)	Di-n-octyl Phthalate	26.48	149	47443	163.02	ng/ml	94
78)	Benzo(b)fluoranthene	27.09	252	38341	181.75	ng/ml	94
79)	Benzo(k)fluoranthene	27.16	252	38023	196.81	ng/ml	96
80)	Benzo(a)pyrene	27.86	252	37267	191.45	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.54	276	30101	171.13	ng/ml	85

(#) = qualifier out of range (m) = manual integration
1114F004.D 1114BNLL.M Mon Nov 17 11:20:16 2003 Page 2

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11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F004.D Vial: 4
Acq On : 14 Nov 2003 16:47 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM15-70E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:45 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	Dibenz(a,h)anthracene	30.61	278	28082	163.89	ng/ml	91
83)	Benzo(g,h,i)perylene	31.10	276	31606	174.65	ng/ml	85

mt 11/18/03

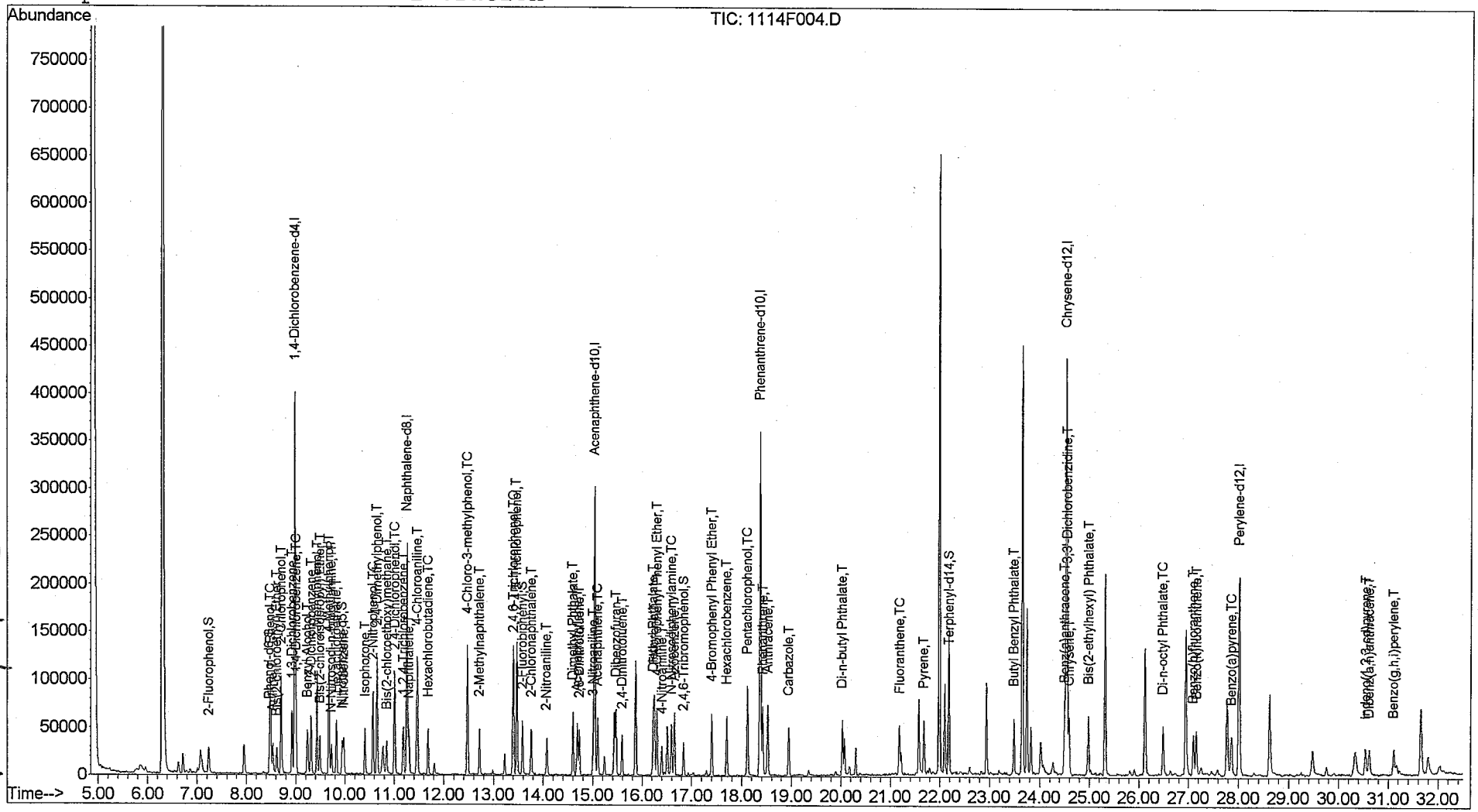
JU 11/17/3

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F004.D Vial: 4
Acq On : 14 Nov 2003 16:47 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM15-70E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:28 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F005.D Vial: 5
Acq On : 14 Nov 2003 17:28 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM15-70F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:50 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	58459	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	185140	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	107111	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	197572	1000.00	ng/ml	-0.01
67) Chrysene-d12	24.54	240	168337	1000.00	ng/ml	-0.01
76) Perylene-d12	28.01	264	137176	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.23	112	33798	476.82	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 12.72%#			
6) Phenol-d6	8.46	99	43307	500.53	ng/ml	-0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 13.35%#			
19) Nitrobenzene-d5	9.95	82	51654	532.16	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 21.29%#			
38) 2-Fluorobiphenyl	13.59	172	79080	556.44	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 22.26%#			
58) 2,4,6-Tribromophenol	16.85	330	15189	514.51	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 13.72%#			
70) Terphenyl-d14	22.19	244	68467	529.01	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 21.16%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.72	42	31478m	519.60	ng/ml	
3) Pyridine	5.79	79	31559	387.08	ng/ml	92
5) Bis(2-chloroethyl) Ether	8.61	93	37116	464.33	ng/ml	91
7) Phenol	8.48	94	95951	1008.54	ng/ml	78
8) Aniline	8.53	93	47905	463.28	ng/ml#	51
9) 2-Chlorophenol	8.70	128	72277	1066.34	ng/ml	96
10) 1,3-Dichlorobenzene	8.91	146	38940	490.37	ng/ml	91
11) 1,4-Dichlorobenzene	9.00	146	43062	500.87	ng/ml	97
12) 1,2-Dichlorobenzene	9.30	146	37061	500.40	ng/ml	95
13) Benzyl Alcohol	9.23	108	21219	497.73	ng/ml#	43
14) Bis(2-chloroisopropyl) Eth	9.50	45	38525	485.77	ng/ml	74
15) 2-Methylphenol	9.44	107	60742	1065.27	ng/ml	85
16) Hexachloroethane	9.83	117	20354	523.86	ng/ml	76
17) N-Nitrosodi-n-propylamine	9.73	70	31587	535.72	ng/ml#	71
18) 4-Methylphenol	9.68	107	88453	1042.21	ng/ml	85
20) Nitrobenzene	9.98	77	51890	522.88	ng/ml	88
22) Isophorone	10.41	82	75576	446.14	ng/ml	96
23) 2-Nitrophenol	10.57	139	39353	956.55	ng/ml	57
24) 2,4-Dimethylphenol	10.65	122	59036	970.39	ng/ml#	68
25) Bis(2-chloroethoxy)methane	10.85	93	43239	447.47	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1114F005.D 1114BNLL.M Mon Nov 17 11:20:19 2003 JJ 11/17/3 Page 1

mst 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F005.D Vial: 5
Acq On : 14 Nov 2003 17:28 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM15-70F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:50 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.01	162	71283	1027.51	ng/ml	92
27)	Benzoic Acid	10.81	122	29644	1401.99	ng/ml	83
28)	1,2,4-Trichlorobenzene	11.18	180	43182	515.85	ng/ml	95
29)	Naphthalene	11.30	128	93959	485.37	ng/ml	96
30)	4-Chloroaniline	11.46	127	40128	493.81	ng/ml	82
31)	Hexachlorobutadiene	11.69	225	30362	567.37	ng/ml	94
32)	4-Chloro-3-methylphenol	12.48	107	68032	907.05	ng/ml	80
33)	2-Methylnaphthalene	12.72	142	61959	535.42	ng/ml	91
35)	Hexachlorocyclopentadiene	13.23	237	24524	874.36	ng/ml	91
36)	2,4,6-Trichlorophenol	13.40	196	53625	1122.65	ng/ml	95
37)	2,4,5-Trichlorophenol	13.47	196	55815	1088.11	ng/ml	97
39)	2-Chloronaphthalene	13.76	127	26857	546.18	ng/ml	94
40)	2-Nitroaniline	14.08	65	23158	432.12	ng/ml#	78
41)	Acenaphthylene	14.68	152	88615	495.98	ng/ml	96
42)	Dimethyl Phthalate	14.61	163	73012	457.93	ng/ml	98
43)	2,6-Dinitrotoluene	14.73	165	15541	435.94	ng/ml#	51
44)	Acenaphthene	15.11	154	51831	496.54	ng/ml	99
45)	3-Nitroaniline	15.01	138	14423	418.91	ng/ml	98
46)	2,4-Dinitrophenol	15.24	184	11995	466.44	ng/ml	65
47)	Dibenzofuran	15.47	168	86296	468.86	ng/ml	78
48)	4-Nitrophenol	15.44	109	43270	1080.29	ng/ml#	61
49)	2,4-Dinitrotoluene	15.60	165	22462	481.49	ng/ml	69
50)	Fluorene	16.25	166	63111	456.49	ng/ml	95
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	36108	447.00	ng/ml	91
52)	Diethyl Phthalate	16.24	149	78805	461.56	ng/ml	96
53)	4-Nitroaniline	16.40	138	16330	439.67	ng/ml#	35
54)	2-Methyl-4,6-dinitrophenol	16.51	198	29024	1058.63	ng/ml	87
55)	N-Nitrosodiphenylamine	16.59	169	45261	447.23	ng/ml	94
56)	Azobenzene	16.65	77	88413	431.06	ng/ml	84
59)	4-Bromophenyl Phenyl Ether	17.41	248	25111	471.28	ng/ml	92
60)	Hexachlorobenzene	17.70	284	29278	501.61	ng/ml	96
61)	Pentachlorophenol	18.13	266	38531	1523.89	ng/ml	97
62)	Phenanthrene	18.42	178	106245	481.93	ng/ml	99
63)	Anthracene	18.53	178	107369	487.78	ng/ml	100
64)	Carbazole	18.95	167	99472	521.29	ng/ml	97
65)	Di-n-butyl Phthalate	20.03	149	144362	532.63	ng/ml	95
66)	Fluoranthene	21.18	202	125467	532.74	ng/ml	93
68)	Benzidine	21.58	184	80067	886.26	ng/ml	95
69)	Pyrene	21.69	202	118851	586.87	ng/ml	97
71)	Butyl Benzyl Phthalate	23.49	149	49229	488.05	ng/ml	90
72)	3,3'-Dichlorobenzidine	24.56	252	63395	923.76	ng/ml	94

(#) = qualifier out of range (m) = manual integration

11/17/3

mnt 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F005.D Vial: 5
Acq On : 14 Nov 2003 17:28 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM15-70F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:50 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.50	228	93565	515.40	ng/ml	97
74)	Chrysene	24.59	228	90442	518.56	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	68429	484.22	ng/ml	97
77)	Di-n-octyl Phthalate	26.48	149	124527	463.61	ng/ml	94
78)	Benzo(b)fluoranthene	27.10	252	94898	487.39	ng/ml	93
79)	Benzo(k)fluoranthene	27.16	252	86135	483.05	ng/ml	95
80)	Benzo(a)pyrene	27.86	252	88995	495.35	ng/ml	93
81)	Indeno(1,2,3-cd)pyrene	30.54	276	79700	490.92	ng/ml	88
82)	Dibenz(a,h)anthracene	30.61	278	79645	503.60	ng/ml	92
83)	Benzo(g,h,i)perylene	31.11	276	86421	517.39	ng/ml	88

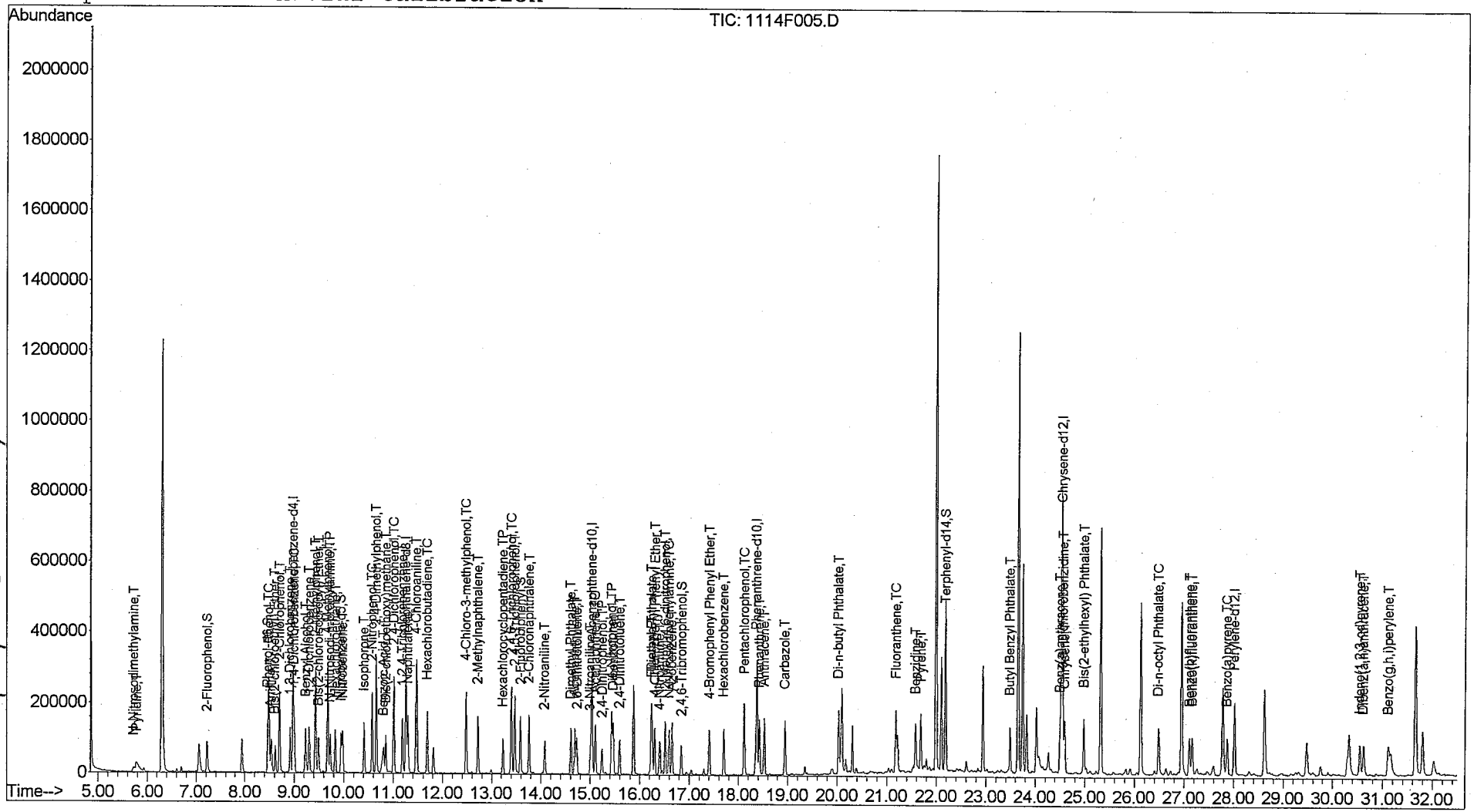
11/17/3 mat 11/18/03

(#) = qualifier out of range (m) = manual integration
1114F005.D 1114BNLL.M Mon Nov 17 11:20:19 2003 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F005.D Vial: 5
Acq On : 14 Nov 2003 17:28 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM15-70F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:31 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration

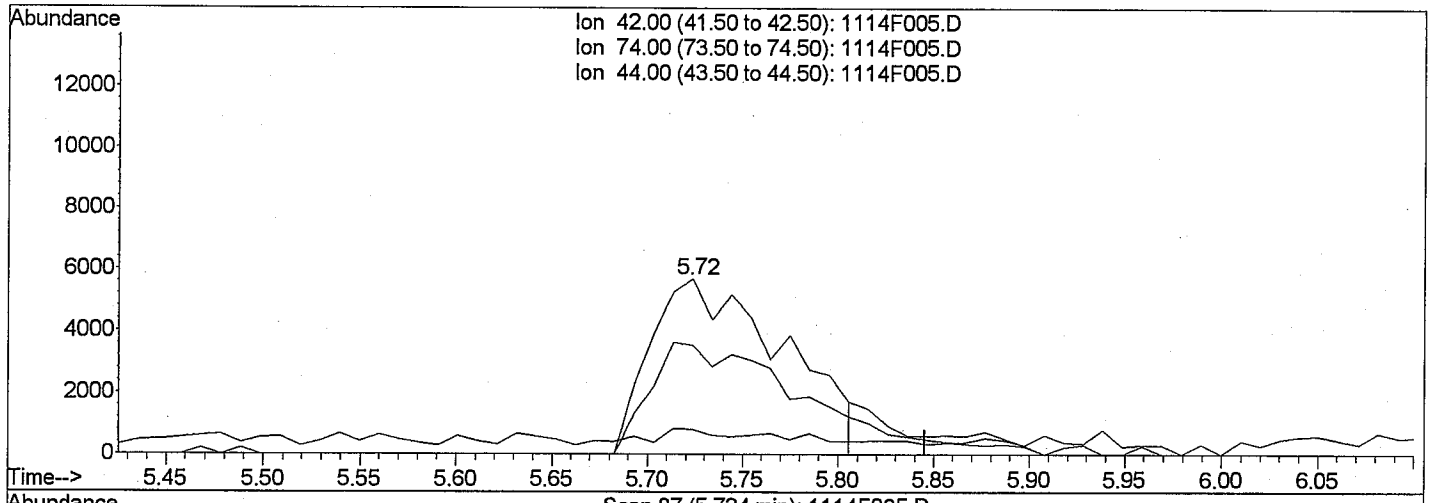


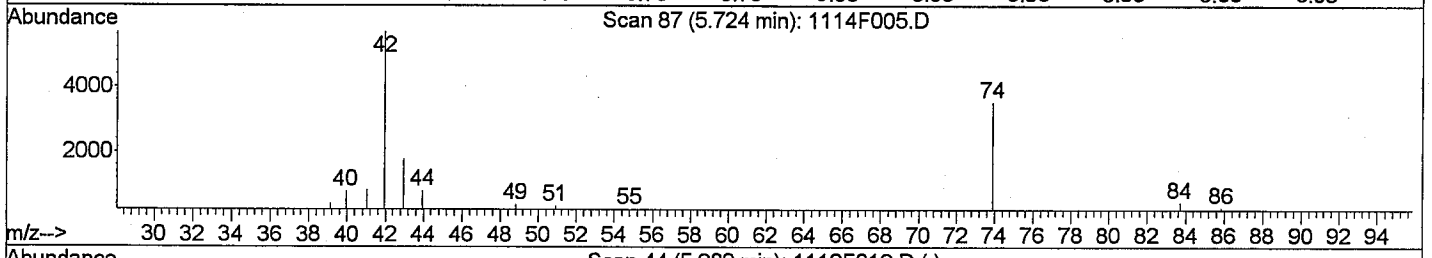
2159

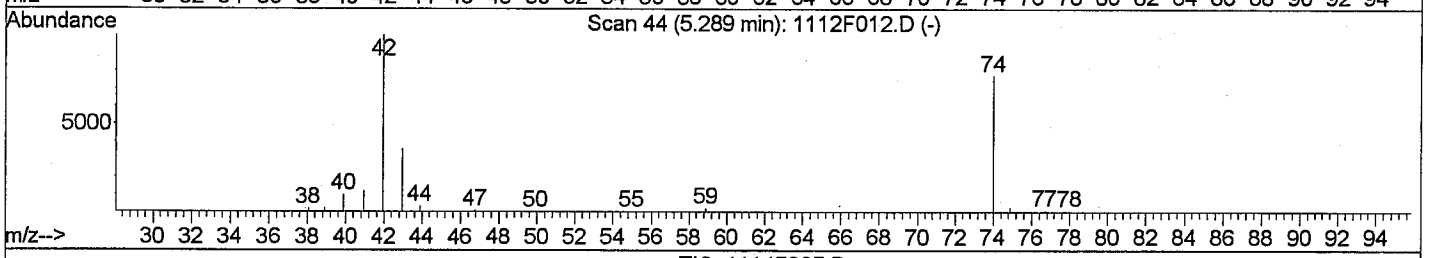
Data File : J:\MS10\DATA\111403\1114F005.D
Acq On : 14 Nov 2003 17:28
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:24 2003

Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F005.D

(2) N-Nitrosodimethylamine (T)

5.72min 456.20ng/ml

response 27637

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	62.18#
44.00	5.00	6.70
0.00	0.00	0.00

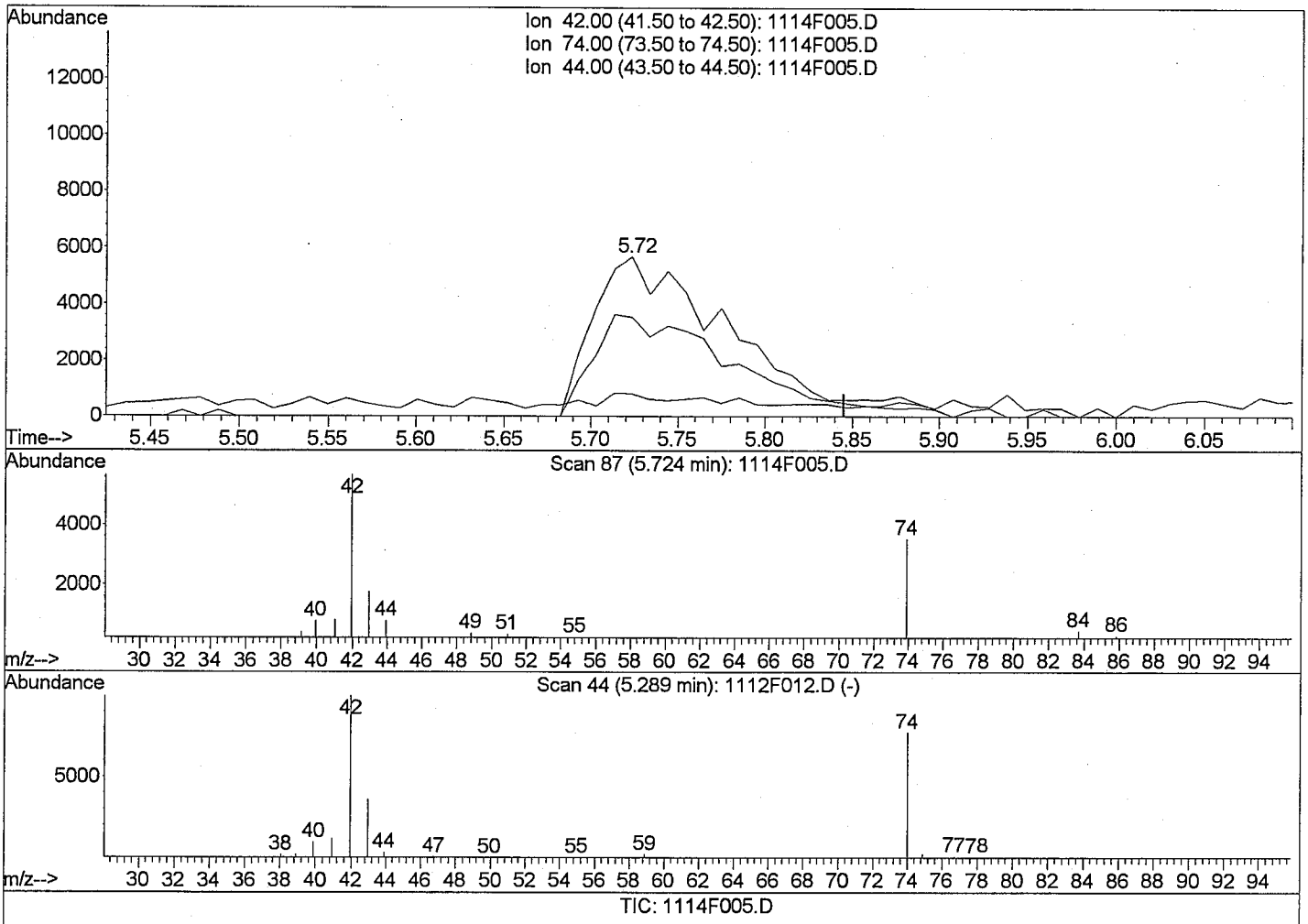
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F005.D
Acq On : 14 Nov 2003 17:28
Sample : 8270-LL @ .5/1 ppm SVM15-70F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:31 2003

Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration



TIC: 1114F005.D

(2) N-Nitrosodimethylamine (T)

5.72min 519.60ng/ml m

response 31478

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	62.18#
44.00	5.00	14.12
0.00	0.00	0.00

J 11/17/3 incomplete
mt 11/18/03

1114F005.D 1114BNLL.M Mon Nov 17 08:31:03 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F006.D Vial: 6
Acq On : 14 Nov 2003 18:09 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:54 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	63336	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	174569	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	104032	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	198340	1000.00	ng/ml	-0.01
67) Chrysene-d12	24.54	240	190040	1000.00	ng/ml	-0.01
76) Perylene-d12	28.02	264	134969	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.22	112	80769	1051.75	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 28.05%#			
6) Phenol-d6	8.47	99	89683	956.71	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 25.51%#			
19) Nitrobenzene-d5	9.95	82	112591	1070.64	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 42.83%			
38) 2-Fluorobiphenyl	13.59	172	154620	1120.17	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 44.81%			
58) 2,4,6-Tribromophenol	16.85	330	35117	1184.93	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 31.60%#			
70) Terphenyl-d14	22.19	244	160907	1101.26	ng/ml	0.01
Spiked Amount 2500.000	Range 54 - 158		Recovery = 44.05%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.68	42	70121m	1068.34	ng/ml	
3) Pyridine	5.72	79	73575	832.93	ng/ml	91
5) Bis(2-chloroethyl) Ether	8.61	93	83058	959.07	ng/ml	83
7) Phenol	8.49	94	184816	1793.02	ng/ml	71
8) Aniline	8.53	93	110619	987.40	ng/ml#	46
9) 2-Chlorophenol	8.69	128	159404	2170.68	ng/ml	90
10) 1,3-Dichlorobenzene	8.92	146	92178	1071.41	ng/ml	96
11) 1,4-Dichlorobenzene	9.00	146	102832	1103.97	ng/ml	98
12) 1,2-Dichlorobenzene	9.30	146	93893	1170.14	ng/ml	94
13) Benzyl Alcohol	9.23	108	42736	925.26	ng/ml#	61
14) Bis(2-chloroisopropyl) Eth	9.49	45	80463	936.45	ng/ml	76
15) 2-Methylphenol	9.44	107	112883	1827.26	ng/ml	80
16) Hexachloroethane	9.83	117	51178	1215.76	ng/ml	92
17) N-Nitrosodi-n-propylamine	9.73	70	60452	946.33	ng/ml	77
18) 4-Methylphenol	9.68	107	162243	1764.45	ng/ml	83
20) Nitrobenzene	9.98	77	109083	1014.56	ng/ml	88
22) Isophorone	10.41	82	153050	958.20	ng/ml	94
23) 2-Nitrophenol	10.57	139	79185	2041.29	ng/ml	66
24) 2,4-Dimethylphenol	10.65	122	108904	1898.47	ng/ml#	78
25) Bis(2-chloroethoxy)methane	10.85	93	85098	933.99	ng/ml	96

(#) = qualifier out of range (m) = manual integration

11/17/3

11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F006.D Vial: 6
Acq On : 14 Nov 2003 18:09 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:54 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.01	162	138351	2115.02	ng/ml	100
27)	Benzoic Acid	10.84	122	61232	2156.48	ng/ml	86
28)	1,2,4-Trichlorobenzene	11.19	180	89256	1130.81	ng/ml	99
29)	Naphthalene	11.30	128	190453	1043.42	ng/ml	97
30)	4-Chloroaniline	11.46	127	75696	987.92	ng/ml	88
31)	Hexachlorobutadiene	11.69	225	60701	1202.99	ng/ml	95
32)	4-Chloro-3-methylphenol	12.48	107	134611	1903.41	ng/ml	81
33)	2-Methylnaphthalene	12.72	142	114998	1053.94	ng/ml	100
35)	Hexachlorocyclopentadiene	13.23	237	54109	1986.25	ng/ml	92
36)	2,4,6-Trichlorophenol	13.40	196	109378	2357.62	ng/ml	94
37)	2,4,5-Trichlorophenol	13.48	196	117729	2363.06	ng/ml	97
39)	2-Chloronaphthalene	13.76	127	55961	1171.73	ng/ml	91
40)	2-Nitroaniline	14.08	65	56043	1076.69	ng/ml#	70
41)	Acenaphthylene	14.68	152	172363	993.27	ng/ml	94
42)	Dimethyl Phthalate	14.61	163	159831	1032.13	ng/ml	98
43)	2,6-Dinitrotoluene	14.73	165	35702	1031.11	ng/ml	74
44)	Acenaphthene	15.11	154	104102	1026.81	ng/ml	97
45)	3-Nitroaniline	15.01	138	32880	983.24	ng/ml	87
46)	2,4-Dinitrophenol	15.25	184	36739	1470.91	ng/ml	70
47)	Dibenzofuran	15.47	168	186438	1042.92	ng/ml	76
48)	4-Nitrophenol	15.45	109	95429	2453.02	ng/ml#	62
49)	2,4-Dinitrotoluene	15.60	165	48219	1064.21	ng/ml	66
50)	Fluorene	16.25	166	135369	1008.12	ng/ml	97
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	81147	1034.30	ng/ml	91
52)	Diethyl Phthalate	16.24	149	176847	1066.44	ng/ml	98
53)	4-Nitroaniline	16.41	138	35776	991.74	ng/ml#	26
54)	2-Methyl-4,6-dinitrophenol	16.51	198	71029	2005.68	ng/ml	76
55)	N-Nitrosodiphenylamine	16.59	169	101643	1034.08	ng/ml	95
56)	Azobenzene	16.66	77	190854	958.06	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.41	248	56930	1064.31	ng/ml	97
60)	Hexachlorobenzene	17.70	284	63298	1080.26	ng/ml	98
61)	Pentachlorophenol	18.13	266	85534	2927.19	ng/ml	98
62)	Phenanthrene	18.43	178	226325	1022.65	ng/ml	98
63)	Anthracene	18.53	178	233075	1054.76	ng/ml	97
64)	Carbazole	18.95	167	206971	1080.45	ng/ml	97
65)	Di-n-butyl Phthalate	20.04	149	283492	1041.90	ng/ml	95
66)	Fluoranthene	21.19	202	244581	1034.48	ng/ml	94
68)	Benzidine	21.58	184	176888	1734.37	ng/ml	95
69)	Pyrene	21.69	202	248060	1085.00	ng/ml	99
71)	Butyl Benzyl Phthalate	23.50	149	117185	1029.08	ng/ml	96
72)	3,3'-Dichlorobenzidine	24.56	252	141660	1828.46	ng/ml	96

(#) = qualifier out of range (m) = manual integration

11/17/3

mat 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F006.D Vial: 6
Acq On : 14 Nov 2003 18:09 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:54 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.51	228	223322	1089.67	ng/ml	97
74)	Chrysene	24.60	228	207926	1056.03	ng/ml	100
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	154841	970.57	ng/ml	97
77)	Di-n-octyl Phthalate	26.48	149	251087	950.08	ng/ml	91
78)	Benzo(b)fluoranthene	27.11	252	191464	999.43	ng/ml	94
79)	Benzo(k)fluoranthene	27.17	252	175981	1003.06	ng/ml	93
80)	Benzo(a)pyrene	27.87	252	178518	1009.89	ng/ml	92
81)	Indeno(1,2,3-cd)pyrene	30.55	276	178860	1119.71	ng/ml	87
82)	Dibenz(a,h)anthracene	30.62	278	173855	1117.27	ng/ml	93
83)	Benzo(g,h,i)perylene	31.12	276	190189	1157.26	ng/ml	88

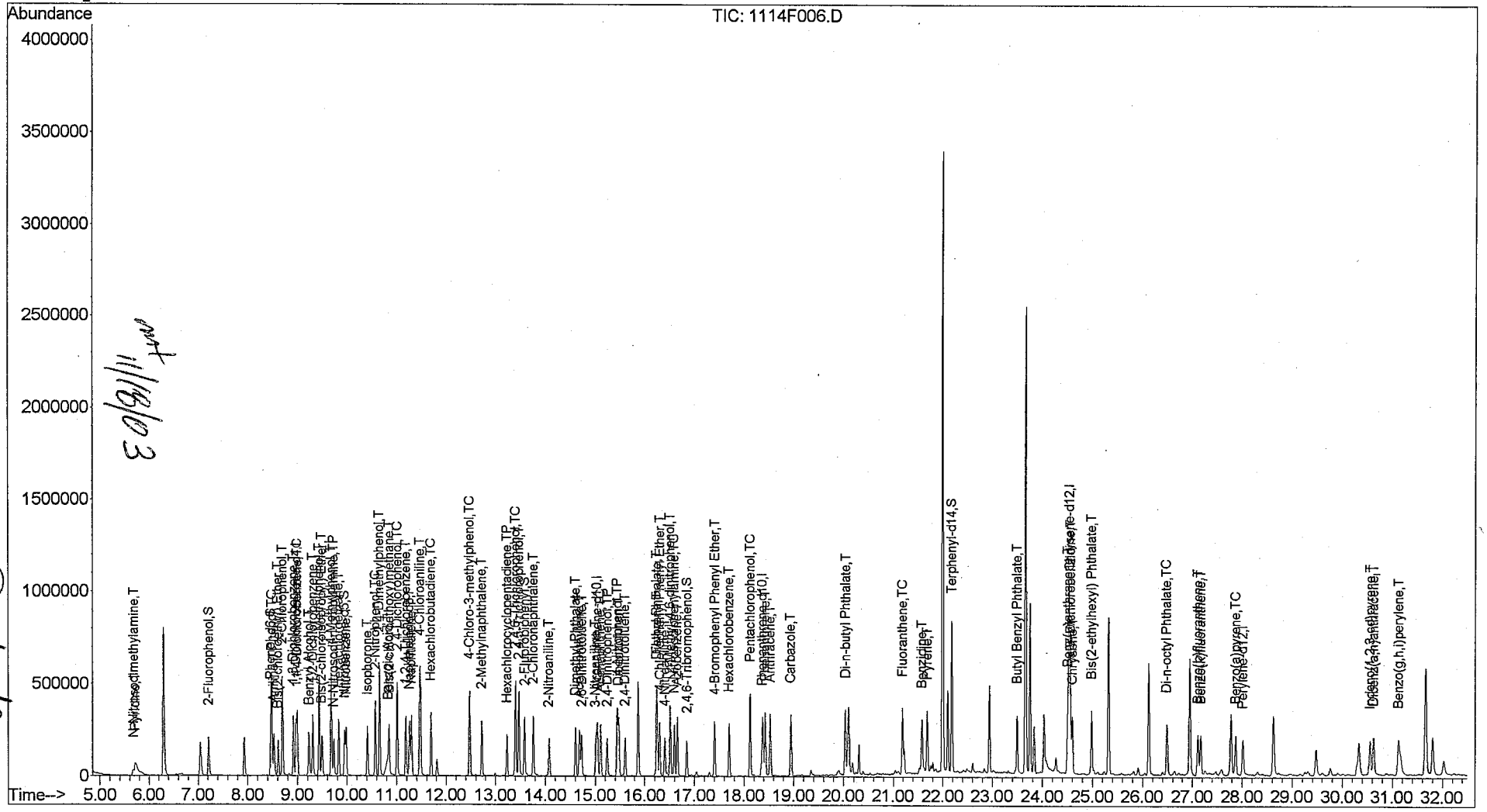
11/17/03 mrt 11/18/03

(#) = qualifier out of range (m) = manual integration
1114F006.D 1114BNLL.M Mon Nov 17 11:20:23 2003 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F006.D Vial: 6
Acq On : 14 Nov 2003 18:09 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:32 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



2165

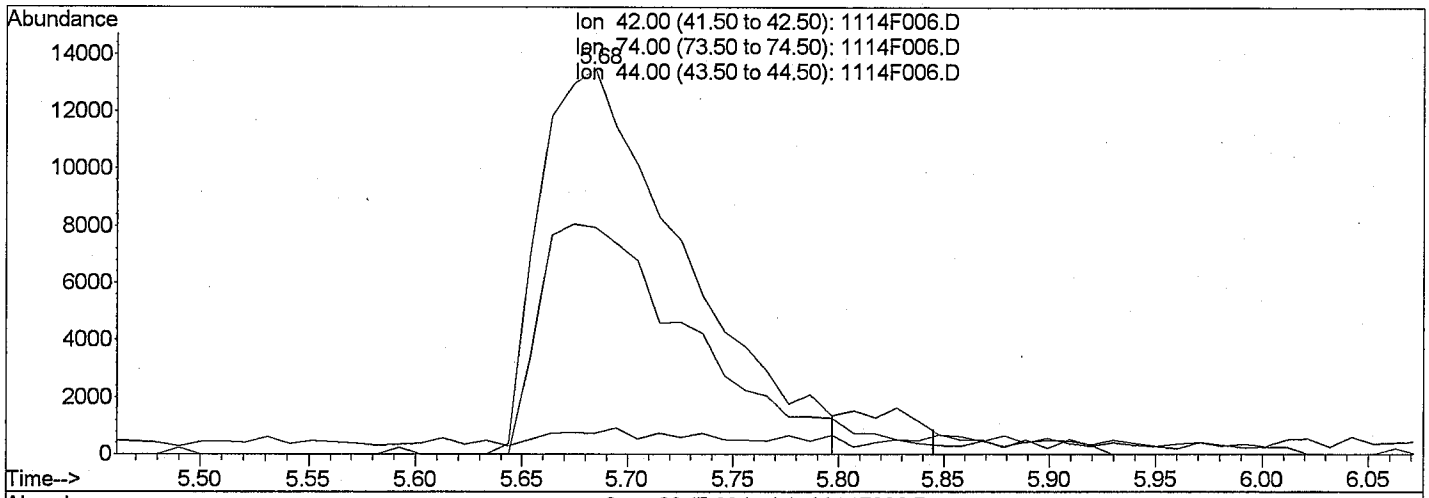
3 09/19/11 mw

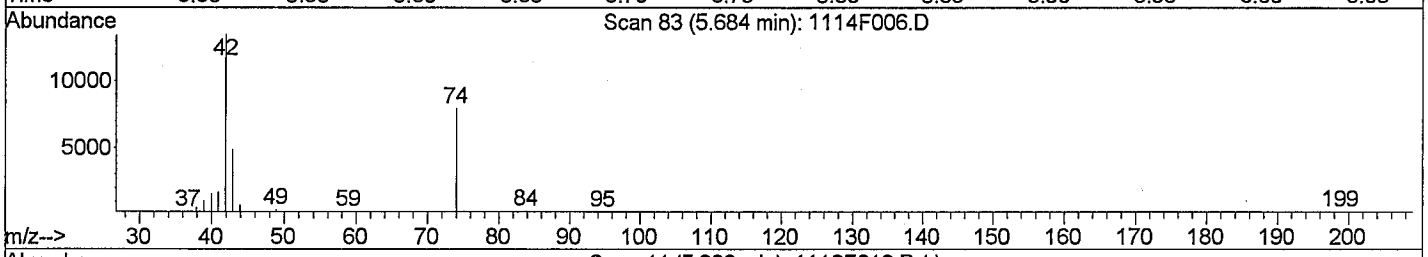
4/11/11

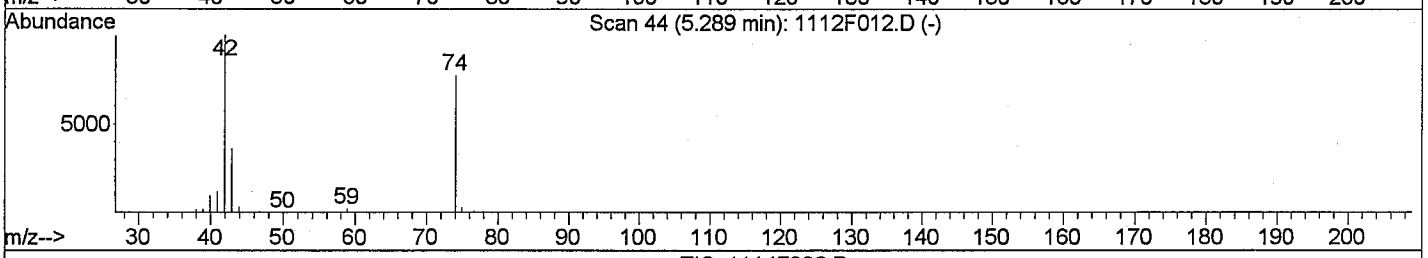
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F006.D Vial: 6
Acq On : 14 Nov 2003 18:09 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM15-70G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:24 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F006.D

(2) N-Nitrosodimethylamine (T)

5.68min 978.66ng/ml

response 64235

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	58.98#
44.00	5.00	2.82
0.00	0.00	0.00

1114F006.D 1114BNLL.M Mon Nov 17 08:32:19 2003

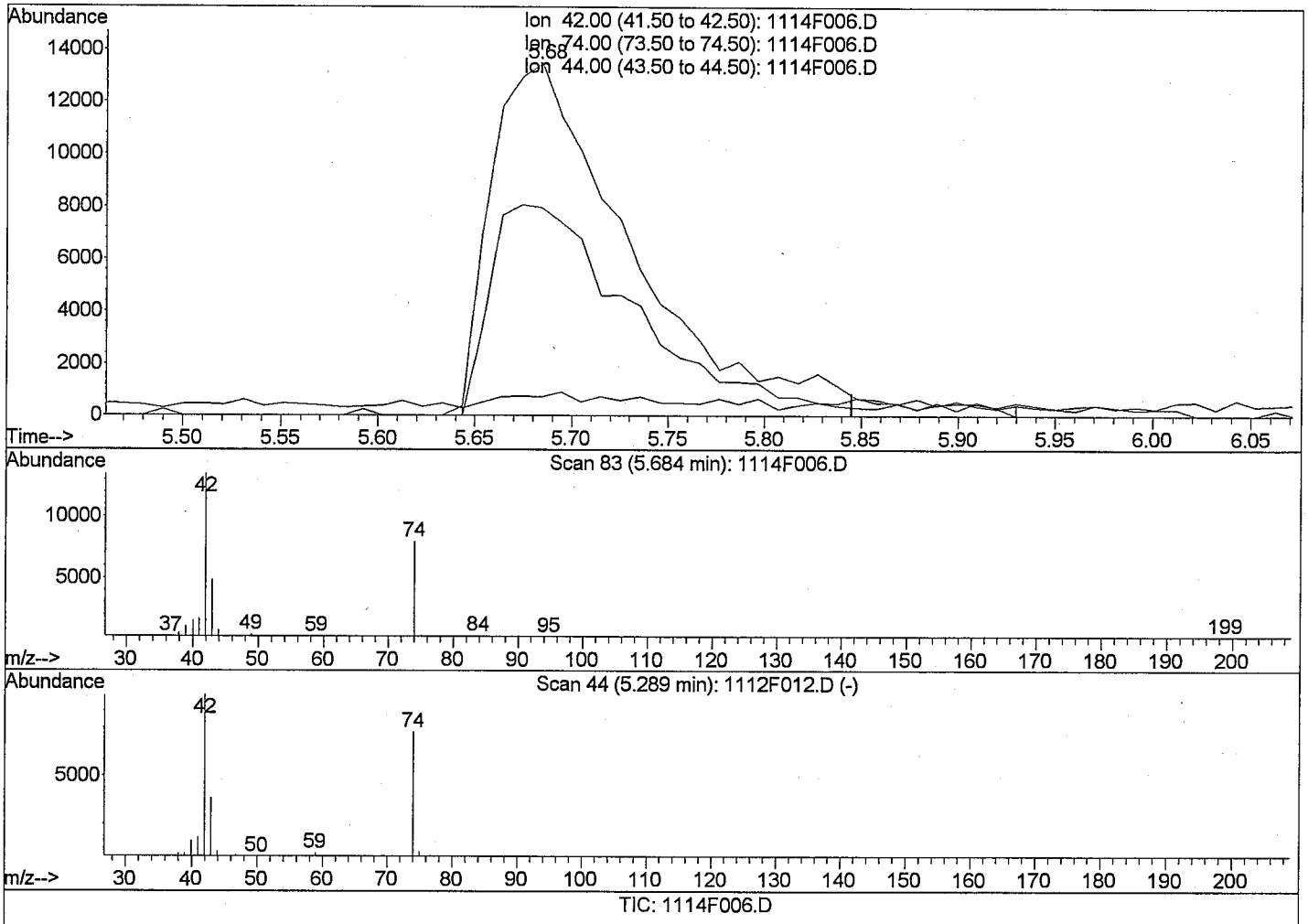
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F006.D
Acq On : 14 Nov 2003 18:09
Sample : 8270-LL @ 1/2 ppm SVM15-70G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:32 2003

Vial: 6
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration



TIC: 1114F006.D

(2) N-Nitrosodimethylamine (T)

5.68min 1068.34ng/ml m

response 70121

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	58.98#
44.00	5.00	5.38
0.00	0.00	0.00

11/17/03 Incorrect

mt 11/18/03

1114F006.D 1114BNLL.M Mon Nov 17 08:32:24 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:59 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	47581	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	161552	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.05	164	110259	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	221690	1000.00	ng/ml	0.00
67) Chrysene-d12	24.54	240	193294	1000.00	ng/ml	0.00
76) Perylene-d12	28.02	264	147044	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	107440	1862.31	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 49.66%			
6) Phenol-d6	8.46	99	123520	1753.99	ng/ml	-0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 46.77%			
19) Nitrobenzene-d5	9.94	82	166859	2112.05	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 84.48%			
38) 2-Fluorobiphenyl	13.58	172	310175	2120.20	ng/ml	0.02
Spiked Amount 2500.000	Range 37 - 126		Recovery = 84.81%			
58) 2,4,6-Tribromophenol	16.86	330	72426	2186.43	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 58.30%			
70) Terphenyl-d14	22.19	244	297164	1999.57	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 79.98%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.63	42	115332m	2338.99	ng/ml	
3) Pyridine	5.67	79	113030	1703.29	ng/ml	92
5) Bis(2-chloroethyl) Ether	8.60	93	110466	1697.91	ng/ml	82
7) Phenol	8.48	94	274553	3545.60	ng/ml	68
8) Aniline	8.52	93	141445	1680.61	ng/ml#	50
9) 2-Chlorophenol	8.70	128	215040	3897.92	ng/ml	94
10) 1,3-Dichlorobenzene	8.92	146	132126	2044.25	ng/ml	98
11) 1,4-Dichlorobenzene	9.00	146	134697	1924.89	ng/ml	97
12) 1,2-Dichlorobenzene	9.31	146	119161	1976.76	ng/ml	96
13) Benzyl Alcohol	9.23	108	79751	2298.38	ng/ml#	34
14) Bis(2-chloroisopropyl) Eth	9.49	45	105946	1641.31	ng/ml	72
15) 2-Methylphenol	9.43	107	183630m	3956.70	ng/ml	
16) Hexachloroethane	9.83	117	66242	2094.67	ng/ml	90
17) N-Nitrosodi-n-propylamine	9.74	70	101914	2123.66	ng/ml	80
18) 4-Methylphenol	9.69	107	306273	4433.72	ng/ml	84
20) Nitrobenzene	9.98	77	162997	2017.97	ng/ml	90
22) Isophorone	10.41	82	304914	2062.78	ng/ml	95
23) 2-Nitrophenol	10.58	139	142776	3977.15	ng/ml#	63
24) 2,4-Dimethylphenol	10.66	122	222058	4182.94	ng/ml#	72
25) Bis(2-chloroethoxy)methane	10.85	93	162843	1931.28	ng/ml	98

(#) = qualifier out of range (m) = manual integration

11/17/3

mrt 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:59 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.02	162	293346	4845.82	ng/ml	99
27)	Benzoic Acid	10.91	122	174580	5045.03	ng/ml#	78
28)	1,2,4-Trichlorobenzene	11.19	180	152550	2088.42	ng/ml	93
29)	Naphthalene	11.30	128	327721	1940.12	ng/ml	97
30)	4-Chloroaniline	11.47	127	155617	2194.63	ng/ml	83
31)	Hexachlorobutadiene	11.69	225	119918	2568.06	ng/ml	96
32)	4-Chloro-3-methylphenol	12.49	107	280186	4281.07	ng/ml	77
33)	2-Methylnaphthalene	12.72	142	238524	2362.19	ng/ml	100
35)	Hexachlorocyclopentadiene	13.24	237	118192	4093.59	ng/ml	92
36)	2,4,6-Trichlorophenol	13.41	196	226404	4604.49	ng/ml	97
37)	2,4,5-Trichlorophenol	13.48	196	239899	4543.31	ng/ml	100
39)	2-Chloronaphthalene	13.77	127	106037	2094.84	ng/ml	90
40)	2-Nitroaniline	14.08	65	108168	1960.75	ng/ml#	74
41)	Acenaphthylene	14.69	152	338141	1838.54	ng/ml	96
42)	Dimethyl Phthalate	14.62	163	311410	1897.39	ng/ml	98
43)	2,6-Dinitrotoluene	14.74	165	70793	1929.11	ng/ml	65
44)	Acenaphthene	15.12	154	202094	1880.78	ng/ml	96
45)	3-Nitroaniline	15.02	138	66152	1866.48	ng/ml	93
46)	2,4-Dinitrophenol	15.25	184	100409	3793.02	ng/ml#	64
47)	Dibenzofuran	15.47	168	360758	1904.08	ng/ml	67
48)	4-Nitrophenol	15.45	109	210701m	5110.23	ng/ml	
49)	2,4-Dinitrotoluene	15.61	165	96787	2015.49	ng/ml	66
50)	Fluorene	16.26	166	259948	1826.55	ng/ml	98
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	163711	1968.82	ng/ml	94
52)	Diethyl Phthalate	16.25	149	325068m	1849.55	ng/ml	
53)	4-Nitroaniline	16.43	138	70922	1854.98	ng/ml#	21
54)	2-Methyl-4,6-dinitrophenol	16.53	198	163871	3757.58	ng/ml	86
55)	N-Nitrosodiphenylamine	16.60	169	201359	1932.85	ng/ml	98
56)	Azobenzene	16.66	77	355431	1683.45	ng/ml	84
59)	4-Bromophenyl Phenyl Ether	17.42	248	113025	1890.46	ng/ml	95
60)	Hexachlorobenzene	17.70	284	127749	1950.57	ng/ml	94
61)	Pentachlorophenol	18.13	266	195910	5440.51	ng/ml	97
62)	Phenanthrene	18.43	178	464181	1876.48	ng/ml	97
63)	Anthracene	18.53	178	469384	1900.43	ng/ml	97
64)	Carbazole	18.95	167	420134	1962.22	ng/ml	97
65)	Di-n-butyl Phthalate	20.04	149	591206	1943.96	ng/ml	96
66)	Fluoranthene	21.19	202	513463	1943.00	ng/ml	93
68)	Benzidine	21.59	184	401503	3870.43	ng/ml	93
69)	Pyrene	21.69	202	480396	2065.85	ng/ml	98
71)	Butyl Benzyl Phthalate	23.49	149	198734	1715.84	ng/ml	89
72)	3,3'-Dichlorobenzidine	24.57	252	325029	4124.64	ng/ml	97

(#) = qualifier out of range (m) = manual integration

11/17/3

mt 11/18/03

Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:23:59 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.50	228	413837	1985.28	ng/ml	97
74)	Chrysene	24.61	228	391015	1952.48	ng/ml	97
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	314989	1941.17	ng/ml	95
77)	Di-n-octyl Phthalate	26.49	149	521344	1810.69	ng/ml	92
78)	Benzo(b)fluoranthene	27.11	252	398741	1910.48	ng/ml	93
79)	Benzo(k)fluoranthene	27.17	252	383964	2008.80	ng/ml	95
80)	Benzo(a)pyrene	27.88	252	372522	1934.33	ng/ml	94
81)	Indeno(1,2,3-cd)pyrene	30.57	276	367932	2114.21	ng/ml	86
82)	Dibenz(a,h)anthracene	30.64	278	374748	2210.53	ng/ml	91
83)	Benzo(g,h,i)perylene	31.14	276	375002	2094.43	ng/ml	86

11/17/3

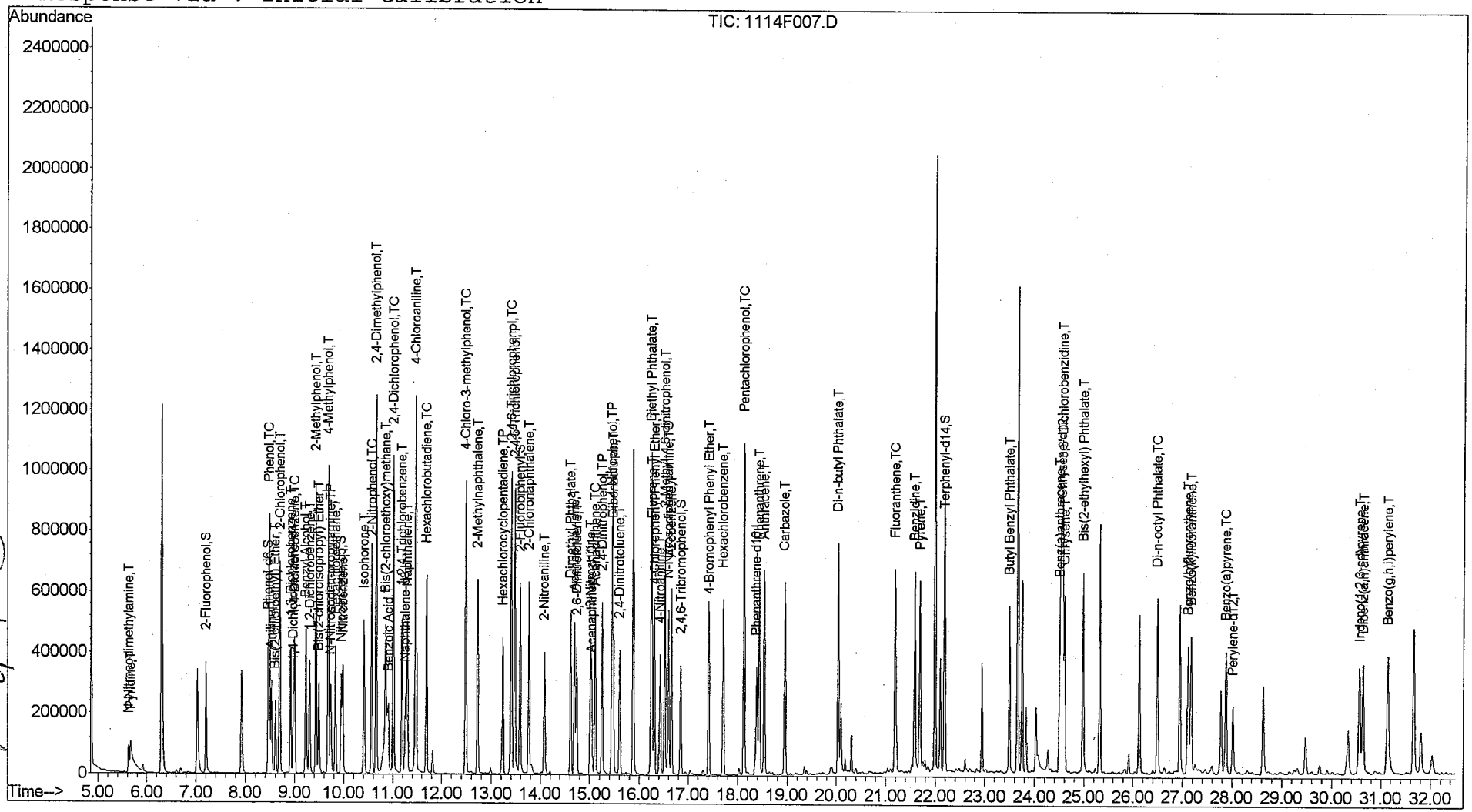
(#) = qualifier out of range (m) = manual integration

mat 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F007.D Vial: 7
Acq On : 14 Nov 2003 18:50 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:35 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



2171

11/17/03

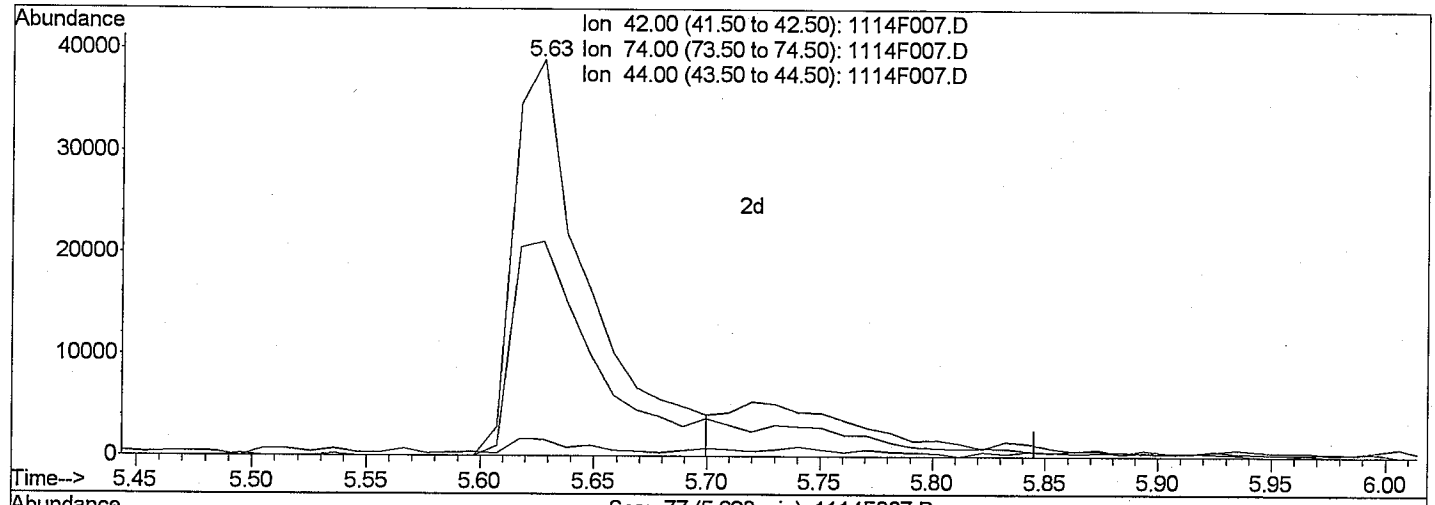
Quantitation Report (Qedit)

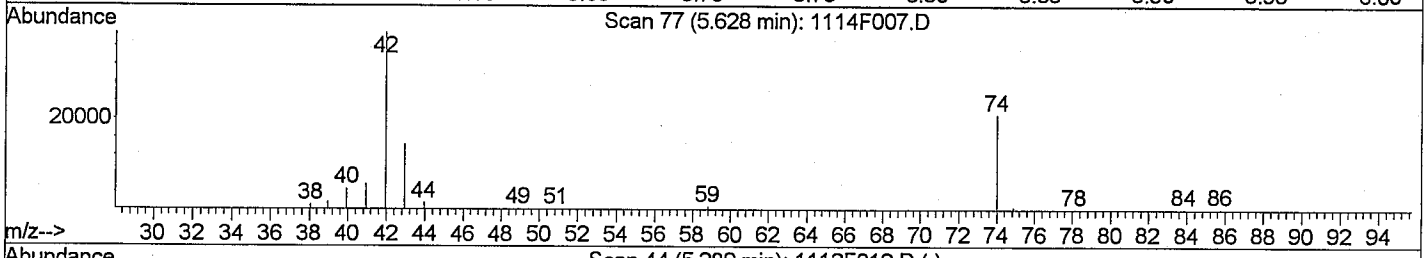
Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:24 2003

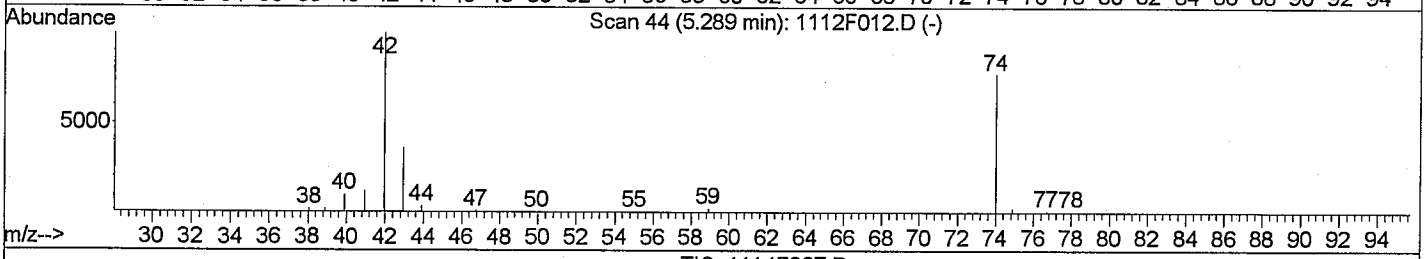
Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F007.D

(2) N-Nitrosodimethylamine (T)

5.63min 1815.79ng/ml

response 89534

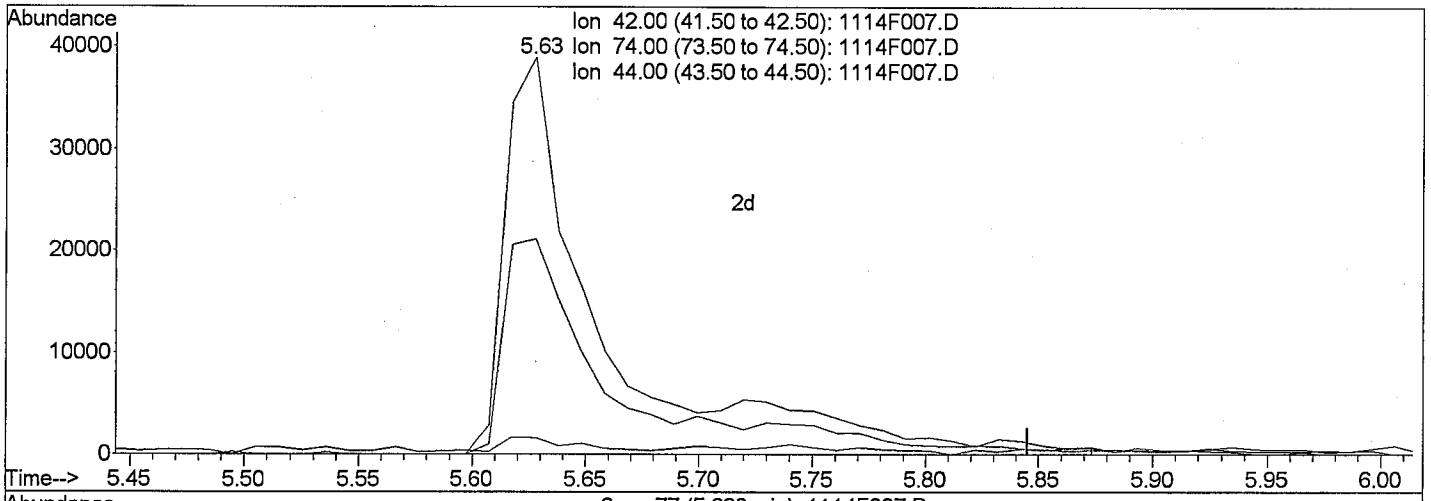
Ion	Exp%	Act%
42.00	100	100
74.00	153.00	54.21#
44.00	5.00	3.31
0.00	0.00	0.00

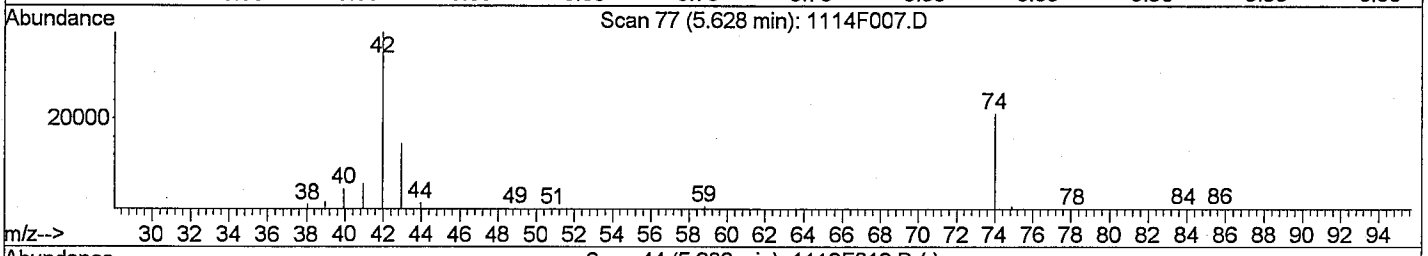
1114F007.D 1114BNLL.M Mon Nov 17 08:33:31 2003

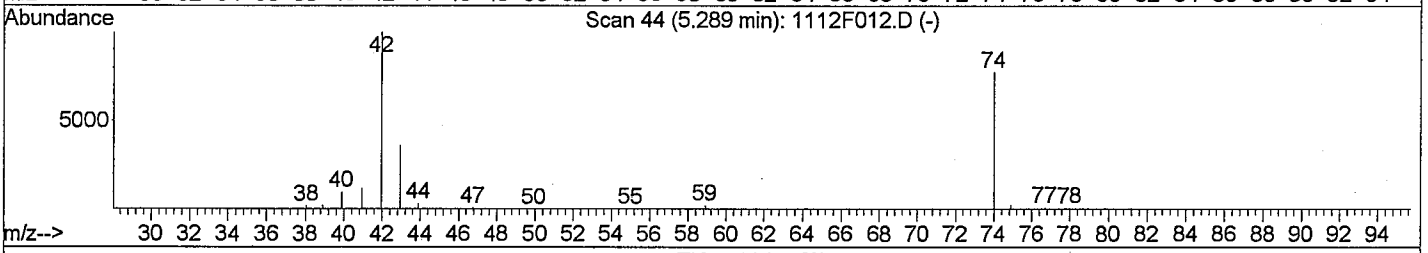
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F007.D Vial: 7
Acq On : 14 Nov 2003 18:50 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:33 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F007.D

(2) N-Nitrosodimethylamine (T)

5.63min 2338.99ng/ml m

response 115332

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	54.21#
44.00	5.00	4.12
0.00	0.00	0.00

J 11/17/3 Incomplete

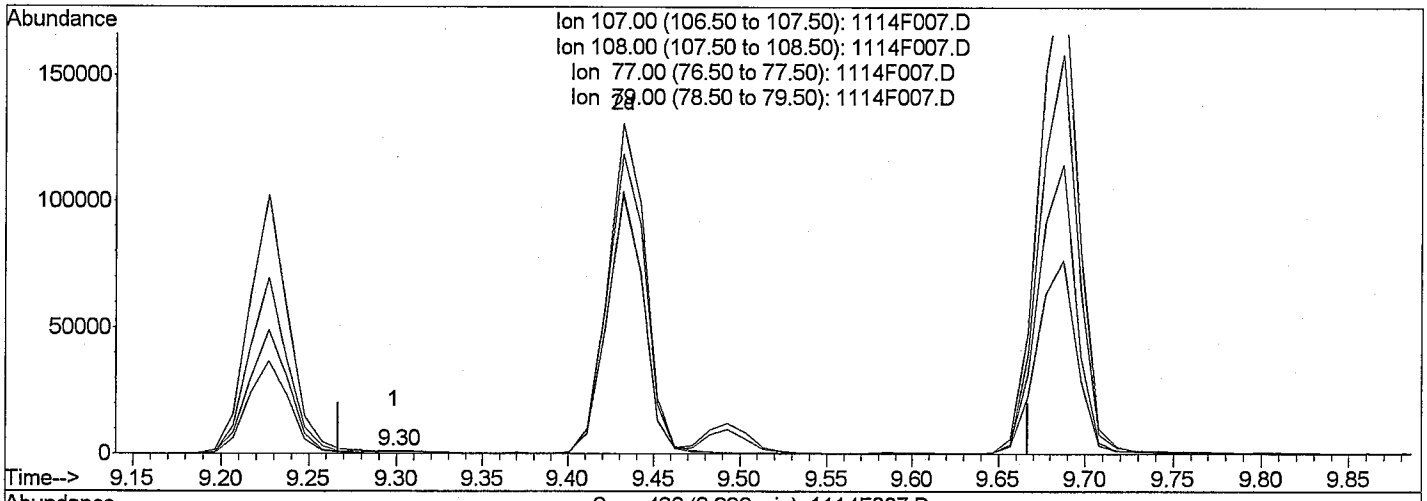
mt 11/18/03

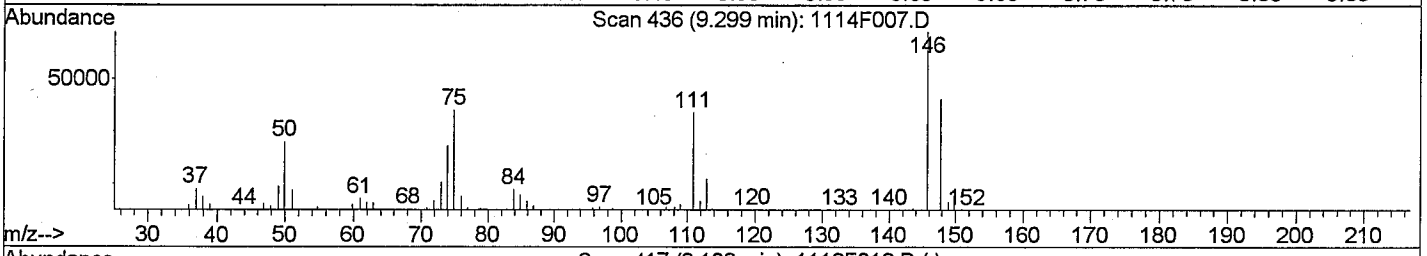
1114F007.D 1114BNLL.M Mon Nov 17 08:33:35 2003

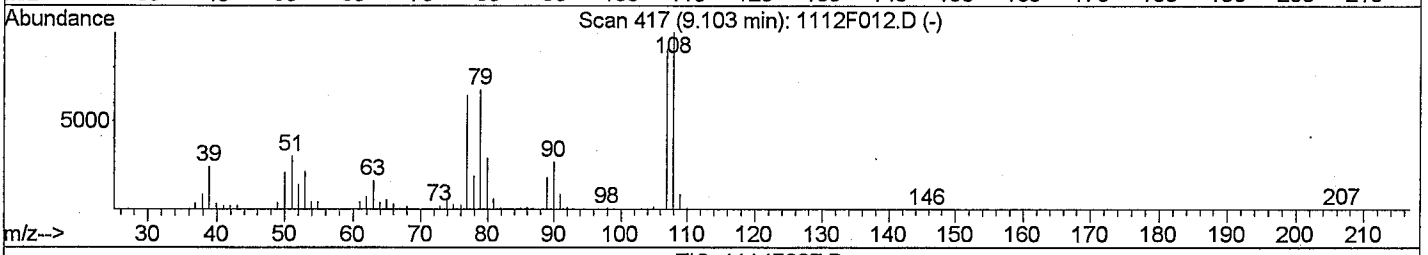
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F007.D Vial: 7
Acq On : 14 Nov 2003 18:50 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:33 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F007.D

(15) 2-Methylphenol (T)

9.30min 43.65ng/ml

response 2026

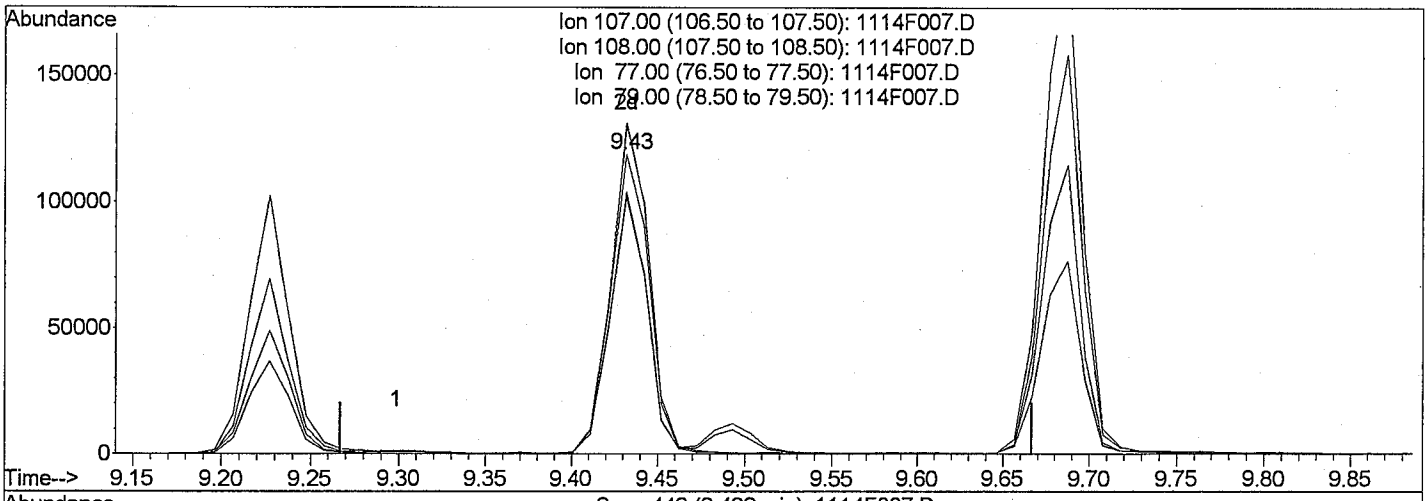
Ion	Exp%	Act%
107.00	100	100
108.00	109.20	89.69
77.00	54.20	60.59
79.00	52.80	44.92

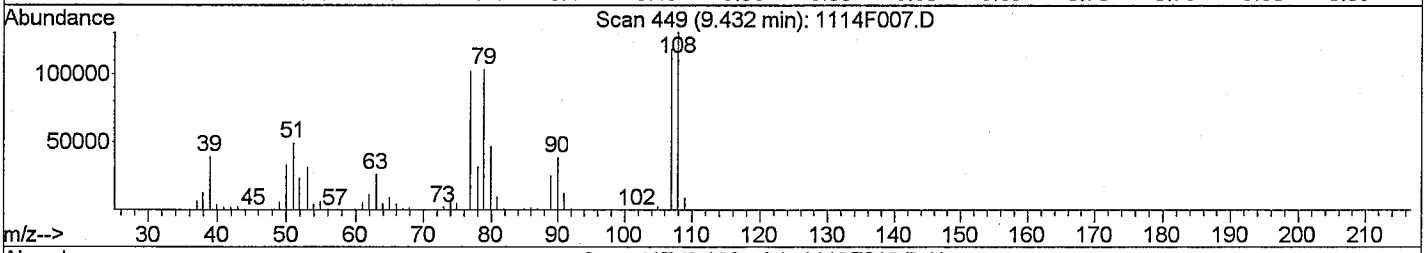
1114F007.D 1114BNLL.M Mon Nov 17 08:33:55 2003

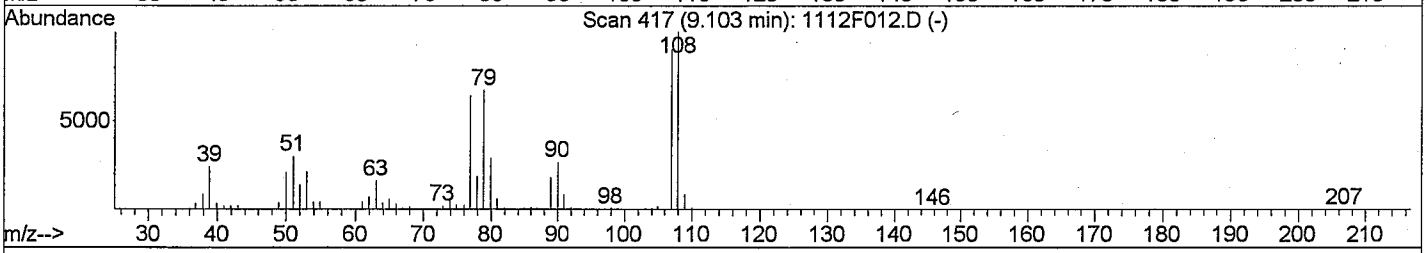
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F007.D Vial: 7
Acq On : 14 Nov 2003 18:50 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM15-70H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:34 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F007.D

(15) 2-Methylphenol (T)

9.43min 3956.70ng/ml m

response 183630

Ion	Exp%	Act%
107.00	100	100
108.00	109.20	110.30
77.00	54.20	85.95#
79.00	52.80	87.37#

11/17/3 missed mt 11/18/03

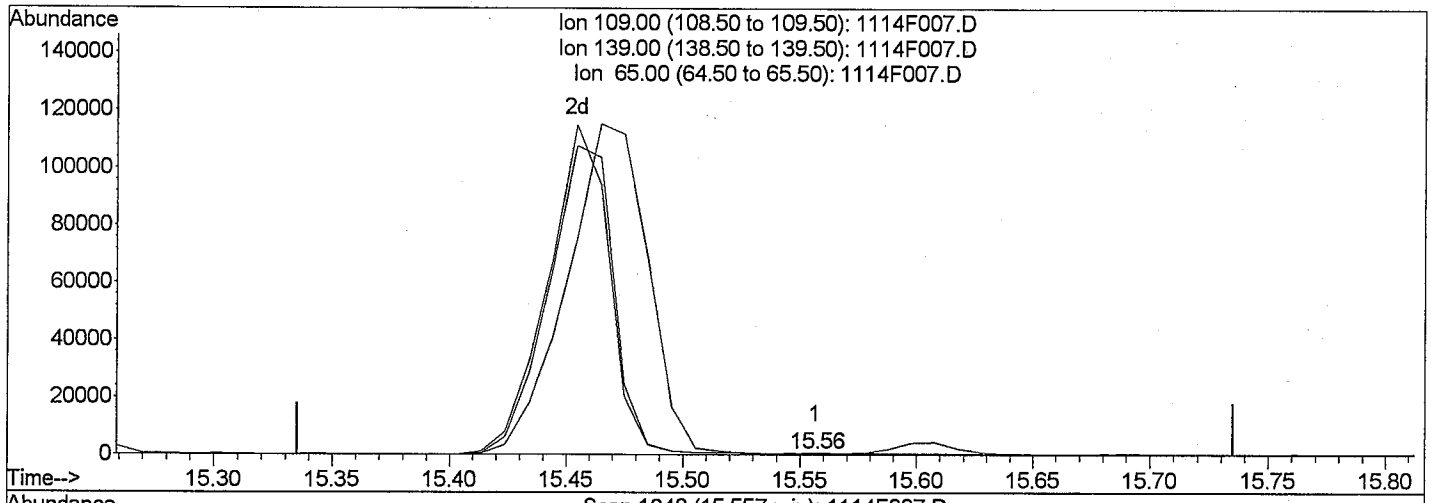
1114F007.D 1114BNLL.M Mon Nov 17 08:34:16 2003

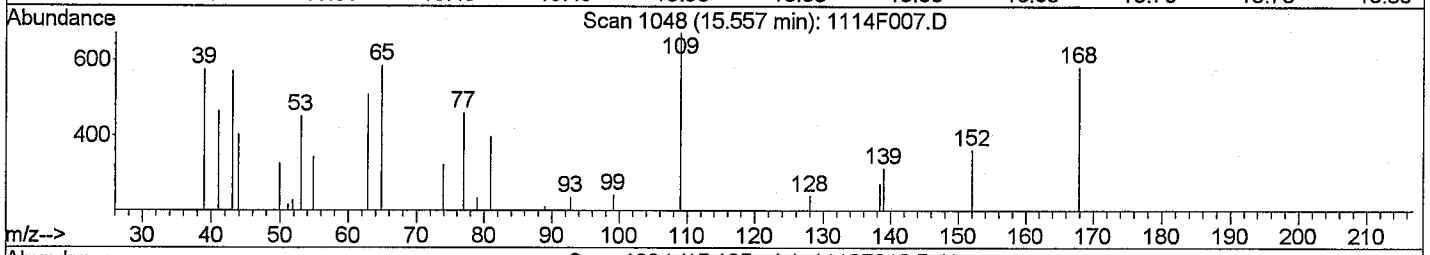
Quantitation Report (Qedit)

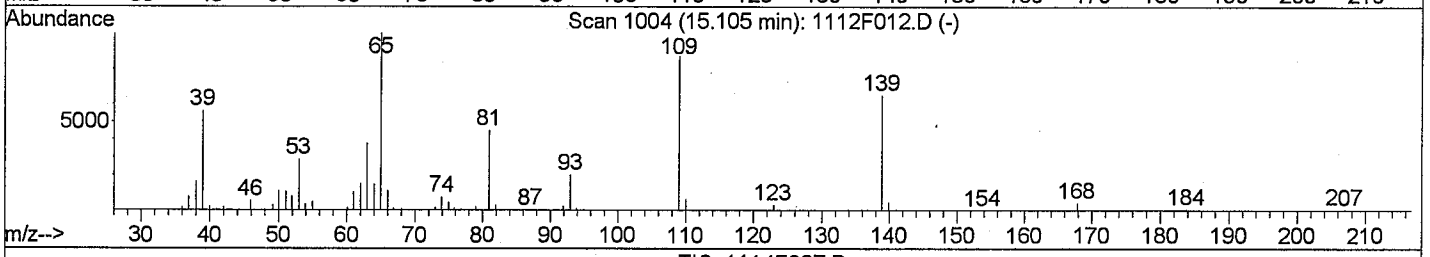
Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:34 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F007.D

(48) 4-Nitrophenol (TP)

15.56min 65.48ng/ml

response 2700

Ion	Exp%	Act%
109.00	100	100
139.00	126.90	0.00#
65.00	131.90	37.70#
0.00	0.00	0.00

1114F007.D 1114BNLL.M Mon Nov 17 08:34:41 2003

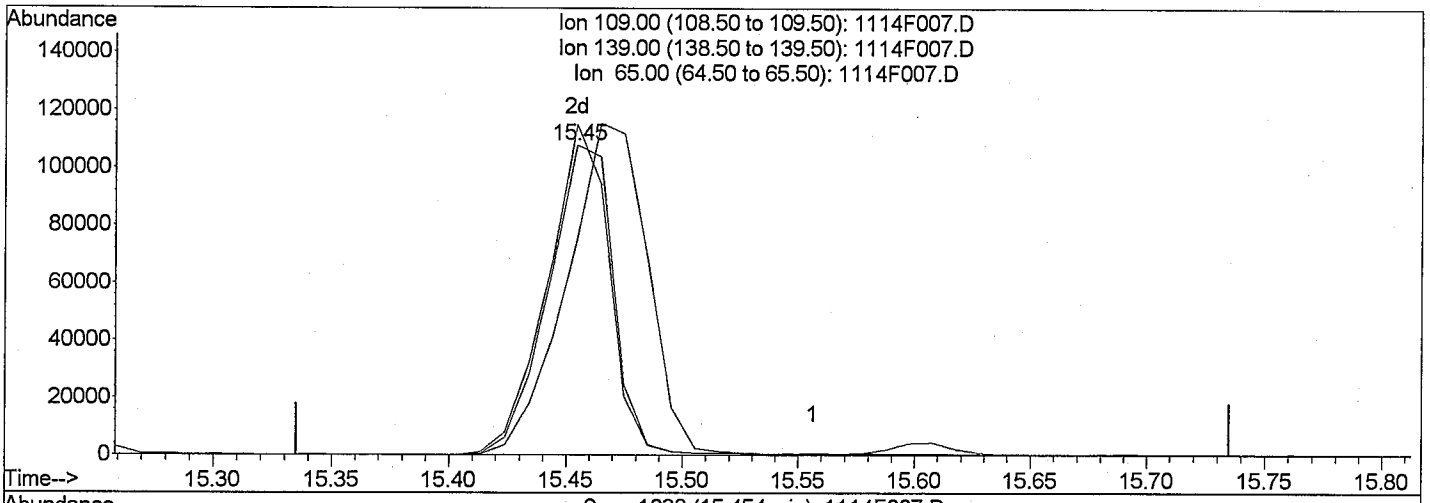
Quantitation Report (Qedit)

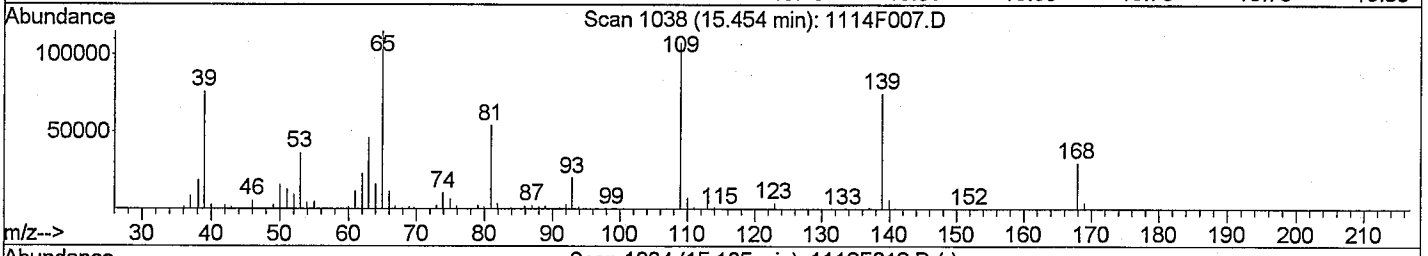
Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:35 2003

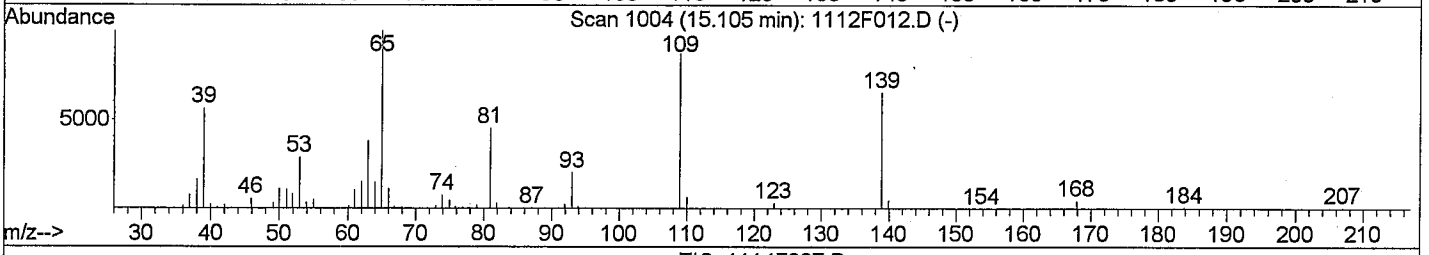
Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F007.D

(48) 4-Nitrophenol (TP)

15.45min 5110.23ng/ml m

response 210701

Ion	Exp%	Act%
109.00	100	100
139.00	126.90	69.26#
65.00	131.90	106.66
0.00	0.00	0.00

JG 11/17/3 missed
MA 11/18/03

1114F007.D 1114BNLL.M Mon Nov 17 08:34:59 2003

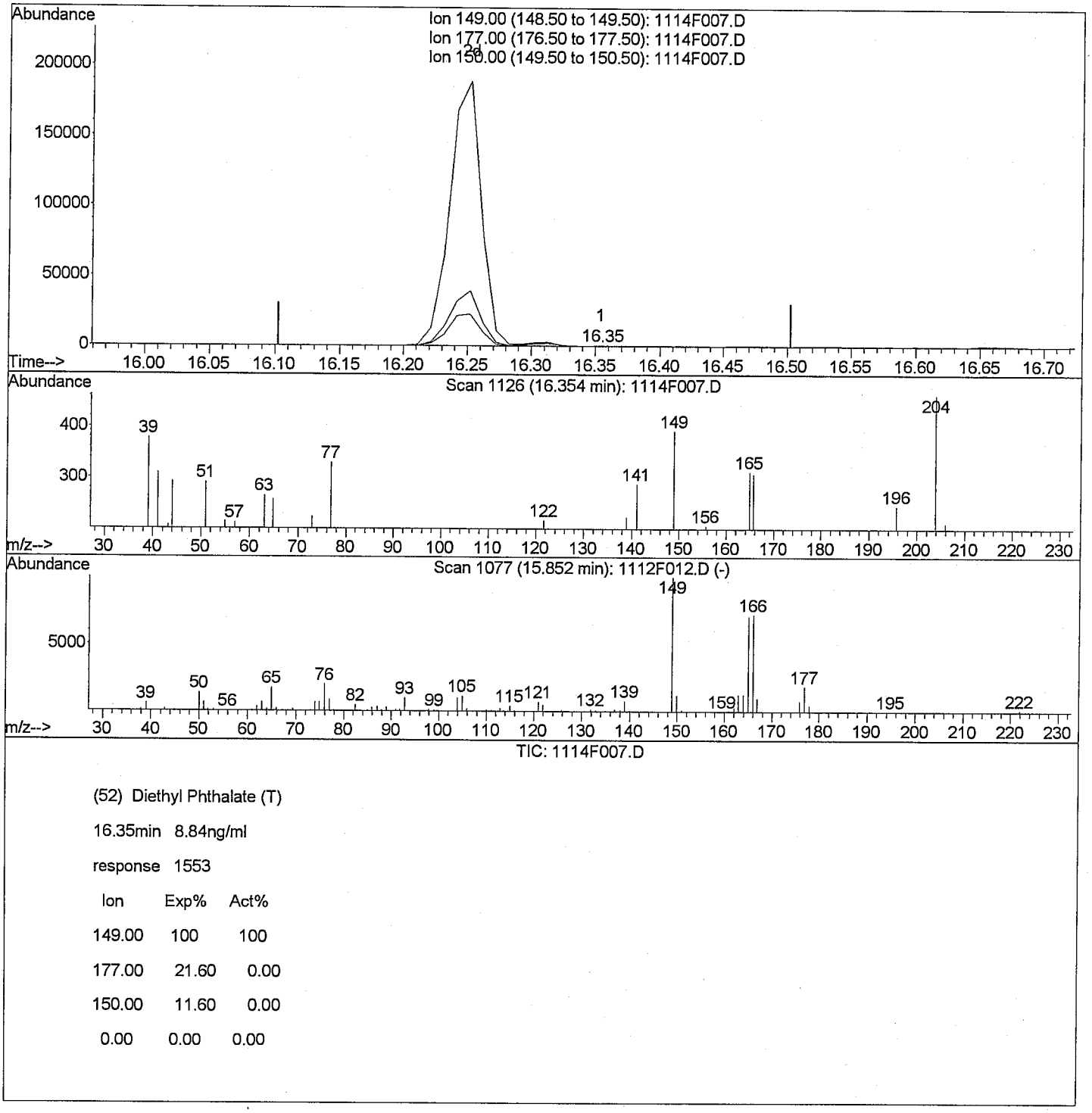
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:35 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration



TIC: 1114F007.D

(52) Diethyl Phthalate (T)

16.35min 8.84ng/ml

response 1553

Ion	Exp%	Act%
149.00	100	100
177.00	21.60	0.00
150.00	11.60	0.00
0.00	0.00	0.00

1114F007.D 1114BNLL.M Mon Nov 17 08:35:09 2003

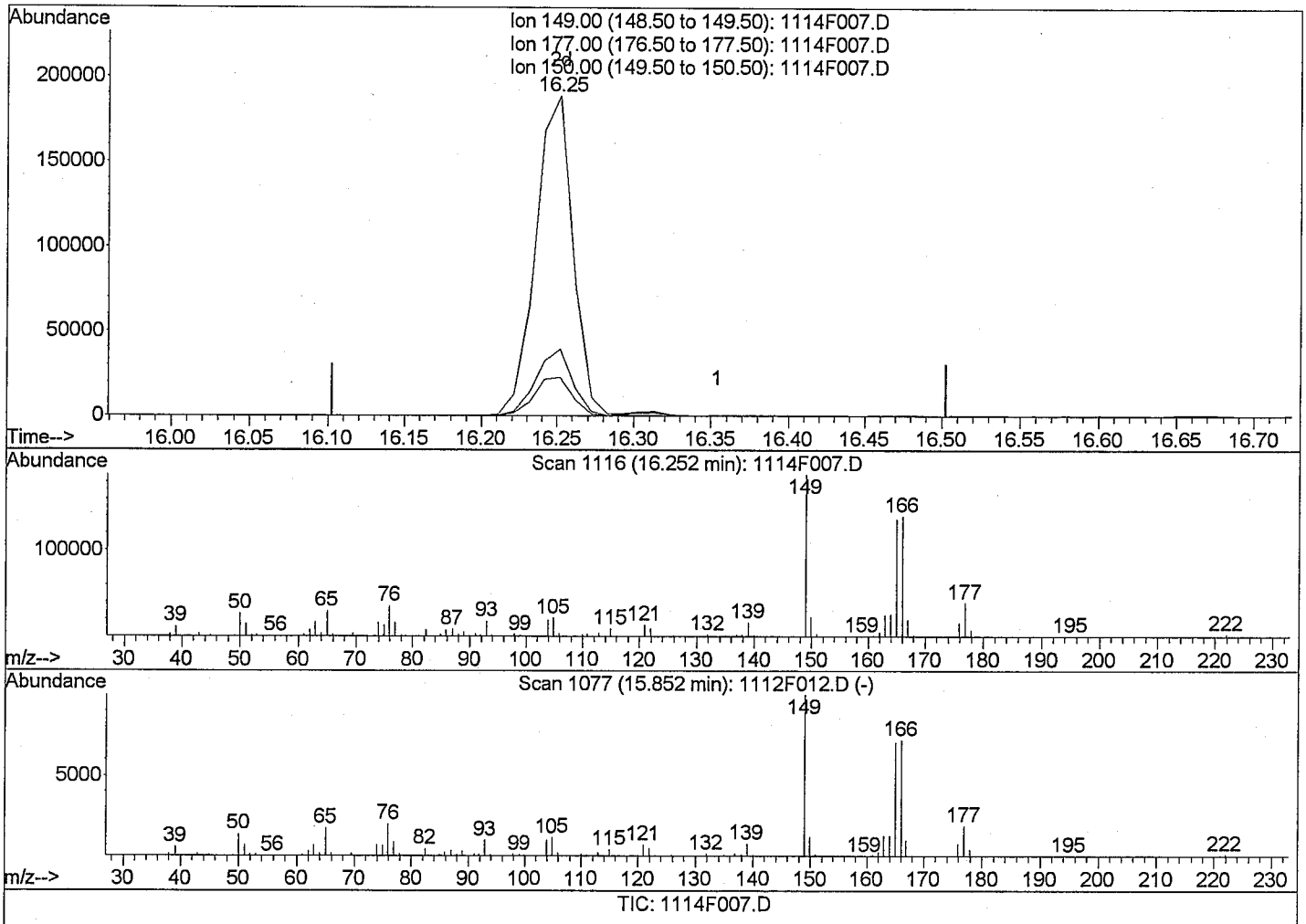
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F007.D
Acq On : 14 Nov 2003 18:50
Sample : 8270-LL @ 2/4 ppm SVM15-70H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:35 2003

Vial: 7
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration



TIC: 1114F007.D

(52) Diethyl Phthalate (T)

16.25min 1849.55ng/ml m

response 325068

Ion	Exp%	Act%
149.00	100	100
177.00	21.60	20.75
150.00	11.60	11.90
0.00	0.00	0.00

11/17/03 mussed
ant 11/18/03

1114F007.D 1114BNLL.M Mon Nov 17 08:35:25 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F008.D Vial: 8
Acq On : 14 Nov 2003 19:31 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM15-70I Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:24:03 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	61811	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	157723	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	105815	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	190162	1000.00	ng/ml	0.00
67) Chrysene-d12	24.54	240	194716	1000.00	ng/ml	-0.01
76) Perylene-d12	28.02	264	137443	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	196277	2618.92	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 69.84%			
6) Phenol-d6	8.46	99	224487	2453.85	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 65.44%			
19) Nitrobenzene-d5	9.95	82	294498	2869.49	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 114.78%			
38) 2-Fluorobiphenyl	13.59	172	431874	3076.05	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 123.04%			
58) 2,4,6-Tribromophenol	16.86	330	103305	3635.67	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 96.95%			
70) Terphenyl-d14	22.20	244	448332	2994.72	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 119.79%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.61	42	186212m	2907.06	ng/ml	
3) Pyridine	5.65	79	185054m	2146.65	ng/ml	
5) Bis(2-chloroethyl) Ether	8.61	93	213674	2528.16	ng/ml	86
7) Phenol	8.49	94	484866	4820.06	ng/ml#	65
8) Aniline	8.53	93	263768	2412.52	ng/ml#	46
9) 2-Chlorophenol	8.69	128	401457	5601.71	ng/ml	90
10) 1,3-Dichlorobenzene	8.91	146	239390	2851.14	ng/ml	97
11) 1,4-Dichlorobenzene	9.00	146	254507	2799.72	ng/ml	96
12) 1,2-Dichlorobenzene	9.30	146	222664	2843.40	ng/ml	92
13) Benzyl Alcohol	9.23	108	115674	2566.19	ng/ml#	47
14) Bis(2-chloroisopropyl) Eth	9.50	45	202968	2420.48	ng/ml	74
15) 2-Methylphenol	9.44	107	301487	5000.65	ng/ml#	76
16) Hexachloroethane	9.82	117	122296	2976.89	ng/ml	96
17) N-Nitrosodi-n-propylamine	9.74	70	165373	2652.67	ng/ml	75
18) 4-Methylphenol	9.69	107	434319	4839.90	ng/ml	81
20) Nitrobenzene	9.98	77	284778	2714.00	ng/ml	85
22) Isophorone	10.42	82	413144	2862.82	ng/ml	94
23) 2-Nitrophenol	10.57	139	224307	6399.95	ng/ml#	55
24) 2,4-Dimethylphenol	10.66	122	291721	5628.60	ng/ml#	76
25) Bis(2-chloroethoxy)methane	10.86	93	231020	2806.35	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1114F008.D 1114BNLL.M Mon Nov 17 11:20:30 2003 Page 1

11/17/3
mt 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F008.D Vial: 8
Acq On : 14 Nov 2003 19:31 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM15-70I Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:24:03 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.02	162	373658	6322.35	ng/ml	98
27)	Benzoic Acid	10.94	122	242875	6862.50	ng/ml	81
28)	1,2,4-Trichlorobenzene	11.18	180	234418	3287.11	ng/ml	97
29)	Naphthalene	11.30	128	481995	2922.70	ng/ml	97
30)	4-Chloroaniline	11.47	127	207645	2999.46	ng/ml	83
31)	Hexachlorobutadiene	11.69	225	162417	3562.62	ng/ml	96
32)	4-Chloro-3-methylphenol	12.48	107	390627	6113.43	ng/ml	74
33)	2-Methylnaphthalene	12.73	142	302956	3073.11	ng/ml	99
35)	Hexachlorocyclopentadiene	13.23	237	155338	5606.11	ng/ml	97
36)	2,4,6-Trichlorophenol	13.41	196	323285	6850.93	ng/ml	99
37)	2,4,5-Trichlorophenol	13.48	196	340410	6717.58	ng/ml	98
39)	2-Chloronaphthalene	13.77	127	149749	3082.66	ng/ml	87
40)	2-Nitroaniline	14.09	65	154815	2924.17	ng/ml#	75
41)	Acenaphthylene	14.69	152	498707	2825.45	ng/ml	98
42)	Dimethyl Phthalate	14.62	163	479274	3042.82	ng/ml	99
43)	2,6-Dinitrotoluene	14.74	165	106329	3019.16	ng/ml	72
44)	Acenaphthene	15.11	154	305399	2961.55	ng/ml	99
45)	3-Nitroaniline	15.03	138	98364	2891.90	ng/ml	90
46)	2,4-Dinitrophenol	15.25	184	160389	6313.26	ng/ml#	65
47)	Dibenzofuran	15.48	168	522316	2872.55	ng/ml	70
48)	4-Nitrophenol	15.47	109	277343	7009.02	ng/ml#	84
49)	2,4-Dinitrotoluene	15.61	165	146215	3172.64	ng/ml	63
50)	Fluorene	16.26	166	399352	2923.94	ng/ml	98
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	247679	3103.73	ng/ml	89
52)	Diethyl Phthalate	16.26	149	494253	2930.27	ng/ml	97
53)	4-Nitroaniline	16.44	138	98004	2670.97	ng/ml#	23
54)	2-Methyl-4,6-dinitrophenol	16.53	198	240521	5368.85	ng/ml	75
55)	N-Nitrosodiphenylamine	16.60	169	297592	2976.57	ng/ml	95
56)	Azobenzene	16.67	77	559805	2762.80	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.41	248	168059	3277.00	ng/ml	87
60)	Hexachlorobenzene	17.71	284	181567	3231.94	ng/ml	94
61)	Pentachlorophenol	18.14	266	256866	7839.58	ng/ml	100
62)	Phenanthrene	18.43	178	609439	2872.17	ng/ml	99
63)	Anthracene	18.54	178	624670	2948.46	ng/ml	98
64)	Carbazole	18.96	167	527357	2871.35	ng/ml	97
65)	Di-n-butyl Phthalate	20.04	149	738529	2830.99	ng/ml	97
66)	Fluoranthene	21.20	202	678496	2993.19	ng/ml	92
68)	Benzidine	21.59	184	628261	6012.11	ng/ml	94
69)	Pyrene	21.70	202	674506	2879.40	ng/ml	99
71)	Butyl Benzyl Phthalate	23.50	149	333401	2857.50	ng/ml	92
72)	3,3'-Dichlorobenzidine	24.57	252	488940	6159.37	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1114F008.D 1114BNLL.M Mon Nov 17 11:20:31 2003 Page 2

11/17/3
mt 11/18/03

Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:24:03 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.51	228	624570	2974.33	ng/ml	97
74)	Chrysene	24.61	228	597264	2960.58	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	457479	2798.69	ng/ml	97
77)	Di-n-octyl Phthalate	26.49	149	755711m	2808.02	ng/ml	
78)	Benzo(b)fluoranthene	27.13	252	567326	2908.09	ng/ml	93
79)	Benzo(k)fluoranthene	27.19	252	551939	3089.32	ng/ml	94
80)	Benzo(a)pyrene	27.88	252	548062	3044.61	ng/ml	93
81)	Indeno(1,2,3-cd)pyrene	30.57	276	527636	3243.69	ng/ml	87
82)	Dibenz(a,h)anthracene	30.64	278	534356	3372.20	ng/ml	90
83)	Benzo(g,h,i)perylene	31.14	276	539156	3221.60	ng/ml	86

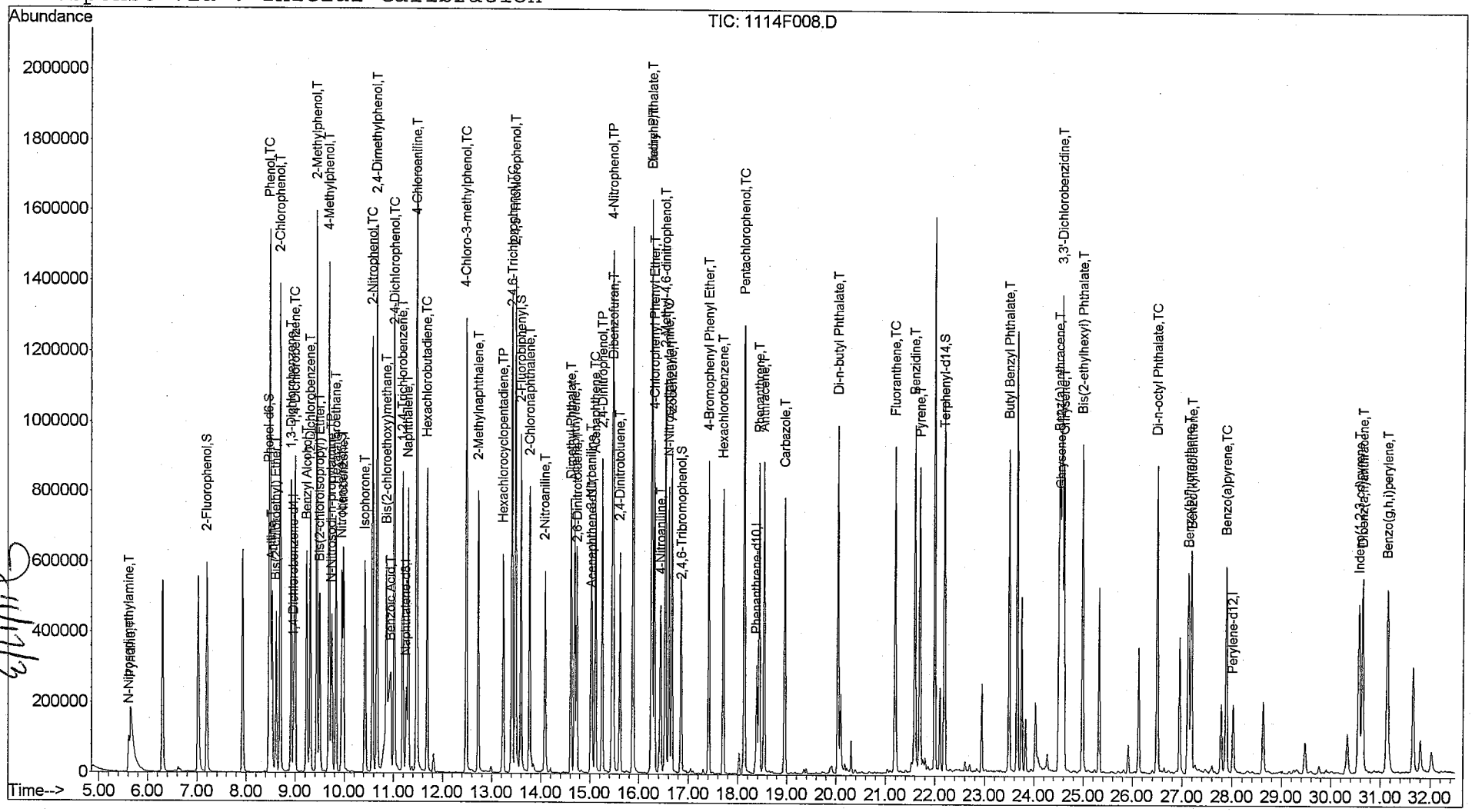
11/17/3 mt 11/18/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F008.D Vial: 8
Acq On : 14 Nov 2003 19:31 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM15-70I Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:38 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



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1114F008.D 1114BNLL.M Mon Nov 17 11:20:31 2003 Page 4

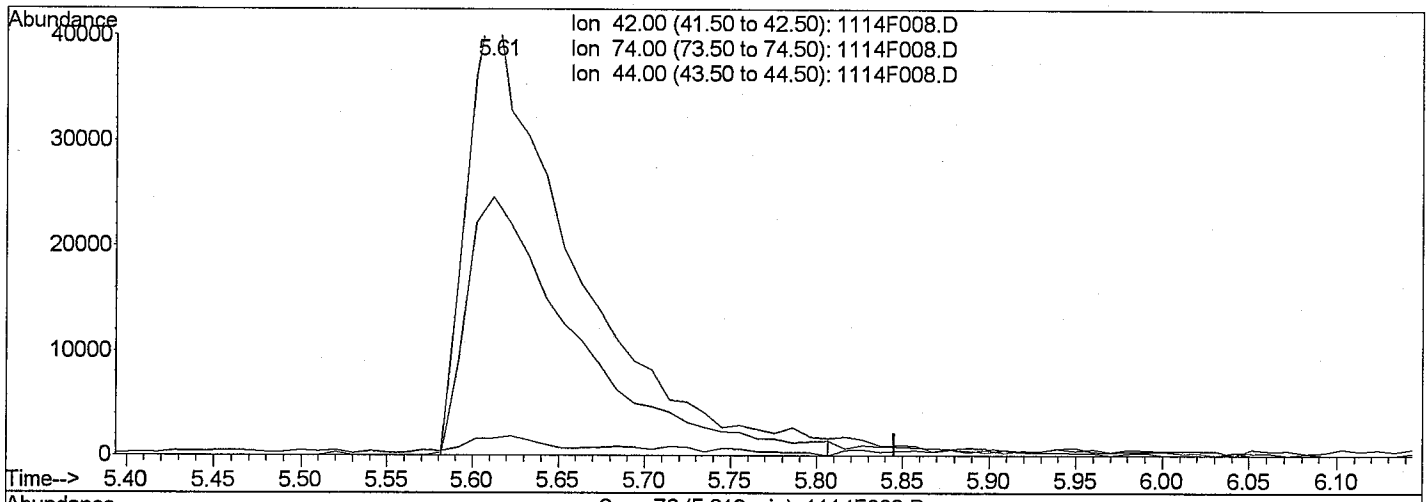
Quantitation Report (Qedit)

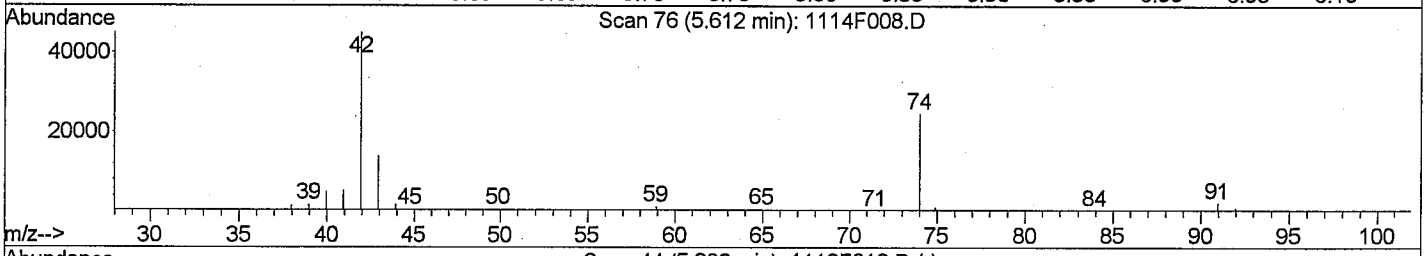
Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:24 2003

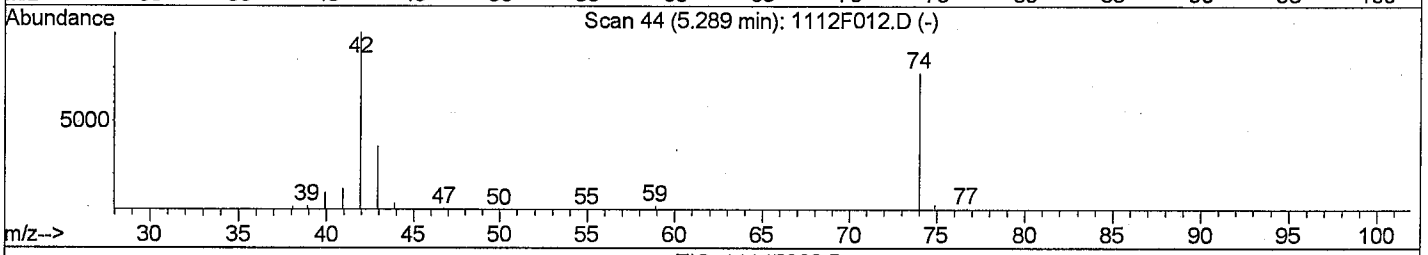
Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F008.D

(2) N-Nitrosodimethylamine (T)

5.61min 2851.21ng/ml

response 182635

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	54.62#
44.00	5.00	3.61
0.00	0.00	0.00

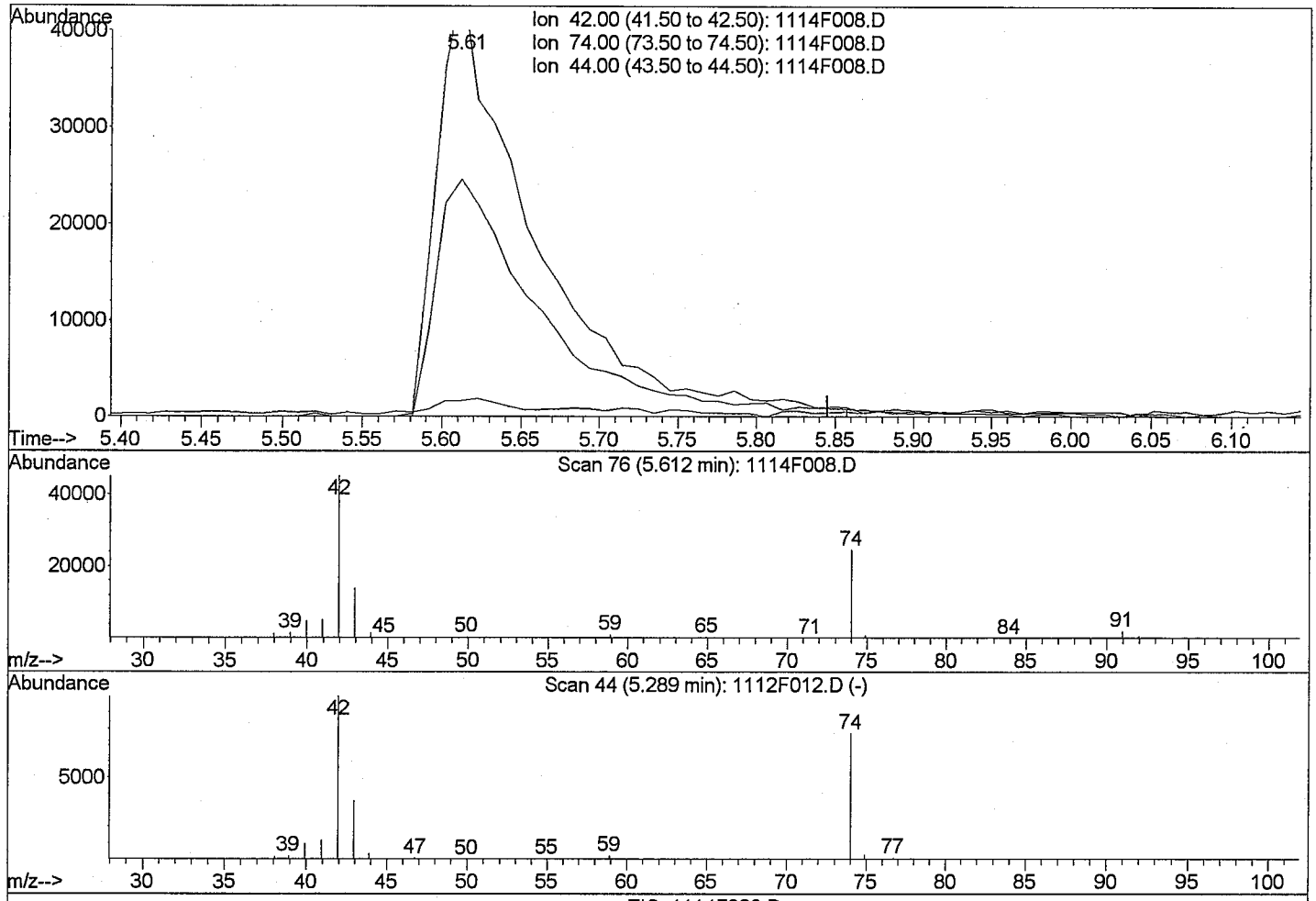
1114F008.D 1114BNLL.M Mon Nov 17 08:36:05 2003

Quantitation Report (Qedit)

Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:36 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration



TIC: 1114F008.D

(2) N-Nitrosodimethylamine (T)

5.61min 2907.06ng/ml m

response 186212

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	54.62#
44.00	5.00	3.61
0.00	0.00	0.00

11/17/3 JGrimsgaard

mt 11/18/03

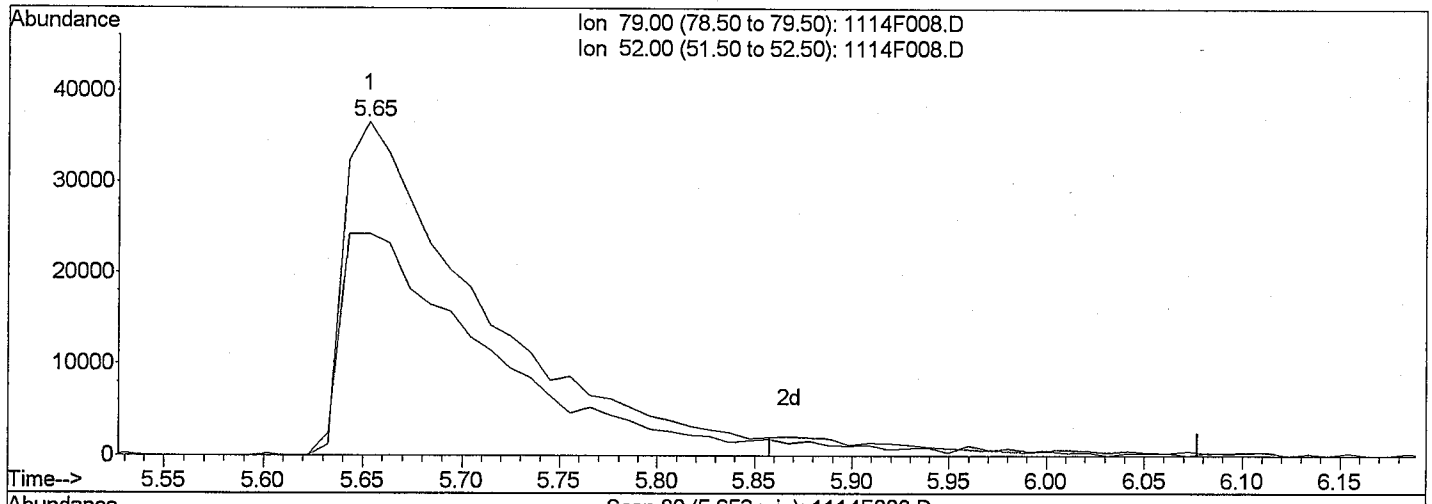
1114F008.D 1114BNLL.M Mon Nov 17 08:36:10 2003

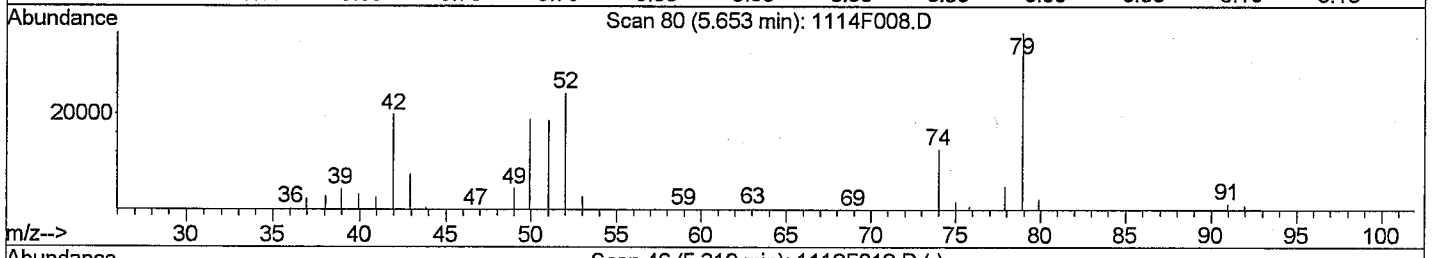
Quantitation Report (Qedit)

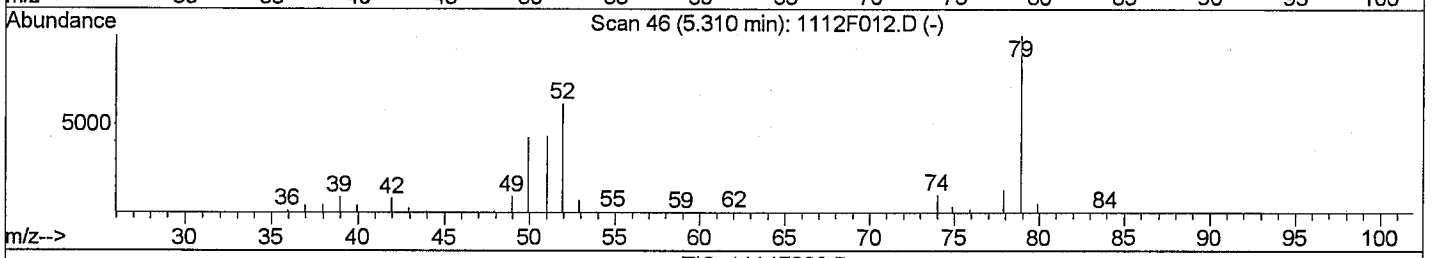
Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:36 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F008.D

(3) Pyridine (T)

5.65min 2042.26ng/ml

response 176055

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	66.33
0.00	0.00	0.00
0.00	0.00	0.00

1114F008.D 1114BNLL.M Mon Nov 17 08:36:16 2003

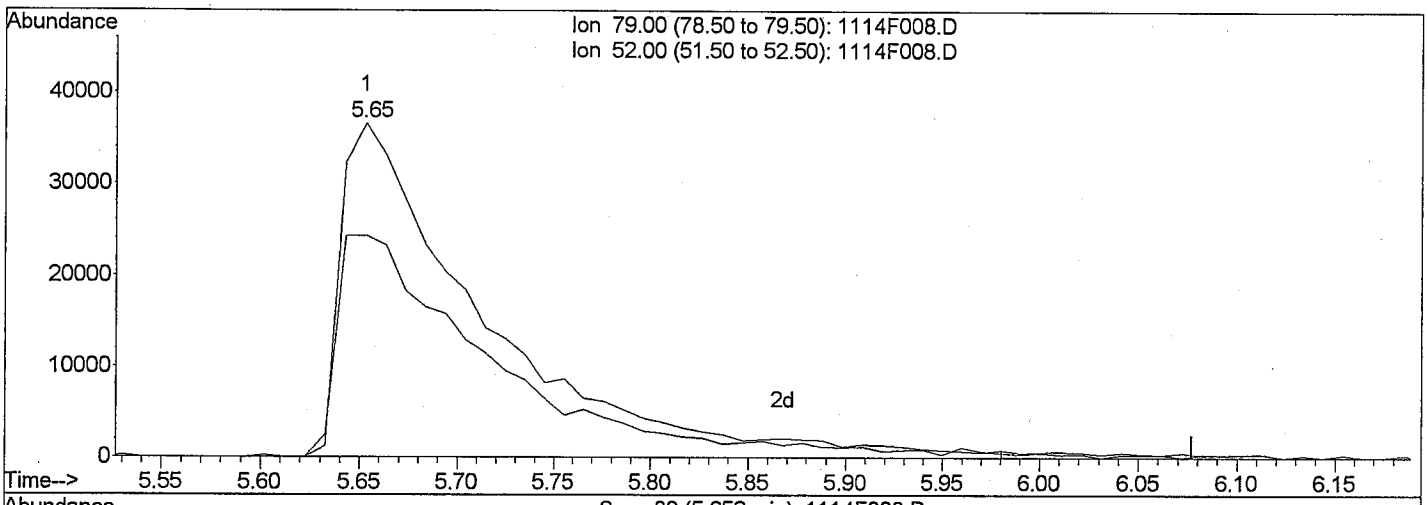
Quantitation Report (Qedit)

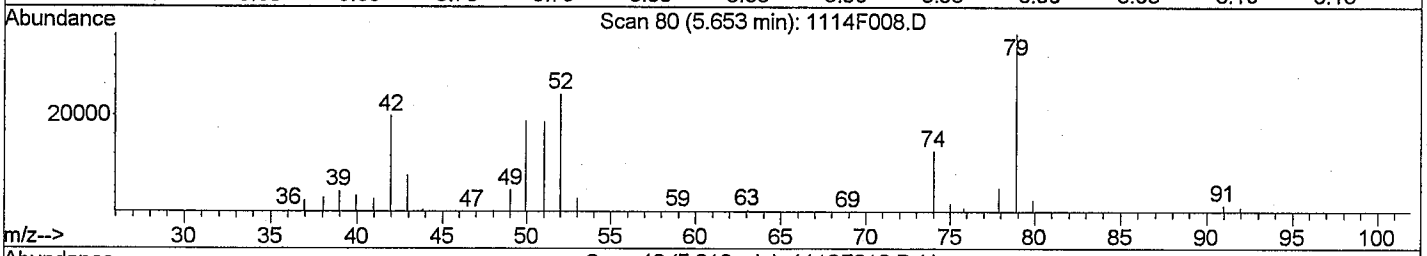
Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:36 2003

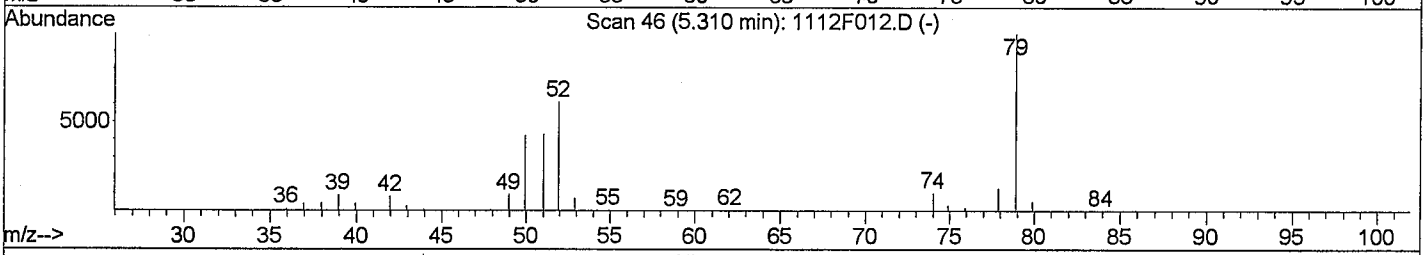
Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F008.D

(3) Pyridine (T)

5.65min 2146.65ng/ml m

response 185054

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	66.33
0.00	0.00	0.00
0.00	0.00	0.00

11/17/3 Incomplete

mt 11/18/03

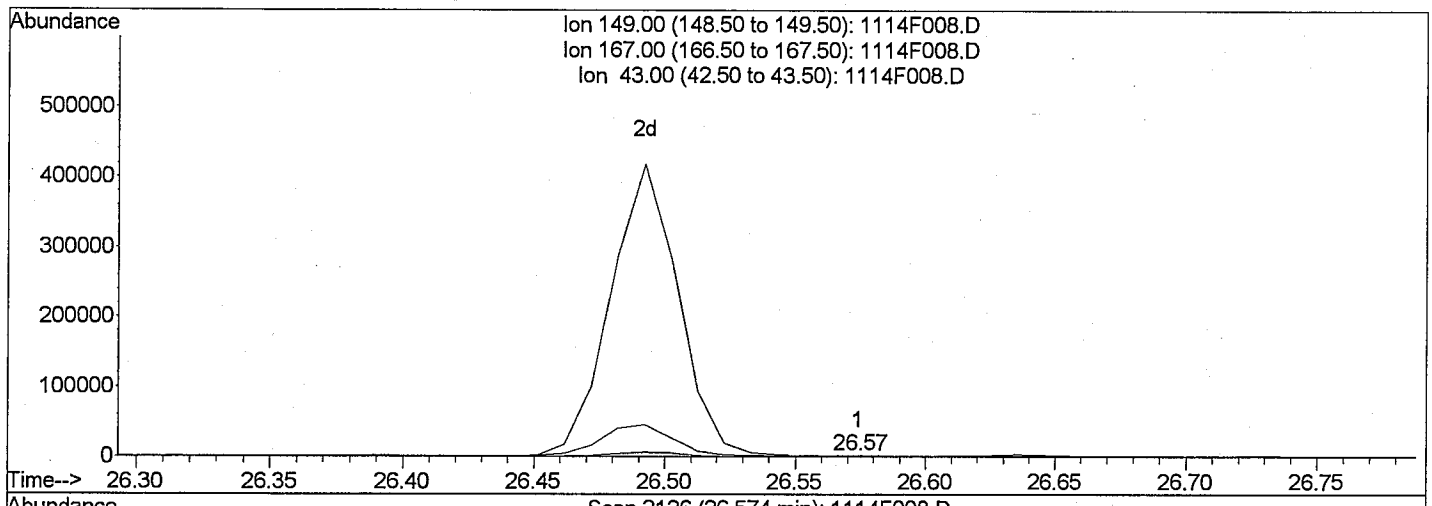
1114F008.D 1114BNLL.M Mon Nov 17 08:36:23 2003

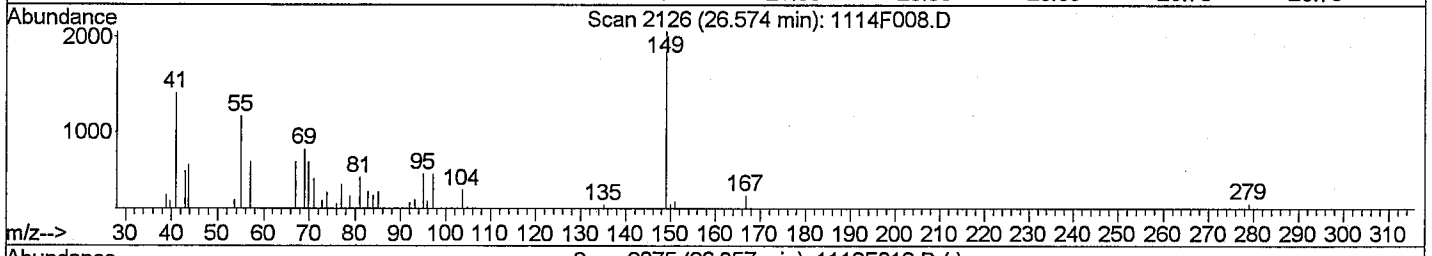
Quantitation Report (Qedit)

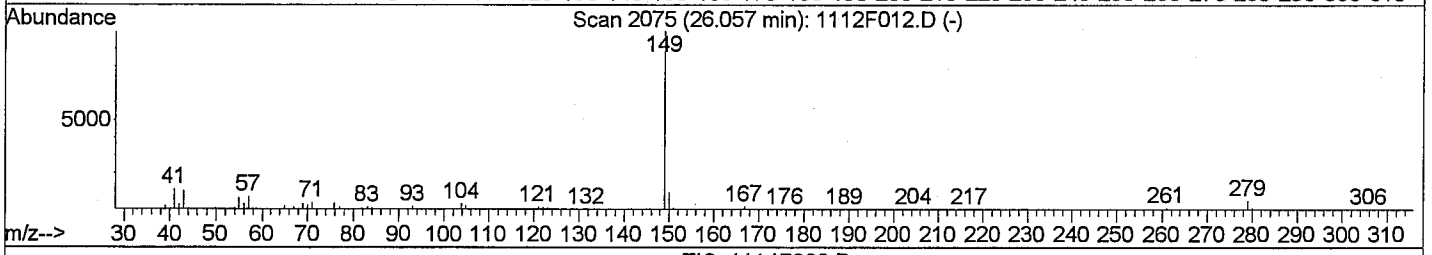
Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:36 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F008.D

(77) Di-n-octyl Phthalate (TC)

26.57min 12.24ng/ml

response 3294

Ion	Exp%	Act%
149.00	100	100
167.00	1.30	21.17
43.00	8.10	0.00
0.00	0.00	0.00

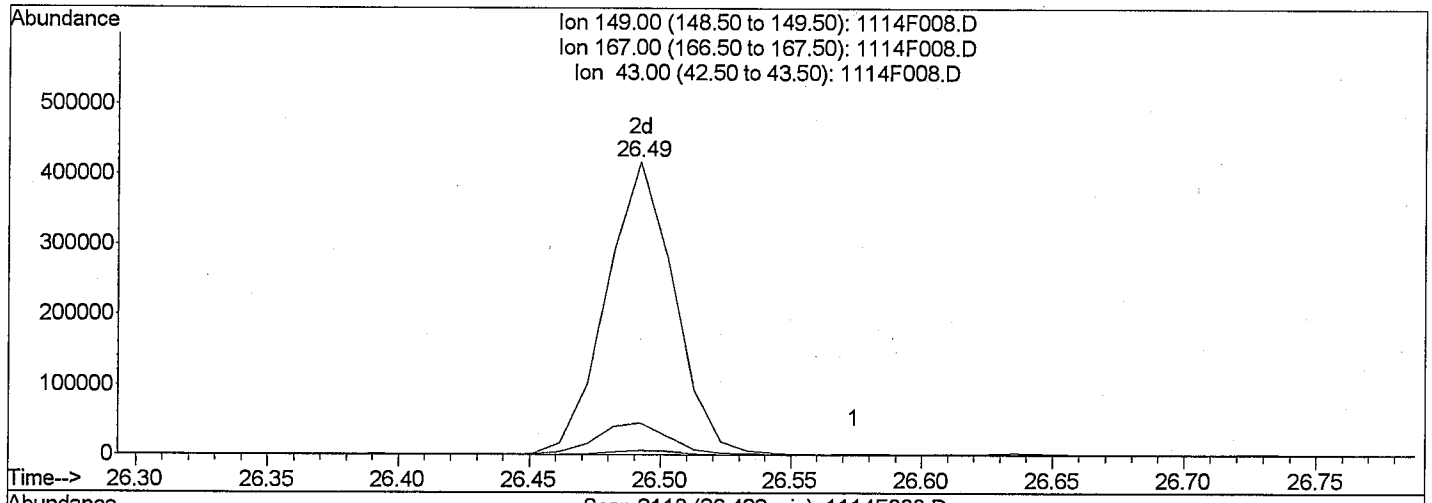
1114F008.D 1114BNLL.M Mon Nov 17 08:37:39 2003

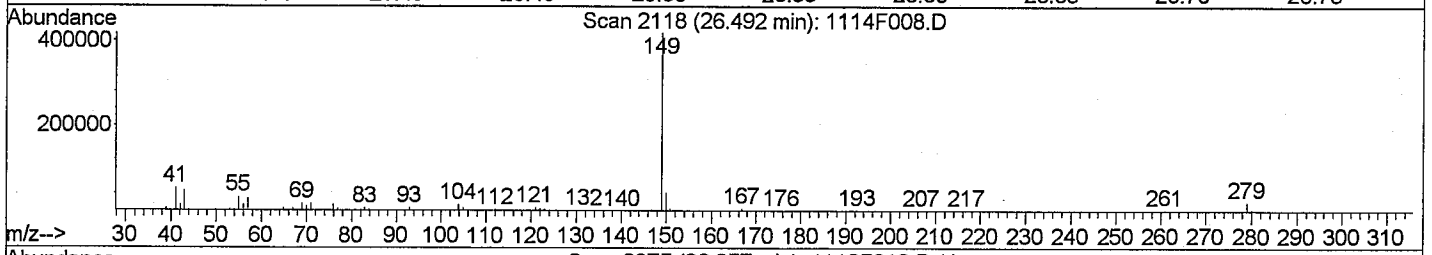
Quantitation Report (Qedit)

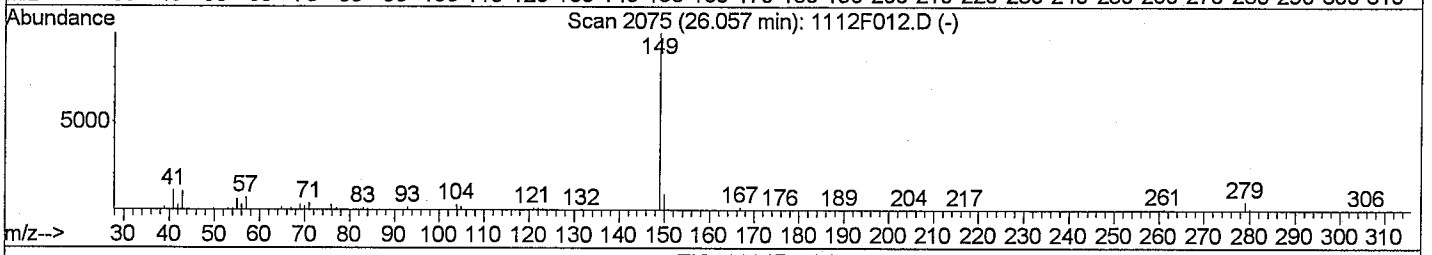
Data File : J:\MS10\DATA\111403\1114F008.D
Acq On : 14 Nov 2003 19:31
Sample : 8270-LL @ 3/6 ppm SVM15-70I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:38 2003

Vial: 8
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F008.D

(77) Di-n-octyl Phthalate (TC)

26.49min 2808.02ng/ml m

response 755711

Ion	Exp%	Act%
149.00	100	100
167.00	1.30	1.48
43.00	8.10	10.85
0.00	0.00	0.00

JJ 11/17/03 manual
mst 11/18/03

1114F008.D 1114BNLL.M Mon Nov 17 08:37:50 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F010.D Vial: 10
Acq On : 14 Nov 2003 20:53 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM15-70K Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:24:12 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	66261	1000.00 ng/ml	0.00
21) Naphthalene-d8	11.27	136	175614	1000.00 ng/ml	0.01
34) Acenaphthene-d10	15.04	164	115345	1000.00 ng/ml	0.00
57) Phenanthrene-d10	18.39	188	202847	1000.00 ng/ml	0.00
67) Chrysene-d12	24.55	240	214456	1000.00 ng/ml	0.00
76) Perylene-d12	28.03	264	152072	1000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	7.20	112	361891	4504.42 ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 120.12%#		
6) Phenol-d6	8.48	99	422196	4305.05 ng/ml	-0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 114.80%		
19) Nitrobenzene-d5	9.96	82	553781	5033.48 ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 201.34%#		
38) 2-Fluorobiphenyl	13.60	172	795723	5199.32 ng/ml	0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 207.97%#		
58) 2,4,6-Tribromophenol	16.86	330	195679	6455.99 ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 172.16%#		
70) Terphenyl-d14	22.20	244	835246	5065.64 ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 202.63%#		
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	5.59	42	346051m	5039.57 ng/ml	
3) Pyridine	5.63	79	364312	3942.26 ng/ml	83
5) Bis(2-chloroethyl) Ether	8.62	93	388926	4292.67 ng/ml	87
7) Phenol	8.50	94	883108	8189.41 ng/ml#	59
8) Aniline	8.53	93	492816	4204.76 ng/ml#	52
9) 2-Chlorophenol	8.70	128	733690	9549.96 ng/ml	91
10) 1,3-Dichlorobenzene	8.92	146	450337	5003.32 ng/ml	96
11) 1,4-Dichlorobenzene	9.00	146	465930	4781.28 ng/ml	95
12) 1,2-Dichlorobenzene	9.31	146	424335	5054.81 ng/ml	96
13) Benzyl Alcohol	9.24	108	226204	4681.25 ng/ml#	47
14) Bis(2-chloroisopropyl) Eth	9.50	45	382774	4258.18 ng/ml	75
15) 2-Methylphenol	9.45	107	543272m	8405.87 ng/ml	
16) Hexachloroethane	9.83	117	231513	5256.95 ng/ml	98
17) N-Nitrosodi-n-propylamine	9.78	70	308613	4617.86 ng/ml	79
18) 4-Methylphenol	9.70	107	828442	8611.87 ng/ml	81
20) Nitrobenzene	9.99	77	537299	4776.70 ng/ml	84
22) Isophorone	10.45	82	779524	4851.30 ng/ml	94
23) 2-Nitrophenol	10.58	139	416084	10662.29 ng/ml#	55
24) 2,4-Dimethylphenol	10.68	122	540409	9364.64 ng/ml#	68
25) Bis(2-chloroethoxy)methane	10.87	93	432858	4722.52 ng/ml	100

(#) = qualifier out of range (m) = manual integration
1114F010.D 1114BNLL.M Mon Nov 17 11:20:34 2003 Page 1

11/17/3
11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F010.D Vial: 10
Acq On : 14 Nov 2003 20:53 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM15-70K Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:24:12 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26)	2,4-Dichlorophenol	11.02	162	714903	10863.93 ng/ml	96
27)	Benzoic Acid	11.02	122	474852	11469.37 ng/ml#	65
28)	1,2,4-Trichlorobenzene	11.20	180	435113	5479.76 ng/ml	95
29)	Naphthalene	11.31	128	898276	4892.01 ng/ml	97
30)	4-Chloroaniline	11.48	127	373910	4850.92 ng/ml	82
31)	Hexachlorobutadiene	11.70	225	306159	6031.43 ng/ml	97
32)	4-Chloro-3-methylphenol	12.50	107	761372	10701.77 ng/ml#	73
33)	2-Methylnaphthalene	12.73	142	577408	5260.39 ng/ml	99
35)	Hexachlorocyclopentadiene	13.24	237	304566	10083.55 ng/ml	95
36)	2,4,6-Trichlorophenol	13.42	196	609212	11843.52 ng/ml	96
37)	2,4,5-Trichlorophenol	13.49	196	657489	11902.75 ng/ml	99
39)	2-Chloronaphthalene	13.77	127	280620	5299.42 ng/ml	88
40)	2-Nitroaniline	14.10	65	296653	5140.28 ng/ml#	75
41)	Acenaphthylene	14.69	152	964756	5014.28 ng/ml	97
42)	Dimethyl Phthalate	14.63	163	884272	5150.23 ng/ml	99
43)	2,6-Dinitrotoluene	14.75	165	201883	5258.75 ng/ml#	42
44)	Acenaphthene	15.12	154	559799	4980.03 ng/ml	98
45)	3-Nitroaniline	15.04	138	184846	4985.46 ng/ml	96
46)	2,4-Dinitrophenol	15.28	184	339435	12257.00 ng/ml	64
47)	Dibenzofuran	15.49	168	979269	4940.66 ng/ml#	34
48)	4-Nitrophenol	15.49	109	530849	12307.22 ng/ml#	70
49)	2,4-Dinitrotoluene	15.62	165	275617	5486.35 ng/ml	62
50)	Fluorene	16.27	166	721365	4845.25 ng/ml	98
51)	4-Chlorophenyl Phenyl Ethe	16.32	204	452325	5199.88 ng/ml	92
52)	Diethyl Phthalate	16.26	149	902268	4907.29 ng/ml	96
53)	4-Nitroaniline	16.46	138	179688	4492.55 ng/ml#	24
54)	2-Methyl-4,6-dinitrophenol	16.56	198	450291	8447.64 ng/ml	80
55)	N-Nitrosodiphenylamine	16.62	169	530162	4864.66 ng/ml	95
56)	Azobenzene	16.68	77	999821	4526.71 ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.42	248	302144	5523.11 ng/ml	90
60)	Hexachlorobenzene	17.72	284	326547	5449.13 ng/ml	89
61)	Pentachlorophenol	18.14	266	477521	12490.49 ng/ml	99
62)	Phenanthrene	18.45	178	1110344	4905.60 ng/ml	99
63)	Anthracene	18.55	178	1113811	4928.46 ng/ml	99
64)	Carbazole	18.97	167	967071	4936.23 ng/ml	94
65)	Di-n-butyl Phthalate	20.04	149	1432820	5148.93 ng/ml	96
66)	Fluoranthene	21.21	202	1312983	5430.01 ng/ml	91
68)	Benzidine	21.61	184	1059358	9204.34 ng/ml	95
69)	Pyrene	21.71	202	1302658	5049.06 ng/ml	99
71)	Butyl Benzyl Phthalate	23.51	149	623471	4851.77 ng/ml	97
72)	3,3'-Dichlorobenzidine	24.58	252	923379	10561.46 ng/ml	98

(#) = qualifier out of range (m) = manual integration
1114F010.D 1114BNLL.M Mon Nov 17 11:20:34 2003 Page 2

11/17/3
mt 11/18/03

Data File : J:\MS10\DATA\111403\1114F010.D
Acq On : 14 Nov 2003 20:53
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 08:24:12 2003

Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.52	228	1164453	5034.93	ng/ml	97
74)	Chrysene	24.62	228	1101412	4957.06	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	24.99	149	847919	4709.79	ng/ml	98
77)	Di-n-octyl Phthalate	26.50	149	1428091	4795.95	ng/ml	93
78)	Benzo(b)fluoranthene	27.14	252	1044335	4838.26	ng/ml	94
79)	Benzo(k)fluoranthene	27.20	252	1024026	5180.31	ng/ml	94
80)	Benzo(a)pyrene	27.91	252	1027922	5161.03	ng/ml	92
81)	Indeno(1,2,3-cd)pyrene	30.59	276	1029350	5719.28	ng/ml	87
82)	Dibenz(a,h)anthracene	30.66	278	986437	5626.33	ng/ml	92
83)	Benzo(g,h,i)perylene	31.17	276	1004412	5424.28	ng/ml	86

11/17/3

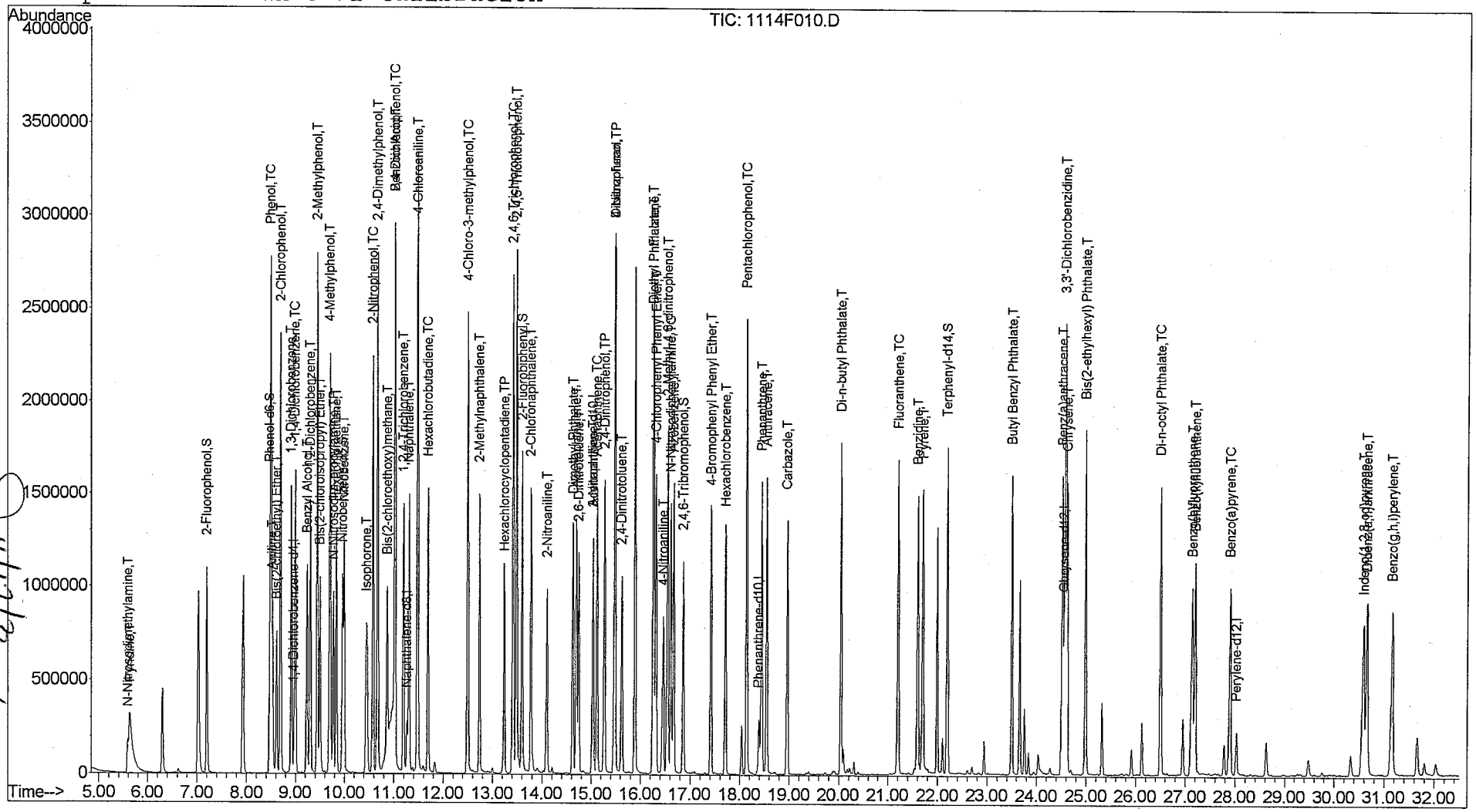
(#) = qualifier out of range (m) = manual integration

mnt 11/18/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111403\1114F010.D Vial: 10
Acq On : 14 Nov 2003 20:53 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM15-70K Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:41 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



2193

1114F010.D 1114BNLL.M Mon Nov 17 11:20:35 2003 Page 4

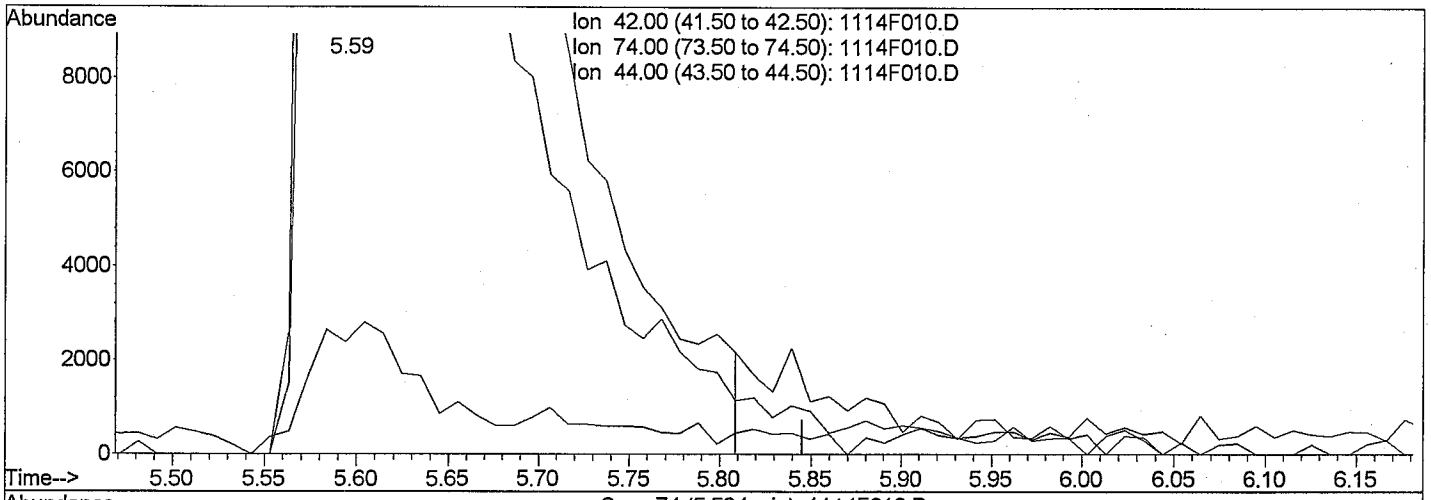
Quantitation Report (Qedit)

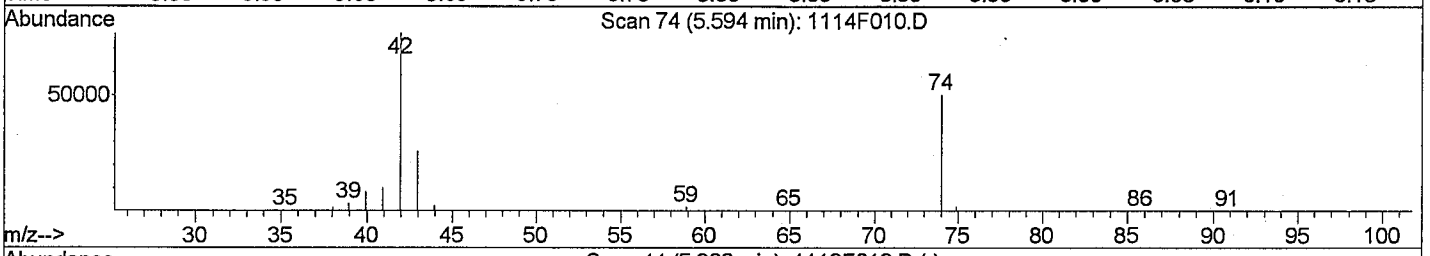
Data File : J:\MS10\DATA\111403\1114F010.D
Acq On : 14 Nov 2003 20:53
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:24 2003

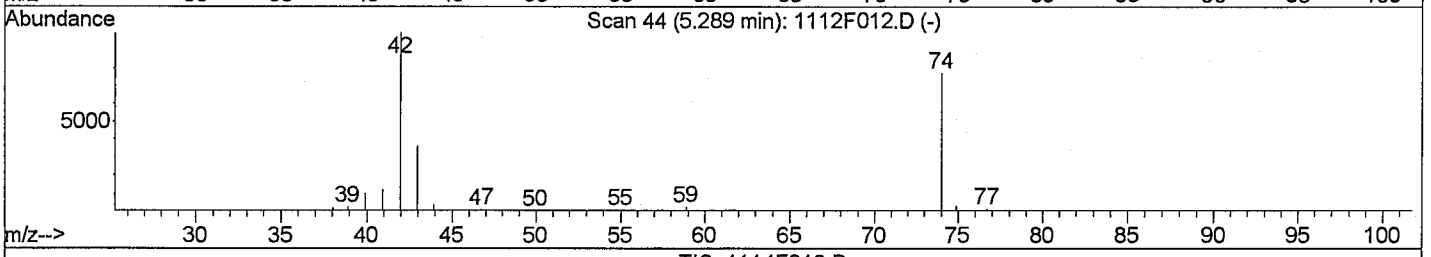
Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F010.D

(2) N-Nitrosodimethylamine (T)

5.59min 4903.55ng/ml

response 336711

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	65.80#
44.00	5.00	3.12
0.00	0.00	0.00

1114F010.D 1114BNLL.M Mon Nov 17 08:40:28 2003

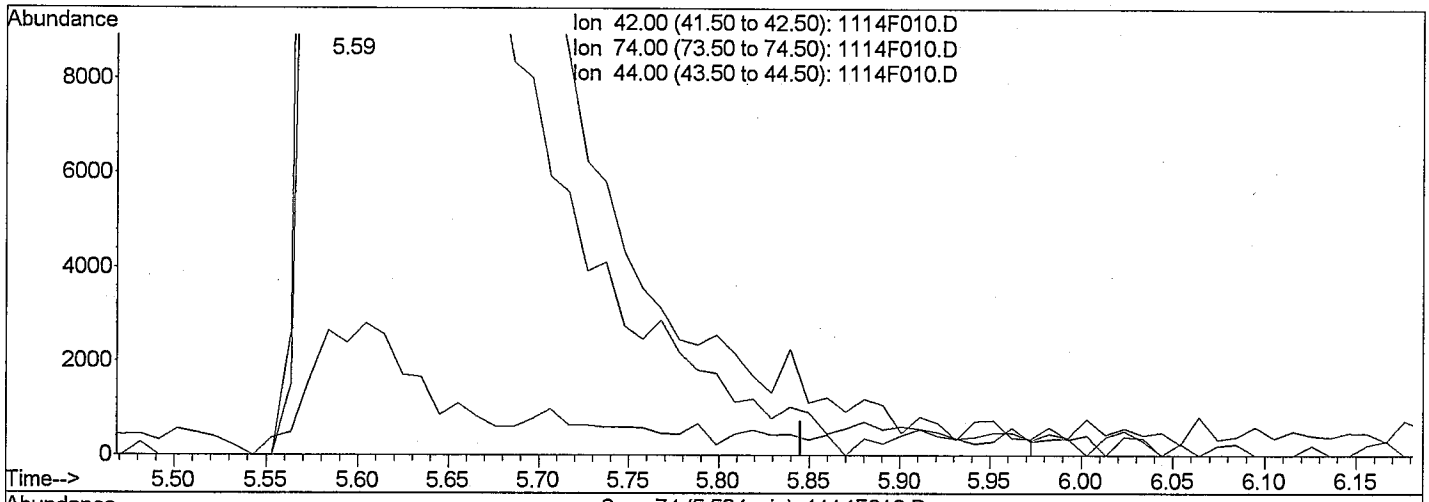
Quantitation Report (Qedit)

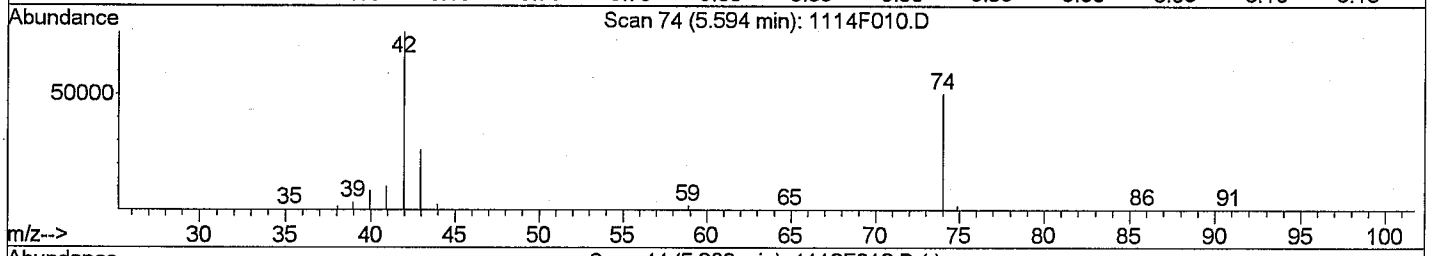
Data File : J:\MS10\DATA\111403\1114F010.D
Acq On : 14 Nov 2003 20:53
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:40 2003

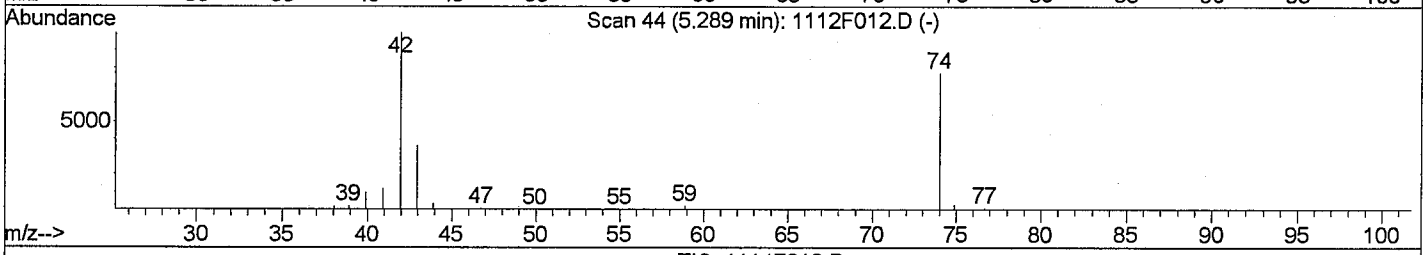
Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F010.D

(2) N-Nitrosodimethylamine (T)

5.59min 5039.57ng/ml m

response 346051

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	65.80#
44.00	5.00	3.12
0.00	0.00	0.00

11/17/03 Incomplete

11/18/03

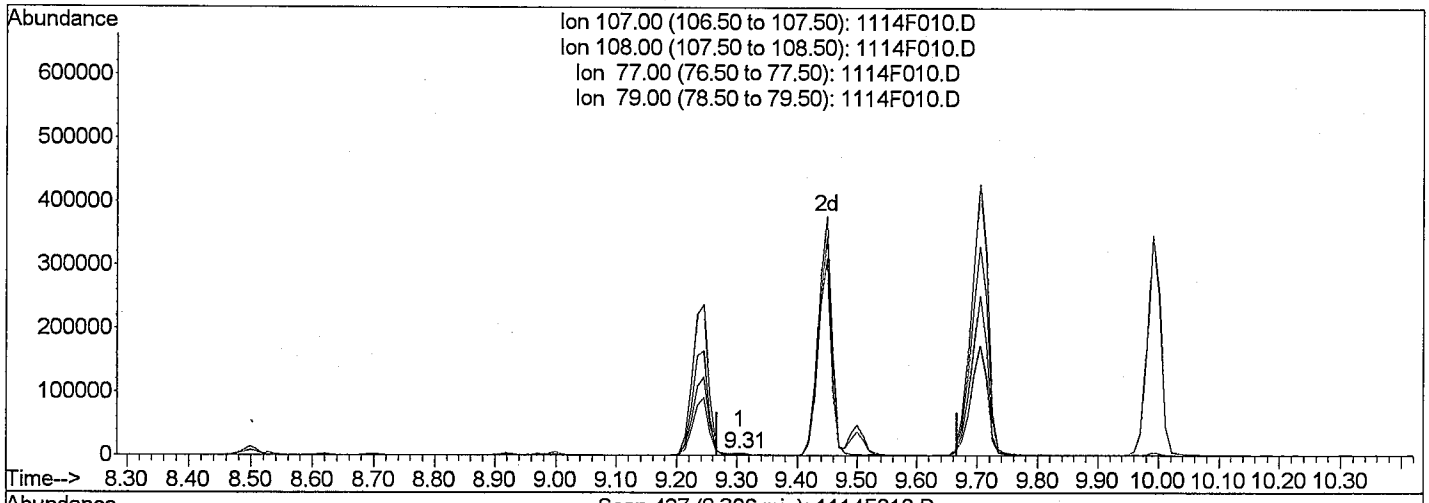
1114F010.D 1114BNLL.M Mon Nov 17 08:40:33 2003

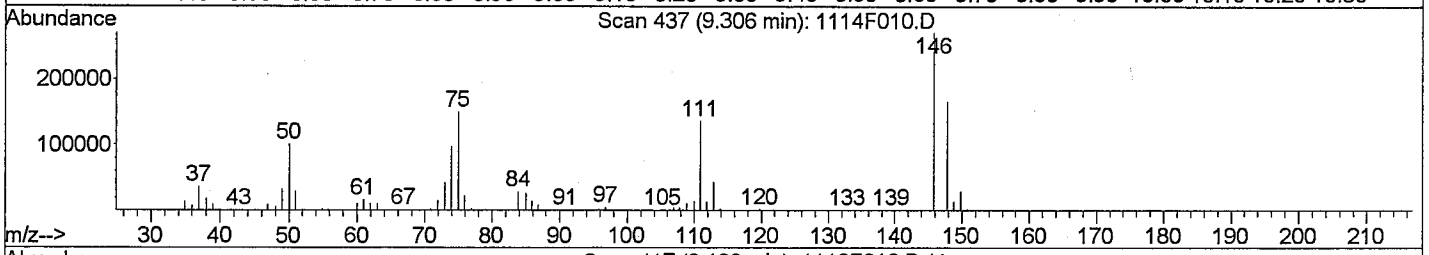
Data File : J:\MS10\DATA\111403\1114F010.D
Acq On : 14 Nov 2003 20:53
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:40 2003

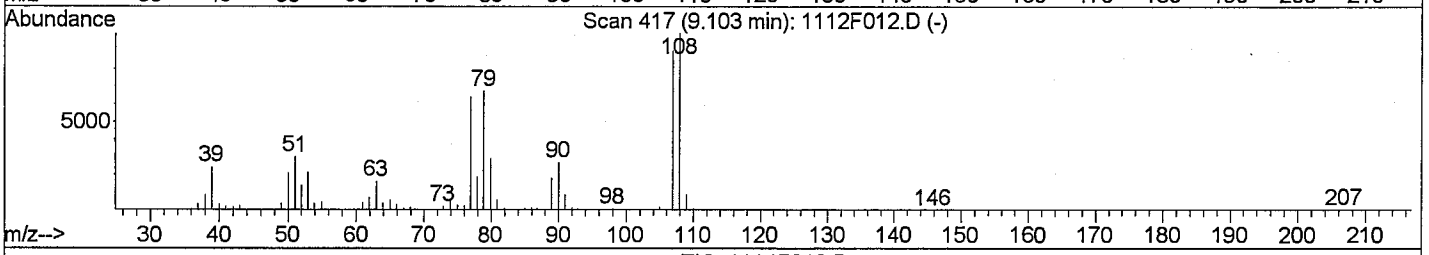
Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F010.D

(15) 2-Methylphenol (T)

9.31min 114.51ng/ml

response 7401

Ion	Exp%	Act%
107.00	100	100
108.00	109.20	105.52
77.00	54.20	49.22
79.00	52.80	28.10

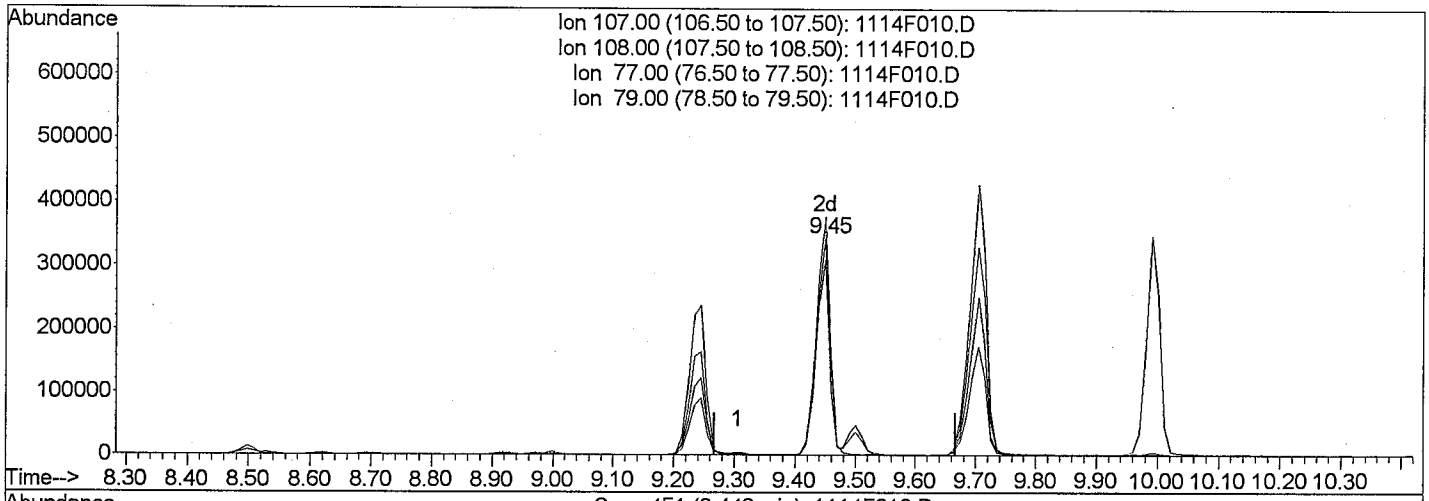
Quantitation Report (Qedit)

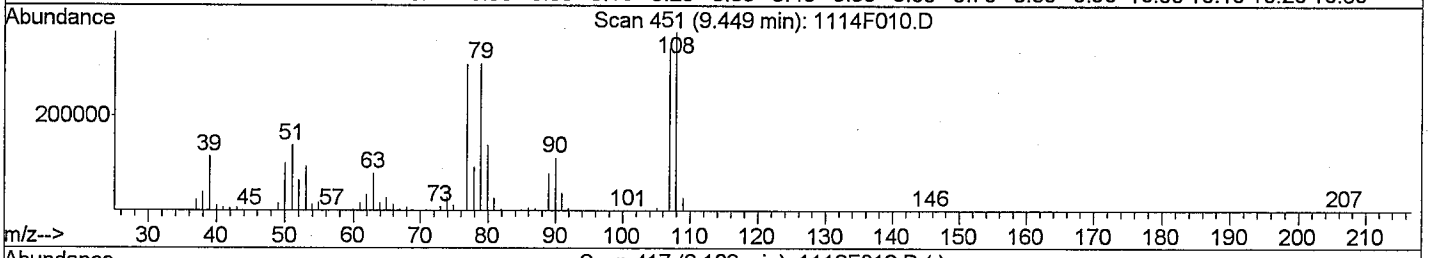
Data File : J:\MS10\DATA\111403\1114F010.D
Acq On : 14 Nov 2003 20:53
Sample : 8270-LL @ 5/10 ppm SVM15-70K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 8:41 2003

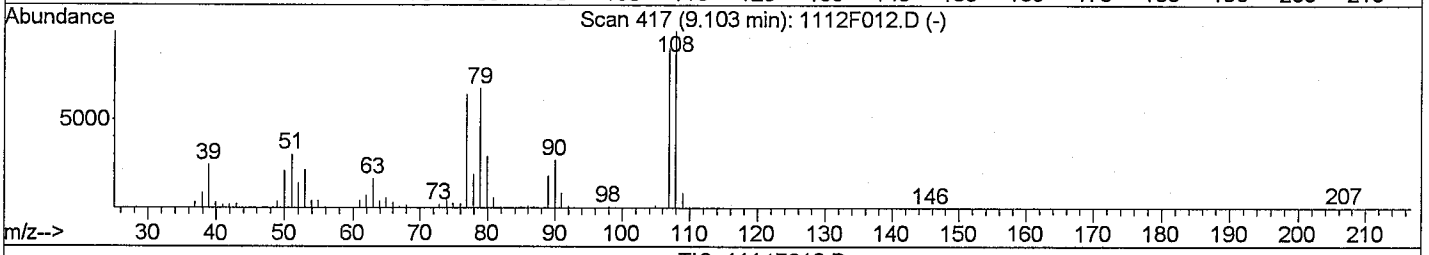
Vial: 10
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 14 10:22:33 2003
Response via : Multiple Level Calibration







TIC: 1114F010.D

(15) 2-Methylphenol (T)

9.45min 8405.87ng/ml m

response 543272

Ion	Exp%	Act%
107.00	100	100
108.00	109.20	109.54
77.00	54.20	89.83#
79.00	52.80	90.18#

JJ 11/17/3 reviewed

mt 11/18/03

1114F010.D 1114BNLL.M Mon Nov 17 08:41:05 2003

Instrument RunLog

Instrument ID: MS10
Department: SVM
Analysis Lot: KWG0318538

Instrument Type: MS

FileSpecification	Type	Laboratory ID	Client ID	Product	Matrix	Dilution	Acquisition Started	Acquisition Ended
J:\MS10\DATA\111703\1117A001.D	DFTPP	KWG0318538-1	GC/MS Tuning - Dec	8270-LL	LIQUID	1.0	11/17/2003 09:06:00	11/17/2003 09:38:29
J:\MS10\DATA\111703\1117F001.D	CCV	KWG0318538-2	Continuing Calibration	8270-LL	LIQUID	1.0	11/17/2003 09:06:00	11/17/2003 09:38:29
J:\MS10\DATA\111703\1117F002.D	MB	KWG0317621-5	Method Blank	8270-LL	SEDIME	1.0	11/17/2003 09:47:00	11/17/2003 10:19:29
J:\MS10\DATA\111703\1117F003.D	SMPL	K2308291-001	CBB DMMU5 2-1	8270-LL	SEDIME	1.0	11/17/2003 10:29:00	11/17/2003 11:01:30
J:\MS10\DATA\111703\1117F004.D	SMPL	K2308291-002	CBB DMMU5 2-2	8270-LL	SEDIME	1.0	11/17/2003 11:11:00	11/17/2003 11:43:30
J:\MS10\DATA\111703\1117F005.D	SMPL	K2308291-003	CBB DMMU5 2-3	8270-LL	SEDIME	1.0	11/17/2003 11:52:00	11/17/2003 12:24:29
J:\MS10\DATA\111703\1117F006.D	SMPL	K2308291-004	CBB DMMU5 2-4	8270-LL	SEDIME	1.0	11/17/2003 12:33:00	11/17/2003 13:05:29
J:\MS10\DATA\111703\1117F007.D	SMPL	K2308291-005	CBB DMMU5 2-5	8270-LL	SEDIME	1.0	11/17/2003 13:15:00	11/17/2003 13:47:29
J:\MS10\DATA\111703\1117F008.D	SMPL	K2308484-001	B2&B4 Composite 5-2	8270-LL	SOIL	1.0	11/17/2003 13:56:00	11/17/2003 14:28:29
J:\MS10\DATA\111703\1117F009.D	SMPL	K2308484-003	B1&B3 Composite 5-2	8270-LL	SOIL	5.0	11/17/2003 14:37:00	11/17/2003 15:09:29
J:\MS10\DATA\111703\1117F010.D	MS	KWG0317621-1	Matrix Spike	8270-LL	SOIL	5.0	11/17/2003 15:19:00	11/17/2003 15:51:29
J:\MS10\DATA\111703\1117F011.D	DMS	KWG0317621-2	Duplicate Matrix Spike	8270-LL	SOIL	5.0	11/17/2003 16:00:00	11/17/2003 16:32:30
J:\MS10\DATA\111703\1117F012.D	SMPL	K2308522-001	Area 1 Pile 70	8270-LL	SEDIME	10.0	11/17/2003 17:01:00	11/17/2003 17:33:30
J:\MS10\DATA\111703\1117F013.D	SMPL	K2308522-002	Area 2 Bent 90	8270-LL	SEDIME	1.0	11/17/2003 17:42:00	11/17/2003 18:14:29
J:\MS10\DATA\111703\1117F014.D	SMPL	K2308433-001	SED-1	8270-LL	SEDIME	5.0	11/17/2003 18:23:00	11/17/2003 18:55:29
J:\MS10\DATA\111703\1117F015.D	SMPL	K2308433-002	SED-2	8270-LL	SEDIME	5.0	11/17/2003 19:04:00	11/17/2003 19:36:30
J:\MS10\DATA\111703\1117F016.D	SMPL	K2308433-003	SED-3	8270-LL	SEDIME	5.0	11/17/2003 19:45:00	11/17/2003 20:17:29

2198

11/18/3
CAL 3102
11/18/03

Exception Report

Data File: J:\MS10\DATA\111703\1117A001.D
Lab ID: KWG0318538-1
RunType: DFTPP
Matrix: LIQUID

Date Acquired: 11/17/2003 09:06
Date Quantitated:
Batch ID: KWG0318538
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/18/3

Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/18/2003

Analysis Lot:	KWG0318538	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:		**Report List ID:**	LJ1747
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS10\DATA\111703\1117A001.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0318538-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	43.2	10798	Pass
68	69	0	2	0.6	111	Pass
69	198	0	100	70.2	17549	Pass
70	69	0	2	0.0	0	Pass
127	198	25	75	42.1	10523	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	25016	Pass
199	198	5	9	6.2	1539	Pass
275	198	10	30	19.7	4939	Pass
365	198	0.75	100	2.9	731	Pass
441	443	0.01	100	71.0	2352	Pass
442	198	40	110	67.2	16809	Pass
443	442	15	24	19.7	3313	Pass

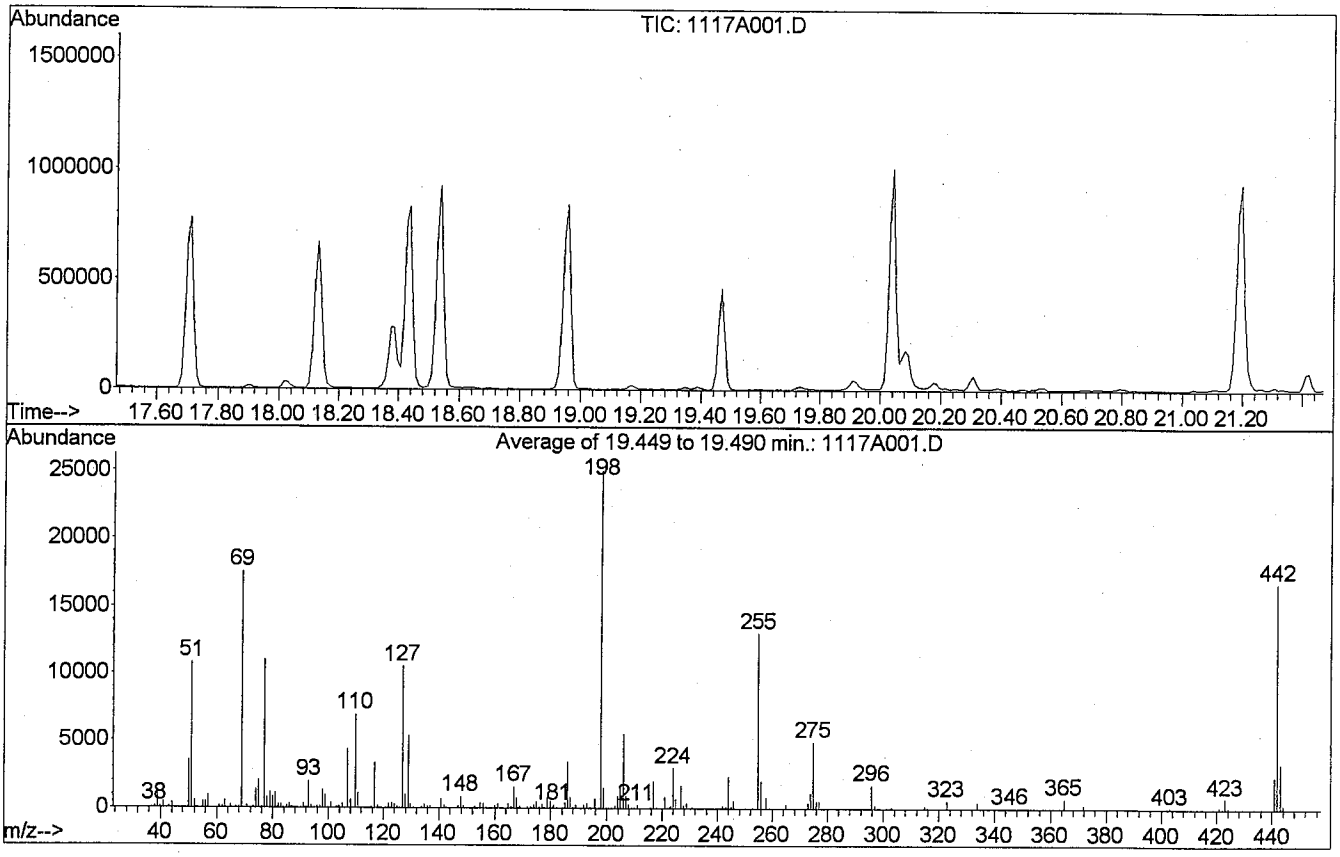
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS10\DATA\111703\1117A001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.449 to 19.490 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	43.2	10798	PASS
68	69	0.00	2	0.6	111	PASS
69	198	0.00	100	70.2	17549	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	42.1	10523	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	25016	PASS
199	198	5	9	6.2	1539	PASS
275	198	10	30	19.7	4939	PASS
365	198	0.75	100	2.9	731	PASS
441	443	0.01	100	71.0	2352	PASS
441	443	0.01	100	71.0	2352	PASS
442	198	40	110	67.2	16809	PASS
443	442	15	24	19.7	3313	PASS

1117A001.D 1114BNLL.M Mon Nov 17 11:24:39 2003

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.85	71	51.00	10798	66.80	91	78.95	1201
37.90	148	51.95	592	67.85	111	79.85	889
39.00	1157	53.00	61	68.85	17549	80.85	1144
39.95	142	55.00	467	70.80	192	81.70	60
40.95	467	55.90	504	71.15	45	81.90	286
42.95	141	56.70	74	72.90	126	82.90	294
43.10	112	56.95	964	73.95	1373	83.85	45
43.90	423	60.90	211	74.90	2073	84.95	203
48.90	51	61.90	161	75.90	113	85.85	343
49.70	65	62.95	589	76.95	11008	86.55	83
50.00	3545	64.95	241	77.90	819	86.95	114

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.90	374	99.90	51	110.90	1171	125.70	42
91.75	73	100.50	41	111.45	48	126.90	10523
91.95	103	100.90	383	111.75	53	127.90	1031
92.85	1969	102.85	129	115.70	130	128.90	5383
93.80	191	103.70	118	116.85	3350	129.75	331
94.95	43	103.90	148	117.85	210	130.80	58
95.80	136	104.95	371	118.65	54	133.75	71
96.90	164	106.90	4361	121.85	329	133.90	124
97.90	1342	107.95	657	122.90	424	134.85	299
98.60	41	109.05	48	123.85	282	135.85	160
98.85	984	109.85	6941	124.75	144	136.90	155

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
140.80	747	154.80	376	164.80	345	173.30	68
141.90	269	155.70	151	165.65	102	173.80	265
142.60	125	155.85	350	166.05	88	174.85	475
145.90	43	156.80	126	166.35	45	175.70	104
146.80	136	158.85	49	166.85	1579	176.00	66
146.95	201	159.90	228	167.75	763	176.80	305
147.80	863	160.35	40	168.05	82	177.60	47
148.75	202	160.95	339	168.85	127	177.90	48
152.80	181	161.85	73	171.65	106	178.80	1092
153.00	55	162.75	42	172.70	90	179.70	144
153.90	58	164.65	46	172.90	57	179.85	517

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
180.60	132	191.95	83	204.85	1682	217.80	134
180.95	276	192.80	399	205.85	5494	220.85	875
181.85	50	194.00	101	206.95	962	221.50	57
183.95	49	194.90	76	207.85	301	221.80	54
184.90	467	195.85	728	208.95	41	222.40	63
185.85	3422	197.80	25016	209.75	89	222.70	107
186.85	844	198.80	1539	210.90	273	222.90	210
187.85	118	199.90	59	214.55	40	223.90	3008
188.95	237	202.60	53	215.55	65	224.85	732
189.15	44	202.85	188	215.75	90	226.80	1707
191.75	259	203.90	936	216.80	2040	227.85	270

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
228.75	380	252.80	81	276.80	521	334.85	76
230.85	98	254.85	13039	277.80	40	345.70	59
233.85	60	255.85	2008	295.85	1741	351.85	64
235.85	53	257.85	826	296.85	271	352.85	53
241.90	193	258.95	58	302.85	96	353.95	46
242.60	47	264.85	346	314.85	206	364.85	731
242.95	157	272.85	430	315.90	83	371.85	253
243.85	2360	273.85	1134	322.85	582	401.65	45
244.80	167	274.85	4939	324.00	80	401.95	49
245.00	178	275.60	118	327.85	46	402.90	130
245.80	592	275.85	561	333.80	432	403.85	49

Average of 19.449 to 19.490 min.: 1117A001.D
8270-LL ICV/CCV @ 3 ppm SVM15-99D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
420.90	139						
421.90	47						
422.90	805						
423.95	154						
440.95	2352						
441.90	16809						
442.90	3313						
443.90	296						

Exception Report

Data File: J:\MS10\DATA\111703\1117F001.D
Lab ID: KWG0318538-2
RunType: CCV & ICV
Matrix: LIQUID

Date Acquired: 11/17/2003 09:06
Date Quantitated: 11/17/2003 09:39
Batch ID: KWG0318538
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/18/03
Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/18/2003

Analysis Lot:	KWG0318538	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:			
Tune Ref:	J:\MS10\DATA\111703\1117A001.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\111703\1117F001.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:**	11/17/2003 09:39	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318538-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.97	0.00	152	61838	1,000.00	OK
2	Naphthalene-d8	11.26	0.00	136	170690	1,000.00	OK
3	Acenaphthene-d10	15.04	0.00	164	105335	1,000.00	OK
4	Phenanthrene-d10	18.37	-0.01	188	191276	1,000.00	OK
5	Chrysene-d12	24.54	0.00	240	186195	1,000.00	OK
6	Perylene-d12	28.02	0.00	264	135991	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	7.19			112	214338	3,228		28-109	NA
1	Phenol-d6	8.46			99	253807	3,190		40-123	NA
1	Nitrobenzene-d5	9.95			82	303685	3,075		24-128	NA
3	2-Fluorobiphenyl	13.59			172	438638	3,004		28-126	NA
4	2,4,6-Tribromophenol	16.85			330	95100	2,942		35-138	NA
5	Terphenyl-d14	22.19			244	449329	3,078		56-152	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.59			42	183265	2,722			
1	Pyridine	5.61			79	233705	3,419			
1	Bis(2-chloroethyl) Ether	8.60			93	226864	3,131			
1	Phenol	8.48			94	265499m	3,170			
1	Aniline	8.52			93	323742	3,578			
1	2-Chlorophenol	8.68			128	218850	3,214			
1	1,3-Dichlorobenzene	8.91			146	252153	2,976			
1	1,4-Dichlorobenzene	8.99			146	263118	2,934			
1	1,2-Dichlorobenzene	9.29			146	242736	3,069			
1	Benzyl Alcohol	9.22			108	133536	3,273			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F001.D		**Instrument:** MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:** 11/17/2003 09:39	**Vial:** 1
Run Type:	CCV		**Dilution:** 1.0
Lab ID:	KWG0318538-2		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.49			45	224544	3,118			
1	2-Methylphenol	9.43			107	170386	3,166			
1	Hexachloroethane	9.83			117	135480	3,179			
1	N-Nitrosodi-n-propylamine	9.72			70	184373	3,231			
1	4-Methylphenol	9.68			107	245321	3,065			
1	Nitrobenzene	9.98			77	304457	3,145			
2	Isophorone	10.40			82	474021	3,125			
2	2-Nitrophenol	10.56			139	122965	3,228			
2	2,4-Dimethylphenol	10.65			122	163268	3,019			
2	Bis(2-chloroethoxy)methane	10.85			93	258475	3,156			
2	2,4-Dichlorophenol	11.01			162	206596	3,003			
2	Benzoic Acid	10.87			122	122872	3,034			
2	1,2,4-Trichlorobenzene	11.19			180	244524	2,973			
2	Naphthalene	11.30			128	540682	3,036			
2	4-Chloroaniline	11.45			127	216206	2,818			
2	Hexachlorobutadiene	11.69			225	167577	2,911			
2	4-Chloro-3-methylphenol	12.49			107	209490	2,876			
2	2-Methylnaphthalene	12.72			142	341570	3,095			
3	Hexachlorocyclopentadiene	13.23			237	148207	2,779			
3	2,4,6-Trichlorophenol	13.41			196	164067	3,028			
3	2,4,5-Trichlorophenol	13.48			196	180632	3,121			
3	2-Chloronaphthalene	13.76			127	156120	3,122			
3	2-Nitroaniline	14.09			65	168475	3,371			
3	Acenaphthylene	14.69			152	534253	3,167			
3	Dimethyl Phthalate	14.61			163	473359	3,058			
3	2,6-Dinitrotoluene	14.73			165	113047	3,516			
3	Acenaphthene	15.11			154	316792	3,135			
3	3-Nitroaniline	15.02			138	108318	3,533			
3	2,4-Dinitrophenol	15.25			184	83093	3,401			
3	Dibenzofuran	15.48			168	554878	3,112			
3	4-Nitrophenol	15.45			109	133466	2,832			
3	2,4-Dinitrotoluene	15.61			165	152388	3,396			
3	Fluorene	16.26			166	399313	3,035			
3	4-Chlorophenyl Phenyl Ether	16.31			204	241335	3,021			
3	Diethyl Phthalate	16.25			149	495599	3,041			
3	4-Nitroaniline	16.43			138	103912	3,235			
3	2-Methyl-4,6-dinitrophenol	16.52			198	113264	3,067			
3	N-Nitrosodiphenylamine	16.61			169	305212	3,165			
3	Azobenzene	16.67			77	527748	2,893			
4	4-Bromophenyl Phenyl Ether	17.41			248	153751	2,884			
4	Hexachlorobenzene	17.71			284	176486	3,020			
4	Pentachlorophenol	18.13			266	117535	2,968			

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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F001.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:**	11/17/2003 09:39	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318538-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.44			178	598745	2,886			
4	Anthracene	18.54			178	637215	3,048			
4	Carbazole	18.96			167	569643	3,133			
4	Di-n-butyl Phthalate	20.04			149	776628	3,066			
4	Fluoranthene	21.20			202	695817	3,053			
5	Pyrene	21.70			202	675246	2,923			
5	Butyl Benzyl Phthalate	23.50			149	341305	3,317			
5	3,3'-Dichlorobenzidine	24.56			252	250569	3,382			
5	Benz(a)anthracene	24.51			228	630357	3,082			
5	Chrysene	24.60			228	580788	2,997			
5	Bis(2-ethylhexyl) Phthalate	24.98			149	464546	3,116			
6	Di-n-octyl Phthalate	26.49			149	772587	3,291			
6	Benzo(b)fluoranthene	27.12			252	588670	3,183			
6	Benzo(k)fluoranthene	27.18			252	567737	3,230			
6	Benzo(a)pyrene	27.88			252	553038	3,151			
6	Indeno(1,2,3-cd)pyrene	30.56			276	511003	3,120			
6	Dibenz(a,h)anthracene	30.64			278	520435	3,245			
6	Benzo(g,h,i)perylene	31.15			276	545547	3,212			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL3102
Method ID: MJ142
DataFile: J:\MS10\DATA\111703\1117F001.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
N-Nitrosodimethylamine		TRG	AverageRF	30	0.01	1.089	0.988	-9.3			
Pyridine		TRG	AverageRF	30	0.01	1.105	1.260	14.0			
2-Fluorophenol		SURR	AverageRF	30	0.01	1.074	1.155	7.6			
Phenol-d6		SURR	AverageRF	30	0.01	1.287	1.368	6.3			
Phenol	CCC	MS	AverageRF	20	0.01	1.354	1.431	5.7			
Aniline		TRG	AverageRF	30	0.01	1.463	1.745	19.3			
Bis(2-chloroethyl) Ether		TRG	AverageRF	30	0.01	1.172	1.223	4.4			
2-Chlorophenol		MS	AverageRF	30	0.01	1.101	1.180	7.1			
1,3-Dichlorobenzene		TRG	AverageRF	30	0.01	1.370	1.359	-0.8			
1,4-Dichlorobenzene	CCC	MS	AverageRF	20	0.01	1.450	1.418	-2.2			
Benzyl Alcohol		TRG	AverageRF	30	0.01	0.660	0.720	9.1			
1,2-Dichlorobenzene		TRG	AverageRF	30	0.01	1.279	1.308	2.3			
2-Methylphenol		TRG	AverageRF	30	0.01	0.870	0.918	5.5			
Bis(2-chloroisopropyl) Ether		TRG	AverageRF	30	0.01	1.164	1.210	3.9			
4-Methylphenol		TRG	AverageRF	30	0.01	1.294	1.322	2.2			
N-Nitrosodi-n-propylamine	SPCC	MS	AverageRF	30	0.05	0.923	0.994	7.7			
Hexachloroethane		TRG	AverageRF	30	0.01	0.689	0.730	6.0			
Nitrobenzene-d5		SURR	AverageRF	30	0.01	1.597	1.637	2.5			
Nitrobenzene		TRG	AverageRF	30	0.01	1.566	1.641	4.8			
Isophorone		TRG	AverageRF	30	0.01	0.889	0.926	4.2			
2-Nitrophenol	CCC	TRG	AverageRF	20	0.01	0.223	0.240	7.6			
2,4-Dimethylphenol		TRG	AverageRF	30	0.01	0.317	0.319	0.6			
Bis(2-chloroethoxy)methane		TRG	AverageRF	30	0.01	0.480	0.505	5.2			
Benzoic Acid		TRG	Linear	30	0.01	0.227	0.240		3,034	3,000	1.1
2,4-Dichlorophenol	CCC	TRG	AverageRF	20	0.01	0.403	0.403	0.1			
1,2,4-Trichlorobenzene		MS	AverageRF	30	0.01	0.482	0.478	-0.9			
Naphthalene		TRG	AverageRF	30	0.01	1.043	1.056	1.2			
4-Chloroaniline		TRG	AverageRF	30	0.01	0.449	0.422	-6.1			
Hexachlorobutadiene	CCC	TRG	AverageRF	20	0.01	0.337	0.327	-3.0			
4-Chloro-3-methylphenol	CCC	MS	AverageRF	20	0.01	0.427	0.409	-4.1			
2-Methylnaphthalene		TRG	AverageRF	30	0.01	0.647	0.667	3.2			
Hexachlorocyclopentadiene	SPCC	TRG	AverageRF	30	0.05	0.506	0.469	-7.4			
2,4,6-Trichlorophenol	CCC	TRG	AverageRF	20	0.01	0.514	0.519	0.9			
2,4,5-Trichlorophenol		TRG	AverageRF	30	0.01	0.549	0.572	4.0			
2-Fluorobiphenyl		SURR	AverageRF	30	0.01	1.386	1.388	0.1			
2-Chloronaphthalene		TRG	AverageRF	30	0.01	0.475	0.494	4.1			
2-Nitroaniline		TRG	AverageRF	30	0.01	0.474	0.533	12.4			
Dimethyl Phthalate		TRG	AverageRF	30	0.01	1.469	1.498	1.9			
Acenaphthylene		TRG	AverageRF	30	0.01	1.602	1.691	5.6			
2,6-Dinitrotoluene		TRG	AverageRF	30	0.01	0.305	0.358	17.2			
3-Nitroaniline		TRG	AverageRF	30	0.01	0.291	0.343	17.8			
Acenaphthene	CCC	MS	AverageRF	30	0.01	0.959	1.002	4.5			
2,4-Dinitrophenol	SPCC	TRG	Linear	30	0.05	0.213	0.263		3,401	3,000	13.4
4-Nitrophenol	SPCC	MS	AverageRF	30	0.05	0.447	0.422	-5.6			
Dibenzofuran		TRG	AverageRF	30	0.01	1.693	1.756	3.7			
2,4-Dinitrotoluene		MS	AverageRF	30	0.01	0.426	0.482	13.2			
Diethyl Phthalate		TRG	AverageRF	30	0.01	1.547	1.568	1.4			

Calibration Verification Report

Calibration ID: CAL3102
Method ID: MJ142
DataFile: J:\MS10\DATA\111703\1117F001.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Fluorene		TRG	AverageRF	30	0.01	1.249	1.264	1.2			
4-Chlorophenyl Phenyl Ether		TRG	AverageRF	30	0.01	0.758	0.764	0.7			
4-Nitroaniline		TRG	AverageRF	30	0.01	0.305	0.329	7.8			
2-Methyl-4,6-dinitrophenol		TRG	AverageRF	30	0.01	0.351	0.358	2.2			
N-Nitrosodiphenylamine	CCC	TRG	AverageRF	20	0.01	0.916	0.966	5.5			
Azobenzene		TRG	AverageRF	30	0.01	1.732	1.670	-3.6			
2,4,6-Tribromophenol		SURR	AverageRF	30	0.01	0.169	0.166	-1.9			
4-Bromophenyl Phenyl Ether		TRG	AverageRF	30	0.01	0.279	0.268	-3.9			
Hexachlorobenzene		TRG	AverageRF	30	0.01	0.305	0.308	0.7			
Pentachlorophenol	CCC	MS	AverageRF	20	0.01	0.207	0.205	-1.1			
Phenanthrene		TRG	AverageRF	30	0.01	1.085	1.043	-3.8			
Anthracene		TRG	AverageRF	30	0.01	1.093	1.110	1.6			
Carbazole		TRG	AverageRF	30	0.01	0.951	0.993	4.4			
Di-n-butyl Phthalate		TRG	AverageRF	30	0.01	1.324	1.353	2.2			
Fluoranthene	CCC	TRG	AverageRF	20	0.01	1.192	1.213	1.8			
Pyrene		MS	AverageRF	30	0.01	1.241	1.209	-2.6			
Terphenyl-d14		SURR	AverageRF	30	0.01	0.784	0.804	2.6			
Butyl Benzyl Phthalate		TRG	AverageRF	30	0.01	0.553	0.611	10.6			
Benz(a)anthracene		TRG	AverageRF	30	0.01	1.098	1.128	2.7			
3,3'-Dichlorobenzidine		TRG	AverageRF	30	0.01	0.398	0.449	12.7			
Chrysene		TRG	AverageRF	30	0.01	1.041	1.040	-0.1			
Bis(2-ethylhexyl) Phthalate		TRG	AverageRF	30	0.01	0.801	0.832	3.9			
Di-n-octyl Phthalate	CCC	TRG	AverageRF	20	0.01	1.726	1.894	9.7			
Benzo(b)fluoranthene		TRG	AverageRF	30	0.01	1.360	1.443	6.1			
Benzo(k)fluoranthene		TRG	AverageRF	30	0.01	1.292	1.392	7.7			
Benzo(a)pyrene	CCC	TRG	AverageRF	20	0.01	1.291	1.356	5.0			
Indeno(1,2,3-cd)pyrene		TRG	AverageRF	30	0.01	1.204	1.253	4.0			
Dibenz(a,h)anthracene		TRG	AverageRF	30	0.01	1.179	1.276	8.2			
Benzo(g,h,i)perylene		TRG	AverageRF	30	0.01	1.249	1.337	7.1			

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 09:38:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	61838	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	170690	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	105335	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	191276	1000.00	ng/ml	0.00
67) Chrysene-d12	24.54	240	186195	1000.00	ng/ml	0.00
76) Perylene-d12	28.02	264	135991	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	214338	3228.13	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 86.08%			
6) Phenol-d6	8.46	99	253807	3189.51	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 85.05%			
19) Nitrobenzene-d5	9.95	82	303685	3074.79	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 122.99%			
38) 2-Fluorobiphenyl	13.59	172	438638	3003.76	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 120.15%			
58) 2,4,6-Tribromophenol	16.85	330	95100	2941.79	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 78.45%			
70) Terphenyl-d14	22.19	244	449329	3078.29	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 123.13%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.59	42	183265	2721.57	ng/ml#	41
3) Pyridine	5.61	79	233705	3419.13	ng/ml	91
5) Bis(2-chloroethyl) Ether	8.60	93	226864	3130.51	ng/ml	88
7) Phenol	8.48	94	265499m	3169.80	ng/ml	
8) Aniline	8.52	93	323742	3578.34	ng/ml#	45
9) 2-Chlorophenol	8.68	128	218850	3213.72	ng/ml	92
10) 1,3-Dichlorobenzene	8.91	146	252153	2975.56	ng/ml	97
11) 1,4-Dichlorobenzene	8.99	146	263118	2933.70	ng/ml	95
12) 1,2-Dichlorobenzene	9.29	146	242736	3069.28	ng/ml	92
13) Benzyl Alcohol	9.22	108	133536	3272.66	ng/ml#	57
14) Bis(2-chloroisopropyl) Eth	9.49	45	224544	3118.40	ng/ml	73
15) 2-Methylphenol	9.43	107	170386	3165.58	ng/ml	84
16) Hexachloroethane	9.83	117	135480	3179.28	ng/ml	88
17) N-Nitrosodi-n-propylamine	9.72	70	184373	3230.76	ng/ml	82
18) 4-Methylphenol	9.68	107	245321	3064.93	ng/ml	88
20) Nitrobenzene	9.98	77	304457	3144.57	ng/ml	87
22) Isophorone	10.40	82	474021	3124.74	ng/ml	94
23) 2-Nitrophenol	10.56	139	122965	3227.81	ng/ml	65
24) 2,4-Dimethylphenol	10.65	122	163268	3018.81	ng/ml	82
25) Bis(2-chloroethoxy)methane	10.85	93	258475	3156.13	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 09:38:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.01	162	206596	3003.22	ng/ml	99
27)	Benzoic Acid	10.87	122	122872	3033.87	ng/ml	79
28)	1,2,4-Trichlorobenzene	11.19	180	244524	2972.62	ng/ml	95
29)	Naphthalene	11.30	128	540682	3036.10	ng/ml	97
30)	4-Chloroaniline	11.45	127	216206	2818.24	ng/ml	87
31)	Hexachlorobutadiene	11.69	225	167577	2910.60	ng/ml	97
32)	4-Chloro-3-methylphenol	12.49	107	209490	2875.71	ng/ml	81
33)	2-Methylnaphthalene	12.72	142	341570	3094.91	ng/ml	96
35)	Hexachlorocyclopentadiene	13.23	237	148207	2779.06	ng/ml	95
36)	2,4,6-Trichlorophenol	13.41	196	164067	3027.77	ng/ml	98
37)	2,4,5-Trichlorophenol	13.48	196	180632	3121.11	ng/ml	98
39)	2-Chloronaphthalene	13.76	127	156120	3122.37	ng/ml	91
40)	2-Nitroaniline	14.09	65	168475	3370.82	ng/ml	76
41)	Acenaphthylene	14.69	152	534253	3166.95	ng/ml	98
42)	Dimethyl Phthalate	14.61	163	473359	3058.25	ng/ml	97
43)	2,6-Dinitrotoluene	14.73	165	113047	3516.35	ng/ml#	60
44)	Acenaphthene	15.11	154	316792	3134.80	ng/ml	97
45)	3-Nitroaniline	15.02	138	108318	3533.44	ng/ml	96
46)	2,4-Dinitrophenol	15.25	184	83093	3401.22	ng/ml#	57
47)	Dibenzofuran	15.48	168	554878	3111.80	ng/ml	83
48)	4-Nitrophenol	15.45	109	133466	2831.51	ng/ml#	68
49)	2,4-Dinitrotoluene	15.61	165	152388	3395.73	ng/ml	79
50)	Fluorene	16.26	166	399313	3034.83	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	241335	3020.67	ng/ml	91
52)	Diethyl Phthalate	16.25	149	495599	3041.10	ng/ml	96
53)	4-Nitroaniline	16.43	138	103912	3234.92	ng/ml#	32
54)	2-Methyl-4,6-dinitrophenol	16.52	198	113264	3066.72	ng/ml	76
55)	N-Nitrosodiphenylamine	16.61	169	305212	3164.57	ng/ml	97
56)	Azobenzene	16.67	77	527748	2893.44	ng/ml	86
59)	4-Bromophenyl Phenyl Ether	17.41	248	153751	2884.25	ng/ml	90
60)	Hexachlorobenzene	17.71	284	176486	3020.41	ng/ml	91
61)	Pentachlorophenol	18.13	266	117535	2968.07	ng/ml	97
62)	Phenanthrene	18.44	178	598745	2885.91	ng/ml	99
63)	Anthracene	18.54	178	637215	3048.06	ng/ml	98
64)	Carbazole	18.96	167	569643	3132.56	ng/ml	97
65)	Di-n-butyl Phthalate	20.04	149	776628	3066.21	ng/ml	97
66)	Fluoranthene	21.20	202	695817	3053.02	ng/ml	92
68)	Benzidine	21.59	184	311454	3356.13	ng/ml	96
69)	Pyrene	21.70	202	675246	2923.42	ng/ml	97
71)	Butyl Benzyl Phthalate	23.50	149	341305	3316.67	ng/ml	93
72)	3,3'-Dichlorobenzidine	24.56	252	250569	3382.44	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 09:38:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

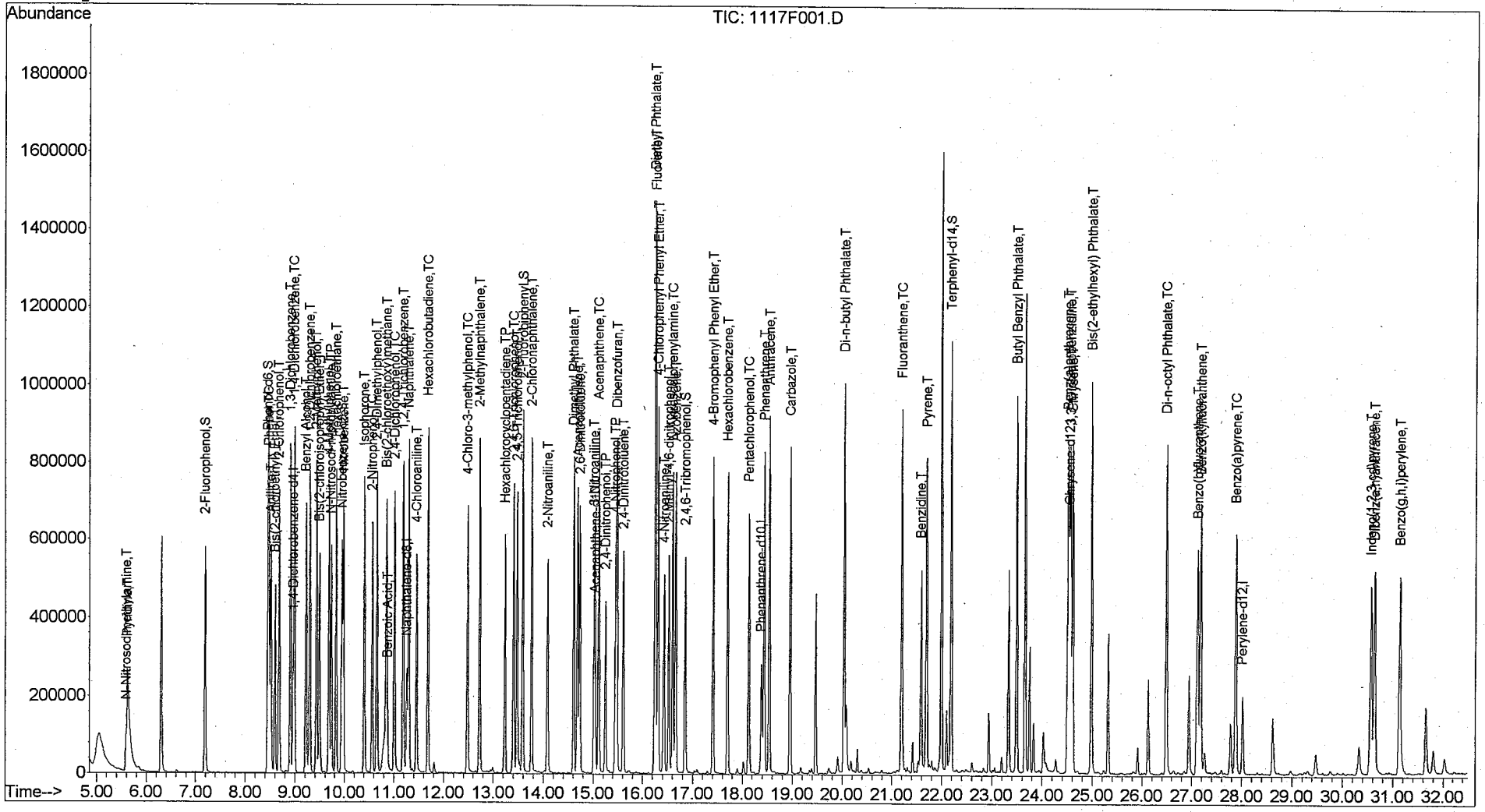
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.51	228	630357	3081.93	ng/ml	98
74)	Chrysene	24.60	228	580788	2996.63	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	464546	3115.57	ng/ml	99
77)	Di-n-octyl Phthalate	26.49	149	772587	3291.06	ng/ml	94
78)	Benzo(b)fluoranthene	27.12	252	588670	3183.48	ng/ml	95
79)	Benzo(k)fluoranthene	27.18	252	567737	3230.33	ng/ml	94
80)	Benzo(a)pyrene	27.88	252	553038	3151.18	ng/ml	92
81)	Indeno(1,2,3-cd)pyrene	30.56	276	511003	3119.83	ng/ml	89
82)	Dibenz(a,h)anthracene	30.64	278	520435	3244.75	ng/ml	92
83)	Benzo(g,h,i)perylene	31.15	276	545547	3212.44	ng/ml	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 9:39 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



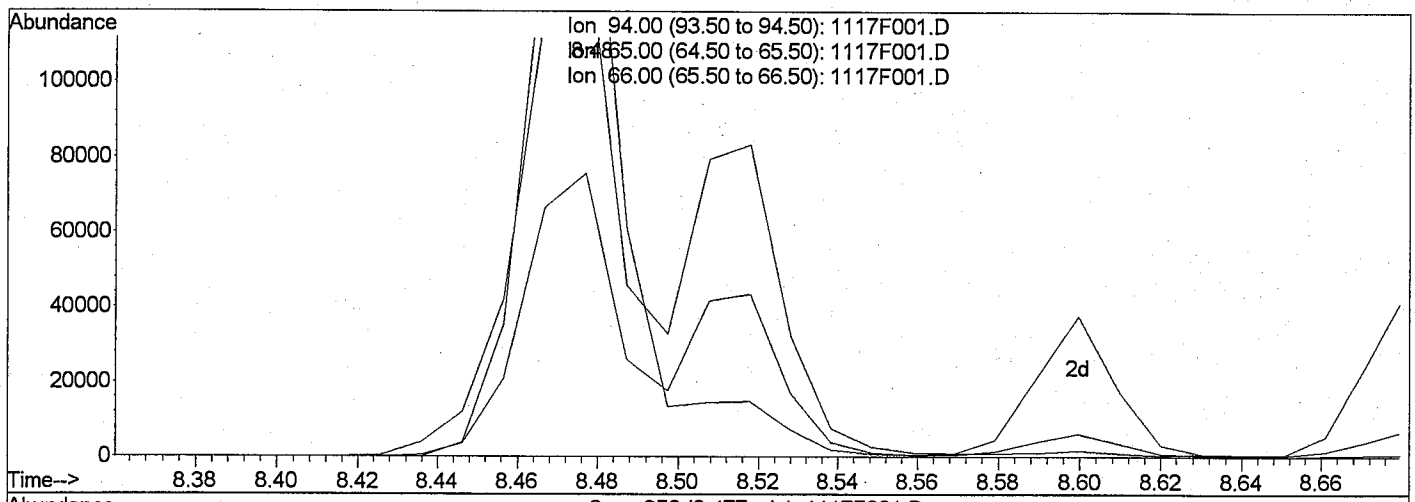
Quantitation Report (Qedit)

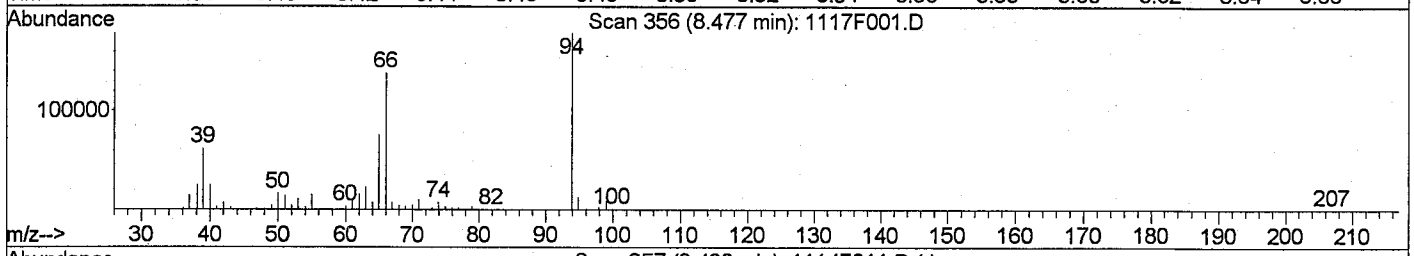
Data File : J:\MS10\DATA\111703\1117F001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 9:39 2003

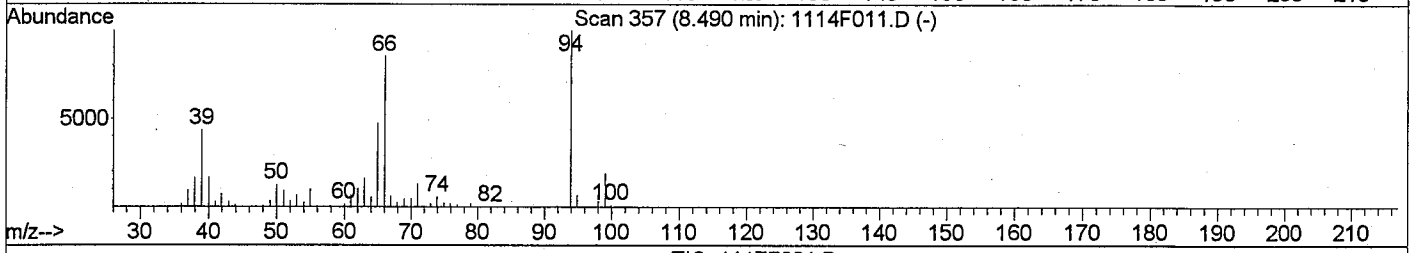
Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Multiple Level Calibration







TIC: 1117F001.D

(7) Phenol (TC)

8.48min 3457.44ng/ml

response 289591

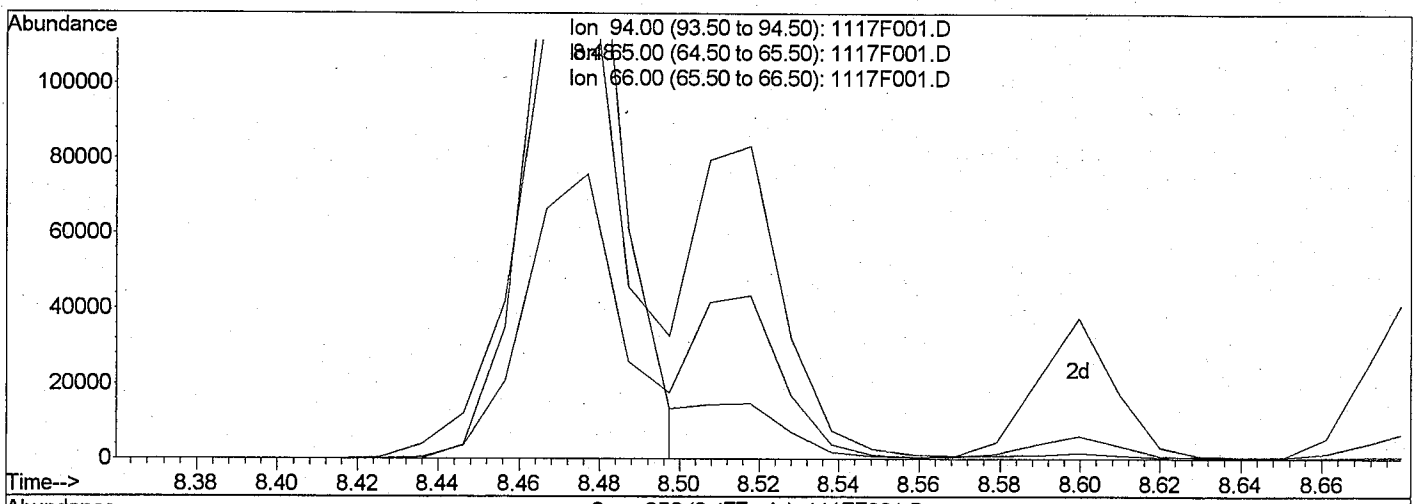
Ion	Exp%	Act%
94.00	100	100
65.00	36.30	42.36
66.00	62.90	77.38
0.00	0.00	0.00

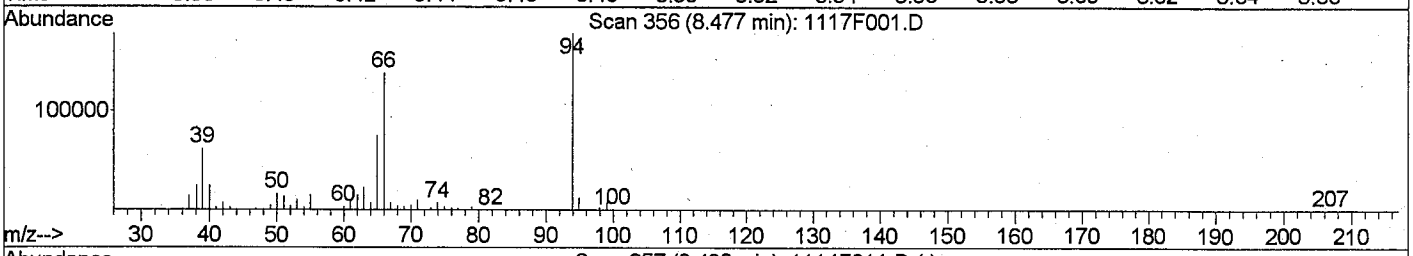
Quantitation Report (Qedit)

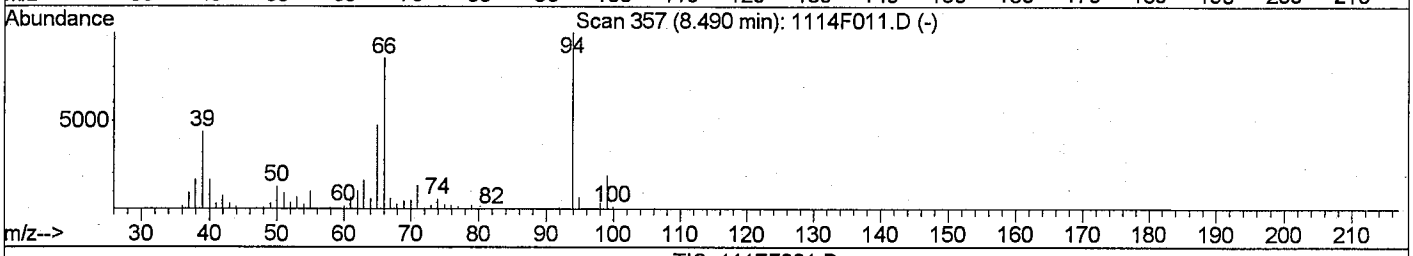
Data File : J:\MS10\DATA\111703\1117F001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 9:39 2003

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Multiple Level Calibration







TIC: 1117F001.D

(7) Phenol (TC)

8.48min 3169.80ng/ml m

response 265499

Ion	Exp%	Act%
94.00	100	100
65.00	36.30	42.36
66.00	62.90	77.60
0.00	0.00	0.00

J 11/17/3 ovr integ

mst 11/18/03

1117F001.D 1114BNLL.M Mon Nov 17 09:39:37 2003

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/12/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/12/2003
Calibration ID: CAL3091
Analysis Lot: KWG0318325
Units: ng/ml

File ID: J:\MS10\DATA\111303\1112F012.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	0.01	1.63	1.66	2	NA	± 20 %	AverageRF
2-Methylphenol	3000	3000	0.01	0.975	0.970	-1	NA	± 30 %	AverageRF
4-Methylphenol	3000	2700	0.01	1.45	1.31	-10	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3100	0.01	0.329	0.334	2	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3100	0.01	0.375	0.384	2	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3300	0.01	0.446	0.484	9	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.01	0.143	0.138	NA	-6	± 20 %	Quadratic
Butyl Benzyl Phthalate	3000	3000	0.01	0.599	0.607	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.01	0.839	0.826	-2	NA	± 30 %	AverageRF
Phenol-d6	3000	3000	0.01	1.48	1.49	1	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	3100	0.01	0.149	0.154	3	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3000	0.01	0.769	0.767	0	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	2800	0.05	0.374	0.347	-7	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	0.01	1.47	1.48	1	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3100	0.01	1.96	2.02	3	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2900	0.01	1.19	1.15	-3	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	0.01	1.31	1.38	6	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2200	0.05	0.240	0.173	-28	NA	± 30 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3400	0.01	0.405	0.454	12	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3000	0.05	1.01	1.00	-1	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	3400	0.05	0.262	0.300	15	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.01	0.975	1.01	3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.01	0.945	0.969	3	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	3200	0.01	0.289	0.304	5	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.222	0.237	7	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS10\DATA\111303\1112F012.D
Lab ID: KWG0318325-2
RunType: CCV
Matrix: LIQUID

4 ICV

Date Acquired: 11/12/2003 22:51
Date Quantitated: 11/13/2003 09:51
Batch ID: KWG0318325
Analysis Method: 8270C
MethodJoinID: MJ143

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/13/3

Secondary Review: mt 11/13/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/13/2003

Analysis Lot:	KWG0318325	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1112BNLL.M	**Calibration ID:**	CAL3091
Title:			
Tune Ref:	J:\MS10\DATA\111303\1112A012.D	**Method ID:**	MJ143
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\111303\1112F012.D			**Instrument:**	MS10
Acqu Date:	11/12/2003 22:51	**Quant Date:**	11/13/2003 09:51	**Vial:**	11
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318325-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.62	-0.01	152	57205	1,000.00	OK
2	Naphthalene-d8	10.88	0.00	136	149882	1,000.00	OK
3	Acenaphthene-d10	14.64	0.01	164	96948	1,000.00	OK
4	Phenanthrene-d10	17.96	-0.01	188	173601	1,000.00	OK
5	Chrysene-d12	24.11	0.00	240	169286	1,000.00	OK
6	Perylene-d12	27.51	0.00	264	119749	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	6.89			112	214776	3,097		33-109	NA
1	Phenol-d6	8.15			99	256088	3,025		41-118	NA
1	Nitrobenzene-d5	9.58			82	279136	2,939		39-120	NA
3	2-Fluorobiphenyl	13.19			172	404383	3,144		36-107	NA
4	2,4,6-Tribromophenol	16.45			330	80068	3,087		34-130	NA
5	Terphenyl-d14	21.78			244	389607	2,993		38-148	NA

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.29			42	173597	2,928			
1	Pyridine	5.31			79	254783	3,193			
1	Bis(2-chloroethyl) Ether	8.27			93	238001	3,043			
1	Phenol	8.17			94	284413	3,055			
1	Aniline	8.18			93	336333	3,324			
1	2-Chlorophenol	8.36			128	215042	3,242			
1	1,3-Dichlorobenzene	8.56			146	250560	3,224			
1	1,4-Dichlorobenzene	8.64			146	254073	3,020			
1	1,2-Dichlorobenzene	8.95			146	241722	3,335			
1	Benzyl Alcohol	8.89			108	119660	2,868			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F012.D		**Instrument:** MS10
Acqu Date:	11/12/2003 22:51	**Quant Date:** 11/13/2003 09:51	**Vial:** 11
Run Type:	CCV		**Dilution:** 1.0
Lab ID:	KWG0318325-2		**Soln Conc. Units:** ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.14			45	237074	3,055			
1	2-Methylphenol	9.10			107	166460	2,983			
1	Hexachloroethane	9.46			117	127923	3,365			
1	N-Nitrosodi-n-propylamine	9.38			70	171855	2,979			
1	4-Methylphenol	9.36			107	224929	2,708			
1	Nitrobenzene	9.61			77	275325	2,835			
2	Isophorone	10.04			82	422449	3,080			
2	2-Nitrophenol	10.20			139	106710	3,204			
2	2,4-Dimethylphenol	10.31			122	150373	3,053			
2	Bis(2-chloroethoxy)methane	10.48			93	233710	2,988			
2	2,4-Dichlorophenol	10.65			162	172456	3,071			
2	Benzoic Acid	10.54			122	70378	2,627			
2	1,2,4-Trichlorobenzene	10.81			180	207551	3,063			
2	Naphthalene	10.91			128	481550	3,073			
2	4-Chloroaniline	11.09			127	194727	2,960			
2	Hexachlorobutadiene	11.30			225	136807	3,158			
2	4-Chloro-3-methylphenol	12.13			107	204280	3,364			
2	2-Methylnaphthalene	12.33			142	299767	3,200			
3	Hexachlorocyclopentadiene	12.84			237	87224	3,436			
3	2,4,6-Trichlorophenol	13.02			196	140775	3,256			
3	2,4,5-Trichlorophenol	13.09			196	160852	3,465			
3	2-Chloronaphthalene	13.37			127	143858	3,232			
3	2-Nitroaniline	13.69			65	160443	3,308			
3	Acenaphthylene	14.29			152	528768	3,270			
3	Dimethyl Phthalate	14.23			163	454783	3,151			
3	2,6-Dinitrotoluene	14.34			165	107563	3,334			
3	Acenaphthene	14.71			154	293156	3,103			
3	3-Nitroaniline	14.62			138	100181	3,215			
3	2,4-Dinitrophenol	14.86			184	50315	2,162			
3	Dibenzofuran	15.06			168	527785	3,168			
3	4-Nitrophenol	15.11			109	100980	2,785			
3	2,4-Dinitrotoluene	15.21			165	144710	3,427			
3	Fluorene	15.84			166	378377	3,024			
3	4-Chlorophenyl Phenyl Ether	15.90			204	215879	2,953			
3	Diethyl Phthalate	15.85			149	472794	3,059			
3	4-Nitroaniline	16.03			138	97121	2,889			
3	2-Methyl-4,6-dinitrophenol	16.13			198	95118	2,670			
3	N-Nitrosodiphenylamine	16.20			169	281794	3,076			
3	Azobenzene	16.26			77	518319	2,792			
4	4-Bromophenyl Phenyl Ether	17.01			248	135566	2,896			
4	Hexachlorobenzene	17.29			284	158175	3,084			
4	Pentachlorophenol	17.73			266	71668	2,820			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111303\1112F012.D			**Instrument:**	MS10
Acqu Date:	11/12/2003 22:51	**Quant Date:**	11/13/2003 09:51	**Vial:**	11
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318325-2			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.02			178	576210	2,975			
4	Anthracene	18.12			178	584894	3,024			
4	Carbazole	18.55			167	524142	3,126			
4	Di-n-butyl Phthalate	19.65			149	691505	2,904			
4	Fluoranthene	20.77			202	601218	2,905			
5	Pyrene	21.26			202	571009	2,804			
5	Butyl Benzyl Phthalate	23.09			149	308024	3,037			
5	3,3'-Dichlorobenzidine	24.14			252	225494	3,267			
5	Benz(a)anthracene	24.08			228	568043	3,112			
5	Chrysene	24.18			228	544493	3,104			
5	Bis(2-ethylhexyl) Phthalate	24.57			149	419313	2,951			
6	Di-n-octyl Phthalate	26.06			149	725088	3,092			
6	Benzo(b)fluoranthene	26.63			252	535478	3,150			
6	Benzo(k)fluoranthene	26.69			252	506003	3,251			
6	Benzo(a)pyrene	27.38			252	496552	3,166			
6	Indeno(1,2,3-cd)pyrene	30.02			276	452738	3,195			
6	Dibenz(a,h)anthracene	30.10			278	458518	3,321			
6	Benzo(g,h,i)perylene	30.60			276	472197	3,238			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F012.D Vial: 11
Acq On : 12 Nov 2003 22:51 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 09:54:22 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:51:57 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.62	152	57205	1000.00	ng/ml	0.00
21) Naphthalene-d8	10.88	136	149882	1000.00	ng/ml	0.00
34) Acenaphthene-d10	14.64	164	96948	1000.00	ng/ml	0.00
57) Phenanthrene-d10	17.96	188	173601	1000.00	ng/ml	0.00
67) Chrysene-d12	24.11	240	169286	1000.00	ng/ml	0.00
76) Perylene-d12	27.51	264	119749	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.89	112	214776	3096.50	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 82.57%			
6) Phenol-d6	8.15	99	256088	3024.67	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 80.66%			
19) Nitrobenzene-d5	9.58	82	279136	2938.80	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 117.55%			
38) 2-Fluorobiphenyl	13.19	172	404383	3143.67	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 125.75%			
58) 2,4,6-Tribromophenol	16.45	330	80068	3086.70	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 82.31%			
70) Terphenyl-d14	21.78	244	389607	2993.39	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 119.74%			

Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.29	42	173597	2928.33	ng/ml#	43
3) Pyridine	5.31	79	254783	3193.49	ng/ml	98
5) Bis(2-chloroethyl) Ether	8.27	93	238001	3042.73	ng/ml	90
7) Phenol	8.17	94	284413	3055.01	ng/ml#	62
8) Aniline	8.18	93	336333	3323.91	ng/ml#	76
9) 2-Chlorophenol	8.36	128	215042	3242.17	ng/ml	93
10) 1,3-Dichlorobenzene	8.56	146	250560	3224.46	ng/ml	95
11) 1,4-Dichlorobenzene	8.64	146	254073	3019.99	ng/ml	95
12) 1,2-Dichlorobenzene	8.95	146	241722	3335.31	ng/ml	96
13) Benzyl Alcohol	8.89	108	119660	2868.36	ng/ml#	59
14) Bis(2-chloroisopropyl) Eth	9.14	45	237074	3054.85	ng/ml	75
15) 2-Methylphenol	9.10	107	166460	2983.32	ng/ml	86
16) Hexachloroethane	9.46	117	127923	3364.58	ng/ml	95
17) N-Nitrosodi-n-propylamine	9.38	70	171855	2978.60	ng/ml	78
18) 4-Methylphenol	9.36	107	224929	2708.35	ng/ml	90
20) Nitrobenzene	9.61	77	275325	2835.18	ng/ml	86
22) Isophorone	10.04	82	422449	3080.44	ng/ml	95
23) 2-Nitrophenol	10.20	139	106710	3203.94	ng/ml	65
24) 2,4-Dimethylphenol	10.31	122	150373	3053.15	ng/ml#	81
25) Bis(2-chloroethoxy)methane	10.48	93	233710	2987.55	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1112F012.D 1112BNLL.M Thu Nov 13 10:18:57 2003 Page 1

mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F012.D Vial: 11
Acq On : 12 Nov 2003 22:51 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 09:54:22 2003 Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:51:57 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.65	162	172456	3070.63	ng/ml	96
27)	Benzoic Acid	10.54	122	70378	2626.62	ng/ml#	65
28)	1,2,4-Trichlorobenzene	10.81	180	207551	3062.62	ng/ml	95
29)	Naphthalene	10.91	128	481550	3072.76	ng/ml	97
30)	4-Chloroaniline	11.09	127	194727	2960.01	ng/ml	92
31)	Hexachlorobutadiene	11.30	225	136807	3157.85	ng/ml	97
32)	4-Chloro-3-methylphenol	12.13	107	204280	3364.30	ng/ml	77
33)	2-Methylnaphthalene	12.33	142	299767	3199.84	ng/ml	100
35)	Hexachlorocyclopentadiene	12.84	237	87224	3435.80	ng/ml	92
36)	2,4,6-Trichlorophenol	13.02	196	140775	3256.10	ng/ml	92
37)	2,4,5-Trichlorophenol	13.09	196	160852	3464.54	ng/ml	93
39)	2-Chloronaphthalene	13.37	127	143858	3232.24	ng/ml	90
40)	2-Nitroaniline	13.69	65	160443	3307.65	ng/ml#	76
41)	Acenaphthylene	14.29	152	528768	3269.76	ng/ml	98
42)	Dimethyl Phthalate	14.23	163	454783	3151.41	ng/ml	99
43)	2,6-Dinitrotoluene	14.34	165	107563	3333.54	ng/ml#	54
44)	Acenaphthene	14.71	154	293156	3102.84	ng/ml	98
45)	3-Nitroaniline	14.62	138	100181	3214.70	ng/ml	87
46)	2,4-Dinitrophenol	14.86	184	50315	2161.65	ng/ml	72
47)	Dibenzofuran	15.06	168	527785	3168.11	ng/ml	80
48)	4-Nitrophenol	15.11	109	100980	2785.38	ng/ml#	70
49)	2,4-Dinitrotoluene	15.21	165	144710	3427.18	ng/ml#	55
50)	Fluorene	15.84	166	378377	3023.75	ng/ml	95
51)	4-Chlorophenyl Phenyl Ethe	15.90	204	215879	2952.66	ng/ml	91
52)	Diethyl Phthalate	15.85	149	472794	3059.41	ng/ml	96
53)	4-Nitroaniline	16.03	138	97121	2888.99	ng/ml#	42
54)	2-Methyl-4,6-dinitrophenol	16.13	198	95118	2670.13	ng/ml	77
55)	N-Nitrosodiphenylamine	16.20	169	281794	3076.35	ng/ml	95
56)	Azobenzene	16.26	77	518319	2792.02	ng/ml	88
59)	4-Bromophenyl Phenyl Ether	17.01	248	135566	2895.59	ng/ml	90
60)	Hexachlorobenzene	17.29	284	158175	3084.15	ng/ml	92
61)	Pentachlorophenol	17.73	266	71668	2820.24	ng/ml	99
62)	Phenanthrene	18.02	178	576210	2974.62	ng/ml	98
63)	Anthracene	18.12	178	584894	3024.08	ng/ml	97
64)	Carbazole	18.55	167	524142	3126.09	ng/ml	97
65)	Di-n-butyl Phthalate	19.65	149	691505	2903.60	ng/ml	98
66)	Fluoranthene	20.77	202	601218	2905.29	ng/ml	94
68)	Benzidine	21.18	184	343708	3783.18	ng/ml	96
69)	Pyrene	21.26	202	571009	2803.76	ng/ml	99
71)	Butyl Benzyl Phthalate	23.09	149	308024	3036.58	ng/ml	88
72)	3,3'-Dichlorobenzidine	24.14	252	225494	3267.35	ng/ml	99

(#) = qualifier out of range (m) = manual integration
11/13/03 mt 11/13/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F012.D
Acq On : 12 Nov 2003 22:51
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 13 09:54:22 2003

Vial: 11
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: 1112BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:51:57 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.08	228	568043	3111.50	ng/ml	96
74)	Chrysene	24.18	228	544493	3104.44	ng/ml	100
75)	Bis(2-ethylhexyl) Phthalat	24.57	149	419313	2950.55	ng/ml	99
77)	Di-n-octyl Phthalate	26.06	149	725088	3092.34	ng/ml	95
78)	Benzo(b)fluoranthene	26.63	252	535478	3150.42	ng/ml	95
79)	Benzo(k)fluoranthene	26.69	252	506003	3250.69	ng/ml	96
80)	Benzo(a)pyrene	27.38	252	496552	3166.05	ng/ml	96
81)	Indeno(1,2,3-cd)pyrene	30.02	276	452738	3194.50	ng/ml	90
82)	Dibenz(a,h)anthracene	30.10	278	458518	3321.16	ng/ml	91
83)	Benzo(g,h,i)perylene	30.60	276	472197	3238.40	ng/ml	88

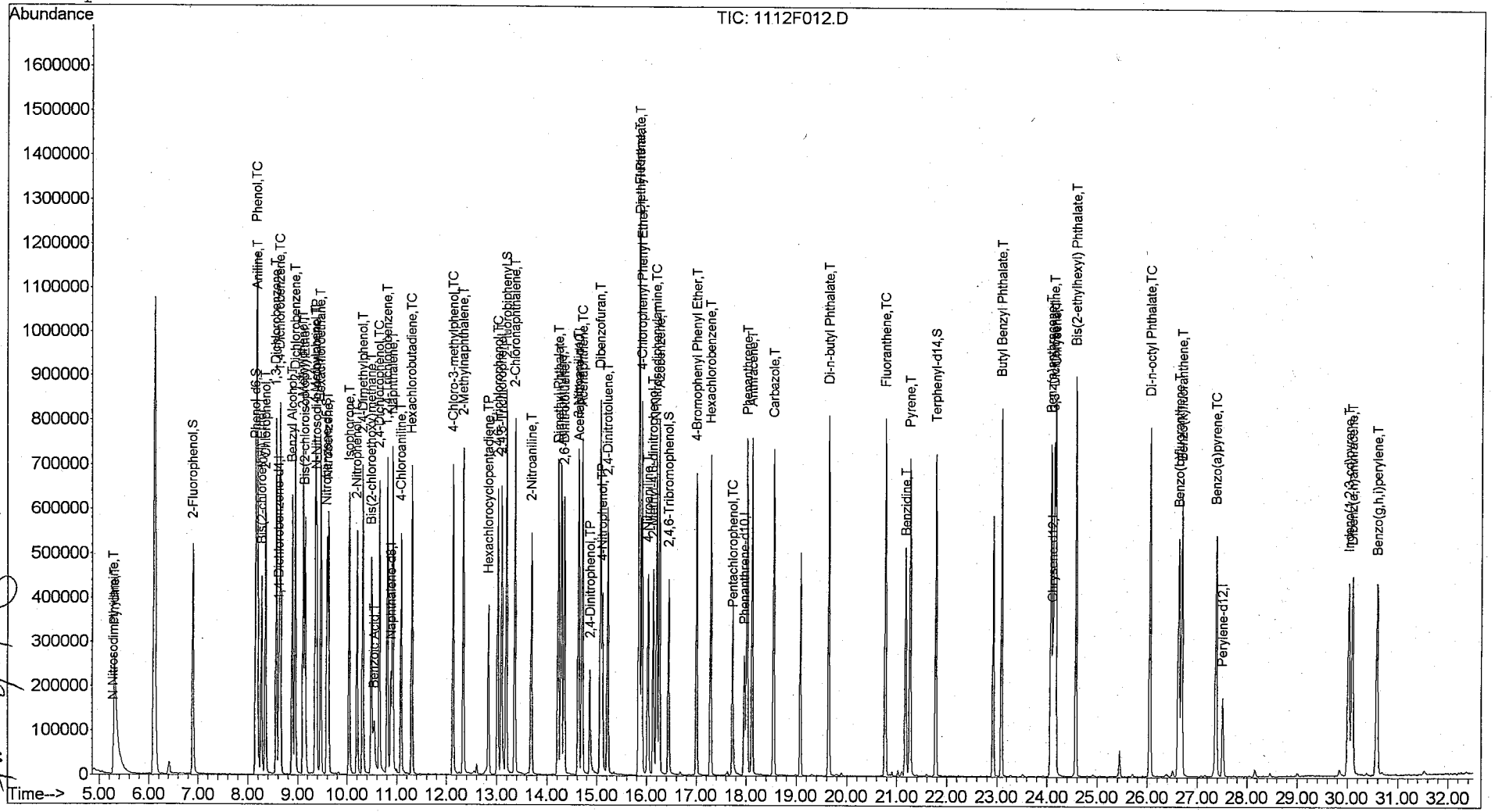
11/13/3 mA 11/13/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111303\1112F012.D Vial: 11
Acq On : 12 Nov 2003 22:51 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 13 9:51 2003 Quant Results File: 1112BNLL.RES

Method : J:\MS10\METHODS\BNA\1112BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Nov 13 09:56:56 2003
Response via : Initial Calibration



2224

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/17/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/14/2003
Calibration ID: CAL3102
Analysis Lot: KWG0318538
Units: ng/ml

File ID: J:\MS10\DATA\111703\1117F001.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3200	0.01	1.35	1.43	6	NA	± 20 %	AverageRF
2-Methylphenol	3000	3200	0.01	0.870	0.918	6	NA	± 30 %	AverageRF
4-Methylphenol	3000	3100	0.01	1.29	1.32	2	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	3000	0.01	0.317	0.319	1	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3000	0.01	0.403	0.403	0	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3000	0.01	0.514	0.519	1	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	3000	0.01	0.207	0.205	-1	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3300	0.01	0.553	0.611	11	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3100	0.01	0.801	0.832	4	NA	± 30 %	AverageRF
Phenol-d6	3000	3200	0.01	1.29	1.37	6	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	2900	0.01	0.169	0.166	-2	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3100	0.01	0.784	0.804	3	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	2800	0.05	0.447	0.422	-6	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2900	0.01	1.45	1.42	-2	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3300	0.01	1.73	1.89	10	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	0.01	1.19	1.21	2	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	0.01	1.29	1.36	5	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	3400	0.05	0.213	0.263	NA	13	± 30 %	Linear
‡ 4-Chloro-3-methylphenol	3000	2900	0.01	0.427	0.409	-4	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3200	0.05	0.923	0.994	8	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2800	0.05	0.506	0.469	-7	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.01	0.959	1.00	4	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3200	0.01	0.916	0.966	5	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.01	0.337	0.327	-3	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.223	0.240	8	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS10\DATA\111703\1117F001.D
Lab ID: KWG0318538-2
RunType: CCV & ICV
Matrix: LIQUID

Date Acquired: 11/17/2003 09:06
Date Quantitated: 11/17/2003 09:39
Batch ID: KWG0318538
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/18/03

Secondary Review: mt 11/18/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/18/2003

Analysis Lot:	KWG0318538	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:			
Tune Ref:	J:\MS10\DATA\111703\1117A001.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\111703\1117F001.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:**	11/17/2003 09:39	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318538-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.97	0.00	152	61838	1,000.00	OK
2	Naphthalene-d8	11.26	0.00	136	170690	1,000.00	OK
3	Acenaphthene-d10	15.04	0.00	164	105335	1,000.00	OK
4	Phenanthrene-d10	18.37	-0.01	188	191276	1,000.00	OK
5	Chrysene-d12	24.54	0.00	240	186195	1,000.00	OK
6	Perylene-d12	28.02	0.00	264	135991	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	7.19			112	214338	3,228		28-109	NA
1	Phenol-d6	8.46			99	253807	3,190		40-123	NA
1	Nitrobenzene-d5	9.95			82	303685	3,075		24-128	NA
3	2-Fluorobiphenyl	13.59			172	438638	3,004		28-126	NA
4	2,4,6-Tribromophenol	16.85			330	95100	2,942		35-138	NA
5	Terphenyl-d14	22.19			244	449329	3,078		56-152	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.59			42	183265	2,722			
1	Pyridine	5.61			79	233705	3,419			
1	Bis(2-chloroethyl) Ether	8.60			93	226864	3,131			
1	Phenol	8.48			94	265499m	3,170			
1	Aniline	8.52			93	323742	3,578			
1	2-Chlorophenol	8.68			128	218850	3,214			
1	1,3-Dichlorobenzene	8.91			146	252153	2,976			
1	1,4-Dichlorobenzene	8.99			146	263118	2,934			
1	1,2-Dichlorobenzene	9.29			146	242736	3,069			
1	Benzyl Alcohol	9.22			108	133536	3,273			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F001.D		
Acqu Date:	11/17/2003 09:06	**Quant Date:**	11/17/2003 09:39
Run Type:	CCV		
Lab ID:	KWG0318538-2		

Instrument:	MS10
Vial:	1
Dilution:	1.0
Soln Conc. Units:	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.49			45	224544	3,118			
1	2-Methylphenol	9.43			107	170386	3,166			
1	Hexachloroethane	9.83			117	135480	3,179			
1	N-Nitrosodi-n-propylamine	9.72			70	184373	3,231			
1	4-Methylphenol	9.68			107	245321	3,065			
1	Nitrobenzene	9.98			77	304457	3,145			
2	Isophorone	10.40			82	474021	3,125			
2	2-Nitrophenol	10.56			139	122965	3,228			
2	2,4-Dimethylphenol	10.65			122	163268	3,019			
2	Bis(2-chloroethoxy)methane	10.85			93	258475	3,156			
2	2,4-Dichlorophenol	11.01			162	206596	3,003			
2	Benzoic Acid	10.87			122	122872	3,034			
2	1,2,4-Trichlorobenzene	11.19			180	244524	2,973			
2	Naphthalene	11.30			128	540682	3,036			
2	4-Chloroaniline	11.45			127	216206	2,818			
2	Hexachlorobutadiene	11.69			225	167577	2,911			
2	4-Chloro-3-methylphenol	12.49			107	209490	2,876			
2	2-Methylnaphthalene	12.72			142	341570	3,095			
3	Hexachlorocyclopentadiene	13.23			237	148207	2,779			
3	2,4,6-Trichlorophenol	13.41			196	164067	3,028			
3	2,4,5-Trichlorophenol	13.48			196	180632	3,121			
3	2-Chloronaphthalene	13.76			127	156120	3,122			
3	2-Nitroaniline	14.09			65	168475	3,371			
3	Acenaphthylene	14.69			152	534253	3,167			
3	Dimethyl Phthalate	14.61			163	473359	3,058			
3	2,6-Dinitrotoluene	14.73			165	113047	3,516			
3	Acenaphthene	15.11			154	316792	3,135			
3	3-Nitroaniline	15.02			138	108318	3,533			
3	2,4-Dinitrophenol	15.25			184	83093	3,401			
3	Dibenzofuran	15.48			168	554878	3,112			
3	4-Nitrophenol	15.45			109	133466	2,832			
3	2,4-Dinitrotoluene	15.61			165	152388	3,396			
3	Fluorene	16.26			166	399313	3,035			
3	4-Chlorophenyl Phenyl Ether	16.31			204	241335	3,021			
3	Diethyl Phthalate	16.25			149	495599	3,041			
3	4-Nitroaniline	16.43			138	103912	3,235			
3	2-Methyl-4,6-dinitrophenol	16.52			198	113264	3,067			
3	N-Nitrosodiphenylamine	16.61			169	305212	3,165			
3	Azobenzene	16.67			77	527748	2,893			
4	4-Bromophenyl Phenyl Ether	17.41			248	153751	2,884			
4	Hexachlorobenzene	17.71			284	176486	3,020			
4	Pentachlorophenol	18.13			266	117535	2,968			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111703\1117F001.D			**Instrument:**	MS10
Acqu Date:	11/17/2003 09:06	**Quant Date:**	11/17/2003 09:39	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318538-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.44			178	598745	2,886			
4	Anthracene	18.54			178	637215	3,048			
4	Carbazole	18.96			167	569643	3,133			
4	Di-n-butyl Phthalate	20.04			149	776628	3,066			
4	Fluoranthene	21.20			202	695817	3,053			
5	Pyrene	21.70			202	675246	2,923			
5	Butyl Benzyl Phthalate	23.50			149	341305	3,317			
5	3,3'-Dichlorobenzidine	24.56			252	250569	3,382			
5	Benz(a)anthracene	24.51			228	630357	3,082			
5	Chrysene	24.60			228	580788	2,997			
5	Bis(2-ethylhexyl) Phthalate	24.98			149	464546	3,116			
6	Di-n-octyl Phthalate	26.49			149	772587	3,291			
6	Benzo(b)fluoranthene	27.12			252	588670	3,183			
6	Benzo(k)fluoranthene	27.18			252	567737	3,230			
6	Benzo(a)pyrene	27.88			252	553038	3,151			
6	Indeno(1,2,3-cd)pyrene	30.56			276	511003	3,120			
6	Dibenz(a,h)anthracene	30.64			278	520435	3,245			
6	Benzo(g,h,i)perylene	31.15			276	545547	3,212			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 09:38:55 2003

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	61838	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.26	136	170690	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	105335	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	191276	1000.00	ng/ml	0.00
67) Chrysene-d12	24.54	240	186195	1000.00	ng/ml	0.00
76) Perylene-d12	28.02	264	135991	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	214338	3228.13	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 86.08%			
6) Phenol-d6	8.46	99	253807	3189.51	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 85.05%			
19) Nitrobenzene-d5	9.95	82	303685	3074.79	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 122.99%			
38) 2-Fluorobiphenyl	13.59	172	438638	3003.76	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 120.15%			
58) 2,4,6-Tribromophenol	16.85	330	95100	2941.79	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 78.45%			
70) Terphenyl-d14	22.19	244	449329	3078.29	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 123.13%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.59	42	183265	2721.57	ng/ml#	41
3) Pyridine	5.61	79	233705	3419.13	ng/ml	91
5) Bis(2-chloroethyl) Ether	8.60	93	226864	3130.51	ng/ml	88
7) Phenol	8.48	94	265499m	3169.80	ng/ml	
8) Aniline	8.52	93	323742	3578.34	ng/ml#	45
9) 2-Chlorophenol	8.68	128	218850	3213.72	ng/ml	92
10) 1,3-Dichlorobenzene	8.91	146	252153	2975.56	ng/ml	97
11) 1,4-Dichlorobenzene	8.99	146	263118	2933.70	ng/ml	95
12) 1,2-Dichlorobenzene	9.29	146	242736	3069.28	ng/ml	92
13) Benzyl Alcohol	9.22	108	133536	3272.66	ng/ml#	57
14) Bis(2-chloroisopropyl) Eth	9.49	45	224544	3118.40	ng/ml	73
15) 2-Methylphenol	9.43	107	170386	3165.58	ng/ml	84
16) Hexachloroethane	9.83	117	135480	3179.28	ng/ml	88
17) N-Nitrosodi-n-propylamine	9.72	70	184373	3230.76	ng/ml	82
18) 4-Methylphenol	9.68	107	245321	3064.93	ng/ml	88
20) Nitrobenzene	9.98	77	304457	3144.57	ng/ml	87
22) Isophorone	10.40	82	474021	3124.74	ng/ml	94
23) 2-Nitrophenol	10.56	139	122965	3227.81	ng/ml	65
24) 2,4-Dimethylphenol	10.65	122	163268	3018.81	ng/ml	82
25) Bis(2-chloroethoxy)methane	10.85	93	258475	3156.13	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 09:38:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.01	162	206596	3003.22	ng/ml	99
27)	Benzoic Acid	10.87	122	122872	3033.87	ng/ml	79
28)	1,2,4-Trichlorobenzene	11.19	180	244524	2972.62	ng/ml	95
29)	Naphthalene	11.30	128	540682	3036.10	ng/ml	97
30)	4-Chloroaniline	11.45	127	216206	2818.24	ng/ml	87
31)	Hexachlorobutadiene	11.69	225	167577	2910.60	ng/ml	97
32)	4-Chloro-3-methylphenol	12.49	107	209490	2875.71	ng/ml	81
33)	2-Methylnaphthalene	12.72	142	341570	3094.91	ng/ml	96
35)	Hexachlorocyclopentadiene	13.23	237	148207	2779.06	ng/ml	95
36)	2,4,6-Trichlorophenol	13.41	196	164067	3027.77	ng/ml	98
37)	2,4,5-Trichlorophenol	13.48	196	180632	3121.11	ng/ml	98
39)	2-Chloronaphthalene	13.76	127	156120	3122.37	ng/ml	91
40)	2-Nitroaniline	14.09	65	168475	3370.82	ng/ml	76
41)	Acenaphthylene	14.69	152	534253	3166.95	ng/ml	98
42)	Dimethyl Phthalate	14.61	163	473359	3058.25	ng/ml	97
43)	2,6-Dinitrotoluene	14.73	165	113047	3516.35	ng/ml#	60
44)	Acenaphthene	15.11	154	316792	3134.80	ng/ml	97
45)	3-Nitroaniline	15.02	138	108318	3533.44	ng/ml	96
46)	2,4-Dinitrophenol	15.25	184	83093	3401.22	ng/ml#	57
47)	Dibenzofuran	15.48	168	554878	3111.80	ng/ml	83
48)	4-Nitrophenol	15.45	109	133466	2831.51	ng/ml#	68
49)	2,4-Dinitrotoluene	15.61	165	152388	3395.73	ng/ml	79
50)	Fluorene	16.26	166	399313	3034.83	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	241335	3020.67	ng/ml	91
52)	Diethyl Phthalate	16.25	149	495599	3041.10	ng/ml	96
53)	4-Nitroaniline	16.43	138	103912	3234.92	ng/ml#	32
54)	2-Methyl-4,6-dinitrophenol	16.52	198	113264	3066.72	ng/ml	76
55)	N-Nitrosodiphenylamine	16.61	169	305212	3164.57	ng/ml	97
56)	Azobenzene	16.67	77	527748	2893.44	ng/ml	86
59)	4-Bromophenyl Phenyl Ether	17.41	248	153751	2884.25	ng/ml	90
60)	Hexachlorobenzene	17.71	284	176486	3020.41	ng/ml	91
61)	Pentachlorophenol	18.13	266	117535	2968.07	ng/ml	97
62)	Phenanthrene	18.44	178	598745	2885.91	ng/ml	99
63)	Anthracene	18.54	178	637215	3048.06	ng/ml	98
64)	Carbazole	18.96	167	569643	3132.56	ng/ml	97
65)	Di-n-butyl Phthalate	20.04	149	776628	3066.21	ng/ml	97
66)	Fluoranthene	21.20	202	695817	3053.02	ng/ml	92
68)	Benzidine	21.59	184	311454	3356.13	ng/ml	96
69)	Pyrene	21.70	202	675246	2923.42	ng/ml	97
71)	Butyl Benzyl Phthalate	23.50	149	341305	3316.67	ng/ml	93
72)	3,3'-Dichlorobenzidine	24.56	252	250569	3382.44	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 09:38:55 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

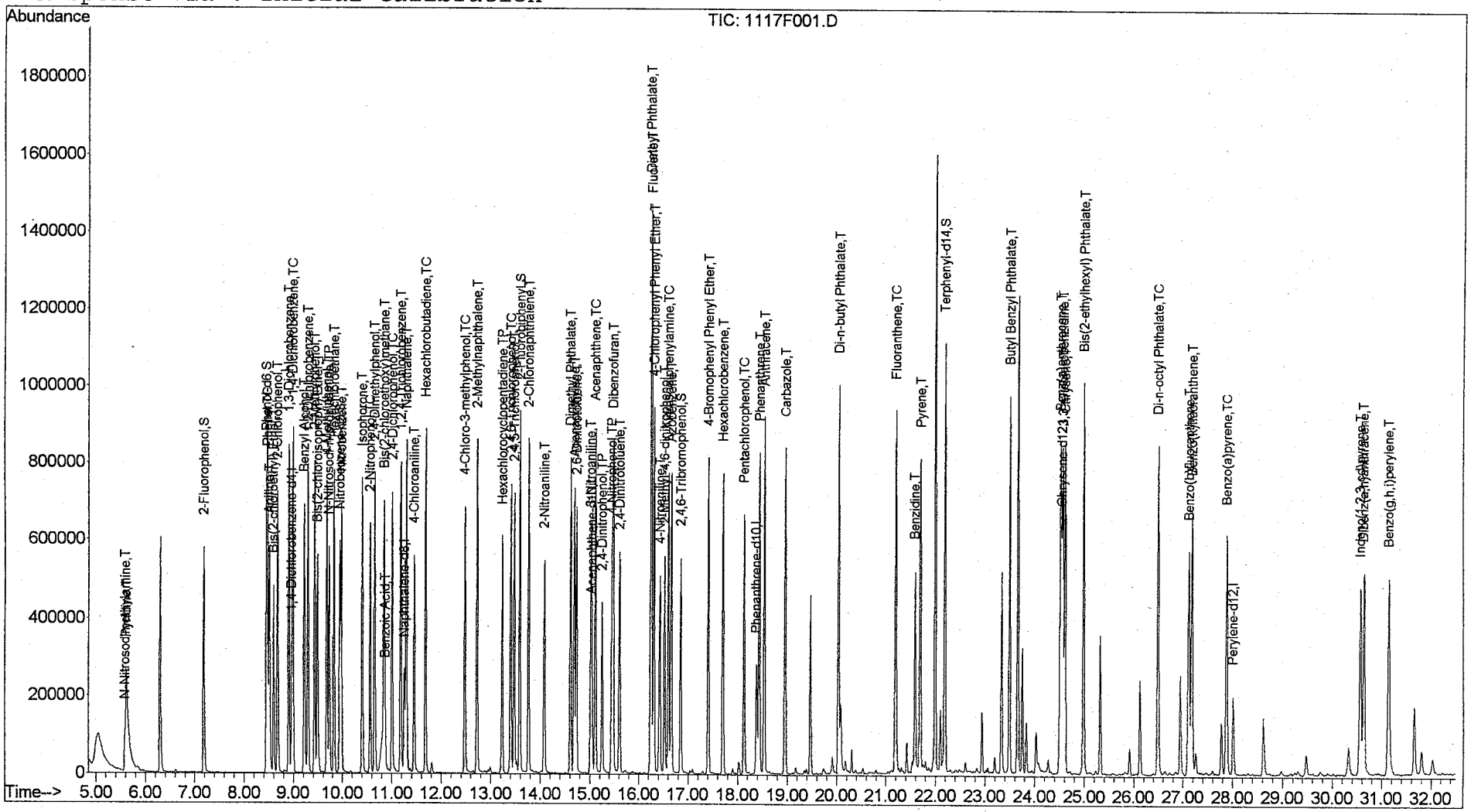
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.51	228	630357	3081.93	ng/ml	98
74)	Chrysene	24.60	228	580788	2996.63	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	464546	3115.57	ng/ml	99
77)	Di-n-octyl Phthalate	26.49	149	772587	3291.06	ng/ml	94
78)	Benzo(b)fluoranthene	27.12	252	588670	3183.48	ng/ml	95
79)	Benzo(k)fluoranthene	27.18	252	567737	3230.33	ng/ml	94
80)	Benzo(a)pyrene	27.88	252	553038	3151.18	ng/ml	92
81)	Indeno(1,2,3-cd)pyrene	30.56	276	511003	3119.83	ng/ml	89
82)	Dibenz(a,h)anthracene	30.64	278	520435	3244.75	ng/ml	92
83)	Benzo(g,h,i)perylene	31.15	276	545547	3212.44	ng/ml	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111703\1117F001.D Vial: 1
Acq On : 17 Nov 2003 9:06 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 17 9:39 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 11:18:31 2003
Response via : Initial Calibration



2233

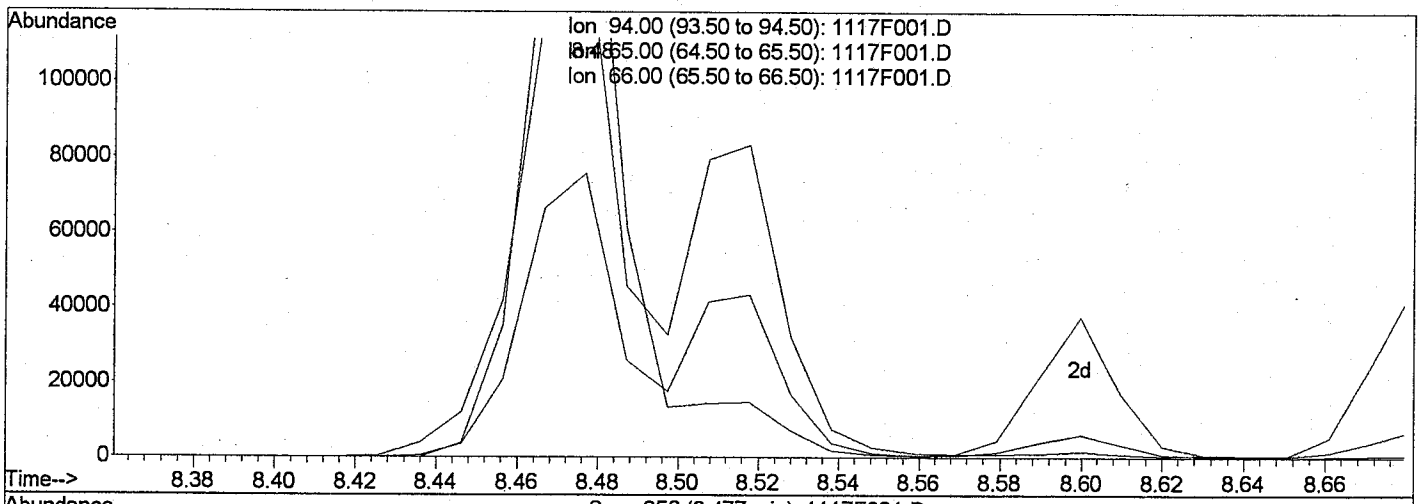
Quantitation Report (Qedit)

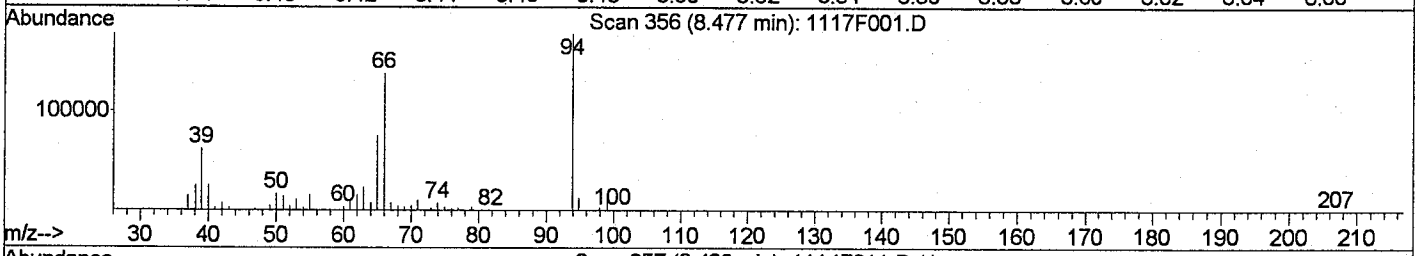
Data File : J:\MS10\DATA\111703\1117F001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 9:39 2003

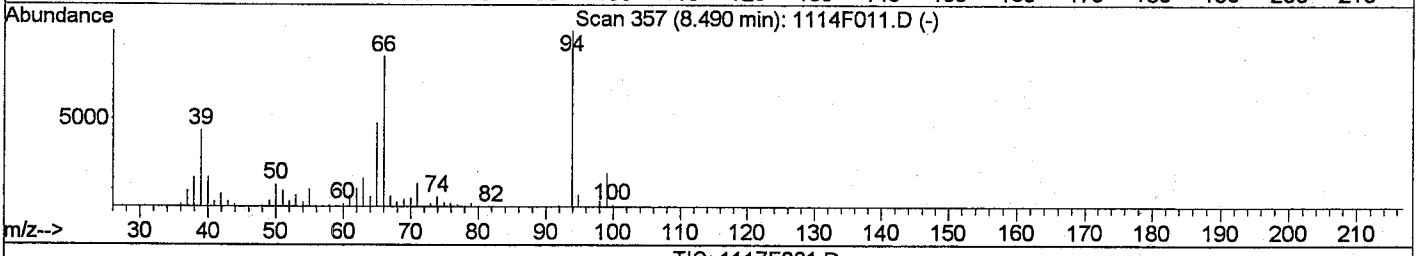
Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Multiple Level Calibration







TIC: 1117F001.D

(7) Phenol (TC)

8.48min 3457.44ng/ml

response 289591

Ion	Exp%	Act%
94.00	100	100
65.00	36.30	42.36
66.00	62.90	77.38
0.00	0.00	0.00

1117F001.D 1114BNLL.M Mon Nov 17 09:39:32 2003

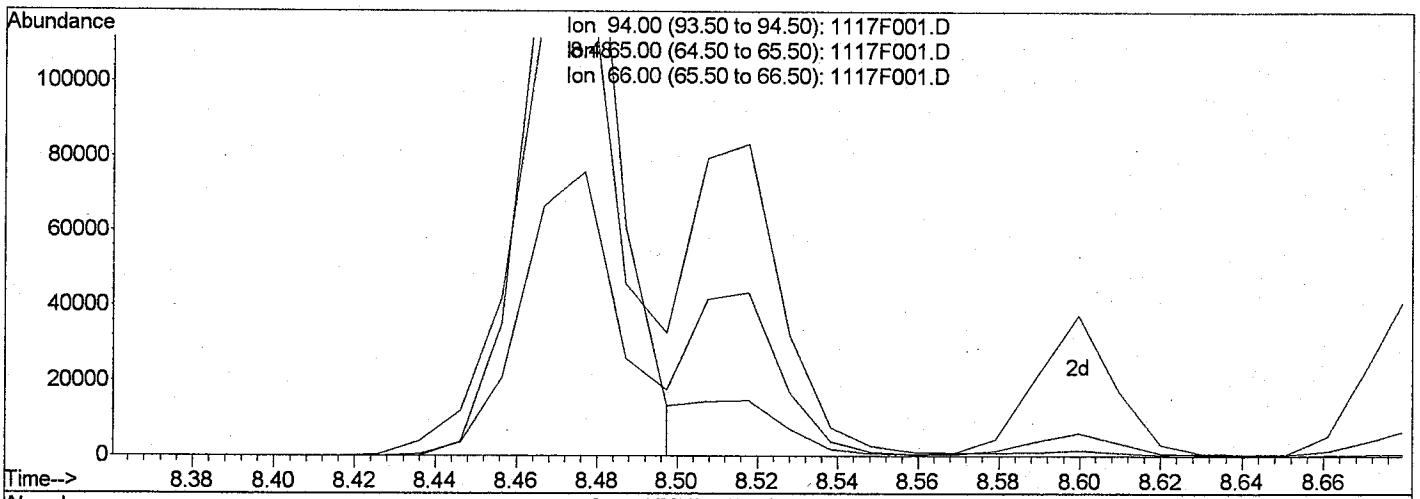
Quantitation Report (Qedit)

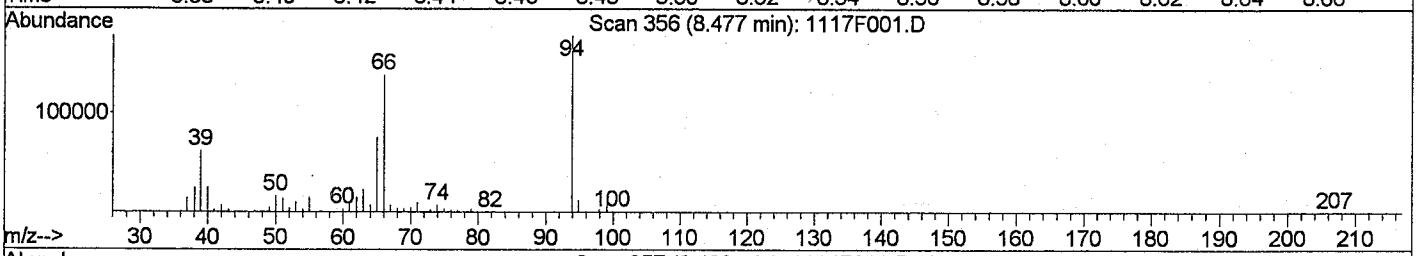
Data File : J:\MS10\DATA\111703\1117F001.D
Acq On : 17 Nov 2003 9:06
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 17 9:39 2003

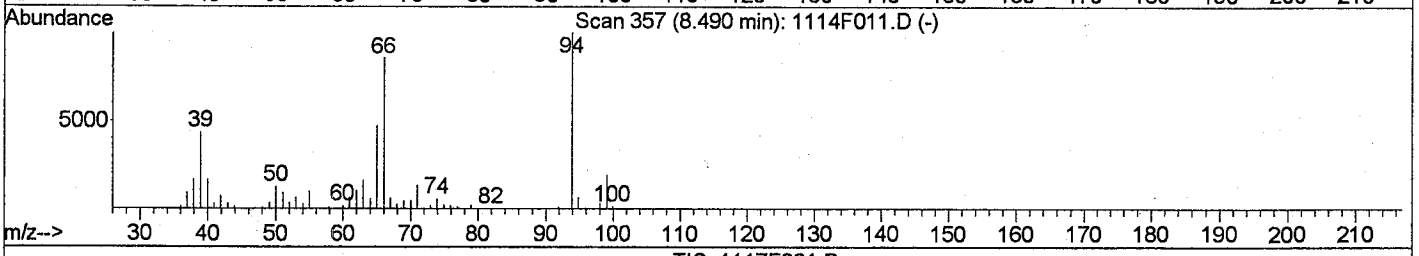
Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Mon Nov 17 09:17:22 2003
Response via : Multiple Level Calibration







TIC: 1117F001.D

(7) Phenol (TC)

8.48min 3169.80ng/ml m

response 265499

Ion	Exp%	Act%
94.00	100	100
65.00	36.30	42.36
66.00	62.90	77.60
0.00	0.00	0.00

JG 11/17/3 overwritten

mst 11/18/03

1117F001.D 1114BNLL.M Mon Nov 17 09:39:37 2003

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/18/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/14/2003
Calibration ID: CAL3102
Analysis Lot: KWG0318619
Units: ng/ml

File ID: J:\MS10\DATA\111803\1118F001.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3500	0.01	1.35	1.58	17	NA	± 20 %	AverageRF
2-Methylphenol	3000	3300	0.01	0.870	0.948	9	NA	± 30 %	AverageRF
4-Methylphenol	3000	3200	0.01	1.29	1.37	6	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2900	0.01	0.317	0.305	-4	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3000	0.01	0.403	0.408	1	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3000	0.01	0.514	0.520	1	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.01	0.207	0.190	-8	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3200	0.01	0.553	0.594	8	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.01	0.801	0.810	1	NA	± 30 %	AverageRF
Phenol-d6	3000	3200	0.01	1.29	1.39	8	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	3100	0.01	0.169	0.174	3	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3200	0.01	0.784	0.825	5	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	2800	0.05	0.447	0.417	-7	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	0.01	1.45	1.44	-1	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3300	0.01	1.73	1.88	9	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	0.01	1.19	1.25	5	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3200	0.01	1.29	1.37	6	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	3000	0.05	0.213	0.223	NA	1	± 30 %	Linear
‡ 4-Chloro-3-methylphenol	3000	3000	0.01	0.427	0.424	-1	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3300	0.05	0.923	1.03	11	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2600	0.05	0.506	0.443	-13	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3100	0.01	0.959	0.992	3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3200	0.01	0.916	0.981	7	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.01	0.337	0.327	-3	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.223	0.237	6	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS10\DATA\111803\1118F001.D
Lab ID: KWG0318619-2
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/18/2003 12:31
Date Quantitated: 11/18/2003 13:13
Batch ID: KWG0318619
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/19/3

Secondary Review: mnt 11/19/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/19/2003

Analysis Lot:	KWG0318619	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1114BNLL.M	**Calibration ID:**	CAL3102
Title:			
Tune Ref:	J:\MS10\DATA\111803\1118A001.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\111803\1118F001.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 12:31	**Quant Date:**	11/18/2003 13:13	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318619-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.99	0.02	152	63019	1,000.00	OK
2	Naphthalene-d8	11.28	0.02	136	180926	1,000.00	OK
3	Acenaphthene-d10	15.07	0.03	164	113865	1,000.00	OK
4	Phenanthrene-d10	18.41	0.03	188	205135	1,000.00	OK
5	Chrysene-d12	24.58	0.04	240	202476	1,000.00	OK
6	Perylene-d12	28.05	0.03	264	144586	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.20			112	223305	3,300		28-109	NA	
1	Phenol-d6	8.48			99	262375	3,235		40-123	NA	
1	Nitrobenzene-d5	9.97			82	324475	3,224		24-128	NA	
3	2-Fluorobiphenyl	13.61			172	472843	2,995		28-126	NA	
4	2,4,6-Tribromophenol	16.89			330	106982	3,086		35-138	NA	
5	Terphenyl-d14	22.21			244	500994	3,156		56-152	NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.61			42	196592	2,865			
1	Pyridine	5.61			79	227276	3,263			
1	Bis(2-chloroethyl) Ether	8.62			93	235139	3,184			
1	Phenol	8.50			94	298479	3,497			
1	Aniline	8.54			93	311881	3,383			
1	2-Chlorophenol	8.71			128	226193	3,259			
1	1,3-Dichlorobenzene	8.93			146	259197	3,001			
1	1,4-Dichlorobenzene	9.01			146	272036	2,976			
1	1,2-Dichlorobenzene	9.33			146	254601	3,159			
1	Benzyl Alcohol	9.25			108	132285	3,181			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F001.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 12:31	**Quant Date:**	11/18/2003 13:13	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318619-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.51			45	225000	3,066			
1	2-Methylphenol	9.46			107	179288	3,269			
1	Hexachloroethane	9.85			117	143333	3,301			
1	N-Nitrosodi-n-propylamine	9.76			70	193961	3,335			
1	4-Methylphenol	9.71			107	259728	3,184			
1	Nitrobenzene	10.00			77	320574	3,249			
2	Isophorone	10.43			82	502199	3,123			
2	2-Nitrophenol	10.60			139	128689	3,187			
2	2,4-Dimethylphenol	10.69			122	165733	2,891			
2	Bis(2-chloroethoxy)methane	10.87			93	262294	3,022			
2	2,4-Dichlorophenol	11.04			162	221480	3,037			
2	Benzoic Acid	10.90			122	101754	2,482			
2	1,2,4-Trichlorobenzene	11.21			180	263093	3,017			
2	Naphthalene	11.32			128	568834	3,013			
2	4-Chloroaniline	11.49			127	225620	2,775			
2	Hexachlorobutadiene	11.71			225	177533	2,909			
2	4-Chloro-3-methylphenol	12.51			107	230029	2,979			
2	2-Methylnaphthalene	12.76			142	345653	2,955			
3	Hexachlorocyclopentadiene	13.26			237	151284	2,624			
3	2,4,6-Trichlorophenol	13.43			196	177576	3,032			
3	2,4,5-Trichlorophenol	13.50			196	190005	3,037			
3	2-Chloronaphthalene	13.80			127	167047	3,091			
3	2-Nitroaniline	14.12			65	173027	3,203			
3	Acenaphthylene	14.72			152	583604	3,200			
3	Dimethyl Phthalate	14.64			163	521778	3,119			
3	2,6-Dinitrotoluene	14.77			165	121869	3,507			
3	Acenaphthene	15.14			154	338888	3,102			
3	3-Nitroaniline	15.06			138	111978	3,379			
3	2,4-Dinitrophenol	15.28			184	76343	3,026			
3	Dibenzofuran	15.51			168	608424	3,156			
3	4-Nitrophenol	15.49			109	142352	2,794			
3	2,4-Dinitrotoluene	15.64			165	164105	3,383			
3	Fluorene	16.28			166	440366	3,096			
3	4-Chlorophenyl Phenyl Ether	16.33			204	263652	3,053			
3	Diethyl Phthalate	16.27			149	544282	3,090			
3	4-Nitroaniline	16.46			138	109865	3,164			
3	2-Methyl-4,6-dinitrophenol	16.56			198	111514	2,793			
3	N-Nitrosodiphenylamine	16.63			169	335005	3,213			
3	Azobenzene	16.69			77	566199	2,872			
4	4-Bromophenyl Phenyl Ether	17.44			248	166324	2,909			
4	Hexachlorobenzene	17.73			284	198559	3,169			
4	Pentachlorophenol	18.16			266	117054	2,756			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\111803\1118F001.D			**Instrument:**	MS10
Acqu Date:	11/18/2003 12:31	**Quant Date:**	11/18/2003 13:13	**Vial:**	1
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0318619-2			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:**

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.46			178	661335	2,972			
4	Anthracene	18.56			178	690003	3,078			
4	Carbazole	18.98			167	622625	3,193			
4	Di-n-butyl Phthalate	20.07			149	854332	3,145			
4	Fluoranthene	21.22			202	769840	3,150			
5	Pyrene	21.72			202	750025	2,986			
5	Butyl Benzyl Phthalate	23.52			149	361108	3,227			
5	3,3'-Dichlorobenzidine	24.59			252	261971	3,252			
5	Benz(a)anthracene	24.53			228	702066	3,157			
5	Chrysene	24.64			228	631294	2,995			
5	Bis(2-ethylhexyl) Phthalate	25.00			149	492238	3,036			
6	Di-n-octyl Phthalate	26.51			149	813560	3,260			
6	Benzo(b)fluoranthene	27.15			252	658058	3,347			
6	Benzo(k)fluoranthene	27.21			252	600846	3,215			
6	Benzo(a)pyrene	27.92			252	595440	3,191			
6	Indeno(1,2,3-cd)pyrene	30.61			276	560923	3,221			
6	Dibenz(a,h)anthracene	30.67			278	564453	3,310			
6	Benzo(g,h,i)perylene	31.18			276	568896	3,151			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F001.D Vial: 1
Acq On : 18 Nov 2003 12:31 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 13:12:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 18 12:21:53 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.99	152	63019	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.28	136	180926	1000.00	ng/ml	0.02
34) Acenaphthene-d10	15.07	164	113865	1000.00	ng/ml	0.02
57) Phenanthrene-d10	18.41	188	205135	1000.00	ng/ml	0.03
67) Chrysene-d12	24.58	240	202476	1000.00	ng/ml	0.03
76) Perylene-d12	28.05	264	144586	1000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	223305	3300.16	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 88.00%			
6) Phenol-d6	8.48	99	262375	3235.39	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 86.28%			
19) Nitrobenzene-d5	9.97	82	324475	3223.72	ng/ml	0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 128.95%			
38) 2-Fluorobiphenyl	13.61	172	472843	2995.42	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 119.82%			
58) 2,4,6-Tribromophenol	16.89	330	106982	3085.76	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 82.29%			
70) Terphenyl-d14	22.21	244	500994	3156.26	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 126.25%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.61	42	196592	2864.77	ng/ml#	32
3) Pyridine	5.61	79	227276	3262.76	ng/ml	89
5) Bis(2-chloroethyl) Ether	8.62	93	235139	3183.89	ng/ml	89
7) Phenol	8.50	94	298479	3496.77	ng/ml	76
8) Aniline	8.54	93	311881	3382.64	ng/ml#	49
9) 2-Chlorophenol	8.71	128	226193	3259.30	ng/ml	89
10) 1,3-Dichlorobenzene	8.93	146	259197	3001.36	ng/ml	94
11) 1,4-Dichlorobenzene	9.01	146	272036	2976.29	ng/ml	94
12) 1,2-Dichlorobenzene	9.33	146	254601	3158.97	ng/ml	96
13) Benzyl Alcohol	9.25	108	132285	3181.24	ng/ml#	47
14) Bis(2-chloroisopropyl) Eth	9.51	45	225000	3066.18	ng/ml	72
15) 2-Methylphenol	9.46	107	179288	3268.55	ng/ml	87
16) Hexachloroethane	9.85	117	143333	3300.53	ng/ml	87
17) N-Nitrosodi-n-propylamine	9.76	70	193961	3335.08	ng/ml	84
18) 4-Methylphenol	9.71	107	259728	3184.11	ng/ml	86
20) Nitrobenzene	10.00	77	320574	3248.99	ng/ml	85
22) Isophorone	10.43	82	502199	3123.19	ng/ml	97
23) 2-Nitrophenol	10.60	139	128689	3186.94	ng/ml	65
24) 2,4-Dimethylphenol	10.69	122	165733	2891.02	ng/ml#	77
25) Bis(2-chloroethoxy)methane	10.87	93	262294	3021.56	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F001.D Vial: 1
Acq On : 18 Nov 2003 12:31 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 13:12:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 18 12:21:53 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.04	162	221480	3037.43	ng/ml	96
27)	Benzoic Acid	10.90	122	101754	2482.49	ng/ml#	69
28)	1,2,4-Trichlorobenzene	11.21	180	263093	3017.41	ng/ml	99
29)	Naphthalene	11.32	128	568834	3013.47	ng/ml	97
30)	4-Chloroaniline	11.49	127	225620	2774.57	ng/ml	89
31)	Hexachlorobutadiene	11.71	225	177533	2909.07	ng/ml	94
32)	4-Chloro-3-methylphenol	12.51	107	230029	2979.00	ng/ml	76
33)	2-Methylnaphthalene	12.76	142	345653	2954.71	ng/ml	100
35)	Hexachlorocyclopentadiene	13.26	237	151284	2624.24	ng/ml	94
36)	2,4,6-Trichlorophenol	13.43	196	177576	3031.57	ng/ml	97
37)	2,4,5-Trichlorophenol	13.50	196	190005	3037.12	ng/ml	97
39)	2-Chloronaphthalene	13.80	127	167047	3090.63	ng/ml	87
40)	2-Nitroaniline	14.12	65	173027	3202.56	ng/ml	79
41)	Acenaphthylene	14.72	152	583604	3200.34	ng/ml	98
42)	Dimethyl Phthalate	14.64	163	521778	3118.53	ng/ml	98
43)	2,6-Dinitrotoluene	14.77	165	121869	3506.78	ng/ml	75
44)	Acenaphthene	15.14	154	338888	3102.23	ng/ml	98
45)	3-Nitroaniline	15.06	138	111978	3379.19	ng/ml	91
46)	2,4-Dinitrophenol	15.28	184	76343	3025.83	ng/ml#	60
47)	Dibenzofuran	15.51	168	608424	3156.48	ng/ml	78
48)	4-Nitrophenol	15.49	109	142352	2793.79	ng/ml#	76
49)	2,4-Dinitrotoluene	15.64	165	164105	3382.88	ng/ml	69
50)	Fluorene	16.28	166	440366	3096.12	ng/ml	96
51)	4-Chlorophenyl Phenyl Ethe	16.33	204	263652	3052.79	ng/ml	90
52)	Diethyl Phthalate	16.27	149	544282	3089.63	ng/ml	97
53)	4-Nitroaniline	16.46	138	109865	3164.03	ng/ml#	26
54)	2-Methyl-4,6-dinitrophenol	16.56	198	111514	2793.15	ng/ml	86
55)	N-Nitrosodiphenylamine	16.63	169	335005	3213.26	ng/ml	99
56)	Azobenzene	16.69	77	566199	2871.70	ng/ml	86
59)	4-Bromophenyl Phenyl Ether	17.44	248	166324	2909.32	ng/ml	92
60)	Hexachlorobenzene	17.73	284	198559	3168.58	ng/ml	94
61)	Pentachlorophenol	18.16	266	117054	2756.22	ng/ml	98
62)	Phenanthrene	18.46	178	661335	2972.23	ng/ml	98
63)	Anthracene	18.56	178	690003	3077.58	ng/ml	98
64)	Carbazole	18.98	167	622625	3192.59	ng/ml	95
65)	Di-n-butyl Phthalate	20.07	149	854332	3145.12	ng/ml	96
66)	Fluoranthene	21.22	202	769840	3149.60	ng/ml	93
68)	Benzidine	21.61	184	235954	2338.12	ng/ml	95
69)	Pyrene	21.72	202	750025	2986.06	ng/ml	98
71)	Butyl Benzyl Phthalate	23.52	149	361108	3226.94	ng/ml	97
72)	3,3'-Dichlorobenzidine	24.59	252	261971	3252.00	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F001.D Vial: 1
Acq On : 18 Nov 2003 12:31 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 13:12:41 2003 Quant Results File: 1114BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 18 12:21:53 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

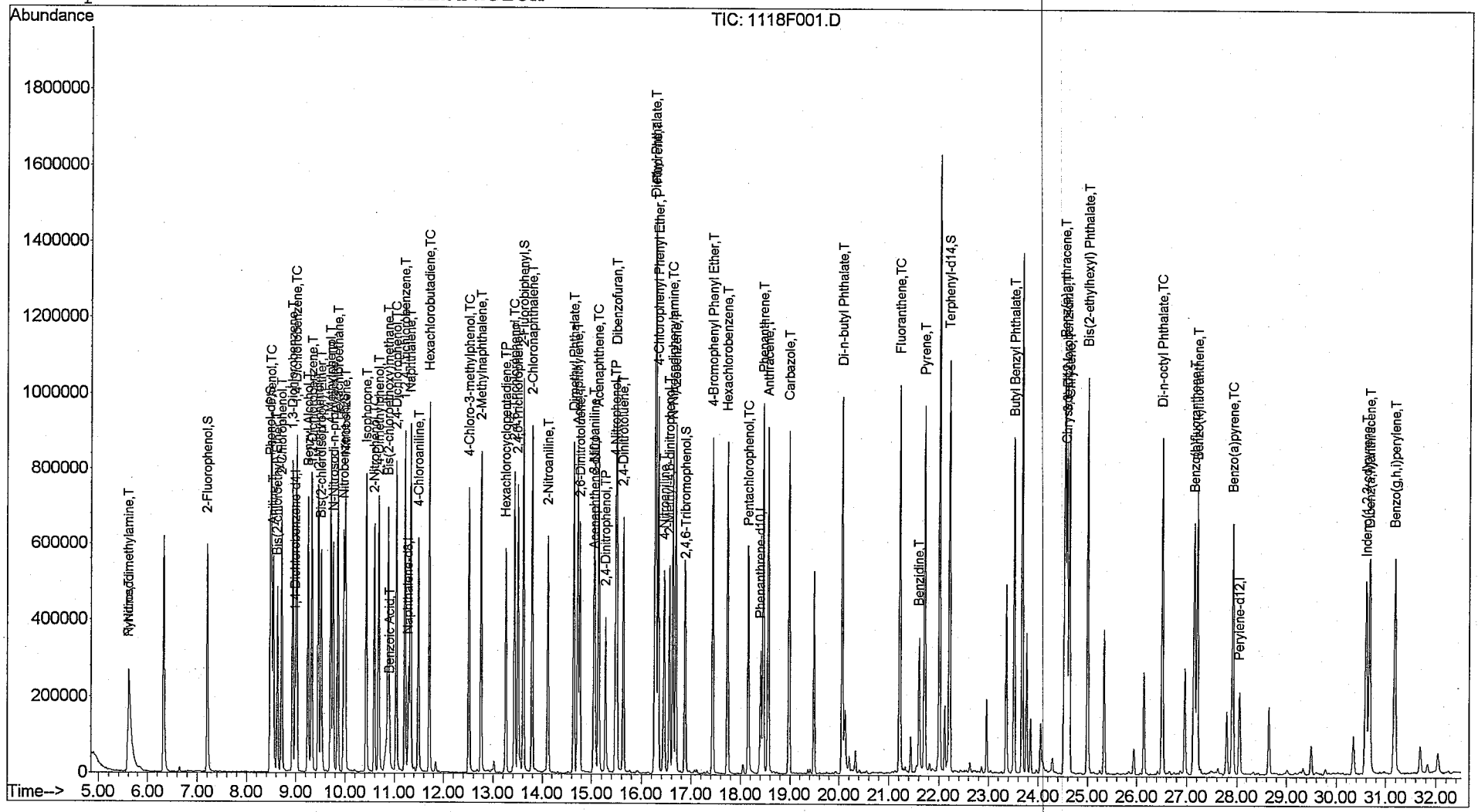
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.53	228	702066	3156.52	ng/ml	96
74)	Chrysene	24.64	228	631294	2995.31	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.00	149	492238	3035.84	ng/ml	99
77)	Di-n-octyl Phthalate	26.51	149	813560	3259.59	ng/ml	92
78)	Benzo(b)fluoranthene	27.15	252	658058	3347.17	ng/ml	94
79)	Benzo(k)fluoranthene	27.21	252	600846	3215.49	ng/ml	94
80)	Benzo(a)pyrene	27.92	252	595440	3191.10	ng/ml	93
81)	Indeno(1,2,3-cd)pyrene	30.61	276	560923	3221.03	ng/ml	87
82)	Dibenz(a,h)anthracene	30.67	278	564453	3309.99	ng/ml	91
83)	Benzo(g,h,i)perylene	31.18	276	568896	3150.79	ng/ml	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\111803\1118F001.D Vial: 1
Acq On : 18 Nov 2003 12:31 Operator: JGISH
Sample : 8270-LL ICV/CCV @ 3 ppm SVM15-99D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 18 13:13 2003 Quant Results File: 1114BNLL.RES

Method : J:\MS10\METHODS\BNA\1114BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 18 12:21:53 2003
Response via : Initial Calibration



2244

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0317457	**Prep Method:**	EPA 3541	**Prep Date:**	10/30/03 00:00
Department:	MSP				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K2308291-001	CBB DMMU5 2-1	8270-LL	SEDIMENT	28.96g	2ml	
K2308291-002	CBB DMMU5 2-2	8270-LL	SEDIMENT	28.24g	2ml	
K2308291-003	CBB DMMU5 2-3	8270-LL	SEDIMENT	25.69g	2ml	
K2308291-004	CBB DMMU5 2-4	8270-LL	SEDIMENT	25.62g	2ml	
K2308291-005	CBB DMMU5 2-5	8270-LL	SEDIMENT	28.96g	2ml	
K2308433-001	SED-1	8270-LL	SEDIMENT	24.63g	2ml	
K2308433-002	SED-2	8270-LL	SEDIMENT	25.77g	2ml	
K2308433-003	SED-3	8270-LL	SEDIMENT	26.07g	2ml	
K2308433-004	SED-4	8270-LL	SEDIMENT	23.57g	2ml	
K2308433-005	SED-4-DUP	8270-LL	SEDIMENT	27.48g	2ml	
K2308433-006	SED-5	8270-LL	SEDIMENT	26.19g	2ml	
K2308433-007	SED-6	8270-LL	SEDIMENT	26.55g	2ml	
K2308433-008	SED-7	8270-LL	SEDIMENT	25.39g	2ml	
K2308433-009	SED-8	8270-LL	SEDIMENT	27.25g	2ml	
KWG0317457-1	Matrix Spike	8270-LL	SEDIMENT	23.57g	2ml	
KWG0317457-2	Duplicate Matrix Spike	8270-LL	SEDIMENT	23.63g	2ml	
KWG0317457-3	Lab Control Sample	8270-LL	SEDIMENT	20.00g	2ml	
KWG0317457-4	Duplicate Lab Control Sampl	8270-LL	SEDIMENT	20.00g	2ml	
KWG0317457-5	Method Blank	8270-LL	SEDIMENT	28.96g	2ml	

Lab Code	Parent Lab Code	Comments
KWG0317457-1	K2308433-004	
KWG0317457-2	K2308433-004	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308291-001	245962	SVMP3-20-G	50uL			JRichard
K2308291-002	245963	SVMP3-20-G	50uL			JRichard
K2308291-003	245964	SVMP3-20-G	50uL			JRichard
K2308291-004	245965	SVMP3-20-G	50uL			JRichard
K2308291-005	245966	SVMP3-20-G	50uL			JRichard
K2308433-001	245967	SVMP3-20-G	50uL			JRichard
K2308433-002	245968	SVMP3-20-G	50uL			JRichard
K2308433-003	245969	SVMP3-20-G	50uL			JRichard
K2308433-004	245970	SVMP3-20-G	50uL			JRichard
K2308433-005	245971	SVMP3-20-G	50uL			JRichard

Comments: IS sum15-71A

Started By: MThompso Assisted By: Training Yes No

Completed By: MThompso Assisted By: Yes No

Reviewed By: [signature] Date: 11/7/03 Storage: Box 1 - E&D

Chain of Custody

Relinquished By: MT Date: 11-5-03

Received By: [signature] Date: 11/12/3 Extracts Examined Yes No

Group ID:	KWG0317457	**Prep Method:**	EPA 3541	**Prep Date:**	10/30/03 00:00
Department:	MSP				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308433-006	245972	SVMP3-20-G	50uL			JRichard
K2308433-007	245973	SVMP3-20-G	50uL			JRichard
K2308433-008	245974	SVMP3-20-G	50uL			JRichard
K2308433-009	245975	SVMP3-20-G	50uL			JRichard
KWG0317457-1	245976	SVMP3-20-G	50uL	SVMP3-20-20-I	50uL	JRichard
KWG0317457-2	245977	SVMP3-20-G	50uL	SVMP3-20-20-I	50uL	JRichard
KWG0317457-3	245978	SVMP3-20-G	50uL	SVMP3-20-20-I	50uL	JRichard
KWG0317457-4	245979	SVMP3-20-G	50uL	SVMP3-20-20-I	50uL	JRichard
KWG0317457-5	245980	SVMP3-20-G	50uL			JRichard

Comments:

Started By: MThompso Assisted By:

Completed By: MThompso Assisted By:

Reviewed By: Date: 11/7/03 Storage:

Training: Yes / No (Started By) Yes / No (Completed By)

Chain of Custody

Relinquished By: Date: 11503

Received By: Date: 11-19-3

Extracts Examined: Yes / No

Preparation Information

Group ID: KWG0317457 **Prep Method:** EPA 3541 **Prep Date:** 10/30/03 00:00
Department: MSP

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K2308291-001	CBB DMMU5 2-1			8270-LL	SEDIMENT	28.96	NA	10mL	2 mL	Yes	NO
2	K2308291-002	CBB DMMU5 2-2			8270-LL	SEDIMENT	28.24					
3	K2308291-003	CBB DMMU5 2-3			8270-LL	SEDIMENT	25.69					
4	K2308291-004	CBB DMMU5 2-4			8270-LL	SEDIMENT	25.62					
5	K2308291-005	CBB DMMU5 2-5			8270-LL	SEDIMENT	28.16					
6	K2308433-001	SED-1			8270-LL	SEDIMENT	24.63					
7	K2308433-002	SED-2			8270-LL	SEDIMENT	25.77					
8	K2308433-003	SED-3			8270-LL	SEDIMENT	26.07					
9	K2308433-004	SED-4			8270-LL	SEDIMENT	23.57					
10	K2308433-005	SED-4-DUP			8270-LL	SEDIMENT	27.48					
11	K2308433-006	SED-5			8270-LL	SEDIMENT	26.19					
12	K2308433-007	SED-6			8270-LL	SEDIMENT	26.55					
13	K2308433-008	SED-7			8270-LL	SEDIMENT	25.39					
14	K2308433-009	SED-8			8270-LL	SEDIMENT	27.25					
15	KWG0317457-1	Matrix Spike 8433-4			8270-LL	SEDIMENT	23.57					Yes
16	KWG0317457-2	Duplicate Matrix Spike 8433 4			8270-LL	SEDIMENT	23.63					
17	KWG0317457-3	Lab Control Sample			8270-LL	SEDIMENT	20.00					

Comments: 8433 Sample 5 is a dup of 8433-4 Sample 5 had water on top Sample 4 did not

Surrogate ID: SUMP3-20-G /100-150ppm /50µL VP 1/4/03

Spike ID: SUMP3-20-I /100ppm /50µL 1/9/04 /SUMP3-15-A /200ppm /50µL KP 11/19/03

Witness: Richardson

Started By: MThompso Assisted By:

Completed By: Assisted By:

Group ID:	KWG0317457	**Prep Method:**	EPA 3541	**Prep Date:** 10/30/03 00:00
Department:	MSP			

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol. mL	Final Vol.	Surr. Added	Spike Added
18	KWG0317457-4	Duplicate Lab Control Sample			8270-LL	SEDIMENT	20.00	NA	10	2 mL	Yes	Yes
19	KWG0317457-5	Method Blank			8270-LL	SEDIMENT	28.96	↓	10	2 mL	↓	no

Comments:

Surrogate ID:

Spike ID: See Page 1

Witness:

Started By: MThompso Assisted By:

Completed By: Assisted By:

GPC RUNLOG 2

RUN DATE: 11-2-03 STANDARD DATE: 11-2-03

OPERATOR: MT PROGRAM*: 1

LAB I.D.	POS.	TEST	DIL.	COMMENTS
KWG7457-5MB	1	LL	None	
3LCS	2			
4DLCS	3			
8291-1	4			
2	5			
3	6			
4	7			
5	8			
8433-1	9			
2	10			
3	11			
4	12			
5	13			
GPC BLANK	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			

*When multiple programs are used, note change in comment section and program settings below.

Program#_____ Dump_____ Collect_____

Program#_____ Dump_____ Collect_____

GPC RUNLOG 2

RUN DATE: 11-3-03

STANDARD DATE: 11-3-03

OPERATOR: MT

PROGRAM*: 1

LAB I.D.	POS.	TEST	DIL.	COMMENTS
KWG-7126-5 MB	1	8270	NONE	
3LCS	2			
4DLCS	3			
8211-1	4			
2	5			
3	6			
4	7			
5	8			
6	9			
7	10			
8	11			
9	12			
10	13			
11	14			
12	15			
13	16			
Blank	17			
8433-6	18	4		
7	19			
8	20			
9	21			
4MS	22			
4D2MS	23			

*When multiple programs are used, note change in comment section and program settings below.

Program#_____ Dump_____ Collect_____

Program#_____ Dump_____ Collect_____

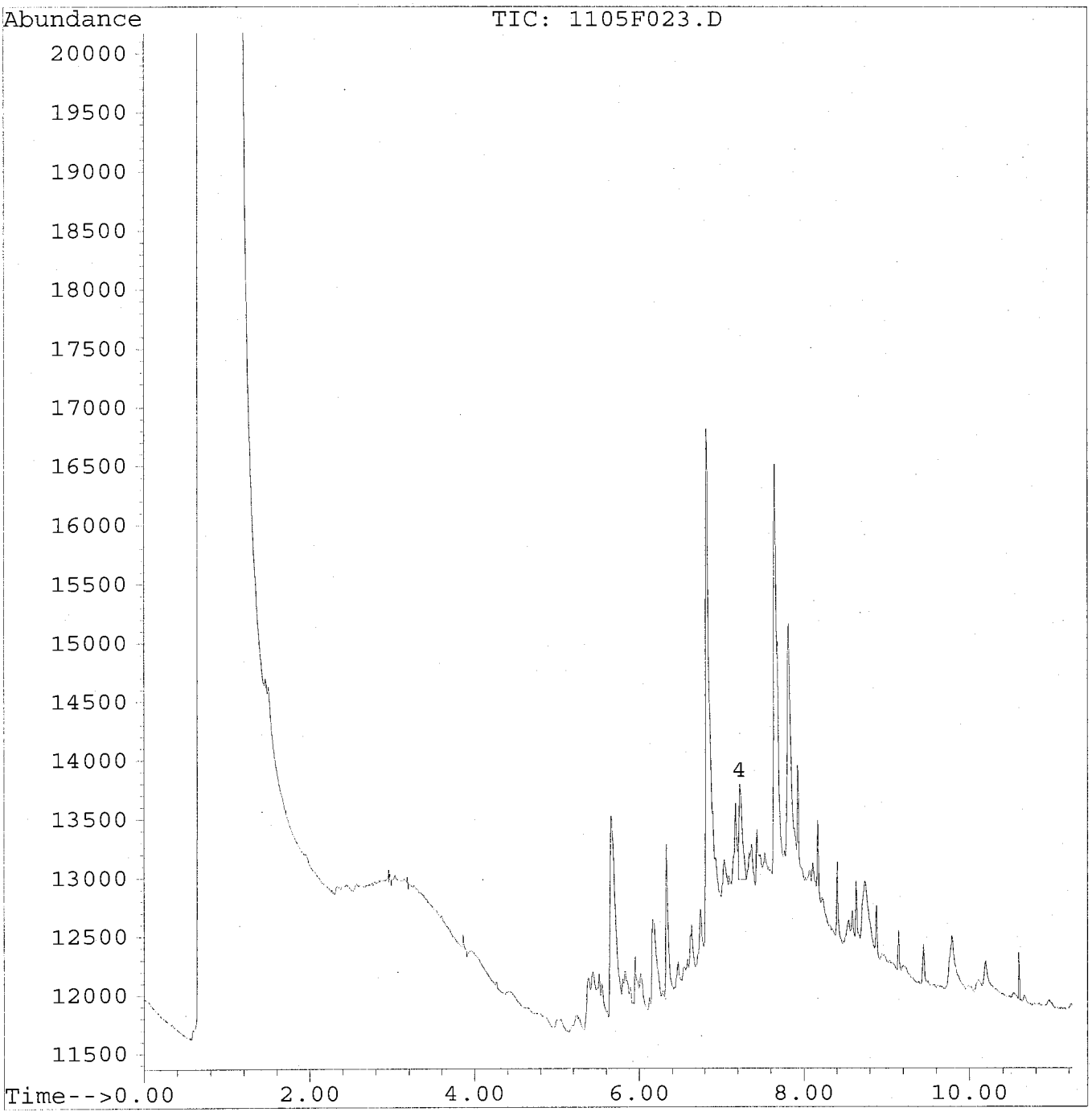
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F023.D
Acq On : 05 Nov 03 03:26 PM
Sample : K2308433-001
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 23
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



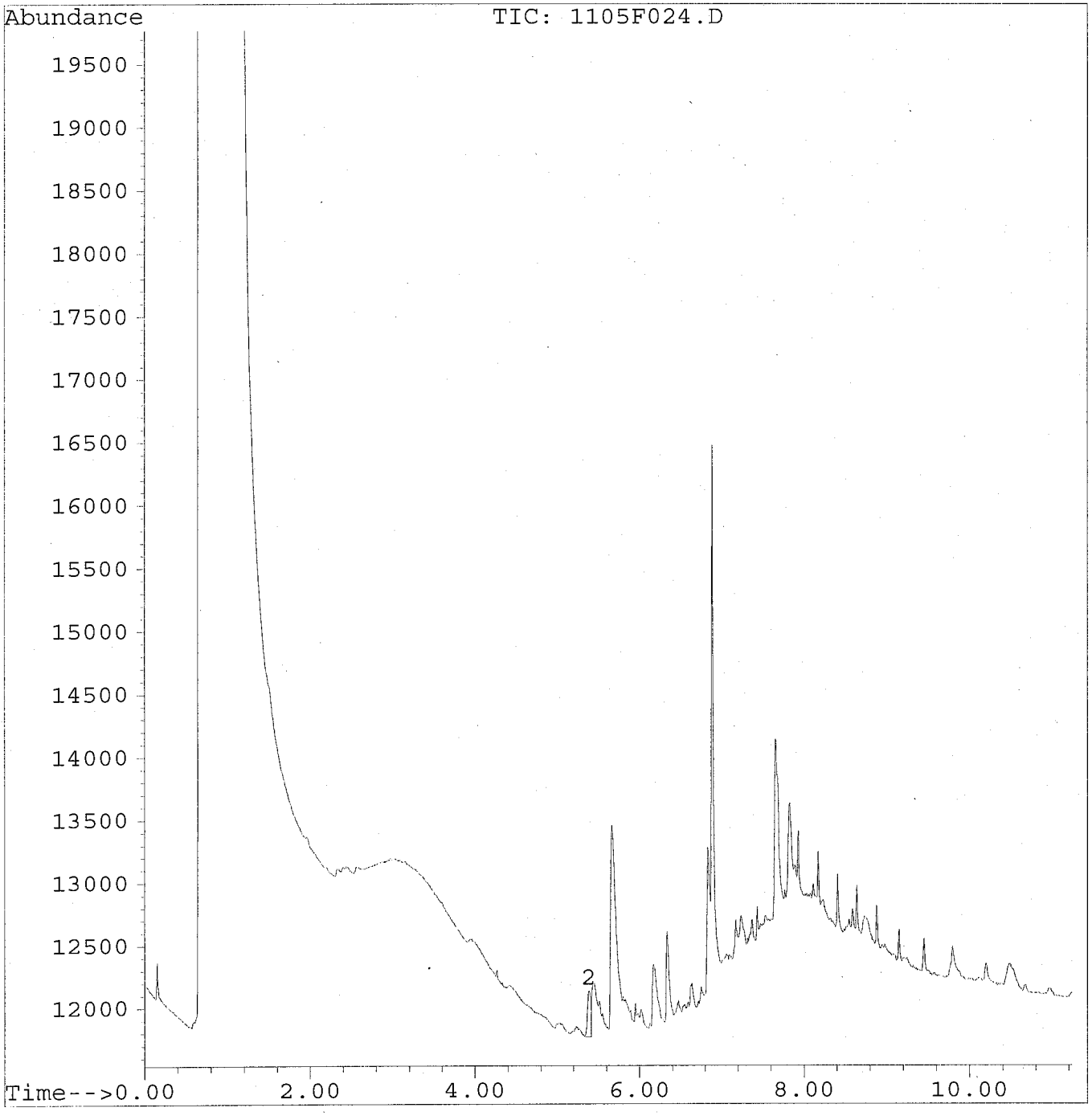
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F024.D
Acq On : 05 Nov 03 03:44 PM
Sample : K2308433-002
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 24
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



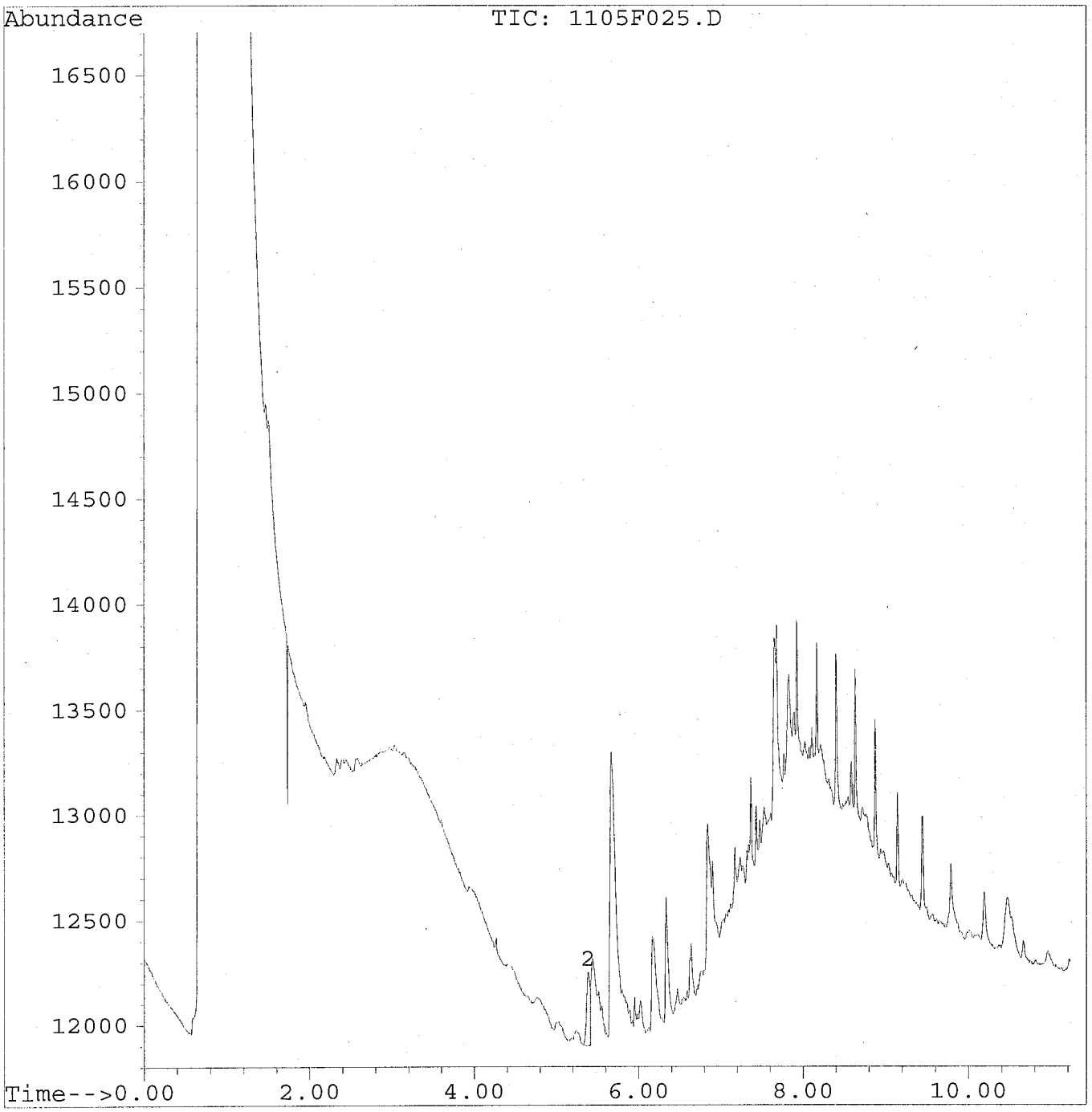
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F025.D
Acq On : 05 Nov 03 04:02 PM
Sample : K2308433-003
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 25
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



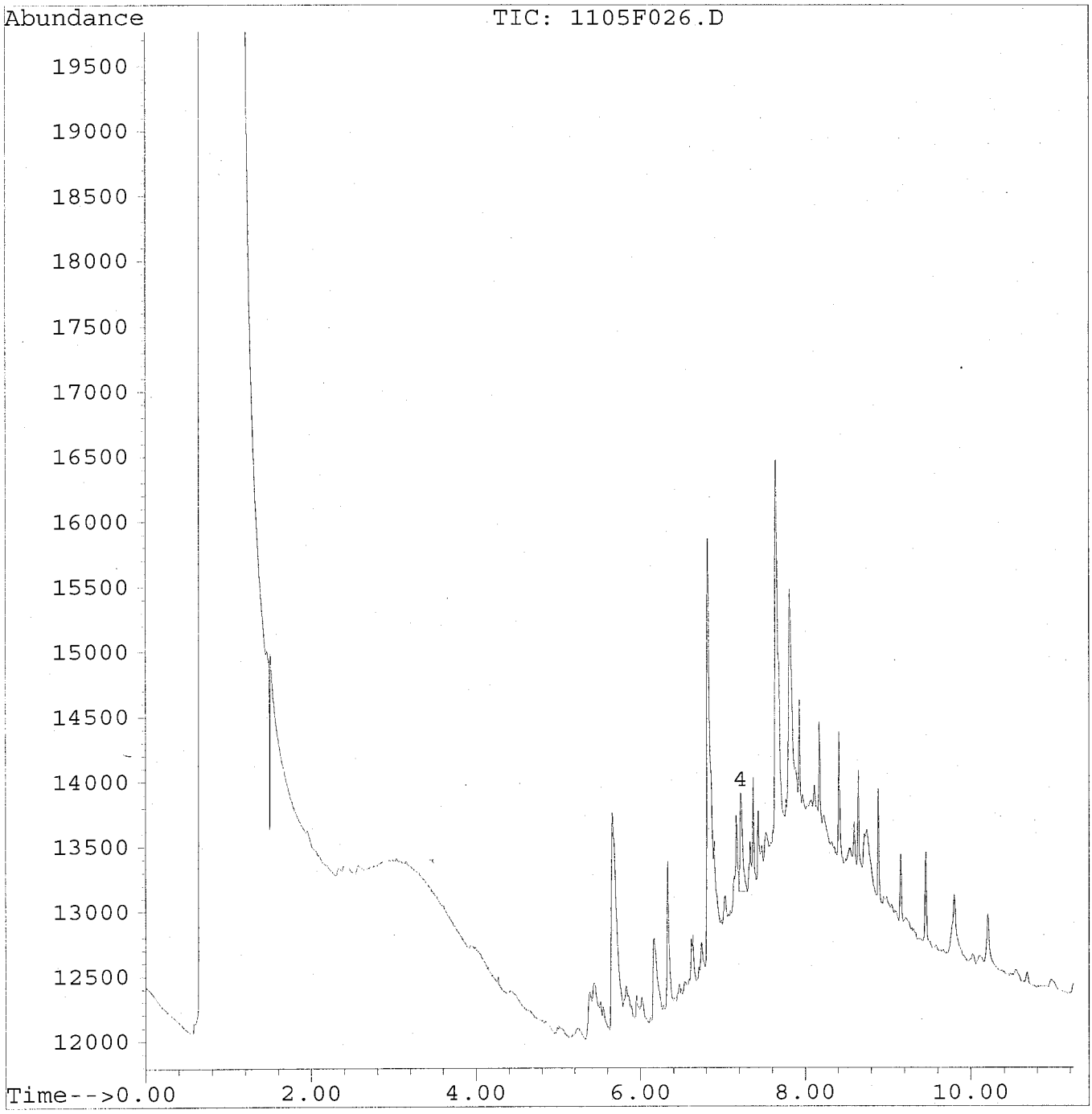
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F026.D
Acq On : 05 Nov 03 04:19 PM
Sample : K2308433-004
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 26
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



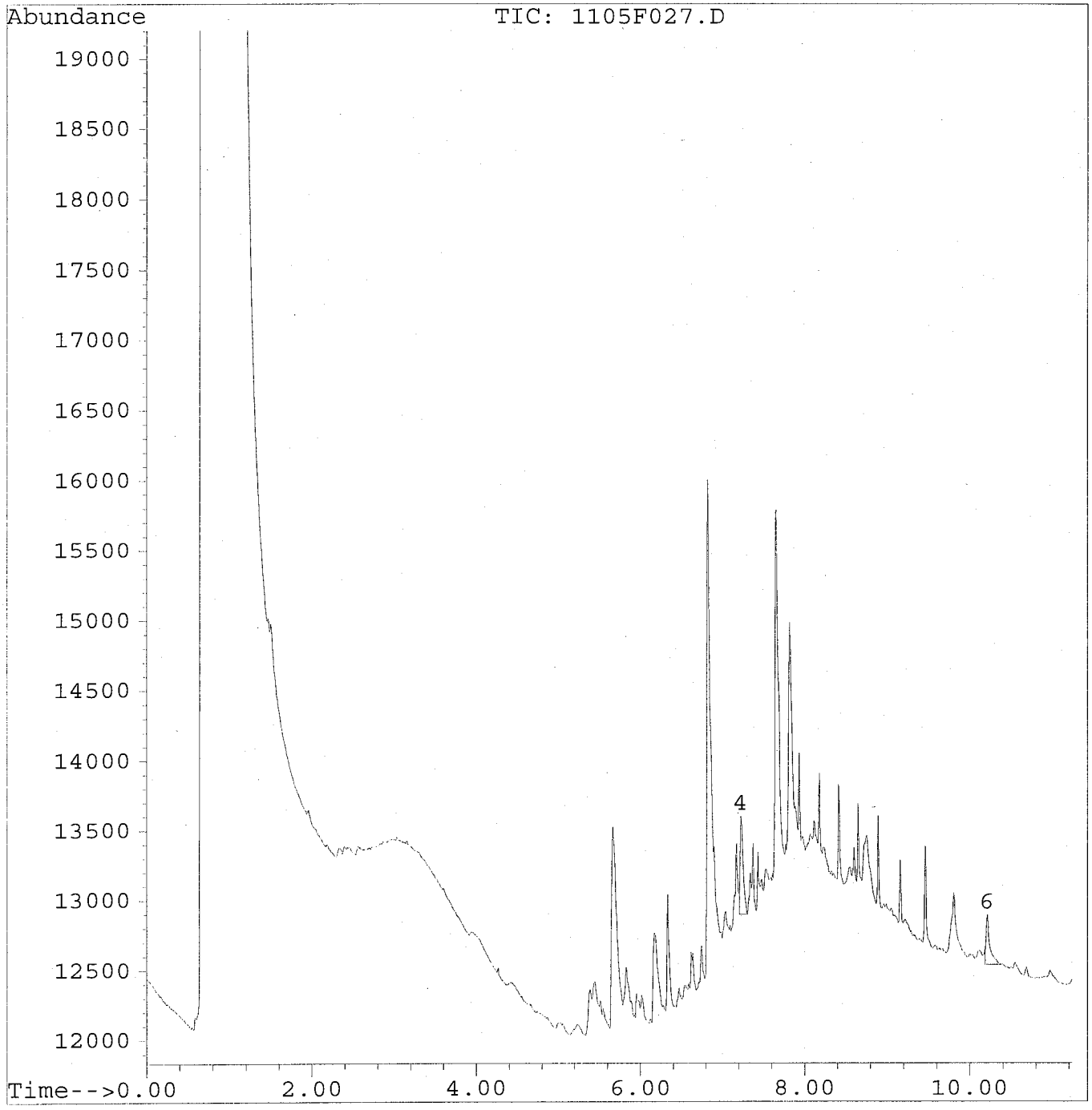
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F027.D
Acq On : 05 Nov 03 04:37 PM
Sample : K2308433-005
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 27
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



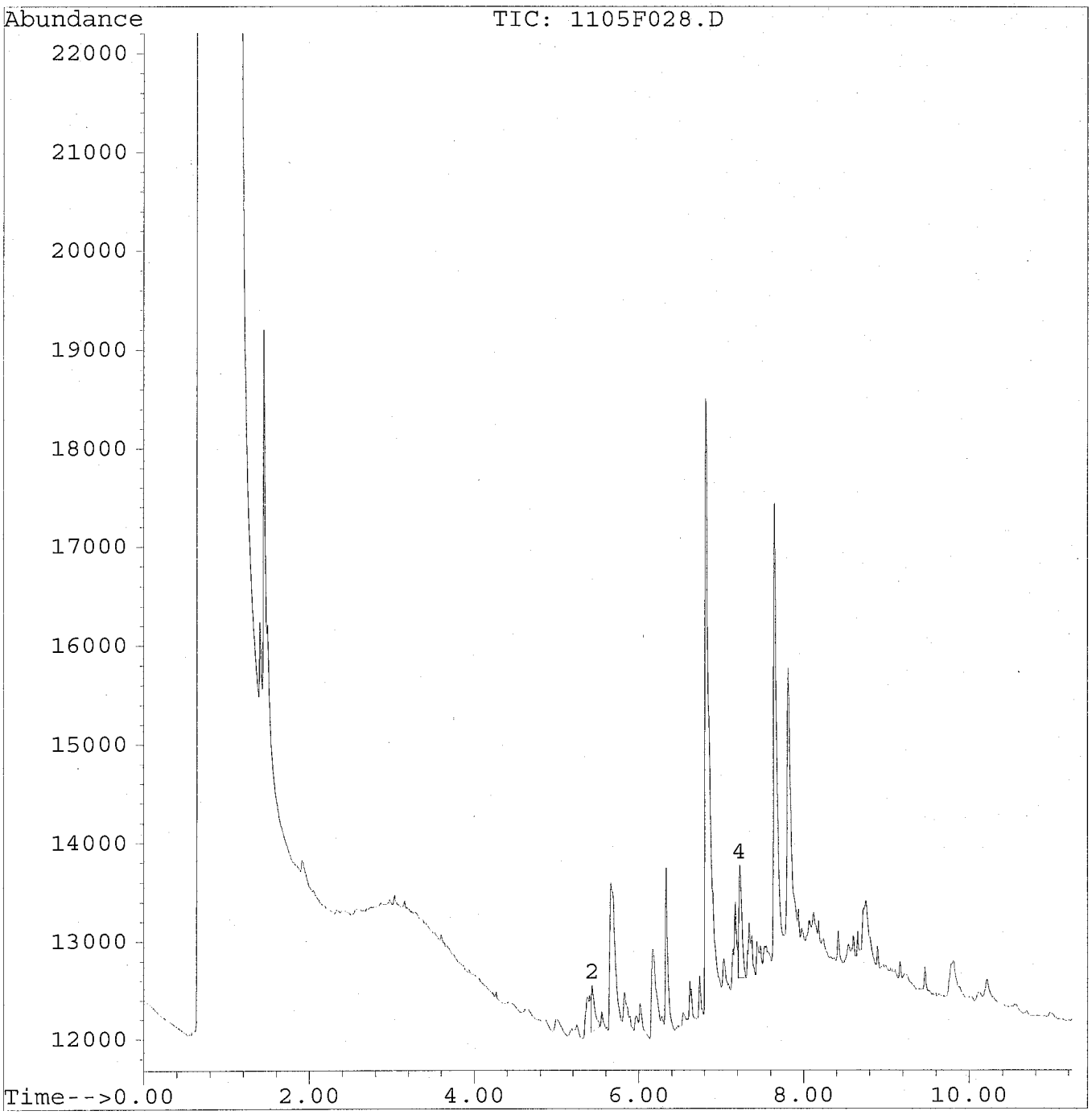
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F028.D
Acq On : 05 Nov 03 04:55 PM
Sample : K2308433-006
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 28
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



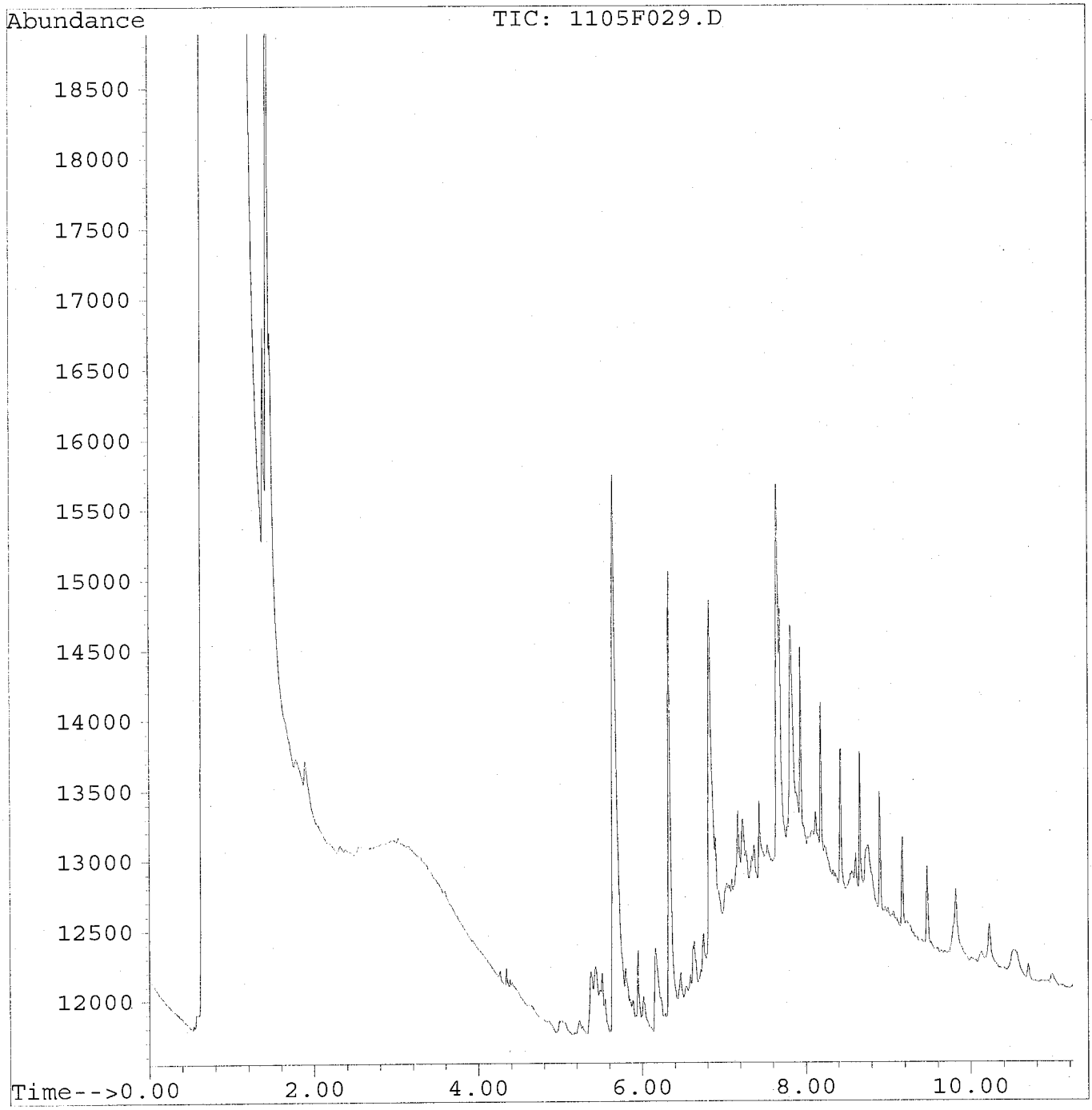
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F029.D
Acq On : 05 Nov 03 05:13 PM
Sample : K2308433-007
Misc :
Quant Time: Nov 7 8:10 19103

Vial: 29
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



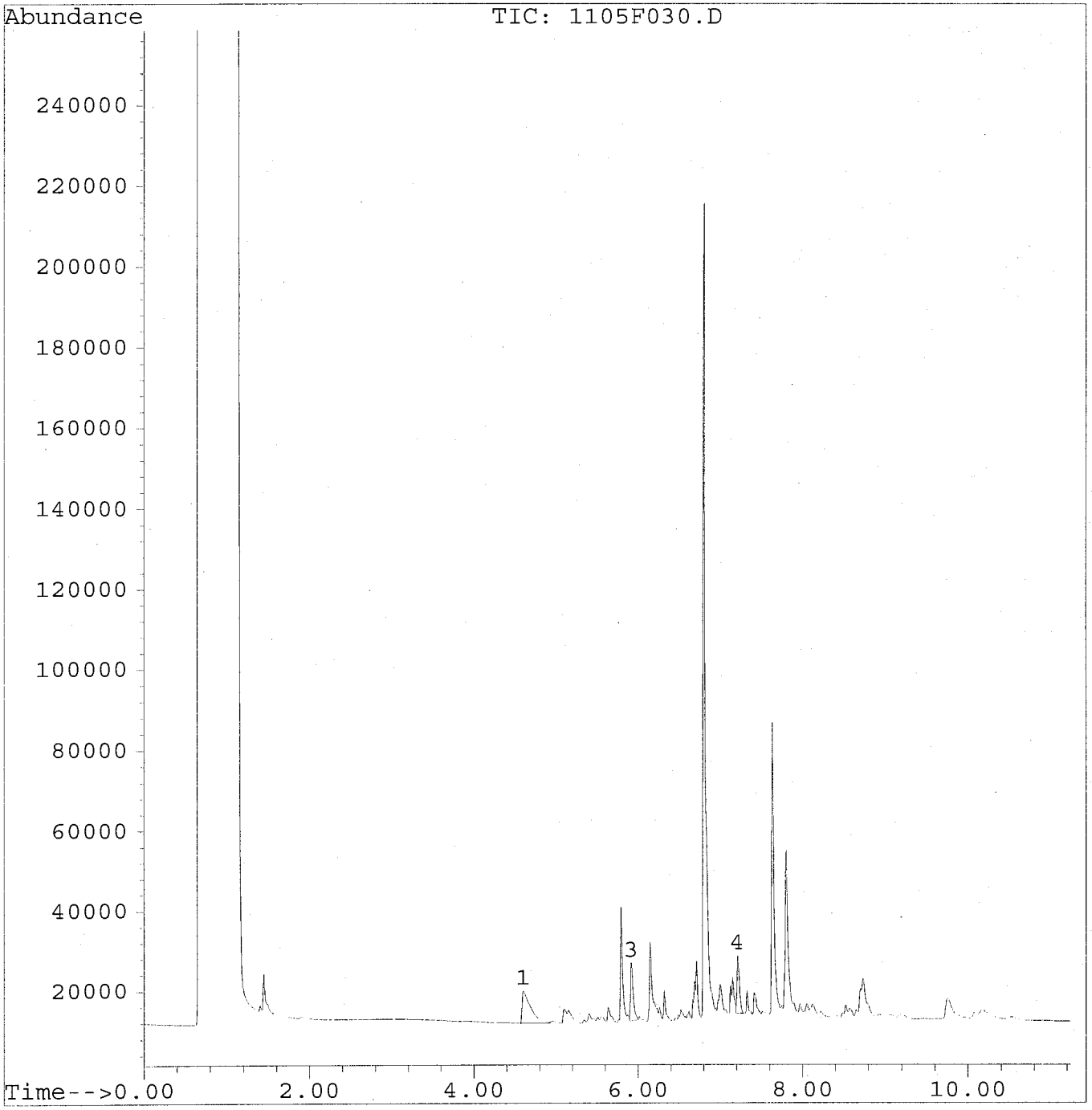
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F030.D
Acq On : 05 Nov 03 05:30 PM
Sample : K2308433-008
Misc :
Quant Time: Nov 7 8:11 19103

Vial: 30
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



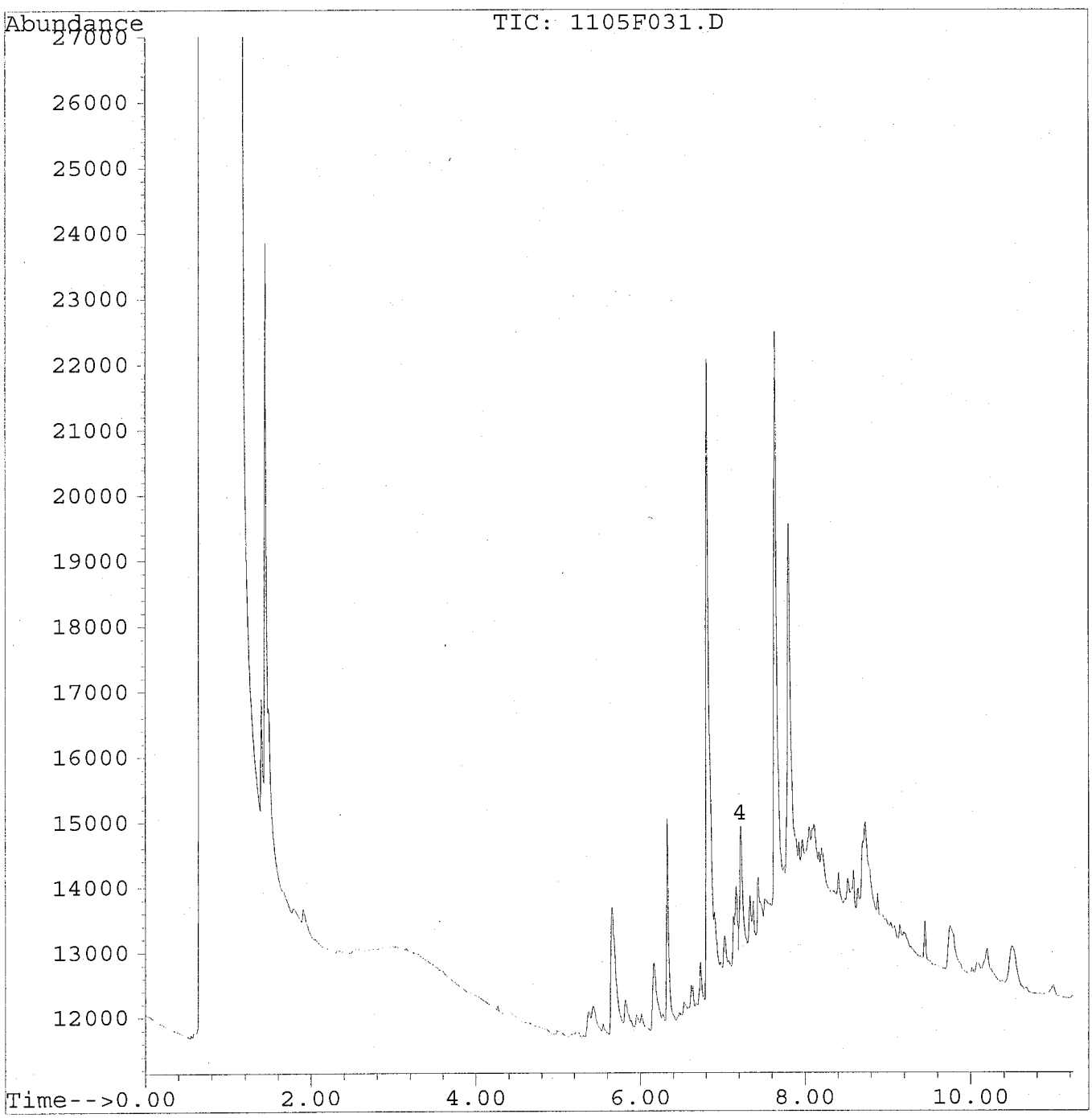
Quantitation Report

Data File : J:\GC05\DATA\110503\1105F031.D
Acq On : 05 Nov 03 05:48 PM
Sample : K2308433-009
Misc :
Quant Time: Nov 7 8:11 19103

Vial: 31
Operator: MThompson
Inst : GC05
Multiplr: 1.00

Method : J:\GC05\METHODS\BNASCRN.M
Title : Methods 625/8270 screening.
Last Update : Tue Jul 22 08:12:14 2003
Response via : Single Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Additional Prep Information For EPA 3541

Service Request 8291/8433 **Workgroup** 7457

DCM Lot 43218 Hexane Lot —

Start (Time/Date/Initial): 1100 10/30/03 MT

Stop (Time/Date/Initial): 1830 10/30/03 MT

Sulfate Lot # 43205333 Pipette Lot # 011503

S-Evap Temp 75 N-evap Temp 35 Silica gel Lot # —

Solvent Exchange: —

Clean-up #1: GPC Initial/Date: 11/2/03 11/3/03 MT

Clean-up #2: — Initial/Date:

Extract Storage: —

Date Completed: 11/4/03

Comments/Observations:

Bench Sheet Review Check List
☑ Hold Times Met (if no, Reason:)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

Injection Log

Directory: J:\MS10\DATA\111303

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1112F001.D	1.	TUNE @ 2.5 ppm SVM15-99E		12 Nov 2003 15:1
2	2	1112F002.D	1.	IB		12 Nov 2003 16:0
3	3	1112F003.D	1.	8270-LL @ 0.1 ppm SVM15-70D		12 Nov 2003 16:4
4	4	1112F004.D	1.	8270-LL @ .2/.5 ppm SVM15-70E	CAL 3091	12 Nov 2003 17:2
5	5	1112F005.D	1.	8270-LL @ .5/1 ppm SVM15-70F		12 Nov 2003 18:0
6	6	1112F006.D	1.	8270-LL @ 1/2 ppm SVM15-70G		12 Nov 2003 18:4
7	7	1112F007.D	1.	8270-LL @ 2/4 ppm SVM15-70H		12 Nov 2003 19:2
8	8	1112F008.D	1.	8270-LL @ 3/6 ppm SVM15-70I		12 Nov 2003 20:0
9	9	1112F009.D	1.	8270-LL @ 4/8 ppm SVM15-70J		12 Nov 2003 20:4
10	10	1112F010.D	1.	8270-LL @ 5/10 ppm SVM15-70K		12 Nov 2003 21:2
11	1	1112F011.D	1.	TUNE @ 2.5 ppm SVM15-99E		12 Nov 2003 22:1
12	11	1112F012.D	1.	8270-LL ICV/CCV @ 3 ppm SVM15-99D		12 Nov 2003 22:5
13	12	1112F013.D	1.	KWG0317457-5 MB		12 Nov 2003 23:3
14	13	1112F014.D	1.	KWG0317457-LCS	KWG0318325	13 Nov 2003 00:1
15	14	1112F015.D	1.	KWG0317457-DLCS		13 Nov 2003 00:5
16	15	1112F016.D	1.	KWG0317621-5 MB		13 Nov 2003 01:3
17	16	1112F017.D	1.	KWG0317621-LCS		13 Nov 2003 02:1
18	17	1112F018.D	1.	KWG0317621-DLCS		13 Nov 2003 02:5
19	18	1112F019.D	1.	KWG0317220-MB		13 Nov 2003 03:4
20	19	1112F020.D	1.	KWG0317220-LCS		13 Nov 2003 04:2
21	20	1112F021.D	1.	KWG0317220-DLCS		13 Nov 2003 05:0
22	21	1112F022.D	1.	K2308414-001		13 Nov 2003 05:4
23	22	1112F023.D	1.	K2308414-002		13 Nov 2003 06:2
24	23	1112F024.D	1.	GPC BLANK 11/8/03		13 Nov 2003 07:0

jay 11/13/03

mt 11/13/03

Instrument RunLog

Instrument ID: MS10
Department: SVM
Analysis Lot: KWG0318538

Instrument Type: MS

FileSpecification	Type	Laboratory ID	Client ID	Product	Matrix	Dilution	Acquisition Started	Acquisition Ended
J:\MS10\DATA\111703\1117A001.D	DFTPP	KWG0318538-1	GC/MS Tuning - Dec	8270-LL	LIQUID	1.0	11/17/2003 09:06:00	11/17/2003 09:38:29
J:\MS10\DATA\111703\1117F001.D	CCV	KWG0318538-2	Continuing Calibration	8270-LL	LIQUID	1.0	11/17/2003 09:06:00	11/17/2003 09:38:29
J:\MS10\DATA\111703\1117F002.D	MB	KWG0317621-5	Method Blank	8270-LL	SEDIME	1.0	11/17/2003 09:47:00	11/17/2003 10:19:29
J:\MS10\DATA\111703\1117F003.D	SMPL	K2308291-001	CBB DMMU5 2-1	8270-LL	SEDIME	1.0	11/17/2003 10:29:00	11/17/2003 11:01:30
J:\MS10\DATA\111703\1117F004.D	SMPL	K2308291-002	CBB DMMU5 2-2	8270-LL	SEDIME	1.0	11/17/2003 11:11:00	11/17/2003 11:43:30
J:\MS10\DATA\111703\1117F005.D	SMPL	K2308291-003	CBB DMMU5 2-3	8270-LL	SEDIME	1.0	11/17/2003 11:52:00	11/17/2003 12:24:29
J:\MS10\DATA\111703\1117F006.D	SMPL	K2308291-004	CBB DMMU5 2-4	8270-LL	SEDIME	1.0	11/17/2003 12:33:00	11/17/2003 13:05:29
J:\MS10\DATA\111703\1117F007.D	SMPL	K2308291-005	CBB DMMU5 2-5	8270-LL	SEDIME	1.0	11/17/2003 13:15:00	11/17/2003 13:47:29
J:\MS10\DATA\111703\1117F008.D	SMPL	K2308484-001	B2&B4 Composite 5-2	8270-LL	SOIL	1.0	11/17/2003 13:56:00	11/17/2003 14:28:29
J:\MS10\DATA\111703\1117F009.D	SMPL	K2308484-003	B1&B3 Composite 5-2	8270-LL	SOIL	5.0	11/17/2003 14:37:00	11/17/2003 15:09:29
J:\MS10\DATA\111703\1117F010.D	MS	KWG0317621-1	Matrix Spike	8270-LL	SOIL	5.0	11/17/2003 15:19:00	11/17/2003 15:51:29
J:\MS10\DATA\111703\1117F011.D	DMS	KWG0317621-2	Duplicate Matrix Spike	8270-LL	SOIL	5.0	11/17/2003 16:00:00	11/17/2003 16:32:30
J:\MS10\DATA\111703\1117F012.D	SMPL	K2308522-001	Area 1 Pile 70	8270-LL	SEDIME	10.0	11/17/2003 17:01:00	11/17/2003 17:33:30
J:\MS10\DATA\111703\1117F013.D	SMPL	K2308522-002	Area 2 Bent 90	8270-LL	SEDIME	1.0	11/17/2003 17:42:00	11/17/2003 18:14:29
J:\MS10\DATA\111703\1117F014.D	SMPL	K2308433-001	SED-1	8270-LL	SEDIME	5.0	11/17/2003 18:23:00	11/17/2003 18:55:29
J:\MS10\DATA\111703\1117F015.D	SMPL	K2308433-002	SED-2	8270-LL	SEDIME	5.0	11/17/2003 19:04:00	11/17/2003 19:36:30
J:\MS10\DATA\111703\1117F016.D	SMPL	K2308433-003	SED-3	8270-LL	SEDIME	5.0	11/17/2003 19:45:00	11/17/2003 20:17:29

2263

11/18/3
CAL 3102
11/18/03

Printed: 11/18/2003 11:25:52
U:\Stealth\Crystal.rpt\runlog1.rpt

Instrument RunLog

Instrument ID: MS10
Department: SVM
Analysis Lot: KWG0318619

Instrument Type: MS

FileSpecification	Type	Laboratory ID	Client ID	Product	Matrix	Dilution	Acquisition Started	Acquisition Ended
J:\MS10\DATA\111803\1118A001.D	DFTPP	KWG0318619-1	GC/MS Tuning - Dec	8270-LL	LIQUID	1.0	11/18/2003 12:31:00	11/18/2003 13:03:30
J:\MS10\DATA\111803\1118F001.D	CCV	KWG0318619-2	Continuing Calibration	8270-LL	LIQUID	1.0	11/18/2003 12:31:00	11/18/2003 13:03:30
J:\MS10\DATA\111803\1118F003.D	SMPL	K2308522-001	Area 1 Pile 70	8270-LL	SEDIME	20.0	11/18/2003 13:59:00	11/18/2003 14:31:29
J:\MS10\DATA\111803\1118F004.D	SMPL	K2308522-002	Area 2 Bent 90	8270-LL	SEDIME	5.0	11/18/2003 14:43:00	11/18/2003 15:15:29
J:\MS10\DATA\111803\1118F005.D	SMPL	K2308433-004	SED-4	8270-LL	SEDIME	5.0	11/18/2003 15:25:00	11/18/2003 15:57:29
J:\MS10\DATA\111803\1118F006.D	MS	KWG0317457-1	Matrix Spike	8270-LL	SEDIME	5.0	11/18/2003 16:06:00	11/18/2003 16:38:29
J:\MS10\DATA\111803\1118F007.D	DMS	KWG0317457-2	Duplicate Matrix Spike	8270-LL	SEDIME	5.0	11/18/2003 16:48:00	11/18/2003 17:20:29
J:\MS10\DATA\111803\1118F008.D	SMPL	K2308433-005	SED-4-DUP	8270-LL	SEDIME	5.0	11/18/2003 17:29:00	11/18/2003 18:01:29
J:\MS10\DATA\111803\1118F009.D	SMPL	K2308433-006	SED-5	8270-LL	SEDIME	5.0	11/18/2003 18:10:00	11/18/2003 18:42:29
J:\MS10\DATA\111803\1118F010.D	SMPL	K2308433-007	SED-6	8270-LL	SEDIME	5.0	11/18/2003 18:52:00	11/18/2003 19:24:29
J:\MS10\DATA\111803\1118F011.D	SMPL	K2308433-008	SED-7	8270-LL	SEDIME	5.0	11/18/2003 19:33:00	11/18/2003 20:05:29
J:\MS10\DATA\111803\1118F012.D	SMPL	K2308433-009	SED-8	8270-LL	SEDIME	5.0	11/18/2003 20:14:00	11/18/2003 20:46:29
J:\MS10\DATA\111803\1118F013.D	MB	KWG0318062-5	Method Blank	8270-LL	SOIL	1.0	11/18/2003 20:55:00	11/18/2003 21:27:29
J:\MS10\DATA\111803\1118F014.D	LCS	KWG0318062-3	Lab Control Sample	8270-LL	SOIL	1.0	11/18/2003 21:36:00	11/18/2003 22:08:29
J:\MS10\DATA\111803\1118F015.D	DLCS	KWG0318062-4	Duplicate Lab Control S	8270-LL	SOIL	1.0	11/18/2003 22:17:00	11/18/2003 22:49:29
J:\MS10\DATA\111803\1118F016.D	SMPL	K2308615-004	B7 S-2	8270-LL	SOIL	1.0	11/18/2003 22:58:00	11/18/2003 23:30:29
J:\MS10\DATA\111803\1118F017.D	SMPL	K2308701-001	MW16	8270-LL	WATER	1.0	11/18/2003 23:40:00	11/19/2003 00:12:29
J:\MS10\DATA\111803\1118F018.D	SMPL	K2308701-002	MW14	8270-LL	WATER	1.0	11/19/2003 00:21:00	11/19/2003 00:53:29

2264

JH 11/19/3
CAL 3102

MAT 11/19/03

Printed: 11/19/2003 10:11:19
U:\Stealth\Crystal.rpt\runlog1.rpt

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

(RR's for Sed-5, Sed-6, Sed-8)

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

QC Reports

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED-5	K2308433-006	64 D	76 D	92 D
SED-6	K2308433-007	70 D	75 D	93 D
SED-8	K2308433-009	67 D	77 D	90 D
Method Blank	KWG0318722-3	44	63	107
Lab Control Sample	KWG0318722-1	63	78	113
Duplicate Lab Control Sample	KWG0318722-2	62	76	117

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	40-123
Sur2 = 2,4,6-Tribromophenol	35-138
Sur3 = Terphenyl-d14	56-152

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003
Time Analyzed: 12:17

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\112403\1124F014.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0319154-2
Analysis Lot: KWG0319154

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	RT	Area	RT	Area	RT
	Results ==>	42,095	8.97	130,561	11.26	71,651	15.04
	Upper Limit ==>	84,190	9.47	261,122	11.76	143,302	15.54
	Lower Limit ==>	21,048	8.47	65,281	10.76	35,826	14.54
	ICAL Result ==>	48,672	8.95	151,773	11.24	82,842	15.02
Associated Analyses							
Method Blank	KWG0318722-3	42,805	8.97	132,404	11.25	70,334	15.03
Lab Control Sample	KWG0318722-1	39,557	8.96	127,407	11.25	66,403	15.03
Duplicate Lab Control Sample	KWG0318722-2	41,117	8.96	130,053	11.25	69,117	15.03
SED-5	K2308433-006	40,614	8.96	129,744	11.25	72,830	15.03
SED-6	K2308433-007	41,502	8.97	133,102	11.25	73,923	15.03
SED-8	K2308433-009	40,303	8.97	132,612	11.25	71,612	15.04

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003
Time Analyzed: 12:17

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\112403\1124F014.D
Instrument ID: MS10
Analysis Method: 8270C

Lab Code: KWG0319154-2
Analysis Lot: KWG0319154

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT	Area	RT
	Results ==>	120,376	18.39	118,167	24.57	78,879	28.04
	Upper Limit ==>	240,752	18.89	236,334	25.07	157,758	28.54
	Lower Limit ==>	60,188	17.89	59,084	24.07	39,440	27.54
	ICAL Result ==>	138,429	18.38	140,813	24.55	89,621	28.02
Associated Analyses							
Method Blank	KWG0318722-3	109,717	18.37	103,495	24.56	66,097	28.03
Lab Control Sample	KWG0318722-1	108,688	18.38	99,516	24.56	66,200	28.03
Duplicate Lab Control Sample	KWG0318722-2	112,854	18.38	104,918	24.56	68,608	28.03
SED-5	K2308433-006	121,619	18.38	119,413	24.56	79,310	28.04
SED-6	K2308433-007	123,916	18.38	119,314	24.56	82,418	28.05
SED-8	K2308433-009	123,119	18.38	119,790	24.58	81,338	28.07

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Extracted: 11/20/2003
Date Analyzed: 11/25/2003

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0318722

	Lab Control Sample KWG0318722-1 Lab Control Spike			Duplicate Lab Control Sample KWG0318722-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	150	250	60	140	250	56	39-124	7	40
2-Methylphenol	140	250	56	126	250	50	31-111	11	40
4-Methylphenol	140	250	56	125	250	50	30-111	11	40
2,4-Dimethylphenol	96.5	250	39	88.4	250	35	10-79	9	40
2,4-Dichlorophenol	143	250	57	133	250	53	42-120	7	40
2,4,6-Trichlorophenol	153	250	61	141	250	56	40-124	9	40
Pentachlorophenol	179	250	72	182	250	73	29-130	1	40
Butyl Benzyl Phthalate	239	250	96	236	250	94	54-134	1	40
Bis(2-ethylhexyl) Phthalate	249	250	100	241	250	96	45-155	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Extracted:**	11/20/2003
Sample Matrix:	Sediment	**Date Analyzed:**	11/25/2003
		Time Analyzed:	19:53

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**File ID:**	J:\MS10\DATA\112403\1124F025.D
Lab Code:	KWG0318722-3	**Instrument ID:**	MS10
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0318722

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0318722-1	J:\MS10\DATA\112403\1124F026.D	11/25/03	20:35
Duplicate Lab Control Sample	KWG0318722-2	J:\MS10\DATA\112403\1124F027.D	11/25/03	21:16
SED-5	K2308433-006	J:\MS10\DATA\112403\1124F028.D	11/25/03	21:57
SED-6	K2308433-007	J:\MS10\DATA\112403\1124F029.D	11/25/03	22:38
SED-8	K2308433-009	J:\MS10\DATA\112403\1124F030.D	11/25/03	23:19

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433

Lab Control Sample/Duplicate Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0318722-1	**Lab Code:**	KWG0318722-2
File ID:	J:\MS10\DATA\112403\1124F026.D	**File ID:**	J:\MS10\DATA\112403\1124F027.D
Instrument ID:	MS10	**Instrument ID:**	MS10
Date Extracted:	11/20/2003	**Date Extracted:**	11/20/2003
Date Analyzed:	11/25/2003	**Date Analyzed:**	11/25/2003
Time Analyzed:	20:35	**Time Analyzed:**	21:16

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0318722

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0318722-3	J:\MS10\DATA\112403\1124F025.D	11/25/03	19:53
SED-5	K2308433-006	J:\MS10\DATA\112403\1124F028.D	11/25/03	21:57
SED-6	K2308433-007	J:\MS10\DATA\112403\1124F029.D	11/25/03	22:38
SED-8	K2308433-009	J:\MS10\DATA\112403\1124F030.D	11/25/03	23:19

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	ARCADIS	**Service Request:**	K2308433
Project:	Bloomington, IN/IN000072.0021	**Date Collected:**	10/23/2003
Sample Matrix:	Sediment	**Date Received:**	10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SED-5	**Units:**	ug/Kg
Lab Code:	K2308433-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	140	5	11/20/03	11/25/03	KWG0318722	*
2-Methylphenol	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
4-Methylphenol†	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dimethylphenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dichlorophenol	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
2,4,6-Trichlorophenol	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
Pentachlorophenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
Butyl Benzyl Phthalate	ND	U	47	5	11/20/03	11/25/03	KWG0318722	*
Bis(2-ethylhexyl) Phthalate	ND	U	930	5	11/20/03	11/25/03	KWG0318722	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	64	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	76	35-138	11/25/03	Acceptable
Terphenyl-d14	92	56-152	11/25/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\112403\1124F028.D
Lab ID: K2308433-006
RunType: RE
Matrix: SEDIMENT

Date Acquired: 11/25/2003 21:57
Date Quantitated: 11/26/2003 08:35
Batch ID: KWG0319154
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	28	NA	14		x
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

SURR 1

MRL MATRIX 3

Primary Review: 11/26/13

Secondary Review: CO 12/1/03

Printed: 11/26/2003 10:46:29
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0319154	**Prep Lot:**	KWG0318722	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	251365	**Prep Date:**	11/20/2003		

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\112403\1124F025.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\112403\1124F028.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 21:57	**Quant Date:**	11/26/2003 08:35	**Vial:**	25
Run Type:	RE			**Dilution:**	5.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.96	-0.01	152	40614	1,000.00	OK
2	Naphthalene-d8	11.25	-0.01	136	129744	1,000.00	OK
3	Acenaphthene-d10	15.03	-0.01	164	72830	1,000.00	OK
4	Phenanthrene-d10	18.38	-0.01	188	121619	1,000.00	OK
5	Chrysene-d12	24.56	-0.01	240	119413	1,000.00	OK
6	Perylene-d12	28.04	0.00	264	79310	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.46	0.00	0.00	99	29293	476.96	64	40-123	OK	
4	2,4,6-Tribromophenol	16.84	-0.02	0.00	330	10501	573.24	76	35-138	OK	
5	Terphenyl-d14	22.20	-0.01	0.00	244	37622	460.37	92	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		12	U	
1	2-Methylphenol				107	0		21	U	
1	4-Methylphenol				107	0		18	U	
2	2,4-Dimethylphenol				122	0d		34	U	
2	2,4-Dichlorophenol				162	0		11	U	
3	2,4,6-Trichlorophenol				196	0		11	U	
4	Pentachlorophenol				266	0		52	U	
5	Butyl Benzyl Phthalate				149	0		9.2	U	
5	Bis(2-ethylhexyl) Phthalate	25.00	-0.01	0.00	149	24658	269.31	120	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F028.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 21:57	**Quant Date:**	11/26/2003 08:35	**Vial:**	25
Run Type:	RE			**Dilution:**	5.0
Lab ID:	K2308433-006			**Soln Conc. Units:**	ng/ml

Prep Amount:	26.32 g	**Dilution:**	5.0
Prep Final Vol:	2.0 ml	**Unit Factor:**	1
Solids:	82.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Data File : J:\MS10\DATA\112403\1124F028.D Vial: 25
Acq On : 25 Nov 2003 21:57 Operator: JGISH
Sample : K2308433-006 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:51 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

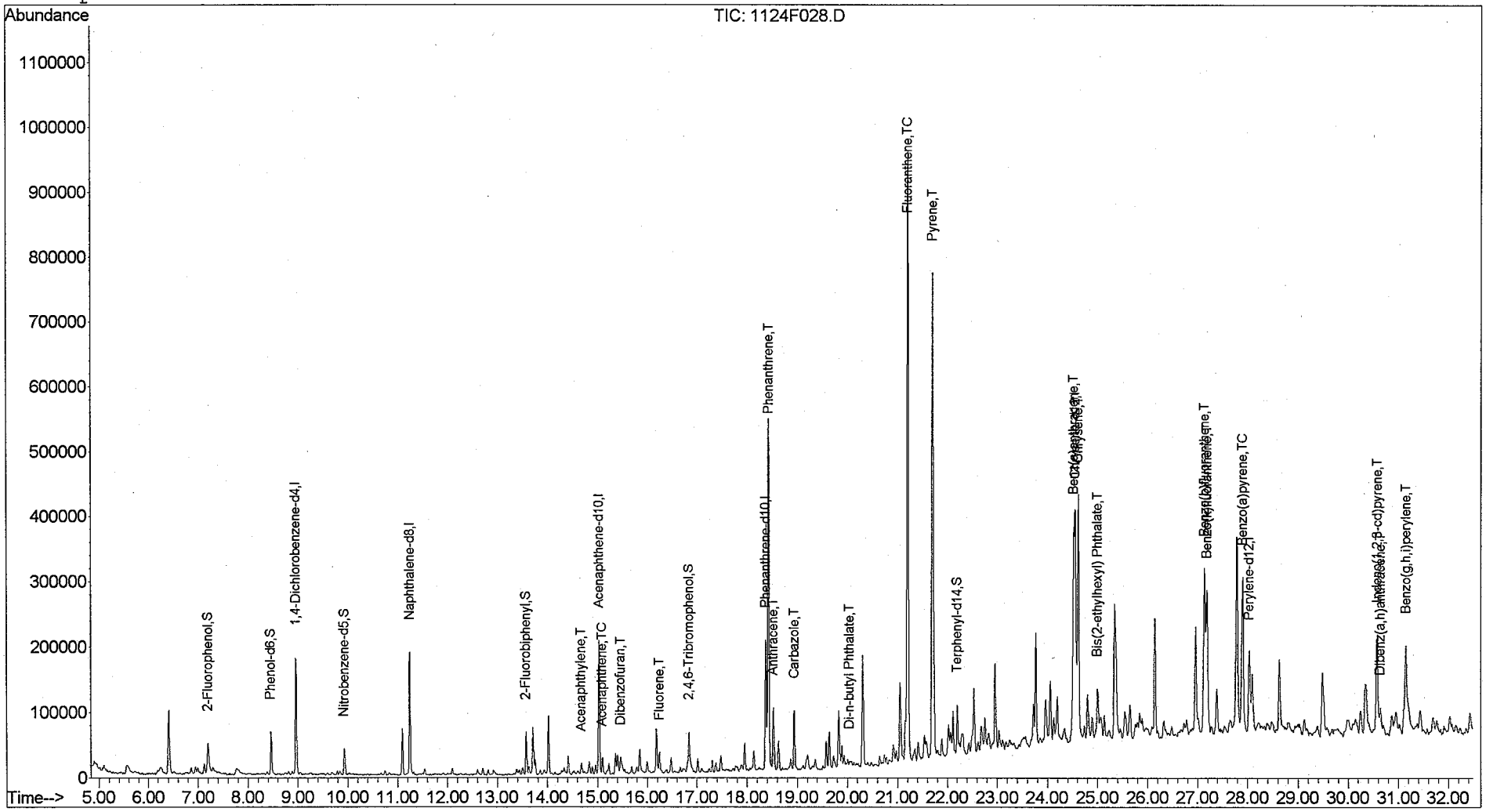
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.96	152	40614	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.25	136	129744	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	72830	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	121619	1000.00	ng/ml	0.00
67) Chrysene-d12	24.56	240	119413	1000.00	ng/ml	0.00
76) Perylene-d12	28.04	264	79310	1000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	19080	385.42	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 10.28%#			
6) Phenol-d6	8.46	99	29293	476.96	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 12.72%#			
19) Nitrobenzene-d5	9.93	82	20473	301.79	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.07%#			
38) 2-Fluorobiphenyl	13.57	172	29557	314.93	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 12.60%#			
58) 2,4,6-Tribromophenol	16.84	330	10501	573.24	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 15.29%#			
70) Terphenyl-d14	22.20	244	37622	460.37	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 18.41%#			
Target Compounds						Qvalue
41) Acenaphthylene	14.67	152	12321	102.89	ng/ml	96
44) Acenaphthene	15.09	154	9087	122.34	ng/ml	95
47) Dibenzofuran	15.46	168	12614	111.12	ng/ml	67
50) Fluorene	16.25	166	15266	166.54	ng/ml	99
62) Phenanthrene	18.44	178	359853	2616.56	ng/ml	99
63) Anthracene	18.53	178	52086	403.70	ng/ml	93
64) Carbazole	18.95	167	61810	557.96	ng/ml	93
65) Di-n-butyl Phthalate	20.04	149	3550	21.05	ng/ml	78
66) Fluoranthene	21.21	202	701474	5041.96	ng/ml	96
69) Pyrene	21.71	202	554480	4118.78	ng/ml	99
73) Benz(a)anthracene	24.53	228	213543	1906.29	ng/ml	97
74) Chrysene	24.62	228	250777	2378.93	ng/ml	96
75) Bis(2-ethylhexyl) Phthalat	25.00	149	24658	269.31	ng/ml	99
78) Benzo(b)fluoranthene	27.14	252	208082	2094.63	ng/ml	96
79) Benzo(k)fluoranthene	27.19	252	196127	1962.11	ng/ml	98
80) Benzo(a)pyrene	27.90	252	193991	2018.07	ng/ml	97
81) Indeno(1,2,3-cd)pyrene	30.58	276	136465	1717.34	ng/ml	93
82) Dibenz(a,h)anthracene	30.64	278	25410	312.86	ng/ml	91
83) Benzo(g,h,i)perylene	31.15	276	127319	1467.68	ng/ml	96

(#) = qualifier out of range (m) = manual integration

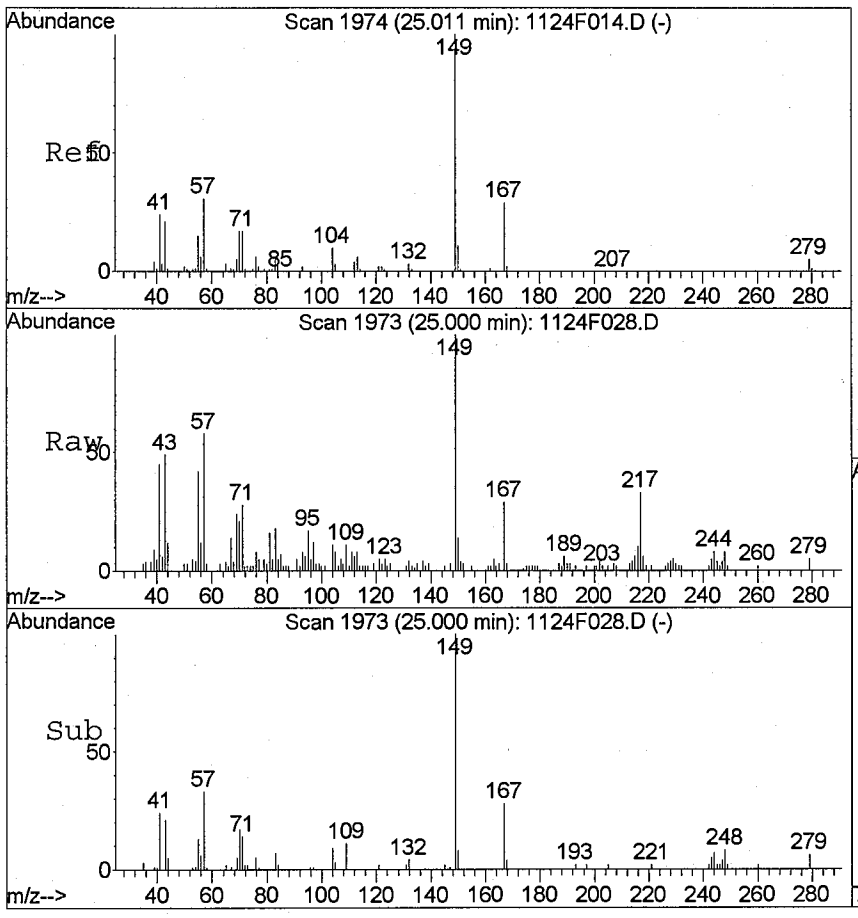
Quantitation Report (Not Reviewed)

Data File : J:\MS10\DATA\112403\1124F028.D Vial: 25
Acq On : 25 Nov 2003 21:57 Operator: JGISH
Sample : K2308433-006 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 8:35 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration

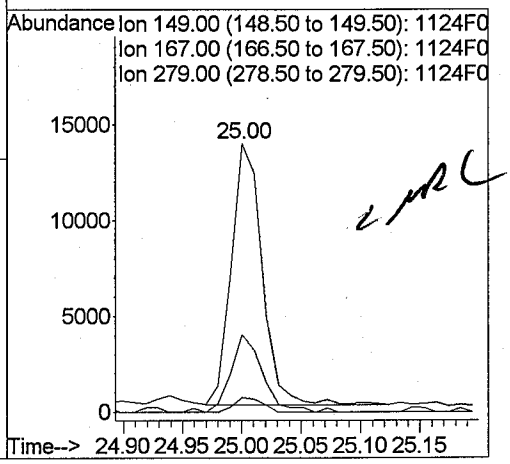


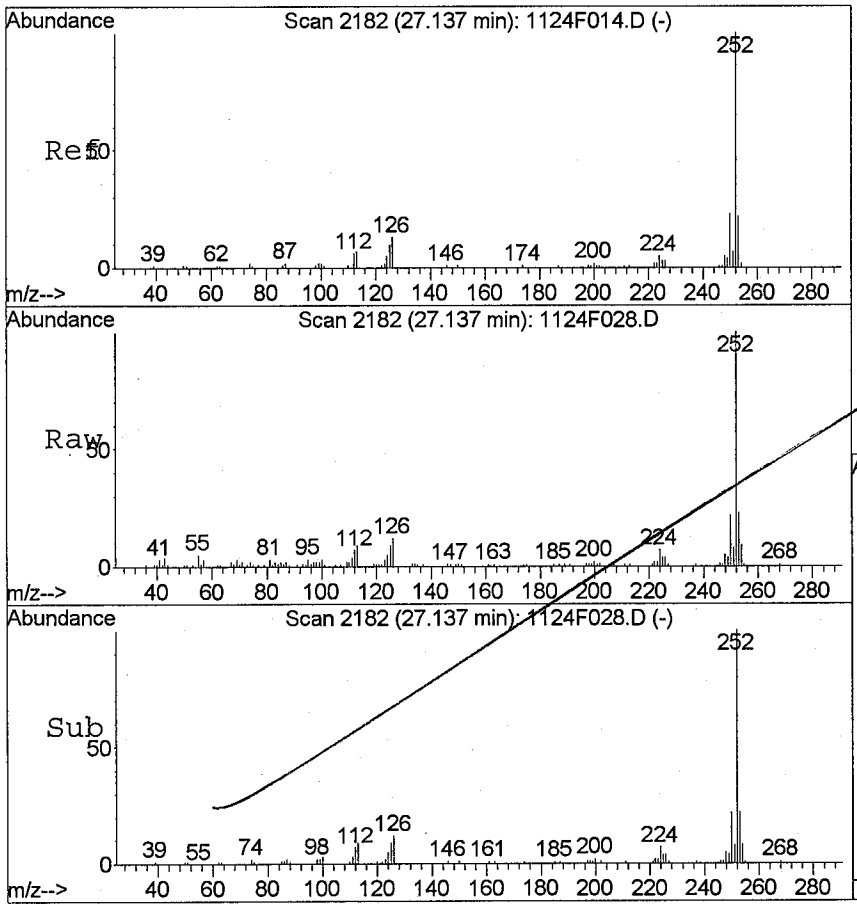
2279



#75
Bis(2-ethylhexyl) Phthalate
Concen: 269.31 ng/ml
RT: 25.00 min Scan# 1973
Delta R.T. 0.01 min
Lab File: 1124F028.D
Acq: 25 Nov 2003 21:57

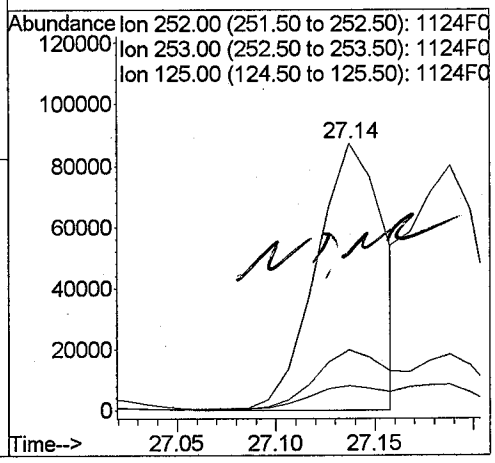
Tgt Ion:149	Resp:	24658	
Ion	Ratio	Lower	Upper
149	100		
167	29.7	0.2	60.2
279	5.5	0.0	34.5





#78
Benzo(b)fluoranthene
Concen: 2094.63 ng/ml
RT: 27.14 min Scan# 2182
Delta R.T. 0.01 min
Lab File: 1124F028.D
Acq: 25 Nov 2003 21:57

Tgt Ion:252	Resp:	208082	
Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.3
125	8.7	0.0	41.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-6
Lab Code: K2308433-007

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	150	5	11/20/03	11/25/03	KWG0318722	*
2-Methylphenol	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
4-Methylphenol†	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dimethylphenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dichlorophenol	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
2,4,6-Trichlorophenol	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
Pentachlorophenol	ND	U	240	5	11/20/03	11/25/03	KWG0318722	*
Butyl Benzyl Phthalate	ND	U	48	5	11/20/03	11/25/03	KWG0318722	*
Bis(2-ethylhexyl) Phthalate	ND	U	960	5	11/20/03	11/25/03	KWG0318722	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	70	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	75	35-138	11/25/03	Acceptable
Terphenyl-d14	93	56-152	11/25/03	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\112403\1124F029.D
Lab ID: K2308433-007
RunType: RE
Matrix: SEDIMENT

Date Acquired: 11/25/2003 22:38
Date Quantitated: 11/26/2003 08:37
Batch ID: KWG0319154
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	28	NA	14		x
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

SURR 1

MRL MATRIX 3

Primary Review: 11/26/03

Secondary Review: CD 12/1/03

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0319154	**Prep Lot:**	KWG0318722	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	251366	**Prep Date:**	11/20/2003		

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\112403\1124F025.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\112403\1124F029.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 22:38	**Quant Date:**	11/26/2003 08:37	**Vial:**	26
Run Type:	RE			**Dilution:**	5.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.97	0.00	152	41502	1,000.00	OK
2	Naphthalene-d8	11.25	-0.01	136	133102	1,000.00	OK
3	Acenaphthene-d10	15.03	-0.01	164	73923	1,000.00	OK
4	Phenanthrene-d10	18.38	-0.01	188	123916	1,000.00	OK
5	Chrysene-d12	24.56	-0.01	240	119314	1,000.00	OK
6	Perylene-d12	28.05	0.01	264	82418	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.46	0.00	0.00	99	32730	521.52	70	40-123	OK	
4	2,4,6-Tribromophenol	16.84	-0.02	0.00	330	10480	561.49	75	35-138	OK	
5	Terphenyl-d14	22.21	0.00	0.00	244	38073	466.27	93	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		13	U	
1	2-Methylphenol				107	0		22	U	
1	4-Methylphenol				107	0		19	U	
2	2,4-Dimethylphenol				122	0		35	U	
2	2,4-Dichlorophenol				162	0		12	U	
3	2,4,6-Trichlorophenol				196	0		12	U	
4	Pentachlorophenol				266	0		54	U	
5	Butyl Benzyl Phthalate				149	0		9.5	U	
5	Bis(2-ethylhexyl) Phthalate	25.01		0.00	149	23789	260.03	120	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F029.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 22:38	**Quant Date:**	11/26/2003 08:37	**Vial:**	26
Run Type:	RE			**Dilution:**	5.0
Lab ID:	K2308433-007			**Soln Conc. Units:**	ng/ml

Prep Amount:	26.63 g	**Dilution:**	5.0
Prep Final Vol:	2.0 ml	**Unit Factor:**	1
Solids:	79.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F029.D Vial: 26
Acq On : 25 Nov 2003 22:38 Operator: JGISH
Sample : K2308433-007 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:56 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

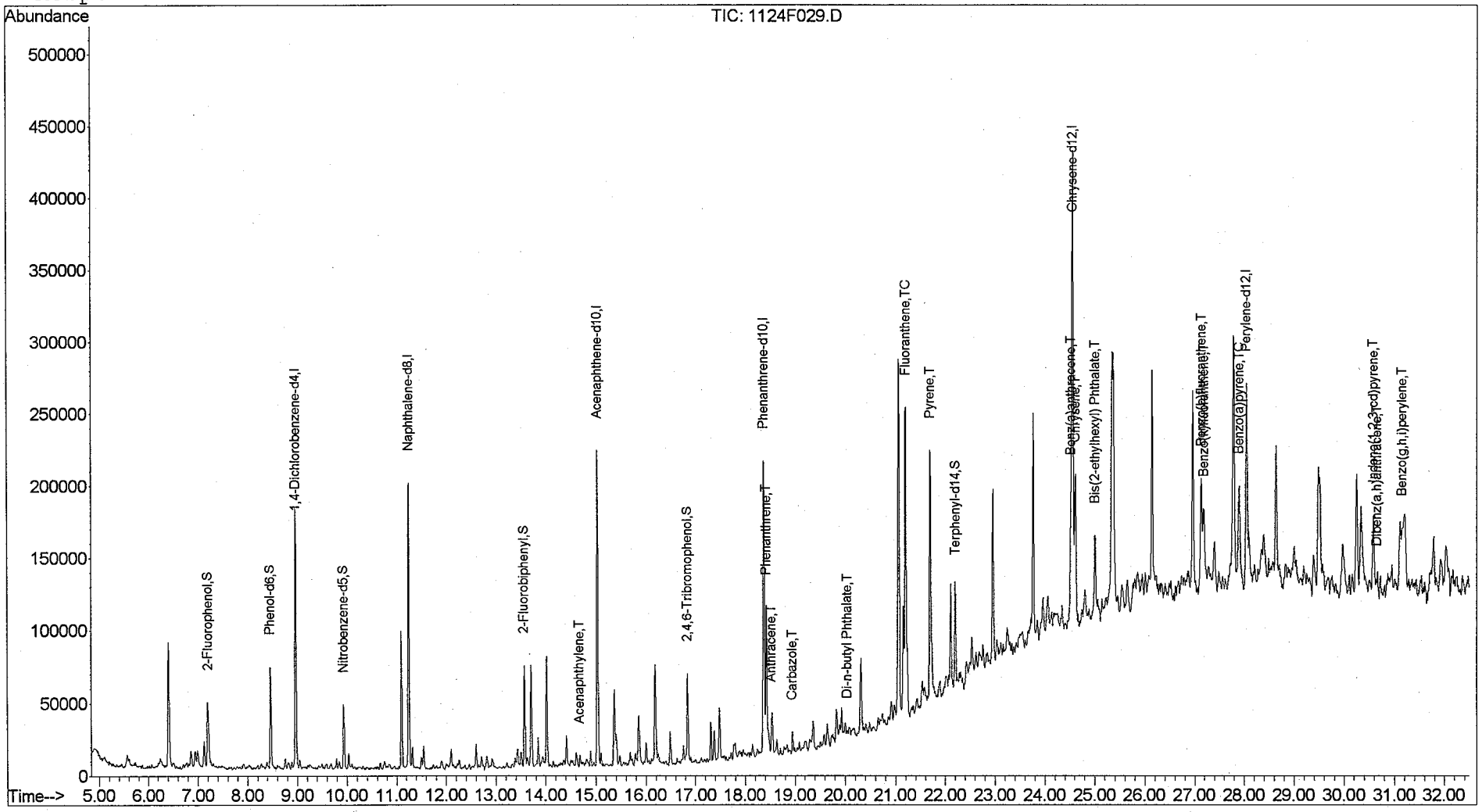
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	41502	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.25	136	133102	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	73923	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	123916	1000.00	ng/ml	0.00
67) Chrysene-d12	24.56	240	119314	1000.00	ng/ml	0.00
76) Perylene-d12	28.05	264	82418	1000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	22455	443.89	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 11.84%#			
6) Phenol-d6	8.46	99	32730	521.52	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 13.91%#			
19) Nitrobenzene-d5	9.93	82	22802	328.93	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 13.16%#			
38) 2-Fluorobiphenyl	13.57	172	31356	329.16	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 13.17%#			
58) 2,4,6-Tribromophenol	16.84	330	10480	561.49	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 14.97%#			
70) Terphenyl-d14	22.21	244	38073	466.27	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 18.65%#			
Target Compounds						Qvalue
41) Acenaphthylene	14.68	152	5576	45.87	ng/ml	96
62) Phenanthrene	18.43	178	61438	438.45	ng/ml	98
63) Anthracene	18.53	178	12014	91.39	ng/ml	95
64) Carbazole	18.95	167	9004	79.77	ng/ml	86
65) Di-n-butyl Phthalate	20.04	149	2311m	13.45	ng/ml	
66) Fluoranthene	21.21	202	153056	1079.72	ng/ml	97
69) Pyrene	21.70	202	128950	958.66	ng/ml	99
73) Benz(a)anthracene	24.53	228	51328	458.58	ng/ml	96
74) Chrysene	24.62	228	69373	658.64	ng/ml	98
75) Bis(2-ethylhexyl) Phthalat	25.01	149	23789	260.03	ng/ml	96
78) Benzo(b)fluoranthene	27.14	252	59198	573.44	ng/ml	97
79) Benzo(k)fluoranthene	27.19	252	49939	480.76	ng/ml	98
80) Benzo(a)pyrene	27.90	252	49472	495.25	ng/ml	96
81) Indeno(1,2,3-cd)pyrene	30.58	276	36944	447.39	ng/ml	94
82) Dibenz(a,h)anthracene	30.65	278	7451	88.28	ng/ml	88
83) Benzo(g,h,i)perylene	31.16	276	38688	429.16	ng/ml	96

(#) = qualifier out of range (m) = manual integration

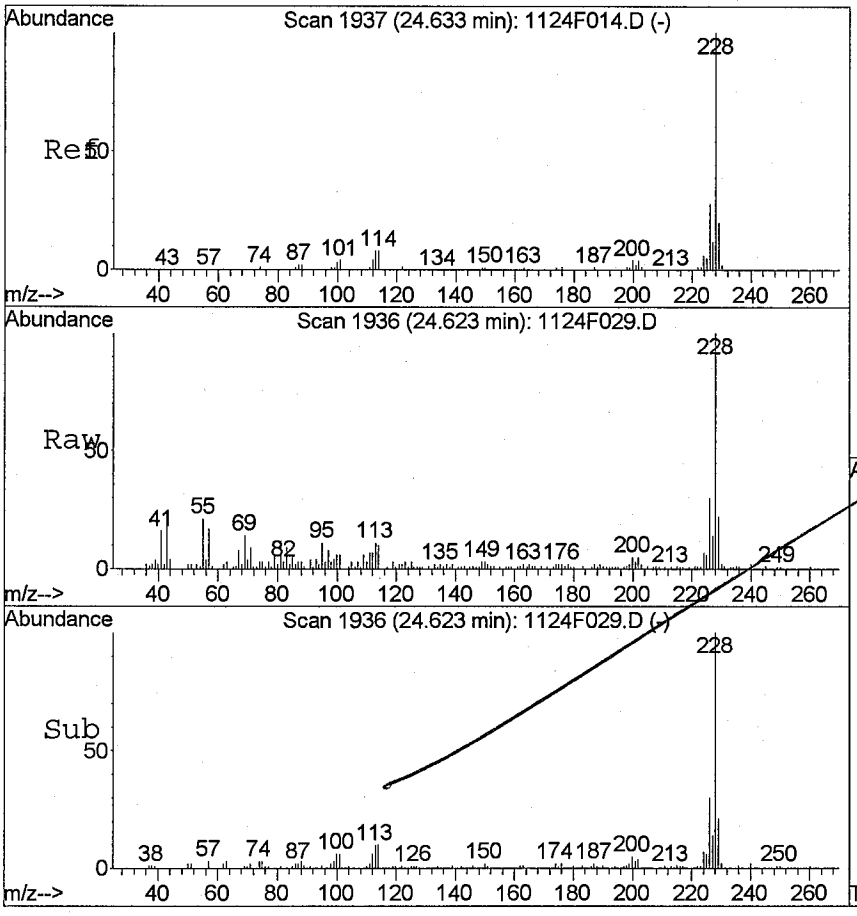
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F029.D Vial: 26
Acq On : 25 Nov 2003 22:38 Operator: JGISH
Sample : K2308433-007 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 8:37 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration



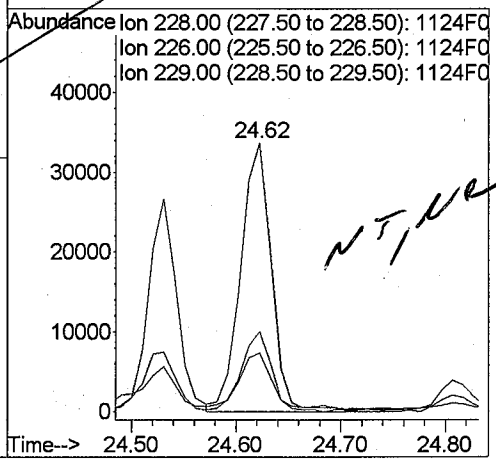
2286

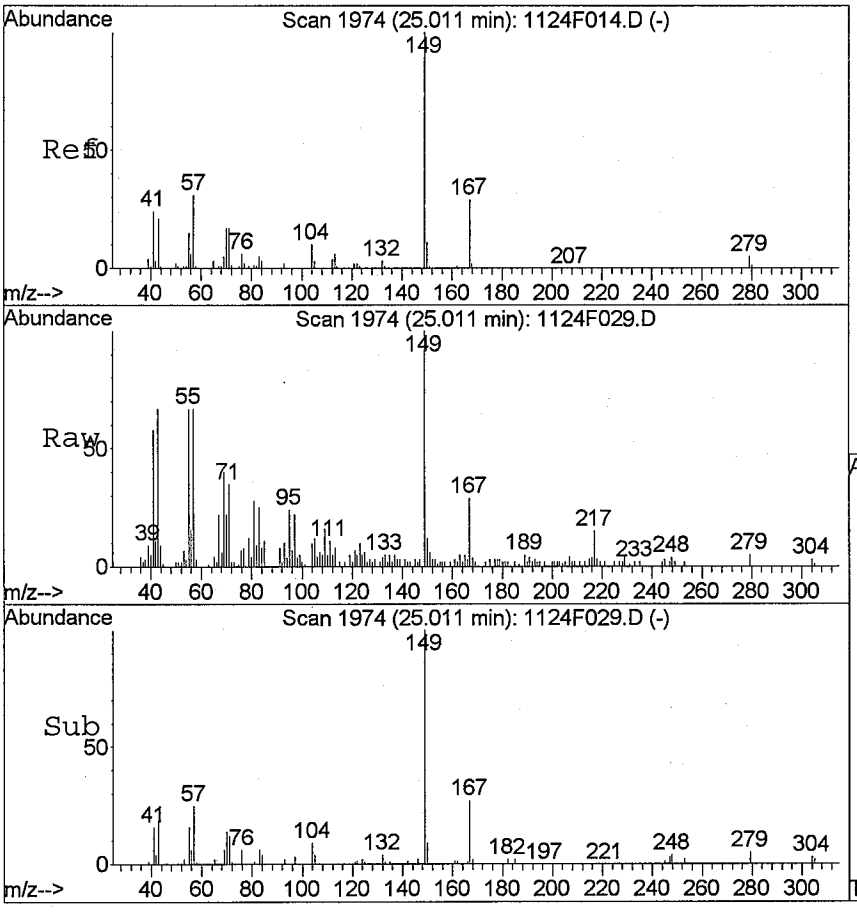


#74
Chrysene
Concen: 658.64 ng/ml
RT: 24.62 min Scan# 1936
Delta R.T. 0.01 min
Lab File: 1124F029.D
Acq: 25 Nov 2003 22:38

Tgt Ion:228 Resp: 69373

Ion	Ratio	Lower	Upper
228	100		
226	29.2	0.0	58.4
229	20.6	0.0	49.1

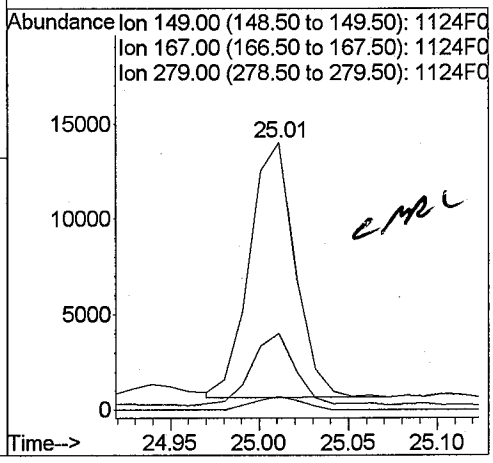




#75
Bis(2-ethylhexyl) Phthalate
Concen: 260.03 ng/ml
RT: 25.01 min Scan# 1974
Delta R.T. 0.02 min
Lab File: 1124F029.D
Acq: 25 Nov 2003 22:38

Tgt Ion:149 Resp: 23789

Ion	Ratio	Lower	Upper
149	100		
167	28.0	0.2	60.2
279	5.3	0.0	34.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: 10/23/2003
Date Received: 10/27/2003

Semi-Volatile Organic Compounds by GC/MS

Sample Name: SED-8
Lab Code: K2308433-009

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	160	5	11/20/03	11/25/03	KWG0318722	*
2-Methylphenol	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
4-Methylphenol†	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dimethylphenol	ND	U	260	5	11/20/03	11/25/03	KWG0318722	*
2,4-Dichlorophenol	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
2,4,6-Trichlorophenol	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
Pentachlorophenol	ND	U	260	5	11/20/03	11/25/03	KWG0318722	*
Butyl Benzyl Phthalate	ND	U	51	5	11/20/03	11/25/03	KWG0318722	*
Bis(2-ethylhexyl) Phthalate	ND	U	1100	5	11/20/03	11/25/03	KWG0318722	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	67	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	77	35-138	11/25/03	Acceptable
Terphenyl-d14	90	56-152	11/25/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\112403\1124F030.D
Lab ID: K2308433-009
RunType: RE
Matrix: SEDIMENT

Date Acquired: 11/25/2003 23:19
Date Quantitated: 11/26/2003 08:38
Batch ID: KWG0319154
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	28	NA	14		x
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

SURR E1

MATRIX 3

Primary Review: 11/26/03

Secondary Review: CO 12/1/03

Printed: 11/26/2003 10:46:37
U:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**	10/23/2003	**Receive Date:**	10/27/2003

Analysis Lot:	KWG0319154	**Prep Lot:**	KWG0318722	**Report Group:**	K2308433
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	251367	**Prep Date:**	11/20/2003		

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ4483
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\112403\1124F025.D	**Quant based on Report List**	

Data File:	J:\MS10\DATA\112403\1124F030.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 23:19	**Quant Date:**	11/26/2003 08:38	**Vial:**	27
Run Type:	RE			**Dilution:**	5.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.97	0.00	152	40303	1,000.00	OK
2	Naphthalene-d8	11.25	-0.01	136	132612	1,000.00	OK
3	Acenaphthene-d10	15.04	0.00	164	71612	1,000.00	OK
4	Phenanthrene-d10	18.38	-0.01	188	123119	1,000.00	OK
5	Chrysene-d12	24.58	0.01	240	119790	1,000.00	OK
6	Perylene-d12	28.07	0.03	264	81338	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Phenol-d6	8.47	0.01	0.00	99	30712	503.93	67	40-123	OK
4	2,4,6-Tribromophenol	16.85	-0.01	0.00	330	10712	577.63	77	35-138	OK
5	Terphenyl-d14	22.22	0.01	0.00	244	36722	447.94	90	56-152	OK

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		14	U	
1	2-Methylphenol				107	0		24	U	
1	4-Methylphenol				107	0		20	U	
2	2,4-Dimethylphenol				122	0		38	U	
2	2,4-Dichlorophenol				162	0		13	U	
3	2,4,6-Trichlorophenol				196	0		13	U	
4	Pentachlorophenol				266	0		59	U	
5	Butyl Benzyl Phthalate	23.52		0.00	149	5930	88.97	45	JD	
5	Bis(2-ethylhexyl) Phthalate	25.01		0.00	149	45962	500.41	250	JD	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F030.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 23:19	**Quant Date:**	11/26/2003 08:38	**Vial:**	27
Run Type:	RE			**Dilution:**	5.0
Lab ID:	K2308433-009			**Soln Conc. Units:**	ng/ml

Prep Amount:	27.40 g	**Dilution:**	5.0
Prep Final Vol:	2.0 ml	**Unit Factor:**	1
Solids:	72.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F030.D Vial: 27
Acq On : 25 Nov 2003 23:19 Operator: JGISH
Sample : K2308433-009 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:06:00 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	40303	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.25	136	132612	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.04	164	71612	1000.00	ng/ml	0.02
57) Phenanthrene-d10	18.38	188	123119	1000.00	ng/ml	0.00
67) Chrysene-d12	24.58	240	119790	1000.00	ng/ml	0.03
76) Perylene-d12	28.07	264	81338	1000.00	ng/ml	0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.20	112	21077	429.05	ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 110		Recovery = 11.44%#			
6) Phenol-d6	8.47	99	30712	503.93	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 13.44%#			
19) Nitrobenzene-d5	9.94	82	20817	309.23	ng/ml	0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 12.37%#			
38) 2-Fluorobiphenyl	13.58	172	28260	306.23	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 12.25%#			
58) 2,4,6-Tribromophenol	16.85	330	10712	577.63	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 15.40%#			
70) Terphenyl-d14	22.22	244	36722	447.94	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 17.92%#			
Target Compounds						Qvalue
29) Naphthalene	11.29	128	7891	62.84	ng/ml	96
33) 2-Methylnaphthalene	12.72	142	3409	40.29	ng/ml	88
41) Acenaphthylene	14.68	152	18287	155.30	ng/ml	96
44) Acenaphthene	15.10	154	23821	326.17	ng/ml	97
47) Dibenzofuran	15.47	168	21613	193.63	ng/ml	83
50) Fluorene	16.26	166	38472	426.84	ng/ml	93
62) Phenanthrene	18.44	178	749207	5381.26	ng/ml	99
63) Anthracene	18.54	178	131916	1009.97	ng/ml	90
64) Carbazole	18.96	167	105783	943.27	ng/ml	93
65) Di-n-butyl Phthalate	20.05	149	4338	25.42	ng/ml	88
66) Fluoranthene	21.24	202	1492016	10593.45	ng/ml	96
69) Pyrene	21.74	202	1172764	8684.09	ng/ml	99
71) Butyl Benzyl Phthalate	23.52	149	5930	88.97	ng/ml	95
73) Benz(a)anthracene	24.55	228	459207	4086.42	ng/ml	96
74) Chrysene	24.65	228	560856	5303.67	ng/ml	96
75) Bis(2-ethylhexyl) Phthalat	25.01	149	45962	500.41	ng/ml	96
77) Di-n-octyl Phthalate	26.52	149	8513	56.72	ng/ml	80
78) Benzo(b)fluoranthene	27.18	252	497681	4884.94	ng/ml	97
79) Benzo(k)fluoranthene	27.23	252	383684	3742.78	ng/ml	98
80) Benzo(a)pyrene	27.94	252	426368	4324.88	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F030.D Vial: 27
Acq On : 25 Nov 2003 23:19 Operator: JGISH
Sample : K2308433-009 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:06:00 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

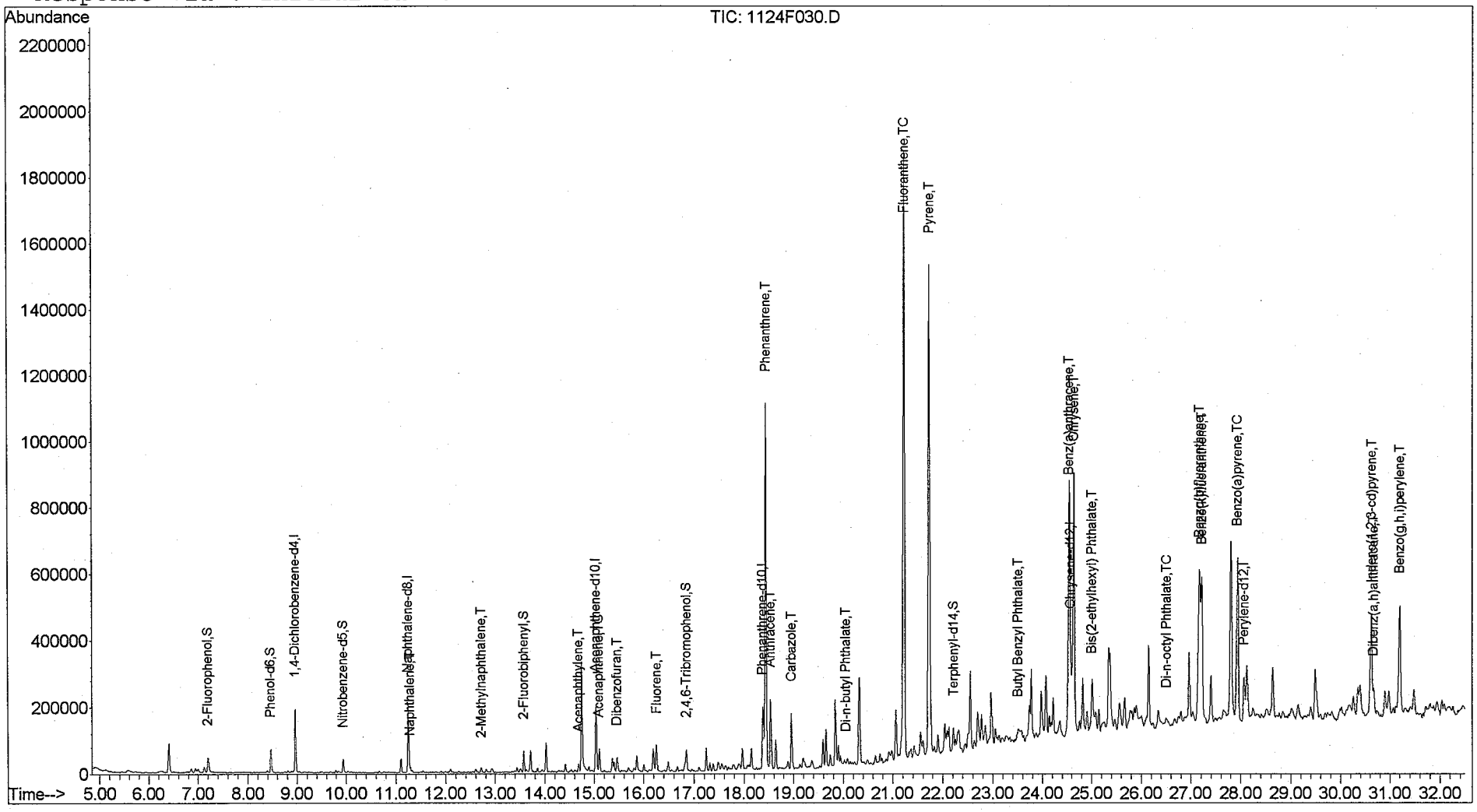
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Indeno(1,2,3-cd)pyrene	30.63	276	308197	3781.80	ng/ml	94
82)	Dibenz(a,h)anthracene	30.67	278	62127m	745.87	ng/ml	
83)	Benzo(g,h,i)perylene	31.20	276	286717	3222.74	ng/ml	95

(#) = qualifier out of range (m) = manual integration

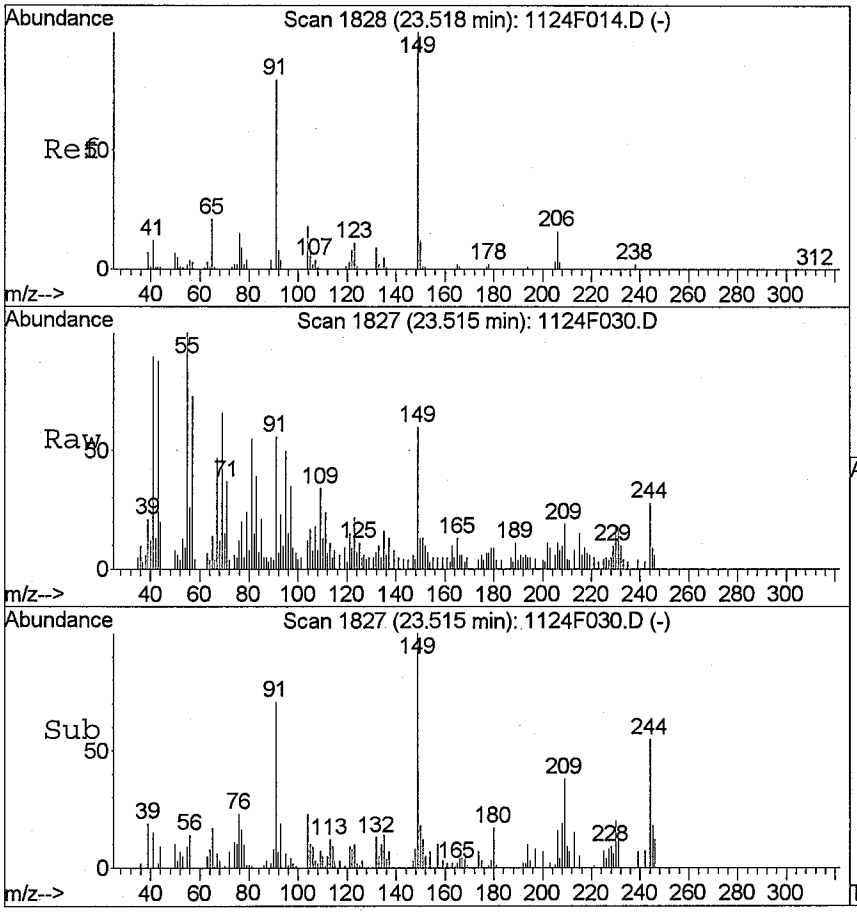
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F030.D Vial: 27
Acq On : 25 Nov 2003 23:19 Operator: JGISH
Sample : K2308433-009 Inst : MS10
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 8:38 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration



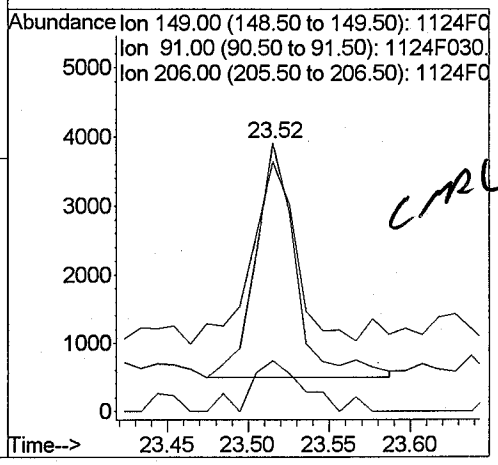
2294

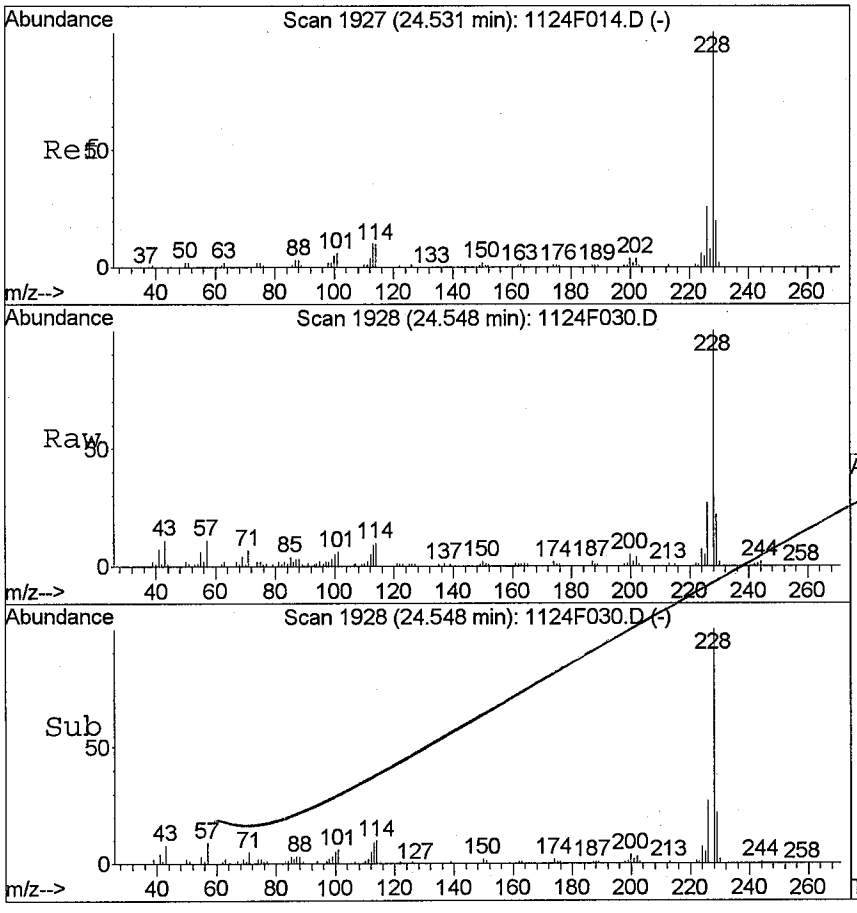


#71
Butyl Benzyl Phthalate
Concen: 88.97 ng/ml
RT: 23.52 min Scan# 1827
Delta R.T. 0.02 min
Lab File: 1124F030.D
Acq: 25 Nov 2003 23:19

Tgt Ion:149 Resp: 5930

Ion	Ratio	Lower	Upper
149	100		
91	73.7	41.4	101.4
206	21.7	0.0	46.5

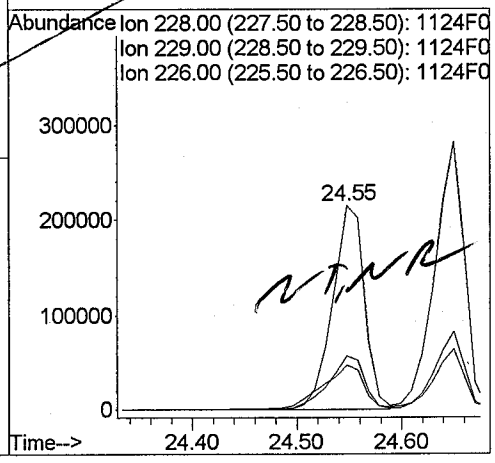


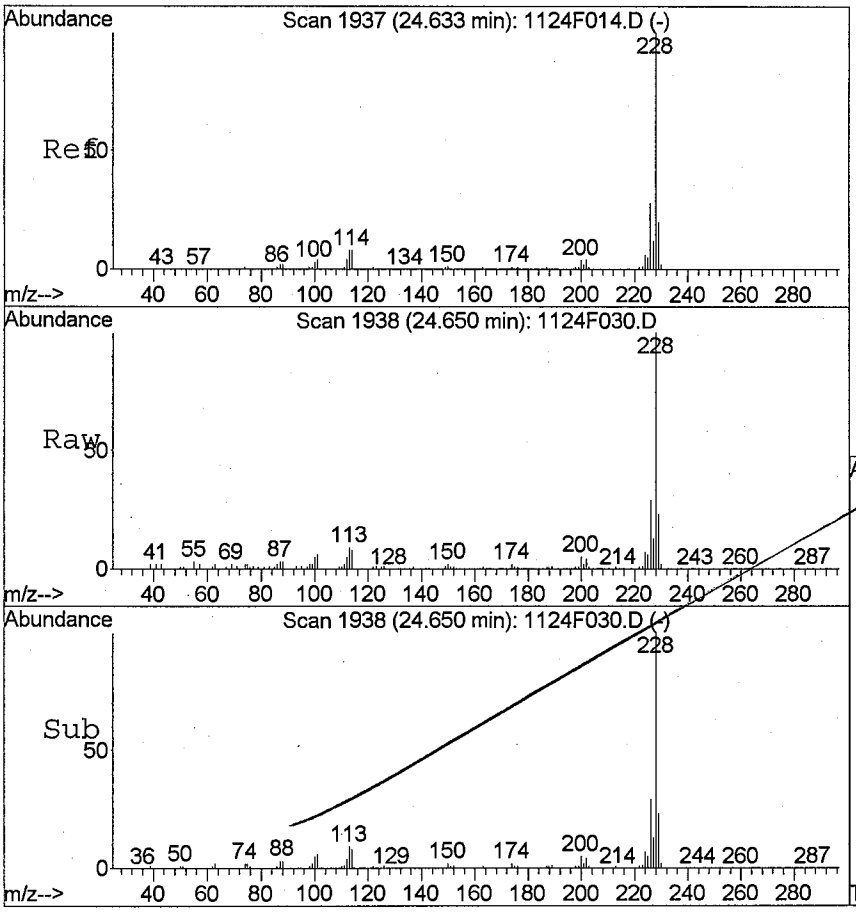


#73
Benz(a)anthracene
Concen: 4086.42 ng/ml
RT: 24.55 min Scan# 1928
Delta R.T. 0.03 min
Lab File: 1124F030.D
Acq: 25 Nov 2003 23:19

Tgt Ion:228 Resp: 459207

Ion	Ratio	Lower	Upper
228	100		
229	21.8	0.0	48.5
226	26.7	0.0	55.6

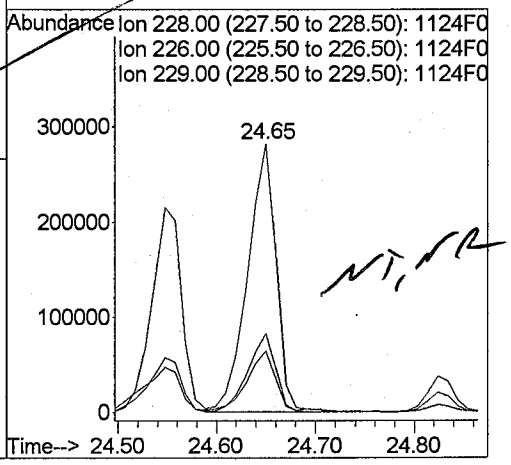


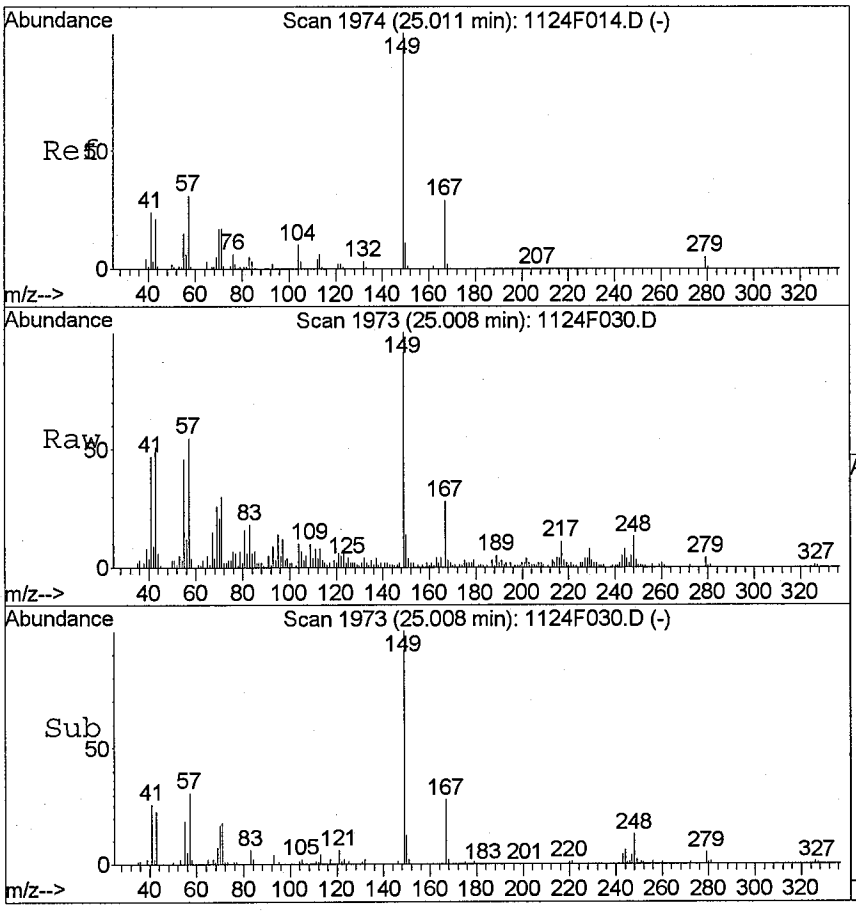


#74
Chrysene
Concen: 5303.67 ng/ml
RT: 24.65 min Scan# 1938
Delta R.T. 0.04 min
Lab File: 1124F030.D
Acq: 25 Nov 2003 23:19

Tgt Ion:228 Resp: 560856

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.4
229	22.5	0.0	49.1

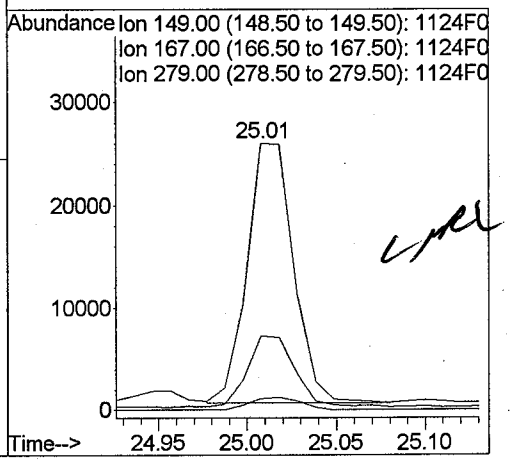




#75
Bis(2-ethylhexyl) Phthalate
Concen: 500.41 ng/ml
RT: 25.01 min Scan# 1973
Delta R.T. 0.02 min
Lab File: 1124F030.D
Acq: 25 Nov 2003 23:19

Tgt Ion:149 Resp: 45962

Ion	Ratio	Lower	Upper
149	100		
167	27.7	0.2	60.2
279	4.6	0.0	34.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0318722-3

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	22	1	11/20/03	11/25/03	KWG0318722	
2-Methylphenol	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
4-Methylphenol†	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
2,4-Dimethylphenol	ND	U	37	1	11/20/03	11/25/03	KWG0318722	
2,4-Dichlorophenol	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
2,4,6-Trichlorophenol	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
Pentachlorophenol	ND	U	37	1	11/20/03	11/25/03	KWG0318722	
Butyl Benzyl Phthalate	ND	U	7.3	1	11/20/03	11/25/03	KWG0318722	
Bis(2-ethylhexyl) Phthalate	ND	U	150	1	11/20/03	11/25/03	KWG0318722	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	44	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	63	35-138	11/25/03	Acceptable
Terphenyl-d14	107	56-152	11/25/03	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\112403\1124F025.D
Lab ID: KWG0318722-3
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/25/2003 19:53
Date Quantitated: 11/26/2003 08:05
Batch ID: KWG0319154
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

KB43326

Primary Review: 11/26/03

Secondary Review: 12/1/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/24/2003

Analysis Lot:	KWG0319154	**Prep Lot:**	KWG0318722	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	251370	**Prep Date:**	11/20/2003		

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:			
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\112403\1124F025.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 19:53	**Quant Date:**	11/26/2003 08:05	**Vial:**	22
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0318722-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.97	0.00	152	42805	1,000.00	OK
2	Naphthalene-d8	11.25	-0.01	136	132404	1,000.00	OK
3	Acenaphthene-d10	15.03	-0.01	164	70334	1,000.00	OK
4	Phenanthrene-d10	18.37	-0.02	188	109717	1,000.00	OK
5	Chrysene-d12	24.56	-0.01	240	103495	1,000.00	OK
6	Perylene-d12	28.03	-0.01	264	66097	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.19	0.02	0.00	112	70718	1,355	36	28-109	OK	
1	Phenol-d6	8.47	0.01	0.00	99	107667	1,663	44	40-123	OK	
1	Nitrobenzene-d5	9.94	0.00	0.00	82	83831	1,173	47	24-128	OK	
3	2-Fluorobiphenyl	13.58	-0.01	0.00	172	116423	1,285	51	28-126	OK	
4	2,4,6-Tribromophenol	16.85	-0.01	0.00	330	39109	2,367	63	35-138	OK	
5	Terphenyl-d14	22.21	0.00	0.00	244	189227	2,672	107	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine				42	0		6.1	U	
1	Pyridine				79	0		3.0	U	
1	Bis(2-chloroethyl) Ether				93	0		2.4	U	
1	Phenol				94	0		1.9	U	
1	Aniline				93	0		1.5	U	
1	2-Chlorophenol				128	0		1.7	U	
1	1,3-Dichlorobenzene				146	0		1.6	U	
1	1,4-Dichlorobenzene				146	0		1.9	U	
1	1,2-Dichlorobenzene				146	0		1.3	U	
1	Benzyl Alcohol				108	0		3.7	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F025.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 19:53	**Quant Date:**	11/26/2003 08:05	**Vial:**	22
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0318722-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether				45	0		1.2	U	
1	2-Methylphenol				107	0		3.4	U	
1	Hexachloroethane				117	0		2.2	U	
1	N-Nitrosodi-n-propylamine				70	0		3.2	U	
1	4-Methylphenol				107	0		2.9	U	
1	Nitrobenzene				77	0		2.0	U	
2	Isophorone				82	0		1.6	U	
2	2-Nitrophenol				139	0		2.6	U	
2	2,4-Dimethylphenol				122	0		5.5	U	
2	Bis(2-chloroethoxy)methane				93	0		1.3	U	
2	2,4-Dichlorophenol				162	0		1.8	U	
2	Benzoic Acid				122	0		96	U	
2	1,2,4-Trichlorobenzene				180	0		1.5	U	
2	Naphthalene				128	0		1.3	U	
2	4-Chloroaniline				127	0		2.1	U	
2	Hexachlorobutadiene				225	0		1.4	U	
2	4-Chloro-3-methylphenol				107	0		2.1	U	
2	2-Methylnaphthalene				142	0		1.2	U	
3	Hexachlorocyclopentadiene				237	0		15	U	
3	2,4,6-Trichlorophenol				196	0		1.8	U	
3	2,4,5-Trichlorophenol				196	0		3.0	U	
3	2-Chloronaphthalene				127	0		3.6	U	
3	2-Nitroaniline				65	0		2.7	U	
3	Acenaphthylene				152	0		1.4	U	
3	Dimethyl Phthalate				163	0		1.8	U	
3	2,6-Dinitrotoluene				165	0		2.8	U	
3	Acenaphthene				154	0		1.0	U	
3	3-Nitroaniline				138	0		2.6	U	
3	2,4-Dinitrophenol				184	0		36	U	
3	Dibenzofuran				168	0		1.3	U	
3	4-Nitrophenol				109	0		30	U	
3	2,4-Dinitrotoluene				165	0		2.8	U	
3	Fluorene				166	0		1.7	U	
3	4-Chlorophenyl Phenyl Ether				204	0		2.0	U	
3	Diethyl Phthalate				149	0		3.5	U	
3	4-Nitroaniline				138	0		3.4	U	
3	2-Methyl-4,6-dinitrophenol				198	0		1.7	U	
3	N-Nitrosodiphenylamine				169	0		2.2	U	
3	Azobenzene				77	0		2.4	U	
4	4-Bromophenyl Phenyl Ether				248	0		1.4	U	
4	Hexachlorobenzene				284	0		2.1	U	
4	Pentachlorophenol				266	0		8.5	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F025.D		**Instrument:** MS10
Acqu Date:	11/25/2003 19:53	**Quant Date:** 11/26/2003 08:05	**Vial:** 22
Run Type:	MB		**Dilution:** 1.0
Lab ID:	KWG0318722-3		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene				178	0		1.3	U	
4	Anthracene				178	0		1.4	U	
4	Carbazole				167	0		1.3	U	
4	Di-n-butyl Phthalate	20.04	-0.01	0.00	149	20445	134.41	9.81		
4	Fluoranthene				202	0		2.2	U	
5	Benzidine				184	0		200	U	
5	Pyrene				202	0		1.3	U	
5	Butyl Benzyl Phthalate				149	0		1.5	U	
5	3,3'-Dichlorobenzidine				252	0		3.7	U	
5	Benz(a)anthracene				228	0		1.4	U	
5	Chrysene				228	0		1.4	U	
5	Bis(2-ethylhexyl) Phthalate	25.01		0.00	149	2513	31.67	2.31	J	
6	Di-n-octyl Phthalate				149	0		1.2	U	
6	Benzo(b)fluoranthene				252	0		2.5	U	
6	Benzo(k)fluoranthene				252	0		2.5	U	
6	Benzo(a)pyrene				252	0		1.6	U	
6	Indeno(1,2,3-cd)pyrene				276	0		1.9	U	
6	Dibenz(a,h)anthracene				278	0		2.2	U	
6	Benzo(g,h,i)perylene				276	0		2.3	U	

Prep Amount:	27.41 g	**Dilution:**	1.0
Prep Final Vol:	2.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F025.D Vial: 22
Acq On : 25 Nov 2003 19:53 Operator: JGISH
Sample : KWG038722-MB Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:36 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

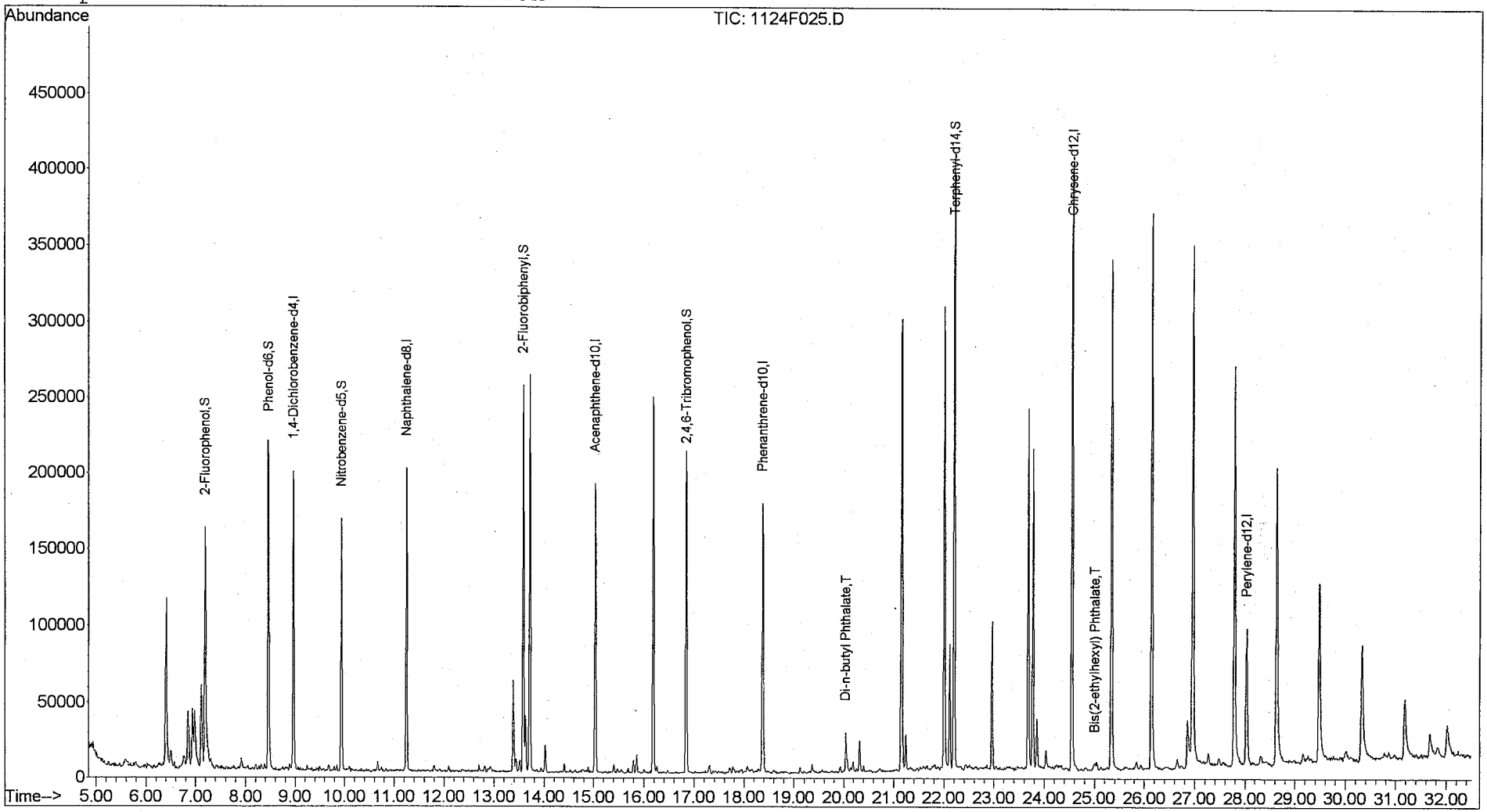
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	42805	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.25	136	132404	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	70334	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	109717	1000.00	ng/ml	0.00
67) Chrysene-d12	24.56	240	103495	1000.00	ng/ml	0.00
76) Perylene-d12	28.03	264	66097	1000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	70718	1355.40	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery = 36.14%#			
6) Phenol-d6	8.47	99	107667	1663.36	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 44.36%			
19) Nitrobenzene-d5	9.94	82	83831	1172.50	ng/ml	0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 46.90%			
38) 2-Fluorobiphenyl	13.58	172	116423	1284.52	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 51.38%			
58) 2,4,6-Tribromophenol	16.85	330	39109	2366.51	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 63.11%			
70) Terphenyl-d14	22.21	244	189227	2671.64	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 106.87%			
Target Compounds						Qvalue
65) Di-n-butyl Phthalate	20.04	149	20445	134.41	ng/ml	97
75) Bis(2-ethylhexyl) Phthalat	25.01	149	2513	31.67	ng/ml	96

(#) = qualifier out of range (m) = manual integration

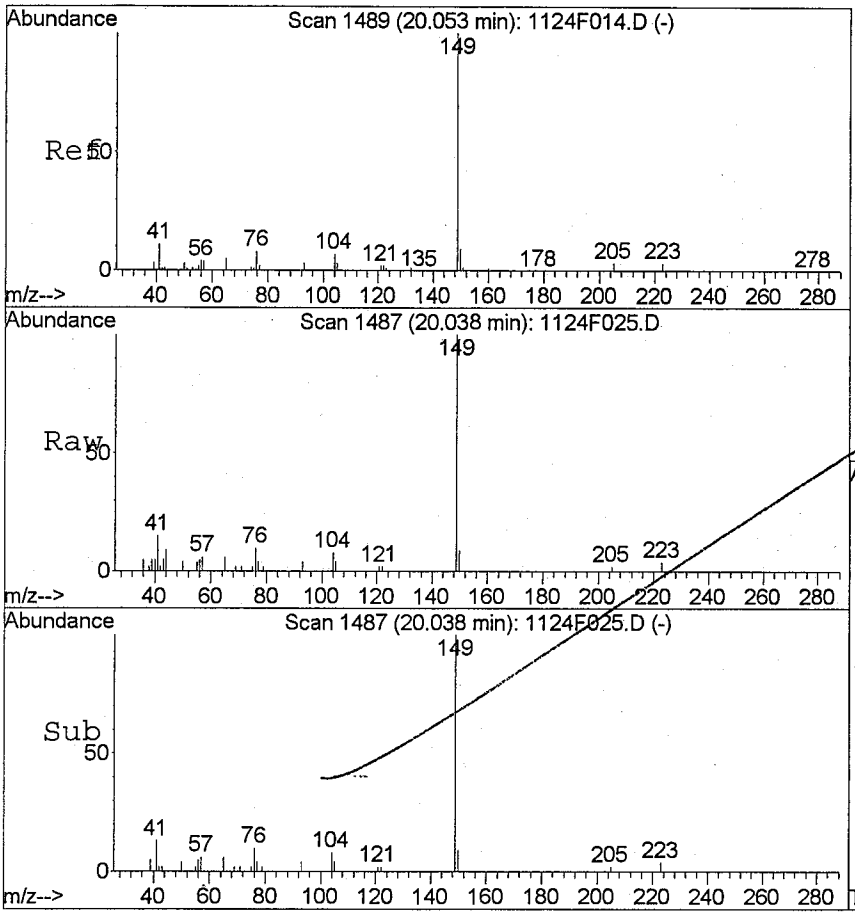
Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F025.D Vial: 22
Acq On : 25 Nov 2003 19:53 Operator: JGISH
Sample : KWG038722-MB Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 8:05 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration



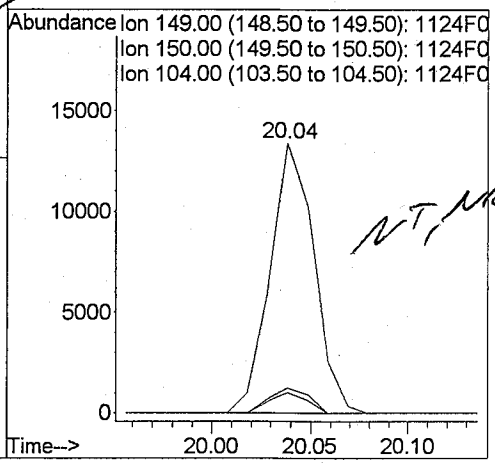
2303

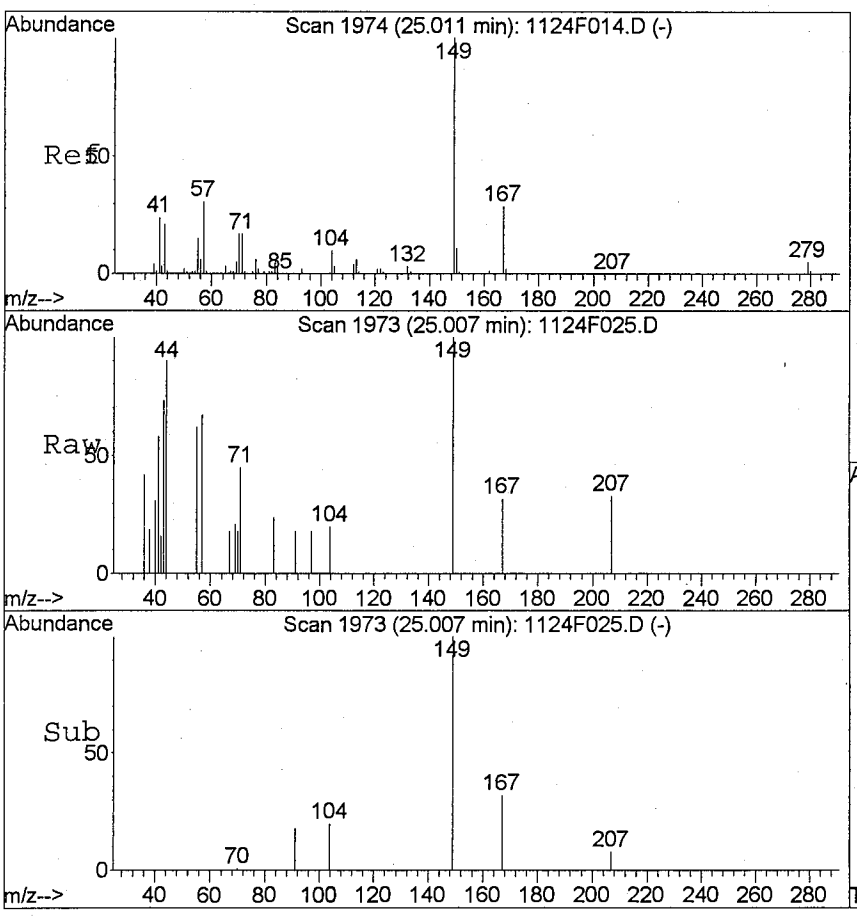


#65
Di-n-butyl Phthalate
Concen: 134.41 ng/ml
RT: 20.04 min Scan# 1487
Delta R.T. 0.01 min
Lab File: 1124F025.D
Acq: 25 Nov 2003 19:53

Tgt Ion:149 Resp: 20445

Ion	Ratio	Lower	Upper
149	100		
150	9.4	0.0	39.4
104	7.6	0.0	35.0

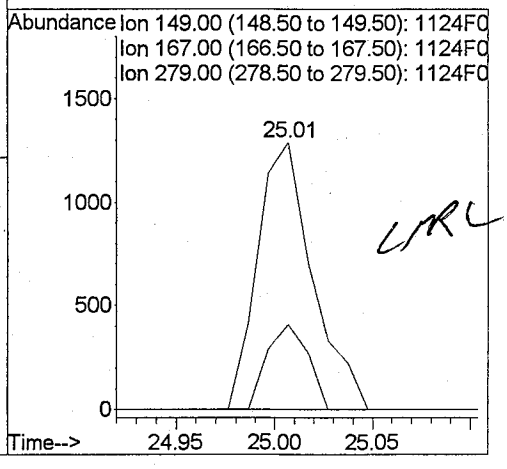




#75
Bis(2-ethylhexyl) Phthalate
Concen: 31.67 ng/ml
RT: 25.01 min Scan# 1973
Delta R.T. 0.02 min
Lab File: 1124F025.D
Acq: 25 Nov 2003 19:53

Tgt Ion:149 Resp: 2513

Ion	Ratio	Lower	Upper
149	100		
167	31.8	0.2	60.2
279	0.0	0.0	34.5



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample
Lab Code: KWG0318722-1

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**150**		30	1	11/20/03	11/25/03	KWG0318722	
2-Methylphenol	**140**		10	1	11/20/03	11/25/03	KWG0318722	
4-Methylphenol†	**140**		10	1	11/20/03	11/25/03	KWG0318722	
2,4-Dimethylphenol	**96.5**		50	1	11/20/03	11/25/03	KWG0318722	
2,4-Dichlorophenol	**143**		10	1	11/20/03	11/25/03	KWG0318722	
2,4,6-Trichlorophenol	**153**		10	1	11/20/03	11/25/03	KWG0318722	
Pentachlorophenol	**179**		50	1	11/20/03	11/25/03	KWG0318722	
Butyl Benzyl Phthalate	**239**		10	1	11/20/03	11/25/03	KWG0318722	
Bis(2-ethylhexyl) Phthalate	**249**		200	1	11/20/03	11/25/03	KWG0318722	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	63	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	78	35-138	11/25/03	Acceptable
Terphenyl-d14	113	56-152	11/25/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\112403\1124F026.D
Lab ID: KWG0318722-1
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/25/2003 20:35
Date Quantitated: 11/26/2003 08:26
Batch ID: KWG0319154
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K 8433 Re

Primary Review: 11/26/03

Secondary Review: CD 12/1/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/24/2003

Analysis Lot:	KWG0319154	**Prep Lot:**	KWG0318722	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	251368	**Prep Date:**	11/20/2003		

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:			
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\112403\1124F025.D	**Quant based on Method**	

Data File:	J:\MS10\DATA\112403\1124F026.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 20:35	**Quant Date:**	11/26/2003 08:26	**Vial:**	23
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0318722-1			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.96	-0.01	152	39557	1,000.00	OK
2	Naphthalene-d8	11.25	-0.01	136	127407	1,000.00	OK
3	Acenaphthene-d10	15.03	-0.01	164	66403	1,000.00	OK
4	Phenanthrene-d10	18.38	-0.01	188	108688	1,000.00	OK
5	Chrysene-d12	24.56	-0.01	240	99516	1,000.00	OK
6	Perylene-d12	28.03	-0.01	264	66200	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.17	0.00	0.00	112	96674	2,005	53	28-109	OK	
1	Phenol-d6	8.46	0.00	0.00	99	141773	2,370	63	40-123	OK	
1	Nitrobenzene-d5	9.93	-0.01	0.00	82	108348	1,640	66	24-128	OK	
3	2-Fluorobiphenyl	13.58	-0.01	0.00	172	137585	1,608	64	28-126	OK	
4	2,4,6-Tribromophenol	16.85	-0.01	0.00	330	48174	2,943	78	35-138	OK	
5	Terphenyl-d14	22.20	-0.01	0.00	244	192639	2,829	113	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.56	0.02	0.00	42	62954m	1,426	143		
1	Pyridine	5.64	0.07	0.01	79	35512m	617.09	61.7		
1	Bis(2-chloroethyl) Ether	8.59	-0.01	0.00	93	77919	1,463	146		
1	Phenol	8.47	-0.01	0.00	94	98989	1,499	150		
1	Aniline	8.51		0.00	93	88882	1,269	127		
1	2-Chlorophenol	8.68		0.00	128	67746	1,428	143		
1	1,3-Dichlorobenzene	8.91		0.00	146	76048	1,398	140		
1	1,4-Dichlorobenzene	8.99		0.00	146	77301	1,350	135		
1	1,2-Dichlorobenzene	9.30		0.00	146	77036	1,457	146		
1	Benzyl Alcohol	9.22	-0.01	0.00	108	47039	1,693	169		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F026.D		**Instrument:** MS10
Acqu Date:	11/25/2003 20:35	**Quant Date:** 11/26/2003 08:26	**Vial:** 23
Run Type:	LCS		**Dilution:** 1.0
Lab ID:	KWG0318722-1		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.48	-0.01	0.00	45	115853	1,485	148		
1	2-Methylphenol	9.43	-0.01	0.00	107	53590	1,397	140		
1	Hexachloroethane	9.82	-0.01	0.00	117	40025	1,496	150		
1	N-Nitrosodi-n-propylamine	9.72	-0.02	0.00	70	71949	1,644	164		
1	4-Methylphenol	9.68	-0.01	0.00	107	78682	1,401	140		
1	Nitrobenzene	9.96	-0.01	0.00	77	100830	1,473	147		
2	Isophorone	10.39	-0.02	0.00	82	191684	1,772	177		
2	2-Nitrophenol	10.56	-0.01	0.00	139	38360	1,469	147		
2	2,4-Dimethylphenol	10.65	-0.01	0.00	122	37809	965.20	96.5		
2	Bis(2-chloroethoxy)methane	10.84	-0.01	0.00	93	93161	1,461	146		
2	2,4-Dichlorophenol	11.01	-0.01	0.00	162	59942	1,430	143		
2	Benzoic Acid	10.86	-0.02	0.00	122	67449	2,692	269		
2	1,2,4-Trichlorobenzene	11.18	-0.01	0.00	180	66434	1,381	138		
2	Naphthalene	11.29	-0.01	0.00	128	169852	1,408	141		
2	4-Chloroaniline	11.45	-0.01	0.00	127	77487	1,480	148		
2	Hexachlorobutadiene	11.68	-0.01	0.00	225	44575	1,383	138		
2	4-Chloro-3-methylphenol	12.48	-0.01	0.00	107	75384	1,617	162		
2	2-Methylnaphthalene	12.71	-0.01	0.00	142	121283	1,492	149		
3	Hexachlorocyclopentadiene	13.23	-0.01	0.00	237	30606	1,205	121		
3	2,4,6-Trichlorophenol	13.40	-0.01	0.00	196	44663	1,534	153		
3	2,4,5-Trichlorophenol	13.47	-0.01	0.00	196	50749	1,668	167		
3	2-Chloronaphthalene	13.76	-0.01	0.00	127	47015	1,546	155		
3	2-Nitroaniline	14.06	-0.01	0.00	65	64277	2,014	201		
3	Acenaphthylene	14.68	-0.02	0.00	152	181820	1,665	167		
3	Dimethyl Phthalate	14.59	-0.02	0.00	163	173369	1,891	189		
3	2,6-Dinitrotoluene	14.72	-0.02	0.00	165	37309	1,957	196		
3	Acenaphthene	15.11		0.00	154	104215	1,539	154		
3	3-Nitroaniline	15.00	-0.01	0.00	138	40771	1,976	198		
3	2,4-Dinitrophenol	15.24	-0.01	0.00	184	12848	1,827	183	J	
3	Dibenzofuran	15.46	-0.02	0.00	168	168722	1,630	163		
3	4-Nitrophenol	15.44	-0.01	0.00	109	42225	2,039	204		
3	2,4-Dinitrotoluene	15.60	-0.01	0.00	165	53206	2,157	216		
3	Fluorene	16.25	-0.01	0.00	166	133958	1,603	160		
3	4-Chlorophenyl Phenyl Ether	16.30	-0.01	0.00	204	69059	1,633	163		
3	Diethyl Phthalate	16.24	-0.01	0.00	149	191093	2,012	201		
3	4-Nitroaniline	16.39	-0.02	0.00	138	41678	2,022	202		
3	2-Methyl-4,6-dinitrophenol	16.52	-0.01	0.00	198	25455	1,829	183		
3	N-Nitrosodiphenylamine	16.60	-0.01	0.00	169	109561	2,022	202		
3	Azobenzene	16.66	-0.01	0.00	77	203609	1,660	166		
4	4-Bromophenyl Phenyl Ether	17.42	-0.01	0.00	248	45306	1,687	169		
4	Hexachlorobenzene	17.71	-0.01	0.00	284	53001	1,811	181		
4	Pentachlorophenol	18.13	-0.01	0.00	266	35502	1,793	179		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F026.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 20:35	**Quant Date:**	11/26/2003 08:26	**Vial:**	23
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0318722-1			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.43	-0.01	0.00	178	202188	1,645	165		
4	Anthracene	18.53	-0.01	0.00	178	213199	1,849	185		
4	Carbazole	18.95	-0.01	0.00	167	220251	2,225	222		
4	Di-n-butyl Phthalate	20.04	-0.01	0.00	149	316444	2,100	210		
4	Fluoranthene	21.20	-0.01	0.00	202	236468	1,902	190		
5	Benzidine				184	0		200	U	
5	Pyrene	21.70	-0.01	0.00	202	228644	2,038	204		
5	Butyl Benzyl Phthalate	23.51	-0.01	0.00	149	132401	2,391	239		
5	3,3'-Dichlorobenzidine	24.58	-0.01	0.00	252	68375	1,896	190		
5	Benz(a)anthracene	24.52	-0.01	0.00	228	205830	2,205	220		
5	Chrysene	24.62	-0.01	0.00	228	194168	2,210	221		
5	Bis(2-ethylhexyl) Phthalate	25.00	-0.01	0.00	149	190300	2,494	249		
6	Di-n-octyl Phthalate	26.50	-0.01	0.00	149	297661	2,437	244		
6	Benzo(b)fluoranthene	27.13	-0.01	0.00	252	188057	2,268	227		
6	Benzo(k)fluoranthene	27.19	-0.01	0.00	252	189588	2,272	227		
6	Benzo(a)pyrene	27.89	-0.01	0.00	252	176167	2,196	220		
6	Indeno(1,2,3-cd)pyrene	30.56	-0.02	0.00	276	152056	2,293	229		
6	Dibenz(a,h)anthracene	30.64	-0.01	0.00	278	152502	2,250	225		
6	Benzo(g,h,i)perylene	31.15	-0.01	0.00	276	167349	2,311	231		

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	2.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F026.D Vial: 23
Acq On : 25 Nov 2003 20:35 Operator: JGISH
Sample : KWG038722-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:41 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.96	152	39557	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.25	136	127407	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	66403	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	108688	1000.00	ng/ml	0.00
67) Chrysene-d12	24.56	240	99516	1000.00	ng/ml	0.00
76) Perylene-d12	28.03	264	66200	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	96674	2005.02	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 53.47%			
6) Phenol-d6	8.46	99	141773	2370.10	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 63.20%			
19) Nitrobenzene-d5	9.93	82	108348	1639.83	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 65.59%			
38) 2-Fluorobiphenyl	13.58	172	137585	1607.86	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 64.31%			
58) 2,4,6-Tribromophenol	16.85	330	48174	2942.63	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 78.47%			
70) Terphenyl-d14	22.20	244	192639	2828.56	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 113.14%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.56	42	62954m	1425.97	ng/ml	
3) Pyridine	5.64	79	35512m	617.09	ng/ml	
5) Bis(2-chloroethyl) Ether	8.59	93	77919	1462.71	ng/ml	77
7) Phenol	8.47	94	98989	1498.53	ng/ml	91
8) Aniline	8.51	93	88882	1269.05	ng/ml#	49
9) 2-Chlorophenol	8.68	128	67746	1427.80	ng/ml	88
10) 1,3-Dichlorobenzene	8.91	146	76048	1398.37	ng/ml	98
11) 1,4-Dichlorobenzene	8.99	146	77301	1350.04	ng/ml	97
12) 1,2-Dichlorobenzene	9.30	146	77036	1457.17	ng/ml	97
13) Benzyl Alcohol	9.22	108	47039	1693.19	ng/ml#	59
14) Bis(2-chloroisopropyl) Eth	9.48	45	115853	1484.92	ng/ml#	64
15) 2-Methylphenol	9.43	107	53590	1397.27	ng/ml	91
16) Hexachloroethane	9.82	117	40025	1496.13	ng/ml	91
17) N-Nitrosodi-n-propylamine	9.72	70	71949	1643.52	ng/ml	73
18) 4-Methylphenol	9.68	107	78682	1401.02	ng/ml	91
20) Nitrobenzene	9.96	77	100830	1472.60	ng/ml	84
22) Isophorone	10.39	82	191684	1772.33	ng/ml	95
23) 2-Nitrophenol	10.56	139	38360	1469.11	ng/ml	67
24) 2,4-Dimethylphenol	10.65	122	37809	965.20	ng/ml#	82
25) Bis(2-chloroethoxy)methane	10.84	93	93161	1460.93	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F026.D Vial: 23
Acq On : 25 Nov 2003 20:35 Operator: JGISH
Sample : KWG038722-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:41 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.01	162	59942	1429.62	ng/ml	98
27)	Benzoic Acid	10.86	122	67449	2691.68	ng/ml#	76
28)	1,2,4-Trichlorobenzene	11.18	180	66434	1381.40	ng/ml	91
29)	Naphthalene	11.29	128	169852	1407.92	ng/ml	99
30)	4-Chloroaniline	11.45	127	77487	1479.53	ng/ml	92
31)	Hexachlorobutadiene	11.68	225	44575	1382.56	ng/ml	97
32)	4-Chloro-3-methylphenol	12.48	107	75384	1616.97	ng/ml	82
33)	2-Methylnaphthalene	12.71	142	121283	1491.98	ng/ml	90
35)	Hexachlorocyclopentadiene	13.23	237	30606	1205.11	ng/ml	96
36)	2,4,6-Trichlorophenol	13.40	196	44663	1534.16	ng/ml	89
37)	2,4,5-Trichlorophenol	13.47	196	50749	1668.03	ng/ml	97
39)	2-Chloronaphthalene	13.76	127	47015	1546.21	ng/ml	97
40)	2-Nitroaniline	14.06	65	64277	2014.49	ng/ml#	71
41)	Acenaphthylene	14.68	152	181820	1665.24	ng/ml	99
42)	Dimethyl Phthalate	14.59	163	173369	1891.33	ng/ml	96
43)	2,6-Dinitrotoluene	14.72	165	37309	1957.16	ng/ml#	64
44)	Acenaphthene	15.11	154	104215	1538.88	ng/ml	93
45)	3-Nitroaniline	15.00	138	40771	1975.97	ng/ml	95
46)	2,4-Dinitrophenol	15.24	184	12848	1826.85	ng/ml	74
47)	Dibenzofuran	15.46	168	168722	1630.17	ng/ml	72
48)	4-Nitrophenol	15.44	109	42225	2039.08	ng/ml#	57
49)	2,4-Dinitrotoluene	15.60	165	53206	2157.24	ng/ml	75
50)	Fluorene	16.25	166	133958	1602.83	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.30	204	69059	1632.61	ng/ml	84
52)	Diethyl Phthalate	16.24	149	191093	2011.55	ng/ml	97
53)	4-Nitroaniline	16.39	138	41678	2021.69	ng/ml#	66
54)	2-Methyl-4,6-dinitrophenol	16.52	198	25455	1829.13	ng/ml	78
55)	N-Nitrosodiphenylamine	16.60	169	109561	2021.85	ng/ml	100
56)	Azobenzene	16.66	77	203609	1659.92	ng/ml	88
59)	4-Bromophenyl Phenyl Ether	17.42	248	45306	1686.86	ng/ml	89
60)	Hexachlorobenzene	17.71	284	53001	1810.71	ng/ml	94
61)	Pentachlorophenol	18.13	266	35502	1792.98	ng/ml	93
62)	Phenanthrene	18.43	178	202188	1645.06	ng/ml	97
63)	Anthracene	18.53	178	213199	1849.02	ng/ml	98
64)	Carbazole	18.95	167	220251	2224.75	ng/ml	93
65)	Di-n-butyl Phthalate	20.04	149	316444	2100.12	ng/ml	98
66)	Fluoranthene	21.20	202	236468	1901.87	ng/ml	98
69)	Pyrene	21.70	202	228644	2037.99	ng/ml	100
71)	Butyl Benzyl Phthalate	23.51	149	132401	2391.08	ng/ml	91
72)	3,3'-Dichlorobenzidine	24.58	252	68375	1895.92	ng/ml	100
73)	Benz(a)anthracene	24.52	228	205830	2204.81	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F026.D Vial: 23
Acq On : 25 Nov 2003 20:35 Operator: JGISH
Sample : KWG038722-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:41 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

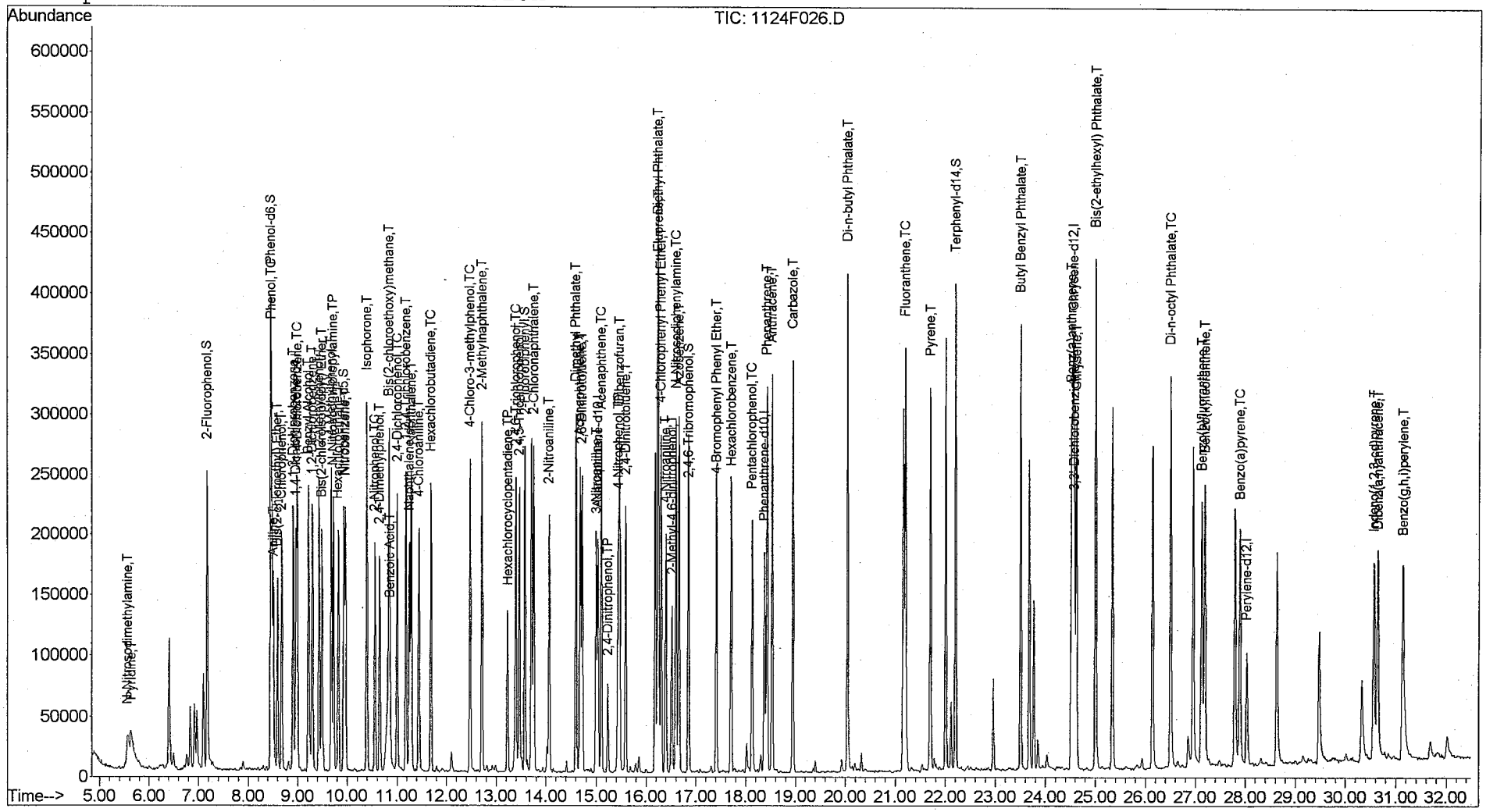
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chrysene	24.62	228	194168	2210.20	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.00	149	190300	2493.97	ng/ml	96
77)	Di-n-octyl Phthalate	26.50	149	297661	2436.68	ng/ml	88
78)	Benzo(b)fluoranthene	27.13	252	188057	2267.95	ng/ml	98
79)	Benzo(k)fluoranthene	27.19	252	189588	2272.30	ng/ml	97
80)	Benzo(a)pyrene	27.89	252	176167	2195.58	ng/ml	97
81)	Indeno(1,2,3-cd)pyrene	30.56	276	152056	2292.50	ng/ml	99
82)	Dibenz(a,h)anthracene	30.64	278	152502	2249.54	ng/ml	97
83)	Benzo(g,h,i)perylene	31.15	276	167349	2311.16	ng/ml	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F026.D Vial: 23
Acq On : 25 Nov 2003 20:35 Operator: JGISH
Sample : KWG038722-LCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 8:26 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration



2313

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021
Sample Matrix: Sediment

Service Request: K2308433
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Duplicate Lab Control Sample
Lab Code: KWG0318722-2

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**140**		30	1	11/20/03	11/25/03	KWG0318722	
2-Methylphenol	**126**		10	1	11/20/03	11/25/03	KWG0318722	
4-Methylphenol†	**125**		10	1	11/20/03	11/25/03	KWG0318722	
2,4-Dimethylphenol	**88.4**		50	1	11/20/03	11/25/03	KWG0318722	
2,4-Dichlorophenol	**133**		10	1	11/20/03	11/25/03	KWG0318722	
2,4,6-Trichlorophenol	**141**		10	1	11/20/03	11/25/03	KWG0318722	
Pentachlorophenol	**182**		50	1	11/20/03	11/25/03	KWG0318722	
Butyl Benzyl Phthalate	**236**		10	1	11/20/03	11/25/03	KWG0318722	
Bis(2-ethylhexyl) Phthalate	**241**		200	1	11/20/03	11/25/03	KWG0318722	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	62	40-123	11/25/03	Acceptable
2,4,6-Tribromophenol	76	35-138	11/25/03	Acceptable
Terphenyl-d14	117	56-152	11/25/03	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS10\DATA\112403\1124F027.D
Lab ID: KWG0318722-2
RunType: DLCS
Matrix: SEDIMENT

Date Acquired: 11/25/2003 21:16
Date Quantitated: 11/26/2003 08:28
Batch ID: KWG0319154
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/26/3

Secondary Review: 12/1/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/24/2003

Analysis Lot:	KWG0319154	**Prep Lot:**	KWG0318722	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	251369	**Prep Date:**	11/20/2003		

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:			
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:	J:\MS10\DATA\112403\1124F025.D	**Quant based on Method**	

Data File:	J:\MS10\DATA\112403\1124F027.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 21:16	**Quant Date:**	11/26/2003 08:28	**Vial:**	24
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0318722-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.96	-0.01	152	41117	1,000.00	OK
2	Naphthalene-d8	11.25	-0.01	136	130053	1,000.00	OK
3	Acenaphthene-d10	15.03	-0.01	164	69117	1,000.00	OK
4	Phenanthrene-d10	18.38	-0.01	188	112854	1,000.00	OK
5	Chrysene-d12	24.56	-0.01	240	104918	1,000.00	OK
6	Perylene-d12	28.03	-0.01	264	68608	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.17	0.00	0.00	112	101671	2,029	54	28-109	OK	
1	Phenol-d6	8.46	0.00	0.00	99	145404	2,339	62	40-123	OK	
1	Nitrobenzene-d5	9.93	-0.01	0.00	82	108879	1,585	63	24-128	OK	
3	2-Fluorobiphenyl	13.58	-0.01	0.00	172	137584	1,545	62	28-126	OK	
4	2,4,6-Tribromophenol	16.85	-0.01	0.00	330	48426	2,849	76	35-138	OK	
5	Terphenyl-d14	22.21	0.00	0.00	244	209397	2,916	117	56-152	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.56	0.02	0.00	42	62373m	1,359	136		
1	Pyridine	5.62	0.05	0.01	79	45102m	754.00	75.4		
1	Bis(2-chloroethyl) Ether	8.59	-0.01	0.00	93	77346	1,397	140		
1	Phenol	8.47	-0.01	0.00	94	96356	1,403	140		
1	Aniline	8.50	-0.01	0.00	93	80503	1,106	111		
1	2-Chlorophenol	8.67	-0.01	0.00	128	64728	1,312	131		
1	1,3-Dichlorobenzene	8.90	-0.01	0.00	146	75520	1,336	134		
1	1,4-Dichlorobenzene	8.99		0.00	146	76859	1,291	129		
1	1,2-Dichlorobenzene	9.30		0.00	146	72234	1,315	131		
1	Benzyl Alcohol	9.22	-0.01	0.00	108	46206	1,600	160		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F027.D		**Instrument:** MS10
Acqu Date:	11/25/2003 21:16	**Quant Date:** 11/26/2003 08:28	**Vial:** 24
Run Type:	DLCS		**Dilution:** 1.0
Lab ID:	KWG0318722-2		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.48	-0.01	0.00	45	111833	1,379	138		
1	2-Methylphenol	9.43	-0.01	0.00	107	50059	1,256	126		
1	Hexachloroethane	9.82	-0.01	0.00	117	38040	1,368	137		
1	N-Nitrosodi-n-propylamine	9.72	-0.02	0.00	70	67791	1,490	149		
1	4-Methylphenol	9.68	-0.01	0.00	107	72925	1,249	125		
1	Nitrobenzene	9.96	-0.01	0.00	77	97875	1,375	138		
2	Isophorone	10.39	-0.02	0.00	82	172419	1,562	156		
2	2-Nitrophenol	10.55	-0.02	0.00	139	36086	1,354	135		
2	2,4-Dimethylphenol	10.65	-0.01	0.00	122	35364	884.41	88.4		
2	Bis(2-chloroethoxy)methane	10.84	-0.01	0.00	93	88401	1,358	136		
2	2,4-Dichlorophenol	11.00	-0.02	0.00	162	56800	1,327	133		
2	Benzoic Acid	10.85	-0.03	0.00	122	57499	2,338	234		
2	1,2,4-Trichlorobenzene	11.18	-0.01	0.00	180	62294	1,269	127		
2	Naphthalene	11.29	-0.01	0.00	128	163716	1,329	133		
2	4-Chloroaniline	11.44	-0.02	0.00	127	72060	1,348	135		
2	Hexachlorobutadiene	11.68	-0.01	0.00	225	42313	1,286	129		
2	4-Chloro-3-methylphenol	12.48	-0.01	0.00	107	68485	1,439	144		
2	2-Methylnaphthalene	12.71	-0.01	0.00	142	113917	1,373	137		
3	Hexachlorocyclopentadiene	13.23	-0.01	0.00	237	27585	1,044	104		
3	2,4,6-Trichlorophenol	13.40	-0.01	0.00	196	42604	1,406	141		
3	2,4,5-Trichlorophenol	13.47	-0.01	0.00	196	47425	1,498	150		
3	2-Chloronaphthalene	13.75	-0.02	0.00	127	45239	1,429	143		
3	2-Nitroaniline	14.06	-0.01	0.00	65	59234	1,784	178		
3	Acenaphthylene	14.67	-0.03	0.00	152	169609	1,492	149		
3	Dimethyl Phthalate	14.59	-0.02	0.00	163	164856	1,728	173		
3	2,6-Dinitrotoluene	14.72	-0.02	0.00	165	33509	1,689	169		
3	Acenaphthene	15.10	-0.01	0.00	154	99000	1,404	140		
3	3-Nitroaniline	15.00	-0.01	0.00	138	39119	1,821	182		
3	2,4-Dinitrophenol	15.24	-0.01	0.00	184	13262	1,818	182	J	
3	Dibenzofuran	15.46	-0.02	0.00	168	156136	1,449	145		
3	4-Nitrophenol	15.44	-0.01	0.00	109	42603	1,977	198		
3	2,4-Dinitrotoluene	15.59	-0.02	0.00	165	52349	2,039	204		
3	Fluorene	16.25	-0.01	0.00	166	129264	1,486	149		
3	4-Chlorophenyl Phenyl Ether	16.30	-0.01	0.00	204	65583	1,490	149		
3	Diethyl Phthalate	16.24	-0.01	0.00	149	192476	1,947	195		
3	4-Nitroaniline	16.39	-0.02	0.00	138	42324	1,972	197		
3	2-Methyl-4,6-dinitrophenol	16.51	-0.02	0.00	198	26800	1,844	184		
3	N-Nitrosodiphenylamine	16.60	-0.01	0.00	169	104759	1,857	186		
3	Azobenzene	16.66	-0.01	0.00	77	194772	1,526	153		
4	4-Bromophenyl Phenyl Ether	17.41	-0.02	0.00	248	44025	1,579	158		
4	Hexachlorobenzene	17.71	-0.01	0.00	284	52698	1,734	173		
4	Pentachlorophenol	18.13	-0.01	0.00	266	37390	1,819	182		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F027.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 21:16	**Quant Date:**	11/26/2003 08:28	**Vial:**	24
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0318722-2			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.43	-0.01	0.00	178	195827	1,534	153		
4	Anthracene	18.53	-0.01	0.00	178	208099	1,738	174		
4	Carbazole	18.95	-0.01	0.00	167	217644	2,117	212		
4	Di-n-butyl Phthalate	20.04	-0.01	0.00	149	334078	2,135	214		
4	Fluoranthene	21.20	-0.01	0.00	202	237845	1,842	184		
5	Benzidine				184	0		200	U	
5	Pyrene	21.70	-0.01	0.00	202	231828	1,960	196		
5	Butyl Benzyl Phthalate	23.51	-0.01	0.00	149	137597	2,357	236		
5	3,3'-Dichlorobenzidine	24.58	-0.01	0.00	252	68638	1,805	181		
5	Benz(a)anthracene	24.52	-0.01	0.00	228	211826	2,152	215		
5	Chrysene	24.62	-0.01	0.00	228	199835	2,158	216		
5	Bis(2-ethylhexyl) Phthalate	25.00	-0.01	0.00	149	193665	2,407	241		
6	Di-n-octyl Phthalate	26.50	-0.01	0.00	149	309694	2,446	245		
6	Benzo(b)fluoranthene	27.13	-0.01	0.00	252	187808	2,185	219		
6	Benzo(k)fluoranthene	27.19	-0.01	0.00	252	192166	2,222	222		
6	Benzo(a)pyrene	27.89	-0.01	0.00	252	182716	2,197	220		
6	Indeno(1,2,3-cd)pyrene	30.57	-0.01	0.00	276	155783	2,266	227		
6	Dibenz(a,h)anthracene	30.64	-0.01	0.00	278	161919	2,305	230		
6	Benzo(g,h,i)perylene	31.14	-0.02	0.00	276	169830	2,263	226		

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	2.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F027.D Vial: 24
Acq On : 25 Nov 2003 21:16 Operator: JGISH
Sample : KWG038722-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:46 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.96	152	41117	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.25	136	130053	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.03	164	69117	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	112854	1000.00	ng/ml	0.00
67) Chrysene-d12	24.56	240	104918	1000.00	ng/ml	0.00
76) Perylene-d12	28.03	264	68608	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	101671	2028.66	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 54.10%			
6) Phenol-d6	8.46	99	145404	2338.58	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 62.36%			
19) Nitrobenzene-d5	9.93	82	108879	1585.34	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 63.41%			
38) 2-Fluorobiphenyl	13.58	172	137584	1544.72	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 61.79%			
58) 2,4,6-Tribromophenol	16.85	330	48426	2848.83	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 75.97%			
70) Terphenyl-d14	22.21	244	209397	2916.31	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 116.65%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.56	42	62373m	1359.20	ng/ml	
3) Pyridine	5.62	79	45102m	754.00	ng/ml	
5) Bis(2-chloroethyl) Ether	8.59	93	77346	1396.87	ng/ml	79
7) Phenol	8.47	94	96356	1403.33	ng/ml	92
8) Aniline	8.50	93	80503	1105.81	ng/ml#	54
9) 2-Chlorophenol	8.67	128	64728	1312.43	ng/ml	79
10) 1,3-Dichlorobenzene	8.90	146	75520	1335.97	ng/ml	96
11) 1,4-Dichlorobenzene	8.99	146	76859	1291.39	ng/ml	96
12) 1,2-Dichlorobenzene	9.30	146	72234	1314.50	ng/ml	94
13) Benzyl Alcohol	9.22	108	46206	1600.10	ng/ml#	62
14) Bis(2-chloroisopropyl) Eth	9.48	45	111833	1379.01	ng/ml#	64
15) 2-Methylphenol	9.43	107	50059	1255.68	ng/ml	86
16) Hexachloroethane	9.82	117	38040	1367.98	ng/ml	92
17) N-Nitrosodi-n-propylamine	9.72	70	67791	1489.78	ng/ml	77
18) 4-Methylphenol	9.68	107	72925	1249.25	ng/ml	88
20) Nitrobenzene	9.96	77	97875	1375.21	ng/ml	85
22) Isophorone	10.39	82	172419	1561.77	ng/ml	94
23) 2-Nitrophenol	10.55	139	36086	1353.90	ng/ml	74
24) 2,4-Dimethylphenol	10.65	122	35364	884.41	ng/ml	85
25) Bis(2-chloroethoxy)methane	10.84	93	88401	1358.08	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F027.D Vial: 24
Acq On : 25 Nov 2003 21:16 Operator: JGISH
Sample : KWG038722-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:46 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.00	162	56800	1327.12	ng/ml	95
27)	Benzoic Acid	10.85	122	57499	2338.16	ng/ml	78
28)	1,2,4-Trichlorobenzene	11.18	180	62294	1268.96	ng/ml	91
29)	Naphthalene	11.29	128	163716	1329.45	ng/ml	99
30)	4-Chloroaniline	11.44	127	72060	1347.91	ng/ml	90
31)	Hexachlorobutadiene	11.68	225	42313	1285.70	ng/ml	98
32)	4-Chloro-3-methylphenol	12.48	107	68485	1439.10	ng/ml	83
33)	2-Methylnaphthalene	12.71	142	113917	1372.85	ng/ml	91
35)	Hexachlorocyclopentadiene	13.23	237	27585	1043.51	ng/ml	95
36)	2,4,6-Trichlorophenol	13.40	196	42604	1405.97	ng/ml	91
37)	2,4,5-Trichlorophenol	13.47	196	47425	1497.57	ng/ml	92
39)	2-Chloronaphthalene	13.75	127	45239	1429.38	ng/ml	96
40)	2-Nitroaniline	14.06	65	59234	1783.54	ng/ml#	70
41)	Acenaphthylene	14.67	152	169609	1492.41	ng/ml	98
42)	Dimethyl Phthalate	14.59	163	164856	1727.84	ng/ml	97
43)	2,6-Dinitrotoluene	14.72	165	33509	1688.79	ng/ml#	53
44)	Acenaphthene	15.10	154	99000	1404.47	ng/ml	94
45)	3-Nitroaniline	15.00	138	39119	1821.46	ng/ml	99
46)	2,4-Dinitrophenol	15.24	184	13262	1817.98	ng/ml	73
47)	Dibenzofuran	15.46	168	156136	1449.33	ng/ml	75
48)	4-Nitrophenol	15.44	109	42603	1976.55	ng/ml#	59
49)	2,4-Dinitrotoluene	15.59	165	52349	2039.15	ng/ml	79
50)	Fluorene	16.25	166	129264	1485.94	ng/ml	98
51)	4-Chlorophenyl Phenyl Ethe	16.30	204	65583	1489.56	ng/ml	84
52)	Diethyl Phthalate	16.24	149	192476	1946.55	ng/ml	97
53)	4-Nitroaniline	16.39	138	42324	1972.41	ng/ml#	64
54)	2-Methyl-4,6-dinitrophenol	16.51	198	26800	1843.67	ng/ml	79
55)	N-Nitrosodiphenylamine	16.60	169	104759	1857.32	ng/ml	98
56)	Azobenzene	16.66	77	194772	1525.53	ng/ml	87
59)	4-Bromophenyl Phenyl Ether	17.41	248	44025	1578.65	ng/ml	93
60)	Hexachlorobenzene	17.71	284	52698	1733.90	ng/ml	96
61)	Pentachlorophenol	18.13	266	37390	1818.63	ng/ml	96
62)	Phenanthrene	18.43	178	195827	1534.49	ng/ml	99
63)	Anthracene	18.53	178	208099	1738.16	ng/ml	98
64)	Carbazole	18.95	167	217644	2117.26	ng/ml	92
65)	Di-n-butyl Phthalate	20.04	149	334078	2135.30	ng/ml	98
66)	Fluoranthene	21.20	202	237845	1842.32	ng/ml	97
69)	Pyrene	21.70	202	231828	1959.97	ng/ml	99
71)	Butyl Benzyl Phthalate	23.51	149	137597	2356.97	ng/ml	91
72)	3,3'-Dichlorobenzidine	24.58	252	68638	1805.22	ng/ml	97
73)	Benz(a)anthracene	24.52	228	211826	2152.21	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F027.D Vial: 24
Acq On : 25 Nov 2003 21:16 Operator: JGISH
Sample : KWG038722-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 08:05:46 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

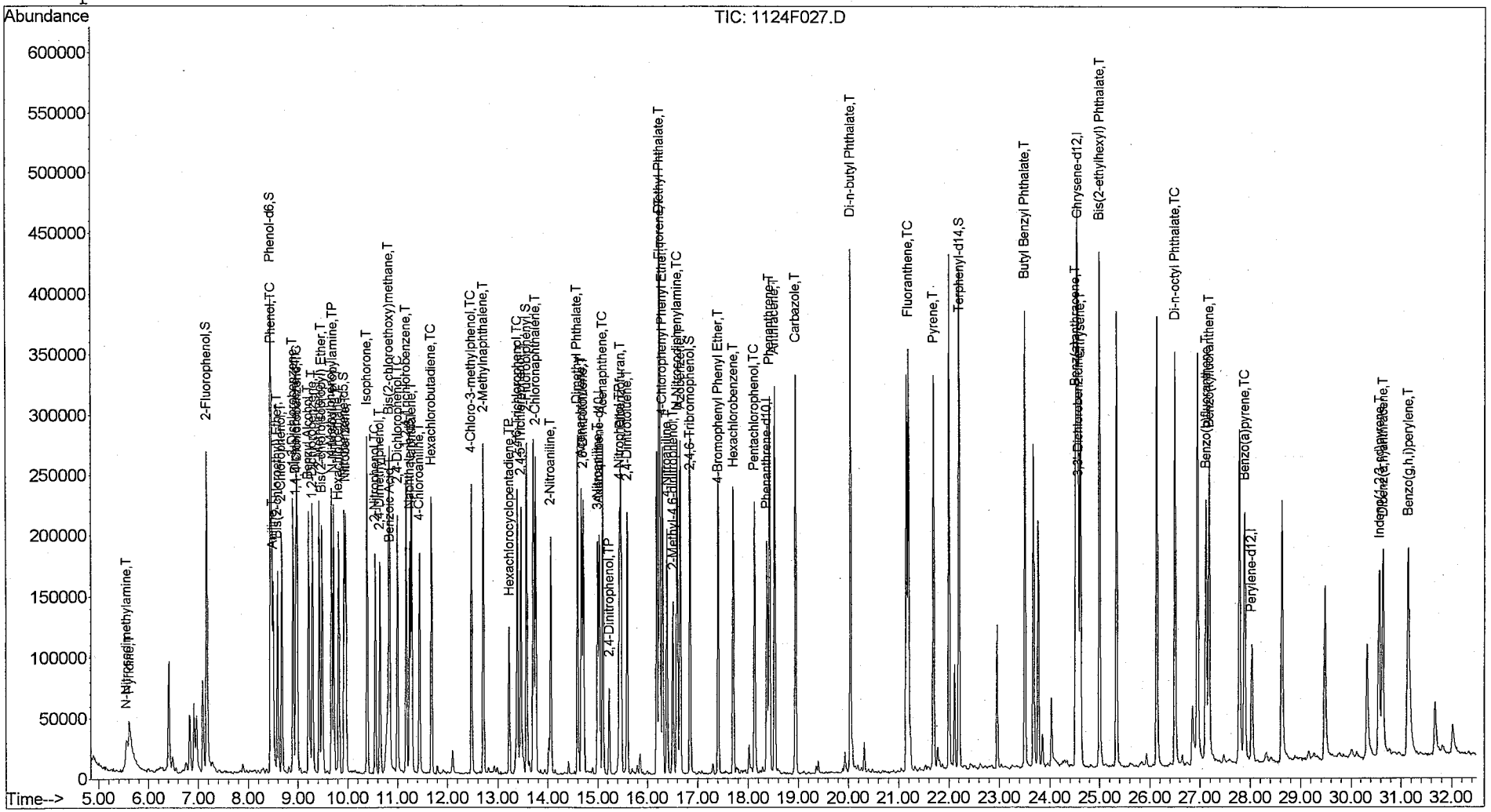
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Chrysene	24.62	228	199835	2157.58	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.00	149	193665	2407.39	ng/ml	97
77)	Di-n-octyl Phthalate	26.50	149	309694	2446.20	ng/ml	86
78)	Benzo(b)fluoranthene	27.13	252	187808	2185.45	ng/ml	98
79)	Benzo(k)fluoranthene	27.19	252	192166	2222.36	ng/ml	97
80)	Benzo(a)pyrene	27.89	252	182716	2197.28	ng/ml	95
81)	Indeno(1,2,3-cd)pyrene	30.57	276	155783	2266.26	ng/ml	96
82)	Dibenz(a,h)anthracene	30.64	278	161919	2304.61	ng/ml	98
83)	Benzo(g,h,i)perylene	31.14	276	169830	2263.11	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F027.D Vial: 24
Acq On : 25 Nov 2003 21:16 Operator: JGISH
Sample : KWG038722-DLCS Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 26 8:28 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Wed Nov 26 08:03:54 2003
Response via : Initial Calibration



2322

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003
Time Analyzed: 12:17

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS10\DATA\112403\1124F014.D
Instrument ID: MS10
Column:

Analysis Method: 8270C
Analysis Lot: KWG0319154

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
127	198	25	75	48.5	9597	PASS
197	198	0	1	0.0	0	PASS
51	198	30	80	54.7	10829	PASS
68	69	0	2	0.3	45	PASS
69	198	0	100	82.7	16382	PASS
70	69	0	2	0.0	0	PASS
198	198	100	100	100.0	19800	PASS
199	198	5	9	6.8	1351	PASS
275	198	10	30	19.1	3775	PASS
365	198	1	100	2.1	421	PASS
441	443	0	100	74.9	1782	PASS
442	198	40	110	61.5	12179	PASS
443	442	15	24	19.5	2378	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0319154-2	J:\MS10\DATA\112403\1124F014.D	11/25/2003	12:17	
Method Blank	KWG0318722-3	J:\MS10\DATA\112403\1124F025.D	11/25/2003	19:53	
Lab Control Sample	KWG0318722-1	J:\MS10\DATA\112403\1124F026.D	11/25/2003	20:35	
Duplicate Lab Control Sample	KWG0318722-2	J:\MS10\DATA\112403\1124F027.D	11/25/2003	21:16	
SED-5	K2308433-006	J:\MS10\DATA\112403\1124F028.D	11/25/2003	21:57	
SED-6	K2308433-007	J:\MS10\DATA\112403\1124F029.D	11/25/2003	22:38	
SED-8	K2308433-009	J:\MS10\DATA\112403\1124F030.D	11/25/2003	23:19	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS10\DATA\112403\1124F014.D
Lab ID: KWG0319154-1
RunType: DFTPP
Matrix: LIQUID

Date Acquired: 11/25/2003 12:17
Date Quantitated:
Batch ID: KWG0319154
Analysis Method: 8270C
ListJoinID: LJ4483

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/26/03

Secondary Review: 12/1/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/26/2003

Analysis Lot:	KWG0319154	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:		**Report List ID:**	LJ1747
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS10\DATA\112403\1124A014.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 12:17	**Quant Date:**		**Vial:**	11
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0319154-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	54.7	10829	Pass
68	69	0	2	0.3	45	Pass
69	198	0	100	82.7	16382	Pass
70	69	0	2	0.0	0	Pass
127	198	25	75	48.5	9597	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	19800	Pass
199	198	5	9	6.8	1351	Pass
275	198	10	30	19.1	3775	Pass
365	198	0.75	100	2.1	421	Pass
441	443	0.01	100	74.9	1782	Pass
442	198	40	110	61.5	12179	Pass
443	442	15	24	19.5	2378	Pass

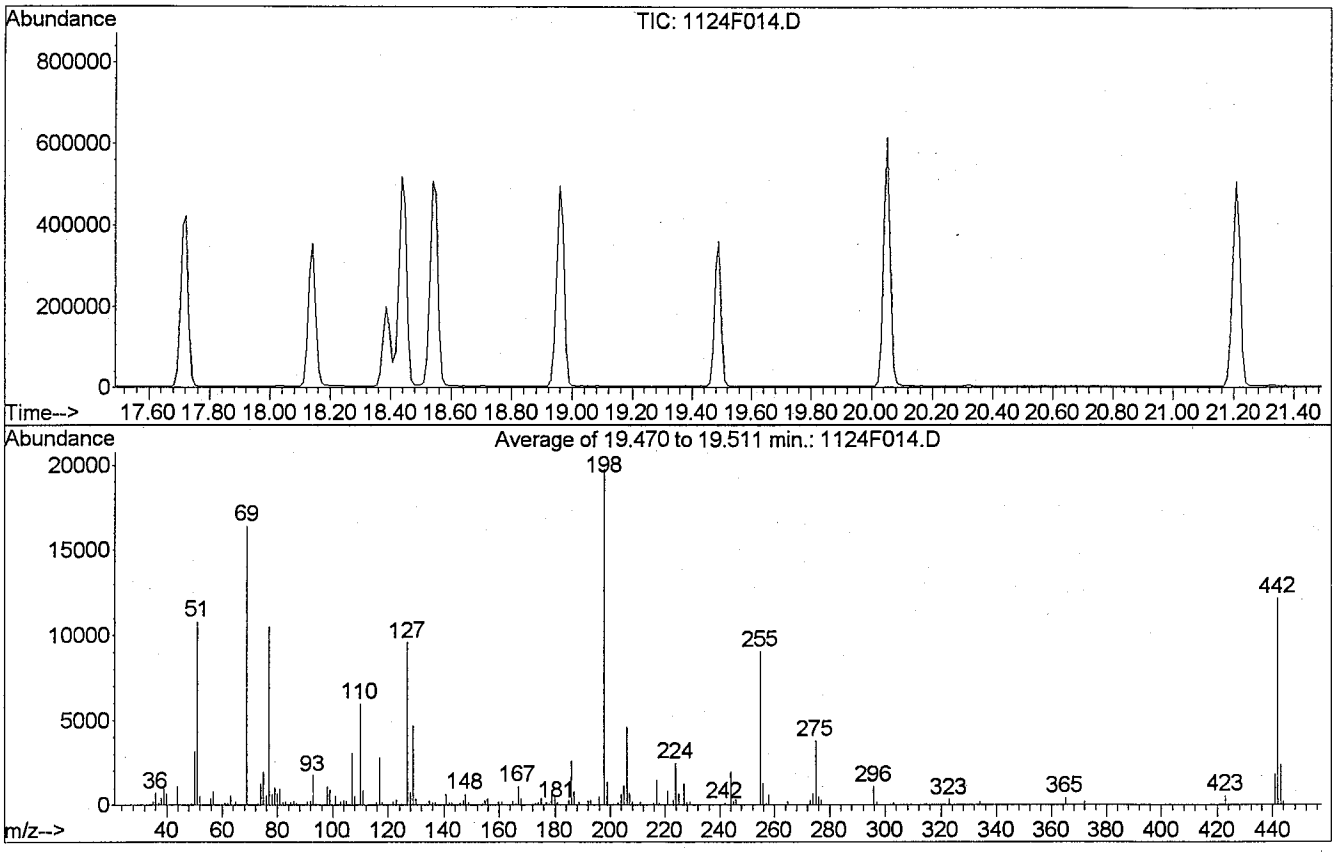
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS10\DATA\112403\1124F014.D
Acq On : 25 Nov 2003 12:17
Sample : 8270-LL ICV @ 3 ppm SVM16-4G
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 11
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.470 to 19.511 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	54.7	10829	PASS
68	69	0.00	2	0.3	45	PASS
69	198	0.00	100	82.7	16382	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	48.5	9597	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	19800	PASS
199	198	5	9	6.8	1351	PASS
275	198	10	30	19.1	3775	PASS
365	198	0.75	100	2.1	421	PASS
441	443	0.01	100	74.9	1782	PASS
441	443	0.01	100	74.9	1782	PASS
442	198	40	110	61.5	12179	PASS
443	442	15	24	19.5	2378	PASS

1124F014.D 1124BNLL.M Wed Nov 26 10:07:29 2003

Average of 19.470 to 19.511 min.: 1124F014.D
8270-LL ICV @ 3 ppm SVM16-4G

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.00	187	52.00	552	73.90	1267	85.90	224
35.95	709	55.00	46	74.90	1957	86.95	138
37.00	114	55.90	406	76.00	585	90.85	211
38.00	432	56.85	837	77.00	10508	91.90	216
39.00	1002	60.95	134	77.95	647	92.85	1722
39.95	701	61.95	120	78.90	1040	93.85	93
40.95	49	62.95	560	79.85	696	97.90	1095
43.90	1107	64.95	196	80.85	951	98.90	901
48.90	67	67.95	45	81.90	153	100.90	521
50.00	3178	68.85	16382	82.85	184	102.85	180
51.00	10829	73.05	84	84.85	172	103.90	294

Average of 19.470 to 19.511 min.: 1124F014.D
8270-LL ICV @ 3 ppm SVM16-4G

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
104.85	240	123.80	67	140.85	675	155.90	410
105.80	43	124.00	71	141.85	146	157.75	48
106.90	3080	124.85	92	142.80	116	159.80	185
107.95	555	126.90	9597	145.90	107	160.85	205
109.95	5974	127.95	772	146.90	277	164.80	223
110.90	860	128.90	4689	147.80	677	165.95	75
115.80	146	129.80	388	148.90	164	166.80	1130
116.85	2827	133.90	95	152.70	63	167.80	48
117.85	137	134.85	281	152.90	70	167.95	412
121.90	199	135.85	124	153.85	97	168.80	40
122.90	320	136.90	159	154.90	255	171.90	49

Average of 19.470 to 19.511 min.: 1124F014.D
8270-LL ICV @ 3 ppm SVM16-4G

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
172.85	93	185.90	2629	201.10	40	217.90	119
173.85	158	186.85	791	202.85	131	220.90	826
174.90	429	187.85	40	203.90	640	222.90	262
175.80	41	188.75	150	204.95	1152	223.90	2473
176.80	159	190.85	60	205.95	4619	224.90	691
177.85	94	191.90	225	206.95	718	226.80	1248
178.80	890	192.85	256	207.85	191	227.85	165
179.85	453	195.95	528	209.85	61	228.90	199
180.85	169	197.80	19800	210.90	146	236.85	46
184.75	40	198.80	1351	215.80	116	241.85	117
184.95	254	199.80	44	216.90	1432	242.90	41

Average of 19.470 to 19.511 min.: 1124F014.D
8270-LL ICV @ 3 ppm SVM16-4G

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
243.90	1955	273.90	686	371.90	193		
244.90	226	274.90	3775	421.95	41		
245.90	363	275.90	506	422.95	565		
246.90	43	276.85	319	423.95	55		
254.90	9059	295.85	1094	440.95	1782		
255.85	1311	296.85	168	441.90	12179		
256.90	92	302.90	130	442.95	2378		
257.85	592	314.85	99	443.95	188		
258.85	46	322.90	339				
264.90	221	333.90	208				
272.85	288	364.90	421				

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3116
Instrument ID: MS10

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS10\DATA\112403\1124F003.D	E	J:\MS10\DATA\112403\1124F007.D
B	J:\MS10\DATA\112403\1124F004.D	F	J:\MS10\DATA\112403\1124F008.D
C	J:\MS10\DATA\112403\1124F005.D	G	J:\MS10\DATA\112403\1124F011.D
D	J:\MS10\DATA\112403\1124F006.D	H	J:\MS10\DATA\112403\1124F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	100	1.65	B	500	1.56	C	1000	1.71	D	2000	1.67	E	4000	1.70
	F	6000	1.68	G	8000	1.71	H	10000	1.69						
2-Methylphenol	A	100	1.00	B	500	0.922	C	1000	0.952	D	2000	0.963	E	4000	0.965
	F	6000	0.975	G	8000	1.02	H	10000	0.956						
4-Methylphenol	A	100	1.47	B	500	1.29	C	1000	1.43	D	2000	1.41	E	4000	1.44
	F	6000	1.44	G	8000	1.48	H	10000	1.40						
2,4-Dimethylphenol	A	100	0.320	B	500	0.292	C	1000	0.306	D	2000	0.300	E	4000	0.314
	F	6000	0.304	G	8000	0.307	H	10000	0.316						
‡ 2,4-Dichlorophenol	A	100	0.286	B	500	0.310	C	1000	0.329	D	2000	0.336	E	4000	0.344
	F	6000	0.343	G	8000	0.336	H	10000	0.349						
‡ 2,4,6-Trichlorophenol	A	100	0.407	B	500	0.413	C	1000	0.437	D	2000	0.436	E	4000	0.447
	F	6000	0.460	G	8000	0.452	H	10000	0.457						
‡ Pentachlorophenol				B	500	0.142	C	1000	0.167	D	2000	0.177	E	4000	0.190
	F	6000	0.195	G	8000	0.203	H	10000	0.200						
Butyl Benzyl Phthalate	A	100	0.540	B	200	0.485	C	500	0.555	D	1000	0.565	E	2000	0.578
	F	3000	0.558	G	4000	0.584	H	5000	0.587						
Bis(2-ethylhexyl) Phthalate				B	200	0.686	C	500	0.760	D	1000	0.764	E	2000	0.791
	F	3000	0.757	G	4000	0.809	H	5000	0.799						
Phenol-d6	A	100	1.43	B	200	1.31	C	500	1.56	D	1000	1.57	E	2000	1.51
	F	3000	1.53	G	4000	1.60	H	5000	1.58						
2,4,6-Tribromophenol				B	200	0.128	C	500	0.155	D	1000	0.150	E	2000	0.152
	F	3000	0.154	G	4000	0.156	H	5000	0.159						
Terphenyl-d14	A	100	0.689	B	200	0.634	C	500	0.663	D	1000	0.675	E	2000	0.709
	F	3000	0.677	G	4000	0.728	H	5000	0.700						
† 4-Nitrophenol				B	500	0.236	C	1000	0.296	D	2000	0.297	E	4000	0.328
	F	6000	0.337	G	8000	0.343	H	10000	0.346						
‡ 1,4-Dichlorobenzene	A	100	1.39	B	200	1.39	C	500	1.49	D	1000	1.45	E	2000	1.46
	F	3000	1.43	G	4000	1.47	H	5000	1.50						

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3116
Instrument ID: MS10

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Di-n-octyl Phthalate	A	100	1.45	B	200	1.51	C	500	1.80	D	1000	1.93	E	2000	1.98
	F	3000	1.99	G	4000	2.06	H	5000	2.05						
‡ Fluoranthene	A	100	1.44	B	200	1.13	C	500	1.17	D	1000	1.09	E	2000	1.06
	F	3000	1.06	G	4000	1.10	H	5000	1.10						
‡ Benzo(a)pyrene	A	100	1.22	B	200	1.09	C	500	1.22	D	1000	1.21	E	2000	1.21
	F	3000	1.21	G	4000	1.25	H	5000	1.28						
† 2,4-Dinitrophenol							C	1000	0.0641	D	2000	0.102	E	4000	0.154
	F	6000	0.178	G	8000	0.195	H	10000	0.210						
‡ 4-Chloro-3-methylphenol	A	100	0.362	B	500	0.343	C	1000	0.361	D	2000	0.368	E	4000	0.371
	F	6000	0.367	G	8000	0.373	H	10000	0.382						
† N-Nitrosodi-n-propylamine	A	100	1.10	B	200	1.06	C	500	1.11	D	1000	1.13	E	2000	1.10
	F	3000	1.08	G	4000	1.17	H	5000	1.11						
† Hexachlorocyclopentadiene							C	500	0.322	D	1000	0.346	E	2000	0.382
	F	3000	0.402	G	4000	0.405	H	5000	0.437						
‡ Acenaphthene	A	100	1.06	B	200	1.01	C	500	1.09	D	1000	1.01	E	2000	0.973
	F	3000	0.988	G	4000	0.985	H	5000	1.04						
‡ N-Nitrosodiphenylamine	A	100	0.820	B	200	0.747	C	500	0.821	D	1000	0.813	E	2000	0.813
	F	3000	0.811	G	4000	0.841	H	5000	0.863						
‡ Hexachlorobutadiene	A	100	0.261	B	200	0.223	C	500	0.267	D	1000	0.249	E	2000	0.260
	F	3000	0.248	G	4000	0.252	H	5000	0.266						
‡ 2-Nitrophenol	A	100	0.175	B	500	0.175	C	1000	0.196	D	2000	0.209	E	4000	0.216
	F	6000	0.219	G	8000	0.221	H	10000	0.227						

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† **SPCC Compound** ‡ **CCC Compound**

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL3116
Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	2.9		≤ 15	1.67		0.01
2-Methylphenol	MS	AverageRF	% RSD	3.1		≤ 15	0.970		0.01
4-Methylphenol	MS	AverageRF	% RSD	4.1		≤ 15	1.42		0.01
2,4-Dimethylphenol	MS	AverageRF	% RSD	3.0		≤ 15	0.307		0.01
‡ 2,4-Dichlorophenol	MS	AverageRF	% RSD	6.4		≤ 15	0.329		0.01
‡ 2,4,6-Trichlorophenol	MS	AverageRF	% RSD	4.5		≤ 15	0.438		0.01
‡ Pentachlorophenol	MS	AverageRF	% RSD	11.9		≤ 15	0.182		0.01
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	5.9		≤ 15	0.556		0.01
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	5.4		≤ 15	0.767		0.01
Phenol-d6	SURR	AverageRF	% RSD	6.4		≤ 15	1.51		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	7.0		≤ 15	0.151		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	4.2		≤ 15	0.684		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	12.6		≤ 15	0.312		0.05
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.9		≤ 15	1.45		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	12.9		≤ 15	1.85		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	11.0		≤ 15	1.14		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	4.4		≤ 15	1.21		0.01
† 2,4-Dinitrophenol	TRG	Quadratic	COD	1.000		≥ 0.990	0.150		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	3.2		≤ 15	0.366		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	2.9		≤ 15	1.11		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	11.0		≤ 15	0.382		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	4.0		≤ 15	1.02		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	4.1		≤ 15	0.816		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	5.7		≤ 15	0.253		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	10.0		≤ 15	0.205		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Calibration Date: 11/24/2003
Date Analyzed: 11/25/2003

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL3116
Units: ng/ml

File ID: J:\MS10\DATA\112403\1124F014.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	1.67	1.73	4	NA	± 20 %	AverageRF
2-Methylphenol	3000	2800	0.970	0.911	-6	NA	± 30 %	AverageRF
4-Methylphenol	3000	2900	1.42	1.36	-4	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2800	0.307	0.292	-5	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	2900	0.329	0.318	-3	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	2900	0.438	0.425	-3	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.182	0.169	-7	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3000	0.556	0.561	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.767	0.779	2	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2800	1.45	1.36	-6	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2900	0.150	0.133	NA	-3	± 30 %	Quadratic
‡ 2-Nitrophenol	3000	3000	0.205	0.208	2	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	2800	0.366	0.345	-6	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	3000	0.312	0.312	0	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	2800	1.02	0.964	-6	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	2900	1.21	1.18	-3	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3000	1.85	1.87	1	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2700	1.14	1.02	-11	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	2800	0.253	0.239	-5	NA	± 20 %	AverageRF
† Hexachlorocyclopentadiene	3000	2700	0.382	0.341	-11	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3100	1.11	1.13	2	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.816	0.834	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Injection Log

Directory: J:\MS10\DATA\112403

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	11	1124a014.D	1.	8270-LL ICV @ 3 ppm SVM16-4G		25 Nov 2003 12:1
2	1	1124F001.D	1.	TUNE @ 2.5 ppm SVM16-2K		24 Nov 2003 14:5
3	2	1124F002.D	1.	IB		24 Nov 2003 15:3
4	3	1124F003.D	1.	8270-LL @ 0.1 ppm SVM16-2A		24 Nov 2003 16:1
5	4	1124F004.D	1.	8270-LL @ .2/.5 ppm SVM16-2B		24 Nov 2003 16:5
6	5	1124F005.D	1.	8270-LL @ .5/1 ppm SVM16-2C		24 Nov 2003 17:4
7	6	1124F006.D	1.	8270-LL @ 1/2 ppm SVM16-2D		24 Nov 2003 18:2
8	7	1124F007.D	1.	8270-LL @ 2/4 ppm SVM16-2E		24 Nov 2003 19:0
9	8	1124F008.D	1.	8270-LL @ 3/6 ppm SVM16-2F	CAL 3116	24 Nov 2003 19:4
10	1	1124F009.D	1.	TUNE @ 2.5 ppm SVM16-2K		25 Nov 2003 08:0
11	2	1124F010.D	1.	IB		25 Nov 2003 08:5
12	9	1124F011.D	1.	8270-LL @ 4/8 ppm SVM16-2G		25 Nov 2003 09:3
13	10	1124F012.D	1.	8270-LL @ 5/10 ppm SVM16-2H		25 Nov 2003 10:1
14	11	1124F013.D	1.	8270-LL ICV @ 3 ppm SVM16-2L		25 Nov 2003 10:5
15	11	1124F014.D	1.	8270-LL ICV @ 3 ppm SVM16-4G		25 Nov 2003 12:1
16	12	1124F015.D	1.	KWG0318624-MB		25 Nov 2003 12:5
17	13	1124F016.D	1.	KWG0318624-LCS		25 Nov 2003 13:4
18	14	1124F017.D	1.	KWG0318624-DLCS		25 Nov 2003 14:2
19	15	1124F018.D	1.	K2308701-003		25 Nov 2003 15:0
20	16	1124F019.D	1.	K2308701-007		25 Nov 2003 15:4
21	17	1124F020.D	5.	K2308701-003		25 Nov 2003 16:2
22	18	1124F021.D	5.	K2308701-007		25 Nov 2003 17:0
23	19	1124F022.D	1.	KWG0318230-MB		25 Nov 2003 17:5
24	20	1124F023.D	1.	KWG0318230-LCS		25 Nov 2003 18:3
25	21	1124F024.D	1.	KWG0318230-DLCS		25 Nov 2003 19:1
26	22	1124F025.D	1.	KWG038722-MB		25 Nov 2003 19:5
27	23	1124F026.D	1.	KWG038722-LCS		25 Nov 2003 20:3
28	24	1124F027.D	1.	KWG038722-DLCS		25 Nov 2003 21:1
29	25	1124F028.D	5.	K2308433-006		25 Nov 2003 21:5
30	26	1124F029.D	5.	K2308433-007		25 Nov 2003 22:3
31	27	1124F030.D	5.	K2308433-009		25 Nov 2003 23:1
32	28	1124F031.D	1.	GPC 2 TEST		26 Nov 2003 00:0
33	29	1124F032.D	1.	GPC 3 TEST		26 Nov 2003 00:4
34	30	1124F033.D	1.	GPC 4 TEST		26 Nov 2003 01:2
35	31	1124F034.D	1.	GPC BLANK		26 Nov 2003 02:0
36	32	1124F035.D	1.	NEW IS SVM16-4F		26 Nov 2003 02:4
37	33	1124F036.D	1.	8270-LL @ 3 PPM		26 Nov 2003 03:2

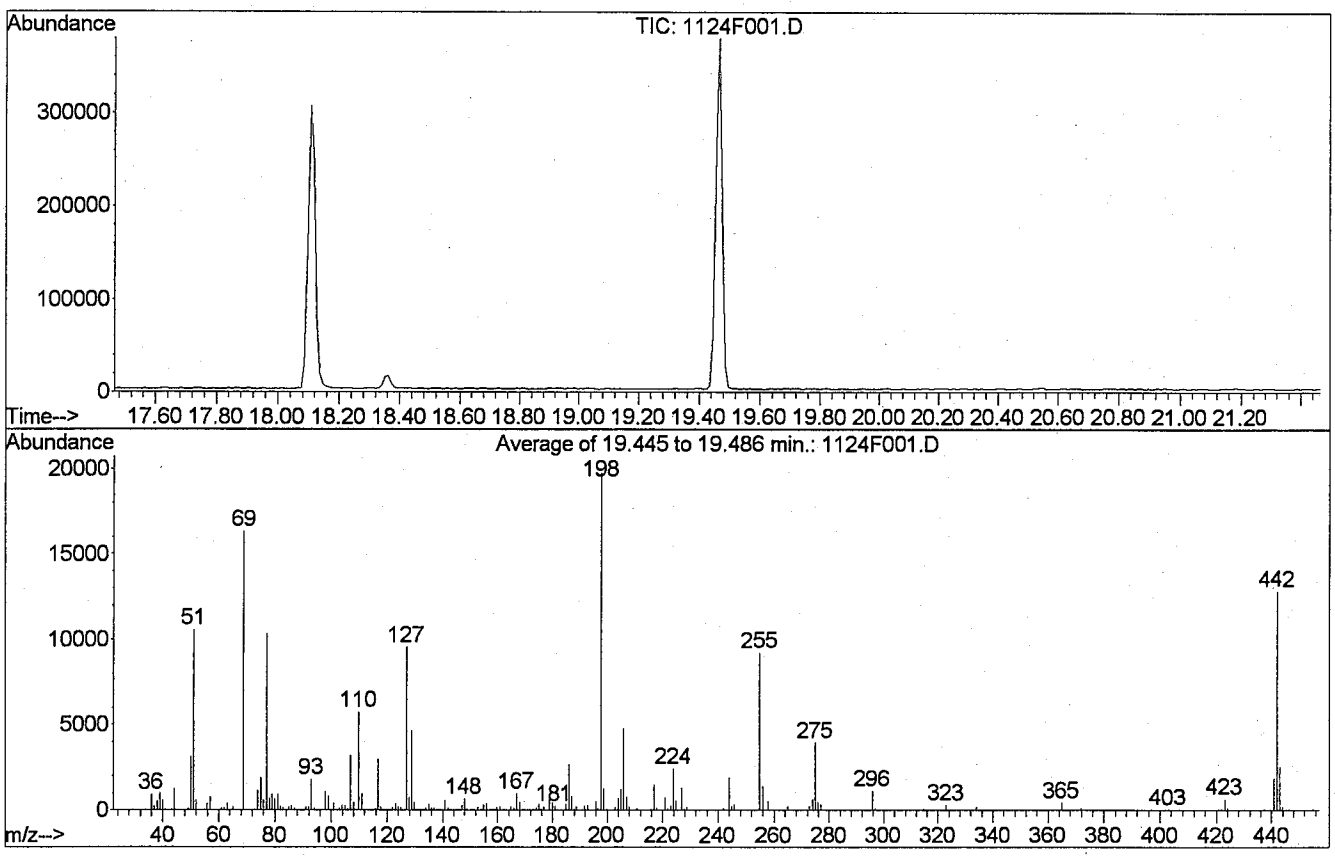
jmg 11/26/03

12/1/03

DFTPP

Data File : J:\MS10\DATA\112403\1124F001.D
Acq On : 24 Nov 2003 14:56
Sample : TUNE @ 2.5 ppm SVM16-2K
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



Spectrum Information: Average of 19.445 to 19.486 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	53.4	10559	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	82.5	16314	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	48.2	9533	PASS
197	198	0.00	1	0.4	71	PASS
198	198	100	100	100.0	19767	PASS
199	198	5	9	6.5	1292	PASS
275	198	10	30	20.0	3950	PASS
365	198	0.75	100	2.3	450	PASS
441	443	0.01	100	72.6	1848	PASS
441	443	0.01	100	72.6	1848	PASS
442	198	40	110	65.0	12843	PASS
443	442	15	24	19.8	2546	PASS

1124F001.D 1124BNLL.M Tue Nov 25 13:53:07 2003 11/25/3 12/1/03

Average of 19.445 to 19.486 min.: 1124F001.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	939	51.95	600	73.90	1165	85.85	257
36.95	246	54.80	44	74.90	1917	86.90	115
37.95	530	55.90	377	76.00	612	90.90	201
38.95	1028	56.90	814	76.95	10359	91.90	194
39.95	612	60.95	116	78.00	705	92.85	1789
40.85	42	61.90	119	78.85	960	93.90	102
43.05	51	63.00	439	79.90	692	97.90	1119
43.95	1289	63.95	41	80.90	943	98.90	858
49.10	64	65.00	184	81.90	207	100.85	409
50.00	3144	68.85	16314	82.85	139	102.85	128
51.00	10559	72.90	48	84.90	173	103.85	285

Average of 19.445 to 19.486 min.: 1124F001.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
104.90	275	121.90	159	135.85	115	154.85	295
105.85	94	122.90	374	136.85	123	155.95	370
106.90	3237	123.85	192	140.85	573	157.85	42
107.95	448	124.85	145	141.90	131	158.85	46
109.90	5737	126.90	9533	142.95	53	159.80	166
110.90	1004	127.90	776	145.90	41	160.90	204
111.75	40	128.85	4672	146.90	276	164.75	211
112.05	44	129.80	462	147.85	677	165.95	102
115.85	82	130.90	40	148.80	93	166.85	962
116.85	3013	133.85	100	152.85	165	167.90	456
117.80	225	134.95	340	153.90	57	171.80	56

Average of 19.445 to 19.486 min.: 1124F001.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
172.80	40	187.75	40	204.95	1224	222.90	254
173.95	126	188.85	205	205.95	4816	223.90	2437
174.90	351	191.80	229	206.95	809	224.90	576
175.90	58	192.90	275	207.90	206	226.85	1329
176.80	178	195.90	485	210.75	93	227.70	74
178.80	806	196.70	71	210.95	84	227.90	90
179.90	456	197.80	19767	215.80	40	228.80	215
180.85	250	198.80	1292	216.90	1479	234.75	41
184.90	358	199.80	47	217.90	124	241.90	116
185.95	2674	202.90	144	220.90	760	243.90	1905
186.85	844	203.95	711	221.80	70	244.85	231

Average of 19.445 to 19.486 min.: 1124F001.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
245.85	360	275.90	500	371.90	128		
246.80	46	276.90	332	402.95	40		
254.85	9215	295.85	1132	420.85	50		
255.85	1404	296.90	126	421.95	42		
256.85	58	303.05	52	422.95	642		
257.90	563	314.80	59	424.00	106		
258.85	45	322.90	305	440.95	1848		
264.85	232	333.90	182	441.90	12843		
272.90	248	351.85	48	442.90	2546		
273.90	657	353.95	45	443.90	188		
274.90	3950	364.85	450				

12/1/03
cc

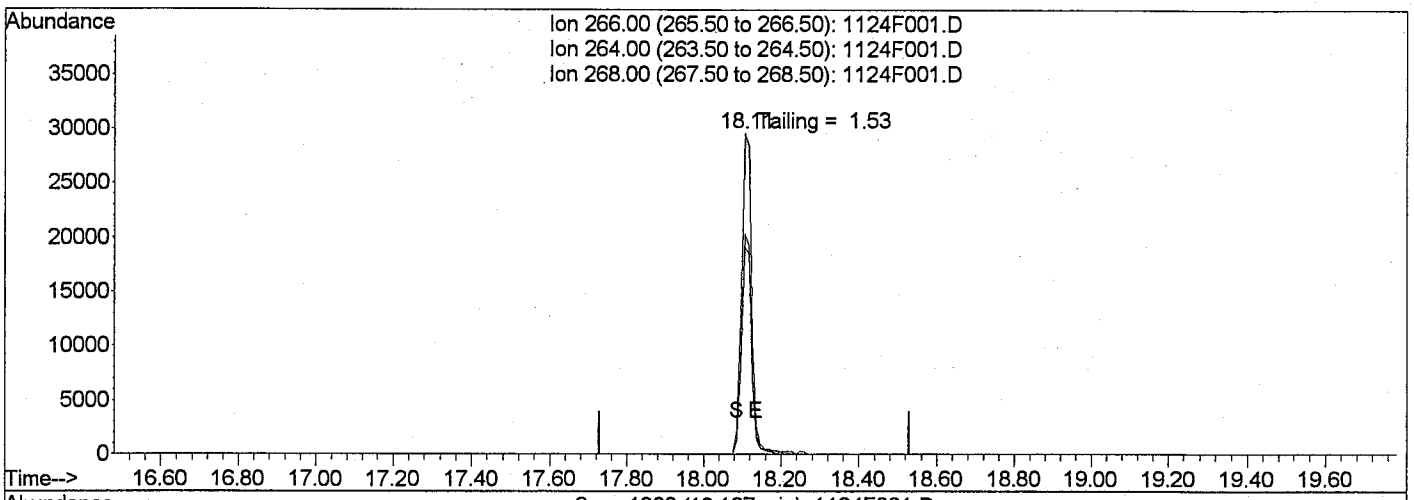
11/25/03

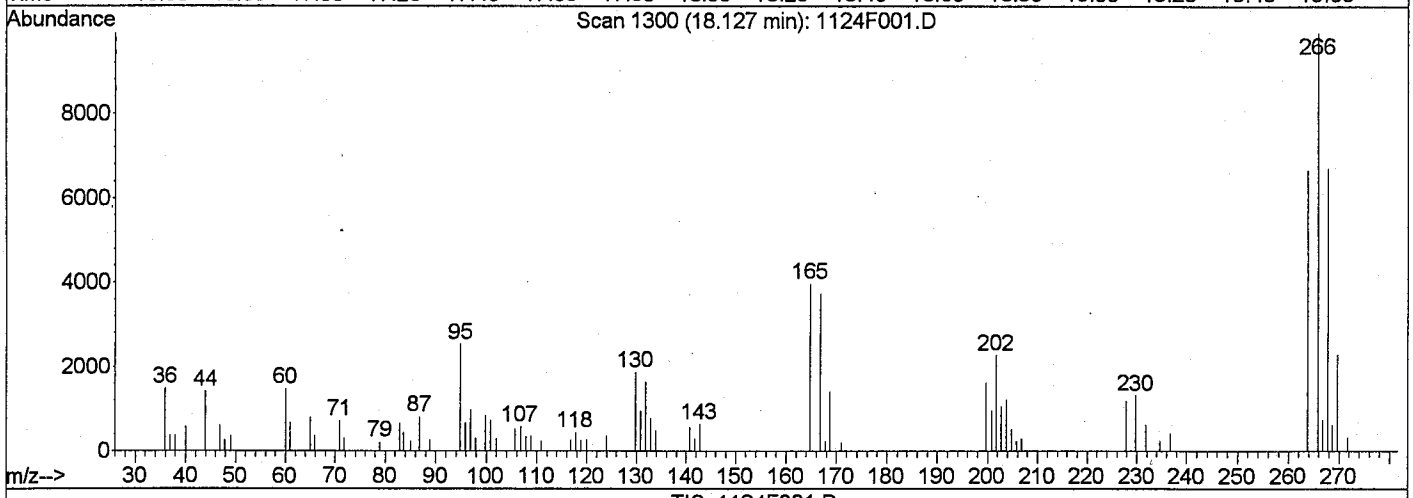
Quantitation Report

Data File : J:\MS10\DATA\112403\1124F001.D
Acq On : 24 Nov 2003 14:56
Sample : TUNE @ 2.5 ppm SVM16-2K
Misc :
MS Integration Params: RTEINT.P

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration





TIC: 1124F001.D

(61) Pentachlorophenol

Exp R.T. 18.13min

response 0

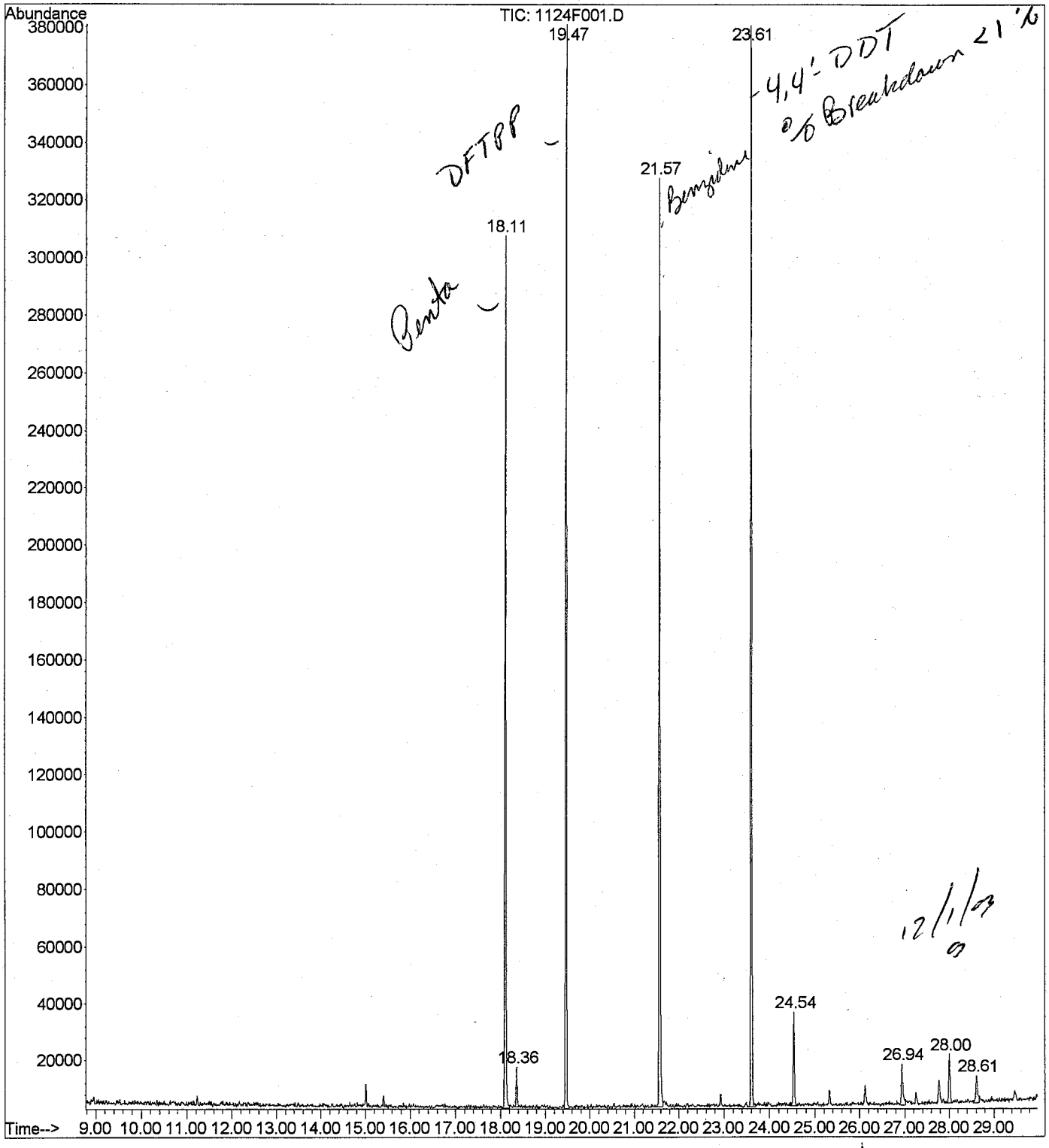
Ion	Exp%	Act%
266.00	100	100
264.00	62.60	67.25
268.00	63.80	67.72
0.00	0.00	0.00

12/1/03

JJ 11/25/3

1124F001.D 1124BNLL.M Mon Nov 24 15:32:01 2003

File : J:\MS10\DATA\112403\1124F001.D
Operator : JGISH
Acquired : 24 Nov 2003 14:56 using AcqMethod 8270LVI
Instrument : MS10
Sample Name: TUNE @ 2.5 ppm SVM16-2K
Misc Info :
Vial Number: 1



11/25/03

1	6.411	rVV	0.215		561923	6.339	6.554
2	18.106	rBV	0.174		512361	18.035	18.208
3	18.362	rBV	0.082		23362	18.321	18.403
4	19.466	rBV	0.112		554519	19.425	19.537
5	21.572	rBV	0.153		556646	21.500	21.654
6	23.606	rBV	0.184		581702	23.514	23.698
7	24.537	rVB	0.133		58417	24.475	24.608
8	26.939	rBV	0.133		35224	26.878	27.011
9	28.002	rVB	0.102		35554	27.961	28.064
10	28.605	rBV	0.133		27527	28.534	28.667

12/1/03

11/25/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F003.D Vial: 3
Acq On : 24 Nov 2003 16:18 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM16-2A Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:03 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03
9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.95	152	46495	1000.00	ng/ml	0.01
21) Naphthalene-d8	11.23	136	143724	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.01	164	77801	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.36	188	126733	1000.00	ng/ml	-0.02
67) Chrysene-d12	24.54	240	125289	1000.00	ng/ml	-0.02
76) Perylene-d12	28.01	264	84843	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	5298	106.12	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery =	2.83%#		
6) Phenol-d6	8.45	99	6630	110.81	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery =	2.95%#		
19) Nitrobenzene-d5	9.92	82	7043	94.84	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery =	3.79%#		
38) 2-Fluorobiphenyl	13.56	172	10008	92.79	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery =	3.71%#		
58) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery =	0.00%#		
70) Terphenyl-d14	22.18	244	8635	87.91	ng/ml	-0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery =	3.52%#		
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.59	93	6375	117.00	ng/ml	74
7) Phenol	8.47	94	7655m	121.55	ng/ml	
8) Aniline	8.50	93	7631	112.18	ng/ml#	53
9) 2-Chlorophenol	8.67	128	5718	111.67	ng/ml	81
10) 1,3-Dichlorobenzene	8.89	146	6629	104.04	ng/ml	98
11) 1,4-Dichlorobenzene	8.98	146	6452	95.68	ng/ml	96
12) 1,2-Dichlorobenzene	9.28	146	6353	106.84	ng/ml	97
13) Benzyl Alcohol	9.21	108	2970	96.81	ng/ml#	45
14) Bis(2-chloroisopropyl) Eth	9.47	45	9557	176.52	ng/ml	64
15) 2-Methylphenol	9.42	107	4656	115.05	ng/ml	90
16) Hexachloroethane	9.81	117	2885	90.04	ng/ml	92
17) N-Nitrosodi-n-propylamine	9.71	70	5122	119.37	ng/ml#	69
18) 4-Methylphenol	9.67	107	6836	113.59	ng/ml	88
20) Nitrobenzene	9.95	77	7890	108.38	ng/ml	81
22) Isophorone	10.38	82	11880	93.01	ng/ml	92
23) 2-Nitrophenol	10.56	139	2516	78.44	ng/ml	84
24) 2,4-Dimethylphenol	10.64	122	4603	101.08	ng/ml	84
25) Bis(2-chloroethoxy)methane	10.82	93	7100	102.96	ng/ml	95
26) 2,4-Dichlorophenol	10.98	162	4111	70.97	ng/ml	84
28) 1,2,4-Trichlorobenzene	11.16	180	5312	76.69	ng/ml	95

(#) = qualifier out of range (m) = manual integration
1124F003.D 1124BNLL.M Tue Nov 25 13:54:08 2003 11/26/03 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F003.D Vial: 3
Acq On : 24 Nov 2003 16:18 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM16-2A Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:03 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 dr

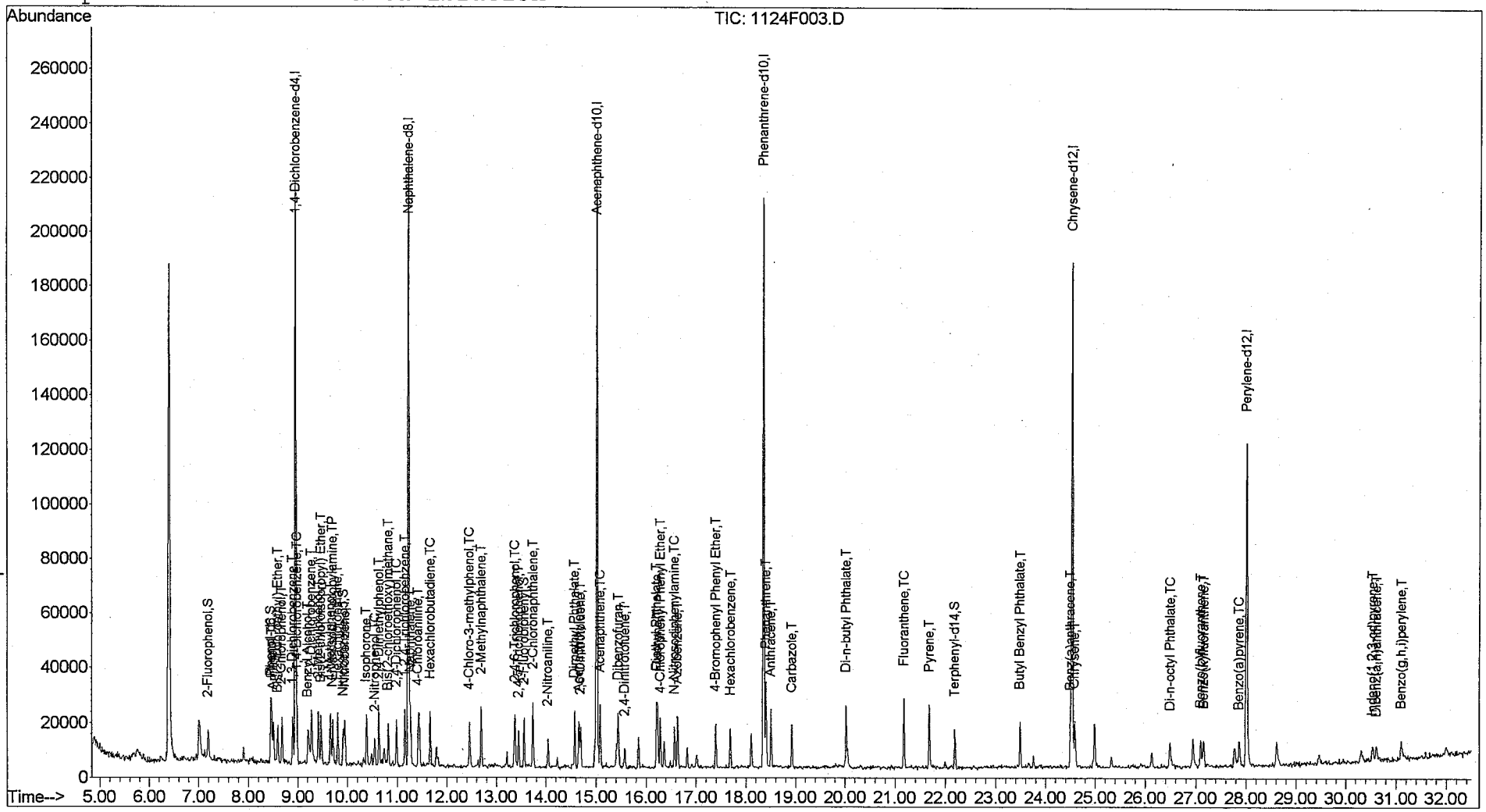
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Naphthalene	11.27	128	13745	91.66	ng/ml	97
30)	4-Chloroaniline	11.42	127	5338	82.64	ng/ml	87
31)	Hexachlorobutadiene	11.67	225	3745	77.25	ng/ml	90
32)	4-Chloro-3-methylphenol	12.46	107	5200	84.77	ng/ml	81
33)	2-Methylnaphthalene	12.69	142	9038	97.26	ng/ml	94
36)	2,4,6-Trichlorophenol	13.38	196	3165	79.08	ng/ml	86
37)	2,4,5-Trichlorophenol	13.45	196	3208	75.05	ng/ml	98
39)	2-Chloronaphthalene	13.73	127	3658	99.05	ng/ml	85
40)	2-Nitroaniline	14.04	65	3191	86.44	ng/ml#	65
41)	Acenaphthylene	14.67	152	12988	104.24	ng/ml	98
42)	Dimethyl Phthalate	14.57	163	11215	98.10	ng/ml	97
43)	2,6-Dinitrotoluene	14.70	165	1786	75.21	ng/ml#	46
44)	Acenaphthene	15.08	154	8268	110.77	ng/ml	91
47)	Dibenzofuran	15.44	168	12377	93.98	ng/ml	69
49)	2,4-Dinitrotoluene	15.58	165	1783	53.79	ng/ml	69
50)	Fluorene	16.23	166	10372	106.73	ng/ml	95
51)	4-Chlorophenyl Phenyl Ethe	16.29	204	4802	81.38	ng/ml	92
52)	Diethyl Phthalate	16.21	149	10908	90.62	ng/ml	99
55)	N-Nitrosodiphenylamine	16.57	169	6377	89.52	ng/ml	96
56)	Azobenzene	16.63	77	14134	104.92	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.39	248	3105	87.91	ng/ml	84
60)	Hexachlorobenzene	17.69	284	3371	87.07	ng/ml	94
62)	Phenanthrene	18.41	178	19630	142.80	ng/ml	98
63)	Anthracene	18.51	178	14956	107.98	ng/ml	96
64)	Carbazole	18.93	167	11579	96.10	ng/ml	97
65)	Di-n-butyl Phthalate	20.02	149	17793	106.03	ng/ml	96
66)	Fluoranthene	21.18	202	18287	121.10	ng/ml	94
69)	Pyrene	21.68	202	17670	113.69	ng/ml	97
71)	Butyl Benzyl Phthalate	23.49	149	6761	97.64	ng/ml	87
73)	Benz(a)anthracene	24.50	228	13271	96.43	ng/ml	98
74)	Chrysene	24.59	228	11316	86.77	ng/ml	95
77)	Di-n-octyl Phthalate	26.49	149	12296	83.96	ng/ml	87
78)	Benzo(b)fluoranthene	27.10	252	10390	90.06	ng/ml	96
79)	Benzo(k)fluoranthene	27.16	252	11002	100.34	ng/ml	96
80)	Benzo(a)pyrene	27.86	252	10393	94.92	ng/ml	97
81)	Indeno(1,2,3-cd)pyrene	30.53	276	7092	69.40	ng/ml	97
82)	Dibenz(a,h)anthracene	30.61	278	7351	73.46	ng/ml	98
83)	Benzo(g,h,i)perylene	31.10	276	8359	78.90	ng/ml	93

(#) = qualifier out of range (m) = manual integration
1124F003.D 1124BNLL.M Tue Nov 25 13:54:09 2003 11/26/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F003.D Vial: 3
Acq On : 24 Nov 2003 16:18 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM16-2A Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:18 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration



2341

11/25/03

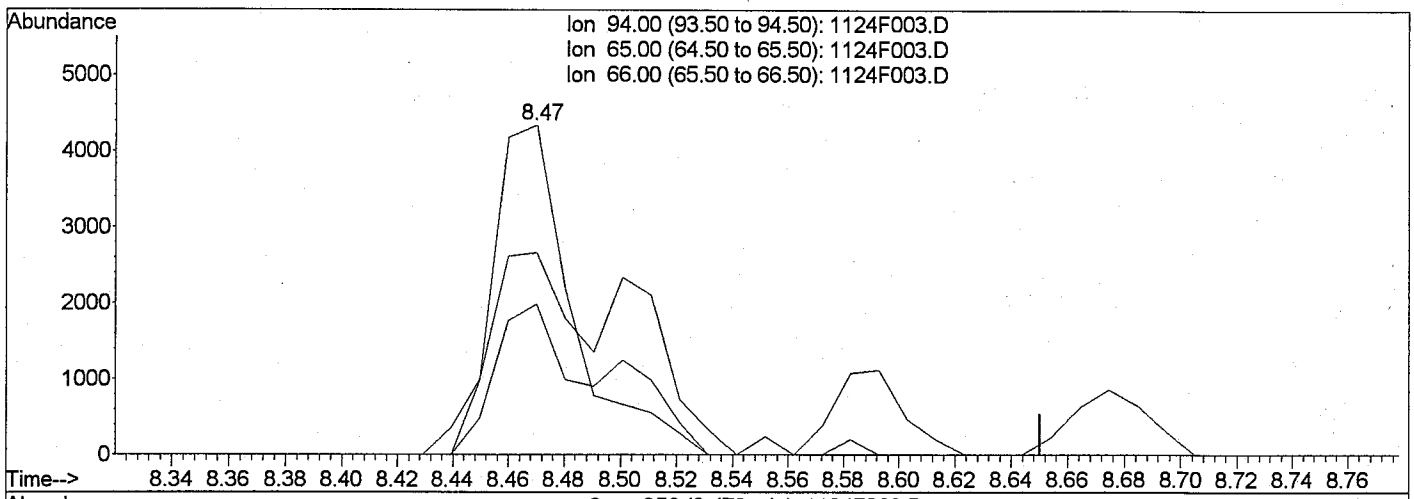
Quantitation Report (Qedit)

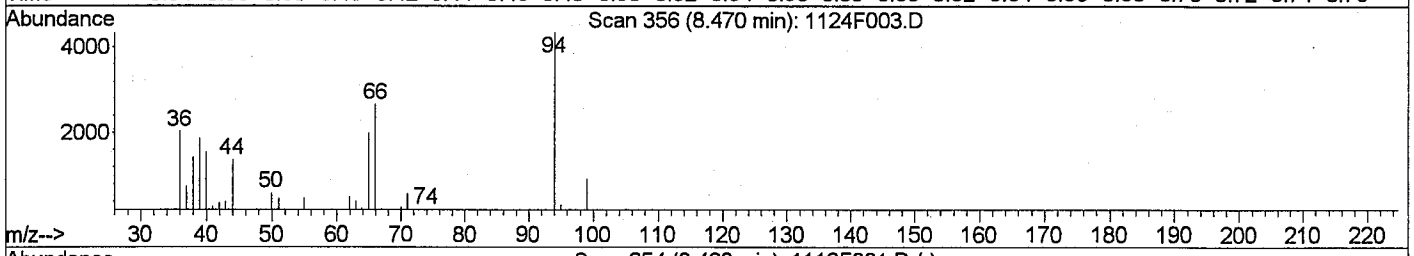
Data File : J:\MS10\DATA\112403\1124F003.D
Acq On : 24 Nov 2003 16:18
Sample : 8270-LL @ 0.1 ppm SVM16-2A
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:17 2003

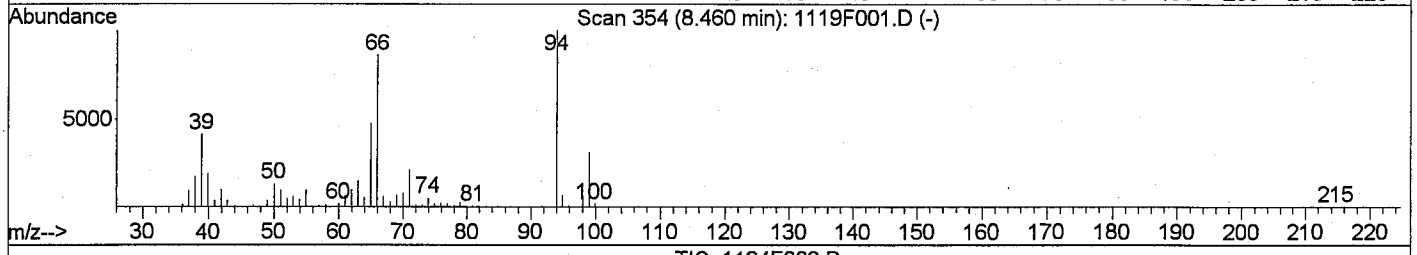
Vial: 3
Operator: JGISH
Inst : MS10
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration







TIC: 1124F003.D

(7) Phenol (TC)

8.47min 136.24ng/ml

response 8580

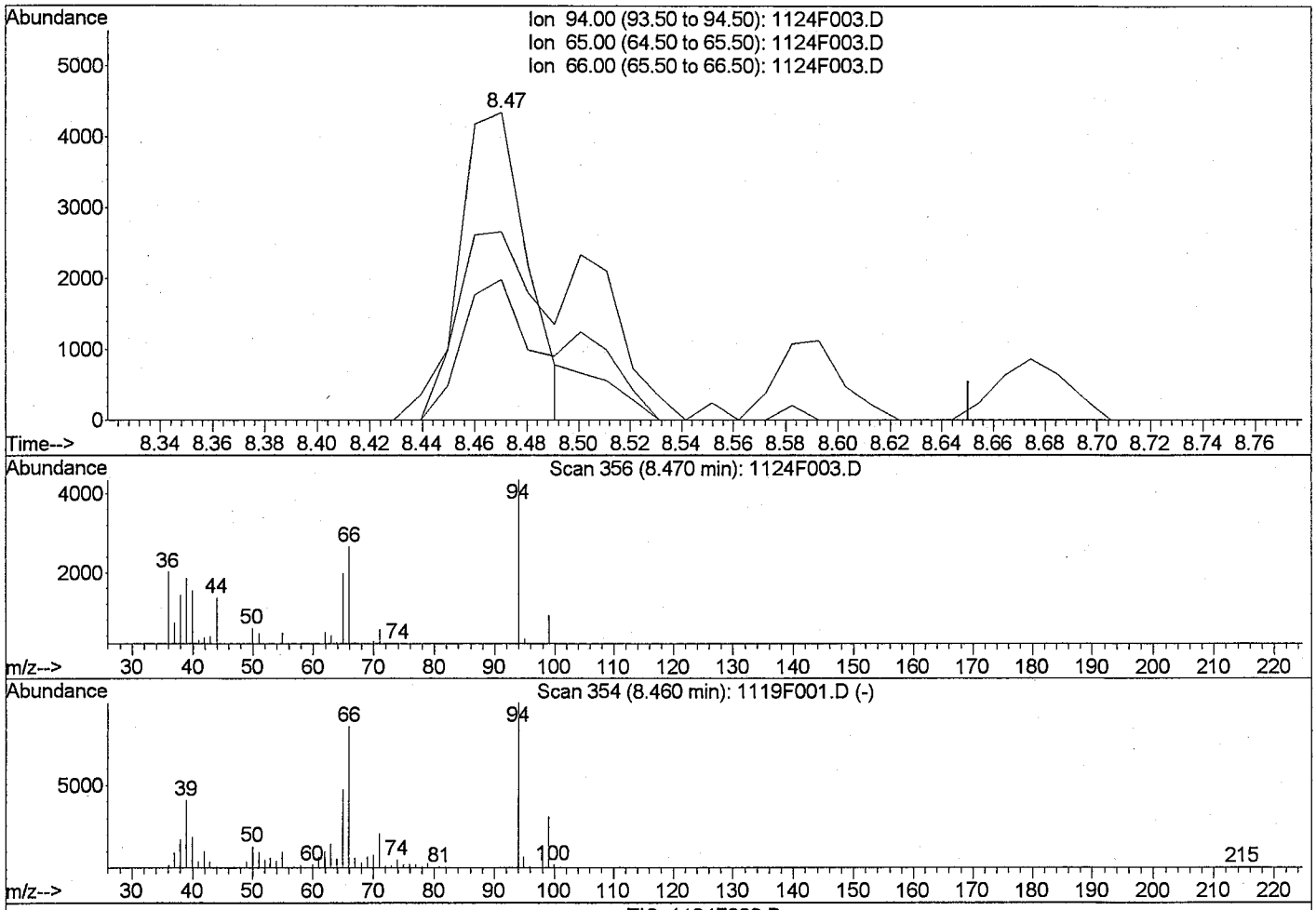
Ion	Exp%	Act%
94.00	100	100
65.00	36.30	45.68
66.00	62.90	61.29
0.00	0.00	0.00

1124F003.D 1124BNLL.M Tue Nov 25 08:18:17 2003

Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F003.D Vial: 3
Acq On : 24 Nov 2003 16:18 Operator: JGISH
Sample : 8270-LL @ 0.1 ppm SVM16-2A Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:18 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration



TIC: 1124F003.D

(7) Phenol (TC)

8.47min 121.55ng/ml m

response 7655

Ion	Exp%	Act%
94.00	100	100
65.00	36.30	45.68
66.00	62.90	61.29
0.00	0.00	0.00

J 11/25/03 overlay

12/1/03 DJ

1124F003.D 1124BNLL.M Tue Nov 25 08:18:24 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F004.D Vial: 4
Acq On : 24 Nov 2003 16:59 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM16-2B Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:07 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.95	152	49953	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.24	136	148739	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.02	164	81638	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.36	188	136098	1000.00	ng/ml	-0.01
67) Chrysene-d12	24.54	240	134187	1000.00	ng/ml	-0.02
76) Perylene-d12	28.01	264	88762	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	11513	214.65	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 5.72%#			
6) Phenol-d6	8.45	99	13131	204.27	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 5.45%#			
19) Nitrobenzene-d5	9.92	82	14758	184.97	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 7.40%#			
38) 2-Fluorobiphenyl	13.56	172	19667	173.77	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 6.95%#			
58) 2,4,6-Tribromophenol	16.83	330	3482	151.38	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 4.04%#			
70) Terphenyl-d14	22.19	244	17022	161.81	ng/ml	-0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 6.47%#			
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.59	93	12350	210.97	ng/ml	76
7) Phenol	8.47	94	38973	576.01	ng/ml	93
8) Aniline	8.50	93	16311	223.18	ng/ml#	52
9) 2-Chlorophenol	8.67	128	27750	504.45	ng/ml	84
10) 1,3-Dichlorobenzene	8.90	146	12535	183.11	ng/ml	96
11) 1,4-Dichlorobenzene	8.98	146	13910	191.99	ng/ml	97
12) 1,2-Dichlorobenzene	9.28	146	12827	200.78	ng/ml	97
13) Benzyl Alcohol	9.20	108	5869	178.06	ng/ml#	52
14) Bis(2-chloroisopropyl) Eth	9.47	45	18823	323.60	ng/ml	63
15) 2-Methylphenol	9.42	107	23038	529.86	ng/ml	87
16) Hexachloroethane	9.81	117	6346	184.35	ng/ml	92
17) N-Nitrosodi-n-propylamine	9.70	70	10576	229.42	ng/ml	79
18) 4-Methylphenol	9.66	107	32293	499.45	ng/ml	92
20) Nitrobenzene	9.95	77	15608	199.56	ng/ml	81
22) Isophorone	10.39	82	24093	182.26	ng/ml	92
23) 2-Nitrophenol	10.54	139	13034	392.63	ng/ml	72
24) 2,4-Dimethylphenol	10.63	122	21729	461.06	ng/ml	87
25) Bis(2-chloroethoxy)methane	10.82	93	14004	196.23	ng/ml	94
26) 2,4-Dichlorophenol	10.98	162	23070	384.85	ng/ml	93
28) 1,2,4-Trichlorobenzene	11.17	180	10335	144.18	ng/ml	88

(#) = qualifier out of range (m) = manual integration
1124F004.D 1124BNLL.M Tue Nov 25 13:54:12 2003 11/25/3 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F004.D Vial: 4
Acq On : 24 Nov 2003 16:59 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM16-2B Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:07 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 CP

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Naphthalene	11.27	128	27642	178.13	ng/ml	97
30)	4-Chloroaniline	11.43	127	11466	171.52	ng/ml	90
31)	Hexachlorobutadiene	11.67	225	6621	131.97	ng/ml	89
32)	4-Chloro-3-methylphenol	12.45	107	25485	401.47	ng/ml	85
33)	2-Methylnaphthalene	12.70	142	17964	186.79	ng/ml	84
36)	2,4,6-Trichlorophenol	13.37	196	16852	401.27	ng/ml	92
37)	2,4,5-Trichlorophenol	13.45	196	17023	379.52	ng/ml	87
39)	2-Chloronaphthalene	13.73	127	6914	178.42	ng/ml	95
40)	2-Nitroaniline	14.05	65	6074	156.80	ng/ml#	70
41)	Acenaphthylene	14.66	152	25087	191.88	ng/ml	97
42)	Dimethyl Phthalate	14.58	163	19788	164.95	ng/ml	96
43)	2,6-Dinitrotoluene	14.70	165	3515	141.07	ng/ml#	51
44)	Acenaphthene	15.08	154	16502	210.69	ng/ml	93
45)	3-Nitroaniline	14.98	138	3776	158.93	ng/ml	96
47)	Dibenzofuran	15.45	168	24047	174.00	ng/ml	75
48)	4-Nitrophenol	15.42	109	9637	263.80	ng/ml#	54
49)	2,4-Dinitrotoluene	15.57	165	4389	126.19	ng/ml	69
50)	Fluorene	16.23	166	19852	194.67	ng/ml	97
51)	4-Chlorophenyl Phenyl Ethe	16.29	204	9771	157.80	ng/ml	83
52)	Diethyl Phthalate	16.21	149	21739	172.12	ng/ml	95
53)	4-Nitroaniline	16.36	138	3927	157.74	ng/ml#	58
55)	N-Nitrosodiphenylamine	16.57	169	12199	163.20	ng/ml	95
56)	Azobenzene	16.64	77	29450	208.33	ng/ml	88
59)	4-Bromophenyl Phenyl Ether	17.39	248	6102	160.88	ng/ml	87
60)	Hexachlorobenzene	17.69	284	6796	163.46	ng/ml	97
61)	Pentachlorophenol	18.11	266	9680	343.55	ng/ml	92
62)	Phenanthrene	18.40	178	32899	222.86	ng/ml	99
63)	Anthracene	18.52	178	26997	181.49	ng/ml	97
64)	Carbazole	18.93	167	21970	169.80	ng/ml	99
65)	Di-n-butyl Phthalate	20.03	149	34100	189.21	ng/ml	98
66)	Fluoranthene	21.17	202	30730	189.50	ng/ml	96
68)	Benzidine	21.57	184	24511	366.49	ng/ml	98
69)	Pyrene	21.68	202	30196	181.40	ng/ml	95
71)	Butyl Benzyl Phthalate	23.49	149	13022	175.59	ng/ml	83
72)	3,3'-Dichlorobenzidine	24.56	252	18921	354.41	ng/ml	97
73)	Benz(a)anthracene	24.51	228	23650	160.44	ng/ml	98
74)	Chrysene	24.60	228	22820	163.38	ng/ml	97
75)	Bis(2-ethylhexyl) Phthalat	24.99	149	18413	171.35	ng/ml	96
77)	Di-n-octyl Phthalate	26.49	149	26886	175.47	ng/ml	88
78)	Benzo(b)fluoranthene	27.10	252	19270	159.66	ng/ml	97
79)	Benzo(k)fluoranthene	27.15	252	21275	185.46	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F004.D Vial: 4
Acq On : 24 Nov 2003 16:59 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM16-2B Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:07 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
80)	Benzo(a)pyrene	27.86	252	19390	169.27	ng/ml	99
81)	Indeno(1,2,3-cd)pyrene	30.54	276	14221	133.02	ng/ml	97
82)	Dibenz(a,h)anthracene	30.61	278	14816	141.52	ng/ml	96
83)	Benzo(g,h,i)perylene	31.10	276	17019	153.54	ng/ml	95

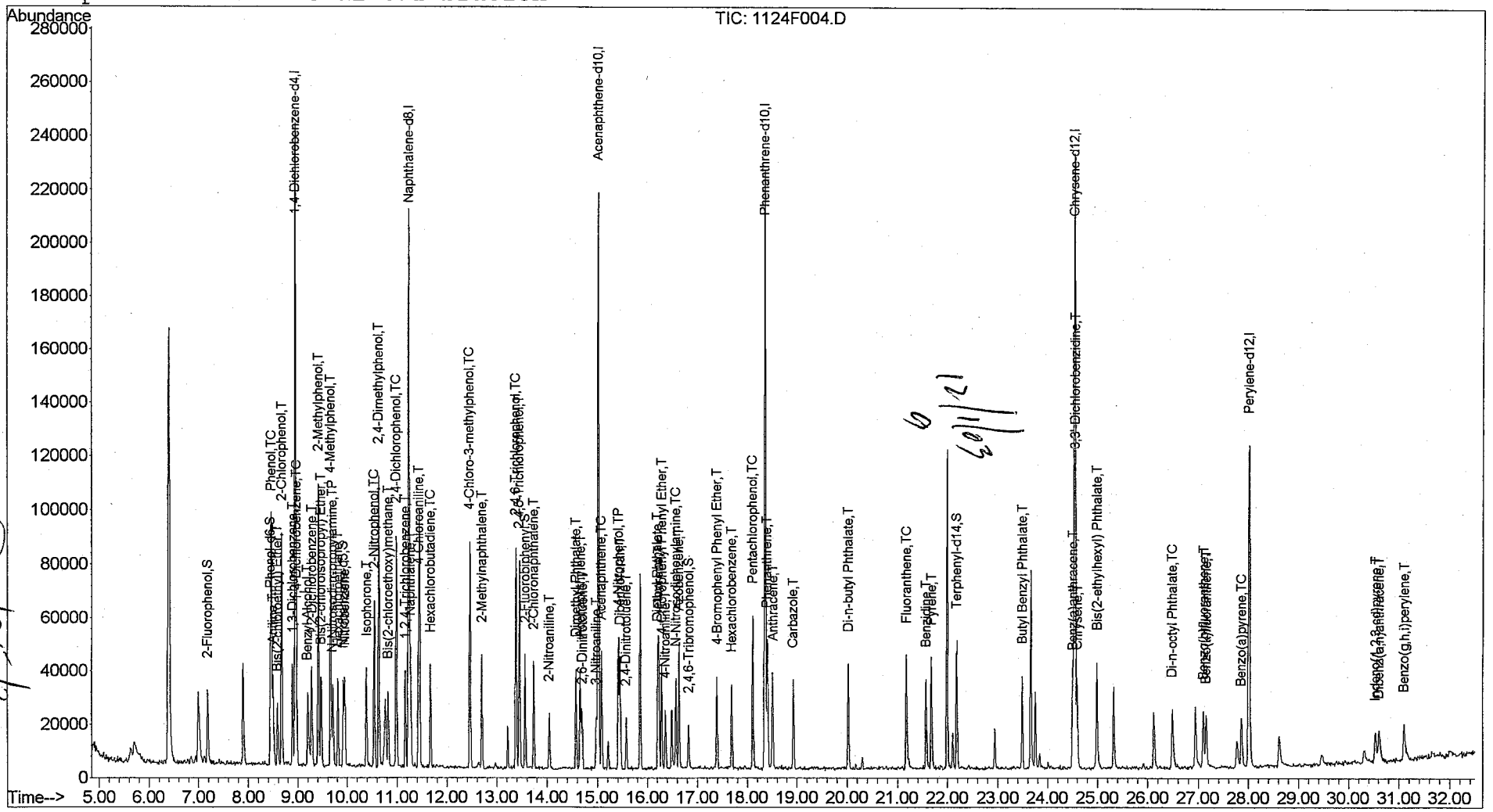
11/25/3

(#) = qualifier out of range (m) = manual integration
1124F004.D 1124BNLL.M Tue Nov 25 13:54:12 2003 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F004.D Vial: 4
Acq On : 24 Nov 2003 16:59 Operator: JGISH
Sample : 8270-LL @ .2/.5 ppm SVM16-2B Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:20 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration



2347

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F005.D Vial: 5
Acq On : 24 Nov 2003 17:40 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM16-2C Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:12 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 g

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.94	152	46917	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.23	136	143391	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.02	164	78500	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.36	188	127298	1000.00	ng/ml	-0.02
67) Chrysene-d12	24.55	240	133070	1000.00	ng/ml	-0.02
76) Perylene-d12	28.01	264	86861	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	29431	584.23	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 15.58%#			
6) Phenol-d6	8.44	99	36599	606.20	ng/ml	0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 16.17%#			
19) Nitrobenzene-d5	9.92	82	40846	545.09	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 21.80%#			
38) 2-Fluorobiphenyl	13.56	172	52175	479.43	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 19.18%#			
58) 2,4,6-Tribromophenol	16.83	330	9886	459.51	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 12.25%#			
70) Terphenyl-d14	22.18	244	44130	423.03	ng/ml	-0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 16.92%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.60	42	25994	508.79	ng/ml#	38
3) Pyridine	5.64	79	34058	656.74	ng/ml#	66
5) Bis(2-chloroethyl) Ether	8.59	93	33519	609.63	ng/ml	75
7) Phenol	8.46	94	80260	1262.97	ng/ml	97
8) Aniline	8.49	93	43915	639.77	ng/ml#	54
9) 2-Chlorophenol	8.67	128	55900	1081.93	ng/ml	86
10) 1,3-Dichlorobenzene	8.89	146	33005	513.34	ng/ml	96
11) 1,4-Dichlorobenzene	8.98	146	35053	515.13	ng/ml	97
12) 1,2-Dichlorobenzene	9.28	146	32731	545.49	ng/ml	94
13) Benzyl Alcohol	9.21	108	16830	543.64	ng/ml#	60
14) Bis(2-chloroisopropyl) Eth	9.48	45	48373	885.44	ng/ml#	65
15) 2-Methylphenol	9.41	107	44658	1093.56	ng/ml	86
16) Hexachloroethane	9.81	117	16808	519.87	ng/ml	94
17) N-Nitrosodi-n-propylamine	9.71	70	26079	602.32	ng/ml	82
18) 4-Methylphenol	9.66	107	67038	1103.90	ng/ml	88
20) Nitrobenzene	9.95	77	41718	567.92	ng/ml	81
22) Isophorone	10.39	82	62624	491.41	ng/ml	94
23) 2-Nitrophenol	10.55	139	28136	879.17	ng/ml	81
24) 2,4-Dimethylphenol	10.63	122	43862	965.40	ng/ml	84
25) Bis(2-chloroethoxy)methane	10.83	93	37555	545.87	ng/ml	98

(#) = qualifier out of range (m) = manual integration
11/25/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F005.D Vial: 5
Acq On : 24 Nov 2003 17:40 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM16-2C Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:12 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 g

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.99	162	47222	817.14	ng/ml	98
27)	Benzoic Acid	10.79	122	21997	1050.19	ng/ml	81
28)	1,2,4-Trichlorobenzene	11.16	180	28109	406.77	ng/ml	97
29)	Naphthalene	11.27	128	70985	474.49	ng/ml	99
30)	4-Chloroaniline	11.43	127	31378	486.88	ng/ml	88
31)	Hexachlorobutadiene	11.67	225	19115	395.21	ng/ml	99
32)	4-Chloro-3-methylphenol	12.46	107	51707	844.92	ng/ml	84
33)	2-Methylnaphthalene	12.70	142	47901	516.65	ng/ml	93
35)	Hexachlorocyclopentadiene	13.22	237	12651	318.31	ng/ml	87
36)	2,4,6-Trichlorophenol	13.38	196	34283	848.95	ng/ml	97
37)	2,4,5-Trichlorophenol	13.45	196	35254	817.38	ng/ml	91
39)	2-Chloronaphthalene	13.74	127	19097	512.50	ng/ml	93
40)	2-Nitroaniline	14.05	65	18760	503.66	ng/ml#	72
41)	Acenaphthylene	14.66	152	69278	551.05	ng/ml	100
42)	Dimethyl Phthalate	14.58	163	56489	489.72	ng/ml	96
43)	2,6-Dinitrotoluene	14.70	165	10659	444.89	ng/ml#	51
44)	Acenaphthene	15.09	154	42707	567.07	ng/ml	92
45)	3-Nitroaniline	14.98	138	11899	520.85	ng/ml	98
46)	2,4-Dinitrophenol	15.21	184	5034	1103.00	ng/ml#	59
47)	Dibenzofuran	15.45	168	64374	484.43	ng/ml	75
48)	4-Nitrophenol	15.42	109	23256	662.04	ng/ml#	62
49)	2,4-Dinitrotoluene	15.57	165	14389	430.25	ng/ml	66
50)	Fluorene	16.23	166	51204	522.19	ng/ml	95
51)	4-Chlorophenyl Phenyl Ethe	16.28	204	26160	439.36	ng/ml	82
52)	Diethyl Phthalate	16.21	149	57489	473.36	ng/ml	97
53)	4-Nitroaniline	16.37	138	11547	482.36	ng/ml#	62
54)	2-Methyl-4,6-dinitrophenol	16.49	198	11921	433.11	ng/ml	70
55)	N-Nitrosodiphenylamine	16.57	169	32216	448.22	ng/ml	98
56)	Azobenzene	16.63	77	75782	557.52	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.40	248	16404	462.39	ng/ml	94
60)	Hexachlorobenzene	17.69	284	18840	484.48	ng/ml	96
61)	Pentachlorophenol	18.11	266	21312	808.67	ng/ml	91
62)	Phenanthrene	18.41	178	74223	537.55	ng/ml	99
63)	Anthracene	18.51	178	72506	521.14	ng/ml	98
64)	Carbazole	18.93	167	60952	503.64	ng/ml	93
65)	Di-n-butyl Phthalate	20.03	149	93285	553.40	ng/ml	98
66)	Fluoranthene	21.18	202	74535	491.40	ng/ml	96
68)	Benzidine	21.57	184	66571	1003.73	ng/ml	98
69)	Pyrene	21.68	202	75892	459.74	ng/ml	97
71)	Butyl Benzyl Phthalate	23.49	149	36934	502.20	ng/ml	93
72)	3,3'-Dichlorobenzidine	24.57	252	43142	814.88	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F005.D Vial: 5
Acq On : 24 Nov 2003 17:40 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM16-2C Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:12 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 G

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.50	228	62793	429.57	ng/ml	99
74)	Chrysene	24.60	228	57596	415.81	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.98	149	50579	474.64	ng/ml	96
77)	Di-n-octyl Phthalate	26.49	149	78286	522.11	ng/ml	88
78)	Benzo(b)fluoranthene	27.10	252	56663	479.75	ng/ml	95
79)	Benzo(k)fluoranthene	27.16	252	55546	494.81	ng/ml	98
80)	Benzo(a)pyrene	27.87	252	53150	474.14	ng/ml	95
81)	Indeno(1,2,3-cd)pyrene	30.54	276	41691	398.51	ng/ml	97
82)	Dibenz(a,h)anthracene	30.62	278	43682m	426.39	ng/ml	
83)	Benzo(g,h,i)perylene	31.11	276	48166	444.05	ng/ml	92

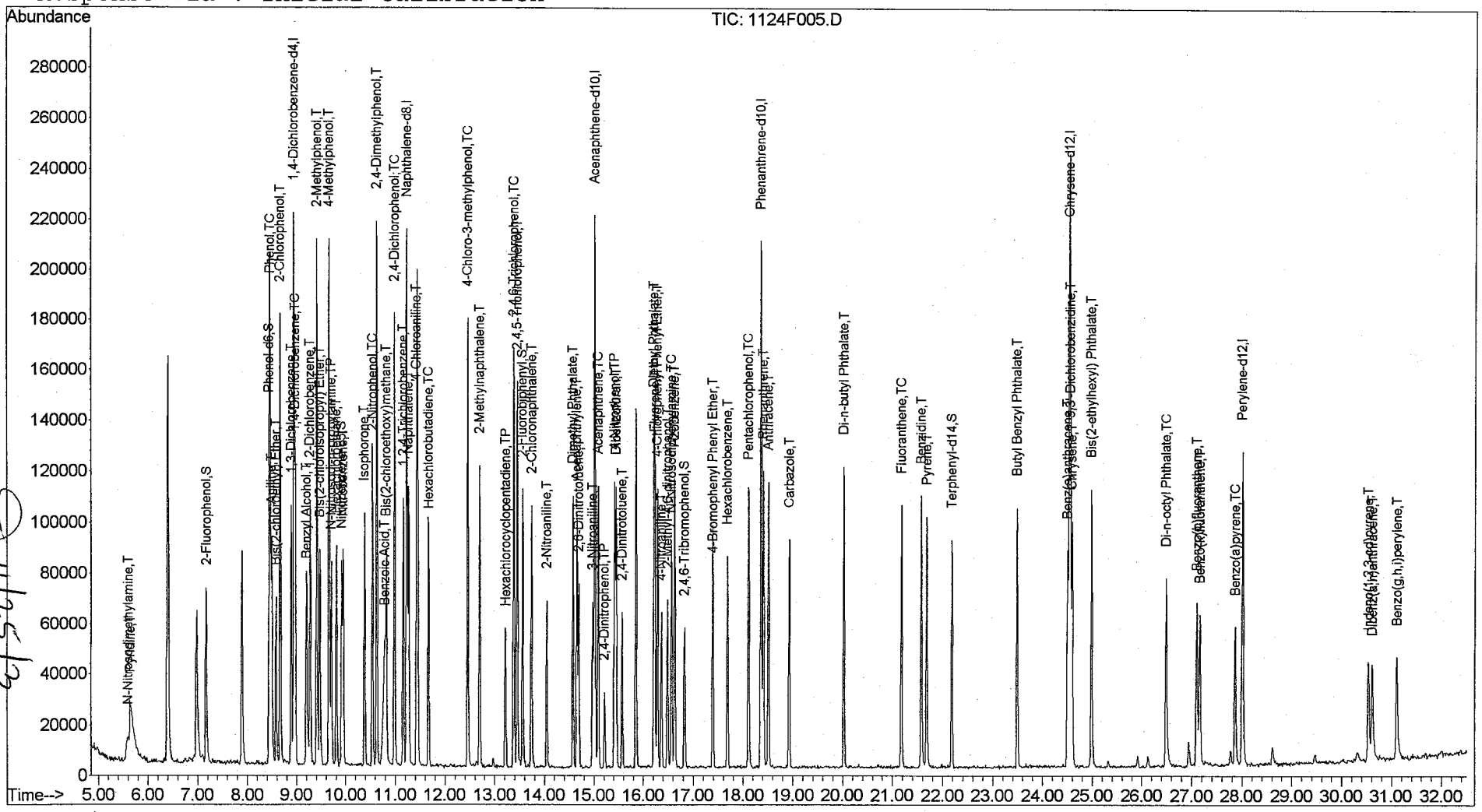
11/25/3

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F005.D Vial: 5
Acq On : 24 Nov 2003 17:40 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM16-2C Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:23 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration

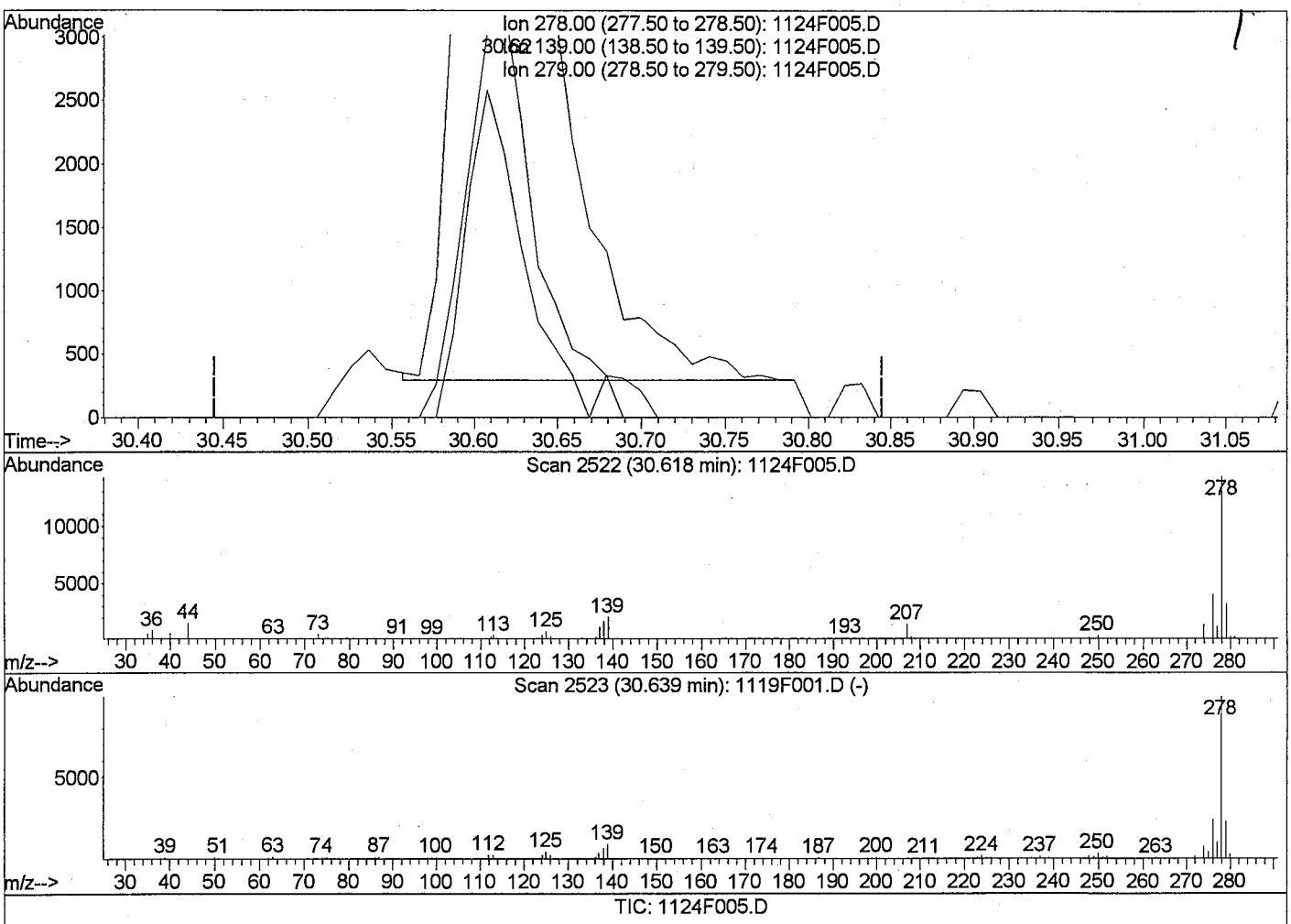


2351

Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F005.D Vial: 5
Acq On : 24 Nov 2003 17:40 Operator: JGISH
Sample : 8270-LL @ .5/1 ppm SVM16-2C Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:02 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration



TIC: 1124F005.D

(82) Dibenz(a,h)anthracene (T)

30.62min 387.86ng/ml

response 39735

Ion	Exp%	Act%
278.00	100	100
139.00	16.30	14.96
279.00	24.80	23.23
0.00	0.00	0.00

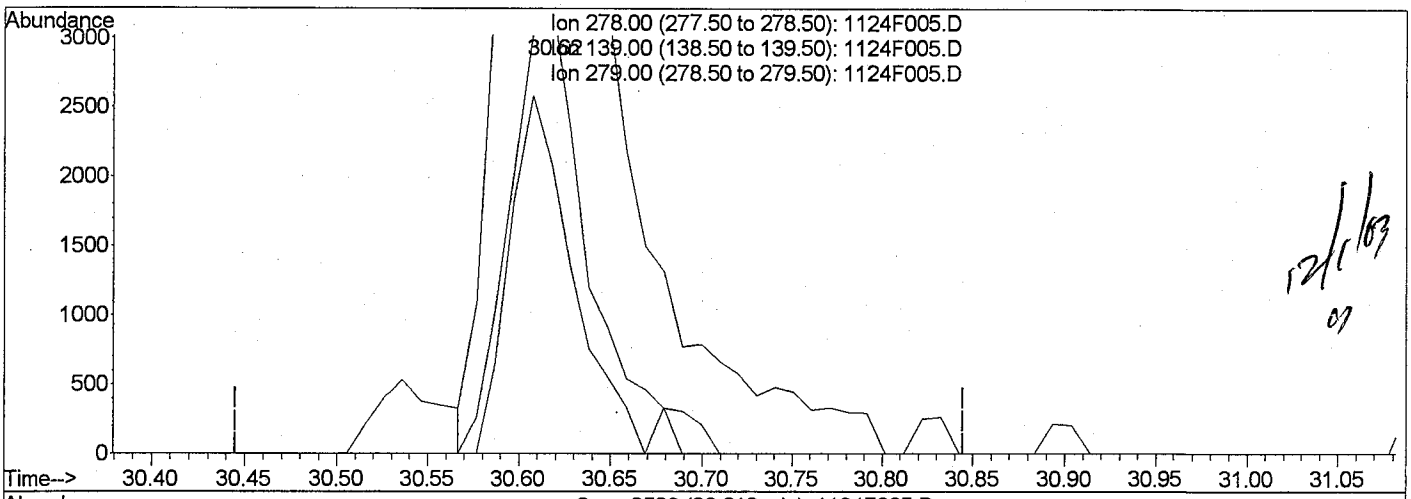
1124F005.D 1124BNLL.M Tue Nov 25 08:23:37 2003

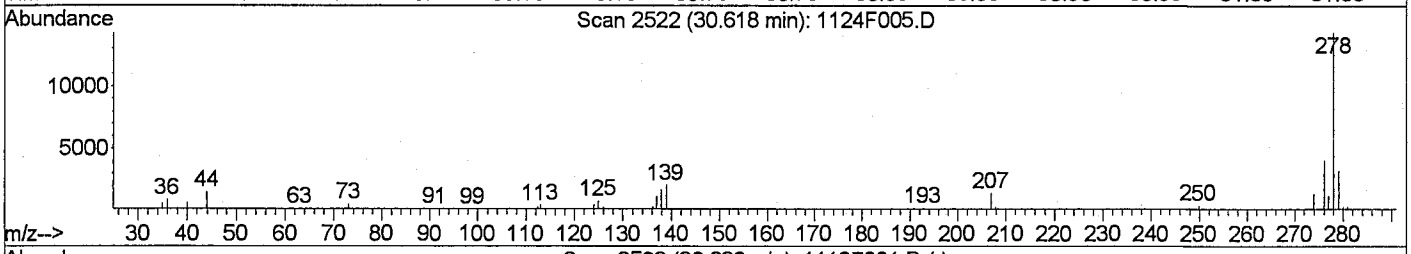
Quantitation Report (Qedit)

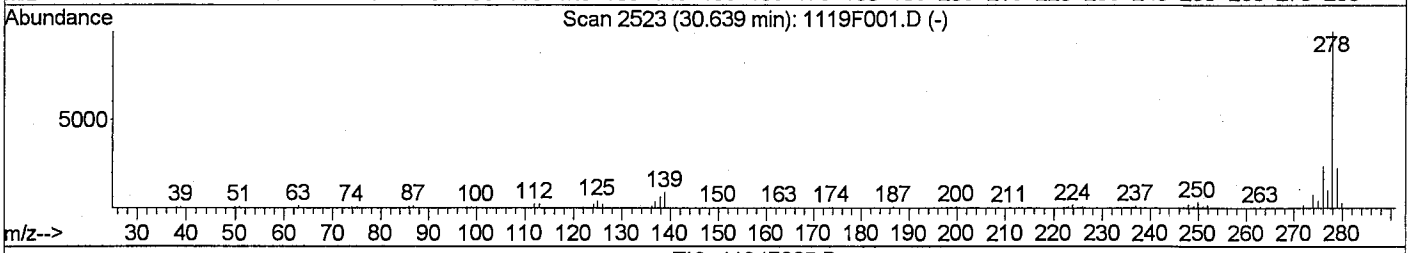
Data File : J:\MS10\DATA\112403\1124F005.D
Acq On : 24 Nov 2003 17:40
Sample : 8270-LL @ .5/1 ppm SVM16-2C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:23 2003

Vial: 5
Operator: JGISH
Inst : MS10
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration







TIC: 1124F005.D

(82) Dibenz(a,h)anthracene (T)

30.62min 426.39ng/ml m

response 43682

Ion	Exp%	Act%
278.00	100	100
139.00	16.30	14.65
279.00	24.80	22.75
0.00	0.00	0.00

11/25/13 BL

1124F005.D 1124BNLL.M Tue Nov 25 08:23:44 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F006.D Vial: 6
Acq On : 24 Nov 2003 18:21 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM16-2D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:16 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.94	152	49929	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.23	136	154151	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.02	164	83848	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.36	188	138871	1000.00	ng/ml	-0.02
67) Chrysene-d12	24.54	240	136074	1000.00	ng/ml	-0.02
76) Perylene-d12	28.02	264	87705	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	62032	1157.10	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 30.86%#			
6) Phenol-d6	8.44	99	78347	1219.40	ng/ml	0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 32.52%#			
19) Nitrobenzene-d5	9.92	82	84223	1056.15	ng/ml	0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 42.25%			
38) 2-Fluorobiphenyl	13.56	172	107362	923.61	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 36.94%#			
58) 2,4,6-Tribromophenol	16.84	330	20787	885.67	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 23.62%#			
70) Terphenyl-d14	22.19	244	91804	860.60	ng/ml	-0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 34.42%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.55	42	54012	993.42	ng/ml#	56
3) Pyridine	5.60	79	70782	1282.55	ng/ml	79
5) Bis(2-chloroethyl) Ether	8.59	93	68819	1176.14	ng/ml	74
7) Phenol	8.46	94	166640	2464.06	ng/ml	98
8) Aniline	8.49	93	86390	1182.63	ng/ml#	52
9) 2-Chlorophenol	8.67	128	118151	2148.82	ng/ml	85
10) 1,3-Dichlorobenzene	8.89	146	68097	995.26	ng/ml	96
11) 1,4-Dichlorobenzene	8.97	146	72547	1001.81	ng/ml	97
12) 1,2-Dichlorobenzene	9.28	146	67279	1053.62	ng/ml	95
13) Benzyl Alcohol	9.21	108	35474	1076.75	ng/ml#	64
14) Bis(2-chloroisopropyl) Eth	9.47	45	99279	1707.62	ng/ml#	66
15) 2-Methylphenol	9.41	107	96202	2213.64	ng/ml	87
16) Hexachloroethane	9.81	117	34168	993.06	ng/ml	94
17) N-Nitrosodi-n-propylamine	9.71	70	56470	1225.54	ng/ml	75
18) 4-Methylphenol	9.67	107	140390	2172.32	ng/ml	93
20) Nitrobenzene	9.96	77	86474	1106.18	ng/ml	85
22) Isophorone	10.38	82	132358	966.11	ng/ml	94
23) 2-Nitrophenol	10.55	139	64453	1873.40	ng/ml	79
24) 2,4-Dimethylphenol	10.64	122	92534	1894.51	ng/ml	86
25) Bis(2-chloroethoxy)methane	10.82	93	75596	1022.11	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1124F006.D 1124BNLL.M Tue Nov 25 13:54:19 2003 11/26/3 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F006.D Vial: 6
Acq On : 24 Nov 2003 18:21 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM16-2D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:16 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 gg

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.99	162	103492	1665.84	ng/ml	96
27)	Benzoic Acid	10.84	122	53315	1724.16	ng/ml#	79
28)	1,2,4-Trichlorobenzene	11.16	180	56274	757.51	ng/ml	89
29)	Naphthalene	11.27	128	141799	881.68	ng/ml	98
30)	4-Chloroaniline	11.43	127	64538	931.51	ng/ml	89
31)	Hexachlorobutadiene	11.67	225	38422	738.94	ng/ml	98
32)	4-Chloro-3-methylphenol	12.46	107	113557	1726.06	ng/ml	81
33)	2-Methylnaphthalene	12.70	142	98622	989.47	ng/ml	91
35)	Hexachlorocyclopentadiene	13.22	237	28981	682.69	ng/ml	96
36)	2,4,6-Trichlorophenol	13.38	196	73087	1694.42	ng/ml	93
37)	2,4,5-Trichlorophenol	13.45	196	77309	1678.13	ng/ml	94
39)	2-Chloronaphthalene	13.74	127	38488	967.01	ng/ml	94
40)	2-Nitroaniline	14.04	65	40293	1012.77	ng/ml#	70
41)	Acenaphthylene	14.67	152	135617	1009.92	ng/ml	99
42)	Dimethyl Phthalate	14.59	163	113213	918.88	ng/ml	97
43)	2,6-Dinitrotoluene	14.70	165	24742	966.82	ng/ml#	54
44)	Acenaphthene	15.09	154	84459	1049.93	ng/ml	96
45)	3-Nitroaniline	14.99	138	26522	1086.88	ng/ml	96
46)	2,4-Dinitrophenol	15.22	184	17060	1544.86	ng/ml	73
47)	Dibenzofuran	15.46	168	129054	909.21	ng/ml	82
48)	4-Nitrophenol	15.42	109	49846	1328.49	ng/ml#	57
49)	2,4-Dinitrotoluene	15.58	165	31851	891.63	ng/ml	71
50)	Fluorene	16.23	166	100250	957.16	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.29	204	52510	825.67	ng/ml	92
52)	Diethyl Phthalate	16.22	149	117897	908.83	ng/ml	96
53)	4-Nitroaniline	16.38	138	25164	984.14	ng/ml#	61
54)	2-Methyl-4,6-dinitrophenol	16.50	198	35208	1197.58	ng/ml	73
55)	N-Nitrosodiphenylamine	16.58	169	68156	887.76	ng/ml	97
56)	Azobenzene	16.64	77	156548	1078.24	ng/ml	87
59)	4-Bromophenyl Phenyl Ether	17.40	248	34567	893.15	ng/ml	89
60)	Hexachlorobenzene	17.69	284	36626	863.36	ng/ml	98
61)	Pentachlorophenol	18.11	266	49265	1713.54	ng/ml	97
62)	Phenanthrene	18.41	178	145646	966.91	ng/ml	99
63)	Anthracene	18.51	178	142454	938.56	ng/ml	98
64)	Carbazole	18.93	167	124175	940.54	ng/ml	93
65)	Di-n-butyl Phthalate	20.03	149	190733	1037.20	ng/ml	97
66)	Fluoranthene	21.18	202	151220	913.89	ng/ml	97
68)	Benzidine	21.58	184	142461	2100.55	ng/ml	98
69)	Pyrene	21.68	202	149989	888.55	ng/ml	99
71)	Butyl Benzyl Phthalate	23.50	149	76882	1022.30	ng/ml	99
72)	3,3'-Dichlorobenzidine	24.56	252	96801	1788.03	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1124F006.D 1124BNLL.M Tue Nov 25 13:54:19 2003 11/25/03 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F006.D Vial: 6
Acq On : 24 Nov 2003 18:21 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM16-2D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:16 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.51	228	123893	828.85	ng/ml	97
74)	Chrysene	24.61	228	120872	853.36	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.99	149	103945	953.91	ng/ml	96
77)	Di-n-octyl Phthalate	26.50	149	169007	1116.30	ng/ml	90
78)	Benzo(b)fluoranthene	27.11	252	110131	923.47	ng/ml	98
79)	Benzo(k)fluoranthene	27.17	252	109603	966.96	ng/ml	97
80)	Benzo(a)pyrene	27.87	252	105974	936.28	ng/ml	98
81)	Indeno(1,2,3-cd)pyrene	30.54	276	85931	813.47	ng/ml	97
82)	Dibenz(a,h)anthracene	30.62	278	92289m	892.18	ng/ml	
83)	Benzo(g,h,i)perylene	31.12	276	96617	882.15	ng/ml	96

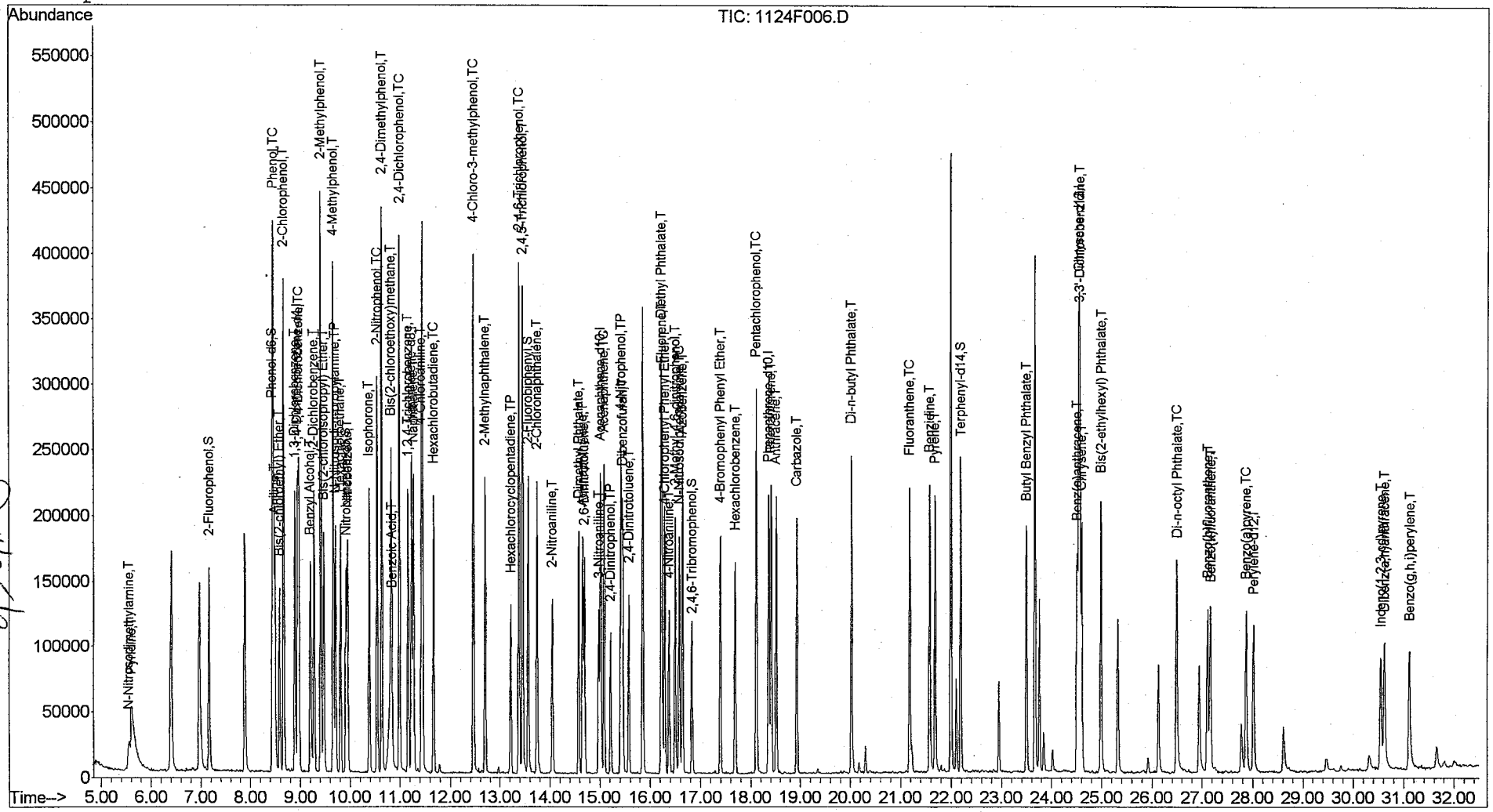
11/25/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F006.D Vial: 6
Acq On : 24 Nov 2003 18:21 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM16-2D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:26 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration



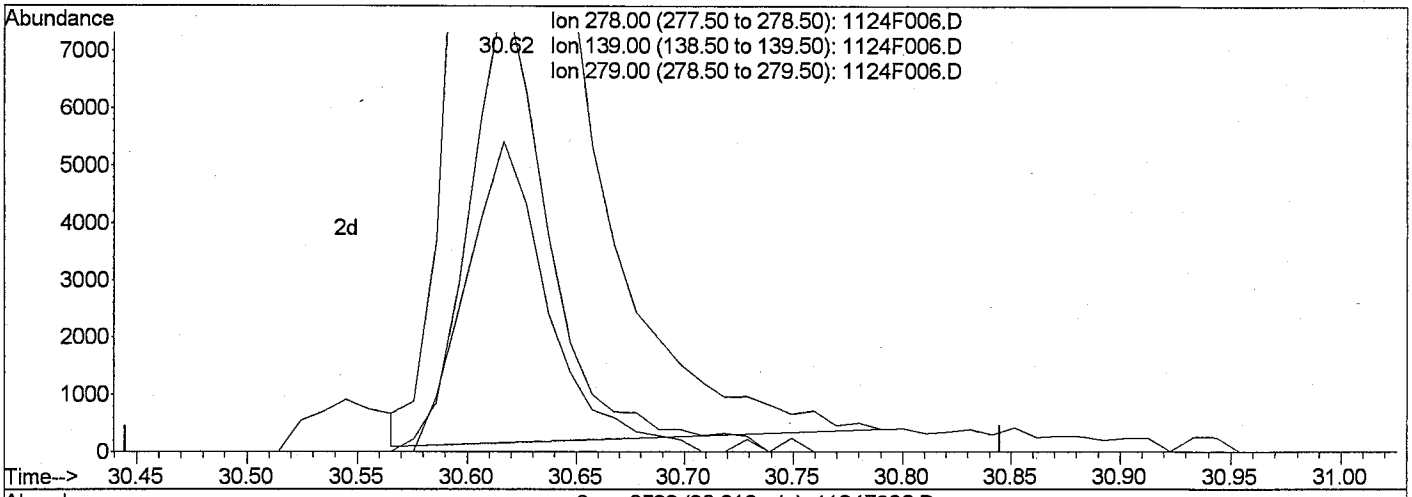
2357

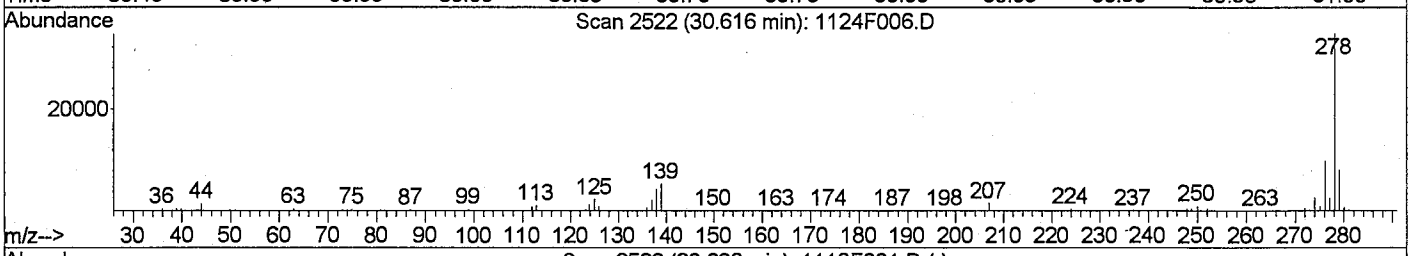
1124F006.D 1124BNLL.M Tue Nov 25 13:54:20 2003 Page 4

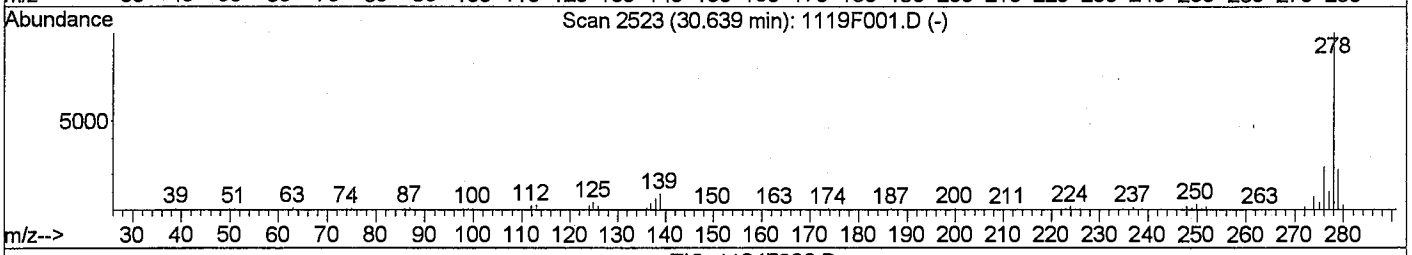
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F006.D Vial: 6
Acq On : 24 Nov 2003 18:21 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM16-2D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:02 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration







TIC: 1124F006.D

(82) Dibenz(a,h)anthracene (T)

30.62min 850.45ng/ml

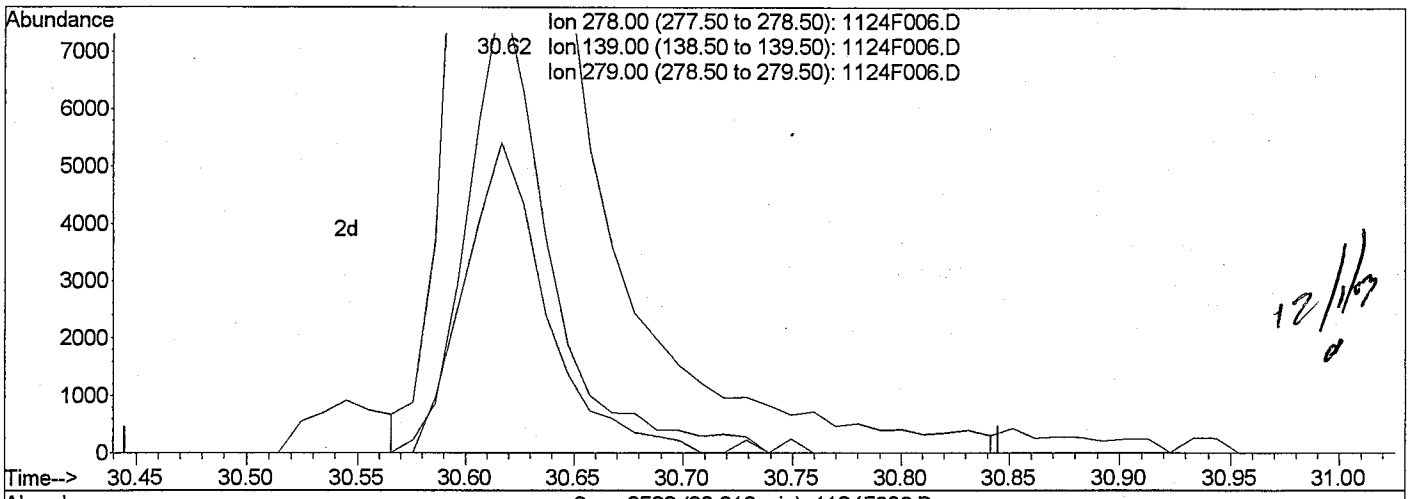
response 87973

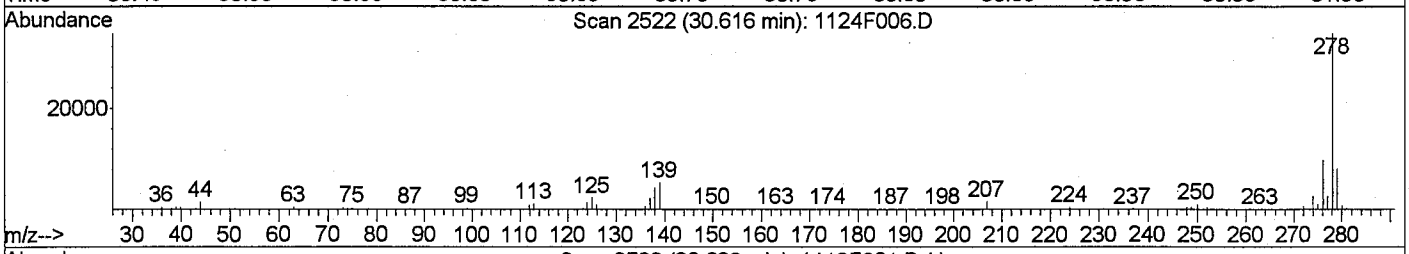
Ion	Exp%	Act%
278.00	100	100
139.00	16.30	15.81
279.00	24.80	23.70
0.00	0.00	0.00

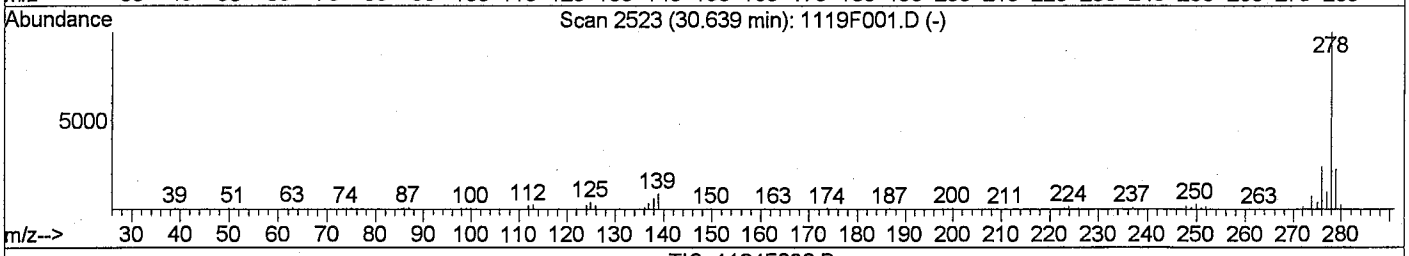
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F006.D Vial: 6
Acq On : 24 Nov 2003 18:21 Operator: JGISH
Sample : 8270-LL @ 1/2 ppm SVM16-2D Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:26 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration







TIC: 1124F006.D

(82) Dibenz(a,h)anthracene (T)

30.62min 892.18ng/ml m

response 92289

Ion	Exp%	Act%
278.00	100	100
139.00	16.30	15.63
279.00	24.80	23.43
0.00	0.00	0.00

11/25/03 BL

1124F006.D 1124BNLL.M Tue Nov 25 08:27:00 2003

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F007.D Vial: 7
Acq On : 24 Nov 2003 19:02 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM16-2E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:21 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03
CP

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.95	152	48404	1000.00	ng/ml	0.00
21) Naphthalene-d8	11.24	136	148247	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.02	164	83894	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.37	188	140088	1000.00	ng/ml	0.00
67) Chrysene-d12	24.55	240	135159	1000.00	ng/ml	-0.01
76) Perylene-d12	28.01	264	89225	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	118665	2283.23	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 60.89%			
6) Phenol-d6	8.44	99	146522	2352.33	ng/ml	0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 62.73%			
19) Nitrobenzene-d5	9.93	82	165340	2138.67	ng/ml	0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 85.55%			
38) 2-Fluorobiphenyl	13.57	172	212033	1823.07	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 72.92%			
58) 2,4,6-Tribromophenol	16.84	330	42575	1798.23	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 157		Recovery = 47.95%			
70) Terphenyl-d14	22.20	244	191633	1808.58	ng/ml	-0.01
Spiked Amount 2500.000	Range 54 - 158		Recovery = 72.34%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.52	42	107111	2032.11	ng/ml#	49
3) Pyridine	5.56	79	138935	2596.77	ng/ml	78
5) Bis(2-chloroethyl) Ether	8.59	93	128569	2266.52	ng/ml	75
7) Phenol	8.47	94	329072	5019.20	ng/ml	93
8) Aniline	8.50	93	171183	2417.23	ng/ml#	52
9) 2-Chlorophenol	8.67	128	235567	4419.26	ng/ml	83
10) 1,3-Dichlorobenzene	8.89	146	133887	2018.45	ng/ml	96
11) 1,4-Dichlorobenzene	8.98	146	140949	2007.71	ng/ml	98
12) 1,2-Dichlorobenzene	9.28	146	126598	2045.05	ng/ml	94
13) Benzyl Alcohol	9.21	108	70291	2200.78	ng/ml#	63
14) Bis(2-chloroisopropyl) Eth	9.48	45	186163	3302.92	ng/ml#	64
15) 2-Methylphenol	9.42	107	186913	4436.43	ng/ml	86
16) Hexachloroethane	9.81	117	66502	1993.71	ng/ml	98
17) N-Nitrosodi-n-propylamine	9.72	70	106400	2381.90	ng/ml	77
18) 4-Methylphenol	9.67	107	278031	4437.65	ng/ml	90
20) Nitrobenzene	9.96	77	169651	2238.55	ng/ml	85
22) Isophorone	10.40	82	255907	1942.32	ng/ml	96
23) 2-Nitrophenol	10.55	139	128296	3877.58	ng/ml	75
24) 2,4-Dimethylphenol	10.64	122	186423	3968.77	ng/ml	83
25) Bis(2-chloroethoxy)methane	10.83	93	150443	2115.10	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1124F007.D 1124BNLL.M Tue Nov 25 13:54:23 2003 JG 11/25/3 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F007.D Vial: 7
Acq On : 24 Nov 2003 19:02 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM16-2E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:21 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03
CP

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	10.99	162	203712	3409.61	ng/ml	95
27)	Benzoic Acid	10.90	122	123764	3436.58	ng/ml#	73
28)	1,2,4-Trichlorobenzene	11.16	180	113825	1593.23	ng/ml	89
29)	Naphthalene	11.28	128	278410	1800.03	ng/ml	99
30)	4-Chloroaniline	11.44	127	124052	1861.82	ng/ml	90
31)	Hexachlorobutadiene	11.68	225	77038	1540.62	ng/ml	99
32)	4-Chloro-3-methylphenol	12.46	107	220179	3480.00	ng/ml	82
33)	2-Methylnaphthalene	12.71	142	195024	2034.60	ng/ml	91
35)	Hexachlorocyclopentadiene	13.22	237	64178	1510.97	ng/ml	94
36)	2,4,6-Trichlorophenol	13.39	196	149882	3472.90	ng/ml	93
37)	2,4,5-Trichlorophenol	13.45	196	156682	3399.19	ng/ml	95
39)	2-Chloronaphthalene	13.74	127	74295	1865.64	ng/ml	96
40)	2-Nitroaniline	14.06	65	84266	2116.87	ng/ml#	71
41)	Acenaphthylene	14.67	152	266571	1984.04	ng/ml	98
42)	Dimethyl Phthalate	14.59	163	226617	1838.30	ng/ml	97
43)	2,6-Dinitrotoluene	14.71	165	51608	2015.54	ng/ml	72
44)	Acenaphthene	15.09	154	163309	2029.02	ng/ml	93
45)	3-Nitroaniline	14.99	138	54700	2240.40	ng/ml	98
46)	2,4-Dinitrophenol	15.22	184	51633	2851.37	ng/ml#	52
47)	Dibenzofuran	15.46	168	252268	1776.31	ng/ml	74
48)	4-Nitrophenol	15.44	109	109913	2927.78	ng/ml#	54
49)	2,4-Dinitrotoluene	15.58	165	67641	1892.49	ng/ml	62
50)	Fluorene	16.25	166	202970	1936.85	ng/ml	98
51)	4-Chlorophenyl Phenyl Ethe	16.30	204	105192	1653.13	ng/ml	90
52)	Diethyl Phthalate	16.24	149	236465	1821.83	ng/ml	97
53)	4-Nitroaniline	16.39	138	53212	2079.93	ng/ml#	62
54)	2-Methyl-4,6-dinitrophenol	16.51	198	86214	2930.90	ng/ml	75
55)	N-Nitrosodiphenylamine	16.58	169	136342	1774.94	ng/ml	97
56)	Azobenzene	16.64	77	302993	2085.75	ng/ml	85
59)	4-Bromophenyl Phenyl Ether	17.40	248	68121	1744.84	ng/ml	87
60)	Hexachlorobenzene	17.70	284	73321	1713.34	ng/ml	96
61)	Pentachlorophenol	18.13	266	106285	3664.70	ng/ml	98
62)	Phenanthrene	18.42	178	285015	1875.72	ng/ml	98
63)	Anthracene	18.53	178	285477	1864.52	ng/ml	98
64)	Carbazole	18.94	167	253551	1903.80	ng/ml	95
65)	Di-n-butyl Phthalate	20.03	149	382395	2061.40	ng/ml	97
66)	Fluoranthene	21.18	202	297902	1784.71	ng/ml	97
68)	Benzidine	21.58	184	316560	4699.19	ng/ml	98
69)	Pyrene	21.69	202	292650	1745.42	ng/ml	99
71)	Butyl Benzyl Phthalate	23.50	149	156201	2091.06	ng/ml	98
72)	3,3'-Dichlorobenzidine	24.58	252	205993	3830.71	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1124F007.D 1124BNLL.M Tue Nov 25 13:54:23 2003 JJ 11/25/03 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F007.D Vial: 7
Acq On : 24 Nov 2003 19:02 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM16-2E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:21 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.52	228	250217	1685.30	ng/ml	98
74)	Chrysene	24.61	228	238959	1698.49	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.00	149	213896	1976.22	ng/ml	98
77)	Di-n-octyl Phthalate	26.50	149	352518	2288.73	ng/ml	92
78)	Benzo(b)fluoranthene	27.11	252	224134	1847.40	ng/ml	98
79)	Benzo(k)fluoranthene	27.17	252	219452	1903.11	ng/ml	98
80)	Benzo(a)pyrene	27.88	252	216380	1879.14	ng/ml	96
81)	Indeno(1,2,3-cd)pyrene	30.56	276	185763	1728.58	ng/ml	97
82)	Dibenz(a,h)anthracene	30.63	278	192418	1828.45	ng/ml	98
83)	Benzo(g,h,i)perylene	31.13	276	199146	1787.30	ng/ml	96

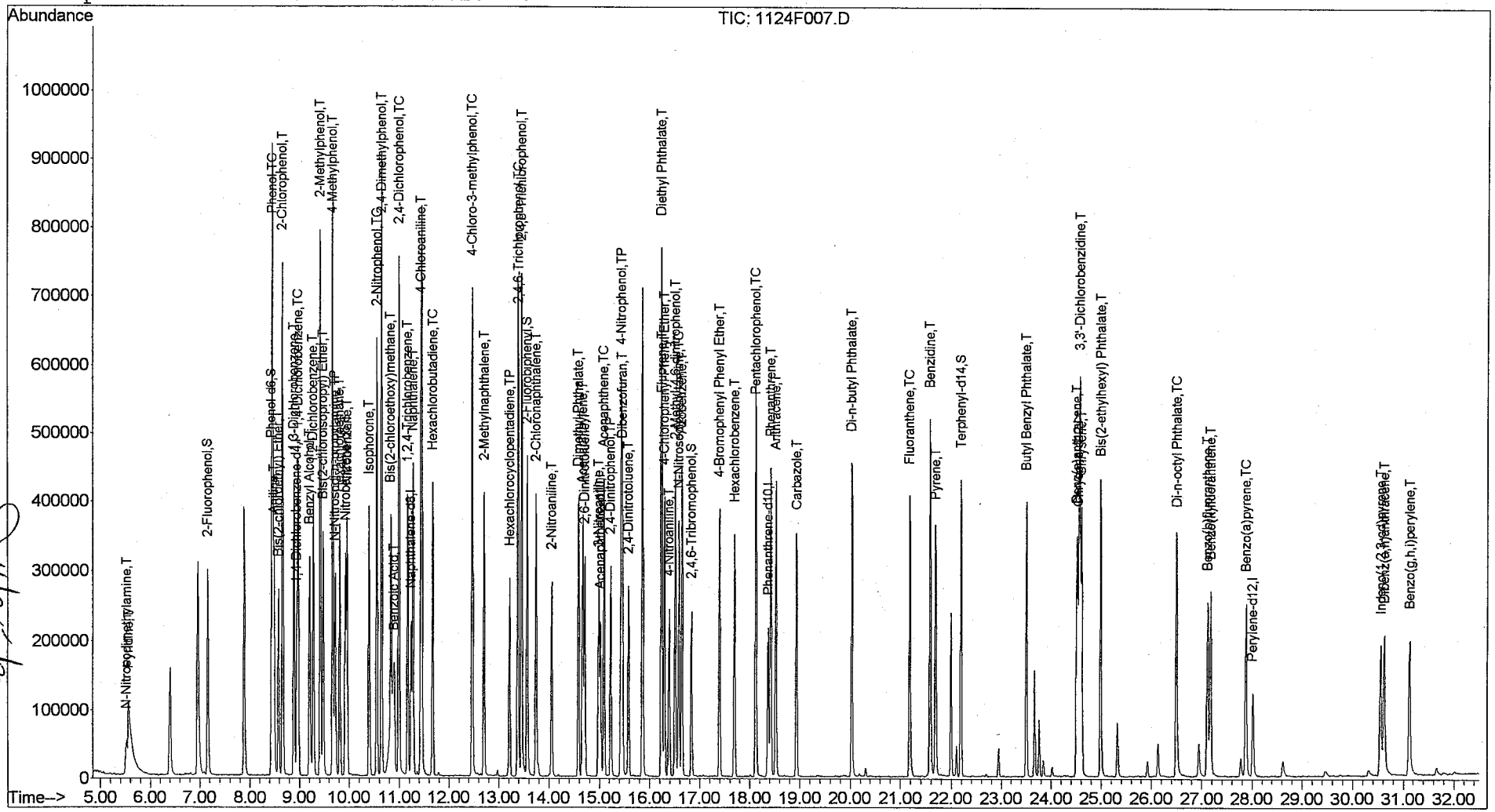
JJ 11/25/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F007.D Vial: 7
Acq On : 24 Nov 2003 19:02 Operator: JGISH
Sample : 8270-LL @ 2/4 ppm SVM16-2E Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:02 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration



2363

4/5/2011

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F008.D Vial: 8
Acq On : 24 Nov 2003 19:43 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM16-2F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:26 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03
09

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.95	152	48672	1000.00	ng/ml	0.01
21) Naphthalene-d8	11.24	136	151773	1000.00	ng/ml	0.00
34) Acenaphthene-d10	15.02	164	82842	1000.00	ng/ml	0.00
57) Phenanthrene-d10	18.38	188	138429	1000.00	ng/ml	0.00
67) Chrysene-d12	24.55	240	140813	1000.00	ng/ml	0.00
76) Perylene-d12	28.02	264	89621	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	176577	3378.80	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 90.10%			
6) Phenol-d6	8.45	99	223424	3567.19	ng/ml	0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 95.13%			
19) Nitrobenzene-d5	9.92	82	247212	3180.07	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 127.20%			
38) 2-Fluorobiphenyl	13.57	172	317296	2762.78	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 110.51%			
58) 2,4,6-Tribromophenol	16.84	330	63940	2732.98	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 72.88%			
70) Terphenyl-d14	22.20	244	285794	2588.95	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 103.56%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.51	42	160312	3024.69	ng/ml#	46
3) Pyridine	5.55	79	205057m	3811.53	ng/ml	
5) Bis(2-chloroethyl) Ether	8.59	93	189067	3314.68	ng/ml	77
7) Phenol	8.47	94	489540	7425.64	ng/ml	92
8) Aniline	8.49	93	262668	3688.64	ng/ml#	58
9) 2-Chlorophenol	8.67	128	356255	6646.58	ng/ml	85
10) 1,3-Dichlorobenzene	8.90	146	201886	3026.82	ng/ml	97
11) 1,4-Dichlorobenzene	8.98	146	208537	2954.09	ng/ml	98
12) 1,2-Dichlorobenzene	9.28	146	190888	3066.60	ng/ml	92
13) Benzyl Alcohol	9.21	108	105083	3271.98	ng/ml#	59
14) Bis(2-chloroisopropyl) Eth	9.48	45	270647	4775.41	ng/ml#	65
15) 2-Methylphenol	9.42	107	284712	6720.50	ng/ml	83
16) Hexachloroethane	9.81	117	100720	3002.93	ng/ml	95
17) N-Nitrosodi-n-propylamine	9.73	70	157593	3508.49	ng/ml	78
18) 4-Methylphenol	9.68	107	421812	6695.46	ng/ml	89
20) Nitrobenzene	9.96	77	246859	3239.37	ng/ml	85
22) Isophorone	10.40	82	373781	2771.06	ng/ml	95
23) 2-Nitrophenol	10.56	139	199648	5893.92	ng/ml	76
24) 2,4-Dimethylphenol	10.65	122	276783	5755.56	ng/ml	83
25) Bis(2-chloroethoxy)methane	10.83	93	225428	3095.69	ng/ml	97

(#) = qualifier out of range (m) = manual integration
1124F008.D 1124BNLL.M Tue Nov 25 13:54:26 2003 11/25/3 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F008.D Vial: 8
Acq On : 24 Nov 2003 19:43 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM16-2F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:26 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 cd

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.00	162	311995	5100.66	ng/ml	96
27)	Benzoic Acid	10.94	122	200050	5128.85	ng/ml#	76
28)	1,2,4-Trichlorobenzene	11.17	180	170432	2330.14	ng/ml	91
29)	Naphthalene	11.28	128	415536	2624.19	ng/ml	100
30)	4-Chloroaniline	11.45	127	186133	2728.65	ng/ml	91
31)	Hexachlorobutadiene	11.68	225	112744	2202.29	ng/ml	98
32)	4-Chloro-3-methylphenol	12.47	107	334178	5159.09	ng/ml	81
33)	2-Methylnaphthalene	12.70	142	282705	2880.81	ng/ml	93
35)	Hexachlorocyclopentadiene	13.22	237	99949	2383.03	ng/ml	94
36)	2,4,6-Trichlorophenol	13.39	196	228472	5361.13	ng/ml	93
37)	2,4,5-Trichlorophenol	13.46	196	240351	5280.59	ng/ml	94
39)	2-Chloronaphthalene	13.75	127	113031	2874.39	ng/ml	94
40)	2-Nitroaniline	14.06	65	126843	3226.93	ng/ml#	74
41)	Acenaphthylene	14.68	152	402409	3033.09	ng/ml	99
42)	Dimethyl Phthalate	14.59	163	350102	2876.07	ng/ml	97
43)	2,6-Dinitrotoluene	14.72	165	77766	3075.70	ng/ml	72
44)	Acenaphthene	15.10	154	245525	3089.25	ng/ml	95
45)	3-Nitroaniline	14.99	138	79638	3303.23	ng/ml	97
46)	2,4-Dinitrophenol	15.24	184	88503	4287.54	ng/ml	69
47)	Dibenzofuran	15.46	168	379146	2703.60	ng/ml	67
48)	4-Nitrophenol	15.45	109	167421	4516.27	ng/ml#	20
49)	2,4-Dinitrotoluene	15.60	165	104324	2955.89	ng/ml	81
50)	Fluorene	16.24	166	306100	2958.06	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.30	204	154703	2462.09	ng/ml	92
52)	Diethyl Phthalate	16.24	149	356299	2779.95	ng/ml	97
53)	4-Nitroaniline	16.40	138	80689	3194.00	ng/ml#	67
54)	2-Methyl-4,6-dinitrophenol	16.52	198	146319	5037.38	ng/ml#	68
55)	N-Nitrosodiphenylamine	16.59	169	201647	2658.44	ng/ml	96
56)	Azobenzene	16.65	77	444813	3100.90	ng/ml	84
59)	4-Bromophenyl Phenyl Ether	17.41	248	101780	2638.22	ng/ml	90
60)	Hexachlorobenzene	17.70	284	110311	2608.60	ng/ml	98
61)	Pentachlorophenol	18.13	266	162190	5659.33	ng/ml	99
62)	Phenanthrene	18.43	178	407053	2710.97	ng/ml	99
63)	Anthracene	18.53	178	428772	2833.98	ng/ml	98
64)	Carbazole	18.95	167	375482	2853.11	ng/ml	94
65)	Di-n-butyl Phthalate	20.03	149	575380	3138.90	ng/ml	97
66)	Fluoranthene	21.19	202	439489	2664.50	ng/ml	97
68)	Benzidine	21.59	184	497937	7094.86	ng/ml	98
69)	Pyrene	21.69	202	435598	2493.68	ng/ml	99
71)	Butyl Benzyl Phthalate	23.50	149	235628	3027.69	ng/ml	91
72)	3,3'-Dichlorobenzidine	24.58	252	326771	5832.73	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F008.D Vial: 8
Acq On : 24 Nov 2003 19:43 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM16-2F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 08:02:26 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03 cg

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.52	228	380679	2461.05	ng/ml	97
74)	Chrysene	24.61	228	362785	2475.08	ng/ml	98
75)	Bis(2-ethylhexyl) Phthalat	24.99	149	319828	2836.29	ng/ml	97
77)	Di-n-octyl Phthalate	26.49	149	535400	3460.73	ng/ml	86
78)	Benzo(b)fluoranthene	27.13	252	337521	2769.69	ng/ml	97
79)	Benzo(k)fluoranthene	27.19	252	333537	2879.68	ng/ml	97
80)	Benzo(a)pyrene	27.88	252	324400	2804.79	ng/ml	97
81)	Indeno(1,2,3-cd)pyrene	30.56	276	291961	2704.78	ng/ml	97
82)	Dibenz(a,h)anthracene	30.63	278	290661	2749.81	ng/ml	99
83)	Benzo(g,h,i)perylene	31.15	276	305176	2726.80	ng/ml	95

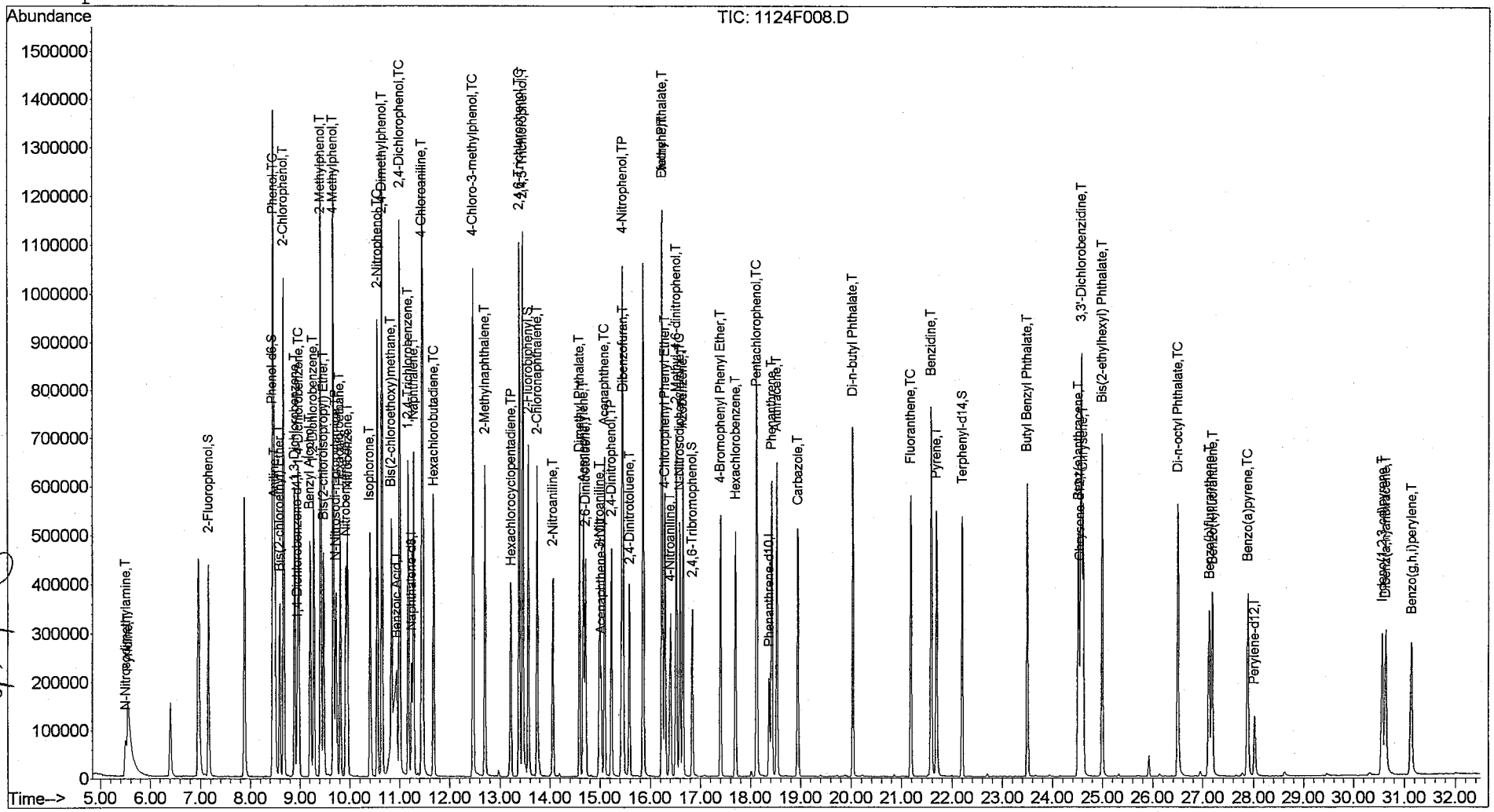
11/25/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F008.D Vial: 8
Acq On : 24 Nov 2003 19:43 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM16-2F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:28 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration

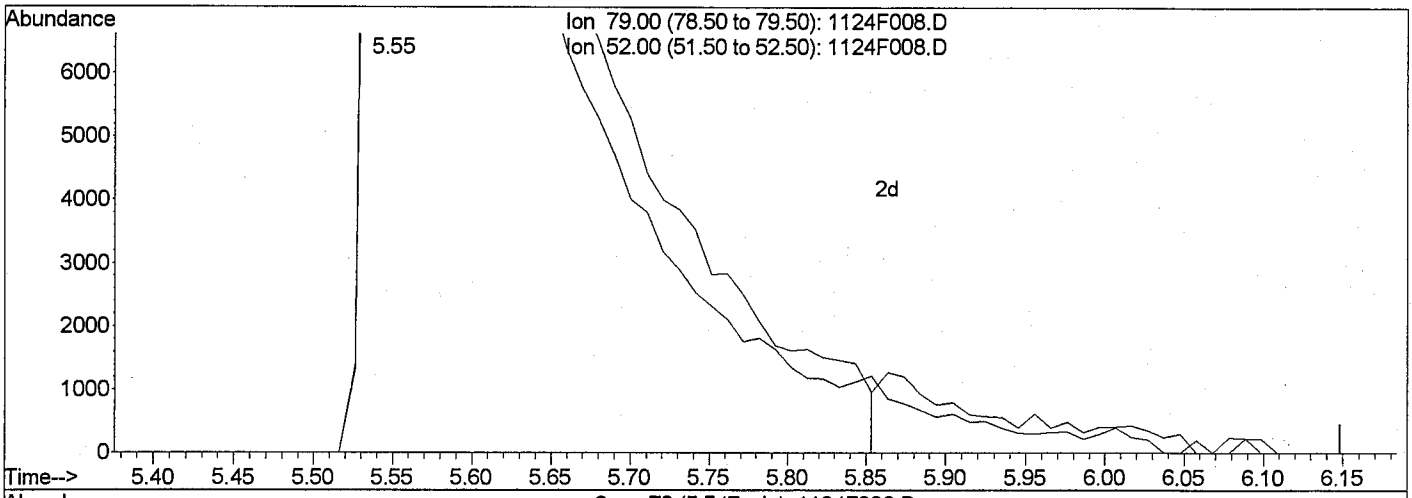


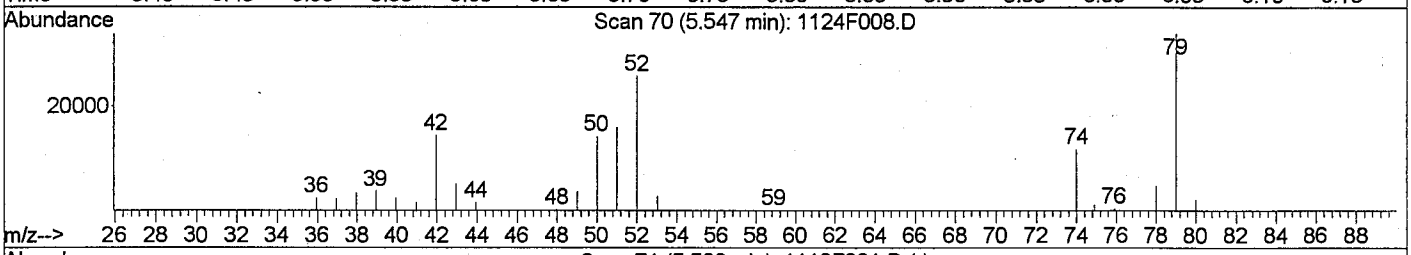
2367

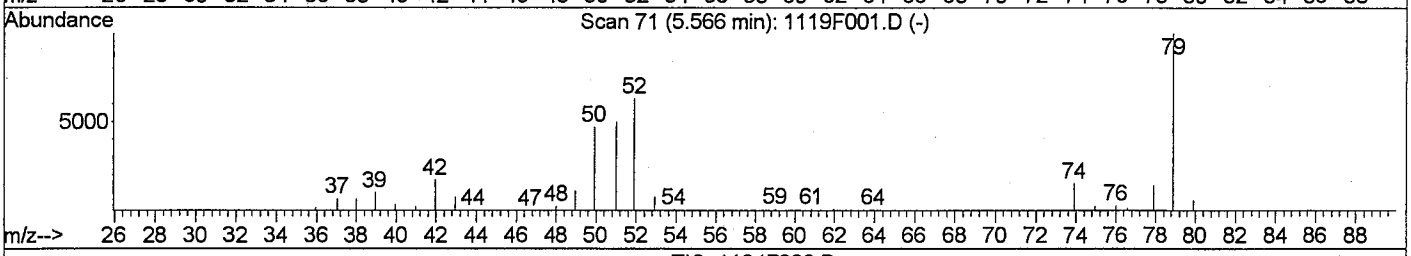
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F008.D Vial: 8
Acq On : 24 Nov 2003 19:43 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM16-2F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:02 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration







TIC: 1124F008.D

(3) Pyridine (T)

5.55min 3685.19ng/ml

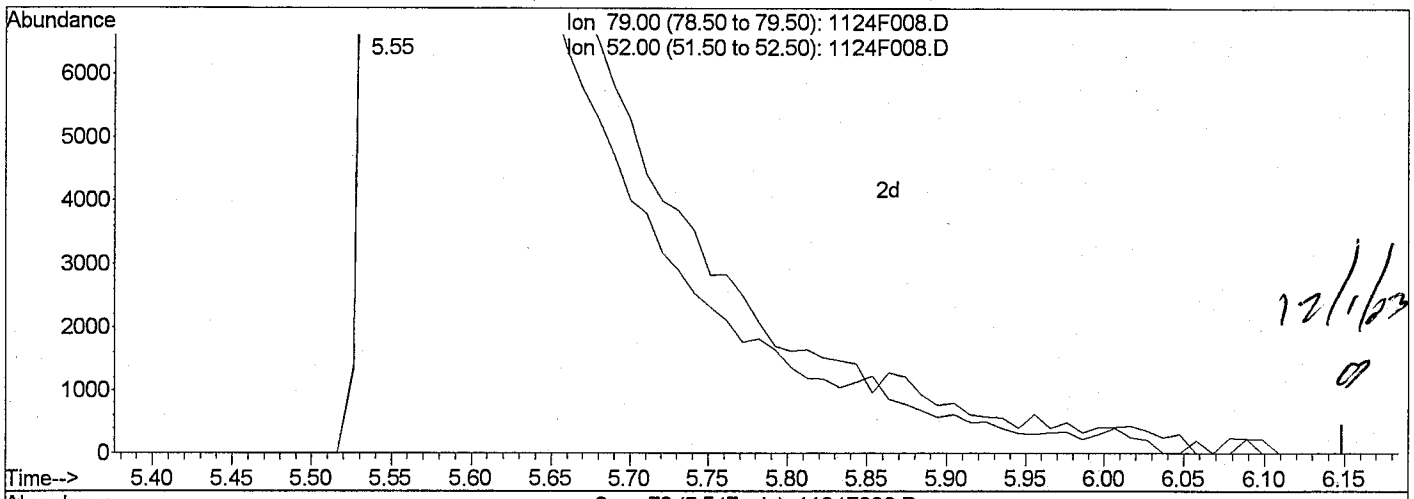
response 198260

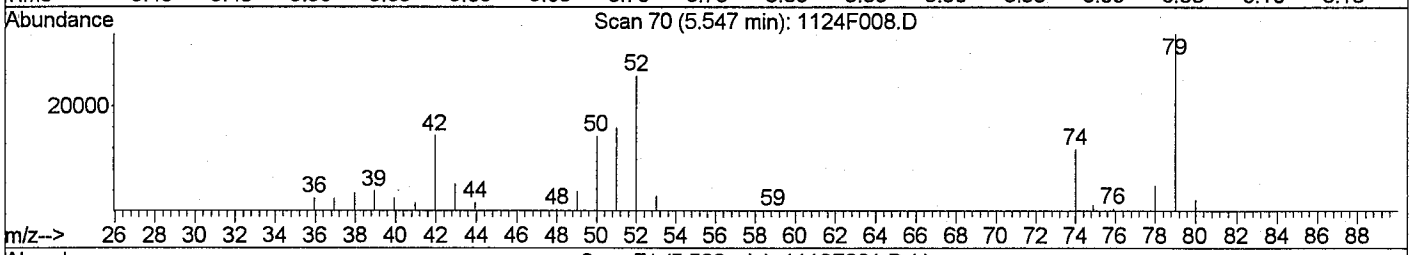
Ion	Exp%	Act%
79.00	100	100
52.00	59.50	76.20
0.00	0.00	0.00
0.00	0.00	0.00

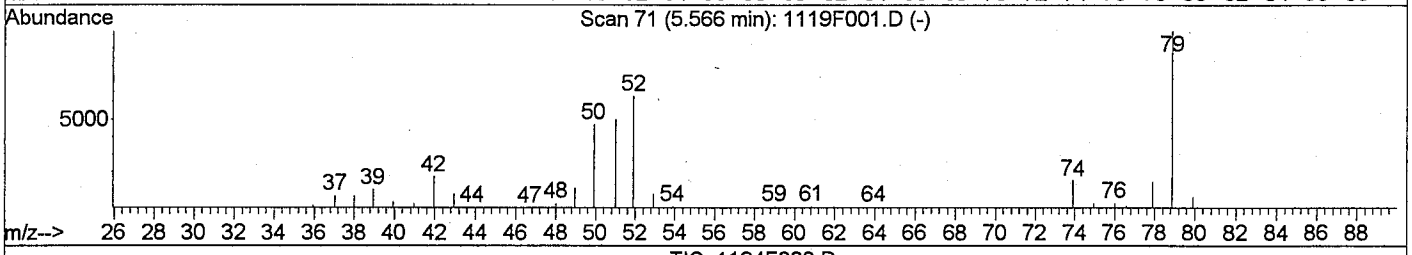
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F008.D Vial: 8
Acq On : 24 Nov 2003 19:43 Operator: JGISH
Sample : 8270-LL @ 3/6 ppm SVM16-2F Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 8:28 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Multiple Level Calibration







TIC: 1124F008.D

(3) Pyridine (T)

5.55min 3811.53ng/ml m

response 205057

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	76.20
0.00	0.00	0.00
0.00	0.00	0.00

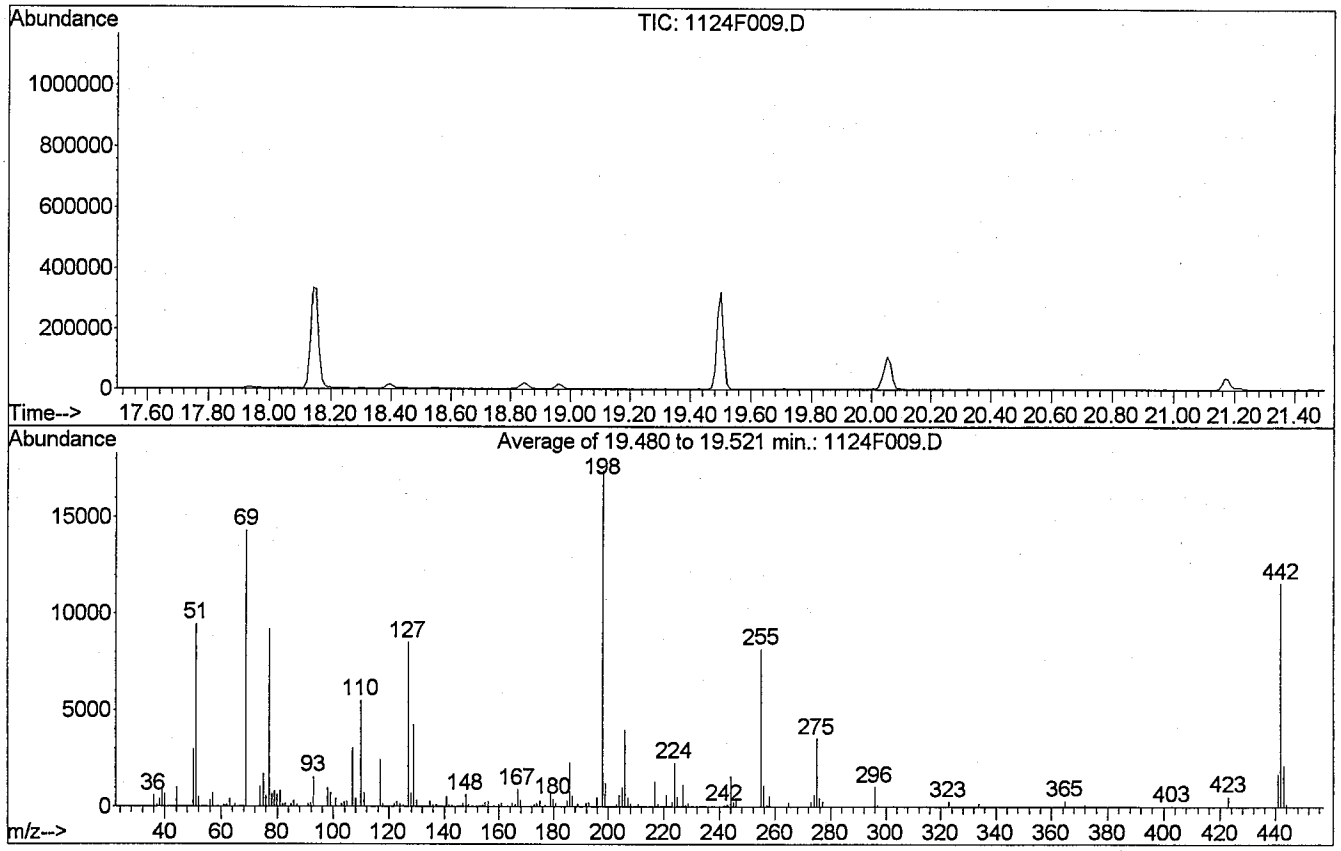
12/1/03 Ø

11/25/3 BE Incomplete

DFTPP

Data File : J:\MS10\DATA\112403\1124F009.D
Acq On : 25 Nov 2003 8:09
Sample : TUNE @ 2.5 ppm SVM16-2K
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: JGISH
Inst : MS10
Multiplr: 1.00



12/1/03
ø

Spectrum Information: Average of 19.480 to 19.521 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	54.3	9462	PASS
68	69	0.00	2	0.3	47	PASS
69	198	0.00	100	82.1	14306	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	48.8	8508	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	17420	PASS
199	198	5	9	7.0	1227	PASS
275	198	10	30	20.2	3525	PASS
365	198	0.75	100	1.8	312	PASS
441	443	0.01	100	79.6	1702	PASS
441	443	0.01	100	79.6	1702	PASS
442	198	40	110	66.7	11624	PASS
443	442	15	24	18.4	2137	PASS

1124F009.D 1124BNLL.M Tue Nov 25 08:52:27 2003 J 11/25/03

Average of 19.480 to 19.521 min.: 1124F009.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	595	60.95	95	78.90	795	97.90	963
37.10	102	61.95	104	79.90	630	98.90	737
38.00	401	62.90	419	80.90	858	100.90	430
39.00	1004	64.95	151	81.85	151	102.85	145
39.95	687	67.85	47	82.90	175	103.90	232
43.95	997	68.85	14306	84.95	148	104.85	276
50.00	2968	73.90	1028	85.85	301	106.90	3030
51.00	9462	74.90	1722	86.95	95	108.00	438
51.95	491	75.95	569	90.90	144	109.95	5517
55.95	341	77.00	9190	91.90	165	110.90	755
56.95	718	77.95	680	92.85	1548	111.95	52

Average of 19.480 to 19.521 min.: 1124F009.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
115.95	58	130.90	44	148.95	107	167.90	334
116.85	2433	133.85	53	152.70	57	171.80	43
117.80	159	134.85	265	152.90	62	172.85	108
121.95	136	135.90	99	153.85	95	173.75	180
122.90	267	137.00	112	154.85	202	174.90	298
123.90	123	140.85	551	155.95	294	176.80	80
125.00	75	141.80	127	159.90	113	178.80	739
126.90	8508	142.85	54	160.85	164	179.90	408
127.90	699	145.90	46	164.85	179	180.85	184
128.90	4228	146.90	169	165.85	120	184.90	287
129.90	328	147.90	623	166.85	888	185.85	2258

Average of 19.480 to 19.521 min.: 1124F009.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.85	595	204.90	1006	226.85	1131	256.95	58
187.95	51	205.95	3965	227.85	84	257.85	533
188.85	145	206.95	495	228.85	175	264.85	200
191.90	164	207.90	160	234.95	43	272.90	237
192.85	206	210.80	126	241.80	74	273.90	623
195.85	469	216.85	1296	242.95	102	274.90	3525
197.80	17420	217.80	155	243.90	1579	275.90	438
198.80	1227	220.90	594	244.90	222	276.90	267
199.80	46	222.90	237	245.85	339	295.90	1029
202.85	97	223.90	2271	254.85	8164	296.80	65
203.85	611	224.90	507	255.85	1112	302.85	45

Average of 19.480 to 19.521 min.: 1124F009.D
TUNE @ 2.5 ppm SVM16-2K

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
314.90	46	443.95	126				
322.90	271						
333.90	176						
364.85	312						
371.85	101						
402.85	40						
422.95	545						
423.85	49						
440.95	1702						
441.90	11624						
442.90	2137						

12/1/03

11/25/13

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F011.D Vial: 9
Acq On : 25 Nov 2003 9:32 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM16-2G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:11:47 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.98	152	44223	1000.00	ng/ml	0.04
21) Naphthalene-d8	11.27	136	139701	1000.00	ng/ml	0.03
34) Acenaphthene-d10	15.05	164	77446	1000.00	ng/ml	0.03
57) Phenanthrene-d10	18.40	188	128182	1000.00	ng/ml	0.03
67) Chrysene-d12	24.58	240	129495	1000.00	ng/ml	0.02
76) Perylene-d12	28.05	264	83782	1000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	225582	4750.77	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 126.69%#			
6) Phenol-d6	8.48	99	283896	4988.70	ng/ml	0.05
Spiked Amount 3750.000	Range 43 - 128		Recovery = 133.03%#			
19) Nitrobenzene-d5	9.96	82	318241	4505.62	ng/ml	0.05
Spiked Amount 2500.000	Range 30 - 139		Recovery = 180.22%#			
38) 2-Fluorobiphenyl	13.60	172	402777	3751.43	ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 150.06%#			
58) 2,4,6-Tribromophenol	16.87	330	80055	3695.33	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 98.54%			
70) Terphenyl-d14	22.23	244	377045	3714.10	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 148.56%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.51	42	205147	4260.02	ng/ml#	48
3) Pyridine	5.56	79	268357	5489.95	ng/ml	75
5) Bis(2-chloroethyl) Ether	8.62	93	238390	4599.87	ng/ml	79
7) Phenol	8.50	94	604360	10089.57	ng/ml	89
8) Aniline	8.52	93	327985	5069.25	ng/ml#	59
9) 2-Chlorophenol	8.70	128	437298	8979.37	ng/ml	86
10) 1,3-Dichlorobenzene	8.92	146	245380	4049.03	ng/ml	94
11) 1,4-Dichlorobenzene	9.00	146	260106	4055.30	ng/ml	97
12) 1,2-Dichlorobenzene	9.30	146	238143	4210.63	ng/ml	91
13) Benzyl Alcohol	9.23	108	133730	4582.87	ng/ml#	54
14) Bis(2-chloroisopropyl) Eth	9.50	45	362541	7040.37	ng/ml#	64
15) 2-Methylphenol	9.45	107	361168	9382.88	ng/ml	86
16) Hexachloroethane	9.84	117	122486	4019.27	ng/ml	97
17) N-Nitrosodi-n-propylamine	9.77	70	206197	5052.39	ng/ml	80
18) 4-Methylphenol	9.71	107	522626	9130.27	ng/ml	91
20) Nitrobenzene	9.99	77	326735	4718.88	ng/ml	85
22) Isophorone	10.44	82	469745	3783.44	ng/ml	95
23) 2-Nitrophenol	10.58	139	247511	7938.33	ng/ml	73
24) 2,4-Dimethylphenol	10.67	122	343444	7758.88	ng/ml	84
25) Bis(2-chloroethoxy)methane	10.87	93	283125	4223.99	ng/ml	98

(#) = qualifier out of range (m) = manual integration

11/25/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F011.D Vial: 9
Acq On : 25 Nov 2003 9:32 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM16-2G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:11:47 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.03	162	375423	6667.99	ng/ml	97
27)	Benzoic Acid	10.99	122	253190	6859.81	ng/ml#	75
28)	1,2,4-Trichlorobenzene	11.20	180	217626	3232.49	ng/ml	91
29)	Naphthalene	11.31	128	530782	3641.65	ng/ml	99
30)	4-Chloroaniline	11.47	127	228070	3632.35	ng/ml	87
31)	Hexachlorobutadiene	11.71	225	140658	2984.98	ng/ml	99
32)	4-Chloro-3-methylphenol	12.49	107	417344	6999.77	ng/ml	81
33)	2-Methylnaphthalene	12.73	142	347678	3849.05	ng/ml	91
35)	Hexachlorocyclopentadiene	13.24	237	125578	3202.70	ng/ml	94
36)	2,4,6-Trichlorophenol	13.41	196	279856	7024.41	ng/ml	94
37)	2,4,5-Trichlorophenol	13.49	196	298586	7017.10	ng/ml	96
39)	2-Chloronaphthalene	13.77	127	139350	3790.59	ng/ml	94
40)	2-Nitroaniline	14.09	65	168016	4572.19	ng/ml#	74
41)	Acenaphthylene	14.70	152	512485	4131.90	ng/ml	99
42)	Dimethyl Phthalate	14.62	163	431757	3793.98	ng/ml	97
43)	2,6-Dinitrotoluene	14.74	165	101812	4307.30	ng/ml#	64
44)	Acenaphthene	15.12	154	305176	4107.33	ng/ml	95
45)	3-Nitroaniline	15.03	138	101918	4521.91	ng/ml	99
46)	2,4-Dinitrophenol	15.26	184	120619	5838.65	ng/ml#	63
47)	Dibenzofuran	15.49	168	490258	3739.49	ng/ml#	41
48)	4-Nitrophenol	15.48	109	212452	6130.31	ng/ml#	23
49)	2,4-Dinitrotoluene	15.62	165	137204	4158.37	ng/ml	71
50)	Fluorene	16.28	166	393220	4064.72	ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.33	204	205207	3493.41	ng/ml	91
52)	Diethyl Phthalate	16.27	149	455514	3801.68	ng/ml	96
53)	4-Nitroaniline	16.44	138	105629	4472.55	ng/ml#	65
54)	2-Methyl-4,6-dinitrophenol	16.55	198	183955	6774.34	ng/ml#	71
55)	N-Nitrosodiphenylamine	16.62	169	260567	3674.56	ng/ml	97
56)	Azobenzene	16.67	77	581650	4337.34	ng/ml	83
59)	4-Bromophenyl Phenyl Ether	17.43	248	128768	3604.60	ng/ml	89
60)	Hexachlorobenzene	17.73	284	143138	3655.47	ng/ml	97
61)	Pentachlorophenol	18.16	266	208035	7839.30	ng/ml	100
62)	Phenanthrene	18.45	178	532188	3827.71	ng/ml	99
63)	Anthracene	18.56	178	540047	3854.81	ng/ml	98
64)	Carbazole	18.98	167	485655	3985.27	ng/ml	95
65)	Di-n-butyl Phthalate	20.06	149	737908	4347.36	ng/ml	97
66)	Fluoranthene	21.22	202	562061	3680.03	ng/ml	96
68)	Benzidine	21.62	184	601817	9324.46	ng/ml	97
69)	Pyrene	21.73	202	546808	3403.91	ng/ml	100
71)	Butyl Benzyl Phthalate	23.52	149	302421	4225.58	ng/ml	92
72)	3,3'-Dichlorobenzidine	24.61	252	416233	8078.95	ng/ml	99

(#) = qualifier out of range (m) = manual integration

11/25/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F011.D Vial: 9
Acq On : 25 Nov 2003 9:32 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM16-2G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:11:47 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Nov 21 14:03:45 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.55	228	475256	3341.02	ng/ml	99
74)	Chrysene	24.65	228	467367	3467.28	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.02	149	419284	4043.27	ng/ml	96
77)	Di-n-octyl Phthalate	26.52	149	689407	4766.77	ng/ml	87
78)	Benzo(b)fluoranthene	27.15	252	453384	3979.75	ng/ml	97
79)	Benzo(k)fluoranthene	27.21	252	414868	3831.50	ng/ml	98
80)	Benzo(a)pyrene	27.92	252	419772	3882.32	ng/ml	96
81)	Indeno(1,2,3-cd)pyrene	30.60	276	380475	3770.44	ng/ml	96
82)	Dibenz(a,h)anthracene	30.67	278	378999	3835.41	ng/ml	98
83)	Benzo(g,h,i)perylene	31.18	276	395775	3782.77	ng/ml	95

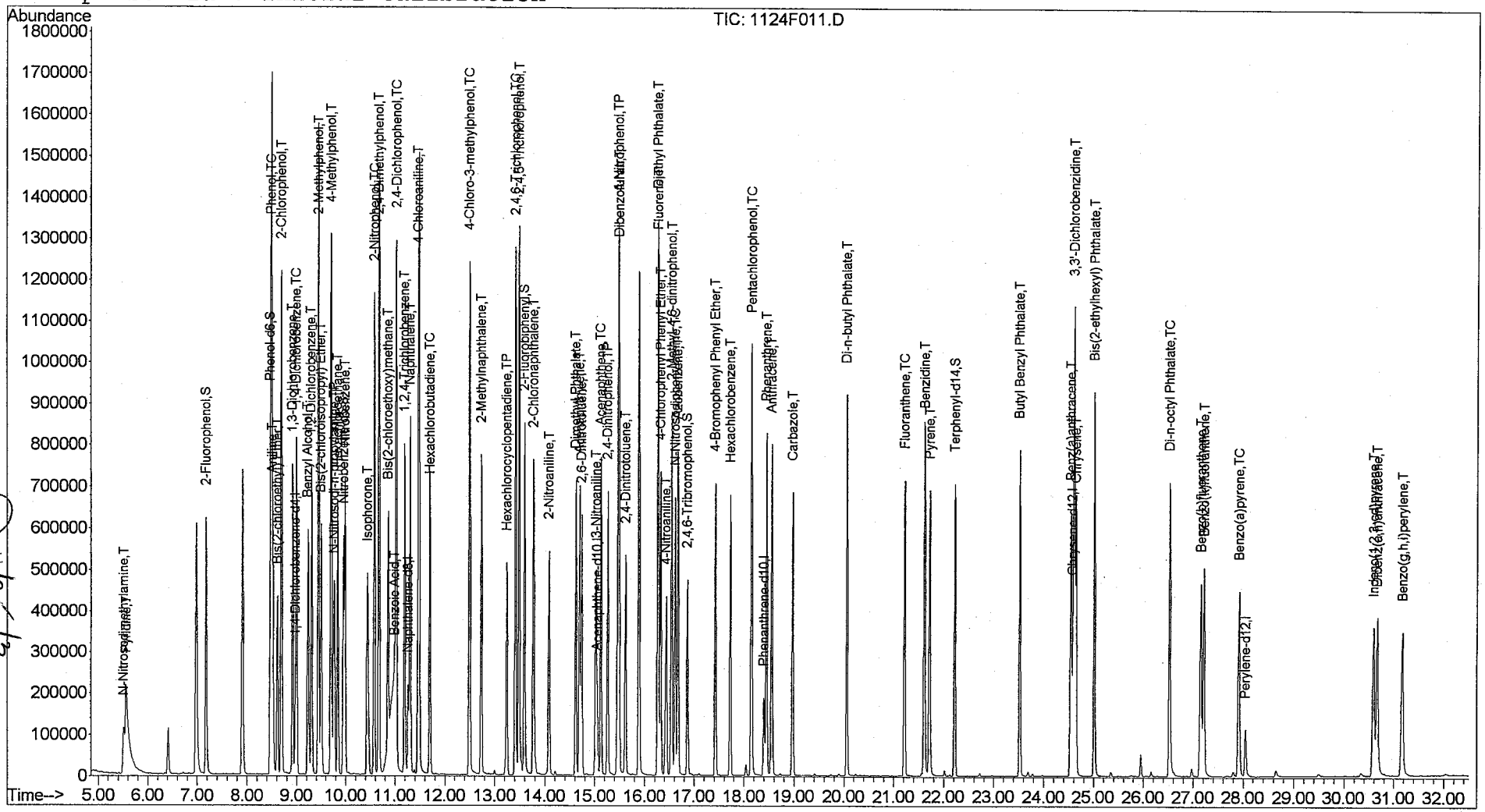
11/25/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F011.D Vial: 9
Acq On : 25 Nov 2003 9:32 Operator: JGISH
Sample : 8270-LL @ 4/8 ppm SVM16-2G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:11 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration



2375

4/5/2011

11/25/11

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F012.D Vial: 10
Acq On : 25 Nov 2003 10:13 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM16-2H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:48:05 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:22:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03
CF

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	43379	1000.00 ng/ml	0.02
21) Naphthalene-d8	11.27	136	132155	1000.00 ng/ml	0.03
34) Acenaphthene-d10	15.05	164	73496	1000.00 ng/ml	0.03
57) Phenanthrene-d10	18.40	188	124571	1000.00 ng/ml	0.02
67) Chrysene-d12	24.58	240	125837	1000.00 ng/ml	0.03
76) Perylene-d12	28.05	264	81262	1000.00 ng/ml	0.03
System Monitoring Compounds					
4) 2-Fluorophenol	7.17	112	271550	5155.74 ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 137.49%#		
6) Phenol-d6	8.48	99	342527	5254.99 ng/ml	0.03
Spiked Amount 3750.000	Range 43 - 128		Recovery = 140.13%#		
19) Nitrobenzene-d5	9.95	82	377934	5248.39 ng/ml	0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 209.94%#		
38) 2-Fluorobiphenyl	13.60	172	502698	5354.82 ng/ml	0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 214.19%#		
58) 2,4,6-Tribromophenol	16.87	330	99272	5342.49 ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 142.47%		
70) Terphenyl-d14	22.22	244	440522	5132.23 ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 205.29%#		
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	5.50	42	247800	5142.71 ng/ml#	46
3) Pyridine	5.55	79	325943	5199.12 ng/ml	76
5) Bis(2-chloroethyl) Ether	8.61	93	301112	5177.38 ng/ml	76
7) Phenol	8.50	94	732645	10130.34 ng/ml	85
8) Aniline	8.52	93	404949	5313.76 ng/ml#	52
9) 2-Chlorophenol	8.70	128	523893	10078.47 ng/ml	83
10) 1,3-Dichlorobenzene	8.92	146	302444	5081.69 ng/ml	95
11) 1,4-Dichlorobenzene	9.00	146	324933	5200.84 ng/ml	97
12) 1,2-Dichlorobenzene	9.31	146	290080	5004.06 ng/ml	92
13) Benzyl Alcohol	9.24	108	165398	5496.40 ng/ml#	55
14) Bis(2-chloroisopropyl) Eth	9.50	45	425671	4971.73 ng/ml#	65
15) 2-Methylphenol	9.45	107	414862	9844.64 ng/ml	86
16) Hexachloroethane	9.84	117	148510	5071.18 ng/ml	95
17) N-Nitrosodi-n-propylamine	9.77	70	240013	4999.44 ng/ml	75
18) 4-Methylphenol	9.71	107	608289	9859.64 ng/ml	89
20) Nitrobenzene	9.98	77	387765	5188.60 ng/ml	83
22) Isophorone	10.44	82	593260	5332.18 ng/ml	94
23) 2-Nitrophenol	10.59	139	299832	11242.34 ng/ml	79
24) 2,4-Dimethylphenol	10.68	122	417032	10302.41 ng/ml	82
25) Bis(2-chloroethoxy)methane	10.86	93	340907	5176.74 ng/ml	98

(#) = qualifier out of range (m) = manual integration
1124F012.D 1124BNLL.M Tue Nov 25 13:55:47 2003 JJ 11/25/03 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F012.D Vial: 10
Acq On : 25 Nov 2003 10:13 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM16-2H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:48:05 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:22:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26)	2,4-Dichlorophenol	11.03	162	461790	10712.57 ng/ml	96
27)	Benzoic Acid	11.03	122	314261	12116.73 ng/ml#	77
28)	1,2,4-Trichlorobenzene	11.20	180	262944	5312.24 ng/ml	90
29)	Naphthalene	11.31	128	646316	5189.34 ng/ml	99
30)	4-Chloroaniline	11.48	127	290757	5406.65 ng/ml	88
31)	Hexachlorobutadiene	11.70	225	175952	5300.91 ng/ml	98
32)	4-Chloro-3-methylphenol	12.50	107	505123	10512.44 ng/ml	82
33)	2-Methylnaphthalene	12.73	142	437981	5223.29 ng/ml	90
35)	Hexachlorocyclopentadiene	13.24	237	160518	5877.42 ng/ml	95
36)	2,4,6-Trichlorophenol	13.42	196	335982	10491.12 ng/ml	93
37)	2,4,5-Trichlorophenol	13.49	196	362768	10893.06 ng/ml	94
39)	2-Chloronaphthalene	13.78	127	175165	5235.41 ng/ml	95
40)	2-Nitroaniline	14.09	65	201547	5824.68 ng/ml#	75
41)	Acenaphthylene	14.70	152	626064	5207.46 ng/ml	98
42)	Dimethyl Phthalate	14.62	163	531948	5279.79 ng/ml	97
43)	2,6-Dinitrotoluene	14.75	165	123471	5997.96 ng/ml	72
44)	Acenaphthene	15.13	154	383537	5134.05 ng/ml	95
45)	3-Nitroaniline	15.02	138	128226	5732.18 ng/ml	94
46)	2,4-Dinitrophenol	15.27	184	153977	9906.88 ng/ml#	63
47)	Dibenzofuran	15.49	168	593398	5206.78 ng/ml	48
48)	4-Nitrophenol	15.48	109	254378	11305.58 ng/ml#	9
49)	2,4-Dinitrotoluene	15.63	165	169472	6430.05 ng/ml	78
50)	Fluorene	16.27	166	481053	5230.34 ng/ml	99
51)	4-Chlorophenyl Phenyl Ethe	16.32	204	248375	5351.76 ng/ml	86
52)	Diethyl Phthalate	16.27	149	561278	5390.20 ng/ml	98
53)	4-Nitroaniline	16.44	138	130680	5869.45 ng/ml#	68
54)	2-Methyl-4,6-dinitrophenol	16.56	198	229212	10049.33 ng/ml	74
55)	N-Nitrosodiphenylamine	16.63	169	317110	5330.95 ng/ml	97
56)	Azobenzene	16.68	77	693249	5121.81 ng/ml	85
59)	4-Bromophenyl Phenyl Ether	17.43	248	163013	5340.63 ng/ml	84
60)	Hexachlorobenzene	17.73	284	169781	5069.61 ng/ml	95
61)	Pentachlorophenol	18.15	266	249611	11185.20 ng/ml	97
62)	Phenanthrene	18.46	178	646926	4539.60 ng/ml	100
63)	Anthracene	18.56	178	651134	4916.85 ng/ml	98
64)	Carbazole	18.97	167	596719	5298.12 ng/ml	93
65)	Di-n-butyl Phthalate	20.06	149	875387	5078.86 ng/ml	98
66)	Fluoranthene	21.22	202	686415	4791.72 ng/ml	97
68)	Benzidine	21.62	184	709284	10753.71 ng/ml	98
69)	Pyrene	21.72	202	673950	4717.05 ng/ml	99
71)	Butyl Benzyl Phthalate	23.53	149	369298	5315.96 ng/ml	94
72)	3,3'-Dichlorobenzidine	24.61	252	510010	11408.82 ng/ml	99

(#) = qualifier out of range (m) = manual integration
1124F012.D 1124BNLL.M Tue Nov 25 13:55:47 2003 11/25/03 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F012.D Vial: 10
Acq On : 25 Nov 2003 10:13 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM16-2H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:48:05 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:22:37 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.54	228	607616	5169.01	ng/ml	97
74)	Chrysene	24.64	228	572414	5175.46	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.02	149	502889	5249.15	ng/ml	96
77)	Di-n-octyl Phthalate	26.52	149	830943	5628.44	ng/ml	89
78)	Benzo(b)fluoranthene	27.16	252	522416	5152.03	ng/ml	97
79)	Benzo(k)fluoranthene	27.22	252	548770	5413.57	ng/ml	98
80)	Benzo(a)pyrene	27.93	252	518178	5300.61	ng/ml	96
81)	Indeno(1,2,3-cd)pyrene	30.60	276	478033	6021.19	ng/ml	95
82)	Dibenz(a,h)anthracene	30.68	278	464468	5675.69	ng/ml	97
83)	Benzo(g,h,i)perylene	31.19	276	472847	5368.90	ng/ml	95

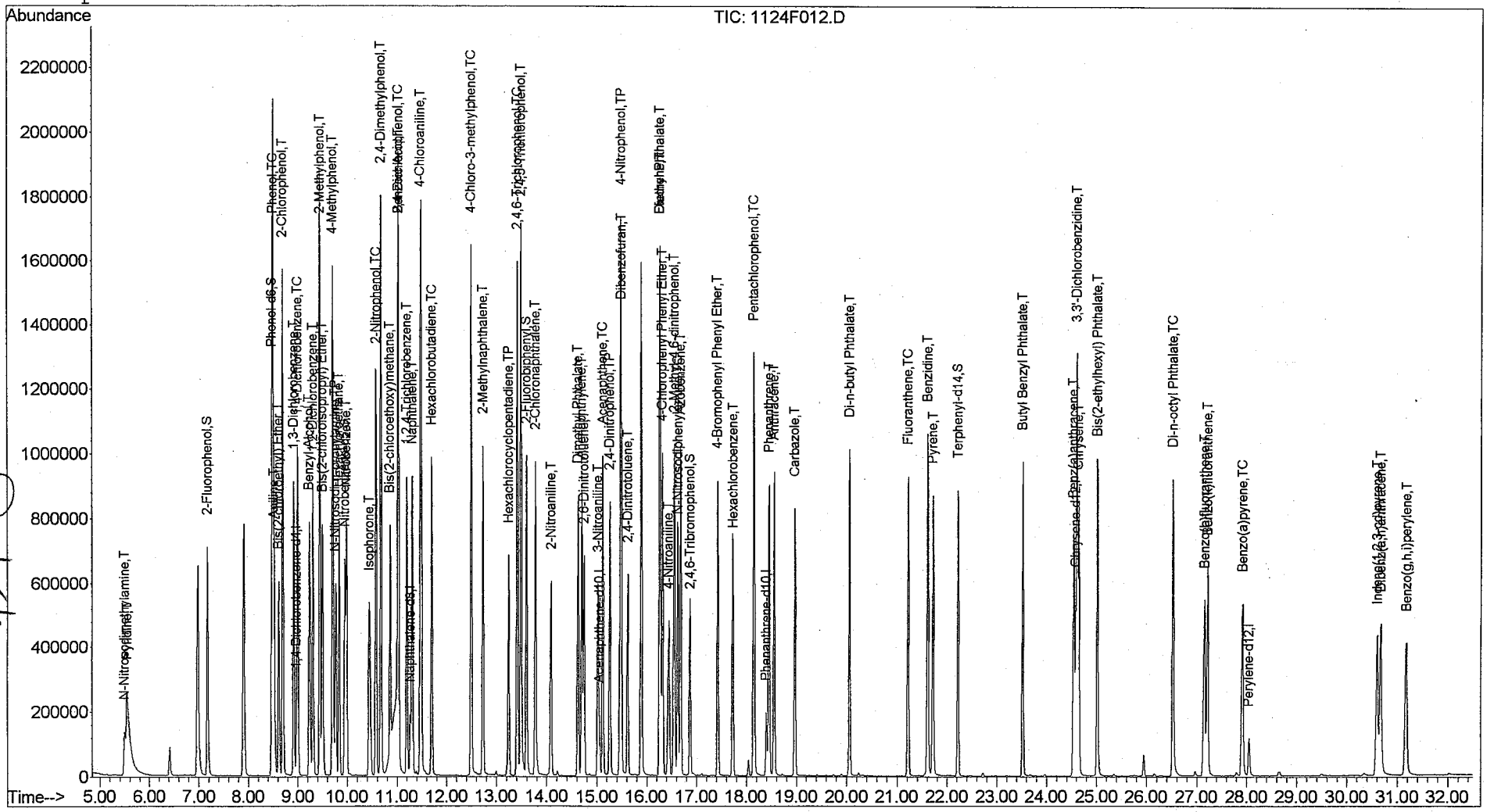
11/25/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F012.D Vial: 10
Acq On : 25 Nov 2003 10:13 Operator: JGISH
Sample : 8270-LL @ 5/10 ppm SVM16-2H Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 10:48 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration



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Client: ARCADIS
Project: Bloomington, IN/IN000072.0021

Service Request: K2308433
Date Analyzed: 11/25/2003

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 11/24/2003
Calibration ID: CAL3116
Analysis Lot: KWG0319154
Units: ng/ml

File ID: J:\MS10\DATA\112403\1124F014.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	0.01	1.67	1.73	4	NA	± 20 %	AverageRF
2-Methylphenol	3000	2800	0.01	0.970	0.911	-6	NA	± 30 %	AverageRF
4-Methylphenol	3000	2900	0.01	1.42	1.36	-4	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2800	0.01	0.307	0.292	-5	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	2900	0.01	0.329	0.318	-3	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	2900	0.01	0.438	0.425	-3	NA	± 20 %	AverageRF
‡ Pentachlorophenol	3000	2800	0.01	0.182	0.169	-7	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3000	0.01	0.556	0.561	1	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.01	0.767	0.779	2	NA	± 30 %	AverageRF
Phenol-d6	3000	3000	0.01	1.51	1.51	0	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	2800	0.01	0.151	0.141	-6	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3000	0.01	0.684	0.690	1	NA	± 30 %	AverageRF
† 4-Nitrophenol	3000	3000	0.05	0.312	0.312	0	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	2800	0.01	1.45	1.36	-6	NA	± 20 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3000	0.01	1.85	1.87	1	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	2700	0.01	1.14	1.02	-11	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	2900	0.01	1.21	1.18	-3	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2900	0.05	0.150	0.133	NA	-3	± 30 %	Quadratic
‡ 4-Chloro-3-methylphenol	3000	2800	0.01	0.366	0.345	-6	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3100	0.05	1.11	1.13	2	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2700	0.05	0.382	0.341	-11	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	2800	0.01	1.02	0.964	-6	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.01	0.816	0.834	2	NA	± 20 %	AverageRF
‡ Hexachlorobutadiene	3000	2800	0.01	0.253	0.239	-5	NA	± 20 %	AverageRF
‡ 2-Nitrophenol	3000	3000	0.01	0.205	0.208	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS10\DATA\112403\1124F014.D
Lab ID: KWG0319154-2
RunType: CCV
Matrix: LIQUID

d1cv

Date Acquired: 11/25/2003 12:17
Date Quantitated: 11/25/2003 12:50
Batch ID: KWG0319154
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/26/03

Secondary Review: CO 12/1/03

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8270-LL	**Collect Date:**		**Receive Date:**	11/26/2003

Analysis Lot:	KWG0319154	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS10\METHODS\BNA\1124BNLL.M	**Calibration ID:**	CAL3116
Title:			
Tune Ref:	J:\MS10\DATA\112403\1124A014.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS10\DATA\112403\1124F014.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 12:17	**Quant Date:**	11/25/2003 12:50	**Vial:**	11
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0319154-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.97	0.02	152	42095	1,000.00	OK
2	Naphthalene-d8	11.26	0.02	136	130561	1,000.00	OK
3	Acenaphthene-d10	15.04	0.02	164	71651	1,000.00	OK
4	Phenanthrene-d10	18.39	0.01	188	120376	1,000.00	OK
5	Chrysene-d12	24.57	0.02	240	118167	1,000.00	OK
6	Perylene-d12	28.04	0.02	264	78879	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	7.17			112	149901	2,922		28-109	NA
1	Phenol-d6	8.46			99	190918	2,999		40-123	NA
1	Nitrobenzene-d5	9.94			82	213140	3,031		24-128	NA
3	2-Fluorobiphenyl	13.59			172	264051	2,860		28-126	NA
4	2,4,6-Tribromophenol	16.86			330	50863	2,805		35-138	NA
5	Terphenyl-d14	22.21			244	244600	3,025		56-152	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.54			42	139036m	2,959			
1	Pyridine	5.57			79	189438m	3,093			
1	Bis(2-chloroethyl) Ether	8.60			93	166196	2,932			
1	Phenol	8.48			94	218420	3,107			
1	Aniline	8.51			93	233332	3,131			
1	2-Chlorophenol	8.68			128	146901	2,909			
1	1,3-Dichlorobenzene	8.91			146	168049	2,904			
1	1,4-Dichlorobenzene	8.99			146	172097	2,824			
1	1,2-Dichlorobenzene	9.30			146	167093	2,970			
1	Benzyl Alcohol	9.23			108	93176	3,152			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F014.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 12:17	**Quant Date:**	11/25/2003 12:50	**Vial:**	11
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0319154-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	9.49			45	241490	2,909			
1	2-Methylphenol	9.44			107	114995	2,818			
1	Hexachloroethane	9.83			117	88241	3,100			
1	N-Nitrosodi-n-propylamine	9.74			70	143115	3,072			
1	4-Methylphenol	9.69			107	171439	2,869			
1	Nitrobenzene	9.97			77	215202	2,953			
2	Isophorone	10.41			82	328438	2,963			
2	2-Nitrophenol	10.57			139	81601	3,050			
2	2,4-Dimethylphenol	10.66			122	114384	2,849			
2	Bis(2-chloroethoxy)methane	10.85			93	190541	2,916			
2	2,4-Dichlorophenol	11.02			162	124737	2,903			
2	Benzoic Acid	10.88			122	70207	2,725			
2	1,2,4-Trichlorobenzene	11.19			180	141073	2,863			
2	Naphthalene	11.30			128	353679	2,861			
2	4-Chloroaniline	11.46			127	148838	2,773			
2	Hexachlorobutadiene	11.69			225	93752	2,838			
2	4-Chloro-3-methylphenol	12.49			107	135246	2,831			
2	2-Methylnaphthalene	12.72			142	240389	2,886			
3	Hexachlorocyclopentadiene	13.24			237	73220	2,672			
3	2,4,6-Trichlorophenol	13.41			196	91357	2,908			
3	2,4,5-Trichlorophenol	13.48			196	98868	3,012			
3	2-Chloronaphthalene	13.77			127	95374	2,907			
3	2-Nitroaniline	14.07			65	111244	3,231			
3	Acenaphthylene	14.70			152	346134	2,938			
3	Dimethyl Phthalate	14.61			163	286835	2,900			
3	2,6-Dinitrotoluene	14.74			165	66418	3,229			
3	Acenaphthene	15.11			154	207161	2,835			
3	3-Nitroaniline	15.01			138	70168	3,152			
3	2,4-Dinitrophenol	15.25			184	28637	2,923			
3	Dibenzofuran	15.48			168	322509	2,888			
3	4-Nitrophenol	15.45			109	66990	2,998			
3	2,4-Dinitrotoluene	15.61			165	90969	3,418			
3	Fluorene	16.26			166	258149	2,863			
3	4-Chlorophenyl Phenyl Ether	16.31			204	132467	2,902			
3	Diethyl Phthalate	16.25			149	305392	2,979			
3	4-Nitroaniline	16.41			138	70504	3,169			
3	2-Methyl-4,6-dinitrophenol	16.53			198	45953	2,671			
3	N-Nitrosodiphenylamine	16.61			169	179346	3,067			
3	Azobenzene	16.67			77	374618	2,830			
4	4-Bromophenyl Phenyl Ether	17.43			248	83492	2,807			
4	Hexachlorobenzene	17.72			284	96566	2,979			
4	Pentachlorophenol	18.14			266	61179	2,790			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS10\DATA\112403\1124F014.D			**Instrument:**	MS10
Acqu Date:	11/25/2003 12:17	**Quant Date:**	11/25/2003 12:50	**Vial:**	11
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0319154-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Phenanthrene	18.44			178	348151	2,558			
4	Anthracene	18.54			178	360576	2,824			
4	Carbazole	18.96			167	343151	3,130			
4	Di-n-butyl Phthalate	20.05			149	479465	2,873			
4	Fluoranthene	21.21			202	368927	2,679			
5	Benzidine	21.60			184	191281	3,055			
5	Pyrene	21.71			202	355542	2,669			
5	Butyl Benzyl Phthalate	23.52			149	198956	3,026			
5	3,3'-Dichlorobenzidine	24.59			252	130886	3,056			
5	Benz(a)anthracene	24.53			228	326315	2,944			
5	Chrysene	24.63			228	299822	2,874			
5	Bis(2-ethylhexyl) Phthalate	25.01			149	275991	3,046			
6	Di-n-octyl Phthalate	26.51			149	443094	3,044			
6	Benzo(b)fluoranthene	27.14			252	292423	2,960			
6	Benzo(k)fluoranthene	27.20			252	304460	3,063			
6	Benzo(a)pyrene	27.90			252	279603	2,925			
6	Indeno(1,2,3-cd)pyrene	30.58			276	232133	2,937			
6	Dibenz(a,h)anthracene	30.65			278	249089	3,084			
6	Benzo(g,h,i)perylene	31.16			276	259253	3,005			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:49:55 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.97	152	42095	1000.00	ng/ml	0.02
21) Naphthalene-d8	11.26	136	130561	1000.00	ng/ml	0.02
34) Acenaphthene-d10	15.04	164	71651	1000.00	ng/ml	0.02
57) Phenanthrene-d10	18.39	188	120376	1000.00	ng/ml	0.00
67) Chrysene-d12	24.57	240	118167	1000.00	ng/ml	0.02
76) Perylene-d12	28.04	264	78879	1000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	149901	2921.51	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 77.91%			
6) Phenol-d6	8.46	99	190918	2999.25	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 79.98%			
19) Nitrobenzene-d5	9.94	82	213140	3031.35	ng/ml	0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 121.25%			
38) 2-Fluorobiphenyl	13.59	172	264051	2859.77	ng/ml	0.02
Spiked Amount 2500.000	Range 37 - 126		Recovery = 114.39%			
58) 2,4,6-Tribromophenol	16.86	330	50863	2805.22	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 74.81%			
70) Terphenyl-d14	22.21	244	244600	3024.64	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 120.99%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.54	42	139036m	2959.41	ng/ml	
3) Pyridine	5.57	79	189438m	3093.37	ng/ml	
5) Bis(2-chloroethyl) Ether	8.60	93	166196	2931.77	ng/ml	75
7) Phenol	8.48	94	218420	3107.17	ng/ml	91
8) Aniline	8.51	93	233332	3130.63	ng/ml#	50
9) 2-Chlorophenol	8.68	128	146901	2909.38	ng/ml	81
10) 1,3-Dichlorobenzene	8.91	146	168049	2903.77	ng/ml	94
11) 1,4-Dichlorobenzene	8.99	146	172097	2824.41	ng/ml	96
12) 1,2-Dichlorobenzene	9.30	146	167093	2970.08	ng/ml	95
13) Benzyl Alcohol	9.23	108	93176	3151.70	ng/ml#	57
14) Bis(2-chloroisopropyl) Eth	9.49	45	241490	2908.63	ng/ml#	64
15) 2-Methylphenol	9.44	107	114995	2817.53	ng/ml	86
16) Hexachloroethane	9.83	117	88241	3099.56	ng/ml	95
17) N-Nitrosodi-n-propylamine	9.74	70	143115	3072.04	ng/ml	79
18) 4-Methylphenol	9.69	107	171439	2868.62	ng/ml	90
20) Nitrobenzene	9.97	77	215202	2953.48	ng/ml	82
22) Isophorone	10.41	82	328438	2963.41	ng/ml	96
23) 2-Nitrophenol	10.57	139	81601	3049.66	ng/ml	69
24) 2,4-Dimethylphenol	10.66	122	114384	2849.48	ng/ml#	81
25) Bis(2-chloroethoxy)methane	10.85	93	190541	2915.84	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1124F014.D 1124BNLL.M Tue Nov 25 13:55:51 2003 11/25/03 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:49:55 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.02	162	124737	2903.11	ng/ml	97
27)	Benzoic Acid	10.88	122	70207	2725.44	ng/ml#	67
28)	1,2,4-Trichlorobenzene	11.19	180	141073	2862.54	ng/ml	90
29)	Naphthalene	11.30	128	353679	2860.86	ng/ml	99
30)	4-Chloroaniline	11.46	127	148838	2773.25	ng/ml	91
31)	Hexachlorobutadiene	11.69	225	93752	2837.60	ng/ml	97
32)	4-Chloro-3-methylphenol	12.49	107	135246	2830.92	ng/ml	85
33)	2-Methylnaphthalene	12.72	142	240389	2885.73	ng/ml	93
35)	Hexachlorocyclopentadiene	13.24	237	73220	2671.86	ng/ml	93
36)	2,4,6-Trichlorophenol	13.41	196	91357	2908.25	ng/ml	93
37)	2,4,5-Trichlorophenol	13.48	196	98868	3011.60	ng/ml	94
39)	2-Chloronaphthalene	13.77	127	95374	2906.88	ng/ml	96
40)	2-Nitroaniline	14.07	65	111244	3231.11	ng/ml#	70
41)	Acenaphthylene	14.70	152	346134	2937.96	ng/ml	98
42)	Dimethyl Phthalate	14.61	163	286835	2899.97	ng/ml	99
43)	2,6-Dinitrotoluene	14.74	165	66418	3228.97	ng/ml	77
44)	Acenaphthene	15.11	154	207161	2834.97	ng/ml	93
45)	3-Nitroaniline	15.01	138	70168	3151.61	ng/ml	97
46)	2,4-Dinitrophenol	15.25	184	28637	2922.67	ng/ml	68
47)	Dibenzofuran	15.48	168	322509	2887.80	ng/ml	78
48)	4-Nitrophenol	15.45	109	66990	2998.05	ng/ml#	57
49)	2,4-Dinitrotoluene	15.61	165	90969	3418.19	ng/ml	73
50)	Fluorene	16.26	166	258149	2862.57	ng/ml	97
51)	4-Chlorophenyl Phenyl Ethe	16.31	204	132467	2902.26	ng/ml	84
52)	Diethyl Phthalate	16.25	149	305392	2979.27	ng/ml	97
53)	4-Nitroaniline	16.41	138	70504	3169.47	ng/ml#	68
54)	2-Methyl-4,6-dinitrophenol	16.53	198	45953	2671.36	ng/ml	69
55)	N-Nitrosodiphenylamine	16.61	169	179346	3067.25	ng/ml	97
56)	Azobenzene	16.67	77	374618	2830.38	ng/ml	88
59)	4-Bromophenyl Phenyl Ether	17.43	248	83492	2806.79	ng/ml	91
60)	Hexachlorobenzene	17.72	284	96566	2978.73	ng/ml	96
61)	Pentachlorophenol	18.14	266	61179	2789.77	ng/ml	98
62)	Phenanthrene	18.44	178	348151	2557.62	ng/ml	99
63)	Anthracene	18.54	178	360576	2823.54	ng/ml	98
64)	Carbazole	18.96	167	343151	3129.60	ng/ml	95
65)	Di-n-butyl Phthalate	20.05	149	479465	2873.06	ng/ml	97
66)	Fluoranthene	21.21	202	368927	2679.10	ng/ml	97
68)	Benzidine	21.60	184	191281	3055.42	ng/ml	97
69)	Pyrene	21.71	202	355542	2668.88	ng/ml	99
71)	Butyl Benzyl Phthalate	23.52	149	198956	3025.92	ng/ml	92
72)	3,3'-Dichlorobenzidine	24.59	252	130886	3056.42	ng/ml	97

(#) = qualifier out of range (m) = manual integration JJ 11/25/03

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:49:55 2003 Quant Results File: 1124BNLL.RES

Quant Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration
DataAcq Meth : 8270LVI

12/1/03
9

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Benz(a)anthracene	24.53	228	326315	2943.72	ng/ml	98
74)	Chrysene	24.63	228	299822	2874.17	ng/ml	99
75)	Bis(2-ethylhexyl) Phthalat	25.01	149	275991	3046.09	ng/ml	97
77)	Di-n-octyl Phthalate	26.51	149	443094	3044.17	ng/ml	87
78)	Benzo(b)fluoranthene	27.14	252	292423	2959.73	ng/ml	98
79)	Benzo(k)fluoranthene	27.20	252	304460	3062.54	ng/ml	98
80)	Benzo(a)pyrene	27.90	252	279603	2924.58	ng/ml	97
81)	Indeno(1,2,3-cd)pyrene	30.58	276	232133	2937.24	ng/ml	96
82)	Dibenz(a,h)anthracene	30.65	278	249089	3083.67	ng/ml	98
83)	Benzo(g,h,i)perylene	31.16	276	259253	3004.88	ng/ml	97

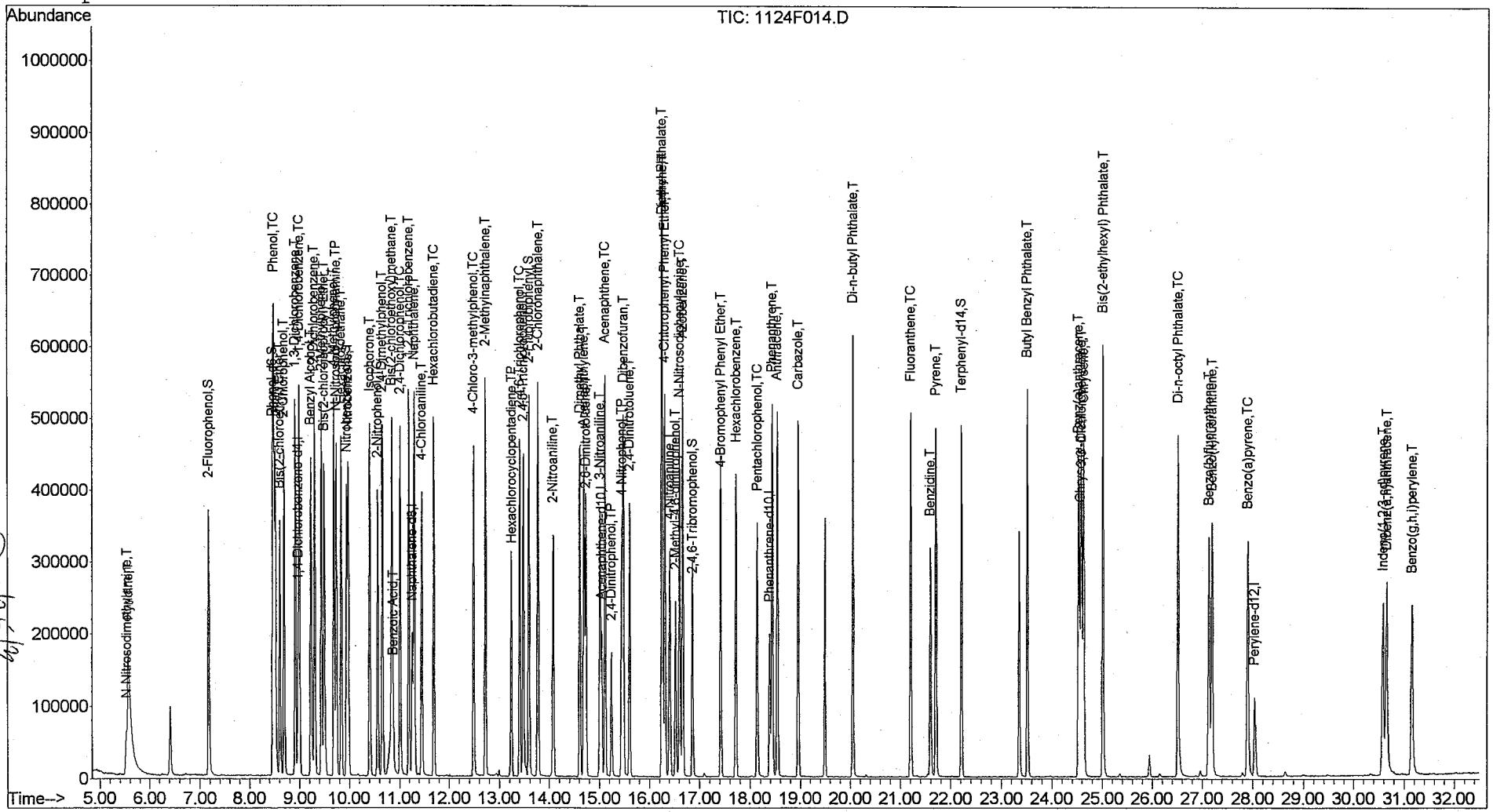
11/25/03

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:50 2003 Quant Results File: 1124BNLL.RES

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Initial Calibration

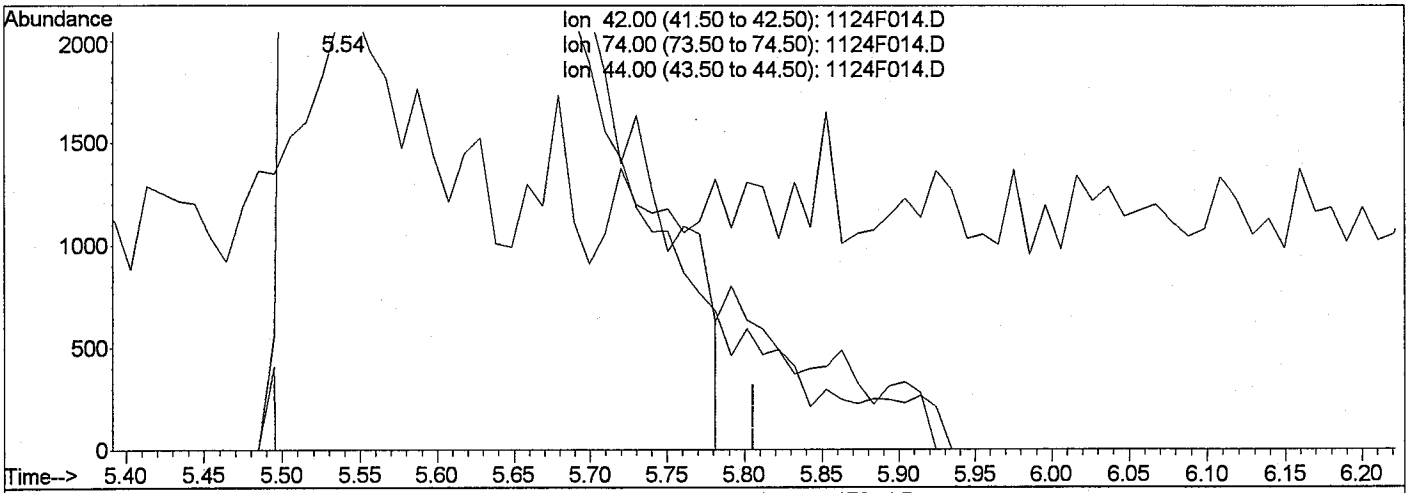


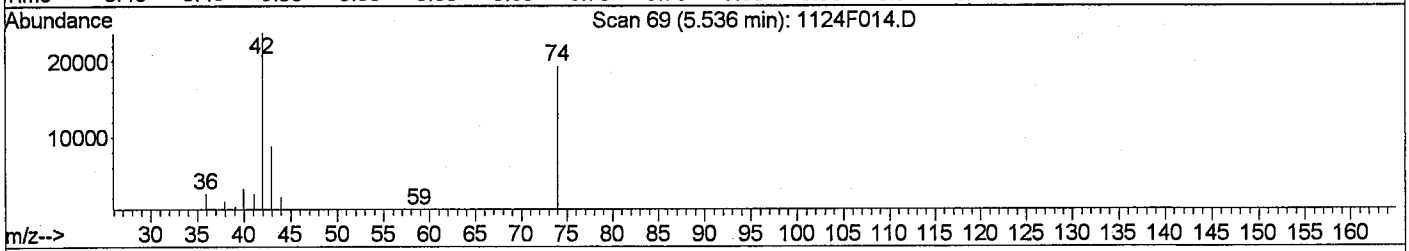
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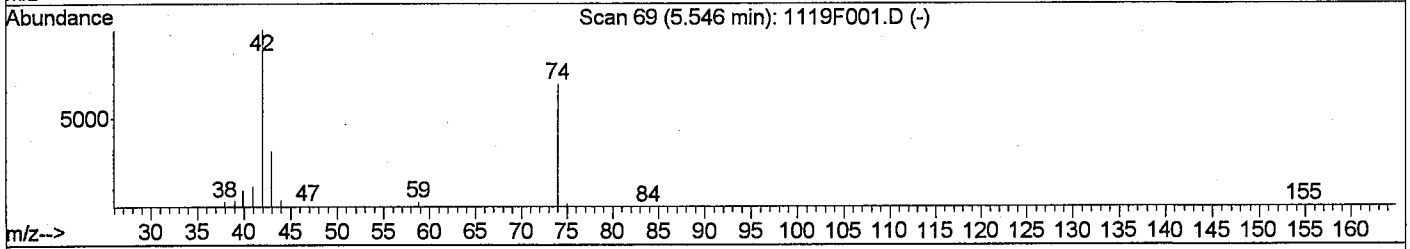
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:49 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Multiple Level Calibration







TIC: 1124F014.D

(2) N-Nitrosodimethylamine (T)

5.54min 2885.62ng/ml

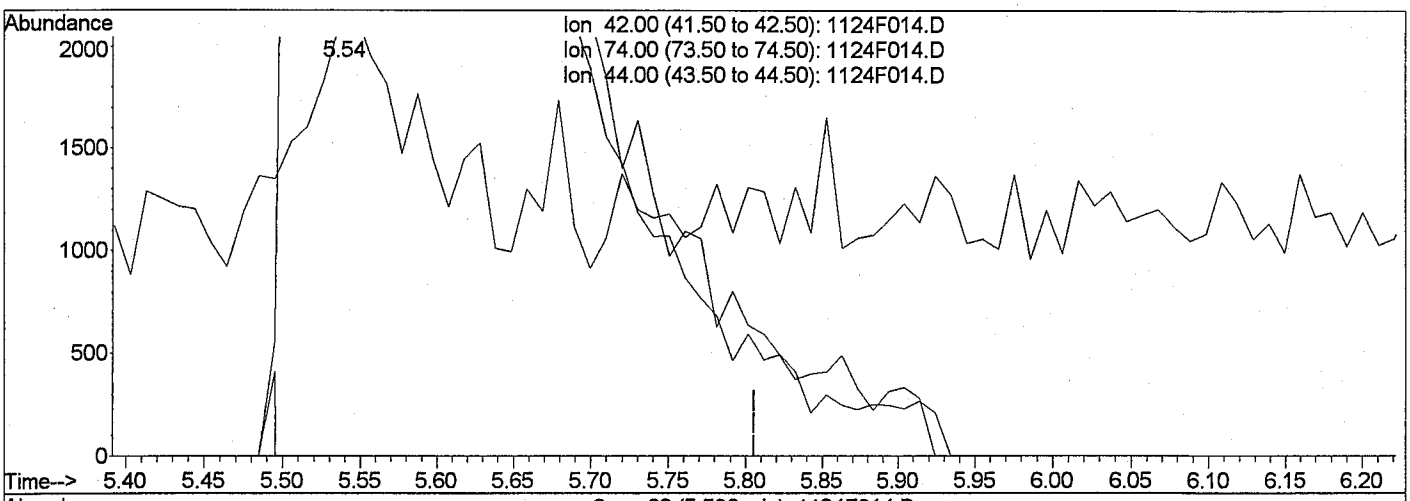
response 135569

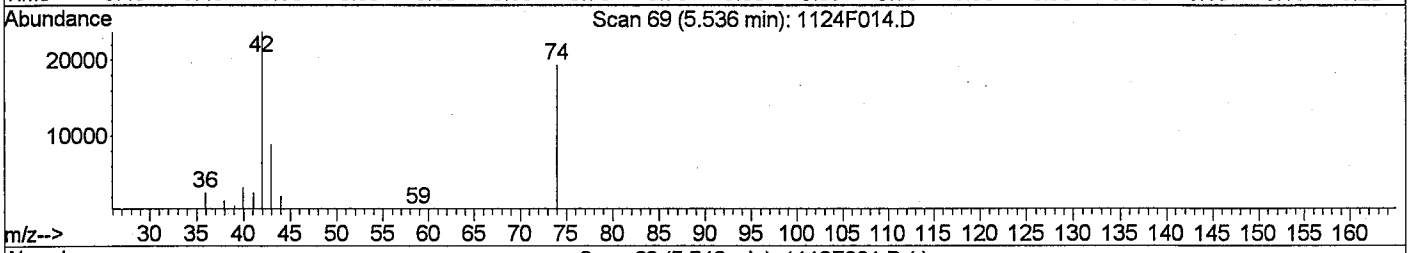
Ion	Exp%	Act%
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74.00	153.00	81.52#
44.00	5.00	3.90
0.00	0.00	0.00

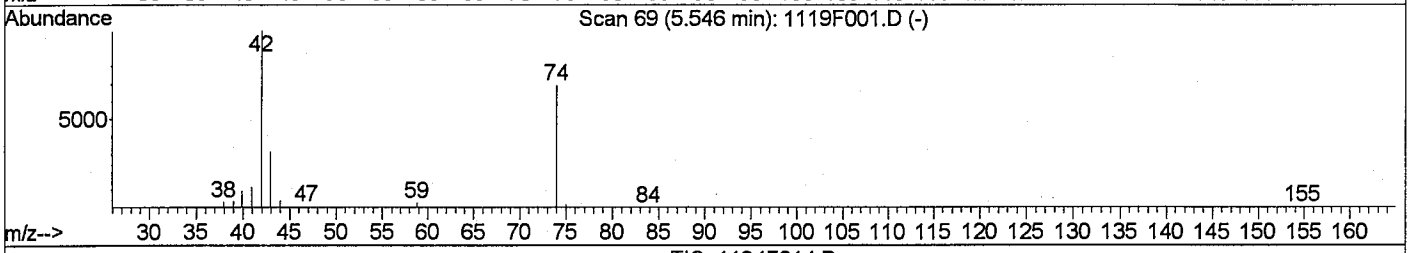
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:50 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Multiple Level Calibration







TIC: 1124F014.D

(2) N-Nitrosodimethylamine (T)

5.54min 2959.41ng/ml m

response 139036

Ion	Exp%	Act%
42.00	100	100
74.00	153.00	81.52#
44.00	5.00	8.88
0.00	0.00	0.00

11/25/13 Incomplete

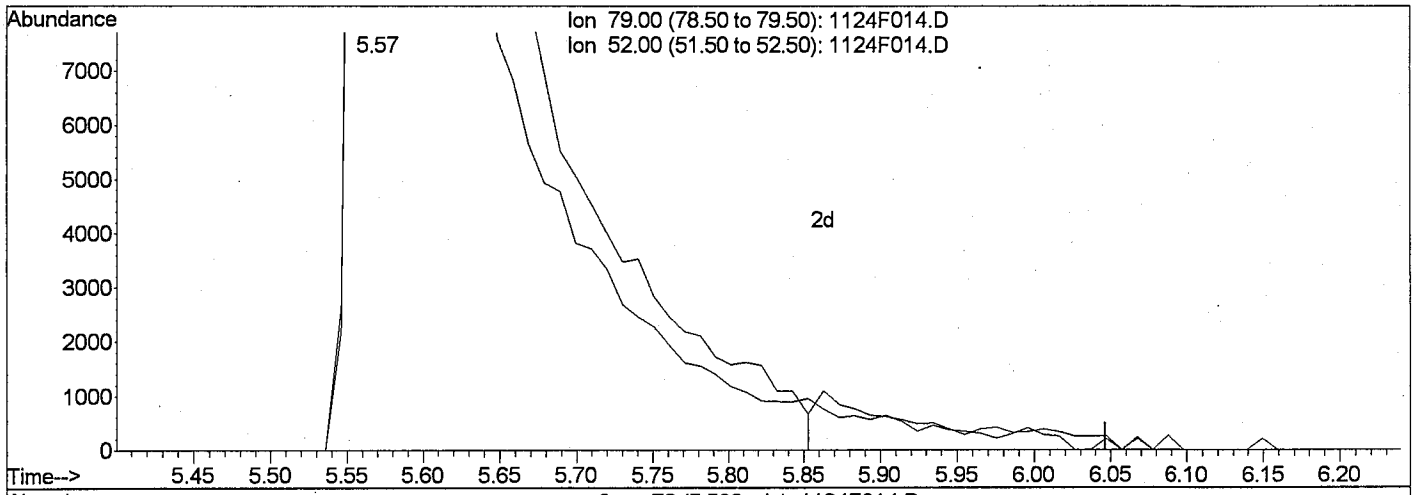
12/16/13 9

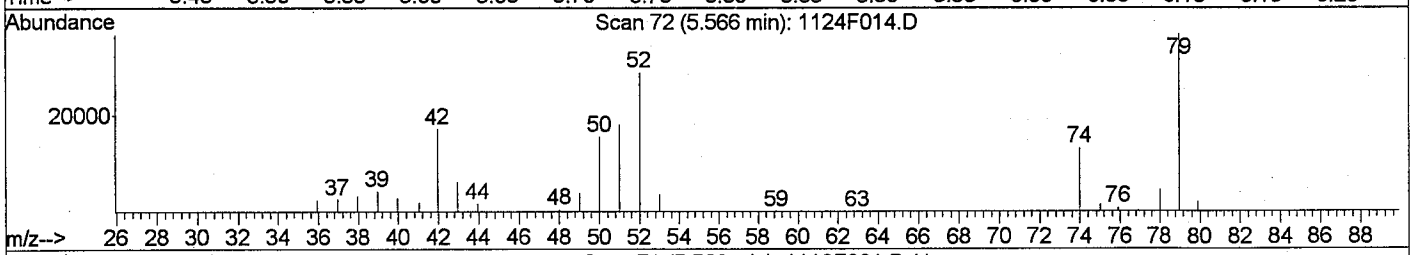
1124F014.D 1124BNLL.M Tue Nov 25 12:50:26 2003

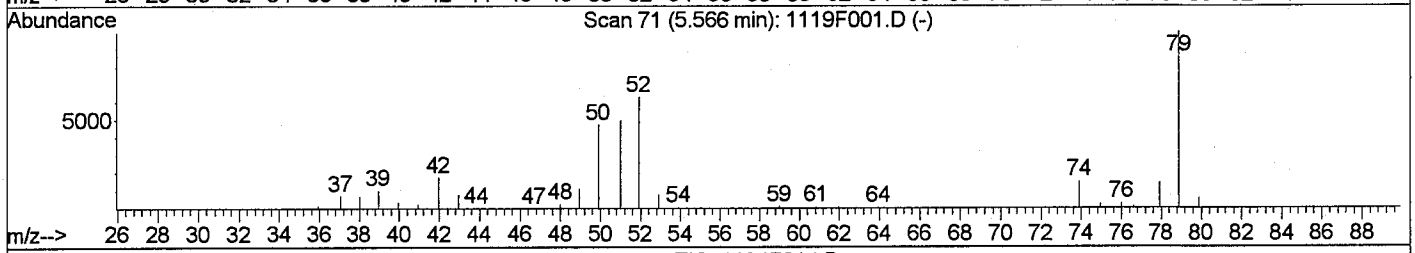
Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:50 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Multiple Level Calibration







TIC: 1124F014.D

(3) Pyridine (T)

5.57min 3000.01ng/ml

response 183721

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	78.45
0.00	0.00	0.00
0.00	0.00	0.00

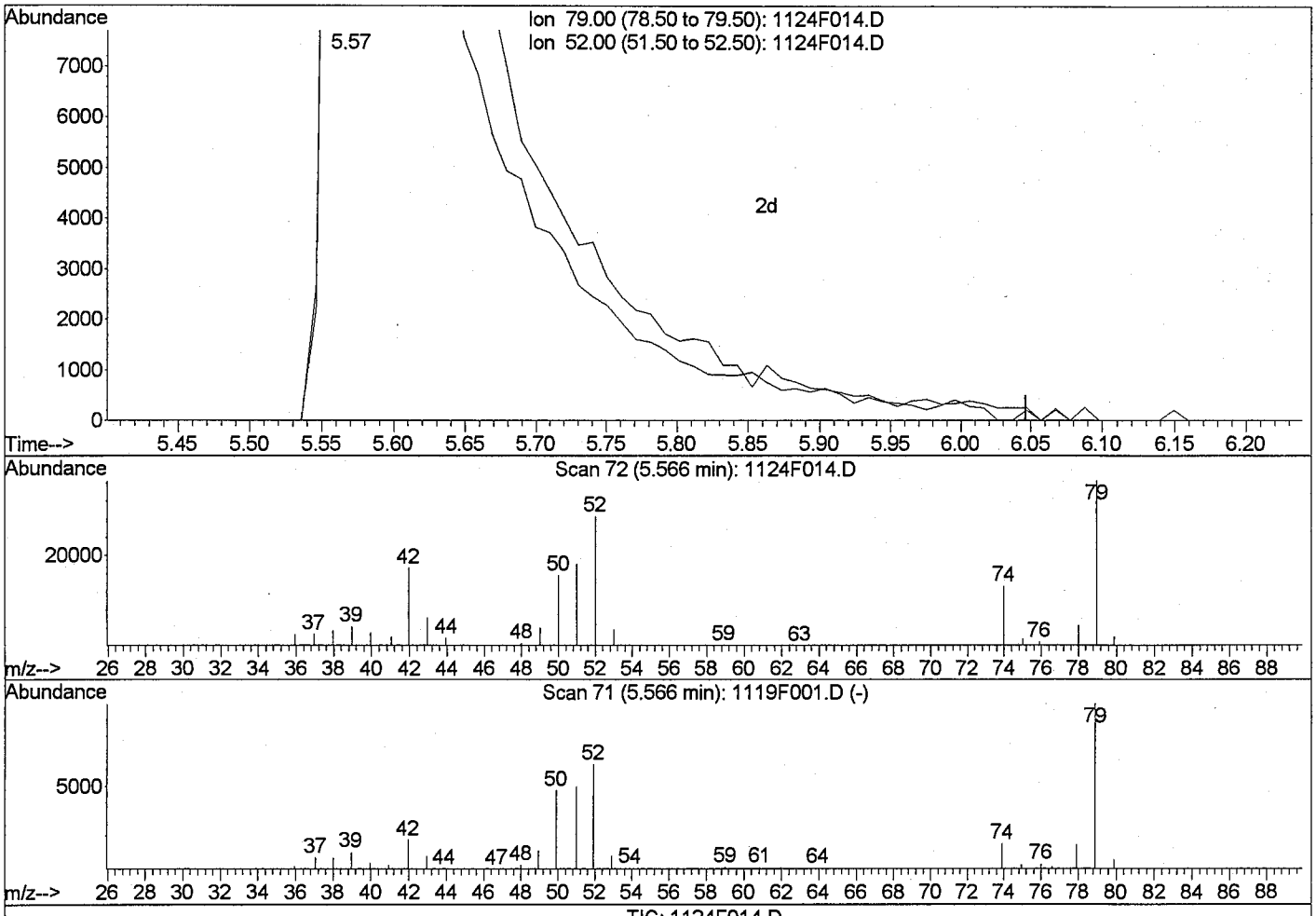
12/1/03
cj

1124F014.D 1124BNLL.M Tue Nov 25 12:50:32 2003

Quantitation Report (Qedit)

Data File : J:\MS10\DATA\112403\1124F014.D Vial: 11
Acq On : 25 Nov 2003 12:17 Operator: JGISH
Sample : 8270-LL ICV @ 3 ppm SVM16-4G Inst : MS10
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 25 12:50 2003 Quant Results File: temp.res

Method : J:\MS10\METHODS\BNA\1124BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Tue Nov 25 10:58:57 2003
Response via : Multiple Level Calibration



TIC: 1124F014.D

(3) Pyridine (T)

5.57min 3093.37ng/ml m

response 189438

Ion	Exp%	Act%
79.00	100	100
52.00	59.50	78.45
0.00	0.00	0.00
0.00	0.00	0.00

J 11/25/03 Incomplete 12/1/03 g

1124F014.D 1124BNLL.M Tue Nov 25 12:50:37 2003

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Sample Prep and Screen Data

ORGANICS QUALITY TRACKING FORM

Work Order #: K8433 Sample #: 6,7,9
Test: 8270-LL Date: 11-19-3

QUALITY DEFICIENCY

1. Holding time missed: Primary* ☐_____, Secondary* ☐_____, Client_____
   (# of days) (# of days)
   H.T. Missed because:_____
2. Surrogates out of acceptance ☒ Low - acid Surrogates
3. Spikes out of acceptance ☐
4. MB or sample contamination ☐
5. Poor solvent exchange ☐
6. Mislabelled vial ☐
7. Suspected matrix interferences ☐
8. Incorrect solution added ☐
9. Other ☐: Explain_____

Analyst: JMY Date: 11-19-3

RECOMMENDED CORRECTIVE ACTION

Need RX ASAP

1. Reext. Samples listed above ☒
2. Resolvent exchange ☐
3. Do additional clean-up ☐
4. PC notified Yes ☒ No ☐ Intials:_____, Date: 11/19/03
5. Other ☐: Expain_____

Supervisor: CD Date: 11/19/02

ACTION TAKEN

1. Corrective action followed ☐
2. Not enough sample ☐
3. Other ☐: Explain_____

Supervisor:_____ Date:_____

OUTCOME (*Note: Primary=H.T. missed upon intial ext., Secondary=H.T. missed upon re-ext. only)

A) Matrix ☐
B) Poor Extraction Technique ☐
C) Incorrect LIMS Code ☐
D) Switched Vial Labels ☐
E) Unreadable Vial Labels ☐
F) Missing Vial ☐
G) Missing Label on Vial ☐
H) Contaminated Reagent ☐
I) Contaminated Surrogate ☐
J) Mis-spiked by Analyst ☐
K) Extract lost during Extraction ☐
L) Lost on GPC ☐
M) Instrument Problems ☐
N) Additional Clean-up Needed ☐
O) Holding time missed (Primary) ☐
P) Holding time missed upon reext. (Secondary) ☐

Report Footnoted with:_____

Preparation Information

Group ID:	KWG0318722	**Prep Method:**	EPA 3541	**Prep Date:**	11/20/03 13:00
Department:	MSP				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K2308433-006	SED-5	8270-LL	SEDIMENT	26.32g	2.0ml	
K2308433-007	SED-6	8270-LL	SEDIMENT	26.63g	2.0ml	
K2308433-009	SED-8	8270-LL	SEDIMENT	27.40g	2.0ml	
KWG0318722-1	Lab Control Sample	8270-LL	SEDIMENT	20.00g	2.0ml	
KWG0318722-2	Duplicate Lab Control Sampl	8270-LL	SEDIMENT	20.00g	2.0ml	
KWG0318722-3	Method Blank	8270-LL	SEDIMENT	27.41g	2.0ml	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K2308433-006	251365	SVMP3-23C	50uL			EErickso
K2308433-007	251366	SVMP3-23C	50uL			EErickso
K2308433-009	251367	SVMP3-23C	50uL			EErickso
KWG0318722-1	251368	SVMP3-23C	50uL	SVMP3-23S	50uL	EErickso
KWG0318722-2	251369	SVMP3-23C	50uL	SVMP3-23S	50uL	EErickso
KWG0318722-3	251370	SVMP3-23C	50uL			EErickso

Comments: IS-SUM15-71A

Started By: JRichard Assisted By: _____ Training: Yes (No)

Completed By: SMurray Assisted By: _____ Yes No

Reviewed By: [signature] Date: 11/25/03 Storage: MS10 Box

Chain of Custody

Relinquished By: [signature] Date: 11-24-03

Received By: [signature] Date: 11/25/3 Extracts Examined: (Yes) No

Preparation Information

Group ID:	KWG0318722	**Prep Method:**	EPA 3541	**Prep Date:**	11/20/03 00:00
Department:	MSP				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K2308433-006(R)	SED-5 re-extract		↘	8270-LL	SEDIMENT	26.32	n/a	10ml	2mL	50µL	↘
2	K2308433-007(R)	SED-6 re-extract		↘	8270-LL	SEDIMENT	26.63					↘
3	K2308433-009(R)	SED-8 re extract		↘	8270-LL	SEDIMENT	27.40					~~50/50~~ 9K112003
4	KWG0318722-1	Lab Control Sample			8270-LL	SEDIMENT	20.00					~~50~~ 50µL
5	KWG0318722-2	Duplicate Lab Control Sample			8270-LL	SEDIMENT	20.00					1
6	KWG0318722-3	Method Blank			8270-LL	SEDIMENT	27.4					↘

Comments: _____

Surrogate ID: SVMP3-23C/100-150ppm/50µl xp 020104

Spike ID: SVMP3-23S/100ppm/50µl xp 013001 SVMP3-24I/200ppm/50µl xp 052304

Witness: Elissa Erickson 11-20-03

Started By: JRichard Assisted By: _____

Completed By: [signature] Assisted By: _____

GPC RUNLOG 2

RUN DATE: 11-21-03 STANDARD DATE: 11-21-03

OPERATOR: km PROGRAM*: 1

LAB I.D.	POS.	TEST	DIL.	COMMENTS
K8724- MB	1	8270	None	
LCS	2	↓	↓	
↓ DLCS	3	↓	↓	
9091- 2	4	↓	↓	
9112- 20	5	↓	↓	
22	6	↓	↓	
23	7	↓	4→8	Lost alot of Sample during filtering took 4ml → 8ml
24	8	↓	↓	
25	9	↓	↓	
↓ 31	10	↓	↓	
GPC Blank	11	8270 LL	↓	
K 8722- MB	12	↓	↓	
LCS	13	↓	↓	
↓ DCCS	14	↓	↓	
8438-67 (R) km 11-21-03	15	↓	↓	
7	16	↓	↓	
↓ 9	17	↓	↓	
8844-3	18	↓	2~10ml	
↓ 4	19	↓	2~10ml	
9175- 1	20	8270	NA	
	21			
	22			
	23			

*When multiple programs are used, note change in comment section and program settings below.

Program#_____ Dump_____ Collect_____

Program#_____ Dump_____ Collect_____

ABC GPC BENCHSHEET

Analyst: Km Matrix: Tissue / Reg. Soil / Low Level Soil / Water / Oil

Date: 11-21-03 Work Order: K2309091 / 9112 / 9175 / 8844 / 8433 (R)

A. GPC Calibrated on this date: 11-21-03

	8844	8433		9091/9112/9175 ↓ 10	9112-#2 ↓ 10
B. (1) Intermediate Volume before GPC:	2	10	(ml)		
(2) Aliquot taken from intermediate volume:	2	10	(ml)	10	4
(3) Aliquot diluted up to.....	10	10	(ml)	10	8
(4) Volume injected onto column:	5	5	(ml)	5	5
(5) GPC'd Extract brought to the Final Volume of	1	1	(ml)	0.5	0.5
(6) Calculate the True Final Volume	2	2	(ml)	1 / 2	

(1) x (3) x (5) = (6) / (2) x (4)

C. Does a split for PCB's or PAH's need to be done? YES (NO)

Checklist for the GPC Run:

1. ✓ Is the column reservoir full?
2. ✓ Is the rinse reservoir full?
3. ✓ Is the waste bottle empty?
4. ✓ Did you check the flow rate?
5. ✓ Is there a collection vessel for each extract tube?
6. ✓ Do the extract tube labels correspond to the collection vessel labels?
7. ✓ Are the extracts diluted properly, if needed?
8. ✓ Are all extracts filtered? (They **MUST** be)
9. ✓ Did you record where you put the remaining extract?
10. ✓ Is the correct method/collection window programmed?
11. ✓ Is the By-pass valve set to **In-line**?
12. ✓ Is the run log filled out?
13. ✓ Is sample load time set correctly for extract with lowest volume? **(VERY IMPORTANT)**
14. ✓ Is the nitrogen tank valve open?
15. ✓ Is there enough nitrogen (at least 500lb/23 extracts)?
16. ✓ Did you double check your GPC setup?

Operator date and initial 11-21-03 Km

Additional Prep Information For EPA 3541

Service Request 8433R **Workgroup** 18722

DCM Lot 42353 Hexane Lot NA

Start (Time/Date/Initial): 1pm 112003 gk

Stop (Time/Date/Initial): 4pm 112003 gk

Sulfate Lot # 43205333 Pipette Lot # 011503

S-Evap Temp 75c N-evap Temp 35c Silica gel Lot # ~~11503~~ NA

Solvent Exchange: NA

Clean-up #1: 3640 Initial/Date: KM 11-21-03

Clean-up #2: ——— Initial/Date: ———

Extract Storage: NA

Date Completed: 11/24/03 sm

Comments/Observations:

Bench Sheet Review Check List	
☐	Hold Times Met (if no, Reason: Reextracts)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☐	Signed service request with Form V, if applicable, has been attached

Appendix from EXT-3541
for Extracting Compounds in Soil or Tissue by EPA Method 3541

Procedure:

Note: a) All anhydrous sodium sulfate (Na_2SO_4) used in this procedure must be thoroughly rinsed with methylene chloride (DCM).

b) Tissue samples require a pre-prep homogenizing procedure before extraction.

1. For low level work follow the low level glassware cleaning procedure.
2. Run the rinse cycle on Soxtherms prior to sample extraction. See EXT-3541 SOP and Operation Manual for programing instructions.

Prog. =01, Temp. limit=200°, Ext. temp =120°, Boil time=10m., Red. A=1x15ml., Ext. time=10m., Red B=1x15ml., sol. cool=30m., Red. int. =5m., Red pulse=5s., time 30m.

3. All lab equipment that will have contact with the sample must be thoroughly rinsed with the extraction solvent.
4. Thoroughly mix sample. Decant water, remove large rocks, sticks, leaves and other organic matter unless this is the primary make-up of the sample. Weigh approximately *initial weigh*grams wet weight into a 150ml beaker. Record Weight to the nearest 0.1 gram.
5. Weigh an equal amount of granular anhydrous Na_2SO_4 for the MB and LCS(s). Sediments require dup LCS's. For sediments and tissues weigh 5 grams of the appropriate SRM for analysis.
6. Mix sample with anhydrous Na_2SO_4 * until sample is sandy and free flowing. Be careful with amount of sulfate used so as not to overload thimble capacity. Multiple thimbles may be used.
7. Transfer dried extract to assembled Soxtherm thimble. Careful not to contaminate rinsed labware.
8. Add surrogate and matrix spikes. See chart. **(Witnessed by a trained analyst)**
9. Add enough DCM to cover samples completely.
10. Place sample on Soxtherm and run the associated program. See EXT-3541 SOP and Operation Manual for programing instructions.

Prog. =04, Temp. limit=200°, Ext. temp =120°, Boil time=1h., Red. A=6x15ml., Ext. time=1h., Red B=3x15ml., sol. cool=30m., Red. int. =5m., Red pulse=5s., time 3h3m.

11. Be careful that the extract does not go dry. The goal is a volume of 10 to 20 ml. after reductions. Samples are removed and immediately covered in foil as soon as this level is reached to allow other sample to continue the reduction step. Additional reduction may be required.
12. Quantitatively transfer the extract to culture tubes.
13. Based on sample analysis and compound list determine cleanup direction to take. See chart.
14. If cleanup is performed, only half the original extract is retained. Therefore the extract must be concentrated to 1/2 the final volume to achieve the correct "calculated" final volume.
15. Concentrate the extracts to < *calculated final volume*ml. on the N-Evap under a **gentle** stream of nitrogen with the temperature not exceeding 35°. Extreme caution must be used to ensure that the sample does not concentrate too low or to dryness.
16. Bring extracts to *calculated final volume* ml. in DCM and place in a labeled, *color*, 2ml autosampler vial.
17. Do FID screening. (see CAS SOP) Evaluate screen data.
18. Complete all necessary paperwork. Turn extracts and paperwork over to MS analysis.

Test	initial Weight	surrogate/ amount	spike/ amount	cleanup	color	calculated final volume
8270 / 625	30 grams	AP/1.0ml	8270+Benzidine/ 1.0 ml each	GPC as needed	clear	1 ml.
SIM-PAH/ SIM-ALKH	20 grams	AP/20ul	PAH/200µl	Silica gel*	green	2 ml.
SIM-PAH-PCP	20 grams	AP/20µl	8270/50µl	GPC as needed	green	2 ml
8270-LL	20 grams	AP/50ul	8270+Benzoic Acid/ 50 µl each	GPC all	amber	2 ml.
SIM-PHEN	20 grams	AP/25ul	8270/50ul	none	red	1 ml.
Tissue	10 grams	AP/50ul	8270+Benzoic Acid/ 50 ul each	GPC, split, silica gel PAH portion*	amber	8 ml.
SIM-PAH-L Tissue	10 grams	AP/20ul	PAH/200ul	Silica gel*	green	1 ml.
MISC.						

* If carbazole is in the compound list do not silica gel or GPC

ref 3541 each page

Rev 8/2002

Injection Log

Directory: J:\MS10\DATA\112403

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	11	1124a014.D	1.	8270-LL ICV @ 3 ppm SVM16-4G		25 Nov 2003 12:1
2	1	1124F001.D	1.	TUNE @ 2.5 ppm SVM16-2K		24 Nov 2003 14:5
3	2	1124F002.D	1.	IB		24 Nov 2003 15:3
4	3	1124F003.D	1.	8270-LL @ 0.1 ppm SVM16-2A		24 Nov 2003 16:1
5	4	1124F004.D	1.	8270-LL @ .2/.5 ppm SVM16-2B		24 Nov 2003 16:5
6	5	1124F005.D	1.	8270-LL @ .5/1 ppm SVM16-2C		24 Nov 2003 17:4
7	6	1124F006.D	1.	8270-LL @ 1/2 ppm SVM16-2D		24 Nov 2003 18:2
8	7	1124F007.D	1.	8270-LL @ 2/4 ppm SVM16-2E		24 Nov 2003 19:0
9	8	1124F008.D	1.	8270-LL @ 3/6 ppm SVM16-2F	CAL 3116	24 Nov 2003 19:4
10	1	1124F009.D	1.	TUNE @ 2.5 ppm SVM16-2K		25 Nov 2003 08:0
11	2	1124F010.D	1.	IB		25 Nov 2003 08:5
12	9	1124F011.D	1.	8270-LL @ 4/8 ppm SVM16-2G		25 Nov 2003 09:3
13	10	1124F012.D	1.	8270-LL @ 5/10 ppm SVM16-2H		25 Nov 2003 10:1
14	11	1124F013.D	1.	8270-LL ICV @ 3 ppm SVM16-2L		25 Nov 2003 10:5
15	11	1124F014.D	1.	8270-LL ICV @ 3 ppm SVM16-4G		25 Nov 2003 12:1
16	12	1124F015.D	1.	KWG0318624-MB		25 Nov 2003 12:5
17	13	1124F016.D	1.	KWG0318624-LCS		25 Nov 2003 13:4
18	14	1124F017.D	1.	KWG0318624-DLCS		25 Nov 2003 14:2
19	15	1124F018.D	1.	K2308701-003		25 Nov 2003 15:0
20	16	1124F019.D	1.	K2308701-007		25 Nov 2003 15:4
21	17	1124F020.D	5.	K2308701-003		25 Nov 2003 16:2
22	18	1124F021.D	5.	K2308701-007		25 Nov 2003 17:0
23	19	1124F022.D	1.	KWG0318230-MB		25 Nov 2003 17:5
24	20	1124F023.D	1.	KWG0318230-LCS		25 Nov 2003 18:3
25	21	1124F024.D	1.	KWG0318230-DLCS		25 Nov 2003 19:1
26	22	1124F025.D	1.	KWG038722-MB		25 Nov 2003 19:5
27	23	1124F026.D	1.	KWG038722-LCS		25 Nov 2003 20:3
28	24	1124F027.D	1.	KWG038722-DLCS		25 Nov 2003 21:1
29	25	1124F028.D	5.	K2308433-006		25 Nov 2003 21:5
30	26	1124F029.D	5.	K2308433-007		25 Nov 2003 22:3
31	27	1124F030.D	5.	K2308433-009		25 Nov 2003 23:1
32	28	1124F031.D	1.	GPC 2 TEST		26 Nov 2003 00:0
33	29	1124F032.D	1.	GPC 3 TEST		26 Nov 2003 00:4
34	30	1124F033.D	1.	GPC 4 TEST		26 Nov 2003 01:2
35	31	1124F034.D	1.	GPC BLANK		26 Nov 2003 02:0
36	32	1124F035.D	1.	NEW IS SVM16-4F		26 Nov 2003 02:4
37	33	1124F036.D	1.	8270-LL @ 3 PPM		26 Nov 2003 03:2

jmg 11/26/03

12/1/03

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

January 27, 2004 Service Request No: K2308433

Katrina Leigh
ARCADIS
26451 Curtiss Wright Parkway, Suite 100
Cleveland, OH 44143

RE: Bloomington, IN / IN000072.0021

Dear Katrina:

Enclosed are the revised pages for the sample(s) submitted to our laboratory on October 27, 2003. For your reference, these analyses have been assigned our service request number K2308433.

Please call if you have any questions. My extension is 3316.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jeff Christian
Laboratory Director

JC/afs

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Simultaneously Extractable Metals

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Sample No.	Lab Sample ID.
SED-1	K2308433-001
SED-2	K2308433-002
SED-3	K2308433-003
SED-4	K2308433-004
SED-4D	K2308433-004D
SED-4S	K2308433-004S
SED-4-DUP	K2308433-005
SED-5	K2308433-006
Method Blank	K2308433-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Eileen M Arnold Date: 1/26/04

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-1
Lab Code: K2308433-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.6		
Copper	6010B	0.5	1	11/01/03	11/25/03	6.3		
Lead	6010B	5	1	11/01/03	11/25/03	28.7		*
Mercury	7471A	0.04	4	11/19/03	11/20/03	0.04	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.4		
Silver	6010B	0.5	1	11/01/03	11/25/03	0.5	U	
Zinc	6010B	0.5	1	11/01/03	11/25/03	54.9		

% Solids: 74.5

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-2
Lab Code: K2308433-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.6		
Copper	6010B	0.4	1	11/01/03	11/25/03	5.6		
Lead	6010B	4	1	11/01/03	11/25/03	158		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.2		
Silver	6010B	0.4	1	11/01/03	11/25/03	0.4	U	
Zinc	6010B	0.4	1	11/01/03	11/25/03	50.8		

% Solids: 77.3

Comments:

00006

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-3
Lab Code: K2308433-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.5		
Copper	6010B	0.4	1	11/01/03	11/25/03	7.1		
Lead	6010B	4	1	11/01/03	11/25/03	39.0		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.8	1	11/01/03	11/25/03	5.4		
Silver	6010B	0.4	1	11/01/03	11/25/03	0.4	U	
Zinc	6010B	0.4	1	11/01/03	11/25/03	326		

% Solids: 81.6

Comments:

00007

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-4
Lab Code: K2308433-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.7		
Copper	6010B	0.4	1	11/01/03	11/25/03	7.3		
Lead	6010B	4	1	11/01/03	11/25/03	36.4		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.0		
Silver	6010B	0.4	1	11/01/03	11/25/03	0.4	U	
Zinc	6010B	0.4	1	11/01/03	11/25/03	59.3		

% Solids: 75.3

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/22/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-4-DUP
Lab Code: K2308433-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.9		
Copper	6010B	0.5	1	11/01/03	11/25/03	9.0		
Lead	6010B	5	1	11/01/03	11/25/03	38.8		*
Mercury	7471A	0.04	4	11/19/03	11/20/03	0.04	U	
Nickel	6010B	0.9	1	11/01/03	11/25/03	5.4		
Silver	6010B	0.5	1	11/01/03	11/25/03	0.5	U	
Zinc	6010B	0.5	1	11/01/03	11/25/03	63.1		

% Solids: 73.0

Comments:

00009

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected: 10/23/03
Date Received: 10/27/03
Units: MG/KG
Basis: Dry

Sample Name: SED-5
Lab Code: K2308433-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.8		
Copper	6010B	0.4	1	11/01/03	11/25/03	10.8		
Lead	6010B	4	1	11/01/03	11/25/03	36.1		*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.08		
Nickel	6010B	0.8	1	11/01/03	11/25/03	5.2		
Silver	6010B	0.4	1	11/01/03	11/25/03	0.4	U	
Zinc	6010B	0.4	1	11/01/03	11/25/03	73.3		

% Solids: 82.0

Comments:

00010

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Date Collected:
Date Received:
Units: MG/KG
Basis: Dry

Sample Name: Method Blank
Lab Code: K2308433-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.2	1	11/01/03	11/25/03	0.2	U	
Copper	6010B	0.3	1	11/01/03	11/25/03	0.7	U	
Lead	6010B	3	1	11/01/03	11/25/03	3	U	*
Mercury	7471A	0.03	4	11/19/03	11/20/03	0.03	U	
Nickel	6010B	0.7	1	11/01/03	11/25/03	0.7	U	
Silver	6010B	0.3	1	11/01/03	11/25/03	0.3	U	
Zinc	6010B	0.3	1	11/01/03	11/25/03	0.3	U	

% Solids: 100.0

Comments:

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: Inorganic Ventures CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium	1250	1230	98	500	486	97	499	100	6010B
Copper	625	636	102	500	498	100	502	100	6010B
Lead	2500	2470	99	500	482	96	514	103	6010B
Mercury	5.0	5.30	106	5.0	5.19	104	5.35	107	7471A
Nickel	1250	1250	100	500	490	98	504	101	6010B
Silver	625	614	98	500	492	98	497	99	6010B
Zinc	1250	1230	98	500	485	97	499	100	6010B

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source:

CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	Method
Cadmium				500	506	101	506	101	6010B
Copper				500	504	101	501	100	6010B
Lead				500	530	106	506	101	6010B
Mercury				5.0	5.12	102	5.10	102	7471A
Nickel				500	508	102	508	102	6010B
Silver				500	505	101	506	101	6010B
Zinc				500	503	101	507	101	6010B

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICV Source: CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.45	109			7471A

Simultaneously Extractable Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Concentration Units: ug/l

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Cadmium				5.0	5.78	116		
Copper				10	8.95	90		
Lead				50	46.9	94		
Mercury	0.20	0.17	84					
Nickel				20	21.3	106		
Silver				10	8.39	84		
Zinc				10	10.3	102		

Simultaneously Extractable Metals
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U					6010B
Copper	20.0	U	20.0	U	20.0	U	20.0	U					6010B
Lead	100	U	100	U	100	U	100	U					6010B
Mercury	0.20	U	0.20	U	0.20	U	0.20	U					7471A
Nickel	20.0	U	20.0	U	20.0	U	20.0	U					6010B
Silver	10.0	U	10.0	U	10.0	U	10.0	U					6010B
Zinc	10.0	U	10.0	U	10.0	U	10.0	U					6010B

Simultaneously Extractable Metals
- 3 -
BLANKS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	Method
Cadmium			5.0	U							6010B
Copper			20.0	U							6010B
Lead			100	U							6010B
Mercury			0.20	U	0.20	U					7471A
Nickel			20.0	U							6010B
Silver			10.0	U							6010B
Zinc			10.0	U							6010B

Simultaneously Extractable Metals
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: ARCADIS

Service Request:K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA Iris ICP

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Cadmium		1000	1.9	860	86			
Copper		500	-0.6	459	92			
Lead		1000	-2	843	84			
Nickel		1000	0.4	835	83			
Silver		1000	-1.6	953	95			
Zinc		1000	14.1	852	85			

Simultaneously Extractable Metals
- 5a -
SPIKE SAMPLE RECOVERY

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Units: mg/kg
Basis: Dry
% Solids: 75.3

Sample Name: SED-4S
Lab Code: K2308433-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Cadmium	60 - 130	47.6		0.7		54.8	86		6010B
Copper	60 - 130	33.4		7.3		27.4	95		6010B
Lead	60 - 130	132		36.4		110	87		6010B
Mercury	60 - 130	0.87		0.03	U	0.87	101		7471A
Nickel	60 - 130	51.0		5.0		54.8	84		6010B
Silver	60 - 130	26.7		0.4	U	27.4	97		6010B
Zinc	60 - 130	105		59.3		54.8	82		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Simultaneously Extractable Metals

- 6 -

DUPLICATES

Client: ARCADIS
Project No.: IN000072.0021
Project Name: Bloomington, IN
Matrix: SEDIMENT

Service Request: K2308433
Units: mg/kg
Basis: Dry
% Solids: 75.3

Sample Name: SED-4D
Lab Code: K2308433-004D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Cadmium		0.7		1.0		38		6010B
Copper	30	7.3		6.2		17		6010B
Lead	30	36.4		21.3		52	*	6010B
Mercury		0.03	U	0.04	U			7471A
Nickel	30	5.0		4.6		9		6010B
Silver		0.4	U	0.4	U			6010B
Zinc	30	59.3		58.8		1		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Simultaneously Extractable Metals
- 7 -
LABORATORY CONTROL SAMPLE

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Aqueous LCS Source: Inorganic Ventures Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Cadmium	1250	1340	107					
Copper	625	679	108					
Lead	2500	2700	108					
Mercury	20.0	20.9	104					
Nickel	1250	1320	106					
Silver	625	672	108					
Zinc	1250	1320	106					

Simultaneously Extractable Metals
- 9 -
ICP SERIAL DILUTIONS

Client: ARCADIS
Service Request: K2308433
Project No.: IN000072.0021
Units: ug/L
Project Name: Bloomington, IN

Sample Name: SED-4L
Lab Code: K2308433-004L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-	Q	Method
Cadmium	16.0		25.0	U			6010B
Copper	170		192		13		6010B
Lead	842		778		8		6010B
Nickel	116		117		1		6010B
Silver	10.0	U	50.0	U			6010B
Zinc	1370		1500		9		6010B

Simultaneously Extractable Metals
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Mercury	253.70	BD	0.20		7471A

Comments _____

Simultaneously Extractable Metals
-10-
METHOD DETECTION LIMITS

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP/ICP-MS ID #: TJA Iris ICP

GFAA ID #: AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Cadmium	226.50		5.0		6010B
Copper	324.75		10.0		6010B
Lead	220.35		100		6010B
Nickel	231.60		20.0		6010B
Silver	328.07		10.0		6010B
Zinc	206.20		10.0		6010B

Comments _____

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS
3/14/03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Cr
Aluminum	237.3	0.0000000	0.0000000	0.0009000	0.0000000	-0.0035000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0125000
Arsenic	189.0	0.0000000	0.0000000	-0.0001400	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	-0.0010000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	-0.0000230	0.0000000	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	-0.0002000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0003000	0.0000000	0.0000000	0.0000000	-0.0003600
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	-0.0009500	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	-0.0000780	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	-0.0005000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0001000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001220
Zinc	213.8	0.0000000	0.0000000	0.0000000	0.0000000	-0.0012000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS
3/14/03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mo	Ni	Ti	V	Co
Aluminum	237.3	0.0000000	0.0000000	0.0000000	0.0000000	-0.0019000
Antimony	206.8	-0.0280000	0.0000000	0.0002400	0.0000000	0.0004000
Arsenic	189.0	0.0010000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	-0.0004700	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0012000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000250	-0.0000120	0.0000600	0.0000000	-0.0000560
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	-0.0001700	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0015000	0.0000000	0.0000000
Copper	324.7	0.0003400	0.0000000	-0.0000070	-0.0017000	0.0000000
Iron	259.9	-0.0003000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0740000	0.0700000
Lead	220.3	-0.0016000	0.0004600	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.3000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0001200
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	-0.0006800	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0118000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	-0.0003000	0.0000000	0.0000000	-0.0001700	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0005500	-0.0060000	-0.0002500	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.0016000	0.0017000	0.0037000
Tin	189.9	0.0000000	0.0000000	-0.0019000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0002500	0.0000000	-0.0006400	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0056600	-0.0000600	0.0000000	0.0000000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS
3/14/03

Analyte	Wave-length (nm)	Mn	P	C
Aluminum	237.3	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000
Arsenic	189.0	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0003100	0.0000330	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000
Iron	259.9	-0.0004000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000
Silicon	251.6	-0.0040000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000
Thallium	190.8	-0.0005900	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000

Simultaneously Extractable Metals

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

ICP ID Number: TJA Iris ICP

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Cadmium	5.00	20000.0	6010B
Copper	5.00	50000.0	6010B
Lead	5.00	200000.0	6010B
Nickel	5.00	100000.0	6010B
Silver	5.00	2000.0	6010B
Zinc	15.00	100000.0	6010B

Comments:

Simultaneously Extractable Metals
- 13 -
PREPARATION LOG

Client: ARCADIS
Service Request: K2308433
Project No.: IN000072.0021
Project Bloomington, IN

Method: P

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/01/03	AVS SEM	50	50
K2308433-MB	11/01/03	AVS SEM	3.00	100
K2308433-001	11/01/03	AVS SEM	2.95	100
K2308433-002	11/01/03	AVS SEM	3.02	100
K2308433-003	11/01/03	AVS SEM	3.00	100
K2308433-004	11/01/03	AVS SEM	3.07	100
K2308433-004D	11/01/03	AVS SEM	3.07	100
K2308433-005	11/01/03	AVS SEM	3.03	100
K2308433-004S	11/01/03	AVS SEM	3.03	100
K2308433-006	11/01/03	AVS SEM	3.03	100

Simultaneously Extractable Metals
- 13 -
PREPARATION LOG

Client: ARCADIS
Service Request: K2308433
Project No.: IN000072.0021
Project Bloomington, IN

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	11/19/03	AVS SEM	100	100
K2308433-MB	11/19/03	AVS SEM	3.00	100
K2308433-001	11/19/03	AVS SEM	2.95	100
K2308433-002	11/19/03	AVS SEM	3.02	100
K2308433-003	11/19/03	AVS SEM	3.00	100
K2308433-004	11/19/03	AVS SEM	3.07	100
K2308433-004D	11/19/03	AVS SEM	3.03	100
K2308433-005	11/19/03	AVS SEM	3.03	100
K2308433-004S	11/19/03	AVS SEM	3.07	100
K2308433-006	11/19/03	AVS SEM	3.03	100

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/20/03 End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	14:06																X								
STANDARD #1	1.00	14:07																X								
STANDARD #2	1.00	14:09																X								
STANDARD #3	1.00	14:11																X								
STANDARD #4	1.00	14:12																X								
STANDARD #5	1.00	14:14																X								
ICV	1.00	14:15																X								
ICB	1.00	14:17																X								
CCV1	1.00	14:19																X								
CCB1	1.00	14:20																X								
CRA	1.00	14:22																X								
ZZZZZZ	1.00	14:23																								
ZZZZZZ	1.00	14:25																								
ZZZZZZ	1.00	14:27																								
ZZZZZZ	1.00	14:28																								
ZZZZZZ	1.00	14:30																								
ZZZZZZ	1.00	14:31																								
ZZZZZZ	1.00	14:33																								
ZZZZZZ	1.00	14:35																								
ZZZZZZ	1.00	14:36																								
CCV2	1.00	14:38																X								
CCB2	1.00	14:40																X								
ZZZZZZ	1.00	14:41																								
ZZZZZZ	1.00	14:43																								
ZZZZZZ	1.00	14:44																								
ZZZZZZ	1.00	14:46																								
ZZZZZZ	1.00	14:48																								
ZZZZZZ	1.00	14:49																								
ZZZZZZ	1.00	14:51																								
ZZZZZZ	1.00	14:53																								

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Simultaneously Extractable Metals

- 14 -

ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: CETAC-1 Method: CV

Start Date: 11/20/03 End Date: 11/20/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	14:54																												
ZZZZZZ	1.00	14:56																												
CCV3	1.00	14:57																X												
CCB3	1.00	14:59																X												
ZZZZZZ	1.00	15:01																												
ZZZZZZ	1.00	15:02																												
K2308433-MB	4.00	15:04																X												
LCSW	4.00	15:05																X												
K2308433-001	4.00	15:07																X												
K2308433-002	4.00	15:09																X												
K2308433-003	4.00	15:10																X												
K2308433-004	4.00	15:12																X												
K2308433-004D	4.00	15:14																X												
K2308433-004S	4.00	15:15																X												
CCV4	1.00	15:17																X												
CCB4	1.00	15:18																X												
K2308433-005	4.00	15:20																X												
K2308433-006	4.00	15:22																X												
CCV5	1.00	15:23																X												
CCB5	1.00	15:25																X												

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS

Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA Iris ICP

Method: P

Start Date: 11/25/03

End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL-BLANK	1.00	11:13							X				X		X				X			X				X	
CAL-STDA	1.00	11:16							X				X		X				X			X				X	
CAL-STDB	1.00	11:18																										
ICV	1.00	11:22							X				X		X				X			X				X	
ZZZZZZ	1.00	11:24																										
ZZZZZZ	1.00	11:27																										
ICB	1.00	11:30							X				X		X				X			X				X	
CCV1	1.00	11:32																				X					
CCV1	1.00	11:38																										
CCB1	1.00	11:45							X				X		X				X			X				X	
CRI	1.00	11:49							X				X		X				X			X				X	
ICSA	1.00	11:56							X				X		X				X			X				X	
ICSAB	1.00	11:58							X				X		X				X			X				X	
ZZZZZZ	1.00	12:01																										
ZZZZZZ	1.00	12:03																										
ZZZZZZ	1.00	12:06																										
ZZZZZZ	1.00	12:10																										
ZZZZZZ	1.00	12:14																										
ZZZZZZ	1.00	12:17																										
ZZZZZZ	1.00	12:19																										
CCV2	1.00	12:22																				X					
CCV2	1.00	12:24																										
CCB2	1.00	12:26							X				X		X				X			X				X	
ZZZZZZ	1.00	12:29																										
ZZZZZZ	1.00	12:31																										
ZZZZZZ	5.00	12:34																										
K2308433-MB	1.00	12:40							X				X		X				X			X				X	
LCSW	1.00	12:43							X				X		X				X			X				X	
K2308433-001	1.00	12:48							X				X		X				X			X				X	
K2308433-004	1.00	12:54							X				X		X				X			X				X	

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Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: ARCADIS Service Request: K2308433

Project No.: IN000072.0021

Project Name: Bloomington, IN

Instrument ID Number: TJA Iris ICP Method: P

Start Date: 11/25/03 End Date: 11/25/03

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2308433-004S	1.00	12:59							X				X		X				X			X				X	
K2308433-004D	1.00	13:11							X				X		X				X			X				X	
K2308433-004L	5.00	13:15							X				X		X				X			X				X	
CCV3	1.00	13:21																				X					
CCV3	1.00	13:24																									
CCB3	1.00	13:27							X				X		X				X			X				X	
K2308433-002	1.00	13:47							X				X		X				X			X				X	
K2308433-003	1.00	13:50							X				X		X				X			X				X	
ZZZZZZ	1.00	13:55																									
K2308433-005	1.00	14:01							X				X		X				X			X				X	
K2308433-006	1.00	14:03							X				X		X				X			X				X	
CCV4	1.00	14:08																				X					
CCV4	1.00	14:11																									
CCB4	1.00	14:13							X				X		X				X			X				X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	18-APR-91	A227975
	Complete 15-MAY-91	PO Number IN07201
	Printed 29-JUN-91	Sampled 18-APR-91

Report To	Bill To
GERAGHTY & MILLER, INC. OREN GOTTLIEB SUITE 1450 101 W. OHIO STREET INDIANAPOLIS, IN 46204	GERAGHTY & MILLER ACCOUNTS PAYABLE SUITE 1450 101 WEST OHIO INDIANAPOLIS, IN 46204

Sample Description

PROJECT: BLOOMINGTON
SAMPLE ID: GMICSDSS1-41891

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 01-MAY-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	BDL	.31	mg/kg
BROMODICHLOROMETHANE	BDL	.31	mg/kg
BROMOFORM	BDL	.31	mg/kg
BROMOMETHANE	BDL	.63	mg/kg
CARBON DISULFIDE	BDL	.31	mg/kg
CARBON TETRACHLORIDE	BDL	.31	mg/kg
CHLOROBENZENE	BDL	.31	mg/kg
CHLOROETHANE	BDL	.63	mg/kg
CHLOROFORM	BDL	.31	mg/kg
CHLOROMETHANE	BDL	.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	.31	mg/kg
1,1-DICHLOROETHANE	BDL	.31	mg/kg
1,2-DICHLOROETHANE	BDL	.31	mg/kg
1,1-DICHLOROETHENE	BDL	.31	mg/kg
1,2-DICHLOROPROPANE	BDL	.31	mg/kg
ETHYLBENZENE	BDL	.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	.31	mg/kg
2-HEXANONE	BDL	.63	mg/kg
METHYLENE CHLORIDE	BDL	.31	mg/kg
METHYL ETHYL KETONE	BDL	.63	mg/kg
4-METHYL-2-PENTANONE	BDL	.63	mg/kg
STYRENE	BDL	.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	.31	mg/kg
TETRACHLOROETHENE	BDL	.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	BDL	.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	.31	mg/kg

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	.31	mg/kg
TRICHLOROETHENE	BDL	.31	mg/kg
VINYL ACETATE	BDL	.63	mg/kg
VINYL CHLORIDE	BDL	.63	mg/kg
XYLENE (TOTAL)	BDL	.31	mg/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	83		% Rec
TOLUENE-D8	89		% Rec
BROMOFLUOROBENZENE	92		% Rec
DILUTION FACTOR 1:63			

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 26-APR-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	15.1		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: K. STONER Analysis Date: 06-MAY-91 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	4000	660	ug/kg
ACENAPHTHYLENE	BDL	660	ug/kg
ANTHRACENE	1100	660	ug/kg
BENZ(A)ANTHRACENE	2600	660	ug/kg
BENZO(A)PYRENE	2300	660	ug/kg
BENZO(B)FLUORANTHENE	3600	660	ug/kg
BENZO(G,H,I)PERYLENE	920	660	ug/kg
BENZO(K)FLUORANTHENE	EST 660	660	ug/kg
BENZYL ALCOHOL	BDL	660	ug/kg
BENZYLBUTYLPHTHALATE	BDL	660	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	660	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	660	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	660	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	EST 610	660	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	660	ug/kg
CARBAZOLE	BDL	660	ug/kg
4-CHLOROANILINE	BDL	660	ug/kg
2-CHLORONAPHTHALENE	BDL	660	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	660	ug/kg
CHRYSENE	2300	660	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	660	ug/kg
DIBENZOFURAN	3100	660	ug/kg
1,2-DICHLOROBENZENE	BDL	660	ug/kg
1,3-DICHLOROBENZENE	BDL	660	ug/kg
1,4-DICHLOROBENZENE	BDL	660	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	1300	ug/kg
DIETHYLPHTHALATE	BDL	660	ug/kg
DIMETHYLPHTHALATE	BDL	660	ug/kg
DI-N-BUTYLPHTHALATE	BDL	660	ug/kg
DINITROBENZENES	BDL	660	ug/kg
2,4-DINITROTOLUENE	BDL	660	ug/kg
2,6-DINITROTOLUENE	BDL	660	ug/kg
DI-N-OCTYLPHTHALATE	BDL	660	ug/kg
FLUORANTHENE	8300	660	ug/kg

Parameter	Result	Det. Limit	Units
FLUORENE	3800	660	ug/kg
HEXACHLOROBENZENE	BDL	660	ug/kg
HEXACHLOROBUTADIENE	BDL	660	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	660	ug/kg
HEXACHLOROETHANE	BDL	660	ug/kg
INDENO(1,2,3-CD)PYRENE	1100	660	ug/kg
ISOPHORONE	BDL	660	ug/kg
2-METHYLNAPHTHALENE	2400	660	ug/kg
NAPHTHALENE	8400	660	ug/kg
2-NITROANILINE	BDL	3200	ug/kg
3-NITROANILINE	BDL	3200	ug/kg
4-NITROANILINE	BDL	3200	ug/kg
NITROBENZENE	BDL	660	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	660	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	660	ug/kg
PHENANTHRENE	11000	660	ug/kg
2-PICOLINE	BDL	3200	ug/kg
PYRENE	3700	660	ug/kg
PYRIDINE	BDL	3200	ug/kg
TETRACHLOROBENZENES	BDL	660	ug/kg
TOLUENEDIAMINE	BDL	3200	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	660	ug/kg
BENZOIC ACID	BDL	3200	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	660	ug/kg
2-CHLOROPHENOL	BDL	660	ug/kg
2,4-DICHLOROPHENOL	BDL	660	ug/kg
2,4-DIMETHYLPHENOL	BDL	660	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	3200	ug/kg
2,4-DINITROPHENOL	BDL	3200	ug/kg
2-METHYLPHENOL	BDL	660	ug/kg
4-METHYLPHENOL	830	660	ug/kg
2-NITROPHENOL	BDL	660	ug/kg
4-NITROPHENOL	BDL	3200	ug/kg
PENTACHLOROPHENOL	BDL	3200	ug/kg
PHENOL	BDL	660	ug/kg
TETRACHLOROPHENOL	BDL	660	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	660	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	660	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	71		% Rec
PHENOL-D5	61		% Rec
NITROBENZENE-D5	55		% Rec
2-FLUOROBIPHENYL	61		% Rec
2,4,6-TRIBROMOPHENOL	70		% Rec
TERPHENYL-D14	47		% Rec
ALSO DETECTED			
3-PENTEN-2-ONE	EST 600 RT=1.62		
UNKNOWN	EST 540 RT=1.74		
PROPANOIC ACID	EST 2800 RT=2.2		
UNKNOWN	EST 22000 RT=4.91		
UNKNOWN	EST 470 RT=8.34		
2-PROPENYL BENZENE	EST 540 RT=10.72		
(2-METHOXYETHYL)-BENZENE	EST 470 RT=15.35		
1-METHYLNAPHTHALENE	EST 1500 RT=16.7		
2-ETHENYLNAPHTHALENE	EST 600 RT=17.94		

Parameter	Result	Det. Limit	Units
1,7-DIMETHYLNAPHTHALENE	EST 600 RT=18.4		
1,8-DIMETHYLNAPHTHALENE	EST 670 RT=18.63		
4,4'-(1,2-ETHENEDIYL)BIS-PYRIDINE	EST 400 RT=21.92		
2-METHYLPHENANTHRENE	EST 400 RT=25.94		
4H-CYCLOPENTA[DEF]PHENANTHRENE	EST 670 RT=26.16		
HEXADECANOIC ACID	EST 1100 RT=26.54		
2-PHENYL NAPHTHALENE	EST 400 RT=26.85		
11H-BENZO[B]FLUORENE	EST 670 RT=29.81		
11H-BENZO[A]FLUORENE	EST 400 RT=30.02		
UNKNOWN HYDROCARBON	EST 1000 RT=34.7		
BENZO[E]PYRENE	EST 1400 RT=36.36		

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P129.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 30-APR-91 Test: P129.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

COPPER ICP SW846-6010

Analyst: M. JAO Analysis Date: 24-APR-91 Instrument: ICP Test: M112.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
COPPER	15.	2.0	mg/kg

prep blank was 0.022 mg/l

CHROMIUM ICP SW846-6010

Analyst: M. JAO Analysis Date: 02-MAY-91 Instrument: ICP Test: M110.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
CHROMIUM	13.	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P130.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 01-MAY-91 Test: P130.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: M. BAUER Analysis Date: 02-MAY-91 Instrument: GFAA Test: M103.2. 0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
ARSENIC	3.6	0.50	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value
RT Retention Time

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location

EMS HERITAGE LABORATORIES, INC.
7901 W. MORRIS ST.
INDIANAPOLIS, IN 46231
(317)243-8305

Received	Lab ID
18-APR-91	A227976
Complete	PO Number
15-MAY-91	IN07201
Printed	Sampled
29-JUN-91	18-APR-91

Report To

GERAGHTY & MILLER, INC.
OREN GOTTLIEB
SUITE 1450
101 W. OHIO STREET
INDIANAPOLIS, IN 46204

Bill To

GERAGHTY & MILLER
ACCOUNTS PAYABLE
SUITE 1450
101 WEST OHIO
INDIANAPOLIS, IN 46204

Sample Description

PROJECT: BLOOMINGTON
SAMPLE ID: GMICSDSS2-41891

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 01-MAY-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	BDL	.31	mg/kg
BROMODICHLOROMETHANE	BDL	.31	mg/kg
BROMOFORM	BDL	.31	mg/kg
BROMOMETHANE	BDL	.63	mg/kg
CARBON DISULFIDE	BDL	.31	mg/kg
CARBON TETRACHLORIDE	BDL	.31	mg/kg
CHLOROBENZENE	BDL	.31	mg/kg
CHLOROETHANE	BDL	.63	mg/kg
CHLOROFORM	BDL	.31	mg/kg
CHLOROMETHANE	BDL	.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	.31	mg/kg
1,1-DICHLOROETHANE	BDL	.31	mg/kg
1,2-DICHLOROETHANE	BDL	.31	mg/kg
1,1-DICHLOROETHENE	BDL	.31	mg/kg
1,2-DICHLOROPROPANE	BDL	.31	mg/kg
ETHYLBENZENE	BDL	.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	.31	mg/kg
2-HEXANONE	BDL	.63	mg/kg
METHYLENE CHLORIDE	0.57	.31	mg/kg
METHYL ETHYL KETONE	BDL	.63	mg/kg
4-METHYL-2-PENTANONE	BDL	.63	mg/kg
STYRENE	BDL	.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	.31	mg/kg
TETRACHLOROETHENE	BDL	.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	0.82	.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	.31	mg/kg

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	.31	mg/kg
TRICHLOROETHENE	BDL	.31	mg/kg
VINYL ACETATE	BDL	.63	mg/kg
VINYL CHLORIDE	BDL	.63	mg/kg
XYLENE (TOTAL)	BDL	.31	mg/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	68		% Rec
TOLUENE-D8	72		% Rec
BROMOFLUOROBENZENE	82		% Rec
DILUTION FACTOR 1:63			

NOTE: SAMPLE WAS RUN TWO TIMES WITH NO IMPROVEMENT IN SURROGATE RECOVERIES.

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 26-APR-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.6		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: K. STONER Analysis Date: 06-MAY-91 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	810	330	ug/kg
BENZO(A)PYRENE	970	330	ug/kg
BENZO(B)FLUORANTHENE	1600	330	ug/kg
BENZO(G,H,I)PERYLENE	610	330	ug/kg
BENZO(K)FLUORANTHENE	EST 310	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	950	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	1100	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	580	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	490	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	1000	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	69		% Rec
PHENOL-D5	59		% Rec
NITROBENZENE-D5	50		% Rec
2-FLUOROBIPHENYL	55		% Rec
2,4,6-TRIBROMOPHENOL	64		% Rec
TERPHENYL-D14	54		% Rec
ALSO DETECTED			
UNKNOWN	EST 200 RT=3.98		
UNKNOWN	EST 13000 RT=4.92		
UNKNOWN	EST 260 RT=7.91		
UNKNOWN	EST 400 RT=8.34		
UNKNOWN	EST 200 RT=9.61		
UNKNOWN	EST 230 RT=11.16		
11H-BENZO[A]FLUORENE	EST 260 RT=29.82		

EMS HERITAGE LABORATORIES, INC.

Lab Sample ID: A227976

Parameter	Result	Det. Limit	Units
11H-BENZO[B]FLUORENE	EST 130 RT=30.02		
CYCLOPENTA[CD]PYRENE	EST 130 RT=31.82		
BENZO[E]PYRENE	EST 1800 RT=36.36		

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P129.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 30-APR-91 Test: P129.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

COPPER ICP SW846-6010

Analyst: M. JAO Analysis Date: 24-APR-91 Instrument: ICP Test: M112.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
COPPER	24.	2.0	mg/kg

CHROMIUM ICP SW846-6010

Analyst: M. JAO Analysis Date: 02-MAY-91 Instrument: ICP Test: M110.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
CHROMIUM	9.2	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P130.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 01-MAY-91 Test: P130.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: M. BAUER Analysis Date: 02-MAY-91 Instrument: GFAA Test: M103.2. 0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
ARSENIC	5.6	1.0	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value
RT Retention Time

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location

EMS HERITAGE LABORATORIES, INC.
7901 W. MORRIS ST.
INDIANAPOLIS, IN 46231
(317)243-8305

Received	Lab ID
18-APR-91	A227977
Complete	PO Number
15-MAY-91	IN07201
Printed	Sampled
29-JUN-91	18-APR-91

Report To

GERAGHTY & MILLER, INC.
OREN GOTTLIEB
SUITE 1450
101 W. OHIO STREET
INDIANAPOLIS, IN 46204

Bill To

GERAGHTY & MILLER
ACCOUNTS PAYABLE
SUITE 1450
101 WEST OHIO
INDIANAPOLIS, IN 46204

Sample Description

PROJECT: BLOOMINGTON
SAMPLE ID: GMICSDSS3-41891

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 30-APR-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	BDL	0.31	mg/kg
BROMODICHLOROMETHANE	BDL	0.31	mg/kg
BROMOFORM	BDL	0.31	mg/kg
BROMOMETHANE	BDL	0.63	mg/kg
CARBON DISULFIDE	BDL	0.31	mg/kg
CARBON TETRACHLORIDE	BDL	0.31	mg/kg
CHLOROBENZENE	BDL	0.31	mg/kg
CHLOROETHANE	BDL	0.63	mg/kg
CHLOROFORM	BDL	0.31	mg/kg
CHLOROMETHANE	BDL	0.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	0.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHANE	BDL	0.31	mg/kg
1,2-DICHLOROETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHENE	BDL	0.31	mg/kg
1,2-DICHLOROPROPANE	BDL	0.31	mg/kg
ETHYLBENZENE	BDL	0.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	0.31	mg/kg
2-HEXANONE	BDL	0.63	mg/kg
METHYLENE CHLORIDE	0.38	0.31	mg/kg
METHYL ETHYL KETONE	BDL	0.63	mg/kg
4-METHYL-2-PENTANONE	BDL	0.63	mg/kg
STYRENE	BDL	0.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	0.31	mg/kg
TETRACHLOROETHENE	BDL	0.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	0.76	0.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	0.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	0.31	mg/kg

EMS HERITAGE LABORATORIES, INC.

Lab Sample ID: A227977

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	0.31	mg/kg
TRICHLOROETHENE	BDL	0.31	mg/kg
VINYL ACETATE	BDL	0.63	mg/kg
VINYL CHLORIDE	BDL	0.63	mg/kg
XYLENE (TOTAL)	BDL	0.31	mg/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	72		% Rec
TOLUENE-D8	82		% Rec
BROMOFLUOROBENZENE	90		% Rec
DILUTION FACTOR 1:63			

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 26-APR-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.1		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: K. STONER Analysis Date: 06-MAY-91 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	400	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	570	330	ug/kg
BENZ(A)ANTHRACENE	2100	330	ug/kg
BENZO(A)PYRENE	2000	330	ug/kg
BENZO(B)FLUORANTHENE	2700	330	ug/kg
BENZO(G,H,I)PERYLENE	1300	330	ug/kg
BENZO(K)FLUORANTHENE	730	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	EST 170	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	450	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	EST 200	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	2000	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	EST 330	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	3800	330	ug/kg

Parameter	Result	Det. Limit	Units
FLUORENE	460	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	1200	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	EST 270	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	3500	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	3900	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			
2-FLUOROPHENOL	72		% Rec
PHENOL-D5	58		% Rec
NITROBENZENE-D5	51		% Rec
2-FLUOROBIPHENYL	57		% Rec
2,4,6-TRIBROMOPHENOL	62		% Rec
TERPHENYL-D14	62		% Rec
ALSO DETECTED			
2-BUTYL TETRAHYDROFURAN	EST 170 RT=1.73		
UNKNOWN	EST 200 RT=3.98		
UNKNOWN	EST 13000 RT=4.92		
UNKNOWN	EST 400 RT=8.34		
DIBENZOTHIOPHENE	EST 170 RT=23.91		
2-METHYL ANTHRACENE	EST 200 RT=25.87		
4-METHYL PHENANTHRENE	EST 230 RT=25.94		
4H-CYCLOPENTA[DEF]PHENANTHRENE	EST 360 RT=26.15		
1-METHYL ANTHRACENE	EST 170 RT=26.25		

Parameter	Result	Det. Limit	Units
HEXADECANOIC ACID	EST 130 RT=26.5		
2-PHENYL NAPHTHALENE	EST 330 RT=26.86		
[1,1'-BIPHENYL]-2,2'-DICARBONITRILE	EST 130 RT=27.79		
BENZO[B]NAPHTHO[2,3-D]FURAN	EST 170 RT=29.16		
11H-BENZO[A]FLUORENE	EST 400 RT=29.82		
11H-BENZO[B]FLUORENE	EST 230 RT=30.04		
1,1':4',1"-TERPHENYL	EST 170 RT=31.38		
CYCLOPENTA[CD]PYRENE	EST 200 RT=31.84		
BENZO[E]PYRENE	EST 1100 RT=36.36		

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P129.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 30-APR-91 Test: P129.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

COPPER ICP SW846-6010

Analyst: M. JAO Analysis Date: 24-APR-91 Instrument: ICP Test: M112.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
COPPER	16.	2.0	mg/kg

prep blank was 0.022 mg/l

CHROMIUM ICP SW846-6010

Analyst: M. JAO Analysis Date: 02-MAY-91 Instrument: ICP Test: M110.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
CHROMIUM	16.	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P130.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 01-MAY-91 Test: P130.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: M. BAUER Analysis Date: 02-MAY-91 Instrument: GFAA Test: M103.2. 0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
ARSENIC	3.8	0.50	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value
RT Retention Time

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	18-APR-91	A227978
	Complete 15-MAY-91	PO Number IN07201
	Printed 29-JUN-91	Sampled 18-APR-91

Report To	Bill To
GERAGHTY & MILLER, INC. OREN GOTTLIEB SUITE 1450 101 W. OHIO STREET INDIANAPOLIS, IN 46204	GERAGHTY & MILLER ACCOUNTS PAYABLE SUITE 1450 101 WEST OHIO INDIANAPOLIS, IN 46204

Sample Description

PROJECT: BLOOMINGTON
SAMPLE ID: GMICSDSS4-41891

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 30-APR-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	BDL	0.31	mg/kg
BROMODICHLOROMETHANE	BDL	0.31	mg/kg
BROMOFORM	BDL	0.31	mg/kg
BROMOMETHANE	BDL	0.63	mg/kg
CARBON DISULFIDE	BDL	0.31	mg/kg
CARBON TETRACHLORIDE	BDL	0.31	mg/kg
CHLOROBENZENE	BDL	0.31	mg/kg
CHLOROETHANE	BDL	0.63	mg/kg
CHLOROFORM	BDL	0.31	mg/kg
CHLOROMETHANE	BDL	0.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	0.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHANE	BDL	0.31	mg/kg
1,2-DICHLOROETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHENE	BDL	0.31	mg/kg
1,2-DICHLOROPROPANE	BDL	0.31	mg/kg
ETHYLBENZENE	BDL	0.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	0.31	mg/kg
2-HEXANONE	BDL	0.63	mg/kg
METHYLENE CHLORIDE	BDL	0.31	mg/kg
METHYL ETHYL KETONE	BDL	0.63	mg/kg
4-METHYL-2-PENTANONE	BDL	0.63	mg/kg
STYRENE	BDL	0.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	0.31	mg/kg
TETRACHLOROETHENE	BDL	0.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	0.44	0.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	0.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	0.31	mg/kg

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	0.31	mg/kg
TRICHLOROETHENE	BDL	0.31	mg/kg
VINYL ACETATE	BDL	0.63	mg/kg
VINYL CHLORIDE	BDL	0.63	mg/kg
XYLENE (TOTAL)	BDL	0.31	mg/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	71		% Rec
TOLUENE-D8	89		% Rec
BROMOFLUOROBENZENE	89		% Rec
DILUTION FACTOR 1:63			

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 26-APR-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: K. STONER Analysis Date: 06-MAY-91 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	850	330	ug/kg
BENZO(A)PYRENE	890	330	ug/kg
BENZO(B)FLUORANTHENE	1200	330	ug/kg
BENZO(G,H,I)PERYLENE	610	330	ug/kg
BENZO(K)FLUORANTHENE	EST 330	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	770	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	950	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	1300	330	ug/kg

Parameter	Result	Det. Limit	Units
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	600	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	740	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	1600	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	EST 240	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			
2-FLUOROPHENOL	72		% Rec
PHENOL-D5	59		% Rec
NITROBENZENE-D5	49		% Rec
2-FLUOROBIPHENYL	57		% Rec
2,4,6-TRIBROMOPHENOL	58		% Rec
TERPHENYL-D14	61		% Rec
ALSO DETECTED			
UNKNOWN	EST 130 RT=1.74		
UNKNOWN	EST 130 RT=1.97		
PROPANOIC ACID	EST 560 RT=2.03		
3-HEXEN-2-ONE	EST 200 RT=3.47		
UNKNOWN	EST 230 RT=3.98		
UNKNOWN	EST 11000 RT=4.91		
3-HEXENE-2,5-DIONE	EST 400 RT=8.34		
HEXADECANOIC ACID	EST 330 RT=26.52		
9,10-ANTHRACENEDIONE	EST 170 RT=26.85		

Parameter	Result	Det. Limit	Units
11H-BENZO[A]FLUORENE	EST 170 RT=29.82		
11H-BEZNO[B]FLUORENE	EST 130 RT=30.03		
CYCLOPENTA[CD]PYRENE	EST 200 RT=31.83		
BENZO[E]PYRENE	EST 560 RT=36.36		

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P129.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: S. STRUEWING Analysis Date: 30-APR-91 Test: P129.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

COPPER ICP SW846-6010
Analyst: M. JAO Analysis Date: 24-APR-91 Instrument: ICP Test: M112.3. 0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
COPPER	12.	2.0	mg/kg

prep blank was 0.022 mg/l

CHROMIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 02-MAY-91 Instrument: ICP Test: M110.3. 0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
CHROMIUM	14.	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P130.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: S. STRUEWING Analysis Date: 01-MAY-91 Test: P130.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060
Analyst: M. BAUER Analysis Date: 02-MAY-91 Instrument: GFAA Test: M103.2. 0
Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
ARSENIC	3.9	0.50	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value
RT Retention Time

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	18-APR-91	A227979
	Complete 15-MAY-91	PO Number IN07201
	Printed 29-JUN-91	Sampled 18-APR-91

Report To	Bill To
GERAGHTY & MILLER, INC. OREN GOTTLIEB SUITE 1450 101 W. OHIO STREET INDIANAPOLIS, IN 46204	GERAGHTY & MILLER ACCOUNTS PAYABLE SUITE 1450 101 WEST OHIO INDIANAPOLIS, IN 46204

Sample Description

PROJECT: BLOOMINGTON
SAMPLE ID: GMICSDSS5-41891

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 30-APR-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	BDL	0.31	mg/kg
BROMODICHLOROMETHANE	BDL	0.31	mg/kg
BROMOFORM	BDL	0.31	mg/kg
BROMOMETHANE	BDL	0.63	mg/kg
CARBON DISULFIDE	BDL	0.31	mg/kg
CARBON TETRACHLORIDE	BDL	0.31	mg/kg
CHLOROBENZENE	BDL	0.31	mg/kg
CHLOROETHANE	BDL	0.63	mg/kg
CHLOROFORM	BDL	0.31	mg/kg
CHLOROMETHANE	BDL	0.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	0.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHANE	BDL	0.31	mg/kg
1,2-DICHLOROETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHENE	BDL	0.31	mg/kg
1,2-DICHLOROPROPANE	BDL	0.31	mg/kg
ETHYLBENZENE	BDL	0.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	0.31	mg/kg
2-HEXANONE	BDL	0.63	mg/kg
METHYLENE CHLORIDE	BDL	0.31	mg/kg
METHYL ETHYL KETONE	0.88	0.63	mg/kg
4-METHYL-2-PENTANONE	BDL	0.63	mg/kg
STYRENE	BDL	0.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	0.31	mg/kg
TETRACHLOROETHENE	BDL	0.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	0.44	0.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	0.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	0.31	mg/kg

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	0.31	mg/kg
TRICHLOROETHENE	BDL	0.31	mg/kg
VINYL ACETATE	BDL	0.63	mg/kg
VINYL CHLORIDE	BDL	0.63	mg/kg
XYLENE (TOTAL)	BDL	0.31	mg/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	70		% Rec
TOLUENE-D8	83		% Rec
BROMOFLUOROBENZENE	84		% Rec
DILUTION FACTOR 1:63			
ALSO DETECTED:			
UNKNOWN	EST 1.0 RT=27.47		

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 26-APR-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	15.1		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: K. STONER Analysis Date: 06-MAY-91 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	EST 360	660	ug/kg
ACENAPHTHYLENE	BDL	660	ug/kg
ANTHRACENE	BDL	660	ug/kg
BENZ(A)ANTHRACENE	1400	660	ug/kg
BENZO(A)PYRENE	1400	660	ug/kg
BENZO(B)FLUORANTHENE	2200	660	ug/kg
BENZO(G,H,I)PERYLENE	880	660	ug/kg
BENZO(K)FLUORANTHENE	850	660	ug/kg
BENZYL ALCOHOL	BDL	660	ug/kg
BENZYLBUTYLPHTHALATE	BDL	660	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	660	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	660	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	660	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	1300	660	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	660	ug/kg
CARBAZOLE	BDL	660	ug/kg
4-CHLOROANILINE	BDL	660	ug/kg
2-CHLORONAPHTHALENE	BDL	660	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	660	ug/kg
CHRYSENE	1800	660	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	660	ug/kg
DIBENZOFURAN	BDL	660	ug/kg
1,2-DICHLOROBENZENE	BDL	660	ug/kg
1,3-DICHLOROBENZENE	BDL	660	ug/kg
1,4-DICHLOROBENZENE	BDL	660	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	1300	ug/kg
DIETHYLPHTHALATE	BDL	660	ug/kg
DIMETHYLPHTHALATE	BDL	660	ug/kg
DI-N-BUTYLPHTHALATE	BDL	660	ug/kg
DINITROBENZENES	BDL	660	ug/kg
2,4-DINITROTOLUENE	BDL	660	ug/kg
2,6-DINITROTOLUENE	BDL	660	ug/kg

Parameter	Result	Det. Limit	Units
DI-N-OCTYLPHTHALATE	BDL	660	ug/kg
FLUORANTHENE	3000	660	ug/kg
FLUORENE	BDL	660	ug/kg
HEXACHLOROBENZENE	BDL	660	ug/kg
HEXACHLOROBUTADIENE	BDL	660	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	660	ug/kg
HEXACHLOROETHANE	BDL	660	ug/kg
INDENO(1,2,3-CD)PYRENE	870	660	ug/kg
ISOPHORONE	BDL	660	ug/kg
2-METHYLNAPHTHALENE	BDL	660	ug/kg
NAPHTHALENE	BDL	660	ug/kg
2-NITROANILINE	BDL	660	ug/kg
3-NITROANILINE	BDL	3200	ug/kg
4-NITROANILINE	BDL	3200	ug/kg
NITROBENZENE	BDL	3200	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	660	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	660	ug/kg
PHENANTHRENE	2000	660	ug/kg
2-PICOLINE	BDL	660	ug/kg
PYRENE	3200	3200	ug/kg
PYRIDINE	BDL	660	ug/kg
TETRACHLOROBENZENES	BDL	3200	ug/kg
TOLUENEDIAMINE	BDL	660	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	3200	ug/kg
BENZOIC ACID	BDL	660	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	3200	ug/kg
2-CHLOROPHENOL	BDL	660	ug/kg
2,4-DICHLOROPHENOL	BDL	660	ug/kg
2,4-DIMETHYLPHENOL	BDL	660	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	660	ug/kg
2,4-DINITROPHENOL	BDL	3200	ug/kg
2-METHYLPHENOL	BDL	3200	ug/kg
4-METHYLPHENOL	BDL	660	ug/kg
2-NITROPHENOL	EST 650	660	ug/kg
4-NITROPHENOL	BDL	660	ug/kg
PENTACHLOROPHENOL	BDL	3200	ug/kg
PHENOL	BDL	3200	ug/kg
TETRACHLOROPHENOL	BDL	660	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	660	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	660	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	68		% Rec
PHENOL-D5	55		% Rec
NITROBENZENE-D5	48		% Rec
2-FLUOROBIPHENYL	50		% Rec
2,4,6-TRIBROMOPHENOL	59		% Rec
TERPHENYL-D14	54		% Rec
ALSO DETECTED			
UNKNOWN	EST 340 RT=1.62		
3-METHOXY-1-HEPTENE	EST 340 RT=1.74		
UNKNOWN	EST 340 RT=3.47		
UNKNOWN	EST 540 RT=3.99		
UNKNOWN	EST 25000 RT=4.93		
UNKNOWN	EST 800 RT=8.33		
UNKNOWN	EST 340 RT=11.15		

Parameter	Result	Det. Limit	Units
BENZENEACETIC ACID	EST 270 RT=15.34		
4H-CYCLOPENTA[DEF]PHENANTHRENE	EST 170 RT=26.16		
HEXADECANOIC ACID	EST 600 RT=26.5		
9,10-ANTHRACENEDIONE	EST 270 RT=26.85		
OCTADECANOIC ACID	EST 270 RT=28.96		
BENZO[B]NAPHTHO[2,3-D]FURAN	EST 270 RT=29.18		
UNKNOWN	EST 340 RT=29.82		
PROPANOIC ACID	EST 600 RT=2.14		

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P129.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 30-APR-91 Test: P129.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

COPPER ICP SW846-6010

Analyst: M. JAO Analysis Date: 24-APR-91 Instrument: ICP Test: M112.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
COPPER	21.	2.0	mg/kg

prep blank was 0.022 mg/l

CHROMIUM ICP SW846-6010

Analyst: M. JAO Analysis Date: 02-MAY-91 Instrument: ICP Test: M110.3. 0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
CHROMIUM	11.	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 23-APR-91 Test: P130.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: S. STRUEWING Analysis Date: 01-MAY-91 Test: P130.7. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: M. BAUER Analysis Date: 02-MAY-91 Instrument: GFAA Test: M103.2. 0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Parameter	Result	Det. Limit	Units
ARSENIC	3.8	0.50	mg/kg

Sample Comments

BDL Below Detection Limit

Sample Comments

EST Estimated Value
RT Retention Time

Quality Assurance Officer: _____

Imagine the result

CSX Transportation

Data Review

BLOOMINGTON, INDIANNA

Semivolatile and Miscellaneous Analyses

SDG# L1014191

Analyses Performed By:
Alpha analytical Laboratories
Mansfield, Massachusetts

Report: #13395R
Review Level: Tier II
Project: IN000072.0052.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # L1014191 for samples collected in association with the CSX Transportation Bloomington Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
SED-15	L1014191-01	Water	9/8/10			X			X
SED-16	L1014191-02	Water	9/9/10			X			X
SED-17	L1014191-03	Water	9/9/10			X			X
SED-18	L1014191-04	Water	9/9/10			X			X
FD-100909	L1014191-05	Water	9/9/10	SED-18		X			X
SED-19	L1014191-06	Water	9/9/10			X			X
SED-20	L1014191-07	Water	9/9/10			X			X
SED-21	L1014191-08	Water	9/9/10			X			X
SED-22	L1014191-09	Water	9/9/10			X			X
SED-23	L1014191-10	Water	9/9/10			X			X
SW-15	L1014191-11	Water	9/8/10			X			X
SW-16	L1014191-12	Water	9/9/10			X			X
SW-17	L1014191-13	Water	9/9/10			X			X
SW-18	L1014191-14	Water	9/9/10			X			X
FD-1-100909	L1014191-15	Water	9/9/10	SW-18		X			X
SW-19	L1014191-16	Water	9/9/10			X			X
SW-20	L1014191-17	Water	9/9/10			X			X
SW-21	L1014191-18	Water	9/9/10			X			X
SW-22	L1014191-19	Water	9/9/10			X			X
SW-23	L1014191-20	Water	9/9/10			X			X

Note:

1. Miscellaneous analyses for all samples include hardness and/or %soot carbon.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 8270C and 8270C (Alkylated PAHs) selective ion monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
	Sediment	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
SW-846 8270C (PAH SIM)	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
	Sediment	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C

The analyses that exceeded the holding are presented in the following table.

Sample Locations	Holding Time	Criteria
SED-15 (8270C)	15 Days	14 Days

Sample results associated with sample locations analyzed by analytical method SW-846 8260 were qualified, as specified in the table below. All other holding times were met.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
Analysis completed less than two times holding time	J	UJ
Analysis completed greater than two times holding time	J	R

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed. All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank

contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
SW-15	Bis(2-ethylhexyl)phthalate	Detected sample results >RL and <BAL	"UB" at detected sample concentration

RL Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
SED-18 FD-1-100909	2,4,6-Tribromophenol	<LL but > 10%
	2-Fluorophenol	<LL but > 10%

LL Lower limit

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

4. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
SW-16 SW-17 SW-18 FD-1-100909 SW-19 SW-20 SW-21 SW-22 SW-23	Phenol	<LL but >10%	<LL but >10%

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations SW-18 and SED-18 were utilized as the MS/MSD. The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries, with the exception of the MS/MSD exhibiting recoveries outside of the control limits which are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
SED-18 (8270C)	2-Methylphenol	<LL but> 10%	AC
	2,4-Dimethylphenol	<10%	<10%
SED-18 (PAH SIM)	Naphthalene	>UL	>UL
	2-Methylnaphthalene	>UL	>UL
	Acenaphthylene	>UL	>UL
	Acenaphthene	>UL	>UL
	Fluorene	>UL	>UL
	Anthracene	>UL	>UL

AC Acceptable
UL Upper Limit
LL Lower limit

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration (D).	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
SED-18 (8270C)	2-Methylphenol
SED-18 (PAH SIM)	Naphthalene
	2-Methylnaphthalene
	Acenaphthylene
	Acenaphthene
	Fluorene
	Anthracene

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	J
	Detect	J

6. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

All analytes associated with laboratory duplicate RPD were within the control limit, with the exception of the analytes presented in the following table.

Sample Location	Analytes	Laboratory RPD
SED-18 (PAH SIM)	Naphthalene	40%
	C3- Naphthalenes	42%
	C4- Naphthalenes	46%
	Acenaphthylene	63%
	Fluorene	42%
	C1-Flourenes	58%
	C2-Flourenes	49%
	C3-Flourenes	45%
	C1-Phenanthrenes/Anthracenes	40%
	C2-Phenanthrenes/Anthracenes	53%
	C3-Phenanthrenes/Anthracenes	45%
	Anthracene	48%
	Fluoranthene	45%
	Pyrene	44%
	C1-Fluoranthenes/Pyrenes	47%
	Perylene	41%
	Indeno(1,2,3-cd)Pyrene	36%
	Dibenz(a,h)anthracene	43%

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	J
	Detect	J

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SED-18/FD-1-100909 (PAH SIM)	Naphthalene	26.4	40.1	NC
	C1- Naphthalenes	24.4	22.1	AC
	C2- Naphthalenes	35.9	40.9	AC

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
	C3- Naphthalenes	36.4	58.4	NC
	C4- Naphthalenes	33.2	55.6	NC
	2-Methylnapthalene	22.0	20.8	AC
	1-Methylnapthalene	15.1	13.0	AC
	Dibenzofuran	32.1	23.4	AC
	Acenaphthylene	91.8	54.1	52%
	Acenaphthene	35.0	15.8	NC
	Fluorene	41.9	34.6	AC
	C1-Flourenes	21.0	39.7	NC
	C2-Flourenes	38.7	64.2	NC
	C3-Flourenes	160	78.6	68%
	Phenanthrene	1180	387	101%
	C1-Phenanthrenes/Anthracenes	364	292	22%
	C2-Phenanthrenes/Anthracenes	220	201	9.0%
	C3-Phenanthrenes/Anthracenes	97.6	92.2	5.7%
	C4-Phenanthrenes/Anthracenes	41.3	34.5	AC
	Anthracene	173	168	2.9%
	Carbazole	146	33.0	NC
	Fluoranthene	2960	1150	88%
	Pyrene	2410	960	86%
	C1-Fluoranthenes/Pyrenes	761	538	34%
	Benz(a)anthracene	1290	616	71%
	Chrysene	1620	599	92%
	C1-Chrysenes	441	247	56%
	C2-Chrysenes	178	115	43%
	C3-Chrysenes	143	124	14%
	C4-Chrysenes	98.1	75.0	27%
	Benzo(b)fluoranthene	1320	516	88%
	Benzo(k)fluoranthene	1220	440	94%
	Benzo(e)pyrene	923	346	91%
	Benzo(a)pyrene	585	496	17%
	Perylene	216	134	47%
	Indeno(1,2,3-cd)Pyrene	740	362	69%
	Dibenz(a,h)anthracene	183	89.3	69%
	Benzo(g,h,i)perylene	746	322	79%
SW-18/FD-1-100909 (PAH SIM)	Naphthalene	32.3	13.6	AC
	Phenanthrene	18.5	18.1	
	C2-Phenanthrenes/Anthracenes	ND (10.8)	9.50	
	Fluoranthene	34.2	41.3	
	Pyrene	30.6	41.1	
	C1-Fluoranthenes/Pyrenes	15.5	23.9	

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
	Benz(a)anthracene	14.8	16.3	
	Chrysene	22.0	32.6	
	C1-Chrysenes	ND (10.8)	12.8	
	C2-Chrysenes	ND (10.8)	9.38	
	Benzo(b)fluoranthene	21.3	31.0	
	Benzo(k)fluoranthene	16.9	28.4	
	Benzo(e)pyrene	14.7	28.2	
	Benzo(a)pyrene	11.1	ND (9.34)	
	Indeno(1,2,3-cd)Pyrene	13.4	24.0	
	Benzo(g,h,i)perylene	14.2	26.5	
SED-18/FD-1-100909 (8270C)	All compounds	ND	ND	AC
SW-18/FD-1-100909 (8270C)	All compounds	ND	ND	AC

AC Acceptable
NC Not compliant
ND Not detected

The compound(s) naphthalene, C3-naphthalenes, C4-naphthalenes, acenaphthene, C1-flourenes, C2-flourenes, phenanthrene and carbazole associated with sample locations SED-18 and FD-1-0100909 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analytes were qualified as estimated.

8. Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270C and 8270C (PAH) SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X	X		
Reporting limits (units)		X		X	
Field Duplicate (RPD)		X	X		
Blanks					
A. Method blanks		X	X		
B. Equipment blanks					X
Surrogate Spike Recoveries		X	X		
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate(LCSD) %R		X	X		
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Lab Duplicate		X	X		
Dilution Factor		X		X	
Moisture Content		X		X	

%R Percent recovery
RPD Relative percent difference

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) Method 3020A (Hardness) and the Analysis of Soot by Accardi-Dey, Gschwend, 2003; Gustafsson (et al.), 1997"(%Soot). Data were reviewed in accordance with USEPA National Functional Guidelines of July 2002.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

    U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

    B The reported value was obtained from a reading less than the contract-required detection limit (CRDL), but greater than or equal to the instrument detection limit (IDL).

- Quantitation (Q) Qualifiers

    E The reported value is estimated due to the presence of interference.

    N Spiked sample recovery is not within control limits.

    * Duplicate analysis is not within control limits.

- Validation Qualifiers

    J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

    UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

    UB Analyte considered non-detect at the listed value due to associated blank contamination.

    R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

GENERAL CHEMISTRY ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Hardness by EPA 6020A	Water	180 days from collection to analysis	Cool to 4°C±2°C; preserved to a pH of less than 2 s.u.
%Soot	Sediment	28 days from collection to analysis	--

su Standard Units

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Matrix Spike (MS)/Laboratory Duplicate Analysis

MS and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS Analysis

All analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS recovery control limits do not apply for MS performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory qualifier "N" will be removed.

All analytes associated with MS/MSD recoveries were within control limits.

3.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the

parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

All analytes associated with laboratory duplicate RPD were within the control limit for Hardness and %Soot.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SED-18/FD-1-100909	%Soot (Rep 1)	1.35	4.20	103%
	%Soot (Rep 2)	1.43	2.77	64%
SW-18/FD-1-100909	Hardness	236	218	9.7%

The analyte %Soot (Rep 1) associated with samples locations SED-18 and FD-1-100909 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analyte were qualified as estimated.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

6. Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL CHEMISTRY

General Chemistry: EPA 6020A and %Soot	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Miscellaneous Instrumentation					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	X		
Serial Dilution (%D)		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R - percent recovery, RPD - relative percent difference, %D – percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: January 10, 2011

PEER REVIEW: Dennis Capria

DATE: January 11, 2011

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ALMA Woods Inc

COC # 1 of 2 L1014191

CSX TRANSPORTATION — CHAIN OF CUSTODY

LABORATORY INFORMATION			
Accutest	Phone:	407-425-6700	SHIPMENT INFORMATION
4405 Vineland Rd., Suite C-15	Fax:	407-425-0707	Shipment Method: FedEx
Orlando, FL 32811			Shipment Tracking No:

Serial No: 1020040642

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 9415829	Proj. State (State of Origin): IN	Company: ARCADIS	Project #: IN000072.0052.E3001
CSXT Project Name: IN CREOSOTE	Proj. City: Bloomington	Address: 251 E. Ohio St., Ste 600	PM: Bryant Bagley
CSXT Contact: Paul J. Ruzansile	LWON: ENV 53216	City, State, Zip: Indianapolis, IN 46204	Email: Bryant.Bagley@arcadis-us.com
			Phone: 317-231-6500 Fax: 317-231-6514

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: NO MRS Copy, DATA CA Only
- ☒ EDD Required, Format: Excel

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: SO = Soil; GW = Groundwater; WW = Waste Water; SW = Surface Water; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION								Note →	0	0	0	0						
	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Pres. Code	METHODS FOR ANALYSIS: SVOCs, 8270 SIM (PAHs)	Aluminum, Iron	Soil Classification	Hardness					COMMENTS	LAB USE
1	SED-15	1	9-8-10	1545	RW	N	G	SO		X	X	X	X					Analysis on Hold	
2	SED-16	1	9-9-10	0915	RW	N	G	SO		X	X	X	X						
3	SED-17	1	9-9-10	1000	RW	N	G	SO		X	X	X	X						
4	SED-18	3	9-9-10	1105	RW	N	G	SO		X	X	X	X					MS/MSD	
5	FD-1-100909	1	9-9-10	—	RW	N	G	SO		X	X	X	X					Field Dup	
6	SED-19	1	9-9-10	1340	RW	N	G	SO		X	X	X	X						
7	SED-20	1	9-9-10	1415	RW	N	G	SO		X	X	X	X						
8	SED-21	1	9-9-10	1445	RW	N	G	SO		X	X	X	X						
9	SED-22	1	9-9-10	1515	RW	N	G	SO		X	X	X	X						
10	SED-23	1	9-9-10	1535	RW	N	G	SO		X	X	X	X						

Relinquished By: ARCADIS	Date Time: 9-9-10 / 1500	Received By: FED EX	Date Time:	Comments & Special Analytical Requirements: - ECO EX SAMPLES - CONTACT HEATHER HANNAH @ ACCUTEST - SEE TABLE 1 * SW/SED-12 RESUBMITTED (NOT ON COOLER)	
Relinquished By: FED EX	Date Time: 9/10/10 1015	Received By:	Date Time: 9/10/10 1015		
Relinquished By:	Date Time:	Received By:	Date Time:		
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal # #	LAB Log Number #

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

L1014191

New Water Mark

COC # 2 of 2

Serial_No:10291016:12

CSX TRANSPORTATION — CHAIN OF CUSTODY

LABORATORY INFORMATION			
Accutest	Phone: 407-425-6700	SHIPMENT INFORMATION	
4405 Vineland Rd., Suite C-15	Fax: 407-425-0707	Shipment Method: FedEx	
Orlando, FL 32811		Shipment Tracking No:	

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 941525	Proj. State (State of Origin): IN	Company: ARCADIS	Project #: IN000097.0052.00001
CSXT Project Name: IN OFFSITE	Proj. City: Bloomington	Address: 251 E. Ohio St. Ste. 1800	PM: Bryant Lewis
CSXT Contact: Paul J. Lawniske	LWON: ENV 5346	City, State, Zip: Indianapolis, IN 46204	Email: Bryant.Lewis@arcadis-us.com
			Phone: 317-231-6500 Fax: 317-231-6574

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: Narrative Only, Water Data Only
- ☒ EDD Required, Format: Excel

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION	Containers	Sample Collection			Filtered	Type	Matrix	METHODS FOR ANALYSIS								COMMENTS	LAB USE
Sample Identification	Number & Type	Date	Time	Sampler	Y or N	Comp or Grab	Code	Note ➡	0	6							
								Pres. Code	SVOCs	Alkalinity, BOD	Inorganics						
11 SW-15	4	9-8-10	1545	RW	N	G	SW		X	X	X						
12 SW-16	4	9-9-10	0915						X	X	X						
13 SW-17	4		1000						X	X	X						
14 SW-18	12		1105						X	X	X					MS/MSD	
15 FD-1-100909	4		—						X	X	X					Field Dup	
16 SW-19	4		1340						X	X	X						
17 SW-20	4		1415						X	X	X						
18 SW-21	4		1445						X	X	X						
19 SW-22	4		1515						X	X	X						
20 SW-23	4	↓	1530	↓	↓	↓	↓		X	X	X						

Relinquished By: [signature]	Date Time: 9-9-10/1800	Received By: FED EX	Date Time:	Comments & Special Analytical Requirements:
Relinquished By: FED EX	Date Time: 9/10/10 1015	Received By: [signature]	Date Time: 9/10/10 1015	- SEE TABLE 1 - ECO EDD FORMS - CONTACT KATHY WANDY IF ACCUTEST
Relinquished By:	Date Time:	Received By:	Date Time:	
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal # # / LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-01	Date Collected:	09/08/10 15:45
Client ID:	SED-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 08:14	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	83%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	230	--	1
2-Methylphenol	ND		ug/kg	230	--	1
4-Methylphenol	ND		ug/kg	230	--	1
2,4-Dimethylphenol	ND		ug/kg	230	--	1
2,4-Dichlorophenol	ND		ug/kg	230	--	1
2,4,6-Trichlorophenol	ND		ug/kg	230	--	1
Pentachlorophenol	ND		ug/kg	920	--	1
Butylbenzylphthalate	ND		ug/kg	230	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	230	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	67		30-130
Phenol-d5	54		30-130
Nitrobenzene-d5	78		30-130
2-Fluorophenol	34		30-130
2,4,6-Tribromophenol	15	Q	30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-02	Date Collected:	09/09/10 09:15
Client ID:	SED-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 08:52	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	83%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	227	--	1
2-Methylphenol	ND		ug/kg	227	--	1
4-Methylphenol	ND		ug/kg	227	--	1
2,4-Dimethylphenol	ND		ug/kg	227	--	1
2,4-Dichlorophenol	ND		ug/kg	227	--	1
2,4,6-Trichlorophenol	ND		ug/kg	227	--	1
Pentachlorophenol	ND		ug/kg	908	--	1
Butylbenzylphthalate	ND		ug/kg	227	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	227	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	78		30-130
Phenol-d5	67		30-130
Nitrobenzene-d5	91		30-130
2-Fluorophenol	47		30-130
2,4,6-Tribromophenol	30		30-130
Terphenyl-d14	85		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-03	Date Collected:	09/09/10 10:00
Client ID:	SED-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 09:31	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	228	--	1
2-Methylphenol	ND		ug/kg	228	--	1
4-Methylphenol	ND		ug/kg	228	--	1
2,4-Dimethylphenol	ND		ug/kg	228	--	1
2,4-Dichlorophenol	ND		ug/kg	228	--	1
2,4,6-Trichlorophenol	ND		ug/kg	228	--	1
Pentachlorophenol	ND		ug/kg	912	--	1
Butylbenzylphthalate	ND		ug/kg	228	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	228	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	81		30-130
Phenol-d5	65		30-130
Nitrobenzene-d5	89		30-130
2-Fluorophenol	41		30-130
2,4,6-Tribromophenol	**23**	Q	30-130
Terphenyl-d14	85		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-04	Date Collected:	09/09/10 11:05
Client ID:	SED-18	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 10:22	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	76%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/kg	248	--	1
2-Methylphenol	ND	J	ug/kg	248	--	1
4-Methylphenol	ND	RJ	ug/kg	248	--	1
2,4-Dimethylphenol	ND	R	ug/kg	248	--	1
2,4-Dichlorophenol	ND	J	ug/kg	248	--	1
2,4,6-Trichlorophenol	ND	J	ug/kg	248	--	1
Pentachlorophenol	ND	J	ug/kg	993	--	1
Butylbenzylphthalate	ND		ug/kg	248	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	248	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	76		30-130
Phenol-d5	54		30-130
Nitrobenzene-d5	84		30-130
2-Fluorophenol	28	Q	30-130
2,4,6-Tribromophenol	11	Q	30-130
Terphenyl-d14	87		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-05	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 13:35	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	80%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/kg	230	--	1
2-Methylphenol	ND		ug/kg	230	--	1
4-Methylphenol	ND		ug/kg	230	--	1
2,4-Dimethylphenol	ND		ug/kg	230	--	1
2,4-Dichlorophenol	ND		ug/kg	230	--	1
2,4,6-Trichlorophenol	ND		ug/kg	230	--	1
Pentachlorophenol	ND	J	ug/kg	919	--	1
Butylbenzylphthalate	ND		ug/kg	230	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	230	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	67		30-130
Phenol-d5	45		30-130
Nitrobenzene-d5	72		30-130
2-Fluorophenol	25	Q	30-130
2,4,6-Tribromophenol	15	Q	30-130
Terphenyl-d14	78		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-06	Date Collected:	09/09/10 13:40
Client ID:	SED-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 14:14	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	78%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	241	--	1
2-Methylphenol	ND		ug/kg	241	--	1
4-Methylphenol	ND		ug/kg	241	--	1
2,4-Dimethylphenol	ND		ug/kg	241	--	1
2,4-Dichlorophenol	ND		ug/kg	241	--	1
2,4,6-Trichlorophenol	ND		ug/kg	241	--	1
Pentachlorophenol	ND		ug/kg	963	--	1
Butylbenzylphthalate	ND		ug/kg	241	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	241	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	39		30-130
Phenol-d5	35		30-130
Nitrobenzene-d5	41		30-130
2-Fluorophenol	34		30-130
2,4,6-Tribromophenol	37		30-130
Terphenyl-d14	48		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-07	Date Collected:	09/09/10 14:15
Client ID:	SED-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 14:53	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	83%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	213	--	1
2-Methylphenol	ND		ug/kg	213	--	1
4-Methylphenol	ND		ug/kg	213	--	1
2,4-Dimethylphenol	ND		ug/kg	213	--	1
2,4-Dichlorophenol	ND		ug/kg	213	--	1
2,4,6-Trichlorophenol	ND		ug/kg	213	--	1
Pentachlorophenol	ND		ug/kg	852	--	1
Butylbenzylphthalate	ND		ug/kg	213	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	213	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	75		30-130
Phenol-d5	56		30-130
Nitrobenzene-d5	84		30-130
2-Fluorophenol	34		30-130
2,4,6-Tribromophenol	**23**	Q	30-130
Terphenyl-d14	86		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-08	Date Collected:	09/09/10 14:45
Client ID:	SED-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 15:31	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	80%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	234	--	1
2-Methylphenol	ND		ug/kg	234	--	1
4-Methylphenol	ND		ug/kg	234	--	1
2,4-Dimethylphenol	ND		ug/kg	234	--	1
2,4-Dichlorophenol	ND		ug/kg	234	--	1
2,4,6-Trichlorophenol	ND		ug/kg	234	--	1
Pentachlorophenol	ND		ug/kg	936	--	1
Butylbenzylphthalate	ND		ug/kg	234	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	234	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	70		30-130
Phenol-d5	56		30-130
Nitrobenzene-d5	74		30-130
2-Fluorophenol	43		30-130
2,4,6-Tribromophenol	28	Q	30-130
Terphenyl-d14	76		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-09	Date Collected:	09/09/10 15:15
Client ID:	SED-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 16:10	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	79%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	236	--	1
2-Methylphenol	ND		ug/kg	236	--	1
4-Methylphenol	ND		ug/kg	236	--	1
2,4-Dimethylphenol	ND		ug/kg	236	--	1
2,4-Dichlorophenol	ND		ug/kg	236	--	1
2,4,6-Trichlorophenol	ND		ug/kg	236	--	1
Pentachlorophenol	ND		ug/kg	943	--	1
Butylbenzylphthalate	ND		ug/kg	236	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	236	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	79		30-130
Phenol-d5	62		30-130
Nitrobenzene-d5	85		30-130
2-Fluorophenol	43		30-130
2,4,6-Tribromophenol	**29**	Q	30-130
Terphenyl-d14	91		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-10	Date Collected:	09/09/10 15:30
Client ID:	SED-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:20
Analytical Date:	10/22/10 16:48	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	80%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	234	--	1
2-Methylphenol	ND		ug/kg	234	--	1
4-Methylphenol	ND		ug/kg	234	--	1
2,4-Dimethylphenol	ND		ug/kg	234	--	1
2,4-Dichlorophenol	ND		ug/kg	234	--	1
2,4,6-Trichlorophenol	ND		ug/kg	234	--	1
Pentachlorophenol	ND		ug/kg	935	--	1
Butylbenzylphthalate	ND		ug/kg	234	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	234	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	71		30-130
Phenol-d5	58		30-130
Nitrobenzene-d5	76		30-130
2-Fluorophenol	45		30-130
2,4,6-Tribromophenol	34		30-130
Terphenyl-d14	77		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-11	Date Collected:	09/08/10 15:45
Client ID:	SW-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/21/10 23:13		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.543	-	1
2-Methylphenol	ND		ug/l	0.543	-	1
4-Methylphenol	ND		ug/l	0.543	-	1
2,4-Dimethylphenol	ND		ug/l	0.543	--	1
2,4-Dichlorophenol	ND		ug/l	0.543	-	1
2,4,6-Trichlorophenol	ND		ug/l	0.543	-	1
Pentachlorophenol	ND		ug/l	2.17	--	1
Butylbenzylphthalate	0.570		ug/l	0.543		1
Bis(2-Ethylhexyl)phthalate	0.751	B	ug/l	0.543		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	68		15-115
Terphenyl-d14	60		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-12	Date Collected:	09/09/10 09:15
Client ID:	SW-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/21/10 23:52		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-115
Phenol-d5	30		15-115
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	65		15-115
Terphenyl-d14	64		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-13	Date Collected:	09/09/10 10:00
Client ID:	SW-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 00:30		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.495	--	1
2-Methylphenol	ND		ug/l	0.495		1
4-Methylphenol	ND		ug/l	0.495		1
2,4-Dimethylphenol	ND		ug/l	0.495		1
2,4-Dichlorophenol	ND		ug/l	0.495		1
2,4,6-Trichlorophenol	ND		ug/l	0.495		1
Pentachlorophenol	ND		ug/l	1.98		1
Butylbenzylphthalate	ND		ug/l	0.495	--	1
Bis(2-Ethylhexyl)phthalate	1.15		ug/l	0.495	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-115
Phenol-d5	27		15-115
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	61		15-115
Terphenyl-d14	62		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-14	Date Collected:	09/09/10 11:05
Client ID:	SW-18	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 02:26		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/l	0.521	--	1
2-Methylphenol	ND		ug/l	0.521	--	1
4-Methylphenol	ND		ug/l	0.521	--	1
2,4-Dimethylphenol	ND		ug/l	0.521	--	1
2,4-Dichlorophenol	ND		ug/l	0.521	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.521	--	1
Pentachlorophenol	ND		ug/l	2.08	--	1
Butylbenzylphthalate	ND		ug/l	0.521	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	55		15-115
Terphenyl-d14	63		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-15	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 04:22		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.505	--	1
2-Methylphenol	ND		ug/l	0.505	--	1
4-Methylphenol	ND		ug/l	0.505	--	1
2,4-Dimethylphenol	ND		ug/l	0.505	--	1
2,4-Dichlorophenol	ND		ug/l	0.505	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.505	--	1
Pentachlorophenol	ND		ug/l	2.02	--	1
Butylbenzylphthalate	ND		ug/l	0.505	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.505	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	82		15-115
Terphenyl-d14	62		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-16	Date Collected:	09/09/10 13:40
Client ID:	SW-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 05:01		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	3.33		ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-115
Phenol-d5	26		15-115
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	62		15-115
Terphenyl-d14	62		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-17	Date Collected:	09/09/10 14:15
Client ID:	SW-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 05:39		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.500	--	1
2-Methylphenol	ND		ug/l	0.500	--	1
4-Methylphenol	ND		ug/l	0.500	--	1
2,4-Dimethylphenol	ND		ug/l	0.500		1
2,4-Dichlorophenol	ND		ug/l	0.500		1
2,4,6-Trichlorophenol	ND		ug/l	0.500	--	1
Pentachlorophenol	ND		ug/l	2.00		1
Butylbenzylphthalate	ND		ug/l	0.500	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-115
Phenol-d5	26		15-115
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	58		15-115
Terphenyl-d14	63		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-18	Date Collected:	09/09/10 14:45
Client ID:	SW-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 06:19		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/l	0.515	--	1
2-Methylphenol	ND		ug/l	0.515	--	1
4-Methylphenol	ND		ug/l	0.515	--	1
2,4-Dimethylphenol	ND		ug/l	0.515	--	1
2,4-Dichlorophenol	ND		ug/l	0.515	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.515	--	1
Pentachlorophenol	ND		ug/l	2.06	--	1
Butylbenzylphthalate	ND		ug/l	0.515	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.515	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-115
Phenol-d5	32		15-115
Nitrobenzene-d5	88		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	85		15-115
Terphenyl-d14	64		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-19	Date Collected:	09/09/10 15:15
Client ID:	SW-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 06:57		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/l	0.505	--	1
2-Methylphenol	ND		ug/l	0.505	--	1
4-Methylphenol	ND		ug/l	0.505	--	1
2,4-Dimethylphenol	ND		ug/l	0.505	--	1
2,4-Dichlorophenol	ND		ug/l	0.505	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.505	--	1
Pentachlorophenol	ND		ug/l	2.02	--	1
Butylbenzylphthalate	ND		ug/l	0.505	--	1
Bis(2-Ethylhexyl)phthalate	1.28		ug/l	0.505	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-115
Phenol-d5	32		15-115
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	78		15-115
Terphenyl-d14	63		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-20	Date Collected:	09/09/10 15:30
Client ID:	SW-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/16/10 16:07
Analytical Date:	10/22/10 07:35		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/l	0.617	--	1
2-Methylphenol	ND		ug/l	0.617	--	1
4-Methylphenol	ND		ug/l	0.617	--	1
2,4-Dimethylphenol	ND		ug/l	0.617	--	1
2,4-Dichlorophenol	ND		ug/l	0.617	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.617	--	1
Pentachlorophenol	ND		ug/l	2.47	--	1
Butylbenzylphthalate	ND		ug/l	0.617	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.617	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-115
Phenol-d5	29		15-115
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	54		15-115
Terphenyl-d14	60		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-01	Date Collected:	09/08/10 15:45
Client ID:	SED-15	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 00:03		
Analyst:	AC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	88.7		ug/kg	4.80	--	1
C1-Naphthalenes	25.2		ug/kg	4.80	--	1
C2-Naphthalenes	23.6		ug/kg	4.80	--	1
C3-Naphthalenes	23.5		ug/kg	4.80	--	1
C4-Naphthalenes	28.4		ug/kg	4.80	--	1
2-Methylnaphthalene	24.4		ug/kg	4.80	--	1
1-Methylnaphthalene	14.2		ug/kg	4.80	--	1
Dibenzofuran	32.3		ug/kg	4.80	--	1
Acenaphthylene	18.8		ug/kg	4.80	--	1
Acenaphthene	22.6		ug/kg	4.80	--	1
Fluorene	21.8		ug/kg	4.80	--	1
C1-Fluorenes	10.6		ug/kg	4.80	--	1
C2-Fluorenes	25.1		ug/kg	4.80	--	1
C3-Fluorenes	64.2		ug/kg	4.80	--	1
Phenanthrene	276		ug/kg	4.80	--	1
C1-Phenanthrenes/Anthracenes	82.8		ug/kg	4.80	--	1
C2-Phenanthrenes/Anthracenes	77.3		ug/kg	4.80	--	1
C3-Phenanthrenes/Anthracenes	59.6		ug/kg	4.80	--	1
C4-Phenanthrenes/Anthracenes	54.1		ug/kg	4.80	--	1
Anthracene	44.5		ug/kg	4.80	--	1
Carbazole	42.2		ug/kg	4.80	--	1
Fluoranthene	462		ug/kg	4.80	--	1
Pyrene	424		ug/kg	4.80	--	1
C1-Fluoranthenes/Pyrenes	207		ug/kg	4.80	--	1
Benz(a)anthracene	182		ug/kg	4.80	--	1
Chrysene	238		ug/kg	4.80	--	1
C1-Chrysenes	113		ug/kg	4.80	--	1
C2-Chrysenes	137		ug/kg	4.80	--	1
C3-Chrysenes	198		ug/kg	4.80	--	1
C4-Chrysenes	142		ug/kg	4.80	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-01
Client ID: SED-15
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	230		ug/kg	4.80	--	1
Benzo(k)fluoranthene	184		ug/kg	4.80	--	1
Benzo(e)Pyrene	192		ug/kg	4.80	--	1
Benzo(a)pyrene	233		ug/kg	4.80	--	1
Perylene	56.3		ug/kg	4.80	--	1
Indeno(1,2,3-cd)Pyrene	146		ug/kg	4.80	--	1
Dibenz(a,h)anthracene	36.7		ug/kg	4.80	--	1
Benzo(ghi)perylene	171		ug/kg	4.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	90		50-130
Pyrene-d10	97		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-02	Date Collected:	09/09/10 09:15
Client ID:	SED-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 01:34		
Analyst:	AC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	10.9		ug/kg	3.98	--	1
C1-Naphthalenes	9.99		ug/kg	3.98	--	1
C2-Naphthalenes	17.1		ug/kg	3.98	--	1
C3-Naphthalenes	21.9		ug/kg	3.98	--	1
C4-Naphthalenes	18.1		ug/kg	3.98	--	1
2-Methylnaphthalene	7.79		ug/kg	3.98	--	1
1-Methylnaphthalene	6.44		ug/kg	3.98	--	1
Dibenzofuran	ND		ug/kg	3.98	--	1
Acenaphthylene	13.8		ug/kg	3.98	--	1
Acenaphthene	6.16		ug/kg	3.98	--	1
Fluorene	7.62		ug/kg	3.98	--	1
C1-Fluorenes	5.60		ug/kg	3.98	--	1
C2-Fluorenes	11.0		ug/kg	3.98	--	1
C3-Fluorenes	28.3		ug/kg	3.98	--	1
Phenanthrene	108		ug/kg	3.98	--	1
C1-Phenanthrenes/Anthracenes	41.6		ug/kg	3.98	--	1
C2-Phenanthrenes/Anthracenes	42.0		ug/kg	3.98	--	1
C3-Phenanthrenes/Anthracenes	29.0		ug/kg	3.98	--	1
C4-Phenanthrenes/Anthracenes	18.8		ug/kg	3.98	--	1
Anthracene	24.7		ug/kg	3.98	--	1
Carbazole	15.3		ug/kg	3.98	--	1
Fluoranthene	221		ug/kg	3.98	--	1
Pyrene	182		ug/kg	3.98	--	1
C1-Fluoranthenes/Pyrenes	74.1		ug/kg	3.98	--	1
Benz(a)anthracene	95.1		ug/kg	3.98	--	1
Chrysene	124		ug/kg	3.98	--	1
C1-Chrysenes	40.8		ug/kg	3.98	--	1
C2-Chrysenes	35.2		ug/kg	3.98	--	1
C3-Chrysenes	65.7		ug/kg	3.98	--	1
C4-Chrysenes	58.7		ug/kg	3.98	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-02
Client ID: SED-16
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	114		ug/kg	3.98	--	1
Benzo(k)fluoranthene	97.7		ug/kg	3.98	--	1
Benzo(e)Pyrene	89.4		ug/kg	3.98	--	1
Benzo(a)pyrene	109		ug/kg	3.98	--	1
Perylene	27.9		ug/kg	3.98	--	1
Indeno(1,2,3-cd)Pyrene	80.7		ug/kg	3.98	--	1
Dibenz(a,h)anthracene	19.0		ug/kg	3.98	--	1
Benzo(ghi)perylene	86.6		ug/kg	3.98	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	89		50-130
Pyrene-d10	95		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-03	Date Collected:	09/09/10 10:00
Client ID:	SED-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 03:06		
Analyst:	AC		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	137		ug/kg	3.65	--	1
C1-Naphthalenes	105		ug/kg	3.65	--	1
C2-Naphthalenes	113		ug/kg	3.65	--	1
C3-Naphthalenes	91.2		ug/kg	3.65	--	1
C4-Naphthalenes	58.2		ug/kg	3.65	--	1
2-Methylnaphthalene	95.1		ug/kg	3.65	--	1
1-Methylnaphthalene	69.6		ug/kg	3.65	--	1
Dibenzofuran	626		ug/kg	3.65	--	1
Acenaphthylene	67.5		ug/kg	3.65	--	1
Acenaphthene	869		ug/kg	3.65	--	1
Fluorene	674		ug/kg	3.65	--	1
C1-Fluorenes	93.0		ug/kg	3.65	--	1
C2-Fluorenes	113		ug/kg	3.65	--	1
C3-Fluorenes	990		ug/kg	3.65	--	1
Phenanthrene	8520 ~~7730~~	~~E~~ D	ug/kg	3.65	--	1
C1-Phenanthrenes/Anthracenes	1290		ug/kg	3.65	--	1
C2-Phenanthrenes/Anthracenes	417		ug/kg	3.65	--	1
C3-Phenanthrenes/Anthracenes	163		ug/kg	3.65	--	1
C4-Phenanthrenes/Anthracenes	55.5		ug/kg	3.65	--	1
Anthracene	720		ug/kg	3.65	--	1
Carbazole	1210		ug/kg	3.65	--	1
Fluoranthene	8410 7680	~~E~~ D	ug/kg	3.65	--	1
Pyrene	5820		ug/kg	3.65	--	1
C1-Fluoranthenes/Pyrenes	1510		ug/kg	3.65	--	1
Benz(a)anthracene	3050		ug/kg	3.65	--	1
Chrysene	3410		ug/kg	3.65	--	1
C1-Chrysenes	786		ug/kg	3.65	--	1
C2-Chrysenes	321		ug/kg	3.65	--	1
C3-Chrysenes	278		ug/kg	3.65	--	1
C4-Chrysenes	160		ug/kg	3.65	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-03
Client ID: SED-17
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	3180		ug/kg	3.65	--	1
Benzo(k)fluoranthene	2510		ug/kg	3.65	--	1
Benzo(e)Pyrene	1930		ug/kg	3.65	--	1
Benzo(a)pyrene	2690		ug/kg	3.65	--	1
Perylene	690		ug/kg	3.65	--	1
Indeno(1,2,3-cd)Pyrene	2170		ug/kg	3.65	--	1
Dibenz(a,h)anthracene	590		ug/kg	3.65	--	1
Benzo(ghi)perylene	1830		ug/kg	3.65	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	88		50-130
Pyrene-d10	87		50-130
Benzo(b)fluoranthene-d12	94		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-03 D
Client ID: SED-17
Sample Location: BLOOMINGTON, IN
Matrix: Sediment
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/28/10 23:17
Analyst: AC
Percent Solids: 81%

Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: ALPHA OP-013
Extraction Date: 09/16/10 11:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Phenanthrene	8520		ug/kg	18.2	--	5
Fluoranthene	8410		ug/kg	18.2		5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	81		50-130
Benzo(b)fluoranthene-d12	77		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-04 D
Client ID: SED-18
Sample Location: BLOOMINGTON, IN
Matrix: Sediment
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/11/10 21:06
Analyst: AC
Percent Solids: 76%

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: ALPHA OP-013
Extraction Date: 09/16/10 11:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	26.4	J	ug/kg	9.29	--	5
C1-Naphthalenes	24.4	J	ug/kg	9.29	--	5
C2-Naphthalenes	35.9	J	ug/kg	9.29	--	5
C3-Naphthalenes	36.4	J	ug/kg	9.29	--	5
C4-Naphthalenes	33.2	J	ug/kg	9.29	--	5
2-Methylnaphthalene	22.0	J	ug/kg	9.29	--	5
1-Methylnaphthalene	15.1		ug/kg	9.29	--	5
Dibenzofuran	32.1		ug/kg	9.29	--	5
Acenaphthylene	91.8	J	ug/kg	9.29	--	5
Acenaphthene	35.0	J	ug/kg	9.29	--	5
Fluorene	41.9	J	ug/kg	9.29	--	5
C1-Fluorenes	21.0	J	ug/kg	9.29	--	5
C2-Fluorenes	38.7	J	ug/kg	9.29	--	5
C3-Fluorenes	160	J	ug/kg	9.29	--	5
Phenanthrene	1180	J	ug/kg	9.29	--	5
C1-Phenanthrenes/Anthracenes	364	J	ug/kg	9.29	--	5
C2-Phenanthrenes/Anthracenes	220	J	ug/kg	9.29	--	5
C3-Phenanthrenes/Anthracenes	97.6	J	ug/kg	9.29	--	5
C4-Phenanthrenes/Anthracenes	41.3	J	ug/kg	9.29	--	5
Anthracene	173	J	ug/kg	9.29	--	5
Carbazole	146	J	ug/kg	9.29	--	5
Fluoranthene	2960	J	ug/kg	9.29	--	5
Pyrene	2410	J	ug/kg	9.29	--	5
C1-Fluoranthenes/Pyrenes	761	J	ug/kg	9.29	--	5
Benz(a)anthracene	1290		ug/kg	9.29	--	5
Chrysene	1620		ug/kg	9.29	--	5
C1-Chrysenes	441		ug/kg	9.29	--	5
C2-Chrysenes	178		ug/kg	9.29	--	5
C3-Chrysenes	143		ug/kg	9.29	--	5
C4-Chrysenes	98.1		ug/kg	9.29	--	5

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-04 D
Client ID: SED-18
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	1320		ug/kg	9.29	--	5
Benzo(k)fluoranthene	1220		ug/kg	9.29	--	5
Benzo(e)Pyrene	923		ug/kg	9.29	--	5
Benzo(a)pyrene	585		ug/kg	9.29	--	5
Perylene	216	J	ug/kg	9.29	--	5
Indeno(1,2,3-cd)Pyrene	740	J	ug/kg	9.29	--	5
Dibenz(a,h)anthracene	183	J	ug/kg	9.29	--	5
Benzo(ghi)perylene	746		ug/kg	9.29	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	77		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-05	Date Collected:	09/09/10 00:00
Client ID:	FD-1-100909	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 13:48		
Analyst:	AC		
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	40.1	J	ug/kg	2.96	--	1
C1-Naphthalenes	22.1		ug/kg	2.96	--	1
C2-Naphthalenes	40.9		ug/kg	2.96	--	1
C3-Naphthalenes	58.4	J	ug/kg	2.96	--	1
C4-Naphthalenes	55.6	J	ug/kg	2.96	--	1
2-Methylnaphthalene	20.8		ug/kg	2.96	--	1
1-Methylnaphthalene	13.0		ug/kg	2.96	--	1
Dibenzofuran	23.4		ug/kg	2.96	--	1
Acenaphthylene	54.1		ug/kg	2.96	--	1
Acenaphthene	15.8	J	ug/kg	2.96	--	1
Fluorene	34.6		ug/kg	2.96	--	1
C1-Fluorenes	39.7	J	ug/kg	2.96	--	1
C2-Fluorenes	64.2	J	ug/kg	2.96	--	1
C3-Fluorenes	78.6		ug/kg	2.96	--	1
Phenanthrene	387	J	ug/kg	2.96	--	1
C1-Phenanthrenes/Anthracenes	292		ug/kg	2.96	--	1
C2-Phenanthrenes/Anthracenes	201		ug/kg	2.96	--	1
C3-Phenanthrenes/Anthracenes	92.2		ug/kg	2.96	--	1
C4-Phenanthrenes/Anthracenes	34.5		ug/kg	2.96	--	1
Anthracene	168		ug/kg	2.96	--	1
Carbazole	33.0	J	ug/kg	2.96	--	1
Fluoranthene	1150		ug/kg	2.96	--	1
Pyrene	960		ug/kg	2.96	--	1
C1-Fluoranthenes/Pyrenes	538		ug/kg	2.96	--	1
Benz(a)anthracene	616		ug/kg	2.96	--	1
Chrysene	599		ug/kg	2.96	--	1
C1-Chrysenes	247		ug/kg	2.96	--	1
C2-Chrysenes	115		ug/kg	2.96	--	1
C3-Chrysenes	124		ug/kg	2.96	--	1
C4-Chrysenes	75.0		ug/kg	2.96	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-05
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	516		ug/kg	2.96	--	1
Benzo(k)fluoranthene	440		ug/kg	2.96	--	1
Benzo(e)Pyrene	346		ug/kg	2.96	--	1
Benzo(a)pyrene	496		ug/kg	2.96	--	1
Perylene	134		ug/kg	2.96	--	1
Indeno(1,2,3-cd)Pyrene	362		ug/kg	2.96	--	1
Dibenz(a,h)anthracene	89.3		ug/kg	2.96	--	1
Benzo(ghi)perylene	322		ug/kg	2.96	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	84		50-130
Benzo(b)fluoranthene-d12	84		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-06	Date Collected:	09/09/10 13:40
Client ID:	SED-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 15:19		
Analyst:	AC		
Percent Solids:	78%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	17.0		ug/kg	3.19	--	1
C1-Naphthalenes	31.6		ug/kg	3.19	--	1
C2-Naphthalenes	53.8		ug/kg	3.19	--	1
C3-Naphthalenes	52.7		ug/kg	3.19	--	1
C4-Naphthalenes	42.5		ug/kg	3.19	--	1
2-Methylnaphthalene	30.3		ug/kg	3.19	--	1
1-Methylnaphthalene	18.4		ug/kg	3.19	--	1
Dibenzofuran	108		ug/kg	3.19	--	1
Acenaphthylene	85.6		ug/kg	3.19	--	1
Acenaphthene	143		ug/kg	3.19	--	1
Fluorene	186		ug/kg	3.19	--	1
C1-Fluorenes	30.4		ug/kg	3.19	--	1
C2-Fluorenes	45.3		ug/kg	3.19	--	1
C3-Fluorenes	223		ug/kg	3.19	--	1
Phenanthrene	1890		ug/kg	3.19	--	1
C1-Phenanthrenes/Anthracenes	360		ug/kg	3.19	--	1
C2-Phenanthrenes/Anthracenes	160		ug/kg	3.19	--	1
C3-Phenanthrenes/Anthracenes	71.6		ug/kg	3.19	--	1
C4-Phenanthrenes/Anthracenes	34.7		ug/kg	3.19	--	1
Anthracene	359		ug/kg	3.19	--	1
Carbazole	315		ug/kg	3.19	--	1
Fluoranthene	2010		ug/kg	3.19	--	1
Pyrene	1580		ug/kg	3.19	--	1
C1-Fluoranthenes/Pyrenes	470		ug/kg	3.19	--	1
Benz(a)anthracene	749		ug/kg	3.19	--	1
Chrysene	881		ug/kg	3.19	--	1
C1-Chrysenes	242		ug/kg	3.19	--	1
C2-Chrysenes	111		ug/kg	3.19	--	1
C3-Chrysenes	111		ug/kg	3.19	--	1
C4-Chrysenes	80.9		ug/kg	3.19	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-06
Client ID: SED-19
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	748		ug/kg	3.19	--	1
Benzo(k)fluoranthene	651		ug/kg	3.19	--	1
Benzo(e)Pyrene	529		ug/kg	3.19	--	1
Benzo(a)pyrene	612		ug/kg	3.19	--	1
Perylene	165		ug/kg	3.19	--	1
Indeno(1,2,3-cd)Pyrene	538		ug/kg	3.19	--	1
Dibenz(a,h)anthracene	136		ug/kg	3.19	--	1
Benzo(ghi)perylene	492		ug/kg	3.19	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	87		50-130
Benzo(b)fluoranthene-d12	88		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-07	Date Collected:	09/09/10 14:15
Client ID:	SED-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 16:51		
Analyst:	AC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	39.8		ug/kg	3.32	--	1
C1-Naphthalenes	32.4		ug/kg	3.32	--	1
C2-Naphthalenes	46.9		ug/kg	3.32	--	1
C3-Naphthalenes	47.2		ug/kg	3.32	--	1
C4-Naphthalenes	35.1		ug/kg	3.32	--	1
2-Methylnaphthalene	25.6		ug/kg	3.32	--	1
1-Methylnaphthalene	24.4		ug/kg	3.32	--	1
Dibenzofuran	78.1		ug/kg	3.32	--	1
Acenaphthylene	58.6		ug/kg	3.32	--	1
Acenaphthene	120		ug/kg	3.32	--	1
Fluorene	130		ug/kg	3.32	--	1
C1-Fluorenes	34.7		ug/kg	3.32	--	1
C2-Fluorenes	45.2		ug/kg	3.32	--	1
C3-Fluorenes	219		ug/kg	3.32	--	1
Phenanthrene	1810		ug/kg	3.32	--	1
C1-Phenanthrenes/Anthracenes	383		ug/kg	3.32	--	1
C2-Phenanthrenes/Anthracenes	170		ug/kg	3.32	--	1
C3-Phenanthrenes/Anthracenes	82.7		ug/kg	3.32	--	1
C4-Phenanthrenes/Anthracenes	39.1		ug/kg	3.32	--	1
Anthracene	288		ug/kg	3.32	--	1
Carbazole	279		ug/kg	3.32	--	1
Fluoranthene	2480		ug/kg	3.32	--	1
Pyrene	1980		ug/kg	3.32	--	1
C1-Fluoranthenes/Pyrenes	617		ug/kg	3.32	--	1
Benz(a)anthracene	1040		ug/kg	3.32	--	1
Chrysene	1150		ug/kg	3.32	--	1
C1-Chrysenes	310		ug/kg	3.32	--	1
C2-Chrysenes	148		ug/kg	3.32	--	1
C3-Chrysenes	145		ug/kg	3.32	--	1
C4-Chrysenes	100		ug/kg	3.32	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-07
Client ID: SED-20
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	1070		ug/kg	3.32	--	1
Benzo(k)fluoranthene	786		ug/kg	3.32	--	1
Benzo(e)Pyrene	674		ug/kg	3.32	--	1
Benzo(a)pyrene	864		ug/kg	3.32	--	1
Perylene	232		ug/kg	3.32	--	1
Indeno(1,2,3-cd)Pyrene	698		ug/kg	3.32	--	1
Dibenz(a,h)anthracene	182		ug/kg	3.32	--	1
Benzo(ghi)perylene	631		ug/kg	3.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	93		50-130
Pyrene-d10	98		50-130
Benzo(b)fluoranthene-d12	100		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-08	Date Collected:	09/09/10 14:45
Client ID:	SED-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 18:22		
Analyst:	AC		
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	15.8		ug/kg	2.84	--	1
C1-Naphthalenes	10.8		ug/kg	2.84	--	1
C2-Naphthalenes	20.9		ug/kg	2.84	--	1
C3-Naphthalenes	22.5		ug/kg	2.84	--	1
C4-Naphthalenes	17.1		ug/kg	2.84	--	1
2-Methylnaphthalene	8.76		ug/kg	2.84	--	1
1-Methylnaphthalene	7.61		ug/kg	2.84	--	1
Dibenzofuran	26.7		ug/kg	2.84	--	1
Acenaphthylene	71.5		ug/kg	2.84	--	1
Acenaphthene	55.8		ug/kg	2.84	--	1
Fluorene	67.6		ug/kg	2.84	--	1
C1-Fluorenes	22.5		ug/kg	2.84	--	1
C2-Fluorenes	26.8		ug/kg	2.84	--	1
C3-Fluorenes	109		ug/kg	2.84	--	1
Phenanthrene	876		ug/kg	2.84	--	1
C1-Phenanthrenes/Anthracenes	200		ug/kg	2.84	--	1
C2-Phenanthrenes/Anthracenes	103		ug/kg	2.84	--	1
C3-Phenanthrenes/Anthracenes	51.1		ug/kg	2.84	--	1
C4-Phenanthrenes/Anthracenes	27.3		ug/kg	2.84	--	1
Anthracene	161		ug/kg	2.84	--	1
Carbazole	110		ug/kg	2.84	--	1
Fluoranthene	1340		ug/kg	2.84	--	1
Pyrene	1180		ug/kg	2.84	--	1
C1-Fluoranthenes/Pyrenes	407		ug/kg	2.84	--	1
Benz(a)anthracene	587		ug/kg	2.84	--	1
Chrysene	638		ug/kg	2.84	--	1
C1-Chrysenes	198		ug/kg	2.84	--	1
C2-Chrysenes	111		ug/kg	2.84	--	1
C3-Chrysenes	114		ug/kg	2.84	--	1
C4-Chrysenes	76.4		ug/kg	2.84	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-08
Client ID: SED-21
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	557		ug/kg	2.84		1
Benzo(k)fluoranthene	405		ug/kg	2.84		1
Benzo(e)Pyrene	381		ug/kg	2.84		1
Benzo(a)pyrene	431		ug/kg	2.84		1
Perylene	119		ug/kg	2.84		1
Indeno(1,2,3-cd)Pyrene	360		ug/kg	2.84	--	1
Dibenz(a,h)anthracene	93.3		ug/kg	2.84		1
Benzo(ghi)perylene	347		ug/kg	2.84		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	85		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-09	Date Collected:	09/09/10 15:15
Client ID:	SED-22	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 19:54		
Analyst:	AC		
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	446		ug/kg	4.57	--	1
C1-Naphthalenes	187		ug/kg	4.57	--	1
C2-Naphthalenes	179		ug/kg	4.57	--	1
C3-Naphthalenes	140		ug/kg	4.57	--	1
C4-Naphthalenes	91.4		ug/kg	4.57	--	1
2-Methylnaphthalene	186		ug/kg	4.57	--	1
1-Methylnaphthalene	106		ug/kg	4.57	--	1
Dibenzofuran	247		ug/kg	4.57	--	1
Acenaphthylene	106		ug/kg	4.57	--	1
Acenaphthene	126		ug/kg	4.57	--	1
Fluorene	160		ug/kg	4.57	--	1
C1-Fluorenes	61.4		ug/kg	4.57	--	1
C2-Fluorenes	89.4		ug/kg	4.57	--	1
C3-Fluorenes	206		ug/kg	4.57	--	1
Phenanthrene	2560		ug/kg	4.57	--	1
C1-Phenanthrenes/Anthracenes	582		ug/kg	4.57	--	1
C2-Phenanthrenes/Anthracenes	256		ug/kg	4.57	--	1
C3-Phenanthrenes/Anthracenes	123		ug/kg	4.57	--	1
C4-Phenanthrenes/Anthracenes	82.3		ug/kg	4.57	--	1
Anthracene	740		ug/kg	4.57	--	1
Carbazole	152		ug/kg	4.57	--	1
Fluoranthene	2940		ug/kg	4.57	--	1
Pyrene	2370		ug/kg	4.57	--	1
C1-Fluoranthenes/Pyrenes	785		ug/kg	4.57	--	1
Benz(a)anthracene	1250		ug/kg	4.57	--	1
Chrysene	1250		ug/kg	4.57	--	1
C1-Chrysenes	398		ug/kg	4.57	--	1
C2-Chrysenes	244		ug/kg	4.57	--	1
C3-Chrysenes	286		ug/kg	4.57	--	1
C4-Chrysenes	180		ug/kg	4.57	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-09
Client ID: SED-22
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	1080		ug/kg	4.57	--	1
Benzo(k)fluoranthene	923		ug/kg	4.57	--	1
Benzo(e)Pyrene	770		ug/kg	4.57	--	1
Benzo(a)pyrene	1130		ug/kg	4.57	--	1
Perylene	295		ug/kg	4.57	--	1
Indeno(1,2,3-cd)Pyrene	771		ug/kg	4.57	--	1
Dibenz(a,h)anthracene	194		ug/kg	4.57	--	1
Benzo(ghi)perylene	742		ug/kg	4.57	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	80		50-130
Pyrene-d10	86		50-130
Benzo(b)fluoranthene-d12	87		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-10	Date Collected:	09/09/10 15:30
Client ID:	SED-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/16/10 11:48
Analytical Date:	09/30/10 21:42		
Analyst:	AC		
Percent Solids:	80%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	2.86		ug/kg	1.89	--	1
C1-Naphthalenes	3.01		ug/kg	1.89	--	1
C2-Naphthalenes	7.97		ug/kg	1.89	--	1
C3-Naphthalenes	9.98		ug/kg	1.89	--	1
C4-Naphthalenes	9.89		ug/kg	1.89	--	1
2-Methylnaphthalene	ND		ug/kg	1.89	--	1
1-Methylnaphthalene	ND		ug/kg	1.89	--	1
Dibenzofuran	2.06		ug/kg	1.89	--	1
Acenaphthylene	10.6		ug/kg	1.89	--	1
Acenaphthene	2.54		ug/kg	1.89	--	1
Fluorene	4.50		ug/kg	1.89	--	1
C1-Fluorenes	5.04		ug/kg	1.89	--	1
C2-Fluorenes	10.3		ug/kg	1.89	--	1
C3-Fluorenes	22.7		ug/kg	1.89	--	1
Phenanthrene	57.8		ug/kg	1.89	--	1
C1-Phenanthrenes/Anthracenes	29.1		ug/kg	1.89	--	1
C2-Phenanthrenes/Anthracenes	25.7		ug/kg	1.89	--	1
C3-Phenanthrenes/Anthracenes	17.9		ug/kg	1.89	--	1
C4-Phenanthrenes/Anthracenes	11.6		ug/kg	1.89	--	1
Anthracene	13.8		ug/kg	1.89	--	1
Carbazole	11.7		ug/kg	1.89	--	1
Fluoranthene	150		ug/kg	1.89	--	1
Pyrene	131		ug/kg	1.89	--	1
C1-Fluoranthenes/Pyrenes	54.6		ug/kg	1.89	--	1
Benz(a)anthracene	64.0		ug/kg	1.89	--	1
Chrysene	99.3		ug/kg	1.89	--	1
C1-Chrysenes	34.0		ug/kg	1.89	--	1
C2-Chrysenes	26.2		ug/kg	1.89	--	1
C3-Chrysenes	38.3		ug/kg	1.89	--	1
C4-Chrysenes	34.3		ug/kg	1.89	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-10
Client ID: SED-23
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	97.0		ug/kg	1.89	--	1
Benzo(k)fluoranthene	77.0		ug/kg	1.89	--	1
Benzo(e)Pyrene	73.1		ug/kg	1.89	--	1
Benzo(a)pyrene	52.8		ug/kg	1.89	--	1
Perylene	16.2		ug/kg	1.89	--	1
Indeno(1,2,3-cd)Pyrene	69.1		ug/kg	1.89	--	1
Dibenz(a,h)anthracene	15.4		ug/kg	1.89	--	1
Benzo(ghi)perylene	67.8		ug/kg	1.89	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	79		50-130
Pyrene-d10	84		50-130
Benzo(b)fluoranthene-d12	88		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-11
Client ID: SW-15
Sample Location: BLOOMINGTON, IN
Matrix: Water
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/02/10 00:34
Analyst: AC

Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	24.2		ng/l	9.34	--	1
C1-Naphthalenes	15.8		ng/l	9.34	--	1
C2-Naphthalenes	17.5		ng/l	9.34	--	1
C3-Naphthalenes	11.7		ng/l	9.34	--	1
C4-Naphthalenes	ND		ng/l	9.34	--	1
2-Methylnaphthalene	ND		ng/l	9.34	--	1
1-Methylnaphthalene	14.7		ng/l	9.34	--	1
Dibenzofuran	25.0		ng/l	9.34	--	1
Acenaphthylene	ND		ng/l	9.34	--	1
Acenaphthene	59.9		ng/l	9.34	--	1
Fluorene	27.1		ng/l	9.34	--	1
C1-Fluorenes	ND		ng/l	9.34	--	1
C2-Fluorenes	ND		ng/l	9.34	--	1
C3-Fluorenes	ND		ng/l	9.34	--	1
Phenanthrene	26.6		ng/l	9.34	--	1
C1-Phenanthrenes/Anthracenes	9.83		ng/l	9.34	--	1
C2-Phenanthrenes/Anthracenes	9.53		ng/l	9.34	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
Anthracene	ND		ng/l	9.34	--	1
Carbazole	22.3		ng/l	9.34	--	1
Fluoranthene	35.2		ng/l	9.34	--	1
Pyrene	26.9		ng/l	9.34	--	1
C1-Fluoranthenes/Pyrenes	16.0		ng/l	9.34	--	1
Benz(a)anthracene	10.6		ng/l	9.34	--	1
Chrysene	18.1		ng/l	9.34	--	1
C1-Chrysenes	ND		ng/l	9.34	--	1
C2-Chrysenes	ND		ng/l	9.34	--	1
C3-Chrysenes	ND		ng/l	9.34	--	1
C4-Chrysenes	ND		ng/l	9.34	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-11
Client ID: SW-15
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	16.5		ng/l	9.34	--	1
Benzo(k)fluoranthene	12.5		ng/l	9.34		1
Benzo(e)Pyrene	13.0		ng/l	9.34	--	1
Benzo(a)pyrene	ND		ng/l	9.34	--	1
Perylene	ND		ng/l	9.34		1
Indeno(1,2,3-cd)Pyrene	11.8		ng/l	9.34	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.34	--	1
Benzo(ghi)perylene	11.7		ng/l	9.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	77		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-12	Date Collected:	09/09/10 09:15
Client ID:	SW-16	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 02:07		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	14.6		ng/l	10.5	--	1
C1-Naphthalenes	ND		ng/l	10.5	--	1
C2-Naphthalenes	ND		ng/l	10.5	--	1
C3-Naphthalenes	ND		ng/l	10.5	--	1
C4-Naphthalenes	ND		ng/l	10.5	--	1
2-Methylnaphthalene	ND		ng/l	10.5	--	1
1-Methylnaphthalene	ND		ng/l	10.5	--	1
Dibenzofuran	ND		ng/l	10.5	--	1
Acenaphthylene	ND		ng/l	10.5	--	1
Acenaphthene	ND		ng/l	10.5	--	1
Fluorene	ND		ng/l	10.5	--	1
C1-Fluorenes	ND		ng/l	10.5	--	1
C2-Fluorenes	ND		ng/l	10.5	--	1
C3-Fluorenes	ND		ng/l	10.5	--	1
Phenanthrene	11.8		ng/l	10.5	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.5	--	1
Anthracene	ND		ng/l	10.5	--	1
Carbazole	ND		ng/l	10.5	--	1
Fluoranthene	16.4		ng/l	10.5	--	1
Pyrene	13.9		ng/l	10.5	--	1
C1-Fluoranthenes/Pyrenes	11.4		ng/l	10.5	--	1
Benz(a)anthracene	ND		ng/l	10.5	--	1
Chrysene	10.6		ng/l	10.5	--	1
C1-Chrysenes	ND		ng/l	10.5	--	1
C2-Chrysenes	ND		ng/l	10.5	--	1
C3-Chrysenes	ND		ng/l	10.5	--	1
C4-Chrysenes	ND		ng/l	10.5	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-12
Client ID: SW-16
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.5	--	1
Benzo(k)fluoranthene	ND		ng/l	10.5		1
Benzo(e)Pyrene	ND		ng/l	10.5		1
Benzo(a)pyrene	ND		ng/l	10.5	--	1
Perylene	ND		ng/l	10.5		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.5	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.5	--	1
Benzo(ghi)perylene	ND		ng/l	10.5		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-13	Date Collected:	09/09/10 10:00
Client ID:	SW-17	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 03:39		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	16.5		ng/l	9.52	--	1
C1-Naphthalenes	ND		ng/l	9.52	--	1
C2-Naphthalenes	ND		ng/l	9.52	--	1
C3-Naphthalenes	ND		ng/l	9.52	--	1
C4-Naphthalenes	ND		ng/l	9.52	--	1
2-Methylnaphthalene	ND		ng/l	9.52	--	1
1-Methylnaphthalene	ND		ng/l	9.52	--	1
Dibenzofuran	ND		ng/l	9.52	--	1
Acenaphthylene	11.8		ng/l	9.52	--	1
Acenaphthene	ND		ng/l	9.52	--	1
Fluorene	ND		ng/l	9.52	--	1
C1-Fluorenes	ND		ng/l	9.52	--	1
C2-Fluorenes	ND		ng/l	9.52	--	1
C3-Fluorenes	ND		ng/l	9.52	--	1
Phenanthrene	43.3		ng/l	9.52	--	1
C1-Phenanthrenes/Anthracenes	17.0		ng/l	9.52	--	1
C2-Phenanthrenes/Anthracenes	14.6		ng/l	9.52	--	1
C3-Phenanthrenes/Anthracenes	10.4		ng/l	9.52	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.52	--	1
Anthracene	10.6		ng/l	9.52	--	1
Carbazole	10.1		ng/l	9.52	--	1
Fluoranthene	97.9		ng/l	9.52	--	1
Pyrene	88.7		ng/l	9.52	--	1
C1-Fluoranthenes/Pyrenes	43.2		ng/l	9.52	--	1
Benz(a)anthracene	33.6		ng/l	9.52	--	1
Chrysene	69.7		ng/l	9.52	--	1
C1-Chrysenes	23.7		ng/l	9.52	--	1
C2-Chrysenes	14.6		ng/l	9.52	--	1
C3-Chrysenes	ND		ng/l	9.52	--	1
C4-Chrysenes	ND		ng/l	9.52	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-13
Client ID: SW-17
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	80.8		ng/l	9.52	--	1
Benzo(k)fluoranthene	51.4		ng/l	9.52	--	1
Benzo(e)Pyrene	56.1		ng/l	9.52	--	1
Benzo(a)pyrene	23.5		ng/l	9.52	--	1
Perylene	ND		ng/l	9.52	--	1
Indeno(1,2,3-cd)Pyrene	50.0		ng/l	9.52	--	1
Dibenz(a,h)anthracene	10.3		ng/l	9.52	--	1
Benzo(ghi)perylene	54.8		ng/l	9.52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	81		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-14	Date Collected:	09/09/10 11:05
Client ID:	SW-18	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 05:13		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	32.3		ng/l	10.8	--	1
C1-Naphthalenes	ND		ng/l	10.8	--	1
C2-Naphthalenes	ND		ng/l	10.8	--	1
C3-Naphthalenes	ND		ng/l	10.8	--	1
C4-Naphthalenes	ND		ng/l	10.8	--	1
2-Methylnaphthalene	ND		ng/l	10.8	--	1
1-Methylnaphthalene	ND		ng/l	10.8	--	1
Dibenzofuran	ND		ng/l	10.8	--	1
Acenaphthylene	ND		ng/l	10.8	--	1
Acenaphthene	ND		ng/l	10.8	--	1
Fluorene	ND		ng/l	10.8	--	1
C1-Fluorenes	ND		ng/l	10.8	--	1
C2-Fluorenes	ND		ng/l	10.8	--	1
C3-Fluorenes	ND		ng/l	10.8	--	1
Phenanthrene	18.5		ng/l	10.8	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
Anthracene	ND		ng/l	10.8	--	1
Carbazole	ND		ng/l	10.8	--	1
Fluoranthene	34.2		ng/l	10.8	--	1
Pyrene	30.6		ng/l	10.8	--	1
C1-Fluoranthenes/Pyrenes	15.5		ng/l	10.8	--	1
Benz(a)anthracene	14.8		ng/l	10.8	--	1
Chrysene	22.0		ng/l	10.8	--	1
C1-Chrysenes	ND		ng/l	10.8	--	1
C2-Chrysenes	ND		ng/l	10.8	--	1
C3-Chrysenes	ND		ng/l	10.8	--	1
C4-Chrysenes	ND		ng/l	10.8	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14
Client ID: SW-18
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	21.3		ng/l	10.8		1
Benzo(k)fluoranthene	16.9		ng/l	10.8	--	1
Benzo(e)Pyrene	14.7		ng/l	10.8	--	1
Benzo(a)pyrene	11.1		ng/l	10.8	--	1
Perylene	ND		ng/l	10.8		1
Indeno(1,2,3-cd)Pyrene	13.4		ng/l	10.8	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.8		1
Benzo(ghi)perylene	14.2		ng/l	10.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	83		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14 RE
Client ID: SW-18
Sample Location: BLOOMINGTON, IN
Matrix: Water
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/01/10 10:48
Analyst: AC

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/17/10 16:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	29.4		ng/l	21.3	--	1
C1-Naphthalenes	ND		ng/l	21.3	--	1
C2-Naphthalenes	ND		ng/l	21.3	--	1
C3-Naphthalenes	ND		ng/l	21.3	--	1
C4-Naphthalenes	ND		ng/l	21.3	--	1
2-Methylnaphthalene	ND		ng/l	21.3	--	1
1-Methylnaphthalene	ND		ng/l	21.3	--	1
Dibenzofuran	ND		ng/l	21.3	--	1
Acenaphthylene	ND		ng/l	21.3	--	1
Acenaphthene	ND		ng/l	21.3	--	1
Fluorene	ND		ng/l	21.3	--	1
C1-Fluorenes	ND		ng/l	21.3	--	1
C2-Fluorenes	ND		ng/l	21.3	--	1
C3-Fluorenes	ND		ng/l	21.3	--	1
Phenanthrene	ND		ng/l	21.3	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	21.3	--	1
Anthracene	ND		ng/l	21.3	--	1
Carbazole	ND		ng/l	21.3	--	1
Fluoranthene	30.8		ng/l	21.3	--	1
Pyrene	28.3		ng/l	21.3	--	1
C1-Fluoranthenes/Pyrenes	23.7		ng/l	21.3	--	1
Benz(a)anthracene	ND		ng/l	21.3	--	1
Chrysene	ND		ng/l	21.3	--	1
C1-Chrysenes	ND		ng/l	21.3	--	1
C2-Chrysenes	ND		ng/l	21.3	--	1
C3-Chrysenes	ND		ng/l	21.3	--	1
C4-Chrysenes	ND		ng/l	21.3	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14 RE
Client ID: SW-18
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	21.3	--	1
Benzo(k)fluoranthene	ND		ng/l	21.3	--	1
Benzo(e)Pyrene	ND		ng/l	21.3	--	1
Benzo(a)pyrene	ND		ng/l	21.3	--	1
Perylene	ND		ng/l	21.3	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	21.3	--	1
Dibenz(a,h)anthracene	ND		ng/l	21.3	--	1
Benzo(ghi)perylene	ND		ng/l	21.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	92		50-130
Benzo(b)fluoranthene-d12	92		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-15
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Matrix: Water
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/02/10 08:18
Analyst: AC

Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	13.6		ng/l	9.34	--	1
C1-Naphthalenes	ND		ng/l	9.34	--	1
C2-Naphthalenes	ND		ng/l	9.34	--	1
C3-Naphthalenes	ND		ng/l	9.34	--	1
C4-Naphthalenes	ND		ng/l	9.34	--	1
2-Methylnaphthalene	ND		ng/l	9.34	--	1
1-Methylnaphthalene	ND		ng/l	9.34	--	1
Dibenzofuran	ND		ng/l	9.34	--	1
Acenaphthylene	ND		ng/l	9.34	--	1
Acenaphthene	ND		ng/l	9.34	--	1
Fluorene	ND		ng/l	9.34	--	1
C1-Fluorenes	ND		ng/l	9.34	--	1
C2-Fluorenes	ND		ng/l	9.34	--	1
C3-Fluorenes	ND		ng/l	9.34	--	1
Phenanthrene	18.1		ng/l	9.34	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
C2-Phenanthrenes/Anthracenes	9.50		ng/l	9.34	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.34	--	1
Anthracene	ND		ng/l	9.34	--	1
Carbazole	ND		ng/l	9.34	--	1
Fluoranthene	41.3		ng/l	9.34	--	1
Pyrene	41.1		ng/l	9.34	--	1
C1-Fluoranthenes/Pyrenes	23.9		ng/l	9.34	--	1
Benz(a)anthracene	16.3		ng/l	9.34	--	1
Chrysene	32.6		ng/l	9.34	--	1
C1-Chrysenes	12.8		ng/l	9.34	--	1
C2-Chrysenes	9.38		ng/l	9.34	--	1
C3-Chrysenes	ND		ng/l	9.34	--	1
C4-Chrysenes	ND		ng/l	9.34	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-15
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	31.0		ng/l	9.34	--	1
Benzo(k)fluoranthene	28.4		ng/l	9.34	--	1
Benzo(e)Pyrene	28.2		ng/l	9.34	--	1
Benzo(a)pyrene	ND		ng/l	9.34	--	1
Perylene	ND		ng/l	9.34	--	1
Indeno(1,2,3-cd)Pyrene	24.0		ng/l	9.34	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.34	--	1
Benzo(ghi)perylene	26.5		ng/l	9.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	76		50-130
Benzo(b)fluoranthene-d12	80		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-16	Date Collected:	09/09/10 13:40
Client ID:	SW-19	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 09:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	21.7		ng/l	9.43	--	1
C1-Naphthalenes	ND		ng/l	9.43	--	1
C2-Naphthalenes	ND		ng/l	9.43	--	1
C3-Naphthalenes	ND		ng/l	9.43	--	1
C4-Naphthalenes	10.5		ng/l	9.43	--	1
2-Methylnaphthalene	ND		ng/l	9.43	--	1
1-Methylnaphthalene	ND		ng/l	9.43	--	1
Dibenzofuran	ND		ng/l	9.43	--	1
Acenaphthylene	ND		ng/l	9.43	--	1
Acenaphthene	ND		ng/l	9.43	--	1
Fluorene	ND		ng/l	9.43	--	1
C1-Fluorenes	ND		ng/l	9.43	--	1
C2-Fluorenes	ND		ng/l	9.43	--	1
C3-Fluorenes	ND		ng/l	9.43	--	1
Phenanthrene	ND		ng/l	9.43	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
Anthracene	ND		ng/l	9.43	--	1
Carbazole	ND		ng/l	9.43	--	1
Fluoranthene	9.43		ng/l	9.43	--	1
Pyrene	ND		ng/l	9.43	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.43	--	1
Benz(a)anthracene	ND		ng/l	9.43	--	1
Chrysene	ND		ng/l	9.43	--	1
C1-Chrysenes	ND		ng/l	9.43	--	1
C2-Chrysenes	ND		ng/l	9.43	--	1
C3-Chrysenes	ND		ng/l	9.43	--	1
C4-Chrysenes	ND		ng/l	9.43	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-16
Client ID: SW-19
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.43	--	1
Benzo(k)fluoranthene	ND		ng/l	9.43	--	1
Benzo(e)Pyrene	ND		ng/l	9.43	--	1
Benzo(a)pyrene	ND		ng/l	9.43	--	1
Perylene	ND		ng/l	9.43	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.43	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.43	--	1
Benzo(ghi)perylene	ND		ng/l	9.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		50-130
Pyrene-d10	75		50-130
Benzo(b)fluoranthene-d12	80		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-17	Date Collected:	09/09/10 14:15
Client ID:	SW-20	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 11:20		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	28.6		ng/l	9.62	--	1
C1-Naphthalenes	ND		ng/l	9.62	--	1
C2-Naphthalenes	ND		ng/l	9.62	--	1
C3-Naphthalenes	ND		ng/l	9.62	--	1
C4-Naphthalenes	ND		ng/l	9.62	--	1
2-Methylnaphthalene	ND		ng/l	9.62	--	1
1-Methylnaphthalene	ND		ng/l	9.62	--	1
Dibenzofuran	ND		ng/l	9.62	--	1
Acenaphthylene	ND		ng/l	9.62	--	1
Acenaphthene	ND		ng/l	9.62	--	1
Fluorene	ND		ng/l	9.62	--	1
C1-Fluorenes	ND		ng/l	9.62	--	1
C2-Fluorenes	ND		ng/l	9.62	--	1
C3-Fluorenes	ND		ng/l	9.62	--	1
Phenanthrene	ND		ng/l	9.62	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
Anthracene	ND		ng/l	9.62	--	1
Carbazole	ND		ng/l	9.62	--	1
Fluoranthene	9.77		ng/l	9.62	--	1
Pyrene	ND		ng/l	9.62	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.62	--	1
Benz(a)anthracene	ND		ng/l	9.62	--	1
Chrysene	ND		ng/l	9.62	--	1
C1-Chrysenes	ND		ng/l	9.62	--	1
C2-Chrysenes	ND		ng/l	9.62	--	1
C3-Chrysenes	ND		ng/l	9.62	--	1
C4-Chrysenes	ND		ng/l	9.62	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-17
Client ID: SW-20
Sample Location: BLOOMINGTON, IN
Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.62	--	1
Benzo(k)fluoranthene	ND		ng/l	9.62	--	1
Benzo(e)Pyrene	ND		ng/l	9.62	--	1
Benzo(a)pyrene	ND		ng/l	9.62	--	1
Perylene	ND		ng/l	9.62	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.62	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.62	--	1
Benzo(ghi)perylene	ND		ng/l	9.62	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	75		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	82		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-18	Date Collected:	09/09/10 14:45
Client ID:	SW-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 12:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	38.1		ng/l	10.0	--	1
C1-Naphthalenes	ND		ng/l	10.0	--	1
C2-Naphthalenes	ND		ng/l	10.0	--	1
C3-Naphthalenes	ND		ng/l	10.0	--	1
C4-Naphthalenes	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzofuran	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	ND		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
C1-Fluorenes	ND		ng/l	10.0	--	1
C2-Fluorenes	ND		ng/l	10.0	--	1
C3-Fluorenes	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
Carbazole	ND		ng/l	10.0	--	1
Fluoranthene	10.5		ng/l	10.0	--	1
Pyrene	ND		ng/l	10.0	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
C1-Chrysenes	ND		ng/l	10.0	--	1
C2-Chrysenes	ND		ng/l	10.0	--	1
C3-Chrysenes	ND		ng/l	10.0	--	1
C4-Chrysenes	ND		ng/l	10.0	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-18
Client ID: SW-21
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	73		50-130
Pyrene-d10	78		50-130
Benzo(b)fluoranthene-d12	81		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-19
Client ID: SW-22
Sample Location: BLOOMINGTON, IN
Matrix: Water
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 10/29/10 00:50
Analyst: AC

Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	21.0		ng/l	9.80	--	1
C1-Naphthalenes	ND		ng/l	9.80	--	1
C2-Naphthalenes	ND		ng/l	9.80	--	1
C3-Naphthalenes	ND		ng/l	9.80	--	1
C4-Naphthalenes	ND		ng/l	9.80	--	1
2-Methylnaphthalene	ND		ng/l	9.80	--	1
1-Methylnaphthalene	ND		ng/l	9.80	--	1
Dibenzofuran	ND		ng/l	9.80	--	1
Acenaphthylene	ND		ng/l	9.80	--	1
Acenaphthene	ND		ng/l	9.80	--	1
Fluorene	ND		ng/l	9.80	--	1
C1-Fluorenes	ND		ng/l	9.80	--	1
C2-Fluorenes	ND		ng/l	9.80	--	1
C3-Fluorenes	ND		ng/l	9.80	--	1
Phenanthrene	ND		ng/l	9.80	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.80	--	1
Anthracene	ND		ng/l	9.80	--	1
Carbazole	ND		ng/l	9.80	--	1
Fluoranthene	10.1		ng/l	9.80	--	1
Pyrene	ND		ng/l	9.80	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.80	--	1
Benz(a)anthracene	ND		ng/l	9.80	--	1
Chrysene	ND		ng/l	9.80	--	1
C1-Chrysenes	ND		ng/l	9.80	--	1
C2-Chrysenes	ND		ng/l	9.80	--	1
C3-Chrysenes	ND		ng/l	9.80	--	1
C4-Chrysenes	ND		ng/l	9.80	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-19
Client ID: SW-22
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.80	--	1
Benzo(k)fluoranthene	ND		ng/l	9.80	--	1
Benzo(e)Pyrene	ND		ng/l	9.80	--	1
Benzo(a)pyrene	ND		ng/l	9.80	--	1
Perylene	ND		ng/l	9.80	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.80	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.80	--	1
Benzo(ghi)perylene	ND		ng/l	9.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	70		50-130
Pyrene-d10	75		50-130
Benzo(b)fluoranthene-d12	78		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1014191-20	Date Collected:	09/09/10 15:30
Client ID:	SW-23	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 15:29
Analytical Date:	10/02/10 15:49		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	84.3		ng/l	10.8	--	1
C1-Naphthalenes	12.5		ng/l	10.8	--	1
C2-Naphthalenes	ND		ng/l	10.8	--	1
C3-Naphthalenes	ND		ng/l	10.8	--	1
C4-Naphthalenes	ND		ng/l	10.8	--	1
2-Methylnaphthalene	ND		ng/l	10.8	--	1
1-Methylnaphthalene	ND		ng/l	10.8	--	1
Dibenzofuran	ND		ng/l	10.8	--	1
Acenaphthylene	ND		ng/l	10.8	--	1
Acenaphthene	ND		ng/l	10.8	--	1
Fluorene	ND		ng/l	10.8	--	1
C1-Fluorenes	ND		ng/l	10.8	--	1
C2-Fluorenes	ND		ng/l	10.8	--	1
C3-Fluorenes	ND		ng/l	10.8	--	1
Phenanthrene	ND		ng/l	10.8	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.8	--	1
Anthracene	ND		ng/l	10.8	--	1
Carbazole	ND		ng/l	10.8	--	1
Fluoranthene	11.8		ng/l	10.8	--	1
Pyrene	ND		ng/l	10.8	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.8	--	1
Benz(a)anthracene	ND		ng/l	10.8	--	1
Chrysene	ND		ng/l	10.8	--	1
C1-Chrysenes	ND		ng/l	10.8	--	1
C2-Chrysenes	ND		ng/l	10.8	--	1
C3-Chrysenes	ND		ng/l	10.8	--	1
C4-Chrysenes	ND		ng/l	10.8	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-20
Client ID: SW-23
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.8	--	1
Benzo(k)fluoranthene	ND		ng/l	10.8	--	1
Benzo(e)Pyrene	ND		ng/l	10.8	--	1
Benzo(a)pyrene	ND		ng/l	10.8	--	1
Perylene	ND		ng/l	10.8	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.8	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.8	--	1
Benzo(ghi)perylene	ND		ng/l	10.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	70		50-130
Pyrene-d10	71		50-130
Benzo(b)fluoranthene-d12	74		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-11
Client ID: SW-15
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	186		mg/l	2.30	-	5	09/21/10 08:55	09/22/10 13:07	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-12
Client ID: SW-16
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	201		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:08	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-13
Client ID: SW-17
Sample Location: BLOOMINGTON, IN
Matrix: Water
Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	213		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:08	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-14
Client ID: SW-18
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	236		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:09	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-15
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	218		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:14	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-16
Client ID: SW-19
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	199		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:14	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-17
Client ID: SW-20
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	192		mg/l	2.30	-	5	09/21/10 08:55	09/22/10 13:15	EPA 3020A	1,6020A	LR

Project Name:	Not Specified	**Lab Number:**	L1014191
Project Number:	Not Specified	**Report Date:**	10/29/10

SAMPLE RESULTS

Lab ID:	L10141191-18	Date Collected:	09/09/10 14:45
Client ID:	SW-21	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	194		mg/l	2.30	-	5	09/21/10 08:55	09/22/10 13:16	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-19
Client ID: SW-22
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	196		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:16	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-20
Client ID: SW-23
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	204		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:17	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-01
Client ID: SED-15
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/08/10 15:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	82.7		%	0.100		1		09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	4.64		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.12		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-02
Client ID: SED-16
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 09:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	83.0		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	3.36		%	0.010	NA	1		10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.19		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-03
Client ID: SED-17
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 10:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	81.2		%	0.100	--	1		09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	2.98		%	0.010	NA	1		10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.01		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-04
Client ID: SED-18
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 11:05
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	75.6		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	1.35	J	%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	1.43		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-05
Client ID: FD-1-100909
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 00:00
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	80.0		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	4.20	J	%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	2.77		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-06
Client ID: SED-19
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 13:40
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	78.1		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	2.62		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.07		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-07
Client ID: SED-20
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 14:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	82.6		%	0.100	-	1		09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	2.53		%	0.010	NA	1		10/06/10 10:00	91,-	NR
% Soot (Rep 2)	2.20		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-08
Client ID: SED-21
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 14:45
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	79.6		%	0.100	--	1		09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	3.08		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	3.67		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-09
Client ID: SED-22
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 15:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	79.0		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	3.01		%	0.010	NA	1	-	10/06/10 10:00	91,-	NR
% Soot (Rep 2)	2.93		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1014191
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1014191-10
Client ID: SED-23
Sample Location: BLOOMINGTON, IN
Matrix: Sediment

Date Collected: 09/09/10 15:30
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	80.1		%	0.100	--	1	-	09/20/10 17:20	30,2540G	KB
% Soot (Rep 1)	4.01		%	0.010	NA	1		10/06/10 10:00	91,-	NR
% Soot (Rep 2)	4.92		%	0.010	NA	1		10/06/10 10:00	91,-	NR

Imagine the result

CSX Transportation

Data Review

BLOOMINGTON, INDIANNA

Semivolatile and Miscellaneous Analyses

SDG# L1013935

Analyses Performed By:
Alpha analytical Laboratories
Mansfield, Massachusetts

Report: #13394R
Review Level: Tier II
Project: IN000072.0052.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # L1013935 for samples collected in association with the CSX Transportation Bloomington Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
SW-09 (F76426-1)	L1013935-01	Water	9/8/10			X			X
SW-10 (F76426-3)	L1013935-02	Water	9/8/10			X			X
SW-11 (F76426-6)	L1013935-03	Water	9/8/10			X			X
SW-12 (F76426-8)	L1013935-04	Water	9/8/10			X			X
SW-13 (F76426-10)	L1013935-05	Water	9/8/10			X			X
SW-14 (F76426-12)	L1013935-06	Water	9/8/10			X			X
SED-09 (F76426-2)	L1013935-07	Water	9/8/10			X			X
SED-10 (F76426-4)	L1013935-08	Water	9/8/10			X			X
SED-11 (F76426-7)	L1013935-09	Water	9/8/10			X			X
SED-13 (F76426-11)	L1013935-11	Water	9/8/10			X			X
SED-14 (F76426-13)	L1013935-12	Water	9/8/10			X			X
SED-14 (F76426-12)	L1013935-13	Water	9/8/10			X			X

Note:

1. Miscellaneous analyses for all samples include hardness and/or %soot carbon.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 8270C (Alkylated PAHs) and 8270C selective ion monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
	Sediment	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
SW-846 8270C (PAH SIM)	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
	Sediment	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
SW-09 SW-14	Bis(2-ethylhexyl)phthalate	Detected sample results >RL and <BAL	"UB" at detected sample concentration

RL Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
SED-14 (F76426-13)	2,4,6-Tribromophenol	< 10%

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

4. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
SED-09 SED-10 SED-11 SED-13 SED-14(F76426-13)	Phenol

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location associated with this SDG.

6. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

A laboratory duplicate was not performed on a sample location associated with this SDG.

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for soil matrices.

A field duplicate was not collected with a sample location associated with this SDG.

8. Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270C and 8270C PAH SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Field Duplicate (RPD)					X
Blanks					
A. Method blanks		X	X		
B. Equipment blanks					X
Surrogate Spike Recoveries		X	X		
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X	X		
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Lab Duplicate (RPD)					X
Dilution Factor		X		X	
Moisture Content		X		X	

%R Percent recovery
RPD Relative percent difference

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) Method 3020A (Hardness) and the Analysis of Soot by Accardi-Dey, Gschwend, 2003; Gustafsson (et al.), 1997"(%Soot). Data were reviewed in accordance with USEPA National Functional Guidelines of July 2002.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

    U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

    B The reported value was obtained from a reading less than the contract-required detection limit (CRDL), but greater than or equal to the instrument detection limit (IDL).

- Quantitation (Q) Qualifiers

    E The reported value is estimated due to the presence of interference.

    N Spiked sample recovery is not within control limits.

    * Duplicate analysis is not within control limits.

- Validation Qualifiers

    J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

    UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

    UB Analyte considered non-detect at the listed value due to associated blank contamination.

    R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

GENERAL CHEMISTRY ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Hardness by EPA 6020A	Water	180 days from collection to analysis	Cool to 4°C±2°C; preserved to a pH of less than 2.
%Soot	Sediment	28 days from collection to analysis	--

su Standard Units

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Matrix Spike (MS)/Laboratory Duplicate Analysis

MS and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS Analysis

All analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS recovery control limits do not apply for MS performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory qualifier "N" will be removed.

A MS analysis was not performed on sample location associated with this SDG.

3.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the

parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

A laboratory duplicate was not performed with a sample location associated with this SDG.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for soil matrices.

A field duplicate was not collected with a sample location associated with this SDG.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

6. Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL CHEMISTRY

General Chemistry: EPA 6020A and %Soot	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Miscellaneous Instrumentation					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Serial Dilution (%D)					X
Dilution Factor		X		X	
Moisture Content					X

%R - percent recovery, RPD - relative percent difference, %D – percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: January 10, 2011

PEER REVIEW: Dennis Capria

DATE: January 11, 2011

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

35285 L1013935

ALPHA Woods Hole

COC # 1 of 1 Cover 1 of 2

CSX TRANSPORTATION — CHAIN OF CUSTODY

LABORATORY INFORMATION		SHIPMENT INFORMATION
Accutest	Phone: 407-425-6700	Shipment Method: FED-EX
4405 Vineland Rd., Suite C-15	Fax: 407-425-0707	Shipment Tracking No:
Orlando, FL 32811		

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 9415829	Proj. State (State of Origin): IN	Company: ARCADIS	Project #: IN000077.0052.00001
CSXT Project Name: IN CREOSOTE	Proj. City: BLOOMINGTON	Address: 251 E. OHIO ST., STE. 800	PM: BRYANT GRIGGS
CSXT Contact: PAUL J. KWIATKOWSKI	LWON: ENV 53246	City, State, Zip: INDIANAPOLIS, IN 46204	Email: BRYANT.GRIGGS@ARCADIS-US.COM
			Phone: 317-231-6500 Fax: 317-231-6514

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: DATA CD only, NO HARD COPY
- ☒ EDD Required, Format: EXCEL

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Note ⇨ Pres. Code: 0	0	0	0	METHODS FOR ANALYSIS: SVOC 8270 SIM (SPECIFIC COMPOUNDS)	ALKYLATED PAHs	SOOT CARBON	WILDNESS	COMMENTS	LAB USE
1	SW/SED-09	5	9-8-10	1115	RW	N	G	SO/SW					X	X	X	X		
2	SW/SED-10	5	9-8-10	1305	RW	N	G	SO/SW					X	X	X	X		
3	SW/SED-11	5	9-8-10	1340	RW	N	G	SO/SW					X	X	X	X		

Relinquished By: ARCADIS	Date Time: 9-8-10 1800	Received By: FED EX	Date Time:	Comments & Special Analytical Requirements: - SEE TABLE 1 - ECO RISC SAMPLES - CONTACT HEATHER WARNER @ ACCUTEST	
Relinquished By: FED EX	Date Time: 9/9/10 0925	Received By:	Date Time: 9/9/10 0925		
Relinquished By:	Date Time:	Received By:	Date Time:		
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal # #	LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

Serial_No:10291012:47

L1013935

ALPHA WOODS HOLE

COC # 1 of 1 Cooler 2 of 2

CSX TRANSPORTATION — CHAIN OF CUSTODY

LABORATORY INFORMATION		SHIPMENT INFORMATION
Accutest	Phone: 407-425-6700	Shipment Method: FED-EX
4405 Vineland Rd., Suite C-15	Fax: 407-425-0707	Shipment Tracking No:
Orlando, FL 32811		

CSXT PROJECT INFORMATION		CONSULTANT INFORMATION	
CSXT Project Number: 941582S	Proj. State (State of Origin): IN	Company: ARCADIS	Project #: IN000072.0052.00001
CSXT Project Name: IN CREOSOTE	Proj. City: BLOOMINGTON	Address: 251 E OHIO ST, STE 500	PM: BRYANT GRIGGS
CSXT Contact: PAUL J. KWIATKOWSKI	LWON: ENV 53216	City, State, Zip: INDIANAPOLIS, IN 46204	Email: BRYANT.GRIGGS@ARCADIS-US.COM
			Phone: 317-231-6500 Fax: 317-231-6574

Turnaround Time:
- ☐ 1 Day Rush
- ☐ 2 Day Rush
- ☐ 3 Day Rush
- ☒ Standard 6-13 Days — Specify # Days 7
- ☐ Standard 14 Days
- ☐ Other

Deliverables:
- ☐ CSXT Standard (Level II)
- ☐ Level III
- ☒ Level IV
- ☒ Other Deliv: DATA QA Only NO MAPS Req
- ☒ EDD Required, Format: EXCEL

Preservative Codes: 0 = No Preservative; 1 = Hydrochloric Acid; 2 = Nitric Acid; 3 = Sulfuric Acid; 4 = Sodium Thiosulfate; 5 = Sodium Hydroxide; 6 = Other

Matrix Codes: GW = Groundwater; WW = Waste Water; SW = Surface Water; SO = Soil; SL = Sludge; OI = Oil; SOL = Other Solid; LIQ = Liquid

SAMPLE INFORMATION

	Sample Identification	Containers Number & Type	Sample Collection Date	Time	Sampler	Filtered Y or N	Type Comp or Grab	Matrix Code	Note ⇨ Pres. Code	METHODS FOR ANALYSIS: SVOCs, BTEX (SOIL)	ALKITANES PAH	SOOT CARBON	HARDNESS	COMMENTS	LAB USE
4	SW/SED-12	5	9-8-10	1415	RW	N	G	SO/SW	0	X	X	X	X		
5	SW/SED-13	5	9-8-10	1445	RW	N	G	SO/SW	0	X	X	X	X		
6	SW/SED-14	5	9-8-10	1515	RW	N	G	SO/SW	0	X	X	X	X		

Relinquished By: ARCADIS	Date Time: 9-8-10 18:00	Received By: FED EX	Date Time:	Comments & Special Analytical Requirements: - SEE TABLE 1 - ECO DISC SAMPLES - CONTACT WATER WORKS (ALLISON)	
Relinquished By: FED EX	Date Time: 9/9/10 0925	Received By:	Date Time: 9/9/10 0925		
Relinquished By:	Date Time:	Received By:	Date Time:		
Received By Laboratory:	Date Time:	Lab Remarks:	LAB USE: Custody Intact ☐ Yes ☐ No	Custody Seal # #	LAB Log Number #

ORIGINAL- RETURN TO LABORATORY WITH SAMPLES — Rev. 5/21/02 — INVOICE MUST BE DELIVERED WITH ORIGINAL COC AND FINAL REPORT TO CONSULTANT

Serial_No:10291012:47

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-01	Date Collected:	09/08/10 11:15
Client ID:	F76426-1 SW-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 14:15		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.521	--	1
2-Methylphenol	ND		ug/l	0.521	--	1
4-Methylphenol	ND		ug/l	0.521	--	1
2,4-Dimethylphenol	ND		ug/l	0.521	--	1
2,4-Dichlorophenol	ND		ug/l	0.521	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.521	--	1
Pentachlorophenol	ND		ug/l	2.08	--	1
Butylbenzylphthalate	ND		ug/l	0.521	--	1
Bis(2-Ethylhexyl)phthalate	1.46	B-ULB	ug/l	0.521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-115
Phenol-d5	32		15-115
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	77		15-115
Terphenyl-d14	126		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-02	Date Collected:	09/08/10 13:05
Client ID:	F76426-3 SW-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 14:54		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.500		1
2-Methylphenol	ND		ug/l	0.500	--	1
4-Methylphenol	ND		ug/l	0.500	--	1
2,4-Dimethylphenol	ND		ug/l	0.500	--	1
2,4-Dichlorophenol	ND		ug/l	0.500	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.500	--	1
Pentachlorophenol	ND		ug/l	2.00		1
Butylbenzylphthalate	ND		ug/l	0.500		1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.500	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-115
Phenol-d5	28		15-115
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	74		15-115
Terphenyl-d14	104		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-03	Date Collected:	09/08/10 13:40
Client ID:	F76426-6 SW-11	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 15:33		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.521	--	1
2-Methylphenol	ND		ug/l	0.521	--	1
4-Methylphenol	ND		ug/l	0.521	--	1
2,4-Dimethylphenol	ND		ug/l	0.521	--	1
2,4-Dichlorophenol	ND		ug/l	0.521	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.521	--	1
Pentachlorophenol	ND		ug/l	2.08	--	1
Butylbenzylphthalate	ND		ug/l	0.521	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-115
Phenol-d5	31		15-115
Nitrobenzene-d5	90		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	68		15-115
Terphenyl-d14	121		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-04
Client ID: F76426-8 SW-12
Sample Location: BLOOMINGTON, IN
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 10/13/10 16:11
Analyst: JS

Date Collected: 09/08/10 14:15
Date Received: 09/09/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/15/10 15:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-115
Phenol-d5	34		15-115
Nitrobenzene-d5	100		30-130
2-Fluorobiphenyl	94		30-130
2,4,6-Tribromophenol	91		15-115
Terphenyl-d14	130		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-05	Date Collected:	09/08/10 14:45
Client ID:	F76426-10 SW-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 16:50		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.526	--	1
2-Methylphenol	ND		ug/l	0.526	--	1
4-Methylphenol	ND		ug/l	0.526	--	1
2,4-Dimethylphenol	ND		ug/l	0.526	--	1
2,4-Dichlorophenol	ND		ug/l	0.526	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.526	--	1
Pentachlorophenol	ND		ug/l	2.10	--	1
Butylbenzylphthalate	ND		ug/l	0.526	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	0.526	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-115
Phenol-d5	31		15-115
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	68		15-115
Terphenyl-d14	125		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-06	Date Collected:	09/08/10 15:15
Client ID:	F76426-12 SW-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	09/15/10 15:57
Analytical Date:	10/13/10 17:28		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/l	0.510	--	1
2-Methylphenol	ND		ug/l	0.510	--	1
4-Methylphenol	ND		ug/l	0.510	--	1
2,4-Dimethylphenol	ND		ug/l	0.510	--	1
2,4-Dichlorophenol	ND		ug/l	0.510	--	1
2,4,6-Trichlorophenol	ND		ug/l	0.510	--	1
Pentachlorophenol	ND		ug/l	2.04	--	1
Butylbenzylphthalate	ND		ug/l	0.510	--	1
Bis(2-Ethylhexyl)phthalate	0.566	B UB	ug/l	0.510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-115
Phenol-d5	30		15-115
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	73		15-115
Terphenyl-d14	124		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-07	Date Collected:	09/08/10 11:15
Client ID:	F76426-2 SED-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 21:51	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	85%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	202	--	1
2-Methylphenol	ND		ug/kg	202	--	1
4-Methylphenol	ND		ug/kg	202	--	1
2,4-Dimethylphenol	ND		ug/kg	202	--	1
2,4-Dichlorophenol	ND		ug/kg	202	--	1
2,4,6-Trichlorophenol	ND		ug/kg	202	--	1
Pentachlorophenol	ND		ug/kg	808	--	1
Butylbenzylphthalate	ND		ug/kg	202	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	202	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	69		30-130
Phenol-d5	49		30-130
Nitrobenzene-d5	66		30-130
2-Fluorophenol	44		30-130
2,4,6-Tribromophenol	**13**	Q	30-130
Terphenyl-d14	86		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-08	Date Collected:	09/08/10 13:05
Client ID:	F76426-4 SED-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 22:30	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	79%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/kg	223	--	1
2-Methylphenol	ND		ug/kg	223	--	1
4-Methylphenol	ND		ug/kg	223	--	1
2,4-Dimethylphenol	ND		ug/kg	223	--	1
2,4-Dichlorophenol	ND		ug/kg	223	--	1
2,4,6-Trichlorophenol	ND		ug/kg	223	--	1
Pentachlorophenol	ND		ug/kg	892	--	1
Butylbenzylphthalate	ND		ug/kg	223	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	223	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	62		30-130
Phenol-d5	47		30-130
Nitrobenzene-d5	58		30-130
2-Fluorophenol	49		30-130
2,4,6-Tribromophenol	**20**	Q	30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-09	Date Collected:	09/08/10 13:40
Client ID:	F76426-7 SED-11	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 23:09	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	84%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/kg	212	--	1
2-Methylphenol	ND		ug/kg	212	--	1
4-Methylphenol	ND		ug/kg	212	--	1
2,4-Dimethylphenol	ND		ug/kg	212	--	1
2,4-Dichlorophenol	ND		ug/kg	212	--	1
2,4,6-Trichlorophenol	ND		ug/kg	212	--	1
Pentachlorophenol	ND		ug/kg	847	--	1
Butylbenzylphthalate	ND		ug/kg	212	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	212	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	61		30-130
Phenol-d5	46		30-130
Nitrobenzene-d5	63		30-130
2-Fluorophenol	41		30-130
2,4,6-Tribromophenol	10	Q	30-130
Terphenyl-d14	77		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-11	Date Collected:	09/08/10 14:45
Client ID:	F76426-11 SED-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/12/10 23:48	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	81%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND	J	ug/kg	233	--	1
2-Methylphenol	ND		ug/kg	233	--	1
4-Methylphenol	ND		ug/kg	233	--	1
2,4-Dimethylphenol	ND		ug/kg	233	--	1
2,4-Dichlorophenol	ND		ug/kg	233	--	1
2,4,6-Trichlorophenol	ND		ug/kg	233	--	1
Pentachlorophenol	ND		ug/kg	934	--	1
Butylbenzylphthalate	ND		ug/kg	233	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	233	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	70		30-130
Phenol-d5	59		30-130
Nitrobenzene-d5	73		30-130
2-Fluorophenol	52		30-130
2,4,6-Tribromophenol	17	Q	30-130
Terphenyl-d14	86		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-12	Date Collected:	09/08/10 15:15
Client ID:	F76426-13 SED-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/13/10 17:09
Analytical Date:	10/13/10 00:27	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/24/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	~~ND~~	R	ug/kg	223	--	1
2-Methylphenol	~~ND~~		ug/kg	223	--	1
4-Methylphenol	~~ND~~		ug/kg	223	--	1
2,4-Dimethylphenol	~~ND~~		ug/kg	223	--	1
2,4-Dichlorophenol	~~ND~~		ug/kg	223	--	1
2,4,6-Trichlorophenol	~~ND~~		ug/kg	223	--	1
Pentachlorophenol	~~ND~~	R	ug/kg	891	--	1
Butylbenzylphthalate	ND		ug/kg	223	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	223	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	66		30-130
Phenol-d5	48		30-130
Nitrobenzene-d5	64		30-130
2-Fluorophenol	31		30-130
2,4,6-Tribromophenol	8	Q	30-130
Terphenyl-d14	72		30-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-13	Date Collected:	09/09/10 16:15
Client ID:	F76426-12 SED-14	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3570
Analytical Method:	1,8270C	Extraction Date:	09/23/10 16:13
Analytical Date:	10/22/10 17:27	Cleanup Method1:	EPA 3640A
Analyst:	JD	Cleanup Date1:	09/29/10
Percent Solids:	85%	Cleanup Method2:	----

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Mansfield Lab						
Phenol	ND		ug/kg	224	--	1
2-Methylphenol	ND		ug/kg	224	--	1
4-Methylphenol	ND		ug/kg	224	--	1
2,4-Dimethylphenol	ND		ug/kg	224	--	1
2,4-Dichlorophenol	ND		ug/kg	224	--	1
2,4,6-Trichlorophenol	ND		ug/kg	224	--	1
Pentachlorophenol	ND		ug/kg	895	--	1
Butylbenzylphthalate	ND		ug/kg	224	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	224	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorobiphenyl	66		30-130
Phenol-d5	52		30-130
Nitrobenzene-d5	69		30-130
2-Fluorophenol	44		30-130
2,4,6-Tribromophenol	33		30-130
Terphenyl-d14	78		30-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-01	Date Collected:	09/08/10 11:15
Client ID:	F76426-1 SW-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	10/12/10 00:10		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	60.5		ng/l	9.39	--	1
C1-Naphthalenes	ND		ng/l	9.39	--	1
C2-Naphthalenes	10.1		ng/l	9.39	--	1
C3-Naphthalenes	ND		ng/l	9.39	--	1
C4-Naphthalenes	ND		ng/l	9.39	--	1
2-Methylnaphthalene	ND		ng/l	9.39	--	1
1-Methylnaphthalene	9.42		ng/l	9.39	--	1
Dibenzofuran	19.0		ng/l	9.39	--	1
Acenaphthylene	ND		ng/l	9.39	--	1
Acenaphthene	49.3		ng/l	9.39	--	1
Fluorene	21.1		ng/l	9.39	--	1
C1-Fluorenes	ND		ng/l	9.39	--	1
C2-Fluorenes	ND		ng/l	9.39	--	1
C3-Fluorenes	ND		ng/l	9.39	--	1
Phenanthrene	16.8		ng/l	9.39	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
Anthracene	ND		ng/l	9.39	--	1
Carbazole	12.2		ng/l	9.39	--	1
Fluoranthene	29.0		ng/l	9.39	--	1
Pyrene	22.6		ng/l	9.39	--	1
C1-Fluoranthenes/Pyrenes	9.83		ng/l	9.39	--	1
Benz(a)anthracene	ND		ng/l	9.39	--	1
Chrysene	15.9		ng/l	9.39	--	1
C1-Chrysenes	ND		ng/l	9.39	--	1
C2-Chrysenes	ND		ng/l	9.39	--	1
C3-Chrysenes	ND		ng/l	9.39	--	1
C4-Chrysenes	ND		ng/l	9.39	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-01
Client ID: F76426-1 SW-09
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	11.8		ng/l	9.39	--	1
Benzo(k)fluoranthene	10.8		ng/l	9.39	--	1
Benzo(e)Pyrene	ND		ng/l	9.39	--	1
Benzo(a)pyrene	ND		ng/l	9.39	--	1
Perylene	ND		ng/l	9.39	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.39	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.39	--	1
Benzo(ghi)perylene	ND		ng/l	9.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	88		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-02	Date Collected:	09/08/10 13:05
Client ID:	F76426-3 SW-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 16:50		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	73.3		ng/l	10.9	--	1
C1-Naphthalenes	ND		ng/l	10.9	--	1
C2-Naphthalenes	ND		ng/l	10.9	--	1
C3-Naphthalenes	13.7		ng/l	10.9	--	1
C4-Naphthalenes	ND		ng/l	10.9	--	1
2-Methylnaphthalene	ND		ng/l	10.9	--	1
1-Methylnaphthalene	ND		ng/l	10.9	--	1
Dibenzofuran	25.2		ng/l	10.9	--	1
Acenaphthylene	ND		ng/l	10.9	--	1
Acenaphthene	60.3		ng/l	10.9	--	1
Fluorene	32.2		ng/l	10.9	--	1
C1-Fluorenes	ND		ng/l	10.9	--	1
C2-Fluorenes	ND		ng/l	10.9	--	1
C3-Fluorenes	ND		ng/l	10.9	--	1
Phenanthrene	18.3		ng/l	10.9	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.9	--	1
Anthracene	ND		ng/l	10.9	--	1
Carbazole	15.5		ng/l	10.9	--	1
Fluoranthene	26.6		ng/l	10.9	--	1
Pyrene	18.6		ng/l	10.9	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.9	--	1
Benz(a)anthracene	ND		ng/l	10.9	--	1
Chrysene	ND		ng/l	10.9	--	1
C1-Chrysenes	ND		ng/l	10.9	--	1
C2-Chrysenes	ND		ng/l	10.9	--	1
C3-Chrysenes	ND		ng/l	10.9	--	1
C4-Chrysenes	ND		ng/l	10.9	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-02
Client ID: F76426-3 SW-10
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	10.9	--	1
Benzo(k)fluoranthene	ND		ng/l	10.9	--	1
Benzo(e)Pyrene	ND		ng/l	10.9	--	1
Benzo(a)pyrene	ND		ng/l	10.9	--	1
Perylene	ND		ng/l	10.9	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.9	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.9	--	1
Benzo(ghi)perylene	ND		ng/l	10.9	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-03
Client ID: F76426-6 SW-11
Sample Location: BLOOMINGTON, IN
Matrix: Water
Analytical Method: 1,8270C-SIM(M)
Analytical Date: 09/25/10 18:29
Analyst: AC

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/14/10 13:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	81.7		ng/l	9.43	--	1
C1-Naphthalenes	12.2		ng/l	9.43	--	1
C2-Naphthalenes	10.5		ng/l	9.43	--	1
C3-Naphthalenes	11.7		ng/l	9.43	--	1
C4-Naphthalenes	ND		ng/l	9.43	--	1
2-Methylnaphthalene	ND		ng/l	9.43	--	1
1-Methylnaphthalene	13.0		ng/l	9.43	--	1
Dibenzofuran	24.5		ng/l	9.43	--	1
Acenaphthylene	ND		ng/l	9.43	--	1
Acenaphthene	57.8		ng/l	9.43	--	1
Fluorene	25.0		ng/l	9.43	--	1
C1-Fluorenes	ND		ng/l	9.43	--	1
C2-Fluorenes	ND		ng/l	9.43	--	1
C3-Fluorenes	ND		ng/l	9.43	--	1
Phenanthrene	17.7		ng/l	9.43	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.43	--	1
Anthracene	ND		ng/l	9.43	--	1
Carbazole	18.3		ng/l	9.43	--	1
Fluoranthene	24.2		ng/l	9.43	--	1
Pyrene	16.1		ng/l	9.43	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.43	--	1
Benz(a)anthracene	ND		ng/l	9.43	--	1
Chrysene	9.70		ng/l	9.43	--	1
C1-Chrysenes	ND		ng/l	9.43	--	1
C2-Chrysenes	ND		ng/l	9.43	--	1
C3-Chrysenes	ND		ng/l	9.43	--	1
C4-Chrysenes	ND		ng/l	9.43	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-03
Client ID: F76426-6 SW-11
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.43		1
Benzo(k)fluoranthene	ND		ng/l	9.43	--	1
Benzo(e)Pyrene	ND		ng/l	9.43	--	1
Benzo(a)pyrene	ND		ng/l	9.43	--	1
Perylene	ND		ng/l	9.43		1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.43	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.43		1
Benzo(ghi)perylene	ND		ng/l	9.43		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	79		50-130
Benzo(b)fluoranthene-d12	90		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-04	Date Collected:	09/08/10 14:15
Client ID:	F76426-8 SW-12	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 20:00		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	74.8		ng/l	9.39	--	1
C1-Naphthalenes	12.3		ng/l	9.39	--	1
C2-Naphthalenes	9.89		ng/l	9.39	--	1
C3-Naphthalenes	11.8		ng/l	9.39	--	1
C4-Naphthalenes	ND		ng/l	9.39	--	1
2-Methylnaphthalene	ND		ng/l	9.39	--	1
1-Methylnaphthalene	13.5		ng/l	9.39	--	1
Dibenzofuran	24.1		ng/l	9.39	--	1
Acenaphthylene	ND		ng/l	9.39	--	1
Acenaphthene	59.0		ng/l	9.39	--	1
Fluorene	26.3		ng/l	9.39	--	1
C1-Fluorenes	ND		ng/l	9.39	--	1
C2-Fluorenes	ND		ng/l	9.39	--	1
C3-Fluorenes	ND		ng/l	9.39	--	1
Phenanthrene	20.2		ng/l	9.39	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.39	--	1
Anthracene	ND		ng/l	9.39	--	1
Carbazole	19.2		ng/l	9.39	--	1
Fluoranthene	31.8		ng/l	9.39	--	1
Pyrene	22.8		ng/l	9.39	--	1
C1-Fluoranthenes/Pyrenes	10.3		ng/l	9.39	--	1
Benz(a)anthracene	ND		ng/l	9.39	--	1
Chrysene	14.8		ng/l	9.39	--	1
C1-Chrysenes	ND		ng/l	9.39	--	1
C2-Chrysenes	ND		ng/l	9.39	--	1
C3-Chrysenes	ND		ng/l	9.39	--	1
C4-Chrysenes	ND		ng/l	9.39	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-04
Client ID: F76426-8 SW-12
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 14:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	13.7		ng/l	9.39	--	1
Benzo(k)fluoranthene	10.7		ng/l	9.39	--	1
Benzo(e)Pyrene	11.3		ng/l	9.39	--	1
Benzo(a)pyrene	ND		ng/l	9.39	--	1
Perylene	ND		ng/l	9.39	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.39	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.39	--	1
Benzo(ghi)perylene	11.5		ng/l	9.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	72		50-130
Pyrene-d10	81		50-130
Benzo(b)fluoranthene-d12	91		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-05	Date Collected:	09/08/10 14:45
Client ID:	F76426-10 SW-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 21:31		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	73.0		ng/l	9.48	--	1
C1-Naphthalenes	13.9		ng/l	9.48	--	1
C2-Naphthalenes	10.3		ng/l	9.48	--	1
C3-Naphthalenes	10.9		ng/l	9.48	--	1
C4-Naphthalenes	ND		ng/l	9.48	--	1
2-Methylnaphthalene	ND		ng/l	9.48	--	1
1-Methylnaphthalene	16.0		ng/l	9.48	--	1
Dibenzofuran	25.8		ng/l	9.48	--	1
Acenaphthylene	ND		ng/l	9.48	--	1
Acenaphthene	63.0		ng/l	9.48	--	1
Fluorene	27.6		ng/l	9.48	--	1
C1-Fluorenes	ND		ng/l	9.48	--	1
C2-Fluorenes	ND		ng/l	9.48	--	1
C3-Fluorenes	ND		ng/l	9.48	--	1
Phenanthrene	20.4		ng/l	9.48	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.48	--	1
Anthracene	ND		ng/l	9.48	--	1
Carbazole	21.0		ng/l	9.48	--	1
Fluoranthene	29.2		ng/l	9.48	--	1
Pyrene	20.0		ng/l	9.48	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.48	--	1
Benz(a)anthracene	ND		ng/l	9.48	--	1
Chrysene	13.8		ng/l	9.48	--	1
C1-Chrysenes	ND		ng/l	9.48	--	1
C2-Chrysenes	ND		ng/l	9.48	--	1
C3-Chrysenes	ND		ng/l	9.48	--	1
C4-Chrysenes	ND		ng/l	9.48	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-05
Client ID: F76426-10 SW-13
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	11.6		ng/l	9.48	--	1
Benzo(k)fluoranthene	ND		ng/l	9.48	--	1
Benzo(e)Pyrene	ND		ng/l	9.48	--	1
Benzo(a)pyrene	ND		ng/l	9.48	--	1
Perylene	ND		ng/l	9.48	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.48	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.48	--	1
Benzo(ghi)perylene	10.1		ng/l	9.48	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		50-130
Pyrene-d10	80		50-130
Benzo(b)fluoranthene-d12	90		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-06	Date Collected:	09/08/10 15:15
Client ID:	F76426-12 SW-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/14/10 13:49
Analytical Date:	09/25/10 23:03		
Analyst:	AC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	43.6		ng/l	9.62	--	1
C1-Naphthalenes	13.3		ng/l	9.62	--	1
C2-Naphthalenes	11.3		ng/l	9.62	--	1
C3-Naphthalenes	12.1		ng/l	9.62	--	1
C4-Naphthalenes	ND		ng/l	9.62	--	1
2-Methylnaphthalene	ND		ng/l	9.62	--	1
1-Methylnaphthalene	14.5		ng/l	9.62	--	1
Dibenzofuran	29.1		ng/l	9.62	--	1
Acenaphthylene	ND		ng/l	9.62	--	1
Acenaphthene	68.0		ng/l	9.62	--	1
Fluorene	31.3		ng/l	9.62	--	1
C1-Fluorenes	ND		ng/l	9.62	--	1
C2-Fluorenes	ND		ng/l	9.62	--	1
C3-Fluorenes	ND		ng/l	9.62	--	1
Phenanthrene	23.1		ng/l	9.62	--	1
C1-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C2-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	9.62	--	1
Anthracene	ND		ng/l	9.62	--	1
Carbazole	21.1		ng/l	9.62	--	1
Fluoranthene	26.9		ng/l	9.62	--	1
Pyrene	17.7		ng/l	9.62	--	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	9.62	--	1
Benz(a)anthracene	ND		ng/l	9.62	--	1
Chrysene	ND		ng/l	9.62	--	1
C1-Chrysenes	ND		ng/l	9.62	--	1
C2-Chrysenes	ND		ng/l	9.62	--	1
C3-Chrysenes	ND		ng/l	9.62	--	1
C4-Chrysenes	ND		ng/l	9.62	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-06
Client ID: F76426-12 SW-14
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	ND		ng/l	9.62		1
Benzo(k)fluoranthene	ND		ng/l	9.62	--	1
Benzo(e)Pyrene	ND		ng/l	9.62	--	1
Benzo(a)pyrene	ND		ng/l	9.62	--	1
Perylene	ND		ng/l	9.62	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.62	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.62		1
Benzo(ghi)perylene	ND		ng/l	9.62		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	78		50-130
Pyrene-d10	81		50-130
Benzo(b)fluoranthene-d12	91		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-07	Date Collected:	09/08/10 11:15
Client ID:	F76426-2 SED-09	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 02:30		
Analyst:	AC		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	9.39		ug/kg	2.78	--	1
C1-Naphthalenes	7.50		ug/kg	2.78	--	1
C2-Naphthalenes	13.0		ug/kg	2.78	--	1
C3-Naphthalenes	19.8		ug/kg	2.78	--	1
C4-Naphthalenes	21.4		ug/kg	2.78	--	1
2-Methylnaphthalene	5.80		ug/kg	2.78	--	1
1-Methylnaphthalene	5.48		ug/kg	2.78	--	1
Dibenzofuran	7.56		ug/kg	2.78	--	1
Acenaphthylene	52.7		ug/kg	2.78	--	1
Acenaphthene	12.2		ug/kg	2.78	--	1
Fluorene	19.7		ug/kg	2.78	--	1
C1-Fluorenes	24.5		ug/kg	2.78	--	1
C2-Fluorenes	28.2		ug/kg	2.78	--	1
C3-Fluorenes	55.5		ug/kg	2.78	--	1
Phenanthrene	247		ug/kg	2.78	--	1
C1-Phenanthrenes/Anthracenes	233		ug/kg	2.78	--	1
C2-Phenanthrenes/Anthracenes	167		ug/kg	2.78	--	1
C3-Phenanthrenes/Anthracenes	59.2		ug/kg	2.78	--	1
C4-Phenanthrenes/Anthracenes	31.4		ug/kg	2.78	--	1
Anthracene	116		ug/kg	2.78	--	1
Carbazole	19.1		ug/kg	2.78	--	1
Fluoranthene	1050		ug/kg	2.78	--	1
Pyrene	777		ug/kg	2.78	--	1
C1-Fluoranthenes/Pyrenes	353		ug/kg	2.78	--	1
Benz(a)anthracene	380		ug/kg	2.78	--	1
Chrysene	430		ug/kg	2.78	--	1
C1-Chrysenes	168		ug/kg	2.78	--	1
C2-Chrysenes	106		ug/kg	2.78	--	1
C3-Chrysenes	128		ug/kg	2.78	--	1
C4-Chrysenes	93.8		ug/kg	2.78	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-07
Client ID: F76426-2 SED-09
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	282		ug/kg	2.78		1
Benzo(k)fluoranthene	283		ug/kg	2.78	--	1
Benzo(e)Pyrene	214		ug/kg	2.78		1
Benzo(a)pyrene	240		ug/kg	2.78		1
Perylene	64.8		ug/kg	2.78	--	1
Indeno(1,2,3-cd)Pyrene	160		ug/kg	2.78		1
Dibenz(a,h)anthracene	56.5		ug/kg	2.78		1
Benzo(ghi)perylene	154		ug/kg	2.78	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		50-130
Pyrene-d10	88		50-130
Benzo(b)fluoranthene-d12	92		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-08	Date Collected:	09/08/10 13:05
Client ID:	F76426-4 SED-10	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 04:00		
Analyst:	AC		
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	198		ug/kg	3.41	--	1
C1-Naphthalenes	24.8		ug/kg	3.41	--	1
C2-Naphthalenes	31.8		ug/kg	3.41	--	1
C3-Naphthalenes	34.9		ug/kg	3.41	--	1
C4-Naphthalenes	31.8		ug/kg	3.41	--	1
2-Methylnaphthalene	18.5		ug/kg	3.41	--	1
1-Methylnaphthalene	18.5		ug/kg	3.41	--	1
Dibenzofuran	26.5		ug/kg	3.41	--	1
Acenaphthylene	44.8		ug/kg	3.41	--	1
Acenaphthene	73.5		ug/kg	3.41	--	1
Fluorene	39.2		ug/kg	3.41	--	1
C1-Fluorenes	15.5		ug/kg	3.41	--	1
C2-Fluorenes	22.5		ug/kg	3.41	--	1
C3-Fluorenes	58.9		ug/kg	3.41	--	1
Phenanthrene	234		ug/kg	3.41	--	1
C1-Phenanthrenes/Anthracenes	103		ug/kg	3.41	--	1
C2-Phenanthrenes/Anthracenes	77.5		ug/kg	3.41	--	1
C3-Phenanthrenes/Anthracenes	48.4		ug/kg	3.41	--	1
C4-Phenanthrenes/Anthracenes	30.5		ug/kg	3.41	--	1
Anthracene	66.1		ug/kg	3.41	--	1
Carbazole	33.4		ug/kg	3.41	--	1
Fluoranthene	583		ug/kg	3.41	--	1
Pyrene	519		ug/kg	3.41	--	1
C1-Fluoranthenes/Pyrenes	235		ug/kg	3.41	--	1
Benz(a)anthracene	286		ug/kg	3.41	--	1
Chrysene	370		ug/kg	3.41	--	1
C1-Chrysenes	139		ug/kg	3.41	--	1
C2-Chrysenes	86.5		ug/kg	3.41	--	1
C3-Chrysenes	103		ug/kg	3.41	--	1
C4-Chrysenes	73.7		ug/kg	3.41	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-08
Client ID: F76426-4 SED-10
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	372		ug/kg	3.41		1
Benzo(k)fluoranthene	301		ug/kg	3.41	--	1
Benzo(e)Pyrene	274		ug/kg	3.41		1
Benzo(a)pyrene	348		ug/kg	3.41		1
Perylene	94.3		ug/kg	3.41	--	1
Indeno(1,2,3-cd)Pyrene	247		ug/kg	3.41		1
Dibenz(a,h)anthracene	63.0		ug/kg	3.41		1
Benzo(ghi)perylene	250		ug/kg	3.41	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		50-130
Pyrene-d10	80		50-130
Benzo(b)fluoranthene-d12	84		50-130

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-09	Date Collected:	09/08/10 13:40
Client ID:	F76426-7 SED-11	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	10/12/10 19:19		
Analyst:	AC		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	23.4		ug/kg	1.24	--	1
C1-Naphthalenes	29.9		ug/kg	1.24	--	1
C2-Naphthalenes	45.1		ug/kg	1.24	--	1
C3-Naphthalenes	67.8		ug/kg	1.24	--	1
C4-Naphthalenes	77.0		ug/kg	1.24	--	1
2-Methylnaphthalene	27.5		ug/kg	1.24	--	1
1-Methylnaphthalene	17.4		ug/kg	1.24	--	1
Dibenzofuran	17.1		ug/kg	1.24	--	1
Acenaphthylene	13.8		ug/kg	1.24	--	1
Acenaphthene	17.6		ug/kg	1.24	--	1
Fluorene	17.8		ug/kg	1.24	--	1
C1-Fluorenes	13.0		ug/kg	1.24	--	1
C2-Fluorenes	44.5		ug/kg	1.24	--	1
C3-Fluorenes	112		ug/kg	1.24	--	1
Phenanthrene	235		ug/kg	1.24	--	1
C1-Phenanthrenes/Anthracenes	213		ug/kg	1.24	--	1
C2-Phenanthrenes/Anthracenes	251		ug/kg	1.24	--	1
C3-Phenanthrenes/Anthracenes	154		ug/kg	1.24	--	1
C4-Phenanthrenes/Anthracenes	82.4		ug/kg	1.24	--	1
Anthracene	27.7		ug/kg	1.24	--	1
Carbazole	29.3		ug/kg	1.24	--	1
Fluoranthene	403		ug/kg	1.24	--	1
Pyrene	412		ug/kg	1.24	--	1
C1-Fluoranthenes/Pyrenes	302		ug/kg	1.24	--	1
Benz(a)anthracene	153		ug/kg	1.24	--	1
Chrysene	245		ug/kg	1.24	--	1
C1-Chrysenes	133		ug/kg	1.24	--	1
C2-Chrysenes	103		ug/kg	1.24	--	1
C3-Chrysenes	83.6		ug/kg	1.24	--	1
C4-Chrysenes	58.7		ug/kg	1.24	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-09
Client ID: F76426-7 SED-11
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	210		ug/kg	1.24	-	1
Benzo(k)fluoranthene	173		ug/kg	1.24	-	1
Benzo(e)Pyrene	174		ug/kg	1.24	-	1
Benzo(a)pyrene	124		ug/kg	1.24	-	1
Perylene	39.0		ug/kg	1.24	--	1
Indeno(1,2,3-cd)Pyrene	145		ug/kg	1.24	--	1
Dibenz(a,h)anthracene	36.3		ug/kg	1.24	-	1
Benzo(ghi)perylene	156		ug/kg	1.24		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	90		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-11	Date Collected:	09/08/10 14:45
Client ID:	F76426-11 SED-13	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 07:00		
Analyst:	AC		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	11.8		ug/kg	2.17	--	1
C1-Naphthalenes	9.96		ug/kg	2.17	--	1
C2-Naphthalenes	19.4		ug/kg	2.17	--	1
C3-Naphthalenes	20.6		ug/kg	2.17	--	1
C4-Naphthalenes	18.2		ug/kg	2.17	--	1
2-Methylnaphthalene	7.94		ug/kg	2.17	--	1
1-Methylnaphthalene	7.19		ug/kg	2.17	--	1
Dibenzofuran	9.12		ug/kg	2.17	--	1
Acenaphthylene	10.6		ug/kg	2.17	--	1
Acenaphthene	20.4		ug/kg	2.17	--	1
Fluorene	17.1		ug/kg	2.17	--	1
C1-Fluorenes	7.31		ug/kg	2.17	--	1
C2-Fluorenes	13.3		ug/kg	2.17	--	1
C3-Fluorenes	43.9		ug/kg	2.17	--	1
Phenanthrene	221		ug/kg	2.17	--	1
C1-Phenanthrenes/Anthracenes	65.2		ug/kg	2.17	--	1
C2-Phenanthrenes/Anthracenes	48.7		ug/kg	2.17	--	1
C3-Phenanthrenes/Anthracenes	29.5		ug/kg	2.17	--	1
C4-Phenanthrenes/Anthracenes	22.4		ug/kg	2.17	--	1
Anthracene	42.4		ug/kg	2.17	--	1
Carbazole	37.2		ug/kg	2.17	--	1
Fluoranthene	504		ug/kg	2.17	--	1
Pyrene	436		ug/kg	2.17	--	1
C1-Fluoranthenes/Pyrenes	175		ug/kg	2.17	--	1
Benz(a)anthracene	273		ug/kg	2.17	--	1
Chrysene	349		ug/kg	2.17	--	1
C1-Chrysenes	105		ug/kg	2.17	--	1
C2-Chrysenes	52.8		ug/kg	2.17	--	1
C3-Chrysenes	76.2		ug/kg	2.17	--	1
C4-Chrysenes	50.2		ug/kg	2.17	--	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-11
Client ID: F76426-11 SED-13
Sample Location: BLOOMINGTON, IN
Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	349		ug/kg	2.17	--	1
Benzo(k)fluoranthene	300		ug/kg	2.17	--	1
Benzo(e)Pyrene	263		ug/kg	2.17	--	1
Benzo(a)pyrene	343		ug/kg	2.17	--	1
Perylene	99.2		ug/kg	2.17	--	1
Indeno(1,2,3-cd)Pyrene	271		ug/kg	2.17	--	1
Dibenz(a,h)anthracene	64.4		ug/kg	2.17	--	1
Benzo(ghi)perylene	262		ug/kg	2.17	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		50-130
Pyrene-d10	83		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-12	Date Collected:	09/08/10 15:15
Client ID:	F76426-13 SED-14	Date Received:	09/09/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/13/10 15:13
Analytical Date:	09/28/10 09:32		
Analyst:	AC		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	2640		ug/kg	3.17	--	1
C1-Naphthalenes	559		ug/kg	3.17	--	1
C2-Naphthalenes	230		ug/kg	3.17	--	1
C3-Naphthalenes	57.5		ug/kg	3.17	--	1
C4-Naphthalenes	28.2		ug/kg	3.17	--	1
2-Methylnaphthalene	287		ug/kg	3.17	--	1
1-Methylnaphthalene	562		ug/kg	3.17	--	1
Dibenzofuran	398		ug/kg	3.17	--	1
Acenaphthylene	43.4		ug/kg	3.17	--	1
Acenaphthene	874		ug/kg	3.17	--	1
Fluorene	377		ug/kg	3.17	--	1
C1-Fluorenes	30.0		ug/kg	3.17	--	1
C2-Fluorenes	24.5		ug/kg	3.17	--	1
C3-Fluorenes	171		ug/kg	3.17	--	1
Phenanthrene	1230		ug/kg	3.17	--	1
C1-Phenanthrenes/Anthracenes	237		ug/kg	3.17	--	1
C2-Phenanthrenes/Anthracenes	111		ug/kg	3.17	--	1
C3-Phenanthrenes/Anthracenes	58.4		ug/kg	3.17	--	1
C4-Phenanthrenes/Anthracenes	35.0		ug/kg	3.17	--	1
Anthracene	108		ug/kg	3.17	--	1
Carbazole	337		ug/kg	3.17	--	1
Fluoranthene	1770		ug/kg	3.17	--	1
Pyrene	1380		ug/kg	3.17	--	1
C1-Fluoranthenes/Pyrenes	393		ug/kg	3.17	--	1
Benz(a)anthracene	602		ug/kg	3.17	--	1
Chrysene	841		ug/kg	3.17	--	1
C1-Chrysenes	208		ug/kg	3.17	--	1
C2-Chrysenes	104		ug/kg	3.17	--	1
C3-Chrysenes	116		ug/kg	3.17	--	1
C4-Chrysenes	74.8		ug/kg	3.17	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-12
Client ID: F76426-13 SED-14
Sample Location: BLOOMINGTON, IN

Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	789		ug/kg	3.17	--	1
Benzo(k)fluoranthene	620		ug/kg	3.17	--	1
Benzo(e)Pyrene	566		ug/kg	3.17	--	1
Benzo(a)pyrene	681		ug/kg	3.17	--	1
Perylene	189		ug/kg	3.17	--	1
Indeno(1,2,3-cd)Pyrene	568		ug/kg	3.17	--	1
Dibenz(a,h)anthracene	139		ug/kg	3.17	--	1
Benzo(ghi)perylene	563		ug/kg	3.17	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		50-130
Pyrene-d10	86		50-130
Benzo(b)fluoranthene-d12	89		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID:	L1013935-13	Date Collected:	09/09/10 16:15
Client ID:	F76426-12 SED-14	Date Received:	09/10/10
Sample Location:	BLOOMINGTON, IN	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	ALPHA OP-013
Analytical Method:	1,8270C-SIM(M)	Extraction Date:	09/15/10 10:40
Analytical Date:	09/26/10 09:46		
Analyst:	AC		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Naphthalene	8.55		ug/kg	2.37	--	1
C1-Naphthalenes	4.54		ug/kg	2.37	--	1
C2-Naphthalenes	9.80		ug/kg	2.37	--	1
C3-Naphthalenes	11.9		ug/kg	2.37	--	1
C4-Naphthalenes	8.77		ug/kg	2.37	--	1
2-Methylnaphthalene	2.65		ug/kg	2.37	--	1
1-Methylnaphthalene	4.18		ug/kg	2.37	--	1
Dibenzofuran	5.35		ug/kg	2.37	--	1
Acenaphthylene	41.6		ug/kg	2.37	--	1
Acenaphthene	13.1		ug/kg	2.37	--	1
Fluorene	9.63		ug/kg	2.37	--	1
C1-Fluorenes	7.31		ug/kg	2.37	--	1
C2-Fluorenes	12.0		ug/kg	2.37	--	1
C3-Fluorenes	22.7		ug/kg	2.37	--	1
Phenanthrene	82.4		ug/kg	2.37	--	1
C1-Phenanthrenes/Anthracenes	62.4		ug/kg	2.37	--	1
C2-Phenanthrenes/Anthracenes	44.2		ug/kg	2.37	--	1
C3-Phenanthrenes/Anthracenes	26.1		ug/kg	2.37	--	1
C4-Phenanthrenes/Anthracenes	13.6		ug/kg	2.37	--	1
Anthracene	30.8		ug/kg	2.37	--	1
Carbazole	7.40		ug/kg	2.37	--	1
Fluoranthene	191		ug/kg	2.37	--	1
Pyrene	216		ug/kg	2.37	--	1
C1-Fluoranthenes/Pyrenes	161		ug/kg	2.37	--	1
Benz(a)anthracene	171		ug/kg	2.37	--	1
Chrysene	230		ug/kg	2.37	--	1
C1-Chrysenes	119		ug/kg	2.37	--	1
C2-Chrysenes	63.2		ug/kg	2.37	--	1
C3-Chrysenes	54.2		ug/kg	2.37	--	1
C4-Chrysenes	39.1		ug/kg	2.37	--	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-13
Client ID: F76426-12 SED-14
Sample Location: BLOOMINGTON, IN

Date Collected: 09/09/10 16:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
Benzo(b)fluoranthene	183		ug/kg	2.37	--	1
Benzo(k)fluoranthene	193		ug/kg	2.37	--	1
Benzo(e)Pyrene	186		ug/kg	2.37	--	1
Benzo(a)pyrene	198		ug/kg	2.37	--	1
Perylene	46.5		ug/kg	2.37	--	1
Indeno(1,2,3-cd)Pyrene	163		ug/kg	2.37	--	1
Dibenz(a,h)anthracene	44.0		ug/kg	2.37	--	1
Benzo(ghi)perylene	186		ug/kg	2.37	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	80		50-130
Pyrene-d10	82		50-130
Benzo(b)fluoranthene-d12	93		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-01
Client ID: F76426-1 SW-09
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	206		mg/l	2.30	---	5	09/21/10 08:55	09/22/10 13:03	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-02
Client ID: F76426-3 SW-10
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	202		mg/l	2.30		5	09/21/10 08:55	09/22/10 13:04	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-03
Client ID: F76426-6 SW-11
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	202		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:04	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-04
Client ID: F76426-8 SW-12
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 14:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	201		mg/l	2.30	---	5	09/21/10 08:55	09/22/10 13:05	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-05
Client ID: F76426-10 SW-13
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	192		mg/l	2.30	--	5	09/21/10 08:55	09/22/10 13:06	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-06
Client ID: F76426-12 SW-14
Sample Location: BLOOMINGTON, IN
Matrix: Water

Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	196		mg/l	2.30	---	5	09/21/10 08:55	09/22/10 13:06	EPA 3020A	1,6020A	LR

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-07
Client ID: F76426-2 SED-09
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 11:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.8		%	0.100	---	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	4.11		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.67		%	0.010	NA	1		09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-08
Client ID: F76426-4 SED-10
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 13:05
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	78.5		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.46		%	0.010	NA	1		09/23/10 16:00	91,-	ES
% Soot (Rep 2)	2.78		%	0.010	NA	1		09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-09
Client ID: F76426-7 SED-11
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 13:40
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.0		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.66		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.38		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-11
Client ID: F76426-11 SED-13
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 14:45
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	81.3		%	0.100	---	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	4.55		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.17		%	0.010	NA	1		09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-12
Client ID: F76426-13 SED-14
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/08/10 15:15
Date Received: 09/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	81.2		%	0.100		1		09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.79		%	0.010	NA	1		09/23/10 16:00	91,-	ES
% Soot (Rep 2)	2.90		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1013935
Report Date: 10/29/10

SAMPLE RESULTS

Lab ID: L1013935-13
Client ID: F76426-12 SED-14
Sample Location: BLOOMINGTON, IN
Matrix: Soil

Date Collected: 09/09/10 16:15
Date Received: 09/10/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.5		%	0.100	--	1	-	09/15/10 17:50	30,2540G	KB
% Soot (Rep 1)	3.02		%	0.010	NA	1	-	09/23/10 16:00	91,-	ES
% Soot (Rep 2)	3.03		%	0.010	NA	1		09/23/10 16:00	91,-	ES

D.S. Jones — CSX Bloomington
SW/SED for ERA

9-8-10

0800 Steve Sharp, Bryant Griggs, Randy Wheadruff, Dan Jones } ARCADIS — Sunny, No Rain in 24 hrs.

Stream Recon by all from County Club Road to downstream edge of Property/Stream ID of Excavation Areas Proposed By CSX and Proposed ~~SW~~ SW/SED Locations for ERA Sampling. Sharp - Griggs Depart ~1030.

1115 SW/SED-09
upstream of Remnant Dam/Pool
on Left Bank (Looking)
SW+SED Collected
Gravel, Sand Predominant. Clay (grey w/ black organic staining) at bottom
Water Depth ~6" at Sample Point

1305 Return from Lunch
Sample SW/SED-10
Just downstream of Dye
Tracer Discharge Point, Left
Bank (Looking), Mostly Sand/GRAVEL

D.S. Jones

CSX Bloomington
Sw/SED for ERA

9-8-10

1340 Sw/SED-11
Downstream Edge of Pool under Sycamore on Left Bank (Ascend), Mostly Bedrock, Sand, Gravel, Clay Layer (Tan) at Bottom of Core (~8-10" deep) - Some included in Samples for Lab. 3 Grabs in Comp.

1415 Sw/SED-12 ~Adj. Trans to Rm. 4
Near Center of Channel, ~12"-15" Deep Water. Sand + Gravel underlain by Tan Clay at ~6"-8" Down
Clay Layer Not included in Samples
3 Grabs - Composited

1445 Sw/SED-13
Left Bank (Ascend) in Sand Bar Targeted for Possible Removal.
Gravel and Sand, Mostly
~4" of water at Sed-13 Location

D.S. Jones
9-8-10

D.S. Jones

CSX Bloomington
Sw/SED for ERA

9-8-10

1515 Sw/SED-14
Mid Stream, ~8'-12" Water Depth
~15 ft downstream of Proposed Excavation Area. Mostly Gravel + Sand
~~9/8/15~~ Distinct Clay Layer (Grey/Black) at 6"-8" below Surface.

1545 Sw/SED-15
Midstream to Left bank (Ascend)
~1" to 4" of water. Mostly Sand, 3 Grab Samples for Composite
Small Sheen observed in Mixing bowl.

1615 Recon of Sites North of Country Club

1700 Pack + Ice Samples for Shipping

1730 DJ departs Site
RW Ships Samples

D.S. Jones
9-8-10

D.S. Jones

CSX Bloomington
SW/SED for ERA

9-9-10

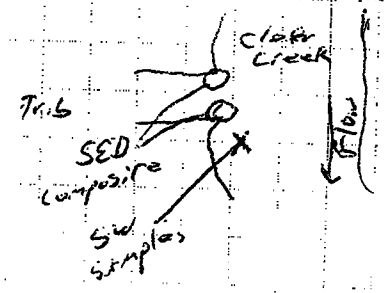
0835 Tailgate Safety Mtg. — Matt Grubbs
Clear, No Rain in last 24h — Wes Khun
Temp in Mid 60's rising to 80° — Scott Maletyt
Dan Jones

0915 SW/SED-16 Approximately 50ft
Upstream of Lower in Creek.
Mid-Stream, Mostly Cobble, Gravel, Sand (Muddy)
3 Grabs composited in Mixing bowl

1000 ~~Sed 9/9/10~~ SW/SED-17 (Field Duplicate)
Collected Hand FD-1-100909
30 ft Downstream
of Beaver Dam, Mostly
Bedrock, Cobble, gravel, SAND
1 Grab by hand Could, but bedrock
Prevents Proper Sampling with Auger.
Used Stainless Steel Mixing Spoon
To collect SAND Gravel deposits
(Approx 4" deep).

Dan Jones
9-9-10

1105 SW/SED-18 MS/MSD
Collected at confluence of
UNNAMED Trib on Left bank.
SW immediately below Trib.
SED From confluence Banks, L and R



SED Mostly Sand & Gravel

1175 Depart for Lunch

1:00 On Site, Prep for Sampling
Matt G. - Reported for other Project
Randy Woodruff on Site

Dan Jones
9-9-10

D.S. Jones

CSX Bloomington
SW/SED for ERA

9-9-10

1340 SW/SED-19 collected
Mid Stream just upstream of
bend. Mostly Sand, Gravel.
Water depths from ~4" to 10".
4 Grabs in Composite.

1415 SW/SED-20 collected
About 75 ft upstream of SW/SED-19
in Mid-Stream at Tail of Large Pool,
Water depth ~ 6"-12". Mostly Sand
+ Gravel. Underlain by bedrock (Less
than 6" deep). 4 Grabs in Composite.

1445 SW/SED-21 Location Estimated
based on Distance upstream from
~~SED-2~~ 9-9-10 SW/SED-06 b/c not
shown on map. GPS Location Taken
Collected ~~Left~~ West Side of Stream (Ascend)
in Sand bar. Mostly Sand + Gravel

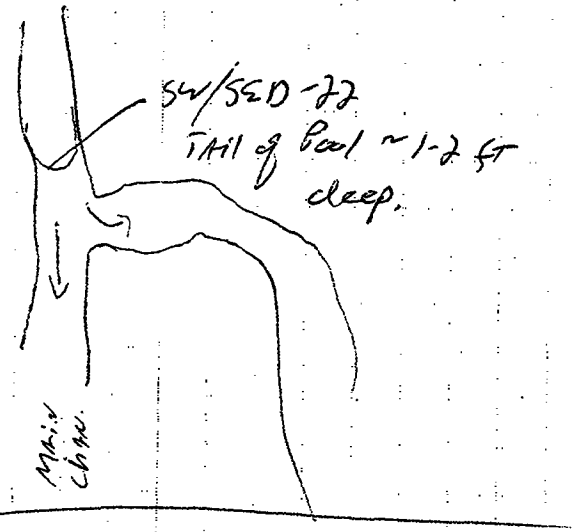
9-9-10

CSX Bloomington
SW/SED for ERA

DS Jones

9-9-10

1515 SW/SED-22 collected
Near estimated location of SW/SED-08
Mid Stream ~30' upstream from
Fork/Trib (Right Side Ascend).
Mostly Sand + Gravel.
Fork is Mostly Dry Stream channel
of Similar Size to Main Channel.
Appears to Flow East then South
Parallel to developed Property to East.



9-9-10

OS JAMES

CSX Bloomington
SW/SED for ERA

9-9-10

1530 SW/SED-23 Collected Mid Stream over Concrete Liner using SS Mixing Spoon for SED. Mostly Sand, some Gravel. Multiple Grabs with Spoon from ~10-15 Sq of Liner.

SW Collected ~~About~~ @ 9-9-10 upstream of SED, but Still over Liner.

15:45 Pack Coolers, Complete C-O-Cs

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-1	Date	10/22/2003		
Sampling Location	Clear Creek						
Weather	Sunny, 50°	Sampling Time:	Begin 13:45	End	13:55		

Field Parameters

Color	Clear
Odor	None
Appearance	Detritus (Leaves)
pH (s.u.)	8.03
Conductivity (mS/cm)	735.1
(µmhos/cm)	
Turbidity (NTU)	1
Temperature (°C)	17.9
Dissolved Oxygen (mg/L)	12.93
ORP (mV)	207

Remarks: Water quality meter not working working properly on 10-22-03, measurements taken on 11-03-03 at 14:35.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Dissolved metals (USEPA 6000/7000/200.8)	1 L plastic	1	$HN0_3$
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-2	Date	10/22/2003		
Sampling Location	Clear Creek						
Weather	Sunny, 50°	Sampling Time:	Begin 14:55	End	15:05		

Field Parameters

Color	Clear
Odor	Slight
Appearance	Sheen from sandbar
pH (s.u.)	8.01
Conductivity (mS/cm)	742.3
(µmhos/cm)	
Turbidity (NTU)	1
Temperature (°C)	17.82
Dissolved Oxygen (mg/L)	12.28
ORP (mV)	212

Remarks: Water quality meter not working working properly on 10-22-03, measurements taken on 11-03-03 at 15:00.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Dissolved metals (USEPA 6000/7000/200.8)	1 L plastic	1	$HN0_3$
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-3	Date	10/22/2003		
Sampling Location	Clear Creek						
Weather	Sunny, 50°	Sampling Time:	Begin 16:10	End	16:25		

Field Parameters

Color	Clear, particulates
Odor	Slight
Appearance	Sheening from bedrock
pH (s.u.)	7.98
Conductivity (mS/cm)	751.3
(µmhos/cm)	
Turbidity (NTU)	1.4
Temperature (°C)	17.52
Dissolved Oxygen (mg/L)	12.17
ORP (mV)	211

Remarks: Water quality meter not working working properly on 10-22-03, measurements taken on 11-03-03 at 15:10.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Dissolved metals (USEPA 6000/7000/200.8)	1 L plastic	1	$HN0_3$
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-4/SW-4-Dup/SW-4-MSMSD	Date	10/22/2003		
Sampling Location	Clear Creek						
Weather	Sunny, 50°	Sampling Time:	Begin 17:05	End	17:30		

Field Parameters

Color	Clear
Odor	None
Appearance	------
pH (s.u.)	7.91
Conductivity (mS/cm)	755.3
(µmhos/cm)	
Turbidity (NTU)	2.8
Temperature (°C)	17.48
Dissolved Oxygen (mg/L)	11.48
ORP (mV)	206

Remarks: Water quality meter not working working properly on 10-22-03, measurements taken on 11-03-03 at 15:20.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Dissolved metals (USEPA 6000/7000/200.8)	1 L plastic	1	$HN0_3$
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-5	Date	10/23/2003		
Sampling Location	Clear Creek						
Weather	Cloudy, 50°	Sampling Time:	Begin 9:45	End	9:50		

Field Parameters

Color	Clear
Odor	None
Appearance	------
pH (s.u.)	8.00
Conductivity (mS/cm)	761.5
(µmhos/cm)	
Turbidity (NTU)	1.2
Temperature (°C)	17.51
Dissolved Oxygen (mg/L)	11.14
ORP (mV)	184

Remarks: Water quality meter not working working properly on 10-23-03, measurements taken on 11-03-03 at 15:45.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Dissolved metals (USEPA 6000/7000/200.8)	1 L plastic	1	$HN0_3$
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-6	Date	10/23/2003		
Sampling Location	Clear Creek						
Weather	Cloudy, 50°	Sampling Time:	Begin 10:25	End	10:40		

Field Parameters

Color	Clear
Odor	None
Appearance	------
pH (s.u.)	7.97
Conductivity (mS/cm)	762
(µmhos/cm)	
Turbidity (NTU)	2.5
Temperature (°C)	17.62
Dissolved Oxygen (mg/L)	10.7
ORP (mV)	208

Remarks: Water quality meter not working working properly on 10-23-03, measurements taken on 11-03-03 at 16:05.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

ARCADIS

Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-7	Date	10/23/2003		
Sampling Location	Clear Creek						
Weather	Cloudy, 50°	Sampling Time:	Begin 11:00	End	11:10		

Field Parameters

Color	Clear
Odor	None
Appearance	-------
pH (s.u.)	7.96
Conductivity (mS/cm)	763.9
(µmhos/cm)	
Turbidity (NTU)	6.9
Temperature (°C)	17.74
Dissolved Oxygen (mg/L)	12.52
ORP (mV)	204

Remarks: Water quality meter not working working properly on 10-23-03, measurements taken on 11-03-03 at 16:00.

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

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Surface Water Sampling Log

Project	CSXT - Bloomington	Project No.	IN000072.0021 CL001	Page	1	of	1
Site Location	Bloomington, Indiana	Sample ID No.	SW-8	Date	10/23/2003		
Sampling Location	Clear Creek						
Weather	Cloudy, 50°	Sampling Time:	Begin 11:20	End	11:30		

Field Parameters

Color	Clear
Odor	None
Appearance	Sheening - organic
pH (s.u.)	not completed
Conductivity (mS/cm)	not completed
(µmhos/cm)	
Turbidity (NTU)	not completed
Temperature (°C)	not completed
Dissolved Oxygen (mg/L)	not completed
ORP (mV)	not completed

Constituents Sampled	Container Description	Number	Preservative
Alkylated PAHs (USEPA 8270C)	1 L amber	2	None
BTEX (USEPA 8021)	40 ml VOA vials	3	HCl
Total metals (USEPA 6000/7000/200.8)	1 L plastic	1	HNO_3
Hardness (SM2340C/USEPA 130.2)	(1 L plastic)	(1)	($HN0_3$)

Sampling Personnel: T. Barber/K. Leigh/ T. Mattox

L	Liter	mS/cm	Millisiemens per centimeter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	N/A	Not Applicable	s.u.	Standard units
mg/L	Milligrams per liter	NR	Not Recorded	umhos/cm	Micromhos per centimeter
ml	milliliter				

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Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/22/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-1	Coded Replicate No.	
Time Sampling Began	13:55	Time Sampling Ended	14:10

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	4"	Medium to coarse grained sand; brown color; no odor.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
AVS/SEM (Allen, Fu et al. 1992)	1 - 4 oz glass jar (no headspace)	none
Porewater extraction (Hoffman 1998)	2 - 32 oz jars	none
Grain size	1 - 16 oz jar	none

Remarks

Sampling Personnel: T. Barber, K. Leigh

ARCADIS

Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/22/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-2	Coded Replicate No.	
Time Sampling Began	15:05	Time Sampling Ended	15:20

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	2-3"	Medium to coarse grained sand; brown color; no odor.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
AVS/SEM (Allen, Fu et al. 1992)	1 - 4 oz glass jar (no headspace)	none
Porewater extraction (Hoffman 1998)	2 - 32 oz jars	none
Grain size	1 - 16 oz jar	none

Remarks: Sheening at sand bar.

Sampling Personnel: T. Barber, K. Leigh

ARCADIS

Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/22/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-3	Coded Replicate No.	
Time Sampling Began	16:25	Time Sampling Ended	16:40

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	2"	Coarse sand and gravel; dark brown in color; sheening.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
AVS/SEM (Allen, Fu et al. 1992)	1 - 4 oz glass jar (no headspace)	none
Porewater extraction (Hoffman 1998)	2 - 32 oz jars	none
Grain size	1- 16 oz jar	none

Remarks: Sheening from bedrock.

Sampling Personnel: T. Barber, K. Leigh

ARCADIS

Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/22/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-4/SED-4-DUP/SED-4-MSMSD	Coded Replicate No.	
Time Sampling Began	17:30	Time Sampling Ended	17:50

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	4"	Sandy silt - more sand; medium brown in color.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
AVS/SEM (Allen, Fu et al. 1992)	1 - 4 oz glass jar (no headspace)	none
Porewater extraction (Hoffman 1998)	2 - 32 oz jars	none
Grain size	1 - 16 oz jar	none

Remarks

Sampling Personnel: T. Barber, K. Leigh

ARCADIS

Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/23/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-5	Coded Replicate No.	
Time Sampling Began	9:50	Time Sampling Ended	10:00

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	3-4"	Medium coarse grained sand and gravel; dark brown; no odor.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
AVS/SEM (Allen, Fu et al. 1992)	1 - 4 oz glass jar (no headspace)	none
Porewater extraction (Hoffman 1998)	2 - 32 oz jars	none
Grain size	1 - 16 oz jar	none

Remarks

Sampling Personnel: T. Barber, K. Leigh

ARCADIS

Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/23/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-6	Coded Replicate No.	
Time Sampling Began	10:40	Time Sampling Ended	10:50

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	2-3"	Medium to coarse sand; light brown.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
Grain size	1 - 16 oz jar	none

Remarks

Sampling Personnel: T. Barber, K. Leigh

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Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/23/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-7	Coded Replicate No.	
Time Sampling Began	11:10	Time Sampling Ended	11:15

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	4"	Medium coarse sand with gravel; medium brown.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
Grain size	1 - 16 oz jar	none

Remarks

Sampling Personnel: T. Barber, K. Leigh

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Sediment Sampling Log

Project/	CSXT - Bloomington	Date	10/23/2003
Site Location	Bloomington, Indiana	Project No.	IN000072.0021.CL001
Sample No.	SED-8	Coded Replicate No.	
Time Sampling Began	11:30	Time Sampling Ended	11:40

Sampling Method and Material: Stainless steel trowel

From	To	Soil/Sediment/Sludge Description
0	4-5"	Silty fine sand; medium brown.

OTHER (PID; etc.)

Constituents Sampled	Container Description	Preservative
Alkylated PAHs (USEPA 8270C)	2 - 8 oz jars	none
SVOCs (USEPA 8270)	(2 - 8 oz jars)	(none)
Total metals (USEPA 6000/7000/200.8)	(2 - 8 oz jars)	(none)
Total organic carbon (USEPA 415.1)	(2 - 8 oz jars)	(none)
BTEX (USEPA 8021)	1 - 2 oz jar	none
Grain size	1 - 16 oz jar	none

Remarks

Sampling Personnel: T. Barber, K. Leigh

Appendix C.

Threatened and Endangered Species Correspondence

DNR Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Division of Nature Preserves
402 W. Washington St W267
Indianapolis, IN 46204-2748
PH: 317/232-4052
FAX: 317/233-0133

March 30, 1999

Ms. Nadine Weinberg
Arcadis Geraghty & Miller, Inc.
24 Preble Street, First Floor
Portland, ME 04101

Dear Ms. Weinberg:

I am responding to your request for information on the endangered, threatened, or rare (ETR) species, high quality natural communities, and natural areas documented within ½ mile of five project areas in Indiana. The Indiana Natural Heritage Data Center has been checked and following you will find information on the ETR species and significant areas documented from these areas.

1. 240 Country Club Drive, Bloomington, Monroe County: There are no ETR species nor significant areas documented from this project area.
2. Monon Rail Yard, Hammond, Lake County: There are no ETR species nor significant areas documented from this project area.
3. 133 Franklin Street, Aurora, Dearborn County: On the enclosed data sheet you will find information on the ETR species documented from this project area.
4. 600 West Canal Street, Peru, Miami County: On the enclosed data sheet you will find information on the ETR species documented in from this project area.
5. 419 North Green Street, Crawfordsville, Montgomery County: There are no ETR species nor significant areas documented from this project area.

For more information on the animal species mentioned, please contact Katie Smith, Nongame Supervisor, Division of Fish and Wildlife, 402 W. Washington Room W273, Indianapolis, Indiana 46204, (317)232-4080.

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. You should contact the Service at their Bloomington, Indiana office.

U.S. Fish and Wildlife Service
620 South Walker St.
Bloomington, Indiana 47403-2121
(812)334-4261

At some point, you may need to contact the Department of Natural Resources' Environmental Review Coordinator so that other divisions within the department have the opportunity to review your proposal.

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For more information, please contact:

Larry Macklin, Director
Department of Natural Resources
attn: Stephen H. Jose
Environmental Coordinator
Division of Fish and Wildlife
402 W. Washington Street, Room W273
Indianapolis, IN 46204
(317)232-4080

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)232-4052 if you have any questions or need additional information.

Sincerely,

Ronald P. Hellmich

Ronald P. Hellmich
Indiana Natural Heritage Data Center

enclosure: Aurora data sheet
Peru data sheet

IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
BLOOMINGTON FIELD OFFICE (ES)
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261 FAX (812) 334-4273

May 13, 1999

Mr. Nadine Weinberg
Arcadis Geraghty & Miller, Inc.
24 Preble Street, First Floor
Portland, Maine 04101

Dear Ms. Weinberg:

This is in response to your letter dated March 29, 1999 requesting information regarding the potential occurrence of critical habitat and/or Federally endangered and threatened species for a 5 sites in Monroe, Lake, Dearborn, Miami, and Montgomery Counties in Indiana. The site locations are described below.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

Any Covenant Not To Sue (CNTS) for natural resource damages granted by the State of Indiana under its Voluntary Remediation Program (VRP) would not represent nor perhaps encompass the position of the federal natural resource trustees under Section 122(j) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended. This letter does not represent formal review of this project by the Department of the Interior (DOI) and therefore, this in no way should be construed to represent a position as to whether or not a CNTS for natural resource damages to federal trust resources would be appropriate.

THREATENED AND ENDANGERED SPECIES

240 County Club Drive, Bloomington, Monroe County, Indiana

This area described in your letter is within the range of the Federally endangered Indiana bat (*Myotis sodalis*) and the Federally threatened bald eagle (*Haliaeetus leucocephalus*). There are known nesting records, as well as wintering records for the eagle in Monroe County, specifically near Lake Lemon and Lake Monroe. The Indiana bat has a known hibernacula several miles west of Bloomington. Clear Creek may provide suitable summer habitat, although no surveys have been conducted for that area.

Monon Rail Yard, between 173rd Street and Interstates 80 and 94, Hammond, Lake County, Indiana

This area is within the range of the Indiana bat and bald eagle; however, there are no current records of either species for the county.

133 Franklin Street, Aurora, Dearborn County, Indiana

This site is within the range of the Indiana bat, bald eagle, and running buffalo clover (*Trifolium stoloniferum*); however, there have been no recent surveys done for any of the species in the county. Potential bat habitat may exist along Hogan Creek and the Ohio River. Also, bald eagles are known to nest and winter along the Ohio, further downstream. Running buffalo clover has been found just south of Laughery Creek in adjacent Ohio County.

600 West Canal Street, Peru, Miami County, Indiana

This area is within the range of the Indiana bat and bald eagle. There is no survey information for the Indiana bat in Miami County; however, both Wabash and Howard Counties have records. There is no survey information for the bald eagle in Miami County. There are records for the Wabash River of the fanshell mussel (*Cyprogenia stegaria*) in Wabash and Carroll Counties.

419 North Green Street, Crawfordsville, Montgomery County, Indiana

This area is within the range of the Indiana bat and the bald eagle. There are several records of the Indiana bat along Sugar Creek within the county. In addition, Sugar Creek (up to approximately the town of Alamo) is considered a primary wintering area for bald eagles. Shelly ditch and Sugar Creek in Crawfordsville may provide suitable Indiana bat foraging habitat.

SPECIES INFORMATION

The Indiana bat uses woodlands during the summer when maternity colonies utilize trees with loose bark for roosting. These bats forage primarily over wooded stream corridors, although they have been collected in grazed woodlots, mature deciduous forests, and pastures with trees.

Bald eagles nest in close proximity to lakes, rivers, or reservoirs. They construct their nests near habitat ecotones, such as lakeshores, rivers, and timber management areas (clearcuts or selective cuts). Tolerance of human activity during the nesting season has been variable, but, ideally, human disturbance of eagles should be avoided. The bald eagle's food base from the watershed includes carrion, waterfowl, and especially fish.

The fanshell is generally found in medium to large rivers in gravel riffles.

The running buffalo clover in Indiana is found in narrow, shallow, wooded stream valleys that had been grazed by cattle. These stream valleys are along intermittent tributaries to the Ohio River. The clover grows in small, scattered stands on loamy soils such as small stream terraces, or rarely on cobbles in the stream bed. The species is thought to be somewhat disturbance-dependent.

In the event that Federally listed species are found within the project area or determined to be adversely affected by project plans, further coordination may be required under the Endangered Species Act of 1973, as amended.

OTHER SPECIES OF CONCERN

In addition to the above mentioned species, several other state-listed species may be potentially found near the areas of interest, including, but not limited to the eastern woodrat (*Neotoma magister*) and Kirtland's snake (*Clonophis kirtlandii*) (both potentially found in Monroe County). These species are not afforded legal protection under the authorities of the Endangered Species Act (as amended); however, agencies are encourage to consider them during project planning becasue there is general concern amoung resource agencies regarding their status.

Contamination from these sites may migrate to nearby wetlands, waterways, or other areas of ecological significance. Pathways of migration may include leachate/ground water, surface water, and sediment. Under conditions that allow certain contaminants to accumulate in waterways, aquatic organisms can bioaccumulate these elements; consequently, elevated or toxic concentrations may be reached. We recommend that sampling and monitoring efforts address the potential for off-site migration of any possible contaminants.

The attached National Wetland Inventory (NWI) maps indicates that there are a variety of wetland habitat types near the areas of interest. Water and other habitat resources of wetlands are attractive to numerous wildlife species, including birds, bats, plants, small mammals and snakes. In particular, migratory birds such as wood ducks (*Aix sponsa*), mallards (*Anas platyrhynchos*), and tree swallows (*Tachycineta bicolor*) will utilize open-water wetlands and are subject to potential impacts from contaminants. We recommend that project plans be designed to avoid impacts to the wetland habitats, particularly regarding contamination.

Based on the occurrence of wetlands adjacent to the most of the sites, certain activities may require a permit under Section 404 of the Clean Water Act. This process is administered by the U.S. Army Corps of Engineers. The appropriate Corps address will depend on the site location. Listed below are the two Corps' offices that cover Indiana:

U.S. Army Corps of Engineers
Louisville District
P.O. Box 59
Louisville, Kentucky 40201

U.S. Army Corps of Engineers
Detroit District
P.O. Box 1027
Detroit, Michigan 48231

This information does not include concerns for other wildlife resources. Therefore, we recommend that you also contact the Indiana Department of Natural Resources, Division of Nature Preserves, and Division of Fish and Wildlife concerning possible State-listed species and other resource concerns. Their addresses are:

Indiana Department of Natural Resources
Division of Nature Preserves
402 West Washington, Rm W267
Indianapolis, Indiana 46204

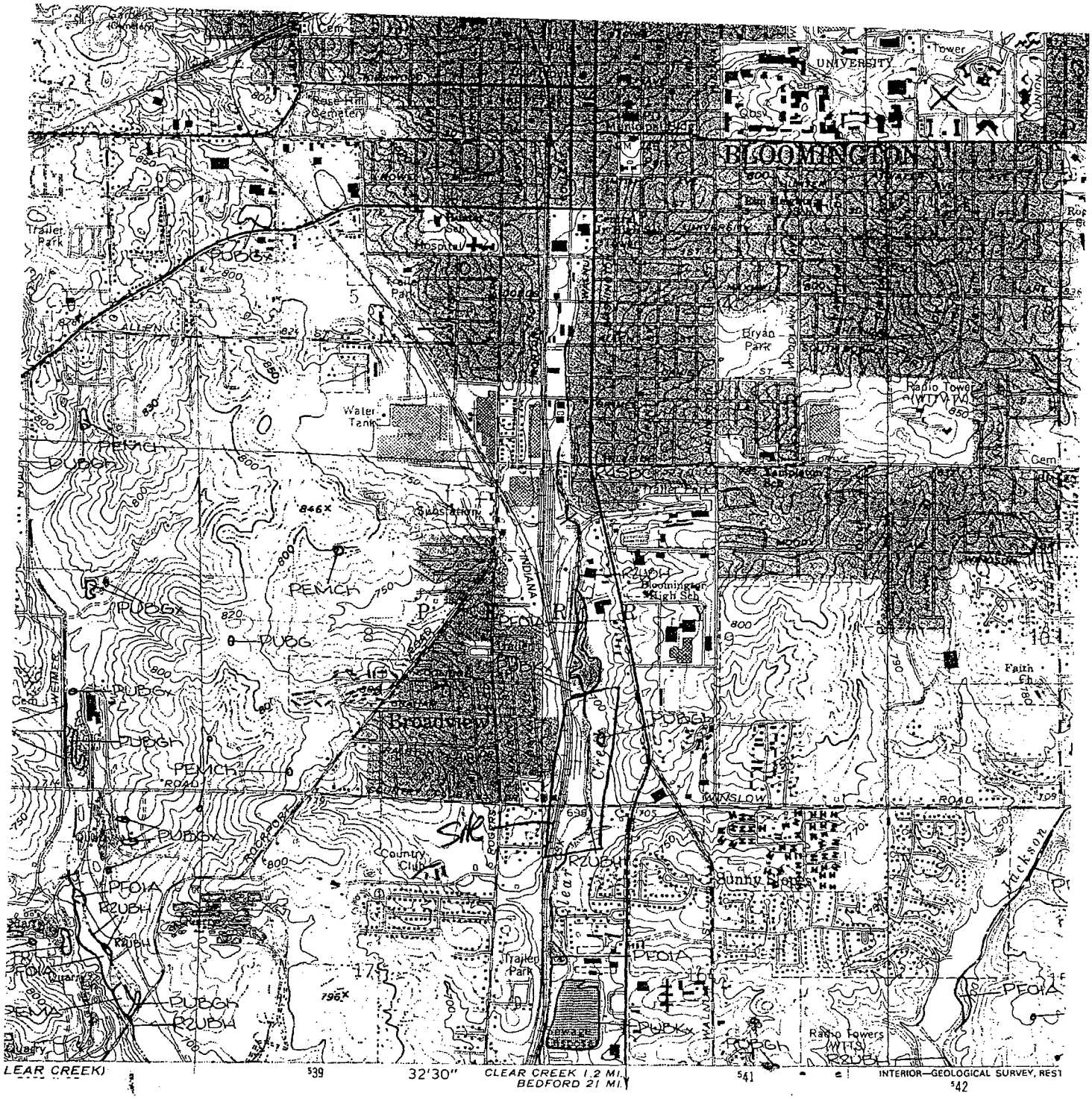
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 West Washington, Rm W273
Indianapolis, Indiana 46204

We appreciate the opportunity to comment at this early stage of project planning. If we can be of further assistance please contact Robin McWilliams-Munson or Mike Litwin at (812) 334-4261 ext. 207 or ext. 205, respectively.

Sincerely,

Scott E. Pruitt
Acting Supervisor

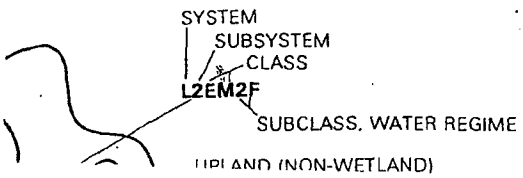
cc: Director, Indiana Division of Fish and Wildlife, Indianapolis, IN
Katie Smith, Division of Fish and Wildlife, IDNR, Indianapolis, IN
IDNR, Division of Nature Preserves, Indianapolis, IN
Jim Smith, IDEM, Indianapolis, IN
Wayne Faatz, IDNR, Indianapolis, IN
IDEM, Emergency Response, Indianapolis, IN



Attachment 1

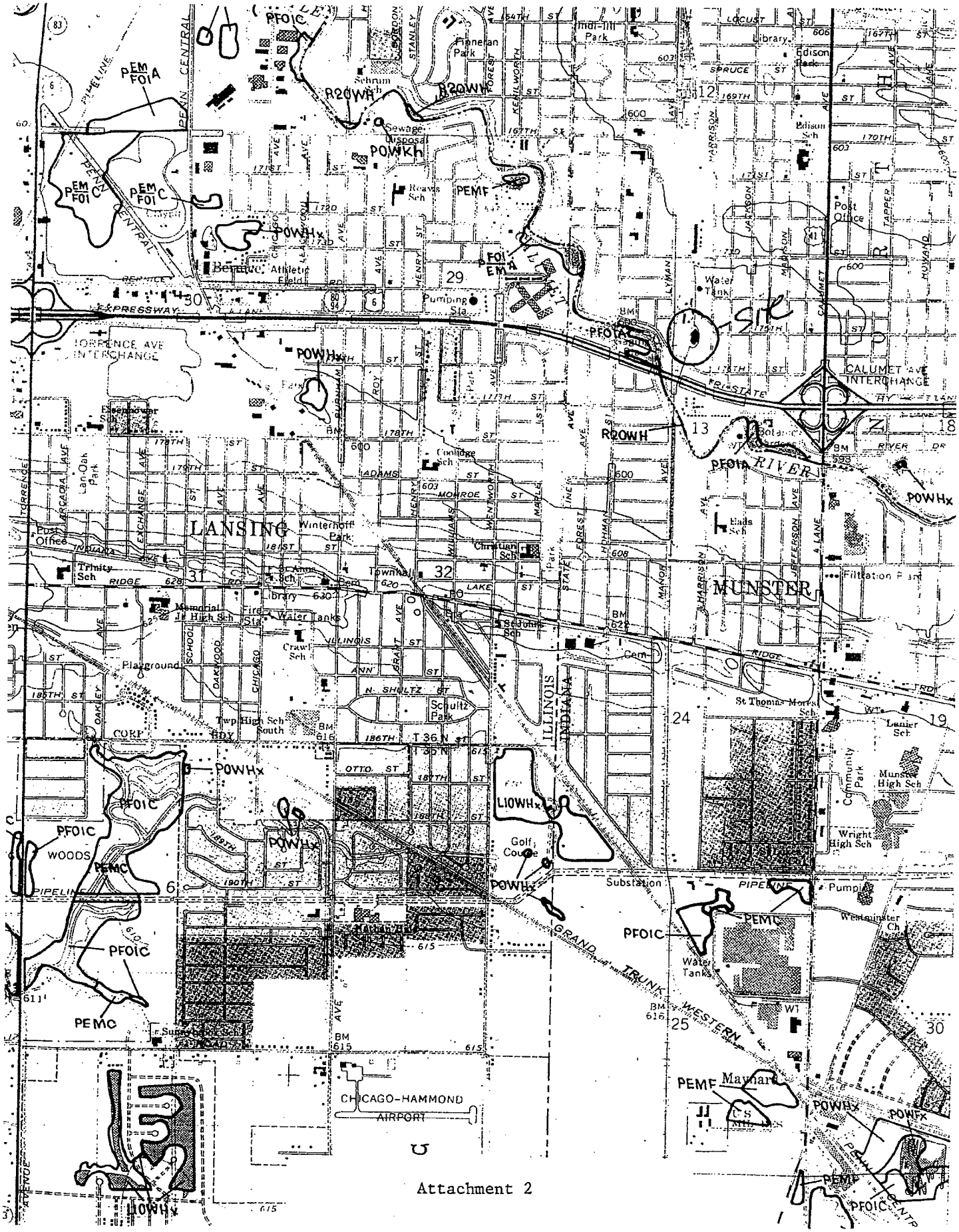
BLOOM

YMBOLOGY EXAMPLE

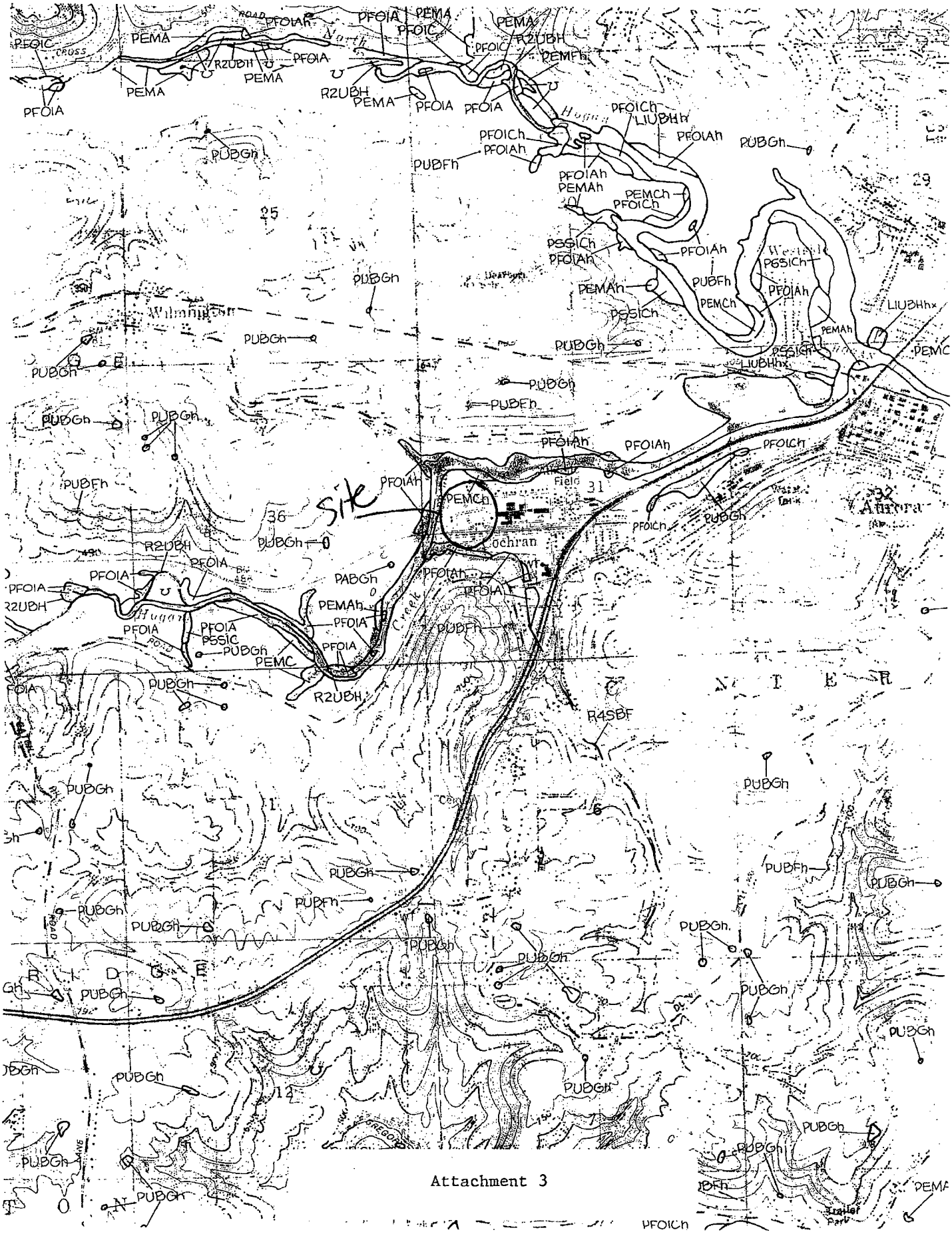


NOTES TO THE USER

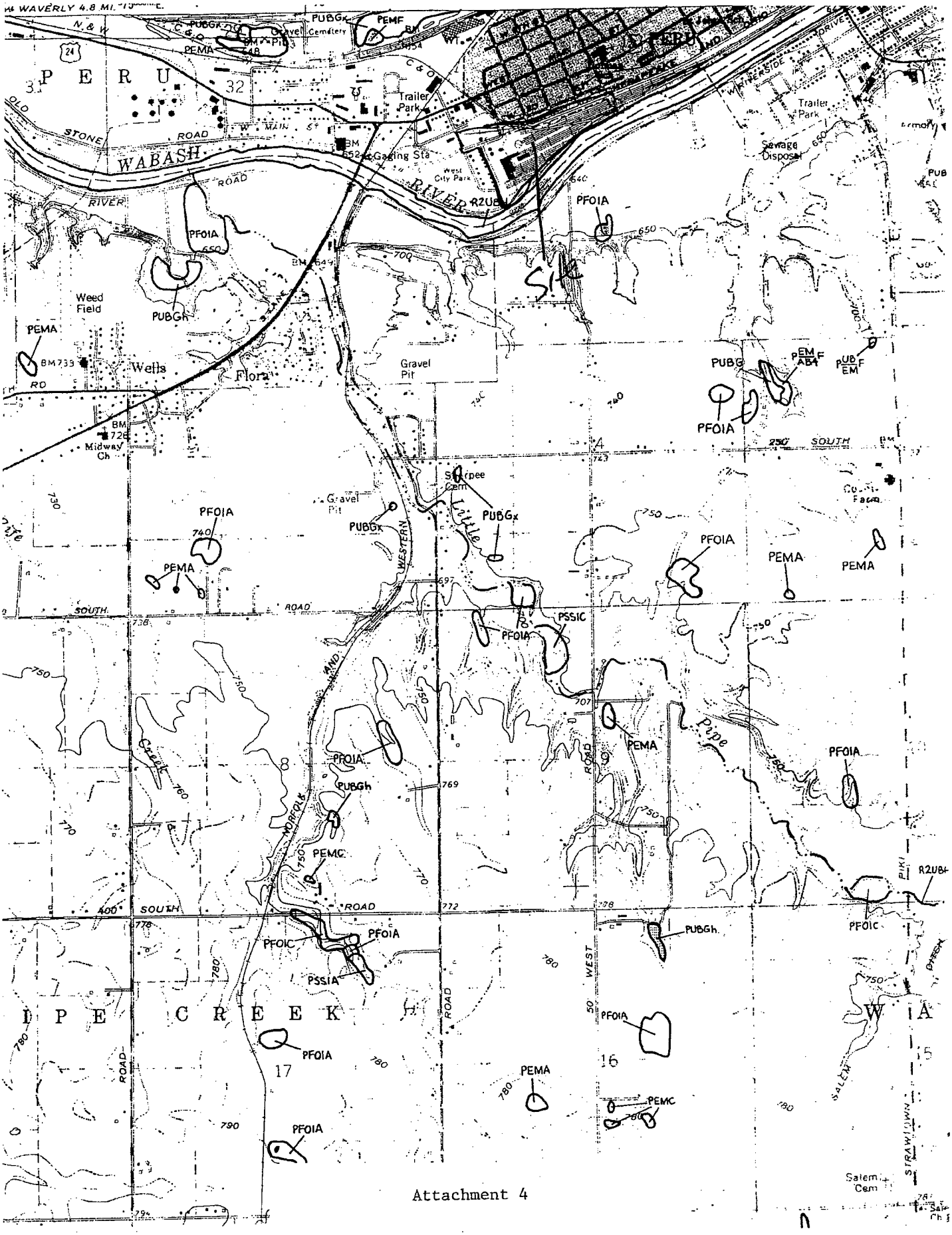
- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.
- Subsystems, Classes, Subclasses, and Water Regimes in *italics* were developed specifically for NATIONAL WETLANDS INVENTORY mapping.
- Some areas designated as R4SB, R4SBW, OR R4SBJ (INTERMITTENT STREAMS) may not meet the definition of wetland.



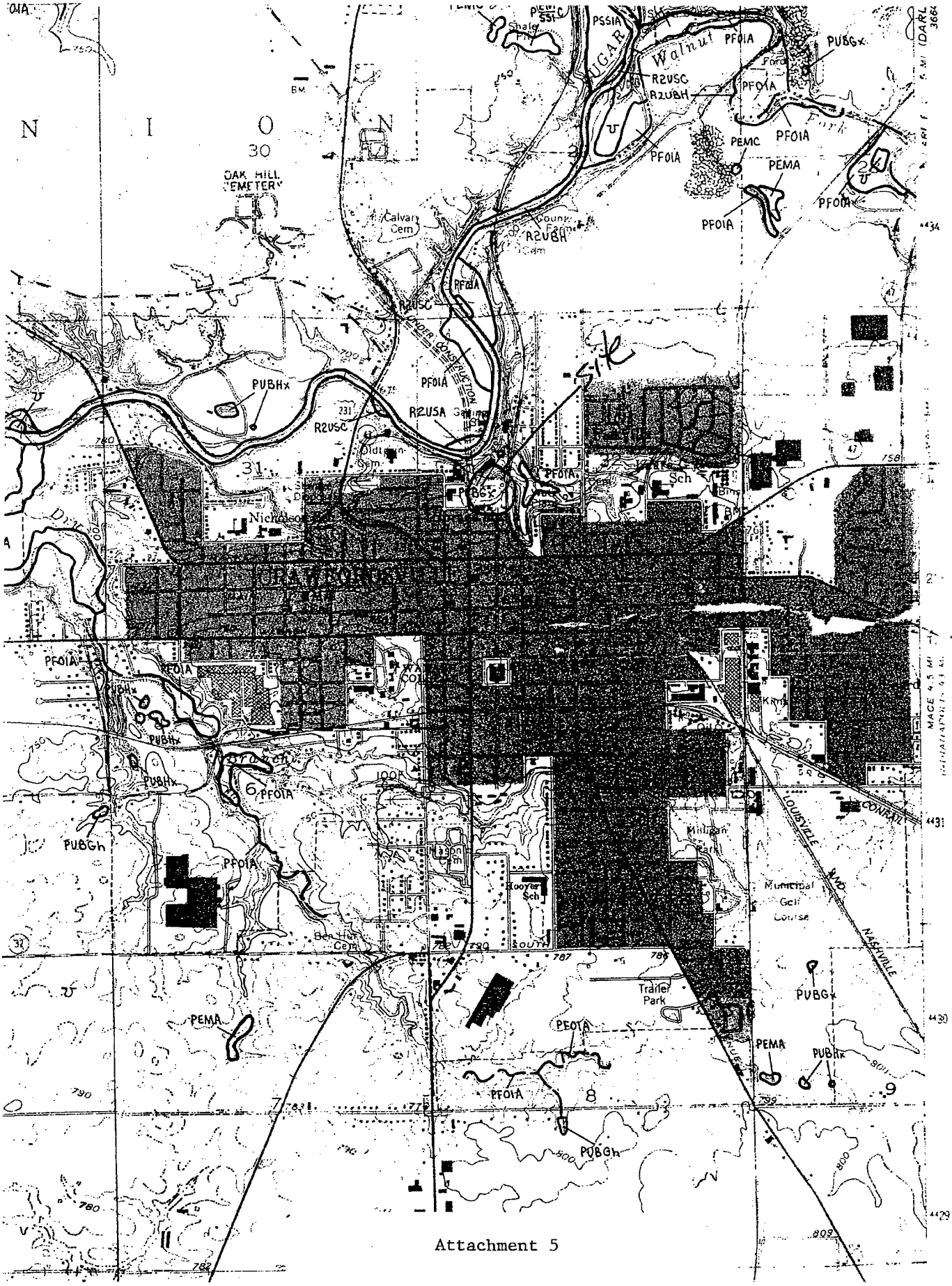
Attachment 2



Attachment 3



Attachment 4



Attachment 5

Appendix D.

Screening-Level Risk Evaluation of Wildlife

D. SCREENING-LEVEL RISK EVALUATION OF WILDLIFE

D.1 Introduction

This screening-level assessment evaluates the potential risks to aquatic-feeding wildlife associated with polycyclic aromatic hydrocarbons (PAHs) and selected metals (arsenic, cadmium, and nickel) in Clear Creek adjacent to the former Indiana Creosoting Company site. This assessment considers two representative wildlife species: raccoons (*Procyon lotor*) and belted kingfishers (*Ceryle alcyon*).

The raccoon has been reported to be the most abundant and widespread medium-sized omnivore in North America (U.S. EPA 1993). Raccoons also tend to be more closely associated with aquatic systems than most mammals, although they feed opportunistically from both aquatic and terrestrial sources. Exposure to chemicals of interest (COIs) is enhanced by raccoons' potential to ingest sediment that may be attached to invertebrate prey.

Belted kingfishers feed almost exclusively from the aquatic environment. Their exposure potential is enhanced by their small territory size and comparatively high food ingestion rate relative to their body weight. For these reasons, the assessment of risks to belted kingfishers is protective of other bird species that may feed from Clear Creek adjacent to the site.

D.2 Exposure Characterization for Wildlife

Wildlife exposures are evaluated in this assessment by calculating the average daily intake of each COI, generally based on the methodology described by the United States Environmental Protection Agency (U.S. EPA 1993) in the *Wildlife Exposure Factors Handbook*. Daily intake calculations are required because wildlife are exposed via multiple pathways, including diet, incidental sediment ingestion, and surface water ingestion. The following equation is used to calculate daily intakes:

$$DI = \frac{\left[\left(C_i \times F_i \times IR_f\right) + \left(C_w \times IR_w\right) + \left(C_s \times IR_s\right)\right] \times AF \times AUF}{BW}$$

where:

DI = daily intake, expressed in milligrams COI per kilogram body weight per day (mg/kg-day);
C_i = concentration of COI in aquatic biota (mg/kg);
F_i = fraction of diet as aquatic biota (unitless);
IR_f = food ingestion rate (kg/day);
C_w = concentration of COI in water (mg/L);
IR_w = water ingestion rate (L/day);
C_s = concentration of COI in sediment (mg/kg);

IR_s = sediment ingestion rate (kg/day);
AF = absorption factor (unitless);
AUF = area use factor (unitless); and
BW = body weight (kg).

The approaches used to identify appropriate values for these exposure parameters are described below, followed by the detailed exposure profiles for raccoons and belted kingfishers.

D.2.1 Exposure Point Concentrations

Wildlife exposure point concentrations estimated for the Clear Creek study area are shown in Table E-1. The typical concept of ecological exposure is that wildlife contacts impacted media on a periodic and random basis. Because of the nature of such contact, exposure to wildlife does not really occur at any one fixed point; rather, it occurs at a variety of points throughout the receptors' territories, with equal likelihood that any given point within the exposure unit will be the contact location on any given day. Therefore, arithmetic mean concentrations of each COI detected in sediment and surface water serve as the exposure point concentrations in the wildlife exposure assessment. The use of mean concentrations is appropriate, because birds and mammals are highly mobile and consume prey items containing varying levels of COIs.

For this screening-level evaluation, the exposure concentrations of COIs in aquatic biota were estimated from sediment COI concentrations using published biota-sediment accumulation factors (BSAFs). The COIs identified for this evaluation may occur in aquatic biota, but they do not biomagnify through the food web. Therefore, BSAFs for benthic invertebrates are used as a conservative surrogate for all aquatic biota. In actuality, PAHs occur at considerably lower concentrations in fish than in benthic invertebrates, because fish efficiently metabolize PAHs (Meador, Stein et al. 1995). Similarly, arsenic has been shown to exhibit biodiminution in food chain exposures (Suhendrayatna, Nakajima et al. 2002a,b). Thus, the BSAFs used here are expected to overestimate actual exposures for wildlife that consume fish.

The BSAF for PAHs was identified from Tracey and Hansen (1996). Tracey and Hansen (1996) analyzed an extensive compilation of BSAF values for 27 species from studies that met their specified criteria for data quality. They found that the central tendencies for BSAF values separated by chemical class into PAHs, polychlorinated biphenyls (PCBs), and pesticides. Probability distributions for the three chemical classes were developed, and specific BSAF values were determined for various probability percentiles. For this assessment, the 50th probability percentile BSAF (median) was selected. Uncertainty associated with choosing the 50th probability percentile is addressed in Section E.5. The BSAFs identified by Tracey and Hansen (1996) for organic compounds are normalized based on the organic carbon content of sediment and the lipid content of biota. Therefore, COI concentrations in aquatic biota are derived from the following formula:

$$C_i = (C_s \div \%TOC) \times BSAF \times (\%lipid \times DW:WW)$$

where:

TOC = total organic carbon; and
DW:WW = dry weight to wet weight ratio conversion factor (unitless).

A value of 5 percent lipid content per dry weight for invertebrates was used in this evaluation (Boese and Lee 1992). This value was then multiplied by a dry weight to wet weight (DW:WW) conversion factor of 0.2 (assuming 80 percent water mass for aquatic organisms) resulting in a value of 1 percent lipids per wet weight of invertebrates.

For metals, BSAFs were identified from the analysis of Bechtel Jacobs (1998), conducted for the Oak Ridge National Laboratory. Bechtel Jacobs (1998) compiled an extensive set of BSAFs for metals and PCBs. The BSAFs for metals were segregated based on whether or not the invertebrate specimens were depurated (that is, allowed to clear their gut contents) prior to analysis. The BSAFs were then evaluated using simple summary statistics, as well as regression analyses testing whether bioaccumulation rates are dependent on sediment concentrations. A separate validation data set was used to determine which of these derivation methods was most appropriate for each metal. For this SLERA, arsenic is assessed using the median BSAF for non-depurated organisms, cadmium is assessed using the median BSAF for depurated organisms, and nickel is assessed using the central tendency regression for depurated organisms. Uncertainty associated with the use of central tendency BSAF estimates is discussed in Section E.5.

In contrast to hydrophobic organic compounds, metals do not partition preferentially to organic carbon and lipid. The BSAFs identified for metals by Bechtel Jacobs (1998) require adjustment only to convert estimated biota concentrations from a dry-weight basis to a wet-weight basis, as follows:

$$C_i = C_s \times BSAF \times DW:WW$$

As described above, a dry-weight to wet-weight conversion factor of 0.2 is used, assuming that aquatic organisms contain 80 percent moisture.

D.2.2 Ingestion Rates

The food ingestion rate for belted kingfishers is estimated based on information provided by the U.S. EPA (1993). A food ingestion rate is not listed in U.S. EPA (1993) for raccoons; therefore a food ingestion rate is calculated based on the raccoon's metabolic rate and the metabolic energy provided by their prey, as described in U.S. EPA (1993) and as shown in the following equations:

$$IR_f = NIR_{total} \times BW \times 0.001$$

where:

NIR_{total} = total normalized ingestion rate (g/kg-day); and

$$NIR_{total} = \frac{NFMR}{\sum (P_k \times ME_k)}$$

where:

NFMR = normalized free-living metabolic rate of predator (kcal/kg-day);
P_k = proportion of diet of k^{th} prey item (unitless);
ME_k = metabolic energy of k^{th} prey item (kcal/g wet weight); and

$$ME = GE \times AE$$

where:

GE = gross energy (kcal/g wet weight); and
AE = assimilation efficiency (unitless).

The raccoon's feeding strategy promotes the incidental ingestion of surface water and sediment. U.S. EPA (1993) cites data from Beyer on sediment ingestion rates, which were unpublished at the time U.S. EPA released its 1993 guidance but were subsequently published by Beyer, Connor et al. (1994). For this evaluation, sediment ingestion rates are obtained from Beyer, Connor et al. (1994). Beyer, Connor et al. (1994) present rates of sediment ingestion as a percentage of ingested food, on a dry weight basis. For this evaluation, COI concentrations and ingestion rates for sediment are presented on a dry weight basis, but for wildlife food items these parameters are presented on a wet weight basis. Therefore, for the purpose of calculating a sediment ingestion rate, the food ingestion rate described above is multiplied by a wet to dry weight conversion factor of 0.2 prior to applying the sediment intake rates developed by Beyer, Connor et al. (1994). Sediment ingestion by kingfishers is considered negligible, based on their feeding strategy (that is, capture of swimming fish).

D.2.3 Other Exposure Parameters

A conservative default value of 1 is employed as the absorption factor. This assumption may overestimate exposures, as laboratory toxicity tests often use highly available forms of the test chemical, whereas COIs in environmental media may be less bioavailable. Area use factors are applied when the foraging area of a wildlife receptor is larger than the area being assessed. Area use factors are identified by comparing the extent of available habitat in the study area with the home range or territory size of the wildlife ROI. Finally, dietary preferences and body weights for wildlife species are estimated based on information provided by U.S. EPA (1993).

D.2.4 Exposure Profile for Raccoons

Exposure of raccoons to COIs is evaluated by calculating daily intakes for dietary uptake, sediment ingestion, and surface water ingestion, as presented in Table E-2. The basis for the exposure parameter values applied in this SLERA is provided below.

- *Food ingestion rate* – Because U.S. EPA (1993) does not list a food ingestion rate for raccoons, it is necessary to derive a value based on the proportion of diet composed of fish, invertebrates, and terrestrial prey, the gross energy in each food group, the efficiency with which raccoons assimilate the gross energy in each food group, and the normalized free-living metabolic rate of raccoons. This derivation is presented in Table E-3.

- *Diet* – The raccoon has been reported to be an opportunistic omnivore, and the relative preference for plant and animal matter in the diet varies (U.S. EPA 1993). For this SLERA, dietary preferences are estimated based on a conservative synthesis of information reported by U.S. EPA (1993) from multiple studies. Exposure assumptions are based on the raccoon's dietary preferences in the spring (that is, breeding season). This approach is conservative, because raccoons consume a higher proportion of animal matter during the spring, and animal matter typically contains higher COI concentrations than plants. Raccoons typically consume few fish, with crayfish being the preferred food item from freshwater aquatic systems (U.S. EPA 1993). For this SLERA, the raccoon's diet is assumed to be comprised of 60 percent aquatic biota (for example, 50 percent benthic invertebrates and 10 percent fish or amphibians). The remainder of the diet is assumed to consist of terrestrial items (for example, terrestrial invertebrates, plants, garbage/carrion) that contain negligible concentrations of COIs.

- *Gross energy of fish, invertebrates, and terrestrial prey* – Gross energy calculations are based on the aquatic component of the raccoon's diet. A gross energy of 1.2 kcal/g wet weight is selected for fish, based on data on bony fishes reported by Thayer, Schaaf et al. (1973), as cited in U.S. EPA (1993). A gross energy of 1.2 kcal/g wet weight for terrestrial invertebrates (U.S. EPA 1993) is used as a surrogate to represent food obtained from the terrestrial environment. A gross energy of 0.95 kcal/g wet weight is selected for aquatic invertebrates, based on the mean of values reported in multiple studies reviewed by U.S. EPA (1993).

- *Assimilation efficiency* – Assimilation efficiency is calculated for the aquatic component of the raccoon's diet. An assimilation efficiency of 91 percent is selected for fish, based on U.S. EPA's (1993) calculated value for mammals consuming fish. A value of 87 percent is used for invertebrates, based on U.S. EPA's (1993) value selected from multiple studies for small mammals consuming insects. This value is used as the assimilation efficiency for both aquatic invertebrates and terrestrial prey.

- *Normalized free-living metabolic rate* – The selected value of 185 kcal/kg-day represents the mean of estimated values for free-living adult male and female raccoons, as reported by U.S. EPA (1993).

- *Sediment ingestion rate* –It is assumed that the rates of sediment ingestion by raccoons are equal to the rates reported by Beyer, Connor et al. (1994) for soil plus sediment. A sediment ingestion rate of 0.021 kg/day corresponds to Beyer, Connor et al.'s (1994) estimate that soil and sediment in diet of raccoons is 9.4 percent of the food ingestion rate, on a dry weight basis.

- *Water ingestion rate* – The water ingestion rate of 0.083 g/g-day used in this SLERA is equal to the mean of estimated values reported by U.S. EPA (1993) for adult male and female raccoons.

- *Body weight* – The body weight of 5.8 kg used in this SLERA is equal to the mean of adult male and female raccoon body weights reported in multiple studies cited by U.S. EPA (1993).

- *Area use factor* – Raccoons commonly utilize a home range of a few hundred hectares (U.S. EPA 1993), much larger than the study area for this SLERA. By comparison, if one assumes a 100 meter corridor along the 0.5 kilometers of stream adjacent to the site, the available habitat in the area of interest is only 5 hectares. A very conservative area use factor of 0.25 is used for raccoons in this SLERA.

D.2.5 Exposure Profile for Belted Kingfishers

Exposure of belted kingfishers to COIs is evaluated in this SLERA by calculating daily intakes for dietary uptake and surface water ingestion, as presented in Table E-4. The basis for the selected exposure factor values is described below.

- *Food ingestion rate* – 0.5 g/g-day is equal to the mean values reported for adult male and female kingfishers by Alexander (1977), as cited in U.S. EPA (1993).

- *Diet* – Belted kingfishers feed primarily on fish, with the remainder of the diet consisting of benthic invertebrates (for example, crayfish, insects), amphibians, birds, and mammals. For this SLERA, the kingfisher's diet is assumed to consist entirely of aquatic biota.

- *Water ingestion rate* – 0.11 g/g-day water ingestion represents the mean of calculated values for male and female belted kingfishers (U.S. EPA 1993).

- *Body weight* – 0.15 kg body weight is equal to the mean of values reported for adult male and female belted kingfishers in three studies cited by U.S. EPA (1993).

- *Area use factor* – During the breeding season, belted kingfisher pairs utilize a territory occupying approximately 1 to 2 kilometers of shoreline (U.S. EPA 1993). However, kingfishers maintain individual territories outside the breeding season which may encompass less than 0.5 kilometers of shoreline (U.S. EPA 1993). Therefore, an area use factor of 1.0 is assumed for this SLERA, under the very conservative assumption that the most exposed kingfishers feed exclusively within the study area.

D.3 Effects Characterization for Wildlife

Toxicity reference values (TRVs) are the measures of effects used to evaluate responses of wildlife receptors to the COIs. Methods used to derive TRVs are described below, followed by chemical-specific effects profiles.

D.3.1 Toxicity Reference Value Derivation

A variety of approaches are available for deriving TRVs, including regression analyses, toxicity testing, application of extrapolation and uncertainty factors, probabilistic analyses, and others. For this evaluation, a majority of the TRVs were obtained from the USEPA Ecological Soil Screening Level (EcoSSL) Guidance documents. The data used in the determining the TRVs in the EcoSSL guidance has undergone rigorous

scientific review as outlined in the USEPA Guidance for Developing Ecological Soil Screening Levels (USEPA 2005) and therefore are considered current and appropriate for this evaluation. The TRVs are typically reported as NOAELs and LOAELs for the laboratory species upon which testing was conducted, under defined testing conditions. In addition, extrapolation factors (EFs) and uncertainty factors (UFs) are used to derive TRVs for wildlife from laboratory study results, based on the methodology of Sample, Opresko et al. (1996) and Sample and Arenal (1999). This process involves the determination of a test species dose for a critical endpoint from a particular experimental combination of exposure concentration, exposure duration, test species, and COI. Uncertainty factors associated with the duration of exposure and endpoint measured are implemented as recommended for each TRV by Sample, Opresko et al. (1996).

The TRVs used in this evaluation are shown in Tables E-5 and E-6. TRVs are calculated in this evaluation according to the following equation:

$$TRV = \frac{Test\ Species\ Dose \times Body\ Weight\ EF}{Endpoint\ UF}$$

The test species dose is the dose reported in the toxicity study selected as the basis for each chemical-specific TRV. Test species doses are identified from USEPA (2005a,b; 2007a,b) and other published sources. An endpoint UF of 10 is used to estimate a no-effect dose (no observed adverse effect level or NOAEL) if only a lowest observed adverse effect level (LOAEL) is available. The body weight EF accounts for differences in species sensitivity based on the body sizes of test species and wildlife receptor species, as described below.

Sample and Arenal (1999) developed body weight scaling methods for numerous chemicals, based on an extensive compilation of toxicity data for multiple birds and mammals. Dosimetric differences between the test species and wildlife receptors are accounted for using:

$$NOAEL_w = NOAEL_t \times \left(\frac{BW_t}{BW_w} \right)^{1-b}$$

where:

$NOAEL_w$ = NOAEL for the wildlife ROI (mg/kg-day);
$NOAEL_t$ = NOAEL for the test species (mg/kg-day);
BW_t = test species body weight (kg);
BW_w = wildlife receptor body weight (kg); and
b = chemical-specific allometric scaling factor (unitless).

In cases where a chemical-specific allometric scaling factor is not available, the average scaling factor identified by Sample and Arenal (1999) is used (that is, 1.2 for birds or 0.94 for mammals).

In some instances, the TRV established in the EcoSSL guidance document is based on a geometric mean of the NOAEL values for reproductive and growth. This value was lower than the lowest bounded LOAEL for reproduction, growth, or survival (USEPA 2007a). In these instances where several different species were used to determine the

TRV, the test species body weight was set equal to the receptor body weight, in essence negating the body weight EF (i.e., setting EF equal to 1).

D.3.2 Toxicity of PAHs to Wildlife

D.3.2.1 Toxicity of PAHs to Mammals

For purposes of this assessment, TRVs are developed for total low molecular weight PAHs (LPAHs) and total high molecular weight PAHs (HPAHs), rather than for each measured PAH compound. The distinction between LPAHs and HPAHs is useful because these groups of PAHs exhibit different degrees of toxicity to wildlife. LPAHs are 2- and 3-ring PAHs, including acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, phenanthrene, and alkylated homologues of these PAHs. HPAHs are 4-, 5-, and 6-ring PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)pyrene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, perylene, pyrene, and alkylated homologues of these PAHs. Mammalian LPAH and HPAH TRVs are available from the USEPA EcoSSL guidance (USEPA 2007b). Conservative surrogate values based on data for certain individual PAHs are identified as mammalian test species doses for total LPAHs and total HPAHs. These values are intentionally conservative and are expected to significantly overestimate risks. A more refined assessment approach could be developed if the conservative TRVs for total LPAHs or HPAHs are exceeded; however, this effort is not necessary for this SLERA, as the conservative TRVs are not exceeded (Section E.4).

As provided in USEPA (2007b), the mammalian NOAEL test species dose for total LPAHs is 65.6 mg/kg-day; the NOAEL test species does for total HPAHs is 0.615 mg/kg-day.

D.3.2.2 Toxicity of PAHs to Birds

Relatively limited information is available on the effects of PAHs in birds. Schafer, Bowles et al. (1983) reported mortality in red-winged blackbirds and house sparrows following 18 hours of oral exposure to acenaphthene, anthracene, fluorene, and phenanthrene. Peakall, Hallett et al. (1982) reported a NOAEL of 200 mg crude oil per kg body weight for effects to body weight gain and organ weights in herring gulls treated with a single oral dose of crude oil mixed with corn oil. The same study (Peakall, Hallett et al. 1982) also reported a NOAEL of 2,000 mg crude oil per kg body weight (highest dose tested) for mortality. A study by Patton and Dieter (1980) reported mortality in mallards exposed for 7 months to a PAH mixture in food; the test species chronic NOAEL of 277 mg/kg-day was developed from the dietary no observed adverse effect concentration (NOAEC) of 4,000 mg/kg PAHs in feed. This value was used in this SLERA to assess exposures of birds to total LPAHs and total HPAHs.

D.3.3 Toxicity of Arsenic to Wildlife

Mammalian and avian arsenic TRVs are available from the USEPA EcoSSL guidance (USEPA 2005a). The mammalian NOAEL dose used in this evaluation is 1.04 mg/kg-day which is the highest bounded NOAEL below the lowest bounded LOAEL for

reproduction, growth or survival. The avian NOAEL dose is 2.24 mg/kg-day which is the lowest NOAEL value for reproduction, growth or survival..

D.3.4 Toxicity of Cadmium to Wildlife

Mammalian and avian cadmium TRVs are available from the USEPA EcoSSL guidance (USEPA 2005b). The mammalian NOAEL dose used in this evaluation is 0.77 mg/kg-day which is the highest bounded NOAEL below the lowest bounded LOAEL for reproduction, growth or survival. The avian NOAEL dose is 1.47 mg/kg-day which is the geometric mean of the NOAEL values for reproduction and growth..

D.3.5 Toxicity of Nickel to Wildlife

Mammalian and avian nickel TRVs are available from the USEPA EcoSSL guidance (USEPA 2007a). The mammalian NOAEL dose used in this evaluation is 1.70 mg/kg-day which is the highest bounded NOAEL below the lowest bounded LOAEL for reproduction, growth or survival. The avian NOAEL dose is 6.71 mg/kg-day which is the geometric mean of the NOAEL values for reproduction and growth.E.4 Risk Characterization

To estimate ecological risks to raccoons and belted kingfishers, hazard quotients (HQs) are calculated for each COI. An HQ is the ratio of the measure of exposure (for example, measured concentration or modeled dose) to a literature-based TRV (with comparable units):

$$HQ = \frac{DI}{TRV}$$

where:

DI = daily intake (mg/kg-day); and
TRV = COI reference toxicity value (mg/kg-day).

If the NOAEL-based HQ is less than or equal to 1, then the predicted dose of the specific COI is at or below a dose that has been shown not to adversely affect chronic reproduction or mortality. An HQ less than 1 indicates that adverse effects due to the COI are unlikely. Although HQ values much greater than 1 can be assumed to describe risks that are more severe than those associated with
HQs that slightly exceed 1, HQ values should not be interpreted literally or as probabilities. For example, an HQ of 0.5 does not reflect a 50 percent probability of adverse effects and an HQ of 4 does not necessarily indicate adverse effects twice as bad as those associated with an HQ of 2. Given the paucity of data available on effects of chemical mixtures on wildlife, risks due to different classes of chemicals are not assumed to be additive.

Tables E-5 and E-6 show the HQs calculated for wildlife receptors in this SLERA. All HQs are below 1, indicating that wildlife are not at risk due to COI exposures in the study area.

D.5 Uncertainty Analysis

Uncertainty can be introduced at every step in the evaluation process, as information of varying quality is gathered from diverse sources in order to be integrated into a complex framework. The methodology used in this SLERA for wildlife relies on a combination of point estimate values, some of which are central tendency and some of which are conservative. The results are presented as point estimates of risk that fall at unknown percentiles within the full distributions of exposure and risk. Consequently, the degree of conservatism in the risk estimates cannot be known with certainty, but it is quite likely that actual risks are overstated (Hattis and Burmaster 1994). The uncertainty associated with key parameters is summarized below.

Central tendency estimates:

- *Exposure point concentrations:* The arithmetic mean of COI concentrations in each environmental medium is used in this screening assessment to represent average exposures. This is a central tendency estimate.

- *Ingestion rates:* The ingestion rates used in this evaluation are central tendency estimates.

- *Lipid levels:* Site-specific wet-weight lipid concentrations are not available. Wet-weight lipid concentrations were estimated from Boese and Lee (1992), using the value of 5 percent lipid (dry weight) for invertebrates. This assumption is assumed to represent a central tendency.

- *BSAF estimation:* Since measured tissue concentrations of COIs were unavailable, invertebrate concentrations were estimated from sediment concentrations using published BSAFs. There is uncertainty associated with mathematical extrapolation from known values. The BSAF values used in this evaluation represent a central tendency for benthic invertebrates. If BSAF values for the 90^{th} probability percentile are used, HQs increase three to seven-fold, depending on the chemical. Note that the central tendency BSAFs for benthic invertebrates are expected to significantly overestimate bioaccumulation in fish, for the COIs evaluated in this SLERA.

Conservative estimates:

- *Area use factors:* The area use factors employed in this evaluation are very conservative, leading to a potentially significant overestimation of risks.

- *Bioavailability:* The bioavailability of COIs in environmental media may be lower than in the exposure media employed in avian and mammalian toxicity tests, particularly for metals. This uncertainty will lead to an overestimation of potential risks.

- *Species sensitivity:* When multiple appropriate toxicity studies were available, the most conservative test species dose was selected for the evaluation. Thus, sensitivity is much more likely to be overestimated than underestimated. This

conservatism is further compounded for HPAHs by the use of benzo(a)pyrene, one of the most toxic PAHs, as a surrogate for all HPAHs.

In summary, the screening-level risk evaluation for wildlife uses a combination of central tendency and conservative estimates for the exposure and effects assessments. This approach likely results in an overestimation of potential risks to wildlife.

D.6 Conclusions

Risks to representative aquatic-feeding wildlife species have been assessed for the Clear Creek study area. The results of this analysis show that wildlife are not at risk due to PAHs, arsenic, cadmium, or nickel exposures.

D.7 References

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Table D-1. Exposure Point Concentrations for Wildlife Receptors
Clear Creek, Bloomington, Indiana

	Sediment Concentration[a,b] Cs (mg/kg)	Water Concentration[a,b] Cw (mg/L)	Biota-Sediment Accumulation Factor[c]	Biota Tissue Concentration Cb (mg/kg)
Total LPAHs	2.1	0.00022	0.29	0.71
Total HPAHs	9.2	0.00018	0.29	3.1
Arsenic	8.5	0.0014	0.025	0.22
Cadmium	0.87	0.00013	0.092	0.080
Nickel	20	0.0018	0.029	0.58

a. Based on arithmetic mean concentrations, assuming one-half the detection limit for non-detects.
b. Metals concentrations are based on total metals results.
c. Biota-sediment accumulation factors are adjusted to estimate wet-weight tissue concentrations from dry-weight sediment concentrations, based on the average site-specific organic carbon content of sediment and assuming biota contain 5 percent lipid and 80 percent moisture.

HPAHs - high molecular weight PAHs
LPAHs - low molecular weight PAHs
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
PAHs - polycyclic aromatic hydrocarbons